Special, 8/30/2022 10:30:00 AM

BE IT REMEMBERED that on August 30, 2022, there was begun and holden a SPECIAL session of the Commissioners Court of Jefferson County, Texas, with the following members and officers present and participating except those absent as indicated:

Honorable Jeff Branick, County Judge

Commissioner Vernon Pierce, Commissioner Pct. No. 1

Commissioner Darrell Bush, Commissioner Pct. No. 2

Commissioner Michael Sinegal, Commissioner Pct. No. 3

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

Honorable Zena Stephens, Sheriff (ABSENT)

Chief Donta Miller and Chief John Shauberger

Honorable Laurie Leister, County Clerk

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

Jeff R. Branick, County Judge
Vernon Pierce, Commissioner, Precinct One
Darrell Bush, Commissioner, Precinct Two
Michael S. Sinegal, Commissioner, Precinct Three
Everette "Bo" Alfred, Commissioner, Precinct Four

NOTICE OF MEETING AND AGENDA OF COMMISSIONERS' COURT OF JEFFERSON COUNTY, TEXAS August 30, 2022

Notice is hereby given that the Commissioners' Court of Jefferson County, Texas, will meet at **10:30 AM,** on the **30th** day of **August 2022** at its regular meeting place in the Commissioners' Courtroom, 4th Floor, Jefferson County Courthouse, 1149 Pearl Street, Beaumont, Texas.

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

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

9:15am - Announcement of an executive (closed) session pursuant to Texas Government Code Section 551.0725 to deliberate business and financial issues relating to a contract being negotiated, that deliberation in open meeting, would have a detrimental effect on the Commissioners Court in negotiations with a third person.

9:45 A.M.- Announcement of an executive (closed) session pursuant to Texas Government Code Section 551.0725 to deliberate business and financial issues relating to a contract being negotiated, that deliberation in open meeting, would have a detrimental effect on the Commissioners Court in negotiations with a third person.

Jefferson County has taken steps to minimize the exposure of COVID-19 by implementing the following steps to allow the public to view the Commissioner's Court meeting.

The following options are available:

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

Listen to audio by calling 346-248-7799 Meeting ID: 917 160 6532#
Participant ID: #

The court will also have a question and answer session at the end of the meeting. If you would like to ask any questions of the Court, please be on the phone call. The Court will give a question and answer session at the end of the meeting as time allows. You will be called upon by your last 4 digits of your phone number. If you do not have any questions, you can pass.

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

INVOCATION: Darrell Bush, Commissioner, Precinct Two

PLEDGE OF ALLEGIANCE: Michael S. Sinegal, Commissioner, Precinct Three

PURCHASING:

(a). Consider and approve specifications for Invitation for Bid (IFB 22-046/MR) Term Contract for Trash and Biomedical Waste Container Service for Jefferson County.

SEE ATTACHMENTS ON PAGES 11 - 75

Motion by: Bush
Second by: Pierce
Abstained: Branick, Pierce, Bush, Sinegal, Alfred
Action: APPROVED

(b). Receive and file bids for Invitation for Bid (IFB 22-028/JW) Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport; pursuant to Chapter 262, Texas Local Government Code, the County Purchasing Act and 2 CFR Sections 200.318 – 326. This project is intended to be 100% funded by the Federal Aviation Administration (FAA) Airport Improvement Program (AIP) Grant #37.

SEE ATTACHMENTS ON PAGES 76 - 1344

Motion by: Bush
Second by: Pierce
In Favor: Branick, Pierce, Bush, Sinegal, Alfred
Action: APPROVED

(c). Discuss and possibly approve the Purchasing Agent to enter into contract negotiations for Request for Proposal (RFP 22-038/MR) Emergency Debris Monitoring Services for Jefferson County; pursuant to Chapter 262, Texas Local Government Code, the County Purchasing Act and 2 CFR Sections 200.318-326.

NO ATTACHMENTS

Motion by: Bush
Second by: Pierce
In Favor: Branick, Pierce, Bush, Sinegal, Alfred
Action: APPROVED

(d). Consider and approve, execute, receive and file a renewal for (IFB 19-041/YS) Term Contract for Hydrated Lime for Jefferson County for a third one (1) year renewal with Lhoist North America from September 13, 2022 to September 12, 2023.

SEE ATTACHMENTS ON PAGES 1345 - 1346

Motion by: Bush
Second by: Pierce
In Favor: Branick, Pierce, Bush, Sinegal, Alfred
Action: APPROVED

COUNTY AUDITOR:

(a).Consider and approve budget transfer– Road & Bridge Pct.1– additional cost for repairs.

SEE ATTACHMENTS ON PAGES 1347 - 1347

111-0105-431-4008	AUTOMOBILES AND TRUCKS	$12,000.00	
111-0102-431-3080	COVER STONE		$12,000.00

Motion by: Sinegal
Second by: Pierce
In Favor: Branick, Pierce, Bush, Sinegal, Alfred
Action: APPROVED

(b).Consider and approve budget transfer– JP Pct. 6 – purchase of a shredder.

SEE ATTACHMENTS ON PAGES 1348 - 1348

120-2047-412-3084	MINOR EQUIPMENT	$1,000.00	
120-2047-412-5062	TRAVEL EXPENSE		$1,000.00

Motion by: Sinegal
Second by: Pierce
In Favor: Branick, Pierce, Bush, Sinegal, Alfred
Action: APPROVED

(c).Consider and approve budget transfer – 58th District Court – additional cost for sound system repairs.

SEE ATTACHMENTS ON PAGES 1349 - 1349

120-2033-412-3084	MINOR EQUIPMENT	$1,300.00	
120-2033-412-1095	EDUCATION PAY		$1,300.00

Motion by: Sinegal
Second by: Pierce
In Favor: Branick, Pierce, Bush, Sinegal, Alfred
Action: APPROVED

(d).Consider and approve renewal of Title IV-E Child Welfare and Legal Services Contracts with the Texas Department of Family and Protective Services. Renewal dates are 10/01/2022 to 09/30/2023.

SEE ATTACHMENTS ON PAGES 1350 - 1386

Motion by: Sinegal
Second by: Pierce
In Favor: Branick, Pierce, Bush, Sinegal, Alfred
Action: APPROVED

(e).Consider and approve electronic disbursement for $ 752,215.56 to LaSalle for revenue received from entities for inmate housing.

NO ATTACHMENTS

Motion by: Sinegal
Second by: Pierce
In Favor: Branick, Pierce, Bush, Sinegal, Alfred
Action: APPROVED

(f).Regular County Bills - check #498229 through check #498437.

SEE ATTACHMENTS ON PAGES 1387 - 1395

Motion by: Sinegal
Second by: Pierce
In Favor: Branick, Pierce, Bush, Sinegal, Alfred
Action: APPROVED

COUNTY CLERK:

(a).Consider and possibly approve the appointment of Presiding and Alternate Election Judges for the November 8, 2022 General and Joint Election. These Judges are appointed for a two year period beginning September 1, 2022. Vacancies may be filled by a supplemental list during this two year period.

SEE ATTACHMENTS ON PAGES 1396 - 1402

Motion by: Pierce
Second by: Bush
In Favor: Branick, Pierce, Bush, Sinegal, Alfred
Action: APPROVED

(b).Consider and possibly approve, execute receive and file a Joint Election Agreement and Election Services Contract between Jefferson County and the City of Bevil Oaks for the election to be held on November 8, 2022.

SEE ATTACHMENTS ON PAGES 1403 - 1412, AND 1433

Motion by: Pierce
Second by: Bush
In Favor: Branick, Pierce, Bush, Sinegal, Alfred
Action: APPROVED

(c).Consider and possibly approve, execute, receive and file a Joint Election Agreement and Election Services Contract between Jefferson County and the Beaumont Municipal Management District No 1 for the election to be held on November 8, 2022.

SEE ATTACHMENTS ON PAGES 1413 - 1422

Motion by: Pierce
Second by: Bush
In Favor: Branick, Pierce, Bush, Sinegal, Alfred
Action: APPROVED

COUNTY COMMISSIONERS:

(a). Consider and possibly approve a Proclamation for Gift of Life 2022 Prostate Cancer Awareness Month.

SEE ATTACHMENTS ON PAGES 1423 - 1424

Motion by: Bush
Second by: Pierce
In Favor: Branick, Pierce, Bush, Sinegal, Alfred
Action: APPROVED

ENGINEERING DEPARTMENT:

(a).Consider and possibly approve the Final Plat of Highland Village Phase 1A, Block 2, (Lots 27 – 35), Block 3, (Lots 1– 9). Being a 4.284 Acre Subdivision out of a 385.53 Acre Tract. Recorded in Doc. No. 2020018894 O.P.R.J.C.T. in the Alexander Horton Survey, A-20 Jefferson County, Texas. The subdivision is located off of State Highway 365 in Precinct #1. Additionally, this subdivision is partially located in the City of Nome City Limits and the City of Nome ETJ. This Final Plat has met all of Jefferson County and City of Nome requirements.

SEE ATTACHMENTS ON PAGES 1425 - 1426

Motion by: Pierce
Second by: Sinegal
In Favor: Branick, Pierce, Bush, Sinegal, Alfred
Action: APPROVED

HISTORICAL COMMISSION:

(a). Consider and possibly approve a donation to the Jefferson County Historical Commission of several issues of the Southwestern Historical Quarterly from Judge John Stevens.

SEE ATTACHMENTS ON PAGES 1427 - 1427

Motion by: Sinegal
Second by: Alfred
In Favor: Branick, Pierce, Bush, Sinegal, Alfred
Action: APPROVED

(b). Consider and possibly approve a donation to the Jefferson County Historical Commission of twenty yearbooks (various editions from years 1917-1951) from the South Park Heritage Association.

SEE ATTACHMENTS ON PAGES 1428 - 1429

Motion by: Sinegal
Second by: Alfred
In Favor: Branick, Pierce, Bush, Sinegal, Alfred
Action: APPROVED

HUMAN RESOURCES:

(a). Consider and possibly approve Resolution commending Cary Erickson for 29 years of dedicated service to Jefferson County and wishing him well in his retirement.

SEE ATTACHMENTS ON PAGES 1430 - 1430

Motion by: Alfred
Second by: Bush
In Favor: Branick, Pierce, Bush, Sinegal, Alfred
Action: APPROVED

(b). Consider and possibly approve appointment of Verenice Rosales to the position of Director of Human Resources and Risk Management at a starting salary of $8,605/month, along with the associated cell phone and car allowances. Appointment to begin September 1, 2022.

NO ATTACHMENTS

Motion by: Alfred
Second by: Bush
In Favor: Branick, Pierce, Bush, Sinegal, Alfred
Action: APPROVED

SHERIFF'S DEPARTMENT:

(a). Consider and possibly approve a Resolution for Kenneth H. Briggs a Corrections Officer for 32 years and 9 months of service and wishing him well in his retirement.

SEE ATTACHMENTS ON PAGES 1431 - 1432

Motion by: Bush
Second by: Alfred
In Favor: Branick, Pierce, Bush, Sinegal, Alfred
Action: APPROVED

OTHER BUSINESS:

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

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

_____

Jeff R. Branick
County Judge

Special, August 30, 2022

There being no further business to come before the Court at this time, same is now here adjourned on this date, August 30, 2022.

JEFFERSON COUNTY PURCHASING DEPARTMENT
Deborah L. Clark, Purchasing Agent

1149 Pearl Street
1st Floor, Beaumont, TX 77701

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

LEGAL NOTICE
Advertisement for Invitation for Bids

August 30, 2022

Notice is hereby given that sealed bids will be accepted by the Jefferson County Purchasing Department for Invitation for Bid **(IFB 22-046/MR) Term Contract for Trash and Biomedical Waste Container Service for Jefferson County** Specifications for this project may be obtained from the Jefferson County website, https://www.co.jefferson.tx.us/Purchasing/ or by calling 409-835-8593.

Bids are to be sealed and addressed to the Purchasing Agent with the bid number and name marked on the outside of the envelope or box. Bidders shall forward an original and two (2) copies of their bid to the address shown below. Jefferson County does not accept bids submitted electronically. Late bids will be rejected as non-responsive. Bids will be publicly opened and read aloud in the Jefferson County Engineering Department Conference Room (5th Floor, Historic Courthouse) 1149 Pearl Street, Beaumont, Texas 77701, at the time and date below. Bidders are invited to attend the sealed bid opening.

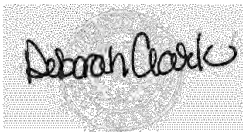
BID NAME:	**Term Contract for Trash and Biomedical Waste Container Service for Jefferson County**
BID NUMBER:	**IFB 22-046/MR**
DUE BY TIME/DATE:	**11:00 AM CT, Wednesday, September 21, 2022**
MAIL OR DELIVER TO:	**Jefferson County Purchasing Department** **1149 Pearl Street, 1st Floor** **Beaumont, Texas 77701**

Any questions relating to these bid requirements should be directed to Mistey Reeves, Assistant Purchasing Agent at 409-835-8593 or via email at: mreeves@co.jefferson.tx.us. If no answer in 72 hours, contact Deborah Clark, Purchasing Agent at 409-835-8593 or via email at: dclark@co.jefferson.tx.us.

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

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

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



Deborah L. Clark, Purchasing Agent
Jefferson County, Texas

PUBLISH:
Beaumont Enterprise & Port Arthur News:
August 31st & September 7th , 2022
Examiner **September 8, 2022**

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BID SUBMISSIONS:

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

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

Additionally, Bidder shall monitor the Jefferson County Purchasing Department Website for any addenda, additional instructions, or bid updates. https://www.co.jefferson.tx.us/Purchasing/

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

SECTION 1: GENERAL CONDITIONS OF BIDDING AND TERMS OF CONTRACT

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

1. BIDDING.

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

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

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

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

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

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

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

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

1.9 DESCRIPTIONS.

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

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

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

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

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

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

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

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

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

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

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

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

1.19 RESPONSIBLE STANDING OF BIDDER.

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

1.20 CONFIDENTIAL/PROPRIETARY INFORMATION.

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

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

1.21 PUBLIC BID OPENING.

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

2. PERFORMANCE.

2.1 DESIGN, STRENGTH, AND QUALITY.

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

2.2 AGE AND MANUFACTURE.

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

2.3 DELIVERY LOCATION.

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

2.4 DELIVERY SCHEDULE.

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

2.5 DELIVERY CHARGES.

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

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

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

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

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

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

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

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

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

2.14 MAINTENANCE.
Maintenance required for equipment bid should be available in Jefferson County by a manufacturer authorized maintenance facility. Cost for this service shall be shown on the bid sheet as requested or on a separate sheet, as required. If Jefferson County opts to include maintenance, it shall be so stated in the purchase order and said cost

will be included. Service will commence only upon expiration of applicable warranties and should be priced accordingly.

2.15 MATERIAL SAFETY DATA SHEETS.

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

2.16 EVALUATION.

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

3. PURCHASE ORDERS AND PAYMENT.

3.1 PURCHASE ORDERS.

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

3.2 INVOICES.

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

3.3 PROMPT PAYMENT.

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

3.4 FUNDING.

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

4. CONTRACT.

4.1 CONTRACT DEFINITION.

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

4.2 CHANGE ORDER.

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

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

4.3 PRICE RE-DETERIMINATION.

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

4.4 TERMINATION.

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

4.5 CONFLICT OF INTEREST.

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

4.6 INTEREST BY PUBLIC OFFICIALS.

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

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

The Jefferson County Purchasing Department will be the primary pre-bid contact for this Invitation for Bid, unless otherwise specified within these bid specifications. If not written within these specifications, Potential Bidders/Vendors shall not visit or conduct discussions with other County Departments or representatives.

The Jefferson County Purchasing Department expects to conduct discussions with vendor's representatives authorized to contractually obligate the vendor with an offer. **Vendors shall not contact any Jefferson County personnel during the IFB process without the express permission from the Jefferson County Purchasing Agent**. **The Purchasing Agent will disqualify any vendor who has made site visits, contacted Jefferson County personnel, or distributed any literature without authorization from the Jefferson County Purchasing Department.**

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

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

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

4.8 INJURIES OR DAMAGES RESULTING FROM NEGLIGENCE.

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

4.9 WARRANTY.

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

4.10 UNIFORM COMMERCIAL CODE.

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

4.11 VENUE.

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

4.12 SALE, ASSIGNMENT, OR TRANSFER OF CONTRACT.

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

4.13 SILENCE OF SPECIFICATIONS.

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

5. REJECTION OR WITHDRAWAL.

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

6. EMERGENCY/DECLARED DISASTER REQUIREMENTS.

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

supplier(s).

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

7. AWARD.

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

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

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

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

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

8. CONTRACT.

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

9. WAIVER OF SUBROGATION.

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

10. FISCAL FUNDING.

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

11. BID RESULTS.

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

12. CHANGES AND ADDENDA TO BID DOCUMENTS.

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

13. SPECIFICATIONS.

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

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

14. DELIVERY.

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

15. INTERPRETATION OF BID AN/OR CONTRACT DOCUMENTS.

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

16. CURRENCY.

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

17. PRICING.

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

18. NOTICE TO PROCEED/PURCHASE ORDER.

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

19. CERTIFICATION.

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

- The submission of the offer did not involve collusion or other anti-competitive practices.

- The Bidder has not given, offered to give, nor intends to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to any public servant in connection with the submitted offer.

- The Bidder hereby certifies that the individual signing the bid is an authorized agent for the Bidder and has the authority to bind the Bidder to the contract.

20. DEFINITIONS.

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

21. MINORITY-OWNED (MWBE), WOMEN-OWNED (WBE) AND HISTORICALLY UNDERUTILIZED (HUB) BUSINESS ENTERPRISE PARTICIPATION.

It is the desire of Jefferson County to increase the participation of Minority-Owned (MBE) , Women-Owned (WBE), and Historically Underutilized (HUB) business enterprises in its contracting and procurement programs. While the County does not have any preference or set aside programs in place, it is committed to a policy of equitable participation for these firms.

REMEDIES

(For all awarded contracts with a value greater than $150,000.00)

Any violation or breach of terms of this contract on the part of the Contractor or the Contractor's subcontractors may result in the suspension or termination of this contract or such other action that may be necessary to enforce the rights of the parties of this contract. The duties and obligations imposed by the contract documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law. Any violation or breach of terms of this contract of the Contractor or the Contractor's sub-contractors will be subject to the remedies, including liquidated damages, described in the bid specifications or Request for Proposal and the Client rules and regulations and special conditions which are incorporated herein by reference in their entirety.

TERMINATION FOR CAUSE AND CONVENIENCE

(For all awarded contracts with a value greater than $10,000.00)

The Client reserves the right to terminate this contract for cause or convenience pursuant to the rules and regulations and special conditions which are incorporated herein by reference in their entirety.

EQUAL EMPLOYMENT OPPORTUNITY

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

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

1. The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:
Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this non-discrimination clause.

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

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

4. The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor

union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

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

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

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

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

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

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

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

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

DAVIS-BACON ACT AND COPELAND "ANTI-KICKBACK" ACT

(The Davis-Bacon Act only applies to the Emergency Management Preparedness Grant Program, Homeland Security Grant Program, Nonprofit Security Grant Program, Tribal Homeland Security Grant Program, Port Security Grant Program, and Transit Security Grant Program. It DOES NOT apply to other FEMA grant and cooperative agreement programs, including the Public Assistance Program.

1. ***Minimum wages.***

i. All laborers and mechanics employed or working upon the site of the work (or under the United States Housing Act of 193 7 or under the Housing Act of 1949 in the construction or development of the project), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage dete1mination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1 (b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(l)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in §5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided,* that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph (a)(l)(ii) of this section) and the Davis Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

ii. (A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination, and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

2) The classification is utilized in the area by the construction industry; and

3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their

representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D)The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(l)(ii) (B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

i. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

ii. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided,* That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. ***Withholding.***

The Federal Agency and/or Client shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work (or under the United States Housing Act of 193 7 or under the Housing Act of 1949 in the construction or development of the project), all or part of the wages required by the contract, the (Agency) may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. ***Payrolls and basic records.***

i. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the project). Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section l (b) (2) (B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(l)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section l(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

ii. (A) The contractor shall submit weekly for each week in which any contract work is performed a copy of

all payrolls to the federal agency if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant, sponsor, or owner, as the case may be, for transmission to the federal agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee *(e.g.,* the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at *http://www.dol.gov/esa/whd(forms/wh347instr.htm* or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the federal agency if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit them to the applicant, sponsor, or owner, as the case may be, for transmission to the federal agency, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the sponsoring government agency (or the applicant, sponsor, or owner).

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

1) That the payroll for the payroll period contains the information required to be provided under §5.5 (a) (3) (ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a) (3) (i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the “Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

i. The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the federal agency or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. ***Apprentices and trainees.***

i. ***Apprentices.*** Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractors registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

ii. ***Trainees.*** Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

iii. ***Equal employment opportunity***. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as

amended, and 29 CFR part 30.

5. ***Compliance with Copeland Act requirements.***

The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. ***Subcontracts.***

The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a) (l) through (10) and such other clauses as FEMA may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. ***Contract termination: debarment.***

A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. ***Compliance with Davis-Bacon and Related Act requirements.***

All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. ***Breach.***

A breach of the contract clauses above may be grounds for termination of the contract, and for debarment as a contractor and subcontractor as provided in 29 C.F.R. § 5.12.

10. ***Disputes concerning labor standards.***

Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

11. ***Certification of eligibility.***

1) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis Bacon Act or 29 CFR 5.12(a)(l).

2) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(l).

3) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

(For all awarded contracts related to "mechanics and laborers" with a value greater than $100,000.00)

1) **Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2) **Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual

laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of $27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.

3) **Withholding for unpaid wages and liquidated damages.** The (write in the name of the Federal agency or the loan or grant recipient) shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.
4) **Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section.

RIGHTS TO INVENTIONS MADE UNDER A CONTRACT OR AGREEMENT

(This requirement **does not apply** to the Public Assistance, Hazard Mitigation Grant Program, Fire Management Assistance Grant Program, Crisis Counseling Assistance and Training Grant Program, Disaster Case Management Grant Program, and Federal Assistance to Individuals and Households - Other Needs Assistance Grant Program, as FEMA awards under these programs do not meet the definition of "funding agreement." If FEMA federal award meets definition of "funding agreement" under 37 CFR §401.2(a), for all awarded contracts related to experimental, developmental, or research work type contracts)

(a) Definitions

(1) *Invention* means any invention or discovery which is or may be patentable or otherwise protectable under Title 35 of the United States Code, or any novel variety of *et seq.).*
(2) *Subject invention* means any invention of the *contractor* conceived or first actually reduced to practice in the performance of work under this *contract,* provided that in the case of a variety of plant, the date of determination (as defined in section 41(d) of the Plant Variety Protection Act, 7 U.S.C. 240l (d)) must also occur during the period of *contract* performance.
(3) *Practical Application* means to manufacture in the case of a composition or product, to practice in the case of a process or method, or to operate in the case of a machine or system; and, in each case, under such conditions as to establish that the invention is being utilized and that its benefits are, to the extent permitted by law or government regulations, available to the public on reasonable terms.
(4) *Made* when used in relation to any invention means the conception or first actual reduction to practice of such invention.
(5) *Small Business Firm* means a small business concern as defined at section 2 of Pub. L. 85-536 (15 U.S.C. 632) and implementing regulations of the Administrator of the Small Business Administration. For the purpose of this clause, the size standards for small business concerns involved in government procurement and subcontracting at 13 CFR 121.3-8 and 13 CFR 121.3- 12, respectively, will be used.
(6) *Nonprofit Organization* means a university or other institution of higher education or an organization of the type described in section 501 (c) {3) of the Internal Revenue Code of 1954 (26 U.S.C. 501(c) and exempt from taxation under section 501(a) of the Internal Revenue Code (25 U.S.C. 501(a)) or any nonprofit scientific or educational organization qualified under a state nonprofit organization statute.

(b) Allocation of Principal Rights

The *Contractor* may retain the entire right, title, and interest throughout the world to each subject invention

subject to the provisions of this clause and 35 U.S.C. 203. With respect to any subject invention in which the *Contractor* retains title, the Federal government shall have a nonexclusive, non-transferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the subject invention throughout the world.

(c) Invention Disclosure, Election of Title and Filing of Patent Application by *Contractor*

(1) The *contractor* will disclose each subject invention to the *Federal Agency* within two months after the inventor discloses it in writing to *contractor* personnel responsible for patent matters. The disclosure to the agency shall be in the form of a written report and shall identify the *contract* under which the invention was made and the inventor(s). It shall be sufficiently complete in technical detail to convey a clear understanding to the extent known at the time of the disclosure, of the nature, purpose, operation, and the physical, chemical, biological or electrical characteristics of the invention. The disclosure shall also identify any publication, on sale or public use of the invention and whether a manuscript describing the invention has been submitted for publication and, if so, whether it has been accepted for publication at the time of disclosure. In addition, after disclosure to the *agency,* the *Contractor* will promptly notify the *agency* of the acceptance of any manuscript describing the invention for publication or of any on sale or public use planned by the *contractor.*

(2) The *Contractor* will elect in writing whether or not to retain title to any such invention by notifying the *Federal agency* within two years of disclosure to the *Federal agency.* However, in any case where publication, on sale or public use has initiated the one-year statutory period wherein valid patent protection can still be obtained in the United States, the period for election of title may be shortened by the *agency* to a date that is no more than 60 days prior to the end of the statutory period.

(3) The *contractor* will file its initial patent application on a subject invention to which it elects to retain title within one year after election of title or, if earlier, prior to the end of any statutory period wherein valid patent protection can be obtained in the United States after a publication, on sale, or public use. The *contractor* will file patent applications in additional countries or international patent offices within either ten months of the corresponding initial patent application or six months from the date permission is granted by the Commissioner of Patents and Trademarks to file foreign patent applications where such filing has been prohibited by a Secrecy Order.

(4) Requests for extension of the time for disclosure, election, and filing under subparagraphs (1), (2), and (3) may, at the discretion of the *agency,* be granted.

(d) Conditions When the Government May Obtain Title

The *contractor* will convey to the *Federal agency,* upon written request, title to any subject invention-

(1) If the *contractor* fails to disclose or elect title to the subject invention within the times specified in (c), above, or elects not to retain title; provided that the *agency* may only request title within 60 days after learning of the failure of the *contractor* to disclose or elect within the specified times.

(2) In those countries in which the *contractor* fails to file patent applications within the times specified in (c) above; provided, however, that if the *contractor* has filed a patent application in a country after the times specified in (c) above, but prior to its receipt of the written request of the *Federal agency,* the *contractor* shall continue to retain title in that country.

(3) In any country in which the *contractor* decides not to continue the prosecution of any application for, to pay the maintenance fees on, or defend in reexamination or opposition proceeding on, a patent on a subject invention.

(e) Minimum Rights to *Contractor* and Protection of the *Contractor* Right to File

(1) The *contractor* will retain a nonexclusive royalty-free license throughout the world in each subject invention to which the Government obtains title, except if the *contractor* fails to disclose the invention within the times specified in (c), above. The *contractor's* license extends to its domestic subsidiary and affiliates, if any, within the corporate structure of which the *contractor* is a party and includes the right to grant sublicenses of the same scope to the extent the *contractor* was legally obligated to do so at the time the *contract* was awarded. The license is transferable only with the approval of the *Federal* to

which the invention pertains.

(2) The *contractor's* domestic license may be revoked or modified by the *funding Federal agency* to the extent necessary to achieve expeditious practical application of the subject invention pursuant to an application for an exclusive license submitted in accordance with applicable provisions at 37 CFR part 404 and *agency* licensing regulations (if any). This license will not be revoked in that field of use or the geographical areas in which the *contractor* has achieved practical application and continues to make the benefits of the invention reasonably accessible to the public. The license in any foreign country may be revoked or modified at the discretion of the *funding Federal agency* to the extent the *contractor,* its licensees, or the domestic subsidiaries or affiliates have failed to achieve practical application in that foreign country.

(3) Before revocation or modification of the license, the *funding Federal agency* will furnish the *contractor* a written notice of its intention to revoke or modify the license, and the *contractor* will be allowed thirty days (or such other time as may be authorized by the *funding Federal agency* for good cause shown by the *contractor)* after the notice to show cause why the license should not be revoked or modified. The *contractor* has the right to appeal, in accordance with applicable regulations in 37 CFR part 404 and *agency* regulations (if any) concerning the licensing of Government-owned inventions, any decision concerning the revocation or modification of the license.

(f) *Contractor* Action to Protect the Government's Interest

(1) The *contractor* agrees to execute or to have executed and promptly deliver to the *Federal agency* all instruments necessary to

(i) establish or confirm the rights the Government has throughout the world in those subject inventions to which the *contractor* elects to retain title, and

(ii) convey title to the *Federal agency* when requested under paragraph (d) above and to enable the government to obtain patent protection throughout the world in that subject invention.

(2) The *contractor* agrees to require, by written agreement, its employees, other than clerical and nontechnical employees, to disclose promptly in writing to personnel identified as responsible for the administration of patent matters and in a format suggested by the *contractor* each subject invention made under *contract* in order that the *contractor* can comply with the disclosure provisions of paragraph (c), above, and to execute all papers necessary to file patent applications on subject inventions and to establish the government's rights in the subject inventions. This disclosure format should require, as a minimum, the information required by (c) (l), above. The *contractor* shall instruct such employees through employee agreements or other suitable educational programs on the importance of reporting inventions in sufficient time to permit the filing of patent applications prior to U.S. or foreign statutory bars.

(3) The *contractor* will notify the *Federal agency* of any decisions not to continue the prosecution of a patent application, pay maintenance fees, or defend in a reexamination or opposition proceeding on a patent, in any country, not less than thirty days before the expiration of the response period required by the relevant patent office.

(4) The *contractor* agrees to include, within the specification of any United States patent applications and any patent issuing thereon covering a subject invention, the following statement, "This invention was made with government support under (identify the *contract)* awarded by (identify the Federal agency). The government has certain rights in the invention."

(g) Subcontracts

(1) The *contractor* will include this clause, suitably modified to identify the parties, in all subcontracts, regardless of tier, for experimental, developmental or research work. The subcontractor will retain all rights provided for the *contractor* in this clause, and the *contractor* will not, as part of the consideration for awarding the subcontract, obtain rights in the subcontractor's subject inventions.

(2) In the case of subcontracts, at any tier, when the prime award with the Federal agency was a contract (but not a grant or cooperative agreement), the *agency,* subcontractor, and the contractor agree that the mutual obligations of the parties created by this clause constitute a contract between the subcontractor and the Federal agency with respect to the matters covered by the clause; provided, however, that nothing in this paragraph is intended to confer any jurisdiction under the Contract Disputes Act in connection with proceedings under paragraph (i) of this clause.

(h) Reporting on Utilization of Subject Inventions

The *Contractor* agrees to submit on request periodic reports no more frequently than annually on the utilization of a subject invention or on efforts at obtaining such utilization that are being made by the *contractor* or its licensees or assignees. Such reports shall include information regarding the status of development, date of first commercial sale or use, gross royalties received by the contractor, and such other data and information as the *agency* may reasonably specify. The *contractor* also agrees to provide additional reports as may be requested by the *agency* in connection with any march-in proceeding undertaken by the *agency* in accordance with paragraph (i) of this clause. As required by 35 U.S.C. 202(c) (5), the *agency* agrees it will not disclose such information to persons outside the government without permission of the *contractor.*

(i) Preference for United States Industry

Notwithstanding any other provision of this clause, the *contractor* agrees that neither it nor any assignee will grant to any person the exclusive right to use or sell any subject inventions in the United States unless such person agrees that any products embodying the subject invention or produced through the use of the subject invention will be manufactured substantially in the United States. However, in individual cases, the requirement for such an agreement may be waived by the *Federal agency* upon a showing by the *contractor* or its assignee that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible.

(j) March-in Rights

The *contractor* agrees that with respect to any subject invention in which it has acquired title, the *Federal agency* has the right in accordance with the procedures in 37 CFR 401.6 and any supplemental regulations of the *agency* to require the *contractor,* an assignee or exclusive licensee of a subject invention to grant a nonexclusive, partially exclusive, or exclusive license in any field of use to a responsible applicant or applicants, upon terms that are reasonable under the circumstances, and if the *contractor,* assignee, or exclusive licensee refuses such a request the *Federal agency* has the right to grant such a license itself if the *Federal agency* determines that:

(1) Such action is necessary because the *contractor* or assignee has not taken or is not expected to take within a reasonable time, effective steps to achieve practical application of the subject invention in such field of use.

(2) Such action is necessary to alleviate health or safety needs which are not reasonably satisfied by the *contractor,* assignee or their licensees;

(3) Such action is necessary to meet requirements for public use specified by Federal regulations and such requirements are not reasonably satisfied by the *contractor,* assignee or licensees; or

(4) Such action is necessary because the agreement required by paragraph (i) of this clause has not been obtained or waived or because a licensee of the exclusive right to use or sell any subject invention in the United States is in breach of such agreement.

(k) Special Provisions for *Contracts* with Nonprofit Organizations

If the *contractor* is a nonprofit organization, it agrees that:

(1) Rights to a subject invention in the United States may not be assigned without the approval of the *Federal agency,* except where such assignment is made to an organization which has as one of its

primary functions the management of inventions, provided that such assignee will be subject to the same provisions as the *contractor;*

(2) The *contractor* will share royalties collected on a subject invention with the inventor, including Federal employee co-inventors (when the agency deems it appropriate) when the subject invention is assigned in accordance with 35 U.S.C. 202(e) and 37 CFR 401.10;

(3) The balance of any royalties or income earned by the *contractor* with respect to subject inventions, after payment of expenses (including payments to inventors) incidental to the administration of subject inventions, will be utilized for the support of scientific research or education; and

(4) It will make efforts that are reasonable under the circumstances to attract licensees of subject invention that are small business firms and that it will give a preference to a small business firm when licensing a subject invention if the *contractor* determines that the small business firm has a plan or proposal for marketing the invention which, if executed, is equally as likely to bring the invention to practical application as any plans or proposals from applicants that are not small business firms; provided, that the *contractor* is also satisfied that the small business firm has the capability and resources to carry out its plan or proposal. The decision whether to give a preference in any specific case will be at the discretion of the *contractor.* However, the *contractor* agrees that the Secretary applicants, and the *contractor* will negotiate changes to its licensing policies, procedures, or practices with the Secretary when the Secretary's review discloses that the *contractor* could take reasonable steps to implement more effectively the requirements of this paragraph (k)(4).

(l) Communication

Any communications to be given hereunder by either party to the other shall be deemed to be duly given if set forth in writing and personally delivered or sent by mail, registered or certified, postage prepaid with return receipt requested, as follows(vendor's address):

_____

_____

_____

_____

Written notices hereunder delivered personally shall be deemed communicated as of actual receipt; mailed notices shall be deemed communicated five (5) days after deposit in the mail, post prepaid, certified, in accordance with this Paragraph.

CLEAN AIR ACT

(For all awarded contracts with a value greater than $150,000.00)

(m) The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.

(n) The contractor agrees to report each violation to the (name of applicant entering into the contract) and understands and agrees that the (name of the applicant entering into the contract) will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.

(o) The contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with Federal assistance provided by FEMA.

FEDERAL WATER POLLUTION CONTROL ACT

(For all awarded contracts with a value greater than $150,000.00)

(1) The contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.

(2) The contractor agrees to report each violation to the (name of the applicant entering into the contract)

and understands and agrees that the (name of the applicant entering into the contract) will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.

(3) The contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with Federal assistance provided by FEMA.

DEBARMENT AND SUSPENSION ***Contractor must complete enclosed certification***

(1) This contract is a covered transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such, the contractor is required to verify that none of the contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).

(2) The contractor must comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.

(3) This certification is a material representation of fact relied upon by Client. If it is later determined that the contractor did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to (insert name of recipient/subrecipient/applicant), the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.

(4) The bidder or proposer agrees to comply with the requirements of 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

BYRD ANTI-LOBBYING AMENDMENT

(For all awarded contracts with a value greater than $100,000.00.) ***Contractor must complete enclosed certification***

Byrd Anti-Lobbying Amendment, 31 U.S.C. § 1352 (as amended) Contractors who apply or bid for an award of $100,000 or more shall file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certification(s) to the awarding agency.

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

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

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

(3) Contractor will include language of this certification in all subcontract awards at any tier and require that all recipients of subcontract awards in excess of $150,000.00 shall certify and disclose accordingly.

PROCUREMENT OF RECOVERED MATERIALS

(The requirements of Section 6002 include procuring only items designated in guidelines of the EPA at 40

C.F.R. Part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds $10,000 or the value of the quantity acquired by the preceding fiscal year exceeded $10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.)

(1) In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA designated items unless the product cannot be acquired:

   a) Competitively within a timeframe providing for compliance with the contract performance schedule;

   b) Meeting contract performance requirements; or

   c) At a reasonable price.

(2) Information about this requirement is available at EPA's Comprehensive Procurement Guidelines website, http://www.epa.gov/cpg/.

   The list of EPA-designate items is available at http://www.epa.gov/cpg/products.htm.

(3) The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the "Solid Waste Disposal Act."

ACCESS TO RECORDS

The following access to records requirements apply to this contract:

(1) The Contractor agrees to provide the Client, the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions.

(2) The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.

(3) The Contractor agrees to provide the FEMA Administrator or his authorized representatives access to construction or other work sites pertaining to the work being completed under the contract.

(4) In compliance with the Disaster Recovery Act of 2018, the Client and the Contractor acknowledge and agree that no language in this contract is intended to prohibit audits or internal reviews by the FEMA Administrator or the Comptroller General of the United States.

CHANGES

To be eligible for FEMA assistance under the non-Federal entity's FEMA grant or cooperative agreement, the cost of the change, modification, change order, or constructive change must be allowable, allocable, within the scope of its grant or cooperative agreement, and reasonable for the completion of project scope.

FEMA recommends, therefore, that a non-Federal entity include a changes clause in its contract that describes how, if at all, changes can be made by either party to alter the method, price, or schedule of the work without breaching the contract. The language of the clause may differ depending on the nature of the contract and the end-item procured.

DHS SEAL, LOGO, AND FLAGS

The contractor shall not use the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials without specific FEMA pre-approval.

COMPLIANCE WITH FEDERAL LAW, REGULATIONS, AND EXECUTIVE ORDERS

This is an acknowledgement that FEMA financial assistance will be used to fund all or a portion of the contract. The contractor will comply with all applicable Federal law, regulations, executive orders, FEMA policies, procedures, and

directives.

NO OBLIGATION BY FEDERAL GOVERNMENT

The Federal Government is not a party to this contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract.

PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS OR RELATED ACTS

The Contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to the Contractor's actions pertaining to this contract.

PROHIBITION ON CONTRACTING FOR COVERED TELECOMMUNICATIONS EQUIPMENT OR SERVICES

2 C.F.R. § 200.216, as implemented by FEMA Policy 405-143-1, prohibits the Contractor from using equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system.

DOMESTIC PREFERENCES FOR PROCUREMENTS

As appropriate and to the extent consistent with law, the Contractor agrees, to the greatest extent practicable, prefer the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products).

AFFIRMATIVE SOCIOECONOMIC STEPS

If subcontracts are to be let, the prime contractor is required to take all necessary steps identified in 2 C.F.R. § 200.321(b)(1)-(5) to ensure that small and minority businesses, women's business enterprises, and labor surplus area firms are used when possible.

COPYRIGHT AND DATA RIGHTS

"License and Delivery of Works Subject to Copyright and Data Rights"

The Contractor grants to the Client a paid-up, royalty-free, nonexclusive, irrevocable, worldwide license in data first produced in the performance of this contract to reproduce, publish, or otherwise use, including prepare derivative works, distribute copies to the public, and perform publicly and display publicly such data. For data required by the contract but not first produced in the performance of this contract, the Contractor will identify such data and grant to the Client or acquires on its behalf a license of the same scope as for data first produced in the performance of this contract. Data, as used herein, shall include any work subject to copyright under 17 U.S.C. § 102, for example, any written reports or literary works, software and/or source code, music, choreography, pictures or images, graphics, sculptures, videos, motion pictures or other audiovisual works, sound and/or video recordings, and architectural works. Upon or before the completion of this contract, the Contractor will deliver to the Client data first produced in the performance of this contract and data required by the contract but not first produced in the performance of this contract in formats acceptable by the Client."

BYRD ANTI-LOBBYING CERTIFICATION

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

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

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

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

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

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

_____

Signature of Contractor's Authorized Official

_____

Name and Title of Contractor's Authorized Official

_____

Date

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

DEBARMENT/SUSPENSION CERTIFICATION

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

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

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

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

_____

Signature of Contractor's Authorized Official

_____

Name and Title of Contractor's Authorized Official

_____

Date

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

CIVIL RIGHTS COMPLIANCE PROVISIONS

1. EQUAL EMPLOYMENT OPPORTUNITY (Equal Opportunity Clause)

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

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

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

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

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

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

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

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

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

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

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

CIVIL RIGHTS COMPLIANCE PROVISIONS (CONTINUED)

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

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

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

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

_____

Signature of Contractor's Authorized Official

_____

Name and Title of Contractor's Authorized Official

_____

Date

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

SECTION 3: SPECIAL REQUIREMENTS/BID SUBMISSION INSTRUCTIONS

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

1. SUBMISSION OF BID.

Bidder is Responsible for Submitting:

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

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

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

Additionally, Bidder shall monitor the Jefferson County Purchasing Department Website for any addenda, additional instructions, or bid updates. https://www.co.jefferson.tx.us/Purchasing/

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

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

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

All submissions must be received by 11:00 am CT, Wednesday, September 21, 2022

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

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

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

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

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

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

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

COUNTY HOLIDAYS (2022):

January 17, 2022	Martin Luther King, Jr. Day	Monday
February 21, 2022	President's Day	Monday
April 15, 2022	Good Friday	Friday
May 30, 2022	Memorial Day	Monday
July 4, 2022	Independence Day	Monday
September 5, 2022	Labor Day	Monday
November 11, 2022	Veteran's Day	Friday
November 24 & 25, 2022	Thanksgiving	Thursday & Friday
December 23 & 26, 2022	Christmas	Friday & Monday
January 2, 2023	New Year's	Monday

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

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

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

2. PRE-BID MEETING AND WALK-THROUGH.

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

3. QUESTIONS/DEADLINE FOR QUESTIONS.

Questions may be emailed to **Mistey Reeves, Assistant Purchasing Agent** at: mreeves@co.jefferson.tx.us
The Deadline for asking questions or requesting additional information (in writing) is 5:00 pm, CT, Wednesday, September 14, 2022**.**

4. VENDOR REGISTRATION (System for Award Management).

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

In instances where a vendor has either an "Inactive" SAM Registration or is not currently registered with the System for Award Management, the Purchasing Department may *initially* accept proof (printout from the SAM website) that the vendor has begun the registration process in order for the IFB/RFQ/RFP submission to be considered as "responsive" to the specifications for the project.

However, the SAM Registration must be completed (showing "active" status, with no exclusions) prior to the award and/or execution of an agreement or contract for the project.

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

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

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

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

A sample of a completed FORM 1295 is included on **PAGE 35**.

FORM 1295 Implementation Background:

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

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

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

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

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

FORM 1295 EXEMPTIONS:

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

A completed Form 1295 is not required for:

• a sponsored research contract of an institution of higher education

• an interagency contract of a state agency or an institution of higher education

• a contract related to health and human services if: the value of the contract cannot be determined at the time the contract is executed; and any qualified vendor is eligible for the contract

• a contract with a publicly traded business entity, including a wholly owned subsidiary of the business entity

• a contract with an electric utility, as that term is defined by Section 31.002, Utilities Code

• a contract with a gas utility, as that term is defined by Section 121.001, Utilities Code

SAMPLE: FORM 1295

CERTIFICATE OF INTERESTED PARTIES — FORM 1295

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

OFFICE USE ONLY

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

YOUR FIRM NAME HERE

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

**JEFFERSON COUNTY, TEXAS*

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

BID/CONTRACT/PO NUMBER GOES HERE

4 Name of Interested Party	City, State, Country (place of business)	Nature of Interest (check applicable)	
		Controlling	Intermediary
NAME OF PERSON/PERSONS THAT OWN BUSINESS GOES HERE. MUST LIST ANY PERSON THAT DOES NOT WORK FOR THE COMPANY LISTED IN #1 THAT WILL PROFIT FROM THE BID/CONTRACT/PO			

5 Check only if there is NO Interested Party. ☐ **ONLY CHECK IF NO CONTROLLING OR INTERMEDIARY PARTY**

6 UNSWORN DECLARATION — Vendor is to complete #6 - Unsworn Declaration

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

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

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

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

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

ADD ADDITIONAL PAGES AS NECESSARY

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

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

<u>BIDDER</u>: INSERT COMPLETED FORM 1295 BEHIND THIS PAGE.

<u>BIDDER</u>: INSERT PROOF OF SYSTEM FOR AWARD MANAGEMENT (SAM) REGISTRATION PROOF HERE.

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

6. MULTIPLE VENDOR AWARD.

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

7. DELIVERY.

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

8. PAYMENT.

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

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

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

9. USAGE REPORTS.

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

10. INSURANCE.

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

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

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

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

Minimum Insurance Requirements:

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

Property Insurance (policy below that is applicable to this project):

Improvements & Betterments Policy: Improvements/Remodeling (for Lease Tenants)
Builder's Risk Policy: Structural Coverage for Construction Projects
Installation Floater Policy: Improvements/Alterations to Existing Structure

Workers' Compensation Statutory Coverage (See Section 9 Below)

11. WORKERS' COMPENSATION INSURANCE

11.1 Definitions:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BIDDER INFORMATION FORM

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

Bid Number & Name: (IFB 22-046/MR) Term Contract for Trash and Biomedical Waste Container Service for Jefferson County

Bidder's Company/Business Name: _____

Bidder's TAX ID Number: _____

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

Contact Person: _____ **Title:** _____

Phone Number (with area code): _____

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

Fax Number (with area code):_____

Email Address: _____

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

_____
Address

_____
City, State, Zip Code

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

SECTION 4: MINIMUM SPECIFICATIONS

The following requirements and specifications supersede General Bid Requirements where applicable. Any questions relating to bid submission or bid item specifications requirements should be directed to Mistey Reeves, Assistant Purchasing Agent at 409-835-8593 or via email at: mreeves@co.jefferson.tx.us. Please reference Bid Number: IFB 22-046/MR.

SCOPE OF PROJECT:

Jefferson County is soliciting bids for trash and biomedical waste container service.

Contract shall be in effect for an initial period of one (1) year **beginning on or about the date of award**, with an option to renew for up to four (4) additional years.

Specific pickup schedules and container locations shall be coordinated with the department heads for each location requiring trash container service. Contractor shall respond to request for changes in pickups and containers with one (1) business day.

The County reserves the right to change, add, or delete pickups, containers, and locations.

Contractor shall furnish containers as required, collect and remove from County premises, transport to treatment and/or disposal facility, and treat and/or dispose of all waste deposited into containers.

Contractor shall maintain bulk containers, and shall exercise reasonable care to keep the County's service areas neat and clean. Maintenance or repairs necessitated by the County's misuse or accident shall not be the responsibility of the successful bidder.

Contractor shall furnish containers as required, collect and remove from County premises, transport to treatment and/or disposal facility, and treat and/or dispose of all biomedical waste container waste and sharps generated by the County and deposited into the containers.

Modification of contract price shall be allowed only on the anniversary date of the contract. Prices throughout the initial one (1) year term shall remain firm/fixed. Written requests for price revisions after the first year shall be submitted in advance to the Jefferson County Purchasing Department. Requests shall be based upon and include documentation of the actual change in cost of components, e.g., dumping fees, involved in the contract. Price increase shall not include overhead or profit. The County reserves the right to reject any price increase and/or to terminate the contract.

Vendor shall invoice "per location", with the location name and address included on invoice.

Complete the Bid Form on page 46. If there are any additional costs, they must be provided on the Bid Form. Examples of additional costs are stop fees, fuel surcharges, waste fees and recovery fees. All fees that will be charged must be included on the Bid Form.

OFFER AND ACCEPTANCE FORM
OFFER TO CONTRACT

To Jefferson County:

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

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

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

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

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

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

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

ACCEPTANCE OF OFFER

The Offer is hereby accepted for the following items: Term Contract for Biomedical Waste Container Service for Jefferson County. Contract Term: One (1) year from date of award with an option to renew for four (4) additional years.

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

This contract shall henceforth be referred to as Contract No. IFB 22-046/MR, Term Contract for Biomedical Waste Container Service for Jefferson County. The Contractor has not been authorized to commence any billable work or to provide any material or service under this contract until Contractor receives a purchase order and/or a notice to proceed from the Jefferson County Purchasing Agent.

COUNTERSIGNED:

Jeff R. Branick **Date**
Jefferson County Judge

ATTEST:

Laurie Leister
Jefferson County Clerk

BID FORM

Item 1. Standard Waste Containers (10 cubic yards & under)
Waste Containers shall be provided and serviced by the successful bidder.

Location	Qty	Capacity	Frequency of Service (Subject to Change)	Price per Container per Service	Additional Costs
Jack Brooks Regional Airport - Main Terminal Highway 69 South, Nederland TX Contact: Alex Rupp 409-719-4961	2	8 cu yd	1 day per week		
Jefferson County Airport - Fuel Service Highway 69 South, Nederland TX Contact: Alex Rupp 409-719-4961	1	8 cu yd	1 day per week		
Jefferson County Airport - Maintenance Shop Highway 69 South, Nederland TX Contact: Alex Rupp 409-719-4961	1	8 cu yd	1 day per week		
Jefferson County Annex I 215 Franklin Street, Beaumont TX Contact: Greg Keller 409-835-8511	1	10 cu yd	5 days per week		
Jefferson County Annex II 1295 Pearl Street, Beaumont TX Contact: Greg Keller 409-835-8511	1	10 cu yd	5 days per week		
Jefferson County Annex IV 820 Neches, Beaumont TX Contact: Greg Keller 409-835-8511	1	10 cu yd	5 days per week		
Jefferson County Mosquito Control District 8905 First Street, Beaumont TX Contact: Denise Wheeler 409-719-5940	1	8 cu yd	1 day per week		
Jefferson County Service Center 7789 Viterbo Road, Beaumont TX Contact: Jose Zurita 409-719-5937	1	8 cu yd	1 day per week		
Jefferson County Precinct #1 Service Center 20205 West Highway 90, China TX Contact: Paul Truax 409-434-5430	1	4 cu yd	1 day per week		
Jefferson County Precinct #2 Service Center 7759 Viterbo Road, Beaumont TX Contact: Mike Trahan 409-727-2173	1	8 cu yd	1 day per week		
Mid-County Tax Office 7759 Viterbo Road, Beaumont TX Contact: Mike Trahan 409-727-2173	1	8 cu yd	1 day per week		
Jefferson County Precinct #4 Justice of the Peace 19217 FM 365, Beaumont TX Contact: Lynette Hensley 409-434-5460	1	6 cu yd	1 day per week		
Jefferson County Precinct #4 Service Center 7780 Boyt Road, Beaumont TX Contact: Kenneth Minkins 409-434-5400	1	4 cu yd	2 days per week		

Item 1. Standard Waste Containers (10 cubic yards & under) - Continued
Waste Containers shall be provided and serviced by the successful bidder.

Location	Qty	Capacity	Frequency of Service (Subject to Change)	Price per Container per Service	Additional Costs
Minnie Rogers Juvenile Justice Center 5326 Highway 69 South, Beaumont TX Contact Chief Ed Cockrell 409-722-7474	1	10 cu yd	5 days per week		
Ben J. Rogers Regional Visitors Center 5055 IH-10 South, Beaumont TX Contact: Kathi Hughes 409-842-0500	1	8 cu yd	1 day per week		
Jefferson County Sheriff's Department - Narcotics 4640 Hangar Drive, Beaumont TX Contact: Capt. Jerry Lowe 409-726-2950	1	4 cu yd	1 day per week		
Jefferson County Precinct #3 Stockpile 24420 Highway 124, Hamshire TX Contact: Kimberly Doyle 409-736-2851	1	4 cu yd	1 day per week		
Jefferson County Correctional Facility Gate #3, 5030 Highway 69 South, Beaumont TX Contact: Chief John Shauberger 409-726-2520	1	10 cu yd	6 days per week		

Item 2: Standard Waste Containers (Roll-Off)
Waste Containers shall be provided and serviced by the successful bidder.

Location	Qty	Capacity	Frequency of Service (Subject to Change)	Price per Haul	Additional Costs
Jack Brooks Regional Airport - Maintenance Shop Highway 69 South, Nederland TX Contact: Alex Rupp 409-719-4961	1	30 cu yd	Will call		
Jefferson County Correctional Facility 5030 Highway 69 South, Nederland TX Contact: Chief John Shauberger 409-726-2520	1	40 cu yd	Will call		
Ford Park Baseball Fields 5115 IH-10 South, Beaumont TX Contact: Claudio Oliveira 409-951-5401	2	20 cu yd	Will call		
Ford Park Pavillion 5115 IH-10 South, Beaumont, TX Contact: Claudio Oliveira 409-951-5401	2	20 cu yd	Will call		

Item 3: Compactor (Roll-Off)

County shall provide one (1) self-contained compactor, approximately 30 cubic yard capacity. Successful bidder shall transport this compactor to and from Ford Park Arena. Disposal facility shall treat and/or dispose of all compacted waste into this container.

Location	Qty	Capacity	Frequency of Service (Subject to Change)	Price per Haul	Additional Costs
Ford Park Arena 5115 IH-10 South, Beaumont, TX Contact: Claudio Oliveira 409-951-5401	1	30 cu yd	Will call		

Item 4. Biomedical Waste Containers

Biomedical waste containers shall be provided and serviced by the successful bidder. Price of boxes and liners shall be included in bid price. When noting pricing, include any costs for stops when containers are not hauled.

Location	Qty	Price Per Container Per Haul	Frequency of Stop (Subject to Change)	Additional Costs
Public Health Department - Unit I (Beaumont) 1295 Pearl Street, Beaumont TX Contact: Rachel Dragulski 409-835-8380	1		Will Call	
Public Health Department - Unit II (Port Arthur) 800 Fourth Street, Port Arthur TX Contact: Vickie McIntyre 409-983-8380	1		Will Call	
Jefferson County Regional Crime Lab 5030 Highway 69 South, Suite 500, Beaumont TX Contact: Julie Hannon 409-726-2577	6		Monthly	
Jefferson County Employee Health 1225 Pearl Street, Suite 146-A, Beaumont TX Contact: Leslie Riggs 409-784-5881	1		Monthly	
Community Supervision - Port Arthur 800 Fourth Street, Port Arthur TX Contact: Jerry Johnson 409-951-2200	1		Monthly	
Community Supervision - Beaumont 820 Neches, Beaumont TX Contact: Jerry Johnson 409-951-2200	1		Monthly	
Minnie Rogers Juvenile Justice Center 5326 Highway 69 South, Beaumont TX Contact: Chief Ed Cockrell 409-722-7474	1		Monthly	
Juvenile Justice - Port Arthur 900 Fourth Street, Port Arthur TX Contact: Chief Ed Cockrell 409-722-7474	1		Monthly	
Jack Brooks Regional Airport, Main Terminal 6000 Airline Drive, Beaumont TX Contact: Elisabeth Landry 409-719-4950	2		Will Call	
Jack Brooks Regional Airport, Jerry Ware Terminal 5000 Jerry Ware Drive, Beaumont TX Contact: Elisabeth Landry 409-719-4950	2		Will Call	

Item 5. Pharmaceutical Container Disposal
When noting price, include any costs for stops when containers not hauled.

Location	Qty	Price Per Container Per Haul	Frequency of Stop (Subject to Change)	Additional Costs
Public Health Deparment - Unit I (Beaumont) 1295 Pearl Street, Beaumont TX Contact: Rachel Dragulski 409-835-8380	1		Will call	
Public Health Department - Unit II (Port Arthur) 800 Fourth Street, Port Arthur TX Contact: Vickie McIntyre 409-983-8380	1		Will call	
Jefferson County Employee Health 1225 Pearl Street, Suite 146-A, Beaumont TX Contact: Leslie Riggs 409-784-5881	1		Will call	
Minnie Rogers Juvenile Justice Center 5326 Highway 69 South, Beaumont TX Contact: Chief Ed Cockrell	1		Monthly	
Juvenile Justice - Port Arthur 900 Fourth Street, Port Arthur TX Contact: Chief Ed Cockrell 409-983-8370	1		Monthly	

BIDDER ACKNOWLEDGEMENT OF BID ADDENDA (IF APPLICABLE):

Addendum 1 _____ Date Received_____

Addendum 2 _____ Date Received_____

Addendum 3 _____ Date Received_____

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

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

VENDOR REFERENCES FORM

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

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

REFERENCE ONE

Government/Company Name: _____

Address: _____

Contact Person and Title: _____

Phone: _____ Fax: _____

Email Address: _____ Contract Period: _____

Scope of Work:

REFERENCE TWO

Government/Company Name: _____

Address: _____

Contact Person and Title: _____

Phone: _____ Fax: _____

Email Address: _____ Contract Period: _____

Scope of Work:

REFERENCE THREE

Government/Company Name: _____

Address: _____

Contact Person and Title: _____

Phone: _____ Fax: _____

Email Address: _____ Contract Period: _____

Scope of Work: _____

SIGNATURE PAGE

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

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

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

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

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

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

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

CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

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

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

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

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

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

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

_____

Signature of Contractor's Authorized Official

_____

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

_____

Date

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

CONFLICT OF INTEREST QUESTIONNAIRE

CONFLICT OF INTEREST QUESTIONNAIRE

FORM CIQ

For vendor doing business with local governmental entity

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

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

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

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

OFFICE USE ONLY

Date Received

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

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

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

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

_____
Name of Officer

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

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

☐ Yes ☐ No

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

☐ Yes ☐ No

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

☐ Yes ☐ No

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

4

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

Adopted 8/7/2015

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

LOCAL GOVERNMENT OFFICER
CONFLICTS DISCLOSURE STATEMENT – OFFICE USE ONLY

LOCAL GOVERNMENT OFFICER CONFLICTS DISCLOSURE STATEMENT

FORM CIS

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

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

OFFICE USE ONLY

Date Received

1 **Name of Local Government Officer**

2 **Office Held**

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

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

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

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

(attach additional forms as necessary)

6 **AFFIDAVIT**

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

_____
Signature of Local Government Officer

AFFIX NOTARY STAMP / SEAL ABOVE

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

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

Adopted 8/7/2015

THIS FORM IS FOR OFFICE USE ONLY

GOOD FAITH EFFORT (GFE) DETERMINATION CHECKLIST

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

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

Did the Prime Contractor/Consultant . . .?

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

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

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

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

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

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

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

Printed Name of Authorized Representative	Signature
Title	Date

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

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

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

Instructions for Prime Contractor/Consultant: Bidder shall submit this form with the bid; however, the information below may be submitted after contract award, but prior to beginning performance on the contract. Please submit one form for each HUB Subcontractor/Subconsultant with proper signatures, per the terms and conditions of your contract.

Contractor Name: _____ HUB: ☐ Yes ☐ No

Address: _____
Street City State Zip

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

Project Title & No.: _____

Prime Contract Amount: $ _____

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

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

Address: _____
Street City State Zip

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

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

Description of Subcontract Work to be Performed: _____

_____

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

_____ _____ _____
Printed Name of HUB Signature of Representative Date

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

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

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

HISTORICALLY UNDERUTILIZED BUSINESS (HUB)
SUCONTRACTING PARTICIPATION DECLARATION FORM

PAGE 1 OF 4

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

Prime Contractor: _____ HUB: ☐ Yes ☐ No

HUB Status (Gender & Ethnicity): _____

Address: _____
Street City State Zip

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

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

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

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

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

FOR HUB OFFICE USE ONLY:

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

PART I. HUB SUBCONTRACTOR DISCLOSURE

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

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

Address: _____
Street City State Zip

Contact person: _____ Title: _____

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

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

Description of Subcontract Work to be Performed: _____

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

HISTORICALLY UNDERUTILIZED BUSINESS (HUB)
SUBCONTRACTING PARTICIPATION DECLARATION FORM

HUB Subcontractor Disclosure

PART I: Continuation Sheet (Duplicate as Needed)

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

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

Address: _____
Street City State Zip

Contact person: _____ Title: _____

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

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

Description of Subcontract Work to be Performed: _____

_____

HUB Subcontractor Name: _____

HUB Status (Gender & Ethnicity): _____

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

Address: _____
Street City State Zip

Contact person: _____ Title: _____

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

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

Description of Subcontract Work to be Performed: _____

_____

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

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

HISTORICALLY UNDERUTILIZED BUSINESS (HUB)
SUCONTRACTING PARTICIPATION DECLARATION FORM

PAGE 3 OF 4

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

Please complete Good Faith Effort (GFE) Checklist and attach any supporting documentation.

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

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

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

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

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

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

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

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

Description of Subcontract Work to be Performed: _____

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

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

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

Description of Subcontract Work to be Performed: _____

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

HISTORICALLY UNDERUTILIZED BUSINESS (HUB)
SUBCONTRACTING PARTICIPATION DECLARATION FORM

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

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

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

Description of Subcontract Work to be Performed: _____

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

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

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

Description of Subcontract Work to be Performed: _____

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

Name (print or type): _____

Title: _____

Signature: _____

Date: _____

E-mail address: _____

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

Name (print or type): _____

Title: _____

Date: _____

E-mail address: _____

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

RESIDENCE CERTIFICATION/TAX FORM

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

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

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

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

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

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

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

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

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

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

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

HOUSE BILL 89 VERIFICATION

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

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

Pursuant to Section 2270.002, Texas Government Code:

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

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

_____
Signature of Company Representative

_____
Date

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

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

Notary Seal

_____
Notary Signature

_____
Date

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

SENATE BILL 252 CERTIFICATION

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

_____

Company Name

_____

IFB/RFP/RFQ number

Certification check performed by:

_____

Purchasing Representative

_____

Date

BID AFFIDAVIT

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

STATE OF_____ COUNTY OF_____

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

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

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

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

Name and address of Bidder:_____

_____

Fax: _____ Telephone#_____

by: _____ Title:_____
(print name)

Signature:_____

SUBSCRIBED AND SWORN to before me by the above-named

_____ on

this the _____ day of_____, 20___.

_____
Notary Public in and for
the State of _____

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

Jefferson County Purchasing Department
Deborah L. Clark, Purchasing Agent

1149 PEARL STREET
1st FLOOR, BEAUMONT, TEXAS 77701

OFFICE MAIN: (409) 83S-8593
FAX: (409)835-8456

LEGAL NOTICE
Advertisement for Invitation for Bids

July 26, 2022

Notice is hereby given that sealed bids will be accepted by the Jefferson County Purchasing Department for Invitation for Bid **(IFB 22-028/JW) Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport.** Specifications for this project may be obtained from the Jefferson County website, https://www.co.jefferson.tx.us/Purchasing/ or by calling 409-835-8593.

Bids are to be sealed and addressed to the Purchasing Agent with the bid number and name marked on the outside of the envelope or box. Bidders shall forward an original and two (2) copies of their bid to the address shown below. Jefferson County does not accept bids submitted electronically. Late bids will be rejected as non-responsive. Bids will be publicly opened and read aloud in the Jefferson County Engineering Department Conference Room (5th Floor, Historic Courthouse) 1149 Pearl Street, Beaumont, Texas 77701, at the time and date below. Bidders are invited to attend the sealed bid opening.

BID NAME:	**Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport**
BID NUMBER:	**IFB 22-028/JW**
DUE BY TIME/DATE:	**11:00 AM CT, Wednesday, August 24, 2022**
MAIL OR DELIVER TO:	**Jefferson County Purchasing Department** **1149 Pearl Street, 1st Floor** **Beaumont, Texas 77701**

There will be a Pre-Bid Conference and Walk-Through at 2:00 PM CT on Thursday, August 4, 2022, at the Airport Administration Conference Room located at 5000 Jerry Ware Blvd. Beaumont, Texas 77705. This conference will be the Bidder's only opportunity to view secured areas of the project.

The County shall require the bidder to furnish a bid security in the amount of five percent (5%) of the total contract cost. The bid bond must be executed with a surety company authorized to do business in the State of Texas. Within ten (10) days after the date of the signing of a contract, the bidder shall furnish a performance bond to the County for the full amount of the contract, if the contract exceeds one hundred thousand dollars ($100,000). If the contract is for one hundred thousand dollars ($100,000) or less, the County may provide that no money be paid to the contractor until completion and acceptance of the work or the fulfillment of the purchase obligation to the County.

Any questions relating to these bid requirements should be directed to Jamey West, Contract Specialist at 409-835-8593 or via email at: jwest@co.jefferson.tx.us

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

Jefferson County reserves the right to accept or reject any or all proposals, to waive technicalities and to take whatever action is in the best interest of Jefferson County. All interested firms are invited to submit a bid in accordance with the terms and conditions stated in this bid.

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

Deborah Clark

Deborah L. Clark, Purchasing Agent
Jefferson County, Texas

PUBLISH:
Beaumont Enterprise & Port Arthur News:
July 27, 2022, and August 3, 2022

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BID SUBMISSIONS:

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

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

Additionally, Bidder shall monitor the Jefferson County Purchasing Department Website for any addenda, additional instructions, or bid updates. https://www.co.jefferson.tx.us/Purchasing/

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

SECTION 1: GENERAL CONDITIONS OF BIDDING AND TERMS OF CONTRACT

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

1. BIDDING.

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

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

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

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

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

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

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

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

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

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

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

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

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

Jefferson County reserves the right to accept or reject in part or in whole any bid submitted, and to waive any technicalities or informalities for the best interest of the County. Jefferson County reserves the right to award based upon individual line items, sections, or total bid.

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

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

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

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

1.18 RESPONSIVENESS.
A responsive bid shall substantially conform to the requirements of this Invitation to Bid and/or specifications contained herein. Bidders who substitute any other terms, conditions, specifications and/or requirements or who qualify their bids in such a manner as to nullify or limit their liability to the contracting entity shall have their bids

deemed non-responsive. Also, bids containing any clause that would limit contracting authority shall be considered non-responsive. Examples of non-responsive bids include but shall not be limited to: a) bids that fail to conform to required delivery schedules as set forth in the bid request; b) bids with prices qualified in such a manner that the bid price cannot be determined, such as with vague wording that may include "price in effect at the time of delivery," and c) bids made contingent upon award of other bids currently under consideration.

1.19 RESPONSIBLE STANDING OF BIDDER.

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

1.20 CONFIDENTIAL/PROPRIETARY INFORMATION.

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

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

1.21 PUBLIC BID OPENING.

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

2. PERFORMANCE.

2.1 DESIGN, STRENGTH, AND QUALITY.

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

2.2 AGE AND MANUFACTURE.

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

2.3 DELIVERY LOCATION.

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

2.4 DELIVERY SCHEDULE.

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

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

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

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

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

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

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

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

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

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

2.14 MAINTENANCE.

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

2.15 MATERIAL SAFETY DATA SHEETS.

Under the "Hazardous Communications Act," commonly known as the "Texas Right to Know Act," a Bidder must provide

the user department, with each delivery, material safety data sheets which are applicable to hazardous substances defined in the Act. Failure of the Bidder to furnish this documentation, will be cause to reject any bid applying thereto.

2.16 EVALUATION.

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

3. PURCHASE ORDERS AND PAYMENT.

3.1 PURCHASE ORDERS.

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

3.2 INVOICES.

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

3.3 PROMPT PAYMENT.

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

3.4 FUNDING.

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

4. CONTRACT.

4.1 CONTRACT DEFINITION.

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

County shall constitute a contract equally binding between the successful Bidder and Jefferson County.

4.2 CHANGE ORDER.

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

4.3 PRICE RE-DETERMINATION.

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

4.4 TERMINATION.

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

4.5 CONFLICT OF INTEREST.

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

4.6 INJURIES OR DAMAGES RESULTING FROM NEGLIGENCE.

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

4.7 INTEREST BY PUBLIC OFFICIALS.

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

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

The Jefferson County Purchasing Department will be the primary pre-bid contact for this Invitation for Bid, unless otherwise specified within these bid specifications. **If not written within these specifications, Potential Bidders /Vendors shall not visit or conduct discussions with other County Departments or representatives.**

The Jefferson County Purchasing Department expects to conduct discussions with vendor's representatives

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

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

Selected vendors may be expected to make a presentation/product demonstration to an Evaluation Committee. Proposals, vendor presentations, and product/service evaluations may develop into negotiating sessions with the vendor(s) as selected by the Evaluation Committee. Jefferson County expects to conduct negotiations with vendor representatives authorized to contractually obligate the vendor with an offer. If vendor is unable to agree to contract terms and conditions, Jefferson County reserves the right to terminate contract negotiations with that vendor and initiate negotiations with another vendor. In addition to a presentation, visits by the Evaluation Committee to representative vendor client sites may be conducted where the proposed solution can be demonstrated in a production environment.

4.9 WARRANTY.

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

4.10 UNIFORM COMMERCIAL CODE.

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

4.11 VENUE.

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

4.12 SALE, ASSIGNMENT, OR TRANSFER OF CONTRACT.

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

4.13 SILENCE OF SPECIFICATIONS.

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

5. REJECTION OR WITHDRAWAL.

Submission of additional terms, conditions or agreements with the bid document are grounds for deeming a bid non-responsive and may result in bid rejection. Jefferson County reserves the right to reject any and all bids and to waive any informalities and minor irregularities or defects in bids. Bids may be withdrawn in person by a bidder or authorized representative, provided their identity is made known and a receipt is signed for the bid, but only if the withdrawal is made prior to the time set for receipt of bids. Bids are an irrevocable offer and may not be withdrawn within **120** days after opening date.

6. EMERGENCY/DECLARED DISASTER REQUIREMENTS.

In the event of an emergency or if Jefferson County is declared a disaster area, by the County, State, or Federal Government, this Acceptance of Offer may be subjected to unusual usage. Contractor shall service the county during

such an emergency or declared disaster under the same terms and conditions that apply during non-emergency/disaster conditions. The pricing as specified in this Acceptance of Offer shall apply to serving the County's needs regardless of the circumstances. If Contractor is unable to supply the services under the terms of the Acceptance of Offer, then Contractor shall provide proof of such disruption and a copy of the invoice from Contractor's supplier(s).

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

7. AWARD.

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

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

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

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

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

8. CONTRACT.

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

9. WAIVER OF SUBROGATION.

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

10. FISCAL FUNDING.

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

11. BID RESULTS.

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

12. CHANGES AND ADDENDA TO BID DOCUMENTS.

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

13. SPECIFICATIONS.

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

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

14. DELIVERY.

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

15. INTERPRETATION OF BID AND/OR CONTRACT DOCUMENTS.

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

16. CURRENCY.

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

17. PRICING.

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

18. NOTICE TO PROCEED/PURCHASE ORDER.

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

19. CERTIFICATION.

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

- The submission of the offer did not involve collusion or other anti-competitive practices.

- The Bidder has not given, offered to give, nor intends to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to any public servant in connection with the submitted offer.

- The Bidder hereby certifies that the individual signing the bid is an authorized agent for the Bidder and has the authority to bind the Bidder to the contract.

20. DEFINITIONS.

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

21. MINORITY-OWNED (MWBE), WOMEN-OWNED (WBE) AND HISTORICALLY UNDERUTILIZED (HUB) BUSINESS ENTERPRISE PARTICIPATION.

It is the desire of Jefferson County to increase the participation of Minority-Owned (MBE) , Women-Owned (WBE), and Historically Underutilized (HUB) business enterprises in its contracting and procurement programs. While the County does not have any preference or set aside programs in place, it is committed to a policy of equitable participation for these firms.

SECTION 2: FEDERAL MANDATED CONTRACT PROVISIONS

Some or all of the provisions in this section will be incorporated into a professional service agreement as a result of this solicitation.

Breach of Contract Terms / Remedies

Source: 2 CFR § 200 Appendix II (A)

Applicability: This provision requires Jefferson County, as the Airport Sponsor, to incorporate administrative, contractual, or legal remedies if contractor/consultant violate or breach contract terms. The sponsor must also include appropriate penalties and sanctions. Language acceptable to meet the intent of this requirement will be included in contractual documents.

This requirement applies to all FEMA grant and cooperative agreement programs

Contract Types: This provision is required for all contracts that exceed the simplified acquisition threshold as stated in 2 CFR § 200, Appendix II (A). This threshold is occasionally adjusted for inflation and is now equal to $150,000.

Termination of Contract (for Cause and Convenience)

Source: 2 CFR § 200 Appendix II (B)

FAA Advisory Circular 150/5370-10, Section 80-09

Applicability: This provision requires Jefferson County, as the Airport Sponsor, to incorporate in all contracts over $10,000, a provision that addresses termination for cause and termination for convenience, by the sponsor. The contractual provision must address the manner by which the sponsor's contract will be affected and the basis for settlement. Language acceptable to meet the intent of this requirement will be included in contractual documents.

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

Contract Types: This provision is required for all contracts that exceed $10,000.

Equal Employment Opportunity

Source: 2 CFR § 200 Appendix II (C) 41 CFR § 60-1.4

Executive Order 11246 41 CFR § 60-4.3

Applicability: The purpose of this provision is to provide equal opportunity for all persons, without regard to race, color, religion, sex, or national origin who are employed or seeking employment with contractors performing under a federally assisted construction contract. There are two provisions, a construction clause, and a specification clause.

The equal opportunity contract clause must be included in any contract or subcontract when the amount exceeds $10,000. Once the equal opportunity clause is determined to be applicable, the contract or subcontract must include the clause for the remainder of the year, regardless of the amount of the contract.

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

Contract Types: This provision is required for all contracts that exceed $10,000.

Use of Provision: 41 CFR 60-1.4 provides the mandatory **contract** language. 41 CFR 60-4.3 provides the mandatory **specification** language. The sponsor will incorporate these clauses without modification.

Note: Any contracts resulting from this RFQ will have the requisite language as set forth in 2 CFR 200 App II, 41 CFR 60-1.4, 41 CFR 60-4.3, and Executive Order 11246.

Davis-Bacon Requirements

Source: 2 CFR § 200 Appendix II (D)

29 CFR Part 5

Applicability: The Davis-Bacon Act ensures that laborers and mechanics employed under the contract receive pay no less than the locally prevailing wages and fringe benefits as determined by the Department of Labor.

For Professional Services: The emergence of different project delivery methods has created situations where Professional Service Agreements (PSAs) includes tasks that meet the definition of construction, alteration, or repair as defined in 29 CFR Part 5. If such tasks result in work that qualifies as construction, alteration, or repair and it exceeds $2,000, the PSA must incorporate this clause.

Use of Provision: 29 CFR 5 establishes the specific language the sponsor must use without modification. A/E firms that employ laborers and mechanics on a task that meets the definition of construction, alteration, or repair are acting as a contractor. The sponsor may not substitute the term "Contractor" for "Consultant" in such instances.

Copeland Anti-Kickback

Source: 2 CFR § 200 Appendix II (D)

29 CFR Part 3 & Part 5

Applicability: The Copeland Act (18 USC 874 and 40 USC 3145) makes it unlawful to induce by force, intimidation, threat of dismissal from employment, or by any other manner, any person employed in the construction or repair of public buildings or public works, financed in whole or in part by the United States, to give up any part of the compensation to which that person is entitled under a contract of employment. The Copeland Act also requires each contractor and subcontractor to furnish weekly a statement of compliance with respect to the wages paid each employee during the preceding week.

It DOES NOT apply to the FEMA Public Assistance Program.

For Professional Services: The emergence of different project delivery methods has created situations where Professional Service Agreements (PSAs) includes tasks that meet the definition of construction, alteration, or repair as defined in 29 CFR Part 5. If such tasks result in work that qualifies as construction, alteration, or repair and it exceeds $2,000, the PSA must incorporate the Copeland Anti-kickback provision.

Use of Provision: 29 CFR 5 establishes the specific language the sponsor must use without modification. A/E firms that employ laborers and mechanics on a task that meets the definition of construction, alteration, or repair are acting as a contractor. The sponsor may not substitute the term "Contractor" for "Consultant" in such instances.

Contract Workhours and Safety Standards Act Requirements

Source: 2 CFR § 200 Appendix II (E) 29 CFR Part 5

40 U.S.C. § 3701-3708

Applicability: Contract Workhours and Safety Standards Act Requirements (CWHSSA) requires contractors and subcontractors on covered contracts to pay laborers and mechanics employed in the performance of the contracts one and one-half times their basic rate of pay for all hours worked over 40 in a workweek and prohibits unsanitary, hazardous, or dangerous working conditions on federally assisted projects. The Wage and Hour division (WHD) within the U.S. Department of Labor (DOL) enforces the compensation requirements of this Act, while DOL's Occupational Safety and Health Administration (OSHA) enforces the safety and health requirements.

Jefferson County urges all contractors, regardless of funding sources for projects, to follow all applicable Federal and State labor laws.

For Professional Services: This provision applies to professional service agreements that exceed $100,000 and employs laborers, mechanics, watchmen, and guards This includes members of survey crews and exploratory drilling operations.

Use of Provision: The following text will be included in applicable contracts without modification:

1. *Overtime requirements.* No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. *Violation; liability for unpaid wages; liquidated damages.* In the event of any violation of the clause set forth in paragraph (1) of this clause, the Contractor, and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this section, in the sum of $27.00 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this clause.

3. *Withholding for unpaid wages and liquidated damages.* Jefferson County shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this clause.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this clause.

Rights to Inventions

Source: 2 CFR § 200 Appendix II (F)

37 CFR § 401

Applicability: This provision applies to all contracts and subcontracts with small business forms or nonprofit organizations that include performance of *experimental, developmental, or research work*. This clause is not applicable to construction, equipment, or professional service contracts unless the contract includes *experimental, developmental, or research work*. This requirement applies to "funding agreements," but it DOES NOT apply to the Public Assistance, Hazard Mitigation Grant Program, Fire Management Assistance Grant Program, Crisis Counseling Assistance and Training Grant Program, Disaster Case Management Grant Program, and Federal Assistance to Individuals and Households – Other Needs Assistance Grant Program, as FEMA awards under these programs do not meet the definition of "funding agreement."

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of Appendix II to 2 CFR part 200.

Clean Air and Water Pollution Control

Source: 2 CFR § 200 Appendix II (G)

29 CFR Part 5

Applicability: This provision is required on all contracts and lower tier contracts that exceed $150,000.

Use of Provisian: The following language will be included in applicable contracts:

1. Contractor agrees to comply with all applicable standards, orders, and regulations pursuant to the Clean Air Act (42 U.S.C. § 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. § 1251-13870). The contractor agrees to report any violation to the owner immediately upon discovery. The owner assumes responsibility for notifying the EPA and the FAA.

Debarment and Suspension

Source: 2 CFR Part 180 (Subpart C) 2 CFR Part 3000

2 CFR Part 1200 DOT Order 4200.5

Applicability: Required in all FEMA grant and cooperative agreement programs, regardless of amount. This requirement applies to covered transactions as defined in 2 CFR part 180. AIP funded contracts are non-procurement transactions as defined by §180.970. Covered transactions include any AIP-funded contract, regardless of tier, that is awarded by a contractor, subcontractor, supplier, consultant, or its agents or representative in any transaction, if the amount of the contract is expected to equal or exceed $25,000. Jefferson County must verify that the firm or individual that is entering into a contract with is not presently suspended, excluded, or debarred by any Federal department or agency from participating in federally assisted projects. This is accomplished by:

1. Checking SAM.gov to verify the firm's or individual's status;
2. Collecting a certification from the firm or individual that is not suspended, debarred, or excluded; and
3. Incorporating a clause into the contract that requires lower tier contracts to verify that no suspended, debarred, or excluded firm or individual is included in the project.

See **Error! Reference source not found.**, Paragraph **Error! Reference source not found.** above for more information on SAM.gov.

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of Appendix II to 2 CFR part 200.

Lobbying and Influencing Federal Employees

Source: 2 CFR § 200 Appendix II (J) 31 USC § 1352 – Byrd Anti-Lobbying Amendment

49 CFR Part 20, Appendix A 44 CFR Part 18

Applicability: This requirement applies to all FEMA grant and cooperative agreement programs. Consultants and contractors that apply or bid an award of $100,000 or more must certify that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant, or another award covered by 31 USC 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award.

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of Appendix II to 2 CFR part 200 Appendix (J) and 31 USC 1352.

If applicable, contractors ***must sign and submit*** to Jefferson County the "**Certification Regarding Lobbying**" Form included in this bid specification.

Procurement of Recovered Materials

Source: 2 CFR § 200 Appendix II (J) Solid Waste Disposal Act

40 CFR Part 247 2 CFR § 200.322

Applicability: Sponsors of AIP funded development and equipment projects must comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. Section 6002 emphasizes maximizing energy and resource recovery through use of affirmative procurement actions for recovered materials identified in the EPA guidelines. When acquiring items designated in the guidelines, the sponsor must procure items that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition.

This requirement applies to:

- All contracts awarded by a non-Federal entity under FEMA grant and cooperative agreement programs.
- All construction and equipment projects.
- Any contract, professional and property acquisition, that includes procurement of a product that exceeds $10,000.

Information about this requirement, along with the list of EPA designated items, is available at EPA's Comprehensive Procurement Guidelines website:

https://www.epa.gov/smm/comprehensiveprocurement-guideline-cpg-program.

The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act." The Uniform Rules authorize FEMA to require additional provisions for non-Federal entity contracts.

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of Appendix II to 2 CFR part 200.

Access to Records and Reports

Source: 2 CFR § 200.333 FAA Order 5100.38

2 CFR § 200.336

Applicability: 2 CFR § 200.333 requires a sponsor to retain records pertinent to a federal award for a period of three years from submission of final closure documents. 2 CFR § 200.336 establishes that sponsors must provide Federal entities the right to access records pertinent to the Federal award. FAA policy extends these requirements to the sponsor's contracts and subcontracts of AIP funded projects.

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of Appendix II to 2 CFR part 200. The following will be in applicable contracts:

1. The contractor must maintain an acceptable cost accounting system. The Contractor agrees to provide the local/state/federal entity providing funding for this project, the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions.
2. The contractor agrees to maintain all books, records and reports required under this contract for a period of not less than three years after final payment is made and all pending matters have been resolved.
3. The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.

4. The Contractor agrees to provide the FEMA Administrator or their representatives access to construction or other work sites pertaining to the work being completed under the contract.
5. In compliance with the Disaster Recovery Act of 2018, the County and the Contractor acknowledge and agree that no language in this contract is intended to prohibit audits or internal reviews by the FEMA Administrator or the Comptroller General of the United States.

Affirmative Action Requirement

Source: 41 CFR Part 60-4 FAA Order 5100.38

Executive Order 11246

Applicability: Sponsors are required to set goals for minority participation in AIP funded projects exceeding $10,000. The goals for minority participation derive from Economic Area (EA) and Standard Metropolitan Statistical Area (SMSA) as established in Volume 45 of the Federal Register dated 10/03/80. Page 65984 contains a table of all EAs and SMSAs and the associated minority participation goals.

Executive Order 11246 has set a goal of 6.9% nationally for female participation for all construction projects. This value remains constant for all counties and states.

Contract Types:

- Construction: The sponsor must incorporate this notice in all solicitations for bids or requests for proposals for AIP funded construction work contracts and subcontracts that exceed $10,000.
- Equipment: The sponsor must incorporate this notice in all solicitations for equipment project exceeding $10,000 that involves installation of equipment onsite (e.g. electrical vault equipment, generators). This provision does not apply to equipment acquisition projects where the manufacturer of the equipment takes place offsite at a manufacturer's plant (e.g. firefighting and vehicles).
- Professional Services: The sponsor must incorporate this notice in any professional service agreement if the agreement includes tasks that meet the definition of construction work, as defined by the DOL, and exceeds $10,000.

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of 41 CFR Part 60-4. The following will be in applicable contracts:

Solicitation Clause:
Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

   a. Goals for minority participation for each trade: Vol. 45 Federal Register pg. 65984 (10/3/80)

   b. Goals for female participation in each trade: 6.90%

These goals are applicable to all of the contractor's construction work, whether or not it is federal or federally assisted, performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR Part 60-4.3(a) and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project for the sole purpose of meeting the contractor's goals shall be a violation of the contract, the Executive Order, and the regulations in 41 CFR Part 60-4. Compliance with these goals will be measured against the total work hours performed.

The contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs (OFCCP) within 10 working days of award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of these subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

As used in this notice and in the contract resulting from this solicitation, the covered area is Texas, Jefferson County, Beaumont.

Buy American Preferences

Source: 49 USC § 50101

Applicability: the buy American preference requirement in 49 USC § 50101 requires that all still in manufactured goods used on AIP projects be produced in the United States. This statute gives the FAA the ability to issue a waiver to a sponsor to use non-domestic material on an AIP funded project subject to meeting certain conditions a sponsor may request that the FAA issue a waiver from the by American preference requirements if the FA finds that:

1. Applying the provision is not in the public interest;
2. The steel or manufactured goods are not available in sufficient quantity or quality in the United States;
3. The cost of components in subcomponents produced in the United States is more than 60% of the total components of a facility or equipment, and final assembly has taken place in the United States. Items that have an FAA standard specification item number, such as specific airport lighting equipment, are considered the equipment.

4. Applying this provision would increase the cost of the overall project by more than 25%.

For construction and equipment procurement projects, language, forms, and references to 49 USC § 50101 will be included in the solicitation.

Professional Service Agreements typically do not result in a deliverable that meets the definition of a manufactured product. If a PSA includes providing a manufactured good as a deliverable under the contract, the sponsor must include the Buy American Preference provision in the agreement.

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of 49 USC § 50101.

Civil Rights

Source:	49 USC § 47123	Title VI of the Civil Rights Act of 1964
	FAA Order 1400.11	US DOT Order 1050.2

Applicability: Title VI of the Civil Rights Act of 1964, as amended, Title VI, prohibits discrimination on the grounds of race, color, or national origin under any program or activity receiving Federal financial assistance. Sponsors must include appropriate clauses from the Standard DOT Title VI Assurances in all contracts and solicitations.

The text of each individual clause comes from the U.S. DOT Order 1050.2 Standard Title VI Assurances and Nondiscrimination Provisions, effective 04/24/2013. These assurances require the sponsor insert the appropriate clauses in the form provided by the DOT. Where the clause refers to the applicable activity, project, or program, it means the AIP project.

TITLE VI SOLICITATION NOTICE

Jefferson County, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 USC § 2000d to 2000d-4) and the Regulations, hereby notifies all bidders or offerors that it will affirmatively ensure that any contract entered into pursuant to this advertisement, Disadvantaged Business Enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

Title VI List of Pertinent Nondiscrimination Acts and Authorities

During the performance of any contract as a result of this bid, the Contractor, for itself, its assignees, and successors in interest, hereinafter referred to as the Contractor, agrees to comply with the following non-discrimination statutes and authorities, including but not limited to:

- Title VI of the Civil Rights Act of 1964
- 49 CFR part 21
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970
- Section 504 of the Rehabilitation Act of 1973
- The Age Discrimination Act of 1975
- Airport and Airway Improvement Act of 1982
- The Civil Rights Restoration Act of 1987
- Titles II and III of the Americans with Disabilities Act of 1990
- The Federal Aviation Administration's Nondiscrimination Statute
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency
- Title IX of the Education Amendments of 1972

Disadvantaged Business Enterprise

Source: 49 CFR part 26

Applicability: A sponsor that anticipates awarding $250,000 or more in AIP funding prime contracts in a federal fiscal year must have an approved Disadvantaged Business Enterprise (DBE) program on file with the FAA Office of Civil Rights (§26.21). The approved DBE program will identify a 3-year overall program goal that the sponsor bases on the availability of ready, willing, and able DBEs relative to all businesses ready, willing, and able to participate on the project. (§26.45).

Sponsors with a DBE program on file with the FAA must include the three following provisions, if applicable:

- Clause in all solicitations for proposals for which a contract goal has been established;
- Clause in each prime contract, and;
- Clause in solicitations that are obtaining DBE participation through race/gender neutral means.

As a condition of bid responsiveness, the Bidder or Offeror must submit the following information with its proposal on the forms provided herein:

1. Names and addresses of the DBE firms that will participate in the contract;
2. A description of the work each DBE firm will perform;
3. Percentage/dollar amount of the participation of each DBE firm listed under 1.
4. Written statement from Bidder or Offeror that attests their commitment to use the DBE firm(s) listed under (1) to meet the Owner's project goal; and

5. If Bidder or Offeror cannot meet the advertised project DBE goal, evidence of good faith efforts undertaken by the Bidder or Offeror as described in 49 CFR part 26 Appendix A

The requirements of 49 CFR part 26 apply to this contract. It is the policy of Jefferson County to practice nondiscrimination based on race, color, sex, or national origin in the award or performance of this contract. Jefferson County encourages participation by all firms qualifying under this solicitation regardless of business size or ownership.

DBE Contract Assurances

Contracts as a result of this bid will include contract assurances per §26.13, if applicable:

The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 and the award and administration of Department of Transportation-assisted contracts. Failure by contractor to carry out these requirements is a material breach of this contract which may result in the termination of this contract or such other remedy as the owner deems appropriate, which may include but is not limited to:

1. Withholding monthly progress payments;
2. Accessing sanctions;
3. Liquidated damages; and/or
4. Disqualifying the Contractor from future bidding as non-responsible.

Prompt Payment (§26.29) – The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than 30 days from the receipt of each payment the prime contractor receives from Jefferson County. The prime contractor agrees further to return retainage payments to each subcontractor within 30 days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of Jefferson County. This clause applies to both DBE and non-DBE subcontractors.

Distracted Driving

Source: Executive Order 13513 2 CFR §200.67

DOT Order 3902.10

Applicability: The FAA encourages recipients of federal grant funds to adopt and enforce safety policies that decrease crashes by distracted drivers, including policies to ban text messaging while driving when performing work related to a grant or subgrant.

Use of Provision: The following clause will be included in all Federally assisted contracts regardless of amount:

In accordance with executive order 13513, federal leadership on reducing text messaging while driving, Andy OT order 3902.10, text messaging while driving, the FAA encourages recipients of Federal grant funds to adopt and enforce safety policies that decrease crashes by distracted drivers including policies to ban text messaging while driving when performing work related to a grant or subgrant.

In support of this initiative, Jefferson County encourages the contractor to promote policies and initiatives for its employees and other work personnel that decrease crashes by distracted drivers, including policies that ban text messaging while driving motor vehicles Papa forming work activities associated with the project. The contractor must include the substance of this clause and other sub tier contracts exceeding $3,500 that involve driving a motor vehicle and performance of work activities associated with the project.

Compliance with Federal Law, Regulations, and Executive Orders

The recipient and its contractors are required to comply with all Federal laws, regulations, and executive orders.

Applicability: FEMA recommends that all non-Federal entities place into their contracts an acknowledgement that FEMA financial assistance will be used to fund the contract along with the requirement that the contractor will

comply with all applicable Federal law, regulations, executive orders, and FEMA policies, procedures, and directives.

"This is an acknowledgement that FEMA financial assistance will be used to fund all or a portion of the contract. The contractor will comply with all applicable Federal law, regulations, executive orders, FEMA policies, procedures, and directives."

No Obligation by Federal Government

The FAA and or FEMA is not a party to any transaction between the recipient and its contractor. The FAA and or FEMA is not subject to any obligations or liable to any party for any matter relating to the contract.

Applicability: FEMA recommends that the non-Federal entity include a provision in its contract that states that the Federal Government is not a party to the contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract.

"The Federal Government is not a party to this contract and is not subject to ony obligations or liabilities to the non-Federal entity, contractor, or any other porty pertaining to any matter resulting from the contract."

Program Fraud and False or Fraudulent Statements or Related Acts

Recipients must comply with the requirements of The False Claims Act (31 U.S.C. §§ 3729-3733) which prohibits the submission of false or fraudulent claims for payment to the federal government. See DHS Standard Terms and Conditions: Version 8.1 (2018); and 31 U.S.C. §§ 3801-3812, which details the administrative remedies for false claims and statements made. The non-Federal entity must include a provision in its contract that the contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to its actions pertaining to the contract.

FEMA recommends that the non-Federal entity include a provision in its contract that the contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to its actions pertaining to the contract.

"The Contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to the Contractor's actions pertaining to this contract."

SECTION 3: SPECIAL REQUIREMENTS/BID SUBMISSION INSTRUCTIONS

The following requirements and instructions supersede General Requirements where applicable.

3.1 SUBMISSION OF BID.

Bidder is Responsible for Submitting:

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

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

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

Additionally, Bidder shall monitor the Jefferson County Purchasing Department Website for any addenda, additional instructions, or bid updates. https://www.co.jefferson.tx.us/Purchasing/

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

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

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

All submissions must be received by 11:00 am CT, Wednesday, August 24, 2022.

Late bids will not be accepted and will be returned unopened to the Bidder.

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

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

Jefferson County shall not be responsible for any effort or cost expended in the preparation of a response to this IFB.

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

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

Please direct questions to Jamey West, Contract Specialist via e-mail at: jwest@co.jefferson.tx.us

3.2 COURTHOUSE SECURITY.

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

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

COUNTY HOLIDAYS (2022)

~~**January 17, 2022,**~~	~~Martin Luther King, Jr. Day~~	~~Monday~~
~~**February 21, 2022,**~~	~~President's Day~~	~~Monday~~
~~**April 15, 2022,**~~	~~Good Friday~~	~~Friday~~
~~**May 30, 2022,**~~	~~Memorial Day~~	~~Monday~~
~~**July 4, 2022,**~~	~~Independence Day~~	~~Monday~~
September 5, 2022,	Labor Day	Monday
November 11, 2022,	Veteran's Day	Friday
November 24 & 25, 2022	Thanksgiving	Thursday & Friday
December 23 & 26, 2022	Christmas	Friday & Monday
January 2, 2023,	New Year's	Monday

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

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

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

3.3 PRE-BID MEETING AND WALK-THROUGH.

There will be a Pre-Bid Conference and Walk-Through at 2:00 PM CT on Thursday, August 4, 2022, at the Airport Administration Conference Room located at 5000 Jerry Ware Blvd. Beaumont, Texas 77705. This conference will be the Bidder's only opportunity to view secured areas of the project.

3.4 QUESTIONS/DEADLINE FOR QUESTIONS.

Questions may be emailed to **Jamey West, Contract Specialist** at: jwest@co.jefferson.tx.us The Deadline for asking questions or requesting additional information (in writing) **is 5:00 pm CT, Monday, August 15, 2022.**

3.5 VENDOR REGISTRATION: SYSTEM FOR AWARD MANAGEMENT.

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

In instances where a vendor has either an "Inactive" SAM Registration or is not currently registered with the System for Award Management, the Purchasing Department may *initially* accept proof (printout from the SAM website) that the vendor has begun the registration process in order for the IFB/RFQ/RFP submission to be considered as "responsive" to the specifications for the project.

However, the SAM Registration must be completed (showing "active" status, with no exclusions) prior to the award and/or execution of an agreement or contract for the project.

3.6 FORM 1295 (Texas Ethics Commission) SUBMISSSION REQUIREMENT/INSTRUCTIONS FOR BIDDERS.

All Non-Exempt Bidders are required to submit a completed FORM 1295 with bid submission.

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

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

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

A sample of a completed FORM 1295 is included on **PAGE 30.**

FORM 1295 Implementation Background:

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

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

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

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

Answer: No. The TEC filing application does not capture the date of birth or street address of the signatory and it will not appear on forms that are filed using the TEC filing application. Although the TEC does not capture the date of birth and street address of the signatory, the contracting state agency or governmental agency will have

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

FORM 1295 EXEMPTIONS:

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

A completed Form 1295 is not required for:

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

SAMPLE: FORM 1295

CERTIFICATE OF INTERESTED PARTIES — FORM 1295

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

OFFICE USE ONLY

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

YOUR FIRM NAME HERE

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

**JEFFERSON COUNTY, TEXAS*

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

BID/CONTRACT/PO NUMBER GOES HERE

4 Name of Interested Party	City, State, Country (place of business)	Nature of Interest (check applicable)	
		Controlling	Intermediary
NAME OF PERSON/PERSONS THAT OWN BUSINESS GOES HERE. MUST LIST ANY PERSON THAT DOES NOT WORK FOR THE COMPANY LISTED IN #1 THAT WILL PROFIT FROM THE BID/CONTRACT/PO			

5 Check only if there is NO Interested Party. ☐ **ONLY CHECK IF NO CONTROLLING OR INTERMEDIARY PARTY**

6 UNSWORN DECLARATION — Vendor is to complete #6 - Unsworn Declaration

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

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

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

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

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

ADD ADDITIONAL PAGES AS NECESSARY

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

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

BIDDER: INSERT COMPLETED FORM 1295 BEHIND THIS PAGE.

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

1 of 1

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

OFFICE USE ONLY
CERTIFICATION OF FILING

Certificate Number:
2022-925239

Date Filed:
08/23/2022

Date Acknowledged:

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.
ALLCO, LLC
BEAUMONT, TX, TX United States

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

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.
IFB 22-028/JW
REHABILITATION OF FUEL FARM PAVEMENT AT THE JACK BROOKS REGIONAL AIRPORT

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

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

6 UNSWORN DECLARATION

My name is T.W. HARRISON, and my date of birth is 3-6-1953.

My address is 6720 COLLEGE (street), BEAUMONT (city), TEXAS (state), 77707 (zip code), USA (country).

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

Executed in JEFFERSON County, State of TEXAS, on the 24 day of August (month), 20 22 (year).

ALLCO, L.L.C. TEXAS

Signature of authorized agent of contracting business entity
(Declarant)

BIDDER: INSERT PROOF OF SYSTEM FOR AWARD MANAGEMENT (SAM) REGISTRATION PROOF HERE.

Mary Beth DeLord

From:	donotreply@sam.gov
Sent:	Thursday, July 14, 2022 12:46 PM
To:	mdelord@allco.com
Cc:	mdelord@allco.com
Subject:	Registration Activated for ALLCO, L L C / PFBHLY1SQCA6 / 0VHB1 in the U.S. Government's System for Award Management (SAM).

This email was sent by an automated administrator. Please do not reply to this message.

Dear MARY BETH DELORD,

The registration for ALLCO, L L C / PFBHLY1SQCA6 / 0VHB1 is now active in the U.S. federal government's System for Award Management (SAM). If you did not provide a Commercial and Government Entity (CAGE) Code during the registration process, one has been assigned to you by the Defense Logistics Agency (DLA) CAGE Program.

To remain eligible to do business with the federal government, you must renew your entity's registration in SAM every year. The annual renewal date for the registration is 2023-07-13 16:51:59.347.

You may invite additional users to manage or review your entity registration by following these steps:

1. Go to https://www.sam.gov and log in.
2. On the Workspace page, scroll down to the User Directory.
3. Enter the email address of the user you want to invite and select Enter or select the email address from the list.
4. On the next page, select the Assign Role button in the top right corner of the page.
5. On the Assign Role page, follow the instructions provided and then select Send Invitation at the bottom of the page.
6. The user will be notified.

All invitees will receive an email message from SAM with instructions on how to complete the process.

Remember, this process is entirely FREE to you. It is FREE to register and maintain your registration in SAM. It is FREE to get help with your registration. Contact our supporting Federal Service Desk at www.fsd.gov, or by telephone at 866-606-8220 (toll free) or 334-206-7828 (internationally).

In addition, if you are located in the U.S. and its outlying areas, you can get FREE support from your local Procurement Technical Assistance Center (PTAC), an official resource for government contracting assistance. Go to http://www.aptac-us.org/ to find your closest PTAC.

Thank you,
The System for Award Management (SAM) Administrator https://www.sam.gov

3.7 MULTIPLE VENDOR AWARD.

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

3.8 DELIVERY.

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

3.9 PAYMENT.

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

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

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

3.10 USAGE REPORTS.

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

3.11 INSURANCE.

The contractor (including any and all subcontractors as defined in Section 3.12.3 below) shall, at all times during the term of this contract, maintain insurance coverages with not less than the type and requirements shown below. Such insurance is to be provided at the sole cost of the contractor. These requirements do not establish limits of the contractor's liability.

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

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

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

Minimum Insurance Requirements:

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

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

Workers' Compensation Statutory Coverage (See Section 9 Below)

3.12 WORKERS' COMPENSATION INSURANCE.

3.12.1 Definitions:

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

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

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

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

3.12.3 The Contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract – **refer to Section 3.11 above**.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

3.12.9.7 Contractually require each person with whom it contracts to perform as required by paragraphs **3.12.1. – 3.12.7**, with the certificates of coverage to be provided to the person for whom they are providing services.

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

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

BIDDER: INSERT COPY OF CERTIFICATE OF INSURANCE (COI) BEHIND THIS PAGE.

Note: For bid purposes, a general COI will suffice.

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

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 5/30/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME: Nicole LeBlanc
Gulf Coast Insurance Agency PO Box 7750 Beaumont TX 77726	PHONE (A/C, No, Ext): (409)898-4444 FAX (A/C, No): (409)898-4468 E-MAIL ADDRESS: NL1@gcia-tx.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A: Travelers Casualty and Surety	19038
INSURER B: Charter Oak Fire Ins. Co	25615
INSURER C: Travelers Casualty & Surety Company	
INSURER D: Texas Mutual Insurance Co.	
INSURER E:	
INSURER F:	

INSURED
Allco, LLC, Allco, Inc. All-Rent, Ltd.
Allco, Ltd.; Rehab Construction, Bolivar Utility Services
P.O. Box 3684
Beaumont TX 77704

COVERAGES **CERTIFICATE NUMBER: 22-23 MASTER** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY [X] PRO-JECT LOC OTHER:	X	Y	CO1A548738	6/1/2022	6/1/2023	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 300,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ 2,000,000
B	AUTOMOBILE LIABILITY X ANY AUTO ALL OWNED AUTOS SCHEDULED AUTOS HIRED AUTOS NON-OWNED AUTOS	X	Y	810-0N781834	6/1/2022	6/1/2023	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) Uninsured motorist combined single	$ 1,000,000 $ $ $ $ 1,000,000
C	X UMBRELLA LIAB X OCCUR EXCESS LIAB CLAIMS-MADE DED X RETENTION $ 10,000	X	Y	CUP5J006641	6/1/2022	6/1/2023	EACH OCCURRENCE AGGREGATE	$ 10,000,000 $ 10,000,000 $
D	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N [ ] N/A If yes, describe under DESCRIPTION OF OPERATIONS below		Y	0002048297	6/1/2022	6/1/2023	X PER STATUTE OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000
C	Builders Risk			QT 660 8J924107 TLC	11/7/2021	11/7/2022	Limit	$20,000,000
C	Contractors Equipment			QT6608069X439	6/1/2022	6/1/2023	Limit	$13,201,200

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Leased/Rented Equipment: Equipment that is leased, rented or borrowed from others.

CERTIFICATE HOLDER

****SAMPLE****

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

George Haynes/NL

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SECTION 4: MINIMUM SPECIFICATIONS

The following requirements and specifications supersede General Bid Requirements where applicable. Any questions relating to bid submission or bid item specifications requirements should be directed to Jamey West, Contract Specialist via email at: jwest@co.jefferson.tx.us Please reference Bid Number: IFB 22-028/JW.

SCOPE OF PROJECT:

Jefferson County is soliciting bids for the Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport located adjacent to and south of the BPT air traffic control tower (ATCT). Fuel supply trucks enter the property through a secured gate just east of the fuel farm. The pavement at the fuel farm of the Jack Brooks Regional Airport has ongoing deterioration and needs to be rehabilitated or replaced. The estimated PCI of the pavement is approximately 40 or less.

The fuel farm concrete panels will be replaced in such a way to reduce the down time of the fueling area. The panel replacement will be coordinated to not impact the ability of the fuel farm to continue to provide fuel to aircraft using the airport. The subgrade must be adequately tested (density, Soil type, and CBR) to determine if it is sufficient to support the pavement surface. The scope of the project includes: • Full depth panel replacement of concrete at fuel loading and unloading area. • Full replacement of the containment wall. • Repair of underground drainage failure beneath pavement, if necessary. The finished product will meet NFPA 407, DOT, and EPA standards for fuel transfer area containment.

TECHNICAL SPECIFICATIONS:

Technical Specifications for this project may be found starting on **Page 61**.

BID FORM:

The BID FORM for this project may be found on **Page 40.**

BIDDER INFORMATION FORM

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

Bid Number & Name: Invitation for Bid (IFB 22-028/JW)
Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport

Bidder's Company/Business Name: ALLCO LLC

Bidder's TAX ID Number: [redacted]

***If Applicable*:** **DBE Vendor No.** N/A **DBE Vendor No.** N/A

Contact Person: BRANDON HARRISON **Title:** PROJECT MANAGER

Phone Number (with area code): 409-860-4459

Alternate Phone Number if available (with area code): N/A

Fax Number (with area code): 409-860-3857

Email Address: bharrison@allco.com

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

P.O. BOX 3684 (6720 COLLEGE, BEAUMONT, TX 77707)
Address
BEAUMONT, TX 77704
City, State, Zip Code

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

BIDDER: INSERT BID SURETY BEHIND THIS PAGE.

THE AMERICAN INSTITUTE OF ARCHITECTS

AIA Document A310

Bid Bond

KNOW ALL MEN BY THESE PRESENTS, THAT WE ALLCO, LLC

P.O. Box 3684, Beaumont, TX 77704

as Principal, hereinafter called the Principal, and Colonial American Casualty and Surety Company

1299 Zurich Way, Schaumburg, IL 60196-105

a corporation duly organized under the laws of the State of Illinois

as Surety, hereinafter called the Surety, are held and firmly bound unto JEFFERSON COUNTY, TEXAS

as Obligee, hereinafter called the Obligee, in the sum of Five Percent of Amount Bid

Dollars ($ 5%),

for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for IFB 22-028/JW REHABILITATION OF FUEL FARM PAVEMENT AT THE JACK BROOKS REGIONAL AIRPORT

NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and materials furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the Work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this 24th day of August 2022

ALLCO, LLC

Jackie Christopher (Witness)

ALLCO, LLC (Principal) (Seal)

By: T.W. Harrison President (Title)

(Witness)

Colonial American Casualty and Surety Company (Surety) (Seal)

By: Attorney-in-Fact Jillian O'Neal (Title)

Bond Number Bid Bond

Obligee JEFFERSON COUNTY, TEXAS

ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND
POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Illinois, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Illinois (herein collectively called the "Companies"), by **Robert D. Murray, Vice President**, in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint Jillian O'Neal, its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: **any and all bonds and undertakings,** and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the ZURICH AMERICAN INSURANCE COMPANY at its office in New York, New York., the regularly elected officers of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at its office in Owings Mills, Maryland., and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at its office in Owings Mills, Maryland., in their own proper persons.

The said Vice President does hereby certify that the extract set forth on the reverse side hereof is a true copy of Article V, Section 8, of the By-Laws of said Companies, and is now in force.

IN WITNESS WHEREOF, the said Vice-President has hereunto subscribed his/her names and affixed the Corporate Seals of the said **ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND,** this 19th day of June, A.D. 2019.

ATTEST:
ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND

By: Robert D. Murray
Vice President

By: Dawn E. Brown
Secretary

State of Maryland
County of Baltimore

On this 19th day of June, A.D. 2019, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, **Robert D. Murray, Vice President and Dawn E. Brown, Secretary** of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, deposeth and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal the day and year first above written.

Constance A. Dunn
Constance A. Dunn, Notary Public
My Commission Expires: July 9, 2023

EXTRACT FROM BY-LAWS OF THE COMPANIES

"Article V, Section 8, Attorneys-in-Fact. The Chief Executive Officer, the President, or any Executive Vice President or Vice President may, by written instrument under the attested corporate seal, appoint attorneys-in-fact with authority to execute bonds, policies, recognizances, stipulations, undertakings, or other like instruments on behalf of the Company, and may authorize any officer or any such attorney-in-fact to affix the corporate seal thereto; and may with or without cause modify of revoke any such appointment or authority at any time."

CERTIFICATE

I, the undersigned, Vice President of the ZURICH AMERICAN INSURANCE COMPANY, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, do hereby certify that the foregoing Power of Attorney is still in full force and effect on the date of this certificate; and I do further certify that Article V, Section 8, of the By-Laws of the Companies is still in force.

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the ZURICH AMERICAN INSURANCE COMPANY at a meeting duly called and held on the 15th day of December 1998.

RESOLVED: "That the signature of the President or a Vice President and the attesting signature of a Secretary or an Assistant Secretary and the Seal of the Company may be affixed by facsimile on any Power of Attorney...Any such Power or any certificate thereof bearing such facsimile signature and seal shall be valid and binding on the Company."

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at a meeting duly called and held on the 5th day of May, 1994, and the following resolution of the Board of Directors of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at a meeting duly called and held on the 10th day of May, 1990.

RESOLVED: "That the facsimile or mechanically reproduced seal of the company and facsimile or mechanically reproduced signature of any Vice-President, Secretary, or Assistant Secretary of the Company, whether made heretofore or hereafter, wherever appearing upon a certified copy of any power of attorney issued by the Company, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seals of the said Companies, this 24th day of August, 2022.

Brian M. Hodges, Vice President

TO REPORT A CLAIM WITH REGARD TO A SURETY BOND, PLEASE SUBMIT A COMPLETE DESCRIPTION OF THE CLAIM INCLUDING THE PRINCIPAL ON THE BOND, THE BOND NUMBER, AND YOUR CONTACT INFORMATION TO:

Zurich Surety Claims
1299 Zurich Way
Schaumburg, IL 60196-1056
www.reportsfclaims@zurichna.com
800-626-4577

ZURICH

Texas Important Notice

IMPORTANT NOTICE

To obtain information or make a complaint:

You may call Zurich North America's toll-free telephone number for information or to make a complaint at:

1-800-382-2150

You may contact the Texas Department of Insurance to obtain information on companies, coverages, rights, or complaints at:

1-800-252-3439

You may write the Texas Department of Insurance:
P.O. Box 149104
Austin, TX 78714-9104
Fax: (512) 490-1007
Web: www.tdi.texas.gov
E-mail: ConsumerProtection@tdi.texas.gov

PREMIUM OR CLAIM DISPUTES:

Should you have a dispute concerning your premium or about a claim, you should contact the company first. If the dispute is not resolved, you may contact the Texas Department of Insurance.

ATTACH THIS NOTICE TO YOUR POLICY:

This notice is for information only and does not become a part or condition of the attached document.

AVISO IMPORTANTE

Para obtener información o para presentar una queja:

Usted puede llamar al número de teléfono gratuito de Zurich North America's para obtener información o para presentar una queja al:

1-800-382-2150

Usted puede comunicarse con el Departamento de Seguros de Texas para obtener información sobre compañías, coberturas, derechos, o quejas al:

1-800-252-3439

Usted puede escribir al Departamento de Seguros de Texas a:
P.O. Box 149104
Austin, TX 78714-9104
Fax: (512) 490-1007
Sitio web: www.tdi.texas.gov
E-mail: ConsumerProtection@tdi.texas.gov

DISPUTAS POR PRIMAS DE SEGUROS O RECLAMACIONES:

Si tiene una disputa relacionada con su prima de seguro o con una reclamación, usted debe comunicarse con la compañía primero. Si la disputa no es resuelta, usted puede comunicarse con el Departamento de Seguros de Texas.

ADJUNTE ESTE AVISO A SU PÓLIZA: Este aviso es solamente para propósitos informativos y no se convierte en parte o en condición del documento adjunto.

BID FORM

UNIT PRICES: This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures. **All quantities are estimated. The contractor will be paid based upon actual quantities as verified by the Owner**

DESCRIPTION:	☒ Base Bid			
REF. NO. 1	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Mobilization C-105	1	LS	11,700.00	11,700.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 2	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Construction Safety (Barricades, Signs, and Traffic Handling) SS-120	1	LS	15,600.00	15,600.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 3	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Allowance for Storm Sewer Pipe Replacement D-701a	1	LS	10,500.00	10,500.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 4	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Install PVC Pipe (2 Inch) D-701b	6	LF	190.00	1,140.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 5	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Sawcut, Remove and Dispose Existing Concrete Pavement Full Depth (8 Inches) P-101-5.1a	602	SY	46.00	27,692.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 6	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Sawcut, Remove and Dispose Existing Asphalt Ramp P-101-5.1b	70	SY	44.00	3,080.00

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

BID FORM (CONTINUED)

DESCRIPTION:	☒ Base Bid			
REF. NO. 7	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Sawcut, Remove and Dispose Existing 6" Vertical Curb P-101-5.1c	302	LF	8.00	2,416.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 8	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Embankment in Place P-152-4.2	30	CY	53.00	1,590.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 9	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Unsuitable Excavation P-152-4.4	30	CY	104.00	3,120.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 10	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Lime Treated Subgrade (8 inches) P-152-8.1	602	SY	53.00	31,906.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 11	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Lime P-152-8.2	31	TON	330.00	10,230.00

DESCRIPTION:	☒ Base Bid			
REF. NO.12	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Reinforced Concrete Pavement (8 Inches) P-501-8.1a	526	SY	197.00	103,622.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 13	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Reinforced Concrete Pavement Ramp (8-12 Inches) P-501-8.1b	76	SY	199.00	15,124.00

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

BID FORM (CONTINUED) REPLACEMENT PAGE 42

DESCRIPTION:	Base Bid			
REF. NO. 14	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Biodegradable Erosion Control Logs (Install) TXDOT 506-6.6.1	200	LF	10.00	2,000.00

DESCRIPTION:	Base Bid			
REF. NO. 15	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Biodegradable Erosion Control Logs (Removal) TXDOT 506-6.6.2	200	LF	2.00	400.00

DESCRIPTION:	Base Bid			
REF. NO. 16	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
4" Concrete Curb TXDOT 529	278	LF	11.00	3,058.00

DESCRIPTION:	Base Bid			
REF. NO. 17	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Furnish and Install 4' Steel Bollards	2	EA	1,630.00	3,260.00

DESCRIPTION:	Base Bid			
REF. NO. 18	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Install 6' Rubber Speed Bumps	4	EA	447.00	1,788.00

DESCRIPTION:	Base Bid
	TOTAL BID PRICE *($ XXX,XXX.XX)*
TOTAL BID	$ 248,226.00

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

BIDDER ACKNOWLEDGEMENT OF BID ADDENDA (IF APPLICABLE):

Addendum 1	X	Date Received	8-01-22
Addendum 2	X	Date Received	8-17-22
Addendum 3		Date Received	
Addendum 4		Date Received	
Addendum 5		Date Received	

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

JEFFERSON COUNTY PURCHASING DEPARTMENT
Deborah L. Clark, Purchasing Agent

1149 Pearl Street
1st Floor, Beaumont, TX 77701

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

Addendum to IFB

IFB NUMBER: IFB 22-028/JW

IFB TITLE: Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport

IFB DUE BY: **11:00 am CT, Wednesday, August 24, 2022**

ADDENDUM NO.: 1

ISSUED (DATE): August 1, 2022

To Bidder: This Addendum is an integral part of the IFB package under consideration by you as a Bidder in connection with the subject matter herein identified. Jefferson County deems all sealed bids to have been proffered in recognition and consideration of the entire IFB Specifications Package – *including all addenda*. For purposes of clarification, **receipt of this present Addendum by a Bidder should be evidenced by returning it (signed) as part of the Bidder's sealed bid submission.** If the bid submission has already been received by the Jefferson County Purchasing Department, Bidder should return this addendum in a separate sealed envelope, clearly marked with the IFB Title, IFB Number, and IFB Opening Date and Time, as stated above.

Reason for Issuance of this Addendum: Clarifications (Attachment)

The information included herein is hereby incorporated into the documents of this present bid matter and supersedes any conflicting documents or portion thereof previously issued.

Receipt of this Addendum is hereby acknowledged by the undersigned Respondent:

ATTEST:

Jackie Christopher
Witness

April Rolen
Witness

Approved by ____ Date: _____

Authorized Signature (Respondent)

PRESIDENT
Title of Person Signing Above

T.W. HARRISON (ALLCO LLC)
Typed Name of Business or Individual

P.O. BOX 3684, BEAUMONT, TX 77704
Address

JEFFERSON COUNTY PURCHASING DEPARTMENT
Deborah L. Clark, Purchasing Agent

1149 Pearl Street
1st Floor, Beaumont, TX 77701

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

Addendum to IFB

IFB NUMBER: IFB 22-028/JW

IFB TITLE: Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional

IFB DUE BY: Airport **11:00 am CT, Wednesday, August 24, 2022**

ADDENDUM NO.: 2

ISSUED (DATE): August 17, 2022

To Bidder: This Addendum is an integral part of the IFB package under consideration by you as a Bidder in connection with the subject matter herein identified. Jefferson County deems all sealed bids to have been proffered in recognition and consideration of the entire IFB Specifications Package – *including all addenda.* For purposes of clarification, **receipt of this present Addendum by a Bidder should be evidenced by returning it (signed) as part of the Bidder's sealed bid submission.** If the bid submission has already been received by the Jefferson County Purchasing Department, Bidder should return this addendum in a separate sealed envelope, clearly marked with the IFB Title, IFB Number, and IFB Opening Date and Time, as stated above.

REASONS FOR ISSUANCE OF THIS ADDENDUM:

- **Clarifications (See Pages 1-4)**
- **REVISED PLAN SHEET NO. 3**
- **REVISED BID FORM PAGE 42 (REPLACEMENT PAGE)**

The information included herein is hereby incorporated into the documents of this present bid matter and supersedes any conflicting documents or portion thereof previously issued.

Receipt of this Addendum is hereby acknowledged by the undersigned Respondent:

ATTEST:

Jackie Christopher
Witness

April Robins
Witness

Approved by ____ Date: _____

Authorized Signature (Respondent)

PRESIDENT
Title of Person Signing Above

T.W. HARRISON (ALLCO LLC)
Typed Name of Business or Individual

P.O. BOX 3684, BEAUMONT, TX 77704
Address

VENDOR REFERENCES FORM

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

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

REFERENCE ONE

Government/Company Name: Jefferson County

Address: 1149 Pearl Street, Beaumont, TX 77701

Contact Person and Title: Jeff Branick, County Judge

Phone: 409-835-8466 Fax: 409-839-2311

Email Address: jbranick@co.jefferson.tx.us Contract Period: 2016-2017

Scope of Work: Jack Brooks Regional Airport Runway Reconstruction / Airport Taxiway D Reconstruction

REFERENCE TWO

Government/Company Name: Garver USA

Address: 12141 Wickchester Lane, Suite 200, Houston, TX 77079

Contact Person and Title: Colin Bible, PE, Project Manager

Phone: 972-377-7480 Fax: 713-395-5486

Email Address: cmbible@garnerusa.com Contract Period: 2016-2017

Scope of Work: Jack Brooks Regional Airport Runway Reconstruction / Airport Taxiway D Reconstruction

REFERENCE THREE

Government/Company Name: City of Beaumont

Address: P.O. Box 3827, Beaumont, TX 77704

Contact Person and Title: David Tingle, E.I.T., Project Manager

Phone: 409-785-4781 Fax: 409-880-3732

Email Address: David.Tingle@beaumonttexas.gov Contract Period: 2017-2021

Scope of Work: Washington Boulevard Pavement Widening Phase 2

SIGNATURE PAGE

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

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

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

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

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

ALLCO LLC
Bidder (Entity Name)

(6720 College, Beaumont, TX 77707)
P.O. Box 3684
Street & Mailing Address

Beaumont, TX 77704
City, State & Zip

409-860-4459
Telephone Number

tharrison@allco.com
E-mail Address

Signature

T.W. HARRISON - PRESIDENT
Print Name

AUGUST 24, 2022
Date Signed

409-860-3857
Fax Number

ALLCO, L.L.C. TEXAS

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

BYRD ANTI-LOBBYING CERTIFICATION

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

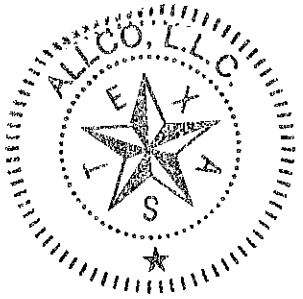
No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection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

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

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

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

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



Signature of Contractor's Authorized Official

T.W. HARRISON - PRESIDENT
Name and Title of Contractor's Authorized Official

AUGUST 24, 2022
Date

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

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LOCAL GOVERNMENT OFFICER
CONFLICTS DISCLOSURE STATEMENT – OFFICE USE ONLY

LOCAL GOVERNMENT OFFICER CONFLICTS DISCLOSURE STATEMENT

FORM CIS

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

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

OFFICE USE ONLY

Date Received

1 **Name of Local Government Officer**

2 **Office Held**

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

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

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

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

(attach additional forms as necessary)

6 **AFFIDAVIT**

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

_____
Signature of Local Government Officer

AFFIX NOTARY STAMP / SEAL ABOVE

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

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

Adopted 8/7/2015

THIS FORM IS FOR OFFICE USE ONLY

DEBARMENT/SUSPENSION CERTIFICATION

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

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

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

www.sam.gov and https://acquisition.gov/far/index.html (see section 52.209-6).

ALLCO LLC

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

Signature of Contractor's Authorized Official

T.W. HARRISON - PRESIDENT

Name and Title of Contractor's Authorized Official

AUGUST 24, 2022

Date

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

CIVIL RIGHTS COMPLIANCE PROVISIONS

EQUAL EMPLOYMENT OPPORTUNITY (Equal Opportunity Clause)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Signature of Contractor's Authorized Official

T.W. HARRISON - PRESIDENT
Name and Title of Contractor's Authorized Official

AUGUST 24, 2022
Date

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

GOOD FAITH EFFORT (GFE) DETERMINATION CHECKLIST

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
☒ Yes ☐ No

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

Did the Prime Contractor/Consultant . . .?

☒ Yes	☐ No	1. To the extent practical, and consistent with standard and prudent industry standards, divide the contract work into the smallest feasible portions, to allow for maximum DBE Subcontractor participation?
☒ Yes	☐ No	2. **Notify** in writing a reasonable number of DBEs, allowing sufficient time for effective participation of the planned work to be subcontracted?
☒ Yes	☐ No	3. **Provide** DBEs that were genuinely interested in bidding on a subcontractor, adequate information regarding the project (i.e., plans, specifications, scope of work, bonding and insurance requirements, and a point of contract within the Prime Contractor/Consultant's organization)?
☒ Yes	☐ No	4. **Negotiate** in good faith with interested DBEs, and not reject bids from DBEs that qualify as lowest and responsive Bidders?
☒ Yes	☐ No	5. **Document** reasons DBEs were rejected? Was a written rejection notice, including the reason for rejection, provided to the rejected DBEs?
☒ Yes	☐ No	6. If Prime Contractor/Consultant has zero (0) DBE participation, **please explain the reasons why.**

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

T.W. HARRISON
Printed Name of Authorized Representative

Signature

PRESIDENT
Title

AUGUST 24, 2022
Date

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

NOTICE OF INTENT (NOI) TO SUBCONTRACT WITH DISADVANTAGED BUSINESS ENTERPRISE (DBE)

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
[X] Yes [ ] No

Instructions for Prime Contractor/Consultant: Bidder shall submit this form with the bid; however, the information below may be submitted after contract award, but prior to beginning performance on the contract. Please submit one form for each DBE Subcontractor/Subconsultant with proper signatures, per the terms and conditions of your contract.

Contractor Name: ALLCO LLC DBE: [ ] Yes [X] No

Address: 6720 COLLEGE (Street) BEAUMONT (City) TEXAS (State) 77707 (Zip)

Phone (with area code): 409-860-4459 Fax (with area code): 409-860-3857

Project Title & No.: Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport IFB 22-028/JW

Prime Contract Amount: $

DBE Subcontractor Name:

DBE Status (Gender & Ethnicity):

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

Address: (Street) (City) (State) (Zip)

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

Proposed Subcontract Amount: $ Percentage of Prime Contract: %

Description of Subcontract Work to be Performed:

T.W. HARRISON		AUGUST 24, 2022
Printed Name of Contractor Representative	Signature of Representative	Date
N/A	N/A	N/A
Printed Name of DBE	Signature of Representative	Date

ALLCO, L.L.C. TEXAS

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

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

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

DISADVANTAGED BUSINESS ENTERPRISE (DBE)
SUBCONTRACTING PARTICIPATION DECLARATION FORM

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
☒ Yes ☐ No

Prime Contractor: ALLCO LLC DBE: ☐ Yes ☒ No

DBE Status (Gender & Ethnicity): N/A

Address: 6720 COLLEGE (Street) BEAUMONT (City) TEXAS (State) 77707 (Zip)

Phone (with area code): 409-860-4459 Fax (with area code): 409-860-3857

Project Title & No.: Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport IFB/RFP No.: 22-028/JW

Total Contract: $ Total DBE Subcontract(s): $

Construction DBE Goals: 12.8% MBE: % 12.6% WBE: %

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

FOR DBE OFFICE USE ONLY:

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

PART I. DBE SUBCONTRACTOR DISCLOSURE

DBE Subcontractor Name:

DBE Status (Gender & Ethnicity):

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

Address: (Street) (City) (State) (Zip)

Contact person: Title:

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

Proposed Subcontract Amount: $ Percentage of Prime Contract: %

Description of Subcontract Work to be Performed:

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

DISADVANTAGED BUSINESS ENTERPRISE (DBE)
SUBCONTRACTING PARTICIPATION DECLARATION FORM

DBE Subcontractor Disclosure

PART I: Continuation Sheet (Duplicate as Needed)

DBE Subcontractor Name: _____

DBE Status (Gender & Ethnicity): _____

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

Address: _____
Street City State Zip

Contact person: _____ Title: _____

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

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

Description of Subcontract Work to be Performed: _____

DBE Subcontractor Name: _____

DBE Status (Gender & Ethnicity): _____

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

Address: _____
Street City State Zip

Contact person: _____ Title: _____

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

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

Description of Subcontract Work to be Performed: _____

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

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

DISADVANTAGED BUSINESS ENTERPRISE (DBE)
SUCONTRACTING PARTICIPATION DECLARATION FORM

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

Please complete Good Faith Effort (GFE) Checklist and attach any supporting documentation.

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

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

Was the Jefferson County DBE Office contacted for assistance in locating DBEs? ☐ Yes ☐ No

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

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

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

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

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

Description of Subcontract Work to be Performed: _____

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

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

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

Description of Subcontract Work to be Performed: _____

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

DISADVANTAGED BUSINESS ENTERPRISE (DBE)
SUBCONTRACTING PARTICIPATION DECLARATION FORM

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

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

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

Description of Subcontract Work to be Performed: _____

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

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

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

Description of Subcontract Work to be Performed: _____

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

Name (print or type): T.W. HARRISON

Title: PRESIDENT

Signature: _____

Date: AUGUST 24, 2022

E-mail address: tharrison@allco.com

ALLCO, L.L.C. TEXAS

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

Name (print or type): DALE HARRISON

Title: COMPTROLLER

Date: AUGUST 24, 2022

E-mail address: dharrison@allco.com

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

RESIDENCE CERTIFICATION/TAX FORM

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

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

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

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

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

Taxpayer Identification Number (T.I.N.):	[redacted]
Company Name submitting bid/proposal:	ALLCO LLC
Mailing address:	6720 COLLEGE, BEAUMONT, TX 77707
If you are an individual, list the names and addresses of any partnership of which you are a general partner:	

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

Jefferson County Tax Acct. No.*	Property address or location**
N/A	

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

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

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

HOUSE BILL 89 VERIFICATION

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

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

Pursuant to Section 2270.002, Texas Government Code:

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

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

Signature of Company Representative T.W. HARRISON

ALLCO, L.L.C. TEXAS

AUGUST 24, 2022
Date

On this 24th day of AUGUST, 2022, personally appeared

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

Notary Seal

JACQUELINE CHRISTOPHER
Notary Public, State of Texas
Comm. Expires 05-21-2024
Notary ID# 155932-5

Jacqueline Christopher
Notary Signature

AUGUST 24, 2022
Date

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

SENATE BILL 252 CERTIFICATION

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

ALLCO LLC

Company Name

IFB 22-028/JW

IFB/RFP/RFQ number

Certification check performed by:

Purchasing Representative

Date

BID AFFIDAVIT

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

STATE OF TEXAS COUNTY OF JEFFERSON

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

on this day personally appeared T.W. HARRISON (name), who

after being by me duly sworn, did depose and say:

"I, T.W. HARRISON (name) am a duly authorized officer of/agent

for ALLCO LLC (name of firm) and have been duly authorized to execute the

foregoing on behalf of the said ALLCO LLC (name of firm).

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

Name and address of Bidder: ALLCO LLC

(mailing) P.O. Box 3684, Beaumont, TX 77704, (physical) 6720 College, Beaumont, TX 77707

Fax: 409-860-3857 Telephone# 409-860-4459

by: T.W. HARRISON (print name) Title: PRESIDENT

Signature:

ALLCO, L.L.C. TEXAS

SUBSCRIBED AND SWORN to before me by the above-named

T.W. HARRISON on

this the 24TH day of AUGUST, 2022.

Jacqueline Christopher
Notary Public in and for
the State of TEXAS

JACQUELINE CHRISTOPHER
Notary Public, State of Texas
Comm. Expires 05-21-2024
Notary ID# 155932-5

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

TECHNICAL SPECIFICATIONS

DAVIS BACON MINIMUM WAGE SCALE AND PAYROLL REQUIREMENTS

1.1 Following 29 CFR 5.5 (a) (1) (v), use the rates listed on the Wage Determination Attachment for minimum wage and benefits for the labor classifications applicable to the Work.

1.2 These rates do not prohibit payment of more than the rates stated.

1.3 Apply rates in this Document 00810 to site work greater than five (5) feet from exterior wall of new building under construction or from exterior wall of existing building.

Certified Payroll Requirements

2.1 The Contractor shall submit the "Certificate from Contractor Appointing Officer or Employee to Supervise Payment of Employees" (Exhibit "A") to the Monitoring Authority prior to final execution of the contract.

2.2 During the course of the work, ALL Subcontractors shall submit the "Certificate from Subcontractor Appointing Officer or Employee to Supervise Payment of Employees" (Exhibit "B") to the Monitoring Authority.

Article 5159a of the Revised Civil Statutes of Texas, passed by the 43rd Legislature Acts of 1933, Page 91, Chapter 45, provides that any government subdivision shall ascertain the general prevailing rate of per diem wages in the locality in which the work is to be per diem wages which shall be paid for each craft type of workman. This Article further provides the CONTRACTOR shall forfeit, as a penalty, to the City, County, or State , or other political subdivision. Ten Dollars ($10.00) per day for each laborer, or workman, or mechanic who is not paid the stipulated wage for the type of work performed by him as set up on the wage scale. The OWNER is authorized to withhold from the CONTRACTOR, after full investigation by the awarding body, the amount of this penalty in any payment that might be claimed by the CONTRACTOR or SUBCONTRACTOR. The Act make the CONTRACTOR responsible for the acts of the SUBCONTRACTOR in this respect. The Article likewise requires that the CONTRACTOR and SUBCONTRACTOR keep an accurate record of the names and occupations of all persons employed by him and show the actual per diem wages paid to each worker, and these records are open to the inspection of the OWNER.

EXHIBIT "A"

Wage Determination Publication Date:
January 7, 2022
for
General Decision Number: **TX20220038 01/07/2022 TX38**
Superseded General Decision Number: TX20210038

State:	Texas
Construction Type:	Highway
Counties:	Austin, Brazoria, Chambers, Fort Bend, Galveston, Hardin, Harris, Jefferson, Liberty, Montgomery, Orange, San Jacinto and Waller Counties in Texas.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022, Executive Order 14026 generally applies to the contract. The contractor must pay all covered workers at least $15.00 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.

If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022, Executive Order 13658 generally applies to the contract. The contractor must pay all covered workers at least $11.25 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/07/2022

LABOR CLASSIFICATIONS AND PREVAILING WAGE RATES
CONSTRUCTION 2022

CLASSIFICATION	RATE	CLASSIFICATION	RATE
Cement Mason / Concrete Finisher- Paving and Structures	$12.98	Power Equipment Operator, Foundation Drill, Truck Mounted	$15.89
Electrician * 3 Journeyman to 2 Apprentices Allowed	$27.11	Power Equipment Operator, Front End Loader, 3 CY or less	$13.32
Form Builder / Form Setter- Paving and Curb	$12.34	Power Equipment Operator, Front End Loader, over 3 CY	$13.17
Form Builder / Form Setter- Structures	$12.23	Power Equipment Operator, Loader/Backhoe	$14.29
Laborer, Asphalt Raker	$12.36	Power Equipment Operator, Mechanic	$16.96
Laborer, Common	$11.02	Power Equipment Operator, Milling Machine	$13.53
Laborer, Flagger	$10.33	Power Equipment Operator, Motor Grader, Fine Grade	$15.69
Laborer, Pipelayer	$12.12	Power Equipment Operator, Motor Grader, Rough	$14.23
Laborer, Utility	$11.73	Power Equipment Operator, Off Road Hauler	$14.60
Laborer, Work Zone Barricade Servicer	$11.67	Power Equipment Operator, Pavement Marking Machine	$11.18
Painter (Structures)	$18.62	Power Equipment Operator, Piledriver	$14.95
Power Equipment Operator, Asphalt Distributor Operator	$14.06	Power Equipment Operator, Roller, Asphalt	$11.95
Power Equipment Operator, Asphalt Paving Machine	$14.32	Power Equipment Operator, Roller, Other	$11.57
Power Equipment Operator, Broom or Sweeper	$12.68	Power Equipment Operator, Scraper	$13.47
Power Equipment Operator, Concrete Paving Finishing Machine	$13.07	Servicer	$13.97
Power Equipment Operator, Concrete Paving, Curing, Float Texturing Machine	$11.71	Power Equipment Operator, Spreader Box	$13.58
Power Equipment Operator, Concrete Saw	$13.99	Steel Worker, Reinforcing Steel	$15.15
Power Equipment Operator, Crane, Hydraulic 80 tons or less	$13.86	Steel Worker, Structural Steel	$14.39
Power Equipment Operator, Crane, Lattice boom 80 tons or less	$14.97	Steel Worker, Structural Steel Welder	$12.85
Power Equipment Operator, Crane, Lattice boom over 80 tons	$15.80	Truck Driver, Low Boy Float	$16.03
Power Equipment Operator, Crawler Tractor	$13.68	Truck Driver, Single Axle	$11.46
Power Equipment Operator, Excavator, 50,000 pounds or less	$12.71	Truck Driver, Single- or Tandem Axle Dump	$11.48
Power Equipment Operator, Excavator, over 50,000 pounds	$14.53	Truck Driver, Tandem Axle Tractor w/ Semi-Trailer	$12.27
Power Equipment Operator, Foundation Drill, Crawler Mounted	$17.43		
Welders - Receive rate prescribed for craft performing operation to which welding is incidental			
* Apprentices- must be in an approved USDOL Program and cannot exceed ratios			

EXHIBIT "B"

CERTIFICATE FROM CONTRACTOR APPOINTING OFFICER OR EMPLOYEE TO SUPERVISE PAYMENT OF EMPLOYEES

Project Name _____

_____

Project WBS#: _____ Date _____

Email Address: _____

(I) (We) hereby certify that (I am) (we are) the Prime Contractor for _____

_____
(specify type of job)

in connection with construction of the above-mentioned Project, and that (I) (we) have appointed _____, whose signature appears below, to supervise the payment of (my) (our) employees beginning _____, 20___;that ___he/she is in a position to have full knowledge of the facts set forth in the payroll documents and in the statement of compliance required by the Copeland Act and Jefferson County, which he/she is to execute with (my) (our) full authority and approval until such time as (I) (we) submit to the Jefferson County a new certificate appointing some other person for the purposes hereinabove stated.

_____ Phone: _____
(Identifying Signature of Appointee)

Attest: _____
(Name of Firm or Corporation)

By: _____ By: _____
(Signature) (Signature)

_____ _____
(Title) (Title)

NOTE: This certificate must be executed by an authorized officer of a corporation or by a member of a partnership, and shall be executed prior to and be submitted with the first payroll. Should the appointee be changed, a new certificate must accompany the first payroll for which the new appointee executes a statement of compliance required by the Copeland Act and Jefferson County.

EXHIBIT "C"

CERTIFICATE FROM SUBCONTRACTOR APPOINTING OFFICER OR EMPLOYEE TO SUPERVISE PAYMENT OF EMPLOYEES

Project Name _____

_____

Project WBS#: _____ Date _____

Email Address: _____

(I) (We) hereby certify that (I am) (we are) the Sub Contractor for _____

_____
(specify type of job)

in connection with construction of the above-mentioned Project, and that (I) (we) have appointed _____, whose signature appears below, to supervise the payment of (my) (our) employees beginning ____, 20__; _____ that ___he/she is in a position to have full knowledge of the facts set forth in the payroll documents and in the statement of compliance required by the Copeland Act and Jefferson County, which he/she is to execute with (my) (our) full authority and approval until such time as (I) (we) submit to Jefferson County a new certificate appointing some other person for the purposes herein above stated.

_____ Phone: _____
(Identifying Signature of Appointee)

Attest: _____
(Name of Firm or Corporation)

By: _____ By: _____
(Signature) (Signature)

_____ _____
(Title) (Title)

NOTE: This certificate must be executed by an authorized officer of a corporation or by a member of a partnership, and shall be executed prior to and be submitted with the first payroll. Should the appointee be changed, a new certificate must accompany the first payroll for which the new appointee executes a statement of compliance required by the Copeland Act and Jefferson County.

END OF DOCUMENT

TECHNICAL SPECIFICATIONS

REHABILITATION OF FUEL FARM PAVEMENT
JACKBROOKS REGIONAL AIRPORT (BPT)
ISB 22-028/JW

May 2022

ITEM SS-101 SAFETY PLAN COMPLIANCE DOCUMENT (SPCD)

DESCRIPTION

101-1.1 The Contractor shall thoroughly review the approved and shall comply with bid plans and specifications. The Contractor shall certify such compliance by completing the attached SPCD and submitting to the Engineer for approval.

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CONTRACTOR SAFETY PLAN COMPLIANCE DOCUMENTS

Owner Name: Jefferson County

Airport: Jack Brooks Regional Airport

Project Description: Fuel Farm Pavement Reconstruction

Contractor: _____

Each item listed below corresponds to a specific section of the plans. The Contractor shall certify that he/she will comply with each section of the plans. Each section with a "no" response must be fully explained in an attachment to the CSPCD. The document shall be signed and dated by a manager, principal or owner of the Contractor's company. All other requested information shall be completed by the Contractor and submitted to the Engineer for approval.

1. **Section 1 – Correspondence:** This project shall be completed in accordance with the plans.

Owner: Alex Rupp, Airport Manager	Phone: 409.719.4900
Engineer: The Solco Group LLC	
Kelvin Solco, PE	Phone: 817.564.6895
Contractor:	

2. **Section 2 - Phasing:** This project shall be completed in accordance with the plans.

   Yes_____ No_____ N/A_____

3. **Section 3 - Areas of Operations affected by Construction Activity:** This project shall be completed in accordance with the plans.

   Yes_____ No_____ N/A_____

4. **Section 4 - Protection of Navigational Aids (NAVAIDs):** This project shall be completed in accordance with the plans.

   Yes_____ No_____ N/A___X___

5. **Section 5 - Contractor Access:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A_____

6. **Section 6 – Wildlife Management:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A___X_____

7. **Section 7 – Foreign Object Debris (FOD) Management:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A_____

8. **Section 8 – Hazardous Materials (HAZMAT) Management:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A____ X _____

9. **Section 9 – Notification of Construction Activities:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A_____

10. **Section 10 - Inspection Requirements:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A_____

11. **Section 11 – Underground Utilities:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A_____

12. **Section 12 – Penalties:** This project shall be completed in accordance with the plans and specifications.

Yes_____ No_____ N/A_____

13. **Section 13 – Special Conditions:** This project shall be completed in accordance with the plans and specifications.

Yes_____ No_____ N/A_____

14. **Section 14 – Runway and Taxiway Visual Aids:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A___X_____

15. **Section 15 - Marking and Signs for Access Routes:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A_____

16. **Section 16 – Hazard Marking and Lighting:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A____X____

17. **Section 17 - Work Zone Lighting for Nighttime Construction:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A_____

18. **Section 18 – Protection of Safety Areas, Object Free Areas, Object Free Zones, and Approach/Departure Surfaces:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A___X___

For the project identified herein, I certify that the responses to the foregoing items are correct as marked and meet the compliance of the plans.

Signed: _____
Contractor's Authorized Representative

Date: _____

_____
Print Name and Title of Contractor's Representative

END OF ITEM SS-101

ITEM C-105
MOBILIZATION

DESCRIPTION

105-1 Description. This item of work shall consist of, but is not limited to, work and operations necessary for the movement of personnel, equipment, material and supplies to and from the project site for work on the project except as provided in the contract as separate pay items.

105-2 Mobilization limit. Mobilization shall be limited to **5** percent of the total project cost.

105-3 Posted notices. Prior to commencement of construction activities, the Contractor must post the following documents in a prominent and accessible place where they may be easily viewed by all employees of the prime Contractor and by all employees of subcontractors engaged by the prime Contractor: Equal Employment Opportunity (EEO) Poster "Equal Employment Opportunity is the Law" in accordance with the Office of Federal Contract Compliance Programs Executive Order 11246, as amended; Davis Bacon Wage Poster (WH 1321) - DOL "Notice to All Employees" Poster; and Applicable Davis-Bacon Wage Rate Determination. These notices must remain posted until final acceptance of the work by the Owner.

~~**105-4 Engineer/RPR field office.** The Contractor shall provide dedicated space for the use of the field RPR and inspectors, as a field office for the duration of the project. This space shall be located conveniently near the construction and shall be separate from any space used by the Contractor. The Contractor shall furnish water, sanitary facilities, heat, air conditioning, and electricity in accordance with local building codes. An Engineer/RPR field office is not required.~~

METHOD OF MEASUREMENT

105-5 Basis of measurement and payment. Based upon the contract lump sum price for "Mobilization" partial payments will be allowed as follows:

a. With first pay request, 50%.

b. When 50% or more of the original contract is earned, an additional 40%.

~~**c.** When ---% or more of the original contract is earned, an additional ---%.~~

d. After Final Inspection, staging area clean-up and delivery of all Project Closeout materials as required by Section 90, paragraph 90-11, *Contractor Final Project Documentation,* the final 10%.

BASIS OF PAYMENT

105-6 Payment will be made under:

Item C-105 -6.1	Mobilization (Maximum 5% of Total Bid Exclusive Mobilization -	per Lump Sum

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Office of Federal Contract Compliance Programs (OFCCP)

Executive Order 11246, as amended

EEOC-P/E-1 – Equal Employment Opportunity is the Law Poster

United States Department of Labor, Wage and Hour Division (WHD)

WH 1321 – Employee Rights under the Davis-Bacon Act Poster

END OF ITEM C-105

ITEM SS-120
CONSTRUCTION SAFETY AND SECURITY

DESCRIPTION

120-1.1 This item covers safety and security for construction of the proposed improvements.

The attention to the bidder is directed to the necessity for careful examination of the entire project site to determine, at the time of bid preparation, the full extent of work to be done under the item "Construction Safety and Security."

The items in the "Construction Safety and Security shall include:

1. Temporary Signs and Barricades
2. Airport Security/Safety Requirements

CONSTRUCTION METHODS

120-2.1 Temporary Signs and Barricades

The contractor shall furnish, install, maintain, and remove barricades and temporary signs in accordance with AC 150/5370-2 Operational Safety on Airports During Construction and details on the plans and as directed by the Engineer.

All work involved in the furnishing, installation, maintenance, fueling and removal of barricades and temporary signs will not be measured for separate payment but will be considered subsidiary to the bid item "Construction Safety and Security."

120-2.2 Airport Security and Safety Requirements

The Contractor shall abide by the Airport Security and Safety requirements that are outlined in the approved CSPP. Any costs associated with Airport Security requirements will not be measured by separate payment but will be considered subsidiary to the bid item "Construction Safety and Security."

MEASUREMENT AND PAYMENT

120-3.1 Construction security and safety will be measured as a lump sum complete item. Work completed and accepted under this item will be paid as a lump sum price bid for "Construction Safety and Security," which include full compensation for furnishing all labor, tools and equipment and incidentals necessary to do complete the work. Payment will be made under:

Item SS -120-3.1 Construction Safety and Security, Barricades, Signs, and Traffic Handling – per Lump Sum

END OF ITEM SS-120

ITEM D-701
PIPE FOR STORM DRAINS AND CULVERTS

DESCRIPTION

701-1.1 This item shall consist of the construction of pipe culverts and storm drains in accordance with these specifications and in close conformity with the lines and grades shown on the plans.

MATERIALS

701-2.1 Materials shall meet the requirements shown on the plans and specified below. Underground piping and components used in drainage systems for terminal and aircraft fueling ramp drainage shall be noncombustible and inert to fuel in accordance with National Fire Protection Association (NFPA) 415.

701-2.2 Pipe. The pipe shall be of the type called for on the plans or in the proposal and shall be in accordance with the following appropriate requirements:

	American Association of State Highway and Transportation Officials (AASHTO) M167 Standard Specification for Corrugated Steel Structural Plate, Zinc-Coated, for Field-Bolted Pipe, Pipe-Arches, and Arches
AASHTO M190	Standard Specification for Bituminous-Coated Corrugated Metal Culvert Pipe and Pipe Arches
AASHTO M196	Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains
AASHTO M219	Standard Specification for Corrugated Aluminum Alloy Structural Plate for Field-Bolted Pipe, Pipe-Arches, and Arches
AASHTO M243	Standard Specification for Field-Applied Coating of Corrugated Metal Structural Plate for Pipe, Pipe-Arches, and Arches
AASHTO M252	Standard Specification for Corrugated Polyethylene Drainage Pipe
AASHTO M294	Standard Specification for Corrugated Polyethylene Pipe, 300- to 1500-mm (12- to 60-in.) Diameter
AASHTO M304	Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Wall Drainpipe and Fittings Based on Controlled Inside Diameter
AASHTO MP20	Standard Specification for Steel Reinforced Polyethylene (PE) Ribbed Pipe, 300- to 900-mm (12- to 36-in.) Diameter
AASHTO R73	Standard Practice for Evaluation of Precast Concrete Drainage Productions
ASTM A760	Standard Specification for Corrugated Steel Pipe, Metallic Coated for Sewers and Drains
ASTM A761	Standard Specification for Corrugated Structural Steel Plate, Zinc-Coated, for Field-Bolted Pipe, Pipe-Arches, and Arches
ASTM A762	Standard Specification for Corrugated Steel Pipe, Polymer Precoated for Sewers and Drains

ASTM A849	Standard Specification for Post Applied Coatings, Pavings, and Linings for Corrugated Steel Sewer and Drainage Pipe
ASTM B745	Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains
ASTM C14	Standard Specification for Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe
ASTM C76	Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
ASTM C506	Standard Specification for Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe
ASTM C507	Standard Specification for Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe
ASTM C655	Standard Specification for Reinforced Concrete D-Load Culvert, Storm Drain, and Sewer Pipe
ASTM C1433	Standard Specification for Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers
ASTM C1479	Standard Practice for Installation of Precast Concrete Sewer, Storm Drain, and Culvert Pipe Using Standard Installations
ASTM C1577	Standard Specification for Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers Designed According to AASHTO LRFD
ASTM C1786	Standard Specification for Segmental Precast Reinforced Concrete Box Sections for Culverts, Storm Drains, and Sewers Designed According to AASHTO LRFD
ASTM C1840	Standard Practice for Inspection and Acceptance of Installed Reinforced Concrete Culvert, Storm Drain, and Storm Sewer Pipe
ASTM D3262	Standard Specification for "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Sewer Pipe
ASTM D4161	Standard Specification for "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe Joints Using Flexible Elastomeric Seals
ASTM F667	Standard Specification for 3 through 24 in Corrugated Polyethylene Pipe and Fittings
ASTM F714	Standard Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Outside Diameter
ASTM F794	Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Gravity Sewer Pipe and Fittings Based on Controlled Inside Diameter
ASTM F894	Standard Specification for Polyethylene (PE) Large Diameter Profile Wall Sewer and Drainpipe
ASTM F949	Standard Specification for Poly (Vinyl Chloride) (PVC) Corrugated Sewer Pipe with a Smooth Interior and Fittings

ASTM F2435	Standard Specification for Steel Reinforced Polyethylene (PE) Corrugated Pipe
ASTM F2562	Specification for Steel Reinforced Thermoplastic Ribbed Pipe and Fittings for Non-Pressure Drainage and Sewerage
ASTM F2736	Standard Specification for 6 to 30 in. (152 to 762 mm) Polypropylene (PP) Corrugated Single Wall Pipe and Double Wall Pipe
ASTM F2764	Standard Specification for 30 to 60 in. (750 to 1500 mm) Polypropylene (PP) Triple Wall Pipe and Fittings for Non-Pressure Sanitary Sewer Applications
ASTM F2881	Standard Specification for 12 to 60 in. (300 to 1500 mm) Polypropylene (PP) Dual Wall Pipe and Fittings for Non-Pressure Storm Sewer Applications
ASTM D3034	Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings

701-2.3 Concrete. Concrete for pipe cradles shall have a minimum compressive strength of 2000 psi (13.8 MPa) at 28 days and conform to the requirements of ASTM C94.

701-2.4 Rubber gaskets. Rubber gaskets for rigid pipe shall conform to the requirements of ASTM C443. Rubber gaskets for PVC pipe, polyethylene, and polypropylene pipe shall conform to the requirements of ASTM F477. Rubber gaskets for zinc-coated steel pipe and precoated galvanized pipe shall conform to the requirements of ASTM D1056, for the "RE" closed cell grades. Rubber gaskets for steel reinforced thermoplastic ribbed pipe shall conform to the requirements of ASTM F477. Not used.

701-2.5 Joint mortar. Pipe joint mortar shall consist of one part Portland cement and two parts sand. The Portland cement shall conform to the requirements of ASTM C150, Type I. The sand shall conform to the requirements of ASTM C144.

701-2.6 Joint fillers. Poured filler for joints shall conform to the requirements of ASTM D6690.

701-2.7 Plastic gaskets. Plastic gaskets shall conform to the requirements of ASTM C990. Not used.

701-2.8. Controlled low-strength material (CLSM). Controlled low-strength material shall conform to the requirements of Item P-153. When CLSM is used, all joints shall have gaskets. Not used.

701-2.9 Precast box culverts. Manufactured in accordance with and conforming to ASTM C1433.

701-2.10 Precast concrete pipe. Precast concrete structures shall be furnished by a plant meeting National Precast Concrete Association Plant Certification Program or American Concrete Pipe Association QCast Plant Certification program.

CONSTRUCTION METHODS

701-3.1 Excavation. The width of the pipe trench shall be sufficient to permit satisfactory jointing of the pipe and thorough tamping of the bedding material under and around the pipe, but it shall not be less than the external diameter of the pipe plus 12 inches (300 mm) on each side. The trench walls shall be vertical.

The Contractor shall comply with all current federal, state, and local rules and regulations governing the safety of men and materials during the excavation, installation, and backfilling operations. Specifically, the Contractor shall observe that all requirements of the Occupational Safety and Health Administration (OSHA) relating to excavations, trenching, and shoring are strictly adhered to. The width of the trench shall be sufficient to permit satisfactorily jointing of the pipe and thorough compaction of the bedding material under the pipe and backfill material around the pipe, but it shall not be greater than the widths shown on the plans trench detail.

Where rock, hardpan, or other unyielding material is encountered, the Contractor shall remove it from below the foundation grade for a depth of at least 8 inch (200 mm) or 1/2 inch (12 mm) for each foot of fill over the top of the pipe (whichever is greater) but for no more than three-quarters of the nominal diameter of the pipe. The excavation below grade should be filled with granular material to form a uniform foundation.

Where a firm foundation is not encountered at the grade established, due to soft, spongy, or other unstable soil, the unstable soil shall be removed and replaced with approved granular material for the full trench width. The RPR shall determine the depth of removal necessary. The granular material shall be compacted to provide adequate support for the pipe.

The excavation for pipes placed in embankment fill shall not be made until the embankment has been completed to a height above the top of the pipe as shown on the plans.

701-3.2 Bedding. The bedding surface for the pipe shall provide a foundation of uniform density to support the pipe throughout its entire length.

a. Rigid pipe. The pipe bedding shall be constructed uniformly for the full length of the pipe barrel, as required on the plans. The maximum aggregate size shall be 1 in when the bedding thickness is less than 6 inches, and 1-1/2 in when the bedding thickness is greater than 6 inches. Bedding shall be loosely placed uncompacted material under the middle third of the pipe prior to placement of the pipe.

b. Flexible pipe. For flexible pipe, the bed shall be shaped to fit the pipe, and a bedding blanket of sand or fine granular material shall be provided as follows:

Flexible Pipe Bedding

Pipe Corrugation Depth		Minimum Bedding Depth	
inch	mm	inch	mm
1/2	12	1	25
1	25	2	50
2	50	3	75
2-1/2	60	3-1/2	90

c. other pipe materials. For PVC, polyethylene, polypropylene, or fiberglass pipe, the bedding material shall consist of coarse sands and gravels with a maximum particle size of

3/4 inches (19 mm). For pipes installed under paved areas, no more than 12% of the material shall pass the No. 200 (0.075 mm) sieve. For all other areas, no more than 50% of the material shall pass the No. 200 (0.075 mm) sieve. The bedding shall have a thickness of at least 6 inches (150 mm) below the bottom of the pipe and extend up around the pipe for a depth of not less than 50% of the pipe's vertical outside diameter.

701-3.3 Laying pipe. The pipe laying shall begin at the lowest point of the trench and proceed upgrade. The lower segment of the pipe shall be in contact with the bedding throughout its full length. Bell or groove ends of rigid pipes and outside circumferential laps of flexible pipes shall be placed facing upgrade.

Paved or partially lined pipe shall be placed so that the longitudinal center line of the paved segment coincides with the flow line.

Elliptical and elliptically reinforced concrete pipes shall be placed with the manufacturer's reference lines designating the top of the pipe within five degrees of a vertical plane through the longitudinal axis of the pipe.

701-3.4 Joining pipe. Joints shall be made with (1) cement mortar, (2) cement grout, (3) rubber gaskets, (4) plastic gaskets, (5) coupling bands or (6).

Mortar joints shall be made with an excess of mortar to form a continuous bead around the outside of the pipe and shall be finished smooth on the inside. Molds or runners shall be used for grouted joints to retain the poured grout. Rubber ring gaskets shall be installed to form a flexible watertight seal.

a. Concrete pipe. Concrete pipe may be either bell and spigot or tongue and groove. Pipe sections at joints shall be fully seated and the inner surfaces flush and even. Concrete pipe joints shall be sealed with rubber gaskets meeting ASTM C443 when leak resistant joints are required or Concrete pipe joints shall be sealed with butyl mastic meeting ASTM C990 or mortar when soil tight joints are required. Joints shall be thoroughly wetted before applying mortar or grout.

b. Metal pipe. Metal pipe shall be firmly joined by form-fitting bands conforming to the requirements of ASTM A760 for steel pipe and AASHTO M196 for aluminum pipe.

c. PVC, Polyethylene, or Polypropylene pipe. Joints for PVC, Polyethylene, or Polypropylene pipe shall conform to the requirements of ASTM D3212 when leak resistant joints are required. Joints for PVC and Polyethylene pipe shall conform to the requirements of AASHTO M304 when soil tight joints are required. Fittings for polyethylene pipe shall conform to the requirements of AASHTO M252 or ASTM M294. Fittings for polypropylene pipe shall conform to ASTM F2881, ASTM F2736, or ASTM F2764.

d. Fiberglass pipe. Joints and fittings shall be as detailed on the plans and in accordance with the manufacturer's recommendations. Joints shall meet the requirements of ASTM D4161 for flexible elastomeric seals. **or** Enter manufacturers joint installation requirements.

701-3.5 Embedment and Overfill. Pipes shall be inspected before any fill material is placed; any pipes found to be out of alignment, unduly settled, or damaged shall be removed and re-laid or replaced at the Contractor's expense.

701-3.5-1 Embedment Material Requirements

a. Concrete Pipe. Embedment material and compaction requirements shall be in accordance with the applicable Type of Standard Installation (Types 1, 2, 3, or 4) per ASTM C1479. If a concrete cradle or CLSM embedment material is used, it shall conform to the plan details.

b. Plastic and fiberglass Pipe. Embedment material shall meet the requirements of ASTM D3282, A-1, A-2-4, A-2-5, or A-3. Embedment material shall be free of organic material, stones

larger than 1.5 inches in the greatest dimension, or frozen lumps. Embedment material shall extend to 12 inches above the top of the pipe.

c. Metal Pipe. Embedment material shall be granular as specified in the contract document and specifications, and shall be free of organic material, rock fragments larger than 1.5 inches in the greatest dimension and frozen lumps. As a minimum, backfill materials shall meet the requirements of ASTM D3282, A-1, A-2, or A-3. Embedment material shall extend to 12 inches above the top of the pipe.

701-3.5-2 Placement of Embedment Material

The embedment material shall be compacted in layers not exceeding 6 inches (150 mm) on each side of the pipe and shall be brought up one foot (30 cm) above the top of the pipe or to natural ground level, whichever is greater. Thoroughly compact the embedment material under the haunches of the pipe without displacing the pipe. Material shall be brought up evenly on each side of the pipe for the full length of the pipe.

When the top of the pipe is above the top of the trench, the embedment material shall be compacted in layers not exceeding 6 inches (150 mm) and shall be brought up evenly on each side of the pipe to one foot (30 cm) above the top of the pipe. All embedment material shall be compacted to a density required under Item P-152.

Concrete cradles and flowable fills, such as controlled low strength material (CLSM) or controlled density fill (CDF), may be used for embedment provided adequate flotation resistance can be achieved by restraints, weighing, or placement technique.

It shall be the Contractor's responsibility to protect installed pipes and culverts from damage due to construction equipment operations. The Contractor shall be responsible for installation of any extra strutting or backfill required to protect pipes from the construction equipment.

701-3.6 Overfill

Pipes shall be inspected before any overfill is in place. Any pipes found to be out of alignment, unduly settled, or damaged shall be removed and re-laid or replaced at the Contractor's expense. Evaluation of any damage to RCP shall be evaluated based on AASHTO R73.

Overfill material shall be place and compacted in layers as required to achieve compaction to at least 95 percent standard proctor per ASTM D698 . The soil shall contain no debris, organic matter, frozen material, or stones with a diameter greater than one half the thickness of the compacted layers being placed.

701-3.7 Inspection Requirements

An initial post installation inspection shall be performed by the RPR no sooner than 30 days after completion of installation and final backfill. Clean or flush all lines prior to inspection.

Use a camera with lighting suitable to allow a clear picture of the entire periphery of the pipe interior. Center the camera in the pipe both vertically and horizontally and be able to pan and tilt to a 90-degree angle with the axis of the pipe rotating 360 degrees. Use equipment to move the camera through the pipe that will not obstruct the camera's view or interfere with proper documentation of the pipe's condition. The video image shall be clear, focused, and relatively free from roll, static, or other image distortion qualities that would prevent the reviewer from evaluating the condition of the pipe.

For pipe sizes larger than 48 inches, a walk-through visual inspection shall be performed.

Incorporate specific inspection requirements for the various types of pipes beneath the general inspection requirements.

Reinforced concrete pipe shall be inspected, evaluated, and reported on in accordance with ASTM C1840, "Standard Practice for Inspection and Acceptance of Installed Reinforced Concrete Culvert, Storm Drain, and Storm Sewer Pipe." Any issues reported shall include still photo and video documentation. The zoom ratio shall be provided for all still or video images that document any issues of concern by the inspection firm.

Flexible pipes shall be inspected for rips, tears, joint separations, soil migration, cracks, localized buckling, settlement, alignment, and deflection. Determine whether the allowable deflection has been exceeded by use of a laser profiler for internal pipe diameters of 48 inches or less, or direct measurement for internal pipe diameters greater than 48 inches. Laser profile equipment shall utilize low barrel distortion video equipment. Deflection of installed pipe shall not exceed the limits provided in the table below, as a percentage of the average inside diameter of the pipe.

Maximum Allowable Pipe Deflection

Type of Pipe	**Maximum Allowable Deflection (%)**
Corrugated Metal Pipe	5
Concrete Lined CMP	3
Thermoplastic Pipe	5
Fiberglass	5

If deflection readings in excess of the allowable deflection are obtained, remove the pipe with excessive deflection and replace with new pipe. Isolated areas may exceed allowable by 2.5% with concurrence of RPR. Repair or replace any pipe with cracks exhibiting displacement across the crack, bulges, creases, tears, spalls, or delamination. The report for flexible pipe shall include as a minimum, the deflection results and final post installation inspection report. The inspection report shall include: a copy of all videos taken, pipe location identification, equipment used for inspection, inspector name, deviation from design line and grade, and inspector's notes.

METHOD OF MEASUREMENT

701-4.1 The length of pipe shall be measured in linear feet (m) of pipe in place, completed, and accepted. It shall be measured along the centerline of the pipe from end or inside face of structure to the end or inside face of structure, whichever is applicable. Identify each class, types and size of pipe shall be measured separately. All fittings shall be included in the footage as typical pipe sections in the pipe being measured.

701-4.2. Precast box culverts shall be measured by individual unit and size.

701-4.3 The volume of concrete for pipe cradles shall be the number of cubic yards (cubic meters) of concrete that is completed in place and accepted.

701-4.4 The volume of rock, hardpan, or other unyielding material shall be the number of cubic yards (cubic meters) excavated. No payment shall be made for the cushion material placed for the bed of the pipe.

BASIS OF PAYMENT

701-5.0 These prices shall fully compensate the Contractor for furnishing all materials and for all preparation, excavation, and installation of these materials; and for all labor, equipment, tools, and incidentals necessary to complete the item.

701-5.1 Payment will be made at the contract unit price per linear foot (meter) for identify each class and size of pipe .

701-5.2 Payment will be made at the contract unit price per unit for identify each class and size of precast box culvert.

701-5.3 Payment will be made at the contract unit price per cubic yard (cubic meter) of concrete for pipe cradles.

701-5.4 Payment will be made at the contract unit price per cubic yard (cubic meter) for rock, hardpan, or other unyielding material excavation.

Payment will be made under:

Item 701-5.1	~~[ ]inch~~ **TBD** per linear foot (meter)
Item 701-5.2	Precast box culvert per unit.
Item 701-5.3	Concrete for pipe cradles - per cubic yard (cubic meter)
Item 701-5.4	Rock, hardpan, or other unyielding material excavation - per cubic yard (cubic meter

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

American Association of State Highway and Transportation Officials (AASHTO)

AASHTO M167	Standard Specification for Corrugated Steel Structural Plate, Zinc-Coated, for Field-Bolted Pipe, Pipe-Arches, and Arches
AASHTO M190	Standard Specification for Bituminous-Coated Corrugated Metal Culvert Pipe and Pipe Arches
AASHTO M196	Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains
AASHTO M219	Standard Specification for Corrugated Aluminum Alloy Structural Plate for Field-Bolted Pipe, Pipe-Arches, and Arches
AASHTO M243	Standard Specification for Field Applied Coating of Corrugated Metal Structural Plate for Pipe, Pipe-Arches, and Arches
AASHTO M252	Standard Specification for Corrugated Polyethylene Drainage Pipe
AASHTO M294	Standard Specification for Corrugated Polyethylene Pipe, 300- to 1500-mm (12- to 60-in.) Diameter
AASHTO M304	Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Wall Drainpipe and Fittings Based on Controlled Inside Diameter
AASHTO MP20	Standard Specification for Steel Reinforced Polyethylene (PE) Ribbed Pipe, 300- to 900-mm (12- to 36-in.) Diameter

ASTM International (ASTM)

ASTM A760	Standard Specification for Corrugated Steel Pipe, Metallic Coated for Sewers and Drains
ASTM A761	Standard Specification for Corrugated Steel Structural Plate, Zinc Coated, for Field-Bolted Pipe, Pipe-Arches, and Arches
ASTM A762	Standard Specification for Corrugated Steel Pipe, Polymer Precoated for Sewers and Drains
ASTM A849	Standard Specification for Post-Applied Coatings, Pavings, and Linings for Corrugated Steel Sewer and Drainage Pipe
ASTM B745	Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains
ASTM C14	Standard Specification for Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe
ASTM C76	Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
ASTM C94	Standard Specification for Ready Mixed Concrete
ASTM C144	Standard Specification for Aggregate for Masonry Mortar
ASTM C150	Standard Specification for Portland Cement
ASTM C443	Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets
ASTM C506	Standard Specification for Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe
ASTM C507	Standard Specification for Reinforced Concrete Elliptical Culvert, Storm Drain and Sewer Pipe
ASTM C655	Standard Specification for Reinforced Concrete D-Load Culvert, Storm Drain and Sewer Pipe
ASTM C990	Standard Specification for Joints for Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants
ASTM C1433	Standard Specification for Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers
ASTM D1056	Standard Specification for Flexible Cellular Materials Sponge or Expanded Rubber
ASTM D3034	Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings
ASTM D3212	Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals
ASTM D3262	Standard Specification for "Fiberglass" (Glass-Fiber Reinforced Thermosetting Resin) Sewer Pipe
ASTM D3282	Standard Practice for Classification of Soils and Soil-Aggregate Mixtures for Highway Construction Purposes

ASTM D4161	Standard Specification for "Fiberglass" (Glass-Fiber Reinforced Thermosetting Resin) Pipe Joints Using Flexible Elastomeric Seals
ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements
ASTM F477	Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe
ASTM F667	Standard Specification for 3 through 24 in. Corrugated Polyethylene Pipe and Fittings
ASTM F714	Standard Specification for Polyethylene (PE) Plastic Pipe (DR PR) Based on Outside Diameter
ASTM F794	Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Gravity Sewer Pipe & Fittings Based on Controlled Inside Diameter
ASTM F894	Standard Specification for Polyethylene (PE) Large Diameter Profile Wall Sewer and Drainpipe
ASTM F949	Standard Specification for Poly (Vinyl Chloride) (PVC) Corrugated Sewer Pipe with a Smooth Interior and Fittings
ASTM F2435	Standard Specification for Steel Reinforced Polyethylene (PE) Corrugated Pipe
ASTM F2562	Specification for Steel Reinforced Thermoplastic Ribbed Pipe and Fittings for Non-Pressure Drainage and Sewerage
ASTM F2736	Standard Specification for 6 to 30 in. (152 to 762 mm) Polypropylene (PP) Corrugated Single Wall Pipe and Double Wall Pipe
ASTM F2764	Standard Specification for 30 to 60 in. (750 to 1500 mm) Polypropylene (PP) Triple Wall Pipe and Fittings for Non-Pressure Sanitary Sewer Applications
ASTM F2881	Standard Specification for 12 to 60 in. (300 to 1500 mm) Polypropylene (PP) Dual Wall Pipe and Fittings for Non-Pressure Storm Sewer Applications

National Fire Protection Association (NFPA)

NFPA 415	Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways

END ITEM D-701

ITEM P-101
PREPARATION/REMOVAL OF EXISTING PAVEMENTS

DESCRIPTION

101-1 This item shall consist of preparation of existing pavement surfaces for overlay, surface treatments, removal of existing pavement, and other miscellaneous items. The work shall be accomplished in accordance with these specifications and the applicable plans.

EQUIPMENT AND MATERIALS

101-2 All equipment and materials shall be specified here and in the following paragraphs or approved by the Resident Project Representative (RPR). The equipment shall not cause damage to the pavement to remain in place.

CONSTRUCTION

101-3.1 Removal of existing pavement.

The Contractor's removal operation shall be controlled to not damage adjacent pavement structure, and base material, cables, utility ducts, pipelines, or drainage structures which are to remain under the pavement.

a. Concrete pavement removal. Full depth saw cuts shall be made perpendicular to the slab surface. The Contractor shall saw through the full depth of the slab including any dowels at the joint, removing the pavement and installing new dowels as shown on the plans and per the specifications. Where the perimeter of the removal limits is not located on the joint and there are no dowels present, the perimeter shall be saw cut the full depth of the pavement. The pavement inside the saw cut shall be removed by methods which will not cause distress in the pavement which is to remain in place. If the material is to be wasted on the airport site, it shall be reduced to a maximum size of 2 inches. Concrete slabs that are damaged by under breaking shall be repaired or removed and replaced as directed by the RPR.

The edge of existing concrete pavement against which new pavement abuts shall be protected from damage at all times. Spall and underbreak repair shall be in accordance with the plans. Any underlaying material that is to remain in place, shall be recompacted and/or replaced as shown on the plans. Adjacent areas damaged during repair shall be repaired or replaced at the Contractor's expense.

b. Asphalt pavement removal. Asphalt pavement to be removed shall be cut to the full depth of the asphalt pavement around the perimeter of the area to be removed. If the material is to be wasted on the airport site , it shall be broken to a maximum size of **2** inches (mm.

c. Repair or removal of Base, Subbase, and/or Subgrade. All failed material including surface, base course, subbase course, and subgrade shall be removed and repaired as shown on the plans or as directed by the RPR. Materials and methods of construction shall comply with the applicable sections of these specifications. Any damage caused by Contractor's removal process shall be repaired at the Contractor's expense.

~~**101-3.2 Preparation of joints and cracks prior to overlay/surface treatment.** Remove all vegetation and debris from cracks to a minimum depth of 1 inch (25 mm). If extensive vegetation exists, treat the specific area with a concentrated solution of a water-based herbicide approved~~

by the RPR. Fill all cracks greater than 1/4 inch (6 mm) wide) with a crack sealant per ASTM D6690. The crack sealant, preparation, and application shall be compatible with the surface treatment/overlay to be used. To minimize contamination of the asphalt with the crack sealant, underfill the crack sealant a minimum of 1/8 inch (3 mm), not to exceed ¼ inch (6 mm). Any excess joint or crack sealer shall be removed from the pavement surface.

101-3.3 Removal of Foreign Substances/contaminates prior to [overlay] [seal-coat] [remarking]. Removal of foreign substances/contaminates from existing pavement that will affect the bond of the new treatment shall consist of removal of rubber, fuel spills, oil, crack sealer, at least 90% of paint, and other foreign substances from the surface of the pavement. Areas that require removal are designated on the plans and as directed by the RPR in the field during construction.

[Chemicals] [high-pressure water] [heater scarifier (asphaltic concrete only)] [cold milling] [rotary grinding] [sandblasting] may be used. If chemicals are used, they shall comply with the state's environmental protection regulations. Removal methods used shall not cause major damage to the pavement, or to any structure or utility within or adjacent to the work area. Major damage is defined as changing the properties of the pavement, removal of asphalt causing the aggregate to ravel, or removing pavement over 1/8 inch (3 mm) deep. If it is deemed by the RPR that damage to the existing pavement is caused by operational error, such as permitting the application method to dwell in one location for too long, the Contractor shall repair the damaged area without compensation and as directed by the RPR.

Removal of foreign substances shall not proceed until approved by the RPR. Water used for high-pressure water equipment shall be provided by the Contractor at the Contractor's expense. No material shall be deposited on the pavement shoulders. All wastes shall be disposed of in areas indicated in this specification or shown on the plans.101-3.4 Concrete spall or failed asphaltic concrete pavement repair.

a. Repair of concrete spalls in areas to be overlaid with asphalt. The Contractor shall repair all spalled concrete as shown on the plans or as directed by the RPR. The perimeter of the repair shall be saw cut a minimum of 2 inches (50 mm) outside the affected area and 2 inches (50 mm) deep. The deteriorated material shall be removed to a depth where the existing material is firm or cannot be easily removed with a geologist pick. The removed area shall be filled with asphalt mixture with aggregate sized appropriately for the depth of the patch. The material shall be compacted with equipment approved by the RPR until the material is dense and no movement or marks are visible. The material shall not be placed in lifts over 4 inches (100 mm) in depth. This method of repair applies only to pavement to be overlaid.

b. Asphalt pavement repair. The Contractor shall repair all spalled concrete as shown on the plans or as directed by the RPR. The failed areas shall be removed as specified in paragraph 101-3.1b. All failed material including surface, base course, subbase course, and subgrade shall be removed. Materials and methods of construction shall comply with the applicable sections of these specifications.

101-3.5 Cold milling. Milling shall be performed with a power operated milling machine or grinder, capable of producing a uniform finished surface. The milling machine or grinder shall operate without tearing or gouging the underlaying surface. The milling machine or grinder shall be equipped with grade and slope controls, and a positive means of dust control. All millings shall be removed and disposed [off Airport property] [in areas designated on the plans]. If the Contractor mills or grinds deeper or wider than the plans specify, the Contractor shall replace the material removed with new material at the Contractor's Expense.

a. Patching. The milling machine shall be capable of cutting a vertical edge without chipping or spalling the edges of the remaining pavement and it shall have a positive method of controlling the depth of cut. The RPR shall layout the area to be milled with a straightedge in increments of 1-foot (30 cm) widths. The area to be milled shall cover only the failed area. Any excessive area that is milled because the Contractor does not have the appropriate milling machine, or areas that are damaged because of his negligence, shall be repaired by the Contractor at the Contractor's Expense.

b. Profiling, grade correction, or surface correction. The milling machine shall have a minimum width of **[** 7 **]** feet (**[** 2 **]** m) and it shall be equipped with electronic grade control devices that will cut the surface to the grade specified. The tolerances shall be maintained within +0 inch and -1/4 inch (+0 mm and -6mm) of the specified grade. The machine must cut vertical edges and have a positive method of dust control. The machine must have the ability to **[** windrow the millings or cuttings **] [** remove the millings or cuttings from the pavement and load them into a truck **]**. All millings shall be removed and disposed of **[** off the airport **] [** in areas designated on the plans **]**.

c. Clean-up. The Contractor shall sweep the milled surface daily and immediately after the milling until all residual materials are removed from the pavement surface. Prior to paving, the Contractor shall wet down the milled pavement and thoroughly sweep and/or blow the surface to remove loose residual material. Waste materials shall be collected and removed from the pavement surface and adjacent areas by sweeping or vacuuming. Waste materials shall be removed and disposed off Airport property. **[** in areas designated on the plans **]**.

101-3.6. Preparation of asphalt pavement surfaces prior to surface treatment. Existing asphalt pavements to be treated with a surface treatment shall be prepared as follows:

a. Patch asphalt pavement surfaces that have been softened by petroleum derivatives or have failed due to any other cause. Remove damaged pavement to the full depth of the damage and replace with new asphalt pavement similar to that of the existing pavement in accordance with paragraph 101-3.4b.

b. Repair joints and cracks in accordance with paragraph 101-3.2.

c. Remove oil or grease that has not penetrated the asphalt pavement by scrubbing with a detergent and washing thoroughly with clean water. After cleaning, treat these areas with an oil spot primer. **[** **]**

d. Clean pavement surface immediately prior to placing the surface treatment so that it is free of dust, dirt, grease, vegetation, oil, or any type of objectionable surface film.

101-3.7 Maintenance. The Contractor shall perform all maintenance work necessary to keep the pavement in a satisfactory condition until the full section is complete and accepted by the RPR. The surface shall be kept clean and free from foreign material. The pavement shall be properly drained at all times. If cleaning is necessary or if the pavement becomes disturbed, any work repairs necessary shall be performed at the Contractor's expense.

101-3.8 Preparation of Joints in Rigid Pavement prior to resealing. Prior to application of sealant material, clean and dry the joints of all scale, dirt, dust, old sealant, curing compound, moisture, and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method used cleans the joint and does not damage the joint.

101-3.8.1 Removal of Existing Joint Sealant. All existing joint sealants will be removed by plowing or use of hand tools. Any remaining sealant and or debris will be removed by use of wire brushes or other tools, as necessary. Resaw joints removing no more than 1/16 inch (2 mm) from

~~each joint face. Immediately after sawing, flush out joint with water and other tools as necessary to completely remove the slurry.~~

101-3.8.2 Cleaning prior to sealing. Immediately before sealing, joints shall be cleaned by removing any remaining laitance and other foreign material. Allow sufficient time to dry out joints prior to sealing. Joint surfaces will be surface-dry prior to installation of sealant.

101-3.8.3 Joint sealant. Joint material and installation will be in accordance with Item P-605 ~~[Item P-604]~~.

~~**101-3.9 Preparation of Cracks in Flexible Pavement prior to sealing.** Prior to application of sealant material, clean and dry the joints of all scale, dirt, dust, old sealant, curing compound, moisture, and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method used cleans the cracks and does not damage the pavement.~~

~~**101-3.9.1 Preparation of Crack.** Widen crack with [router] [random crack saw] by removing a minimum of 1/16 inch (2 mm) from each side of crack. Immediately before sealing, cracks will be blown out with a hot air lance combined with oil and water free compressed air.~~

~~**101-3.9.2 Removal of Existing Crack Sealant.** Existing sealants will be removed by [routing] [random crack saw]. Following [routing] [sawing] any remaining debris will be removed by use of a hot lance combined with oil and water free compressed air.~~

~~**101-3.9.3 Crack Sealant.** Crack sealant material and installation will be in accordance with [Item P-605].~~

101-3.9.4 Removal of Pipe and other Buried Structures.

a. Removal of Existing Pipe Material. Remove all pipes as recommended by RPR. The pipe material shall be legally disposed of off-site in a timely manner following removal. Trenches shall be backfilled material equal to or better in quality than adjacent embankment. Trenches under paved areas must be compacted to 95% of ASTM D698 .

~~**b. Removal of Inlets/Manholes.** [Where indicated on the plans or as directed by the RPR, inlets and/or manholes shall be removed and legally disposed of off-site in a timely fashion after removal. Excavations after removal shall be backfilled with material equal or better in quality than adjacent embankment. When under paved areas must be compacted to [95%] of ASTM [D1557] [D698], when outside of paved areas must be compacted to [95%] of ASTM D698. [Not used.]]~~

~~c. Removal of [ ].~~

METHOD OF MEASUREMENT

~~**101-4.1 Lump sum.** No separate measurement for payment will be made. The work covered by this section shall be considered as a subsidiary obligation of the Contractor and covered under the other contract items.~~

101-4.1 Pavement removal. The unit of measurement for pavement removal shall be the number of square yards ~~(square meters)~~ removed by the Contractor. Any pavement removed outside the limits of removal because the pavement was damaged by negligence on the part of the Contractor shall not be included in the measurement for payment. No direct measurement or payment shall be made for saw cutting. Saw cutting shall be incidental to pavement removal. Dowel bar installation shall be incidental to pavement removal.

~~**101-4.2 Joint and crack repair.** The unit of measurement for joint and crack repair shall be the linear foot (meter) of joint.~~

~~**101-4.3 Removal of Foreign Substances/contaminates.** The unit of measurement for foreign Substances/contaminates removal shall be the square foot (meter).~~

~~**101-4.4 Spalled and failed asphalt pavement repair.** The unit of measure for failed asphalt pavement repair shall be square foot (square meter).~~

~~**101-4.5 Concrete Spall Repair.** The unit of measure for concrete spall repair shall be the number of square feet (square meter). The location and average depth of the patch shall be determined and agreed upon by the RPR and the Contractor.~~

~~**101-4.6 Cold milling.** The unit of measure for cold milling shall be [____] inches of milling per square yard (square meter). The location and average depth of the cold milling shall be as shown on the plans. If the initial cut does not correct the condition, the Contractor shall re-mill the area and will be paid for the total depth of milling.~~]

101-4.7 Removal of Pipe and other Buried Structures. ~~[Not require.]~~ [The unit of measurement for removal of pipe and other buried structures will be Linear Feet. No separate measurement for payment will be made. The work covered by this section shall be considered ~~as a subsidiary obligation of the Contractor and covered under the other contract items.]~~ made at the contract unit price for each completed and accepted item. This price shall be full compensation for all labor, equipment, tools, and incidentals necessary to complete this item in accordance with paragraph 101-3.9.4

BASIS OF PAYMENT

101-5.1 Payment. Payment shall be made at contract unit price for the unit of measurement as specified above. This price shall be full compensation for furnishing all materials and for all preparation, hauling, and placing of the material and for all labor, equipment, tools, and incidentals necessary to complete this item.

Item P 101-5.1a	Sawcut, Remove and Dispose Existing Concrete Pavement Full Depth (8") - per Square Yards
Item P 101-5.1b	Sawcut, Remove and Dispose Existing Asphalt Ramp – per Square Yards
Item P-101-5.1c	Sawcut, Remove and Dispose Existing 6" Vertical Curb –per Linear Feet

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

AC 150/5380-6	Guidelines and Procedures for Maintenance of Airport Pavements.

ASTM International (ASTM)

ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements

END OF ITEM P-101

ITEM P-152
EXCAVATION, SUBGRADE, AND EMBANKMENT

DESCRIPTION

152-1.1 This item covers excavation, disposal, placement, and compaction of all materials within the limits of the work required to construct safety areas, runways, taxiways, aprons, and intermediate areas as well as other areas for drainage, building construction, parking, or other purposes in accordance with these specifications and in conformity to the dimensions and typical sections shown on the plans.

152-1.2 Classification. All material excavated shall be classified as defined below:

a. Unclassified excavation. Unclassified excavation shall consist of the excavation and disposal of all material, regardless of its nature which is not otherwise classified and paid for under one of the following items .

Borrow excavation. Borrow excavation shall consist of approved material required for the construction of embankments or for other portions of the work in excess of the quantity of usable material available from required excavations. Borrow material shall be obtained from areas designated by the Resident Project Representative (RPR) within the limits of the airport property but outside the normal limits of necessary grading, or from areas outside the airport boundaries.

152-1.3 Unsuitable excavation. Unsuitable material shall be disposed of off-site or as directed by the RPR. Materials containing vegetable or organic matter, such as muck, peat, organic silt, or sod shall be considered unsuitable for use in embankment construction. Material suitable for topsoil may be used on the embankment slope when approved by the RPR. *Undercutting of material unsatisfactory for subgrade foundation shall be considered unsuitable excavation and shall be excavated to the depth specified by the Engineer below the subgrade.*

CONSTRUCTION METHODS

152-2.1 General. ~~Before beginning excavation, grading, and embankment operations in any area, the area shall be cleared or cleared and grubbed in accordance with Item P-151.~~

The suitability of material to be placed in embankments shall be subject to approval by the RPR. All unsuitable material shall be disposed of off site. ~~in waste areas as shown on the plans~~. All waste areas shall be graded to allow positive drainage of the area and adjacent areas. The surface elevation of waste areas shall be specified on the plans or approved by the RPR.

When the Contractor's excavating operations encounter artifacts of historical or archaeological significance, the operations shall be temporarily discontinued and the RPR notified per Section 70, paragraph 70-20. At the direction of the RPR, the Contractor shall excavate the site in such a manner as to preserve the artifacts encountered and allow for their removal. Such excavation will be paid for as extra work.

Areas outside the limits of the pavement areas where the top layer of soil has become compacted by hauling or other Contractor activities shall be scarified and disked to a depth of 4 inches (100 mm), to loosen and pulverize the soil. Stones or rock fragments larger than 4 inches (100 mm) in their greatest dimension will not be permitted in the top 6 inches (150 mm) of the subgrade.

If it is necessary to interrupt existing surface drainage, sewers or under-drainage, conduits, utilities, or similar underground structures, the Contractor shall be responsible for and shall take

all necessary precautions to preserve them or provide temporary services. When such facilities are encountered, the Contractor shall notify the RPR, who shall arrange for their removal if necessary. The Contractor, at their own expense, shall satisfactorily repair or pay the cost of all damage to such facilities or structures that may result from any of the Contractor's operations during the period of the contract.

a. Blasting. Blasting shall not be allowed.

152-2.2 Excavation. No excavation shall be started until the work has been staked out by the Contractor and the RPR has obtained from the Contractor, the survey notes of the elevations and measurements of the ground surface. The Contractor and RPR shall agree that the original ground lines shown on the original topographic mapping are accurate, or agree to any adjustments made to the original ground lines.

Volumetric quantities were calculated by comparing DTM files of the applicable design surfaces and generating Triangle Volume Reports. Electronic copies of DTM files and a paper copy of the original topographic map will be issued to the successful bidder.

Volumetric quantities were calculated using design cross sections which were created for this project using the DTM files of the applicable design surfaces and generating End Area Volume Reports. Paper copies of design cross sections and a paper copy of the original topographic map will be issued to the successful bidder.

Existing grades on the design cross sections or DTM's, where they do not match the locations of actual spot elevations shown on the topographic map, were developed by computer interpolation from those spot elevations. Prior to disturbing original grade, Contractor shall verify the accuracy of the existing ground surface by verifying spot elevations at the same locations where original field survey data was obtained as indicated on the topographic map. Contractor shall recognize that, due to the interpolation process, the actual ground surface at any particular location may differ somewhat from the interpolated surface shown on the design cross sections or obtained from the DTM's. Contractor's verification of original ground surface, however, shall be limited to verification of spot elevations as indicated herein, and no adjustments will be made to the original ground surface unless the Contractor demonstrates that spot elevations shown are incorrect. For this purpose, spot elevations which are within 0.1 foot (30 mm) of the stated elevations for ground surfaces, or within 0.04 foot (12 mm) for hard surfaces (pavements, buildings, foundations, structures, etc.) shall be considered "no change". Only deviations in excess of these will be considered for adjustment of the original ground surface. If Contractor's verification identifies discrepancies in the topographic map, Contractor shall notify the RPR in writing at least **1 DAY** before disturbance of existing grade to allow sufficient time to verify the submitted information and make adjustments to the design cross sections or DTM's. Disturbance of existing grade in any area shall constitute acceptance by the Contractor of the accuracy of the original elevations shown on the topographic map for that area.

All areas to be excavated shall be stripped of vegetation and topsoil. Topsoil shall be stockpiled for future use in areas designated on the plans or by the RPR. All suitable excavated material shall be used in the formation of embankment, subgrade, or other purposes **as** shown on the plans. All unsuitable material shall be disposed of ~~as shown on the plans~~.

The grade shall be maintained so that the surface is well drained at all times.

When the volume of the excavation exceeds that required to construct the embankments to the grades as indicated on the plans, the excess shall be used to grade the areas of ultimate development or disposed as directed by the RPR. When the volume of excavation is not sufficient for constructing the embankments to the grades indicated, the deficiency shall be obtained from borrow areas.

a. Selective grading. *When quality of the material varies significantly,* ~~selective grading is indicated on the plans~~, the more suitable material designated by the RPR shall be used in constructing the embankment or in capping the pavement subgrade. If, at the time of excavation, it is not possible to place this material in its final location, it shall be stockpiled in approved areas until it can be placed. The more suitable material shall then be placed and compacted as specified. Selective grading shall be considered incidental to the work involved. The cost of stockpiling and placing the material shall be included in the various pay items of work involved.

b. Undercutting. Rock, shale, hardpan, loose rock, boulders, or other material unsatisfactory for safety areas, subgrades, roads, shoulders, or any areas intended for turf shall be excavated to a minimum depth of 12 inches (300 mm) below the subgrade or to the depth specified by the RPR. Muck, peat, matted roots, or other yielding material, unsatisfactory for subgrade foundation, shall be removed to the depth specified. Unsuitable materials shall be disposed off the airport. The cost is incidental to this item. This excavated material shall be paid for at the contract unit price per cubic yard. The excavated area shall be backfilled with suitable material obtained from the grading operations or borrow areas and compacted to specified densities. The necessary backfill will constitute a part of *Unsuitable Excavation* ~~the embankment~~. Where rock cuts are made, backfill with select material. Any pockets created in the rock surface shall be drained in accordance with the details shown on the plans. Undercutting will be paid as unclassified excavation .

c. Over-break. Over-break, including slides, is that portion of any material displaced or loosened beyond the finished work as planned or authorized by the RPR. All over-break shall be graded or removed by the Contractor and disposed of as directed by the RPR. The RPR shall determine if the displacement of such material was unavoidable and their own decision shall be final. Payment will not be made for the removal and disposal of over-break that the RPR determines as avoidable. Unavoidable over-break will be classified as "Unclassified Excavation."

d. **Removal of utilities.** The removal of existing structures and utilities required to permit the orderly progress of work will be accomplished by the Contractor as indicated on the plans. All existing foundations shall be excavated at least 2 feet (60 cm) below the top of subgrade or as indicated on the plans, and the material disposed of as directed by the RPR. All foundations thus excavated shall be backfilled with suitable material and compacted as specified for embankment or as shown on the plans.

152-2.3 Borrow excavation. Borrow areas from outside the airport boundary. Embankment quantities shown on plans.

152-2.4 Drainage excavation. Drainage excavation shall consist of excavating drainage ditches including intercepting, inlet, or outlet ditches; or other types as shown on the plans. The work shall be performed in sequence with the other construction. Ditches shall be constructed prior to starting adjacent excavation operations. All satisfactory material shall be placed in embankment fills; unsuitable material shall be placed in designated waste areas or as directed by the RPR. All necessary work shall be performed true to final line, elevation, and cross-section. The Contractor shall maintain ditches constructed on the project to the required cross-section and shall keep them free of debris or obstructions until the project is accepted.

152-2.5 Preparation of cut areas or areas where existing pavement has been removed. In those areas on which a subbase or base course is to be placed, the top 8 inches of subgrade shall be compacted to not less than 100 % of maximum density for non-cohesive soils, and 95% of maximum density for cohesive soils as determined by ASTM D698. As used in this

specification, "non-cohesive" shall mean those soils having a plasticity index (PI) of less than 3 as determined by ASTM D4318.

152-2.6 Preparation of embankment area. All sod and vegetative matter shall be removed from the surface upon which the embankment is to be placed. The cleared surface shall be broken up by plowing or scarifying to a minimum depth of 6 inches (150 mm) and shall then be compacted per paragraph 152-2.10.

Sloped surfaces steeper than one (1) vertical to four (4) horizontal shall be plowed, stepped, benched, or broken up so that the fill material will bond with the existing material. When the subgrade is part fill and part excavation or natural ground, the excavated or natural ground portion shall be scarified to a depth of 12 inches (300 mm) and compacted as specified for the adjacent fill.

No direct payment shall be made for the work performed under this section. The necessary clearing and grubbing and the quantity of excavation removed will be paid for under the respective items of work.

152-2.7 Control Strip. The first half-day of construction of subgrade and/or embankment shall be considered as a control strip for the Contractor to demonstrate, in the presence of the RPR, that the materials, equipment, and construction processes meet the requirements of this specification. The sequence and manner of rolling necessary to obtain specified density requirements shall be determined. The maximum compacted thickness may be increased to a maximum of 12 inches (300 mm) upon the Contractor's demonstration that approved equipment and operations will uniformly compact the lift to the specified density. The RPR must witness this demonstration and approve the lift thickness prior to full production.

Control strips that do not meet specification requirements shall be reworked, re-compacted, or removed and replaced at the Contractor's expense. Full operations shall not begin until the control strip has been accepted by the RPR. The Contractor shall use the same equipment, materials, and construction methods for the remainder of construction, unless adjustments made by the Contractor are approved in advance by the RPR.

152-2.8 Formation of embankments. The material shall be constructed in lifts as established in the control strip, but not less than 6 inches (150 mm) nor more than 12 inches (300 mm) of compacted thickness.

When more than one lift is required to establish the layer thickness shown on the plans, the construction procedure described here shall apply to each lift. No lift shall be covered by subsequent lifts until tests verify that compaction requirements have been met. The Contractor shall rework, re-compact and retest any material placed which does not meet the specifications.

The lifts shall be placed, to produce a soil structure as shown on the typical cross-section or as directed by the RPR. Materials such as brush, hedge, roots, stumps, grass and other organic matter, shall not be incorporated or buried in the embankment.

Earthwork operations shall be suspended at any time when satisfactory results cannot be obtained due to rain, freezing, or other unsatisfactory weather conditions in the field. Frozen material shall not be placed in the embankment nor shall embankment be placed upon frozen material. Material shall not be placed on surfaces that are muddy, frozen, or contain frost. The Contractor shall drag, blade, or slope the embankment to provide surface drainage at all times.

The material in each lift shall be within ±2% of optimum moisture content before rolling to obtain the prescribed compaction. The material shall be moistened or aerated as necessary to achieve a uniform moisture content throughout the lift. Natural drying may be accelerated by blending in dry material or manipulation alone to increase the rate of evaporation.

The Contractor shall make the necessary corrections and adjustments in methods, materials or moisture content to achieve the specified embankment density.

The contractor will take samples of excavated materials which will be used in embankment for testing and develop a Moisture-Density Relations of Soils Report (Proctor) in accordance with ASTM D698. A new Proctor shall be developed for each soil type based on visual classification.

Density tests will be taken by the contractor for every 500 square yards of compacted embankment for each lift which is required to be compacted, or other appropriate frequencies as determined by the RPR.

If the material has greater than 30% retained on the 3/4-inch (19.0 mm) sieve, follow AASHTO T-180 Annex Correction of maximum dry density and optimum moisture for oversized particles.

Rolling operations shall be continued until the embankment is compacted to not less than 100% of maximum density for non-cohesive soils, and 95% of maximum density for cohesive soils as determined by ASTM D698. Under all areas to be paved, the embankments shall be compacted to a depth of 12 inches and to a density of not less than 95 percent of the maximum density as determined by ASTM D698. As used in this specification, "non-cohesive" shall mean those soils having a plasticity index (PI) of less than 3 as determined by ASTM D4318.

There will be no separate measurement of payment for compacted embankment. All costs incidental to placing in lifts, compacting, discing, watering, mixing, sloping, and other operations necessary for construction of embankments will be included in the contract price for excavation, borrow, or other items. Payment for compacted embankment will be made under embankment in-place and no payment will be made for excavation, borrow, or other items.

152-2.9 Proof rolling. The purpose of proof rolling the subgrade is to identify any weak areas in the subgrade and not for compaction of the subgrade. After compaction is completed, the subgrade area shall be proof rolled with a 20 ton (18.1 metric ton) Tandem axle Dual Wheel Dump Truck loaded to the legal limit with tires inflated to 100 psi in the presence of the RPR. Apply a minimum of **50%** coverage, or as specified by the RPR, under pavement areas. A coverage is defined as the application of one tire print over the designated area. Soft areas of subgrade that deflect more than 1 inch (25 mm) or show permanent deformation greater than 1 inch (25 mm) shall be removed and replaced with suitable material or reworked to conform to the moisture content and compaction requirements in accordance with these specifications. Removal and replacement of soft areas is incidental to this item.

152-2.10 Compaction requirements. The subgrade under areas to be paved shall be compacted to a depth of 12 inches (300 mm) and to a density of not less than 95 percent of the maximum dry density as determined by ASTM D698.

The material to be compacted shall be within ±2% of optimum moisture content before being rolled to obtain the prescribed compaction (except for expansive soils). When the material has greater than 30 percent retained on the ¾ inch (19.0 mm) sieve, follow the methods in ASTM D698 procedures in AASHTO T180 Annex for correction of maximum dry density and optimum moisture for oversized particles. Tests for moisture content and compaction will be taken at a minimum of 500 S.Y. of subgrade. All quality assurance testing shall be done by the Contractor's laboratory in the presence of the RPR, and density test results shall be furnished upon completion to the RPR for acceptance determination.

The in-place field density shall be determined in accordance with ASTM D6938 using Procedure A, the direct transmission method, and ASTM D6938 shall be used to determine the moisture content of the material. The machine shall be calibrated in accordance with ASTM D6938 within 12 months prior to its use on this contract. The gauge shall be field standardized daily.

Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

If the specified density is not attained, the entire lot shall be reworked and/or re-compacted and additional random tests made. This procedure shall be followed until the specified density is reached.

All cut-and-fill slopes shall be uniformly dressed to the slope, cross-section, and alignment shown on the plans or as directed by the RPR and the finished subgrade shall be maintained.

152-2.11 Finishing and protection of subgrade. Finishing and protection of the subgrade is incidental to this item. Grading and compacting of the subgrade shall be performed so that it will drain readily. All low areas, holes or depressions in the subgrade shall be brought to grade. Scarifying, blading, rolling and other methods shall be performed to provide a thoroughly compacted subgrade shaped to the lines and grades shown on the plans. All ruts or rough places that develop in the completed subgrade shall be graded, re-compacted, and retested. The Contractor shall protect the subgrade from damage and limit hauling over the finished subgrade to only traffic essential for construction purposes.

The Contractor shall maintain the completed course in satisfactory condition throughout placement of subsequent layers. No subbase, base, or surface course shall be placed on the subgrade until the subgrade has been accepted by the RPR.

152-2.12 Haul. All hauling will be considered a necessary and incidental part of the work. The Contractor shall include the cost in the contract unit price for the pay of items of work involved. No payment will be made separately or directly for hauling on any part of the work.

The Contractor's equipment shall not cause damage to any excavated surface, compacted lift or to the subgrade as a result of hauling operations. Any damage caused as a result of the Contractor's hauling operations shall be repaired at the Contractor's expense.

The Contractor shall be responsible for providing, maintaining and removing any haul roads or routes within or outside of the work area, and shall return the affected areas to their former condition, unless otherwise authorized in writing by the Owner. No separate payment will be made for any work or materials associated with providing, maintaining and removing haul roads or routes.

152-2.13 Surface Tolerances. In those areas on which a subbase or base course is to be placed, the surface shall be tested for smoothness and accuracy of grade and crown. Any portion lacking the required smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches (75 mm), reshaped and re-compacted to grade until the required smoothness and accuracy are obtained and approved by the RPR. The Contractor shall perform all final smoothness and grade checks in the presence of the RPR. Any deviation in surface tolerances shall be corrected by the Contractor at the Contractor's expense.

a. **Smoothness.** The finished surface shall not vary more than +/- ½ inch (12 mm) when tested with a 12-foot (3.7-m) straightedge applied parallel with and at right angles to the centerline. The straightedge shall be moved continuously forward at half the length of the 12-foot (3.7-m) straightedge for the full length of each line on a 50-foot (15-m) grid.

b. **Grade.** The grade and crown shall be measured on a 50-foot (15-m) grid and shall be within +/-0.05 feet (15 mm) of the specified grade.

METHOD OF MEASUREMENT

152-3.1 Measurement for payment specified by the cubic yard shall be computed by the average end areas of design cross sections. The end area is that bound by the original ground line established by ~~field cross-sections~~ and the final theoretical pay line established by cross-sections shown on the plans, subject to verification by the RPR.

In cut sections, the additional cut required to construct the topsoil layer to the plan grade had not been measured and will not be measured for separate payment, but will be subsidiary to "Unclassified Excavation."

No allowance has been made in the measurement of shrink/swell. The Contractor shall make his own determination as to the amount of shrink/swell involved in the construction.

No adjustments have been made to the plan quantities for the construction and demolition of existing drainage structures. The Contractor shall make his/her own determination as to the amount of unsuitable excavated materials which may be encountered and the resulting additional borrow material required embankment required to construct the project if the excavated material is deemed suitable,

The quantity of the unclassified excavation to be paid for shall be the number of Cubic Yards measure in its original position. Measurement shall not include the quantity of materials excavated without authorization beyond normal slope lines or the quantity of material used for purpose other those directed.

152.3.2 The quantity of borrow excavation to be paid for shall be the number of cubic yards measure in its FINAL position. Measurement shall not include the quantity of materials excavated without authorization beyond normal slope lines or the quantity of material used for purpose other those directed.

~~**152-3.2** The quantity of embankment in place shall be the number of cubic yards as measured in its final position.~~

152-3.3 Stockpiled material shall not be measured for payment in the stockpiled position

152-3.4 Unsuitable excavation shall be measured for the surface to the ground., after stripping is accomplished. Measurement will be taken by Engineer, and the volume of excavation will be calculated by the average end area method. The necessary refilling of unsuitable areas will not be measured for separate payment but will be subsidiary to "Unsuitable Excavation". Only the amount of excavation directed by the Engineer will be measured for payment.

BASIS OF PAYMENT

152-4.1 Unclassified excavation. Drainage Excavation payment shall be made at the contract unit price per cubic yard. This price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the item.

152-4.2 For embankment in place, payment shall be made at the contract unit price per cubic yard (cubic meter). This price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the item.

~~**152-4.3** Stockpiled material shall be paid for on the basis of the number of cubic yards measure in the stockpile position.~~

152-4.4 Unsuitable excavation shall be paid at the contract unit price per Cubic Yard for "Unsuitable Excavation." which price shall be full compensation for all excavation, disposal or placement of the material including loading, hauling, spreading and compaction, compaction and preparation of subgrade, for refillling, rolling and compaction of all undercut areas, and for all equipment tools, labor and incidentals necessary to complete the work.

Payment will be made under:

~~Item P-152-4.1~~	~~Unclassified/ Drainage Excavation - per cubic yard.~~
Item P-152-4.2	Embankment in Place - per cubic yard
Item P-152-4.4	Unsuitable Excavation – per cubic yard

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

American Association of State Highway and Transportation Officials (AASHTO)

AASHTO T-180	Standard Method of Test for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop

ASTM International (ASTM)

ASTM D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft^3 (600 kN-m/m^3))
ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
ASTM D1557	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft^3 (2700 kN-m/m^3))
ASTM D6938	Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

Advisory Circulars (AC)

AC 150/5370-2	Operational Safety on Airports During Construction Software

Software

FAARFIELD – FAA Rigid and Flexible Iterative Elastic Layered Design

U.S. Department of Transportation

FAA RD-76-66	Design and Construction of Airport Pavements on Expansive Soils

END OF ITEM P-152

ITEM P-155
LIME-TREATED SUBGRADE

DESCRIPTION

155-1.1 This item shall be used for soil modification that require strength gain to a specific level. This item shall consist of constructing one or more courses of a mixture of soil, lime, and water in accordance with this specification, and in conformity with the lines, grades, thicknesses, and typical cross-sections shown on the plans.

MATERIALS

155-2.1 Lime. Quicklime, hydrated lime, and either high-calcium dolomitic, or magnesium lime, as defined by ASTM C51, shall conform to the requirements of ASTM C977. Lime not produced from calcining limestone is not permitted.

~~**155-2.2 Commercial lime slurry.** Commercial lime slurry shall be a pumpable suspension of solids in water. The water or liquid portion of the slurry shall not contain dissolved material injurious or objectionable for the intended purpose. The solids portion of the mixture, when considered on the basis of "solids content," shall consist principally of hydrated lime of a quality and fineness sufficient to meet the following chemical composition and residue requirements.~~

~~**a. Chemical composition.** The "solids content" of the lime slurry shall consist of a minimum of 70%, by weight, of calcium and magnesium oxides.~~

~~**b. Residue.** The percent by weight of residue retained in the "solids content" of lime slurry shall conform to the following requirements:~~

- ~~Residue retained on a No. 6 (3.35 µm) sieve = maximum 0.0%~~
- ~~Residue retained on a No. 10 (2.00 µm) sieve = maximum 1.0%~~
- ~~Residue retained on a No. 30 (600 µm) sieve = maximum 2.5%~~

~~**c. Grade.** Commercial lime slurry shall conform to one of the following two grades:~~

- ~~Grade 1. The "dry solids content" shall be at least 31% by weight, of the slurry.~~
- ~~Grade 2. The "dry solids content" shall be at least 35%, by weight, of the slurry.~~

155-2.3 Water. Water used in mixing or curing shall be from potable water sources. Other sources shall be tested in accordance with ASTM C1602 prior to use.

155-2.4 Soil. The soil for this work shall consist of on-site materials free of roots, sod, weeds, and stones larger than 2-1/2 inches (60 mm) and have a sulfate content of less than 0.3%.

COMPOSITION

155-3.1 Soil-lime mixture. Lime shall be applied at 8 % dry unit weight of soil for the depth of subgrade treatment as shown on the plans.

155-3.2 Tolerances. At final compaction, the lime and water content for each course of subgrade treatment shall conform to the following tolerances:

Tolerances

Material	Tolerance
Lime	+ 0.5%
Water	+ 2%, -0%

WEATHER LIMITATIONS

155-4.1 Weather limitation. Subgrade shall not be constructed when weather conditions detrimentally affect the quality of the materials. Lime shall not be applied unless the air temperature is at least 40°F (4°C) and rising. Lime shall not be applied to soils that are frozen or contain frost. Protect completed lime-treated areas by approved methods against the detrimental effects of freezing if the air temperature falls below 35°F (2°C). Remove and replace any damaged portion of the completed soil-lime treated area with new soil-lime material in accordance with this specification.

EQUIPMENT

155-5.1 Equipment. All equipment necessary to grade, scarify, spread, mix, and compact the material shall be provided. The Resident Project Representative (RPR) must approve the Contractor's proposed equipment prior to the start of the treatment.

CONSTRUCTION METHODS

155-6.1 General. This specification is to construct a subgrade consisting of a uniform lime mixture which shall be free from loose or segregated areas. The subgrade shall be of uniform density and moisture content, well mixed for its full depth, and have a smooth surface suitable for placing subsequent lifts. The Contractor shall be responsible to meet the above requirements.

Prior to any treatment, the subgrade shall be constructed as specified in Item P-152, Excavation, Subgrade and Embankment, and shaped to conform to the typical sections, lines, and grades as shown on the plans.

The mixing equipment must give visible indication at all times that it is cutting, pulverizing, and mixing the material uniformly to the proper depth over the full width of the cut.

155-6.2 Application. Lime shall be uniformly spread only over an area where the initial mixing operations can be completed during the same workday. Lime shall not be applied when wind conditions are detrimental to proper application. A motor grader shall not be used to spread the lime. Adequate moisture shall be added to the cement/soil mixture to maintain the proper moisture content. Materials shall be handled, stored, and applied in accordance with all federal, state, and local requirements.

155-6.3 Mixing. The mixing procedure shall be as described below:

a. Preliminary mixing. The full depth of the treated subgrade shall be mixed with an approved mixing machine. Lime shall not be left exposed for more than six (6) hours. The mixing machine shall make two coverages. Water shall be added to the subgrade during mixing to

provide a moisture content 3% to 5% above the optimum moisture of the material and to ensure chemical reaction of the lime and subgrade. After mixing, the subgrade shall be lightly rolled to seal the surface and help prevent evaporation of moisture. The water content of the subgrade mixture shall be maintained at a moisture content above the optimum moisture content for a minimum of 4 to 24 hours or until the material becomes friable. During the mellowing period, the material shall be sprinkled as directed by the RPR.

b. Final mixing. After the required mellowing time, the material shall be uniformly mixed by approved methods. Any clods shall be reduced in size by blading, discing, harrowing, scarifying, or by the use of other approved pulverization methods. After curing, pulverize lime treated material until 100% of soil particles pass a one-inch (25.0 mm) sieve and 60% pass the No. 4 (4.75 mm) sieve when tested dry by laboratory sieves. If resultant mixture contains clods, reduce their size by scarifying, remixing, or pulverization to meet specified gradation.

155-6.4 Control Strip. The first half-day of construction shall be considered the control strip. The Contractor shall demonstrate, in the presence of the RPR, that the materials, equipment, and construction processes meet the requirements of the specification. The sequence and manner of rolling necessary to obtain specified density requirements shall be determined. Control strips that do not meet specification requirements shall be reworked, re-compacted, or removed and replaced at the Contractor's expense. Full operations shall not continue until the control strip has been accepted by the RPR. Upon acceptance of the control strip by the RPR, the Contractor shall use the same equipment, materials, and construction methods for the remainder of construction, unless adjustments made by the Contractor are approved in advance by the RPR.

155-6.5 Treatment Application and Depth Checks. The depth and amount of stabilization shall be measured by the Contractor with no less than 2 tests per day of material placed; test shall be witnessed by the RPR. Measurements shall be made in test holes excavated to show the full depth of mixing and the pH checked by spraying the side of the test hole with a pH indicator such as phenolphthalein. Phenolphthalein changes from clear to red between pH 8.3 and 10. The color change indicates the location of the bottom of the mixing zone. pH indicators other than phenolphthalein can be used to measure pH levels. If the pH is not at least 8.3 and/or if the depth of the treated subgrade is more than 1/2 inch (12 mm) deficient, additional lime treatment shall be added and the material remixed. The Contractor shall correct all such areas in a manner satisfactory to the RPR.

155-6.6 Compaction. Compaction of the mixture shall immediately follow the final mixing operation with the mixture compacted within 1 to 4 hours after final mixing. The material shall be at the moisture content specified in paragraph 155-3.2 during compaction. The field density of the compacted mixture shall be at least 95% of the maximum density as specified in paragraph 155-6.10. Perform in-place density test to determine degree of compaction between 24 and 72 hours after final compaction and the 24-hour moist cure period. If the material fails to meet the density requirements, it shall be reworked to meet the density requirements. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

155-6.7 Finishing and curing. After the final lift or course of lime-treated subgrade has been compacted, it shall be brought to the required lines and grades in accordance with the typical sections. The completed section shall then be finished by rolling, as directed by the RPR, with a pneumatic or other suitable roller sufficiently light to prevent hairline cracking. The finished surface shall not vary more than 1/2-inch (12 mm) when tested with a 12-foot (3.7 m) straightedge applied parallel with and at right angles to the pavement centerline. Any variations in excess of this tolerance shall be corrected by the Contractor at the Contractor's expense in a manner satisfactory to the RPR.

The completed section shall be moist cured for a minimum of seven (7) days before further courses are added or any traffic is permitted, unless otherwise directed by the RPR. The final lift should not be exposed for more than 14 days without protection or the placement of a base course material.

155-6.8 Maintenance. The Contractor shall protect and maintain the lime-treated subgrade from yielding until the lime-treated subgrade is covered by placement of the next lift. When material has been exposed to excessive rain, snow, or freeze-thaw conditions, prior to placement of additional material, the Contractor shall verify that materials still meet all specification requirements. The maintenance cost shall be incidental to this item.

155-6.9 Surface tolerance. In those areas on which a subbase or base course is to be placed, the surface shall be tested for smoothness and accuracy of grade and crown. Any portion lacking the required smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches (75 mm), reshaped and re-compacted to grade until the required smoothness and accuracy are obtained and approved by the RPR. The Contractor shall perform all final smoothness and grade checks in the presence of the RPR. Any deviation in surface tolerances shall be corrected by the Contractor at the Contractor's expense.

a. Smoothness. The finished surface shall not vary more than +/- ½ inch (12 mm) when tested with a 12-foot (3.7-m) straightedge applied parallel with and at right angles to the centerline. The straightedge shall be moved continuously forward at half the length of the 12-foot (3.7-m) straightedge for the full length of each line on a 50-foot (15-m) grid.

b. Grade. The grade and crown shall be measured on a 50-foot (15-m) grid and shall be within +/-0.05 feet (15 mm) of the specified grade.

155-6.10 Acceptance sampling and testing. The lime treated subgrade shall be accepted for density and thickness on an area basis. Testing frequency shall be a minimum of one compaction and thickness test per 1000 square yards 840 square meters) of lime treated subgrade, but not less than four (4) tests per day of production. Sampling locations will be determined on a random basis per ASTM D3665.

a. Density. All testing shall be done by the Contractor's laboratory in the presence of the RPR and density test results shall be furnished upon completion to the RPR for acceptance determination.

The field density of the compacted mixture shall be at least 95% of the maximum density of laboratory specimens prepared from samples taken from the material in place. The specimens shall be compacted and tested in accordance with ASTM D698 to determine maximum density and optimum moisture content. The in-place field density shall be determined in accordance with ASTM D1556. If the material fails to meet the density requirements, the area represented by the failed test shall be reworked to meet the density requirements. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

b. Thickness. The thickness of the course shall be within +0 and -1/2 inch (12 mm) of the specified thickness as determined by depth tests taken by the Contractor in the presence of the RPR for each area. Where the thickness is deficient by more than 1/2-inch (12 mm), the Contractor shall correct such areas at no additional cost The Contractor shall replace, at his expense, material where depth tests have been taken.

155-6.11 Handling and safety. The Contractor shall obtain and enforce the lime supplier's instructions for proper safety and handling of the lime to prevent physical eye or skin contact with lime during transport or application.

METHOD OF MEASUREMENT

155-7.1 Lime-treated subgrade shall be paid for by the square yard (square meter) in the completed and accepted work.

155-7.2 Lime shall be paid by the number of tons (kg) of Hydrated Lime applied at the application rate specified in paragraph 155-3.1.

a. Hydrated lime delivered to the project in dry form will be measured according to the actual tonnage either spread on the subgrade or batched on site into a slurry, whichever is applicable.

b. Quicklime delivered to the project in dry form will be measured for payment on the basis of the tons of equivalent hydrated lime using the following formula:

Equivalent Hydrated Lime ($Ca(OH)_2$) = Total Quicklime (CaO) × 1.32

~~**c.** Lime delivered to the project in slurry form will be measured for payment in tons, dry weight of hydrated lime or equivalent hydrated lime in accordance with paragraph b above.~~

BASIS OF PAYMENT

155-8.1 Payment shall be made at the contract unit price per square yard (square meter) for the lime-treated subgrade at the thickness specified. The price shall be full compensation for furnishing all material, except the lime, and for all preparation, delivering, placing, and mixing these materials, and all labor, equipment, tools, and incidentals necessary to complete this item.

155-8.2 Payment shall be made at the contract unit price per ton (kg). This price shall be full compensation for furnishing, delivery, and placing this material.

Payment will be made under:

Item P-155-8.1	Lime-treated subgrade - per square yard (m^2)
Item P-155-8.2	Lime - per ton

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM C51	Standard Terminology Relating to Lime and Limestone (as used by the industry)
ASTM C977	Standard Specification for Quicklime and Hydrated Lime for Soil Stabilization
ASTM C1602	Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete
ASTM D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft^3) (600 kN-m/m^3)
ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method

ASTM D2487	Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)
ASTM D6938	Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

Software

FAARFIELD – FAA Rigid and Flexible Iterative Elastic Layered Design

END OF ITEM P-155

ITEM P-501
CEMENT CONCRETE PAVEMENT

DESCRIPTION

501-1.1 This work shall consist of pavement composed of cement concrete **with reinforcement** constructed on a prepared underlying surface in accordance with these specifications and shall conform to the lines, grades, thickness, and typical cross-sections shown on the plans. The terms cement concrete, hydraulic cement concrete, and concrete are interchangeable in this specification.

MATERIALS

501-2.1 Aggregates.

a. Reactivity. Fine and Coarse aggregates to be used in PCC on this project shall be tested and evaluated by the Contractor for alkali-aggregate reactivity in accordance with both ASTM C1260 and ASTM C1567. Tests must be representative of aggregate sources which will be providing material for production. ASTM C1260 and ASTM C1567 tests may be run concurrently.

(1) Coarse aggregate and fine aggregate shall be tested separately in accordance with ASTM C1260, however, the length of test shall be extended to 28 days (30 days from casting). Tests must have been completed within 6 months of the date of the concrete mix submittal.

(2) The combined coarse and fine aggregate shall be tested in accordance with ASTM C1567, modified for combined aggregates, using the proposed mixture design proportions of aggregates, cementitious materials, and/or specific reactivity reducing chemicals. If the expansion does not exceed 0.10% at 28 days, the proposed combined materials will be accepted. If the expansion is greater than 0.10% at 28 days, the aggregates will not be accepted unless adjustments to the combined materials mixture can reduce the expansion to less than 0.10% at 28 days, or new aggregates shall be evaluated and tested.

(3) If lithium nitrate is proposed for use with or without supplementary cementitious materials, the aggregates shall be tested in accordance with Corps of Engineers (COE) Concrete Research Division (CRD) C662 in lieu of ASTM C1567. If lithium nitrate admixture is used, it shall be nominal 30% ±0.5% weight lithium nitrate in water. If the expansion does not exceed 0.10% at 28 days, the proposed combined materials will be accepted. If the expansion is greater than 0.10% at 28 days, the aggregates will not be accepted unless adjustments to the combined materials mixture can reduce the expansion to less than 0.10% at 28 days, or new aggregates shall be evaluated and tested.

b. Fine aggregate. Grading of the fine aggregate, as delivered to the mixer, shall conform to the requirements of ASTM C33 and the parameters identified in the fine aggregate material requirements below. Fine aggregate material requirements and deleterious limits are shown in the table below.

Fine Aggregate Material Requirements		
Soundness of Aggregates by Use of Sodium Sulfate **or** Magnesium Sulfate	Loss after 5 cycles: 10% maximum using Sodium sulfate - or - 15% maximum using magnesium sulfate	ASTM C88
Sand Equivalent	[45] minimum	ASTM D2419
Fineness Modulus (FM)	2.50 ≤ FM ≤ 3.40	ASTM C136
Limits for Deleterious Substances in Fine Aggregate for Concrete		
Clay lumps and friable particles	1.0% maximum	ASTM C142
Coal and lignite	0.5% using a medium with a density of Sp. Gr. of 2.0	ASTM C123
Total Deleterious Material	1.0% maximum	

c. Coarse aggregate. The maximum size coarse aggregate shall be **1-1/2-inch**.

Aggregates delivered to the mixer shall be clean, hard, uncoated aggregates consisting of crushed stone, crushed or uncrushed gravel, air-cooled iron blast furnace slag, crushed recycled concrete pavement, or a combination. The aggregates shall have no known history of detrimental pavement staining. Steel blast furnace slag shall not be permitted. Coarse aggregate material requirements and deleterious limits are shown in the table below; washing may be required to meet aggregate requirements.

Coarse Aggregate Material Requirements

Material Test	Requirement	Standard
Resistance to Degradation	Loss: 40% maximum	ASTM C131
Soundness of Aggregates by Use of Sodium Sulfate **or** Magnesium Sulfate	Loss after 5 cycles: 12% maximum using Sodium sulfate - or - 18% maximum using magnesium sulfate	ASTM C88
Flat, Elongated, or Flat and Elongated Particles	8% maximum, by weight, of flat, elongated, or flat and elongated particles at 5:1 for any size group coarser than 3/8 (9.5 mm) sieve [1]	ASTM D4791
Bulk density of slag [2]	Weigh not less than 70 pounds per cubic foot (1.12 Mg/cubic meter)	ASTM C29

[1] A flat particle is one having a ratio of width to thickness greater than five (5); an elongated particle is one having a ratio of length to width greater than five (5).

[2] Only required if slag is specified.

The amount of deleterious material in the coarse aggregate shall not exceed the following limits:

Limits for Deleterious Substances in Coarse Aggregate

Deleterious material	ASTM	Percentage by Mass
Clay Lumps and friable particles	ASTM C142	1.0
Material finer than No. 200 sieve (75 µm)	ASTM C117	1.0[1]
Lightweight particles	ASTM C123 using a medium with a density of Sp. Gr. of 2.0	0.5
Chert[2] (less than 2.40 Sp Gr.)	ASTM C123 using a medium with a density of Sp. Gr. of 2.40)	[0.1][3]

[1] The limit for material finer than 75-µm is allowed to be increased to 1.5% for crushed aggregates consisting of dust of fracture that is essentially free from clay or shale. Test results supporting acceptance of increasing limit to 1.5% with statement indicating material is dust of fracture must be submitted with Concrete mix. Acceptable techniques to characterizing these fines include methylene blue adsorption or X-ray diffraction analysis.

[2] Chert and aggregates with less than 2.4 specific gravity.

[3] The limit for chert may be increased to 1.0 percent by mass in areas not subject to severe freeze and thaw.

d. Combined aggregate gradation. This specification is targeted for a combined aggregate gradation developed following the guidance presented in United States Air Force Engineering Technical Letter (ETL) 97-5: Proportioning Concrete Mixtures with Graded Aggregates for Rigid Airfield Pavements. Base the aggregate grading upon a combination of all the aggregates (coarse and fine) to be used for the mixture proportioning. Three aggregate sizes may be required to achieve an optimized combined gradation that will produce a workable concrete mixture for its intended use. Use aggregate gradations that produce concrete mixtures with well-graded or optimized aggregate combinations. The Contractor shall submit complete mixture information necessary to calculate the volumetric components of the mixture. The combined aggregate grading shall meet the following requirements:

(1) The materials selected and the proportions used shall be such that when the Coarseness Factor (CF) and the Workability Factor (WF) are plotted on a diagram as described in paragraph 501-2.1d(4) below, the point thus determined shall fall within the parallelogram described therein.

(2) The CF shall be determined from the following equation:

CF = (cumulative percent retained on the 3/8 in. (9.5 mm) sieve)(100) / (cumulative percent retained on the No. 8 (2.36 mm) sieve)

(3) The WF is defined as the percent passing the No. 8 (2.36 mm) sieve based on the combined gradation. However, WF shall be adjusted, upwards only, by 2.5 percentage points for each 94 pounds (42 kg) of cementitious material per cubic meter yard greater than 564 pounds per cubic yard (335 kg per cubic meter).

(4) A diagram shall be plotted using a rectangular scale with WF on the Y-axis with units from 20 (bottom) to 45 (top), and with CF on the X-axis with units from 80 (left side) to 30 (right side). On this diagram a parallelogram shall be plotted with corners at the following coordinates (CF-75, WF-28), (CF-75, WF-40), (CF-45, WF-32.5), and (CF-45, WF-44.5). If the point determined by the intersection of the computed CF and WF does not fall within the above parallelogram, the grading of each size of aggregate used and the proportions selected shall be changed as necessary. The point determined by the plotting of the CF

and WF may be adjusted during production ±3 WF and ±5 CF. Adjustments to gradation may not take the point outside of the parallelogram.

e. Contractors combined aggregate gradation. The Contractor shall submit their combined aggregate gradation using the following format:

Contractor's Combined Aggregate Gradation

Sieve Size	Contractor's Concrete mix Gradation (Percent passing by weight)
2 inch (50 mm)	
1-1/2 inch (37.5 mm)	
1 inch (25.0 mm)	
3/4 inch (19.0 mm)	
1/2 inch (12.5 mm)	
3/8 inch (9.5 mm)	
No. 4 (4.75 mm)	
No. 8 (2.36 mm)	
No. 16 (1.18 mm)	
No. 30 (600 µm)	
No. 50 (300 µm)	
No. 100 (150 µm)	

501-2.2 Cement. Cement shall conform to the requirements of **ASTM 150 Type I.**

501-2.3 Cementitious materials.

a. Fly ash. Fly ash shall meet the requirements of ASTM C618, with the exception of loss of ignition, where the maximum shall be less than 6%. Fly ash shall have a Calcium Oxide (CaO) content of less than 15% and a total alkali content less than 3% per ASTM C311. The Contractor shall furnish the previous three most recent, consecutive ASTM C618 reports for each source of fly ash proposed in the concrete mix, and shall furnish each additional report as they become available during the project. The reports can be used for acceptance or the material may be tested independently by the Resident Project Representative (RPR).

b. Slag cement (ground granulated blast furnace (GGBF)). Slag cement shall conform to ASTM C989, Grade 100 or Grade 120. Slag cement shall be used only at a rate between 25% and 55% of the total cementitious material by mass.

c. Raw or calcined natural pozzolan. Natural pozzolan shall be raw or calcined and conform to ASTM C618, Class N, including the optional requirements for uniformity and effectiveness in controlling Alkali-Silica reaction and shall have a loss on ignition not exceeding 6%. Class N pozzolan for use in mitigating Alkali-Silica Reactivity shall have a total available alkali content less than 3%.

501-2.4 Joint seal. The joint seal for the joints in the concrete pavement shall meet the requirements of **Item P-605** and shall be of the type specified in the plans.

501-2.5 Isolation joint filler. Premolded joint filler for isolation joints shall conform to the requirements of ASTM D1751 or ASTM D1752 and shall be where shown on the plans. The filler for each joint shall be furnished in a single piece for the full depth and width required for the joint, unless otherwise specified by the RPR. When the use of more than one piece is required for a joint, the abutting ends shall be fastened securely and held accurately to shape by stapling or other positive fastening means satisfactory to the RPR.

501-2.6 Steel reinforcement. Reinforcing shall consist of **Welded Wire Fabric** conforming to the requirements of **ASTM A1064** or **Bar Mats** conforming to the requirements of **ASTM A184 or A704**.

501-2.7 Dowel and tie bars. Dowel bars shall be plain steel bars conforming to ASTM A615 and shall be free from burring or other deformation restricting slippage in the concrete.

a. Dowel Bars. Before delivery to the construction site each dowel bar shall be epoxy coated per ASTM A1078, Type 1, with a coating thickness after curing greater than 10 mils. Patched ends are not required for Type 1 coated dowels. The dowels shall be coated with a bond-breaker recommended by the manufacturer. Dowel sleeves or inserts are not permitted. Grout retention rings shall be fully circular metal or plastic devices capable of supporting the dowel until the grout hardens.

b. Tie Bars. Tie bars shall be deformed steel bars and conform to the requirements of ASTM A615. Tie bars designated as Grade 60 in ASTM A615 or ASTM A706 shall be used for construction requiring bent bars.

501-2.8 Water. Water used in mixing or curing shall be potable. If water is taken from other sources considered non-potable, it shall meet the requirements of ASTM C1602.

501-2.9 Material for curing concrete. Curing materials shall conform to one of the following specifications:

a. Liquid membrane-forming compounds for curing concrete shall conform to the requirements of ASTM C309, Type 2, Class A, or Class B.

b. White polyethylene film for curing concrete shall conform to the requirements of ASTM C171.

c. White burlap-polyethylene sheeting for curing concrete shall conform to the requirements of ASTM C171.

d. Waterproof paper for curing concrete shall conform to the requirements of ASTM C171.

501-2.10 Admixtures. Admixtures shall conform to the following specifications:

a. Air-entraining admixtures. Air-entraining admixtures shall meet the requirements of ASTM C260 and shall consistently entrain the air content in the specified ranges under field conditions. The air-entraining agent and any water reducer admixture shall be compatible.

b. Water-reducing admixtures. Water-reducing admixture shall meet the requirements of ASTM C494, Type A, B, or D.

c. Other admixtures. The use of set retarding and set-accelerating admixtures shall be approved by the RPR prior to developing the concrete mix. Retarding admixtures shall meet the requirements of ASTM C494, Type A, B, or D and set-accelerating admixtures shall meet the requirements of ASTM C494, Type C. Calcium chloride and admixtures containing calcium chloride shall not be used.

d. Lithium Nitrate. The lithium admixture shall be a nominal 30% aqueous solution of Lithium Nitrate, with a density of 10 pounds/gallon (1.2 kg/L), and shall have the approximate chemical form as shown below:

Lithium Admixture

Constituent	Limit (Percent by Mass)
LiNO3 (Lithium Nitrate)	30 ±0.5
SO4 (Sulfate Ion)	0.1 (max)
Cl (Chloride Ion)	0.2 (max)
Na (Sodium Ion)	0.1 (max)
K (Potassium Ion)	0.1 (max)

The lithium nitrate admixture dispensing and mixing operations shall be verified and certified by the lithium manufacturer's representative.

501-2.11 Epoxy-resin. All epoxy-resin materials shall be two-component materials conforming to the requirements of ASTM C881, Class as appropriate for each application temperature to be encountered, except that in addition, the materials shall meet the following requirements:

a. Material for use for embedding dowels and anchor bolts shall be Type IV, Grade 3.

b. Material for use as patching materials for complete filling of spalls and other voids and for use in preparing epoxy resin mortar shall be Type III, Grade as approved.

c. Material for use for injecting cracks shall be Type IV, Grade 1.

d. Material for bonding freshly mixed Portland cement concrete or mortar or freshly mixed epoxy resin concrete or mortar to hardened concrete shall be Type V, Grade as approved.

501-2.12 Bond Breaker. Liquid membrane forming compound shall be in accordance with paragraph 501-2.9a.

CONCRETE MIX

501-3.1. General. No concrete shall be placed until an acceptable concrete mix has been submitted to the RPR for review and the RPR has taken appropriate action. The RPR's review shall not relieve the Contractor of the responsibility to select and proportion the materials to comply with this section.

501-3.2 Concrete Mix Laboratory. The laboratory used to develop the concrete mix shall be accredited in accordance with ASTM C1077. The laboratory accreditation must be current and listed on the accrediting authority's website. All test methods required for developing the concrete mix must be included in the lab accreditation. A copy of the laboratory's current accreditation and accredited test methods shall be submitted to the RPR prior to start of construction.

501-3.3 Concrete Mix Proportions. Develop the mix using the procedures contained in Portland Cement Association (PCA) publication, "Design and Control of Concrete Mixtures." Concrete shall be proportioned to achieve a 28-day Compressive strength that meets or exceeds the acceptance criteria contained in paragraph 501-6.6 for a compressive strength of **4,400 psi** per ASTM C39.

The minimum cementitious material shall be adequate to ensure a workable, durable mix. The minimum cementitious material (cement plus fly ash, or slag cement) shall be **470** pounds per cubic yard. The ratio of water to cementitious material, including free surface moisture on the aggregates but not including moisture absorbed by the aggregates shall be between 0.38 – 0.45 by weight.

Flexural strength test specimens shall be prepared in accordance with ASTM C192 and tested in accordance with ASTM C78. At the start of the project, the Contractor shall determine an allowable slump as determined by ASTM C143 not to exceed 2 inches (50 mm) for slip-form placement. For fixed-form placement, the slump shall not exceed 3 inches (75 mm). For hand placement, the slump shall not exceed 4 inches (100 mm).

When the flexural design strength in paragraph 501-3.3 is to be accepted on the basis of compressive strength, the following procedure establishes the correlation between compressive and flexural strength for the concrete mix. Each concrete mix will require a separate correlation.

Cylinders/Beams

a. Fabricate all beams and cylinders for each mixture from the same batch or blend of batches. Fabricate and cure all beams and cylinders in accordance with ASTM C192, using 6 × 6-inch (150 × 150 mm) steel beam forms and 6 × 12-inch (150 × 300 mm) single-use cylinder forms.

b. Cure test beams from each mixture for 3, 7, 14, and 28 day flexural tests; three (3) beams to be tested per age.

c. Cure test cylinders from each mixture for 3, 7, 14 and 28 day compressive strength tests; three (3) cylinders to be tested per age.

d. Test beams in accordance with ASTM C78, cylinders in accordance with ASTM C39.

e. Using the average strength for each age, plot all results on separate graphs for each w/c versus:

- 3-day flexural strength
- 7-day flexural strength
- 14-day flexural strength
- 28-day flexural strength
- 3-day compressive strength
- 7-day compressive strength
- 14-day compressive strength
- 28-day compressive strength

f. From the above expected strengths for the selected mixture determine the following Correlation Ratios:

(1) Ratio of the 14-day compressive strength of the selected mixture to the 28-day flexural strength of the mixture (for acceptance).

(2) Ratio of the 7-day compressive strength of the selected mixture to the 28-day flexural strength of the mixture (for Contractor QC control).

g. If there is a change in materials, additional mixture design studies shall be made using the new materials and new Correlation Ratios shall be determined.

h. No concrete pavement shall be placed until the Engineer has approved the Contractor's mixture proportions. The approved water-cementitious materials ratio shall not exceed the maximum value specified.

The results of the concrete mix shall include a statement giving the maximum nominal coarse aggregate size and the weights and volumes of each ingredient proportioned on a one cubic yard (meter) basis. Aggregate quantities shall be based on the mass in a saturated surface dry condition.

If a change in source(s) is made, or admixtures added or deleted from the mix, a new concrete mix must be submitted to the RPR for approval.

The RPR may request samples at any time for testing, prior to and during production, to verify the quality of the materials and to ensure conformance with the applicable specifications.

501-3.4 Concrete Mix submittal. The concrete mix shall be submitted to the RPR at least **30** days prior to the start of operations. The submitted concrete mix shall not be more than 180 days old and must use the materials to be used for production for the project. Production shall not begin until the concrete mix is approved in writing by the RPR.

Each of the submitted concrete mixes (i.e, slip form, side form machine finish and side form hand finish) shall be stamped or sealed by the responsible professional Engineer of the laboratory and shall include the following items and quantities as a minimum:

- Certified material test reports for aggregate in accordance with paragraph 501-2.1. Certified reports must include all tests required; reporting each test, test method, test result, and requirement specified (criteria).
- Combined aggregate gradations and analysis; and including plots of the fine aggregate fineness modulus.
- Reactivity Test Results.
- Coarse aggregate quality test results, including deleterious materials.
- Fine aggregate quality test results, including deleterious materials.
- Mill certificates for cement and supplemental cementitious materials.
- Certified test results for all admixtures, including Lithium Nitrate if applicable.
- Specified flexural strength, slump, and air content.
- Recommended proportions/volumes for proposed mixture and trial water-cementitious materials ratio, including actual slump and air content.
- Flexural and compressive strength summaries and plots, including all individual beam and cylinder breaks.
- Correlation ratios for acceptance testing and Contractor QC testing, when applicable.
- Historical record of test results documenting production standard deviation, when applicable.

501-3.5 Cementitious materials.

a. Fly ash. When fly ash is used as a partial replacement for cement, the replacement rate shall be determined from laboratory trial mixes, and shall be between 20 and 30% by weight of the total cementitious material. If fly ash is used in conjunction with slag cement the maximum replacement rate shall not exceed 10% by weight of total cementitious material.

b. Slag cement (ground granulated blast furnace (GGBF)). Slag cement may be used. The slag cement, or slag cement plus fly ash if both are used, may constitute between 25 to 55% of the total cementitious material by weight.

c. Raw or calcined natural pozzolan. Natural pozzolan may be used in the concrete mix. When pozzolan is used as a partial replacement for cement, the replacement rate shall be determined from laboratory trial mixes, and shall be between 20 and 30% by weight of the total cementitious material. If pozzolan is used in conjunction with slag cement the maximum replacement rate shall not exceed 10% by weight of total cementitious material.

501-3.6 Admixtures.

a. Air-entraining admixtures. Air-entraining admixture are to be added in such a manner that will ensure uniform distribution of the agent throughout the batch. The air content of freshly mixed air-entrained concrete shall be based upon trial mixes with the materials to be used in the work adjusted to produce concrete of the required plasticity and workability. The percentage of air in the mix shall be **2.5%.** Air content shall be determined by testing in accordance with ASTM C231 for gravel and stone coarse aggregate and ASTM C173 for slag and other highly porous coarse aggregate.

b. Water-reducing admixtures. Water-reducing admixtures shall be added to the mix in the manner recommended by the manufacturer and in the amount necessary to comply with the specification requirements. Tests shall be conducted with the materials to be used in the work, in accordance with ASTM C494.

c. Other admixtures. Set controlling, and other approved admixtures shall be added to the mix in the manner recommended by the manufacturer and in the amount necessary to comply with the specification requirements. Tests shall be conducted with the materials to be used in the work, in accordance with ASTM C494.

d. Lithium nitrate. Lithium nitrate shall be added to the mix in the manner recommended by the manufacturer and in the amount necessary to comply with the specification requirements in accordance with paragraph 501-2.10d.

CONSTRUCTION METHODS

501-4.1 Control Strip. The control strip(s) shall be to the next planned joint after the initial 250 feet (75 m) of each type of pavement construction (slip-form pilot lane, slip-form fill-in lane, or fixed form). The Contractor shall demonstrate, in the presence of the RPR, that the materials, concrete mix, equipment, construction processes, and quality control processes meet the requirements of the specifications. The concrete mixture shall be extruded from the paver meeting the edge slump tolerance and with little or no finishing. Pilot, fill-in, and fixed-form control strips will be accepted separately. Minor adjustments to the mix design may be required to place an acceptable control strip. The production mix will be the adjusted mix design used to place the acceptable control strip. Upon acceptance of the control strip by the RPR, the Contractor must use the same equipment, materials, and construction methods for the remainder of concrete paving. Any adjustments to processes or materials must be approved in advance by the RPR.

Acceptable control strips will meet edge slump tolerance and surface acceptable with little or no finishing, air content within action limits, strength equal or greater than requirements of P501-3.3. The control strip will be considered one lot for payment (no sublots required for control strip). Payment will only be made for an acceptable control strip in accordance with paragraph 501-8.1 using a lot pay factor equal to 100.

501-4.2 Equipment. The Contractor is responsible for the proper operation and maintenance of all equipment necessary for handling materials and performing all parts of the work to meet this specification.

a. Plant and equipment. The plant and mixing equipment shall conform to the requirements of ASTM C94 and/or ASTM C685. Each truck mixer shall have attached in a prominent place a manufacturer's nameplate showing the capacity of the drum in terms of volume of mixed concrete and the speed of rotation of the mixing drum or blades. The truck mixers shall be examined daily for changes in condition due to accumulation of hard concrete or mortar or wear of blades. The pickup and throwover blades shall be replaced when they have worn down 3/4 inch (19 mm) or more. The Contractor shall have a copy of the manufacturer's design on hand showing dimensions and arrangement of blades in reference to original height and depth.

Equipment for transferring and spreading concrete from the transporting equipment to the paving lane in front of the finishing equipment shall be provided. The equipment shall be specially manufactured, self-propelled transfer equipment which will accept the concrete outside the paving lane and will spread it evenly across the paving lane in front of the paver and strike off the surface evenly to a depth which permits the paver to operate efficiently.

b. Finishing equipment.

(1) Slip-form. The standard method of constructing concrete pavements shall be with an approved slip-form paving equipment designed and operated to spread, consolidate, screed, and finish the freshly placed concrete in one complete pass of the machine so that the end result is a dense and homogeneous pavement which is achieved with a minimum of hand finishing. The paver-finisher shall be a heavy duty, self-propelled machine designed specifically for paving and finishing high quality concrete pavements.

(2) Fixed-form. On projects requiring less than 10,000 cubic yards of concrete pavement or irregular areas at locations inaccessible to slip-form paving equipment, concrete pavement may be placed with equipment specifically designed for placement and finishing using stationary side forms. Methods and equipment shall be reviewed and accepted by the RPR. Hand screeding and float finishing may only be used on small irregular areas as allowed by the RPR.

c. Vibrators. Vibrator shall be the internal type. The rate of vibration of each vibrating unit shall be sufficient to consolidate the pavement without segregation or voids. The number, spacing, and frequency shall be as necessary to provide a dense and homogeneous pavement and meet the recommendations of American Concrete Institute (ACI) 309R, Guide for Consolidation of Concrete. Adequate power to operate all vibrators shall be available on the paver. The vibrators shall be automatically controlled so that they shall be stopped as forward motion ceases. The Contractor shall provide an electronic or mechanical means to monitor vibrator status. The checks on vibrator status shall occur a minimum of two times per day or when requested by the RPR.

Hand held vibrators may only be used in irregular areas and shall meet the recommendations of ACI 309R, Guide for Consolidation of Concrete.

d. Concrete saws. The Contractor shall provide sawing equipment adequate in number of units and power to complete the sawing to the required dimensions. The Contractor shall provide at least one standby saw in good working order and a supply of saw blades at the site of the work at all times during sawing operations.

e. Fixed forms. Straight side fixed forms shall be made of steel and shall be furnished in sections not less than 10 feet (3 m) in length. Forms shall be provided with adequate devices for secure settings so that when in place they will withstand, without visible spring or settlement, the impact and vibration of the consolidating and finishing equipment. Forms with battered top surfaces and bent, twisted or broken forms shall not be used. Built-up forms shall not be used, except as approved by the RPR. The top face of the form shall not vary from a true plane more than 1/8 inch (3 mm) in 10 feet (3 m), and the upstanding leg shall not vary more than 1/4 inch (6 mm). The forms shall contain provisions for locking the ends of abutting sections together tightly for secure setting. Wood forms may be used under special conditions, when approved by the RPR. The forms shall extend the full depth of the pavement section.

501-4.3 Form setting. Forms shall be set to line and grade as shown on the plans, sufficiently in advance of the concrete placement, to ensure continuous paving operation. Forms shall be set to withstand, without visible spring or settlement, the impact and vibration of the consolidating and finishing equipment. Forms shall be cleaned and oiled prior to the concrete placement.

501-4.4 Base surface preparation prior to placement. Any damage to the prepared base, subbase, and subgrade shall be corrected full depth by the Contractor prior to concrete placement. The underlying surface shall be entirely free of frost when concrete is placed. The prepared grade shall be moistened with water, without saturating, immediately ahead of concrete placement to prevent rapid loss of moisture from concrete. Bond breaker shall be applied in accordance with 501-2.12.

501-4.5 Handling, measuring, and batching material. Aggregate stockpiles shall be constructed and managed in such a manner that prevents segregation and intermixing of deleterious materials. Aggregates from different sources shall be stockpiled, weighed and batched separately at the concrete batch plant. Aggregates that have become segregated or mixed with earth or foreign material shall not be used. All aggregates produced or handled by hydraulic methods, and washed aggregates, shall be stockpiled or binned for draining at least 12 hours before being batched. Store and maintain all aggregates at a uniform moisture content prior to use. A continuous supply of materials shall be provided to the work to ensure continuous placement.

501-4.6 Mixing concrete. The concrete may be mixed at the work site, in a central mix plant or in truck mixers. The mixer shall be of an approved type and capacity. Mixing time shall be measured from the time all materials are placed into the drum until the drum is emptied into the truck. All concrete shall be mixed and delivered to the site in accordance with the requirements of ASTM C94 or ASTM C685.

Mixed concrete from the central mixing plant shall be transported in truck mixers, truck agitators, or non-agitating trucks. The elapsed time from the addition of cementitious material to the mix until the concrete is discharged from the truck should not exceed [30] minutes when the concrete is hauled in non-agitating trucks, nor 90 minutes when the concrete is hauled in truck mixers or truck agitators. In no case shall the temperature of the concrete when placed exceed 90°F (32°C). Retempering concrete by adding water or by other means will not be permitted. With transit mixers additional water may be added to the batch materials and additional mixing performed to increase the slump to meet the specified requirements provided the addition of water

is performed within 45 minutes after the initial mixing operations and provided the water/cementitious ratio specified is not exceeded.

501-4.7 Weather Limitations on mixing and placing. No concrete shall be mixed, placed, or finished when the natural light is insufficient, unless an adequate and approved artificial lighting system is operated.

a. Cold weather. Unless authorized in writing by the RPR, mixing and concreting operations shall be discontinued when a descending air temperature in the shade and away from artificial heat reaches 40°F (4°C) and shall not be resumed until an ascending air temperature in the shade and away from artificial heat reaches 35°F (2°C).

The aggregate shall be free of ice, snow, and frozen lumps before entering the mixer. The temperature of the mixed concrete shall not be less than 50°F (10°C) at the time of placement. Concrete shall not be placed on frozen material nor shall frozen aggregates be used in the concrete.

When concreting is authorized during cold weather, water and/or the aggregates may be heated to not more than 150°F (66°C). The apparatus used shall heat the mass uniformly and shall be arranged to preclude the possible occurrence of overheated areas which might be detrimental to the materials.

Curing during cold weather shall be in accordance with paragraph 501-4.13d.

b. Hot weather. During periods of hot weather when the maximum daily air temperature exceeds 85°F (30°C), the following precautions shall be taken.

The forms and/or the underlying surface shall be sprinkled with water immediately before placing the concrete. The concrete shall be placed at the coolest temperature practicable, and in no case shall the temperature of the concrete when placed exceed 90°F (32°C). The aggregates and/or mixing water shall be cooled as necessary to maintain the concrete temperature at or not more than the specified maximum.

The concrete placement shall be protected from exceeding an evaporation rate of 0.2 psf (0.98 kg/m^2 per hour) per hour. When conditions are such that problems with plastic cracking can be expected, and particularly if any plastic cracking begins to occur, the Contractor shall immediately take such additional measures as necessary to protect the concrete surface. If the Contractor's measures are not effective in preventing plastic cracking, paving operations shall be immediately stopped.

Curing during hot weather shall be in accordance with paragraph 501-4.13e.

c. Temperature management program. Prior to the start of paving operation for each day of paving, the Contractor shall provide the RPR with a Temperature Management Program for the concrete to be placed to assure that uncontrolled cracking is avoided. (Federal Highway Administration HIPERPAV 3 is one example of a temperature management program.) As a minimum, the program shall address the following items:

(1) Anticipated tensile strains in the fresh concrete as related to heating and cooling of the concrete material.

(2) Anticipated weather conditions such as ambient temperatures, wind velocity, and relative humidity; and anticipated evaporation rate using Figure 19-9, PCA, Design and Control of Concrete Mixtures.

(3) Anticipated timing of initial sawing of joint.

(4) Anticipated number and type of saws to be used.

d. **Rain.** The Contractor shall have available materials for the protection of the concrete during inclement weather. Such protective materials shall consist of rolled polyethylene sheeting at least 4 mils (0.1 mm) thick of sufficient length and width to cover the plastic concrete slab and any edges. The sheeting may be mounted on either the paver or a separate movable bridge from which it can be unrolled without dragging over the plastic concrete surface. When rain appears imminent, all paving operations shall stop and all available personnel shall begin covering the surface of the unhardened concrete with the protective covering.

501-4.8 Concrete Placement. At any point in concrete conveyance, the free vertical drop of the concrete from one point to another or to the underlying surface shall not exceed 3 feet (1 m). The finished concrete product must be dense and homogeneous, without segregation and conforming to the standards in this specification. Backhoes and grading equipment shall not be used to distribute the concrete in front of the paver. Front end loaders will not be used. All concrete shall be consolidated without voids or segregation, including under and around all load-transfer devices, joint assembly units, and other features embedded in the pavement. Hauling equipment or other mechanical equipment can be permitted on adjoining previously constructed pavement when the concrete strength reaches **a compressive strength of 3,100 psi (21.4 MPa),** based on the average of four field cured specimens per 2,000 cubic yards (1,530 cubic meters) of concrete placed. The Contractor must determine that the above minimum strengths are adequate to protection the pavement from overloads due to the construction equipment proposed for the project.

a. Slip-form construction. The concrete shall be distributed uniformly into final position by a self-propelled slip-form paver without delay. The alignment and elevation of the paver shall be regulated from outside reference lines established for this purpose. The paver shall vibrate the concrete for the full width and depth of the strip of pavement being placed and the vibration shall be adequate to provide a consistency of concrete that will stand normal to the surface with sharp well-defined edges. The sliding forms shall be rigidly held together laterally to prevent spreading of the forms. The plastic concrete shall be effectively consolidated by internal vibration with transverse vibrating units for the full width of the pavement and/or a series of equally placed longitudinal vibrating units. The space from the outer edge of the pavement to longitudinal unit shall not exceed 9 inches (23 cm) for slipform and at the end of the dowels for the fill-in lanes. The spacing of internal units shall be uniform and shall not exceed 18 inches (0.5 m).

The term internal vibration means vibrating units located within the specified thickness of pavement section.

The rate of vibration of each vibrating unit shall be sufficient to consolidate the pavement without, segregation, voids, or vibrator trails and the amplitude of vibration shall be sufficient to be perceptible on the surface of the concrete along the entire length of the vibrating unit and for a distance of at least one foot (30 cm). The frequency of vibration or amplitude should be adjusted proportionately with the rate of travel to result in a uniform density and air content. The paving machine shall be equipped with a tachometer or other suitable device for measuring and indicating the actual frequency of vibrations.

The concrete shall be held at a uniform consistency. The slip-form paver shall be operated with as nearly a continuous forward movement as possible and all operations of mixing, delivering, and spreading concrete shall be coordinated to provide uniform progress with stopping and starting of the paver held to a minimum. If for any reason, it is necessary to stop the forward movement of the paver, the vibratory and tamping elements shall also be stopped

immediately. No tractive force shall be applied to the machine, except that which is controlled from the machine.

When concrete is being placed adjacent to an existing pavement, that part of the equipment which is supported on the existing pavement shall be equipped with protective pads on crawler tracks or rubber-tired wheels on which the bearing surface is offset to run a sufficient distance from the edge of the pavement to avoid breaking the pavement edge.

Not more than 15% of the total free edge of each 500-foot (150 m) segment of pavement, or fraction thereof, shall have an edge slump exceeding 1/4 inch (6 mm), and none of the free edge of the pavement shall have an edge slump exceeding 3/8 inch (9 mm). (The total free edge of 500 feet (150 m) of pavement will be considered the cumulative total linear measurement of pavement edge originally constructed as nonadjacent to any existing pavement; that is, 500 feet (150 m) of paving lane originally constructed as a separate lane will have 1,000 feet (300 m) of free edge, 500 feet (150 m) of fill-in lane will have no free edge, etc.). The area affected by the downward movement of the concrete along the pavement edge shall be limited to not more than 18 inches (0.5 m) from the edge.

When excessive edge slump cannot be corrected before the concrete has hardened, the area with excessive edge slump will be removed the full width of the slip form lane and replaced at the expense of the Contractor as directed by the RPR.

b. Fixed-form construction. Forms shall be drilled in advance of being placed to line and grade to accommodate tie bars / dowel bars where these are specified.

Immediately in advance of placing concrete and after all subbase operations are completed, side forms shall be trued and maintained to the required line and grade for a distance sufficient to prevent delay in placing.

Side forms shall remain in place at least 12 hours after the concrete has been placed, and in all cases until the edge of the pavement no longer requires the protection of the forms. Curing compound shall be applied to the concrete immediately after the forms have been removed.

Side forms shall be thoroughly cleaned and coated with a release agent each time they are used and before concrete is placed against them.

Concrete shall be spread, screed, shaped and consolidated by one or more self-propelled machines. These machines shall uniformly distribute and consolidate concrete without segregation so that the completed pavement will conform to the required cross-section with a minimum of handwork.

The number and capacity of machines furnished shall be adequate to perform the work required at a rate equal to that of concrete delivery. The equipment must be specifically designed for placement and finishing using stationary side forms. Methods and equipment shall be reviewed and accepted by the RPR.

Concrete for the full paving width shall be effectively consolidated by internal vibrators. The rate of vibration of each vibrating unit shall be sufficient to consolidate the pavement without segregation, voids, or leaving vibrator trails.

Power to vibrators shall be connected so that vibration ceases when forward or backward motion of the machine is stopped.

c. Consolidation. Concrete shall be consolidated with the specified type of lane-spanning, gang-mounted, mechanical, immersion type vibrating equipment mounted in front of the paver, supplemented, in rare instances as specified, by hand-operated vibrators. The vibrators shall be inserted into the concrete to a depth that will provide the best full-depth

consolidation but not closer to the underlying material than 2 inches (50 mm). Vibrators shall not be used to transport or spread the concrete. For each paving train, at least one additional vibrator spud, or sufficient parts for rapid replacement and repair of vibrators shall be maintained at the paving site at all times. Any evidence of inadequate consolidation (honeycomb along the edges, large air pockets, or any other evidence) or over-consolidation (vibrator trails, segregation, or any other evidence) shall require the immediate stopping of the paving operation and adjustment of the equipment or procedures as approved by the RPR.

If a lack of consolidation of the hardened concrete is suspected by the RPR, referee testing may be required. Referee testing of hardened concrete will be performed by the RPR by cutting cores from the finished pavement after a minimum of 24 hours curing. The RPR shall visually examine the cores for evidence of lack of consolidation. Density determinations will be made by the RPR based on the water content of the core as taken. ASTM C642 shall be used for the determination of core density in the saturated-surface dry condition. When required, referee cores will be taken at the minimum rate of one for each 500 cubic yards (382 m^2) of pavement, or fraction. The Contractor shall be responsible for all referee testing cost if they fail to meet the required density.

The average density of the cores shall be at least 97% of the original concrete mix density, with no cores having a density of less than 96% of the original concrete mix density. Failure to meet the referee tests will be considered evidence that the minimum requirements for vibration are inadequate for the job conditions. Additional vibrating units or other means of increasing the effect of vibration shall be employed so that the density of the hardened concrete conforms to the above requirements.

501-4.9 Strike-off of concrete and placement of reinforcement. Following the placing of the concrete, it shall be struck off to conform to the cross-section shown on the plans and to an elevation that when the concrete is properly consolidated and finished, the surface of the pavement shall be at the elevation shown on the plans. When reinforced concrete pavement is placed in two layers, the bottom layer shall be struck off to such length and depth that the sheet of reinforcing steel fabric or bar mat may be laid full length on the concrete in its final position without further manipulation. The reinforcement shall then be placed directly upon the concrete, after which the top layer of the concrete shall be placed, struck off, and screed. If any portion of the bottom layer of concrete has been placed more than 30 minutes without being covered with the top layer or if initial set has taken place, it shall be removed and replaced with freshly mixed concrete at the Contractor's expense. When reinforced concrete is placed in one layer, the reinforcement may be positioned in advance of concrete placement or it may be placed in plastic concrete by mechanical or vibratory means after spreading.

Reinforcing steel, at the time concrete is placed, shall be free of mud, oil, or other organic matter that may adversely affect or reduce bond. Reinforcing steel with rust, mill scale or a combination of both will be considered satisfactory, provided the minimum dimensions, weight, and tensile properties of a hand wire-brushed test specimen are not less than the applicable ASTM specification requirements.

501-4.10 Joints. Joints shall be constructed as shown on the plans and in accordance with these requirements. All joints shall be constructed with their faces perpendicular to the surface of the pavement and finished or edged as shown on the plans. Joints shall not vary more than 1/2-inch (12 mm) from their designated position and shall be true to line with not more than 1/4-inch (6 mm) variation in 10 feet (3 m). The surface across the joints shall be tested with a 12-foot (3 m) straightedge as the joints are finished and any irregularities in excess of 1/4 inch (6 mm) shall be corrected before the concrete has hardened. All joints shall be so prepared, finished, or cut to provide a groove of uniform width and depth as shown on the plans.

a. Construction. Longitudinal construction joints shall be slip-formed or formed against side forms as shown in the plans.

Transverse construction joints shall be installed at the end of each day's placing operations and at any other points within a paving lane when concrete placement is interrupted for more than 30 minutes or it appears that the concrete will obtain its initial set before fresh concrete arrives. The installation of the joint shall be located at a planned contraction or expansion joint. If placing of the concrete is stopped, the Contractor shall remove the excess concrete back to the previous planned joint.

b. Contraction. Contraction joints shall be installed at the locations and spacing as shown on the plans. Contraction joints shall be installed to the dimensions required by forming a groove or cleft in the top of the slab while the concrete is still plastic or by sawing a groove into the concrete surface after the concrete has hardened. When the groove is formed in plastic concrete the sides of the grooves shall be finished even and smooth with an edging tool. If an insert material is used, the installation and edge finish shall be according to the manufacturer's instructions. The groove shall be finished or cut clean so that spalling will be avoided at intersections with other joints. Grooving or sawing shall produce a slot at least 1/8 inch (3 mm) wide and to the depth shown on the plans.

c. Isolation (expansion). Isolation joints shall be installed as shown on the plans. The premolded filler of the thickness as shown on the plans, shall extend for the full depth and width of the slab at the joint. The filler shall be fastened uniformly along the hardened joint face with no buckling or debris between the filler and the concrete interface, including a temporary filler for the sealant reservoir at the top of the slab. The edges of the joint shall be finished and tooled while the concrete is still plastic

d. Dowels and Tie Bars for Joints

(1) Tie bars. Tie bars shall consist of deformed bars installed in joints as shown on the plans. Tie bars shall be placed at right angles to the centerline of the concrete slab and shall be spaced at intervals shown on the plans. They shall be held in position parallel to the pavement surface and in the middle of the slab depth and within the tolerances in paragraph 501-4.10(f.). When tie bars extend into an unpaved lane, they may be bent against the form at longitudinal construction joints, unless threaded bolt or other assembled tie bars are specified. Tie bars shall not be painted, greased, or enclosed in sleeves. When slip-form operations call for tie bars, two-piece hook bolts can be installed.

(2) Dowel bars. Dowel bars shall be placed across joints in the proper horizontal and vertical alignment as shown on the plans. The dowels shall be coated with a bond-breaker or other lubricant recommended by the manufacturer and approved by the RPR. Dowels bars at longitudinal construction joints shall be bonded in drilled holes.

(3) Placing dowels and tie bars. Horizontal spacing of dowels shall be within a tolerance of ±3/4 inch (19 mm). The vertical location on the face of the slab shall be within a tolerance of ±1/2 inch (12 mm). The method used to install dowels shall ensure that the horizontal and vertical alignment will not be greater than 1/4 inch per feet (6 mm per 0.3 m), except for those across the crown or other grade change joints. Dowels across crowns and other joints at grade changes shall be measured to a level surface. Horizontal alignment shall be checked perpendicular to the joint edge. The portion of each dowel intended to move within the concrete or expansion cap shall be wiped clean and coated with a thin, even film of lubricating oil or light grease before the concrete is placed. Dowels shall be installed as specified in the following subparagraphs.

Dowels and tie bars shall not be placed closer than 0.6 times the dowel bar or tie bar length to the planned joint line. If the last regularly spaced longitudinal dowel and/or tie bar is closer than that dimension, it shall be moved away from the joint to a location 0.6 times the dowel bar and/or tie bar length, but not closer than 6 inches (150 mm) to its nearest neighbor.

(a) Contraction joints. Dowels and tie bars in longitudinal and transverse contraction joints within the paving lane shall be held securely in place by means of rigid metal frames or basket assemblies of an approved type. The basket assemblies shall be held securely in the proper location by means of suitable pins or anchors. Do not cut or crimp the dowel basket tie wires.

At the Contractor's option, dowels and tie bars in contraction joints may be installed by insertion into the plastic concrete using approved equipment and procedures per the paver manufacturer's design. Approval of installation methods will be based on the results of the control strip showing that the dowels and tie bars are installed within specified tolerances as verified by cores or non-destructive rebar location devices approved by the RPR.

(b) Construction joints. Install dowels and tie bars by the cast-in- place or the drill-and-dowel method. Installation by removing and replacing in preformed holes will not be permitted. Dowels and tie bars shall be prepared and placed across joints where indicated, correctly aligned, and securely held in the proper horizontal and vertical position during placing and finishing operations, by means of devices fastened to the forms.

(c) Joints in hardened concrete. Install dowels in hardened concrete by bonding the dowels into holes drilled into the concrete. The concrete shall have cured for seven (7) days or reached a minimum **compressive strength of 3100 psi ((21.4 MPa)**before drilling begins. Holes 1/8 inch (3 mm) greater in diameter than the dowels shall be drilled into the hardened concrete using rotary-core drills. Rotary-percussion drills may be used, provided that excessive spalling does not occur. Spalling beyond the limits of the grout retention ring will require modification of the equipment and operation. Depth of dowel hole shall be within a tolerance of ±1/2 inch (12 mm) of the dimension shown on the drawings. On completion of the drilling operation, the dowel hole shall be blown out with oil-free, compressed air. Dowels shall be bonded in the drilled holes using epoxy resin. Epoxy resin shall be injected at the back of the hole before installing the dowel and extruded to the collar during insertion of the dowel so as to completely fill the void around the dowel. Application by buttering the dowel will not be permitted. The dowels shall be held in alignment at the collar of the hole by means of a suitable metal or plastic grout retention ring fitted around the dowel.

e. Sawing of joints. Sawing shall commence, without regard to day or night, as soon as the concrete has hardened sufficiently to permit cutting without chipping, spalling, or tearing and before uncontrolled shrinkage cracking of the pavement occurs and shall continue without interruption until all joints have been sawn. All slurry and debris produced in the sawing of joints shall be removed by vacuuming and washing. Curing compound or system shall be reapplied in the initial saw-cut and maintained for the remaining cure period.

Joints shall be cut in locations as shown on the plans. The initial joint cut shall be a minimum 1/8 inch (3 mm) wide and to the depth shown on the plans. Prior to placement of joint sealant or seals, the top of the joint shall be widened by sawing as shown on the plans.

501-4.11 Finishing. Finishing operations shall be a continuing part of placing operations starting immediately behind the strike-off of the paver. Initial finishing shall be provided by the transverse screed or extrusion plate. The sequence of operations shall be transverse finishing, longitudinal machine floating if used, straightedge finishing, edging of joints, and then texturing. Finishing shall be by the machine method. The hand method shall be used only on isolated areas of odd slab widths or shapes and in the event of a breakdown of the mechanical finishing equipment. Supplemental hand finishing for machine finished pavement shall be kept to an absolute minimum. Any machine finishing operation which requires appreciable hand finishing, other than a moderate amount of straightedge finishing, shall be immediately stopped and proper adjustments made or the equipment replaced. Equipment, mixture, and/or procedures which produce more than 1/4 inch (6 mm) of mortar-rich surface shall be immediately modified as necessary to eliminate this condition or operations shall cease. Compensation shall be made for surging behind the screeds or extrusion plate and settlement during hardening and care shall be taken to ensure that paving and finishing machines are properly adjusted so that the finished surface of the concrete (not just the cutting edges of the screeds) will be at the required line and grade. Finishing equipment and tools shall be maintained clean and in an approved condition. At no time shall water be added to the surface of the slab with the finishing equipment or tools, or in any other way. Fog (mist) sprays or other surface applied finishing aids specified to prevent plastic shrinkage cracking, approved by the RPR, may be used in accordance with the manufacturers requirements.

a. Machine finishing with slipform pavers. The slipform paver shall be operated so that only a very minimum of additional finishing work is required to produce pavement surfaces and edges meeting the specified tolerances. Any equipment or procedure that fails to meet these specified requirements shall immediately be replaced or modified as necessary. A self-propelled non-rotating pipe float may be used while the concrete is still plastic, to remove minor irregularities and score marks. Only one pass of the pipe float shall be allowed. Equipment, mixture, and/or procedures which produce more than 1/4 inch (6 mm) of mortar-rich surface shall be immediately modified as necessary to eliminate this condition or operations shall cease. Remove excessive slurry from the surface with a cutting straightedge and wipe off the edge. Any slurry which does run down the vertical edges shall be immediately removed by hand, using stiff brushes or scrapers. No slurry, concrete or concrete mortar shall be used to build up along the edges of the pavement to compensate for excessive edge slump, either while the concrete is plastic or after it hardens.

b. Machine finishing with fixed forms. The machine shall be designed to straddle the forms and shall be operated to screed and consolidate the concrete. Machines that cause displacement of the forms shall be replaced. The machine shall make only one pass over each area of pavement. If the equipment and procedures do not produce a surface of uniform texture, true to grade, in one pass, the operation shall be immediately stopped and the equipment, mixture, and procedures adjusted as necessary.

c. Other types of finishing equipment. Clary screeds, other rotating tube floats, or bridge deck finishers are not allowed on mainline paving, but may be allowed on irregular or odd-shaped slabs, and near buildings or trench drains, subject to the RPR's approval.

Bridge deck finishers shall have a minimum operating weight of 7500 pounds (3400 kg) and shall have a transversely operating carriage containing a knock-down auger and a minimum

of two immersion vibrators. Vibrating screeds or pans shall be used only for isolated slabs where hand finishing is permitted as specified, and only where specifically approved.

d. Hand finishing. Hand finishing methods will not be permitted, except under the following conditions: (1) in the event of breakdown of the mechanical equipment, hand methods may be used to finish the concrete already deposited on the grade and (2) in areas of narrow widths or of irregular dimensions where operation of the mechanical equipment is impractical.

e. Straightedge testing and surface correction. After the pavement has been struck off and while the concrete is still plastic, it shall be tested for trueness with a 12-foot (3.7-m) finishing straightedge swung from handles capable of spanning at least one-half the width of the slab. The straightedge shall be held in contact with the surface in successive positions parallel to the centerline and the whole area gone over from one side of the slab to the other, as necessary. Advancing shall be in successive stages of not more than one-half the length of the straightedge. Any excess water and laitance in excess of 1/8 inch (3 mm) thick shall be removed from the surface of the pavement and wasted. Any depressions shall be immediately filled with freshly mixed concrete, struck off, consolidated, and refinished. High areas shall be cut down and refinished. Special attention shall be given to assure that the surface across joints meets the smoothness requirements. Straightedge testing and surface corrections shall continue until the entire surface is found to be free from observable departures from the straightedge and until the slab conforms to the required grade and cross-section. The use of long-handled wood floats shall be confined to a minimum; they may be used only in emergencies and in areas not accessible to finishing equipment.

501-4.12 Surface texture. The surface of the pavement shall be finished as designated below for all newly constructed concrete pavements. It is important that the texturing equipment not tear or unduly roughen the pavement surface during the operation. The texture shall be uniform in appearance and approximately 1/16 inch (2 mm) in depth. Any imperfections resulting from the texturing operation shall be corrected to the satisfaction of the RPR.

a. Brush or broom finish. Shall be applied when the water sheen has practically disappeared. The equipment shall operate transversely across the pavement surface.

b. Burlap drag finish. Burlap, at least 15 ounces per square yard (555 grams per square meter), will typically produce acceptable texture. To obtain a textured surface, the transverse threads of the burlap shall be removed approximately one foot (30 cm) from the trailing edge. A heavy buildup of grout on the burlap threads produces the desired wide sweeping longitudinal striations on the pavement surface.

c. Artificial turf finish. Shall be applied by dragging the surface of the pavement in the direction of concrete placement with an approved full-width drag made with artificial turf. The leading transverse edge of the artificial turf drag will be securely fastened to a lightweight pole on a traveling bridge. At least 2 feet (60 cm) of the artificial turf shall be in contact with the concrete surface during dragging operations. Approval of the artificial turf will be done only after it has been demonstrated by the Contractor to provide a satisfactory texture. One type that has provided satisfactory texture consists of 7,200 approximately 0.85-inch-long polyethylene turf blades per square foot.

501-4.13 Curing. Immediately after finishing operations are completed and bleed water is gone from the surface, all exposed surfaces of the newly placed concrete shall be cured for a 7-day cure period in accordance with one of the methods below. Failure to provide sufficient cover material of whatever kind the Contractor may elect to use, or lack of water to adequately take care

of both curing and other requirements, shall be cause for immediate suspension of concreting operations. The concrete shall not be left exposed for more than 1/2 hour during the curing period.

When a two-saw-cut method is used to construct the contraction joint, the curing compound shall be applied to the saw-cut immediately after the initial cut has been made. The sealant reservoir shall not be sawed until after the curing period has been completed. When the one cut method is used to construct the contraction joint, the joint shall be cured with wet rope, wet rags, or wet blankets. The rags, ropes, or blankets shall be kept moist for the duration of the curing period.

a. Impervious membrane method. Curing with liquid membrane compounds should not occur until bleed and surface moisture has evaporated. All exposed surfaces of the pavement shall be sprayed uniformly with white pigmented curing compound immediately after the finishing of the surface and before the set of the concrete has taken place. The curing compound shall not be applied during rainfall. Curing compound shall be applied by mechanical sprayers under pressure at the rate of one gallon (4 liters) to not more than 150 square feet (14 sq m). The spraying equipment shall be of the fully atomizing type equipped with a tank agitator. At the time of use, the compound shall be in a thoroughly mixed condition with the pigment uniformly dispersed throughout the vehicle. During application, the compound shall be stirred continuously by mechanical means. Hand spraying of odd widths or shapes and concrete surfaces exposed by the removal of forms will be permitted. When hand spraying is approved by the RPR, a double application rate shall be used to ensure coverage. Should the film become damaged from any cause, including sawing operations, within the required curing period, the damaged portions shall be repaired immediately with additional compound or other approved means. Upon removal of side forms, the sides of the exposed slabs shall be protected immediately to provide a curing treatment equal to that provided for the surface.

b. White burlap-polyethylene sheets. The surface of the pavement shall be entirely covered with the sheeting. The sheeting used shall be such length (or width) that it will extend at least twice the thickness of the pavement beyond the edges of the slab. The sheeting shall be placed so that the entire surface and both edges of the slab are completely covered. The sheeting shall be placed and weighted to remain in contact with the surface covered, and the covering shall be maintained fully saturated and in position for seven (7) days after the concrete has been placed.

c. Water method. The entire area shall be covered with burlap or other water absorbing material. The material shall be of sufficient thickness to retain water for adequate curing without excessive runoff. The material shall be kept wet at all times and maintained for seven (7) days. When the forms are stripped, the vertical walls shall also be kept moist. It shall be the responsibility of the Contractor to prevent ponding of the curing water on the subbase.

d. Concrete protection for cold weather. Maintain the concrete at a temperature of at least 50°F (10°C) for a period of 72 hours after placing and at a temperature above freezing for the remainder of the 7-day curing period. The Contractor shall be responsible for the quality and strength of the concrete placed during cold weather; and any concrete damaged shall be removed and replaced at the Contractor's expense.

e. Concrete protection for hot weather. Concrete should be continuous moisture cured for the entire curing period and shall commence as soon as the surfaces are finished and continue for at least 24 hours. However, if moisture curing is not practical beyond 24 hours, the concrete surface shall be protected from drying with application of a liquid membrane-forming curing compound while the surfaces are still damp. Other curing methods may be approved by the RPR.

501-4.14 Removing forms. Unless otherwise specified, forms shall not be removed from freshly placed concrete until it has hardened sufficiently to permit removal without chipping, spalling, or tearing. After the forms have been removed, the sides of the slab shall be cured in accordance with paragraph 501-4.13.

If honeycombed areas are evident when the forms are removed, materials, placement, and consolidation methods must be reviewed and appropriate adjustments made to assure adequate consolidation at the edges of future concrete placements. Honeycombed areas that extend into the slab less than approximately 1 inch (25 mm), shall be repaired with an approved grout, as directed by the RPR. Honeycombed areas that extend into the slab greater than a depth of 1 inch (25 mm) shall be considered as defective work and shall be removed and replaced in accordance with paragraph 501-4.19.

501-4.15 Saw-cut grooving. If shown on the plans, grooved surfaces shall be provided in accordance with the requirements of Item P-621.

501-4.16 Sealing joints. The joints in the pavement shall be sealed in accordance with Item **P-605**.

501-4.17 Protection of pavement. The Contractor shall protect the pavement and its appurtenances against both public traffic and traffic caused by the Contractor's employees and agents until accepted by the RPR. This shall include watchmen to direct traffic and the erection and maintenance of warning signs, lights, pavement bridges, crossovers, and protection of unsealed joints from intrusion of foreign material, etc. Any damage to the pavement occurring prior to final acceptance shall be repaired or the pavement replaced at the Contractor's expense.

Aggregates, rubble, or other similar construction materials shall not be placed on airfield pavements. Traffic shall be excluded from the new pavement by erecting and maintaining barricades and signs until the concrete is at least seven (7) days old, or for a longer period if directed by the RPR.

In paving intermediate lanes between newly paved pilot lanes, operation of the hauling and paving equipment will be permitted on the new pavement after the pavement has been cured for seven (7) days, the joints are protected, the concrete has attained a minimum field cured flexural strength of [450 psi (3100 kPa)], and the slab edge is protected.

All new and existing pavement carrying construction traffic or equipment shall be kept clean and spillage of concrete and other materials shall be cleaned up immediately.

Damaged pavements shall be removed and replaced at the Contractor's expense. Slabs shall be removed to the full depth, width, and length of the slab.

501-4.18 Opening to construction traffic. The pavement shall not be opened to traffic until test specimens molded and cured in accordance with ASTM C31 have **compressive strength of 3100 psi (21.4 MPa)**. If such tests are not conducted, the pavement shall not be opened to traffic until 14 days after the concrete was placed. Prior to opening the pavement to construction traffic, all joints shall either be sealed or protected from damage to the joint edge and intrusion of foreign materials into the joint. As a minimum, backer rod or tape may be used to protect the joints from foreign matter intrusion.

501-4.19 Repair, removal, or replacement of slabs. New pavement slabs that are broken or contain cracks or are otherwise defective or unacceptable as defined by acceptance criteria in paragraph 501-6.6 shall be removed and replaced or repaired, as directed by the RPR, at the Contractor's expense. Spalls along joints shall be repaired as specified. Removal of partial slabs is not permitted. Removal and replacement shall be full depth, shall be full width of the slab, and the limit of removal shall be normal to the paving lane and to each original transverse joint. The

RPR will determine whether cracks extend full depth of the pavement and may require cores to be drilled on the crack to determine depth of cracking. Such cores shall be have a diameter of 2 inches (50 mm) to 4 inches (100 mm), shall be drilled by the Contractor and shall be filled by the Contractor with a well consolidated concrete mixture bonded to the walls of the hole with a bonding agent, using approved procedures. Drilling of cores and refilling holes shall be at no expense to the Owner. Repair of cracks as described in this section shall not be allowed if in the opinion of the RPR the overall condition of the pavement indicates that such repair is unlikely to achieve an acceptable and durable finished pavement. No repair of cracks shall be allowed in any panel that demonstrates segregated aggregate with an absence of coarse aggregate in the upper 1/8 inch (3 mm) of the pavement surface.

a. Shrinkage cracks. Shrinkage cracks which do not exceed one-third of the pavement depth shall be cleaned and either high molecular weight methacrylate (HMWM) applied; or epoxy resin (Type IV, Grade 1) pressure injected using procedures recommended by the manufacturer and approved by the RPR. Sandblasting of the surface may be required following the application of HMWM to restore skid resistance. Care shall be taken to ensure that the crack is not widened during epoxy resin injection. All epoxy resin injection shall take place in the presence of the RPR. Shrinkage cracks which exceed one-third the pavement depth shall be treated as full depth cracks in accordance with paragraphs 501-4.19b and 501-19c.

b. Slabs with cracks through interior areas. Interior area is defined as that area more than 6 inches (150 mm) from either adjacent original transverse joint. The full slab shall be removed and replaced at no cost to the Owner, when there are any full depth cracks, or cracks greater than one-third the pavement depth, that extend into the interior area.

c. Cracks close to and parallel to joints. All full-depth cracks within 6 inches (150 mm) either side of the joint and essentially parallel to the original joints, shall be treated as follows.

(1) Full depth cracks and original joint not cracked. The full-depth crack shall be treated as the new joint and the original joint filled with an epoxy resin.

i. Full-depth crack. The joint sealant reservoir for the crack shall be formed by sawing to a depth of 3/4 inches (19 mm), ±1/16 inch (2 mm), and to a width of 5/8 inch (16 mm), ±1/8 inch (3 mm). The crack shall be sawed with equipment specially designed to follow random cracks. Any equipment or procedure which causes raveling or spalling along the crack shall be modified or replaced to prevent raveling or spalling. The joint shall be sealed with sealant in accordance with P-605 or as directed by the RPR.

ii. Original joint. If the original joint sealant reservoir has been sawed out, the reservoir and as much of the lower saw cut as possible shall be filled with epoxy resin, Type IV, Grade 2, thoroughly tooled into the void using approved procedures.

If only the original narrow saw cut has been made, it shall be cleaned and pressure injected with epoxy resin, Type IV, Grade 1, using approved procedures.

Where a parallel crack goes part way across paving lane and then intersects and follows the original joint which is cracked only for the remained of the width, it shall be treated as specified above for a parallel crack, and the cracked original joint shall be prepared and sealed as originally designed.

(2) Full depth cracks and original joint cracked. If there is any place in the lane width where a parallel crack and a cracked portion of the original joint overlap, the entire slab containing the crack shall be removed and replaced.

d. Removal and replacement of full slabs. Make a full depth cut perpendicular to the slab surface along all edges of the slab with a concrete saw cutting any dowels or tie-bars. Remove damaged slab protecting adjacent pavement from damage. Damage to adjacent slabs may result in removal of additional slabs as directed by the RPR at the Contractor's expense.

The underlying material shall be repaired, re-compacted and shaped to grade.

Dowels of the size and spacing specified for other joints in similar pavement on the project shall be installed along all four (4) edges of the new slab in accordance with paragraph 501-4.10d.

Placement of concrete shall be as specified for original construction. The joints around the new slab shall be prepared and sealed as specified for original construction.

e. Spalls along joints.

(1) Spalls less than one inch wide and less than the depth of the joint sealant reservoir, shall be filled with joint sealant material.

(2) Spalls larger than one inch and/or deeper than the joint reservoir, but less than ½ the slab depth, and less than 25% of the length of the adjacent joint shall be repaired as follows:

i. Make a vertical saw cut at least one inch (25 mm) outside the spalled area and to a depth of at least 2 inches (50 mm). Saw cuts shall be straight lines forming rectangular areas surrounding the spalled area.

ii. Remove unsound concrete and at least 1/2 inch (12 mm) of visually sound concrete between the saw cut and the joint or crack with a light chipping hammer.

iii. Clean cavity with high-pressure water jets supplemented with compressed air as needed to remove all loose material.

iv. Apply a prime coat of epoxy resin, Type III, Grade I, to the dry, cleaned surface of all sides and bottom of the cavity, except any joint face.

v. Fill the cavity with low slump concrete or mortar or with epoxy resin concrete or mortar.

vi. An insert or other bond-breaking medium shall be used to prevent bond at all joint faces.

vii. A reservoir for the joint sealant shall be sawed to the dimensions required for other joints, or as required to be routed for cracks. The reservoir shall be thoroughly cleaned and sealed with the sealer specified for the joints.

(3) Spalls deeper than 1/2 of the slab depth or spalls longer than 25% of the adjacent joint require replacement of the entire slab.

f. Diamond grinding of Concrete surfaces. Diamond grinding shall be completed prior to pavement grooving. Diamond grinding of the hardened concrete should not be performed until the concrete is at least 14 days old and has achieved full minimum strength. Equipment that causes ravels, aggregate fractures, spalls or disturbance to the joints will not be permitted. The depth of diamond grinding shall not exceed 1/2 inch (13 mm) and all areas in which diamond grinding has been performed will be subject to the final pavement thickness tolerances specified.

Diamond grinding shall be performed with a machine specifically designed for diamond grinding capable of cutting a path at least 3 feet (0.9 m) wide. The saw blades shall be 1/8-inch (3-mm) wide with sufficient number of flush cut blades that create grooves between 0.090 and 0.130 inches (2 and 3.5 mm) wide; and peaks and ridges approximately 1/32 inch (1 mm) higher than the bottom of the grinding cut. The Contractor shall determine the number and

type of blades based on the hardness of the aggregate. Contractor shall demonstrate to the RPR that the grinding equipment will produce satisfactory results prior to making corrections to surfaces.

Grinding will be tapered in all directions to provide smooth transitions to areas not requiring grinding. The slurry resulting from the grinding operation shall be continuously removed and the pavement left in a clean condition. All grinding shall be at the expense of the Contractor.

CONTRACTOR QUALITY CONTROL (CQC)

501-5.1 Quality control tests. The Contractor shall provide Quality Control Tests.

501-5.2 Contractor Quality Control (CQC). The Contractor shall provide or contract for testing facilities in accordance with Item C-100. The RPR shall be permitted unrestricted access to inspect the Contractor's QC facilities and witness QC activities. The RPR will advise the Contractor in writing of any noted deficiencies concerning the QC facility, equipment, supplies, or testing personnel and procedures. When the deficiencies are serious enough to be adversely affecting the test results, the incorporation of the materials into the work shall be suspended immediately and will not be permitted to resume until the deficiencies are satisfactorily corrected

501-5.3 Contractor QC testing. The Contractor shall perform all QC tests necessary to control the production and construction processes applicable to this specification. The testing shall include, but not necessarily be limited to, tests for aggregate gradation, aggregate moisture content, slump, and air content.

The RPR may at any time, notwithstanding previous plant acceptance, reject and require the Contractor to dispose of any batch of concrete mixture which is rendered unfit for use due to contamination, segregation, or improper slump. Such rejection may be based on only visual inspection. In the event of such rejection, the Contractor may take a representative sample of the rejected material in the presence of the RPR, and if it can be demonstrated in the laboratory, in the presence of the RPR, that such material was erroneously rejected, payment will be made for the material at the contract unit price.

a. Fine aggregate.

(1) Gradation. A sieve analysis shall be made at least twice daily in accordance with ASTM C136 from randomly sampled material taken from the discharge gate of storage bins or from the conveyor belt.

(2) Moisture content. If an electric moisture meter is used, at least two direct measurements of moisture content shall be made per week to check the calibration. If direct measurements are made in lieu of using an electric meter, two tests shall be made per day. Tests shall be made in accordance with ASTM C70 or ASTM C566.

(3) Deleterious substances. Fine aggregate as delivered to the mixer shall be tested for deleterious substances in fine aggregate for concrete as specified in paragraph 501-2.1b, prior to production of the control strip, and a minimum of every 30-days during production or more frequently as necessary to control deleterious substances.

b. Coarse Aggregate.

(1) Gradation. A sieve analysis shall be made at least twice daily for each size of aggregate. Tests shall be made in accordance with ASTM C136 from randomly sampled material taken from the discharge gate of storage bins or from the conveyor belt.

(2) Moisture content. If an electric moisture meter is used, at least two direct measurements of moisture content shall be made per week to check the calibration. If direct measurements are made in lieu of using an electric meter, two tests shall be made per day. Tests shall be made in accordance with ASTM C566.

(3) Deleterious substances. Coarse aggregate as delivered to the mixer shall be tested for deleterious substances in coarse aggregate for concrete as specified in paragraph 501-2.1c, prior to production of the control strip, and a minimum of every 30-days during production or more frequently as necessary to control deleterious substances.

c. Slump. One test shall be made for each sublot. Slump tests shall be performed in accordance with ASTM C143 from material randomly sampled from material discharged from trucks at the paving site. Material samples shall be taken in accordance with ASTM C172.

d. Air content. One test shall be made for each sublot. Air content tests shall be performed in accordance with ASTM C231 for gravel and stone coarse aggregate and ASTM C173 for slag or other porous coarse aggregate, from material randomly sampled from trucks at the paving site. Material samples shall be taken in accordance with ASTM C172.

e. Unit weight and Yield. One test shall be made for each sublot. Unit weight and yield tests shall be in accordance with ASTM C138. The samples shall be taken in accordance with ASTM C172 and at the same time as the air content tests.

f. Temperatures. Temperatures shall be checked at least four times per lot at the job site in accordance with ASTM C1064.

g. Smoothness for Contractor Quality Control.

The Contractor shall perform smoothness testing in transverse and longitudinal directions daily to verify that the construction processes are producing pavement with variances less than ¼ inch in 12 feet, identifying areas that may pond water which could lead to hydroplaning of aircraft. If the smoothness criteria is not met, appropriate changes and corrections to the construction process shall be made by the Contractor before construction continues

The Contractor may use a 12-foot (3.7 m) "straightedge, a rolling inclinometer meeting the requirements of ASTM E2133 or rolling external reference device that can simulate a 12-foot (3.7m) straightedge approved by the RPR. Straight-edge testing shall start with one-half the length of the straightedge at the edge of pavement section being tested and then moved ahead one-half the length of the straightedge for each successive measurement. Testing shall be continuous across all joints. The surface irregularity shall be determined by placing the freestanding (unleveled) straightedge on the pavement surface and allowing it to rest upon the two highest spots covered by its length, and measuring the maximum gap between the straightedge and the pavement surface in the area between the two high points. If the rolling inclinometer or external reference device is used, the data may be evaluated using either the FAA profile program, ProFAA, or FHWA profile program ProVal, using the 12-foot straightedge simulation function.

Smoothness readings shall not be made across grade changes or cross slope transitions. The transition between new and existing pavement shall be evaluated separately for conformance with the plans.

(1) Transverse measurements. Transverse measurements shall be taken for each day's production placed. Transverse measurements shall be taken perpendicular to the pavement centerline each 50 feet (15 m) or more often as determined by the RPR. The joint between lanes shall be tested separately to facilitate smoothness between lanes.

(2) Longitudinal measurements. Longitudinal measurements shall be taken for each day's production placed. Longitudinal tests shall be parallel to the centerline of paving; at the center of paving lanes when widths of paving lanes are less than 20 feet (6 m); and at the third points of paving lanes when widths of paving lanes are 20 ft (6 m) or greater. When placement abuts previously placed material the first measurement shall start with one half the length of the straight edge on the previously placed material.

Deviations on the final surface course in either the transverse or longitudinal direction that will trap water greater than 1/4 inch (6 mm) shall be corrected with diamond grinding per paragraph 501-4.19f or by removing and replacing the surface course to full depth. Grinding shall be tapered in all directions to provide smooth transitions to areas not requiring grinding. All areas in which diamond grinding has been performed shall be subject to the final pavement thickness tolerances specified in paragraph 501-6.6.

Control charts shall be kept to show area of each day's placement and the percentage of corrective grinding required. Corrections to production and placement shall be initiated when corrective grinding is required. If the Contractor's machines and/or methods produce significant areas that need corrective actions in excess of 10 percent of a day's production, production shall be stopped until corrective measures are implemented by the Contractor.

h. Grade. Grade will be evaluated prior to and after placement of the concrete surface.

Measurements will be taken at appropriate gradelines (as a minimum at center and edges of paving lane) and longitudinal spacing as shown on cross-sections and plans. The final surface of the pavement will not vary from the gradeline elevations and cross-sections shown on the plans by more than 1/2 inch (12 mm) vertically or 0.1 feet (30 mm) laterally. The documentation will be provided by the Contractor to the RPR ~~[within 48 hours]~~ by the end of the following working day.

Areas with humps or depression that that exceed grade or smoothness and that retain water on the surface must be ground off provided the course thickness after grinding is not more than 1/2 inch (12 mm) less than the thickness specified on the plans. If these areas cannot be corrected with grinding then the slabs that are retaining water must be removed and replaced in accordance with paragraph 501-4.19d. Grinding shall be in accordance with paragraph 501-4.19f. All corrections will be at the Contractors expense.

501-5.4 Control charts. The Contractor shall maintain linear control charts for fine and coarse aggregate gradation, slump, and air content. The Contractor shall also maintain a control chart plotting the coarseness factor/workability factor from the combined gradations in accordance with paragraph 501-2.1d.

Control charts shall be posted in a location satisfactory to the RPR and shall be kept up to date at all times. As a minimum, the control charts shall identify the project number, the contract item number, the test number, each test parameter, the Action and suspension Limits, or Specification limits, applicable to each test parameter, and the Contractor's test results. The Contractor shall use the control charts as part of a process control system for identifying potential problems and assignable causes before they occur. If the Contractor's projected data during production indicates a potential problem and the Contractor is not taking satisfactory corrective action, the RPR may halt production or acceptance of the material.

a. Fine and coarse aggregate gradation. The Contractor shall record the running average of the last five gradation tests for each control sieve on linear control charts. Superimposed on the control charts shall be the action and suspension limits. Gradation tests shall be performed by the Contractor per ASTM C136. The Contractor shall take at least [two]

samples per lot to check the final gradation. Sampling shall be per ASTM D75 from the flowing aggregate stream or conveyor belt.

b. Slump and air content. The Contractor shall maintain linear control charts both for individual measurements and range (that is, difference between highest and lowest measurements) for slump and air content in accordance with the following Action and Suspension Limits.

c. Combined gradation. The Contractor shall maintain a control chart plotting the coarseness factor and workability factor on a chart in accordance with paragraph 501-2.1d.

Control Chart Limits[1]

Control Parameter	Individual Measurements	
	Action Limit	Suspension Limit
Gradation[2]	*[3]	*[3]
Coarseness Factor (CF)	±3.5	±5
Workability Factor (WF)	±2	±3
Slump	+0.5 to -1 inch (+13 to -25 mm)	+1 to -1.5 inch (+25 to -38 mm)
Air Content	±1.5%	±2.0%

[1] Control charts shall developed and maintained for each control parameter indicated.

[2] Control charts shall be developed and maintained for each sieve size.

[3] Action and suspension limits shall be determined by the Contractor.

501-5.5 Corrective action at Suspension Limit. As a minimum, the contractor quality control process shall be deemed out of control and corrective action taken if any one of the following conditions exists.

a. Fine and coarse aggregate gradation. When two consecutive averages of five tests are outside of the suspension limits, immediate steps, including a halt to production, shall be taken to correct the grading.

b. Coarseness and Workability factor. When the CF or WF reaches the applicable suspension limits, the Contractor, immediate steps, including a halt to production, shall be taken to correct the CF and WF.

c. Fine and coarse aggregate moisture content. Whenever the moisture content of the fine or coarse aggregate changes by more than 0.5%, the scale settings for the aggregate batcher and water batcher shall be adjusted.

d. Slump. The Contractor shall halt production and make appropriate adjustments whenever:

(1) one point falls outside the Suspension Limit line for individual measurements

OR

(2) two points in a row fall outside the Action Limit line for individual measurements.

e. Air content. The Contractor shall halt production and adjust the amount of air-entraining admixture whenever:

(1) one point falls outside the Suspension Limit line for individual measurements

OR

(2) two points in a row fall outside the Action Limit line for individual measurements.

MATERIAL ACCEPTANCE

501-6.1 Quality Assurance (QA) Acceptance sampling and testing. All acceptance sampling and testing necessary to determine conformance with the requirements specified in this section, with the exception of coring for thickness determination, will be performed by the RPR. The Contractor shall provide adequate facilities for the initial curing of beams. The Contractor shall bear the cost of providing initial curing facilities and coring and filling operations, per paragraph 501-6.5b(1).

The samples will be transported while in the molds. The curing, except for the initial cure period, will be accomplished using the immersion in saturated lime water method. During the 24 hours after molding, the temperature immediately adjacent to the specimens must be maintained in the range of 60° to 80°F (16° to 27°C), and loss of moisture from the specimens must be prevented. The specimens may be stored in tightly constructed wooden boxes, damp sand pits, temporary buildings at construction sites, under wet burlap in favorable weather, or in heavyweight closed plastic bags, or using other suitable methods, provided the temperature and moisture loss requirements are met.

501-6.2 Quality Assurance (QA) testing laboratory. Quality assurance testing organizations performing these acceptance tests will be accredited in accordance with ASTM C1077. The quality assurance laboratory accreditation must be current and listed on the accrediting authority's website. All test methods required for acceptance sampling and testing must be listed on the lab accreditation. A copy of the laboratory's current accreditation and accredited test methods will be submitted to the RPR prior to start of construction.

501-6.3 Lot size. Concrete will be accepted for strength and thickness on a lot basis. A lot will consist of a day's production not to exceed 2,000 cubic yards. Each lot will be divided into approximately equal sublots with individual sublots between 400 to 600 cubic yards. Where three sublots are produced, they will constitute a lot. Where one or two sublots are produced, they will be incorporated into the previous or next lot. Where more than one plant is simultaneously producing concrete for the job, the lot sizes will apply separately for each plant.

501-6.4 Partial lots. When operational conditions cause a lot to be terminated before the specified number of tests have been made for the lot or for overages or minor placements to be considered as partial lots, the following procedure will be used to adjust the lot size and the number of tests for the lot.

Where three sublots have been produced, they will constitute a lot. Where one or two sublots have been produced, they will be incorporated into the next lot or the previous lot and the total number of sublots will be used in the acceptance criteria calculation, that is, n=5 or n=6.

501-6.5 Acceptance Sampling and Testing.

a. Strength.

(1) Sampling. One sample will be taken for each sublot from the concrete delivered to the job site. Sampling locations will be determined by the RPR in accordance with random sampling procedures contained in ASTM D3665. The concrete will be sampled in accordance with ASTM C172.

(2) Test Specimens. The RPR will be responsible for the casting, initial curing, transportation, and curing of specimens in accordance with ASTM C31. Two (2) specimens will be made from each sample and slump, air content, unit weight, and temperature tests will be conducted for each set of strength specimens. Within 24 to 48 hours, the samples will be transported from the field to the laboratory while in the molds. Samples will be cured in saturated lime water.

The strength of each specimen will be determined in accordance with **ASTM C39.** The strength for each sublot will be computed by averaging the results of the two test specimens representing that sublot.

(3) Acceptance. Acceptance of pavement for strength will be determined by the RPR in accordance with paragraph 501-6.6b(1). All individual strength tests within a lot will be checked for outliers in accordance with ASTM E178, at a significance level of 5%. Outliers will be discarded and the remaining test values will be used to determine acceptance in accordance with paragraph 501-6.5b.

b. Pavement thickness.

(1) Sampling. One core will be taken by the Contractor for each sublot in the presence of the RPR. Sampling locations will be determined by the RPR in accordance with random sampling procedures contained in ASTM D3665. Areas, such as thickened edges, with planned variable thickness, will be excluded from sample locations.

Cores shall be a minimum 4 inch (100 mm) in diameter neatly cut with a core drill. The Contractor will furnish all tools, labor, and materials for cutting samples and filling the cored hole. Core holes will be filled by the Contractor with a non-shrink grout approved by the RPR within one day after sampling.

(2) Testing. The thickness of the cores will be determined by the RPR by the average caliper measurement in accordance with ASTM C174. Each core shall be photographed and the photograph included with the test report.

(3) Acceptance. Acceptance of pavement for thickness will be determined by the RPR in accordance with paragraph 501-6.6.

501-6.6 Acceptance criteria.

a. General. Acceptance will be based on the following characteristics of the completed pavement discussed in paragraph 501-6.5b:

(1) Strength

(2) Thickness

(3) Grade

(4) Profilograph smoothness [Not used]

(5) Adjustments for repairs

Acceptance for strength, thickness, and grade, will be based on the criteria contained in accordance with paragraph 501-6.6b(1), 501-6.6b(2), and 501-6.6b(3), respectively.

(3) Grade. The final finished surface of the pavement of the completed project will not vary from the gradeline elevations and cross-sections shown on the plans by more than 1/2 inch vertically or 0.1 feet laterally. The documentation, stamped and signed by a licensed surveyor shall be in accordance with paragraph 501-5.3h. Payment for sublots that do not meet grade for over 25% of the sublot shall be reduced by 5% and not be more than 95%.

(4) Profilograph roughness for QA Acceptance. ~~[Not used.]~~

METHOD OF MEASUREMENT

501-7.1 Concrete pavement shall be measured by the number of square yards of plain or reinforced pavement as specified in-place, completed and accepted.

BASIS OF PAYMENT

501-8.1 Payment. Payment for concrete pavement meeting all acceptance criteria as specified in paragraph 501-6.6. Acceptance Criteria shall be based on results of strength and thickness tests. Payment for acceptable lots of concrete pavement shall be adjusted in accordance with paragraph 501-8.1a for strength and thickness; 501-8.1b for repairs; 501-8.1c for grinding; and 501-8.1d for smoothness, subject to the limitation that:

The total project payment for concrete pavement shall not exceed **100** percent of the product of the contract unit price and the total number of square yards of concrete pavement used in the accepted work.

Payment shall be full compensation for all labor, materials, tools, equipment, and incidentals required to complete the work as specified herein and on the drawings.

~~**a. Basis of adjusted payment.** The pay factor for each individual lot shall be calculated in accordance with the Price Adjustment Schedule table below. A pay factor shall be calculated for both strength and thickness. The lot pay factor shall be the higher of the two values when calculations for both strength and thickness are 100% or higher. The lot pay factor shall be the product of the two values when only one of the calculations for either strength or thickness is 100% or higher. The lot pay factor shall be the lower of the two values when calculations for both strength and thickness are less than 100%.~~

~~**Price Adjustment Schedule**[1]~~

~~**Percentage of Materials Within Specification Limits (PWL)**~~	~~**Lot Pay Factor (Percent of Contract Unit Price)**~~
~~96 – 100~~	~~106~~
~~90 – 95~~	~~PWL + 10~~
~~75 – 90~~	~~0.5 PWL + 55~~
~~55 – 74~~	~~1.4 PWL – 12~~
~~Below 55~~	~~Reject~~[2]

~~[1] Although it is theoretically possible to achieve a pay factor of 106% for each lot, actual payment in excess of 100% shall be subject to the total project payment limitation specified in paragraph 501-8.1.~~

~~[2] The lot shall be removed and replaced unless, after receipt of FAA concurrence, the Owner and Contractor agree in writing that the lot will remain; the lot paid at 50% of the contract unit price; and the total project payment limitation reduced by the amount withheld for that lot.~~

~~For each lot accepted, the adjusted contract unit price shall be the product of the lot pay factor for the lot and the contract unit price. Payment shall be subject to the total project payment limitation specified in paragraph 501-8.1. Payment in excess of 100% for accepted lots of concrete pavement shall be used to offset payment for accepted lots of concrete pavement that achieve a lot pay factor less than 100%; except for rejected lots which remain in place and/or sublots with adjustments for repairs.~~

~~**b. Adjusted payment for repairs.** The PWL lot pay factor shall be reduced by 5% and be no higher than 95% for sublots which contain repairs in accordance with paragraph 501-4.19 on more than 20% of the slabs within the sublot. Payment factors greater than 100 percent for the strength and thickness cannot be used to offset adjustments for repairs.~~

~~**c. Adjusted payment for grinding.** The PWL lot pay factor shall be reduced by 5% and be no higher than 95% for sublots with grinding over 25% of a sublot.~~

e. Payment. Payment shall be made under:

Item P-501-8.1a	Reinforced Concrete Pavement (8 inches) - per square yard
Item P-501-8.1b	Reinforced Concrete Pavement Ramp (8-12 inches) – per square yard

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM A184	Standard Specification for Welded Deformed Steel Bar Mats for Concrete Reinforcement
ASTM A615	Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
ASTM A704	Standard Specification for Welded Steel Plain Bar or Rod Mats for Concrete Reinforcement
ASTM A706	Standard Specification for Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement
ASTM A775	Standard Specification for Epoxy-Coated Steel Reinforcing Bars
ASTM A884	Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Reinforcement
ASTM A934	Standard Specification for Epoxy-Coated Prefabricated Steel Reinforcing Bars
ASTM A996	Standard Specification for Rail-Steel and Axle-Steel Deformed Bars for Concrete Reinforcement
ASTM A1035	Standard Specification for Deformed and Plain, Low-Carbon, Chromium, Steel Bars for Concrete Reinforcement
ASTM A1064	Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete
ASTM A1078	Standard Specification for Epoxy-Coated Steel Dowels for Concrete Pavement
ASTM C29	Standard Test Method for Bulk Density ("Unit Weight") and Voids in Aggregate
ASTM C31	Standard Practice for Making and Curing Concrete Test Specimens in the Field

ASTM C33	Standard Specification for Concrete Aggregates
ASTM C39	Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
ASTM C70	Standard Test Method for Surface Moisture in Fine Aggregate
ASTM C78	Standard Test Method for Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)
ASTM C88	Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
ASTM C94	Standard Specification for Ready-Mixed Concrete
ASTM C114	Standard Test Methods for Chemical Analysis of Hydraulic Cement
ASTM C117	Standard Test Method for Materials Finer than 75-µm (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C123	Standard Test Method for Lightweight Particles in Aggregate
ASTM C136	Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
ASTM C131	Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C136	Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates
ASTM C138	Standard Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete
ASTM C142	Standard Test Method for Clay Lumps and Friable Particles in Aggregates
ASTM C143	Standard Test Method for Slump of Hydraulic-Cement Concrete
ASTM C150	Standard Specification for Portland Cement
ASTM C171	Standard Specification for Sheet Materials for Curing Concrete
ASTM C172	Standard Practice for Sampling Freshly Mixed Concrete
ASTM C173	Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method
ASTM C174	Standard Test Method for Measuring Thickness of Concrete Elements Using Drilled Concrete Cores
ASTM C227	Standard Test Method for Potential Alkali Reactivity of Cement-Aggregate Combinations (Mortar-Bar Method)
ASTM C231	Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
ASTM C260	Standard Specification for Air-Entraining Admixtures for Concrete
ASTM C295	Standard Guide for Petrographic Examination of Aggregates for Concrete

ASTM C309	Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete
ASTM C311	Standard Test Methods for Sampling and Testing Fly Ash or Natural Pozzolans for Use in Portland Cement Concrete
ASTM C494	Standard Specification for Chemical Admixtures for Concrete
ASTM C566	Standard Test Method for Total Evaporable Moisture Content of Aggregates by Drying
ASTM C595	Standard Specification for Blended Hydraulic Cements
ASTM C618	Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
ASTM C642	Standard Test Method for Density, Absorption, and Voids in Hardened Concrete
ASTM C666	Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing
ASTM C685	Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing
ASTM C881	Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete
ASTM C989	Standard Specification for Slag Cement for Use in Concrete and Mortars
ASTM C1017	Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete
ASTM C1064	Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete
ASTM C1077	Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation
ASTM C1157	Standard Performance Specification for Hydraulic Cement
ASTM C1260	Standard Test Method for Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)
ASTM C1365	Standard Test Method for Determination of the Proportion of Phases in Portland Cement and Portland-Cement Clinker Using X-Ray Powder Diffraction Analysis
ASTM C1567	Standard Test Method for Determining the Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials and Aggregate (Accelerated Mortar-Bar Method)
ASTM C1602	Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete
ASTM D75	Standard Practice for Sampling Aggregates

ASTM D1751	Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)
ASTM D1752	Standard Specification for Preformed Sponge Rubber and Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction
ASTM D2419	Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate
ASTM D3665	Standard Practice for Random Sampling of Construction Materials
ASTM D4791	Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
ASTM E178	Standard Practice for Dealing with Outlying Observations
ASTM E1274	Standard Test Method for Measuring Pavement Roughness Using a Profilograph
ASTM E2133	Standard Test Method for Using a Rolling Inclinometer to Measure Longitudinal and Transverse Profiles of a Traveled Surface

American Concrete Institute (ACI)

ACI 305R	Guide to Hot Weather Concreting
ACI 306R	Guide to Cold Weather Concreting
ACI 309R	Guide for Consolidation of Concrete

Advisory Circulars (AC)

AC 150/5320-6	Airport Pavement Design and Evaluation

Federal Highway Administration (FHWA)

HIPERPAV 3, version 3.2

Portland Concrete Association (PCA)

PCA	Design and Control of Concrete Mixtures, 16th Edition

U.S. Army Corps of Engineers (USACE) Concrete Research Division (CRD)

CRD C662	Determining the Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials, Lithium Nitrate Admixture and Aggregate (Accelerated Mortar-Bar Method)

United States Air Force Engineering Technical Letter (ETL)

ETL 97-5	Proportioning Concrete Mixtures with Graded Aggregates for Rigid Airfield Pavements

END ITEM P-501

ITEM P-605
JOINT SEALANTS FOR PAVEMENTS

DESCRIPTION

605-1.1 This item shall consist of providing and installing a resilient and adhesive joint sealing material capable of effectively sealing joints in pavement; joints between different types of pavements; and cracks in existing pavement.

MATERIALS

605-2.1 Joint sealants. Joint sealant materials shall meet the requirements of ASTM D5893 Standard Specifications for Cold Applied, Single Component, Chemically Curing Silicone Joint Sealant for Portland Cement Concrete Pavements.

Each lot or batch of sealant shall be delivered to the jobsite in the manufacturer's original sealed container. Each container shall be marked with the manufacturer's name, batch or lot number, the safe heating temperature, and shall be accompanied by the manufacturer's certification stating that the sealant meets the requirements of this specification.

605-2.2 Backer rod. The material furnished shall be a compressible, non-shrinking, non-staining, non-absorbing material that is non-reactive with the joint sealant in accordance with ASTM D5249. The backer-rod material shall be 25% ± 5 % larger in diameter than the nominal width of the joint.

605-2.3 Bond breaking tapes. Provide a bond breaking tape or separating material that is a flexible, non-shrinkable, non-absorbing, non-staining, and non-reacting adhesive-backed tape. The material shall have a melting point at least 5°F (3°C) greater than the pouring temperature of the sealant being used when tested in accordance with ASTM D789. The bond breaker tape shall be approximately 1/8 inch (3 mm) wider than the nominal width of the joint and shall not bond to the joint sealant.

CONSTRUCTION METHODS

605-3.1 Time of application. Joints shall be sealed as soon after completion of the curing period as feasible and before the pavement is opened to traffic, including construction equipment. The pavement temperature shall be 50°F (10°C) and rising at the time of application of the poured joint sealing material. Do not apply sealant if moisture is observed in the joint.

605-3.2 Equipment. Machines, tools, and equipment used in the performance of the work required by this section shall be approved before the work is started and maintained in satisfactory condition at all times. Submit a list of proposed equipment to be used in performance of construction work including descriptive data, **14 Calendar** days prior to use on the project.

a. Tractor-mounted routing tool. Provide a routing tool, used for removing old sealant from the joints, of such shape and dimensions and so mounted on the tractor that it will not damage the sides of the joints. The tool shall be designed so that it can be adjusted to remove the old material to varying depths as required. The use of V-shaped tools or rotary impact routing devices will not be permitted. Hand-operated spindle routing devices may be used to clean and enlarge random cracks.

b. Concrete saw. Provide a self-propelled power saw, with water-cooled diamond or abrasive saw blades, for cutting joints to the depths and widths specified.

c. Sandblasting equipment. Sandblasting is not allowed.

d. Waterblasting equipment. The Contractor must demonstrate waterblasting equipment including the pumps, hose, guide and nozzle size, under job conditions, before approval in accordance with paragraph 605-3.3. The Contractor shall demonstrate, in the presence of the RPR, that the method cleans the joint and does not damage the joint.

e. Hand tools. Hand tools may be used, when approved, for removing defective sealant from a crack and repairing or cleaning the crack faces. Hand tools should be carefully evaluated for potential spalling effects prior to approval for use.

f. Hot-poured sealing equipment. The unit applicators used for heating and installing ASTM D6690 joint sealant materials shall be mobile and shall be equipped with a double-boiler, agitator-type kettle with an oil medium in the outer space for heat transfer; a direct-connected pressure-type extruding device with a nozzle shaped for inserting in the joint to be filled; positive temperature devices for controlling the temperature of the transfer oil and sealant; and a recording type thermometer for indicating the temperature of the sealant. The applicator unit shall be designed so that the sealant will circulate through the delivery hose and return to the inner kettle when not in use.

g. Cold-applied, single-component sealing equipment. The equipment for installing ASTM D5893 single component joint sealants shall consist of an extrusion pump, air compressor, following plate, hoses, and nozzle for transferring the sealant from the storage container into the joint opening. The dimension of the nozzle shall be such that the tip of the nozzle will extend into the joint to allow sealing from the bottom of the joint to the top. Maintain the initially approved equipment in good working condition, serviced in accordance with the supplier's instructions, and unaltered in any way without obtaining prior approval. Small hand-held air-powered equipment (i.e., caulking guns) may be used for small applications.

605-3.3 Preparation of joints. Pavement joints for application of material in this specification must be dry, clean of all scale, dirt, dust, curing compound, and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method cleans the joint and does not damage the joint.

a. Sawing. All joints shall be sawed in accordance with specifications and plan details. Immediately after sawing the joint, the resulting slurry shall be completely removed from joint and adjacent area by flushing with a jet of water, and by use of other tools as necessary.

b. Sealing. Immediately before sealing, the joints shall be thoroughly cleaned of all remaining laitance, curing compound, filler, protrusions of hardened concrete, old sealant and other foreign material from the sides and upper edges of the joint space to be sealed. Cleaning shall be accomplished by tractor-mounted routing equipment, concrete saw or waterblaster as specified in paragraph 605-3.2. The newly exposed concrete joint faces and the pavement surface extending a minimum of 1/2 inch (12 mm) from the joint edge shall be sandblasted clean. Sandblasting shall be accomplished in a minimum of two passes. One pass per joint face with the nozzle held at an angle directly toward the joint face and not more than 3 inches (75 mm) from it. After final cleaning and immediately prior to sealing, blow out the joints with compressed air and leave them completely free of debris and water. The joint faces shall be surface dry when the seal is applied.

c. Backer Rod. When the joint opening is of a greater depth than indicated for the sealant depth, plug or seal off the lower portion of the joint opening using a backer rod in accordance

with paragraph 605-2.2 to prevent the entrance of the sealant below the specified depth. Take care to ensure that the backer rod is placed at the specified depth and is not stretched or twisted during installation.

d. Bond-breaking tape. Where inserts or filler materials contain bitumen, or the depth of the joint opening does not allow for the use of a backup material, insert a bond-separating tape breaker in accordance with paragraph 605-2.3 to prevent incompatibility with the filler materials and three-sided adhesion of the sealant. Securely bond the tape to the bottom of the joint opening so it will not float up into the new sealant.

605-3.4 Installation of sealants. Joints shall be inspected for proper width, depth, alignment, and preparation, and shall be approved by the RPR before sealing is allowed. Sealants shall be installed in accordance with the following requirements:

Immediately preceding, but not more than 50 feet (15 m) ahead of the joint sealing operations, perform a final cleaning with compressed air. Fill the joints from the bottom up to **1/8 inch ±1/16 inch** below the top of pavement surface; or bottom of groove for grooved pavement. Remove and discard excess or spilled sealant from the pavement by approved methods. Install the sealant in such a manner as to prevent the formation of voids and entrapped air. In no case shall gravity methods or pouring pots be used to install the sealant material. Traffic shall not be permitted over newly sealed pavement until authorized by the RPR. When a primer is recommended by the manufacturer, apply it evenly to the joint faces in accordance with the manufacturer's instructions. Check the joints frequently to ensure that the newly installed sealant is cured to a tack-free condition within the time specified.

605-3.5 Inspection. The Contractor shall inspect the joint sealant for proper rate of cure and set, bonding to the joint walls, cohesive separation within the sealant, reversion to liquid, entrapped air and voids. Sealants exhibiting any of these deficiencies at any time prior to the final acceptance of the project shall be removed from the joint, wasted, and replaced as specified at no additional cost to the airport.

605-3.6 Clean-up. Upon completion of the project, remove all unused materials from the site and leave the pavement in a clean condition.

METHOD OF MEASUREMENT

605-4.1 No Direct Measurement. All work shall be considered incidental to the bid items for specification P-501

BASIS OF PAYMENT

605-5.1 No Direct Payment. All the work under this item including furnishing all materials, for all preparation, delivering, and placing of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the work item shall be considered incidental to the bid items for specification P-501.

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM D789	Standard Test Method for Determination of Relative Viscosity of Polyamide (PA)
ASTM D5249	Standard Specification for Backer Material for Use with Cold- and Hot-Applied Joint Sealants in Portland-Cement Concrete and Asphalt Joints
ASTM D5893	Standard Specification for Cold Applied, Single Component, Chemically Curing Silicone Joint Sealant for Portland Cement Concrete Pavements
ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt
ASTM D7116	Standard Specification for Joint Sealants, Hot Applied, Jet Fuel Resistant Types for Portland Cement Concrete Pavements

Advisory Circulars (AC)

AC 150/5340-30	Design and Installation Details for Airport Visual Aids

END ITEM P-605

ITEM P-610
CONCRETE FOR MISCELLANEOUS STRUCTURES

DESCRIPTION

610-1.1 This item shall consist of concrete and reinforcement, as shown on the plans, prepared and constructed in accordance with these specifications. This specification shall be used for all concrete other than airfield pavement which are cast-in-place.

MATERIALS

610-2.1 General. Only approved materials, conforming to the requirements of these specifications, shall be used in the work. Materials may be subject to inspection and tests at any time during their preparation or use. The source of all materials shall be approved by the Resident Project Representative (RPR) before delivery or use in the work. Representative preliminary samples of the materials shall be submitted by the Contractor, when required, for examination and test. Materials shall be stored and handled to ensure preservation of their quality and fitness for use and shall be located to facilitate prompt inspection. All equipment for handling and transporting materials and concrete must be clean before any material or concrete is placed in them.

The use of pit-run aggregates shall not be permitted unless the pit-run aggregate has been screened and washed, and all fine and coarse aggregates stored separately and kept clean. The mixing of different aggregates from different sources in one storage stockpile or alternating batches of different aggregates shall not be permitted.

a. Reactivity. Fine aggregate and coarse aggregates to be used in all concrete shall have been tested separately within six months of the project in accordance with ASTM C1260. Test results shall be submitted to the RPR. The aggregate shall be considered innocuous if the expansion of test specimens, tested in accordance with ASTM C1260, does not exceed 0.08% at 14 days (16 days from casting). If the expansion either or both test specimen is greater than 0.08% at 14 days, but less than 0.20%, a minimum of 25% of Type F fly ash, or between 40% and 55% of slag cement shall be used in the concrete mix.

If the expansion is greater than 0.20%, the aggregates shall not be used, and test results for other aggregates must be submitted for evaluation; or aggregates that meet P-501 reactivity test requirements may be utilized.

610-2.2 Coarse aggregate. The coarse aggregate for concrete shall meet the requirements of ASTM C33 and the requirements of Table 4, Class Designation 5S; and the grading requirements shown below, as required for the project.

Coarse Aggregate Grading Requirements

Maximum Aggregate Size	ASTM C33, Table 3 Grading Requirements (Size No.)
1 1/2 inch (37.5 mm)	467 or 4 and 67
1 inch (25 mm)	57
¾ inch (19 mm)	67
½ inch (12.5 mm)	7

610-2.2.1 Coarse Aggregate susceptibility to durability (D) cracking. ~~[Not used]~~

610-2.3 Fine aggregate. The fine aggregate for concrete shall meet all fine aggregate requirements of ASTM C33.

610-2.4 Cement. Cement shall conform to the requirements of **ASTM C150_Type I.**

610-2.5 Cementitious materials.

a. Fly ash. Fly ash shall meet the requirements of ASTM C618, with the exception of loss of ignition, where the maximum shall be less than 6%. Fly ash shall have a Calcium Oxide (CaO) content of less than [15%] and a total available alkali content less than 3% per ASTM C311. Fly ash produced in furnace operations using liming materials or soda ash (sodium carbonate) as an additive shall not be acceptable. The Contractor shall furnish the previous three most recent, consecutive ASTM C618 reports for each source of fly ash proposed in the concrete mix and shall furnish each additional report as they become available during the project. The reports can be used for acceptance, or the material may be tested independently by the RPR.

b. Slag cement (ground granulated blast furnace (GGBF)). Slag cement shall conform to ASTM C989, Grade 100 or Grade 120. Slag cement shall be used only at a rate between 25% and 55% of the total cementitious material by mass.

610-2.6 Water. Water used in mixing or curing shall be from potable water sources. Other sources shall be tested in accordance with ASTM C1602 prior to use.

610-2.7 Admixtures. The Contractor shall submit certificates indicating that the material to be furnished meets all of the requirements indicated below. In addition, the RPR may require the Contractor to submit complete test data from an approved laboratory showing that the material to be furnished meets all of the requirements of the cited specifications. Subsequent tests may be made of samples taken by the RPR from the supply of the material being furnished or proposed for use on the work to determine whether the admixture is uniform in quality with that approved.

a. Air-entraining admixtures. Air-entraining admixtures shall meet the requirements of ASTM C260 and shall consistently entrain the air content in the specified ranges under field conditions. The air-entrainment agent and any water reducer admixture shall be compatible.

b. Water-reducing admixtures. Water-reducing admixture shall meet the requirements of ASTM C494, Type A, B, or D. ASTM C494, Type F and G high range water reducing admixtures and ASTM C1017 flowable admixtures shall not be used.

c. Other chemical admixtures. The use of set retarding and set-accelerating admixtures shall be approved by the RPR. Retarding shall meet the requirements of ASTM C494, Type A,

B, or D and set accelerating shall meet the requirements of ASTM C494, Type C. Calcium chloride and admixtures containing calcium chloride shall not be used.

~~**610-2.8 Premolded joint material.** Premolded joint material for expansion joints shall meet the requirements of ASTM [___].~~

~~**610-2.9 Joint filler.** The filler for joints shall meet the requirements of Item P-605, unless otherwise specified.~~

610-2.10 Steel reinforcement. Reinforcing shall consist of **Reinforcing Steel** conforming to the requirements of ASTM A615, ASTM A706, ASTM A775, ASTM A934

610-2.11 Materials for curing concrete. Curing materials shall conform to White-pigmented Liquid Membrane-Forming Compound, Type 2, Class B, ASTM C309.

CONSTRUCTION METHODS

610-3.1 General. The Contractor shall furnish all labor, materials, and services necessary for, and incidental to, the completion of all work as shown on the drawings and specified here. All machinery and equipment used by the Contractor on the work, shall be of sufficient size to meet the requirements of the work. All work shall be subject to the inspection and approval of the RPR.

610-3.2 Concrete Mixture. The concrete shall develop a compressive strength of **4000** psi in 28 days as determined by test cylinders made in accordance with ASTM C31 and tested in accordance with ASTM C39. The concrete shall contain not less than 470 pounds of cementitious material per cubic yard (280 kg per cubic meter). The water cementitious ratio shall not exceed 0.45 by weight. The air content of the concrete shall be 5% +/- 1.2% as determined by ASTM C231 and shall have a slump of not more than 4 inches (100 mm) as determined by ASTM C143.

610-3.3 Mixing. Concrete may be mixed at the construction site, at a central point, or wholly or in part in truck mixers. The concrete shall be mixed and delivered in accordance with the requirements of ASTM C94 or ASTM C685.

The concrete shall be mixed only in quantities required for immediate use. Concrete shall not be mixed while the air temperature is below 40°F (4°C) without the RPRs approval. If approval is granted for mixing under such conditions, aggregates or water, or both, shall be heated and the concrete shall be placed at a temperature not less than 50°F (10°C) nor more than 100°F (38°C). The Contractor shall be held responsible for any defective work, resulting from freezing or injury in any manner during placing and curing, and shall replace such work at his expense.

Retempering of concrete by adding water or any other material is not permitted.

The rate of delivery of concrete to the job shall be sufficient to allow uninterrupted placement of the concrete.

610-3.4 Forms. Concrete shall not be placed until all the forms and reinforcements have been inspected and approved by the RPR. Forms shall be of suitable material and shall be of the type, size, shape, quality, and strength to build the structure as shown on the plans. The forms shall be true to line and grade and shall be mortar-tight and sufficiently rigid to prevent displacement and sagging between supports. The surfaces of forms shall be smooth and free from irregularities, dents, sags, and holes. The Contractor shall be responsible for their adequacy.

The internal form ties shall be arranged so no metal will show in the concrete surface or discolor the surface when exposed to weathering when the forms are removed. All forms shall be wetted with water or with a non-staining mineral oil, which shall be applied immediately before the

concrete is placed. Forms shall be constructed so they can be removed without injuring the concrete or concrete surface.

610-3.5 Placing reinforcement. All reinforcement shall be accurately placed, as shown on the plans, and shall be firmly held in position during concrete placement. Bars shall be fastened together at intersections. The reinforcement shall be supported by approved metal chairs. Shop drawings, lists, and bending details shall be supplied by the Contractor when required.

610-3.6 Embedded items. Before placing concrete, all embedded items shall be firmly and securely fastened in place as indicated. All embedded items shall be clean and free from coating, rust, scale, oil, or any foreign matter. The concrete shall be spaded and consolidated around and against embedded items. The embedding of wood shall not be allowed.

610-3.7 Concrete Consistency. The Contractor shall monitor the consistency of the concrete delivered to the project site; collect each batch ticket; check temperature; and perform slump tests on each truck at the project site in accordance with ASTM C143.

610-3.8 Placing concrete. All concrete shall be placed during daylight hours, unless otherwise approved. The concrete shall not be placed until the depth and condition of foundations, the adequacy of forms and falsework, and the placing of the steel reinforcing have been approved by the RPR. Concrete shall be placed as soon as practical after mixing, but in no case later than one (1) hour after water has been added to the mix. The method and manner of placing shall avoid segregation and displacement of the reinforcement. Troughs, pipes, and chutes shall be used as an aid in placing concrete when necessary. The concrete shall not be dropped from a height of more than 5 feet (1.5 m). Concrete shall be deposited as nearly as practical in its final position to avoid segregation due to rehandling or flowing. Do not subject concrete to procedures which cause segregation. Concrete shall be placed on clean, damp surfaces, free from running water, or on a properly consolidated soil foundation.

610-3.9 Vibration. Vibration shall follow the guidelines in American Concrete Institute (ACI) Committee 309R, Guide for Consolidation of Concrete.

610-3.10 Joints. Joints shall be constructed as indicated on the plans.

610-3.11 Finishing. All exposed concrete surfaces shall be true, smooth, and free from open or rough areas, depressions, or projections. All concrete horizontal plane surfaces shall be brought flush to the proper elevation with the finished top surface struck-off with a straightedge and floated.

610-3.12 Curing and protection. All concrete shall be properly cured in accordance with the recommendations in American Concrete Institute (ACI) 308R, Guide to External Curing of Concrete. The concrete shall be protected from damage until project acceptance.

610-3.13 Cold weather placing. When concrete is placed at temperatures below 40°F (4°C), follow the cold weather concreting recommendations found in ACI 306R, Cold Weather Concreting.

610-3.14 Hot weather placing. When concrete is placed in hot weather greater than 85°F (30 °C), follow the hot weather concreting recommendations found in ACI 305R, Hot Weather Concreting.

QUALITY ASSURANCE (QA)

610-4.1 Quality Assurance sampling and testing. Concrete for each day's placement will be accepted on the basis of the compressive strength specified in paragraph 610-3.2. The RPR will sample the concrete in accordance with ASTM C172; test the slump in accordance with ASTM

C143; test air content in accordance with ASTM C231; make and cure compressive strength specimens in accordance with ASTM C31; and test in accordance with ASTM C39. The QA testing agency will meet the requirements of ASTM C1077.

The Contractor shall provide adequate facilities for the initial curing of cylinders.

610-4.2 Defective work. Any defective work that cannot be satisfactorily repaired as determined by the RPR, shall be removed and replaced at the Contractor's expense. Defective work includes, but is not limited to, uneven dimensions, honeycombing and other voids on the surface or edges of the concrete.

METHOD OF MEASUREMENT

610-5.1 Concrete shall be considered incidental, and no separate measurement shall be made of concrete complete in place and accepted.

BASIS OF PAYMENT

610-6.1 Concrete shall be considered incidental, and no separate payment shall be made.

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM A184	Standard Specification for Welded Deformed Steel Bar Mats for Concrete Reinforcement
ASTM A615	Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
ASTM A704	Standard Specification for Welded Steel Plain Bar or Rod Mats for Concrete Reinforcement
ASTM A706	Standard Specification for Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement
ASTM A775	Standard Specification for Epoxy-Coated Steel Reinforcing Bars
ASTM A884	Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Reinforcement
ASTM A934	Standard Specification for Epoxy-Coated Prefabricated Steel Reinforcing Bars
ASTM A1064	Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete
ASTM C31	Standard Practice for Making and Curing Concrete Test Specimens in the Field
ASTM C33	Standard Specification for Concrete Aggregates
ASTM C39	Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens

ASTM C94	Standard Specification for Ready-Mixed Concrete
ASTM C136	Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates
ASTM C114	Standard Test Methods for Chemical Analysis of Hydraulic Cement
ASTM C136	Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
ASTM C143	Standard Test Method for Slump of Hydraulic-Cement Concrete
ASTM C150	Standard Specification for Portland Cement
ASTM C171	Standard Specification for Sheet Materials for Curing Concrete
ASTM C172	Standard Practice for Sampling Freshly Mixed Concrete
ASTM C231	Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
ASTM C260	Standard Specification for Air-Entraining Admixtures for Concrete
ASTM C309	Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete
ASTM C311	Standard Test Methods for Sampling and Testing Fly Ash or Natural Pozzolans for Use in Portland-Cement Concrete
ASTM C494	Standard Specification for Chemical Admixtures for Concrete
ASTM C618	Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
ASTM C666	Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing
ASTM C685	Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing
ASTM C989	Standard Specification for Slag Cement for Use in Concrete and Mortars
ASTM C1017	Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete
ASTM C1077	Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation
ASTM C1157	Standard Performance Specification for Hydraulic Cement
ASTM C1260	Standard Test Method for Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)
ASTM C1365	Standard Test Method for Determination of the Proportion of Phases in Portland Cement and Portland-Cement Clinker Using X-Ray Powder Diffraction Analysis
ASTM C1602	Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete

ASTM D1751	Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Asphalt Types)
ASTM D1752	Standard Specification for Preformed Sponge Rubber Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction

American Concrete Institute (ACI)

ACI 305R	Hot Weather Concreting
ACI 306R	Cold Weather Concreting
ACI 308R	Guide to External Curing of Concrete
ACI 309R	Guide for Consolidation of Concrete

END OF ITEM P-610

ITEM 506

TEMPORARY EROSION, SEDIMENTATION,AND ENVIRONMENTAL CONTROLS

1. DESCRIPTION

Install, maintain, and remove erosion, sedimentation, and environmental control measures to prevent or reduce the discharge of pollutants in accordance with the Storm Water Pollution Prevention Plan (SWP3) onthe plans and the Texas Pollutant Discharge Elimination System (TPDES) General Permit TXR150000.

Control measures are defined as Best Management Practices used to prevent or reduce the discharge of pollutants. Control measures include, but are not limited to, rock filter dams, temporary pipe slope drains, temporary paved flumes, construction exits, earthwork for erosion control, pipe, construction perimeter fence, sandbags, temporary sediment control fence, biodegradable erosion control logs, vertical tracking, temporary or permanent seeding, and other measures. Erosion and sediment control devices must be selected from the *Erosion Control Approved Products* or *Sediment Control Approved Products* lists. Perform work in a manner to prevent degradation of receiving waters, facilitate project construction, and comply with applicable federal, state, and local regulations. Ensure the installation and maintenance of control measures is performed in accordance with the manufacturer's or designer's specifications.

Provide the Contractor Certification of Compliance before performing SWP3 or soil disturbing activities. By signing the Contractor Certification of Compliance, the Contractor certifies they have read and understand the requirements applicable to this project pertaining to the SWP3, the plans, and the TPDES General Permit TXR150000. The Contractor is responsible for any penalties associated with non-performance of installation or maintenance activities required for compliance. Ensure the most current version of the certificate is executed for this project.

2. MATERIALS

2.1. Construction Exits. Provide materials that meet the details shown on the plans and this Section.

2.1.1. **Rock Construction Exit**. Provide crushed aggregate for long- and short-term construction exits. Furnish aggregates that are clean, hard, durable, and free from adherent coatings such as salt, alkali, dirt, clay, loam, shale, soft or flaky materials, and organic and injurious matter. Use 4- to 8-in. aggregate for Type 1. Use 2- to 4-in. aggregate for Type 3.

2.1.2. **Foundation Course**. Provide a foundation course consisting of flexible base, bituminous concrete, hydraulic cement concrete, or other materials as shown on the plans or directed.

2.2. Embankment for Erosion Control. Provide rock, loam, clay, topsoil, or other earth materials that will form a stable embankment to meet the intended use.

2.3. Construction Perimeter Fence.

2.3.1. **Posts**. Provide essentially straight wood or steel posts that are at least 60 in. long. Furnish soft wood posts with a minimum diameter of 3 in., or use nominal 2 × 4 in. boards. Furnish hardwood posts with a minimum cross-section of 1-1/2 × 1-1/5 in. Furnish T- or L-shaped steel posts with a minimum weight of 1.25 lb. per foot.

2.3.2. **Fence**. Provide orange construction fencing as approved.

2.3.3. **Fence Wire**. Provide 14 gauge or larger galvanized smooth or twisted wire. Provide 16 gauge or larger tie wire.

2.3.4. **Flagging**. Provide brightly-colored flagging that is fade-resistant and at least 3/4 in. wide to provide maximum visibility both day and night.

2.3.5. **Staples**. Provide staples with a crown at least 1/2 in. wide and legs at least 1/2 in. long.

2.3.6. **Used Materials**. Previously used materials meeting the applicable requirements may be used if approved.

2.4. Sandbags. Provide sandbag material of polypropylene, polyethylene, or polyamide woven fabric with a minimum unit weight of **4** oz. per square yard, a Mullen burst-strength exceeding 300 psi, and an ultraviolet stability exceeding 70%.

Use natural coarse sand or manufactured sand meeting the gradation given in Table 1 to fill sandbags. Filled sandbags must be 24 to 30 in. long, 16 to 18 in. wide, and 6 to 8 in. thick.

Table 1 Sand Gradation

Sieve Size	Retained (% by Weight)
#4	Maximum 3%
#100	Minimum 80%
#200	Minimum 95%

Aggregate may be used instead of sand for situations where sandbags are not adjacent to traffic. The aggregate size must not exceed 3/8 in.

2.5. Temporary Sediment Control Fence. Provide a net-reinforced fence using woven geo-textile fabric. Logos visible to the traveling public will not be allowed.

2.5.1. **Fabric**. Provide fabric materials in accordance with DMS-6230, "Temporary Sediment Control Fence Fabric."

2.5.2. **Posts**. Provide essentially straight wood or steel posts with a minimum length of 48 in., unless otherwise shown on the plans. Furnish soft wood posts at least 3 in. in diameter, or use nominal 2 × 4 in. boards. Furnish hardwood posts with a minimum cross-section of 1-1/2 × 1-1/2 in. Furnish T- or L-shaped steel postswith a minimum weight of 1.25 lb. per foot.

2.5.3. **Net Reinforcement**. Provide net reinforcement of at least 12.5 gauge (SWG) galvanized welded wire mesh, with a maximum opening size of 2 × 4 in., at least 24 in. wide, unless otherwise shown on the plans.

2.5.4. **Staples**. Provide staples with a crown at least 3/4 in. wide and legs 1/2 in. long.

2.5.5. **Used Materials**. Use recycled material meeting the applicable requirements if approved.

2.6. Biodegradable Erosion Control Logs.

2.6.1. **Core Material**. Furnish core material that is biodegradable or recyclable. Use compost, mulch, aspen excelsior wood fibers, chipped site vegetation, agricultural rice or wheat straw, coconut fiber, 100% recyclable fibers, or any other acceptable material unless specifically called out on the plans. Permit no more than 5% of the material to escape from the containment mesh. Furnish compost meeting the requirements ofItem 161, "Compost."

2.6.2. **Containment Mesh**. Furnish containment mesh that is 100% biodegradable, photodegradable, or recyclable such as burlap, twine, UV photodegradable plastic, polyester, or any other acceptable material.

Furnish biodegradable or photodegradable containment mesh when log will remain in place as part of a vegetative system.

Furnish recyclable containment mesh for temporary installations.

2.6.3. **Size**. Furnish biodegradable erosion control logs with diameters shown on the plans or as directed. Stuff containment mesh densely so logs do not deform.

3. QUALIFICATIONS, TRAINING, AND EMPLOYEE REQUIREMENTS

3.1. Contractor Responsible Person Environmental (CRPE) Qualifications and Responsibilities. Provide and designate in writing at the preconstruction conference a CRPE and alternate CRPE who have overall responsibility for the storm water management program. The CRPE will implement storm water and erosion control practices; will oversee and observe storm water control measure monitoring and management; will monitor the project site daily and produce daily monitoring reports as long as there are BMPs in place or soil disturbing activities are evident to ensure compliance with the SWP3 and TPDES General Permit TXR150000. During time suspensions when work is not occurring or on contract non-work days, daily inspections are not required unless a rain event has occurred. The CRPE will provide recommendations on how to improve the effectiveness of control measures. Attend the Department's preconstruction conference for the project. Ensure training is completed as identified in Section 506.3.3., "Training," by all applicable personnel before employees work on the project. Document and submit a list, signed by the CRPE, of all applicable Contractor and subcontractor employees who have completed the training. Include the employee's name, the training course name, and date the employee completed the training. Provide the most current list at the preconstruction conference or before SWP3 or soil disturbing activities. Update the list as needed and provide the updated list when updated.

3.2. Contractor Superintendent Qualifications and Responsibilities. Provide a superintendent that is competent, has experience with and knowledge of storm water management, and is knowledgeable of the requirements and the conditions of the TPDES General Permit TXR150000. The superintendent will manage and oversee the day to day operations and activities at the project site; work with the CRPE to provide effective storm water management at the project site; represent and act on behalf of the Contractor; and attend the Department's preconstruction conference for the project.

3.3. Training. All Contractor and subcontractor employees involved in soil disturbing activities, small or large structures, storm water control measures, and seeding activities must complete training as prescribed by theDepartment.

4. CONSTRUCTION

4.1. Contractor Responsibilities. Implement the SWP3 for the project site in accordance with the plans and specifications, TPDES General Permit TXR150000, and as directed. Coordinate storm water management with all other work on the project. Develop and implement an SWP3 for project-specific material supply plants within and outside of the Department's right of way in accordance with the specific or general storm water permit requirements. Prevent water pollution from storm water associated with construction activity from entering any surface water or private property on or adjacent to the project site.

4.2. Implementation. The CRPE, or alternate CRPE, must be accessible by phone and able to respond to project-related storm water management or other environmental emergencies 24 hr. per day.

4.2.1. **Commencement**. Implement the SWP3 as shown and as directed. Contractor-proposed recommendations for changes will be allowed as approved. Conform to the established guidelines in the TPDES General Permit TXR150000 to make changes. Do not implement changes until approval has been received and changes have been incorporated into the plans. Minor adjustments to meet field conditions are allowed and will be recorded in the SWP3.

4.2.2. **Phasing**. Implement control measures before the commencement of activities that result in soil disturbance. Phase and minimize the soil disturbance to the areas shown on the plans. Coordinate temporary control measures with permanent control measures and all other work activities on the project to assure economical, effective, safe, and continuous water pollution prevention. Provide control measures that are appropriate to the construction means, methods, and sequencing allowed by the Contract. Exercise precaution throughout the life of the project to prevent pollution of ground waters and surface waters. Schedule and perform clearing and grubbing operations so that stabilization measures will follow immediately thereafter if project conditions permit. Bring all grading sections to final grade as soon as possible and implement temporary and permanent control measures at the earliest time possible. Implement temporary control measures when required by the TPDES General Permit TXR150000 or otherwise necessitated by project conditions.

Do not prolong final grading and shaping. Preserve vegetation where possible throughout the project, and minimize clearing, grubbing, and excavation within stream banks, bed, and approach sections.

4.3. General.

4.3.1. **Temporary Alterations or Control Measure Removal**. Altering or removal of control measures is allowed when control measures are restored within the same working day.

4.3.2. **Stabilization**. Initiate stabilization for disturbed areas no more than 14 days after the construction activities in that portion of the site have temporarily or permanently ceased. Establish a uniform vegetative cover or use another stabilization practice in accordance with the TPDES General Permit TXR150000.

4.3.3. **Finished Work**. Remove and dispose of all temporary control measures upon acceptance of vegetative cover or other stabilization practice unless otherwise directed. Complete soil disturbing activities and establish a uniform perennial vegetative cover. A project will not be considered for acceptance until a vegetative cover of 70% density of existing adjacent undisturbed areas is obtained or equivalent permanent stabilization is obtained in accordance with the TPDES General Permit TXR150000. An exception will be allowed in arid areas as defined in the TPDES General Permit TXR150000.

4.3.4. **Restricted Activities and Required Precautions**. Do not discharge onto the ground or surface waters any pollutants such as chemicals, raw sewage, fuels, lubricants, coolants, hydraulic fluids, bitumens, or any other petroleum product. Operate and maintain equipment on-site to prevent actual or potential water pollution. Manage, control, and dispose of litter on-site such that no adverse impacts to water quality occur. Prevent dust from creating a potential or actual unsafe condition, public nuisance, or condition endangering the value, utility, or appearance of any property. Wash out concrete trucks only as described in the TPDES General Permit TXR150000. Use appropriate controls to minimize the offsite transport of suspended sediments and other pollutants if it is necessary to pump or channel standing water (i.e., dewatering). Prevent discharges that would contribute to a violation of Edwards Aquifer Rules, water quality standards, the impairment of a listed water body, or other state or federal law.

4.4. Installation, Maintenance, and Removal Work. Perform work in accordance with the SWP3, according to manufacturers' guidelines, and in accordance with the TPDES General Permit TXR150000. Install and maintain the integrity of temporary erosion and sedimentation control devices to accumulate silt and debris until soil disturbing activities are completed and permanent erosion control features are in place or the disturbed area has been adequately stabilized as approved.

The Department will inspect and document the condition of the control measures at the frequency shown on the plans and will provide the Construction SWP3 Field Inspection and Maintenance Reports to the Contractor. Make corrections as soon as possible before the next anticipated rain event or within 7 calendar days after being able to enter the worksite for each control measure. The only acceptable reason for not accomplishing the corrections with the time frame specified is when site conditions are "Too Wet to Work." Take immediate action if a correction is deemed critical as directed. When corrections are not made within the established time frame, all work will cease on the project and time charges will continue while the control measures are brought into compliance. Commence work once the Engineer reviews and documents the project is in compliance. Commencing work does not release the Contractor of the liability for noncompliance of the SWP3, plans, or TPDES General Permit TXR150000.

The Engineer may limit the disturbed area if the Contractor cannot control soil erosion and sedimentation resulting from the Contractor's operations. Implement additional controls as directed.

Remove devices upon approval or as directed. Finish-grade and dress the area upon removal. Stabilize disturbed areas in accordance with the permit, and as shown on the plans or directed. Materials removed are considered consumed by the project. Retain ownership of stockpiled material and remove it from the project when new installations or replacements are no longer required.

4.4.1.1. **Type 4 (Sack Gabions)**. Unfold sack gabions and smooth out kinks and bends. Connect the sides by lacing in a single loop–double loop pattern on 4- to 5-in. spacing for vertical filling. Pull the end lacing rod at one end until tight, wrap around the end, and twist 4 times. Fill with stone at the filling end, pull the rod tight, cut the wire with approximately 6 in. remaining, and twist wires 4 times.

4.4.2. **Construction Exits**. Prevent traffic from crossing or exiting the construction site or moving directly onto a public roadway, alley, sidewalk, parking area, or other right of way areas other than at the location of construction exits when tracking conditions exist. Construct exits for either long- or short-term use.

4.4.2.1. **Long-Term**. Place the exit over a foundation course as required. Grade the foundation course or compacted subgrade to direct runoff from the construction exits to a sediment trap as shown on the plans or as directed. Construct exits with a width of at least 14 ft. for one-way and 20 ft. for two-way traffic for the full width of the exit, or as directed.

4.4.4.1.1. **Type 1**. Construct to a depth of at least 8 in. using crushed aggregate as shown on the plans or as directed.

4.4.2.2. **Short-Term**.

4.4.4.2.1. **Type 3**. Construct using crushed aggregate, plywood, or wafer board. This type of exit may be used for daily operations where long-term exits are not practical.

4.4.4.2.2. **Type** 4. Construct as shown on the plans or as directed.

4.4.3. **Earthwork for Erosion Control**. Perform excavation and embankment operations to minimize erosion and to remove collected sediments from other erosion control devices.

4.4.3.1. **Excavation and Embankment for Erosion Control Features**. Place earth dikes, swales, or combinations of both along the low crown of daily lift placement, or as directed, to prevent runoff spillover. Place swales and dikes at other locations as shown on the plans or as directed to prevent runoff spillover or to divert runoff. Construct cuts with the low end blocked with undisturbed earth to prevent erosion of hillsides. Construct sediment traps at drainage structures in conjunction with other erosion control measures as shown on the plans or as directed.

Create a sediment basin, where required, providing 3,600 cu. ft. of storage per acre drained, or equivalent control measures for drainage locations that serve an area with 10 or more disturbed acres at one time, not including offsite areas.

4.4.3.2. **Excavation of Sediment and Debris**. Remove sediment and debris when accumulation affects the performance of the devices, after a rain, and when directed.
4.4.3.3.

4.4.4. **Construction Perimeter Fence**. Construct, align, and locate fencing as shown on the plans or as directed.

4.4.4.1. **Installation of Posts**. Embed posts 18 in. deep or adequately anchor in rock, with a spacing of 8 to 10 ft.

4.4.4.2. **Wire Attachment**. Attach the top wire to the posts at least 3 ft. from the ground. Attach the lower wire midway between the ground and the top wire.

4.4.4.3. **Flag Attachment**. Attach flagging to both wire strands midway between each post. Use flagging at least 18 in. long. Tie flagging to the wire using a square knot.

4.4.5. **Sandbags for Erosion Control**. Construct a berm or dam of sandbags that will intercept sediment-laden storm water runoff from disturbed areas, create a retention pond, detain sediment, and release water in sheet flow. Fill each bag with sand so that at least the top 6 in. of the bag is unfilled to allow for proper tying of the open end. Place the sandbags with their tied ends in the same direction. Offset subsequent rows of sandbags 1/2 the length of the preceding row. Place a single layer of sandbags downstream as a secondary debris trap. Place additional sandbags as necessary or as directed for supplementary support to berms or dams of sandbags or earth.

4.4.6. **Temporary Sediment-Control Fence**. Provide temporary sediment-control fence near the downstream perimeter of a disturbed area to intercept sediment from sheet flow. Incorporate the fence into erosion-control measures used to control sediment in areas of higher flow. Install the fence as shown on the plans, as specified in this Section, or as directed.

4.4.6.1. **Installation of Posts**. Embed posts at least 18 in. deep, or adequately anchor, if in rock, with a spacing of 6 to 8 ft. and install on a slight angle toward the runoff source.

4.4.6.2. **Fabric Anchoring**. Dig trenches along the uphill side of the fence to anchor 6 to 8 in. of fabric. Provide a minimum trench cross-section of 6 × 6 in. Place the fabric against the side of the trench and align approximately 2 in. of fabric along the bottom in the upstream direction. Backfill the trench, then hand-tamp.

4.4.6.3. **Fabric and Net Reinforcement Attachment**. Attach the reinforcement to wooden posts with staples, or to steel posts with T-clips, in at least 4 places equally spaced unless otherwise shown on the plans. Sewn vertical pockets may be used to attach reinforcement to end posts. Fasten the fabric to the top strand of reinforcement by hog rings or cord every 15 in. or less.

4.4.6.4. **Fabric and Net Splices**. Locate splices at a fence post with a minimum lap of 6 in. attached in at least 6 places equally spaced unless otherwise shown on the plans. Do not locate splices in concentrated flow areas.

Requirements for installation of used temporary sediment-control fence include the following:

- fabric with minimal or no visible signs of biodegradation (weak fibers),
- fabric without excessive patching (more than 1 patch every 15 to 20 ft.),
- posts without bends, and
- backing without holes.

4.4.7. **Biodegradable Erosion Control Logs**. Install biodegradable erosion control logs near the downstream perimeter of a disturbed area to intercept sediment from sheet flow. Incorporate the biodegradable erosion control logs into the erosion measures used to control sediment in areas of higher flow. Install, align, and locate the biodegradable erosion control logs as specified below, as shown on the plans, or as directed.

Secure biodegradable erosion control logs in a method adequate to prevent displacement as a result of normal rain events, prevent damage to the logs, and as approved, such that flow is not allowed under the logs. Temporarily removing and replacing biodegradable erosion logs as to facilitate daily work is allowed at the Contractor's expense.

4.4.8. **Vertical Tracking**. Perform vertical tracking on slopes to temporarily stabilize soil. Provide equipment with a track undercarriage capable of producing a linear soil impression measuring a minimum of 12 in. long × 2 to 4 in. wide × 1/2 to 2 in. deep. Do not exceed 12 in. between track impressions. Install continuous linear track impressions where the 12 in. length impressions are perpendicular to the slope. Vertical tracking is required on projects where soil disturbing activities have occurred unless otherwise approved.

4.5. Monitoring and Documentation. Monitor the control measures on a daily basis as long as there are BMPs in place and/or soil disturbing activities are evident to ensure compliance with the SWP3 and TPDES General Permit TXR150000. During time suspensions when work is not occurring or contract non-work days, daily inspections are not required unless a rain event has occurred. Monitoring will consist of, but is not limited to, observing, inspecting, and documenting site locations with control measures and discharge points to provide maintenance and inspection of controls as described in the SWP3. Keep written records of daily monitoring. Document in the daily monitoring report the control measure condition, the date of inspection, required corrective actions, responsible person for making the corrections, and the date corrective actions were completed. Maintain records of all monitoring reports at the project site or at an approved place. Provide copies within 7 days. Together, the CRPE and an Engineer's representative will complete the Construction Stage Gate Checklist on a periodic basis as directed.

5. MEASUREMENT

5.2. Earthwork for Erosion and Sediment Control.

5.2.1. **Equipment and Labor Measurement**. Equipment and labor used will be measured by the actual number of hours the equipment is operated and the labor is engaged in the work.

5.2.2. **Volume Measurement.**

5.2.2.1. **In Place.**

5.2.2.1.1. **Excavation**. Excavation will be measured by the cubic yard in its original position and the volume computed by the method of average end areas.

5.2.2.1.2. **Embankment.** Embankment will be measured by the cubic yard in its final position by the method of average end areas. The volume of embankment will be determined between:

- the original ground surfaces or the surface upon that the embankment is to be constructed for the feature and
- the lines, grades and slopes of the accepted embankment for the feature.

5.3. Construction Perimeter Fence. Construction perimeter fence will be measured by the foot.

5.4. Sandbags for Erosion Control. Sandbags will be measured as each sandbag or by the foot along the top of sandbag berms or dams.

5.5. Temporary Sediment-Control Fence. Installation or removal of temporary sediment-control fence will be measured by the foot.

5.6. Biodegradable Erosion Control Logs. Installation or removal of biodegradable erosion control logs will be measured by the foot along the centerline of the top of the control logs.

5.7. Vertical Tracking. Vertical tracking will not be measured or paid for directly but is considered subsidiary to this Item.

6. PAYMENT

The following will not be paid for directly but are subsidiary to pertinent Items:

- erosion-control measures for Contractor project-specific locations (PSLs) inside and outside the right of way (such as construction and haul roads, field offices, equipment and supply areas, plants, and material sources);
- removal of litter, unless a separate pay item is shown on the plans;
- repair to devices and features damaged by Contractor operations;
- added measures and maintenance needed due to negligence, carelessness, lack of maintenance, and failure to install permanent controls;
- removal and reinstallation of devices and features needed for the convenience of the Contractor;
- finish grading and dressing upon removal of the device; and
- minor adjustments including but not limited to plumbing posts, reattaching fabric, minor grading to maintain slopes on an erosion embankment feature, or moving small numbers of sandbags.

Stabilization of disturbed areas will be paid for under pertinent Items except vertical tacking which is subsidiary.

Furnishing and installing pipe for outfalls associated with sediment traps and ponds will not be paid for directly but is subsidiary to the excavation and embankment under this Item.

6.1. Construction Exits. Contractor-required construction exits from off right of way locations or on-right of way PSLs will not be paid for directly but are subsidiary to pertinent Items.

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" for construction exits needed on right of way access to work areas required by the Department will be paid for at the unit price bid for "Construction Exits (Install)" of the type specified or "Construction Exits (Remove)." This price is full compensation for furnishing and placing materials, excavating, removal and disposal, cleaning vehicles, labor, tools, and incidentals.

When the Engineer directs that a construction exit or portion thereof be removed and replaced, payment will be made at the unit prices bid for "Construction Exit (Remove)" and "Construction Exit (Install)" of the type specified. These prices are full compensation for the removal and replacement of the construction exit and for equipment, labor, tools, and incidentals.

Construction of sediment traps used in conjunction with the construction exit will be measured and paid for under "Earthwork for Erosion and Sediment Control."

6.2. Earthwork for Erosion and Sediment Control.

6.2.1. **Initial Earthwork for Erosion and Sediment Control**. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Excavation (Erosion and Sediment Control, In Place)," "Embankment (Erosion and Sediment Control, In Place)," "Excavation (Erosion and Sediment Control, In Vehicle)," "Embankment (Erosion and Sediment Control, (In Vehicle)," or "Earthwork (Erosion and Sediment Control, In Vehicle)."

This price is full compensation for excavation and embankment including hauling, disposal of material not used elsewhere on the project; embankments including furnishing material from approved sources and construction of erosion-control features; and equipment, labor, tools, and incidentals.

Sprinkling and rolling required by this Item will not be paid for directly but will be subsidiary to this Item.

6.3. Construction Perimeter Fence. The work performed and materials furnished in accordance with this Itemand measured as provided under "Measurement" will be paid for at the unit price bid for "Construction Perimeter Fence." This price is full compensation for furnishing and placing the fence; digging, fence posts, wire, and flagging; removal and disposal; and materials, equipment, labor, tools, and incidentals.

Removal of construction perimeter fence will be not be paid for directly but is subsidiary to the installation Item. When the Engineer directs that the perimeter fence installation or portions thereof be removed and replaced, payment will be made at the unit price bid for "Construction Perimeter Fence," which is full compensation for the removal and reinstallation of the construction perimeter fence.

6.4. Sandbags for Erosion Control. Sandbags will be paid for at the unit price bid for "Sandbags for Erosion Control" (of the height specified when measurement is by the foot). This price is full compensation for materials, placing sandbags, removal and disposal, equipment, labor, tools, and incidentals.

Removal of sandbags will not be paid for directly but is subsidiary to the installation Item. When the Engineer directs that the sandbag installation or portions thereof be replaced, payment will be made at the unit price bid for "Sandbags for Erosion Control," which is full compensation for the reinstallation of the sandbags.

6.5. Temporary Sediment-Control Fence. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid as follows:

6.5.1. **Installation**. Installation will be paid for as "Temporary Sediment-Control Fence (Install)." This price is full compensation for furnishing and operating equipment finish backfill and grading, lacing, proper disposal, labor, materials, tools, and incidentals.

6.5.2. **Removal**. Removal will be paid for as "Temporary Sediment-Control Fence (Remove)." This price is full compensation for furnishing and operating equipment, proper disposal, labor, materials, tools, and incidentals.

6.6. Biodegradable Erosion Control Logs. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid as follows:

6.6.1. **Installation**. Installation will be paid for as "Biodegradable Erosion Control Logs (Install)" of the size specified. This price is full compensation for furnishing and operating equipment finish backfill and grading, staking, proper disposal, labor, materials, tools, and incidentals.

6.6.2. **Removal**. Removal will be paid for as "Biodegradable Erosion Control Logs (Remove)." This price is full compensation for furnishing and operating equipment, proper disposal, labor, materials, tools, and incidentals.

6.7. Vertical Tracking. Vertical tracking will not be measured or paid for directly but is considered subsidiary to this Item.

ITEM 529
CONCRETE CURB, GUTTER,COMBINED CURB AND GUTTER

DESCRIPTION

Construct hydraulic cement concrete curb, gutter, and combined curb and gutter.

MATERIALS

Furnish materials conforming to:

- Item 360, "Concrete Pavement"
- Item 420, "Concrete Substructures"
- Item 421, "Hydraulic Cement Concrete"
- Item 440, "Reinforcement for Concrete"

Use Class A concrete or material specified on the plans. Use Grade 8 coarse aggregate for extruded Class Aconcrete. Use other grades if approved.

When approved, use fibers meeting the requirements of DMS-4550, "Fibers for Concrete," to replace reinforcing steel in Class A concrete. Dose fibers in accordance with the Department's MPL of pre-qualified fibers for concrete.

CONSTRUCTION

Provide finished work with a well-compacted mass and a surface free from voids and honeycomb, in the required shape, line, and grade. Round exposed edges with an edging tool of the radius shown on the plans. Mix, place, and cure concrete in accordance with Item 420, "Concrete Substructures." Construct joints at locations shown on the plans. Cure for at least 72 hr.

Furnish and place reinforcing steel in accordance with Item 440, "Reinforcement for Concrete."

Set and maintain a guideline that conforms to alignment data shown on the plans, with an outline that conforms to the details shown on the plans. Ensure that changes in curb grade and alignment do not exceed 1/4 in. between any 2 contacts on a 10-ft. straightedge.

3.1 Conventionally Formed Concrete. Shape and compact subgrade, foundation, or pavement surface to the line, grade, and cross-section shown on the plans. Lightly sprinkle subgrade or foundation material immediately before concrete placement.

Pour concrete into forms and strike off with a template 1/4 to 3/8 in. less than the dimensions of the finished curb unless otherwise approved. After initial set, plaster surface with mortar consisting of 1-part hydraulic cement and 2 parts fine aggregate. Brush exposed surfaces to a uniform

EXHIBIT A: PLANS

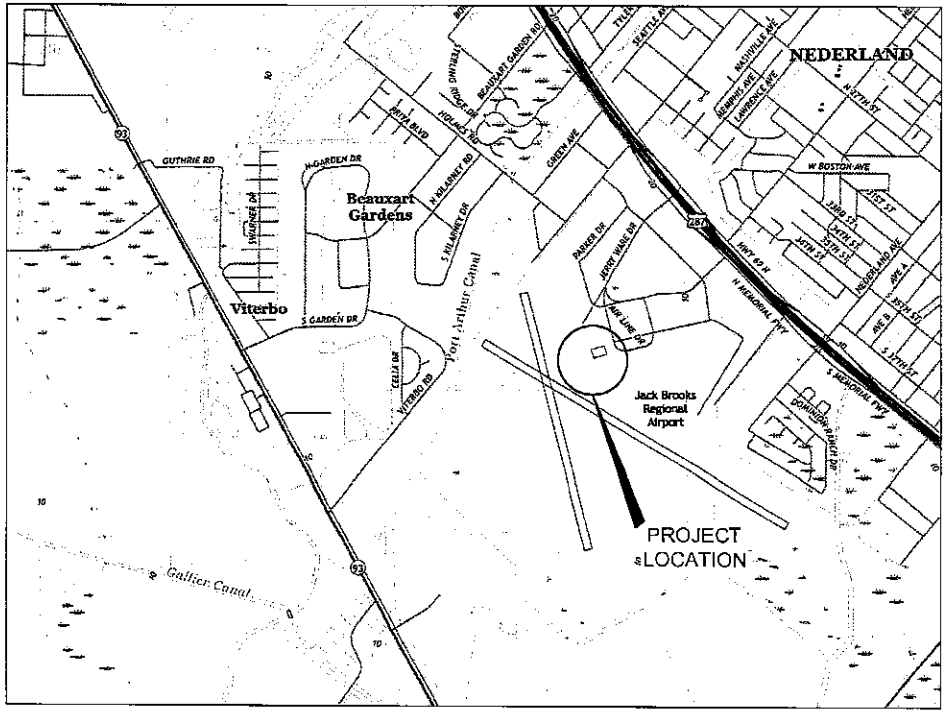
IFB 22-028/JW
EXHIBIT A: PAGE A-2

REHABILITATION OF FUEL FARM PAVEMENT
JACK BROOKS REGIONAL AIRPORT (BPT)

ISSUED FOR BIDDING

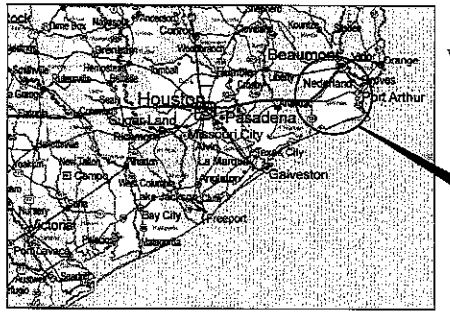
PROJECT CONSISTS OF RECONSTRUCTION OF EXISTING CONCRETE PAVEMENT AT THE JACK BROOKS REGIONAL AIRPORT FUEL FARM

FAA AIRPORT IMPROVEMENT PROGRAM (AIP) PN: AIP 3-480018-37-20
JEFFERSON COUNTY PN: ISB 22-028/JW
THE SOLCO GROUP PN: 2021-10-1092
MAY 2022



VICINITY MAP
N.T.S

SHEET INDEX		
SHEET NO.	DWG NO.	SHEET TITLE
1	G-000	COVER PAGE
2	G-001	GENERAL NOTES AND SUMMARY OF QUANTITIES
3	C-001	PROJECT LAYOUT AND PHASING PLAN
4	C-002	SURVEY PLAN
5	C-003	SITE DEMOLITION PLAN
6	C-004	GRADING, PLAN AND PROFILE
7	C-005	SITE PAVING, JOINTING AND SPOT ELEVATIONS
8	C-006	PAVEMENT DETAILS
9	C-007	PAVEMENT DETAILS
10	EC(9)-16	TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES EROSION CONTROL LOG
11	BC(8)-21	BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES



LOCATION MAP
N.T.S

JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #22626

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
COVER PAGE

DRAWING NUMBER:
G-000

SHEET NUMBER: 1 SHEET TOTAL: 11

SCALE: N.T.S

DRAWN BY: AM CHECKED BY: KS

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CONSTRUCTION ACTIVITIES

1. THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS. THE PROJECT IS SUBJECT TO INSPECTION BY REPRESENTATIVES OF JACK BROOKS REGIONAL AIRPORT, THE ENGINEER, JEFFERSON COUNTY AND THE FEDERAL AVIATION ADMINISTRATION (FAA).

2. CONTRACTOR AND CONSTRUCTION ACTIVITIES SHALL COMPLY WITH ALL PLANS, SPECIFICATIONS AND FAA ADVISORY CIRCULARS.

3. THE CONTRACTOR SHALL SUBMIT A DETAILED CONSTRUCTION PROGRESS SCHEDULE TO THE AIRPORT, ENGINEER AND RESIDENT PROJECT REPRESENTATIVE (RPR) EACH WEEK.

4. ALL MATERIAL SUBMITTALS FOR ITEMS TO BE USED IN CONSTRUCTION OF THE PROJECT SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL 14 DAYS PRIOR TO COMMENCEMENT OF THE ASSOCIATED WORK.

5. THE PROJECT PAY ITEMS ARE PROVIDED TO BE INCLUSIVE OF ALL WORK TO BE PERFORMED AS SHOWN IN THESE PLANS. ALL WORK NOT IDENTIFIED WITH A SPECIFIC PAY ITEM IS TO BE CONSIDERED REQUIRED/INCIDENTAL WORK TO COMPLETE THE PROJECT AND IS TO BE INCLUDED IN THE COST OF THE PROJECT PAY ITEMS PROVIDED.

6. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING SAFETY FOR CONSTRUCTION PERSONNEL AND EQUIPMENT AT ALL TIMES.

7. CONTRACTOR SHALL REPAIR OR REPLACE ALL ITEMS NOT DESIGNATED FOR DEMOLITION OR REMOVAL THAT ARE DAMAGED BY CONSTRUCTION EFFORTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMMEDIATE REPAIR OF ANY DAMAGE TO AIRPORT FACILITIES, INCLUDING BUT NOT LIMITED TO EXISTING PAVEMENTS, UNDERGROUND CABLES, LIGHTS, SIGNS, FENCES, EQUIPMENT, ETC. CAUSED DURING CONSTRUCTION. ALL REPAIRS MUST BE MADE IN COORDINATION WITH THE OWNER AND TO EQUAL OR BETTER QUALITY AND IN COMPLIANCE WITH THE AIRPORT. ALL REPAIR AND REPLACEMENT COST SHALL BE AT THE EXPENSE OF THE CONTRACTOR.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EFFORT AND COST OF IMMEDIATE CLEANING OF EARTH TRACKING AND SPILLS RESULTING FROM THE CONTRACTOR'S OPERATIONS.

9. CONSTRUCTION AREA LIMITS: THE LIMITS OF CONSTRUCTION MATERIAL STORAGE AREAS, PLAN SITE, EQUIPMENT STORAGE AREA, PARKING AREA AND OTHER AREAS DEFINED AS REQUIRED FOR THE CONTRACTOR'S EXCLUSIVE USE DURING CONSTRUCTION SHALL BE MARKED BY THE CONTRACTOR.

10. THE CONTRACTOR SHALL BE RESPONSIBLE OF COMPLYING WITH ALL FEDERAL, STATE, AND LOCAL LAWS AND SHALL OBTAIN ALL NECESSARY PERMITS REQUIRED FOR CONSTRUCTION.

ENVIRONMENTAL

1. IN THE EVENT THAT UNANTICIPATED CONTAMINATION IS ENCOUNTERED DURING CONSTRUCTION, WORK IN THE IMMEDIATE AREA WILL CEASE. CONTRACTOR SHALL NOTIFY THE RPR AND ENGINEER TO CONTACT THE RELEVANT ENVIRONMENTAL AUTHORITY.

2. ALL WASTE MATERIAL SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH ALL THE LOCAL, STATE AND FEDERAL REGULATIONS.

EXISTING TOPOGRAPHY

1. EXISTING TOPOGRAPHY SHOWN ON THE PLANS ARE BASED ON THE SURVEYED TERRAIN FOR THE CONSTRUCTION LIMITS OF THE PROJECT. THE CONTRACTOR SHALL FIELD VERIFY THAT THE EXISTING TOPOGRAPHY SHOWN IS REASONABLY ACCURATE. IF THE ACCURACY IS IN QUESTION THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST TWO WEEKS PRIOR TO THE START OF CONSTRUCTION AND A COURSE OF ACTION WILL BE DETERMINED AT THAT TIME.

EXISTING CONDITIONS /UNDERGROUND AND CONCEALED

1. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO BEGINNING CONSTRUCTION AND REPORT TO THE ENGINEER ANY VARIATIONS FROM THE INFORMATION SHOWN ON CONSTRUCTION PLANS.

2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND IDENTIFICATION OF ALL EXISTING UTILITIES AND PIPELINES IN THE CONSTRUCTION AREA. ANY DAMAGE TO EXISTING UTILITIES OR PIPELINES (ON OR OFF AIRPORT PROPERTY) DAMAGED BY CONTRACTOR SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL REPAIR ALL UTILITY/PIPELINE DAMAGED BY CONTRACTOR AT NO ADDITIONAL COST TO OWNER.

3. ANY UNPLANNED, UNAPPROVED OR ACCIDENTAL SHUTDOWN OR INTERRUPTION OF SERVICE TO ANY LIGHTING CIRCUIT REQUIRES IMMEDIATE NOTIFICATION OF THE OWNER BY THE CONTRACTOR. ALL NECESSARY REPAIRS WILL BE AT CONTRACTOR'S EXPENSE.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STAKING AND GRADE CONTROL OF ALL ELEMENTS OF THE PROJECT AT NO ADDITIONAL COST TO THE OWNER.

5. CONTRACTOR SHALL VERIFY ALL SURVEY CONTROL, ELEVATIONS, AND EXISTING GRADES PRIOR TO BEGINNING CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER PRIOR TO BEGINNING CONSTRUCTION.

6. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL HORIZONTAL AND VERTICAL CONSTRUCTION STAKING AS REQUIRED FOR THE PROJECT DEVELOPMENT.

7. CONTRACTOR SHALL ESTABLISH ANY ADDITIONAL CONTROL POINTS DEEMED NECESSARY BY CONSTRUCTION PERSONNEL PRIOR TO BEGINNING THE WORK.

SUMMARY OF QUANTITIES

Spec	Pay Item	Description	Units	Bid Quantity	Final Quantity	Remarks
1	C-105	Mobilization	LS	1		
2	SS-120	Construction Safety and Security (CSPP, Barricades, Signs and Traffic Handling)	LS	1		
3	D-701a	Allowance for Storm Sewer Pipe Replacement	LS	1		
4	D-701b	Install PVC Pipe (2 Inch)	LF	8		
5	P-101-5.1a	Sawcut, Remove and Dispose Existing Concrete Pavement Full Depth (8 Inches)	SY	600		
6	P-101-5.1b	Sawcut, Remove and Dispose Existing Asphalt Ramp	SY	70		
7	P-101-5.1c	Sawcut, Remove and Dispose Existing 6" Vertical Curb	LF	310		
8	P-152-4.2	Embankment in Place	CY	20		
9	P-152-4.4	Unsuitable Excavation	CY	20		
10	P-155-8.1	Lime Treated Subgrade (8 Inches)	SY	600		
11	P-155-8.2	Lime	TON	31		
12	P-501-8.1a	Reinforced Concrete Pavement (8 Inches)	SY	530		
13	P-501-8.1b	Reinforced Concrete Pavement Ramp (8-12 Inches)	SY	70		
14	TXDOT 506-6.6.1	Biodegradable Erosion Control Logs (Install)	LF	200		
15	TXDOT 506-6.6.2	Biodegradable Erosion Control Logs (Removal)	LF	200		
16	TXDOT 529	4" Concrete Curb	LF	310		
17	See Plan	Furnish and Install 4' Steel Bollards	EA	2		
18	See Plan	Install 6' Rubber Speed Bumps	EA	4		

HAUL ROUTES, STAGING AREAS AND SITE ACCESS

1. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING STAGING AREA AND HAUL ROUTE AS NECESSARY FOR HIS OPERATIONS. THIS ITEMS SHALL BE SUBSIDIARY TO OTHER ITEMS IN THE CONTRACT.

2. CONTRACTOR SHALL PROVIDE ACCESS ROUTE PLAN FOR APPROVAL BY THE AIRPORT PRIOR TO THE BEGINNING OF CONSTRUCTION. THE ACTUAL SIZE AND LOCATION OF THE STAGING AREA AND HAUL ROUTE WILL BE APPROVED BY THE AIRPORT PRIOR TO CONSTRUCTION.

4. IT SHALL BE THE CONTRACTORS' RESPONSIBILITY TO COORDINATE ALL OFF-AIRPORT ROUTES WITH THE APPROPRIATE AUTHORITIES.

5. HAUL TRUCKS TRANSPORTING LOOSE MATERIAL OFF AIRPORT PROPERTY SHALL USE LOAD COVERS AND SHALL BE LOADED SUCH THAT NO SPILLAGE OCCURS DURING TRANSIT. ALL CONTRACTOR EQUIPMENT MUST BE MAINTAINED IN GOOD WORKING ORDER. CONTRACTOR VEHICLES THAT LEAK OR DRIP OIL AND/OR FLUIDS MUST BE IMMEDIATELY REMOVED FROM THE PROJECT FOR REPAIR AND THE SPILL CLEANED UP IN ACCORDANCE WITH STATE AND FEDERAL REQUIREMENTS.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING HIS/HER OWN COMPLETE UTILITY SERVICES. THE AIRPORT WILL NOT PROVIDE FACILITIES AND SERVICES TO THE CONTRACTOR DURING CONSTRUCTION. THE CONTRACTOR'S PERSONNEL ARE PROHIBITED FROM UTILIZING THE AIRPORT TERMINAL. ASSOCIATED COST WILL BE SUBSIDIARY TO OTHER ITEMS IN THE CONTRACT.

7. THE AREAS UTILIZED AS THE CONTRACTOR'S STAGING AREA, PARKING, LAYDOWN, STORAGE AREA, AND THE HAUL ROUTES ARE TO BE RESTORED TO THE ORIGINAL CONDITION AT THE END OF THE PROJECT. ALL EXISTING ROADS OR PAVEMENTS USED AS ACCESS/HAUL ROADS SHALL BE MAINTAINED AND IMPROVED AS REQUIRED. THE ROAD OR PAVEMENT CONDITIONS WILL BE INSPECTED JOINTLY BY THE ENGINEER AND CONTRACTOR PRIOR TO AND AT THE END OF THE PROJECT. THE CONDITION OF THESE ROADS AND PAVEMENTS SHALL BE EQUAL OR BETTER THAN AT THE START OF THE PROJECT AS DETERMINED BY THE ENGINEER. MECHANICAL BROOMS WILL BE REQUIRED BY THE ENGINEER FOR THESE EXISTING PAVEMENT ACCESS ROADS IF CONDITIONS ARE NOT BEING MAINTAINED (IN THE OPINION OF THE ENGINEER) BY THE CONTRACTOR.

8. CONSTRUCTION EQUIPMENT AND VEHICLES SHALL NOT TRAVEL ON NEWLY CONSTRUCTED PAVEMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF ANY DAMAGE TO THE NEWLY CONSTRUCTED PAVEMENT; ALL REPAIRS SHALL BE AT THE CONTRACTORS OWN EXPENSE.

9. THE FUEL FARM SHALL BE KEPT FREE OF ALL DEBRIS, DIRT, ETC., AT ALL TIMES. ANY SPILLAGE OF SOIL, DEBRIS OR OTHER MATERIALS SHALL BE CLEANED UP IMMEDIATELY USING APPROPRIATE POWER SWEEPERS, BLOWERS OR OTHER APPROVED EQUIPMENT, BY THE CONTRACTOR. DUST GENERATED DUE TO CONSTRUCTION ACTIVITIES SHALL BE ADEQUATELY CONTROLLED AT ALL TIMES. A PROGRAM OF REGULAR FUEL FARM AREA INSPECTION SHALL BE IMPLEMENTED BY THE CONTRACTOR DURING CONSTRUCTION.

10. ALL EQUIPMENT MUST BE RETURNED TO THE STAGING AREA AT THE END OF EACH WORK DAY AND WHEN NOT ENGAGED IN THE CONSTRUCTION DURING NON-WORKING DAYS AND NIGHTS UNLESS APPROVED BY THE OWNER. THE OWNER WILL DESIGNATE AREAS FOR CONTRACTOR'S EMPLOYEES AUTO PARKING.

11. ACCESS TO THE SITE:

    a. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRAFFIC CONTROL TO AND FROM THE VARIOUS CONSTRUCTION AREAS ON THE SITE.

    b. THE CONTRACTOR SHALL NOT PERMIT ANY UNAUTHORIZED CONSTRUCTION PERSONNEL OR TRAFFIC ON THE SITE.

    c. THE CONTRACTOR IS RESPONSIBLE FOR IMMEDIATE CLEAN UP OF ANY DEBRIS DEPOSITED ALONG THE ACCESS ROUTE AS A RESULT OF HIS CONSTRUCTION TRAFFIC.

    d. ANY TRAFFIC CONTROL SIGN AND DEVICES PLACED IN THE COURSE OF THE PROJECT SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), THE APPLICABLE FAA ADVISORY CIRCULAR, OR AS APPROVED IN WRITING FROM SHOP DRAWINGS SUBMITTED TO THE ENGINEER PRIOR TO SIGN PLACEMENT.

    e. THE CONTRACTOR WILL BE LIABLE FOR ANY FINES ISSUED BY THE FAA, DOTD, COUNTY AND AIRPORT OPERATIONS FOR TRAFFIC VIOLATIONS AND SECURITY VIOLATIONS FOR WHICH IT IS CITED.

DUST PROTECTION

1. CONTRACTOR SHALL INSTALL DUST PROTECTION COVERS TO PROTECT THE EXISTING FUEL TANK EQUIPMENT AND CHAIN LINK FENCE. DUST PROTECTION IS INCIDENTAL TO PAY ITEM SS-100

Tayac811

JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #22626

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
GENERAL NOTES AND SUMMARY OF QUANTITIES

DRAWING NUMBER: G-001

SHEET NUMBER: 2 SHEET TOTAL: 11

SCALE: N.T.S

DRAWN BY: AM CHECKED BY: KS

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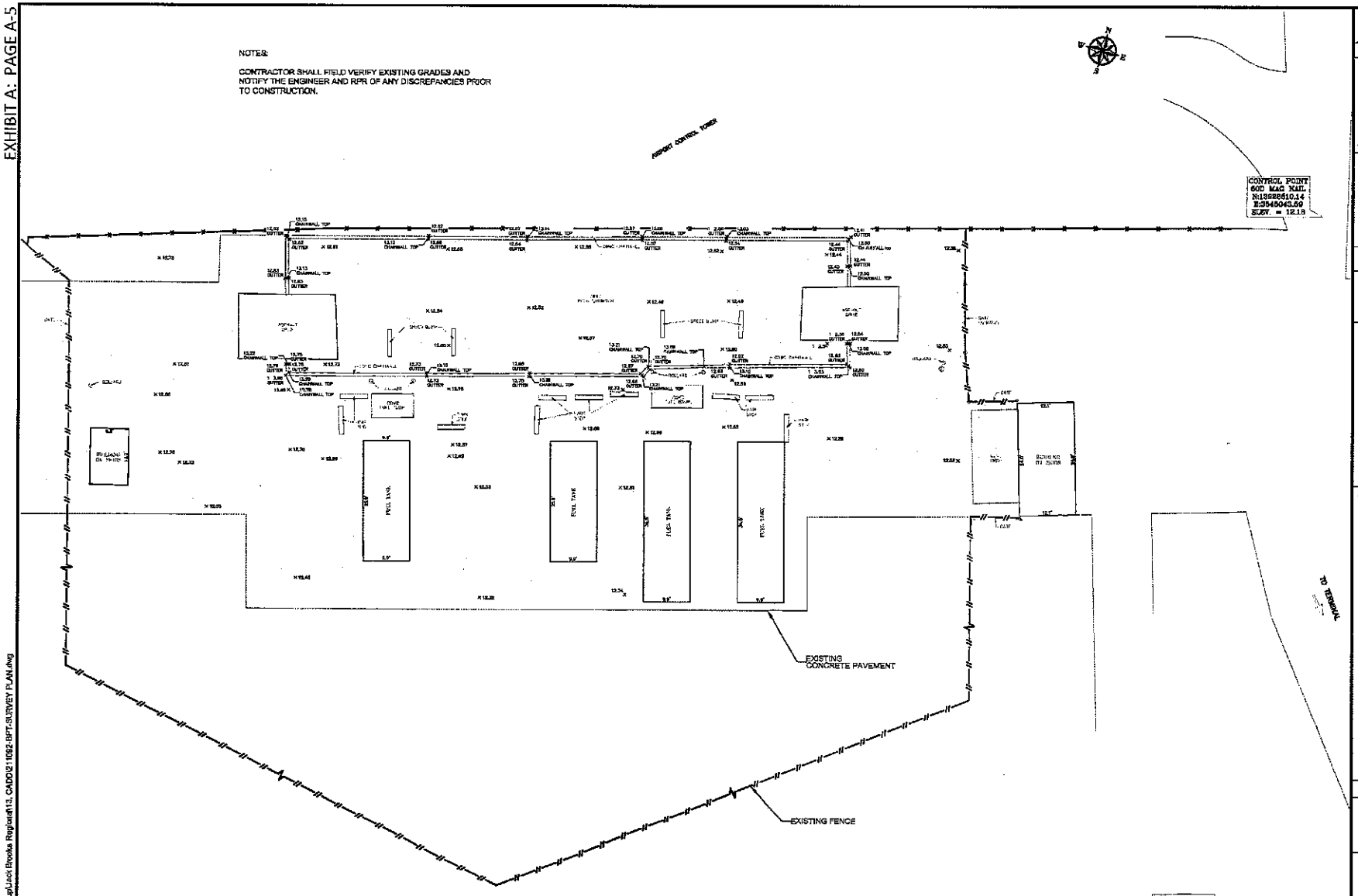
IFB 22-028/JW
EXHIBIT A: PAGE A-5



JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #22626

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
SURVEY PLAN

DRAWING NUMBER:
C-002

SHEET NUMBER: 4 SHEET TOTAL: 11

SCALE: 1" = 10' (FULL) 1"=20' (HALF)

DRAWN BY: AM CHECKED BY: KS

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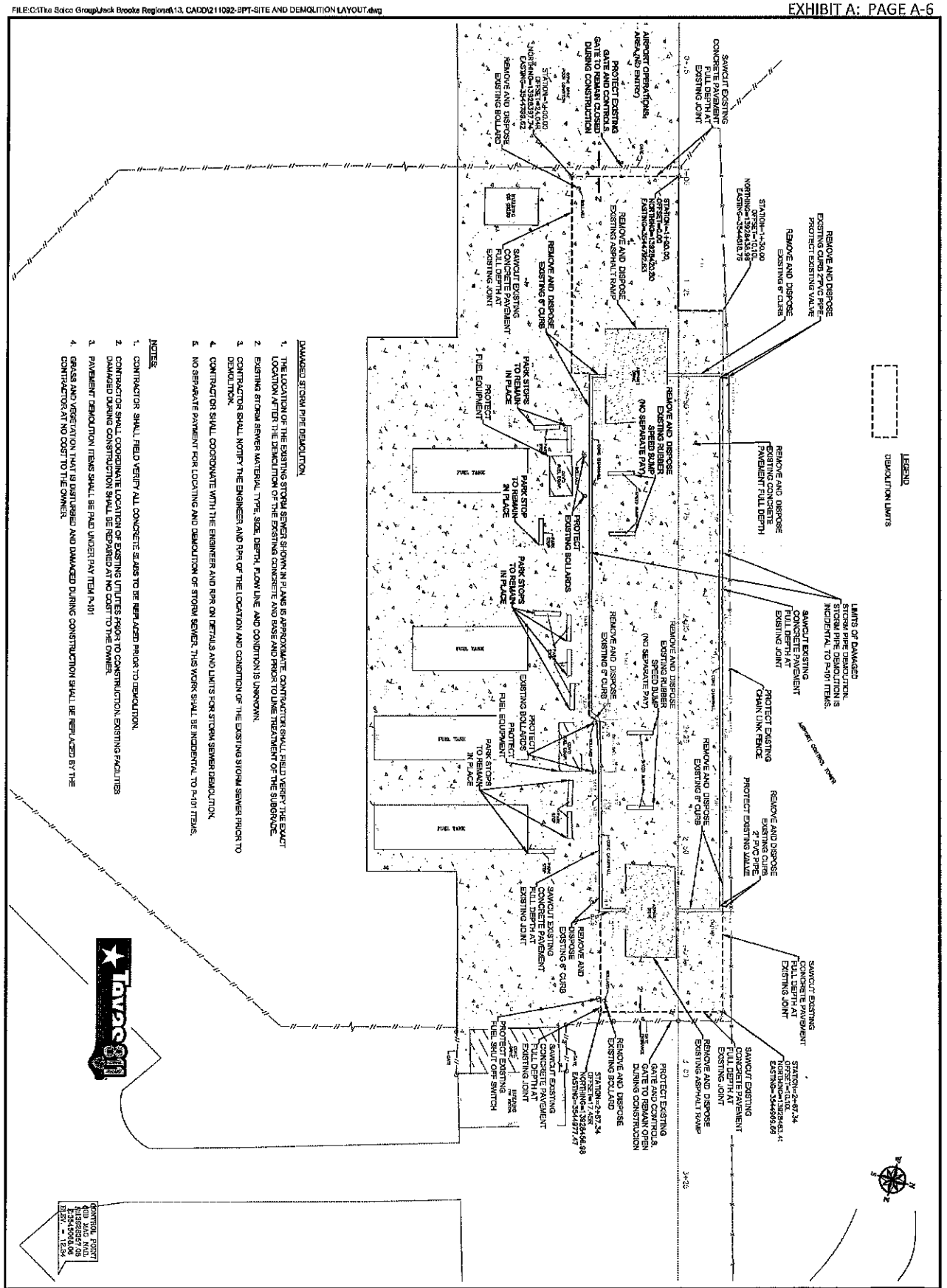
FILE:C:\The Sales Group\Jack Brooks Regional\13, CADD\211092-BPT-SITE AND DEMOLITION LAYOUT.dwg



DAMAGED STORM PIPE DEMOLITION

1. THE LOCATION OF THE EXISTING STORM SEWER SHOWN IN PLANS IS APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATION AFTER THE DEMOLITION OF THE EXISTING CONCRETE AND BASE AND PRIOR TO LIME TREATMENT OF THE SUBGRADE.
2. EXISTING STORM SEWER MATERIAL TYPE, SIZE, DEPTH, FLOW LINE, AND CONDITION IS UNKNOWN.
3. CONTRACTOR SHALL NOTIFY THE ENGINEER AND RPR OF THE LOCATION AND CONDITION OF THE EXISTING STORM SEWER PRIOR TO DEMOLITION.
4. CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND RPR ON DETAILS AND LIMITS FOR STORM SEWER DEMOLITION.
5. NO SEPARATE PAYMENT FOR LOCATING AND DEMOLITION OF STORM SEWER. THIS WORK SHALL BE INCIDENTAL TO P-101 ITEMS.

NOTES:

1. CONTRACTOR SHALL FIELD VERIFY ALL CONCRETE SLABS TO BE REPLACED PRIOR TO DEMOLITION.
2. CONTRACTOR SHALL COORDINATE LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. EXISTING FACILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED AT NO COST TO THE OWNER.
3. PAVEMENT DEMOLITION ITEMS SHALL BE PAID UNDER PAY ITEM P-101
4. GRASS AND VEGETATION THAT IS DISTURBED AND DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER.

GENERAL NOTES:

NO.	DATE	REVISION

JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #22676

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
SITE DEMOLITION PLAN

DRAWING NUMBER: C-203
SHEET NUMBER: 8
SHEET TOTAL: 11
SCALE: 1" = 10' (FULL) 1"=20' (HALF)
DRAWN BY: AM
CHECKED BY: KS

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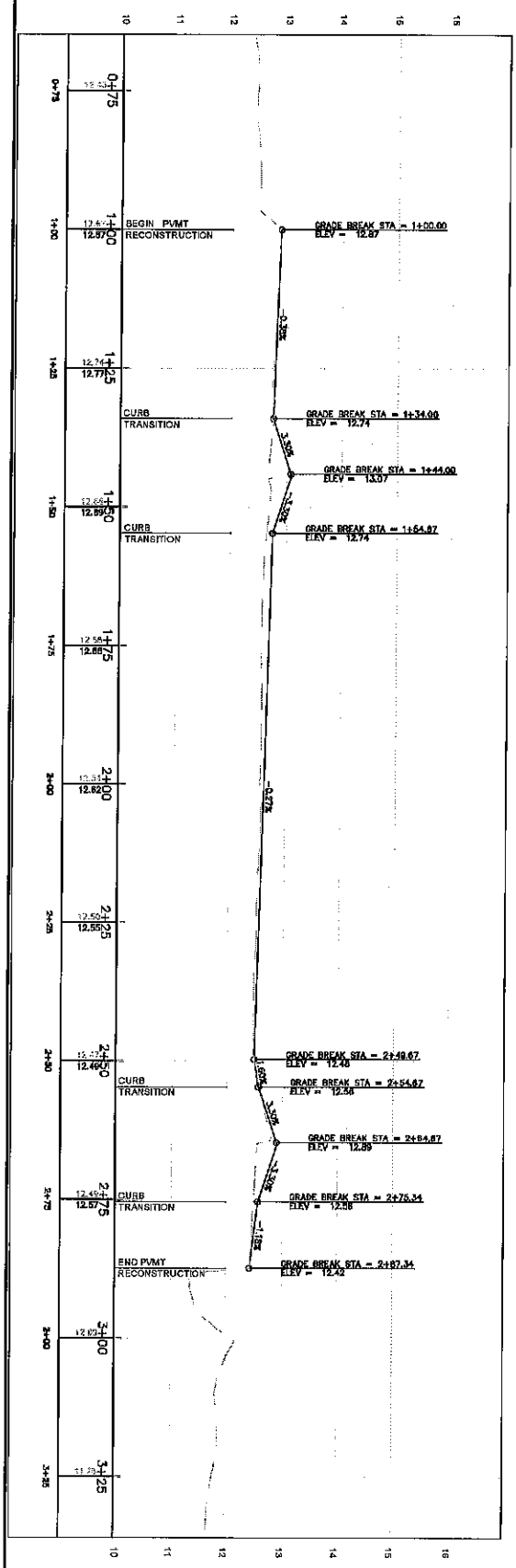

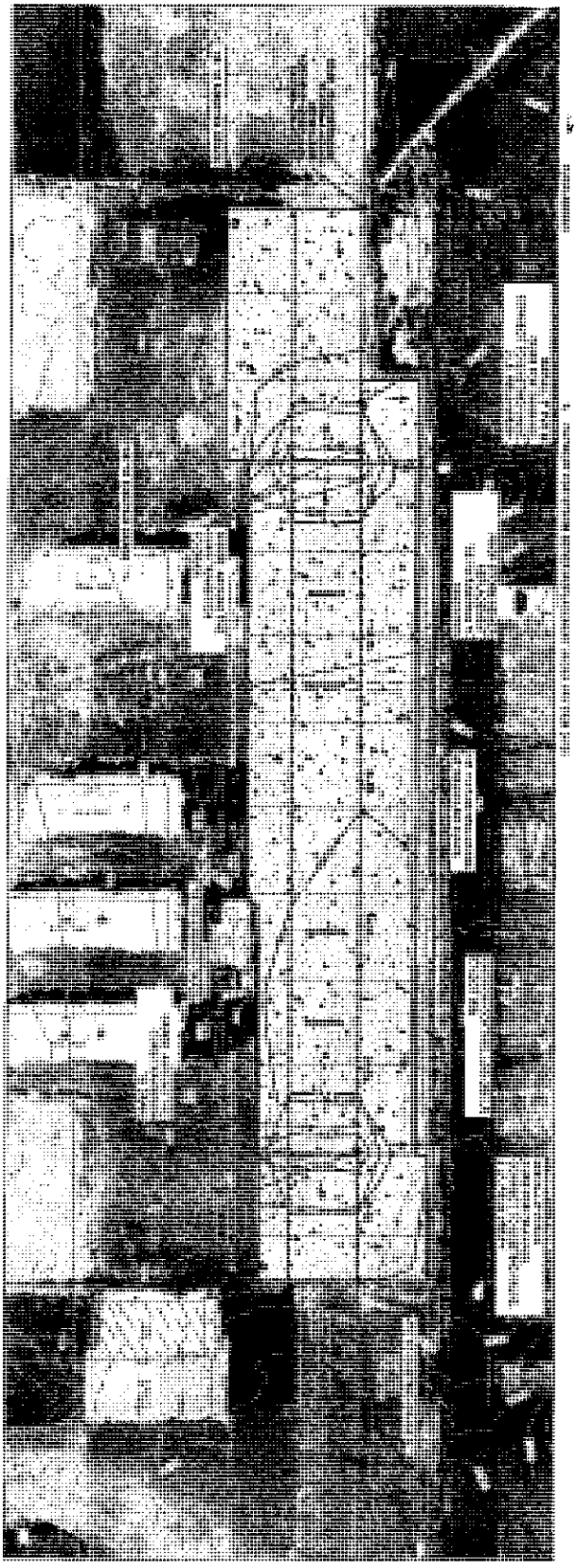

LEGEND

XX — PROPOSED GRADE AT 0.2' INTERVAL

XX — EXISTING GRADE AT 0.2' INTERVAL

EROSION CONTROL LOG

DAMAGED STORM PIPE REPLACEMENT

1. THE LOCATION OF THE DAMAGED STORM SEWER REPLACEMENT SHOWN IN PLANS IS APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATION.
2. CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND RPR ON DETAILS FOR STORM SEWER MATERIAL TYPE AND CONSTRUCTION PRIOR TO REPLACEMENT.

NOTES:

CONTRACTOR SHALL FIELD VERIFY EXISTING GRADES AND NOTIFY THE ENGINEER AND RPR OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.

GENERAL NOTES:

REVISION	DATE	NO.

JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #2609

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
GRADING, PLAN AND PROFILE

DRAWING NUMBER: C-004

SHEET NUMBER: 5

SHEET TOTAL: 11

SCALE: 1" = 10' (FULL) 1"=20' (HALF)

DRAWN BY: AM

CHECKED BY: KS

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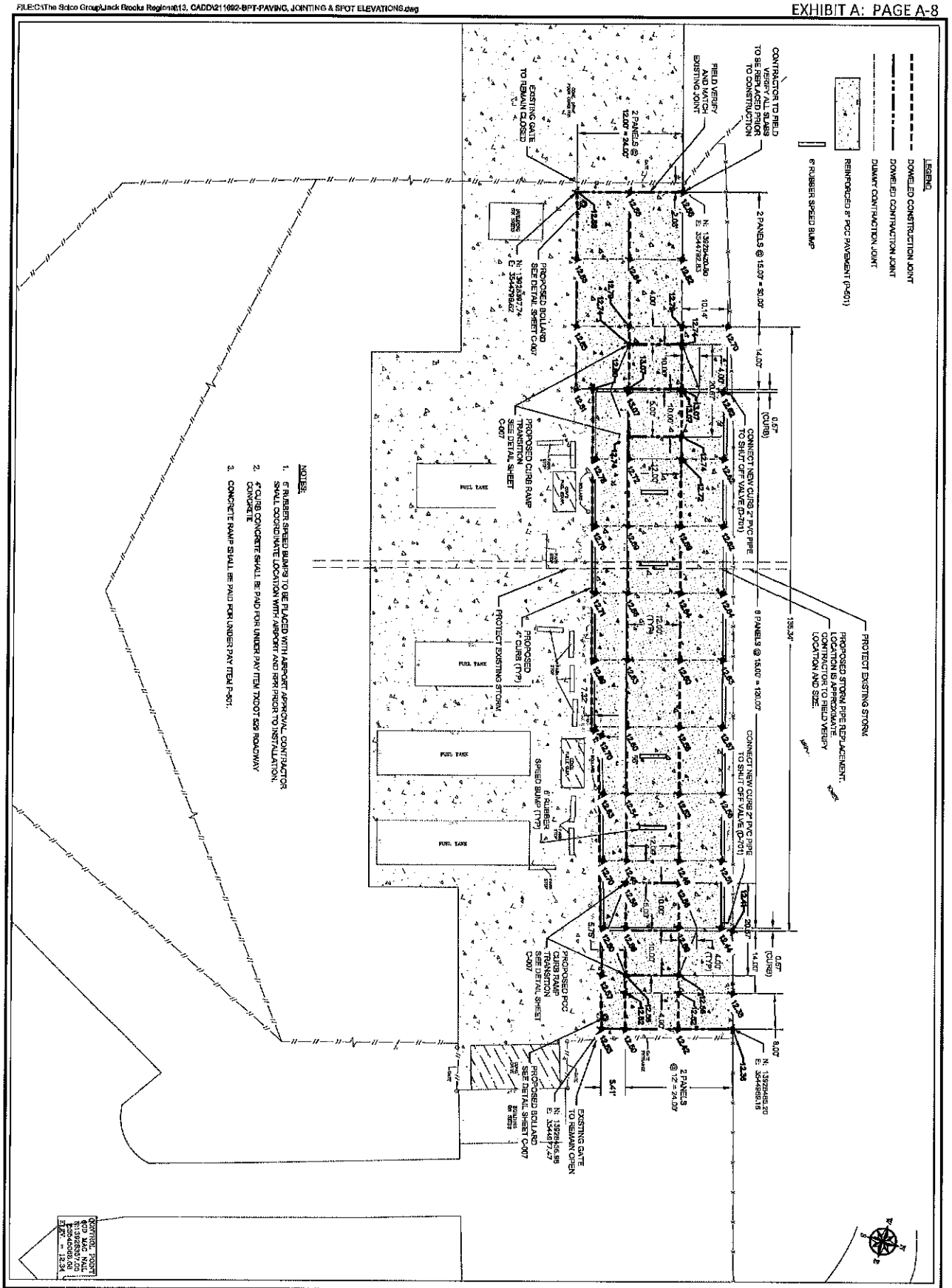

NOTES:

1. 6" RUBBER SPEED BUMPS TO BE PLACED WITH AIRPORT APPROVAL. CONTRACTOR SHALL COORDINATE LOCATION WITH AIRPORT AND RPR PRIOR TO INSTALLATION.
2. 4" CURB CONCRETE SHALL BE PAID FOR UNDER PAY ITEM TXDOT 529 ROADWAY CONCRETE
3. CONCRETE RAMP SHALL BE PAID FOR UNDER PAY ITEM P-501.

GENERAL NOTES:

NO.	DATE	REVISION

JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #2928

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
SITE PAVING, JOINTING AND SPOT ELEVATIONS

DRAWING NUMBER: C-005

SHEET NUMBER: 7

SHEET TOTAL: 11

SCALE: 1" = 10' (FULL); 1"=5' (HALF)

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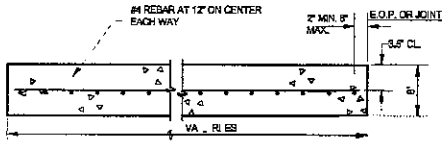
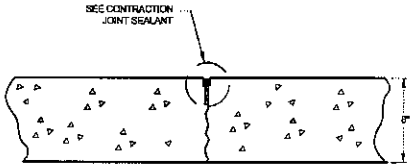
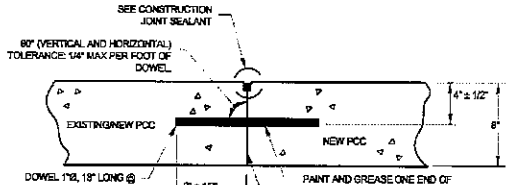
CHECKED BY: KS



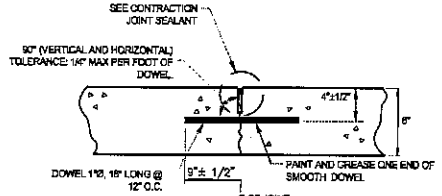
TYPICAL REINFORCED CONCRETE PAVEMENT SLAB
N.T.S.



DUMMY CONTRACTION JOINT (JOINT D)
N.T.S.



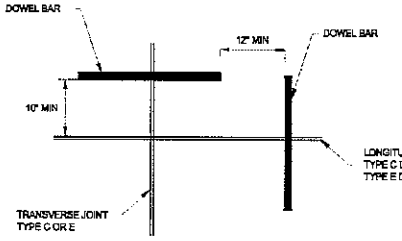
DOWELED CONSTRUCTION JOINT (TYPE E)
N.T.S.



DOWELED CONTRACTION JOINT (TYPE C)
N.T.S.

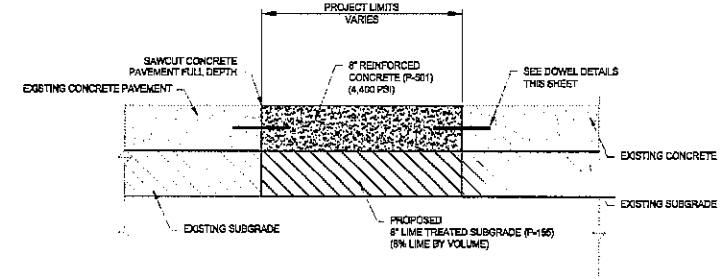
CONCRETE JOINTS NOTE:

PAYMENT FOR CONCRETE JOINTS AND SEALANT SHALL BE INCIDENTAL TO PAY ITEM P-501

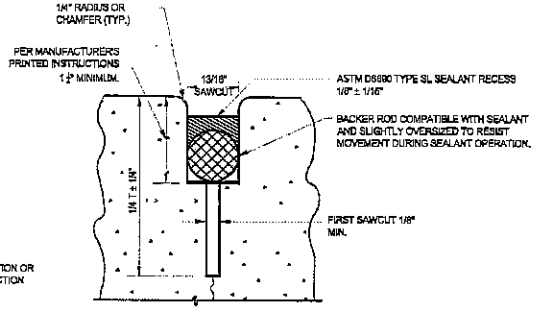


POSITION OF DOWELS AT EDGE OF JOINT TYPE C, E
N.T.S.

SMOOTH DOWEL BAR SCHEDULE			
PCC SLAB DEPTH	DIAMETER	LENGTH	SPACING
8"	1"	18"	12"
12"	1"	18"	12"

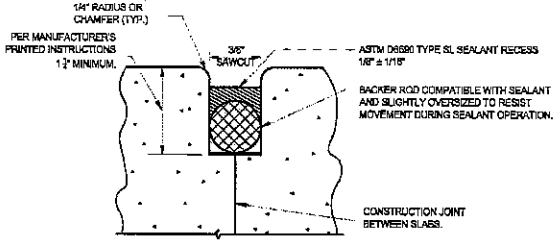


FUEL FARM ROAD PAVEMENT
N.T.S.



NOTE:
ALL SEALANT MATERIALS MUST BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS AS APPROVED BY ENGINEER.

CONTRACTION JOINT SEALANT
N.T.S.



NOTE:
ALL SEALANT MATERIALS MUST BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS AS APPROVED BY ENGINEER.

CONSTRUCTION JOINT SEALANT
N.T.S.

JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #22626

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
PAVEMENT DETAILS

DRAWING NUMBER: C-006

SHEET NUMBER: 8 SHEET TOTAL: 11

SCALE: N.T.S

DRAWN BY: AM CHECKED BY: KS

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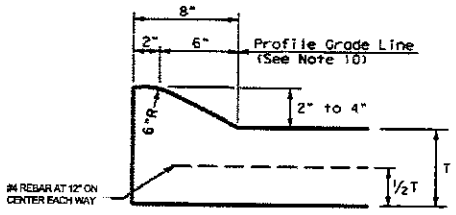
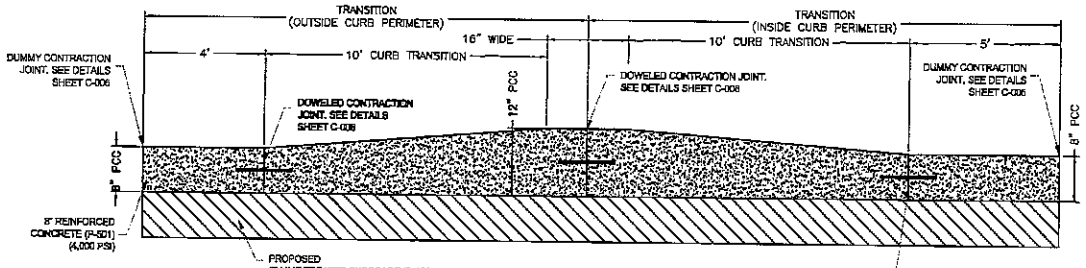
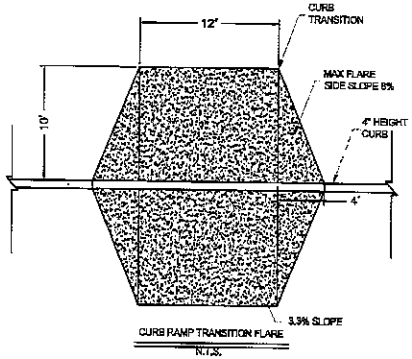


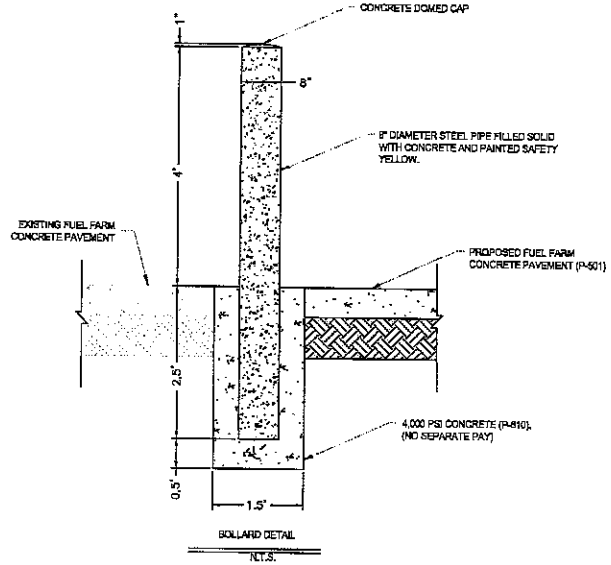
4" HEIGHT CURB DETAIL
N.T.S.



CURB RAMP TRANSITION DETAIL
N.T.S.



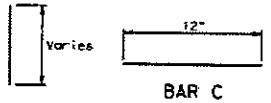
CURB RAMP TRANSITION FLARE
N.T.S.



BOLLARD DETAIL
N.T.S.

GENERAL NOTES

1. All materials and construction shall be in accordance with Item 529, "Concrete Curb, Gutter, and Combined Curb and Gutter."
2. Concrete shall be Class A.
3. When reinforcing bars are used, they shall be No. 4 unless otherwise shown. The use of fiber reinforced concrete in lieu of reinforcing steel is acceptable. Use fibers meeting the requirements of DMS 4550, "Fibers for Concrete," and dose fibers in accordance with Material Producers List (MPL) "Fibers for Class A and B Concrete Applications."
4. Round exposed sharp edges with a rounding tool, to a minimum radius of ⅛ inch.
5. All existing curbs and driveways to be removed shall be sawed or removed at existing joints.
6. Where concrete curb is to be placed on existing concrete pavement, Bar B may be drilled and the grouted in place, or may be inserted into fresh concrete.
7. Expansion and contraction joints shall be constructed to match pavement joints in all curbs and curb and gutter adjacent to jointed concrete pavement. Where placement of curb or curb and gutter is not adjacent to concrete pavement, expansion joints shall be provided at structures, curb returns at streets, and at locations directed by The Engineer.
8. Vertical and horizontal dowel bars and transverse reinforcing bars shall be placed at four feet C-C.
9. Dimension "T" shown is the thickness of concrete pavement. When curb is installed adjacent to flexible pavement dimension "T" is 8" maximum.
10. Usual profile grade line. Refer to typical sections and plan-profile sheets for exact locations.
11. One-half inch expansion joint material shall be provided where curb or curb and gutter is adjacent to sidewalk or riprap.
12. When horizontal permissible construction joints are used, the longitudinal pavement steel shall be placed in accordance with pavement details shown elsewhere in the plans. Reinforcing steel for curb section shall then conform to that required for concrete curb.
13. Bar B used as needed to support curb reinforcing steel during concrete placement.



BAR B BAR C

JACK BROOKS REGIONAL AIRPORT

TSG

TBPE FIRM #22626

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION
OF FUEL FARM PAVEMENT

DRAWING TITLE:
PAVEMENT DETAILS

DRAWING NUMBER: C-007

SHEET NUMBER: 9 SHEET TOTAL: 11

SCALE: N.T.S

DRAWN BY: AM CHECKED BY: KS

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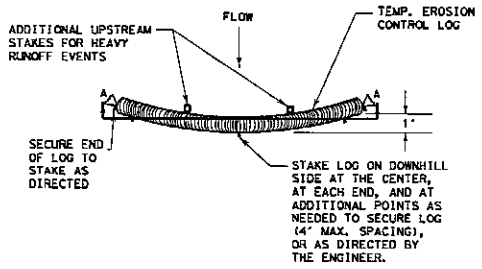
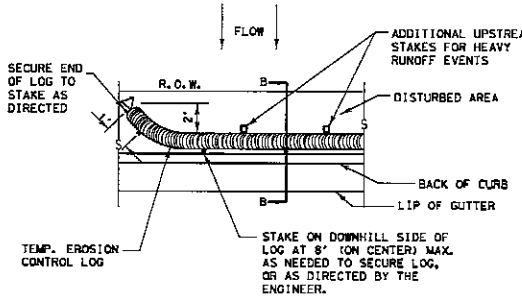
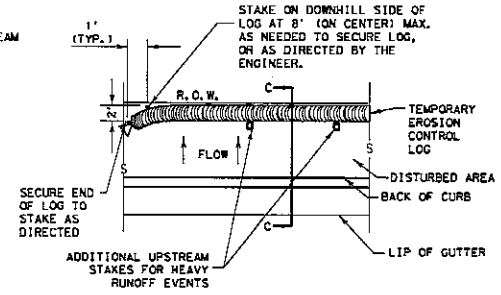
DATE:
FILE:



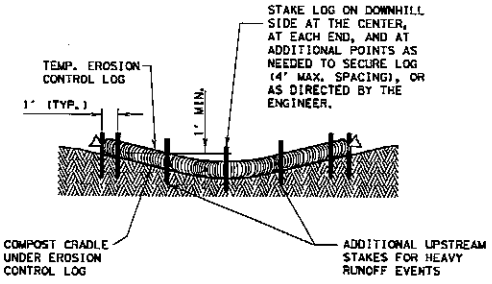
PLAN VIEW



PLAN VIEW



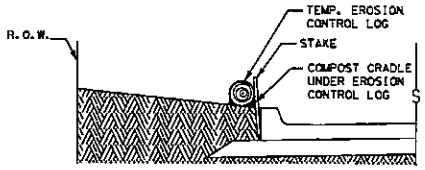
PLAN VIEW



SECTION A-A

EROSION CONTROL LOG DAM

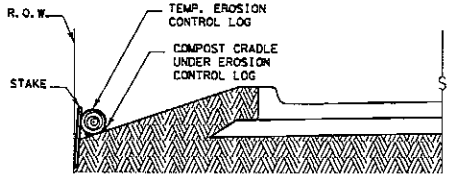
CL-D



SECTION B-B

EROSION CONTROL LOG AT BACK OF CURB

CL-BOC



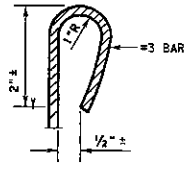
SECTION C-C

EROSION CONTROL LOG AT EDGE OF RIGHT-OF-WAY

CL-ROW

LEGEND

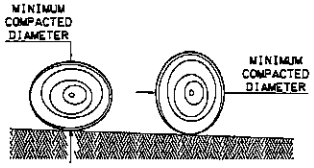
- CL-D — EROSION CONTROL LOG DAM
- CL-BOC — EROSION CONTROL LOG AT BACK OF CURB
- CL-ROW — EROSION CONTROL LOG AT EDGE OF RIGHT-OF-WAY



REBAR STAKE DETAIL

GENERAL NOTES:

1. EROSION CONTROL LOGS SHALL BE INSTALLED IN ACCORDANCE WITH MANFACTURER'S RECOMMENDATIONS, OR AS DIRECTED BY THE ENGINEER.
2. LENGTHS OF EROSION CONTROL LOGS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND AS REQUIRED FOR THE PURPOSE INTENDED.
3. UNLESS OTHERWISE DIRECTED, USE BIODEGRADABLE OR PHOTODEGRADABLE CONTAINMENT MESH ONLY WHERE LOG WILL REMAIN IN PLACE AS PART OF A VEGETATIVE SYSTEM. FOR TEMPORARY INSTALLATIONS, USE RECYCLABLE CONTAINMENT MESH.
4. FILL LOGS WITH SUFFICIENT FILTER MATERIAL TO ACHIEVE THE MINIMUM COMPACTED DIAMETER SPECIFIED IN THE PLANS WITHOUT EXCESSIVE DEFORMATION.
5. STAKES SHALL BE 2" X 2" WOOD OR #3 REBAR, 2'-4' LONG, EMBEDDED SUCH THAT 2" PROTRUDES ABOVE LOG, OR AS DIRECTED BY THE ENGINEER.
6. DO NOT PLACE STAKES THROUGH CONTAINMENT MESH.
7. COMPOST CRADLE MATERIAL IS INCIDENTAL & WILL NOT BE PAID FOR SEPARATELY.
8. SANDBAGS USED AS ANCHORS SHALL BE PLACED ON TOP OF LOGS & SHALL BE OF SUFFICIENT SIZE TO HOLD LOGS IN PLACE.
9. TURN THE ENDS OF EACH ROW OF LOGS UPSLOPE TO PREVENT RUNOFF FROM FLOWING AROUND THE LOG.
10. FOR HEAVY RUNOFF EVENTS, ADDITIONAL UPSTREAM STAKES MAY BE NECESSARY TO KEEP LOG FROM FOLDING IN ON ITSELF.



DIAMETER MEASUREMENTS OF EROSION CONTROL LOGS SPECIFIED IN PLANS

SEDIMENT BASIN & TRAP USAGE GUIDELINES

An erosion control log sediment trap may be used to filter sediment out of runoff draining from an unstabilized area.

Log Traps: The drainage area for a sediment trap should not exceed 5 acres. The trap capacity should be 1800 CF/Acre (0.5" over the drainage area).

Control logs should be placed in the following locations:

1. Within drainage ditches spaced as needed or min. 500' on center
2. Immediately preceding ditch inlets or drain inlets
3. Just before the drainage enters a water course
4. Just before the drainage leaves the right of way
5. Just before the drainage leaves the construction limits where drainage flows away from the project.

The logs should be cleaned when the sediment has accumulated to a depth of 1/2 the log diameter.

Cleaning and removal of accumulated sediment deposits is incidental and will not be paid for separately.

Texas Department of Transportation | Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

EROSION CONTROL LOG

EC(9)-16

FILE: ec916	DN: TxDOT	CK: KN	DW: LS/PT	CK: LS
© TxDOT: JULY 2016	CONT	SECT	JOB	HIGHWAY
REVISIONS	DIST	COUNTY		SHEET NO.

IFB 22-028/JW
EXHIBIT A: PAGE A-12

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DATE:
FILE:

GENERAL NOTES

1. For long term stationary work zones on freeways, drums shall be used as the primary channelizing device.
2. For intermediate term stationary work zones on freeways, drums should be used as the primary channelizing device but may be replaced in tangent sections by vertical panels, or 42" two-piece cones. In tangent sections, one-piece cones may be used with the approval of the Engineer but only if personnel are present on the project at all times to maintain the cones in proper position and location.
3. For short term stationary work zones on freeways, drums are the preferred channelizing device but may be replaced in tapers, transitions and tangent sections by vertical panels, two-piece cones or one-piece cones as approved by the Engineer.
4. Drums and all related items shall comply with the requirements of the current version of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) and the "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
5. Drums, bases, and related materials shall exhibit good workmanship and shall be free from objectionable marks or defects that would adversely affect their appearance or serviceability.
6. The Contractor shall have a maximum of 24 hours to replace any plastic drums identified for replacement by the Engineer/Inspector. The replacement device must be an approved device.

GENERAL DESIGN REQUIREMENTS

Pre-qualified plastic drums shall meet the following requirements:

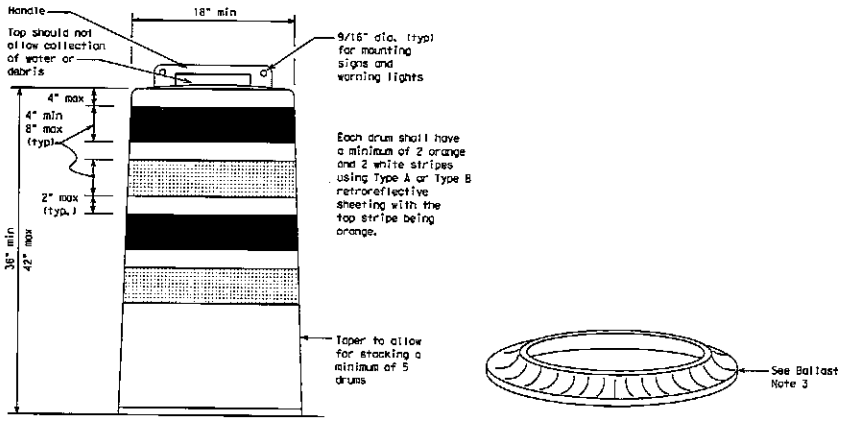
1. Plastic drums shall be a two-piece design; the "body" of the drum shall be the top portion and the "base" shall be the bottom.
2. The body and base shall lock together in such a manner that the body separates from the base when impacted by a vehicle traveling at a speed of 20 MPH or greater but prevents accidental separation due to normal handling and/or air turbulence created by passing vehicles.
3. Plastic drums shall be constructed of lightweight flexible, and deformable materials. The Contractor shall NOT use metal drums or single piece plastic drums as channelization devices or sign supports.
4. Drums shall present a profile that is a minimum of 18 inches in width at the 36 inch height when viewed from any direction. The height of drum unit (body installed on base) shall be a minimum of 36 inches and a maximum of 42 inches.
5. The top of the drum shall have a built-in handle for easy pickup and shall be designed to drain water and not collect debris. The handle shall have a minimum of two widely spaced 9/16 inch diameter holes to allow attachment of a warning light, warning reflector unit or approved compliant sign.
6. The exterior of the drum body shall have a minimum of four alternating orange and white retroreflective circumferential stripes not less than 4 inches nor greater than 8 inches in width. Any non-reflectorized space between any two adjacent stripes shall not exceed 2 inches in width.
7. Bases shall have a maximum width of 36 inches, a maximum height of 4 inches, and a minimum of two footholds of sufficient size to allow base to be held down while separating the drum body from the base.
8. Plastic drums shall be constructed of ultra-violet stabilized, orange, high-density polyethylene (HDPE) or other approved material.
9. Drum body shall have a maximum unballasted weight of 11 lbs.
10. Drum and base shall be marked with manufacturer's name and model number.

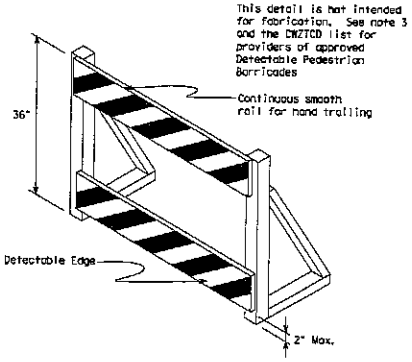
RETROREFLECTIVE SHEETING

1. The stripes used on drums shall be constructed of sheeting meeting the color and retroreflectivity requirements of Departmental Materials Specification DMS-8300, "Sign Face Materials." Type A or Type B reflective sheeting shall be supplied unless otherwise specified in the plans.
2. The sheeting shall be suitable for use on and shall adhere to the drum surface such that, upon vehicular impact, the sheeting shall remain adhered in-place and exhibit no delaminating, cracking, or loss of retroreflectivity other than that loss due to abrasion of the sheeting surface.

BALLAST

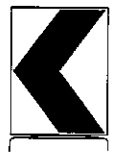
1. Unballasted bases shall be large enough to hold up to 50 lbs. of sand. This base, when filled with the ballast material, should weigh between 35 lbs (minimum) and 50 lbs (maximum). The ballast may be sand in one to three sandbags separate from the base, sand in a sand-filled plastic base, or other ballasting devices as approved by the Engineer. Stacking of sandbags will be allowed, however height of sandbags above pavement surface may not exceed 12 inches.
2. Bases with built-in ballast shall weigh between 40 lbs. and 50 lbs. Built-in ballast can be constructed of an integral crumb rubber base or a solid rubber base.
3. Recycled truck tire sidewalls may be used for ballast on drums approved for this type of ballast on the CWZTCD list.
4. The ballast shall not be heavy objects, water, or any material that would become hazardous to motorists, pedestrians, or workers when the drum is struck by a vehicle.
5. When used in regions susceptible to freezing, drums shall have drainage holes in the bottoms so that water will not collect and freeze becoming a hazard when struck by a vehicle.
6. Ballast shall not be placed on top of drums.
7. Adhesives may be used to secure base of drums to pavement.



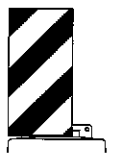


DETECTABLE PEDESTRIAN BARRICADES

1. When existing pedestrian facilities are disrupted, closed, or relocated in a TTC zone, the temporary facilities shall be detectable and include accessibility features consistent with the features present in the existing pedestrian facility. Refer to RZ(BTS-2) for Pedestrian Control requirements for Sidewalk Diversions, Sidewalk Detours and Crosswalk Closures.
2. Where pedestrians with visual disabilities normally use the closed sidewalk, a Detectable Pedestrian Barricade shall be placed across the full width of the closed sidewalk instead of a Type 3 Barricade.
3. Detectable pedestrian barricades similar to the one pictured above, longitudinal channelizing devices, some concrete barriers, and wood or chain link fencing with a continuous detectable edging can satisfactorily delineate a pedestrian path.
4. Tape, rope, or plastic chain strung between devices are not detectable, do not comply with the design standards in the "Americans with Disabilities Act Accessibility Guidelines (ADAAG)" and should not be used as a control for pedestrian movements.
5. Warning lights shall not be attached to detectable pedestrian barricades.
6. Detectable pedestrian barricades should use 8" nominal barricade rails as shown on BC(10) provided that the top rail provides a smooth continuous rail suitable for hand trailing with no splinters, burrs, or sharp edges.



18" x 24" Sign (Maximum Sign Dimension) Chevron CWI-8, Opposing Traffic Lane Divider, Driveway sign D70a, Keep Right R4 series or other signs as approved by Engineer



12" x 24" Vertical Panel mount with diagonals sloping down towards travel way

Plywood, Aluminum or Metal sign substrates shall NOT be used on plastic drums

SIGNS, CHEVRONS, AND VERTICAL PANELS MOUNTED ON PLASTIC DRUMS

1. Signs used on plastic drums shall be manufactured using substrates listed on the CWZTCD.
2. Chevrons and other work zone signs with an orange background shall be manufactured with Type B_{FL} or Type C_{FL} Orange sheeting meeting the color and retroreflectivity requirements of DMS-8300, "Sign Face Material," unless otherwise specified in the plans.
3. Vertical Panels shall be manufactured with orange and white sheeting meeting the requirements of DMS-8300 Type A or Type B. Diagonal stripes on Vertical Panels shall slope down toward the intended traveled lane.
4. Other sign messages (text or symbolic) may be used as approved by the Engineer. Sign dimensions shall not exceed 18 inches in width or 24 inches in height, except for the R9 series signs discussed in note 8 below.
5. Signs shall be installed using a 1/2 inch bolt (nominal) and nut, two washers, and one locking washer for each connection.
6. Mounting bolts and nuts shall be fully engaged and adequately torqued. Bolts should not extend more than 1/2 inch beyond nut.
7. Chevrons may be placed on drums on the outside of curves, on merging tapers or on shifting tapers. When used in these locations, they may be placed on every drum or spaced not more than on every third drum. A minimum of three (3) should be used at each location called for in the plans.
8. R9-9, R9-10, R9-11 and R9-11a Sidewalk Closed signs which are 24 inches wide may be mounted on plastic drums, with approval of the Engineer.

SHEET 8 OF 12

Texas Department of Transportation | *Traffic Safety Division Standard*

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(8)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS				
4-03 8-14	DIST	COUNTY		SHEET NO.
9-07 5-21				
7-13				
102				

ALLCO
P.O. BOX 3684
BEAUMONT, TEXAS 77704

SEALED
BID

JEFFERSON COUNTY PURCHASING DEPARTMENT
1149 PEARL STREET, 1ST FLOOR
BEAUMONT, TEXAS 77701

IFB 22-028/JW
REHABILITATION OF FUEL FARM PAVEMENT AT
THE JACK BROOKS REGIONAL AIRPORT

BIDS: AUGUST 24, 2022 11:00 AM

August

REC'VD JEFFCOPURCH:10:44 AM AUG 24 2022

Jefferson County Purchasing Department
Deborah L. Clark, Purchasing Agent

1149 PEARL STREET
1st FLOOR, BEAUMONT, TEXAS 77701

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

ORIGINAL

LEGAL NOTICE
Advertisement for Invitation for Bids

July 26, 2022

Notice is hereby given that sealed bids will be accepted by the Jefferson County Purchasing Department for Invitation for Bid **(IFB 22-028/JW) Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport.** Specifications for this project may be obtained from the Jefferson County website, https://www.co.jefferson.tx.us/Purchasing/ or by calling 409-835-8593.

Bids are to be sealed and addressed to the Purchasing Agent with the bid number and name marked on the outside of the envelope or box. Bidders shall forward an original and two (2) copies of their bid to the address shown below. Jefferson County does not accept bids submitted electronically. Late bids will be rejected as non-responsive. Bids will be publicly opened and read aloud in the Jefferson County Engineering Department Conference Room (5th Floor, Historic Courthouse) 1149 Pearl Street, Beaumont, Texas 77701, at the time and date below. Bidders are invited to attend the sealed bid opening.

BID NAME:	**Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport**
BID NUMBER:	**IFB 22-028/JW**
DUE BY TIME/DATE:	**11:00 AM CT, Wednesday, August 24, 2022**
MAIL OR DELIVER TO:	**Jefferson County Purchasing Department** **1149 Pearl Street, 1st Floor** **Beaumont, Texas 77701**

There will be a Pre-Bid Conference and Walk-Through at 2:00 PM CT on Thursday, August 4, 2022, at the Airport Administration Conference Room located at 5000 Jerry Ware Blvd. Beaumont, Texas 77705. This conference will be the Bidder's only opportunity to view secured areas of the project.

The County shall require the bidder to furnish a bid security in the amount of five percent (5%) of the total contract cost. The bid bond must be executed with a surety company authorized to do business in the State of Texas. Within ten (10) days after the date of the signing of a contract, the bidder shall furnish a performance bond to the County for the full amount of the contract, if the contract exceeds one hundred thousand dollars ($100,000). If the contract is for one hundred thousand dollars ($100,000) or less, the County may provide that no money be paid to the contractor until completion and acceptance of the work or the fulfillment of the purchase obligation to the County.

Any questions relating to these bid requirements should be directed to Jamey West, Contract Specialist at 409-835-8593 or via email at: jwest@co.jefferson.tx.us

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

Jefferson County reserves the right to accept or reject any or all proposals, to waive technicalities and to take whatever action is in the best interest of Jefferson County. All interested firms are invited to submit a bid in accordance with the terms and conditions stated in this bid.

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

Deborah Clark

Deborah L. Clark, Purchasing Agent
Jefferson County, Texas

PUBLISH:
Beaumont Enterprise & Port Arthur News:
July 27, 2022, and August 3, 2022

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BID SUBMISSIONS:

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

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

Additionally, Bidder shall monitor the Jefferson County Purchasing Department Website for any addenda, additional instructions, or bid updates. https://www.co.jefferson.tx.us/Purchasing/

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

SECTION 1: GENERAL CONDITIONS OF BIDDING AND TERMS OF CONTRACT

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

1. BIDDING.

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

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

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

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

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

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

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

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

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

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

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

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

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

Jefferson County reserves the right to accept or reject in part or in whole any bid submitted, and to waive any technicalities or informalities for the best interest of the County. Jefferson County reserves the right to award based upon individual line items, sections, or total bid.

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

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

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

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

1.18 RESPONSIVENESS.
A responsive bid shall substantially conform to the requirements of this Invitation to Bid and/or specifications contained herein. Bidders who substitute any other terms, conditions, specifications and/or requirements or who qualify their bids in such a manner as to nullify or limit their liability to the contracting entity shall have their bids

deemed non-responsive. Also, bids containing any clause that would limit contracting authority shall be considered non-responsive. Examples of non-responsive bids include but shall not be limited to: a) bids that fail to conform to required delivery schedules as set forth in the bid request; b) bids with prices qualified in such a manner that the bid price cannot be determined, such as with vague wording that may include "price in effect at the time of delivery," and c) bids made contingent upon award of other bids currently under consideration.

1.19 RESPONSIBLE STANDING OF BIDDER.

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

1.20 CONFIDENTIAL/PROPRIETARY INFORMATION.

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

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

1.21 PUBLIC BID OPENING.

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

2. PERFORMANCE.

2.1 DESIGN, STRENGTH, AND QUALITY.

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

2.2 AGE AND MANUFACTURE.

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

2.3 DELIVERY LOCATION.

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

2.4 DELIVERY SCHEDULE.

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

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

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

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

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

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

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

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

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

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

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

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

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

3. PURCHASE ORDERS AND PAYMENT.

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

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

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

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

4. CONTRACT.

4.1 CONTRACT DEFINITION.
The General Conditions of Bidding and Terms of Contract, Specifications, Plans, Bidding Forms, Addenda, and any other documents made a part of this bid shall constitute the complete bid. This bid, when duly accepted by Jefferson

County shall constitute a contract equally binding between the successful Bidder and Jefferson County.

4.2 CHANGE ORDER.

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

4.3 PRICE RE-DETERMINATION.

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

4.4 TERMINATION.

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

4.5 CONFLICT OF INTEREST.

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

4.6 INJURIES OR DAMAGES RESULTING FROM NEGLIGENCE.

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

4.7 INTEREST BY PUBLIC OFFICIALS.

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

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

The Jefferson County Purchasing Department will be the primary pre-bid contact for this Invitation for Bid, unless otherwise specified within these bid specifications. **If not written within these specifications, Potential Bidders /Vendors shall not visit or conduct discussions with other County Departments or representatives.**

The Jefferson County Purchasing Department expects to conduct discussions with vendor's representatives

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

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

Selected vendors may be expected to make a presentation/product demonstration to an Evaluation Committee. Proposals, vendor presentations, and product/service evaluations may develop into negotiating sessions with the vendor(s) as selected by the Evaluation Committee. Jefferson County expects to conduct negotiations with vendor representatives authorized to contractually obligate the vendor with an offer. If vendor is unable to agree to contract terms and conditions, Jefferson County reserves the right to terminate contract negotiations with that vendor and initiate negotiations with another vendor. In addition to a presentation, visits by the Evaluation Committee to representative vendor client sites may be conducted where the proposed solution can be demonstrated in a production environment.

4.9 WARRANTY.

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

4.10 UNIFORM COMMERCIAL CODE.

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

4.11 VENUE.

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

4.12 SALE, ASSIGNMENT, OR TRANSFER OF CONTRACT.

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

4.13 SILENCE OF SPECIFICATIONS.

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

5. REJECTION OR WITHDRAWAL.

Submission of additional terms, conditions or agreements with the bid document are grounds for deeming a bid non-responsive and may result in bid rejection. Jefferson County reserves the right to reject any and all bids and to waive any informalities and minor irregularities or defects in bids. Bids may be withdrawn in person by a bidder or authorized representative, provided their identity is made known and a receipt is signed for the bid, but only if the withdrawal is made prior to the time set for receipt of bids. Bids are an irrevocable offer and may not be withdrawn within **120** days after opening date.

6. EMERGENCY/DECLARED DISASTER REQUIREMENTS.

In the event of an emergency or if Jefferson County is declared a disaster area, by the County, State, or Federal Government, this Acceptance of Offer may be subjected to unusual usage. Contractor shall service the county during

such an emergency or declared disaster under the same terms and conditions that apply during non-emergency/disaster conditions. The pricing as specified in this Acceptance of Offer shall apply to serving the County's needs regardless of the circumstances. If Contractor is unable to supply the services under the terms of the Acceptance of Offer, then Contractor shall provide proof of such disruption and a copy of the invoice from Contractor's supplier(s).

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

7. AWARD.

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

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

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

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

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

8. CONTRACT.

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

9. WAIVER OF SUBROGATION.

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

10. FISCAL FUNDING.

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

11. BID RESULTS.

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

12. CHANGES AND ADDENDA TO BID DOCUMENTS.

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

13. SPECIFICATIONS.

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

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

14. DELIVERY.

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

15. INTERPRETATION OF BID AND/OR CONTRACT DOCUMENTS.

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

16. CURRENCY.

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

17. PRICING.

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

18. NOTICE TO PROCEED/PURCHASE ORDER.

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

19. CERTIFICATION.

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

- The submission of the offer did not involve collusion or other anti-competitive practices.

- The Bidder has not given, offered to give, nor intends to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to any public servant in connection with the submitted offer.

- The Bidder hereby certifies that the individual signing the bid is an authorized agent for the Bidder and has the authority to bind the Bidder to the contract.

20. DEFINITIONS.

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

21. MINORITY-OWNED (MWBE), WOMEN-OWNED (WBE) AND HISTORICALLY UNDERUTILIZED (HUB) BUSINESS ENTERPRISE PARTICIPATION.

It is the desire of Jefferson County to increase the participation of Minority-Owned (MBE) , Women-Owned (WBE), and Historically Underutilized (HUB) business enterprises in its contracting and procurement programs. While the County does not have any preference or set aside programs in place, it is committed to a policy of equitable participation for these firms.

SECTION 2: FEDERAL MANDATED CONTRACT PROVISIONS

Some or all of the provisions in this section will be incorporated into a professional service agreement as a result of this solicitation.

Breach of Contract Terms / Remedies

Source: 2 CFR § 200 Appendix II (A)

Applicability: This provision requires Jefferson County, as the Airport Sponsor, to incorporate administrative, contractual, or legal remedies if contractor/consultant violate or breach contract terms. The sponsor must also include appropriate penalties and sanctions. Language acceptable to meet the intent of this requirement will be included in contractual documents.

This requirement applies to all FEMA grant and cooperative agreement programs

Contract Types: This provision is required for all contracts that exceed the simplified acquisition threshold as stated in 2 CFR § 200, Appendix II (A). This threshold is occasionally adjusted for inflation and is now equal to $150,000.

Termination of Contract (for Cause and Convenience)

Source: 2 CFR § 200 Appendix II (B)

FAA Advisory Circular 150/5370-10, Section 80-09

Applicability: This provision requires Jefferson County, as the Airport Sponsor, to incorporate in all contracts over $10,000, a provision that addresses termination for cause and termination for convenience, by the sponsor. The contractual provision must address the manner by which the sponsor's contract will be affected and the basis for settlement. Language acceptable to meet the intent of this requirement will be included in contractual documents.

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

Contract Types: This provision is required for all contracts that exceed $10,000.

Equal Employment Opportunity

Source: 2 CFR § 200 Appendix II (C) 41 CFR § 60-1.4

Executive Order 11246 41 CFR § 60-4.3

Applicability: The purpose of this provision is to provide equal opportunity for all persons, without regard to race, color, religion, sex, or national origin who are employed or seeking employment with contractors performing under a federally assisted construction contract. There are two provisions, a construction clause, and a specification clause.

The equal opportunity contract clause must be included in any contract or subcontract when the amount exceeds $10,000. Once the equal opportunity clause is determined to be applicable, the contract or subcontract must include the clause for the remainder of the year, regardless of the amount of the contract.

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

Contract Types: This provision is required for all contracts that exceed $10,000.

Use of Provision: 41 CFR 60-1.4 provides the mandatory **contract** language. 41 CFR 60-4.3 provides the mandatory **specification** language. The sponsor will incorporate these clauses without modification.

Note: Any contracts resulting from this RFQ will have the requisite language as set forth in 2 CFR 200 App II, 41 CFR 60-1.4, 41 CFR 60-4.3, and Executive Order 11246.

Davis-Bacon Requirements

Source: 2 CFR § 200 Appendix II (D)

29 CFR Part 5

Applicability: The Davis-Bacon Act ensures that laborers and mechanics employed under the contract receive pay no less than the locally prevailing wages and fringe benefits as determined by the Department of Labor.

For Professional Services: The emergence of different project delivery methods has created situations where Professional Service Agreements (PSAs) includes tasks that meet the definition of construction, alteration, or repair as defined in 29 CFR Part 5. If such tasks result in work that qualifies as construction, alteration, or repair and it exceeds $2,000, the PSA must incorporate this clause.

Use of Provision: 29 CFR 5 establishes the specific language the sponsor must use without modification. A/E firms that employ laborers and mechanics on a task that meets the definition of construction, alteration, or repair are acting as a contractor. The sponsor may not substitute the term "Contractor" for "Consultant" in such instances.

Copeland Anti-Kickback

Source: 2 CFR § 200 Appendix II (D)

29 CFR Part 3 & Part 5

Applicability: The Copeland Act (18 USC 874 and 40 USC 3145) makes it unlawful to induce by force, intimidation, threat of dismissal from employment, or by any other manner, any person employed in the construction or repair of public buildings or public works, financed in whole or in part by the United States, to give up any part of the compensation to which that person is entitled under a contract of employment. The Copeland Act also requires each contractor and subcontractor to furnish weekly a statement of compliance with respect to the wages paid each employee during the preceding week.

It DOES NOT apply to the FEMA Public Assistance Program.

For Professional Services: The emergence of different project delivery methods has created situations where Professional Service Agreements (PSAs) includes tasks that meet the definition of construction, alteration, or repair as defined in 29 CFR Part 5. If such tasks result in work that qualifies as construction, alteration, or repair and it exceeds $2,000, the PSA must incorporate the Copeland Anti-kickback provision.

Use of Provision: 29 CFR 5 establishes the specific language the sponsor must use without modification. A/E firms that employ laborers and mechanics on a task that meets the definition of construction, alteration, or repair are acting as a contractor. The sponsor may not substitute the term "Contractor" for "Consultant" in such instances.

Contract Workhours and Safety Standards Act Requirements

Source: 2 CFR § 200 Appendix II (E) 29 CFR Part 5

40 U.S.C. § 3701-3708

Applicability: Contract Workhours and Safety Standards Act Requirements (CWHSSA) requires contractors and subcontractors on covered contracts to pay laborers and mechanics employed in the performance of the contracts one and one-half times their basic rate of pay for all hours worked over 40 in a workweek and prohibits unsanitary, hazardous, or dangerous working conditions on federally assisted projects. The Wage and Hour division (WHD) within the U.S. Department of Labor (DOL) enforces the compensation requirements of this Act, while DOL's Occupational Safety and Health Administration (OSHA) enforces the safety and health requirements.

Jefferson County urges all contractors, regardless of funding sources for projects, to follow all applicable Federal and State labor laws.

For Professional Services: This provision applies to professional service agreements that exceed $100,000 and employs laborers, mechanics, watchmen, and guards This includes members of survey crews and exploratory drilling operations.

Use of Provision: The following text will be included in applicable contracts without modification:

1. *Overtime requirements*. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. *Violation; liability for unpaid wages; liquidated damages.* In the event of any violation of the clause set forth in paragraph (1) of this clause, the Contractor, and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this section, in the sum of $27.00 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this clause.

3. *Withholding for unpaid wages and liquidated damages.* Jefferson County shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this clause.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this clause.

Rights to Inventions

Source: 2 CFR § 200 Appendix II (F)

37 CFR § 401

Applicability: This provision applies to all contracts and subcontracts with small business forms or nonprofit organizations that include performance of *experimental, developmental, or research work*. This clause is not applicable to construction, equipment, or professional service contracts unless the contract includes *experimental, developmental, or research work*. This requirement applies to "funding agreements," but it DOES NOT apply to the Public Assistance, Hazard Mitigation Grant Program, Fire Management Assistance Grant Program, Crisis Counseling Assistance and Training Grant Program, Disaster Case Management Grant Program, and Federal Assistance to Individuals and Households – Other Needs Assistance Grant Program, as FEMA awards under these programs do not meet the definition of "funding agreement."

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of Appendix II to 2 CFR part 200.

Clean Air and Water Pollution Control

Source: 2 CFR § 200 Appendix II (G)

29 CFR Part 5

Applicability: This provision is required on all contracts and lower tier contracts that exceed $150,000.

Use of Provision: The following language will be included in applicable contracts:

1. Contractor agrees to comply with all applicable standards, orders, and regulations pursuant to the Clean Air Act (42 U.S.C. § 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. § 1251-13870). The contractor agrees to report any violation to the owner immediately upon discovery. The owner assumes responsibility for notifying the EPA and the FAA.

Debarment and Suspension

Source: 2 CFR Part 180 (Subpart C) 2 CFR Part 3000

2 CFR Part 1200 DOT Order 4200.5

Applicability: Required in all FEMA grant and cooperative agreement programs, regardless of amount. This requirement applies to covered transactions as defined in 2 CFR part 180. AIP funded contracts are non-procurement transactions as defined by §180.970. Covered transactions include any AIP-funded contract, regardless of tier, that is awarded by a contractor, subcontractor, supplier, consultant, or its agents or representative in any transaction, if the amount of the contract is expected to equal or exceed $25,000. Jefferson County must verify that the firm or individual that is entering into a contract with is not presently suspended, excluded, or debarred by any Federal department or agency from participating in federally assisted projects. This is accomplished by:

1. Checking SAM.gov to verify the firm's or individual's status;
2. Collecting a certification from the firm or individual that is not suspended, debarred, or excluded; and
3. Incorporating a clause into the contract that requires lower tier contracts to verify that no suspended, debarred, or excluded firm or individual is included in the project.

See **Error! Reference source not found.**, Paragraph **Error! Reference source not found.** above for more information on SAM.gov.

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of Appendix II to 2 CFR part 200.

Lobbying and Influencing Federal Employees

Source: 2 CFR § 200 Appendix II (J) 31 USC § 1352 – Byrd Anti-Lobbying Amendment

49 CFR Part 20, Appendix A 44 CFR Part 18

Applicability: This requirement applies to all FEMA grant and cooperative agreement programs. Consultants and contractors that apply or bid an award of $100,000 or more must certify that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant, or another award covered by 31 USC 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award.

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of Appendix II to 2 CFR part 200 Appendix (J) and 31 USC 1352.

If applicable, contractors ***must sign and submit*** to Jefferson County the **"Certification Regarding Lobbying"** Form included in this bid specification.

Procurement of Recovered Materials

Source: 2 CFR § 200 Appendix II (J) Solid Waste Disposal Act

40 CFR Part 247 2 CFR § 200.322

Applicability: Sponsors of AIP funded development and equipment projects must comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. Section 6002 emphasizes maximizing energy and resource recovery through use of affirmative procurement actions for recovered materials identified in the EPA guidelines. When acquiring items designated in the guidelines, the sponsor must procure items that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition.

This requirement applies to:

- All contracts awarded by a non-Federal entity under FEMA grant and cooperative agreement programs.
- All construction and equipment projects.
- Any contract, professional and property acquisition, that includes procurement of a product that exceeds $10,000.

Information about this requirement, along with the list of EPA designated items, is available at EPA's Comprehensive Procurement Guidelines website:

https://www.epa.gov/smm/comprehensiveprocurement-guideline-cpg-program.

The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act." The Uniform Rules authorize FEMA to require additional provisions for non-Federal entity contracts.

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of Appendix II to 2 CFR part 200.

Access to Records and Reports

Source: 2 CFR § 200.333 FAA Order 5100.38

2 CFR § 200.336

Applicability: 2 CFR § 200.333 requires a sponsor to retain records pertinent to a federal award for a period of three years from submission of final closure documents. 2 CFR § 200.336 establishes that sponsors must provide Federal entities the right to access records pertinent to the Federal award. FAA policy extends these requirements to the sponsor's contracts and subcontracts of AIP funded projects.

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of Appendix II to 2 CFR part 200. The following will be in applicable contracts:

1. The contractor must maintain an acceptable cost accounting system. The Contractor agrees to provide the local/state/federal entity providing funding for this project, the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions.
2. The contractor agrees to maintain all books, records and reports required under this contract for a period of not less than three years after final payment is made and all pending matters have been resolved.
3. The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.

4. The Contractor agrees to provide the FEMA Administrator or their representatives access to construction or other work sites pertaining to the work being completed under the contract.
5. In compliance with the Disaster Recovery Act of 2018, the County and the Contractor acknowledge and agree that no language in this contract is intended to prohibit audits or internal reviews by the FEMA Administrator or the Comptroller General of the United States.

Affirmative Action Requirement

Source: 41 CFR Part 60-4 FAA Order 5100.38

Executive Order 11246

Applicability: Sponsors are required to set goals for minority participation in AIP funded projects exceeding $10,000. The goals for minority participation derive from Economic Area (EA) and Standard Metropolitan Statistical Area (SMSA) as established in Volume 45 of the Federal Register dated 10/03/80. Page 65984 contains a table of all EAs and SMSAs and the associated minority participation goals.

Executive Order 11246 has set a goal of 6.9% nationally for female participation for all construction projects. This value remains constant for all counties and states.

Contract Types:

- Construction: The sponsor must incorporate this notice in all solicitations for bids or requests for proposals for AIP funded construction work contracts and subcontracts that exceed $10,000.

- Equipment: The sponsor must incorporate this notice in all solicitations for equipment project exceeding $10,000 that involves installation of equipment onsite (e.g. electrical vault equipment, generators). This provision does not apply to equipment acquisition projects where the manufacturer of the equipment takes place offsite at a manufacturer's plant (e.g. firefighting and vehicles).

- Professional Services: The sponsor must incorporate this notice in any professional service agreement if the agreement includes tasks that meet the definition of construction work, as defined by the DOL, and exceeds $10,000.

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of 41 CFR Part 60-4. The following will be in applicable contracts:

Solicitation Clause:
Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

   a. Goals for minority participation for each trade: Vol. 45 Federal Register pg. 65984 (10/3/80)

   b. Goals for female participation in each trade: 6.90%

These goals are applicable to all of the contractor's construction work, whether or not it is federal or federally assisted, performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR Part 60-4.3(a) and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project for the sole purpose of meeting the contractor's goals shall be a violation of the contract, the Executive Order, and the regulations in 41 CFR Part 60-4. Compliance with these goals will be measured against the total work hours performed.

The contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs (OFCCP) within 10 working days of award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of these subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

As used in this notice and in the contract resulting from this solicitation, the covered area is Texas, Jefferson County, Beaumont.

Buy American Preferences

Source: 49 USC § 50101

Applicability: the buy American preference requirement in 49 USC § 50101 requires that all still in manufactured goods used on AIP projects be produced in the United States. This statute gives the FAA the ability to issue a waiver to a sponsor to use non-domestic material on an AIP funded project subject to meeting certain conditions a sponsor may request that the FAA issue a waiver from the by American preference requirements if the FA finds that:

1. Applying the provision is not in the public interest;
2. The steel or manufactured goods are not available in sufficient quantity or quality in the United States;
3. The cost of components in subcomponents produced in the United States is more than 60% of the total components of a facility or equipment, and final assembly has taken place in the United States. Items that have an FAA standard specification item number, such as specific airport lighting equipment, are considered the equipment.

4. Applying this provision would increase the cost of the overall project by more than 25%.

For construction and equipment procurement projects, language, forms, and references to 49 USC § 50101 will be included in the solicitation.

Professional Service Agreements typically do not result in a deliverable that meets the definition of a manufactured product. If a PSA includes providing a manufactured good as a deliverable under the contract, the sponsor must include the Buy American Preference provision in the agreement.

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of 49 USC § 50101.

Civil Rights

Source:	49 USC § 47123	Title VI of the Civil Rights Act of 1964
	FAA Order 1400.11	US DOT Order 1050.2

Applicability: Title VI of the Civil Rights Act of 1964, as amended, Title VI, prohibits discrimination on the grounds of race, color, or national origin under any program or activity receiving Federal financial assistance. Sponsors must include appropriate clauses from the Standard DOT Title VI Assurances in all contracts and solicitations.

The text of each individual clause comes from the U.S. DOT Order 1050.2 Standard Title VI Assurances and Nondiscrimination Provisions, effective 04/24/2013. These assurances require the sponsor insert the appropriate clauses in the form provided by the DOT. Where the clause refers to the applicable activity, project, or program, it means the AIP project.

TITLE VI SOLICITATION NOTICE

Jefferson County, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 USC § 2000d to 2000d-4) and the Regulations, hereby notifies all bidders or offerors that it will affirmatively ensure that any contract entered into pursuant to this advertisement, Disadvantaged Business Enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

Title VI List of Pertinent Nondiscrimination Acts and Authorities

During the performance of any contract as a result of this bid, the Contractor, for itself, its assignees, and successors in interest, hereinafter referred to as the Contractor, agrees to comply with the following non-discrimination statutes and authorities, including but not limited to:

- Title VI of the Civil Rights Act of 1964
- 49 CFR part 21
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970
- Section 504 of the Rehabilitation Act of 1973
- The Age Discrimination Act of 1975
- Airport and Airway Improvement Act of 1982
- The Civil Rights Restoration Act of 1987
- Titles II and III of the Americans with Disabilities Act of 1990
- The Federal Aviation Administration's Nondiscrimination Statute
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency
- Title IX of the Education Amendments of 1972

Disadvantaged Business Enterprise

Source: 49 CFR part 26

Applicability: A sponsor that anticipates awarding $250,000 or more in AIP funding prime contracts in a federal fiscal year must have an approved Disadvantaged Business Enterprise (DBE) program on file with the FAA Office of Civil Rights (§26.21). The approved DBE program will identify a 3-year overall program goal that the sponsor bases on the availability of ready, willing, and able DBEs relative to all businesses ready, willing, and able to participate on the project. (§26.45).

Sponsors with a DBE program on file with the FAA must include the three following provisions, if applicable:

- Clause in all solicitations for proposals for which a contract goal has been established;
- Clause in each prime contract, and;
- Clause in solicitations that are obtaining DBE participation through race/gender neutral means.

As a condition of bid responsiveness, the Bidder or Offeror must submit the following information with its proposal on the forms provided herein:

1. Names and addresses of the DBE firms that will participate in the contract;
2. A description of the work each DBE firm will perform;
3. Percentage/dollar amount of the participation of each DBE firm listed under 1.
4. Written statement from Bidder or Offeror that attests their commitment to use the DBE firm(s) listed under (1) to meet the Owner's project goal; and

5. If Bidder or Offeror cannot meet the advertised project DBE goal, evidence of good faith efforts undertaken by the Bidder or Offeror as described in 49 CFR part 26 Appendix A

The requirements of 49 CFR part 26 apply to this contract. It is the policy of Jefferson County to practice nondiscrimination based on race, color, sex, or national origin in the award or performance of this contract. Jefferson County encourages participation by all firms qualifying under this solicitation regardless of business size or ownership.

DBE Contract Assurances

Contracts as a result of this bid will include contract assurances per §26.13, if applicable:

The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 and the award and administration of Department of Transportation-assisted contracts. Failure by contractor to carry out these requirements is a material breach of this contract which may result in the termination of this contract or such other remedy as the owner deems appropriate, which may include but is not limited to:

1. Withholding monthly progress payments;
2. Accessing sanctions;
3. Liquidated damages; and/or
4. Disqualifying the Contractor from future bidding as non-responsible.

Prompt Payment (§26.29) – The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than 30 days from the receipt of each payment the prime contractor receives from Jefferson County. The prime contractor agrees further to return retainage payments to each subcontractor within 30 days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of Jefferson County. This clause applies to both DBE and non-DBE subcontractors.

Distracted Driving

Source: Executive Order 13513 2 CFR §200.67

DOT Order 3902.10

Applicability: The FAA encourages recipients of federal grant funds to adopt and enforce safety policies that decrease crashes by distracted drivers, including policies to ban text messaging while driving when performing work related to a grant or subgrant.

Use of Provision: The following clause will be included in all Federally assisted contracts regardless of amount:

In accordance with executive order 13513, federal leadership on reducing text messaging while driving, Andy OT order 3902.10, text messaging while driving, the FAA encourages recipients of Federal grant funds to adopt and enforce safety policies that decrease crashes by distracted drivers including policies to ban text messaging while driving when performing work related to a grant or subgrant.

In support of this initiative, Jefferson County encourages the contractor to promote policies and initiatives for its employees and other work personnel that decrease crashes by distracted drivers, including policies that ban text messaging while driving motor vehicles Papa forming work activities associated with the project. The contractor must include the substance of this clause and other sub tier contracts exceeding $3,500 that involve driving a motor vehicle and performance of work activities associated with the project.

Compliance with Federal Law, Regulations, and Executive Orders

The recipient and its contractors are required to comply with all Federal laws, regulations, and executive orders.

Applicability: FEMA recommends that all non-Federal entities place into their contracts an acknowledgement that FEMA financial assistance will be used to fund the contract along with the requirement that the contractor will

comply with all applicable Federal law, regulations, executive orders, and FEMA policies, procedures, and directives.

"This is an acknowledgement that FEMA financial assistance will be used to fund all or a portion of the contract. The contractor will comply with all applicable Federal law, regulations, executive orders, FEMA policies, procedures, and directives."

No Obligation by Federal Government

The FAA and or FEMA is not a party to any transaction between the recipient and its contractor. The FAA and or FEMA is not subject to any obligations or liable to any party for any matter relating to the contract.

Applicability: FEMA recommends that the non-Federal entity include a provision in its contract that states that the Federal Government is not a party to the contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract.

"The Federal Government is not a party to this contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract."

Program Fraud and False or Fraudulent Statements or Related Acts

Recipients must comply with the requirements of The False Claims Act (31 U.S.C. §§ 3729-3733) which prohibits the submission of false or fraudulent claims for payment to the federal government. See DHS Standard Terms and Conditions: Version 8.1 (2018); and 31 U.S.C. §§ 3801-3812, which details the administrative remedies for false claims and statements made. The non-Federal entity must include a provision in its contract that the contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to its actions pertaining to the contract.

FEMA recommends that the non-Federal entity include a provision in its contract that the contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to its actions pertaining to the contract.

"The Contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to the Contractor's actions pertaining to this contract."

SECTION 3: SPECIAL REQUIREMENTS/BID SUBMISSION INSTRUCTIONS

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

3.1 SUBMISSION OF BID.

Bidder is Responsible for Submitting:

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

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

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

Additionally, Bidder shall monitor the Jefferson County Purchasing Department Website for any addenda, additional instructions, or bid updates. https://www.co.jefferson.tx.us/Purchasing/

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

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

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

All submissions must be received by 11:00 am CT, Wednesday, August 24, 2022.

Late bids will not be accepted and will be returned unopened to the Bidder.

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

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

Jefferson County shall not be responsible for any effort or cost expended in the preparation of a response to this IFB.

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

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

Please direct questions to Jamey West, Contract Specialist via e-mail at: jwest@co.jefferson.tx.us

3.2 COURTHOUSE SECURITY.

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

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

COUNTY HOLIDAYS (2022)

~~**January 17, 2022,**~~	~~Martin Luther King, Jr. Day~~	~~Monday~~
~~**February 21, 2022,**~~	~~President's Day~~	~~Monday~~
~~**April 15, 2022,**~~	~~Good Friday~~	~~Friday~~
~~**May 30, 2022,**~~	~~Memorial Day~~	~~Monday~~
~~**July 4, 2022,**~~	~~Independence Day~~	~~Monday~~
September 5, 2022,	Labor Day	Monday
November 11, 2022,	Veteran's Day	Friday
November 24 & 25, 2022	Thanksgiving	Thursday & Friday
December 23 & 26, 2022	Christmas	Friday & Monday
January 2, 2023,	New Year's	Monday

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

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

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

3.3 PRE-BID MEETING AND WALK-THROUGH.

There will be a Pre-Bid Conference and Walk-Through at 2:00 PM CT on Thursday, August 4, 2022, at the Airport Administration Conference Room located at 5000 Jerry Ware Blvd. Beaumont, Texas 77705. This conference will be the Bidder's only opportunity to view secured areas of the project.

3.4 QUESTIONS/DEADLINE FOR QUESTIONS.

Questions may be emailed to **Jamey West, Contract Specialist** at: jwest@co.jefferson.tx.us The Deadline for asking questions or requesting additional information (in writing) **is 5:00 pm CT, Monday, August 15, 2022.**

3.5 VENDOR REGISTRATION: SYSTEM FOR AWARD MANAGEMENT.

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

In instances where a vendor has either an "Inactive" SAM Registration or is not currently registered with the System for Award Management, the Purchasing Department may *initially* accept proof (printout from the SAM website) that the vendor has begun the registration process in order for the IFB/RFQ/RFP submission to be considered as "responsive" to the specifications for the project.

However, the SAM Registration must be completed (showing "active" status, with no exclusions) prior to the award and/or execution of an agreement or contract for the project.

3.6 FORM 1295 (Texas Ethics Commission) SUBMISSSION REQUIREMENT/INSTRUCTIONS FOR BIDDERS.

All Non-Exempt Bidders are required to submit a completed FORM 1295 with bid submission.

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

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

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

A sample of a completed FORM 1295 is included on **PAGE 30**.

FORM 1295 Implementation Background:

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

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

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

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

Answer: No. The TEC filing application does not capture the date of birth or street address of the signatory and it will not appear on forms that are filed using the TEC filing application. Although the TEC does not capture the date of birth and street address of the signatory, the contracting state agency or governmental agency will have

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

FORM 1295 EXEMPTION5:

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

A completed Form 1295 is not required for:

• a sponsored research contract of an institution of higher education

• an interagency contract of a state agency or an institution of higher education

• a contract related to health and human services if: the value of the contract cannot be determined at the time the contract is executed; and any qualified vendor is eligible for the contract

• a contract with a publicly traded business entity, including a wholly owned subsidiary of the business entity

• a contract with an electric utility, as that term is defined by Section 31.002, Utilities Code

• a contract with a gas utility, as that term is defined by Section 121.001, Utilities Code

SAMPLE: FORM 1295

CERTIFICATE OF INTERESTED PARTIES — FORM 1295

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

OFFICE USE ONLY

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

YOUR FIRM NAME HERE

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

**JEFFERSON COUNTY, TEXAS*

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

BID/CONTRACT/PO NUMBER GOES HERE

4 Name of Interested Party	City, State, Country (place of business)	Nature of Interest (check applicable)	
		Controlling	Intermediary
NAME OF PERSON/PERSONS THAT OWN BUSINESS GOES HERE. MUST LIST ANY PERSON THAT DOES NOT WORK FOR THE COMPANY LISTED IN #1 THAT WILL PROFIT FROM THE BID/CONTRACT/PO			

5 **Check only if there is NO Interested Party.** ☐ **ONLY CHECK IF NO CONTROLLING OR INTERMEDIARY PARTY**

6 **UNSWORN DECLARATION** Vendor is to complete #6 - Unsworn Declaration

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

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

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

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

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

ADD ADDITIONAL PAGES AS NECESSARY

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

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

BIDDER: INSERT COMPLETED FORM 1295 BEHIND THIS PAGE.

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

1 of 1

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

OFFICE USE ONLY
CERTIFICATION OF FILING

Certificate Number:
2022-923835

Date Filed:
08/18/2022

Date Acknowledged:

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.
Brizo Construction, LLC
Houston, TX United States

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

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.
IFB 22-028/JW
Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport

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

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

6 UNSWORN DECLARATION

My name is Ronnie Vaughan, and my date of birth is 12/20/1974.

My address is 9100 Canniff St. (street), Houston (city), TX (state), 77017 (zip code), USA (country).

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

Executed in Harris County, State of Texas, on the 23 day of August (month), 2022 (year).

Signature of authorized agent of contracting business entity
(Declarant)

BIDDER: INSERT PROOF OF SYSTEM FOR AWARD MANAGEMENT (SAM) REGISTRATION PROOF HERE.

SAM.GOV®

BRIZO CONSTRUCTION, LLC

Unique Entity ID	CAGE / NCAGE	Purpose of Registration
T9FDJHHPJKV8	**80BN5**	**All Awards**
Registration Status	Expiration Date	
Active Registration	**Oct 13, 2022**	
Physical Address	Mailing Address	
9100 Canniff ST STE 100 **Houston, Texas 77017-6522** **United States**	**9100 Canniff ST STE 100** **Houston, Texas 77017-6522** **United States**	

Business Information

Doing Business as	Division Name	Division Number
(blank)	**(blank)**	**(blank)**
Congressional District	State / Country of Incorporation	URL
Texas 29	**Texas / United States**	**(blank)**
MPIN		
*****Con2**		

Registration Dates

Activation Date	Submission Date	Initial Registration Date
Jul 19, 2021	**Jul 15, 2021**	**Dec 1, 2017**

Entity Dates

Entity Start Date	Fiscal Year End Close Date
Aug 7, 2017	**Dec 31**

Immediate Owner

CAGE	Legal Business Name
(blank)	**(blank)**

Highest Level Owner

CAGE	Legal Business Name
(blank)	**(blank)**

Executive Compensation

In your business or organization's preceding completed fiscal year, did your business or organization (the legal entity to which this specific SAM record, represented by a Unique Entity ID, belongs) receive both of the following: 1. 80 percent or more of your annual gross revenues in U.S. federal contracts, subcontracts, loans, grants, subgrants, and/or cooperative agreements and 2. $25,000,000 or more in annual gross revenues from U.S. federal contracts, subcontracts, loans, grants, subgrants, and/or cooperative agreements?

No

Does the public have access to information about the compensation of the senior executives in your business or organization (the legal entity to which this specific SAM record, represented by a Unique Entity ID, belongs) through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986?

Not Selected

Proceedings Questions

Is your business or organization, as represented by the Unique Entity ID on this entity registration, responding to a Federal procurement opportunity that contains the provision at FAR 52.209-7, subject to the clause in FAR 52.209-9 in a current Federal contract, or applying for a Federal grant opportunity which contains the award term and condition described in 2 C.F.R. 200 Appendix XII?

No

Does your business or organization, as represented by the Unique Entity ID on this specific SAM record, have current active Federal contracts and/or grants with total value (including any exercised/unexercised options) greater than $10,000,000?

Not Selected

Within the last five years, had the business or organization (represented by the Unique Entity ID on this specific SAM record) and/or any of its principals, in connection with the award to or performance by the business or organization of a Federal contract or grant, been the subject of a Federal or State (1) criminal proceeding resulting in a conviction or other acknowledgment of fault; (2) civil proceeding resulting in a finding of fault with a monetary fine, penalty, reimbursement, restitution, and/or damages greater than $5,000, or other acknowledgment of fault; and/or (3) administrative proceeding resulting in a finding of fault with either a monetary fine or penalty greater than $5,000 or reimbursement, restitution, or damages greater than $100,000, or other acknowledgment of fault?

Not Selected

Exclusion Summary

Active Exclusions Records?

No

SAM Search Authorization

I authorize my entity's non-sensitive information to be displayed in SAM public search results:

Yes

Entity Types

Business Types

Entity Structure	Entity Type	Organization Factors
Other	**Business or Organization**	**Limited Liability Company**

Profit Structure
For Profit Organization

Socio-Economic Types

Woman Owned Business

Check the registrant's Reps & Certs, if present, under FAR 52.212-3 or FAR 52.219-1 to determine if the entity is an SBA-certified HUBZone small business concern. Additional small business information may be found in the SBA's Dynamic Small Business Search if the entity completed the SBA supplemental pages during registration.

Financial Information

Accepts Credit Card Payments	Debt Subject To Offset
No	**No**

EFT Indicator	CAGE Code
0000	**80BN5**

Electronic Funds Transfer

Account Type	Routing Number	Lock Box Number
Checking	*******0256**	**(blank)**

Financial Institution	Account Number
TEXAS FIRST BANK TEXAS CITY	*******897**

Automated Clearing House

Phone (U.S.)	Email	Phone (non-U.S.)
4696877430	**jose.lopez@brizoconstruction.com**	**(blank)**

Fax
(blank)

Remittance Address

9100 Canniff Street
Suite 100
Houston, Texas 77017
United States

Taxpayer Information

EIN	Type of Tax	Taxpayer Name
*******8708**	**Applicable Federal Tax**	**Brizo Construction LLC**

Tax Year (Most Recent Tax Year)	Name/Title of Individual Executing Consent	TIN Consent Date
2020	**Corporate Controls Manager**	**Jul 15, 2021**

Address	Signature
9100 Canniff ST STE 100 **Houston, Texas 77017**	**Jose Oliverio Lopez Jr**

Points of Contact

Accounts Receivable POC

Jose Lopez, Corporate Controls Manager
jose.lopez@brizoconstruction.com
4093164764

Electronic Business

Thomas Sheppard, Vice President
tom.sheppard@brizoconstruction.com
4093164762

9100 Canniff Street
Houston, Texas 77017
United States

Government Business

Jose Lopez, Corporate Controls Manager
jose.lopez@brizoconstruction.com
4093164762

9100 Canniff Street
Houston, Texas 77017
United States

Sole Proprietorship POC

Jose Lopez, Accounting Manager
jose.lopez@brizoconstruction.com
4093164762

Security Information

Company Security Level
(blank)

Highest Level Employee Security Level
(blank)

Service Classifications

NAICS Codes

Primary	NAICS Codes	NAICS Title
Yes	236115	New Single-Family Housing Construction (Except For-Sale Builders)
	236116	New Multifamily Housing Construction (Except For-Sale Builders)
	236117	New Housing For-Sale Builders
	236118	Residential Remodelers
	238110	Poured Concrete Foundation And Structure Contractors
	238130	Framing Contractors
	238140	Masonry Contractors
	238150	Glass And Glazing Contractors
	238160	Roofing Contractors
	238170	Siding Contractors
	238310	Drywall And Insulation Contractors
	238910	Site Preparation Contractors

Size Metrics

IGT Size Metrics

Annual Revenue (from all IGTs)
(blank)

Worldwide

Annual Receipts (in accordance with 13 CFR 121)
$90,000,000.00

Number of Employees (in accordance with 13 CFR 121)
69

Location

Annual Receipts (in accordance with 13 CFR 121)
(blank)

Number of Employees (in accordance with 13 CFR 121)
(blank)

Industry-Specific

Barrels Capacity	Megawatt Hours	Total Assets
(blank)	**(blank)**	**(blank)**

Electronic Data Interchange (EDI) Information

This entity did not enter the EDI information

Disaster Response

Yes, this entity appears in the disaster response registry.

Yes, this entity require bonding to bid on contracts.

Bonding Levels	Dollars
Construction Aggregate	**$30,000,000.00**
Construction Per Contract	**$5,000,000.00**

States	Counties	Metropolitan Statistical Areas
Any	**(blank)**	**(blank)**

3.7 MULTIPLE VENDOR AWARD.

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

3.8 DELIVERY.

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

3.9 PAYMENT.

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

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

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

3.10 USAGE REPORTS.

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

3.11 INSURANCE.

The contractor (including any and all subcontractors as defined in Section 3.12.3 below) shall, at all times during the term of this contract, maintain insurance coverages with not less than the type and requirements shown below. Such insurance is to be provided at the sole cost of the contractor. These requirements do not establish limits of the contractor's liability.

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

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

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

Minimum Insurance Requirements:

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

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

Workers' Compensation Statutory Coverage (See Section 9 Below)

3.12 WORKERS' COMPENSATION INSURANCE.

3.12.1 Definitions:

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

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

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

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

3.12.3 The Contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract – **refer to Section 3.11 above**.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

3.12.9.7 Contractually require each person with whom it contracts to perform as required by paragraphs **3.12.1. – 3.12.7**, with the certificates of coverage to be provided to the person for whom they are providing services.

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

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

BIDDER: INSERT COPY OF CERTIFICATE OF INSURANCE (COI) BEHIND THIS PAGE.

Note: For bid purposes, a general COI will suffice.

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

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 08/18/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME: Nichelle Alger	
Volmert & Associates 11700 Preston Rd Ste 660-205 Dallas TX 75230	PHONE (A/C, No, Ext): (817) 756-6908	FAX (A/C, No): (866) 732-9327
	E-MAIL ADDRESS: service@volmertins.com	

INSURED	INSURER(S) AFFORDING COVERAGE	NAIC #
BRIZO CONSTRUCTION, LLC 9100 CANNIFF STREET SUITE 200 HOUSTON TX 77017	INSURER A: Navigators Insurance Company	42307
	INSURER B: State Auto Manual	25135
	INSURER C: Colony Insurance Company	39993
	INSURER D: American Interstate Insurance Company of Texas	12228
	INSURER E: Travelers Lloyds Insurance Co	41564
	INSURER F:	

COVERAGES **CERTIFICATE NUMBER:** 2022 - 2023 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	[X] COMMERCIAL GENERAL LIABILITY [ ] CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: [ ] POLICY [X] PRO-JECT [ ] LOC [ ] OTHER:			HO22CGLZ05A8MIC	05/18/2022	05/18/2023	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG [ ]	$ 1,000,000 $ 50,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $
B	AUTOMOBILE LIABILITY [X] ANY AUTO [ ] OWNED AUTOS ONLY [ ] SCHEDULED AUTOS [ ] HIRED AUTOS ONLY [ ] NON-OWNED AUTOS ONLY			10098982CA	10/16/2021	10/16/2022	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) FEEC	$ 1,000,000 $ $ $ $
C	[X] UMBRELLA LIAB [ ] OCCUR [ ] EXCESS LIAB [ ] CLAIMS-MADE [ ] DED [ ] RETENTION $			AR6461270	05/18/2022	05/18/2023	EACH OCCURRENCE AGGREGATE [ ]	$ 2,000,000 $ 2,000,000 $
D	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N [N] If yes, describe under DESCRIPTION OF OPERATIONS below	N/A		AVWCTX3091632022	07/10/2022	07/10/2023	[ ] PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000
E	CONTRACTORS EQUIPMENT			QT-660-6P972891-TLC-22	02/17/2022	02/17/2023	MAX VALUE LEASED/RENTED DEDUCTIBLE	699,458 200,000 1,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER

JEFFERSON COUNTY
1149 PEARL STREET
1ST FLOOR
BEAUMONT TX 77701

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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SECTION 4: MINIMUM SPECIFICATIONS

The following requirements and specifications supersede General Bid Requirements where applicable. Any questions relating to bid submission or bid item specifications requirements should be directed to Jamey West, Contract Specialist via email at: jwest@co.jefferson.tx.us Please reference Bid Number: IFB 22-028/JW.

SCOPE OF PROJECT:

Jefferson County is soliciting bids for the Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport located adjacent to and south of the BPT air traffic control tower (ATCT). Fuel supply trucks enter the property through a secured gate just east of the fuel farm. The pavement at the fuel farm of the Jack Brooks Regional Airport has ongoing deterioration and needs to be rehabilitated or replaced. The estimated PCI of the pavement is approximately 40 or less.

The fuel farm concrete panels will be replaced in such a way to reduce the down time of the fueling area. The panel replacement will be coordinated to not impact the ability of the fuel farm to continue to provide fuel to aircraft using the airport. The subgrade must be adequately tested (density, Soil type, and CBR) to determine if it is sufficient to support the pavement surface. The scope of the project includes: • Full depth panel replacement of concrete at fuel loading and unloading area. • Full replacement of the containment wall. • Repair of underground drainage failure beneath pavement, if necessary. The finished product will meet NFPA 407, DOT, and EPA standards for fuel transfer area containment.

TECHNICAL SPECIFICATIONS:

Technical Specifications for this project may be found starting on **Page 61**.

BID FORM:

The BID FORM for this project may be found on **Page 40.**

BIDDER INFORMATION FORM

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

Bid Number & Name: Invitation for Bid (IFB 22-028/JW)
Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport

Bidder's Company/Business Name: Brizo Construction LLC

Bidder's TAX ID Number: [redacted]

***If Applicable*:** **DBE Vendor No.** 1822408708200 **DBE Vendor No.** _____

Contact Person: Kevin Jenkins **Title:** Director of Business Development

Phone Number (with area code): 409-316-4764

Alternate Phone Number if available (with area code): 917-554-1357

Fax Number (with area code): NA

Email Address: kevin.jenkins@brizoconstruction.com

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

9100 Canniff St.
Address
Houston, TX 77017
City, State, Zip Code

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

BIDDER: INSERT BID SURETY BEHIND THIS PAGE.

Document A310™ – 2010

Conforms with The American Institute of Architects AIA Document 310

Bid Bond

CONTRACTOR:
(Name, legal status and address)
Brizo Construction, LLC

9100 Canniff Street
Houston, TX 77017

OWNER:
(Name, legal status and address)
Jefferson County Purchasing Department
1149 Pearl St, 1st Floor
Beaumont, TX 77701

SURETY:
(Name, legal status and principal place of business)
Berkley Insurance Company
475 Steamboat Road
Greenwich, CT 06830
Mailing Address for Notices
475 Steamboat Road
Greenwich, CT 06830

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

BOND AMOUNT: $ Five Percent Of The Total Amount Bid (5%)

PROJECT:
(Name, location or address, and Project number, if any)
Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport Bid No. IFB 22-028/JW

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this 24th day of August, 2022

(Witness)

Brizo Construction, LLC
(Principal) (Seal)

(Title)

(Witness) Kristi Messer

Berkley Insurance Company
(Surety) (Seal)

(Title) William G. Griffin, Attorney-in-Fact

No. BI-10137b

POWER OF ATTORNEY
BERKLEY INSURANCE COMPANY
WILMINGTON, DELAWARE

NOTICE: The warning found elsewhere in this Power of Attorney affects the validity thereof. Please review carefully.

KNOW ALL MEN BY THESE PRESENTS, that BERKLEY INSURANCE COMPANY (the "Company"), a corporation duly organized and existing under the laws of the State of Delaware, having its principal office in Greenwich, CT, has made, constituted and appointed, and does by these presents make, constitute and appoint: ***Michael Marino or William G. Griffin of American Global, LLC of Miami, FL*** its true and lawful Attorney-in-Fact, to sign its name as surety only as delineated below and to execute, seal, acknowledge and deliver any and all bonds and undertakings, with the exception of Financial Guaranty Insurance, providing that no single obligation shall exceed Fifty Million and 00/100 U.S. Dollars (U.S.$50,000,000.00), to the same extent as if such bonds had been duly executed and acknowledged by the regularly elected officers of the Company at its principal office in their own proper persons.

This Power of Attorney shall be construed and enforced in accordance with, and governed by, the laws of the State of Delaware, without giving effect to the principles of conflicts of laws thereof. This Power of Attorney is granted pursuant to the following resolutions which were duly and validly adopted at a meeting of the Board of Directors of the Company held on January 25, 2010:

RESOLVED, that, with respect to the Surety business written by Berkley Surety, the Chairman of the Board, Chief Executive Officer, President or any Vice President of the Company, in conjunction with the Secretary or any Assistant Secretary are hereby authorized to execute powers of attorney authorizing and qualifying the attorney-in-fact named therein to execute bonds, undertakings, recognizances, or other suretyship obligations on behalf of the Company, and to affix the corporate seal of the Company to powers of attorney executed pursuant hereto; and said officers may remove any such attorney-in-fact and revoke any power of attorney previously granted; and further

RESOLVED, that such power of attorney limits the acts of those named therein to the bonds, undertakings, recognizances, or other suretyship obligations specifically named therein, and they have no authority to bind the Company except in the manner and to the extent therein stated; and further

RESOLVED, that such power of attorney revokes all previous powers issued on behalf of the attorney-in-fact named; and further

RESOLVED, that the signature of any authorized officer and the seal of the Company may be affixed by facsimile to any power of attorney or certification thereof authorizing the execution and delivery of any bond, undertaking, recognizance, or other suretyship obligation of the Company; and such signature and seal when so used shall have the same force and effect as though manually affixed. The Company may continue to use for the purposes herein stated the facsimile signature of any person or persons who shall have been such officer or officers of the Company, notwithstanding the fact that they may have ceased to be such at the time when such instruments shall be issued.

IN WITNESS WHEREOF, the Company has caused these presents to be signed and attested by its appropriate officers and its corporate seal hereunto affixed this 11th day of October, 2021.

Attest:

(Seal) By _____
Ira S. Lederman
Executive Vice President & Secretary

Berkley Insurance Company

By _____
Jeffrey M. Hafter
Senior Vice President

WARNING: THIS POWER INVALID IF NOT PRINTED ON BLUE "BERKLEY" SECURITY PAPER.

STATE OF CONNECTICUT)
) ss:
COUNTY OF FAIRFIELD)

Sworn to before me, a Notary Public in the State of Connecticut, this 11th day of October, 2021, by Ira S. Lederman and Jeffrey M. Hafter who are sworn to me to be the Executive Vice President and Secretary, and the Senior Vice President, respectively, of Berkley Insurance Company.

MARIA C RUBORACEK
NOTARY PUBLIC
CONNECTICUT
MY COMMISSION EXPIRES
APRIL 30, 2024

_____
Notary Public, State of Connecticut

CERTIFICATE

I, the undersigned, Assistant Secretary of BERKLEY INSURANCE COMPANY, DO HEREBY CERTIFY that the foregoing is a true, correct and complete copy of the original Power of Attorney; that said Power of Attorney has not been revoked or rescinded and that the authority of the Attorney-in-Fact set forth therein, who executed the bond or undertaking to which this Power of Attorney is attached, is in full force and effect as of this date.

Given under my hand and seal of the Company, this 11th day of October, 2021

(Seal)

_____
Vincent P. Forte

WARNING: Any unauthorized reproduction or alteration of this document is prohibited. This power of attorney is void unless seals are readable and the certification seal at the bottom is embossed. The background imprint, warning and verification instructions (on reverse) must be in blue ink.

BID FORM

UNIT PRICES: This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures. **All quantities are estimated. The contractor will be paid based upon actual quantities as verified by the Owner**

DESCRIPTION:	☒ Base Bid			
REF. NO. 1	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Mobilization C-105	1	LS	$13,000.00	$13,000.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 2	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Construction Safety (Barricades, Signs, and Traffic Handling) SS-120	1	LS	$10,000.00	$10,000.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 3	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Allowance for Storm Sewer Pipe Replacement D-701a	1	LS	$4,000.00	$4,000.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 4	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Install PVC Pipe (2 Inch) D-701b	6	LF	$80.00	$480.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 5	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Sawcut, Remove and Dispose Existing Concrete Pavement Full Depth (8 Inches) P-101-5.1a	602	SY	$65.00	$39,130.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 6	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Sawcut, Remove and Dispose Existing Asphalt Ramp P-101-5.1b	70	SY	$60.00	$4,200.00

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

BID FORM (CONTINUED)

DESCRIPTION:	☒ Base Bid			
REF. NO. 7	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Sawcut, Remove and Dispose Existing 6" Vertical Curb P-101-5.1c	302	LF	$10.00	$3,020.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 8	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Embankment in Place P-152-4.2	30	CY	$120.00	$3,600.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 9	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Unsuitable Excavation P-152-4.4	30	CY	$100.00	$3,000.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 10	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Lime Treated Subgrade (8 inches) P-152-8.1	602	SY	$60.00	$36,120.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 11	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Lime P-152-8.2	31	TON	$300.00	$9,300.00

DESCRIPTION:	☒ Base Bid			
REF. NO.12	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Reinforced Concrete Pavement (8 Inches) P-501-8.1a	526	SY	$216.00	$133,616.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 13	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Reinforced Concrete Pavement Ramp (8-12 Inches) P-501-8.1b	76	SY	$240.00	$18,240.00

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

BID FORM (CONTINUED) NA

DESCRIPTION:	☐ Base Bid			
REF. NO. 14	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Biodegradable Erosion Control Logs (Install) TXDOT 506-6.6.1	200	LF		

DESCRIPTION:	☐ Base Bid			
REF. NO. 15	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Biodegradable Erosion Control Logs (Removal) TXDOT 506-6.6.2	200	LF		

DESCRIPTION:	☐ Base Bid			
REF. NO. 16	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
4" Concrete Curb TXDOT 529	278	LF		

DESCRIPTION:	☐ Base Bid			
REF. NO. 17	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Furnish and Install 4' Steel Bollards	2	EA		

DESCRIPTION:	☐ Base Bid			
REF. NO. 18	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Install 6' Rubber Speed Bumps	4	EA		

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

BIDDER ACKNOWLEDGEMENT OF BID ADDENDA (IF APPLICABLE):

Addendum 1 _____ Date Received_____

Addendum 2 _____ Date Received_____

Addendum 3 _____ Date Received_____

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

BID FORM (CONTINUED) (REPLACEMENT PAGE 42)

DESCRIPTION:	☒ Base Bid			
REF. NO. 14	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Biodegradable Erosion Control Logs (Install) TXDOT 506-6.6.1	200	LF	$10.00	$2,000.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 15	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Biodegradable Erosion Control Logs (Removal) TXDOT 506-6.6.2	200	LF	$2.00	$400.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 16	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
4" Concrete Curb TXDOT 529	278	LF	$25.00	$6,950.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 17	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Furnish and Install 4' Steel Bollards	2	EA	$750.00	$1,500.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 18	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Install 6' Rubber Speed Bumps	4	EA	$450.00	$1.800.00

DESCRIPTION:	☒ Base Bid
	TOTAL BID PRICE *($ XXX,XXX.XX)*
TOTAL BID	$270,356.00

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

BIDDER ACKNOWLEDGEMENT OF BID ADDENDA (IF APPLICABLE):

Addendum 1	✓	Date Received	8/1/22
Addendum 2	✓	Date Received	8/17/22
Addendum 3	_____	Date Received	_____
Addendum 4	_____	Date Received	_____
Addendum 5	_____	Date Received	_____

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

VENDOR REFERENCES FORM

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

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

REFERENCE ONE

Government/Company Name: Texas General Land Office/Taylor Engineering

Address: 10199 Southside Blvd Suite 310, Jacksonville, FL 32256

Contact Person and Title: Jonathan Brumfield, Project Engineer

Phone: 904-731-7040 Fax: NA

Email Address: jbrumfield@tarylorengineering.com Contract Period: 08/01/2019-08/12/2020

Scope of Work: Bolivar Rollover Pass Closure

REFERENCE TWO

Government/Company Name: Brazoria County/RPS Engineering

Address: 575 N Dairy Ashford Rd, Ste 700, Houston, TX 77079

Contact Person and Title: Khaled Elhalabi, Engineer

Phone: 281-902-3528 Fax: NA

Email Address: khaled.elhalabi@rpsgroup.com Contract Period: 03/15/21-06/11/21

Scope of Work: Holiday Lakes Drainage Improvements Project

REFERENCE THREE

Government/Company Name: Texas General Land Office/H2Bravo

Address: 1509 Highland Road, Suite 100, Baton Rouge, LA 70802

Contact Person and Title: Heather Brothers, Program Manager

Phone: 225-907-8856 Fax: NA

Email Address: heather@h2bravo.com Contract Period: 10/01/2019-Current

Scope of Work: Homeowner's Assistance Program

SIGNATURE PAGE

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

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

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

The undersigned agrees, if this bid is accepted, to furnish any and all items upon which prices are offered, at the price and upon the terms and conditions contained in the Invitation for Bid, Conditions of Bidding, Terms of Contract, and Specifications and all other items made a part of the accepted contract.

The undersigned affirms that they are duly authorized to execute the contract, that this company, corporation, firm, partnership or individual has not prepared this bid in collusion with any other Bidder, and that the contents of this bid as to prices, terms or conditions of said bid have not been communicated by the undersigned nor by any employee or agent to any other Bidder or to any other person(s) engaged in this type of business prior to the official opening of this bid. And further, that neither the Bidder nor their employees nor agents have been for the past six (6) months directly nor indirectly concerned in any pool or agreement or combination to control the price of goods or services on, nor to influence any person to bid or not to bid thereon.

Brizo Construction LLC	
Bidder (Entity Name)	Signature
9100 Canniff St.	Ronnie Vaughan
Street & Mailing Address	Print Name
Houston, TX 77017	08/23/2022
City, State & Zip	Date Signed
409-316-4764	NA
Telephone Number	Fax Number
ronnie@brizoconstruction.com	
E-mail Address	

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

BYRD ANTI-LOBBYING CERTIFICATION

Certification for Contracts, Grants, Loans, and Cooperative Agreements-The undersigned certifies, to the best of his or her knowledge and belief, that:

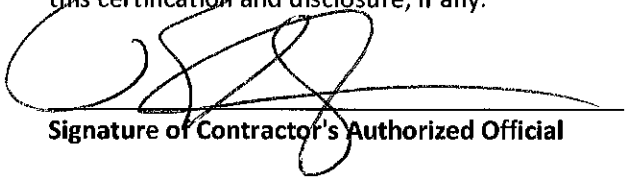
No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor Brizo Construction LLC certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.



Signature of Contractor's Authorized Official

Ronnie Vaughan, Chief Operating Officer

Name and Title of Contractor's Authorized Official

08/23/2022

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

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LOCAL GOVERNMENT OFFICER
CONFLICTS DISCLOSURE STATEMENT – OFFICE USE ONLY

LOCAL GOVERNMENT OFFICER CONFLICTS DISCLOSURE STATEMENT

FORM CIS

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This is the notice to the appropriate local governmental entity that the following local government officer has become aware of facts that require the officer to file this statement in accordance with Chapter 176, Local Government Code.

OFFICE USE ONLY

Date Received

1 Name of Local Government Officer

NA

2 Office Held

NA

3 Name of vendor described by Sections 176.001(7) and 176.003(a), Local Government Code

Brizo Construction LLC

4 Description of the nature and extent of employment or other business relationship with vendor named in item 3

NA

5 List gifts accepted by the local government officer and any family member, if aggregate value of the gifts accepted from vendor named in item 3 exceeds $100 during the 12-month period described by Section 176.003(a)(2)(B).

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

(attach additional forms as necessary)

6 AFFIDAVIT

I swear under penalty of perjury that the above statement is true and correct. I acknowledge that the disclosure applies to each family member (as defined by Section 176.001(2), Local Government Code) of this local government officer. I also acknowledge that this statement covers the 12-month period described by Section 176.003(a)(2)(B), Local Government Code.

_____
Signature of Local Government Officer

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said _____, this the _____ day of _____, 20_____, to certify which, witness my hand and seal of office.

_____
Signature of officer administering oath | Printed name of officer administering oath | Title of officer administering oath

Adopted 8/7/2015

THIS FORM IS FOR OFFICE USE ONLY

DEBARMENT/SUSPENSION CERTIFICATION

Non-Federal entities and contractors are subject to the debarment and suspension regulations implementing Executive Order 12549, Debarment and Suspension (1986) and Executive Order 12689, Debarment and Suspension (1989) at 2 C.F.R. Part 180 and the Department of Homeland Security's regulations at 2 C.F.R. Part 3000 (No procurement Debarment and Suspension).

This requirement applies to all FEMA grant and cooperative agreement programs.

Federal Executive Order (E .O.) 12549 "Debarment" requires that all contractors receiving individual awards, using federal funds, and all sub recipients certify that the organization and its principals are not debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded by any Federal department or agency from doing business with the Federal Government. By signing this document, you certify that your organization and its principals are not debarred. Failure to comply or attempts to edit this language may disqualify your bid. Information on debarment is available at the following websites:

www.sam.gov and https://acguisition.qov/far/index.html (see section 52.209-6).

Brizo Construction LLC

The Contractor certifies or affirms by your signature that neither you nor your principal is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.

Signature of Contractor's Authorized Official

Ronnie Vaughan, Chief Operating Officer

Name and Title of Contractor's Authorized Official

08/23/2022

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

CIVIL RIGHTS COMPLIANCE PROVISIONS

EQUAL EMPLOYMENT OPPORTUNITY (Equal Opportunity Clause)

(For all awarded contracts that meet the definition of "federally assisted construction contract" provided in 41 CFR Part 60-1.3)

During the performance of this contract, the contractor agrees as follows:

The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or order this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

Signature of Contractor's Authorized Official

Ronnie Vaughan, Chief Operating Officer

Name and Title of Contractor's Authorized Official

08/23/2022

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

GOOD FAITH EFFORT (GFE) DETERMINATION CHECKLIST

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☒ No

Instructions: In order to determine if a "Good Faith Effort" was made in soliciting DBEs for subcontracting opportunities, the following checklist and supporting documentation shall be completed by the Prime Contractor/Consultant and returned with the Prime Contractor/ Consultant's bid. This list contains the **minimum** efforts that should be put forth by the Prime Contractor/Consultant when attempting to achieve or exceed the goals of DBE Subcontractor participation. The Prime Contractor/Consultant may extend his/her efforts in soliciting DBE Subcontractor participation beyond what is listed below.

Did the Prime Contractor/Consultant . . .?

☐ Yes	☒ No	1. To the extent practical, and consistent with standard and prudent industry standards, divide the contract work into the smallest feasible portions, to allow for maximum DBE Subcontractor participation?
☐ Yes	☒ No	2. **Notify** in writing a reasonable number of DBEs, allowing sufficient time for effective participation of the planned work to be subcontracted?
☐ Yes	☒ No	3. **Provide** DBEs that were genuinely interested in bidding on a subcontractor, adequate information regarding the project (i.e., plans, specifications, scope of work, bonding and insurance requirements, and a point of contract within the Prime Contractor/Consultant's organization)?
☐ Yes	☒ No	4. **Negotiate** in good faith with interested DBEs, and not reject bids from DBEs that qualify as lowest and responsive Bidders?
☐ Yes	☒ No	5. **Document** reasons DBEs were rejected? Was a written rejection notice, including the reason for rejection, provided to the rejected DBEs?
☒ Yes	☐ No	6. If Prime Contractor/Consultant has zero (0) DBE participation, **please explain the reasons why.** Brizo Construction is self-performing all work as a HUB.

If "No" was selected, please explain, and include any pertinent documentation with your bid.
If necessary, please use a separate sheet to answer the above questions.

Ronnie Vaughan
Printed Name of Authorized Representative

Signature

Chief Operating Officer
Title

08/23/2022
Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

NOTICE OF INTENT (NOI) TO SUBCONTRACT WITH DISADVANTAGED BUSINESS ENTERPRISE (DBE)

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☒ No

Instructions for Prime Contractor/Consultant: Bidder shall submit this form with the bid; however, the information below may be submitted after contract award, but prior to beginning performance on the contract. Please submit one form for each DBE Subcontractor/Subconsultant with proper signatures, per the terms and conditions of your contract.

Contractor Name: Brizo Construction LLC DBE: ☒ Yes ☐ No

Address: 9100 Canniff St., Houston, TX 77017
Street City State Zip

Phone (with area code): 409-316-4764 Fax (with area code): NA

Project Title & No.: Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional IFB 22-028/JW

Prime Contract Amount: $270,356.00

DBE Subcontractor Name: NA

DBE Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg. & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Ronnie Vaughan		08/23/2022
Printed Name of Contractor Representative	Signature of Representative	Date
NA		
Printed Name of DBE	Signature of Representative	Date

Note: Nothing on this Notice of Intent Form is intended to confer any rights, expressed or implied, to any third parties.

Pre-Approval for Subcontractor Substitutions must be obtained from the Jefferson County Purchasing Agent's Representative. The "DBE Subcontractor/Subconsultant Change Form" must be completed and faxed to 409-835-8456.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

DISADVANTAGED BUSINESS ENTERPRISE (DBE)
SUBCONTRACTING PARTICIPATION DECLARATION FORM

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☒ No

Prime Contractor: Brizo Construction LLC DBE: ☒ Yes ☐ No

DBE Status (Gender & Ethnicity): Women Owned Business/HUB Certified in Texas

Address: 9100 Canniff St. (Street) Houston (City) TX (State) 77017 (Zip)

Phone (with area code): 409-316-4764 Fax (with area code): NA

Project Title & No.: Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional IFB/RFP No.: IFB 22-028/JW

Total Contract: $ 270,356.00 Total DBE Subcontract(s): $ 270,356.00

Construction DBE Goals: 12.8% MBE: 0 % 12.6% WBE: 100 %

Sub-goals: 1.7 African American, 9.7% Hispanic, 0.7% Native American, 0.8% Asian American.
Use these goals as a guide to diversify.

FOR DBE OFFICE USE ONLY:

Verification date DBE Program Office reviewed and verified DBE Sub information Date: _____ Initials: _____

PART I. DBE SUBCONTRACTOR DISCLOSURE

DBE Subcontractor Name: NA

DBE Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Texas Bldg. & Procurement Comm. ☐ Texas Unified Certification Prog.

Address: _____ (Street) _____ (City) _____ (State) _____ (Zip)

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

DISADVANTAGED BUSINESS ENTERPRISE (DBE) SUBCONTRACTING PARTICIPATION DECLARATION FORM

DBE Subcontractor Disclosure

PART I: Continuation Sheet (Duplicate as Needed)

DBE Subcontractor Name: NA

DBE Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg. & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: ISB
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

DBE Subcontractor Name: NA

DBE Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg. & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

All DBE Subcontractor Participation may be verified with the DBE Subcontractor(s) listed on Part I.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

DISADVANTAGED BUSINESS ENTERPRISE (DBE)
SUCONTRACTING PARTICIPATION DECLARATION FORM

PART II: STATEMENT OF NON-COMPLIANCE FOR NOT MEETING DBE SUBCONTRACTING GOALS

Please complete Good Faith Effort (GFE) Checklist and attach any supporting documentation.

Our firm was unable to meet the DBE goals for this project for the following reasons:

- ☐ All subcontractors to be utilized are "Non-DBEs." *(Complete Part III)*
- ☐ DBEs were solicited but did not respond.
- ☐ DBEs solicited were not competitive.
- ☐ DBEs were unavailable for the following trade(s):
- ☒ Other: self-performing

Was the Jefferson County DBE Office contacted for assistance in locating DBEs? ☐ Yes ☒ No

PART III: DISCLOSURE OF OTHER "NON-DBE" SUBCONTRACTS

The Bidder shall use this area to provide a listing of all "Non-DBE" Subcontractors, including suppliers, who will perform under this project. A list of those "Non-DBE" Subcontractors the Bidder selects, after bid submission, shall be provided to the Purchasing Office not later than five (5) calendar days after being notified that Bidder is the apparent low Bidder. A list of those "Non-DBE" Subcontractors that are selected after contract award must be provided **immediately** after their selection.

Subcontractor Name: NA

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: NA

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

DISADVANTAGED BUSINESS ENTERPRISE (DBE)
SUBCONTRACTING PARTICIPATION DECLARATION FORM

PAGE 4 OF 4

Subcontractor Name: NA

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: NA

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

I hereby certify that I have read the *DBE Program Instructions and Information*, truthfully completed all applicable parts of this form, and **attach any necessary support documentation as required**. I fully understand that intentionally falsifying information on this document may result in my not receiving a contract award or termination of any resulting contract.

Name (print or type): Ronnie Vaughan

Title: Chief Operating Officer

Signature: _____

Date: 08/23/2022

E-mail address: ronnie@brizoconstruction.com

Contact person that will be in charge of invoicing for this project:

Name (print or type): Cameron Tobey

Title: Controller

Date: 08/23/2022

E-mail address: cameron.tobey@brizoconstruction.com

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

RESIDENCE CERTIFICATION/TAX FORM

Pursuant to Texas Government Code §2252.001 *et seq.*, as amended, Jefferson County requests Resident Certification. §2252.001 *et seq.* of the Government Code provides some restrictions on the awarding of governmental contracts; pertinent provisions of §2252.001 are stated below:

(3) "Non-resident Bidder" refers to a person who is not a resident.

(4) "Resident Bidder" refers to a person whose principal place of business is in this state, including a contractor whose ultimate parent company or majority owner has its principal place of business in this state.

☒ I certify that Brizo Construction LLC [company name] is a Resident Bidder of Texas as defined in Government Code §2252.001.

☐ I certify that _____ [company name] is a Nonresident Bidder as defined in Government Code §2252.001 and our principal place of business is _____ _____ (city and state).

Taxpayer Identification Number (T.I.N.):	[redacted]
Company Name submitting bid/proposal:	Brizo Construction LLC
Mailing address:	9100 Canniff St., Houston, TX 77017
If you are an individual, list the names and addresses of any partnership of which you are a general partner: NA	

Property: List all taxable property owned by you or above partnerships in Jefferson County.

Jefferson County Tax Acct. No.*	Property address or location**
70000000008837500000	10925 Eastex Fwy, Beaumont, TX 77708

* This is the property amount identification number assigned by the Jefferson County Appraisal District.

** For real property, specify the property address or legal description. For business property, specify the address where the property is located. For example, office equipment will normally be at your office, but inventory may be stored as a warehouse or other location.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

HOUSE BILL 89 VERIFICATION

I, Ronnie Vaughan, the undersigned representative of (company or business name) Brizo Construction LLC (heretofore referred to as company) being an adult over the age of eighteen (18) years of age, after being duly sworn by the undersigned notary, do hereby depose and verify under oath that the company named above, under the provisions of Subtitle F, Title 10, Government Code Chapter 2270:

1. Does not boycott Israel currently; and
2. Will not boycott Israel during the term of the contract.

Pursuant to Section 2270.002, Texas Government Code:

1. "**Boycott Israel**" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made ordinary business purposes; and

2. "**Company**" means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or a limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of those entities or business association that exist to make a profit.

Signature of Company Representative

08/23/2022
Date

On this 23rd day of August, 2022, personally appeared

Ronnie Vaughan, the above-named person, who after by me being duly sworn, did swear and confirm that the above is true and correct.

Notary Seal

STEPHANIE DAVIDSON
Notary Public, State of Texas
Comm. Expires 11-01-2025
Notary ID 128495555

SDavidson
Notary Signature

08/23/2022
Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

SENATE BILL 252 CERTIFICATION

On this day, I, Deborah L. Clark, Purchasing Agent for Jefferson County, Texas, pursuant to Texas Government Code, Chapter 2252, Section 2252.152 and Section 2252.153, certify that I did review the website of the Comptroller of the State of Texas concerning the listing of companies that is identified under Section 806.051, Section 807.051, or Section 2253.253 and I have ascertained that the below named company is not contained on said listing of companies which do business with Iran, Sudan, or any Foreign Terrorist Organization.

Brizo Construction LLC

Company Name

IFB 22-028/JW

IFB/RFP/RFQ number

Certification check performed by:

Purchasing Representative

Date

BID AFFIDAVIT

The undersigned certifies that the bid prices contained in this bid have been carefully reviewed and are submitted as correct and final. Bidder further certifies and agrees to furnish any and/or all commodities upon which prices are extended at the price offered, and upon the conditions contained in the specifications and the Notice to Bidders.

STATE OF Texas COUNTY OF Harris

BEFORE ME, the undersigned authority, a Notary Public in and for the State of Texas,

on this day personally appeared Ronnie Vaughan (name), who

after being by me duly sworn, did depose and say:

"I, Ronnie Vaughan (name) am a duly authorized officer of/agent

for Brizo Construction LLC (name of firm) and have been duly authorized to execute the

foregoing on behalf of the said Brizo Construction LLC (name of firm).

I hereby certify that the foregoing bid has not been prepared in collusion with any other Bidder or other person or persons engaged in the same line of business prior to the official opening of this bid. Further, I certify that the Bidder is not now, nor has been for the past six (6) months, directly or indirectly concerned in any pool or agreement or combination, to control the price of services/commodities bid on, or to influence any person or persons to bid or not to bid thereon."

Name and address of Bidder: Brizo Construction 9100 Canniff St. Houston, TX 77017

Fax: NA Telephone# 409-316-4764

by: Ronnie Vaughan (print name) Title: Chief Operating Officer

Signature:

SUBSCRIBED AND SWORN to before me by the above-named

Ronnie Vaughan on

this the 23rd day of August, 2022.

SDavidson

Notary Public in and for

the State of Texas

STEPHANIE DAVIDSON
Notary Public, State of Texas
Comm. Expires 11-01-2025
Notary ID 128495555

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

TECHNICAL SPECIFICATIONS

DAVIS BACON MINIMUM WAGE SCALE AND PAYROLL REQUIREMENTS

1.1 Following 29 CFR 5.5 (a) (1) (v), use the rates listed on the Wage Determination Attachment for minimum wage and benefits for the labor classifications applicable to the Work.

1.2 These rates do not prohibit payment of more than the rates stated.

1.3 Apply rates in this Document 00810 to site work greater than five (5) feet from exterior wall of new building under construction or from exterior wall of existing building.

Certified Payroll Requirements

2.1 The Contractor shall submit the "Certificate from Contractor Appointing Officer or Employee to Supervise Payment of Employees" (Exhibit "A") to the Monitoring Authority prior to final execution of the contract.

2.2 During the course of the work, ALL Subcontractors shall submit the "Certificate from Subcontractor Appointing Officer or Employee to Supervise Payment of Employees" (Exhibit "B") to the Monitoring Authority.

Article 5159a of the Revised Civil Statutes of Texas, passed by the 43rd Legislature Acts of 1933, Page 91, Chapter 45, provides that any government subdivision shall ascertain the general prevailing rate of per diem wages in the locality in which the work is to be per diem wages which shall be paid for each craft type of workman. This Article further provides the CONTRACTOR shall forfeit, as a penalty, to the City, County, or State , or other political subdivision. Ten Dollars ($10.00) per day for each laborer, or workman, or mechanic who is not paid the stipulated wage for the type of work performed by him as set up on the wage scale. The OWNER is authorized to withhold from the CONTRACTOR, after full investigation by the awarding body, the amount of this penalty in any payment that might be claimed by the CONTRACTOR or SUBCONTRACTOR. The Act make the CONTRACTOR responsible for the acts of the SUBCONTRACTOR in this respect. The Article likewise requires that the CONTRACTOR and SUBCONTRACTOR keep an accurate record of the names and occupations of all persons employed by him and show the actual per diem wages paid to each worker, and these records are open to the inspection of the OWNER.

EXHIBIT "A"

Wage Determination Publication Date:
January 7, 2022
for
General Decision Number: **TX20220038 01/07/2022 TX38**
Superseded General Decision Number: TX20210038

State: Texas
Construction Type: Highway
Counties: Austin, Brazoria, Chambers, Fort Bend, Galveston, Hardin, Harris, Jefferson, Liberty, Montgomery, Orange, San Jacinto and Waller Counties in Texas.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022, Executive Order 14026 generally applies to the contract. The contractor must pay all covered workers at least $15.00 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.

If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022, Executive Order 13658 generally applies to the contract. The contractor must pay all covered workers at least $11.25 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/07/2022

LABOR CLASSIFICATIONS AND PREVAILING WAGE RATES
CONSTRUCTION 2022

CLASSIFICATION	RATE	CLASSIFICATION	RATE
Cement Mason / Concrete Finisher- Paving and Structures	$12.98	Power Equipment Operator, Foundation Drill, Truck Mounted	$15.89
Electrician * 3 Journeyman to 2 Apprentices Allowed	$27.11	Power Equipment Operator, Front End Loader, 3 CY or less	$13.32
Form Builder / Form Setter- Paving and Curb	$12.34	Power Equipment Operator, Front End Loader, over 3 CY	$13.17
Form Builder / Form Setter- Structures	$12.23	Power Equipment Operator, Loader/Backhoe	$14.29
Laborer, Asphalt Raker	$12.36	Power Equipment Operator, Mechanic	$16.96
Laborer, Common	$11.02	Power Equipment Operator, Milling Machine	$13.53
Laborer, Flagger	$10.33	Power Equipment Operator, Motor Grader, Fine Grade	$15.69
Laborer, Pipelayer	$12.12	Power Equipment Operator, Motor Grader, Rough	$14.23
Laborer, Utility	$11.73	Power Equipment Operator, Off Road Hauler	$14.60
Laborer, Work Zone Barricade Servicer	$11.67	Power Equipment Operator, Pavement Marking Machine	$11.18
Painter (Structures)	$18.62	Power Equipment Operator, Piledriver	$14.95
Power Equipment Operator, Asphalt Distributor Operator	$14.06	Power Equipment Operator, Roller, Asphalt	$11.95
Power Equipment Operator, Asphalt Paving Machine	$14.32	Power Equipment Operator, Roller, Other	$11.57
Power Equipment Operator, Broom or Sweeper	$12.68	Power Equipment Operator, Scraper	$13.47
Power Equipment Operator, Concrete Paving Finishing Machine	$13.07	Servicer	$13.97
Power Equipment Operator, Concrete Paving, Curing, Float Texturing Machine	$11.71	Power Equipment Operator, Spreader Box	$13.58
Power Equipment Operator, Concrete Saw	$13.99	Steel Worker, Reinforcing Steel	$15.15
Power Equipment Operator, Crane, Hydraulic 80 tons or less	$13.86	Steel Worker, Structural Steel	$14.39
Power Equipment Operator, Crane, Lattice boom 80 tons or less	$14.97	Steel Worker, Structural Steel Welder	$12.85
Power Equipment Operator, Crane, Lattice boom over 80 tons	$15.80	Truck Driver, Low Boy Float	$16.03
Power Equipment Operator, Crawler Tractor	$13.68	Truck Driver, Single Axle	$11.46
Power Equipment Operator, Excavator, 50,000 pounds or less	$12.71	Truck Driver, Single-or Tandem Axle Dump	$11.48
Power Equipment Operator, Excavator, over 50,000 pounds	$14.53	Truck Driver, Tandem Axle Tractor w/ Semi-Trailer	$12.27
Power Equipment Operator, Foundation Drill, Crawler Mounted	$17.43		
Welders - Receive rate prescribed for craft performing operation to which welding is incidental			
* Apprentices- must be in an approved USDOL Program and cannot exceed ratios			

EXHIBIT "B"

CERTIFICATE FROM CONTRACTOR APPOINTING OFFICER OR EMPLOYEE TO SUPERVISE PAYMENT OF EMPLOYEES

Project Name Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport

Project WBS#: ISB 22-028/JW Date 08/23/2022

Email Address: ronnie@brizoconstruction.com

(I) (We) hereby certify that (I am) (we are) the Prime Contractor for Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional
(specify type of job)

in connection with construction of the above-mentioned Project, and that (I) (we) have appointed Cameron Tobey, whose signature appears below, to supervise the payment of (my) (our) employees beginning August 23, 2022 ;that he he/she is in a position to have full knowledge of the facts set forth in the payroll documents and in the statement of compliance required by the Copeland Act and Jefferson County, which he/she is to execute with (my) (our) full authority and approval until such time as (I) (we) submit to the Jefferson County a new certificate appointing some other person for the purposes hereinabove stated.

Cameron TOBEY Phone: 409-316-4764
(Identifying Signature of Appointee)

Attest: Brizo Construction LLC
(Name of Firm or Corporation)

By: (Signature) By: (Signature)

Chief Operating Officer (Title) CONTROLLER (Title)

NOTE: This certificate must be executed by an authorized officer of a corporation or by a member of a partnership, and shall be executed prior to and be submitted with the first payroll. Should the appointee be changed, a new certificate must accompany the first payroll for which the new appointee executes a statement of compliance required by the Copeland Act and Jefferson County.

EXHIBIT "C"

CERTIFICATE FROM SUBCONTRACTOR APPOINTING OFFICER OR EMPLOYEE TO SUPERVISE PAYMENT OF EMPLOYEES

Project Name Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional

Project WBS#: ISB 22-028/JW Date 08/23/2022

Email Address: ronnie@brizoconstruction.com

(I) (We) hereby certify that (I am) (we are) the Sub Contractor for

Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional
(specify type of job)

in connection with construction of the above-mentioned Project, and that (I) (we) have appointed Cameron Tobey, whose signature appears below, to supervise the payment of (my) (our) employees beginning August 23, 2022 ; that he he/she is in a position to have full knowledge of the facts set forth in the payroll documents and in the statement of compliance required by the Copeland Act and Jefferson County, which he/she is to execute with (my) (our) full authority and approval until such time as (I) (we) submit to Jefferson County a new certificate appointing some other person for the purposes herein above stated.

CAMERON TOBEY Phone: 409-316-4764
(Identifying Signature of Appointee)

Attest: Brizo Construction LLC
(Name of Firm or Corporation)

By: (Signature)
Chief Operating Officer
(Title)

By: (Signature)
CONTROLLER
(Title)

NOTE: This certificate must be executed by an authorized officer of a corporation or by a member of a partnership, and shall be executed prior to and be submitted with the first payroll. Should the appointee be changed, a new certificate must accompany the first payroll for which the new appointee executes a statement of compliance required by the Copeland Act and Jefferson County.

END OF DOCUMENT

TECHNICAL SPECIFICATIONS

REHABILITATION OF FUEL FARM PAVEMENT
JACKBROOKS REGIONAL AIRPORT (BPT)
ISB 22-028/JW

May 2022

ITEM SS-101 SAFETY PLAN COMPLIANCE DOCUMENT (SPCD)

DESCRIPTION

101-1.1 The Contractor shall thoroughly review the approved and shall comply with bid plans and specifications. The Contractor shall certify such compliance by completing the attached SPCD and submitting to the Engineer for approval.

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CONTRACTOR SAFETY PLAN COMPLIANCE DOCUMENTS

Owner Name: Jefferson County

Airport: Jack Brooks Regional Airport

Project Description: Fuel Farm Pavement Reconstruction

Contractor: Brizo Construction LLC

Each item listed below corresponds to a specific section of the plans. The Contractor shall certify that he/she will comply with each section of the plans. Each section with a "no" response must be fully explained in an attachment to the CSPCD. The document shall be signed and dated by a manager, principal or owner of the Contractor's company. All other requested information shall be completed by the Contractor and submitted to the Engineer for approval.

1. **Section 1 – Correspondence:** This project shall be completed in accordance with the plans.

Owner: Alex Rupp, Airport Manager	Phone: 409.719.4900
Engineer: The Solco Group LLC	
Kelvin Solco, PE	Phone: 817.564.6895
Contractor: Brizo Construction LLC	Phone: 409-316-4764

2. **Section 2 - Phasing:** This project shall be completed in accordance with the plans.

   Yes__✓__ No_____ N/A_____

3. **Section 3 - Areas of Operations affected by Construction Activity:** This project shall be completed in accordance with the plans.

   Yes__✓__ No_____ N/A_____

4. **Section 4 - Protection of Navigational Aids (NAVAIDs):** This project shall be completed in accordance with the plans.

   Yes_____ No_____ N/A__X__

5. **Section 5 - Contractor Access:** This project shall be completed in accordance with the plans.

Yes ✓ No_____ N/A_____

6. **Section 6 – Wildlife Management:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A X

7. **Section 7 – Foreign Object Debris (FOD) Management:** This project shall be completed in accordance with the plans.

Yes ✓ No_____ N/A_____

8. **Section 8 – Hazardous Materials (HAZMAT) Management:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A X

9. **Section 9 – Notification of Construction Activities:** This project shall be completed in accordance with the plans.

Yes ✓ No_____ N/A_____

10. **Section 10 - Inspection Requirements:** This project shall be completed in accordance with the plans.

Yes ✓ No_____ N/A_____

11. **Section 11 – Underground Utilities:** This project shall be completed in accordance with the plans.

Yes ✓ No_____ N/A_____

12. **Section 12 – Penalties:** This project shall be completed in accordance with the plans and specifications.

Yes ✓ No_____ N/A_____

13. **Section 13 – Special Conditions:** This project shall be completed in accordance with the plans and specifications.

Yes ✓ No_____ N/A_____

14. **Section 14 – Runway and Taxiway Visual Aids:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A X

15. **Section 15 - Marking and Signs for Access Routes:** This project shall be completed in accordance with the plans.

Yes ✓ No_____ N/A_____

16. **Section 16 – Hazard Marking and Lighting:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A_____X_____

17. **Section 17 - Work Zone Lighting for Nighttime Construction:** This project shall be completed in accordance with the plans.

Yes__✓__ No_____ N/A_____

18. **Section 18 – Protection of Safety Areas, Object Free Areas, Object Free Zones, and Approach/Departure Surfaces:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A___X____

For the project identified herein, I certify that the responses to the foregoing items are correct as marked and meet the compliance of the plans.

Signed: _____
Contractor's Authorized Representative

Date: 08/23/2022

Ronnie Vaughan, Chief Operating Officer
Print Name and Title of Contractor's Representative

END OF ITEM SS-101

ITEM C-105
MOBILIZATION

DESCRIPTION

105-1 Description. This item of work shall consist of, but is not limited to, work and operations necessary for the movement of personnel, equipment, material and supplies to and from the project site for work on the project except as provided in the contract as separate pay items.

105-2 Mobilization limit. Mobilization shall be limited to **5** percent of the total project cost.

105-3 Posted notices. Prior to commencement of construction activities, the Contractor must post the following documents in a prominent and accessible place where they may be easily viewed by all employees of the prime Contractor and by all employees of subcontractors engaged by the prime Contractor: Equal Employment Opportunity (EEO) Poster "Equal Employment Opportunity is the Law" in accordance with the Office of Federal Contract Compliance Programs Executive Order 11246, as amended; Davis Bacon Wage Poster (WH 1321) - DOL "Notice to All Employees" Poster; and Applicable Davis-Bacon Wage Rate Determination. These notices must remain posted until final acceptance of the work by the Owner.

~~**105-4 Engineer/RPR field office.** The Contractor shall provide dedicated space for the use of the field RPR and inspectors, as a field office for the duration of the project. This space shall be located conveniently near the construction and shall be separate from any space used by the Contractor. The Contractor shall furnish water, sanitary facilities, heat, air conditioning, and electricity in accordance with local building codes. An Engineer/RPR field office is not required.~~

METHOD OF MEASUREMENT

105-5 Basis of measurement and payment. Based upon the contract lump sum price for "Mobilization" partial payments will be allowed as follows:

a. With first pay request, 50%.

b. When 50% or more of the original contract is earned, an additional 40%.

~~**c.** When ---% or more of the original contract is earned, an additional ---%.~~

d. After Final Inspection, staging area clean-up and delivery of all Project Closeout materials as required by Section 90, paragraph 90-11, *Contractor Final Project Documentation,* the final 10%.

BASIS OF PAYMENT

105-6 Payment will be made under:

Item C-105 -6.1	Mobilization	(Maximum 5% of Total Bid Exclusive Mobilization - per Lump Sum

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Office of Federal Contract Compliance Programs (OFCCP)

Executive Order 11246, as amended

EEOC-P/E-1 – Equal Employment Opportunity is the Law Poster

United States Department of Labor, Wage and Hour Division (WHD)

WH 1321 – Employee Rights under the Davis-Bacon Act Poster

END OF ITEM C-105

ITEM SS-120
CONSTRUCTION SAFETY AND SECURITY

DESCRIPTION

120-1.1 This item covers safety and security for construction of the proposed improvements.

The attention to the bidder is directed to the necessity for careful examination of the entire project site to determine, at the time of bid preparation, the full extent of work to be done under the item "Construction Safety and Security."

The items in the "Construction Safety and Security shall include:

1. Temporary Signs and Barricades
2. Airport Security/Safety Requirements

CONSTRUCTION METHODS

120-2.1 Temporary Signs and Barricades

The contractor shall furnish, install, maintain, and remove barricades and temporary signs in accordance with AC 150/5370-2 Operational Safety on Airports During Construction and details on the plans and as directed by the Engineer.

All work involved in the furnishing, installation, maintenance, fueling and removal of barricades and temporary signs will not be measured for separate payment but will be considered subsidiary to the bid item "Construction Safety and Security."

120-2.2 Airport Security and Safety Requirements

The Contractor shall abide by the Airport Security and Safety requirements that are outlined in the approved CSPP. Any costs associated with Airport Security requirements will not be measured by separate payment but will be considered subsidiary to the bid item "Construction Safety and Security."

MEASUREMENT AND PAYMENT

120-3.1 Construction security and safety will be measured as a lump sum complete item. Work completed and accepted under this item will be paid as a lump sum price bid for "Construction Safety and Security," which include full compensation for furnishing all labor, tools and equipment and incidentals necessary to do complete the work. Payment will be made under:

Item SS -120-3.1	Construction Safety and Security, Barricades, Signs, and Traffic Handling – per Lump Sum

END OF ITEM SS-120

ITEM D-701
PIPE FOR STORM DRAINS AND CULVERTS

DESCRIPTION

701-1.1 This item shall consist of the construction of pipe culverts and storm drains in accordance with these specifications and in close conformity with the lines and grades shown on the plans.

MATERIALS

701-2.1 Materials shall meet the requirements shown on the plans and specified below. Underground piping and components used in drainage systems for terminal and aircraft fueling ramp drainage shall be noncombustible and inert to fuel in accordance with National Fire Protection Association (NFPA) 415.

701-2.2 Pipe. The pipe shall be of the type called for on the plans or in the proposal and shall be in accordance with the following appropriate requirements:

	American Association of State Highway and Transportation Officials (AASHTO) M167 Standard Specification for Corrugated Steel Structural Plate, Zinc-Coated, for Field-Bolted Pipe, Pipe-Arches, and Arches
AASHTO M190	Standard Specification for Bituminous-Coated Corrugated Metal Culvert Pipe and Pipe Arches
AASHTO M196	Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains
AASHTO M219	Standard Specification for Corrugated Aluminum Alloy Structural Plate for Field-Bolted Pipe, Pipe-Arches, and Arches
AASHTO M243	Standard Specification for Field-Applied Coating of Corrugated Metal Structural Plate for Pipe, Pipe-Arches, and Arches
AASHTO M252	Standard Specification for Corrugated Polyethylene Drainage Pipe
AASHTO M294	Standard Specification for Corrugated Polyethylene Pipe, 300- to 1500-mm (12- to 60-in.) Diameter
AASHTO M304	Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Wall Drainpipe and Fittings Based on Controlled Inside Diameter
AASHTO MP20	Standard Specification for Steel Reinforced Polyethylene (PE) Ribbed Pipe, 300- to 900-mm (12- to 36-in.) Diameter
AASHTO R73	Standard Practice for Evaluation of Precast Concrete Drainage Productions
ASTM A760	Standard Specification for Corrugated Steel Pipe, Metallic Coated for Sewers and Drains
ASTM A761	Standard Specification for Corrugated Structural Steel Plate, Zinc-Coated, for Field-Bolted Pipe, Pipe-Arches, and Arches
ASTM A762	Standard Specification for Corrugated Steel Pipe, Polymer Precoated for Sewers and Drains

ASTM A849	Standard Specification for Post Applied Coatings, Pavings, and Linings for Corrugated Steel Sewer and Drainage Pipe
ASTM B745	Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains
ASTM C14	Standard Specification for Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe
ASTM C76	Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
ASTM C506	Standard Specification for Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe
ASTM C507	Standard Specification for Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe
ASTM C655	Standard Specification for Reinforced Concrete D-Load Culvert, Storm Drain, and Sewer Pipe
ASTM C1433	Standard Specification for Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers
ASTM C1479	Standard Practice for Installation of Precast Concrete Sewer, Storm Drain, and Culvert Pipe Using Standard Installations
ASTM C1577	Standard Specification for Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers Designed According to AASHTO LRFD
ASTM C1786	Standard Specification for Segmental Precast Reinforced Concrete Box Sections for Culverts, Storm Drains, and Sewers Designed According to AASHTO LRFD
ASTM C1840	Standard Practice for Inspection and Acceptance of Installed Reinforced Concrete Culvert, Storm Drain, and Storm Sewer Pipe
ASTM D3262	Standard Specification for "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Sewer Pipe
ASTM D4161	Standard Specification for "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe Joints Using Flexible Elastomeric Seals
ASTM F667	Standard Specification for 3 through 24 in Corrugated Polyethylene Pipe and Fittings
ASTM F714	Standard Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Outside Diameter
ASTM F794	Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Gravity Sewer Pipe and Fittings Based on Controlled Inside Diameter
ASTM F894	Standard Specification for Polyethylene (PE) Large Diameter Profile Wall Sewer and Drainpipe
ASTM F949	Standard Specification for Poly (Vinyl Chloride) (PVC) Corrugated Sewer Pipe with a Smooth Interior and Fittings

ASTM F2435	Standard Specification for Steel Reinforced Polyethylene (PE) Corrugated Pipe
ASTM F2562	Specification for Steel Reinforced Thermoplastic Ribbed Pipe and Fittings for Non-Pressure Drainage and Sewerage
ASTM F2736	Standard Specification for 6 to 30 in. (152 to 762 mm) Polypropylene (PP) Corrugated Single Wall Pipe and Double Wall Pipe
ASTM F2764	Standard Specification for 30 to 60 in. (750 to 1500 mm) Polypropylene (PP) Triple Wall Pipe and Fittings for Non-Pressure Sanitary Sewer Applications
ASTM F2881	Standard Specification for 12 to 60 in. (300 to 1500 mm) Polypropylene (PP) Dual Wall Pipe and Fittings for Non-Pressure Storm Sewer Applications
ASTM D3034	Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings

701-2.3 Concrete. Concrete for pipe cradles shall have a minimum compressive strength of 2000 psi (13.8 MPa) at 28 days and conform to the requirements of ASTM C94.

701-2.4 Rubber gaskets. Rubber gaskets for rigid pipe shall conform to the requirements of ASTM C443. Rubber gaskets for PVC pipe, polyethylene, and polypropylene pipe shall conform to the requirements of ASTM F477. Rubber gaskets for zinc-coated steel pipe and precoated galvanized pipe shall conform to the requirements of ASTM D1056, for the "RE" closed cell grades. Rubber gaskets for steel reinforced thermoplastic ribbed pipe shall conform to the requirements of ASTM F477. Not used.

701-2.5 Joint mortar. Pipe joint mortar shall consist of one part Portland cement and two parts sand. The Portland cement shall conform to the requirements of ASTM C150, Type I. The sand shall conform to the requirements of ASTM C144.

701-2.6 Joint fillers. Poured filler for joints shall conform to the requirements of ASTM D6690.

701-2.7 Plastic gaskets. Plastic gaskets shall conform to the requirements of ASTM C990. Not used.

701-2.8. Controlled low-strength material (CLSM). Controlled low-strength material shall conform to the requirements of Item P-153. When CLSM is used, all joints shall have gaskets. Not used.

701-2.9 Precast box culverts. Manufactured in accordance with and conforming to ASTM C1433.

701-2.10 Precast concrete pipe. Precast concrete structures shall be furnished by a plant meeting National Precast Concrete Association Plant Certification Program or American Concrete Pipe Association QCast Plant Certification program.

CONSTRUCTION METHODS

701-3.1 Excavation. The width of the pipe trench shall be sufficient to permit satisfactory jointing of the pipe and thorough tamping of the bedding material under and around the pipe, but it shall not be less than the external diameter of the pipe plus 12 inches (300 mm) on each side. The trench walls shall be vertical.

The Contractor shall comply with all current federal, state, and local rules and regulations governing the safety of men and materials during the excavation, installation, and backfilling operations. Specifically, the Contractor shall observe that all requirements of the Occupational Safety and Health Administration (OSHA) relating to excavations, trenching, and shoring are strictly adhered to. The width of the trench shall be sufficient to permit satisfactorily jointing of the pipe and thorough compaction of the bedding material under the pipe and backfill material around the pipe, but it shall not be greater than the widths shown on the plans trench detail.

Where rock, hardpan, or other unyielding material is encountered, the Contractor shall remove it from below the foundation grade for a depth of at least 8 inch (200 mm) or 1/2 inch (12 mm) for each foot of fill over the top of the pipe (whichever is greater) but for no more than three-quarters of the nominal diameter of the pipe. The excavation below grade should be filled with granular material to form a uniform foundation.

Where a firm foundation is not encountered at the grade established, due to soft, spongy, or other unstable soil, the unstable soil shall be removed and replaced with approved granular material for the full trench width. The RPR shall determine the depth of removal necessary. The granular material shall be compacted to provide adequate support for the pipe.

The excavation for pipes placed in embankment fill shall not be made until the embankment has been completed to a height above the top of the pipe as shown on the plans.

701-3.2 Bedding. The bedding surface for the pipe shall provide a foundation of uniform density to support the pipe throughout its entire length.

a. Rigid pipe. The pipe bedding shall be constructed uniformly for the full length of the pipe barrel, as required on the plans. The maximum aggregate size shall be 1 in when the bedding thickness is less than 6 inches, and 1-1/2 in when the bedding thickness is greater than 6 inches. Bedding shall be loosely placed uncompacted material under the middle third of the pipe prior to placement of the pipe.

b. Flexible pipe. For flexible pipe, the bed shall be shaped to fit the pipe, and a bedding blanket of sand or fine granular material shall be provided as follows:

Flexible Pipe Bedding

Pipe Corrugation Depth		Minimum Bedding Depth	
inch	mm	inch	mm
1/2	12	1	25
1	25	2	50
2	50	3	75
2-1/2	60	3-1/2	90

c. other pipe materials. For PVC, polyethylene, polypropylene, or fiberglass pipe, the bedding material shall consist of coarse sands and gravels with a maximum particle size of

3/4 inches (19 mm). For pipes installed under paved areas, no more than 12% of the material shall pass the No. 200 (0.075 mm) sieve. For all other areas, no more than 50% of the material shall pass the No. 200 (0.075 mm) sieve. The bedding shall have a thickness of at least 6 inches (150 mm) below the bottom of the pipe and extend up around the pipe for a depth of not less than 50% of the pipe's vertical outside diameter.

701-3.3 Laying pipe. The pipe laying shall begin at the lowest point of the trench and proceed upgrade. The lower segment of the pipe shall be in contact with the bedding throughout its full length. Bell or groove ends of rigid pipes and outside circumferential laps of flexible pipes shall be placed facing upgrade.

Paved or partially lined pipe shall be placed so that the longitudinal center line of the paved segment coincides with the flow line.

Elliptical and elliptically reinforced concrete pipes shall be placed with the manufacturer's reference lines designating the top of the pipe within five degrees of a vertical plane through the longitudinal axis of the pipe.

701-3.4 Joining pipe. Joints shall be made with (1) cement mortar, (2) cement grout, (3) rubber gaskets, (4) plastic gaskets, (5) coupling bands or (6).

Mortar joints shall be made with an excess of mortar to form a continuous bead around the outside of the pipe and shall be finished smooth on the inside. Molds or runners shall be used for grouted joints to retain the poured grout. Rubber ring gaskets shall be installed to form a flexible watertight seal.

a. Concrete pipe. Concrete pipe may be either bell and spigot or tongue and groove. Pipe sections at joints shall be fully seated and the inner surfaces flush and even. Concrete pipe joints shall be sealed with rubber gaskets meeting ASTM C443 when leak resistant joints are required or Concrete pipe joints shall be sealed with butyl mastic meeting ASTM C990 or mortar when soil tight joints are required. Joints shall be thoroughly wetted before applying mortar or grout.

b. Metal pipe. Metal pipe shall be firmly joined by form-fitting bands conforming to the requirements of ASTM A760 for steel pipe and AASHTO M196 for aluminum pipe.

c. PVC, Polyethylene, or Polypropylene pipe. Joints for PVC, Polyethylene, or Polypropylene pipe shall conform to the requirements of ASTM D3212 when leak resistant joints are required. Joints for PVC and Polyethylene pipe shall conform to the requirements of AASHTO M304 when soil tight joints are required. Fittings for polyethylene pipe shall conform to the requirements of AASHTO M252 or ASTM M294. Fittings for polypropylene pipe shall conform to ASTM F2881, ASTM F2736, or ASTM F2764.

d. Fiberglass pipe. Joints and fittings shall be as detailed on the plans and in accordance with the manufacturer's recommendations. Joints shall meet the requirements of ASTM D4161 for flexible elastomeric seals. **or** Enter manufacturers joint installation requirements.

701-3.5 Embedment and Overfill. Pipes shall be inspected before any fill material is placed; any pipes found to be out of alignment, unduly settled, or damaged shall be removed and re-laid or replaced at the Contractor's expense.

701-3.5-1 Embedment Material Requirements

a. Concrete Pipe. Embedment material and compaction requirements shall be in accordance with the applicable Type of Standard Installation (Types 1, 2, 3, or 4) per ASTM C1479. If a concrete cradle or CLSM embedment material is used, it shall conform to the plan details.

b. Plastic and fiberglass Pipe. Embedment material shall meet the requirements of ASTM D3282, A-1, A-2-4, A-2-5, or A-3. Embedment material shall be free of organic material, stones

larger than 1.5 inches in the greatest dimension, or frozen lumps. Embedment material shall extend to 12 inches above the top of the pipe.

c. Metal Pipe. Embedment material shall be granular as specified in the contract document and specifications, and shall be free of organic material, rock fragments larger than 1.5 inches in the greatest dimension and frozen lumps. As a minimum, backfill materials shall meet the requirements of ASTM D3282, A-1, A-2, or A-3. Embedment material shall extend to 12 inches above the top of the pipe.

701-3.5-2 Placement of Embedment Material

The embedment material shall be compacted in layers not exceeding 6 inches (150 mm) on each side of the pipe and shall be brought up one foot (30 cm) above the top of the pipe or to natural ground level, whichever is greater. Thoroughly compact the embedment material under the haunches of the pipe without displacing the pipe. Material shall be brought up evenly on each side of the pipe for the full length of the pipe.

When the top of the pipe is above the top of the trench, the embedment material shall be compacted in layers not exceeding 6 inches (150 mm) and shall be brought up evenly on each side of the pipe to one foot (30 cm) above the top of the pipe. All embedment material shall be compacted to a density required under Item P-152.

Concrete cradles and flowable fills, such as controlled low strength material (CLSM) or controlled density fill (CDF), may be used for embedment provided adequate flotation resistance can be achieved by restraints, weighing, or placement technique.

It shall be the Contractor's responsibility to protect installed pipes and culverts from damage due to construction equipment operations. The Contractor shall be responsible for installation of any extra strutting or backfill required to protect pipes from the construction equipment.

701-3.6 Overfill

Pipes shall be inspected before any overfill is in place. Any pipes found to be out of alignment, unduly settled, or damaged shall be removed and re-laid or replaced at the Contractor's expense. Evaluation of any damage to RCP shall be evaluated based on AASHTO R73.

Overfill material shall be place and compacted in layers as required to achieve compaction to at least 95 percent standard proctor per ASTM D698 . The soil shall contain no debris, organic matter, frozen material, or stones with a diameter greater than one half the thickness of the compacted layers being placed.

701-3.7 Inspection Requirements

An initial post installation inspection shall be performed by the RPR no sooner than 30 days after completion of installation and final backfill. Clean or flush all lines prior to inspection.

Use a camera with lighting suitable to allow a clear picture of the entire periphery of the pipe interior. Center the camera in the pipe both vertically and horizontally and be able to pan and tilt to a 90-degree angle with the axis of the pipe rotating 360 degrees. Use equipment to move the camera through the pipe that will not obstruct the camera's view or interfere with proper documentation of the pipe's condition. The video image shall be clear, focused, and relatively free from roll, static, or other image distortion qualities that would prevent the reviewer from evaluating the condition of the pipe.

For pipe sizes larger than 48 inches, a walk-through visual inspection shall be performed.

Incorporate specific inspection requirements for the various types of pipes beneath the general inspection requirements.

Reinforced concrete pipe shall be inspected, evaluated, and reported on in accordance with ASTM C1840, "Standard Practice for Inspection and Acceptance of Installed Reinforced Concrete Culvert, Storm Drain, and Storm Sewer Pipe." Any issues reported shall include still photo and video documentation. The zoom ratio shall be provided for all still or video images that document any issues of concern by the inspection firm.

Flexible pipes shall be inspected for rips, tears, joint separations, soil migration, cracks, localized buckling, settlement, alignment, and deflection. Determine whether the allowable deflection has been exceeded by use of a laser profiler for internal pipe diameters of 48 inches or less, or direct measurement for internal pipe diameters greater than 48 inches. Laser profile equipment shall utilize low barrel distortion video equipment. Deflection of installed pipe shall not exceed the limits provided in the table below, as a percentage of the average inside diameter of the pipe.

Maximum Allowable Pipe Deflection

Type of Pipe	**Maximum Allowable Deflection (%)**
Corrugated Metal Pipe	5
Concrete Lined CMP	3
Thermoplastic Pipe	5
Fiberglass	5

If deflection readings in excess of the allowable deflection are obtained, remove the pipe with excessive deflection and replace with new pipe. Isolated areas may exceed allowable by 2.5% with concurrence of RPR. Repair or replace any pipe with cracks exhibiting displacement across the crack, bulges, creases, tears, spalls, or delamination. The report for flexible pipe shall include as a minimum, the deflection results and final post installation inspection report. The inspection report shall include: a copy of all videos taken, pipe location identification, equipment used for inspection, inspector name, deviation from design line and grade, and inspector's notes.

METHOD OF MEASUREMENT

701-4.1 The length of pipe shall be measured in linear feet (m) of pipe in place, completed, and accepted. It shall be measured along the centerline of the pipe from end or inside face of structure to the end or inside face of structure, whichever is applicable. Identify each class, types and size of pipe shall be measured separately. All fittings shall be included in the footage as typical pipe sections in the pipe being measured.

701-4.2. Precast box culverts shall be measured by individual unit and size.

701-4.3 The volume of concrete for pipe cradles shall be the number of cubic yards (cubic meters) of concrete that is completed in place and accepted.

701-4.4 The volume of rock, hardpan, or other unyielding material shall be the number of cubic yards (cubic meters) excavated. No payment shall be made for the cushion material placed for the bed of the pipe.

BASIS OF PAYMENT

701-5.0 These prices shall fully compensate the Contractor for furnishing all materials and for all preparation, excavation, and installation of these materials; and for all labor, equipment, tools, and incidentals necessary to complete the item.

701-5.1 Payment will be made at the contract unit price per linear foot (meter) for identify each class and size of pipe .

701-5.2 Payment will be made at the contract unit price per unit for identify each class and size of precast box culvert.

701-5.3 Payment will be made at the contract unit price per cubic yard (cubic meter) of concrete for pipe cradles.

701-5.4 Payment will be made at the contract unit price per cubic yard (cubic meter) for rock, hardpan, or other unyielding material excavation.

Payment will be made under:

Item 701-5.1	~~[ ]~~ ~~inch~~ **TBD** per linear foot (meter)
Item 701-5.2	Precast box culvert per unit.
Item 701-5.3	Concrete for pipe cradles - per cubic yard (cubic meter)
Item 701-5.4	Rock, hardpan, or other unyielding material excavation - per cubic yard (cubic meter

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

American Association of State Highway and Transportation Officials (AASHTO)

AASHTO M167	Standard Specification for Corrugated Steel Structural Plate, Zinc-Coated, for Field-Bolted Pipe, Pipe-Arches, and Arches
AASHTO M190	Standard Specification for Bituminous-Coated Corrugated Metal Culvert Pipe and Pipe Arches
AASHTO M196	Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains
AASHTO M219	Standard Specification for Corrugated Aluminum Alloy Structural Plate for Field-Bolted Pipe, Pipe-Arches, and Arches
AASHTO M243	Standard Specification for Field Applied Coating of Corrugated Metal Structural Plate for Pipe, Pipe-Arches, and Arches
AASHTO M252	Standard Specification for Corrugated Polyethylene Drainage Pipe
AASHTO M294	Standard Specification for Corrugated Polyethylene Pipe, 300- to 1500-mm (12- to 60-in.) Diameter
AASHTO M304	Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Wall Drainpipe and Fittings Based on Controlled Inside Diameter
AASHTO MP20	Standard Specification for Steel Reinforced Polyethylene (PE) Ribbed Pipe, 300- to 900-mm (12- to 36-in.) Diameter

ASTM International (ASTM)

ASTM A760	Standard Specification for Corrugated Steel Pipe, Metallic Coated for Sewers and Drains
ASTM A761	Standard Specification for Corrugated Steel Structural Plate, Zinc Coated, for Field-Bolted Pipe, Pipe-Arches, and Arches
ASTM A762	Standard Specification for Corrugated Steel Pipe, Polymer Precoated for Sewers and Drains
ASTM A849	Standard Specification for Post-Applied Coatings, Pavings, and Linings for Corrugated Steel Sewer and Drainage Pipe
ASTM B745	Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains
ASTM C14	Standard Specification for Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe
ASTM C76	Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
ASTM C94	Standard Specification for Ready Mixed Concrete
ASTM C144	Standard Specification for Aggregate for Masonry Mortar
ASTM C150	Standard Specification for Portland Cement
ASTM C443	Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets
ASTM C506	Standard Specification for Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe
ASTM C507	Standard Specification for Reinforced Concrete Elliptical Culvert, Storm Drain and Sewer Pipe
ASTM C655	Standard Specification for Reinforced Concrete D-Load Culvert, Storm Drain and Sewer Pipe
ASTM C990	Standard Specification for Joints for Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants
ASTM C1433	Standard Specification for Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers
ASTM D1056	Standard Specification for Flexible Cellular Materials Sponge or Expanded Rubber
ASTM D3034	Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings
ASTM D3212	Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals
ASTM D3262	Standard Specification for "Fiberglass" (Glass-Fiber Reinforced Thermosetting Resin) Sewer Pipe
ASTM D3282	Standard Practice for Classification of Soils and Soil-Aggregate Mixtures for Highway Construction Purposes

ASTM D4161	Standard Specification for "Fiberglass" (Glass-Fiber Reinforced Thermosetting Resin) Pipe Joints Using Flexible Elastomeric Seals
ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements
ASTM F477	Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe
ASTM F667	Standard Specification for 3 through 24 in. Corrugated Polyethylene Pipe and Fittings
ASTM F714	Standard Specification for Polyethylene (PE) Plastic Pipe (DR PR) Based on Outside Diameter
ASTM F794	Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Gravity Sewer Pipe & Fittings Based on Controlled Inside Diameter
ASTM F894	Standard Specification for Polyethylene (PE) Large Diameter Profile Wall Sewer and Drainpipe
ASTM F949	Standard Specification for Poly (Vinyl Chloride) (PVC) Corrugated Sewer Pipe with a Smooth Interior and Fittings
ASTM F2435	Standard Specification for Steel Reinforced Polyethylene (PE) Corrugated Pipe
ASTM F2562	Specification for Steel Reinforced Thermoplastic Ribbed Pipe and Fittings for Non-Pressure Drainage and Sewerage
ASTM F2736	Standard Specification for 6 to 30 in. (152 to 762 mm) Polypropylene (PP) Corrugated Single Wall Pipe and Double Wall Pipe
ASTM F2764	Standard Specification for 30 to 60 in. (750 to 1500 mm) Polypropylene (PP) Triple Wall Pipe and Fittings for Non-Pressure Sanitary Sewer Applications
ASTM F2881	Standard Specification for 12 to 60 in. (300 to 1500 mm) Polypropylene (PP) Dual Wall Pipe and Fittings for Non-Pressure Storm Sewer Applications

National Fire Protection Association (NFPA)

NFPA 415	Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways

END ITEM D-701

ITEM P-101
PREPARATION/REMOVAL OF EXISTING PAVEMENTS

DESCRIPTION

101-1 This item shall consist of preparation of existing pavement surfaces for overlay, surface treatments, removal of existing pavement, and other miscellaneous items. The work shall be accomplished in accordance with these specifications and the applicable plans.

EQUIPMENT AND MATERIALS

101-2 All equipment and materials shall be specified here and in the following paragraphs or approved by the Resident Project Representative (RPR). The equipment shall not cause damage to the pavement to remain in place.

CONSTRUCTION

101-3.1 Removal of existing pavement.

The Contractor's removal operation shall be controlled to not damage adjacent pavement structure, and base material, cables, utility ducts, pipelines, or drainage structures which are to remain under the pavement.

a. Concrete pavement removal. Full depth saw cuts shall be made perpendicular to the slab surface. The Contractor shall saw through the full depth of the slab including any dowels at the joint, removing the pavement and installing new dowels as shown on the plans and per the specifications. Where the perimeter of the removal limits is not located on the joint and there are no dowels present, the perimeter shall be saw cut the full depth of the pavement. The pavement inside the saw cut shall be removed by methods which will not cause distress in the pavement which is to remain in place. If the material is to be wasted on the airport site, it shall be reduced to a maximum size of 2 inches. Concrete slabs that are damaged by under breaking shall be repaired or removed and replaced as directed by the RPR.

The edge of existing concrete pavement against which new pavement abuts shall be protected from damage at all times. Spall and underbreak repair shall be in accordance with the plans. Any underlaying material that is to remain in place, shall be recompacted and/or replaced as shown on the plans. Adjacent areas damaged during repair shall be repaired or replaced at the Contractor's expense.

b. Asphalt pavement removal. Asphalt pavement to be removed shall be cut to the full depth of the asphalt pavement around the perimeter of the area to be removed. If the material is to be wasted on the airport site , it shall be broken to a maximum size of **2** inches (mm.

c. Repair or removal of Base, Subbase, and/or Subgrade. All failed material including surface, base course, subbase course, and subgrade shall be removed and repaired as shown on the plans or as directed by the RPR. Materials and methods of construction shall comply with the applicable sections of these specifications. Any damage caused by Contractor's removal process shall be repaired at the Contractor's expense.

~~**101-3.2 Preparation of joints and cracks prior to overlay/surface treatment.** Remove all vegetation and debris from cracks to a minimum depth of 1 inch (25 mm). If extensive vegetation exists, treat the specific area with a concentrated solution of a water-based herbicide approved~~

by the RPR. Fill all cracks greater than 1/4 inch (6 mm) wide) with a crack sealant per ASTM D6690. The crack sealant, preparation, and application shall be compatible with the surface treatment/overlay to be used. To minimize contamination of the asphalt with the crack sealant, underfill the crack sealant a minimum of 1/8 inch (3 mm), not to exceed ¼ inch (6 mm). Any excess joint or crack sealer shall be removed from the pavement surface.

101-3.3 Removal of Foreign Substances/contaminates prior to [overlay] [seal-coat] [remarking]. Removal of foreign substances/contaminates from existing pavement that will affect the bond of the new treatment shall consist of removal of rubber, fuel spills, oil, crack sealer, at least 90% of paint, and other foreign substances from the surface of the pavement. Areas that require removal are designated on the plans and as directed by the RPR in the field during construction.

[Chemicals] [high-pressure water] [heater scarifier (asphaltic concrete only)] [cold milling] [rotary grinding] [sandblasting] may be used. If chemicals are used, they shall comply with the state's environmental protection regulations. Removal methods used shall not cause major damage to the pavement, or to any structure or utility within or adjacent to the work area. Major damage is defined as changing the properties of the pavement, removal of asphalt causing the aggregate to ravel, or removing pavement over 1/8 inch (3 mm) deep. If it is deemed by the RPR that damage to the existing pavement is caused by operational error, such as permitting the application method to dwell in one location for too long, the Contractor shall repair the damaged area without compensation and as directed by the RPR.

Removal of foreign substances shall not proceed until approved by the RPR. Water used for high-pressure water equipment shall be provided by the Contractor at the Contractor's expense. No material shall be deposited on the pavement shoulders. All wastes shall be disposed of in areas indicated in this specification or shown on the plans.101-3.4 Concrete spall or failed asphaltic concrete pavement repair.

a. Repair of concrete spalls in areas to be overlaid with asphalt. The Contractor shall repair all spalled concrete as shown on the plans or as directed by the RPR. The perimeter of the repair shall be saw cut a minimum of 2 inches (50 mm) outside the affected area and 2 inches (50 mm) deep. The deteriorated material shall be removed to a depth where the existing material is firm or cannot be easily removed with a geologist pick. The removed area shall be filled with asphalt mixture with aggregate sized appropriately for the depth of the patch. The material shall be compacted with equipment approved by the RPR until the material is dense and no movement or marks are visible. The material shall not be placed in lifts over 4 inches (100 mm) in depth. This method of repair applies only to pavement to be overlaid.

b. Asphalt pavement repair. The Contractor shall repair all spalled concrete as shown on the plans or as directed by the RPR. The failed areas shall be removed as specified in paragraph 101-3.1b. All failed material including surface, base course, subbase course, and subgrade shall be removed. Materials and methods of construction shall comply with the applicable sections of these specifications.

101-3.5 Cold milling. Milling shall be performed with a power-operated milling machine or grinder, capable of producing a uniform finished surface. The milling machine or grinder shall operate without tearing or gouging the underlaying surface. The milling machine or grinder shall be equipped with grade and slope controls, and a positive means of dust control. All millings shall be removed and disposed [off Airport property] [in areas designated on the plans]. If the Contractor mills or grinds deeper or wider than the plans specify, the Contractor shall replace the material removed with new material at the Contractor's Expense.

a. Patching. The milling machine shall be capable of cutting a vertical edge without chipping or spalling the edges of the remaining pavement and it shall have a positive method of controlling the depth of cut. The RPR shall layout the area to be milled with a straightedge in increments of 1-foot (30 cm) widths. The area to be milled shall cover only the failed area. Any excessive area that is milled because the Contractor does not have the appropriate milling machine, or areas that are damaged because of his negligence, shall be repaired by the Contractor at the Contractor's Expense.

b. Profiling, grade correction, or surface correction. The milling machine shall have a minimum width of [7] feet ([2] m) and it shall be equipped with electronic grade control devices that will cut the surface to the grade specified. The tolerances shall be maintained within +0 inch and -1/4 inch (+0 mm and -6mm) of the specified grade. The machine must cut vertical edges and have a positive method of dust control. The machine must have the ability to [windrow the millings or cuttings] [remove the millings or cuttings from the pavement and load them into a truck]. All millings shall be removed and disposed of [off the airport] [in areas designated on the plans].

c. Clean-up. The Contractor shall sweep the milled surface daily and immediately after the milling until all residual materials are removed from the pavement surface. Prior to paving, the Contractor shall wet down the milled pavement and thoroughly sweep and/or blow the surface to remove loose residual material. Waste materials shall be collected and removed from the pavement surface and adjacent areas by sweeping or vacuuming. Waste materials shall be removed and disposed off Airport property. [in areas designated on the plans].

101-3.6. Preparation of asphalt pavement surfaces prior to surface treatment. Existing asphalt pavements to be treated with a surface treatment shall be prepared as follows:

a. Patch asphalt pavement surfaces that have been softened by petroleum derivatives or have failed due to any other cause. Remove damaged pavement to the full depth of the damage and replace with new asphalt pavement similar to that of the existing pavement in accordance with paragraph 101-3.4b.

b. Repair joints and cracks in accordance with paragraph 101-3.2.

c. Remove oil or grease that has not penetrated the asphalt pavement by scrubbing with a detergent and washing thoroughly with clean water. After cleaning, treat these areas with an oil spot primer. [ ]

d. Clean pavement surface immediately prior to placing the surface treatment so that it is free of dust, dirt, grease, vegetation, oil, or any type of objectionable surface film.

101-3.7 Maintenance. The Contractor shall perform all maintenance work necessary to keep the pavement in a satisfactory condition until the full section is complete and accepted by the RPR. The surface shall be kept clean and free from foreign material. The pavement shall be properly drained at all times. If cleaning is necessary or if the pavement becomes disturbed, any work repairs necessary shall be performed at the Contractor's expense.

101-3.8 Preparation of Joints in Rigid Pavement prior to resealing. Prior to application of sealant material, clean and dry the joints of all scale, dirt, dust, old sealant, curing compound, moisture, and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method used cleans the joint and does not damage the joint.

101-3.8.1 Removal of Existing Joint Sealant. All existing joint sealants will be removed by plowing or use of hand tools. Any remaining sealant and or debris will be removed by use of wire brushes or other tools, as necessary. Resaw joints removing no more than 1/16 inch (2 mm) from

~~each joint face. Immediately after sawing, flush out joint with water and other tools as necessary to completely remove the slurry.~~

101-3.8.2 Cleaning prior to sealing. Immediately before sealing, joints shall be cleaned by removing any remaining laitance and other foreign material. Allow sufficient time to dry out joints prior to sealing. Joint surfaces will be surface-dry prior to installation of sealant.

101-3.8.3 Joint sealant. Joint material and installation will be in accordance with Item P-605 ~~[Item P-604]~~.

~~**101-3.9 Preparation of Cracks in Flexible Pavement prior to sealing.** Prior to application of sealant material, clean and dry the joints of all scale, dirt, dust, old sealant, curing compound, moisture, and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method used cleans the cracks and does not damage the pavement.~~

~~**101-3.9.1 Preparation of Crack.** Widen crack with [router] [random crack saw] by removing a minimum of 1/16 inch (2 mm) from each side of crack. Immediately before sealing, cracks will be blown out with a hot air lance combined with oil and water free compressed air.~~

~~**101-3.9.2 Removal of Existing Crack Sealant.** Existing sealants will be removed by [routing] [random crack saw]. Following [routing] [sawing] any remaining debris will be removed by use of a hot lance combined with oil and water free compressed air.~~

~~**101-3.9.3 Crack Sealant.** Crack sealant material and installation will be in accordance with [Item P-605].~~

101-3.9.4 Removal of Pipe and other Buried Structures.

a. Removal of Existing Pipe Material. Remove all pipes as recommended by RPR. The pipe material shall be legally disposed of off-site in a timely manner following removal. Trenches shall be backfilled material equal to or better in quality than adjacent embankment. Trenches under paved areas must be compacted to 95% of ASTM D698 .

~~**b. Removal of Inlets/Manholes.** [Where indicated on the plans or as directed by the RPR, inlets and/or manholes shall be removed and legally disposed of off-site in a timely fashion after removal. Excavations after removal shall be backfilled with material equal or better in quality than adjacent embankment. When under paved areas must be compacted to [95%] of ASTM [D1557] [D698], when outside of paved areas must be compacted to [95%] of ASTM D698. [Not used.]]~~

~~**c.** Removal of [ ].~~

METHOD OF MEASUREMENT

~~**101-4.1 Lump sum.** No separate measurement for payment will be made. The work covered by this section shall be considered as a subsidiary obligation of the Contractor and covered under the other contract items.~~

101-4.1 Pavement removal. The unit of measurement for pavement removal shall be the number of square yards ~~(square meters)~~ removed by the Contractor. Any pavement removed outside the limits of removal because the pavement was damaged by negligence on the part of the Contractor shall not be included in the measurement for payment. No direct measurement or payment shall be made for saw cutting. Saw cutting shall be incidental to pavement removal. Dowel bar installation shall be incidental to pavement removal.

~~**101-4.2 Joint and crack repair.** The unit of measurement for joint and crack repair shall be the linear foot (meter) of joint.~~

~~**101-4.3 Removal of Foreign Substances/contaminates.** The unit of measurement for foreign Substances/contaminates removal shall be the square foot (meter).~~

~~**101-4.4 Spalled and failed asphalt pavement repair.** The unit of measure for failed asphalt pavement repair shall be square foot (square meter).~~

~~**101-4.5 Concrete Spall Repair.** The unit of measure for concrete spall repair shall be the number of square feet (square meter). The location and average depth of the patch shall be determined and agreed upon by the RPR and the Contractor.~~

~~**101-4.6 Cold milling.** The unit of measure for cold milling shall be [___] inches of milling per square yard (square meter). The location and average depth of the cold milling shall be as shown on the plans. If the initial cut does not correct the condition, the Contractor shall re-mill the area and will be paid for the total depth of milling.]~~

101-4.7 Removal of Pipe and other Buried Structures. ~~[Not require.] [~~ The unit of measurement for removal of pipe and other buried structures will be Linear Feet. No separate measurement for payment will be made. The work covered by this section shall be considered ~~as a subsidiary obligation of the Contractor and covered under the other contract items.]~~ made at the contract unit price for each completed and accepted item. This price shall be full compensation for all labor, equipment, tools, and incidentals necessary to complete this item in accordance with paragraph 101-3.9.4

BASIS OF PAYMENT

101-5.1 Payment. Payment shall be made at contract unit price for the unit of measurement as specified above. This price shall be full compensation for furnishing all materials and for all preparation, hauling, and placing of the material and for all labor, equipment, tools, and incidentals necessary to complete this item.

Item P 101-5.1a	Sawcut, Remove and Dispose Existing Concrete Pavement Full Depth (8") - per Square Yards
Item P 101-5.1b	Sawcut, Remove and Dispose Existing Asphalt Ramp – per Square Yards
Item P-101-5.1c	Sawcut, Remove and Dispose Existing 6" Vertical Curb –per Linear Feet

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

AC 150/5380-6	Guidelines and Procedures for Maintenance of Airport Pavements.

ASTM International (ASTM)

ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements

END OF ITEM P-101

ITEM P-152
EXCAVATION, SUBGRADE, AND EMBANKMENT

DESCRIPTION

152-1.1 This item covers excavation, disposal, placement, and compaction of all materials within the limits of the work required to construct safety areas, runways, taxiways, aprons, and intermediate areas as well as other areas for drainage, building construction, parking, or other purposes in accordance with these specifications and in conformity to the dimensions and typical sections shown on the plans.

152-1.2 Classification. All material excavated shall be classified as defined below:

a. Unclassified excavation. Unclassified excavation shall consist of the excavation and disposal of all material, regardless of its nature which is not otherwise classified and paid for under one of the following items .

Borrow excavation. Borrow excavation shall consist of approved material required for the construction of embankments or for other portions of the work in excess of the quantity of usable material available from required excavations. Borrow material shall be obtained from areas designated by the Resident Project Representative (RPR) within the limits of the airport property but outside the normal limits of necessary grading, or from areas outside the airport boundaries.

152-1.3 Unsuitable excavation. Unsuitable material shall be disposed of off-site or as directed by the RPR. Materials containing vegetable or organic matter, such as muck, peat, organic silt, or sod shall be considered unsuitable for use in embankment construction. Material suitable for topsoil may be used on the embankment slope when approved by the RPR. *Undercutting of material unsatisfactory for subgrade foundation shall be considered unsuitable excavation and shall be excavated to the depth specified by the Engineer below the subgrade.*

CONSTRUCTION METHODS

152-2.1 General. ~~Before beginning excavation, grading, and embankment operations in any area, the area shall be cleared or cleared and grubbed in accordance with Item P-151.~~

The suitability of material to be placed in embankments shall be subject to approval by the RPR. All unsuitable material shall be disposed of off site. ~~in waste areas as shown on the plans~~. All waste areas shall be graded to allow positive drainage of the area and adjacent areas. The surface elevation of waste areas shall be specified on the plans or approved by the RPR.

When the Contractor's excavating operations encounter artifacts of historical or archaeological significance, the operations shall be temporarily discontinued and the RPR notified per Section 70, paragraph 70-20. At the direction of the RPR, the Contractor shall excavate the site in such a manner as to preserve the artifacts encountered and allow for their removal. Such excavation will be paid for as extra work.

Areas outside the limits of the pavement areas where the top layer of soil has become compacted by hauling or other Contractor activities shall be scarified and disked to a depth of 4 inches (100 mm), to loosen and pulverize the soil. Stones or rock fragments larger than 4 inches (100 mm) in their greatest dimension will not be permitted in the top 6 inches (150 mm) of the subgrade.

If it is necessary to interrupt existing surface drainage, sewers or under-drainage, conduits, utilities, or similar underground structures, the Contractor shall be responsible for and shall take

all necessary precautions to preserve them or provide temporary services. When such facilities are encountered, the Contractor shall notify the RPR, who shall arrange for their removal if necessary. The Contractor, at their own expense, shall satisfactorily repair or pay the cost of all damage to such facilities or structures that may result from any of the Contractor's operations during the period of the contract.

a. Blasting. Blasting shall not be allowed.

152-2.2 Excavation. No excavation shall be started until the work has been staked out by the Contractor and the RPR has obtained from the Contractor, the survey notes of the elevations and measurements of the ground surface. The Contractor and RPR shall agree that the original ground lines shown on the original topographic mapping are accurate, or agree to any adjustments made to the original ground lines.

Volumetric quantities were calculated by comparing DTM files of the applicable design surfaces and generating Triangle Volume Reports. Electronic copies of DTM files and a paper copy of the original topographic map will be issued to the successful bidder.

Volumetric quantities were calculated using design cross sections which were created for this project using the DTM files of the applicable design surfaces and generating End Area Volume Reports. Paper copies of design cross sections and a paper copy of the original topographic map will be issued to the successful bidder.

Existing grades on the design cross sections or DTM's, where they do not match the locations of actual spot elevations shown on the topographic map, were developed by computer interpolation from those spot elevations. Prior to disturbing original grade, Contractor shall verify the accuracy of the existing ground surface by verifying spot elevations at the same locations where original field survey data was obtained as indicated on the topographic map. Contractor shall recognize that, due to the interpolation process, the actual ground surface at any particular location may differ somewhat from the interpolated surface shown on the design cross sections or obtained from the DTM's. Contractor's verification of original ground surface, however, shall be limited to verification of spot elevations as indicated herein, and no adjustments will be made to the original ground surface unless the Contractor demonstrates that spot elevations shown are incorrect. For this purpose, spot elevations which are within 0.1 foot (30 mm) of the stated elevations for ground surfaces, or within 0.04 foot (12 mm) for hard surfaces (pavements, buildings, foundations, structures, etc.) shall be considered "no change". Only deviations in excess of these will be considered for adjustment of the original ground surface. If Contractor's verification identifies discrepancies in the topographic map, Contractor shall notify the RPR in writing at least **1 DAY** before disturbance of existing grade to allow sufficient time to verify the submitted information and make adjustments to the design cross sections or DTM's. Disturbance of existing grade in any area shall constitute acceptance by the Contractor of the accuracy of the original elevations shown on the topographic map for that area.

All areas to be excavated shall be stripped of vegetation and topsoil. Topsoil shall be stockpiled for future use in areas designated on the plans or by the RPR. All suitable excavated material shall be used in the formation of embankment, subgrade, or other purposes as shown on the plans. All unsuitable material shall be disposed of ~~as shown on the plans~~.

The grade shall be maintained so that the surface is well drained at all times.

When the volume of the excavation exceeds that required to construct the embankments to the grades as indicated on the plans, the excess shall be used to grade the areas of ultimate development or disposed as directed by the RPR. When the volume of excavation is not sufficient for constructing the embankments to the grades indicated, the deficiency shall be obtained from borrow areas.

a. Selective grading. *When quality of the material varies significantly,* ~~selective grading is indicated on the plans~~, the more suitable material designated by the RPR shall be used in constructing the embankment or in capping the pavement subgrade. If, at the time of excavation, it is not possible to place this material in its final location, it shall be stockpiled in approved areas until it can be placed. The more suitable material shall then be placed and compacted as specified. Selective grading shall be considered incidental to the work involved. The cost of stockpiling and placing the material shall be included in the various pay items of work involved.

b. Undercutting. Rock, shale, hardpan, loose rock, boulders, or other material unsatisfactory for safety areas, subgrades, roads, shoulders, or any areas intended for turf shall be excavated to a minimum depth of 12 inches (300 mm) below the subgrade or to the depth specified by the RPR. Muck, peat, matted roots, or other yielding material, unsatisfactory for subgrade foundation, shall be removed to the depth specified. Unsuitable materials shall be disposed off the airport. The cost is incidental to this item. This excavated material shall be paid for at the contract unit price per cubic yard. The excavated area shall be backfilled with suitable material obtained from the grading operations or borrow areas and compacted to specified densities. The necessary backfill will constitute a part of *Unsuitable Excavation* ~~the embankment~~. Where rock cuts are made, backfill with select material. Any pockets created in the rock surface shall be drained in accordance with the details shown on the plans. Undercutting will be paid as unclassified excavation .

c. Over-break. Over-break, including slides, is that portion of any material displaced or loosened beyond the finished work as planned or authorized by the RPR. All over-break shall be graded or removed by the Contractor and disposed of as directed by the RPR. The RPR shall determine if the displacement of such material was unavoidable and their own decision shall be final. Payment will not be made for the removal and disposal of over-break that the RPR determines as avoidable. Unavoidable over-break will be classified as "Unclassified Excavation."

d. Removal of utilities. The removal of existing structures and utilities required to permit the orderly progress of work will be accomplished by the Contractor as indicated on the plans. All existing foundations shall be excavated at least 2 feet (60 cm) below the top of subgrade or as indicated on the plans, and the material disposed of as directed by the RPR. All foundations thus excavated shall be backfilled with suitable material and compacted as specified for embankment or as shown on the plans.

152-2.3 Borrow excavation. Borrow areas from outside the airport boundary. Embankment quantities shown on plans.

152-2.4 Drainage excavation. Drainage excavation shall consist of excavating drainage ditches including intercepting, inlet, or outlet ditches; or other types as shown on the plans. The work shall be performed in sequence with the other construction. Ditches shall be constructed prior to starting adjacent excavation operations. All satisfactory material shall be placed in embankment fills; unsuitable material shall be placed in designated waste areas or as directed by the RPR. All necessary work shall be performed true to final line, elevation, and cross-section. The Contractor shall maintain ditches constructed on the project to the required cross-section and shall keep them free of debris or obstructions until the project is accepted.

152-2.5 Preparation of cut areas or areas where existing pavement has been removed. In those areas on which a subbase or base course is to be placed, the top 8 inches of subgrade shall be compacted to not less than 100 % of maximum density for non-cohesive soils, and 95% of maximum density for cohesive soils as determined by ASTM D698. As used in this

specification, "non-cohesive" shall mean those soils having a plasticity index (PI) of less than 3 as determined by ASTM D4318.

152-2.6 Preparation of embankment area. All sod and vegetative matter shall be removed from the surface upon which the embankment is to be placed. The cleared surface shall be broken up by plowing or scarifying to a minimum depth of 6 inches (150 mm) and shall then be compacted per paragraph 152-2.10.

Sloped surfaces steeper than one (1) vertical to four (4) horizontal shall be plowed, stepped, benched, or broken up so that the fill material will bond with the existing material. When the subgrade is part fill and part excavation or natural ground, the excavated or natural ground portion shall be scarified to a depth of 12 inches (300 mm) and compacted as specified for the adjacent fill.

No direct payment shall be made for the work performed under this section. The necessary clearing and grubbing and the quantity of excavation removed will be paid for under the respective items of work.

152-2.7 Control Strip. The first half-day of construction of subgrade and/or embankment shall be considered as a control strip for the Contractor to demonstrate, in the presence of the RPR, that the materials, equipment, and construction processes meet the requirements of this specification. The sequence and manner of rolling necessary to obtain specified density requirements shall be determined. The maximum compacted thickness may be increased to a maximum of 12 inches (300 mm) upon the Contractor's demonstration that approved equipment and operations will uniformly compact the lift to the specified density. The RPR must witness this demonstration and approve the lift thickness prior to full production.

Control strips that do not meet specification requirements shall be reworked, re-compacted, or removed and replaced at the Contractor's expense. Full operations shall not begin until the control strip has been accepted by the RPR. The Contractor shall use the same equipment, materials, and construction methods for the remainder of construction, unless adjustments made by the Contractor are approved in advance by the RPR.

152-2.8 Formation of embankments. The material shall be constructed in lifts as established in the control strip, but not less than 6 inches (150 mm) nor more than 12 inches (300 mm) of compacted thickness.

When more than one lift is required to establish the layer thickness shown on the plans, the construction procedure described here shall apply to each lift. No lift shall be covered by subsequent lifts until tests verify that compaction requirements have been met. The Contractor shall rework, re-compact and retest any material placed which does not meet the specifications.

The lifts shall be placed, to produce a soil structure as shown on the typical cross-section or as directed by the RPR. Materials such as brush, hedge, roots, stumps, grass and other organic matter, shall not be incorporated or buried in the embankment.

Earthwork operations shall be suspended at any time when satisfactory results cannot be obtained due to rain, freezing, or other unsatisfactory weather conditions in the field. Frozen material shall not be placed in the embankment nor shall embankment be placed upon frozen material. Material shall not be placed on surfaces that are muddy, frozen, or contain frost. The Contractor shall drag, blade, or slope the embankment to provide surface drainage at all times.

The material in each lift shall be within ±2% of optimum moisture content before rolling to obtain the prescribed compaction. The material shall be moistened or aerated as necessary to achieve a uniform moisture content throughout the lift. Natural drying may be accelerated by blending in dry material or manipulation alone to increase the rate of evaporation.

The Contractor shall make the necessary corrections and adjustments in methods, materials or moisture content to achieve the specified embankment density.

The contractor will take samples of excavated materials which will be used in embankment for testing and develop a Moisture-Density Relations of Soils Report (Proctor) in accordance with ASTM D698. A new Proctor shall be developed for each soil type based on visual classification.

Density tests will be taken by the contractor for every 500 square yards of compacted embankment for each lift which is required to be compacted, or other appropriate frequencies as determined by the RPR.

If the material has greater than 30% retained on the 3/4-inch (19.0 mm) sieve, follow AASHTO T-180 Annex Correction of maximum dry density and optimum moisture for oversized particles.

Rolling operations shall be continued until the embankment is compacted to not less than 100% of maximum density for non-cohesive soils, and 95% of maximum density for cohesive soils as determined by ASTM D698. Under all areas to be paved, the embankments shall be compacted to a depth of 12 inches and to a density of not less than 95 percent of the maximum density as determined by ASTM D698. As used in this specification, "non-cohesive" shall mean those soils having a plasticity index (PI) of less than 3 as determined by ASTM D4318.

There will be no separate measurement of payment for compacted embankment. All costs incidental to placing in lifts, compacting, discing, watering, mixing, sloping, and other operations necessary for construction of embankments will be included in the contract price for excavation, borrow, or other items. Payment for compacted embankment will be made under embankment in-place and no payment will be made for excavation, borrow, or other items.

152-2.9 Proof rolling. The purpose of proof rolling the subgrade is to identify any weak areas in the subgrade and not for compaction of the subgrade. After compaction is completed, the subgrade area shall be proof rolled with a 20 ton (18.1 metric ton) Tandem axle Dual Wheel Dump Truck loaded to the legal limit with tires inflated to 100 psi in the presence of the RPR. Apply a minimum of **50%** coverage, or as specified by the RPR, under pavement areas. A coverage is defined as the application of one tire print over the designated area. Soft areas of subgrade that deflect more than 1 inch (25 mm) or show permanent deformation greater than 1 inch (25 mm) shall be removed and replaced with suitable material or reworked to conform to the moisture content and compaction requirements in accordance with these specifications. Removal and replacement of soft areas is incidental to this item.

152-2.10 Compaction requirements. The subgrade under areas to be paved shall be compacted to a depth of 12 inches (300 mm) and to a density of not less than 95 percent of the maximum dry density as determined by ASTM D698.

The material to be compacted shall be within ±2% of optimum moisture content before being rolled to obtain the prescribed compaction (except for expansive soils). When the material has greater than 30 percent retained on the ¾ inch (19.0 mm) sieve, follow the methods in ASTM D698 procedures in AASHTO T180 Annex for correction of maximum dry density and optimum moisture for oversized particles. Tests for moisture content and compaction will be taken at a minimum of 500 S.Y. of subgrade. All quality assurance testing shall be done by the Contractor's laboratory in the presence of the RPR, and density test results shall be furnished upon completion to the RPR for acceptance determination.

The in-place field density shall be determined in accordance with ASTM D6938 using Procedure A, the direct transmission method, and ASTM D6938 shall be used to determine the moisture content of the material. The machine shall be calibrated in accordance with ASTM D6938 within 12 months prior to its use on this contract. The gauge shall be field standardized daily.

Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

If the specified density is not attained, the entire lot shall be reworked and/or re-compacted and additional random tests made. This procedure shall be followed until the specified density is reached.

All cut-and-fill slopes shall be uniformly dressed to the slope, cross-section, and alignment shown on the plans or as directed by the RPR and the finished subgrade shall be maintained.

152-2.11 Finishing and protection of subgrade. Finishing and protection of the subgrade is incidental to this item. Grading and compacting of the subgrade shall be performed so that it will drain readily. All low areas, holes or depressions in the subgrade shall be brought to grade. Scarifying, blading, rolling and other methods shall be performed to provide a thoroughly compacted subgrade shaped to the lines and grades shown on the plans. All ruts or rough places that develop in the completed subgrade shall be graded, re-compacted, and retested. The Contractor shall protect the subgrade from damage and limit hauling over the finished subgrade to only traffic essential for construction purposes.

The Contractor shall maintain the completed course in satisfactory condition throughout placement of subsequent layers. No subbase, base, or surface course shall be placed on the subgrade until the subgrade has been accepted by the RPR.

152-2.12 Haul. All hauling will be considered a necessary and incidental part of the work. The Contractor shall include the cost in the contract unit price for the pay of items of work involved. No payment will be made separately or directly for hauling on any part of the work.

The Contractor's equipment shall not cause damage to any excavated surface, compacted lift or to the subgrade as a result of hauling operations. Any damage caused as a result of the Contractor's hauling operations shall be repaired at the Contractor's expense.

The Contractor shall be responsible for providing, maintaining and removing any haul roads or routes within or outside of the work area, and shall return the affected areas to their former condition, unless otherwise authorized in writing by the Owner. No separate payment will be made for any work or materials associated with providing, maintaining and removing haul roads or routes.

152-2.13 Surface Tolerances. In those areas on which a subbase or base course is to be placed, the surface shall be tested for smoothness and accuracy of grade and crown. Any portion lacking the required smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches (75 mm), reshaped and re-compacted to grade until the required smoothness and accuracy are obtained and approved by the RPR. The Contractor shall perform all final smoothness and grade checks in the presence of the RPR. Any deviation in surface tolerances shall be corrected by the Contractor at the Contractor's expense.

a. **Smoothness.** The finished surface shall not vary more than +/- ½ inch (12 mm) when tested with a 12-foot (3.7-m) straightedge applied parallel with and at right angles to the centerline. The straightedge shall be moved continuously forward at half the length of the 12-foot (3.7-m) straightedge for the full length of each line on a 50-foot (15-m) grid.

b. **Grade.** The grade and crown shall be measured on a 50-foot (15-m) grid and shall be within +/-0.05 feet (15 mm) of the specified grade.

METHOD OF MEASUREMENT

152-3.1 Measurement for payment specified by the cubic yard shall be computed by the average end areas of design cross sections. The end area is that bound by the original ground line established by ~~field cross-sections~~ and the final theoretical pay line established by cross-sections shown on the plans, subject to verification by the RPR.

In cut sections, the additional cut required to construct the topsoil layer to the plan grade had not been measured and will not be measured for separate payment, but will be subsidiary to "Unclassified Excavation."

No allowance has been made in the measurement of shrink/swell. The Contractor shall make his own determination as to the amount of shrink/swell involved in the construction.

No adjustments have been made to the plan quantities for the construction and demolition of existing drainage structures. The Contractor shall make his/her own determination as to the amount of unsuitable excavated materials which may be encountered and the resulting additional borrow material required embankment required to construct the project if the excavated material is deemed suitable,

The quantity of the unclassified excavation to be paid for shall be the number of Cubic Yards measure in its original position. Measurement shall not include the quantity of materials excavated without authorization beyond normal slope lines or the quantity of material used for purpose other those directed.

152.3.2 The quantity of borrow excavation to be paid for shall be the number of cubic yards measure in its FINAL position. Measurement shall not include the quantity of materials excavated without authorization beyond normal slope lines or the quantity of material used for purpose other those directed.

~~**152-3.2** The quantity of embankment in place shall be the number of cubic yards as measured in its final position.~~

152-3.3 Stockpiled material shall not be measured for payment in the stockpiled position

152-3.4 Unsuitable excavation shall be measured for the surface to the ground., after stripping is accomplished. Measurement will be taken by Engineer, and the volume of excavation will be calculated by the average end area method. The necessary refilling of unsuitable areas will not be measured for separate payment but will be subsidiary to "Unsuitable Excavation". Only the amount of excavation directed by the Engineer will be measured for payment.

BASIS OF PAYMENT

152-4.1 Unclassified excavation. Drainage Excavation payment shall be made at the contract unit price per cubic yard. This price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the item.

152-4.2 For embankment in place, payment shall be made at the contract unit price per cubic yard (cubic meter). This price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the item.

~~**152-4.3** Stockpiled material shall be paid for on the basis of the number of cubic yards measure in the stockpile position.~~

152-4.4 Unsuitable excavation shall be paid at the contract unit price per Cubic Yard for "Unsuitable Excavation." which price shall be full compensation for all excavation, disposal or placement of the material including loading, hauling, spreading and compaction, compaction and preparation of subgrade, for refillling, rolling and compaction of all undercut areas, and for all equipment tools, labor and incidentals necessary to complete the work.

Payment will be made under:

~~Item P-152-4.1~~	~~Unclassified/ Drainage Excavation - per cubic yard.~~
Item P-152-4.2	Embankment in Place - per cubic yard
Item P-152-4.4	Unsuitable Excavation – per cubic yard

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

American Association of State Highway and Transportation Officials (AASHTO)

AASHTO T-180	Standard Method of Test for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop

ASTM International (ASTM)

ASTM D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft^3 (600 kN-m/m^3))
ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
ASTM D1557	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft^3 (2700 kN-m/m^3))
ASTM D6938	Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

Advisory Circulars (AC)

AC 150/5370-2	Operational Safety on Airports During Construction Software

Software

FAARFIELD – FAA Rigid and Flexible Iterative Elastic Layered Design

U.S. Department of Transportation

FAA RD-76-66	Design and Construction of Airport Pavements on Expansive Soils

END OF ITEM P-152

ITEM P-155
LIME-TREATED SUBGRADE

DESCRIPTION

155-1.1 This item shall be used for soil modification that require strength gain to a specific level. This item shall consist of constructing one or more courses of a mixture of soil, lime, and water in accordance with this specification, and in conformity with the lines, grades, thicknesses, and typical cross-sections shown on the plans.

MATERIALS

155-2.1 Lime. Quicklime, hydrated lime, and either high-calcium dolomitic, or magnesium lime, as defined by ASTM C51, shall conform to the requirements of ASTM C977. Lime not produced from calcining limestone is not permitted.

~~**155-2.2 Commercial lime slurry.** Commercial lime slurry shall be a pumpable suspension of solids in water. The water or liquid portion of the slurry shall not contain dissolved material injurious or objectionable for the intended purpose. The solids portion of the mixture, when considered on the basis of "solids content," shall consist principally of hydrated lime of a quality and fineness sufficient to meet the following chemical composition and residue requirements.~~

~~**a. Chemical composition.** The "solids content" of the lime slurry shall consist of a minimum of 70%, by weight, of calcium and magnesium oxides.~~

~~**b. Residue.** The percent by weight of residue retained in the "solids content" of lime slurry shall conform to the following requirements:~~

- ~~Residue retained on a No. 6 (3.35 µm) sieve = maximum 0.0%~~
- ~~Residue retained on a No. 10 (2.00 µm) sieve = maximum 1.0%~~
- ~~Residue retained on a No. 30 (600 µm) sieve = maximum 2.5%~~

~~**c. Grade.** Commercial lime slurry shall conform to one of the following two grades:~~

- ~~Grade 1. The "dry solids content" shall be at least 31% by weight, of the slurry.~~
- ~~Grade 2. The "dry solids content" shall be at least 35%, by weight, of the slurry.~~

155-2.3 Water. Water used in mixing or curing shall be from potable water sources. Other sources shall be tested in accordance with ASTM C1602 prior to use.

155-2.4 Soil. The soil for this work shall consist of on-site materials free of roots, sod, weeds, and stones larger than 2-1/2 inches (60 mm) and have a sulfate content of less than 0.3%.

COMPOSITION

155-3.1 Soil-lime mixture. Lime shall be applied at 8 % dry unit weight of soil for the depth of subgrade treatment as shown on the plans.

155-3.2 Tolerances. At final compaction, the lime and water content for each course of subgrade treatment shall conform to the following tolerances:

Tolerances

Material	Tolerance
Lime	+ 0.5%
Water	+ 2%, -0%

WEATHER LIMITATIONS

155-4.1 Weather limitation. Subgrade shall not be constructed when weather conditions detrimentally affect the quality of the materials. Lime shall not be applied unless the air temperature is at least 40°F (4°C) and rising. Lime shall not be applied to soils that are frozen or contain frost. Protect completed lime-treated areas by approved methods against the detrimental effects of freezing if the air temperature falls below 35°F (2°C). Remove and replace any damaged portion of the completed soil-lime treated area with new soil-lime material in accordance with this specification.

EQUIPMENT

155-5.1 Equipment. All equipment necessary to grade, scarify, spread, mix, and compact the material shall be provided. The Resident Project Representative (RPR) must approve the Contractor's proposed equipment prior to the start of the treatment.

CONSTRUCTION METHODS

155-6.1 General. This specification is to construct a subgrade consisting of a uniform lime mixture which shall be free from loose or segregated areas. The subgrade shall be of uniform density and moisture content, well mixed for its full depth, and have a smooth surface suitable for placing subsequent lifts. The Contractor shall be responsible to meet the above requirements.

Prior to any treatment, the subgrade shall be constructed as specified in Item P-152, Excavation, Subgrade and Embankment, and shaped to conform to the typical sections, lines, and grades as shown on the plans.

The mixing equipment must give visible indication at all times that it is cutting, pulverizing, and mixing the material uniformly to the proper depth over the full width of the cut.

155-6.2 Application. Lime shall be uniformly spread only over an area where the initial mixing operations can be completed during the same workday. Lime shall not be applied when wind conditions are detrimental to proper application. A motor grader shall not be used to spread the lime. Adequate moisture shall be added to the cement/soil mixture to maintain the proper moisture content. Materials shall be handled, stored, and applied in accordance with all federal, state, and local requirements.

155-6.3 Mixing. The mixing procedure shall be as described below:

a. Preliminary mixing. The full depth of the treated subgrade shall be mixed with an approved mixing machine. Lime shall not be left exposed for more than six (6) hours. The mixing machine shall make two coverages. Water shall be added to the subgrade during mixing to

provide a moisture content 3% to 5% above the optimum moisture of the material and to ensure chemical reaction of the lime and subgrade. After mixing, the subgrade shall be lightly rolled to seal the surface and help prevent evaporation of moisture. The water content of the subgrade mixture shall be maintained at a moisture content above the optimum moisture content for a minimum of 4 to 24 hours or until the material becomes friable. During the mellowing period, the material shall be sprinkled as directed by the RPR.

b. Final mixing. After the required mellowing time, the material shall be uniformly mixed by approved methods. Any clods shall be reduced in size by blading, discing, harrowing, scarifying, or by the use of other approved pulverization methods. After curing, pulverize lime treated material until 100% of soil particles pass a one-inch (25.0 mm) sieve and 60% pass the No. 4 (4.75 mm) sieve when tested dry by laboratory sieves. If resultant mixture contains clods, reduce their size by scarifying, remixing, or pulverization to meet specified gradation.

155-6.4 Control Strip. The first half-day of construction shall be considered the control strip. The Contractor shall demonstrate, in the presence of the RPR, that the materials, equipment, and construction processes meet the requirements of the specification. The sequence and manner of rolling necessary to obtain specified density requirements shall be determined. Control strips that do not meet specification requirements shall be reworked, re-compacted, or removed and replaced at the Contractor's expense. Full operations shall not continue until the control strip has been accepted by the RPR. Upon acceptance of the control strip by the RPR, the Contractor shall use the same equipment, materials, and construction methods for the remainder of construction, unless adjustments made by the Contractor are approved in advance by the RPR.

155-6.5 Treatment Application and Depth Checks. The depth and amount of stabilization shall be measured by the Contractor with no less than 2 tests per day of material placed; test shall be witnessed by the RPR. Measurements shall be made in test holes excavated to show the full depth of mixing and the pH checked by spraying the side of the test hole with a pH indicator such as phenolphthalein. Phenolphthalein changes from clear to red between pH 8.3 and 10. The color change indicates the location of the bottom of the mixing zone. pH indicators other than phenolphthalein can be used to measure pH levels. If the pH is not at least 8.3 and/or if the depth of the treated subgrade is more than 1/2 inch (12 mm) deficient, additional lime treatment shall be added and the material remixed. The Contractor shall correct all such areas in a manner satisfactory to the RPR.

155-6.6 Compaction. Compaction of the mixture shall immediately follow the final mixing operation with the mixture compacted within 1 to 4 hours after final mixing. The material shall be at the moisture content specified in paragraph 155-3.2 during compaction. The field density of the compacted mixture shall be at least 95% of the maximum density as specified in paragraph 155-6.10. Perform in-place density test to determine degree of compaction between 24 and 72 hours after final compaction and the 24-hour moist cure period. If the material fails to meet the density requirements, it shall be reworked to meet the density requirements. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

155-6.7 Finishing and curing. After the final lift or course of lime-treated subgrade has been compacted, it shall be brought to the required lines and grades in accordance with the typical sections. The completed section shall then be finished by rolling, as directed by the RPR, with a pneumatic or other suitable roller sufficiently light to prevent hairline cracking. The finished surface shall not vary more than 1/2-inch (12 mm) when tested with a 12-foot (3.7 m) straightedge applied parallel with and at right angles to the pavement centerline. Any variations in excess of this tolerance shall be corrected by the Contractor at the Contractor's expense in a manner satisfactory to the RPR.

The completed section shall be moist cured for a minimum of seven (7) days before further courses are added or any traffic is permitted, unless otherwise directed by the RPR. The final lift should not be exposed for more than 14 days without protection or the placement of a base course material.

155-6.8 Maintenance. The Contractor shall protect and maintain the lime-treated subgrade from yielding until the lime-treated subgrade is covered by placement of the next lift. When material has been exposed to excessive rain, snow, or freeze-thaw conditions, prior to placement of additional material, the Contractor shall verify that materials still meet all specification requirements. The maintenance cost shall be incidental to this item.

155-6.9 Surface tolerance. In those areas on which a subbase or base course is to be placed, the surface shall be tested for smoothness and accuracy of grade and crown. Any portion lacking the required smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches (75 mm), reshaped and re-compacted to grade until the required smoothness and accuracy are obtained and approved by the RPR. The Contractor shall perform all final smoothness and grade checks in the presence of the RPR. Any deviation in surface tolerances shall be corrected by the Contractor at the Contractor's expense.

a. Smoothness. The finished surface shall not vary more than +/- ½ inch (12 mm) when tested with a 12-foot (3.7-m) straightedge applied parallel with and at right angles to the centerline. The straightedge shall be moved continuously forward at half the length of the 12-foot (3.7-m) straightedge for the full length of each line on a 50-foot (15-m) grid.

b. Grade. The grade and crown shall be measured on a 50-foot (15-m) grid and shall be within +/-0.05 feet (15 mm) of the specified grade.

155-6.10 Acceptance sampling and testing. The lime treated subgrade shall be accepted for density and thickness on an area basis. Testing frequency shall be a minimum of one compaction and thickness test per 1000 square yards 840 square meters) of lime treated subgrade, but not less than four (4) tests per day of production. Sampling locations will be determined on a random basis per ASTM D3665.

a. Density. All testing shall be done by the Contractor's laboratory in the presence of the RPR and density test results shall be furnished upon completion to the RPR for acceptance determination.

The field density of the compacted mixture shall be at least 95% of the maximum density of laboratory specimens prepared from samples taken from the material in place. The specimens shall be compacted and tested in accordance with ASTM D698 to determine maximum density and optimum moisture content. The in-place field density shall be determined in accordance with ASTM D1556. If the material fails to meet the density requirements, the area represented by the failed test shall be reworked to meet the density requirements. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

b. Thickness. The thickness of the course shall be within +0 and -1/2 inch (12 mm) of the specified thickness as determined by depth tests taken by the Contractor in the presence of the RPR for each area. Where the thickness is deficient by more than 1/2-inch (12 mm), the Contractor shall correct such areas at no additional cost The Contractor shall replace, at his expense, material where depth tests have been taken.

155-6.11 Handling and safety. The Contractor shall obtain and enforce the lime supplier's instructions for proper safety and handling of the lime to prevent physical eye or skin contact with lime during transport or application.

METHOD OF MEASUREMENT

155-7.1 Lime-treated subgrade shall be paid for by the square yard (square meter) in the completed and accepted work.

155-7.2 Lime shall be paid by the number of tons (kg) of Hydrated Lime applied at the application rate specified in paragraph 155-3.1.

a. Hydrated lime delivered to the project in dry form will be measured according to the actual tonnage either spread on the subgrade or batched on site into a slurry, whichever is applicable.

b. Quicklime delivered to the project in dry form will be measured for payment on the basis of the tons of equivalent hydrated lime using the following formula:

Equivalent Hydrated Lime ($Ca(OH)_2$) = Total Quicklime (CaO) × 1.32

~~**c.** Lime delivered to the project in slurry form will be measured for payment in tons, dry weight of hydrated lime or equivalent hydrated lime in accordance with paragraph b above.~~

BASIS OF PAYMENT

155-8.1 Payment shall be made at the contract unit price per square yard (square meter) for the lime-treated subgrade at the thickness specified. The price shall be full compensation for furnishing all material, except the lime, and for all preparation, delivering, placing, and mixing these materials, and all labor, equipment, tools, and incidentals necessary to complete this item.

155-8.2 Payment shall be made at the contract unit price per ton (kg). This price shall be full compensation for furnishing, delivery, and placing this material.

Payment will be made under:

Item P-155-8.1	Lime-treated subgrade - per square yard (m^2)
Item P-155-8.2	Lime - per ton

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM C51	Standard Terminology Relating to Lime and Limestone (as used by the industry)
ASTM C977	Standard Specification for Quicklime and Hydrated Lime for Soil Stabilization
ASTM C1602	Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete
ASTM D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft^3) (600 kN-m/m^3)
ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method

ASTM D2487	Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)
ASTM D6938	Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

Software

FAARFIELD – FAA Rigid and Flexible Iterative Elastic Layered Design

END OF ITEM P-155

ITEM P-501
CEMENT CONCRETE PAVEMENT

DESCRIPTION

501-1.1 This work shall consist of pavement composed of cement concrete **with reinforcement** constructed on a prepared underlying surface in accordance with these specifications and shall conform to the lines, grades, thickness, and typical cross-sections shown on the plans. The terms cement concrete, hydraulic cement concrete, and concrete are interchangeable in this specification.

MATERIALS

501-2.1 Aggregates.

a. Reactivity. Fine and Coarse aggregates to be used in PCC on this project shall be tested and evaluated by the Contractor for alkali-aggregate reactivity in accordance with both ASTM C1260 and ASTM C1567. Tests must be representative of aggregate sources which will be providing material for production. ASTM C1260 and ASTM C1567 tests may be run concurrently.

(1) Coarse aggregate and fine aggregate shall be tested separately in accordance with ASTM C1260, however, the length of test shall be extended to 28 days (30 days from casting). Tests must have been completed within 6 months of the date of the concrete mix submittal.

(2) The combined coarse and fine aggregate shall be tested in accordance with ASTM C1567, modified for combined aggregates, using the proposed mixture design proportions of aggregates, cementitious materials, and/or specific reactivity reducing chemicals. If the expansion does not exceed 0.10% at 28 days, the proposed combined materials will be accepted. If the expansion is greater than 0.10% at 28 days, the aggregates will not be accepted unless adjustments to the combined materials mixture can reduce the expansion to less than 0.10% at 28 days, or new aggregates shall be evaluated and tested.

(3) If lithium nitrate is proposed for use with or without supplementary cementitious materials, the aggregates shall be tested in accordance with Corps of Engineers (COE) Concrete Research Division (CRD) C662 in lieu of ASTM C1567. If lithium nitrate admixture is used, it shall be nominal 30% ±0.5% weight lithium nitrate in water. If the expansion does not exceed 0.10% at 28 days, the proposed combined materials will be accepted. If the expansion is greater than 0.10% at 28 days, the aggregates will not be accepted unless adjustments to the combined materials mixture can reduce the expansion to less than 0.10% at 28 days, or new aggregates shall be evaluated and tested.

b. Fine aggregate. Grading of the fine aggregate, as delivered to the mixer, shall conform to the requirements of ASTM C33 and the parameters identified in the fine aggregate material requirements below. Fine aggregate material requirements and deleterious limits are shown in the table below.

Fine Aggregate Material Requirements		
Soundness of Aggregates by Use of Sodium Sulfate **or** Magnesium Sulfate	Loss after 5 cycles: 10% maximum using Sodium sulfate - or - 15% maximum using magnesium sulfate	ASTM C88
Sand Equivalent	[45] minimum	ASTM D2419
Fineness Modulus (FM)	2.50 ≤ FM ≤ 3.40	ASTM C136
Limits for Deleterious Substances in Fine Aggregate for Concrete		
Clay lumps and friable particles	1.0% maximum	ASTM C142
Coal and lignite	0.5% using a medium with a density of Sp. Gr. of 2.0	ASTM C123
Total Deleterious Material	1.0% maximum	

c. Coarse aggregate. The maximum size coarse aggregate shall be **1-1/2-inch**.

Aggregates delivered to the mixer shall be clean, hard, uncoated aggregates consisting of crushed stone, crushed or uncrushed gravel, air-cooled iron blast furnace slag, crushed recycled concrete pavement, or a combination. The aggregates shall have no known history of detrimental pavement staining. Steel blast furnace slag shall not be permitted. Coarse aggregate material requirements and deleterious limits are shown in the table below; washing may be required to meet aggregate requirements.

Coarse Aggregate Material Requirements

Material Test	Requirement	Standard
Resistance to Degradation	Loss: 40% maximum	ASTM C131
Soundness of Aggregates by Use of Sodium Sulfate **or** Magnesium Sulfate	Loss after 5 cycles: 12% maximum using Sodium sulfate - or - 18% maximum using magnesium sulfate	ASTM C88
Flat, Elongated, or Flat and Elongated Particles	8% maximum, by weight, of flat, elongated, or flat and elongated particles at 5:1 for any size group coarser than 3/8 (9.5 mm) sieve [1]	ASTM D4791
Bulk density of slag [2]	Weigh not less than 70 pounds per cubic foot (1.12 Mg/cubic meter)	ASTM C29

[1] A flat particle is one having a ratio of width to thickness greater than five (5); an elongated particle is one having a ratio of length to width greater than five (5).

[2] Only required if slag is specified.

The amount of deleterious material in the coarse aggregate shall not exceed the following limits:

Limits for Deleterious Substances in Coarse Aggregate

Deleterious material	ASTM	Percentage by Mass
Clay Lumps and friable particles	ASTM C142	1.0
Material finer than No. 200 sieve (75 µm)	ASTM C117	1.0[1]
Lightweight particles	ASTM C123 using a medium with a density of Sp. Gr. of 2.0	0.5
Chert[2] (less than 2.40 Sp Gr.)	ASTM C123 using a medium with a density of Sp. Gr. of 2.40)	[0.1][3]

[1] The limit for material finer than 75-µm is allowed to be increased to 1.5% for crushed aggregates consisting of dust of fracture that is essentially free from clay or shale. Test results supporting acceptance of increasing limit to 1.5% with statement indicating material is dust of fracture must be submitted with Concrete mix. Acceptable techniques to characterizing these fines include methylene blue adsorption or X-ray diffraction analysis.

[2] Chert and aggregates with less than 2.4 specific gravity.

[3] The limit for chert may be increased to 1.0 percent by mass in areas not subject to severe freeze and thaw.

d. Combined aggregate gradation. This specification is targeted for a combined aggregate gradation developed following the guidance presented in United States Air Force Engineering Technical Letter (ETL) 97-5: Proportioning Concrete Mixtures with Graded Aggregates for Rigid Airfield Pavements. Base the aggregate grading upon a combination of all the aggregates (coarse and fine) to be used for the mixture proportioning. Three aggregate sizes may be required to achieve an optimized combined gradation that will produce a workable concrete mixture for its intended use. Use aggregate gradations that produce concrete mixtures with well-graded or optimized aggregate combinations. The Contractor shall submit complete mixture information necessary to calculate the volumetric components of the mixture. The combined aggregate grading shall meet the following requirements:

(1) The materials selected and the proportions used shall be such that when the Coarseness Factor (CF) and the Workability Factor (WF) are plotted on a diagram as described in paragraph 501-2.1d(4) below, the point thus determined shall fall within the parallelogram described therein.

(2) The CF shall be determined from the following equation:

CF = (cumulative percent retained on the 3/8 in. (9.5 mm) sieve)(100) / (cumulative percent retained on the No. 8 (2.36 mm) sieve)

(3) The WF is defined as the percent passing the No. 8 (2.36 mm) sieve based on the combined gradation. However, WF shall be adjusted, upwards only, by 2.5 percentage points for each 94 pounds (42 kg) of cementitious material per cubic meter yard greater than 564 pounds per cubic yard (335 kg per cubic meter).

(4) A diagram shall be plotted using a rectangular scale with WF on the Y-axis with units from 20 (bottom) to 45 (top), and with CF on the X-axis with units from 80 (left side) to 30 (right side). On this diagram a parallelogram shall be plotted with corners at the following coordinates (CF-75, WF-28), (CF-75, WF-40), (CF-45, WF-32.5), and (CF-45, WF-44.5). If the point determined by the intersection of the computed CF and WF does not fall within the above parallelogram, the grading of each size of aggregate used and the proportions selected shall be changed as necessary. The point determined by the plotting of the CF

and WF may be adjusted during production ±3 WF and ±5 CF. Adjustments to gradation may not take the point outside of the parallelogram.

e. Contractors combined aggregate gradation. The Contractor shall submit their combined aggregate gradation using the following format:

Contractor's Combined Aggregate Gradation

Sieve Size	Contractor's Concrete mix Gradation (Percent passing by weight)
2 inch (50 mm)	
1-1/2 inch (37.5 mm)	
1 inch (25.0 mm)	
3/4 inch (19.0 mm)	
1/2 inch (12.5 mm)	
3/8 inch (9.5 mm)	
No. 4 (4.75 mm)	
No. 8 (2.36 mm)	
No. 16 (1.18 mm)	
No. 30 (600 µm)	
No. 50 (300 µm)	
No. 100 (150 µm)	

501-2.2 Cement. Cement shall conform to the requirements of **ASTM 150 Type I.**

501-2.3 Cementitious materials.

a. Fly ash. Fly ash shall meet the requirements of ASTM C618, with the exception of loss of ignition, where the maximum shall be less than 6%. Fly ash shall have a Calcium Oxide (CaO) content of less than 15% and a total alkali content less than 3% per ASTM C311. The Contractor shall furnish the previous three most recent, consecutive ASTM C618 reports for each source of fly ash proposed in the concrete mix, and shall furnish each additional report as they become available during the project. The reports can be used for acceptance or the material may be tested independently by the Resident Project Representative (RPR).

b. Slag cement (ground granulated blast furnace (GGBF)). Slag cement shall conform to ASTM C989, Grade 100 or Grade 120. Slag cement shall be used only at a rate between 25% and 55% of the total cementitious material by mass.

c. Raw or calcined natural pozzolan. Natural pozzolan shall be raw or calcined and conform to ASTM C618, Class N, including the optional requirements for uniformity and effectiveness in controlling Alkali-Silica reaction and shall have a loss on ignition not exceeding 6%. Class N pozzolan for use in mitigating Alkali-Silica Reactivity shall have a total available alkali content less than 3%.

501-2.4 Joint seal. The joint seal for the joints in the concrete pavement shall meet the requirements of **Item P-605** and shall be of the type specified in the plans.

501-2.5 Isolation joint filler. Premolded joint filler for isolation joints shall conform to the requirements of ASTM D1751 or ASTM D1752 and shall be where shown on the plans. The filler for each joint shall be furnished in a single piece for the full depth and width required for the joint, unless otherwise specified by the RPR. When the use of more than one piece is required for a joint, the abutting ends shall be fastened securely and held accurately to shape by stapling or other positive fastening means satisfactory to the RPR.

501-2.6 Steel reinforcement. Reinforcing shall consist of **Welded Wire Fabric** conforming to the requirements of **ASTM A1064** or **Bar Mats** conforming to the requirements of **ASTM A184 or A704**.

501-2.7 Dowel and tie bars. Dowel bars shall be plain steel bars conforming to ASTM A615 and shall be free from burring or other deformation restricting slippage in the concrete.

a. Dowel Bars. Before delivery to the construction site each dowel bar shall be epoxy coated per ASTM A1078, Type 1, with a coating thickness after curing greater than 10 mils. Patched ends are not required for Type 1 coated dowels. The dowels shall be coated with a bond-breaker recommended by the manufacturer. Dowel sleeves or inserts are not permitted. Grout retention rings shall be fully circular metal or plastic devices capable of supporting the dowel until the grout hardens.

b. Tie Bars. Tie bars shall be deformed steel bars and conform to the requirements of ASTM A615. Tie bars designated as Grade 60 in ASTM A615 or ASTM A706 shall be used for construction requiring bent bars.

501-2.8 Water. Water used in mixing or curing shall be potable. If water is taken from other sources considered non-potable, it shall meet the requirements of ASTM C1602.

501-2.9 Material for curing concrete. Curing materials shall conform to one of the following specifications:

a. Liquid membrane-forming compounds for curing concrete shall conform to the requirements of ASTM C309, Type 2, Class A, or Class B.

b. White polyethylene film for curing concrete shall conform to the requirements of ASTM C171.

c. White burlap-polyethylene sheeting for curing concrete shall conform to the requirements of ASTM C171.

d. Waterproof paper for curing concrete shall conform to the requirements of ASTM C171.

501-2.10 Admixtures. Admixtures shall conform to the following specifications:

a. Air-entraining admixtures. Air-entraining admixtures shall meet the requirements of ASTM C260 and shall consistently entrain the air content in the specified ranges under field conditions. The air-entraining agent and any water reducer admixture shall be compatible.

b. Water-reducing admixtures. Water-reducing admixture shall meet the requirements of ASTM C494, Type A, B, or D.

c. Other admixtures. The use of set retarding and set-accelerating admixtures shall be approved by the RPR prior to developing the concrete mix. Retarding admixtures shall meet the requirements of ASTM C494, Type A, B, or D and set-accelerating admixtures shall meet the requirements of ASTM C494, Type C. Calcium chloride and admixtures containing calcium chloride shall not be used.

d. Lithium Nitrate. The lithium admixture shall be a nominal 30% aqueous solution of Lithium Nitrate, with a density of 10 pounds/gallon (1.2 kg/L), and shall have the approximate chemical form as shown below:

Lithium Admixture

Constituent	Limit (Percent by Mass)
LiNO3 (Lithium Nitrate)	30 ±0.5
SO4 (Sulfate Ion)	0.1 (max)
Cl (Chloride Ion)	0.2 (max)
Na (Sodium Ion)	0.1 (max)
K (Potassium Ion)	0.1 (max)

The lithium nitrate admixture dispensing and mixing operations shall be verified and certified by the lithium manufacturer's representative.

501-2.11 Epoxy-resin. All epoxy-resin materials shall be two-component materials conforming to the requirements of ASTM C881, Class as appropriate for each application temperature to be encountered, except that in addition, the materials shall meet the following requirements:

a. Material for use for embedding dowels and anchor bolts shall be Type IV, Grade 3.

b. Material for use as patching materials for complete filling of spalls and other voids and for use in preparing epoxy resin mortar shall be Type III, Grade as approved.

c. Material for use for injecting cracks shall be Type IV, Grade 1.

d. Material for bonding freshly mixed Portland cement concrete or mortar or freshly mixed epoxy resin concrete or mortar to hardened concrete shall be Type V, Grade as approved.

501-2.12 Bond Breaker. Liquid membrane forming compound shall be in accordance with paragraph 501-2.9a.

CONCRETE MIX

501-3.1. General. No concrete shall be placed until an acceptable concrete mix has been submitted to the RPR for review and the RPR has taken appropriate action. The RPR's review shall not relieve the Contractor of the responsibility to select and proportion the materials to comply with this section.

501-3.2 Concrete Mix Laboratory. The laboratory used to develop the concrete mix shall be accredited in accordance with ASTM C1077. The laboratory accreditation must be current and listed on the accrediting authority's website. All test methods required for developing the concrete mix must be included in the lab accreditation. A copy of the laboratory's current accreditation and accredited test methods shall be submitted to the RPR prior to start of construction.

501-3.3 Concrete Mix Proportions. Develop the mix using the procedures contained in Portland Cement Association (PCA) publication, "Design and Control of Concrete Mixtures." Concrete shall be proportioned to achieve a 28-day Compressive strength that meets or exceeds the acceptance criteria contained in paragraph 501-6.6 for a compressive strength of **4,400 psi** per ASTM C39.

The minimum cementitious material shall be adequate to ensure a workable, durable mix. The minimum cementitious material (cement plus fly ash, or slag cement) shall be **470** pounds per cubic yard. The ratio of water to cementitious material, including free surface moisture on the aggregates but not including moisture absorbed by the aggregates shall be between 0.38 – 0.45 by weight.

Flexural strength test specimens shall be prepared in accordance with ASTM C192 and tested in accordance with ASTM C78. At the start of the project, the Contractor shall determine an allowable slump as determined by ASTM C143 not to exceed 2 inches (50 mm) for slip-form placement. For fixed-form placement, the slump shall not exceed 3 inches (75 mm). For hand placement, the slump shall not exceed 4 inches (100 mm).

When the flexural design strength in paragraph 501-3.3 is to be accepted on the basis of compressive strength, the following procedure establishes the correlation between compressive and flexural strength for the concrete mix. Each concrete mix will require a separate correlation.

Cylinders/Beams

a. Fabricate all beams and cylinders for each mixture from the same batch or blend of batches. Fabricate and cure all beams and cylinders in accordance with ASTM C192, using 6 × 6-inch (150 × 150 mm) steel beam forms and 6 × 12-inch (150 × 300 mm) single-use cylinder forms.

b. Cure test beams from each mixture for 3, 7, 14, and 28 day flexural tests; three (3) beams to be tested per age.

c. Cure test cylinders from each mixture for 3, 7, 14 and 28 day compressive strength tests; three (3) cylinders to be tested per age.

d. Test beams in accordance with ASTM C78, cylinders in accordance with ASTM C39.

e. Using the average strength for each age, plot all results on separate graphs for each w/c versus:

- 3-day flexural strength
- 7-day flexural strength
- 14-day flexural strength
- 28-day flexural strength
- 3-day compressive strength
- 7-day compressive strength
- 14-day compressive strength
- 28-day compressive strength

f. From the above expected strengths for the selected mixture determine the following Correlation Ratios:

(1) Ratio of the 14-day compressive strength of the selected mixture to the 28-day flexural strength of the mixture (for acceptance).

(2) Ratio of the 7-day compressive strength of the selected mixture to the 28-day flexural strength of the mixture (for Contractor QC control).

g. If there is a change in materials, additional mixture design studies shall be made using the new materials and new Correlation Ratios shall be determined.

h. No concrete pavement shall be placed until the Engineer has approved the Contractor's mixture proportions. The approved water-cementitious materials ratio shall not exceed the maximum value specified.

The results of the concrete mix shall include a statement giving the maximum nominal coarse aggregate size and the weights and volumes of each ingredient proportioned on a one cubic yard (meter) basis. Aggregate quantities shall be based on the mass in a saturated surface dry condition.

If a change in source(s) is made, or admixtures added or deleted from the mix, a new concrete mix must be submitted to the RPR for approval.

The RPR may request samples at any time for testing, prior to and during production, to verify the quality of the materials and to ensure conformance with the applicable specifications.

501-3.4 Concrete Mix submittal. The concrete mix shall be submitted to the RPR at least **30** days prior to the start of operations. The submitted concrete mix shall not be more than 180 days old and must use the materials to be used for production for the project. Production shall not begin until the concrete mix is approved in writing by the RPR.

Each of the submitted concrete mixes (i.e, slip form, side form machine finish and side form hand finish) shall be stamped or sealed by the responsible professional Engineer of the laboratory and shall include the following items and quantities as a minimum:

- Certified material test reports for aggregate in accordance with paragraph 501-2.1. Certified reports must include all tests required; reporting each test, test method, test result, and requirement specified (criteria).
- Combined aggregate gradations and analysis; and including plots of the fine aggregate fineness modulus.
- Reactivity Test Results.
- Coarse aggregate quality test results, including deleterious materials.
- Fine aggregate quality test results, including deleterious materials.
- Mill certificates for cement and supplemental cementitious materials.
- Certified test results for all admixtures, including Lithium Nitrate if applicable.
- Specified flexural strength, slump, and air content.
- Recommended proportions/volumes for proposed mixture and trial water-cementitious materials ratio, including actual slump and air content.
- Flexural and compressive strength summaries and plots, including all individual beam and cylinder breaks.
- Correlation ratios for acceptance testing and Contractor QC testing, when applicable.
- Historical record of test results documenting production standard deviation, when applicable.

501-3.5 Cementitious materials.

a. Fly ash. When fly ash is used as a partial replacement for cement, the replacement rate shall be determined from laboratory trial mixes, and shall be between 20 and 30% by weight of the total cementitious material. If fly ash is used in conjunction with slag cement the maximum replacement rate shall not exceed 10% by weight of total cementitious material.

b. Slag cement (ground granulated blast furnace (GGBF)). Slag cement may be used. The slag cement, or slag cement plus fly ash if both are used, may constitute between 25 to 55% of the total cementitious material by weight.

c. Raw or calcined natural pozzolan. Natural pozzolan may be used in the concrete mix. When pozzolan is used as a partial replacement for cement, the replacement rate shall be determined from laboratory trial mixes, and shall be between 20 and 30% by weight of the total cementitious material. If pozzolan is used in conjunction with slag cement the maximum replacement rate shall not exceed 10% by weight of total cementitious material.

501-3.6 Admixtures.

a. Air-entraining admixtures. Air-entraining admixture are to be added in such a manner that will ensure uniform distribution of the agent throughout the batch. The air content of freshly mixed air-entrained concrete shall be based upon trial mixes with the materials to be used in the work adjusted to produce concrete of the required plasticity and workability. The percentage of air in the mix shall be **2.5%.** Air content shall be determined by testing in accordance with ASTM C231 for gravel and stone coarse aggregate and ASTM C173 for slag and other highly porous coarse aggregate.

b. Water-reducing admixtures. Water-reducing admixtures shall be added to the mix in the manner recommended by the manufacturer and in the amount necessary to comply with the specification requirements. Tests shall be conducted with the materials to be used in the work, in accordance with ASTM C494.

c. Other admixtures. Set controlling, and other approved admixtures shall be added to the mix in the manner recommended by the manufacturer and in the amount necessary to comply with the specification requirements. Tests shall be conducted with the materials to be used in the work, in accordance with ASTM C494.

d. Lithium nitrate. Lithium nitrate shall be added to the mix in the manner recommended by the manufacturer and in the amount necessary to comply with the specification requirements in accordance with paragraph 501-2.10d.

CONSTRUCTION METHODS

501-4.1 Control Strip. The control strip(s) shall be to the next planned joint after the initial 250 feet (75 m) of each type of pavement construction (slip-form pilot lane, slip-form fill-in lane, or fixed form). The Contractor shall demonstrate, in the presence of **the** RPR, that the materials, concrete mix, equipment, construction processes, and quality control processes meet the requirements of the specifications. The concrete mixture shall be extruded from the paver meeting the edge slump tolerance and with little or no finishing. Pilot, fill-in, and fixed-form control strips will be accepted separately. Minor adjustments to the mix design may be required to place an acceptable control strip. The production mix will be the adjusted mix design used to place the acceptable control strip. Upon acceptance of the control strip by the RPR, the Contractor must use the same equipment, materials, and construction methods for the remainder of concrete paving. Any adjustments to processes or materials must be approved in advance by the RPR.

Acceptable control strips will meet edge slump tolerance and surface acceptable with little or no finishing, air content within action limits, strength equal or greater than requirements of P501-3.3. The control strip will be considered one lot for payment (no sublots required for control strip). Payment will only be made for an acceptable control strip in accordance with paragraph 501-8.1 using a lot pay factor equal to 100.

501-4.2 Equipment. The Contractor is responsible for the proper operation and maintenance of all equipment necessary for handling materials and performing all parts of the work to meet this specification.

a. Plant and equipment. The plant and mixing equipment shall conform to the requirements of ASTM C94 and/or ASTM C685. Each truck mixer shall have attached in a prominent place a manufacturer's nameplate showing the capacity of the drum in terms of volume of mixed concrete and the speed of rotation of the mixing drum or blades. The truck mixers shall be examined daily for changes in condition due to accumulation of hard concrete or mortar or wear of blades. The pickup and throwover blades shall be replaced when they have worn down 3/4 inch (19 mm) or more. The Contractor shall have a copy of the manufacturer's design on hand showing dimensions and arrangement of blades in reference to original height and depth.

Equipment for transferring and spreading concrete from the transporting equipment to the paving lane in front of the finishing equipment shall be provided. The equipment shall be specially manufactured, self-propelled transfer equipment which will accept the concrete outside the paving lane and will spread it evenly across the paving lane in front of the paver and strike off the surface evenly to a depth which permits the paver to operate efficiently.

b. Finishing equipment.

(1) Slip-form. The standard method of constructing concrete pavements shall be with an approved slip-form paving equipment designed and operated to spread, consolidate, screed, and finish the freshly placed concrete in one complete pass of the machine so that the end result is a dense and homogeneous pavement which is achieved with a minimum of hand finishing. The paver-finisher shall be a heavy duty, self-propelled machine designed specifically for paving and finishing high quality concrete pavements.

(2) Fixed-form. On projects requiring less than 10,000 cubic yards of concrete pavement or irregular areas at locations inaccessible to slip-form paving equipment, concrete pavement may be placed with equipment specifically designed for placement and finishing using stationary side forms. Methods and equipment shall be reviewed and accepted by the RPR. Hand screeding and float finishing may only be used on small irregular areas as allowed by the RPR.

c. Vibrators. Vibrator shall be the internal type. The rate of vibration of each vibrating unit shall be sufficient to consolidate the pavement without segregation or voids. The number, spacing, and frequency shall be as necessary to provide a dense and homogeneous pavement and meet the recommendations of American Concrete Institute (ACI) 309R, Guide for Consolidation of Concrete. Adequate power to operate all vibrators shall be available on the paver. The vibrators shall be automatically controlled so that they shall be stopped as forward motion ceases. The Contractor shall provide an electronic or mechanical means to monitor vibrator status. The checks on vibrator status shall occur a minimum of two times per day or when requested by the RPR.

Hand held vibrators may only be used in irregular areas and shall meet the recommendations of ACI 309R, Guide for Consolidation of Concrete.

d. Concrete saws. The Contractor shall provide sawing equipment adequate in number of units and power to complete the sawing to the required dimensions. The Contractor shall provide at least one standby saw in good working order and a supply of saw blades at the site of the work at all times during sawing operations.

e. Fixed forms. Straight side fixed forms shall be made of steel and shall be furnished in sections not less than 10 feet (3 m) in length. Forms shall be provided with adequate devices for secure settings so that when in place they will withstand, without visible spring or settlement, the impact and vibration of the consolidating and finishing equipment. Forms with battered top surfaces and bent, twisted or broken forms shall not be used. Built-up forms shall not be used, except as approved by the RPR. The top face of the form shall not vary from a true plane more than 1/8 inch (3 mm) in 10 feet (3 m), and the upstanding leg shall not vary more than 1/4 inch (6 mm). The forms shall contain provisions for locking the ends of abutting sections together tightly for secure setting. Wood forms may be used under special conditions, when approved by the RPR. The forms shall extend the full depth of the pavement section.

501-4.3 Form setting. Forms shall be set to line and grade as shown on the plans, sufficiently in advance of the concrete placement, to ensure continuous paving operation. Forms shall be set to withstand, without visible spring or settlement, the impact and vibration of the consolidating and finishing equipment. Forms shall be cleaned and oiled prior to the concrete placement.

501-4.4 Base surface preparation prior to placement. Any damage to the prepared base, subbase, and subgrade shall be corrected full depth by the Contractor prior to concrete placement. The underlying surface shall be entirely free of frost when concrete is placed. The prepared grade shall be moistened with water, without saturating, immediately ahead of concrete placement to prevent rapid loss of moisture from concrete. Bond breaker shall be applied in accordance with 501-2.12.

501-4.5 Handling, measuring, and batching material. Aggregate stockpiles shall be constructed and managed in such a manner that prevents segregation and intermixing of deleterious materials. Aggregates from different sources shall be stockpiled, weighed and batched separately at the concrete batch plant. Aggregates that have become segregated or mixed with earth or foreign material shall not be used. All aggregates produced or handled by hydraulic methods, and washed aggregates, shall be stockpiled or binned for draining at least 12 hours before being batched. Store and maintain all aggregates at a uniform moisture content prior to use. A continuous supply of materials shall be provided to the work to ensure continuous placement.

501-4.6 Mixing concrete. The concrete may be mixed at the work site, in a central mix plant or in truck mixers. The mixer shall be of an approved type and capacity. Mixing time shall be measured from the time all materials are placed into the drum until the drum is emptied into the truck. All concrete shall be mixed and delivered to the site in accordance with the requirements of ASTM C94 or ASTM C685.

Mixed concrete from the central mixing plant shall be transported in truck mixers, truck agitators, or non-agitating trucks. The elapsed time from the addition of cementitious material to the mix until the concrete is discharged from the truck should not exceed [30] minutes when the concrete is hauled in non-agitating trucks, nor 90 minutes when the concrete is hauled in truck mixers or truck agitators. In no case shall the temperature of the concrete when placed exceed 90°F (32°C). Retempering concrete by adding water or by other means will not be permitted. With transit mixers additional water may be added to the batch materials and additional mixing performed to increase the slump to meet the specified requirements provided the addition of water

is performed within 45 minutes after the initial mixing operations and provided the water/cementitious ratio specified is not exceeded.

501-4.7 Weather Limitations on mixing and placing. No concrete shall be mixed, placed, or finished when the natural light is insufficient, unless an adequate and approved artificial lighting system is operated.

a. Cold weather. Unless authorized in writing by the RPR, mixing and concreting operations shall be discontinued when a descending air temperature in the shade and away from artificial heat reaches 40°F (4°C) and shall not be resumed until an ascending air temperature in the shade and away from artificial heat reaches 35°F (2°C).

The aggregate shall be free of ice, snow, and frozen lumps before entering the mixer. The temperature of the mixed concrete shall not be less than 50°F (10°C) at the time of placement. Concrete shall not be placed on frozen material nor shall frozen aggregates be used in the concrete.

When concreting is authorized during cold weather, water and/or the aggregates may be heated to not more than 150°F (66°C). The apparatus used shall heat the mass uniformly and shall be arranged to preclude the possible occurrence of overheated areas which might be detrimental to the materials.

Curing during cold weather shall be in accordance with paragraph 501-4.13d.

b. Hot weather. During periods of hot weather when the maximum daily air temperature exceeds 85°F (30°C), the following precautions shall be taken.

The forms and/or the underlying surface shall be sprinkled with water immediately before placing the concrete. The concrete shall be placed at the coolest temperature practicable, and in no case shall the temperature of the concrete when placed exceed 90°F (32°C). The aggregates and/or mixing water shall be cooled as necessary to maintain the concrete temperature at or not more than the specified maximum.

The concrete placement shall be protected from exceeding an evaporation rate of 0.2 psf (0.98 kg/m^2 per hour) per hour. When conditions are such that problems with plastic cracking can be expected, and particularly if any plastic cracking begins to occur, the Contractor shall immediately take such additional measures as necessary to protect the concrete surface. If the Contractor's measures are not effective in preventing plastic cracking, paving operations shall be immediately stopped.

Curing during hot weather shall be in accordance with paragraph 501-4.13e.

c. Temperature management program. Prior to the start of paving operation for each day of paving, the Contractor shall provide the RPR with a Temperature Management Program for the concrete to be placed to assure that uncontrolled cracking is avoided. (Federal Highway Administration HIPERPAV 3 is one example of a temperature management program.) As a minimum, the program shall address the following items:

(1) Anticipated tensile strains in the fresh concrete as related to heating and cooling of the concrete material.

(2) Anticipated weather conditions such as ambient temperatures, wind velocity, and relative humidity; and anticipated evaporation rate using Figure 19-9, PCA, Design and Control of Concrete Mixtures.

(3) Anticipated timing of initial sawing of joint.

(4) Anticipated number and type of saws to be used.

d. **Rain.** The Contractor shall have available materials for the protection of the concrete during inclement weather. Such protective materials shall consist of rolled polyethylene sheeting at least 4 mils (0.1 mm) thick of sufficient length and width to cover the plastic concrete slab and any edges. The sheeting may be mounted on either the paver or a separate movable bridge from which it can be unrolled without dragging over the plastic concrete surface. When rain appears imminent, all paving operations shall stop and all available personnel shall begin covering the surface of the unhardened concrete with the protective covering.

501-4.8 Concrete Placement. At any point in concrete conveyance, the free vertical drop of the concrete from one point to another or to the underlying surface shall not exceed 3 feet (1 m). The finished concrete product must be dense and homogeneous, without segregation and conforming to the standards in this specification. Backhoes and grading equipment shall not be used to distribute the concrete in front of the paver. Front end loaders will not be used. All concrete shall be consolidated without voids or segregation, including under and around all load-transfer devices, joint assembly units, and other features embedded in the pavement. Hauling equipment or other mechanical equipment can be permitted on adjoining previously constructed pavement when the concrete strength reaches **a compressive strength of 3,100 psi (21.4 MPa),** based on the average of four field cured specimens per 2,000 cubic yards (1,530 cubic meters) of concrete placed. The Contractor must determine that the above minimum strengths are adequate to protection the pavement from overloads due to the construction equipment proposed for the project.

a. Slip-form construction. The concrete shall be distributed uniformly into final position by a self-propelled slip-form paver without delay. The alignment and elevation of the paver shall be regulated from outside reference lines established for this purpose. The paver shall vibrate the concrete for the full width and depth of the strip of pavement being placed and the vibration shall be adequate to provide a consistency of concrete that will stand normal to the surface with sharp well-defined edges. The sliding forms shall be rigidly held together laterally to prevent spreading of the forms. The plastic concrete shall be effectively consolidated by internal vibration with transverse vibrating units for the full width of the pavement and/or a series of equally placed longitudinal vibrating units. The space from the outer edge of the pavement to longitudinal unit shall not exceed 9 inches (23 cm) for slipform and at the end of the dowels for the fill-in lanes. The spacing of internal units shall be uniform and shall not exceed 18 inches (0.5 m).

The term internal vibration means vibrating units located within the specified thickness of pavement section.

The rate of vibration of each vibrating unit shall be sufficient to consolidate the pavement without, segregation, voids, or vibrator trails and the amplitude of vibration shall be sufficient to be perceptible on the surface of the concrete along the entire length of the vibrating unit and for a distance of at least one foot (30 cm). The frequency of vibration or amplitude should be adjusted proportionately with the rate of travel to result in a uniform density and air content. The paving machine shall be equipped with a tachometer or other suitable device for measuring and indicating the actual frequency of vibrations.

The concrete shall be held at a uniform consistency. The slip-form paver shall be operated with as nearly a continuous forward movement as possible and all operations of mixing, delivering, and spreading concrete shall be coordinated to provide uniform progress with stopping and starting of the paver held to a minimum. If for any reason, it is necessary to stop the forward movement of the paver, the vibratory and tamping elements shall also be stopped

immediately. No tractive force shall be applied to the machine, except that which is controlled from the machine.

When concrete is being placed adjacent to an existing pavement, that part of the equipment which is supported on the existing pavement shall be equipped with protective pads on crawler tracks or rubber-tired wheels on which the bearing surface is offset to run a sufficient distance from the edge of the pavement to avoid breaking the pavement edge.

Not more than 15% of the total free edge of each 500-foot (150 m) segment of pavement, or fraction thereof, shall have an edge slump exceeding 1/4 inch (6 mm), and none of the free edge of the pavement shall have an edge slump exceeding 3/8 inch (9 mm). (The total free edge of 500 feet (150 m) of pavement will be considered the cumulative total linear measurement of pavement edge originally constructed as nonadjacent to any existing pavement; that is, 500 feet (150 m) of paving lane originally constructed as a separate lane will have 1,000 feet (300 m) of free edge, 500 feet (150 m) of fill-in lane will have no free edge, etc.). The area affected by the downward movement of the concrete along the pavement edge shall be limited to not more than 18 inches (0.5 m) from the edge.

When excessive edge slump cannot be corrected before the concrete has hardened, the area with excessive edge slump will be removed the full width of the slip form lane and replaced at the expense of the Contractor as directed by the RPR.

b. Fixed-form construction. Forms shall be drilled in advance of being placed to line and grade to accommodate tie bars / dowel bars where these are specified.

Immediately in advance of placing concrete and after all subbase operations are completed, side forms shall be trued and maintained to the required line and grade for a distance sufficient to prevent delay in placing.

Side forms shall remain in place at least 12 hours after the concrete has been placed, and in all cases until the edge of the pavement no longer requires the protection of the forms. Curing compound shall be applied to the concrete immediately after the forms have been removed.

Side forms shall be thoroughly cleaned and coated with a release agent each time they are used and before concrete is placed against them.

Concrete shall be spread, screed, shaped and consolidated by one or more self-propelled machines. These machines shall uniformly distribute and consolidate concrete without segregation so that the completed pavement will conform to the required cross-section with a minimum of handwork.

The number and capacity of machines furnished shall be adequate to perform the work required at a rate equal to that of concrete delivery. The equipment must be specifically designed for placement and finishing using stationary side forms. Methods and equipment shall be reviewed and accepted by the RPR.

Concrete for the full paving width shall be effectively consolidated by internal vibrators. The rate of vibration of each vibrating unit shall be sufficient to consolidate the pavement without segregation, voids, or leaving vibrator trails.

Power to vibrators shall be connected so that vibration ceases when forward or backward motion of the machine is stopped.

c. Consolidation. Concrete shall be consolidated with the specified type of lane-spanning, gang-mounted, mechanical, immersion type vibrating equipment mounted in front of the paver, supplemented, in rare instances as specified, by hand-operated vibrators. The vibrators shall be inserted into the concrete to a depth that will provide the best full-depth

consolidation but not closer to the underlying material than 2 inches (50 mm). Vibrators shall not be used to transport or spread the concrete. For each paving train, at least one additional vibrator spud, or sufficient parts for rapid replacement and repair of vibrators shall be maintained at the paving site at all times. Any evidence of inadequate consolidation (honeycomb along the edges, large air pockets, or any other evidence) or over-consolidation (vibrator trails, segregation, or any other evidence) shall require the immediate stopping of the paving operation and adjustment of the equipment or procedures as approved by the RPR.

If a lack of consolidation of the hardened concrete is suspected by the RPR, referee testing may be required. Referee testing of hardened concrete will be performed by the RPR by cutting cores from the finished pavement after a minimum of 24 hours curing. The RPR shall visually examine the cores for evidence of lack of consolidation. Density determinations will be made by the RPR based on the water content of the core as taken. ASTM C642 shall be used for the determination of core density in the saturated-surface dry condition. When required, referee cores will be taken at the minimum rate of one for each 500 cubic yards (382 m^2) of pavement, or fraction. The Contractor shall be responsible for all referee testing cost if they fail to meet the required density.

The average density of the cores shall be at least 97% of the original concrete mix density, with no cores having a density of less than 96% of the original concrete mix density. Failure to meet the referee tests will be considered evidence that the minimum requirements for vibration are inadequate for the job conditions. Additional vibrating units or other means of increasing the effect of vibration shall be employed so that the density of the hardened concrete conforms to the above requirements.

501-4.9 Strike-off of concrete and placement of reinforcement. Following the placing of the concrete, it shall be struck off to conform to the cross-section shown on the plans and to an elevation that when the concrete is properly consolidated and finished, the surface of the pavement shall be at the elevation shown on the plans. When reinforced concrete pavement is placed in two layers, the bottom layer shall be struck off to such length and depth that the sheet of reinforcing steel fabric or bar mat may be laid full length on the concrete in its final position without further manipulation. The reinforcement shall then be placed directly upon the concrete, after which the top layer of the concrete shall be placed, struck off, and screed. If any portion of the bottom layer of concrete has been placed more than 30 minutes without being covered with the top layer or if initial set has taken place, it shall be removed and replaced with freshly mixed concrete at the Contractor's expense. When reinforced concrete is placed in one layer, the reinforcement may be positioned in advance of concrete placement or it may be placed in plastic concrete by mechanical or vibratory means after spreading.

Reinforcing steel, at the time concrete is placed, shall be free of mud, oil, or other organic matter that may adversely affect or reduce bond. Reinforcing steel with rust, mill scale or a combination of both will be considered satisfactory, provided the minimum dimensions, weight, and tensile properties of a hand wire-brushed test specimen are not less than the applicable ASTM specification requirements.

501-4.10 Joints. Joints shall be constructed as shown on the plans and in accordance with these requirements. All joints shall be constructed with their faces perpendicular to the surface of the pavement and finished or edged as shown on the plans. Joints shall not vary more than 1/2-inch (12 mm) from their designated position and shall be true to line with not more than 1/4-inch (6 mm) variation in 10 feet (3 m). The surface across the joints shall be tested with a 12-foot (3 m) straightedge as the joints are finished and any irregularities in excess of 1/4 inch (6 mm) shall be corrected before the concrete has hardened. All joints shall be so prepared, finished, or cut to provide a groove of uniform width and depth as shown on the plans.

a. Construction. Longitudinal construction joints shall be slip-formed or formed against side forms as shown in the plans.

Transverse construction joints shall be installed at the end of each day's placing operations and at any other points within a paving lane when concrete placement is interrupted for more than 30 minutes or it appears that the concrete will obtain its initial set before fresh concrete arrives. The installation of the joint shall be located at a planned contraction or expansion joint. If placing of the concrete is stopped, the Contractor shall remove the excess concrete back to the previous planned joint.

b. Contraction. Contraction joints shall be installed at the locations and spacing as shown on the plans. Contraction joints shall be installed to the dimensions required by forming a groove or cleft in the top of the slab while the concrete is still plastic or by sawing a groove into the concrete surface after the concrete has hardened. When the groove is formed in plastic concrete the sides of the grooves shall be finished even and smooth with an edging tool. If an insert material is used, the installation and edge finish shall be according to the manufacturer's instructions. The groove shall be finished or cut clean so that spalling will be avoided at intersections with other joints. Grooving or sawing shall produce a slot at least 1/8 inch (3 mm) wide and to the depth shown on the plans.

c. Isolation (expansion). Isolation joints shall be installed as shown on the plans. The premolded filler of the thickness as shown on the plans, shall extend for the full depth and width of the slab at the joint. The filler shall be fastened uniformly along the hardened joint face with no buckling or debris between the filler and the concrete interface, including a temporary filler for the sealant reservoir at the top of the slab. The edges of the joint shall be finished and tooled while the concrete is still plastic

d. Dowels and Tie Bars for Joints

(1) Tie bars. Tie bars shall consist of deformed bars installed in joints as shown on the plans. Tie bars shall be placed at right angles to the centerline of the concrete slab and shall be spaced at intervals shown on the plans. They shall be held in position parallel to the pavement surface and in the middle of the slab depth and within the tolerances in paragraph 501-4.10(f.). When tie bars extend into an unpaved lane, they may be bent against the form at longitudinal construction joints, unless threaded bolt or other assembled tie bars are specified. Tie bars shall not be painted, greased, or enclosed in sleeves. When slip-form operations call for tie bars, two-piece hook bolts can be installed.

(2) Dowel bars. Dowel bars shall be placed across joints in the proper horizontal and vertical alignment as shown on the plans. The dowels shall be coated with a bond-breaker or other lubricant recommended by the manufacturer and approved by the RPR. Dowels bars at longitudinal construction joints shall be bonded in drilled holes.

(3) Placing dowels and tie bars. Horizontal spacing of dowels shall be within a tolerance of ±3/4 inch (19 mm). The vertical location on the face of the slab shall be within a tolerance of ±1/2 inch (12 mm). The method used to install dowels shall ensure that the horizontal and vertical alignment will not be greater than 1/4 inch per feet (6 mm per 0.3 m), except for those across the crown or other grade change joints. Dowels across crowns and other joints at grade changes shall be measured to a level surface. Horizontal alignment shall be checked perpendicular to the joint edge. The portion of each dowel intended to move within the concrete or expansion cap shall be wiped clean and coated with a thin, even film of lubricating oil or light grease before the concrete is placed. Dowels shall be installed as specified in the following subparagraphs.

Dowels and tie bars shall not be placed closer than 0.6 times the dowel bar or tie bar length to the planned joint line. If the last regularly spaced longitudinal dowel and/or tie bar is closer than that dimension, it shall be moved away from the joint to a location 0.6 times the dowel bar and/or tie bar length, but not closer than 6 inches (150 mm) to its nearest neighbor.

(a) Contraction joints. Dowels and tie bars in longitudinal and transverse contraction joints within the paving lane shall be held securely in place by means of rigid metal frames or basket assemblies of an approved type. The basket assemblies shall be held securely in the proper location by means of suitable pins or anchors. Do not cut or crimp the dowel basket tie wires.

At the Contractor's option, dowels and tie bars in contraction joints may be installed by insertion into the plastic concrete using approved equipment and procedures per the paver manufacturer's design. Approval of installation methods will be based on the results of the control strip showing that the dowels and tie bars are installed within specified tolerances as verified by cores or non-destructive rebar location devices approved by the RPR.

(b) Construction joints. Install dowels and tie bars by the cast-in- place or the drill-and-dowel method. Installation by removing and replacing in preformed holes will not be permitted. Dowels and tie bars shall be prepared and placed across joints where indicated, correctly aligned, and securely held in the proper horizontal and vertical position during placing and finishing operations, by means of devices fastened to the forms.

(c) Joints in hardened concrete. Install dowels in hardened concrete by bonding the dowels into holes drilled into the concrete. The concrete shall have cured for seven (7) days or reached a minimum **compressive strength of 3100 psi ((21.4 MPa)**before drilling begins. Holes 1/8 inch (3 mm) greater in diameter than the dowels shall be drilled into the hardened concrete using rotary-core drills. Rotary-percussion drills may be used, provided that excessive spalling does not occur. Spalling beyond the limits of the grout retention ring will require modification of the equipment and operation. Depth of dowel hole shall be within a tolerance of ±1/2 inch (12 mm) of the dimension shown on the drawings. On completion of the drilling operation, the dowel hole shall be blown out with oil-free, compressed air. Dowels shall be bonded in the drilled holes using epoxy resin. Epoxy resin shall be injected at the back of the hole before installing the dowel and extruded to the collar during insertion of the dowel so as to completely fill the void around the dowel. Application by buttering the dowel will not be permitted. The dowels shall be held in alignment at the collar of the hole by means of a suitable metal or plastic grout retention ring fitted around the dowel.

e. Sawing of joints. Sawing shall commence, without regard to day or night, as soon as the concrete has hardened sufficiently to permit cutting without chipping, spalling, or tearing and before uncontrolled shrinkage cracking of the pavement occurs and shall continue without interruption until all joints have been sawn. All slurry and debris produced in the sawing of joints shall be removed by vacuuming and washing. Curing compound or system shall be reapplied in the initial saw-cut and maintained for the remaining cure period.

Joints shall be cut in locations as shown on the plans. The initial joint cut shall be a minimum 1/8 inch (3 mm) wide and to the depth shown on the plans. Prior to placement of joint sealant or seals, the top of the joint shall be widened by sawing as shown on the plans.

501-4.11 Finishing. Finishing operations shall be a continuing part of placing operations starting immediately behind the strike-off of the paver. Initial finishing shall be provided by the transverse screed or extrusion plate. The sequence of operations shall be transverse finishing, longitudinal machine floating if used, straightedge finishing, edging of joints, and then texturing. Finishing shall be by the machine method. The hand method shall be used only on isolated areas of odd slab widths or shapes and in the event of a breakdown of the mechanical finishing equipment. Supplemental hand finishing for machine finished pavement shall be kept to an absolute minimum. Any machine finishing operation which requires appreciable hand finishing, other than a moderate amount of straightedge finishing, shall be immediately stopped and proper adjustments made or the equipment replaced. Equipment, mixture, and/or procedures which produce more than 1/4 inch (6 mm) of mortar-rich surface shall be immediately modified as necessary to eliminate this condition or operations shall cease. Compensation shall be made for surging behind the screeds or extrusion plate and settlement during hardening and care shall be taken to ensure that paving and finishing machines are properly adjusted so that the finished surface of the concrete (not just the cutting edges of the screeds) will be at the required line and grade. Finishing equipment and tools shall be maintained clean and in an approved condition. At no time shall water be added to the surface of the slab with the finishing equipment or tools, or in any other way. Fog (mist) sprays or other surface applied finishing aids specified to prevent plastic shrinkage cracking, approved by the RPR, may be used in accordance with the manufacturers requirements.

a. Machine finishing with slipform pavers. The slipform paver shall be operated so that only a very minimum of additional finishing work is required to produce pavement surfaces and edges meeting the specified tolerances. Any equipment or procedure that fails to meet these specified requirements shall immediately be replaced or modified as necessary. A self-propelled non-rotating pipe float may be used while the concrete is still plastic, to remove minor irregularities and score marks. Only one pass of the pipe float shall be allowed. Equipment, mixture, and/or procedures which produce more than 1/4 inch (6 mm) of mortar-rich surface shall be immediately modified as necessary to eliminate this condition or operations shall cease. Remove excessive slurry from the surface with a cutting straightedge and wipe off the edge. Any slurry which does run down the vertical edges shall be immediately removed by hand, using stiff brushes or scrapers. No slurry, concrete or concrete mortar shall be used to build up along the edges of the pavement to compensate for excessive edge slump, either while the concrete is plastic or after it hardens.

b. Machine finishing with fixed forms. The machine shall be designed to straddle the forms and shall be operated to screed and consolidate the concrete. Machines that cause displacement of the forms shall be replaced. The machine shall make only one pass over each area of pavement. If the equipment and procedures do not produce a surface of uniform texture, true to grade, in one pass, the operation shall be immediately stopped and the equipment, mixture, and procedures adjusted as necessary.

c. Other types of finishing equipment. Clary screeds, other rotating tube floats, or bridge deck finishers are not allowed on mainline paving, but may be allowed on irregular or odd-shaped slabs, and near buildings or trench drains, subject to the RPR's approval.

Bridge deck finishers shall have a minimum operating weight of 7500 pounds (3400 kg) and shall have a transversely operating carriage containing a knock-down auger and a minimum

of two immersion vibrators. Vibrating screeds or pans shall be used only for isolated slabs where hand finishing is permitted as specified, and only where specifically approved.

d. Hand finishing. Hand finishing methods will not be permitted, except under the following conditions: (1) in the event of breakdown of the mechanical equipment, hand methods may be used to finish the concrete already deposited on the grade and (2) in areas of narrow widths or of irregular dimensions where operation of the mechanical equipment is impractical.

e. Straightedge testing and surface correction. After the pavement has been struck off and while the concrete is still plastic, it shall be tested for trueness with a 12-foot (3.7-m) finishing straightedge swung from handles capable of spanning at least one-half the width of the slab. The straightedge shall be held in contact with the surface in successive positions parallel to the centerline and the whole area gone over from one side of the slab to the other, as necessary. Advancing shall be in successive stages of not more than one-half the length of the straightedge. Any excess water and laitance in excess of 1/8 inch (3 mm) thick shall be removed from the surface of the pavement and wasted. Any depressions shall be immediately filled with freshly mixed concrete, struck off, consolidated, and refinished. High areas shall be cut down and refinished. Special attention shall be given to assure that the surface across joints meets the smoothness requirements. Straightedge testing and surface corrections shall continue until the entire surface is found to be free from observable departures from the straightedge and until the slab conforms to the required grade and cross-section. The use of long-handled wood floats shall be confined to a minimum; they may be used only in emergencies and in areas not accessible to finishing equipment.

501-4.12 Surface texture. The surface of the pavement shall be finished as designated below for all newly constructed concrete pavements. It is important that the texturing equipment not tear or unduly roughen the pavement surface during the operation. The texture shall be uniform in appearance and approximately 1/16 inch (2 mm) in depth. Any imperfections resulting from the texturing operation shall be corrected to the satisfaction of the RPR.

a. Brush or broom finish. Shall be applied when the water sheen has practically disappeared. The equipment shall operate transversely across the pavement surface.

b. Burlap drag finish. Burlap, at least 15 ounces per square yard (555 grams per square meter), will typically produce acceptable texture. To obtain a textured surface, the transverse threads of the burlap shall be removed approximately one foot (30 cm) from the trailing edge. A heavy buildup of grout on the burlap threads produces the desired wide sweeping longitudinal striations on the pavement surface.

c. Artificial turf finish. Shall be applied by dragging the surface of the pavement in the direction of concrete placement with an approved full-width drag made with artificial turf. The leading transverse edge of the artificial turf drag will be securely fastened to a lightweight pole on a traveling bridge. At least 2 feet (60 cm) of the artificial turf shall be in contact with the concrete surface during dragging operations. Approval of the artificial turf will be done only after it has been demonstrated by the Contractor to provide a satisfactory texture. One type that has provided satisfactory texture consists of 7,200 approximately 0.85-inch-long polyethylene turf blades per square foot.

501-4.13 Curing. Immediately after finishing operations are completed and bleed water is gone from the surface, all exposed surfaces of the newly placed concrete shall be cured for a 7-day cure period in accordance with one of the methods below. Failure to provide sufficient cover material of whatever kind the Contractor may elect to use, or lack of water to adequately take care

of both curing and other requirements, shall be cause for immediate suspension of concreting operations. The concrete shall not be left exposed for more than 1/2 hour during the curing period.

When a two-saw-cut method is used to construct the contraction joint, the curing compound shall be applied to the saw-cut immediately after the initial cut has been made. The sealant reservoir shall not be sawed until after the curing period has been completed. When the one cut method is used to construct the contraction joint, the joint shall be cured with wet rope, wet rags, or wet blankets. The rags, ropes, or blankets shall be kept moist for the duration of the curing period.

a. Impervious membrane method. Curing with liquid membrane compounds should not occur until bleed and surface moisture has evaporated. All exposed surfaces of the pavement shall be sprayed uniformly with white pigmented curing compound immediately after the finishing of the surface and before the set of the concrete has taken place. The curing compound shall not be applied during rainfall. Curing compound shall be applied by mechanical sprayers under pressure at the rate of one gallon (4 liters) to not more than 150 square feet (14 sq m). The spraying equipment shall be of the fully atomizing type equipped with a tank agitator. At the time of use, the compound shall be in a thoroughly mixed condition with the pigment uniformly dispersed throughout the vehicle. During application, the compound shall be stirred continuously by mechanical means. Hand spraying of odd widths or shapes and concrete surfaces exposed by the removal of forms will be permitted. When hand spraying is approved by the RPR, a double application rate shall be used to ensure coverage. Should the film become damaged from any cause, including sawing operations, within the required curing period, the damaged portions shall be repaired immediately with additional compound or other approved means. Upon removal of side forms, the sides of the exposed slabs shall be protected immediately to provide a curing treatment equal to that provided for the surface.

b. White burlap-polyethylene sheets. The surface of the pavement shall be entirely covered with the sheeting. The sheeting used shall be such length (or width) that it will extend at least twice the thickness of the pavement beyond the edges of the slab. The sheeting shall be placed so that the entire surface and both edges of the slab are completely covered. The sheeting shall be placed and weighted to remain in contact with the surface covered, and the covering shall be maintained fully saturated and in position for seven (7) days after the concrete has been placed.

c. Water method. The entire area shall be covered with burlap or other water absorbing material. The material shall be of sufficient thickness to retain water for adequate curing without excessive runoff. The material shall be kept wet at all times and maintained for seven (7) days. When the forms are stripped, the vertical walls shall also be kept moist. It shall be the responsibility of the Contractor to prevent ponding of the curing water on the subbase.

d. Concrete protection for cold weather. Maintain the concrete at a temperature of at least 50°F (10°C) for a period of 72 hours after placing and at a temperature above freezing for the remainder of the 7-day curing period. The Contractor shall be responsible for the quality and strength of the concrete placed during cold weather; and any concrete damaged shall be removed and replaced at the Contractor's expense.

e. Concrete protection for hot weather. Concrete should be continuous moisture cured for the entire curing period and shall commence as soon as the surfaces are finished and continue for at least 24 hours. However, if moisture curing is not practical beyond 24 hours, the concrete surface shall be protected from drying with application of a liquid membrane-forming curing compound while the surfaces are still damp. Other curing methods may be approved by the RPR.

501-4.14 Removing forms. Unless otherwise specified, forms shall not be removed from freshly placed concrete until it has hardened sufficiently to permit removal without chipping, spalling, or tearing. After the forms have been removed, the sides of the slab shall be cured in accordance with paragraph 501-4.13.

If honeycombed areas are evident when the forms are removed, materials, placement, and consolidation methods must be reviewed and appropriate adjustments made to assure adequate consolidation at the edges of future concrete placements. Honeycombed areas that extend into the slab less than approximately 1 inch (25 mm), shall be repaired with an approved grout, as directed by the RPR. Honeycombed areas that extend into the slab greater than a depth of 1 inch (25 mm) shall be considered as defective work and shall be removed and replaced in accordance with paragraph 501-4.19.

501-4.15 Saw-cut grooving. If shown on the plans, grooved surfaces shall be provided in accordance with the requirements of Item P-621.

501-4.16 Sealing joints. The joints in the pavement shall be sealed in accordance with Item **P-605.**

501-4.17 Protection of pavement. The Contractor shall protect the pavement and its appurtenances against both public traffic and traffic caused by the Contractor's employees and agents until accepted by the RPR. This shall include watchmen to direct traffic and the erection and maintenance of warning signs, lights, pavement bridges, crossovers, and protection of unsealed joints from intrusion of foreign material, etc. Any damage to the pavement occurring prior to final acceptance shall be repaired or the pavement replaced at the Contractor's expense.

Aggregates, rubble, or other similar construction materials shall not be placed on airfield pavements. Traffic shall be excluded from the new pavement by erecting and maintaining barricades and signs until the concrete is at least seven (7) days old, or for a longer period if directed by the RPR.

In paving intermediate lanes between newly paved pilot lanes, operation of the hauling and paving equipment will be permitted on the new pavement after the pavement has been cured for seven (7) days, the joints are protected, the concrete has attained a minimum field cured flexural strength of [450 psi (3100 kPa)], and the slab edge is protected.

All new and existing pavement carrying construction traffic or equipment shall be kept clean and spillage of concrete and other materials shall be cleaned up immediately.

Damaged pavements shall be removed and replaced at the Contractor's expense. Slabs shall be removed to the full depth, width, and length of the slab.

501-4.18 Opening to construction traffic. The pavement shall not be opened to traffic until test specimens molded and cured in accordance with ASTM C31 have **compressive strength of 3100 psi (21.4 MPa)**. If such tests are not conducted, the pavement shall not be opened to traffic until 14 days after the concrete was placed. Prior to opening the pavement to construction traffic, all joints shall either be sealed or protected from damage to the joint edge and intrusion of foreign materials into the joint. As a minimum, backer rod or tape may be used to protect the joints from foreign matter intrusion.

501-4.19 Repair, removal, or replacement of slabs. New pavement slabs that are broken or contain cracks or are otherwise defective or unacceptable as defined by acceptance criteria in paragraph 501-6.6 shall be removed and replaced or repaired, as directed by the RPR, at the Contractor's expense. Spalls along joints shall be repaired as specified. Removal of partial slabs is not permitted. Removal and replacement shall be full depth, shall be full width of the slab, and the limit of removal shall be normal to the paving lane and to each original transverse joint. The

RPR will determine whether cracks extend full depth of the pavement and may require cores to be drilled on the crack to determine depth of cracking. Such cores shall be have a diameter of 2 inches (50 mm) to 4 inches (100 mm), shall be drilled by the Contractor and shall be filled by the Contractor with a well consolidated concrete mixture bonded to the walls of the hole with a bonding agent, using approved procedures. Drilling of cores and refilling holes shall be at no expense to the Owner. Repair of cracks as described in this section shall not be allowed if in the opinion of the RPR the overall condition of the pavement indicates that such repair is unlikely to achieve an acceptable and durable finished pavement. No repair of cracks shall be allowed in any panel that demonstrates segregated aggregate with an absence of coarse aggregate in the upper 1/8 inch (3 mm) of the pavement surface.

a. Shrinkage cracks. Shrinkage cracks which do not exceed one-third of the pavement depth shall be cleaned and either high molecular weight methacrylate (HMWM) applied; or epoxy resin (Type IV, Grade 1) pressure injected using procedures recommended by the manufacturer and approved by the RPR. Sandblasting of the surface may be required following the application of HMWM to restore skid resistance. Care shall be taken to ensure that the crack is not widened during epoxy resin injection. All epoxy resin injection shall take place in the presence of the RPR. Shrinkage cracks which exceed one-third the pavement depth shall be treated as full depth cracks in accordance with paragraphs 501-4.19b and 501-19c.

b. Slabs with cracks through interior areas. Interior area is defined as that area more than 6 inches (150 mm) from either adjacent original transverse joint. The full slab shall be removed and replaced at no cost to the Owner, when there are any full depth cracks, or cracks greater than one-third the pavement depth, that extend into the interior area.

c. Cracks close to and parallel to joints. All full-depth cracks within 6 inches (150 mm) either side of the joint and essentially parallel to the original joints, shall be treated as follows.

(1) Full depth cracks and original joint not cracked. The full-depth crack shall be treated as the new joint and the original joint filled with an epoxy resin.

i. Full-depth crack. The joint sealant reservoir for the crack shall be formed by sawing to a depth of 3/4 inches (19 mm), ±1/16 inch (2 mm), and to a width of 5/8 inch (16 mm), ±1/8 inch (3 mm). The crack shall be sawed with equipment specially designed to follow random cracks. Any equipment or procedure which causes raveling or spalling along the crack shall be modified or replaced to prevent raveling or spalling. The joint shall be sealed with sealant in accordance with P-605 or as directed by the RPR.

ii. Original joint. If the original joint sealant reservoir has been sawed out, the reservoir and as much of the lower saw cut as possible shall be filled with epoxy resin, Type IV, Grade 2, thoroughly tooled into the void using approved procedures.

If only the original narrow saw cut has been made, it shall be cleaned and pressure injected with epoxy resin, Type IV, Grade 1, using approved procedures.

Where a parallel crack goes part way across paving lane and then intersects and follows the original joint which is cracked only for the remained of the width, it shall be treated as specified above for a parallel crack, and the cracked original joint shall be prepared and sealed as originally designed.

(2) Full depth cracks and original joint cracked. If there is any place in the lane width where a parallel crack and a cracked portion of the original joint overlap, the entire slab containing the crack shall be removed and replaced.

d. Removal and replacement of full slabs. Make a full depth cut perpendicular to the slab surface along all edges of the slab with a concrete saw cutting any dowels or tie-bars. Remove damaged slab protecting adjacent pavement from damage. Damage to adjacent slabs may result in removal of additional slabs as directed by the RPR at the Contractor's expense.

The underlying material shall be repaired, re-compacted and shaped to grade.

Dowels of the size and spacing specified for other joints in similar pavement on the project shall be installed along all four (4) edges of the new slab in accordance with paragraph 501-4.10d.

Placement of concrete shall be as specified for original construction. The joints around the new slab shall be prepared and sealed as specified for original construction.

e. Spalls along joints.

(1) Spalls less than one inch wide and less than the depth of the joint sealant reservoir, shall be filled with joint sealant material.

(2) Spalls larger than one inch and/or deeper than the joint reservoir, but less than ½ the slab depth, and less than 25% of the length of the adjacent joint shall be repaired as follows:

i. Make a vertical saw cut at least one inch (25 mm) outside the spalled area and to a depth of at least 2 inches (50 mm). Saw cuts shall be straight lines forming rectangular areas surrounding the spalled area.

ii. Remove unsound concrete and at least 1/2 inch (12 mm) of visually sound concrete between the saw cut and the joint or crack with a light chipping hammer.

iii. Clean cavity with high-pressure water jets supplemented with compressed air as needed to remove all loose material.

iv. Apply a prime coat of epoxy resin, Type III, Grade I, to the dry, cleaned surface of all sides and bottom of the cavity, except any joint face.

v. Fill the cavity with low slump concrete or mortar or with epoxy resin concrete or mortar.

vi. An insert or other bond-breaking medium shall be used to prevent bond at all joint faces.

vii. A reservoir for the joint sealant shall be sawed to the dimensions required for other joints, or as required to be routed for cracks. The reservoir shall be thoroughly cleaned and sealed with the sealer specified for the joints.

(3) Spalls deeper than 1/2 of the slab depth or spalls longer than 25% of the adjacent joint require replacement of the entire slab.

f. Diamond grinding of Concrete surfaces. Diamond grinding shall be completed prior to pavement grooving. Diamond grinding of the hardened concrete should not be performed until the concrete is at least 14 days old and has achieved full minimum strength. Equipment that causes ravels, aggregate fractures, spalls or disturbance to the joints will not be permitted. The depth of diamond grinding shall not exceed 1/2 inch (13 mm) and all areas in which diamond grinding has been performed will be subject to the final pavement thickness tolerances specified.

Diamond grinding shall be performed with a machine specifically designed for diamond grinding capable of cutting a path at least 3 feet (0.9 m) wide. The saw blades shall be 1/8-inch (3-mm) wide with sufficient number of flush cut blades that create grooves between 0.090 and 0.130 inches (2 and 3.5 mm) wide; and peaks and ridges approximately 1/32 inch (1 mm) higher than the bottom of the grinding cut. The Contractor shall determine the number and

type of blades based on the hardness of the aggregate. Contractor shall demonstrate to the RPR that the grinding equipment will produce satisfactory results prior to making corrections to surfaces.

Grinding will be tapered in all directions to provide smooth transitions to areas not requiring grinding. The slurry resulting from the grinding operation shall be continuously removed and the pavement left in a clean condition. All grinding shall be at the expense of the Contractor.

CONTRACTOR QUALITY CONTROL (CQC)

501-5.1 Quality control tests. The Contractor shall provide Quality Control Tests.

501-5.2 Contractor Quality Control (CQC). The Contractor shall provide or contract for testing facilities in accordance with Item C-100. The RPR shall be permitted unrestricted access to inspect the Contractor's QC facilities and witness QC activities. The RPR will advise the Contractor in writing of any noted deficiencies concerning the QC facility, equipment, supplies, or testing personnel and procedures. When the deficiencies are serious enough to be adversely affecting the test results, the incorporation of the materials into the work shall be suspended immediately and will not be permitted to resume until the deficiencies are satisfactorily corrected

501-5.3 Contractor QC testing. The Contractor shall perform all QC tests necessary to control the production and construction processes applicable to this specification. The testing shall include, but not necessarily be limited to, tests for aggregate gradation, aggregate moisture content, slump, and air content.

The RPR may at any time, notwithstanding previous plant acceptance, reject and require the Contractor to dispose of any batch of concrete mixture which is rendered unfit for use due to contamination, segregation, or improper slump. Such rejection may be based on only visual inspection. In the event of such rejection, the Contractor may take a representative sample of the rejected material in the presence of the RPR, and if it can be demonstrated in the laboratory, in the presence of the RPR, that such material was erroneously rejected, payment will be made for the material at the contract unit price.

a. Fine aggregate.

(1) Gradation. A sieve analysis shall be made at least twice daily in accordance with ASTM C136 from randomly sampled material taken from the discharge gate of storage bins or from the conveyor belt.

(2) Moisture content. If an electric moisture meter is used, at least two direct measurements of moisture content shall be made per week to check the calibration. If direct measurements are made in lieu of using an electric meter, two tests shall be made per day. Tests shall be made in accordance with ASTM C70 or ASTM C566.

(3) Deleterious substances. Fine aggregate as delivered to the mixer shall be tested for deleterious substances in fine aggregate for concrete as specified in paragraph 501-2.1b, prior to production of the control strip, and a minimum of every 30-days during production or more frequently as necessary to control deleterious substances.

b. Coarse Aggregate.

(1) Gradation. A sieve analysis shall be made at least twice daily for each size of aggregate. Tests shall be made in accordance with ASTM C136 from randomly sampled material taken from the discharge gate of storage bins or from the conveyor belt.

(2) Moisture content. If an electric moisture meter is used, at least two direct measurements of moisture content shall be made per week to check the calibration. If direct measurements are made in lieu of using an electric meter, two tests shall be made per day. Tests shall be made in accordance with ASTM C566.

(3) Deleterious substances. Coarse aggregate as delivered to the mixer shall be tested for deleterious substances in coarse aggregate for concrete as specified in paragraph 501-2.1c, prior to production of the control strip, and a minimum of every 30-days during production or more frequently as necessary to control deleterious substances.

c. Slump. One test shall be made for each sublot. Slump tests shall be performed in accordance with ASTM C143 from material randomly sampled from material discharged from trucks at the paving site. Material samples shall be taken in accordance with ASTM C172.

d. Air content. One test shall be made for each sublot. Air content tests shall be performed in accordance with ASTM C231 for gravel and stone coarse aggregate and ASTM C173 for slag or other porous coarse aggregate, from material randomly sampled from trucks at the paving site. Material samples shall be taken in accordance with ASTM C172.

e. Unit weight and Yield. One test shall be made for each sublot. Unit weight and yield tests shall be in accordance with ASTM C138. The samples shall be taken in accordance with ASTM C172 and at the same time as the air content tests.

f. Temperatures. Temperatures shall be checked at least four times per lot at the job site in accordance with ASTM C1064.

g. Smoothness for Contractor Quality Control.

The Contractor shall perform smoothness testing in transverse and longitudinal directions daily to verify that the construction processes are producing pavement with variances less than ¼ inch in 12 feet, identifying areas that may pond water which could lead to hydroplaning of aircraft. If the smoothness criteria is not met, appropriate changes and corrections to the construction process shall be made by the Contractor before construction continues

The Contractor may use a 12-foot (3.7 m) "straightedge, a rolling inclinometer meeting the requirements of ASTM E2133 or rolling external reference device that can simulate a 12-foot (3.7m) straightedge approved by the RPR. Straight-edge testing shall start with one-half the length of the straightedge at the edge of pavement section being tested and then moved ahead one-half the length of the straightedge for each successive measurement. Testing shall be continuous across all joints. The surface irregularity shall be determined by placing the freestanding (unleveled) straightedge on the pavement surface and allowing it to rest upon the two highest spots covered by its length, and measuring the maximum gap between the straightedge and the pavement surface in the area between the two high points. If the rolling inclinometer or external reference device is used, the data may be evaluated using either the FAA profile program, ProFAA, or FHWA profile program ProVal, using the 12-foot straightedge simulation function.

Smoothness readings shall not be made across grade changes or cross slope transitions. The transition between new and existing pavement shall be evaluated separately for conformance with the plans.

(1) Transverse measurements. Transverse measurements shall be taken for each day's production placed. Transverse measurements shall be taken perpendicular to the pavement centerline each 50 feet (15 m) or more often as determined by the RPR. The joint between lanes shall be tested separately to facilitate smoothness between lanes.

(2) Longitudinal measurements. Longitudinal measurements shall be taken for each day's production placed. Longitudinal tests shall be parallel to the centerline of paving; at the center of paving lanes when widths of paving lanes are less than 20 feet (6 m); and at the third points of paving lanes when widths of paving lanes are 20 ft (6 m) or greater. When placement abuts previously placed material the first measurement shall start with one half the length of the straight edge on the previously placed material.

Deviations on the final surface course in either the transverse or longitudinal direction that will trap water greater than 1/4 inch (6 mm) shall be corrected with diamond grinding per paragraph 501-4.19f or by removing and replacing the surface course to full depth. Grinding shall be tapered in all directions to provide smooth transitions to areas not requiring grinding. All areas in which diamond grinding has been performed shall be subject to the final pavement thickness tolerances specified in paragraph 501-6.6.

Control charts shall be kept to show area of each day's placement and the percentage of corrective grinding required. Corrections to production and placement shall be initiated when corrective grinding is required. If the Contractor's machines and/or methods produce significant areas that need corrective actions in excess of 10 percent of a day's production, production shall be stopped until corrective measures are implemented by the Contractor.

h. Grade. Grade will be evaluated prior to and after placement of the concrete surface.

Measurements will be taken at appropriate gradelines (as a minimum at center and edges of paving lane) and longitudinal spacing as shown on cross-sections and plans. The final surface of the pavement will not vary from the gradeline elevations and cross-sections shown on the plans by more than 1/2 inch (12 mm) vertically or 0.1 feet (30 mm) laterally. The documentation will be provided by the Contractor to the RPR **[** ~~within 48 hours~~ **]** by the end of the following working day.

Areas with humps or depression that that exceed grade or smoothness and that retain water on the surface must be ground off provided the course thickness after grinding is not more than 1/2 inch (12 mm) less than the thickness specified on the plans. If these areas cannot be corrected with grinding then the slabs that are retaining water must be removed and replaced in accordance with paragraph 501-4.19d. Grinding shall be in accordance with paragraph 501-4.19f. All corrections will be at the Contractors expense.

501-5.4 Control charts. The Contractor shall maintain linear control charts for fine and coarse aggregate gradation, slump, and air content. The Contractor shall also maintain a control chart plotting the coarseness factor/workability factor from the combined gradations in accordance with paragraph 501-2.1d.

Control charts shall be posted in a location satisfactory to the RPR and shall be kept up to date at all times. As a minimum, the control charts shall identify the project number, the contract item number, the test number, each test parameter, the Action and suspension Limits, or Specification limits, applicable to each test parameter, and the Contractor's test results. The Contractor shall use the control charts as part of a process control system for identifying potential problems and assignable causes before they occur. If the Contractor's projected data during production indicates a potential problem and the Contractor is not taking satisfactory corrective action, the RPR may halt production or acceptance of the material.

a. Fine and coarse aggregate gradation. The Contractor shall record the running average of the last five gradation tests for each control sieve on linear control charts. Superimposed on the control charts shall be the action and suspension limits. Gradation tests shall be performed by the Contractor per ASTM C136. The Contractor shall take at least **[** two **]**

samples per lot to check the final gradation. Sampling shall be per ASTM D75 from the flowing aggregate stream or conveyor belt.

b. Slump and air content. The Contractor shall maintain linear control charts both for individual measurements and range (that is, difference between highest and lowest measurements) for slump and air content in accordance with the following Action and Suspension Limits.

c. Combined gradation. The Contractor shall maintain a control chart plotting the coarseness factor and workability factor on a chart in accordance with paragraph 501-2.1d.

Control Chart Limits[1]

Control Parameter	Individual Measurements	
	Action Limit	**Suspension Limit**
Gradation[2]	*[3]	*[3]
Coarseness Factor (CF)	±3.5	±5
Workability Factor (WF)	±2	±3
Slump	+0.5 to -1 inch (+13 to -25 mm)	+1 to -1.5 inch (+25 to -38 mm)
Air Content	±1.5%	±2.0%

[1] Control charts shall developed and maintained for each control parameter indicated.
[2] Control charts shall be developed and maintained for each sieve size.
[3] Action and suspension limits shall be determined by the Contractor.

501-5.5 Corrective action at Suspension Limit. As a minimum, the contractor quality control process shall be deemed out of control and corrective action taken if any one of the following conditions exists.

a. Fine and coarse aggregate gradation. When two consecutive averages of five tests are outside of the suspension limits, immediate steps, including a halt to production, shall be taken to correct the grading.

b. Coarseness and Workability factor. When the CF or WF reaches the applicable suspension limits, the Contractor, immediate steps, including a halt to production, shall be taken to correct the CF and WF.

c. Fine and coarse aggregate moisture content. Whenever the moisture content of the fine or coarse aggregate changes by more than 0.5%, the scale settings for the aggregate batcher and water batcher shall be adjusted.

d. Slump. The Contractor shall halt production and make appropriate adjustments whenever:

(1) one point falls outside the Suspension Limit line for individual measurements

OR

(2) two points in a row fall outside the Action Limit line for individual measurements.

e. Air content. The Contractor shall halt production and adjust the amount of air-entraining admixture whenever:

(1) one point falls outside the Suspension Limit line for individual measurements

OR

(2) two points in a row fall outside the Action Limit line for individual measurements.

MATERIAL ACCEPTANCE

501-6.1 Quality Assurance (QA) Acceptance sampling and testing. All acceptance sampling and testing necessary to determine conformance with the requirements specified in this section, with the exception of coring for thickness determination, will be performed by the RPR. The Contractor shall provide adequate facilities for the initial curing of beams. The Contractor shall bear the cost of providing initial curing facilities and coring and filling operations, per paragraph 501-6.5b(1).

The samples will be transported while in the molds. The curing, except for the initial cure period, will be accomplished using the immersion in saturated lime water method. During the 24 hours after molding, the temperature immediately adjacent to the specimens must be maintained in the range of 60° to 80°F (16° to 27°C), and loss of moisture from the specimens must be prevented. The specimens may be stored in tightly constructed wooden boxes, damp sand pits, temporary buildings at construction sites, under wet burlap in favorable weather, or in heavyweight closed plastic bags, or using other suitable methods, provided the temperature and moisture loss requirements are met.

501-6.2 Quality Assurance (QA) testing laboratory. Quality assurance testing organizations performing these acceptance tests will be accredited in accordance with ASTM C1077. The quality assurance laboratory accreditation must be current and listed on the accrediting authority's website. All test methods required for acceptance sampling and testing must be listed on the lab accreditation. A copy of the laboratory's current accreditation and accredited test methods will be submitted to the RPR prior to start of construction.

501-6.3 Lot size. Concrete will be accepted for strength and thickness on a lot basis. A lot will consist of a day's production not to exceed 2,000 cubic yards. Each lot will be divided into approximately equal sublots with individual sublots between 400 to 600 cubic yards. Where three sublots are produced, they will constitute a lot. Where one or two sublots are produced, they will be incorporated into the previous or next lot. Where more than one plant is simultaneously producing concrete for the job, the lot sizes will apply separately for each plant.

501-6.4 Partial lots. When operational conditions cause a lot to be terminated before the specified number of tests have been made for the lot or for overages or minor placements to be considered as partial lots, the following procedure will be used to adjust the lot size and the number of tests for the lot.

Where three sublots have been produced, they will constitute a lot. Where one or two sublots have been produced, they will be incorporated into the next lot or the previous lot and the total number of sublots will be used in the acceptance criteria calculation, that is, n=5 or n=6.

501-6.5 Acceptance Sampling and Testing.

a. Strength.

(1) Sampling. One sample will be taken for each sublot from the concrete delivered to the job site. Sampling locations will be determined by the RPR in accordance with random sampling procedures contained in ASTM D3665. The concrete will be sampled in accordance with ASTM C172.

(2) Test Specimens. The RPR will be responsible for the casting, initial curing, transportation, and curing of specimens in accordance with ASTM C31. Two (2) specimens will be made from each sample and slump, air content, unit weight, and temperature tests will be conducted for each set of strength specimens. Within 24 to 48 hours, the samples will be transported from the field to the laboratory while in the molds. Samples will be cured in saturated lime water.

The strength of each specimen will be determined in accordance with **ASTM C39.** The strength for each sublot will be computed by averaging the results of the two test specimens representing that sublot.

(3) Acceptance. Acceptance of pavement for strength will be determined by the RPR in accordance with paragraph 501-6.6b(1). All individual strength tests within a lot will be checked for outliers in accordance with ASTM E178, at a significance level of 5%. Outliers will be discarded and the remaining test values will be used to determine acceptance in accordance with paragraph 501-6.5b.

b. Pavement thickness.

(1) Sampling. One core will be taken by the Contractor for each sublot in the presence of the RPR. Sampling locations will be determined by the RPR in accordance with random sampling procedures contained in ASTM D3665. Areas, such as thickened edges, with planned variable thickness, will be excluded from sample locations.

Cores shall be a minimum 4 inch (100 mm) in diameter neatly cut with a core drill. The Contractor will furnish all tools, labor, and materials for cutting samples and filling the cored hole. Core holes will be filled by the Contractor with a non-shrink grout approved by the RPR within one day after sampling.

(2) Testing. The thickness of the cores will be determined by the RPR by the average caliper measurement in accordance with ASTM C174. Each core shall be photographed and the photograph included with the test report.

(3) Acceptance. Acceptance of pavement for thickness will be determined by the RPR in accordance with paragraph 501-6.6.

501-6.6 Acceptance criteria.

a. General. Acceptance will be based on the following characteristics of the completed pavement discussed in paragraph 501-6.5b:

(1) Strength

(2) Thickness

(3) Grade

(4) Profilograph smoothness [Not used]

(5) Adjustments for repairs

Acceptance for strength, thickness, and grade, will be based on the criteria contained in accordance with paragraph 501-6.6b(1), 501-6.6b(2), and 501-6.6b(3), respectively.

(3) Grade. The final finished surface of the pavement of the completed project will not vary from the gradeline elevations and cross-sections shown on the plans by more than 1/2 inch vertically or 0.1 feet laterally. The documentation, stamped and signed by a licensed surveyor shall be in accordance with paragraph 501-5.3h. Payment for sublots that do not meet grade for over 25% of the sublot shall be reduced by 5% and not be more than 95%.

(4) Profilograph roughness for QA Acceptance. ~~[Not used.]~~

METHOD OF MEASUREMENT

501-7.1 Concrete pavement shall be measured by the number of square yards of plain or reinforced pavement as specified in-place, completed and accepted.

BASIS OF PAYMENT

501-8.1 Payment. Payment for concrete pavement meeting all acceptance criteria as specified in paragraph 501-6.6. Acceptance Criteria shall be based on results of strength and thickness tests. Payment for acceptable lots of concrete pavement shall be adjusted in accordance with paragraph 501-8.1a for strength and thickness; 501-8.1b for repairs; 501-8.1c for grinding; and 501-8.1d for smoothness, subject to the limitation that:

The total project payment for concrete pavement shall not exceed **100** percent of the product of the contract unit price and the total number of square yards of concrete pavement used in the accepted work.

Payment shall be full compensation for all labor, materials, tools, equipment, and incidentals required to complete the work as specified herein and on the drawings.

~~**a. Basis of adjusted payment.** The pay factor for each individual lot shall be calculated in accordance with the Price Adjustment Schedule table below. A pay factor shall be calculated for both strength and thickness. The lot pay factor shall be the higher of the two values when calculations for both strength and thickness are 100% or higher. The lot pay factor shall be the product of the two values when only one of the calculations for either strength or thickness is 100% or higher. The lot pay factor shall be the lower of the two values when calculations for both strength and thickness are less than 100%.~~

~~**Price Adjustment Schedule**[1]~~

~~**Percentage of Materials Within Specification Limits (PWL)**~~	~~**Lot Pay Factor (Percent of Contract Unit Price)**~~
~~96 – 100~~	~~106~~
~~90 – 95~~	~~PWL + 10~~
~~75 – 90~~	~~0.5 PWL + 55~~
~~55 – 74~~	~~1.4 PWL – 12~~
~~Below 55~~	~~Reject~~[2]

~~[1] Although it is theoretically possible to achieve a pay factor of 106% for each lot, actual payment in excess of 100% shall be subject to the total project payment limitation specified in paragraph 501-8.1.~~

~~[2] The lot shall be removed and replaced unless, after receipt of FAA concurrence, the Owner and Contractor agree in writing that the lot will remain; the lot paid at 50% of the contract unit price; and the total project payment limitation reduced by the amount withheld for that lot.~~

~~For each lot accepted, the adjusted contract unit price shall be the product of the lot pay factor for the lot and the contract unit price. Payment shall be subject to the total project payment limitation specified in paragraph 501-8.1. Payment in excess of 100% for accepted lots of concrete pavement shall be used to offset payment for accepted lots of concrete pavement that achieve a lot pay factor less than 100%; except for rejected lots which remain in place and/or sublots with adjustments for repairs.~~

~~**b. Adjusted payment for repairs.** The PWL lot pay factor shall be reduced by 5% and be no higher than 95% for sublots which contain repairs in accordance with paragraph 501-4.19 on more than 20% of the slabs within the sublot. Payment factors greater than 100 percent for the strength and thickness cannot be used to offset adjustments for repairs.~~

~~**c. Adjusted payment for grinding.** The PWL lot pay factor shall be reduced by 5% and be no higher than 95% for sublots with grinding over 25% of a sublot.~~

e. Payment. Payment shall be made under:

Item P-501-8.1a	Reinforced Concrete Pavement (8 inches) - per square yard
Item P-501-8.1b	Reinforced Concrete Pavement Ramp (8-12 inches) – per square yard

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM A184	Standard Specification for Welded Deformed Steel Bar Mats for Concrete Reinforcement
ASTM A615	Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
ASTM A704	Standard Specification for Welded Steel Plain Bar or Rod Mats for Concrete Reinforcement
ASTM A706	Standard Specification for Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement
ASTM A775	Standard Specification for Epoxy-Coated Steel Reinforcing Bars
ASTM A884	Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Reinforcement
ASTM A934	Standard Specification for Epoxy-Coated Prefabricated Steel Reinforcing Bars
ASTM A996	Standard Specification for Rail-Steel and Axle-Steel Deformed Bars for Concrete Reinforcement
ASTM A1035	Standard Specification for Deformed and Plain, Low-Carbon, Chromium, Steel Bars for Concrete Reinforcement
ASTM A1064	Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete
ASTM A1078	Standard Specification for Epoxy-Coated Steel Dowels for Concrete Pavement
ASTM C29	Standard Test Method for Bulk Density ("Unit Weight") and Voids in Aggregate
ASTM C31	Standard Practice for Making and Curing Concrete Test Specimens in the Field

ASTM C33	Standard Specification for Concrete Aggregates
ASTM C39	Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
ASTM C70	Standard Test Method for Surface Moisture in Fine Aggregate
ASTM C78	Standard Test Method for Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)
ASTM C88	Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
ASTM C94	Standard Specification for Ready-Mixed Concrete
ASTM C114	Standard Test Methods for Chemical Analysis of Hydraulic Cement
ASTM C117	Standard Test Method for Materials Finer than 75-µm (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C123	Standard Test Method for Lightweight Particles in Aggregate
ASTM C136	Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
ASTM C131	Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C136	Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates
ASTM C138	Standard Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete
ASTM C142	Standard Test Method for Clay Lumps and Friable Particles in Aggregates
ASTM C143	Standard Test Method for Slump of Hydraulic-Cement Concrete
ASTM C150	Standard Specification for Portland Cement
ASTM C171	Standard Specification for Sheet Materials for Curing Concrete
ASTM C172	Standard Practice for Sampling Freshly Mixed Concrete
ASTM C173	Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method
ASTM C174	Standard Test Method for Measuring Thickness of Concrete Elements Using Drilled Concrete Cores
ASTM C227	Standard Test Method for Potential Alkali Reactivity of Cement-Aggregate Combinations (Mortar-Bar Method)
ASTM C231	Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
ASTM C260	Standard Specification for Air-Entraining Admixtures for Concrete
ASTM C295	Standard Guide for Petrographic Examination of Aggregates for Concrete

ASTM C309	Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete
ASTM C311	Standard Test Methods for Sampling and Testing Fly Ash or Natural Pozzolans for Use in Portland Cement Concrete
ASTM C494	Standard Specification for Chemical Admixtures for Concrete
ASTM C566	Standard Test Method for Total Evaporable Moisture Content of Aggregates by Drying
ASTM C595	Standard Specification for Blended Hydraulic Cements
ASTM C618	Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
ASTM C642	Standard Test Method for Density, Absorption, and Voids in Hardened Concrete
ASTM C666	Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing
ASTM C685	Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing
ASTM C881	Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete
ASTM C989	Standard Specification for Slag Cement for Use in Concrete and Mortars
ASTM C1017	Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete
ASTM C1064	Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete
ASTM C1077	Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation
ASTM C1157	Standard Performance Specification for Hydraulic Cement
ASTM C1260	Standard Test Method for Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)
ASTM C1365	Standard Test Method for Determination of the Proportion of Phases in Portland Cement and Portland-Cement Clinker Using X-Ray Powder Diffraction Analysis
ASTM C1567	Standard Test Method for Determining the Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials and Aggregate (Accelerated Mortar-Bar Method)
ASTM C1602	Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete
ASTM D75	Standard Practice for Sampling Aggregates

ASTM D1751	Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)
ASTM D1752	Standard Specification for Preformed Sponge Rubber and Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction
ASTM D2419	Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate
ASTM D3665	Standard Practice for Random Sampling of Construction Materials
ASTM D4791	Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
ASTM E178	Standard Practice for Dealing with Outlying Observations
ASTM E1274	Standard Test Method for Measuring Pavement Roughness Using a Profilograph
ASTM E2133	Standard Test Method for Using a Rolling Inclinometer to Measure Longitudinal and Transverse Profiles of a Traveled Surface

American Concrete Institute (ACI)

ACI 305R	Guide to Hot Weather Concreting
ACI 306R	Guide to Cold Weather Concreting
ACI 309R	Guide for Consolidation of Concrete

Advisory Circulars (AC)

AC 150/5320-6	Airport Pavement Design and Evaluation

Federal Highway Administration (FHWA)

HIPERPAV 3, version 3.2

Portland Concrete Association (PCA)

PCA	Design and Control of Concrete Mixtures, 16th Edition

U.S. Army Corps of Engineers (USACE) Concrete Research Division (CRD)

CRD C662	Determining the Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials, Lithium Nitrate Admixture and Aggregate (Accelerated Mortar-Bar Method)

United States Air Force Engineering Technical Letter (ETL)

ETL 97-5	Proportioning Concrete Mixtures with Graded Aggregates for Rigid Airfield Pavements

END ITEM P-501

ITEM P-605
JOINT SEALANTS FOR PAVEMENTS

DESCRIPTION

605-1.1 This item shall consist of providing and installing a resilient and adhesive joint sealing material capable of effectively sealing joints in pavement; joints between different types of pavements; and cracks in existing pavement.

MATERIALS

605-2.1 Joint sealants. Joint sealant materials shall meet the requirements of ASTM D5893 Standard Specifications for Cold Applied, Single Component, Chemically Curing Silicone Joint Sealant for Portland Cement Concrete Pavements.

Each lot or batch of sealant shall be delivered to the jobsite in the manufacturer's original sealed container. Each container shall be marked with the manufacturer's name, batch or lot number, the safe heating temperature, and shall be accompanied by the manufacturer's certification stating that the sealant meets the requirements of this specification.

605-2.2 Backer rod. The material furnished shall be a compressible, non-shrinking, non-staining, non-absorbing material that is non-reactive with the joint sealant in accordance with ASTM D5249. The backer-rod material shall be 25% ± 5 % larger in diameter than the nominal width of the joint.

605-2.3 Bond breaking tapes. Provide a bond breaking tape or separating material that is a flexible, non-shrinkable, non-absorbing, non-staining, and non-reacting adhesive-backed tape. The material shall have a melting point at least 5°F (3°C) greater than the pouring temperature of the sealant being used when tested in accordance with ASTM D789. The bond breaker tape shall be approximately 1/8 inch (3 mm) wider than the nominal width of the joint and shall not bond to the joint sealant.

CONSTRUCTION METHODS

605-3.1 Time of application. Joints shall be sealed as soon after completion of the curing period as feasible and before the pavement is opened to traffic, including construction equipment. The pavement temperature shall be 50°F (10°C) and rising at the time of application of the poured joint sealing material. Do not apply sealant if moisture is observed in the joint.

605-3.2 Equipment. Machines, tools, and equipment used in the performance of the work required by this section shall be approved before the work is started and maintained in satisfactory condition at all times. Submit a list of proposed equipment to be used in performance of construction work including descriptive data, **14 Calendar** days prior to use on the project.

a. Tractor-mounted routing tool. Provide a routing tool, used for removing old sealant from the joints, of such shape and dimensions and so mounted on the tractor that it will not damage the sides of the joints. The tool shall be designed so that it can be adjusted to remove the old material to varying depths as required. The use of V-shaped tools or rotary impact routing devices will not be permitted. Hand-operated spindle routing devices may be used to clean and enlarge random cracks.

b. Concrete saw. Provide a self-propelled power saw, with water-cooled diamond or abrasive saw blades, for cutting joints to the depths and widths specified.

c. Sandblasting equipment. Sandblasting is not allowed.

d. Waterblasting equipment. The Contractor must demonstrate waterblasting equipment including the pumps, hose, guide and nozzle size, under job conditions, before approval in accordance with paragraph 605-3.3. The Contractor shall demonstrate, in the presence of the RPR, that the method cleans the joint and does not damage the joint.

e. Hand tools. Hand tools may be used, when approved, for removing defective sealant from a crack and repairing or cleaning the crack faces. Hand tools should be carefully evaluated for potential spalling effects prior to approval for use.

f. Hot-poured sealing equipment. The unit applicators used for heating and installing ASTM D6690 joint sealant materials shall be mobile and shall be equipped with a double-boiler, agitator-type kettle with an oil medium in the outer space for heat transfer; a direct-connected pressure-type extruding device with a nozzle shaped for inserting in the joint to be filled; positive temperature devices for controlling the temperature of the transfer oil and sealant; and a recording type thermometer for indicating the temperature of the sealant. The applicator unit shall be designed so that the sealant will circulate through the delivery hose and return to the inner kettle when not in use.

g. Cold-applied, single-component sealing equipment. The equipment for installing ASTM D5893 single component joint sealants shall consist of an extrusion pump, air compressor, following plate, hoses, and nozzle for transferring the sealant from the storage container into the joint opening. The dimension of the nozzle shall be such that the tip of the nozzle will extend into the joint to allow sealing from the bottom of the joint to the top. Maintain the initially approved equipment in good working condition, serviced in accordance with the supplier's instructions, and unaltered in any way without obtaining prior approval. Small hand-held air-powered equipment (i.e., caulking guns) may be used for small applications.

605-3.3 Preparation of joints. Pavement joints for application of material in this specification must be dry, clean of all scale, dirt, dust, curing compound, and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method cleans the joint and does not damage the joint.

a. Sawing. All joints shall be sawed in accordance with specifications and plan details. Immediately after sawing the joint, the resulting slurry shall be completely removed from joint and adjacent area by flushing with a jet of water, and by use of other tools as necessary.

b. Sealing. Immediately before sealing, the joints shall be thoroughly cleaned of all remaining laitance, curing compound, filler, protrusions of hardened concrete, old sealant and other foreign material from the sides and upper edges of the joint space to be sealed. Cleaning shall be accomplished by tractor-mounted routing equipment, concrete saw or waterblaster as specified in paragraph 605-3.2. The newly exposed concrete joint faces and the pavement surface extending a minimum of 1/2 inch (12 mm) from the joint edge shall be sandblasted clean. Sandblasting shall be accomplished in a minimum of two passes. One pass per joint face with the nozzle held at an angle directly toward the joint face and not more than 3 inches (75 mm) from it. After final cleaning and immediately prior to sealing, blow out the joints with compressed air and leave them completely free of debris and water. The joint faces shall be surface dry when the seal is applied.

c. Backer Rod. When the joint opening is of a greater depth than indicated for the sealant depth, plug or seal off the lower portion of the joint opening using a backer rod in accordance

with paragraph 605-2.2 to prevent the entrance of the sealant below the specified depth. Take care to ensure that the backer rod is placed at the specified depth and is not stretched or twisted during installation.

d. Bond-breaking tape. Where inserts or filler materials contain bitumen, or the depth of the joint opening does not allow for the use of a backup material, insert a bond-separating tape breaker in accordance with paragraph 605-2.3 to prevent incompatibility with the filler materials and three-sided adhesion of the sealant. Securely bond the tape to the bottom of the joint opening so it will not float up into the new sealant.

605-3.4 Installation of sealants. Joints shall be inspected for proper width, depth, alignment, and preparation, and shall be approved by the RPR before sealing is allowed. Sealants shall be installed in accordance with the following requirements:

Immediately preceding, but not more than 50 feet (15 m) ahead of the joint sealing operations, perform a final cleaning with compressed air. Fill the joints from the bottom up to **1/8 inch ±1/16 inch** below the top of pavement surface; or bottom of groove for grooved pavement. Remove and discard excess or spilled sealant from the pavement by approved methods. Install the sealant in such a manner as to prevent the formation of voids and entrapped air. In no case shall gravity methods or pouring pots be used to install the sealant material. Traffic shall not be permitted over newly sealed pavement until authorized by the RPR. When a primer is recommended by the manufacturer, apply it evenly to the joint faces in accordance with the manufacturer's instructions. Check the joints frequently to ensure that the newly installed sealant is cured to a tack-free condition within the time specified.

605-3.5 Inspection. The Contractor shall inspect the joint sealant for proper rate of cure and set, bonding to the joint walls, cohesive separation within the sealant, reversion to liquid, entrapped air and voids. Sealants exhibiting any of these deficiencies at any time prior to the final acceptance of the project shall be removed from the joint, wasted, and replaced as specified at no additional cost to the airport.

605-3.6 Clean-up. Upon completion of the project, remove all unused materials from the site and leave the pavement in a clean condition.

METHOD OF MEASUREMENT

605-4.1 No Direct Measurement. All work shall be considered incidental to the bid items for specification P-501

BASIS OF PAYMENT

605-5.1 No Direct Payment. All the work under this item including furnishing all materials, for all preparation, delivering, and placing of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the work item shall be considered incidental to the bid items for specification P-501.

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM D789	Standard Test Method for Determination of Relative Viscosity of Polyamide (PA)
ASTM D5249	Standard Specification for Backer Material for Use with Cold- and Hot-Applied Joint Sealants in Portland-Cement Concrete and Asphalt Joints
ASTM D5893	Standard Specification for Cold Applied, Single Component, Chemically Curing Silicone Joint Sealant for Portland Cement Concrete Pavements
ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt
ASTM D7116	Standard Specification for Joint Sealants, Hot Applied, Jet Fuel Resistant Types for Portland Cement Concrete Pavements

Advisory Circulars (AC)

AC 150/5340-30	Design and Installation Details for Airport Visual Aids

END ITEM P-605

ITEM P-610
CONCRETE FOR MISCELLANEOUS STRUCTURES

DESCRIPTION

610-1.1 This item shall consist of concrete and reinforcement, as shown on the plans, prepared and constructed in accordance with these specifications. This specification shall be used for all concrete other than airfield pavement which are cast-in-place.

MATERIALS

610-2.1 General. Only approved materials, conforming to the requirements of these specifications, shall be used in the work. Materials may be subject to inspection and tests at any time during their preparation or use. The source of all materials shall be approved by the Resident Project Representative (RPR) before delivery or use in the work. Representative preliminary samples of the materials shall be submitted by the Contractor, when required, for examination and test. Materials shall be stored and handled to ensure preservation of their quality and fitness for use and shall be located to facilitate prompt inspection. All equipment for handling and transporting materials and concrete must be clean before any material or concrete is placed in them.

The use of pit-run aggregates shall not be permitted unless the pit-run aggregate has been screened and washed, and all fine and coarse aggregates stored separately and kept clean. The mixing of different aggregates from different sources in one storage stockpile or alternating batches of different aggregates shall not be permitted.

a. Reactivity. Fine aggregate and coarse aggregates to be used in all concrete shall have been tested separately within six months of the project in accordance with ASTM C1260. Test results shall be submitted to the RPR. The aggregate shall be considered innocuous if the expansion of test specimens, tested in accordance with ASTM C1260, does not exceed 0.08% at 14 days (16 days from casting). If the expansion either or both test specimen is greater than 0.08% at 14 days, but less than 0.20%, a minimum of 25% of Type F fly ash, or between 40% and 55% of slag cement shall be used in the concrete mix.

If the expansion is greater than 0.20%, the aggregates shall not be used, and test results for other aggregates must be submitted for evaluation; or aggregates that meet P-501 reactivity test requirements may be utilized.

610-2.2 Coarse aggregate. The coarse aggregate for concrete shall meet the requirements of ASTM C33 and the requirements of Table 4, Class Designation 5S; and the grading requirements shown below, as required for the project.

Coarse Aggregate Grading Requirements

Maximum Aggregate Size	ASTM C33, Table 3 Grading Requirements (Size No.)
1 1/2 inch (37.5 mm)	467 or 4 and 67
1 inch (25 mm)	57
¾ inch (19 mm)	67
½ inch (12.5 mm)	7

610-2.2.1 Coarse Aggregate susceptibility to durability (D) cracking. ~~[Not used]~~

610-2.3 Fine aggregate. The fine aggregate for concrete shall meet all fine aggregate requirements of ASTM C33.

610-2.4 Cement. Cement shall conform to the requirements of **ASTM C150 Type I.**

610-2.5 Cementitious materials.

a. Fly ash. Fly ash shall meet the requirements of ASTM C618, with the exception of loss of ignition, where the maximum shall be less than 6%. Fly ash shall have a Calcium Oxide (CaO) content of less than [15%] and a total available alkali content less than 3% per ASTM C311. Fly ash produced in furnace operations using liming materials or soda ash (sodium carbonate) as an additive shall not be acceptable. The Contractor shall furnish the previous three most recent, consecutive ASTM C618 reports for each source of fly ash proposed in the concrete mix and shall furnish each additional report as they become available during the project. The reports can be used for acceptance, or the material may be tested independently by the RPR.

b. Slag cement (ground granulated blast furnace (GGBF)). Slag cement shall conform to ASTM C989, Grade 100 or Grade 120. Slag cement shall be used only at a rate between 25% and 55% of the total cementitious material by mass.

610-2.6 Water. Water used in mixing or curing shall be from potable water sources. Other sources shall be tested in accordance with ASTM C1602 prior to use.

610-2.7 Admixtures. The Contractor shall submit certificates indicating that the material to be furnished meets all of the requirements indicated below. In addition, the RPR may require the Contractor to submit complete test data from an approved laboratory showing that the material to be furnished meets all of the requirements of the cited specifications. Subsequent tests may be made of samples taken by the RPR from the supply of the material being furnished or proposed for use on the work to determine whether the admixture is uniform in quality with that approved.

a. Air-entraining admixtures. Air-entraining admixtures shall meet the requirements of ASTM C260 and shall consistently entrain the air content in the specified ranges under field conditions. The air-entrainment agent and any water reducer admixture shall be compatible.

b. Water-reducing admixtures. Water-reducing admixture shall meet the requirements of ASTM C494, Type A, B, or D. ASTM C494, Type F and G high range water reducing admixtures and ASTM C1017 flowable admixtures shall not be used.

c. Other chemical admixtures. The use of set retarding and set-accelerating admixtures shall be approved by the RPR. Retarding shall meet the requirements of ASTM C494, Type A,

B, or D and set accelerating shall meet the requirements of ASTM C494, Type C. Calcium chloride and admixtures containing calcium chloride shall not be used.

~~**610-2.8 Premolded joint material.** Premolded joint material for expansion joints shall meet the requirements of ASTM [ ].~~

~~**610-2.9 Joint filler.** The filler for joints shall meet the requirements of Item P-605, unless otherwise specified.~~

610-2.10 Steel reinforcement. Reinforcing shall consist of **Reinforcing Steel** conforming to the requirements of ASTM A615, ASTM A706, ASTM A775, ASTM A934

610-2.11 Materials for curing concrete. Curing materials shall conform to White-pigmented Liquid Membrane-Forming Compound, Type 2, Class B, ASTM C309.

CONSTRUCTION METHODS

610-3.1 General. The Contractor shall furnish all labor, materials, and services necessary for, and incidental to, the completion of all work as shown on the drawings and specified here. All machinery and equipment used by the Contractor on the work, shall be of sufficient size to meet the requirements of the work. All work shall be subject to the inspection and approval of the RPR.

610-3.2 Concrete Mixture. The concrete shall develop a compressive strength of **4000** psi in 28 days as determined by test cylinders made in accordance with ASTM C31 and tested in accordance with ASTM C39. The concrete shall contain not less than 470 pounds of cementitious material per cubic yard (280 kg per cubic meter). The water cementitious ratio shall not exceed 0.45 by weight. The air content of the concrete shall be 5% +/- 1.2% as determined by ASTM C231 and shall have a slump of not more than 4 inches (100 mm) as determined by ASTM C143.

610-3.3 Mixing. Concrete may be mixed at the construction site, at a central point, or wholly or in part in truck mixers. The concrete shall be mixed and delivered in accordance with the requirements of ASTM C94 or ASTM C685.

The concrete shall be mixed only in quantities required for immediate use. Concrete shall not be mixed while the air temperature is below 40°F (4°C) without the RPRs approval. If approval is granted for mixing under such conditions, aggregates or water, or both, shall be heated and the concrete shall be placed at a temperature not less than 50°F (10°C) nor more than 100°F (38°C). The Contractor shall be held responsible for any defective work, resulting from freezing or injury in any manner during placing and curing, and shall replace such work at his expense.

Retempering of concrete by adding water or any other material is not permitted.

The rate of delivery of concrete to the job shall be sufficient to allow uninterrupted placement of the concrete.

610-3.4 Forms. Concrete shall not be placed until all the forms and reinforcements have been inspected and approved by the RPR. Forms shall be of suitable material and shall be of the type, size, shape, quality, and strength to build the structure as shown on the plans. The forms shall be true to line and grade and shall be mortar-tight and sufficiently rigid to prevent displacement and sagging between supports. The surfaces of forms shall be smooth and free from irregularities, dents, sags, and holes. The Contractor shall be responsible for their adequacy.

The internal form ties shall be arranged so no metal will show in the concrete surface or discolor the surface when exposed to weathering when the forms are removed. All forms shall be wetted with water or with a non-staining mineral oil, which shall be applied immediately before the

concrete is placed. Forms shall be constructed so they can be removed without injuring the concrete or concrete surface.

610-3.5 Placing reinforcement. All reinforcement shall be accurately placed, as shown on the plans, and shall be firmly held in position during concrete placement. Bars shall be fastened together at intersections. The reinforcement shall be supported by approved metal chairs. Shop drawings, lists, and bending details shall be supplied by the Contractor when required.

610-3.6 Embedded items. Before placing concrete, all embedded items shall be firmly and securely fastened in place as indicated. All embedded items shall be clean and free from coating, rust, scale, oil, or any foreign matter. The concrete shall be spaded and consolidated around and against embedded items. The embedding of wood shall not be allowed.

610-3.7 Concrete Consistency. The Contractor shall monitor the consistency of the concrete delivered to the project site; collect each batch ticket; check temperature; and perform slump tests on each truck at the project site in accordance with ASTM C143.

610-3.8 Placing concrete. All concrete shall be placed during daylight hours, unless otherwise approved. The concrete shall not be placed until the depth and condition of foundations, the adequacy of forms and falsework, and the placing of the steel reinforcing have been approved by the RPR. Concrete shall be placed as soon as practical after mixing, but in no case later than one (1) hour after water has been added to the mix. The method and manner of placing shall avoid segregation and displacement of the reinforcement. Troughs, pipes, and chutes shall be used as an aid in placing concrete when necessary. The concrete shall not be dropped from a height of more than 5 feet (1.5 m). Concrete shall be deposited as nearly as practical in its final position to avoid segregation due to rehandling or flowing. Do not subject concrete to procedures which cause segregation. Concrete shall be placed on clean, damp surfaces, free from running water, or on a properly consolidated soil foundation.

610-3.9 Vibration. Vibration shall follow the guidelines in American Concrete Institute (ACI) Committee 309R, Guide for Consolidation of Concrete.

610-3.10 Joints. Joints shall be constructed as indicated on the plans.

610-3.11 Finishing. All exposed concrete surfaces shall be true, smooth, and free from open or rough areas, depressions, or projections. All concrete horizontal plane surfaces shall be brought flush to the proper elevation with the finished top surface struck-off with a straightedge and floated.

610-3.12 Curing and protection. All concrete shall be properly cured in accordance with the recommendations in American Concrete Institute (ACI) 308R, Guide to External Curing of Concrete. The concrete shall be protected from damage until project acceptance.

610-3.13 Cold weather placing. When concrete is placed at temperatures below 40°F (4°C), follow the cold weather concreting recommendations found in ACI 306R, Cold Weather Concreting.

610-3.14 Hot weather placing. When concrete is placed in hot weather greater than 85ºF (30 ºC), follow the hot weather concreting recommendations found in ACI 305R, Hot Weather Concreting.

QUALITY ASSURANCE (QA)

610-4.1 Quality Assurance sampling and testing. Concrete for each day's placement will be accepted on the basis of the compressive strength specified in paragraph 610-3.2. The RPR will sample the concrete in accordance with ASTM C172; test the slump in accordance with ASTM

C143; test air content in accordance with ASTM C231; make and cure compressive strength specimens in accordance with ASTM C31; and test in accordance with ASTM C39. The QA testing agency will meet the requirements of ASTM C1077.

The Contractor shall provide adequate facilities for the initial curing of cylinders.

610-4.2 Defective work. Any defective work that cannot be satisfactorily repaired as determined by the RPR, shall be removed and replaced at the Contractor's expense. Defective work includes, but is not limited to, uneven dimensions, honeycombing and other voids on the surface or edges of the concrete.

METHOD OF MEASUREMENT

610-5.1 Concrete shall be considered incidental, and no separate measurement shall be made of concrete complete in place and accepted.

BASIS OF PAYMENT

610-6.1 Concrete shall be considered incidental, and no separate payment shall be made.

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM A184	Standard Specification for Welded Deformed Steel Bar Mats for Concrete Reinforcement
ASTM A615	Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
ASTM A704	Standard Specification for Welded Steel Plain Bar or Rod Mats for Concrete Reinforcement
ASTM A706	Standard Specification for Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement
ASTM A775	Standard Specification for Epoxy-Coated Steel Reinforcing Bars
ASTM A884	Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Reinforcement
ASTM A934	Standard Specification for Epoxy-Coated Prefabricated Steel Reinforcing Bars
ASTM A1064	Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete
ASTM C31	Standard Practice for Making and Curing Concrete Test Specimens in the Field
ASTM C33	Standard Specification for Concrete Aggregates
ASTM C39	Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens

ASTM C94	Standard Specification for Ready-Mixed Concrete
ASTM C136	Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates
ASTM C114	Standard Test Methods for Chemical Analysis of Hydraulic Cement
ASTM C136	Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
ASTM C143	Standard Test Method for Slump of Hydraulic-Cement Concrete
ASTM C150	Standard Specification for Portland Cement
ASTM C171	Standard Specification for Sheet Materials for Curing Concrete
ASTM C172	Standard Practice for Sampling Freshly Mixed Concrete
ASTM C231	Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
ASTM C260	Standard Specification for Air-Entraining Admixtures for Concrete
ASTM C309	Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete
ASTM C311	Standard Test Methods for Sampling and Testing Fly Ash or Natural Pozzolans for Use in Portland-Cement Concrete
ASTM C494	Standard Specification for Chemical Admixtures for Concrete
ASTM C618	Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
ASTM C666	Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing
ASTM C685	Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing
ASTM C989	Standard Specification for Slag Cement for Use in Concrete and Mortars
ASTM C1017	Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete
ASTM C1077	Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation
ASTM C1157	Standard Performance Specification for Hydraulic Cement
ASTM C1260	Standard Test Method for Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)
ASTM C1365	Standard Test Method for Determination of the Proportion of Phases in Portland Cement and Portland-Cement Clinker Using X-Ray Powder Diffraction Analysis
ASTM C1602	Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete

ASTM D1751	Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Asphalt Types)
ASTM D1752	Standard Specification for Preformed Sponge Rubber Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction

American Concrete Institute (ACI)

ACI 305R	Hot Weather Concreting
ACI 306R	Cold Weather Concreting
ACI 308R	Guide to External Curing of Concrete
ACI 309R	Guide for Consolidation of Concrete

END OF ITEM P-610

ITEM 506

TEMPORARY EROSION, SEDIMENTATION,AND ENVIRONMENTAL CONTROLS

1. DESCRIPTION

Install, maintain, and remove erosion, sedimentation, and environmental control measures to prevent or reduce the discharge of pollutants in accordance with the Storm Water Pollution Prevention Plan (SWP3) onthe plans and the Texas Pollutant Discharge Elimination System (TPDES) General Permit TXR150000.

Control measures are defined as Best Management Practices used to prevent or reduce the discharge of pollutants. Control measures include, but are not limited to, rock filter dams, temporary pipe slope drains, temporary paved flumes, construction exits, earthwork for erosion control, pipe, construction perimeter fence, sandbags, temporary sediment control fence, biodegradable erosion control logs, vertical tracking, temporary or permanent seeding, and other measures. Erosion and sediment control devices must be selected from the *Erosion Control Approved Products* or *Sediment Control Approved Products* lists. Perform work in a manner to prevent degradation of receiving waters, facilitate project construction, and comply with applicable federal, state, and local regulations. Ensure the installation and maintenance of control measures is performed in accordance with the manufacturer's or designer's specifications.

Provide the Contractor Certification of Compliance before performing SWP3 or soil disturbing activities. By signing the Contractor Certification of Compliance, the Contractor certifies they have read and understand the requirements applicable to this project pertaining to the SWP3, the plans, and the TPDES General Permit TXR150000. The Contractor is responsible for any penalties associated with non-performance of installation or maintenance activities required for compliance. Ensure the most current version of the certificate is executed for this project.

2. MATERIALS

2.1. Construction Exits. Provide materials that meet the details shown on the plans and this Section.

2.1.1. **Rock Construction Exit**. Provide crushed aggregate for long- and short-term construction exits. Furnish aggregates that are clean, hard, durable, and free from adherent coatings such as salt, alkali, dirt, clay, loam, shale, soft or flaky materials, and organic and injurious matter. Use 4- to 8-in. aggregate for Type 1. Use 2- to 4-in. aggregate for Type 3.

2.1.2. **Foundation Course**. Provide a foundation course consisting of flexible base, bituminous concrete, hydraulic cement concrete, or other materials as shown on the plans or directed.

2.2. Embankment for Erosion Control. Provide rock, loam, clay, topsoil, or other earth materials that will form a stable embankment to meet the intended use.

2.3. Construction Perimeter Fence.

2.3.1. **Posts**. Provide essentially straight wood or steel posts that are at least 60 in. long. Furnish soft wood posts with a minimum diameter of 3 in., or use nominal 2 × 4 in. boards. Furnish hardwood posts with a minimum cross-section of 1-1/2 × 1-1/5 in. Furnish T- or L-shaped steel posts with a minimum weight of 1.25 lb. per foot.

2.3.2. **Fence**. Provide orange construction fencing as approved.

2.3.3. **Fence Wire**. Provide 14 gauge or larger galvanized smooth or twisted wire. Provide 16 gauge or larger tiewire.

2.3.4. **Flagging**. Provide brightly-colored flagging that is fade-resistant and at least 3/4 in. wide to provide maximum visibility both day and night.

2.3.5. **Staples**. Provide staples with a crown at least 1/2 in. wide and legs at least 1/2 in. long.

2.3.6. **Used Materials**. Previously used materials meeting the applicable requirements may be used if approved.

2.4. Sandbags. Provide sandbag material of polypropylene, polyethylene, or polyamide woven fabric with a minimum unit weight of 4 oz. per square yard, a Mullen burst-strength exceeding 300 psi, and an ultraviolet stability exceeding 70%.

Use natural coarse sand or manufactured sand meeting the gradation given in Table 1 to fill sandbags. Filled sandbags must be 24 to 30 in. long, 16 to 18 in. wide, and 6 to 8 in. thick.

Table 1 Sand Gradation

Sieve Size	Retained (% by Weight)
#4	Maximum 3%
#100	Minimum 80%
#200	Minimum 95%

Aggregate may be used instead of sand for situations where sandbags are not adjacent to traffic. The aggregate size must not exceed 3/8 in.

2.5. Temporary Sediment Control Fence. Provide a net-reinforced fence using woven geo-textile fabric. Logos visible to the traveling public will not be allowed.

2.5.1. **Fabric**. Provide fabric materials in accordance with DMS-6230, "Temporary Sediment Control Fence Fabric."

2.5.2. **Posts**. Provide essentially straight wood or steel posts with a minimum length of 48 in., unless otherwise shown on the plans. Furnish soft wood posts at least 3 in. in diameter, or use nominal 2 × 4 in. boards. Furnish hardwood posts with a minimum cross-section of 1-1/2 × 1-1/2 in. Furnish T- or L-shaped steel posts with a minimum weight of 1.25 lb. per foot.

2.5.3. **Net Reinforcement**. Provide net reinforcement of at least 12.5 gauge (SWG) galvanized welded wire mesh, with a maximum opening size of 2 × 4 in., at least 24 in. wide, unless otherwise shown on the plans.

2.5.4. **Staples**. Provide staples with a crown at least 3/4 in. wide and legs 1/2 in. long.

2.5.5. **Used Materials**. Use recycled material meeting the applicable requirements if approved.

2.6. Biodegradable Erosion Control Logs.

2.6.1. **Core Material**. Furnish core material that is biodegradable or recyclable. Use compost, mulch, aspen excelsior wood fibers, chipped site vegetation, agricultural rice or wheat straw, coconut fiber, 100% recyclable fibers, or any other acceptable material unless specifically called out on the plans. Permit no more than 5% of the material to escape from the containment mesh. Furnish compost meeting the requirements of Item 161, "Compost."

2.6.2. **Containment Mesh**. Furnish containment mesh that is 100% biodegradable, photodegradable, or recyclable such as burlap, twine, UV photodegradable plastic, polyester, or any other acceptable material.

Furnish biodegradable or photodegradable containment mesh when log will remain in place as part of a vegetative system.

Furnish recyclable containment mesh for temporary installations.

2.6.3. **Size**. Furnish biodegradable erosion control logs with diameters shown on the plans or as directed. Stuff containment mesh densely so logs do not deform.

3. QUALIFICATIONS, TRAINING, AND EMPLOYEE REQUIREMENTS

3.1. Contractor Responsible Person Environmental (CRPE) Qualifications and Responsibilities. Provide and designate in writing at the preconstruction conference a CRPE and alternate CRPE who have overall responsibility for the storm water management program. The CRPE will implement storm water and erosion control practices; will oversee and observe storm water control measure monitoring and management; will monitor the project site daily and produce daily monitoring reports as long as there are BMPs in place or soil disturbing activities are evident to ensure compliance with the SWP3 and TPDES General Permit TXR150000. During time suspensions when work is not occurring or on contract non-work days, daily inspections are not required unless a rain event has occurred. The CRPE will provide recommendations on how to improve the effectiveness of control measures. Attend the Department's preconstruction conference for the project. Ensure training is completed as identified in Section 506.3.3., "Training," by all applicable personnel before employees work on the project. Document and submit a list, signed by the CRPE, of all applicable Contractor and subcontractor employees who have completed the training. Include the employee's name, the training course name, and date the employee completed the training. Provide the most current list at the preconstruction conference or before SWP3 or soil disturbing activities. Update the list as needed and provide the updated list when updated.

3.2. Contractor Superintendent Qualifications and Responsibilities. Provide a superintendent that is competent, has experience with and knowledge of storm water management, and is knowledgeable of the requirements and the conditions of the TPDES General Permit TXR150000. The superintendent will manage and oversee the day to day operations and activities at the project site; work with the CRPE to provide effective storm water management at the project site; represent and act on behalf of the Contractor; and attend the Department's preconstruction conference for the project.

3.3. Training. All Contractor and subcontractor employees involved in soil disturbing activities, small or large structures, storm water control measures, and seeding activities must complete training as prescribed by the Department.

4. CONSTRUCTION

4.1. Contractor Responsibilities. Implement the SWP3 for the project site in accordance with the plans and specifications, TPDES General Permit TXR150000, and as directed. Coordinate storm water management with all other work on the project. Develop and implement an SWP3 for project-specific material supply plants within and outside of the Department's right of way in accordance with the specific or general storm water permit requirements. Prevent water pollution from storm water associated with construction activity from entering any surface water or private property on or adjacent to the project site.

4.2. Implementation. The CRPE, or alternate CRPE, must be accessible by phone and able to respond to project-related storm water management or other environmental emergencies 24 hr. per day.

4.2.1. **Commencement**. Implement the SWP3 as shown and as directed. Contractor-proposed recommendations for changes will be allowed as approved. Conform to the established guidelines in the TPDES General Permit TXR150000 to make changes. Do not implement changes until approval has been received and changes have been incorporated into the plans. Minor adjustments to meet field conditions are allowed and will be recorded in the SWP3.

4.2.2. **Phasing**. Implement control measures before the commencement of activities that result in soil disturbance. Phase and minimize the soil disturbance to the areas shown on the plans. Coordinate temporary control measures with permanent control measures and all other work activities on the project to assure economical, effective, safe, and continuous water pollution prevention. Provide control measures that are appropriate to the construction means, methods, and sequencing allowed by the Contract. Exercise precaution throughout the life of the project to prevent pollution of ground waters and surface waters. Schedule and perform clearing and grubbing operations so that stabilization measures will follow immediately thereafter if project conditions permit. Bring all grading sections to final grade as soon as possible and implement temporary and permanent control measures at the earliest time possible. Implement temporary control measures when required by the TPDES General Permit TXR150000 or otherwise necessitated by project conditions.

Do not prolong final grading and shaping. Preserve vegetation where possible throughout the project, and minimize clearing, grubbing, and excavation within stream banks, bed, and approach sections.

4.3. General.

4.3.1. **Temporary Alterations or Control Measure Removal**. Altering or removal of control measures is allowed when control measures are restored within the same working day.

4.3.2. **Stabilization**. Initiate stabilization for disturbed areas no more than 14 days after the construction activities in that portion of the site have temporarily or permanently ceased. Establish a uniform vegetative cover or use another stabilization practice in accordance with the TPDES General Permit TXR150000.

4.3.3. **Finished Work**. Remove and dispose of all temporary control measures upon acceptance of vegetative cover or other stabilization practice unless otherwise directed. Complete soil disturbing activities and establish a uniform perennial vegetative cover. A project will not be considered for acceptance until a vegetative cover of 70% density of existing adjacent undisturbed areas is obtained or equivalent permanent stabilization is obtained in accordance with the TPDES General Permit TXR150000. An exception will be allowed in arid areas as defined in the TPDES General Permit TXR150000.

4.3.4. **Restricted Activities and Required Precautions**. Do not discharge onto the ground or surface waters any pollutants such as chemicals, raw sewage, fuels, lubricants, coolants, hydraulic fluids, bitumens, or any other petroleum product. Operate and maintain equipment on-site to prevent actual or potential water pollution. Manage, control, and dispose of litter on-site such that no adverse impacts to water quality occur. Prevent dust from creating a potential or actual unsafe condition, public nuisance, or condition endangering the value, utility, or appearance of any property. Wash out concrete trucks only as described in the TPDES General Permit TXR150000. Use appropriate controls to minimize the offsite transport of suspended sediments and other pollutants if it is necessary to pump or channel standing water (i.e., dewatering). Prevent discharges that would contribute to a violation of Edwards Aquifer Rules, water quality standards, the impairment of a listed water body, or other state or federal law.

4.4. Installation, Maintenance, and Removal Work. Perform work in accordance with the SWP3, according to manufacturers' guidelines, and in accordance with the TPDES General Permit TXR150000. Install and maintain the integrity of temporary erosion and sedimentation control devices to accumulate silt and debris until soil disturbing activities are completed and permanent erosion control features are in place or the disturbed area has been adequately stabilized as approved.

The Department will inspect and document the condition of the control measures at the frequency shown on the plans and will provide the Construction SWP3 Field Inspection and Maintenance Reports to the Contractor. Make corrections as soon as possible before the next anticipated rain event or within 7 calendar days after being able to enter the worksite for each control measure. The only acceptable reason for not accomplishing the corrections with the time frame specified is when site conditions are "Too Wet to Work." Take immediate action if a correction is deemed critical as directed. When corrections are not made within the established time frame, all work will cease on the project and time charges will continue while the control measures are brought into compliance. Commence work once the Engineer reviews and documents the project is in compliance. Commencing work does not release the Contractor of the liability for noncompliance of the SWP3, plans, or TPDES General Permit TXR150000.

The Engineer may limit the disturbed area if the Contractor cannot control soil erosion and sedimentation resulting from the Contractor's operations. Implement additional controls as directed.

Remove devices upon approval or as directed. Finish-grade and dress the area upon removal. Stabilize disturbed areas in accordance with the permit, and as shown on the plans or directed. Materials removed are considered consumed by the project. Retain ownership of stockpiled material and remove it from the project when new installations or replacements are no longer required.

4.4.1.1. **Type 4 (Sack Gabions)**. Unfold sack gabions and smooth out kinks and bends. Connect the sides by lacing in a single loop–double loop pattern on 4- to 5-in. spacing for vertical filling. Pull the end lacing rod at one end until tight, wrap around the end, and twist 4 times. Fill with stone at the filling end, pull the rod tight, cut the wire with approximately 6 in. remaining, and twist wires 4 times.

4.4.2. **Construction Exits**. Prevent traffic from crossing or exiting the construction site or moving directly onto a public roadway, alley, sidewalk, parking area, or other right of way areas other than at the location of construction exits when tracking conditions exist. Construct exits for either long- or short-term use.

4.4.2.1. **Long-Term**. Place the exit over a foundation course as required. Grade the foundation course or compacted subgrade to direct runoff from the construction exits to a sediment trap as shown on the plans or as directed. Construct exits with a width of at least 14 ft. for one-way and 20 ft. for two-way traffic for the full width of the exit, or as directed.

4.4.4.1.1. **Type 1**. Construct to a depth of at least 8 in. using crushed aggregate as shown on the plans or as directed.

4.4.2.2. **Short-Term**.

4.4.4.2.1. **Type 3**. Construct using crushed aggregate, plywood, or wafer board. This type of exit may be used for daily operations where long-term exits are not practical.

4.4.4.2.2. **Type 4**. Construct as shown on the plans or as directed.

4.4.3. **Earthwork for Erosion Control**. Perform excavation and embankment operations to minimize erosion and to remove collected sediments from other erosion control devices.

4.4.3.1. **Excavation and Embankment for Erosion Control Features**. Place earth dikes, swales, or combinations of both along the low crown of daily lift placement, or as directed, to prevent runoff spillover. Place swales and dikes at other locations as shown on the plans or as directed to prevent runoff spillover or to divert runoff. Construct cuts with the low end blocked with undisturbed earth to prevent erosion of hillsides. Construct sediment traps at drainage structures in conjunction with other erosion control measures as shown on the plans or as directed.

Create a sediment basin, where required, providing 3,600 cu. ft. of storage per acre drained, or equivalent control measures for drainage locations that serve an area with 10 or more disturbed acres at one time, not including offsite areas.

4.4.3.2. **Excavation of Sediment and Debris**. Remove sediment and debris when accumulation affects the performance of the devices, after a rain, and when directed.
4.4.3.3.

4.4.4. **Construction Perimeter Fence**. Construct, align, and locate fencing as shown on the plans or as directed.

4.4.4.1. **Installation of Posts**. Embed posts 18 in. deep or adequately anchor in rock, with a spacing of 8 to 10 ft.

4.4.4.2. **Wire Attachment.** Attach the top wire to the posts at least 3 ft. from the ground. Attach the lower wire midway between the ground and the top wire.

4.4.4.3. **Flag Attachment**. Attach flagging to both wire strands midway between each post. Use flagging at least 18 in. long. Tie flagging to the wire using a square knot.

4.4.5. **Sandbags for Erosion Control**. Construct a berm or dam of sandbags that will intercept sediment-laden storm water runoff from disturbed areas, create a retention pond, detain sediment, and release water in sheet flow. Fill each bag with sand so that at least the top 6 in. of the bag is unfilled to allow for proper tying of the open end. Place the sandbags with their tied ends in the same direction. Offset subsequent rows of sandbags 1/2 the length of the preceding row. Place a single layer of sandbags downstream as a secondary debris trap. Place additional sandbags as necessary or as directed for supplementary support to berms or dams of sandbags or earth.

4.4.6. **Temporary Sediment-Control Fence**. Provide temporary sediment-control fence near the downstream perimeter of a disturbed area to intercept sediment from sheet flow. Incorporate the fence into erosion-control measures used to control sediment in areas of higher flow. Install the fence as shown on the plans, as specified in this Section, or as directed.

4.4.6.1. **Installation of Posts**. Embed posts at least 18 in. deep, or adequately anchor, if in rock, with a spacing of 6 to 8 ft. and install on a slight angle toward the runoff source.

4.4.6.2. **Fabric Anchoring**. Dig trenches along the uphill side of the fence to anchor 6 to 8 in. of fabric. Provide a minimum trench cross-section of 6 × 6 in. Place the fabric against the side of the trench and align approximately 2 in. of fabric along the bottom in the upstream direction. Backfill the trench, then hand-tamp.

4.4.6.3. **Fabric and Net Reinforcement Attachment**. Attach the reinforcement to wooden posts with staples, or tosteel posts with T-clips, in at least 4 places equally spaced unless otherwise shown on the plans. Sewn vertical pockets may be used to attach reinforcement to end posts. Fasten the fabric to the top strand of reinforcement by hog rings or cord every 15 in. or less.

4.4.6.4. **Fabric and Net Splices**. Locate splices at a fence post with a minimum lap of 6 in. attached in at least 6 places equally spaced unless otherwise shown on the plans. Do not locate splices in concentrated flow areas.

Requirements for installation of used temporary sediment-control fence include the following:

- fabric with minimal or no visible signs of biodegradation (weak fibers),
- fabric without excessive patching (more than 1 patch every 15 to 20 ft.),
- posts without bends, and
- backing without holes.

4.4.7. **Biodegradable Erosion Control Logs.** Install biodegradable erosion control logs near the downstream perimeter of a disturbed area to intercept sediment from sheet flow. Incorporate the biodegradable erosion control logs into the erosion measures used to control sediment in areas of higher flow. Install, align, and locate the biodegradable erosion control logs as specified below, as shown on the plans, or as directed.

Secure biodegradable erosion control logs in a method adequate to prevent displacement as a result of normal rain events, prevent damage to the logs, and as approved, such that flow is not allowed under the logs. Temporarily removing and replacing biodegradable erosion logs as to facilitate daily work is allowed at the Contractor's expense.

4.4.8. **Vertical Tracking**. Perform vertical tracking on slopes to temporarily stabilize soil. Provide equipment with atrack undercarriage capable of producing a linear soil impression measuring a minimum of 12 in. long × 2 to4 in. wide × 1/2 to 2 in. deep. Do not exceed 12 in. between track impressions. Install continuous linear track impressions where the 12 in. length impressions are perpendicular to the slope. Vertical tracking is required on projects where soil disturbing activities have occurred unless otherwise approved.

4.5. Monitoring and Documentation. Monitor the control measures on a daily basis as long as there are BMPs in place and/or soil disturbing activities are evident to ensure compliance with the SWP3 and TPDES General Permit TXR150000. During time suspensions when work is not occurring or contract non-work days, daily inspections are not required unless a rain event has occurred. Monitoring will consist of, but is not limited to, observing, inspecting, and documenting site locations with control measures and discharge points to provide maintenance and inspection of controls as described in the SWP3. Keep written records of daily monitoring. Document in the daily monitoring report the control measure condition, the date of inspection, required corrective actions, responsible person for making the corrections, and the date corrective actions were completed. Maintain records of all monitoring reports at the project site or at an approved place. Provide copies within 7 days. Together, the CRPE and an Engineer's representative will complete the Construction Stage Gate Checklist on a periodic basis as directed.

5. MEASUREMENT

5.2. Earthwork for Erosion and Sediment Control.

5.2.1. **Equipment and Labor Measurement**. Equipment and labor used will be measured by the actual number of hours the equipment is operated and the labor is engaged in the work.

5.2.2. **Volume Measurement**.

5.2.2.1. **In Place**.

5.2.2.1.1. **Excavation**. Excavation will be measured by the cubic yard in its original position and the volume computed by the method of average end areas.

5.2.2.1.2. **Embankment**. Embankment will be measured by the cubic yard in its final position by the method of average end areas. The volume of embankment will be determined between:

- the original ground surfaces or the surface upon that the embankment is to be constructed for the feature and
- the lines, grades and slopes of the accepted embankment for the feature.

5.3. Construction Perimeter Fence. Construction perimeter fence will be measured by the foot.

5.4. Sandbags for Erosion Control. Sandbags will be measured as each sandbag or by the foot along the top of sandbag berms or dams.

5.5. Temporary Sediment-Control Fence. Installation or removal of temporary sediment-control fence will be measured by the foot.

5.6. Biodegradable Erosion Control Logs. Installation or removal of biodegradable erosion control logs will be measured by the foot along the centerline of the top of the control logs.

5.7. Vertical Tracking. Vertical tracking will not be measured or paid for directly but is considered subsidiary to this Item.

6. PAYMENT

The following will not be paid for directly but are subsidiary to pertinent Items:

- erosion-control measures for Contractor project-specific locations (PSLs) inside and outside the right of way (such as construction and haul roads, field offices, equipment and supply areas, plants, and material sources);
- removal of litter, unless a separate pay item is shown on the plans;
- repair to devices and features damaged by Contractor operations;
- added measures and maintenance needed due to negligence, carelessness, lack of maintenance, and failure to install permanent controls;
- removal and reinstallation of devices and features needed for the convenience of the Contractor;
- finish grading and dressing upon removal of the device; and
- minor adjustments including but not limited to plumbing posts, reattaching fabric, minor grading to maintain slopes on an erosion embankment feature, or moving small numbers of sandbags.

Stabilization of disturbed areas will be paid for under pertinent Items except vertical tacking which is subsidiary.

Furnishing and installing pipe for outfalls associated with sediment traps and ponds will not be paid for directly but is subsidiary to the excavation and embankment under this Item.

6.1. Construction Exits. Contractor-required construction exits from off right of way locations or on-right of way PSLs will not be paid for directly but are subsidiary to pertinent Items.

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" for construction exits needed on right of way access to work areas required by the Department will be paid for at the unit price bid for "Construction Exits (Install)" of the type specified or "Construction Exits (Remove)." This price is full compensation for furnishing and placing materials, excavating, removal and disposal, cleaning vehicles, labor, tools, and incidentals.

When the Engineer directs that a construction exit or portion thereof be removed and replaced, payment will be made at the unit prices bid for "Construction Exit (Remove)" and "Construction Exit (Install)" of the type specified. These prices are full compensation for the removal and replacement of the construction exit and for equipment, labor, tools, and incidentals.

Construction of sediment traps used in conjunction with the construction exit will be measured and paid for under "Earthwork for Erosion and Sediment Control."

6.2. Earthwork for Erosion and Sediment Control.

6.2.1. **Initial Earthwork for Erosion and Sediment Control.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Excavation (Erosion and Sediment Control, In Place)," "Embankment (Erosion and Sediment Control, In Place)," "Excavation (Erosion and Sediment Control, In Vehicle)," "Embankment (Erosion and Sediment Control, (In Vehicle)," or "Earthwork (Erosion and Sediment Control, In Vehicle)."

This price is full compensation for excavation and embankment including hauling, disposal of material not used elsewhere on the project; embankments including furnishing material from approved sources and construction of erosion-control features; and equipment, labor, tools, and incidentals.

Sprinkling and rolling required by this Item will not be paid for directly but will be subsidiary to this Item.

6.3. Construction Perimeter Fence. The work performed and materials furnished in accordance with this Itemand measured as provided under "Measurement" will be paid for at the unit price bid for "Construction Perimeter Fence." This price is full compensation for furnishing and placing the fence; digging, fence posts, wire, and flagging; removal and disposal; and materials, equipment, labor, tools, and incidentals.

Removal of construction perimeter fence will be not be paid for directly but is subsidiary to the installation Item. When the Engineer directs that the perimeter fence installation or portions thereof be removed and replaced, payment will be made at the unit price bid for "Construction Perimeter Fence," which is full compensation for the removal and reinstallation of the construction perimeter fence.

6.4. Sandbags for Erosion Control. Sandbags will be paid for at the unit price bid for "Sandbags for Erosion Control" (of the height specified when measurement is by the foot). This price is full compensation for materials, placing sandbags, removal and disposal, equipment, labor, tools, and incidentals.

Removal of sandbags will not be paid for directly but is subsidiary to the installation Item. When the Engineer directs that the sandbag installation or portions thereof be replaced, payment will be made at the unit price bid for "Sandbags for Erosion Control," which is full compensation for the reinstallation of the sandbags.

6.5. Temporary Sediment-Control Fence. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid as follows:

6.5.1. **Installation**. Installation will be paid for as "Temporary Sediment-Control Fence (Install)." This price is full compensation for furnishing and operating equipment finish backfill and grading, lacing, proper disposal, labor, materials, tools, and incidentals.

6.5.2. **Removal**. Removal will be paid for as "Temporary Sediment-Control Fence (Remove)." This price is full compensation for furnishing and operating equipment, proper disposal, labor, materials, tools, and incidentals.

6.6. Biodegradable Erosion Control Logs. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid as follows:

6.6.1. **Installation**. Installation will be paid for as "Biodegradable Erosion Control Logs (Install)" of the size specified. This price is full compensation for furnishing and operating equipment finish backfill and grading, staking, proper disposal, labor, materials, tools, and incidentals.

6.6.2. **Removal**. Removal will be paid for as "Biodegradable Erosion Control Logs (Remove)." This price is full compensation for furnishing and operating equipment, proper disposal, labor, materials, tools, and incidentals.

6.7. Vertical Tracking. Vertical tracking will not be measured or paid for directly but is considered subsidiary to this Item.

ITEM 529
CONCRETE CURB, GUTTER,COMBINED CURB AND GUTTER

DESCRIPTION

Construct hydraulic cement concrete curb, gutter, and combined curb and gutter.

MATERIALS

Furnish materials conforming to:

- Item 360, "Concrete Pavement"
- Item 420, "Concrete Substructures"
- Item 421, "Hydraulic Cement Concrete"
- Item 440, "Reinforcement for Concrete"

Use Class A concrete or material specified on the plans. Use Grade 8 coarse aggregate for extruded Class Aconcrete. Use other grades if approved.

When approved, use fibers meeting the requirements of DMS-4550, "Fibers for Concrete," to replace reinforcing steel in Class A concrete. Dose fibers in accordance with the Department's MPL of pre-qualified fibers for concrete.

CONSTRUCTION

Provide finished work with a well-compacted mass and a surface free from voids and honeycomb, in the required shape, line, and grade. Round exposed edges with an edging tool of the radius shown on the plans. Mix, place, and cure concrete in accordance with Item 420, "Concrete Substructures." Construct joints at locations shown on the plans. Cure for at least 72 hr.

Furnish and place reinforcing steel in accordance with Item 440, "Reinforcement for Concrete."

Set and maintain a guideline that conforms to alignment data shown on the plans, with an outline that conforms to the details shown on the plans. Ensure that changes in curb grade and alignment do not exceed 1/4 in. between any 2 contacts on a 10-ft. straightedge.

3.1 Conventionally Formed Concrete. Shape and compact subgrade, foundation, or pavement surface to theline, grade, and cross-section shown on the plans. Lightly sprinkle subgrade or foundation material immediately before concrete placement.

Pour concrete into forms and strike off with a template 1/4 to 3/8 in. less than the dimensions of the finishedcurb unless otherwise approved. After initial set, plaster surface with mortar consisting of 1-part hydraulic cement and 2 parts fine aggregate. Brush exposed surfaces to a uniform

texture.

Place curbs, gutters, and combined curb and gutters in 50-ft. maximum sections unless otherwise approved.

3.2 Extruded or Slipformed Concrete. Hand-tamp and sprinkle subgrade or foundation material before concrete placement. Provide clean surfaces for concrete placement. Coat cleaned surfaces, if required, with approved adhesive or coating at the rate of application shown on the plans or as directed. Place concrete with approved self-propelled equipment.

The forming tube of the extrusion machine or the form of the slipform machine must be easily adjustable vertically during the forward motion of the machine to provide variable heights necessary to conform to the established grade line.

Attach a pointer or gauge to the machine so that a continual comparison can be made between the extruded or slipform work and the grade guideline. Other methods may be used when approved.

Finish surfaces immediately after extrusion or slipforming.

MEASUREMENT

This Item will be measured by the lineal foot.

PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Concrete Curb," "Concrete Curb (Mono)," or "Concrete Curb and Gutter" of the type specified. This price is full compensation for surface preparation of curb foundation, equipment, labor, materials, tools, and incidentals.

END OF ITEM 529

EXHIBIT A: PLANS

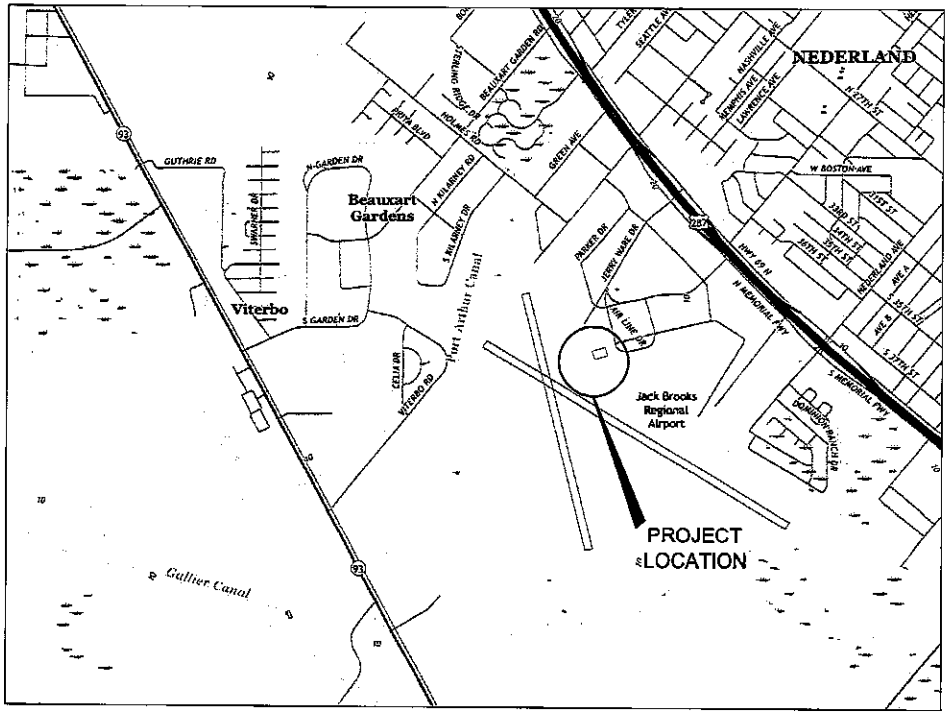
IFB 22-028/JW
EXHIBIT A: PAGE A-2

REHABILITATION OF FUEL FARM PAVEMENT
JACK BROOKS REGIONAL AIRPORT (BPT)

ISSUED FOR BIDDING

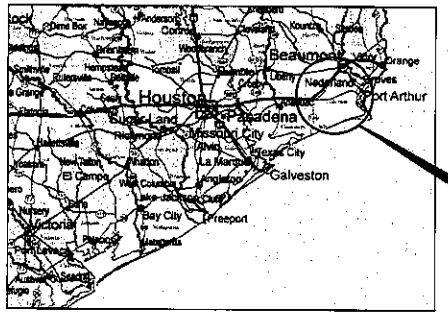
PROJECT CONSISTS OF RECONSTRUCTION OF EXISTING CONCRETE PAVEMENT AT THE JACK BROOKS REGIONAL AIRPORT FUEL FARM

FAA AIRPORT IMPROVEMENT PROGRAM (AIP) PN: AIP 3-480018-37-20
JEFFERSON COUNTY PN: ISB 22-028/JW
THE SOLCO GROUP PN: 2021-10-1092
MAY 2022



VICINITY MAP
N.T.S

SHEET INDEX		
SHEET NO.	DWG NO.	SHEET TITLE
1	G-000	COVER PAGE
2	G-001	GENERAL NOTES AND SUMMARY OF QUANTITIES
3	C-001	PROJECT LAYOUT AND PHASING PLAN
4	C-002	SURVEY PLAN
5	C-003	SITE DEMOLITION PLAN
6	C-004	GRADING, PLAN AND PROFILE
7	C-005	SITE PAVING, JOINTING AND SPOT ELEVATIONS
8	C-006	PAVEMENT DETAILS
9	C-007	PAVEMENT DETAILS
10	EC(9)-16	TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES EROSION CONTROL LOG
11	BC(8)-21	BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES



LOCATION MAP
N.T.S

JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #22626

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
COVER PAGE

DRAWING NUMBER:
G-000

SHEET NUMBER: 1 SHEET TOTAL: 11

SCALE: N.T.S

DRAWN BY: AM CHECKED BY: KB

FILE:C:\The Solco Group\Jack Brooks Regional\13. CAD\2021\1092-BPT COVER PAGE.dwg

CONSTRUCTION ACTIVITIES

1. THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS. THE PROJECT IS SUBJECT TO INSPECTION BY REPRESENTATIVES OF JACK BROOKS REGIONAL AIRPORT, THE ENGINEER, JEFFERSON COUNTY AND THE FEDERAL AVIATION ADMINISTRATION (FAA).
2. CONTRACTOR AND CONSTRUCTION ACTIVITIES SHALL COMPLY WITH ALL PLANS, SPECIFICATIONS AND FAA ADVISORY CIRCULARS.
3. THE CONTRACTOR SHALL SUBMIT A DETAILED CONSTRUCTION PROGRESS SCHEDULE TO THE AIRPORT, ENGINEER AND RESIDENT PROJECT REPRESENTATIVE (RPR) EACH WEEK.
4. ALL MATERIAL SUBMITTALS FOR ITEMS TO BE USED IN CONSTRUCTION OF THE PROJECT SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL 14 DAYS PRIOR TO COMMENCEMENT OF THE ASSOCIATED WORK.
5. THE PROJECT PAY ITEMS ARE PROVIDED TO BE INCLUSIVE OF ALL WORK TO BE PERFORMED AS SHOWN IN THESE PLANS. ALL WORK NOT IDENTIFIED WITH A SPECIFIC PAY ITEM IS TO BE CONSIDERED REQUIRED/INCIDENTAL WORK TO COMPLETE THE PROJECT AND IS TO BE INCLUDED IN THE COST OF THE PROJECT PAY ITEMS PROVIDED.
6. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING SAFETY FOR CONSTRUCTION PERSONNEL AND EQUIPMENT AT ALL TIMES.
7. CONTRACTOR SHALL REPAIR OR REPLACE ALL ITEMS NOT DESIGNATED FOR DEMOLITION OR REMOVAL THAT ARE DAMAGED BY CONSTRUCTION EFFORTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMMEDIATE REPAIR OF ANY DAMAGE TO AIRPORT FACILITIES, INCLUDING BUT NOT LIMITED TO EXISTING PAVEMENTS, UNDERGROUND CABLES, LIGHTS, SIGNS, FENCES, EQUIPMENT, ETC. CAUSED DURING CONSTRUCTION. ALL REPAIRS MUST BE MADE IN COORDINATION WITH THE OWNER AND TO EQUAL OR BETTER QUALITY AND IN COMPLIANCE WITH THE AIRPORT. ALL REPAIR AND REPLACEMENT COST SHALL BE AT THE EXPENSE OF THE CONTRACTOR.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EFFORT AND COST OF IMMEDIATE CLEANING OF EARTH TRACKING AND SPILLS RESULTING FROM THE CONTRACTOR'S OPERATIONS.
9. CONSTRUCTION AREA LIMITS: THE LIMITS OF CONSTRUCTION MATERIAL STORAGE AREAS, PLAN SITE, EQUIPMENT STORAGE AREA, PARKING AREA AND OTHER AREAS DEFINED AS REQUIRED FOR THE CONTRACTOR'S EXCLUSIVE USE DURING CONSTRUCTION SHALL BE MARKED BY THE CONTRACTOR.
10. THE CONTRACTOR SHALL BE RESPONSIBLE OF COMPLYING WITH ALL FEDERAL, STATE, AND LOCAL LAWS AND SHALL OBTAIN ALL NECESSARY PERMITS REQUIRED FOR CONSTRUCTION.

ENVIRONMENTAL

1. IN THE EVENT THAT UNANTICIPATED CONTAMINATION IS ENCOUNTERED DURING CONSTRUCTION, WORK IN THE IMMEDIATE AREA WILL CEASE. CONTRACTOR SHALL NOTIFY THE RPR AND ENGINEER TO CONTACT THE RELEVANT ENVIRONMENTAL AUTHORITY.
2. ALL WASTE MATERIAL SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH ALL THE LOCAL, STATE AND FEDERAL REGULATIONS.

EXISTING TOPOGRAPHY

1. EXISTING TOPOGRAPHY SHOWN ON THE PLANS ARE BASED ON THE SURVEYED TERRAIN FOR THE CONSTRUCTION LIMITS OF THE PROJECT. THE CONTRACTOR SHALL FIELD VERIFY THAT THE EXISTING TOPOGRAPHY SHOWN IS REASONABLY ACCURATE. IF THE ACCURACY IS IN QUESTION THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST TWO WEEKS PRIOR TO THE START OF CONSTRUCTION AND A COURSE OF ACTION WILL BE DETERMINED AT THAT TIME.

EXISTING CONDITIONS/UNDERGROUND AND CONCEALED

1. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO BEGINNING CONSTRUCTION AND REPORT TO THE ENGINEER ANY VARIATIONS FROM THE INFORMATION SHOWN ON CONSTRUCTION PLANS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND IDENTIFICATION OF ALL EXISTING UTILITIES AND PIPELINES IN THE CONSTRUCTION AREA. ANY DAMAGE TO EXISTING UTILITIES OR PIPELINES (ON OR OFF AIRPORT PROPERTY) DAMAGED BY CONTRACTOR SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL REPAIR ALL UTILITY/PIPELINE DAMAGED BY CONTRACTOR AT NO ADDITIONAL COST TO OWNER.
3. ANY UNPLANNED, UNAPPROVED OR ACCIDENTAL SHUTDOWN OR INTERRUPTION OF SERVICE TO ANY LIGHTING CIRCUIT REQUIRES IMMEDIATE NOTIFICATION OF THE OWNER BY THE CONTRACTOR. ALL NECESSARY REPAIRS WILL BE AT CONTRACTORS EXPENSE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STAKING AND GRADE CONTROL OF ALL ELEMENTS OF THE PROJECT AT NO ADDITIONAL COST TO THE OWNER.
5. CONTRACTOR SHALL VERIFY ALL SURVEY CONTROL, ELEVATIONS, AND EXISTING GRADES PRIOR TO BEGINNING CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER PRIOR TO BEGINNING CONSTRUCTION.
6. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL HORIZONTAL AND VERTICAL CONSTRUCTION STAKING AS REQUIRED FOR THE PROJECT DEVELOPMENT.
7. CONTRACTOR SHALL ESTABLISH ANY ADDITIONAL CONTROL POINTS DEEMED NECESSARY BY CONSTRUCTION PERSONNEL PRIOR TO BEGINNING THE WORK.

SUMMARY OF QUANTITIES

Spec	Pay Item	Description	Units	Bid Quantity	Final Quantity	Remarks
1	C-105	Mobilization	LS	1		
2	SS-120	Construction Safety and Security (CSPP, Barricades, Signs and Traffic Handling)	LS	1		
3	D-701a	Allowance for Storm Sewer Pipe Replacement	LS	1		
4	D-701b	Install PVC Pipe (2 inch)	LF	8		
5	P-101-5.1a	Sawcut, Remove and Dispose Existing Concrete Pavement Full Depth (8 Inches)	SY	600		
6	P-101-5.1b	Sawcut, Remove and Dispose Existing Asphalt Ramp	SY	70		
7	P-101-5.1c	Sawcut, Remove and Dispose Existing 6" Vertical Curb	LF	310		
8	P-152-4.2	Embankment in Place	CY	20		
9	P-152-4.4	Unsuitable Excavation	CY	20		
10	P-155-6.1	Lime Treated Subgrade (8 inches)	SY	600		
11	P-155-6.2	Lime	TON	31		
12	P-501-8.1a	Reinforced Concrete Pavement (8 Inches)	SY	530		
13	P-501-8.1b	Reinforced Concrete Pavement Ramp (8-12 Inches)	SY	70		
14	TXDOT 506-6.6.1	Biodegradable Erosion Control Logs (Install)	LF	200		
15	TXDOT 506-6.6.2	Biodegradable Erosion Control Logs (Removal)	LF	200		
16	TXDOT 529	4" Concrete Curb	LF	310		
17	See Plan	Furnish and Install 4' Steel Bollards	EA	2		
18	See Plan	Install 6' Rubber Speed Bumps	EA	4		

HAUL ROUTES, STAGING AREAS AND SITE ACCESS

1. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING STAGING AREA AND HAUL ROUTE AS NECESSARY FOR HIS OPERATIONS. THIS ITEMS SHALL BE SUBSIDIARY TO OTHER ITEMS IN THE CONTRACT.
2. CONTRACTOR SHALL PROVIDE ACCESS ROUTE PLAN FOR APPROVAL BY THE AIRPORT PRIOR TO THE BEGINNING OF CONSTRUCTION. THE ACTUAL SIZE AND LOCATION OF THE STAGING AREA AND HAUL ROUTE WILL BE APPROVED BY THE AIRPORT PRIOR TO CONSTRUCTION.
4. IT SHALL BE THE CONTRACTORS' RESPONSIBILITY TO COORDINATE ALL OFF-AIRPORT ROUTES WITH THE APPROPRIATE AUTHORITIES.
5. HAUL TRUCKS TRANSPORTING LOOSE MATERIAL OFF AIRPORT PROPERTY SHALL USE LOAD COVERS AND SHALL BE LOADED SUCH THAT NO SPILLAGE OCCURS DURING TRANSIT. ALL CONTRACTOR EQUIPMENT MUST BE MAINTAINED IN GOOD WORKING ORDER. CONTRACTOR VEHICLES THAT LEAK OR DRIP OIL AND/OR FLUIDS MUST BE IMMEDIATELY REMOVED FROM THE PROJECT FOR REPAIR AND THE SPILL CLEANED UP IN ACCORDANCE WITH STATE AND FEDERAL REQUIREMENTS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING HIS/HER OWN COMPLETE UTILITY SERVICES. THE AIRPORT WILL NOT PROVIDE FACILITIES AND SERVICES TO THE CONTRACTOR DURING CONSTRUCTION. THE CONTRACTOR'S PERSONNEL ARE PROHIBITED FROM UTILIZING THE AIRPORT TERMINAL. ASSOCIATED COST WILL BE SUBSIDIARY TO OTHER ITEMS IN THE CONTRACT.
7. THE AREAS UTILIZED AS THE CONTRACTOR'S STAGING AREA, PARKING, LAYDOWN, STORAGE AREA, AND THE HAUL ROUTES ARE TO BE RESTORED TO THE ORIGINAL CONDITION AT THE END OF THE PROJECT. ALL EXISTING ROADS OR PAVEMENTS USED AS ACCESS/HAUL ROADS SHALL BE MAINTAINED AND IMPROVED AS REQUIRED. THE ROAD OR PAVEMENT CONDITIONS WILL BE INSPECTED JOINTLY BY THE ENGINEER AND CONTRACTOR PRIOR TO AND AT THE END OF THE PROJECT. THE CONDITION OF THESE ROADS AND PAVEMENTS SHALL BE EQUAL OR BETTER THAN AT THE START OF THE PROJECT AS DETERMINED BY THE ENGINEER. MECHANICAL BROOMS WILL BE REQUIRED BY THE ENGINEER FOR THESE EXISTING PAVEMENT ACCESS ROADS IF CONDITIONS ARE NOT BEING MAINTAINED (IN THE OPINION OF THE ENGINEER) BY THE CONTRACTOR.
8. CONSTRUCTION EQUIPMENT AND VEHICLES SHALL NOT TRAVEL ON NEWLY CONSTRUCTED PAVEMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF ANY DAMAGE TO THE NEWLY CONSTRUCTED PAVEMENT. ALL REPAIRS SHALL BE AT THE CONTRACTORS OWN EXPENSE.
9. THE FUEL FARM SHALL BE KEPT FREE OF ALL DEBRIS, DIRT, ETC., AT ALL TIMES. ANY SPILLAGE OF SOIL, DEBRIS OR OTHER MATERIALS SHALL BE CLEANED UP IMMEDIATELY USING APPROPRIATE POWER SWEEPERS, BLOWERS OR OTHER APPROVED EQUIPMENT, BY THE CONTRACTOR. DUST GENERATED DUE TO CONSTRUCTION ACTIVITIES SHALL BE ADEQUATELY CONTROLLED AT ALL TIMES. A PROGRAM OF REGULAR FUEL FARM AREA INSPECTION SHALL BE IMPLEMENTED BY THE CONTRACTOR DURING CONSTRUCTION.
10. ALL EQUIPMENT MUST BE RETURNED TO THE STAGING AREA AT THE END OF EACH WORK DAY AND WHEN NOT ENGAGED IN THE CONSTRUCTION DURING NON-WORKING DAYS AND NIGHTS UNLESS APPROVED BY THE OWNER. THE OWNER WILL DESIGNATE AREAS FOR CONTRACTOR'S EMPLOYEES AUTO PARKING.
11. ACCESS TO THE SITE:
    a. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRAFFIC CONTROL TO AND FROM THE VARIOUS CONSTRUCTION AREAS ON THE SITE.
    b. THE CONTRACTOR SHALL NOT PERMIT ANY UNAUTHORIZED CONSTRUCTION PERSONNEL OR TRAFFIC ON THE SITE.
    c. THE CONTRACTOR IS RESPONSIBLE FOR IMMEDIATE CLEAN UP OF ANY DEBRIS DEPOSITED ALONG THE ACCESS ROUTE AS A RESULT OF HIS CONSTRUCTION TRAFFIC.
    d. ANY TRAFFIC CONTROL SIGN AND DEVICES PLACED IN THE COURSE OF THE PROJECT SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), THE APPLICABLE FAA ADVISORY CIRCULAR, OR AS APPROVED IN WRITING FROM SHOP DRAWINGS SUBMITTED TO THE ENGINEER PRIOR TO SIGN PLACEMENT.
    e. THE CONTRACTOR WILL BE LIABLE FOR ANY FINES ISSUED BY THE FAA, DOTD, COUNTY AND AIRPORT OPERATIONS FOR TRAFFIC VIOLATIONS AND SECURITY VIOLATIONS FOR WHICH IT IS CITED.

DUST PROTECTION

1. CONTRACTOR SHALL INSTALL DUST PROTECTION COVERS TO PROTECT THE EXISTING FUEL TANK EQUIPMENT AND CHAIN LINK FENCE. DUST PROTECTION IS INCIDENTAL TO PAY ITEM SS-100

Texas 811

JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #22826

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
GENERAL NOTES AND SUMMARY OF QUANTITIES

DRAWING NUMBER: G-001

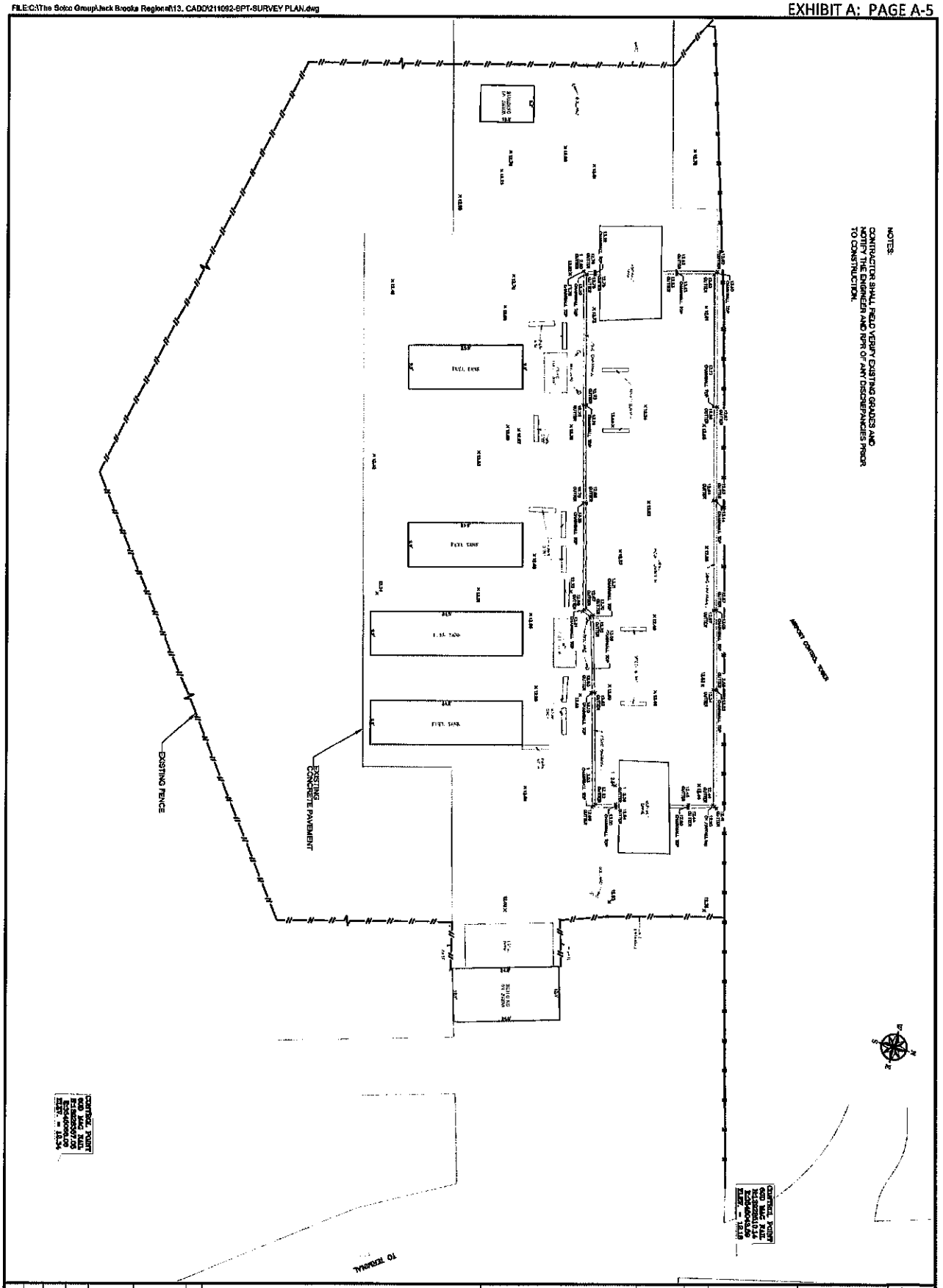
SHEET NUMBER: 2 SHEET TOTAL: 11

SCALE: N.T.S

DRAWN BY: AM CHECKED BY: KS

FILE:C:\The Solco Group\Jack Brooks Regional\13. CAD\221109\JBRP-GENERAL NOTES.dwg

FILE:C:\The Solco Group\Jack Brooks Regional\13. CADD\211092-SPT-SURVEY PLAN.dwg



REVISION	DATE	NO.

GENERAL NOTES:

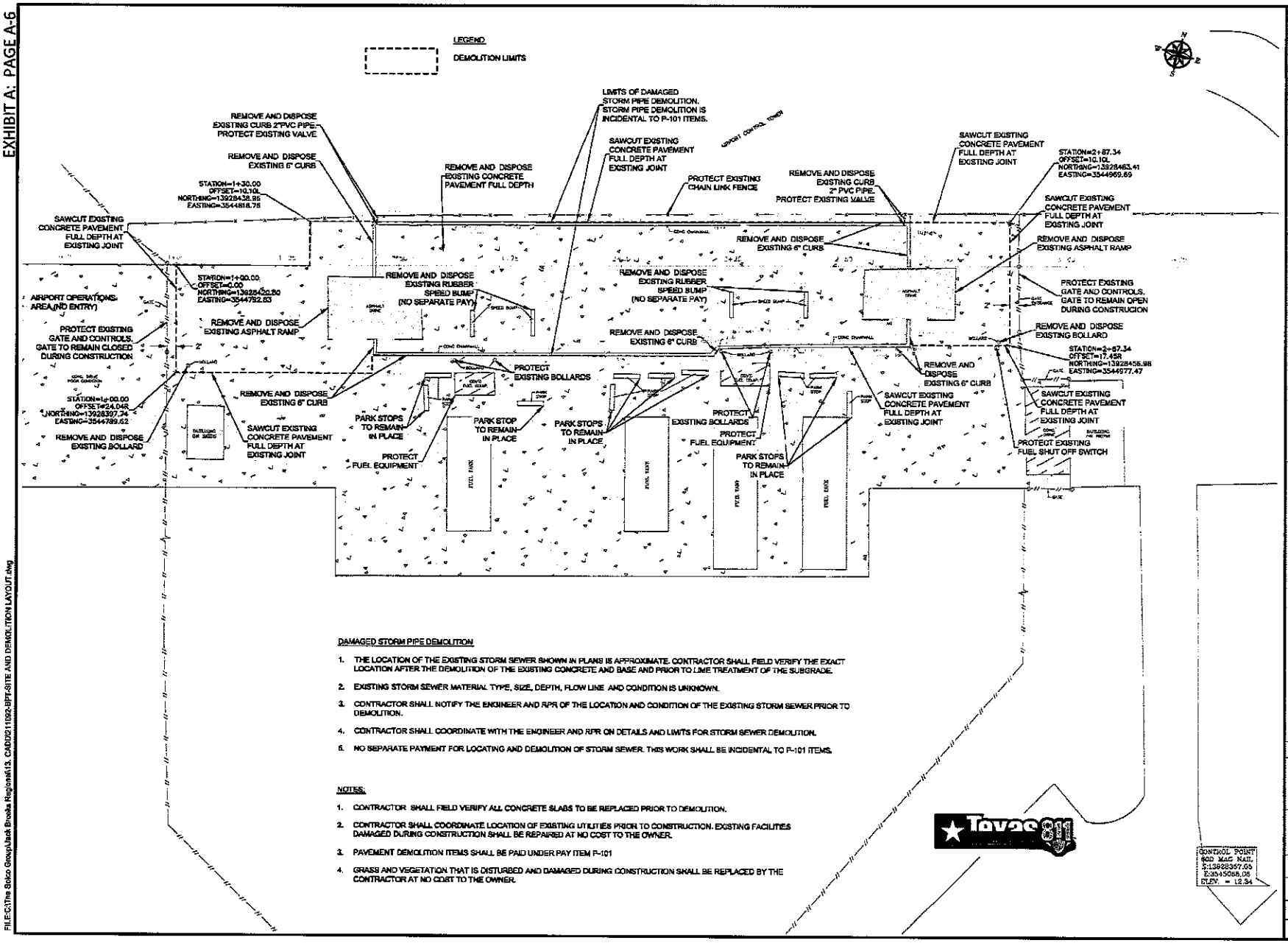
DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
SURVEY PLAN

DRAWING NUMBER: C-002
SHEET NUMBER: 4
SHEET TOTAL: 11
SCALE: 1" = 10' (FULL) 1"=20' (HALF)
DRAWN BY: AM
CHECKED BY: KS

JACK BROOKS REGIONAL AIRPORT
TBPE FIRM #22626



DAMAGED STORM PIPE DEMOLITION

1. THE LOCATION OF THE EXISTING STORM SEWER SHOWN IN PLANS IS APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATION AFTER THE DEMOLITION OF THE EXISTING CONCRETE AND BASE AND PRIOR TO LIME TREATMENT OF THE SUBGRADE.
2. EXISTING STORM SEWER MATERIAL TYPE, SIZE, DEPTH, FLOW LINE AND CONDITION IS UNKNOWN.
3. CONTRACTOR SHALL NOTIFY THE ENGINEER AND RPR OF THE LOCATION AND CONDITION OF THE EXISTING STORM SEWER PRIOR TO DEMOLITION.
4. CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND RPR ON DETAILS AND LIMITS FOR STORM SEWER DEMOLITION.
5. NO SEPARATE PAYMENT FOR LOCATING AND DEMOLITION OF STORM SEWER. THIS WORK SHALL BE INCIDENTAL TO P-101 ITEMS.

NOTES:

1. CONTRACTOR SHALL FIELD VERIFY ALL CONCRETE SLABS TO BE REPLACED PRIOR TO DEMOLITION.
2. CONTRACTOR SHALL COORDINATE LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. EXISTING FACILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED AT NO COST TO THE OWNER.
3. PAVEMENT DEMOLITION ITEMS SHALL BE PAID UNDER PAY ITEM P-101
4. GRASS AND VEGETATION THAT IS DISTURBED AND DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER.

JACK BROOKS REGIONAL AIRPORT

TSG

TBPE FIRM #22626

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
SITE DEMOLITION PLAN

DRAWING NUMBER: C-003

SHEET NUMBER: 5 SHEET TOTAL: 11

SCALE: 1" = 10' (FULL) 1"=20' (HALF)

DRAWN BY: AM CHECKED BY: KS

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IFB 22-028/JW
EXHIBIT A: PAGE A-7

LEGEND

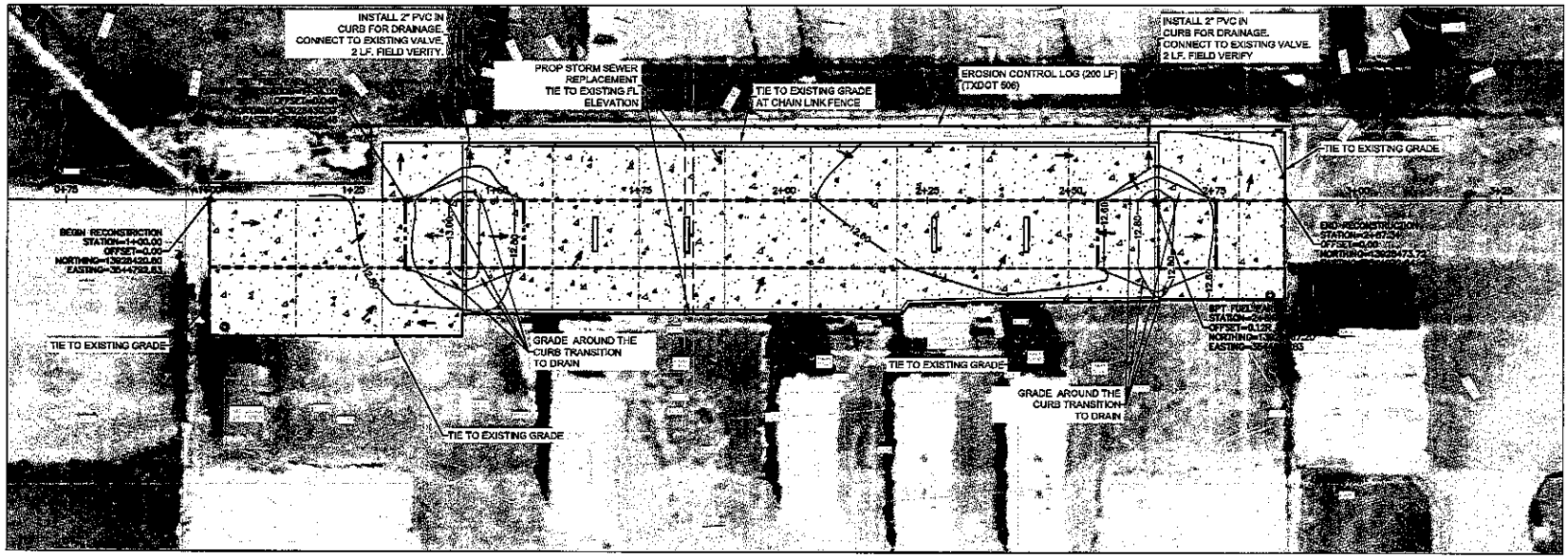
- PROPOSED GRADE AT 0.2' INTERVAL
- EXISTING GRADE AT 0.2' INTERVAL
- EROSION CONTROL LOG
- FLOW ARROW

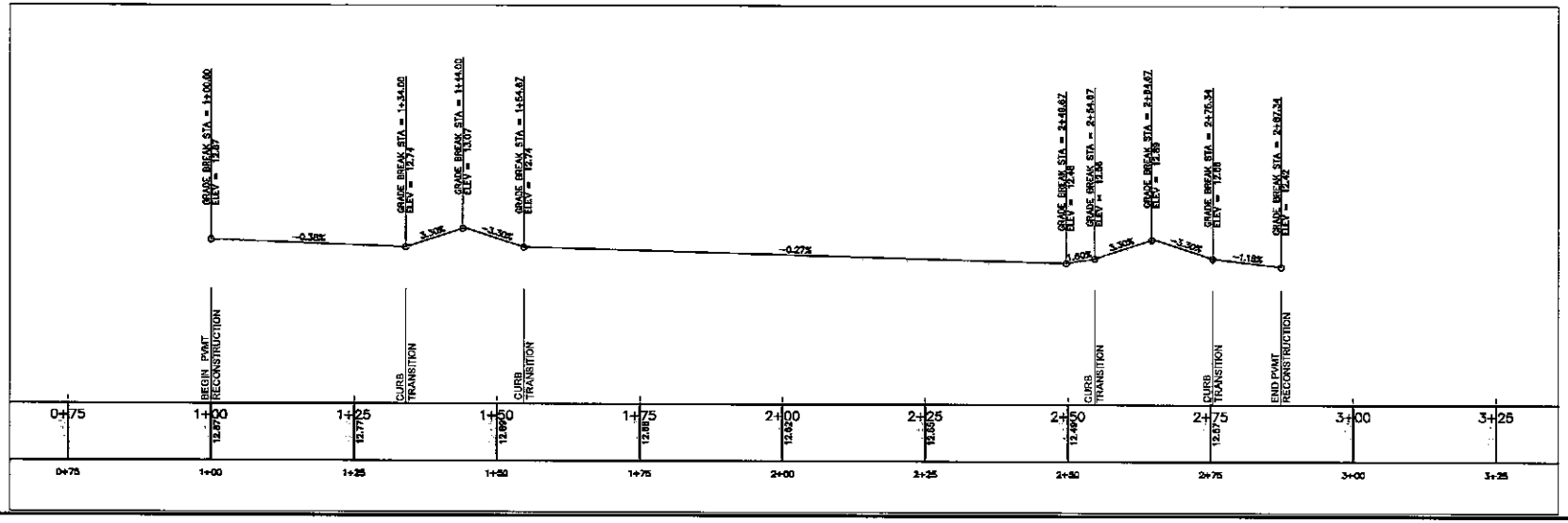
DAMAGED STORM PIPE REPLACEMENT

1. THE LOCATION OF THE DAMAGED STORM SEWER REPLACEMENT SHOWN IN PLANS IS APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATION.
2. CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND RPR ON DETAILS FOR STORM SEWER MATERIAL TYPE AND CONSTRUCTION PRIOR TO REPLACEMENT.
3. PAYMENT FOR STORM SEWER REPLACEMENT UNDER PAY ITEM D-701

NOTES:

CONTRACTOR SHALL FIELD VERIFY EXISTING GRADES AND NOTIFY THE ENGINEER AND RPR OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.





JACK BROOKS REGIONAL AIRPORT

TSG

TBPE FIRM #22626

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
GRADING, PLAN AND PROFILE

DRAWING NUMBER: C-004

SHEET NUMBER: 6 SHEET TOTAL: 11

SCALE: 1" = 10' (FULL) 1"=20' (HALF)

DRAWN BY: AM CHECKED BY: KS

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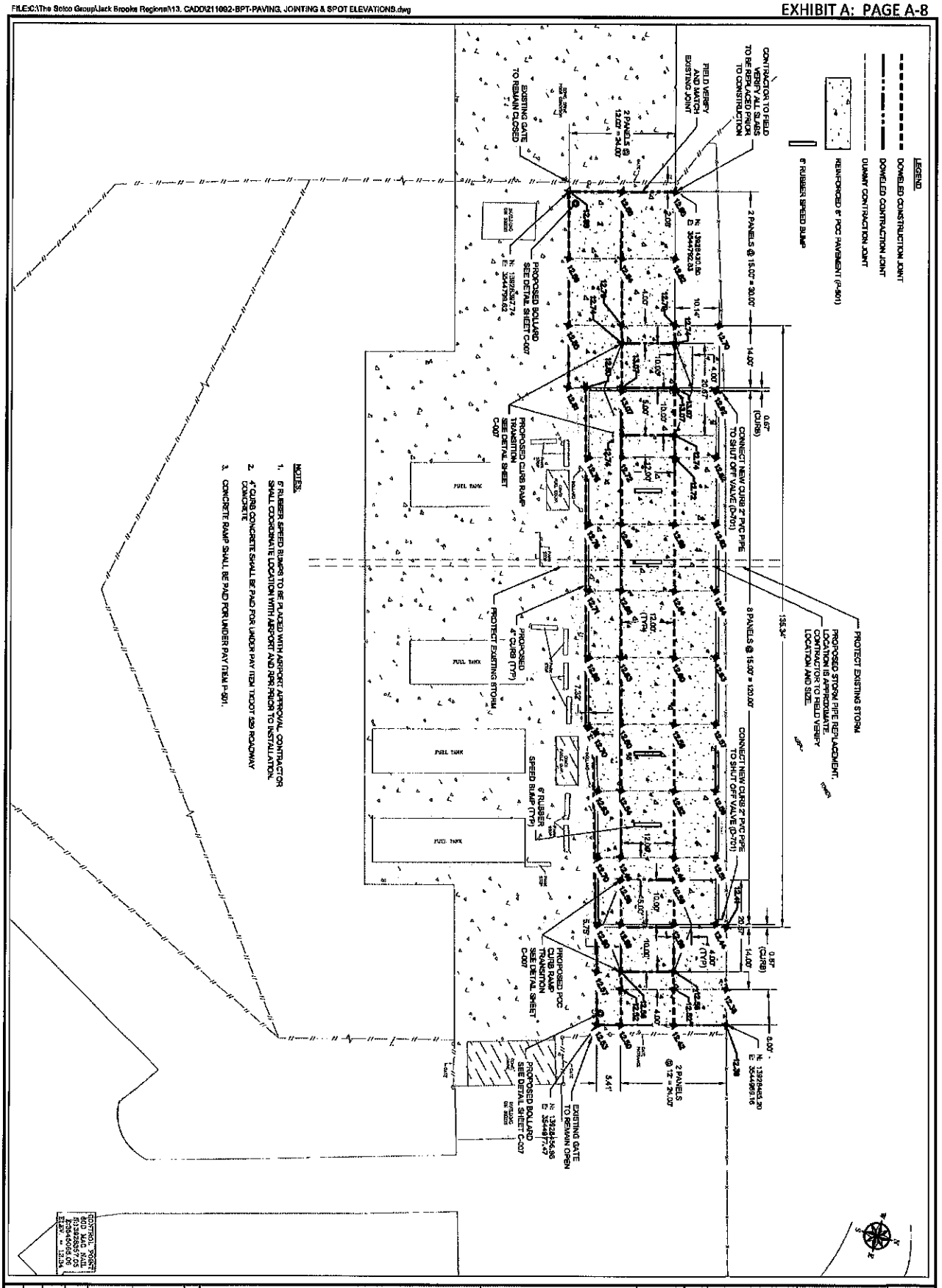
FILE:C:\The Seico Group\Jack Brooks Regional\13. CADD\211092-BPT-PAVING, JOINTING & SPOT ELEVATIONS.dwg



JACK BROOKS REGIONAL AIRPORT

TSC

TBPE FIRM #23309

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

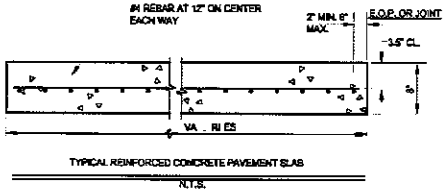
DRAWING TITLE:
SITE PAVING, JOINTING AND SPOT ELEVATIONS

DRAWING NUMBER: C-205

SHEET NUMBER: 7 SHEET TOTAL: 11

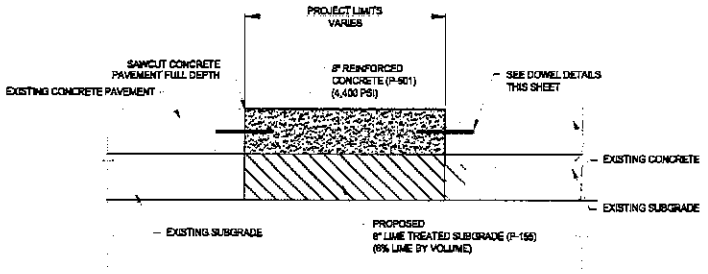
SCALE: 1" = 10' (FULL) 1"=20' (HALF)

DRAWN BY: AM CHECKED BY: KS



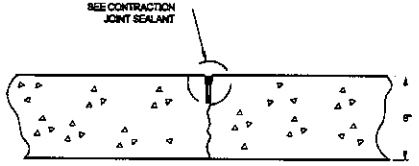
TYPICAL REINFORCED CONCRETE PAVEMENT SLAB

N.T.S.



FUEL FARM ROAD PAVEMENT

N.T.S.

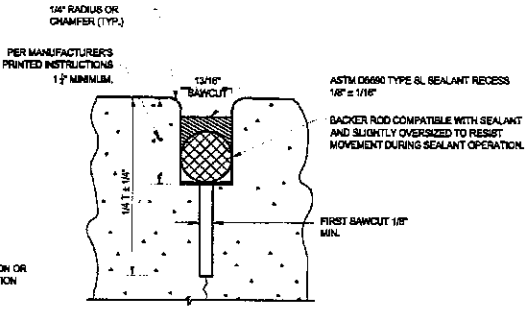


DUMMY CONTRACTION JOINT (JOINT D)

N.T.S.

CONCRETE JOINTS NOTE:

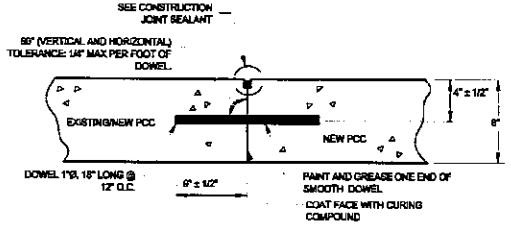
PAYMENT FOR CONCRETE JOINTS AND SEALANT SHALL BE INCIDENTAL TO PAY ITEM P-501



NOTE:
ALL SEALANT MATERIALS MUST BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS AS APPROVED BY ENGINEER.

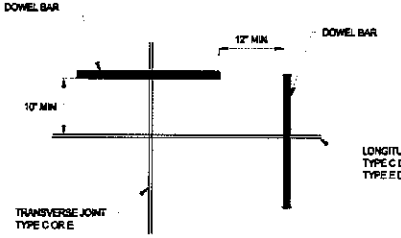
CONTRACTION JOINT SEALANT

N.T.S.



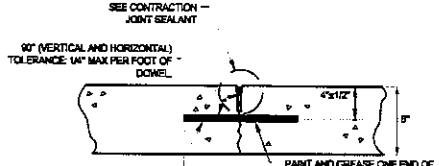
DOWELED CONSTRUCTION JOINT (TYPE E)

N.T.S.



POSITION OF DOWELS AT EDGE OF JOINT TYPE C, E

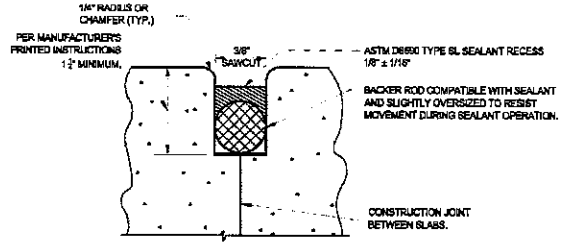
N.T.S.



DOWELED CONTRACTION JOINT (TYPE C)

N.T.S.

SMOOTH DOWEL BAR SCHEDULE			
PCC SLAB DEPTH	DIAMETER	LENGTH	SPACING
8"	1"	18"	12"
12"	1"	18"	12"



NOTE:
ALL SEALANT MATERIALS MUST BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS AS APPROVED BY ENGINEER.

CONSTRUCTION JOINT SEALANT

N.T.S.

JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #22626

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
PAVEMENT DETAILS

DRAWING NUMBER: C-006

SHEET NUMBER: 8 SHEET TOTAL: 11

SCALE: N.T.S

DRAWN BY: AM CHECKED BY: KS

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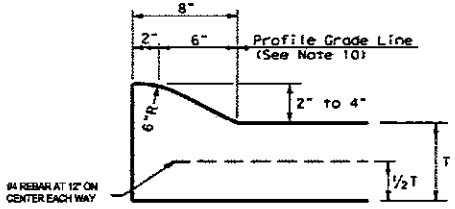
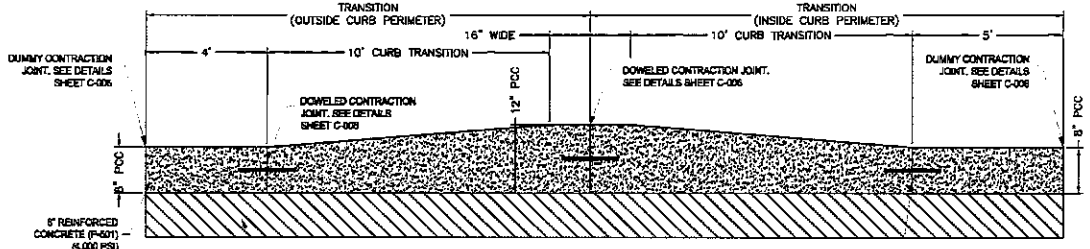
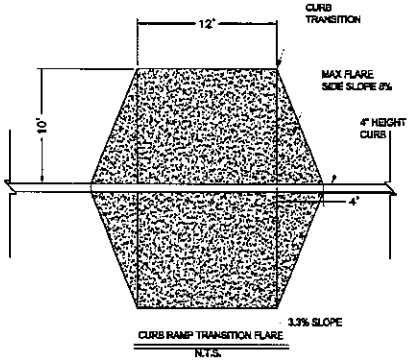


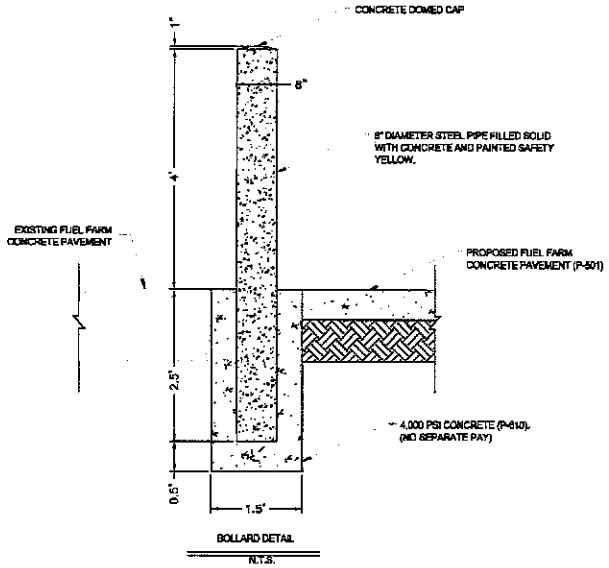
4" HEIGHT CURB DETAIL
N.T.S.



CURB RAMP TRANSITION DETAIL
N.T.S.



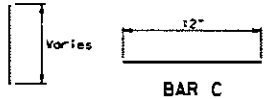
CURB RAMP TRANSITION FLARE
N.T.S.



BOLLARD DETAIL
N.T.S.

GENERAL NOTES

1. All materials and construction shall be in accordance with Item 529, "Concrete Curb, Gutter, and Combined Curb and Gutter."
2. Concrete shall be Class A.
3. When reinforcing bars are used, they shall be No.4 unless otherwise shown. The use of fiber reinforced concrete in lieu of reinforcing steel is acceptable. Use fibers meeting the requirements of DMS 4550, "Fibers for Concrete," and dose fibers in accordance with Material Producers List (MPL) "Fibers for Class A and B Concrete Applications."
4. Round exposed sharp edges with a rounding tool, to a minimum radius of ¼ inch.
5. All existing curbs and driveways to be removed shall be sawed or removed at existing joints.
6. Where concrete curb is to be placed on existing concrete pavement, Bar B may be drilled and the grouted in place, or may be inserted into fresh concrete.
7. Expansion and contraction joints shall be constructed to match pavement joints in all curbs and curb and gutter adjacent to jointed concrete pavement. Where placement of curb or curb and gutter is not adjacent to concrete pavement, expansion joints shall be provided at structures, curb returns at streets, and at locations directed by The Engineer.
8. Vertical and horizontal dowel bars and transverse reinforcing bars shall be placed at four feet C-C.
9. Dimension 'T' shown is the thickness of concrete pavement. When curb is installed adjacent to flexible pavement dimension 'T' is 8" maximum.
10. Usual profile grade line. Refer to typical sections and plan-profile sheets for exact locations.
11. One-half inch expansion joint material shall be provided where curb or curb and gutter is adjacent to sidewalk or riprap.
12. When horizontal permissible construction joints are used, the longitudinal pavement steel shall be placed in accordance with pavement details shown elsewhere in the plans. Reinforcing steel for curb section shall then conform to that required for concrete curb.
13. Bar B used as needed to support curb reinforcing steel during concrete placement.



BAR B BAR C

JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #22626

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION
OF FUEL FARM PAVEMENT

DRAWING TITLE:
PAVEMENT DETAILS

DRAWING NUMBER: C-007

SHEET NUMBER: 9 SHEET TOTAL: 11

SCALE: N.T.S

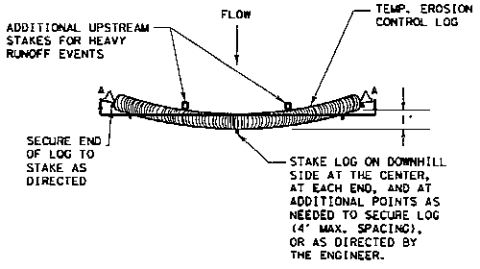
DRAWN BY: AM CHECKED BY: KS

FILE:C:\The Sidoo Group\Abeli Brooks Regional\13. CAD\D0211002-RPT-PAVING DETAILS.dwg

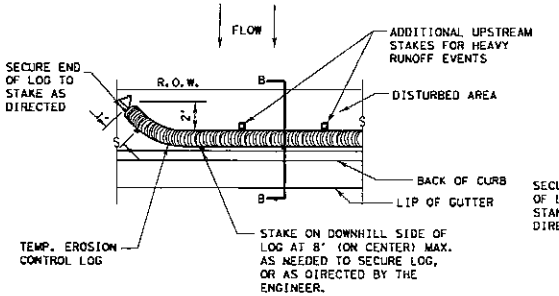
IFB 22-028/JW
EXHIBIT A: PAGE A-11

DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

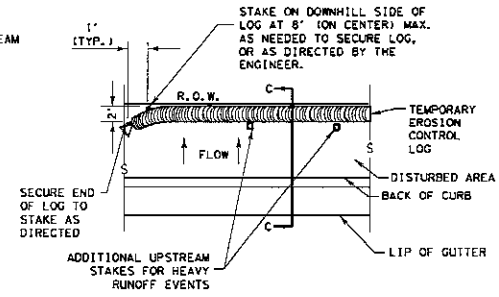
DATE:
FILE:



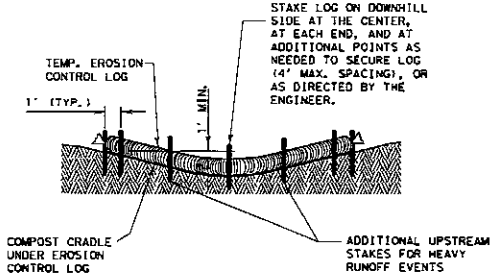
PLAN VIEW



PLAN VIEW



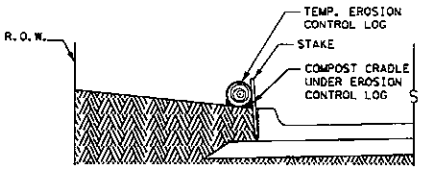
PLAN VIEW



SECTION A-A

EROSION CONTROL LOG DAM

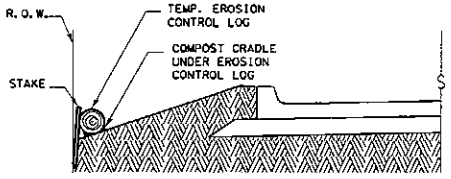
CL-D



SECTION B-B

EROSION CONTROL LOG AT BACK OF CURB

CL-BOC



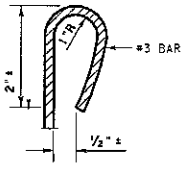
SECTION C-C

EROSION CONTROL LOG AT EDGE OF RIGHT-OF-WAY

CL-ROW

LEGEND

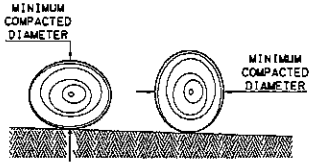
- CL-D — EROSION CONTROL LOG DAM
- CL-BOC — EROSION CONTROL LOG AT BACK OF CURB
- CL-ROW — EROSION CONTROL LOG AT EDGE OF RIGHT-OF-WAY



REBAR STAKE DETAIL

GENERAL NOTES:

1. EROSION CONTROL LOGS SHALL BE INSTALLED IN ACCORDANCE WITH MANFACTURER'S RECOMMENDATIONS, OR AS DIRECTED BY THE ENGINEER.
2. LENGTHS OF EROSION CONTROL LOGS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND AS REQUIRED FOR THE PURPOSE INTENDED.
3. UNLESS OTHERWISE DIRECTED, USE BIODEGRADABLE OR PHOTODEGRADABLE CONTAINMENT MESH ONLY WHERE LOG WILL REMAIN IN PLACE AS PART OF A VEGETATIVE SYSTEM. FOR TEMPORARY INSTALLATIONS, USE RECYCLABLE CONTAINMENT MESH.
4. FILL LOGS WITH SUFFICIENT FILTER MATERIAL TO ACHIEVE THE MINIMUM COMPACTED DIAMETER SPECIFIED IN THE PLANS WITHOUT EXCESSIVE DEFORMATION.
5. STAKES SHALL BE 2" X 2" WOOD OR #3 REBAR, 2'-4' LONG, EMBEDDED SUCH THAT 2" PROTRUDES ABOVE LOG, OR AS DIRECTED BY THE ENGINEER.
6. DO NOT PLACE STAKES THROUGH CONTAINMENT MESH.
7. COMPOST CRADLE MATERIAL IS INCIDENTAL & WILL NOT BE PAID FOR SEPARATELY.
8. SANDBAGS USED AS ANCHORS SHALL BE PLACED ON TOP OF LOGS & SHALL BE OF SUFFICIENT SIZE TO HOLD LOGS IN PLACE.
9. TURN THE ENDS OF EACH ROW OF LOGS UPSLOPE TO PREVENT RUNOFF FROM FLOWING AROUND THE LOG.
10. FOR HEAVY RUNOFF EVENTS, ADDITIONAL UPSTREAM STAKES MAY BE NECESSARY TO KEEP LOG FROM FOLDING IN ON ITSELF.



DIAMETER MEASUREMENTS OF EROSION CONTROL LOGS SPECIFIED IN PLANS

SEDIMENT BASIN & TRAP USAGE GUIDELINES

An erosion control log sediment trap may be used to filter sediment out of runoff draining from an unstabilized area.

Log Traps: The drainage area for a sediment trap should not exceed 5 acres. The trap capacity should be 1800 CF/Acre (0.5" over the drainage area).

Control logs should be placed in the following locations:

1. Within drainage ditches spaced as needed or min. 500' on center
2. Immediately preceding ditch inlets or drain inlets
3. Just before the drainage enters a water course
4. Just before the drainage leaves the right of way
5. Just before the drainage leaves the construction limits where drainage flows away from the project.

The logs should be cleaned when the sediment has accumulated to a depth of 1/2 the log diameter.

Cleaning and removal of accumulated sediment deposits is incidental and will not be paid for separately.

SHEET 1 OF 3

Texas Department of Transportation — Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

EROSION CONTROL LOG

EC(9)-16

FILE: ec916	DN: TxDOT	CK: KN	DW: LS/PT	CK: LS
© TxDOT: JULY 2016	CONT	SECT	JOB	HIGHWAY
REVISIONS				
	DIST	COUNTY		SHEET NO.

DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

DATE:
FILE:

GENERAL NOTES

1. For long term stationary work zones on freeways, drums shall be used as the primary channelizing device.
2. For intermediate term stationary work zones on freeways, drums should be used as the primary channelizing device but may be replaced in tangent sections by vertical panels, or 42" two-piece cones. In tangent sections, one-piece cones may be used with the approval of the Engineer but only if personnel are present on the project at all times to maintain the cones in proper position and location.
3. For short term stationary work zones on freeways, drums are the preferred channelizing device but may be replaced in tapers, transitions and tangent sections by vertical panels, two-piece cones or one-piece cones as approved by the Engineer.
4. Drums and all related items shall comply with the requirements of the current version of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) and the "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
5. Drums, bases, and related materials shall exhibit good workmanship and shall be free from objectionable marks or defects that would adversely affect their appearance or serviceability.
6. The Contractor shall have a maximum of 24 hours to replace any plastic drums identified for replacement by the Engineer/Inspector. The replacement device must be an approved device.

GENERAL DESIGN REQUIREMENTS

Pre-qualified plastic drums shall meet the following requirements:

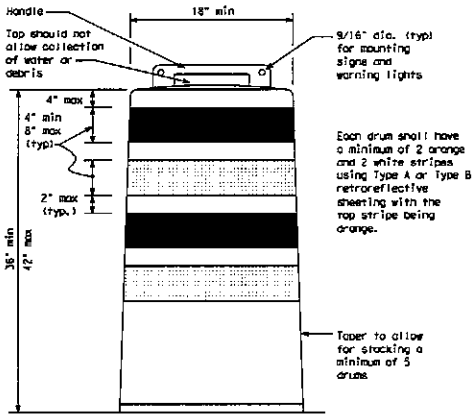
1. Plastic drums shall be a two-piece design, the "body" of the drum shall be the top portion and the "base" shall be the bottom.
2. The body and base shall lock together in such a manner that the body separates from the base when impacted by a vehicle traveling at a speed of 20 MPH or greater but prevents accidental separation due to normal handling and/or air turbulence created by passing vehicles.
3. Plastic drums shall be constructed of lightweight flexible, and deformable materials. The Contractor shall NOT use metal drums or single piece plastic drums as channelization devices or sign supports.
4. Drums shall present a profile that is a minimum of 18 inches in width at the 36 inch height when viewed from any direction. The height of drum unit (body installed on base) shall be a minimum of 36 inches and a maximum of 42 inches.
5. The top of the drum shall have a built-in handle for easy pickup and shall be designed to drain water and not collect debris. The handle shall have a minimum of two widely spaced 9/16 inch diameter holes to allow attachment of a warning light, warning reflector unit or approved compliant sign.
6. The exterior of the drum body shall have a minimum of four alternating orange and white retroreflective circumferential stripes not less than 4 inches nor greater than 8 inches in width. Any non-reflectorized space between any two adjacent stripes shall not exceed 2 inches in width.
7. Bases shall have a maximum width of 36 inches, a maximum height of 4 inches, and a minimum of two footholds of sufficient size to allow base to be held down while separating the drum body from the base.
8. Plastic drums shall be constructed of ultra-violet stabilized, orange, high-density polyethylene (HDPE) or other approved material.
9. Drum body shall have a maximum unballasted weight of 11 lbs.
10. Drum and base shall be marked with manufacturer's name and model number.

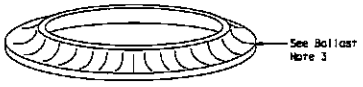
RETROREFLECTIVE SHEETING

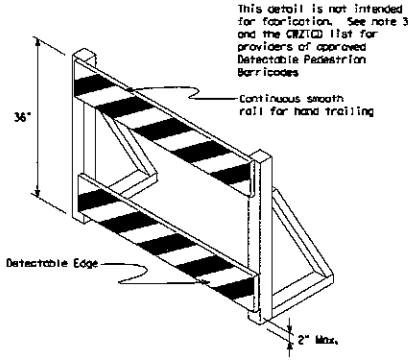
1. The stripes used on drums shall be constructed of sheeting meeting the color and retroreflectivity requirements of Departmental Materials Specification DMS-8300, "Sign Face Materials." Type A or Type B reflective sheeting shall be supplied unless otherwise specified in the plans.
2. The sheeting shall be suitable for use on and shall adhere to the drum surface such that, upon vehicular impact, the sheeting shall remain adhered in-place and exhibit no delaminating, cracking, or loss of retroreflectivity other than that loss due to abrasion of the sheeting surface.

BALLAST

1. Unballasted bases shall be large enough to hold up to 50 lbs. of sand. This base, when filled with the ballast material, should weigh between 35 lbs (minimum) and 50 lbs (maximum). The ballast may be sand in one to three sandbags separate from the base, sand in a sand-filled plastic base, or other ballasting devices as approved by the Engineer. Stacking of sandbags will be allowed, however height of sandbags above pavement surface may not exceed 12 inches.
2. Bases with built-in ballast shall weigh between 40 lbs. and 50 lbs. Built-in ballast can be constructed of an integral crumb rubber base or a solid rubber base.
3. Recycled truck tire sidewalls may be used for ballast on drums approved for this type of ballast on the CWZTCD list.
4. The ballast shall not be heavy objects, water, or any material that would become hazardous to motorists, pedestrians, or workers when the drum is struck by a vehicle.
5. When used in regions susceptible to freezing, drums shall have drainage holes in the bottoms so that water will not collect and freeze becoming a hazard when struck by a vehicle.
6. Ballast shall not be placed on top of drums.
7. Adhesives may be used to secure base of drums to pavement.

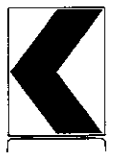




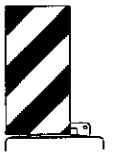


DETECTABLE PEDESTRIAN BARRICADES

1. When existing pedestrian facilities are disrupted, closed, or relocated in a TTC zone, the temporary facilities shall be detectable and include accessibility features consistent with the features present in the existing pedestrian facility. Refer to WZ(BTS-2) for Pedestrian Control requirements for Sidewalk Diversions, Sidewalk Detours and Crosswalk Closures.
2. Where pedestrians with visual disabilities normally use the closed sidewalk, a Detectable Pedestrian Barricade shall be placed across the full width of the closed sidewalk instead of a Type 3 Barricade.
3. Detectable pedestrian barricades similar to the one pictured above, longitudinal channelizing devices, some concrete barriers, and wood or chain link fencing with a continuous detectable edging can satisfactorily delineate a pedestrian path.
4. Tape, rope, or plastic chain strung between devices are not detectable, do not comply with the design standards in the "Americans with Disabilities Act Accessibility Guidelines (ADAAG)" and should not be used as a control for pedestrian movements.
5. Warning lights shall not be attached to detectable pedestrian barricades.
6. Detectable pedestrian barricades should use 8" nominal barricade rails as shown on BC(10) provided that the top rail provides a smooth continuous rail suitable for hand trailing with no splinters, burrs, or sharp edges.



18" x 24" Sign (Maximum Sign Dimension) Chevron CW1-8, Opposing Traffic Lane Divider, Driveway sign D70a, Keep Right R4 series or other signs as approved by Engineer



12" x 24" Vertical Panel mount with diagonals sloping down towards travel way

Plywood, Aluminum or Metal sign substrates shall NOT be used on plastic drums

SIGNS, CHEVRONS, AND VERTICAL PANELS MOUNTED ON PLASTIC DRUMS

1. Signs used on plastic drums shall be manufactured using substrates listed on the CWZTCD.
2. Chevrons and other work zone signs with an orange background shall be manufactured with Type B_{FL} or Type C_{FL} Orange sheeting meeting the color and retroreflectivity requirements of DMS-8300, "Sign Face Material," unless otherwise specified in the plans.
3. Vertical Panels shall be manufactured with orange and white sheeting meeting the requirements of DMS-8300 Type A or Type B. Diagonal stripes on Vertical Panels shall slope down toward the intended traveled lane.
4. Other sign messages (text or symbolic) may be used as approved by the Engineer. Sign dimensions shall not exceed 18 inches in width or 24 inches in height, except for the R9 series signs discussed in note 8 below.
5. Signs shall be installed using a 1/2 inch bolt (nominal) and nut, two washers, and one locking washer for each connection.
6. Mounting bolts and nuts shall be fully engaged and adequately torqued. Bolts should not extend more than 1/2 inch beyond nuts.
7. Chevrons may be placed on drums on the outside of curves, on merging tapers or on shifting tapers. When used in these locations, they may be placed on every drum or spaced not more than on every third drum. A minimum of three (3) should be used at each location called for in the plans.
8. R9-9, R9-10, R9-11 and R9-11a Sidewalk Closed signs which are 24 inches wide may be mounted on plastic drums, with approval of the Engineer.

SHEET 8 OF 12

Texas Department of Transportation | Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(8)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS 4-03 8-14 9-07 5-21 7-13	DIST	COUNTY		SHEET NO.

102

JEFFERSON COUNTY PURCHASING DEPARTMENT
Deborah L. Clark, Purchasing Agent

1149 Pearl Street
1st Floor, Beaumont, TX 77701

OFFICE MAIN: (409) 835-8593
FAX: (409) 835-8456

Addendum to IFB

IFB NUMBER: IFB 22-028/JW

IFB TITLE: Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport

IFB DUE BY: **11:00 am CT, Wednesday, August 24, 2022**

ADDENDUM NO.: 1

ISSUED (DATE): August 1, 2022

To Bidder: This Addendum is an integral part of the IFB package under consideration by you as a Bidder in connection with the subject matter herein identified. Jefferson County deems all sealed bids to have been proffered in recognition and consideration of the entire IFB Specifications Package – *including all addenda.* For purposes of clarification, **receipt of this present Addendum by a Bidder should be evidenced by returning it (signed) as part of the Bidder's sealed bid submission.** If the bid submission has already been received by the Jefferson County Purchasing Department, Bidder should return this addendum in a separate sealed envelope, clearly marked with the IFB Title, IFB Number, and IFB Opening Date and Time, as stated above.

Reason for Issuance of this Addendum: Clarifications (Attachment)

The information included herein is hereby incorporated into the documents of this present bid matter and supersedes any conflicting documents or portion thereof previously issued.

Receipt of this Addendum is hereby acknowledged by the undersigned Respondent:

ATTEST:

S Dawson
Witness

Witness

Approved by: Date: 08/23/2022

Authorized Signature (Respondent)

Chief Operating Officer
Title of Person Signing Above

Brizo Construction LLC
Typed Name of Business or Individual

9100 Canniff St., Houston, TX 77017
Address

TSG
The Solco Group, LLC

ADDENDUM N0. 1

DATE: July 29,2022

OWNER: Jefferson County, Texas - Jack Brooks Regional Airport

PROJECT: FB 22-028/JW Rehabilitation of Fuel Farm Pavement at Jack Brooks Regional Airport

TSG Project No: 2021-10-1092

DEADLINE FOR QUESTIONS: Email questions to Jamey West, Contract Specialist at jwest@co.jefferson.tx.us by **Monday, August 15, 2022, at 5:00 p.m.**,

SUBMITTAL DEADLINE: Bid date **Wednesday, August 24, 2022, at 11:00 a.m.**, Central Standard Time

The additions, omissions, clarifications, and corrections herein shall be made to the contract documents, plans and specifications, for the Rehabilitation of Fuel Farm Pavement Project. **All Bidders must acknowledge receipt of this addendum on the appropriate section of the Bid Form and include with the Contract Documents.**

Addendum references are summarized below.

A. SECTION 2: FEDERAL MANDATED CONTRACT PROVISIONS

Breach of Contract Terms/Remedies (ADD following Paragraph)

Source: FAA AC 150/5370-10H 12/21/2018; Section 80 Execution and Progress pg. 51

Failure to complete on time. For each calendar day or working day, as specified in the contract, that any work remains uncompleted after the contract time (including all extensions and adjustments as provided in paragraph 80-07, Determination and Extension of Contract Time) the sum specified in the contract and proposal as liquidated damages (LD) will be deducted from any money due or to become due the Contractor or their own surety. Such deducted sums shall not be deducted as a penalty but shall be considered as liquidation of a reasonable portion of damages including but not limited to additional engineering services that will be incurred by the Owner should the Contractor fail to complete the work in the time provided in their contract.

Schedule – 1 Phase
Liquidated Damages Cost - $500/day
Allowed Construction Time – 30 Calendar Days

B. SECTION 4: MINIMUM SPECIFICATIONS

Drawings reflect the scope of work as described on page 37.

Addendum Prepared By:

Kelvin Solco, P.E.,
Principal

JEFFERSON COUNTY PURCHASING DEPARTMENT
Deborah L. Clark, Purchasing Agent

1149 Pearl Street
1st Floor, Beaumont, TX 77701

OFFICE MAIN: (409) 835-8593
FAX: (409) 835-8456

Addendum to IFB

IFB NUMBER: IFB 22-028/JW

IFB TITLE: Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional

IFB DUE BY: Airport **11:00 am CT, Wednesday, August 24, 2022**

ADDENDUM NO.: 2

ISSUED (DATE): August 17, 2022

To Bidder: This Addendum is an integral part of the IFB package under consideration by you as a Bidder in connection with the subject matter herein identified. Jefferson County deems all sealed bids to have been proffered in recognition and consideration of the entire IFB Specifications Package – *including all addenda*. For purposes of clarification, **receipt of this present Addendum by a Bidder should be evidenced by returning it (signed) as part of the Bidder's sealed bid submission.** If the bid submission has already been received by the Jefferson County Purchasing Department, Bidder should return this addendum in a separate sealed envelope, clearly marked with the IFB Title, IFB Number, and IFB Opening Date and Time, as stated above.

REASONS FOR ISSUANCE OF THIS ADDENDUM:

- **Clarifications (See Pages 1-4)**
- **REVISED PLAN SHEET NO. 3**
- **REVISED BID FORM PAGE 42 (REPLACEMENT PAGE)**

The information included herein is hereby incorporated into the documents of this present bid matter and supersedes any conflicting documents or portion thereof previously issued.

Receipt of this Addendum is hereby acknowledged by the undersigned Respondent:

ATTEST:

S Davidson
Witness

Witness

Approved by _____ Date: 08/17/2022

Authorized Signature (Respondent)

Chief Operating Officer
Title of Person Signing Above

Brizo Construction LLC
Typed Name of Business or Individual

9100 Canniff St., Houston, TX 77017
Address

The Solco Group, LLC

FB 22-028/JW ADDENDUM N0. 2

DATE: 8/10/2022

OWNER: Jefferson County/Jack Brooks Regional Airport

PROJECT: FB 22-028/JW Rehabilitation of Fuel Farm Pavement at Jack Brooks Regional Airport

TSG Project No: 2021-10-1092

DEADLINE FOR QUESTIONS: Email questions to Jamey West. Contract Specialist at jwest@co.jefferson.tx.us by **Thursday, August 18, 2022, at 5:00 p.m.**

SUBMITTAL DEADLINE: Bid date **Wednesday, August 24, 2022, at 11:00 a.m.**, Central Standard Time.

The additions, omissions, clarifications, and corrections herein shall be made to the contract documents, plans and specifications, for the Rehabilitation of Fuel Farm Pavement Project. **All Bidders must acknowledge receipt of this addendum on the appropriate section of the Bid Form and include with the Contract Documents.**

Addendum references to answer questions posted by potential bidders are summarized below.

1. CONTRACT TIME: Can the time of completion be revised to 45 or 60 calendar days? Given the phasing and access issues, 30 days is going to be difficult. **30 days is preferred timeframe. The access issues and project phasing concerns are clarified in section 5 of this addendum.**

   Can we work Sundays? **Yes**

2. ALLOWANCE FOR STORM SEWER PIPE: Is the County going to provide an amount to input for the allowance? **No**

   Without more information, it is very difficult to assess what is required. **A core sample taken during a geotechnical investigation indicated an accumulation of water beneath a section of the concrete panels. This accumulation of water is the likely cause of the panel failures. The purpose of the allowance is to provide compensation for the contractor to locate the source of the water accumulation and repair a broken water line if encountered. The onsite resident project representative (RPR) will work with contractor after the panels are removed to examine the area and resolve the issue before new concrete is placed.**

PO BOX 22001 BEAUMONT, TEXAS 77720
817-564-6895 / 833-591-5780
https://thesolcogroup.com

3. CONCRETE SLUMP/PUMPING: Can the max slump allowed be revised to 5" to 6" so we can pump the concrete? It would help speed up the schedule if pumping is allowed but the slump requirements would have to be modified.

No. The contract specifications apply as indicated in P-501-7 - Flexural strength. Test specimens shall be prepared in accordance with ASTM C192 and tested in accordance with ASTM C78. At the start of the project, the Contractor shall determine an allowable slump as determined by ASTM C143 not to exceed 2 inches (50 mm) for slip-form placement. For fixed-form placement, the slump shall not exceed 3 inches (75 mm). For hand placement, the slump shall not exceed 4 inches (100 mm)

4. CONCRETE FINISHING EQUIPMENT: Can you clarify what finishing equipment will be allowed? Is this area considered irregular?

This is considered irregular. Any appropriate equipment may be used as long as the concrete requirements are met, such as smoothness, etc.

A slip form paver cannot be used in this location. Would a vibratory screed be allowed?
Yes – as long as concrete as specified is achieved.

5. ACCESS: Please clarify the extent we must accommodate airport access. Will we have to shutdown work at anytime to allow planes to fuel, etc.?

This construction project shall take place outside of the Aircraft Operational Area (AOA). The contractor shall NOT access the AOA without the explicit permission of the airport owner. Further clarification on the possibility of accommodating fueling operations during the construction project includes the following:

a. **Aircraft will not enter into the construction area.**
b. **All construction equipment shall remain outside of the AOA.**
c. **Fuel trucks will be used to provide fuel to aircraft in the AOA when needed.**
d. **Fueling operations will cease during the concrete demolition phase of this project.**
e. **In the event that emergency access to the fuel farm tanks is needed, or anticipated to be needed during this construction period, the airport owner and the engineer will coordinate with the contractor to phase the concrete placement in a manner that allows an emergency lane for fuel truck access. Emergency fueling operations will only use this temporary emergency lane after sufficient concrete curing has occurred.**

f. **The contractor will need to be prepared to accommodate a temporary interruption of work only for a brief period of time to allow for emergency fueling operations.**
g. **The contractor will need to ensure there is a safe distance between ongoing construction activities and emergency fueling operations.**

Addendum Prepared By:

Kelvin Solco, PE,
Principal

The Solco Group, LLC

FB 22-028/JW ADDENDUM N0. 2

DATE: 8/15/2022

OWNER: Jefferson County/Jack Brooks Regional Airport

PROJECT: FB 22-028/JW Rehabilitation of Fuel Farm Pavement at Jack Brooks Regional Airport

TSG Project No: 2021-10-1092

DEADLINE FOR QUESTIONS: email questions to Jamey West. Contract Specialist at jwest@co.jefferson.tx.us by **Thursday, August 15, 2022, at 5:00 p.m.**,

SUBMITTAL DEADLINE: Bid date **Wednesday, August 24, 2022, at 11:00 a.m.**, Central Standard Time.

The additions, omissions, clarifications, and corrections herein shall be made to the contract documents, plans and specifications, for the Rehabilitation of Fuel Farm Pavement Project. **All Bidders must acknowledge receipt of this addendum on the appropriate section of the Bid Form and include with the Contract Documents.**

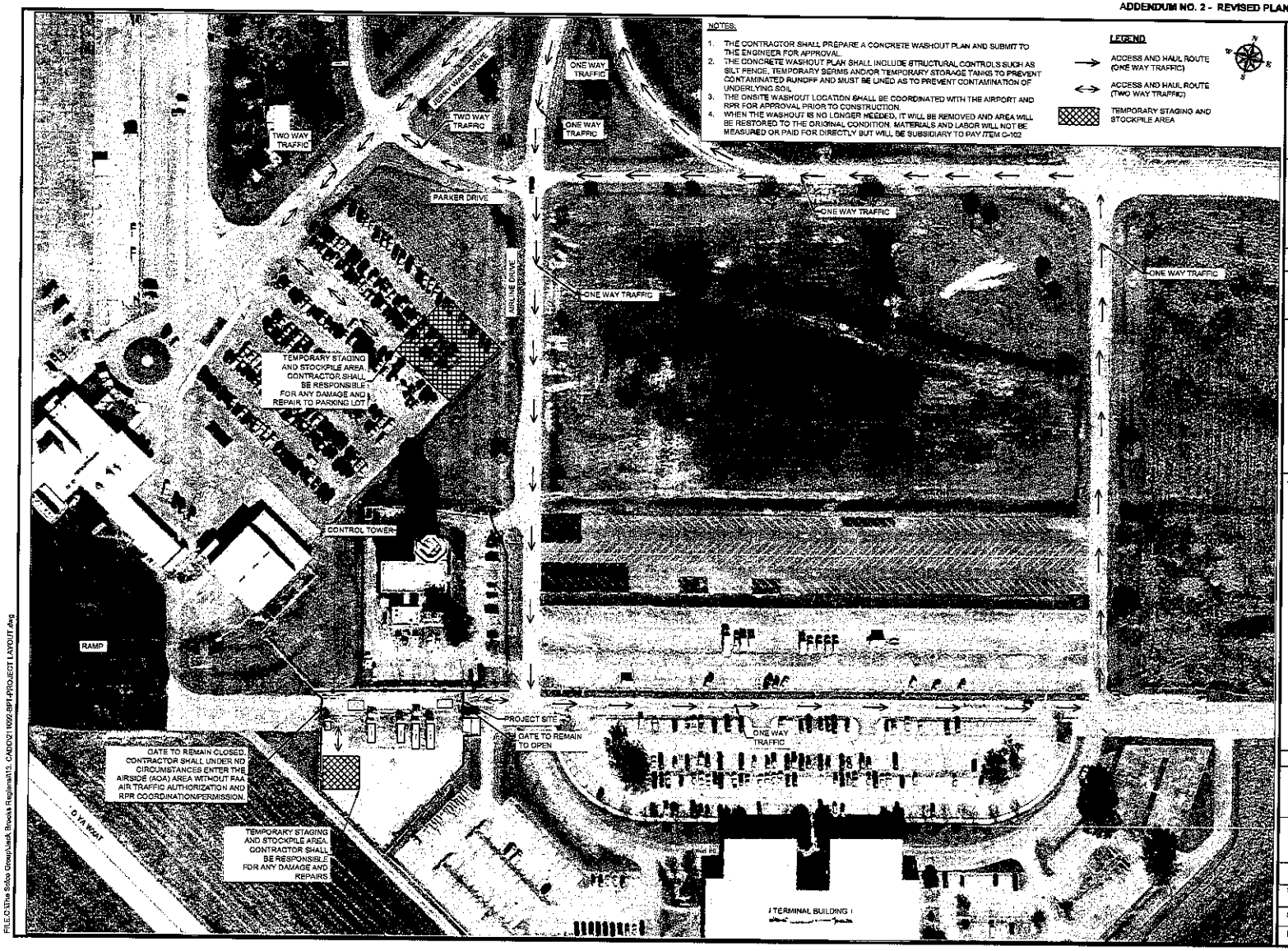
Addendum references to answer questions posted by potential bidders are summarized below.

1. Who is responsible for Materials Testing? All quality assurance testing shall be done by the Contractor. Please see the Items below:
    a. Item 152-5, section 152-2.10 under paragraph 2, last sentence.
    b. Item 155-4, section 155-6.10 and a. Density Paragraph
    c. Item 501-7, section 501-3.3 f., 501-3.4 Concrete Mix Submittal, 501-4.8 c. Consolidation, 501-4-11 e. Straightedge testing and surface correction., P-501-24 CONTRACTOR QUALITY CONTROL (CQC)
    d. Page 8 of 61 of bid documents section 2.12.
2. DRAWING PLAN SHEET 3 – Replace Sheet 3 with New Sheet 3. Arrow for "One-Way" traffic corrected.
3. BID DOCUMENTS – Replace pg. 42 with New Page to include TOTAL BID LINE.

Addendum Prepared By:

Kelvin Solco, PE,
President / CEO

STATE OF TEXAS
KELVIN L SOLCO
78161
LICENSED
PROFESSIONAL ENGINEER



JACK BROOKS REGIONAL AIRPORT

TSG

TBPE FIRM #22626

NO	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
PROJECT LAYOUT AND PHASING PLAN

DRAWING NUMBER: C-001	
SHEET NUMBER: 3	SHEET TOTAL: 11
SCALE: 1" = 60' (FULL) 1"=120' (HALF)	
DRAWN BY: AM	CHECKED BY: KS

Copyright 2019 Versatile

FILE:G:\The Sofco Group\Jack Brooks Regional\13. CADD\21 1692-BPI-PROJECT LAYOUT.dwg

BID FORM (CONTINUED) REPLACEMENT PAGE 42

DESCRIPTION:	☒ Base Bid			
REF. NO. 14	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Biodegradable Erosion Control Logs (Install) TXDOT 506-6.6.1	200	LF		

DESCRIPTION:	☒ Base Bid			
REF. NO. 15	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Biodegradable Erosion Control Logs (Removal) TXDOT 506-6.6.2	200	LF		

DESCRIPTION:	☒ Base Bid			
REF. NO. 16	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
4" Concrete Curb TXDOT 529	278	LF		

DESCRIPTION:	☒ Base Bid			
REF. NO. 17	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Furnish and Install 4' Steel Bollards	2	EA		

DESCRIPTION:	☒ Base Bid			
REF. NO. 18	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Install 6' Rubber Speed Bumps	4	EA		

DESCRIPTION:	☒ Base Bid
	TOTAL BID PRICE *($ XXX,XXX.XX)*
TOTAL BID	

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

BIDDER ACKNOWLEDGEMENT OF BID ADDENDA (IF APPLICABLE):

Addendum 1	✓	Date Received	8/1/22
Addendum 2	✓	Date Received	8/17/22
Addendum 3		Date Received	
Addendum 4		Date Received	
Addendum 5		Date Received	

BIDDER: INCLUDE FULL, SIGNED, & ATTESTED COPY OF EACH ADDENDUM ISSUED WITH BID SUBMISSION.

SEALED BID

BID NAME: Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport
BID NUMBER: IFB 22-028/JW
DUE BY TIME/DATE: 11:00 AM CT, Wednesday, August 24, 2022
BIDDER:
Brizo Construction
9100 Canniff St.
Houston, TX 77017
MAIL OR DELIVER TO:
Jefferson County Purchasing Department
1149 Pearl Street, 1st Floor
Beaumont, Texas 77701

RECEIVED JEFFCOPURCH 08:57 AM AUG 24 2022

Jefferson County Purchasing Department
Deborah L. Clark, Purchasing Agent

1149 PEARL STREET
1st FLOOR, BEAUMONT, TEXAS 77701

OFFICE MAIN: (409) 835-8593
FAX: (409)835-8456

LEGAL NOTICE
Advertisement for Invitation for Bids

July 26, 2022

Notice is hereby given that sealed bids will be accepted by the Jefferson County Purchasing Department for Invitation for Bid **(IFB 22-028/JW) Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport.** Specifications for this project may be obtained from the Jefferson County website, https://www.co.jefferson.tx.us/Purchasing/ or by calling 409-835-8593.

Bids are to be sealed and addressed to the Purchasing Agent with the bid number and name marked on the outside of the envelope or box. Bidders shall forward an original and two (2) copies of their bid to the address shown below. Jefferson County does not accept bids submitted electronically. Late bids will be rejected as non-responsive. Bids will be publicly opened and read aloud in the Jefferson County Engineering Department Conference Room (5th Floor, Historic Courthouse) 1149 Pearl Street, Beaumont, Texas 77701, at the time and date below. Bidders are invited to attend the sealed bid opening.

BID NAME:	**Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport**
BID NUMBER:	**IFB 22-028/JW**
DUE BY TIME/DATE:	**11:00 AM CT, Wednesday, August 24, 2022**
MAIL OR DELIVER TO:	**Jefferson County Purchasing Department** **1149 Pearl Street, 1st Floor** **Beaumont, Texas 77701**

There will be a Pre-Bid Conference and Walk-Through at 2:00 PM CT on Thursday, August 4, 2022, at the Airport Administration Conference Room located at 5000 Jerry Ware Blvd. Beaumont, Texas 77705. This conference will be the Bidder's only opportunity to view secured areas of the project.

The County shall require the bidder to furnish a bid security in the amount of five percent (5%) of the total contract cost. The bid bond must be executed with a surety company authorized to do business in the State of Texas. Within ten (10) days after the date of the signing of a contract, the bidder shall furnish a performance bond to the County for the full amount of the contract, if the contract exceeds one hundred thousand dollars ($100,000). If the contract is for one hundred thousand dollars ($100,000) or less, the County may provide that no money be paid to the contractor until completion and acceptance of the work or the fulfillment of the purchase obligation to the County.

Any questions relating to these bid requirements should be directed to Jamey West, Contract Specialist at 409-835-8593 or via email at: jwest@co.jefferson.tx.us

Jefferson County encourages Disadvantaged Business Enterprises (DBEs), Minority/Women Business Enterprises (M/WBEs), and Historically Underutilized Businesses (HUBs) to participate in the bidding process. Jefferson County does not discriminate on the basis of race, color, national origin, sex, religion, age or disability in employment, or the provisions of services. Individuals requiring special accommodations are requested to contact our office at least seven (7) days prior to the bid due date at 409-835-8593.

Jefferson County reserves the right to accept or reject any or all proposals, to waive technicalities and to take whatever action is in the best interest of Jefferson County. All interested firms are invited to submit a bid in accordance with the terms and conditions stated in this bid.

Respondents are strongly encouraged to carefully read the entire invitation, as failure to return and/or complete all required documentation will result in a response being declared as non-responsive.

Deborah Clark

Deborah L. Clark, Purchasing Agent
Jefferson County, Texas

PUBLISH:
Beaumont Enterprise & Port Arthur News:
July 27, 2022, and August 3, 2022

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BID SUBMISSIONS:

One (1) Original and Two (2) Bid Copies; with all copies to include a Completed Copy of this specifications packet, in its entirety.

Each Bidder shall ensure that required parts of their bid submission are completed with accuracy and submitted as per the requirements within this specifications packet, including any addenda.

Additionally, Bidder shall monitor the Jefferson County Purchasing Department Website for any addenda, additional instructions, or bid updates. https://www.co.jefferson.tx.us/Purchasing/

Failure to return and/or completed all required documentation will result in a response being declared as non-responsive.

SECTION 1: GENERAL CONDITIONS OF BIDDING AND TERMS OF CONTRACT

By execution of this document, the Vendor accepts all general and special conditions of the contract as outlined below and, in the specifications, and plans.

1. BIDDING.

1.1 BIDS.
All bids must be submitted on the bid form furnished in this package.

1.2 AUTHORIZED SIGNATURES.
The bid must be executed personally by the Vendor, duly authorized partner of the partnership, or duly authorized officer of the corporation. If executed by an agent, a power of attorney or other evidence of authority to act on behalf of the Vendor shall accompany the bid to become a valid bid.

1.3 LATE BIDS.
Bids must be in the office of the Jefferson County Purchasing Agent before or at the specified time and date bids are due. Bids received after the submission deadline shall be rejected as non-responsive and returned unopened.

1.4 WITHDRAWAL OF BID PRIOR TO OPENING.
A bid may be withdrawn before the opening date by submitting a written request to the Purchasing Agent. If time allows, the Bidder may submit a new bid. Bidder assumes full responsibility for submitting a new bid before or at the specified time and date bids are due. Jefferson County reserves the right to withdraw a request for bids before the opening date.

1.S WITHDRAWAL OF BID AFTER OPENING.
Bidder agrees that its offer may not be withdrawn or cancelled by the Vendor for a period of ninety (90) days following the date and time designated for the receipt of bids unless otherwise stated in the bid and/or specifications.

1.6 BID AMOUNTS.
Bids shall show net prices, extensions where applicable and net total. In case of conflict between unit price and extension, the unit price will govern. Any ambiguity in the bid as a result of omission, error, unintelligible or illegible wording shall be interpreted in the favor of Jefferson County.

1.7 EXCEPTIONS AND/OR SUBSTITUTIONS.
All bids meeting the intent of the specifications and plans will be considered for award. Vendors taking exception to the specifications and plans, or offering substitutions, shall state these exceptions in the section provided. If bid is made on an article other than the one specified, which a Bidder considers comparable, the name and grade of said article must be specified in the bid and sufficient specifications and descriptive data must accompany same to permit thorough evaluation. The absence of stated exceptions and/or substitutions shall indicate that the Vendor has not taken any exceptions to the specifications and shall be responsible to perform in strict accordance with the specifications. As a matter of practice, Jefferson County rejects exception(s) and /or substitutions as non-responsive but reserves the right to accept any and/or all of the exception(s) and/or substitution(s) deemed to be in the best interest of Jefferson County.

1.8 ALTERNATES.
The Invitation for Bid and/or specifications may expressly allow Bidder to submit an alternate bid. Presence of such an offer shall not be considered an indication of non-responsiveness.

1.9 DESCRIPTIONS.
Unless otherwise specified, any reference to make, manufacturer and/or model used in the bid specifications is merely descriptive and not restrictive, and is used only to indicate type, style, or quality of material desired.

1.10 BID ALTERATIONS.
Bids cannot be altered or amended after submission deadline. Any interlineations, alterations, or erasures made before opening time must be initialed by the signer of the bid, guaranteeing authenticity.

1.11 TAX EXEMPT STATUS.
Jefferson County is exempt from federal excise tax and state sales tax. Unless the bid form or specifications specifically indicate otherwise, the bid price must be net, exclusive of above-mentioned taxes and will be so construed. Therefore, the bid price shall not include taxes.

1.12 QUANTITIES.
Quantities indicated are estimated quantities only and are not a commitment to buy. Approximate usage does not constitute an order, but only implies the probable quantity that will be used. Commodities will be ordered on an as-needed basis. Bidder is responsible for accurate final counts.

1.13 BID AWARD.
Award of contract shall be made to the most responsible, responsive Bidder, whose offer is determined to be the best value, taking into consideration the relative importance of price. Jefferson County reserves the right to be the sole judge as to whether items bid will serve the purpose intended.

Jefferson County reserves the right to accept or reject in part or in whole any bid submitted, and to waive any technicalities or informalities for the best interest of the County. Jefferson County reserves the right to award based upon individual line items, sections, or total bid.

1.14 SILENCE OF SPECIFICATIONS FOR COMPLETE UNITS.
All materials, equipment and/or parts that will become a portion of the completed work, including items not specifically stated herein but, necessary to render the service(s) complete and operational per the specifications, are to be included in the bid price. Vendor may be required to furnish evidence that the service, as bid, will meet or exceed these requirements.

1.15 ADDENDA.
Any interpretations, corrections or changes to the specifications and plans will be made by addenda no later than forty-eight (48) hours prior to the bid opening. Addenda will be posted on the Purchasing web site. Vendors are responsible for monitoring the web site in order to remain informed on addenda. Vendors shall acknowledge receipt of all addenda with submission of bid.

1.16 GENERAL BID BOND/SURETY REQUIREMENTS.
Failure to furnish bid bond/surety, if requested, will result in bid being declared non-responsive. Non-responsive bids will not be considered for award.

1.17 GENERAL INSURANCE REQUIREMENTS.
Failure to furnish Affidavit of Insurance, if required in these specifications, will result in bid being declared non-responsive. Non-responsive bids will not be considered for award.

1.18 RESPONSIVENESS.
A responsive bid shall substantially conform to the requirements of this Invitation to Bid and/or specifications contained herein. Bidders who substitute any other terms, conditions, specifications and/or requirements or who qualify their bids in such a manner as to nullify or limit their liability to the contracting entity shall have their bids

deemed non-responsive. Also, bids containing any clause that would limit contracting authority shall be considered non-responsive. Examples of non-responsive bids include but shall not be limited to: a) bids that fail to conform to required delivery schedules as set forth in the bid request; b) bids with prices qualified in such a manner that the bid price cannot be determined, such as with vague wording that may include "price in effect at the time of delivery," and c) bids made contingent upon award of other bids currently under consideration.

1.19 RESPONSIBLE STANDING OF BIDDER.

To be considered for award, Bidder must at least: have the ability to obtain adequate financial resources, be able to comply with required or proposed delivery/completion schedule, have a satisfactory record of performance; have a satisfactory record of integrity and ethics, and be otherwise qualified and eligible to receive award.

1.20 CONFIDENTIAL/PROPRIETARY INFORMATION.

If any material in the bid submission is considered by Bidder to be confidential or proprietary information (including manufacturing and/or design processes exclusive to the Bidder), Bidder **must** clearly mark the applicable pages of Bidder's bid submission to indicate each claim of confidentiality. Additionally, Bidder must include a statement on company letterhead identifying all Bid Submission section(s) and page(s) that have been marked as confidential. Jefferson County will protect from public disclosure such portions of a bid, unless directed otherwise by legal authority, including existing open records acts. Merely making a blanket claim that the entire bid submission is protected from disclosure because it contains some proprietary information is not acceptable and will make the entire bid submission subject to release under the Texas Public Information Act.

By submitting a bid, Bidder agrees to reproduction by Jefferson County, without cost or liability, of any copyrighted portions of Bidder's bid submission or other information submitted by Bidder.

1.21 PUBLIC BID OPENING.

Bidders are invited to be present at the opening of bids. After the official opening of bids, a period of not less than one week is necessary to evaluate bids. The amount of time necessary for bid evaluation may vary and is determined solely by the County. Following the bid evaluation, all bids submitted are available for public review.

2. PERFORMANCE.

2.1 DESIGN, STRENGTH, AND QUALITY.

Design, strength, and quality of materials and workmanship must conform to the highest standards of manufacturing and engineering practices. The apparent silence of specifications and/or plans as to any detailed description concerning any point shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of these specifications and/or plans shall be made on the basis of this statement.

2.2 AGE AND MANUFACTURE.

All tangible goods being bid must be new and unused, unless otherwise specified, in first-class condition, of current manufacture, and furnished ready to use. All items not specifically mentioned that are required for a complete unit shall be furnished.

2.3 DELIVERY LOCATION.

All deliveries will be made to the address(es) specified on the purchase order during normal working hours of 8:00 am to 4:00 pm, Monday through Friday, unless otherwise authorized by the Purchasing Agent or designee.

2.4 DELIVERY SCHEDULE.

Delivery time may be an important consideration in the evaluation of best value. The maximum number of days necessary for delivery ARO shall be stated in the space, if provided, on the bid form.

2.5 DELIVERY CHARGES.
All delivery and freight charges, F.O.B. destination shown on Jefferson County purchase order, as necessary to perform contract are to be included in the bid price.

2.6 INSTALLATION CHARGES.
All charges for assembly, installation and set-up shall be included in the bid price. Unless otherwise stated, assembly, installation and set-up will be required.

2.7 OPERATING INSTRUCTIONS AND TRAINING.
Clear and concise operating instructions and descriptive literature will be provided in English, if requested. On-site detailed training in the safe and efficient use and general maintenance of item(s) purchased shall be provided as needed at the request of Jefferson County. Instructions and training shall be at no additional cost to the County.

2.8 STORAGE.
Bidder agrees to provide storage of custom ordered materials, if requested, for up to thirty (30) calendar days.

2.9 COMPLIANCE WITH FEDERAL, STATE, COUNTY, AND LOCAL LAWS.
Bids must comply with all federal, state, county, and local laws, including, but not limited to, all applicable standard safety, emission, and noise control requirements. Any vehicles or equipment shall contain all standard safety, emission, and noise control requirements required for the types and sizes of equipment at the time of their manufacture. The contractor agrees, during the performance of work or service, to comply with all applicable codes and ordinances of Jefferson County or the State of Texas as they may apply, as these laws may now read, or as they may hereafter be changed or amended.

2.10 OSHA.
The Bidder will certify all equipment complies with all regulations and conditions stipulated under the Williams-Steiger Occupational Safety and Health Act of 1971, as amended. The successful Bidder will further certify that all items furnished under this project will conform and comply with federal and State of Texas OSHA standards. The successful Bidder will agree to indemnify and hold harmless Jefferson County for any and all damages that may be assessed against the County.

2.11 PATENTS AND COPYRIGHTS.
The successful Vendor agrees to protect the County from claims involving infringements of patents and/or copyrights.

2.12 SAMPLES, DEMONSTRATIONS, AND TESTING.
At Jefferson County's request and direction, Bidder shall provide product samples and/or testing of items bid to ensure compliance with specifications. Samples, demonstrations and/or testing may be requested at any point prior to or following bid award. Samples, demonstrations and/or testing may be requested upon delivery and/or any point during the term of resulting contract. All samples (including return thereof), demonstrations, and/or testing shall be at the expense of the Bidder/Vendor.

2.13 ACCEPTABILITY.
All articles enumerated in the bid shall be subject to inspection by an officer designated for that purpose by Jefferson County. If found inferior to the quality called for, or not equal in value to the specifications, deficient in workmanship or otherwise, this fact shall be certified to the Purchasing Agent, who shall have the right to reject the whole or any part of the same. Items and/or work determined to be contrary to specifications must be replaced at the vendor's expense. Inferior items not retrieved by the vendor within thirty (30) calendar days, or an otherwise agreed upon time, shall become the property of the County. If disposal of such items warrants an expense, an amount equal to the disposal expense will be deducted from amounts payable to the vendor.

2.14 MAINTENANCE.
Maintenance required for equipment bid should be available in Jefferson County by a manufacturer authorized maintenance facility. Cost for this service shall be shown on the bid sheet as requested or on a separate sheet, as required. If Jefferson County opts to include maintenance, it shall be so stated in the purchase order and said cost will be included. Service will commence only upon expiration of applicable warranties and should be priced accordingly.

2.15 MATERIAL SAFETY DATA SHEETS.
Under the "Hazardous Communications Act," commonly known as the "Texas Right to Know Act," a Bidder must provide
the user department, with each delivery, material safety data sheets which are applicable to hazardous substances defined in the Act. Failure of the Bidder to furnish this documentation, will be cause to reject any bid applying thereto.

2.16 EVALUATION.
Evaluation shall be used as a determinant as to which services are the most efficient and/or most economical for the County. It shall be based on all factors having a bearing on price and performance of the items in the user environment. All bids are subject to tabulation by the Jefferson County Purchasing Department and recommendation to Jefferson County Commissioners' Court. Compliance with all bid requirements and needs of the using department are considered in evaluating bids. Pricing is not the only criteria for making a recommendation. The Jefferson County Purchasing Department reserves to right to contact any Bidder, at any time, to clarify, verify or requirement information with regard to this bid.

3. PURCHASE ORDERS AND PAYMENT.

3.1 PURCHASE ORDERS.
A purchase order(s) shall be generated by the Jefferson County Purchasing Agent to the successful vendor. The purchase order number must appear on all itemized invoices and packing slips. The County will not be held responsible for any work orders placed and/or performed without a valid current purchase order number. Payment will be made for all services rendered and accepted by the contract administrator for which a valid invoice has been received.

3.2 INVOICES.
All invoices shall reference the Purchase Order number. Invoices shall reference the bid item number or a detailed description for each item invoiced. If an item purchased and itemized on the invoice does not correspond to an item in any of the categories awarded to the vendor, invoice shall reference the item as "N/C" to indicate that it is a non-contract item. This requirement is to assist the County in verifying contract pricing on all invoices. Payment will be made under terms of net thirty (30) days unless otherwise agreed upon by seller and the purchasing department.

3.3 PROMPT PAYMENT.
In accordance with the State of Texas Prompt Payment Act, Article 601f V.T.C.S., payment will be made after receiving and acceptance by the County of the merchandise ordered and of a valid invoice. Successful Bidder(s) is required to pay subcontractors within ten (10) days after the successful Bidder receives payment from the County.

3.4 FUNDING.
Jefferson County is operated and funded on an October 1 to September 30 basis; accordingly, the County reserves the right to terminate, without liability to the County, any contract for which funding is not available.

4. CONTRACT.

4.1 CONTRACT DEFINITION.
The General Conditions of Bidding and Terms of Contract, Specifications, Plans, Bidding Forms, Addenda, and any other documents made a part of this bid shall constitute the complete bid. This bid, when duly accepted by Jefferson

County shall constitute a contract equally binding between the successful Bidder and Jefferson County.

4.2 CHANGE ORDER.

No different or additional terms will become part of this contract with the exception of a change order. No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated in the resulting contract. All change orders to the contract will be made in writing and at the discretion and approval of Jefferson County. No change order will be binding unless signed by an authorized representative of the County and the vendor.

4.3 PRICE RE-DETERMINATION.

A price re-determination may be requested at the time of annual renewal. All requests for price re-determination shall be in written form. Cause for such request, i.e., manufacturer's direct cost, postage rates, Railroad Commission rates, Federal/State minimum wage law, Federal/State unemployment taxes, F.I.C.A, Insurance Coverage Rates, etc., shall be substantiated in writing by the source of the cost increase. The Bidder's past experience of honoring contracts at the bid price will be an important consideration in the evaluation of the lowest and best bid. Jefferson County reserves the right to accept or reject any/all requests for price re-determination as it deems to be in the best interest of the County.

4.4 TERMINATION.

Jefferson County reserves the right to terminate the contract for default if the Bidder breached any of the terms therein, including warranties of Bidder or if the Bidder becomes insolvent or commits acts of bankruptcy. Such right of termination is in addition to and not in lieu of any other remedies which Jefferson County may have in law or equity. Default may be construed as, but not limited to, failure to deliver the proper goods and/or service within the proper amount of time, and/or to properly perform any and all services required to Jefferson County's satisfaction and/or to meet all other obligations and requirements. Contracts may be terminated without cause upon thirty (30) days' written notice to either party unless otherwise specified. Jefferson County reserves the right to award canceled contract to the next lowest Bidder. Bidder, in submitting this bid, agrees that Jefferson County shall not be liable to prosecution for damages in the event that the County declares the Bidder in default.

4.5 CONFLICT OF INTEREST.

Employees of the County are not permitted to maintain financial interest in, or receive payment, directly or indirectly, borrow from, lend to, invest in, or engage in any substantial financial transaction with any individual, organization, supplier, or subcontractor who does business with the County without disclosure. When conflict of interest is discovered, it shall be grounds for termination of contract.

4.6 INJURIES OR DAMAGES RESULTING FROM NEGLIGENCE.

Successful vendor shall defend, indemnify and save harmless Jefferson County and all its officers, agents and employees from all suits, actions, or other claims of any character, name and description brought for or on account of any injuries or damages received or sustained by any person, persons, or property on account of any negligent act or fault of the successful vendor, or of any agent, employee, subcontractor or supplier in the execution of, or performance under, any contract which may result from bid award. Successful vendor shall pay any judgment with cost which may be obtained against Jefferson County growing out of such injury or damages.

4.7 INTEREST BY PUBLIC OFFICIALS.

No public official shall have interest in this contract, in accordance with Texas Local Government Code.

4.8 PRE-AWARD/CONTRACT CONTACT BETWEEN COUNTY AND VENDORS.

The Jefferson County Purchasing Department will be the primary pre-bid contact for this Invitation for Bid, unless otherwise specified within these bid specifications. **If not written within these specifications, Potential Bidders /Vendors shall not visit or conduct discussions with other County Departments or representatives.**

The Jefferson County Purchasing Department expects to conduct discussions with vendor's representatives

authorized to contractually obligate the vendor with an offer. **Vendors shall not contact any Jefferson County personnel during the IFB process without the express permission from the Jefferson County Purchasing Agent. The Purchasing Agent will disqualify any vendor who has made site visits, contacted Jefferson County personnel, or distributed any literature without authorization from the Jefferson County Purchasing Department.**

All correspondence relating to this IFB, from advertisement to award shall be sent to the Jefferson County Purchasing Department. All presentations and/or meetings between Jefferson County and the vendor relating to this IFB shall be coordinated by the Jefferson County Purchasing Department.

Selected vendors may be expected to make a presentation/product demonstration to an Evaluation Committee. Proposals, vendor presentations, and product/service evaluations may develop into negotiating sessions with the vendor(s) as selected by the Evaluation Committee. Jefferson County expects to conduct negotiations with vendor representatives authorized to contractually obligate the vendor with an offer. If vendor is unable to agree to contract terms and conditions, Jefferson County reserves the right to terminate contract negotiations with that vendor and initiate negotiations with another vendor. In addition to a presentation, visits by the Evaluation Committee to representative vendor client sites may be conducted where the proposed solution can be demonstrated in a production environment.

4.9 WARRANTY.
The successful vendor shall warrant that all materials utilized in the performance of this contract shall conform to the proposed specifications and/or all warranties as stated in the Uniform Commercial Code and be free from all defects in material, workmanship and title.

4.10 UNIFORM COMMERCIAL CODE.
The successful vendor and Jefferson County agree that both parties have all rights, duties, and remedies available as stated in the Uniform Commercial Code.

4.11 VENUE.
This agreement will be governed and construed according to the laws of the State of Texas. This agreement is performable in the County of Jefferson, Texas.

4.12 SALE, ASSIGNMENT, OR TRANSFER OF CONTRACT.
The successful vendor shall not sell, assign, transfer or convey this contract, in whole or in part, without the prior written consent of Jefferson County.

4.13 SILENCE OF SPECIFICATIONS.
The apparent silence of these specifications as to any detailed description concerning any point, shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of these specifications shall be made on the basis of this statement.

5. REJECTION OR WITHDRAWAL.
Submission of additional terms, conditions or agreements with the bid document are grounds for deeming a bid non-responsive and may result in bid rejection. Jefferson County reserves the right to reject any and all bids and to waive any informalities and minor irregularities or defects in bids. Bids may be withdrawn in person by a bidder or authorized representative, provided their identity is made known and a receipt is signed for the bid, but only if the withdrawal is made prior to the time set for receipt of bids. Bids are an irrevocable offer and may not be withdrawn within **120** days after opening date.

6. EMERGENCY/DECLARED DISASTER REQUIREMENTS.
In the event of an emergency or if Jefferson County is declared a disaster area, by the County, State, or Federal Government, this Acceptance of Offer may be subjected to unusual usage. Contractor shall service the county during

such an emergency or declared disaster under the same terms and conditions that apply during non-emergency/disaster conditions. The pricing as specified in this Acceptance of Offer shall apply to serving the County's needs regardless of the circumstances. If Contractor is unable to supply the services under the terms of the Acceptance of Offer, then Contractor shall provide proof of such disruption and a copy of the invoice from Contractor's supplier(s).

Additional profit margin as a result of supplying services during an emergency or declared disaster shall not be permitted. In the event that additional equipment, supplies, and materials are required during the declared disaster, additional shipping, handling, and drayage fees may apply.

7. AWARD.

The bid will be awarded to the responsible, responsive bidder(s) whose bid, conforming to the solicitation, will be most advantageous to Jefferson County – price and other factors considered. Unless otherwise specified in this IFB, Jefferson County reserves the right to accept a bid in whole or in part, and to award by item or by group, whichever is deemed to be in the best interest of Jefferson County. Any bidder who is in default to Jefferson County at the time of submittal of the bid shall have that bid rejected.

Jefferson County reserves the right to clarify any contractual terms with the concurrence of the Contractor; however, any substantial non-conformity in the offer, as determined by Jefferson County, shall be deemed non-responsive and the offer rejected.

In evaluating bids, Jefferson County shall consider the qualifications of the bidders, and, where applicable, operating costs, delivery time, maintenance requirements, performance data, and guarantees of materials and equipment.

In addition, Jefferson County may conduct such investigation as it deems necessary to assist in the evaluation of a bid and to establish the responsibility, qualifications, and financial ability of the bidders to fulfill the contract.

Jefferson County reserves the right to award this contract on the basis of **lowest and best bid** in accordance with the laws of the State of Texas, to waive any formality or irregularity, to make awards to more than one offeror, and/or to reject any or all bids. In the event the lowest dollar offeror meeting specifications is not a awarded a contract, Offeror may appear before the Commissioners' Court and present evidence concerning Offeror responsibility after officially notifying the Office of the Purchasing Agent of Offeror's intent to appear.

8. CONTRACT.

A response to an IFB is an offer to contract with Jefferson County based upon the terms, conditions, and specifications contained in the IFB. Bids do not become contracts unless and until they are executed by Jefferson County, eliminating a formal signing of a separate contract. For that reason, all of the terms and conditions of the contract are contained in the IFB, unless any of the terms and conditions is modified by an IFB Amendment, a Contract Amendment, or by mutually agreed terms and conditions in the contract documents.

9. WAIVER OF SUBROGATION.

Bidder and bidder's insurance carrier waive any and all rights whatsoever with regard to subrogation against Jefferson County as an indirect party to any suit arising out of personal or property damages resulting from bidder's performance under this agreement.

10. FISCAL FUNDING.

A multi-year contract (if requested by the specifications) continuing as a result of an extension option must include fiscal funding out. If, for any reason, funds are not appropriated to continue the contract, said contract shall become null and void.

11. BID RESULTS.

Bid results are not provided in response to telephone inquiries. A preliminary tabulation of bids received will be posted on the Purchasing web page at https://www.co.jefferson.tx.us/Purchasing/ as soon as possible following bid opening. A final tabulation will be posted following bid award and will also be available for review in the Purchasing Department.

12. CHANGES AND ADDENDA TO BID DOCUMENTS.

Each change or addendum issued in relation to this IFB document will be on file in the Office of the Purchasing Agent, and will be posted on the Purchasing web site as soon as possible. It shall be the bidder's responsibility to make inquiry as to change or addenda issued, and to monitor the web site. All such changes or addenda shall become part of the contract and all bidders shall be bound by such addenda. Information on all changes or addenda issued will be available at the Office of the County Purchasing Agent.

13. SPECIFICATIONS.

Unless otherwise stated by the bidder, the bid will be considered as being in accordance with Jefferson County's applicable standard specifications, and any special specifications outlined in the bid document. References to a particular trade name, manufacturer's catalogue, or model number are made for descriptive purposes to guide the bidder in interpreting the requirements of Jefferson County and should not be construed as excluding bids on other types of materials, equipment, and supplies. However, the bidder, if awarded a contract, will be required to furnish the particular item referred to in the specifications or description unless departure or substitution is clearly noted and described in the bid.

Jefferson County reserves the right to determine if equipment/ product being bid is an acceptable alternate. All goods shall be new unless otherwise so stated in the bid. Any unsolicited alternate bid, or any changes, insertions, or omissions to the terms and conditions, specifications, or any other requirements of the bid, may be considered non-responsive.

14. DELIVERY.

Bids shall include all charges for delivery, packing, crating, containers, etc. Unless otherwise stated by the bidder (in writing on the included Bid Form), prices bid will be considered as being based on F.O.B. destination/delivered freight included.

15. INTERPRETATION OF BID AND/OR CONTRACT DOCUMENTS.

All inquiries shall be made within a reasonable time prior to the date and time fixed for the bid opening, in order that a written response in the form of an addendum, if required, can be processed before the bids are opened. Inquiries received that are not made in a timely fashion may or may not be considered.

16. CURRENCY.

Prices calculated by the bidder shall be stated in U.S. dollars.

17. PRICING.

Prices shall be stated in units of quantity specified in the bid documents. In case of discrepancy in computing the amount of the bid, the unit price shall govern.

18. NOTICE TO PROCEED/PURCHASE ORDER.

The successful bidder may not commence work under this contract until authorized to do so by the Purchasing Agent.

19. CERTIFICATION.

By signing the offer section of the Offer and Acceptance page, Bidder certifies:

- The submission of the offer did not involve collusion or other anti-competitive practices.

- The Bidder has not given, offered to give, nor intends to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to any public servant in connection with the submitted offer.

- The Bidder hereby certifies that the individual signing the bid is an authorized agent for the Bidder and has the authority to bind the Bidder to the contract.

20. DEFINITIONS.

"County" – Jefferson County, Texas.
"Contractor" – The Bidder whose proposal is accepted by Jefferson County.

21. MINORITY-OWNED (MWBE), WOMEN-OWNED (WBE) AND HISTORICALLY UNDERUTILIZED (HUB) BUSINESS ENTERPRISE PARTICIPATION.

It is the desire of Jefferson County to increase the participation of Minority-Owned (MBE) , Women-Owned (WBE), and Historically Underutilized (HUB) business enterprises in its contracting and procurement programs. While the County does not have any preference or set aside programs in place, it is committed to a policy of equitable participation for these firms.

SECTION 2: FEDERAL MANDATED CONTRACT PROVISIONS

Some or all of the provisions in this section will be incorporated into a professional service agreement as a result of this solicitation.

Breach of Contract Terms / Remedies

Source: 2 CFR § 200 Appendix II (A)

Applicability: This provision requires Jefferson County, as the Airport Sponsor, to incorporate administrative, contractual, or legal remedies if contractor/consultant violate or breach contract terms. The sponsor must also include appropriate penalties and sanctions. Language acceptable to meet the intent of this requirement will be included in contractual documents.

This requirement applies to all FEMA grant and cooperative agreement programs

Contract Types: This provision is required for all contracts that exceed the simplified acquisition threshold as stated in 2 CFR § 200, Appendix II (A). This threshold is occasionally adjusted for inflation and is now equal to $150,000.

Termination of Contract (for Cause and Convenience)

Source: 2 CFR § 200 Appendix II (B)

FAA Advisory Circular 150/5370-10, Section 80-09

Applicability: This provision requires Jefferson County, as the Airport Sponsor, to incorporate in all contracts over $10,000, a provision that addresses termination for cause and termination for convenience, by the sponsor. The contractual provision must address the manner by which the sponsor's contract will be affected and the basis for settlement. Language acceptable to meet the intent of this requirement will be included in contractual documents.

This requirement applies to all FEMA grant and cooperative agreement programs.

Contract Types: This provision is required for all contracts that exceed $10,000.

Equal Employment Opportunity

Source: 2 CFR § 200 Appendix II (C) 41 CFR § 60-1.4

Executive Order 11246 41 CFR § 60-4.3

Applicability: The purpose of this provision is to provide equal opportunity for all persons, without regard to race, color, religion, sex, or national origin who are employed or seeking employment with contractors performing under a federally assisted construction contract. There are two provisions, a construction clause, and a specification clause.

The equal opportunity contract clause must be included in any contract or subcontract when the amount exceeds $10,000. Once the equal opportunity clause is determined to be applicable, the contract or subcontract must include the clause for the remainder of the year, regardless of the amount of the contract.

This requirement applies to all FEMA grant and cooperative agreement programs.

Contract Types: This provision is required for all contracts that exceed $10,000.

Use of Provision: 41 CFR 60-1.4 provides the mandatory **contract** language. 41 CFR 60-4.3 provides the mandatory **specification** language. The sponsor will incorporate these clauses without modification.

Note: Any contracts resulting from this RFQ will have the requisite language as set forth in 2 CFR 200 App II, 41 CFR 60-1.4, 41 CFR 60-4.3, and Executive Order 11246.

Davis-Bacon Requirements

Source: 2 CFR § 200 Appendix II (D)

29 CFR Part 5

Applicability: The Davis-Bacon Act ensures that laborers and mechanics employed under the contract receive pay no less than the locally prevailing wages and fringe benefits as determined by the Department of Labor.

For Professional Services: The emergence of different project delivery methods has created situations where Professional Service Agreements (PSAs) includes tasks that meet the definition of construction, alteration, or repair as defined in 29 CFR Part 5. If such tasks result in work that qualifies as construction, alteration, or repair and it exceeds $2,000, the PSA must incorporate this clause.

Use of Provision: 29 CFR 5 establishes the specific language the sponsor must use without modification. A/E firms that employ laborers and mechanics on a task that meets the definition of construction, alteration, or repair are acting as a contractor. The sponsor may not substitute the term "Contractor" for "Consultant" in such instances.

Copeland Anti-Kickback

Source: 2 CFR § 200 Appendix II (D)

29 CFR Part 3 & Part 5

Applicability: The Copeland Act (18 USC 874 and 40 USC 3145) makes it unlawful to induce by force, intimidation, threat of dismissal from employment, or by any other manner, any person employed in the construction or repair of public buildings or public works, financed in whole or in part by the United States, to give up any part of the compensation to which that person is entitled under a contract of employment. The Copeland Act also requires each contractor and subcontractor to furnish weekly a statement of compliance with respect to the wages paid each employee during the preceding week.

It DOES NOT apply to the FEMA Public Assistance Program.

For Professional Services: The emergence of different project delivery methods has created situations where Professional Service Agreements (PSAs) includes tasks that meet the definition of construction, alteration, or repair as defined in 29 CFR Part 5. If such tasks result in work that qualifies as construction, alteration, or repair and it exceeds $2,000, the PSA must incorporate the Copeland Anti-kickback provision.

Use of Provision: 29 CFR 5 establishes the specific language the sponsor must use without modification. A/E firms that employ laborers and mechanics on a task that meets the definition of construction, alteration, or repair are acting as a contractor. The sponsor may not substitute the term "Contractor" for "Consultant" in such instances.

Contract Workhours and Safety Standards Act Requirements

Source: 2 CFR § 200 Appendix II (E) 29 CFR Part 5

40 U.S.C. § 3701-3708

Applicability: Contract Workhours and Safety Standards Act Requirements (CWHSSA) requires contractors and subcontractors on covered contracts to pay laborers and mechanics employed in the performance of the contracts one and one-half times their basic rate of pay for all hours worked over 40 in a workweek and prohibits unsanitary, hazardous, or dangerous working conditions on federally assisted projects. The Wage and Hour division (WHD) within the U.S. Department of Labor (DOL) enforces the compensation requirements of this Act, while DOL's Occupational Safety and Health Administration (OSHA) enforces the safety and health requirements.

Jefferson County urges all contractors, regardless of funding sources for projects, to follow all applicable Federal and State labor laws.

For Professional Services: This provision applies to professional service agreements that exceed $100,000 and employs laborers, mechanics, watchmen, and guards This includes members of survey crews and exploratory drilling operations.

Use of Provision: The following text will be included in applicable contracts without modification:

1. *Overtime requirements*. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. *Violation; liability for unpaid wages; liquidated damages.* In the event of any violation of the clause set forth in paragraph (1) of this clause, the Contractor, and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this section, in the sum of $27.00 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this clause.

3. *Withholding for unpaid wages and liquidated damages*. Jefferson County shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this clause.

4. Subcontracts. The contractor *or* subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this clause.

Rights to Inventions

Source: 2 CFR § 200 Appendix II (F)

37 CFR § 401

Applicability: This provision applies to all contracts and subcontracts with small business forms or nonprofit organizations that include performance of *experimental, developmental, or research work*. This clause is not applicable to construction, equipment, or professional service contracts unless the contract includes *experimental, developmental, or research work*. This requirement applies to "funding agreements," but it DOES NOT apply to the Public Assistance, Hazard Mitigation Grant Program, Fire Management Assistance Grant Program, Crisis Counseling Assistance and Training Grant Program, Disaster Case Management Grant Program, and Federal Assistance to Individuals and Households – Other Needs Assistance Grant Program, as FEMA awards under these programs do not meet the definition of "funding agreement."

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of Appendix II to 2 CFR part 200.

Clean Air and Water Pollution Control

Source: 2 CFR § 200 Appendix II (G)

29 CFR Part 5

Applicability: This provision is required on all contracts and lower tier contracts that exceed $150,000.

Use of Provision: The following language will be included in applicable contracts:

1. Contractor agrees to comply with all applicable standards, orders, and regulations pursuant to the Clean Air Act (42 U.S.C. § 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. § 1251-13870). The contractor agrees to report any violation to the owner immediately upon discovery. The owner assumes responsibility for notifying the EPA and the FAA.

Debarment and Suspension

Source: 2 CFR Part 180 (Subpart C) 2 CFR Part 3000

2 CFR Part 1200 DOT Order 4200.5

Applicability: Required in all FEMA grant and cooperative agreement programs, regardless of amount. This requirement applies to covered transactions as defined in 2 CFR part 180. AIP funded contracts are non-procurement transactions as defined by §180.970. Covered transactions include any AIP-funded contract, regardless of tier, that is awarded by a contractor, subcontractor, supplier, consultant, or its agents or representative in any transaction, if the amount of the contract is expected to equal or exceed $25,000. Jefferson County must verify that the firm or individual that is entering into a contract with is not presently suspended, excluded, or debarred by any Federal department or agency from participating in federally assisted projects. This is accomplished by:

1. Checking SAM.gov to verify the firm's or individual's status;
2. Collecting a certification from the firm or individual that is not suspended, debarred, or excluded; and
3. Incorporating a clause into the contract that requires lower tier contracts to verify that no suspended, debarred, or excluded firm or individual is included in the project.

See **Error! Reference source not found.**, Paragraph **Error! Reference source not found.** above for more information on SAM.gov.

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of Appendix II to 2 CFR part 200.

Lobbying and Influencing Federal Employees

Source: 2 CFR § 200 Appendix II (J) 31 USC § 1352 – Byrd Anti-Lobbying Amendment

49 CFR Part 20, Appendix A 44 CFR Part 18

Applicability: This requirement applies to all FEMA grant and cooperative agreement programs. Consultants and contractors that apply or bid an award of $100,000 or more must certify that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant, or another award covered by 31 USC 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award.

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of Appendix II to 2 CFR part 200 Appendix (J) and 31 USC 1352.

If applicable, contractors ***must sign and submit*** to Jefferson County the "**Certification Regarding Lobbying**" Form included in this bid specification.

Procurement of Recovered Materials

Source: 2 CFR § 200 Appendix II (J) Solid Waste Disposal Act

40 CFR Part 247 2 CFR § 200.322

Applicability: Sponsors of AIP funded development and equipment projects must comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. Section 6002 emphasizes maximizing energy and resource recovery through use of affirmative procurement actions for recovered materials identified in the EPA guidelines. When acquiring items designated in the guidelines, the sponsor must procure items that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition.

This requirement applies to:

- All contracts awarded by a non-Federal entity under FEMA grant and cooperative agreement programs.
- All construction and equipment projects.
- Any contract, professional and property acquisition, that includes procurement of a product that exceeds $10,000.

Information about this requirement, along with the list of EPA designated items, is available at EPA's Comprehensive Procurement Guidelines website:

https://www.epa.gov/smm/comprehensiveprocurement-guideline-cpg-program.

The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act." The Uniform Rules authorize FEMA to require additional provisions for non-Federal entity contracts.

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of Appendix II to 2 CFR part 200.

Access to Records and Reports

Source: 2 CFR § 200.333 FAA Order 5100.38

2 CFR § 200.336

Applicability: 2 CFR § 200.333 requires a sponsor to retain records pertinent to a federal award for a period of three years from submission of final closure documents. 2 CFR § 200.336 establishes that sponsors must provide Federal entities the right to access records pertinent to the Federal award. FAA policy extends these requirements to the sponsor's contracts and subcontracts of AIP funded projects.

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of Appendix II to 2 CFR part 200. The following will be in applicable contracts:

1. The contractor must maintain an acceptable cost accounting system. The Contractor agrees to provide the local/state/federal entity providing funding for this project, the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions.
2. The contractor agrees to maintain all books, records and reports required under this contract for a period of not less than three years after final payment is made and all pending matters have been resolved.
3. The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.

4. The Contractor agrees to provide the FEMA Administrator or their representatives access to construction or other work sites pertaining to the work being completed under the contract.
5. In compliance with the Disaster Recovery Act of 2018, the County and the Contractor acknowledge and agree that no language in this contract is intended to prohibit audits or internal reviews by the FEMA Administrator or the Comptroller General of the United States.

Affirmative Action Requirement

Source: 41 CFR Part 60-4 FAA Order 5100.38

Executive Order 11246

Applicability: Sponsors are required to set goals for minority participation in AIP funded projects exceeding $10,000. The goals for minority participation derive from Economic Area (EA) and Standard Metropolitan Statistical Area (SMSA) as established in Volume 45 of the Federal Register dated 10/03/80. Page 65984 contains a table of all EAs and SMSAs and the associated minority participation goals.

Executive Order 11246 has set a goal of 6.9% nationally for female participation for all construction projects. This value remains constant for all counties and states.

Contract Types:

- Construction: The sponsor must incorporate this notice in all solicitations for bids or requests for proposals for AIP funded construction work contracts and subcontracts that exceed $10,000.
- Equipment: The sponsor must incorporate this notice in all solicitations for equipment project exceeding $10,000 that involves installation of equipment onsite (e.g. electrical vault equipment, generators). This provision does not apply to equipment acquisition projects where the manufacturer of the equipment takes place offsite at a manufacturer's plant (e.g. firefighting and vehicles).
- Professional Services: The sponsor must incorporate this notice in any professional service agreement if the agreement includes tasks that meet the definition of construction work, as defined by the DOL, and exceeds $10,000.

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of 41 CFR Part 60-4. The following will be in applicable contracts:

Solicitation Clause:
Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

   a. Goals for minority participation for each trade: Vol. 45 Federal Register pg. 65984 (10/3/80)

   b. Goals for female participation in each trade: 6.90%

These goals are applicable to all of the contractor's construction work, whether or not it is federal or federally assisted, performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR Part 60-4.3(a) and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project for the sole purpose of meeting the contractor's goals shall be a violation of the contract, the Executive Order, and the regulations in 41 CFR Part 60-4. Compliance with these goals will be measured against the total work hours performed.

The contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs (OFCCP) within 10 working days of award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of these subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

As used in this notice and in the contract resulting from this solicitation, the covered area is Texas, Jefferson County, Beaumont.

Buy American Preferences

Source: 49 USC § 50101

Applicability: the buy American preference requirement in 49 USC § 50101 requires that all still in manufactured goods used on AIP projects be produced in the United States. This statute gives the FAA the ability to issue a waiver to a sponsor to use non-domestic material on an AIP funded project subject to meeting certain conditions a sponsor may request that the FAA issue a waiver from the by American preference requirements if the FA finds that:

1. Applying the provision is not in the public interest;
2. The steel or manufactured goods are not available in sufficient quantity or quality in the United States;
3. The cost of components in subcomponents produced in the United States is more than 60% of the total components of a facility or equipment, and final assembly has taken place in the United States. Items that have an FAA standard specification item number, such as specific airport lighting equipment, are considered the equipment.

4. Applying this provision would increase the cost of the overall project by more than 25%.

For construction and equipment procurement projects, language, forms, and references to 49 USC § 50101 will be included in the solicitation.

Professional Service Agreements typically do not result in a deliverable that meets the definition of a manufactured product. If a PSA includes providing a manufactured good as a deliverable under the contract, the sponsor must include the Buy American Preference provision in the agreement.

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of 49 USC § 50101.

Civil Rights

Source:	49 USC § 47123	Title VI of the Civil Rights Act of 1964
	FAA Order 1400.11	US DOT Order 1050.2

Applicability: Title VI of the Civil Rights Act of 1964, as amended, Title VI, prohibits discrimination on the grounds of race, color, or national origin under any program or activity receiving Federal financial assistance. Sponsors must include appropriate clauses from the Standard DOT Title VI Assurances in all contracts and solicitations.

The text of each individual clause comes from the U.S. DOT Order 1050.2 Standard Title VI Assurances and Nondiscrimination Provisions, effective 04/24/2013. These assurances require the sponsor insert the appropriate clauses in the form provided by the DOT. Where the clause refers to the applicable activity, project, or program, it means the AIP project.

TITLE VI SOLICITATION NOTICE

Jefferson County, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 USC § 2000d to 2000d-4) and the Regulations, hereby notifies all bidders or offerors that it will affirmatively ensure that any contract entered into pursuant to this advertisement, Disadvantaged Business Enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

Title VI List of Pertinent Nondiscrimination Acts and Authorities

During the performance of any contract as a result of this bid, the Contractor, for itself, its assignees, and successors in interest, hereinafter referred to as the Contractor, agrees to comply with the following non-discrimination statutes and authorities, including but not limited to:

- Title VI of the Civil Rights Act of 1964
- 49 CFR part 21
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970
- Section 504 of the Rehabilitation Act of 1973
- The Age Discrimination Act of 1975
- Airport and Airway Improvement Act of 1982
- The Civil Rights Restoration Act of 1987
- Titles II and III of the Americans with Disabilities Act of 1990
- The Federal Aviation Administration's Nondiscrimination Statute
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency
- Title IX of the Education Amendments of 1972

Disadvantaged Business Enterprise

Source: 49 CFR part 26

Applicability: A sponsor that anticipates awarding $250,000 or more in AIP funding prime contracts in a federal fiscal year must have an approved Disadvantaged Business Enterprise (DBE) program on file with the FAA Office of Civil Rights (§26.21). The approved DBE program will identify a 3-year overall program goal that the sponsor bases on the availability of ready, willing, and able DBEs relative to all businesses ready, willing, and able to participate on the project. (§26.45).

Sponsors with a DBE program on file with the FAA must include the three following provisions, if applicable:

- Clause in all solicitations for proposals for which a contract goal has been established;
- Clause in each prime contract, and;
- Clause in solicitations that are obtaining DBE participation through race/gender neutral means.

As a condition of bid responsiveness, the Bidder or Offeror must submit the following information with its proposal on the forms provided herein:

1. Names and addresses of the DBE firms that will participate in the contract;
2. A description of the work each DBE firm will perform;
3. Percentage/dollar amount of the participation of each DBE firm listed under 1.
4. Written statement from Bidder or Offeror that attests their commitment to use the DBE firm(s) listed under (1) to meet the Owner's project goal; and

5. If Bidder or Offeror cannot meet the advertised project DBE goal, evidence of good faith efforts undertaken by the Bidder or Offeror as described in 49 CFR part 26 Appendix A

The requirements of 49 CFR part 26 apply to this contract. It is the policy of Jefferson County to practice nondiscrimination based on race, color, sex, or national origin in the award or performance of this contract. Jefferson County encourages participation by all firms qualifying under this solicitation regardless of business size or ownership.

DBE Contract Assurances

Contracts as a result of this bid will include contract assurances per §26.13, if applicable:

The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 and the award and administration of Department of Transportation-assisted contracts. Failure by contractor to carry out these requirements is a material breach of this contract which may result in the termination of this contract or such other remedy as the owner deems appropriate, which may include but is not limited to:

1. Withholding monthly progress payments;
2. Accessing sanctions;
3. Liquidated damages; and/or
4. Disqualifying the Contractor from future bidding as non-responsible.

Prompt Payment (§26.29) – The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than 30 days from the receipt of each payment the prime contractor receives from Jefferson County. The prime contractor agrees further to return retainage payments to each subcontractor within 30 days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of Jefferson County. This clause applies to both DBE and non-DBE subcontractors.

Distracted Driving

Source: Executive Order 13513 2 CFR §200.67

DOT Order 3902.10

Applicability: The FAA encourages recipients of federal grant funds to adopt and enforce safety policies that decrease crashes by distracted drivers, including policies to ban text messaging while driving when performing work related to a grant or subgrant.

Use of Provision: The following clause will be included in all Federally assisted contracts regardless of amount:

In accordance with executive order 13513, federal leadership on reducing text messaging while driving, Andy OT order 3902.10, text messaging while driving, the FAA encourages recipients of Federal grant funds to adopt and enforce safety policies that decrease crashes by distracted drivers including policies to ban text messaging while driving when performing work related to a grant or subgrant.

In support of this initiative, Jefferson County encourages the contractor to promote policies and initiatives for its employees and other work personnel that decrease crashes by distracted drivers, including policies that ban text messaging while driving motor vehicles Papa forming work activities associated with the project. The contractor must include the substance of this clause and other sub tier contracts exceeding $3,500 that involve driving a motor vehicle and performance of work activities associated with the project.

Compliance with Federal Law, Regulations, and Executive Orders

The recipient and its contractors are required to comply with all Federal laws, regulations, and executive orders.

Applicability: FEMA recommends that all non-Federal entities place into their contracts an acknowledgement that FEMA financial assistance will be used to fund the contract along with the requirement that the contractor will

comply with all applicable Federal law, regulations, executive orders, and FEMA policies, procedures, and directives.

"This is an acknowledgement that FEMA financial assistance will be used to fund all or a portion of the contract. The contractor will comply with all applicable Federal law, regulations, executive orders, FEMA policies, procedures, and directives."

No Obligation by Federal Government

The FAA and or FEMA is not a party to any transaction between the recipient and its contractor. The FAA and or FEMA is not subject to any obligations or liable to any party for any matter relating to the contract.

Applicability: FEMA recommends that the non-Federal entity include a provision in its contract that states that the Federal Government is not a party to the contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract.

"The Federal Government is not a party to this contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract."

Program Fraud and False or Fraudulent Statements or Related Acts

Recipients must comply with the requirements of The False Claims Act (31 U.S.C. §§ 3729-3733) which prohibits the submission of false or fraudulent claims for payment to the federal government. See DHS Standard Terms and Conditions: Version 8.1 (2018); and 31 U.S.C. §§ 3801-3812, which details the administrative remedies for false claims and statements made. The non-Federal entity must include a provision in its contract that the contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to its actions pertaining to the contract.

FEMA recommends that the non-Federal entity include a provision in its contract that the contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to its actions pertaining to the contract.

"The Contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to the Contractor's actions pertaining to this contract."

SECTION 3: SPECIAL REQUIREMENTS/BID SUBMISSION INSTRUCTIONS

The following requirements and instructions **supersede** General Requirements where applicable.

3.1 SUBMISSION OF BID.

Bidder is Responsible for Submitting:

One (1) Original and Two (2) Bid Copies; with all copies to include a Completed Copy of this specifications packet, in its entirety.

The County requests that bid submissions NOT be bound by staples or glued spines.

Each Bidder shall ensure that required parts of their bid submission are completed with accuracy and submitted as per the requirements within this specifications packet, including any addenda.

Additionally, Bidder shall monitor the Jefferson County Purchasing Department Website for any addenda, additional instructions, or bid updates. https://www.co.jefferson.tx.us/Purchasing/

Failure to return and/or complete all required documentation will result in a response being declared as non-responsive.

Bids must be submitted in complete original form by mail or messenger to the following address:
Jefferson County Purchasing Department
1149 Pearl Street, 1st Floor
Beaumont, TX 77701

Bid Packaging: Bidder shall submit response in a tightly sealed opaque envelope or box, plainly marked "SEALED BID." The outside of the envelope of box shall also include the IFB Number, IFB Name, IFB Due Date, and the Bidder's Name and Address; and shall be addressed to the Purchasing Agent.

All submissions must be received by 11:00 am CT, Wednesday, August 24, 2022.

Late bids will not be accepted and will be returned unopened to the Bidder.

Bids will be accepted at the above address until the time and date specified herein, and immediately after will be publicly opened and read aloud.

Jefferson County will not accept any responsibility for bids being delivered by third party carriers.

Jefferson County shall not be responsible for any effort or cost expended in the preparation of a response to this IFB.

All bid responses submitted in response to this invitation shall become the property of Jefferson County and will be a matter of public record available for review.

All protests should be coordinated through the Purchasing Office prior to award recommendation to Commissioners' Court.

Please direct questions to Jamey West, Contract Specialist via e-mail at: jwest@co.jefferson.tx.us

3.2 COURTHOUSE SECURITY.

All visitors to the Courthouse must pass through Security. Respondents planning to hand deliver proposals must allow time to get through Security, as a delay in entering the Courthouse will not be accepted as an excuse for late submittal. Mondays and Tuesdays are particularly heavy days.

In response to the Covid-19 pandemic, Jefferson County has implemented precautionary measures as currently recommended by the CDC within its facilities. Bidders are strongly urged to plan accordingly.

COUNTY HOLIDAYS (2022)

~~**January 17, 2022,**~~	~~Martin Luther King, Jr. Day~~	~~Monday~~
~~**February 21, 2022,**~~	~~President's Day~~	~~Monday~~
~~**April 15, 2022,**~~	~~Good Friday~~	~~Friday~~
~~**May 30, 2022,**~~	~~Memorial Day~~	~~Monday~~
~~**July 4, 2022,**~~	~~Independence Day~~	~~Monday~~
September 5, 2022,	Labor Day	Monday
November 11, 2022,	Veteran's Day	Friday
November 24 & 25, 2022	Thanksgiving	Thursday & Friday
December 23 & 26, 2022	Christmas	Friday & Monday
January 2, 2023,	New Year's	Monday

Submissions During Time of Inclement Weather, Disaster, or Emergency:

In case of inclement weather or any other unforeseen event causing the County to close for business on the date of a bid/proposal/statement of qualifications submission deadline, the RFQ closing will automatically be postponed until the next business day that County offices are open to the public. Should inclement weather conditions or any other unforeseen event cause delays in courier service operations, the County may issue an addendum to all known vendors interested in the project to extend the deadline. It will be the responsibility of the vendor to notify the county of their interest in the project should these conditions impact their ability to submit a bid/proposal/statement of qualifications submission before the stated deadline. The County reserves the right to make the final judgement call to extend any deadline.

Should an emergency or unanticipated event interrupt normal County processes, and bid/proposal/statement of qualifications submissions cannot be received by the Jefferson County Purchasing Department's office by the exact time specified in the RFQ and urgent County requirements preclude amendment to the RFQ, the time specified for receipt of Statements of Qualifications will be deemed to be extended to the same time of day specified in the solicitation on the first business day on which normal County processes resume.

3.3 PRE-BID MEETING AND WALK-THROUGH.

There will be a Pre-Bid Conference and Walk-Through at 2:00 PM CT on Thursday, August 4, 2022, at the Airport Administration Conference Room located at 5000 Jerry Ware Blvd. Beaumont, Texas 77705. This conference will be the Bidder's only opportunity to view secured areas of the project.

3.4 QUESTIONS/DEADLINE FOR QUESTIONS.

Questions may be emailed to **Jamey West, Contract Specialist** at: jwest@co.jefferson.tx.us The Deadline for asking questions or requesting additional information (in writing) **is 5:00 pm CT, Monday, August 15, 2022.**

3.5 VENDOR REGISTRATION: SYSTEM FOR AWARD MANAGEMENT.

Vendors doing business with Jefferson County are **required** to be registered with The System for Award Management (SAM), with an "active" status. The System for Award Management (SAM) is the Official U.S. Government system that consolidated the capabilities of CCR/FedReg, ORCA, and EPLS. There is NO fee to register for this site. Entities may register at no cost directly from the SAM website at: https://www.sam.gov

In instances where a vendor has either an "inactive" SAM Registration or is not currently registered with the System for Award Management, the Purchasing Department may *initially* accept proof (printout from the SAM website) that the vendor has begun the registration process in order for the IFB/RFQ/RFP submission to be considered as "responsive" to the specifications for the project.

However, the SAM Registration must be completed (showing "active" status, with no exclusions) prior to the award and/or execution of an agreement or contract for the project.

3.6 FORM 1295 (Texas Ethics Commission) SUBMISSSION REQUIREMENT/INSTRUCTIONS FOR BIDDERS.

All Non-Exempt Bidders are required to submit a completed FORM 1295 with bid submission.

1. Submit a FORM 1295 online via the Texas Ethics Commission website link below.
Vendors must enter the required information on Form 1295 and print a copy of the completed form.
The form will include a certification of filing that will contain a unique certification number.

2. Submit a FORM 1295 hard copy (completed & signed by an Authorized Agent of the Awarded Vendor), to the Jefferson County Purchasing Department **with bid submission.**

FORM 1295, Completion Instructions, and Login Instructions are available via the Texas Ethics Commission Website at: https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm

A sample of a completed FORM 1295 is included on **PAGE 30**.

FORM 1295 Implementation Background:

In accordance with House Bill 1295 (passed January 1, 2016), Vendors entering into contracts and professional agreements with Jefferson County will be required to complete a Certificate of Interested Parties (FORM 1295), **unless contract is considered exempt as described below.**

In 2017, the Texas legislature amended the law to require Form 1295 to include an "unsworn declaration" which includes, among other things, the date of birth and address of the authorized representative signing the form. The unsworn declaration, including the date of birth and address of the signatory, replaces the notary requirement that applied to contracts entered into before January 1, 2018. The TEC filing application does not capture the date of birth or street address of the signatory and it will not appear on forms that are filed using the TEC filing application.

Changes to the law requiring certain businesses to file a Form 1295 are in effect for contracts entered into or amended on or after January 1, 2018. The changes exempt businesses from filing a Form 1295 for certain types of contracts and replace the need for a completed Form 1295 to be notarized. Instead, the person filing a 1295 needs to complete an "unsworn declaration."

Question: Will the date of birth and address provided appear on the TEC's website when the form is filed?

Answer: No. The TEC filing application does not capture the date of birth or street address of the signatory and it will not appear on forms that are filed using the TEC filing application. Although the TEC does not capture the date of birth and street address of the signatory, the contracting state agency or governmental agency will have

a physical copy of the form that includes the date of birth and address of the signatory. The TEC cannot answer whether the contracting state agency or governmental agency may release such information. Questions regarding the Texas Public Information Act may be directed to the Office of the Attorney General. See also Paxton v. City of Dall., No. 03-13-00546-CV, 2015 Tex. App. LEXIS 5228, at *10-11 (App.—Austin May 22, 2015) (mem. op.) (pet. denied) (available here)

FORM 1295 EXEMPTIONS:

What type of contracts are exempt from the Form 1295 filing requirement under the amended law?
The amended law adds to the list of types of contracts exempt from the Form 1295 filing requirement.

A completed Form 1295 is not required for:

- a sponsored research contract of an institution of higher education
- an interagency contract of a state agency or an institution of higher education
- a contract related to health and human services if: the value of the contract cannot be determined at the time the contract is executed; and any qualified vendor is eligible for the contract
- a contract with a publicly traded business entity, including a wholly owned subsidiary of the business entity
- a contract with an electric utility, as that term is defined by Section 31.002, Utilities Code
- a contract with a gas utility, as that term is defined by Section 121.001, Utilities Code

BIDDER: INSERT COMPLETED FORM 1295 BEHIND THIS PAGE.

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

1 of 1

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY
CERTIFICATION OF FILING

Certificate Number:
2022-925814

Date Filed:
08/24/2022

Date Acknowledged:

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.
L & L General Contractor
BEAUMONT, TX United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.
Jefferson County

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.
IFB-22-28/JW
Rehabilitation of Fuel Farm Pavement @ Jack Brooks Regional Airport

4 Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
		Controlling	Intermediary

5 Check only if there is NO Interested Party. [X]

6 UNSWORN DECLARATION

My name is McClain McDonald, and my date of birth is 08/28/1984.

My address is 4540 Burrell Loop (street), Beaumont (city), TX (state), 77705 (zip code), (country).

I declare under penalty of perjury that the foregoing is true and correct.

Executed in Jefferson County, State of TX, on the 24 day of Aug (month), 2022 (year).

Signature of authorized agent of contracting business entity
(Declarant)

BIDDER: INSERT PROOF OF SYSTEM FOR AWARD MANAGEMENT (SAM) REGISTRATION PROOF HERE.

An official website of the United States government Here's how you know

Register Entity

Core Data
Assertions
Representations and Certifications
Points of Contact
Small Business Certification
Entity Review
Confirmation Page

Confirmation Page

Unique Entity ID: PQSYSDFMJFM5

Registration Submitted - Confirmation
Wed Aug 24 09:44:10 EDT 2022

You successfully submitted your entity registration. This registration record will remain in Submitted status until all external validations are complete. This process is entirely FREE to you. It is FREE to register and maintain your registration in SAM. It is FREE to get help with your registration.

What happens next?

1. If you provided a Taxpayer Identification Number (TIN), the Internal Revenue Service (IRS) will conduct a validation of your TIN and Taxpayer Name. This could take two business days. You will get an email from @sam.gov when that review is complete.
2. Your registration will then be sent to the Defense Logistics Agency (DLA) Commercial and Government Entity (CAGE) Code system for assignment or validation of your CAGE Code. This also is a FREE service. This step averages two business days, but the DLA CAGE team can take up to ten business days, or longer, in peak periods. You will get an email from @sam.gov when that review is complete.
3. If the DLA CAGE team has any questions, they will contact the individual you listed as the Government Business Point of Contact (POC) via email. The email will come from an @dla.mil address. Please tell your Government Business POC to respond right away to any requests from an @dla.mil email. If a timely response is not received, your registration will be returned to SAM and your registration status changed to Work in Progress. You will have to resubmit and provide the requested information to DLA CAGE to continue.
4. You will get an email from @sam.gov when your registration passes these external validations and becomes Active. While you are waiting, select Check Status on the SAM.gov homepage to see where your registration is in the review process.
5. Remember, it is FREE to register and maintain your registration in SAM. If you get an email from any address that does not end in .gov or .mil, be cautious. If you get an email, text message, or phone call asking for money or payment of any amount, be very cautious. These parties do not represent the U.S. government. You engage third party vendors at your own risk.
6. You can get FREE help with your registration by contacting our supporting Federal Service Desk (FSD). In addition, if you are located in the U.S. and its outlying areas, you can get FREE support from your local Procurement Technical Assistance Center (PTAC), an official resource for government contracting assistance. Check the PTAC website to locate your closest PTAC.

Select Back to Workspace to be navigated to your Workspace where you can view your entity record and print or save a PDF.

Return to top

This is a U.S. General Services Administration Federal Government computer system that is **"FOR OFFICIAL USE ONLY."** This system is subject to monitoring. Individuals found performing unauthorized activities are subject to disciplinary action including criminal prosecution.

3.7 MULTIPLE VENDOR AWARD.

Jefferson County reserves the right to award this contract to more than one vendor at the County's discretion.

3.8 DELIVERY.

If delivery is required, all items must be packaged so as to be protected from damage during shipping and handling. Any item(s) damaged in shipping must be replaced in kind, or repaired, by the contractor, at the discretion of, and at no additional charge to, Jefferson County.

3.9 PAYMENT.

Jefferson County will pay original invoices that clearly itemize the goods and/or services provided as to quantity, part number, description, price, applicable discount (if any), labor charges showing time differential, if applicable and if previously agreed to, and delivery, installation, and set-up costs, if applicable and if previously agreed to. Only charges as stated on the Bid Form(s) submitted as a part of the bid will be considered.

Invoices must indicate Jefferson County as applicable, the address to which the product(s) and/or service(s) were delivered, and the applicable purchase order number. Invoices will be matched to delivery tickets prior to payment; therefore, all delivery tickets should have an accurate description of the product(s) and/or service(s).

Invoices shall be submitted to:
Jefferson County Auditing Department
Attention: Accounts Payable
1149 Pearl Street, 7th floor Beaumont,
TX 77701.

3.10 USAGE REPORTS.

Jefferson County reserves the right to request, and receive at no additional cost, up to two (2) times during the contract period, a usage report detailing the products and/or services furnished to date under a contract resulting from this IFB. The reports must be furnished no later than five (5) working days after written request and itemize all purchases to date by Jefferson County department, description of each item purchased, including manufacturer, quantity of each item purchased, per unit and extended price of each item purchased, and total amount and price of all items purchased.

3.11 INSURANCE.

The contractor (including any and all subcontractors as defined in Section 3.12.3 below) shall, at all times during the term of this contract, maintain insurance coverages with not less than the type and requirements shown below. Such insurance is to be provided at the sole cost of the contractor. These requirements do not establish limits of the contractor's liability.

All policies of insurance shall waive all rights of subrogation against the County, its officers, employees, and agents; a copy of the policy wording or endorsement is required.

Contractor shall furnish Jefferson County with Certificate of Insurance naming Jefferson County as additional insured and will provide the actual policy wording or endorsement showing as such.

All insurance must be written by an insurer licensed to conduct business in the State of Texas.

Minimum Insurance Requirements:

Public Liability, including Products & Completed Operations	$1,000,000
Excess Liability	$1,000,000

Property Insurance (policy below that is applicable to this project):
Improvements & Betterments Policy: Improvements/Remodeling (for Lease Tenants)
Builder's Risk Policy: Structural Coverage for Construction Projects
Installation Floater Policy: Improvements/Alterations to Existing Structure

Workers' Compensation Statutory Coverage (See Section 9 Below)

3.12 WORKERS' COMPENSATION INSURANCE.

3.12.1 Definitions:

3.12.1.1 **Certificate of coverage ("Certificate")** – A copy of a certificate of insurance, a certificate of authority to self-insure issued by the commission, or a coverage agreement, DWC-81, DWC-82, DWC-83, or DWC-84 showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.

3.12.1.2 **Duration of the project** – Includes the time from the beginning of the work on the project until the contractor's/person's work on the project has been completed and accepted by the governmental entity.

3.12.1.3 **Persons providing services on the project ("subcontractor") in article 406.096** – Includes all persons or entities performing all or part of the services under the contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the contractor and regardless of whether that person has employees. This includes, without limitation, independent contractors, subcontractor, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the project. "Services" includes, without limitation, providing, hauling, or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

3.12.2 The Contractor shall provide coverage, based on proper reporting of classification code and payroll amounts and filing any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the contractor providing services on the project, for the duration of the project.

3.12.3 The Contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract – **refer to Section 3.11 above**.

3.12.4 If the coverage period shown on the Contractor's current certificate of coverage ends during the duration of the project, the Contractor must, prior to the end of the coverage period, file a new certificate of coverage with the governmental entity showing that coverage has been extended.

3.12.5 The Contractor shall obtain from each person providing services on a project, and provide to the governmental entity:

3.12.5.1 A certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and

3.12.5.2 No later than seven (7) days after receipt by the Contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate ends during the duration of the project.

3.12.6 The Contractor shall retain all required certificates of coverage for the duration of the project and for one (1) year thereafter.

3.12.7 The Contractor shall notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.

3.12.8 The Contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Department of Workers' Compensation, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.

3.12.9 The Contractor shall contractually require each person with whom it contracts to provide services on a project to:

3.12.9.1 Provide coverage, based on reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all its employees' providing services on the project, for the duration of the project.

3.12.9.2 Provide to the Contractor, prior to that person beginning work on the project a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project.

3.12.9.3 Provide the Contractor, prior to the end of coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.

3.12.9.4 Obtain from each person with whom it contracts, and provide to the Contractor:

3.12.9.4.1 A certificate of coverage, prior to the other person beginning work on the project; and

3.12.9.4.2 the coverage period, if the coverage period shown on the current certificate of a new certificate of coverage showing extension of coverage, prior to the end of coverage ends during the duration of the project.

3.12.9.5 Retain all required certificates of coverage on file for the duration of the project and for one (1) year thereafter.

3.12.9.6 Notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and

3.12.9.7 Contractually require each person with whom it contracts to perform as required by paragraphs **3.12.1. – 3.12.7**, with the certificates of coverage to be provided to the person for whom they are providing services.

3.12.10 By signing this contract or providing or causing to be provided a certificate of coverage, the Contractor is representing to the governmental entity that all employees of the contractor who will provide services of the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.

3.12.11 The Contractor's failure to comply with any of these provisions is a breach of contract by the Contractor which entitles the governmental entity to declare the contract void if the Contractor does not remedy the breach within ten (10) days after receipt of notice of breach from the governmental entity.

BIDDER: INSERT COPY OF CERTIFICATE OF INSURANCE (COI) BEHIND THIS PAGE.

Note: For bid purposes, a general COI will suffice.

However, a COI that includes the notation that "Jefferson County as an additional insured" will be required from Awarded Bidder(s) prior to the issuance of a Purchase Order.

ACORD®

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 8/16/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER FB Taylor 2020 Avenue H Nederland TX 77627	CONTACT NAME: DUSTY DAVIS PHONE (A/C, No, Ext): 409-853-4598 FAX (A/C, No): E-MAIL ADDRESS: DUSTYDAVIS@NAVSAV.COM	
	INSURER(S) AFFORDING COVERAGE	NAIC #
	INSURER A : UNITED SPECIALTY INS CO	12537
	INSURER B : TEXAS MUTUAL WORKERS COMPENSATION INS.	22945
INSURED GADV, Inc. dba L & L General Contractors and Glenn McDonald Busi 11988 FM 365 RD BEAUMONT TX 777059408	INSURER C :	
	INSURER D :	
	INSURER E :	
	INSURER F :	

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	[X] COMMERCIAL GENERAL LIABILITY [ ] CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: [X] POLICY [ ] PRO-JECT [ ] LOC [ ] OTHER:	Y	Y	OMKS00028-00	06/14/2022	06/14/2023	EACH OCCURRENCE	$ 1,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 50,000
							MED EXP (Any one person)	$ 5,000
							PERSONAL & ADV INJURY	$ 1,000,000
							GENERAL AGGREGATE	$ 2,000,000
							PRODUCTS - COMP/OP AGG	$ 2,000,000
								$
	AUTOMOBILE LIABILITY [ ] ANY AUTO [ ] OWNED AUTOS ONLY [ ] SCHEDULED AUTOS [ ] HIRED AUTOS ONLY [ ] NON-OWNED AUTOS ONLY						COMBINED SINGLE LIMIT (Ea accident)	$
							BODILY INJURY (Per person)	$
							BODILY INJURY (Per accident)	$
							PROPERTY DAMAGE (Per accident)	$
								$
	[ ] UMBRELLA LIAB [ ] OCCUR [ ] EXCESS LIAB [ ] CLAIMS-MADE [ ] DED [ ] RETENTION $						EACH OCCURRENCE	$
							AGGREGATE	$
								$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N [Y] (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N/A		0001196029	11/08/2021	11/08/2022	[X] PER STATUTE [ ] OTH-ER	
							E.L. EACH ACCIDENT	$ 1,000,000
							E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

See ACORD 101

CERTIFICATE HOLDER

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Mrs. Dusty Davis

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SECTION 4: MINIMUM SPECIFICATIONS

The following requirements and specifications supersede General Bid Requirements where applicable. Any questions relating to bid submission or bid item specifications requirements should be directed to Jamey West, Contract Specialist via email at: jwest@co.jefferson.tx.us Please reference Bid Number: IFB 22-028/JW.

SCOPE OF PROJECT:

Jefferson County is soliciting bids for the Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport located adjacent to and south of the BPT air traffic control tower (ATCT). Fuel supply trucks enter the property through a secured gate just east of the fuel farm. The pavement at the fuel farm of the Jack Brooks Regional Airport has ongoing deterioration and needs to be rehabilitated or replaced. The estimated PCI of the pavement is approximately 40 or less.

The fuel farm concrete panels will be replaced in such a way to reduce the down time of the fueling area. The panel replacement will be coordinated to not impact the ability of the fuel farm to continue to provide fuel to aircraft using the airport. The subgrade must be adequately tested (density, Soil type, and CBR) to determine if it is sufficient to support the pavement surface. The scope of the project includes: • Full depth panel replacement of concrete at fuel loading and unloading area. • Full replacement of the containment wall. • Repair of underground drainage failure beneath pavement, if necessary. The finished product will meet NFPA 407, DOT, and EPA standards for fuel transfer area containment.

TECHNICAL SPECIFICATIONS:

Technical Specifications for this project may be found starting on **Page 61.**

BID FORM:

The BID FORM for this project may be found on **Page 40.**

BIDDER INFORMATION FORM

Instructions: Complete the form below. Please provide legible, accurate, and complete contact information. PLEASE PRINT.

Bid Number & Name: Invitation for Bid (IFB 22-028/JW)
Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport

Bidder's Company/Business Name: GADV Inc dba L&L General Contractors

Bidder's TAX ID Number: [redacted]

***If Applicable*:** **DBE Vendor No.** _____ **DBE Vendor No.** _____

Contact Person: McClain McDonald **Title:** Vice President

Phone Number (with area code): 409-796-1344

Alternate Phone Number if available (with area code): 409-796-1301

Fax Number (with area code): 409-796-1341

Email Address: landlinc@att.net

Mailing Address (Please provide a physical address for bid bond return, if applicable):

11988 FM 365
Address
Beaumont, Texas 77705
City, State, Zip Code

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

BIDDER: INSERT BID SURETY BEHIND THIS PAGE.

AIA® Document A310™ – 2010

Bid Bond

CONTRACTOR:
(Name, legal status and address)
L&L General Contractors
11988 FM 365 Road
Beaumont, TX 77705

SURETY:
(Name, legal status and principal place of business)
Merchants Bonding Company (Mutual)
P.O. Box 14498
Des Moines, IA 50306-3498

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

OWNER:
(Name, legal status and address)
Jefferson County Purchasing Department
1149 Pearl St., 1st Floor
Beaumont, TX 77701

BOND AMOUNT: Five Percent (5%) of Total Amount Bid

PROJECT:
(Name, location or address, and Project number, if any)
Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport
Bid No. IFB 22-028/JW

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this 24th day of August 2022

(Witness)

L&L General Contractors
(Principal) *(Seal)*

(Witness)

(Title)

Merchants Bonding Company (Mutual)
(Surety) *(Seal)*

(Title) **Mary Catherine Turner, Attorney-in-Fact**

Init.

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061110

MERCHANTS BONDING COMPANY™

POWER OF ATTORNEY

Know All Persons By These Presents, that MERCHANTS BONDING COMPANY (MUTUAL) and MERCHANTS NATIONAL BONDING, INC., both being corporations of the State of Iowa (herein collectively called the "Companies") do hereby make, constitute and appoint, individually,

Garrett Turner; Mary Catherine Turner; Meghann Turner

their true and lawful Attorney(s)-in-Fact, to sign its name as surety(ies) and to execute, seal and acknowledge any and all bonds, undertakings, contracts and other written instruments in the nature thereof, on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

This Power-of-Attorney is granted and is signed and sealed by facsimile under and by authority of the following By-Laws adopted by the Board of Directors of Merchants Bonding Company (Mutual) on April 23, 2011 and amended August 14, 2015 and adopted by the Board of Directors of Merchants National Bonding, Inc., on October 16, 2015.

"The President, Secretary, Treasurer, or any Assistant Treasurer or any Assistant Secretary or any Vice President shall have power and authority to appoint Attorneys-in-Fact, and to authorize them to execute on behalf of the Company, and attach the seal of the Company thereto, bonds and undertakings, recognizances, contracts of indemnity and other writings obligatory in the nature thereof."

"The signature of any authorized officer and the seal of the Company may be affixed by facsimile or electronic transmission to any Power of Attorney or Certification thereof authorizing the execution and delivery of any bond, undertaking, recognizance, or other suretyship obligations of the Company, and such signature and seal when so used shall have the same force and effect as though manually fixed."

In connection with obligations in favor of the Florida Department of Transportation only, it is agreed that the power and aut hority hereby given to the Attorney-in-Fact includes any and all consents for the release of retained percentages and/or final estimates on engineering and construction contracts required by the State of Florida Department of Transportation. It is fully understood that consenting to the State of Florida Department of Transportation making payment of the final estimate to the Contractor and/or its assignee, shall not relieve this surety company of any of its obligations under its bond.

In connection with obligations in favor of the Kentucky Department of Highways only, it is agreed that the power and authority hereby given to the Attorney-in-Fact cannot be modified or revoked unless prior written personal notice of such intent has been given to the Commissioner-Department of Highways of the Commonwealth of Kentucky at least thirty (30) days prior to the modification or revocation.

In Witness Whereof, the Companies have caused this instrument to be signed and sealed this 11th day of February , 2020 .

MERCHANTS NATIONAL BONDING, INC. -o- 2003

MERCHANTS BONDING COMPANY (MUTUAL) INCORPORATED -o- 1933

MERCHANTS BONDING COMPANY (MUTUAL)
MERCHANTS NATIONAL BONDING, INC.

By Larry Taylor
President

STATE OF IOWA
COUNTY OF DALLAS ss.
On this 11th dey of February 2020 , before me appeared Larry Taylor, to me personally known, who being by me duly sworn did say that he is President of MERCHANTS BONDING COMPANY (MUTUAL) and MERCHANTS NATIONAL BONDING, INC.; and that the seals affixed to the foregoing instrument are the Corporate Seals of the Companies; and that the said instrument was signed and sealed in behalf of the Companies by authority of their respective Boards of Directors.

NOTARIAL SEAL IOWA

POLLY MASON
Commission Number 750576
My Commission Expires
January 07, 2023

Polly Mason
Notary Public

(Expiration of notary's commission does not invalidate this instrument)

I, William Warner, Jr., Secretary of MERCHANTS BONDING COMPANY (MUTUAL) and MERCHANTS NATIONAL BONDING, INC., do hereby certify that the above and foregoing is a true and correct copy of the POWER-OF-ATTORNEY executed by said Companies, which is still in full force and effect and has not been amended or revoked.

In Witness Whereof, I have hereunto set my hand and affixed the seal of the Companies on this **24th** day of **August** , **2022** .

MERCHANTS NATIONAL BONDING, INC. -o- 2003

MERCHANTS BONDING COMPANY (MUTUAL) INCORPORATED -o- 1933

William Warner Jr.
Secretary

POA 0018 (1/20)

Attention: Katie Royer
Surety Bond Brokers, Inc.
Phone: (225)757-9191
Fax: (225)757-9199

SURETY
BOND BROKERS

BID BOND RESULT FORM

CONTRACTOR: L&L General Contractors

FAX:
Phone: () -

BID DATE: 8/24/2022

OWNER: Jefferson County Purchasing Department

PROJECT: Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport, Bid No. IFB 22-028/JW

The Surety asks that Bid Results be provided as soon as possible after the bid date. We would appreciate you completing this form and returning via fax or email at your earliest opportunity. Thank you!

	CONTRACTOR	BID
1st	_____	$ _____
2nd	_____	$ _____
3rd	_____	$ _____

If you are *not* one of the three lowest bidders:

My Bid: _____ $ _____

If you were low, or were low and negotiating, evaluation of bids and award of contract is expected by ___/___/___.

Surety Bond Brokers
Please Email or Fax to: Katie Royer

BID FORM

UNIT PRICES: This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures. **All quantities are estimated. The contractor will be paid based upon actual quantities as verified by the Owner**

DESCRIPTION:	☒ Base Bid			
REF. NO. 1	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Mobilization C-105	1	LS	43,651.00	43,651.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 2	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Construction Safety (Barricades, Signs, and Traffic Handling) SS-120	1	LS	5,500.00	5,500.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 3	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Allowance for Storm Sewer Pipe Replacement D-701a	1	LS	5,000.00	5,000.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 4	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Install PVC Pipe (2 Inch) D-701b	6	LF	250.00	1,500.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 5	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Sawcut, Remove and Dispose Existing Concrete Pavement Full Depth (8 Inches) P-101-5.1a	602	SY	30.00	18,000.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 6	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Sawcut, Remove and Dispose Existing Asphalt Ramp P-101-5.1b	70	SY	30.00	2,100.00

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

BID FORM (CONTINUED)

DESCRIPTION:	☒ Base Bid			
REF. NO. 7	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Sawcut, Remove and Dispose Existing 6" Vertical Curb P-101-5.1c	302	LF	15.00	4,530.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 8	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Embankment in Place P-152-4.2	30	CY	150.00	4,500.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 9	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Unsuitable Excavation P-152-4.4	30	CY	150.00	4,500.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 10	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Lime Treated Subgrade (8 inches) P-152-8.1	602	SY	43.00	25,886.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 11	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Lime P-152-8.2	31	TON	350.00	10,850.00

DESCRIPTION:	☒ Base Bid			
REF. NO.12	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Reinforced Concrete Pavement (8 Inches) P-501-8.1a	526	SY	180.00	94,680.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 13	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Reinforced Concrete Pavement Ramp (8-12 Inches) P-501-8.1b	76	SY	180.00	13,680.00

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

BID FORM (CONTINUED) REPLACEMENT PAGE 42

DESCRIPTION:	☒ Base Bid			
REF. NO. 14	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Biodegradable Erosion Control Logs (Install) TXDOT 506-6.6.1	200	LF	20.00	4,000.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 15	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Biodegradable Erosion Control Logs (Removal) TXDOT 506-6.6.2	200	LF	20.00	4,000.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 16	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
4" Concrete Curb TXDOT 529	278	LF	30.00	8,340.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 17	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Furnish and Install 4' Steel Bollards	2	EA	750.00	1,500.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 18	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Install 6' Rubber Speed Bumps	4	EA	500.00	2,000.00

DESCRIPTION:	☒ Base Bid
	TOTAL BID PRICE ***($ XXX,XXX.XX)***
TOTAL BID	254,217.00

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

BIDDER ACKNOWLEDGEMENT OF BID ADDENDA (IF APPLICABLE):

Addendum	1 XX	Date Received	08.01.2022
Addendum	2 XX	Date Received	08.17.2022
Addendum	3 _____	Date Received	_____
Addendum	4 _____	Date Received	_____
Addendum	5 _____	Date Received	_____

BIDDER: INCLUDE FULL, SIGNED, & ATTESTED COPY OF EACH ADDENDUM ISSUED WITH BID SUBMISSION.

VENDOR REFERENCES FORM

Bidder: Please list at least three (3) companies or governmental agencies (preferably a municipality) where the same or equivalent products and/or services as contained in this specification package were recently provided.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

REFERENCE ONE

Government/Company Name: Diocese of Beaumont

Address: 710 Archie Street, Beaumont, Texas 77701

Contact Person and Title: Alan Bihm - Director of Construction

Phone: 409-924-4300 Fax:

Email Address: abihm@dioceseofbmt.org Contract Period: Since 2008

Scope of Work: Serve the needs of the Diocese of Beaumont

REFERENCE TWO

Government/Company Name: Waste Connections of Texas

Address: 3 Waterway Square Place, Suite 110, The Woodlands, Tx, 77380

Contact Person and Title: Gary Bartles

Phone: 832-442-2200 Fax: 832-442-2290

Email Address: gary.bartles@wasteconnections.com Contract Period: Since 2014

Scope of Work: To serve the needs of Waste Connections across Texas and the US

REFERENCE THREE

Government/Company Name: Jack Brooks Regional Airport

Address: 5000 Jerry Ware Drive Suite 100, Beaumont, Texas 77705

Contact Person and Title: Alex Rupp - Airport Manager

Phone: 409-719-4900 Fax:

Email Address: Alex Rupp [arupp@co.jefferson.tx.us] Contract Period: 2011-2012 and 2018

Scope of Work: Hangar #2 Rehabilitation 2011-2012 Hangar #2 Repair 2018-2019

SIGNATURE PAGE

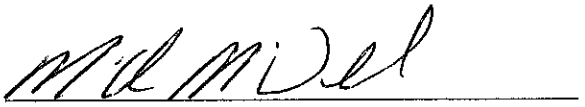
As permitted under Article 4413 (32c) V.A.C.S., other governmental entities may wish to participate under the same terms and conditions contained in this contract (i.e., piggyback). In the event any other entity participates, all purchase orders will be issued directly from and shipped directly to the entity requiring supplies/services. Jefferson County shall not be held responsible for any orders placed, deliveries made or payment for supplies/services ordered by another entity. Each entity reserves the right to determine their participation in this contract.

Would Bidder be willing to allow other governmental entities to piggyback off this contract, if awarded, under the same terms and conditions? ..... **Yes** ☐ **No** ☒

This bid shall remain in effect for ninety (90) days from bid opening and shall be exclusive of federal excise and state and local sales tax (exempt).

The undersigned agrees, if this bid is accepted, to furnish any and all items upon which prices are offered, at the price and upon the terms and conditions contained in the Invitation for Bid, Conditions of Bidding, Terms of Contract, and Specifications and all other items made a part of the accepted contract.

The undersigned affirms that they are duly authorized to execute the contract, that this company, corporation, firm, partnership or individual has not prepared this bid in collusion with any other Bidder, and that the contents of this bid as to prices, terms or conditions of said bid have not been communicated by the undersigned nor by any employee or agent to any other Bidder or to any other person(s) engaged in this type of business prior to the official opening of this bid. And further, that neither the Bidder nor their employees nor agents have been for the past six (6) months directly nor indirectly concerned in any pool or agreement or combination to control the price of goods or services on, nor to influence any person to bid or not to bid thereon.

GADV Inc dba L&L General Contractors	
Bidder (Entity Name)	Signature
11988 FM 365	McClain McDonald
Street & Mailing Address	Print Name
Beaumont, Texas 77705	8-24-2022
City, State & Zip	Date Signed
409-796-1344	409-796-1341
Telephone Number	Fax Number
landlinc@att.net	
E-mail Address	

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

BYRD ANTI-LOBBYING CERTIFICATION

Certification for Contracts, Grants, Loans, and Cooperative Agreements-The undersigned certifies, to the best of his or her knowledge and belief, that:

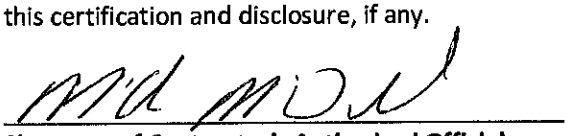
No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor GADV Inc dba L&L General Contractors certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.



Signature of Contractor's Authorized Official

McClain McDonald - Vice President

Name and Title of Contractor's Authorized Official

08-24-2022

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

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LOCAL GOVERNMENT OFFICER
CONFLICTS DISCLOSURE STATEMENT – OFFICE USE ONLY

LOCAL GOVERNMENT OFFICER CONFLICTS DISCLOSURE STATEMENT

FORM CIS

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This is the notice to the appropriate local governmental entity that the following local government officer has become aware of facts that require the officer to file this statement in accordance with Chapter 176, Local Government Code.

OFFICE USE ONLY

Date Received

1 **Name of Local Government Officer**

2 **Office Held**

3 **Name of vendor described by Sections 176.001(7) and 176.003(a), Local Government Code**

4 **Description of the nature and extent of employment or other business relationship with vendor named in item 3**

5 **List gifts accepted by the local government officer and any family member, if aggregate value of the gifts accepted from vendor named in item 3 exceeds $100 during the 12-month period described by Section 176.003(a)(2)(B).**

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

(attach additional forms as necessary)

6 **AFFIDAVIT**

I swear under penalty of perjury that the above statement is true and correct. I acknowledge that the disclosure applies to each family member (as defined by Section 176.001(2), Local Government Code) of this local government officer. I also acknowledge that this statement covers the 12-month period described by Section 176.003(a)(2)(B), Local Government Code.

_____
Signature of Local Government Officer

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said _____, this the _____ day of _____, 20 _____, to certify which, witness my hand and seal of office.

_____
Signature of officer administering oath | Printed name of officer administering oath | Title of officer administering oath

Adopted 8/7/2015

THIS FORM IS FOR OFFICE USE ONLY

DEBARMENT/SUSPENSION CERTIFICATION

Non-Federal entities and contractors are subject to the debarment and suspension regulations implementing Executive Order 12549, Debarment and Suspension (1986) and Executive Order 12689, Debarment and Suspension (1989) at 2 C.F.R. Part 180 and the Department of Homeland Security's regulations at 2 C.F.R. Part 3000 (No procurement Debarment and Suspension).

This requirement applies to all FEMA grant and cooperative agreement programs.

Federal Executive Order (E .O.) 12549 "Debarment" requires that all contractors receiving individual awards, using federal funds, and all sub recipients certify that the organization and its principals are not debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded by any Federal department or agency from doing business with the Federal Government. By signing this document, you certify that your organization and its principals are not debarred. Failure to comply or attempts to edit this language may disqualify your bid. Information on debarment is available at the following websites:

www.sam.gov and https://acguisition.qov/far/index.html (see section 52.209-6).

GADV Inc dba L&L General Contractors

The Contractor certifies or affirms by your signature that neither you nor your principal is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.

Signature of Contractor's Authorized Official

McClain McDonald - Vice President

Name and Title of Contractor's Authorized Official

08-24-2022

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

CIVIL RIGHTS COMPLIANCE PROVISIONS

EQUAL EMPLOYMENT OPPORTUNITY (Equal Opportunity Clause)

(For all awarded contracts that meet the definition of "federally assisted construction contract" provided in 41 CFR Part 60-1.3)

During the performance of this contract, the contractor agrees as follows:

The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or order this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

Signature of Contractor's Authorized Official

McClain McDonald - Vice President

Name and Title of Contractor's Authorized Official

08-24-2022

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

GOOD FAITH EFFORT (GFE) DETERMINATION CHECKLIST

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
☒ Yes ☒ No

Instructions: In order to determine if a "Good Faith Effort" was made in soliciting DBEs for subcontracting opportunities, the following checklist and supporting documentation shall be completed by the Prime Contractor/Consultant and returned with the Prime Contractor/ Consultant's bid. This list contains the **minimum** efforts that should be put forth by the Prime Contractor/Consultant when attempting to achieve or exceed the goals of DBE Subcontractor participation. The Prime Contractor/Consultant may extend his/her efforts in soliciting DBE Subcontractor participation beyond what is listed below.

Did the Prime Contractor/Consultant . . .?

☐ Yes ☒ No 1. To the extent practical, and consistent with standard and prudent industry standards, divide the contract work into the smallest feasible portions, to allow for maximum DBE Subcontractor participation?

☐ Yes ☒ No 2. **Notify** in writing a reasonable number of DBEs, allowing sufficient time for effective participation of the planned work to be subcontracted?

☐ Yes ☒ No 3. **Provide** DBEs that were genuinely interested in bidding on a subcontractor, adequate information regarding the project (i.e., plans, specifications, scope of work, bonding and insurance requirements, and a point of contract within the Prime Contractor/Consultant's organization)?

☐ Yes ☒ No 4. **Negotiate** in good faith with interested DBEs, and not reject bids from DBEs that qualify as lowest and responsive Bidders?

☐ Yes ☒ No 5. **Document** reasons DBEs were rejected? Was a written rejection notice, including the reason for rejection, provided to the rejected DBEs?

☐ Yes ☒ No 6. If Prime Contractor/Consultant has zero (0) DBE participation, **please explain the reasons why.** Due to the time requirements for this project, L&L intends to self-perform the majority of this work

If "No" was selected, please explain, and include any pertinent documentation with your bid.
If necessary, please use a separate sheet to answer the above questions.

McClain McDonald - Vice President
Printed Name of Authorized Representative

Signature

Vice President
Title

08-24-2022
Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

NOTICE OF INTENT (NOI) TO SUBCONTRACT WITH DISADVANTAGED BUSINESS ENTERPRISE (DBE)

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
[X] Yes [X] No

Instructions for Prime Contractor/Consultant: Bidder shall submit this form with the bid; however, the information below may be submitted after contract award, but prior to beginning performance on the contract. Please submit one form for each DBE Subcontractor/Subconsultant with proper signatures, per the terms and conditions of your contract.

Contractor Name: TBA DBE: ☐ Yes ☐ No

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Project Title & No.: _____

Prime Contract Amount: $ UNKNOWN

DBE Subcontractor Name: TBA

DBE Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg. & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ UNKNOWN Percentage of Prime Contract: UNKNOWN %

Description of Subcontract Work to be Performed: _____

McClain McDonald	[signature]	08-24-2022
Printed Name of Contractor Representative	Signature of Representative	Date
NA	NA	NA
Printed Name of DBE	Signature of Representative	Date

Note: Nothing on this Notice of Intent Form is intended to confer any rights, expressed or implied, to any third parties.

Pre-Approval for Subcontractor Substitutions must be obtained from the Jefferson County Purchasing Agent's Representative. The "DBE Subcontractor/Subconsultant Change Form" must be completed and faxed to 409-835-8456.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

DISADVANTAGED BUSINESS ENTERPRISE (DBE)
SUBCONTRACTING PARTICIPATION DECLARATION FORM

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
[X] Yes [X] No

Prime Contractor: GADU INC DBA L&L General Contractors DBE: [ ] Yes [X] No

DBE Status (Gender & Ethnicity): N/A

Address: 11988 FM 365 (Street) Bmt (City) TX (State) 77705 (Zip)

Phone (with area code): 409 796 1344 Fax (with area code): 409 796 1341

Project Title & No.: IFB 22-028/JW IFB/RFP No.: IFB22-028/JW

Total Contract: $ TBA Total DBE Subcontract(s): $ TBA

Construction DBE Goals: 12.8% MBE: TBA % 12.6% WBE: TBA %

Sub-goals: 1.7 African American, 9.7% Hispanic, 0.7% Native American, 0.8% Asian American.
Use these goals as a guide to diversify.

FOR DBE OFFICE USE ONLY:

Verification date DBE Program Office reviewed and verified DBE Sub information Date: _____ Initials: _____

PART I. DBE SUBCONTRACTOR DISCLOSURE

DBE Subcontractor Name: TBA

DBE Status (Gender & Ethnicity): TBA

Certifying Agency: [ ] Texas Bldg. & Procurement Comm. [ ] Texas Unified Certification Prog.

Address: TBA (Street) (City) (State) (Zip)

Contact person: TBA Title: TBA

Phone (with area code): TBA Fax (with area code): TBA

Proposed Subcontract Amount: $ TBA Percentage of Prime Contract: TBA %

Description of Subcontract Work to be Performed: TBA

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

DISADVANTAGED BUSINESS ENTERPRISE (DBE)
SUBCONTRACTING PARTICIPATION DECLARATION FORM

Subcontractor Name: TBA

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: TBA

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

I hereby certify that I have read the *DBE Program Instructions and Information*, truthfully completed all applicable parts of this form, and **attach any necessary support documentation as required**. I fully understand that intentionally falsifying information on this document may result in my not receiving a contract award or termination of any resulting contract.

Name (print or type): McClain McDonald

Title: Vice President

Signature: [signature]

Date: 08-24-2022

E-mail address: landlinc@att,.net

Contact person that will be in charge of invoicing for this project:

Name (print or type): McClain McDonald

Title: Vice President

Date: 08-24-2022

E-mail address: landlinc@att.net

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

RESIDENCE CERTIFICATION/TAX FORM

Pursuant to Texas Government Code §2252.001 *et seq.*, as amended, Jefferson County requests Resident Certification. §2252.001 *et seq.* of the Government Code provides some restrictions on the awarding of governmental contracts; pertinent provisions of §2252.001 are stated below:

(3) "Non-resident Bidder" refers to a person who is not a resident.

(4) "Resident Bidder" refers to a person whose principal place of business is in this state, including a contractor whose ultimate parent company or majority owner has its principal place of business in this state.

GADV Inc dba

☒ I certify that L&L General Contractors [company name] is a Resident Bidder of Texas as defined in Government Code §2252.001.

☐ I certify that _____ [company name] is a Nonresident Bidder as defined in Government Code §2252.001 and our principal place of business is _____ _____ (city and state).

Taxpayer Identification Number (T.I.N.):	[redacted]
Company Name submitting bid/proposal:	GADV Inc dba L&LGeneral Contractors
Mailing address:	11988 FM 365, Beaumont, Texas 77705
If you are an individual, list the names and addresses of any partnership of which you are a general partner:	

Property: List all taxable property owned by you or above partnerships in Jefferson County.

Jefferson County Tax Acct. No.*	Property address or location**
38625-000-100-000-8	11988 FM 365, Beaumont, Texas 77705
053300-000 / 024200-000	TR2 S1 AC of W 3 AC OF LT 6 BLK 5 Port Acres Abstract 53300
700000-000-355565-0000-6	11988 FM 365, Beaumont, Texas 77705

* This is the property amount identification number assigned by the Jefferson County Appraisal District.

** For real property, specify the property address or legal description. For business property, specify the address where the property is located. For example, office equipment will normally be at your office, but inventory may be stored as a warehouse or other location.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

HOUSE BILL 89 VERIFICATION

I, McClain McDonald, the undersigned representative of (company or business name) GADV Inc dba L&L General Contractors (heretofore referred to as company) being an adult over the age of eighteen (18) years of age, after being duly sworn by the undersigned notary, do hereby depose and verify under oath that the company named above, under the provisions of Subtitle F, Title 10, Government Code Chapter 2270:

1. Does not boycott Israel currently; and
2. Will not boycott Israel during the term of the contract.

Pursuant to Section 2270.002, Texas Government Code:

1. **"Boycott Israel"** means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made ordinary business purposes; and

2. **"Company"** means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or a limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of those entities or business association that exist to make a profit.

Signature of Company Representative

08-24-2022
Date

On this 24th day of August, 20 22, personally appeared

McClain McDonald, the above-named person, who after by me being duly sworn, did swear and confirm that the above is true and correct.

Notary Seal

Notary Signature

8-24-2022
Date

TARA KYLE DAVIS
Notary Public, State of Texas
Comm. Expires 03-02-2026
Notary ID 12196848

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

SENATE BILL 252 CERTIFICATION

On this day, I, Deborah L. Clark, Purchasing Agent for Jefferson County, Texas, pursuant to Texas Government Code, Chapter 2252, Section 2252.152 and Section 2252.153, certify that I did review the website of the Comptroller of the State of Texas concerning the listing of companies that is identified under Section 806.051, Section 807.051, or Section 2253.253 and I have ascertained that the below named company is not contained on said listing of companies which do business with Iran, Sudan, or any Foreign Terrorist Organization.

GADV Inc dba L&L General Contractors

Company Name

IFB 22-028/JW

IFB/RFP/RFQ number

Certification check performed by:

Purchasing Representative

Date

BID AFFIDAVIT

The undersigned certifies that the bid prices contained in this bid have been carefully reviewed and are submitted as correct and final. Bidder further certifies and agrees to furnish any and/or all commodities upon which prices are extended at the price offered, and upon the conditions contained in the specifications and the Notice to Bidders.

STATE OF Texas COUNTY OF Jefferson

BEFORE ME, the undersigned authority, a Notary Public in and for the State of Texas,

on this day personally appeared McClain McDonald (name), who

after being by me duly sworn, did depose and say:

"I, McClain McDonald (name) am a duly authorized officer of/agent

for GADV Inc dba L&L General Contractors (name of firm) and have been duly authorized to execute the

foregoing on behalf of the said GADV Inc dba L&L General Contractors (name of firm).

I hereby certify that the foregoing bid has not been prepared in collusion with any other Bidder or other person or persons engaged in the same line of business prior to the official opening of this bid. Further, I certify that the Bidder is not now, nor has been for the past six (6) months, directly or indirectly concerned in any pool or agreement or combination, to control the price of services/commodities bid on, or to influence any person or persons to bid or not to bid thereon."

Name and address of Bidder: GADV Inc dba L&L General Contractors

11988 FM 365, Beaumont, Texas 77705

Fax: 409-796-1341 Telephone# 409-796-1344

by: _____ (print name) Title: Vice President

Signature: _____

SUBSCRIBED AND SWORN to before me by the above-named

McClain McDonald on

this the 24th day of August, 20 22.

Tara Kyle Davis

Notary Public in and for

the State of Texas

TARA KYLE DAVIS
Notary Public, State of Texas
Comm. Expires 03-02-2026
Notary ID 12196848

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

TECHNICAL SPECIFICATIONS

BID AFFIDAVIT

The undersigned certifies that the bid prices contained in this bid have been carefully reviewed and are submitted as correct and final. Bidder further certifies and agrees to furnish any and/or all commodities upon which prices are extended at the price offered, and upon the conditions contained in the specifications and the Notice to Bidders.

STATE OF_____ COUNTY OF_____

BEFORE ME, the undersigned authority, a Notary Public in and for the State of _____,

on this day personally appeared _____, who
(name)

after being by me duly sworn, did depose and say:

"I, _____ am a duly authorized officer of/agent
(name)

for _____ and have been duly authorized to execute the
(name of firm)

foregoing on behalf of the said_____.
(name of firm)

I hereby certify that the foregoing bid has not been prepared in collusion with any other Bidder or other person or persons engaged in the same line of business prior to the official opening of this bid. Further, I certify that the Bidder is not now, nor has been for the past six (6) months, directly or indirectly concerned in any pool or agreement or combination, to control the price of services/commodities bid on, or to influence any person or persons to bid or not to bid thereon."

Name and address of Bidder:_____

_____

Fax: _____ Telephone#_____

by: _____ Title:_____
(print name)

Signature:_____

SUBSCRIBED AND SWORN to before me by the above-named

_____ on

this the _____ day of_____, 20___.

_____
Notary Public in and for
the State of _____

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

DAVIS BACON MINIMUM WAGE SCALE AND PAYROLL REQUIREMENTS

1.1 Following 29 CFR 5.5 (a) (1) (v), use the rates listed on the Wage Determination Attachment for minimum wage and benefits for the labor classifications applicable to the Work.

1.2 These rates do not prohibit payment of more than the rates stated.

1.3 Apply rates in this Document 00810 to site work greater than five (5) feet from exterior wall of new building under construction or from exterior wall of existing building.

Certified Payroll Requirements

2.1 The Contractor shall submit the "Certificate from Contractor Appointing Officer or Employee to Supervise Payment of Employees" (Exhibit "A") to the Monitoring Authority prior to final execution of the contract.

2.2 During the course of the work, ALL Subcontractors shall submit the "Certificate from Subcontractor Appointing Officer or Employee to Supervise Payment of Employees" (Exhibit "B") to the Monitoring Authority.

Article 5159a of the Revised Civil Statutes of Texas, passed by the 43rd Legislature Acts of 1933, Page 91, Chapter 45, provides that any government subdivision shall ascertain the general prevailing rate of per diem wages in the locality in which the work is to be per diem wages which shall be paid for each craft type of workman. This Article further provides the CONTRACTOR shall forfeit, as a penalty, to the City, County, or State , or other political subdivision. Ten Dollars ($10.00) per day for each laborer, or workman, or mechanic who is not paid the stipulated wage for the type of work performed by him as set up on the wage scale. The OWNER is authorized to withhold from the CONTRACTOR, after full investigation by the awarding body, the amount of this penalty in any payment that might be claimed by the CONTRACTOR or SUBCONTRACTOR. The Act make the CONTRACTOR responsible for the acts of the SUBCONTRACTOR in this respect. The Article likewise requires that the CONTRACTOR and SUBCONTRACTOR keep an accurate record of the names and occupations of all persons employed by him and show the actual per diem wages paid to each worker, and these records are open to the inspection of the OWNER.

EXHIBIT "A"

Wage Determination Publication Date:
January 7, 2022
for
General Decision Number: **TX20220038 01/07/2022 TX38**
Superseded General Decision Number: TX20210038

State: Texas
Construction Type: Highway
Counties: Austin, Brazoria, Chambers, Fort Bend, Galveston, Hardin, Harris, Jefferson, Liberty, Montgomery, Orange, San Jacinto and Waller Counties in Texas.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022, Executive Order 14026 generally applies to the contract. The contractor must pay all covered workers at least $15.00 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.

If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022, Executive Order 13658 generally applies to the contract. The contractor must pay all covered workers at least $11.25 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/07/2022

LABOR CLASSIFICATIONS AND PREVAILING WAGE RATES
CONSTRUCTION 2022

CLASSIFICATION	RATE	CLASSIFICATION	RATE
Cement Mason / Concrete Finisher- Paving and Structures	$12.98	Power Equipment Operator, Foundation Drill, Truck Mounted	$15.89
Electrician * 3 Journeyman to 2 Apprentices Allowed	$27.11	Power Equipment Operator, Front End Loader, 3 CY or less	$13.32
Form Builder / Form Setter- Paving and Curb	$12.34	Power Equipment Operator, Front End Loader, over 3 CY	$13.17
Form Builder / Form Setter- Structures	$12.23	Power Equipment Operator, Loader/Backhoe	$14.29
Laborer, Asphalt Raker	$12.36	Power Equipment Operator, Mechanic	$16.96
Laborer, Common	$11.02	Power Equipment Operator, Milling Machine	$13.53
Laborer, Flagger	$10.33	Power Equipment Operator, Motor Grader, Fine Grade	$15.69
Laborer, Pipelayer	$12.12	Power Equipment Operator, Motor Grader, Rough	$14.23
Laborer, Utility	$11.73	Power Equipment Operator, Off Road Hauler	$14.60
Laborer, Work Zone Barricade Servicer	$11.67	Power Equipment Operator, Pavement Marking Machine	$11.18
Painter (Structures)	$18.62	Power Equipment Operator, Piledriver	$14.95
Power Equipment Operator, Asphalt Distributor Operator	$14.06	Power Equipment Operator, Roller, Asphalt	$11.95
Power Equipment Operator, Asphalt Paving Machine	$14.32	Power Equipment Operator, Roller, Other	$11.57
Power Equipment Operator, Broom or Sweeper	$12.68	Power Equipment Operator, Scraper	$13.47
Power Equipment Operator, Concrete Paving Finishing Machine	$13.07	Servicer	$13.97
Power Equipment Operator, Concrete Paving, Curing, Float Texturing Machine	$11.71	Power Equipment Operator, Spreader Box	$13.58
Power Equipment Operator, Concrete Saw	$13.99	Steel Worker, Reinforcing Steel	$15.15
Power Equipment Operator, Crane, Hydraulic 80 tons or less	$13.86	Steel Worker, Structural Steel	$14.39
Power Equipment Operator, Crane, Lattice boom 80 tons or less	$14.97	Steel Worker, Structural Steel Welder	$12.85
Power Equipment Operator, Crane, Lattice boom over 80 tons	$15.80	Truck Driver, Low Boy Float	$16.03
Power Equipment Operator, Crawler Tractor	$13.68	Truck Driver, Single Axle	$11.46
Power Equipment Operator, Excavator, 50,000 pounds or less	$12.71	Truck Driver, Single-or Tandem Axle Dump	$11.48
Power Equipment Operator, Excavator, over 50,000 pounds	$14.53	Truck Driver, Tandem Axle Tractor w/ Semi-Trailer	$12.27
Power Equipment Operator, Foundation Drill, Crawler Mounted	$17.43		
Welders - Receive rate prescribed for craft performing operation to which welding is incidental			
* Apprentices- must be in an approved USDOL Program and cannot exceed ratios			

EXHIBIT "B"

CERTIFICATE FROM CONTRACTOR APPOINTING OFFICER OR EMPLOYEE TO SUPERVISE PAYMENT OF EMPLOYEES

Project Name _____

_____

Project WBS#: _____ Date _____

Email Address: _____

(I) (We) hereby certify that (I am) (we are) the Prime Contractor for _____

_____
(specify type of job)

in connection with construction of the above-mentioned Project, and that (I) (we) have appointed _____, whose signature appears below, to supervise the payment of (my) (our) employees beginning _____, 20___; that ___he/she is in a position to have full knowledge of the facts set forth in the payroll documents and in the statement of compliance required by the Copeland Act and Jefferson County, which he/she is to execute with (my) (our) full authority and approval until such time as (I) (we) submit to the Jefferson County a new certificate appointing some other person for the purposes hereinabove stated.

_____ Phone: _____
(Identifying Signature of Appointee)

Attest: _____
(Name of Firm or Corporation)

By: _____ By: _____
(Signature) (Signature)

_____ _____
(Title) (Title)

NOTE: This certificate must be executed by an authorized officer of a corporation or by a member of a partnership, and shall be executed prior to and be submitted with the first payroll. Should the appointee be changed, a new certificate must accompany the first payroll for which the new appointee executes a statement of compliance required by the Copeland Act and Jefferson County.

EXHIBIT "C"

CERTIFICATE FROM SUBCONTRACTOR APPOINTING OFFICER OR EMPLOYEE TO SUPERVISE PAYMENT OF EMPLOYEES

Project Name _____

_____

Project WBS#: _____ Date _____

Email Address: _____

(I) (We) hereby certify that (I am) (we are) the Sub Contractor for _____

_____
(specify type of job)

in connection with construction of the above-mentioned Project, and that (I) (we) have appointed _____, whose signature appears below, to supervise the payment of (my) (our) employees beginning ____, 20__; _____ that ___he/she is in a position to have full knowledge of the facts set forth in the payroll documents and in the statement of compliance required by the Copeland Act and Jefferson County, which he/she is to execute with (my) (our) full authority and approval until such time as (I) (we) submit to Jefferson County a new certificate appointing some other person for the purposes herein above stated.

_____ Phone: _____
(Identifying Signature of Appointee)

Attest: _____
(Name of Firm or Corporation)

By: _____ By: _____
(Signature) (Signature)

_____ _____
(Title) (Title)

NOTE: This certificate must be executed by an authorized officer of a corporation or by a member of a partnership, and shall be executed prior to and be submitted with the first payroll. Should the appointee be changed, a new certificate must accompany the first payroll for which the new appointee executes a statement of compliance required by the Copeland Act and Jefferson County.

END OF DOCUMENT

TECHNICAL SPECIFICATIONS

REHABILITATION OF FUEL FARM PAVEMENT
JACKBROOKS REGIONAL AIRPORT (BPT)
ISB 22-028/JW

May 2022

ITEM SS-101 SAFETY PLAN COMPLIANCE DOCUMENT (SPCD)

DESCRIPTION

101-1.1 The Contractor shall thoroughly review the approved and shall comply with bid plans and specifications. The Contractor shall certify such compliance by completing the attached SPCD and submitting to the Engineer for approval.

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CONTRACTOR SAFETY PLAN COMPLIANCE DOCUMENTS

Owner Name: Jefferson County

Airport: Jack Brooks Regional Airport

Project Description: Fuel Farm Pavement Reconstruction

Contractor: _____

Each item listed below corresponds to a specific section of the plans. The Contractor shall certify that he/she will comply with each section of the plans. Each section with a "no" response must be fully explained in an attachment to the CSPCD. The document shall be signed and dated by a manager, principal or owner of the Contractor's company. All other requested information shall be completed by the Contractor and submitted to the Engineer for approval.

1. **Section 1 – Correspondence:** This project shall be completed in accordance with the plans.

Owner: Alex Rupp, Airport Manager	Phone: 409.719.4900
Engineer: The Solco Group LLC	
Kelvin Solco, PE	Phone: 817.564.6895
Contractor:	

2. **Section 2 - Phasing:** This project shall be completed in accordance with the plans.

   Yes_____ No_____ N/A_____

3. **Section 3 - Areas of Operations affected by Construction Activity:** This project shall be completed in accordance with the plans.

   Yes_____ No_____ N/A_____

4. **Section 4 - Protection of Navigational Aids (NAVAIDs):** This project shall be completed in accordance with the plans.

   Yes_____ No_____ N/A___X___

5. **Section 5 - Contractor Access:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A_____

6. **Section 6 – Wildlife Management:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A___X_____

7. **Section 7 – Foreign Object Debris (FOD) Management:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A_____

8. **Section 8 – Hazardous Materials (HAZMAT) Management:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A____ X _____

9. **Section 9 – Notification of Construction Activities:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A_____

10. **Section 10 - Inspection Requirements:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A_____

11. **Section 11 – Underground Utilities:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A_____

12. **Section 12 – Penalties:** This project shall be completed in accordance with the plans and specifications.

Yes_____ No_____ N/A_____

13. **Section 13 – Special Conditions:** This project shall be completed in accordance with the plans and specifications.

Yes_____ No_____ N/A_____

14. **Section 14 – Runway and Taxiway Visual Aids:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A___X_____

15. **Section 15 - Marking and Signs for Access Routes:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A_____

16. **Section 16 – Hazard Marking and Lighting:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A____X____

17. **Section 17 - Work Zone Lighting for Nighttime Construction:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A_____

18. **Section 18 – Protection of Safety Areas, Object Free Areas, Object Free Zones, and Approach/Departure Surfaces:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A___X____

For the project identified herein, I certify that the responses to the foregoing items are correct as marked and meet the compliance of the plans.

Signed: _____
Contractor's Authorized Representative

Date: _____

_____
Print Name and Title of Contractor's Representative

END OF ITEM SS-101

ITEM C-105
MOBILIZATION

DESCRIPTION

105-1 Description. This item of work shall consist of, but is not limited to, work and operations necessary for the movement of personnel, equipment, material and supplies to and from the project site for work on the project except as provided in the contract as separate pay items.

105-2 Mobilization limit. Mobilization shall be limited to **5** percent of the total project cost.

105-3 Posted notices. Prior to commencement of construction activities, the Contractor must post the following documents in a prominent and accessible place where they may be easily viewed by all employees of the prime Contractor and by all employees of subcontractors engaged by the prime Contractor: Equal Employment Opportunity (EEO) Poster "Equal Employment Opportunity is the Law" in accordance with the Office of Federal Contract Compliance Programs Executive Order 11246, as amended; Davis Bacon Wage Poster (WH 1321) - DOL "Notice to All Employees" Poster; and Applicable Davis-Bacon Wage Rate Determination. These notices must remain posted until final acceptance of the work by the Owner.

~~**105-4 Engineer/RPR field office.** The Contractor shall provide dedicated space for the use of the field RPR and inspectors, as a field office for the duration of the project. This space shall be located conveniently near the construction and shall be separate from any space used by the Contractor. The Contractor shall furnish water, sanitary facilities, heat, air conditioning, and electricity in accordance with local building codes. An Engineer/RPR field office is not required.~~

METHOD OF MEASUREMENT

105-5 Basis of measurement and payment. Based upon the contract lump sum price for "Mobilization" partial payments will be allowed as follows:

a. With first pay request, 50%.

b. When 50% or more of the original contract is earned, an additional 40%.

~~**c.** When ---% or more of the original contract is earned, an additional ---%.~~

d. After Final Inspection, staging area clean-up and delivery of all Project Closeout materials as required by Section 90, paragraph 90-11, *Contractor Final Project Documentation,* the final 10%.

BASIS OF PAYMENT

105-6 Payment will be made under:

Item C-105 -6.1	Mobilization (Maximum 5% of Total Bid Exclusive Mobilization - per Lump Sum	

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Office of Federal Contract Compliance Programs (OFCCP)

Executive Order 11246, as amended

EEOC-P/E-1 – Equal Employment Opportunity is the Law Poster

United States Department of Labor, Wage and Hour Division (WHD)

WH 1321 – Employee Rights under the Davis-Bacon Act Poster

END OF ITEM C-105

ITEM SS-120
CONSTRUCTION SAFETY AND SECURITY

DESCRIPTION

120-1.1 This item covers safety and security for construction of the proposed improvements.

The attention to the bidder is directed to the necessity for careful examination of the entire project site to determine, at the time of bid preparation, the full extent of work to be done under the item "Construction Safety and Security."

The items in the "Construction Safety and Security shall include:

1. Temporary Signs and Barricades
2. Airport Security/Safety Requirements

CONSTRUCTION METHODS

120-2.1 Temporary Signs and Barricades

The contractor shall furnish, install, maintain, and remove barricades and temporary signs in accordance with AC 150/5370-2 Operational Safety on Airports During Construction and details on the plans and as directed by the Engineer.

All work involved in the furnishing, installation, maintenance, fueling and removal of barricades and temporary signs will not be measured for separate payment but will be considered subsidiary to the bid item "Construction Safety and Security."

120-2.2 Airport Security and Safety Requirements

The Contractor shall abide by the Airport Security and Safety requirements that are outlined in the approved CSPP. Any costs associated with Airport Security requirements will not be measured by separate payment but will be considered subsidiary to the bid item "Construction Safety and Security."

MEASUREMENT AND PAYMENT

120-3.1 Construction security and safety will be measured as a lump sum complete item. Work completed and accepted under this item will be paid as a lump sum price bid for "Construction Safety and Security," which include full compensation for furnishing all labor, tools and equiprnent and incidentals necessary to do complete the work. Payment will be made under:

Item SS -120-3.1 Construction Safety and Security, Barricades, Signs, and Traffic Handling – per Lump Sum

END OF ITEM SS-120

ITEM D-701
PIPE FOR STORM DRAINS AND CULVERTS

DESCRIPTION

701-1.1 This item shall consist of the construction of pipe culverts and storm drains in accordance with these specifications and in close conformity with the lines and grades shown on the plans.

MATERIALS

701-2.1 Materials shall meet the requirements shown on the plans and specified below. Underground piping and components used in drainage systems for terminal and aircraft fueling ramp drainage shall be noncombustible and inert to fuel in accordance with National Fire Protection Association (NFPA) 415.

701-2.2 Pipe. The pipe shall be of the type called for on the plans or in the proposal and shall be in accordance with the following appropriate requirements:

	American Association of State Highway and Transportation Officials (AASHTO) M167 Standard Specification for Corrugated Steel Structural Plate, Zinc-Coated, for Field-Bolted Pipe, Pipe-Arches, and Arches
AASHTO M190	Standard Specification for Bituminous-Coated Corrugated Metal Culvert Pipe and Pipe Arches
AASHTO M196	Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains
AASHTO M219	Standard Specification for Corrugated Aluminum Alloy Structural Plate for Field-Bolted Pipe, Pipe-Arches, and Arches
AASHTO M243	Standard Specification for Field-Applied Coating of Corrugated Metal Structural Plate for Pipe, Pipe-Arches, and Arches
AASHTO M252	Standard Specification for Corrugated Polyethylene Drainage Pipe
AASHTO M294	Standard Specification for Corrugated Polyethylene Pipe, 300- to 1500-mm (12- to 60-in.) Diameter
AASHTO M304	Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Wall Drainpipe and Fittings Based on Controlled Inside Diameter
AASHTO MP20	Standard Specification for Steel Reinforced Polyethylene (PE) Ribbed Pipe, 300- to 900-mm (12- to 36-in.) Diameter
AASHTO R73	Standard Practice for Evaluation of Precast Concrete Drainage Productions
ASTM A760	Standard Specification for Corrugated Steel Pipe, Metallic Coated for Sewers and Drains
ASTM A761	Standard Specification for Corrugated Structural Steel Plate, Zinc-Coated, for Field-Bolted Pipe, Pipe-Arches, and Arches
ASTM A762	Standard Specification for Corrugated Steel Pipe, Polymer Precoated for Sewers and Drains

ASTM A849	Standard Specification for Post Applied Coatings, Pavings, and Linings for Corrugated Steel Sewer and Drainage Pipe
ASTM B745	Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains
ASTM C14	Standard Specification for Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe
ASTM C76	Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
ASTM C506	Standard Specification for Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe
ASTM C507	Standard Specification for Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe
ASTM C655	Standard Specification for Reinforced Concrete D-Load Culvert, Storm Drain, and Sewer Pipe
ASTM C1433	Standard Specification for Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers
ASTM C1479	Standard Practice for Installation of Precast Concrete Sewer, Storm Drain, and Culvert Pipe Using Standard Installations
ASTM C1577	Standard Specification for Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers Designed According to AASHTO LRFD
ASTM C1786	Standard Specification for Segmental Precast Reinforced Concrete Box Sections for Culverts, Storm Drains, and Sewers Designed According to AASHTO LRFD
ASTM C1840	Standard Practice for Inspection and Acceptance of Installed Reinforced Concrete Culvert, Storm Drain, and Storm Sewer Pipe
ASTM D3262	Standard Specification for "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Sewer Pipe
ASTM D4161	Standard Specification for "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe Joints Using Flexible Elastomeric Seals
ASTM F667	Standard Specification for 3 through 24 in Corrugated Polyethylene Pipe and Fittings
ASTM F714	Standard Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Outside Diameter
ASTM F794	Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Gravity Sewer Pipe and Fittings Based on Controlled Inside Diameter
ASTM F894	Standard Specification for Polyethylene (PE) Large Diameter Profile Wall Sewer and Drainpipe
ASTM F949	Standard Specification for Poly (Vinyl Chloride) (PVC) Corrugated Sewer Pipe with a Smooth Interior and Fittings

ASTM F2435	Standard Specification for Steel Reinforced Polyethylene (PE) Corrugated Pipe
ASTM F2562	Specification for Steel Reinforced Thermoplastic Ribbed Pipe and Fittings for Non-Pressure Drainage and Sewerage
ASTM F2736	Standard Specification for 6 to 30 in. (152 to 762 mm) Polypropylene (PP) Corrugated Single Wall Pipe and Double Wall Pipe
ASTM F2764	Standard Specification for 30 to 60 in. (750 to 1500 mm) Polypropylene (PP) Triple Wall Pipe and Fittings for Non-Pressure Sanitary Sewer Applications
ASTM F2881	Standard Specification for 12 to 60 in. (300 to 1500 mm) Polypropylene (PP) Dual Wall Pipe and Fittings for Non-Pressure Storm Sewer Applications
ASTM D3034	Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings

701-2.3 Concrete. Concrete for pipe cradles shall have a minimum compressive strength of 2000 psi (13.8 MPa) at 28 days and conform to the requirements of ASTM C94.

701-2.4 Rubber gaskets. Rubber gaskets for rigid pipe shall conform to the requirements of ASTM C443. Rubber gaskets for PVC pipe, polyethylene, and polypropylene pipe shall conform to the requirements of ASTM F477. Rubber gaskets for zinc-coated steel pipe and precoated galvanized pipe shall conform to the requirements of ASTM D1056, for the "RE" closed cell grades. Rubber gaskets for steel reinforced thermoplastic ribbed pipe shall conform to the requirements of ASTM F477. Not used.

701-2.5 Joint mortar. Pipe joint mortar shall consist of one part Portland cement and two parts sand. The Portland cement shall conform to the requirements of ASTM C150, Type I. The sand shall conform to the requirements of ASTM C144.

701-2.6 Joint fillers. Poured filler for joints shall conform to the requirements of ASTM D6690.

701-2.7 Plastic gaskets. Plastic gaskets shall conform to the requirements of ASTM C990. Not used.

701-2.8. Controlled low-strength material (CLSM). Controlled low-strength material shall conform to the requirements of Item P-153. When CLSM is used, all joints shall have gaskets. Not used.

701-2.9 Precast box culverts. Manufactured in accordance with and conforming to ASTM C1433.

701-2.10 Precast concrete pipe. Precast concrete structures shall be furnished by a plant meeting National Precast Concrete Association Plant Certification Program or American Concrete Pipe Association QCast Plant Certification program.

CONSTRUCTION METHODS

701-3.1 Excavation. The width of the pipe trench shall be sufficient to permit satisfactory jointing of the pipe and thorough tamping of the bedding material under and around the pipe, but it shall not be less than the external diameter of the pipe plus 12 inches (300 mm) on each side. The trench walls shall be vertical.

The Contractor shall comply with all current federal, state, and local rules and regulations governing the safety of men and materials during the excavation, installation, and backfilling operations. Specifically, the Contractor shall observe that all requirements of the Occupational Safety and Health Administration (OSHA) relating to excavations, trenching, and shoring are strictly adhered to. The width of the trench shall be sufficient to permit satisfactorily jointing of the pipe and thorough compaction of the bedding material under the pipe and backfill material around the pipe, but it shall not be greater than the widths shown on the plans trench detail.

Where rock, hardpan, or other unyielding material is encountered, the Contractor shall remove it from below the foundation grade for a depth of at least 8 inch (200 mm) or 1/2 inch (12 mm) for each foot of fill over the top of the pipe (whichever is greater) but for no more than three-quarters of the nominal diameter of the pipe. The excavation below grade should be filled with granular material to form a uniform foundation.

Where a firm foundation is not encountered at the grade established, due to soft, spongy, or other unstable soil, the unstable soil shall be removed and replaced with approved granular material for the full trench width. The RPR shall determine the depth of removal necessary. The granular material shall be compacted to provide adequate support for the pipe.

The excavation for pipes placed in embankment fill shall not be made until the embankment has been completed to a height above the top of the pipe as shown on the plans.

701-3.2 Bedding. The bedding surface for the pipe shall provide a foundation of uniform density to support the pipe throughout its entire length.

a. Rigid pipe. The pipe bedding shall be constructed uniformly for the full length of the pipe barrel, as required on the plans. The maximum aggregate size shall be 1 in when the bedding thickness is less than 6 inches, and 1-1/2 in when the bedding thickness is greater than 6 inches. Bedding shall be loosely placed uncompacted material under the middle third of the pipe prior to placement of the pipe.

b. Flexible pipe. For flexible pipe, the bed shall be shaped to fit the pipe, and a bedding blanket of sand or fine granular material shall be provided as follows:

Flexible Pipe Bedding

Pipe Corrugation Depth		Minimum Bedding Depth	
inch	**mm**	**inch**	**mm**
1/2	12	1	25
1	25	2	50
2	50	3	75
2-1/2	60	3-1/2	90

c. other pipe materials. For PVC, polyethylene, polypropylene, or fiberglass pipe, the bedding material shall consist of coarse sands and gravels with a maximum particle size of

3/4 inches (19 mm). For pipes installed under paved areas, no more than 12% of the material shall pass the No. 200 (0.075 mm) sieve. For all other areas, no more than 50% of the material shall pass the No. 200 (0.075 mm) sieve. The bedding shall have a thickness of at least 6 inches (150 mm) below the bottom of the pipe and extend up around the pipe for a depth of not less than 50% of the pipe's vertical outside diameter.

701-3.3 Laying pipe. The pipe laying shall begin at the lowest point of the trench and proceed upgrade. The lower segment of the pipe shall be in contact with the bedding throughout its full length. Bell or groove ends of rigid pipes and outside circumferential laps of flexible pipes shall be placed facing upgrade.

Paved or partially lined pipe shall be placed so that the longitudinal center line of the paved segment coincides with the flow line.

Elliptical and elliptically reinforced concrete pipes shall be placed with the manufacturer's reference lines designating the top of the pipe within five degrees of a vertical plane through the longitudinal axis of the pipe.

701-3.4 Joining pipe. Joints shall be made with (1) cement mortar, (2) cement grout, (3) rubber gaskets, (4) plastic gaskets, (5) coupling bands or (6).

Mortar joints shall be made with an excess of mortar to form a continuous bead around the outside of the pipe and shall be finished smooth on the inside. Molds or runners shall be used for grouted joints to retain the poured grout. Rubber ring gaskets shall be installed to form a flexible watertight seal.

a. Concrete pipe. Concrete pipe may be either bell and spigot or tongue and groove. Pipe sections at joints shall be fully seated and the inner surfaces flush and even. Concrete pipe joints shall be sealed with rubber gaskets meeting ASTM C443 when leak resistant joints are required or Concrete pipe joints shall be sealed with butyl mastic meeting ASTM C990 or mortar when soil tight joints are required. Joints shall be thoroughly wetted before applying mortar or grout.

b. Metal pipe. Metal pipe shall be firmly joined by form-fitting bands conforming to the requirements of ASTM A760 for steel pipe and AASHTO M196 for aluminum pipe.

c. PVC, Polyethylene, or Polypropylene pipe. Joints for PVC, Polyethylene, or Polypropylene pipe shall conform to the requirements of ASTM D3212 when leak resistant joints are required. Joints for PVC and Polyethylene pipe shall conform to the requirements of AASHTO M304 when soil tight joints are required. Fittings for polyethylene pipe shall conform to the requirements of AASHTO M252 or ASTM M294. Fittings for polypropylene pipe shall conform to ASTM F2881, ASTM F2736, or ASTM F2764.

d. Fiberglass pipe. Joints and fittings shall be as detailed on the plans and in accordance with the manufacturer's recommendations. Joints shall meet the requirements of ASTM D4161 for flexible elastomeric seals. **or** Enter manufacturers joint installation requirements.

701-3.5 Embedment and Overfill. Pipes shall be inspected before any fill material is placed; any pipes found to be out of alignment, unduly settled, or damaged shall be removed and re-laid or replaced at the Contractor's expense.

701-3.5-1 Embedment Material Requirements

a. Concrete Pipe. Embedment material and compaction requirements shall be in accordance with the applicable Type of Standard Installation (Types 1, 2, 3, or 4) per ASTM C1479. If a concrete cradle or CLSM embedment material is used, it shall conform to the plan details.

b. Plastic and fiberglass Pipe. Embedment material shall meet the requirements of ASTM D3282, A-1, A-2-4, A-2-5, or A-3. Embedment material shall be free of organic material, stones

larger than 1.5 inches in the greatest dimension, or frozen lumps. Embedment material shall extend to 12 inches above the top of the pipe.

c. Metal Pipe. Embedment material shall be granular as specified in the contract document and specifications, and shall be free of organic material, rock fragments larger than 1.5 inches in the greatest dimension and frozen lumps. As a minimum, backfill materials shall meet the requirements of ASTM D3282, A-1, A-2, or A-3. Embedment material shall extend to 12 inches above the top of the pipe.

701-3.5-2 Placement of Embedment Material

The embedment material shall be compacted in layers not exceeding 6 inches (150 mm) on each side of the pipe and shall be brought up one foot (30 cm) above the top of the pipe or to natural ground level, whichever is greater. Thoroughly compact the embedment material under the haunches of the pipe without displacing the pipe. Material shall be brought up evenly on each side of the pipe for the full length of the pipe.

When the top of the pipe is above the top of the trench, the embedment material shall be compacted in layers not exceeding 6 inches (150 mm) and shall be brought up evenly on each side of the pipe to one foot (30 cm) above the top of the pipe. All embedment material shall be compacted to a density required under Item P-152.

Concrete cradles and flowable fills, such as controlled low strength material (CLSM) or controlled density fill (CDF), may be used for embedment provided adequate flotation resistance can be achieved by restraints, weighing, or placement technique.

It shall be the Contractor's responsibility to protect installed pipes and culverts from damage due to construction equipment operations. The Contractor shall be responsible for installation of any extra strutting or backfill required to protect pipes from the construction equipment.

701-3.6 Overfill

Pipes shall be inspected before any overfill is in place. Any pipes found to be out of alignment, unduly settled, or damaged shall be removed and re-laid or replaced at the Contractor's expense. Evaluation of any damage to RCP shall be evaluated based on AASHTO R73.

Overfill material shall be place and compacted in layers as required to achieve compaction to at least 95 percent standard proctor per ASTM D698 . The soil shall contain no debris, organic matter, frozen material, or stones with a diameter greater than one half the thickness of the compacted layers being placed.

701-3.7 Inspection Requirements

An initial post installation inspection shall be performed by the RPR no sooner than 30 days after completion of installation and final backfill. Clean or flush all lines prior to inspection.

Use a camera with lighting suitable to allow a clear picture of the entire periphery of the pipe interior. Center the camera in the pipe both vertically and horizontally and be able to pan and tilt to a 90-degree angle with the axis of the pipe rotating 360 degrees. Use equipment to move the camera through the pipe that will not obstruct the camera's view or interfere with proper documentation of the pipe's condition. The video image shall be clear, focused, and relatively free from roll, static, or other image distortion qualities that would prevent the reviewer from evaluating the condition of the pipe.

For pipe sizes larger than 48 inches, a walk-through visual inspection shall be performed.

Incorporate specific inspection requirements for the various types of pipes beneath the general inspection requirements.

Reinforced concrete pipe shall be inspected, evaluated, and reported on in accordance with ASTM C1840, "Standard Practice for Inspection and Acceptance of Installed Reinforced Concrete Culvert, Storm Drain, and Storm Sewer Pipe." Any issues reported shall include still photo and video documentation. The zoom ratio shall be provided for all still or video images that document any issues of concern by the inspection firm.

Flexible pipes shall be inspected for rips, tears, joint separations, soil migration, cracks, localized buckling, settlement, alignment, and deflection. Determine whether the allowable deflection has been exceeded by use of a laser profiler for internal pipe diameters of 48 inches or less, or direct measurement for internal pipe diameters greater than 48 inches. Laser profile equipment shall utilize low barrel distortion video equipment. Deflection of installed pipe shall not exceed the limits provided in the table below, as a percentage of the average inside diameter of the pipe.

Maximum Allowable Pipe Deflection

Type of Pipe	**Maximum Allowable Deflection (%)**
Corrugated Metal Pipe	5
Concrete Lined CMP	3
Thermoplastic Pipe	5
Fiberglass	5

If deflection readings in excess of the allowable deflection are obtained, remove the pipe with excessive deflection and replace with new pipe. Isolated areas may exceed allowable by 2.5% with concurrence of RPR. Repair or replace any pipe with cracks exhibiting displacement across the crack, bulges, creases, tears, spalls, or delamination. The report for flexible pipe shall include as a minimum, the deflection results and final post installation inspection report. The inspection report shall include: a copy of all videos taken, pipe location identification, equipment used for inspection, inspector name, deviation from design line and grade, and inspector's notes.

METHOD OF MEASUREMENT

701-4.1 The length of pipe shall be measured in linear feet (m) of pipe in place, completed, and accepted. It shall be measured along the centerline of the pipe from end or inside face of structure to the end or inside face of structure, whichever is applicable. Identify each class, types and size of pipe shall be measured separately. All fittings shall be included in the footage as typical pipe sections in the pipe being measured.

701-4.2. Precast box culverts shall be measured by individual unit and size.

701-4.3 The volume of concrete for pipe cradles shall be the number of cubic yards (cubic meters) of concrete that is completed in place and accepted.

701-4.4 The volume of rock, hardpan, or other unyielding material shall be the number of cubic yards (cubic meters) excavated. No payment shall be made for the cushion material placed for the bed of the pipe.

BASIS OF PAYMENT

701-5.0 These prices shall fully compensate the Contractor for furnishing all materials and for all preparation, excavation, and installation of these materials; and for all labor, equipment, tools, and incidentals necessary to complete the item.

701-5.1 Payment will be made at the contract unit price per linear foot (meter) for identify each class and size of pipe .

701-5.2 Payment will be made at the contract unit price per unit for identify each class and size of precast box culvert.

701-5.3 Payment will be made at the contract unit price per cubic yard (cubic meter) of concrete for pipe cradles.

701-5.4 Payment will be made at the contract unit price per cubic yard (cubic meter) for rock, hardpan, or other unyielding material excavation.

Payment will be made under:

Item 701-5.1	~~[ ]~~ ~~inch~~ **TBD** per linear foot (meter)
Item 701-5.2	Precast box culvert per unit.
Item 701-5.3	Concrete for pipe cradles - per cubic yard (cubic meter)
Item 701-5.4	Rock, hardpan, or other unyielding material excavation - per cubic yard (cubic meter

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

American Association of State Highway and Transportation Officials (AASHTO)

AASHTO M167	Standard Specification for Corrugated Steel Structural Plate, Zinc-Coated, for Field-Bolted Pipe, Pipe-Arches, and Arches
AASHTO M190	Standard Specification for Bituminous-Coated Corrugated Metal Culvert Pipe and Pipe Arches
AASHTO M196	Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains
AASHTO M219	Standard Specification for Corrugated Aluminum Alloy Structural Plate for Field-Bolted Pipe, Pipe-Arches, and Arches
AASHTO M243	Standard Specification for Field Applied Coating of Corrugated Metal Structural Plate for Pipe, Pipe-Arches, and Arches
AASHTO M252	Standard Specification for Corrugated Polyethylene Drainage Pipe
AASHTO M294	Standard Specification for Corrugated Polyethylene Pipe, 300- to 1500-mm (12- to 60-in.) Diameter
AASHTO M304	Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Wall Drainpipe and Fittings Based on Controlled Inside Diameter
AASHTO MP20	Standard Specification for Steel Reinforced Polyethylene (PE) Ribbed Pipe, 300- to 900-mm (12- to 36-in.) Diameter

ASTM International (ASTM)

ASTM A760	Standard Specification for Corrugated Steel Pipe, Metallic Coated for Sewers and Drains
ASTM A761	Standard Specification for Corrugated Steel Structural Plate, Zinc Coated, for Field-Bolted Pipe, Pipe-Arches, and Arches
ASTM A762	Standard Specification for Corrugated Steel Pipe, Polymer Precoated for Sewers and Drains
ASTM A849	Standard Specification for Post-Applied Coatings, Pavings, and Linings for Corrugated Steel Sewer and Drainage Pipe
ASTM B745	Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains
ASTM C14	Standard Specification for Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe
ASTM C76	Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
ASTM C94	Standard Specification for Ready Mixed Concrete
ASTM C144	Standard Specification for Aggregate for Masonry Mortar
ASTM C150	Standard Specification for Portland Cement
ASTM C443	Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets
ASTM C506	Standard Specification for Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe
ASTM C507	Standard Specification for Reinforced Concrete Elliptical Culvert, Storm Drain and Sewer Pipe
ASTM C655	Standard Specification for Reinforced Concrete D-Load Culvert, Storm Drain and Sewer Pipe
ASTM C990	Standard Specification for Joints for Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants
ASTM C1433	Standard Specification for Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers
ASTM D1056	Standard Specification for Flexible Cellular Materials Sponge or Expanded Rubber
ASTM D3034	Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings
ASTM D3212	Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals
ASTM D3262	Standard Specification for "Fiberglass" (Glass-Fiber Reinforced Thermosetting Resin) Sewer Pipe
ASTM D3282	Standard Practice for Classification of Soils and Soil-Aggregate Mixtures for Highway Construction Purposes

ASTM D4161	Standard Specification for "Fiberglass" (Glass-Fiber Reinforced Thermosetting Resin) Pipe Joints Using Flexible Elastomeric Seals
ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements
ASTM F477	Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe
ASTM F667	Standard Specification for 3 through 24 in. Corrugated Polyethylene Pipe and Fittings
ASTM F714	Standard Specification for Polyethylene (PE) Plastic Pipe (DR PR) Based on Outside Diameter
ASTM F794	Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Gravity Sewer Pipe & Fittings Based on Controlled Inside Diameter
ASTM F894	Standard Specification for Polyethylene (PE) Large Diameter Profile Wall Sewer and Drainpipe
ASTM F949	Standard Specification for Poly (Vinyl Chloride) (PVC) Corrugated Sewer Pipe with a Smooth Interior and Fittings
ASTM F2435	Standard Specification for Steel Reinforced Polyethylene (PE) Corrugated Pipe
ASTM F2562	Specification for Steel Reinforced Thermoplastic Ribbed Pipe and Fittings for Non-Pressure Drainage and Sewerage
ASTM F2736	Standard Specification for 6 to 30 in. (152 to 762 mm) Polypropylene (PP) Corrugated Single Wall Pipe and Double Wall Pipe
ASTM F2764	Standard Specification for 30 to 60 in. (750 to 1500 mm) Polypropylene (PP) Triple Wall Pipe and Fittings for Non-Pressure Sanitary Sewer Applications
ASTM F2881	Standard Specification for 12 to 60 in. (300 to 1500 mm) Polypropylene (PP) Dual Wall Pipe and Fittings for Non-Pressure Storm Sewer Applications

National Fire Protection Association (NFPA)

NFPA 415	Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways

END ITEM D-701

ITEM P-101
PREPARATION/REMOVAL OF EXISTING PAVEMENTS

DESCRIPTION

101-1 This item shall consist of preparation of existing pavement surfaces for overlay, surface treatments, removal of existing pavement, and other miscellaneous items. The work shall be accomplished in accordance with these specifications and the applicable plans.

EQUIPMENT AND MATERIALS

101-2 All equipment and materials shall be specified here and in the following paragraphs or approved by the Resident Project Representative (RPR). The equipment shall not cause damage to the pavement to remain in place.

CONSTRUCTION

101-3.1 Removal of existing pavement.

The Contractor's removal operation shall be controlled to not damage adjacent pavement structure, and base material, cables, utility ducts, pipelines, or drainage structures which are to remain under the pavement.

a. Concrete pavement removal. Full depth saw cuts shall be made perpendicular to the slab surface. The Contractor shall saw through the full depth of the slab including any dowels at the joint, removing the pavement and installing new dowels as shown on the plans and per the specifications. Where the perimeter of the removal limits is not located on the joint and there are no dowels present, the perimeter shall be saw cut the full depth of the pavement. The pavement inside the saw cut shall be removed by methods which will not cause distress in the pavement which is to remain in place. If the material is to be wasted on the airport site, it shall be reduced to a maximum size of 2 inches. Concrete slabs that are damaged by under breaking shall be repaired or removed and replaced as directed by the RPR.

The edge of existing concrete pavement against which new pavement abuts shall be protected from damage at all times. Spall and underbreak repair shall be in accordance with the plans. Any underlaying material that is to remain in place, shall be recompacted and/or replaced as shown on the plans. Adjacent areas damaged during repair shall be repaired or replaced at the Contractor's expense.

b. Asphalt pavement removal. Asphalt pavement to be removed shall be cut to the full depth of the asphalt pavement around the perimeter of the area to be removed. If the material is to be wasted on the airport site , it shall be broken to a maximum size of **2** inches (mm.

c. Repair or removal of Base, Subbase, and/or Subgrade. All failed material including surface, base course, subbase course, and subgrade shall be removed and repaired as shown on the plans or as directed by the RPR. Materials and methods of construction shall comply with the applicable sections of these specifications. Any damage caused by Contractor's removal process shall be repaired at the Contractor's expense.

~~**101-3.2 Preparation of joints and cracks prior to overlay/surface treatment.** Remove all vegetation and debris from cracks to a minimum depth of 1 inch (25 mm). If extensive vegetation exists, treat the specific area with a concentrated solution of a water-based herbicide approved~~

by the RPR. Fill all cracks greater than 1/4 inch (6 mm) wide) with a crack sealant per ASTM D6690. The crack sealant, preparation, and application shall be compatible with the surface treatment/overlay to be used. To minimize contamination of the asphalt with the crack sealant, underfill the crack sealant a minimum of 1/8 inch (3 mm), not to exceed ¼ inch (6 mm). Any excess joint or crack sealer shall be removed from the pavement surface.

101-3.3 Removal of Foreign Substances/contaminates prior to [overlay] [seal coat] [remarking]. Removal of foreign substances/contaminates from existing pavement that will affect the bond of the new treatment shall consist of removal of rubber, fuel spills, oil, crack sealer, at least 90% of paint, and other foreign substances from the surface of the pavement. Areas that require removal are designated on the plans and as directed by the RPR in the field during construction.

[Chemicals **] [** high-pressure water **] [** heater scarifier (asphaltic concrete only) **] [** cold milling **] [** rotary grinding **] [** sandblasting **]** may be used. If chemicals are used, they shall comply with the state's environmental protection regulations. Removal methods used shall not cause major damage to the pavement, or to any structure or utility within or adjacent to the work area. Major damage is defined as changing the properties of the pavement, removal of asphalt causing the aggregate to ravel, or removing pavement over 1/8 inch (3 mm) deep. If it is deemed by the RPR that damage to the existing pavement is caused by operational error, such as permitting the application method to dwell in one location for too long, the Contractor shall repair the damaged area without compensation and as directed by the RPR.

Removal of foreign substances shall not proceed until approved by the RPR. Water used for high-pressure water equipment shall be provided by the Contractor at the Contractor's expense. No material shall be deposited on the pavement shoulders. All wastes shall be disposed of in areas indicated in this specification or shown on the plans.101-3.4 Concrete spall or failed asphaltic concrete pavement repair.

a. Repair of concrete spalls in areas to be overlaid with asphalt. The Contractor shall repair all spalled concrete as shown on the plans or as directed by the RPR. The perimeter of the repair shall be saw cut a minimum of 2 inches (50 mm) outside the affected area and 2 inches (50 mm) deep. The deteriorated material shall be removed to a depth where the existing material is firm or cannot be easily removed with a geologist pick. The removed area shall be filled with asphalt mixture with aggregate sized appropriately for the depth of the patch. The material shall be compacted with equipment approved by the RPR until the material is dense and no movement or marks are visible. The material shall not be placed in lifts over 4 inches (100 mm) in depth. This method of repair applies only to pavement to be overlaid.

b. Asphalt pavement repair. The Contractor shall repair all spalled concrete as shown on the plans or as directed by the RPR. The failed areas shall be removed as specified in paragraph 101-3.1b. All failed material including surface, base course, subbase course, and subgrade shall be removed. Materials and methods of construction shall comply with the applicable sections of these specifications.

101-3.5 Cold milling. Milling shall be performed with a power-operated milling machine or grinder, capable of producing a uniform finished surface. The milling machine or grinder shall operate without tearing or gouging the underlaying surface. The milling machine or grinder shall be equipped with grade and slope controls, and a positive means of dust control. All millings shall be removed and disposed **[** off Airport property **] [** in areas designated on the plans **]**. If the Contractor mills or grinds deeper or wider than the plans specify, the Contractor shall replace the material removed with new material at the Contractor's Expense.

a. Patching. The milling machine shall be capable of cutting a vertical edge without chipping or spalling the edges of the remaining pavement and it shall have a positive method of controlling the depth of cut. The RPR shall layout the area to be milled with a straightedge in increments of 1-foot (30 cm) widths. The area to be milled shall cover only the failed area. Any excessive area that is milled because the Contractor does not have the appropriate milling machine, or areas that are damaged because of his negligence, shall be repaired by the Contractor at the Contractor's Expense.

b. Profiling, grade correction, or surface correction. The milling machine shall have a minimum width of [7] feet ([2] m) and it shall be equipped with electronic grade control devices that will cut the surface to the grade specified. The tolerances shall be maintained within +0 inch and -1/4 inch (+0 mm and -6mm) of the specified grade. The machine must cut vertical edges and have a positive method of dust control. The machine must have the ability to [windrow the millings or cuttings] [remove the millings or cuttings from the pavement and load them into a truck]. All millings shall be removed and disposed of [off the airport] [in areas designated on the plans].

c. Clean-up. The Contractor shall sweep the milled surface daily and immediately after the milling until all residual materials are removed from the pavement surface. Prior to paving, the Contractor shall wet down the milled pavement and thoroughly sweep and/or blow the surface to remove loose residual material. Waste materials shall be collected and removed from the pavement surface and adjacent areas by sweeping or vacuuming. Waste materials shall be removed and disposed off Airport property. [in areas designated on the plans].

101-3.6. Preparation of asphalt pavement surfaces prior to surface treatment. Existing asphalt pavements to be treated with a surface treatment shall be prepared as follows:

a. Patch asphalt pavement surfaces that have been softened by petroleum derivatives or have failed due to any other cause. Remove damaged pavement to the full depth of the damage and replace with new asphalt pavement similar to that of the existing pavement in accordance with paragraph 101-3.4b.

b. Repair joints and cracks in accordance with paragraph 101-3.2.

c. Remove oil or grease that has not penetrated the asphalt pavement by scrubbing with a detergent and washing thoroughly with clean water. After cleaning, treat these areas with an oil spot primer. [ ]

d. Clean pavement surface immediately prior to placing the surface treatment so that it is free of dust, dirt, grease, vegetation, oil, or any type of objectionable surface film.

101-3.7 Maintenance. The Contractor shall perform all maintenance work necessary to keep the pavement in a satisfactory condition until the full section is complete and accepted by the RPR. The surface shall be kept clean and free from foreign material. The pavement shall be properly drained at all times. If cleaning is necessary or if the pavement becomes disturbed, any work repairs necessary shall be performed at the Contractor's expense.

101-3.8 Preparation of Joints in Rigid Pavement prior to resealing. Prior to application of sealant material, clean and dry the joints of all scale, dirt, dust, old sealant, curing compound, moisture, and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method used cleans the joint and does not damage the joint.

101-3.8.1 Removal of Existing Joint Sealant. All existing joint sealants will be removed by plowing or use of hand tools. Any remaining sealant and or debris will be removed by use of wire brushes or other tools, as necessary. Resaw joints removing no more than 1/16 inch (2 mm) from

~~each joint face. Immediately after sawing, flush out joint with water and other tools as necessary to completely remove the slurry.~~

101-3.8.2 Cleaning prior to sealing. Immediately before sealing, joints shall be cleaned by removing any remaining laitance and other foreign material. Allow sufficient time to dry out joints prior to sealing. Joint surfaces will be surface-dry prior to installation of sealant.

101-3.8.3 Joint sealant. Joint material and installation will be in accordance with Item P-605 ~~[Item P-604]~~.

~~**101-3.9 Preparation of Cracks in Flexible Pavement prior to sealing.** Prior to application of sealant material, clean and dry the joints of all scale, dirt, dust, old sealant, curing compound, moisture, and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method used cleans the cracks and does not damage the pavement.~~

~~**101-3.9.1 Preparation of Crack**. Widen crack with [router] [random crack saw] by removing a minimum of 1/16 inch (2 mm) from each side of crack. Immediately before sealing, cracks will be blown out with a hot air lance combined with oil and water free compressed air.~~

~~**101-3.9.2 Removal of Existing Crack Sealant.** Existing sealants will be removed by [routing] [random crack saw]. Following [routing] [sawing] any remaining debris will be removed by use of a hot lance combined with oil and water free compressed air.~~

~~**101-3.9.3 Crack Sealant.** Crack sealant material and installation will be in accordance with [Item P-605].~~

101-3.9.4 Removal of Pipe and other Buried Structures.

a. Removal of Existing Pipe Material. Remove all pipes as recommended by RPR. The pipe material shall be legally disposed of off-site in a timely manner following removal. Trenches shall be backfilled material equal to or better in quality than adjacent embankment. Trenches under paved areas must be compacted to 95% of ASTM D698 .

~~**b. Removal of Inlets/Manholes.** [Where indicated on the plans or as directed by the RPR, inlets and/or manholes shall be removed and legally disposed of off-site in a timely fashion after removal. Excavations after removal shall be backfilled with material equal or better in quality than adjacent embankment. When under paved areas must be compacted to [95%] of ASTM [D1557] [D698], when outside of paved areas must be compacted to [95%] of ASTM D698. [Not used.]]~~

~~**c.** Removal of [___].~~

METHOD OF MEASUREMENT

~~**101-4.1 Lump sum.** No separate measurement for payment will be made. The work covered by this section shall be considered as a subsidiary obligation of the Contractor and covered under the other contract items.~~

101-4.1 Pavement removal. The unit of measurement for pavement removal shall be the number of square yards ~~(square meters)~~ removed by the Contractor. Any pavement removed outside the limits of removal because the pavement was damaged by negligence on the part of the Contractor shall not be included in the measurement for payment. No direct measurement or payment shall be made for saw cutting. Saw cutting shall be incidental to pavement removal. Dowel bar installation shall be incidental to pavement removal.

~~**101-4.2 Joint and crack repair.** The unit of measurement for joint and crack repair shall be the linear foot (meter) of joint.~~

~~**101-4.3 Removal of Foreign Substances/contaminates.** The unit of measurement for foreign Substances/contaminates removal shall be the square foot (meter).~~

~~**101-4.4 Spalled and failed asphalt pavement repair.** The unit of measure for failed asphalt pavement repair shall be square foot (square meter).~~

~~**101-4.5 Concrete Spall Repair.** The unit of measure for concrete spall repair shall be the number of square feet (square meter). The location and average depth of the patch shall be determined and agreed upon by the RPR and the Contractor.~~

~~**101-4.6 Cold milling.** The unit of measure for cold milling shall be [___] inches of milling per square yard (square meter). The location and average depth of the cold milling shall be as shown on the plans. If the initial cut does not correct the condition, the Contractor shall re-mill the area and will be paid for the total depth of milling.]~~

101-4.7 Removal of Pipe and other Buried Structures. ~~[Not require.] [~~ The unit of measurement for removal of pipe and other buried structures will be Linear Feet. No separate measurement for payment will be made. The work covered by this section shall be considered ~~as a subsidiary obligation of the Contractor and covered under the other contract items.] made~~ at the contract unit price for each completed and accepted item. This price shall be full compensation for all labor, equipment, tools, and incidentals necessary to complete this item in accordance with paragraph 101-3.9.4

BASIS OF PAYMENT

101-5.1 Payment. Payment shall be made at contract unit price for the unit of measurement as specified above. This price shall be full compensation for furnishing all materials and for all preparation, hauling, and placing of the material and for all labor, equipment, tools, and incidentals necessary to complete this item.

Item P 101-5.1a	Sawcut, Remove and Dispose Existing Concrete Pavement Full Depth (8") - per Square Yards
Item P 101-5.1b	Sawcut, Remove and Dispose Existing Asphalt Ramp – per Square Yards
Item P-101-5.1c	Sawcut, Remove and Dispose Existing 6" Vertical Curb –per Linear Feet

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

AC 150/5380-6	Guidelines and Procedures for Maintenance of Airport Pavements.

ASTM International (ASTM)

ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements

END OF ITEM P-101

ITEM P-152
EXCAVATION, SUBGRADE, AND EMBANKMENT

DESCRIPTION

152-1.1 This item covers excavation, disposal, placement, and compaction of all materials within the limits of the work required to construct safety areas, runways, taxiways, aprons, and intermediate areas as well as other areas for drainage, building construction, parking, or other purposes in accordance with these specifications and in conformity to the dimensions and typical sections shown on the plans.

152-1.2 Classification. All material excavated shall be classified as defined below:

a. Unclassified excavation. Unclassified excavation shall consist of the excavation and disposal of all material, regardless of its nature which is not otherwise classified and paid for under one of the following items .

Borrow excavation. Borrow excavation shall consist of approved material required for the construction of embankments or for other portions of the work in excess of the quantity of usable material available from required excavations. Borrow material shall be obtained from areas designated by the Resident Project Representative (RPR) within the limits of the airport property but outside the normal limits of necessary grading, or from areas outside the airport boundaries.

152-1.3 Unsuitable excavation. Unsuitable material shall be disposed of off-site or as directed by the RPR. Materials containing vegetable or organic matter, such as muck, peat, organic silt, or sod shall be considered unsuitable for use in embankment construction. Material suitable for topsoil may be used on the embankment slope when approved by the RPR. *Undercutting of material unsatisfactory for subgrade foundation shall be considered unsuitable excavation and shall be excavated to the depth specified by the Engineer below the subgrade.*

CONSTRUCTION METHODS

152-2.1 General. ~~Before beginning excavation, grading, and embankment operations in any area, the area shall be cleared or cleared and grubbed in accordance with Item P-151.~~

The suitability of material to be placed in embankments shall be subject to approval by the RPR. All unsuitable material shall be disposed of off site. ~~in waste areas as shown on the plans.~~ All waste areas shall be graded to allow positive drainage of the area and adjacent areas. The surface elevation of waste areas shall be specified on the plans or approved by the RPR.

When the Contractor's excavating operations encounter artifacts of historical or archaeological significance, the operations shall be temporarily discontinued and the RPR notified per Section 70, paragraph 70-20. At the direction of the RPR, the Contractor shall excavate the site in such a manner as to preserve the artifacts encountered and allow for their removal. Such excavation will be paid for as extra work.

Areas outside the limits of the pavement areas where the top layer of soil has become compacted by hauling or other Contractor activities shall be scarified and disked to a depth of 4 inches (100 mm), to loosen and pulverize the soil. Stones or rock fragments larger than 4 inches (100 mm) in their greatest dimension will not be permitted in the top 6 inches (150 mm) of the subgrade.

If it is necessary to interrupt existing surface drainage, sewers or under-drainage, conduits, utilities, or similar underground structures, the Contractor shall be responsible for and shall take

all necessary precautions to preserve them or provide temporary services. When such facilities are encountered, the Contractor shall notify the RPR, who shall arrange for their removal if necessary. The Contractor, at their own expense, shall satisfactorily repair or pay the cost of all damage to such facilities or structures that may result from any of the Contractor's operations during the period of the contract.

a. Blasting. Blasting shall not be allowed.

152-2.2 Excavation. No excavation shall be started until the work has been staked out by the Contractor and the RPR has obtained from the Contractor, the survey notes of the elevations and measurements of the ground surface. The Contractor and RPR shall agree that the original ground lines shown on the original topographic mapping are accurate, or agree to any adjustments made to the original ground lines.

Volumetric quantities were calculated by comparing DTM files of the applicable design surfaces and generating Triangle Volume Reports. Electronic copies of DTM files and a paper copy of the original topographic map will be issued to the successful bidder.

Volumetric quantities were calculated using design cross sections which were created for this project using the DTM files of the applicable design surfaces and generating End Area Volume Reports. Paper copies of design cross sections and a paper copy of the original topographic map will be issued to the successful bidder.

Existing grades on the design cross sections or DTM's, where they do not match the locations of actual spot elevations shown on the topographic map, were developed by computer interpolation from those spot elevations. Prior to disturbing original grade, Contractor shall verify the accuracy of the existing ground surface by verifying spot elevations at the same locations where original field survey data was obtained as indicated on the topographic map. Contractor shall recognize that, due to the interpolation process, the actual ground surface at any particular location may differ somewhat from the interpolated surface shown on the design cross sections or obtained from the DTM's. Contractor's verification of original ground surface, however, shall be limited to verification of spot elevations as indicated herein, and no adjustments will be made to the original ground surface unless the Contractor demonstrates that spot elevations shown are incorrect. For this purpose, spot elevations which are within 0.1 foot (30 mm) of the stated elevations for ground surfaces, or within 0.04 foot (12 mm) for hard surfaces (pavements, buildings, foundations, structures, etc.) shall be considered "no change". Only deviations in excess of these will be considered for adjustment of the original ground surface. If Contractor's verification identifies discrepancies in the topographic map, Contractor shall notify the RPR in writing at least **1 DAY** before disturbance of existing grade to allow sufficient time to verify the submitted information and make adjustments to the design cross sections or DTM's. Disturbance of existing grade in any area shall constitute acceptance by the Contractor of the accuracy of the original elevations shown on the topographic map for that area.

All areas to be excavated shall be stripped of vegetation and topsoil. Topsoil shall be stockpiled for future use in areas designated on the plans or by the RPR. All suitable excavated material shall be used in the formation of embankment, subgrade, or other purposes **as** shown on the plans. All unsuitable material shall be disposed of ~~as shown on the plans~~.

The grade shall be maintained so that the surface is well drained at all times.

When the volume of the excavation exceeds that required to construct the embankments to the grades as indicated on the plans, the excess shall be used to grade the areas of ultimate development or disposed as directed by the RPR. When the volume of excavation is not sufficient for constructing the embankments to the grades indicated, the deficiency shall be obtained from borrow areas.

a. Selective grading. *When quality of the material varies significantly*, ~~selective grading is indicated on the plans~~, the more suitable material designated by the RPR shall be used in constructing the embankment or in capping the pavement subgrade. If, at the time of excavation, it is not possible to place this material in its final location, it shall be stockpiled in approved areas until it can be placed. The more suitable material shall then be placed and compacted as specified. Selective grading shall be considered incidental to the work involved. The cost of stockpiling and placing the material shall be included in the various pay items of work involved.

b. Undercutting. Rock, shale, hardpan, loose rock, boulders, or other material unsatisfactory for safety areas, subgrades, roads, shoulders, or any areas intended for turf shall be excavated to a minimum depth of 12 inches (300 mm) below the subgrade or to the depth specified by the RPR. Muck, peat, matted roots, or other yielding material, unsatisfactory for subgrade foundation, shall be removed to the depth specified. Unsuitable materials shall be disposed off the airport. The cost is incidental to this item. This excavated material shall be paid for at the contract unit price per cubic yard. The excavated area shall be backfilled with suitable material obtained from the grading operations or borrow areas and compacted to specified densities. The necessary backfill will constitute a part of *Unsuitable Excavation* ~~the embankment~~. Where rock cuts are made, backfill with select material. Any pockets created in the rock surface shall be drained in accordance with the details shown on the plans. Undercutting will be paid as unclassified excavation .

c. Over-break. Over-break, including slides, is that portion of any material displaced or loosened beyond the finished work as planned or authorized by the RPR. All over-break shall be graded or removed by the Contractor and disposed of as directed by the RPR. The RPR shall determine if the displacement of such material was unavoidable and their own decision shall be final. Payment will not be made for the removal and disposal of over-break that the RPR determines as avoidable. Unavoidable over-break will be classified as "Unclassified Excavation."

d. Removal of utilities. The removal of existing structures and utilities required to permit the orderly progress of work will be accomplished by the Contractor as indicated on the plans. All existing foundations shall be excavated at least 2 feet (60 cm) below the top of subgrade or as indicated on the plans, and the material disposed of as directed by the RPR. All foundations thus excavated shall be backfilled with suitable material and compacted as specified for embankment or as shown on the plans.

152-2.3 Borrow excavation. Borrow areas from outside the airport boundary. Embankment quantities shown on plans.

152-2.4 Drainage excavation. Drainage excavation shall consist of excavating drainage ditches including intercepting, inlet, or outlet ditches; or other types as shown on the plans. The work shall be performed in sequence with the other construction. Ditches shall be constructed prior to starting adjacent excavation operations. All satisfactory material shall be placed in embankment fills; unsuitable material shall be placed in designated waste areas or as directed by the RPR. All necessary work shall be performed true to final line, elevation, and cross-section. The Contractor shall maintain ditches constructed on the project to the required cross-section and shall keep them free of debris or obstructions until the project is accepted.

152-2.5 Preparation of cut areas or areas where existing pavement has been removed. In those areas on which a subbase or base course is to be placed, the top 8 inches of subgrade shall be compacted to not less than 100 % of maximum density for non-cohesive soils, and 95% of maximum density for cohesive soils as determined by ASTM D698. As used in this

specification, "non-cohesive" shall mean those soils having a plasticity index (PI) of less than 3 as determined by ASTM D4318.

152-2.6 Preparation of embankment area. All sod and vegetative matter shall be removed from the surface upon which the embankment is to be placed. The cleared surface shall be broken up by plowing or scarifying to a minimum depth of 6 inches (150 mm) and shall then be compacted per paragraph 152-2.10.

Sloped surfaces steeper than one (1) vertical to four (4) horizontal shall be plowed, stepped, benched, or broken up so that the fill material will bond with the existing material. When the subgrade is part fill and part excavation or natural ground, the excavated or natural ground portion shall be scarified to a depth of 12 inches (300 mm) and compacted as specified for the adjacent fill.

No direct payment shall be made for the work performed under this section. The necessary clearing and grubbing and the quantity of excavation removed will be paid for under the respective items of work.

152-2.7 Control Strip. The first half-day of construction of subgrade and/or embankment shall be considered as a control strip for the Contractor to demonstrate, in the presence of the RPR, that the materials, equipment, and construction processes meet the requirements of this specification. The sequence and manner of rolling necessary to obtain specified density requirements shall be determined. The maximum compacted thickness may be increased to a maximum of 12 inches (300 mm) upon the Contractor's demonstration that approved equipment and operations will uniformly compact the lift to the specified density. The RPR must witness this demonstration and approve the lift thickness prior to full production.

Control strips that do not meet specification requirements shall be reworked, re-compacted, or removed and replaced at the Contractor's expense. Full operations shall not begin until the control strip has been accepted by the RPR. The Contractor shall use the same equipment, materials, and construction methods for the remainder of construction, unless adjustments made by the Contractor are approved in advance by the RPR.

152-2.8 Formation of embankments. The material shall be constructed in lifts as established in the control strip, but not less than 6 inches (150 mm) nor more than 12 inches (300 mm) of compacted thickness.

When more than one lift is required to establish the layer thickness shown on the plans, the construction procedure described here shall apply to each lift. No lift shall be covered by subsequent lifts until tests verify that compaction requirements have been met. The Contractor shall rework, re-compact and retest any material placed which does not meet the specifications.

The lifts shall be placed, to produce a soil structure as shown on the typical cross-section or as directed by the RPR. Materials such as brush, hedge, roots, stumps, grass and other organic matter, shall not be incorporated or buried in the embankment.

Earthwork operations shall be suspended at any time when satisfactory results cannot be obtained due to rain, freezing, or other unsatisfactory weather conditions in the field. Frozen material shall not be placed in the embankment nor shall embankment be placed upon frozen material. Material shall not be placed on surfaces that are muddy, frozen, or contain frost. The Contractor shall drag, blade, or slope the embankment to provide surface drainage at all times.

The material in each lift shall be within ±2% of optimum moisture content before rolling to obtain the prescribed compaction. The material shall be moistened or aerated as necessary to achieve a uniform moisture content throughout the lift. Natural drying may be accelerated by blending in dry material or manipulation alone to increase the rate of evaporation.

The Contractor shall make the necessary corrections and adjustments in methods, materials or moisture content to achieve the specified embankment density.

The contractor will take samples of excavated materials which will be used in embankment for testing and develop a Moisture-Density Relations of Soils Report (Proctor) in accordance with ASTM D698. A new Proctor shall be developed for each soil type based on visual classification.

Density tests will be taken by the contractor for every 500 square yards of compacted embankment for each lift which is required to be compacted, or other appropriate frequencies as determined by the RPR.

If the material has greater than 30% retained on the 3/4-inch (19.0 mm) sieve, follow AASHTO T-180 Annex Correction of maximum dry density and optimum moisture for oversized particles.

Rolling operations shall be continued until the embankment is compacted to not less than 100% of maximum density for non-cohesive soils, and 95% of maximum density for cohesive soils as determined by ASTM D698. Under all areas to be paved, the embankments shall be compacted to a depth of 12 inches and to a density of not less than 95 percent of the maximum density as determined by ASTM D698. As used in this specification, "non-cohesive" shall mean those soils having a plasticity index (PI) of less than 3 as determined by ASTM D4318.

There will be no separate measurement of payment for compacted embankment. All costs incidental to placing in lifts, compacting, discing, watering, mixing, sloping, and other operations necessary for construction of embankments will be included in the contract price for excavation, borrow, or other items. Payment for compacted embankment will be made under embankment in-place and no payment will be made for excavation, borrow, or other items.

152-2.9 Proof rolling. The purpose of proof rolling the subgrade is to identify any weak areas in the subgrade and not for compaction of the subgrade. After compaction is completed, the subgrade area shall be proof rolled with a 20 ton (18.1 metric ton) Tandem axle Dual Wheel Dump Truck loaded to the legal limit with tires inflated to 100 psi in the presence of the RPR. Apply a minimum of **50%** coverage, or as specified by the RPR, under pavement areas. A coverage is defined as the application of one tire print over the designated area. Soft areas of subgrade that deflect more than 1 inch (25 mm) or show permanent deformation greater than 1 inch (25 mm) shall be removed and replaced with suitable material or reworked to conform to the moisture content and compaction requirements in accordance with these specifications. Removal and replacement of soft areas is incidental to this item.

152-2.10 Compaction requirements. The subgrade under areas to be paved shall be compacted to a depth of 12 inches (300 mm) and to a density of not less than 95 percent of the maximum dry density as determined by ASTM D698.

The material to be compacted shall be within ±2% of optimum moisture content before being rolled to obtain the prescribed compaction (except for expansive soils). When the material has greater than 30 percent retained on the ¾ inch (19.0 mm) sieve, follow the methods in ASTM D698 procedures in AASHTO T180 Annex for correction of maximum dry density and optimum moisture for oversized particles. Tests for moisture content and compaction will be taken at a minimum of 500 S.Y. of subgrade. All quality assurance testing shall be done by the Contractor's laboratory in the presence of the RPR, and density test results shall be furnished upon completion to the RPR for acceptance determination.

The in-place field density shall be determined in accordance with ASTM D6938 using Procedure A, the direct transmission method, and ASTM D6938 shall be used to determine the moisture content of the material. The machine shall be calibrated in accordance with ASTM D6938 within 12 months prior to its use on this contract. The gauge shall be field standardized daily.

Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

If the specified density is not attained, the entire lot shall be reworked and/or re-compacted and additional random tests made. This procedure shall be followed until the specified density is reached.

All cut-and-fill slopes shall be uniformly dressed to the slope, cross-section, and alignment shown on the plans or as directed by the RPR and the finished subgrade shall be maintained.

152-2.11 Finishing and protection of subgrade. Finishing and protection of the subgrade is incidental to this item. Grading and compacting of the subgrade shall be performed so that it will drain readily. All low areas, holes or depressions in the subgrade shall be brought to grade. Scarifying, blading, rolling and other methods shall be performed to provide a thoroughly compacted subgrade shaped to the lines and grades shown on the plans. All ruts or rough places that develop in the completed subgrade shall be graded, re-compacted, and retested. The Contractor shall protect the subgrade from damage and limit hauling over the finished subgrade to only traffic essential for construction purposes.

The Contractor shall maintain the completed course in satisfactory condition throughout placement of subsequent layers. No subbase, base, or surface course shall be placed on the subgrade until the subgrade has been accepted by the RPR.

152-2.12 Haul. All hauling will be considered a necessary and incidental part of the work. The Contractor shall include the cost in the contract unit price for the pay of items of work involved. No payment will be made separately or directly for hauling on any part of the work.

The Contractor's equipment shall not cause damage to any excavated surface, compacted lift or to the subgrade as a result of hauling operations. Any damage caused as a result of the Contractor's hauling operations shall be repaired at the Contractor's expense.

The Contractor shall be responsible for providing, maintaining and removing any haul roads or routes within or outside of the work area, and shall return the affected areas to their former condition, unless otherwise authorized in writing by the Owner. No separate payment will be made for any work or materials associated with providing, maintaining and removing haul roads or routes.

152-2.13 Surface Tolerances. In those areas on which a subbase or base course is to be placed, the surface shall be tested for smoothness and accuracy of grade and crown. Any portion lacking the required smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches (75 mm), reshaped and re-compacted to grade until the required smoothness and accuracy are obtained and approved by the RPR. The Contractor shall perform all final smoothness and grade checks in the presence of the RPR. Any deviation in surface tolerances shall be corrected by the Contractor at the Contractor's expense.

a. **Smoothness.** The finished surface shall not vary more than +/- ½ inch (12 mm) when tested with a 12-foot (3.7-m) straightedge applied parallel with and at right angles to the centerline. The straightedge shall be moved continuously forward at half the length of the 12-foot (3.7-m) straightedge for the full length of each line on a 50-foot (15-m) grid.

b. **Grade.** The grade and crown shall be measured on a 50-foot (15-m) grid and shall be within +/-0.05 feet (15 mm) of the specified grade.

METHOD OF MEASUREMENT

152-3.1 Measurement for payment specified by the cubic yard shall be computed by the average end areas of design cross sections. The end area is that bound by the original ground line established by ~~field cross-sections~~ and the final theoretical pay line established by cross-sections shown on the plans, subject to verification by the RPR.

In cut sections, the additional cut required to construct the topsoil layer to the plan grade had not been measured and will not be measured for separate payment, but will be subsidiary to "Unclassified Excavation."

No allowance has been made in the measurement of shrink/swell. The Contractor shall make his own determination as to the amount of shrink/swell involved in the construction.

No adjustments have been made to the plan quantities for the construction and demolition of existing drainage structures. The Contractor shall make his/her own determination as to the amount of unsuitable excavated materials which may be encountered and the resulting additional borrow material required embankment required to construct the project if the excavated material is deemed suitable,

The quantity of the unclassified excavation to be paid for shall be the number of Cubic Yards measure in its original position. Measurement shall not include the quantity of materials excavated without authorization beyond normal slope lines or the quantity of material used for purpose other those directed.

152.3.2 The quantity of borrow excavation to be paid for shall be the number of cubic yards measure in its FINAL position. Measurement shall not include the quantity of materials excavated without authorization beyond normal slope lines or the quantity of material used for purpose other those directed.

~~**152-3.2** The quantity of embankment in place shall be the number of cubic yards as measured in its final position.~~

152-3.3 Stockpiled material shall not be measured for payment in the stockpiled position

152-3.4 Unsuitable excavation shall be measured for the surface to the ground., after stripping is accomplished. Measurement will be taken by Engineer, and the volume of excavation will be calculated by the average end area method. The necessary refilling of unsuitable areas will not be measured for separate payment but will be subsidiary to "Unsuitable Excavation". Only the amount of excavation directed by the Engineer will be measured for payment.

BASIS OF PAYMENT

152-4.1 Unclassified excavation. Drainage Excavation payment shall be made at the contract unit price per cubic yard. This price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the item.

152-4.2 For embankment in place, payment shall be made at the contract unit price per cubic yard (cubic meter). This price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the item.

~~**152-4.3** Stockpiled material shall be paid for on the basis of the number of cubic yards measure in the stockpile position.~~

152-4.4 Unsuitable excavation shall be paid at the contract unit price per Cubic Yard for "Unsuitable Excavation." which price shall be full compensation for all excavation, disposal or placement of the material including loading, hauling, spreading and compaction, compaction and preparation of subgrade, for refillling, rolling and compaction of all undercut areas, and for all equipment tools, labor and incidentals necessary to complete the work.

Payment will be made under:

~~Item P-152-4.1~~	~~Unclassified/ Drainage Excavation - per cubic yard.~~
Item P-152-4.2	Embankment in Place - per cubic yard
Item P-152-4.4	Unsuitable Excavation – per cubic yard

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

American Association of State Highway and Transportation Officials (AASHTO)

AASHTO T-180	Standard Method of Test for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop

ASTM International (ASTM)

ASTM D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft^3 (600 kN-m/m^3))
ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
ASTM D1557	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft^3 (2700 kN-m/m^3))
ASTM D6938	Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

Advisory Circulars (AC)

AC 150/5370-2	Operational Safety on Airports During Construction Software

Software

FAARFIELD – FAA Rigid and Flexible Iterative Elastic Layered Design

U.S. Department of Transportation

FAA RD-76-66	Design and Construction of Airport Pavements on Expansive Soils

END OF ITEM P-152

ITEM P-155
LIME-TREATED SUBGRADE

DESCRIPTION

155-1.1 This item shall be used for soil modification that require strength gain to a specific level. This item shall consist of constructing one or more courses of a mixture of soil, lime, and water in accordance with this specification, and in conformity with the lines, grades, thicknesses, and typical cross-sections shown on the plans.

MATERIALS

155-2.1 Lime. Quicklime, hydrated lime, and either high-calcium dolomitic, or magnesium lime, as defined by ASTM C51, shall conform to the requirements of ASTM C977. Lime not produced from calcining limestone is not permitted.

~~**155-2.2 Commercial lime slurry.** Commercial lime slurry shall be a pumpable suspension of solids in water. The water or liquid portion of the slurry shall not contain dissolved material injurious or objectionable for the intended purpose. The solids portion of the mixture, when considered on the basis of "solids content," shall consist principally of hydrated lime of a quality and fineness sufficient to meet the following chemical composition and residue requirements.~~

~~**a. Chemical composition.** The "solids content" of the lime slurry shall consist of a minimum of 70%, by weight, of calcium and magnesium oxides.~~

~~**b. Residue.** The percent by weight of residue retained in the "solids content" of lime slurry shall conform to the following requirements:~~

- ~~Residue retained on a No. 6 (3.35 µm) sieve = maximum 0.0%~~
- ~~Residue retained on a No. 10 (2.00 µm) sieve = maximum 1.0%~~
- ~~Residue retained on a No. 30 (600 µm) sieve = maximum 2.5%~~

~~**c. Grade.** Commercial lime slurry shall conform to one of the following two grades:~~

- ~~Grade 1. The "dry solids content" shall be at least 31% by weight, of the slurry.~~
- ~~Grade 2. The "dry solids content" shall be at least 35%, by weight, of the slurry.~~

155-2.3 Water. Water used in mixing or curing shall be from potable water sources. Other sources shall be tested in accordance with ASTM C1602 prior to use.

155-2.4 Soil. The soil for this work shall consist of on-site materials free of roots, sod, weeds, and stones larger than 2-1/2 inches (60 mm) and have a sulfate content of less than 0.3%.

COMPOSITION

155-3.1 Soil-lime mixture. Lime shall be applied at 8 % dry unit weight of soil for the depth of subgrade treatment as shown on the plans.

155-3.2 Tolerances. At final compaction, the lime and water content for each course of subgrade treatment shall conform to the following tolerances:

Tolerances

Material	Tolerance
Lime	+ 0.5%
Water	+ 2%, -0%

WEATHER LIMITATIONS

155-4.1 Weather limitation. Subgrade shall not be constructed when weather conditions detrimentally affect the quality of the materials. Lime shall not be applied unless the air temperature is at least 40°F (4°C) and rising. Lime shall not be applied to soils that are frozen or contain frost. Protect completed lime-treated areas by approved methods against the detrimental effects of freezing if the air temperature falls below 35°F (2°C). Remove and replace any damaged portion of the completed soil-lime treated area with new soil-lime material in accordance with this specification.

EQUIPMENT

155-5.1 Equipment. All equipment necessary to grade, scarify, spread, mix, and compact the material shall be provided. The Resident Project Representative (RPR) must approve the Contractor's proposed equipment prior to the start of the treatment.

CONSTRUCTION METHODS

155-6.1 General. This specification is to construct a subgrade consisting of a uniform lime mixture which shall be free from loose or segregated areas. The subgrade shall be of uniform density and moisture content, well mixed for its full depth, and have a smooth surface suitable for placing subsequent lifts. The Contractor shall be responsible to meet the above requirements.

Prior to any treatment, the subgrade shall be constructed as specified in Item P-152, Excavation, Subgrade and Embankment, and shaped to conform to the typical sections, lines, and grades as shown on the plans.

The mixing equipment must give visible indication at all times that it is cutting, pulverizing, and mixing the material uniformly to the proper depth over the full width of the cut.

155-6.2 Application. Lime shall be uniformly spread only over an area where the initial mixing operations can be completed during the same workday. Lime shall not be applied when wind conditions are detrimental to proper application. A motor grader shall not be used to spread the lime. Adequate moisture shall be added to the cement/soil mixture to maintain the proper moisture content. Materials shall be handled, stored, and applied in accordance with all federal, state, and local requirements.

155-6.3 Mixing. The mixing procedure shall be as described below:

a. Preliminary mixing. The full depth of the treated subgrade shall be mixed with an approved mixing machine. Lime shall not be left exposed for more than six (6) hours. The mixing machine shall make two coverages. Water shall be added to the subgrade during mixing to

provide a moisture content 3% to 5% above the optimum moisture of the material and to ensure chemical reaction of the lime and subgrade. After mixing, the subgrade shall be lightly rolled to seal the surface and help prevent evaporation of moisture. The water content of the subgrade mixture shall be maintained at a moisture content above the optimum moisture content for a minimum of 4 to 24 hours or until the material becomes friable. During the mellowing period, the material shall be sprinkled as directed by the RPR.

b. Final mixing. After the required mellowing time, the material shall be uniformly mixed by approved methods. Any clods shall be reduced in size by blading, discing, harrowing, scarifying, or by the use of other approved pulverization methods. After curing, pulverize lime treated material until 100% of soil particles pass a one-inch (25.0 mm) sieve and 60% pass the No. 4 (4.75 mm) sieve when tested dry by laboratory sieves. If resultant mixture contains clods, reduce their size by scarifying, remixing, or pulverization to meet specified gradation.

155-6.4 Control Strip. The first half-day of construction shall be considered the control strip. The Contractor shall demonstrate, in the presence of the RPR, that the materials, equipment, and construction processes meet the requirements of the specification. The sequence and manner of rolling necessary to obtain specified density requirements shall be determined. Control strips that do not meet specification requirements shall be reworked, re-compacted, or removed and replaced at the Contractor's expense. Full operations shall not continue until the control strip has been accepted by the RPR. Upon acceptance of the control strip by the RPR, the Contractor shall use the same equipment, materials, and construction methods for the remainder of construction, unless adjustments made by the Contractor are approved in advance by the RPR.

155-6.5 Treatment Application and Depth Checks. The depth and amount of stabilization shall be measured by the Contractor with no less than 2 tests per day of material placed; test shall be witnessed by the RPR. Measurements shall be made in test holes excavated to show the full depth of mixing and the pH checked by spraying the side of the test hole with a pH indicator such as phenolphthalein. Phenolphthalein changes from clear to red between pH 8.3 and 10. The color change indicates the location of the bottom of the mixing zone. pH indicators other than phenolphthalein can be used to measure pH levels. If the pH is not at least 8.3 and/or if the depth of the treated subgrade is more than 1/2 inch (12 mm) deficient, additional lime treatment shall be added and the material remixed. The Contractor shall correct all such areas in a manner satisfactory to the RPR.

155-6.6 Compaction. Compaction of the mixture shall immediately follow the final mixing operation with the mixture compacted within 1 to 4 hours after final mixing. The material shall be at the moisture content specified in paragraph 155-3.2 during compaction. The field density of the compacted mixture shall be at least 95% of the maximum density as specified in paragraph 155-6.10. Perform in-place density test to determine degree of compaction between 24 and 72 hours after final compaction and the 24-hour moist cure period. If the material fails to meet the density requirements, it shall be reworked to meet the density requirements. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

155-6.7 Finishing and curing. After the final lift or course of lime-treated subgrade has been compacted, it shall be brought to the required lines and grades in accordance with the typical sections. The completed section shall then be finished by rolling, as directed by the RPR, with a pneumatic or other suitable roller sufficiently light to prevent hairline cracking. The finished surface shall not vary more than 1/2-inch (12 mm) when tested with a 12-foot (3.7 m) straightedge applied parallel with and at right angles to the pavement centerline. Any variations in excess of this tolerance shall be corrected by the Contractor at the Contractor's expense in a manner satisfactory to the RPR.

The completed section shall be moist cured for a minimum of seven (7) days before further courses are added or any traffic is permitted, unless otherwise directed by the RPR. The final lift should not be exposed for more than 14 days without protection or the placement of a base course material.

155-6.8 Maintenance. The Contractor shall protect and maintain the lime-treated subgrade from yielding until the lime-treated subgrade is covered by placement of the next lift. When material has been exposed to excessive rain, snow, or freeze-thaw conditions, prior to placement of additional material, the Contractor shall verify that materials still meet all specification requirements. The maintenance cost shall be incidental to this item.

155-6.9 Surface tolerance. In those areas on which a subbase or base course is to be placed, the surface shall be tested for smoothness and accuracy of grade and crown. Any portion lacking the required smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches (75 mm), reshaped and re-compacted to grade until the required smoothness and accuracy are obtained and approved by the RPR. The Contractor shall perform all final smoothness and grade checks in the presence of the RPR. Any deviation in surface tolerances shall be corrected by the Contractor at the Contractor's expense.

a. Smoothness. The finished surface shall not vary more than +/- ½ inch (12 mm) when tested with a 12-foot (3.7-m) straightedge applied parallel with and at right angles to the centerline. The straightedge shall be moved continuously forward at half the length of the 12-foot (3.7-m) straightedge for the full length of each line on a 50-foot (15-m) grid.

b. Grade. The grade and crown shall be measured on a 50-foot (15-m) grid and shall be within +/-0.05 feet (15 mm) of the specified grade.

155-6.10 Acceptance sampling and testing. The lime treated subgrade shall be accepted for density and thickness on an area basis. Testing frequency shall be a minimum of one compaction and thickness test per 1000 square yards 840 square meters) of lime treated subgrade, but not less than four (4) tests per day of production. Sampling locations will be determined on a random basis per ASTM D3665.

a. Density. All testing shall be done by the Contractor's laboratory in the presence of the RPR and density test results shall be furnished upon completion to the RPR for acceptance determination.

The field density of the compacted mixture shall be at least 95% of the maximum density of laboratory specimens prepared from samples taken from the material in place. The specimens shall be compacted and tested in accordance with ASTM D698 to determine maximum density and optimum moisture content. The in-place field density shall be determined in accordance with ASTM D1556. If the material fails to meet the density requirements, the area represented by the failed test shall be reworked to meet the density requirements. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

b. Thickness. The thickness of the course shall be within +0 and -1/2 inch (12 mm) of the specified thickness as determined by depth tests taken by the Contractor in the presence of the RPR for each area. Where the thickness is deficient by more than 1/2-inch (12 mm), the Contractor shall correct such areas at no additional cost The Contractor shall replace, at his expense, material where depth tests have been taken.

155-6.11 Handling and safety. The Contractor shall obtain and enforce the lime supplier's instructions for proper safety and handling of the lime to prevent physical eye or skin contact with lime during transport or application.

METHOD OF MEASUREMENT

155-7.1 Lime-treated subgrade shall be paid for by the square yard (square meter) in the completed and accepted work.

155-7.2 Lime shall be paid by the number of tons (kg) of Hydrated Lime applied at the application rate specified in paragraph 155-3.1.

a. Hydrated lime delivered to the project in dry form will be measured according to the actual tonnage either spread on the subgrade or batched on site into a slurry, whichever is applicable.

b. Quicklime delivered to the project in dry form will be measured for payment on the basis of the tons of equivalent hydrated lime using the following formula:

Equivalent Hydrated Lime ($Ca(OH)_2$) = Total Quicklime (CaO) × 1.32

~~**c.** Lime delivered to the project in slurry form will be measured for payment in tons, dry weight of hydrated lime or equivalent hydrated lime in accordance with paragraph b above.~~

BASIS OF PAYMENT

155-8.1 Payment shall be made at the contract unit price per square yard (square meter) for the lime-treated subgrade at the thickness specified. The price shall be full compensation for furnishing all material, except the lime, and for all preparation, delivering, placing, and mixing these materials, and all labor, equipment, tools, and incidentals necessary to complete this item.

155-8.2 Payment shall be made at the contract unit price per ton (kg). This price shall be full compensation for furnishing, delivery, and placing this material.

Payment will be made under:

Item P-155-8.1	Lime-treated subgrade - per square yard (m^2)
Item P-155-8.2	Lime - per ton

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM C51	Standard Terminology Relating to Lime and Limestone (as used by the industry)
ASTM C977	Standard Specification for Quicklime and Hydrated Lime for Soil Stabilization
ASTM C1602	Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete
ASTM D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft^3) (600 kN-m/m^3)
ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method

ASTM D2487	Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)
ASTM D6938	Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

Software

FAARFIELD – FAA Rigid and Flexible Iterative Elastic Layered Design

END OF ITEM P-155

ITEM P-501
CEMENT CONCRETE PAVEMENT

DESCRIPTION

501-1.1 This work shall consist of pavement composed of cement concrete **with reinforcement** constructed on a prepared underlying surface in accordance with these specifications and shall conform to the lines, grades, thickness, and typical cross-sections shown on the plans. The terms cement concrete, hydraulic cement concrete, and concrete are interchangeable in this specification.

MATERIALS

501-2.1 Aggregates.

a. Reactivity. Fine and Coarse aggregates to be used in PCC on this project shall be tested and evaluated by the Contractor for alkali-aggregate reactivity in accordance with both ASTM C1260 and ASTM C1567. Tests must be representative of aggregate sources which will be providing material for production. ASTM C1260 and ASTM C1567 tests may be run concurrently.

(1) Coarse aggregate and fine aggregate shall be tested separately in accordance with ASTM C1260, however, the length of test shall be extended to 28 days (30 days from casting). Tests must have been completed within 6 months of the date of the concrete mix submittal.

(2) The combined coarse and fine aggregate shall be tested in accordance with ASTM C1567, modified for combined aggregates, using the proposed mixture design proportions of aggregates, cementitious materials, and/or specific reactivity reducing chemicals. If the expansion does not exceed 0.10% at 28 days, the proposed combined materials will be accepted. If the expansion is greater than 0.10% at 28 days, the aggregates will not be accepted unless adjustments to the combined materials mixture can reduce the expansion to less than 0.10% at 28 days, or new aggregates shall be evaluated and tested.

(3) If lithium nitrate is proposed for use with or without supplementary cementitious materials, the aggregates shall be tested in accordance with Corps of Engineers (COE) Concrete Research Division (CRD) C662 in lieu of ASTM C1567. If lithium nitrate admixture is used, it shall be nominal 30% ±0.5% weight lithium nitrate in water. If the expansion does not exceed 0.10% at 28 days, the proposed combined materials will be accepted. If the expansion is greater than 0.10% at 28 days, the aggregates will not be accepted unless adjustments to the combined materials mixture can reduce the expansion to less than 0.10% at 28 days, or new aggregates shall be evaluated and tested.

b. Fine aggregate. Grading of the fine aggregate, as delivered to the mixer, shall conform to the requirements of ASTM C33 and the parameters identified in the fine aggregate material requirements below. Fine aggregate material requirements and deleterious limits are shown in the table below.

Fine Aggregate Material Requirements		
Soundness of Aggregates by Use of Sodium Sulfate **or** Magnesium Sulfate	Loss after 5 cycles: 10% maximum using Sodium sulfate - or - 15% maximum using magnesium sulfate	ASTM C88
Sand Equivalent	[45] minimum	ASTM D2419
Fineness Modulus (FM)	2.50 ≤ FM ≤ 3.40	ASTM C136
Limits for Deleterious Substances in Fine Aggregate for Concrete		
Clay lumps and friable particles	1.0% maximum	ASTM C142
Coal and lignite	0.5% using a medium with a density of Sp. Gr. of 2.0	ASTM C123
Total Deleterious Material	1.0% maximum	

c. Coarse aggregate. The maximum size coarse aggregate shall be **1-1/2-inch**.

Aggregates delivered to the mixer shall be clean, hard, uncoated aggregates consisting of crushed stone, crushed or uncrushed gravel, air-cooled iron blast furnace slag, crushed recycled concrete pavement, or a combination. The aggregates shall have no known history of detrimental pavement staining. Steel blast furnace slag shall not be permitted. Coarse aggregate material requirements and deleterious limits are shown in the table below; washing may be required to meet aggregate requirements.

Coarse Aggregate Material Requirements

Material Test	Requirement	Standard
Resistance to Degradation	Loss: 40% maximum	ASTM C131
Soundness of Aggregates by Use of Sodium Sulfate **or** Magnesium Sulfate	Loss after 5 cycles: 12% maximum using Sodium sulfate - or - 18% maximum using magnesium sulfate	ASTM C88
Flat, Elongated, or Flat and Elongated Particles	8% maximum, by weight, of flat, elongated, or flat and elongated particles at 5:1 for any size group coarser than 3/8 (9.5 mm) sieve [1]	ASTM D4791
Bulk density of slag [2]	Weigh not less than 70 pounds per cubic foot (1.12 Mg/cubic meter)	ASTM C29

[1] A flat particle is one having a ratio of width to thickness greater than five (5); an elongated particle is one having a ratio of length to width greater than five (5).

[2] Only required if slag is specified.

The amount of deleterious material in the coarse aggregate shall not exceed the following limits:

Limits for Deleterious Substances in Coarse Aggregate

Deleterious material	ASTM	Percentage by Mass
Clay Lumps and friable particles	ASTM C142	1.0
Material finer than No. 200 sieve (75 µm)	ASTM C117	1.0[1]
Lightweight particles	ASTM C123 using a medium with a density of Sp. Gr. of 2.0	0.5
Chert[2] (less than 2.40 Sp Gr.)	ASTM C123 using a medium with a density of Sp. Gr. of 2.40)	[0.1][3]

[1] The limit for material finer than 75-µm is allowed to be increased to 1.5% for crushed aggregates consisting of dust of fracture that is essentially free from clay or shale. Test results supporting acceptance of increasing limit to 1.5% with statement indicating material is dust of fracture must be submitted with Concrete mix. Acceptable techniques to characterizing these fines include methylene blue adsorption or X-ray diffraction analysis.

[2] Chert and aggregates with less than 2.4 specific gravity.

[3] The limit for chert may be increased to 1.0 percent by mass in areas not subject to severe freeze and thaw.

d. Combined aggregate gradation. This specification is targeted for a combined aggregate gradation developed following the guidance presented in United States Air Force Engineering Technical Letter (ETL) 97-5: Proportioning Concrete Mixtures with Graded Aggregates for Rigid Airfield Pavements. Base the aggregate grading upon a combination of all the aggregates (coarse and fine) to be used for the mixture proportioning. Three aggregate sizes may be required to achieve an optimized combined gradation that will produce a workable concrete mixture for its intended use. Use aggregate gradations that produce concrete mixtures with well-graded or optimized aggregate combinations. The Contractor shall submit complete mixture information necessary to calculate the volumetric components of the mixture. The combined aggregate grading shall meet the following requirements:

(1) The materials selected and the proportions used shall be such that when the Coarseness Factor (CF) and the Workability Factor (WF) are plotted on a diagram as described in paragraph 501-2.1d(4) below, the point thus determined shall fall within the parallelogram described therein.

(2) The CF shall be determined from the following equation:

CF = (cumulative percent retained on the 3/8 in. (9.5 mm) sieve)(100) / (cumulative percent retained on the No. 8 (2.36 mm) sieve)

(3) The WF is defined as the percent passing the No. 8 (2.36 mm) sieve based on the combined gradation. However, WF shall be adjusted, upwards only, by 2.5 percentage points for each 94 pounds (42 kg) of cementitious material per cubic meter yard greater than 564 pounds per cubic yard (335 kg per cubic meter).

(4) A diagram shall be plotted using a rectangular scale with WF on the Y-axis with units from 20 (bottom) to 45 (top), and with CF on the X-axis with units from 80 (left side) to 30 (right side). On this diagram a parallelogram shall be plotted with corners at the following coordinates (CF-75, WF-28), (CF-75, WF-40), (CF-45, WF-32.5), and (CF-45, WF-44.5). If the point determined by the intersection of the computed CF and WF does not fall within the above parallelogram, the grading of each size of aggregate used and the proportions selected shall be changed as necessary. The point determined by the plotting of the CF

and WF may be adjusted during production ±3 WF and ±5 CF. Adjustments to gradation may not take the point outside of the parallelogram.

e. Contractors combined aggregate gradation. The Contractor shall submit their combined aggregate gradation using the following format:

Contractor's Combined Aggregate Gradation

Sieve Size	Contractor's Concrete mix Gradation (Percent passing by weight)
2 inch (50 mm)	
1-1/2 inch (37.5 mm)	
1 inch (25.0 mm)	
3/4 inch (19.0 mm)	
1/2 inch (12.5 mm)	
3/8 inch (9.5 mm)	
No. 4 (4.75 mm)	
No. 8 (2.36 mm)	
No. 16 (1.18 mm)	
No. 30 (600 µm)	
No. 50 (300 µm)	
No. 100 (150 µm)	

501-2.2 Cement. Cement shall conform to the requirements of **ASTM 150 Type I.**

501-2.3 Cementitious materials.

a. Fly ash. Fly ash shall meet the requirements of ASTM C618, with the exception of loss of ignition, where the maximum shall be less than 6%. Fly ash shall have a Calcium Oxide (CaO) content of less than 15% and a total alkali content less than 3% per ASTM C311. The Contractor shall furnish the previous three most recent, consecutive ASTM C618 reports for each source of fly ash proposed in the concrete mix, and shall furnish each additional report as they become available during the project. The reports can be used for acceptance or the material may be tested independently by the Resident Project Representative (RPR).

b. Slag cement (ground granulated blast furnace (GGBF)). Slag cement shall conform to ASTM C989, Grade 100 or Grade 120. Slag cement shall be used only at a rate between 25% and 55% of the total cementitious material by mass.

c. Raw or calcined natural pozzolan. Natural pozzolan shall be raw or calcined and conform to ASTM C618, Class N, including the optional requirements for uniformity and effectiveness in controlling Alkali-Silica reaction and shall have a loss on ignition not exceeding 6%. Class N pozzolan for use in mitigating Alkali-Silica Reactivity shall have a total available alkali content less than 3%.

501-2.4 Joint seal. The joint seal for the joints in the concrete pavement shall meet the requirements of **Item P-605** and shall be of the type specified in the plans.

501-2.5 Isolation joint filler. Premolded joint filler for isolation joints shall conform to the requirements of ASTM D1751 or ASTM D1752 and shall be where shown on the plans. The filler for each joint shall be furnished in a single piece for the full depth and width required for the joint, unless otherwise specified by the RPR. When the use of more than one piece is required for a joint, the abutting ends shall be fastened securely and held accurately to shape by stapling or other positive fastening means satisfactory to the RPR.

501-2.6 Steel reinforcement. Reinforcing shall consist of **Welded Wire Fabric** conforming to the requirements of **ASTM A1064** or **Bar Mats** conforming to the requirements of **ASTM A184 or A704**.

501-2.7 Dowel and tie bars. Dowel bars shall be plain steel bars conforming to ASTM A615 and shall be free from burring or other deformation restricting slippage in the concrete.

a. Dowel Bars. Before delivery to the construction site each dowel bar shall be epoxy coated per ASTM A1078, Type 1, with a coating thickness after curing greater than 10 mils. Patched ends are not required for Type 1 coated dowels. The dowels shall be coated with a bond-breaker recommended by the manufacturer. Dowel sleeves or inserts are not permitted. Grout retention rings shall be fully circular metal or plastic devices capable of supporting the dowel until the grout hardens.

b. Tie Bars. Tie bars shall be deformed steel bars and conform to the requirements of ASTM A615. Tie bars designated as Grade 60 in ASTM A615 or ASTM A706 shall be used for construction requiring bent bars.

501-2.8 Water. Water used in mixing or curing shall be potable. If water is taken from other sources considered non-potable, it shall meet the requirements of ASTM C1602.

501-2.9 Material for curing concrete. Curing materials shall conform to one of the following specifications:

a. Liquid membrane-forming compounds for curing concrete shall conform to the requirements of ASTM C309, Type 2, Class A, or Class B.

b. White polyethylene film for curing concrete shall conform to the requirements of ASTM C171.

c. White burlap-polyethylene sheeting for curing concrete shall conform to the requirements of ASTM C171.

d. Waterproof paper for curing concrete shall conform to the requirements of ASTM C171.

501-2.10 Admixtures. Admixtures shall conform to the following specifications:

a. Air-entraining admixtures. Air-entraining admixtures shall meet the requirements of ASTM C260 and shall consistently entrain the air content in the specified ranges under field conditions. The air-entraining agent and any water reducer admixture shall be compatible.

b. Water-reducing admixtures. Water-reducing admixture shall meet the requirements of ASTM C494, Type A, B, or D.

c. Other admixtures. The use of set retarding and set-accelerating admixtures shall be approved by the RPR prior to developing the concrete mix. Retarding admixtures shall meet the requirements of ASTM C494, Type A, B, or D and set-accelerating admixtures shall meet the requirements of ASTM C494, Type C. Calcium chloride and admixtures containing calcium chloride shall not be used.

d. Lithium Nitrate. The lithium admixture shall be a nominal 30% aqueous solution of Lithium Nitrate, with a density of 10 pounds/gallon (1.2 kg/L), and shall have the approximate chemical form as shown below:

Lithium Admixture

Constituent	Limit (Percent by Mass)
LiNO3 (Lithium Nitrate)	30 ±0.5
SO4 (Sulfate Ion)	0.1 (max)
Cl (Chloride Ion)	0.2 (max)
Na (Sodium Ion)	0.1 (max)
K (Potassium Ion)	0.1 (max)

The lithium nitrate admixture dispensing and mixing operations shall be verified and certified by the lithium manufacturer's representative.

501-2.11 Epoxy-resin. All epoxy-resin materials shall be two-component materials conforming to the requirements of ASTM C881, Class as appropriate for each application temperature to be encountered, except that in addition, the materials shall meet the following requirements:

a. Material for use for embedding dowels and anchor bolts shall be Type IV, Grade 3.

b. Material for use as patching materials for complete filling of spalls and other voids and for use in preparing epoxy resin mortar shall be Type III, Grade as approved.

c. Material for use for injecting cracks shall be Type IV, Grade 1.

d. Material for bonding freshly mixed Portland cement concrete or mortar or freshly mixed epoxy resin concrete or mortar to hardened concrete shall be Type V, Grade as approved.

501-2.12 Bond Breaker. Liquid membrane forming compound shall be in accordance with paragraph 501-2.9a.

CONCRETE MIX

501-3.1. General. No concrete shall be placed until an acceptable concrete mix has been submitted to the RPR for review and the RPR has taken appropriate action. The RPR's review shall not relieve the Contractor of the responsibility to select and proportion the materials to comply with this section.

501-3.2 Concrete Mix Laboratory. The laboratory used to develop the concrete mix shall be accredited in accordance with ASTM C1077. The laboratory accreditation must be current and listed on the accrediting authority's website. All test methods required for developing the concrete mix must be included in the lab accreditation. A copy of the laboratory's current accreditation and accredited test methods shall be submitted to the RPR prior to start of construction.

501-3.3 Concrete Mix Proportions. Develop the mix using the procedures contained in Portland Cement Association (PCA) publication, "Design and Control of Concrete Mixtures." Concrete shall be proportioned to achieve a 28-day Compressive strength that meets or exceeds the acceptance criteria contained in paragraph 501-6.6 for a compressive strength of **4,400 psi** per ASTM C39.

The minimum cementitious material shall be adequate to ensure a workable, durable mix. The minimum cementitious material (cement plus fly ash, or slag cement) shall be **470** pounds per cubic yard. The ratio of water to cementitious material, including free surface moisture on the aggregates but not including moisture absorbed by the aggregates shall be between 0.38 – 0.45 by weight.

Flexural strength test specimens shall be prepared in accordance with ASTM C192 and tested in accordance with ASTM C78. At the start of the project, the Contractor shall determine an allowable slump as determined by ASTM C143 not to exceed 2 inches (50 mm) for slip-form placement. For fixed-form placement, the slump shall not exceed 3 inches (75 mm). For hand placement, the slump shall not exceed 4 inches (100 mm).

When the flexural design strength in paragraph 501-3.3 is to be accepted on the basis of compressive strength, the following procedure establishes the correlation between compressive and flexural strength for the concrete mix. Each concrete mix will require a separate correlation.

Cylinders/Beams

a. Fabricate all beams and cylinders for each mixture from the same batch or blend of batches. Fabricate and cure all beams and cylinders in accordance with ASTM C192, using 6 × 6-inch (150 × 150 mm) steel beam forms and 6 × 12-inch (150 × 300 mm) single-use cylinder forms.

b. Cure test beams from each mixture for 3, 7, 14, and 28 day flexural tests; three (3) beams to be tested per age.

c. Cure test cylinders from each mixture for 3, 7, 14 and 28 day compressive strength tests; three (3) cylinders to be tested per age.

d. Test beams in accordance with ASTM C78, cylinders in accordance with ASTM C39.

e. Using the average strength for each age, plot all results on separate graphs for each w/c versus:

- 3-day flexural strength
- 7-day flexural strength
- 14-day flexural strength
- 28-day flexural strength
- 3-day compressive strength
- 7-day compressive strength
- 14-day compressive strength
- 28-day compressive strength

f. From the above expected strengths for the selected mixture determine the following Correlation Ratios:

(1) Ratio of the 14-day compressive strength of the selected mixture to the 28-day flexural strength of the mixture (for acceptance).

(2) Ratio of the 7-day compressive strength of the selected mixture to the 28-day flexural strength of the mixture (for Contractor QC control).

g. If there is a change in materials, additional mixture design studies shall be made using the new materials and new Correlation Ratios shall be determined.

h. No concrete pavement shall be placed until the Engineer has approved the Contractor's mixture proportions. The approved water-cementitious materials ratio shall not exceed the maximum value specified.

The results of the concrete mix shall include a statement giving the maximum nominal coarse aggregate size and the weights and volumes of each ingredient proportioned on a one cubic yard (meter) basis. Aggregate quantities shall be based on the mass in a saturated surface dry condition.

If a change in source(s) is made, or admixtures added or deleted from the mix, a new concrete mix must be submitted to the RPR for approval.

The RPR may request samples at any time for testing, prior to and during production, to verify the quality of the materials and to ensure conformance with the applicable specifications.

501-3.4 Concrete Mix submittal. The concrete mix shall be submitted to the RPR at least **30** days prior to the start of operations. The submitted concrete mix shall not be more than 180 days old and must use the materials to be used for production for the project. Production shall not begin until the concrete mix is approved in writing by the RPR.

Each of the submitted concrete mixes (i.e, slip form, side form machine finish and side form hand finish) shall be stamped or sealed by the responsible professional Engineer of the laboratory and shall include the following items and quantities as a minimum:

- Certified material test reports for aggregate in accordance with paragraph 501-2.1. Certified reports must include all tests required; reporting each test, test method, test result, and requirement specified (criteria).
- Combined aggregate gradations and analysis; and including plots of the fine aggregate fineness modulus.
- Reactivity Test Results.
- Coarse aggregate quality test results, including deleterious materials.
- Fine aggregate quality test results, including deleterious materials.
- Mill certificates for cement and supplemental cementitious materials.
- Certified test results for all admixtures, including Lithium Nitrate if applicable.
- Specified flexural strength, slump, and air content.
- Recommended proportions/volumes for proposed mixture and trial water-cementitious materials ratio, including actual slump and air content.
- Flexural and compressive strength summaries and plots, including all individual beam and cylinder breaks.
- Correlation ratios for acceptance testing and Contractor QC testing, when applicable.
- Historical record of test results documenting production standard deviation, when applicable.

501-3.5 Cementitious materials.

a. Fly ash. When fly ash is used as a partial replacement for cement, the replacement rate shall be determined from laboratory trial mixes, and shall be between 20 and 30% by weight of the total cementitious material. If fly ash is used in conjunction with slag cement the maximum replacement rate shall not exceed 10% by weight of total cementitious material.

b. Slag cement (ground granulated blast furnace (GGBF)). Slag cement may be used. The slag cement, or slag cement plus fly ash if both are used, may constitute between 25 to 55% of the total cementitious material by weight.

c. Raw or calcined natural pozzolan. Natural pozzolan may be used in the concrete mix. When pozzolan is used as a partial replacement for cement, the replacement rate shall be determined from laboratory trial mixes, and shall be between 20 and 30% by weight of the total cementitious material. If pozzolan is used in conjunction with slag cement the maximum replacement rate shall not exceed 10% by weight of total cementitious material.

501-3.6 Admixtures.

a. Air-entraining admixtures. Air-entraining admixture are to be added in such a manner that will ensure uniform distribution of the agent throughout the batch. The air content of freshly mixed air-entrained concrete shall be based upon trial mixes with the materials to be used in the work adjusted to produce concrete of the required plasticity and workability. The percentage of air in the mix shall be **2.5%.** Air content shall be determined by testing in accordance with ASTM C231 for gravel and stone coarse aggregate and ASTM C173 for slag and other highly porous coarse aggregate.

b. Water-reducing admixtures. Water-reducing admixtures shall be added to the mix in the manner recommended by the manufacturer and in the amount necessary to comply with the specification requirements. Tests shall be conducted with the materials to be used in the work, in accordance with ASTM C494.

c. Other admixtures. Set controlling, and other approved admixtures shall be added to the mix in the manner recommended by the manufacturer and in the amount necessary to comply with the specification requirements. Tests shall be conducted with the materials to be used in the work, in accordance with ASTM C494.

d. Lithium nitrate. Lithium nitrate shall be added to the mix in the manner recommended by the manufacturer and in the amount necessary to comply with the specification requirements in accordance with paragraph 501-2.10d.

CONSTRUCTION METHODS

501-4.1 Control Strip. The control strip(s) shall be to the next planned joint after the initial 250 feet (75 m) of each type of pavement construction (slip-form pilot lane, slip-form fill-in lane, or fixed form). The Contractor shall demonstrate, in the presence of the RPR, that the materials, concrete mix, equipment, construction processes, and quality control processes meet the requirements of the specifications. The concrete mixture shall be extruded from the paver meeting the edge slump tolerance and with little or no finishing. Pilot, fill-in, and fixed-form control strips will be accepted separately. Minor adjustments to the mix design may be required to place an acceptable control strip. The production mix will be the adjusted mix design used to place the acceptable control strip. Upon acceptance of the control strip by the RPR, the Contractor must use the same equipment, materials, and construction methods for the remainder of concrete paving. Any adjustments to processes or materials must be approved in advance by the RPR.

Acceptable control strips will meet edge slump tolerance and surface acceptable with little or no finishing, air content within action limits, strength equal or greater than requirements of P501-3.3. The control strip will be considered one lot for payment (no sublots required for control strip). Payment will only be made for an acceptable control strip in accordance with paragraph 501-8.1 using a lot pay factor equal to 100.

501-4.2 Equipment. The Contractor is responsible for the proper operation and maintenance of all equipment necessary for handling materials and performing all parts of the work to meet this specification.

a. Plant and equipment. The plant and mixing equipment shall conform to the requirements of ASTM C94 and/or ASTM C685. Each truck mixer shall have attached in a prominent place a manufacturer's nameplate showing the capacity of the drum in terms of volume of mixed concrete and the speed of rotation of the mixing drum or blades. The truck mixers shall be examined daily for changes in condition due to accumulation of hard concrete or mortar or wear of blades. The pickup and throwover blades shall be replaced when they have worn down 3/4 inch (19 mm) or more. The Contractor shall have a copy of the manufacturer's design on hand showing dimensions and arrangement of blades in reference to original height and depth.

Equipment for transferring and spreading concrete from the transporting equipment to the paving lane in front of the finishing equipment shall be provided. The equipment shall be specially manufactured, self-propelled transfer equipment which will accept the concrete outside the paving lane and will spread it evenly across the paving lane in front of the paver and strike off the surface evenly to a depth which permits the paver to operate efficiently.

b. Finishing equipment.

(1) Slip-form. The standard method of constructing concrete pavements shall be with an approved slip-form paving equipment designed and operated to spread, consolidate, screed, and finish the freshly placed concrete in one complete pass of the machine so that the end result is a dense and homogeneous pavement which is achieved with a minimum of hand finishing. The paver-finisher shall be a heavy duty, self-propelled machine designed specifically for paving and finishing high quality concrete pavements.

(2) Fixed-form. On projects requiring less than 10,000 cubic yards of concrete pavement or irregular areas at locations inaccessible to slip-form paving equipment, concrete pavement may be placed with equipment specifically designed for placement and finishing using stationary side forms. Methods and equipment shall be reviewed and accepted by the RPR. Hand screeding and float finishing may only be used on small irregular areas as allowed by the RPR.

c. Vibrators. Vibrator shall be the internal type. The rate of vibration of each vibrating unit shall be sufficient to consolidate the pavement without segregation or voids. The number, spacing, and frequency shall be as necessary to provide a dense and homogeneous pavement and meet the recommendations of American Concrete Institute (ACI) 309R, Guide for Consolidation of Concrete. Adequate power to operate all vibrators shall be available on the paver. The vibrators shall be automatically controlled so that they shall be stopped as forward motion ceases. The Contractor shall provide an electronic or mechanical means to monitor vibrator status. The checks on vibrator status shall occur a minimum of two times per day or when requested by the RPR.

Hand held vibrators may only be used in irregular areas and shall meet the recommendations of ACI 309R, Guide for Consolidation of Concrete.

d. Concrete saws. The Contractor shall provide sawing equipment adequate in number of units and power to complete the sawing to the required dimensions. The Contractor shall provide at least one standby saw in good working order and a supply of saw blades at the site of the work at all times during sawing operations.

e. Fixed forms. Straight side fixed forms shall be made of steel and shall be furnished in sections not less than 10 feet (3 m) in length. Forms shall be provided with adequate devices for secure settings so that when in place they will withstand, without visible spring or settlement, the impact and vibration of the consolidating and finishing equipment. Forms with battered top surfaces and bent, twisted or broken forms shall not be used. Built-up forms shall not be used, except as approved by the RPR. The top face of the form shall not vary from a true plane more than 1/8 inch (3 mm) in 10 feet (3 m), and the upstanding leg shall not vary more than 1/4 inch (6 mm). The forms shall contain provisions for locking the ends of abutting sections together tightly for secure setting. Wood forms may be used under special conditions, when approved by the RPR. The forms shall extend the full depth of the pavement section.

501-4.3 Form setting. Forms shall be set to line and grade as shown on the plans, sufficiently in advance of the concrete placement, to ensure continuous paving operation. Forms shall be set to withstand, without visible spring or settlement, the impact and vibration of the consolidating and finishing equipment. Forms shall be cleaned and oiled prior to the concrete placement.

501-4.4 Base surface preparation prior to placement. Any damage to the prepared base, subbase, and subgrade shall be corrected full depth by the Contractor prior to concrete placement. The underlying surface shall be entirely free of frost when concrete is placed. The prepared grade shall be moistened with water, without saturating, immediately ahead of concrete placement to prevent rapid loss of moisture from concrete. Bond breaker shall be applied in accordance with 501-2.12.

501-4.5 Handling, measuring, and batching material. Aggregate stockpiles shall be constructed and managed in such a manner that prevents segregation and intermixing of deleterious materials. Aggregates from different sources shall be stockpiled, weighed and batched separately at the concrete batch plant. Aggregates that have become segregated or mixed with earth or foreign material shall not be used. All aggregates produced or handled by hydraulic methods, and washed aggregates, shall be stockpiled or binned for draining at least 12 hours before being batched. Store and maintain all aggregates at a uniform moisture content prior to use. A continuous supply of materials shall be provided to the work to ensure continuous placement.

501-4.6 Mixing concrete. The concrete may be mixed at the work site, in a central mix plant or in truck mixers. The mixer shall be of an approved type and capacity. Mixing time shall be measured from the time all materials are placed into the drum until the drum is emptied into the truck. All concrete shall be mixed and delivered to the site in accordance with the requirements of ASTM C94 or ASTM C685.

Mixed concrete from the central mixing plant shall be transported in truck mixers, truck agitators, or non-agitating trucks. The elapsed time from the addition of cementitious material to the mix until the concrete is discharged from the truck should not exceed [30] minutes when the concrete is hauled in non-agitating trucks, nor 90 minutes when the concrete is hauled in truck mixers or truck agitators. In no case shall the temperature of the concrete when placed exceed 90°F (32°C). Retempering concrete by adding water or by other means will not be permitted. With transit mixers additional water may be added to the batch materials and additional mixing performed to increase the slump to meet the specified requirements provided the addition of water

is performed within 45 minutes after the initial mixing operations and provided the water/cementitious ratio specified is not exceeded.

501-4.7 Weather Limitations on mixing and placing. No concrete shall be mixed, placed, or finished when the natural light is insufficient, unless an adequate and approved artificial lighting system is operated.

a. Cold weather. Unless authorized in writing by the RPR, mixing and concreting operations shall be discontinued when a descending air temperature in the shade and away from artificial heat reaches 40°F (4°C) and shall not be resumed until an ascending air temperature in the shade and away from artificial heat reaches 35°F (2°C).

The aggregate shall be free of ice, snow, and frozen lumps before entering the mixer. The temperature of the mixed concrete shall not be less than 50°F (10°C) at the time of placement. Concrete shall not be placed on frozen material nor shall frozen aggregates be used in the concrete.

When concreting is authorized during cold weather, water and/or the aggregates may be heated to not more than 150°F (66°C). The apparatus used shall heat the mass uniformly and shall be arranged to preclude the possible occurrence of overheated areas which might be detrimental to the materials.

Curing during cold weather shall be in accordance with paragraph 501-4.13d.

b. Hot weather. During periods of hot weather when the maximum daily air temperature exceeds 85°F (30°C), the following precautions shall be taken.

The forms and/or the underlying surface shall be sprinkled with water immediately before placing the concrete. The concrete shall be placed at the coolest temperature practicable, and in no case shall the temperature of the concrete when placed exceed 90°F (32°C). The aggregates and/or mixing water shall be cooled as necessary to maintain the concrete temperature at or not more than the specified maximum.

The concrete placement shall be protected from exceeding an evaporation rate of 0.2 psf (0.98 kg/m^2 per hour) per hour. When conditions are such that problems with plastic cracking can be expected, and particularly if any plastic cracking begins to occur, the Contractor shall immediately take such additional measures as necessary to protect the concrete surface. If the Contractor's measures are not effective in preventing plastic cracking, paving operations shall be immediately stopped.

Curing during hot weather shall be in accordance with paragraph 501-4.13e.

c. Temperature management program. Prior to the start of paving operation for each day of paving, the Contractor shall provide the RPR with a Temperature Management Program for the concrete to be placed to assure that uncontrolled cracking is avoided. (Federal Highway Administration HIPERPAV 3 is one example of a temperature management program.) As a minimum, the program shall address the following items:

(1) Anticipated tensile strains in the fresh concrete as related to heating and cooling of the concrete material.

(2) Anticipated weather conditions such as ambient temperatures, wind velocity, and relative humidity; and anticipated evaporation rate using Figure 19-9, PCA, Design and Control of Concrete Mixtures.

(3) Anticipated timing of initial sawing of joint.

(4) Anticipated number and type of saws to be used.

d. **Rain.** The Contractor shall have available materials for the protection of the concrete during inclement weather. Such protective materials shall consist of rolled polyethylene sheeting at least 4 mils (0.1 mm) thick of sufficient length and width to cover the plastic concrete slab and any edges. The sheeting may be mounted on either the paver or a separate movable bridge from which it can be unrolled without dragging over the plastic concrete surface. When rain appears imminent, all paving operations shall stop and all available personnel shall begin covering the surface of the unhardened concrete with the protective covering.

501-4.8 Concrete Placement. At any point in concrete conveyance, the free vertical drop of the concrete from one point to another or to the underlying surface shall not exceed 3 feet (1 m). The finished concrete product must be dense and homogeneous, without segregation and conforming to the standards in this specification. Backhoes and grading equipment shall not be used to distribute the concrete in front of the paver. Front end loaders will not be used. All concrete shall be consolidated without voids or segregation, including under and around all load-transfer devices, joint assembly units, and other features embedded in the pavement. Hauling equipment or other mechanical equipment can be permitted on adjoining previously constructed pavement when the concrete strength reaches **a compressive strength of 3,100 psi (21.4 MPa),** based on the average of four field cured specimens per 2,000 cubic yards (1,530 cubic meters) of concrete placed. The Contractor must determine that the above minimum strengths are adequate to protection the pavement from overloads due to the construction equipment proposed for the project.

a. Slip-form construction. The concrete shall be distributed uniformly into final position by a self-propelled slip-form paver without delay. The alignment and elevation of the paver shall be regulated from outside reference lines established for this purpose. The paver shall vibrate the concrete for the full width and depth of the strip of pavement being placed and the vibration shall be adequate to provide a consistency of concrete that will stand normal to the surface with sharp well-defined edges. The sliding forms shall be rigidly held together laterally to prevent spreading of the forms. The plastic concrete shall be effectively consolidated by internal vibration with transverse vibrating units for the full width of the pavement and/or a series of equally placed longitudinal vibrating units. The space from the outer edge of the pavement to longitudinal unit shall not exceed 9 inches (23 cm) for slipform and at the end of the dowels for the fill-in lanes. The spacing of internal units shall be uniform and shall not exceed 18 inches (0.5 m).

The term internal vibration means vibrating units located within the specified thickness of pavement section.

The rate of vibration of each vibrating unit shall be sufficient to consolidate the pavement without, segregation, voids, or vibrator trails and the amplitude of vibration shall be sufficient to be perceptible on the surface of the concrete along the entire length of the vibrating unit and for a distance of at least one foot (30 cm). The frequency of vibration or amplitude should be adjusted proportionately with the rate of travel to result in a uniform density and air content. The paving machine shall be equipped with a tachometer or other suitable device for measuring and indicating the actual frequency of vibrations.

The concrete shall be held at a uniform consistency. The slip-form paver shall be operated with as nearly a continuous forward movement as possible and all operations of mixing, delivering, and spreading concrete shall be coordinated to provide uniform progress with stopping and starting of the paver held to a minimum. If for any reason, it is necessary to stop the forward movement of the paver, the vibratory and tamping elements shall also be stopped

immediately. No tractive force shall be applied to the machine, except that which is controlled from the machine.

When concrete is being placed adjacent to an existing pavement, that part of the equipment which is supported on the existing pavement shall be equipped with protective pads on crawler tracks or rubber-tired wheels on which the bearing surface is offset to run a sufficient distance from the edge of the pavement to avoid breaking the pavement edge.

Not more than 15% of the total free edge of each 500-foot (150 m) segment of pavement, or fraction thereof, shall have an edge slump exceeding 1/4 inch (6 mm), and none of the free edge of the pavement shall have an edge slump exceeding 3/8 inch (9 mm). (The total free edge of 500 feet (150 m) of pavement will be considered the cumulative total linear measurement of pavement edge originally constructed as nonadjacent to any existing pavement; that is, 500 feet (150 m) of paving lane originally constructed as a separate lane will have 1,000 feet (300 m) of free edge, 500 feet (150 m) of fill-in lane will have no free edge, etc.). The area affected by the downward movement of the concrete along the pavement edge shall be limited to not more than 18 inches (0.5 m) from the edge.

When excessive edge slump cannot be corrected before the concrete has hardened, the area with excessive edge slump will be removed the full width of the slip form lane and replaced at the expense of the Contractor as directed by the RPR.

b. Fixed-form construction. Forms shall be drilled in advance of being placed to line and grade to accommodate tie bars / dowel bars where these are specified.

Immediately in advance of placing concrete and after all subbase operations are completed, side forms shall be trued and maintained to the required line and grade for a distance sufficient to prevent delay in placing.

Side forms shall remain in place at least 12 hours after the concrete has been placed, and in all cases until the edge of the pavement no longer requires the protection of the forms. Curing compound shall be applied to the concrete immediately after the forms have been removed.

Side forms shall be thoroughly cleaned and coated with a release agent each time they are used and before concrete is placed against them.

Concrete shall be spread, screed, shaped and consolidated by one or more self-propelled machines. These machines shall uniformly distribute and consolidate concrete without segregation so that the completed pavement will conform to the required cross-section with a minimum of handwork.

The number and capacity of machines furnished shall be adequate to perform the work required at a rate equal to that of concrete delivery. The equipment must be specifically designed for placement and finishing using stationary side forms. Methods and equipment shall be reviewed and accepted by the RPR.

Concrete for the full paving width shall be effectively consolidated by internal vibrators. The rate of vibration of each vibrating unit shall be sufficient to consolidate the pavement without segregation, voids, or leaving vibrator trails.

Power to vibrators shall be connected so that vibration ceases when forward or backward motion of the machine is stopped.

c. Consolidation. Concrete shall be consolidated with the specified type of lane-spanning, gang-mounted, mechanical, immersion type vibrating equipment mounted in front of the paver, supplemented, in rare instances as specified, by hand-operated vibrators. The vibrators shall be inserted into the concrete to a depth that will provide the best full-depth

consolidation but not closer to the underlying material than 2 inches (50 mm). Vibrators shall not be used to transport or spread the concrete. For each paving train, at least one additional vibrator spud, or sufficient parts for rapid replacement and repair of vibrators shall be maintained at the paving site at all times. Any evidence of inadequate consolidation (honeycomb along the edges, large air pockets, or any other evidence) or over-consolidation (vibrator trails, segregation, or any other evidence) shall require the immediate stopping of the paving operation and adjustment of the equipment or procedures as approved by the RPR.

If a lack of consolidation of the hardened concrete is suspected by the RPR, referee testing may be required. Referee testing of hardened concrete will be performed by the RPR by cutting cores from the finished pavement after a minimum of 24 hours curing. The RPR shall visually examine the cores for evidence of lack of consolidation. Density determinations will be made by the RPR based on the water content of the core as taken. ASTM C642 shall be used for the determination of core density in the saturated-surface dry condition. When required, referee cores will be taken at the minimum rate of one for each 500 cubic yards (382 m^2) of pavement, or fraction. The Contractor shall be responsible for all referee testing cost if they fail to meet the required density.

The average density of the cores shall be at least 97% of the original concrete mix density, with no cores having a density of less than 96% of the original concrete mix density. Failure to meet the referee tests will be considered evidence that the minimum requirements for vibration are inadequate for the job conditions. Additional vibrating units or other means of increasing the effect of vibration shall be employed so that the density of the hardened concrete conforms to the above requirements.

501-4.9 Strike-off of concrete and placement of reinforcement. Following the placing of the concrete, it shall be struck off to conform to the cross-section shown on the plans and to an elevation that when the concrete is properly consolidated and finished, the surface of the pavement shall be at the elevation shown on the plans. When reinforced concrete pavement is placed in two layers, the bottom layer shall be struck off to such length and depth that the sheet of reinforcing steel fabric or bar mat may be laid full length on the concrete in its final position without further manipulation. The reinforcement shall then be placed directly upon the concrete, after which the top layer of the concrete shall be placed, struck off, and screed. If any portion of the bottom layer of concrete has been placed more than 30 minutes without being covered with the top layer or if initial set has taken place, it shall be removed and replaced with freshly mixed concrete at the Contractor's expense. When reinforced concrete is placed in one layer, the reinforcement may be positioned in advance of concrete placement or it may be placed in plastic concrete by mechanical or vibratory means after spreading.

Reinforcing steel, at the time concrete is placed, shall be free of mud, oil, or other organic matter that may adversely affect or reduce bond. Reinforcing steel with rust, mill scale or a combination of both will be considered satisfactory, provided the minimum dimensions, weight, and tensile properties of a hand wire-brushed test specimen are not less than the applicable ASTM specification requirements.

501-4.10 Joints. Joints shall be constructed as shown on the plans and in accordance with these requirements. All joints shall be constructed with their faces perpendicular to the surface of the pavement and finished or edged as shown on the plans. Joints shall not vary more than 1/2-inch (12 mm) from their designated position and shall be true to line with not more than 1/4-inch (6 mm) variation in 10 feet (3 m). The surface across the joints shall be tested with a 12-foot (3 m) straightedge as the joints are finished and any irregularities in excess of 1/4 inch (6 mm) shall be corrected before the concrete has hardened. All joints shall be so prepared, finished, or cut to provide a groove of uniform width and depth as shown on the plans.

a. Construction. Longitudinal construction joints shall be slip-formed or formed against side forms as shown in the plans.

Transverse construction joints shall be installed at the end of each day's placing operations and at any other points within a paving lane when concrete placement is interrupted for more than 30 minutes or it appears that the concrete will obtain its initial set before fresh concrete arrives. The installation of the joint shall be located at a planned contraction or expansion joint. If placing of the concrete is stopped, the Contractor shall remove the excess concrete back to the previous planned joint.

b. Contraction. Contraction joints shall be installed at the locations and spacing as shown on the plans. Contraction joints shall be installed to the dimensions required by forming a groove or cleft in the top of the slab while the concrete is still plastic or by sawing a groove into the concrete surface after the concrete has hardened. When the groove is formed in plastic concrete the sides of the grooves shall be finished even and smooth with an edging tool. If an insert material is used, the installation and edge finish shall be according to the manufacturer's instructions. The groove shall be finished or cut clean so that spalling will be avoided at intersections with other joints. Grooving or sawing shall produce a slot at least 1/8 inch (3 mm) wide and to the depth shown on the plans.

c. Isolation (expansion). Isolation joints shall be installed as shown on the plans. The premolded filler of the thickness as shown on the plans, shall extend for the full depth and width of the slab at the joint. The filler shall be fastened uniformly along the hardened joint face with no buckling or debris between the filler and the concrete interface, including a temporary filler for the sealant reservoir at the top of the slab. The edges of the joint shall be finished and tooled while the concrete is still plastic

d. Dowels and Tie Bars for Joints

(1) Tie bars. Tie bars shall consist of deformed bars installed in joints as shown on the plans. Tie bars shall be placed at right angles to the centerline of the concrete slab and shall be spaced at intervals shown on the plans. They shall be held in position parallel to the pavement surface and in the middle of the slab depth and within the tolerances in paragraph 501-4.10(f.). When tie bars extend into an unpaved lane, they may be bent against the form at longitudinal construction joints, unless threaded bolt or other assembled tie bars are specified. Tie bars shall not be painted, greased, or enclosed in sleeves. When slip-form operations call for tie bars, two-piece hook bolts can be installed.

(2) Dowel bars. Dowel bars shall be placed across joints in the proper horizontal and vertical alignment as shown on the plans. The dowels shall be coated with a bond-breaker or other lubricant recommended by the manufacturer and approved by the RPR. Dowels bars at longitudinal construction joints shall be bonded in drilled holes.

(3) Placing dowels and tie bars. Horizontal spacing of dowels shall be within a tolerance of ±3/4 inch (19 mm). The vertical location on the face of the slab shall be within a tolerance of ±1/2 inch (12 mm). The method used to install dowels shall ensure that the horizontal and vertical alignment will not be greater than 1/4 inch per feet (6 mm per 0.3 m), except for those across the crown or other grade change joints. Dowels across crowns and other joints at grade changes shall be measured to a level surface. Horizontal alignment shall be checked perpendicular to the joint edge. The portion of each dowel intended to move within the concrete or expansion cap shall be wiped clean and coated with a thin, even film of lubricating oil or light grease before the concrete is placed. Dowels shall be installed as specified in the following subparagraphs.

Dowels and tie bars shall not be placed closer than 0.6 times the dowel bar or tie bar length to the planned joint line. If the last regularly spaced longitudinal dowel and/or tie bar is closer than that dimension, it shall be moved away from the joint to a location 0.6 times the dowel bar and/or tie bar length, but not closer than 6 inches (150 mm) to its nearest neighbor.

(a) Contraction joints. Dowels and tie bars in longitudinal and transverse contraction joints within the paving lane shall be held securely in place by means of rigid metal frames or basket assemblies of an approved type. The basket assemblies shall be held securely in the proper location by means of suitable pins or anchors. Do not cut or crimp the dowel basket tie wires.

At the Contractor's option, dowels and tie bars in contraction joints may be installed by insertion into the plastic concrete using approved equipment and procedures per the paver manufacturer's design. Approval of installation methods will be based on the results of the control strip showing that the dowels and tie bars are installed within specified tolerances as verified by cores or non-destructive rebar location devices approved by the RPR.

(b) Construction joints. Install dowels and tie bars by the cast-in- place or the drill-and-dowel method. Installation by removing and replacing in preformed holes will not be permitted. Dowels and tie bars shall be prepared and placed across joints where indicated, correctly aligned, and securely held in the proper horizontal and vertical position during placing and finishing operations, by means of devices fastened to the forms.

(c) Joints in hardened concrete. Install dowels in hardened concrete by bonding the dowels into holes drilled into the concrete. The concrete shall have cured for seven (7) days or reached a minimum **compressive strength of 3100 psi ((21.4 MPa)**before drilling begins. Holes 1/8 inch (3 mm) greater in diameter than the dowels shall be drilled into the hardened concrete using rotary-core drills. Rotary-percussion drills may be used, provided that excessive spalling does not occur. Spalling beyond the limits of the grout retention ring will require modification of the equipment and operation. Depth of dowel hole shall be within a tolerance of ±1/2 inch (12 mm) of the dimension shown on the drawings. On completion of the drilling operation, the dowel hole shall be blown out with oil-free, compressed air. Dowels shall be bonded in the drilled holes using epoxy resin. Epoxy resin shall be injected at the back of the hole before installing the dowel and extruded to the collar during insertion of the dowel so as to completely fill the void around the dowel. Application by buttering the dowel will not be permitted. The dowels shall be held in alignment at the collar of the hole by means of a suitable metal or plastic grout retention ring fitted around the dowel.

e. Sawing of joints. Sawing shall commence, without regard to day or night, as soon as the concrete has hardened sufficiently to permit cutting without chipping, spalling, or tearing and before uncontrolled shrinkage cracking of the pavement occurs and shall continue without interruption until all joints have been sawn. All slurry and debris produced in the sawing of joints shall be removed by vacuuming and washing. Curing compound or system shall be reapplied in the initial saw-cut and maintained for the remaining cure period.

Joints shall be cut in locations as shown on the plans. The initial joint cut shall be a minimum 1/8 inch (3 mm) wide and to the depth shown on the plans. Prior to placement of joint sealant or seals, the top of the joint shall be widened by sawing as shown on the plans.

501-4.11 Finishing. Finishing operations shall be a continuing part of placing operations starting immediately behind the strike-off of the paver. Initial finishing shall be provided by the transverse screed or extrusion plate. The sequence of operations shall be transverse finishing, longitudinal machine floating if used, straightedge finishing, edging of joints, and then texturing. Finishing shall be by the machine method. The hand method shall be used only on isolated areas of odd slab widths or shapes and in the event of a breakdown of the mechanical finishing equipment. Supplemental hand finishing for machine finished pavement shall be kept to an absolute minimum. Any machine finishing operation which requires appreciable hand finishing, other than a moderate amount of straightedge finishing, shall be immediately stopped and proper adjustments made or the equipment replaced. Equipment, mixture, and/or procedures which produce more than 1/4 inch (6 mm) of mortar-rich surface shall be immediately modified as necessary to eliminate this condition or operations shall cease. Compensation shall be made for surging behind the screeds or extrusion plate and settlement during hardening and care shall be taken to ensure that paving and finishing machines are properly adjusted so that the finished surface of the concrete (not just the cutting edges of the screeds) will be at the required line and grade. Finishing equipment and tools shall be maintained clean and in an approved condition. At no time shall water be added to the surface of the slab with the finishing equipment or tools, or in any other way. Fog (mist) sprays or other surface applied finishing aids specified to prevent plastic shrinkage cracking, approved by the RPR, may be used in accordance with the manufacturers requirements.

a. Machine finishing with slipform pavers. The slipform paver shall be operated so that only a very minimum of additional finishing work is required to produce pavement surfaces and edges meeting the specified tolerances. Any equipment or procedure that fails to meet these specified requirements shall immediately be replaced or modified as necessary. A self-propelled non-rotating pipe float may be used while the concrete is still plastic, to remove minor irregularities and score marks. Only one pass of the pipe float shall be allowed. Equipment, mixture, and/or procedures which produce more than 1/4 inch (6 mm) of mortar-rich surface shall be immediately modified as necessary to eliminate this condition or operations shall cease. Remove excessive slurry from the surface with a cutting straightedge and wipe off the edge. Any slurry which does run down the vertical edges shall be immediately removed by hand, using stiff brushes or scrapers. No slurry, concrete or concrete mortar shall be used to build up along the edges of the pavement to compensate for excessive edge slump, either while the concrete is plastic or after it hardens.

b. Machine finishing with fixed forms. The machine shall be designed to straddle the forms and shall be operated to screed and consolidate the concrete. Machines that cause displacement of the forms shall be replaced. The machine shall make only one pass over each area of pavement. If the equipment and procedures do not produce a surface of uniform texture, true to grade, in one pass, the operation shall be immediately stopped and the equipment, mixture, and procedures adjusted as necessary.

c. Other types of finishing equipment. Clary screeds, other rotating tube floats, or bridge deck finishers are not allowed on mainline paving, but may be allowed on irregular or odd-shaped slabs, and near buildings or trench drains, subject to the RPR's approval.

Bridge deck finishers shall have a minimum operating weight of 7500 pounds (3400 kg) and shall have a transversely operating carriage containing a knock-down auger and a minimum

of two immersion vibrators. Vibrating screeds or pans shall be used only for isolated slabs where hand finishing is permitted as specified, and only where specifically approved.

d. Hand finishing. Hand finishing methods will not be permitted, except under the following conditions: (1) in the event of breakdown of the mechanical equipment, hand methods may be used to finish the concrete already deposited on the grade and (2) in areas of narrow widths or of irregular dimensions where operation of the mechanical equipment is impractical.

e. Straightedge testing and surface correction. After the pavement has been struck off and while the concrete is still plastic, it shall be tested for trueness with a 12-foot (3.7-m) finishing straightedge swung from handles capable of spanning at least one-half the width of the slab. The straightedge shall be held in contact with the surface in successive positions parallel to the centerline and the whole area gone over from one side of the slab to the other, as necessary. Advancing shall be in successive stages of not more than one-half the length of the straightedge. Any excess water and laitance in excess of 1/8 inch (3 mm) thick shall be removed from the surface of the pavement and wasted. Any depressions shall be immediately filled with freshly mixed concrete, struck off, consolidated, and refinished. High areas shall be cut down and refinished. Special attention shall be given to assure that the surface across joints meets the smoothness requirements. Straightedge testing and surface corrections shall continue until the entire surface is found to be free from observable departures from the straightedge and until the slab conforms to the required grade and cross-section. The use of long-handled wood floats shall be confined to a minimum; they may be used only in emergencies and in areas not accessible to finishing equipment.

501-4.12 Surface texture. The surface of the pavement shall be finished as designated below for all newly constructed concrete pavements. It is important that the texturing equipment not tear or unduly roughen the pavement surface during the operation. The texture shall be uniform in appearance and approximately 1/16 inch (2 mm) in depth. Any imperfections resulting from the texturing operation shall be corrected to the satisfaction of the RPR.

a. Brush or broom finish. Shall be applied when the water sheen has practically disappeared. The equipment shall operate transversely across the pavement surface.

b. Burlap drag finish. Burlap, at least 15 ounces per square yard (555 grams per square meter), will typically produce acceptable texture. To obtain a textured surface, the transverse threads of the burlap shall be removed approximately one foot (30 cm) from the trailing edge. A heavy buildup of grout on the burlap threads produces the desired wide sweeping longitudinal striations on the pavement surface.

c. Artificial turf finish. Shall be applied by dragging the surface of the pavement in the direction of concrete placement with an approved full-width drag made with artificial turf. The leading transverse edge of the artificial turf drag will be securely fastened to a lightweight pole on a traveling bridge. At least 2 feet (60 cm) of the artificial turf shall be in contact with the concrete surface during dragging operations. Approval of the artificial turf will be done only after it has been demonstrated by the Contractor to provide a satisfactory texture. One type that has provided satisfactory texture consists of 7,200 approximately 0.85-inch-long polyethylene turf blades per square foot.

501-4.13 Curing. Immediately after finishing operations are completed and bleed water is gone from the surface, all exposed surfaces of the newly placed concrete shall be cured for a 7-day cure period in accordance with one of the methods below. Failure to provide sufficient cover material of whatever kind the Contractor may elect to use, or lack of water to adequately take care

of both curing and other requirements, shall be cause for immediate suspension of concreting operations. The concrete shall not be left exposed for more than 1/2 hour during the curing period.

When a two-saw-cut method is used to construct the contraction joint, the curing compound shall be applied to the saw-cut immediately after the initial cut has been made. The sealant reservoir shall not be sawed until after the curing period has been completed. When the one cut method is used to construct the contraction joint, the joint shall be cured with wet rope, wet rags, or wet blankets. The rags, ropes, or blankets shall be kept moist for the duration of the curing period.

a. Impervious membrane method. Curing with liquid membrane compounds should not occur until bleed and surface moisture has evaporated. All exposed surfaces of the pavement shall be sprayed uniformly with white pigmented curing compound immediately after the finishing of the surface and before the set of the concrete has taken place. The curing compound shall not be applied during rainfall. Curing compound shall be applied by mechanical sprayers under pressure at the rate of one gallon (4 liters) to not more than 150 square feet (14 sq m). The spraying equipment shall be of the fully atomizing type equipped with a tank agitator. At the time of use, the compound shall be in a thoroughly mixed condition with the pigment uniformly dispersed throughout the vehicle. During application, the compound shall be stirred continuously by mechanical means. Hand spraying of odd widths or shapes and concrete surfaces exposed by the removal of forms will be permitted. When hand spraying is approved by the RPR, a double application rate shall be used to ensure coverage. Should the film become damaged from any cause, including sawing operations, within the required curing period, the damaged portions shall be repaired immediately with additional compound or other approved means. Upon removal of side forms, the sides of the exposed slabs shall be protected immediately to provide a curing treatment equal to that provided for the surface.

b. **White burlap-polyethylene sheets.** The surface of the pavement shall be entirely covered with the sheeting. The sheeting used shall be such length (or width) that it will extend at least twice the thickness of the pavement beyond the edges of the slab. The sheeting shall be placed so that the entire surface and both edges of the slab are completely covered. The sheeting shall be placed and weighted to remain in contact with the surface covered, and the covering shall be maintained fully saturated and in position for seven (7) days after the concrete has been placed.

c. **Water method.** The entire area shall be covered with burlap or other water absorbing material. The material shall be of sufficient thickness to retain water for adequate curing without excessive runoff. The material shall be kept wet at all times and maintained for seven (7) days. When the forms are stripped, the vertical walls shall also be kept moist. It shall be the responsibility of the Contractor to prevent ponding of the curing water on the subbase.

d. Concrete protection for cold weather. Maintain the concrete at a temperature of at least 50°F (10°C) for a period of 72 hours after placing and at a temperature above freezing for the remainder of the 7-day curing period. The Contractor shall be responsible for the quality and strength of the concrete placed during cold weather; and any concrete damaged shall be removed and replaced at the Contractor's expense.

e. Concrete protection for hot weather. Concrete should be continuous moisture cured for the entire curing period and shall commence as soon as the surfaces are finished and continue for at least 24 hours. However, if moisture curing is not practical beyond 24 hours, the concrete surface shall be protected from drying with application of a liquid membrane-forming curing compound while the surfaces are still damp. Other curing methods may be approved by the RPR.

501-4.14 Removing forms. Unless otherwise specified, forms shall not be removed from freshly placed concrete until it has hardened sufficiently to permit removal without chipping, spalling, or tearing. After the forms have been removed, the sides of the slab shall be cured in accordance with paragraph 501-4.13.

If honeycombed areas are evident when the forms are removed, materials, placement, and consolidation methods must be reviewed and appropriate adjustments made to assure adequate consolidation at the edges of future concrete placements. Honeycombed areas that extend into the slab less than approximately 1 inch (25 mm), shall be repaired with an approved grout, as directed by the RPR. Honeycombed areas that extend into the slab greater than a depth of 1 inch (25 mm) shall be considered as defective work and shall be removed and replaced in accordance with paragraph 501-4.19.

501-4.15 Saw-cut grooving. If shown on the plans, grooved surfaces shall be provided in accordance with the requirements of Item P-621.

501-4.16 Sealing joints. The joints in the pavement shall be sealed in accordance with Item **P-605.**

501-4.17 Protection of pavement. The Contractor shall protect the pavement and its appurtenances against both public traffic and traffic caused by the Contractor's employees and agents until accepted by the RPR. This shall include watchmen to direct traffic and the erection and maintenance of warning signs, lights, pavement bridges, crossovers, and protection of unsealed joints from intrusion of foreign material, etc. Any damage to the pavement occurring prior to final acceptance shall be repaired or the pavement replaced at the Contractor's expense.

Aggregates, rubble, or other similar construction materials shall not be placed on airfield pavements. Traffic shall be excluded from the new pavement by erecting and maintaining barricades and signs until the concrete is at least seven (7) days old, or for a longer period if directed by the RPR.

In paving intermediate lanes between newly paved pilot lanes, operation of the hauling and paving equipment will be permitted on the new pavement after the pavement has been cured for seven (7) days, the joints are protected, the concrete has attained a minimum field cured flexural strength of [450 psi (3100 kPa)], and the slab edge is protected.

All new and existing pavement carrying construction traffic or equipment shall be kept clean and spillage of concrete and other materials shall be cleaned up immediately.

Damaged pavements shall be removed and replaced at the Contractor's expense. Slabs shall be removed to the full depth, width, and length of the slab.

501-4.18 Opening to construction traffic. The pavement shall not be opened to traffic until test specimens molded and cured in accordance with ASTM C31 have **compressive strength of 3100 psi (21.4 MPa)**. If such tests are not conducted, the pavement shall not be opened to traffic until 14 days after the concrete was placed. Prior to opening the pavement to construction traffic, all joints shall either be sealed or protected from damage to the joint edge and intrusion of foreign materials into the joint. As a minimum, backer rod or tape may be used to protect the joints from foreign matter intrusion.

501-4.19 Repair, removal, or replacement of slabs. New pavement slabs that are broken or contain cracks or are otherwise defective or unacceptable as defined by acceptance criteria in paragraph 501-6.6 shall be removed and replaced or repaired, as directed by the RPR, at the Contractor's expense. Spalls along joints shall be repaired as specified. Removal of partial slabs is not permitted. Removal and replacement shall be full depth, shall be full width of the slab, and the limit of removal shall be normal to the paving lane and to each original transverse joint. The

RPR will determine whether cracks extend full depth of the pavement and may require cores to be drilled on the crack to determine depth of cracking. Such cores shall be have a diameter of 2 inches (50 mm) to 4 inches (100 mm), shall be drilled by the Contractor and shall be filled by the Contractor with a well consolidated concrete mixture bonded to the walls of the hole with a bonding agent, using approved procedures. Drilling of cores and refilling holes shall be at no expense to the Owner. Repair of cracks as described in this section shall not be allowed if in the opinion of the RPR the overall condition of the pavement indicates that such repair is unlikely to achieve an acceptable and durable finished pavement. No repair of cracks shall be allowed in any panel that demonstrates segregated aggregate with an absence of coarse aggregate in the upper 1/8 inch (3 mm) of the pavement surface.

a. **Shrinkage cracks.** Shrinkage cracks which do not exceed one-third of the pavement depth shall be cleaned and either high molecular weight methacrylate (HMWM) applied; or epoxy resin (Type IV, Grade 1) pressure injected using procedures recommended by the manufacturer and approved by the RPR. Sandblasting of the surface may be required following the application of HMWM to restore skid resistance. Care shall be taken to ensure that the crack is not widened during epoxy resin injection. All epoxy resin injection shall take place in the presence of the RPR. Shrinkage cracks which exceed one-third the pavement depth shall be treated as full depth cracks in accordance with paragraphs 501-4.19b and 501-19c.

b. Slabs with cracks through interior areas. Interior area is defined as that area more than 6 inches (150 mm) from either adjacent original transverse joint. The full slab shall be removed and replaced at no cost to the Owner, when there are any full depth cracks, or cracks greater than one-third the pavement depth, that extend into the interior area.

c. Cracks close to and parallel to joints. All full-depth cracks within 6 inches (150 mm) either side of the joint and essentially parallel to the original joints, shall be treated as follows.

(1) Full depth cracks and original joint not cracked. The full-depth crack shall be treated as the new joint and the original joint filled with an epoxy resin.

i. Full-depth crack. The joint sealant reservoir for the crack shall be formed by sawing to a depth of 3/4 inches (19 mm), ±1/16 inch (2 mm), and to a width of 5/8 inch (16 mm), ±1/8 inch (3 mm). The crack shall be sawed with equipment specially designed to follow random cracks. Any equipment or procedure which causes raveling or spalling along the crack shall be modified or replaced to prevent raveling or spalling. The joint shall be sealed with sealant in accordance with P-605 or as directed by the RPR.

ii. Original joint. If the original joint sealant reservoir has been sawed out, the reservoir and as much of the lower saw cut as possible shall be filled with epoxy resin, Type IV, Grade 2, thoroughly tooled into the void using approved procedures.

If only the original narrow saw cut has been made, it shall be cleaned and pressure injected with epoxy resin, Type IV, Grade 1, using approved procedures.

Where a parallel crack goes part way across paving lane and then intersects and follows the original joint which is cracked only for the remained of the width, it shall be treated as specified above for a parallel crack, and the cracked original joint shall be prepared and sealed as originally designed.

(2) Full depth cracks and original joint cracked. If there is any place in the lane width where a parallel crack and a cracked portion of the original joint overlap, the entire slab containing the crack shall be removed and replaced.

d. Removal and replacement of full slabs. Make a full depth cut perpendicular to the slab surface along all edges of the slab with a concrete saw cutting any dowels or tie-bars. Remove damaged slab protecting adjacent pavement from damage. Damage to adjacent slabs may result in removal of additional slabs as directed by the RPR at the Contractor's expense.

The underlying material shall be repaired, re-compacted and shaped to grade.

Dowels of the size and spacing specified for other joints in similar pavement on the project shall be installed along all four (4) edges of the new slab in accordance with paragraph 501-4.10d.

Placement of concrete shall be as specified for original construction. The joints around the new slab shall be prepared and sealed as specified for original construction.

e. Spalls along joints.

(1) Spalls less than one inch wide and less than the depth of the joint sealant reservoir, shall be filled with joint sealant material.

(2) Spalls larger than one inch and/or deeper than the joint reservoir, but less than ½ the slab depth, and less than 25% of the length of the adjacent joint shall be repaired as follows:

i. Make a vertical saw cut at least one inch (25 mm) outside the spalled area and to a depth of at least 2 inches (50 mm). Saw cuts shall be straight lines forming rectangular areas surrounding the spalled area.

ii. Remove unsound concrete and at least 1/2 inch (12 mm) of visually sound concrete between the saw cut and the joint or crack with a light chipping hammer.

iii. Clean cavity with high-pressure water jets supplemented with compressed air as needed to remove all loose material.

iv. Apply a prime coat of epoxy resin, Type III, Grade I, to the dry, cleaned surface of all sides and bottom of the cavity, except any joint face.

v. Fill the cavity with low slump concrete or mortar or with epoxy resin concrete or mortar.

vi. An insert or other bond-breaking medium shall be used to prevent bond at all joint faces.

vii. A reservoir for the joint sealant shall be sawed to the dimensions required for other joints, or as required to be routed for cracks. The reservoir shall be thoroughly cleaned and sealed with the sealer specified for the joints.

(3) Spalls deeper than 1/2 of the slab depth or spalls longer than 25% of the adjacent joint require replacement of the entire slab.

f. Diamond grinding of Concrete surfaces. Diamond grinding shall be completed prior to pavement grooving. Diamond grinding of the hardened concrete should not be performed until the concrete is at least 14 days old and has achieved full minimum strength. Equipment that causes ravels, aggregate fractures, spalls or disturbance to the joints will not be permitted. The depth of diamond grinding shall not exceed 1/2 inch (13 mm) and all areas in which diamond grinding has been performed will be subject to the final pavement thickness tolerances specified.

Diamond grinding shall be performed with a machine specifically designed for diamond grinding capable of cutting a path at least 3 feet (0.9 m) wide. The saw blades shall be 1/8-inch (3-mm) wide with sufficient number of flush cut blades that create grooves between 0.090 and 0.130 inches (2 and 3.5 mm) wide; and peaks and ridges approximately 1/32 inch (1 mm) higher than the bottom of the grinding cut. The Contractor shall determine the number and

type of blades based on the hardness of the aggregate. Contractor shall demonstrate to the RPR that the grinding equipment will produce satisfactory results prior to making corrections to surfaces.

Grinding will be tapered in all directions to provide smooth transitions to areas not requiring grinding. The slurry resulting from the grinding operation shall be continuously removed and the pavement left in a clean condition. All grinding shall be at the expense of the Contractor.

CONTRACTOR QUALITY CONTROL (CQC)

501-5.1 Quality control tests. The Contractor shall provide Quality Control Tests.

501-5.2 Contractor Quality Control (CQC). The Contractor shall provide or contract for testing facilities in accordance with Item C-100. The RPR shall be permitted unrestricted access to inspect the Contractor's QC facilities and witness QC activities. The RPR will advise the Contractor in writing of any noted deficiencies concerning the QC facility, equipment, supplies, or testing personnel and procedures. When the deficiencies are serious enough to be adversely affecting the test results, the incorporation of the materials into the work shall be suspended immediately and will not be permitted to resume until the deficiencies are satisfactorily corrected

501-5.3 Contractor QC testing. The Contractor shall perform all QC tests necessary to control the production and construction processes applicable to this specification. The testing shall include, but not necessarily be limited to, tests for aggregate gradation, aggregate moisture content, slump, and air content.

The RPR may at any time, notwithstanding previous plant acceptance, reject and require the Contractor to dispose of any batch of concrete mixture which is rendered unfit for use due to contamination, segregation, or improper slump. Such rejection may be based on only visual inspection. In the event of such rejection, the Contractor may take a representative sample of the rejected material in the presence of the RPR, and if it can be demonstrated in the laboratory, in the presence of the RPR, that such material was erroneously rejected, payment will be made for the material at the contract unit price.

a. Fine aggregate.

(1) Gradation. A sieve analysis shall be made at least twice daily in accordance with ASTM C136 from randomly sampled material taken from the discharge gate of storage bins or from the conveyor belt.

(2) Moisture content. If an electric moisture meter is used, at least two direct measurements of moisture content shall be made per week to check the calibration. If direct measurements are made in lieu of using an electric meter, two tests shall be made per day. Tests shall be made in accordance with ASTM C70 or ASTM C566.

(3) Deleterious substances. Fine aggregate as delivered to the mixer shall be tested for deleterious substances in fine aggregate for concrete as specified in paragraph 501-2.1b, prior to production of the control strip, and a minimum of every 30-days during production or more frequently as necessary to control deleterious substances.

b. Coarse Aggregate.

(1) Gradation. A sieve analysis shall be made at least twice daily for each size of aggregate. Tests shall be made in accordance with ASTM C136 from randomly sampled material taken from the discharge gate of storage bins or from the conveyor belt.

(2) Moisture content. If an electric moisture meter is used, at least two direct measurements of moisture content shall be made per week to check the calibration. If direct measurements are made in lieu of using an electric meter, two tests shall be made per day. Tests shall be made in accordance with ASTM C566.

(3) Deleterious substances. Coarse aggregate as delivered to the mixer shall be tested for deleterious substances in coarse aggregate for concrete as specified in paragraph 501-2.1c, prior to production of the control strip, and a minimum of every 30-days during production or more frequently as necessary to control deleterious substances.

c. Slump. One test shall be made for each sublot. Slump tests shall be performed in accordance with ASTM C143 from material randomly sampled from material discharged from trucks at the paving site. Material samples shall be taken in accordance with ASTM C172.

d. Air content. One test shall be made for each sublot. Air content tests shall be performed in accordance with ASTM C231 for gravel and stone coarse aggregate and ASTM C173 for slag or other porous coarse aggregate, from material randomly sampled from trucks at the paving site. Material samples shall be taken in accordance with ASTM C172.

e. Unit weight and Yield. One test shall be made for each sublot. Unit weight and yield tests shall be in accordance with ASTM C138. The samples shall be taken in accordance with ASTM C172 and at the same time as the air content tests.

f. Temperatures. Temperatures shall be checked at least four times per lot at the job site in accordance with ASTM C1064.

g. Smoothness for Contractor Quality Control.

The Contractor shall perform smoothness testing in transverse and longitudinal directions daily to verify that the construction processes are producing pavement with variances less than ¼ inch in 12 feet, identifying areas that may pond water which could lead to hydroplaning of aircraft. If the smoothness criteria is not met, appropriate changes and corrections to the construction process shall be made by the Contractor before construction continues

The Contractor may use a 12-foot (3.7 m) "straightedge, a rolling inclinometer meeting the requirements of ASTM E2133 or rolling external reference device that can simulate a 12-foot (3.7m) straightedge approved by the RPR. Straight-edge testing shall start with one-half the length of the straightedge at the edge of pavement section being tested and then moved ahead one-half the length of the straightedge for each successive measurement. Testing shall be continuous across all joints. The surface irregularity shall be determined by placing the freestanding (unleveled) straightedge on the pavement surface and allowing it to rest upon the two highest spots covered by its length, and measuring the maximum gap between the straightedge and the pavement surface in the area between the two high points. If the rolling inclinometer or external reference device is used, the data may be evaluated using either the FAA profile program, ProFAA, or FHWA profile program ProVal, using the 12-foot straightedge simulation function.

Smoothness readings shall not be made across grade changes or cross slope transitions. The transition between new and existing pavement shall be evaluated separately for conformance with the plans.

(1) Transverse measurements. Transverse measurements shall be taken for each day's production placed. Transverse measurements shall be taken perpendicular to the pavement centerline each 50 feet (15 m) or more often as determined by the RPR. The joint between lanes shall be tested separately to facilitate smoothness between lanes.

(2) Longitudinal measurements. Longitudinal measurements shall be taken for each day's production placed. Longitudinal tests shall be parallel to the centerline of paving; at the center of paving lanes when widths of paving lanes are less than 20 feet (6 m); and at the third points of paving lanes when widths of paving lanes are 20 ft (6 m) or greater. When placement abuts previously placed material the first measurement shall start with one half the length of the straight edge on the previously placed material.

Deviations on the final surface course in either the transverse or longitudinal direction that will trap water greater than 1/4 inch (6 mm) shall be corrected with diamond grinding per paragraph 501-4.19f or by removing and replacing the surface course to full depth. Grinding shall be tapered in all directions to provide smooth transitions to areas not requiring grinding. All areas in which diamond grinding has been performed shall be subject to the final pavement thickness tolerances specified in paragraph 501-6.6.

Control charts shall be kept to show area of each day's placement and the percentage of corrective grinding required. Corrections to production and placement shall be initiated when corrective grinding is required. If the Contractor's machines and/or methods produce significant areas that need corrective actions in excess of 10 percent of a day's production, production shall be stopped until corrective measures are implemented by the Contractor.

h. Grade. Grade will be evaluated prior to and after placement of the concrete surface.

Measurements will be taken at appropriate gradelines (as a minimum at center and edges of paving lane) and longitudinal spacing as shown on cross-sections and plans. The final surface of the pavement will not vary from the gradeline elevations and cross-sections shown on the plans by more than 1/2 inch (12 mm) vertically or 0.1 feet (30 mm) laterally. The documentation will be provided by the Contractor to the RPR ~~[within 48 hours]~~ by the end of the following working day.

Areas with humps or depression that that exceed grade or smoothness and that retain water on the surface must be ground off provided the course thickness after grinding is not more than 1/2 inch (12 mm) less than the thickness specified on the plans. If these areas cannot be corrected with grinding then the slabs that are retaining water must be removed and replaced in accordance with paragraph 501-4.19d. Grinding shall be in accordance with paragraph 501-4.19f. All corrections will be at the Contractors expense.

501-5.4 Control charts. The Contractor shall maintain linear control charts for fine and coarse aggregate gradation, slump, and air content. The Contractor shall also maintain a control chart plotting the coarseness factor/workability factor from the combined gradations in accordance with paragraph 501-2.1d.

Control charts shall be posted in a location satisfactory to the RPR and shall be kept up to date at all times. As a minimum, the control charts shall identify the project number, the contract item number, the test number, each test parameter, the Action and suspension Limits, or Specification limits, applicable to each test parameter, and the Contractor's test results. The Contractor shall use the control charts as part of a process control system for identifying potential problems and assignable causes before they occur. If the Contractor's projected data during production indicates a potential problem and the Contractor is not taking satisfactory corrective action, the RPR may halt production or acceptance of the material.

a. Fine and coarse aggregate gradation. The Contractor shall record the running average of the last five gradation tests for each control sieve on linear control charts. Superimposed on the control charts shall be the action and suspension limits. Gradation tests shall be performed by the Contractor per ASTM C136. The Contractor shall take at least [two]

samples per lot to check the final gradation. Sampling shall be per ASTM D75 from the flowing aggregate stream or conveyor belt.

b. Slump and air content. The Contractor shall maintain linear control charts both for individual measurements and range (that is, difference between highest and lowest measurements) for slump and air content in accordance with the following Action and Suspension Limits.

c. Combined gradation. The Contractor shall maintain a control chart plotting the coarseness factor and workability factor on a chart in accordance with paragraph 501-2.1d.

Control Chart Limits[1]

Control Parameter	Individual Measurements	
	Action Limit	**Suspension Limit**
Gradation[2]	*[3]	*[3]
Coarseness Factor (CF)	±3.5	±5
Workability Factor (WF)	±2	±3
Slump	+0.5 to -1 inch (+13 to -25 mm)	+1 to -1.5 inch (+25 to -38 mm)
Air Content	±1.5%	±2.0%

[1] Control charts shall developed and maintained for each control parameter indicated.

[2] Control charts shall be developed and maintained for each sieve size.

[3] Action and suspension limits shall be determined by the Contractor.

501-5.5 Corrective action at Suspension Limit. As a minimum, the contractor quality control process shall be deemed out of control and corrective action taken if any one of the following conditions exists.

a. Fine and coarse aggregate gradation. When two consecutive averages of five tests are outside of the suspension limits, immediate steps, including a halt to production, shall be taken to correct the grading.

b. Coarseness and Workability factor. When the CF or WF reaches the applicable suspension limits, the Contractor, immediate steps, including a halt to production, shall be taken to correct the CF and WF.

c. Fine and coarse aggregate moisture content. Whenever the moisture content of the fine or coarse aggregate changes by more than 0.5%, the scale settings for the aggregate batcher and water batcher shall be adjusted.

d. Slump. The Contractor shall halt production and make appropriate adjustments whenever:

(1) one point falls outside the Suspension Limit line for individual measurements

OR

(2) two points in a row fall outside the Action Limit line for individual measurements.

e. Air content. The Contractor shall halt production and adjust the amount of air-entraining admixture whenever:

(1) one point falls outside the Suspension Limit line for individual measurements

OR

(2) two points in a row fall outside the Action Limit line for individual measurements.

MATERIAL ACCEPTANCE

501-6.1 Quality Assurance (QA) Acceptance sampling and testing. All acceptance sampling and testing necessary to determine conformance with the requirements specified in this section, with the exception of coring for thickness determination, will be performed by the RPR. The Contractor shall provide adequate facilities for the initial curing of beams. The Contractor shall bear the cost of providing initial curing facilities and coring and filling operations, per paragraph 501-6.5b(1).

The samples will be transported while in the molds. The curing, except for the initial cure period, will be accomplished using the immersion in saturated lime water method. During the 24 hours after molding, the temperature immediately adjacent to the specimens must be maintained in the range of 60° to 80°F (16° to 27°C), and loss of moisture from the specimens must be prevented. The specimens may be stored in tightly constructed wooden boxes, damp sand pits, temporary buildings at construction sites, under wet burlap in favorable weather, or in heavyweight closed plastic bags, or using other suitable methods, provided the temperature and moisture loss requirements are met.

501-6.2 Quality Assurance (QA) testing laboratory. Quality assurance testing organizations performing these acceptance tests will be accredited in accordance with ASTM C1077. The quality assurance laboratory accreditation must be current and listed on the accrediting authority's website. All test methods required for acceptance sampling and testing must be listed on the lab accreditation. A copy of the laboratory's current accreditation and accredited test methods will be submitted to the RPR prior to start of construction.

501-6.3 Lot size. Concrete will be accepted for strength and thickness on a lot basis. A lot will consist of a day's production not to exceed 2,000 cubic yards. Each lot will be divided into approximately equal sublots with individual sublots between 400 to 600 cubic yards. Where three sublots are produced, they will constitute a lot. Where one or two sublots are produced, they will be incorporated into the previous or next lot. Where more than one plant is simultaneously producing concrete for the job, the lot sizes will apply separately for each plant.

501-6.4 Partial lots. When operational conditions cause a lot to be terminated before the specified number of tests have been made for the lot or for overages or minor placements to be considered as partial lots, the following procedure will be used to adjust the lot size and the number of tests for the lot.

Where three sublots have been produced, they will constitute a lot. Where one or two sublots have been produced, they will be incorporated into the next lot or the previous lot and the total number of sublots will be used in the acceptance criteria calculation, that is, n=5 or n=6.

501-6.5 Acceptance Sampling and Testing.

a. Strength.

(1) Sampling. One sample will be taken for each sublot from the concrete delivered to the job site. Sampling locations will be determined by the RPR in accordance with random sampling procedures contained in ASTM D3665. The concrete will be sampled in accordance with ASTM C172.

(2) Test Specimens. The RPR will be responsible for the casting, initial curing, transportation, and curing of specimens in accordance with ASTM C31. Two (2) specimens will be made from each sample and slump, air content, unit weight, and temperature tests will be conducted for each set of strength specimens. Within 24 to 48 hours, the samples will be transported from the field to the laboratory while in the molds. Samples will be cured in saturated lime water.

The strength of each specimen will be determined in accordance with **ASTM C39.** The strength for each sublot will be computed by averaging the results of the two test specimens representing that sublot.

(3) Acceptance. Acceptance of pavement for strength will be determined by the RPR in accordance with paragraph 501-6.6b(1). All individual strength tests within a lot will be checked for outliers in accordance with ASTM E178, at a significance level of 5%. Outliers will be discarded and the remaining test values will be used to determine acceptance in accordance with paragraph 501-6.5b.

b. Pavement thickness.

(1) Sampling. One core will be taken by the Contractor for each sublot in the presence of the RPR. Sampling locations will be determined by the RPR in accordance with random sampling procedures contained in ASTM D3665. Areas, such as thickened edges, with planned variable thickness, will be excluded from sample locations.

Cores shall be a minimum 4 inch (100 mm) in diameter neatly cut with a core drill. The Contractor will furnish all tools, labor, and materials for cutting samples and filling the cored hole. Core holes will be filled by the Contractor with a non-shrink grout approved by the RPR within one day after sampling.

(2) Testing. The thickness of the cores will be determined by the RPR by the average caliper measurement in accordance with ASTM C174. Each core shall be photographed and the photograph included with the test report.

(3) Acceptance. Acceptance of pavement for thickness will be determined by the RPR in accordance with paragraph 501-6.6.

501-6.6 Acceptance criteria.

a. General. Acceptance will be based on the following characteristics of the completed pavement discussed in paragraph 501-6.5b:

(1) Strength

(2) Thickness

(3) Grade

(4) Profilograph smoothness [Not used]

(5) Adjustments for repairs

Acceptance for strength, thickness, and grade, will be based on the criteria contained in accordance with paragraph 501-6.6b(1), 501-6.6b(2), and 501-6.6b(3), respectively.

(3) Grade. The final finished surface of the pavement of the completed project will not vary from the gradeline elevations and cross-sections shown on the plans by more than 1/2 inch vertically or 0.1 feet laterally. The documentation, stamped and signed by a licensed surveyor shall be in accordance with paragraph 501-5.3h. Payment for sublots that do not meet grade for over 25% of the sublot shall be reduced by 5% and not be more than 95%.

(4) Profilograph roughness for QA Acceptance. ~~[Not used.]~~

METHOD OF MEASUREMENT

501-7.1 Concrete pavement shall be measured by the number of square yards of plain or reinforced pavement as specified in-place, completed and accepted.

BASIS OF PAYMENT

501-8.1 Payment. Payment for concrete pavement meeting all acceptance criteria as specified in paragraph 501-6.6. Acceptance Criteria shall be based on results of strength and thickness tests. Payment for acceptable lots of concrete pavement shall be adjusted in accordance with paragraph 501-8.1a for strength and thickness; 501-8.1b for repairs; 501-8.1c for grinding; and 501-8.1d for smoothness, subject to the limitation that:

The total project payment for concrete pavement shall not exceed **100** percent of the product of the contract unit price and the total number of square yards of concrete pavement used in the accepted work.

Payment shall be full compensation for all labor, materials, tools, equipment, and incidentals required to complete the work as specified herein and on the drawings.

~~**a. Basis of adjusted payment.** The pay factor for each individual lot shall be calculated in accordance with the Price Adjustment Schedule table below. A pay factor shall be calculated for both strength and thickness. The lot pay factor shall be the higher of the two values when calculations for both strength and thickness are 100% or higher. The lot pay factor shall be the product of the two values when only one of the calculations for either strength or thickness is 100% or higher. The lot pay factor shall be the lower of the two values when calculations for both strength and thickness are less than 100%.~~

~~**Price Adjustment Schedule**[1]~~

~~**Percentage of Materials Within Specification Limits (PWL)**~~	~~**Lot Pay Factor (Percent of Contract Unit Price)**~~
~~96 – 100~~	~~106~~
~~90 – 95~~	~~PWL + 10~~
~~75 – 90~~	~~0.5 PWL + 55~~
~~55 – 74~~	~~1.4 PWL – 12~~
~~Below 55~~	~~Reject~~[2]

~~[1] Although it is theoretically possible to achieve a pay factor of 106% for each lot, actual payment in excess of 100% shall be subject to the total project payment limitation specified in paragraph 501-8.1.~~

~~[2] The lot shall be removed and replaced unless, after receipt of FAA concurrence, the Owner and Contractor agree in writing that the lot will remain; the lot paid at 50% of the contract unit price; and the total project payment limitation reduced by the amount withheld for that lot.~~

~~For each lot accepted, the adjusted contract unit price shall be the product of the lot pay factor for the lot and the contract unit price. Payment shall be subject to the total project payment limitation specified in paragraph 501-8.1. Payment in excess of 100% for accepted lots of concrete pavement shall be used to offset payment for accepted lots of concrete pavement that achieve a lot pay factor less than 100%; except for rejected lots which remain in place and/or sublots with adjustments for repairs.~~

~~**b. Adjusted payment for repairs.** The PWL lot pay factor shall be reduced by 5% and be no higher than 95% for sublots which contain repairs in accordance with paragraph 501-4.19 on more than 20% of the slabs within the sublot. Payment factors greater than 100 percent for the strength and thickness cannot be used to offset adjustments for repairs.~~

~~**c. Adjusted payment for grinding.** The PWL lot pay factor shall be reduced by 5% and be no higher than 95% for sublots with grinding over 25% of a sublot.~~

e. Payment. Payment shall be made under:

Item P-501-8.1a	Reinforced Concrete Pavement (8 inches) - per square yard
Item P-501-8.1b	Reinforced Concrete Pavement Ramp (8-12 inches) – per square yard

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM A184	Standard Specification for Welded Deformed Steel Bar Mats for Concrete Reinforcement
ASTM A615	Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
ASTM A704	Standard Specification for Welded Steel Plain Bar or Rod Mats for Concrete Reinforcement
ASTM A706	Standard Specification for Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement
ASTM A775	Standard Specification for Epoxy-Coated Steel Reinforcing Bars
ASTM A884	Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Reinforcement
ASTM A934	Standard Specification for Epoxy-Coated Prefabricated Steel Reinforcing Bars
ASTM A996	Standard Specification for Rail-Steel and Axle-Steel Deformed Bars for Concrete Reinforcement
ASTM A1035	Standard Specification for Deformed and Plain, Low-Carbon, Chromium, Steel Bars for Concrete Reinforcement
ASTM A1064	Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete
ASTM A1078	Standard Specification for Epoxy-Coated Steel Dowels for Concrete Pavement
ASTM C29	Standard Test Method for Bulk Density ("Unit Weight") and Voids in Aggregate
ASTM C31	Standard Practice for Making and Curing Concrete Test Specimens in the Field

ASTM C33	Standard Specification for Concrete Aggregates
ASTM C39	Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
ASTM C70	Standard Test Method for Surface Moisture in Fine Aggregate
ASTM C78	Standard Test Method for Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)
ASTM C88	Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
ASTM C94	Standard Specification for Ready-Mixed Concrete
ASTM C114	Standard Test Methods for Chemical Analysis of Hydraulic Cement
ASTM C117	Standard Test Method for Materials Finer than 75-µm (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C123	Standard Test Method for Lightweight Particles in Aggregate
ASTM C136	Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
ASTM C131	Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C136	Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates
ASTM C138	Standard Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete
ASTM C142	Standard Test Method for Clay Lumps and Friable Particles in Aggregates
ASTM C143	Standard Test Method for Slump of Hydraulic-Cement Concrete
ASTM C150	Standard Specification for Portland Cement
ASTM C171	Standard Specification for Sheet Materials for Curing Concrete
ASTM C172	Standard Practice for Sampling Freshly Mixed Concrete
ASTM C173	Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method
ASTM C174	Standard Test Method for Measuring Thickness of Concrete Elements Using Drilled Concrete Cores
ASTM C227	Standard Test Method for Potential Alkali Reactivity of Cement-Aggregate Combinations (Mortar-Bar Method)
ASTM C231	Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
ASTM C260	Standard Specification for Air-Entraining Admixtures for Concrete
ASTM C295	Standard Guide for Petrographic Examination of Aggregates for Concrete

ASTM C309	Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete
ASTM C311	Standard Test Methods for Sampling and Testing Fly Ash or Natural Pozzolans for Use in Portland Cement Concrete
ASTM C494	Standard Specification for Chemical Admixtures for Concrete
ASTM C566	Standard Test Method for Total Evaporable Moisture Content of Aggregates by Drying
ASTM C595	Standard Specification for Blended Hydraulic Cements
ASTM C618	Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
ASTM C642	Standard Test Method for Density, Absorption, and Voids in Hardened Concrete
ASTM C666	Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing
ASTM C685	Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing
ASTM C881	Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete
ASTM C989	Standard Specification for Slag Cement for Use in Concrete and Mortars
ASTM C1017	Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete
ASTM C1064	Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete
ASTM C1077	Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation
ASTM C1157	Standard Performance Specification for Hydraulic Cement
ASTM C1260	Standard Test Method for Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)
ASTM C1365	Standard Test Method for Determination of the Proportion of Phases in Portland Cement and Portland-Cement Clinker Using X-Ray Powder Diffraction Analysis
ASTM C1567	Standard Test Method for Determining the Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials and Aggregate (Accelerated Mortar-Bar Method)
ASTM C1602	Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete
ASTM D75	Standard Practice for Sampling Aggregates

ASTM D1751	Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)
ASTM D1752	Standard Specification for Preformed Sponge Rubber and Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction
ASTM D2419	Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate
ASTM D3665	Standard Practice for Random Sampling of Construction Materials
ASTM D4791	Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
ASTM E178	Standard Practice for Dealing with Outlying Observations
ASTM E1274	Standard Test Method for Measuring Pavement Roughness Using a Profilograph
ASTM E2133	Standard Test Method for Using a Rolling Inclinometer to Measure Longitudinal and Transverse Profiles of a Traveled Surface

American Concrete Institute (ACI)

ACI 305R	Guide to Hot Weather Concreting
ACI 306R	Guide to Cold Weather Concreting
ACI 309R	Guide for Consolidation of Concrete

Advisory Circulars (AC)

AC 150/5320-6	Airport Pavement Design and Evaluation

Federal Highway Administration (FHWA)

HIPERPAV 3, version 3.2

Portland Concrete Association (PCA)

PCA	Design and Control of Concrete Mixtures, 16th Edition

U.S. Army Corps of Engineers (USACE) Concrete Research Division (CRD)

CRD C662	Determining the Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials, Lithium Nitrate Admixture and Aggregate (Accelerated Mortar-Bar Method)

United States Air Force Engineering Technical Letter (ETL)

ETL 97-5	Proportioning Concrete Mixtures with Graded Aggregates for Rigid Airfield Pavements

END ITEM P-501

ITEM P-605
JOINT SEALANTS FOR PAVEMENTS

DESCRIPTION

605-1.1 This item shall consist of providing and installing a resilient and adhesive joint sealing material capable of effectively sealing joints in pavement; joints between different types of pavements; and cracks in existing pavement.

MATERIALS

605-2.1 Joint sealants. Joint sealant materials shall meet the requirements of ASTM D5893 Standard Specifications for Cold Applied, Single Component, Chemically Curing Silicone Joint Sealant for Portland Cement Concrete Pavements.

Each lot or batch of sealant shall be delivered to the jobsite in the manufacturer's original sealed container. Each container shall be marked with the manufacturer's name, batch or lot number, the safe heating temperature, and shall be accompanied by the manufacturer's certification stating that the sealant meets the requirements of this specification.

605-2.2 Backer rod. The material furnished shall be a compressible, non-shrinking, non-staining, non-absorbing material that is non-reactive with the joint sealant in accordance with ASTM D5249. The backer-rod material shall be 25% ± 5 % larger in diameter than the nominal width of the joint.

605-2.3 Bond breaking tapes. Provide a bond breaking tape or separating material that is a flexible, non-shrinkable, non-absorbing, non-staining, and non-reacting adhesive-backed tape. The material shall have a melting point at least 5°F (3°C) greater than the pouring temperature of the sealant being used when tested in accordance with ASTM D789. The bond breaker tape shall be approximately 1/8 inch (3 mm) wider than the nominal width of the joint and shall not bond to the joint sealant.

CONSTRUCTION METHODS

605-3.1 Time of application. Joints shall be sealed as soon after completion of the curing period as feasible and before the pavement is opened to traffic, including construction equipment. The pavement temperature shall be 50°F (10°C) and rising at the time of application of the poured joint sealing material. Do not apply sealant if moisture is observed in the joint.

605-3.2 Equipment. Machines, tools, and equipment used in the performance of the work required by this section shall be approved before the work is started and maintained in satisfactory condition at all times. Submit a list of proposed equipment to be used in performance of construction work including descriptive data, **14 Calendar** days prior to use on the project.

a. Tractor-mounted routing tool. Provide a routing tool, used for removing old sealant from the joints, of such shape and dimensions and so mounted on the tractor that it will not damage the sides of the joints. The tool shall be designed so that it can be adjusted to remove the old material to varying depths as required. The use of V-shaped tools or rotary impact routing devices will not be permitted. Hand-operated spindle routing devices may be used to clean and enlarge random cracks.

b. Concrete saw. Provide a self-propelled power saw, with water-cooled diamond or abrasive saw blades, for cutting joints to the depths and widths specified.

c. Sandblasting equipment. Sandblasting is not allowed.

d. Waterblasting equipment. The Contractor must demonstrate waterblasting equipment including the pumps, hose, guide and nozzle size, under job conditions, before approval in accordance with paragraph 605-3.3. The Contractor shall demonstrate, in the presence of the RPR, that the method cleans the joint and does not damage the joint.

e. Hand tools. Hand tools may be used, when approved, for removing defective sealant from a crack and repairing or cleaning the crack faces. Hand tools should be carefully evaluated for potential spalling effects prior to approval for use.

f. Hot-poured sealing equipment. The unit applicators used for heating and installing ASTM D6690 joint sealant materials shall be mobile and shall be equipped with a double-boiler, agitator-type kettle with an oil medium in the outer space for heat transfer; a direct-connected pressure-type extruding device with a nozzle shaped for inserting in the joint to be filled; positive temperature devices for controlling the temperature of the transfer oil and sealant; and a recording type thermometer for indicating the temperature of the sealant. The applicator unit shall be designed so that the sealant will circulate through the delivery hose and return to the inner kettle when not in use.

g. Cold-applied, single-component sealing equipment. The equipment for installing ASTM D5893 single component joint sealants shall consist of an extrusion pump, air compressor, following plate, hoses, and nozzle for transferring the sealant from the storage container into the joint opening. The dimension of the nozzle shall be such that the tip of the nozzle will extend into the joint to allow sealing from the bottom of the joint to the top. Maintain the initially approved equipment in good working condition, serviced in accordance with the supplier's instructions, and unaltered in any way without obtaining prior approval. Small hand-held air-powered equipment (i.e., caulking guns) may be used for small applications.

605-3.3 Preparation of joints. Pavement joints for application of material in this specification must be dry, clean of all scale, dirt, dust, curing compound, and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method cleans the joint and does not damage the joint.

a. Sawing. All joints shall be sawed in accordance with specifications and plan details. Immediately after sawing the joint, the resulting slurry shall be completely removed from joint and adjacent area by flushing with a jet of water, and by use of other tools as necessary.

b. Sealing. Immediately before sealing, the joints shall be thoroughly cleaned of all remaining laitance, curing compound, filler, protrusions of hardened concrete, old sealant and other foreign material from the sides and upper edges of the joint space to be sealed. Cleaning shall be accomplished by tractor-mounted routing equipment, concrete saw or waterblaster as specified in paragraph 605-3.2. The newly exposed concrete joint faces and the pavement surface extending a minimum of 1/2 inch (12 mm) from the joint edge shall be sandblasted clean. Sandblasting shall be accomplished in a minimum of two passes. One pass per joint face with the nozzle held at an angle directly toward the joint face and not more than 3 inches (75 mm) from it. After final cleaning and immediately prior to sealing, blow out the joints with compressed air and leave them completely free of debris and water. The joint faces shall be surface dry when the seal is applied.

c. Backer Rod. When the joint opening is of a greater depth than indicated for the sealant depth, plug or seal off the lower portion of the joint opening using a backer rod in accordance

with paragraph 605-2.2 to prevent the entrance of the sealant below the specified depth. Take care to ensure that the backer rod is placed at the specified depth and is not stretched or twisted during installation.

d. **Bond-breaking tape.** Where inserts or filler materials contain bitumen, or the depth of the joint opening does not allow for the use of a backup material, insert a bond-separating tape breaker in accordance with paragraph 605-2.3 to prevent incompatibility with the filler materials and three-sided adhesion of the sealant. Securely bond the tape to the bottom of the joint opening so it will not float up into the new sealant.

605-3.4 Installation of sealants. Joints shall be inspected for proper width, depth, alignment, and preparation, and shall be approved by the RPR before sealing is allowed. Sealants shall be installed in accordance with the following requirements:

Immediately preceding, but not more than 50 feet (15 m) ahead of the joint sealing operations, perform a final cleaning with compressed air. Fill the joints from the bottom up to **1/8 inch ±1/16 inch** below the top of pavement surface; or bottom of groove for grooved pavement. Remove and discard excess or spilled sealant from the pavement by approved methods. Install the sealant in such a manner as to prevent the formation of voids and entrapped air. In no case shall gravity methods or pouring pots be used to install the sealant material. Traffic shall not be permitted over newly sealed pavement until authorized by the RPR. When a primer is recommended by the manufacturer, apply it evenly to the joint faces in accordance with the manufacturer's instructions. Check the joints frequently to ensure that the newly installed sealant is cured to a tack-free condition within the time specified.

605-3.5 Inspection. The Contractor shall inspect the joint sealant for proper rate of cure and set, bonding to the joint walls, cohesive separation within the sealant, reversion to liquid, entrapped air and voids. Sealants exhibiting any of these deficiencies at any time prior to the final acceptance of the project shall be removed from the joint, wasted, and replaced as specified at no additional cost to the airport.

605-3.6 Clean-up. Upon completion of the project, remove all unused materials from the site and leave the pavement in a clean condition.

METHOD OF MEASUREMENT

605-4.1 No Direct Measurement. All work shall be considered incidental to the bid items for specification P-501

BASIS OF PAYMENT

605-5.1 No Direct Payment. All the work under this item including furnishing all materials, for all preparation, delivering, and placing of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the work item shall be considered incidental to the bid items for specification P-501.

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM D789	Standard Test Method for Determination of Relative Viscosity of Polyamide (PA)
ASTM D5249	Standard Specification for Backer Material for Use with Cold- and Hot-Applied Joint Sealants in Portland-Cement Concrete and Asphalt Joints
ASTM D5893	Standard Specification for Cold Applied, Single Component, Chemically Curing Silicone Joint Sealant for Portland Cement Concrete Pavements
ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt
ASTM D7116	Standard Specification for Joint Sealants, Hot Applied, Jet Fuel Resistant Types for Portland Cement Concrete Pavements

Advisory Circulars (AC)

AC 150/5340-30	Design and Installation Details for Airport Visual Aids

END ITEM P-605

ITEM P-610
CONCRETE FOR MISCELLANEOUS STRUCTURES

DESCRIPTION

610-1.1 This item shall consist of concrete and reinforcement, as shown on the plans, prepared and constructed in accordance with these specifications. This specification shall be used for all concrete other than airfield pavement which are cast-in-place.

MATERIALS

610-2.1 General. Only approved materials, conforming to the requirements of these specifications, shall be used in the work. Materials may be subject to inspection and tests at any time during their preparation or use. The source of all materials shall be approved by the Resident Project Representative (RPR) before delivery or use in the work. Representative preliminary samples of the materials shall be submitted by the Contractor, when required, for examination and test. Materials shall be stored and handled to ensure preservation of their quality and fitness for use and shall be located to facilitate prompt inspection. All equipment for handling and transporting materials and concrete must be clean before any material or concrete is placed in them.

The use of pit-run aggregates shall not be permitted unless the pit-run aggregate has been screened and washed, and all fine and coarse aggregates stored separately and kept clean. The mixing of different aggregates from different sources in one storage stockpile or alternating batches of different aggregates shall not be permitted.

a. Reactivity. Fine aggregate and coarse aggregates to be used in all concrete shall have been tested separately within six months of the project in accordance with ASTM C1260. Test results shall be submitted to the RPR. The aggregate shall be considered innocuous if the expansion of test specimens, tested in accordance with ASTM C1260, does not exceed 0.08% at 14 days (16 days from casting). If the expansion either or both test specimen is greater than 0.08% at 14 days, but less than 0.20%, a minimum of 25% of Type F fly ash, or between 40% and 55% of slag cement shall be used in the concrete mix.

If the expansion is greater than 0.20%, the aggregates shall not be used, and test results for other aggregates must be submitted for evaluation; or aggregates that meet P-501 reactivity test requirements may be utilized.

610-2.2 Coarse aggregate. The coarse aggregate for concrete shall meet the requirements of ASTM C33 and the requirements of Table 4, Class Designation 5S; and the grading requirements shown below, as required for the project.

Coarse Aggregate Grading Requirements

Maximum Aggregate Size	ASTM C33, Table 3 Grading Requirements (Size No.)
1 1/2 inch (37.5 mm)	467 or 4 and 67
1 inch (25 mm)	57
¾ inch (19 mm)	67
½ inch (12.5 mm)	7

610-2.2.1 Coarse Aggregate susceptibility to durability (D) cracking. ~~[Not used]~~

610-2.3 Fine aggregate. The fine aggregate for concrete shall meet all fine aggregate requirements of ASTM C33.

610-2.4 Cement. Cement shall conform to the requirements of **ASTM C150_Type I.**

610-2.5 Cementitious materials.

a. Fly ash. Fly ash shall meet the requirements of ASTM C618, with the exception of loss of ignition, where the maximum shall be less than 6%. Fly ash shall have a Calcium Oxide (CaO) content of less than [15%] and a total available alkali content less than 3% per ASTM C311. Fly ash produced in furnace operations using liming materials or soda ash (sodium carbonate) as an additive shall not be acceptable. The Contractor shall furnish the previous three most recent, consecutive ASTM C618 reports for each source of fly ash proposed in the concrete mix and shall furnish each additional report as they become available during the project. The reports can be used for acceptance, or the material may be tested independently by the RPR.

b. Slag cement (ground granulated blast furnace (GGBF)). Slag cement shall conform to ASTM C989, Grade 100 or Grade 120. Slag cement shall be used only at a rate between 25% and 55% of the total cementitious material by mass.

610-2.6 Water. Water used in mixing or curing shall be from potable water sources. Other sources shall be tested in accordance with ASTM C1602 prior to use.

610-2.7 Admixtures. The Contractor shall submit certificates indicating that the material to be furnished meets all of the requirements indicated below. In addition, the RPR may require the Contractor to submit complete test data from an approved laboratory showing that the material to be furnished meets all of the requirements of the cited specifications. Subsequent tests may be made of samples taken by the RPR from the supply of the material being furnished or proposed for use on the work to determine whether the admixture is uniform in quality with that approved.

a. Air-entraining admixtures. Air-entraining admixtures shall meet the requirements of ASTM C260 and shall consistently entrain the air content in the specified ranges under field conditions. The air-entrainment agent and any water reducer admixture shall be compatible.

b. Water-reducing admixtures. Water-reducing admixture shall meet the requirements of ASTM C494, Type A, B, or D. ASTM C494, Type F and G high range water reducing admixtures and ASTM C1017 flowable admixtures shall not be used.

c. Other chemical admixtures. The use of set retarding and set-accelerating admixtures shall be approved by the RPR. Retarding shall meet the requirements of ASTM C494, Type A,

B, or D and set accelerating shall meet the requirements of ASTM C494, Type C. Calcium chloride and admixtures containing calcium chloride shall not be used.

~~**610-2.8 Premolded joint material.** Premolded joint material for expansion joints shall meet the requirements of ASTM [___].~~

~~**610-2.9 Joint filler.** The filler for joints shall meet the requirements of Item P-605, unless otherwise specified.~~

610-2.10 Steel reinforcement. Reinforcing shall consist of **Reinforcing Steel** conforming to the requirements of ASTM A615, ASTM A706, ASTM A775, ASTM A934

610-2.11 Materials for curing concrete. Curing materials shall conform to White-pigmented Liquid Membrane-Forming Compound, Type 2, Class B, ASTM C309.

CONSTRUCTION METHODS

610-3.1 General. The Contractor shall furnish all labor, materials, and services necessary for, and incidental to, the completion of all work as shown on the drawings and specified here. All machinery and equipment used by the Contractor on the work, shall be of sufficient size to meet the requirements of the work. All work shall be subject to the inspection and approval of the RPR.

610-3.2 Concrete Mixture. The concrete shall develop a compressive strength of **4000** psi in 28 days as determined by test cylinders made in accordance with ASTM C31 and tested in accordance with ASTM C39. The concrete shall contain not less than 470 pounds of cementitious material per cubic yard (280 kg per cubic meter). The water cementitious ratio shall not exceed 0.45 by weight. The air content of the concrete shall be 5% +/- 1.2% as determined by ASTM C231 and shall have a slump of not more than 4 inches (100 mm) as determined by ASTM C143.

610-3.3 Mixing. Concrete may be mixed at the construction site, at a central point, or wholly or in part in truck mixers. The concrete shall be mixed and delivered in accordance with the requirements of ASTM C94 or ASTM C685.

The concrete shall be mixed only in quantities required for immediate use. Concrete shall not be mixed while the air temperature is below 40°F (4°C) without the RPRs approval. If approval is granted for mixing under such conditions, aggregates or water, or both, shall be heated and the concrete shall be placed at a temperature not less than 50°F (10°C) nor more than 100°F (38°C). The Contractor shall be held responsible for any defective work, resulting from freezing or injury in any manner during placing and curing, and shall replace such work at his expense.

Retempering of concrete by adding water or any other material is not permitted.

The rate of delivery of concrete to the job shall be sufficient to allow uninterrupted placement of the concrete.

610-3.4 Forms. Concrete shall not be placed until all the forms and reinforcements have been inspected and approved by the RPR. Forms shall be of suitable material and shall be of the type, size, shape, quality, and strength to build the structure as shown on the plans. The forms shall be true to line and grade and shall be mortar-tight and sufficiently rigid to prevent displacement and sagging between supports. The surfaces of forms shall be smooth and free from irregularities, dents, sags, and holes. The Contractor shall be responsible for their adequacy.

The internal form ties shall be arranged so no metal will show in the concrete surface or discolor the surface when exposed to weathering when the forms are removed. All forms shall be wetted with water or with a non-staining mineral oil, which shall be applied immediately before the

concrete is placed. Forms shall be constructed so they can be removed without injuring the concrete or concrete surface.

610-3.5 Placing reinforcement. All reinforcement shall be accurately placed, as shown on the plans, and shall be firmly held in position during concrete placement. Bars shall be fastened together at intersections. The reinforcement shall be supported by approved metal chairs. Shop drawings, lists, and bending details shall be supplied by the Contractor when required.

610-3.6 Embedded items. Before placing concrete, all embedded items shall be firmly and securely fastened in place as indicated. All embedded items shall be clean and free from coating, rust, scale, oil, or any foreign matter. The concrete shall be spaded and consolidated around and against embedded items. The embedding of wood shall not be allowed.

610-3.7 Concrete Consistency. The Contractor shall monitor the consistency of the concrete delivered to the project site; collect each batch ticket; check temperature; and perform slump tests on each truck at the project site in accordance with ASTM C143.

610-3.8 Placing concrete. All concrete shall be placed during daylight hours, unless otherwise approved. The concrete shall not be placed until the depth and condition of foundations, the adequacy of forms and falsework, and the placing of the steel reinforcing have been approved by the RPR. Concrete shall be placed as soon as practical after mixing, but in no case later than one (1) hour after water has been added to the mix. The method and manner of placing shall avoid segregation and displacement of the reinforcement. Troughs, pipes, and chutes shall be used as an aid in placing concrete when necessary. The concrete shall not be dropped from a height of more than 5 feet (1.5 m). Concrete shall be deposited as nearly as practical in its final position to avoid segregation due to rehandling or flowing. Do not subject concrete to procedures which cause segregation. Concrete shall be placed on clean, damp surfaces, free from running water, or on a properly consolidated soil foundation.

610-3.9 Vibration. Vibration shall follow the guidelines in American Concrete Institute (ACI) Committee 309R, Guide for Consolidation of Concrete.

610-3.10 Joints. Joints shall be constructed as indicated on the plans.

610-3.11 Finishing. All exposed concrete surfaces shall be true, smooth, and free from open or rough areas, depressions, or projections. All concrete horizontal plane surfaces shall be brought flush to the proper elevation with the finished top surface struck-off with a straightedge and floated.

610-3.12 Curing and protection. All concrete shall be properly cured in accordance with the recommendations in American Concrete Institute (ACI) 308R, Guide to External Curing of Concrete. The concrete shall be protected from damage until project acceptance.

610-3.13 Cold weather placing. When concrete is placed at temperatures below 40°F (4°C), follow the cold weather concreting recommendations found in ACI 306R, Cold Weather Concreting.

610-3.14 Hot weather placing. When concrete is placed in hot weather greater than 85°F (30 °C), follow the hot weather concreting recommendations found in ACI 305R, Hot Weather Concreting.

QUALITY ASSURANCE (QA)

610-4.1 Quality Assurance sampling and testing. Concrete for each day's placement will be accepted on the basis of the compressive strength specified in paragraph 610-3.2. The RPR will sample the concrete in accordance with ASTM C172; test the slump in accordance with ASTM

C143; test air content in accordance with ASTM C231; make and cure compressive strength specimens in accordance with ASTM C31; and test in accordance with ASTM C39. The QA testing agency will meet the requirements of ASTM C1077.

The Contractor shall provide adequate facilities for the initial curing of cylinders.

610-4.2 Defective work. Any defective work that cannot be satisfactorily repaired as determined by the RPR, shall be removed and replaced at the Contractor's expense. Defective work includes, but is not limited to, uneven dimensions, honeycombing and other voids on the surface or edges of the concrete.

METHOD OF MEASUREMENT

610-5.1 Concrete shall be considered incidental, and no separate measurement shall be made of concrete complete in place and accepted.

BASIS OF PAYMENT

610-6.1 Concrete shall be considered incidental, and no separate payment shall be made.

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM A184	Standard Specification for Welded Deformed Steel Bar Mats for Concrete Reinforcement
ASTM A615	Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
ASTM A704	Standard Specification for Welded Steel Plain Bar or Rod Mats for Concrete Reinforcement
ASTM A706	Standard Specification for Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement
ASTM A775	Standard Specification for Epoxy-Coated Steel Reinforcing Bars
ASTM A884	Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Reinforcement
ASTM A934	Standard Specification for Epoxy-Coated Prefabricated Steel Reinforcing Bars
ASTM A1064	Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete
ASTM C31	Standard Practice for Making and Curing Concrete Test Specimens in the Field
ASTM C33	Standard Specification for Concrete Aggregates
ASTM C39	Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens

ASTM C94	Standard Specification for Ready-Mixed Concrete
ASTM C136	Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates
ASTM C114	Standard Test Methods for Chemical Analysis of Hydraulic Cement
ASTM C136	Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
ASTM C143	Standard Test Method for Slump of Hydraulic-Cement Concrete
ASTM C150	Standard Specification for Portland Cement
ASTM C171	Standard Specification for Sheet Materials for Curing Concrete
ASTM C172	Standard Practice for Sampling Freshly Mixed Concrete
ASTM C231	Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
ASTM C260	Standard Specification for Air-Entraining Admixtures for Concrete
ASTM C309	Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete
ASTM C311	Standard Test Methods for Sampling and Testing Fly Ash or Natural Pozzolans for Use in Portland-Cement Concrete
ASTM C494	Standard Specification for Chemical Admixtures for Concrete
ASTM C618	Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
ASTM C666	Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing
ASTM C685	Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing
ASTM C989	Standard Specification for Slag Cement for Use in Concrete and Mortars
ASTM C1017	Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete
ASTM C1077	Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation
ASTM C1157	Standard Performance Specification for Hydraulic Cement
ASTM C1260	Standard Test Method for Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)
ASTM C1365	Standard Test Method for Determination of the Proportion of Phases in Portland Cement and Portland-Cement Clinker Using X-Ray Powder Diffraction Analysis
ASTM C1602	Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete

ASTM D1751	Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Asphalt Types)
ASTM D1752	Standard Specification for Preformed Sponge Rubber Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction

American Concrete Institute (ACI)

ACI 305R	Hot Weather Concreting
ACI 306R	Cold Weather Concreting
ACI 308R	Guide to External Curing of Concrete
ACI 309R	Guide for Consolidation of Concrete

END OF ITEM P-610

ITEM 506

TEMPORARY EROSION, SEDIMENTATION,AND ENVIRONMENTAL CONTROLS

1. DESCRIPTION

Install, maintain, and remove erosion, sedimentation, and environmental control measures to prevent or reduce the discharge of pollutants in accordance with the Storm Water Pollution Prevention Plan (SWP3) on the plans and the Texas Pollutant Discharge Elimination System (TPDES) General Permit TXR150000.

Control measures are defined as Best Management Practices used to prevent or reduce the discharge of pollutants. Control measures include, but are not limited to, rock filter dams, temporary pipe slope drains, temporary paved flumes, construction exits, earthwork for erosion control, pipe, construction perimeter fence, sandbags, temporary sediment control fence, biodegradable erosion control logs, vertical tracking, temporary or permanent seeding, and other measures. Erosion and sediment control devices must be selected from the *Erosion Control Approved Products* or *Sediment Control Approved Products* lists. Perform work in a manner to prevent degradation of receiving waters, facilitate project construction, and comply with applicable federal, state, and local regulations. Ensure the installation and maintenance of control measures is performed in accordance with the manufacturer's or designer's specifications.

Provide the Contractor Certification of Compliance before performing SWP3 or soil disturbing activities. By signing the Contractor Certification of Compliance, the Contractor certifies they have read and understand the requirements applicable to this project pertaining to the SWP3, the plans, and the TPDES General Permit TXR150000. The Contractor is responsible for any penalties associated with non-performance of installation or maintenance activities required for compliance. Ensure the most current version of the certificate is executed for this project.

2. MATERIALS

2.1. Construction Exits. Provide materials that meet the details shown on the plans and this Section.

2.1.1. **Rock Construction Exit**. Provide crushed aggregate for long- and short-term construction exits. Furnish aggregates that are clean, hard, durable, and free from adherent coatings such as salt, alkali, dirt, clay, loam, shale, soft or flaky materials, and organic and injurious matter. Use 4- to 8-in. aggregate for Type 1. Use 2- to 4-in. aggregate for Type 3.

2.1.2. **Foundation Course**. Provide a foundation course consisting of flexible base, bituminous concrete, hydraulic cement concrete, or other materials as shown on the plans or directed.

2.2. Embankment for Erosion Control. Provide rock, loam, clay, topsoil, or other earth materials that will form a stable embankment to meet the intended use.

2.3. Construction Perimeter Fence.

2.3.1. **Posts.** Provide essentially straight wood or steel posts that are at least 60 in. long. Furnish soft wood posts with a minimum diameter of 3 in., or use nominal 2 × 4 in. boards. Furnish hardwood posts with a minimum cross-section of 1-1/2 × 1-1/5 in. Furnish T- or L-shaped steel posts with a minimum weight of 1.25 lb. per foot.

2.3.2. **Fence.** Provide orange construction fencing as approved.

2.3.3. **Fence Wire.** Provide 14 gauge or larger galvanized smooth or twisted wire. Provide 16 gauge or larger tie wire.

2.3.4. **Flagging.** Provide brightly-colored flagging that is fade-resistant and at least 3/4 in. wide to provide maximum visibility both day and night.

2.3.5. **Staples.** Provide staples with a crown at least 1/2 in. wide and legs at least 1/2 in. long.

2.3.6. **Used Materials.** Previously used materials meeting the applicable requirements may be used if approved.

2.4. Sandbags. Provide sandbag material of polypropylene, polyethylene, or polyamide woven fabric with a minimum unit weight of 4 oz. per square yard, a Mullen burst-strength exceeding 300 psi, and an ultraviolet stability exceeding 70%.

Use natural coarse sand or manufactured sand meeting the gradation given in Table 1 to fill sandbags. Filled sandbags must be 24 to 30 in. long, 16 to 18 in. wide, and 6 to 8 in. thick.

Table 1 Sand Gradation

Sieve Size	Retained (% by Weight)
#4	Maximum 3%
#100	Minimum 80%
#200	Minimum 95%

Aggregate may be used instead of sand for situations where sandbags are not adjacent to traffic. The aggregate size must not exceed 3/8 in.

2.5. Temporary Sediment Control Fence. Provide a net-reinforced fence using woven geo-textile fabric. Logos visible to the traveling public will not be allowed.

2.5.1. **Fabric**. Provide fabric materials in accordance with DMS-6230, "Temporary Sediment Control Fence Fabric."

2.5.2. **Posts**. Provide essentially straight wood or steel posts with a minimum length of 48 in., unless otherwise shown on the plans. Furnish soft wood posts at least 3 in. in diameter, or use nominal 2 × 4 in. boards. Furnish hardwood posts with a minimum cross-section of 1-1/2 × 1-1/2 in. Furnish T- or L-shaped steel postswith a minimum weight of 1.25 lb. per foot.

2.5.3. **Net Reinforcement**. Provide net reinforcement of at least 12.5 gauge (SWG) galvanized welded wire mesh, with a maximum opening size of 2 × 4 in., at least 24 in. wide, unless otherwise shown on the plans.

2.5.4. **Staples**. Provide staples with a crown at least 3/4 in. wide and legs 1/2 in. long.

2.5.5. **Used Materials**. Use recycled material meeting the applicable requirements if approved.

2.6. Biodegradable Erosion Control Logs.

2.6.1. **Core Material**. Furnish core material that is biodegradable or recyclable. Use compost, mulch, aspen excelsior wood fibers, chipped site vegetation, agricultural rice or wheat straw, coconut fiber, 100% recyclable fibers, or any other acceptable material unless specifically called out on the plans. Permit no more than 5% of the material to escape from the containment mesh. Furnish compost meeting the requirements ofItem 161, "Compost."

2.6.2. **Containment Mesh**. Furnish containment mesh that is 100% biodegradable, photodegradable, or recyclable such as burlap, twine, UV photodegradable plastic, polyester, or any other acceptable material.

Furnish biodegradable or photodegradable containment mesh when log will remain in place as part of a vegetative system.

Furnish recyclable containment mesh for temporary installations.

2.6.3. **Size**. Furnish biodegradable erosion control logs with diameters shown on the plans or as directed. Stuff containment mesh densely so logs do not deform.

3. QUALIFICATIONS, TRAINING, AND EMPLOYEE REQUIREMENTS

3.1. Contractor Responsible Person Environmental (CRPE) Qualifications and Responsibilities. Provide and designate in writing at the preconstruction conference a CRPE and alternate CRPE who have overall responsibility for the storm water management program. The CRPE will implement storm water and erosion control practices; will oversee and observe storm water control measure monitoring and management; will monitor the project site daily and produce daily monitoring reports as long as there are BMPs in place or soil disturbing activities are evident to ensure compliance with the SWP3 and TPDES General Permit TXR150000. During time suspensions when work is not occurring or on contract non-work days, daily inspections are not required unless a rain event has occurred. The CRPE will provide recommendations on how to improve the effectiveness of control measures. Attend the Department's preconstruction conference for the project. Ensure training is completed as identified in Section 506.3.3., "Training," by all applicable personnel before employees work on the project. Document and submit a list, signed by the CRPE, of all applicable Contractor and subcontractor employees who have completed the training. Include the employee's name, the training course name, and date the employee completed the training. Provide the most current list at the preconstruction conference or before SWP3 or soil disturbing activities. Update the list as needed and provide the updated list when updated.

3.2. Contractor Superintendent Qualifications and Responsibilities. Provide a superintendent that is competent, has experience with and knowledge of storm water management, and is knowledgeable of the requirements and the conditions of the TPDES General Permit TXR150000. The superintendent will manage and oversee the day to day operations and activities at the project site; work with the CRPE to provide effective storm water management at the project site; represent and act on behalf of the Contractor; and attend the Department's preconstruction conference for the project.

3.3. Training. All Contractor and subcontractor employees involved in soil disturbing activities, small or large structures, storm water control measures, and seeding activities must complete training as prescribed by theDepartment.

4. CONSTRUCTION

4.1. Contractor Responsibilities. Implement the SWP3 for the project site in accordance with the plans and specifications, TPDES General Permit TXR150000, and as directed. Coordinate storm water management with all other work on the project. Develop and implement an SWP3 for project-specific material supply plants within and outside of the Department's right of way in accordance with the specific or general storm water permit requirements. Prevent water pollution from storm water associated with construction activity from entering any surface water or private property on or adjacent to the project site.

4.2. Implementation. The CRPE, or alternate CRPE, must be accessible by phone and able to respond to project-related storm water management or other environmental emergencies 24 hr. per day.

4.2.1. **Commencement**. Implement the SWP3 as shown and as directed. Contractor-proposed recommendations for changes will be allowed as approved. Conform to the established guidelines in the TPDES General Permit TXR150000 to make changes. Do not implement changes until approval has been received and changes have been incorporated into the plans. Minor adjustments to meet field conditions are allowed and will be recorded in the SWP3.

4.2.2. **Phasing**. Implement control measures before the commencement of activities that result in soil disturbance. Phase and minimize the soil disturbance to the areas shown on the plans. Coordinate temporary control measures with permanent control measures and all other work activities on the project to assure economical, effective, safe, and continuous water pollution prevention. Provide control measures that are appropriate to the construction means, methods, and sequencing allowed by the Contract. Exercise precaution throughout the life of the project to prevent pollution of ground waters and surface waters. Schedule and perform clearing and grubbing operations so that stabilization measures will follow immediately thereafter if project conditions permit. Bring all grading sections to final grade as soon as possible and implement temporary and permanent control measures at the earliest time possible. Implement temporary control measures when required by the TPDES General Permit TXR150000 or otherwise necessitated by project conditions.

Do not prolong final grading and shaping. Preserve vegetation where possible throughout the project, and minimize clearing, grubbing, and excavation within stream banks, bed, and approach sections.

4.3. General.

4.3.1. **Temporary Alterations or Control Measure Removal**. Altering or removal of control measures is allowed when control measures are restored within the same working day.

4.3.2. **Stabilization**. Initiate stabilization for disturbed areas no more than 14 days after the construction activities in that portion of the site have temporarily or permanently ceased. Establish a uniform vegetative cover or use another stabilization practice in accordance with the TPDES General Permit TXR150000.

4.3.3. **Finished Work**. Remove and dispose of all temporary control measures upon acceptance of vegetative cover or other stabilization practice unless otherwise directed. Complete soil disturbing activities and establish a uniform perennial vegetative cover. A project will not be considered for acceptance until a vegetative cover of 70% density of existing adjacent undisturbed areas is obtained or equivalent permanent stabilization is obtained in accordance with the TPDES General Permit TXR150000. An exception will be allowed in arid areas as defined in the TPDES General Permit TXR150000.

4.3.4. **Restricted Activities and Required Precautions**. Do not discharge onto the ground or surface waters any pollutants such as chemicals, raw sewage, fuels, lubricants, coolants, hydraulic fluids, bitumens, or any other petroleum product. Operate and maintain equipment on-site to prevent actual or potential water pollution. Manage, control, and dispose of litter on-site such that no adverse impacts to water quality occur. Prevent dust from creating a potential or actual unsafe condition, public nuisance, or condition endangering the value, utility, or appearance of any property. Wash out concrete trucks only as described in the TPDES General Permit TXR150000. Use appropriate controls to minimize the offsite transport of suspended sediments and other pollutants if it is necessary to pump or channel standing water (i.e., dewatering). Prevent discharges that would contribute to a violation of Edwards Aquifer Rules, water quality standards, the impairment of a listed water body, or other state or federal law.

4.4. Installation, Maintenance, and Removal Work. Perform work in accordance with the SWP3, according to manufacturers' guidelines, and in accordance with the TPDES General Permit TXR150000. Install and maintain the integrity of temporary erosion and sedimentation control devices to accumulate silt and debris until soil disturbing activities are completed and permanent erosion control features are in place or the disturbed area has been adequately stabilized as approved.

The Department will inspect and document the condition of the control measures at the frequency shown on the plans and will provide the Construction SWP3 Field Inspection and Maintenance Reports to the Contractor. Make corrections as soon as possible before the next anticipated rain event or within 7 calendar days after being able to enter the worksite for each control measure. The only acceptable reason for not accomplishing the corrections with the time frame specified is when site conditions are "Too Wet to Work." Take immediate action if a correction is deemed critical as directed. When corrections are not made within the established time frame, all work will cease on the project and time charges will continue while the control measures are brought into compliance. Commence work once the Engineer reviews and documents the project is in compliance. Commencing work does not release the Contractor of the liability for noncompliance of the SWP3, plans, or TPDES General Permit TXR150000.

The Engineer may limit the disturbed area if the Contractor cannot control soil erosion and sedimentation resulting from the Contractor's operations. Implement additional controls as directed.

Remove devices upon approval or as directed. Finish-grade and dress the area upon removal. Stabilize disturbed areas in accordance with the permit, and as shown on the plans or directed. Materials removed are considered consumed by the project. Retain ownership of stockpiled material and remove it from the project when new installations or replacements are no longer required.

4.4.1.1. **Type 4 (Sack Gabions)**. Unfold sack gabions and smooth out kinks and bends. Connect the sides by lacing in a single loop–double loop pattern on 4- to 5-in. spacing for vertical filling. Pull the end lacing rod at one end until tight, wrap around the end, and twist 4 times. Fill with stone at the filling end, pull the rod tight, cut the wire with approximately 6 in. remaining, and twist wires 4 times.

4.4.2. **Construction Exits**. Prevent traffic from crossing or exiting the construction site or moving directly onto a public roadway, alley, sidewalk, parking area, or other right of way areas other than at the location of construction exits when tracking conditions exist. Construct exits for either long- or short-term use.

4.4.2.1. **Long-Term**. Place the exit over a foundation course as required. Grade the foundation course or compacted subgrade to direct runoff from the construction exits to a sediment trap as shown on the plans or as directed. Construct exits with a width of at least 14 ft. for one-way and 20 ft. for two-way traffic for the full width of the exit, or as directed.

4.4.4.1.1. **Type 1**. Construct to a depth of at least 8 in. using crushed aggregate as shown on the plans or as directed.

4.4.2.2. **Short-Term**.

4.4.4.2.1. **Type 3**. Construct using crushed aggregate, plywood, or wafer board. This type of exit may be used for daily operations where long-term exits are not practical.

4.4.4.2.2. **Type 4**. Construct as shown on the plans or as directed.

4.4.3. **Earthwork for Erosion Control**. Perform excavation and embankment operations to minimize erosion and to remove collected sediments from other erosion control devices.

4.4.3.1. **Excavation and Embankment for Erosion Control Features**. Place earth dikes, swales, or combinations of both along the low crown of daily lift placement, or as directed, to prevent runoff spillover. Place swales and dikes at other locations as shown on the plans or as directed to prevent runoff spillover or to divert runoff. Construct cuts with the low end blocked with undisturbed earth to prevent erosion of hillsides. Construct sediment traps at drainage structures in conjunction with other erosion control measures as shown on the plans or as directed.

Create a sediment basin, where required, providing 3,600 cu. ft. of storage per acre drained, or equivalent control measures for drainage locations that serve an area with 10 or more disturbed acres at one time, not including offsite areas.

4.4.3.2. **Excavation of Sediment and Debris**. Remove sediment and debris when accumulation affects theperformance of the devices, after a rain, and when directed.
4.4.3.3.

4.4.4. **Construction Perimeter Fence**. Construct, align, and locate fencing as shown on the plans or as directed.

4.4.4.1. **Installation of Posts**. Embed posts 18 in. deep or adequately anchor in rock, with a spacing of 8 to 10 ft.

4.4.4.2. **Wire Attachment**. Attach the top wire to the posts at least 3 ft. from the ground. Attach the lower wire midway between the ground and the top wire.

4.4.4.3. **Flag Attachment**. Attach flagging to both wire strands midway between each post. Use flagging at least 18 in. long. Tie flagging to the wire using a square knot.

4.4.5. **Sandbags for Erosion Control**. Construct a berm or dam of sandbags that will intercept sediment-laden storm water runoff from disturbed areas, create a retention pond, detain sediment, and release water in sheet flow. Fill each bag with sand so that at least the top 6 in. of the bag is unfilled to allow for proper tying of the open end. Place the sandbags with their tied ends in the same direction. Offset subsequent rows of sandbags 1/2 the length of the preceding row. Place a single layer of sandbags downstream as a secondary debris trap. Place additional sandbags as necessary or as directed for supplementary support to berms or dams of sandbags or earth.

4.4.6. **Temporary Sediment-Control Fence**. Provide temporary sediment-control fence near the downstream perimeter of a disturbed area to intercept sediment from sheet flow. Incorporate the fence into erosion-control measures used to control sediment in areas of higher flow. Install the fence as shown on the plans, as specified in this Section, or as directed.

4.4.6.1. **Installation of Posts**. Embed posts at least 18 in. deep, or adequately anchor, if in rock, with a spacing of 6 to 8 ft. and install on a slight angle toward the runoff source.

4.4.6.2. **Fabric Anchoring**. Dig trenches along the uphill side of the fence to anchor 6 to 8 in. of fabric. Provide a minimum trench cross-section of 6 × 6 in. Place the fabric against the side of the trench and align approximately 2 in. of fabric along the bottom in the upstream direction. Backfill the trench, then hand-tamp.

4.4.6.3. **Fabric and Net Reinforcement Attachment**. Attach the reinforcement to wooden posts with staples, or tosteel posts with T-clips, in at least 4 places equally spaced unless otherwise shown on the plans. Sewn vertical pockets may be used to attach reinforcement to end posts. Fasten the fabric to the top strand of reinforcement by hog rings or cord every 15 in. or less.

4.4.6.4. **Fabric and Net Splices**. Locate splices at a fence post with a minimum lap of 6 in. attached in at least 6 places equally spaced unless otherwise shown on the plans. Do not locate splices in concentrated flow areas.

Requirements for installation of used temporary sediment-control fence include the following:

- fabric with minimal or no visible signs of biodegradation (weak fibers),
- fabric without excessive patching (more than 1 patch every 15 to 20 ft.),
- posts without bends, and
- backing without holes.

4.4.7. **Biodegradable Erosion Control Logs**. Install biodegradable erosion control logs near the downstream perimeter of a disturbed area to intercept sediment from sheet flow. Incorporate the biodegradable erosion control logs into the erosion measures used to control sediment in areas of higher flow. Install, align, and locate the biodegradable erosion control logs as specified below, as shown on the plans, or as directed.

Secure biodegradable erosion control logs in a method adequate to prevent displacement as a result of normal rain events, prevent damage to the logs, and as approved, such that flow is not allowed under the logs. Temporarily removing and replacing biodegradable erosion logs as to facilitate daily work is allowed at the Contractor's expense.

4.4.8. **Vertical Tracking**. Perform vertical tracking on slopes to temporarily stabilize soil. Provide equipment with atrack undercarriage capable of producing a linear soil impression measuring a minimum of 12 in. long × 2 to4 in. wide × 1/2 to 2 in. deep. Do not exceed 12 in. between track impressions. Install continuous linear track impressions where the 12 in. length impressions are perpendicular to the slope. Vertical tracking is required on projects where soil disturbing activities have occurred unless otherwise approved.

4.5. Monitoring and Documentation. Monitor the control measures on a daily basis as long as there are BMPs in place and/or soil disturbing activities are evident to ensure compliance with the SWP3 and TPDES General Permit TXR150000. During time suspensions when work is not occurring or contract non-work days, daily inspections are not required unless a rain event has occurred. Monitoring will consist of, but is not limited to, observing, inspecting, and documenting site locations with control measures and discharge points to provide maintenance and inspection of controls as described in the SWP3. Keep written records of daily monitoring. Document in the daily monitoring report the control measure condition, the date of inspection, required corrective actions, responsible person for making the corrections, and the date corrective actions were completed. Maintain records of all monitoring reports at the project site or at an approved place. Provide copies within 7 days. Together, the CRPE and an Engineer's representative will complete the Construction Stage Gate Checklist on a periodic basis as directed.

5. MEASUREMENT

5.2. Earthwork for Erosion and Sediment Control.

5.2.1. **Equipment and Labor Measurement**. Equipment and labor used will be measured by the actual number ofhours the equipment is operated and the labor is engaged in the work.

5.2.2. **Volume Measurement.**

5.2.2.1. **In Place.**

5.2.2.1.1. **Excavation**. Excavation will be measured by the cubic yard in its original position and the volume computed by the method of average end areas.

5.2.2.1.2. **Embankment.** Embankment will be measured by the cubic yard in its final position by the method of average end areas. The volume of embankment will be determined between:

- the original ground surfaces or the surface upon that the embankment is to be constructed for thefeature and
- the lines, grades and slopes of the accepted embankment for the feature.

5.3. Construction Perimeter Fence. Construction perimeter fence will be measured by the foot.

5.4. Sandbags for Erosion Control. Sandbags will be measured as each sandbag or by the foot along the top of sandbag berms or dams.

5.5. Temporary Sediment-Control Fence. Installation or removal of temporary sediment-control fence will be measured by the foot.

5.6. Biodegradable Erosion Control Logs. Installation or removal of biodegradable erosion control logs will be measured by the foot along the centerline of the top of the control logs.

5.7. Vertical Tracking. Vertical tracking will not be measured or paid for directly but is considered subsidiary to this Item.

6. PAYMENT

The following will not be paid for directly but are subsidiary to pertinent Items:

- erosion-control measures for Contractor project-specific locations (PSLs) inside and outside the right of way (such as construction and haul roads, field offices, equipment and supply areas, plants, and material sources);
- removal of litter, unless a separate pay item is shown on the plans;
- repair to devices and features damaged by Contractor operations;
- added measures and maintenance needed due to negligence, carelessness, lack of maintenance, and failure to install permanent controls;
- removal and reinstallation of devices and features needed for the convenience of the Contractor;
- finish grading and dressing upon removal of the device; and
- minor adjustments including but not limited to plumbing posts, reattaching fabric, minor grading to maintain slopes on an erosion embankment feature, or moving small numbers of sandbags.

Stabilization of disturbed areas will be paid for under pertinent Items except vertical tacking which is subsidiary.

Furnishing and installing pipe for outfalls associated with sediment traps and ponds will not be paid for directly but is subsidiary to the excavation and embankment under this Item.

6.1. Construction Exits. Contractor-required construction exits from off right of way locations or on-right of way PSLs will not be paid for directly but are subsidiary to pertinent Items.

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" for construction exits needed on right of way access to work areas required by the Department will be paid for at the unit price bid for "Construction Exits (Install)" of the type specified or "Construction Exits (Remove)." This price is full compensation for furnishing and placing materials, excavating, removal and disposal, cleaning vehicles, labor, tools, and incidentals.

When the Engineer directs that a construction exit or portion thereof be removed and replaced, payment will be made at the unit prices bid for "Construction Exit (Remove)" and "Construction Exit (Install)" of the type specified. These prices are full compensation for the removal and replacement of the construction exit and for equipment, labor, tools, and incidentals.

Construction of sediment traps used in conjunction with the construction exit will be measured and paid for under "Earthwork for Erosion and Sediment Control."

6.2. Earthwork for Erosion and Sediment Control.

6.2.1. **Initial Earthwork for Erosion and Sediment Control.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Excavation (Erosion and Sediment Control, In Place)," "Embankment (Erosion and Sediment Control, In Place)," "Excavation (Erosion and Sediment Control, In Vehicle)," "Embankment (Erosion and Sediment Control, (In Vehicle)," or "Earthwork (Erosion and Sediment Control, In Vehicle)."

This price is full compensation for excavation and embankment including hauling, disposal of material not used elsewhere on the project; embankments including furnishing material from approved sources and construction of erosion-control features; and equipment, labor, tools, and incidentals.

Sprinkling and rolling required by this Item will not be paid for directly but will be subsidiary to this Item.

6.3. Construction Perimeter Fence. The work performed and materials furnished in accordance with this Itemand measured as provided under "Measurement" will be paid for at the unit price bid for "Construction Perimeter Fence." This price is full compensation for furnishing and placing the fence; digging, fence posts, wire, and flagging; removal and disposal; and materials, equipment, labor, tools, and incidentals.

Removal of construction perimeter fence will be not be paid for directly but is subsidiary to the installation Item. When the Engineer directs that the perimeter fence installation or portions thereof be removed and replaced, payment will be made at the unit price bid for "Construction Perimeter Fence," which is full compensation for the removal and reinstallation of the construction perimeter fence.

6.4. Sandbags for Erosion Control. Sandbags will be paid for at the unit price bid for "Sandbags for Erosion Control" (of the height specified when measurement is by the foot). This price is full compensation for materials, placing sandbags, removal and disposal, equipment, labor, tools, and incidentals.

Removal of sandbags will not be paid for directly but is subsidiary to the installation Item. When the Engineer directs that the sandbag installation or portions thereof be replaced, payment will be made at the unit price bid for "Sandbags for Erosion Control," which is full compensation for the reinstallation of the sandbags.

6.5. Temporary Sediment-Control Fence. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid as follows:

6.5.1. **Installation**. Installation will be paid for as "Temporary Sediment-Control Fence (Install)." This price is full compensation for furnishing and operating equipment finish backfill and grading, lacing, proper disposal, labor, materials, tools, and incidentals.

6.5.2. **Removal**. Removal will be paid for as "Temporary Sediment-Control Fence (Remove)." This price is full compensation for furnishing and operating equipment, proper disposal, labor, materials, tools, and incidentals.

6.6. Biodegradable Erosion Control Logs. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid as follows:

6.6.1. **Installation**. Installation will be paid for as "Biodegradable Erosion Control Logs (Install)" of the size specified. This price is full compensation for furnishing and operating equipment finish backfill and grading, staking, proper disposal, labor, materials, tools, and incidentals.

6.6.2. **Removal**. Removal will be paid for as "Biodegradable Erosion Control Logs (Remove)." This price is full compensation for furnishing and operating equipment, proper disposal, labor, materials, tools, and incidentals.

6.7. Vertical Tracking. Vertical tracking will not be measured or paid for directly but is considered subsidiary to this Item.

ITEM 529
CONCRETE CURB, GUTTER,COMBINED CURB AND GUTTER

DESCRIPTION

Construct hydraulic cement concrete curb, gutter, and combined curb and gutter.

MATERIALS

Furnish materials conforming to:

- Item 360, "Concrete Pavement"
- Item 420, "Concrete Substructures"
- Item 421, "Hydraulic Cement Concrete"
- Item 440, "Reinforcement for Concrete"

Use Class A concrete or material specified on the plans. Use Grade 8 coarse aggregate for extruded Class Aconcrete. Use other grades if approved.

When approved, use fibers meeting the requirements of DMS-4550, "Fibers for Concrete," to replace reinforcing steel in Class A concrete. Dose fibers in accordance with the Department's MPL of pre-qualified fibers for concrete.

CONSTRUCTION

Provide finished work with a well-compacted mass and a surface free from voids and honeycomb, in the required shape, line, and grade. Round exposed edges with an edging tool of the radius shown on the plans. Mix, place, and cure concrete in accordance with Item 420, "Concrete Substructures." Construct joints at locations shown on the plans. Cure for at least 72 hr.

Furnish and place reinforcing steel in accordance with Item 440, "Reinforcement for Concrete."

Set and maintain a guideline that conforms to alignment data shown on the plans, with an outline that conforms to the details shown on the plans. Ensure that changes in curb grade and alignment do not exceed 1/4 in. between any 2 contacts on a 10-ft. straightedge.

3.1 Conventionally Formed Concrete. Shape and compact subgrade, foundation, or pavement surface to theline, grade, and cross-section shown on the plans. Lightly sprinkle subgrade or foundation material immediately before concrete placement.

Pour concrete into forms and strike off with a template 1/4 to 3/8 in. less than the dimensions of the finishedcurb unless otherwise approved. After initial set, plaster surface with mortar consisting of 1-part hydraulic cement and 2 parts fine aggregate. Brush exposed surfaces to a uniform

texture.

Place curbs, gutters, and combined curb and gutters in 50-ft. maximum sections unless otherwise approved.

3.2 Extruded or Slipformed Concrete. Hand-tamp and sprinkle subgrade or foundation material before concrete placement. Provide clean surfaces for concrete placement. Coat cleaned surfaces, if required, with approved adhesive or coating at the rate of application shown on the plans or as directed. Place concrete with approved self-propelled equipment.

The forming tube of the extrusion machine or the form of the slipform machine must be easily adjustable vertically during the forward motion of the machine to provide variable heights necessary to conform to the established grade line.

Attach a pointer or gauge to the machine so that a continual comparison can be made between the extruded or slipform work and the grade guideline. Other methods may be used when approved.

Finish surfaces immediately after extrusion or slipforming.

MEASUREMENT

This Item will be measured by the lineal foot.

PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under"Measurement" will be paid for at the unit price bid for "Concrete Curb," "Concrete Curb (Mono)," or "Concrete Curb and Gutter" of the type specified. This price is full compensation for surface preparation of curb foundation, equipment, labor, materials, tools, and incidentals.

END OF ITEM 529

EXHIBIT A: PLANS

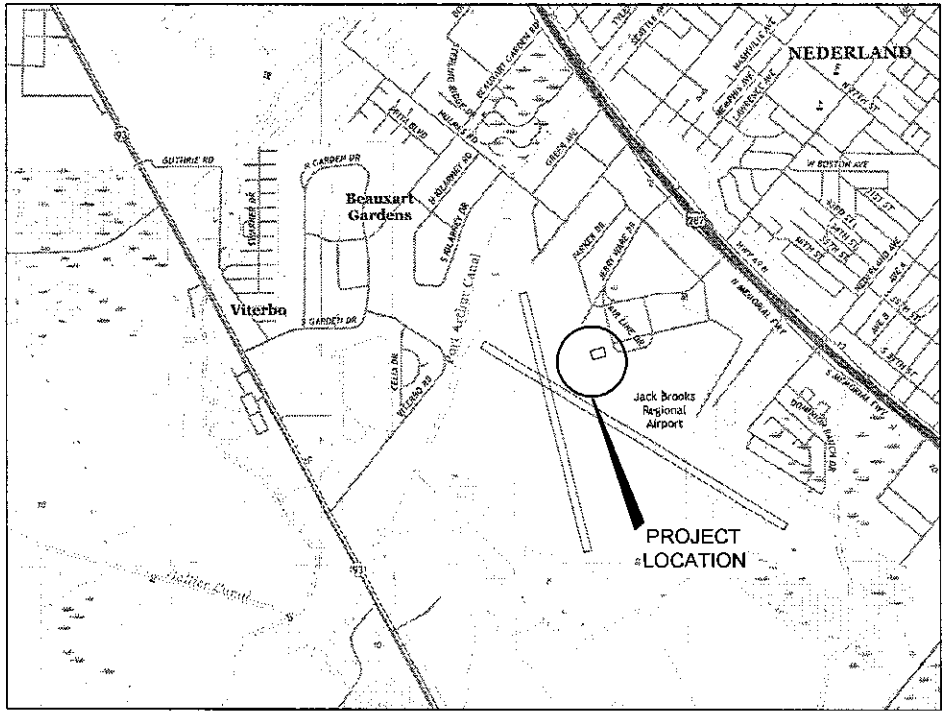
IFB 22-028/JW
EXHIBIT A: PAGE A-2

REHABILITATION OF FUEL FARM PAVEMENT
JACK BROOKS REGIONAL AIRPORT (BPT)

ISSUED FOR BIDDING

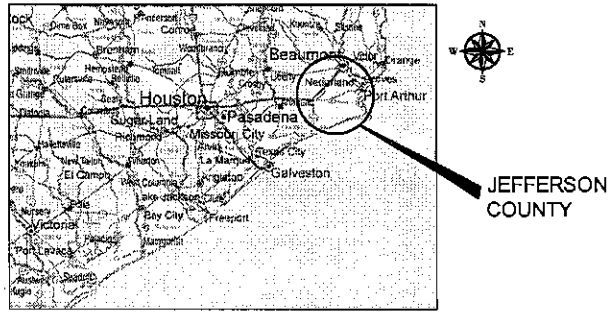
PROJECT CONSISTS OF RECONSTRUCTION OF EXISTING CONCRETE PAVEMENT AT THE JACK BROOKS REGIONAL AIRPORT FUEL FARM

FAA AIRPORT IMPROVEMENT PROGRAM (AIP) PN: AIP 3-480018-37-20
JEFFERSON COUNTY PN: ISB 22-028/JW
THE SOLCO GROUP PN: 2021-10-1092
MAY 2022



VICINITY MAP
N.T.S

SHEET INDEX		
SHEET NO.	DWG NO.	SHEET TITLE
1	G-000	COVER PAGE
2	G-001	GENERAL NOTES AND SUMMARY OF QUANTITIES
3	C-001	PROJECT LAYOUT AND PHASING PLAN
4	C-002	SURVEY PLAN
5	C-003	SITE DEMOLITION PLAN
6	C-004	GRADING, PLAN AND PROFILE
7	C-005	SITE PAVING, JOINTING AND SPOT ELEVATIONS
8	C-006	PAVEMENT DETAILS
9	C-007	PAVEMENT DETAILS
10	EC(9)-16	TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES EROSION CONTROL LOG
11	BC(8)-21	BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES



LOCATION MAP
N.T.S

JACK BROOKS REGIONAL AIRPORT

TSPE FIRM #22626

NO.	DATE	REVISION

GENERAL NOTES.

DATE: MAY 2022
PROJECT TITLE: REHABILITATION OF FUEL FARM PAVEMENT
DRAWING TITLE: COVER PAGE
DRAWING NUMBER: G-000
SHEET NUMBER: 1 SHEET TOTAL: 11
SCALE: N.T.S
DRAWN BY: AM CHECKED BY: KS

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631

IFB 22-028/JW

EXHIBIT A; PAGE A-3

CONSTRUCTION ACTIVITIES

1. THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS. THE PROJECT IS SUBJECT TO INSPECTION BY REPRESENTATIVES OF JACK BROOKS REGIONAL AIRPORT, THE ENGINEER, JEFFERSON COUNTY AND THE FEDERAL AVIATION ADMINISTRATION (FAA).

2. CONTRACTOR AND CONSTRUCTION ACTIVITIES SHALL COMPLY WITH ALL PLANS, SPECIFICATIONS AND FAA ADVISORY CIRCULARS.

3. THE CONTRACTOR SHALL SUBMIT A DETAILED CONSTRUCTION PROGRESS SCHEDULE TO THE AIRPORT, ENGINEER AND RESIDENT PROJECT REPRESENTATIVE (RPR) EACH WEEK.

4. ALL MATERIAL SUBMITTALS FOR ITEMS TO BE USED IN CONSTRUCTION OF THE PROJECT SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL 14 DAYS PRIOR TO COMMENCEMENT OF THE ASSOCIATED WORK.

5. THE PROJECT PAY ITEMS ARE PROVIDED TO BE INCLUSIVE OF ALL WORK TO BE PERFORMED AS SHOWN IN THESE PLANS. ALL WORK NOT IDENTIFIED WITH A SPECIFIC PAY ITEM IS TO BE CONSIDERED REQUIRED/INCIDENTAL WORK TO COMPLETE THE PROJECT AND IS TO BE INCLUDED IN THE COST OF THE PROJECT PAY ITEMS PROVIDED.

6. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING SAFETY FOR CONSTRUCTION PERSONNEL AND EQUIPMENT AT ALL TIMES.

7. CONTRACTOR SHALL REPAIR OR REPLACE ALL ITEMS NOT DESIGNATED FOR DEMOLITION OR REMOVAL THAT ARE DAMAGED BY CONSTRUCTION EFFORTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMMEDIATE REPAIR OF ANY DAMAGE TO AIRPORT FACILITIES, INCLUDING BUT NOT LIMITED TO EXISTING PAVEMENTS, UNDERGROUND CABLES, LIGHTS, SIGNS, FENCES, EQUIPMENT, ETC. CAUSED DURING CONSTRUCTION. ALL REPAIRS MUST BE MADE IN COORDINATION WITH THE OWNER AND TO EQUAL OR BETTER QUALITY AND IN COMPLIANCE WITH THE AIRPORT. ALL REPAIR AND REPLACEMENT COST SHALL BE AT THE EXPENSE OF THE CONTRACTOR.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EFFORT AND COST OF IMMEDIATE CLEANING OF EARTH TRACKING AND SPILLS RESULTING FROM THE CONTRACTOR'S OPERATIONS.

9. CONSTRUCTION AREA LIMITS: THE LIMITS OF CONSTRUCTION MATERIAL STORAGE AREAS, PLAN SITE, EQUIPMENT STORAGE AREA, PARKING AREA AND OTHER AREAS DEFINED AS REQUIRED FOR THE CONTRACTOR'S EXCLUSIVE USE DURING CONSTRUCTION SHALL BE MARKED BY THE CONTRACTOR.

10. THE CONTRACTOR SHALL BE RESPONSIBLE OF COMPLYING WITH ALL FEDERAL, STATE, AND LOCAL LAWS AND SHALL OBTAIN ALL NECESSARY PERMITS REQUIRED FOR CONSTRUCTION.

ENVIRONMENTAL

1. IN THE EVENT THAT UNANTICIPATED CONTAMINATION IS ENCOUNTERED DURING CONSTRUCTION, WORK IN THE IMMEDIATE AREA WILL CEASE. CONTRACTOR SHALL NOTIFY THE RPR AND ENGINEER TO CONTACT THE RELEVANT ENVIRONMENTAL AUTHORITY.

2. ALL WASTE MATERIAL SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH ALL THE LOCAL, STATE AND FEDERAL REGULATIONS.

EXISTING TOPOGRAPHY

1. EXISTING TOPOGRAPHY SHOWN ON THE PLANS ARE BASED ON THE SURVEYED TERRAIN FOR THE CONSTRUCTION LIMITS OF THE PROJECT. THE CONTRACTOR SHALL FIELD VERIFY THAT THE EXISTING TOPOGRAPHY SHOWN IS REASONABLY ACCURATE. IF THE ACCURACY IS IN QUESTION THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST TWO WEEKS PRIOR TO THE START OF CONSTRUCTION AND A COURSE OF ACTION WILL BE DETERMINED AT THAT TIME.

EXISTING CONDITIONS/UNDERGROUND AND CONCEALED

1. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO BEGINNING CONSTRUCTION AND REPORT TO THE ENGINEER ANY VARIATIONS FROM THE INFORMATION SHOWN ON CONSTRUCTION PLANS.

2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND IDENTIFICATION OF ALL EXISTING UTILITIES AND PIPELINES IN THE CONSTRUCTION AREA. ANY DAMAGE TO EXISTING UTILITIES OR PIPELINES (ON OR OFF AIRPORT PROPERTY) DAMAGED BY CONTRACTOR SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL REPAIR ALL UTILITY/PIPELINE DAMAGED BY CONTRACTOR AT NO ADDITIONAL COST TO OWNER.

3. ANY UNPLANNED, UNAPPROVED OR ACCIDENTAL SHUTDOWN OR INTERRUPTION OF SERVICE TO ANY LIGHTING CIRCUIT REQUIRES IMMEDIATE NOTIFICATION OF THE OWNER BY THE CONTRACTOR. ALL NECESSARY REPAIRS WILL BE AT CONTRACTORS EXPENSE.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STAKING AND GRADE CONTROL OF ALL ELEMENTS OF THE PROJECT AT NO ADDITIONAL COST TO THE OWNER.

5. CONTRACTOR SHALL VERIFY ALL SURVEY CONTROL, ELEVATIONS, AND EXISTING GRADES PRIOR TO BEGINNING CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER PRIOR TO BEGINNING CONSTRUCTION.

6. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL HORIZONTAL AND VERTICAL CONSTRUCTION STAKING AS REQUIRED FOR THE PROJECT DEVELOPMENT.

7. CONTRACTOR SHALL ESTABLISH ANY ADDITIONAL CONTROL POINTS DEEMED NECESSARY BY CONSTRUCTION PERSONNEL PRIOR TO BEGINNING THE WORK.

SUMMARY OF QUANTITIES

Spec	Pay Item	Description	Units	Bid Quantity	Final Quantity	Remarks
1	C-105	Mobilization	LS	1		
2	SS-120	Construction Safety and Security (CSPP, Barricades, Signs and Traffic Handling)	LS	1		
3	D-701a	Allowance for Storm Sewer Pipe Replacement	LS	1		
4	D-701b	Install PVC Pipe (2 Inch)	LF	8		
5	P-101-5.1a	Sawcut, Remove and Dispose Existing Concrete Pavement Full Depth (8 Inches)	SY	600		
6	P-101-5.1b	Sawcut, Remove and Dispose Existing Asphalt Ramp	SY	70		
7	P-101-5.1c	Sawcut, Remove and Dispose Existing 6" Vertical Curb	LF	310		
8	P-152-4.2	Embankment in Place	CY	20		
9	P-152-4.4	Unsuitable Excavation	CY	20		
10	P-155-8.1	Lime Treated Subgrade (8 Inches)	SY	600		
11	P-155-8.2	Lime	TON	31		
12	P-501-8.1a	Reinforced Concrete Pavement (8 Inches)	SY	530		
13	P-501-8.1b	Reinforced Concrete Pavement Ramp (8-12 Inches)	SY	70		
14	TXDOT 506-6.6.1	Biodegradable Erosion Control Logs (Install)	LF	200		
15	TXDOT 506-6.6.2	Biodegradable Erosion Control Logs (Removal)	LF	200		
16	TXDOT 529	4" Concrete Curb	LF	310		
17	See Plan	Furnish and Install 4" Steel Bollards	EA	2		
18	See Plan	Install 6' Rubber Speed Bumps	EA	4		

HAUL ROUTES, STAGING AREAS AND SITE ACCESS

1. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING STAGING AREA AND HAUL ROUTE AS NECESSARY FOR HIS OPERATIONS. THIS ITEMS SHALL BE SUBSIDIARY TO OTHER ITEMS IN THE CONTRACT.

2. CONTRACTOR SHALL PROVIDE ACCESS ROUTE PLAN FOR APPROVAL BY THE AIRPORT PRIOR TO THE BEGINNING OF CONSTRUCTION. THE ACTUAL SIZE AND LOCATION OF THE STAGING AREA AND HAUL ROUTE WILL BE APPROVED BY THE AIRPORT PRIOR TO CONSTRUCTION.

4. IT SHALL BE THE CONTRACTORS' RESPONSIBILITY TO COORDINATE ALL OFF-AIRPORT ROUTES WITH THE APPROPRIATE AUTHORITIES.

5. HAUL TRUCKS TRANSPORTING LOOSE MATERIAL OFF AIRPORT PROPERTY SHALL USE LOAD COVERS AND SHALL BE LOADED SUCH THAT NO SPILLAGE OCCURS DURING TRANSIT. ALL CONTRACTOR EQUIPMENT MUST BE MAINTAINED IN GOOD WORKING ORDER. CONTRACTOR VEHICLES THAT LEAK OR DRIP OIL AND/OR FLUIDS MUST BE IMMEDIATELY REMOVED FROM THE PROJECT FOR REPAIR AND THE SPILL CLEANED UP IN ACCORDANCE WITH STATE AND FEDERAL REQUIREMENTS.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING HIS/HER OWN COMPLETE UTILITY SERVICES. THE AIRPORT WILL NOT PROVIDE FACILITIES AND SERVICES TO THE CONTRACTOR DURING CONSTRUCTION. THE CONTRACTOR'S PERSONNEL ARE PROHIBITED FROM UTILIZING THE AIRPORT TERMINAL. ASSOCIATED COST WILL BE SUBSIDIARY TO OTHER ITEMS IN THE CONTRACT.

7. THE AREAS UTILIZED AS THE CONTRACTOR'S STAGING AREA, PARKING, LAYDOWN, STORAGE AREA, AND THE HAUL ROUTES ARE TO BE RESTORED TO THE ORIGINAL CONDITION AT THE END OF THE PROJECT. ALL EXISTING ROADS OR PAVEMENTS USED AS ACCESS/HAUL ROADS SHALL BE MAINTAINED AND IMPROVED AS REQUIRED. THE ROAD OR PAVEMENT CONDITIONS WILL BE INSPECTED JOINTLY BY THE ENGINEER AND CONTRACTOR PRIOR TO AND AT THE END OF THE PROJECT. THE CONDITION OF THESE ROADS AND PAVEMENTS SHALL BE EQUAL OR BETTER THAN AT THE START OF THE PROJECT AS DETERMINED BY THE ENGINEER. MECHANICAL BROOMS WILL BE REQUIRED BY THE ENGINEER FOR THESE EXISTING PAVEMENT ACCESS ROADS IF CONDITIONS ARE NOT BEING MAINTAINED (IN THE OPINION OF THE ENGINEER) BY THE CONTRACTOR.

8. CONSTRUCTION EQUIPMENT AND VEHICLES SHALL NOT TRAVEL ON NEWLY CONSTRUCTED PAVEMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF ANY DAMAGE TO THE NEWLY CONSTRUCTED PAVEMENT. ALL REPAIRS SHALL BE AT THE CONTRACTORS OWN EXPENSE.

9. THE FUEL FARM SHALL BE KEPT FREE OF ALL DEBRIS, DIRT, ETC., AT ALL TIMES. ANY SPILLAGE OF SOIL, DEBRIS OR OTHER MATERIALS SHALL BE CLEANED UP IMMEDIATELY USING APPROPRIATE POWER SWEEPERS, BLOWERS OR OTHER APPROVED EQUIPMENT, BY THE CONTRACTOR. DUST GENERATED DUE TO CONSTRUCTION ACTIVITIES SHALL BE ADEQUATELY CONTROLLED AT ALL TIMES. A PROGRAM OF REGULAR FUEL FARM AREA INSPECTION SHALL BE IMPLEMENTED BY THE CONTRACTOR DURING CONSTRUCTION.

10. ALL EQUIPMENT MUST BE RETURNED TO THE STAGING AREA AT THE END OF EACH WORKDAY AND WHEN NOT ENGAGED IN THE CONSTRUCTION DURING NON-WORKING DAYS AND NIGHTS UNLESS APPROVED BY THE OWNER. THE OWNER WILL DESIGNATE AREAS FOR CONTRACTOR'S EMPLOYEES AUTO PARKING.

11. ACCESS TO THE SITE:

    a. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRAFFIC CONTROL TO AND FROM THE VARIOUS CONSTRUCTION AREAS ON THE SITE.

    b. THE CONTRACTOR SHALL NOT PERMIT ANY UNAUTHORIZED CONSTRUCTION PERSONNEL OR TRAFFIC ON THE SITE.

    c. THE CONTRACTOR IS RESPONSIBLE FOR IMMEDIATE CLEAN UP OF ANY DEBRIS DEPOSITED ALONG THE ACCESS ROUTE AS A RESULT OF HIS CONSTRUCTION TRAFFIC.

    d. ANY TRAFFIC CONTROL SIGN AND DEVICES PLACED IN THE COURSE OF THE PROJECT SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), THE APPLICABLE FAA ADVISORY CIRCULAR, OR AS APPROVED IN WRITING FROM SHOP DRAWINGS SUBMITTED TO THE ENGINEER PRIOR TO SIGN PLACEMENT.

    e. THE CONTRACTOR WILL BE LIABLE FOR ANY FINES ISSUED BY THE FAA, DOTD, COUNTY AND AIRPORT OPERATIONS FOR TRAFFIC VIOLATIONS AND SECURITY VIOLATIONS FOR WHICH IT IS CITED.

DUST PROTECTION

1. CONTRACTOR SHALL INSTALL DUST PROTECTION COVERS TO PROTECT THE EXISTING FUEL TANK EQUIPMENT AND CHAIN LINK FENCE. DUST PROTECTION IS INCIDENTAL TO PAY ITEM 88-100

Texas 811

JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #22626

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
GENERAL NOTES AND SUMMARY OF QUANTITIES

DRAWING NUMBER: G-001

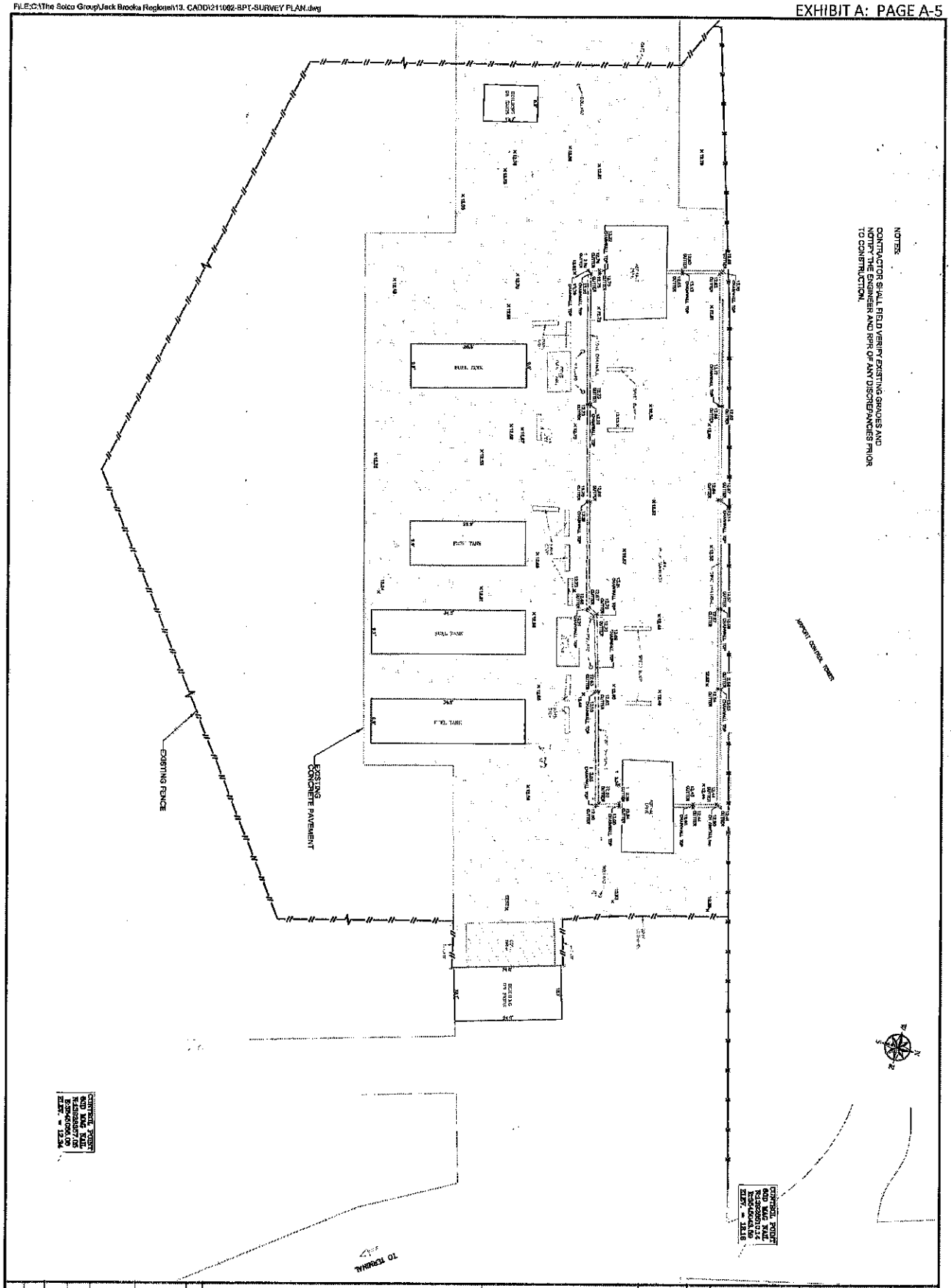
SHEET NUMBER: 2 SHEET TOTAL: 11

SCALE: N.T.S

DRAWN BY: AM CHECKED BY: KS

FILE:C:\The Sallos Group\Jack Brooks Regional\13. CAD\D211002-BPT-GENERAL NOTES.dwg

FILE:C:\The Solco Group\Jack Brooks Regional\13. CADD\211002-BPT-SURVEY PLAN.dwg



REVISION	DATE	NO.

GENERAL NOTES:

JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #22626

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

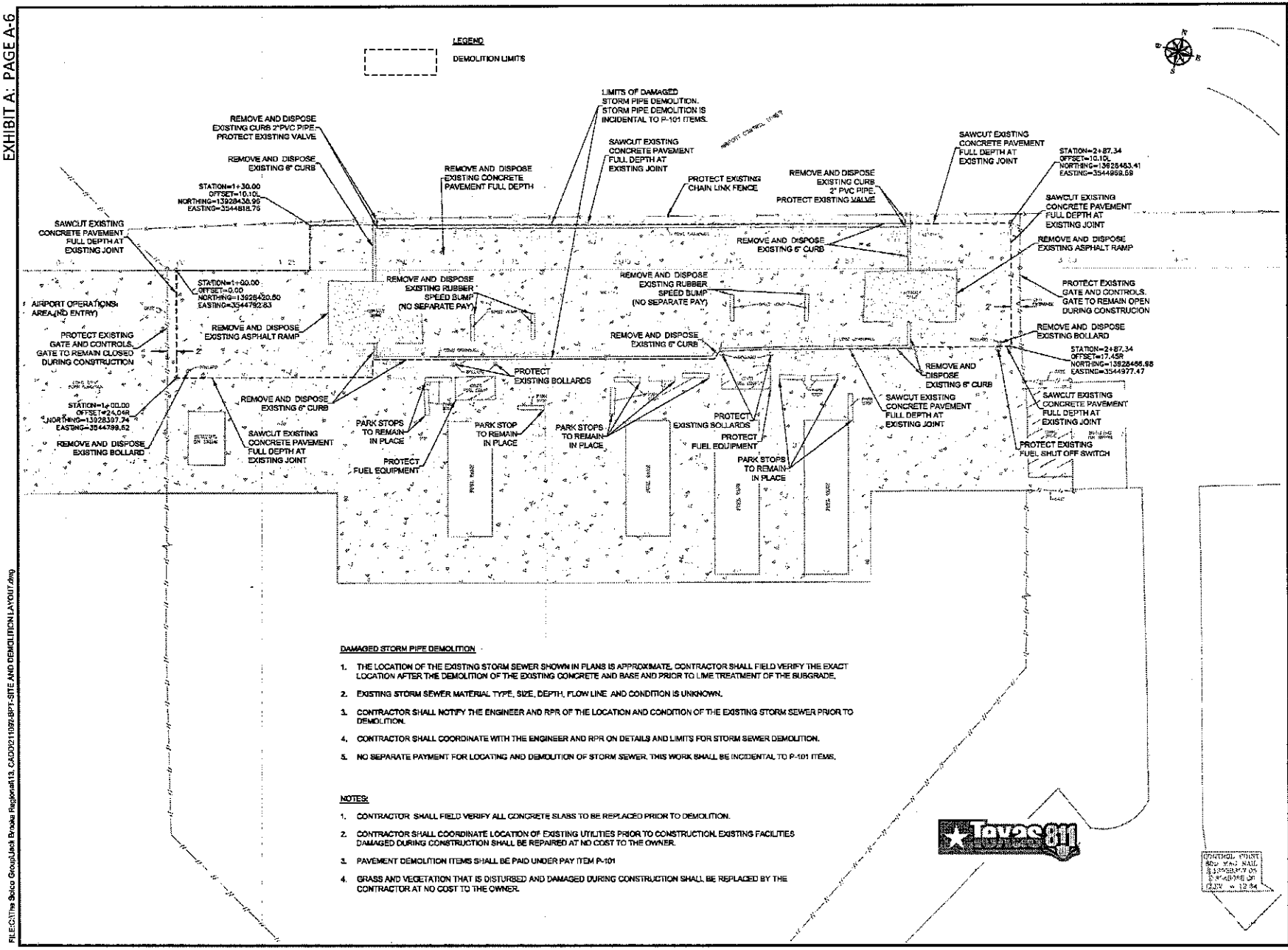
DRAWING TITLE:
SURVEY PLAN

DRAWING NUMBER: C-002

SHEET NUMBER: 4 SHEET TOTAL: 11

SCALE: 1" = 10' (FULL) 1"=20' (HALF)

DRAWN BY: AM CHECKED BY: KS



DAMAGED STORM PIPE DEMOLITION

1. THE LOCATION OF THE EXISTING STORM SEWER SHOWN IN PLANS IS APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATION AFTER THE DEMOLITION OF THE EXISTING CONCRETE AND BASE AND PRIOR TO LIME TREATMENT OF THE SUBGRADE.
2. EXISTING STORM SEWER MATERIAL TYPE, SIZE, DEPTH, FLOW LINE AND CONDITION IS UNKNOWN.
3. CONTRACTOR SHALL NOTIFY THE ENGINEER AND RPR OF THE LOCATION AND CONDITION OF THE EXISTING STORM SEWER PRIOR TO DEMOLITION.
4. CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND RPR ON DETAILS AND LIMITS FOR STORM SEWER DEMOLITION.
5. NO SEPARATE PAYMENT FOR LOCATING AND DEMOLITION OF STORM SEWER. THIS WORK SHALL BE INCIDENTAL TO P-101 ITEMS.

NOTES:

1. CONTRACTOR SHALL FIELD VERIFY ALL CONCRETE SLABS TO BE REPLACED PRIOR TO DEMOLITION.
2. CONTRACTOR SHALL COORDINATE LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. EXISTING FACILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED AT NO COST TO THE OWNER.
3. PAVEMENT DEMOLITION ITEMS SHALL BE PAID UNDER PAY ITEM P-101
4. GRASS AND VEGETATION THAT IS DISTURBED AND DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER.

JACK BROOKS REGIONAL AIRPORT

TSPE FIRM #22526

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
SITE DEMOLITION PLAN

DRAWING NUMBER: C-003

SHEET NUMBER: 5 SHEET TOTAL: 11

SCALE: 1" = 10' (FULL) 1"=20' (HALF)

DRAWN BY: AM CHECKED BY: KS

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IFB 22-028/JW
EXHIBIT A: PAGE A-7

LEGEND

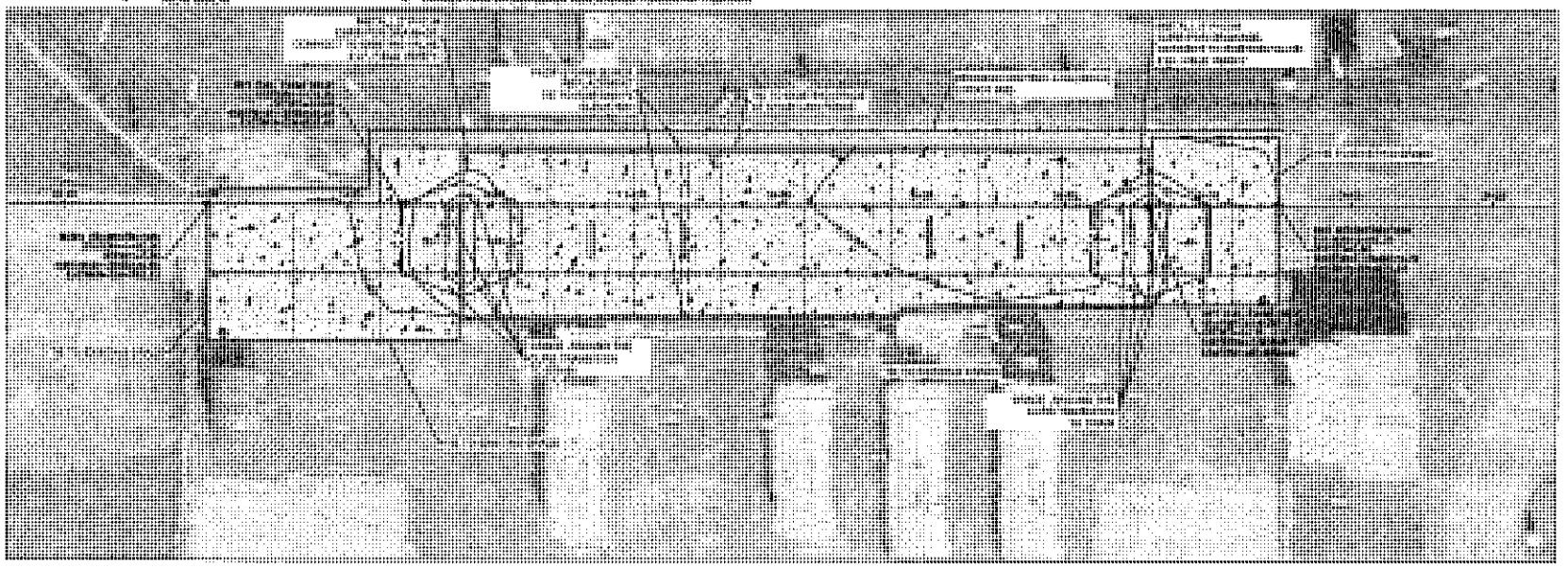
- PROPOSED GRADE AT 0.2' INTERVAL
- EXISTING GRADE AT 0.2' INTERVAL
- EROSION CONTROL LOG

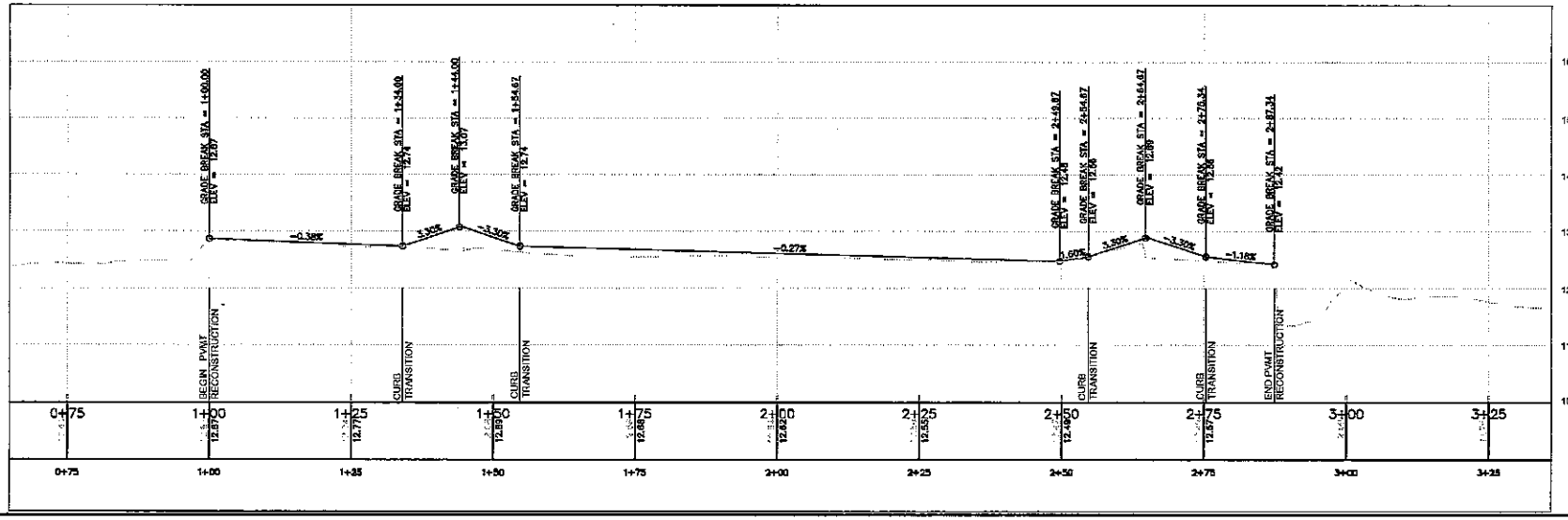
DAMAGED STORM PIPE REPLACEMENT

1. THE LOCATION OF THE DAMAGED STORM SEWER REPLACEMENT SHOWN IN PLANS IS APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATION.
2. CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND RPR ON DETAILS FOR STORM SEWER MATERIAL TYPE AND CONSTRUCTION PRIOR TO REPLACEMENT.

NOTES:

CONTRACTOR SHALL FIELD VERIFY EXISTING GRADES AND NOTIFY THE ENGINEER AND RPR OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.





JACK BROOKS REGIONAL AIRPORT

TSC

TBPE FIRM #22626

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
GRADING, PLAN AND PROFILE

DRAWING NUMBER: C-004

SHEET NUMBER: 6 | SHEET TOTAL: 11

SCALE: 1" = 10' (FULL) 1"=20' (HALF)

DRAWN BY: AM | CHECKED BY: KS

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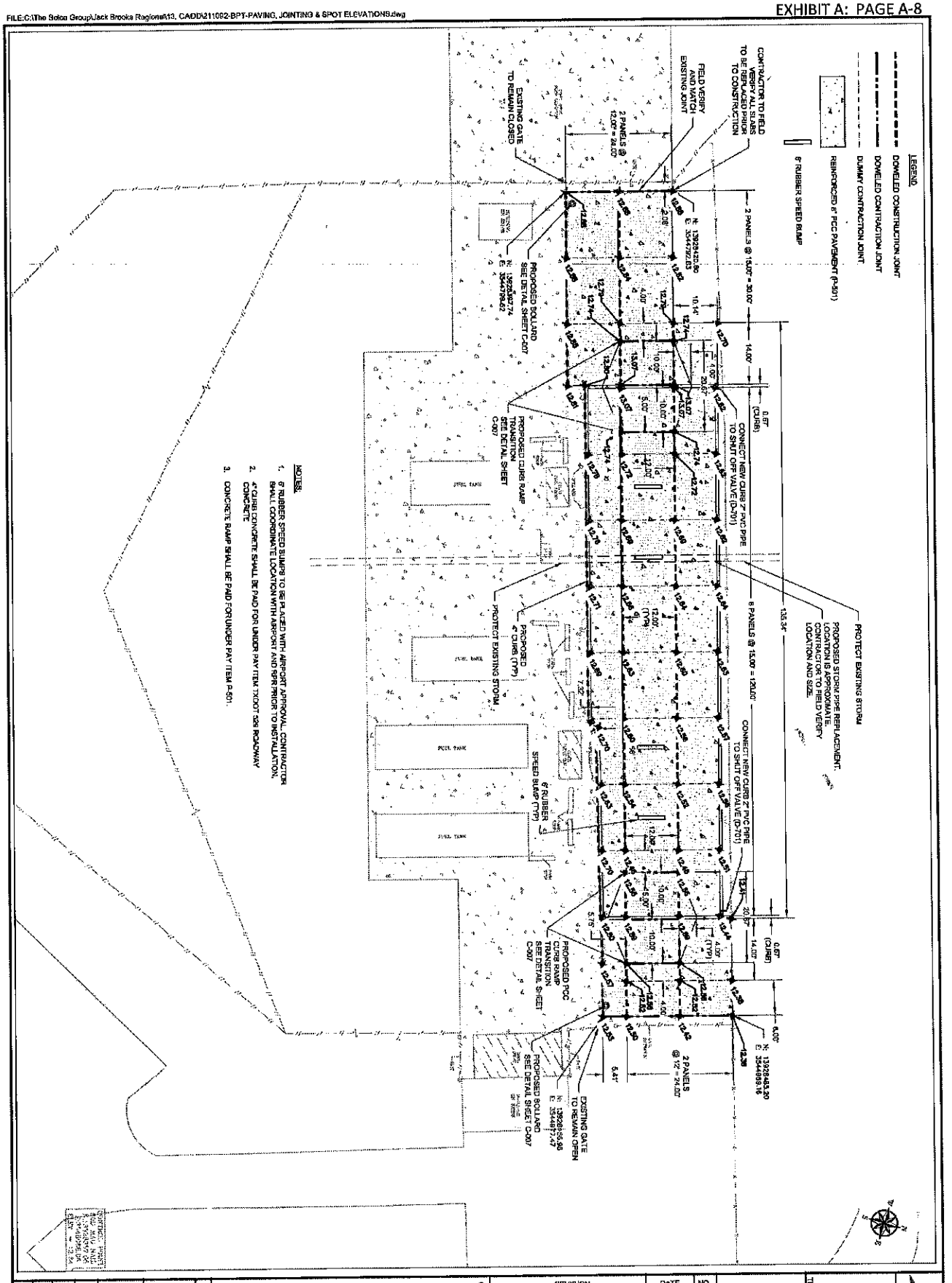
FILE:C:\The Solca Group\Jack Brooks Regional\13, CADD\211092-BPT-PAVING, JOINTING & SPOT ELEVATIONS.dwg



JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #2626

REVISION	DATE	NO.

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

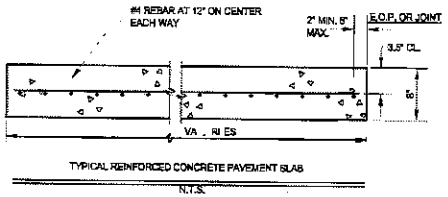
DRAWING TITLE:
SITE PAVING, JOINTING AND SPOT ELEVATIONS

DRAWING NUMBER: C-005

SHEET NUMBER: 7 SHEET TOTAL: 11

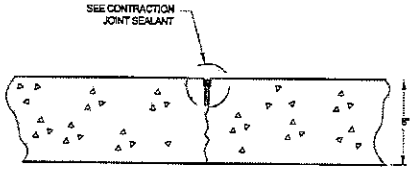
SCALE: 1" = 10' (FULL) 1"=20' (HALF)

DRAWN BY: AM CHECKED BY: KS



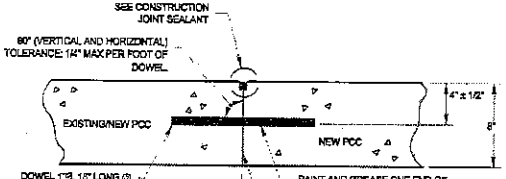
TYPICAL REINFORCED CONCRETE PAVEMENT SLAB

N.T.S.



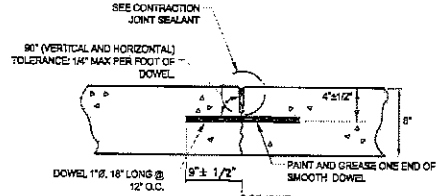
DUMMY CONTRACTION JOINT (JOINT D)

N.T.S.



DOWELED CONSTRUCTION JOINT (TYPE E)

N.T.S.

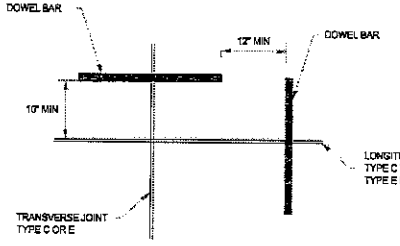


DOWELED CONTRACTION JOINT (TYPE C)

N.T.S.

CONCRETE JOINTS NOTE:

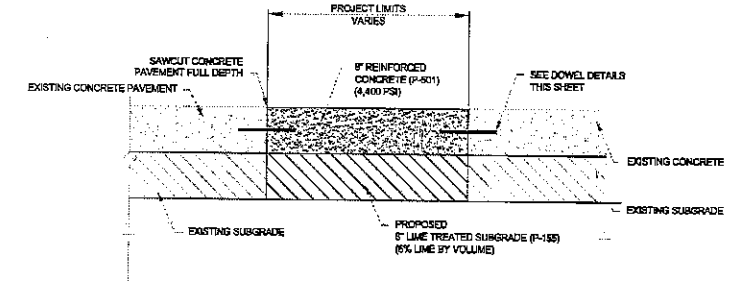
PAYMENT FOR CONCRETE JOINTS AND SEALANT SHALL BE INCIDENTAL TO PAY ITEM P-501



POSITION OF DOWELS AT EDGE OF JOINT TYPE C, E

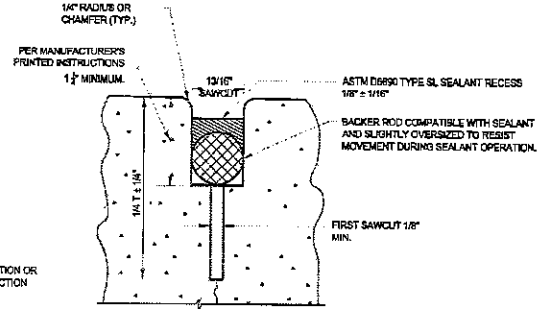
N.T.S.

SMOOTH DOWEL BAR SCHEDULE			
PCC SLAB DEPTH	DIAMETER	LENGTH	SPACING
8"	1"	18"	12"
12"	1"	18"	12"



FUEL FARM ROAD PAVEMENT

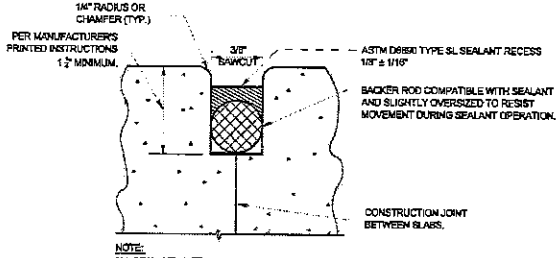
N.T.S.



NOTE:
ALL SEALANT MATERIALS MUST BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS AS APPROVED BY ENGINEER.

CONTRACTION JOINT SEALANT

N.T.S.



NOTE:
ALL SEALANT MATERIALS MUST BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS AS APPROVED BY ENGINEER.

CONSTRUCTION JOINT SEALANT

N.T.S.

JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #22626

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
PAVEMENT DETAILS

DRAWING NUMBER: C-009

SHEET NUMBER: 8 SHEET TOTAL: 11

SCALE: N.T.S

DRAWN BY: AM CHECKED BY: KS

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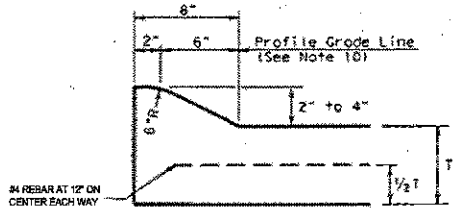
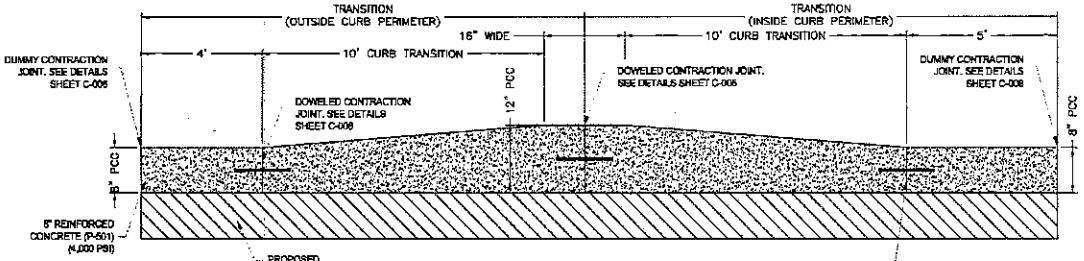
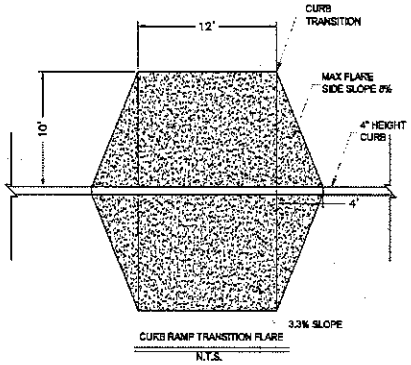


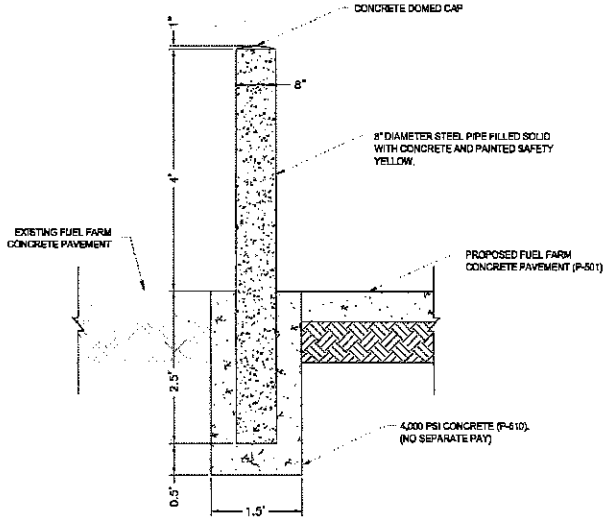
4" HEIGHT CURB DETAIL
N.T.S.



CURB RAMP TRANSITION DETAIL
N.T.S.



CURB RAMP TRANSITION FLARE
N.T.S.

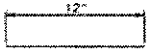


BOLLARD DETAIL
N.T.S.

GENERAL NOTES

1. All materials and construction shall be in accordance with Item 529, "Concrete Curb, Gutter, and Combined Curb and Gutter."
2. Concrete shall be Class A.
3. When reinforcing bars are used, they shall be No.4 unless otherwise shown. The use of fiber reinforced concrete in lieu of reinforcing steel is acceptable. Use fibers meeting the requirements of AMS 4550, "Fibers for Concrete," and base fibers in accordance with Materials Producers List (MPL) "Fibers for Class A and B Concrete Applications."
4. Round exposed sharp edges with a rounding tool, to a minimum radius of ⅛ inch.
5. All existing curbs and driveways to be removed shall be sawed or removed at existing joints.
6. Where concrete curb is to be placed on existing concrete pavement, Bar B may be drilled and the grouted in place, or may be inserted into fresh concrete.
7. Expansion and contraction joints shall be constructed to match pavement joints in all curbs and curb and gutter adjacent to jointed concrete pavement. Where placement of curb or curb and gutter is not adjacent to concrete pavement, expansion joints shall be provided at structures, curb returns of streets, and at locations directed by the Engineer.
8. Vertical and horizontal dowel bars and transverse reinforcing bars shall be placed at four feet C-C.
9. Dimension 'T' shown is the thickness of concrete pavement. When curb is installed adjacent to flexible pavement dimension 'T' is 8" maximum.
10. Usual profile grade line. Refer to typical sections and plan-profile sheets for exact locations.
11. One-half inch expansion joint material shall be provided where curb or curb and gutter is adjacent to sidewalk or riprap.
12. When horizontal permissible construction joints are used, the longitudinal pavement steel shall be placed in accordance with pavement details shown elsewhere in the Plans. Reinforcing steel for curb section shall then conform to that required for concrete curb.
13. Bar B used as needed to support curb reinforcing steel during concrete placement.

BAR B



BAR C

JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #22626

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION
OF FUEL FARM PAVEMENT

DRAWING TITLE:
PAVEMENT DETAILS

DRAWING NUMBER:
C-007

SHEET NUMBER: 9 SHEET TOTAL: 11

SCALE: N.T.S

DRAWN BY: AM CHECKED BY: KS

FILE:C:\The Stahra Group\Jack Brooks Regional\13. CAD\D21\092-BPT-PAVING DETAILS.dwg

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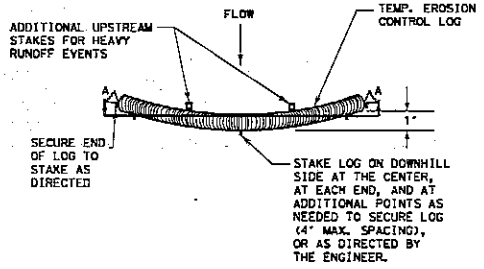
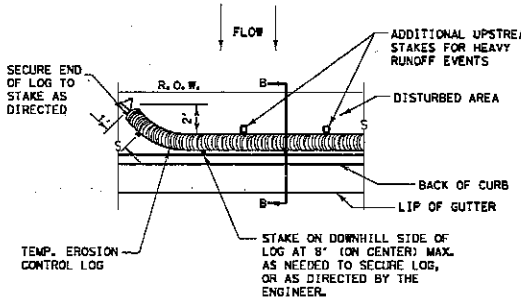
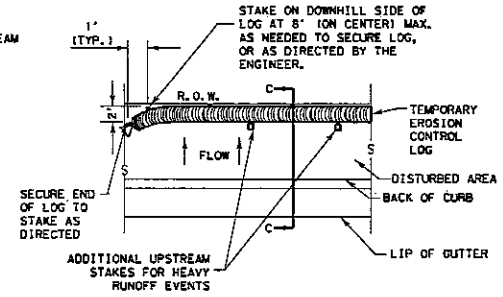
DATE:
FILE:



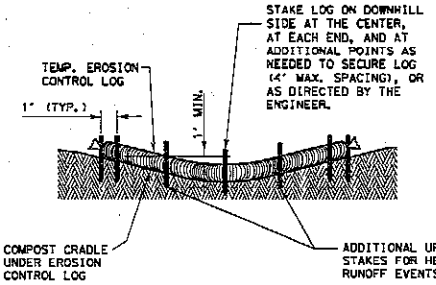
PLAN VIEW



PLAN VIEW



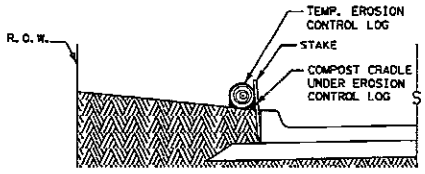
PLAN VIEW



SECTION A-A

EROSION CONTROL LOG DAM

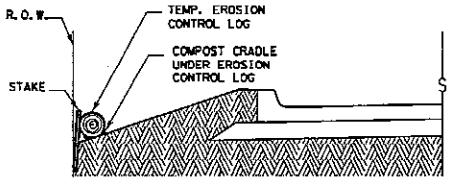
CL-D



SECTION B-B

EROSION CONTROL LOG AT BACK OF CURB

CL-BOC



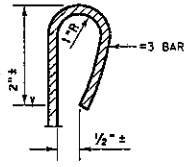
SECTION C-C

EROSION CONTROL LOG AT EDGE OF RIGHT-OF-WAY

CL-ROW

LEGEND

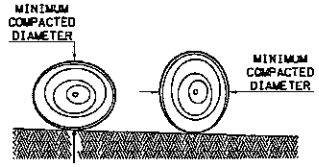
- CL-D — EROSION CONTROL LOG DAM
- CL-BOC — EROSION CONTROL LOG AT BACK OF CURB
- CL-ROW — EROSION CONTROL LOG AT EDGE OF RIGHT-OF-WAY



REBAR STAKE DETAIL

GENERAL NOTES:

1. EROSION CONTROL LOGS SHALL BE INSTALLED IN ACCORDANCE WITH MANFACTURER'S RECOMMENDATIONS, OR AS DIRECTED BY THE ENGINEER.
2. LENGTHS OF EROSION CONTROL LOGS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND AS REQUIRED FOR THE PURPOSE INTENDED.
3. UNLESS OTHERWISE DIRECTED, USE BIODEGRADABLE OR PHOTODEGRADABLE CONTAINMENT MESH ONLY WHERE LOG WILL REMAIN IN PLACE AS PART OF A VEGETATIVE SYSTEM. FOR TEMPORARY INSTALLATIONS, USE RECYCLABLE CONTAINMENT MESH.
4. FILL LOGS WITH SUFFICIENT FILTER MATERIAL TO ACHIEVE THE MINIMUM COMPACTED DIAMETER SPECIFIED IN THE PLANS WITHOUT EXCESSIVE DEFORMATION.
5. STAKES SHALL BE 2" X 2" WOOD OR #3 REBAR, 2'-4' LONG, EMBEDDED SUCH THAT 2" PROTRUDES ABOVE LOG, OR AS DIRECTED BY THE ENGINEER.
6. DO NOT PLACE STAKES THROUGH CONTAINMENT MESH.
7. COMPOST CRADLE MATERIAL IS INCIDENTAL & WILL NOT BE PAID FOR SEPARATELY.
8. SANDBAGS USED AS ANCHORS SHALL BE PLACED ON TOP OF LOGS & SHALL BE OF SUFFICIENT SIZE TO HOLD LOGS IN PLACE.
9. TURN THE ENDS OF EACH ROW OF LOGS UPSLOPE TO PREVENT RUNOFF FROM FLOWING AROUND THE LOG.
10. FOR HEAVY RUNOFF EVENTS, ADDITIONAL UPSTREAM STAKES MAY BE NECESSARY TO KEEP LOG FROM FOLDING IN ON ITSELF.



DIAMETER MEASUREMENTS OF EROSION CONTROL LOGS SPECIFIED IN PLANS

SEDIMENT BASIN & TRAP USAGE GUIDELINES

An erosion control log sediment trap may be used to filter sediment out of runoff draining from an unstabilized area.

Log Traps: The drainage area for a sediment trap should not exceed 5 acres. The trap capacity should be 1800 CF/Acre (0.5" over the drainage area).

Control logs should be placed in the following locations:

1. Within drainage ditches spaced as needed or min. 500' on center
2. Immediately preceding ditch inlets or drain inlets
3. Just before the drainage enters a water course
4. Just before the drainage leaves the right of way
5. Just before the drainage leaves the construction limits where drainage flows away from the project.

The logs should be cleaned when the sediment has accumulated to a depth of 1/2 the log diameter.

Cleaning and removal of accumulated sediment deposits is incidental and will not be paid for separately.

SHEET 1 OF 3

Texas Department of Transportation — Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

EROSION CONTROL LOG

EC(9)-16

FILE: ec916	DW: TxDOT	CK: KM	DW: LS/PT	CK: LS
© TxDOT: JULY 2016	CONT	SECT	JOB	HIGHWAY
REVISIONS	DIST	COUNTY		SHEET NO.

IFB 22-028/JW
EXHIBIT A: PAGE A-12

DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

DATE:
FILE:

GENERAL NOTES

1. For long term stationary work zones on freeways, drums shall be used as the primary channelizing device.
2. For intermediate term stationary work zones on freeways, drums should be used as the primary channelizing device but may be replaced in tangent sections by vertical panels, or 42" two-piece cones. In tangent sections, one-piece cones may be used with the approval of the Engineer but only if personnel are present on the project at all times to maintain the cones in proper position and location.
3. For short term stationary work zones on freeways, drums are the preferred channelizing device but may be replaced in tapers, transitions and tangent sections by vertical panels, two-piece cones or one-piece cones as approved by the Engineer.
4. Drums and all related items shall comply with the requirements of the current version of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) and the "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
5. Drums, bases, and related materials shall exhibit good workmanship and shall be free from objectionable marks or defects that would adversely affect their appearance or serviceability.
6. The Contractor shall have a maximum of 24 hours to replace any plastic drums identified for replacement by the Engineer/Inspector. The replacement device must be an approved device.

GENERAL DESIGN REQUIREMENTS

Pre-qualified plastic drums shall meet the following requirements:

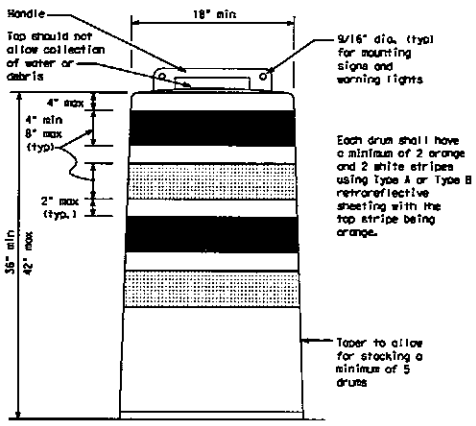
1. Plastic drums shall be a two-piece design; the "body" of the drum shall be the top portion and the "base" shall be the bottom.
2. The body and base shall lock together in such a manner that the body separates from the base when impacted by a vehicle travelling at a speed of 20 MPH or greater but prevents accidental separation due to normal handling and/or air turbulence created by passing vehicles.
3. Plastic drums shall be constructed of lightweight flexible, and deformable materials. The Contractor shall NOT use metal drums or single piece plastic drums as channelization devices or sign supports.
4. Drums shall present a profile that is a minimum of 18 inches in width at the 36 inch height when viewed from any direction. The height of drum unit (body installed on base) shall be a minimum of 36 inches and a maximum of 42 inches.
5. The top of the drum shall have a built-in handle for easy pickup and shall be designed to drain water and not collect debris. The handle shall have a minimum of two widely spaced 9/16 inch diameter holes to allow attachment of a warning light, warning reflector unit or approved compliant sign.
6. The exterior of the drum body shall have a minimum of four alternating orange and white retroreflective circumferential stripes not less than 4 inches nor greater than 8 inches in width. Any non-reflectorized space between any two adjacent stripes shall not exceed 2 inches in width.
7. Bases shall have a maximum width of 36 inches, a maximum height of 4 inches, and a minimum of two footholds of sufficient size to allow base to be held down while separating the drum body from the base.
8. Plastic drums shall be constructed of ultra-violet stabilized, orange, high-density polyethylene (HDPE) or other approved material.
9. Drum body shall have a maximum unballasted weight of 11 lbs.
10. Drum and base shall be marked with manufacturer's name and model number.

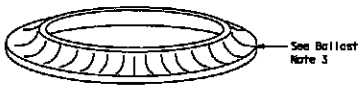
RETROREFLECTIVE SHEETING

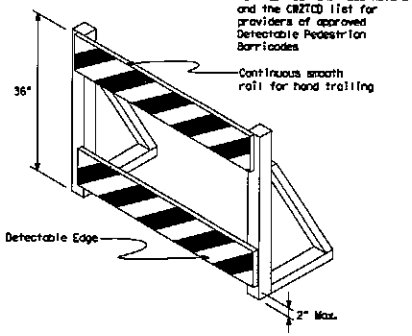
1. The stripes used on drums shall be constructed of sheeting meeting the color and retroreflectivity requirements of Departmental Materials Specification DMS-8300, "Sign Face Materials." Type A or Type B reflective sheeting shall be supplied unless otherwise specified in the plans.
2. The sheeting shall be suitable for use on and shall adhere to the drum surface such that, upon vehicular impact, the sheeting shall remain adhered in-place and exhibit no delaminating, cracking, or loss of retroreflectivity other than that loss due to abrasion of the sheeting surface.

BALLAST

1. Unballasted bases shall be large enough to hold up to 50 lbs. of sand. This base, when filled with the ballast material, should weigh between 35 lbs (minimum) and 50 lbs (maximum). The ballast may be sand in one to three sandbags separate from the base, sand in a sand-filled plastic base, or other ballasting devices as approved by the Engineer. Stacking of sandbags will be allowed, however height of sandbags above pavement surface may not exceed 12 inches.
2. Bases with built-in ballast shall weigh between 40 lbs. and 50 lbs. Built-in ballast can be constructed of an integral crush rubber base or a solid rubber base.
3. Recycled truck tire sidewalls may be used for ballast on drums approved for this type of ballast on the CWZTCD list.
4. The ballast shall not be heavy objects, water, or any material that would become hazardous to motorists, pedestrians, or workers when the drum is struck by a vehicle.
5. When used in regions susceptible to freezing, drums shall have drainage holes in the bottoms so that water will not collect and freeze becoming a hazard when struck by a vehicle.
6. Ballast shall not be placed on top of drums.
7. Adhesives may be used to secure base of drums to pavement.

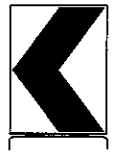






DETECTABLE PEDESTRIAN BARRICADES

1. When existing pedestrian facilities are disrupted, closed, or relocated in a TTC zone, the temporary facilities shall be detectable and include accessibility features consistent with the features present in the existing pedestrian facility. Refer to WZ(BTS-2) for Pedestrian Control requirements for Sidewalk Diversions, Sidewalk Detours and Crosswalk Closures.
2. Where pedestrians with visual disabilities normally use the closed sidewalk, a Detectable Pedestrian Barricade shall be placed across the full width of the closed sidewalk instead of a Type 3 Barricade.
3. Detectable pedestrian barricades similar to the one pictured above, longitudinal channelizing devices, some concrete barriers, and wood or chain link fencing with a continuous detectable edging can satisfactorily delineate a pedestrian path.
4. Tape, rope, or plastic chain strung between devices are not detectable, do not comply with the design standards in the "Americans with Disabilities Act Accessibility Guidelines (ADAAG)" and should not be used as a control for pedestrian movements.
5. Warning lights shall not be attached to detectable pedestrian barricades.
6. Detectable pedestrian barricades should use 6" nominal barricade rails as shown on BC(10) provided that the top rail provides a smooth continuous rail suitable for hand trailing with no splinters, burrs, or sharp edges.



18" x 24" Sign
(Maximum Sign Dimension)
Chevron CW1-8, Opposing Traffic Lane Divider, Driveway sign D70a, Keep Right R4 series or other signs as approved by Engineer

12" x 24"
Vertical Panel
mount with diagonals sloping down towards travel way

Plywood, Aluminum or Metal sign substrates shall NOT be used on plastic drums

SIGNS, CHEVRONS, AND VERTICAL PANELS MOUNTED ON PLASTIC DRUMS

1. Signs used on plastic drums shall be manufactured using substrates listed on the CWZTCD.
2. Chevrons and other work zone signs with an orange background shall be manufactured with Type B_{FL} or Type C_{FL} Orange sheeting meeting the color and retroreflectivity requirements of DMS-8300, "Sign Face Material," unless otherwise specified in the plans.
3. Vertical Panels shall be manufactured with orange and white sheeting meeting the requirements of DMS-8300 Type A or Type B. Diagonal stripes on Vertical Panels shall slope down toward the intended traveled lane.
4. Other sign messages (text or symbolic) may be used as approved by the Engineer. Sign dimensions shall not exceed 18 inches in width or 24 inches in height, except for the R9 series signs discussed in note 8 below.
5. Signs shall be installed using a 1/2 inch bolt (nominal) and nut, two washers, and one locking washer for each connection.
6. Mounting bolts and nuts shall be fully engaged and adequately torqued. Bolts should not extend more than 1/2 inch beyond nuts.
7. Chevrons may be placed on drums on the outside of curves, on merging tapers or on shifting tapers. When used in these locations, they may be placed on every drum or spaced not more than on every third drum. A minimum of three (3) should be used at each location called for in the plans.
8. R9-9, R9-10, R9-11 and R9-11a Sidewalk Closed signs which are 24 inches wide may be mounted on plastic drums, with approval of the Engineer.

SHEET 8 OF 12

Texas Department of Transportation | Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(8)-21

FILE: bc-21.dgn	DW: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS				
4-03 8-14	DIST	COUNTY		SHEET NO.
9-07 5-21				
7-13				
163				

JEFFERSON COUNTY PURCHASING DEPARTMENT
Deborah L. Clark, Purchasing Agent

1149 Pearl Street
1st Floor, Beaumont, TX 77701

OFFICE MAIN: (409) 835-8593
FAX: (409) 835-8456

Addendum to IFB

IFB NUMBER: IFB 22-028/JW

IFB TITLE: Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport

IFB DUE BY: **11:00 am CT, Wednesday, August 24, 2022**

ADDENDUM NO.: 1

ISSUED (DATE): August 1, 2022

To Bidder: This Addendum is an integral part of the IFB package under consideration by you as a Bidder in connection with the subject matter herein identified. Jefferson County deems all sealed bids to have been proffered in recognition and consideration of the entire IFB Specifications Package – *including all addenda*. For purposes of clarification, **receipt of this present Addendum by a Bidder should be evidenced by returning it (signed) as part of the Bidder's sealed bid submission.** If the bid submission has already been received by the Jefferson County Purchasing Department, Bidder should return this addendum in a separate sealed envelope, clearly marked with the IFB Title, IFB Number, and IFB Opening Date and Time, as stated above.

Reason for Issuance of this Addendum: Clarifications (Attachment)

The information included herein is hereby incorporated into the documents of this present bid matter and supersedes any conflicting documents or portion thereof previously issued.

Receipt of this Addendum is hereby acknowledged by the undersigned Respondent:

ATTEST:

Witness

Witness

Approved by ____ Date: _____

Authorized Signature (Respondent)

VICE PRESIDENT
Title of Person Signing Above

GADV Inc dba L & L General Contractors
Typed Name of Business or Individual

11988 FM 365, Beaumont, TX 77705
Address

JEFFERSON COUNTY PURCHASING DEPARTMENT
Deborah L. Clark, Purchasing Agent

1149 Pearl Street
1st Floor, Beaumont, TX 77701

OFFICE MAIN: (409) 835-8593
FAX: (409) 835-8456

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ATTEST:

Witness

Witness

Approved by ____ Date: _____

Authorized Signature (Respondent)

VICE PRESIDENT
Title of Person Signing Above

GADV Inc dba L & L General Contractors
Typed Name of Business or Individual

11988 FM 365, Beaumont, TX 77705
Address

The Solco Group, LLC

ADDENDUM N0. 1

DATE: July 29,2022

OWNER: Jefferson County, Texas - Jack Brooks Regional Airport

PROJECT: FB 22-028/JW Rehabilitation of Fuel Farm Pavement at Jack Brooks Regional Airport

TSG Project No: 2021-10-1092

DEADLINE FOR QUESTIONS: Email questions to Jamey West, Contract Specialist at jwest@co.jefferson.tx.us by **Monday, August 15, 2022, at 5:00 p.m.**,

SUBMITTAL DEADLINE: Bid date **Wednesday, August 24, 2022, at 11:00 a.m.**, Central Standard Time

The additions, omissions, clarifications, and corrections herein shall be made to the contract documents, plans and specifications, for the Rehabilitation of Fuel Farm Pavement Project. **All Bidders must acknowledge receipt of this addendum on the appropriate section of the Bid Form and include with the Contract Documents.**

Addendum references are summarized below.

A. SECTION 2: FEDERAL MANDATED CONTRACT PROVISIONS

Breach of Contract Terms/Remedies (ADD following Paragraph)

Source: FAA AC 150/5370-10H 12/21/2018; Section 80 Execution and Progress pg. 51

Failure to complete on time. For each calendar day or working day, as specified in the contract, that any work remains uncompleted after the contract time (including all extensions and adjustments as provided in paragraph 80-07, Determination and Extension of Contract Time) the sum specified in the contract and proposal as liquidated damages (LD) will be deducted from any money due or to become due the Contractor or their own surety. Such deducted sums shall not be deducted as a penalty but shall be considered as liquidation of a reasonable portion of damages including but not limited to additional engineering services that will be incurred by the Owner should the Contractor fail to complete the work in the time provided in their contract.

Schedule – 1 Phase
Liquidated Damages Cost - $500/day
Allowed Construction Time – 30 Calendar Days

B. SECTION 4: MINIMUM SPECIFICATIONS

Drawings reflect the scope of work as described on page 37.

Addendum Prepared By:

Kelvin Solco, P.E.,
Principal

JEFFERSON COUNTY PURCHASING DEPARTMENT
Deborah L. Clark, Purchasing Agent

1149 Pearl Street
1st Floor, Beaumont, TX 77701

OFFICE MAIN: (409) 835-8593
FAX: (409) 835-8456

Addendum to IFB

IFB NUMBER: IFB 22-028/JW

IFB TITLE: Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional

IFB DUE BY: Airport **11:00 am CT, Wednesday, August 24, 2022**

ADDENDUM NO.: 2

ISSUED (DATE): August 17, 2022

To Bidder: This Addendum is an integral part of the IFB package under consideration by you as a Bidder in connection with the subject matter herein identified. Jefferson County deems all sealed bids to have been proffered in recognition and consideration of the entire IFB Specifications Package – *including all addenda.* For purposes of clarification, **receipt of this present Addendum by a Bidder should be evidenced by returning it (signed) as part of the Bidder's sealed bid submission.** If the bid submission has already been received by the Jefferson County Purchasing Department, Bidder should return this addendum in a separate sealed envelope, clearly marked with the IFB Title, IFB Number, and IFB Opening Date and Time, as stated above.

REASONS FOR ISSUANCE OF THIS ADDENDUM:

- **Clarifications (See Pages 1-4)**
- **REVISED PLAN SHEET NO. 3**
- **REVISED BID FORM PAGE 42 (REPLACEMENT PAGE)**

The information included herein is hereby incorporated into the documents of this present bid matter and supersedes any conflicting documents or portion thereof previously issued.

Receipt of this Addendum is hereby acknowledged by the undersigned Respondent:

ATTEST:

Witness

Witness

Approved by ____ Date: _____

Authorized Signature (Respondent)

VICE PRESIDENT
Title of Person Signing Above

GADU Inc dba L&L General Contractors
Typed Name of Business or Individual

11988 FM365, Beaumont, TX 77705
Address

f. **The contractor will need to be prepared to accommodate a temporary interruption of work only for a brief period of time to allow for emergency fueling operations.**
g. **The contractor will need to ensure there is a safe distance between ongoing construction activities and emergency fueling operations.**

Addendum Prepared By:

Kelvin Solco, PE,
Principal

The Solco Group, LLC

FB 22-028/JW ADDENDUM N0. 2

DATE: 8/15/2022

OWNER: Jefferson County/Jack Brooks Regional Airport

PROJECT: FB 22-028/JW Rehabilitation of Fuel Farm Pavement at Jack Brooks Regional Airport

TSG Project No: 2021-10-1092

DEADLINE FOR QUESTIONS: email questions to Jamey West. Contract Specialist at jwest@co.jefferson.tx.us by **Thursday, August 15, 2022, at 5:00 p.m.**,

SUBMITTAL DEADLINE: Bid date **Wednesday, August 24, 2022, at 11:00 a.m.**, Central Standard Time.

The additions, omissions, clarifications, and corrections herein shall be made to the contract documents, plans and specifications, for the Rehabilitation of Fuel Farm Pavement Project. **All Bidders must acknowledge receipt of this addendum on the appropriate section of the Bid Form and include with the Contract Documents.**

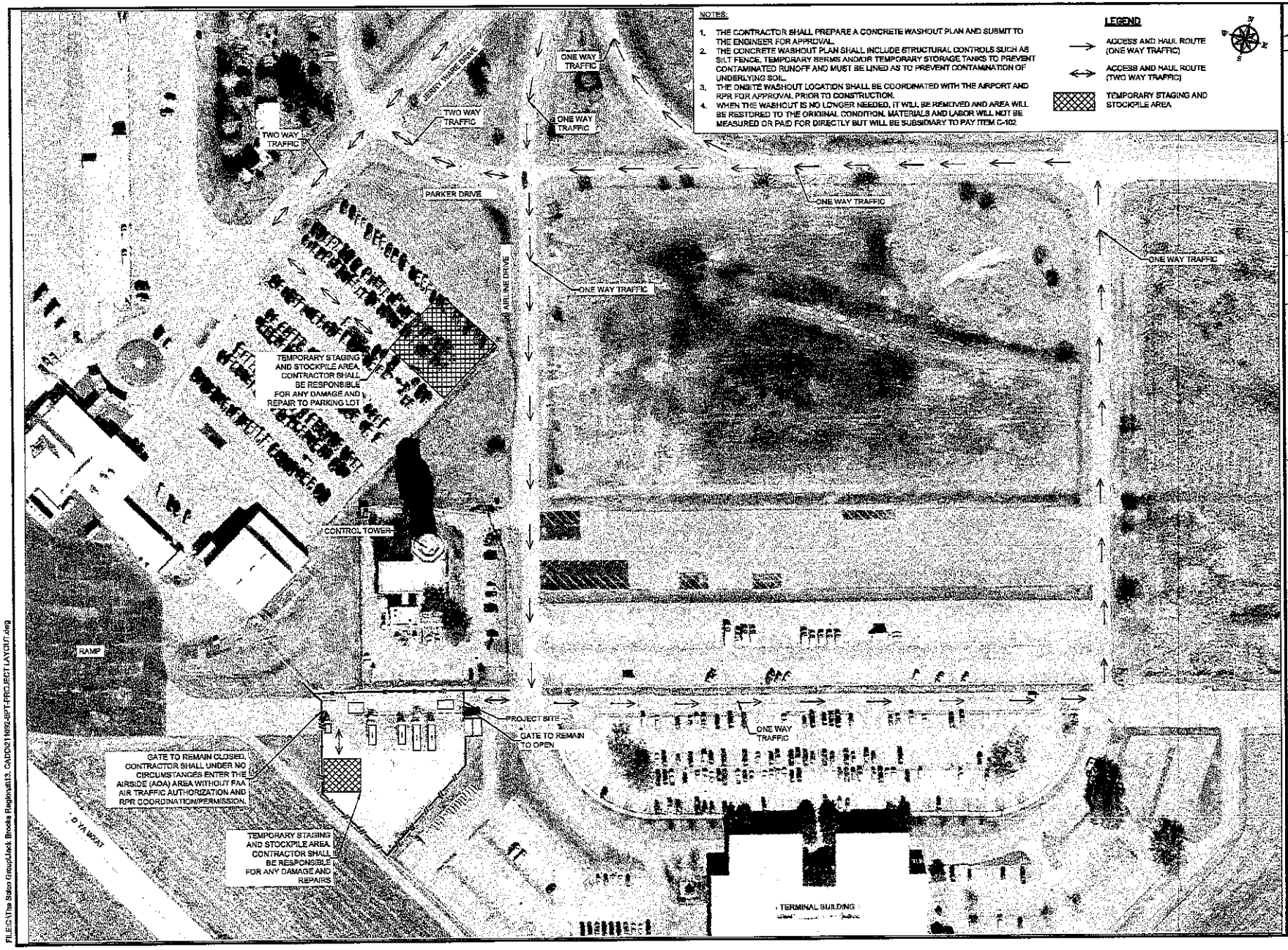
Addendum references to answer questions posted by potential bidders are summarized below.

1. Who is responsible for Materials Testing? All quality assurance testing shall be done by the Contractor. Please see the Items below:
   a. Item 152-5, section 152-2.10 under paragraph 2, last sentence.
   b. Item 155-4, section 155-6.10 and a. Density Paragraph
   c. Item 501-7, section 501-3.3 f., 501-3.4 Concrete Mix Submittal, 501-4.8 c. Consolidation, 501-4-11 e. Straightedge testing and surface correction., P-501-24 CONTRACTOR QUALITY CONTROL (CQC)
   d. Page 8 of 61 of bid documents section 2.12.
2. DRAWING PLAN SHEET 3 – Replace Sheet 3 with New Sheet 3. Arrow for "One-Way" traffic corrected.
3. BID DOCUMENTS – Replace pg. 42 with New Page to include TOTAL BID LINE.

Addendum Prepared By:

Kelvin Solco, PE,
President / CEO

STATE OF TEXAS
KELVIN L SOLCO
78161
LICENSED
PROFESSIONAL ENGINEER



JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #22526

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
PROJECT LAYOUT AND PHASING PLAN

DRAWING NUMBER: C-001

SHEET NUMBER: 3 SHEET TOTAL: 11

SCALE: 1" = 60' (FULL) 1"=120' (HALF)

DRAWN BY: AM CHECKED BY: KS

FILE:C:\The Silton Group\Jack Brooks Regional\13_CADD\211692-BPT-PROJECT LAYOUT.dwg

BID FORM (CONTINUED) REPLACEMENT PAGE 42

DESCRIPTION:	☒ Base Bid			
REF. NO. 14	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Biodegradable Erosion Control Logs (Install) TXDOT 506-6.6.1	200	LF		

DESCRIPTION:	☒ Base Bid			
REF. NO. 15	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Biodegradable Erosion Control Logs (Removal) TXDOT 506-6.6.2	200	LF		

DESCRIPTION:	☒ Base Bid			
REF. NO. 16	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
4" Concrete Curb TXDOT 529	278	LF		

DESCRIPTION:	☒ Base Bid			
REF. NO. 17	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Furnish and Install 4' Steel Bollards	2	EA		

DESCRIPTION:	☒ Base Bid			
REF. NO. 18	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Install 6' Rubber Speed Bumps	4	EA		

DESCRIPTION:	☒ Base Bid
	TOTAL BID PRICE *($ XXX,XXX.XX)*
TOTAL BID	

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

BIDDER ACKNOWLEDGEMENT OF BID ADDENDA (IF APPLICABLE):

Addendum 1 _____ Date Received _____
Addendum 2 _____ Date Received _____
Addendum 3 _____ Date Received _____
Addendum 4 _____ Date Received _____
Addendum 5 _____ Date Received _____

BIDDER: INCLUDE FULL, SIGNED, & ATTESTED COPY OF EACH ADDENDUM ISSUED WITH BID SUBMISSION.

L&L GENERAL CONTRACTORS

L&L General Contractors

11988 FM 365 W
Beaumont, TX 77705

IFB22-028/JW

St. Catherine of Siena Catholic School

Project Name: Rehabilitation of Fuel Farm Pavement - Jack Brooks Regional Airport

Bid Location: 1149 Pearl Street, 1st Floor, Beaumont, Texas 77701

Bid Time: August 24, 2022 - 11:00 AM

RECVD JEFFCOPURCH 10:44 AM AUG 24 2022

JWlst

Jefferson County Purchasing Department
Deborah L. Clark, Purchasing Agent

1149 PEARL STREET
1st FLOOR, BEAUMONT, TEXAS 77701

OFFICE MAIN: (409) 835-8593
FAX: (409)835-8456

LEGAL NOTICE
Advertisement for Invitation for Bids

July 26, 2022

Notice is hereby given that sealed bids will be accepted by the Jefferson County Purchasing Department for Invitation for Bid **(IFB 22-028/JW) Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport.** Specifications for this project may be obtained from the Jefferson County website, https://www.co.jefferson.tx.us/Purchasing/ or by calling 409-835-8593.

Bids are to be sealed and addressed to the Purchasing Agent with the bid number and name marked on the outside of the envelope or box. Bidders shall forward an original and two (2) copies of their bid to the address shown below. Jefferson County does not accept bids submitted electronically. Late bids will be rejected as non-responsive. Bids will be publicly opened and read aloud in the Jefferson County Engineering Department Conference Room (5th Floor, Historic Courthouse) 1149 Pearl Street, Beaumont, Texas 77701, at the time and date below. Bidders are invited to attend the sealed bid opening.

BID NAME:	**Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport**
BID NUMBER:	**IFB 22-028/JW**
DUE BY TIME/DATE:	**11:00 AM CT, Wednesday, August 24, 2022**
MAIL OR DELIVER TO:	**Jefferson County Purchasing Department** **1149 Pearl Street, 1st Floor** **Beaumont, Texas 77701**

There will be a Pre-Bid Conference and Walk-Through at 2:00 PM CT on Thursday, August 4, 2022, at the Airport Administration Conference Room located at 5000 Jerry Ware Blvd. Beaumont, Texas 7770S. This conference will be the Bidder's only opportunity to view secured areas of the project.

The County shall require the bidder to furnish a bid security in the amount of five percent (5%) of the total contract cost. The bid bond must be executed with a surety company authorized to do business in the State of Texas. Within ten (10) days after the date of the signing of a contract, the bidder shall furnish a performance bond to the County for the full amount of the contract, if the contract exceeds one hundred thousand dollars ($100,000). If the contract is for one hundred thousand dollars ($100,000) or less, the County may provide that no money be paid to the contractor until completion and acceptance of the work or the fulfillment of the purchase obligation to the County.

Any questions relating to these bid requirements should be directed to Jamey West, Contract Specialist at 409-835-8593 or via email at: jwest@co.jefferson.tx.us

Jefferson County encourages Disadvantaged Business Enterprises (DBEs), Minority/Women Business Enterprises (M/WBEs), and Historically Underutilized Businesses (HUBs) to participate in the bidding process. Jefferson County does not discriminate on the basis of race, color, national origin, sex, religion, age or disability in employment, or the provisions of services. Individuals requiring special accommodations are requested to contact our office at least seven (7) days prior to the bid due date at 409-835-8593.

Jefferson County reserves the right to accept or reject any or all proposals, to waive technicalities and to take whatever action is in the best interest of Jefferson County. All interested firms are invited to submit a bid in accordance with the terms and conditions stated in this bid.

Respondents are strongly encouraged to carefully read the entire invitation, as failure to return and/or complete all required documentation will result in a response being declared as non-responsive.

Deborah Clark

Deborah L. Clark, Purchasing Agent
Jefferson County, Texas

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BID SUBMISSIONS:

One (1) Original and Two (2) Bid Copies; with all copies to include a Completed Copy of this specifications packet, in its entirety.

Each Bidder shall ensure that required parts of their bid submission are completed with accuracy and submitted as per the requirements within this specifications packet, including any addenda.

Additionally, Bidder shall monitor the Jefferson County Purchasing Department Website for any addenda, additional instructions, or bid updates. https://www.co.jefferson.tx.us/Purchasing/

Failure to return and/or completed all required documentation will result in a response being declared as non-responsive.

SECTION 1: GENERAL CONDITIONS OF BIDDING AND TERMS OF CONTRACT

By execution of this document, the Vendor accepts all general and special conditions of the contract as outlined below and, in the specifications, and plans.

1. BIDDING.

1.1 BIDS.
All bids must be submitted on the bid form furnished in this package.

1.2 AUTHORIZED SIGNATURES.
The bid must be executed personally by the Vendor, duly authorized partner of the partnership, or duly authorized officer of the corporation. If executed by an agent, a power of attorney or other evidence of authority to act on behalf of the Vendor shall accompany the bid to become a valid bid.

1.3 LATE BIDS.
Bids must be in the office of the Jefferson County Purchasing Agent before or at the specified time and date bids are due. Bids received after the submission deadline shall be rejected as non-responsive and returned unopened.

1.4 WITHDRAWAL OF BID PRIOR TO OPENING.
A bid may be withdrawn before the opening date by submitting a written request to the Purchasing Agent. If time allows, the Bidder may submit a new bid. Bidder assumes full responsibility for submitting a new bid before or at the specified time and date bids are due. Jefferson County reserves the right to withdraw a request for bids before the opening date.

1.5 WITHDRAWAL OF BID AFTER OPENING.
Bidder agrees that its offer may not be withdrawn or cancelled by the Vendor for a period of ninety (90) days following the date and time designated for the receipt of bids unless otherwise stated in the bid and/or specifications.

1.6 BID AMOUNTS.
Bids shall show net prices, extensions where applicable and net total. In case of conflict between unit price and extension, the unit price will govern. Any ambiguity in the bid as a result of omission, error, unintelligible or illegible wording shall be interpreted in the favor of Jefferson County.

1.7 EXCEPTIONS AND/OR SUBSTITUTIONS.
All bids meeting the intent of the specifications and plans will be considered for award. Vendors taking exception to the specifications and plans, or offering substitutions, shall state these exceptions in the section provided. If bid is made on an article other than the one specified, which a Bidder considers comparable, the name and grade of said article must be specified in the bid and sufficient specifications and descriptive data must accompany same to permit thorough evaluation. The absence of stated exceptions and/or substitutions shall indicate that the Vendor has not taken any exceptions to the specifications and shall be responsible to perform in strict accordance with the specifications. As a matter of practice, Jefferson County rejects exception(s) and /or substitutions as non-responsive but reserves the right to accept any and/or all of the exception(s) and/or substitution(s) deemed to be in the best interest of Jefferson County.

1.8 ALTERNATES.
The Invitation for Bid and/or specifications may expressly allow Bidder to submit an alternate bid. Presence of such an offer shall not be considered an indication of non-responsiveness.

1.9 DESCRIPTIONS.
Unless otherwise specified, any reference to make, manufacturer and/or model used in the bid specifications is merely descriptive and not restrictive, and is used only to indicate type, style, or quality of material desired.

1.10 BID ALTERATIONS.
Bids cannot be altered or amended after submission deadline. Any interlineations, alterations, or erasures made before opening time must be initialed by the signer of the bid, guaranteeing authenticity.

1.11 TAX EXEMPT STATUS.
Jefferson County is exempt from federal excise tax and state sales tax. Unless the bid form or specifications specifically indicate otherwise, the bid price must be net, exclusive of above-mentioned taxes and will be so construed. Therefore, the bid price shall not include taxes.

1.12 QUANTITIES.
Quantities indicated are estimated quantities only and are not a commitment to buy. Approximate usage does not constitute an order, but only implies the probable quantity that will be used. Commodities will be ordered on an as-needed basis. Bidder is responsible for accurate final counts.

1.13 BID AWARD.
Award of contract shall be made to the most responsible, responsive Bidder, whose offer is determined to be the best value, taking into consideration the relative importance of price. Jefferson County reserves the right to be the sole judge as to whether items bid will serve the purpose intended.

Jefferson County reserves the right to accept or reject in part or in whole any bid submitted, and to waive any technicalities or informalities for the best interest of the County. Jefferson County reserves the right to award based upon individual line items, sections, or total bid.

1.14 SILENCE OF SPECIFICATIONS FOR COMPLETE UNITS.
All materials, equipment and/or parts that will become a portion of the completed work, including items not specifically stated herein but, necessary to render the service(s) complete and operational per the specifications, are to be included in the bid price. Vendor may be required to furnish evidence that the service, as bid, will meet or exceed these requirements.

1.15 ADDENDA.
Any interpretations, corrections or changes to the specifications and plans will be made by addenda no later than forty-eight (48) hours prior to the bid opening. Addenda will be posted on the Purchasing web site. Vendors are responsible for monitoring the web site in order to remain informed on addenda. Vendors shall acknowledge receipt of all addenda with submission of bid.

1.16 GENERAL BID BOND/SURETY REQUIREMENTS.
Failure to furnish bid bond/surety, if requested, will result in bid being declared non-responsive. Non-responsive bids will not be considered for award.

1.17 GENERAL INSURANCE REQUIREMENTS.
Failure to furnish Affidavit of Insurance, if required in these specifications, will result in bid being declared non-responsive. Non-responsive bids will not be considered for award.

1.18 RESPONSIVENESS.
A responsive bid shall substantially conform to the requirements of this Invitation to Bid and/or specifications contained herein. Bidders who substitute any other terms, conditions, specifications and/or requirements or who qualify their bids in such a manner as to nullify or limit their liability to the contracting entity shall have their bids

deemed non-responsive. Also, bids containing any clause that would limit contracting authority shall be considered non-responsive. Examples of non-responsive bids include but shall not be limited to: a) bids that fail to conform to required delivery schedules as set forth in the bid request; b) bids with prices qualified in such a manner that the bid price cannot be determined, such as with vague wording that may include "price in effect at the time of delivery," and c) bids made contingent upon award of other bids currently under consideration.

1.19 RESPONSIBLE STANDING OF BIDDER.

To be considered for award, Bidder must at least: have the ability to obtain adequate financial resources, be able to comply with required or proposed delivery/completion schedule, have a satisfactory record of performance; have a satisfactory record of integrity and ethics, and be otherwise qualified and eligible to receive award.

1.20 CONFIDENTIAL/PROPRIETARY INFORMATION.

If any material in the bid submission is considered by Bidder to be confidential or proprietary information (including manufacturing and/or design processes exclusive to the Bidder), Bidder must clearly mark the applicable pages of Bidder's bid submission to indicate each claim of confidentiality. Additionally, Bidder must include a statement on company letterhead identifying all Bid Submission section(s) and page(s) that have been marked as confidential. Jefferson County will protect from public disclosure such portions of a bid, unless directed otherwise by legal authority, including existing open records acts. Merely making a blanket claim that the entire bid submission is protected from disclosure because it contains some proprietary information is not acceptable and will make the entire bid submission subject to release under the Texas Public Information Act.

By submitting a bid, Bidder agrees to reproduction by Jefferson County, without cost or liability, of any copyrighted portions of Bidder's bid submission or other information submitted by Bidder.

1.21 PUBLIC BID OPENING.

Bidders are invited to be present at the opening of bids. After the official opening of bids, a period of not less than one week is necessary to evaluate bids. The amount of time necessary for bid evaluation may vary and is determined solely by the County. Following the bid evaluation, all bids submitted are available for public review.

2. PERFORMANCE.

2.1 DESIGN, STRENGTH, AND QUALITY.

Design, strength, and quality of materials and workmanship must conform to the highest standards of manufacturing and engineering practices. The apparent silence of specifications and/or plans as to any detailed description concerning any point shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of these specifications and/or plans shall be made on the basis of this statement.

2.2 AGE AND MANUFACTURE.

All tangible goods being bid must be new and unused, unless otherwise specified, in first-class condition, of current manufacture, and furnished ready to use. All items not specifically mentioned that are required for a complete unit shall be furnished.

2.3 DELIVERY LOCATION.

All deliveries will be made to the address(es) specified on the purchase order during normal working hours of 8:00 am to 4:00 pm, Monday through Friday, unless otherwise authorized by the Purchasing Agent or designee.

2.4 DELIVERY SCHEDULE.

Delivery time may be an important consideration in the evaluation of best value. The maximum number of days necessary for delivery ARO shall be stated in the space, if provided, on the bid form.

2.5 DELIVERY CHARGES.
All delivery and freight charges, F.O.B. destination shown on Jefferson County purchase order, as necessary to perform contract are to be included in the bid price.

2.6 INSTALLATION CHARGES.
All charges for assembly, installation and set-up shall be included in the bid price. Unless otherwise stated, assembly, installation and set-up will be required.

2.7 OPERATING INSTRUCTIONS AND TRAINING.
Clear and concise operating instructions and descriptive literature will be provided in English, if requested. On-site detailed training in the safe and efficient use and general maintenance of item(s) purchased shall be provided as needed at the request of Jefferson County. Instructions and training shall be at no additional cost to the County.

2.8 STORAGE.
Bidder agrees to provide storage of custom ordered materials, if requested, for up to thirty (30) calendar days.

2.9 COMPLIANCE WITH FEDERAL, STATE, COUNTY, AND LOCAL LAWS.
Bids must comply with all federal, state, county, and local laws, including, but not limited to, all applicable standard safety, emission, and noise control requirements. Any vehicles or equipment shall contain all standard safety, emission, and noise control requirements required for the types and sizes of equipment at the time of their manufacture. The contractor agrees, during the performance of work or service, to comply with all applicable codes and ordinances of Jefferson County or the State of Texas as they may apply, as these laws may now read, or as they may hereafter be changed or amended.

2.10 OSHA.
The Bidder will certify all equipment complies with all regulations and conditions stipulated under the Williams-Steiger Occupational Safety and Health Act of 1971, as amended. The successful Bidder will further certify that all items furnished under this project will conform and comply with federal and State of Texas OSHA standards. The successful Bidder will agree to indemnify and hold harmless Jefferson County for any and all damages that may be assessed against the County.

2.11 PATENTS AND COPYRIGHTS.
The successful Vendor agrees to protect the County from claims involving infringements of patents and/or copyrights.

2.12 SAMPLES, DEMONSTRATIONS, AND TESTING.
At Jefferson County's request and direction, Bidder shall provide product samples and/or testing of items bid to ensure compliance with specifications. Samples, demonstrations and/or testing may be requested at any point prior to or following bid award. Samples, demonstrations and/or testing may be requested upon delivery and/or any point during the term of resulting contract. All samples (including return thereof), demonstrations, and/or testing shall be at the expense of the Bidder/Vendor.

2.13 ACCEPTABILITY.
All articles enumerated in the bid shall be subject to inspection by an officer designated for that purpose by Jefferson County. If found inferior to the quality called for, or not equal in value to the specifications, deficient in workmanship or otherwise, this fact shall be certified to the Purchasing Agent, who shall have the right to reject the whole or any part of the same. Items and/or work determined to be contrary to specifications must be replaced at the vendor's expense. Inferior items not retrieved by the vendor within thirty (30) calendar days, or an otherwise agreed upon time, shall become the property of the County. If disposal of such items warrants an expense, an amount equal to the disposal expense will be deducted from amounts payable to the vendor.

2.14 MAINTENANCE.

Maintenance required for equipment bid should be available in Jefferson County by a manufacturer authorized maintenance facility. Cost for this service shall be shown on the bid sheet as requested or on a separate sheet, as required. If Jefferson County opts to include maintenance, it shall be so stated in the purchase order and said cost will be included. Service will commence only upon expiration of applicable warranties and should be priced accordingly.

2.15 MATERIAL SAFETY DATA SHEETS.

Under the "Hazardous Communications Act," commonly known as the "Texas Right to Know Act," a Bidder must provide
the user department, with each delivery, material safety data sheets which are applicable to hazardous substances defined in the Act. Failure of the Bidder to furnish this documentation, will be cause to reject any bid applying thereto.

2.16 EVALUATION.

Evaluation shall be used as a determinant as to which services are the most efficient and/or most economical for the County. It shall be based on all factors having a bearing on price and performance of the items in the user environment. All bids are subject to tabulation by the Jefferson County Purchasing Department and recommendation to Jefferson County Commissioners' Court. Compliance with all bid requirements and needs of the using department are considered in evaluating bids. Pricing is not the only criteria for making a recommendation. The Jefferson County Purchasing Department reserves to right to contact any Bidder, at any time, to clarify, verify or requirement information with regard to this bid.

3. PURCHASE ORDERS AND PAYMENT.

3.1 PURCHASE ORDERS.

A purchase order(s) shall be generated by the Jefferson County Purchasing Agent to the successful vendor. The purchase order number must appear on all itemized invoices and packing slips. The County will not be held responsible for any work orders placed and/or performed without a valid current purchase order number. Payment will be made for all services rendered and accepted by the contract administrator for which a valid invoice has been received.

3.2 INVOICES.

All invoices shall reference the Purchase Order number. Invoices shall reference the bid item number or a detailed description for each item invoiced. If an item purchased and itemized on the invoice does not correspond to an item in any of the categories awarded to the vendor, invoice shall reference the item as "N/C" to indicate that it is a non-contract item. This requirement is to assist the County in verifying contract pricing on all invoices. Payment will be made under terms of net thirty (30) days unless otherwise agreed upon by seller and the purchasing department.

3.3 PROMPT PAYMENT.

In accordance with the State of Texas Prompt Payment Act, Article 601f V.T.C.S., payment will be made after receiving and acceptance by the County of the merchandise ordered and of a valid invoice. Successful Bidder(s) is required to pay subcontractors within ten (10) days after the successful Bidder receives payment from the County.

3.4 FUNDING.

Jefferson County is operated and funded on an October 1 to September 30 basis; accordingly, the County reserves the right to terminate, without liability to the County, any contract for which funding is not available.

4. CONTRACT.

4.1 CONTRACT DEFINITION.

The General Conditions of Bidding and Terms of Contract, Specifications, Plans, Bidding Forms, Addenda, and any other documents made a part of this bid shall constitute the complete bid. This bid, when duly accepted by Jefferson

County shall constitute a contract equally binding between the successful Bidder and Jefferson County.

4.2 CHANGE ORDER.

No different or additional terms will become part of this contract with the exception of a change order. No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated in the resulting contract. All change orders to the contract will be made in writing and at the discretion and approval of Jefferson County. No change order will be binding unless signed by an authorized representative of the County and the vendor.

4.3 PRICE RE-DETERMINATION.

A price re-determination may be requested at the time of annual renewal. All requests for price re-determination shall be in written form. Cause for such request, i.e., manufacturer's direct cost, postage rates, Railroad Commission rates, Federal/State minimum wage law, Federal/State unemployment taxes, F.I.C.A, Insurance Coverage Rates, etc., shall be substantiated in writing by the source of the cost increase. The Bidder's past experience of honoring contracts at the bid price will be an important consideration in the evaluation of the lowest and best bid. Jefferson County reserves the right to accept or reject any/all requests for price re-determination as it deems to be in the best interest of the County.

4.4 TERMINATION.

Jefferson County reserves the right to terminate the contract for default if the Bidder breached any of the terms therein, including warranties of Bidder or if the Bidder becomes insolvent or commits acts of bankruptcy. Such right of termination is in addition to and not in lieu of any other remedies which Jefferson County may have in law or equity. Default may be construed as, but not limited to, failure to deliver the proper goods and/or service within the proper amount of time, and/or to properly perform any and all services required to Jefferson County's satisfaction and/or to meet all other obligations and requirements. Contracts may be terminated without cause upon thirty (30) days' written notice to either party unless otherwise specified. Jefferson County reserves the right to award canceled contract to the next lowest Bidder. Bidder, in submitting this bid, agrees that Jefferson County shall not be liable to prosecution for damages in the event that the County declares the Bidder in default.

4.5 CONFLICT OF INTEREST.

Employees of the County are not permitted to maintain financial interest in, or receive payment, directly or indirectly, borrow from, lend to, invest in, or engage in any substantial financial transaction with any individual, organization, supplier, or subcontractor who does business with the County without disclosure. When conflict of interest is discovered, it shall be grounds for termination of contract.

4.6 INJURIES OR DAMAGES RESULTING FROM NEGLIGENCE.

Successful vendor shall defend, indemnify and save harmless Jefferson County and all its officers, agents and employees from all suits, actions, or other claims of any character, name and description brought for or on account of any injuries or damages received or sustained by any person, persons, or property on account of any negligent act or fault of the successful vendor, or of any agent, employee, subcontractor or supplier in the execution of, or performance under, any contract which may result from bid award. Successful vendor shall pay any judgment with cost which may be obtained against Jefferson County growing out of such injury or damages.

4.7 INTEREST BY PUBLIC OFFICIALS.

No public official shall have interest in this contract, in accordance with Texas Local Government Code.

4.8 PRE-AWARD/CONTRACT CONTACT BETWEEN COUNTY AND VENDORS.

The Jefferson County Purchasing Department will be the primary pre-bid contact for this Invitation for Bid, unless otherwise specified within these bid specifications. **If not written within these specifications, Potential Bidders /Vendors shall not visit or conduct discussions with other County Departments or representatives.**

The Jefferson County Purchasing Department expects to conduct discussions with vendor's representatives

authorized to contractually obligate the vendor with an offer. **Vendors shall not contact any Jefferson County personnel during the IFB process without the express permission from the Jefferson County Purchasing Agent. The Purchasing Agent will disqualify any vendor who has made site visits, contacted Jefferson County personnel, or distributed any literature without authorization from the Jefferson County Purchasing Department.**

All correspondence relating to this IFB, from advertisement to award shall be sent to the Jefferson County Purchasing Department. All presentations and/or meetings between Jefferson County and the vendor relating to this IFB shall be coordinated by the Jefferson County Purchasing Department.

Selected vendors may be expected to make a presentation/product demonstration to an Evaluation Committee. Proposals, vendor presentations, and product/service evaluations may develop into negotiating sessions with the vendor(s) as selected by the Evaluation Committee. Jefferson County expects to conduct negotiations with vendor representatives authorized to contractually obligate the vendor with an offer. If vendor is unable to agree to contract terms and conditions, Jefferson County reserves the right to terminate contract negotiations with that vendor and initiate negotiations with another vendor. In addition to a presentation, visits by the Evaluation Committee to representative vendor client sites may be conducted where the proposed solution can be demonstrated in a production environment.

4.9 WARRANTY.
The successful vendor shall warrant that all materials utilized in the performance of this contract shall conform to the proposed specifications and/or all warranties as stated in the Uniform Commercial Code and be free from all defects in material, workmanship and title.

4.10 UNIFORM COMMERCIAL CODE.
The successful vendor and Jefferson County agree that both parties have all rights, duties, and remedies available as stated in the Uniform Commercial Code.

4.11 VENUE.
This agreement will be governed and construed according to the laws of the State of Texas. This agreement is performable in the County of Jefferson, Texas.

4.12 SALE, ASSIGNMENT, OR TRANSFER OF CONTRACT.
The successful vendor shall not sell, assign, transfer or convey this contract, in whole or in part, without the prior written consent of Jefferson County.

4.13 SILENCE OF SPECIFICATIONS.
The apparent silence of these specifications as to any detailed description concerning any point, shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of these specifications shall be made on the basis of this statement.

5. REJECTION OR WITHDRAWAL.
Submission of additional terms, conditions or agreements with the bid document are grounds for deeming a bid non-responsive and may result in bid rejection. Jefferson County reserves the right to reject any and all bids and to waive any informalities and minor irregularities or defects in bids. Bids may be withdrawn in person by a bidder or authorized representative, provided their identity is made known and a receipt is signed for the bid, but only if the withdrawal is made prior to the time set for receipt of bids. Bids are an irrevocable offer and may not be withdrawn within **120** days after opening date.

6. EMERGENCY/DECLARED DISASTER REQUIREMENTS.
In the event of an emergency or if Jefferson County is declared a disaster area, by the County, State, or Federal Government, this Acceptance of Offer may be subjected to unusual usage. Contractor shall service the county during

such an emergency or declared disaster under the same terms and conditions that apply during non-emergency/disaster conditions. The pricing as specified in this Acceptance of Offer shall apply to serving the County's needs regardless of the circumstances. If Contractor is unable to supply the services under the terms of the Acceptance of Offer, then Contractor shall provide proof of such disruption and a copy of the invoice from Contractor's supplier(s).

Additional profit margin as a result of supplying services during an emergency or declared disaster shall not be permitted. In the event that additional equipment, supplies, and materials are required during the declared disaster, additional shipping, handling, and drayage fees may apply.

7. AWARD.

The bid will be awarded to the responsible, responsive bidder(s) whose bid, conforming to the solicitation, will be most advantageous to Jefferson County – price and other factors considered. Unless otherwise specified in this IFB, Jefferson County reserves the right to accept a bid in whole or in part, and to award by item or by group, whichever is deemed to be in the best interest of Jefferson County. Any bidder who is in default to Jefferson County at the time of submittal of the bid shall have that bid rejected.

Jefferson County reserves the right to clarify any contractual terms with the concurrence of the Contractor; however, any substantial non-conformity in the offer, as determined by Jefferson County, shall be deemed non-responsive and the offer rejected.

In evaluating bids, Jefferson County shall consider the qualifications of the bidders, and, where applicable, operating costs, delivery time, maintenance requirements, performance data, and guarantees of materials and equipment.

In addition, Jefferson County may conduct such investigation as it deems necessary to assist in the evaluation of a bid and to establish the responsibility, qualifications, and financial ability of the bidders to fulfill the contract.

Jefferson County reserves the right to award this contract on the basis of **lowest and best bid** in accordance with the laws of the State of Texas, to waive any formality or irregularity, to make awards to more than one offeror, and/or to reject any or all bids. In the event the lowest dollar offeror meeting specifications is not a awarded a contract, Offeror may appear before the Commissioners' Court and present evidence concerning Offeror responsibility after officially notifying the Office of the Purchasing Agent of Offeror's intent to appear.

8. CONTRACT.

A response to an IFB is an offer to contract with Jefferson County based upon the terms, conditions, and specifications contained in the IFB. Bids do not become contracts unless and until they are executed by Jefferson County, eliminating a formal signing of a separate contract. For that reason, all of the terms and conditions of the contract are contained in the IFB, unless any of the terms and conditions is modified by an IFB Amendment, a Contract Amendment, or by mutually agreed terms and conditions in the contract documents.

9. WAIVER OF SUBROGATION.

Bidder and bidder's insurance carrier waive any and all rights whatsoever with regard to subrogation against Jefferson County as an indirect party to any suit arising out of personal or property damages resulting from bidder's performance under this agreement.

10. FISCAL FUNDING.

A multi-year contract (if requested by the specifications) continuing as a result of an extension option must include fiscal funding out. If, for any reason, funds are not appropriated to continue the contract, said contract shall become null and void.

11. BID RESULTS.

Bid results are not provided in response to telephone inquiries. A preliminary tabulation of bids received will be posted on the Purchasing web page at https://www.co.jefferson.tx.us/Purchasing/ as soon as possible following bid opening. A final tabulation will be posted following bid award and will also be available for review in the Purchasing Department.

12. CHANGES AND ADDENDA TO BID DOCUMENTS.

Each change or addendum issued in relation to this IFB document will be on file in the Office of the Purchasing Agent, and will be posted on the Purchasing web site as soon as possible. It shall be the bidder's responsibility to make inquiry as to change or addenda issued, and to monitor the web site. All such changes or addenda shall become part of the contract and all bidders shall be bound by such addenda. Information on all changes or addenda issued will be available at the Office of the County Purchasing Agent.

13. SPECIFICATIONS.

Unless otherwise stated by the bidder, the bid will be considered as being in accordance with Jefferson County's applicable standard specifications, and any special specifications outlined in the bid document. References to a particular trade name, manufacturer's catalogue, or model number are made for descriptive purposes to guide the bidder in interpreting the requirements of Jefferson County and should not be construed as excluding bids on other types of materials, equipment, and supplies. However, the bidder, if awarded a contract, will be required to furnish the particular item referred to in the specifications or description unless departure or substitution is clearly noted and described in the bid.

Jefferson County reserves the right to determine if equipment/ product being bid is an acceptable alternate. All goods shall be new unless otherwise so stated in the bid. Any unsolicited alternate bid, or any changes, insertions, or omissions to the terms and conditions, specifications, or any other requirements of the bid, may be considered non-responsive.

14. DELIVERY.

Bids shall include all charges for delivery, packing, crating, containers, etc. Unless otherwise stated by the bidder (in writing on the included Bid Form), prices bid will be considered as being based on F.O.B. destination/delivered freight included.

15. INTERPRETATION OF BID AND/OR CONTRACT DOCUMENTS.

All inquiries shall be made within a reasonable time prior to the date and time fixed for the bid opening, in order that a written response in the form of an addendum, if required, can be processed before the bids are opened. Inquiries received that are not made in a timely fashion may or may not be considered.

16. CURRENCY.

Prices calculated by the bidder shall be stated in U.S. dollars.

17. PRICING.

Prices shall be stated in units of quantity specified in the bid documents. In case of discrepancy in computing the amount of the bid, the unit price shall govern.

18. NOTICE TO PROCEED/PURCHASE ORDER.

The successful bidder may not commence work under this contract until authorized to do so by the Purchasing Agent.

19. CERTIFICATION.

By signing the offer section of the Offer and Acceptance page, Bidder certifies:

- The submission of the offer did not involve collusion or other anti-competitive practices.

- The Bidder has not given, offered to give, nor intends to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to any public servant in connection with the submitted offer.

- The Bidder hereby certifies that the individual signing the bid is an authorized agent for the Bidder and has the authority to bind the Bidder to the contract.

20. DEFINITIONS.

"County" – Jefferson County, Texas.
"Contractor" – The Bidder whose proposal is accepted by Jefferson County.

21. MINORITY-OWNED (MWBE), WOMEN-OWNED (WBE) AND HISTORICALLY UNDERUTILIZED (HUB) BUSINESS ENTERPRISE PARTICIPATION.

It is the desire of Jefferson County to increase the participation of Minority-Owned (MBE) , Women-Owned (WBE), and Historically Underutilized (HUB) business enterprises in its contracting and procurement programs. While the County does not have any preference or set aside programs in place, it is committed to a policy of equitable participation for these firms.

SECTION 2: FEDERAL MANDATED CONTRACT PROVISIONS

Some or all of the provisions in this section will be incorporated into a professional service agreement as a result of this solicitation.

Breach of Contract Terms / Remedies

Source: 2 CFR § 200 Appendix II (A)

Applicability: This provision requires Jefferson County, as the Airport Sponsor, to incorporate administrative, contractual, or legal remedies if contractor/consultant violate or breach contract terms. The sponsor must also include appropriate penalties and sanctions. Language acceptable to meet the intent of this requirement will be included in contractual documents.

This requirement applies to all FEMA grant and cooperative agreement programs

Contract Types: This provision is required for all contracts that exceed the simplified acquisition threshold as stated in 2 CFR § 200, Appendix II (A). This threshold is occasionally adjusted for inflation and is now equal to $150,000.

Termination of Contract (for Cause and Convenience)

Source: 2 CFR § 200 Appendix II (B)

FAA Advisory Circular 150/5370-10, Section 80-09

Applicability: This provision requires Jefferson County, as the Airport Sponsor, to incorporate in all contracts over $10,000, a provision that addresses termination for cause and termination for convenience, by the sponsor. The contractual provision must address the manner by which the sponsor's contract will be affected and the basis for settlement. Language acceptable to meet the intent of this requirement will be included in contractual documents.

This requirement applies to all FEMA grant and cooperative agreement programs.

Contract Types: This provision is required for all contracts that exceed $10,000.

Equal Employment Opportunity

Source: 2 CFR § 200 Appendix II (C) 41 CFR § 60-1.4

Executive Order 11246 41 CFR § 60-4.3

Applicability: The purpose of this provision is to provide equal opportunity for all persons, without regard to race, color, religion, sex, or national origin who are employed or seeking employment with contractors performing under a federally assisted construction contract. There are two provisions, a construction clause, and a specification clause.

The equal opportunity contract clause must be included in any contract or subcontract when the amount exceeds $10,000. Once the equal opportunity clause is determined to be applicable, the contract or subcontract must include the clause for the remainder of the year, regardless of the amount of the contract.

This requirement applies to all FEMA grant and cooperative agreement programs.

Contract Types: This provision is required for all contracts that exceed $10,000.

Use of Provision: 41 CFR 60-1.4 provides the mandatory **contract** language. 41 CFR 60-4.3 provides the mandatory **specification** language. The sponsor will incorporate these clauses without modification.

Note: Any contracts resulting from this RFQ will have the requisite language as set forth in 2 CFR 200 App II, 41 CFR 60-1.4, 41 CFR 60-4.3, and Executive Order 11246.

Davis-Bacon Requirements

Source: 2 CFR § 200 Appendix II (D)

29 CFR Part 5

Applicability: The Davis-Bacon Act ensures that laborers and mechanics employed under the contract receive pay no less than the locally prevailing wages and fringe benefits as determined by the Department of Labor.

For Professional Services: The emergence of different project delivery methods has created situations where Professional Service Agreements (PSAs) includes tasks that meet the definition of construction, alteration, or repair as defined in 29 CFR Part 5. If such tasks result in work that qualifies as construction, alteration, or repair and it exceeds $2,000, the PSA must incorporate this clause.

Use of Provision: 29 CFR 5 establishes the specific language the sponsor must use without modification. A/E firms that employ laborers and mechanics on a task that meets the definition of construction, alteration, or repair are acting as a contractor. The sponsor may not substitute the term "Contractor" for "Consultant" in such instances.

Copeland Anti-Kickback

Source: 2 CFR § 200 Appendix II (D)

29 CFR Part 3 & Part 5

Applicability: The Copeland Act (18 USC 874 and 40 USC 3145) makes it unlawful to induce by force, intimidation, threat of dismissal from employment, or by any other manner, any person employed in the construction or repair of public buildings or public works, financed in whole or in part by the United States, to give up any part of the compensation to which that person is entitled under a contract of employment. The Copeland Act also requires each contractor and subcontractor to furnish weekly a statement of compliance with respect to the wages paid each employee during the preceding week.

It DOES NOT apply to the FEMA Public Assistance Program.

For Professional Services: The emergence of different project delivery methods has created situations where Professional Service Agreements (PSAs) includes tasks that meet the definition of construction, alteration, or repair as defined in 29 CFR Part 5. If such tasks result in work that qualifies as construction, alteration, or repair and it exceeds $2,000, the PSA must incorporate the Copeland Anti-kickback provision.

Use of Provision: 29 CFR 5 establishes the specific language the sponsor must use without modification. A/E firms that employ laborers and mechanics on a task that meets the definition of construction, alteration, or repair are acting as a contractor. The sponsor may not substitute the term "Contractor" for "Consultant" in such instances.

Contract Workhours and Safety Standards Act Requirements

Source: 2 CFR § 200 Appendix II (E) 29 CFR Part 5

40 U.S.C. § 3701-3708

Applicability: Contract Workhours and Safety Standards Act Requirements (CWHSSA) requires contractors and subcontractors on covered contracts to pay laborers and mechanics employed in the performance of the contracts one and one-half times their basic rate of pay for all hours worked over 40 in a workweek and prohibits unsanitary, hazardous, or dangerous working conditions on federally assisted projects. The Wage and Hour division (WHD) within the U.S. Department of Labor (DOL) enforces the compensation requirements of this Act, while DOL's Occupational Safety and Health Administration (OSHA) enforces the safety and health requirements.

Jefferson County urges all contractors, regardless of funding sources for projects, to follow all applicable Federal and State labor laws.

For Professional Services: This provision applies to professional service agreements that exceed $100,000 and employs laborers, mechanics, watchmen, and guards This includes members of survey crews and exploratory drilling operations.

Use of Provision: The following text will be included in applicable contracts without modification:

1. *Overtime requirements.* No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. *Violation; liability for unpaid wages; liquidated damages.* In the event of any violation of the clause set forth in paragraph (1) of this clause, the Contractor, and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this section, in the sum of $27.00 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this clause.

3. *Withholding for unpaid wages and liquidated damages.* Jefferson County shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this clause.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this clause.

Rights to Inventions

Source: 2 CFR § 200 Appendix II (F)

37 CFR § 401

Applicability: This provision applies to all contracts and subcontracts with small business forms or nonprofit organizations that include performance of *experimental, developmental, or research work*. This clause is not applicable to construction, equipment, or professional service contracts unless the contract includes *experimental, developmental, or research work*. This requirement applies to "funding agreements," but it DOES NOT apply to the Public Assistance, Hazard Mitigation Grant Program, Fire Management Assistance Grant Program, Crisis Counseling Assistance and Training Grant Program, Disaster Case Management Grant Program, and Federal Assistance to Individuals and Households – Other Needs Assistance Grant Program, as FEMA awards under these programs do not meet the definition of "funding agreement."

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of Appendix II to 2 CFR part 200.

Clean Air and Water Pollution Control

Source: 2 CFR § 200 Appendix II (G)

29 CFR Part 5

Applicability: This provision is required on all contracts and lower tier contracts that exceed $150,000.

Use of Provision: The following language will be included in applicable contracts:

1. Contractor agrees to comply with all applicable standards, orders, and regulations pursuant to the Clean Air Act (42 U.S.C. § 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. § 12S1-13870). The contractor agrees to report any violation to the owner immediately upon discovery. The owner assumes responsibility for notifying the EPA and the FAA.

Debarment and Suspension

Source: 2 CFR Part 180 (Subpart C) 2 CFR Part 3000

2 CFR Part 1200 DOT Order 4200.5

Applicability: Required in all FEMA grant and cooperative agreement programs, regardless of amount. This requirement applies to covered transactions as defined in 2 CFR part 180. AIP funded contracts are non-procurement transactions as defined by §180.970. Covered transactions include any AIP-funded contract, regardless of tier, that is awarded by a contractor, subcontractor, supplier, consultant, or its agents or representative in any transaction, if the amount of the contract is expected to equal or exceed $25,000. Jefferson County must verify that the firm or individual that is entering into a contract with is not presently suspended, excluded, or debarred by any Federal department or agency from participating in federally assisted projects. This is accomplished by:

1. Checking SAM.gov to verify the firm's or individual's status;
2. Collecting a certification from the firm or individual that is not suspended, debarred, or excluded; and
3. Incorporating a clause into the contract that requires lower tier contracts to verify that no suspended, debarred, or excluded firm or individual is included in the project.

See **Error! Reference source not found.**, Paragraph **Error! Reference source not found.** above for more information on SAM.gov.

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of Appendix II to 2 CFR part 200.

Lobbying and Influencing Federal Employees

Source: 2 CFR § 200 Appendix II (J) 31 USC § 1352 – Byrd Anti-Lobbying Amendment

49 CFR Part 20, Appendix A 44 CFR Part 18

Applicability: This requirement applies to all FEMA grant and cooperative agreement programs. Consultants and contractors that apply or bid an award of $100,000 or more must certify that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant, or another award covered by 31 USC 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award.

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of Appendix II to 2 CFR part 200 Appendix (J) and 31 USC 1352.

If applicable, contractors ***must sign and submit*** to Jefferson County the **"Certification Regarding Lobbying"** Form included in this bid specification.

Procurement of Recovered Materials

Source: 2 CFR § 200 Appendix II (J) Solid Waste Disposal Act

40 CFR Part 247 2 CFR § 200.322

Applicability: Sponsors of AIP funded development and equipment projects must comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. Section 6002 emphasizes maximizing energy and resource recovery through use of affirmative procurement actions for recovered materials identified in the EPA guidelines. When acquiring items designated in the guidelines, the sponsor must procure items that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition.

This requirement applies to:

- All contracts awarded by a non-Federal entity under FEMA grant and cooperative agreement programs.
- All construction and equipment projects.
- Any contract, professional and property acquisition, that includes procurement of a product that exceeds $10,000.

Information about this requirement, along with the list of EPA designated items, is available at EPA's Comprehensive Procurement Guidelines website:

https://www.epa.gov/smm/comprehensiveprocurement-guideline-cpg-program.

The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act." The Uniform Rules authorize FEMA to require additional provisions for non-Federal entity contracts.

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of Appendix II to 2 CFR part 200.

Access to Records and Reports

Source: 2 CFR § 200.333 FAA Order 5100.38

2 CFR § 200.336

Applicability: 2 CFR § 200.333 requires a sponsor to retain records pertinent to a federal award for a period of three years from submission of final closure documents. 2 CFR § 200.336 establishes that sponsors must provide Federal entities the right to access records pertinent to the Federal award. FAA policy extends these requirements to the sponsor's contracts and subcontracts of AIP funded projects.

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of Appendix II to 2 CFR part 200. The following will be in applicable contracts:

1. The contractor must maintain an acceptable cost accounting system. The Contractor agrees to provide the local/state/federal entity providing funding for this project, the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions.
2. The contractor agrees to maintain all books, records and reports required under this contract for a period of not less than three years after final payment is made and all pending matters have been resolved.
3. The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.

4. The Contractor agrees to provide the FEMA Administrator or their representatives access to construction or other work sites pertaining to the work being completed under the contract.
5. In compliance with the Disaster Recovery Act of 2018, the County and the Contractor acknowledge and agree that no language in this contract is intended to prohibit audits or internal reviews by the FEMA Administrator or the Comptroller General of the United States.

Affirmative Action Requirement

Source: 41 CFR Part 60-4 FAA Order 5100.38

Executive Order 11246

Applicability: Sponsors are required to set goals for minority participation in AIP funded projects exceeding $10,000. The goals for minority participation derive from Economic Area (EA) and Standard Metropolitan Statistical Area (SMSA) as established in Volume 45 of the Federal Register dated 10/03/80. Page 65984 contains a table of all EAs and SMSAs and the associated minority participation goals.

Executive Order 11246 has set a goal of 6.9% nationally for female participation for all construction projects. This value remains constant for all counties and states.

Contract Types:

- Construction: The sponsor must incorporate this notice in all solicitations for bids or requests for proposals for AIP funded construction work contracts and subcontracts that exceed $10,000.
- Equipment: The sponsor must incorporate this notice in all solicitations for equipment project exceeding $10,000 that involves installation of equipment onsite (e.g. electrical vault equipment, generators). This provision does not apply to equipment acquisition projects where the manufacturer of the equipment takes place offsite at a manufacturer's plant (e.g. firefighting and vehicles).
- Professional Services: The sponsor must incorporate this notice in any professional service agreement if the agreement includes tasks that meet the definition of construction work, as defined by the DOL, and exceeds $10,000.

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of 41 CFR Part 60-4. The following will be in applicable contracts:

Solicitation Clause:
Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

a.	Goals for minority participation for each trade: (10/3/80)	Vol. 45 Federal Register pg. 65984
b.	Goals for female participation in each trade:	6.90%

These goals are applicable to all of the contractor's construction work, whether or not it is federal or federally assisted, performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR Part 60-4.3(a) and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project for the sole purpose of meeting the contractor's goals shall be a violation of the contract, the Executive Order, and the regulations in 41 CFR Part 60-4. Compliance with these goals will be measured against the total work hours performed.

The contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs (OFCCP) within 10 working days of award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of these subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

As used in this notice and in the contract resulting from this solicitation, the covered area is Texas, Jefferson County, Beaumont.

Buy American Preferences

Source: 49 USC § 50101

Applicability: the buy American preference requirement in 49 USC § 50101 requires that all still in manufactured goods used on AIP projects be produced in the United States. This statute gives the FAA the ability to issue a waiver to a sponsor to use non-domestic material on an AIP funded project subject to meeting certain conditions a sponsor may request that the FAA issue a waiver from the by American preference requirements if the FA finds that:

1. Applying the provision is not in the public interest;
2. The steel or manufactured goods are not available in sufficient quantity or quality in the United States;
3. The cost of components in subcomponents produced in the United States is more than 60% of the total components of a facility or equipment, and final assembly has taken place in the United States. Items that have an FAA standard specification item number, such as specific airport lighting equipment, are considered the equipment.

4. Applying this provision would increase the cost of the overall project by more than 25%.

For construction and equipment procurement projects, language, forms, and references to 49 USC § 50101 will be included in the solicitation.

Professional Service Agreements typically do not result in a deliverable that meets the definition of a manufactured product. If a PSA includes providing a manufactured good as a deliverable under the contract, the sponsor must include the Buy American Preference provision in the agreement.

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of 49 USC § 50101.

Civil Rights

Source:	49 USC § 47123	Title VI of the Civil Rights Act of 1964
	FAA Order 1400.11	US DOT Order 1050.2

Applicability: Title VI of the Civil Rights Act of 1964, as amended, Title VI, prohibits discrimination on the grounds of race, color, or national origin under any program or activity receiving Federal financial assistance. Sponsors must include appropriate clauses from the Standard DOT Title VI Assurances in all contracts and solicitations.

The text of each individual clause comes from the U.S. DOT Order 1050.2 Standard Title VI Assurances and Nondiscrimination Provisions, effective 04/24/2013. These assurances require the sponsor insert the appropriate clauses in the form provided by the DOT. Where the clause refers to the applicable activity, project, or program, it means the AIP project.

TITLE VI SOLICITATION NOTICE

Jefferson County, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 USC § 2000d to 2000d-4) and the Regulations, hereby notifies all bidders or offerors that it will affirmatively ensure that any contract entered into pursuant to this advertisement, Disadvantaged Business Enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

Title VI List of Pertinent Nondiscrimination Acts and Authorities

During the performance of any contract as a result of this bid, the Contractor, for itself, its assignees, and successors in interest, hereinafter referred to as the Contractor, agrees to comply with the following non-discrimination statutes and authorities, including but not limited to:

- Title VI of the Civil Rights Act of 1964
- 49 CFR part 21
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970
- Section 504 of the Rehabilitation Act of 1973
- The Age Discrimination Act of 1975
- Airport and Airway Improvement Act of 1982
- The Civil Rights Restoration Act of 1987
- Titles II and III of the Americans with Disabilities Act of 1990
- The Federal Aviation Administration's Nondiscrimination Statute
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency
- Title IX of the Education Amendments of 1972

Disadvantaged Business Enterprise

Source: 49 CFR part 26

Applicability: A sponsor that anticipates awarding $250,000 or more in AIP funding prime contracts in a federal fiscal year must have an approved Disadvantaged Business Enterprise (DBE) program on file with the FAA Office of Civil Rights (§26.21). The approved DBE program will identify a 3-year overall program goal that the sponsor bases on the availability of ready, willing, and able DBEs relative to all businesses ready, willing, and able to participate on the project. (§26.45).

Sponsors with a DBE program on file with the FAA must include the three following provisions, if applicable:

- Clause in all solicitations for proposals for which a contract goal has been established;
- Clause in each prime contract, and;
- Clause in solicitations that are obtaining DBE participation through race/gender neutral means.

As a condition of bid responsiveness, the Bidder or Offeror must submit the following information with its proposal on the forms provided herein:

1. Names and addresses of the DBE firms that will participate in the contract;
2. A description of the work each DBE firm will perform;
3. Percentage/dollar amount of the participation of each DBE firm listed under 1.
4. Written statement from Bidder or Offeror that attests their commitment to use the DBE firm(s) listed under (1) to meet the Owner's project goal; and

5. If Bidder or Offeror cannot meet the advertised project DBE goal, evidence of good faith efforts undertaken by the Bidder or Offeror as described in 49 CFR part 26 Appendix A

The requirements of 49 CFR part 26 apply to this contract. It is the policy of Jefferson County to practice nondiscrimination based on race, color, sex, or national origin in the award or performance of this contract. Jefferson County encourages participation by all firms qualifying under this solicitation regardless of business size or ownership.

DBE Contract Assurances

Contracts as a result of this bid will include contract assurances per §26.13, if applicable:

The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 and the award and administration of Department of Transportation-assisted contracts. Failure by contractor to carry out these requirements is a material breach of this contract which may result in the termination of this contract or such other remedy as the owner deems appropriate, which may include but is not limited to:

1. Withholding monthly progress payments;
2. Accessing sanctions;
3. Liquidated damages; and/or
4. Disqualifying the Contractor from future bidding as non-responsible.

Prompt Payment (§26.29) – The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than 30 days from the receipt of each payment the prime contractor receives from Jefferson County. The prime contractor agrees further to return retainage payments to each subcontractor within 30 days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of Jefferson County. This clause applies to both DBE and non-DBE subcontractors.

Distracted Driving

Source: Executive Order 13513 2 CFR §200.67

DOT Order 3902.10

Applicability: The FAA encourages recipients of federal grant funds to adopt and enforce safety policies that decrease crashes by distracted drivers, including policies to ban text messaging while driving when performing work related to a grant or subgrant.

Use of Provision: The following clause will be included in all Federally assisted contracts regardless of amount:

In accordance with executive order 13513, federal leadership on reducing text messaging while driving, Andy OT order 3902.10, text messaging while driving, the FAA encourages recipients of Federal grant funds to adopt and enforce safety policies that decrease crashes by distracted drivers including policies to ban text messaging while driving when performing work related to a grant or subgrant.

In support of this initiative, Jefferson County encourages the contractor to promote policies and initiatives for its employees and other work personnel that decrease crashes by distracted drivers, including policies that ban text messaging while driving motor vehicles Papa forming work activities associated with the project. The contractor must include the substance of this clause and other sub tier contracts exceeding $3,500 that involve driving a motor vehicle and performance of work activities associated with the project.

Compliance with Federal Law, Regulations, and Executive Orders

The recipient and its contractors are required to comply with all Federal laws, regulations, and executive orders.

Applicability: FEMA recommends that all non-Federal entities place into their contracts an acknowledgement that FEMA financial assistance will be used to fund the contract along with the requirement that the contractor will

SECTION 3: SPECIAL REQUIREMENTS/BID SUBMISSION INSTRUCTIONS

The following requirements and instructions **supersede** General Requirements where applicable.

3.1 SUBMISSION OF BID.

Bidder is Responsible for Submitting:

One (1) Original and Two (2) Bid Copies; with all copies to include a Completed Copy of this specifications packet, in its entirety.

The County requests that bid submissions NOT be bound by staples or glued spines.

Each Bidder shall ensure that required parts of their bid submission are completed with accuracy and submitted as per the requirements within this specifications packet, including any addenda.

Additionally, Bidder shall monitor the Jefferson County Purchasing Department Website for any addenda, additional instructions, or bid updates. https://www.co.jefferson.tx.us/Purchasing/

Failure to return and/or complete all required documentation will result in a response being declared as non-responsive.

Bids must be submitted in complete original form by mail or messenger to the following address:
Jefferson County Purchasing Department
1149 Pearl Street, 1st Floor
Beaumont, TX 77701

Bid Packaging: Bidder shall submit response in a tightly sealed opaque envelope or box, plainly marked "SEALED BID." The outside of the envelope of box shall also include the IFB Number, IFB Name, IFB Due Date, and the Bidder's Name and Address; and shall be addressed to the Purchasing Agent.

All submissions must be received by 11:00 am CT, Wednesday, August 24, 2022.

Late bids will not be accepted and will be returned unopened to the Bidder.

Bids will be accepted at the above address until the time and date specified herein, and immediately after will be publicly opened and read aloud.

Jefferson County will not accept any responsibility for bids being delivered by third party carriers.

Jefferson County shall not be responsible for any effort or cost expended in the preparation of a response to this IFB.

All bid responses submitted in response to this invitation shall become the property of Jefferson County and will be a matter of public record available for review.

All protests should be coordinated through the Purchasing Office prior to award recommendation to Commissioners' Court.

Please direct questions to Jamey West, Contract Specialist via e-mail at: jwest@co.jefferson.tx.us

3.2 COURTHOUSE SECURITY.

All visitors to the Courthouse must pass through Security. Respondents planning to hand deliver proposals must allow time to get through Security, as a delay in entering the Courthouse will not be accepted as an excuse for late submittal. Mondays and Tuesdays are particularly heavy days.

In response to the Covid-19 pandemic, Jefferson County has implemented precautionary measures as currently recommended by the CDC within its facilities. Bidders are strongly urged to plan accordingly.

COUNTY HOLIDAYS (2022)

~~**January 17, 2022,**~~	~~Martin Luther King, Jr. Day~~	~~Monday~~
~~**February 21, 2022,**~~	~~President's Day~~	~~Monday~~
~~**April 15, 2022,**~~	~~Good Friday~~	~~Friday~~
~~**May 30, 2022,**~~	~~Memorial Day~~	~~Monday~~
~~**July 4, 2022,**~~	~~Independence Day~~	~~Monday~~
September 5, 2022,	Labor Day	Monday
November 11, 2022,	Veteran's Day	Friday
November 24 & 25, 2022	Thanksgiving	Thursday & Friday
December 23 & 26, 2022	Christmas	Friday & Monday
January 2, 2023,	New Year's	Monday

Submissions During Time of Inclement Weather, Disaster, or Emergency:

In case of inclement weather or any other unforeseen event causing the County to close for business on the date of a bid/proposal/statement of qualifications submission deadline, the RFQ closing will automatically be postponed until the next business day that County offices are open to the public. Should inclement weather conditions or any other unforeseen event cause delays in courier service operations, the County may issue an addendum to all known vendors interested in the project to extend the deadline. It will be the responsibility of the vendor to notify the county of their interest in the project should these conditions impact their ability to submit a bid/proposal/statement of qualifications submission before the stated deadline. The County reserves the right to make the final judgement call to extend any deadline.

Should an emergency or unanticipated event interrupt normal County processes, and bid/proposal/statement of qualifications submissions cannot be received by the Jefferson County Purchasing Department's office by the exact time specified in the RFQ and urgent County requirements preclude amendment to the RFQ, the time specified for receipt of Statements of Qualifications will be deemed to be extended to the same time of day specified in the solicitation on the first business day on which normal County processes resume.

3.3 PRE-BID MEETING AND WALK-THROUGH.

There will be a Pre-Bid Conference and Walk-Through at 2:00 PM CT on Thursday, August 4, 2022, at the Airport Administration Conference Room located at 5000 Jerry Ware Blvd. Beaumont, Texas 77705. This conference will be the Bidder's only opportunity to view secured areas of the project.

3.4 QUESTIONS/DEADLINE FOR QUESTIONS.

Questions may be emailed to **Jamey West, Contract Specialist** at: jwest@co.jefferson.tx.us The Deadline for asking questions or requesting additional information (in writing) **is 5:00 pm CT, Monday, August 15, 2022.**

3.5 VENDOR REGISTRATION: SYSTEM FOR AWARD MANAGEMENT.

Vendors doing business with Jefferson County are **required** to be registered with The System for Award Management (SAM), with an "active" status. The System for Award Management (SAM) is the Official U.S. Government system that consolidated the capabilities of CCR/FedReg, ORCA, and EPLS. There is NO fee to register for this site. Entities may register at no cost directly from the SAM website at: https://www.sam.gov

In instances where a vendor has either an "Inactive" SAM Registration or is not currently registered with the System for Award Management, the Purchasing Department may *initially* accept proof (printout from the SAM website) that the vendor has begun the registration process in order for the IFB/RFQ/RFP submission to be considered as "responsive" to the specifications for the project.

However, the SAM Registration must be completed (showing "active" status, with no exclusions) prior to the award and/or execution of an agreement or contract for the project.

3.6 FORM 1295 (Texas Ethics Commission) SUBMISSSION REQUIREMENT/INSTRUCTIONS FOR BIDDERS.

All Non-Exempt Bidders are required to submit a completed FORM 1295 with bid submission.

1. Submit a FORM 1295 online via the Texas Ethics Commission website link below.
Vendors must enter the required information on Form 1295 and print o copy of the completed form.
The farm will include a certification of filing that will contoin a unique certification number.

2. Submit a FORM 1295 hard copy (completed & signed by an Authorized Agent of the Awarded Vendor), to the Jefferson County Purchasing Department **with bid submission.**

FORM 1295, Completion Instructions, and Login Instructions are available via the Texas Ethics Commission Website at: https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm

A sample of a completed FORM 1295 is included on **PAGE 30**.

FORM 1295 Implementation Background:

In accordance with House Bill 1295 (passed January 1, 2016), Vendors entering into contracts and professional agreements with Jefferson County will be required to complete a Certificate of Interested Parties (FORM 1295), **unless contract is considered exempt as described below.**

In 2017, the Texas legislature amended the law to require Form 1295 to include an "unsworn declaration" which includes, among other things, the date of birth and address of the authorized representative signing the form. The unsworn declaration, including the date of birth and address of the signatory, replaces the notary requirement that applied to contracts entered into before January 1, 2018. The TEC filing application does not capture the date of birth or street address of the signatory and it will not appear on forms that are filed using the TEC filing application.

Changes to the law requiring certain businesses to file a Form 1295 are in effect for contracts entered into or amended on or after January 1, 2018. The changes exempt businesses from filing a Form 1295 for certain types of contracts and replace the need for a completed Form 1295 to be notarized. Instead, the person filing a 1295 needs to complete an "unsworn declaration."

Question: Will the date of birth and address provided appear on the TEC's website when the form is filed?

Answer: No. The TEC filing application does not capture the date of birth or street address of the signatory and it will not appear on forms that are filed using the TEC filing application. Although the TEC does not capture the date of birth and street address of the signatory, the contracting state agency or governmental agency will have

SAMPLE: FORM 1295

CERTIFICATE OF INTERESTED PARTIES — FORM 1295

(Complete Nos. 1 - 4 and 6 if there are interested parties.)
(Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.)

OFFICE USE ONLY

1 **Name of business entity filing form, and the city, state and country of the business entity's place of business.**

YOUR FIRM NAME HERE

2 **Name of governmental entity or state agency that is a party to the contract for which the form is being filed.**

JEFFERSON COUNTY, TEXAS

3 **Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.**

BID/CONTRACT/PO NUMBER GOES HERE

4 Name of Interested Party	City, State, Country (place of business)	Nature of Interest (check applicable)	
		Controlling	Intermediary
NAME OF PERSON/PERSONS THAT OWN BUSINESS GOES HERE. MUST LIST ANY PERSON THAT DOES NOT WORK FOR THE COMPANY LISTED IN #1 THAT WILL PROFIT FROM THE BID/CONTRACT/PO			

5 Check only if there is NO Interested Party. ☐ **ONLY CHECK IF NO CONTROLLING OR INTERMEDIARY PARTY**

6 **UNSWORN DECLARATION** Vendor is to complete #6 - Unsworn Declaration

My name is _____, and my date of birth is _____.

My address is _____, _____, _____, _____, _____.
(street) (city) (state) (zip code) (country)

I declare under penalty of perjury that the foregoing is true and correct.

Executed in _____ County, State of _____, on the _____ day of _____, 20_____.
(month) (year)

_____
Signature of authorized agent of contracting business entity
(Declarant)

ADD ADDITIONAL PAGES AS NECESSARY

Form provided by Texas Ethics Commission www.ethics.state.tx.us Revised 12/22/2017

Must file online at www.ethics.state.tx.us/File

BIDDER: INSERT COMPLETED FORM 1295 BEHIND THIS PAGE.

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY

1 **Name of business entity filing form, and the city, state and country of the business entity's place of business.** Mason Construction, LLC
Beaumont, TX United States

2 **Name of governmental entity or state agency that is a party to the contract for which the form is being filed.** Jefferson County, Texas

3 **Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.**
IFB 22-028/JW
Rehabilitation of Fuel Farm Pavement at Jack Brooks Regional Airport

4 Name of Interested Party	City, State, Country (place of business)	Nature of Interest (check applicable)	
		Controlling	Intermediary

5 **Check only if there is NO Interested Party.** [X]

6 **UNSWORN DECLARATION**

My name is _____, and my date of birth is _____.

My address is _____, _____, _____, _____, _____.
(street) (city) (state) (zip code) (country)

I declare under penalty of perjury that the foregoing is true and correct.

Executed in _____ County, State of _____, on the _____ day of _____, 20_____.
(month) (year)

_____
Signature of authorized agent of contracting business entity
(Declarant)

ADD ADDITIONAL PAGES AS NECESSARY

Form provided by Texas Ethics Commission www.ethics.state.tx.us Revised 12/22/2017

Mason is registered

Must file online at www.ethics.state.tx.us/File

BIDDER: INSERT PROOF OF SYSTEM FOR AWARD MANAGEMENT (SAM) REGISTRATION PROOF HERE.

SAM.GOV®

MASON CONSTRUCTION, LTD.

Unique Entity ID	CAGE / NCAGE	Purpose of Registration
XHZGGJVHBNS4	**3R4J2**	**All Awards**
Registration Status	Expiration Date	
Active Registration	**Nov 22, 2022**	
Physical Address	Mailing Address	
6285 Walden RD	**PO Box 20057**	
Beaumont, Texas 77707-5599	**Beaumont, Texas 77720-0057**	
United States	**United States**	

Doing Business as	Division Name	Division Number
(blank)	**(blank)**	**(blank)**
Congressional District	State / Country of Incorporation	URL
Texas 14	**Texas / United States**	**(blank)**

Registration Dates

Activation Date	Submission Date	Initial Registration Date
Sep 1, 2021	**Aug 24, 2021**	**Mar 2, 2004**

Entity Dates

Entity Start Date	Fiscal Year End Close Date
Jan 1, 1939	**Dec 31**

Immediate Owner

CAGE	Legal Business Name
(blank)	**(blank)**

Highest Level Owner

CAGE	Legal Business Name
(blank)	**(blank)**

Executive Compensation

In your business or organization's preceding completed fiscal year, did your business or organization (the legal entity to which this specific SAM record, represented by a Unique Entity ID, belongs) receive both of the following: 1. 80 percent or more of your annual gross revenues in U.S. federal contracts, subcontracts, loans, grants, subgrants, and/or cooperative agreements and 2. $25,000,000 or more in annual gross revenues from U.S. federal contracts, subcontracts, loans, grants, subgrants, and/or cooperative agreements?

No

Does the public have access to information about the compensation of the senior executives in your business or organization (the legal entity to which this specific SAM record, represented by a Unique Entity ID, belongs) through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986?

Not Selected

Proceedings Questions

Is your business or organization, as represented by the Unique Entity ID on this entity registration, responding to a Federal procurement opportunity that contains the provision at FAR 52.209-7, subject to the clause in FAR 52.209-9 in a current Federal contract, or applying for a Federal grant opportunity which contains the award term and condition described in 2 C.F.R. 200 Appendix XII?

No

Does your business or organization, as represented by the Unique Entity ID on this specific SAM record, have current active Federal contracts and/or grants with total value (including any exercised/unexercised options) greater than $10,000,000?

Not Selected

Within the last five years, had the business or organization (represented by the Unique Entity ID on this specific SAM record) and/or any of its principals, in connection with the award to or performance by the business or organization of a Federal contract or grant, been the subject of a Federal or State (1) criminal proceeding resulting in a conviction or other acknowledgment of fault; (2) civil proceeding resulting in a finding of fault with a monetary fine, penalty, reimbursement, restitution, and/or damages greater than $5,000, or other acknowledgment of fault; and/or (3) administrative proceeding resulting in a finding of fault with either a monetary fine or penalty greater than $5,000 or reimbursement, restitution, or damages greater than $100,000, or other acknowledgment of fault?

Not Selected

Active Exclusions Records?

No

I authorize my entity's non-sensitive information to be displayed in SAM public search results:

Yes

Business Types

Entity Structure	Entity Type	Organization Factors
Corporate Entity (Not Tax Exempt)	**Business or Organization**	**(blank)**

Profit Structure
For Profit Organization

Socio-Economic Types

Check the registrant's Reps & Certs, if present, under FAR 52.212-3 or FAR 52.219-1 to determine if the entity is an SBA-certified HUBZone small business concern. Additional small business information may be found in the SBA's Dynamic Small Business Search if the entity completed the SBA supplemental pages during registration.

Accepts Credit Card Payments	Debt Subject To Offset
Yes	**No**

EFT Indicator	CAGE Code
0000	**3R4J2**

Electronic Funds Transfer

Account Type	Routing Number	Lock Box Number
Checking	*******1122**	**(blank)**

Financial Institution	Account Number
FIRST FINANCIAL BANK	*******0005662**

Automated Clearing House

Phone (U.S.)	Email	Phone (non-U.S.)
4098424455	**payments@masonconstruction.net**	**(blank)**

Fax
(blank)

Remittance Address

MASON CONSTRUCTION LLC
PO Box 20057
Beaumont, Texas 77720
United States

EIN	Type of Tax	Taxpayer Name
*******5517**	**Applicable Federal Tax**	**MASON CONSTRUCTION**

Tax Year (Most Recent Tax Year)	Name/Title of Individual Executing Consent	TIN Consent Date
2020	**Accounting Manager**	**Aug 24, 2021**

Address	Signature
PO Box 20057 **Beaumont, Texas 77720**	**Theresa Webb**

Accounts Receivable POC

Theresa Webb
twebb@masonconstruction.net
4098424455

Electronic Business

Mandy Bunn
mandy@masonconstruction.net
4098424455
PO Box 20057
Beaumont, Texas 77720
United States

Chad Mason
chad@masonconstruction.net
4098424455
PO Box 20057
Beaumont, Texas 77720
United States

Government Business

Mandy Bunn
mandy@masonconstruction.net
4098424455
PO Box 20057
Beaumont, Texas 77720
United States

Le Short
le@masonconstruction.net
4098424455
PO Box 20057
Beaumont, Texas 77720
United States

Past Performance

Mandy Bunn
mandy@masonconstruction.net
4098424455
PO Box 20057
Beaumont, Texas 77720
United States

Le Short
le@masonconstruction.net
4098424455
PO Box 20057
Beaumont, Texas 77720
United States

[redacted]

Company Security Level
(blank)

Highest Level Employee Security Level
(blank)

[redacted]

NAICS Codes

Primary	NAICS Codes	NAICS Title
Yes	**237990**	**Other Heavy And Civil Engineering Construction**
	237120	**Oil And Gas Pipeline And Related Structures Construction**
	237310	**Highway, Street, And Bridge Construction**
	238110	**Poured Concrete Foundation And Structure Contractors**
	238120	**Structural Steel And Precast Concrete Contractors**
	238190	**Other Foundation, Structure, And Building Exterior Contractors**

[redacted]

IGT Size Metrics

Annual Revenue (from all IGTs)
(blank)

Worldwide

Annual Receipts (in accordance with 13 CFR 121)
$70,000,000.00

Number of Employees (in accordance with 13 CFR 121)
335

Location

Annual Receipts (in accordance with 13 CFR 121)
$70,000,000.00

Number of Employees (in accordance with 13 CFR 121)
223

Industry-Specific

Barrels Capacity
(blank)

Megawatt Hours
(blank)

Total Assets
(blank)

[redacted]

This entity did not enter the EDI Information

[redacted]

Yes, this entity appears in the disaster response registry.

No, this entity does not require bonding to bid on contracts.

Bonding Levels	Dollars
	(blank)

States	Counties	Metropolitan Statistical Areas
Louisiana	**(blank)**	**(blank)**
Texas		

Corporations Section
P.O.Box 13697
Austin, Texas 78711-3697

David Whitley
Secretary of State

Office of the Secretary of State

CERTIFICATE OF CONVERSION

The undersigned, as Secretary of State of Texas, hereby certifies that a filing instrument for

MASON CONSTRUCTION, LTD.
File Number: 14047010

Converting it to

Mason Construction, LLC
File Number: 803239139

has been received in this office and has been found to conform to law. ACCORDINGLY, the undersigned, as Secretary of State, and by virtue of the authority vested in the secretary by law, hereby issues this certificate evidencing the acceptance and filing of the conversion on the date shown below.

Dated: 02/14/2019

Effective: 03/01/2019

David Whitley
Secretary of State

3.7 MULTIPLE VENDOR AWARD.

Jefferson County reserves the right to award this contract to more than one vendor at the County's discretion.

3.8 DELIVERY.

If delivery is required, all items must be packaged so as to be protected from damage during shipping and handling. Any item(s) damaged in shipping must be replaced in kind, or repaired, by the contractor, at the discretion of, and at no additional charge to, Jefferson County.

3.9 PAYMENT.

Jefferson County will pay original invoices that clearly itemize the goods and/or services provided as to quantity, part number, description, price, applicable discount (if any), labor charges showing time differential, if applicable and if previously agreed to, and delivery, installation, and set-up costs, if applicable and if previously agreed to. Only charges as stated on the Bid Form(s) submitted as a part of the bid will be considered.

Invoices must indicate Jefferson County as applicable, the address to which the product(s) and/or service(s) were delivered, and the applicable purchase order number. Invoices will be matched to delivery tickets prior to payment; therefore, all delivery tickets should have an accurate description of the product(s) and/or service(s).

Invoices shall be submitted to:
Jefferson County Auditing Department
Attention: Accounts Payable
1149 Pearl Street, 7th floor Beaumont,
TX 77701.

3.10 USAGE REPORTS.

Jefferson County reserves the right to request, and receive at no additional cost, up to two (2) times during the contract period, a usage report detailing the products and/or services furnished to date under a contract resulting from this IFB. The reports must be furnished no later than five (5) working days after written request and itemize all purchases to date by Jefferson County department, description of each item purchased, including manufacturer, quantity of each item purchased, per unit and extended price of each item purchased, and total amount and price of all items purchased.

3.11 INSURANCE.

The contractor (including any and all subcontractors as defined in Section 3.12.3 below) shall, at all times during the term of this contract, maintain insurance coverages with not less than the type and requirements shown below. Such insurance is to be provided at the sole cost of the contractor. These requirements do not establish limits of the contractor's liability.

All policies of insurance shall waive all rights of subrogation against the County, its officers, employees, and agents; a copy of the policy wording or endorsement is required.

Contractor shall furnish Jefferson County with Certificate of Insurance naming Jefferson County as additional insured and will provide the actual policy wording or endorsement showing as such.

All insurance must be written by an insurer licensed to conduct business in the State of Texas.

Minimum Insurance Requirements:

Public Liability, including Products & Completed Operations	$1,000,000
Excess Liability	$1,000,000

Property Insurance (policy below that is applicable to this project):
Improvements & Betterments Policy: Improvements/Remodeling (for Lease Tenants)
Builder's Risk Policy: Structural Coverage for Construction Projects
Installation Floater Policy: Improvements/Alterations to Existing Structure

Workers' Compensation Statutory Coverage (See Section 9 Below)

3.12 WORKERS' COMPENSATION INSURANCE.

3.12.1 Definitions:

3.12.1.1 **Certificate of coverage ("Certificate")** – A copy of a certificate of insurance, a certificate of authority to self-insure issued by the commission, or a coverage agreement, DWC-81, DWC-82, DWC-83, or DWC-84 showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.

3.12.1.2 **Duration of the project** – Includes the time from the beginning of the work on the project until the contractor's/person's work on the project has been completed and accepted by the governmental entity.

3.12.1.3 **Persons providing services on the project ("subcontractor") in article 406.096** – Includes all persons or entities performing all or part of the services under the contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the contractor and regardless of whether that person has employees. This includes, without limitation, independent contractors, subcontractor, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the project. "Services" includes, without limitation, providing, hauling, or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

3.12.2 The Contractor shall provide coverage, based on proper reporting of classification code and payroll amounts and filing any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the contractor providing services on the project, for the duration of the project.

3.12.3 The Contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract – **refer to Section 3.11 above**.

3.12.4 If the coverage period shown on the Contractor's current certificate of coverage ends during the duration of the project, the Contractor must, prior to the end of the coverage period, file a new certificate of coverage with the governmental entity showing that coverage has been extended.

3.12.5 The Contractor shall obtain from each person providing services on a project, and provide to the governmental entity:

3.12.5.1 A certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and

3.12.5.2 No later than seven (7) days after receipt by the Contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate ends during the duration of the project.

3.12.6 The Contractor shall retain all required certificates of coverage for the duration of the project and for one (1) year thereafter.

3.12.7 The Contractor shall notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.

3.12.8 The Contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Department of Workers' Compensation, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.

3.12.9 The Contractor shall contractually require each person with whom it contracts to provide services on a project to:

3.12.9.1 Provide coverage, based on reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all its employees' providing services on the project, for the duration of the project.

3.12.9.2 Provide to the Contractor, prior to that person beginning work on the project a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project.

3.12.9.3 Provide the Contractor, prior to the end of coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.

3.12.9.4 Obtain from each person with whom it contracts, and provide to the Contractor:

3.12.9.4.1 A certificate of coverage, prior to the other person beginning work on the project; and

3.12.9.4.2 the coverage period, if the coverage period shown on the current certificate of a new certificate of coverage showing extension of coverage, prior to the end of coverage ends during the duration of the project.

3.12.9.5 Retain all required certificates of coverage on file for the duration of the project and for one (1) year thereafter.

3.12.9.6 Notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and

3.12.9.7 Contractually require each person with whom it contracts to perform as required by paragraphs **3.12.1. – 3.12.7**, with the certificates of coverage to be provided to the person for whom they are providing services.

3.12.10 By signing this contract or providing or causing to be provided a certificate of coverage, the Contractor is representing to the governmental entity that all employees of the contractor who will provide services of the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.

3.12.11 The Contractor's failure to comply with any of these provisions is a breach of contract by the Contractor which entitles the governmental entity to declare the contract void if the Contractor does not remedy the breach within ten (10) days after receipt of notice of breach from the governmental entity.

BIDDER: INSERT COPY OF CERTIFICATE OF INSURANCE (COI) BEHIND THIS PAGE.

Note: For bid purposes, a general COI will suffice.

However, a COI that includes the notation that "Jefferson County as an additional insured" will be required from Awarded Bidder(s) prior to the issuance of a Purchase Order.

ACORD®

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 2/24/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Higginbotham Insurance Agency
PO Box 1609
Nederland TX 77627

CONTACT NAME: Victoria Stansbury
PHONE (A/C, No, Ext): 409-721-6400 FAX (A/C, No): 409-721-9600
E-MAIL ADDRESS: vstansbury@higginbotham.net

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Westchester Surplus/Ace American Ins Co A++ XV	10172
INSURER B : Crum & Forster Specialty Ins Co A XIV	44520
INSURER C : Mt Hawley Ins Co A+ XII	37974
INSURER D : Texas Mutual Ins Co A XV	22945
INSURER E : Argonaut Ins Co A XIV	19801
INSURER F : Markel American Ins Co A XV	28932

INSURED MASON11
Mason Construction LLC
Mason Construction Ltd
P O Box 20057
(Phys: 6285 Walden Rd, Beaumont TX 77707)
Beaumont TX 77720

COVERAGES **CERTIFICATE NUMBER:** 1487083116 **REVISION NUMBER:** 1

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY			G71494342-004	3/1/2022	3/1/2023	EACH OCCURRENCE	$ 1,000,000
	[ ] CLAIMS-MADE [X] OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 400,000
	X 5,000						MED EXP (Any one person)	$ 5,000
	X $2M/$5M Agg Cap						PERSONAL & ADV INJURY	$ 1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$ 2,000,000
	[ ] POLICY [X] PRO-JECT [ ] LOC						PRODUCTS - COMP/OP AGG	$ 2,000,000
	X OTHER: Contractors Poll						Contractor Pollution	$ 1,000,000
A	AUTOMOBILE LIABILITY			H08461491-007	3/1/2022	3/1/2023	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	X ANY AUTO						BODILY INJURY (Per person)	$
	[ ] ALL OWNED AUTOS [ ] SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	X HIRED AUTOS X NON-OWNED AUTOS						PROPERTY DAMAGE (Per accident)	$
								$
B C	[ ] UMBRELLA LIAB X OCCUR			SEO117384 - $5MM Primary	3/1/2022	3/1/2023	EACH OCCURRENCE	$ 5,000,000
	X EXCESS LIAB [ ] CLAIMS-MADE			NRX0001079 $5MM XS of $5MM	3/1/2022	3/1/2023	AGGREGATE	$ 5,000,000
	[ ] DED [ ] RETENTION $						$5MM XS of $5MM	$ 5,000,000
D E	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y/N			0001221315 (Texas)	3/1/2022	3/1/2023	X PER STATUTE [ ] OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? [Y] N/A (Mandatory in NH)			92-884-835290-4 (Other States)	3/1/2022	3/1/2023	E.L. EACH ACCIDENT	$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	$ 1,000,000
F	See Remarks for: -Leased/Rented Equipt. -Riggers Liability			MKLM4IM0052718	3/1/2022	3/1/2023	See Remarks for: -Leased/Rented Equipt -Riggers Liability	750,000/$2,800,000 750,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
As required by written contract & subject to policy terms & conditions the following policies provide coverage as stated:

General Liability & Contractors Pollution policies provide:
-Blanket Additional Insurad for ongoing & completed operations (CG2037 10/01; CG2010 10/01; ENV3100 08/04; ENV-3228 10/06)
-Blanket Waiver of Subrogation (ENV3143 03/05)
-General Liability & Contractors Pollution Coverages are Primary & Noncontributory (ENV3101 08/04)

General Liability & Contractors Pollution policies (continued):
See Attached...

CERTIFICATE HOLDER

SAMPLE FOR INFORMATION ONLY

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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AGENCY CUSTOMER ID: MASON11

LOC #:

ACORD®

ADDITIONAL REMARKS SCHEDULE

AGENCY	NAMED INSURED
Higginbotham Insurance Agency	Mason Construction LLC Mason Construction Ltd P O Box 20057 (Phys: 6285 Walden Rd, Beaumont TX 77707) Beaumont TX 77720
POLICY NUMBER	
CARRIER / NAIC CODE	EFFECTIVE DATE:

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,

FORM NUMBER: 25 FORM TITLE: CERTIFICATE OF LIABILITY INSURANCE

-General Liability policy follows ISO form CG0001 (04/13), where there is No exclusionary wording or language that would impact on coverage for an Additional Insured for Contractual Liability Assumed, No exclusion for Explosion/Collapse/Underground or Cross Suits.

Auto Liability provides:
-Blanket Additional Insured (DA6Z04a 06/14)
-Blanket Waiver of Subrogation (CA0444 10/13)
-Auto Liability Coverage is Primary & Non-Contributory (CA2048 10/13)

Worker's Compensation (Texas - Pol#0001221315) provides:
-Blanket Waiver of Subrogation (WC420304B 06/14)
-Blanket Alternate Employer (WC000301)

Worker's Compensation (Other States - Pol#92-884-835290-4) provides:
-Coverage for all states EXCEPT: CA, NY, ND, OH, TX, WA, WY
-Blanket Waiver of Subrogation (WC000313 04/84)

Excess Liability ($5M Primary - Pol# SEO117384 / $5M XS OF $5M - Pol #NRX0001079):
-$5M Excess Limit of the primary limits of the General Liability, Contractors Pollution Liability, Auto Liability, Employers Liability. The excess liability policy follows form of all underlying policies.

Leased/Rented Equipment:
-Leased/Rented-$750,000 Per Item / $2,800,000 Max.; Riggers Liability-$750,000; No Boom or Overload Exclusion

30-Day Notice of Cancellation is provided to first named insured for all reasons except, 10-Days Notice for Non-payment of premium.

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SECTION 4: MINIMUM SPECIFICATIONS

The following requirements and specifications supersede General Bid Requirements where applicable. Any questions relating to bid submission or bid item specifications requirements should be directed to Jamey West, Contract Specialist via email at: jwest@co.jefferson.tx.us Please reference Bid Number: IFB 22-028/JW.

SCOPE OF PROJECT:

Jefferson County is soliciting bids for the Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport located adjacent to and south of the BPT air traffic control tower (ATCT). Fuel supply trucks enter the property through a secured gate just east of the fuel farm. The pavement at the fuel farm of the Jack Brooks Regional Airport has ongoing deterioration and needs to be rehabilitated or replaced. The estimated PCI of the pavement is approximately 40 or less.

The fuel farm concrete panels will be replaced in such a way to reduce the down time of the fueling area. The panel replacement will be coordinated to not impact the ability of the fuel farm to continue to provide fuel to aircraft using the airport. The subgrade must be adequately tested (density, Soil type, and CBR) to determine if it is sufficient to support the pavement surface. The scope of the project includes: • Full depth panel replacement of concrete at fuel loading and unloading area. • Full replacement of the containment wall. • Repair of underground drainage failure beneath pavement, if necessary. The finished product will meet NFPA 407, DOT, and EPA standards for fuel transfer area containment.

TECHNICAL SPECIFICATIONS:

Technical Specifications for this project may be found starting on **Page 61.**

BID FORM:

The BID FORM for this project may be found on **Page 40.**

BIDDER INFORMATION FORM

Instructions: Complete the form below. Please provide legible, accurate, and complete contact information. PLEASE PRINT.

Bid Number & Name: Invitation for Bid (IFB 22-028/JW)
Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport

Bidder's Company/Business Name: Mason Construction, LLC

Bidder's TAX ID Number: [redacted]

***If Applicable*:** **DBE Vendor No.** N/A **DBE Vendor No.** N/A

Contact Person: Butch Hart **Title:** Estimator/Project Manager

Phone Number (with area code): 409-842-4455 Office

Alternate Phone Number if available (with area code): 409-926-3320 Butch Cell

Fax Number (with area code): 409-842-4586

Email Address: RFP@masonconstruction.net

Mailing Address (Please provide a physical address for bid bond return, if applicable):

6285 Walden Road
Address
Beaumont, TX 77707
City, State, Zip Code

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

BIDDER: INSERT BID SURETY BEHIND THIS PAGE.

Bid or Proposal Bond

Westfield Insurance Company

Westfield Group℠ One Park Circle, P O Box 5001
Westfield Center, Ohio 44251-5001

KNOW ALL MEN BY THESE PRESENTS, that we, Mason Construction, LLC 6285 Walden Road, Beaumont, Texas 77707 as Principal, and the WESTFIELD INSURANCE COMPANY, an Ohio Corporation, with its principal office at Westfield Center, Ohio, as Surety, are held and firmly bound unto Jefferson County, Texas, as Obligee, in the penal sum of Five Percent (5%) of the Greatest Amount Bid (5% of the G.A.B.) DOLLARS, lawful money of the United States of America, for the payment of which, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS the said Principal is herewith submitting a bid or proposal for IFB 22-028/JW Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport;

NOW THEREFORE, the condition of the above obligation is such, that if the said Principal shall execute a contract and give bond for the faithful performance thereof, if required by the contract, or if the Principal or Surety shall pay the Obligee the difference, not exceeding the penal sum hereof, between the amount of the contract entered into in good faith to perform the work to which the bid or proposal relates and the amount bid or proposed by the Principal, then this obligation shall be void; otherwise it shall remain in full force and effect.

SIGNED this 24th day of August, 2022.

Mason Construction, LLC
Principal

By: Hallie Bradford

Westfield Insurance Company

By: Sharon Cavanaugh
Sharon Cavanaugh Attorney-in-fact

THIS POWER OF ATTORNEY SUPERCEDES ANY PREVIOUS POWER BEARING THIS SAME POWER # AND ISSUED PRIOR TO 05/26/16, FOR ANY PERSON OR PERSONS NAMED BELOW.

General Power of Attorney

CERTIFIED COPY

POWER NO. 4219912 01

Westfield Insurance Co.
Westfield National Insurance Co.
Ohio Farmers Insurance Co.

Westfield Center, Ohio

Know All Men by These Presents, That WESTFIELD INSURANCE COMPANY, WESTFIELD NATIONAL INSURANCE COMPANY and OHIO FARMERS INSURANCE COMPANY, corporations, hereinafter referred to individually as a "Company" and collectively as "Companies," duly organized and existing under the laws of the State of Ohio, and having its principal office in Westfield Center, Medina County, Ohio, do by these presents make, constitute and appoint

DAVID R. GROPPELL, EDWARD L. MOORE, ROXANNE G. BRUNE, BEVERLY A. IRELAND, SHAREN R. GROPPELL, FRANCINE HAY, KURT A. RISK, SHARON CAVANAUGH, SUE KOHLER, GLORIA M. VILLA, JOINTLY OR SEVERALLY

of **HOUSTON** and State of **TX** its true and lawful Attorney(s)-in-Fact, with full power and authority hereby conferred in its name, place and stead, to execute, acknowledge and deliver **any and all bonds, recognizances, undertakings, or other instruments or contracts of suretyship**- - - -

IMPORTANT NOTICE
STATE OF TEXAS
COMPLAINT PROCEDURES

1. IMPORTANT NOTICE

To obtain information or make a complaint:

2. You may contact your agent.

3. You may call **Westfield Insurance Company, Westfield National Insurance Company, and/or Ohio Farmers Insurance Company's** toll-free telephone number for information or to make a complaint at:

1-800-243-0210

4. You may also write to **Westfield Insurance Company, Westfield National Insurance Company, and/or Ohio Farmers Insurance Company** at:

Attn: Bond Claims
One Park Circle
P O Box 5001
Westfield Center, OH 44251-5001
Fax #330-887-0840

5. You may contact the Texas Department of Insurance to obtain information on companies, coverages, rights or complaints at:

1-800-252-3439

6. You may write to the Texas Department of Insurance, Consumer Protection Section (MC 111-1A):

P.O. Box 149091
Austin, TX 78714-9091
Fax: (512) 490-1007
Web: www.tdi.texas.gov
E-mail: ConsumerProtection@tdi.texas.gov

7. **PREMIUM OR CLAIM DISPUTES:**
Should you have a dispute concerning your premium or about a claim, you should contact the agent, Westfield Insurance Company, Westfield National Insurance Company, or Ohio Farmers Insurance Company first. If the dispute is not resolved, you may contact the Texas Department of Insurance.

8. **ATTACH THIS NOTICE TO YOUR POLICY:**
This notice is for information only and does not become a part or condition of the attached document.

AVISO IMPORTANTE

Para obtener informacion o para someter una queja:

Puede comunicarse con su (title) al (telephone number).

Usted puede llamar al numero de telefono gratis de **Westfield Insurance Company, Westfield National Insurance Company, and/or Ohio Farmers Insurance Company's** para informacion o para someter una queja al:

1-800-243-0210

Usted tambien puede escribir a **Westfield Insurance Company, Westfield National Insurance Company, and/or Ohio Farmers Insurance Company:**

Attn: Bond Claims
One Park Circle
P O Box 5001
Westfield Center, OH 44251-5001
Fax #330-887-0840

Puede comunicarse con el Departamento de Sequros de Texas para obtener informacion acerca de companies, coberturas, derechos o quejas al:

1-800-252-3439

Puede escribir al Departamento de Seguros de Texas, Consumer Protection Section (MC 111-1A):

P.O. Box 149091
Austin, TX 78714-9091
Fax: (512) 490-1007
Web: www.tdi.texas.gov
E-mail: ConsumerProtection@tdi.texas.gov

DISPUTAS SOBRE PRIMAS O RECLAMOS:
Si tiene una disputa concerniente a su prima o a un reclamo, debe comunicarse con el agente, Westfield Insurance Company, Westfield National Insurance Company, o Ohio Farmers Insurance Company primero. Si no se resuelve la disputa, puede entonces comunicarse con el departamento (TDI).

UNA ESTE AVISO A SU POLIZA: Este aviso es solo para proposito de informacion y no se convierte en parte o condicion del documento adjunto.

BID FORM

UNIT PRICES: This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures. **All quantities are estimated. The contractor will be paid based upon actual quantities as verified by the Owner**

DESCRIPTION:	☒ Base Bid			
REF. NO. 1	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Mobilization C-105	1	LS	$4,000.00	$4,000.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 2	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Construction Safety (Barricades, Signs, and Traffic Handling) SS-120	1	LS	$ 2,000.00	$2,000.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 3	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Allowance for Storm Sewer Pipe Replacement D-701a	1	LS	$10,000.00	$10,000.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 4	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Install PVC Pipe (2 Inch) D-701b	6	LF	$100.00	$600.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 5	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Sawcut, Remove and Dispose Existing Concrete Pavement Full Depth (8 Inches) P-101-5.1a	602	SY	$50.66	$30,497.32

DESCRIPTION:	☒ Base Bid			
REF. NO. 6	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Sawcut, Remove and Dispose Existing Asphalt Ramp P-101-5.1b	70	SY	$28.60	$2,002.00

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

BID FORM (CONTINUED)

DESCRIPTION:	☒ Base Bid			
REF. NO. 7	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Sawcut, Remove and Dispose Existing 6" Vertical Curb P-101-5.1c	302	LF	$8.28	$2,500.56

DESCRIPTION:	☒ Base Bid			
REF. NO. 8	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Embankment in Place P-152-4.2	30	CY	$250.00	$7,500.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 9	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Unsuitable Excavation P-152-4.4	30	CY	$100.00	$3,000.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 10	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Lime Treated Subgrade (8 inches) P-152-8.1	602	SY	$29.07	$17,500.14

DESCRIPTION:	☒ Base Bid			
REF. NO. 11	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Lime P-152-8.2	31	TON	$306.45	$9499.95

DESCRIPTION:	☒ Base Bid			
REF. NO.12	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Reinforced Concrete Pavement (8 Inches) P-501-8.1a	526	SY	$170.34	$89,598.84

DESCRIPTION:	☒ Base Bid			
REF. NO. 13	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Reinforced Concrete Pavement Ramp (8-12 Inches) P-501-8.1b	76	SY	$26.32	$2,000.32

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

BID FORM (CONTINUED) (REPLACEMENT PAGE 42)

DESCRIPTION:	☒ Base Bid			
REF. NO. 14	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Biodegradable Erosion Control Logs (Install) TXDOT 506-6.6.1	200	LF	$5.00	$1,000.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 15	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Biodegradable Erosion Control Logs (Removal) TXDOT 506-6.6.2	200	LF	$2.00	$400.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 16	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
4" Concrete Curb TXDOT 529	278	LF	$ 19.80	$5,504.40

DESCRIPTION:	☒ Base Bid			
REF. NO. 17	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Furnish and Install 4' Steel Bollards	2	EA	$ 350.00	$ 700.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 18	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Install 6' Rubber Speed Bumps	4	EA	$ 250.00	$1,000.00

DESCRIPTION:	☒ Base Bid
	TOTAL BID PRICE *($ XXX,XXX.XX)*
TOTAL BID	$189,303.53

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

BIDDER ACKNOWLEDGEMENT OF BID ADDENDA (IF APPLICABLE):

Addendum	1 ✓	Date Received	8/1/22
Addendum	2 ✓	Date Received	8/17/22
Addendum	3 _____	Date Received	_____
Addendum	4 _____	Date Received	_____
Addendum	5 _____	Date Received	_____

BIDDER: INCLUDE FULL, SIGNED, & ATTESTED COPY OF EACH ADDENDUM ISSUED WITH BID SUBMISSION.

Lee Short

VENDOR REFERENCES FORM

Bidder: Please list at least three (3) companies or governmental agencies (preferably a municipality) where the same or equivalent products and/or services as contained in this specification package were recently provided.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

REFERENCE ONE

Government/Company Name: Little Cypress-Mauriceville Consolidated ISD

Address: 6586 FM 1130, Orange, TX 77632

Contact Person and Title: Stephen West, Engineer

Phone: 409-892-0421 Office Fax: 409-673-4340 Cell

Email Address: Stephen.west@whitleyoliver.com Contract Period: 2021

Scope of Work: LCM High School Driveway Rehabilitation

REFERENCE TWO

Government/Company Name: Jefferson County Drainage District #7

Address: 4401 9th Avenue, Port Arthur, TX 77642

Contact Person and Title: Garrett Boudoin / Brady Girouard

Phone: 409-985-4369 Fax: 409-983-7564

Email Address: gboudoin@dd7.org Contract Period: 2020

Scope of Work: Improvements to Shamrock Ditch & Rodair Lateral 3

REFERENCE THREE

Government/Company Name: City of Port Nechus, Texas

Address: 1005 Merriman Street, Port Neches, TX 77651

Contact Person and Title: Stephen West, Engineer

Phone: 409-892-0421 Office Fax: 409-673-4340 Cell

Email Address: Stephen.west@whitleyoliver.com Contract Period: 2020

Scope of Work: Riverfront Development Street Improvements Project

SIGNATURE PAGE

As permitted under Article 4413 (32c) V.A.C.S., other governmental entities may wish to participate under the same terms and conditions contained in this contract (i.e., piggyback). In the event any other entity participates, all purchase orders will be issued directly from and shipped directly to the entity requiring supplies/services. Jefferson County shall not be held responsible for any orders placed, deliveries made or payment for supplies/services ordered by another entity. Each entity reserves the right to determine their participation in this contract.

Would Bidder be willing to allow other governmental entities to piggyback off this contract, if awarded, under the same terms and conditions? ..... **Yes** ☑ **No** ☐

This bid shall remain in effect for ninety (90) days from bid opening and shall be exclusive of federal excise and state and local sales tax (exempt).

The undersigned agrees, if this bid is accepted, to furnish any and all items upon which prices are offered, at the price and upon the terms and conditions contained in the Invitation for Bid, Conditions of Bidding, Terms of Contract, and Specifications and all other items made a part of the accepted contract.

The undersigned affirms that they are duly authorized to execute the contract, that this company, corporation, firm, partnership or individual has not prepared this bid in collusion with any other Bidder, and that the contents of this bid as to prices, terms or conditions of said bid have not been communicated by the undersigned nor by any employee or agent to any other Bidder or to any other person(s) engaged in this type of business prior to the official opening of this bid. And further, that neither the Bidder nor their employees nor agents have been for the past six (6) months directly nor indirectly concerned in any pool or agreement or combination to control the price of goods or services on, nor to influence any person to bid or not to bid thereon.

Mason Construction, LLC
Bidder (Entity Name)

6285 Walden Road
Street & Mailing Address

Beaumont, TX 77707
City, State & Zip

409-842-4455
Telephone Number

RFP@masonconstruction.net
E-mail Address

Signature

Le Short
Print Name

8/24/22
Date Signed

409-842-4586
Fax Number

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

BYRD ANTI-LOBBYING CERTIFICATION

Certification for Contracts, Grants, Loans, and Cooperative Agreements-The undersigned certifies, to the best of his or her knowledge and belief, that:

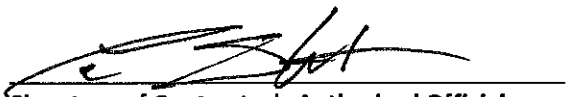
No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor Mason Construction, LLC certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.



Signature of Contractor's Authorized Official

L. Short - Vice President

Name and Title of Contractor's Authorized Official

8/24/22

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

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LOCAL GOVERNMENT OFFICER
CONFLICTS DISCLOSURE STATEMENT – OFFICE USE ONLY

LOCAL GOVERNMENT OFFICER CONFLICTS DISCLOSURE STATEMENT

FORM CIS

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This is the notice to the appropriate local governmental entity that the following local government officer has become aware of facts that require the officer to file this statement in accordance with Chapter 176, Local Government Code.

OFFICE USE ONLY

Date Received

1 Name of Local Government Officer

Jefferson County, Texas

2 Office Held

Jefferson County Rep

3 Name of vendor described by Sections 176.001(7) and 176.003(a), Local Government Code

Mason Construction, LLC

4 Description of the nature and extent of employment or other business relationship with vendor named in item 3

None

5 List gifts accepted by the local government officer and any family member, if aggregate value of the gifts accepted from vendor named in item 3 exceeds $100 during the 12-month period described by Section 176.003(a)(2)(B).

Date Gift Accepted N/A Description of Gift N/A

Date Gift Accepted N/A Description of Gift N/A

Date Gift Accepted N/A Description of Gift N/A

(attach additional forms as necessary)

6 AFFIDAVIT

I swear under penalty of perjury that the above statement is true and correct. I acknowledge that the disclosure applies to each family member (as defined by Section 176.001(2), Local Government Code) of this local government officer. I also acknowledge that this statement covers the 12-month period described by Section 176.003(a)(2)(B), Local Government Code.

Signature of Local Government Officer

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said _____, this the _____ day of _____, 20 _____, to certify which, witness my hand and seal of office.

Signature of officer administering oath | Printed name of officer administering oath | Title of officer administering oath

Adopted 8/7/2015

THIS FORM IS FOR OFFICE USE ONLY

DEBARMENT/SUSPENSION CERTIFICATION

Non-Federal entities and contractors are subject to the debarment and suspension regulations implementing Executive Order 12549, Debarment and Suspension (1986) and Executive Order 12689, Debarment and Suspension (1989) at 2 C.F.R. Part 180 and the Department of Homeland Security's regulations at 2 C.F.R. Part 3000 (No procurement Debarment and Suspension).

This requirement applies to all FEMA grant and cooperative agreement programs.

Federal Executive Order (E .O.) 12549 "Debarment" requires that all contractors receiving individual awards, using federal funds, and all sub recipients certify that the organization and its principals are not debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded by any Federal department or agency from doing business with the Federal Government. By signing this document, you certify that your organization and its principals are not debarred. Failure to comply or attempts to edit this language may disqualify your bid. Information on debarment is available at the following websites:

www.sam.gov and https://acguisition.gov/far/index.html (see section 52.209-6).

The Contractor Mason Construction, LLC certifies or affirms by your signature that neither you nor your principal is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.

Signature of Contractor's Authorized Official

Lee Short - Vice President

Name and Title of Contractor's Authorized Official

8/24/22

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

CIVIL RIGHTS COMPLIANCE PROVISIONS

EQUAL EMPLOYMENT OPPORTUNITY (Equal Opportunity Clause)

(For all awarded contracts that meet the definition of "federally assisted construction contract" provided in 41 CFR Part 60-1.3)

During the performance of this contract, the contractor agrees as follows:

The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or order this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

Signature of Contractor's Authorized Official

Lee Short - Vice President

Name and Title of Contractor's Authorized Official

8/24/22

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

GOOD FAITH EFFORT (GFE) DETERMINATION CHECKLIST

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☑ No Mason intends to self perform all work.

Instructions: In order to determine if a "Good Faith Effort" was made in soliciting DBEs for subcontracting opportunities, the following checklist and supporting documentation shall be completed by the Prime Contractor/Consultant and returned with the Prime Contractor/ Consultant's bid. This list contains the **minimum** efforts that should be put forth by the Prime Contractor/Consultant when attempting to achieve or exceed the goals of DBE Subcontractor participation. The Prime Contractor/Consultant may extend his/her efforts in soliciting DBE Subcontractor participation beyond what is listed below.

Did the Prime Contractor/Consultant . . .?

☐ Yes ☐ No N/A 1. To the extent practical, and consistent with standard and prudent industry standards, divide the contract work into the smallest feasible portions, to allow for maximum DBE Subcontractor participation?

☐ Yes ☐ No N/A 2. **Notify** in writing a reasonable number of DBEs, allowing sufficient time for effective participation of the planned work to be subcontracted?

☐ Yes ☐ No N/A 3. **Provide** DBEs that were genuinely interested in bidding on a subcontractor, adequate information regarding the project (i.e., plans, specifications, scope of work, bonding and insurance requirements, and a point of contract within the Prime Contractor/Consultant's organization)?

☐ Yes ☐ No N/A 4. **Negotiate** in good faith with interested DBEs, and not reject bids from DBEs that qualify as lowest and responsive Bidders?

☐ Yes ☐ No N/A 5. **Document** reasons DBEs were rejected? Was a written rejection notice, including the reason for rejection, provided to the rejected DBEs?

☐ Yes ☐ No N/A 6. If Prime Contractor/Consultant has zero (0) DBE participation, **please explain the reasons why.**

If "No" was selected, please explain, and include any pertinent documentation with your bid.
If necessary, please use a separate sheet to answer the above questions.

Printed Name of Authorized Representative

Signature

Vice President/Managing Member
Title

8/24/22
Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

NOTICE OF INTENT (NOI) TO SUBCONTRACT WITH DISADVANTAGED BUSINESS ENTERPRISE (DBE)

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☑ No

Instructions for Prime Contractor/Consultant: Bidder shall submit this form with the bid; however, the information below may be submitted after contract award, but prior to beginning performance on the contract. Please submit one form for each DBE Subcontractor/Subconsultant with proper signatures, per the terms and conditions of your contract.

Contractor Name: Mason Construction, LLC DBE: ☐ Yes ☑ No

Address: 6285 Walden Road, Beaumont, TX 77707
Street City State Zip

Phone (with area code): 409-842-4455 Fax (with area code): 409-842-4586

Project Title & No.: IFB 22-028/JW: Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport

Prime Contract Amount: $189,303.53

DBE Subcontractor Name: None → Mason intends to self perform all work

DBE Status (Gender & Ethnicity): N/A

Certifying Agency: ☐ Tx. Bldg. & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: N/A
Street City State Zip

Phone (with area code): N/A Fax (with area code): N/A

Proposed Subcontract Amount: $ N/A Percentage of Prime Contract: N/A %

Description of Subcontract Work to be Performed: N/A

Printed Name of Contractor Representative	Signature of Representative	Date
L Short		8/24/22
Printed Name of DBE	**Signature of Representative**	**Date**
N/A	N/A	N/A

Note: Nothing on this Notice of Intent Form is intended to confer any rights, expressed or implied, to any third parties.

Pre-Approval for Subcontractor Substitutions must be obtained from the Jefferson County Purchasing Agent's Representative. The "DBE Subcontractor/Subconsultant Change Form" must be completed and faxed to 409-835-8456.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

DISADVANTAGED BUSINESS ENTERPRISE (DBE)
SUBCONTRACTING PARTICIPATION DECLARATION FORM

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☑ No

Prime Contractor: Mason Construction, LLC DBE: ☐ Yes ☑ No

DBE Status (Gender & Ethnicity): N/A

Address: 6285 Walden Road, Beaumont, TX 77707
Street City State Zip

Phone (with area code): 409-842-4455 Fax (with area code): 409-842-4586

Project Title & No.: Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport IFB/RFP No.: 22-028/JW

Total Contract: $ 189,303.53 Total DBE Subcontract(s): $ Ø

Construction DBE Goals: 12.8% MBE: — % 12.6% WBE: — %

Sub-goals: 1.7 African American, 9.7% Hispanic, 0.7% Native American, 0.8% Asian American.
Use these goals as a guide to diversify.

FOR DBE OFFICE USE ONLY:

Verification date DBE Program Office reviewed and verified DBE Sub Information Date: _____ Initials: _____

PART I. DBE SUBCONTRACTOR DISCLOSURE

DBE Subcontractor Name: None → Mason intends to self perform all work

DBE Status (Gender & Ethnicity): N/A

Certifying Agency: ☐ Texas Bldg. & Procurement Comm. ☐ Texas Unified Certification Prog.

Address: N/A
Street City State Zip

Contact person: N/A Title: N/A

Phone (with area code): N/A Fax (with area code): N/A

Proposed Subcontract Amount: $ N/A Percentage of Prime Contract: N/A %

Description of Subcontract Work to be Performed: N/A

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

DISADVANTAGED BUSINESS ENTERPRISE (DBE)
SUBCONTRACTING PARTICIPATION DECLARATION FORM

DBE Subcontractor Disclosure

PART I: Continuation Sheet (Duplicate as Needed)

DBE Subcontractor Name: N/A

DBE Status (Gender & Ethnicity): N/A

Certifying Agency: ☐ Tx. Bldg. & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: N/A
Street City State Zip

Contact person: N/A Title: N/A

Phone (with area code): N/A Fax (with area code): N/A

Proposed Subcontract Amount: $ N/A Percentage of Prime Contract: N/A %

Description of Subcontract Work to be Performed: N/A

DBE Subcontractor Name: N/A

DBE Status (Gender & Ethnicity): N/A

Certifying Agency: ☐ Tx. Bldg. & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: N/A
Street City State Zip

Contact person: N/A Title: N/A

Phone (with area code): N/A Fax (with area code): N/A

Proposed Subcontract Amount: $ N/A Percentage of Prime Contract: N/A %

Description of Subcontract Work to be Performed: N/A

All DBE Subcontractor Participation may be verified with the DBE Subcontractor(s) listed on Part I.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

DISADVANTAGED BUSINESS ENTERPRISE (DBE)
SUCONTRACTING PARTICIPATION DECLARATION FORM

PART II: STATEMENT OF NON-COMPLIANCE FOR NOT MEETING DBE SUBCONTRACTING GOALS

Please complete Good Faith Effort (GFE) Checklist and attach any supporting documentation.

Our firm was unable to meet the DBE goals for this project for the following reasons:

- ☐ All subcontractors to be utilized are "Non-DBEs." *(Complete Part III)*
- ☐ DBEs were solicited but did not respond.
- ☐ DBEs solicited were not competitive.
- ☐ DBEs were unavailable for the following trade(s):
- ☑ Other: Mason is Self performing all work So subs were not needed

Was the Jefferson County DBE Office contacted for assistance in locating DBEs? ☐ Yes ☑ No

PART III: DISCLOSURE OF OTHER "NON-DBE" SUBCONTRACTS

The Bidder shall use this area to provide a listing of all "Non-DBE" Subcontractors, including suppliers, who will perform under this project. A list of those "Non-DBE" Subcontractors the Bidder selects, after bid submission, shall be provided to the Purchasing Office not later than five (5) calendar days after being notified that Bidder is the apparent low Bidder. A list of those "Non-DBE" Subcontractors that are selected after contract award must be provided **immediately** after their selection.

Subcontractor Name: None → Mason intends to self perform all work

Address: N/A
Street City State Zip

Contact person: N/A Title: N/A

Phone (with area code): N/A Fax (with area code): N/A

Proposed Subcontract Amount: $ N/A Percentage of Prime Contract: N/A %

Description of Subcontract Work to be Performed: N/A

Subcontractor Name: N/A

Address: N/A
Street City State Zip

Contact person: N/A Title: N/A

Phone (with area code): N/A Fax (with area code): N/A

Proposed Subcontract Amount: $ N/A Percentage of Prime Contract: N/A %

Description of Subcontract Work to be Performed: N/A

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

DISADVANTAGED BUSINESS ENTERPRISE (DBE)
SUBCONTRACTING PARTICIPATION DECLARATION FORM

Subcontractor Name: N/A

Address: N/A
Street City State Zip

Contact person: N/A Title: N/A

Phone (with area code): N/A Fax (with area code): N/A

Proposed Subcontract Amount: $ N/A Percentage of Prime Contract: N/A %

Description of Subcontract Work to be Performed: N/A

Subcontractor Name: N/A

Address: N/A
Street City State Zip

Contact person: N/A Title: N/A

Phone (with area code): N/A Fax (with area code): N/A

Proposed Subcontract Amount: $ N/A Percentage of Prime Contract: N/A %

Description of Subcontract Work to be Performed: N/A

I hereby certify that I have read the *DBE Program Instructions and Information*, truthfully completed all applicable parts of this form, and **attach any necessary support documentation as required.** I fully understand that intentionally falsifying information on this document may result in my not receiving a contract award or termination of any resulting contract.

Name (print or type): L Short

Title: Vice President/Managing Member

Signature:

Date: 8/24/22

E-mail address: RFP@masonconstruction.net

Contact person that will be in charge of invoicing for this project:

Name (print or type): Brithi Milam

Title: AR Manager

Date: 8/24/22

E-mail address: britni@masonconstruction.net

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

RESIDENCE CERTIFICATION/TAX FORM

Pursuant to Texas Government Code §2252.001 *et seq.*, as amended, Jefferson County requests Resident Certification. §2252.001 *et seq.* of the Government Code provides some restrictions on the awarding of governmental contracts; pertinent provisions of §2252.001 are stated below:

(3) "Non-resident Bidder" refers to a person who is not a resident.

(4) "Resident Bidder" refers to a person whose principal place of business is in this state, including a contractor whose ultimate parent company or majority owner has its principal place of business in this state.

☑ I certify that Mason Construction [company name] is a Resident Bidder of Texas as defined in Government Code §2252.001.

☐ I certify that _____ [company name] is a Nonresident Bidder as defined in Government Code §2252.001 and our principal place of business is _____ _____ (city and state).

Taxpayer Identification Number (T.I.N.):	[redacted]
Company Name submitting bid/proposal:	Mason Construction, LLC
Mailing address:	6285 Walden Road, Beaumont, TX 77707
If you are an individual, list the names and addresses of any partnership of which you are a general partner:	

Property: List all taxable property owned by you or above partnerships in Jefferson County.

Jefferson County Tax Acct. No.*	Property address or location**
→	6285 Walden Road, Beaumont, TX 77707
→	9750 Walden Road, Beaumont, TX 77707

* This is the property amount identification number assigned by the Jefferson County Appraisal District.

** For real property, specify the property address or legal description. For business property, specify the address where the property is located. For example, office equipment will normally be at your office, but inventory may be stored as a warehouse or other location.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

HOUSE BILL 89 VERIFICATION

I, Le Short, the undersigned representative of (company or business name) Mason Construction, LLC (heretofore referred to as company) being an adult over the age of eighteen (18) years of age, after being duly sworn by the undersigned notary, do hereby depose and verify under oath that the company named above, under the provisions of Subtitle F, Title 10, Government Code Chapter 2270:

1. Does not boycott Israel currently; and
2. Will not boycott Israel during the term of the contract.

Pursuant to Section 2270.002, Texas Government Code:

1. **"Boycott Israel"** means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made ordinary business purposes; and

2. **"Company"** means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or a limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of those entities or business association that exist to make a profit.

Signature of Company Representative

8/24/22
Date

On this 24th day of August, 2022, personally appeared Le Short, the above-named person, who after by me being duly sworn, did swear and confirm that the above is true and correct.

Notary Seal

MANDY BUNN
My Notary ID # 126135690
Expires April 23, 2024

Mandy Bunn
Notary Signature

8/24/22
Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

SENATE BILL 252 CERTIFICATION

On this day, I, Deborah L. Clark, Purchasing Agent for Jefferson County, Texas, pursuant to Texas Government Code, Chapter 2252, Section 2252.152 and Section 2252.153, certify that I did review the website of the Comptroller of the State of Texas concerning the listing of companies that is identified under Section 806.051, Section 807.051, or Section 2253.253 and I have ascertained that the below named company is not contained on said listing of companies which do business with Iran, Sudan, or any Foreign Terrorist Organization.

Mason Construction, LLC
Company Name

IFB 22-028/JW
IFB/RFP/RFQ number

Certification check performed by:

_____
Purchasing Representative

_____
Date

BID AFFIDAVIT

The undersigned certifies that the bid prices contained in this bid have been carefully reviewed and are submitted as correct and final. Bidder further certifies and agrees to furnish any and/or all commodities upon which prices are extended at the price offered, and upon the conditions contained in the specifications and the Notice to Bidders.

STATE OF Texas COUNTY OF Jefferson

BEFORE ME, the undersigned authority, a Notary Public in and for the State of Texas,

on this day personally appeared Le Short (name), who

after being by me duly sworn, did depose and say:

"I, Le Short (name) am a duly authorized officer of/agent

for Mason Construction, LLC (name of firm) and have been duly authorized to execute the

foregoing on behalf of the said Mason Construction, LLC (name of firm).

I hereby certify that the foregoing bid has not been prepared in collusion with any other Bidder or other person or persons engaged in the same line of business prior to the official opening of this bid. Further, I certify that the Bidder is not now, nor has been for the past six (6) months, directly or indirectly concerned in any pool or agreement or combination, to control the price of services/commodities bid on, or to influence any person or persons to bid or not to bid thereon."

Name and address of Bidder: Mason Construction, LLC, 6285 Walden Road, Beaumont, TX 77707

Fax: 409-842-4586 Telephone# 409-842-4455

by: Le Short (print name) Title: Vice President

Signature: [signature]

SUBSCRIBED AND SWORN to before me by the above-named

Le Short on

this the 24th day of August, 2022

Mandy Bunn

Notary Public in and for

the State of Texas

MANDY BUNN
My Notary ID # 126135690
Expires April 23, 2024

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

TECHNICAL SPECIFICATIONS

DAVIS BACON MINIMUM WAGE SCALE AND PAYROLL REQUIREMENTS

1.1 Following 29 CFR 5.5 (a) (1) (v), use the rates listed on the Wage Determination Attachment for minimum wage and benefits for the labor classifications applicable to the Work.

1.2 These rates do not prohibit payment of more than the rates stated.

1.3 Apply rates in this Document 00810 to site work greater than five (5) feet from exterior wall of new building under construction or from exterior wall of existing building.

Certified Payroll Requirements

2.1 The Contractor shall submit the "Certificate from Contractor Appointing Officer or Employee to Supervise Payment of Employees" (Exhibit "A") to the Monitoring Authority prior to final execution of the contract.

2.2 During the course of the work, ALL Subcontractors shall submit the "Certificate from Subcontractor Appointing Officer or Employee to Supervise Payment of Employees" (Exhibit "B") to the Monitoring Authority.

Article 5159a of the Revised Civil Statutes of Texas, passed by the 43rd Legislature Acts of 1933, Page 91, Chapter 45, provides that any government subdivision shall ascertain the general prevailing rate of per diem wages in the locality in which the work is to be per diem wages which shall be paid for each craft type of workman. This Article further provides the CONTRACTOR shall forfeit, as a penalty, to the City, County, or State , or other political subdivision. Ten Dollars ($10.00) per day for each laborer, or workman, or mechanic who is not paid the stipulated wage for the type of work performed by him as set up on the wage scale. The OWNER is authorized to withhold from the CONTRACTOR, after full investigation by the awarding body, the amount of this penalty in any payment that might be claimed by the CONTRACTOR or SUBCONTRACTOR. The Act make the CONTRACTOR responsible for the acts of the SUBCONTRACTOR in this respect. The Article likewise requires that the CONTRACTOR and SUBCONTRACTOR keep an accurate record of the names and occupations of all persons employed by him and show the actual per diem wages paid to each worker, and these records are open to the inspection of the OWNER.

EXHIBIT "A"

Wage Determination Publication Date:
January 7, 2022
for
General Decision Number: **TX20220038 01/07/2022 TX38**
Superseded General Decision Number: TX20210038

State: Texas
Construction Type: Highway
Counties: Austin, Brazoria, Chambers, Fort Bend, Galveston, Hardin, Harris, Jefferson, Liberty, Montgomery, Orange, San Jacinto and Waller Counties in Texas.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022, Executive Order 14026 generally applies to the contract. The contractor must pay all covered workers at least $15.00 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.

If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022, Executive Order 13658 generally applies to the contract. The contractor must pay all covered workers at least $11.25 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/07/2022

LABOR CLASSIFICATIONS AND PREVAILING WAGE RATES
CONSTRUCTION 2022

CLASSIFICATION	RATE	CLASSIFICATION	RATE
Cement Mason / Concrete Finisher- Paving and Structures	$12.98	Power Equipment Operator, Foundation Drill, Truck Mounted	$15.89
Electrician * 3 Journeyman to 2 Apprentices Allowed	$27.11	Power Equipment Operator, Front End Loader, 3 CY or less	$13.32
Form Builder / Form Setter- Paving and Curb	$12.34	Power Equipment Operator, Front End Loader, over 3 CY	$13.17
Form Builder / Form Setter- Structures	$12.23	Power Equipment Operator, Loader/Backhoe	$14.29
Laborer, Asphalt Raker	$12.36	Power Equipment Operator, Mechanic	$16.96
Laborer, Common	$11.02	Power Equipment Operator, Milling Machine	$13.53
Laborer, Flagger	$10.33	Power Equipment Operator, Motor Grader, Fine Grade	$15.69
Laborer, Pipelayer	$12.12	Power Equipment Operator, Motor Grader, Rough	$14.23
Laborer, Utility	$11.73	Power Equipment Operator, Off Road Hauler	$14.60
Laborer, Work Zone Barricade Servicer	$11.67	Power Equipment Operator, Pavement Marking Machine	$11.18
Painter (Structures)	$18.62	Power Equipment Operator, Piledriver	$14.95
Power Equipment Operator, Asphalt Distributor Operator	$14.06	Power Equipment Operator, Roller, Asphalt	$11.95
Power Equipment Operator, Asphalt Paving Machine	$14.32	Power Equipment Operator, Roller, Other	$11.57
Power Equipment Operator, Broom or Sweeper	$12.68	Power Equipment Operator, Scraper	$13.47
Power Equipment Operator, Concrete Paving Finishing Machine	$13.07	Servicer	$13.97
Power Equipment Operator, Concrete Paving, Curing, Float Texturing Machine	$11.71	Power Equipment Operator, Spreader Box	$13.58
Power Equipment Operator, Concrete Saw	$13.99	Steel Worker, Reinforcing Steel	$15.15
Power Equipment Operator, Crane, Hydraulic 80 tons or less	$13.86	Steel Worker, Structural Steel	$14.39
Power Equipment Operator, Crane, Lattice boom 80 tons or less	$14.97	Steel Worker, Structural Steel Welder	$12.85
Power Equipment Operator, Crane, Lattice boom over 80 tons	$15.80	Truck Driver, Low Boy Float	$16.03
Power Equipment Operator, Crawler Tractor	$13.68	Truck Driver, Single Axle	$11.46
Power Equipment Operator, Excavator, 50,000 pounds or less	$12.71	Truck Driver, Single or Tandem Axle Dump	$11.48
Power Equipment Operator, Excavator, over 50,000 pounds	$14.53	Truck Driver, Tandem Axle Tractor w/ Semi-Trailer	$12.27
Power Equipment Operator, Foundation Drill, Crawler Mounted	$17.43		
Welders - Receive rate prescribed for craft performing operation to which welding is incidental			
* Apprentices- must be in an approved USDOL Program and cannot exceed ratios			

EXHIBIT "B"

CERTIFICATE FROM CONTRACTOR APPOINTING OFFICER OR EMPLOYEE TO SUPERVISE PAYMENT OF EMPLOYEES

Project Name Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport

Project WBS#: 22-028 / JW Date 8-24-22

Email Address: RFP@masonconstruction.net

(I) (We) hereby certify that (I am) (we are) the Prime Contractor for Construction

(specify type of job)

in connection with construction of the above-mentioned Project, and that (I) (we) have appointed Jana Prather, whose signature appears below, to supervise the payment of (my) (our) employees beginning _____, 20___; that he/she is in a position to have full knowledge of the facts set forth in the payroll documents and in the statement of compliance required by the Copeland Act and Jefferson County, which he/she is to execute with (my) (our) full authority and approval until such time as (I) (we) submit to the Jefferson County a new certificate appointing some other person for the purposes hereinabove stated.

_____ Phone: 409-842-4455

(Identifying Signature of Appointee)

Attest: Mason Construction, LLC

(Name of Firm or Corporation)

By: _____ By: _____

(Signature) (Signature)

_____ _____

(Title) (Title)

NOTE: This certificate must be executed by an authorized officer of a corporation or by a member of a partnership, and shall be executed prior to and be submitted with the first payroll. Should the appointee be changed, a new certificate must accompany the first payroll for which the new appointee executes a statement of compliance required by the Copeland Act and Jefferson County.

Will provide once awarded

EXHIBIT "C"

CERTIFICATE FROM SUBCONTRACTOR APPOINTING OFFICER OR EMPLOYEE TO SUPERVISE PAYMENT OF EMPLOYEES

Project Name N/A

Project WBS#: N/A Date N/A

Email Address: N/A

(I) (We) hereby certify that (I am) (we are) the Sub Contractor for N/A

N/A
(specify type of job)

in connection with construction of the above-mentioned Project, and that (I) (we) have appointed N/A, whose signature appears below, to supervise the payment of (my) (our) employees beginning ___, 20___ that he/she is in a position to have full knowledge of the facts set forth in the payroll documents and in the statement of compliance required by the Copeland Act and Jefferson County, which he/she is to execute with (my) (our) full authority and approval until such time as (I) (we) submit to Jefferson County a new certificate appointing some other person for the purposes herein above stated.

N/A Phone: N/A
(Identifying Signature of Appointee)

Attest: N/A
(Name of Firm or Corporation)

By: N/A
(Signature)

N/A
(Title)

By: N/A
(Signature)

N/A
(Title)

NOTE: This certificate must be executed by an authorized officer of a corporation or by a member of a partnership, and shall be executed prior to and be submitted with the first payroll. Should the appointee be changed, a new certificate must accompany the first payroll for which the new appointee executes a statement of compliance required by the Copeland Act and Jefferson County.

END OF DOCUMENT

TECHNICAL SPECIFICATIONS

REHABILITATION OF FUEL FARM PAVEMENT
JACKBROOKS REGIONAL AIRPORT (BPT)
ISB 22-028/JW

May 2022

ITEM SS-101 SAFETY PLAN COMPLIANCE DOCUMENT (SPCD)

DESCRIPTION

101-1.1 The Contractor shall thoroughly review the approved and shall comply with bid plans and specifications. The Contractor shall certify such compliance by completing the attached SPCD and submitting to the Engineer for approval.

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CONTRACTOR SAFETY PLAN COMPLIANCE DOCUMENTS

Owner Name: Jefferson County

Airport: Jack Brooks Regional Airport

Project Description: Fuel Farm Pavement Reconstruction

Contractor: Mason Construction, LLC

Each item listed below corresponds to a specific section of the plans. The Contractor shall certify that he/she will comply with each section of the plans. Each section with a "no" response must be fully explained in an attachment to the CSPCD. The document shall be signed and dated by a manager, principal or owner of the Contractor's company. All other requested information shall be completed by the Contractor and submitted to the Engineer for approval.

1. **Section 1 – Correspondence:** This project shall be completed in accordance with the plans.

Owner: Alex Rupp, Airport Manager	Phone: 409.719.4900
Engineer: The Solco Group LLC	
Kelvin Solco, PE	Phone: 817.564.6895
Contractor: Mason Construction, LLC	409-842-4455
Butch Hart	

2. **Section 2 - Phasing:** This project shall be completed in accordance with the plans.

   Yes ✓ No_____ N/A_____

3. **Section 3 - Areas of Operations affected by Construction Activity:** This project shall be completed in accordance with the plans.

   Yes ✓ No_____ N/A_____

4. **Section 4 - Protection of Navigational Aids (NAVAIDs):** This project shall be completed in accordance with the plans.

   Yes_____ No_____ N/A X

5. **Section 5 - Contractor Access:** This project shall be completed in accordance with the plans.

Yes ✓ No_____ N/A_____

6. **Section 6 – Wildlife Management:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A___X_____

7. **Section 7 – Foreign Object Debris (FOD) Management:** This project shall be completed in accordance with the plans.

Yes ✓ No_____ N/A_____

8. **Section 8 – Hazardous Materials (HAZMAT) Management:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A____ X _____

9. **Section 9 – Notification of Construction Activities:** This project shall be completed in accordance with the plans.

Yes ✓ No_____ N/A_____

10. **Section 10 - Inspection Requirements:** This project shall be completed in accordance with the plans.

Yes ✓ No_____ N/A_____

11. **Section 11 – Underground Utilities:** This project shall be completed in accordance with the plans.

Yes ✓ No_____ N/A_____

12. **Section 12 – Penalties:** This project shall be completed in accordance with the plans and specifications.

Yes ✓ No_____ N/A_____

13. **Section 13 – Special Conditions:** This project shall be completed in accordance with the plans and specifications.

Yes ✓ No_____ N/A_____

14. **Section 14 – Runway and Taxiway Visual Aids:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A___X_____

15. **Section 15 - Marking and Signs for Access Routes:** This project shall be completed in accordance with the plans.

Yes ✓ No_____ N/A_____

16. **Section 16 – Hazard Marking and Lighting:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A____X____

17. **Section 17 - Work Zone Lighting for Nighttime Construction:** This project shall be completed in accordance with the plans.

Yes__✓__ No_____ N/A_____

18. **Section 18 – Protection of Safety Areas, Object Free Areas, Object Free Zones, and Approach/Departure Surfaces:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A___X____

For the project identified herein, I certify that the responses to the foregoing items are correct as marked and meet the compliance of the plans.

Signed: _____
Contractor's Authorized Representative

Date: 8-24-22

Lee Short, Vice President/Managing Member
Print Name and Title of Contractor's Representative

END OF ITEM SS-101

ITEM C-105
MOBILIZATION

DESCRIPTION

105-1 Description. This item of work shall consist of, but is not limited to, work and operations necessary for the movement of personnel, equipment, material and supplies to and from the project site for work on the project except as provided in the contract as separate pay items.

105-2 Mobilization limit. Mobilization shall be limited to **5** percent of the total project cost.

105-3 Posted notices. Prior to commencement of construction activities, the Contractor must post the following documents in a prominent and accessible place where they may be easily viewed by all employees of the prime Contractor and by all employees of subcontractors engaged by the prime Contractor: Equal Employment Opportunity (EEO) Poster "Equal Employment Opportunity is the Law" in accordance with the Office of Federal Contract Compliance Programs Executive Order 11246, as amended; Davis Bacon Wage Poster (WH 1321) - DOL "Notice to All Employees" Poster; and Applicable Davis-Bacon Wage Rate Determination. These notices must remain posted until final acceptance of the work by the Owner.

~~**105-4 Engineer/RPR field office.** The Contractor shall provide dedicated space for the use of the field RPR and inspectors, as a field office for the duration of the project. This space shall be located conveniently near the construction and shall be separate from any space used by the Contractor. The Contractor shall furnish water, sanitary facilities, heat, air conditioning, and electricity in accordance with local building codes. An Engineer/RPR field office is not required.~~

METHOD OF MEASUREMENT

105-5 Basis of measurement and payment. Based upon the contract lump sum price for "Mobilization" partial payments will be allowed as follows:

a. With first pay request, 50%.

b. When 50% or more of the original contract is earned, an additional 40%.

~~**c.** When ---% or more of the original contract is earned, an additional ---%.~~

d. After Final Inspection, staging area clean-up and delivery of all Project Closeout materials as required by Section 90, paragraph 90-11, *Contractor Final Project Documentation,* the final 10%.

BASIS OF PAYMENT

105-6 Payment will be made under:

Item C-105 -6.1	Mobilization (Maximum 5% of Total Bid Exclusive Mobilization -	per Lump Sum

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Office of Federal Contract Compliance Programs (OFCCP)

Executive Order 11246, as amended

EEOC-P/E-1 – Equal Employment Opportunity is the Law Poster

United States Department of Labor, Wage and Hour Division (WHD)

WH 1321 – Employee Rights under the Davis-Bacon Act Poster

END OF ITEM C-105

ITEM SS-120
CONSTRUCTION SAFETY AND SECURITY

DESCRIPTION

120-1.1 This item covers safety and security for construction of the proposed improvements.

The attention to the bidder is directed to the necessity for careful examination of the entire project site to determine, at the time of bid preparation, the full extent of work to be done under the item "Construction Safety and Security."

The items in the "Construction Safety and Security shall include:

1. Temporary Signs and Barricades
2. Airport Security/Safety Requirements

CONSTRUCTION METHODS

120-2.1 Temporary Signs and Barricades

The contractor shall furnish, install, maintain, and remove barricades and temporary signs in accordance with AC 150/5370-2 Operational Safety on Airports During Construction and details on the plans and as directed by the Engineer.

All work involved in the furnishing, installation, maintenance, fueling and removal of barricades and temporary signs will not be measured for separate payment but will be considered subsidiary to the bid item "Construction Safety and Security."

120-2.2 Airport Security and Safety Requirements

The Contractor shall abide by the Airport Security and Safety requirements that are outlined in the approved CSPP. Any costs associated with Airport Security requirements will not be measured by separate payment but will be considered subsidiary to the bid item "Construction Safety and Security."

MEASUREMENT AND PAYMENT

120-3.1 Construction security and safety will be measured as a lump sum complete item. Work completed and accepted under this item will be paid as a lump sum price bid for "Construction Safety and Security," which include full compensation for furnishing all labor, tools and equipment and incidentals necessary to do complete the work. Payment will be made under:

Item SS -120-3.1 Construction Safety and Security, Barricades, Signs, and Traffic Handling – per Lump Sum

END OF ITEM SS-120

ITEM D-701
PIPE FOR STORM DRAINS AND CULVERTS

DESCRIPTION

701-1.1 This item shall consist of the construction of pipe culverts and storm drains in accordance with these specifications and in close conformity with the lines and grades shown on the plans.

MATERIALS

701-2.1 Materials shall meet the requirements shown on the plans and specified below. Underground piping and components used in drainage systems for terminal and aircraft fueling ramp drainage shall be noncombustible and inert to fuel in accordance with National Fire Protection Association (NFPA) 415.

701-2.2 Pipe. The pipe shall be of the type called for on the plans or in the proposal and shall be in accordance with the following appropriate requirements:

	American Association of State Highway and Transportation Officials (AASHTO) M167 Standard Specification for Corrugated Steel Structural Plate, Zinc-Coated, for Field-Bolted Pipe, Pipe-Arches, and Arches
AASHTO M190	Standard Specification for Bituminous-Coated Corrugated Metal Culvert Pipe and Pipe Arches
AASHTO M196	Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains
AASHTO M219	Standard Specification for Corrugated Aluminum Alloy Structural Plate for Field-Bolted Pipe, Pipe-Arches, and Arches
AASHTO M243	Standard Specification for Field-Applied Coating of Corrugated Metal Structural Plate for Pipe, Pipe-Arches, and Arches
AASHTO M252	Standard Specification for Corrugated Polyethylene Drainage Pipe
AASHTO M294	Standard Specification for Corrugated Polyethylene Pipe, 300- to 1500-mm (12- to 60-in.) Diameter
AASHTO M304	Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Wall Drainpipe and Fittings Based on Controlled Inside Diameter
AASHTO MP20	Standard Specification for Steel Reinforced Polyethylene (PE) Ribbed Pipe, 300- to 900-mm (12- to 36-in.) Diameter
AASHTO R73	Standard Practice for Evaluation of Precast Concrete Drainage Productions
ASTM A760	Standard Specification for Corrugated Steel Pipe, Metallic Coated for Sewers and Drains
ASTM A761	Standard Specification for Corrugated Structural Steel Plate, Zinc-Coated, for Field-Bolted Pipe, Pipe-Arches, and Arches
ASTM A762	Standard Specification for Corrugated Steel Pipe, Polymer Precoated for Sewers and Drains

ASTM A849	Standard Specification for Post Applied Coatings, Pavings, and Linings for Corrugated Steel Sewer and Drainage Pipe
ASTM B745	Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains
ASTM C14	Standard Specification for Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe
ASTM C76	Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
ASTM C506	Standard Specification for Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe
ASTM C507	Standard Specification for Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe
ASTM C655	Standard Specification for Reinforced Concrete D-Load Culvert, Storm Drain, and Sewer Pipe
ASTM C1433	Standard Specification for Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers
ASTM C1479	Standard Practice for Installation of Precast Concrete Sewer, Storm Drain, and Culvert Pipe Using Standard Installations
ASTM C1577	Standard Specification for Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers Designed According to AASHTO LRFD
ASTM C1786	Standard Specification for Segmental Precast Reinforced Concrete Box Sections for Culverts, Storm Drains, and Sewers Designed According to AASHTO LRFD
ASTM C1840	Standard Practice for Inspection and Acceptance of Installed Reinforced Concrete Culvert, Storm Drain, and Storm Sewer Pipe
ASTM D3262	Standard Specification for "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Sewer Pipe
ASTM D4161	Standard Specification for "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe Joints Using Flexible Elastomeric Seals
ASTM F667	Standard Specification for 3 through 24 in Corrugated Polyethylene Pipe and Fittings
ASTM F714	Standard Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Outside Diameter
ASTM F794	Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Gravity Sewer Pipe and Fittings Based on Controlled Inside Diameter
ASTM F894	Standard Specification for Polyethylene (PE) Large Diameter Profile Wall Sewer and Drainpipe
ASTM F949	Standard Specification for Poly (Vinyl Chloride) (PVC) Corrugated Sewer Pipe with a Smooth Interior and Fittings

ASTM F2435	Standard Specification for Steel Reinforced Polyethylene (PE) Corrugated Pipe
ASTM F2562	Specification for Steel Reinforced Thermoplastic Ribbed Pipe and Fittings for Non-Pressure Drainage and Sewerage
ASTM F2736	Standard Specification for 6 to 30 in. (152 to 762 mm) Polypropylene (PP) Corrugated Single Wall Pipe and Double Wall Pipe
ASTM F2764	Standard Specification for 30 to 60 in. (750 to 1500 mm) Polypropylene (PP) Triple Wall Pipe and Fittings for Non-Pressure Sanitary Sewer Applications
ASTM F2881	Standard Specification for 12 to 60 in. (300 to 1500 mm) Polypropylene (PP) Dual Wall Pipe and Fittings for Non-Pressure Storm Sewer Applications
ASTM D3034	Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings

701-2.3 Concrete. Concrete for pipe cradles shall have a minimum compressive strength of 2000 psi (13.8 MPa) at 28 days and conform to the requirements of ASTM C94.

701-2.4 Rubber gaskets. Rubber gaskets for rigid pipe shall conform to the requirements of ASTM C443. Rubber gaskets for PVC pipe, polyethylene, and polypropylene pipe shall conform to the requirements of ASTM F477. Rubber gaskets for zinc-coated steel pipe and precoated galvanized pipe shall conform to the requirements of ASTM D1056, for the "RE" closed cell grades. Rubber gaskets for steel reinforced thermoplastic ribbed pipe shall conform to the requirements of ASTM F477. Not used.

701-2.5 Joint mortar. Pipe joint mortar shall consist of one part Portland cement and two parts sand. The Portland cement shall conform to the requirements of ASTM C150, Type I. The sand shall conform to the requirements of ASTM C144.

701-2.6 Joint fillers. Poured filler for joints shall conform to the requirements of ASTM D6690.

701-2.7 Plastic gaskets. Plastic gaskets shall conform to the requirements of ASTM C990. Not used.

701-2.8. Controlled low-strength material (CLSM). Controlled low-strength material shall conform to the requirements of Item P-153. When CLSM is used, all joints shall have gaskets. Not used.

701-2.9 Precast box culverts. Manufactured in accordance with and conforming to ASTM C1433.

701-2.10 Precast concrete pipe. Precast concrete structures shall be furnished by a plant meeting National Precast Concrete Association Plant Certification Program or American Concrete Pipe Association QCast Plant Certification program.

CONSTRUCTION METHODS

701-3.1 Excavation. The width of the pipe trench shall be sufficient to permit satisfactory jointing of the pipe and thorough tamping of the bedding material under and around the pipe, but it shall not be less than the external diameter of the pipe plus 12 inches (300 mm) on each side. The trench walls shall be vertical.

The Contractor shall comply with all current federal, state, and local rules and regulations governing the safety of men and materials during the excavation, installation, and backfilling operations. Specifically, the Contractor shall observe that all requirements of the Occupational Safety and Health Administration (OSHA) relating to excavations, trenching, and shoring are strictly adhered to. The width of the trench shall be sufficient to permit satisfactorily jointing of the pipe and thorough compaction of the bedding material under the pipe and backfill material around the pipe, but it shall not be greater than the widths shown on the plans trench detail.

Where rock, hardpan, or other unyielding material is encountered, the Contractor shall remove it from below the foundation grade for a depth of at least 8 inch (200 mm) or 1/2 inch (12 mm) for each foot of fill over the top of the pipe (whichever is greater) but for no more than three-quarters of the nominal diameter of the pipe. The excavation below grade should be filled with granular material to form a uniform foundation.

Where a firm foundation is not encountered at the grade established, due to soft, spongy, or other unstable soil, the unstable soil shall be removed and replaced with approved granular material for the full trench width. The RPR shall determine the depth of removal necessary. The granular material shall be compacted to provide adequate support for the pipe.

The excavation for pipes placed in embankment fill shall not be made until the embankment has been completed to a height above the top of the pipe as shown on the plans.

701-3.2 Bedding. The bedding surface for the pipe shall provide a foundation of uniform density to support the pipe throughout its entire length.

a. Rigid pipe. The pipe bedding shall be constructed uniformly for the full length of the pipe barrel, as required on the plans. The maximum aggregate size shall be 1 in when the bedding thickness is less than 6 inches, and 1-1/2 in when the bedding thickness is greater than 6 inches. Bedding shall be loosely placed uncompacted material under the middle third of the pipe prior to placement of the pipe.

b. Flexible pipe. For flexible pipe, the bed shall be shaped to fit the pipe, and a bedding blanket of sand or fine granular material shall be provided as follows:

Flexible Pipe Bedding

Pipe Corrugation Depth		Minimum Bedding Depth	
inch	mm	inch	mm
1/2	12	1	25
1	25	2	50
2	50	3	75
2-1/2	60	3-1/2	90

c. other pipe materials. For PVC, polyethylene, polypropylene, or fiberglass pipe, the bedding material shall consist of coarse sands and gravels with a maximum particle size of

3/4 inches (19 mm). For pipes installed under paved areas, no more than 12% of the material shall pass the No. 200 (0.075 mm) sieve. For all other areas, no more than 50% of the material shall pass the No. 200 (0.075 mm) sieve. The bedding shall have a thickness of at least 6 inches (150 mm) below the bottom of the pipe and extend up around the pipe for a depth of not less than 50% of the pipe's vertical outside diameter.

701-3.3 Laying pipe. The pipe laying shall begin at the lowest point of the trench and proceed upgrade. The lower segment of the pipe shall be in contact with the bedding throughout its full length. Bell or groove ends of rigid pipes and outside circumferential laps of flexible pipes shall be placed facing upgrade.

Paved or partially lined pipe shall be placed so that the longitudinal center line of the paved segment coincides with the flow line.

Elliptical and elliptically reinforced concrete pipes shall be placed with the manufacturer's reference lines designating the top of the pipe within five degrees of a vertical plane through the longitudinal axis of the pipe.

701-3.4 Joining pipe. Joints shall be made with (1) cement mortar, (2) cement grout, (3) rubber gaskets, (4) plastic gaskets, (5) coupling bands or (6).

Mortar joints shall be made with an excess of mortar to form a continuous bead around the outside of the pipe and shall be finished smooth on the inside. Molds or runners shall be used for grouted joints to retain the poured grout. Rubber ring gaskets shall be installed to form a flexible watertight seal.

a. Concrete pipe. Concrete pipe may be either bell and spigot or tongue and groove. Pipe sections at joints shall be fully seated and the inner surfaces flush and even. Concrete pipe joints shall be sealed with rubber gaskets meeting ASTM C443 when leak resistant joints are required or Concrete pipe joints shall be sealed with butyl mastic meeting ASTM C990 or mortar when soil tight joints are required. Joints shall be thoroughly wetted before applying mortar or grout.

b. Metal pipe. Metal pipe shall be firmly joined by form-fitting bands conforming to the requirements of ASTM A760 for steel pipe and AASHTO M196 for aluminum pipe.

c. PVC, Polyethylene, or Polypropylene pipe. Joints for PVC, Polyethylene, or Polypropylene pipe shall conform to the requirements of ASTM D3212 when leak resistant joints are required. Joints for PVC and Polyethylene pipe shall conform to the requirements of AASHTO M304 when soil tight joints are required. Fittings for polyethylene pipe shall conform to the requirements of AASHTO M252 or ASTM M294. Fittings for polypropylene pipe shall conform to ASTM F2881, ASTM F2736, or ASTM F2764.

d. Fiberglass pipe. Joints and fittings shall be as detailed on the plans and in accordance with the manufacturer's recommendations. Joints shall meet the requirements of ASTM D4161 for flexible elastomeric seals. **or** Enter manufacturers joint installation requirements.

701-3.5 Embedment and Overfill. Pipes shall be inspected before any fill material is placed; any pipes found to be out of alignment, unduly settled, or damaged shall be removed and re-laid or replaced at the Contractor's expense.

701-3.5-1 Embedment Material Requirements

a. Concrete Pipe. Embedment material and compaction requirements shall be in accordance with the applicable Type of Standard Installation (Types 1, 2, 3, or 4) per ASTM C1479. If a concrete cradle or CLSM embedment material is used, it shall conform to the plan details.

b. Plastic and fiberglass Pipe. Embedment material shall meet the requirements of ASTM D3282, A-1, A-2-4, A-2-5, or A-3. Embedment material shall be free of organic material, stones

larger than 1.5 inches in the greatest dimension, or frozen lumps. Embedment material shall extend to 12 inches above the top of the pipe.

c. Metal Pipe. Embedment material shall be granular as specified in the contract document and specifications, and shall be free of organic material, rock fragments larger than 1.5 inches in the greatest dimension and frozen lumps. As a minimum, backfill materials shall meet the requirements of ASTM D3282, A-1, A-2, or A-3. Embedment material shall extend to 12 inches above the top of the pipe.

701-3.5-2 Placement of Embedment Material

The embedment material shall be compacted in layers not exceeding 6 inches (150 mm) on each side of the pipe and shall be brought up one foot (30 cm) above the top of the pipe or to natural ground level, whichever is greater. Thoroughly compact the embedment material under the haunches of the pipe without displacing the pipe. Material shall be brought up evenly on each side of the pipe for the full length of the pipe.

When the top of the pipe is above the top of the trench, the embedment material shall be compacted in layers not exceeding 6 inches (150 mm) and shall be brought up evenly on each side of the pipe to one foot (30 cm) above the top of the pipe. All embedment material shall be compacted to a density required under Item P-152.

Concrete cradles and flowable fills, such as controlled low strength material (CLSM) or controlled density fill (CDF), may be used for embedment provided adequate flotation resistance can be achieved by restraints, weighing, or placement technique.

It shall be the Contractor's responsibility to protect installed pipes and culverts from damage due to construction equipment operations. The Contractor shall be responsible for installation of any extra strutting or backfill required to protect pipes from the construction equipment.

701-3.6 Overfill

Pipes shall be inspected before any overfill is in place. Any pipes found to be out of alignment, unduly settled, or damaged shall be removed and re-laid or replaced at the Contractor's expense. Evaluation of any damage to RCP shall be evaluated based on AASHTO R73.

Overfill material shall be place and compacted in layers as required to achieve compaction to at least 95 percent standard proctor per ASTM D698 . The soil shall contain no debris, organic matter, frozen material, or stones with a diameter greater than one half the thickness of the compacted layers being placed.

701-3.7 Inspection Requirements

An initial post installation inspection shall be performed by the RPR no sooner than 30 days after completion of installation and final backfill. Clean or flush all lines prior to inspection.

Use a camera with lighting suitable to allow a clear picture of the entire periphery of the pipe interior. Center the camera in the pipe both vertically and horizontally and be able to pan and tilt to a 90-degree angle with the axis of the pipe rotating 360 degrees. Use equipment to move the camera through the pipe that will not obstruct the camera's view or interfere with proper documentation of the pipe's condition. The video image shall be clear, focused, and relatively free from roll, static, or other image distortion qualities that would prevent the reviewer from evaluating the condition of the pipe.

For pipe sizes larger than 48 inches, a walk-through visual inspection shall be performed.

Incorporate specific inspection requirements for the various types of pipes beneath the general inspection requirements.

Reinforced concrete pipe shall be inspected, evaluated, and reported on in accordance with ASTM C1840, "Standard Practice for Inspection and Acceptance of Installed Reinforced Concrete Culvert, Storm Drain, and Storm Sewer Pipe." Any issues reported shall include still photo and video documentation. The zoom ratio shall be provided for all still or video images that document any issues of concern by the inspection firm.

Flexible pipes shall be inspected for rips, tears, joint separations, soil migration, cracks, localized buckling, settlement, alignment, and deflection. Determine whether the allowable deflection has been exceeded by use of a laser profiler for internal pipe diameters of 48 inches or less, or direct measurement for internal pipe diameters greater than 48 inches. Laser profile equipment shall utilize low barrel distortion video equipment. Deflection of installed pipe shall not exceed the limits provided in the table below, as a percentage of the average inside diameter of the pipe.

Maximum Allowable Pipe Deflection

Type of Pipe	**Maximum Allowable Deflection (%)**
Corrugated Metal Pipe	5
Concrete Lined CMP	3
Thermoplastic Pipe	5
Fiberglass	5

If deflection readings in excess of the allowable deflection are obtained, remove the pipe with excessive deflection and replace with new pipe. Isolated areas may exceed allowable by 2.5% with concurrence of RPR. Repair or replace any pipe with cracks exhibiting displacement across the crack, bulges, creases, tears, spalls, or delamination. The report for flexible pipe shall include as a minimum, the deflection results and final post installation inspection report. The inspection report shall include: a copy of all videos taken, pipe location identification, equipment used for inspection, inspector name, deviation from design line and grade, and inspector's notes.

METHOD OF MEASUREMENT

701-4.1 The length of pipe shall be measured in linear feet (m) of pipe in place, completed, and accepted. It shall be measured along the centerline of the pipe from end or inside face of structure to the end or inside face of structure, whichever is applicable. Identify each class, types and size of pipe shall be measured separately. All fittings shall be included in the footage as typical pipe sections in the pipe being measured.

701-4.2. Precast box culverts shall be measured by individual unit and size.

701-4.3 The volume of concrete for pipe cradles shall be the number of cubic yards (cubic meters) of concrete that is completed in place and accepted.

701-4.4 The volume of rock, hardpan, or other unyielding material shall be the number of cubic yards (cubic meters) excavated. No payment shall be made for the cushion material placed for the bed of the pipe.

BASIS OF PAYMENT

701-5.0 These prices shall fully compensate the Contractor for furnishing all materials and for all preparation, excavation, and installation of these materials; and for all labor, equipment, tools, and incidentals necessary to complete the item.

701-5.1 Payment will be made at the contract unit price per linear foot (meter) for identify each class and size of pipe .

701-5.2 Payment will be made at the contract unit price per unit for identify each class and size of precast box culvert.

701-5.3 Payment will be made at the contract unit price per cubic yard (cubic meter) of concrete for pipe cradles.

701-5.4 Payment will be made at the contract unit price per cubic yard (cubic meter) for rock, hardpan, or other unyielding material excavation.

Payment will be made under:

Item 701-5.1	~~[___] inch~~ **TBD** per linear foot (meter)
Item 701-5.2	Precast box culvert per unit.
Item 701-5.3	Concrete for pipe cradles - per cubic yard (cubic meter)
Item 701-5.4	Rock, hardpan, or other unyielding material excavation - per cubic yard (cubic meter

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

American Association of State Highway and Transportation Officials (AASHTO)

AASHTO M167	Standard Specification for Corrugated Steel Structural Plate, Zinc-Coated, for Field-Bolted Pipe, Pipe-Arches, and Arches
AASHTO M190	Standard Specification for Bituminous-Coated Corrugated Metal Culvert Pipe and Pipe Arches
AASHTO M196	Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains
AASHTO M219	Standard Specification for Corrugated Aluminum Alloy Structural Plate for Field-Bolted Pipe, Pipe-Arches, and Arches
AASHTO M243	Standard Specification for Field Applied Coating of Corrugated Metal Structural Plate for Pipe, Pipe-Arches, and Arches
AASHTO M252	Standard Specification for Corrugated Polyethylene Drainage Pipe
AASHTO M294	Standard Specification for Corrugated Polyethylene Pipe, 300- to 1500-mm (12- to 60-in.) Diameter
AASHTO M304	Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Wall Drainpipe and Fittings Based on Controlled Inside Diameter
AASHTO MP20	Standard Specification for Steel Reinforced Polyethylene (PE) Ribbed Pipe, 300- to 900-mm (12- to 36-in.) Diameter

ASTM International (ASTM)

ASTM A760	Standard Specification for Corrugated Steel Pipe, Metallic Coated for Sewers and Drains
ASTM A761	Standard Specification for Corrugated Steel Structural Plate, Zinc Coated, for Field-Bolted Pipe, Pipe-Arches, and Arches
ASTM A762	Standard Specification for Corrugated Steel Pipe, Polymer Precoated for Sewers and Drains
ASTM A849	Standard Specification for Post-Applied Coatings, Pavings, and Linings for Corrugated Steel Sewer and Drainage Pipe
ASTM B745	Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains
ASTM C14	Standard Specification for Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe
ASTM C76	Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
ASTM C94	Standard Specification for Ready Mixed Concrete
ASTM C144	Standard Specification for Aggregate for Masonry Mortar
ASTM C150	Standard Specification for Portland Cement
ASTM C443	Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets
ASTM C506	Standard Specification for Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe
ASTM C507	Standard Specification for Reinforced Concrete Elliptical Culvert, Storm Drain and Sewer Pipe
ASTM C655	Standard Specification for Reinforced Concrete D-Load Culvert, Storm Drain and Sewer Pipe
ASTM C990	Standard Specification for Joints for Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants
ASTM C1433	Standard Specification for Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers
ASTM D1056	Standard Specification for Flexible Cellular Materials Sponge or Expanded Rubber
ASTM D3034	Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings
ASTM D3212	Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals
ASTM D3262	Standard Specification for "Fiberglass" (Glass-Fiber Reinforced Thermosetting Resin) Sewer Pipe
ASTM D3282	Standard Practice for Classification of Soils and Soil-Aggregate Mixtures for Highway Construction Purposes

ASTM D4161	Standard Specification for "Fiberglass" (Glass-Fiber Reinforced Thermosetting Resin) Pipe Joints Using Flexible Elastomeric Seals
ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements
ASTM F477	Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe
ASTM F667	Standard Specification for 3 through 24 in. Corrugated Polyethylene Pipe and Fittings
ASTM F714	Standard Specification for Polyethylene (PE) Plastic Pipe (DR PR) Based on Outside Diameter
ASTM F794	Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Gravity Sewer Pipe & Fittings Based on Controlled Inside Diameter
ASTM F894	Standard Specification for Polyethylene (PE) Large Diameter Profile Wall Sewer and Drainpipe
ASTM F949	Standard Specification for Poly (Vinyl Chloride) (PVC) Corrugated Sewer Pipe with a Smooth Interior and Fittings
ASTM F2435	Standard Specification for Steel Reinforced Polyethylene (PE) Corrugated Pipe
ASTM F2562	Specification for Steel Reinforced Thermoplastic Ribbed Pipe and Fittings for Non-Pressure Drainage and Sewerage
ASTM F2736	Standard Specification for 6 to 30 in. (152 to 762 mm) Polypropylene (PP) Corrugated Single Wall Pipe and Double Wall Pipe
ASTM F2764	Standard Specification for 30 to 60 in. (750 to 1500 mm) Polypropylene (PP) Triple Wall Pipe and Fittings for Non-Pressure Sanitary Sewer Applications
ASTM F2881	Standard Specification for 12 to 60 in. (300 to 1500 mm) Polypropylene (PP) Dual Wall Pipe and Fittings for Non-Pressure Storm Sewer Applications

National Fire Protection Association (NFPA)

NFPA 415	Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways

END ITEM D-701

ITEM P-101
PREPARATION/REMOVAL OF EXISTING PAVEMENTS

DESCRIPTION

101-1 This item shall consist of preparation of existing pavement surfaces for overlay, surface treatments, removal of existing pavement, and other miscellaneous items. The work shall be accomplished in accordance with these specifications and the applicable plans.

EQUIPMENT AND MATERIALS

101-2 All equipment and materials shall be specified here and in the following paragraphs or approved by the Resident Project Representative (RPR). The equipment shall not cause damage to the pavement to remain in place.

CONSTRUCTION

101-3.1 Removal of existing pavement.

The Contractor's removal operation shall be controlled to not damage adjacent pavement structure, and base material, cables, utility ducts, pipelines, or drainage structures which are to remain under the pavement.

a. Concrete pavement removal. Full depth saw cuts shall be made perpendicular to the slab surface. The Contractor shall saw through the full depth of the slab including any dowels at the joint, removing the pavement and installing new dowels as shown on the plans and per the specifications. Where the perimeter of the removal limits is not located on the joint and there are no dowels present, the perimeter shall be saw cut the full depth of the pavement. The pavement inside the saw cut shall be removed by methods which will not cause distress in the pavement which is to remain in place. If the material is to be wasted on the airport site, it shall be reduced to a maximum size of 2 inches. Concrete slabs that are damaged by under breaking shall be repaired or removed and replaced as directed by the RPR.

The edge of existing concrete pavement against which new pavement abuts shall be protected from damage at all times. Spall and underbreak repair shall be in accordance with the plans. Any underlaying material that is to remain in place, shall be recompacted and/or replaced as shown on the plans. Adjacent areas damaged during repair shall be repaired or replaced at the Contractor's expense.

b. Asphalt pavement removal. Asphalt pavement to be removed shall be cut to the full depth of the asphalt pavement around the perimeter of the area to be removed. If the material is to be wasted on the airport site , it shall be broken to a maximum size of **2** inches (mm.

c. Repair or removal of Base, Subbase, and/or Subgrade. All failed material including surface, base course, subbase course, and subgrade shall be removed and repaired as shown on the plans or as directed by the RPR. Materials and methods of construction shall comply with the applicable sections of these specifications. Any damage caused by Contractor's removal process shall be repaired at the Contractor's expense.

~~**101-3.2 Preparation of joints and cracks prior to overlay/surface treatment.** Remove all vegetation and debris from cracks to a minimum depth of 1 inch (25 mm). If extensive vegetation exists, treat the specific area with a concentrated solution of a water-based herbicide approved~~

by the RPR. Fill all cracks greater than 1/4 inch (6 mm) wide) with a crack sealant per ASTM D6690. The crack sealant, preparation, and application shall be compatible with the surface treatment/overlay to be used. To minimize contamination of the asphalt with the crack sealant, underfill the crack sealant a minimum of 1/8 inch (3 mm), not to exceed ¼ inch (6 mm). Any excess joint or crack sealer shall be removed from the pavement surface.

101-3.3 Removal of Foreign Substances/contaminates prior to [overlay] [seal coat] [remarking]. Removal of foreign substances/contaminates from existing pavement that will affect the bond of the new treatment shall consist of removal of rubber, fuel spills, oil, crack sealer, at least 90% of paint, and other foreign substances from the surface of the pavement. Areas that require removal are designated on the plans and as directed by the RPR in the field during construction.

[Chemicals] [high pressure water] [heater scarifier (asphaltic concrete only)] [cold milling] [rotary grinding] [sandblasting] may be used. If chemicals are used, they shall comply with the state's environmental protection regulations. Removal methods used shall not cause major damage to the pavement, or to any structure or utility within or adjacent to the work area. Major damage is defined as changing the properties of the pavement, removal of asphalt causing the aggregate to ravel, or removing pavement over 1/8 inch (3 mm) deep. If it is deemed by the RPR that damage to the existing pavement is caused by operational error, such as permitting the application method to dwell in one location for too long, the Contractor shall repair the damaged area without compensation and as directed by the RPR.

Removal of foreign substances shall not proceed until approved by the RPR. Water used for high pressure water equipment shall be provided by the Contractor at the Contractor's expense. No material shall be deposited on the pavement shoulders. All wastes shall be disposed of in areas indicated in this specification or shown on the plans.101-3.4 Concrete spall or failed asphaltic concrete pavement repair.

a. Repair of concrete spalls in areas to be overlaid with asphalt. The Contractor shall repair all spalled concrete as shown on the plans or as directed by the RPR. The perimeter of the repair shall be saw cut a minimum of 2 inches (50 mm) outside the affected area and 2 inches (50 mm) deep. The deteriorated material shall be removed to a depth where the existing material is firm or cannot be easily removed with a geologist pick. The removed area shall be filled with asphalt mixture with aggregate sized appropriately for the depth of the patch. The material shall be compacted with equipment approved by the RPR until the material is dense and no movement or marks are visible. The material shall not be placed in lifts over 4 inches (100 mm) in depth. This method of repair applies only to pavement to be overlaid.

b. Asphalt pavement repair. The Contractor shall repair all spalled concrete as shown on the plans or as directed by the RPR. The failed areas shall be removed as specified in paragraph 101-3.1b. All failed material including surface, base course, subbase course, and subgrade shall be removed. Materials and methods of construction shall comply with the applicable sections of these specifications.

101-3.5 Cold milling. Milling shall be performed with a power operated milling machine or grinder, capable of producing a uniform finished surface. The milling machine or grinder shall operate without tearing or gouging the underlaying surface. The milling machine or grinder shall be equipped with grade and slope controls, and a positive means of dust control. All millings shall be removed and disposed [off Airport property] [in areas designated on the plans]. If the Contractor mills or grinds deeper or wider than the plans specify, the Contractor shall replace the material removed with new material at the Contractor's Expense.

a. Patching. The milling machine shall be capable of cutting a vertical edge without chipping or spalling the edges of the remaining pavement and it shall have a positive method of controlling the depth of cut. The RPR shall layout the area to be milled with a straightedge in increments of 1 foot (30 cm) widths. The area to be milled shall cover only the failed area. Any excessive area that is milled because the Contractor does not have the appropriate milling machine, or areas that are damaged because of his negligence, shall be repaired by the Contractor at the Contractor's Expense.

b. Profiling, grade correction, or surface correction. The milling machine shall have a minimum width of [7] feet ([2] m) and it shall be equipped with electronic grade control devices that will cut the surface to the grade specified. The tolerances shall be maintained within +0 inch and -1/4 inch (+0 mm and -6mm) of the specified grade. The machine must cut vertical edges and have a positive method of dust control. The machine must have the ability to [windrow the millings or cuttings] [remove the millings or cuttings from the pavement and load them into a truck]. All millings shall be removed and disposed of [off the airport] [in areas designated on the plans].

c. Clean-up. The Contractor shall sweep the milled surface daily and immediately after the milling until all residual materials are removed from the pavement surface. Prior to paving, the Contractor shall wet down the milled pavement and thoroughly sweep and/or blow the surface to remove loose residual material. Waste materials shall be collected and removed from the pavement surface and adjacent areas by sweeping or vacuuming. Waste materials shall be removed and disposed off Airport property. [in areas designated on the plans].

101-3.6. Preparation of asphalt pavement surfaces prior to surface treatment. Existing asphalt pavements to be treated with a surface treatment shall be prepared as follows:

a. Patch asphalt pavement surfaces that have been softened by petroleum derivatives or have failed due to any other cause. Remove damaged pavement to the full depth of the damage and replace with new asphalt pavement similar to that of the existing pavement in accordance with paragraph 101-3.4b.

b. Repair joints and cracks in accordance with paragraph 101-3.2.

c. Remove oil or grease that has not penetrated the asphalt pavement by scrubbing with a detergent and washing thoroughly with clean water. After cleaning, treat these areas with an oil spot primer. [ ]

d. Clean pavement surface immediately prior to placing the surface treatment so that it is free of dust, dirt, grease, vegetation, oil, or any type of objectionable surface film.

101-3.7 Maintenance. The Contractor shall perform all maintenance work necessary to keep the pavement in a satisfactory condition until the full section is complete and accepted by the RPR. The surface shall be kept clean and free from foreign material. The pavement shall be properly drained at all times. If cleaning is necessary or if the pavement becomes disturbed, any work repairs necessary shall be performed at the Contractor's expense.

101-3.8 Preparation of Joints in Rigid Pavement prior to resealing. Prior to application of sealant material, clean and dry the joints of all scale, dirt, dust, old sealant, curing compound, moisture, and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method used cleans the joint and does not damage the joint.

101-3.8.1 Removal of Existing Joint Sealant. All existing joint sealants will be removed by plowing or use of hand tools. Any remaining sealant and or debris will be removed by use of wire brushes or other tools, as necessary. Resaw joints removing no more than 1/16 inch (2 mm) from

~~each joint face. Immediately after sawing, flush out joint with water and other tools as necessary to completely remove the slurry.~~

101-3.8.2 Cleaning prior to sealing. Immediately before sealing, joints shall be cleaned by removing any remaining laitance and other foreign material. Allow sufficient time to dry out joints prior to sealing. Joint surfaces will be surface-dry prior to installation of sealant.

101-3.8.3 Joint sealant. Joint material and installation will be in accordance with Item P-605 ~~[Item P-604]~~.

~~**101-3.9 Preparation of Cracks in Flexible Pavement prior to sealing.** Prior to application of sealant material, clean and dry the joints of all scale, dirt, dust, old sealant, curing compound, moisture, and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method used cleans the cracks and does not damage the pavement.~~

~~**101-3.9.1 Preparation of Crack.** Widen crack with [router] [random crack saw] by removing a minimum of 1/16 inch (2 mm) from each side of crack. Immediately before sealing, cracks will be blown out with a hot air lance combined with oil and water free compressed air.~~

~~**101-3.9.2 Removal of Existing Crack Sealant.** Existing sealants will be removed by [routing] [random crack saw]. Following [routing] [sawing] any remaining debris will be removed by use of a hot lance combined with oil and water free compressed air.~~

~~**101-3.9.3 Crack Sealant.** Crack sealant material and installation will be in accordance with [Item P-605].~~

101-3.9.4 Removal of Pipe and other Buried Structures.

a. Removal of Existing Pipe Material. Remove all pipes as recommended by RPR. The pipe material shall be legally disposed of off-site in a timely manner following removal. Trenches shall be backfilled material equal to or better in quality than adjacent embankment. Trenches under paved areas must be compacted to 95% of ASTM D698 .

~~**b. Removal of Inlets/Manholes.** [Where indicated on the plans or as directed by the RPR, inlets and/or manholes shall be removed and legally disposed of off site in a timely fashion after removal. Excavations after removal shall be backfilled with material equal or better in quality than adjacent embankment. When under paved areas must be compacted to [95%] of ASTM [D1557] [D698], when outside of paved areas must be compacted to [95%] of ASTM D698. [Not used.]]~~

~~**c.** Removal of [ ].~~

METHOD OF MEASUREMENT

~~**101-4.1 Lump sum.** No separate measurement for payment will be made. The work covered by this section shall be considered as a subsidiary obligation of the Contractor and covered under the other contract items.~~

101-4.1 Pavement removal. The unit of measurement for pavement removal shall be the number of square yards ~~(square meters)~~ removed by the Contractor. Any pavement removed outside the limits of removal because the pavement was damaged by negligence on the part of the Contractor shall not be included in the measurement for payment. No direct measurement or payment shall be made for saw cutting. Saw cutting shall be incidental to pavement removal. Dowel bar installation shall be incidental to pavement removal.

~~**101-4.2 Joint and crack repair.** The unit of measurement for joint and crack repair shall be the linear foot (meter) of joint.~~

~~**101-4.3 Removal of Foreign Substances/contaminates.** The unit of measurement for foreign Substances/contaminates removal shall be the square foot (meter).~~

~~**101-4.4 Spalled and failed asphalt pavement repair.** The unit of measure for failed asphalt pavement repair shall be square foot (square meter).~~

~~**101-4.5 Concrete Spall Repair.** The unit of measure for concrete spall repair shall be the number of square feet (square meter). The location and average depth of the patch shall be determined and agreed upon by the RPR and the Contractor.~~

~~**101-4.6 Cold milling.** The unit of measure for cold milling shall be [___] inches of milling per square yard (square meter). The location and average depth of the cold milling shall be as shown on the plans. If the initial cut does not correct the condition, the Contractor shall re-mill the area and will be paid for the total depth of milling.]~~

101-4.7 Removal of Pipe and other Buried Structures. ~~[Not require.] [~~ The unit of measurement for removal of pipe and other buried structures will be Linear Feet. No separate measurement for payment will be made. The work covered by this section shall be considered ~~as a subsidiary obligation of the Contractor and covered under the other contract items.] made~~ at the contract unit price for each completed and accepted Item. This price shall be full compensation for all labor, equipment, tools, and incidentals necessary to complete this item in accordance with paragraph 101-3.9.4

BASIS OF PAYMENT

101-5.1 Payment. Payment shall be made at contract unit price for the unit of measurement as specified above. This price shall be full compensation for furnishing all materials and for all preparation, hauling, and placing of the material and for all labor, equipment, tools, and incidentals necessary to complete this item.

Item P 101-5.1a	Sawcut, Remove and Dispose Existing Concrete Pavement Full Depth (8") - per Square Yards
Item P 101-5.1b	Sawcut, Remove and Dispose Existing Asphalt Ramp – per Square Yards
Item P-101-5.1c	Sawcut, Remove and Dispose Existing 6" Vertical Curb –per Linear Feet

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

AC 150/5380-6	Guidelines and Procedures for Maintenance of Airport Pavements.

ASTM International (ASTM)

ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements

END OF ITEM P-101

ITEM P-152
EXCAVATION, SUBGRADE, AND EMBANKMENT

DESCRIPTION

152-1.1 This item covers excavation, disposal, placement, and compaction of all materials within the limits of the work required to construct safety areas, runways, taxiways, aprons, and intermediate areas as well as other areas for drainage, building construction, parking, or other purposes in accordance with these specifications and in conformity to the dimensions and typical sections shown on the plans.

152-1.2 Classification. All material excavated shall be classified as defined below:

a. Unclassified excavation. Unclassified excavation shall consist of the excavation and disposal of all material, regardless of its nature which is not otherwise classified and paid for under one of the following items .

Borrow excavation. Borrow excavation shall consist of approved material required for the construction of embankments or for other portions of the work in excess of the quantity of usable material available from required excavations. Borrow material shall be obtained from areas designated by the Resident Project Representative (RPR) within the limits of the airport property but outside the normal limits of necessary grading, or from areas outside the airport boundaries.

152-1.3 Unsuitable excavation. Unsuitable material shall be disposed of off-site or as directed by the RPR. Materials containing vegetable or organic matter, such as muck, peat, organic silt, or sod shall be considered unsuitable for use in embankment construction. Material suitable for topsoil may be used on the embankment slope when approved by the RPR. *Undercutting of material unsatisfactory for subgrade foundation shall be considered unsuitable excavation and shall be excavated to the depth specified by the Engineer below the subgrade.*

CONSTRUCTION METHODS

152-2.1 General. ~~Before beginning excavation, grading, and embankment operations in any area, the area shall be cleared or cleared and grubbed in accordance with Item P-151.~~

The suitability of material to be placed in embankments shall be subject to approval by the RPR. All unsuitable material shall be disposed of off site. ~~in waste areas as shown on the plans~~. All waste areas shall be graded to allow positive drainage of the area and adjacent areas. The surface elevation of waste areas shall be specified on the plans or approved by the RPR.

When the Contractor's excavating operations encounter artifacts of historical or archaeological significance, the operations shall be temporarily discontinued and the RPR notified per Section 70, paragraph 70-20. At the direction of the RPR, the Contractor shall excavate the site in such a manner as to preserve the artifacts encountered and allow for their removal. Such excavation will be paid for as extra work.

Areas outside the limits of the pavement areas where the top layer of soil has become compacted by hauling or other Contractor activities shall be scarified and disked to a depth of 4 inches (100 mm), to loosen and pulverize the soil. Stones or rock fragments larger than 4 inches (100 mm) in their greatest dimension will not be permitted in the top 6 inches (150 mm) of the subgrade.

If it is necessary to interrupt existing surface drainage, sewers or under-drainage, conduits, utilities, or similar underground structures, the Contractor shall be responsible for and shall take

all necessary precautions to preserve them or provide temporary services. When such facilities are encountered, the Contractor shall notify the RPR, who shall arrange for their removal if necessary. The Contractor, at their own expense, shall satisfactorily repair or pay the cost of all damage to such facilities or structures that may result from any of the Contractor's operations during the period of the contract.

a. Blasting. Blasting shall not be allowed.

152-2.2 Excavation. No excavation shall be started until the work has been staked out by the Contractor and the RPR has obtained from the Contractor, the survey notes of the elevations and measurements of the ground surface. The Contractor and RPR shall agree that the original ground lines shown on the original topographic mapping are accurate, or agree to any adjustments made to the original ground lines.

Volumetric quantities were calculated by comparing DTM files of the applicable design surfaces and generating Triangle Volume Reports. Electronic copies of DTM files and a paper copy of the original topographic map will be issued to the successful bidder.

Volumetric quantities were calculated using design cross sections which were created for this project using the DTM files of the applicable design surfaces and generating End Area Volume Reports. Paper copies of design cross sections and a paper copy of the original topographic map will be issued to the successful bidder.

Existing grades on the design cross sections or DTM's, where they do not match the locations of actual spot elevations shown on the topographic map, were developed by computer interpolation from those spot elevations. Prior to disturbing original grade, Contractor shall verify the accuracy of the existing ground surface by verifying spot elevations at the same locations where original field survey data was obtained as indicated on the topographic map. Contractor shall recognize that, due to the interpolation process, the actual ground surface at any particular location may differ somewhat from the interpolated surface shown on the design cross sections or obtained from the DTM's. Contractor's verification of original ground surface, however, shall be limited to verification of spot elevations as indicated herein, and no adjustments will be made to the original ground surface unless the Contractor demonstrates that spot elevations shown are incorrect. For this purpose, spot elevations which are within 0.1 foot (30 mm) of the stated elevations for ground surfaces, or within 0.04 foot (12 mm) for hard surfaces (pavements, buildings, foundations, structures, etc.) shall be considered "no change". Only deviations in excess of these will be considered for adjustment of the original ground surface. If Contractor's verification identifies discrepancies in the topographic map, Contractor shall notify the RPR in writing at least **1 DAY** before disturbance of existing grade to allow sufficient time to verify the submitted information and make adjustments to the design cross sections or DTM's. Disturbance of existing grade in any area shall constitute acceptance by the Contractor of the accuracy of the original elevations shown on the topographic map for that area.

All areas to be excavated shall be stripped of vegetation and topsoil. Topsoil shall be stockpiled for future use in areas designated on the plans or by the RPR. All suitable excavated material shall be used in the formation of embankment, subgrade, or other purposes **as** shown on the plans. All unsuitable material shall be disposed of ~~as shown on the plans~~.

The grade shall be maintained so that the surface is well drained at all times.

When the volume of the excavation exceeds that required to construct the embankments to the grades as indicated on the plans, the excess shall be used to grade the areas of ultimate development or disposed as directed by the RPR. When the volume of excavation is not sufficient for constructing the embankments to the grades indicated, the deficiency shall be obtained from borrow areas.

a. Selective grading. *When quality of the material varies significantly,* ~~selective grading is indicated on the plans~~, the more suitable material designated by the RPR shall be used in constructing the embankment or in capping the pavement subgrade. If, at the time of excavation, it is not possible to place this material in its final location, it shall be stockpiled in approved areas until it can be placed. The more suitable material shall then be placed and compacted as specified. Selective grading shall be considered incidental to the work involved. The cost of stockpiling and placing the material shall be included in the various pay items of work involved.

b. Undercutting. Rock, shale, hardpan, loose rock, boulders, or other material unsatisfactory for safety areas, subgrades, roads, shoulders, or any areas intended for turf shall be excavated to a minimum depth of 12 inches (300 mm) below the subgrade or to the depth specified by the RPR. Muck, peat, matted roots, or other yielding material, unsatisfactory for subgrade foundation, shall be removed to the depth specified. Unsuitable materials shall be disposed off the airport. The cost is incidental to this item. This excavated material shall be paid for at the contract unit price per cubic yard. The excavated area shall be backfilled with suitable material obtained from the grading operations or borrow areas and compacted to specified densities. The necessary backfill will constitute a part of *Unsuitable Excavation* ~~the embankment~~. Where rock cuts are made, backfill with select material. Any pockets created in the rock surface shall be drained in accordance with the details shown on the plans. Undercutting will be paid as unclassified excavation .

c. Over-break. Over-break, including slides, is that portion of any material displaced or loosened beyond the finished work as planned or authorized by the RPR. All over-break shall be graded or removed by the Contractor and disposed of as directed by the RPR. The RPR shall determine if the displacement of such material was unavoidable and their own decision shall be final. Payment will not be made for the removal and disposal of over-break that the RPR determines as avoidable. Unavoidable over-break will be classified as "Unclassified Excavation."

d. Removal of utilities. The removal of existing structures and utilities required to permit the orderly progress of work will be accomplished by the Contractor as indicated on the plans. All existing foundations shall be excavated at least 2 feet (60 cm) below the top of subgrade or as indicated on the plans, and the material disposed of as directed by the RPR. All foundations thus excavated shall be backfilled with suitable material and compacted as specified for embankment or as shown on the plans.

152-2.3 Borrow excavation. Borrow areas from outside the airport boundary. Embankment quantities shown on plans.

152-2.4 Drainage excavation. Drainage excavation shall consist of excavating drainage ditches including intercepting, inlet, or outlet ditches; or other types as shown on the plans. The work shall be performed in sequence with the other construction. Ditches shall be constructed prior to starting adjacent excavation operations. All satisfactory material shall be placed in embankment fills; unsuitable material shall be placed in designated waste areas or as directed by the RPR. All necessary work shall be performed true to final line, elevation, and cross-section. The Contractor shall maintain ditches constructed on the project to the required cross-section and shall keep them free of debris or obstructions until the project is accepted.

152-2.5 Preparation of cut areas or areas where existing pavement has been removed. In those areas on which a subbase or base course is to be placed, the top 8 inches of subgrade shall be compacted to not less than 100 % of maximum density for non-cohesive soils, and 95% of maximum density for cohesive soils as determined by ASTM D698. As used in this

specification, "non-cohesive" shall mean those soils having a plasticity index (PI) of less than 3 as determined by ASTM D4318.

152-2.6 Preparation of embankment area. All sod and vegetative matter shall be removed from the surface upon which the embankment is to be placed. The cleared surface shall be broken up by plowing or scarifying to a minimum depth of 6 inches (150 mm) and shall then be compacted per paragraph 152-2.10.

Sloped surfaces steeper than one (1) vertical to four (4) horizontal shall be plowed, stepped, benched, or broken up so that the fill material will bond with the existing material. When the subgrade is part fill and part excavation or natural ground, the excavated or natural ground portion shall be scarified to a depth of 12 inches (300 mm) and compacted as specified for the adjacent fill.

No direct payment shall be made for the work performed under this section. The necessary clearing and grubbing and the quantity of excavation removed will be paid for under the respective items of work.

152-2.7 Control Strip. The first half-day of construction of subgrade and/or embankment shall be considered as a control strip for the Contractor to demonstrate, in the presence of the RPR, that the materials, equipment, and construction processes meet the requirements of this specification. The sequence and manner of rolling necessary to obtain specified density requirements shall be determined. The maximum compacted thickness may be increased to a maximum of 12 inches (300 mm) upon the Contractor's demonstration that approved equipment and operations will uniformly compact the lift to the specified density. The RPR must witness this demonstration and approve the lift thickness prior to full production.

Control strips that do not meet specification requirements shall be reworked, re-compacted, or removed and replaced at the Contractor's expense. Full operations shall not begin until the control strip has been accepted by the RPR. The Contractor shall use the same equipment, materials, and construction methods for the remainder of construction, unless adjustments made by the Contractor are approved in advance by the RPR.

152-2.8 Formation of embankments. The material shall be constructed in lifts as established in the control strip, but not less than 6 inches (150 mm) nor more than 12 inches (300 mm) of compacted thickness.

When more than one lift is required to establish the layer thickness shown on the plans, the construction procedure described here shall apply to each lift. No lift shall be covered by subsequent lifts until tests verify that compaction requirements have been met. The Contractor shall rework, re-compact and retest any material placed which does not meet the specifications.

The lifts shall be placed, to produce a soil structure as shown on the typical cross-section or as directed by the RPR. Materials such as brush, hedge, roots, stumps, grass and other organic matter, shall not be incorporated or buried in the embankment.

Earthwork operations shall be suspended at any time when satisfactory results cannot be obtained due to rain, freezing, or other unsatisfactory weather conditions in the field. Frozen material shall not be placed in the embankment nor shall embankment be placed upon frozen material. Material shall not be placed on surfaces that are muddy, frozen, or contain frost. The Contractor shall drag, blade, or slope the embankment to provide surface drainage at all times.

The material in each lift shall be within ±2% of optimum moisture content before rolling to obtain the prescribed compaction. The material shall be moistened or aerated as necessary to achieve a uniform moisture content throughout the lift. Natural drying may be accelerated by blending in dry material or manipulation alone to increase the rate of evaporation.

The Contractor shall make the necessary corrections and adjustments in methods, materials or moisture content to achieve the specified embankment density.

The contractor will take samples of excavated materials which will be used in embankment for testing and develop a Moisture-Density Relations of Soils Report (Proctor) in accordance with ASTM D698. A new Proctor shall be developed for each soil type based on visual classification.

Density tests will be taken by the contractor for every 500 square yards of compacted embankment for each lift which is required to be compacted, or other appropriate frequencies as determined by the RPR.

If the material has greater than 30% retained on the 3/4-inch (19.0 mm) sieve, follow AASHTO T-180 Annex Correction of maximum dry density and optimum moisture for oversized particles.

Rolling operations shall be continued until the embankment is compacted to not less than 100% of maximum density for non-cohesive soils, and 95% of maximum density for cohesive soils as determined by ASTM D698. Under all areas to be paved, the embankments shall be compacted to a depth of 12 inches and to a density of not less than 95 percent of the maximum density as determined by ASTM D698. As used in this specification, "non-cohesive" shall mean those soils having a plasticity index (PI) of less than 3 as determined by ASTM D4318.

There will be no separate measurement of payment for compacted embankment. All costs incidental to placing in lifts, compacting, discing, watering, mixing, sloping, and other operations necessary for construction of embankments will be included in the contract price for excavation, borrow, or other items. Payment for compacted embankment will be made under embankment in-place and no payment will be made for excavation, borrow, or other items.

152-2.9 Proof rolling. The purpose of proof rolling the subgrade is to identify any weak areas in the subgrade and not for compaction of the subgrade. After compaction is completed, the subgrade area shall be proof rolled with a 20 ton (18.1 metric ton) Tandem axle Dual Wheel Dump Truck loaded to the legal limit with tires inflated to 100 psi in the presence of the RPR. Apply a minimum of **50%** coverage, or as specified by the RPR, under pavement areas. A coverage is defined as the application of one tire print over the designated area. Soft areas of subgrade that deflect more than 1 inch (25 mm) or show permanent deformation greater than 1 inch (25 mm) shall be removed and replaced with suitable material or reworked to conform to the moisture content and compaction requirements in accordance with these specifications. Removal and replacement of soft areas is incidental to this item.

152-2.10 Compaction requirements. The subgrade under areas to be paved shall be compacted to a depth of 12 inches (300 mm) and to a density of not less than 95 percent of the maximum dry density as determined by ASTM D698.

The material to be compacted shall be within ±2% of optimum moisture content before being rolled to obtain the prescribed compaction (except for expansive soils). When the material has greater than 30 percent retained on the ¾ inch (19.0 mm) sieve, follow the methods in ASTM D698 procedures in AASHTO T180 Annex for correction of maximum dry density and optimum moisture for oversized particles. Tests for moisture content and compaction will be taken at a minimum of 500 S.Y. of subgrade. All quality assurance testing shall be done by the Contractor's laboratory in the presence of the RPR, and density test results shall be furnished upon completion to the RPR for acceptance determination.

The in-place field density shall be determined in accordance with ASTM D6938 using Procedure A, the direct transmission method, and ASTM D6938 shall be used to determine the moisture content of the material. The machine shall be calibrated in accordance with ASTM D6938 within 12 months prior to its use on this contract. The gauge shall be field standardized daily.

Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

If the specified density is not attained, the entire lot shall be reworked and/or re-compacted and additional random tests made. This procedure shall be followed until the specified density is reached.

All cut-and-fill slopes shall be uniformly dressed to the slope, cross-section, and alignment shown on the plans or as directed by the RPR and the finished subgrade shall be maintained.

152-2.11 Finishing and protection of subgrade. Finishing and protection of the subgrade is incidental to this item. Grading and compacting of the subgrade shall be performed so that it will drain readily. All low areas, holes or depressions in the subgrade shall be brought to grade. Scarifying, blading, rolling and other methods shall be performed to provide a thoroughly compacted subgrade shaped to the lines and grades shown on the plans. All ruts or rough places that develop in the completed subgrade shall be graded, re-compacted, and retested. The Contractor shall protect the subgrade from damage and limit hauling over the finished subgrade to only traffic essential for construction purposes.

The Contractor shall maintain the completed course in satisfactory condition throughout placement of subsequent layers. No subbase, base, or surface course shall be placed on the subgrade until the subgrade has been accepted by the RPR.

152-2.12 Haul. All hauling will be considered a necessary and incidental part of the work. The Contractor shall include the cost in the contract unit price for the pay of items of work involved. No payment will be made separately or directly for hauling on any part of the work.

The Contractor's equipment shall not cause damage to any excavated surface, compacted lift or to the subgrade as a result of hauling operations. Any damage caused as a result of the Contractor's hauling operations shall be repaired at the Contractor's expense.

The Contractor shall be responsible for providing, maintaining and removing any haul roads or routes within or outside of the work area, and shall return the affected areas to their former condition, unless otherwise authorized in writing by the Owner. No separate payment will be made for any work or materials associated with providing, maintaining and removing haul roads or routes.

152-2.13 Surface Tolerances. In those areas on which a subbase or base course is to be placed, the surface shall be tested for smoothness and accuracy of grade and crown. Any portion lacking the required smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches (75 mm), reshaped and re-compacted to grade until the required smoothness and accuracy are obtained and approved by the RPR. The Contractor shall perform all final smoothness and grade checks in the presence of the RPR. Any deviation in surface tolerances shall be corrected by the Contractor at the Contractor's expense.

a. **Smoothness.** The finished surface shall not vary more than +/- ½ inch (12 mm) when tested with a 12-foot (3.7-m) straightedge applied parallel with and at right angles to the centerline. The straightedge shall be moved continuously forward at half the length of the 12-foot (3.7-m) straightedge for the full length of each line on a 50-foot (15-m) grid.

b. **Grade.** The grade and crown shall be measured on a 50-foot (15-m) grid and shall be within +/-0.05 feet (15 mm) of the specified grade.

METHOD OF MEASUREMENT

152-3.1 Measurement for payment specified by the cubic yard shall be computed by the average end areas of design cross sections. The end area is that bound by the original ground line established by ~~field cross-sections~~ and the final theoretical pay line established by cross-sections shown on the plans, subject to verification by the RPR.

In cut sections, the additional cut required to construct the topsoil layer to the plan grade had not been measured and will not be measured for separate payment, but will be subsidiary to "Unclassified Excavation."

No allowance has been made in the measurement of shrink/swell. The Contractor shall make his own determination as to the amount of shrink/swell involved in the construction.

No adjustments have been made to the plan quantities for the construction and demolition of existing drainage structures. The Contractor shall make his/her own determination as to the amount of unsuitable excavated materials which may be encountered and the resulting additional borrow material required embankment required to construct the project if the excavated material is deemed suitable,

The quantity of the unclassified excavation to be paid for shall be the number of Cubic Yards measure in its original position. Measurement shall not include the quantity of materials excavated without authorization beyond normal slope lines or the quantity of material used for purpose other those directed.

152.3.2 The quantity of borrow excavation to be paid for shall be the number of cubic yards measure in its FINAL position. Measurement shall not include the quantity of materials excavated without authorization beyond normal slope lines or the quantity of material used for purpose other those directed.

~~**152-3.2** The quantity of embankment in place shall be the number of cubic yards as measured in its final position.~~

152-3.3 Stockpiled material shall not be measured for payment in the stockpiled position

152-3.4 Unsuitable excavation shall be measured for the surface to the ground., after stripping is accomplished. Measurement will be taken by Engineer, and the volume of excavation will be calculated by the average end area method. The necessary refilling of unsuitable areas will not be measured for separate payment but will be subsidiary to "Unsuitable Excavation". Only the amount of excavation directed by the Engineer will be measured for payment.

BASIS OF PAYMENT

152-4.1 Unclassified excavation. Drainage Excavation payment shall be made at the contract unit price per cubic yard. This price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the item.

152-4.2 For embankment in place, payment shall be made at the contract unit price per cubic yard (cubic meter). This price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the item.

~~**152-4.3** Stockpiled material shall be paid for on the basis of the number of cubic yards measure in the stockpile position.~~

152-4.4 Unsuitable excavation shall be paid at the contract unit price per Cubic Yard for "Unsuitable Excavation." which price shall be full compensation for all excavation, disposal or placement of the material including loading, hauling, spreading and compaction, compaction and preparation of subgrade, for refillling, rolling and compaction of all undercut areas, and for all equipment tools, labor and incidentals necessary to complete the work.

Payment will be made under:

~~Item P-152-4.1~~	~~Unclassified/ Drainage Excavation - per cubic yard.~~
Item P-152-4.2	Embankment in Place - per cubic yard
Item P-152-4.4	Unsuitable Excavation – per cubic yard

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

American Association of State Highway and Transportation Officials (AASHTO)

AASHTO T-180	Standard Method of Test for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop

ASTM International (ASTM)

ASTM D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft^3 (600 kN-m/m^3))
ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
ASTM D1557	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft^3 (2700 kN-m/m^3))
ASTM D6938	Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

Advisory Circulars (AC)

AC 150/5370-2	Operational Safety on Airports During Construction Software

Software

FAARFIELD – FAA Rigid and Flexible Iterative Elastic Layered Design

U.S. Department of Transportation

FAA RD-76-66	Design and Construction of Airport Pavements on Expansive Soils

END OF ITEM P-152

ITEM P-155
LIME-TREATED SUBGRADE

DESCRIPTION

155-1.1 This item shall be used for soil modification that require strength gain to a specific level. This item shall consist of constructing one or more courses of a mixture of soil, lime, and water in accordance with this specification, and in conformity with the lines, grades, thicknesses, and typical cross-sections shown on the plans.

MATERIALS

155-2.1 Lime. Quicklime, hydrated lime, and either high-calcium dolomitic, or magnesium lime, as defined by ASTM C51, shall conform to the requirements of ASTM C977. Lime not produced from calcining limestone is not permitted.

~~**155-2.2 Commercial lime slurry.** Commercial lime slurry shall be a pumpable suspension of solids in water. The water or liquid portion of the slurry shall not contain dissolved material injurious or objectionable for the intended purpose. The solids portion of the mixture, when considered on the basis of "solids content," shall consist principally of hydrated lime of a quality and fineness sufficient to meet the following chemical composition and residue requirements.~~

~~**a. Chemical composition.** The "solids content" of the lime slurry shall consist of a minimum of 70%, by weight, of calcium and magnesium oxides.~~

~~**b. Residue.** The percent by weight of residue retained in the "solids content" of lime slurry shall conform to the following requirements:~~

- ~~Residue retained on a No. 6 (3.35 µm) sieve = maximum 0.0%~~
- ~~Residue retained on a No. 10 (2.00 µm) sieve = maximum 1.0%~~
- ~~Residue retained on a No. 30 (600 µm) sieve = maximum 2.5%~~

~~**c. Grade.** Commercial lime slurry shall conform to one of the following two grades:~~

- ~~Grade 1. The "dry solids content" shall be at least 31% by weight, of the slurry.~~
- ~~Grade 2. The "dry solids content" shall be at least 35%, by weight, of the slurry.~~

155-2.3 Water. Water used in mixing or curing shall be from potable water sources. Other sources shall be tested in accordance with ASTM C1602 prior to use.

155-2.4 Soil. The soil for this work shall consist of on-site materials free of roots, sod, weeds, and stones larger than 2-1/2 inches (60 mm) and have a sulfate content of less than 0.3%.

COMPOSITION

155-3.1 Soil-lime mixture. Lime shall be applied at 8 % dry unit weight of soil for the depth of subgrade treatment as shown on the plans.

155-3.2 Tolerances. At final compaction, the lime and water content for each course of subgrade treatment shall conform to the following tolerances:

Tolerances

Material	Tolerance
Lime	+ 0.5%
Water	+ 2%, -0%

WEATHER LIMITATIONS

155-4.1 Weather limitation. Subgrade shall not be constructed when weather conditions detrimentally affect the quality of the materials. Lime shall not be applied unless the air temperature is at least 40°F (4°C) and rising. Lime shall not be applied to soils that are frozen or contain frost. Protect completed lime-treated areas by approved methods against the detrimental effects of freezing if the air temperature falls below 35°F (2°C). Remove and replace any damaged portion of the completed soil-lime treated area with new soil-lime material in accordance with this specification.

EQUIPMENT

155-5.1 Equipment. All equipment necessary to grade, scarify, spread, mix, and compact the material shall be provided. The Resident Project Representative (RPR) must approve the Contractor's proposed equipment prior to the start of the treatment.

CONSTRUCTION METHODS

155-6.1 General. This specification is to construct a subgrade consisting of a uniform lime mixture which shall be free from loose or segregated areas. The subgrade shall be of uniform density and moisture content, well mixed for its full depth, and have a smooth surface suitable for placing subsequent lifts. The Contractor shall be responsible to meet the above requirements.

Prior to any treatment, the subgrade shall be constructed as specified in Item P-152, Excavation, Subgrade and Embankment, and shaped to conform to the typical sections, lines, and grades as shown on the plans.

The mixing equipment must give visible indication at all times that it is cutting, pulverizing, and mixing the material uniformly to the proper depth over the full width of the cut.

155-6.2 Application. Lime shall be uniformly spread only over an area where the initial mixing operations can be completed during the same workday. Lime shall not be applied when wind conditions are detrimental to proper application. A motor grader shall not be used to spread the lime. Adequate moisture shall be added to the cement/soil mixture to maintain the proper moisture content. Materials shall be handled, stored, and applied in accordance with all federal, state, and local requirements.

155-6.3 Mixing. The mixing procedure shall be as described below:

a. Preliminary mixing. The full depth of the treated subgrade shall be mixed with an approved mixing machine. Lime shall not be left exposed for more than six (6) hours. The mixing machine shall make two coverages. Water shall be added to the subgrade during mixing to

provide a moisture content 3% to 5% above the optimum moisture of the material and to ensure chemical reaction of the lime and subgrade. After mixing, the subgrade shall be lightly rolled to seal the surface and help prevent evaporation of moisture. The water content of the subgrade mixture shall be maintained at a moisture content above the optimum moisture content for a minimum of 4 to 24 hours or until the material becomes friable. During the mellowing period, the material shall be sprinkled as directed by the RPR.

b. Final mixing. After the required mellowing time, the material shall be uniformly mixed by approved methods. Any clods shall be reduced in size by blading, discing, harrowing, scarifying, or by the use of other approved pulverization methods. After curing, pulverize lime treated material until 100% of soil particles pass a one-inch (25.0 mm) sieve and 60% pass the No. 4 (4.75 mm) sieve when tested dry by laboratory sieves. If resultant mixture contains clods, reduce their size by scarifying, remixing, or pulverization to meet specified gradation.

155-6.4 Control Strip. The first half-day of construction shall be considered the control strip. The Contractor shall demonstrate, in the presence of the RPR, that the materials, equipment, and construction processes meet the requirements of the specification. The sequence and manner of rolling necessary to obtain specified density requirements shall be determined. Control strips that do not meet specification requirements shall be reworked, re-compacted, or removed and replaced at the Contractor's expense. Full operations shall not continue until the control strip has been accepted by the RPR. Upon acceptance of the control strip by the RPR, the Contractor shall use the same equipment, materials, and construction methods for the remainder of construction, unless adjustments made by the Contractor are approved in advance by the RPR.

155-6.5 Treatment Application and Depth Checks. The depth and amount of stabilization shall be measured by the Contractor with no less than 2 tests per day of material placed; test shall be witnessed by the RPR. Measurements shall be made in test holes excavated to show the full depth of mixing and the pH checked by spraying the side of the test hole with a pH indicator such as phenolphthalein. Phenolphthalein changes from clear to red between pH 8.3 and 10. The color change indicates the location of the bottom of the mixing zone. pH indicators other than phenolphthalein can be used to measure pH levels. If the pH is not at least 8.3 and/or if the depth of the treated subgrade is more than 1/2 inch (12 mm) deficient, additional lime treatment shall be added and the material remixed. The Contractor shall correct all such areas in a manner satisfactory to the RPR.

155-6.6 Compaction. Compaction of the mixture shall immediately follow the final mixing operation with the mixture compacted within 1 to 4 hours after final mixing. The material shall be at the moisture content specified in paragraph 155-3.2 during compaction. The field density of the compacted mixture shall be at least 95% of the maximum density as specified in paragraph 155-6.10. Perform in-place density test to determine degree of compaction between 24 and 72 hours after final compaction and the 24-hour moist cure period. If the material fails to meet the density requirements, it shall be reworked to meet the density requirements. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

155-6.7 Finishing and curing. After the final lift or course of lime-treated subgrade has been compacted, it shall be brought to the required lines and grades in accordance with the typical sections. The completed section shall then be finished by rolling, as directed by the RPR, with a pneumatic or other suitable roller sufficiently light to prevent hairline cracking. The finished surface shall not vary more than 1/2-inch (12 mm) when tested with a 12-foot (3.7 m) straightedge applied parallel with and at right angles to the pavement centerline. Any variations in excess of this tolerance shall be corrected by the Contractor at the Contractor's expense in a manner satisfactory to the RPR.

The completed section shall be moist cured for a minimum of seven (7) days before further courses are added or any traffic is permitted, unless otherwise directed by the RPR. The final lift should not be exposed for more than 14 days without protection or the placement of a base course material.

155-6.8 Maintenance. The Contractor shall protect and maintain the lime-treated subgrade from yielding until the lime-treated subgrade is covered by placement of the next lift. When material has been exposed to excessive rain, snow, or freeze-thaw conditions, prior to placement of additional material, the Contractor shall verify that materials still meet all specification requirements. The maintenance cost shall be incidental to this item.

155-6.9 Surface tolerance. In those areas on which a subbase or base course is to be placed, the surface shall be tested for smoothness and accuracy of grade and crown. Any portion lacking the required smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches (75 mm), reshaped and re-compacted to grade until the required smoothness and accuracy are obtained and approved by the RPR. The Contractor shall perform all final smoothness and grade checks in the presence of the RPR. Any deviation in surface tolerances shall be corrected by the Contractor at the Contractor's expense.

a. Smoothness. The finished surface shall not vary more than +/- ½ inch (12 mm) when tested with a 12-foot (3.7-m) straightedge applied parallel with and at right angles to the centerline. The straightedge shall be moved continuously forward at half the length of the 12-foot (3.7-m) straightedge for the full length of each line on a 50-foot (15-m) grid.

b. Grade. The grade and crown shall be measured on a 50-foot (15-m) grid and shall be within +/-0.05 feet (15 mm) of the specified grade.

155-6.10 Acceptance sampling and testing. The lime treated subgrade shall be accepted for density and thickness on an area basis. Testing frequency shall be a minimum of one compaction and thickness test per 1000 square yards 840 square meters) of lime treated subgrade, but not less than four (4) tests per day of production. Sampling locations will be determined on a random basis per ASTM D3665.

a. Density. All testing shall be done by the Contractor's laboratory in the presence of the RPR and density test results shall be furnished upon completion to the RPR for acceptance determination.

The field density of the compacted mixture shall be at least 95% of the maximum density of laboratory specimens prepared from samples taken from the material in place. The specimens shall be compacted and tested in accordance with ASTM D698 to determine maximum density and optimum moisture content. The in-place field density shall be determined in accordance with ASTM D1556. If the material fails to meet the density requirements, the area represented by the failed test shall be reworked to meet the density requirements. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

b. Thickness. The thickness of the course shall be within +0 and -1/2 inch (12 mm) of the specified thickness as determined by depth tests taken by the Contractor in the presence of the RPR for each area. Where the thickness is deficient by more than 1/2-inch (12 mm), the Contractor shall correct such areas at no additional cost The Contractor shall replace, at his expense, material where depth tests have been taken.

155-6.11 Handling and safety. The Contractor shall obtain and enforce the lime supplier's instructions for proper safety and handling of the lime to prevent physical eye or skin contact with lime during transport or application.

METHOD OF MEASUREMENT

155-7.1 Lime-treated subgrade shall be paid for by the square yard (square meter) in the completed and accepted work.

155-7.2 Lime shall be paid by the number of tons (kg) of Hydrated Lime applied at the application rate specified in paragraph 155-3.1.

a. Hydrated lime delivered to the project in dry form will be measured according to the actual tonnage either spread on the subgrade or batched on site into a slurry, whichever is applicable.

b. Quicklime delivered to the project in dry form will be measured for payment on the basis of the tons of equivalent hydrated lime using the following formula:

Equivalent Hydrated Lime ($Ca(OH)_2$) = Total Quicklime (CaO) × 1.32

~~**c.** Lime delivered to the project in slurry form will be measured for payment in tons, dry weight of hydrated lime or equivalent hydrated lime in accordance with paragraph b above.~~

BASIS OF PAYMENT

155-8.1 Payment shall be made at the contract unit price per square yard (square meter) for the lime-treated subgrade at the thickness specified. The price shall be full compensation for furnishing all material, except the lime, and for all preparation, delivering, placing, and mixing these materials, and all labor, equipment, tools, and incidentals necessary to complete this item.

155-8.2 Payment shall be made at the contract unit price per ton (kg). This price shall be full compensation for furnishing, delivery, and placing this material.

Payment will be made under:

Item P-155-8.1	Lime-treated subgrade - per square yard (m^2)
Item P-155-8.2	Lime - per ton

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM C51	Standard Terminology Relating to Lime and Limestone (as used by the industry)
ASTM C977	Standard Specification for Quicklime and Hydrated Lime for Soil Stabilization
ASTM C1602	Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete
ASTM D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft^3) (600 kN-m/m^3)
ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method

ASTM D2487	Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)
ASTM D6938	Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

Software

FAARFIELD – FAA Rigid and Flexible Iterative Elastic Layered Design

END OF ITEM P-155

ITEM P-501
CEMENT CONCRETE PAVEMENT

DESCRIPTION

501-1.1 This work shall consist of pavement composed of cement concrete **with reinforcement** constructed on a prepared underlying surface in accordance with these specifications and shall conform to the lines, grades, thickness, and typical cross-sections shown on the plans. The terms cement concrete, hydraulic cement concrete, and concrete are interchangeable in this specification.

MATERIALS

501-2.1 Aggregates.

a. Reactivity. Fine and Coarse aggregates to be used in PCC on this project shall be tested and evaluated by the Contractor for alkali-aggregate reactivity in accordance with both ASTM C1260 and ASTM C1567. Tests must be representative of aggregate sources which will be providing material for production. ASTM C1260 and ASTM C1567 tests may be run concurrently.

(1) Coarse aggregate and fine aggregate shall be tested separately in accordance with ASTM C1260, however, the length of test shall be extended to 28 days (30 days from casting). Tests must have been completed within 6 months of the date of the concrete mix submittal.

(2) The combined coarse and fine aggregate shall be tested in accordance with ASTM C1567, modified for combined aggregates, using the proposed mixture design proportions of aggregates, cementitious materials, and/or specific reactivity reducing chemicals. If the expansion does not exceed 0.10% at 28 days, the proposed combined materials will be accepted. If the expansion is greater than 0.10% at 28 days, the aggregates will not be accepted unless adjustments to the combined materials mixture can reduce the expansion to less than 0.10% at 28 days, or new aggregates shall be evaluated and tested.

(3) If lithium nitrate is proposed for use with or without supplementary cementitious materials, the aggregates shall be tested in accordance with Corps of Engineers (COE) Concrete Research Division (CRD) C662 in lieu of ASTM C1567. If lithium nitrate admixture is used, it shall be nominal 30% ±0.5% weight lithium nitrate in water. If the expansion does not exceed 0.10% at 28 days, the proposed combined materials will be accepted. If the expansion is greater than 0.10% at 28 days, the aggregates will not be accepted unless adjustments to the combined materials mixture can reduce the expansion to less than 0.10% at 28 days, or new aggregates shall be evaluated and tested.

b. **Fine aggregate.** Grading of the fine aggregate, as delivered to the mixer, shall conform to the requirements of ASTM C33 and the parameters identified in the fine aggregate material requirements below. Fine aggregate material requirements and deleterious limits are shown in the table below.

Fine Aggregate Material Requirements		
Soundness of Aggregates by Use of Sodium Sulfate **or** Magnesium Sulfate	Loss after 5 cycles: 10% maximum using Sodium sulfate - or - 15% maximum using magnesium sulfate	ASTM C88
Sand Equivalent	[45] minimum	ASTM D2419
Fineness Modulus (FM)	2.50 ≤ FM ≤ 3.40	ASTM C136
Limits for Deleterious Substances in Fine Aggregate for Concrete		
Clay lumps and friable particles	1.0% maximum	ASTM C142
Coal and lignite	0.5% using a medium with a density of Sp. Gr. of 2.0	ASTM C123
Total Deleterious Material	1.0% maximum	

c. Coarse aggregate. The maximum size coarse aggregate shall be **1-1/2-inch**.

Aggregates delivered to the mixer shall be clean, hard, uncoated aggregates consisting of crushed stone, crushed or uncrushed gravel, air-cooled iron blast furnace slag, crushed recycled concrete pavement, or a combination. The aggregates shall have no known history of detrimental pavement staining. Steel blast furnace slag shall not be permitted. Coarse aggregate material requirements and deleterious limits are shown in the table below; washing may be required to meet aggregate requirements.

Coarse Aggregate Material Requirements

Material Test	Requirement	Standard
Resistance to Degradation	Loss: 40% maximum	ASTM C131
Soundness of Aggregates by Use of Sodium Sulfate **or** Magnesium Sulfate	Loss after 5 cycles: 12% maximum using Sodium sulfate - or - 18% maximum using magnesium sulfate	ASTM C88
Flat, Elongated, or Flat and Elongated Particles	8% maximum, by weight, of flat, elongated, or flat and elongated particles at 5:1 for any size group coarser than 3/8 (9.5 mm) sieve [1]	ASTM D4791
Bulk density of slag [2]	Weigh not less than 70 pounds per cubic foot (1.12 Mg/cubic meter)	ASTM C29

[1] A flat particle is one having a ratio of width to thickness greater than five (5); an elongated particle is one having a ratio of length to width greater than five (5).

[2] Only required if slag is specified.

The amount of deleterious material in the coarse aggregate shall not exceed the following limits:

Limits for Deleterious Substances in Coarse Aggregate

Deleterious material	ASTM	Percentage by Mass
Clay Lumps and friable particles	ASTM C142	1.0
Material finer than No. 200 sieve (75 µm)	ASTM C117	1.0[1]
Lightweight particles	ASTM C123 using a medium with a density of Sp. Gr. of 2.0	0.5
Chert[2] (less than 2.40 Sp Gr.)	ASTM C123 using a medium with a density of Sp. Gr. of 2.40)	[0.1][3]

[1] The limit for material finer than 75-µm is allowed to be increased to 1.5% for crushed aggregates consisting of dust of fracture that is essentially free from clay or shale. Test results supporting acceptance of increasing limit to 1.5% with statement indicating material is dust of fracture must be submitted with Concrete mix. Acceptable techniques to characterizing these fines include methylene blue adsorption or X-ray diffraction analysis.

[2] Chert and aggregates with less than 2.4 specific gravity.

[3] The limit for chert may be increased to 1.0 percent by mass in areas not subject to severe freeze and thaw.

d. Combined aggregate gradation. This specification is targeted for a combined aggregate gradation developed following the guidance presented in United States Air Force Engineering Technical Letter (ETL) 97-5: Proportioning Concrete Mixtures with Graded Aggregates for Rigid Airfield Pavements. Base the aggregate grading upon a combination of all the aggregates (coarse and fine) to be used for the mixture proportioning. Three aggregate sizes may be required to achieve an optimized combined gradation that will produce a workable concrete mixture for its intended use. Use aggregate gradations that produce concrete mixtures with well-graded or optimized aggregate combinations. The Contractor shall submit complete mixture information necessary to calculate the volumetric components of the mixture. The combined aggregate grading shall meet the following requirements:

(1) The materials selected and the proportions used shall be such that when the Coarseness Factor (CF) and the Workability Factor (WF) are plotted on a diagram as described in paragraph 501-2.1d(4) below, the point thus determined shall fall within the parallelogram described therein.

(2) The CF shall be determined from the following equation:

CF = (cumulative percent retained on the 3/8 in. (9.5 mm) sieve)(100) / (cumulative percent retained on the No. 8 (2.36 mm) sieve)

(3) The WF is defined as the percent passing the No. 8 (2.36 mm) sieve based on the combined gradation. However, WF shall be adjusted, upwards only, by 2.5 percentage points for each 94 pounds (42 kg) of cementitious material per cubic meter yard greater than 564 pounds per cubic yard (335 kg per cubic meter).

(4) A diagram shall be plotted using a rectangular scale with WF on the Y-axis with units from 20 (bottom) to 45 (top), and with CF on the X-axis with units from 80 (left side) to 30 (right side). On this diagram a parallelogram shall be plotted with corners at the following coordinates (CF-75, WF-28), (CF-75, WF-40), (CF-45, WF-32.5), and (CF-45, WF-44.5). If the point determined by the intersection of the computed CF and WF does not fall within the above parallelogram, the grading of each size of aggregate used and the proportions selected shall be changed as necessary. The point determined by the plotting of the CF

and WF may be adjusted during production ±3 WF and ±5 CF. Adjustments to gradation may not take the point outside of the parallelogram.

e. Contractors combined aggregate gradation. The Contractor shall submit their combined aggregate gradation using the following format:

Contractor's Combined Aggregate Gradation

Sieve Size	Contractor's Concrete mix Gradation (Percent passing by weight)
2 inch (50 mm)	
1-1/2 inch (37.5 mm)	
1 inch (25.0 mm)	
3/4 inch (19.0 mm)	
1/2 inch (12.5 mm)	
3/8 inch (9.5 mm)	
No. 4 (4.75 mm)	
No. 8 (2.36 mm)	
No. 16 (1.18 mm)	
No. 30 (600 µm)	
No. 50 (300 µm)	
No. 100 (150 µm)	

501-2.2 Cement. Cement shall conform to the requirements of **ASTM 150 Type I.**

501-2.3 Cementitious materials.

a. Fly ash. Fly ash shall meet the requirements of ASTM C618, with the exception of loss of ignition, where the maximum shall be less than 6%. Fly ash shall have a Calcium Oxide (CaO) content of less than 15% and a total alkali content less than 3% per ASTM C311. The Contractor shall furnish the previous three most recent, consecutive ASTM C618 reports for each source of fly ash proposed in the concrete mix, and shall furnish each additional report as they become available during the project. The reports can be used for acceptance or the material may be tested independently by the Resident Project Representative (RPR).

b. Slag cement (ground granulated blast furnace (GGBF)). Slag cement shall conform to ASTM C989, Grade 100 or Grade 120. Slag cement shall be used only at a rate between 25% and 55% of the total cementitious material by mass.

c. Raw or calcined natural pozzolan. Natural pozzolan shall be raw or calcined and conform to ASTM C618, Class N, including the optional requirements for uniformity and effectiveness in controlling Alkali-Silica reaction and shall have a loss on ignition not exceeding 6%. Class N pozzolan for use in mitigating Alkali-Silica Reactivity shall have a total available alkali content less than 3%.

501-2.4 Joint seal. The joint seal for the joints in the concrete pavement shall meet the requirements of **Item P-605** and shall be of the type specified in the plans.

501-2.5 Isolation joint filler. Premolded joint filler for isolation joints shall conform to the requirements of ASTM D1751 or ASTM D1752 and shall be where shown on the plans. The filler for each joint shall be furnished in a single piece for the full depth and width required for the joint, unless otherwise specified by the RPR. When the use of more than one piece is required for a joint, the abutting ends shall be fastened securely and held accurately to shape by stapling or other positive fastening means satisfactory to the RPR.

501-2.6 Steel reinforcement. Reinforcing shall consist of **Welded Wire Fabric** conforming to the requirements of **ASTM A1064** or **Bar Mats** conforming to the requirements of **ASTM A184 or A704**.

501-2.7 Dowel and tie bars. Dowel bars shall be plain steel bars conforming to ASTM A615 and shall be free from burring or other deformation restricting slippage in the concrete.

a. Dowel Bars. Before delivery to the construction site each dowel bar shall be epoxy coated per ASTM A1078, Type 1, with a coating thickness after curing greater than 10 mils. Patched ends are not required for Type 1 coated dowels. The dowels shall be coated with a bond-breaker recommended by the manufacturer. Dowel sleeves or inserts are not permitted. Grout retention rings shall be fully circular metal or plastic devices capable of supporting the dowel until the grout hardens.

b. Tie Bars. Tie bars shall be deformed steel bars and conform to the requirements of ASTM A615. Tie bars designated as Grade 60 in ASTM A615 or ASTM A706 shall be used for construction requiring bent bars.

501-2.8 Water. Water used in mixing or curing shall be potable. If water is taken from other sources considered non-potable, it shall meet the requirements of ASTM C1602.

501-2.9 Material for curing concrete. Curing materials shall conform to one of the following specifications:

a. Liquid membrane-forming compounds for curing concrete shall conform to the requirements of ASTM C309, Type 2, Class A, or Class B.

b. White polyethylene film for curing concrete shall conform to the requirements of ASTM C171.

c. White burlap-polyethylene sheeting for curing concrete shall conform to the requirements of ASTM C171.

d. Waterproof paper for curing concrete shall conform to the requirements of ASTM C171.

501-2.10 Admixtures. Admixtures shall conform to the following specifications:

a. Air-entraining admixtures. Air-entraining admixtures shall meet the requirements of ASTM C260 and shall consistently entrain the air content in the specified ranges under field conditions. The air-entraining agent and any water reducer admixture shall be compatible.

b. Water-reducing admixtures. Water-reducing admixture shall meet the requirements of ASTM C494, Type A, B, or D.

c. Other admixtures. The use of set retarding and set-accelerating admixtures shall be approved by the RPR prior to developing the concrete mix. Retarding admixtures shall meet the requirements of ASTM C494, Type A, B, or D and set-accelerating admixtures shall meet the requirements of ASTM C494, Type C. Calcium chloride and admixtures containing calcium chloride shall not be used.

d. Lithium Nitrate. The lithium admixture shall be a nominal 30% aqueous solution of Lithium Nitrate, with a density of 10 pounds/gallon (1.2 kg/L), and shall have the approximate chemical form as shown below:

Lithium Admixture

Constituent	Limit (Percent by Mass)
LiNO3 (Lithium Nitrate)	30 ±0.5
SO4 (Sulfate Ion)	0.1 (max)
Cl (Chloride Ion)	0.2 (max)
Na (Sodium Ion)	0.1 (max)
K (Potassium Ion)	0.1 (max)

The lithium nitrate admixture dispensing and mixing operations shall be verified and certified by the lithium manufacturer's representative.

501-2.11 Epoxy-resin. All epoxy-resin materials shall be two-component materials conforming to the requirements of ASTM C881, Class as appropriate for each application temperature to be encountered, except that in addition, the materials shall meet the following requirements:

a. Material for use for embedding dowels and anchor bolts shall be Type IV, Grade 3.

b. Material for use as patching materials for complete filling of spalls and other voids and for use in preparing epoxy resin mortar shall be Type III, Grade as approved.

c. Material for use for injecting cracks shall be Type IV, Grade 1.

d. Material for bonding freshly mixed Portland cement concrete or mortar or freshly mixed epoxy resin concrete or mortar to hardened concrete shall be Type V, Grade as approved.

501-2.12 Bond Breaker. Liquid membrane forming compound shall be in accordance with paragraph 501-2.9a.

CONCRETE MIX

501-3.1. General. No concrete shall be placed until an acceptable concrete mix has been submitted to the RPR for review and the RPR has taken appropriate action. The RPR's review shall not relieve the Contractor of the responsibility to select and proportion the materials to comply with this section.

501-3.2 Concrete Mix Laboratory. The laboratory used to develop the concrete mix shall be accredited in accordance with ASTM C1077. The laboratory accreditation must be current and listed on the accrediting authority's website. All test methods required for developing the concrete mix must be included in the lab accreditation. A copy of the laboratory's current accreditation and accredited test methods shall be submitted to the RPR prior to start of construction.

501-3.3 Concrete Mix Proportions. Develop the mix using the procedures contained in Portland Cement Association (PCA) publication, "Design and Control of Concrete Mixtures." Concrete shall be proportioned to achieve a 28-day Compressive strength that meets or exceeds the acceptance criteria contained in paragraph 501-6.6 for a compressive strength of **4,400 psi** per ASTM C39.

The minimum cementitious material shall be adequate to ensure a workable, durable mix. The minimum cementitious material (cement plus fly ash, or slag cement) shall be **470** pounds per cubic yard. The ratio of water to cementitious material, including free surface moisture on the aggregates but not including moisture absorbed by the aggregates shall be between 0.38 – 0.45 by weight.

Flexural strength test specimens shall be prepared in accordance with ASTM C192 and tested in accordance with ASTM C78. At the start of the project, the Contractor shall determine an allowable slump as determined by ASTM C143 not to exceed 2 inches (50 mm) for slip-form placement. For fixed-form placement, the slump shall not exceed 3 inches (75 mm). For hand placement, the slump shall not exceed 4 inches (100 mm).

When the flexural design strength in paragraph 501-3.3 is to be accepted on the basis of compressive strength, the following procedure establishes the correlation between compressive and flexural strength for the concrete mix. Each concrete mix will require a separate correlation.

Cylinders/Beams

a. Fabricate all beams and cylinders for each mixture from the same batch or blend of batches. Fabricate and cure all beams and cylinders in accordance with ASTM C192, using 6 × 6-inch (150 × 150 mm) steel beam forms and 6 × 12-inch (150 × 300 mm) single-use cylinder forms.

b. Cure test beams from each mixture for 3, 7, 14, and 28 day flexural tests; three (3) beams to be tested per age.

c. Cure test cylinders from each mixture for 3, 7, 14 and 28 day compressive strength tests; three (3) cylinders to be tested per age.

d. Test beams in accordance with ASTM C78, cylinders in accordance with ASTM C39.

e. Using the average strength for each age, plot all results on separate graphs for each w/c versus:

- 3-day flexural strength
- 7-day flexural strength
- 14-day flexural strength
- 28-day flexural strength
- 3-day compressive strength
- 7-day compressive strength
- 14-day compressive strength
- 28-day compressive strength

f. From the above expected strengths for the selected mixture determine the following Correlation Ratios:

(1) Ratio of the 14-day compressive strength of the selected mixture to the 28-day flexural strength of the mixture (for acceptance).

(2) Ratio of the 7-day compressive strength of the selected mixture to the 28-day flexural strength of the mixture (for Contractor QC control).

g. If there is a change in materials, additional mixture design studies shall be made using the new materials and new Correlation Ratios shall be determined.

h. No concrete pavement shall be placed until the Engineer has approved the Contractor's mixture proportions. The approved water-cementitious materials ratio shall not exceed the maximum value specified.

The results of the concrete mix shall include a statement giving the maximum nominal coarse aggregate size and the weights and volumes of each ingredient proportioned on a one cubic yard (meter) basis. Aggregate quantities shall be based on the mass in a saturated surface dry condition.

If a change in source(s) is made, or admixtures added or deleted from the mix, a new concrete mix must be submitted to the RPR for approval.

The RPR may request samples at any time for testing, prior to and during production, to verify the quality of the materials and to ensure conformance with the applicable specifications.

501-3.4 Concrete Mix submittal. The concrete mix shall be submitted to the RPR at least **30** days prior to the start of operations. The submitted concrete mix shall not be more than 180 days old and must use the materials to be used for production for the project. Production shall not begin until the concrete mix is approved in writing by the RPR.

Each of the submitted concrete mixes (i.e, slip form, side form machine finish and side form hand finish) shall be stamped or sealed by the responsible professional Engineer of the laboratory and shall include the following items and quantities as a minimum:

- Certified material test reports for aggregate in accordance with paragraph 501-2.1. Certified reports must include all tests required; reporting each test, test method, test result, and requirement specified (criteria).
- Combined aggregate gradations and analysis; and including plots of the fine aggregate fineness modulus.
- Reactivity Test Results.
- Coarse aggregate quality test results, including deleterious materials.
- Fine aggregate quality test results, including deleterious materials.
- Mill certificates for cement and supplemental cementitious materials.
- Certified test results for all admixtures, including Lithium Nitrate if applicable.
- Specified flexural strength, slump, and air content.
- Recommended proportions/volumes for proposed mixture and trial water-cementitious materials ratio, including actual slump and air content.
- Flexural and compressive strength summaries and plots, including all individual beam and cylinder breaks.
- Correlation ratios for acceptance testing and Contractor QC testing, when applicable.
- Historical record of test results documenting production standard deviation, when applicable.

501-3.5 Cementitious materials.

a. Fly ash. When fly ash is used as a partial replacement for cement, the replacement rate shall be determined from laboratory trial mixes, and shall be between 20 and 30% by weight of the total cementitious material. If fly ash is used in conjunction with slag cement the maximum replacement rate shall not exceed 10% by weight of total cementitious material.

b. Slag cement (ground granulated blast furnace (GGBF)). Slag cement may be used. The slag cement, or slag cement plus fly ash if both are used, may constitute between 25 to 55% of the total cementitious material by weight.

c. Raw or calcined natural pozzolan. Natural pozzolan may be used in the concrete mix. When pozzolan is used as a partial replacement for cement, the replacement rate shall be determined from laboratory trial mixes, and shall be between 20 and 30% by weight of the total cementitious material. If pozzolan is used in conjunction with slag cement the maximum replacement rate shall not exceed 10% by weight of total cementitious material.

501-3.6 Admixtures.

a. Air-entraining admixtures. Air-entraining admixture are to be added in such a manner that will ensure uniform distribution of the agent throughout the batch. The air content of freshly mixed air-entrained concrete shall be based upon trial mixes with the materials to be used in the work adjusted to produce concrete of the required plasticity and workability. The percentage of air in the mix shall be **2.5%.** Air content shall be determined by testing in accordance with ASTM C231 for gravel and stone coarse aggregate and ASTM C173 for slag and other highly porous coarse aggregate.

b. Water-reducing admixtures. Water-reducing admixtures shall be added to the mix in the manner recommended by the manufacturer and in the amount necessary to comply with the specification requirements. Tests shall be conducted with the materials to be used in the work, in accordance with ASTM C494.

c. Other admixtures. Set controlling, and other approved admixtures shall be added to the mix in the manner recommended by the manufacturer and in the amount necessary to comply with the specification requirements. Tests shall be conducted with the materials to be used in the work, in accordance with ASTM C494.

d. Lithium nitrate. Lithium nitrate shall be added to the mix in the manner recommended by the manufacturer and in the amount necessary to comply with the specification requirements in accordance with paragraph 501-2.10d.

CONSTRUCTION METHODS

501-4.1 Control Strip. The control strip(s) shall be to the next planned joint after the initial 250 feet (75 m) of each type of pavement construction (slip-form pilot lane, slip-form fill-in lane, or fixed form). The Contractor shall demonstrate, in the presence of the RPR, that the materials, concrete mix, equipment, construction processes, and quality control processes meet the requirements of the specifications. The concrete mixture shall be extruded from the paver meeting the edge slump tolerance and with little or no finishing. Pilot, fill-in, and fixed-form control strips will be accepted separately. Minor adjustments to the mix design may be required to place an acceptable control strip. The production mix will be the adjusted mix design used to place the acceptable control strip. Upon acceptance of the control strip by the RPR, the Contractor must use the same equipment, materials, and construction methods for the remainder of concrete paving. Any adjustments to processes or materials must be approved in advance by the RPR.

Acceptable control strips will meet edge slump tolerance and surface acceptable with little or no finishing, air content within action limits, strength equal or greater than requirements of P501-3.3. The control strip will be considered one lot for payment (no sublots required for control strip). Payment will only be made for an acceptable control strip in accordance with paragraph 501-8.1 using a lot pay factor equal to 100.

501-4.2 Equipment. The Contractor is responsible for the proper operation and maintenance of all equipment necessary for handling materials and performing all parts of the work to meet this specification.

a. Plant and equipment. The plant and mixing equipment shall conform to the requirements of ASTM C94 and/or ASTM C685. Each truck mixer shall have attached in a prominent place a manufacturer's nameplate showing the capacity of the drum in terms of volume of mixed concrete and the speed of rotation of the mixing drum or blades. The truck mixers shall be examined daily for changes in condition due to accumulation of hard concrete or mortar or wear of blades. The pickup and throwover blades shall be replaced when they have worn down 3/4 inch (19 mm) or more. The Contractor shall have a copy of the manufacturer's design on hand showing dimensions and arrangement of blades in reference to original height and depth.

Equipment for transferring and spreading concrete from the transporting equipment to the paving lane in front of the finishing equipment shall be provided. The equipment shall be specially manufactured, self-propelled transfer equipment which will accept the concrete outside the paving lane and will spread it evenly across the paving lane in front of the paver and strike off the surface evenly to a depth which permits the paver to operate efficiently.

b. Finishing equipment.

(1) Slip-form. The standard method of constructing concrete pavements shall be with an approved slip-form paving equipment designed and operated to spread, consolidate, screed, and finish the freshly placed concrete in one complete pass of the machine so that the end result is a dense and homogeneous pavement which is achieved with a minimum of hand finishing. The paver-finisher shall be a heavy duty, self-propelled machine designed specifically for paving and finishing high quality concrete pavements.

(2) Fixed-form. On projects requiring less than 10,000 cubic yards of concrete pavement or irregular areas at locations inaccessible to slip-form paving equipment, concrete pavement may be placed with equipment specifically designed for placement and finishing using stationary side forms. Methods and equipment shall be reviewed and accepted by the RPR. Hand screeding and float finishing may only be used on small irregular areas as allowed by the RPR.

c. Vibrators. Vibrator shall be the internal type. The rate of vibration of each vibrating unit shall be sufficient to consolidate the pavement without segregation or voids. The number, spacing, and frequency shall be as necessary to provide a dense and homogeneous pavement and meet the recommendations of American Concrete Institute (ACI) 309R, Guide for Consolidation of Concrete. Adequate power to operate all vibrators shall be available on the paver. The vibrators shall be automatically controlled so that they shall be stopped as forward motion ceases. The Contractor shall provide an electronic or mechanical means to monitor vibrator status. The checks on vibrator status shall occur a minimum of two times per day or when requested by the RPR.

Hand held vibrators may only be used in irregular areas and shall meet the recommendations of ACI 309R, Guide for Consolidation of Concrete.

d. Concrete saws. The Contractor shall provide sawing equipment adequate in number of units and power to complete the sawing to the required dimensions. The Contractor shall provide at least one standby saw in good working order and a supply of saw blades at the site of the work at all times during sawing operations.

e. Fixed forms. Straight side fixed forms shall be made of steel and shall be furnished in sections not less than 10 feet (3 m) in length. Forms shall be provided with adequate devices for secure settings so that when in place they will withstand, without visible spring or settlement, the impact and vibration of the consolidating and finishing equipment. Forms with battered top surfaces and bent, twisted or broken forms shall not be used. Built-up forms shall not be used, except as approved by the RPR. The top face of the form shall not vary from a true plane more than 1/8 inch (3 mm) in 10 feet (3 m), and the upstanding leg shall not vary more than 1/4 inch (6 mm). The forms shall contain provisions for locking the ends of abutting sections together tightly for secure setting. Wood forms may be used under special conditions, when approved by the RPR. The forms shall extend the full depth of the pavement section.

501-4.3 Form setting. Forms shall be set to line and grade as shown on the plans, sufficiently in advance of the concrete placement, to ensure continuous paving operation. Forms shall be set to withstand, without visible spring or settlement, the impact and vibration of the consolidating and finishing equipment. Forms shall be cleaned and oiled prior to the concrete placement.

501-4.4 Base surface preparation prior to placement. Any damage to the prepared base, subbase, and subgrade shall be corrected full depth by the Contractor prior to concrete placement. The underlying surface shall be entirely free of frost when concrete is placed. The prepared grade shall be moistened with water, without saturating, immediately ahead of concrete placement to prevent rapid loss of moisture from concrete. Bond breaker shall be applied in accordance with 501-2.12.

501-4.5 Handling, measuring, and batching material. Aggregate stockpiles shall be constructed and managed in such a manner that prevents segregation and intermixing of deleterious materials. Aggregates from different sources shall be stockpiled, weighed and batched separately at the concrete batch plant. Aggregates that have become segregated or mixed with earth or foreign material shall not be used. All aggregates produced or handled by hydraulic methods, and washed aggregates, shall be stockpiled or binned for draining at least 12 hours before being batched. Store and maintain all aggregates at a uniform moisture content prior to use. A continuous supply of materials shall be provided to the work to ensure continuous placement.

501-4.6 Mixing concrete. The concrete may be mixed at the work site, in a central mix plant or in truck mixers. The mixer shall be of an approved type and capacity. Mixing time shall be measured from the time all materials are placed into the drum until the drum is emptied into the truck. All concrete shall be mixed and delivered to the site in accordance with the requirements of ASTM C94 or ASTM C685.

Mixed concrete from the central mixing plant shall be transported in truck mixers, truck agitators, or non-agitating trucks. The elapsed time from the addition of cementitious material to the mix until the concrete is discharged from the truck should not exceed [30] minutes when the concrete is hauled in non-agitating trucks, nor 90 minutes when the concrete is hauled in truck mixers or truck agitators. In no case shall the temperature of the concrete when placed exceed 90°F (32°C). Retempering concrete by adding water or by other means will not be permitted. With transit mixers additional water may be added to the batch materials and additional mixing performed to increase the slump to meet the specified requirements provided the addition of water

is performed within 45 minutes after the initial mixing operations and provided the water/cementitious ratio specified is not exceeded.

501-4.7 Weather Limitations on mixing and placing. No concrete shall be mixed, placed, or finished when the natural light is insufficient, unless an adequate and approved artificial lighting system is operated.

a. Cold weather. Unless authorized in writing by the RPR, mixing and concreting operations shall be discontinued when a descending air temperature in the shade and away from artificial heat reaches 40°F (4°C) and shall not be resumed until an ascending air temperature in the shade and away from artificial heat reaches 35°F (2°C).

The aggregate shall be free of ice, snow, and frozen lumps before entering the mixer. The temperature of the mixed concrete shall not be less than 50°F (10°C) at the time of placement. Concrete shall not be placed on frozen material nor shall frozen aggregates be used in the concrete.

When concreting is authorized during cold weather, water and/or the aggregates may be heated to not more than 150°F (66°C). The apparatus used shall heat the mass uniformly and shall be arranged to preclude the possible occurrence of overheated areas which might be detrimental to the materials.

Curing during cold weather shall be in accordance with paragraph 501-4.13d.

b. Hot weather. During periods of hot weather when the maximum daily air temperature exceeds 85°F (30°C), the following precautions shall be taken.

The forms and/or the underlying surface shall be sprinkled with water immediately before placing the concrete. The concrete shall be placed at the coolest temperature practicable, and in no case shall the temperature of the concrete when placed exceed 90°F (32°C). The aggregates and/or mixing water shall be cooled as necessary to maintain the concrete temperature at or not more than the specified maximum.

The concrete placement shall be protected from exceeding an evaporation rate of 0.2 psf (0.98 kg/m^2 per hour) per hour. When conditions are such that problems with plastic cracking can be expected, and particularly if any plastic cracking begins to occur, the Contractor shall immediately take such additional measures as necessary to protect the concrete surface. If the Contractor's measures are not effective in preventing plastic cracking, paving operations shall be immediately stopped.

Curing during hot weather shall be in accordance with paragraph 501-4.13e.

c. Temperature management program. Prior to the start of paving operation for each day of paving, the Contractor shall provide the RPR with a Temperature Management Program for the concrete to be placed to assure that uncontrolled cracking is avoided. (Federal Highway Administration HIPERPAV 3 is one example of a temperature management program.) As a minimum, the program shall address the following items:

(1) Anticipated tensile strains in the fresh concrete as related to heating and cooling of the concrete material.

(2) Anticipated weather conditions such as ambient temperatures, wind velocity, and relative humidity; and anticipated evaporation rate using Figure 19-9, PCA, Design and Control of Concrete Mixtures.

(3) Anticipated timing of initial sawing of joint.

(4) Anticipated number and type of saws to be used.

d. **Rain.** The Contractor shall have available materials for the protection of the concrete during inclement weather. Such protective materials shall consist of rolled polyethylene sheeting at least 4 mils (0.1 mm) thick of sufficient length and width to cover the plastic concrete slab and any edges. The sheeting may be mounted on either the paver or a separate movable bridge from which it can be unrolled without dragging over the plastic concrete surface. When rain appears imminent, all paving operations shall stop and all available personnel shall begin covering the surface of the unhardened concrete with the protective covering.

501-4.8 Concrete Placement. At any point in concrete conveyance, the free vertical drop of the concrete from one point to another or to the underlying surface shall not exceed 3 feet (1 m). The finished concrete product must be dense and homogeneous, without segregation and conforming to the standards in this specification. Backhoes and grading equipment shall not be used to distribute the concrete in front of the paver. Front end loaders will not be used. All concrete shall be consolidated without voids or segregation, including under and around all load-transfer devices, joint assembly units, and other features embedded in the pavement. Hauling equipment or other mechanical equipment can be permitted on adjoining previously constructed pavement when the concrete strength reaches **a compressive strength of 3,100 psi (21.4 MPa),** based on the average of four field cured specimens per 2,000 cubic yards (1,530 cubic meters) of concrete placed. The Contractor must determine that the above minimum strengths are adequate to protection the pavement from overloads due to the construction equipment proposed for the project.

a. Slip-form construction. The concrete shall be distributed uniformly into final position by a self-propelled slip-form paver without delay. The alignment and elevation of the paver shall be regulated from outside reference lines established for this purpose. The paver shall vibrate the concrete for the full width and depth of the strip of pavement being placed and the vibration shall be adequate to provide a consistency of concrete that will stand normal to the surface with sharp well-defined edges. The sliding forms shall be rigidly held together laterally to prevent spreading of the forms. The plastic concrete shall be effectively consolidated by internal vibration with transverse vibrating units for the full width of the pavement and/or a series of equally placed longitudinal vibrating units. The space from the outer edge of the pavement to longitudinal unit shall not exceed 9 inches (23 cm) for slipform and at the end of the dowels for the fill-in lanes. The spacing of internal units shall be uniform and shall not exceed 18 inches (0.5 m).

The term internal vibration means vibrating units located within the specified thickness of pavement section.

The rate of vibration of each vibrating unit shall be sufficient to consolidate the pavement without, segregation, voids, or vibrator trails and the amplitude of vibration shall be sufficient to be perceptible on the surface of the concrete along the entire length of the vibrating unit and for a distance of at least one foot (30 cm). The frequency of vibration or amplitude should be adjusted proportionately with the rate of travel to result in a uniform density and air content. The paving machine shall be equipped with a tachometer or other suitable device for measuring and indicating the actual frequency of vibrations.

The concrete shall be held at a uniform consistency. The slip-form paver shall be operated with as nearly a continuous forward movement as possible and all operations of mixing, delivering, and spreading concrete shall be coordinated to provide uniform progress with stopping and starting of the paver held to a minimum. If for any reason, it is necessary to stop the forward movement of the paver, the vibratory and tamping elements shall also be stopped

immediately. No tractive force shall be applied to the machine, except that which is controlled from the machine.

When concrete is being placed adjacent to an existing pavement, that part of the equipment which is supported on the existing pavement shall be equipped with protective pads on crawler tracks or rubber-tired wheels on which the bearing surface is offset to run a sufficient distance from the edge of the pavement to avoid breaking the pavement edge.

Not more than 15% of the total free edge of each 500-foot (150 m) segment of pavement, or fraction thereof, shall have an edge slump exceeding 1/4 inch (6 mm), and none of the free edge of the pavement shall have an edge slump exceeding 3/8 inch (9 mm). (The total free edge of 500 feet (150 m) of pavement will be considered the cumulative total linear measurement of pavement edge originally constructed as nonadjacent to any existing pavement; that is, 500 feet (150 m) of paving lane originally constructed as a separate lane will have 1,000 feet (300 m) of free edge, 500 feet (150 m) of fill-in lane will have no free edge, etc.). The area affected by the downward movement of the concrete along the pavement edge shall be limited to not more than 18 inches (0.5 m) from the edge.

When excessive edge slump cannot be corrected before the concrete has hardened, the area with excessive edge slump will be removed the full width of the slip form lane and replaced at the expense of the Contractor as directed by the RPR.

b. Fixed-form construction. Forms shall be drilled in advance of being placed to line and grade to accommodate tie bars / dowel bars where these are specified.

Immediately in advance of placing concrete and after all subbase operations are completed, side forms shall be trued and maintained to the required line and grade for a distance sufficient to prevent delay in placing.

Side forms shall remain in place at least 12 hours after the concrete has been placed, and in all cases until the edge of the pavement no longer requires the protection of the forms. Curing compound shall be applied to the concrete immediately after the forms have been removed.

Side forms shall be thoroughly cleaned and coated with a release agent each time they are used and before concrete is placed against them.

Concrete shall be spread, screed, shaped and consolidated by one or more self-propelled machines. These machines shall uniformly distribute and consolidate concrete without segregation so that the completed pavement will conform to the required cross-section with a minimum of handwork.

The number and capacity of machines furnished shall be adequate to perform the work required at a rate equal to that of concrete delivery. The equipment must be specifically designed for placement and finishing using stationary side forms. Methods and equipment shall be reviewed and accepted by the RPR.

Concrete for the full paving width shall be effectively consolidated by internal vibrators. The rate of vibration of each vibrating unit shall be sufficient to consolidate the pavement without segregation, voids, or leaving vibrator trails.

Power to vibrators shall be connected so that vibration ceases when forward or backward motion of the machine is stopped.

c. Consolidation. Concrete shall be consolidated with the specified type of lane-spanning, gang-mounted, mechanical, immersion type vibrating equipment mounted in front of the paver, supplemented, in rare instances as specified, by hand-operated vibrators. The vibrators shall be inserted into the concrete to a depth that will provide the best full-depth

consolidation but not closer to the underlying material than 2 inches (50 mm). Vibrators shall not be used to transport or spread the concrete. For each paving train, at least one additional vibrator spud, or sufficient parts for rapid replacement and repair of vibrators shall be maintained at the paving site at all times. Any evidence of inadequate consolidation (honeycomb along the edges, large air pockets, or any other evidence) or over-consolidation (vibrator trails, segregation, or any other evidence) shall require the immediate stopping of the paving operation and adjustment of the equipment or procedures as approved by the RPR.

If a lack of consolidation of the hardened concrete is suspected by the RPR, referee testing may be required. Referee testing of hardened concrete will be performed by the RPR by cutting cores from the finished pavement after a minimum of 24 hours curing. The RPR shall visually examine the cores for evidence of lack of consolidation. Density determinations will be made by the RPR based on the water content of the core as taken. ASTM C642 shall be used for the determination of core density in the saturated-surface dry condition. When required, referee cores will be taken at the minimum rate of one for each 500 cubic yards (382 m^2) of pavement, or fraction. The Contractor shall be responsible for all referee testing cost if they fail to meet the required density.

The average density of the cores shall be at least 97% of the original concrete mix density, with no cores having a density of less than 96% of the original concrete mix density. Failure to meet the referee tests will be considered evidence that the minimum requirements for vibration are inadequate for the job conditions. Additional vibrating units or other means of increasing the effect of vibration shall be employed so that the density of the hardened concrete conforms to the above requirements.

501-4.9 Strike-off of concrete and placement of reinforcement. Following the placing of the concrete, it shall be struck off to conform to the cross-section shown on the plans and to an elevation that when the concrete is properly consolidated and finished, the surface of the pavement shall be at the elevation shown on the plans. When reinforced concrete pavement is placed in two layers, the bottom layer shall be struck off to such length and depth that the sheet of reinforcing steel fabric or bar mat may be laid full length on the concrete in its final position without further manipulation. The reinforcement shall then be placed directly upon the concrete, after which the top layer of the concrete shall be placed, struck off, and screed. If any portion of the bottom layer of concrete has been placed more than 30 minutes without being covered with the top layer or if initial set has taken place, it shall be removed and replaced with freshly mixed concrete at the Contractor's expense. When reinforced concrete is placed in one layer, the reinforcement may be positioned in advance of concrete placement or it may be placed in plastic concrete by mechanical or vibratory means after spreading.

Reinforcing steel, at the time concrete is placed, shall be free of mud, oil, or other organic matter that may adversely affect or reduce bond. Reinforcing steel with rust, mill scale or a combination of both will be considered satisfactory, provided the minimum dimensions, weight, and tensile properties of a hand wire-brushed test specimen are not less than the applicable ASTM specification requirements.

501-4.10 Joints. Joints shall be constructed as shown on the plans and in accordance with these requirements. All joints shall be constructed with their faces perpendicular to the surface of the pavement and finished or edged as shown on the plans. Joints shall not vary more than 1/2-inch (12 mm) from their designated position and shall be true to line with not more than 1/4-inch (6 mm) variation in 10 feet (3 m). The surface across the joints shall be tested with a 12-foot (3 m) straightedge as the joints are finished and any irregularities in excess of 1/4 inch (6 mm) shall be corrected before the concrete has hardened. All joints shall be so prepared, finished, or cut to provide a groove of uniform width and depth as shown on the plans.

a. Construction. Longitudinal construction joints shall be slip-formed or formed against side forms as shown in the plans.

Transverse construction joints shall be installed at the end of each day's placing operations and at any other points within a paving lane when concrete placement is interrupted for more than 30 minutes or it appears that the concrete will obtain its initial set before fresh concrete arrives. The installation of the joint shall be located at a planned contraction or expansion joint. If placing of the concrete is stopped, the Contractor shall remove the excess concrete back to the previous planned joint.

b. Contraction. Contraction joints shall be installed at the locations and spacing as shown on the plans. Contraction joints shall be installed to the dimensions required by forming a groove or cleft in the top of the slab while the concrete is still plastic or by sawing a groove into the concrete surface after the concrete has hardened. When the groove is formed in plastic concrete the sides of the grooves shall be finished even and smooth with an edging tool. If an insert material is used, the installation and edge finish shall be according to the manufacturer's instructions. The groove shall be finished or cut clean so that spalling will be avoided at intersections with other joints. Grooving or sawing shall produce a slot at least 1/8 inch (3 mm) wide and to the depth shown on the plans.

c. Isolation (expansion). Isolation joints shall be installed as shown on the plans. The premolded filler of the thickness as shown on the plans, shall extend for the full depth and width of the slab at the joint. The filler shall be fastened uniformly along the hardened joint face with no buckling or debris between the filler and the concrete interface, including a temporary filler for the sealant reservoir at the top of the slab. The edges of the joint shall be finished and tooled while the concrete is still plastic

d. Dowels and Tie Bars for Joints

(1) Tie bars. Tie bars shall consist of deformed bars installed in joints as shown on the plans. Tie bars shall be placed at right angles to the centerline of the concrete slab and shall be spaced at intervals shown on the plans. They shall be held in position parallel to the pavement surface and in the middle of the slab depth and within the tolerances in paragraph 501-4.10(f.). When tie bars extend into an unpaved lane, they may be bent against the form at longitudinal construction joints, unless threaded bolt or other assembled tie bars are specified. Tie bars shall not be painted, greased, or enclosed in sleeves. When slip-form operations call for tie bars, two-piece hook bolts can be installed.

(2) Dowel bars. Dowel bars shall be placed across joints in the proper horizontal and vertical alignment as shown on the plans. The dowels shall be coated with a bond-breaker or other lubricant recommended by the manufacturer and approved by the RPR. Dowels bars at longitudinal construction joints shall be bonded in drilled holes.

(3) Placing dowels and tie bars. Horizontal spacing of dowels shall be within a tolerance of ±3/4 inch (19 mm). The vertical location on the face of the slab shall be within a tolerance of ±1/2 inch (12 mm). The method used to install dowels shall ensure that the horizontal and vertical alignment will not be greater than 1/4 inch per feet (6 mm per 0.3 m), except for those across the crown or other grade change joints. Dowels across crowns and other joints at grade changes shall be measured to a level surface. Horizontal alignment shall be checked perpendicular to the joint edge. The portion of each dowel intended to move within the concrete or expansion cap shall be wiped clean and coated with a thin, even film of lubricating oil or light grease before the concrete is placed. Dowels shall be installed as specified in the following subparagraphs.

Dowels and tie bars shall not be placed closer than 0.6 times the dowel bar or tie bar length to the planned joint line. If the last regularly spaced longitudinal dowel and/or tie bar is closer than that dimension, it shall be moved away from the joint to a location 0.6 times the dowel bar and/or tie bar length, but not closer than 6 inches (150 mm) to its nearest neighbor.

(a) Contraction joints. Dowels and tie bars in longitudinal and transverse contraction joints within the paving lane shall be held securely in place by means of rigid metal frames or basket assemblies of an approved type. The basket assemblies shall be held securely in the proper location by means of suitable pins or anchors. Do not cut or crimp the dowel basket tie wires.

At the Contractor's option, dowels and tie bars in contraction joints may be installed by insertion into the plastic concrete using approved equipment and procedures per the paver manufacturer's design. Approval of installation methods will be based on the results of the control strip showing that the dowels and tie bars are installed within specified tolerances as verified by cores or non-destructive rebar location devices approved by the RPR.

(b) Construction Joints. Install dowels and tie bars by the cast-in- place or the drill-and-dowel method. Installation by removing and replacing in preformed holes will not be permitted. Dowels and tie bars shall be prepared and placed across joints where indicated, correctly aligned, and securely held in the proper horizontal and vertical position during placing and finishing operations, by means of devices fastened to the forms.

(c) Joints in hardened concrete. Install dowels in hardened concrete by bonding the dowels into holes drilled into the concrete. The concrete shall have cured for seven (7) days or reached a minimum **compressive strength of 3100 psi ((21.4 MPa)**before drilling begins. Holes 1/8 inch (3 mm) greater in diameter than the dowels shall be drilled into the hardened concrete using rotary-core drills. Rotary-percussion drills may be used, provided that excessive spalling does not occur. Spalling beyond the limits of the grout retention ring will require modification of the equipment and operation. Depth of dowel hole shall be within a tolerance of ±1/2 inch (12 mm) of the dimension shown on the drawings. On completion of the drilling operation, the dowel hole shall be blown out with oil-free, compressed air. Dowels shall be bonded in the drilled holes using epoxy resin. Epoxy resin shall be injected at the back of the hole before installing the dowel and extruded to the collar during insertion of the dowel so as to completely fill the void around the dowel. Application by buttering the dowel will not be permitted. The dowels shall be held in alignment at the collar of the hole by means of a suitable metal or plastic grout retention ring fitted around the dowel.

e. Sawing of joints. Sawing shall commence, without regard to day or night, as soon as the concrete has hardened sufficiently to permit cutting without chipping, spalling, or tearing and before uncontrolled shrinkage cracking of the pavement occurs and shall continue without interruption until all joints have been sawn. All slurry and debris produced in the sawing of joints shall be removed by vacuuming and washing. Curing compound or system shall be reapplied in the initial saw-cut and maintained for the remaining cure period.

Joints shall be cut in locations as shown on the plans. The initial joint cut shall be a minimum 1/8 inch (3 mm) wide and to the depth shown on the plans. Prior to placement of joint sealant or seals, the top of the joint shall be widened by sawing as shown on the plans.

501-4.11 Finishing. Finishing operations shall be a continuing part of placing operations starting immediately behind the strike-off of the paver. Initial finishing shall be provided by the transverse screed or extrusion plate. The sequence of operations shall be transverse finishing, longitudinal machine floating if used, straightedge finishing, edging of joints, and then texturing. Finishing shall be by the machine method. The hand method shall be used only on isolated areas of odd slab widths or shapes and in the event of a breakdown of the mechanical finishing equipment. Supplemental hand finishing for machine finished pavement shall be kept to an absolute minimum. Any machine finishing operation which requires appreciable hand finishing, other than a moderate amount of straightedge finishing, shall be immediately stopped and proper adjustments made or the equipment replaced. Equipment, mixture, and/or procedures which produce more than 1/4 inch (6 mm) of mortar-rich surface shall be immediately modified as necessary to eliminate this condition or operations shall cease. Compensation shall be made for surging behind the screeds or extrusion plate and settlement during hardening and care shall be taken to ensure that paving and finishing machines are properly adjusted so that the finished surface of the concrete (not just the cutting edges of the screeds) will be at the required line and grade. Finishing equipment and tools shall be maintained clean and in an approved condition. At no time shall water be added to the surface of the slab with the finishing equipment or tools, or in any other way. Fog (mist) sprays or other surface applied finishing aids specified to prevent plastic shrinkage cracking, approved by the RPR, may be used in accordance with the manufacturers requirements.

a. Machine finishing with slipform pavers. The slipform paver shall be operated so that only a very minimum of additional finishing work is required to produce pavement surfaces and edges meeting the specified tolerances. Any equipment or procedure that fails to meet these specified requirements shall immediately be replaced or modified as necessary. A self-propelled non-rotating pipe float may be used while the concrete is still plastic, to remove minor irregularities and score marks. Only one pass of the pipe float shall be allowed. Equipment, mixture, and/or procedures which produce more than 1/4 inch (6 mm) of mortar-rich surface shall be immediately modified as necessary to eliminate this condition or operations shall cease. Remove excessive slurry from the surface with a cutting straightedge and wipe off the edge. Any slurry which does run down the vertical edges shall be immediately removed by hand, using stiff brushes or scrapers. No slurry, concrete or concrete mortar shall be used to build up along the edges of the pavement to compensate for excessive edge slump, either while the concrete is plastic or after it hardens.

b. Machine finishing with fixed forms. The machine shall be designed to straddle the forms and shall be operated to screed and consolidate the concrete. Machines that cause displacement of the forms shall be replaced. The machine shall make only one pass over each area of pavement. If the equipment and procedures do not produce a surface of uniform texture, true to grade, in one pass, the operation shall be immediately stopped and the equipment, mixture, and procedures adjusted as necessary.

c. Other types of finishing equipment. Clary screeds, other rotating tube floats, or bridge deck finishers are not allowed on mainline paving, but may be allowed on irregular or odd-shaped slabs, and near buildings or trench drains, subject to the RPR's approval.

Bridge deck finishers shall have a minimum operating weight of 7500 pounds (3400 kg) and shall have a transversely operating carriage containing a knock-down auger and a minimum

of two immersion vibrators. Vibrating screeds or pans shall be used only for isolated slabs where hand finishing is permitted as specified, and only where specifically approved.

d. **Hand finishing.** Hand finishing methods will not be permitted, except under the following conditions: (1) in the event of breakdown of the mechanical equipment, hand methods may be used to finish the concrete already deposited on the grade and (2) in areas of narrow widths or of irregular dimensions where operation of the mechanical equipment is impractical.

e. Straightedge testing and surface correction. After the pavement has been struck off and while the concrete is still plastic, it shall be tested for trueness with a 12-foot (3.7-m) finishing straightedge swung from handles capable of spanning at least one-half the width of the slab. The straightedge shall be held in contact with the surface in successive positions parallel to the centerline and the whole area gone over from one side of the slab to the other, as necessary. Advancing shall be in successive stages of not more than one-half the length of the straightedge. Any excess water and laitance in excess of 1/8 inch (3 mm) thick shall be removed from the surface of the pavement and wasted. Any depressions shall be immediately filled with freshly mixed concrete, struck off, consolidated, and refinished. High areas shall be cut down and refinished. Special attention shall be given to assure that the surface across joints meets the smoothness requirements. Straightedge testing and surface corrections shall continue until the entire surface is found to be free from observable departures from the straightedge and until the slab conforms to the required grade and cross-section. The use of long-handled wood floats shall be confined to a minimum; they may be used only in emergencies and in areas not accessible to finishing equipment.

501-4.12 Surface texture. The surface of the pavement shall be finished as designated below for all newly constructed concrete pavements. It is important that the texturing equipment not tear or unduly roughen the pavement surface during the operation. The texture shall be uniform in appearance and approximately 1/16 inch (2 mm) in depth. Any imperfections resulting from the texturing operation shall be corrected to the satisfaction of the RPR.

a. Brush or broom finish. Shall be applied when the water sheen has practically disappeared. The equipment shall operate transversely across the pavement surface.

b. Burlap drag finish. Burlap, at least 15 ounces per square yard (555 grams per square meter), will typically produce acceptable texture. To obtain a textured surface, the transverse threads of the burlap shall be removed approximately one foot (30 cm) from the trailing edge. A heavy buildup of grout on the burlap threads produces the desired wide sweeping longitudinal striations on the pavement surface.

c. Artificial turf finish. Shall be applied by dragging the surface of the pavement in the direction of concrete placement with an approved full-width drag made with artificial turf. The leading transverse edge of the artificial turf drag will be securely fastened to a lightweight pole on a traveling bridge. At least 2 feet (60 cm) of the artificial turf shall be in contact with the concrete surface during dragging operations. Approval of the artificial turf will be done only after it has been demonstrated by the Contractor to provide a satisfactory texture. One type that has provided satisfactory texture consists of 7,200 approximately 0.85-inch-long polyethylene turf blades per square foot.

501-4.13 Curing. Immediately after finishing operations are completed and bleed water is gone from the surface, all exposed surfaces of the newly placed concrete shall be cured for a 7-day cure period in accordance with one of the methods below. Failure to provide sufficient cover material of whatever kind the Contractor may elect to use, or lack of water to adequately take care

of both curing and other requirements, shall be cause for immediate suspension of concreting operations. The concrete shall not be left exposed for more than 1/2 hour during the curing period.

When a two-saw-cut method is used to construct the contraction joint, the curing compound shall be applied to the saw-cut immediately after the initial cut has been made. The sealant reservoir shall not be sawed until after the curing period has been completed. When the one cut method is used to construct the contraction joint, the joint shall be cured with wet rope, wet rags, or wet blankets. The rags, ropes, or blankets shall be kept moist for the duration of the curing period.

a. Impervious membrane method. Curing with liquid membrane compounds should not occur until bleed and surface moisture has evaporated. All exposed surfaces of the pavement shall be sprayed uniformly with white pigmented curing compound immediately after the finishing of the surface and before the set of the concrete has taken place. The curing compound shall not be applied during rainfall. Curing compound shall be applied by mechanical sprayers under pressure at the rate of one gallon (4 liters) to not more than 150 square feet (14 sq m). The spraying equipment shall be of the fully atomizing type equipped with a tank agitator. At the time of use, the compound shall be in a thoroughly mixed condition with the pigment uniformly dispersed throughout the vehicle. During application, the compound shall be stirred continuously by mechanical means. Hand spraying of odd widths or shapes and concrete surfaces exposed by the removal of forms will be permitted. When hand spraying is approved by the RPR, a double application rate shall be used to ensure coverage. Should the film become damaged from any cause, including sawing operations, within the required curing period, the damaged portions shall be repaired immediately with additional compound or other approved means. Upon removal of side forms, the sides of the exposed slabs shall be protected immediately to provide a curing treatment equal to that provided for the surface.

b. White burlap-polyethylene sheets. The surface of the pavement shall be entirely covered with the sheeting. The sheeting used shall be such length (or width) that it will extend at least twice the thickness of the pavement beyond the edges of the slab. The sheeting shall be placed so that the entire surface and both edges of the slab are completely covered. The sheeting shall be placed and weighted to remain in contact with the surface covered, and the covering shall be maintained fully saturated and in position for seven (7) days after the concrete has been placed.

c. Water method. The entire area shall be covered with burlap or other water absorbing material. The material shall be of sufficient thickness to retain water for adequate curing without excessive runoff. The material shall be kept wet at all times and maintained for seven (7) days. When the forms are stripped, the vertical walls shall also be kept moist. It shall be the responsibility of the Contractor to prevent ponding of the curing water on the subbase.

d. Concrete protection for cold weather. Maintain the concrete at a temperature of at least 50°F (10°C) for a period of 72 hours after placing and at a temperature above freezing for the remainder of the 7-day curing period. The Contractor shall be responsible for the quality and strength of the concrete placed during cold weather; and any concrete damaged shall be removed and replaced at the Contractor's expense.

e. Concrete protection for hot weather. Concrete should be continuous moisture cured for the entire curing period and shall commence as soon as the surfaces are finished and continue for at least 24 hours. However, if moisture curing is not practical beyond 24 hours, the concrete surface shall be protected from drying with application of a liquid membrane-forming curing compound while the surfaces are still damp. Other curing methods may be approved by the RPR.

501-4.14 Removing forms. Unless otherwise specified, forms shall not be removed from freshly placed concrete until it has hardened sufficiently to permit removal without chipping, spalling, or tearing. After the forms have been removed, the sides of the slab shall be cured in accordance with paragraph 501-4.13.

If honeycombed areas are evident when the forms are removed, materials, placement, and consolidation methods must be reviewed and appropriate adjustments made to assure adequate consolidation at the edges of future concrete placements. Honeycombed areas that extend into the slab less than approximately 1 inch (25 mm), shall be repaired with an approved grout, as directed by the RPR. Honeycombed areas that extend into the slab greater than a depth of 1 inch (25 mm) shall be considered as defective work and shall be removed and replaced in accordance with paragraph 501-4.19.

501-4.15 Saw-cut grooving. If shown on the plans, grooved surfaces shall be provided in accordance with the requirements of Item P-621.

501-4.16 Sealing joints. The joints in the pavement shall be sealed in accordance with Item **P-605.**

501-4.17 Protection of pavement. The Contractor shall protect the pavement and its appurtenances against both public traffic and traffic caused by the Contractor's employees and agents until accepted by the RPR. This shall include watchmen to direct traffic and the erection and maintenance of warning signs, lights, pavement bridges, crossovers, and protection of unsealed joints from intrusion of foreign material, etc. Any damage to the pavement occurring prior to final acceptance shall be repaired or the pavement replaced at the Contractor's expense.

Aggregates, rubble, or other similar construction materials shall not be placed on airfield pavements. Traffic shall be excluded from the new pavement by erecting and maintaining barricades and signs until the concrete is at least seven (7) days old, or for a longer period if directed by the RPR.

In paving intermediate lanes between newly paved pilot lanes, operation of the hauling and paving equipment will be permitted on the new pavement after the pavement has been cured for seven (7) days, the joints are protected, the concrete has attained a minimum field cured flexural strength of [450 psi (3100 kPa)], and the slab edge is protected.

All new and existing pavement carrying construction traffic or equipment shall be kept clean and spillage of concrete and other materials shall be cleaned up immediately.

Damaged pavements shall be removed and replaced at the Contractor's expense. Slabs shall be removed to the full depth, width, and length of the slab.

501-4.18 Opening to construction traffic. The pavement shall not be opened to traffic until test specimens molded and cured in accordance with ASTM C31 have **compressive strength of 3100 psi (21.4 MPa).** If such tests are not conducted, the pavement shall not be opened to traffic until 14 days after the concrete was placed. Prior to opening the pavement to construction traffic, all joints shall either be sealed or protected from damage to the joint edge and intrusion of foreign materials into the joint. As a minimum, backer rod or tape may be used to protect the joints from foreign matter intrusion.

501-4.19 Repair, removal, or replacement of slabs. New pavement slabs that are broken or contain cracks or are otherwise defective or unacceptable as defined by acceptance criteria in paragraph 501-6.6 shall be removed and replaced or repaired, as directed by the RPR, at the Contractor's expense. Spalls along joints shall be repaired as specified. Removal of partial slabs is not permitted. Removal and replacement shall be full depth, shall be full width of the slab, and the limit of removal shall be normal to the paving lane and to each original transverse joint. The

RPR will determine whether cracks extend full depth of the pavement and may require cores to be drilled on the crack to determine depth of cracking. Such cores shall be have a diameter of 2 inches (50 mm) to 4 inches (100 mm), shall be drilled by the Contractor and shall be filled by the Contractor with a well consolidated concrete mixture bonded to the walls of the hole with a bonding agent, using approved procedures. Drilling of cores and refilling holes shall be at no expense to the Owner. Repair of cracks as described in this section shall not be allowed if in the opinion of the RPR the overall condition of the pavement indicates that such repair is unlikely to achieve an acceptable and durable finished pavement. No repair of cracks shall be allowed in any panel that demonstrates segregated aggregate with an absence of coarse aggregate in the upper 1/8 inch (3 mm) of the pavement surface.

a. Shrinkage cracks. Shrinkage cracks which do not exceed one-third of the pavement depth shall be cleaned and either high molecular weight methacrylate (HMWM) applied; or epoxy resin (Type IV, Grade 1) pressure injected using procedures recommended by the manufacturer and approved by the RPR. Sandblasting of the surface may be required following the application of HMWM to restore skid resistance. Care shall be taken to ensure that the crack is not widened during epoxy resin injection. All epoxy resin injection shall take place in the presence of the RPR. Shrinkage cracks which exceed one-third the pavement depth shall be treated as full depth cracks in accordance with paragraphs 501-4.19b and 501-19c.

b. Slabs with cracks through interior areas. Interior area is defined as that area more than 6 inches (150 mm) from either adjacent original transverse joint. The full slab shall be removed and replaced at no cost to the Owner, when there are any full depth cracks, or cracks greater than one-third the pavement depth, that extend into the interior area.

c. Cracks close to and parallel to joints. All full-depth cracks within 6 inches (150 mm) either side of the joint and essentially parallel to the original joints, shall be treated as follows.

(1) Full depth cracks and original joint not cracked. The full-depth crack shall be treated as the new joint and the original joint filled with an epoxy resin.

i. Full-depth crack. The joint sealant reservoir for the crack shall be formed by sawing to a depth of 3/4 inches (19 mm), ±1/16 inch (2 mm), and to a width of 5/8 inch (16 mm), ±1/8 inch (3 mm). The crack shall be sawed with equipment specially designed to follow random cracks. Any equipment or procedure which causes raveling or spalling along the crack shall be modified or replaced to prevent raveling or spalling. The joint shall be sealed with sealant in accordance with P-605 or as directed by the RPR.

ii. Original joint. If the original joint sealant reservoir has been sawed out, the reservoir and as much of the lower saw cut as possible shall be filled with epoxy resin, Type IV, Grade 2, thoroughly tooled into the void using approved procedures.

If only the original narrow saw cut has been made, it shall be cleaned and pressure injected with epoxy resin, Type IV, Grade 1, using approved procedures.

Where a parallel crack goes part way across paving lane and then intersects and follows the original joint which is cracked only for the remained of the width, it shall be treated as specified above for a parallel crack, and the cracked original joint shall be prepared and sealed as originally designed.

(2) Full depth cracks and original joint cracked. If there is any place in the lane width where a parallel crack and a cracked portion of the original joint overlap, the entire slab containing the crack shall be removed and replaced.

d. Removal and replacement of full slabs. Make a full depth cut perpendicular to the slab surface along all edges of the slab with a concrete saw cutting any dowels or tie-bars. Remove damaged slab protecting adjacent pavement from damage. Damage to adjacent slabs may result in removal of additional slabs as directed by the RPR at the Contractor's expense.

The underlying material shall be repaired, re-compacted and shaped to grade.

Dowels of the size and spacing specified for other joints in similar pavement on the project shall be installed along all four (4) edges of the new slab in accordance with paragraph 501-4.10d.

Placement of concrete shall be as specified for original construction. The joints around the new slab shall be prepared and sealed as specified for original construction.

e. Spalls along joints.

(1) Spalls less than one inch wide and less than the depth of the joint sealant reservoir, shall be filled with joint sealant material.

(2) Spalls larger than one inch and/or deeper than the joint reservoir, but less than ½ the slab depth, and less than 25% of the length of the adjacent joint shall be repaired as follows:

i. Make a vertical saw cut at least one inch (25 mm) outside the spalled area and to a depth of at least 2 inches (50 mm). Saw cuts shall be straight lines forming rectangular areas surrounding the spalled area.

ii. Remove unsound concrete and at least 1/2 inch (12 mm) of visually sound concrete between the saw cut and the joint or crack with a light chipping hammer.

iii. Clean cavity with high-pressure water jets supplemented with compressed air as needed to remove all loose material.

iv. Apply a prime coat of epoxy resin, Type III, Grade I, to the dry, cleaned surface of all sides and bottom of the cavity, except any joint face.

v. Fill the cavity with low slump concrete or mortar or with epoxy resin concrete or mortar.

vi. An insert or other bond-breaking medium shall be used to prevent bond at all joint faces.

vii. A reservoir for the joint sealant shall be sawed to the dimensions required for other joints, or as required to be routed for cracks. The reservoir shall be thoroughly cleaned and sealed with the sealer specified for the joints.

(3) Spalls deeper than 1/2 of the slab depth or spalls longer than 25% of the adjacent joint require replacement of the entire slab.

f. Diamond grinding of Concrete surfaces. Diamond grinding shall be completed prior to pavement grooving. Diamond grinding of the hardened concrete should not be performed until the concrete is at least 14 days old and has achieved full minimum strength. Equipment that causes ravels, aggregate fractures, spalls or disturbance to the joints will not be permitted. The depth of diamond grinding shall not exceed 1/2 inch (13 mm) and all areas in which diamond grinding has been performed will be subject to the final pavement thickness tolerances specified.

Diamond grinding shall be performed with a machine specifically designed for diamond grinding capable of cutting a path at least 3 feet (0.9 m) wide. The saw blades shall be 1/8-inch (3-mm) wide with sufficient number of flush cut blades that create grooves between 0.090 and 0.130 inches (2 and 3.5 mm) wide; and peaks and ridges approximately 1/32 inch (1 mm) higher than the bottom of the grinding cut. The Contractor shall determine the number and

type of blades based on the hardness of the aggregate. Contractor shall demonstrate to the RPR that the grinding equipment will produce satisfactory results prior to making corrections to surfaces.

Grinding will be tapered in all directions to provide smooth transitions to areas not requiring grinding. The slurry resulting from the grinding operation shall be continuously removed and the pavement left in a clean condition. All grinding shall be at the expense of the Contractor.

CONTRACTOR QUALITY CONTROL (CQC)

501-5.1 Quality control tests. The Contractor shall provide Quality Control Tests.

501-5.2 Contractor Quality Control (CQC). The Contractor shall provide or contract for testing facilities in accordance with Item C-100. The RPR shall be permitted unrestricted access to inspect the Contractor's QC facilities and witness QC activities. The RPR will advise the Contractor in writing of any noted deficiencies concerning the QC facility, equipment, supplies, or testing personnel and procedures. When the deficiencies are serious enough to be adversely affecting the test results, the incorporation of the materials into the work shall be suspended immediately and will not be permitted to resume until the deficiencies are satisfactorily corrected

501-5.3 Contractor QC testing. The Contractor shall perform all QC tests necessary to control the production and construction processes applicable to this specification. The testing shall include, but not necessarily be limited to, tests for aggregate gradation, aggregate moisture content, slump, and air content.

The RPR may at any time, notwithstanding previous plant acceptance, reject and require the Contractor to dispose of any batch of concrete mixture which is rendered unfit for use due to contamination, segregation, or improper slump. Such rejection may be based on only visual inspection. In the event of such rejection, the Contractor may take a representative sample of the rejected material in the presence of the RPR, and if it can be demonstrated in the laboratory, in the presence of the RPR, that such material was erroneously rejected, payment will be made for the material at the contract unit price.

a. Fine aggregate.

(1) Gradation. A sieve analysis shall be made at least twice daily in accordance with ASTM C136 from randomly sampled material taken from the discharge gate of storage bins or from the conveyor belt.

(2) Moisture content. If an electric moisture meter is used, at least two direct measurements of moisture content shall be made per week to check the calibration. If direct measurements are made in lieu of using an electric meter, two tests shall be made per day. Tests shall be made in accordance with ASTM C70 or ASTM C566.

(3) Deleterious substances. Fine aggregate as delivered to the mixer shall be tested for deleterious substances in fine aggregate for concrete as specified in paragraph 501-2.1b, prior to production of the control strip, and a minimum of every 30-days during production or more frequently as necessary to control deleterious substances.

b. Coarse Aggregate.

(1) Gradation. A sieve analysis shall be made at least twice daily for each size of aggregate. Tests shall be made in accordance with ASTM C136 from randomly sampled material taken from the discharge gate of storage bins or from the conveyor belt.

(2) Moisture content. If an electric moisture meter is used, at least two direct measurements of moisture content shall be made per week to check the calibration. If direct measurements are made in lieu of using an electric meter, two tests shall be made per day. Tests shall be made in accordance with ASTM C566.

(3) Deleterious substances. Coarse aggregate as delivered to the mixer shall be tested for deleterious substances in coarse aggregate for concrete as specified in paragraph 501-2.1c, prior to production of the control strip, and a minimum of every 30-days during production or more frequently as necessary to control deleterious substances.

c. Slump. One test shall be made for each sublot. Slump tests shall be performed in accordance with ASTM C143 from material randomly sampled from material discharged from trucks at the paving site. Material samples shall be taken in accordance with ASTM C172.

d. Air content. One test shall be made for each sublot. Air content tests shall be performed in accordance with ASTM C231 for gravel and stone coarse aggregate and ASTM C173 for slag or other porous coarse aggregate, from material randomly sampled from trucks at the paving site. Material samples shall be taken in accordance with ASTM C172.

e. Unit weight and Yield. One test shall be made for each sublot. Unit weight and yield tests shall be in accordance with ASTM C138. The samples shall be taken in accordance with ASTM C172 and at the same time as the air content tests.

f. Temperatures. Temperatures shall be checked at least four times per lot at the job site in accordance with ASTM C1064.

g. Smoothness for Contractor Quality Control.

The Contractor shall perform smoothness testing in transverse and longitudinal directions daily to verify that the construction processes are producing pavement with variances less than ¼ inch in 12 feet, identifying areas that may pond water which could lead to hydroplaning of aircraft. If the smoothness criteria is not met, appropriate changes and corrections to the construction process shall be made by the Contractor before construction continues

The Contractor may use a 12-foot (3.7 m) "straightedge, a rolling inclinometer meeting the requirements of ASTM E2133 or rolling external reference device that can simulate a 12-foot (3.7m) straightedge approved by the RPR. Straight-edge testing shall start with one-half the length of the straightedge at the edge of pavement section being tested and then moved ahead one-half the length of the straightedge for each successive measurement. Testing shall be continuous across all joints. The surface irregularity shall be determined by placing the freestanding (unleveled) straightedge on the pavement surface and allowing it to rest upon the two highest spots covered by its length, and measuring the maximum gap between the straightedge and the pavement surface in the area between the two high points. If the rolling inclinometer or external reference device is used, the data may be evaluated using either the FAA profile program, ProFAA, or FHWA profile program ProVal, using the 12-foot straightedge simulation function.

Smoothness readings shall not be made across grade changes or cross slope transitions. The transition between new and existing pavement shall be evaluated separately for conformance with the plans.

(1) Transverse measurements. Transverse measurements shall be taken for each day's production placed. Transverse measurements shall be taken perpendicular to the pavement centerline each 50 feet (15 m) or more often as determined by the RPR. The joint between lanes shall be tested separately to facilitate smoothness between lanes.

(2) Longitudinal measurements. Longitudinal measurements shall be taken for each day's production placed. Longitudinal tests shall be parallel to the centerline of paving; at the center of paving lanes when widths of paving lanes are less than 20 feet (6 m); and at the third points of paving lanes when widths of paving lanes are 20 ft (6 m) or greater. When placement abuts previously placed material the first measurement shall start with one half the length of the straight edge on the previously placed material.

Deviations on the final surface course in either the transverse or longitudinal direction that will trap water greater than 1/4 inch (6 mm) shall be corrected with diamond grinding per paragraph 501-4.19f or by removing and replacing the surface course to full depth. Grinding shall be tapered in all directions to provide smooth transitions to areas not requiring grinding. All areas in which diamond grinding has been performed shall be subject to the final pavement thickness tolerances specified in paragraph 501-6.6.

Control charts shall be kept to show area of each day's placement and the percentage of corrective grinding required. Corrections to production and placement shall be initiated when corrective grinding is required. If the Contractor's machines and/or methods produce significant areas that need corrective actions in excess of 10 percent of a day's production, production shall be stopped until corrective measures are implemented by the Contractor.

h. Grade. Grade will be evaluated prior to and after placement of the concrete surface.

Measurements will be taken at appropriate gradelines (as a minimum at center and edges of paving lane) and longitudinal spacing as shown on cross-sections and plans. The final surface of the pavement will not vary from the gradeline elevations and cross-sections shown on the plans by more than 1/2 inch (12 mm) vertically or 0.1 feet (30 mm) laterally. The documentation will be provided by the Contractor to the RPR ~~[within 48 hours]~~ by the end of the following working day.

Areas with humps or depression that that exceed grade or smoothness and that retain water on the surface must be ground off provided the course thickness after grinding is not more than 1/2 inch (12 mm) less than the thickness specified on the plans. If these areas cannot be corrected with grinding then the slabs that are retaining water must be removed and replaced in accordance with paragraph 501-4.19d. Grinding shall be in accordance with paragraph 501-4.19f. All corrections will be at the Contractors expense.

501-5.4 Control charts. The Contractor shall maintain linear control charts for fine and coarse aggregate gradation, slump, and air content. The Contractor shall also maintain a control chart plotting the coarseness factor/workability factor from the combined gradations in accordance with paragraph 501-2.1d.

Control charts shall be posted in a location satisfactory to the RPR and shall be kept up to date at all times. As a minimum, the control charts shall identify the project number, the contract item number, the test number, each test parameter, the Action and suspension Limits, or Specification limits, applicable to each test parameter, and the Contractor's test results. The Contractor shall use the control charts as part of a process control system for identifying potential problems and assignable causes before they occur. If the Contractor's projected data during production indicates a potential problem and the Contractor is not taking satisfactory corrective action, the RPR may halt production or acceptance of the material.

a. Fine and coarse aggregate gradation. The Contractor shall record the running average of the last five gradation tests for each control sieve on linear control charts. Superimposed on the control charts shall be the action and suspension limits. Gradation tests shall be performed by the Contractor per ASTM C136. The Contractor shall take at least **[** two **]**

samples per lot to check the final gradation. Sampling shall be per ASTM D75 from the flowing aggregate stream or conveyor belt.

b. Slump and air content. The Contractor shall maintain linear control charts both for individual measurements and range (that is, difference between highest and lowest measurements) for slump and air content in accordance with the following Action and Suspension Limits.

c. Combined gradation. The Contractor shall maintain a control chart plotting the coarseness factor and workability factor on a chart in accordance with paragraph 501-2.1d.

Control Chart Limits[1]

Control Parameter	Individual Measurements	
	Action Limit	**Suspension Limit**
Gradation[2]	*[3]	*[3]
Coarseness Factor (CF)	±3.5	±5
Workability Factor (WF)	±2	±3
Slump	+0.5 to -1 inch (+13 to -25 mm)	+1 to -1.5 inch (+25 to -38 mm)
Air Content	±1.5%	±2.0%

[1] Control charts shall developed and maintained for each control parameter indicated.

[2] Control charts shall be developed and maintained for each sieve size.

[3] Action and suspension limits shall be determined by the Contractor.

501-5.5 Corrective action at Suspension Limit. As a minimum, the contractor quality control process shall be deemed out of control and corrective action taken if any one of the following conditions exists.

a. Fine and coarse aggregate gradation. When two consecutive averages of five tests are outside of the suspension limits, immediate steps, including a halt to production, shall be taken to correct the grading.

b. Coarseness and Workability factor. When the CF or WF reaches the applicable suspension limits, the Contractor, immediate steps, including a halt to production, shall be taken to correct the CF and WF.

c. Fine and coarse aggregate moisture content. Whenever the moisture content of the fine or coarse aggregate changes by more than 0.5%, the scale settings for the aggregate batcher and water batcher shall be adjusted.

d. Slump. The Contractor shall halt production and make appropriate adjustments whenever:

(1) one point falls outside the Suspension Limit line for individual measurements

OR

(2) two points in a row fall outside the Action Limit line for individual measurements.

e. Air content. The Contractor shall halt production and adjust the amount of air-entraining admixture whenever:

(1) one point falls outside the Suspension Limit line for individual measurements

OR

(2) two points in a row fall outside the Action Limit line for individual measurements.

MATERIAL ACCEPTANCE

501-6.1 Quality Assurance (QA) Acceptance sampling and testing. All acceptance sampling and testing necessary to determine conformance with the requirements specified in this section, with the exception of coring for thickness determination, will be performed by the RPR. The Contractor shall provide adequate facilities for the initial curing of beams. The Contractor shall bear the cost of providing initial curing facilities and coring and filling operations, per paragraph 501-6.5b(1).

The samples will be transported while in the molds. The curing, except for the initial cure period, will be accomplished using the immersion in saturated lime water method. During the 24 hours after molding, the temperature immediately adjacent to the specimens must be maintained in the range of 60° to 80°F (16° to 27°C), and loss of moisture from the specimens must be prevented. The specimens may be stored in tightly constructed wooden boxes, damp sand pits, temporary buildings at construction sites, under wet burlap in favorable weather, or in heavyweight closed plastic bags, or using other suitable methods, provided the temperature and moisture loss requirements are met.

501-6.2 Quality Assurance (QA) testing laboratory. Quality assurance testing organizations performing these acceptance tests will be accredited in accordance with ASTM C1077. The quality assurance laboratory accreditation must be current and listed on the accrediting authority's website. All test methods required for acceptance sampling and testing must be listed on the lab accreditation. A copy of the laboratory's current accreditation and accredited test methods will be submitted to the RPR prior to start of construction.

501-6.3 Lot size. Concrete will be accepted for strength and thickness on a lot basis. A lot will consist of a day's production not to exceed 2,000 cubic yards. Each lot will be divided into approximately equal sublots with individual sublots between 400 to 600 cubic yards. Where three sublots are produced, they will constitute a lot. Where one or two sublots are produced, they will be incorporated into the previous or next lot. Where more than one plant is simultaneously producing concrete for the job, the lot sizes will apply separately for each plant.

501-6.4 Partial lots. When operational conditions cause a lot to be terminated before the specified number of tests have been made for the lot or for overages or minor placements to be considered as partial lots, the following procedure will be used to adjust the lot size and the number of tests for the lot.

Where three sublots have been produced, they will constitute a lot. Where one or two sublots have been produced, they will be incorporated into the next lot or the previous lot and the total number of sublots will be used in the acceptance criteria calculation, that is, n=5 or n=6.

501-6.5 Acceptance Sampling and Testing.

a. Strength.

(1) Sampling. One sample will be taken for each sublot from the concrete delivered to the job site. Sampling locations will be determined by the RPR in accordance with random sampling procedures contained in ASTM D3665. The concrete will be sampled in accordance with ASTM C172.

(2) Test Specimens. The RPR will be responsible for the casting, initial curing, transportation, and curing of specimens in accordance with ASTM C31. Two (2) specimens will be made from each sample and slump, air content, unit weight, and temperature tests will be conducted for each set of strength specimens. Within 24 to 48 hours, the samples will be transported from the field to the laboratory while in the molds. Samples will be cured in saturated lime water.

The strength of each specimen will be determined in accordance with **ASTM C39.** The strength for each sublot will be computed by averaging the results of the two test specimens representing that sublot.

(3) Acceptance. Acceptance of pavement for strength will be determined by the RPR in accordance with paragraph 501-6.6b(1). All individual strength tests within a lot will be checked for outliers in accordance with ASTM E178, at a significance level of 5%. Outliers will be discarded and the remaining test values will be used to determine acceptance in accordance with paragraph 501-6.5b.

b. Pavement thickness.

(1) Sampling. One core will be taken by the Contractor for each sublot in the presence of the RPR. Sampling locations will be determined by the RPR in accordance with random sampling procedures contained in ASTM D3665. Areas, such as thickened edges, with planned variable thickness, will be excluded from sample locations.

Cores shall be a minimum 4 inch (100 mm) in diameter neatly cut with a core drill. The Contractor will furnish all tools, labor, and materials for cutting samples and filling the cored hole. Core holes will be filled by the Contractor with a non-shrink grout approved by the RPR within one day after sampling.

(2) Testing. The thickness of the cores will be determined by the RPR by the average caliper measurement in accordance with ASTM C174. Each core shall be photographed and the photograph included with the test report.

(3) Acceptance. Acceptance of pavement for thickness will be determined by the RPR in accordance with paragraph 501-6.6.

501-6.6 Acceptance criteria.

a. General. Acceptance will be based on the following characteristics of the completed pavement discussed in paragraph 501-6.5b:

(1) Strength

(2) Thickness

(3) Grade

(4) Profilograph smoothness [Not used]

(5) Adjustments for repairs

Acceptance for strength, thickness, and grade, will be based on the criteria contained in accordance with paragraph 501-6.6b(1), 501-6.6b(2), and 501-6.6b(3), respectively.

(3) Grade. The final finished surface of the pavement of the completed project will not vary from the gradeline elevations and cross-sections shown on the plans by more than 1/2 inch vertically or 0.1 feet laterally. The documentation, stamped and signed by a licensed surveyor shall be in accordance with paragraph 501-5.3h. Payment for sublots that do not meet grade for over 25% of the sublot shall be reduced by 5% and not be more than 95%.

(4) Profilograph roughness for QA Acceptance. ~~[Not used.]~~

METHOD OF MEASUREMENT

501-7.1 Concrete pavement shall be measured by the number of square yards of plain or reinforced pavement as specified in-place, completed and accepted.

BASIS OF PAYMENT

501-8.1 Payment. Payment for concrete pavement meeting all acceptance criteria as specified in paragraph 501-6.6. Acceptance Criteria shall be based on results of strength and thickness tests. Payment for acceptable lots of concrete pavement shall be adjusted in accordance with paragraph 501-8.1a for strength and thickness; 501-8.1b for repairs; 501-8.1c for grinding; and 501-8.1d for smoothness, subject to the limitation that:

The total project payment for concrete pavement shall not exceed **100** percent of the product of the contract unit price and the total number of square yards of concrete pavement used in the accepted work.

Payment shall be full compensation for all labor, materials, tools, equipment, and incidentals required to complete the work as specified herein and on the drawings.

~~**a. Basis of adjusted payment.** The pay factor for each individual lot shall be calculated in accordance with the Price Adjustment Schedule table below. A pay factor shall be calculated for both strength and thickness. The lot pay factor shall be the higher of the two values when calculations for both strength and thickness are 100% or higher. The lot pay factor shall be the product of the two values when only one of the calculations for either strength or thickness is 100% or higher. The lot pay factor shall be the lower of the two values when calculations for both strength and thickness are less than 100%.~~

~~**Price Adjustment Schedule**[1]~~

~~**Percentage of Materials Within Specification Limits (PWL)**~~	~~**Lot Pay Factor (Percent of Contract Unit Price)**~~
~~96 – 100~~	~~106~~
~~90 – 95~~	~~PWL + 10~~
~~75 – 90~~	~~0.5 PWL + 55~~
~~55 – 74~~	~~1.4 PWL – 12~~
~~Below 55~~	~~Reject~~[2]

~~[1] Although it is theoretically possible to achieve a pay factor of 106% for each lot, actual payment in excess of 100% shall be subject to the total project payment limitation specified in paragraph 501-8.1.~~

~~[2] The lot shall be removed and replaced unless, after receipt of FAA concurrence, the Owner and Contractor agree in writing that the lot will remain; the lot paid at 50% of the contract unit price; and the total project payment limitation reduced by the amount withheld for that lot.~~

~~For each lot accepted, the adjusted contract unit price shall be the product of the lot pay factor for the lot and the contract unit price. Payment shall be subject to the total project payment limitation specified in paragraph 501-8.1. Payment in excess of 100% for accepted lots of concrete pavement shall be used to offset payment for accepted lots of concrete pavement that achieve a lot pay factor less than 100%; except for rejected lots which remain in-place and/or sublots with adjustments for repairs.~~

~~**b. Adjusted payment for repairs.** The PWL lot pay factor shall be reduced by 5% and be no higher than 95% for sublots which contain repairs in accordance with paragraph 501-4.19 on more than 20% of the slabs within the sublot. Payment factors greater than 100 percent for the strength and thickness cannot be used to offset adjustments for repairs.~~

~~**c. Adjusted payment for grinding.** The PWL lot pay factor shall be reduced by 5% and be no higher than 95% for sublots with grinding over 25% of a sublot.~~

e. Payment. Payment shall be made under:

Item P-501-8.1a	Reinforced Concrete Pavement (8 inches) - per square yard
Item P-501-8.1b	Reinforced Concrete Pavement Ramp (8-12 inches) – per square yard

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM A184	Standard Specification for Welded Deformed Steel Bar Mats for Concrete Reinforcement
ASTM A615	Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
ASTM A704	Standard Specification for Welded Steel Plain Bar or Rod Mats for Concrete Reinforcement
ASTM A706	Standard Specification for Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement
ASTM A775	Standard Specification for Epoxy-Coated Steel Reinforcing Bars
ASTM A884	Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Reinforcement
ASTM A934	Standard Specification for Epoxy-Coated Prefabricated Steel Reinforcing Bars
ASTM A996	Standard Specification for Rail-Steel and Axle-Steel Deformed Bars for Concrete Reinforcement
ASTM A1035	Standard Specification for Deformed and Plain, Low-Carbon, Chromium, Steel Bars for Concrete Reinforcement
ASTM A1064	Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete
ASTM A1078	Standard Specification for Epoxy-Coated Steel Dowels for Concrete Pavement
ASTM C29	Standard Test Method for Bulk Density ("Unit Weight") and Voids in Aggregate
ASTM C31	Standard Practice for Making and Curing Concrete Test Specimens in the Field

ASTM C33	Standard Specification for Concrete Aggregates
ASTM C39	Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
ASTM C70	Standard Test Method for Surface Moisture in Fine Aggregate
ASTM C78	Standard Test Method for Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)
ASTM C88	Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
ASTM C94	Standard Specification for Ready-Mixed Concrete
ASTM C114	Standard Test Methods for Chemical Analysis of Hydraulic Cement
ASTM C117	Standard Test Method for Materials Finer than 75-µm (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C123	Standard Test Method for Lightweight Particles in Aggregate
ASTM C136	Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
ASTM C131	Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C136	Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates
ASTM C138	Standard Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete
ASTM C142	Standard Test Method for Clay Lumps and Friable Particles in Aggregates
ASTM C143	Standard Test Method for Slump of Hydraulic-Cement Concrete
ASTM C150	Standard Specification for Portland Cement
ASTM C171	Standard Specification for Sheet Materials for Curing Concrete
ASTM C172	Standard Practice for Sampling Freshly Mixed Concrete
ASTM C173	Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method
ASTM C174	Standard Test Method for Measuring Thickness of Concrete Elements Using Drilled Concrete Cores
ASTM C227	Standard Test Method for Potential Alkali Reactivity of Cement-Aggregate Combinations (Mortar-Bar Method)
ASTM C231	Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
ASTM C260	Standard Specification for Air-Entraining Admixtures for Concrete
ASTM C295	Standard Guide for Petrographic Examination of Aggregates for Concrete

ASTM C309	Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete
ASTM C311	Standard Test Methods for Sampling and Testing Fly Ash or Natural Pozzolans for Use in Portland Cement Concrete
ASTM C494	Standard Specification for Chemical Admixtures for Concrete
ASTM C566	Standard Test Method for Total Evaporable Moisture Content of Aggregates by Drying
ASTM C595	Standard Specification for Blended Hydraulic Cements
ASTM C618	Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
ASTM C642	Standard Test Method for Density, Absorption, and Voids in Hardened Concrete
ASTM C666	Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing
ASTM C685	Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing
ASTM C881	Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete
ASTM C989	Standard Specification for Slag Cement for Use in Concrete and Mortars
ASTM C1017	Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete
ASTM C1064	Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete
ASTM C1077	Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation
ASTM C1157	Standard Performance Specification for Hydraulic Cement
ASTM C1260	Standard Test Method for Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)
ASTM C1365	Standard Test Method for Determination of the Proportion of Phases in Portland Cement and Portland-Cement Clinker Using X-Ray Powder Diffraction Analysis
ASTM C1567	Standard Test Method for Determining the Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials and Aggregate (Accelerated Mortar-Bar Method)
ASTM C1602	Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete
ASTM D75	Standard Practice for Sampling Aggregates

ASTM D1751	Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)
ASTM D1752	Standard Specification for Preformed Sponge Rubber and Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction
ASTM D2419	Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate
ASTM D3665	Standard Practice for Random Sampling of Construction Materials
ASTM D4791	Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
ASTM E178	Standard Practice for Dealing with Outlying Observations
ASTM E1274	Standard Test Method for Measuring Pavement Roughness Using a Profilograph
ASTM E2133	Standard Test Method for Using a Rolling Inclinometer to Measure Longitudinal and Transverse Profiles of a Traveled Surface

American Concrete Institute (ACI)

ACI 305R	Guide to Hot Weather Concreting
ACI 306R	Guide to Cold Weather Concreting
ACI 309R	Guide for Consolidation of Concrete

Advisory Circulars (AC)

AC 150/5320-6	Airport Pavement Design and Evaluation

Federal Highway Administration (FHWA)

HIPERPAV 3, version 3.2

Portland Concrete Association (PCA)

PCA	Design and Control of Concrete Mixtures, 16th Edition

U.S. Army Corps of Engineers (USACE) Concrete Research Division (CRD)

CRD C662	Determining the Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials, Lithium Nitrate Admixture and Aggregate (Accelerated Mortar-Bar Method)

United States Air Force Engineering Technical Letter (ETL)

ETL 97-5	Proportioning Concrete Mixtures with Graded Aggregates for Rigid Airfield Pavements

END ITEM P-501

ITEM P-605
JOINT SEALANTS FOR PAVEMENTS

DESCRIPTION

605-1.1 This item shall consist of providing and installing a resilient and adhesive joint sealing material capable of effectively sealing joints in pavement; joints between different types of pavements; and cracks in existing pavement.

MATERIALS

605-2.1 Joint sealants. Joint sealant materials shall meet the requirements of ASTM D5893 Standard Specifications for Cold Applied, Single Component, Chemically Curing Silicone Joint Sealant for Portland Cement Concrete Pavements.

Each lot or batch of sealant shall be delivered to the jobsite in the manufacturer's original sealed container. Each container shall be marked with the manufacturer's name, batch or lot number, the safe heating temperature, and shall be accompanied by the manufacturer's certification stating that the sealant meets the requirements of this specification.

605-2.2 Backer rod. The material furnished shall be a compressible, non-shrinking, non-staining, non-absorbing material that is non-reactive with the joint sealant in accordance with ASTM D5249. The backer-rod material shall be 25% ± 5 % larger in diameter than the nominal width of the joint.

605-2.3 Bond breaking tapes. Provide a bond breaking tape or separating material that is a flexible, non-shrinkable, non-absorbing, non-staining, and non-reacting adhesive-backed tape. The material shall have a melting point at least 5°F (3°C) greater than the pouring temperature of the sealant being used when tested in accordance with ASTM D789. The bond breaker tape shall be approximately 1/8 inch (3 mm) wider than the nominal width of the joint and shall not bond to the joint sealant.

CONSTRUCTION METHODS

605-3.1 Time of application. Joints shall be sealed as soon after completion of the curing period as feasible and before the pavement is opened to traffic, including construction equipment. The pavement temperature shall be 50°F (10°C) and rising at the time of application of the poured joint sealing material. Do not apply sealant if moisture is observed in the joint.

605-3.2 Equipment. Machines, tools, and equipment used in the performance of the work required by this section shall be approved before the work is started and maintained in satisfactory condition at all times. Submit a list of proposed equipment to be used in performance of construction work including descriptive data, **14 Calendar** days prior to use on the project.

a. Tractor-mounted routing tool. Provide a routing tool, used for removing old sealant from the joints, of such shape and dimensions and so mounted on the tractor that it will not damage the sides of the joints. The tool shall be designed so that it can be adjusted to remove the old material to varying depths as required. The use of V-shaped tools or rotary impact routing devices will not be permitted. Hand-operated spindle routing devices may be used to clean and enlarge random cracks.

b. Concrete saw. Provide a self-propelled power saw, with water-cooled diamond or abrasive saw blades, for cutting joints to the depths and widths specified.

c. Sandblasting equipment. Sandblasting is not allowed.

d. Waterblasting equipment. The Contractor must demonstrate waterblasting equipment including the pumps, hose, guide and nozzle size, under job conditions, before approval in accordance with paragraph 605-3.3. The Contractor shall demonstrate, in the presence of the RPR, that the method cleans the joint and does not damage the joint.

e. Hand tools. Hand tools may be used, when approved, for removing defective sealant from a crack and repairing or cleaning the crack faces. Hand tools should be carefully evaluated for potential spalling effects prior to approval for use.

f. Hot-poured sealing equipment. The unit applicators used for heating and installing ASTM D6690 joint sealant materials shall be mobile and shall be equipped with a double-boiler, agitator-type kettle with an oil medium in the outer space for heat transfer; a direct-connected pressure-type extruding device with a nozzle shaped for inserting in the joint to be filled; positive temperature devices for controlling the temperature of the transfer oil and sealant; and a recording type thermometer for indicating the temperature of the sealant. The applicator unit shall be designed so that the sealant will circulate through the delivery hose and return to the inner kettle when not in use.

g. Cold-applied, single-component sealing equipment. The equipment for installing ASTM D5893 single component joint sealants shall consist of an extrusion pump, air compressor, following plate, hoses, and nozzle for transferring the sealant from the storage container into the joint opening. The dimension of the nozzle shall be such that the tip of the nozzle will extend into the joint to allow sealing from the bottom of the joint to the top. Maintain the initially approved equipment in good working condition, serviced in accordance with the supplier's instructions, and unaltered in any way without obtaining prior approval. Small hand-held air-powered equipment (i.e., caulking guns) may be used for small applications.

605-3.3 Preparation of joints. Pavement joints for application of material in this specification must be dry, clean of all scale, dirt, dust, curing compound, and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method cleans the joint and does not damage the joint.

a. Sawing. All joints shall be sawed in accordance with specifications and plan details. Immediately after sawing the joint, the resulting slurry shall be completely removed from joint and adjacent area by flushing with a jet of water, and by use of other tools as necessary.

b. Sealing. Immediately before sealing, the joints shall be thoroughly cleaned of all remaining laitance, curing compound, filler, protrusions of hardened concrete, old sealant and other foreign material from the sides and upper edges of the joint space to be sealed. Cleaning shall be accomplished by tractor-mounted routing equipment, concrete saw or waterblaster as specified in paragraph 605-3.2. The newly exposed concrete joint faces and the pavement surface extending a minimum of 1/2 inch (12 mm) from the joint edge shall be sandblasted clean. Sandblasting shall be accomplished in a minimum of two passes. One pass per joint face with the nozzle held at an angle directly toward the joint face and not more than 3 inches (75 mm) from it. After final cleaning and immediately prior to sealing, blow out the joints with compressed air and leave them completely free of debris and water. The joint faces shall be surface dry when the seal is applied.

c. Backer Rod. When the joint opening is of a greater depth than indicated for the sealant depth, plug or seal off the lower portion of the joint opening using a backer rod in accordance

with paragraph 605-2.2 to prevent the entrance of the sealant below the specified depth. Take care to ensure that the backer rod is placed at the specified depth and is not stretched or twisted during installation.

d. Bond-breaking tape. Where inserts or filler materials contain bitumen, or the depth of the joint opening does not allow for the use of a backup material, insert a bond-separating tape breaker in accordance with paragraph 605-2.3 to prevent incompatibility with the filler materials and three-sided adhesion of the sealant. Securely bond the tape to the bottom of the joint opening so it will not float up into the new sealant.

605-3.4 Installation of sealants. Joints shall be inspected for proper width, depth, alignment, and preparation, and shall be approved by the RPR before sealing is allowed. Sealants shall be installed in accordance with the following requirements:

Immediately preceding, but not more than 50 feet (15 m) ahead of the joint sealing operations, perform a final cleaning with compressed air. Fill the joints from the bottom up to **1/8 inch ±1/16 inch** below the top of pavement surface; or bottom of groove for grooved pavement. Remove and discard excess or spilled sealant from the pavement by approved methods. Install the sealant in such a manner as to prevent the formation of voids and entrapped air. In no case shall gravity methods or pouring pots be used to install the sealant material. Traffic shall not be permitted over newly sealed pavement until authorized by the RPR. When a primer is recommended by the manufacturer, apply it evenly to the joint faces in accordance with the manufacturer's instructions. Check the joints frequently to ensure that the newly installed sealant is cured to a tack-free condition within the time specified.

605-3.5 Inspection. The Contractor shall inspect the joint sealant for proper rate of cure and set, bonding to the joint walls, cohesive separation within the sealant, reversion to liquid, entrapped air and voids. Sealants exhibiting any of these deficiencies at any time prior to the final acceptance of the project shall be removed from the joint, wasted, and replaced as specified at no additional cost to the airport.

605-3.6 Clean-up. Upon completion of the project, remove all unused materials from the site and leave the pavement in a clean condition.

METHOD OF MEASUREMENT

605-4.1 No Direct Measurement. All work shall be considered incidental to the bid items for specification P-501

BASIS OF PAYMENT

605-5.1 No Direct Payment. All the work under this item including furnishing all materials, for all preparation, delivering, and placing of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the work item shall be considered incidental to the bid items for specification P-501.

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM D789	Standard Test Method for Determination of Relative Viscosity of Polyamide (PA)
ASTM D5249	Standard Specification for Backer Material for Use with Cold- and Hot-Applied Joint Sealants in Portland-Cement Concrete and Asphalt Joints
ASTM D5893	Standard Specification for Cold Applied, Single Component, Chemically Curing Silicone Joint Sealant for Portland Cement Concrete Pavements
ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt
ASTM D7116	Standard Specification for Joint Sealants, Hot Applied, Jet Fuel Resistant Types for Portland Cement Concrete Pavements

Advisory Circulars (AC)

AC 150/5340-30	Design and Installation Details for Airport Visual Aids

END ITEM P-605

ITEM P-610
CONCRETE FOR MISCELLANEOUS STRUCTURES

DESCRIPTION

610-1.1 This item shall consist of concrete and reinforcement, as shown on the plans, prepared and constructed in accordance with these specifications. This specification shall be used for all concrete other than airfield pavement which are cast-in-place.

MATERIALS

610-2.1 General. Only approved materials, conforming to the requirements of these specifications, shall be used in the work. Materials may be subject to inspection and tests at any time during their preparation or use. The source of all materials shall be approved by the Resident Project Representative (RPR) before delivery or use in the work. Representative preliminary samples of the materials shall be submitted by the Contractor, when required, for examination and test. Materials shall be stored and handled to ensure preservation of their quality and fitness for use and shall be located to facilitate prompt inspection. All equipment for handling and transporting materials and concrete must be clean before any material or concrete is placed in them.

The use of pit-run aggregates shall not be permitted unless the pit-run aggregate has been screened and washed, and all fine and coarse aggregates stored separately and kept clean. The mixing of different aggregates from different sources in one storage stockpile or alternating batches of different aggregates shall not be permitted.

a. Reactivity. Fine aggregate and coarse aggregates to be used in all concrete shall have been tested separately within six months of the project in accordance with ASTM C1260. Test results shall be submitted to the RPR. The aggregate shall be considered innocuous if the expansion of test specimens, tested in accordance with ASTM C1260, does not exceed 0.08% at 14 days (16 days from casting). If the expansion either or both test specimen is greater than 0.08% at 14 days, but less than 0.20%, a minimum of 25% of Type F fly ash, or between 40% and 55% of slag cement shall be used in the concrete mix.

If the expansion is greater than 0.20%, the aggregates shall not be used, and test results for other aggregates must be submitted for evaluation; or aggregates that meet P-501 reactivity test requirements may be utilized.

610-2.2 Coarse aggregate. The coarse aggregate for concrete shall meet the requirements of ASTM C33 and the requirements of Table 4, Class Designation 5S; and the grading requirements shown below, as required for the project.

Coarse Aggregate Grading Requirements

Maximum Aggregate Size	ASTM C33, Table 3 Grading Requirements (Size No.)
1 1/2 inch (37.5 mm)	467 or 4 and 67
1 inch (25 mm)	57
¾ inch (19 mm)	67
½ inch (12.5 mm)	7

610-2.2.1 Coarse Aggregate susceptibility to durability (D) cracking. ~~[Not used]~~

610-2.3 Fine aggregate. The fine aggregate for concrete shall meet all fine aggregate requirements of ASTM C33.

610-2.4 Cement. Cement shall conform to the requirements of **ASTM C150_Type I.**

610-2.5 Cementitious materials.

a. Fly ash. Fly ash shall meet the requirements of ASTM C618, with the exception of loss of ignition, where the maximum shall be less than 6%. Fly ash shall have a Calcium Oxide (CaO) content of less than [15%] and a total available alkali content less than 3% per ASTM C311. Fly ash produced in furnace operations using liming materials or soda ash (sodium carbonate) as an additive shall not be acceptable. The Contractor shall furnish the previous three most recent, consecutive ASTM C618 reports for each source of fly ash proposed in the concrete mix and shall furnish each additional report as they become available during the project. The reports can be used for acceptance, or the material may be tested independently by the RPR.

b. Slag cement (ground granulated blast furnace (GGBF)). Slag cement shall conform to ASTM C989, Grade 100 or Grade 120. Slag cement shall be used only at a rate between 25% and 55% of the total cementitious material by mass.

610-2.6 Water. Water used in mixing or curing shall be from potable water sources. Other sources shall be tested in accordance with ASTM C1602 prior to use.

610-2.7 Admixtures. The Contractor shall submit certificates indicating that the material to be furnished meets all of the requirements indicated below. In addition, the RPR may require the Contractor to submit complete test data from an approved laboratory showing that the material to be furnished meets all of the requirements of the cited specifications. Subsequent tests may be made of samples taken by the RPR from the supply of the material being furnished or proposed for use on the work to determine whether the admixture is uniform in quality with that approved.

a. Air-entraining admixtures. Air-entraining admixtures shall meet the requirements of ASTM C260 and shall consistently entrain the air content in the specified ranges under field conditions. The air-entrainment agent and any water reducer admixture shall be compatible.

b. Water-reducing admixtures. Water-reducing admixture shall meet the requirements of ASTM C494, Type A, B, or D. ASTM C494, Type F and G high range water reducing admixtures and ASTM C1017 flowable admixtures shall not be used.

c. Other chemical admixtures. The use of set retarding and set-accelerating admixtures shall be approved by the RPR. Retarding shall meet the requirements of ASTM C494, Type A,

B, or D and set accelerating shall meet the requirements of ASTM C494, Type C. Calcium chloride and admixtures containing calcium chloride shall not be used.

~~**610-2.8 Premolded joint material.** Premolded joint material for expansion joints shall meet the requirements of ASTM [___].~~

~~**610-2.9 Joint filler.** The filler for joints shall meet the requirements of Item P-605, unless otherwise specified.~~

610-2.10 Steel reinforcement. Reinforcing shall consist of **Reinforcing Steel** conforming to the requirements of ASTM A615, ASTM A706, ASTM A775, ASTM A934

610-2.11 Materials for curing concrete. Curing materials shall conform to White-pigmented Liquid Membrane-Forming Compound, Type 2, Class B, ASTM C309.

CONSTRUCTION METHODS

610-3.1 General. The Contractor shall furnish all labor, materials, and services necessary for, and incidental to, the completion of all work as shown on the drawings and specified here. All machinery and equipment used by the Contractor on the work, shall be of sufficient size to meet the requirements of the work. All work shall be subject to the inspection and approval of the RPR.

610-3.2 Concrete Mixture. The concrete shall develop a compressive strength of **4000** psi in 28 days as determined by test cylinders made in accordance with ASTM C31 and tested in accordance with ASTM C39. The concrete shall contain not less than 470 pounds of cementitious material per cubic yard (280 kg per cubic meter). The water cementitious ratio shall not exceed 0.45 by weight. The air content of the concrete shall be 5% +/- 1.2% as determined by ASTM C231 and shall have a slump of not more than 4 inches (100 mm) as determined by ASTM C143.

610-3.3 Mixing. Concrete may be mixed at the construction site, at a central point, or wholly or in part in truck mixers. The concrete shall be mixed and delivered in accordance with the requirements of ASTM C94 or ASTM C685.

The concrete shall be mixed only in quantities required for immediate use. Concrete shall not be mixed while the air temperature is below 40°F (4°C) without the RPRs approval. If approval is granted for mixing under such conditions, aggregates or water, or both, shall be heated and the concrete shall be placed at a temperature not less than 50°F (10°C) nor more than 100°F (38°C). The Contractor shall be held responsible for any defective work, resulting from freezing or injury in any manner during placing and curing, and shall replace such work at his expense.

Retempering of concrete by adding water or any other material is not permitted.

The rate of delivery of concrete to the job shall be sufficient to allow uninterrupted placement of the concrete.

610-3.4 Forms. Concrete shall not be placed until all the forms and reinforcements have been inspected and approved by the RPR. Forms shall be of suitable material and shall be of the type, size, shape, quality, and strength to build the structure as shown on the plans. The forms shall be true to line and grade and shall be mortar-tight and sufficiently rigid to prevent displacement and sagging between supports. The surfaces of forms shall be smooth and free from irregularities, dents, sags, and holes. The Contractor shall be responsible for their adequacy.

The internal form ties shall be arranged so no metal will show in the concrete surface or discolor the surface when exposed to weathering when the forms are removed. All forms shall be wetted with water or with a non-staining mineral oil, which shall be applied immediately before the

concrete is placed. Forms shall be constructed so they can be removed without injuring the concrete or concrete surface.

610-3.5 Placing reinforcement. All reinforcement shall be accurately placed, as shown on the plans, and shall be firmly held in position during concrete placement. Bars shall be fastened together at intersections. The reinforcement shall be supported by approved metal chairs. Shop drawings, lists, and bending details shall be supplied by the Contractor when required.

610-3.6 Embedded items. Before placing concrete, all embedded items shall be firmly and securely fastened in place as indicated. All embedded items shall be clean and free from coating, rust, scale, oil, or any foreign matter. The concrete shall be spaded and consolidated around and against embedded items. The embedding of wood shall not be allowed.

610-3.7 Concrete Consistency. The Contractor shall monitor the consistency of the concrete delivered to the project site; collect each batch ticket; check temperature; and perform slump tests on each truck at the project site in accordance with ASTM C143.

610-3.8 Placing concrete. All concrete shall be placed during daylight hours, unless otherwise approved. The concrete shall not be placed until the depth and condition of foundations, the adequacy of forms and falsework, and the placing of the steel reinforcing have been approved by the RPR. Concrete shall be placed as soon as practical after mixing, but in no case later than one (1) hour after water has been added to the mix. The method and manner of placing shall avoid segregation and displacement of the reinforcement. Troughs, pipes, and chutes shall be used as an aid in placing concrete when necessary. The concrete shall not be dropped from a height of more than 5 feet (1.5 m). Concrete shall be deposited as nearly as practical in its final position to avoid segregation due to rehandling or flowing. Do not subject concrete to procedures which cause segregation. Concrete shall be placed on clean, damp surfaces, free from running water, or on a properly consolidated soil foundation.

610-3.9 Vibration. Vibration shall follow the guidelines in American Concrete Institute (ACI) Committee 309R, Guide for Consolidation of Concrete.

610-3.10 Joints. Joints shall be constructed as indicated on the plans.

610-3.11 Finishing. All exposed concrete surfaces shall be true, smooth, and free from open or rough areas, depressions, or projections. All concrete horizontal plane surfaces shall be brought flush to the proper elevation with the finished top surface struck-off with a straightedge and floated.

610-3.12 Curing and protection. All concrete shall be properly cured in accordance with the recommendations in American Concrete Institute (ACI) 308R, Guide to External Curing of Concrete. The concrete shall be protected from damage until project acceptance.

610-3.13 Cold weather placing. When concrete is placed at temperatures below 40°F (4°C), follow the cold weather concreting recommendations found in ACI 306R, Cold Weather Concreting.

610-3.14 Hot weather placing. When concrete is placed in hot weather greater than 85°F (30 °C), follow the hot weather concreting recommendations found in ACI 305R, Hot Weather Concreting.

QUALITY ASSURANCE (QA)

610-4.1 Quality Assurance sampling and testing. Concrete for each day's placement will be accepted on the basis of the compressive strength specified in paragraph 610-3.2. The RPR will sample the concrete in accordance with ASTM C172; test the slump in accordance with ASTM

C143; test air content in accordance with ASTM C231; make and cure compressive strength specimens in accordance with ASTM C31; and test in accordance with ASTM C39. The QA testing agency will meet the requirements of ASTM C1077.

The Contractor shall provide adequate facilities for the initial curing of cylinders.

610-4.2 Defective work. Any defective work that cannot be satisfactorily repaired as determined by the RPR, shall be removed and replaced at the Contractor's expense. Defective work includes, but is not limited to, uneven dimensions, honeycombing and other voids on the surface or edges of the concrete.

METHOD OF MEASUREMENT

610-5.1 Concrete shall be considered incidental, and no separate measurement shall be made of concrete complete in place and accepted.

BASIS OF PAYMENT

610-6.1 Concrete shall be considered incidental, and no separate payment shall be made.

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM A184	Standard Specification for Welded Deformed Steel Bar Mats for Concrete Reinforcement
ASTM A615	Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
ASTM A704	Standard Specification for Welded Steel Plain Bar or Rod Mats for Concrete Reinforcement
ASTM A706	Standard Specification for Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement
ASTM A775	Standard Specification for Epoxy-Coated Steel Reinforcing Bars
ASTM A884	Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Reinforcement
ASTM A934	Standard Specification for Epoxy-Coated Prefabricated Steel Reinforcing Bars
ASTM A1064	Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete
ASTM C31	Standard Practice for Making and Curing Concrete Test Specimens in the Field
ASTM C33	Standard Specification for Concrete Aggregates
ASTM C39	Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens

ASTM C94	Standard Specification for Ready-Mixed Concrete
ASTM C136	Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates
ASTM C114	Standard Test Methods for Chemical Analysis of Hydraulic Cement
ASTM C136	Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
ASTM C143	Standard Test Method for Slump of Hydraulic-Cement Concrete
ASTM C150	Standard Specification for Portland Cement
ASTM C171	Standard Specification for Sheet Materials for Curing Concrete
ASTM C172	Standard Practice for Sampling Freshly Mixed Concrete
ASTM C231	Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
ASTM C260	Standard Specification for Air-Entraining Admixtures for Concrete
ASTM C309	Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete
ASTM C311	Standard Test Methods for Sampling and Testing Fly Ash or Natural Pozzolans for Use in Portland-Cement Concrete
ASTM C494	Standard Specification for Chemical Admixtures for Concrete
ASTM C618	Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
ASTM C666	Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing
ASTM C685	Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing
ASTM C989	Standard Specification for Slag Cement for Use in Concrete and Mortars
ASTM C1017	Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete
ASTM C1077	Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation
ASTM C1157	Standard Performance Specification for Hydraulic Cement
ASTM C1260	Standard Test Method for Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)
ASTM C1365	Standard Test Method for Determination of the Proportion of Phases in Portland Cement and Portland-Cement Clinker Using X-Ray Powder Diffraction Analysis
ASTM C1602	Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete

ASTM D1751	Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Asphalt Types)
ASTM D1752	Standard Specification for Preformed Sponge Rubber Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction

American Concrete Institute (ACI)

ACI 305R	Hot Weather Concreting
ACI 306R	Cold Weather Concreting
ACI 308R	Guide to External Curing of Concrete
ACI 309R	Guide for Consolidation of Concrete

END OF ITEM P-610

ITEM 506
TEMPORARY EROSION, SEDIMENTATION,AND ENVIRONMENTAL CONTROLS

1. DESCRIPTION

Install, maintain, and remove erosion, sedimentation, and environmental control measures to prevent or reduce the discharge of pollutants in accordance with the Storm Water Pollution Prevention Plan (SWP3) on the plans and the Texas Pollutant Discharge Elimination System (TPDES) General Permit TXR150000.

Control measures are defined as Best Management Practices used to prevent or reduce the discharge of pollutants. Control measures include, but are not limited to, rock filter dams, temporary pipe slope drains, temporary paved flumes, construction exits, earthwork for erosion control, pipe, construction perimeter fence, sandbags, temporary sediment control fence, biodegradable erosion control logs, vertical tracking, temporary or permanent seeding, and other measures. Erosion and sediment control devices must be selected from the *Erosion Control Approved Products* or *Sediment Control Approved Products* lists. Perform work in a manner to prevent degradation of receiving waters, facilitate project construction, and comply with applicable federal, state, and local regulations. Ensure the installation and maintenance of control measures is performed in accordance with the manufacturer's or designer's specifications.

Provide the Contractor Certification of Compliance before performing SWP3 or soil disturbing activities. By signing the Contractor Certification of Compliance, the Contractor certifies they have read and understand the requirements applicable to this project pertaining to the SWP3, the plans, and the TPDES General Permit TXR150000. The Contractor is responsible for any penalties associated with non-performance of installation or maintenance activities required for compliance. Ensure the most current version of the certificate is executed for this project.

2. MATERIALS

2.1. Construction Exits. Provide materials that meet the details shown on the plans and this Section.

2.1.1. **Rock Construction Exit.** Provide crushed aggregate for long- and short-term construction exits. Furnish aggregates that are clean, hard, durable, and free from adherent coatings such as salt, alkali, dirt, clay, loam, shale, soft or flaky materials, and organic and injurious matter. Use 4- to 8-in. aggregate for Type 1. Use 2- to 4-in. aggregate for Type 3.

2.1.2. **Foundation Course.** Provide a foundation course consisting of flexible base, bituminous concrete, hydraulic cement concrete, or other materials as shown on the plans or directed.

2.2. Embankment for Erosion Control. Provide rock, loam, clay, topsoil, or other earth materials that will form a stable embankment to meet the intended use.

2.3. Construction Perimeter Fence.

2.3.1. **Posts.** Provide essentially straight wood or steel posts that are at least 60 in. long. Furnish soft wood posts with a minimum diameter of 3 in., or use nominal 2 × 4 in. boards. Furnish hardwood posts with a minimum cross-section of 1-1/2 × 1-1/5 in. Furnish T- or L-shaped steel posts with a minimum weight of 1.25 lb. per foot.

2.3.2. **Fence.** Provide orange construction fencing as approved.

2.3.3. **Fence Wire.** Provide 14 gauge or larger galvanized smooth or twisted wire. Provide 16 gauge or larger tie wire.

2.3.4. **Flagging.** Provide brightly-colored flagging that is fade-resistant and at least 3/4 in. wide to provide maximum visibility both day and night.

2.3.5. **Staples.** Provide staples with a crown at least 1/2 in. wide and legs at least 1/2 in. long.

2.3.6. **Used Materials.** Previously used materials meeting the applicable requirements may be used if approved.

2.4. Sandbags. Provide sandbag material of polypropylene, polyethylene, or polyamide woven fabric with a minimum unit weight of 4 oz. per square yard, a Mullen burst-strength exceeding 300 psi, and an ultraviolet stability exceeding 70%.

Use natural coarse sand or manufactured sand meeting the gradation given in Table 1 to fill sandbags. Filled sandbags must be 24 to 30 in. long, 16 to 18 in. wide, and 6 to 8 in. thick.

Table 1 Sand Gradation

Sieve Size	Retained (% by Weight)
#4	Maximum 3%
#100	Minimum 80%
#200	Minimum 95%

Aggregate may be used instead of sand for situations where sandbags are not adjacent to traffic. The aggregate size must not exceed 3/8 in.

2.5. Temporary Sediment Control Fence. Provide a net-reinforced fence using woven geo-textile fabric. Logos visible to the traveling public will not be allowed.

2.5.1. **Fabric**. Provide fabric materials in accordance with DMS-6230, "Temporary Sediment Control Fence Fabric."

2.5.2. **Posts**. Provide essentially straight wood or steel posts with a minimum length of 48 in., unless otherwise shown on the plans. Furnish soft wood posts at least 3 in. in diameter, or use nominal 2 × 4 in. boards. Furnish hardwood posts with a minimum cross-section of 1-1/2 × 1-1/2 in. Furnish T- or L-shaped steel postswith a minimum weight of 1.25 lb. per foot.

2.5.3. **Net Reinforcement**. Provide net reinforcement of at least 12.5 gauge (SWG) galvanized welded wire mesh, with a maximum opening size of 2 × 4 in., at least 24 in. wide, unless otherwise shown on the plans.

2.5.4. **Staples**. Provide staples with a crown at least 3/4 in. wide and legs 1/2 in. long.

2.5.5. **Used Materials**. Use recycled material meeting the applicable requirements if approved.

2.6. Biodegradable Erosion Control Logs.

2.6.1. **Core Material**. Furnish core material that is biodegradable or recyclable. Use compost, mulch, aspen excelsior wood fibers, chipped site vegetation, agricultural rice or wheat straw, coconut fiber, 100% recyclable fibers, or any other acceptable material unless specifically called out on the plans. Permit no more than 5% of the material to escape from the containment mesh. Furnish compost meeting the requirements ofItem 161, "Compost."

2.6.2. **Containment Mesh**. Furnish containment mesh that is 100% biodegradable, photodegradable, or recyclable such as burlap, twine, UV photodegradable plastic, polyester, or any other acceptable material.

Furnish biodegradable or photodegradable containment mesh when log will remain in place as part of a vegetative system.

Furnish recyclable containment mesh for temporary installations.

2.6.3. **Size**. Furnish biodegradable erosion control logs with diameters shown on the plans or as directed. Stuff containment mesh densely so logs do not deform.

3. QUALIFICATIONS, TRAINING, AND EMPLOYEE REQUIREMENTS

3.1. Contractor Responsible Person Environmental (CRPE) Qualifications and Responsibilities. Provide and designate in writing at the preconstruction conference a CRPE and alternate CRPE who have overall responsibility for the storm water management program. The CRPE will implement storm water and erosion control practices; will oversee and observe storm water control measure monitoring and management; will monitor the project site daily and produce daily monitoring reports as long as there are BMPs in place or soil disturbing activities are evident to ensure compliance with the SWP3 and TPDES General Permit TXR150000. During time suspensions when work is not occurring or on contract non-work days, daily inspections are not required unless a rain event has occurred. The CRPE will provide recommendations on how to improve the effectiveness of control measures. Attend the Department's preconstruction conference for the project. Ensure training is completed as identified in Section 506.3.3., "Training," by all applicable personnel before employees work on the project. Document and submit a list, signed by the CRPE, of all applicable Contractor and subcontractor employees who have completed the training. Include the employee's name, the training course name, and date the employee completed the training. Provide the most current list at the preconstruction conference or before SWP3 or soil disturbing activities. Update the list as needed and provide the updated list when updated.

3.2. Contractor Superintendent Qualifications and Responsibilities. Provide a superintendent that is competent, has experience with and knowledge of storm water management, and is knowledgeable of the requirements and the conditions of the TPDES General Permit TXR150000. The superintendent will manage and oversee the day to day operations and activities at the project site; work with the CRPE to provide effective storm water management at the project site; represent and act on behalf of the Contractor; and attend the Department's preconstruction conference for the project.

3.3. Training. All Contractor and subcontractor employees involved in soil disturbing activities, small or large structures, storm water control measures, and seeding activities must complete training as prescribed by theDepartment.

4. CONSTRUCTION

4.1. Contractor Responsibilities. Implement the SWP3 for the project site in accordance with the plans and specifications, TPDES General Permit TXR150000, and as directed. Coordinate storm water management with all other work on the project. Develop and implement an SWP3 for project-specific material supply plants within and outside of the Department's right of way in accordance with the specific or general storm water permit requirements. Prevent water pollution from storm water associated with construction activity from entering any surface water or private property on or adjacent to the project site.

4.2. Implementation. The CRPE, or alternate CRPE, must be accessible by phone and able to respond to project-related storm water management or other environmental emergencies 24 hr. per day.

4.2.1. **Commencement.** Implement the SWP3 as shown and as directed. Contractor-proposed recommendations for changes will be allowed as approved. Conform to the established guidelines in the TPDES General Permit TXR150000 to make changes. Do not implement changes until approval has been received and changes have been incorporated into the plans. Minor adjustments to meet field conditions are allowed and will be recorded in the SWP3.

4.2.2. **Phasing.** Implement control measures before the commencement of activities that result in soil disturbance. Phase and minimize the soil disturbance to the areas shown on the plans. Coordinate temporary control measures with permanent control measures and all other work activities on the project to assure economical, effective, safe, and continuous water pollution prevention. Provide control measures that are appropriate to the construction means, methods, and sequencing allowed by the Contract. Exercise precaution throughout the life of the project to prevent pollution of ground waters and surface waters. Schedule and perform clearing and grubbing operations so that stabilization measures will follow immediately thereafter if project conditions permit. Bring all grading sections to final grade as soon as possible and implement temporary and permanent control measures at the earliest time possible. Implement temporary control measures when required by the TPDES General Permit TXR150000 or otherwise necessitated by project conditions.

Do not prolong final grading and shaping. Preserve vegetation where possible throughout the project, and minimize clearing, grubbing, and excavation within stream banks, bed, and approach sections.

4.3. General.

4.3.1. **Temporary Alterations or Control Measure Removal.** Altering or removal of control measures is allowed when control measures are restored within the same working day.

4.3.2. **Stabilization.** Initiate stabilization for disturbed areas no more than 14 days after the construction activities in that portion of the site have temporarily or permanently ceased. Establish a uniform vegetative cover or use another stabilization practice in accordance with the TPDES General Permit TXR150000.

4.3.3. **Finished Work**. Remove and dispose of all temporary control measures upon acceptance of vegetative cover or other stabilization practice unless otherwise directed. Complete soil disturbing activities and establish a uniform perennial vegetative cover. A project will not be considered for acceptance until a vegetative cover of 70% density of existing adjacent undisturbed areas is obtained or equivalent permanent stabilization is obtained in accordance with the TPDES General Permit TXR150000. An exception will be allowed in arid areas as defined in the TPDES General Permit TXR150000.

4.3.4. **Restricted Activities and Required Precautions.** Do not discharge onto the ground or surface waters any pollutants such as chemicals, raw sewage, fuels, lubricants, coolants, hydraulic fluids, bitumens, or any other petroleum product. Operate and maintain equipment on-site to prevent actual or potential water pollution. Manage, control, and dispose of litter on-site such that no adverse impacts to water quality occur. Prevent dust from creating a potential or actual unsafe condition, public nuisance, or condition endangering the value, utility, or appearance of any property. Wash out concrete trucks only as described in the TPDES General Permit TXR150000. Use appropriate controls to minimize the offsite transport of suspended sediments and other pollutants if it is necessary to pump or channel standing water (i.e., dewatering). Prevent discharges that would contribute to a violation of Edwards Aquifer Rules, water quality standards, the impairment of a listed water body, or other state or federal law.

4.4. Installation, Maintenance, and Removal Work. Perform work in accordance with the SWP3, according to manufacturers' guidelines, and in accordance with the TPDES General Permit TXR150000. Install and maintain the integrity of temporary erosion and sedimentation control devices to accumulate silt and debris until soil disturbing activities are completed and permanent erosion control features are in place or the disturbed area has been adequately stabilized as approved.

The Department will inspect and document the condition of the control measures at the frequency shown on the plans and will provide the Construction SWP3 Field Inspection and Maintenance Reports to the Contractor. Make corrections as soon as possible before the next anticipated rain event or within 7 calendar days after being able to enter the worksite for each control measure. The only acceptable reason for not accomplishing the corrections with the time frame specified is when site conditions are "Too Wet to Work." Take immediate action if a correction is deemed critical as directed. When corrections are not made within the established time frame, all work will cease on the project and time charges will continue while the control measures are brought into compliance. Commence work once the Engineer reviews and documents the project is in compliance. Commencing work does not release the Contractor of the liability for noncompliance of the SWP3, plans, or TPDES General Permit TXR150000.

The Engineer may limit the disturbed area if the Contractor cannot control soil erosion and sedimentation resulting from the Contractor's operations. Implement additional controls as directed.

Remove devices upon approval or as directed. Finish-grade and dress the area upon removal. Stabilize disturbed areas in accordance with the permit, and as shown on the plans or directed. Materials removed are considered consumed by the project. Retain ownership of stockpiled material and remove it from the project when new installations or replacements are no longer required.

4.4.1.1. **Type 4 (Sack Gabions).** Unfold sack gabions and smooth out kinks and bends. Connect the sides by lacing in a single loop–double loop pattern on 4- to 5-in. spacing for vertical filling. Pull the end lacing rod at one end until tight, wrap around the end, and twist 4 times. Fill with stone at the filling end, pull the rod tight, cut the wire with approximately 6 in. remaining, and twist wires 4 times.

4.4.2. **Construction Exits**. Prevent traffic from crossing or exiting the construction site or moving directly onto a public roadway, alley, sidewalk, parking area, or other right of way areas other than at the location of construction exits when tracking conditions exist. Construct exits for either long- or short-term use.

4.4.2.1. **Long-Term**. Place the exit over a foundation course as required. Grade the foundation course or compacted subgrade to direct runoff from the construction exits to a sediment trap as shown on the plans or as directed. Construct exits with a width of at least 14 ft. for one-way and 20 ft. for two-way traffic for the full width of the exit, or as directed.

4.4.4.1.1. **Type 1**. Construct to a depth of at least 8 in. using crushed aggregate as shown on the plans or as directed.

4.4.2.2. **Short-Term.**

4.4.4.2.1. **Type 3**. Construct using crushed aggregate, plywood, or wafer board. This type of exit may be used for daily operations where long-term exits are not practical.

4.4.4.2.2. **Type 4**. Construct as shown on the plans or as directed.

4.4.3. **Earthwork for Erosion Control**. Perform excavation and embankment operations to minimize erosion andto remove collected sediments from other erosion control devices.

4.4.3.1. **Excavation and Embankment for Erosion Control Features.** Place earth dikes, swales, or combinations of both along the low crown of daily lift placement, or as directed, to prevent runoff spillover. Place swales and dikes at other locations as shown on the plans or as directed to prevent runoff spillover or to divert runoff. Construct cuts with the low end blocked with undisturbed earth to prevent erosion of hillsides. Construct sediment traps at drainage structures in conjunction with other erosion control measures as shown on the plans or as directed.

Create a sediment basin, where required, providing 3,600 cu. ft. of storage per acre drained, or equivalent control measures for drainage locations that serve an area with 10 or more disturbed acres at one time, not including offsite areas.

4.4.3.2. **Excavation of Sediment and Debris.** Remove sediment and debris when accumulation affects theperformance of the devices, after a rain, and when directed.
4.4.3.3.

4.4.4. **Construction Perimeter Fence**. Construct, align, and locate fencing as shown on the plans or as directed.

4.4.4.1. **Installation of Posts.** Embed posts 18 in. deep or adequately anchor in rock, with a spacing of 8 to 10 ft.

4.4.4.2. **Wire Attachment.** Attach the top wire to the posts at least 3 ft. from the ground. Attach the lower wire midway between the ground and the top wire.

4.4.4.3. **Flag Attachment.** Attach flagging to both wire strands midway between each post. Use flagging at least 18 in. long. Tie flagging to the wire using a square knot.

4.4.5. **Sandbags for Erosion Control**. Construct a berm or dam of sandbags that will intercept sediment-laden storm water runoff from disturbed areas, create a retention pond, detain sediment, and release water in sheet flow. Fill each bag with sand so that at least the top 6 in. of the bag is unfilled to allow for proper tying of the open end. Place the sandbags with their tied ends in the same direction. Offset subsequent rows of sandbags 1/2 the length of the preceding row. Place a single layer of sandbags downstream as a secondary debris trap. Place additional sandbags as necessary or as directed for supplementary support to berms or dams of sandbags or earth.

4.4.6. **Temporary Sediment-Control Fence**. Provide temporary sediment-control fence near the downstream perimeter of a disturbed area to intercept sediment from sheet flow. Incorporate the fence into erosion-control measures used to control sediment in areas of higher flow. Install the fence as shown on the plans, as specified in this Section, or as directed.

4.4.6.1. **Installation of Posts**. Embed posts at least 18 in. deep, or adequately anchor, if in rock, with a spacing of 6 to 8 ft. and install on a slight angle toward the runoff source.

4.4.6.2. **Fabric Anchoring**. Dig trenches along the uphill side of the fence to anchor 6 to 8 in. of fabric. Provide a minimum trench cross-section of 6 × 6 in. Place the fabric against the side of the trench and align approximately 2 in. of fabric along the bottom in the upstream direction. Backfill the trench, then hand-tamp.

4.4.6.3. **Fabric and Net Reinforcement Attachment**. Attach the reinforcement to wooden posts with staples, or to steel posts with T-clips, in at least 4 places equally spaced unless otherwise shown on the plans. Sewn vertical pockets may be used to attach reinforcement to end posts. Fasten the fabric to the top strand of reinforcement by hog rings or cord every 15 in. or less.

4.4.6.4. **Fabric and Net Splices**. Locate splices at a fence post with a minimum lap of 6 in. attached in at least 6 places equally spaced unless otherwise shown on the plans. Do not locate splices in concentrated flow areas.

Requirements for installation of used temporary sediment-control fence include the following:

- fabric with minimal or no visible signs of biodegradation (weak fibers),
- fabric without excessive patching (more than 1 patch every 15 to 20 ft.),
- posts without bends, and
- backing without holes.

4.4.7. **Biodegradable Erosion Control Logs**. Install biodegradable erosion control logs near the downstream perimeter of a disturbed area to intercept sediment from sheet flow. Incorporate the biodegradable erosion control logs into the erosion measures used to control sediment in areas of higher flow. Install, align, and locate the biodegradable erosion control logs as specified below, as shown on the plans, or as directed.

Secure biodegradable erosion control logs in a method adequate to prevent displacement as a result of normal rain events, prevent damage to the logs, and as approved, such that flow is not allowed under the logs. Temporarily removing and replacing biodegradable erosion logs as to facilitate daily work is allowed at the Contractor's expense.

4.4.8. **Vertical Tracking**. Perform vertical tracking on slopes to temporarily stabilize soil. Provide equipment with a track undercarriage capable of producing a linear soil impression measuring a minimum of 12 in. long × 2 to 4 in. wide × 1/2 to 2 in. deep. Do not exceed 12 in. between track impressions. Install continuous linear track impressions where the 12 in. length impressions are perpendicular to the slope. Vertical tracking is required on projects where soil disturbing activities have occurred unless otherwise approved.

4.5. Monitoring and Documentation. Monitor the control measures on a daily basis as long as there are BMPs in place and/or soil disturbing activities are evident to ensure compliance with the SWP3 and TPDES General Permit TXR150000. During time suspensions when work is not occurring or contract non-work days, daily inspections are not required unless a rain event has occurred. Monitoring will consist of, but is not limited to, observing, inspecting, and documenting site locations with control measures and discharge points to provide maintenance and inspection of controls as described in the SWP3. Keep written records of daily monitoring. Document in the daily monitoring report the control measure condition, the date of inspection, required corrective actions, responsible person for making the corrections, and the date corrective actions were completed. Maintain records of all monitoring reports at the project site or at an approved place. Provide copies within 7 days. Together, the CRPE and an Engineer's representative will complete the Construction Stage Gate Checklist on a periodic basis as directed.

5. MEASUREMENT

5.2. Earthwork for Erosion and Sediment Control.

5.2.1. **Equipment and Labor Measurement.** Equipment and labor used will be measured by the actual number of hours the equipment is operated and the labor is engaged in the work.

5.2.2. **Volume Measurement.**

5.2.2.1. **In Place.**

5.2.2.1.1. **Excavation.** Excavation will be measured by the cubic yard in its original position and the volume computed by the method of average end areas.

5.2.2.1.2. **Embankment.** Embankment will be measured by the cubic yard in its final position by the method of average end areas. The volume of embankment will be determined between:

- the original ground surfaces or the surface upon that the embankment is to be constructed for the feature and
- the lines, grades and slopes of the accepted embankment for the feature.

5.3. Construction Perimeter Fence. Construction perimeter fence will be measured by the foot.

5.4. Sandbags for Erosion Control. Sandbags will be measured as each sandbag or by the foot along the top of sandbag berms or dams.

5.5. Temporary Sediment-Control Fence. Installation or removal of temporary sediment-control fence will be measured by the foot.

5.6. Biodegradable Erosion Control Logs. Installation or removal of biodegradable erosion control logs will be measured by the foot along the centerline of the top of the control logs.

5.7. Vertical Tracking. Vertical tracking will not be measured or paid for directly but is considered subsidiary to this Item.

6. PAYMENT

The following will not be paid for directly but are subsidiary to pertinent Items:

- erosion-control measures for Contractor project-specific locations (PSLs) inside and outside the right of way (such as construction and haul roads, field offices, equipment and supply areas, plants, and material sources);
- removal of litter, unless a separate pay item is shown on the plans;
- repair to devices and features damaged by Contractor operations;
- added measures and maintenance needed due to negligence, carelessness, lack of maintenance, and failure to install permanent controls;
- removal and reinstallation of devices and features needed for the convenience of the Contractor;
- finish grading and dressing upon removal of the device; and
- minor adjustments including but not limited to plumbing posts, reattaching fabric, minor grading to maintain slopes on an erosion embankment feature, or moving small numbers of sandbags.

Stabilization of disturbed areas will be paid for under pertinent Items except vertical tacking which is subsidiary.

Furnishing and installing pipe for outfalls associated with sediment traps and ponds will not be paid for directly but is subsidiary to the excavation and embankment under this Item.

6.1. Construction Exits. Contractor-required construction exits from off right of way locations or on-right of way PSLs will not be paid for directly but are subsidiary to pertinent Items.

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" for construction exits needed on right of way access to work areas required by the Department will be paid for at the unit price bid for "Construction Exits (Install)" of the type specified or "Construction Exits (Remove)." This price is full compensation for furnishing and placing materials, excavating, removal and disposal, cleaning vehicles, labor, tools, and incidentals.

When the Engineer directs that a construction exit or portion thereof be removed and replaced, payment will be made at the unit prices bid for "Construction Exit (Remove)" and "Construction Exit (Install)" of the type specified. These prices are full compensation for the removal and replacement of the construction exit and for equipment, labor, tools, and incidentals.

Construction of sediment traps used in conjunction with the construction exit will be measured and paid for under "Earthwork for Erosion and Sediment Control."

6.2. Earthwork for Erosion and Sediment Control.

6.2.1. **Initial Earthwork for Erosion and Sediment Control.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Excavation (Erosion and Sediment Control, In Place)," "Embankment (Erosion and Sediment Control, In Place)," "Excavation (Erosion and Sediment Control, In Vehicle)," "Embankment (Erosion and Sediment Control, (In Vehicle)," or "Earthwork (Erosion and Sediment Control, In Vehicle)."

This price is full compensation for excavation and embankment including hauling, disposal of material not used elsewhere on the project; embankments including furnishing material from approved sources and construction of erosion-control features; and equipment, labor, tools, and incidentals.

Sprinkling and rolling required by this Item will not be paid for directly but will be subsidiary to this Item.

6.3. Construction Perimeter Fence. The work performed and materials furnished in accordance with this Itemand measured as provided under "Measurement" will be paid for at the unit price bid for "Construction Perimeter Fence." This price is full compensation for furnishing and placing the fence; digging, fence posts, wire, and flagging; removal and disposal; and materials, equipment, labor, tools, and incidentals.

Removal of construction perimeter fence will be not be paid for directly but is subsidiary to the installation Item. When the Engineer directs that the perimeter fence installation or portions thereof be removed and replaced, payment will be made at the unit price bid for "Construction Perimeter Fence," which is full compensation for the removal and reinstallation of the construction perimeter fence.

6.4. Sandbags for Erosion Control. Sandbags will be paid for at the unit price bid for "Sandbags for Erosion Control" (of the height specified when measurement is by the foot). This price is full compensation for materials, placing sandbags, removal and disposal, equipment, labor, tools, and incidentals.

Removal of sandbags will not be paid for directly but is subsidiary to the installation Item. When the Engineer directs that the sandbag installation or portions thereof be replaced, payment will be made at the unit price bid for "Sandbags for Erosion Control," which is full compensation for the reinstallation of the sandbags.

6.5. Temporary Sediment-Control Fence. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid as follows:

6.5.1. **Installation.** Installation will be paid for as "Temporary Sediment-Control Fence (Install)." This price is full compensation for furnishing and operating equipment finish backfill and grading, lacing, proper disposal, labor, materials, tools, and incidentals.

6.5.2. **Removal.** Removal will be paid for as "Temporary Sediment-Control Fence (Remove)." This price is full compensation for furnishing and operating equipment, proper disposal, labor, materials, tools, and incidentals.

6.6. Biodegradable Erosion Control Logs. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid as follows:

6.6.1. **Installation.** Installation will be paid for as "Biodegradable Erosion Control Logs (Install)" of the size specified. This price is full compensation for furnishing and operating equipment finish backfill and grading, staking, proper disposal, labor, materials, tools, and incidentals.

6.6.2. **Removal.** Removal will be paid for as "Biodegradable Erosion Control Logs (Remove)." This price is full compensation for furnishing and operating equipment, proper disposal, labor, materials, tools, and incidentals.

6.7. Vertical Tracking. Vertical tracking will not be measured or paid for directly but is considered subsidiary to this Item.

ITEM 529
CONCRETE CURB, GUTTER,COMBINED CURB AND GUTTER

DESCRIPTION

Construct hydraulic cement concrete curb, gutter, and combined curb and gutter.

MATERIALS

Furnish materials conforming to:

- Item 360, "Concrete Pavement"
- Item 420, "Concrete Substructures"
- Item 421, "Hydraulic Cement Concrete"
- Item 440, "Reinforcement for Concrete"

Use Class A concrete or material specified on the plans. Use Grade 8 coarse aggregate for extruded Class Aconcrete. Use other grades if approved.

When approved, use fibers meeting the requirements of DMS-4550, "Fibers for Concrete," to replace reinforcing steel in Class A concrete. Dose fibers in accordance with the Department's MPL of pre-qualified fibers for concrete.

CONSTRUCTION

Provide finished work with a well-compacted mass and a surface free from voids and honeycomb, in the required shape, line, and grade. Round exposed edges with an edging tool of the radius shown on the plans. Mix, place, and cure concrete in accordance with Item 420, "Concrete Substructures." Construct joints at locations shown on the plans. Cure for at least 72 hr.

Furnish and place reinforcing steel in accordance with Item 440, "Reinforcement for Concrete."

Set and maintain a guideline that conforms to alignment data shown on the plans, with an outline that conforms to the details shown on the plans. Ensure that changes in curb grade and alignment do not exceed 1/4 in. between any 2 contacts on a 10-ft. straightedge.

3.1 Conventionally Formed Concrete. Shape and compact subgrade, foundation, or pavement surface to theline, grade, and cross-section shown on the plans. Lightly sprinkle subgrade or foundation material immediately before concrete placement.

Pour concrete into forms and strike off with a template 1/4 to 3/8 in. less than the dimensions of the finishedcurb unless otherwise approved. After initial set, plaster surface with mortar consisting of 1-part hydraulic cement and 2 parts fine aggregate. Brush exposed surfaces to a uniform

texture.

Place curbs, gutters, and combined curb and gutters in 50-ft. maximum sections unless otherwise approved.

3.2 Extruded or Slipformed Concrete. Hand-tamp and sprinkle subgrade or foundation material before concrete placement. Provide clean surfaces for concrete placement. Coat cleaned surfaces, if required, with approved adhesive or coating at the rate of application shown on the plans or as directed. Place concrete with approved self-propelled equipment.

The forming tube of the extrusion machine or the form of the slipform machine must be easily adjustable vertically during the forward motion of the machine to provide variable heights necessary to conform to the established grade line.

Attach a pointer or gauge to the machine so that a continual comparison can be made between the extruded or slipform work and the grade guideline. Other methods may be used when approved.

Finish surfaces immediately after extrusion or slipforming.

MEASUREMENT

This Item will be measured by the lineal foot.

PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Concrete Curb," "Concrete Curb (Mono)," or "Concrete Curb and Gutter" of the type specified. This price is full compensation for surface preparation of curb foundation, equipment, labor, materials, tools, and incidentals.

END OF ITEM 529

EXHIBIT A: PLANS

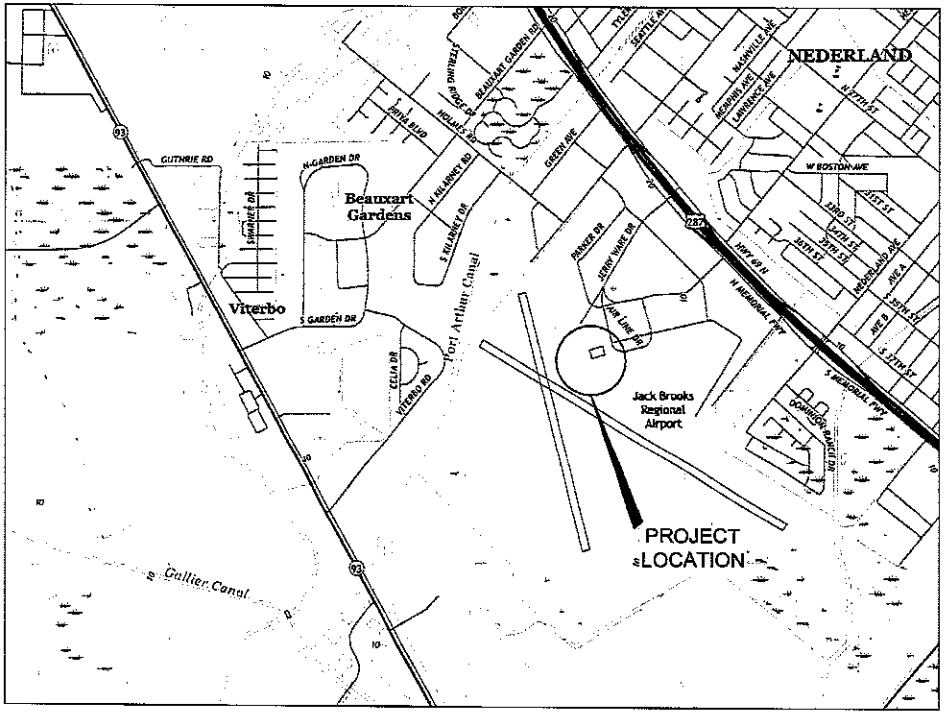
IFB 22-028/JW
EXHIBIT A: PAGE A-2

REHABILITATION OF FUEL FARM PAVEMENT
JACK BROOKS REGIONAL AIRPORT (BPT)

ISSUED FOR BIDDING

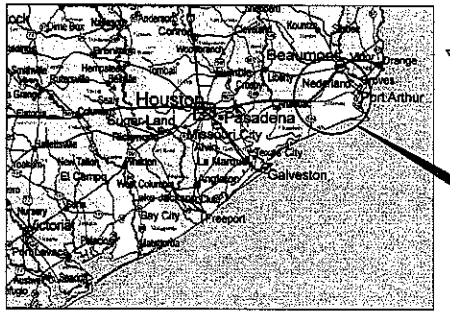
PROJECT CONSISTS OF RECONSTRUCTION OF EXISTING CONCRETE PAVEMENT AT THE JACK BROOKS REGIONAL AIRPORT FUEL FARM

FAA AIRPORT IMPROVEMENT PROGRAM (AIP) PN: AIP 3-480018-37-20
JEFFERSON COUNTY PN: ISB 22-028/JW
THE SOLCO GROUP PN: 2021-10-1092
MAY 2022



VICINITY MAP
N.T.S

SHEET INDEX		
SHEET NO.	DWG NO.	SHEET TITLE
1	G-000	COVER PAGE
2	G-001	GENERAL NOTES AND SUMMARY OF QUANTITIES
3	C-001	PROJECT LAYOUT AND PHASING PLAN
4	C-002	SURVEY PLAN
5	C-003	SITE DEMOLITION PLAN
6	C-004	GRADING, PLAN AND PROFILE
7	C-005	SITE PAVING, JOINTING AND SPOT ELEVATIONS
8	C-006	PAVEMENT DETAILS
9	C-007	PAVEMENT DETAILS
10	EC(9)-16	TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES EROSION CONTROL LOG
11	BC(8)-21	BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES



LOCATION MAP
N.T.S

JACK BROOKS REGIONAL AIRPORT

TSPE FIRM #22826

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022
PROJECT TITLE: REHABILITATION OF FUEL FARM PAVEMENT
DRAWING TITLE: COVER PAGE
DRAWING NUMBER: G-000
SHEET NUMBER: 1 SHEET TOTAL: 11
SCALE: N.T.S
DRAWN BY: AM CHECKED BY: KS

FILE:C:\The Solco Group\Jack Brooks Regional\13. CAD\2021092-BPT-COVER PAGE.dwg

827

IFB 22-028/JW
EXHIBIT A: PAGE A-3

CONSTRUCTION ACTIVITIES

1. THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS. THE PROJECT IS SUBJECT TO INSPECTION BY REPRESENTATIVES OF JACK BROOKS REGIONAL AIRPORT, THE ENGINEER, JEFFERSON COUNTY AND THE FEDERAL AVIATION ADMINISTRATION(FAA).
2. CONTRACTOR AND CONSTRUCTION ACTIVITIES SHALL COMPLY WITH ALL PLANS, SPECIFICATIONS AND FAA ADVISORY CIRCULARS.
3. THE CONTRACTOR SHALL SUBMIT A DETAILED CONSTRUCTION PROGRESS SCHEDULE TO THE AIRPORT, ENGINEER AND RESIDENT PROJECT REPRESENTATIVE (RPR) EACH WEEK.
4. ALL MATERIAL SUBMITTALS FOR ITEMS TO BE USED IN CONSTRUCTION OF THE PROJECT SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL 14 DAYS PRIOR TO COMMENCEMENT OF THE ASSOCIATED WORK.
5. THE PROJECT PAY ITEMS ARE PROVIDED TO BE INCLUSIVE OF ALL WORK TO BE PERFORMED AS SHOWN IN THESE PLANS. ALL WORK NOT IDENTIFIED WITH A SPECIFIC PAY ITEM IS TO BE CONSIDERED REQUIRED/INCIDENTAL WORK TO COMPLETE THE PROJECT AND IS TO BE INCLUDED IN THE COST OF THE PROJECT PAY ITEMS PROVIDED.
6. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING SAFETY FOR CONSTRUCTION PERSONNEL AND EQUIPMENT AT ALL TIMES.
7. CONTRACTOR SHALL REPAIR OR REPLACE ALL ITEMS NOT DESIGNATED FOR DEMOLITION OR REMOVAL THAT ARE DAMAGED BY CONSTRUCTION EFFORTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMMEDIATE REPAIR OF ANY DAMAGE TO AIRPORT FACILITIES, INCLUDING BUT NOT LIMITED TO EXISTING PAVEMENTS, UNDERGROUND CABLES, LIGHTS, SIGNS, FENCES, EQUIPMENT, ETC. CAUSED DURING CONSTRUCTION. ALL REPAIRS MUST BE MADE IN COORDINATION WITH THE OWNER AND TO EQUAL OR BETTER QUALITY AND IN COMPLIANCE WITH THE AIRPORT. ALL REPAIR AND REPLACEMENT COST SHALL BE AT THE EXPENSE OF THE CONTRACTOR.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EFFORT AND COST OF IMMEDIATE CLEANING OF EARTH TRACKING AND SPILLS RESULTING FROM THE CONTRACTOR'S OPERATIONS.
9. CONSTRUCTION AREA LIMITS: THE LIMITS OF CONSTRUCTION MATERIAL STORAGE AREAS, PLAN SITE, EQUIPMENT STORAGE AREA, PARKING AREA AND OTHER AREAS DEFINED AS REQUIRED FOR THE CONTRACTOR'S EXCLUSIVE USE DURING CONSTRUCTION SHALL BE MARKED BY THE CONTRACTOR.
10. THE CONTRACTOR SHALL BE RESPONSIBLE OF COMPLYING WITH ALL FEDERAL, STATE, AND LOCAL LAWS AND SHALL OBTAIN ALL NECESSARY PERMITS REQUIRED FOR CONSTRUCTION.

ENVIRONMENTAL

1. IN THE EVENT THAT UNANTICIPATED CONTAMINATION IS ENCOUNTERED DURING CONSTRUCTION, WORK IN THE IMMEDIATE AREA WILL CEASE. CONTRACTOR SHALL NOTIFY THE RPR AND ENGINEER TO CONTACT THE RELEVANT ENVIRONMENTAL AUTHORITY.
2. ALL WASTE MATERIAL SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH ALL THE LOCAL, STATE AND FEDERAL REGULATIONS.

EXISTING TOPOGRAPHY

1. EXISTING TOPOGRAPHY SHOWN ON THE PLANS ARE BASED ON THE SURVEYED TERRAIN FOR THE CONSTRUCTION LIMITS OF THE PROJECT. THE CONTRACTOR SHALL FIELD VERIFY THAT THE EXISTING TOPOGRAPHY SHOWN IS REASONABLY ACCURATE. IF THE ACCURACY IS IN QUESTION THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST TWO WEEKS PRIOR TO THE START OF CONSTRUCTION AND A COURSE OF ACTION WILL BE DETERMINED AT THAT TIME.

EXISTING CONDITIONS/UNDERGROUND AND CONCEALED

1. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO BEGINNING CONSTRUCTION AND REPORT TO THE ENGINEER ANY VARIATIONS FROM THE INFORMATION SHOWN ON CONSTRUCTION PLANS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND IDENTIFICATION OF ALL EXISTING UTILITIES AND PIPELINES IN THE CONSTRUCTION AREA. ANY DAMAGE TO EXISTING UTILITIES OR PIPELINES (ON OR OFF AIRPORT PROPERTY) DAMAGED BY CONTRACTOR SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL REPAIR ALL UTILITY/PIPELINE DAMAGED BY CONTRACTOR AT NO ADDITIONAL COST TO OWNER.
3. ANY UNPLANNED, UNAPPROVED OR ACCIDENTAL SHUTDOWN OR INTERRUPTION OF SERVICE TO ANY LIGHTING CIRCUIT REQUIRES IMMEDIATE NOTIFICATION OF THE OWNER BY THE CONTRACTOR. ALL NECESSARY REPAIRS WILL BE AT CONTRACTORS EXPENSE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STAKING AND GRADE CONTROL OF ALL ELEMENTS OF THE PROJECT AT NO ADDITIONAL COST TO THE OWNER.
5. CONTRACTOR SHALL VERIFY ALL SURVEY CONTROL ELEVATIONS, AND EXISTING GRADES PRIOR TO BEGINNING CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER PRIOR TO BEGINNING CONSTRUCTION.
6. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL HORIZONTAL AND VERTICAL CONSTRUCTION STAKING AS REQUIRED FOR THE PROJECT DEVELOPMENT.
7. CONTRACTOR SHALL ESTABLISH ANY ADDITIONAL CONTROL POINTS DEEMED NECESSARY BY CONSTRUCTION PERSONNEL PRIOR TO BEGINNING THE WORK.

SUMMARY OF QUANTITIES

Spec	Pay Item	Description	Units	Bid Quantity	Final Quantity	Remarks
1	C-105	Mobilization	LS	1		
2	SS-120	Construction Safety and Security (CSPP, Barricades, Signs and Traffic Handling)	LS	1		
3	D-701a	Allowance for Storm Sewer Pipe Replacement	LS	1		
4	D-701b	Install PVC Pipe (2 Inch)	LF	8		
5	P-101-5.1a	Sawcut, Remove and Dispose Existing Concrete Pavement Full Depth (8 Inches)	SY	600		
6	P-101-5.1b	Sawcut, Remove and Dispose Existing Asphalt Ramp	SY	70		
7	P-101-5.1c	Sawcut, Remove and Dispose Existing 6" Vertical Curb	LF	310		
8	P-152-4.2	Embankment in Place	CY	20		
9	P-152-4.4	Unsuitable Excavation	CY	20		
10	P-155-8.1	Lime Treated Subgrade (8 Inches)	SY	600		
11	P-155-8.2	Lime	TON	31		
12	P-501-8.1a	Reinforced Concrete Pavement (8 Inches)	SY	530		
13	P-501-8.1b	Reinforced Concrete Pavement Ramp (8-12 Inches)	SY	70		
14	TXDOT 506-6.6.1	Biodegradable Erosion Control Logs (Install)	LF	200		
15	TXDOT 506-6.6.2	Biodegradable Erosion Control Logs (Removal)	LF	200		
16	TXDOT 529	4" Concrete Curb	LF	310		
17	See Plan	Furnish and Install 4' Steel Bollards	EA	2		
18	See Plan	Install 6' Rubber Speed Bumps	EA	4		

HAUL ROUTES, STAGING AREAS AND SITE ACCESS

1. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING STAGING AREA AND HAUL ROUTE AS NECESSARY FOR HIS OPERATIONS. THIS ITEMS SHALL BE SUBSIDIARY TO OTHER ITEMS IN THE CONTRACT.
2. CONTRACTOR SHALL PROVIDE ACCESS ROUTE PLAN FOR APPROVAL BY THE AIRPORT PRIOR TO THE BEGINNING OF CONSTRUCTION. THE ACTUAL SIZE AND LOCATION OF THE STAGING AREA AND HAUL ROUTE WILL BE APPROVED BY THE AIRPORT PRIOR TO CONSTRUCTION.
4. IT SHALL BE THE CONTRACTORS' RESPONSIBILITY TO COORDINATE ALL OFF-AIRPORT ROUTES WITH THE APPROPRIATE AUTHORITIES.
5. HAUL TRUCKS TRANSPORTING LOOSE MATERIAL OFF AIRPORT PROPERTY SHALL USE LOAD COVERS AND SHALL BE LOADED SUCH THAT NO SPILLAGE OCCURS DURING TRANSIT. ALL CONTRACTOR EQUIPMENT MUST BE MAINTAINED IN GOOD WORKING ORDER. CONTRACTOR VEHICLES THAT LEAK OR DRIP OIL AND/OR FLUIDS MUST BE IMMEDIATELY REMOVED FROM THE PROJECT FOR REPAIR AND THE SPILL CLEANED UP IN ACCORDANCE WITH STATE AND FEDERAL REQUIREMENTS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING HIS/HER OWN COMPLETE UTILITY SERVICES. THE AIRPORT WILL NOT PROVIDE FACILITIES AND SERVICES TO THE CONTRACTOR DURING CONSTRUCTION. THE CONTRACTOR'S PERSONNEL ARE PROHIBITED FROM UTILIZING THE AIRPORT TERMINAL. ASSOCIATED COST WILL BE SUBSIDIARY TO OTHER ITEMS IN THE CONTRACT.
7. THE AREAS UTILIZED AS THE CONTRACTOR'S STAGING AREA, PARKING, LAYDOWN, STORAGE AREA, AND THE HAUL ROUTES ARE TO BE RESTORED TO THE ORIGINAL CONDITION AT THE END OF THE PROJECT. ALL EXISTING ROADS OR PAVEMENTS USED AS ACCESS/HAUL ROADS SHALL BE MAINTAINED AND IMPROVED AS REQUIRED. THE ROAD OR PAVEMENT CONDITIONS WILL BE INSPECTED JOINTLY BY THE ENGINEER AND CONTRACTOR PRIOR TO AND AT THE END OF THE PROJECT. THE CONDITION OF THESE ROADS AND PAVEMENTS SHALL BE EQUAL OR BETTER THAN AT THE START OF THE PROJECT AS DETERMINED BY THE ENGINEER. MECHANICAL BROOMS WILL BE REQUIRED BY THE ENGINEER FOR THESE EXISTING PAVEMENT ACCESS ROADS IF CONDITIONS ARE NOT BEING MAINTAINED (IN THE OPINION OF THE ENGINEER) BY THE CONTRACTOR.
8. CONSTRUCTION EQUIPMENT AND VEHICLES SHALL NOT TRAVEL ON NEWLY CONSTRUCTED PAVEMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF ANY DAMAGE TO THE NEWLY CONSTRUCTED PAVEMENT. ALL REPAIRS SHALL BE AT THE CONTRACTOR'S OWN EXPENSE.
9. THE FUEL FARM SHALL BE KEPT FREE OF ALL DEBRIS, DIRT, ETC., AT ALL TIMES. ANY SPILLAGE OF SOIL, DEBRIS OR OTHER MATERIALS SHALL BE CLEANED UP IMMEDIATELY USING APPROPRIATE POWER SWEEPERS, BLOWERS OR OTHER APPROVED EQUIPMENT, BY THE CONTRACTOR. DUST GENERATED DUE TO CONSTRUCTION ACTIVITIES SHALL BE ADEQUATELY CONTROLLED AT ALL TIMES. A PROGRAM OF REGULAR FUEL FARM AREA INSPECTION SHALL BE IMPLEMENTED BY THE CONTRACTOR DURING CONSTRUCTION.
10. ALL EQUIPMENT MUST BE RETURNED TO THE STAGING AREA AT THE END OF EACH WORK DAY AND WHEN NOT ENGAGED IN THE CONSTRUCTION DURING NON-WORKING DAYS AND NIGHTS UNLESS APPROVED BY THE OWNER. THE OWNER WILL DESIGNATE AREAS FOR CONTRACTOR'S EMPLOYEES AUTO PARKING.
11. ACCESS TO THE SITE
    a. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRAFFIC CONTROL TO AND FROM THE VARIOUS CONSTRUCTION AREAS ON THE SITE.
    b. THE CONTRACTOR SHALL NOT PERMIT ANY UNAUTHORIZED CONSTRUCTION PERSONNEL OR TRAFFIC ON THE SITE.
    c. THE CONTRACTOR IS RESPONSIBLE FOR IMMEDIATE CLEAN UP OF ANY DEBRIS DEPOSITED ALONG THE ACCESS ROUTE AS A RESULT OF HIS CONSTRUCTION TRAFFIC.
    d. ANY TRAFFIC CONTROL SIGN AND DEVICES PLACED IN THE COURSE OF THE PROJECT SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), THE APPLICABLE FAA ADVISORY CIRCULAR, OR AS APPROVED IN WRITING FROM SHOP DRAWINGS SUBMITTED TO THE ENGINEER PRIOR TO SIGN PLACEMENT.
    e. THE CONTRACTOR WILL BE LIABLE FOR ANY FINES ISSUED BY THE FAA, DOTD, COUNTY AND AIRPORT OPERATIONS FOR TRAFFIC VIOLATIONS AND SECURITY VIOLATIONS FOR WHICH IT IS CITED.

DUST PROTECTION

1. CONTRACTOR SHALL INSTALL DUST PROTECTION COVERS TO PROTECT THE EXISTING FUEL TANK EQUIPMENT AND CHAIN LINK FENCE. DUST PROTECTION IS INCIDENTAL TO PAY ITEM SS-100

Texas 811

JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #22626

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
GENERAL NOTES AND SUMMARY OF QUANTITIES

DRAWING NUMBER: G-001

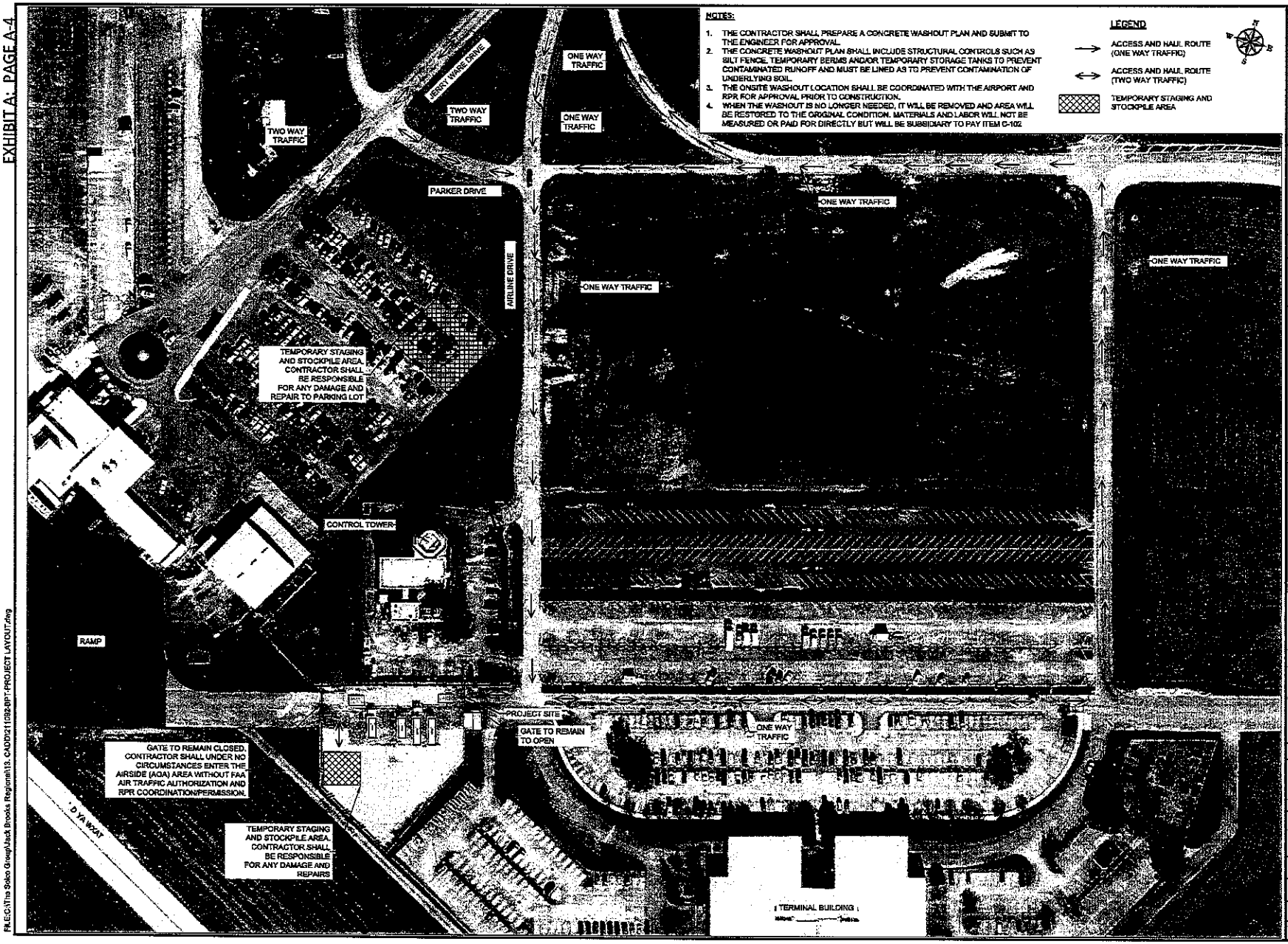
SHEET NUMBER: 2 SHEET TOTAL: 11

SCALE: N.T.S

DRAWN BY: AM CHECKED BY: KS

FILE:C:\The Sabo Group\Jack Brooks Regional\13. CAD\D21092.RPT-GENERAL NOTES.dwg

IFB 22-028/JW
EXHIBIT A: PAGE A-4



JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #22526

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
PROJECT LAYOUT AND PHASING PLAN

DRAWING NUMBER: C-001

SHEET NUMBER: 3 SHEET TOTAL: 11

SCALE: 1" = 60' (FULL) 1"=120' (HALF)

DRAWN BY: AM CHECKED BY: KS

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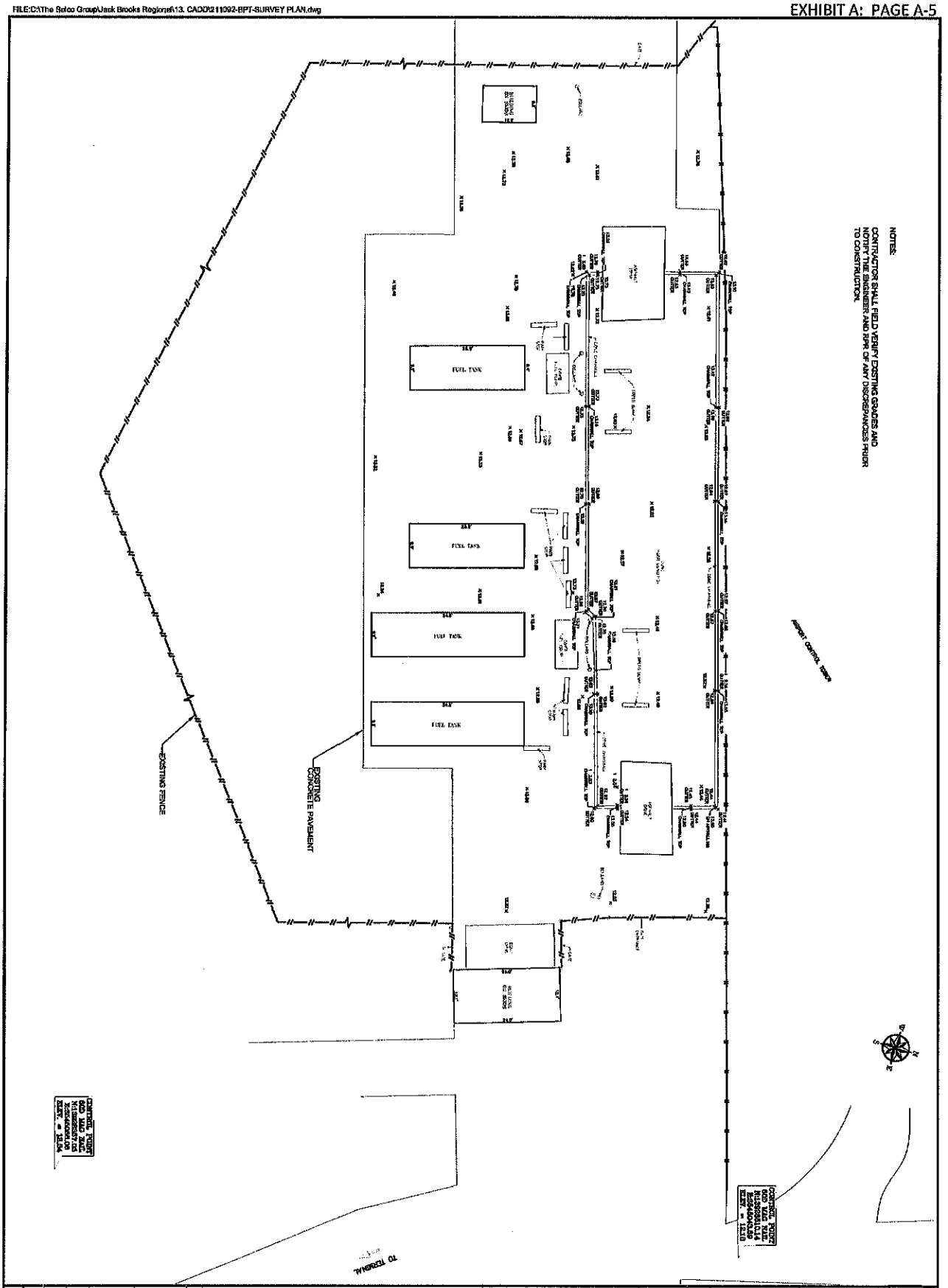


JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #2936

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
SURVEY PLAN

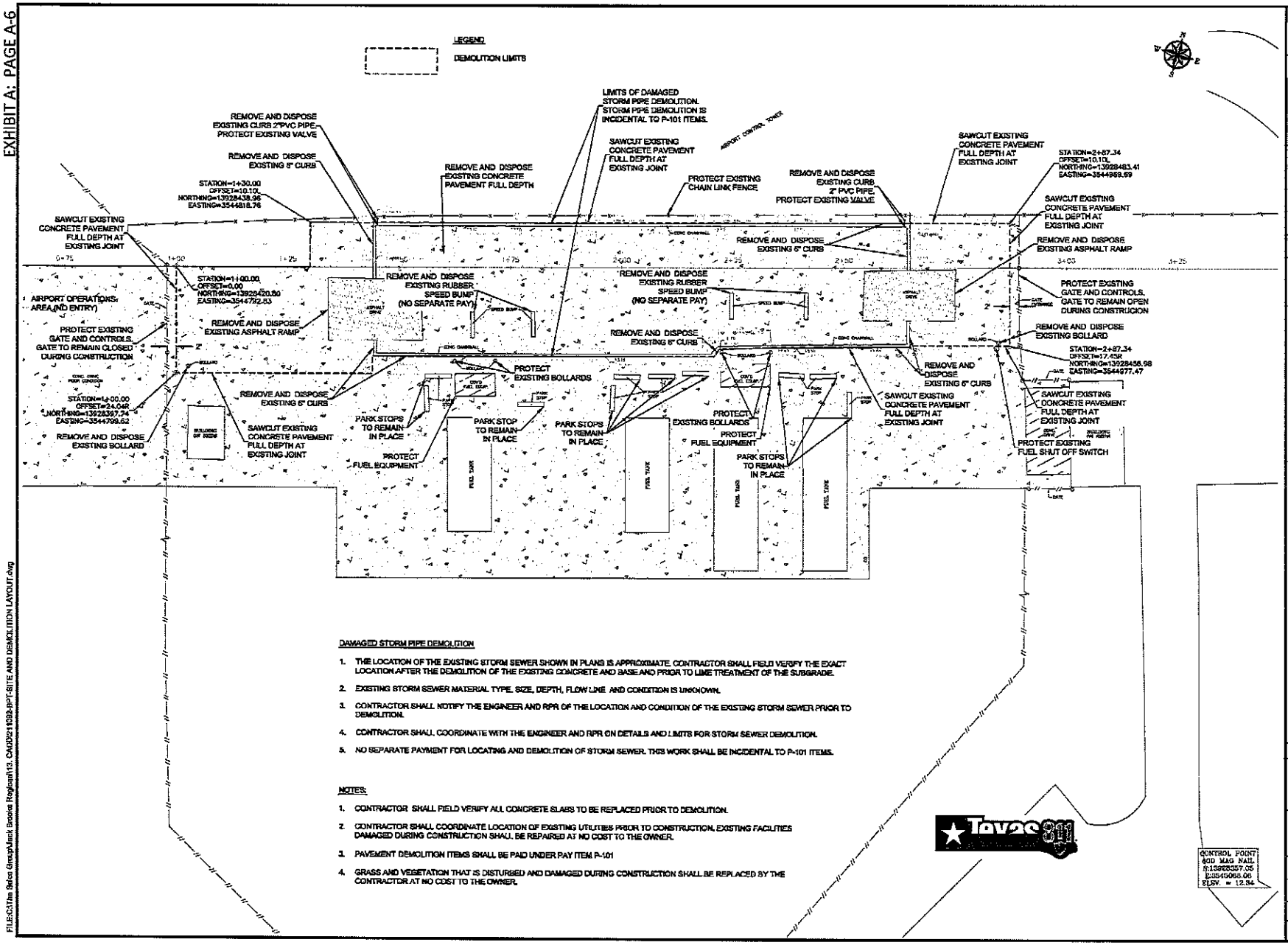
DRAWING NUMBER:
C-002

SHEET NUMBER: 4 SHEET TOTAL: 11

SCALE: 1" = 10' (FULL) 1"=20' (HALF)

DRAWN BY: AM CHECKED BY: KS

IFB 22-028/JW
EXHIBIT A: PAGE A-6



DAMAGED STORM PIPE DEMOLITION

1. THE LOCATION OF THE EXISTING STORM SEWER SHOWN IN PLANS IS APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATION AFTER THE DEMOLITION OF THE EXISTING CONCRETE AND BASE AND PRIOR TO LIME TREATMENT OF THE SUBGRADE.
2. EXISTING STORM SEWER MATERIAL TYPE, SIZE, DEPTH, FLOW LINE AND CONDITION IS UNKNOWN.
3. CONTRACTOR SHALL NOTIFY THE ENGINEER AND RPR OF THE LOCATION AND CONDITION OF THE EXISTING STORM SEWER PRIOR TO DEMOLITION.
4. CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND RPR ON DETAILS AND LIMITS FOR STORM SEWER DEMOLITION.
5. NO SEPARATE PAYMENT FOR LOCATING AND DEMOLITION OF STORM SEWER. THIS WORK SHALL BE INCIDENTAL TO P-101 ITEMS.

NOTES:

1. CONTRACTOR SHALL FIELD VERIFY ALL CONCRETE SLABS TO BE REPLACED PRIOR TO DEMOLITION.
2. CONTRACTOR SHALL COORDINATE LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. EXISTING FACILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED AT NO COST TO THE OWNER.
3. PAVEMENT DEMOLITION ITEMS SHALL BE PAID UNDER PAY ITEM P-101
4. GRASS AND VEGETATION THAT IS DISTURBED AND DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER.

Texas 811

JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #22626

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
SITE DEMOLITION PLAN

DRAWING NUMBER: C-003

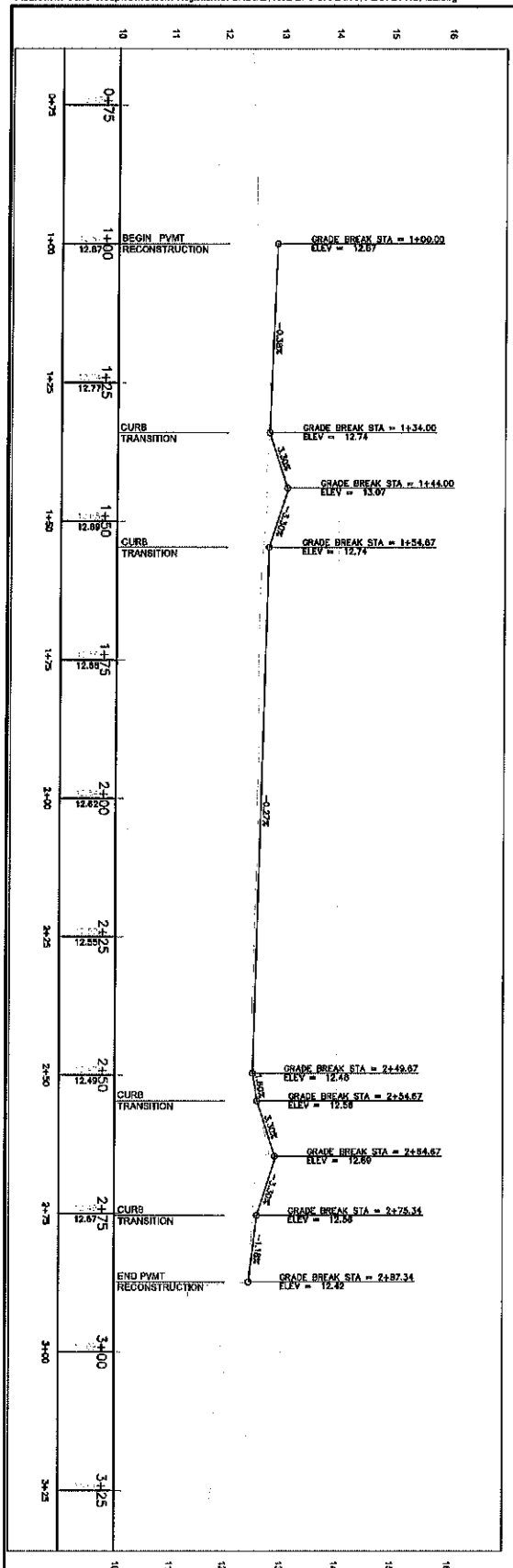
SHEET NUMBER: 5 SHEET TOTAL: 11

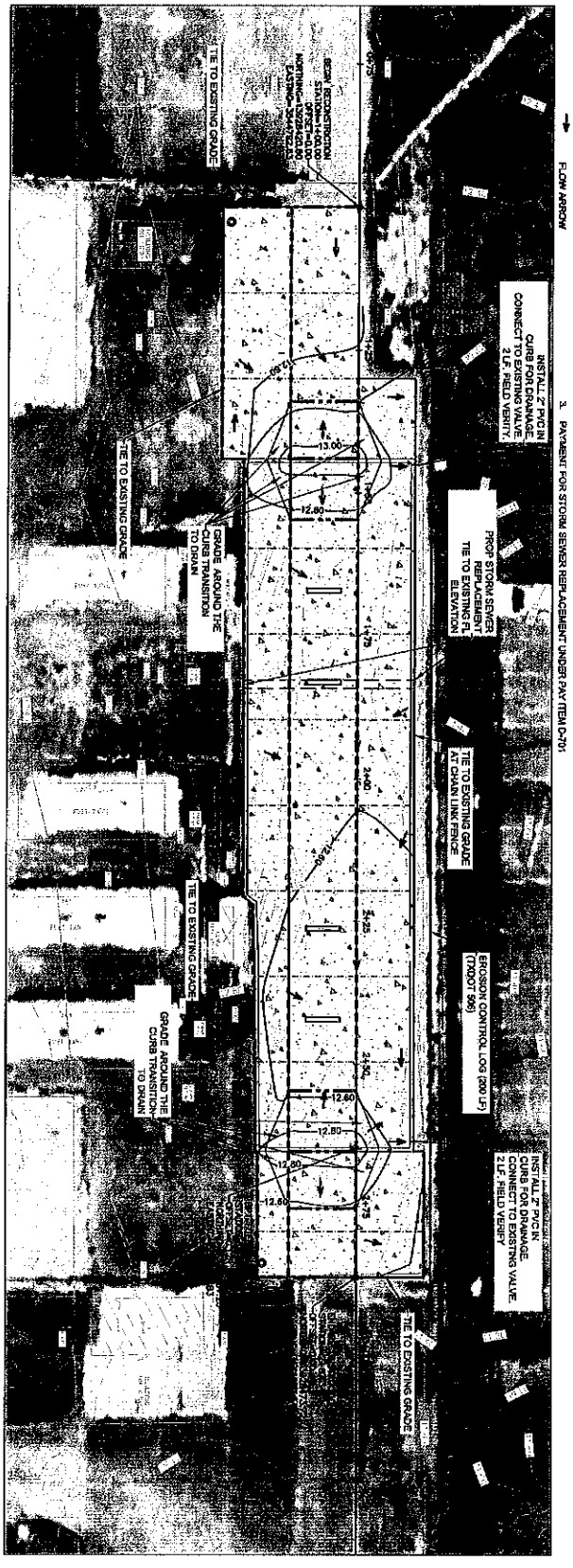
SCALE: 1" = 10' (FULL) 1"=20' (HALF)

DRAWN BY: AM CHECKED BY: KS

FILE:C:\Tns Telco Group\Jack Brooks Regional\113. CAD\D211028-BPT-SITE AND DEMOLITION LAYOUT.dwg

FILE:C:\The Solco Group\Jack Brooks Regional\13. CADD\211092-BPT-GRADING, PLAN & PROFILE.dwg





LEGEND

PROPOSED GRADE AT 0.2' INTERVAL

EXISTING GRADE AT 0.2' INTERVAL

EROSION CONTROL LOG

FLOW ARROW

DAMAGED STORM PIPE REPLACEMENT

1. THE LOCATION OF THE DAMAGED STORM SEWER REPLACEMENT SHOWN IN PLANS IS APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATION.
2. CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND RPR ON DETAILS FOR STORM SEWER MATERIAL, TYPE AND CONSTRUCTION PRIOR TO REPLACEMENT.
3. PAYMENT FOR STORM SEWER REPLACEMENT UNDER PAY ITEM D-701

NOTES:

CONTRACTOR SHALL FIELD VERIFY EXISTING GRADES AND NOTIFY THE ENGINEER AND RPR OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.

JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #22626

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
GRADING, PLAN AND PROFILE

DRAWING NUMBER: C-004

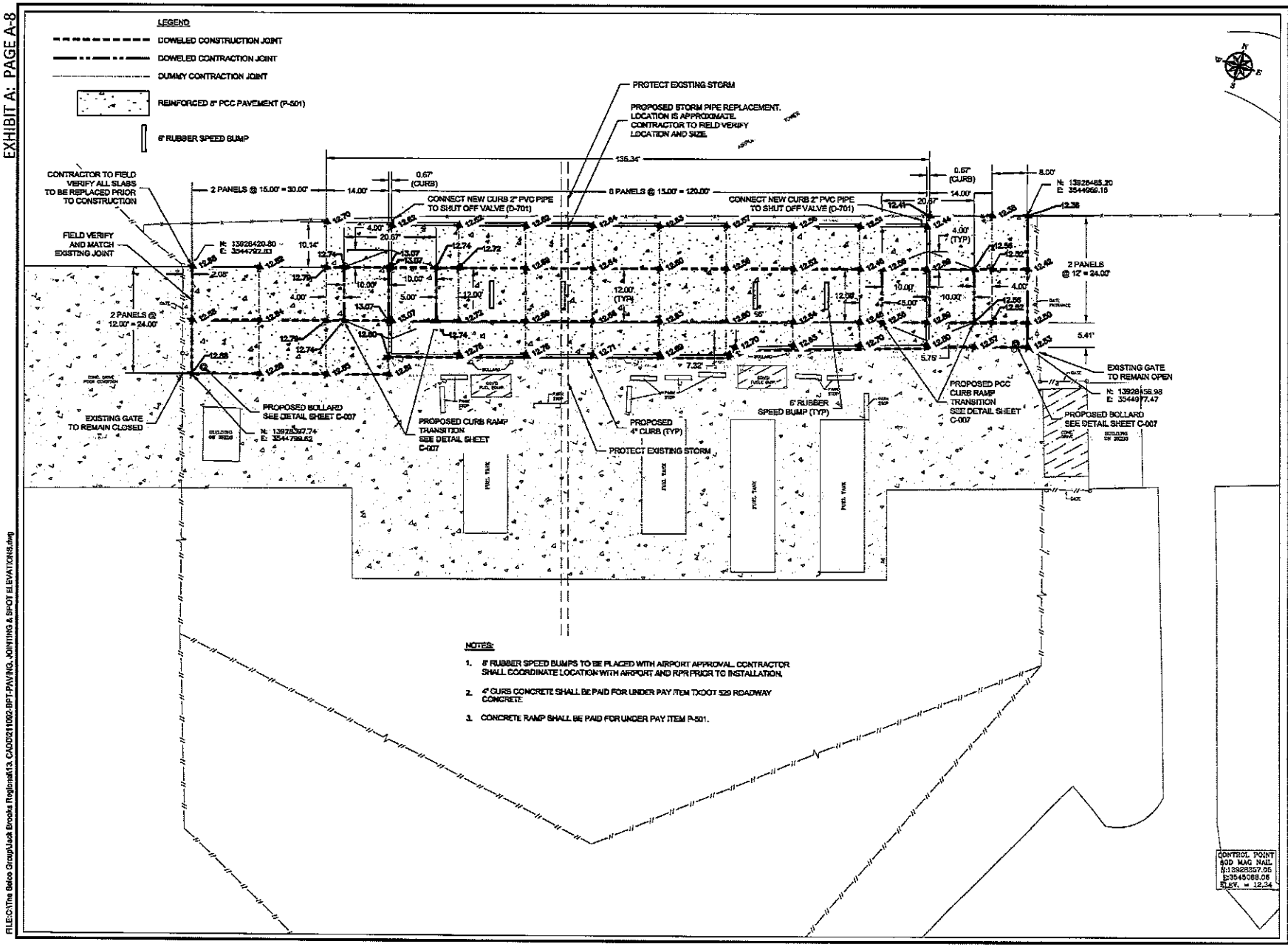
SHEET NUMBER: 6

SHEET TOTAL: 11

SCALE: 1" = 10' (FULL) 1"=20' (HALF)

DRAWN BY: AM

CHECKED BY: KS



NOTES:

1. 6" RUBBER SPEED BUMPS TO BE PLACED WITH AIRPORT APPROVAL. CONTRACTOR SHALL COORDINATE LOCATION WITH AIRPORT AND RPR PRIOR TO INSTALLATION.
2. 4" CURB CONCRETE SHALL BE PAID FOR UNDER PAY ITEM TXDOT 529 ROADWAY CONCRETE.
3. CONCRETE RAMP SHALL BE PAID FOR UNDER PAY ITEM P-501.

JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #22626

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
SITE PAVING, JOINTING AND SPOT ELEVATIONS

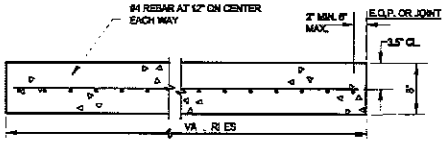
DRAWING NUMBER: C-005

SHEET NUMBER: 7 SHEET TOTAL: 11

SCALE: 1" = 10' (FULL) 1"=20' (HALF)

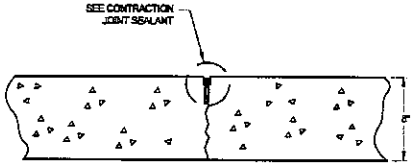
DRAWN BY: AM CHECKED BY: KS

FILE:C:\The Belco Group\Jack Brooks Region\413. CAD\D211002-BPT-PAVING, JOINTING & SPOT ELEVATIONS.dwg



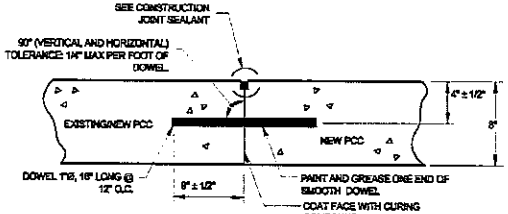
TYPICAL REINFORCED CONCRETE PAVEMENT SLAB

N.T.S.



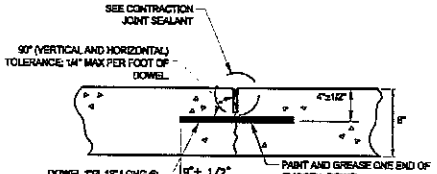
DUMMY CONTRACTION JOINT (JOINT D)

N.T.S.



DOWELED CONSTRUCTION JOINT (TYPE E)

N.T.S.

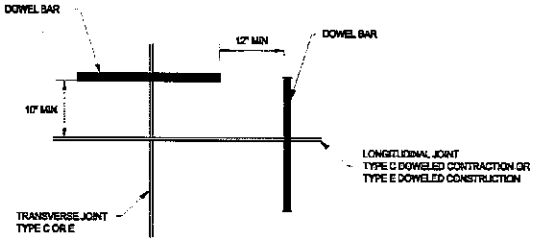


DOWELED CONTRACTION JOINT (TYPE C)

N.T.S.

CONCRETE JOINTS NOTE:

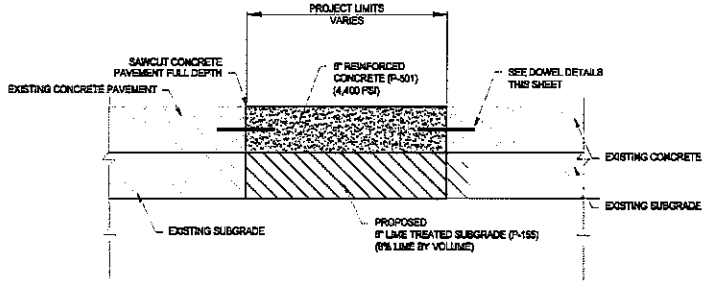
PAYMENT FOR CONCRETE JOINTS AND SEALANT SHALL BE INCIDENTAL TO PAY ITEM P-501



POSITION OF DOWELS AT EDGE OF JOINT TYPE C, E

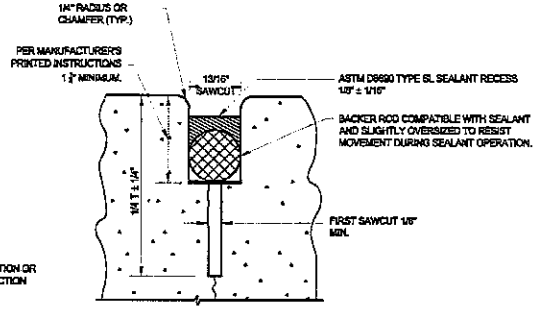
N.T.S.

SMOOTH DOWEL BAR SCHEDULE			
PCC SLAB DEPTH	DIAMETER	LENGTH	SPACING
8"	1"	18"	12"
12"	1"	18"	12"



FUEL FARM ROAD PAVEMENT

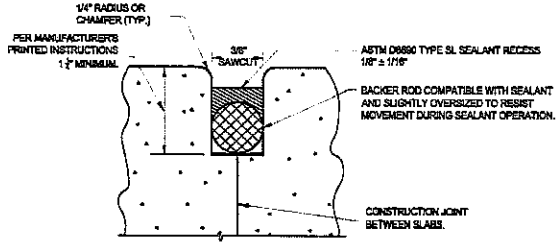
N.T.S.



NOTE:
ALL SEALANT MATERIALS MUST BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS AS APPROVED BY ENGINEER.

CONTRACTION JOINT SEALANT

N.T.S.



NOTE:
ALL SEALANT MATERIALS MUST BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS AS APPROVED BY ENGINEER.

CONSTRUCTION JOINT SEALANT

N.T.S.

JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #22626

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
PAVEMENT DETAILS

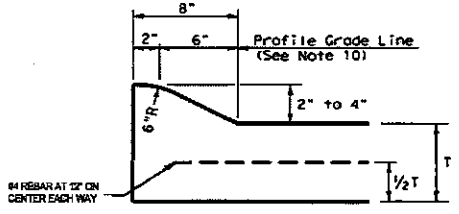
DRAWING NUMBER: C-005

SHEET NUMBER: 5 SHEET TOTAL: 11

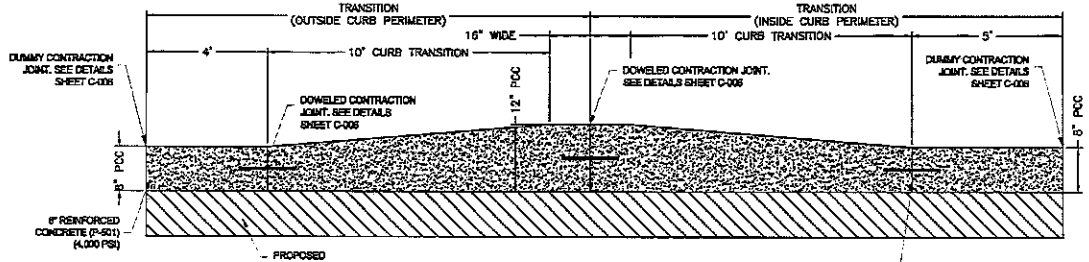
SCALE: N.T.S

DRAWN BY: AM CHECKED BY: KS

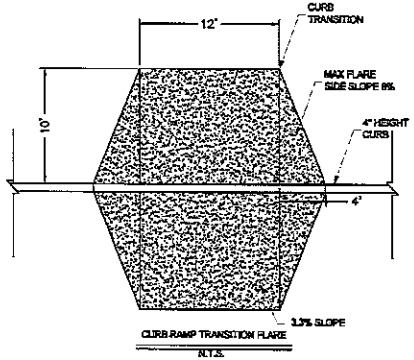
FILE:C:\The Beico Group\Jack Brooks Regional\13. CADD\2211002.BPT-PAVING DETAILS.dwg



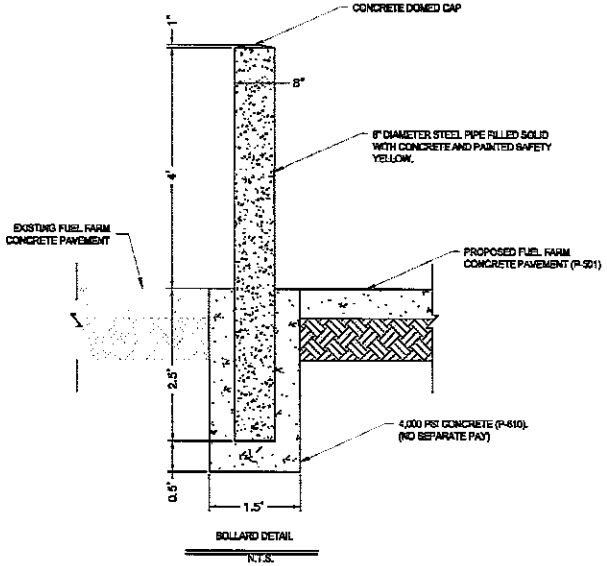
4" HEIGHT CURB DETAIL
N.T.S.



CURB RAMP TRANSITION DETAIL
N.T.S.



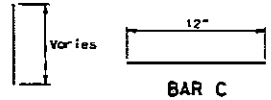
CURB RAMP TRANSITION FLARE
N.T.S.



BOLLARD DETAIL
N.T.S.

GENERAL NOTES

1. All materials and construction shall be in accordance with Item 529, "Concrete Curb, Gutter, and Combined Curb and Gutter."
2. Concrete shall be Class A.
3. When reinforcing bars are used, they shall be No.4 unless otherwise shown. The use of fiber reinforced concrete in lieu of reinforcing steel is acceptable. Use fibers meeting the requirements of DMS 4550, "Fibers for Concrete," and dose fibers in accordance with Material Producers List (MPL) "Fibers for Class A and B Concrete Applications."
4. Round exposed sharp edges with a rounding tool, to a minimum radius of ¼ inch.
5. All existing curbs and driveways to be removed shall be sawed or removed at existing joints.
6. Where concrete curb is to be placed on existing concrete pavement, Bar B may be drilled and the grouted in place, or may be inserted into fresh concrete.
7. Expansion and contraction joints shall be constructed to match pavement joints in all curbs and curb and gutter adjacent to jointed concrete pavement. Where placement of curb or curb and gutter is not adjacent to concrete pavement, expansion joints shall be provided at structures, curb returns at streets, and at locations directed by The Engineer.
8. Vertical and horizontal dowel bars and transverse reinforcing bars shall be placed at four feet C-C.
9. Dimension "T" shown is the thickness of concrete pavement. When curb is installed adjacent to flexible pavement dimension "T" is 8" maximum.
10. Usual profile grade line. Refer to typical sections and plan-profile sheets for exact locations.
11. One-half inch expansion joint material shall be provided where curb or curb and gutter is adjacent to sidewalk or riprap.
12. When horizontal permissible construction joints are used, the longitudinal pavement steel shall be placed in accordance with pavement details shown elsewhere in the plans. Reinforcing steel for curb section shall then conform to that required for concrete curb.
13. Bar B used as needed to support curb reinforcing steel during concrete placement.



BAR B BAR C

JACK BROOKS REGIONAL AIRPORT

TSPE FIRM #22626

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION
OF FUEL FARM PAVEMENT

DRAWING TITLE:
PAVEMENT DETAILS

DRAWING NUMBER:
C-007

SHEET NUMBER: 9 SHEET TOTAL: 11

SCALE: N.T.S

DRAWN BY: AM CHECKED BY: KS

FILEC:\The Sidoo Group\Jack Brooks Regional\13. CADD\21 0092-BPT-PAVING DETAILS.dwg

IFB 22-028/JW
EXHIBIT A: PAGE A-11

DISCLAIMER:
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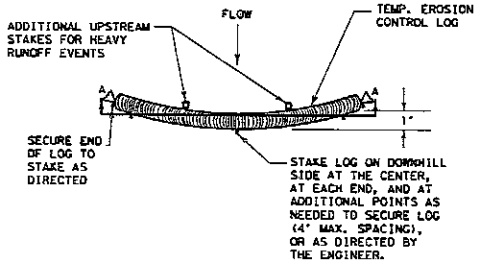
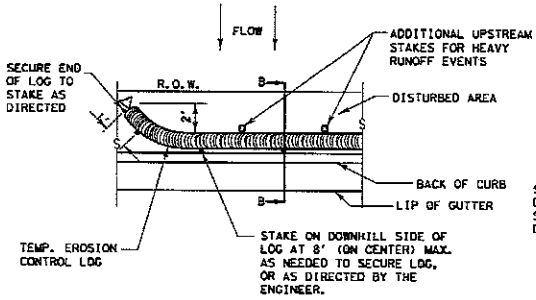
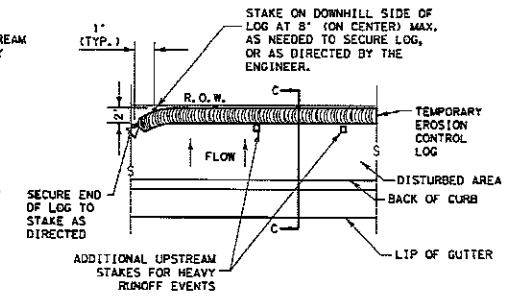
DATE:
FILE:



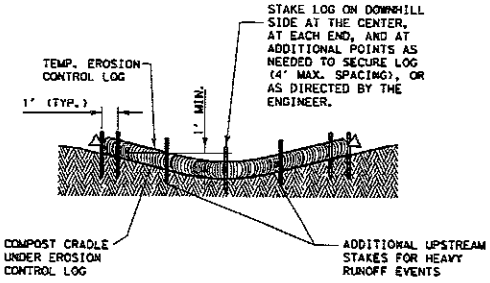
PLAN VIEW



PLAN VIEW



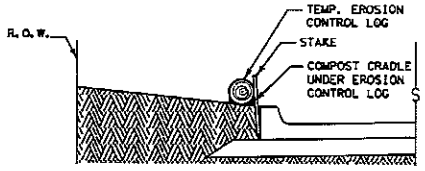
PLAN VIEW



SECTION A-A

EROSION CONTROL LOG DAM

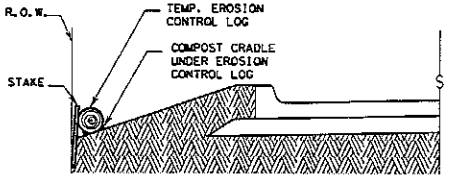
CL-D



SECTION B-B

EROSION CONTROL LOG AT BACK OF CURB

CL-BOC



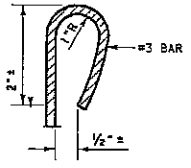
SECTION C-C

EROSION CONTROL LOG AT EDGE OF RIGHT-OF-WAY

CL-ROW

LEGEND

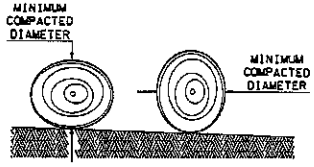
- CL-D — EROSION CONTROL LOG DAM
- CL-BOC — EROSION CONTROL LOG AT BACK OF CURB
- CL-ROW — EROSION CONTROL LOG AT EDGE OF RIGHT-OF-WAY



REBAR STAKE DETAIL

GENERAL NOTES:

1. EROSION CONTROL LOGS SHALL BE INSTALLED IN ACCORDANCE WITH MANFACTURER'S RECOMMENDATIONS, OR AS DIRECTED BY THE ENGINEER.
2. LENGTHS OF EROSION CONTROL LOGS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND AS REQUIRED FOR THE PURPOSE INTENDED.
3. UNLESS OTHERWISE DIRECTED, USE BIODEGRADABLE OR PHOTODEGRADABLE CONTAINMENT MESH ONLY WHERE LOG WILL REMAIN IN PLACE AS PART OF A VEGETATIVE SYSTEM. FOR TEMPORARY INSTALLATIONS, USE RECYCLABLE CONTAINMENT MESH.
4. FILL LOGS WITH SUFFICIENT FILTER MATERIAL TO ACHIEVE THE MINIMUM COMPACTED DIAMETER SPECIFIED IN THE PLANS WITHOUT EXCESSIVE DEFORMATION.
5. STAKES SHALL BE 2" X 2" WOOD OR #3 REBAR, 2'-4' LONG, EMBEDDED SUCH THAT 2" PROTRUDES ABOVE LOG, OR AS DIRECTED BY THE ENGINEER.
6. DO NOT PLACE STAKES THROUGH CONTAINMENT MESH.
7. COMPOST CRADLE MATERIAL IS INCIDENTAL & WILL NOT BE PAID FOR SEPARATELY.
8. SANDBAGS USED AS ANCHORS SHALL BE PLACED ON TOP OF LOGS & SHALL BE OF SUFFICIENT SIZE TO HOLD LOGS IN PLACE.
9. TURN THE ENDS OF EACH ROW OF LOGS UPSLOPE TO PREVENT RUNOFF FROM FLOWING AROUND THE LOG.
10. FOR HEAVY RUNOFF EVENTS, ADDITIONAL UPSTREAM STAKES MAY BE NECESSARY TO KEEP LOG FROM FOLDING IN ON ITSELF.



DIAMETER MEASUREMENTS OF EROSION CONTROL LOGS SPECIFIED IN PLANS

SEDIMENT BASIN & TRAP USAGE GUIDELINES

An erosion control log sediment trap may be used to filter sediment out of runoff draining from an unstabilized area.

Log Traps: The drainage area for a sediment trap should not exceed 5 acres. The trap capacity should be 1800 CF/acre (0.5" over the drainage area).

Control logs should be placed in the following locations:
1. Within drainage ditches spaced as needed or min. 500' on center
2. Immediately preceding ditch inlets or drain inlets
3. Just before the drainage enters a water course
4. Just before the drainage leaves the right of way
5. Just before the drainage leaves the construction limits where drainage flows away from the project.

The logs should be cleaned when the sediment has accumulated to a depth of 1/2 the log diameter.

Cleaning and removal of accumulated sediment deposits is incidental and will not be paid for separately.

SHEET 1 OF 3

Texas Department of Transportation — Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

EROSION CONTROL LOG

EC(9)-16

FILE: ec916	DW: TxDOT	CK: KM	DW: LS/PT	CK: LS
© TxDOT: JULY 2016	CONT	SECT	JOB	HIGHWAY
REVISIONS	DIST	COUNTY		SHEET NO.

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DATE:
FILE:

GENERAL NOTES

1. For long term stationary work zones on freeways, drums shall be used as the primary channelizing device.
2. For intermediate term stationary work zones on freeways, drums should be used as the primary channelizing device but may be replaced in tangent sections by vertical panels, or 42" two-piece cones. In tangent sections, one-piece cones may be used with the approval of the Engineer but only if personnel are present on the project at all times to maintain the cones in proper position and location.
3. For short term stationary work zones on freeways, drums are the preferred channelizing device but may be replaced in tapers, transitions and tangent sections by vertical panels, two-piece cones or one-piece cones as approved by the Engineer.
4. Drums and all related items shall comply with the requirements of the current version of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) and the "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
5. Drums, bases, and related materials shall exhibit good workmanship and shall be free from objectionable marks or defects that would adversely affect their appearance or serviceability.
6. The Contractor shall have a maximum of 24 hours to replace any plastic drums identified for replacement by the Engineer/Inspector. The replacement device must be an approved device.

GENERAL DESIGN REQUIREMENTS

Pre-qualified plastic drums shall meet the following requirements:

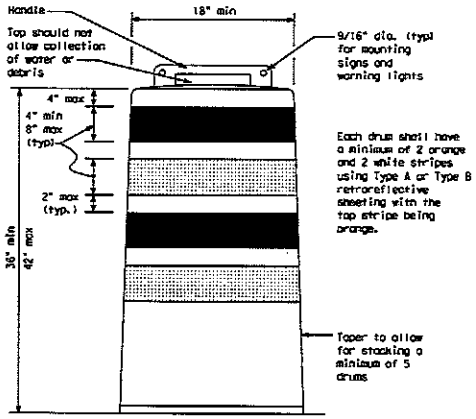
1. Plastic drums shall be a two-piece design; the "body" of the drum shall be the top portion and the "base" shall be the bottom.
2. The body and base shall lock together in such a manner that the body separates from the base when impacted by a vehicle traveling at a speed of 20 MPH or greater but prevents accidental separation due to normal handling and/or air turbulence created by passing vehicles.
3. Plastic drums shall be constructed of lightweight flexible, and deformable materials. The Contractor shall NOT use metal drums or single piece plastic drums as channelization devices or sign supports.
4. Drums shall present a profile that is a minimum of 18 inches in width at the 36 inch height when viewed from any direction. The height of drum unit (body installed on base) shall be a minimum of 36 inches and a maximum of 42 inches.
5. The top of the drum shall have a built-in handle for easy pickup and shall be designed to drain water and not collect debris. The handle shall have a minimum of two widely spaced 9/16 inch diameter holes to allow attachment of a warning light, warning reflector unit or approved compliant sign.
6. The exterior of the drum body shall have a minimum of four alternating orange and white retroreflective circumferential stripes not less than 4 inches nor greater than 8 inches in width. Any non-reflectorized space between any two adjacent stripes shall not exceed 2 inches in width.
7. Bases shall have a maximum width of 36 inches, a maximum height of 4 inches, and a minimum of two footholds of sufficient size to allow base to be held down while separating the drum body from the base.
8. Plastic drums shall be constructed of ultra-violet stabilized, orange, high-density polyethylene (HDPE) or other approved material.
9. Drum body shall have a maximum unballasted weight of 11 lbs.
10. Drum and base shall be marked with manufacturer's name and model number.

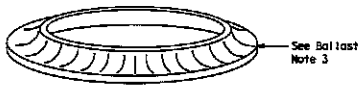
RETROREFLECTIVE SHEETING

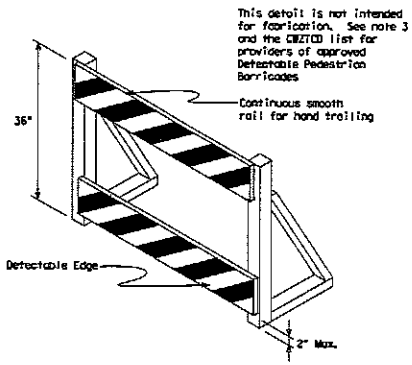
1. The stripes used on drums shall be constructed of sheeting meeting the color and retroreflectivity requirements of Departmental Materials Specification DMS-8300, "Sign Face Materials." Type A or Type B reflective sheeting shall be supplied unless otherwise specified in the plans.
2. The sheeting shall be suitable for use on and shall adhere to the drum surface such that, upon vehicular impact, the sheeting shall remain adhered in-place and exhibit no delaminating, cracking, or loss of retroreflectivity other than that loss due to abrasion of the sheeting surface.

BALLAST

1. Unballasted bases shall be large enough to hold up to 50 lbs. of sand. This base, when filled with the ballast material, should weigh between 35 lbs (minimum) and 50 lbs (maximum). The ballast may be sand in one to three sandbags separate from the base, sand in a sand-filled plastic base, or other ballasting devices as approved by the Engineer. Stacking of sandbags will be allowed, however height of sandbags above pavement surface may not exceed 12 inches.
2. Bases with built-in ballast shall weigh between 40 lbs. and 50 lbs. Built-in ballast can be constructed of an integral crush rubber base or a solid rubber base.
3. Recycled truck tire sidewalls may be used for ballast on drums approved for this type of ballast on the CWZTCD list.
4. The ballast shall not be heavy objects, water, or any material that would become hazardous to motorists, pedestrians, or workers when the drum is struck by a vehicle.
5. When used in regions susceptible to freezing, drums shall have drainage holes in the bottoms so that water will not collect and freeze becoming a hazard when struck by a vehicle.
6. Ballast shall not be placed on top of drums.
7. Adhesives may be used to secure base of drums to pavement.



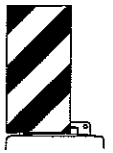




DETECTABLE PEDESTRIAN BARRICADES

1. When existing pedestrian facilities are disrupted, closed, or relocated in a TTC zone, the temporary facilities shall be detectable and include accessibility features consistent with the features present in the existing pedestrian facility. Refer to WZ(BTS)-21 for Pedestrian Control requirements for Sidewalk Diversions, Sidewalk Detours and Crosswalk Closures.
2. Where pedestrians with visual disabilities normally use the closed sidewalk, a Detectable Pedestrian Barricade shall be placed across the full width of the closed sidewalk instead of a Type 3 Barricade.
3. Detectable pedestrian barricades similar to the one pictured above, longitudinal channelizing devices, some concrete barriers, and wood or chain link fencing with a continuous detectable edging can satisfactorily delineate a pedestrian path.
4. Tape, rope, or plastic chain strung between devices are not detectable, do not comply with the design standards in the "Americans with Disabilities Act Accessibility Guidelines (ADAAG)" and should not be used as a control for pedestrian movements.
5. Warning lights shall not be attached to detectable pedestrian barricades.
6. Detectable pedestrian barricades should use 8" nominal barricade rails as shown on BC(10) provided that the top rail provides a smooth continuous rail suitable for hand trailing with no splinters, burrs, or sharp edges.

18" x 24" Sign
(Maximum Sign Dimension)
Chevron CW1-8, Opposing Traffic Lane Divider, Driveway Sign D70a, Keep Right R4 series or other signs as approved by Engineer



12" x 24"
Vertical Panel
mount with diagonals sloping down towards travel way

Plywood, Aluminum or Metal sign substrates shall NOT be used on plastic drums

SIGNS, CHEVRONS, AND VERTICAL PANELS MOUNTED ON PLASTIC DRUMS

1. Signs used on plastic drums shall be manufactured using substrates listed on the CWZTCD.
2. Chevrons and other work zone signs with an orange background shall be manufactured with Type B_{FL} or Type C_{FL} Orange sheeting meeting the color and retroreflectivity requirements of DMS-8300, "Sign Face Material," unless otherwise specified in the plans.
3. Vertical Panels shall be manufactured with orange and white sheeting meeting the requirements of DMS-8300 Type A or Type B. Diagonal stripes on Vertical Panels shall slope down toward the intended traveled lane.
4. Other sign messages (text or symbolic) may be used as approved by the Engineer. Sign dimensions shall not exceed 18 inches in width or 24 inches in height, except for the R9 series signs discussed in note 8 below.
5. Signs shall be installed using a 1/2 inch bolt (nominal) and nut, two washers, and one locking washer for each connection.
6. Mounting bolts and nuts shall be fully engaged and adequately torqued. Bolts should not extend more than 1/2 inch beyond nuts.
7. Chevrons may be placed on drums on the outside of curves, on merging tapers or on shifting tapers. When used in these locations, they may be placed on every drum or spaced not more than on every third drum. A minimum of three (3) should be used at each location called for in the plans.
8. R9-9, R9-10, R9-11 and R9-11a Sidewalk Closed signs which are 24 inches wide may be mounted on plastic drums, with approval of the Engineer.

SHEET 8 OF 12

Texas Department of Transportation | *Traffic Safety Division Standard*

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(8)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS				
4-03 8-14	DIST	COUNTY		SHEET NO.
9-07 5-21				
7-13				

102

JEFFERSON COUNTY PURCHASING DEPARTMENT
Deborah L. Clark, Purchasing Agent

1149 Pearl Street
1st Floor, Beaumont, TX 77701

OFFICE MAIN: (409) 835-8593
FAX: (409) 835-8456

Addendum to IFB

IFB NUMBER: IFB 22-028/JW

IFB TITLE: Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport

IFB DUE BY: **11:00 am CT, Wednesday, August 24, 2022**

ADDENDUM NO.: 1

ISSUED (DATE): August 1, 2022

To Bidder: This Addendum is an integral part of the IFB package under consideration by you as a Bidder in connection with the subject matter herein identified. Jefferson County deems all sealed bids to have been proffered in recognition and consideration of the entire IFB Specifications Package – *including all addenda.* For purposes of clarification, **receipt of this present Addendum by a Bidder should be evidenced by returning it (signed) as part of the Bidder's sealed bid submission.** If the bid submission has already been received by the Jefferson County Purchasing Department, Bidder should return this addendum in a separate sealed envelope, clearly marked with the IFB Title, IFB Number, and IFB Opening Date and Time, as stated above.

Reason for Issuance of this Addendum: Clarifications (Attachment)

The information included herein is hereby incorporated into the documents of this present bid matter and supersedes any conflicting documents or portion thereof previously issued.

Receipt of this Addendum is hereby acknowledged by the undersigned Respondent:

ATTEST:

Mandy Bunn
Witness

Mandy Bunn

Dusty Carpenter
Witness

Authorized Signature (Respondent) LeShort

Vice President
Title of Person Signing Above

Mason Construction, LLC
Typed Name of Business or Individual

6285 Walden Rd, Beaumont, TX 77707
Address

Approved by ____ Date: _____

TSG
The Solco Group, LLC

ADDENDUM N0. 1

DATE: July 29,2022

OWNER: Jefferson County, Texas - Jack Brooks Regional Airport

PROJECT: FB 22-028/JW Rehabilitation of Fuel Farm Pavement at Jack Brooks Regional Airport

TSG Project No: 2021-10-1092

DEADLINE FOR QUESTIONS: Email questions to Jamey West, Contract Specialist at jwest@co.jefferson.tx.us by **Monday, August 15, 2022, at 5:00 p.m.**,

SUBMITTAL DEADLINE: Bid date **Wednesday, August 24, 2022, at 11:00 a.m.**, Central Standard Time

The additions, omissions, clarifications, and corrections herein shall be made to the contract documents, plans and specifications, for the Rehabilitation of Fuel Farm Pavement Project. **All Bidders must acknowledge receipt of this addendum on the appropriate section of the Bid Form and include with the Contract Documents.**

Addendum references are summarized below.

A. SECTION 2: FEDERAL MANDATED CONTRACT PROVISIONS

Breach of Contract Terms/Remedies (ADD following Paragraph)

Source: FAA AC 150/5370-10H 12/21/2018; Section 80 Execution and Progress pg. 51

Failure to complete on time. For each calendar day or working day, as specified in the contract, that any work remains uncompleted after the contract time (including all extensions and adjustments as provided in paragraph 80-07, Determination and Extension of Contract Time) the sum specified in the contract and proposal as liquidated damages (LD) will be deducted from any money due or to become due the Contractor or their own surety. Such deducted sums shall not be deducted as a penalty but shall be considered as liquidation of a reasonable portion of damages including but not limited to additional engineering services that will be incurred by the Owner should the Contractor fail to complete the work in the time provided in their contract.

Schedule – 1 Phase
Liquidated Damages Cost - $500/day
Allowed Construction Time – 30 Calendar Days

B. SECTION 4: MINIMUM SPECIFICATIONS

Drawings reflect the scope of work as described on page 37.

Addendum Prepared By:

Kelvin Solco, P.E.,
Principal

JEFFERSON COUNTY PURCHASING DEPARTMENT
Deborah L. Clark, Purchasing Agent

1149 Pearl Street
1st Floor, Beaumont, TX 77701

OFFICE MAIN: (409) 835-8593
FAX: (409) 835-8456

Addendum to IFB

IFB NUMBER: IFB 22-028/JW

IFB TITLE: Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional

IFB DUE BY: Airport **11:00 am CT, Wednesday, August 24, 2022**

ADDENDUM NO.: 2

ISSUED (DATE): August 17, 2022

To Bidder: This Addendum is an integral part of the IFB package under consideration by you as a Bidder in connection with the subject matter herein identified. Jefferson County deems all sealed bids to have been proffered in recognition and consideration of the entire IFB Specifications Package – *including all addenda.* For purposes of clarification, **receipt of this present Addendum by a Bidder should be evidenced by returning it (signed) as part of the Bidder's sealed bid submission.** If the bid submission has already been received by the Jefferson County Purchasing Department, Bidder should return this addendum in a separate sealed envelope, clearly marked with the IFB Title, IFB Number, and IFB Opening Date and Time, as stated above.

REASONS FOR ISSUANCE OF THIS ADDENDUM:

- **Clarifications (See Pages 1-4)**
- **REVISED PLAN SHEET NO. 3**
- **REVISED BID FORM PAGE 42 (REPLACEMENT PAGE)**

The information included herein is hereby incorporated into the documents of this present bid matter and supersedes any conflicting documents or portion thereof previously issued.

Receipt of this Addendum is hereby acknowledged by the undersigned Respondent:

ATTEST:

Mandy Burn
Witness Mandy Burn

Witness Dusty Carpenter

Approved by ____ Date: _____

Authorized Signature (Respondent) Le Short

Vice President
Title of Person Signing Above

Mason Construction, LLC
Typed Name of Business or Individual

6285 Walden Rd, Beaumont, TX 77707
Address

TSG
The Solco Group, LLC

FB 22-028/JW ADDENDUM N0. 2

DATE: 8/10/2022

OWNER: Jefferson County/Jack Brooks Regional Airport

PROJECT: FB 22-028/JW Rehabilitation of Fuel Farm Pavement at Jack Brooks Regional Airport

TSG Project No: 2021-10-1092

DEADLINE FOR QUESTIONS: Email questions to Jamey West. Contract Specialist at jwest@co.jefferson.tx.us by **Thursday, August 18, 2022, at 5:00 p.m.**

SUBMITTAL DEADLINE: Bid date **Wednesday, August 24, 2022, at 11:00 a.m.**, Central Standard Time.

The additions, omissions, clarifications, and corrections herein shall be made to the contract documents, plans and specifications, for the Rehabilitation of Fuel Farm Pavement Project. **All Bidders must acknowledge receipt of this addendum on the appropriate section of the Bid Form and include with the Contract Documents.**

Addendum references to answer questions posted by potential bidders are summarized below.

1. CONTRACT TIME: Can the time of completion be revised to 45 or 60 calendar days? Given the phasing and access issues, 30 days is going to be difficult. **30 days is preferred timeframe. The access issues and project phasing concerns are clarified in section 5 of this addendum.**

   Can we work Sundays? **Yes**

2. ALLOWANCE FOR STORM SEWER PIPE: Is the County going to provide an amount to input for the allowance? **No**

   Without more information, it is very difficult to assess what is required. **A core sample taken during a geotechnical investigation indicated an accumulation of water beneath a section of the concrete panels. This accumulation of water is the likely cause of the panel failures. The purpose of the allowance is to provide compensation for the contractor to locate the source of the water accumulation and repair a broken water line if encountered. The onsite resident project representative (RPR) will work with contractor after the panels are removed to examine the area and resolve the issue before new concrete is placed.**

PO BOX 22001 BEAUMONT, TEXAS 77720
817-564-6895 / 833-591-5780
https://thesolcogroup.com

3. CONCRETE SLUMP/PUMPING: Can the max slump allowed be revised to 5" to 6" so we can pump the concrete? It would help speed up the schedule if pumping is allowed but the slump requirements would have to be modified.

No. The contract specifications apply as indicated in P-501-7 - Flexural strength. Test specimens shall be prepared in accordance with ASTM C192 and tested in accordance with ASTM C78. At the start of the project, the Contractor shall determine an allowable slump as determined by ASTM C143 not to exceed 2 inches (50 mm) for slip-form placement. For fixed-form placement, the slump shall not exceed 3 inches (75 mm). For hand placement, the slump shall not exceed 4 inches (100 mm)

4. CONCRETE FINISHING EQUIPMENT: Can you clarify what finishing equipment will be allowed? Is this area considered irregular?

This is considered irregular. Any appropriate equipment may be used as long as the concrete requirements are met, such as smoothness, etc.

A slip form paver cannot be used in this location. Would a vibratory screed be allowed?
Yes – as long as concrete as specified is achieved.

5. ACCESS: Please clarify the extent we must accommodate airport access. Will we have to shutdown work at anytime to allow planes to fuel, etc.?

This construction project shall take place outside of the Aircraft Operational Area (AOA). The contractor shall NOT access the AOA without the explicit permission of the airport owner. Further clarification on the possibility of accommodating fueling operations during the construction project includes the following:

a. **Aircraft will not enter into the construction area.**
b. **All construction equipment shall remain outside of the AOA.**
c. **Fuel trucks will be used to provide fuel to aircraft in the AOA when needed.**
d. **Fueling operations will cease during the concrete demolition phase of this project.**
e. **In the event that emergency access to the fuel farm tanks is needed, or anticipated to be needed during this construction period, the airport owner and the engineer will coordinate with the contractor to phase the concrete placement in a manner that allows an emergency lane for fuel truck access. Emergency fueling operations will only use this temporary emergency lane after sufficient concrete curing has occurred.**

f. **The contractor will need to be prepared to accommodate a temporary interruption of work only for a brief period of time to allow for emergency fueling operations.**
g. **The contractor will need to ensure there is a safe distance between ongoing construction activities and emergency fueling operations.**

Addendum Prepared By:

Kelvin Solco, PE,
Principal

The Solco Group, LLC

FB 22-028/JW ADDENDUM N0. 2

DATE: 8/15/2022

OWNER: Jefferson County/Jack Brooks Regional Airport

PROJECT: FB 22-028/JW Rehabilitation of Fuel Farm Pavement at Jack Brooks Regional Airport

TSG Project No: 2021-10-1092

DEADLINE FOR QUESTIONS: email questions to Jamey West. Contract Specialist at jwest@co.jefferson.tx.us by **Thursday, August 15, 2022, at 5:00 p.m.,**

SUBMITTAL DEADLINE: Bid date **Wednesday, August 24, 2022, at 11:00 a.m.**, Central Standard Time.

The additions, omissions, clarifications, and corrections herein shall be made to the contract documents, plans and specifications, for the Rehabilitation of Fuel Farm Pavement Project. **All Bidders must acknowledge receipt of this addendum on the appropriate section of the Bid Form and include with the Contract Documents.**

Addendum references to answer questions posted by potential bidders are summarized below.

1. Who is responsible for Materials Testing? All quality assurance testing shall be done by the Contractor. Please see the Items below:
   a. Item 152-5, section 152-2.10 under paragraph 2, last sentence.
   b. Item 155-4, section 155-6.10 and a. Density Paragraph
   c. Item 501-7, section 501-3.3 f., 501-3.4 Concrete Mix Submittal, 501-4.8 c. Consolidation, 501-4-11 e. Straightedge testing and surface correction., P-501-24 CONTRACTOR QUALITY CONTROL (CQC)
   d. Page 8 of 61 of bid documents section 2.12.
2. DRAWING PLAN SHEET 3 – Replace Sheet 3 with New Sheet 3. Arrow for "One-Way" traffic corrected.
3. BID DOCUMENTS – Replace pg. 42 with New Page to include TOTAL BID LINE.

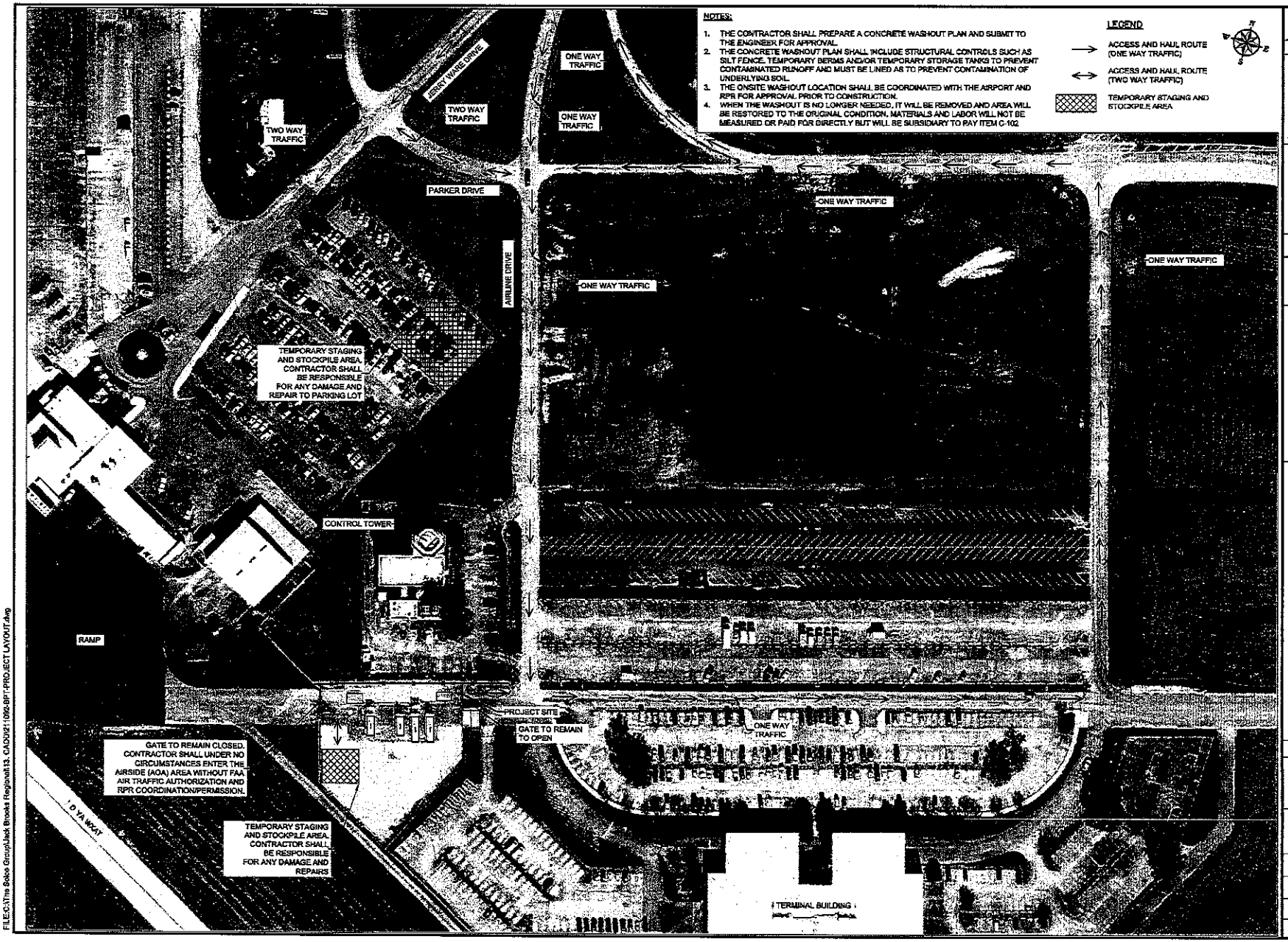
Addendum Prepared By:

Kelvin Solco, PE,
President / CEO

STATE OF TEXAS
KELVIN L SOLCO
78161
LICENSED
PROFESSIONAL ENGINEER

PO BOX 22001 BEAUMONT, TEXAS 77720
817-564-6895 / 833-591-5780
https://thesolcogroup.com

ADDENDUM NO. 2 - REVISED PLAN SHEET NO. 3 (IFB 22-028/JW)



JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #22526

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
PROJECT LAYOUT AND PHASING PLAN

DRAWING NUMBER: C-001

SHEET NUMBER: 3 SHEET TOTAL: 11

SCALE: 1" = 80' (FULL) 1"=120' (HALF)

DRAWN BY: AM CHECKED BY: KS

FILE:\The Boko Group\Jack Brooks Region\t13. CADD\21-090.BPT-PROJECT LAYOUT.dwg

Jefferson County – Jack Brooks Regional Airport, Texas
Fuel Farm Pavement PRE-BID Conference Sign-in Sheet
~~Friday~~, August 4, 2022 – 2:00 PM
Thursday

Name	Organization / Company / Firm	Email Address	√ = I am a DBE Firm	Phone Number
McClain McDonald	L&L General Contractors	landline@attnet		409-796-1344
Mark Maxwell	STI Group	mmaxwell@setxind.com		713-240-2633
Kevin Cook	Hartmann Building Specialties	KCook@HBSLTD.NET		409-866-6103
Jeffrey Buxton	Atlas Technical Consultants	jeffrey.buxton@oneATLAS.com		409-499-7529
Esther Salazar	RAMTEX	Esther@Ramtex.net		409-983-5555
Amber English	Brizo Construction	amber.english@brizoConstruction.com		832.799.1760
Elizabeth LeBlanc	Jack Brooks Regional Airport	ELeBlanc@co.jefferson.tx.us		(409)719-4950

Jefferson County – Jack Brooks Regional Airport, Texas
Fuel Farm Pavement PRE-BID Conference Sign-in Sheet
~~Friday~~, August 4, 2022 – 2:00 PM
Thursday

Name	Organization / Company / Firm	Email Address	√ = I am a DBE Firm	Phone Number
KELVIN L. SOLCO	THE SOLCO GROUP LLC	KELVIN@THESOLCOGROUP.COM	✓	409-237-0200
DAN BLACKSHER	BRYSTAR CONTRACTING	RON@BRYSTAR.COM		409-842-6768
Thomas Kelley for Brandon Harrison	ALLCO	BHARRISON@ALLCO.COM		409-860-4459
JIM SHELL	Setex Construction	Jims@setexcoast.com		409 842-8181
Juan Hernandez	Gulf Coast	juan.hernandez@gc-texas.com		409-781-9813
Butch Hart	Mason Const.	Butch@masonconstruction.net		409) 842-4455
David Duhon	Tolunay-Wong Eng	dduhon@tweinc.com		(337)540-8746

Jefferson County – Jack Brooks Regional Airport, Texas
Fuel Farm Pavement PRE-BID Conference Sign-in Sheet
~~Friday~~, August 4, 2022 – 2:00 PM
Thursday

Name	Organization / Company / Firm	Email Address	√ = I am a DBE Firm	Phone Number
Robert Heufelder	RCI	Robert.Heufelder EPC.com		409-926-6737
Jamey West	Jefferson County Purchasing Dept.	jwest@co.jefferson.tx.us		409.835.8793
Alex Rupp	Airport	Arupp e Co.Jefferson.Tx.us		409-719-4950

Form **W-9**
(Rev. October 2018)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

▶ **Go to *www.irs.gov/FormW9* for instructions and the latest information.**

Give Form to the requester. Do not send to the IRS.

Print or type. See Specific Instructions on page 3.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.
Mason Construction, LLC

2 Business name/disregarded entity name, if different from above

3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only one of the following seven boxes.

☐ Individual/sole proprietor or single-member LLC ☐ C Corporation ☐ S Corporation ☐ Partnership ☐ Trust/estate

☑ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▶ **S**

Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is **not** disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.

☐ Other (see instructions) ▶

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any) _____

Exemption from FATCA reporting code (if any) _____

(Applies to accounts maintained outside the U.S.)

5 Address (number, street, and apt. or suite no.) See instructions.
PO Box 20057

Requester's name and address (optional)

6 City, state, and ZIP code
Beaumont TX 77720

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number
			–			–				

or

Employer identification number
7	4	–	1	6	7	5	5	1	7

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here | **Signature of U.S. person** ▶ Theresa Webb | **Date** ▶ 03/22/2022

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to *www.irs.gov/FormW9*.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, *later.*

HIGGINBOTHAM™
Global Reach. Local Touch. Single Source.

P.O. Box 1609
Nederland, TX 77627
Tel: (409) 721-6400
Fax: (409) 721-9600
www.higginbotham.net

1/28/2022

Mason Construction LLC
PO Box 20057
Beaumont, TX 77720

Re: Workers Compensation Experience Modification History

To Whom It May Concern:

Listed below is the Workers Compensation experience modification information for Mason Construction LLC for the 2022-23 policy period and the five prior years:

Effective 3/1/2022 – 3/1/2023 .74
Effective 3/1/2021 – 3/1/2022 .71
Effective 3/1/2020 – 3/1/2021 .72
Effective 3/1/2019 – 3/1/2020 .65
Effective 3/1/2018 – 3/1/2019 .57
Effective 3/1/2017 – 3/1/2018 .62

Should you have any questions or if our agency can be of further service, please do not hesitate to contact us:

Higginbotham
PO Box 1609
Nederland, TX 77627
(409) 721-6400 phone
(409) 721-9600 fax

Sincerely,

Lori Duvall

Lori Duvall, CISR Account Manager

OSHA's Form 300 (Rev. 01/2004)

Log of Work-Related Injuries and Illnesses

Attention: This form contains information relating to employee health and must be used in a manner that protects the confidentiality of employees to the extent possible while the information is being used for occupational safety and health purposes.

Year 2021

U.S. Department of Labor
Occupational Safety and Health Administration

You must record information about every work-related injury or illness that involves loss of consciousness, restricted work activity or job transfer, days away from work, or medical treatment beyond first aid. You must also record significant work-related injuries and illnesses that are diagnosed by a physician or licensed health care professional. You must also record work-related injuries and illnesses that meet any of the specific recording criteria listed in 29 CFR 1904.8 through 1904.12. Feel free to use two lines for a single case if you need to. You must complete an injury and illness incident report (OSHA Form 301) or equivalent form for each injury or illness recorded on this form. If you're not sure whether a case is recordable, call your local OSHA office for help.

Form approved OMB no. 1218-0176

Establishment name: Mason Construction, LLC.

City: Beaumont State: TX

Identify the person				Describe the case		Classify the case											
						CHECK ONLY ONE box for each case based on the most serious outcome for that case:				Enter the number of days the injured or ill worker was:		Check the "injury" column or choose one type of illness:					
(A) Case No.	(B) Employee's Name	(C) Job Title (e.g., Welder)	(D) Date of injury or onset of illness (mo./day)	(E) Where the event occurred (e.g. Loading dock north end)	(F) Describe injury or illness, parts of body affected, and object/substance that directly injured or made person ill (e.g. Second degree burns on right forearm from acetylene torch)	Death	Days away from work	Remained at work: Job transfer or restriction	Remained at work: Other record-able cases	Away From Work (days)	On job transfer or restriction (days)	(M) Injury	Skin Disorder	Respiratory Condition	Poisoning	Hearing Loss	All other illnesses
						(G)	(H)	(I)	(J)	(K)	(L)	(1)	(2)	(3)	(4)	(5)	(6)
1	[redacted]	Operator	9/3	South Ave. A	Broken left wrist from falling from same level							x					
2																	
					Page totals	0	0	0	0	0	0	1	0	0	0	0	0

Be sure to transfer these totals to the Summary page (Form 300A) before you post it.

	Injury	Skin Disorder	Respiratory Condition	Poisoning	Hearing Loss	All other illnesses
	(1)	(2)	(3)	(4)	(5)	(6)

Public reporting burden for this collection of information is estimated to average 14 minutes per response, including time to review the instruction, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistics, Room N-3644, 200 Constitution Ave, NW, Washington, DC 20210. Do not send the completed forms to this office.

OSHA's Form 300A (Rev. 01/2004)

Summary of Work-Related Injuries and Illnesses

Year 2021

U.S. Department of Labor
Occupational Safety and Health Administration
Form approved OMB no. 1218-0176

All establishments covered by Part 1904 must complete this Summary page, even if no injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the log. If you had no cases write "0."

Employees, former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR 1904.35, in OSHA's Recordkeeping rule, for further details on the access provisions for these forms.

Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0	0	0	1
(G)	(H)	(I)	(J)

Number of Days

Total number of days away from work	Total number of days of job transfer or restriction
0	0
(K)	(L)

Injury and Illness Types

Total number of...	(M)		(M)
(1) Injury	1	(4) Poisoning	0
(2) Skin Disorder	0	(5) Hearing Loss	0
(3) Respiratory Condition	0	(6) All Other Illnesses	0

Post this Summary page from February 1 to April 30 of the year following the year covered by the form

Public reporting burden for this collection of information is estimated to average 58 minutes per response, including time to review the instruction, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistics, Room N-3644, 200 Constitution Ave, NW, Washington, DC 20210. Do not send the completed forms to this office.

Establishment information

Your establishment name: Mason Construction, LLC.

Street: 6285 Walden Rd.

City: Beaumont State: Texas Zip: 77707

Industry description (e.g., Manufacture of motor truck trailers)
Heavy Civil Construction

Standard Industrial Classification (SIC), if known (e.g., SIC 3715)
1629

OR North American Industrial Classification (NAICS), if known (e.g., 336212)
237990

Employment information

Annual average number of employees: 435

Total hours worked by all employees last year: 680,301

Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

Kelly Alford
Company executive

Corporate Safety Director
Title

(409)842-4455
Phone

1/10/2022
Date

OSHA's Form 300 (Rev. 01/2004)

Log of Work-Related Injuries and Illnesses

Attention: This form contains information relating to employee health and must be used in a manner that protects the confidentiality of employees to the extent possible while the information is being used for occupational safety and health purposes.

Year 2020

U.S. Department of Labor
Occupational Safety and Health Administration

You must record information about every work-related injury or illness that involves loss of consciousness, restricted work activity or job transfer, days away from work, or medical treatment beyond first aid. You must also record significant work-related injuries and illnesses that are diagnosed by a physician or licensed health care professional. You must also record work-related injuries and illnesses that meet any of the specific recording criteria listed in 29 CFR 1904.8 through 1904.12. Feel free to use two lines for a single case if you need to. You must complete an injury and illness incident report (OSHA Form 301) or equivalent form for each injury or illness recorded on this form. If you're not sure whether a case is recordable, call your local OSHA office for help.

Form approved OMB no. 1218-0176

Establishment name Mason Construction, LLC.

City Beaumont State TX

Identify the person			Describe the case			Classify the case											
						CHECK ONLY ONE box for each case based on the most serious outcome for that case:				Enter the number of days the injured or ill worker was:		Check the "injury" column or choose one type of illness:					
(A) Case No.	(B) Employee's Name	(C) Job Title (e.g., Welder)	(D) Date of injury or onset of illness (mo./day)	(E) Where the event occurred (e.g. Loading dock north end)	(F) Describe injury or illness, parts of body affected, and object/substance that directly injured or made person ill (e.g. Second degree burns on right forearm from acetylene torch)	Death	Days away from work	Remained at work		Away From Work (days)	On job transfer or restriction (days)	(M) Injury	Skin Disorder	Respiratory Condition	Poisoning	Hearing Loss	All other illnesses
								Job transfer or restriction	Other record-able cases								
						(G)	(H)	(I)	(J)	(K)	(L)	(1)	(2)	(3)	(4)	(5)	(6)
2																	
					Page totals	0	0	0	0	0	0	0	0	0	0	0	0

Be sure to transfer these totals to the Summary page (Form 300A) before you post it.

Injury (1) | Skin Disorder (2) | Respiratory Condition (3) | Poisoning (4) | Hearing Loss (5) | All other illnesses (6)

Public reporting burden for this collection of information is estimated to average 14 minutes per response, including time to review the instruction, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistics, Room N-3644, 200 Constitution Ave, NW, Washington, DC 20210. Do not send the completed forms to this office.

OSHA's Form 300A (Rev. 01/2004)

Summary of Work-Related Injuries and Illnesses

Year 2020

U.S. Department of Labor
Occupational Safety and Health Administration
Form approved OMB no. 1218-0176

All establishments covered by Part 1904 must complete this Summary page, even if no injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the log. If you had no cases write "0."

Employees, former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR 1904.35, in OSHA's Recordkeeping rule, for further details on the access provisions for these forms.

Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0	0	0	0
(G)	(H)	(I)	(J)

Number of Days

Total number of days away from work	Total number of days of job transfer or restriction
0	0
(K)	(L)

Injury and Illness Types

Total number of...	(M)		(M)
(1) Injury	0	(4) Poisoning	0
(2) Skin Disorder	0	(5) Hearing Loss	0
(3) Respiratory Condition	0	(6) All Other Illnesses	0

Post this Summary page from February 1 to April 30 of the year following the year covered by the form

Public reporting burden for this collection of information is estimated to average 58 minutes per response, including time to review the instruction, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistics, Room N-3644, 200 Constitution Ave. NW, Washington, DC 20210. Do not send the completed forms to this office.

Establishment information

Your establishment name: Mason Construction, LLC.

Street: 5285 Walden Rd.

City: Beaumont State: Texas Zip: 77707

Industry description (e.g., Manufacture of motor truck trailers)
Heavy Civil Construction

Standard Industrial Classification (SIC), if known (e.g., SIC 3715)
1 8 2 9

OR North American Industrial Classification (NAICS), if known (e.g., 336212)
2 3 7 9 9 0

Employment information

Annual average number of employees: 285

Total hours worked by all employees last year: 605,825

Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

Kelly Alford
Company executive

Corporate Safety Director
Title

(409)842-4455
Phone

1/7/2021
Date

OSHA's Form 300A (Rev. 01/2004)

Summary of Work-Related Injuries and Illnesses

Year 2019

U.S. Department of Labor
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

All establishments covered by Part 1904 must complete this Summary page, even if no injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete.

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the log. If you had no cases write "0."

Employees, former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR 1904.35, in OSHA's Recordkeeping rule, for further details on the access provisions for these forms.

Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0	0	0	2
(G)	(H)	(I)	(J)

Number of Days

Total number of days away from work	Total number of days of job transfer or restriction
0	0
(K)	(L)

Injury and Illness Types

Total number of...	(M)		
(1) Injury	2	(4) Poisoning	0
(2) Skin Disorder	0	(5) Hearing Loss	0
(3) Respiratory Condition	0	(6) All Other Illnesses	0

Post this Summary page from February 1 to April 30 of the year following the year covered by the form

Public reporting burden for this collection of information is estimated to average 58 minutes per response, including time to review the instruction, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistics, Room N-3644, 200 Constitution Ave. NW, Washington, DC 20210. Do not send the completed forms to this office.

Establishment information

Your establishment name: Mason Construction, LLC.

Street: 6285 Walden Rd.

City: Beaumont State: Texas Zip: 77707

Industry description (e.g., Manufacture of motor truck trailers):
Heavy Civil Construction

Standard Industrial Classification (SIC), if known (e.g., SIC 3715):
1629

OR North American Industrial Classification (NAICS), if known (e.g., 336212):
237990

Employment information

Annual average number of employees: 495

Total hours worked by all employees last year: 1,041,577

Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

Kelly Alford
Company executive

Corporate Safety Director
Title

(409)842-4455
Phone

1/13/2020
Date

OSHA's Form 300 (Rev. 01/2004)

Log of Work-Related Injuries and Illnesses

Attention: This form contains information relating to employee health and must be used in a manner that protects the confidentiality of employees to the extent possible while the information is being used for occupational safety and health purposes.

Year 2019

U.S. Department of Labor
Occupational Safety and Health Administration

You must record information about every work-related injury or illness that involves loss of consciousness, restricted work activity or job transfer, days away from work, or medical treatment beyond first aid. You must also record significant work-related injuries and illnesses that are diagnosed by a physician or licensed health care professional. You must also record work-related injuries and illnesses that meet any of the specific recording criteria listed in 29 CFR 1904.8 through 1904.12. Feel free to use two lines for a single case if you need to. You must complete an injury and illness incident report (OSHA Form 301) or equivalent form for each injury or illness recorded on this form. If you're not sure whether a case is recordable, call your local OSHA office for help.

Form approved OMB no. 1218-0176

Log good from January 1, 2019-December 31, 2019

Establishment name Mason Construction, LLC.

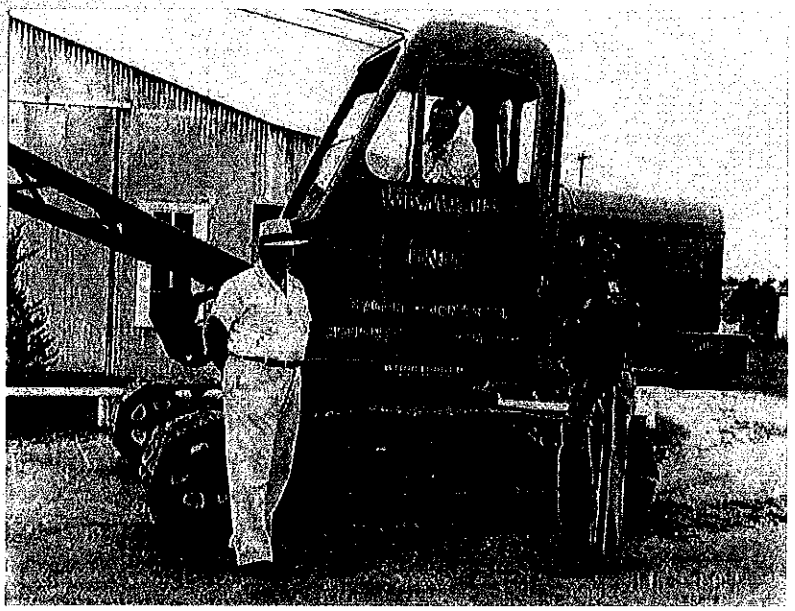
City Beaumont State TX

Identify the person				Describe the case		Classify the case											
(A) Case No.	(B) Employee's Name	(C) Job Title (e.g., Welder)	(D) Date of injury or onset of illness (mo./day)	(E) Where the event occurred (e.g. Loading dock north end)	(F) Describe injury or illness, parts of body affected, and object/substance that directly injured or made person ill (e.g. Second degree burns on right forearm from acetylene torch)	CHECK ONLY ONE box for each case based on the most serious outcome for that case:				Enter the number of days the injured or ill worker was:		Check the "injury" column or choose one type of illness:					
						Death	Days away from work	Remained at work: Job transfer or restriction	Remained at work: Other record-able cases	Away From Work (days)	On job transfer or restriction (days)	(M) Injury	Skin Disorder	Respiratory Condition	Poisoning	Hearing Loss	All other illnesses
						(G)	(H)	(I)	(J)	(K)	(L)	(1)	(2)	(3)	(4)	(5)	(6)
1	[redacted]	Helper	02/06	ExxonMobil	Right index finger				x			x					
2	[redacted]	Iron Worker	06/06	Iron Workers Apprentice Building	Cut to left pinky finger from tin roof				x			x					
				Page totals		0	0	0	2	0	0	2	0	0	0	0	0

Be sure to transfer these totals to the Summary page (Form 300A) before you post it.

Public reporting burden for this collection of information is estimated to average 14 minutes per response, including time to review the instruction, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistics, Room N-3644, 200 Constitution Ave, NW, Washington, DC 20210. Do not send the completed forms to this office.

COMPANY RESUME



MASON CONSTRUCTION

BUILDING ON A FOUNDATION OF INTEGRITY

-SINCE 1939-

UPDATED JULY 2022

COMPANY RESUME

MASON CONSTRUCTION, LLC

TEXAS LIMITED LIABILITY COMPANY - FOUNDED 1939
CONVERTED TO LLC MARCH 2019

CORPORATE STRUCTURE			
OFFICERS	OFFICE	PRIMARY RESPONSIBILITIES	EXPERIENCE
LE SHORT	MANAGING MEMBER	VP OF CONSTRUCTION OPERATIONS	26 YEARS
CHAD MASON	MANAGING MEMBER	VP OF BUSINESS ADMINISTRATION	25 YEARS
HALLIE BRADFORD	MANAGING MEMBER	VP OF ACCOUNTING OPERATIONS	23 YEARS

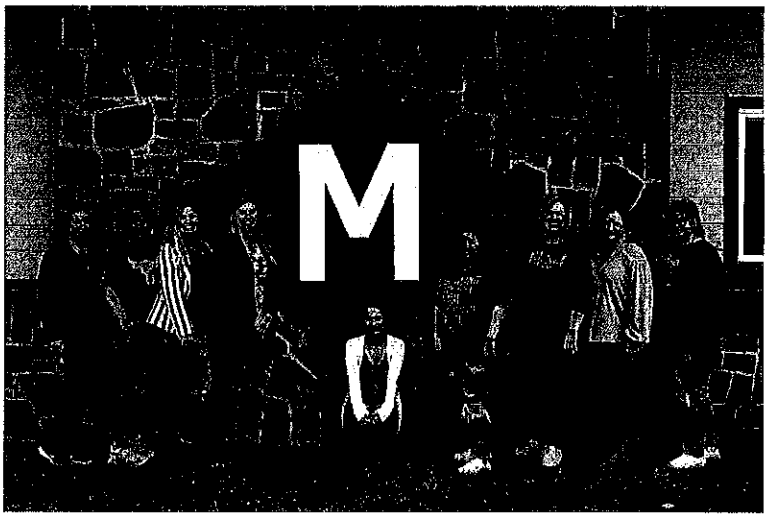
COMPANY RESUME

BUSINESS DEVELOPMENT

NAME	POSITION	RESPONSIBILITIES
KELLY ENSINGER	BUSINESS DEVELOPMENT	SALES & MARKETING
PAUL GRIFFIN	BUSINESS DEVELOPMENT	KEY ACCOUNTS, SALES, & STRATEGY

BUSINESS OPERATIONS

NAME	POSITION	RESPONSIBILITIES
THERESA WEBB	ACCOUNTING MANAGER	ACCOUNTING
TINA MARSHALL	A/P ASSISTANT	ACCOUNTS PAYABLE
BRITNI MILAM	A/R MANAGER	ACCOUNTS RECEIVABLE
GLENDA BRUNSON	A/R ASSISTANT	ACCOUNTS RECEIVABLE
JEREMY MASON	BUILDING & GROUNDS MANAGER	BUILDING & GROUNDS MANAGER
JENNIFER DAVIS	DATA PROCESSING / CODING	DATA PROCESSING / CODING
AMY ADAMS	HR / SAFETY COORDINATOR	HR / TRAINING / SAFETY
KYLEE MENARD	HR / SAFETY ASSISTANT	HR / TRAINING / SAFETY
MARK GONNERING	LEGAL / CONTRACTS MANAGER	LEGAL / CONTRACTS
JANA PRATHER	PAYROLL MANAGER	PAYROLL / BENEFITS
ISAAC ROBIN	PROGRAMMING SPECIALIST	PROGRAMMING SPECIALIST
BEAU BAZAR	PROGRAMMING SPECIALIST	PROGRAMMING SPECIALIST
ALEXIS JARRELL	RECEPTIONIST	RECEPTION & CUSTOMER SERVICE



COMPANY RESUME

CONSTRUCTION MANAGEMENT ORGANIZATION

NAME	POSITION	RESPONSIBILITIES
CHRIS DAVIS	LEAD PROJECT MANAGER / CHIEF ESTIMATOR	CIVIL – ESTIMATING & PROJECT MANAGEMENT
MANDY BUNN	ESTIMATING COORDINATOR	ESTIMATING COORDINATION / SCHEDULING / DOCUMENT CONTROL
BUBBA BARNES	PROJECT MANAGER / ESTIMATOR	CIVIL – ESTIMATING & PROJECT MANAGEMENT
DUSTY CARPENTER	PROJECT MANAGER / ESTIMATOR	CIVIL – ESTIMATING & PROJECT MANAGEMENT
TRENT LATINO	PROJECT MANAGER / ESTIMATOR	CIVIL – ESTIMATING & PROJECT MANAGEMENT
PHILLIP VERRETT, JR	PROJECT MANAGER / ESTIMATOR	CIVIL – ESTIMATING & PROJECT MANAGEMENT
ERIC WEATHERSBEE	PROJECT MANAGER / ESTIMATOR	CIVIL – ESTIMATING & PROJECT MANAGEMENT
KELLY ENSIGNER	PROJECT MANAGER / ESTIMATOR	CIVIL & ASPHALT – ESTIMATING & PROJECT MANAGEMENT
CORY LEDESMA	PROJECT MANAGER / ESTIMATOR	CIVIL & ASPHALT – ESTIMATING & PROJECT MANAGEMENT
BUTCH HART	PROJECT MANAGER / ESTIMATOR	CIVIL & HYDROEXCAVATION – ESTIMATING & PROJECT MANAGEMENT
JIMMIE DAVIS	PILING GENERAL MANAGER / ESTIMATOR	PILING – ESTIMATING & PROJECT MANAGEMENT
KYLE KIBODEAUX	PROJECT MANAGER / ESTIMATOR	PILING – ESTIMATING & PROJECT MANGER
DANNY GOSSETT	PROJECT MANGER / ESTIMATOR	PILING & CIVIL – ESTIMATING & PROJECT MANAGEMENT
JOE GERICKE	PROJECT MANAGER / ESTIMATOR	STRUCTURAL – ESTIMATING & PROJECT MANAGEMENT

CONSTRUCTION MANAGEMENT CONSULTANTS

NAME	POSITION	RESPONSIBILITIES
ERIC HUDNALL	CONSULTANT PROJECT MANAGER	SPECIAL PROJECTS TEAM
DAVID HUDSON	CONSULTANT PROJECT MANAGER	SPECIAL PROJECTS TEAM

COMPANY RESUME

FIELD OPERATIONS MANAGEMENT ORGANIZATION

NAME	POSITION	RESPONSIBILITIES
RANDALL OWENS	CONSTRUCTION EXECUTION MANAGER / GENERAL SUPERINTENDENT - CIVIL	FIELD OPERATIONS
JONATHON CHANDLER	GENERAL SUPERINTENDENT – PILING / CRANES & RIGGING	PILING FIELD OPERATIONS/CRANE & RIGGING LIFT DIRECTOR
AARON TOMPLAIT	GENERAL SUPERINTENDENT – STRUCTURAL STEEL / HEAVY RIGGING	STRUCTURAL STEEL FIELD OPERATIONS/ HEAVY LIFT COORDINATOR
ADAM MENARD	RESOURCE MANAGER	FIELD OPERATIONS / SCHEDULING & EXPEDITING
LANE NEWELL	EQUIPMENT / YARD MANAGER	EQUIPMENT MANAGEMENT & COORDINATION
GARRETT BOWMAN	RENTAL & FLEET MANAGER	HEAVY & LIGHT EQUIPMENT COORDINATION & SERVICE
MARIO LOPEZ	SHOP SUPERVISOR / CHIEF MECHANIC	HEAVY & LIGHT EQUIPMENT REPAIR & SERVICE

SAFETY / TRAINING ORGANIZATION

NAME	POSITION	RESPONSIBILITIES
KELLY ALFORD	CORPORATE SAFETY DIRECTOR	SAFETY/TRAINING/HUMAN RESOURCES
TERRY GRAY	FIELD SAFETY DIRECTOR	COMPLIANCE/TRAINING/HAZARD RECOGNITION
BRIAN JOHNSON	CORPORATE TRAINER	SAFETY/HR/CRAFT TRAINING & ASSESSMENT
JEREMIAH JOHNSON	SITE SAFETY SUPERINTENDENT	SITE SAFETY COMPLIANCE & TRAINING
PEDRO SAN JUAN	SITE SAFETY SUPERINTENDENT	SITE SAFETY COMPLIANCE & TRAINING
MICHAEL SMITH	SITE SAFETY SUPERINTENDENT	SITE SAFETY COMPLIANCE & TRAINING
RAY SOILEAU	SITE SAFETY SUPERINTENDENT	SITE SAFETY COMPLIANCE & TRAINING
CODY TAYLOR	SITE SAFETY SUPERINTENDENT	SITE SAFETY COMPLIANCE & TRAINING
AIMEE BELL	SITE SAFETY SUPERINTENDENT	SITE SAFETY COMPLIANCE & TRAINING
SCOTT EDWARDS	SITE SAFETY SPECIALIST	SITE SAFETY COMPLIANCE & TRAINING
WAYNE SWEAT	SITE SAFETY SPECIALIST	SITE SAFETY COMPLIANCE & TRAINING
BRANDON PEREZ	SITE SAFETY SPECIALIST	SITE SAFETY COMPLIANCE & TRAINING
REYNALDO FLORES, JR	SITE SAFETY SPECIALIST	SITE SAFETY COMPLIANCE & TRAINING

COMPANY RESUME

FIELD PROJECT CONTROLS

NAME	POSITION	RESPONSIBILITIES
JOSH FARROW	PROJECT CONTROLS MANAGER	MAJOR PROJECTS / SITE PROJECT CONTROLS
MASON HARRIS	PROJECT CONTROLS	SITE PROJECT CONTROLS

FIELD QUALITY ASSURANCE

NAME	POSITION	RESPONSIBILITIES
LOGAN HEBERT	QUALITY ASSURANCE / CONTROL	SITE QA/QC MANAGER
MICHAEL HEBERT	QUALITY ASSURANCE / CONTROL	SITE QA/QC MANAGER
ROGER MANNETTE	QUALITY ASSURANCE / CONTROL	SITE QA/QC MANAGER
JERRY PEREZ	QUALITY ASSURANCE / CONTROL	SITE QA/QC MANAGER
MICHAEL BROWDER	SURVEY / QUALITY ASSURANCE / CONTROL	SITE SURVEY / SITE QA/QC MANAGER

CONSTRUCTION FIELD SUPERVISION / MANAGEMENT

NAME	POSITION	RESPONSIBILITIES
TONY BERRY	SITE MANAGER / SUPERINTENDENT	MAJOR PROJECTS / SITE MANAGEMENT
BRIAN DUGAS	SITE MANAGER / SUPERINTENDENT	MAJOR PROJECTS / SITE MANAGEMENT
CHAD HANNON	SITE MANAGER / SUPERINTENDENT	MAJOR PROJECTS / SITE MANAGEMENT
KEITH LINDSEY	SITE MANAGER / SUPERINTENDENT	MAJOR PROJECTS / SITE MANAGEMENT
CHARLES WILLIAMS, JR	SITE MANAGER / SUPERINTENDENT	MAJOR PROJECTS / SITE MANAGEMENT

COMPANY RESUME

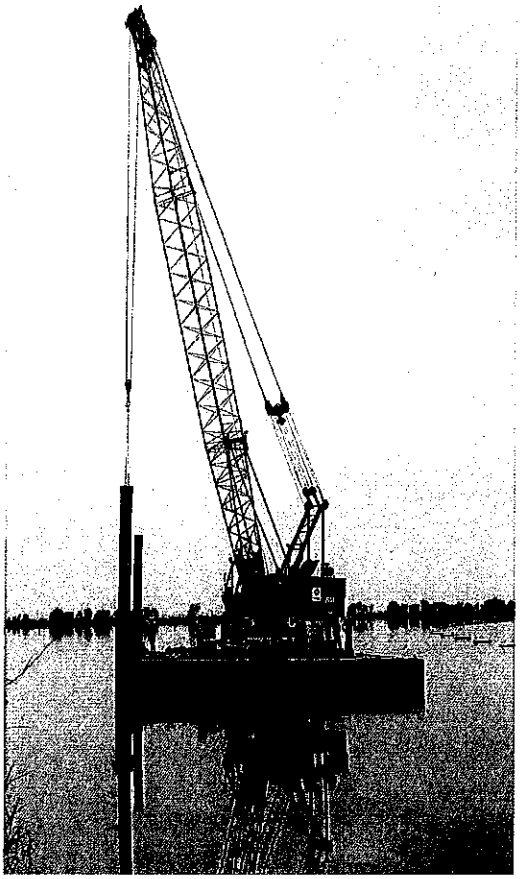
CONSTRUCTION FIELD SUPERVISION / MANAGEMENT

NAME	POSITION	RESPONSIBILITIES
CHRIS ARD	FIELD SUPERINTENDENT – ASPHALT	ROADS/PAVING/ASPHALT
JOSE H GONZALEZ	FIELD SUPERINTENDENT – CIVIL	FOUNDATIONS/PAVING/SITE WORK
JOSE R GONZALEZ	FIELD SUPERINTENDENT – CIVIL	FOUNDATIONS/PAVING/SITE WORK
JOE HAINES	FIELD SUPERINTENDENT – CIVIL	FOUNDATIONS/PAVING/SITE WORK
CHARLES JOHNSON	FIELD SUPERINTENDENT – CIVIL	FOUNDATIONS/PAVING/SITE WORK
ANTONIO LOPEZ	FIELD SUPERINTENDENT – CIVIL	FOUNDATIONS/PAVING/SITE WORK
ZANTH MENARD	FIELD SUPERINTENDENT – CIVIL	FOUNDATIONS/PAVING/SITE WORK
ESTEBAN LUNA	FIELD SUPERINTENDENT – CIVIL	FOUNDATIONS/PAVING/SITE WORK
FREDDY MONTALVO	FIELD SUPERINTENDENT – CIVIL	FOUNDATIONS/PAVING/SITE WORK
JULIO SANCHEZ	FIELD SUPERINTENDENT – CIVIL	FOUNDATIONS/PAVING/SITE WORK
JOAQUIN VERDIN	FIELD SUPERINTENDENT – CIVIL	FOUNDATIONS/PAVING/SITE WORK
LINO ZAMUDIO	FIELD SUPERINTENDENT – CIVIL	FOUNDATIONS/PAVING/SITE WORK
TREY BERRY	FIELD SUPERINTENDENT – CIVIL	FOUNDATIONS/PAVING/SITE WORK
STEVE BROWN	FIELD SUPERINTENDENT – CIVIL	FOUNDATIONS/PAVING/SITE WORK
JAY CREWS	FIELD SUPERINTENDENT – CIVIL	FOUNDATIONS/PAVING/SITE WORK
EUGER DEETS	FIELD SUPERINTENDENT – CIVIL	FOUNDATIONS/PAVING/SITE WORK
JOEY JAY	FIELD SUPERINTENDENT – CIVIL	FOUNDATIONS/PAVING/SITE WORK
RUSSELL VICKERY	FIELD SUPERINTENDENT – CIVIL	FOUNDATIONS/PAVING/SITE WORK
GREG DENTEN	FIELD SUPERINTENDENT – CIVIL	SITE PREP/SITE WORK
JOHN PURVIS	FIELD SUPERINTENDENT – CIVIL	SITE PREP/SITE WORK
ANDREW DUDLEY	FIELD SUPERINTENDENT – CIVIL	SITE PREP/SITE WORK/PAVING/FOUNDATIONS
DALE MARTIN	FIELD SUPERINTENDENT – CIVIL	SITE PREP/SITE WORK/PAVING/FOUNDATIONS
BRYAN PRESLEY	FIELD SUPERINTENDENT – CIVIL	SITE PREP/SITE WORK/PAVING/FOUNDATIONS
GRADY SPARKS	FIELD SUPERINTENDENT – CIVIL	SITE PREP/SITE WORK/PAVING/FOUNDATIONS
MIKE WEIBLE	FIELD SUPERINTENDENT – CIVIL	SITE PREP/SITE WORK/PAVING/FOUNDATIONS
BRUCE WORTHY	FIELD SUPERINTENDENT – CIVIL	SITE PREP/SITE WORK/PAVING/FOUNDATIONS
JASON WILLIAMSON	FIELD SUPERINTENDENT – CIVIL/SURVEY	SURVEY/FOUNDATIONS/PAVING/SITE WORK
BEN CLEMENT	FIELD SUPERINTENDENT – CIVIL/SURVEY	SURVEY/FOUNDATIONS/PAVING/SITE WORK
DERRICK MITCHELL	FIELD SUPERINTENDENT – CIVIL/SURVEY	SURVEY/FOUNDATIONS/PAVING/SITE WORK

COMPANY RESUME

CONSTRUCTION FIELD SUPERVISION / MANAGEMENT

NAME	POSITION	RESPONSIBILITIES
BRIAN DAVIS	FIELD SUPERINTENDENT – PILING	DRIVEN/ACP/SHEET/HELICAL PILES
BLAKE PATTERSON	FIELD SUPERINTENDENT – PILING	DRIVEN/ACP/SHEET/HELICAL PILES
WAYNE WALTERS	FIELD SUPERINTENDENT – PILING	DRIVEN/ACP/SHEET/HELICAL PILES
BRADLEY WILLIAMS	FIELD SUPERINTENDENT – PILING	DRIVEN/ACP/SHEET/HELICAL PILES
ARNOLD PRESCOTT	FIELD SUPERINTENDENT – HYDRO/CIVIL	HYDRO-EXCAVATION/FOUNDATIONS/PAVING/SITE WORK
ANDREW ZUBIA	FIELD SUPERINTENDENT – HYDRO	HYDRO-EXCAVATION
BEN GERICKE	FIELD SUPERINTENDENT – STRUCTRUAL	STEEL/PREFAB/SPRUNG/HEAVY RIGGING/WELDING
JASON HINDS	FIELD SUPERINTENDENT – STRUCTURAL	STEEL/PREFAB/SPRUNG/HEAVY RIGGINGS/WELDING
CLINT JOHNSON	FIELD SUPERINTENDENT – STRUCTURAL	STEEL/PREFAB/SPRUNG/HEAVY RIGGINGS/WELDING



PILING CAPABILITIES

PILING & DEEP FOUNDATIONS

▪ DRILLED SHAFTS	▪ AUGERCAST PILES
▪ CAISSONS / LARGE CASINGS	▪ TIMBER PILE
▪ PRECAST CONCRETE PILE	▪ STEEL PIPE PILE
▪ STEEL H-PILE	▪ STEEL SHEET PILE
▪ HELICAL FOUNDATION PILES	▪ HELICAL TIE BACKS

SPECIALTY PILING SERVICES

▪ LOW HEADROOM RIG OPTIONS	▪ RESTRICTED ACCESS RIG OPTIONS
▪ PILE CUTOFF SERVICES	▪ PILE LOAD TESTING
▪ MARINE INSTALL FROM BARGES	▪ MARINE BULKHEAD & DOCK REPAIRS
▪ ALTERNATE PILE DESIGN ASSISTANCE	▪ TEMPORARY PILES
▪ PILING OPTIONS FOR ENVIROMENTAL SENSITIVE AREAS	▪ PILING & DEEP FOUNDATION CONSTRUCTABILITY REVIEW

COMPANY RESUME

CIVIL SITE WORK CAPABILITIES

EARTHWORK & SITE PREPARATION

- SITE CLEARING & GRUBBING
- SITE GRADING & BALANCING
- GENERAL EXCAVATION & BACKFILL
- MASS EXCAVATION
- SITE BATHTUBBING
- SOIL STABILIZATION
- DIKES & LEVEES
- HOLDING PONDS
- SLOPE PROTECTION
- EROSION CONTROL
- CRANE PAD CONSTRUCTION
- DRILLING RIG SITE CONSTRUCTION
- MAT PLACEMENT

UNDERGROUND

- UNDERGROUND PIPING
- UNDERGROUND DRAINAGE
- HDPE FIREWATER SYSTEMS
- PIPING & UTILITY TRENCHING

ROAD & RAIL BED CONSTRUCTION

- HEAVY HAUL CONSTRUCTION
- ACCESS ROAD CONSTRUCTION
- PARKING LOTS
- LAYDOWN YARDS
- DRIVEWAYS & SIDEWALKS
- RAILROAD BED INSTALLATION

SHORING

- SHORING BOXES
- TRENCH SHIELDS
- HYDRAULIC SHORING SYSTEMS
- SLIDE RAIL SHORING SYSTEMS
- BEAM & PLATE SHORING SYSTEMS
- SHEET PILE SHORING SYSTEMS
- SHEET PILE SHORING DESIGN CONSULTING
- EXCAVATION DEWATERING

CIVIL HYDRO-EXCAVATION CAPABILITIES

HAZWOPER CERTIFIED CRAFTSMAN

HYDRO-EXCAVATION RIG SERVICES / COMBINATION RIG SERVICES

EXPLORATORY EXCAVATION / DAYLIGHTING & TRENCHING

HYDRO-PROBING

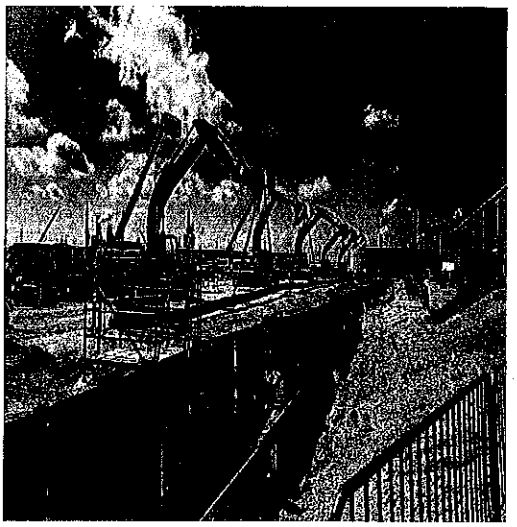
PIPELINE & UTILITY LOCATION

SEWER & DRAIN LINE CLEANING / PIPE FLUSHING

REMOVAL OF DRY & FLOWABLE SOLID MATERIALS

PILING & FOUNDATION INSTALLATION OPTIONS IN ENVIRONMENTALLY RESTRICTED AREAS

COMPANY RESUME



CIVIL CONCRETE CAPABILITIES

BUILDING STRUCTURES

- SLABS ON GRADE
- ELEVATED ROOFS & DECKS
- ELEVATED ROOFS & DECKS
- PARKING STRUCTURES

EQUIPMENT FOUNDATIONS

- PUMP FOUNDATIONS
- COMPRESSOR FOUNDATIONS
- VESSEL FOUNDATIONS
- SKID SYSTEM FOUNDATIONS
- PIPE SUPPORTS
- PIPE RACK FOUNDATIONS

TANK FOUNDATIONS

- RING WALL FOUNDATIONS
- MAT FOUNDATIONS

CONTAINMENT

- SUMPS, PITS, & VAULTS
- INTAKE STRUCTURES
- MANIFOLDS SYSTEMS
- COOLING TOWER BASINS
- CATCH BASINS & MANHOLES
- TRENCHES & TUNNELS

ELECTRICAL STRUCTURES

- SUBSTATION FOUNDATIONS
- MCC BUILDING FOUNDATIONS
- TRANSMISSION LINE FOUNDATIONS
- ELECTRICAL ROUTING TRENCHES
- ELECTRICAL DUCT BANKS
- INSTRUMENTATION SUPPORTS

MASS CONCRETE STRUCTURES

ELEVATED STRUCTURES

RAIL PORTAL STRUCTURES

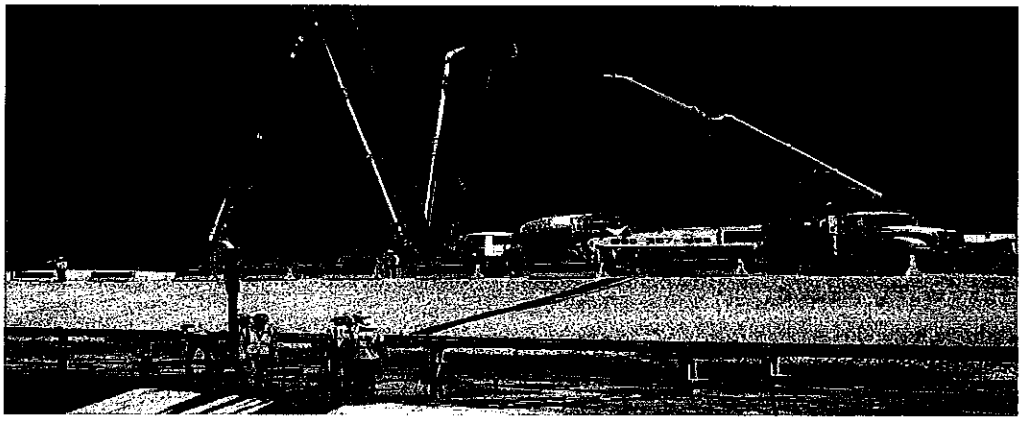
CRANE FOUNDATIONS

SLOPE PROTECTION

CONCRETE LINED DITCHES

CONCRETE AREA PAVING

MASON CONSTRUCTION EST. 1939



COMPANY RESUME

CIVIL ASPHALT CAPABILITIES

HOT MIX ASPHALT PAVING

- HEAVY HAUL & ACCESS ROAD PAVING
- SIDEWALK & TRAIL PAVING
- PARKING LOT & DRIVEWAY PAVING
- LAYDOWN / STORAGE YARD PAVING
- STORAGE TANK FOUNDATION ASPHALT PAVING
- TEMPORARY WAREHOUSE & LUNCHROOM TENT PAVING

ASPHALT OVERLAYS

ASPHALT POTHOLE & PAVEMENT REPAIR

BASE PREPARATION & STABILIZATION

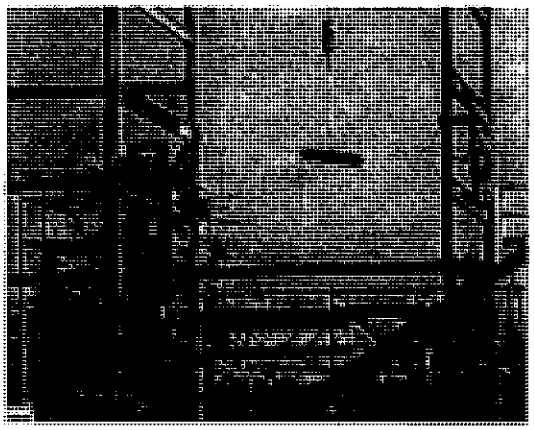
ASPHALT MILLING

SLURRY SEAL & SEAL COAT

ASPHALT CRACK SEALING & CRACK FILLING

STRIPING, PAVEMENT MARKING, & SIGNAGE INSTALLATION

CONCRETE CURB, GUTTER, BARRIER & PARKING BUMPER INSTALLATION



STRUCTURAL STEEL CAPABILITIES

STRUCTURAL STEEL ERECTION

STRUCTURAL STEEL DEMOLITION

STRUCTURAL STEEL RETROFITS

WALL PANEL, ROOF SHEETING, & INSULATION

FIELD FABRICATION

Q-DECK & NELSON STUD INSTALLATION

PRE-ENGINEERED METAL BUILDING CONSTRUCTION

PRE-CAST CONCRETE WALL PANEL & DECK

PRE-CAST CONCRETE STRUCTURAL ERECTION

BLAST RATED BUILDING ERECTION

BLAST RATED ENVELOPE STRUCTURE ERECTION

BULK MATERIAL HANDLING CONVEYOR ERECTION

INDUSTRIAL ELEVATOR ERECTION

MABEY/BAILEY MILITARY STYLE TEMPORARY DEPLOYABLE LOGISTICS SUPPORT BRIDGE ERECTION SERVICES

SPECIALTY TENT ERECTION SERVICES (SPRUNG STRUCTURES)

CRANE ERECTION SERVICES

HEAVY RIGGING SERVICES

EQUIPMENT UNLOADING & SETTING SERVICES

COMPANY GROSS SALES / PAST SIX (6) YEARS	
2021: $112,000,000	2020: $90,000,000
2019: $135,000,000	2018: $115,000,000
2017: $93,000,000	2016: $86,000,000

COMPANY SAFETY STATISTICS / PAST FIVE (5) YEARS		
YEAR	EMR	INCIDENT RATE
2021	0.74	0.29
2020	0.72	0.00
2019	0.65	0.38
2018	0.57	0.43
2017	0.62	0.66

TOTAL COMPANY MAN HOURS WORKED	
2021: 680,301	2020: 605,825
2019: 1,041,577	2018: 912,804
2017: 899,005	2016: 860,027

ONE MILLION MANHOUR MILESTONE HONORS

ZERO INJURY INSTITUTE HALL OF HONOR (ZII) AWARDS

2007 THRU 2016 – ONE MILLION SAFE MANHOURS – EXXONMOBIL BEAUMONT COMPLEX

2007 THRU 2019 – ONE MILLION SAFE MANHOURS – MOTIVA ENTERPRISES PORT ARTHUR

2011 THRU 2016 – ONE MILLION SAFE MANHOURS – VALERO ENERGY CORPORATION TEXAS SITES

2014 THRU 2015 – ONE MILLION SAFE MANHOURS – MASON CONSTRUCTION COMPANY WIDE

2019 THRU 2020 – ONE MILLION SAFE MANHOURS – MASON CONSTRUCTION COMPANY WIDE

COMPANY AWARDS AND RECOGNITION

ASSOCIATED BUILDERS AND CONTRACTORS

2021 – STEP AWARD – DIAMOND LEVEL

ASSOCIATED GENERAL CONTRACTORS OF AMERICA AWARDS

2020 – CERTIFICATE OF EXCELLENCE

BUSINESS ROUNDTABLE CONSTRUCTION INDUSTRY SAFETY EXCELLENCE AWARD

1997 – NATIONAL RECIPENT FOR COMPANIES WITH LESS THAN 250,000 WORK HOURS PER YEAR

BEAUMONT ENTERPRISE BEST OF THE BEST AWARDS

2020 – SILVER MEDAL AWARD – BEST EMPLOYER

2021 – SILVER MEDAL AWARD – BEST EMPLOYER

BETTER BUSINESS BUREAU AWARDS

1998 – TORCH AWARD RECIPIENT – INTEGRITY IN THE MARKETPLACE – LARGE BUSINESS

2021 – 40+ YEARS BBB SOUTHEAST TEXAS ACCREDITATION

GREATER BEAUMONT CHAMBER OF COMMERCE AWARDS

2010 – SPINDLETOP AWARD – SUPERIOR CORPORATE CITIZENSHIP

INTERNATIONAL SAFETY TRAINING COUNCIL AWARDS

2016 – SAFETY ACHIEVEMENT AWARD – WORKED OVER 2 MILLION HOURS WITHOUT AN OSHA LOST WORKDAY CASE

SOUTHEAST TEXAS ECONOMIC DEVELOPMENT FOUNDATION AWARDS

2014 – FAMILY-OWNED BUSINESS OF THE YEAR – STATE OF TEXAS SMALL BUSINESS AWARD

TEXAS MUTUAL WORKERS' COMPENSATION INSURANCE AWARDS

2016 – PLATINUM SAFETY PARTNER AWARD WINNER

2021 – PLATINUM SAFETY PARTNER AWARD WINNER

AWARDS AND RECOGNITION CONTINUED

GOLDEN TRIANGLE BUSINESS ROUNDTABLE SAFETY AWARDS

2000 – AWARD RECIPIENT – SMALL CONSTRUCTION *(PREMCOR / GOODYEAR / ATOFINA / MOTIVA)*

2004 – AWARD RECIPIENT – MEDIUM CONSTRUCTION *(PREMCOR)*

2005 – AWARD RECIPIENT – SMALL CONSTRUCTION *(TOTAL)*

2006 – AWARD RECIPIENT – LARGE CONSTRUCTION *(VALERO)*

2007 – AWARD RECIPIENT – LARGE CONSTRUCTION *(MOTIVA)*

2007 – AWARD RECIPIENT – SMALL CONSTRUCTION *(BASF)*

2008 – AWARD RECIPIENT – LARGE CONSTRUCTION *(VALERO)*

2008 – AWARD RECIPIENT – SMALL CONSTRUCTION *(BASF)*

2009 – AWARD RECIPIENT – SMALL CONSTRUCTION *(EXXONMOBIL)*

2009 – FINALIST – MEDIUM CONSTRUCTION *(MOTIVA)*

2010 – AWARD RECIPIENT – MEDIUM CONSTRUCTION *(EXXONMOBIL)*

2011 – AWARD RECIPIENT – MEDIUM CONSTRUCTION *(EXXONMOBIL CHEMICAL)*

2011 – AWARD RECIPIENT – SMALL CONSTRUCTION *(EXXONMOBIL)*

2011 – FINALIST – SMALL CONSTRUCTION *(MOTIVA)*

2012 – AWARD RECIPIENT – MEDIUM CONSTRUCTION *(EXXONMOBIL)*

2012 – FINALIST – LARGE CONSTRUCTION *(VALERO)*

2012 – FINALIST – MEDIUM CONSTRUCTION *(EXXONMOBIL CHEMICAL)*

2012 – FINALIST – SMALL CONSTRUCTION *(FLINT HILLS)*

2013 – AWARD RECIPIENT – MEDIUM CONSTRUCTION *(VALERO)*

2013 – FINALIST – SMALL CONSTRUCTION *(EXXONMOBIL / EXXONMOBIL CHEMICAL / TOTAL)*

2014 – FINALIST – MEDIUM CONSTRUCTION *(VALERO)*

2014 – FINALIST – SMALL CONSTRUCTION *(EXXONMOBIL / EXXONMOBIL CHEMICAL / BASF)*

2015 – FINALIST – LARGE CONSTRUCTION *(VALERO)*

2015 – FINALIST – SMALL CONSTRUCTION *(EXXONMOBIL CHEMICAL)*

2017 – FINALIST – MEDIUM CONSTRUCTION *(VALERO)*

2018 – AWARD RECIPIENT – MEDIUM CONSTRUCTION *(VALERO)*

2018 – FINALIST – MEDIUM CONSTRUCTION *(EXXONMOBIL BLENDING & PACKAGING)*

2019 – AWARD RECIPIENT – MEDIUM CONSTRUCTION *(VALERO)*

2020 – AWARD RECIPIENT – MEDIUM CONSTRUCTION *(EXXONMOBIL BLADE / EXXONMOBIL / MOTIVA)*

2021 – FINALIST – MEDIUM CONSTRUCTION *(EXXONMOBIL BLADE / EXXONMOBIL / MOTIVA)*

CLIENT REFERENCES

DIAMOND GREEN DIESEL – PORT ARTHUR 1801 SOUTH GULFWAY DRIVE PORT ARTHUR, TX 77640 JOHN HILL (210)345-3203	ENTERPRISE PRODUCTS 1100 LOUISIANA HOUSTON, TX 77002 JOHN WRIGHT (713)381-4231
EXXONMOBIL – BAYTOWN 2800 DECKER DRIVE BAYTOWN, TX 77520 MICHELLE HOLLOWAY (346)259-5246	EXXONMOBIL – BEAUMONT PO BOX 2788 BEAUMONT, TX 77704 SEAN MCNELIS (409)504-9095
INTERNATIONAL PAPER 1750 INLAND ROAD ORANGE, TX 77632 FRANK FRACCASTORO (409)746-7236	JEFFERSON COUNTY DRAINAGE DISTRICT #7 4401 9TH AVENUA PORT ARTHUR, TX 77642 BRADY GIROUARD (409)985-4369
MOTIVA ENTERPRISES PO BOX 712 PORT ARTHUR, TX 77740 MARK GIVENS (713)829-4054	ONEOK PARTNERS 9900 FM 1942 MONT BELVIEU, TX 77580 JOSHUA ROEGIERS (281)385-5970
PHILLIPS 66 2331 CITY WEST BLVD HOUSTON, TX 77042 AMANDA OLIVER (832)765-4018	TOTAL PETROCHEMICALS PO BOX 849 PORT ARTHUR, TX 77641 BRIAN CLARK (409)985-0611
VALERO – SAN ANTONIO HEADQUARTERS ONE VALERO WAY SAN ANTONIO, TX 78249 JOHN ROACH (210)345-5887	VALERO – PORT ARTHUR PO BOX 788 PORT ARTHUR, TX 77642 CARL WOODSON (409)985-1089

ARCHITECT, ENGINEER, & CONTRACTOR REFERENCES

BECHTEL CORPORATION 3000 POST OAK BLVD HOUSTON, TX 77056 THOMAS HABERMAS (409)730-7800	BURNS & MCDONNELL 9400 WARD PARKWAY KANSAS CITY, MO 64114 JOE PODREBAVAC (816)333-9400
ECHO MAINTENANCE PO BOX 1915 NEDERLAND, TX 77627 MIKE ROEBUCK (409)724-1512	FLUOR ENTERPRISES 1 FLUOR DANIEL DRIVE SUGARLAND, TX 77478 TODD ZLATICH (713)855-3977
KBR 601 JEFFERSON STREET HOUSTON, TX 77002 DANIEL NGUYEN (713)753-4794	LJA ENGINEERING 2615 CALDER AVE, SUITE 500 BEAUMONT, TX 77702 HEATH REYNOLDS (409)833-3363
NEWTRON 1905 INDUSTRIAL PARK DRIVE NEDERLAND, TX 77627 DAVID WHITE (409)727-2469	PAT TANK 2146 FIFTH AVE PORT ARTHUR, TX 77642 TERRY BLOCK (409)982-7319
RICHARD 750 PEARL STREET BEAUMONT, TX 77701 ART RICHARD (409)727-3881	UNIVERSAL PEGASUS 4848 LOOP CENTRAL DRIVE HOUSTON, TX 77081 TODD RYAN (214)507-4139
WHITELEY OLIVER 3250 EASTEX FREEWAY BEAUMONT, TX 77703 JASON WHITELEY (409)892-0421	ZACHRY GROUP 527 LOGWOOD AVE SAN ANTONIO, TX 78221 BRENT DOVIN (303)521-1221

COMPANY RESUME

SUPPLIER REFERENCES	ADDITIONAL REFERENCES
HARTMANN BUILDING SPECIALTIES PO BOX 12010 BEAUMONT, TX 77720 DOUG HARVILL (409)866-6103	FIRST FINANCIAL BANK – FINANCIAL 3515 DOWNLEN ROAD BEAUMONT, TX 77706 STEPHEN LEE (409)221-6160
MODERN CONCRETE 2090 W CARDINAL DRIVE BEAUMONT, TX 77705 TRENT ALMOND (409)659-1208	MARSH & MCLENNAN – BONDING AGENT 2500 CITY WEST BLVD, SUITE 2400 HOUSTON, TX 77042 BEVERY IRELAND (713)780-6156
MUSTANG RENTAL SERVICES 3200 NORTH TWIN CITY HWY NEDERLAND, TX 77627 CODY O'DELL (409)722-7368	HIGGINBOTHAM INSURANCE AGENCY PO BOX 1609 NEDERLAND, TX 77627 LORI DUVALL (409)721-6400
MARTIN MARRIETTA 505 ORLEANS STREET BEAUMONT, TX 77701 BILL KELLY (409)658-7791	DUN & BRADSTREET – CREDIT RATING PO BOX 1429 HOUSTON, TX 77251 (800)888-3867 MASON'S DUNS #04-890-1623 (4A1)

MASON CONSTRUCTION

OWNER	PROJECT LOCATION	GENERAL CONTRACTOR / ARCHITECT / ENGINEER	CONTRACT AMOUNT	DESCRIPTION OF WORK PERFORMED	YEAR
Afton Chemical	Port Arthur, TX	Prime Contractor	$72,300	Install Concrete Slab for New Lab - Civil	2020
Air Liquide	Bayport, TX	BMWC	$130,000	Denim Water Project - Civil	2018
Air Products	Port Arthur, TX	Prime Contractor	$323,000	Roadway Repairs - Asphalt & Concrete - Civil	2019-2020
			$2,278,000	Motiva Off-Gas H2 OSBL Project - Piling & Hydroexcavation	2021-2022
Arkema	Beaumont, TX	Prime Contractor	$227,000	Install New Filter Foundation	2006
Arlanxeo	Orange, TX	Prime Contractor	$84,000	Furnish & Install Augercast Piles - Piling	2019
			$162,900	Phase III Boiler #5 Augercast Piles - Piling	2021
		Cleaver Brooks	$195,000	Force Draft Fan Foundation B3 & B4 - Civil	2019
Ascend	Chocolate Bayou, TX	Turner Industries	$104,000	Augercast Pile Project - Piling	2019
Ashland	Texas City, TX	DeJean Company	$496,000	Furnish & Install Drill Shafts	2014
BASF Fina Petrochemicals	Port Arthur, TX	Prime Contractor	$1,826,000	Mobile lifting tower foundation and Augercast Piling	2005-06
			$1,904,000	PAR Steam Integration Project – Civil, Piling, & Structural Steel	2009-2010
			$910,000	Ethane Import Project - Civil, Piling, & Structural Steel	2011-2012
			$156,000	CO2 System Improvements	2017
			$320,000	Ethane Cracker SP3 Project - Civil & Piling	2018
			$1,700,000	2019 Pre-Tar Project - Civil	2018-2019
			$137,000	2021 Pre-Tar Project - Civil	2021
BASF – Beaumont	Beaumont, TX	Prime Contractor	$2,752,000	Dicamba 8400 Project	2014
			$1,312,000	Waste Water Tank Replacement - Phase I, II, & III	2013-2015
			$343,000	WOD Storm Water Retention Pond Upgrades	2016
			$205,000	CO2 System Structural Detailing	2017
			$250,000	Plant Wide Misc. Repairs - Civil	2018
			$525,000	MPP Unit Repairs - Civil	2019
		Performance Contractors	$645,000	Pre Turnaround & Misc Work Cobra Laydown Yard	2014
BASF – Freeport	Freeport, TX	Prime Contractor	$772,000	C-002 Clarifier Foundations – Civil & Piling	2012

MASON CONSTRUCTION

OWNER	PROJECT LOCATION	GENERAL CONTRACTOR / ARCHITECT / ENGINEER	CONTRACT AMOUNT	DESCRIPTION OF WORK PERFORMED	YEAR
			$27,500	Steam Elimination T-105 Helical Pile Project - Piling	2020
		Performance Contractors	$1,240,000	IOU Ammonia Terminal Project	2016
Bay, Ltd.	Corpus Christi, TX	Prime Contractor	$413,000	Steam Line & HCN Line Support Augercast Piles	2012
Boise Cascade	Deridder, LA	Southeast Texas Industries	$526,000	Secondary Fiber Storage Slab	2010-2011
Bostco	La Porte, TX	Tellepsen Industrial	$4,495,000	Pipe and Concrete Pile for New Pipe Rack	2012-2013
Buckeye Pipeline	Mont Belvieu, TX	Pilgrim Construction	$37,600	Champion Lake Boat Ramp Asphalt - Civil	2021
Calcasieu Refinery	Lake Charles, LA	R&R Construction	$199,000	Vacuum Preflash Unit # 8 – Augercast Pile	2015
Cameron LNG	Hackberry, LA	Overland Contracting	$2,147,000	BOG Liquefaction Project - Civil & Piling	2012-2013
Chemours Company FC, LLC	Corpus Christi, TX	Kellogg Brown & Root, LLC	$526,530	Pile Load Test Program - Augercast Piling	2017
Cheniere Sabine Pass	Cameron, LA	MK Constructors	$1,375,000	Lighthouse Road Improvements - Civil - Asphalt	2020
		Richard Construction	$80,900	LNG HV14036 Bypass Support Train 1 & Train 2 - Civil	2019
		Arkel International, LLC	$2,216,980	SPLNG Highway 82 Improvements & Asphalt Paving Project - Civil-Asphalt & Hydroexcavation	2021
		S&B Engineers	$121,000	P4233-Z0019 Asphalt Paving Project - Civil - Asphalt	2021
Chevron Phillips Chemical	Baytown, TX	Prime Contractor	$422,300	Cedar Bayou Seal Drum Area FGRU Project - Civil & Piling	2021
		PCL Industrial Construction Company	$831,000	1594 DBN Furnace & BOP Projects - Civil, Piling, & Hydroexcavation	2021
	Brazoria, TX	Optimal Field Services	$185,300	Cavern 24 Conversion Project - Augercast Pile	2021
	Orange, TX	Burns & McDonnell	$300,000	Steam Elimination Project Helical Pile - Piling	2019
	Pasadena, TX	Prime Contractor	$440,000	Catalyst Activation Sustainability Project - Piling	2020
	Port Arthur, TX	Prime Contractor	$1,500,000	Plant Roads & Infrastructure Improvements	2019
			$31,000	Helical Pile Install - Piling	2020
			$700,000	Gate 150 Parking Lot Project - Recycled Asphalt	2021
			$200,000	Plant Wide Asphalt Repairs	2021
		Jacobs Engineering	$3,958,000	Steam Project - Piling	2012-2013
Chevron USA, Inc.	Port Arthur, TX	Prime Contractor	$4,085,000	Flood Protection Project – Piling & Sheet Pile Walls	2011-2012
			$7,265,000	Flood Protection Project – Civil	2011-2013

MASON CONSTRUCTION

OWNER	PROJECT LOCATION	GENERAL CONTRACTOR / ARCHITECT / ENGINEER	CONTRACT AMOUNT	DESCRIPTION OF WORK PERFORMED	YEAR
			$2,400,000	Phase II – PALP Parking Lot Improvements	2015-2016
			$87,000	Seawall Rail Upgrade Project - Civil	2020
			$469,600	Drainage Project - Civil	2021
			$144,450	EFTM Pump Upgrades Phase II & III - Civil	2021
		HMT Tank	$150,600	Install Tank Ringwall - Civil	2021
	Borger, TX	D.E. Rice Construction	$367,000	Sheet Piling and Augercast	2010
CB&I Constructors, Inc.	Beaumont, TX	Prime Contractor	$724,000	Laydown Yard, Crane Foundation, & Module Storage Paving	2008
Coastal Caverns	Beaumont, TX	Prime Contractor	$3,300,000	Brine Pond #4 - Civil	2018
			$153,000	CO2 Removal Project - Civil	2020
			$842,000	Inert Gas Storage, Tank, & Road Project - Civil & Hydroexcavation	2021
Cottonwood	Beaumont, TX	NRG	$6,000,000	2018 Flood Protection Project - Civil, Piling, & Structural Steel	2018
			$500,000	Switch Yard Control Building Flood Protection Project - Civil	2018
Devon Energy	Bridgeport, TX	Burns & McDonnell	$1,344,000	Plant 7 Expansion Project	2012-2013
Dow	Beaumont, TX	Prime Contractor	$245,000	New Concrete Containment Wall - Civil	2017
Duco, Inc.	Houston, TX	Prime Contractor	$696,000	Dock Repairs & Improvements – Marine Based Work - Piling, Helical Tie Backs, Sheet Pile Rehabilitation, & Fender Repair	2009-2011
Dupont	Orange, TX	CB&I	$790,000	Ethylene Cracking Expansion Foundations & Paving	2017
		Richard Construction	$576,600	Install Railroad Scale Box - Civil & Sheet Pile	2017
East Texas Electric Cooperative	Woodville, TX	Apeck Construction, LLC	$562,000	Reclaim Water Pump Station – Civil & Structural Steel	2013
		Gemma Power, Inc.	$1,127,000	Woodville Renewable Power - Reclaimer & Escape Tunnel	2013
Eastman	Longview, TX	Prime Contractor	$726,000	Demethanizer Upgrade – Augercast Pile - Phase I & II	2014-2015
			$229,000	B-9 Foundations Project - Augercast Pile	2021
Enbridge G&P Beckville Facility	Beckville, TX	PCL Industrial Construction Company	$540,000	Augercast Pile	2014
Entergy	Orange, TX	Prime Contractor	$1,300,000	Sabine Station Road Repairs - Civil	2017-2018
			$271,000	Sabine Station Road Repairs - Civil & Asphalt	2020
Enterprise Pipeline	Carmine, TX	PUMPCO	$171,000	Movax Sheet Pile Installation	2017

MASON CONSTRUCTION

OWNER	PROJECT LOCATION	GENERAL CONTRACTOR / ARCHITECT / ENGINEER	CONTRACT AMOUNT	DESCRIPTION OF WORK PERFORMED	YEAR
Enterprise Products	Beaumont, TX	Prime Contractor	$8,300,000	Crude Expansion Project - Civil, Piling, Structural Steel, & Hydroexcavation	2015-2016
			$15,900,000	Major Civil Foundations - Civil, Piling, Structural Steel, & Hydroexcavation	2018-2019
			$1,300,000	SRW Arkema Novus PGP Meter Relocate - Civil, Piling, & Structural Steel	2019
	Houston, TX	Primoris	$1,036,000	Manifold Area Grading - Civil	2019
	Port Arthur, TX	Prime Contractor	$200,000	Road & Levee Repairs - Civil	2018
	Mont Belvieu, TX	Beard Construction, LLC	$809,000	Brine Expansion Project Phase 3 – Pump Vault Shell	2015
		Dashiell Corporation	$570,000	Vidor Sub Station Foundations, Timber Pile, & Sheet Pile	2015
		Richard Construction, Inc.	$294,000	West Texas Fractionator Project – Civil & Hydroexcavation	2014
			$255,000	EPCO-OTI Feed / Load Project	2014
		Tepsco	$244,000	Brine Degrasser – Augercast Pile & Hydroexcavation	2014
ExxonMobil Baytown	Baytown, TX	Prime Contractor	$4,075,000	NSPS JA Flare Gas Recovery Project – Civil, Piling, Structural Steel, & Hydroexcavation	2013-2014
			$423,000	CT-9 Header Replacement	2017
			$800,000	TA Trailer Pad & Parking Lot	2017
			$830,000	Reservoir #2 Bulkhead Repair Sheet Pile - Civil & Piling	2018
		Burrow Global	$142,000	Mechanical Shop Expansion / Improvements	2017
		Kleinfelder	$180,000	Well Repair	2015
			$184,000	Dock 6 & 7 Geotech Bore Pads	2015
			$215,000	WMA-1 & CAS Original System Re-Start	2017
			$898,925	SWMU 59 Regrade Work - Civil	2017
ExxonMobil Beaumont	Beaumont, TX	Prime Contractor	$4,684,000	South County Road Flood Protection Project	2012
			$2,933,000	Wharf Area Flood Protection Project	2012-2013
			$1,510,000	BMRF Biodistillate Project – Civil, Piling, & Structural Steel	2012-2013
			$3,047,000	Alky Blow Down Project	2014
			$814, 000	REF Flare Project	2014
			$785,000	South Plant Flares Project	2014

OWNER	PROJECT LOCATION	GENERAL CONTRACTOR / ARCHITECT / ENGINEER	CONTRACT AMOUNT	DESCRIPTION OF WORK PERFORMED	YEAR
			$1,311,000	South Plant Sludge Pond Improvements	2014
			$650,000	NSPS JA Montoitoring – Complex – Civil & Piling	2015
			$6,845,000	BPEX Early Works & Tree Clearing - Phase I & II	2015
			$3,343,000	SCANfiner Project – Demo, Site Prep, Sewer, Grading, & Probing	2015-2016
			$817,000	BPEX Pile Load Test Program & Mat Access Road	2015-2016
			$924,000	ALKY 2 Compressor Saftey Project	2015
			$1,050,000	BMCP Flare Project – PCN # 11802	2015
			$1,197,000	BMBP B Tank Farm Expansion	2016
			$1,111,000	GTL Logistics - Exploratory, Site Prep, & Project	2017
			$470,000	CHD2 Flare Blowdown Line & Sand Filter Replacement - Civil & Timber Piles	2017
			$475,000	LNVA Reliability Project - Civil & Augercast Piles	2017
			$3,342,000	Hurricane Harvey Recovery - Civil	2017
			$14,000,000	Flare Gas Recovery Project - Civil & Piling	2018-2020
			$1,600,000	Track 9 AMP Project Phase 3 - Civil	2019-2020
			$1,029,000	BMAP - BPEP Substation 700 Replacement - Civil	2020
		Bechtel	$18,500,000	SCANfiner Project – OSBL Civil / ISBL & OSBL Piling	2016-2017
		D.E. Harvey Builders	$472,000	BOB Office Complex Site Work	2010-2011
		DME Industrial	$1,191,000	Flare Project	2014
		Echo Maintenance	$3,643,000	Aqueous Ethylene Oxide F-8 Project	2014
		HB Neild	$1,867,000	New Control Room Project - Civil & Structural Steel	2016-2017
			$2,700,000	CCB Blast Upgrade Project - Civil, Structural Steel, & Hydroexcavation	2019
		Jacobs Field Services	$3,414,000	Nox Sulfur Recovery Project - Civil & Piling	2007-2008
			$3,975,000	MSAT 2 Site Work & Piling	2009-2011
			$34,900,000	Blade Project - Civil, Piling, & Hydroexcavation	2018-2020
		KBR	$3,700,000	Blade Augercast & Helical Piles - Piling	2019-2020

OWNER	PROJECT LOCATION	GENERAL CONTRACTOR / ARCHITECT / ENGINEER	CONTRACT AMOUNT	DESCRIPTION OF WORK PERFORMED	YEAR
		Performance Contractors	$5,041,000	Blade Install Shoring & Sheet Piling - Piling & Hydroexcavation	2019
		Westech	$3,000,000	Water Clarifier Tank Foundation - Civil & Piling	2018
		Worley Parsons	$15,947,000	Flood Protection Project - Civil, Piling, Sandbar, & Operations	2009
ExxonMobil Hull Daisetta	Hull Daisetta, TX	Prime Contractor	$776,000	Hurricane Harvey Clean Up - Civil	2017
ExxonMobil Mont Belvieu	Mont Belvieu, TX	Prime Contractor	$700,000	Laydown Area Hauling & Grading - Civil	2017
			$530,000	Loading Island Concrete Skirting - Civil	2017
		Universal Pegasus	$1,098,000	Furnish & Install Pipeline Mats - Hydroexcavation	2019-2020
Flint Hills	Port Arthur, TX	Prime Contractor	$1,935,000	OSBL Benzene Tank – Civil & Helical Piles	2013
			$2,284,000	FHR Steam Reliability – Civil & Piling	2016
			$431,000	PGP Tower Entry, Utility, & Piping Modifications	2017
Freeport LNG	Freeport, TX	REF-CHEM, LP	$1,041,000	Stratton Ridge Compression	2013-2014
			$963,000	Cavern Facility I	2014
Georgia Pacific	Camden, TX	Prime Contractor	$835,000	South LLC – Maintenance, Machine Shop, & Storeroom	2014
German Pellets	Port Arthur, TX	Evans General Contractors	$6,575,000	German Pellet Storage & Shipping Facility & Truck Dump – Civil, Piling, & Structural Steel	2012-2014
	Woodville, TX	Evans General Contractors	$452,000	Sheet Pile Retaining Wall & Grouting	2012-2013
Goodyear Tire & Rubber	Beaumont, TX	Prime Contractor	$220,000	Hurricane Harvey Clean Up & Repair - Civil & Piling	2017
GT Logistics	Port Arthur, TX	MPG Pipeline	$580,000	GT Omniport Project - Civil & Structural Steel	2018
Holly Frontier	Albuquerque, NM	SafeRack	$231,000	Rack Upgrade Project - Helical Piles	2021
Huntsman	Port Neches, TX	Prime Contractor	$3,400,000	Aqueous Ethylene Oxide F-8 Project	2014
			$797,000	FDR Civil Work Package	2014
		Echo Maintenance	$3,928,000	Aqueous Ethylene Oxide F-8 Project - Civil & Hydroexcavation	2014-2015
		Gulfspan	$550,000	E4 Cooling Tower	2015
			$124,000	Clarifier Pump Replacement	2017
		Newtron	$1,170,000	AA & HC-1 Substation Replacement - Civil	2017
IBEW Local 479	Beaumont, TX	Prime Contractor	$268,000	Union Hall Roof & Canopy Project - Structural Steel	2021

MASON CONSTRUCTION

OWNER	PROJECT LOCATION	GENERAL CONTRACTOR / ARCHITECT / ENGINEER	CONTRACT AMOUNT	DESCRIPTION OF WORK PERFORMED	YEAR
Indorama / Huntsman	Port Neches, TX	Prime Contractor	$138,000	FS Water Water Tank Foundation Project - Civil	2020
International Paper	Orange, TX	Prime Contractor	$395,000	Spill Containment Modifications	2013-2014
			$253,000	Longwood Truck Unbinding Racks	2014
			$276,000	Mill Water Storage Tank Replacement	2017
Invista	Orange, TX	Prime Contractor	$225,000	S2 DN Calandria Project ACIP Pile - Civil & Piling	2020
		TGE Industrial	$240,000	A D N Expansion – Pedestals, FND's & Elevated Slabs Demolition	2014
Jefferson County Drainage District #7	Port Arthur, TX	Prime Contractor	$9,985,000	Flood Wall Protection Repair - Civil & Piling	2017
			$437,000	Improvements to Shamrock Ditch & Rodair Lateral 3 - Civil	2020
Jefferson Refinery	Beaumont, TX	Prime Contractor	$391,000	Cable Tray & Pipe Pile Project - Piling	2020
		B&E Resources	$2,900,000	Crude Tank Expansion Project Timber & Pipe Piles - Civil & Piling	2018
		SafeRack	$190,000	Ethanol Rail Loading / Unloading Rack - Piling	2017
			$120,000	Refined Products Rail Loading / Unloading Rack - Piling	2017
		Southeast Texas Industries	$17,720,000	Port of Beaumont Petroleum Transload Terminal – Site Work, Civil, & Piling	2013-2014
			$1,193,000	Jefferson Cross Channel Pipeline Project - Piling	2020
			$631,700	Area 1 Track 102 Pipe Rack & Boiler Foundation - Pipe Pile	2021
	Winnie, TX	Southeast Texas Industries	$530,000	Winnie Truck Loading Facility	2013-2014
KEMTEX	Port Arthur, TX	Pat Tank	$370,000	Install Leveling Grout for (13) Tank Foundations - Civil	2021
Kinder Morgan	La Porte, TX	Capital Industrial	$123,000	Tank 200-5 El Segundo Concrete Project - Civil	2020
	Pecos, TX	Submar	$165,000	Helical Pile Pipeline Supports - Piling	2017
	Pasadena, TX	Sun Midstream	$222,000	Install Drill Shafts	2016
	Van Horn, TX	Submar	$135,000	Helical Pile Pipeline Supports - Piling	2015
Juniper GTL	Westlake, LA	Richard Construction	$368,000	Juniper GTL Project	2014
Lake Charles LNG/Energy Transfer	Lake Charles, LA	PSI	$998,000	Sietwork & Roadway, Piling Installation & Load Test	2016
Lone Star LNG	Mont Belvieu, TX	Prime Contractor	$7,000,000	Freshwater Lift Station - Phases 1 - 4 - Civil, Piling, Structural Steel, & Hydroexcavation	2020-2021
		Southeast Texas Industries	$234,000	Cedar Bayou Terminal T-100 Tank	2013-2014

MASON CONSTRUCTION

OWNER	PROJECT LOCATION	GENERAL CONTRACTOR / ARCHITECT / ENGINEER	CONTRACT AMOUNT	DESCRIPTION OF WORK PERFORMED	YEAR
Lucite International	Nederland, TX	Prime Contractor	$100,000	Hurricane Harvey Repairs	2017
		Echo Maintenance	$965,000	HCN Cooling Tower	2012
			$3,911,000	MAA Facility Upgrade and Site Clearing	2012-2013
Lummus Technology	Pasadena, TX	Prime Contractor	$1,556,000	Mitigation Pond Containment	2013
LyondellBasell Chemical	Channelview, TX	Dashiell Corporation	$380,000	Install Steel Sleeves & Casings - Piling	2021
		Zachry Engineering Group	$1,743,200	Install Sump Shoring Systems - Piling	2020-2021
Martin Gas Sales	Beaumont, TX	Prime Contractor	$1,878,000	Neches Prill Pad Expansion	2009
			$466,000	ATS Tank Foundation	2013
			$183,000	Miscellaneous Road Repairs - Civil & Asphalt	2020
MeadWestvaco	Silsbee, TX	Prime Contractor	$792,000	HEEDE Crane Foundation & Rail Replacement	2012-2013
			$266,000	New Log Jam Road Project	2015
Monsanto	Luling, LA	Cajun Contractors	$166,000	Sprung Building Erection - Structural Steel	2017
Motiva	Port Arthur, TX	Prime Contractor	$2,670,000	Sheet Pile for Reservoir 7	2011
			$13,300,000	Crude Expansion Project Final Roads and Grading	2012
			$2,003,000	Sulfur Pit Project	2017
			$440,000	Pat Spill Prevention	2017
			$534,000	Wespac 7th Street Tank Farm	2017
			$200,000	Gas Station Project - Civil & Piling	2017
			$3,400,000	USMF/00116 - Exchanger Wash Slab Project - Civil & Piling	2019
			$664,000	USMF/00137 - FCCU ARV Demand Pumps Project - Civil & Piling	2020
			$917,000	USMF/00178 & 00197 - Debottleneck Projects - Civil & Piling	2020
			$11,000,000	S-100 Storm Water Improvements Project - Civil, Piling, & Hydroexcavation	2020-2021
			$1,270,000	USMF/00277 - CRU4 Flare Replacement Project - Civil & Piling	2021
			$406,000	USMF/002 - Fuel Gas NGL Recovery Project - Civil & Piling	2021
		Dashiell Corporation	$2,027,000	Flare Hill Substation Liquide Site Prep Project - Civil	2021

MASON CONSTRUCTION

OWNER	PROJECT LOCATION	GENERAL CONTRACTOR / ARCHITECT / ENGINEER	CONTRACT AMOUNT	DESCRIPTION OF WORK PERFORMED	YEAR
		ABClean Environmental	$9,537,000	DCUII Environmental Work - Civil, Sheet Piling, Exploratory Excavation, & API Pipe Rack	2007-2009
		Bechtel Jacobs JV	$41,126,000	Crude Expansion Project & Early Works - Civil & Piling	2007-2009
			$17,227,000	CEP Project & Pump House 27 - Civil & Piling	2008
		Dashiell Corporation	$1,488,000	HCU Substation Project - Civil, Piling, & Hydroexcavation	2018
OCI Beaumont	Beaumont, TX	Orascom E&C USA, Inc.	$2,543,000	Methanol Plant Upgrade Project	2013-2014
			$3,408,000	Debottlenecking Project	2014-2015
OilTanking	Beaumont, Texas	Prime Contractor	$17,031,000	Crude Oil Expansion Project	2014-2015
	Port Neches, TX	Prime Contractor	$1,584,000	Shell Tank Foundations	2014
ONEOK, Inc.	Mont Belvieu, TX	Prime Contractor	$4,036,000	West Winfree Station Project - Civil & Structural Steel	2012-2014
			$255,000	Nustar Interconnect -- West Winfree Station	2015
			$199,000	WWS – INEOS/Lonestar Interconnect – Civil, Structural Steel, & Hydroexcavation	2015
			$229,000	OMBS – Well 14 & 15 Infrastructure	2015
			$6,000,000	OMBS – Pond 6 Pump Vault & Pad Construction - Civil, Piling, & Structural Steel	2019-2020
			$1,043,000	480V PDC Project - Civil, Hydroexcavation, & Structural Steel	2020
		Burns & McDonnell	$843,000	Canal Lift Station	2012
			$13,447,000	NGL Fractionation Plant Expansion Project	2012-2014
			$1,800,000	Mont Belvieu Fractionation Plant #5 Project - Civil	2020
		Coastal Field Services	$608,000	Well 15 Infrastructure – Civil Foundation	2015
Optimus Steel	Vidor, TX	Prime Contractor	$424,000	Bag House Modifcation Project - Civil, Piling, & Structural Steel	2020
OXY Crude Terminal	Ingleside, TX	Matrix	$1,500,000	OIEC Tanks Augercast Pile Project - Piling	2018
		Performance Contractors	$5,953,000	OXY Crude Terminal Expansion	2016
Phillips 66	Borger, TX	Prime Contractor	$264,000	Borger Crude Flex Paint Pad Project - Civil	2020
	Nederland, TX	Prime Contractor	$3,140,000	Methanol Storage Expansion	2016
			$1,927,000	Crude Phase II Concrete Foundations - Civil	2017-2018
			$3,085,000	Crude Phase III Foundations - Civil	2018

MASON CONSTRUCTION

OWNER	PROJECT LOCATION	GENERAL CONTRACTOR / ARCHITECT / ENGINEER	CONTRACT AMOUNT	DESCRIPTION OF WORK PERFORMED	YEAR
			$5,370,000	Crude Phase IV Foundations - Civil	2019
			$4,168,000	Dock 4 - Demo & Bulkhead Project - Civil, Piling, & Structural Steel	2019-2020
			$1,400,000	Dock 4 - Priority 4/VCU Foundations - Civil & Piling	2020
		Pat Tank	$320,000	Tank 122 Concrete Bottom Project	2017
	Orange, TX	Echo Maintenance	$6,878,000	Interconnectivity Mechanical Installation	2015
	Sweeny, TX	Dashiell Corporation	$1,100,000	Civil & Precast Piling	2018
		Richard Construction	$10,000,000	Clemens Carverns – Civil & Piling	2014
			$1,100,000	Clemens Mixed Butanes Project	2017
		Structure Tone	$340,000	Sweeny Refinery Conference Center - Structural Steel	2017-2018
	Westlake, LA	Echo Maintenance	$241,000	Sasol MEG Pipeline Project	2017
		Richard Construction	$670,000	900 Pipe Rack Project	2017
Port of Port Arthur	Port Arthur, TX	Orion Construction	$4,327,000	Berth 6 Expansion Project - Civil	2022
Renewable Bio Fuels	Port Neches, TX	Prime Contractor	$140,000	Esterfication Tank & FFA Heater FND - Helical Pile	2017
Sam Rayburn MPA	Jasper, TX	Prime Contractor	$1,050,000	Install of New Substation Control House - Civil	2020-2021
Sasol	Westlake, LA	Steel Service	$290,000	West QC Labs - Structural Steel	2017
South Hampton	Silsbee, TX	Prime Contractor	$368,000	Asphalt Paving for Unit & Gate Area	2016
Sunoco Logistics / Energy Transfer	Nederland, TX	Prime Contractor	$1,785,000	Mariner South Project Early Works -- Site Work & Paving	2013
			$641,000	Dock 2 Piling & Structural Steel	2013
			$175,000	Ship Dock 4 Piling	2014
			$192,000	Central Manifold – Helical Piles	2015
			$275,800	Central Manifold Buildout Phase I Helical Pile & Foundation Project - Civil & Piling	2021
		Burns & McDonnell	$5,020,000	Raw Water Treatment Plant Project - Civil & Piling	2019-2020
		Gulfspan	$165,000	Eaglebine 12" Crude Sysytem	2014
		Echo Maintenance	$345,000	Civil Work for Waste Water Tank	2015
		Dashiell Corporation	$1,869,000	Substation Project - Civil & Piling	2014

MASON CONSTRUCTION

OWNER	PROJECT LOCATION	GENERAL CONTRACTOR / ARCHITECT / ENGINEER	CONTRACT AMOUNT	DESCRIPTION OF WORK PERFORMED	YEAR
		Orion Construction	$2,700,000	Nederland Dock 1 & 2 Project - Civil	2020
		S&B Engineers	$300,000	Compressor Building Shelter - Structural Steel	2020
		Southeast Texas Industries	$175,000	#4 Ship Dock HVCO Blending	2014
		Triple S	$161,000	AB Barge Dock Phase I – Pipe, Helical Pile & Load Test	2014
			$996,000	New Barge Dock A/D Phase II - Pipe & Helical Pile	2015
			$200,700	Ship Dock #4 Upgrade Phase II	2017
			$3,500,000	Ship Dock #6 Landslide Project - Piling	2019
			$442,000	Dock 5 MCVS Pipe Pile Project - Piling	2020
			$189,000	Nat Gas Phase 3 ACIP Pile Project - Piling	2020
			$278,500	DOE & Marshland Manifold Augercast Project - Piling	2021
Targa Midstream Services	Mont Belvieu, TX	REF-CHEM LP	$1,928,000	Civil & Piling Services	2011
			$1,312,000	Excavation & Compression Unit for Cavern Facility	2011
Tenaris	Bay City, TX	Prime Contractor	$5,090,000	Pipe Pile Installation	2014
		Turner Construction	$407,000	Auxiliary Buildings – Pipe Pile	2016
Terra Biochem	Jasper, TX	Prime Contractor	$1,575,000	Glycol Plant	2012
Topsail Energy	Baytown, TX	Parfab	$524,000	New Tank Containment - Civil	2019
TOTAL Petrochemicals	Port Arthur, TX	B & E Resources	$994,000	Naptha / Gasoline Area Construction	2016
		Black & Veatch	$3,100,000	Clarifier / Demineralization Project - Substations - Civil	2019-2020
		CB&I	$751,000	Ethane Cracker Asphalt Project - Civil - Asphalt	2020-2021
		Fluor	$13,038,000	DCP Piling Project	2008-09
			$35,087,000	DCP Civil Project - Site Prep & Structural Steel	2008-2010
		Recon	$728,750	Side Cracker Test Pile Program - Piling	2017
Total Specialties, Inc.	Pasadena, TX	Prime Contractor	$3,345,000	HDA Project Civil & Structural Steel	2014
			$1,485,000	HAD Project Early Works Civil	2014
TPC Group	Houston, TX	Burns & McDonnell	$232,000	S-001 Boiler 12 Hydroexcavation Project - Hydroexcavation	2021

MASON CONSTRUCTION

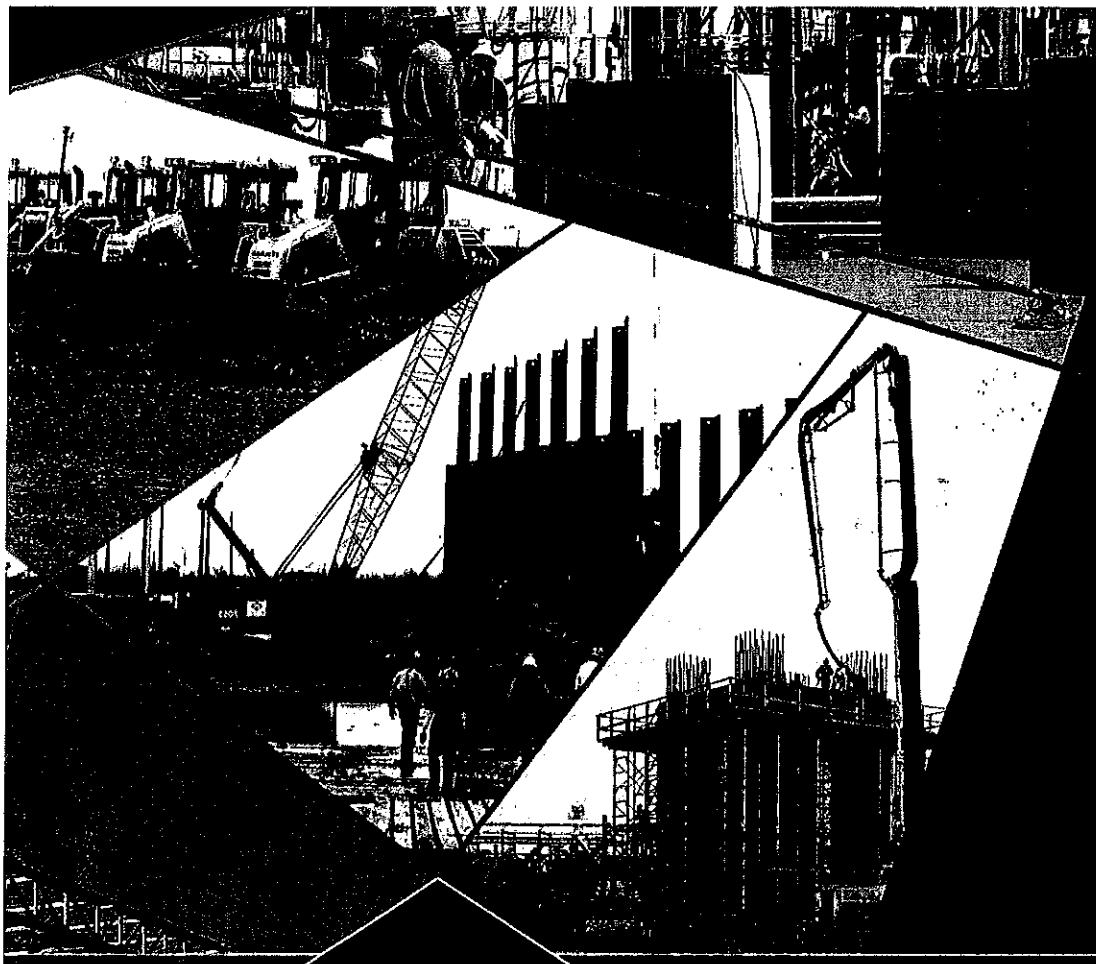
OWNER	PROJECT LOCATION	GENERAL CONTRACTOR / ARCHITECT / ENGINEER	CONTRACT AMOUNT	DESCRIPTION OF WORK PERFORMED	YEAR
Tubal Cain Marine Services	Port Arthur, TX	Prime Contractor	$175,000	Warehouse Building Foundation	2013
			$145,000	Tower Crane Foundations	2013-2014
			$190,000	Building Foundation	2014
Universal Pegasus	Pasadena, TX	Prime Contractor	$40,000	Hydro-Probe 8in Energy Transfer Pipeline Project - Hydroexcavation	2020
Wilson Storage Facility	Boling, TX	Beard Construction, LLC	$532,000	Wilson Storage Facility Foundation - Sheet Pile	2012
Williams	Hankamer, TX	Danos	$218,000	D1 Hankamer Pump Station	2015
	Markham, TX	Danos	$320,000	Markham Station #24 - Civil & Hydroexcavation	2017
	Port Arthur, TX	Danos	$257,000	D2 Port Arthur Pump Station	2015
	Orange, TX	Danos	$730,000	D3 Orange Pump Station	2015
			$314,000	Dupont Solvey Meter Site	2015
			$363,000	Williams- Solvey Meter Site	2015
Valero Houston	Houston, TX	Prime Contractor	$1,215,000	Eagle Ford Crude Unit - Site Prep	2014
			$1,416,000	Crude S-220 OSBL Civil & UG Piping	2014
			$9,044,000	Crude S-210- ISBL Foundations & UG Piping	2015-2017
			$848,000	Area 14 - Kero Merox – Civil & Piling	2015
			$1,087,000	Crude S-250 - Final Site Grading & Roadways	2015
			$4,200,000	S-220 ISBL Civil Project	2017
			$2,676,000	S-460 ISBL Piling & Bathtub Project	2017
			$1,330,000	Alky S-231 OSBL Cooling Tower Area Project	2017
			$1,123,500	S-232 AES Area - OSBL PDC Building Area Project - Civil & Piling	2017
			$1,103,000	Alky S-240 OSBL Sphere Area Project	2017
			$993,000	S-200 Acid Blowdown Scrubber Project - Civil & Piling	2017
			$300,000	Alky S-230 OSBL BOP - CH Rack Foundations Project - Civil	2017
			$250,000	S-221-E Demo & Replace U/G Storm Water Piping Project	2017
			$1,499,000	Alky S-220-7 Compressor Foundation - Civil	2018

MASON CONSTRUCTION

OWNER	PROJECT LOCATION	GENERAL CONTRACTOR / ARCHITECT / ENGINEER	CONTRACT AMOUNT	DESCRIPTION OF WORK PERFORMED	YEAR
		Burrow Global	$278,700	S-640 Electrical Building Project - Structural Steel	2017
Valero McKee	McKee, TX	Prime Contractor	$1,687,000	Crude VAC Unit - Civil & Structural Steel	2013-2014
		Burns and McDonnell	$1,335,000	Heart Cut Reformate Project	2010
			$2,248,000	Benzene Storage Tank - Site Work	2010
			$1,044,000	Miscellaneous Civil and Paving	2010-2011
Valero Port Arthur	Port Arthur, TX	Prime Contractor	$1,315,000	Waste Water Treatment Unit 8742	2012-2013
			$986,000	PS2 to SRTF Cable Tray - Structural Steel	2012-2013
			$2,395,000	North End Firewater Pump Station	2013-2014
			$2,609,000	HCU-942 Reactor Foundation	2013-2014
			$657,000	East Heavy Haul Road	2013-2014
			$928,000	ACH-72 Foundation	2013-2014
			$465,000	SS-227 - Foundation & Piles	2014
			$351,000	SRU 453 Upgrade Project	2014
			$560,000	SS-227 - Structural Steel	2014
			$473,000	36" Crude Line Bridge Foundations	2014
			$299,000	AVU 146 Canadian Crude UG Piping	2015
			$844,000	Repair Retention Pond Levees	2015
			$457,000	SS-227 Installation Phase II - Structural Steel	2015
			$1,087,000	Crude S-250 Final Site Grading & Roadways	2015
			$685,000	HCU – 942 Amine to ATU 7842 – Civil, Piling, & Structural Steel	2016
			$3,786,000	Jet Tank 2187 – Timber Pile	2016
			$3,116,000	New 400 MB Jet Fuel Tank Project	2017
			$2,285,000	Butane Rail Install Rail Sub Ballast Project	2017
			$1,620,000	Dock Piles & Foundations Project - Civil & Piling	2017
			$721,000	NSTF Tank 284 Tank Ring Project	2017

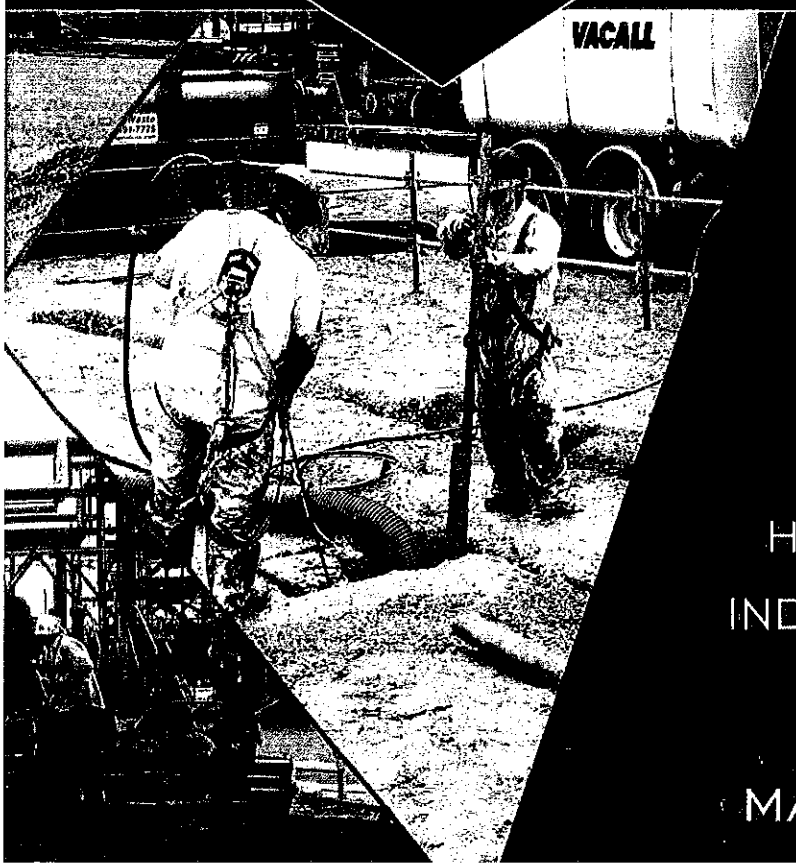
MASON CONSTRUCTION

OWNER	PROJECT LOCATION	GENERAL CONTRACTOR / ARCHITECT / ENGINEER	CONTRACT AMOUNT	DESCRIPTION OF WORK PERFORMED	YEAR
			$1,000,000	Pump House #35 Directional Boring - Civil	2017
			$600,000	Install Steel Support for Pump House #35 - Structural Steel	2017
			$3,366,000	Tank 108 Replacement - Civil & Piling	2017-2018
			$8,660,000	DCU 844 ISBL: CH-502 Site Work, Bathtub, Laydown Yard Access Bridge - Civil & Piling	2018-2019
			$1,900,000	S-06-230 Coker Naphtha Project - Civil	2020
		Burns & McDonnell	$14,000,000	Diamond Green Diesel 3 ISBL & OSBL Projects - Civil & Piling	2020-2021
		Dashiell Corporation	$235,000	Valero Transmission Lines	2011-2012
			$430,000	230/69kv South Sub Station	2011-2012
			$867,000	South 230kv Sub Station	2011-2012
		Echo Maintenance	$675,000	Canadian Crude Expansion	2011-2012
			$393,000	Piperack 31 - Helical Piles	2012
			$555,000	Jet Tank & Area 21 Fire Water Upgrades - Civil	2017
		Jacobs Engineering	$19,180,000	Valero Expansion Project - Civil, Piling, & Structural Steel	2005-2006
		Richard Construction, Inc.	$1,472,000	WWTU 8742 – Desalter Effluent Treatment Facility	2012
			$478,000	Magellan – Foundations & Pump Installation	2015
			$1,670,000	Butane Rail Foundations & Timber Pile Project - Civil & Piling	2017
Valero Texas City	Texas City, TX	Prime Contractor	$358,000	MDHT Structure - Piling	2014
			$302,000	Incinerator Foundation - Piling	2014
			$163,000	Tank 649 - Augercast Pile	2014
		Burrow Global	$400,000	S-640 Electrical Building Project - Structural Steel	2017-2018
		DeJean Company	$185,000	Installation of Augercast Piles	2008
		Richard Construction	$1,267,300	GDU Tier 3 Project - Civil & Piling	2017



PROUDLY SERVING THE
TEXAS AND LOUISIANA
GULF COAST

MASON CONSTRUCTION, LLC



CIVIL

PILING

ASPHALT

HYDRO-EXCAVATION

STRUCTURAL STEEL

HURRICANE FLOOD PROTECTION

INDUSTRIAL SPECIALTY SERVICES

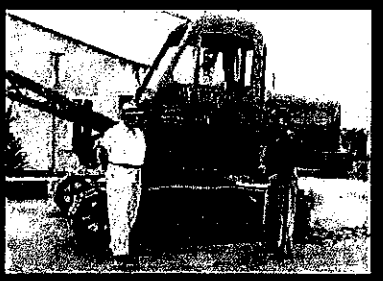
MASONCONSTRUCTION.NET

BUILDING ON A FOUNDATION OF INTEGRITY

SINCE 1939

Mason Construction, LLC. began in 1939 when W.K. Mason originally founded the company as a dragline excavation contractor after win-ning a bid for the construction of a portion of the Houston Ship Channel. More than 80 years later, what emerged from the vision of one man and his life savings of $600.00, is one of the most well-respected industrial contractors in Southeast Texas and Southwest Louisiana.

Although we have grown and changed substantially over time, we still hold tight to the core values that we were founded on all those years ago. We believe that the key to success hinges on your commitment to integrity, the combined strengths of the team you tackle a challenge with, a strong safety culture, quality workmanship, and consistent dependability. We are deeply rooted in the mindset that we will give our all to deliver on our word and that a handshake still means something today. We stand behind what we say, and will give our absolute best to back it up. That is what makes us who we are and why over 90% of our business comes from repeat customers.



Mason Construction, LLC. is proud to be a family owned and operated Industrial Civil Construction Contractor with four generations of experience and over 80 years of unwavering commitment.
We believe in:

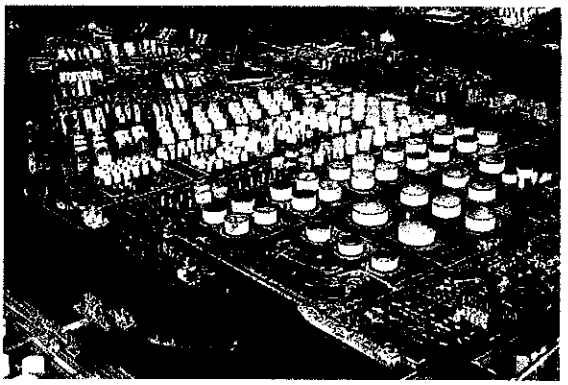
- Embracing a team driven relationship advantage. It is our mission to be a direct extension of your project vision and to work with you to accomplish your goals.
- Continuously developing and empowering a strong proactive safety culture, based on the belief that all accidents are preventable.
- Being production minded and schedule driven without sacrifice to employee safety or quality.
- Investing in the future development of our employees, equipment, technology and processes so that we can consistently deliver unparalleled quality and performance.
- Maintaining a positive and forward thinking attitude in order to quickly adapt to changing conditions and overcome challenges.
- Providing steadfast reliability and consistency in all that we do.
- Being good stewards of our customer's resources. We try our best to treat every project as if we were paying for it ourselves.
- Maintaining the core values that we were founded on: integrity, trust, loyalty, ingenuity, professionalism, teamwork and stewardship with our customers, employees and community.

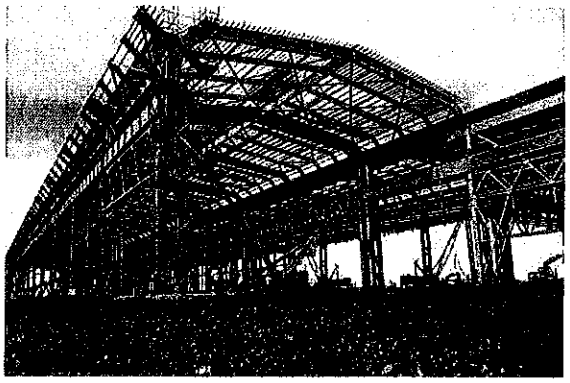
OUR MARKET

- Oil & Gas Production & Processing Facilities
- Petroleum Refineries
- Chemical Processing Plants
- Oil, Gas and Chemical Liquid Storage
- Bulk Storage Terminals
- Pipelines & Compressor Stations
- Alternative Fuel Plants
- Electric Power Generation, Transmission & Distribution
- Alternative Power Plants
- Industrial Manufacturing, Distribution & Warehousing Facilities
- Pulp, Paper & Wood Product Mills
- Pharmaceutical & Biotech Facilities
- Port Facilities
- Rail Terminals
- Food & Beverage Processing, Storage & Distribution Facilities

AREAS OF EXPERTISE

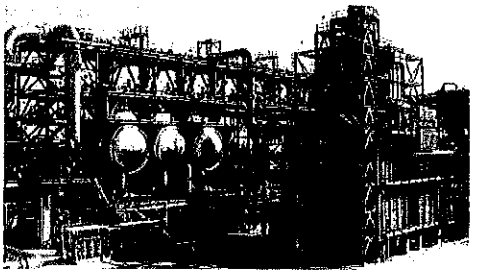
CIVIL • PILING • ASPHALT
HYDRO-EXCAVATION
STRUCTURAL STEEL ERECTION
HURRICANE FLOOD PROTECTION
ENVIRONMENTAL • SPECIALTY SERVICES





Today, Mason operates as a multi-faceted industrial construction company that offers services including civil site work, piling, concrete foundations, paving, structural steel erection, hydro-excavation and environmental services. Additionally, we provide construction services and front-end constructability assistance for a variety of Hurricane Flood Protection projects for clients along the Texas and Louisiana Gulf Coast.

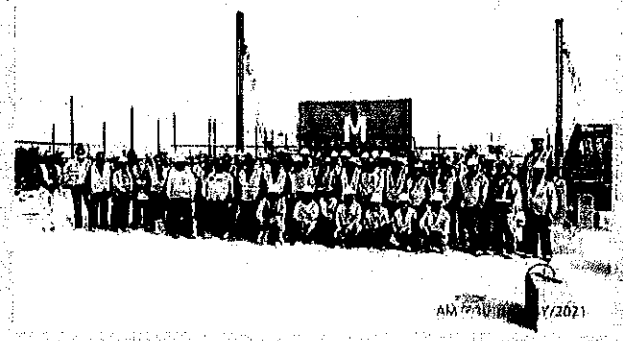
As a 4th generation family owned and operated company, Mason has the flexibility to address our customer' changing needs quickly and adapt to accomplish their desired outcome.



Although we call Beaumont, TX and the Golden Triangle industrial market home; Mason has performed work all over Texas, Louisiana and beyond. Because of our centralized location within the petrochemicial hub of the South, Mason Construction, LLC. has the capabilities and resources necessary to execute any project across the Gulf Coast region.

OUR COMMITMENT TO SAFETY

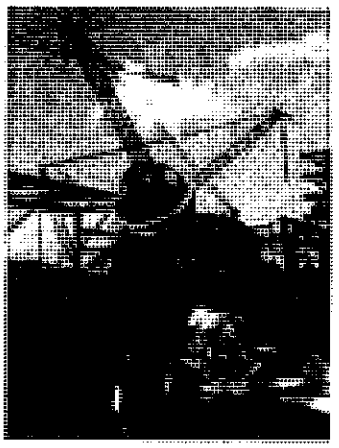
ONE TEAM.



ONE VISION.

ONE GOAL.

EVERYONE GOES HOME SAFE.



Safety is a core value in our daily business. It is our belief that safety and quality are the cornerstones on which every project should be built and they should never be sacrificed to increase production.

Our owners, management, supervision and safety staff are committed to see that our employees, and those working with and around us make it home safely each and every day. We are continually improving our safety culture by partnering with some of the most prestigous organizations in the industry including OSHA, DISA Global Solutions, Avetta (formerly PICS), ISNetworld, the Zero Injury Institute and more.

Our employees strive to set site wide and company wide milestone goals to keep safety at the forefront of their minds each day. To ensure we meet these goals, we assess risks, continuously train and communicate hazards, and gather feedback to drive regular improvement. We utilize:

- BACKGROUND CHECKS AND TWIC
- PRE-EMPLOYMENT PHYSICALS
- DRUG SCREENING
- NEW EMPLOYEE ORIENTATION
- SAFETY & CRAFT TRAINING
- NCCER & NCCCO CRAFT ASSESSMENT, VERIFICATION AND CERTIFICATION
- OSHA 30 CERTIFIED SUPERVISION
- PRE-JOB SAFETY INSPECTIONS
- JSA/JLA
- DAILY EQUIPMENT INSPECTIONS
- JOB SITE SAFETY AUDITS
- SAFETY AWARDS FOR OUTSTANDING ACHIEVEMENT

Our commitment to the safety and well being of our employees, subcontractors, suppliers and customers runs deep. When we work together as a cohesive team, we create a direct and lasting impact on employee morale, productivity and the quality of work we produce. Our primary goal is to send each person home to their families in as good or better shape than when they arrived to work. One Team. One Vision. One Goal. Everyone goes home safe.

THE SAFER WE ARE, THE STRONGER WE ARE.

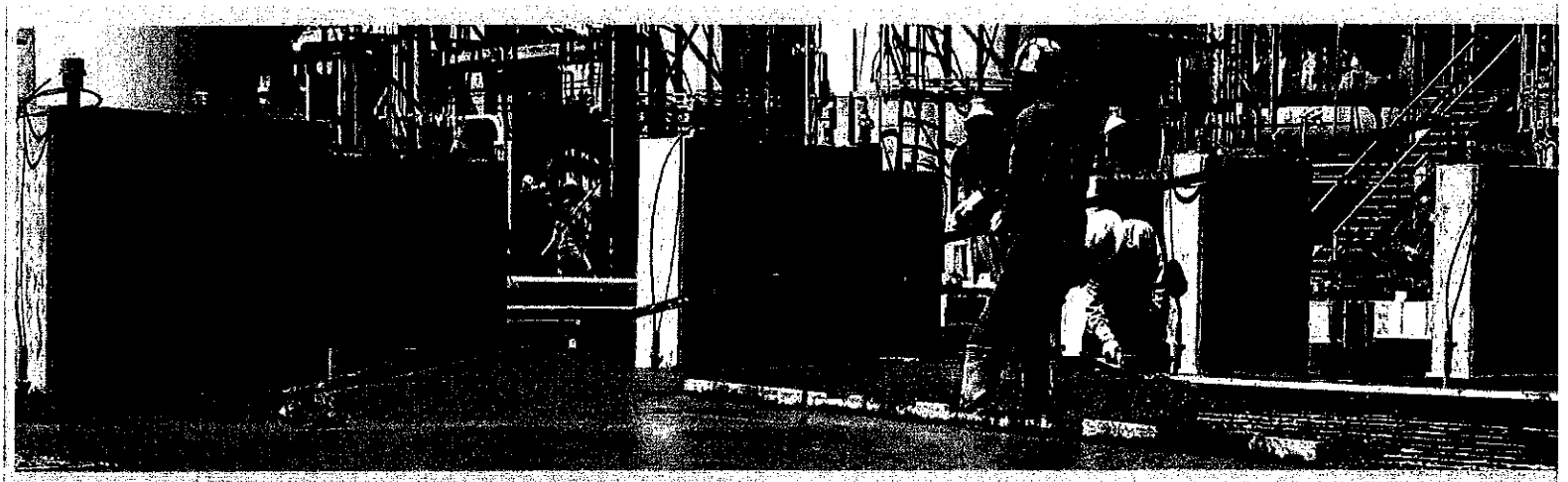
ONE MILLION SAFE MAN HOUR MILESTONES

On August 3, 2015, Mason was recognized by the Zero Injury Institute (ZII) as the 34th Construction Company In North America to achieve the milestone of over One Million Safe Man Hours without a recordable or lost time injury.

To date, Mason Construction has been recognized on 5 occasions in the ZII Hall of Honor for Million Safe Man Hour Milestones. Those teams include the following:

Mason Construction, LLC - Company Wide - 2014-2015
ExxonMobil - Beaumont Complex 2007-2016
Valero Energy Corporation - Texas Sites - 2011-2016
Motiva Enterprises, LLC. - Port Arthur, TX 2007-2019
Mason Construction, LLC - Company Wide - 2019-2020

QUALITY IS MORE THAN A STANDARD. IT'S HOW YOU BUILD A LEGACY.



Mason strives to provide top quality service in all that we do through:

- Management Expectations & Support
- Supervisory & Craft Training
- Active Mentoring Systems
- Solid QA/QC Practices
- Field Quality Inspections
- Third Party Testing

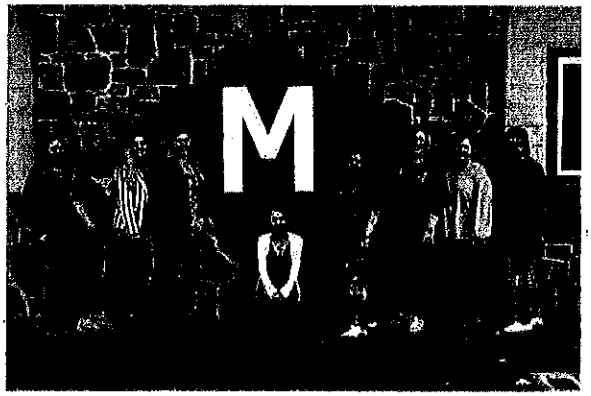
At Mason, we do more than just grade dirt, drive piles, hang steel, or pour concrete.

We believe that each project completed memorializes our own unique signatures on our customers' facilities.

Through quality work practices we strive to build a legacy that will withstand the tests of time and continue to serve the generations of tomorrow.

OUR STRONGEST ASSETS

Mason has expanded exponentially over the years from the humble beginnings of a one-man operation to our present family of roughly 500 talented leaders, craftspeople and support staff. Our people consistently put their hearts and souls into helping some of the world's largest downstream and midstream petrochemical, liquid and bulk storage and manufacturing companies achieve their project goals safely and successfully.

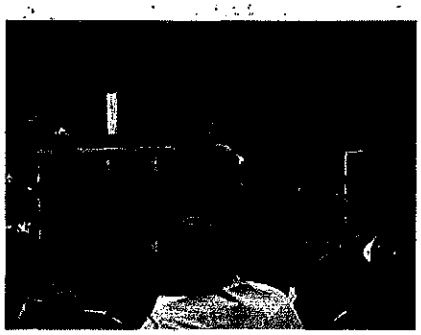


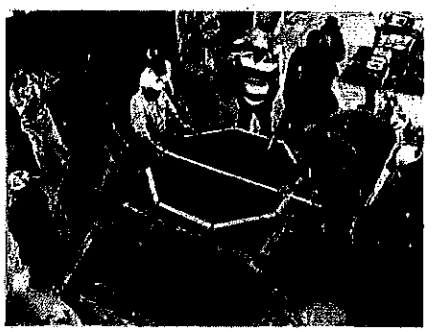
MASON RANGER ACADEMY

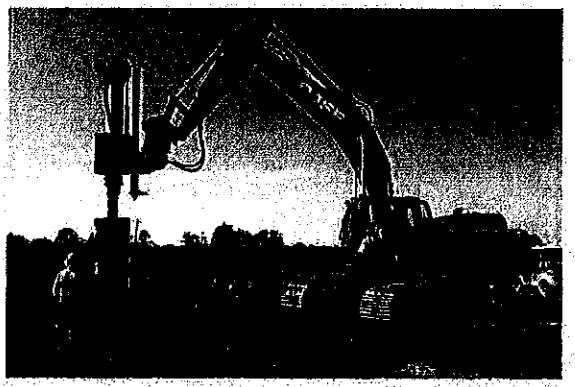
Employee Craft Training Program

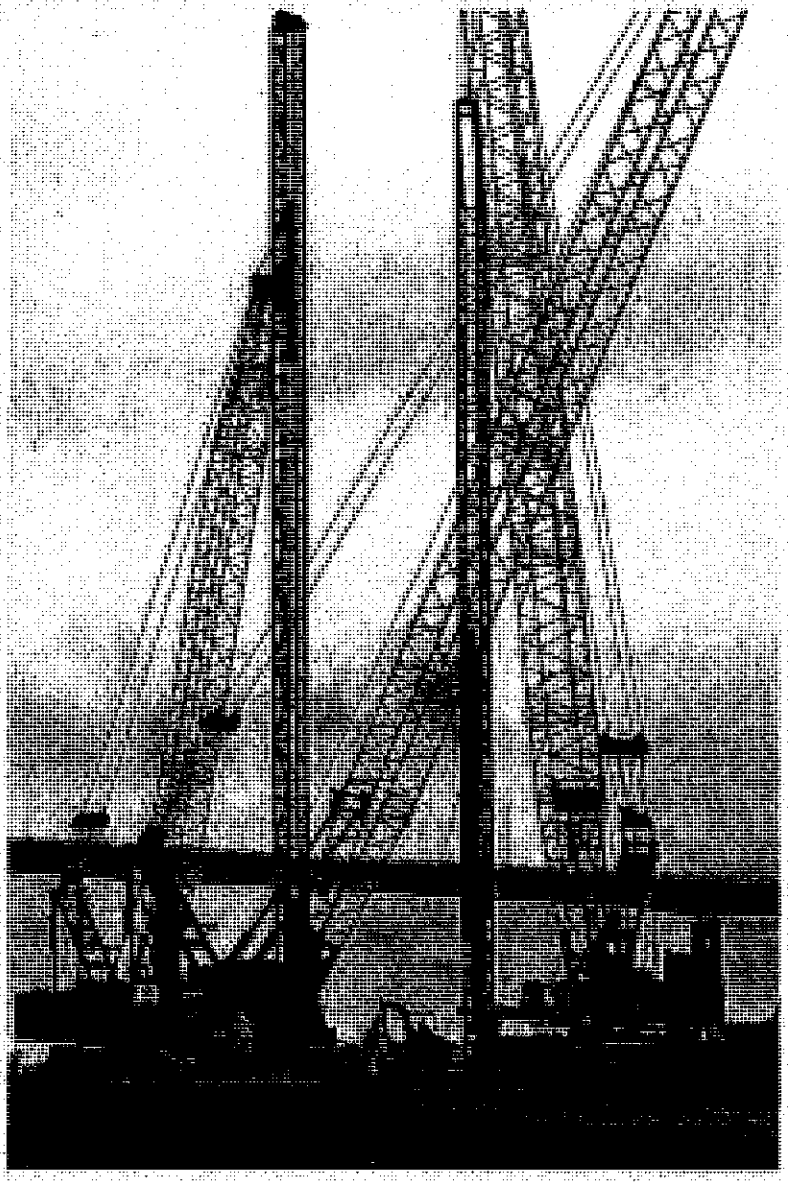
The Mason Ranger Academy was founded in 2014 to assist in the development of journeyman craftsmen and field leaders to counteract the decline of skilled craft workers in the industrial market. The goal of the Mason Ranger Academy is to produce the most knowledgeable and highly skilled craftsmen possible to ensure the success of our client's projects.

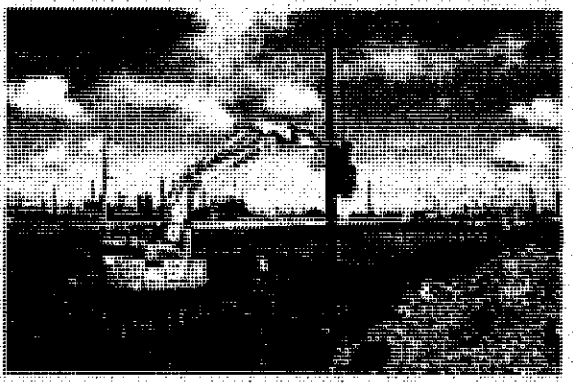
Each month, Mason offers two 2.5 hour course modules pertaining to a specific work scope that Mason performs. These courses are led by industry experts, manufacturer's representatives, and senior Mason supervisors to ensure that each new Mason Ranger receives the training that they need to perform their work successfully.

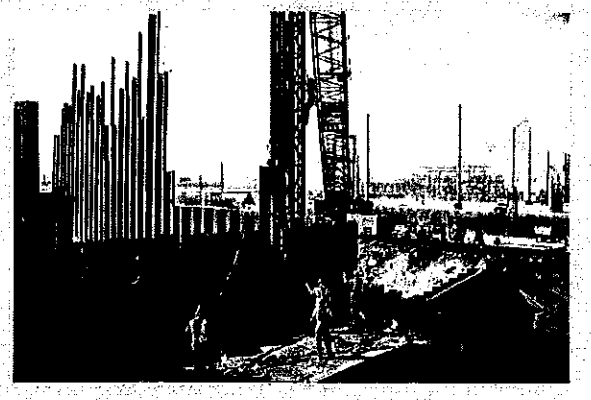




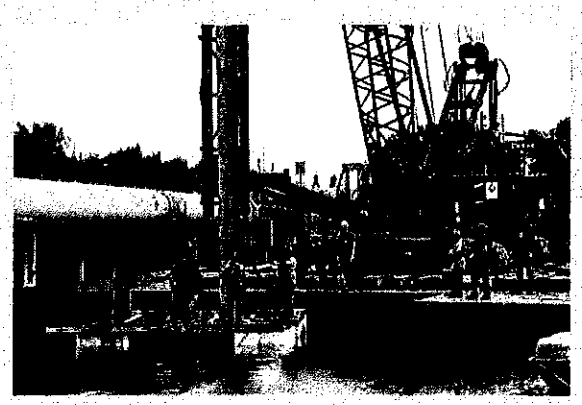








PILING CAPABILITIES

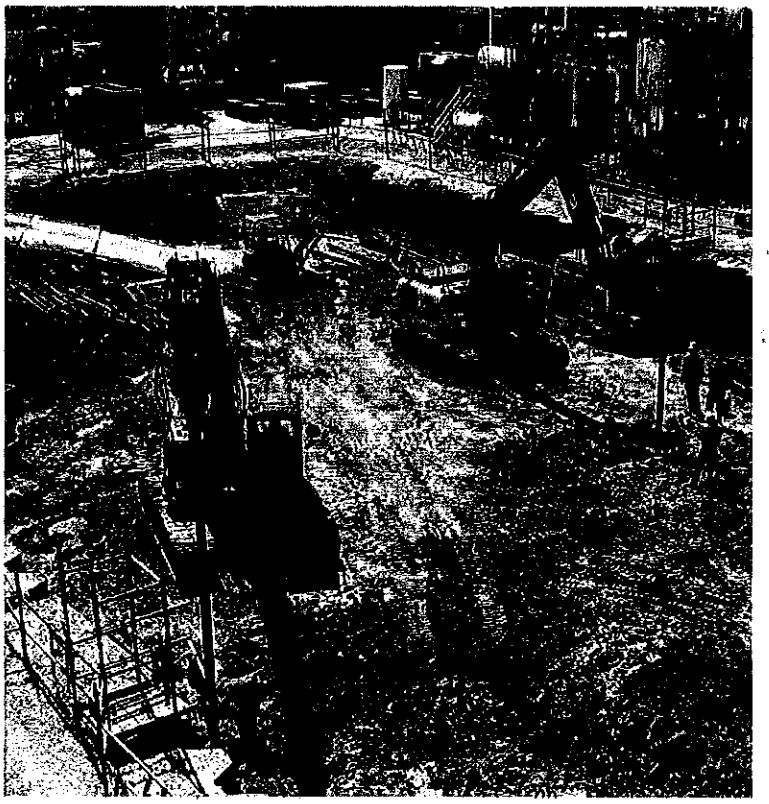


Piling & Deep Foundations

- Drilled Shafts
- Augercast Piles
- Caissons / Large Diameter Casings
- Timber Pile
- Precast Concrete Pile
- Steel Pipe Pile
- Steel H-Pile
- Steel Sheet Piles
- Helical Foundation Piles
- Helical Tie Backs

Specialty Piling Services

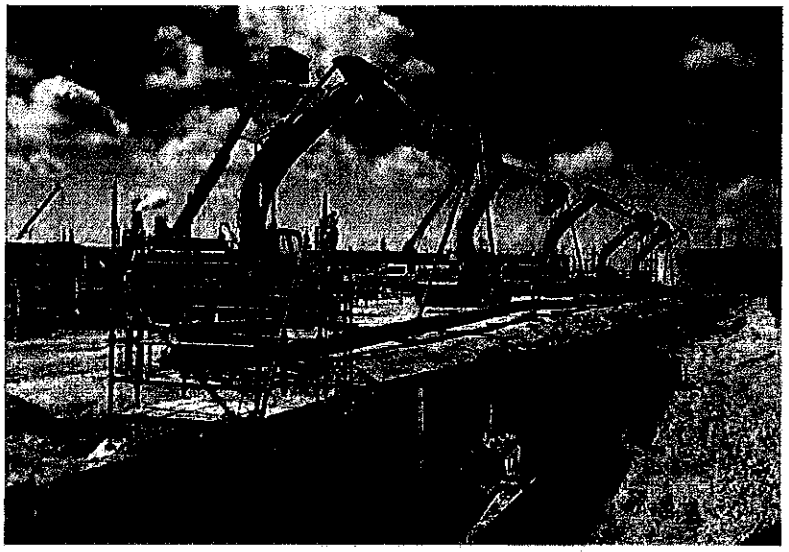
- Low Headroom & Restricted Access Rig Options
- Pile Cutoff Services
- Pile Load Testing
- Marine Installations from Sectional Barges
- Marine Bulkhead & Dock Repairs
- Temporary Piles
- Piling Options for Environmentally Sensitive Areas
- Piling & Deep Foundation Constructability Review
- Alternative Pile Design Assistance

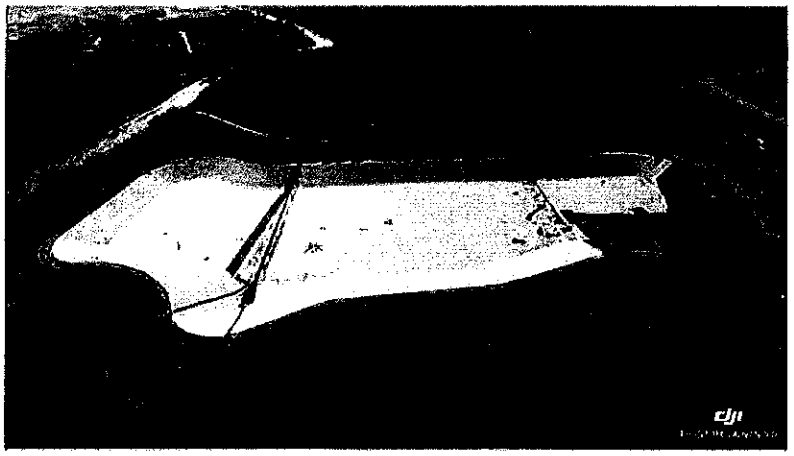


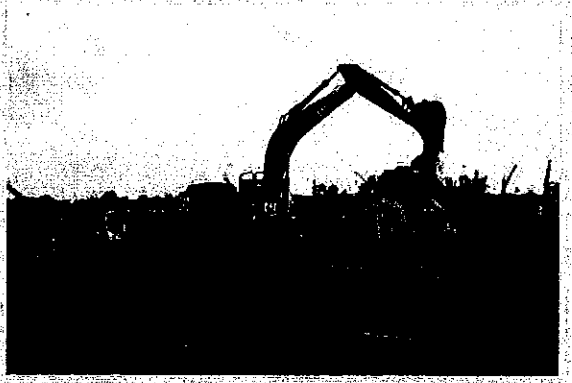
CIVIL CAPABILITIES

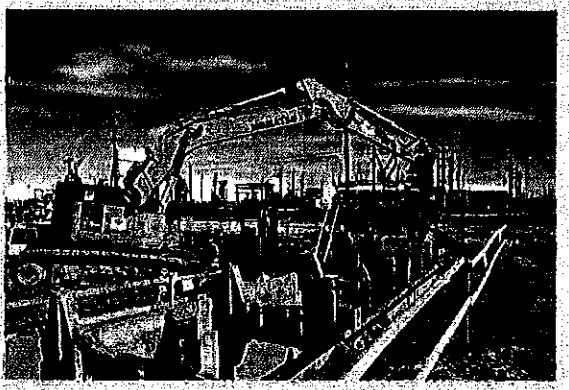
Site Work

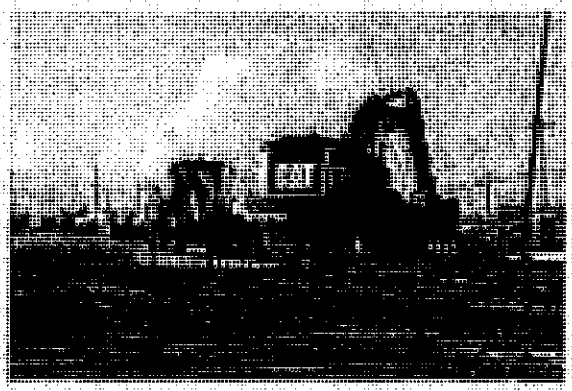
- **Earthwork & Site Preparation**
  - -Site Clearing & Grubbing
  - -Site Grading & Balancing
  - -General Excavation & Backfill
  - -Mass Excavation
  - -Site Bathtubbing
  - -Soil Stabilization
  - -Dikes & Levees
  - -Holding Ponds
  - -Slope Protection
  - -Erosion Control
  - -Crane Pad Construction
  - -Drilling Rig Site Construction
  - -Mat Placement
- **Underground**
  - -Underground Piping
  - -Underground Drainage
  - -HDPE Firewater Systems
  - -Piping & Utility Trenching
- **Road & Rail Bed Construction**
  - -Heavy Haul Construction
  - -Access Road Construction
  - -Parking Lots
  - -Laydown Yards
  - -Driveways & Sidewalks
  - -Railroad Bed Installation
- **Shoring**
  - -Shoring Boxes
  - -Trench Shields
  - -Hydraulic Shoring Systems
  - -Slide Rail Shoring Systems
  - -Beam & Plate Shoring Systems
  - -Sheet Pile Shoring Systems
  - -Sheet Pile Shoring Design Consulting Services
  - -Excavation Dewatering

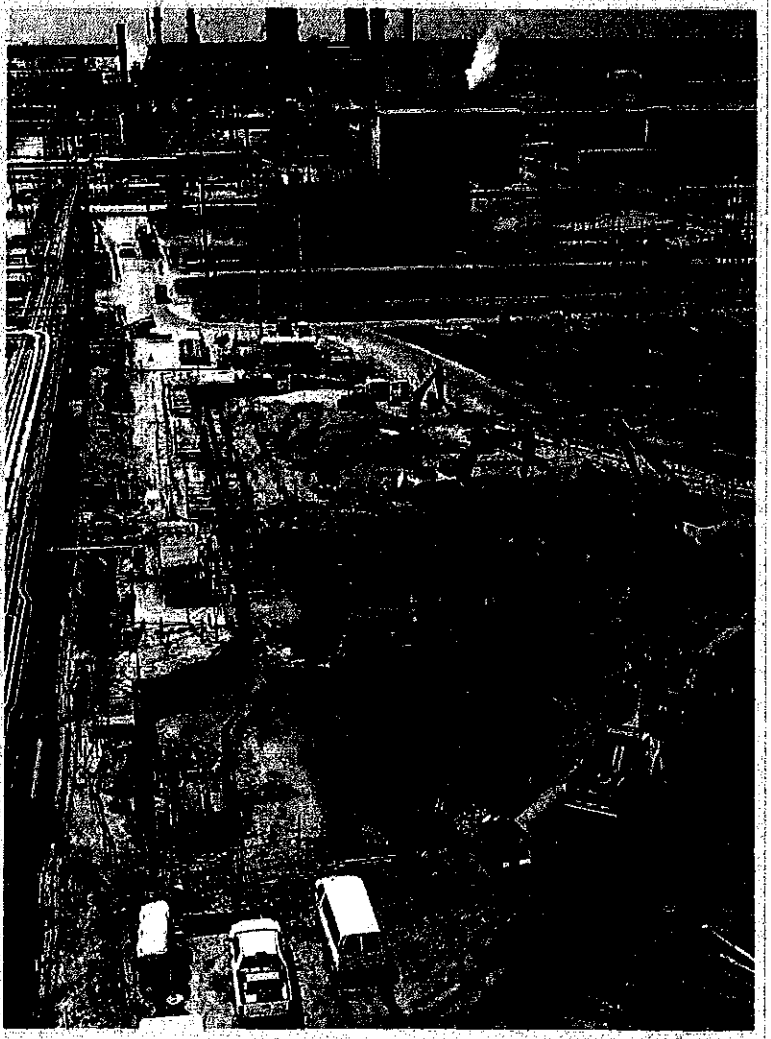


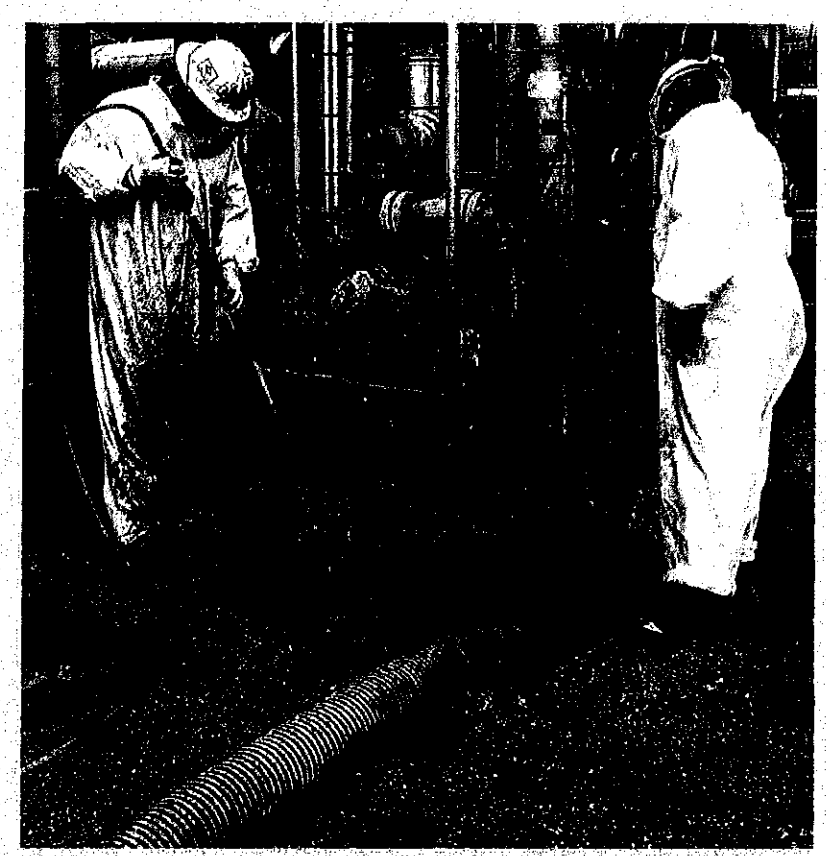






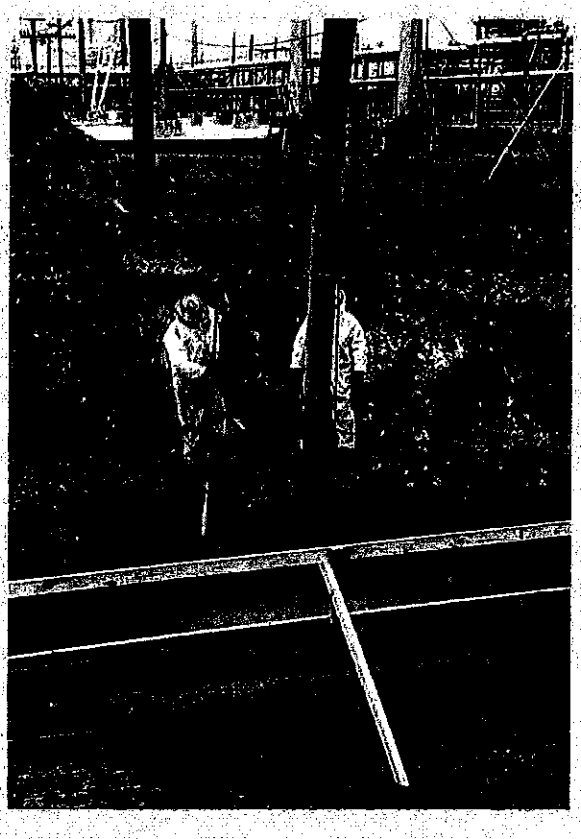


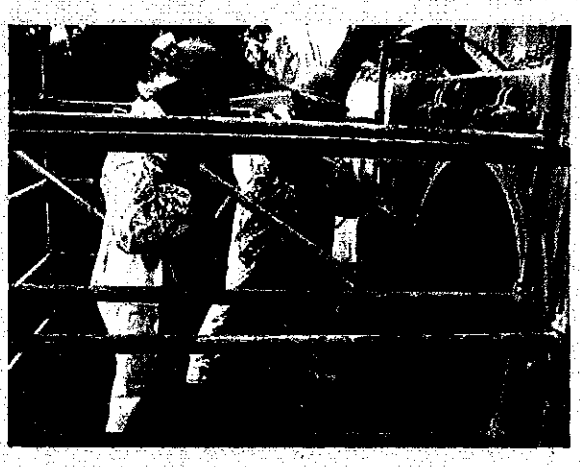




MASON CONSTRUCTION LTD

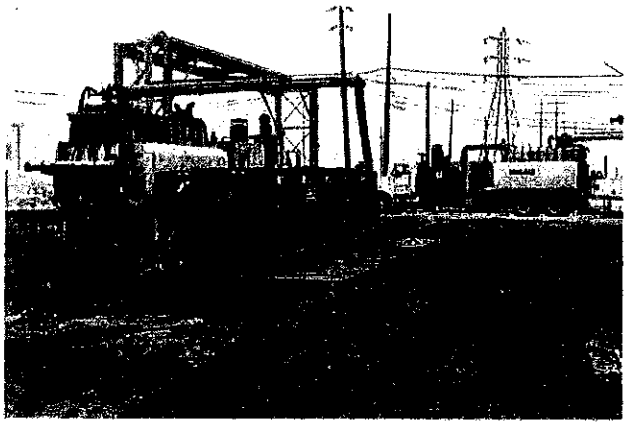
CIVIL CAPABILITIES

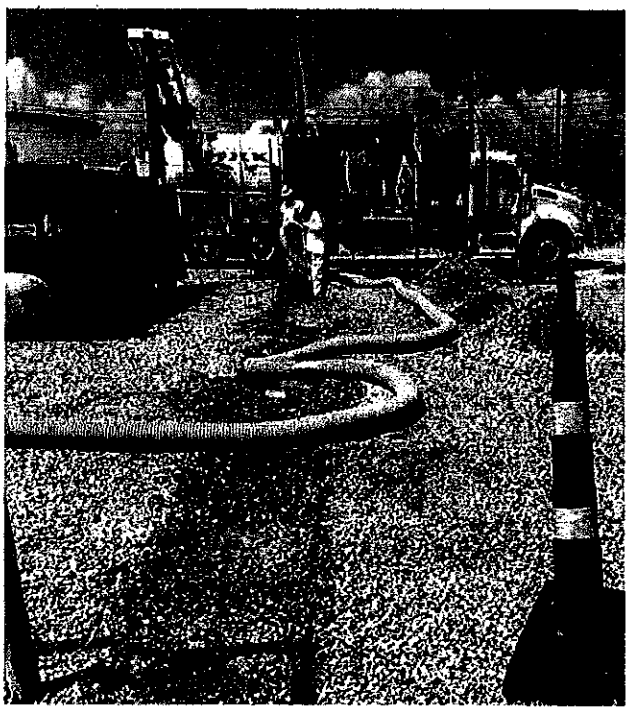




Hydro-Excavation Specialty Services

- HAZWOPER Certified Craftsmen
- Hydro-Excavation Rig Services
- Exploratory Excavation, Daylighting & Trenching
- Hydro-Probing
- Pipeline & Utility Location
- Limited Access Excavation
- Combination Rig Services
- Sewer & Drain Line Cleaning
- Pipe Flushing
- Removal Of Dry & Flowable Solid Materials
- Piling & Foundation Installation Options in Environmentally Restricted Areas

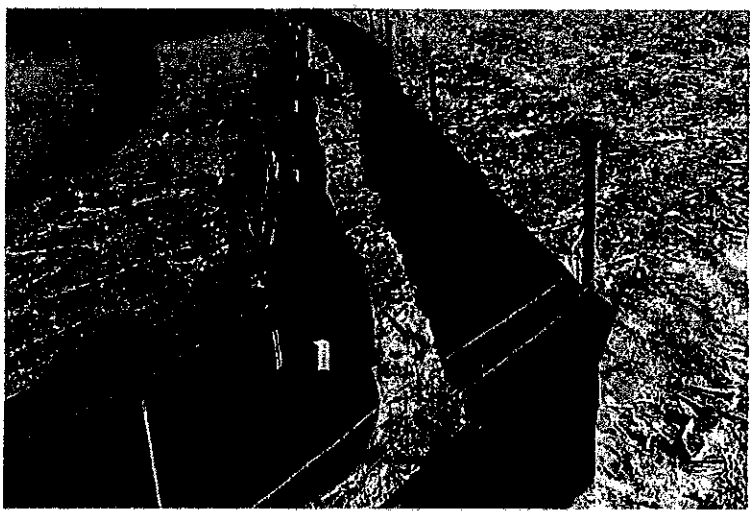


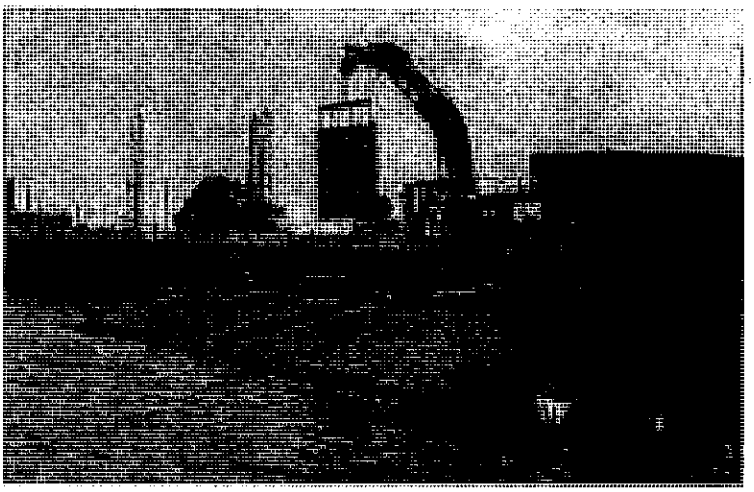


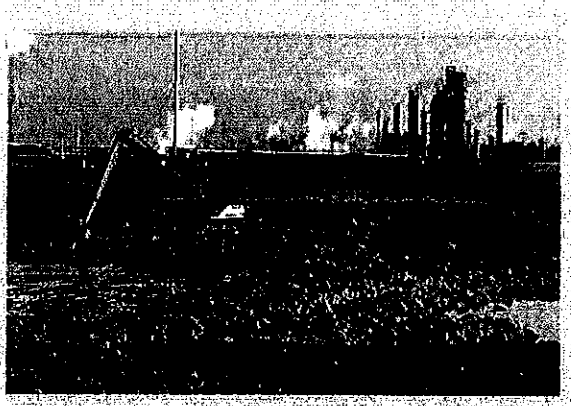
CIVIL CAPABILITIES

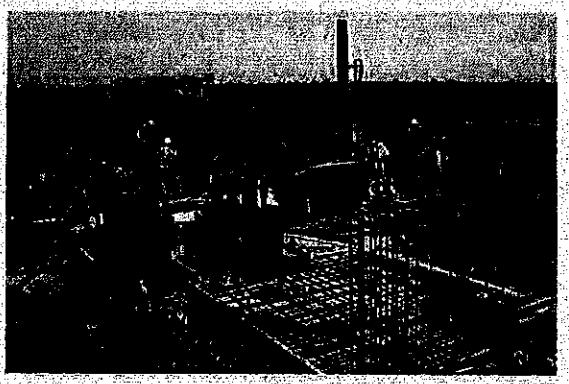
Environmental Services

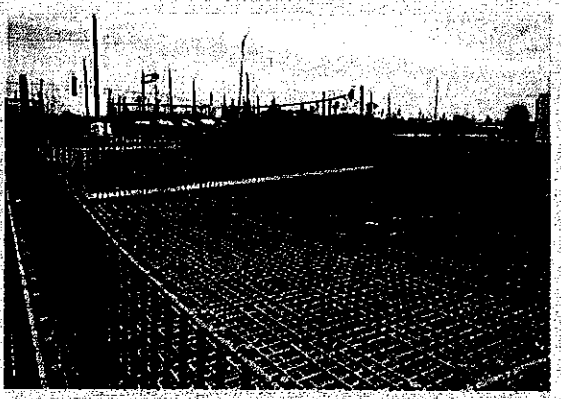
- HAZWOPER Certified Craftsmen
- SWPPP System Installation & Maintenance
- Erosion Control
- Construction Dewatering
- Excavation & Removal of Contaminated Materials
- Soil Remediation
- Soil Solidification & Stabilization
- Land Fill Capping
- Settlement Pond & Placement Area Dredging
- Chemical Resistant Concrete Construction
- Chemical Resistant Concrete Coatings
- Containment & Liner System Installation
- Piling & Foundation Installation Options in Environmentally Restrictive or Sensitive Areas
- Pipe Conduit Cleaning & Clearancing

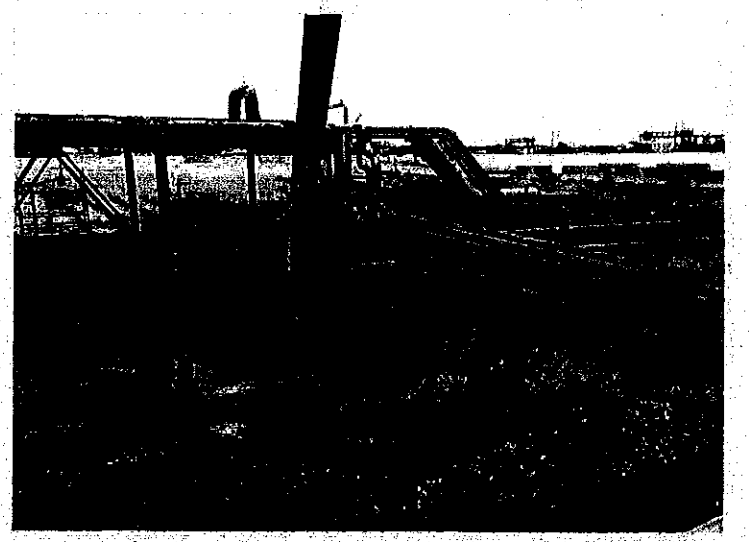


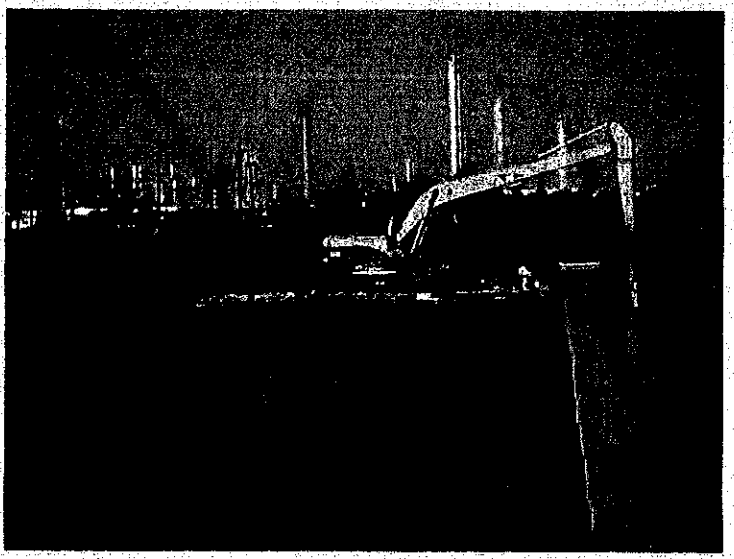


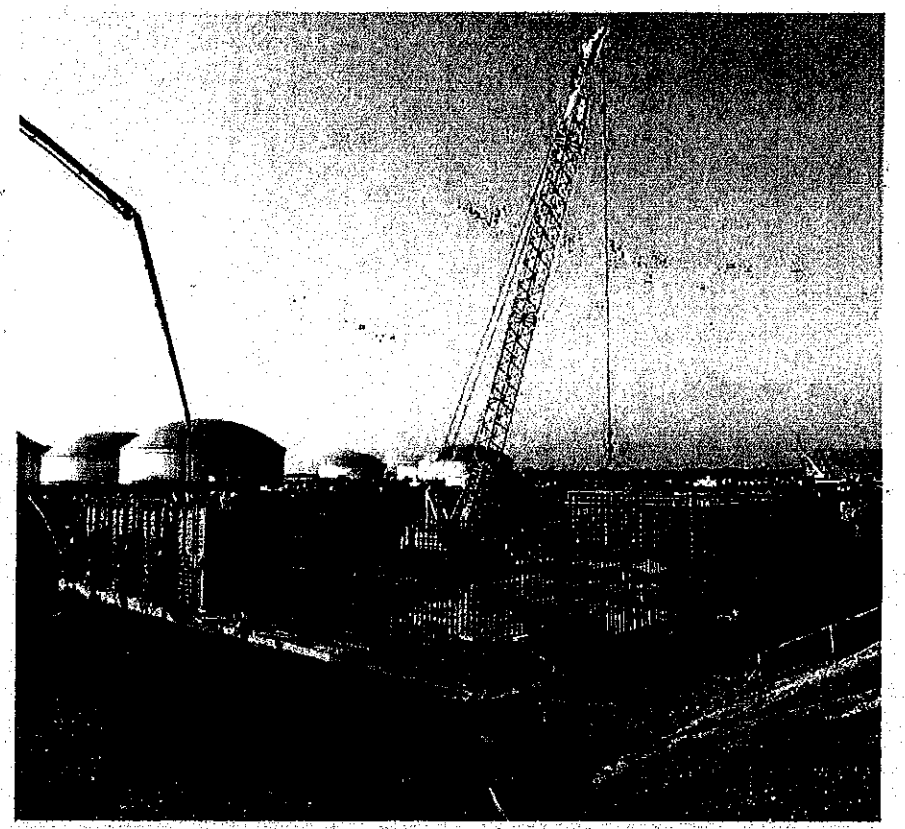


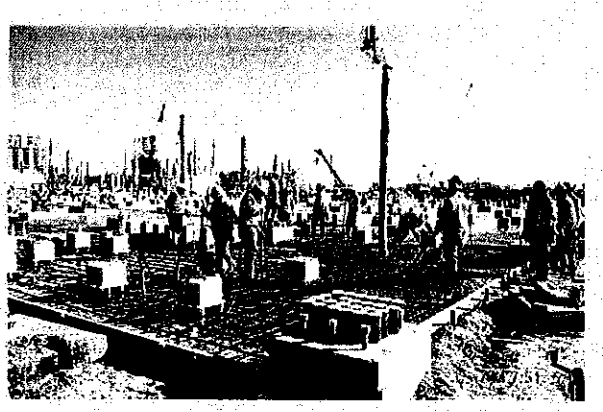




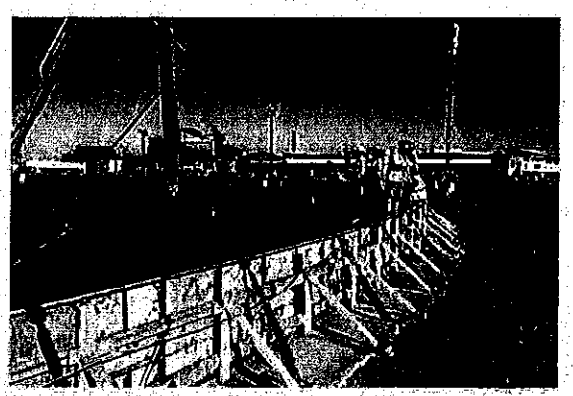


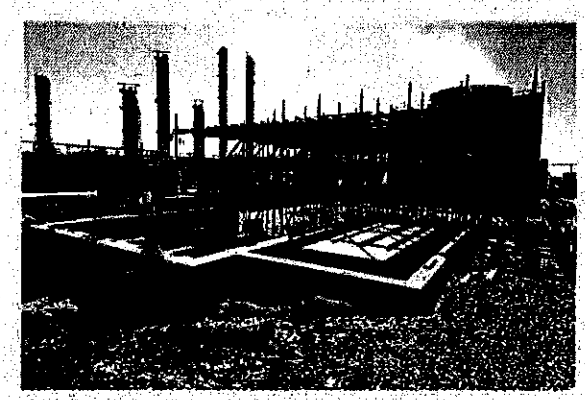


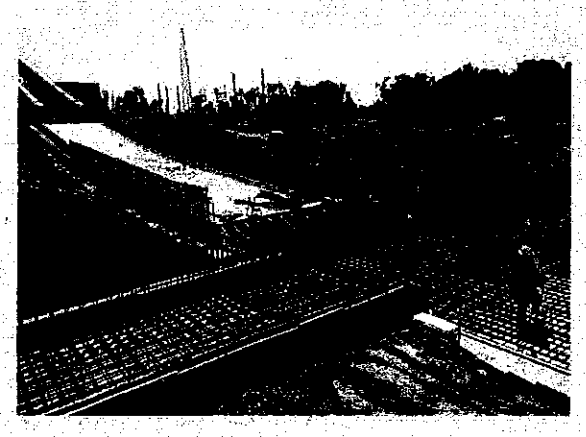




CIVIL CAPABILITIES

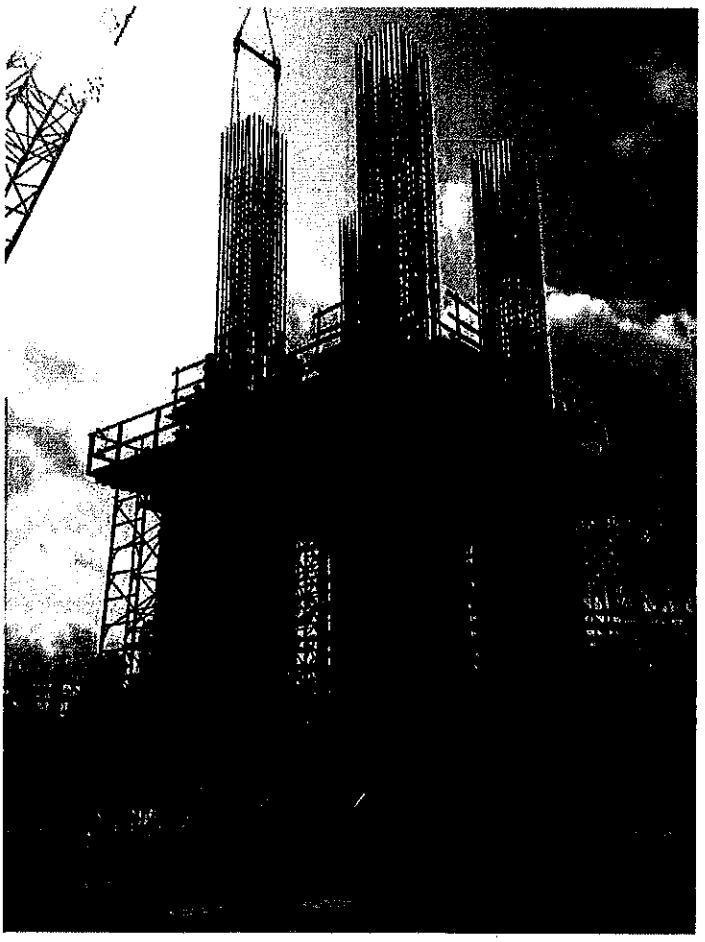






Concrete

- **Pipe Rack Foundations**
- **Building Structures**
  - Slabs on Grade
  - Elevated Roofs & Decks
  - Parking Structures
- **Equipment Foundations**
  - Pump Foundations
  - Compressor Foundations
  - Vessel Foundations
  - Skid System Foundations
  - Pipe Supports
- **Tank Foundations**
  - Ring Wall Foundations
  - Mat Foundations
- **Concrete Wall Systems**
  - Retaining Walls
  - Blast Walls
  - Flood Protection Walls
- **Mass Concrete Structures**
- **Elevated Structures**
- **Containment**
  - Sumps & Pits
  - Intake Structures
  - Manifolds Systems
  - Cooling Tower Basins
  - Catch Basins & Manholes
  - Trenches & Tunnels
- **Electrical Structures**
  - Substation Foundations
  - MCC Building Foundations
  - Transmission Line Foundations
  - Electrical Routing Trenches
  - Electrical Duct Banks
  - Instrumentation Supports
- **Rail Portal Structures**
- **Crane Foundations**
- **Slope Protection**
- **Concrete Lined Ditches**
- **Concrete Area Paving**



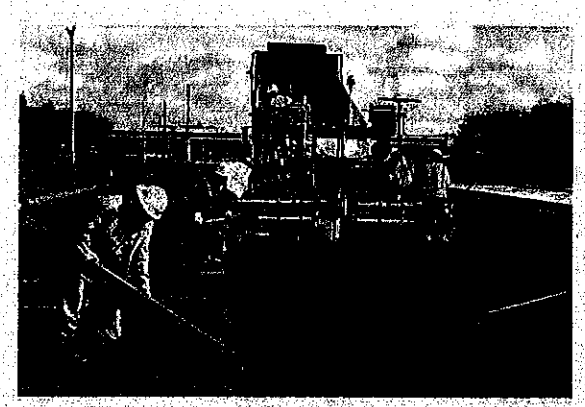
CIVIL CAPABILITIES

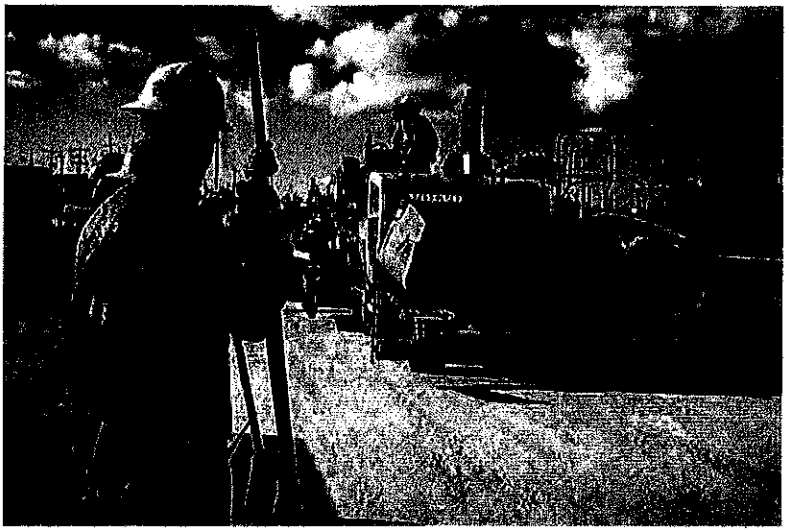
Asphalt Services

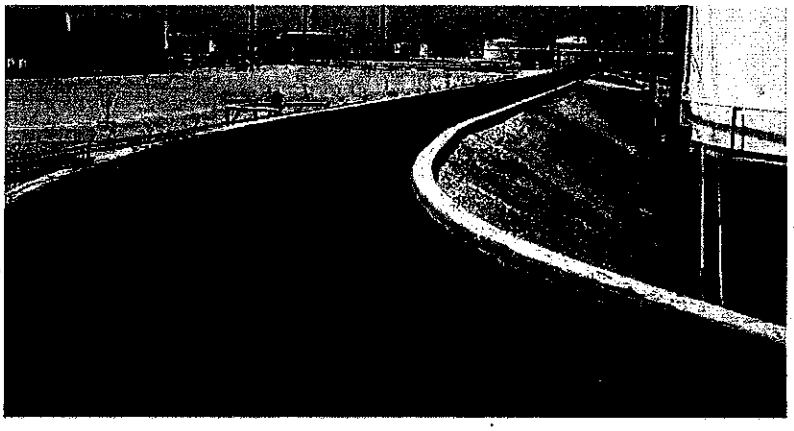
- **Hot Mix Asphalt Paving**

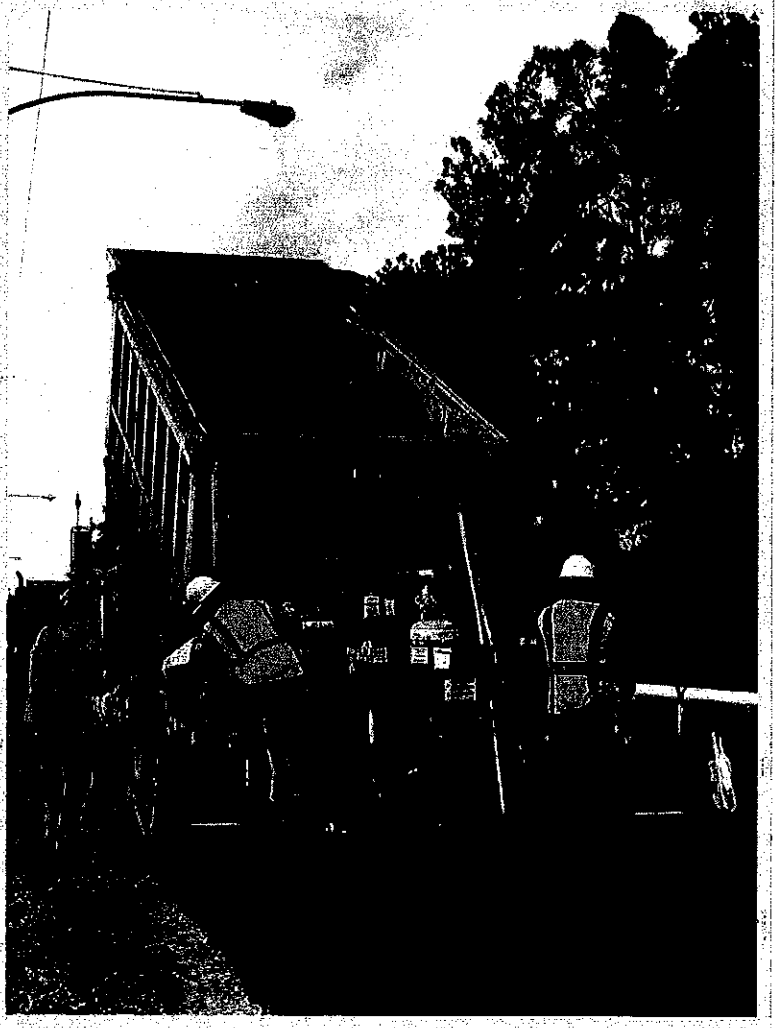
-Heavy Haul Road Paving
-Access Road Paving
-Parking Lot Paving
-Laydown/Storage Yard Paving
-Driveway, Sidewalk & Trail Paving
-Temporary Warehouse & Lunchroom Tent Paving
- Storage Tank Foundation Asphalt Paving

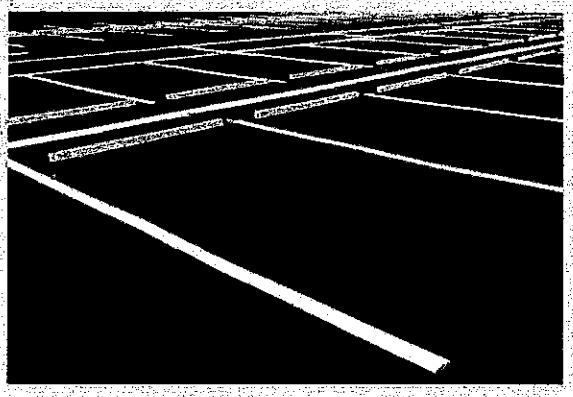
- **Asphalt Overlays**
- **Asphalt Pothole & Pavement Repair**
- **Base Preparation & Stabilization**
- **Asphalt Milling**
- **Slurry Seal & Seal Coat**
- **Asphalt Crack Sealing & Crack Filling**
- **Striping, Pavement Marking & Signage Installation**
- **Concrete Curb, Gutter, Barrier & Parking Bumper Installation**

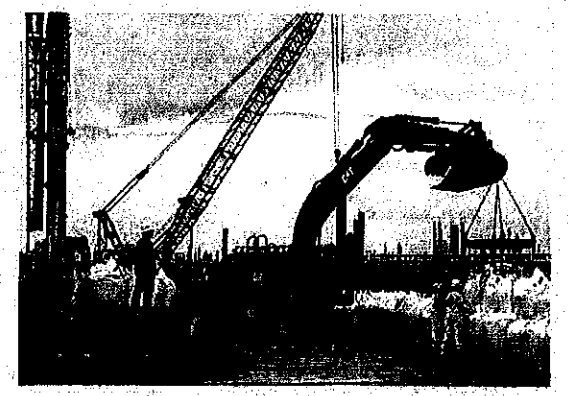


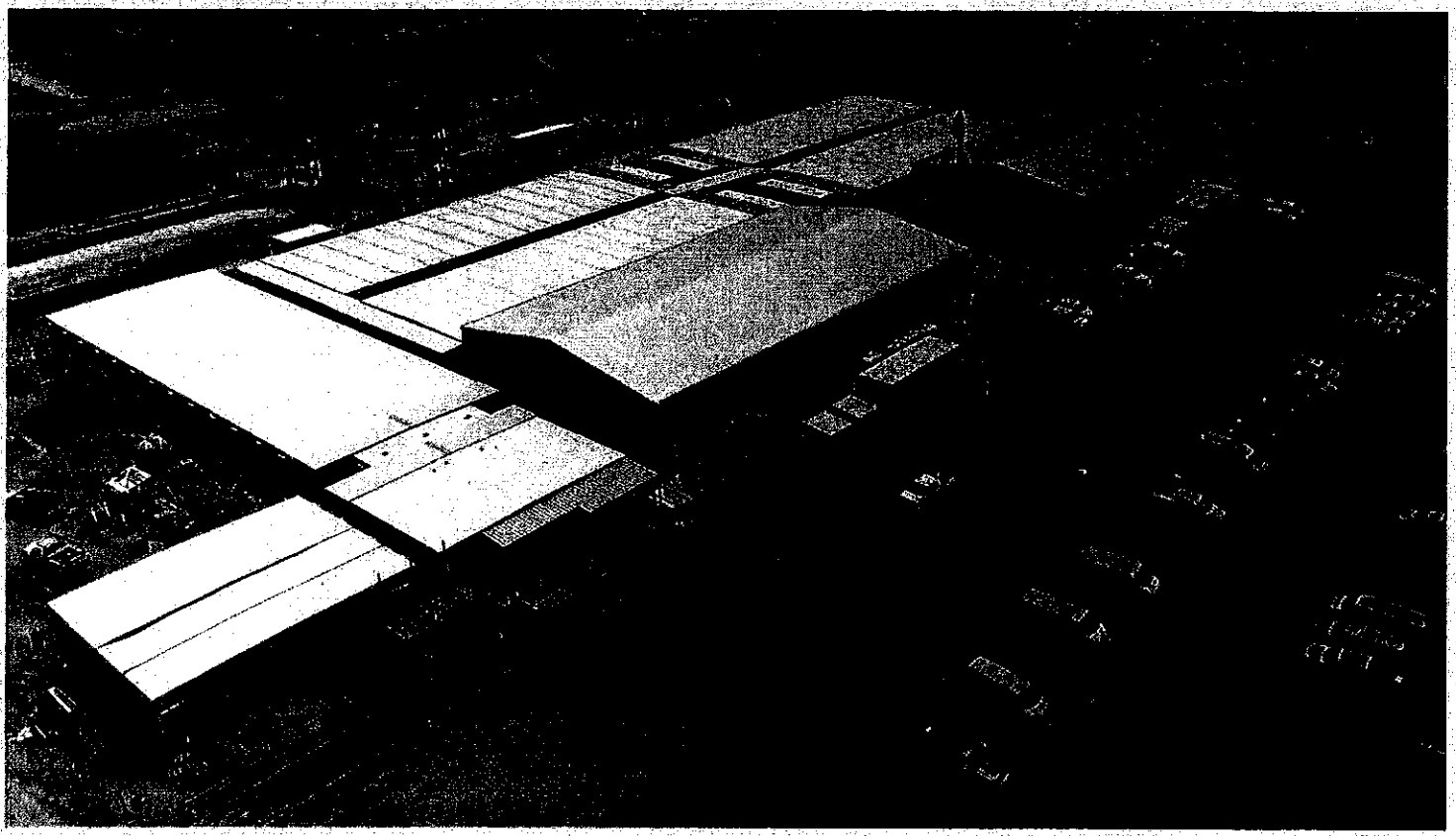




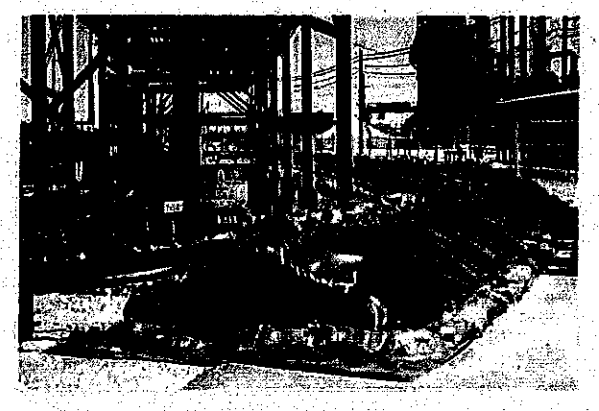








CIVIL CAPABILITIES



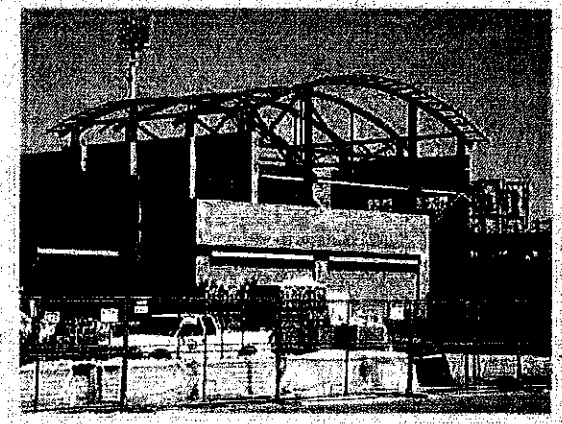
Specialty Services

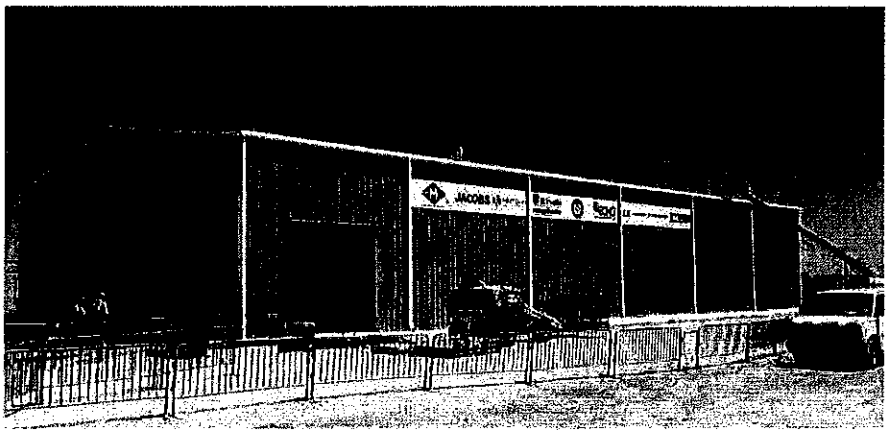
- Exploratory Excavation, Probing & Obstruction Location
- Survey, Data Collection, & Surface Modeling
- GPS Machine Control Earthwork Capabilities
- Concrete Demolition, Saw Cutting & Core Drilling
- Concrete Repairs
- Cementitious & Epoxy Grouting
- Heat & Chemical Resistant Specialty Concrete Applications
- Concrete Coatings
- Liner System Installations
- Paint & Thermoplastic Parking Lot & Roadway Striping
- Guard Rail & Pipe Bollard Installation
- Emergency & Disaster Response
- Inland Marine Construction Services from Sectional Barges
- Construction Maintenance & Turnaround Services
- Major Projects Logistics & Early Works Preparation
- Engineering Constructability Review Services

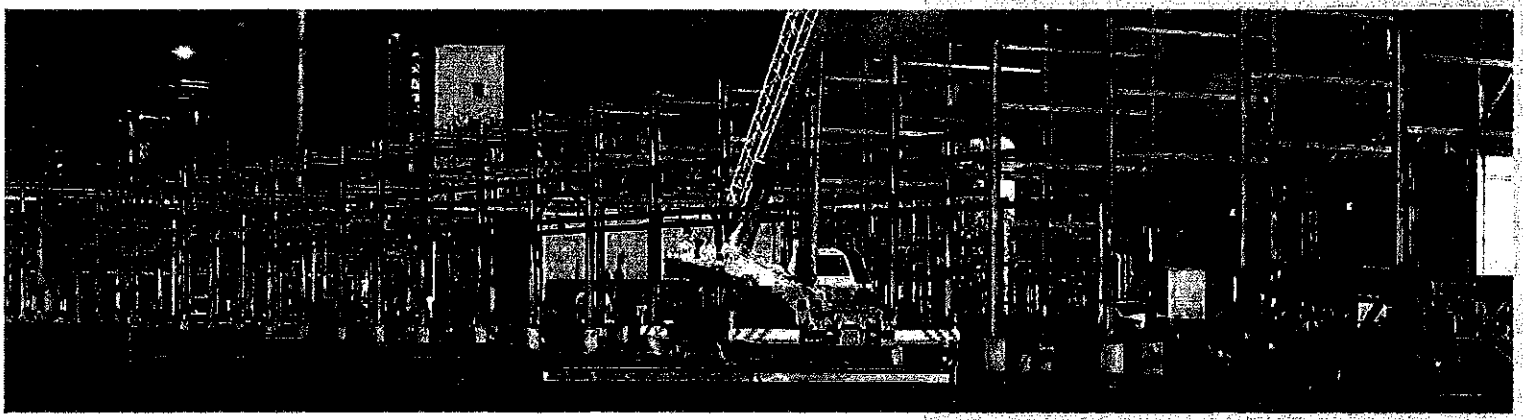
STRUCTURAL CAPABILITIES

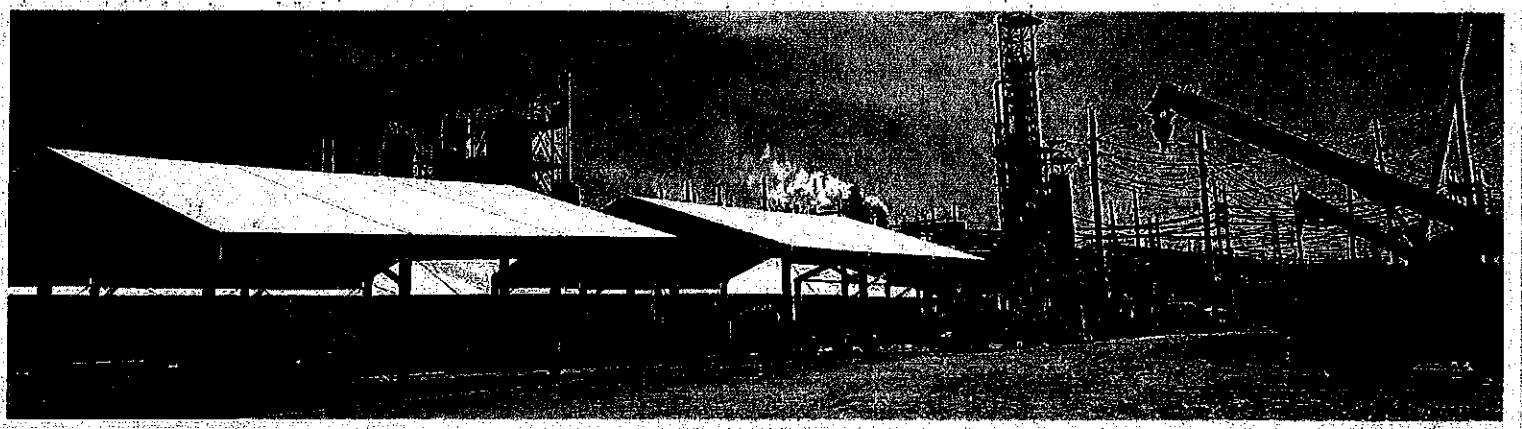
Structural Steel Services

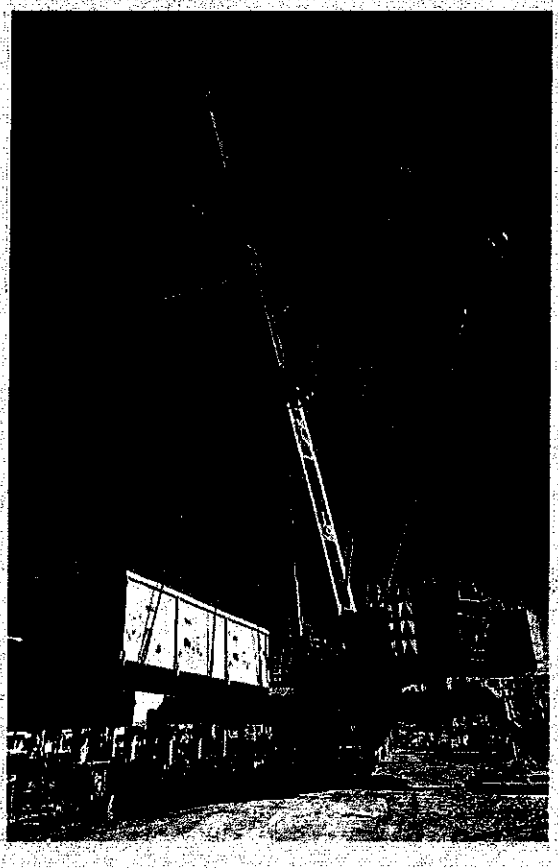
- Structural Steel Erection
- Structural Steel Demolition
- Structural Steel Retrofits
- Wall Panel, Roof Sheeting & Insulation
- Field Fabrication
- Q-Deck & Nelson Stud Installation
- Pre-Engineered Metal Building Construction
- Pre-Cast Concrete Wall Panel & Deck Installation
- Pre-Cast Concrete Structure Erection
- Blast Rated Building Erection
- Blast Rated Envelope Structure Erection
- Bulk Material Handling Conveyor & Industrial Elevator Erection
- Mabey/Bailey Military-Style Temporary Deployable Logistic Support Bridge Erection Services
- Specialty Tent Erection Services (Sprung Structures)
- Crane Erection Services
- Heavy Rigging Services
- Equipment Unloading & Setting Services

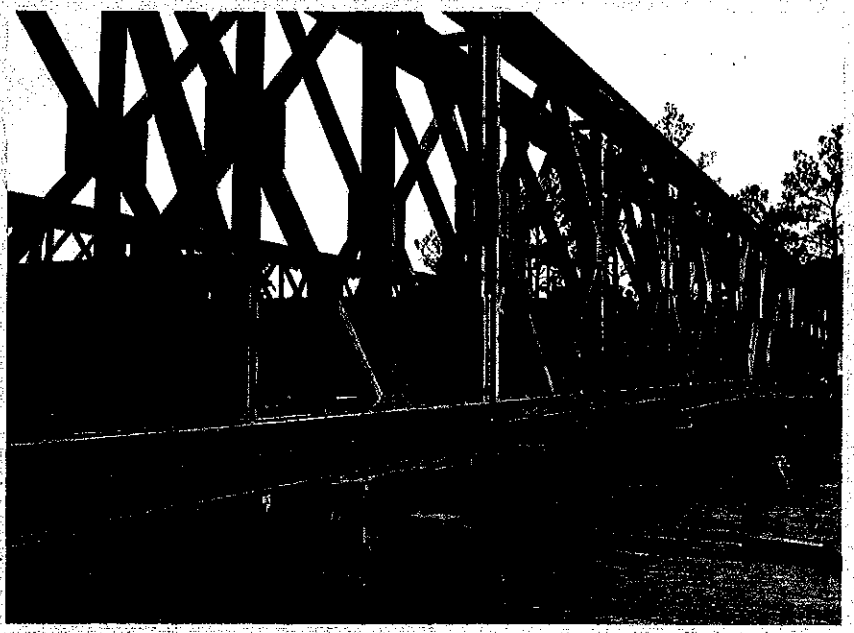


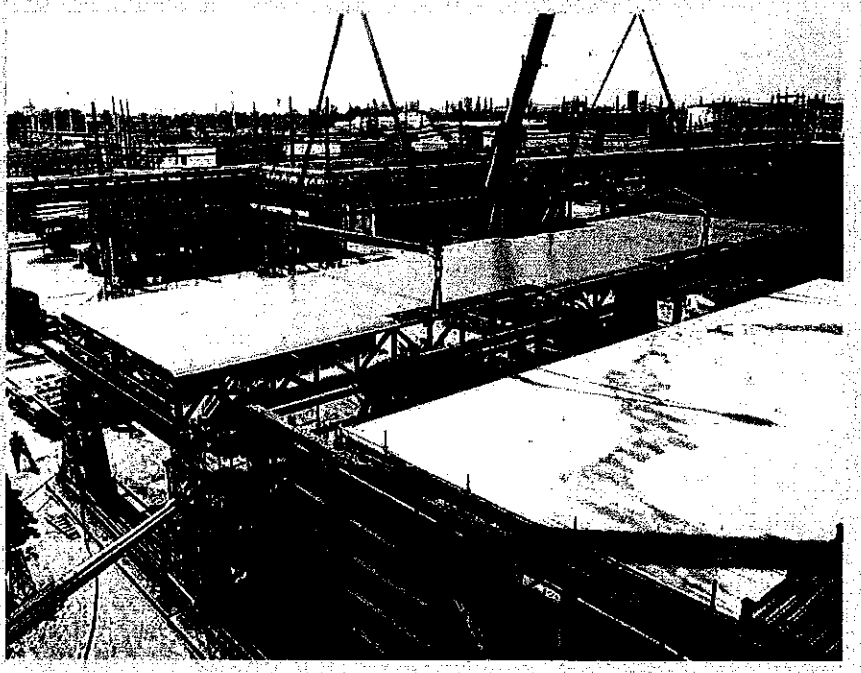


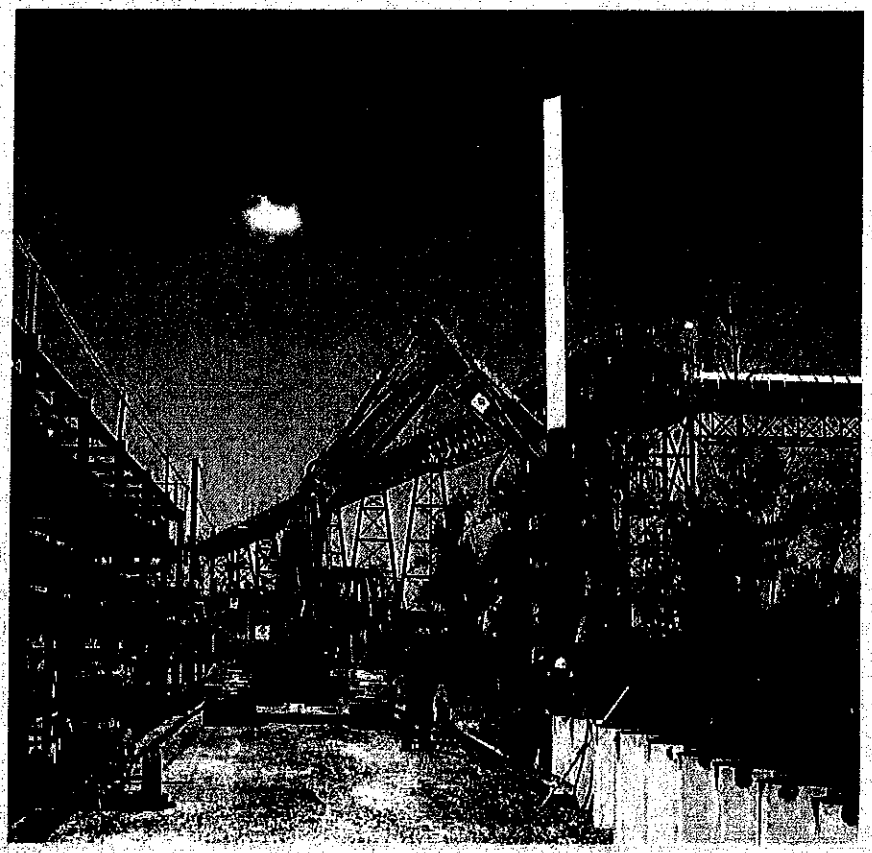


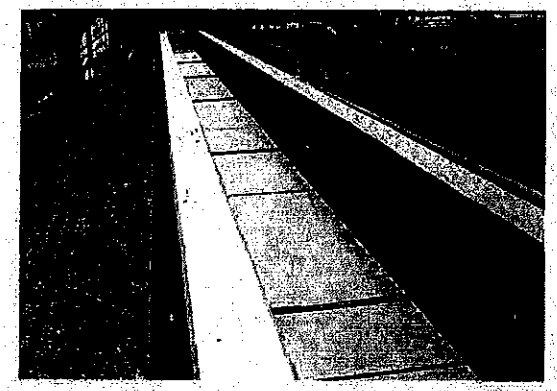


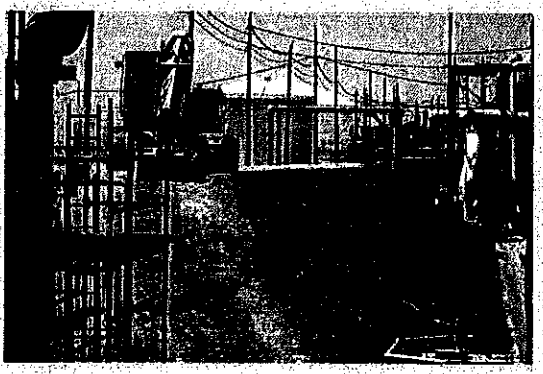


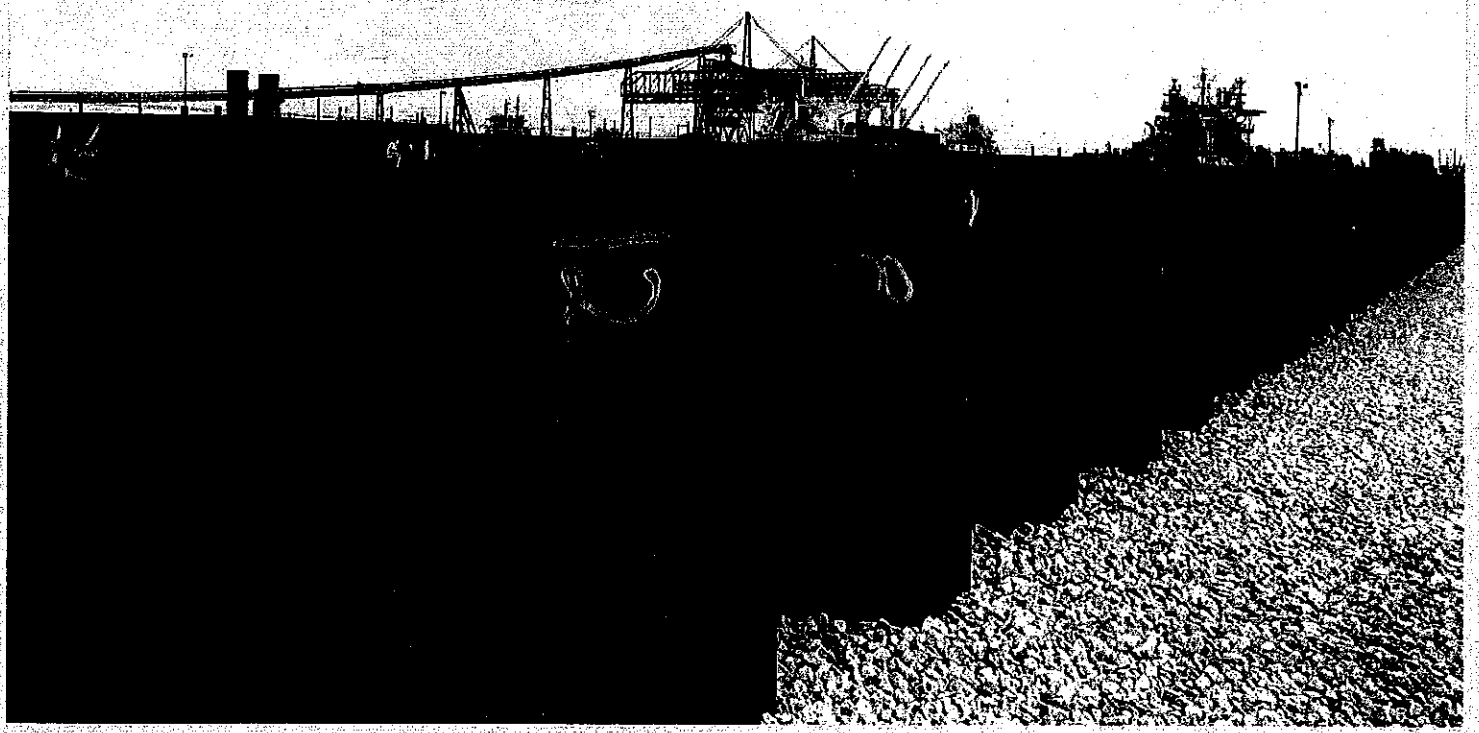


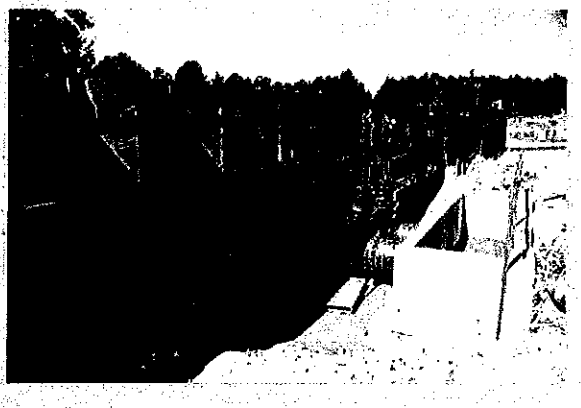


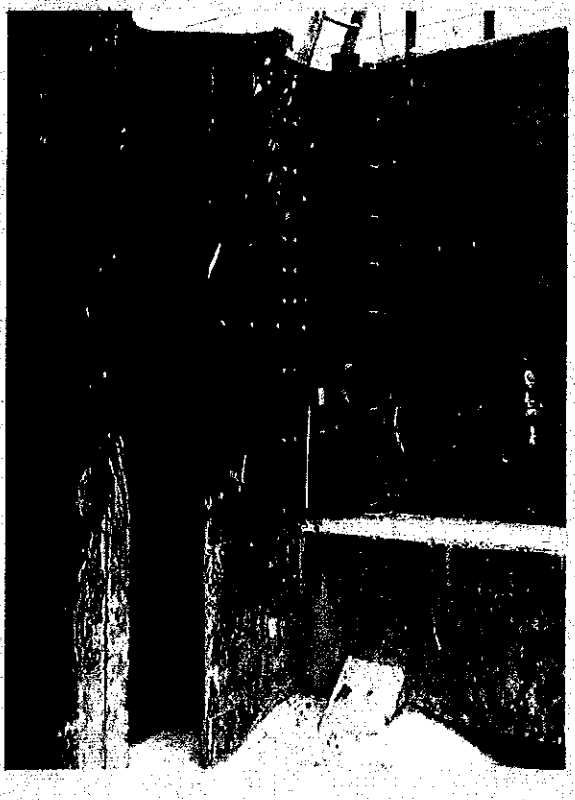


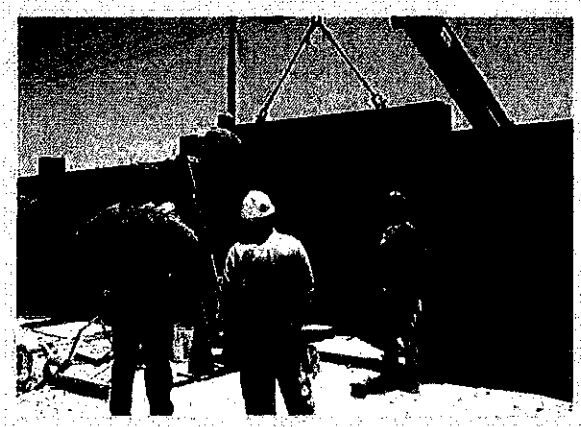








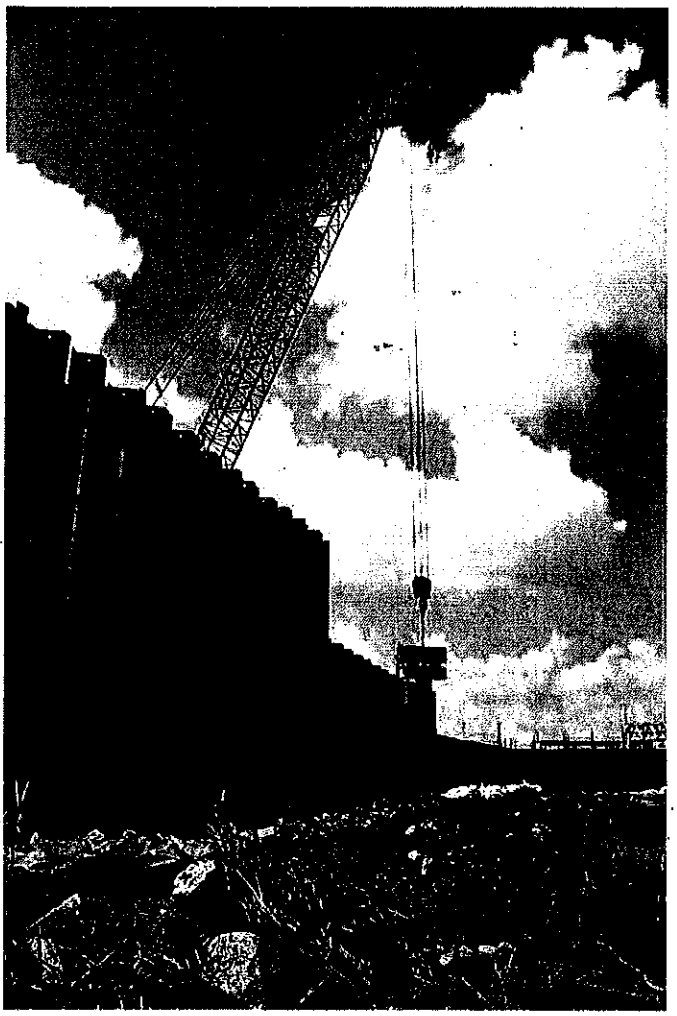




HURRICANE FLOOD PROTECTION CAPABILITIES

Specialty Services

- Constructability Consultation
- Engineered Design Review & Budgeting Services
- Temporary Flood Protection Installation
- Sand Bag & Bulk Super Sack Filling Operations
- Earthen Levee Construction
- Sheet Pile Flood Wall Installation
- Sheet Pile Cut-off Walls
- Pile Installation for Foundation Construction
- Custom Segmented Cut-off Wall Design & Installation
- Concrete Flood Walls & Structures
- Concrete Pump & Draingage Structures
- Flood Gate Design & Installation
- Inland Marine Construction Services from Sectional Barges
- Marine Construction & Material Transport
- Limted Headroom & Restricted Access Piling Installations
- Engineering Design-Build Partnership Capabilities



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Please send any requests for proposal to RFP@masonconstruction.net.

MASON CONSTRUCTION, LLC

BUILDING ON A FOUNDATION OF INTEGRITY

-SINCE 1939-

CORPORATE OFFICE

6285 WALDEN ROAD

BEAUMONT, TX 77707

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LOUISIANA

2234 INDUSTRIAL DR. UNIT J

SULPHUR, LA 70665

(P): (337)882-0492

LICENSE NO. 18907

REQUESTS FOR PROPOSAL

We would appreciate the opportunity to earn your business. To request a budgetary estimate, formal proposal, or more information, please contact us at:
RFP@masonconstruction.net

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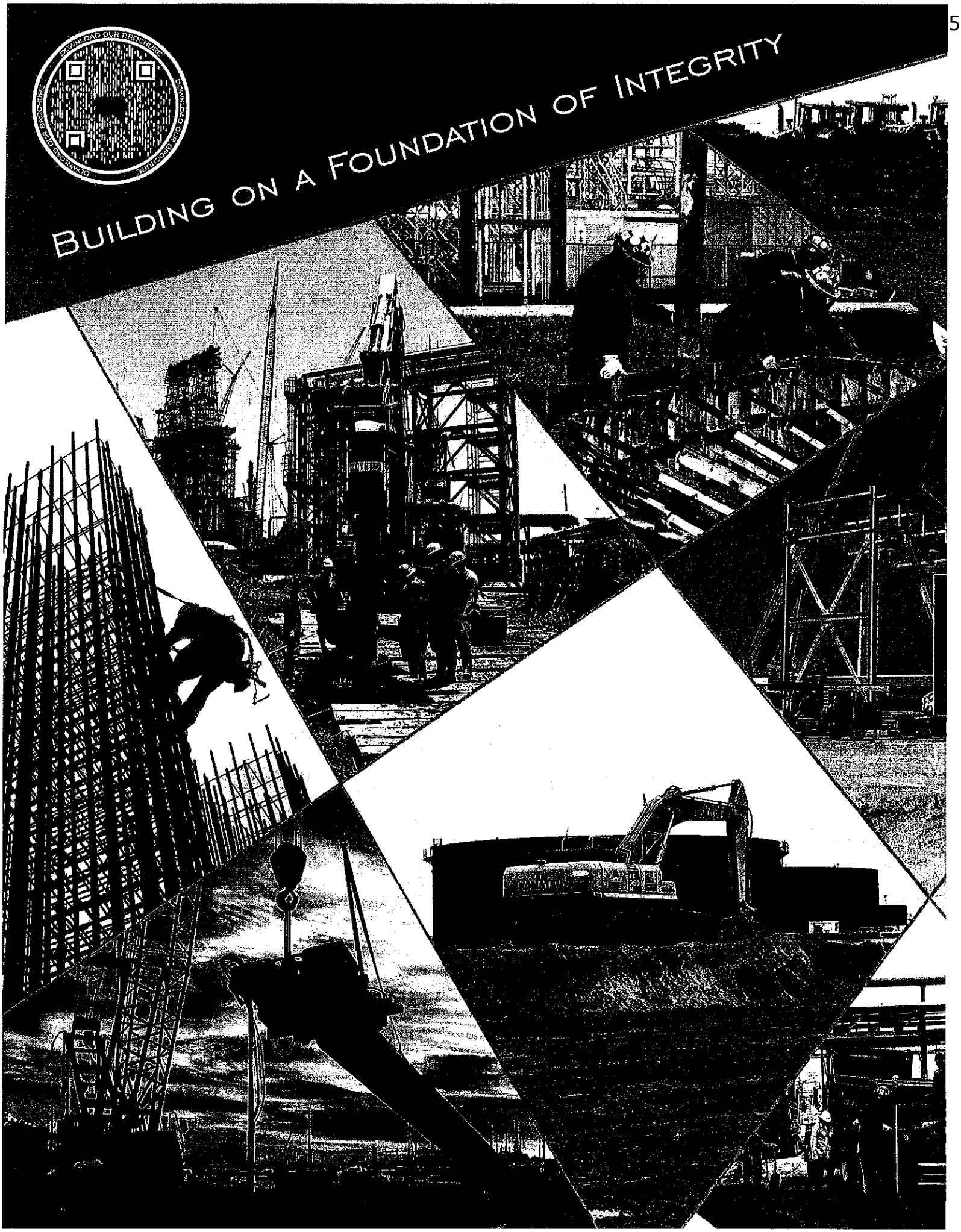
www.masonconstruction.net

Building on a Foundation of Integrity



Original

SEALED BID

ATTENTION: PURCHASING AGENT
JEFFERSON COUNTY
PURCHASING DEPARTMENT
1149 PEARL STREET, 1ST FLOOR
BEAUMONT, TX 77701

IFB 22-028/JW
REHABILITATION OF FUEL FARM PAVEMENT AT THE JACK BROOKS REGIONAL AIRPORT

SUBCONTRACTOR NAME: MASON CONSTRUCTION, LLC
CLOSING DATE / TIME: AUGUST 24, 2022 BY 11AM

DO NOT OPEN – TO BE OPENED BY ADDRESSEE

(1) FULL BID
(2) FULL COPIES

SEALED BID

ATTENTION: PURCHASING AGENT
JEFFERSON COUNTY
PURCHASING DEPARTMENT
1149 PEARL STREET, 1ST FLOOR
BEAUMONT, TX 77701

IFB 22-028/JW
REHABILITATION OF FUEL FARM PAVEMENT AT THE JACK BROOKS REGIONAL AIRPORT

SUBCONTRACTOR NAME: MASON CONSTRUCTION, LLC
CLOSING DATE / TIME: AUGUST 24, 2022 BY 11AM

DO NOT OPEN – TO BE OPENED BY ADDRESSEE

(1) FULL BID
(2) FULL COPIES

RECVD JEFFCOPURCH:10:25 AM AUG 24 2022

Jefferson County Purchasing Department
Deborah L. Clark, Purchasing Agent

1149 PEARL STREET
1st FLOOR, BEAUMONT, TEXAS 77701

OFFICE MAIN: (409) 835-8593
FAX: (409)835-8456

LEGAL NOTICE
Advertisement for Invitation for Bids

July 26, 2022

Notice is hereby given that sealed bids will be accepted by the Jefferson County Purchasing Department for Invitation for Bid **(IFB 22-028/JW) Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport.** Specifications for this project may be obtained from the Jefferson County website, https://www.co.jefferson.tx.us/Purchasing/ or by calling 409-835-8593.

Bids are to be sealed and addressed to the Purchasing Agent with the bid number and name marked on the outside of the envelope or box. Bidders shall forward an original and two (2) copies of their bid to the address shown below. Jefferson County does not accept bids submitted electronically. Late bids will be rejected as non-responsive. Bids will be publicly opened and read aloud in the Jefferson County Engineering Department Conference Room (5th Floor, Historic Courthouse) 1149 Pearl Street, Beaumont, Texas 77701, at the time and date below. Bidders are invited to attend the sealed bid opening.

BID NAME:	**Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport**
BID NUMBER:	**IFB 22-028/JW**
DUE BY TIME/DATE:	**11:00 AM CT, Wednesday, August 24, 2022**
MAIL OR DELIVER TO:	**Jefferson County Purchasing Department** **1149 Pearl Street, 1st Floor** **Beaumont, Texas 77701**

There will be a Pre-Bid Conference and Walk-Through at 2:00 PM CT on Thursday, August 4, 2022, at the Airport Administration Conference Room located at 5000 Jerry Ware Blvd. Beaumont, Texas 77705. This conference will be the Bidder's only opportunity to view secured areas of the project.

The County shall require the bidder to furnish a bid security in the amount of five percent (5%) of the total contract cost. The bid bond must be executed with a surety company authorized to do business in the State of Texas. Within ten (10) days after the date of the signing of a contract, the bidder shall furnish a performance bond to the County for the full amount of the contract, if the contract exceeds one hundred thousand dollars ($100,000). If the contract is for one hundred thousand dollars ($100,000) or less, the County may provide that no money be paid to the contractor until completion and acceptance of the work or the fulfillment of the purchase obligation to the County.

Any questions relating to these bid requirements should be directed to Jamey West, Contract Specialist at 409-835-8593 or via email at: jwest@co.jefferson.tx.us

Jefferson County encourages Disadvantaged Business Enterprises (DBEs), Minority/Women Business Enterprises (M/WBEs), and Historically Underutilized Businesses (HUBs) to participate in the bidding process. Jefferson County does not discriminate on the basis of race, color, national origin, sex, religion, age or disability in employment, or the provisions of services. Individuals requiring special accommodations are requested to contact our office at least seven (7) days prior to the bid due date at 409-835-8593.

Jefferson County reserves the right to accept or reject any or all proposals, to waive technicalities and to take whatever action is in the best interest of Jefferson County. All interested firms are invited to submit a bid in accordance with the terms and conditions stated in this bid.

Respondents are strongly encouraged to carefully read the entire invitation, as failure to return and/or complete all required documentation will result in a response being declared as non-responsive.

Deborah Clark

Deborah L. Clark, Purchasing Agent
Jefferson County, Texas

PUBLISH:
Beaumont Enterprise & Port Arthur News:
July 27, 2022, and August 3, 2022

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BID SUBMISSIONS:

One (1) Original and Two (2) Bid Copies; with all copies to include a Completed Copy of this specifications packet, in its entirety.

Each Bidder shall ensure that required parts of their bid submission are completed with accuracy and submitted as per the requirements within this specifications packet, including any addenda.

Additionally, Bidder shall monitor the Jefferson County Purchasing Department Website for any addenda, additional instructions, or bid updates. https://www.co.jefferson.tx.us/Purchasing/

Failure to return and/or completed all required documentation will result in a response being declared as non-responsive.

SECTION 1: GENERAL CONDITIONS OF BIDDING AND TERMS OF CONTRACT

By execution of this document, the Vendor accepts all general and special conditions of the contract as outlined below and, in the specifications, and plans.

1. BIDDING.

1.1 BIDS.
All bids must be submitted on the bid form furnished in this package.

1.2 AUTHORIZED SIGNATURES.
The bid must be executed personally by the Vendor, duly authorized partner of the partnership, or duly authorized officer of the corporation. If executed by an agent, a power of attorney or other evidence of authority to act on behalf of the Vendor shall accompany the bid to become a valid bid.

1.3 LATE BIDS.
Bids must be in the office of the Jefferson County Purchasing Agent before or at the specified time and date bids are due. Bids received after the submission deadline shall be rejected as non-responsive and returned unopened.

1.4 WITHDRAWAL OF BID PRIOR TO OPENING.
A bid may be withdrawn before the opening date by submitting a written request to the Purchasing Agent. If time allows, the Bidder may submit a new bid. Bidder assumes full responsibility for submitting a new bid before or at the specified time and date bids are due. Jefferson County reserves the right to withdraw a request for bids before the opening date.

1.5 WITHDRAWAL OF BID AFTER OPENING.
Bidder agrees that its offer may not be withdrawn or cancelled by the Vendor for a period of ninety (90) days following the date and time designated for the receipt of bids unless otherwise stated in the bid and/or specifications.

1.6 BID AMOUNTS.
Bids shall show net prices, extensions where applicable and net total. In case of conflict between unit price and extension, the unit price will govern. Any ambiguity in the bid as a result of omission, error, unintelligible or illegible wording shall be interpreted in the favor of Jefferson County.

1.7 EXCEPTIONS AND/OR SUBSTITUTIONS.
All bids meeting the intent of the specifications and plans will be considered for award. Vendors taking exception to the specifications and plans, or offering substitutions, shall state these exceptions in the section provided. If bid is made on an article other than the one specified, which a Bidder considers comparable, the name and grade of said article must be specified in the bid and sufficient specifications and descriptive data must accompany same to permit thorough evaluation. The absence of stated exceptions and/or substitutions shall indicate that the Vendor has not taken any exceptions to the specifications and shall be responsible to perform in strict accordance with the specifications. As a matter of practice, Jefferson County rejects exception(s) and /or substitutions as non-responsive but reserves the right to accept any and/or all of the exception(s) and/or substitution(s) deemed to be in the best interest of Jefferson County.

1.8 ALTERNATES.
The Invitation for Bid and/or specifications may expressly allow Bidder to submit an alternate bid. Presence of such an offer shall not be considered an indication of non-responsiveness.

1.9 DESCRIPTIONS.
Unless otherwise specified, any reference to make, manufacturer and/or model used in the bid specifications is merely descriptive and not restrictive, and is used only to indicate type, style, or quality of material desired.

1.10 BID ALTERATIONS.
Bids cannot be altered or amended after submission deadline. Any interlineations, alterations, or erasures made before opening time must be initialed by the signer of the bid, guaranteeing authenticity.

1.11 TAX EXEMPT STATUS.
Jefferson County is exempt from federal excise tax and state sales tax. Unless the bid form or specifications specifically indicate otherwise, the bid price must be net, exclusive of above-mentioned taxes and will be so construed. Therefore, the bid price shall not include taxes.

1.12 QUANTITIES.
Quantities indicated are estimated quantities only and are not a commitment to buy. Approximate usage does not constitute an order, but only implies the probable quantity that will be used. Commodities will be ordered on an as-needed basis. Bidder is responsible for accurate final counts.

1.13 BID AWARD.
Award of contract shall be made to the most responsible, responsive Bidder, whose offer is determined to be the best value, taking into consideration the relative importance of price. Jefferson County reserves the right to be the sole judge as to whether items bid will serve the purpose intended.

Jefferson County reserves the right to accept or reject in part or in whole any bid submitted, and to waive any technicalities or informalities for the best interest of the County. Jefferson County reserves the right to award based upon individual line items, sections, or total bid.

1.14 SILENCE OF SPECIFICATIONS FOR COMPLETE UNITS.
All materials, equipment and/or parts that will become a portion of the completed work, including items not specifically stated herein but, necessary to render the service(s) complete and operational per the specifications, are to be included in the bid price. Vendor may be required to furnish evidence that the service, as bid, will meet or exceed these requirements.

1.15 ADDENDA.
Any interpretations, corrections or changes to the specifications and plans will be made by addenda no later than forty-eight (48) hours prior to the bid opening. Addenda will be posted on the Purchasing web site. Vendors are responsible for monitoring the web site in order to remain informed on addenda. Vendors shall acknowledge receipt of all addenda with submission of bid.

1.16 GENERAL BID BOND/SURETY REQUIREMENTS.
Failure to furnish bid bond/surety, if requested, will result in bid being declared non-responsive. Non-responsive bids will not be considered for award.

1.17 GENERAL INSURANCE REQUIREMENTS.
Failure to furnish Affidavit of Insurance, if required in these specifications, will result in bid being declared non-responsive. Non-responsive bids will not be considered for award.

1.18 RESPONSIVENESS.
A responsive bid shall substantially conform to the requirements of this Invitation to Bid and/or specifications contained herein. Bidders who substitute any other terms, conditions, specifications and/or requirements or who qualify their bids in such a manner as to nullify or limit their liability to the contracting entity shall have their bids

deemed non-responsive. Also, bids containing any clause that would limit contracting authority shall be considered non-responsive. Examples of non-responsive bids include but shall not be limited to: a) bids that fail to conform to required delivery schedules as set forth in the bid request; b) bids with prices qualified in such a manner that the bid price cannot be determined, such as with vague wording that may include "price in effect at the time of delivery," and c) bids made contingent upon award of other bids currently under consideration.

1.19 RESPONSIBLE STANDING OF BIDDER.

To be considered for award, Bidder must at least: have the ability to obtain adequate financial resources, be able to comply with required or proposed delivery/completion schedule, have a satisfactory record of performance; have a satisfactory record of integrity and ethics, and be otherwise qualified and eligible to receive award.

1.20 CONFIDENTIAL/PROPRIETARY INFORMATION.

If any material in the bid submission is considered by Bidder to be confidential or proprietary information (including manufacturing and/or design processes exclusive to the Bidder), Bidder **must** clearly mark the applicable pages of Bidder's bid submission to indicate each claim of confidentiality. Additionally, Bidder must include a statement on company letterhead identifying all Bid Submission section(s) and page(s) that have been marked as confidential. Jefferson County will protect from public disclosure such portions of a bid, unless directed otherwise by legal authority, including existing open records acts. Merely making a blanket claim that the entire bid submission is protected from disclosure because it contains some proprietary information is not acceptable and will make the entire bid submission subject to release under the Texas Public Information Act.

By submitting a bid, Bidder agrees to reproduction by Jefferson County, without cost or liability, of any copyrighted portions of Bidder's bid submission or other information submitted by Bidder.

1.21 PUBLIC BID OPENING.

Bidders are invited to be present at the opening of bids. After the official opening of bids, a period of not less than one week is necessary to evaluate bids. The amount of time necessary for bid evaluation may vary and is determined solely by the County. Following the bid evaluation, all bids submitted are available for public review.

2. PERFORMANCE.

2.1 DESIGN, STRENGTH, AND QUALITY.

Design, strength, and quality of materials and workmanship must conform to the highest standards of manufacturing and engineering practices. The apparent silence of specifications and/or plans as to any detailed description concerning any point shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of these specifications and/or plans shall be made on the basis of this statement.

2.2 AGE AND MANUFACTURE.

All tangible goods being bid must be new and unused, unless otherwise specified, in first-class condition, of current manufacture, and furnished ready to use. All items not specifically mentioned that are required for a complete unit shall be furnished.

2.3 DELIVERY LOCATION.

All deliveries will be made to the address(es) specified on the purchase order during normal working hours of 8:00 am to 4:00 pm, Monday through Friday, unless otherwise authorized by the Purchasing Agent or designee.

2.4 DELIVERY SCHEDULE.

Delivery time may be an important consideration in the evaluation of best value. The maximum number of days necessary for delivery ARO shall be stated in the space, if provided, on the bid form.

2.5 DELIVERY CHARGES.
All delivery and freight charges, F.O.B. destination shown on Jefferson County purchase order, as necessary to perform contract are to be included in the bid price.

2.6 INSTALLATION CHARGES.
All charges for assembly, installation and set-up shall be included in the bid price. Unless otherwise stated, assembly, installation and set-up will be required.

2.7 OPERATING INSTRUCTIONS AND TRAINING.
Clear and concise operating instructions and descriptive literature will be provided in English, if requested. On-site detailed training in the safe and efficient use and general maintenance of item(s) purchased shall be provided as needed at the request of Jefferson County. Instructions and training shall be at no additional cost to the County.

2.8 STORAGE.
Bidder agrees to provide storage of custom ordered materials, if requested, for up to thirty (30) calendar days.

2.9 COMPLIANCE WITH FEDERAL, STATE, COUNTY, AND LOCAL LAWS.
Bids must comply with all federal, state, county, and local laws, including, but not limited to, all applicable standard safety, emission, and noise control requirements. Any vehicles or equipment shall contain all standard safety, emission, and noise control requirements required for the types and sizes of equipment at the time of their manufacture. The contractor agrees, during the performance of work or service, to comply with all applicable codes and ordinances of Jefferson County or the State of Texas as they may apply, as these laws may now read, or as they may hereafter be changed or amended.

2.10 OSHA.
The Bidder will certify all equipment complies with all regulations and conditions stipulated under the Williams-Steiger Occupational Safety and Health Act of 1971, as amended. The successful Bidder will further certify that all items furnished under this project will conform and comply with federal and State of Texas OSHA standards. The successful Bidder will agree to indemnify and hold harmless Jefferson County for any and all damages that may be assessed against the County.

2.11 PATENTS AND COPYRIGHTS.
The successful Vendor agrees to protect the County from claims involving infringements of patents and/or copyrights.

2.12 SAMPLES, DEMONSTRATIONS, AND TESTING.
At Jefferson County's request and direction, Bidder shall provide product samples and/or testing of items bid to ensure compliance with specifications. Samples, demonstrations and/or testing may be requested at any point prior to or following bid award. Samples, demonstrations and/or testing may be requested upon delivery and/or any point during the term of resulting contract. All samples (including return thereof), demonstrations, and/or testing shall be at the expense of the Bidder/Vendor.

2.13 ACCEPTABILITY.
All articles enumerated in the bid shall be subject to inspection by an officer designated for that purpose by Jefferson County. If found inferior to the quality called for, or not equal in value to the specifications, deficient in workmanship or otherwise, this fact shall be certified to the Purchasing Agent, who shall have the right to reject the whole or any part of the same. Items and/or work determined to be contrary to specifications must be replaced at the vendor's expense. Inferior items not retrieved by the vendor within thirty (30) calendar days, or an otherwise agreed upon time, shall become the property of the County. If disposal of such items warrants an expense, an amount equal to the disposal expense will be deducted from amounts payable to the vendor.

2.14 MAINTENANCE.
Maintenance required for equipment bid should be available in Jefferson County by a manufacturer authorized maintenance facility. Cost for this service shall be shown on the bid sheet as requested or on a separate sheet, as required. If Jefferson County opts to include maintenance, it shall be so stated in the purchase order and said cost will be included. Service will commence only upon expiration of applicable warranties and should be priced accordingly.

2.15 MATERIAL SAFETY DATA SHEETS.
Under the "Hazardous Communications Act," commonly known as the "Texas Right to Know Act," a Bidder must provide
the user department, with each delivery, material safety data sheets which are applicable to hazardous substances defined in the Act. Failure of the Bidder to furnish this documentation, will be cause to reject any bid applying thereto.

2.16 EVALUATION.
Evaluation shall be used as a determinant as to which services are the most efficient and/or most economical for the County. It shall be based on all factors having a bearing on price and performance of the items in the user environment. All bids are subject to tabulation by the Jefferson County Purchasing Department and recommendation to Jefferson County Commissioners' Court. Compliance with all bid requirements and needs of the using department are considered in evaluating bids. Pricing is not the only criteria for making a recommendation. The Jefferson County Purchasing Department reserves to right to contact any Bidder, at any time, to clarify, verify or requirement information with regard to this bid.

3. PURCHASE ORDERS AND PAYMENT.

3.1 PURCHASE ORDERS.
A purchase order(s) shall be generated by the Jefferson County Purchasing Agent to the successful vendor. The purchase order number must appear on all itemized invoices and packing slips. The County will not be held responsible for any work orders placed and/or performed without a valid current purchase order number. Payment will be made for all services rendered and accepted by the contract administrator for which a valid invoice has been received.

3.2 INVOICES.
All invoices shall reference the Purchase Order number. Invoices shall reference the bid item number or a detailed description for each item invoiced. If an item purchased and itemized on the invoice does not correspond to an item in any of the categories awarded to the vendor, invoice shall reference the item as "N/C" to indicate that it is a non-contract item. This requirement is to assist the County in verifying contract pricing on all invoices. Payment will be made under terms of net thirty (30) days unless otherwise agreed upon by seller and the purchasing department.

3.3 PROMPT PAYMENT.
In accordance with the State of Texas Prompt Payment Act, Article 601f V.T.C.S., payment will be made after receiving and acceptance by the County of the merchandise ordered and of a valid invoice. Successful Bidder(s) is required to pay subcontractors within ten (10) days after the successful Bidder receives payment from the County.

3.4 FUNDING.
Jefferson County is operated and funded on an October 1 to September 30 basis; accordingly, the County reserves the right to terminate, without liability to the County, any contract for which funding is not available.

4. CONTRACT.

4.1 CONTRACT DEFINITION.
The General Conditions of Bidding and Terms of Contract, Specifications, Plans, Bidding Forms, Addenda, and any other documents made a part of this bid shall constitute the complete bid. This bid, when duly accepted by Jefferson

County shall constitute a contract equally binding between the successful Bidder and Jefferson County.

4.2 CHANGE ORDER.

No different or additional terms will become part of this contract with the exception of a change order. No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated in the resulting contract. All change orders to the contract will be made in writing and at the discretion and approval of Jefferson County. No change order will be binding unless signed by an authorized representative of the County and the vendor.

4.3 PRICE RE-DETERMINATION.

A price re-determination may be requested at the time of annual renewal. All requests for price re-determination shall be in written form. Cause for such request, i.e., manufacturer's direct cost, postage rates, Railroad Commission rates, Federal/State minimum wage law, Federal/State unemployment taxes, F.I.C.A, Insurance Coverage Rates, etc., shall be substantiated in writing by the source of the cost increase. The Bidder's past experience of honoring contracts at the bid price will be an important consideration in the evaluation of the lowest and best bid. Jefferson County reserves the right to accept or reject any/all requests for price re-determination as it deems to be in the best interest of the County.

4.4 TERMINATION.

Jefferson County reserves the right to terminate the contract for default if the Bidder breached any of the terms therein, including warranties of Bidder or if the Bidder becomes insolvent or commits acts of bankruptcy. Such right of termination is in addition to and not in lieu of any other remedies which Jefferson County may have in law or equity. Default may be construed as, but not limited to, failure to deliver the proper goods and/or service within the proper amount of time, and/or to properly perform any and all services required to Jefferson County's satisfaction and/or to meet all other obligations and requirements. Contracts may be terminated without cause upon thirty (30) days' written notice to either party unless otherwise specified. Jefferson County reserves the right to award canceled contract to the next lowest Bidder. Bidder, in submitting this bid, agrees that Jefferson County shall not be liable to prosecution for damages in the event that the County declares the Bidder in default.

4.5 CONFLICT OF INTEREST.

Employees of the County are not permitted to maintain financial interest in, or receive payment, directly or indirectly, borrow from, lend to, invest in, or engage in any substantial financial transaction with any individual, organization, supplier, or subcontractor who does business with the County without disclosure. When conflict of interest is discovered, it shall be grounds for termination of contract.

4.6 INJURIES OR DAMAGES RESULTING FROM NEGLIGENCE.

Successful vendor shall defend, indemnify and save harmless Jefferson County and all its officers, agents and employees from all suits, actions, or other claims of any character, name and description brought for or on account of any injuries or damages received or sustained by any person, persons, or property on account of any negligent act or fault of the successful vendor, or of any agent, employee, subcontractor or supplier in the execution of, or performance under, any contract which may result from bid award. Successful vendor shall pay any judgment with cost which may be obtained against Jefferson County growing out of such injury or damages.

4.7 INTEREST BY PUBLIC OFFICIALS.

No public official shall have interest in this contract, in accordance with Texas Local Government Code.

4.8 PRE-AWARD/CONTRACT CONTACT BETWEEN COUNTY AND VENDORS.

The Jefferson County Purchasing Department will be the primary pre-bid contact for this Invitation for Bid, unless otherwise specified within these bid specifications. **If not written within these specifications, Potential Bidders /Vendors shall not visit or conduct discussions with other County Departments or representatives.**

The Jefferson County Purchasing Department expects to conduct discussions with vendor's representatives

authorized to contractually obligate the vendor with an offer. **Vendors shall not contact any Jefferson County personnel during the IFB process without the express permission from the Jefferson County Purchasing Agent. The Purchasing Agent will disqualify any vendor who has made site visits, contacted Jefferson County personnel, or distributed any literature without authorization from the Jefferson County Purchasing Department.**

All correspondence relating to this IFB, from advertisement to award shall be sent to the Jefferson County Purchasing Department. All presentations and/or meetings between Jefferson County and the vendor relating to this IFB shall be coordinated by the Jefferson County Purchasing Department.

Selected vendors may be expected to make a presentation/product demonstration to an Evaluation Committee. Proposals, vendor presentations, and product/service evaluations may develop into negotiating sessions with the vendor(s) as selected by the Evaluation Committee. Jefferson County expects to conduct negotiations with vendor representatives authorized to contractually obligate the vendor with an offer. If vendor is unable to agree to contract terms and conditions, Jefferson County reserves the right to terminate contract negotiations with that vendor and initiate negotiations with another vendor. In addition to a presentation, visits by the Evaluation Committee to representative vendor client sites may be conducted where the proposed solution can be demonstrated in a production environment.

4.9 WARRANTY.
The successful vendor shall warrant that all materials utilized in the performance of this contract shall conform to the proposed specifications and/or all warranties as stated in the Uniform Commercial Code and be free from all defects in material, workmanship and title.

4.10 UNIFORM COMMERCIAL CODE.
The successful vendor and Jefferson County agree that both parties have all rights, duties, and remedies available as stated in the Uniform Commercial Code.

4.11 VENUE.
This agreement will be governed and construed according to the laws of the State of Texas. This agreement is performable in the County of Jefferson, Texas.

4.12 SALE, ASSIGNMENT, OR TRANSFER OF CONTRACT.
The successful vendor shall not sell, assign, transfer or convey this contract, in whole or in part, without the prior written consent of Jefferson County.

4.13 SILENCE OF SPECIFICATIONS.
The apparent silence of these specifications as to any detailed description concerning any point, shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of these specifications shall be made on the basis of this statement.

5. REJECTION OR WITHDRAWAL.
Submission of additional terms, conditions or agreements with the bid document are grounds for deeming a bid non-responsive and may result in bid rejection. Jefferson County reserves the right to reject any and all bids and to waive any informalities and minor irregularities or defects in bids. Bids may be withdrawn in person by a bidder or authorized representative, provided their identity is made known and a receipt is signed for the bid, but only if the withdrawal is made prior to the time set for receipt of bids. Bids are an irrevocable offer and may not be withdrawn within **120** days after opening date.

6. EMERGENCY/DECLARED DISASTER REQUIREMENTS.
In the event of an emergency or if Jefferson County is declared a disaster area, by the County, State, or Federal Government, this Acceptance of Offer may be subjected to unusual usage. Contractor shall service the county during

such an emergency or declared disaster under the same terms and conditions that apply during non-emergency/disaster conditions. The pricing as specified in this Acceptance of Offer shall apply to serving the County's needs regardless of the circumstances. If Contractor is unable to supply the services under the terms of the Acceptance of Offer, then Contractor shall provide proof of such disruption and a copy of the invoice from Contractor's supplier(s).

Additional profit margin as a result of supplying services during an emergency or declared disaster shall not be permitted. In the event that additional equipment, supplies, and materials are required during the declared disaster, additional shipping, handling, and drayage fees may apply.

7. AWARD.

The bid will be awarded to the responsible, responsive bidder(s) whose bid, conforming to the solicitation, will be most advantageous to Jefferson County – price and other factors considered. Unless otherwise specified in this IFB, Jefferson County reserves the right to accept a bid in whole or in part, and to award by item or by group, whichever is deemed to be in the best interest of Jefferson County. Any bidder who is in default to Jefferson County at the time of submittal of the bid shall have that bid rejected.

Jefferson County reserves the right to clarify any contractual terms with the concurrence of the Contractor; however, any substantial non-conformity in the offer, as determined by Jefferson County, shall be deemed non-responsive and the offer rejected.

In evaluating bids, Jefferson County shall consider the qualifications of the bidders, and, where applicable, operating costs, delivery time, maintenance requirements, performance data, and guarantees of materials and equipment.

In addition, Jefferson County may conduct such investigation as it deems necessary to assist in the evaluation of a bid and to establish the responsibility, qualifications, and financial ability of the bidders to fulfill the contract.

Jefferson County reserves the right to award this contract on the basis of **lowest and best bid** in accordance with the laws of the State of Texas, to waive any formality or irregularity, to make awards to more than one offeror, and/or to reject any or all bids. In the event the lowest dollar offeror meeting specifications is not a awarded a contract, Offeror may appear before the Commissioners' Court and present evidence concerning Offeror responsibility after officially notifying the Office of the Purchasing Agent of Offeror's intent to appear.

8. CONTRACT.

A response to an **IFB** is an offer to contract with Jefferson County based upon the terms, conditions, and specifications contained in the **IFB**. Bids do not become contracts unless and until they are executed by Jefferson County, eliminating a formal signing of a separate contract. For that reason, all of the terms and conditions of the contract are contained in the **IFB**, unless any of the terms and conditions is modified by an IFB Amendment, a Contract Amendment, or by mutually agreed terms and conditions in the contract documents.

9. WAIVER OF SUBROGATION.

Bidder and bidder's insurance carrier waive any and all rights whatsoever with regard to subrogation against Jefferson County as an indirect party to any suit arising out of personal or property damages resulting from bidder's performance under this agreement.

10. FISCAL FUNDING.

A multi-year contract (if requested by the specifications) continuing as a result of an extension option must include fiscal funding out. If, for any reason, funds are not appropriated to continue the contract, said contract shall become null and void.

11. BID RESULTS.

Bid results are not provided in response to telephone inquiries. A preliminary tabulation of bids received will be posted on the Purchasing web page at https://www.co.jefferson.tx.us/Purchasing/ as soon as possible following bid opening. A final tabulation will be posted following bid award and will also be available for review in the Purchasing Department.

12. CHANGES AND ADDENDA TO BID DOCUMENTS.

Each change or addendum issued in relation to this IFB document will be on file in the Office of the Purchasing Agent, and will be posted on the Purchasing web site as soon as possible. It shall be the bidder's responsibility to make inquiry as to change or addenda issued, and to monitor the web site. All such changes or addenda shall become part of the contract and all bidders shall be bound by such addenda. Information on all changes or addenda issued will be available at the Office of the County Purchasing Agent.

13. SPECIFICATIONS.

Unless otherwise stated by the bidder, the bid will be considered as being in accordance with Jefferson County's applicable standard specifications, and any special specifications outlined in the bid document. References to a particular trade name, manufacturer's catalogue, or model number are made for descriptive purposes to guide the bidder in interpreting the requirements of Jefferson County and should not be construed as excluding bids on other types of materials, equipment, and supplies. However, the bidder, if awarded a contract, will be required to furnish the particular item referred to in the specifications or description unless departure or substitution is clearly noted and described in the bid.

Jefferson County reserves the right to determine if equipment/ product being bid is an acceptable alternate. All goods shall be new unless otherwise so stated in the bid. Any unsolicited alternate bid, or any changes, insertions, or omissions to the terms and conditions, specifications, or any other requirements of the bid, may be considered non-responsive.

14. DELIVERY.

Bids shall include all charges for delivery, packing, crating, containers, etc. Unless otherwise stated by the bidder (in writing on the included Bid Form), prices bid will be considered as being based on F.O.B. destination/delivered freight included.

15. INTERPRETATION OF BID AND/OR CONTRACT DOCUMENTS.

All inquiries shall be made within a reasonable time prior to the date and time fixed for the bid opening, in order that a written response in the form of an addendum, if required, can be processed before the bids are opened. Inquiries received that are not made in a timely fashion may or may not be considered.

16. CURRENCY.

Prices calculated by the bidder shall be stated in U.S. dollars.

17. PRICING.

Prices shall be stated in units of quantity specified in the bid documents. In case of discrepancy in computing the amount of the bid, the unit price shall govern.

18. NOTICE TO PROCEED/PURCHASE ORDER.

The successful bidder may not commence work under this contract until authorized to do so by the Purchasing Agent.

19. CERTIFICATION.

By signing the offer section of the Offer and Acceptance page, Bidder certifies:

- The submission of the offer did not involve collusion or other anti-competitive practices.

- The Bidder has not given, offered to give, nor intends to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to any public servant in connection with the submitted offer.

- The Bidder hereby certifies that the individual signing the bid is an authorized agent for the Bidder and has the authority to bind the Bidder to the contract.

20. DEFINITIONS.

"County" – Jefferson County, Texas.
"Contractor" – The Bidder whose proposal is accepted by Jefferson County.

21. MINORITY-OWNED (MWBE), WOMEN-OWNED (WBE) AND HISTORICALLY UNDERUTILIZED (HUB) BUSINESS ENTERPRISE PARTICIPATION.

It is the desire of Jefferson County to increase the participation of Minority-Owned (MBE) , Women-Owned (WBE), and Historically Underutilized (HUB) business enterprises in its contracting and procurement programs. While the County does not have any preference or set aside programs in place, it is committed to a policy of equitable participation for these firms.

SECTION 2: FEDERAL MANDATED CONTRACT PROVISIONS

Some or all of the provisions in this section will be incorporated into a professional service agreement as a result of this solicitation.

Breach of Contract Terms / Remedies

Source: 2 CFR § 200 Appendix II (A)

Applicability: This provision requires Jefferson County, as the Airport Sponsor, to incorporate administrative, contractual, or legal remedies if contractor/consultant violate or breach contract terms. The sponsor must also include appropriate penalties and sanctions. Language acceptable to meet the intent of this requirement will be included in contractual documents.

This requirement applies to all FEMA grant and cooperative agreement programs

Contract Types: This provision is required for all contracts that exceed the simplified acquisition threshold as stated in 2 CFR § 200, Appendix II (A). This threshold is occasionally adjusted for inflation and is now equal to $150,000.

Termination of Contract (for Cause and Convenience)

Source: 2 CFR § 200 Appendix II (B)

FAA Advisory Circular 150/5370-10, Section 80-09

Applicability: This provision requires Jefferson County, as the Airport Sponsor, to incorporate in all contracts over $10,000, a provision that addresses termination for cause and termination for convenience, by the sponsor. The contractual provision must address the manner by which the sponsor's contract will be affected and the basis for settlement. Language acceptable to meet the intent of this requirement will be included in contractual documents.

This requirement applies to all FEMA grant and cooperative agreement programs.

Contract Types: This provision is required for all contracts that exceed $10,000.

Equal Employment Opportunity

Source: 2 CFR § 200 Appendix II (C) 41 CFR § 60-1.4

Executive Order 11246 41 CFR § 60-4.3

Applicability: The purpose of this provision is to provide equal opportunity for all persons, without regard to race, color, religion, sex, or national origin who are employed or seeking employment with contractors performing under a federally assisted construction contract. There are two provisions, a construction clause, and a specification clause.

The equal opportunity contract clause must be included in any contract or subcontract when the amount exceeds $10,000. Once the equal opportunity clause is determined to be applicable, the contract or subcontract must include the clause for the remainder of the year, regardless of the amount of the contract.

This requirement applies to all FEMA grant and cooperative agreement programs.

Contract Types: This provision is required for all contracts that exceed $10,000.

Use of Provision: 41 CFR 60-1.4 provides the mandatory **contract** language. 41 CFR 60-4.3 provides the mandatory **specification** language. The sponsor will incorporate these clauses without modification.

Note: Any contracts resulting from this RFQ will have the requisite language as set forth in 2 CFR 200 App II, 41 CFR 60-1.4, 41 CFR 60-4.3, and Executive Order 11246.

Davis-Bacon Requirements

Source: 2 CFR § 200 Appendix II (D)

29 CFR Part 5

Applicability: The Davis-Bacon Act ensures that laborers and mechanics employed under the contract receive pay no less than the locally prevailing wages and fringe benefits as determined by the Department of Labor.

For Professional Services: The emergence of different project delivery methods has created situations where Professional Service Agreements (PSAs) includes tasks that meet the definition of construction, alteration, or repair as defined in 29 CFR Part 5. If such tasks result in work that qualifies as construction, alteration, or repair and it exceeds $2,000, the PSA must incorporate this clause.

Use of Provision: 29 CFR 5 establishes the specific language the sponsor must use without modification. A/E firms that employ laborers and mechanics on a task that meets the definition of construction, alteration, or repair are acting as a contractor. The sponsor may not substitute the term "Contractor" for "Consultant" in such instances.

Copeland Anti-Kickback

Source: 2 CFR § 200 Appendix II (D)

29 CFR Part 3 & Part 5

Applicability: The Copeland Act (18 USC 874 and 40 USC 3145) makes it unlawful to induce by force, intimidation, threat of dismissal from employment, or by any other manner, any person employed in the construction or repair of public buildings or public works, financed in whole or in part by the United States, to give up any part of the compensation to which that person is entitled under a contract of employment. The Copeland Act also requires each contractor and subcontractor to furnish weekly a statement of compliance with respect to the wages paid each employee during the preceding week.

It DOES NOT apply to the FEMA Public Assistance Program.

For Professional Services: The emergence of different project delivery methods has created situations where Professional Service Agreements (PSAs) includes tasks that meet the definition of construction, alteration, or repair as defined in 29 CFR Part 5. If such tasks result in work that qualifies as construction, alteration, or repair and it exceeds $2,000, the PSA must incorporate the Copeland Anti-kickback provision.

Use of Provision: 29 CFR 5 establishes the specific language the sponsor must use without modification. A/E firms that employ laborers and mechanics on a task that meets the definition of construction, alteration, or repair are acting as a contractor. The sponsor may not substitute the term "Contractor" for "Consultant" in such instances.

Contract Workhours and Safety Standards Act Requirements

Source: 2 CFR § 200 Appendix II (E) 29 CFR Part 5

40 U.S.C. § 3701-3708

Applicability: Contract Workhours and Safety Standards Act Requirements (CWHSSA) requires contractors and subcontractors on covered contracts to pay laborers and mechanics employed in the performance of the contracts one and one-half times their basic rate of pay for all hours worked over 40 in a workweek and prohibits unsanitary, hazardous, or dangerous working conditions on federally assisted projects. The Wage and Hour division (WHD) within the U.S. Department of Labor (DOL) enforces the compensation requirements of this Act, while DOL's Occupational Safety and Health Administration (OSHA) enforces the safety and health requirements.

Jefferson County urges all contractors, regardless of funding sources for projects, to follow all applicable Federal and State labor laws.

Far Professional Services: This provision applies to professional service agreements that exceed $100,000 and employs laborers, mechanics, watchmen, and guards This includes members of survey crews and exploratory drilling operations.

Use of Provision: The following text will be included in applicable contracts without modification:

1. *Overtime requirements*. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. *Vialation; liability for unpaid wages; liquidated damages.* In the event of any violation of the clause set forth in paragraph (1) of this clause, the Contractor, and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this section, in the sum of $27.00 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this clause.

3. *Withholding for unpaid wages and liquidated damages.* Jefferson County shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this clause.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this clause.

Rights to Inventions

Source: 2 CFR § 200 Appendix II (F)

37 CFR § 401

Applicability: This provision applies to all contracts and subcontracts with small business forms or nonprofit organizations that include performance of *experimental, developmental, or research work*. This clause is not applicable to construction, equipment, or professional service contracts unless the contract includes *experimental, developmental, or research work*. This requirement applies to "funding agreements," but it DOES NOT apply to the Public Assistance, Hazard Mitigation Grant Program, Fire Management Assistance Grant Program, Crisis Counseling Assistance and Training Grant Program, Disaster Case Management Grant Program, and Federal Assistance to Individuals and Households – Other Needs Assistance Grant Program, as FEMA awards under these programs do not meet the definition of "funding agreement."

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of Appendix II to 2 CFR part 200.

Clean Air and Water Pollution Control

Source: 2 CFR § 200 Appendix II (G)

29 CFR Part 5

Applicability: This provision is required on all contracts and lower tier contracts that exceed $150,000.

Use of Provision: The following language will be included in applicable contracts:

1. Contractor agrees to comply with all applicable standards, orders, and regulations pursuant to the Clean Air Act (42 U.S.C. § 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. § 1251-13870). The contractor agrees to report any violation to the owner immediately upon discovery. The owner assumes responsibility for notifying the EPA and the FAA.

Debarment and Suspension

Source: 2 CFR Part 180 (Subpart C) 2 CFR Part 3000

2 CFR Part 1200 DOT Order 4200.5

Applicability: Required in all FEMA grant and cooperative agreement programs, regardless of amount. This requirement applies to covered transactions as defined in 2 CFR part 180. AIP funded contracts are non-procurement transactions as defined by §180.970. Covered transactions include any AIP-funded contract, regardless of tier, that is awarded by a contractor, subcontractor, supplier, consultant, or its agents or representative in any transaction, if the amount of the contract is expected to equal or exceed $25,000. Jefferson County must verify that the firm or individual that is entering into a contract with is not presently suspended, excluded, or debarred by any Federal department or agency from participating in federally assisted projects. This is accomplished by:

1. Checking SAM.gov to verify the firm's or individual's status;
2. Collecting a certification from the firm or individual that is not suspended, debarred, or excluded; and
3. Incorporating a clause into the contract that requires lower tier contracts to verify that no suspended, debarred, or excluded firm or individual is included in the project.

See **Error! Reference source not found.**, Paragraph **Error! Reference source not found.** above for more information on SAM.gov.

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of Appendix II to 2 CFR part 200.

Lobbying and Influencing Federal Employees

Source: 2 CFR § 200 Appendix II (J) 31 USC § 1352 – Byrd Anti-Lobbying Amendment

49 CFR Part 20, Appendix A 44 CFR Part 18

Applicability: This requirement applies to all FEMA grant and cooperative agreement programs. Consultants and contractors that apply or bid an award of $100,000 or more must certify that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant, or another award covered by 31 USC 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award.

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of Appendix II to 2 CFR part 200 Appendix (J) and 31 USC 1352.

If applicable, contractors ***must sign and submit*** to Jefferson County the **"Certification Regarding Lobbying"** Form included in this bid specification.

Procurement of Recovered Materials

Source: 2 CFR § 200 Appendix II (J) Solid Waste Disposal Act

40 CFR Part 247 2 CFR § 200.322

Applicability: Sponsors of AIP funded development and equipment projects must comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. Section 6002 emphasizes maximizing energy and resource recovery through use of affirmative procurement actions for recovered materials identified in the EPA guidelines. When acquiring items designated in the guidelines, the sponsor must procure items that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition.

This requirement applies to:

- All contracts awarded by a non-Federal entity under FEMA grant and cooperative agreement programs.
- All construction and equipment projects.
- Any contract, professional and property acquisition, that includes procurement of a product that exceeds $10,000.

Information about this requirement, along with the list of EPA designated items, is available at EPA's Comprehensive Procurement Guidelines website:

https://www.epa.gov/smm/comprehensiveprocurement-guideline-cpg-program.

The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act." The Uniform Rules authorize FEMA to require additional provisions for non-Federal entity contracts.

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of Appendix II to 2 CFR part 200.

Access to Records and Reports

Source: 2 CFR § 200.333 FAA Order 5100.38

2 CFR § 200.336

Applicability: 2 CFR § 200.333 requires a sponsor to retain records pertinent to a federal award for a period of three years from submission of final closure documents. 2 CFR § 200.336 establishes that sponsors must provide Federal entities the right to access records pertinent to the Federal award. FAA policy extends these requirements to the sponsor's contracts and subcontracts of AIP funded projects.

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of Appendix II to 2 CFR part 200. The following will be in applicable contracts:

1. The contractor must maintain an acceptable cost accounting system. The Contractor agrees to provide the local/state/federal entity providing funding for this project, the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions.
2. The contractor agrees to maintain all books, records and reports required under this contract for a period of not less than three years after final payment is made and all pending matters have been resolved.
3. The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.

4. The Contractor agrees to provide the FEMA Administrator or their representatives access to construction or other work sites pertaining to the work being completed under the contract.
5. In compliance with the Disaster Recovery Act of 2018, the County and the Contractor acknowledge and agree that no language in this contract is intended to prohibit audits or internal reviews by the FEMA Administrator or the Comptroller General of the United States.

Affirmative Action Requirement

Source: 41 CFR Part 60-4 FAA Order 5100.38

Executive Order 11246

Applicability: Sponsors are required to set goals for minority participation in AIP funded projects exceeding $10,000. The goals for minority participation derive from Economic Area (EA) and Standard Metropolitan Statistical Area (SMSA) as established in Volume 45 of the Federal Register dated 10/03/80. Page 65984 contains a table of all EAs and SMSAs and the associated minority participation goals.

Executive Order 11246 has set a goal of 6.9% nationally for female participation for all construction projects. This value remains constant for all counties and states.

Contract Types:

- Construction: The sponsor must incorporate this notice in all solicitations for bids or requests for proposals for AIP funded construction work contracts and subcontracts that exceed $10,000.
- Equipment: The sponsor must incorporate this notice in all solicitations for equipment project exceeding $10,000 that involves installation of equipment onsite (e.g. electrical vault equipment, generators). This provision does not apply to equipment acquisition projects where the manufacturer of the equipment takes place offsite at a manufacturer's plant (e.g. firefighting and vehicles).
- Professional Services: The sponsor must incorporate this notice in any professional service agreement if the agreement includes tasks that meet the definition of construction work, as defined by the DOL, and exceeds $10,000.

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of 41 CFR Part 60-4. The following will be in applicable contracts:

Solicitation Clause:
Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

    a. Goals for minority participation for each trade: (10/3/80) — Vol. 45 Federal Register pg. 65984

    b. Goals for female participation in each trade: 6.90%

These goals are applicable to all of the contractor's construction work, whether or not it is federal or federally assisted, performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR Part 60-4.3(a) and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project for the sole purpose of meeting the contractor's goals shall be a violation of the contract, the Executive Order, and the regulations in 41 CFR Part 60-4. Compliance with these goals will be measured against the total work hours performed.

The contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs (OFCCP) within 10 working days of award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of these subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

As used in this notice and in the contract resulting from this solicitation, the covered area is Texas, Jefferson County, Beaumont.

Buy American Preferences

Source: 49 USC § 50101

Applicability: the buy American preference requirement in 49 USC § 50101 requires that all still in manufactured goods used on AIP projects be produced in the United States. This statute gives the FAA the ability to issue a waiver to a sponsor to use non-domestic material on an AIP funded project subject to meeting certain conditions a sponsor may request that the FAA issue a waiver from the by American preference requirements if the FA finds that:

1. Applying the provision is not in the public interest;
2. The steel or manufactured goods are not available in sufficient quantity or quality in the United States;
3. The cost of components in subcomponents produced in the United States is more than 60% of the total components of a facility or equipment, and final assembly has taken place in the United States. Items that have an FAA standard specification item number, such as specific airport lighting equipment, are considered the equipment.

4. Applying this provision would increase the cost of the overall project by more than 25%.

For construction and equipment procurement projects, language, forms, and references to 49 USC § 50101 will be included in the solicitation.

Professional Service Agreements typically do not result in a deliverable that meets the definition of a manufactured product. If a PSA includes providing a manufactured good as a deliverable under the contract, the sponsor must include the Buy American Preference provision in the agreement.

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of 49 USC § 50101.

Civil Rights

Source:	49 USC § 47123	Title VI of the Civil Rights Act of 1964
	FAA Order 1400.11	US DOT Order 1050.2

Applicability: Title VI of the Civil Rights Act of 1964, as amended, Title VI, prohibits discrimination on the grounds of race, color, or national origin under any program or activity receiving Federal financial assistance. Sponsors must include appropriate clauses from the Standard DOT Title VI Assurances in all contracts and solicitations.

The text of each individual clause comes from the U.S. DOT Order 1050.2 Standard Title VI Assurances and Nondiscrimination Provisions, effective 04/24/2013. These assurances require the sponsor insert the appropriate clauses in the form provided by the DOT. Where the clause refers to the applicable activity, project, or program, it means the AIP project.

TITLE VI SOLICITATION NOTICE

Jefferson County, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 USC § 2000d to 2000d-4) and the Regulations, hereby notifies all bidders or offerors that it will affirmatively ensure that any contract entered into pursuant to this advertisement, Disadvantaged Business Enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

Title VI List of Pertinent Nondiscrimination Acts and Authorities

During the performance of any contract as a result of this bid, the Contractor, for itself, its assignees, and successors in interest, hereinafter referred to as the Contractor, agrees to comply with the following non-discrimination statutes and authorities, including but not limited to:

- Title VI of the Civil Rights Act of 1964
- 49 CFR part 21
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970
- Section 504 of the Rehabilitation Act of 1973
- The Age Discrimination Act of 1975
- Airport and Airway Improvement Act of 1982
- The Civil Rights Restoration Act of 1987
- Titles II and III of the Americans with Disabilities Act of 1990
- The Federal Aviation Administration's Nondiscrimination Statute
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency
- Title IX of the Education Amendments of 1972

Disadvantaged Business Enterprise

Source: 49 CFR part 26

Applicability: A sponsor that anticipates awarding $250,000 or more in AIP funding prime contracts in a federal fiscal year must have an approved Disadvantaged Business Enterprise (DBE) program on file with the FAA Office of Civil Rights (§26.21). The approved DBE program will identify a 3-year overall program goal that the sponsor bases on the availability of ready, willing, and able DBEs relative to all businesses ready, willing, and able to participate on the project. (§26.45).

Sponsors with a DBE program on file with the FAA must include the three following provisions, if applicable:

- Clause in all solicitations for proposals for which a contract goal has been established;
- Clause in each prime contract, and;
- Clause in solicitations that are obtaining DBE participation through race/gender neutral means.

As a condition of bid responsiveness, the Bidder or Offeror must submit the following information with its proposal on the forms provided herein:

1. Names and addresses of the DBE firms that will participate in the contract;
2. A description of the work each DBE firm will perform;
3. Percentage/dollar amount of the participation of each DBE firm listed under 1.
4. Written statement from Bidder or Offeror that attests their commitment to use the DBE firm(s) listed under (1) to meet the Owner's project goal; and

5. If Bidder or Offeror cannot meet the advertised project DBE goal, evidence of good faith efforts undertaken by the Bidder or Offeror as described in 49 CFR part 26 Appendix A

The requirements of 49 CFR part 26 apply to this contract. It is the policy of Jefferson County to practice nondiscrimination based on race, color, sex, or national origin in the award or performance of this contract. Jefferson County encourages participation by all firms qualifying under this solicitation regardless of business size or ownership.

DBE Contract Assurances

Contracts as a result of this bid will include contract assurances per §26.13, if applicable:

The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 and the award and administration of Department of Transportation-assisted contracts. Failure by contractor to carry out these requirements is a material breach of this contract which may result in the termination of this contract or such other remedy as the owner deems appropriate, which may include but is not limited to:

1. Withholding monthly progress payments;
2. Accessing sanctions;
3. Liquidated damages; and/or
4. Disqualifying the Contractor from future bidding as non-responsible.

Prompt Payment (§26.29) – The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than 30 days from the receipt of each payment the prime contractor receives from Jefferson County. The prime contractor agrees further to return retainage payments to each subcontractor within 30 days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of Jefferson County. This clause applies to both DBE and non-DBE subcontractors.

Distracted Driving

Source: Executive Order 13513 2 CFR §200.67

DOT Order 3902.10

Applicability: The FAA encourages recipients of federal grant funds to adopt and enforce safety policies that decrease crashes by distracted drivers, including policies to ban text messaging while driving when performing work related to a grant or subgrant.

Use of Provision: The following clause will be included in all Federally assisted contracts regardless of amount:

In accordance with executive order 13513, federal leadership on reducing text messaging while driving, Andy OT order 3902.10, text messaging while driving, the FAA encourages recipients of Federal grant funds to adopt and enforce safety policies that decrease crashes by distracted drivers including policies to ban text messaging while driving when performing work related to a grant or subgrant.

In support of this initiative, Jefferson County encourages the contractor to promote policies and initiatives for its employees and other work personnel that decrease crashes by distracted drivers, including policies that ban text messaging while driving motor vehicles Papa forming work activities associated with the project. The contractor must include the substance of this clause and other sub tier contracts exceeding $3,500 that involve driving a motor vehicle and performance of work activities associated with the project.

Compliance with Federal Law, Regulations, and Executive Orders

The recipient and its contractors are required to comply with all Federal laws, regulations, and executive orders.

Applicability: FEMA recommends that all non-Federal entities place into their contracts an acknowledgement that FEMA financial assistance will be used to fund the contract along with the requirement that the contractor will

comply with all applicable Federal law, regulations, executive orders, and FEMA policies, procedures, and directives.

"This is an acknowledgement that FEMA financial assistance will be used to fund all or a portion of the contract. The contractor will comply with all applicable Federal law, regulations, executive orders, FEMA policies, procedures, and directives."

No Obligation by Federal Government

The FAA and or FEMA is not a party to any transaction between the recipient and its contractor. The FAA and or FEMA is not subject to any obligations or liable to any party for any matter relating to the contract.

Applicability: FEMA recommends that the non-Federal entity include a provision in its contract that states that the Federal Government is not a party to the contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract.

"The Federal Government is not a party to this contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract."

Program Fraud and False or Fraudulent Statements or Related Acts

Recipients must comply with the requirements of The False Claims Act (31 U.S.C. §§ 3729-3733) which prohibits the submission of false or fraudulent claims for payment to the federal government. See DHS Standard Terms and Conditions: Version 8.1 (2018); and 31 U.S.C. §§ 3801-3812, which details the administrative remedies for false claims and statements made. The non-Federal entity must include a provision in its contract that the contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to its actions pertaining to the contract.

FEMA recommends that the non-Federal entity include a provision in its contract that the contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to its actions pertaining to the contract.

"The Contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to the Contractor's actions pertaining to this contract."

SECTION 3: SPECIAL REQUIREMENTS/BID SUBMISSION INSTRUCTIONS

The following requirements and instructions **supersede** General Requirements where applicable.

3.1 SUBMISSION OF BID.

Bidder is Responsible for Submitting:

One (1) Original and Two (2) Bid Copies; with all copies to include a Completed Copy of this specifications packet, in its entirety.

The County requests that bid submissions NOT be bound by staples or glued spines.

Each Bidder shall ensure that required parts of their bid submission are completed with accuracy and submitted as per the requirements within this specifications packet, including any addenda.

Additionally, Bidder shall monitor the Jefferson County Purchasing Department Website for any addenda, additional instructions, or bid updates. https://www.co.jefferson.tx.us/Purchasing/

Failure to return and/or complete all required documentation will result in a response being declared as non-responsive.

Bids must be submitted in complete original form by mail or messenger to the following address:
Jefferson County Purchasing Department
1149 Pearl Street, 1st Floor
Beaumont, TX 77701

Bid Packaging: Bidder shall submit response in a tightly sealed opaque envelope or box, plainly marked "SEALED BID." The outside of the envelope of box shall also include the IFB Number, IFB Name, IFB Due Date, and the Bidder's Name and Address; and shall be addressed to the Purchasing Agent.

All submissions must be received by 11:00 am CT, Wednesday, August 24, 2022.

Late bids will not be accepted and will be returned unopened to the Bidder.

Bids will be accepted at the above address until the time and date specified herein, and immediately after will be publicly opened and read aloud.

Jefferson County will not accept any responsibility for bids being delivered by third party carriers.

Jefferson County shall not be responsible for any effort or cost expended in the preparation of a response to this IFB.

All bid responses submitted in response to this invitation shall become the property of Jefferson County and will be a matter of public record available for review.

All protests should be coordinated through the Purchasing Office prior to award recommendation to Commissioners' Court.

Please direct questions to Jamey West, Contract Specialist via e-mail at: jwest@co.jefferson.tx.us

3.2 COURTHOUSE SECURITY.

All visitors to the Courthouse must pass through Security. Respondents planning to hand deliver proposals must allow time to get through Security, as a delay in entering the Courthouse will not be accepted as an excuse for late submittal. Mondays and Tuesdays are particularly heavy days.

In response to the Covid-19 pandemic, Jefferson County has implemented precautionary measures as currently recommended by the CDC within its facilities. Bidders are strongly urged to plan accordingly.

COUNTY HOLIDAYS (2022)

~~**January 17, 2022,**~~	~~Martin Luther King, Jr. Day~~	~~Monday~~
~~**February 21, 2022,**~~	~~President's Day~~	~~Monday~~
~~**April 15, 2022,**~~	~~Good Friday~~	~~Friday~~
~~**May 30, 2022,**~~	~~Memorial Day~~	~~Monday~~
~~**July 4, 2022,**~~	~~Independence Day~~	~~Monday~~
September 5, 2022,	Labor Day	Monday
November 11, 2022,	Veteran's Day	Friday
November 24 & 25, 2022	Thanksgiving	Thursday & Friday
December 23 & 26, 2022	Christmas	Friday & Monday
January 2, 2023,	New Year's	Monday

Submissions During Time of Inclement Weather, Disaster, or Emergency:

In case of inclement weather or any other unforeseen event causing the County to close for business on the date of a bid/proposal/statement of qualifications submission deadline, the RFQ closing will automatically be postponed until the next business day that County offices are open to the public. Should inclement weather conditions or any other unforeseen event cause delays in courier service operations, the County may issue an addendum to all known vendors interested in the project to extend the deadline. It will be the responsibility of the vendor to notify the county of their interest in the project should these conditions impact their ability to submit a bid/proposal/statement of qualifications submission before the stated deadline. The County reserves the right to make the final judgement call to extend any deadline.

Should an emergency or unanticipated event interrupt normal County processes, and bid/proposal/statement of qualifications submissions cannot be received by the Jefferson County Purchasing Department's office by the exact time specified in the RFQ and urgent County requirements preclude amendment to the RFQ, the time specified for receipt of Statements of Qualifications will be deemed to be extended to the same time of day specified in the solicitation on the first business day on which normal County processes resume.

3.3 PRE-BID MEETING AND WALK-THROUGH.

There will be a Pre-Bid Conference and Walk-Through at 2:00 PM CT on Thursday, August 4, 2022, at the Airport Administration Conference Room located at 5000 Jerry Ware Blvd. Beaumont, Texas 77705. This conference will be the Bidder's only opportunity to view secured areas of the project.

3.4 QUESTIONS/DEADLINE FOR QUESTIONS.

Questions may be emailed to **Jamey West, Contract Specialist** at: jwest@co.jefferson.tx.us The Deadline for asking questions or requesting additional information (in writing) **is 5:00 pm CT, Monday, August 15, 2022.**

3.5 VENDOR REGISTRATION: SYSTEM FOR AWARD MANAGEMENT.

Vendors doing business with Jefferson County are **required** to be registered with The System for Award Management (SAM), with an "active" status. The System for Award Management (SAM) is the Official U.S. Government system that consolidated the capabilities of CCR/FedReg, ORCA, and EPLS. There is NO fee to register for this site. Entities may register at no cost directly from the SAM website at: https://www.sam.gov

In instances where a vendor has either an "Inactive" SAM Registration or is not currently registered with the System for Award Management, the Purchasing Department may *initially* accept proof (printout from the SAM website) that the vendor has begun the registration process in order for the IFB/RFQ/RFP submission to be considered as "responsive" to the specifications for the project.

However, the SAM Registration must be completed (showing "active" status, with no exclusions) prior to the award and/or execution of an agreement or contract for the project.

3.6 FORM 1295 (Texas Ethics Commission) SUBMISSSION REQUIREMENT/INSTRUCTIONS FOR BIDDERS.

All Non-Exempt Bidders are required to submit a completed FORM 1295 with bid submission.

1. Submit a FORM 1295 online via the Texas Ethics Commission website link below.
Vendors must enter the required information an Form 1295 and print a copy of the completed form.
The form will include a certification of filing that will contain a unique certification number.

2. Submit a FORM 1295 hard copy (completed & signed by an Authorized Agent of the Awarded Vendor), to the Jefferson County Purchasing Department **with bid submission.**

FORM 1295, Completion Instructions, and Login Instructions are available via the Texas Ethics Commission Website at: https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm

A sample of a completed FORM 1295 is included on **PAGE 30**.

FORM 1295 Implementation Background:

In accordance with House Bill 1295 (passed January 1, 2016), Vendors entering into contracts and professional agreements with Jefferson County will be required to complete a Certificate of Interested Parties (FORM 1295), **unless contract is considered exempt as described below.**

In 2017, the Texas legislature amended the law to require Form 1295 to include an "unsworn declaration" which includes, among other things, the date of birth and address of the authorized representative signing the form. The unsworn declaration, including the date of birth and address of the signatory, replaces the notary requirement that applied to contracts entered into before January 1, 2018. The TEC filing application does not capture the date of birth or street address of the signatory and it will not appear on forms that are filed using the TEC filing application.

Changes to the law requiring certain businesses to file a Form 1295 are in effect for contracts entered into or amended on or after January 1, 2018. The changes exempt businesses from filing a Form 1295 for certain types of contracts and replace the need for a completed Form 1295 to be notarized. Instead, the person filing a 1295 needs to complete an "unsworn declaration."

Question: Will the date of birth and address provided appear on the TEC's website when the form is filed?

Answer: No. The TEC filing application does not capture the date of birth or street address of the signatory and it will not appear on forms that are filed using the TEC filing application. Although the TEC does not capture the date of birth and street address of the signatory, the contracting state agency or governmental agency will have

a physical copy of the form that includes the date of birth and address of the signatory. The TEC cannot answer whether the contracting state agency or governmental agency may release such information. Questions regarding the Texas Public Information Act may be directed to the Office of the Attorney General. See also Paxton v. City of Dall., No. 03-13-00546-CV, 2015 Tex. App. LEXIS 5228, at *10-11 (App.—Austin May 22, 2015) (mem. op.) (pet. denied) (available here)

FORM 1295 EXEMPTIONS:

What type of contracts are exempt from the Form 1295 filing requirement under the amended law?
The amended law adds to the list of types of contracts exempt from the Form 1295 filing requirement.

A completed Form 1295 is not required for:

- a sponsored research contract of an institution of higher education
- an interagency contract of a state agency or an institution of higher education
- a contract related to health and human services if: the value of the contract cannot be determined at the time the contract is executed; and any qualified vendor is eligible for the contract
- a contract with a publicly traded business entity, including a wholly owned subsidiary of the business entity
- a contract with an electric utility, as that term is defined by Section 31.002, Utilities Code
- a contract with a gas utility, as that term is defined by Section 121.001, Utilities Code

SAMPLE: FORM 1295

CERTIFICATE OF INTERESTED PARTIES — FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY

1 **Name of business entity filing form, and the city, state and country of the business entity's place of business.**

YOUR FIRM NAME HERE

2 **Name of governmental entity or state agency that is a party to the contract for which the form is being filed.**

**JEFFERSON COUNTY, TEXAS*

3 **Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.**

BID/CONTRACT/PO NUMBER GOES HERE

4 Name of Interested Party	City, State, Country (place of business)	Nature of Interest (check applicable)	
		Controlling	Intermediary
NAME OF PERSON/PERSONS THAT ~~OWN BUSINESS GOES HERE.~~ MUST LIST ANY PERSON THAT DOES NOT WORK FOR THE COMPANY LISTED IN #1 THAT WILL PROFIT FROM THE BID/CONTRACT/PO			

5 **Check only if there is NO Interested Party.** ☐ **ONLY CHECK IF NO CONTROLLING OR INTERMEDIARY PARTY**

6 **UNSWORN DECLARATION** Vendor is to complete #6 - Unsworn Declaration

My name is _____, and my date of birth is _____.

My address is _____, _____, _____, _____, _____.
(street) (city) (state) (zip code) (country)

I declare under penalty of perjury that the foregoing is true and correct.

Executed in _____ County, State of _____, on the _____ day of _____, 20_____.
(month) (year)

_____
Signature of authorized agent of contracting business entity
(Declarant)

ADD ADDITIONAL PAGES AS NECESSARY

Form provided by Texas Ethics Commission www.ethics.state.tx.us Revised 12/22/2017

Must file online at www.ethics.state.tx.us/File

BIDDER: INSERT COMPLETED FORM 1295 BEHIND THIS PAGE.

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

1 of 1

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY
CERTIFICATION OF FILING

Certificate Number:
2022-925400

Date Filed:
08/23/2022

Date Acknowledged:

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.
Ramtex Industrial, LLC
Port Arthur, TX United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.
Jefferson County Purchasing Department

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.
IFB-22-028/JW
Civil Construction Services

4 Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
		Controlling	Intermediary

5 Check only if there is NO Interested Party. [X]

6 UNSWORN DECLARATION

My name is JORDAN ROBBINS, and my date of birth is 02/04/1990.

My address is 7925 Labelle Rd, (street) Beaumont (city) TX (state) 77705 (zip code) USA (country).

I declare under penalty of perjury that the foregoing is true and correct.

Executed in Jefferson County, State of Texas, on the 23 day of August (month), 2022 (year).

Signature of authorized agent of contracting business entity
(Declarant)

SAM.GOV®

DEZTEX INDUSTRIAL SERVICES, LLC

ALERT! This entity is only available FOR OFFICIAL USE ONLY.

DUNS Unique Entity ID	SAM Unique Entity ID	CAGE / NCAGE
054061595	**JGPCKKBHWDV5**	**6RZZ8**
Purpose of Registration	Expiration Date	Registration Status
All Awards	**Jul 20, 2022**	**Active**
Physical Address	Mailing Address	
905 Jade AVE **Port Arthur, Texas 77640-1373** **United States**	**PO Box 21397** **Beaumont, Texas 77720** **United States**	

Entity Information

Doing Business as	Division Name	Division Number
Ramtex	**Deztex Industrial Services, Llc**	**DezTex Ind**
Congressional District	State / Country of Incorporation	URL
Texas 14	**Texas / United States**	**http://www.deztex.com**
MPIN		
*******x018**		

Registration Dates

Activation Date	Submission Date	Initial Registration Date
Jul 23, 2021	**Jul 20, 2021**	**Jun 18, 2012**

Entity Dates

Entity Start Date	Fiscal Year End Close Date
Feb 3, 2012	**Dec 31**

Immediate Owner

CAGE	Legal Business Name
(blank)	**(blank)**

Highest Level Owner

CAGE	Legal Business Name
(blank)	**(blank)**

Executive Compensation

In your business or organization's preceding completed fiscal year, did your business or organization (the legal entity to which this specific SAM record, represented by a DUNS number, belongs) receive both of the following: 1. 80 percent or more of your annual gross revenues in U.S. federal contracts, subcontracts, loans, grants, subgrants, and/or cooperative agreements and 2. $25,000,000 or more in annual gross revenues from U.S. federal contracts, subcontracts, loans, grants, subgrants, and/or cooperative agreements?

No

Does the public have access to information about the compensation of the senior executives in your business or organization (the legal entity to which this specific SAM record, represented by a DUNS number, belongs) through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986?

Not Selected

Proceedings Questions

Is your business or organization, as represented by the DUNS Number on this entity registration, responding to a Federal procurement opportunity that contains the provision at FAR 52.209-7, subject to the clause in FAR 52.209-9 in a current Federal contract, or applying for a Federal grant opportunity which contains the award term and condition described in 2 C.F.R. 200 Appendix XII?

No

Does your business or organization, as represented by the DUNS number on this specific SAM record, have current active Federal contracts and/or grants with total value (including any exercised/unexercised options) greater than $10,000,000?

Not Selected

Within the last five years, had the business or organization (represented by the DUNS number on this specific SAM record) and/or any of its principals, in connection with the award to or performance by the business or organization of a Federal contract or grant, been the subject of a Federal or State (1) criminal proceeding resulting in a conviction or other acknowledgment of fault; (2) civil proceeding resulting in a finding of fault with a monetary fine, penalty, reimbursement, restitution, and/or damages greater than $5,000, or other acknowledgment of fault; and/or (3) administrative proceeding resulting in a

finding of fault with either a monetary fine or penalty greater than $5,000 or reimbursement, restitution, or damages greater than $100,000, or other acknowledgment of fault?

Not Selected

SAM Search Authorization

I authorize my entity's non-sensitive information to be displayed in SAM public search results:

Yes

Entity Info

Business Types

Entity Structure	Entity Type	Organization Factors
Corporate Entity (Not Tax Exempt)	**Business or Organization**	**Limited Liability Company**

Profit Structure
For Profit Organization

Government Types

(blank)

Financial Information

Accepts Credit Card Payments	Debt Subject To Offset	Department Code
No	**No**	**(blank)**
CAGE Code	Agency Location Code	Disbursing Office Symbol
6RZZ8	**(blank)**	**(blank)**

Electronic Funds Transfer

Financial Institution	Account Type	Lock Box Number
THIRD COAST BANK, SSB	**Checking**	**(blank)**
Routing Number	Account Number	
*******4149**	*******51928**	

Automated Clearing House

Financial Institution	Phone (U.S.)	Email
THIRD COAST BANK, SSB	**4099835555**	**(blank)**
Phone (non-U.S.)	Fax	
(blank)	**4099857762**	

Remittance Information

Merchant ID1	Merchant ID2	Accounting Station
(blank)	**(blank)**	**(blank)**

Remittance Address

Deztex Industrial Services, LLC
PO Box 21397
Beaumont, Texas 77720
United States

Taxpayer Information

EIN	Type of Tax	Taxpayer Name
*******0954**	**Applicable Federal Tax**	**DezTex Industrial Services**
Tax Year (Most Recent Tax Year)	Name/Title of Individual Executing Consent	TIN Consent Date
2017	**President**	**Jul 20, 2021**

Address
246 REV. DR. Ransom Howard ST
Port Arthur, Texas 77640

Points of Contact

Accounts Receivable POC

Angel Lee
angel@deztex.com
4099835555

Electronic Business

Angel Lee
angel@deztex.com
4099835555

PO Box 21397
Beaumont, Texas 77720
United States

Government Business

Angel Lee
angel@deztex.com
4099835555

PO Box 21397
Beaumont, Texas 77720
United States

Jordan Robbins
jordan@deztex.com
4099835555

PO Box 21397
Beaumont, Texas 77720
United States

Security Information

Company Security Level
(blank)

Highest Level Employee Security Level
(blank)

Socio-Economic Information

NAICS Codes

Primary	NAICS Codes	NAICS Title
Yes	**238910**	**Site Preparation Contractors**
	236210	**Industrial Building Construction**
	236220	**Commercial And Institutional Building Construction**
	238110	**Poured Concrete Foundation And Structure Contractors**
	238990	**All Other Specialty Trade Contractors**

Product and Service Codes

PSC	PSC Name
F021	**Natural Resources/Conservation- Site Preparation**
J054	**Maintenance, Repair, And Rebuilding Of Equipment- Prefabricated Structures And Scaffolding**
N054	**Installation Of Equipment- Prefabricated Structures And Scaffolding**
Y100	**Construction Of Structures And Facilities**
Y1AA	**Construction Of Office Buildings**
Y1JZ	**Construction Of Miscellaneous Buildings**

Size Metrics

IGT Size Metrics

Annual Revenue (from all IGTs)
(blank)

World Wide

Annual Receipts (3 Year Average)
$3,000,000.00

Number of Employees (12 Month Average)
35

Location

Annual Receipts (3 Year Average)
(blank)

Number of Employees (12 Month Average)
(blank)

Industry-Specific

Barrels Capacity
(blank)

Megawatt Hours
(blank)

Total Assets
(blank)

Electronic Data Interchange (EDI) Information

This entity did not enter the EDI information

Disaster Response

Yes, this entity appears in the disaster response registry.

States	Counties	Metropolitan Statistical Areas
Florida	**(blank)**	**(blank)**
Louisiana		
Texas		

SAM.GOV

Requests Notifications Workspace Sign Out

Home Search Data Bank Data Services Help

Entity Workspace Enter an entity ID, name, or keyword Actions

Please verify your identity: As an entity administrator, you should verify your identity to register, update, or deactivate your entity's registration in SAM.gov. This will become mandatory in FY 2022. **Verify Your Identity**

Show Workspace For Non-Federal Entities

1 of 1

Results per page 25

Sort by Expiration Date Ascending

Non-Federal Entities

Filter By

Search by Keyword

Search By Entity

Search By Status

- [ ] Work in Progress Registration
- [ ] Submitted Registration
- [x] Active Registration
- [ ] Inactive Registration
- [ ] ID Assigned
- [ ] Pending ID Assignment

Expiration Date

Search by FSD Number

Deztex Industrial Services, LLC • Active Registration

Unique Entity ID: JGPCKKBHWDV5

Purpose of Registration: All Awards

Expiration Date: Oct 18, 2022

CAGE/NCAGE: 6RZZ8

Physical Address: 905 Jade Ave Port Arthur, TX 77640-1373 USA

FSD Number: INC-GSAFSD6313781

FSD Incidents

RAMTEX INDUSTRIAL, LLC • Submitted Registration

Unique Entity ID: JGPCKKBHWDV5

Purpose of Registration: All Awards

Expiration Date: (blank)

CAGE/NCAGE: 6RZZ8

Address: 905 JADE AVE PORT ARTHUR, TX 77640-1373 USA

UEI··· CAGE···

BIDDER: INSERT PROOF OF SYSTEM FOR AWARD MANAGEMENT (SAM) REGISTRATION PROOF HERE.

SECTION 3: SPECIAL REQUIREMENTS/BID SUBMISSION INSTRUCTIONS (CONTINUED)

3.7 MULTIPLE VENDOR AWARD.

Jefferson County reserves the right to award this contract to more than one vendor at the County's discretion.

3.8 DELIVERY.

If delivery is required, all items must be packaged so as to be protected from damage during shipping and handling. Any item(s) damaged in shipping must be replaced in kind, or repaired, by the contractor, at the discretion of, and at no additional charge to, Jefferson County.

3.9 PAYMENT.

Jefferson County will pay original invoices that clearly itemize the goods and/or services provided as to quantity, part number, description, price, applicable discount (if any), labor charges showing time differential, if applicable and if previously agreed to, and delivery, installation, and set-up costs, if applicable and if previously agreed to. Only charges as stated on the Bid Form(s) submitted as a part of the bid will be considered.

Invoices must indicate Jefferson County as applicable, the address to which the product(s) and/or service(s) were delivered, and the applicable purchase order number. Invoices will be matched to delivery tickets prior to payment; therefore, all delivery tickets should have an accurate description of the product(s) and/or service(s).

Invoices shall be submitted to:
Jefferson County Auditing Department
Attention: Accounts Payable
1149 Pearl Street, 7th floor Beaumont,
TX 77701.

3.10 USAGE REPORTS.

Jefferson County reserves the right to request, and receive at no additional cost, up to two (2) times during the contract period, a usage report detailing the products and/or services furnished to date under a contract resulting from this IFB. The reports must be furnished no later than five (5) working days after written request and itemize all purchases to date by Jefferson County department, description of each item purchased, including manufacturer, quantity of each item purchased, per unit and extended price of each item purchased, and total amount and price of all items purchased.

3.11 INSURANCE.

The contractor (including any and all subcontractors as defined in Section 3.12.3 below) shall, at all times during the term of this contract, maintain insurance coverages with not less than the type and requirements shown below. Such insurance is to be provided at the sole cost of the contractor. These requirements do not establish limits of the contractor's liability.

All policies of insurance shall waive all rights of subrogation against the County, its officers, employees, and agents; a copy of the policy wording or endorsement is required.

Contractor shall furnish Jefferson County with Certificate of Insurance naming Jefferson County as additional insured and will provide the actual policy wording or endorsement showing as such.

All insurance must be written by an insurer licensed to conduct business in the State of Texas.

Minimum Insurance Requirements:

Public Liability, including Products & Completed Operations	$1,000,000
Excess Liability	$1,000,000

Property Insurance (policy below that is applicable to this project):
Improvements & Betterments Policy: Improvements/Remodeling (for Lease Tenants)
Builder's Risk Policy: Structural Coverage for Construction Projects
Installation Floater Policy: Improvements/Alterations to Existing Structure

Workers' Compensation Statutory Coverage (See Section 9 Below)

3.12 WORKERS' COMPENSATION INSURANCE.

3.12.1 Definitions:

3.12.1.1 **Certificate of coverage ("Certificate")** – A copy of a certificate of insurance, a certificate of authority to self-insure issued by the commission, or a coverage agreement, DWC-81, DWC-82, DWC-83, or DWC-84 showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.

3.12.1.2 **Duration of the project** – Includes the time from the beginning of the work on the project until the contractor's/person's work on the project has been completed and accepted by the governmental entity.

3.12.1.3 **Persons providing services on the project ("subcontractor") in article 406.096** – Includes all persons or entities performing all or part of the services under the contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the contractor and regardless of whether that person has employees. This includes, without limitation, independent contractors, subcontractor, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the project. "Services" includes, without limitation, providing, hauling, or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

3.12.2 The Contractor shall provide coverage, based on proper reporting of classification code and payroll amounts and filing any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the contractor providing services on the project, for the duration of the project.

3.12.3 The Contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract – **refer to Section 3.11 above**.

3.12.4 If the coverage period shown on the Contractor's current certificate of coverage ends during the duration of the project, the Contractor must, prior to the end of the coverage period, file a new certificate of coverage with the governmental entity showing that coverage has been extended.

3.12.5 The Contractor shall obtain from each person providing services on a project, and provide to the governmental entity:

3.12.5.1 A certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and

3.12.5.2 No later than seven (7) days after receipt by the Contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate ends during the duration of the project.

3.12.6 The Contractor shall retain all required certificates of coverage for the duration of the project and for one (1) year thereafter.

3.12.7 The Contractor shall notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.

3.12.8 The Contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Department of Workers' Compensation, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.

3.12.9 The Contractor shall contractually require each person with whom it contracts to provide services on a project to:

3.12.9.1 Provide coverage, based on reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all its employees' providing services on the project, for the duration of the project.

3.12.9.2 Provide to the Contractor, prior to that person beginning work on the project a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project.

3.12.9.3 Provide the Contractor, prior to the end of coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.

3.12.9.4 Obtain from each person with whom it contracts, and provide to the Contractor:

3.12.9.4.1 A certificate of coverage, prior to the other person beginning work on the project; and

3.12.9.4.2 the coverage period, if the coverage period shown on the current certificate of a new certificate of coverage showing extension of coverage, prior to the end of coverage ends during the duration of the project.

3.12.9.5 Retain all required certificates of coverage on file for the duration of the project and for one (1) year thereafter.

3.12.9.6 Notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and

3.12.9.7 Contractually require each person with whom it contracts to perform as required by paragraphs **3.12.1. – 3.12.7**, with the certificates of coverage to be provided to the person for whom they are providing services.

3.12.10 By signing this contract or providing or causing to be provided a certificate of coverage, the Contractor is representing to the governmental entity that all employees of the contractor who will provide services of the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.

3.12.11 The Contractor's failure to comply with any of these provisions is a breach of contract by the Contractor which entitles the governmental entity to declare the contract void if the Contractor does not remedy the breach within ten (10) days after receipt of notice of breach from the governmental entity.

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 8/11/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Higginbotham Insurance Agency, Inc.
PO Box 1609
Nederland TX 77627

CONTACT NAME: Rayette Corley
PHONE (A/C, No, Ext): 409-721-6400 **FAX (A/C, No):** 409-721-9600
E-MAIL ADDRESS: rcorley@higginbotham.net

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Texas Mutual Insurance Company	22945
INSURER B : Mt Hawley Insurance Company	37974
INSURER C : Continental Casualty Company	20443
INSURER D : Imperium Insurance Company	35408
INSURER E :	
INSURER F :	

INSURED DEZTE
RAMTEX Industrial, LLC
905 West Jade Avenue
Port Arthur TX 77640

COVERAGES **CERTIFICATE NUMBER:** 1820897745 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
B	X COMMERCIAL GENERAL LIABILITY	Y	Y	NRG0000497	4/17/2022	4/17/2023	EACH OCCURRENCE	$ 1,000,000
	CLAIMS-MADE [X] OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 100,000
	X 5,000 deductible						MED EXP (Any one person)	$ 10,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						PERSONAL & ADV INJURY	$ 1,000,000
	POLICY [X] PRO-JECT [ ] LOC						GENERAL AGGREGATE	$ 2,000,000
	OTHER:						PRODUCTS - COMP/OP AGG	$ 2,000,000
								$
D	AUTOMOBILE LIABILITY	Y	Y	ILR18-01747-00	6/26/2022	6/26/2023	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	ANY AUTO						BODILY INJURY (Per person)	$
	X OWNED AUTOS ONLY; [ ] SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	X HIRED AUTOS ONLY; [X] NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
								$
B	UMBRELLA LIAB [X] OCCUR	Y	Y	NRX0000522	4/17/2022	4/17/2023	EACH OCCURRENCE	$ 5,000,000
	X EXCESS LIAB [ ] CLAIMS-MADE						AGGREGATE	$ 5,000,000
	DED [ ] RETENTION $							$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y/N		Y	0001236480	4/17/2022	4/17/2023	X PER STATUTE [ ] OTH-ER	
	ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? [ ] (Mandatory in NH)	N/A					E.L. EACH ACCIDENT	$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	$ 1,000,000
B	Contractors Pollution			NRG0000497	4/17/2022	4/17/2023	Each Occurrence	1,000,000
C	Leased/Rented Equipment			7015578566	10/11/2021	10/11/2022	Aggregate	2,000,000
							R/L Equipment Limit	500,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
As required by written contract and subject to policy terms and conditions, General Liability policy provides Blanket Additional Insured (CG2010 10/01 & CG2037 10/01) which includes ongoing and completed operations, Primary and Noncontributory (CG2001 04/13) and Blanket Waiver of Subrogation (CG2404 05/09); Business Auto policy provides blanket additional insured (IIC CA 33 01 04/13) and Blanket Waiver of Subrogation (CA 04 44 10/13) Primary and Noncontributory (IIC CA 33 01 04/13); Workers Compensation policy provides Blanket Waiver of Subrogation (WC420304B). Umbrella Policy follows form General Liability, Business Automobile and Workers Compensation.

Supplemental Named Insureds:
DezTex Industrial Services, LLC dba RamTex
See Attached...

CERTIFICATE HOLDER

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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AGENCY CUSTOMER ID: DEZTE

LOC #:

ACORD

ADDITIONAL REMARKS SCHEDULE

AGENCY	NAMED INSURED
Higginbotham Insurance Agency, Inc.	RAMTEX Industrial, LLC 905 West Jade Avenue Port Arthur TX 77640
POLICY NUMBER	
CARRIER / NAIC CODE	EFFECTIVE DATE:

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,

FORM NUMBER: 25 **FORM TITLE:** CERTIFICATE OF LIABILITY INSURANCE

RAMTEX Holdings LLC
Robbins and Adkins Management, LLC
The general liability, automobile liability and umbrella policies include a blanket automatic additional insured endorsement that provides additional insured status to the certificate holder only when there is a written contract between the named insured and the certificate holder that requires such status. The general liability, automobile liability, umbrella and workers compensation policies include a blanket automatic waiver of subrogation endorsement that provides this feature only when there is a written contract between the named insured and the certificate holder that requires it.

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BIDDER: INSERT COPY OF CERTIFICATE OF INSURANCE (COI) BEHIND THIS PAGE.

Note: For bid purposes, a general COI will suffice.

However, a COI that includes the notation that "Jefferson County as an additional insured" will be required from Awarded Bidder(s) prior to the issuance of a Purchase Order.

SECTION 4: MINIMUM SPECIFICATIONS

The following requirements and specifications supersede General Bid Requirements where applicable. Any questions relating to bid submission or bid item specifications requirements should be directed to Jamey West, Contract Specialist via email at: jwest@co.jefferson.tx.us Please reference Bid Number: IFB 22-028/JW.

SCOPE OF PROJECT:

Jefferson County is soliciting bids for the Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport located adjacent to and south of the BPT air traffic control tower (ATCT). Fuel supply trucks enter the property through a secured gate just east of the fuel farm. The pavement at the fuel farm of the Jack Brooks Regional Airport has ongoing deterioration and needs to be rehabilitated or replaced. The estimated PCI of the pavement is approximately 40 or less.

The fuel farm concrete panels will be replaced in such a way to reduce the down time of the fueling area. The panel replacement will be coordinated to not impact the ability of the fuel farm to continue to provide fuel to aircraft using the airport. The subgrade must be adequately tested (density, Soil type, and CBR) to determine if it is sufficient to support the pavement surface. The scope of the project includes: • Full depth panel replacement of concrete at fuel loading and unloading area. • Full replacement of the containment wall. • Repair of underground drainage failure beneath pavement, if necessary. The finished product will meet NFPA 407, DOT, and EPA standards for fuel transfer area containment.

TECHNICAL SPECIFICATIONS:

Technical Specifications for this project may be found starting on **Page 61.**

BID FORM:

The BID FORM for this project may be found on **Page 40.**

BIDDER INFORMATION FORM

Instructions: Complete the form below. Please provide legible, accurate, and complete contact information. PLEASE PRINT.

Bid Number & Name: Invitation for Bid (IFB 22-028/JW)
Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport

Bidder's Company/Business Name: RAMTEX Industrial LLC

Bidder's TAX ID Number: [redacted]

***If Applicable*:** **DBE Vendor No.** _____ **DBE Vendor No.** _____

Contact Person: Jordan Robbins **Title:** Business Manager

Phone Number (with area code): 409-344-2279

Alternate Phone Number if available (with area code): 409-983-5555

Fax Number (with area code): 409-985-7762

Email Address: jordan@ramtex.net

Mailing Address (Please provide a physical address for bid bond return, if applicable):

PO Box 21397
Address
Beaumont, Texas, 77720
City, State, Zip Code

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

BIDDER: INSERT BID SURETY BEHIND THIS PAGE.

MARKEL

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we DezTex Industrial Services, LLC dba RAMTEX Industrial, LLC as principal, hereinafter called the "Principal," and **SURETEC INSURANCE COMPANY**, 2103 CityWest Blvd., Suite 1300, Houston, TX 77042, as surety, hereinafter called the "Surety," are held and firmly bound unto Jefferson County Purchasing Department as obligee, hereinafter called the Obligee, in the sum of Five Percent (5%) of the Amount Bid by Principal for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the principal has submitted a bid for Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport, Project No. IFB-22-028/JW.

NOW, THEREFORE, if the contract be timely awarded to the Principal and the Principal shall within such time as specified in the bid, enter into a contract in writing or, in the event of the failure of the Principal to enter into such Contract, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

PROVIDED, HOWEVER, neither Principal nor Surety shall be bound hereunder unless Obligee prior to execution of the final contract shall furnish evidence of financing in a manner and form acceptable to Principal and Surety that financing has been firmly committed to cover the entire cost of the project.

SIGNED, sealed and dated this 24th day of August, 2022.

Principal: DezTex Industrial Services, LLC dba RAMTEX Industrial, LLC

By: _____
Signature

Name: JORDAN ROBBINS

Title: MANAGER

SureTec Insurance Company

By: _____
Signature

Name: Jessica Turner
Attorney-in-Fact

The Rider(s) Attached Hereto Is/Are Incorporated in the Bond and Contains Important Coverage Information and Limitations

POA #: 4221178

SureTec Insurance Company
LIMITED POWER OF ATTORNEY

Know All Men by These Presents, That SURETEC INSURANCE COMPANY (the "Company"), a corporation duly organized and existing under the laws of the State of Texas, and having its principal office in Houston, Harris County, Texas, does by these presents make, constitute and appoint

William Mitchell Jennings, Lindsay Senior Gingras, Jessica Turner, Payton Blanchard, William Blanchard, James R. Reid, Markham Paukune

its true and lawful Attorney-in-fact, with full power and authority hereby conferred in its name, place and stead, to execute, acknowledge and deliver any and all bonds, recognizances, undertakings or other instruments or contracts of suretyship to include waivers to the conditions of contracts and consents of surety for, providing the bond penalty does not exceed

Five Million and 00/100 Dollars ($5,000,000.00)

and to bind the Company thereby as fully and to the same extent as if such bond were signed by the President, sealed with the corporate seal of the Company and duly attested by its Secretary, hereby ratifying and confirming all that the said Attorney-in-Fact may do in the premises. Said appointment is made under and by authority of the following resolutions of the Board of Directors of the SureTec Insurance Company:

Be it Resolved, that the President, any Vice-President, any Assistant Vice-President, any Secretary or any Assistant Secretary shall be and is hereby vested with full power and authority to appoint any one or more suitable persons as Attorney(s)-in-Fact to represent and act for and on behalf of the Company subject to the following provisions:

Attorney-in-Fact may be given full power and authority for and in the name of and of behalf of the Company, to execute, acknowledge and deliver, any and all bonds, recognizances, contracts, agreements or indemnity and other conditional or obligatory undertakings and any and all notices and documents canceling or terminating the Company's liability thereunder, and any such instruments so executed by any such Attorney-in-Fact shall be binding upon the Company as if signed by the President and sealed and effected by the Corporate Secretary.

Be it Resolved, that the signature of any authorized officer and seal of the Company heretofore or hereafter affixed to any power of attorney or any certificate relating thereto by facsimile, and any power of attorney or certificate bearing facsimile signature or facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is attached. *(Adopted at a meeting held on 20th of April, 1999.)*

In Witness Whereof, SURETEC INSURANCE COMPANY has caused these presents to be signed by its President, and its corporate seal to be hereto affixed this 11th day of January, A.D. 2022 .

SURETEC INSURANCE COMPANY

By: _____
Michael C. Keimig, President

State of Texas ss:
County of Harris

On this 11th day of January, A.D. 2022 before me personally came Michael C. Keimig, to me known, who, being by me duly sworn, did depose and say, that he resides in Houston, Texas, that he is President of SURETEC INSURANCE COMPANY, the company described in and which executed the above instrument; that he knows the seal of said Company; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said Company; and that he signed his name thereto by like order.

XENIA CHAVEZ
Notary Public, State of Texas
Notary ID# 12911765-9
My Commission Expires
SEPTEMBER 10, 2024

_____
Xenia Chavez, Notary Public
My commission expires September 10, 2024

I, M. Brent Beaty, Assistant Secretary of SURETEC INSURANCE COMPANY, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney, executed by said Company, which is still in full force and effect; and furthermore, the resolutions of the Board of Directors, set out in the Power of Attorney are in full force and effect.

Given under my hand and the seal of said Company at Houston, Texas this 24th day of August, 2022, A.D.

_____
M. Brent Beaty, Assistant Secretary

Any instrument issued in excess of the penalty stated above is totally void and without any validity. 4221178
For verification of the authority of this power you may call (713) 812-0800 any business day between 8:30 am and 5:00 pm CST.

SureTec Insurance Company

IMPORTANT NOTICE
Statutory Complaint Notice/Filing of Claims

To obtain information or make a complaint: You may call the Surety's toll free telephone number for information or to make a complaint or file a claim at: 1-866-732-0099. You may also write to the Surety at:

SureTec Insurance Company
9737 Great Hills Trail, Suite 320
Austin, TX 78759

You may contact the Texas Department of Insurance to obtain information on companies, coverage, rights or complaints at 1-800-252- 3439. You may write the Texas Department of Insurance at:

PO Box 149104
Austin, TX 78714-9104
Fax#: 512-490-1007
Web: http://www.tdi.texas.gov
Email: ConsumerProtection@tdi.texas.gov

PREMIUM OR CLAIMS DISPUTES: Should you have a dispute concerning your premium or about a claim, you should contact the Surety first. If the dispute is not resolved, you may contact the Texas Department of Insurance.

BID FORM

UNIT PRICES: This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures. **All quantities are estimated. The contractor will be paid based upon actual quantities as verified by the Owner**

DESCRIPTION:	☒ Base Bid			
REF. NO. 1	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Mobilization C-105	1	LS	$7,535.42	$7,535.42

DESCRIPTION:	☒ Base Bid			
REF. NO. 2	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Construction Safety (Barricades, Signs, and Traffic Handling) SS-120	1	LS	$1,283.32	$1,283.32

DESCRIPTION:	☒ Base Bid			
REF. NO. 3	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Allowance for Storm Sewer Pipe Replacement D-701a	1	LS	$9,498.73	$9,498.73

DESCRIPTION:	☒ Base Bid			
REF. NO. 4	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Install PVC Pipe (2 Inch) D-701b	6	LF	$119.04	$714.24

DESCRIPTION:	☒ Base Bid			
REF. NO. 5	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Sawcut, Remove and Dispose Existing Concrete Pavement Full Depth (8 Inches) P-101-5.1a	602	SY	$51.10	$30,764.89

DESCRIPTION:	☒ Base Bid			
REF. NO. 6	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Sawcut, Remove and Dispose Existing Asphalt Ramp P-101-S.1b	70	SY	$22.78	$1,594.90

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

BID FORM (CONTINUED)

DESCRIPTION:	☒ Base Bid			
REF. NO. 7	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Sawcut, Remove and Dispose Existing 6" Vertical Curb P-101-5.1c	302	LF	$5.28	$1,594.90

DESCRIPTION:	☒ Base Bid			
REF. NO. 8	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Embankment in Place P-152-4.2	30	CY	$47.88	$1,436.40

DESCRIPTION:	☒ Base Bid			
REF. NO. 9	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Unsuitable Excavation P-152-4.4	30	CY	$46.04	$1,381.20

DESCRIPTION:	☒ Base Bid			
REF. NO. 10	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Lime Treated Subgrade (8 inches) P-152-8.1	602	SY	$53.67	$32,309.42

DESCRIPTION:	☒ Base Bid			
REF. NO. 11	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Lime P-152-8.2	31	TON	$385.41	$11,947.74

DESCRIPTION:	☒ Base Bid			
REF. NO.12	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Reinforced Concrete Pavement (8 Inches) P-501-8.1a	526	SY	$121.41	$63,862.43

DESCRIPTION:	☒ Base Bid			
REF. NO. 13	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Reinforced Concrete Pavement Ramp (8-12 Inches) P-501-8.1b	76	SY	$111.86	$8,501.36

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

BID FORM (CONTINUED) REPLACEMENT PAGE 42

DESCRIPTION:	☒ Base Bid			
REF. NO. 14	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Biodegradable Erosion Control Logs (Install) TXDOT 506-6.6.1	200	LF	$6.13	$1,226.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 15	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Biodegradable Erosion Control Logs (Removal) TXDOT 506-6.6.2	200	LF	$1.43	$286.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 16	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
4" Concrete Curb TXDOT 529	278	LF	$15.15	$4,211.70

DESCRIPTION:	☒ Base Bid			
REF. NO. 17	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Furnish and Install 4' Steel Bollards	2	EA	$2,098.73	$4,197.46

DESCRIPTION:	☒ Base Bid			
REF. NO. 18	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Install 6' Rubber Speed Bumps	4	EA	$851.37	$3,405.48

DESCRIPTION:	☒ Base Bid
	TOTAL BID PRICE *($ XXX,XXX.XX)*
TOTAL BID	$185,751.59

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

BIDDER ACKNOWLEDGEMENT OF BID ADDENDA (IF APPLICABLE):

Addendum	1	✓	Date Received 7/29/22
Addendum	2	✓	Date Received 8/10/22
Addendum	3		Date Received
Addendum	4		Date Received
Addendum	5		Date Received

BIDDER: INCLUDE FULL, SIGNED, & ATTESTED COPY OF EACH ADDENDUM ISSUED WITH BID SUBMISSION.

VENDOR REFERENCES FORM

Bidder: Please list at least three (3) companies or governmental agencies (preferably a municipality) where the same or equivalent products and/or services as contained in this specification package were recently provided.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

REFERENCE ONE

Government/Company Name: City of China

Address: China, TX

Contact Person and Title: Dawn Matte / City Secretary

Phone: 409-383-2066 Fax: N/A

Email Address: N/A Contract Period: 2022

Scope of Work: Stabilization of roadways & asphalt paving

REFERENCE TWO

Government/Company Name: Motiva Distribution Terminal

Address: Beaumont Terminal

Contact Person and Title: Derek Knepp

Phone: 409-527-1901 Fax: N/A

Email Address: N/A Contract Period: 2022

Scope of Work: Stabilize ditches, pour concrete foundations/supports

REFERENCE THREE

Government/Company Name: BASF Beaumont

Address: Beaumont, TX

Contact Person and Title: Sterling Simoneaux

Phone: 409-670-5065 Fax: N/A

Email Address: N/A Contract Period: 2022

Scope of Work: Concrete Paving

SIGNATURE PAGE

As permitted under Article 4413 (32c) V.A.C.S., other governmental entities may wish to participate under the same terms and conditions contained in this contract (i.e., piggyback). In the event any other entity participates, all purchase orders will be issued directly from and shipped directly to the entity requiring supplies/services. Jefferson County shall not be held responsible for any orders placed, deliveries made or payment for supplies/services ordered by another entity. Each entity reserves the right to determine their participation in this contract.

Would Bidder be willing to allow other governmental entities to piggyback off this contract, if awarded, under the same terms and conditions? ..... **Yes** ☐ **No** ☑

This bid shall remain in effect for ninety (90) days from bid opening and shall be exclusive of federal excise and state and local sales tax (exempt).

The undersigned agrees, if this bid is accepted, to furnish any and all items upon which prices are offered, at the price and upon the terms and conditions contained in the Invitation for Bid, Conditions of Bidding, Terms of Contract, and Specifications and all other items made a part of the accepted contract.

The undersigned affirms that they are duly authorized to execute the contract, that this company, corporation, firm, partnership or individual has not prepared this bid in collusion with any other Bidder, and that the contents of this bid as to prices, terms or conditions of said bid have not been communicated by the undersigned nor by any employee or agent to any other Bidder or to any other person(s) engaged in this type of business prior to the official opening of this bid. And further, that neither the Bidder nor their employees nor agents have been for the past six (6) months directly nor indirectly concerned in any pool or agreement or combination to control the price of goods or services on, nor to influence any person to bid or not to bid thereon.

RAMTEX Industrial LLC
Bidder (Entity Name)

PO Box 21397
Street & Mailing Address

Beaumont, Texas 77720
City, State & Zip

409-983-5555
Telephone Number

jordan@ramtex.net
E-mail Address

Signature

JORDAN ROBBINS
Print Name

8/23/22
Date Signed

409-985-7762
Fax Number

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

BYRD ANTI-LOBBYING CERTIFICATION

Certification for Contracts, Grants, Loans, and Cooperative Agreements-The undersigned certifies, to the best of his or her knowledge and belief, that:

No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor RAMTEX Industrial, LLC certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

Signature of Contractor's Authorized Official

Jordan Rogers / Manager

Name and Title of Contractor's Authorized Official

8/23/22

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

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LOCAL GOVERNMENT OFFICER
CONFLICTS DISCLOSURE STATEMENT – OFFICE USE ONLY

LOCAL GOVERNMENT OFFICER CONFLICTS DISCLOSURE STATEMENT

FORM CIS

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This is the notice to the appropriate local governmental entity that the following local government officer has become aware of facts that require the officer to file this statement in accordance with Chapter 176, Local Government Code.

OFFICE USE ONLY

Date Received

1 **Name of Local Government Officer**

2 **Office Held**

3 **Name of vendor described by Sections 176.001(7) and 176.003(a), Local Government Code**

4 **Description of the nature and extent of employment or other business relationship with vendor named in item 3**

5 **List gifts accepted by the local government officer and any family member, if aggregate value of the gifts accepted from vendor named in item 3 exceeds $100 during the 12-month period described by Section 176.003(a)(2)(B).**

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

(attach additional forms as necessary)

6 **AFFIDAVIT**

I swear under penalty of perjury that the above statement is true and correct. I acknowledge that the disclosure applies to each family member (as defined by Section 176.001(2), Local Government Code) of this local government officer. I also acknowledge that this statement covers the 12-month period described by Section 176.003(a)(2)(B), Local Government Code.

_____
Signature of Local Government Officer

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said _____, this the _____ day of _____, 20 _____, to certify which, witness my hand and seal of office.

_____
Signature of officer administering oath | Printed name of officer administering oath | Title of officer administering oath

Adopted 8/7/2015

THIS FORM IS FOR OFFICE USE ONLY

LOCAL GOVERNMENT OFFICER CONFLICTS DISCLOSURE STATEMENT

FORM CIS

(Instructions for completing and filing this form are provided on the next page.)

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This is the notice to the appropriate local governmental entity that the following local government officer has become aware of facts that require the officer to file this statement in accordance with Chapter 176, Local Government Code.

OFFICE USE ONLY

Date Received

1 **Name of Local Government Officer**

2 **Office Held**

3 **Name of vendor described by Sections 176.001(7) and 176.003(a), Local Government Code**

4 **Description of the nature and extent of each employment or other business relationship and each family relationship with vendor named in item 3.**

5 **List gifts accepted by the local government officer and any family member, if aggregate value of the gifts accepted from vendor named in item 3 exceeds $100 during the 12-month period described by Section 176.003(a)(2)(B).**

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

(attach additional forms as necessary)

6 **SIGNATURE** I swear under penalty of perjury that the above statement is true and correct. I acknowledge that the disclosure applies to each family member (as defined by Section 176.001(2), Local Government Code) of this local government officer. I also acknowledge that this statement covers the 12-month period described by Section 176.003(a)(2)(B), Local Government Code.

_____
Signature of Local Government Officer

Please complete either option below:

(1) Affidavit

NOTARY STAMP / SEAL

Sworn to and subscribed before me by _____ this the _____ day of _____,

20 _____, to certify which, witness my hand and seal of office.

_____

Signature of officer administering oath | Printed name of officer administering oath | Title of officer administering oath

OR

(2) Unsworn Declaration

My name is _____, and my date of birth is _____.

My address is _____, _____, _____, _____, _____.

(street) (city) (state) (zip code) (country)

Executed in _____ County, State of _____, on the _____ day of _____, 20_____.

(month) (year)

_____
Signature of Local Government Officer (Declarant)

LOCAL GOVERNMENT OFFICER CONFLICTS DISCLOSURE STATEMENT

Section 176.003 of the Local Government Code requires certain local government officers to file this form. A "local government officer" is defined as a member of the governing body of a local governmental entity; a director, superintendent, administrator, president, or other person designated as the executive officer of a local governmental entity; or an agent of a local governmental entity who exercises discretion in the planning, recommending, selecting, or contracting of a vendor. This form is required to be filed with the records administrator of the local governmental entity not later than 5 p.m. on the seventh business day after the date on which the officer becomes aware of the facts that require the filing of this statement.

A local government officer commits an offense if the officer knowingly violates Section 176.003, Local Government Code. An offense under this section is a misdemeanor.

Refer to chapter 176 of the Local Government Code for detailed information regarding the requirement to file this form.

INSTRUCTIONS FOR COMPLETING THIS FORM

The following numbers correspond to the numbered boxes on the other side.

1. **Name of Local Government Officer.** Enter the name of the local government officer filing this statement.

2. **Office Held.** Enter the name of the office held by the local government officer filing this statement.

3. **Name of vendor described by Sections 176.001(7) and 176.003(a), Local Government Code.** Enter the name of the vendor described by Section 176.001(7), Local Government Code, if the vendor: a) has an employment or other business relationship with the local government officer or a family member of the officer as described by Section 176.003(a)(2)(A), Local Government Code; b) has given to the local government officer or a family member of the officer one or more gifts as described by Section 176.003(a)(2)(B), Local Government Code; or c) has a family relationship with the local government officer as defined by Section 176.001(2-a), Local Government Code.

4. **Description of the nature and extent of each employment or other business relationship and each family relationship with vendor named in item 3.** Describe the nature and extent of the employment or other business relationship the vendor has with the local government officer or a family member of the officer as described by Section 176.003(a)(2)(A), Local Government Code, and each family relationship the vendor has with the local government officer as defined by Section 176.001(2-a), Local Government Code.

5. **List gifts accepted, if the aggregate value of the gifts accepted from vendor named in item 3 exceeds $100.** List gifts accepted during the 12-month period (described by Section 176.003(a)(2)(B), Local Government Code) by the local government officer or family member of the officer from the vendor named in item 3 that in the aggregate exceed $100 in value.

6. **Signature.** Signature of local government officer. Complete this section after you finish the rest of this report. You have the option to either: (1) take the completed form to a notary public where you will sign above the first line that says "Signature of Local Government Officer" (an electronic signature is not acceptable) and your signature will be notarized, or (2) sign above both lines that say "Signature of Local Government Officer (Declarant)" (an electronic signature is not acceptable), and fill out the unsworn declaration section.

Local Government Code § 176.001(2-a): "Family relationship" means a relationship between a person and another person within the third degree by consanguinity or the second degree by affinity, as those terms are defined by Subchapter B, Chapter 573, Government Code.

Local Government Code § 176.003(a)(2)(A):

(a) A local government officer shall file a conflicts disclosure statement with respect to a vendor if:

***

(2) the vendor:

(A) has an employment or other business relationship with the local government officer or a family member of the officer that results in the officer or family member receiving taxable income, other than investment income, that exceeds $2,500 during the 12-month period preceding the date that the officer becomes aware that:

(i) a contract between the local governmental entity and vendor has been executed; or

(ii) the local governmental entity is considering entering into a contract with the vendor.

DEBARMENT/SUSPENSION CERTIFICATION

Non-Federal entities and contractors are subject to the debarment and suspension regulations implementing Executive Order 12549, Debarment and Suspension (1986) and Executive Order 12689, Debarment and Suspension (1989) at 2 C.F.R. Part 180 and the Department of Homeland Security's regulations at 2 C.F.R. Part 3000 (No procurement Debarment and Suspension).

This requirement applies to all FEMA grant and cooperative agreement programs.

Federal Executive Order (E .O.) 12549 "Debarment" requires that all contractors receiving individual awards, using federal funds, and all sub recipients certify that the organization and its principals are not debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded by any Federal department or agency from doing business with the Federal Government. By signing this document, you certify that your organization and its principals are not debarred. Failure to comply or attempts to edit this language may disqualify your bid. Information on debarment is available at the following websites:

www.sam.gov and https://acguisition.gov/far/index.html (see section 52.209-6).

The Contractor Ramtex Industrial, LLC certifies or affirms by your signature that neither you nor your principal is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.

Signature of Contractor's Authorized Official

Jordan Robbins / Business Manager

Name and Title of Contractor's Authorized Official

8/23/22

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

CIVIL RIGHTS COMPLIANCE PROVISIONS

EQUAL EMPLOYMENT OPPORTUNITY (Equal Opportunity Clause)

(For all awarded contracts that meet the definition of "federally assisted construction contract" provided in 41 CFR Part 60-1.3)

During the performance of this contract, the contractor agrees as follows:

The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or order this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

Signature of Contractor's Authorized Official

Jordan Robbins / Business Manager

Name and Title of Contractor's Authorized Official

8/23/22

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

GOOD FAITH EFFORT (GFE) DETERMINATION CHECKLIST

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
☑ Yes ☐ No

Instructions: In order to determine if a "Good Faith Effort" was made in soliciting DBEs for subcontracting opportunities, the following checklist and supporting documentation shall be completed by the Prime Contractor/Consultant and returned with the Prime Contractor/ Consultant's bid. This list contains the **minimum** efforts that should be put forth by the Prime Contractor/Consultant when attempting to achieve or exceed the goals of DBE Subcontractor participation. The Prime Contractor/Consultant may extend his/her efforts in soliciting DBE Subcontractor participation beyond what is listed below.

Did the Prime Contractor/Consultant . . .?

☑ Yes ☐ No 1. To the extent practical, and consistent with standard and prudent industry standards, divide the contract work into the smallest feasible portions, to allow for maximum DBE Subcontractor participation?

☑ Yes ☐ No 2. **Notify** in writing a reasonable number of DBEs, allowing sufficient time for effective participation of the planned work to be subcontracted?

☑ Yes ☐ No 3. **Provide** DBEs that were genuinely interested in bidding on a subcontractor, adequate information regarding the project (i.e., plans, specifications, scope of work, bonding and insurance requirements, and a point of contract within the Prime Contractor/Consultant's organization)?

☑ Yes ☐ No 4. **Negotiate** in good faith with interested DBEs, and not reject bids from DBEs that qualify as lowest and responsive Bidders?

☑ Yes ☐ No 5. **Document** reasons DBEs were rejected? Was a written rejection notice, including the reason for rejection, provided to the rejected DBEs?

☑ Yes ☐ No 6. If Prime Contractor/Consultant has zero (0) DBE participation, **please explain the reasons why.**

If "No" was selected, please explain, and include any pertinent documentation with your bid. If necessary, please use a separate sheet to answer the above questions.

Jordan Robbins
Printed Name of Authorized Representative

Signature

Business Manager
Title

8/23/22
Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

NOTICE OF INTENT (NOI) TO SUBCONTRACT WITH DISADVANTAGED BUSINESS ENTERPRISE (DBE)

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
☑ Yes ☐ No

Instructions for Prime Contractor/Consultant: Bidder shall submit this form with the bid; however, the information below may be submitted after contract award, but prior to beginning performance on the contract. Please submit one form for each DBE Subcontractor/Subconsultant with proper signatures, per the terms and conditions of your contract.

Contractor Name: Ramtex Industrial, LLC DBE: ☐ Yes ☑ No

Address: 905 Slade Ave. (Street) Port Arthur (City) TX (State) 77640 (Zip)

Phone (with area code): 409-983-3555 Fax (with area code): N/A

Project Title & No.: Rehabilitation of Fuel Farm Pavement @ Jack Brooks Airport

Prime Contract Amount: $ 209,000

DBE Subcontractor Name: Tolunay-Wong Engineers, INC

DBE Status (Gender & Ethnicity): Woman

Certifying Agency: ☐ Tx. Bldg. & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: 2455 W Cardinal Dr, Beaumont, Texas 77705 (Street, City, State, Zip)

Phone (with area code): 409-840-4214 Fax (with area code): 409-985-7762

Proposed Subcontract Amount: $ $3,500 Percentage of Prime Contract: 1 %

Description of Subcontract Work to be Performed: Concrete Testing

Printed Name of Contractor Representative	Signature of Representative	Date
Jordan Robbins		8/23/22
Printed Name of DBE	**Signature of Representative**	**Date**
Liana Collier		8/23/22

Note: Nothing on this Notice of Intent Form is intended to confer any rights, expressed or implied, to any third parties.

Pre-Approval for Subcontractor Substitutions must be obtained from the Jefferson County Purchasing Agent's Representative. The "DBE Subcontractor/Subconsultant Change Form" must be completed and faxed to 409-835-8456.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

DISADVANTAGED BUSINESS ENTERPRISE (DBE)
SUBCONTRACTING PARTICIPATION DECLARATION FORM

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
☐ Yes ☐ No

Prime Contractor: _____ DBE: ☐ Yes ☐ No

DBE Status (Gender & Ethnicity): _____

Address: _____
Street City State Zip

Phone (with area code): _____ Fax (with area code): _____

Project Title & No.: _____ IFB/RFP No.: _____

Total Contract: $ _____ Total DBE Subcontract(s): $ _____

Construction DBE Goals: 12.8% MBE: _____ % 12.6% WBE: _____ %

Sub-goals: 1.7 African American, 9.7% Hispanic, 0.7% Native American, 0.8% Asian American.
Use these goals as a guide to diversify.

FOR DBE OFFICE USE ONLY:

Verification date DBE Program Office reviewed and verified DBE Sub information Date: _____ Initials: _____

PART I. DBE SUBCONTRACTOR DISCLOSURE

DBE Subcontractor Name: _____

DBE Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Texas Bldg. & Procurement Comm. ☐ Texas Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

BEAUMONT
TEXAS

February 8, 2021

Mr. Daniel Wong
Tolunay-Wong Engineers, Inc.
2455 W. Cardinal Drive, Ste. A
Beaumont, TX 77705

Dear Mr. Wong

I am pleased to inform you that your application for certification as a Minority Business Enterprise (MBE) for the City of Beaumont has been approved. Your business will be included in the City's MBE Directory.

Your certification is effective immediately and will be valid for a period of two years. Every two years you must submit a new application in order to renew your certification. Failure to renew every two years will result in your business being removed from the directory of certified MBEs. If at any time there is a change in ownership or control of the business, the business must submit a new application within thirty (30) days of the change. Violations of this policy may result in the revocation of the business' MBE certification with the City of Beaumont.

If you have any questions, please contact our Purchasing Division at 409-880-3720 or send an email to MBE.Beaumont@BeaumontTexas.gov

Sincerely,

Todd Simoneaux

Todd A. Simoneaux, CPA
Chief Financial Officer

TS:jj

FINANCE DEPT.
T 409.880.3789
F 409.880.3132
PO Box 3827 | Beaumont, TX 77704
beaumonttexas.gov

BEAUMONT
Finance

City of Beaumont, Texas

Certifies that

TOLUNAY-WONG ENGINEERS, INC.
Meets all the criteria established by the City of Beaumont,
And thereby is duly registered as a Minority Business Enterprise,
To do business with the City of Beaumont and its agents as such.

This certification is valid until February 8, 2023.

Todd A. Simoneaux, CPA, Chief Financial Officer

February 8, 2021
Certification Date

CMBL/HUB Vendor Detail

Vendor ID / Vendor Number	1760409302500 / 09320
Vendor Name	TOLUNAY-WONG ENGINEERS, INC.
Vendor Address	10710 S SAM HOUSTON PKWY W SUITE 100 HOUSTON, TX 77031-3054 USA
County	HARRIS
Contact	Daniel Wong
Phone/Fax	713-722-7064 / 713-777-1424
Email Address	eshackelford@tweinc.com
Website	http://www.tweinc.com
Business Description	We provide geotechnical engineering and testing, construction materials testing, environmental field services, geophysical, and deep foundations testing services.
Business Category	Architectural/Engineering And Surveying (05)
Small Business	N
Service Disabled Veteran	No
CMBL Status	Active Bidder
CMBL Expires	12-AUG-2022
HUB Status	Active Bidder (A-Approved; Active Texas certified HUB)
HUB Expires	30-NOV-2022
HUB Eligibility	AS (Asian-Pacific American)
HUB Gender	M
	Commodity items shown above are available for district(s) 12,16,18,20

DISADVANTAGED BUSINESS ENTERPRISE (DBE)
SUBCONTRACTING PARTICIPATION DECLARATION FORM

DBE Subcontractor Disclosure

PART I: Continuation Sheet (Duplicate as Needed)

DBE Subcontractor Name: _____

DBE Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg. & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

DBE Subcontractor Name: _____

DBE Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg. & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

All DBE Subcontractor Participation may be verified with the DBE Subcontractor(s) listed on Part I.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

DISADVANTAGED BUSINESS ENTERPRISE (DBE)
SUCONTRACTING PARTICIPATION DECLARATION FORM

PART II: STATEMENT OF NON-COMPLIANCE FOR NOT MEETING DBE SUBCONTRACTING GOALS

Please complete Good Faith Effort (GFE) Checklist and attach any supporting documentotion.

Our firm was unable to meet the DBE goals for this project for the following reasons:

- ☐ All subcontractors to be utilized are "Non-DBEs." *(Complete Part III)*
- ☐ DBEs were solicited but did not respond.
- ☐ DBEs solicited were not competitive.
- ☐ DBEs were unavailable for the following trade(s):
- ☐ Other: _____

Was the Jefferson County DBE Office contacted for assistance in locating DBEs? ☐ Yes ☐ No

PART III: DISCLOSURE OF OTHER "NON-DBE" SUBCONTRACTS

The Bidder shall use this area to provide a listing of all "Non-DBE" Subcontractors, including suppliers, who will perform under this project. A list of those "Non-DBE" Subcontractors the Bidder selects, after bid submission, shall be provided to the Purchasing Office not later than five (5) calendar days after being notified that Bidder is the apparent low Bidder. A list of those "Non-DBE" Subcontractors that are selected after contract award must be provided **immediately** after their selection.

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

DISADVANTAGED BUSINESS ENTERPRISE (DBE)
SUBCONTRACTING PARTICIPATION DECLARATION FORM

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

I hereby certify that I have read the *DBE Program Instructions and Information*, truthfully completed all applicable parts of this form, and **attach any necessary support documentation as required.** I fully understand that intentionally falsifying information on this document may result in my not receiving a contract award or termination of any resulting contract.

Name (print or type): _____

Title: _____

Signature: _____

Date: _____

E-mail address: _____

Contact person that will be in charge of invoicing for this project:

Name (print or type): _____

Title: _____

Date: _____

E-mail address: _____

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

RESIDENCE CERTIFICATION/TAX FORM

Pursuant to Texas Government Code §2252.001 *et seq.*, as amended, Jefferson County requests Resident Certification. §2252.001 *et seq.* of the Government Code provides some restrictions on the awarding of governmental contracts; pertinent provisions of §2252.001 are stated below:

(3) "Non-resident Bidder" refers to a person who is not a resident.

(4) "Resident Bidder" refers to a person whose principal place of business is in this state, including a contractor whose ultimate parent company or majority owner has its principal place of business in this state.

☑ I certify that RAMTEX Industrial, LLC [company name] is a Resident Bidder of Texas as defined in Government Code §2252.001.

☐ I certify that _____ [company name] is a Nonresident Bidder as defined in Government Code §2252.001 and our principal place of business is _____ _____ (city and state).

Taxpayer Identification Number (T.I.N.):	[redacted]
Company Name submitting bid/proposal:	RAMTEX Industrial, LLC
Mailing address:	PO Box 21397 Beaumont, TX 77720
If you are an individual, list the names and addresses of any partnership of which you are a general partner:	

Property: List all taxable property owned by you or above partnerships in Jefferson County.

Jefferson County Tax Acct. No.*	Property address or location**

* This is the property amount identification number assigned by the Jefferson County Appraisal District.

** For real property, specify the property address or legal description. For business property, specify the address where the property is located. For example, office equipment will normally be at your office, but inventory may be stored as a warehouse or other location.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

HOUSE BILL 89 VERIFICATION

I, Jordan Robbins, the undersigned representative of (company or business name) RAMTEX Industrial, LLC (heretofore referred to as company) being an adult over the age of eighteen (18) years of age, after being duly sworn by the undersigned notary, do hereby depose and verify under oath that the company named above, under the provisions of Subtitle F, Title 10, Government Code Chapter 2270:

1. Does not boycott Israel currently; and
2. Will not boycott Israel during the term of the contract.

Pursuant to Section 2270.002, Texas Government Code:

1. "**Boycott Israel**" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made ordinary business purposes; and

2. "**Company**" means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or a limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of those entities or business association that exist to make a profit.

Signature of Company Representative

8/23/22
Date

On this 23 day of August, 2022 personally appeared

Jordan Robbins, the above-named person, who after by me being duly sworn, did swear and confirm that the above is true and correct.

Notary Seal

KASSIDY KAY ADKINS
Notary ID #132269463
My Commission Expires
December 2, 2023

Kassidy Kay Adkins
Notary Signature

8/23/22
Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

SENATE BILL 252 CERTIFICATION

On this day, I, Deborah L. Clark, Purchasing Agent for Jefferson County, Texas, pursuant to Texas Government Code, Chapter 2252, Section 2252.152 and Section 2252.153, certify that I did review the website of the Comptroller of the State of Texas concerning the listing of companies that is identified under Section 806.051, Section 807.051, or Section 2253.253 and I have ascertained that the below named company is not contained on said listing of companies which do business with Iran, Sudan, or any Foreign Terrorist Organization.

RAMTEX Industrial, LLC

Company Name

IFB-22-028/JW

IFB/RFP/RFQ number

Certification check performed by:

_____

Purchasing Representative

_____

Date

BID AFFIDAVIT

The undersigned certifies that the bid prices contained in this bid have been carefully reviewed and are submitted as correct and final. Bidder further certifies and agrees to furnish any and/or all commodities upon which prices are extended at the price offered, and upon the conditions contained in the specifications and the Notice to Bidders.

STATE OF Texas COUNTY OF Jefferson

BEFORE ME, the undersigned authority, a Notary Public in and for the State of Texas,

on this day personally appeared Jordan Robbins (name), who

after being by me duly sworn, did depose and say:

"I, Jordan Robbins (name) am a duly authorized officer of/agent

for RAMTEX Industrial, LLC (name of firm) and have been duly authorized to execute the

foregoing on behalf of the said RAMTEX Industrial, LLC (name of firm).

I hereby certify that the foregoing bid has not been prepared in collusion with any other Bidder or other person or persons engaged in the same line of business prior to the official opening of this bid. Further, I certify that the Bidder is not now, nor has been for the past six (6) months, directly or indirectly concerned in any pool or agreement or combination, to control the price of services/commodities bid on, or to influence any person or persons to bid or not to bid thereon."

Name and address of Bidder: RAMTEX Industrial LLC , PO Box 21397, Beaumont, Texas, 77720

Fax: 409-985-7762 Telephone# 409-983-5555

by: Jordan Robbins (print name) Title: Business Manager

Signature: [signature]

SUBSCRIBED AND SWORN to before me by the above-named

Jordan Robbins on

this the 23 day of August, 2022.

[signature]
Notary Public in and for
the State of TX

KASSIDY KAY ADKINS
Notary ID #132269463
My Commission Expires
December 2, 2023

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

TECHNICAL SPECIFICATIONS

DAVIS BACON MINIMUM WAGE SCALE AND PAYROLL REQUIREMENTS

1.1 Following 29 CFR 5.5 (a) (1) (v), use the rates listed on the Wage Determination Attachment for minimum wage and benefits for the labor classifications applicable to the Work.

1.2 These rates do not prohibit payment of more than the rates stated.

1.3 Apply rates in this Document 00810 to site work greater than five (5) feet from exterior wall of new building under construction or from exterior wall of existing building.

Certified Payroll Requirements

2.1 The Contractor shall submit the "Certificate from Contractor Appointing Officer or Employee to Supervise Payment of Employees" (Exhibit "A") to the Monitoring Authority prior to final execution of the contract.

2.2 During the course of the work, ALL Subcontractors shall submit the "Certificate from Subcontractor Appointing Officer or Employee to Supervise Payment of Employees" (Exhibit "B") to the Monitoring Authority.

Article 5159a of the Revised Civil Statutes of Texas, passed by the 43rd Legislature Acts of 1933, Page 91, Chapter 45, provides that any government subdivision shall ascertain the general prevailing rate of per diem wages in the locality in which the work is to be per diem wages which shall be paid for each craft type of workman. This Article further provides the CONTRACTOR shall forfeit, as a penalty, to the City, County, or State , or other political subdivision. Ten Dollars ($10.00) per day for each laborer, or workman, or mechanic who is not paid the stipulated wage for the type of work performed by him as set up on the wage scale. The OWNER is authorized to withhold from the CONTRACTOR, after full investigation by the awarding body, the amount of this penalty in any payment that might be claimed by the CONTRACTOR or SUBCONTRACTOR. The Act make the CONTRACTOR responsible for the acts of the SUBCONTRACTOR in this respect. The Article likewise requires that the CONTRACTOR and SUBCONTRACTOR keep an accurate record of the names and occupations of all persons employed by him and show the actual per diem wages paid to each worker, and these records are open to the inspection of the OWNER.

EXHIBIT "A"

Wage Determination Publication Date:
January 7, 2022
for
General Decision Number: **TX20220038 01/07/2022 TX38**
Superseded General Decision Number: TX20210038

State: Texas
Construction Type: Highway
Counties: Austin, Brazoria, Chambers, Fort Bend, Galveston, Hardin, Harris, Jefferson, Liberty, Montgomery, Orange, San Jacinto and Waller Counties in Texas.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022, Executive Order 14026 generally applies to the contract. The contractor must pay all covered workers at least $15.00 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.

If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022, Executive Order 13658 generally applies to the contract. The contractor must pay all covered workers at least $11.25 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/07/2022

LABOR CLASSIFICATIONS AND PREVAILING WAGE RATES
CONSTRUCTION 2022

CLASSIFICATION	RATE	CLASSIFICATION	RATE
Cement Mason / Concrete Finisher- Paving and Structures	$12.98	Power Equipment Operator, Foundation Drill, Truck Mounted	$15.89
Electrician * 3 Journeyman to 2 Apprentices Allowed	$27.11	Power Equipment Operator, Front End Loader, 3 CY or less	$13.32
Form Builder / Form Setter- Paving and Curb	$12.34	Power Equipment Operator, Front End Loader, over 3 CY	$13.17
Form Builder / Form Setter- Structures	$12.23	Power Equipment Operator, Loader/Backhoe	$14.29
Laborer, Asphalt Raker	$12.36	Power Equipment Operator, Mechanic	$16.96
Laborer, Common	$11.02	Power Equipment Operator, Milling Machine	$13.53
Laborer, Flagger	$10.33	Power Equipment Operator, Motor Grader, Fine Grade	$15.69
Laborer, Pipelayer	$12.12	Power Equipment Operator, Motor Grader, Rough	$14.23
Laborer, Utility	$11.73	Power Equipment Operator, Off Road Hauler	$14.60
Laborer, Work Zone Barricade Servicer	$11.67	Power Equipment Operator, Pavement Marking Machine	$11.18
Painter (Structures)	$18.62	Power Equipment Operator, Piledriver	$14.95
Power Equipment Operator, Asphalt Distributor Operator	$14.06	Power Equipment Operator, Roller, Asphalt	$11.95
Power Equipment Operator, Asphalt Paving Machine	$14.32	Power Equipment Operator, Roller, Other	$11.57
Power Equipment Operator, Broom or Sweeper	$12.68	Power Equipment Operator, Scraper	$13.47
Power Equipment Operator, Concrete Paving Finishing Machine	$13.07	Servicer	$13.97
Power Equipment Operator, Concrete Paving, Curing, Float Texturing Machine	$11.71	Power Equipment Operator, Spreader Box	$13.58
Power Equipment Operator, Concrete Saw	$13.99	Steel Worker, Reinforcing Steel	$15.15
Power Equipment Operator, Crane, Hydraulic 80 tons or less	$13.86	Steel Worker, Structural Steel	$14.39
Power Equipment Operator, Crane, Lattice boom 80 tons or less	$14.97	Steel Worker, Structural Steel Welder	$12.85
Power Equipment Operator, Crane, Lattice boom over 80 tons	$15.80	Truck Driver, Low Boy Float	$16.03
Power Equipment Operator, Crawler Tractor	$13.68	Truck Driver, Single Axle	$11.46
Power Equipment Operator, Excavator, 50,000 pounds or less	$12.71	Truck Driver, Single-or Tandem Axle Dump	$11.48
Power Equipment Operator, Excavator, over 50,000 pounds	$14.53	Truck Driver, Tandem Axle Tractor w/ Semi-Trailer	$12.27
Power Equipment Operator, Foundation Drill, Crawler Mounted	$17.43		
Welders - Receive rate prescribed for craft performing operation to which welding is incidental			
* Apprentices- must be in an approved USDOL Program and cannot exceed ratios			

EXHIBIT "B"

CERTIFICATE FROM CONTRACTOR APPOINTING OFFICER OR EMPLOYEE TO SUPERVISE PAYMENT OF EMPLOYEES

Project Name _____

_____

Project WBS#: _____ Date _____

Email Address: _____

(I) (We) hereby certify that (I am) (we are) the Prime Contractor for _____

_____
(specify type of job)

in connection with construction of the above-mentioned Project, and that (I) (we) have appointed _____, whose signature appears below, to supervise the payment of (my) (our) employees beginning _____, 20___;that ___he/she is in a position to have full knowledge of the facts set forth in the payroll documents and in the statement of compliance required by the Copeland Act and Jefferson County, which he/she is to execute with (my) (our) full authority and approval until such time as (I) (we) submit to the Jefferson County a new certificate appointing some other person for the purposes hereinabove stated.

_____ Phone: _____
(Identifying Signature of Appointee)

Attest: _____
(Name of Firm or Corporation)

By: _____ By: _____
(Signature) (Signature)

_____ _____
(Title) (Title)

NOTE: This certificate must be executed by an authorized officer of a corporation or by a member of a partnership, and shall be executed prior to and be submitted with the first payroll. Should the appointee be changed, a new certificate must accompany the first payroll for which the new appointee executes a statement of compliance required by the Copeland Act and Jefferson County.

EXHIBIT "C"

CERTIFICATE FROM SUBCONTRACTOR APPOINTING OFFICER OR EMPLOYEE TO SUPERVISE PAYMENT OF EMPLOYEES

Project Name _____

_____

Project WBS#: _____ Date _____

Email Address: _____

(I) (We) hereby certify that (I am) (we are) the Sub Contractor for _____

_____
(specify type of job)

in connection with construction of the above-mentioned Project, and that (I) (we) have appointed _____, whose signature appears below, to supervise the payment of (my) (our) employees beginning ____, 20__; _____ that ___he/she is in a position to have full knowledge of the facts set forth in the payroll documents and in the statement of compliance required by the Copeland Act and Jefferson County, which he/she is to execute with (my) (our) full authority and approval until such time as (I) (we) submit to Jefferson County a new certificate appointing some other person for the purposes herein above stated.

_____ Phone: _____
(Identifying Signature of Appointee)

Attest: _____
(Name of Firm or Corporation)

By: _____ By: _____
(Signature) (Signature)

_____ _____
(Title) (Title)

NOTE: This certificate must be executed by an authorized officer of a corporation or by a member of a partnership, and shall be executed prior to and be submitted with the first payroll. Should the appointee be changed, a new certificate must accompany the first payroll for which the new appointee executes a statement of compliance required by the Copeland Act and Jefferson County.

END OF DOCUMENT

TECHNICAL SPECIFICATIONS

REHABILITATION OF FUEL FARM PAVEMENT
JACKBROOKS REGIONAL AIRPORT (BPT)
ISB 22-028/JW

May 2022

ITEM SS-101 SAFETY PLAN COMPLIANCE DOCUMENT (SPCD)

DESCRIPTION

101-1.1 The Contractor shall thoroughly review the approved and shall comply with bid plans and specifications. The Contractor shall certify such compliance by completing the attached SPCD and submitting to the Engineer for approval.

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CONTRACTOR SAFETY PLAN COMPLIANCE DOCUMENTS

Owner Name: Jefferson County

Airport: Jack Brooks Regional Airport

Project Description: Fuel Farm Pavement Reconstruction

Contractor: RAMTEX Industrial LLC

Each item listed below corresponds to a specific section of the plans. The Contractor shall certify that he/she will comply with each section of the plans. Each section with a "no" response must be fully explained in an attachment to the CSPCD. The document shall be signed and dated by a manager, principal or owner of the Contractor's company. All other requested information shall be completed by the Contractor and submitted to the Engineer for approval.

1. **Section 1 – Correspondence:** This project shall be completed in accordance with the plans.

Owner: Alex Rupp, Airport Manager	Phone: 409.719.4900
Engineer: The Solco Group LLC	
Kelvin Solco, PE	Phone: 817.564.6895
Contractor:	

2. **Section 2 - Phasing:** This project shall be completed in accordance with the plans.

   Yes__X__ No_____ N/A_____

3. **Section 3 - Areas of Operations affected by Construction Activity:** This project shall be completed in accordance with the plans.

   Yes__X__ No_____ N/A_____

4. **Section 4 - Protection of Navigational Aids (NAVAIDs):** This project shall be completed in accordance with the plans.

   Yes__X__ No_____ N/A__X__

5. **Section 5 - Contractor Access:** This project shall be completed in accordance with the plans.

Yes X No_____ N/A_____

6. **Section 6 – Wildlife Management:** This project shall be completed in accordance with the plans.

Yes X No_____ N/A X

7. **Section 7 – Foreign Object Debris (FOD) Management:** This project shall be completed in accordance with the plans.

Yes X No_____ N/A_____

8. **Section 8 – Hazardous Materials (HAZMAT) Management:** This project shall be completed in accordance with the plans.

Yes X No_____ N/A X

9. **Section 9 – Notification of Construction Activities:** This project shall be completed in accordance with the plans.

Yes X No_____ N/A_____

10. **Section 10 - Inspection Requirements:** This project shall be completed in accordance with the plans.

Yes X No_____ N/A_____

11. **Section 11 – Underground Utilities:** This project shall be completed in accordance with the plans.

Yes X No_____ N/A_____

12. **Section 12 – Penalties:** This project shall be completed in accordance with the plans and specifications.

Yes X No_____ N/A_____

13. **Section 13 – Special Conditions:** This project shall be completed in accordance with the plans and specifications.

Yes X No_____ N/A_____

14. **Section 14 – Runway and Taxiway Visual Aids:** This project shall be completed in accordance with the plans.

Yes X No_____ N/A X

15. **Section 15 - Marking and Signs for Access Routes:** This project shall be completed in accordance with the plans.

Yes X No_____ N/A_____

16. **Section 16 – Hazard Marking and Lighting:** This project shall be completed in accordance with the plans.

Yes X No N/A X

17. **Section 17 - Work Zone Lighting for Nighttime Construction:** This project shall be completed in accordance with the plans.

Yes X No N/A

18. **Section 18 – Protection of Safety Areas, Object Free Areas, Object Free Zones, and Approach/Departure Surfaces:** This project shall be completed in accordance with the plans.

Yes X No N/A X

For the project identified herein, I certify that the responses to the foregoing items are correct as marked and meet the compliance of the plans.

Signed: _____
Contractor's Authorized Representative

Date: 8/23/22

Jordan Robbins / Manager
Print Name and Title of Contractor's Representative

END OF ITEM SS-101

ITEM C-105
MOBILIZATION

DESCRIPTION

105-1 Description. This item of work shall consist of, but is not limited to, work and operations necessary for the movement of personnel, equipment, material and supplies to and from the project site for work on the project except as provided in the contract as separate pay items.

105-2 Mobilization limit. Mobilization shall be limited to **5** percent of the total project cost.

105-3 Posted notices. Prior to commencement of construction activities, the Contractor must post the following documents in a prominent and accessible place where they may be easily viewed by all employees of the prime Contractor and by all employees of subcontractors engaged by the prime Contractor: Equal Employment Opportunity (EEO) Poster "Equal Employment Opportunity is the Law" in accordance with the Office of Federal Contract Compliance Programs Executive Order 11246, as amended; Davis Bacon Wage Poster (WH 1321) - DOL "Notice to All Employees" Poster; and Applicable Davis-Bacon Wage Rate Determination. These notices must remain posted until final acceptance of the work by the Owner.

~~**105-4 Engineer/RPR field office.** The Contractor shall provide dedicated space for the use of the field RPR and inspectors, as a field office for the duration of the project. This space shall be located conveniently near the construction and shall be separate from any space used by the Contractor. The Contractor shall furnish water, sanitary facilities, heat, air conditioning, and electricity in accordance with local building codes. An Engineer/RPR field office is not required.~~

METHOD OF MEASUREMENT

105-5 Basis of measurement and payment. Based upon the contract lump sum price for "Mobilization" partial payments will be allowed as follows:

a. With first pay request, 50%.

b. When 50% or more of the original contract is earned, an additional 40%.

~~**c.** When ---% or more of the original contract is earned, an additional ---%.~~

d. After Final Inspection, staging area clean-up and delivery of all Project Closeout materials as required by Section 90, paragraph 90-11, *Contractor Final Project Documentation,* the final 10%.

BASIS OF PAYMENT

105-6 Payment will be made under:

Item C-105 -6.1	Mobilization (Maximum 5% of Total Bid Exclusive Mobilization -	per Lump Sum

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Office of Federal Contract Compliance Programs (OFCCP)

Executive Order 11246, as amended

EEOC-P/E-1 – Equal Employment Opportunity is the Law Poster

United States Department of Labor, Wage and Hour Division (WHD)

WH 1321 – Employee Rights under the Davis-Bacon Act Poster

END OF ITEM C-105

ITEM SS-120
CONSTRUCTION SAFETY AND SECURITY

DESCRIPTION

120-1.1 This item covers safety and security for construction of the proposed improvements.

The attention to the bidder is directed to the necessity for careful examination of the entire project site to determine, at the time of bid preparation, the full extent of work to be done under the item "Construction Safety and Security."

The items in the "Construction Safety and Security shall include:

1. Temporary Signs and Barricades
2. Airport Security/Safety Requirements

CONSTRUCTION METHODS

120-2.1 Temporary Signs and Barricades

The contractor shall furnish, install, maintain, and remove barricades and temporary signs in accordance with AC 150/5370-2 Operational Safety on Airports During Construction and details on the plans and as directed by the Engineer.

All work involved in the furnishing, installation, maintenance, fueling and removal of barricades and temporary signs will not be measured for separate payment but will be considered subsidiary to the bid item "Construction Safety and Security."

120-2.2 Airport Security and Safety Requirements

The Contractor shall abide by the Airport Security and Safety requirements that are outlined in the approved CSPP. Any costs associated with Airport Security requirements will not be measured by separate payment but will be considered subsidiary to the bid item "Construction Safety and Security."

MEASUREMENT AND PAYMENT

120-3.1 Construction security and safety will be measured as a lump sum complete item. Work completed and accepted under this item will be paid as a lump sum price bid for "Construction Safety and Security," which include full compensation for furnishing all labor, tools and equipment and incidentals necessary to do complete the work. Payment will be made under:

Item SS -120-3.1	Construction Safety and Security, Barricades, Signs, and Traffic Handling – per Lump Sum

END OF ITEM SS-120

ITEM D-701
PIPE FOR STORM DRAINS AND CULVERTS

DESCRIPTION

701-1.1 This item shall consist of the construction of pipe culverts and storm drains in accordance with these specifications and in close conformity with the lines and grades shown on the plans.

MATERIALS

701-2.1 Materials shall meet the requirements shown on the plans and specified below. Underground piping and components used in drainage systems for terminal and aircraft fueling ramp drainage shall be noncombustible and inert to fuel in accordance with National Fire Protection Association (NFPA) 415.

701-2.2 Pipe. The pipe shall be of the type called for on the plans or in the proposal and shall be in accordance with the following appropriate requirements:

	American Association of State Highway and Transportation Officials (AASHTO) M167 Standard Specification for Corrugated Steel Structural Plate, Zinc-Coated, for Field-Bolted Pipe, Pipe-Arches, and Arches
AASHTO M190	Standard Specification for Bituminous-Coated Corrugated Metal Culvert Pipe and Pipe Arches
AASHTO M196	Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains
AASHTO M219	Standard Specification for Corrugated Aluminum Alloy Structural Plate for Field-Bolted Pipe, Pipe-Arches, and Arches
AASHTO M243	Standard Specification for Field-Applied Coating of Corrugated Metal Structural Plate for Pipe, Pipe-Arches, and Arches
AASHTO M252	Standard Specification for Corrugated Polyethylene Drainage Pipe
AASHTO M294	Standard Specification for Corrugated Polyethylene Pipe, 300- to 1500-mm (12- to 60-in.) Diameter
AASHTO M304	Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Wall Drainpipe and Fittings Based on Controlled Inside Diameter
AASHTO MP20	Standard Specification for Steel Reinforced Polyethylene (PE) Ribbed Pipe, 300- to 900-mm (12- to 36-in.) Diameter
AASHTO R73	Standard Practice for Evaluation of Precast Concrete Drainage Productions
ASTM A760	Standard Specification for Corrugated Steel Pipe, Metallic Coated for Sewers and Drains
ASTM A761	Standard Specification for Corrugated Structural Steel Plate, Zinc-Coated, for Field-Bolted Pipe, Pipe-Arches, and Arches
ASTM A762	Standard Specification for Corrugated Steel Pipe, Polymer Precoated for Sewers and Drains

ASTM A849	Standard Specification for Post Applied Coatings, Pavings, and Linings for Corrugated Steel Sewer and Drainage Pipe
ASTM B745	Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains
ASTM C14	Standard Specification for Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe
ASTM C76	Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
ASTM C506	Standard Specification for Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe
ASTM C507	Standard Specification for Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe
ASTM C655	Standard Specification for Reinforced Concrete D-Load Culvert, Storm Drain, and Sewer Pipe
ASTM C1433	Standard Specification for Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers
ASTM C1479	Standard Practice for Installation of Precast Concrete Sewer, Storm Drain, and Culvert Pipe Using Standard Installations
ASTM C1577	Standard Specification for Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers Designed According to AASHTO LRFD
ASTM C1786	Standard Specification for Segmental Precast Reinforced Concrete Box Sections for Culverts, Storm Drains, and Sewers Designed According to AASHTO LRFD
ASTM C1840	Standard Practice for Inspection and Acceptance of Installed Reinforced Concrete Culvert, Storm Drain, and Storm Sewer Pipe
ASTM D3262	Standard Specification for "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Sewer Pipe
ASTM D4161	Standard Specification for "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe Joints Using Flexible Elastomeric Seals
ASTM F667	Standard Specification for 3 through 24 in Corrugated Polyethylene Pipe and Fittings
ASTM F714	Standard Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Outside Diameter
ASTM F794	Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Gravity Sewer Pipe and Fittings Based on Controlled Inside Diameter
ASTM F894	Standard Specification for Polyethylene (PE) Large Diameter Profile Wall Sewer and Drainpipe
ASTM F949	Standard Specification for Poly (Vinyl Chloride) (PVC) Corrugated Sewer Pipe with a Smooth Interior and Fittings

ASTM F2435	Standard Specification for Steel Reinforced Polyethylene (PE) Corrugated Pipe
ASTM F2562	Specification for Steel Reinforced Thermoplastic Ribbed Pipe and Fittings for Non-Pressure Drainage and Sewerage
ASTM F2736	Standard Specification for 6 to 30 in. (152 to 762 mm) Polypropylene (PP) Corrugated Single Wall Pipe and Double Wall Pipe
ASTM F2764	Standard Specification for 30 to 60 in. (750 to 1500 mm) Polypropylene (PP) Triple Wall Pipe and Fittings for Non-Pressure Sanitary Sewer Applications
ASTM F2881	Standard Specification for 12 to 60 in. (300 to 1500 mm) Polypropylene (PP) Dual Wall Pipe and Fittings for Non-Pressure Storm Sewer Applications
ASTM D3034	Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings

701-2.3 Concrete. Concrete for pipe cradles shall have a minimum compressive strength of 2000 psi (13.8 MPa) at 28 days and conform to the requirements of ASTM C94.

701-2.4 Rubber gaskets. Rubber gaskets for rigid pipe shall conform to the requirements of ASTM C443. Rubber gaskets for PVC pipe, polyethylene, and polypropylene pipe shall conform to the requirements of ASTM F477. Rubber gaskets for zinc-coated steel pipe and precoated galvanized pipe shall conform to the requirements of ASTM D1056, for the "RE" closed cell grades. Rubber gaskets for steel reinforced thermoplastic ribbed pipe shall conform to the requirements of ASTM F477. Not used.

701-2.5 Joint mortar. Pipe joint mortar shall consist of one part Portland cement and two parts sand. The Portland cement shall conform to the requirements of ASTM C150, Type I. The sand shall conform to the requirements of ASTM C144.

701-2.6 Joint fillers. Poured filler for joints shall conform to the requirements of ASTM D6690.

701-2.7 Plastic gaskets. Plastic gaskets shall conform to the requirements of ASTM C990. Not used.

701-2.8. Controlled low-strength material (CLSM). Controlled low-strength material shall conform to the requirements of Item P-153. When CLSM is used, all joints shall have gaskets. Not used.

701-2.9 Precast box culverts. Manufactured in accordance with and conforming to ASTM C1433.

701-2.10 Precast concrete pipe. Precast concrete structures shall be furnished by a plant meeting National Precast Concrete Association Plant Certification Program or American Concrete Pipe Association QCast Plant Certification program.

CONSTRUCTION METHODS

701-3.1 Excavation. The width of the pipe trench shall be sufficient to permit satisfactory jointing of the pipe and thorough tamping of the bedding material under and around the pipe, but it shall not be less than the external diameter of the pipe plus 12 inches (300 mm) on each side. The trench walls shall be vertical.

The Contractor shall comply with all current federal, state, and local rules and regulations governing the safety of men and materials during the excavation, installation, and backfilling operations. Specifically, the Contractor shall observe that all requirements of the Occupational Safety and Health Administration (OSHA) relating to excavations, trenching, and shoring are strictly adhered to. The width of the trench shall be sufficient to permit satisfactorily jointing of the pipe and thorough compaction of the bedding material under the pipe and backfill material around the pipe, but it shall not be greater than the widths shown on the plans trench detail.

Where rock, hardpan, or other unyielding material is encountered, the Contractor shall remove it from below the foundation grade for a depth of at least 8 inch (200 mm) or 1/2 inch (12 mm) for each foot of fill over the top of the pipe (whichever is greater) but for no more than three-quarters of the nominal diameter of the pipe. The excavation below grade should be filled with granular material to form a uniform foundation.

Where a firm foundation is not encountered at the grade established, due to soft, spongy, or other unstable soil, the unstable soil shall be removed and replaced with approved granular material for the full trench width. The RPR shall determine the depth of removal necessary. The granular material shall be compacted to provide adequate support for the pipe.

The excavation for pipes placed in embankment fill shall not be made until the embankment has been completed to a height above the top of the pipe as shown on the plans.

701-3.2 Bedding. The bedding surface for the pipe shall provide a foundation of uniform density to support the pipe throughout its entire length.

a. Rigid pipe. The pipe bedding shall be constructed uniformly for the full length of the pipe barrel, as required on the plans. The maximum aggregate size shall be 1 in when the bedding thickness is less than 6 inches, and 1-1/2 in when the bedding thickness is greater than 6 inches. Bedding shall be loosely placed uncompacted material under the middle third of the pipe prior to placement of the pipe.

b. Flexible pipe. For flexible pipe, the bed shall be shaped to fit the pipe, and a bedding blanket of sand or fine granular material shall be provided as follows:

Flexible Pipe Bedding

Pipe Corrugation Depth		Minimum Bedding Depth	
inch	mm	inch	mm
1/2	12	1	25
1	25	2	50
2	50	3	75
2-1/2	60	3-1/2	90

c. other pipe materials. For PVC, polyethylene, polypropylene, or fiberglass pipe, the bedding material shall consist of coarse sands and gravels with a maximum particle size of

3/4 inches (19 mm). For pipes installed under paved areas, no more than 12% of the material shall pass the No. 200 (0.075 mm) sieve. For all other areas, no more than 50% of the material shall pass the No. 200 (0.075 mm) sieve. The bedding shall have a thickness of at least 6 inches (150 mm) below the bottom of the pipe and extend up around the pipe for a depth of not less than 50% of the pipe's vertical outside diameter.

701-3.3 Laying pipe. The pipe laying shall begin at the lowest point of the trench and proceed upgrade. The lower segment of the pipe shall be in contact with the bedding throughout its full length. Bell or groove ends of rigid pipes and outside circumferential laps of flexible pipes shall be placed facing upgrade.

Paved or partially lined pipe shall be placed so that the longitudinal center line of the paved segment coincides with the flow line.

Elliptical and elliptically reinforced concrete pipes shall be placed with the manufacturer's reference lines designating the top of the pipe within five degrees of a vertical plane through the longitudinal axis of the pipe.

701-3.4 Joining pipe. Joints shall be made with (1) cement mortar, (2) cement grout, (3) rubber gaskets, (4) plastic gaskets, (5) coupling bands or (6).

Mortar joints shall be made with an excess of mortar to form a continuous bead around the outside of the pipe and shall be finished smooth on the inside. Molds or runners shall be used for grouted joints to retain the poured grout. Rubber ring gaskets shall be installed to form a flexible watertight seal.

a. Concrete pipe. Concrete pipe may be either bell and spigot or tongue and groove. Pipe sections at joints shall be fully seated and the inner surfaces flush and even. Concrete pipe joints shall be sealed with rubber gaskets meeting ASTM C443 when leak resistant joints are required or Concrete pipe joints shall be sealed with butyl mastic meeting ASTM C990 or mortar when soil tight joints are required. Joints shall be thoroughly wetted before applying mortar or grout.

b. Metal pipe. Metal pipe shall be firmly joined by form-fitting bands conforming to the requirements of ASTM A760 for steel pipe and AASHTO M196 for aluminum pipe.

c. PVC, Polyethylene, or Polypropylene pipe. Joints for PVC, Polyethylene, or Polypropylene pipe shall conform to the requirements of ASTM D3212 when leak resistant joints are required. Joints for PVC and Polyethylene pipe shall conform to the requirements of AASHTO M304 when soil tight joints are required. Fittings for polyethylene pipe shall conform to the requirements of AASHTO M252 or ASTM M294. Fittings for polypropylene pipe shall conform to ASTM F2881, ASTM F2736, or ASTM F2764.

d. Fiberglass pipe. Joints and fittings shall be as detailed on the plans and in accordance with the manufacturer's recommendations. Joints shall meet the requirements of ASTM D4161 for flexible elastomeric seals. **or** Enter manufacturers joint installation requirements.

701-3.5 Embedment and Overfill. Pipes shall be inspected before any fill material is placed; any pipes found to be out of alignment, unduly settled, or damaged shall be removed and re-laid or replaced at the Contractor's expense.

701-3.5-1 Embedment Material Requirements

a. Concrete Pipe. Embedment material and compaction requirements shall be in accordance with the applicable Type of Standard Installation (Types 1, 2, 3, or 4) per ASTM C1479. If a concrete cradle or CLSM embedment material is used, it shall conform to the plan details.

b. Plastic and fiberglass Pipe. Embedment material shall meet the requirements of ASTM D3282, A-1, A-2-4, A-2-5, or A-3. Embedment material shall be free of organic material, stones

larger than 1.5 inches in the greatest dimension, or frozen lumps. Embedment material shall extend to 12 inches above the top of the pipe.

c. **Metal Pipe.** Embedment material shall be granular as specified in the contract document and specifications, and shall be free of organic material, rock fragments larger than 1.5 inches in the greatest dimension and frozen lumps. As a minimum, backfill materials shall meet the requirements of ASTM D3282, A-1, A-2, or A-3. Embedment material shall extend to 12 inches above the top of the pipe.

701-3.5-2 Placement of Embedment Material

The embedment material shall be compacted in layers not exceeding 6 inches (150 mm) on each side of the pipe and shall be brought up one foot (30 cm) above the top of the pipe or to natural ground level, whichever is greater. Thoroughly compact the embedment material under the haunches of the pipe without displacing the pipe. Material shall be brought up evenly on each side of the pipe for the full length of the pipe.

When the top of the pipe is above the top of the trench, the embedment material shall be compacted in layers not exceeding 6 inches (150 mm) and shall be brought up evenly on each side of the pipe to one foot (30 cm) above the top of the pipe. All embedment material shall be compacted to a density required under Item P-152.

Concrete cradles and flowable fills, such as controlled low strength material (CLSM) or controlled density fill (CDF), may be used for embedment provided adequate flotation resistance can be achieved by restraints, weighing, or placement technique.

It shall be the Contractor's responsibility to protect installed pipes and culverts from damage due to construction equipment operations. The Contractor shall be responsible for installation of any extra strutting or backfill required to protect pipes from the construction equipment.

701-3.6 Overfill

Pipes shall be inspected before any overfill is in place. Any pipes found to be out of alignment, unduly settled, or damaged shall be removed and re-laid or replaced at the Contractor's expense. Evaluation of any damage to RCP shall be evaluated based on AASHTO R73.

Overfill material shall be place and compacted in layers as required to achieve compaction to at least 95 percent standard proctor per ASTM D698 . The soil shall contain no debris, organic matter, frozen material, or stones with a diameter greater than one half the thickness of the compacted layers being placed.

701-3.7 Inspection Requirements

An initial post installation inspection shall be performed by the RPR no sooner than 30 days after completion of installation and final backfill. Clean or flush all lines prior to inspection.

Use a camera with lighting suitable to allow a clear picture of the entire periphery of the pipe interior. Center the camera in the pipe both vertically and horizontally and be able to pan and tilt to a 90-degree angle with the axis of the pipe rotating 360 degrees. Use equipment to move the camera through the pipe that will not obstruct the camera's view or interfere with proper documentation of the pipe's condition. The video image shall be clear, focused, and relatively free from roll, static, or other image distortion qualities that would prevent the reviewer from evaluating the condition of the pipe.

For pipe sizes larger than 48 inches, a walk-through visual inspection shall be performed.

Incorporate specific inspection requirements for the various types of pipes beneath the general inspection requirements.

Reinforced concrete pipe shall be inspected, evaluated, and reported on in accordance with ASTM C1840, "Standard Practice for Inspection and Acceptance of Installed Reinforced Concrete Culvert, Storm Drain, and Storm Sewer Pipe." Any issues reported shall include still photo and video documentation. The zoom ratio shall be provided for all still or video images that document any issues of concern by the inspection firm.

Flexible pipes shall be inspected for rips, tears, joint separations, soil migration, cracks, localized buckling, settlement, alignment, and deflection. Determine whether the allowable deflection has been exceeded by use of a laser profiler for internal pipe diameters of 48 inches or less, or direct measurement for internal pipe diameters greater than 48 inches. Laser profile equipment shall utilize low barrel distortion video equipment. Deflection of installed pipe shall not exceed the limits provided in the table below, as a percentage of the average inside diameter of the pipe.

Maximum Allowable Pipe Deflection

Type of Pipe	**Maximum Allowable Deflection (%)**
Corrugated Metal Pipe	5
Concrete Lined CMP	3
Thermoplastic Pipe	5
Fiberglass	5

If deflection readings in excess of the allowable deflection are obtained, remove the pipe with excessive deflection and replace with new pipe. Isolated areas may exceed allowable by 2.5% with concurrence of RPR. Repair or replace any pipe with cracks exhibiting displacement across the crack, bulges, creases, tears, spalls, or delamination. The report for flexible pipe shall include as a minimum, the deflection results and final post installation inspection report. The inspection report shall include: a copy of all videos taken, pipe location identification, equipment used for inspection, inspector name, deviation from design line and grade, and inspector's notes.

METHOD OF MEASUREMENT

701-4.1 The length of pipe shall be measured in linear feet (m) of pipe in place, completed, and accepted. It shall be measured along the centerline of the pipe from end or inside face of structure to the end or inside face of structure, whichever is applicable. Identify each class, types and size of pipe shall be measured separately. All fittings shall be included in the footage as typical pipe sections in the pipe being measured.

701-4.2. Precast box culverts shall be measured by individual unit and size.

701-4.3 The volume of concrete for pipe cradles shall be the number of cubic yards (cubic meters) of concrete that is completed in place and accepted.

701-4.4 The volume of rock, hardpan, or other unyielding material shall be the number of cubic yards (cubic meters) excavated. No payment shall be made for the cushion material placed for the bed of the pipe.

BASIS OF PAYMENT

701-5.0 These prices shall fully compensate the Contractor for furnishing all materials and for all preparation, excavation, and installation of these materials; and for all labor, equipment, tools, and incidentals necessary to complete the item.

701-5.1 Payment will be made at the contract unit price per linear foot (meter) for identify each class and size of pipe .

701-5.2 Payment will be made at the contract unit price per unit for identify each class and size of precast box culvert.

701-5.3 Payment will be made at the contract unit price per cubic yard (cubic meter) of concrete for pipe cradles.

701-5.4 Payment will be made at the contract unit price per cubic yard (cubic meter) for rock, hardpan, or other unyielding material excavation.

Payment will be made under:

Item 701-5.1	[~~inch~~ **TBD** per linear foot (meter)
Item 701-5.2	Precast box culvert per unit.
Item 701-5.3	Concrete for pipe cradles - per cubic yard (cubic meter)
Item 701-5.4	Rock, hardpan, or other unyielding material excavation - per cubic yard (cubic meter

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

American Association of State Highway and Transportation Officials (AASHTO)

AASHTO M167	Standard Specification for Corrugated Steel Structural Plate, Zinc-Coated, for Field-Bolted Pipe, Pipe-Arches, and Arches
AASHTO M190	Standard Specification for Bituminous-Coated Corrugated Metal Culvert Pipe and Pipe Arches
AASHTO M196	Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains
AASHTO M219	Standard Specification for Corrugated Aluminum Alloy Structural Plate for Field-Bolted Pipe, Pipe-Arches, and Arches
AASHTO M243	Standard Specification for Field Applied Coating of Corrugated Metal Structural Plate for Pipe, Pipe-Arches, and Arches
AASHTO M252	Standard Specification for Corrugated Polyethylene Drainage Pipe
AASHTO M294	Standard Specification for Corrugated Polyethylene Pipe, 300- to 1500-mm (12- to 60-in.) Diameter
AASHTO M304	Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Wall Drainpipe and Fittings Based on Controlled Inside Diameter
AASHTO MP20	Standard Specification for Steel Reinforced Polyethylene (PE) Ribbed Pipe, 300- to 900-mm (12- to 36-in.) Diameter

ASTM International (ASTM)

ASTM A760	Standard Specification for Corrugated Steel Pipe, Metallic Coated for Sewers and Drains
ASTM A761	Standard Specification for Corrugated Steel Structural Plate, Zinc Coated, for Field-Bolted Pipe, Pipe-Arches, and Arches
ASTM A762	Standard Specification for Corrugated Steel Pipe, Polymer Precoated for Sewers and Drains
ASTM A849	Standard Specification for Post-Applied Coatings, Pavings, and Linings for Corrugated Steel Sewer and Drainage Pipe
ASTM B745	Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains
ASTM C14	Standard Specification for Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe
ASTM C76	Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
ASTM C94	Standard Specification for Ready Mixed Concrete
ASTM C144	Standard Specification for Aggregate for Masonry Mortar
ASTM C150	Standard Specification for Portland Cement
ASTM C443	Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets
ASTM C506	Standard Specification for Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe
ASTM C507	Standard Specification for Reinforced Concrete Elliptical Culvert, Storm Drain and Sewer Pipe
ASTM C655	Standard Specification for Reinforced Concrete D-Load Culvert, Storm Drain and Sewer Pipe
ASTM C990	Standard Specification for Joints for Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants
ASTM C1433	Standard Specification for Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers
ASTM D1056	Standard Specification for Flexible Cellular Materials Sponge or Expanded Rubber
ASTM D3034	Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings
ASTM D3212	Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals
ASTM D3262	Standard Specification for "Fiberglass" (Glass-Fiber Reinforced Thermosetting Resin) Sewer Pipe
ASTM D3282	Standard Practice for Classification of Soils and Soil-Aggregate Mixtures for Highway Construction Purposes

ASTM D4161	Standard Specification for "Fiberglass" (Glass-Fiber Reinforced Thermosetting Resin) Pipe Joints Using Flexible Elastomeric Seals
ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements
ASTM F477	Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe
ASTM F667	Standard Specification for 3 through 24 in. Corrugated Polyethylene Pipe and Fittings
ASTM F714	Standard Specification for Polyethylene (PE) Plastic Pipe (DR PR) Based on Outside Diameter
ASTM F794	Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Gravity Sewer Pipe & Fittings Based on Controlled Inside Diameter
ASTM F894	Standard Specification for Polyethylene (PE) Large Diameter Profile Wall Sewer and Drainpipe
ASTM F949	Standard Specification for Poly (Vinyl Chloride) (PVC) Corrugated Sewer Pipe with a Smooth Interior and Fittings
ASTM F2435	Standard Specification for Steel Reinforced Polyethylene (PE) Corrugated Pipe
ASTM F2562	Specification for Steel Reinforced Thermoplastic Ribbed Pipe and Fittings for Non-Pressure Drainage and Sewerage
ASTM F2736	Standard Specification for 6 to 30 in. (152 to 762 mm) Polypropylene (PP) Corrugated Single Wall Pipe and Double Wall Pipe
ASTM F2764	Standard Specification for 30 to 60 in. (750 to 1500 mm) Polypropylene (PP) Triple Wall Pipe and Fittings for Non-Pressure Sanitary Sewer Applications
ASTM F2881	Standard Specification for 12 to 60 in. (300 to 1500 mm) Polypropylene (PP) Dual Wall Pipe and Fittings for Non-Pressure Storm Sewer Applications

National Fire Protection Association (NFPA)

NFPA 415	Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways

END ITEM D-701

ITEM P-101
PREPARATION/REMOVAL OF EXISTING PAVEMENTS

DESCRIPTION

101-1 This item shall consist of preparation of existing pavement surfaces for overlay, surface treatments, removal of existing pavement, and other miscellaneous items. The work shall be accomplished in accordance with these specifications and the applicable plans.

EQUIPMENT AND MATERIALS

101-2 All equipment and materials shall be specified here and in the following paragraphs or approved by the Resident Project Representative (RPR). The equipment shall not cause damage to the pavement to remain in place.

CONSTRUCTION

101-3.1 Removal of existing pavement.

The Contractor's removal operation shall be controlled to not damage adjacent pavement structure, and base material, cables, utility ducts, pipelines, or drainage structures which are to remain under the pavement.

a. Concrete pavement removal. Full depth saw cuts shall be made perpendicular to the slab surface. The Contractor shall saw through the full depth of the slab including any dowels at the joint, removing the pavement and installing new dowels as shown on the plans and per the specifications. Where the perimeter of the removal limits is not located on the joint and there are no dowels present, the perimeter shall be saw cut the full depth of the pavement. The pavement inside the saw cut shall be removed by methods which will not cause distress in the pavement which is to remain in place. If the material is to be wasted on the airport site, it shall be reduced to a maximum size of 2 inches. Concrete slabs that are damaged by under breaking shall be repaired or removed and replaced as directed by the RPR.

The edge of existing concrete pavement against which new pavement abuts shall be protected from damage at all times. Spall and underbreak repair shall be in accordance with the plans. Any underlaying material that is to remain in place, shall be recompacted and/or replaced as shown on the plans. Adjacent areas damaged during repair shall be repaired or replaced at the Contractor's expense.

b. Asphalt pavement removal. Asphalt pavement to be removed shall be cut to the full depth of the asphalt pavement around the perimeter of the area to be removed. If the material is to be wasted on the airport site , it shall be broken to a maximum size of **2** inches (mm.

c. Repair or removal of Base, Subbase, and/or Subgrade. All failed material including surface, base course, subbase course, and subgrade shall be removed and repaired as shown on the plans or as directed by the RPR. Materials and methods of construction shall comply with the applicable sections of these specifications. Any damage caused by Contractor's removal process shall be repaired at the Contractor's expense.

~~**101-3.2 Preparation of joints and cracks prior to overlay/surface treatment.** Remove all vegetation and debris from cracks to a minimum depth of 1 inch (25 mm). If extensive vegetation exists, treat the specific area with a concentrated solution of a water-based herbicide approved~~

by the RPR. Fill all cracks greater than 1/4 inch (6 mm) wide) with a crack sealant per ASTM D6690. The crack sealant, preparation, and application shall be compatible with the surface treatment/overlay to be used. To minimize contamination of the asphalt with the crack sealant, underfill the crack sealant a minimum of 1/8 inch (3 mm), not to exceed ¼ inch (6 mm). Any excess joint or crack sealer shall be removed from the pavement surface.

101-3.3 Removal of Foreign Substances/contaminates prior to [overlay] [seal coat] [remarking]. Removal of foreign substances/contaminates from existing pavement that will affect the bond of the new treatment shall consist of removal of rubber, fuel spills, oil, crack sealer, at least 90% of paint, and other foreign substances from the surface of the pavement. Areas that require removal are designated on the plans and as directed by the RPR in the field during construction.

[Chemicals **] [** high pressure water **] [** heater scarifier (asphaltic concrete only) **] [** cold milling **] [** rotary grinding **] [** sandblasting **]** may be used. If chemicals are used, they shall comply with the state's environmental protection regulations. Removal methods used shall not cause major damage to the pavement, or to any structure or utility within or adjacent to the work area. Major damage is defined as changing the properties of the pavement, removal of asphalt causing the aggregate to ravel, or removing pavement over 1/8 inch (3 mm) deep. If it is deemed by the RPR that damage to the existing pavement is caused by operational error, such as permitting the application method to dwell in one location for too long, the Contractor shall repair the damaged area without compensation and as directed by the RPR.

Removal of foreign substances shall not proceed until approved by the RPR. Water used for high-pressure water equipment shall be provided by the Contractor at the Contractor's expense. No material shall be deposited on the pavement shoulders. All wastes shall be disposed of in areas indicated in this specification or shown on the plans.101-3.4 Concrete spall or failed asphaltic concrete pavement repair.

a. Repair of concrete spalls in areas to be overlaid with asphalt. The Contractor shall repair all spalled concrete as shown on the plans or as directed by the RPR. The perimeter of the repair shall be saw cut a minimum of 2 inches (50 mm) outside the affected area and 2 inches (50 mm) deep. The deteriorated material shall be removed to a depth where the existing material is firm or cannot be easily removed with a geologist pick. The removed area shall be filled with asphalt mixture with aggregate sized appropriately for the depth of the patch. The material shall be compacted with equipment approved by the RPR until the material is dense and no movement or marks are visible. The material shall not be placed in lifts over 4 inches (100 mm) in depth. This method of repair applies only to pavement to be overlaid.

b. Asphalt pavement repair. The Contractor shall repair all spalled concrete as shown on the plans or as directed by the RPR. The failed areas shall be removed as specified in paragraph 101-3.1b. All failed material including surface, base course, subbase course, and subgrade shall be removed. Materials and methods of construction shall comply with the applicable sections of these specifications.

101-3.5 Cold milling. Milling shall be performed with a power operated milling machine or grinder, capable of producing a uniform finished surface. The milling machine or grinder shall operate without tearing or gouging the underlaying surface. The milling machine or grinder shall be equipped with grade and slope controls, and a positive means of dust control. All millings shall be removed and disposed **[** off Airport property **] [** in areas designated on the plans **]**. If the Contractor mills or grinds deeper or wider than the plans specify, the Contractor shall replace the material removed with new material at the Contractor's Expense.

a. Patching. The milling machine shall be capable of cutting a vertical edge without chipping or spalling the edges of the remaining pavement and it shall have a positive method of controlling the depth of cut. The RPR shall layout the area to be milled with a straightedge in increments of 1-foot (30 cm) widths. The area to be milled shall cover only the failed area. Any excessive area that is milled because the Contractor does not have the appropriate milling machine, or areas that are damaged because of his negligence, shall be repaired by the Contractor at the Contractor's Expense.

b. Profiling, grade correction, or surface correction. The milling machine shall have a minimum width of **[** 7 **]** feet (**[** 2 **]** m) and it shall be equipped with electronic grade control devices that will cut the surface to the grade specified. The tolerances shall be maintained within +0 inch and -1/4 inch (+0 mm and -6mm) of the specified grade. The machine must cut vertical edges and have a positive method of dust control. The machine must have the ability to **[** windrow the millings or cuttings **]** **[** remove the millings or cuttings from the pavement and load them into a truck **]**. All millings shall be removed and disposed of **[** off the airport **]** **[** in areas designated on the plans **]**.

c. Clean-up. The Contractor shall sweep the milled surface daily and immediately after the milling until all residual materials are removed from the pavement surface. Prior to paving, the Contractor shall wet down the milled pavement and thoroughly sweep and/or blow the surface to remove loose residual material. Waste materials shall be collected and removed from the pavement surface and adjacent areas by sweeping or vacuuming. Waste materials shall be removed and disposed off Airport property. **[** in areas designated on the plans **]**.

101-3.6. Preparation of asphalt pavement surfaces prior to surface treatment. Existing asphalt pavements to be treated with a surface treatment shall be prepared as follows:

a. Patch asphalt pavement surfaces that have been softened by petroleum derivatives or have failed due to any other cause. Remove damaged pavement to the full depth of the damage and replace with new asphalt pavement similar to that of the existing pavement in accordance with paragraph 101-3.4b.

b. Repair joints and cracks in accordance with paragraph 101-3.2.

c. Remove oil or grease that has not penetrated the asphalt pavement by scrubbing with a detergent and washing thoroughly with clean water. After cleaning, treat these areas with an oil spot primer. **[** **]**

d. Clean pavement surface immediately prior to placing the surface treatment so that it is free of dust, dirt, grease, vegetation, oil, or any type of objectionable surface film.

101-3.7 Maintenance. The Contractor shall perform all maintenance work necessary to keep the pavement in a satisfactory condition until the full section is complete and accepted by the RPR. The surface shall be kept clean and free from foreign material. The pavement shall be properly drained at all times. If cleaning is necessary or if the pavement becomes disturbed, any work repairs necessary shall be performed at the Contractor's expense.

101-3.8 Preparation of Joints in Rigid Pavement prior to resealing. Prior to application of sealant material, clean and dry the joints of all scale, dirt, dust, old sealant, curing compound, moisture, and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method used cleans the joint and does not damage the joint.

101-3.8.1 Removal of Existing Joint Sealant. All existing joint sealants will be removed by plowing or use of hand tools. Any remaining sealant and or debris will be removed by use of wire brushes or other tools, as necessary. Resaw joints removing no more than 1/16 inch (2 mm) from

~~each joint face. Immediately after sawing, flush out joint with water and other tools as necessary to completely remove the slurry.~~

101-3.8.2 Cleaning prior to sealing. Immediately before sealing, joints shall be cleaned by removing any remaining laitance and other foreign material. Allow sufficient time to dry out joints prior to sealing. Joint surfaces will be surface-dry prior to installation of sealant.

101-3.8.3 Joint sealant. Joint material and installation will be in accordance with Item P-605 ~~[Item P-604]~~.

~~**101-3.9 Preparation of Cracks in Flexible Pavement prior to sealing.** Prior to application of sealant material, clean and dry the joints of all scale, dirt, dust, old sealant, curing compound, moisture, and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method used cleans the cracks and does not damage the pavement.~~

~~**101-3.9.1 Preparation of Crack.** Widen crack with [router] [random crack saw] by removing a minimum of 1/16 inch (2 mm) from each side of crack. Immediately before sealing, cracks will be blown out with a hot air lance combined with oil and water free compressed air.~~

~~**101-3.9.2 Removal of Existing Crack Sealant.** Existing sealants will be removed by [routing] [random crack saw]. Following [routing] [sawing] any remaining debris will be removed by use of a hot lance combined with oil and water free compressed air.~~

~~**101-3.9.3 Crack Sealant.** Crack sealant material and installation will be in accordance with [Item P-605].~~

101-3.9.4 Removal of Pipe and other Buried Structures.

a. Removal of Existing Pipe Material. Remove all pipes as recommended by RPR. The pipe material shall be legally disposed of off-site in a timely manner following removal. Trenches shall be backfilled material equal to or better in quality than adjacent embankment. Trenches under paved areas must be compacted to 95% of ASTM D698 .

~~**b. Removal of Inlets/Manholes.** [Where indicated on the plans or as directed by the RPR, inlets and/or manholes shall be removed and legally disposed of off-site in a timely fashion after removal. Excavations after removal shall be backfilled with material equal or better in quality than adjacent embankment. When under paved areas must be compacted to [95%] of ASTM [D1557] [D698], when outside of paved areas must be compacted to [95%] of ASTM D698. [Not used.]]~~

~~**c.** Removal of [___].~~

METHOD OF MEASUREMENT

~~**101-4.1 Lump sum.** No separate measurement for payment will be made. The work covered by this section shall be considered as a subsidiary obligation of the Contractor and covered under the other contract items.~~

101-4.1 Pavement removal. The unit of measurement for pavement removal shall be the number of square yards ~~(square meters)~~ removed by the Contractor. Any pavement removed outside the limits of removal because the pavement was damaged by negligence on the part of the Contractor shall not be included in the measurement for payment. No direct measurement or payment shall be made for saw cutting. Saw cutting shall be incidental to pavement removal. Dowel bar installation shall be incidental to pavement removal.

~~**101-4.2 Joint and crack repair**. The unit of measurement for joint and crack repair shall be the linear foot (meter) of joint.~~

~~**101-4.3 Removal of Foreign Substances/contaminates.** The unit of measurement for foreign Substances/contaminates removal shall be the square foot (meter).~~

~~**101-4.4 Spalled and failed asphalt pavement repair.** The unit of measure for failed asphalt pavement repair shall be square foot (square meter).~~

~~**101-4.5 Concrete Spall Repair.** The unit of measure for concrete spall repair shall be the number of square feet (square meter). The location and average depth of the patch shall be determined and agreed upon by the RPR and the Contractor.~~

~~**101-4.6 Cold milling.** The unit of measure for cold milling shall be [___] inches of milling per square yard (square meter). The location and average depth of the cold milling shall be as shown on the plans. If the initial cut does not correct the condition, the Contractor shall re-mill the area and will be paid for the total depth of milling.]~~

101-4.7 Removal of Pipe and other Buried Structures. ~~[Not require.] [~~ The unit of measurement for removal of pipe and other buried structures will be Linear Feet. No separate measurement for payment will be made. The work covered by this section shall be considered ~~as a subsidiary obligation of the Contractor and covered under the other contract items.] made~~ at the contract unit price for each completed and accepted item. This price shall be full compensation for all labor, equipment, tools, and incidentals necessary to complete this item in accordance with paragraph 101-3.9.4

BASIS OF PAYMENT

101-5.1 Payment. Payment shall be made at contract unit price for the unit of measurement as specified above. This price shall be full compensation for furnishing all materials and for all preparation, hauling, and placing of the material and for all labor, equipment, tools, and incidentals necessary to complete this item.

Item P 101-5.1a	Sawcut, Remove and Dispose Existing Concrete Pavement Full Depth (8") - per Square Yards
Item P 101-5.1b	Sawcut, Remove and Dispose Existing Asphalt Ramp – per Square Yards
Item P-101-5.1c	Sawcut, Remove and Dispose Existing 6" Vertical Curb –per Linear Feet

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

AC 150/5380-6	Guidelines and Procedures for Maintenance of Airport Pavements.

ASTM International (ASTM)

ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements

END OF ITEM P-101

ITEM P-152
EXCAVATION, SUBGRADE, AND EMBANKMENT

DESCRIPTION

152-1.1 This item covers excavation, disposal, placement, and compaction of all materials within the limits of the work required to construct safety areas, runways, taxiways, aprons, and intermediate areas as well as other areas for drainage, building construction, parking, or other purposes in accordance with these specifications and in conformity to the dimensions and typical sections shown on the plans.

152-1.2 Classification. All material excavated shall be classified as defined below:

a. Unclassified excavation. Unclassified excavation shall consist of the excavation and disposal of all material, regardless of its nature which is not otherwise classified and paid for under one of the following items .

Borrow excavation. Borrow excavation shall consist of approved material required for the construction of embankments or for other portions of the work in excess of the quantity of usable material available from required excavations. Borrow material shall be obtained from areas designated by the Resident Project Representative (RPR) within the limits of the airport property but outside the normal limits of necessary grading, or from areas outside the airport boundaries.

152-1.3 Unsuitable excavation. Unsuitable material shall be disposed of off-site or as directed by the RPR. Materials containing vegetable or organic matter, such as muck, peat, organic silt, or sod shall be considered unsuitable for use in embankment construction. Material suitable for topsoil may be used on the embankment slope when approved by the RPR. *Undercutting of material unsatisfactory for subgrade foundation shall be considered unsuitable excavation and shall be excavated to the depth specified by the Engineer below the subgrade.*

CONSTRUCTION METHODS

152-2.1 General. ~~Before beginning excavation, grading, and embankment operations in any area, the area shall be cleared or cleared and grubbed in accordance with Item P-151.~~

The suitability of material to be placed in embankments shall be subject to approval by the RPR. All unsuitable material shall be disposed of off site. ~~in waste areas as shown on the plans~~. All waste areas shall be graded to allow positive drainage of the area and adjacent areas. The surface elevation of waste areas shall be specified on the plans or approved by the RPR.

When the Contractor's excavating operations encounter artifacts of historical or archaeological significance, the operations shall be temporarily discontinued and the RPR notified per Section 70, paragraph 70-20. At the direction of the RPR, the Contractor shall excavate the site in such a manner as to preserve the artifacts encountered and allow for their removal. Such excavation will be paid for as extra work.

Areas outside the limits of the pavement areas where the top layer of soil has become compacted by hauling or other Contractor activities shall be scarified and disked to a depth of 4 inches (100 mm), to loosen and pulverize the soil. Stones or rock fragments larger than 4 inches (100 mm) in their greatest dimension will not be permitted in the top 6 inches (150 mm) of the subgrade.

If it is necessary to interrupt existing surface drainage, sewers or under-drainage, conduits, utilities, or similar underground structures, the Contractor shall be responsible for and shall take

all necessary precautions to preserve them or provide temporary services. When such facilities are encountered, the Contractor shall notify the RPR, who shall arrange for their removal if necessary. The Contractor, at their own expense, shall satisfactorily repair or pay the cost of all damage to such facilities or structures that may result from any of the Contractor's operations during the period of the contract.

a. Blasting. Blasting shall not be allowed.

152-2.2 Excavation. No excavation shall be started until the work has been staked out by the Contractor and the RPR has obtained from the Contractor, the survey notes of the elevations and measurements of the ground surface. The Contractor and RPR shall agree that the original ground lines shown on the original topographic mapping are accurate, or agree to any adjustments made to the original ground lines.

Volumetric quantities were calculated by comparing DTM files of the applicable design surfaces and generating Triangle Volume Reports. Electronic copies of DTM files and a paper copy of the original topographic map will be issued to the successful bidder.

Volumetric quantities were calculated using design cross sections which were created for this project using the DTM files of the applicable design surfaces and generating End Area Volume Reports. Paper copies of design cross sections and a paper copy of the original topographic map will be issued to the successful bidder.

Existing grades on the design cross sections or DTM's, where they do not match the locations of actual spot elevations shown on the topographic map, were developed by computer interpolation from those spot elevations. Prior to disturbing original grade, Contractor shall verify the accuracy of the existing ground surface by verifying spot elevations at the same locations where original field survey data was obtained as indicated on the topographic map. Contractor shall recognize that, due to the interpolation process, the actual ground surface at any particular location may differ somewhat from the interpolated surface shown on the design cross sections or obtained from the DTM's. Contractor's verification of original ground surface, however, shall be limited to verification of spot elevations as indicated herein, and no adjustments will be made to the original ground surface unless the Contractor demonstrates that spot elevations shown are incorrect. For this purpose, spot elevations which are within 0.1 foot (30 mm) of the stated elevations for ground surfaces, or within 0.04 foot (12 mm) for hard surfaces (pavements, buildings, foundations, structures, etc.) shall be considered "no change". Only deviations in excess of these will be considered for adjustment of the original ground surface. If Contractor's verification identifies discrepancies in the topographic map, Contractor shall notify the RPR in writing at least **1 DAY** before disturbance of existing grade to allow sufficient time to verify the submitted information and make adjustments to the design cross sections or DTM's. Disturbance of existing grade in any area shall constitute acceptance by the Contractor of the accuracy of the original elevations shown on the topographic map for that area.

All areas to be excavated shall be stripped of vegetation and topsoil. Topsoil shall be stockpiled for future use in areas designated on the plans or by the RPR. All suitable excavated material shall be used in the formation of embankment, subgrade, or other purposes **as** shown on the plans. All unsuitable material shall be disposed of ~~as shown on the plans~~.

The grade shall be maintained so that the surface is well drained at all times.

When the volume of the excavation exceeds that required to construct the embankments to the grades as indicated on the plans, the excess shall be used to grade the areas of ultimate development or disposed as directed by the RPR. When the volume of excavation is not sufficient for constructing the embankments to the grades indicated, the deficiency shall be obtained from borrow areas.

a. Selective grading. *When quality of the material varies significantly,* ~~selective grading is indicated on the plans~~, the more suitable material designated by the RPR shall be used in constructing the embankment or in capping the pavement subgrade. If, at the time of excavation, it is not possible to place this material in its final location, it shall be stockpiled in approved areas until it can be placed. The more suitable material shall then be placed and compacted as specified. Selective grading shall be considered incidental to the work involved. The cost of stockpiling and placing the material shall be included in the various pay items of work involved.

b. Undercutting. Rock, shale, hardpan, loose rock, boulders, or other material unsatisfactory for safety areas, subgrades, roads, shoulders, or any areas intended for turf shall be excavated to a minimum depth of 12 inches (300 mm) below the subgrade or to the depth specified by the RPR. Muck, peat, matted roots, or other yielding material, unsatisfactory for subgrade foundation, shall be removed to the depth specified. Unsuitable materials shall be disposed off the airport. The cost is incidental to this item. This excavated material shall be paid for at the contract unit price per cubic yard. The excavated area shall be backfilled with suitable material obtained from the grading operations or borrow areas and compacted to specified densities. The necessary backfill will constitute a part of *Unsuitable Excavation* ~~the embankment~~. Where rock cuts are made, backfill with select material. Any pockets created in the rock surface shall be drained in accordance with the details shown on the plans. Undercutting will be paid as unclassified excavation .

c. Over-break. Over-break, including slides, is that portion of any material displaced or loosened beyond the finished work as planned or authorized by the RPR. All over-break shall be graded or removed by the Contractor and disposed of as directed by the RPR. The RPR shall determine if the displacement of such material was unavoidable and their own decision shall be final. Payment will not be made for the removal and disposal of over-break that the RPR determines as avoidable. Unavoidable over-break will be classified as "Unclassified Excavation."

d. Removal of utilities. The removal of existing structures and utilities required to permit the orderly progress of work will be accomplished by the Contractor as indicated on the plans. All existing foundations shall be excavated at least 2 feet (60 cm) below the top of subgrade or as indicated on the plans, and the material disposed of as directed by the RPR. All foundations thus excavated shall be backfilled with suitable material and compacted as specified for embankment or as shown on the plans.

152-2.3 Borrow excavation. Borrow areas from outside the airport boundary. Embankment quantities shown on plans.

152-2.4 Drainage excavation. Drainage excavation shall consist of excavating drainage ditches including intercepting, inlet, or outlet ditches; or other types as shown on the plans. The work shall be performed in sequence with the other construction. Ditches shall be constructed prior to starting adjacent excavation operations. All satisfactory material shall be placed in embankment fills; unsuitable material shall be placed in designated waste areas or as directed by the RPR. All necessary work shall be performed true to final line, elevation, and cross-section. The Contractor shall maintain ditches constructed on the project to the required cross-section and shall keep them free of debris or obstructions until the project is accepted.

152-2.5 Preparation of cut areas or areas where existing pavement has been removed. In those areas on which a subbase or base course is to be placed, the top 8 inches of subgrade shall be compacted to not less than 100 % of maximum density for non-cohesive soils, and 95% of maximum density for cohesive soils as determined by ASTM D698. As used in this

specification, "non-cohesive" shall mean those soils having a plasticity index (PI) of less than 3 as determined by ASTM D4318.

152-2.6 Preparation of embankment area. All sod and vegetative matter shall be removed from the surface upon which the embankment is to be placed. The cleared surface shall be broken up by plowing or scarifying to a minimum depth of 6 inches (150 mm) and shall then be compacted per paragraph 152-2.10.

Sloped surfaces steeper than one (1) vertical to four (4) horizontal shall be plowed, stepped, benched, or broken up so that the fill material will bond with the existing material. When the subgrade is part fill and part excavation or natural ground, the excavated or natural ground portion shall be scarified to a depth of 12 inches (300 mm) and compacted as specified for the adjacent fill.

No direct payment shall be made for the work performed under this section. The necessary clearing and grubbing and the quantity of excavation removed will be paid for under the respective items of work.

152-2.7 Control Strip. The first half-day of construction of subgrade and/or embankment shall be considered as a control strip for the Contractor to demonstrate, in the presence of the RPR, that the materials, equipment, and construction processes meet the requirements of this specification. The sequence and manner of rolling necessary to obtain specified density requirements shall be determined. The maximum compacted thickness may be increased to a maximum of 12 inches (300 mm) upon the Contractor's demonstration that approved equipment and operations will uniformly compact the lift to the specified density. The RPR must witness this demonstration and approve the lift thickness prior to full production.

Control strips that do not meet specification requirements shall be reworked, re-compacted, or removed and replaced at the Contractor's expense. Full operations shall not begin until the control strip has been accepted by the RPR. The Contractor shall use the same equipment, materials, and construction methods for the remainder of construction, unless adjustments made by the Contractor are approved in advance by the RPR.

152-2.8 Formation of embankments. The material shall be constructed in lifts as established in the control strip, but not less than 6 inches (150 mm) nor more than 12 inches (300 mm) of compacted thickness.

When more than one lift is required to establish the layer thickness shown on the plans, the construction procedure described here shall apply to each lift. No lift shall be covered by subsequent lifts until tests verify that compaction requirements have been met. The Contractor shall rework, re-compact and retest any material placed which does not meet the specifications.

The lifts shall be placed, to produce a soil structure as shown on the typical cross-section or as directed by the RPR. Materials such as brush, hedge, roots, stumps, grass and other organic matter, shall not be incorporated or buried in the embankment.

Earthwork operations shall be suspended at any time when satisfactory results cannot be obtained due to rain, freezing, or other unsatisfactory weather conditions in the field. Frozen material shall not be placed in the embankment nor shall embankment be placed upon frozen material. Material shall not be placed on surfaces that are muddy, frozen, or contain frost. The Contractor shall drag, blade, or slope the embankment to provide surface drainage at all times.

The material in each lift shall be within ±2% of optimum moisture content before rolling to obtain the prescribed compaction. The material shall be moistened or aerated as necessary to achieve a uniform moisture content throughout the lift. Natural drying may be accelerated by blending in dry material or manipulation alone to increase the rate of evaporation.

The Contractor shall make the necessary corrections and adjustments in methods, materials or moisture content to achieve the specified embankment density.

The contractor will take samples of excavated materials which will be used in embankment for testing and develop a Moisture-Density Relations of Soils Report (Proctor) in accordance with ASTM D698. A new Proctor shall be developed for each soil type based on visual classification.

Density tests will be taken by the contractor for every 500 square yards of compacted embankment for each lift which is required to be compacted, or other appropriate frequencies as determined by the RPR.

If the material has greater than 30% retained on the 3/4-inch (19.0 mm) sieve, follow AASHTO T-180 Annex Correction of maximum dry density and optimum moisture for oversized particles.

Rolling operations shall be continued until the embankment is compacted to not less than 100% of maximum density for non-cohesive soils, and 95% of maximum density for cohesive soils as determined by ASTM D698. Under all areas to be paved, the embankments shall be compacted to a depth of 12 inches and to a density of not less than 95 percent of the maximum density as determined by ASTM D698. As used in this specification, "non-cohesive" shall mean those soils having a plasticity index (PI) of less than 3 as determined by ASTM D4318.

There will be no separate measurement of payment for compacted embankment. All costs incidental to placing in lifts, compacting, discing, watering, mixing, sloping, and other operations necessary for construction of embankments will be included in the contract price for excavation, borrow, or other items. Payment for compacted embankment will be made under embankment in-place and no payment will be made for excavation, borrow, or other items.

152-2.9 Proof rolling. The purpose of proof rolling the subgrade is to identify any weak areas in the subgrade and not for compaction of the subgrade. After compaction is completed, the subgrade area shall be proof rolled with a 20 ton (18.1 metric ton) Tandem axle Dual Wheel Dump Truck loaded to the legal limit with tires inflated to 100 psi in the presence of the RPR. Apply a minimum of **50%** coverage, or as specified by the RPR, under pavement areas. A coverage is defined as the application of one tire print over the designated area. Soft areas of subgrade that deflect more than 1 inch (25 mm) or show permanent deformation greater than 1 inch (25 mm) shall be removed and replaced with suitable material or reworked to conform to the moisture content and compaction requirements in accordance with these specifications. Removal and replacement of soft areas is incidental to this item.

152-2.10 Compaction requirements. The subgrade under areas to be paved shall be compacted to a depth of 12 inches (300 mm) and to a density of not less than 95 percent of the maximum dry density as determined by ASTM D698.

The material to be compacted shall be within ±2% of optimum moisture content before being rolled to obtain the prescribed compaction (except for expansive soils). When the material has greater than 30 percent retained on the ¾ inch (19.0 mm) sieve, follow the methods in ASTM D698 procedures in AASHTO T180 Annex for correction of maximum dry density and optimum moisture for oversized particles. Tests for moisture content and compaction will be taken at a minimum of 500 S.Y. of subgrade. All quality assurance testing shall be done by the Contractor's laboratory in the presence of the RPR, and density test results shall be furnished upon completion to the RPR for acceptance determination.

The in-place field density shall be determined in accordance with ASTM D6938 using Procedure A, the direct transmission method, and ASTM D6938 shall be used to determine the moisture content of the material. The machine shall be calibrated in accordance with ASTM D6938 within 12 months prior to its use on this contract. The gauge shall be field standardized daily.

Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

If the specified density is not attained, the entire lot shall be reworked and/or re-compacted and additional random tests made. This procedure shall be followed until the specified density is reached.

All cut-and-fill slopes shall be uniformly dressed to the slope, cross-section, and alignment shown on the plans or as directed by the RPR and the finished subgrade shall be maintained.

152-2.11 Finishing and protection of subgrade. Finishing and protection of the subgrade is incidental to this item. Grading and compacting of the subgrade shall be performed so that it will drain readily. All low areas, holes or depressions in the subgrade shall be brought to grade. Scarifying, blading, rolling and other methods shall be performed to provide a thoroughly compacted subgrade shaped to the lines and grades shown on the plans. All ruts or rough places that develop in the completed subgrade shall be graded, re-compacted, and retested. The Contractor shall protect the subgrade from damage and limit hauling over the finished subgrade to only traffic essential for construction purposes.

The Contractor shall maintain the completed course in satisfactory condition throughout placement of subsequent layers. No subbase, base, or surface course shall be placed on the subgrade until the subgrade has been accepted by the RPR.

152-2.12 Haul. All hauling will be considered a necessary and incidental part of the work. The Contractor shall include the cost in the contract unit price for the pay of items of work involved. No payment will be made separately or directly for hauling on any part of the work.

The Contractor's equipment shall not cause damage to any excavated surface, compacted lift or to the subgrade as a result of hauling operations. Any damage caused as a result of the Contractor's hauling operations shall be repaired at the Contractor's expense.

The Contractor shall be responsible for providing, maintaining and removing any haul roads or routes within or outside of the work area, and shall return the affected areas to their former condition, unless otherwise authorized in writing by the Owner. No separate payment will be made for any work or materials associated with providing, maintaining and removing haul roads or routes.

152-2.13 Surface Tolerances. In those areas on which a subbase or base course is to be placed, the surface shall be tested for smoothness and accuracy of grade and crown. Any portion lacking the required smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches (75 mm), reshaped and re-compacted to grade until the required smoothness and accuracy are obtained and approved by the RPR. The Contractor shall perform all final smoothness and grade checks in the presence of the RPR. Any deviation in surface tolerances shall be corrected by the Contractor at the Contractor's expense.

a. **Smoothness.** The finished surface shall not vary more than +/- ½ inch (12 mm) when tested with a 12-foot (3.7-m) straightedge applied parallel with and at right angles to the centerline. The straightedge shall be moved continuously forward at half the length of the 12-foot (3.7-m) straightedge for the full length of each line on a 50-foot (15-m) grid.

b. **Grade.** The grade and crown shall be measured on a 50-foot (15-m) grid and shall be within +/-0.05 feet (15 mm) of the specified grade.

METHOD OF MEASUREMENT

152-3.1 Measurement for payment specified by the cubic yard shall be computed by the average end areas of design cross sections. The end area is that bound by the original ground line established by ~~field cross-sections~~ and the final theoretical pay line established by cross-sections shown on the plans, subject to verification by the RPR.

In cut sections, the additional cut required to construct the topsoil layer to the plan grade had not been measured and will not be measured for separate payment, but will be subsidiary to "Unclassified Excavation."

No allowance has been made in the measurement of shrink/swell. The Contractor shall make his own determination as to the amount of shrink/swell involved in the construction.

No adjustments have been made to the plan quantities for the construction and demolition of existing drainage structures. The Contractor shall make his/her own determination as to the amount of unsuitable excavated materials which may be encountered and the resulting additional borrow material required embankment required to construct the project if the excavated material is deemed suitable,

The quantity of the unclassified excavation to be paid for shall be the number of Cubic Yards measure in its original position. Measurement shall not include the quantity of materials excavated without authorization beyond normal slope lines or the quantity of material used for purpose other those directed.

152.3.2 The quantity of borrow excavation to be paid for shall be the number of cubic yards measure in its FINAL position. Measurement shall not include the quantity of materials excavated without authorization beyond normal slope lines or the quantity of material used for purpose other those directed.

~~**152-3.2** The quantity of embankment in place shall be the number of cubic yards as measured in its final position.~~

152-3.3 Stockpiled material shall not be measured for payment in the stockpiled position

152-3.4 Unsuitable excavation shall be measured for the surface to the ground., after stripping is accomplished. Measurement will be taken by Engineer, and the volume of excavation will be calculated by the average end area method. The necessary refilling of unsuitable areas will not be measured for separate payment but will be subsidiary to "Unsuitable Excavation". Only the amount of excavation directed by the Engineer will be measured for payment.

BASIS OF PAYMENT

152-4.1 Unclassified excavation. Drainage Excavation payment shall be made at the contract unit price per cubic yard. This price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the item.

152-4.2 For embankment in place, payment shall be made at the contract unit price per cubic yard (cubic meter). This price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the item.

~~**152-4.3** Stockpiled material shall be paid for on the basis of the number of cubic yards measure in the stockpile position.~~

152-4.4 Unsuitable excavation shall be paid at the contract unit price per Cubic Yard for "Unsuitable Excavation." which price shall be full compensation for all excavation, disposal or placement of the material including loading, hauling, spreading and compaction, compaction and preparation of subgrade, for refillling, rolling and compaction of all undercut areas, and for all equipment tools, labor and incidentals necessary to complete the work.

Payment will be made under:

~~Item P-152-4.1~~	~~Unclassified/ Drainage Excavation - per cubic yard.~~
Item P-152-4.2	Embankment in Place - per cubic yard
Item P-152-4.4	Unsuitable Excavation – per cubic yard

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

American Association of State Highway and Transportation Officials (AASHTO)

AASHTO T-180	Standard Method of Test for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop

ASTM International (ASTM)

ASTM D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft^3 (600 kN-m/m^3))
ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
ASTM D1557	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft^3 (2700 kN-m/m^3))
ASTM D6938	Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

Advisory Circulars (AC)

AC 150/5370-2	Operational Safety on Airports During Construction Software

Software

FAARFIELD – FAA Rigid and Flexible Iterative Elastic Layered Design

U.S. Department of Transportation

FAA RD-76-66	Design and Construction of Airport Pavements on Expansive Soils

END OF ITEM P-152

ITEM P-155
LIME-TREATED SUBGRADE

DESCRIPTION

155-1.1 This item shall be used for soil modification that require strength gain to a specific level. This item shall consist of constructing one or more courses of a mixture of soil, lime, and water in accordance with this specification, and in conformity with the lines, grades, thicknesses, and typical cross-sections shown on the plans.

MATERIALS

155-2.1 Lime. Quicklime, hydrated lime, and either high-calcium dolomitic, or magnesium lime, as defined by ASTM C51, shall conform to the requirements of ASTM C977. Lime not produced from calcining limestone is not permitted.

~~**155-2.2 Commercial lime slurry.** Commercial lime slurry shall be a pumpable suspension of solids in water. The water or liquid portion of the slurry shall not contain dissolved material injurious or objectionable for the intended purpose. The solids portion of the mixture, when considered on the basis of "solids content," shall consist principally of hydrated lime of a quality and fineness sufficient to meet the following chemical composition and residue requirements.~~

~~**a. Chemical composition.** The "solids content" of the lime slurry shall consist of a minimum of 70%, by weight, of calcium and magnesium oxides.~~

~~**b. Residue.** The percent by weight of residue retained in the "solids content" of lime slurry shall conform to the following requirements:~~

- ~~Residue retained on a No. 6 (3.35 µm) sieve = maximum 0.0%~~
- ~~Residue retained on a No. 10 (2.00 µm) sieve = maximum 1.0%~~
- ~~Residue retained on a No. 30 (600 µm) sieve = maximum 2.5%~~

~~**c. Grade.** Commercial lime slurry shall conform to one of the following two grades:~~

- ~~Grade 1. The "dry solids content" shall be at least 31% by weight, of the slurry.~~
- ~~Grade 2. The "dry solids content" shall be at least 35%, by weight, of the slurry.~~

155-2.3 Water. Water used in mixing or curing shall be from potable water sources. Other sources shall be tested in accordance with ASTM C1602 prior to use.

155-2.4 Soil. The soil for this work shall consist of on-site materials free of roots, sod, weeds, and stones larger than 2-1/2 inches (60 mm) and have a sulfate content of less than 0.3%.

COMPOSITION

155-3.1 Soil-lime mixture. Lime shall be applied at 8 % dry unit weight of soil for the depth of subgrade treatment as shown on the plans.

155-3.2 Tolerances. At final compaction, the lime and water content for each course of subgrade treatment shall conform to the following tolerances:

Tolerances

Material	Tolerance
Lime	+ 0.5%
Water	+ 2%, -0%

WEATHER LIMITATIONS

155-4.1 Weather limitation. Subgrade shall not be constructed when weather conditions detrimentally affect the quality of the materials. Lime shall not be applied unless the air temperature is at least 40°F (4°C) and rising. Lime shall not be applied to soils that are frozen or contain frost. Protect completed lime-treated areas by approved methods against the detrimental effects of freezing if the air temperature falls below 35°F (2°C). Remove and replace any damaged portion of the completed soil-lime treated area with new soil-lime material in accordance with this specification.

EQUIPMENT

155-5.1 Equipment. All equipment necessary to grade, scarify, spread, mix, and compact the material shall be provided. The Resident Project Representative (RPR) must approve the Contractor's proposed equipment prior to the start of the treatment.

CONSTRUCTION METHODS

155-6.1 General. This specification is to construct a subgrade consisting of a uniform lime mixture which shall be free from loose or segregated areas. The subgrade shall be of uniform density and moisture content, well mixed for its full depth, and have a smooth surface suitable for placing subsequent lifts. The Contractor shall be responsible to meet the above requirements.

Prior to any treatment, the subgrade shall be constructed as specified in Item P-152, Excavation, Subgrade and Embankment, and shaped to conform to the typical sections, lines, and grades as shown on the plans.

The mixing equipment must give visible indication at all times that it is cutting, pulverizing, and mixing the material uniformly to the proper depth over the full width of the cut.

155-6.2 Application. Lime shall be uniformly spread only over an area where the initial mixing operations can be completed during the same workday. Lime shall not be applied when wind conditions are detrimental to proper application. A motor grader shall not be used to spread the lime. Adequate moisture shall be added to the cement/soil mixture to maintain the proper moisture content. Materials shall be handled, stored, and applied in accordance with all federal, state, and local requirements.

155-6.3 Mixing. The mixing procedure shall be as described below:

a. Preliminary mixing. The full depth of the treated subgrade shall be mixed with an approved mixing machine. Lime shall not be left exposed for more than six (6) hours. The mixing machine shall make two coverages. Water shall be added to the subgrade during mixing to

provide a moisture content 3% to 5% above the optimum moisture of the material and to ensure chemical reaction of the lime and subgrade. After mixing, the subgrade shall be lightly rolled to seal the surface and help prevent evaporation of moisture. The water content of the subgrade mixture shall be maintained at a moisture content above the optimum moisture content for a minimum of 4 to 24 hours or until the material becomes friable. During the mellowing period, the material shall be sprinkled as directed by the RPR.

b. Final mixing. After the required mellowing time, the material shall be uniformly mixed by approved methods. Any clods shall be reduced in size by blading, discing, harrowing, scarifying, or by the use of other approved pulverization methods. After curing, pulverize lime treated material until 100% of soil particles pass a one-inch (25.0 mm) sieve and 60% pass the No. 4 (4.75 mm) sieve when tested dry by laboratory sieves. If resultant mixture contains clods, reduce their size by scarifying, remixing, or pulverization to meet specified gradation.

155-6.4 Control Strip. The first half-day of construction shall be considered the control strip. The Contractor shall demonstrate, in the presence of the RPR, that the materials, equipment, and construction processes meet the requirements of the specification. The sequence and manner of rolling necessary to obtain specified density requirements shall be determined. Control strips that do not meet specification requirements shall be reworked, re-compacted, or removed and replaced at the Contractor's expense. Full operations shall not continue until the control strip has been accepted by the RPR. Upon acceptance of the control strip by the RPR, the Contractor shall use the same equipment, materials, and construction methods for the remainder of construction, unless adjustments made by the Contractor are approved in advance by the RPR.

155-6.5 Treatment Application and Depth Checks. The depth and amount of stabilization shall be measured by the Contractor with no less than 2 tests per day of material placed; test shall be witnessed by the RPR. Measurements shall be made in test holes excavated to show the full depth of mixing and the pH checked by spraying the side of the test hole with a pH indicator such as phenolphthalein. Phenolphthalein changes from clear to red between pH 8.3 and 10. The color change indicates the location of the bottom of the mixing zone. pH indicators other than phenolphthalein can be used to measure pH levels. If the pH is not at least 8.3 and/or if the depth of the treated subgrade is more than 1/2 inch (12 mm) deficient, additional lime treatment shall be added and the material remixed. The Contractor shall correct all such areas in a manner satisfactory to the RPR.

155-6.6 Compaction. Compaction of the mixture shall immediately follow the final mixing operation with the mixture compacted within 1 to 4 hours after final mixing. The material shall be at the moisture content specified in paragraph 155-3.2 during compaction. The field density of the compacted mixture shall be at least 95% of the maximum density as specified in paragraph 155-6.10. Perform in-place density test to determine degree of compaction between 24 and 72 hours after final compaction and the 24-hour moist cure period. If the material fails to meet the density requirements, it shall be reworked to meet the density requirements. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

155-6.7 Finishing and curing. After the final lift or course of lime-treated subgrade has been compacted, it shall be brought to the required lines and grades in accordance with the typical sections. The completed section shall then be finished by rolling, as directed by the RPR, with a pneumatic or other suitable roller sufficiently light to prevent hairline cracking. The finished surface shall not vary more than 1/2-inch (12 mm) when tested with a 12-foot (3.7 m) straightedge applied parallel with and at right angles to the pavement centerline. Any variations in excess of this tolerance shall be corrected by the Contractor at the Contractor's expense in a manner satisfactory to the RPR.

The completed section shall be moist cured for a minimum of seven (7) days before further courses are added or any traffic is permitted, unless otherwise directed by the RPR. The final lift should not be exposed for more than 14 days without protection or the placement of a base course material.

155-6.8 Maintenance. The Contractor shall protect and maintain the lime-treated subgrade from yielding until the lime-treated subgrade is covered by placement of the next lift. When material has been exposed to excessive rain, snow, or freeze-thaw conditions, prior to placement of additional material, the Contractor shall verify that materials still meet all specification requirements. The maintenance cost shall be incidental to this item.

155-6.9 Surface tolerance. In those areas on which a subbase or base course is to be placed, the surface shall be tested for smoothness and accuracy of grade and crown. Any portion lacking the required smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches (75 mm), reshaped and re-compacted to grade until the required smoothness and accuracy are obtained and approved by the RPR. The Contractor shall perform all final smoothness and grade checks in the presence of the RPR. Any deviation in surface tolerances shall be corrected by the Contractor at the Contractor's expense.

a. Smoothness. The finished surface shall not vary more than +/- ½ inch (12 mm) when tested with a 12-foot (3.7-m) straightedge applied parallel with and at right angles to the centerline. The straightedge shall be moved continuously forward at half the length of the 12-foot (3.7-m) straightedge for the full length of each line on a 50-foot (15-m) grid.

b. Grade. The grade and crown shall be measured on a 50-foot (15-m) grid and shall be within +/-0.05 feet (15 mm) of the specified grade.

155-6.10 Acceptance sampling and testing. The lime treated subgrade shall be accepted for density and thickness on an area basis. Testing frequency shall be a minimum of one compaction and thickness test per 1000 square yards 840 square meters) of lime treated subgrade, but not less than four (4) tests per day of production. Sampling locations will be determined on a random basis per ASTM D3665.

a. Density. All testing shall be done by the Contractor's laboratory in the presence of the RPR and density test results shall be furnished upon completion to the RPR for acceptance determination.

The field density of the compacted mixture shall be at least 95% of the maximum density of laboratory specimens prepared from samples taken from the material in place. The specimens shall be compacted and tested in accordance with ASTM D698 to determine maximum density and optimum moisture content. The in-place field density shall be determined in accordance with ASTM D1556. If the material fails to meet the density requirements, the area represented by the failed test shall be reworked to meet the density requirements. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

b. Thickness. The thickness of the course shall be within +0 and -1/2 inch (12 mm) of the specified thickness as determined by depth tests taken by the Contractor in the presence of the RPR for each area. Where the thickness is deficient by more than 1/2-inch (12 mm), the Contractor shall correct such areas at no additional cost The Contractor shall replace, at his expense, material where depth tests have been taken.

155-6.11 Handling and safety. The Contractor shall obtain and enforce the lime supplier's instructions for proper safety and handling of the lime to prevent physical eye or skin contact with lime during transport or application.

METHOD OF MEASUREMENT

155-7.1 Lime-treated subgrade shall be paid for by the square yard (square meter) in the completed and accepted work.

155-7.2 Lime shall be paid by the number of tons (kg) of Hydrated Lime applied at the application rate specified in paragraph 155-3.1.

a. Hydrated lime delivered to the project in dry form will be measured according to the actual tonnage either spread on the subgrade or batched on site into a slurry, whichever is applicable.

b. Quicklime delivered to the project in dry form will be measured for payment on the basis of the tons of equivalent hydrated lime using the following formula:

Equivalent Hydrated Lime ($Ca(OH)_2$) = Total Quicklime (CaO) × 1.32

~~**c.** Lime delivered to the project in slurry form will be measured for payment in tons, dry weight of hydrated lime or equivalent hydrated lime in accordance with paragraph b above.~~

BASIS OF PAYMENT

155-8.1 Payment shall be made at the contract unit price per square yard (square meter) for the lime-treated subgrade at the thickness specified. The price shall be full compensation for furnishing all material, except the lime, and for all preparation, delivering, placing, and mixing these materials, and all labor, equipment, tools, and incidentals necessary to complete this item.

155-8.2 Payment shall be made at the contract unit price per ton (kg). This price shall be full compensation for furnishing, delivery, and placing this material.

Payment will be made under:

Item P-155-8.1	Lime-treated subgrade - per square yard (m^2)
Item P-155-8.2	Lime - per ton

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM C51	Standard Terminology Relating to Lime and Limestone (as used by the industry)
ASTM C977	Standard Specification for Quicklime and Hydrated Lime for Soil Stabilization
ASTM C1602	Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete
ASTM D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft^3) (600 kN-m/m^3)
ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method

ASTM D2487	Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)
ASTM D6938	Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

Software

FAARFIELD – FAA Rigid and Flexible Iterative Elastic Layered Design

END OF ITEM P-155

ITEM P-501
CEMENT CONCRETE PAVEMENT

DESCRIPTION

501-1.1 This work shall consist of pavement composed of cement concrete **with reinforcement** constructed on a prepared underlying surface in accordance with these specifications and shall conform to the lines, grades, thickness, and typical cross-sections shown on the plans. The terms cement concrete, hydraulic cement concrete, and concrete are interchangeable in this specification.

MATERIALS

501-2.1 Aggregates.

a. Reactivity. Fine and Coarse aggregates to be used in PCC on this project shall be tested and evaluated by the Contractor for alkali-aggregate reactivity in accordance with both ASTM C1260 and ASTM C1567. Tests must be representative of aggregate sources which will be providing material for production. ASTM C1260 and ASTM C1567 tests may be run concurrently.

(1) Coarse aggregate and fine aggregate shall be tested separately in accordance with ASTM C1260, however, the length of test shall be extended to 28 days (30 days from casting). Tests must have been completed within 6 months of the date of the concrete mix submittal.

(2) The combined coarse and fine aggregate shall be tested in accordance with ASTM C1567, modified for combined aggregates, using the proposed mixture design proportions of aggregates, cementitious materials, and/or specific reactivity reducing chemicals. If the expansion does not exceed 0.10% at 28 days, the proposed combined materials will be accepted. If the expansion is greater than 0.10% at 28 days, the aggregates will not be accepted unless adjustments to the combined materials mixture can reduce the expansion to less than 0.10% at 28 days, or new aggregates shall be evaluated and tested.

(3) If lithium nitrate is proposed for use with or without supplementary cementitious materials, the aggregates shall be tested in accordance with Corps of Engineers (COE) Concrete Research Division (CRD) C662 in lieu of ASTM C1567. If lithium nitrate admixture is used, it shall be nominal 30% ±0.5% weight lithium nitrate in water. If the expansion does not exceed 0.10% at 28 days, the proposed combined materials will be accepted. If the expansion is greater than 0.10% at 28 days, the aggregates will not be accepted unless adjustments to the combined materials mixture can reduce the expansion to less than 0.10% at 28 days, or new aggregates shall be evaluated and tested.

b. Fine aggregate. Grading of the fine aggregate, as delivered to the mixer, shall conform to the requirements of ASTM C33 and the parameters identified in the fine aggregate material requirements below. Fine aggregate material requirements and deleterious limits are shown in the table below.

Fine Aggregate Material Requirements		
Soundness of Aggregates by Use of Sodium Sulfate **or** Magnesium Sulfate	Loss after 5 cycles: 10% maximum using Sodium sulfate - or - 15% maximum using magnesium sulfate	ASTM C88
Sand Equivalent	[45] minimum	ASTM D2419
Fineness Modulus (FM)	2.50 ≤ FM ≤ 3.40	ASTM C136
Limits for Deleterious Substances in Fine Aggregate for Concrete		
Clay lumps and friable particles	1.0% maximum	ASTM C142
Coal and lignite	0.5% using a medium with a density of Sp. Gr. of 2.0	ASTM C123
Total Deleterious Material	1.0% maximum	

c. Coarse aggregate. The maximum size coarse aggregate shall be **1-1/2-inch**.

Aggregates delivered to the mixer shall be clean, hard, uncoated aggregates consisting of crushed stone, crushed or uncrushed gravel, air-cooled iron blast furnace slag, crushed recycled concrete pavement, or a combination. The aggregates shall have no known history of detrimental pavement staining. Steel blast furnace slag shall not be permitted. Coarse aggregate material requirements and deleterious limits are shown in the table below; washing may be required to meet aggregate requirements.

Coarse Aggregate Material Requirements

Material Test	Requirement	Standard
Resistance to Degradation	Loss: 40% maximum	ASTM C131
Soundness of Aggregates by Use of Sodium Sulfate **or** Magnesium Sulfate	Loss after 5 cycles: 12% maximum using Sodium sulfate - or - 18% maximum using magnesium sulfate	ASTM C88
Flat, Elongated, or Flat and Elongated Particles	8% maximum, by weight, of flat, elongated, or flat and elongated particles at 5:1 for any size group coarser than 3/8 (9.5 mm) sieve [1]	ASTM D4791
Bulk density of slag [2]	Weigh not less than 70 pounds per cubic foot (1.12 Mg/cubic meter)	ASTM C29

[1] A flat particle is one having a ratio of width to thickness greater than five (5); an elongated particle is one having a ratio of length to width greater than five (5).

[2] Only required if slag is specified.

The amount of deleterious material in the coarse aggregate shall not exceed the following limits:

Limits for Deleterious Substances in Coarse Aggregate

Deleterious material	ASTM	Percentage by Mass
Clay Lumps and friable particles	ASTM C142	1.0
Material finer than No. 200 sieve (75 µm)	ASTM C117	1.0[1]
Lightweight particles	ASTM C123 using a medium with a density of Sp. Gr. of 2.0	0.5
Chert[2] (less than 2.40 Sp Gr.)	ASTM C123 using a medium with a density of Sp. Gr. of 2.40)	[0.1][3]

[1] The limit for material finer than 75-µm is allowed to be increased to 1.5% for crushed aggregates consisting of dust of fracture that is essentially free from clay or shale. Test results supporting acceptance of increasing limit to 1.5% with statement indicating material is dust of fracture must be submitted with Concrete mix. Acceptable techniques to characterizing these fines include methylene blue adsorption or X-ray diffraction analysis.

[2] Chert and aggregates with less than 2.4 specific gravity.

[3] The limit for chert may be increased to 1.0 percent by mass in areas not subject to severe freeze and thaw.

d. Combined aggregate gradation. This specification is targeted for a combined aggregate gradation developed following the guidance presented in United States Air Force Engineering Technical Letter (ETL) 97-5: Proportioning Concrete Mixtures with Graded Aggregates for Rigid Airfield Pavements. Base the aggregate grading upon a combination of all the aggregates (coarse and fine) to be used for the mixture proportioning. Three aggregate sizes may be required to achieve an optimized combined gradation that will produce a workable concrete mixture for its intended use. Use aggregate gradations that produce concrete mixtures with well-graded or optimized aggregate combinations. The Contractor shall submit complete mixture information necessary to calculate the volumetric components of the mixture. The combined aggregate grading shall meet the following requirements:

(1) The materials selected and the proportions used shall be such that when the Coarseness Factor (CF) and the Workability Factor (WF) are plotted on a diagram as described in paragraph 501-2.1d(4) below, the point thus determined shall fall within the parallelogram described therein.

(2) The CF shall be determined from the following equation:

CF = (cumulative percent retained on the 3/8 in. (9.5 mm) sieve)(100) / (cumulative percent retained on the No. 8 (2.36 mm) sieve)

(3) The WF is defined as the percent passing the No. 8 (2.36 mm) sieve based on the combined gradation. However, WF shall be adjusted, upwards only, by 2.5 percentage points for each 94 pounds (42 kg) of cementitious material per cubic meter yard greater than 564 pounds per cubic yard (335 kg per cubic meter).

(4) A diagram shall be plotted using a rectangular scale with WF on the Y-axis with units from 20 (bottom) to 45 (top), and with CF on the X-axis with units from 80 (left side) to 30 (right side). On this diagram a parallelogram shall be plotted with corners at the following coordinates (CF-75, WF-28), (CF-75, WF-40), (CF-45, WF-32.5), and (CF-45, WF-44.5). If the point determined by the intersection of the computed CF and WF does not fall within the above parallelogram, the grading of each size of aggregate used and the proportions selected shall be changed as necessary. The point determined by the plotting of the CF

and WF may be adjusted during production ±3 WF and ±5 CF. Adjustments to gradation may not take the point outside of the parallelogram.

e. Contractors combined aggregate gradation. The Contractor shall submit their combined aggregate gradation using the following format:

Contractor's Combined Aggregate Gradation

Sieve Size	Contractor's Concrete mix Gradation (Percent passing by weight)
2 inch (50 mm)	
1-1/2 inch (37.5 mm)	
1 inch (25.0 mm)	
3/4 inch (19.0 mm)	
1/2 inch (12.5 mm)	
3/8 inch (9.5 mm)	
No. 4 (4.75 mm)	
No. 8 (2.36 mm)	
No. 16 (1.18 mm)	
No. 30 (600 µm)	
No. 50 (300 µm)	
No. 100 (150 µm)	

501-2.2 Cement. Cement shall conform to the requirements of **ASTM 150 Type I.**

501-2.3 Cementitious materials.

a. Fly ash. Fly ash shall meet the requirements of ASTM C618, with the exception of loss of ignition, where the maximum shall be less than 6%. Fly ash shall have a Calcium Oxide (CaO) content of less than 15% and a total alkali content less than 3% per ASTM C311. The Contractor shall furnish the previous three most recent, consecutive ASTM C618 reports for each source of fly ash proposed in the concrete mix, and shall furnish each additional report as they become available during the project. The reports can be used for acceptance or the material may be tested independently by the Resident Project Representative (RPR).

b. Slag cement (ground granulated blast furnace (GGBF)). Slag cement shall conform to ASTM C989, Grade 100 or Grade 120. Slag cement shall be used only at a rate between 25% and 55% of the total cementitious material by mass.

c. Raw or calcined natural pozzolan. Natural pozzolan shall be raw or calcined and conform to ASTM C618, Class N, including the optional requirements for uniformity and effectiveness in controlling Alkali-Silica reaction and shall have a loss on ignition not exceeding 6%. Class N pozzolan for use in mitigating Alkali-Silica Reactivity shall have a total available alkali content less than 3%.

501-2.4 Joint seal. The joint seal for the joints in the concrete pavement shall meet the requirements of **Item P-605** and shall be of the type specified in the plans.

501-2.5 Isolation joint filler. Premolded joint filler for isolation joints shall conform to the requirements of ASTM D1751 or ASTM D1752 and shall be where shown on the plans. The filler for each joint shall be furnished in a single piece for the full depth and width required for the joint, unless otherwise specified by the RPR. When the use of more than one piece is required for a joint, the abutting ends shall be fastened securely and held accurately to shape by stapling or other positive fastening means satisfactory to the RPR.

501-2.6 Steel reinforcement. Reinforcing shall consist of **Welded Wire Fabric** conforming to the requirements of **ASTM A1064** or **Bar Mats** conforming to the requirements of **ASTM A184 or A704**.

501-2.7 Dowel and tie bars. Dowel bars shall be plain steel bars conforming to ASTM A615 and shall be free from burring or other deformation restricting slippage in the concrete.

a. Dowel Bars. Before delivery to the construction site each dowel bar shall be epoxy coated per ASTM A1078, Type 1, with a coating thickness after curing greater than 10 mils. Patched ends are not required for Type 1 coated dowels. The dowels shall be coated with a bond-breaker recommended by the manufacturer. Dowel sleeves or inserts are not permitted. Grout retention rings shall be fully circular metal or plastic devices capable of supporting the dowel until the grout hardens.

b. Tie Bars. Tie bars shall be deformed steel bars and conform to the requirements of ASTM A615. Tie bars designated as Grade 60 in ASTM A615 or ASTM A706 shall be used for construction requiring bent bars.

501-2.8 Water. Water used in mixing or curing shall be potable. If water is taken from other sources considered non-potable, it shall meet the requirements of ASTM C1602.

501-2.9 Material for curing concrete. Curing materials shall conform to one of the following specifications:

a. Liquid membrane-forming compounds for curing concrete shall conform to the requirements of ASTM C309, Type 2, Class A, or Class B.

b. White polyethylene film for curing concrete shall conform to the requirements of ASTM C171.

c. White burlap-polyethylene sheeting for curing concrete shall conform to the requirements of ASTM C171.

d. Waterproof paper for curing concrete shall conform to the requirements of ASTM C171.

501-2.10 Admixtures. Admixtures shall conform to the following specifications:

a. Air-entraining admixtures. Air-entraining admixtures shall meet the requirements of ASTM C260 and shall consistently entrain the air content in the specified ranges under field conditions. The air-entraining agent and any water reducer admixture shall be compatible.

b. Water-reducing admixtures. Water-reducing admixture shall meet the requirements of ASTM C494, Type A, B, or D.

c. Other admixtures. The use of set retarding and set-accelerating admixtures shall be approved by the RPR prior to developing the concrete mix. Retarding admixtures shall meet the requirements of ASTM C494, Type A, B, or D and set-accelerating admixtures shall meet the requirements of ASTM C494, Type C. Calcium chloride and admixtures containing calcium chloride shall not be used.

d. Lithium Nitrate. The lithium admixture shall be a nominal 30% aqueous solution of Lithium Nitrate, with a density of 10 pounds/gallon (1.2 kg/L), and shall have the approximate chemical form as shown below:

Lithium Admixture

Constituent	Limit (Percent by Mass)
LiNO3 (Lithium Nitrate)	30 ±0.5
SO4 (Sulfate Ion)	0.1 (max)
Cl (Chloride Ion)	0.2 (max)
Na (Sodium Ion)	0.1 (max)
K (Potassium Ion)	0.1 (max)

The lithium nitrate admixture dispensing and mixing operations shall be verified and certified by the lithium manufacturer's representative.

501-2.11 Epoxy-resin. All epoxy-resin materials shall be two-component materials conforming to the requirements of ASTM C881, Class as appropriate for each application temperature to be encountered, except that in addition, the materials shall meet the following requirements:

a. Material for use for embedding dowels and anchor bolts shall be Type IV, Grade 3.

b. Material for use as patching materials for complete filling of spalls and other voids and for use in preparing epoxy resin mortar shall be Type III, Grade as approved.

c. Material for use for injecting cracks shall be Type IV, Grade 1.

d. Material for bonding freshly mixed Portland cement concrete or mortar or freshly mixed epoxy resin concrete or mortar to hardened concrete shall be Type V, Grade as approved.

501-2.12 Bond Breaker. Liquid membrane forming compound shall be in accordance with paragraph 501-2.9a.

CONCRETE MIX

501-3.1. General. No concrete shall be placed until an acceptable concrete mix has been submitted to the RPR for review and the RPR has taken appropriate action. The RPR's review shall not relieve the Contractor of the responsibility to select and proportion the materials to comply with this section.

501-3.2 Concrete Mix Laboratory. The laboratory used to develop the concrete mix shall be accredited in accordance with ASTM C1077. The laboratory accreditation must be current and listed on the accrediting authority's website. All test methods required for developing the concrete mix must be included in the lab accreditation. A copy of the laboratory's current accreditation and accredited test methods shall be submitted to the RPR prior to start of construction.

501-3.3 Concrete Mix Proportions. Develop the mix using the procedures contained in Portland Cement Association (PCA) publication, "Design and Control of Concrete Mixtures." Concrete shall be proportioned to achieve a 28-day Compressive strength that meets or exceeds the acceptance criteria contained in paragraph 501-6.6 for a compressive strength of **4,400 psi** per ASTM C39.

The minimum cementitious material shall be adequate to ensure a workable, durable mix. The minimum cementitious material (cement plus fly ash, or slag cement) shall be **470** pounds per cubic yard. The ratio of water to cementitious material, including free surface moisture on the aggregates but not including moisture absorbed by the aggregates shall be between 0.38 – 0.45 by weight.

Flexural strength test specimens shall be prepared in accordance with ASTM C192 and tested in accordance with ASTM C78. At the start of the project, the Contractor shall determine an allowable slump as determined by ASTM C143 not to exceed 2 inches (50 mm) for slip-form placement. For fixed-form placement, the slump shall not exceed 3 inches (75 mm). For hand placement, the slump shall not exceed 4 inches (100 mm).

When the flexural design strength in paragraph 501-3.3 is to be accepted on the basis of compressive strength, the following procedure establishes the correlation between compressive and flexural strength for the concrete mix. Each concrete mix will require a separate correlation.

Cylinders/Beams

a. Fabricate all beams and cylinders for each mixture from the same batch or blend of batches. Fabricate and cure all beams and cylinders in accordance with ASTM C192, using 6 × 6-inch (150 × 150 mm) steel beam forms and 6 × 12-inch (150 × 300 mm) single-use cylinder forms.

b. Cure test beams from each mixture for 3, 7, 14, and 28 day flexural tests; three (3) beams to be tested per age.

c. Cure test cylinders from each mixture for 3, 7, 14 and 28 day compressive strength tests; three (3) cylinders to be tested per age.

d. Test beams in accordance with ASTM C78, cylinders in accordance with ASTM C39.

e. Using the average strength for each age, plot all results on separate graphs for each w/c versus:

- 3-day flexural strength
- 7-day flexural strength
- 14-day flexural strength
- 28-day flexural strength
- 3-day compressive strength
- 7-day compressive strength
- 14-day compressive strength
- 28-day compressive strength

f. From the above expected strengths for the selected mixture determine the following Correlation Ratios:

(1) Ratio of the 14-day compressive strength of the selected mixture to the 28-day flexural strength of the mixture (for acceptance).

(2) Ratio of the 7-day compressive strength of the selected mixture to the 28-day flexural strength of the mixture (for Contractor QC control).

g. If there is a change in materials, additional mixture design studies shall be made using the new materials and new Correlation Ratios shall be determined.

h. No concrete pavement shall be placed until the Engineer has approved the Contractor's mixture proportions. The approved water-cementitious materials ratio shall not exceed the maximum value specified.

The results of the concrete mix shall include a statement giving the maximum nominal coarse aggregate size and the weights and volumes of each ingredient proportioned on a one cubic yard (meter) basis. Aggregate quantities shall be based on the mass in a saturated surface dry condition.

If a change in source(s) is made, or admixtures added or deleted from the mix, a new concrete mix must be submitted to the RPR for approval.

The RPR may request samples at any time for testing, prior to and during production, to verify the quality of the materials and to ensure conformance with the applicable specifications.

501-3.4 Concrete Mix submittal. The concrete mix shall be submitted to the RPR at least **30** days prior to the start of operations. The submitted concrete mix shall not be more than 180 days old and must use the materials to be used for production for the project. Production shall not begin until the concrete mix is approved in writing by the RPR.

Each of the submitted concrete mixes (i.e, slip form, side form machine finish and side form hand finish) shall be stamped or sealed by the responsible professional Engineer of the laboratory and shall include the following items and quantities as a minimum:

- Certified material test reports for aggregate in accordance with paragraph 501-2.1. Certified reports must include all tests required; reporting each test, test method, test result, and requirement specified (criteria).
- Combined aggregate gradations and analysis; and including plots of the fine aggregate fineness modulus.
- Reactivity Test Results.
- Coarse aggregate quality test results, including deleterious materials.
- Fine aggregate quality test results, including deleterious materials.
- Mill certificates for cement and supplemental cementitious materials.
- Certified test results for all admixtures, including Lithium Nitrate if applicable.
- Specified flexural strength, slump, and air content.
- Recommended proportions/volumes for proposed mixture and trial water-cementitious materials ratio, including actual slump and air content.
- Flexural and compressive strength summaries and plots, including all individual beam and cylinder breaks.
- Correlation ratios for acceptance testing and Contractor QC testing, when applicable.
- Historical record of test results documenting production standard deviation, when applicable.

501-3.5 Cementitious materials.

a. Fly ash. When fly ash is used as a partial replacement for cement, the replacement rate shall be determined from laboratory trial mixes, and shall be between 20 and 30% by weight of the total cementitious material. If fly ash is used in conjunction with slag cement the maximum replacement rate shall not exceed 10% by weight of total cementitious material.

b. Slag cement (ground granulated blast furnace (GGBF)). Slag cement may be used. The slag cement, or slag cement plus fly ash if both are used, may constitute between 25 to 55% of the total cementitious material by weight.

c. Raw or calcined natural pozzolan. Natural pozzolan may be used in the concrete mix. When pozzolan is used as a partial replacement for cement, the replacement rate shall be determined from laboratory trial mixes, and shall be between 20 and 30% by weight of the total cementitious material. If pozzolan is used in conjunction with slag cement the maximum replacement rate shall not exceed 10% by weight of total cementitious material.

501-3.6 Admixtures.

a. Air-entraining admixtures. Air-entraining admixture are to be added in such a manner that will ensure uniform distribution of the agent throughout the batch. The air content of freshly mixed air-entrained concrete shall be based upon trial mixes with the materials to be used in the work adjusted to produce concrete of the required plasticity and workability. The percentage of air in the mix shall be **2.5%.** Air content shall be determined by testing in accordance with ASTM C231 for gravel and stone coarse aggregate and ASTM C173 for slag and other highly porous coarse aggregate.

b. Water-reducing admixtures. Water-reducing admixtures shall be added to the mix in the manner recommended by the manufacturer and in the amount necessary to comply with the specification requirements. Tests shall be conducted with the materials to be used in the work, in accordance with ASTM C494.

c. Other admixtures. Set controlling, and other approved admixtures shall be added to the mix in the manner recommended by the manufacturer and in the amount necessary to comply with the specification requirements. Tests shall be conducted with the materials to be used in the work, in accordance with ASTM C494.

d. Lithium nitrate. Lithium nitrate shall be added to the mix in the manner recommended by the manufacturer and in the amount necessary to comply with the specification requirements in accordance with paragraph 501-2.10d.

CONSTRUCTION METHODS

501-4.1 Control Strip. The control strip(s) shall be to the next planned joint after the initial 250 feet (75 m) of each type of pavement construction (slip-form pilot lane, slip-form fill-in lane, or fixed form). The Contractor shall demonstrate, in the presence of the RPR, that the materials, concrete mix, equipment, construction processes, and quality control processes meet the requirements of the specifications. The concrete mixture shall be extruded from the paver meeting the edge slump tolerance and with little or no finishing. Pilot, fill-in, and fixed-form control strips will be accepted separately. Minor adjustments to the mix design may be required to place an acceptable control strip. The production mix will be the adjusted mix design used to place the acceptable control strip. Upon acceptance of the control strip by the RPR, the Contractor must use the same equipment, materials, and construction methods for the remainder of concrete paving. Any adjustments to processes or materials must be approved in advance by the RPR.

Acceptable control strips will meet edge slump tolerance and surface acceptable with little or no finishing, air content within action limits, strength equal or greater than requirements of P501-3.3. The control strip will be considered one lot for payment (no sublots required for control strip). Payment will only be made for an acceptable control strip in accordance with paragraph 501-8.1 using a lot pay factor equal to 100.

501-4.2 Equipment. The Contractor is responsible for the proper operation and maintenance of all equipment necessary for handling materials and performing all parts of the work to meet this specification.

a. Plant and equipment. The plant and mixing equipment shall conform to the requirements of ASTM C94 and/or ASTM C685. Each truck mixer shall have attached in a prominent place a manufacturer's nameplate showing the capacity of the drum in terms of volume of mixed concrete and the speed of rotation of the mixing drum or blades. The truck mixers shall be examined daily for changes in condition due to accumulation of hard concrete or mortar or wear of blades. The pickup and throwover blades shall be replaced when they have worn down 3/4 inch (19 mm) or more. The Contractor shall have a copy of the manufacturer's design on hand showing dimensions and arrangement of blades in reference to original height and depth.

Equipment for transferring and spreading concrete from the transporting equipment to the paving lane in front of the finishing equipment shall be provided. The equipment shall be specially manufactured, self-propelled transfer equipment which will accept the concrete outside the paving lane and will spread it evenly across the paving lane in front of the paver and strike off the surface evenly to a depth which permits the paver to operate efficiently.

b. Finishing equipment.

(1) Slip-form. The standard method of constructing concrete pavements shall be with an approved slip-form paving equipment designed and operated to spread, consolidate, screed, and finish the freshly placed concrete in one complete pass of the machine so that the end result is a dense and homogeneous pavement which is achieved with a minimum of hand finishing. The paver-finisher shall be a heavy duty, self-propelled machine designed specifically for paving and finishing high quality concrete pavements.

(2) Fixed-form. On projects requiring less than 10,000 cubic yards of concrete pavement or irregular areas at locations inaccessible to slip-form paving equipment, concrete pavement may be placed with equipment specifically designed for placement and finishing using stationary side forms. Methods and equipment shall be reviewed and accepted by the RPR. Hand screeding and float finishing may only be used on small irregular areas as allowed by the RPR.

c. Vibrators. Vibrator shall be the internal type. The rate of vibration of each vibrating unit shall be sufficient to consolidate the pavement without segregation or voids. The number, spacing, and frequency shall be as necessary to provide a dense and homogeneous pavement and meet the recommendations of American Concrete Institute (ACI) 309R, Guide for Consolidation of Concrete. Adequate power to operate all vibrators shall be available on the paver. The vibrators shall be automatically controlled so that they shall be stopped as forward motion ceases. The Contractor shall provide an electronic or mechanical means to monitor vibrator status. The checks on vibrator status shall occur a minimum of two times per day or when requested by the RPR.

Hand held vibrators may only be used in irregular areas and shall meet the recommendations of ACI 309R, Guide for Consolidation of Concrete.

d. Concrete saws. The Contractor shall provide sawing equipment adequate in number of units and power to complete the sawing to the required dimensions. The Contractor shall provide at least one standby saw in good working order and a supply of saw blades at the site of the work at all times during sawing operations.

e. Fixed forms. Straight side fixed forms shall be made of steel and shall be furnished in sections not less than 10 feet (3 m) in length. Forms shall be provided with adequate devices for secure settings so that when in place they will withstand, without visible spring or settlement, the impact and vibration of the consolidating and finishing equipment. Forms with battered top surfaces and bent, twisted or broken forms shall not be used. Built-up forms shall not be used, except as approved by the RPR. The top face of the form shall not vary from a true plane more than 1/8 inch (3 mm) in 10 feet (3 m), and the upstanding leg shall not vary more than 1/4 inch (6 mm). The forms shall contain provisions for locking the ends of abutting sections together tightly for secure setting. Wood forms may be used under special conditions, when approved by the RPR. The forms shall extend the full depth of the pavement section.

501-4.3 Form setting. Forms shall be set to line and grade as shown on the plans, sufficiently in advance of the concrete placement, to ensure continuous paving operation. Forms shall be set to withstand, without visible spring or settlement, the impact and vibration of the consolidating and finishing equipment. Forms shall be cleaned and oiled prior to the concrete placement.

501-4.4 Base surface preparation prior to placement. Any damage to the prepared base, subbase, and subgrade shall be corrected full depth by the Contractor prior to concrete placement. The underlying surface shall be entirely free of frost when concrete is placed. The prepared grade shall be moistened with water, without saturating, immediately ahead of concrete placement to prevent rapid loss of moisture from concrete. Bond breaker shall be applied in accordance with 501-2.12.

501-4.5 Handling, measuring, and batching material. Aggregate stockpiles shall be constructed and managed in such a manner that prevents segregation and intermixing of deleterious materials. Aggregates from different sources shall be stockpiled, weighed and batched separately at the concrete batch plant. Aggregates that have become segregated or mixed with earth or foreign material shall not be used. All aggregates produced or handled by hydraulic methods, and washed aggregates, shall be stockpiled or binned for draining at least 12 hours before being batched. Store and maintain all aggregates at a uniform moisture content prior to use. A continuous supply of materials shall be provided to the work to ensure continuous placement.

501-4.6 Mixing concrete. The concrete may be mixed at the work site, in a central mix plant or in truck mixers. The mixer shall be of an approved type and capacity. Mixing time shall be measured from the time all materials are placed into the drum until the drum is emptied into the truck. All concrete shall be mixed and delivered to the site in accordance with the requirements of ASTM C94 or ASTM C685.

Mixed concrete from the central mixing plant shall be transported in truck mixers, truck agitators, or non-agitating trucks. The elapsed time from the addition of cementitious material to the mix until the concrete is discharged from the truck should not exceed [30] minutes when the concrete is hauled in non-agitating trucks, nor 90 minutes when the concrete is hauled in truck mixers or truck agitators. In no case shall the temperature of the concrete when placed exceed 90°F (32°C). Retempering concrete by adding water or by other means will not be permitted. With transit mixers additional water may be added to the batch materials and additional mixing performed to increase the slump to meet the specified requirements provided the addition of water

is performed within 45 minutes after the initial mixing operations and provided the water/cementitious ratio specified is not exceeded.

501-4.7 Weather Limitations on mixing and placing. No concrete shall be mixed, placed, or finished when the natural light is insufficient, unless an adequate and approved artificial lighting system is operated.

a. Cold weather. Unless authorized in writing by the RPR, mixing and concreting operations shall be discontinued when a descending air temperature in the shade and away from artificial heat reaches 40°F (4°C) and shall not be resumed until an ascending air temperature in the shade and away from artificial heat reaches 35°F (2°C).

The aggregate shall be free of ice, snow, and frozen lumps before entering the mixer. The temperature of the mixed concrete shall not be less than 50°F (10°C) at the time of placement. Concrete shall not be placed on frozen material nor shall frozen aggregates be used in the concrete.

When concreting is authorized during cold weather, water and/or the aggregates may be heated to not more than 150°F (66°C). The apparatus used shall heat the mass uniformly and shall be arranged to preclude the possible occurrence of overheated areas which might be detrimental to the materials.

Curing during cold weather shall be in accordance with paragraph 501-4.13d.

b. Hot weather. During periods of hot weather when the maximum daily air temperature exceeds 85°F (30°C), the following precautions shall be taken.

The forms and/or the underlying surface shall be sprinkled with water immediately before placing the concrete. The concrete shall be placed at the coolest temperature practicable, and in no case shall the temperature of the concrete when placed exceed 90°F (32°C). The aggregates and/or mixing water shall be cooled as necessary to maintain the concrete temperature at or not more than the specified maximum.

The concrete placement shall be protected from exceeding an evaporation rate of 0.2 psf (0.98 kg/m^2 per hour) per hour. When conditions are such that problems with plastic cracking can be expected, and particularly if any plastic cracking begins to occur, the Contractor shall immediately take such additional measures as necessary to protect the concrete surface. If the Contractor's measures are not effective in preventing plastic cracking, paving operations shall be immediately stopped.

Curing during hot weather shall be in accordance with paragraph 501-4.13e.

c. Temperature management program. Prior to the start of paving operation for each day of paving, the Contractor shall provide the RPR with a Temperature Management Program for the concrete to be placed to assure that uncontrolled cracking is avoided. (Federal Highway Administration HIPERPAV 3 is one example of a temperature management program.) As a minimum, the program shall address the following items:

(1) Anticipated tensile strains in the fresh concrete as related to heating and cooling of the concrete material.

(2) Anticipated weather conditions such as ambient temperatures, wind velocity, and relative humidity; and anticipated evaporation rate using Figure 19-9, PCA, Design and Control of Concrete Mixtures.

(3) Anticipated timing of initial sawing of joint.

(4) Anticipated number and type of saws to be used.

d. **Rain.** The Contractor shall have available materials for the protection of the concrete during inclement weather. Such protective materials shall consist of rolled polyethylene sheeting at least 4 mils (0.1 mm) thick of sufficient length and width to cover the plastic concrete slab and any edges. The sheeting may be mounted on either the paver or a separate movable bridge from which it can be unrolled without dragging over the plastic concrete surface. When rain appears imminent, all paving operations shall stop and all available personnel shall begin covering the surface of the unhardened concrete with the protective covering.

501-4.8 Concrete Placement. At any point in concrete conveyance, the free vertical drop of the concrete from one point to another or to the underlying surface shall not exceed 3 feet (1 m). The finished concrete product must be dense and homogeneous, without segregation and conforming to the standards in this specification. Backhoes and grading equipment shall not be used to distribute the concrete in front of the paver. Front end loaders will not be used. All concrete shall be consolidated without voids or segregation, including under and around all load-transfer devices, joint assembly units, and other features embedded in the pavement. Hauling equipment or other mechanical equipment can be permitted on adjoining previously constructed pavement when the concrete strength reaches **a compressive strength of 3,100 psi (21.4 MPa),** based on the average of four field cured specimens per 2,000 cubic yards (1,530 cubic meters) of concrete placed. The Contractor must determine that the above minimum strengths are adequate to protection the pavement from overloads due to the construction equipment proposed for the project.

a. Slip-form construction. The concrete shall be distributed uniformly into final position by a self-propelled slip-form paver without delay. The alignment and elevation of the paver shall be regulated from outside reference lines established for this purpose. The paver shall vibrate the concrete for the full width and depth of the strip of pavement being placed and the vibration shall be adequate to provide a consistency of concrete that will stand normal to the surface with sharp well-defined edges. The sliding forms shall be rigidly held together laterally to prevent spreading of the forms. The plastic concrete shall be effectively consolidated by internal vibration with transverse vibrating units for the full width of the pavement and/or a series of equally placed longitudinal vibrating units. The space from the outer edge of the pavement to longitudinal unit shall not exceed 9 inches (23 cm) for slipform and at the end of the dowels for the fill-in lanes. The spacing of internal units shall be uniform and shall not exceed 18 inches (0.5 m).

The term internal vibration means vibrating units located within the specified thickness of pavement section.

The rate of vibration of each vibrating unit shall be sufficient to consolidate the pavement without, segregation, voids, or vibrator trails and the amplitude of vibration shall be sufficient to be perceptible on the surface of the concrete along the entire length of the vibrating unit and for a distance of at least one foot (30 cm). The frequency of vibration or amplitude should be adjusted proportionately with the rate of travel to result in a uniform density and air content. The paving machine shall be equipped with a tachometer or other suitable device for measuring and indicating the actual frequency of vibrations.

The concrete shall be held at a uniform consistency. The slip-form paver shall be operated with as nearly a continuous forward movement as possible and all operations of mixing, delivering, and spreading concrete shall be coordinated to provide uniform progress with stopping and starting of the paver held to a minimum. If for any reason, it is necessary to stop the forward movement of the paver, the vibratory and tamping elements shall also be stopped

immediately. No tractive force shall be applied to the machine, except that which is controlled from the machine.

When concrete is being placed adjacent to an existing pavement, that part of the equipment which is supported on the existing pavement shall be equipped with protective pads on crawler tracks or rubber-tired wheels on which the bearing surface is offset to run a sufficient distance from the edge of the pavement to avoid breaking the pavement edge.

Not more than 15% of the total free edge of each 500-foot (150 m) segment of pavement, or fraction thereof, shall have an edge slump exceeding 1/4 inch (6 mm), and none of the free edge of the pavement shall have an edge slump exceeding 3/8 inch (9 mm). (The total free edge of 500 feet (150 m) of pavement will be considered the cumulative total linear measurement of pavement edge originally constructed as nonadjacent to any existing pavement; that is, 500 feet (150 m) of paving lane originally constructed as a separate lane will have 1,000 feet (300 m) of free edge, 500 feet (150 m) of fill-in lane will have no free edge, etc.). The area affected by the downward movement of the concrete along the pavement edge shall be limited to not more than 18 inches (0.5 m) from the edge.

When excessive edge slump cannot be corrected before the concrete has hardened, the area with excessive edge slump will be removed the full width of the slip form lane and replaced at the expense of the Contractor as directed by the RPR.

b. Fixed-form construction. Forms shall be drilled in advance of being placed to line and grade to accommodate tie bars / dowel bars where these are specified.

Immediately in advance of placing concrete and after all subbase operations are completed, side forms shall be trued and maintained to the required line and grade for a distance sufficient to prevent delay in placing.

Side forms shall remain in place at least 12 hours after the concrete has been placed, and in all cases until the edge of the pavement no longer requires the protection of the forms. Curing compound shall be applied to the concrete immediately after the forms have been removed.

Side forms shall be thoroughly cleaned and coated with a release agent each time they are used and before concrete is placed against them.

Concrete shall be spread, screed, shaped and consolidated by one or more self-propelled machines. These machines shall uniformly distribute and consolidate concrete without segregation so that the completed pavement will conform to the required cross-section with a minimum of handwork.

The number and capacity of machines furnished shall be adequate to perform the work required at a rate equal to that of concrete delivery. The equipment must be specifically designed for placement and finishing using stationary side forms. Methods and equipment shall be reviewed and accepted by the RPR.

Concrete for the full paving width shall be effectively consolidated by internal vibrators. The rate of vibration of each vibrating unit shall be sufficient to consolidate the pavement without segregation, voids, or leaving vibrator trails.

Power to vibrators shall be connected so that vibration ceases when forward or backward motion of the machine is stopped.

c. Consolidation. Concrete shall be consolidated with the specified type of lane-spanning, gang-mounted, mechanical, immersion type vibrating equipment mounted in front of the paver, supplemented, in rare instances as specified, by hand-operated vibrators. The vibrators shall be inserted into the concrete to a depth that will provide the best full-depth

consolidation but not closer to the underlying material than 2 inches (50 mm). Vibrators shall not be used to transport or spread the concrete. For each paving train, at least one additional vibrator spud, or sufficient parts for rapid replacement and repair of vibrators shall be maintained at the paving site at all times. Any evidence of inadequate consolidation (honeycomb along the edges, large air pockets, or any other evidence) or over-consolidation (vibrator trails, segregation, or any other evidence) shall require the immediate stopping of the paving operation and adjustment of the equipment or procedures as approved by the RPR.

If a lack of consolidation of the hardened concrete is suspected by the RPR, referee testing may be required. Referee testing of hardened concrete will be performed by the RPR by cutting cores from the finished pavement after a minimum of 24 hours curing. The RPR shall visually examine the cores for evidence of lack of consolidation. Density determinations will be made by the RPR based on the water content of the core as taken. ASTM C642 shall be used for the determination of core density in the saturated-surface dry condition. When required, referee cores will be taken at the minimum rate of one for each 500 cubic yards (382 m^2) of pavement, or fraction. The Contractor shall be responsible for all referee testing cost if they fail to meet the required density.

The average density of the cores shall be at least 97% of the original concrete mix density, with no cores having a density of less than 96% of the original concrete mix density. Failure to meet the referee tests will be considered evidence that the minimum requirements for vibration are inadequate for the job conditions. Additional vibrating units or other means of increasing the effect of vibration shall be employed so that the density of the hardened concrete conforms to the above requirements.

501-4.9 Strike-off of concrete and placement of reinforcement. Following the placing of the concrete, it shall be struck off to conform to the cross-section shown on the plans and to an elevation that when the concrete is properly consolidated and finished, the surface of the pavement shall be at the elevation shown on the plans. When reinforced concrete pavement is placed in two layers, the bottom layer shall be struck off to such length and depth that the sheet of reinforcing steel fabric or bar mat may be laid full length on the concrete in its final position without further manipulation. The reinforcement shall then be placed directly upon the concrete, after which the top layer of the concrete shall be placed, struck off, and screed. If any portion of the bottom layer of concrete has been placed more than 30 minutes without being covered with the top layer or if initial set has taken place, it shall be removed and replaced with freshly mixed concrete at the Contractor's expense. When reinforced concrete is placed in one layer, the reinforcement may be positioned in advance of concrete placement or it may be placed in plastic concrete by mechanical or vibratory means after spreading.

Reinforcing steel, at the time concrete is placed, shall be free of mud, oil, or other organic matter that may adversely affect or reduce bond. Reinforcing steel with rust, mill scale or a combination of both will be considered satisfactory, provided the minimum dimensions, weight, and tensile properties of a hand wire-brushed test specimen are not less than the applicable ASTM specification requirements.

501-4.10 Joints. Joints shall be constructed as shown on the plans and in accordance with these requirements. All joints shall be constructed with their faces perpendicular to the surface of the pavement and finished or edged as shown on the plans. Joints shall not vary more than 1/2-inch (12 mm) from their designated position and shall be true to line with not more than 1/4-inch (6 mm) variation in 10 feet (3 m). The surface across the joints shall be tested with a 12-foot (3 m) straightedge as the joints are finished and any irregularities in excess of 1/4 inch (6 mm) shall be corrected before the concrete has hardened. All joints shall be so prepared, finished, or cut to provide a groove of uniform width and depth as shown on the plans.

a. Construction. Longitudinal construction joints shall be slip-formed or formed against side forms as shown in the plans.

Transverse construction joints shall be installed at the end of each day's placing operations and at any other points within a paving lane when concrete placement is interrupted for more than 30 minutes or it appears that the concrete will obtain its initial set before fresh concrete arrives. The installation of the joint shall be located at a planned contraction or expansion joint. If placing of the concrete is stopped, the Contractor shall remove the excess concrete back to the previous planned joint.

b. Contraction. Contraction joints shall be installed at the locations and spacing as shown on the plans. Contraction joints shall be installed to the dimensions required by forming a groove or cleft in the top of the slab while the concrete is still plastic or by sawing a groove into the concrete surface after the concrete has hardened. When the groove is formed in plastic concrete the sides of the grooves shall be finished even and smooth with an edging tool. If an insert material is used, the installation and edge finish shall be according to the manufacturer's instructions. The groove shall be finished or cut clean so that spalling will be avoided at intersections with other joints. Grooving or sawing shall produce a slot at least 1/8 inch (3 mm) wide and to the depth shown on the plans.

c. Isolation (expansion). Isolation joints shall be installed as shown on the plans. The premolded filler of the thickness as shown on the plans, shall extend for the full depth and width of the slab at the joint. The filler shall be fastened uniformly along the hardened joint face with no buckling or debris between the filler and the concrete interface, including a temporary filler for the sealant reservoir at the top of the slab. The edges of the joint shall be finished and tooled while the concrete is still plastic

d. Dowels and Tie Bars for Joints

(1) Tie bars. Tie bars shall consist of deformed bars installed in joints as shown on the plans. Tie bars shall be placed at right angles to the centerline of the concrete slab and shall be spaced at intervals shown on the plans. They shall be held in position parallel to the pavement surface and in the middle of the slab depth and within the tolerances in paragraph 501-4.10(f.). When tie bars extend into an unpaved lane, they may be bent against the form at longitudinal construction joints, unless threaded bolt or other assembled tie bars are specified. Tie bars shall not be painted, greased, or enclosed in sleeves. When slip-form operations call for tie bars, two-piece hook bolts can be installed.

(2) Dowel bars. Dowel bars shall be placed across joints in the proper horizontal and vertical alignment as shown on the plans. The dowels shall be coated with a bond-breaker or other lubricant recommended by the manufacturer and approved by the RPR. Dowels bars at longitudinal construction joints shall be bonded in drilled holes.

(3) Placing dowels and tie bars. Horizontal spacing of dowels shall be within a tolerance of ±3/4 inch (19 mm). The vertical location on the face of the slab shall be within a tolerance of ±1/2 inch (12 mm). The method used to install dowels shall ensure that the horizontal and vertical alignment will not be greater than 1/4 inch per feet (6 mm per 0.3 m), except for those across the crown or other grade change joints. Dowels across crowns and other joints at grade changes shall be measured to a level surface. Horizontal alignment shall be checked perpendicular to the joint edge. The portion of each dowel intended to move within the concrete or expansion cap shall be wiped clean and coated with a thin, even film of lubricating oil or light grease before the concrete is placed. Dowels shall be installed as specified in the following subparagraphs.

Dowels and tie bars shall not be placed closer than 0.6 times the dowel bar or tie bar length to the planned joint line. If the last regularly spaced longitudinal dowel and/or tie bar is closer than that dimension, it shall be moved away from the joint to a location 0.6 times the dowel bar and/or tie bar length, but not closer than 6 inches (150 mm) to its nearest neighbor.

(a) Contraction joints. Dowels and tie bars in longitudinal and transverse contraction joints within the paving lane shall be held securely in place by means of rigid metal frames or basket assemblies of an approved type. The basket assemblies shall be held securely in the proper location by means of suitable pins or anchors. Do not cut or crimp the dowel basket tie wires.

At the Contractor's option, dowels and tie bars in contraction joints may be installed by insertion into the plastic concrete using approved equipment and procedures per the paver manufacturer's design. Approval of installation methods will be based on the results of the control strip showing that the dowels and tie bars are installed within specified tolerances as verified by cores or non-destructive rebar location devices approved by the RPR.

(b) Construction joints. Install dowels and tie bars by the cast-in- place or the drill-and-dowel method. Installation by removing and replacing in preformed holes will not be permitted. Dowels and tie bars shall be prepared and placed across joints where indicated, correctly aligned, and securely held in the proper horizontal and vertical position during placing and finishing operations, by means of devices fastened to the forms.

(c) Joints in hardened concrete. Install dowels in hardened concrete by bonding the dowels into holes drilled into the concrete. The concrete shall have cured for seven (7) days or reached a minimum **compressive strength of 3100 psi ((21.4 MPa)**before drilling begins. Holes 1/8 inch (3 mm) greater in diameter than the dowels shall be drilled into the hardened concrete using rotary-core drills. Rotary-percussion drills may be used, provided that excessive spalling does not occur. Spalling beyond the limits of the grout retention ring will require modification of the equipment and operation. Depth of dowel hole shall be within a tolerance of ±1/2 inch (12 mm) of the dimension shown on the drawings. On completion of the drilling operation, the dowel hole shall be blown out with oil-free, compressed air. Dowels shall be bonded in the drilled holes using epoxy resin. Epoxy resin shall be injected at the back of the hole before installing the dowel and extruded to the collar during insertion of the dowel so as to completely fill the void around the dowel. Application by buttering the dowel will not be permitted. The dowels shall be held in alignment at the collar of the hole by means of a suitable metal or plastic grout retention ring fitted around the dowel.

e. Sawing of joints. Sawing shall commence, without regard to day or night, as soon as the concrete has hardened sufficiently to permit cutting without chipping, spalling, or tearing and before uncontrolled shrinkage cracking of the pavement occurs and shall continue without interruption until all joints have been sawn. All slurry and debris produced in the sawing of joints shall be removed by vacuuming and washing. Curing compound or system shall be reapplied in the initial saw-cut and maintained for the remaining cure period.

Joints shall be cut in locations as shown on the plans. The initial joint cut shall be a minimum 1/8 inch (3 mm) wide and to the depth shown on the plans. Prior to placement of joint sealant or seals, the top of the joint shall be widened by sawing as shown on the plans.

501-4.11 Finishing. Finishing operations shall be a continuing part of placing operations starting immediately behind the strike-off of the paver. Initial finishing shall be provided by the transverse screed or extrusion plate. The sequence of operations shall be transverse finishing, longitudinal machine floating if used, straightedge finishing, edging of joints, and then texturing. Finishing shall be by the machine method. The hand method shall be used only on isolated areas of odd slab widths or shapes and in the event of a breakdown of the mechanical finishing equipment. Supplemental hand finishing for machine finished pavement shall be kept to an absolute minimum. Any machine finishing operation which requires appreciable hand finishing, other than a moderate amount of straightedge finishing, shall be immediately stopped and proper adjustments made or the equipment replaced. Equipment, mixture, and/or procedures which produce more than 1/4 inch (6 mm) of mortar-rich surface shall be immediately modified as necessary to eliminate this condition or operations shall cease. Compensation shall be made for surging behind the screeds or extrusion plate and settlement during hardening and care shall be taken to ensure that paving and finishing machines are properly adjusted so that the finished surface of the concrete (not just the cutting edges of the screeds) will be at the required line and grade. Finishing equipment and tools shall be maintained clean and in an approved condition. At no time shall water be added to the surface of the slab with the finishing equipment or tools, or in any other way. Fog (mist) sprays or other surface applied finishing aids specified to prevent plastic shrinkage cracking, approved by the RPR, may be used in accordance with the manufacturers requirements.

a. Machine finishing with slipform pavers. The slipform paver shall be operated so that only a very minimum of additional finishing work is required to produce pavement surfaces and edges meeting the specified tolerances. Any equipment or procedure that fails to meet these specified requirements shall immediately be replaced or modified as necessary. A self-propelled non-rotating pipe float may be used while the concrete is still plastic, to remove minor irregularities and score marks. Only one pass of the pipe float shall be allowed. Equipment, mixture, and/or procedures which produce more than 1/4 inch (6 mm) of mortar-rich surface shall be immediately modified as necessary to eliminate this condition or operations shall cease. Remove excessive slurry from the surface with a cutting straightedge and wipe off the edge. Any slurry which does run down the vertical edges shall be immediately removed by hand, using stiff brushes or scrapers. No slurry, concrete or concrete mortar shall be used to build up along the edges of the pavement to compensate for excessive edge slump, either while the concrete is plastic or after it hardens.

b. Machine finishing with fixed forms. The machine shall be designed to straddle the forms and shall be operated to screed and consolidate the concrete. Machines that cause displacement of the forms shall be replaced. The machine shall make only one pass over each area of pavement. If the equipment and procedures do not produce a surface of uniform texture, true to grade, in one pass, the operation shall be immediately stopped and the equipment, mixture, and procedures adjusted as necessary.

c. Other types of finishing equipment. Clary screeds, other rotating tube floats, or bridge deck finishers are not allowed on mainline paving, but may be allowed on irregular or odd-shaped slabs, and near buildings or trench drains, subject to the RPR's approval.

Bridge deck finishers shall have a minimum operating weight of 7500 pounds (3400 kg) and shall have a transversely operating carriage containing a knock-down auger and a minimum

of two immersion vibrators. Vibrating screeds or pans shall be used only for isolated slabs where hand finishing is permitted as specified, and only where specifically approved.

d. Hand finishing. Hand finishing methods will not be permitted, except under the following conditions: (1) in the event of breakdown of the mechanical equipment, hand methods may be used to finish the concrete already deposited on the grade and (2) in areas of narrow widths or of irregular dimensions where operation of the mechanical equipment is impractical.

e. Straightedge testing and surface correction. After the pavement has been struck off and while the concrete is still plastic, it shall be tested for trueness with a 12-foot (3.7-m) finishing straightedge swung from handles capable of spanning at least one-half the width of the slab. The straightedge shall be held in contact with the surface in successive positions parallel to the centerline and the whole area gone over from one side of the slab to the other, as necessary. Advancing shall be in successive stages of not more than one-half the length of the straightedge. Any excess water and laitance in excess of 1/8 inch (3 mm) thick shall be removed from the surface of the pavement and wasted. Any depressions shall be immediately filled with freshly mixed concrete, struck off, consolidated, and refinished. High areas shall be cut down and refinished. Special attention shall be given to assure that the surface across joints meets the smoothness requirements. Straightedge testing and surface corrections shall continue until the entire surface is found to be free from observable departures from the straightedge and until the slab conforms to the required grade and cross-section. The use of long-handled wood floats shall be confined to a minimum; they may be used only in emergencies and in areas not accessible to finishing equipment.

501-4.12 Surface texture. The surface of the pavement shall be finished as designated below for all newly constructed concrete pavements. It is important that the texturing equipment not tear or unduly roughen the pavement surface during the operation. The texture shall be uniform in appearance and approximately 1/16 inch (2 mm) in depth. Any imperfections resulting from the texturing operation shall be corrected to the satisfaction of the RPR.

a. Brush or broom finish. Shall be applied when the water sheen has practically disappeared. The equipment shall operate transversely across the pavement surface.

b. Burlap drag finish. Burlap, at least 15 ounces per square yard (555 grams per square meter), will typically produce acceptable texture. To obtain a textured surface, the transverse threads of the burlap shall be removed approximately one foot (30 cm) from the trailing edge. A heavy buildup of grout on the burlap threads produces the desired wide sweeping longitudinal striations on the pavement surface.

c. Artificial turf finish. Shall be applied by dragging the surface of the pavement in the direction of concrete placement with an approved full-width drag made with artificial turf. The leading transverse edge of the artificial turf drag will be securely fastened to a lightweight pole on a traveling bridge. At least 2 feet (60 cm) of the artificial turf shall be in contact with the concrete surface during dragging operations. Approval of the artificial turf will be done only after it has been demonstrated by the Contractor to provide a satisfactory texture. One type that has provided satisfactory texture consists of 7,200 approximately 0.85-inch-long polyethylene turf blades per square foot.

501-4.13 Curing. Immediately after finishing operations are completed and bleed water is gone from the surface, all exposed surfaces of the newly placed concrete shall be cured for a 7-day cure period in accordance with one of the methods below. Failure to provide sufficient cover material of whatever kind the Contractor may elect to use, or lack of water to adequately take care

of both curing and other requirements, shall be cause for immediate suspension of concreting operations. The concrete shall not be left exposed for more than 1/2 hour during the curing period.

When a two-saw-cut method is used to construct the contraction joint, the curing compound shall be applied to the saw-cut immediately after the initial cut has been made. The sealant reservoir shall not be sawed until after the curing period has been completed. When the one cut method is used to construct the contraction joint, the joint shall be cured with wet rope, wet rags, or wet blankets. The rags, ropes, or blankets shall be kept moist for the duration of the curing period.

a. Impervious membrane method. Curing with liquid membrane compounds should not occur until bleed and surface moisture has evaporated. All exposed surfaces of the pavement shall be sprayed uniformly with white pigmented curing compound immediately after the finishing of the surface and before the set of the concrete has taken place. The curing compound shall not be applied during rainfall. Curing compound shall be applied by mechanical sprayers under pressure at the rate of one gallon (4 liters) to not more than 150 square feet (14 sq m). The spraying equipment shall be of the fully atomizing type equipped with a tank agitator. At the time of use, the compound shall be in a thoroughly mixed condition with the pigment uniformly dispersed throughout the vehicle. During application, the compound shall be stirred continuously by mechanical means. Hand spraying of odd widths or shapes and concrete surfaces exposed by the removal of forms will be permitted. When hand spraying is approved by the RPR, a double application rate shall be used to ensure coverage. Should the film become damaged from any cause, including sawing operations, within the required curing period, the damaged portions shall be repaired immediately with additional compound or other approved means. Upon removal of side forms, the sides of the exposed slabs shall be protected immediately to provide a curing treatment equal to that provided for the surface.

b. White burlap-polyethylene sheets. The surface of the pavement shall be entirely covered with the sheeting. The sheeting used shall be such length (or width) that it will extend at least twice the thickness of the pavement beyond the edges of the slab. The sheeting shall be placed so that the entire surface and both edges of the slab are completely covered. The sheeting shall be placed and weighted to remain in contact with the surface covered, and the covering shall be maintained fully saturated and in position for seven (7) days after the concrete has been placed.

c. Water method. The entire area shall be covered with burlap or other water absorbing material. The material shall be of sufficient thickness to retain water for adequate curing without excessive runoff. The material shall be kept wet at all times and maintained for seven (7) days. When the forms are stripped, the vertical walls shall also be kept moist. It shall be the responsibility of the Contractor to prevent ponding of the curing water on the subbase.

d. Concrete protection for cold weather. Maintain the concrete at a temperature of at least 50°F (10°C) for a period of 72 hours after placing and at a temperature above freezing for the remainder of the 7-day curing period. The Contractor shall be responsible for the quality and strength of the concrete placed during cold weather; and any concrete damaged shall be removed and replaced at the Contractor's expense.

e. Concrete protection for hot weather. Concrete should be continuous moisture cured for the entire curing period and shall commence as soon as the surfaces are finished and continue for at least 24 hours. However, if moisture curing is not practical beyond 24 hours, the concrete surface shall be protected from drying with application of a liquid membrane-forming curing compound while the surfaces are still damp. Other curing methods may be approved by the RPR.

501-4.14 Removing forms. Unless otherwise specified, forms shall not be removed from freshly placed concrete until it has hardened sufficiently to permit removal without chipping, spalling, or tearing. After the forms have been removed, the sides of the slab shall be cured in accordance with paragraph 501-4.13.

If honeycombed areas are evident when the forms are removed, materials, placement, and consolidation methods must be reviewed and appropriate adjustments made to assure adequate consolidation at the edges of future concrete placements. Honeycombed areas that extend into the slab less than approximately 1 inch (25 mm), shall be repaired with an approved grout, as directed by the RPR. Honeycombed areas that extend into the slab greater than a depth of 1 inch (25 mm) shall be considered as defective work and shall be removed and replaced in accordance with paragraph 501-4.19.

501-4.15 Saw-cut grooving. If shown on the plans, grooved surfaces shall be provided in accordance with the requirements of Item P-621.

501-4.16 Sealing joints. The joints in the pavement shall be sealed in accordance with Item **P-605.**

501-4.17 Protection of pavement. The Contractor shall protect the pavement and its appurtenances against both public traffic and traffic caused by the Contractor's employees and agents until accepted by the RPR. This shall include watchmen to direct traffic and the erection and maintenance of warning signs, lights, pavement bridges, crossovers, and protection of unsealed joints from intrusion of foreign material, etc. Any damage to the pavement occurring prior to final acceptance shall be repaired or the pavement replaced at the Contractor's expense.

Aggregates, rubble, or other similar construction materials shall not be placed on airfield pavements. Traffic shall be excluded from the new pavement by erecting and maintaining barricades and signs until the concrete is at least seven (7) days old, or for a longer period if directed by the RPR.

In paving intermediate lanes between newly paved pilot lanes, operation of the hauling and paving equipment will be permitted on the new pavement after the pavement has been cured for seven (7) days, the joints are protected, the concrete has attained a minimum field cured flexural strength of [450 psi (3100 kPa)], and the slab edge is protected.

All new and existing pavement carrying construction traffic or equipment shall be kept clean and spillage of concrete and other materials shall be cleaned up immediately.

Damaged pavements shall be removed and replaced at the Contractor's expense. Slabs shall be removed to the full depth, width, and length of the slab.

501-4.18 Opening to construction traffic. The pavement shall not be opened to traffic until test specimens molded and cured in accordance with ASTM C31 have **compressive strength of 3100 psi (21.4 MPa)**. If such tests are not conducted, the pavement shall not be opened to traffic until 14 days after the concrete was placed. Prior to opening the pavement to construction traffic, all joints shall either be sealed or protected from damage to the joint edge and intrusion of foreign materials into the joint. As a minimum, backer rod or tape may be used to protect the joints from foreign matter intrusion.

501-4.19 Repair, removal, or replacement of slabs. New pavement slabs that are broken or contain cracks or are otherwise defective or unacceptable as defined by acceptance criteria in paragraph 501-6.6 shall be removed and replaced or repaired, as directed by the RPR, at the Contractor's expense. Spalls along joints shall be repaired as specified. Removal of partial slabs is not permitted. Removal and replacement shall be full depth, shall be full width of the slab, and the limit of removal shall be normal to the paving lane and to each original transverse joint. The

RPR will determine whether cracks extend full depth of the pavement and may require cores to be drilled on the crack to determine depth of cracking. Such cores shall be have a diameter of 2 inches (50 mm) to 4 inches (100 mm), shall be drilled by the Contractor and shall be filled by the Contractor with a well consolidated concrete mixture bonded to the walls of the hole with a bonding agent, using approved procedures. Drilling of cores and refilling holes shall be at no expense to the Owner. Repair of cracks as described in this section shall not be allowed if in the opinion of the RPR the overall condition of the pavement indicates that such repair is unlikely to achieve an acceptable and durable finished pavement. No repair of cracks shall be allowed in any panel that demonstrates segregated aggregate with an absence of coarse aggregate in the upper 1/8 inch (3 mm) of the pavement surface.

a. Shrinkage cracks. Shrinkage cracks which do not exceed one-third of the pavement depth shall be cleaned and either high molecular weight methacrylate (HMWM) applied; or epoxy resin (Type IV, Grade 1) pressure injected using procedures recommended by the manufacturer and approved by the RPR. Sandblasting of the surface may be required following the application of HMWM to restore skid resistance. Care shall be taken to ensure that the crack is not widened during epoxy resin injection. All epoxy resin injection shall take place in the presence of the RPR. Shrinkage cracks which exceed one-third the pavement depth shall be treated as full depth cracks in accordance with paragraphs 501-4.19b and 501-19c.

b. Slabs with cracks through interior areas. Interior area is defined as that area more than 6 inches (150 mm) from either adjacent original transverse joint. The full slab shall be removed and replaced at no cost to the Owner, when there are any full depth cracks, or cracks greater than one-third the pavement depth, that extend into the interior area.

c. Cracks close to and parallel to joints. All full-depth cracks within 6 inches (150 mm) either side of the joint and essentially parallel to the original joints, shall be treated as follows.

(1) Full depth cracks and original joint not cracked. The full-depth crack shall be treated as the new joint and the original joint filled with an epoxy resin.

i. Full-depth crack. The joint sealant reservoir for the crack shall be formed by sawing to a depth of 3/4 inches (19 mm), ±1/16 inch (2 mm), and to a width of 5/8 inch (16 mm), ±1/8 inch (3 mm). The crack shall be sawed with equipment specially designed to follow random cracks. Any equipment or procedure which causes raveling or spalling along the crack shall be modified or replaced to prevent raveling or spalling. The joint shall be sealed with sealant in accordance with P-605 or as directed by the RPR.

ii. Original joint. If the original joint sealant reservoir has been sawed out, the reservoir and as much of the lower saw cut as possible shall be filled with epoxy resin, Type IV, Grade 2, thoroughly tooled into the void using approved procedures.

If only the original narrow saw cut has been made, it shall be cleaned and pressure injected with epoxy resin, Type IV, Grade 1, using approved procedures.

Where a parallel crack goes part way across paving lane and then intersects and follows the original joint which is cracked only for the remained of the width, it shall be treated as specified above for a parallel crack, and the cracked original joint shall be prepared and sealed as originally designed.

(2) Full depth cracks and original joint cracked. If there is any place in the lane width where a parallel crack and a cracked portion of the original joint overlap, the entire slab containing the crack shall be removed and replaced.

d. Removal and replacement of full slabs. Make a full depth cut perpendicular to the slab surface along all edges of the slab with a concrete saw cutting any dowels or tie-bars. Remove damaged slab protecting adjacent pavement from damage. Damage to adjacent slabs may result in removal of additional slabs as directed by the RPR at the Contractor's expense.

The underlying material shall be repaired, re-compacted and shaped to grade.

Dowels of the size and spacing specified for other joints in similar pavement on the project shall be installed along all four (4) edges of the new slab in accordance with paragraph 501-4.10d.

Placement of concrete shall be as specified for original construction. The joints around the new slab shall be prepared and sealed as specified for original construction.

e. Spalls along joints.

(1) Spalls less than one inch wide and less than the depth of the joint sealant reservoir, shall be filled with joint sealant material.

(2) Spalls larger than one inch and/or deeper than the joint reservoir, but less than ½ the slab depth, and less than 25% of the length of the adjacent joint shall be repaired as follows:

i. Make a vertical saw cut at least one inch (25 mm) outside the spalled area and to a depth of at least 2 inches (50 mm). Saw cuts shall be straight lines forming rectangular areas surrounding the spalled area.

ii. Remove unsound concrete and at least 1/2 inch (12 mm) of visually sound concrete between the saw cut and the joint or crack with a light chipping hammer.

iii. Clean cavity with high-pressure water jets supplemented with compressed air as needed to remove all loose material.

iv. Apply a prime coat of epoxy resin, Type III, Grade I, to the dry, cleaned surface of all sides and bottom of the cavity, except any joint face.

v. Fill the cavity with low slump concrete or mortar or with epoxy resin concrete or mortar.

vi. An insert or other bond-breaking medium shall be used to prevent bond at all joint faces.

vii. A reservoir for the joint sealant shall be sawed to the dimensions required for other joints, or as required to be routed for cracks. The reservoir shall be thoroughly cleaned and sealed with the sealer specified for the joints.

(3) Spalls deeper than 1/2 of the slab depth or spalls longer than 25% of the adjacent joint require replacement of the entire slab.

f. Diamond grinding of Concrete surfaces. Diamond grinding shall be completed prior to pavement grooving. Diamond grinding of the hardened concrete should not be performed until the concrete is at least 14 days old and has achieved full minimum strength. Equipment that causes ravels, aggregate fractures, spalls or disturbance to the joints will not be permitted. The depth of diamond grinding shall not exceed 1/2 inch (13 mm) and all areas in which diamond grinding has been performed will be subject to the final pavement thickness tolerances specified.

Diamond grinding shall be performed with a machine specifically designed for diamond grinding capable of cutting a path at least 3 feet (0.9 m) wide. The saw blades shall be 1/8-inch (3-mm) wide with sufficient number of flush cut blades that create grooves between 0.090 and 0.130 inches (2 and 3.5 mm) wide; and peaks and ridges approximately 1/32 inch (1 mm) higher than the bottom of the grinding cut. The Contractor shall determine the number and

type of blades based on the hardness of the aggregate. Contractor shall demonstrate to the RPR that the grinding equipment will produce satisfactory results prior to making corrections to surfaces.

Grinding will be tapered in all directions to provide smooth transitions to areas not requiring grinding. The slurry resulting from the grinding operation shall be continuously removed and the pavement left in a clean condition. All grinding shall be at the expense of the Contractor.

CONTRACTOR QUALITY CONTROL (CQC)

501-5.1 Quality control tests. The Contractor shall provide Quality Control Tests.

501-5.2 Contractor Quality Control (CQC). The Contractor shall provide or contract for testing facilities in accordance with Item C-100. The RPR shall be permitted unrestricted access to inspect the Contractor's QC facilities and witness QC activities. The RPR will advise the Contractor in writing of any noted deficiencies concerning the QC facility, equipment, supplies, or testing personnel and procedures. When the deficiencies are serious enough to be adversely affecting the test results, the incorporation of the materials into the work shall be suspended immediately and will not be permitted to resume until the deficiencies are satisfactorily corrected

501-5.3 Contractor QC testing. The Contractor shall perform all QC tests necessary to control the production and construction processes applicable to this specification. The testing shall include, but not necessarily be limited to, tests for aggregate gradation, aggregate moisture content, slump, and air content.

The RPR may at any time, notwithstanding previous plant acceptance, reject and require the Contractor to dispose of any batch of concrete mixture which is rendered unfit for use due to contamination, segregation, or improper slump. Such rejection may be based on only visual inspection. In the event of such rejection, the Contractor may take a representative sample of the rejected material in the presence of the RPR, and if it can be demonstrated in the laboratory, in the presence of the RPR, that such material was erroneously rejected, payment will be made for the material at the contract unit price.

a. Fine aggregate.

(1) Gradation. A sieve analysis shall be made at least twice daily in accordance with ASTM C136 from randomly sampled material taken from the discharge gate of storage bins or from the conveyor belt.

(2) Moisture content. If an electric moisture meter is used, at least two direct measurements of moisture content shall be made per week to check the calibration. If direct measurements are made in lieu of using an electric meter, two tests shall be made per day. Tests shall be made in accordance with ASTM C70 or ASTM C566.

(3) Deleterious substances. Fine aggregate as delivered to the mixer shall be tested for deleterious substances in fine aggregate for concrete as specified in paragraph 501-2.1b, prior to production of the control strip, and a minimum of every 30-days during production or more frequently as necessary to control deleterious substances.

b. Coarse Aggregate.

(1) Gradation. A sieve analysis shall be made at least twice daily for each size of aggregate. Tests shall be made in accordance with ASTM C136 from randomly sampled material taken from the discharge gate of storage bins or from the conveyor belt.

(2) Moisture content. If an electric moisture meter is used, at least two direct measurements of moisture content shall be made per week to check the calibration. If direct measurements are made in lieu of using an electric meter, two tests shall be made per day. Tests shall be made in accordance with ASTM C566.

(3) Deleterious substances. Coarse aggregate as delivered to the mixer shall be tested for deleterious substances in coarse aggregate for concrete as specified in paragraph 501-2.1c, prior to production of the control strip, and a minimum of every 30-days during production or more frequently as necessary to control deleterious substances.

c. Slump. One test shall be made for each sublot. Slump tests shall be performed in accordance with ASTM C143 from material randomly sampled from material discharged from trucks at the paving site. Material samples shall be taken in accordance with ASTM C172.

d. Air content. One test shall be made for each sublot. Air content tests shall be performed in accordance with ASTM C231 for gravel and stone coarse aggregate and ASTM C173 for slag or other porous coarse aggregate, from material randomly sampled from trucks at the paving site. Material samples shall be taken in accordance with ASTM C172.

e. Unit weight and Yield. One test shall be made for each sublot. Unit weight and yield tests shall be in accordance with ASTM C138. The samples shall be taken in accordance with ASTM C172 and at the same time as the air content tests.

f. Temperatures. Temperatures shall be checked at least four times per lot at the job site in accordance with ASTM C1064.

g. Smoothness for Contractor Quality Control.

The Contractor shall perform smoothness testing in transverse and longitudinal directions daily to verify that the construction processes are producing pavement with variances less than ¼ inch in 12 feet, identifying areas that may pond water which could lead to hydroplaning of aircraft. If the smoothness criteria is not met, appropriate changes and corrections to the construction process shall be made by the Contractor before construction continues

The Contractor may use a 12-foot (3.7 m) "straightedge, a rolling inclinometer meeting the requirements of ASTM E2133 or rolling external reference device that can simulate a 12-foot (3.7m) straightedge approved by the RPR. Straight-edge testing shall start with one-half the length of the straightedge at the edge of pavement section being tested and then moved ahead one-half the length of the straightedge for each successive measurement. Testing shall be continuous across all joints. The surface irregularity shall be determined by placing the freestanding (unleveled) straightedge on the pavement surface and allowing it to rest upon the two highest spots covered by its length, and measuring the maximum gap between the straightedge and the pavement surface in the area between the two high points. If the rolling inclinometer or external reference device is used, the data may be evaluated using either the FAA profile program, ProFAA, or FHWA profile program ProVal, using the 12-foot straightedge simulation function.

Smoothness readings shall not be made across grade changes or cross slope transitions. The transition between new and existing pavement shall be evaluated separately for conformance with the plans.

(1) Transverse measurements. Transverse measurements shall be taken for each day's production placed. Transverse measurements shall be taken perpendicular to the pavement centerline each 50 feet (15 m) or more often as determined by the RPR. The joint between lanes shall be tested separately to facilitate smoothness between lanes.

(2) Longitudinal measurements. Longitudinal measurements shall be taken for each day's production placed. Longitudinal tests shall be parallel to the centerline of paving; at the center of paving lanes when widths of paving lanes are less than 20 feet (6 m); and at the third points of paving lanes when widths of paving lanes are 20 ft (6 m) or greater. When placement abuts previously placed material the first measurement shall start with one half the length of the straight edge on the previously placed material.

Deviations on the final surface course in either the transverse or longitudinal direction that will trap water greater than 1/4 inch (6 mm) shall be corrected with diamond grinding per paragraph 501-4.19f or by removing and replacing the surface course to full depth. Grinding shall be tapered in all directions to provide smooth transitions to areas not requiring grinding. All areas in which diamond grinding has been performed shall be subject to the final pavement thickness tolerances specified in paragraph 501-6.6.

Control charts shall be kept to show area of each day's placement and the percentage of corrective grinding required. Corrections to production and placement shall be initiated when corrective grinding is required. If the Contractor's machines and/or methods produce significant areas that need corrective actions in excess of 10 percent of a day's production, production shall be stopped until corrective measures are implemented by the Contractor.

h. Grade. Grade will be evaluated prior to and after placement of the concrete surface.

Measurements will be taken at appropriate gradelines (as a minimum at center and edges of paving lane) and longitudinal spacing as shown on cross-sections and plans. The final surface of the pavement will not vary from the gradeline elevations and cross-sections shown on the plans by more than 1/2 inch (12 mm) vertically or 0.1 feet (30 mm) laterally. The documentation will be provided by the Contractor to the RPR **[** ~~within 48 hours~~ **]** by the end of the following working day.

Areas with humps or depression that that exceed grade or smoothness and that retain water on the surface must be ground off provided the course thickness after grinding is not more than 1/2 inch (12 mm) less than the thickness specified on the plans. If these areas cannot be corrected with grinding then the slabs that are retaining water must be removed and replaced in accordance with paragraph 501-4.19d. Grinding shall be in accordance with paragraph 501-4.19f. All corrections will be at the Contractors expense.

501-5.4 Control charts. The Contractor shall maintain linear control charts for fine and coarse aggregate gradation, slump, and air content. The Contractor shall also maintain a control chart plotting the coarseness factor/workability factor from the combined gradations in accordance with paragraph 501-2.1d.

Control charts shall be posted in a location satisfactory to the RPR and shall be kept up to date at all times. As a minimum, the control charts shall identify the project number, the contract item number, the test number, each test parameter, the Action and suspension Limits, or Specification limits, applicable to each test parameter, and the Contractor's test results. The Contractor shall use the control charts as part of a process control system for identifying potential problems and assignable causes before they occur. If the Contractor's projected data during production indicates a potential problem and the Contractor is not taking satisfactory corrective action, the RPR may halt production or acceptance of the material.

a. Fine and coarse aggregate gradation. The Contractor shall record the running average of the last five gradation tests for each control sieve on linear control charts. Superimposed on the control charts shall be the action and suspension limits. Gradation tests shall be performed by the Contractor per ASTM C136. The Contractor shall take at least **[** two **]**

samples per lot to check the final gradation. Sampling shall be per ASTM D75 from the flowing aggregate stream or conveyor belt.

b. Slump and air content. The Contractor shall maintain linear control charts both for individual measurements and range (that is, difference between highest and lowest measurements) for slump and air content in accordance with the following Action and Suspension Limits.

c. Combined gradation. The Contractor shall maintain a control chart plotting the coarseness factor and workability factor on a chart in accordance with paragraph 501-2.1d.

Control Chart Limits[1]

Control Parameter	Individual Measurements	
	Action Limit	**Suspension Limit**
Gradation[2]	*[3]	*[3]
Coarseness Factor (CF)	±3.5	±5
Workability Factor (WF)	±2	±3
Slump	+0.5 to -1 inch (+13 to -25 mm)	+1 to -1.5 inch (+25 to -38 mm)
Air Content	±1.5%	±2.0%

[1] Control charts shall developed and maintained for each control parameter indicated.

[2] Control charts shall be developed and maintained for each sieve size.

[3] Action and suspension limits shall be determined by the Contractor.

501-5.5 Corrective action at Suspension Limit. As a minimum, the contractor quality control process shall be deemed out of control and corrective action taken if any one of the following conditions exists.

a. Fine and coarse aggregate gradation. When two consecutive averages of five tests are outside of the suspension limits, immediate steps, including a halt to production, shall be taken to correct the grading.

b. Coarseness and Workability factor. When the CF or WF reaches the applicable suspension limits, the Contractor, immediate steps, including a halt to production, shall be taken to correct the CF and WF.

c. Fine and coarse aggregate moisture content. Whenever the moisture content of the fine or coarse aggregate changes by more than 0.5%, the scale settings for the aggregate batcher and water batcher shall be adjusted.

d. Slump. The Contractor shall halt production and make appropriate adjustments whenever:

(1) one point falls outside the Suspension Limit line for individual measurements

OR

(2) two points in a row fall outside the Action Limit line for individual measurements.

e. Air content. The Contractor shall halt production and adjust the amount of air-entraining admixture whenever:

(1) one point falls outside the Suspension Limit line for individual measurements

OR

(2) two points in a row fall outside the Action Limit line for individual measurements.

MATERIAL ACCEPTANCE

501-6.1 Quality Assurance (QA) Acceptance sampling and testing. All acceptance sampling and testing necessary to determine conformance with the requirements specified in this section, with the exception of coring for thickness determination, will be performed by the RPR. The Contractor shall provide adequate facilities for the initial curing of beams. The Contractor shall bear the cost of providing initial curing facilities and coring and filling operations, per paragraph 501-6.5b(1).

The samples will be transported while in the molds. The curing, except for the initial cure period, will be accomplished using the immersion in saturated lime water method. During the 24 hours after molding, the temperature immediately adjacent to the specimens must be maintained in the range of 60° to 80°F (16° to 27°C), and loss of moisture from the specimens must be prevented. The specimens may be stored in tightly constructed wooden boxes, damp sand pits, temporary buildings at construction sites, under wet burlap in favorable weather, or in heavyweight closed plastic bags, or using other suitable methods, provided the temperature and moisture loss requirements are met.

501-6.2 Quality Assurance (QA) testing laboratory. Quality assurance testing organizations performing these acceptance tests will be accredited in accordance with ASTM C1077. The quality assurance laboratory accreditation must be current and listed on the accrediting authority's website. All test methods required for acceptance sampling and testing must be listed on the lab accreditation. A copy of the laboratory's current accreditation and accredited test methods will be submitted to the RPR prior to start of construction.

501-6.3 Lot size. Concrete will be accepted for strength and thickness on a lot basis. A lot will consist of a day's production not to exceed 2,000 cubic yards. Each lot will be divided into approximately equal sublots with individual sublots between 400 to 600 cubic yards. Where three sublots are produced, they will constitute a lot. Where one or two sublots are produced, they will be incorporated into the previous or next lot. Where more than one plant is simultaneously producing concrete for the job, the lot sizes will apply separately for each plant.

501-6.4 Partial lots. When operational conditions cause a lot to be terminated before the specified number of tests have been made for the lot or for overages or minor placements to be considered as partial lots, the following procedure will be used to adjust the lot size and the number of tests for the lot.

Where three sublots have been produced, they will constitute a lot. Where one or two sublots have been produced, they will be incorporated into the next lot or the previous lot and the total number of sublots will be used in the acceptance criteria calculation, that is, n=5 or n=6.

501-6.5 Acceptance Sampling and Testing.

a. Strength.

(1) Sampling. One sample will be taken for each sublot from the concrete delivered to the job site. Sampling locations will be determined by the RPR in accordance with random sampling procedures contained in ASTM D3665. The concrete will be sampled in accordance with ASTM C172.

(2) Test Specimens. The RPR will be responsible for the casting, initial curing, transportation, and curing of specimens in accordance with ASTM C31. Two (2) specimens will be made from each sample and slump, air content, unit weight, and temperature tests will be conducted for each set of strength specimens. Within 24 to 48 hours, the samples will be transported from the field to the laboratory while in the molds. Samples will be cured in saturated lime water.

The strength of each specimen will be determined in accordance with **ASTM C39.** The strength for each sublot will be computed by averaging the results of the two test specimens representing that sublot.

(3) Acceptance. Acceptance of pavement for strength will be determined by the RPR in accordance with paragraph 501-6.6b(1). All individual strength tests within a lot will be checked for outliers in accordance with ASTM E178, at a significance level of 5%. Outliers will be discarded and the remaining test values will be used to determine acceptance in accordance with paragraph 501-6.5b.

b. Pavement thickness.

(1) Sampling. One core will be taken by the Contractor for each sublot in the presence of the RPR. Sampling locations will be determined by the RPR in accordance with random sampling procedures contained in ASTM D3665. Areas, such as thickened edges, with planned variable thickness, will be excluded from sample locations.

Cores shall be a minimum 4 inch (100 mm) in diameter neatly cut with a core drill. The Contractor will furnish all tools, labor, and materials for cutting samples and filling the cored hole. Core holes will be filled by the Contractor with a non-shrink grout approved by the RPR within one day after sampling.

(2) Testing. The thickness of the cores will be determined by the RPR by the average caliper measurement in accordance with ASTM C174. Each core shall be photographed and the photograph included with the test report.

(3) Acceptance. Acceptance of pavement for thickness will be determined by the RPR in accordance with paragraph 501-6.6.

501-6.6 Acceptance criteria.

a. General. Acceptance will be based on the following characteristics of the completed pavement discussed in paragraph 501-6.5b:

(1) Strength

(2) Thickness

(3) Grade

(4) Profilograph smoothness [Not used]

(5) Adjustments for repairs

Acceptance for strength, thickness, and grade, will be based on the criteria contained in accordance with paragraph 501-6.6b(1), 501-6.6b(2), and 501-6.6b(3), respectively.

(3) Grade. The final finished surface of the pavement of the completed project will not vary from the gradeline elevations and cross-sections shown on the plans by more than 1/2 inch vertically or 0.1 feet laterally. The documentation, stamped and signed by a licensed surveyor shall be in accordance with paragraph 501-5.3h. Payment for sublots that do not meet grade for over 25% of the sublot shall be reduced by 5% and not be more than 95%.

(4) Profilograph roughness for QA Acceptance. ~~[Not used.]~~

METHOD OF MEASUREMENT

501-7.1 Concrete pavement shall be measured by the number of square yards of plain or reinforced pavement as specified in-place, completed and accepted.

BASIS OF PAYMENT

501-8.1 Payment. Payment for concrete pavement meeting all acceptance criteria as specified in paragraph 501-6.6. Acceptance Criteria shall be based on results of strength and thickness tests. Payment for acceptable lots of concrete pavement shall be adjusted in accordance with paragraph 501-8.1a for strength and thickness; 501-8.1b for repairs; 501-8.1c for grinding; and 501-8.1d for smoothness, subject to the limitation that:

The total project payment for concrete pavement shall not exceed **100** percent of the product of the contract unit price and the total number of square yards of concrete pavement used in the accepted work.

Payment shall be full compensation for all labor, materials, tools, equipment, and incidentals required to complete the work as specified herein and on the drawings.

~~**a. Basis of adjusted payment.** The pay factor for each individual lot shall be calculated in accordance with the Price Adjustment Schedule table below. A pay factor shall be calculated for both strength and thickness. The lot pay factor shall be the higher of the two values when calculations for both strength and thickness are 100% or higher. The lot pay factor shall be the product of the two values when only one of the calculations for either strength or thickness is 100% or higher. The lot pay factor shall be the lower of the two values when calculations for both strength and thickness are less than 100%.~~

~~**Price Adjustment Schedule**[1]~~

~~**Percentage of Materials Within Specification Limits (PWL)**~~	~~**Lot Pay Factor (Percent of Contract Unit Price)**~~
~~96 – 100~~	~~106~~
~~90 – 95~~	~~PWL + 10~~
~~75 – 90~~	~~0.5 PWL + 55~~
~~55 – 74~~	~~1.4 PWL – 12~~
~~Below 55~~	~~Reject~~[2]

~~[1] Although it is theoretically possible to achieve a pay factor of 106% for each lot, actual payment in excess of 100% shall be subject to the total project payment limitation specified in paragraph 501-8.1.~~

~~[2] The lot shall be removed and replaced unless, after receipt of FAA concurrence, the Owner and Contractor agree in writing that the lot will remain; the lot paid at 50% of the contract unit price; and the total project payment limitation reduced by the amount withheld for that lot.~~

~~For each lot accepted, the adjusted contract unit price shall be the product of the lot pay factor for the lot and the contract unit price. Payment shall be subject to the total project payment limitation specified in paragraph 501-8.1. Payment in excess of 100% for accepted lots of concrete pavement shall be used to offset payment for accepted lots of concrete pavement that achieve a lot pay factor less than 100%; except for rejected lots which remain in-place and/or sublots with adjustments for repairs.~~

~~**b. Adjusted payment for repairs.** The PWL lot pay factor shall be reduced by 5% and be no higher than 95% for sublots which contain repairs in accordance with paragraph 501-4.19 on more than 20% of the slabs within the sublot. Payment factors greater than 100 percent for the strength and thickness cannot be used to offset adjustments for repairs.~~

~~**c. Adjusted payment for grinding.** The PWL lot pay factor shall be reduced by 5% and be no higher than 95% for sublots with grinding over 25% of a sublot.~~

e. Payment. Payment shall be made under:

Item P-501-8.1a	Reinforced Concrete Pavement (8 inches) - per square yard
Item P-501-8.1b	Reinforced Concrete Pavement Ramp (8-12 inches) – per square yard

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM A184	Standard Specification for Welded Deformed Steel Bar Mats for Concrete Reinforcement
ASTM A615	Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
ASTM A704	Standard Specification for Welded Steel Plain Bar or Rod Mats for Concrete Reinforcement
ASTM A706	Standard Specification for Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement
ASTM A775	Standard Specification for Epoxy-Coated Steel Reinforcing Bars
ASTM A884	Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Reinforcement
ASTM A934	Standard Specification for Epoxy-Coated Prefabricated Steel Reinforcing Bars
ASTM A996	Standard Specification for Rail-Steel and Axle-Steel Deformed Bars for Concrete Reinforcement
ASTM A1035	Standard Specification for Deformed and Plain, Low-Carbon, Chromium, Steel Bars for Concrete Reinforcement
ASTM A1064	Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete
ASTM A1078	Standard Specification for Epoxy-Coated Steel Dowels for Concrete Pavement
ASTM C29	Standard Test Method for Bulk Density ("Unit Weight") and Voids in Aggregate
ASTM C31	Standard Practice for Making and Curing Concrete Test Specimens in the Field

ASTM C33	Standard Specification for Concrete Aggregates
ASTM C39	Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
ASTM C70	Standard Test Method for Surface Moisture in Fine Aggregate
ASTM C78	Standard Test Method for Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)
ASTM C88	Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
ASTM C94	Standard Specification for Ready-Mixed Concrete
ASTM C114	Standard Test Methods for Chemical Analysis of Hydraulic Cement
ASTM C117	Standard Test Method for Materials Finer than 75-µm (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C123	Standard Test Method for Lightweight Particles in Aggregate
ASTM C136	Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
ASTM C131	Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C136	Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates
ASTM C138	Standard Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete
ASTM C142	Standard Test Method for Clay Lumps and Friable Particles in Aggregates
ASTM C143	Standard Test Method for Slump of Hydraulic-Cement Concrete
ASTM C150	Standard Specification for Portland Cement
ASTM C171	Standard Specification for Sheet Materials for Curing Concrete
ASTM C172	Standard Practice for Sampling Freshly Mixed Concrete
ASTM C173	Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method
ASTM C174	Standard Test Method for Measuring Thickness of Concrete Elements Using Drilled Concrete Cores
ASTM C227	Standard Test Method for Potential Alkali Reactivity of Cement-Aggregate Combinations (Mortar-Bar Method)
ASTM C231	Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
ASTM C260	Standard Specification for Air-Entraining Admixtures for Concrete
ASTM C295	Standard Guide for Petrographic Examination of Aggregates for Concrete

ASTM C309	Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete
ASTM C311	Standard Test Methods for Sampling and Testing Fly Ash or Natural Pozzolans for Use in Portland Cement Concrete
ASTM C494	Standard Specification for Chemical Admixtures for Concrete
ASTM C566	Standard Test Method for Total Evaporable Moisture Content of Aggregates by Drying
ASTM C595	Standard Specification for Blended Hydraulic Cements
ASTM C618	Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
ASTM C642	Standard Test Method for Density, Absorption, and Voids in Hardened Concrete
ASTM C666	Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing
ASTM C685	Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing
ASTM C881	Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete
ASTM C989	Standard Specification for Slag Cement for Use in Concrete and Mortars
ASTM C1017	Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete
ASTM C1064	Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete
ASTM C1077	Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation
ASTM C1157	Standard Performance Specification for Hydraulic Cement
ASTM C1260	Standard Test Method for Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)
ASTM C1365	Standard Test Method for Determination of the Proportion of Phases in Portland Cement and Portland-Cement Clinker Using X-Ray Powder Diffraction Analysis
ASTM C1567	Standard Test Method for Determining the Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials and Aggregate (Accelerated Mortar-Bar Method)
ASTM C1602	Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete
ASTM D75	Standard Practice for Sampling Aggregates

ASTM D1751	Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)
ASTM D1752	Standard Specification for Preformed Sponge Rubber and Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction
ASTM D2419	Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate
ASTM D3665	Standard Practice for Random Sampling of Construction Materials
ASTM D4791	Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
ASTM E178	Standard Practice for Dealing with Outlying Observations
ASTM E1274	Standard Test Method for Measuring Pavement Roughness Using a Profilograph
ASTM E2133	Standard Test Method for Using a Rolling Inclinometer to Measure Longitudinal and Transverse Profiles of a Traveled Surface

American Concrete Institute (ACI)

ACI 305R	Guide to Hot Weather Concreting
ACI 306R	Guide to Cold Weather Concreting
ACI 309R	Guide for Consolidation of Concrete

Advisory Circulars (AC)

AC 150/5320-6	Airport Pavement Design and Evaluation

Federal Highway Administration (FHWA)

HIPERPAV 3, version 3.2

Portland Concrete Association (PCA)

PCA	Design and Control of Concrete Mixtures, 16th Edition

U.S. Army Corps of Engineers (USACE) Concrete Research Division (CRD)

CRD C662	Determining the Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials, Lithium Nitrate Admixture and Aggregate (Accelerated Mortar-Bar Method)

United States Air Force Engineering Technical Letter (ETL)

ETL 97-5	Proportioning Concrete Mixtures with Graded Aggregates for Rigid Airfield Pavements

END ITEM P-501

ITEM P-605
JOINT SEALANTS FOR PAVEMENTS

DESCRIPTION

605-1.1 This item shall consist of providing and installing a resilient and adhesive joint sealing material capable of effectively sealing joints in pavement; joints between different types of pavements; and cracks in existing pavement.

MATERIALS

605-2.1 Joint sealants. Joint sealant materials shall meet the requirements of ASTM D5893 Standard Specifications for Cold Applied, Single Component, Chemically Curing Silicone Joint Sealant for Portland Cement Concrete Pavements.

Each lot or batch of sealant shall be delivered to the jobsite in the manufacturer's original sealed container. Each container shall be marked with the manufacturer's name, batch or lot number, the safe heating temperature, and shall be accompanied by the manufacturer's certification stating that the sealant meets the requirements of this specification.

605-2.2 Backer rod. The material furnished shall be a compressible, non-shrinking, non-staining, non-absorbing material that is non-reactive with the joint sealant in accordance with ASTM D5249. The backer-rod material shall be 25% ± 5 % larger in diameter than the nominal width of the joint.

605-2.3 Bond breaking tapes. Provide a bond breaking tape or separating material that is a flexible, non-shrinkable, non-absorbing, non-staining, and non-reacting adhesive-backed tape. The material shall have a melting point at least 5°F (3°C) greater than the pouring temperature of the sealant being used when tested in accordance with ASTM D789. The bond breaker tape shall be approximately 1/8 inch (3 mm) wider than the nominal width of the joint and shall not bond to the joint sealant.

CONSTRUCTION METHODS

605-3.1 Time of application. Joints shall be sealed as soon after completion of the curing period as feasible and before the pavement is opened to traffic, including construction equipment. The pavement temperature shall be 50°F (10°C) and rising at the time of application of the poured joint sealing material. Do not apply sealant if moisture is observed in the joint.

605-3.2 Equipment. Machines, tools, and equipment used in the performance of the work required by this section shall be approved before the work is started and maintained in satisfactory condition at all times. Submit a list of proposed equipment to be used in performance of construction work including descriptive data, **14 Calendar** days prior to use on the project.

a. Tractor-mounted routing tool. Provide a routing tool, used for removing old sealant from the joints, of such shape and dimensions and so mounted on the tractor that it will not damage the sides of the joints. The tool shall be designed so that it can be adjusted to remove the old material to varying depths as required. The use of V-shaped tools or rotary impact routing devices will not be permitted. Hand-operated spindle routing devices may be used to clean and enlarge random cracks.

b. Concrete saw. Provide a self-propelled power saw, with water-cooled diamond or abrasive saw blades, for cutting joints to the depths and widths specified.

c. Sandblasting equipment. Sandblasting is not allowed.

d. Waterblasting equipment. The Contractor must demonstrate waterblasting equipment including the pumps, hose, guide and nozzle size, under job conditions, before approval in accordance with paragraph 605-3.3. The Contractor shall demonstrate, in the presence of the RPR, that the method cleans the joint and does not damage the joint.

e. Hand tools. Hand tools may be used, when approved, for removing defective sealant from a crack and repairing or cleaning the crack faces. Hand tools should be carefully evaluated for potential spalling effects prior to approval for use.

f. Hot-poured sealing equipment. The unit applicators used for heating and installing ASTM D6690 joint sealant materials shall be mobile and shall be equipped with a double-boiler, agitator-type kettle with an oil medium in the outer space for heat transfer; a direct-connected pressure-type extruding device with a nozzle shaped for inserting in the joint to be filled; positive temperature devices for controlling the temperature of the transfer oil and sealant; and a recording type thermometer for indicating the temperature of the sealant. The applicator unit shall be designed so that the sealant will circulate through the delivery hose and return to the inner kettle when not in use.

g. Cold-applied, single-component sealing equipment. The equipment for installing ASTM D5893 single component joint sealants shall consist of an extrusion pump, air compressor, following plate, hoses, and nozzle for transferring the sealant from the storage container into the joint opening. The dimension of the nozzle shall be such that the tip of the nozzle will extend into the joint to allow sealing from the bottom of the joint to the top. Maintain the initially approved equipment in good working condition, serviced in accordance with the supplier's instructions, and unaltered in any way without obtaining prior approval. Small hand-held air-powered equipment (i.e., caulking guns) may be used for small applications.

605-3.3 Preparation of joints. Pavement joints for application of material in this specification must be dry, clean of all scale, dirt, dust, curing compound, and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method cleans the joint and does not damage the joint.

a. Sawing. All joints shall be sawed in accordance with specifications and plan details. Immediately after sawing the joint, the resulting slurry shall be completely removed from joint and adjacent area by flushing with a jet of water, and by use of other tools as necessary.

b. Sealing. Immediately before sealing, the joints shall be thoroughly cleaned of all remaining laitance, curing compound, filler, protrusions of hardened concrete, old sealant and other foreign material from the sides and upper edges of the joint space to be sealed. Cleaning shall be accomplished by tractor-mounted routing equipment, concrete saw or waterblaster as specified in paragraph 605-3.2. The newly exposed concrete joint faces and the pavement surface extending a minimum of 1/2 inch (12 mm) from the joint edge shall be sandblasted clean. Sandblasting shall be accomplished in a minimum of two passes. One pass per joint face with the nozzle held at an angle directly toward the joint face and not more than 3 inches (75 mm) from it. After final cleaning and immediately prior to sealing, blow out the joints with compressed air and leave them completely free of debris and water. The joint faces shall be surface dry when the seal is applied.

c. Backer Rod. When the joint opening is of a greater depth than indicated for the sealant depth, plug or seal off the lower portion of the joint opening using a backer rod in accordance

with paragraph 605-2.2 to prevent the entrance of the sealant below the specified depth. Take care to ensure that the backer rod is placed at the specified depth and is not stretched or twisted during installation.

d. Bond-breaking tape. Where inserts or filler materials contain bitumen, or the depth of the joint opening does not allow for the use of a backup material, insert a bond-separating tape breaker in accordance with paragraph 605-2.3 to prevent incompatibility with the filler materials and three-sided adhesion of the sealant. Securely bond the tape to the bottom of the joint opening so it will not float up into the new sealant.

605-3.4 Installation of sealants. Joints shall be inspected for proper width, depth, alignment, and preparation, and shall be approved by the RPR before sealing is allowed. Sealants shall be installed in accordance with the following requirements:

Immediately preceding, but not more than 50 feet (15 m) ahead of the joint sealing operations, perform a final cleaning with compressed air. Fill the joints from the bottom up to **1/8 inch ±1/16 inch** below the top of pavement surface; or bottom of groove for grooved pavement. Remove and discard excess or spilled sealant from the pavement by approved methods. Install the sealant in such a manner as to prevent the formation of voids and entrapped air. In no case shall gravity methods or pouring pots be used to install the sealant material. Traffic shall not be permitted over newly sealed pavement until authorized by the RPR. When a primer is recommended by the manufacturer, apply it evenly to the joint faces in accordance with the manufacturer's instructions. Check the joints frequently to ensure that the newly installed sealant is cured to a tack-free condition within the time specified.

605-3.5 Inspection. The Contractor shall inspect the joint sealant for proper rate of cure and set, bonding to the joint walls, cohesive separation within the sealant, reversion to liquid, entrapped air and voids. Sealants exhibiting any of these deficiencies at any time prior to the final acceptance of the project shall be removed from the joint, wasted, and replaced as specified at no additional cost to the airport.

605-3.6 Clean-up. Upon completion of the project, remove all unused materials from the site and leave the pavement in a clean condition.

METHOD OF MEASUREMENT

605-4.1 No Direct Measurement. All work shall be considered incidental to the bid items for specification P-501

BASIS OF PAYMENT

605-5.1 No Direct Payment. All the work under this item including furnishing all materials, for all preparation, delivering, and placing of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the work item shall be considered incidental to the bid items for specification P-501.

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM D789	Standard Test Method for Determination of Relative Viscosity of Polyamide (PA)
ASTM D5249	Standard Specification for Backer Material for Use with Cold- and Hot-Applied Joint Sealants in Portland-Cement Concrete and Asphalt Joints
ASTM D5893	Standard Specification for Cold Applied, Single Component, Chemically Curing Silicone Joint Sealant for Portland Cement Concrete Pavements
ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt
ASTM D7116	Standard Specification for Joint Sealants, Hot Applied, Jet Fuel Resistant Types for Portland Cement Concrete Pavements

Advisory Circulars (AC)

AC 150/5340-30	Design and Installation Details for Airport Visual Aids

END ITEM P-605

ITEM P-610
CONCRETE FOR MISCELLANEOUS STRUCTURES

DESCRIPTION

610-1.1 This item shall consist of concrete and reinforcement, as shown on the plans, prepared and constructed in accordance with these specifications. This specification shall be used for all concrete other than airfield pavement which are cast-in-place.

MATERIALS

610-2.1 General. Only approved materials, conforming to the requirements of these specifications, shall be used in the work. Materials may be subject to inspection and tests at any time during their preparation or use. The source of all materials shall be approved by the Resident Project Representative (RPR) before delivery or use in the work. Representative preliminary samples of the materials shall be submitted by the Contractor, when required, for examination and test. Materials shall be stored and handled to ensure preservation of their quality and fitness for use and shall be located to facilitate prompt inspection. All equipment for handling and transporting materials and concrete must be clean before any material or concrete is placed in them.

The use of pit-run aggregates shall not be permitted unless the pit-run aggregate has been screened and washed, and all fine and coarse aggregates stored separately and kept clean. The mixing of different aggregates from different sources in one storage stockpile or alternating batches of different aggregates shall not be permitted.

a. Reactivity. Fine aggregate and coarse aggregates to be used in all concrete shall have been tested separately within six months of the project in accordance with ASTM C1260. Test results shall be submitted to the RPR. The aggregate shall be considered innocuous if the expansion of test specimens, tested in accordance with ASTM C1260, does not exceed 0.08% at 14 days (16 days from casting). If the expansion either or both test specimen is greater than 0.08% at 14 days, but less than 0.20%, a minimum of 25% of Type F fly ash, or between 40% and 55% of slag cement shall be used in the concrete mix.

If the expansion is greater than 0.20%, the aggregates shall not be used, and test results for other aggregates must be submitted for evaluation; or aggregates that meet P-501 reactivity test requirements may be utilized.

610-2.2 Coarse aggregate. The coarse aggregate for concrete shall meet the requirements of ASTM C33 and the requirements of Table 4, Class Designation 5S; and the grading requirements shown below, as required for the project.

Coarse Aggregate Grading Requirements

Maximum Aggregate Size	ASTM C33, Table 3 Grading Requirements (Size No.)
1 1/2 inch (37.5 mm)	467 or 4 and 67
1 inch (25 mm)	57
¾ inch (19 mm)	67
½ inch (12.5 mm)	7

610-2.2.1 Coarse Aggregate susceptibility to durability (D) cracking. ~~[Not used]~~

610-2.3 Fine aggregate. The fine aggregate for concrete shall meet all fine aggregate requirements of ASTM C33.

610-2.4 Cement. Cement shall conform to the requirements of **ASTM C150_Type I.**

610-2.5 Cementitious materials.

a. Fly ash. Fly ash shall meet the requirements of ASTM C618, with the exception of loss of ignition, where the maximum shall be less than 6%. Fly ash shall have a Calcium Oxide (CaO) content of less than [15%] and a total available alkali content less than 3% per ASTM C311. Fly ash produced in furnace operations using liming materials or soda ash (sodium carbonate) as an additive shall not be acceptable. The Contractor shall furnish the previous three most recent, consecutive ASTM C618 reports for each source of fly ash proposed in the concrete mix and shall furnish each additional report as they become available during the project. The reports can be used for acceptance, or the material may be tested independently by the RPR.

b. Slag cement (ground granulated blast furnace (GGBF)). Slag cement shall conform to ASTM C989, Grade 100 or Grade 120. Slag cement shall be used only at a rate between 25% and 55% of the total cementitious material by mass.

610-2.6 Water. Water used in mixing or curing shall be from potable water sources. Other sources shall be tested in accordance with ASTM C1602 prior to use.

610-2.7 Admixtures. The Contractor shall submit certificates indicating that the material to be furnished meets all of the requirements indicated below. In addition, the RPR may require the Contractor to submit complete test data from an approved laboratory showing that the material to be furnished meets all of the requirements of the cited specifications. Subsequent tests may be made of samples taken by the RPR from the supply of the material being furnished or proposed for use on the work to determine whether the admixture is uniform in quality with that approved.

a. Air-entraining admixtures. Air-entraining admixtures shall meet the requirements of ASTM C260 and shall consistently entrain the air content in the specified ranges under field conditions. The air-entrainment agent and any water reducer admixture shall be compatible.

b. Water-reducing admixtures. Water-reducing admixture shall meet the requirements of ASTM C494, Type A, B, or D. ASTM C494, Type F and G high range water reducing admixtures and ASTM C1017 flowable admixtures shall not be used.

c. Other chemical admixtures. The use of set retarding and set-accelerating admixtures shall be approved by the RPR. Retarding shall meet the requirements of ASTM C494, Type A,

B, or D and set accelerating shall meet the requirements of ASTM C494, Type C. Calcium chloride and admixtures containing calcium chloride shall not be used.

~~**610-2.8 Premolded joint material.** Premolded joint material for expansion joints shall meet the requirements of ASTM [ ].~~

~~**610-2.9 Joint filler.** The filler for joints shall meet the requirements of Item P-605, unless otherwise specified.~~

610-2.10 Steel reinforcement. Reinforcing shall consist of **Reinforcing Steel** conforming to the requirements of ASTM A615, ASTM A706, ASTM A775, ASTM A934

610-2.11 Materials for curing concrete. Curing materials shall conform to White-pigmented Liquid Membrane-Forming Compound, Type 2, Class B, ASTM C309.

CONSTRUCTION METHODS

610-3.1 General. The Contractor shall furnish all labor, materials, and services necessary for, and incidental to, the completion of all work as shown on the drawings and specified here. All machinery and equipment used by the Contractor on the work, shall be of sufficient size to meet the requirements of the work. All work shall be subject to the inspection and approval of the RPR.

610-3.2 Concrete Mixture. The concrete shall develop a compressive strength of **4000** psi in 28 days as determined by test cylinders made in accordance with ASTM C31 and tested in accordance with ASTM C39. The concrete shall contain not less than 470 pounds of cementitious material per cubic yard (280 kg per cubic meter). The water cementitious ratio shall not exceed 0.45 by weight. The air content of the concrete shall be 5% +/- 1.2% as determined by ASTM C231 and shall have a slump of not more than 4 inches (100 mm) as determined by ASTM C143.

610-3.3 Mixing. Concrete may be mixed at the construction site, at a central point, or wholly or in part in truck mixers. The concrete shall be mixed and delivered in accordance with the requirements of ASTM C94 or ASTM C685.

The concrete shall be mixed only in quantities required for immediate use. Concrete shall not be mixed while the air temperature is below 40°F (4°C) without the RPRs approval. If approval is granted for mixing under such conditions, aggregates or water, or both, shall be heated and the concrete shall be placed at a temperature not less than 50°F (10°C) nor more than 100°F (38°C). The Contractor shall be held responsible for any defective work, resulting from freezing or injury in any manner during placing and curing, and shall replace such work at his expense.

Retempering of concrete by adding water or any other material is not permitted.

The rate of delivery of concrete to the job shall be sufficient to allow uninterrupted placement of the concrete.

610-3.4 Forms. Concrete shall not be placed until all the forms and reinforcements have been inspected and approved by the RPR. Forms shall be of suitable material and shall be of the type, size, shape, quality, and strength to build the structure as shown on the plans. The forms shall be true to line and grade and shall be mortar-tight and sufficiently rigid to prevent displacement and sagging between supports. The surfaces of forms shall be smooth and free from irregularities, dents, sags, and holes. The Contractor shall be responsible for their adequacy.

The internal form ties shall be arranged so no metal will show in the concrete surface or discolor the surface when exposed to weathering when the forms are removed. All forms shall be wetted with water or with a non-staining mineral oil, which shall be applied immediately before the

concrete is placed. Forms shall be constructed so they can be removed without injuring the concrete or concrete surface.

610-3.5 Placing reinforcement. All reinforcement shall be accurately placed, as shown on the plans, and shall be firmly held in position during concrete placement. Bars shall be fastened together at intersections. The reinforcement shall be supported by approved metal chairs. Shop drawings, lists, and bending details shall be supplied by the Contractor when required.

610-3.6 Embedded items. Before placing concrete, all embedded items shall be firmly and securely fastened in place as indicated. All embedded items shall be clean and free from coating, rust, scale, oil, or any foreign matter. The concrete shall be spaded and consolidated around and against embedded items. The embedding of wood shall not be allowed.

610-3.7 Concrete Consistency. The Contractor shall monitor the consistency of the concrete delivered to the project site; collect each batch ticket; check temperature; and perform slump tests on each truck at the project site in accordance with ASTM C143.

610-3.8 Placing concrete. All concrete shall be placed during daylight hours, unless otherwise approved. The concrete shall not be placed until the depth and condition of foundations, the adequacy of forms and falsework, and the placing of the steel reinforcing have been approved by the RPR. Concrete shall be placed as soon as practical after mixing, but in no case later than one (1) hour after water has been added to the mix. The method and manner of placing shall avoid segregation and displacement of the reinforcement. Troughs, pipes, and chutes shall be used as an aid in placing concrete when necessary. The concrete shall not be dropped from a height of more than 5 feet (1.5 m). Concrete shall be deposited as nearly as practical in its final position to avoid segregation due to rehandling or flowing. Do not subject concrete to procedures which cause segregation. Concrete shall be placed on clean, damp surfaces, free from running water, or on a properly consolidated soil foundation.

610-3.9 Vibration. Vibration shall follow the guidelines in American Concrete Institute (ACI) Committee 309R, Guide for Consolidation of Concrete.

610-3.10 Joints. Joints shall be constructed as indicated on the plans.

610-3.11 Finishing. All exposed concrete surfaces shall be true, smooth, and free from open or rough areas, depressions, or projections. All concrete horizontal plane surfaces shall be brought flush to the proper elevation with the finished top surface struck-off with a straightedge and floated.

610-3.12 Curing and protection. All concrete shall be properly cured in accordance with the recommendations in American Concrete Institute (ACI) 308R, Guide to External Curing of Concrete. The concrete shall be protected from damage until project acceptance.

610-3.13 Cold weather placing. When concrete is placed at temperatures below 40°F (4°C), follow the cold weather concreting recommendations found in ACI 306R, Cold Weather Concreting.

610-3.14 Hot weather placing. When concrete is placed in hot weather greater than 85ºF (30 ºC), follow the hot weather concreting recommendations found in ACI 305R, Hot Weather Concreting.

QUALITY ASSURANCE (QA)

610-4.1 Quality Assurance sampling and testing. Concrete for each day's placement will be accepted on the basis of the compressive strength specified in paragraph 610-3.2. The RPR will sample the concrete in accordance with ASTM C172; test the slump in accordance with ASTM

C143; test air content in accordance with ASTM C231; make and cure compressive strength specimens in accordance with ASTM C31; and test in accordance with ASTM C39. The QA testing agency will meet the requirements of ASTM C1077.

The Contractor shall provide adequate facilities for the initial curing of cylinders.

610-4.2 Defective work. Any defective work that cannot be satisfactorily repaired as determined by the RPR, shall be removed and replaced at the Contractor's expense. Defective work includes, but is not limited to, uneven dimensions, honeycombing and other voids on the surface or edges of the concrete.

METHOD OF MEASUREMENT

610-5.1 Concrete shall be considered incidental, and no separate measurement shall be made of concrete complete in place and accepted.

BASIS OF PAYMENT

610-6.1 Concrete shall be considered incidental, and no separate payment shall be made.

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM A184	Standard Specification for Welded Deformed Steel Bar Mats for Concrete Reinforcement
ASTM A615	Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
ASTM A704	Standard Specification for Welded Steel Plain Bar or Rod Mats for Concrete Reinforcement
ASTM A706	Standard Specification for Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement
ASTM A775	Standard Specification for Epoxy-Coated Steel Reinforcing Bars
ASTM A884	Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Reinforcement
ASTM A934	Standard Specification for Epoxy-Coated Prefabricated Steel Reinforcing Bars
ASTM A1064	Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete
ASTM C31	Standard Practice for Making and Curing Concrete Test Specimens in the Field
ASTM C33	Standard Specification for Concrete Aggregates
ASTM C39	Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens

ASTM C94	Standard Specification for Ready-Mixed Concrete
ASTM C136	Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates
ASTM C114	Standard Test Methods for Chemical Analysis of Hydraulic Cement
ASTM C136	Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
ASTM C143	Standard Test Method for Slump of Hydraulic-Cement Concrete
ASTM C150	Standard Specification for Portland Cement
ASTM C171	Standard Specification for Sheet Materials for Curing Concrete
ASTM C172	Standard Practice for Sampling Freshly Mixed Concrete
ASTM C231	Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
ASTM C260	Standard Specification for Air-Entraining Admixtures for Concrete
ASTM C309	Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete
ASTM C311	Standard Test Methods for Sampling and Testing Fly Ash or Natural Pozzolans for Use in Portland-Cement Concrete
ASTM C494	Standard Specification for Chemical Admixtures for Concrete
ASTM C618	Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
ASTM C666	Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing
ASTM C685	Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing
ASTM C989	Standard Specification for Slag Cement for Use in Concrete and Mortars
ASTM C1017	Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete
ASTM C1077	Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation
ASTM C1157	Standard Performance Specification for Hydraulic Cement
ASTM C1260	Standard Test Method for Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)
ASTM C1365	Standard Test Method for Determination of the Proportion of Phases in Portland Cement and Portland-Cement Clinker Using X-Ray Powder Diffraction Analysis
ASTM C1602	Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete

ASTM D1751	Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Asphalt Types)
ASTM D1752	Standard Specification for Preformed Sponge Rubber Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction

American Concrete Institute (ACI)

ACI 305R	Hot Weather Concreting
ACI 306R	Cold Weather Concreting
ACI 308R	Guide to External Curing of Concrete
ACI 309R	Guide for Consolidation of Concrete

END OF ITEM P-610

ITEM 506
TEMPORARY EROSION, SEDIMENTATION,AND ENVIRONMENTAL CONTROLS

1. DESCRIPTION

Install, maintain, and remove erosion, sedimentation, and environmental control measures to prevent or reduce the discharge of pollutants in accordance with the Storm Water Pollution Prevention Plan (SWP3) onthe plans and the Texas Pollutant Discharge Elimination System (TPDES) General Permit TXR150000.

Control measures are defined as Best Management Practices used to prevent or reduce the discharge of pollutants. Control measures include, but are not limited to, rock filter dams, temporary pipe slope drains, temporary paved flumes, construction exits, earthwork for erosion control, pipe, construction perimeter fence,sandbags, temporary sediment control fence, biodegradable erosion control logs, vertical tracking, temporary or permanent seeding, and other measures. Erosion and sediment control devices must be selected from the*Erosion Control Approved Products* or *Sediment Control Approved Products* lists. Perform work in a manner to prevent degradation of receiving waters, facilitate project construction, and comply with applicable federal, state, and local regulations. Ensure the installation and maintenance of control measures is performed in accordance with the manufacturer's or designer's specifications.

Provide the Contractor Certification of Compliance before performing SWP3 or soil disturbing activities. By signing the Contractor Certification of Compliance, the Contractor certifies they have read and understand the requirements applicable to this project pertaining to the SWP3, the plans, and the TPDES General Permit TXR150000. The Contractor is responsible for any penalties associated with non-performance of installation or maintenance activities required for compliance. Ensure the most current version of the certificate is executed for this project.

2. MATERIALS

2.1. Construction Exits. Provide materials that meet the details shown on the plans and this Section.

2.1.1. **Rock Construction Exit**. Provide crushed aggregate for long- and short-term construction exits. Furnish aggregates that are clean, hard, durable, and free from adherent coatings such as salt, alkali, dirt, clay, loam,shale, soft or flaky materials, and organic and injurious matter. Use 4- to 8-in. aggregate for Type 1. Use 2- to4-in. aggregate for Type 3.

2.1.2. **Foundation Course**. Provide a foundation course consisting of flexible base, bituminous concrete, hydraulic cement concrete, or other materials as shown on the plans or directed.

2.2. Embankment for Erosion Control. Provide rock, loam, clay, topsoil, or other earth materials that will form a stable embankment to meet the intended use.

2.3. Construction Perimeter Fence.

2.3.1. **Posts**. Provide essentially straight wood or steel posts that are at least 60 in. long. Furnish soft wood posts with a minimum diameter of 3 in., or use nominal 2 × 4 in. boards. Furnish hardwood posts with a minimum cross-section of 1-1/2 × 1-1/5 in. Furnish T- or L-shaped steel posts with a minimum weight of 1.25 lb. per foot.

2.3.2. **Fence**. Provide orange construction fencing as approved.

2.3.3. **Fence Wire**. Provide 14 gauge or larger galvanized smooth or twisted wire. Provide 16 gauge or larger tie wire.

2.3.4. **Flagging**. Provide brightly-colored flagging that is fade-resistant and at least 3/4 in. wide to provide maximum visibility both day and night.

2.3.5. **Staples**. Provide staples with a crown at least 1/2 in. wide and legs at least 1/2 in. long.

2.3.6. **Used Materials**. Previously used materials meeting the applicable requirements may be used if approved.

2.4. Sandbags. Provide sandbag material of polypropylene, polyethylene, or polyamide woven fabric with a minimum unit weight of 4 oz. per square yard, a Mullen burst-strength exceeding 300 psi, and an ultraviolet stability exceeding 70%.

Use natural coarse sand or manufactured sand meeting the gradation given in Table 1 to fill sandbags. Filled sandbags must be 24 to 30 in. long, 16 to 18 in. wide, and 6 to 8 in. thick.

Table 1 Sand Gradation

Sieve Size	Retained (% by Weight)
#4	Maximum 3%
#100	Minimum 80%
#200	Minimum 95%

Aggregate may be used instead of sand for situations where sandbags are not adjacent to traffic. The aggregate size must not exceed 3/8 in.

2.5. Temporary Sediment Control Fence. Provide a net-reinforced fence using woven geo-textile fabric. Logos visible to the traveling public will not be allowed.

2.5.1. **Fabric**. Provide fabric materials in accordance with DMS-6230, "Temporary Sediment Control Fence Fabric."

2.5.2. **Posts**. Provide essentially straight wood or steel posts with a minimum length of 48 in., unless otherwise shown on the plans. Furnish soft wood posts at least 3 in. in diameter, or use nominal 2 × 4 in. boards. Furnish hardwood posts with a minimum cross-section of 1-1/2 × 1-1/2 in. Furnish T- or L-shaped steel postswith a minimum weight of 1.25 lb. per foot.

2.5.3. **Net Reinforcement**. Provide net reinforcement of at least 12.5 gauge (SWG) galvanized welded wire mesh, with a maximum opening size of 2 × 4 in., at least 24 in. wide, unless otherwise shown on the plans.

2.5.4. **Staples**. Provide staples with a crown at least 3/4 in. wide and legs 1/2 in. long.

2.5.5. **Used Materials**. Use recycled material meeting the applicable requirements if approved.

2.6. Biodegradable Erosion Control Logs.

2.6.1. **Core Material**. Furnish core material that is biodegradable or recyclable. Use compost, mulch, aspen excelsior wood fibers, chipped site vegetation, agricultural rice or wheat straw, coconut fiber, 100% recyclable fibers, or any other acceptable material unless specifically called out on the plans. Permit no more than 5% of the material to escape from the containment mesh. Furnish compost meeting the requirements ofItem 161, "Compost."

2.6.2. **Containment Mesh**. Furnish containment mesh that is 100% biodegradable, photodegradable, or recyclable such as burlap, twine, UV photodegradable plastic, polyester, or any other acceptable material.

Furnish biodegradable or photodegradable containment mesh when log will remain in place as part of a vegetative system.

Furnish recyclable containment mesh for temporary installations.

2.6.3. **Size**. Furnish biodegradable erosion control logs with diameters shown on the plans or as directed. Stuff containment mesh densely so logs do not deform.

3. QUALIFICATIONS, TRAINING, AND EMPLOYEE REQUIREMENTS

3.1. Contractor Responsible Person Environmental (CRPE) Qualifications and Responsibilities. Provide and designate in writing at the preconstruction conference a CRPE and alternate CRPE who have overall responsibility for the storm water management program. The CRPE will implement storm water and erosion control practices; will oversee and observe storm water control measure monitoring and management; will monitor the project site daily and produce daily monitoring reports as long as there are BMPs in place or soil disturbing activities are evident to ensure compliance with the SWP3 and TPDES General Permit TXR150000. During time suspensions when work is not occurring or on contract non-work days, daily inspections are not required unless a rain event has occurred. The CRPE will provide recommendations on how to improve the effectiveness of control measures. Attend the Department's preconstruction conference for the project. Ensure training is completed as identified in Section 506.3.3., "Training," by all applicable personnel before employees work on the project. Document and submit a list, signed by the CRPE, of all applicable Contractor and subcontractor employees who have completed the training. Include the employee's name, the training course name, and date the employee completed the training. Provide the most current list at the preconstruction conference or before SWP3 or soil disturbing activities. Update the list as needed and provide the updated list when updated.

3.2. Contractor Superintendent Qualifications and Responsibilities. Provide a superintendent that is competent, has experience with and knowledge of storm water management, and is knowledgeable of the requirements and the conditions of the TPDES General Permit TXR150000. The superintendent will manage and oversee the day to day operations and activities at the project site; work with the CRPE to provide effective storm water management at the project site; represent and act on behalf of the Contractor; and attend the Department's preconstruction conference for the project.

3.3. Training. All Contractor and subcontractor employees involved in soil disturbing activities, small or large structures, storm water control measures, and seeding activities must complete training as prescribed by the Department.

4. CONSTRUCTION

4.1. Contractor Responsibilities. Implement the SWP3 for the project site in accordance with the plans and specifications, TPDES General Permit TXR150000, and as directed. Coordinate storm water management with all other work on the project. Develop and implement an SWP3 for project-specific material supply plants within and outside of the Department's right of way in accordance with the specific or general storm water permit requirements. Prevent water pollution from storm water associated with construction activity from entering any surface water or private property on or adjacent to the project site.

4.2. Implementation. The CRPE, or alternate CRPE, must be accessible by phone and able to respond to project-related storm water management or other environmental emergencies 24 hr. per day.

4.2.1. **Commencement.** Implement the SWP3 as shown and as directed. Contractor-proposed recommendations for changes will be allowed as approved. Conform to the established guidelines in the TPDES General Permit TXR150000 to make changes. Do not implement changes until approval has been received and changes have been incorporated into the plans. Minor adjustments to meet field conditions are allowed and will be recorded in the SWP3.

4.2.2. **Phasing.** Implement control measures before the commencement of activities that result in soil disturbance. Phase and minimize the soil disturbance to the areas shown on the plans. Coordinate temporary control measures with permanent control measures and all other work activities on the project to assure economical, effective, safe, and continuous water pollution prevention. Provide control measures that are appropriate to the construction means, methods, and sequencing allowed by the Contract. Exercise precaution throughout the life of the project to prevent pollution of ground waters and surface waters. Schedule and perform clearing and grubbing operations so that stabilization measures will follow immediately thereafter if project conditions permit. Bring all grading sections to final grade as soon as possible and implement temporary and permanent control measures at the earliest time possible. Implement temporary control measures when required by the TPDES General Permit TXR150000 or otherwise necessitated by project conditions.

Do not prolong final grading and shaping. Preserve vegetation where possible throughout the project, and minimize clearing, grubbing, and excavation within stream banks, bed, and approach sections.

4.3. General.

4.3.1. **Temporary Alterations or Control Measure Removal.** Altering or removal of control measures is allowed when control measures are restored within the same working day.

4.3.2. **Stabilization.** Initiate stabilization for disturbed areas no more than 14 days after the construction activities in that portion of the site have temporarily or permanently ceased. Establish a uniform vegetative cover or use another stabilization practice in accordance with the TPDES General Permit TXR150000.

4.3.3. **Finished Work**. Remove and dispose of all temporary control measures upon acceptance of vegetative cover or other stabilization practice unless otherwise directed. Complete soil disturbing activities and establish a uniform perennial vegetative cover. A project will not be considered for acceptance until a vegetative cover of 70% density of existing adjacent undisturbed areas is obtained or equivalent permanent stabilization is obtained in accordance with the TPDES General Permit TXR150000. An exception will be allowed in arid areas as defined in the TPDES General Permit TXR150000.

4.3.4. **Restricted Activities and Required Precautions**. Do not discharge onto the ground or surface waters any pollutants such as chemicals, raw sewage, fuels, lubricants, coolants, hydraulic fluids, bitumens, or any other petroleum product. Operate and maintain equipment on-site to prevent actual or potential water pollution. Manage, control, and dispose of litter on-site such that no adverse impacts to water quality occur. Prevent dust from creating a potential or actual unsafe condition, public nuisance, or condition endangering the value, utility, or appearance of any property. Wash out concrete trucks only as described in the TPDES General Permit TXR150000. Use appropriate controls to minimize the offsite transport of suspended sediments and other pollutants if it is necessary to pump or channel standing water (i.e., dewatering). Prevent discharges that would contribute to a violation of Edwards Aquifer Rules, water quality standards, the impairment of a listed water body, or other state or federal law.

4.4. Installation, Maintenance, and Removal Work. Perform work in accordance with the SWP3, according to manufacturers' guidelines, and in accordance with the TPDES General Permit TXR150000. Install and maintain the integrity of temporary erosion and sedimentation control devices to accumulate silt and debris until soil disturbing activities are completed and permanent erosion control features are in place or the disturbed area has been adequately stabilized as approved.

The Department will inspect and document the condition of the control measures at the frequency shown on the plans and will provide the Construction SWP3 Field Inspection and Maintenance Reports to the Contractor. Make corrections as soon as possible before the next anticipated rain event or within 7 calendar days after being able to enter the worksite for each control measure. The only acceptable reason for not accomplishing the corrections with the time frame specified is when site conditions are "Too Wet to Work." Take immediate action if a correction is deemed critical as directed. When corrections are not made within the established time frame, all work will cease on the project and time charges will continue while the control measures are brought into compliance. Commence work once the Engineer reviews and documents the project is in compliance. Commencing work does not release the Contractor of the liability for noncompliance of the SWP3, plans, or TPDES General Permit TXR150000.

The Engineer may limit the disturbed area if the Contractor cannot control soil erosion and sedimentation resulting from the Contractor's operations. Implement additional controls as directed.

Remove devices upon approval or as directed. Finish-grade and dress the area upon removal. Stabilize disturbed areas in accordance with the permit, and as shown on the plans or directed. Materials removed are considered consumed by the project. Retain ownership of stockpiled material and remove it from the project when new installations or replacements are no longer required.

4.4.1.1. **Type 4 (Sack Gabions)**. Unfold sack gabions and smooth out kinks and bends. Connect the sides by lacing in a single loop–double loop pattern on 4- to 5-in. spacing for vertical filling. Pull the end lacing rod at one end until tight, wrap around the end, and twist 4 times. Fill with stone at the filling end, pull the rod tight, cut the wire with approximately 6 in. remaining, and twist wires 4 times.

4.4.2. **Construction Exits**. Prevent traffic from crossing or exiting the construction site or moving directly onto a public roadway, alley, sidewalk, parking area, or other right of way areas other than at the location of construction exits when tracking conditions exist. Construct exits for either long- or short-term use.

4.4.2.1. **Long-Term**. Place the exit over a foundation course as required. Grade the foundation course or compacted subgrade to direct runoff from the construction exits to a sediment trap as shown on the plans or as directed. Construct exits with a width of at least 14 ft. for one-way and 20 ft. for two-way traffic for the full width of the exit, or as directed.

4.4.4.1.1. **Type 1**. Construct to a depth of at least 8 in. using crushed aggregate as shown on the plans or as directed.

4.4.2.2. **Short-Term**.

4.4.4.2.1. **Type 3**. Construct using crushed aggregate, plywood, or wafer board. This type of exit may be used for daily operations where long-term exits are not practical.

4.4.4.2.2. **Type 4**. Construct as shown on the plans or as directed.

4.4.3. **Earthwork for Erosion Control**. Perform excavation and embankment operations to minimize erosion andto remove collected sediments from other erosion control devices.

4.4.3.1. **Excavation and Embankment for Erosion Control Features**. Place earth dikes, swales, or combinations of both along the low crown of daily lift placement, or as directed, to prevent runoff spillover. Place swales and dikes at other locations as shown on the plans or as directed to prevent runoff spillover or to divert runoff. Construct cuts with the low end blocked with undisturbed earth to prevent erosion of hillsides. Construct sediment traps at drainage structures in conjunction with other erosion control measures as shown on the plans or as directed.

Create a sediment basin, where required, providing 3,600 cu. ft. of storage per acre drained, or equivalent control measures for drainage locations that serve an area with 10 or more disturbed acres at one time, not including offsite areas.

4.4.3.2. **Excavation of Sediment and Debris**. Remove sediment and debris when accumulation affects theperformance of the devices, after a rain, and when directed.
4.4.3.3.

4.4.4. **Construction Perimeter Fence**. Construct, align, and locate fencing as shown on the plans or as directed.

4.4.4.1. **Installation of Posts**. Embed posts 18 in. deep or adequately anchor in rock, with a spacing of 8 to 10 ft.

4.4.4.2. **Wire Attachment**. Attach the top wire to the posts at least 3 ft. from the ground. Attach the lower wire midway between the ground and the top wire.

4.4.4.3. **Flag Attachment**. Attach flagging to both wire strands midway between each post. Use flagging at least 18 in. long. Tie flagging to the wire using a square knot.

4.4.5. **Sandbags for Erosion Control**. Construct a berm or dam of sandbags that will intercept sediment-laden storm water runoff from disturbed areas, create a retention pond, detain sediment, and release water in sheet flow. Fill each bag with sand so that at least the top 6 in. of the bag is unfilled to allow for proper tying of the open end. Place the sandbags with their tied ends in the same direction. Offset subsequent rows of sandbags 1/2 the length of the preceding row. Place a single layer of sandbags downstream as a secondary debris trap. Place additional sandbags as necessary or as directed for supplementary support to berms or dams of sandbags or earth.

4.4.6. **Temporary Sediment-Control Fence**. Provide temporary sediment-control fence near the downstream perimeter of a disturbed area to intercept sediment from sheet flow. Incorporate the fence into erosion-control measures used to control sediment in areas of higher flow. Install the fence as shown on the plans, as specified in this Section, or as directed.

4.4.6.1. **Installation of Posts**. Embed posts at least 18 in. deep, or adequately anchor, if in rock, with a spacing of 6 to 8 ft. and install on a slight angle toward the runoff source.

4.4.6.2. **Fabric Anchoring**. Dig trenches along the uphill side of the fence to anchor 6 to 8 in. of fabric. Provide a minimum trench cross-section of 6 × 6 in. Place the fabric against the side of the trench and align approximately 2 in. of fabric along the bottom in the upstream direction. Backfill the trench, then hand-tamp.

4.4.6.3. **Fabric and Net Reinforcement Attachment**. Attach the reinforcement to wooden posts with staples, or to steel posts with T-clips, in at least 4 places equally spaced unless otherwise shown on the plans. Sewn vertical pockets may be used to attach reinforcement to end posts. Fasten the fabric to the top strand of reinforcement by hog rings or cord every 15 in. or less.

4.4.6.4. **Fabric and Net Splices**. Locate splices at a fence post with a minimum lap of 6 in. attached in at least 6 places equally spaced unless otherwise shown on the plans. Do not locate splices in concentrated flow areas.

Requirements for installation of used temporary sediment-control fence include the following:

- fabric with minimal or no visible signs of biodegradation (weak fibers),
- fabric without excessive patching (more than 1 patch every 15 to 20 ft.),
- posts without bends, and
- backing without holes.

4.4.7. **Biodegradable Erosion Control Logs**. Install biodegradable erosion control logs near the downstream perimeter of a disturbed area to intercept sediment from sheet flow. Incorporate the biodegradable erosion control logs into the erosion measures used to control sediment in areas of higher flow. Install, align, and locate the biodegradable erosion control logs as specified below, as shown on the plans, or as directed.

Secure biodegradable erosion control logs in a method adequate to prevent displacement as a result of normal rain events, prevent damage to the logs, and as approved, such that flow is not allowed under the logs. Temporarily removing and replacing biodegradable erosion logs as to facilitate daily work is allowed at the Contractor's expense.

4.4.8. **Vertical Tracking**. Perform vertical tracking on slopes to temporarily stabilize soil. Provide equipment with a track undercarriage capable of producing a linear soil impression measuring a minimum of 12 in. long × 2 to 4 in. wide × 1/2 to 2 in. deep. Do not exceed 12 in. between track impressions. Install continuous linear track impressions where the 12 in. length impressions are perpendicular to the slope. Vertical tracking is required on projects where soil disturbing activities have occurred unless otherwise approved.

4.5. Monitoring and Documentation. Monitor the control measures on a daily basis as long as there are BMPs in place and/or soil disturbing activities are evident to ensure compliance with the SWP3 and TPDES General Permit TXR150000. During time suspensions when work is not occurring or contract non-work days, daily inspections are not required unless a rain event has occurred. Monitoring will consist of, but is not limited to, observing, inspecting, and documenting site locations with control measures and discharge points to provide maintenance and inspection of controls as described in the SWP3. Keep written records of daily monitoring. Document in the daily monitoring report the control measure condition, the date of inspection, required corrective actions, responsible person for making the corrections, and the date corrective actions were completed. Maintain records of all monitoring reports at the project site or at an approved place. Provide copies within 7 days. Together, the CRPE and an Engineer's representative will complete the Construction Stage Gate Checklist on a periodic basis as directed.

5. MEASUREMENT

5.2. Earthwork for Erosion and Sediment Control.

5.2.1. **Equipment and Labor Measurement.** Equipment and labor used will be measured by the actual number of hours the equipment is operated and the labor is engaged in the work.

5.2.2. **Volume Measurement.**

5.2.2.1. **In Place.**

5.2.2.1.1. **Excavation**. Excavation will be measured by the cubic yard in its original position and the volume computed by the method of average end areas.

5.2.2.1.2. **Embankment**. Embankment will be measured by the cubic yard in its final position by the method of average end areas. The volume of embankment will be determined between:

- the original ground surfaces or the surface upon that the embankment is to be constructed for the feature and
- the lines, grades and slopes of the accepted embankment for the feature.

5.3. Construction Perimeter Fence. Construction perimeter fence will be measured by the foot.

5.4. Sandbags for Erosion Control. Sandbags will be measured as each sandbag or by the foot along the top of sandbag berms or dams.

5.5. Temporary Sediment-Control Fence. Installation or removal of temporary sediment-control fence will be measured by the foot.

5.6. Biodegradable Erosion Control Logs. Installation or removal of biodegradable erosion control logs will be measured by the foot along the centerline of the top of the control logs.

5.7. Vertical Tracking. Vertical tracking will not be measured or paid for directly but is considered subsidiary to this Item.

6. PAYMENT

The following will not be paid for directly but are subsidiary to pertinent Items:

- erosion-control measures for Contractor project-specific locations (PSLs) inside and outside the right of way (such as construction and haul roads, field offices, equipment and supply areas, plants, and material sources);
- removal of litter, unless a separate pay item is shown on the plans;
- repair to devices and features damaged by Contractor operations;
- added measures and maintenance needed due to negligence, carelessness, lack of maintenance, and failure to install permanent controls;
- removal and reinstallation of devices and features needed for the convenience of the Contractor;
- finish grading and dressing upon removal of the device; and
- minor adjustments including but not limited to plumbing posts, reattaching fabric, minor grading to maintain slopes on an erosion embankment feature, or moving small numbers of sandbags.

Stabilization of disturbed areas will be paid for under pertinent Items except vertical tacking which is subsidiary.

Furnishing and installing pipe for outfalls associated with sediment traps and ponds will not be paid for directly but is subsidiary to the excavation and embankment under this Item.

6.1. Construction Exits. Contractor-required construction exits from off right of way locations or on-right of way PSLs will not be paid for directly but are subsidiary to pertinent Items.

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" for construction exits needed on right of way access to work areas required by the Department will be paid for at the unit price bid for "Construction Exits (Install)" of the type specified or "Construction Exits (Remove)." This price is full compensation for furnishing and placing materials, excavating, removal and disposal, cleaning vehicles, labor, tools, and incidentals.

When the Engineer directs that a construction exit or portion thereof be removed and replaced, payment will be made at the unit prices bid for "Construction Exit (Remove)" and "Construction Exit (Install)" of the type specified. These prices are full compensation for the removal and replacement of the construction exit and for equipment, labor, tools, and incidentals.

Construction of sediment traps used in conjunction with the construction exit will be measured and paid for under "Earthwork for Erosion and Sediment Control."

6.2. Earthwork for Erosion and Sediment Control.

6.2.1. **Initial Earthwork for Erosion and Sediment Control.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Excavation (Erosion and Sediment Control, In Place)," "Embankment (Erosion and Sediment Control, In Place)," "Excavation (Erosion and Sediment Control, In Vehicle)," "Embankment (Erosion and Sediment Control, (In Vehicle)," or "Earthwork (Erosion and Sediment Control, In Vehicle)."

This price is full compensation for excavation and embankment including hauling, disposal of material not used elsewhere on the project; embankments including furnishing material from approved sources and construction of erosion-control features; and equipment, labor, tools, and incidentals.

Sprinkling and rolling required by this Item will not be paid for directly but will be subsidiary to this Item.

6.3. Construction Perimeter Fence. The work performed and materials furnished in accordance with this Itemand measured as provided under "Measurement" will be paid for at the unit price bid for "Construction Perimeter Fence." This price is full compensation for furnishing and placing the fence; digging, fence posts, wire, and flagging; removal and disposal; and materials, equipment, labor, tools, and incidentals.

Removal of construction perimeter fence will be not be paid for directly but is subsidiary to the installation Item. When the Engineer directs that the perimeter fence installation or portions thereof be removed and replaced, payment will be made at the unit price bid for "Construction Perimeter Fence," which is full compensation for the removal and reinstallation of the construction perimeter fence.

6.4. Sandbags for Erosion Control. Sandbags will be paid for at the unit price bid for "Sandbags for Erosion Control" (of the height specified when measurement is by the foot). This price is full compensation for materials, placing sandbags, removal and disposal, equipment, labor, tools, and incidentals.

Removal of sandbags will not be paid for directly but is subsidiary to the installation Item. When the Engineer directs that the sandbag installation or portions thereof be replaced, payment will be made at the unit price bid for "Sandbags for Erosion Control," which is full compensation for the reinstallation of the sandbags.

6.5. Temporary Sediment-Control Fence. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid as follows:

6.5.1. **Installation**. Installation will be paid for as "Temporary Sediment-Control Fence (Install)." This price is full compensation for furnishing and operating equipment finish backfill and grading, lacing, proper disposal, labor, materials, tools, and incidentals.

6.5.2. **Removal**. Removal will be paid for as "Temporary Sediment-Control Fence (Remove)." This price is full compensation for furnishing and operating equipment, proper disposal, labor, materials, tools, and incidentals.

6.6. Biodegradable Erosion Control Logs. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid as follows:

6.6.1. **Installation**. Installation will be paid for as "Biodegradable Erosion Control Logs (Install)" of the size specified. This price is full compensation for furnishing and operating equipment finish backfill and grading, staking, proper disposal, labor, materials, tools, and incidentals.

6.6.2. **Removal**. Removal will be paid for as "Biodegradable Erosion Control Logs (Remove)." This price is full compensation for furnishing and operating equipment, proper disposal, labor, materials, tools, and incidentals.

6.7. Vertical Tracking. Vertical tracking will not be measured or paid for directly but is considered subsidiary to this Item.

ITEM 529
CONCRETE CURB, GUTTER,COMBINED CURB AND GUTTER

DESCRIPTION

Construct hydraulic cement concrete curb, gutter, and combined curb and gutter.

MATERIALS

Furnish materials conforming to:

- Item 360, "Concrete Pavement"
- Item 420, "Concrete Substructures"
- Item 421, "Hydraulic Cement Concrete"
- Item 440, "Reinforcement for Concrete"

Use Class A concrete or material specified on the plans. Use Grade 8 coarse aggregate for extruded Class Aconcrete. Use other grades if approved.

When approved, use fibers meeting the requirements of DMS-4550, "Fibers for Concrete," to replace reinforcing steel in Class A concrete. Dose fibers in accordance with the Department's MPL of pre-qualified fibers for concrete.

CONSTRUCTION

Provide finished work with a well-compacted mass and a surface free from voids and honeycomb, in the required shape, line, and grade. Round exposed edges with an edging tool of the radius shown on the plans. Mix, place, and cure concrete in accordance with Item 420, "Concrete Substructures." Construct joints at locations shown on the plans. Cure for at least 72 hr.

Furnish and place reinforcing steel in accordance with Item 440, "Reinforcement for Concrete."

Set and maintain a guideline that conforms to alignment data shown on the plans, with an outline that conforms to the details shown on the plans. Ensure that changes in curb grade and alignment do not exceed 1/4 in. between any 2 contacts on a 10-ft. straightedge.

3.1 Conventionally Formed Concrete. Shape and compact subgrade, foundation, or pavement surface to theline, grade, and cross-section shown on the plans. Lightly sprinkle subgrade or foundation material immediately before concrete placement.

Pour concrete into forms and strike off with a template 1/4 to 3/8 in. less than the dimensions of the finished curb unless otherwise approved. After initial set, plaster surface with mortar consisting of 1-part hydraulic cement and 2 parts fine aggregate. Brush exposed surfaces to a uniform

texture.

Place curbs, gutters, and combined curb and gutters in 50-ft. maximum sections unless otherwise approved.

3.2 Extruded or Slipformed Concrete. Hand-tamp and sprinkle subgrade or foundation material before concrete placement. Provide clean surfaces for concrete placement. Coat cleaned surfaces, if required, with approved adhesive or coating at the rate of application shown on the plans or as directed. Place concrete with approved self-propelled equipment.

The forming tube of the extrusion machine or the form of the slipform machine must be easily adjustable vertically during the forward motion of the machine to provide variable heights necessary to conform to the established grade line.

Attach a pointer or gauge to the machine so that a continual comparison can be made between the extruded or slipform work and the grade guideline. Other methods may be used when approved.

Finish surfaces immediately after extrusion or slipforming.

MEASUREMENT

This Item will be measured by the lineal foot.

PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under"Measurement" will be paid for at the unit price bid for "Concrete Curb," "Concrete Curb (Mono)," or "Concrete Curb and Gutter" of the type specified. This price is full compensation for surface preparation of curb foundation, equipment, labor, materials, tools, and incidentals.

END OF ITEM 529

EXHIBIT A: PLANS

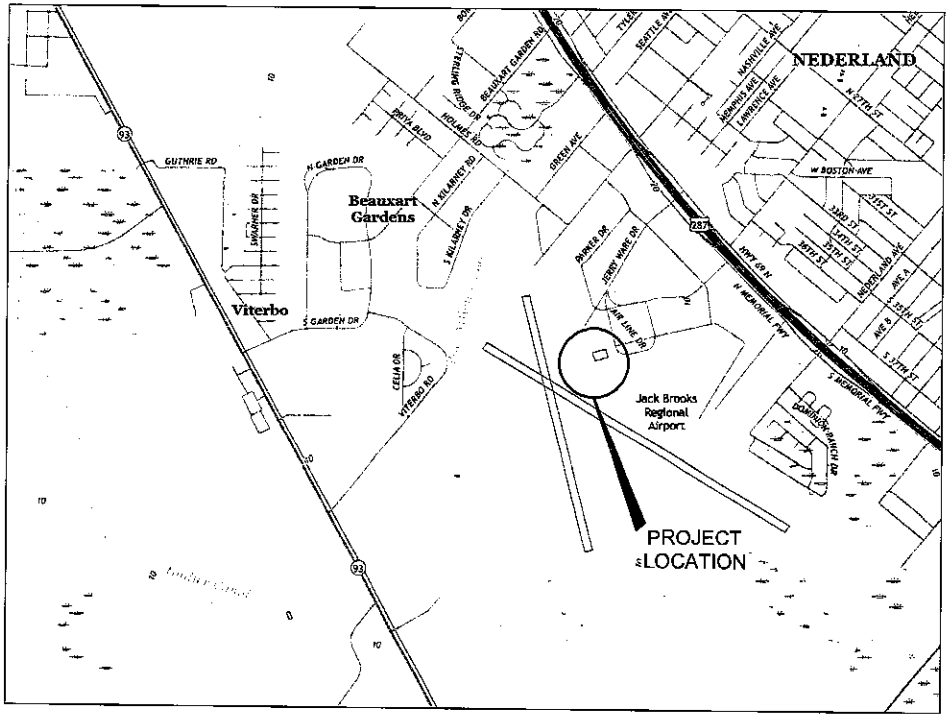
IFB 22-028/JW
EXHIBIT A: PAGE A-2

REHABILITATION OF FUEL FARM PAVEMENT
JACK BROOKS REGIONAL AIRPORT (BPT)

ISSUED FOR BIDDING

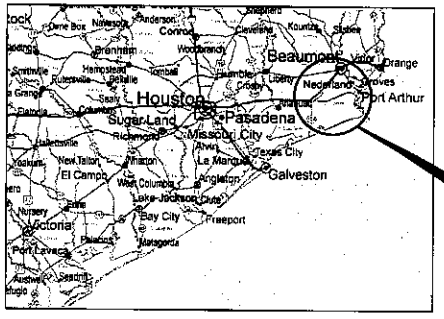
PROJECT CONSISTS OF RECONSTRUCTION OF EXISTING CONCRETE PAVEMENT AT THE JACK BROOKS REGIONAL AIRPORT FUEL FARM

FAA AIRPORT IMPROVEMENT PROGRAM (AIP) PN: AIP 3-480018-37-20
JEFFERSON COUNTY PN: ISB 22-028/JW
THE SOLCO GROUP PN: 2021-10-1092
MAY 2022



VICINITY MAP
N.T.S

SHEET INDEX		
SHEET NO.	DWG NO.	SHEET TITLE
1	G-000	COVER PAGE
2	G-001	GENERAL NOTES AND SUMMARY OF QUANTITIES
3	C-001	PROJECT LAYOUT AND PHASING PLAN
4	C-002	SURVEY PLAN
5	C-003	SITE DEMOLITION PLAN
6	C-004	GRADING, PLAN AND PROFILE
7	C-005	SITE PAVING, JOINTING AND SPOT ELEVATIONS
8	C-006	PAVEMENT DETAILS
9	C-007	PAVEMENT DETAILS
10	EC(8)-16	TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES EROSION CONTROL LOG
11	BC(8)-21	BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES



LOCATION MAP
N.T.S

JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #22626

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
COVER PAGE

DRAWING NUMBER: G-000

SHEET NUMBER: 1 SHEET TOTAL: 11

SCALE: N.T.S

DRAWN BY: AM CHECKED BY: KS

FILE:G:\The Solco Group\Jack Brooks Regional\13. CADD\21 1092-BPT-COVER PAGE.dwg

1117

IFB 22-028/JW
EXHIBIT A: PAGE A-3

CONSTRUCTION ACTIVITIES

1. THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS. THE PROJECT IS SUBJECT TO INSPECTION BY REPRESENTATIVES OF JACK BROOKS REGIONAL AIRPORT, THE ENGINEER, JEFFERSON COUNTY AND THE FEDERAL AVIATION ADMINISTRATION (FAA).
2. CONTRACTOR AND CONSTRUCTION ACTIVITIES SHALL COMPLY WITH ALL PLANS, SPECIFICATIONS AND FAA ADVISORY CIRCULARS.
3. THE CONTRACTOR SHALL SUBMIT A DETAILED CONSTRUCTION PROGRESS SCHEDULE TO THE AIRPORT, ENGINEER AND RESIDENT PROJECT REPRESENTATIVE (RPR) EACH WEEK.
4. ALL MATERIAL SUBMITTALS FOR ITEMS TO BE USED IN CONSTRUCTION OF THE PROJECT SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL 14 DAYS PRIOR TO COMMENCEMENT OF THE ASSOCIATED WORK.
5. THIS PROJECT PAY ITEMS ARE PROVIDED TO BE INCLUSIVE OF ALL WORK TO BE PERFORMED AS SHOWN IN THESE PLANS. ALL WORK NOT IDENTIFIED WITH A SPECIFIC PAY ITEM IS TO BE CONSIDERED REQUIRED/INCIDENTAL WORK TO COMPLETE THE PROJECT AND IS TO BE INCLUDED IN THE COST OF THE PROJECT PAY ITEMS PROVIDED.
6. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING SAFETY FOR CONSTRUCTION PERSONNEL AND EQUIPMENT AT ALL TIMES.
7. CONTRACTOR SHALL REPAIR OR REPLACE ALL ITEMS NOT DESIGNATED FOR DEMOLITION OR REMOVAL THAT ARE DAMAGED BY CONSTRUCTION EFFORTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMMEDIATE REPAIR OF ANY DAMAGE TO AIRPORT FACILITIES, INCLUDING BUT NOT LIMITED TO EXISTING PAVEMENTS, UNDERGROUND CABLES, LIGHTS, SIGNS, FENCES, EQUIPMENT, ETC. CAUSED DURING CONSTRUCTION. ALL REPAIRS MUST BE MADE IN COORDINATION WITH THE OWNER AND TO EQUAL OR BETTER QUALITY AND IN COMPLIANCE WITH THE AIRPORT. ALL REPAIR AND REPLACEMENT COST SHALL BE AT THE EXPENSE OF THE CONTRACTOR.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EFFORT AND COST OF IMMEDIATE CLEANING OF EARTH TRACKING AND SPILLS RESULTING FROM THE CONTRACTOR'S OPERATIONS.
9. CONSTRUCTION AREA LIMITS: THE LIMITS OF CONSTRUCTION MATERIAL STORAGE AREAS, PLAN SITE, EQUIPMENT STORAGE AREA, PARKING AREA AND OTHER AREAS DEFINED AS REQUIRED FOR THE CONTRACTOR'S EXCLUSIVE USE DURING CONSTRUCTION SHALL BE MARKED BY THE CONTRACTOR.
10. THE CONTRACTOR SHALL BE RESPONSIBLE OF COMPLYING WITH ALL FEDERAL, STATE, AND LOCAL LAWS AND SHALL OBTAIN ALL NECESSARY PERMITS REQUIRED FOR CONSTRUCTION.

ENVIRONMENTAL

1. IN THE EVENT THAT UNANTICIPATED CONTAMINATION IS ENCOUNTERED DURING CONSTRUCTION, WORK IN THE IMMEDIATE AREA WILL CEASE. CONTRACTOR SHALL NOTIFY THE RPR AND ENGINEER TO CONTACT THE RELEVANT ENVIRONMENTAL AUTHORITY.
2. ALL WASTE MATERIAL SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH ALL THE LOCAL, STATE AND FEDERAL REGULATIONS.

EXISTING TOPOGRAPHY

1. EXISTING TOPOGRAPHY SHOWN ON THE PLANS ARE BASED ON THE SURVEYED TERRAIN FOR THE CONSTRUCTION LIMITS OF THE PROJECT. THE CONTRACTOR SHALL FIELD VERIFY THAT THE EXISTING TOPOGRAPHY SHOWN IS REASONABLY ACCURATE. IF THE ACCURACY IS IN QUESTION THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST TWO WEEKS PRIOR TO THE START OF CONSTRUCTION AND A COURSE OF ACTION WILL BE DETERMINED AT THAT TIME.

EXISTING CONDITIONS/UNDERGROUND AND CONCEALED

1. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO BEGINNING CONSTRUCTION AND REPORT TO THE ENGINEER ANY VARIATIONS FROM THE INFORMATION SHOWN ON CONSTRUCTION PLANS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND IDENTIFICATION OF ALL EXISTING UTILITIES AND PIPELINES IN THE CONSTRUCTION AREA. ANY DAMAGE TO EXISTING UTILITIES OR PIPELINES (ON OR OFF AIRPORT PROPERTY) DAMAGED BY CONTRACTOR SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL REPAIR ALL UTILITY/PIPELINE DAMAGED BY CONTRACTOR AT NO ADDITIONAL COST TO OWNER.
3. ANY UNPLANNED, UNAPPROVED OR ACCIDENTAL SHUTDOWN OR INTERRUPTION OF SERVICE TO ANY LIGHTING CIRCUIT REQUIRES IMMEDIATE NOTIFICATION OF THE OWNER BY THE CONTRACTOR. ALL NECESSARY REPAIRS WILL BE AT CONTRACTORS EXPENSE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STAKING AND GRADE CONTROL OF ALL ELEMENTS OF THE PROJECT AT NO ADDITIONAL COST TO THE OWNER.
5. CONTRACTOR SHALL VERIFY ALL SURVEY CONTROL, ELEVATIONS, AND EXISTING GRADES PRIOR TO BEGINNING CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER PRIOR TO BEGINNING CONSTRUCTION.
6. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL HORIZONTAL AND VERTICAL CONSTRUCTION STAKING AS REQUIRED FOR THE PROJECT DEVELOPMENT.
7. CONTRACTOR SHALL ESTABLISH ANY ADDITIONAL CONTROL POINTS DEEMED NECESSARY BY CONSTRUCTION PERSONNEL PRIOR TO BEGINNING THE WORK.

SUMMARY OF QUANTITIES

Spec	Pay Item	Description	Units	Bid Quantity	Final Quantity	Remarks
1	C-105	Mobilization	LS	1		
2	SS-120	Construction Safety and Security (CSPP, Barricades, Signs and Traffic Handling)	LS	1		
3	D-701a	Allowance for Storm Sewer Pipe Replacement	LS	1		
4	D-701b	Install PVC Pipe (2 Inch)	LF	8		
5	P-101-5.1a	Sawcut, Remove and Dispose Existing Concrete Pavement Full Depth (8 Inches)	SY	600		
6	P-101-5.1b	Sawcut, Remove and Dispose Existing Asphalt Ramp	SY	70		
7	P-101-5.1c	Sawcut, Remove and Dispose Existing 6" Vertical Curb	LF	310		
8	P-152-4.2	Embankment in Place	CY	20		
9	P-152-4.4	Unsuitable Excavation	CY	20		
10	P-155-8.1	Lime Treated Subgrade (8 inches)	SY	600		
11	P-155-8.2	Lime	TON	31		
12	P-501-8.1a	Reinforced Concrete Pavement (8 Inches)	SY	530		
13	P-501-8.1b	Reinforced Concrete Pavement Ramp (8-12 Inches)	SY	70		
14	TXDOT 506-6.6.1	Biodegradable Erosion Control Logs (Install)	LF	200		
15	TXDOT 506-6.6.2	Biodegradable Erosion Control Logs (Removal)	LF	200		
16	TXDOT 529	4" Concrete Curb	LF	310		
17	See Plan	Furnish and Install 4' Steel Bollards	EA	2		
18	See Plan	Install 5' Rubber Speed Bumps	EA	4		

HAUL ROUTES, STAGING AREAS AND SITE ACCESS

1. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING STAGING AREA AND HAUL ROUTE AS NECESSARY FOR HIS OPERATIONS. THIS ITEMS SHALL BE SUBSIDIARY TO OTHER ITEMS IN THE CONTRACT.
2. CONTRACTOR SHALL PROVIDE ACCESS ROUTE PLAN FOR APPROVAL BY THE AIRPORT PRIOR TO THE BEGINNING OF CONSTRUCTION. THE ACTUAL SIZE AND LOCATION OF THE STAGING AREA AND HAUL ROUTE WILL BE APPROVED BY THE AIRPORT PRIOR TO CONSTRUCTION.
4. IT SHALL BE THE CONTRACTORS' RESPONSIBILITY TO COORDINATE ALL OFF-AIRPORT ROUTES WITH THE APPROPRIATE AUTHORITIES.
5. HAUL TRUCKS TRANSPORTING LOOSE MATERIAL OFF AIRPORT PROPERTY SHALL USE LOAD COVERS AND SHALL BE LOADED SUCH THAT NO SPILLAGE OCCURS DURING TRANSIT. ALL CONTRACTOR EQUIPMENT MUST BE MAINTAINED IN GOOD WORKING ORDER. CONTRACTOR VEHICLES THAT LEAK OR DRIP OIL AND/OR FLUIDS MUST BE IMMEDIATELY REMOVED FROM THE PROJECT FOR REPAIR AND THE SPILL CLEANED UP IN ACCORDANCE WITH STATE AND FEDERAL REQUIREMENTS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING HIS/HER OWN COMPLETE UTILITY SERVICES. THE AIRPORT WILL NOT PROVIDE FACILITIES AND SERVICES TO THE CONTRACTOR DURING CONSTRUCTION. THE CONTRACTOR'S PERSONNEL ARE PROHIBITED FROM UTILIZING THE AIRPORT TERMINAL. ASSOCIATED COST WILL BE SUBSIDIARY TO OTHER ITEMS IN THE CONTRACT.
7. THE AREAS UTILIZED AS THE CONTRACTOR'S STAGING AREA, PARKING, LAYDOWN, STORAGE AREA, AND THE HAUL ROUTES ARE TO BE RESTORED TO THE ORIGINAL CONDITION AT THE END OF THE PROJECT. ALL EXISTING ROADS OR PAVEMENTS USED AS ACCESS/HAUL ROADS SHALL BE MAINTAINED AND IMPROVED AS REQUIRED. THE ROAD OR PAVEMENT CONDITIONS WILL BE INSPECTED JOINTLY BY THE ENGINEER AND CONTRACTOR PRIOR TO AND AT THE END OF THE PROJECT. THE CONDITION OF THESE ROADS AND PAVEMENTS SHALL BE EQUAL OR BETTER THAN AT THE START OF THE PROJECT AS DETERMINED BY THE ENGINEER. MECHANICAL BROOMS WILL BE REQUIRED BY THE ENGINEER FOR THESE EXISTING PAVEMENT ACCESS ROADS IF CONDITIONS ARE NOT BEING MAINTAINED (IN THE OPINION OF THE ENGINEER) BY THE CONTRACTOR.
8. CONSTRUCTION EQUIPMENT AND VEHICLES SHALL NOT TRAVEL ON NEWLY CONSTRUCTED PAVEMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF ANY DAMAGE TO THE NEWLY CONSTRUCTED PAVEMENT. ALL REPAIRS SHALL BE AT THE CONTRACTORS OWN EXPENSE.
9. THE FUEL FARM SHALL BE KEPT FREE OF ALL DEBRIS, DIRT, ETC., AT ALL TIMES. ANY SPILLAGE OF SOIL, DEBRIS OR OTHER MATERIALS SHALL BE CLEANED UP IMMEDIATELY USING APPROPRIATE POWER SWEEPERS, BLOWERS OR OTHER APPROVED EQUIPMENT, BY THE CONTRACTOR. DUST GENERATED DUE TO CONSTRUCTION ACTIVITIES SHALL BE ADEQUATELY CONTROLLED AT ALL TIMES. A PROGRAM OF REGULAR FUEL FARM AREA INSPECTION SHALL BE IMPLEMENTED BY THE CONTRACTOR DURING CONSTRUCTION.
10. ALL EQUIPMENT MUST BE RETURNED TO THE STAGING AREA AT THE END OF EACH WORK DAY AND WHEN NOT ENGAGED IN THE CONSTRUCTION DURING NON-WORKING DAYS AND NIGHTS UNLESS APPROVED BY THE OWNER. THE OWNER WILL DESIGNATE AREAS FOR CONTRACTOR'S EMPLOYEES AUTO PARKING.
11. ACCESS TO THE SITE:
    a. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRAFFIC CONTROL TO AND FROM THE VARIOUS CONSTRUCTION AREAS ON THE SITE.
    b. THE CONTRACTOR SHALL NOT PERMIT ANY UNAUTHORIZED CONSTRUCTION PERSONNEL OR TRAFFIC ON THE SITE.
    c. THE CONTRACTOR IS RESPONSIBLE FOR IMMEDIATE CLEAN UP OF ANY DEBRIS DEPOSITED ALONG THE ACCESS ROUTE AS A RESULT OF HIS CONSTRUCTION TRAFFIC.
    d. ANY TRAFFIC CONTROL SIGN AND DEVICES PLACED IN THE COURSE OF THE PROJECT SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), THE APPLICABLE FAA ADVISORY CIRCULAR, OR AS APPROVED IN WRITING FROM SHOP DRAWINGS SUBMITTED TO THE ENGINEER PRIOR TO SIGN PLACEMENT.
    e. THE CONTRACTOR WILL BE LIABLE FOR ANY FINES ISSUED BY THE FAA, DOTD, COUNTY AND AIRPORT OPERATIONS FOR TRAFFIC VIOLATIONS AND SECURITY VIOLATIONS FOR WHICH IT IS CITED.

DUST PROTECTION

1. CONTRACTOR SHALL INSTALL DUST PROTECTION COVERS TO PROTECT THE EXISTING FUEL TANK EQUIPMENT AND CHAIN LINK FENCE. DUST PROTECTION IS INCIDENTAL TO PAY ITEM SS-100

Texas 811

JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #22826

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
GENERAL NOTES AND SUMMARY OF QUANTITIES

DRAWING NUMBER: G-001

SHEET NUMBER: 2 SHEET TOTAL: 11

SCALE: N.T.S

DRAWN BY: AM CHECKED BY: KS

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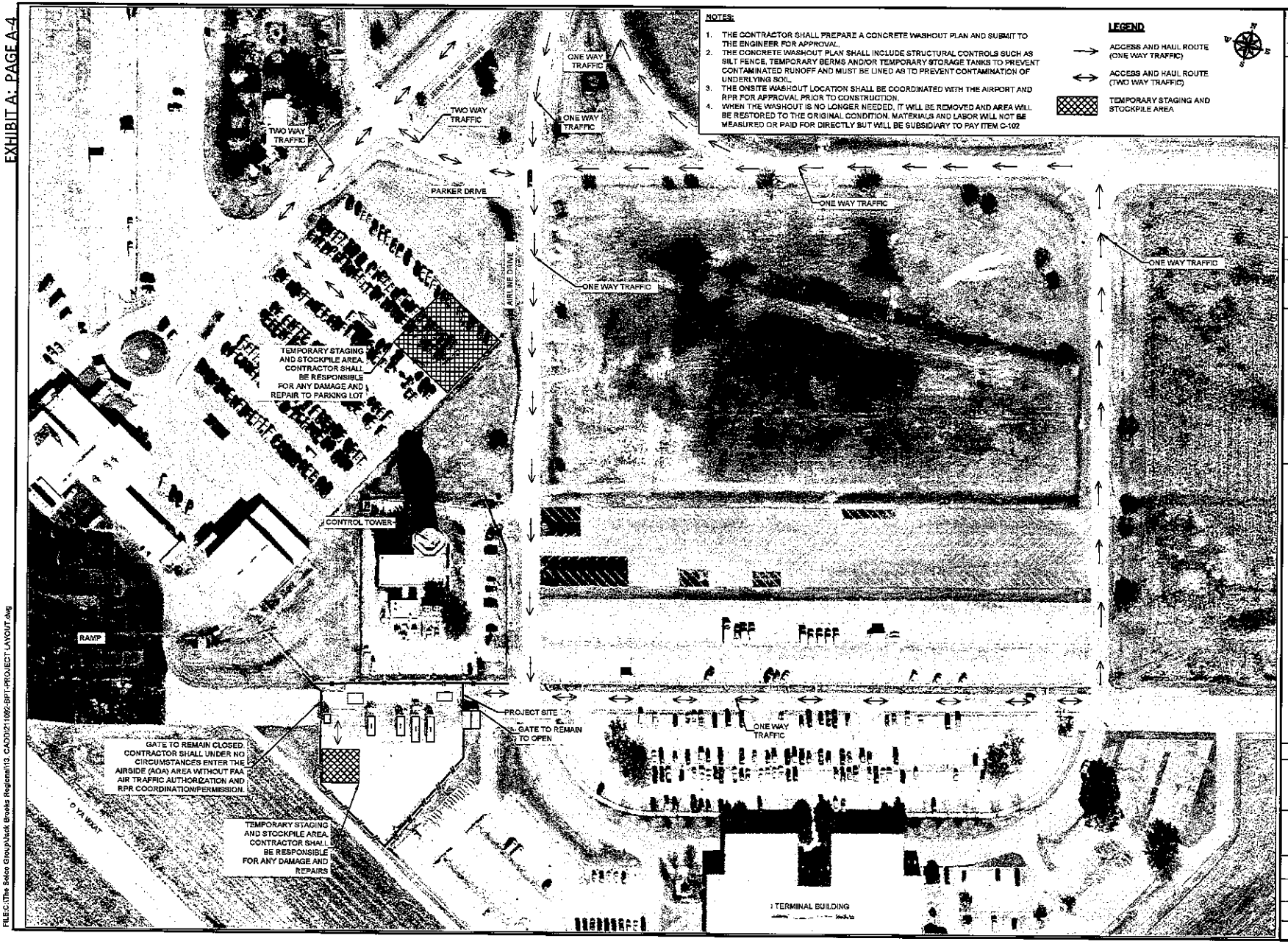
IFB 22-028/JW
EXHIBIT A: PAGE A-4



JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #22626

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
PROJECT LAYOUT AND PHASING PLAN

DRAWING NUMBER: C-001

SHEET NUMBER: 3 SHEET TOTAL: 11

SCALE: 1" = 60' (FULL) 1"=120' (HALF)

DRAWN BY: AM CHECKED BY: KB

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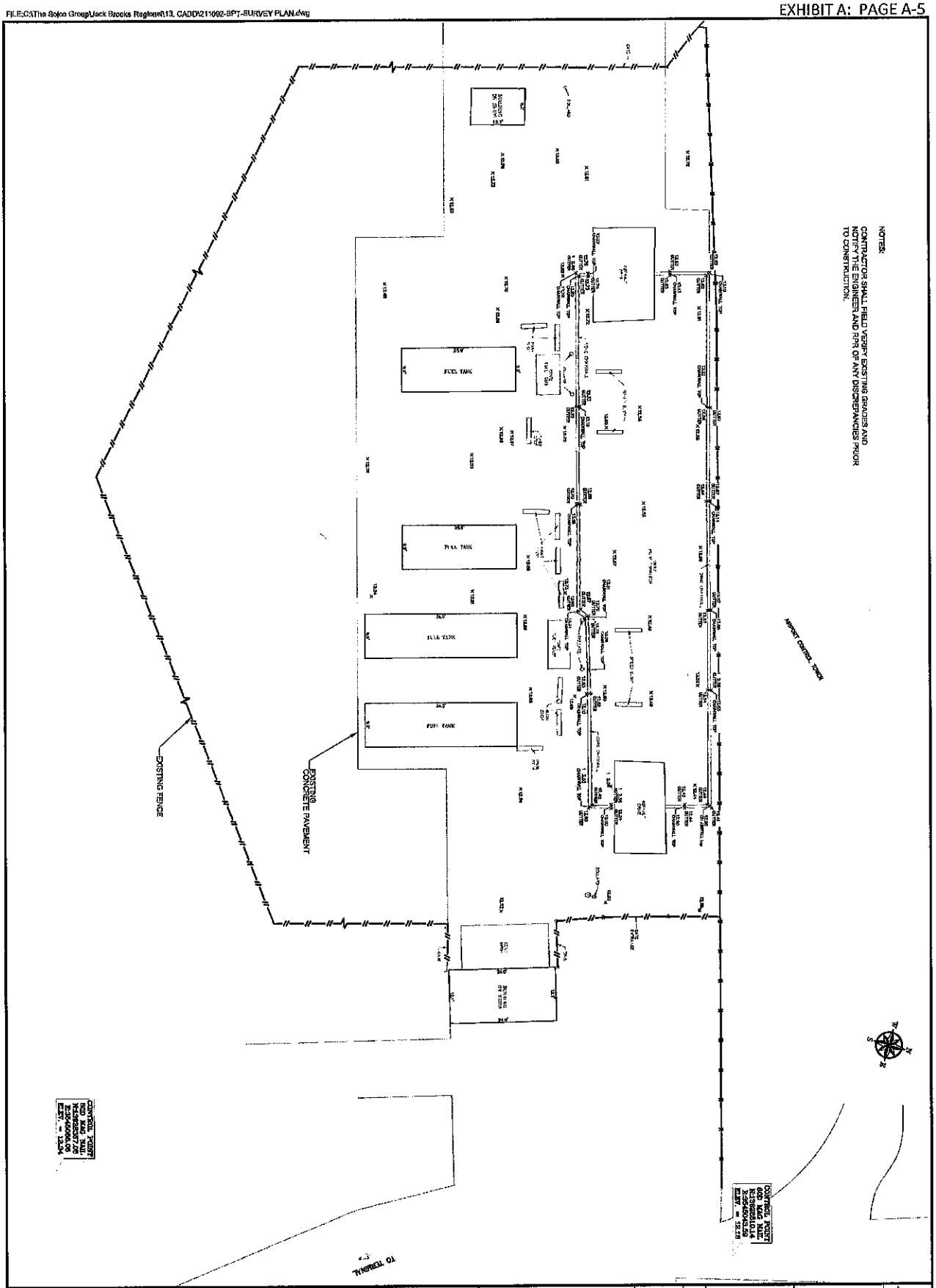


JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #22926

REVISION	DATE	NO.

GENERAL NOTES:

DATE: MAY 2022

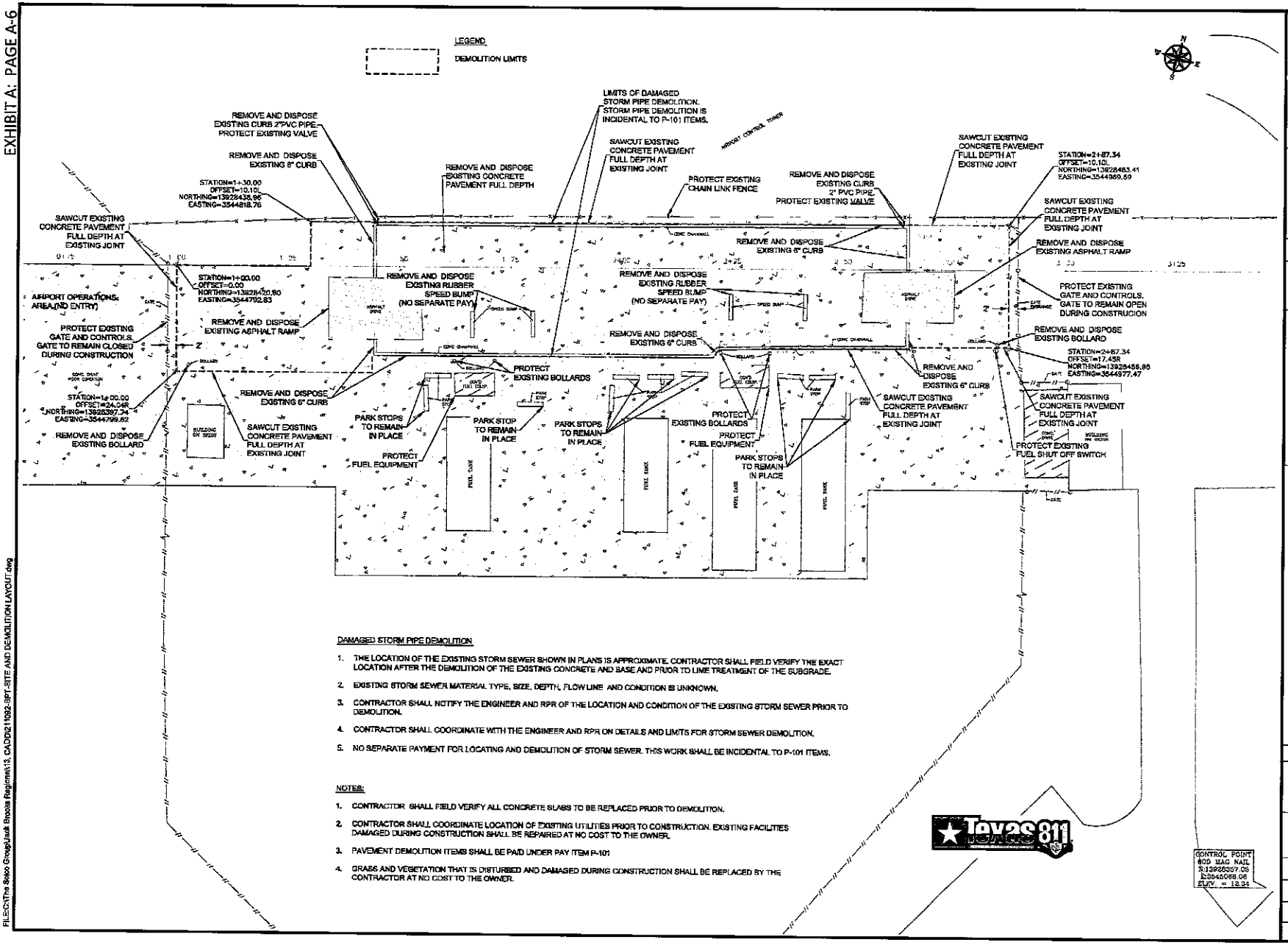
PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
SURVEY PLAN

DRAWING NUMBER: C-002
SHEET NUMBER: 4
SHEET TOTAL: 11
SCALE: 1" = 10' (FULL) 1"=20' (HALF)
DRAWN BY: AM
CHECKED BY: KS

1120

IFB 22-028/JW
EXHIBIT A: PAGE A-6



DAMAGED STORM PIPE DEMOLITION

1. THE LOCATION OF THE EXISTING STORM SEWER SHOWN IN PLANS IS APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATION AFTER THE DEMOLITION OF THE EXISTING CONCRETE AND BASE AND PRIOR TO LIME TREATMENT OF THE SUBGRADE.
2. EXISTING STORM SEWER MATERIAL TYPE, SIZE, DEPTH, FLOW LINE AND CONDITION IS UNKNOWN.
3. CONTRACTOR SHALL NOTIFY THE ENGINEER AND RPR OF THE LOCATION AND CONDITION OF THE EXISTING STORM SEWER PRIOR TO DEMOLITION.
4. CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND RPR ON DETAILS AND LIMITS FOR STORM SEWER DEMOLITION.
5. NO SEPARATE PAYMENT FOR LOCATING AND DEMOLITION OF STORM SEWER. THIS WORK SHALL BE INCIDENTAL TO P-101 ITEMS.

NOTES:

1. CONTRACTOR SHALL FIELD VERIFY ALL CONCRETE SLABS TO BE REPLACED PRIOR TO DEMOLITION.
2. CONTRACTOR SHALL COORDINATE LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. EXISTING FACILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED AT NO COST TO THE OWNER.
3. PAVEMENT DEMOLITION ITEMS SHALL BE PAID UNDER PAY ITEM P-101
4. GRASS AND VEGETATION THAT IS DISTURBED AND DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER.

JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #22626

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
SITE DEMOLITION PLAN

DRAWING NUMBER: C-003

SHEET NUMBER: 6 SHEET TOTAL: 11

SCALE: 1" = 10' (FULL) 1"=20' (HALF)

DRAWN BY: AM CHECKED BY: KS

FILE:C:\The Sepo Group\Jack Brooks Regional\13. CAD\D211092-SPT-SITE AND DEMOLITION LAYOUT.dwg

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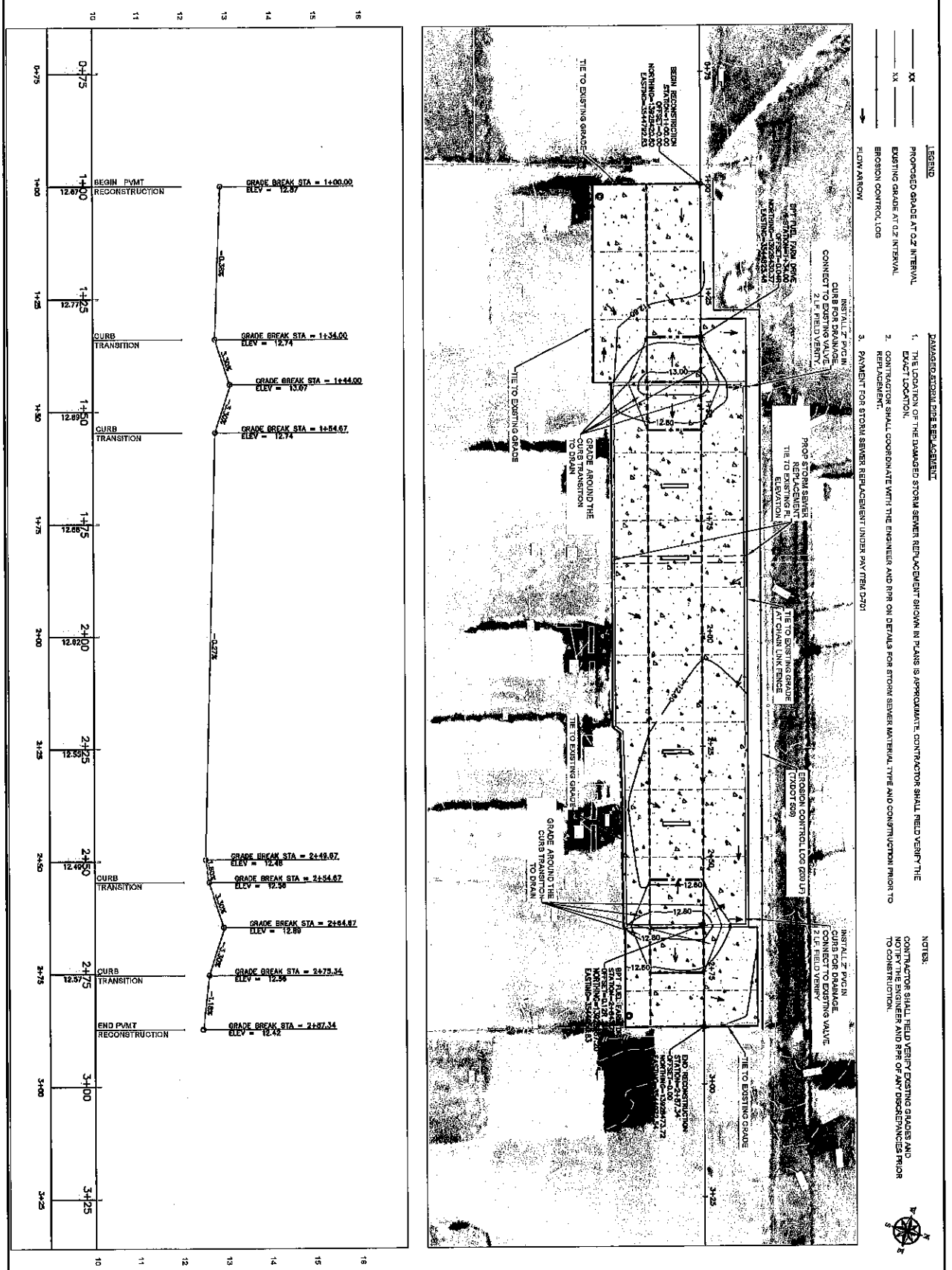


REVISION	DATE	NO.

GENERAL NOTES:

JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #2226

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
GRADING, PLAN AND PROFILE

DRAWING NUMBER: C-004

SHEET NUMBER: 6

SHEET TOTAL: 11

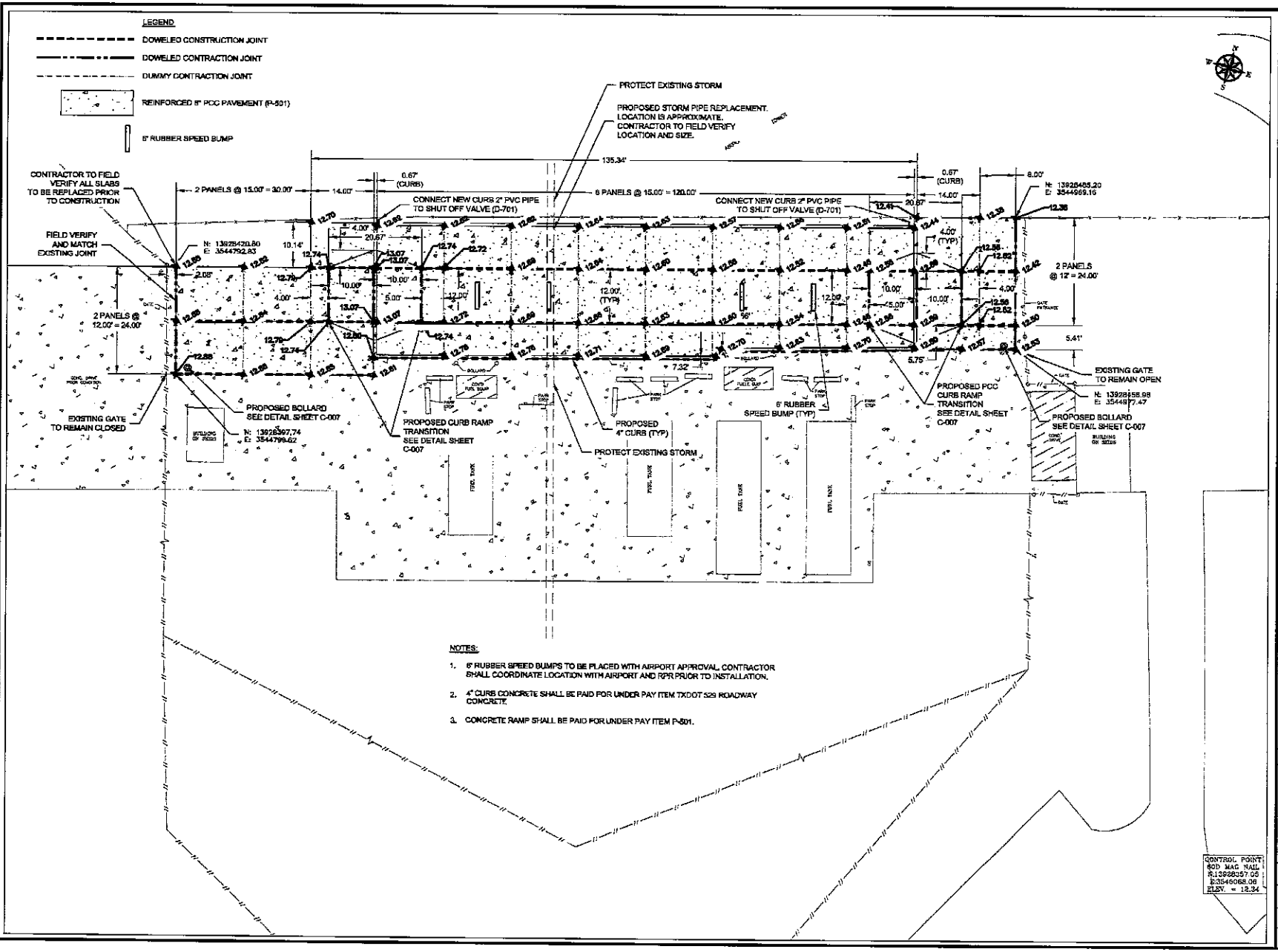
SCALE: 1" = 10' (FULL) 1"=20' (HALF)

DRAWN BY: AM

CHECKED BY: KS

1122

IFB 22-028/JW
EXHIBIT A: PAGE A-8



NOTES:

1. 6" RUBBER SPEED BUMPS TO BE PLACED WITH AIRPORT APPROVAL, CONTRACTOR SHALL COORDINATE LOCATION WITH AIRPORT AND RPR PRIOR TO INSTALLATION.
2. 4" CURB CONCRETE SHALL BE PAID FOR UNDER PAY ITEM TXDOT 529 ROADWAY CONCRETE.
3. CONCRETE RAMP SHALL BE PAID FOR UNDER PAY ITEM P-501.

JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #22626

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
SITE PAVING, JOINTING AND SPOT ELEVATIONS

DRAWING NUMBER: C-005

SHEET NUMBER: 7 SHEET TOTAL: 11

SCALE: 1" = 10' (FULL) 1"=20' (HALF)

DRAWN BY: AM CHECKED BY: KIS

FILE:C:\The Sixto Group\Jack Brooks Regional\13. CADD\211992-SPT-PAVING, JOINTING & SPOT ELEVATIONS.dwg

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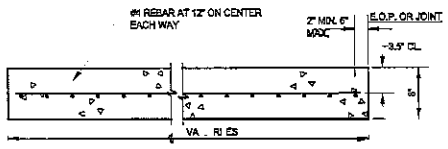
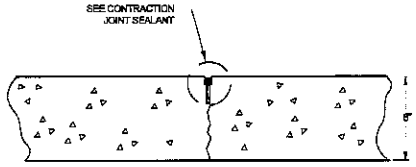
EXHIBIT A: PAGE A-9



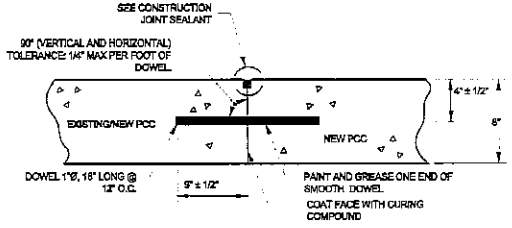
TYPICAL REINFORCED CONCRETE PAVEMENT SLAB

N.T.S.



DUMMY CONTRACTION JOINT (JOINT D)

N.T.S.



DOWELED CONSTRUCTION JOINT (TYPE E)

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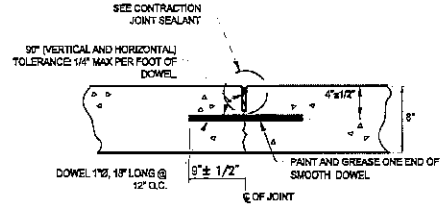
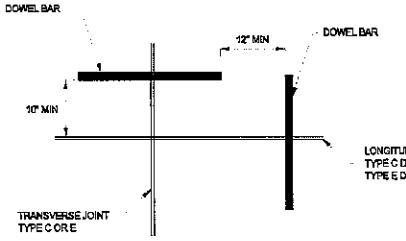


DOWELED CONTRACTION JOINT (TYPE C)

N.T.S.

CONCRETE JOINTS NOTE:

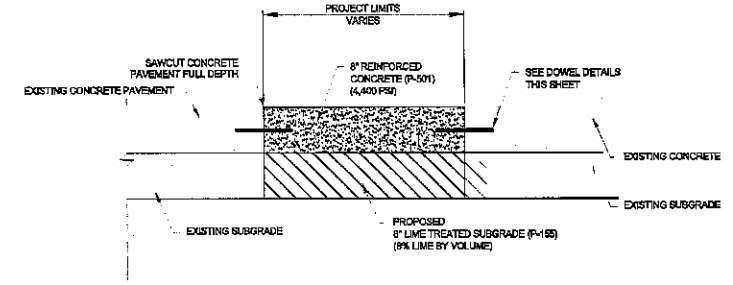
PAYMENT FOR CONCRETE JOINTS AND SEALANT SHALL BE INCIDENTAL TO PAY ITEM P-501



POSITION OF DOWELS AT EDGE OF JOINT TYPE C, E

N.T.S.

SMOOTH DOWEL BAR SCHEDULE			
PCC SLAB DEPTH	DIAMETER	LENGTH	SPACING
8"	1"	18"	12"
12"	1"	18"	12"



FUEL FARM ROAD PAVEMENT

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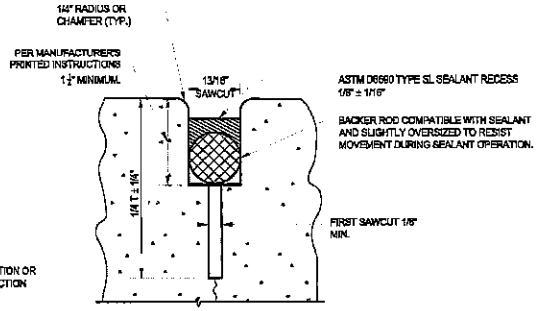

NOTE:
ALL SEALANT MATERIALS MUST BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS AS APPROVED BY ENGINEER.

CONTRACTION JOINT SEALANT

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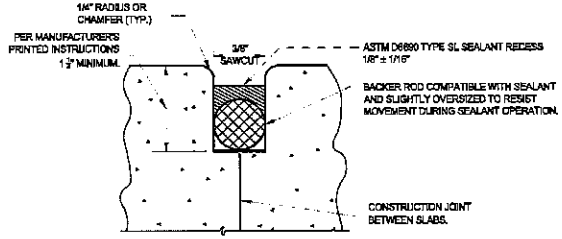

NOTE:
ALL SEALANT MATERIALS MUST BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS AS APPROVED BY ENGINEER.

CONSTRUCTION JOINT SEALANT

N.T.S.

JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #22626

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
PAVEMENT DETAILS

DRAWING NUMBER: C-006

SHEET NUMBER: 8 SHEET TOTAL: 11

SCALE: N.T.S

DRAWN BY: AM CHECKED BY: KS

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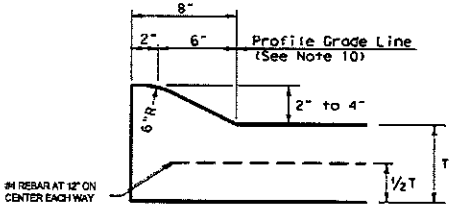
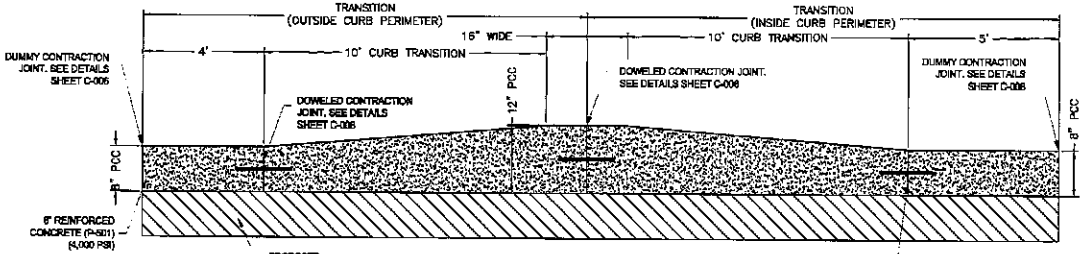
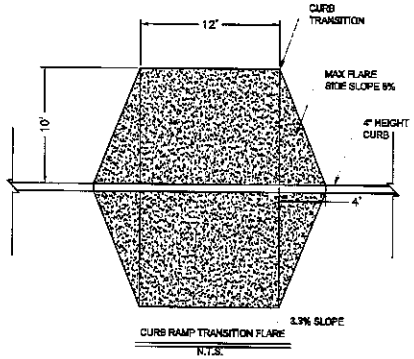


4" HEIGHT CURB DETAIL
N.T.S.



CURB RAMP TRANSITION DETAIL
N.T.S.



CURB RAMP TRANSITION FLARE
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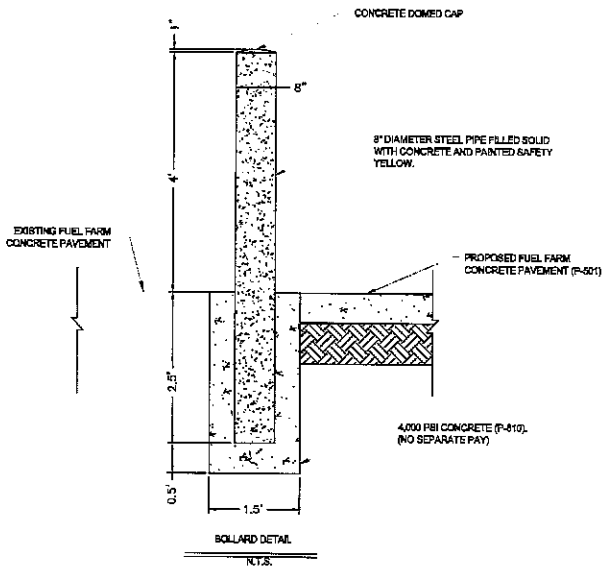
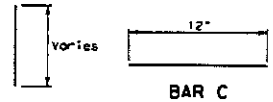


BOLLARD DETAIL
N.T.S.

GENERAL NOTES

1. All materials and construction shall be in accordance with Item 529, "Concrete Curb, Gutter, and Combined Curb and Gutter."
2. Concrete shall be Class A.
3. When reinforcing bars are used, they shall be No. 4 unless otherwise shown. The use of fiber reinforced concrete in lieu of reinforcing steel is acceptable. Use fibers meeting the requirements of DMS 4550, "Fibers for Concrete," and dose fibers in accordance with Material Producers List (MPL) "Fibers for Class A and B Concrete Applications."
4. Round exposed sharp edges with a rounding tool, to a minimum radius of ¼ inch.
5. All existing curbs and driveways to be removed shall be sawed or removed at existing joints.
6. Where concrete curb is to be placed on existing concrete pavement, Bar B may be drilled and the grouted in place, or may be inserted into fresh concrete.
7. Expansion and contraction joints shall be constructed to match pavement joints in all curbs and curb and gutter adjacent to jointed concrete pavement. Where placement of curb or curb and gutter is not adjacent to concrete pavement, expansion joints shall be provided at structures, curb returns at streets, and at locations directed by The Engineer.
8. Vertical and horizontal dowel bars and transverse reinforcing bars shall be placed at four feet C-C.
9. Dimension 'T' shown is the thickness of concrete pavement. When curb is installed adjacent to flexible pavement dimension 'T' is 8" maximum.
10. Usual profile grade line. Refer to typical sections and plan-profile sheets for exact locations.
11. One-half inch expansion joint material shall be provided where curb or curb and gutter is adjacent to sidewalk or riprap.
12. When horizontal permissible construction joints are used, the longitudinal pavement steel shall be placed in accordance with pavement details shown elsewhere in the plans. Reinforcing steel for curb section shall then conform to that required for concrete curb.
13. Bar B used as needed to support curb reinforcing steel during concrete placement.



BAR B BAR C

JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #22826

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION
OF FUEL FARM PAVEMENT

DRAWING TITLE:
PAVEMENT DETAILS

DRAWING NUMBER:
C-007

SHEET NUMBER: 9 SHEET TOTAL: 11

SCALE: N.T.S

DRAWN BY: AM CHECKED BY: KS

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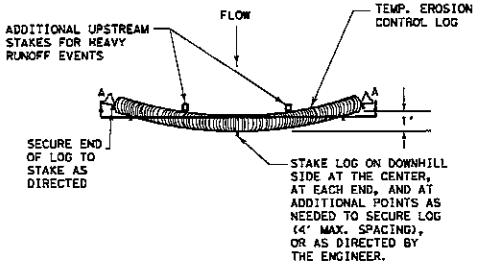
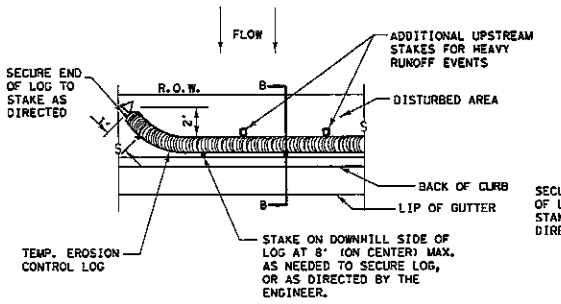
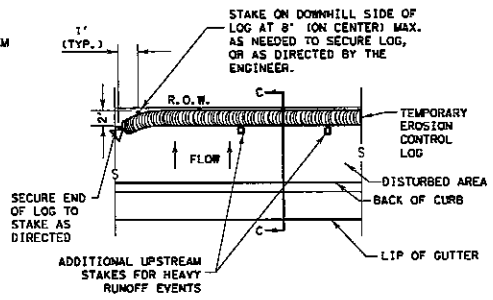


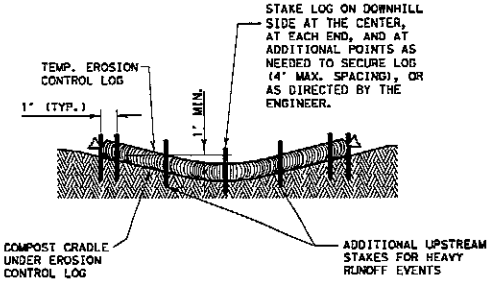
PLAN VIEW



PLAN VIEW



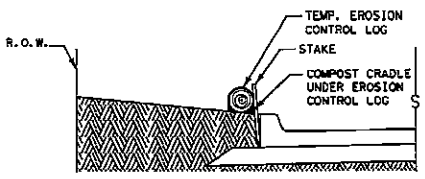
PLAN VIEW



SECTION A-A

EROSION CONTROL LOG DAM

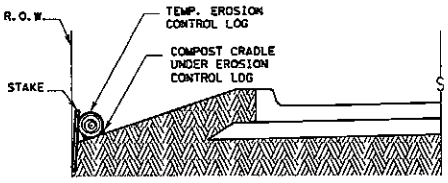
CL-D



SECTION B-B

EROSION CONTROL LOG AT BACK OF CURB

CL-BOC



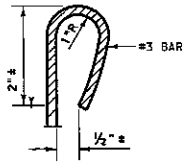
SECTION C-C

EROSION CONTROL LOG AT EDGE OF RIGHT-OF-WAY

CL-ROW

LEGEND

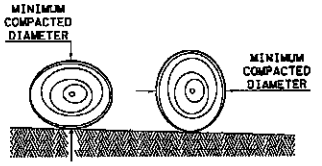
- CL-D — EROSION CONTROL LOG DAM
- CL-BOC — EROSION CONTROL LOG AT BACK OF CURB
- CL-ROW — EROSION CONTROL LOG AT EDGE OF RIGHT-OF-WAY



REBAR STAKE DETAIL

GENERAL NOTES:

1. EROSION CONTROL LOGS SHALL BE INSTALLED IN ACCORDANCE WITH MANFACTURER'S RECOMMENDATIONS, OR AS DIRECTED BY THE ENGINEER.
2. LENGTHS OF EROSION CONTROL LOGS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND AS REQUIRED FOR THE PURPOSE INTENDED.
3. UNLESS OTHERWISE DIRECTED, USE BIODEGRADABLE OR PHOTODEGRADABLE CONTAINMENT MESH ONLY WHERE LOG WILL REMAIN IN PLACE AS PART OF A VEGETATIVE SYSTEM. FOR TEMPORARY INSTALLATIONS, USE RECYCLABLE CONTAINMENT MESH.
4. FILL LOGS WITH SUFFICIENT FILTER MATERIAL TO ACHIEVE THE MINIMUM COMPACTED DIAMETER SPECIFIED IN THE PLANS WITHOUT EXCESSIVE DEFORMATION.
5. STAKES SHALL BE 2" X 2" WOOD OR #3 REBAR, 2'-4' LONG, EMBEDDED SUCH THAT 2" PROTRUDES ABOVE LOG, OR AS DIRECTED BY THE ENGINEER.
6. DO NOT PLACE STAKES THROUGH CONTAINMENT MESH.
7. COMPOST CRADLE MATERIAL IS INCIDENTAL & WILL NOT BE PAID FOR SEPARATELY.
8. SANDBAGS USED AS ANCHORS SHALL BE PLACED ON TOP OF LOGS & SHALL BE OF SUFFICIENT SIZE TO HOLD LOGS IN PLACE.
9. TURN THE ENDS OF EACH ROW OF LOGS UPSLOPE TO PREVENT RUNOFF FROM FLOWING AROUND THE LOG.
10. FOR HEAVY RUNOFF EVENTS, ADDITIONAL UPSTREAM STAKES MAY BE NECESSARY TO KEEP LOG FROM FOLDING IN ON ITSELF.



DIAMETER MEASUREMENTS OF EROSION CONTROL LOGS SPECIFIED IN PLANS

SEDIMENT BASIN & TRAP USAGE GUIDELINES

An erosion control log sediment trap may be used to filter sediment out of runoff draining from an unstabilized area.

Log Traps: The drainage area for a sediment trap should not exceed 5 acres. The trap capacity should be 1800 CF/Acre (0.5" over the drainage area).

Control logs should be placed in the following locations:

1. Within drainage ditches spaced as needed or min. 500' on center
2. Immediately preceding ditch inlets or drain inlets
3. Just before the drainage enters a water course
4. Just before the drainage leaves the right of way
5. Just before the drainage leaves the construction limits where drainage flows away from the project.

The logs should be cleaned when the sediment has accumulated to a depth of 1/2 the log diameter.

Cleaning and removal of accumulated sediment deposits is incidental and will not be paid for separately.

SHEET 1 OF 3

Texas Department of Transportation — Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

EROSION CONTROL LOG

EC(9)-16

FILE: ec916	DN: TxDOT	CK: KM	DW: LS/PT	CK: LS
© TxDOT: JULY 2016	CONT	SECT	JOB	HIGHWAY
REVISIONS				
	DIST	COUNTY		SHEET NO.

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DATE:
FILE:

GENERAL NOTES

1. For long term stationary work zones on freeways, drums shall be used as the primary channelizing device.
2. For intermediate term stationary work zones on freeways, drums should be used as the primary channelizing device but may be replaced in tangent sections by vertical panels, or 42" two-piece cones. In tangent sections, one-piece cones may be used with the approval of the Engineer but only if personnel are present on the project at all times to maintain the cones in proper position and location.
3. For short term stationary work zones on freeways, drums are the preferred channelizing device but may be replaced in tapers, transitions and tangent sections by vertical panels, two-piece cones or one-piece cones as approved by the Engineer.
4. Drums and all related items shall comply with the requirements of the current version of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) and the "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
5. Drums, bases, and related materials shall exhibit good workmanship and shall be free from objectionable marks or defects that would adversely affect their appearance or serviceability.
6. The Contractor shall have a maximum of 24 hours to replace any plastic drums identified for replacement by the Engineer/Inspector. The replacement device must be an approved device.

GENERAL DESIGN REQUIREMENTS

Pre-qualified plastic drums shall meet the following requirements:

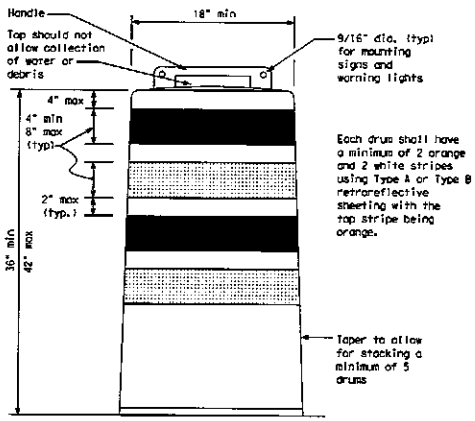
1. Plastic drums shall be a two-piece design; the "body" of the drum shall be the top portion and the "base" shall be the bottom.
2. The body and base shall lock together in such a manner that the body separates from the base when impacted by a vehicle traveling at a speed of 20 MPH or greater but prevents accidental separation due to normal handling and/or air turbulence created by passing vehicles.
3. Plastic drums shall be constructed of lightweight flexible, and deformable materials. The Contractor shall NOT use metal drums or single piece plastic drums as channelization devices or sign supports.
4. Drums shall present a profile that is a minimum of 18 inches in width at the 36 inch height when viewed from any direction. The height of drum unit (body installed on base) shall be a minimum of 36 inches and a maximum of 42 inches.
5. The top of the drum shall have a built-in handle for easy pickup and shall be designed to drain water and not collect debris. The handle shall have a minimum of two widely spaced 9/16 inch diameter holes to allow attachment of a warning light, warning reflector unit or approved compliant sign.
6. The exterior of the drum body shall have a minimum of four alternating orange and white retroreflective circumferential stripes not less than 4 inches nor greater than 8 inches in width. Any non-reflectorized space between any two adjacent stripes shall not exceed 2 inches in width.
7. Bases shall have a maximum width of 36 inches, a maximum height of 4 inches, and a minimum of two footholds of sufficient size to allow base to be held down while separating the drum body from the base.
8. Plastic drums shall be constructed of ultra-violet stabilized, orange, high-density polyethylene (HDPE) or other approved material.
9. Drum body shall have a maximum unballasted weight of 11 lbs.
10. Drum and base shall be marked with manufacturer's name and model number.

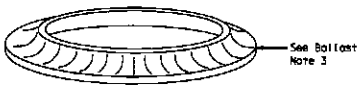
RETROREFLECTIVE SHEETING

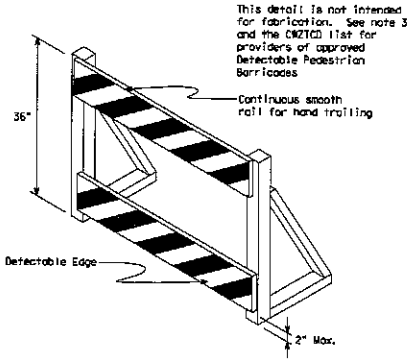
1. The stripes used on drums shall be constructed of sheeting meeting the color and retroreflectivity requirements of Departmental Materials Specification DMS-8300, "Sign Face Materials." Type A or Type B reflective sheeting shall be supplied unless otherwise specified in the plans.
2. The sheeting shall be suitable for use on and shall adhere to the drum surface such that, upon vehicular impact, the sheeting shall remain adhered in-place and exhibit no delaminating, cracking, or loss of retroreflectivity other than that loss due to abrasion of the sheeting surface.

BALLAST

1. Unballasted bases shall be large enough to hold up to 50 lbs. of sand. This base, when filled with the ballast material, should weigh between 35 lbs (minimum) and 50 lbs (maximum). The ballast may be sand in one to three sandbags separate from the base, sand in a sand-filled plastic base, or other ballasting devices as approved by the Engineer. Stacking of sandbags will be allowed, however height of sandbags above pavement surface may not exceed 12 inches.
2. Bases with built-in ballast shall weigh between 40 lbs. and 50 lbs. Built-in ballast can be constructed of an integral crumb rubber base or a solid rubber base.
3. Recycled truck tire sidewalls may be used for ballast on drums approved for this type of ballast on the CWZTCD list.
4. The ballast shall not be heavy objects, water, or any material that would become hazardous to motorists, pedestrians, or workers when the drum is struck by a vehicle.
5. When used in regions susceptible to freezing, drums shall have drainage holes in the bottoms so that water will not collect and freeze becoming a hazard when struck by a vehicle.
6. Ballast shall not be placed on top of drums.
7. Adhesives may be used to secure base of drums to pavement.

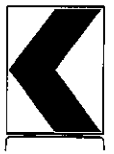






DETECTABLE PEDESTRIAN BARRICADES

1. When existing pedestrian facilities are disrupted, closed, or relocated in a TTC zone, the temporary facilities shall be detectable and include accessibility features consistent with the features present in the existing pedestrian facility. Refer to WZ(BTS-2)-21 for Pedestrian Control requirements for Sidewalk Diversions, Sidewalk Detours and Crosswalk Closures.
2. Where pedestrians with visual disabilities normally use the closed sidewalk, a Detectable Pedestrian Barricade shall be placed across the full width of the closed sidewalk instead of a Type 3 Barricade.
3. Detectable pedestrian barricades similar to the one pictured above, longitudinal channelizing devices, some concrete barriers, and wood or chain link fencing with a continuous detectable edging can satisfactorily delineate a pedestrian path.
4. Tape, rope, or plastic chain strung between devices are not detectable, do not comply with the design standards in the "Americans with Disabilities Act Accessibility Guidelines (ADAAG)" and should not be used as a control for pedestrian movements.
5. Warning lights shall not be attached to detectable pedestrian barricades.
6. Detectable pedestrian barricades should use 8" nominal barricade rails as shown on BC(10) provided that the top rail provides a smooth continuous rail suitable for hand trailing with no splinters, burrs, or sharp edges.



18" x 24" Sign
(Maximum Sign Dimension)
Chevron CW1-8, Opposing Traffic Lane Divider, Driveway sign D70a, Keep Right R4 series or other signs as approved by Engineer

12" x 24"
Vertical Panel
mount with diagonals sloping down towards travel way

Plywood, Aluminum or Metal sign substrates shall NOT be used on plastic drums

SIGNS, CHEVRONS, AND VERTICAL PANELS MOUNTED ON PLASTIC DRUMS

1. Signs used on plastic drums shall be manufactured using substrates listed on the CWZTCD.
2. Chevrons and other work zone signs with an orange background shall be manufactured with Type B_{FL} or Type C_{FL} Orange sheeting meeting the color and retroreflectivity requirements of DMS-8300, "Sign Face Material," unless otherwise specified in the plans.
3. Vertical Panels shall be manufactured with orange and white sheeting meeting the requirements of DMS-8300 Type A or Type B. Diagonal stripes on Vertical Panels shall slope down toward the intended traveled lane.
4. Other sign messages (text or symbolic) may be used as approved by the Engineer. Sign dimensions shall not exceed 18 inches in width or 24 inches in height, except for the R9 series signs discussed in note 8 below.
5. Signs shall be installed using a 1/2 inch bolt (nominal) and nut, two washers, and one locking washer for each connection.
6. Mounting bolts and nuts shall be fully engaged and adequately torqued. Bolts should not extend more than 1/2 inch beyond nuts.
7. Chevrons may be placed on drums on the outside of curves, on merging tapers or on shifting tapers. When used in these locations, they may be placed on every drum or spaced not more than on every third drum. A minimum of three (3) should be used at each location called for in the plans.
8. R9-9, R9-10, R9-11 and R9-11a Sidewalk Closed signs which are 24 inches wide may be mounted on plastic drums, with approval of the Engineer.

Texas Department of Transportation

Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(8)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS				
4-03 8-14	DIST	COUNTY		SHEET NO.
9-07 5-21				
7-13				
TxDOT				

JEFFERSON COUNTY PURCHASING DEPARTMENT
Deborah L. Clark, Purchasing Agent

1149 Pearl Street
1st Floor, Beaumont, TX 77701

OFFICE MAIN: (409) 835-8593
FAX: (409) 835-8456

Addendum to IFB

IFB NUMBER: IFB 22-028/JW

IFB TITLE: Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport

IFB DUE BY: **11:00 am CT, Wednesday, August 24, 2022**

ADDENDUM NO.: 1

ISSUED (DATE): August 1, 2022

To Bidder: This Addendum is an integral part of the IFB package under consideration by you as a Bidder in connection with the subject matter herein identified. Jefferson County deems all sealed bids to have been proffered in recognition and consideration of the entire IFB Specifications Package – *including all addenda.* For purposes of clarification, **receipt of this present Addendum by a Bidder should be evidenced by returning it (signed) as part of the Bidder's sealed bid submission.** If the bid submission has already been received by the Jefferson County Purchasing Department, Bidder should return this addendum in a separate sealed envelope, clearly marked with the IFB Title, IFB Number, and IFB Opening Date and Time, as stated above.

Reason for Issuance of this Addendum: Clarifications (Attachment)

The information included herein is hereby incorporated into the documents of this present bid matter and supersedes any conflicting documents or portion thereof previously issued.

Receipt of this Addendum is hereby acknowledged by the undersigned Respondent:

ATTEST:

K. Adkins
Witness

Witness

Approved by ____ Date: _____

Authorized Signature (Respondent)

MANAGER
Title of Person Signing Above

Jordan Robbins
Typed Name of Business or Individual

~~7900~~ 905 Jade Ave, Port Arthur TX
Address

TSG
The Solco Group, LLC

ADDENDUM N0. 1

DATE: July 29,2022

OWNER: Jefferson County, Texas - Jack Brooks Regional Airport

PROJECT: FB 22-028/JW Rehabilitation of Fuel Farm Pavement at Jack Brooks Regional Airport

TSG Project No: 2021-10-1092

DEADLINE FOR QUESTIONS: Email questions to Jamey West, Contract Specialist at jwest@co.jefferson.tx.us by **Monday, August 15, 2022, at 5:00 p.m.**,

SUBMITTAL DEADLINE: Bid date **Wednesday, August 24, 2022, at 11:00 a.m.**, Central Standard Time

The additions, omissions, clarifications, and corrections herein shall be made to the contract documents, plans and specifications, for the Rehabilitation of Fuel Farm Pavement Project. **All Bidders must acknowledge receipt of this addendum on the appropriate section of the Bid Form and include with the Contract Documents.**

Addendum references are summarized below.

A. SECTION 2: FEDERAL MANDATED CONTRACT PROVISIONS

Breach of Contract Terms/Remedies (ADD following Paragraph)

Source: FAA AC 150/5370-10H 12/21/2018; Section 80 Execution and Progress pg. 51

Failure to complete on time. For each calendar day or working day, as specified in the contract, that any work remains uncompleted after the contract time (including all extensions and adjustments as provided in paragraph 80-07, Determination and Extension of Contract Time) the sum specified in the contract and proposal as liquidated damages (LD) will be deducted from any money due or to become due the Contractor or their own surety. Such deducted sums shall not be deducted as a penalty but shall be considered as liquidation of a reasonable portion of damages including but not limited to additional engineering services that will be incurred by the Owner should the Contractor fail to complete the work in the time provided in their contract.

Schedule – 1 Phase
Liquidated Damages Cost - $500/day
Allowed Construction Time – 30 Calendar Days

B. SECTION 4: MINIMUM SPECIFICATIONS

Drawings reflect the scope of work as described on page 37.

Addendum Prepared By:

Kelvin Solco, P.E.,
Principal

JEFFERSON COUNTY PURCHASING DEPARTMENT
Deborah L. Clark, Purchasing Agent

1149 Pearl Street
1st Floor, Beaumont, TX 77701

OFFICE MAIN: (409) 835-8593
FAX: (409) 835-8456

Addendum to IFB

IFB NUMBER: IFB 22-028/JW

IFB TITLE: Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional

IFB DUE BY: Airport **11:00 am CT, Wednesday, August 24, 2022**

ADDENDUM NO.: 2

ISSUED (DATE): August 17, 2022

To Bidder: This Addendum is an integral part of the IFB package under consideration by you as a Bidder in connection with the subject matter herein identified. Jefferson County deems all sealed bids to have been proffered in recognition and consideration of the entire IFB Specifications Package – *including all addenda.* For purposes of clarification, **receipt of this present Addendum by a Bidder should be evidenced by returning it (signed) as part of the Bidder's sealed bid submission.** If the bid submission has already been received by the Jefferson County Purchasing Department, Bidder should return this addendum in a separate sealed envelope, clearly marked with the IFB Title, IFB Number, and IFB Opening Date and Time, as stated above.

REASONS FOR ISSUANCE OF THIS ADDENDUM:

- **Clarifications (See Pages 1-4)**
- **REVISED PLAN SHEET NO. 3**
- **REVISED BID FORM PAGE 42 (REPLACEMENT PAGE)**

The information included herein is hereby incorporated into the documents of this present bid matter and supersedes any conflicting documents or portion thereof previously issued.

Receipt of this Addendum is hereby acknowledged by the undersigned Respondent:

ATTEST:

K Adkins
Witness

Salazar Ez.
Witness

Approved by ____ Date: _____

Authorized Signature (Respondent)

MANAGER
Title of Person Signing Above

Jordan Robbins
Typed Name of Business or Individual

905 Doyle Ave Port Arthur Tx
Address

TSG
The Solco Group, LLC

FB 22-028/JW ADDENDUM N0. 2

DATE: 8/10/2022

OWNER: Jefferson County/Jack Brooks Regional Airport

PROJECT: FB 22-028/JW Rehabilitation of Fuel Farm Pavement at Jack Brooks Regional Airport

TSG Project No: 2021-10-1092

DEADLINE FOR QUESTIONS: Email questions to Jamey West. Contract Specialist at jwest@co.jefferson.tx.us by **Thursday, August 18, 2022, at 5:00 p.m.**

SUBMITTAL DEADLINE: Bid date **Wednesday, August 24, 2022, at 11:00 a.m.**, Central Standard Time.

The additions, omissions, clarifications, and corrections herein shall be made to the contract documents, plans and specifications, for the Rehabilitation of Fuel Farm Pavement Project. **All Bidders must acknowledge receipt of this addendum on the appropriate section of the Bid Form and include with the Contract Documents.**

Addendum references to answer questions posted by potential bidders are summarized below.

1. CONTRACT TIME: Can the time of completion be revised to 45 or 60 calendar days? Given the phasing and access issues, 30 days is going to be difficult. **30 days is preferred timeframe. The access issues and project phasing concerns are clarified in section 5 of this addendum.**

   Can we work Sundays? **Yes**

2. ALLOWANCE FOR STORM SEWER PIPE: Is the County going to provide an amount to input for the allowance? **No**

   Without more information, it is very difficult to assess what is required. **A core sample taken during a geotechnical investigation indicated an accumulation of water beneath a section of the concrete panels. This accumulation of water is the likely cause of the panel failures. The purpose of the allowance is to provide compensation for the contractor to locate the source of the water accumulation and repair a broken water line if encountered. The onsite resident project representative (RPR) will work with contractor after the panels are removed to examine the area and resolve the issue before new concrete is placed.**

PO BOX 22001 BEAUMONT, TEXAS 77720
817-564-6895 / 833-591-5780
https://thesolcogroup.com

3. CONCRETE SLUMP/PUMPING: Can the max slump allowed be revised to 5" to 6" so we can pump the concrete? It would help speed up the schedule if pumping is allowed but the slump requirements would have to be modified.

No. The contract specifications apply as indicated in P-501-7 - Flexural strength. Test specimens shall be prepared in accordance with ASTM C192 and tested in accordance with ASTM C78. At the start of the project, the Contractor shall determine an allowable slump as determined by ASTM C143 not to exceed 2 inches (50 mm) for slip-form placement. For fixed-form placement, the slump shall not exceed 3 inches (75 mm). For hand placement, the slump shall not exceed 4 inches (100 mm)

4. CONCRETE FINISHING EQUIPMENT: Can you clarify what finishing equipment will be allowed? Is this area considered irregular?

This is considered irregular. Any appropriate equipment may be used as long as the concrete requirements are met, such as smoothness, etc.

A slip form paver cannot be used in this location. Would a vibratory screed be allowed?
Yes – as long as concrete as specified is achieved.

5. ACCESS: Please clarify the extent we must accommodate airport access. Will we have to shutdown work at anytime to allow planes to fuel, etc.?

This construction project shall take place outside of the Aircraft Operational Area (AOA). The contractor shall NOT access the AOA without the explicit permission of the airport owner. Further clarification on the possibility of accommodating fueling operations during the construction project includes the following:

a. **Aircraft will not enter into the construction area.**
b. **All construction equipment shall remain outside of the AOA.**
c. **Fuel trucks will be used to provide fuel to aircraft in the AOA when needed.**
d. **Fueling operations will cease during the concrete demolition phase of this project.**
e. **In the event that emergency access to the fuel farm tanks is needed, or anticipated to be needed during this construction period, the airport owner and the engineer will coordinate with the contractor to phase the concrete placement in a manner that allows an emergency lane for fuel truck access. Emergency fueling operations will only use this temporary emergency lane after sufficient concrete curing has occurred.**

f. **The contractor will need to be prepared to accommodate a temporary interruption of work only for a brief period of time to allow for emergency fueling operations.**
g. **The contractor will need to ensure there is a safe distance between ongoing construction activities and emergency fueling operations.**

Addendum Prepared By:

Kelvin Solco, PE,
Principal

PO BOX 22001 BEAUMONT, TEXAS 77720
817-564-6895 / 833-591-5780
https://thesolcogroup.com

TSG
The Solco Group, LLC

FB 22-028/JW ADDENDUM N0. 2

DATE: 8/15/2022

OWNER: Jefferson County/Jack Brooks Regional Airport

PROJECT: FB 22-028/JW Rehabilitation of Fuel Farm Pavement at Jack Brooks Regional Airport

TSG Project No: 2021-10-1092

DEADLINE FOR QUESTIONS: email questions to Jamey West. Contract Specialist at jwest@co.jefferson.tx.us by **Thursday, August 15, 2022, at 5:00 p.m.,**

SUBMITTAL DEADLINE: Bid date **Wednesday, August 24, 2022, at 11:00 a.m.**, Central Standard Time.

The additions, omissions, clarifications, and corrections herein shall be made to the contract documents, plans and specifications, for the Rehabilitation of Fuel Farm Pavement Project. **All Bidders must acknowledge receipt of this addendum on the appropriate section of the Bid Form and include with the Contract Documents.**

Addendum references to answer questions posted by potential bidders are summarized below.

1. Who is responsible for Materials Testing? All quality assurance testing shall be done by the Contractor. Please see the Items below:
    a. Item 152-5, section 152-2.10 under paragraph 2, last sentence.
    b. Item 155-4, section 155-6.10 and a. Density Paragraph
    c. Item 501-7, section 501-3.3 f., 501-3.4 Concrete Mix Submittal, 501-4.8 c. Consolidation, 501-4-11 e. Straightedge testing and surface correction., P-501-24 CONTRACTOR QUALITY CONTROL (CQC)
    d. Page 8 of 61 of bid documents section 2.12.
2. DRAWING PLAN SHEET 3 – Replace Sheet 3 with New Sheet 3. Arrow for "One-Way" traffic corrected.
3. BID DOCUMENTS – Replace pg. 42 with New Page to include TOTAL BID LINE.

Addendum Prepared By:

Kelvin Solco, PE,
President / CEO

STATE OF TEXAS
KELVIN L SOLCO
78161
LICENSED
PROFESSIONAL ENGINEER

PO BOX 22001 BEAUMONT, TEXAS 77720
817-564-6895 / 833-591-5780
https://thesolcogroup.com

BID FORM (CONTINUED) REPLACEMENT PAGE 42

DESCRIPTION:	☒ Base Bid			
REF. NO. 14	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Biodegradable Erosion Control Logs (Install) TXDOT 506-6.6.1	200	LF		

DESCRIPTION:	☒ Base Bid			
REF. NO. 15	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Biodegradable Erosion Control Logs (Removal) TXDOT 506-6.6.2	200	LF		

DESCRIPTION:	☒ Base Bid			
REF. NO. 16	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
4" Concrete Curb TXDOT 529	278	LF		

DESCRIPTION:	☒ Base Bid			
REF. NO. 17	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Furnish and Install 4' Steel Bollards	2	EA		

DESCRIPTION:	☒ Base Bid			
REF. NO. 18	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Install 6' Rubber Speed Bumps	4	EA		

DESCRIPTION:	☒ Base Bid
	TOTAL BID PRICE *($ XXX,XXX.XX)*
TOTAL BID	

REQUIRED FORM
<u>Bidder</u>: Please complete this form and include with bid submission.

BIDDER ACKNOWLEDGEMENT OF BID ADDENDA (IF APPLICABLE):

Addendum 1 _____ Date Received _____
Addendum 2 _____ Date Received _____
Addendum 3 _____ Date Received _____
Addendum 4 _____ Date Received _____
Addendum 5 _____ Date Received _____

BIDDER: INCLUDE FULL, SIGNED, & ATTESTED COPY OF EACH ADDENDUM ISSUED WITH BID SUBMISSION.

RAMTEX Industrial, LLC
PO Box 21397
Beaumont, TX 77720

Jefferson County Purchasing Department
1149 Pearl Street, 1st Floor
Beaumont, TX 77701

SEALED BID

IFB 22-028/JW
Jefferson County Purchasing Department
Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport

IFB 22-028
Due: August 24, 2022
11:00 AM

REC'VD JEFFCOPURCH 10:44 AM AUG 24 2022

Jefferson County Purchasing Department
Deborah L. Clark, Purchasing Agent

1149 PEARL STREET
1st FLOOR, BEAUMONT, TEXAS 77701

OFFICE MAIN: (409) 835-8593
FAX: (409)835-8456

LEGAL NOTICE
Advertisement for Invitation for Bids

July 26, 2022

Notice is hereby given that sealed bids will be accepted by the Jefferson County Purchasing Department for Invitation for Bid **(IFB 22-028/JW) Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport.** Specifications for this project may be obtained from the Jefferson County website, https://www.co.jefferson.tx.us/Purchasing/ or by calling 409-835-8593.

Bids are to be sealed and addressed to the Purchasing Agent with the bid number and name marked on the outside of the envelope or box. Bidders shall forward an original and two (2) copies of their bid to the address shown below. Jefferson County does not accept bids submitted electronically. Late bids will be rejected as non-responsive. Bids will be publicly opened and read aloud in the Jefferson County Engineering Department Conference Room (5th Floor, Historic Courthouse) 1149 Pearl Street, Beaumont, Texas 77701, at the time and date below. Bidders are invited to attend the sealed bid opening.

BID NAME:	**Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport**
BID NUMBER:	**IFB 22-028/JW**
DUE BY TIME/DATE:	**11:00 AM CT, Wednesday, August 24, 2022**
MAIL OR DELIVER TO:	**Jefferson County Purchasing Department** **1149 Pearl Street, 1st Floor** **Beaumont, Texas 77701**

There will be a Pre-Bid Conference and Walk-Through at 2:00 PM CT on Thursday, August 4, 2022, at the Airport Administration Conference Room located at 5000 Jerry Ware Blvd. Beaumont, Texas 77705. This conference will be the Bidder's only opportunity to view secured areas of the project.

The County shall require the bidder to furnish a bid security in the amount of five percent (5%) of the total contract cost. The bid bond must be executed with a surety company authorized to do business in the State of Texas. Within ten (10) days after the date of the signing of a contract, the bidder shall furnish a performance bond to the County for the full amount of the contract, if the contract exceeds one hundred thousand dollars ($100,000). If the contract is for one hundred thousand dollars ($100,000) or less, the County may provide that no money be paid to the contractor until completion and acceptance of the work or the fulfillment of the purchase obligation to the County.

Any questions relating to these bid requirements should be directed to Jamey West, Contract Specialist at 409-835-8593 or via email at: jwest@co.jefferson.tx.us

Jefferson County encourages Disadvantaged Business Enterprises (DBEs), Minority/Women Business Enterprises (M/WBEs), and Historically Underutilized Businesses (HUBs) to participate in the bidding process. Jefferson County does not discriminate on the basis of race, color, national origin, sex, religion, age or disability in employment, or the provisions of services. Individuals requiring special accommodations are requested to contact our office at least seven (7) days prior to the bid due date at 409-835-8593.

Jefferson County reserves the right to accept or reject any or all proposals, to waive technicalities and to take whatever action is in the best interest of Jefferson County. All interested firms are invited to submit a bid in accordance with the terms and conditions stated in this bid.

Respondents are strongly encouraged to carefully read the entire invitation, as failure to return and/or complete all required documentation will result in a response being declared as non-responsive.

Deborah Clark

Deborah L. Clark, Purchasing Agent
Jefferson County, Texas

PUBLISH:
Beaumont Enterprise & Port Arthur News:
July 27, 2022, and August 3, 2022

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BID SUBMISSIONS:

One (1) Original and Two (2) Bid Copies; with all copies to include a Completed Copy of this specifications packet, in its entirety.

Each Bidder shall ensure that required parts of their bid submission are completed with accuracy and submitted as per the requirements within this specifications packet, including any addenda.

Additionally, Bidder shall monitor the Jefferson County Purchasing Department Website for any addenda, additional instructions, or bid updates. https://www.co.jefferson.tx.us/Purchasing/

Failure to return and/or completed all required documentation will result in a response being declared as non-responsive.

SECTION 1: GENERAL CONDITIONS OF BIDDING AND TERMS OF CONTRACT

By execution of this document, the Vendor accepts all general and special conditions of the contract as outlined below and, in the specifications, and plans.

1. BIDDING.

1.1 BIDS.
All bids must be submitted on the bid form furnished in this package.

1.2 AUTHORIZED SIGNATURES.
The bid must be executed personally by the Vendor, duly authorized partner of the partnership, or duly authorized officer of the corporation. If executed by an agent, a power of attorney or other evidence of authority to act on behalf of the Vendor shall accompany the bid to become a valid bid.

1.3 LATE BIDS.
Bids must be in the office of the Jefferson County Purchasing Agent before or at the specified time and date bids are due. Bids received after the submission deadline shall be rejected as non-responsive and returned unopened.

1.4 WITHDRAWAL OF BID PRIOR TO OPENING.
A bid may be withdrawn before the opening date by submitting a written request to the Purchasing Agent. If time allows, the Bidder may submit a new bid. Bidder assumes full responsibility for submitting a new bid before or at the specified time and date bids are due. Jefferson County reserves the right to withdraw a request for bids before the opening date.

1.5 WITHDRAWAL OF BID AFTER OPENING.
Bidder agrees that its offer may not be withdrawn or cancelled by the Vendor for a period of ninety (90) days following the date and time designated for the receipt of bids unless otherwise stated in the bid and/or specifications.

1.6 BID AMOUNTS.
Bids shall show net prices, extensions where applicable and net total. In case of conflict between unit price and extension, the unit price will govern. Any ambiguity in the bid as a result of omission, error, unintelligible or illegible wording shall be interpreted in the favor of Jefferson County.

1.7 EXCEPTIONS AND/OR SUBSTITUTIONS.
All bids meeting the intent of the specifications and plans will be considered for award. Vendors taking exception to the specifications and plans, or offering substitutions, shall state these exceptions in the section provided. If bid is made on an article other than the one specified, which a Bidder considers comparable, the name and grade of said article must be specified in the bid and sufficient specifications and descriptive data must accompany same to permit thorough evaluation. The absence of stated exceptions and/or substitutions shall indicate that the Vendor has not taken any exceptions to the specifications and shall be responsible to perform in strict accordance with the specifications. As a matter of practice, Jefferson County rejects exception(s) and /or substitutions as non-responsive but reserves the right to accept any and/or all of the exception(s) and/or substitution(s) deemed to be in the best interest of Jefferson County.

1.8 ALTERNATES.
The Invitation for Bid and/or specifications may expressly allow Bidder to submit an alternate bid. Presence of such an offer shall not be considered an indication of non-responsiveness.

1.9 DESCRIPTIONS.
Unless otherwise specified, any reference to make, manufacturer and/or model used in the bid specifications is merely descriptive and not restrictive, and is used only to indicate type, style, or quality of material desired.

1.10 BID ALTERATIONS.
Bids cannot be altered or amended after submission deadline. Any interlineations, alterations, or erasures made before opening time must be initialed by the signer of the bid, guaranteeing authenticity.

1.11 TAX EXEMPT STATUS.
Jefferson County is exempt from federal excise tax and state sales tax. Unless the bid form or specifications specifically indicate otherwise, the bid price must be net, exclusive of above-mentioned taxes and will be so construed. Therefore, the bid price shall not include taxes.

1.12 QUANTITIES.
Quantities indicated are estimated quantities only and are not a commitment to buy. Approximate usage does not constitute an order, but only implies the probable quantity that will be used. Commodities will be ordered on an as-needed basis. Bidder is responsible for accurate final counts.

1.13 BID AWARD.
Award of contract shall be made to the most responsible, responsive Bidder, whose offer is determined to be the best value, taking into consideration the relative importance of price. Jefferson County reserves the right to be the sole judge as to whether items bid will serve the purpose intended.

Jefferson County reserves the right to accept or reject in part or in whole any bid submitted, and to waive any technicalities or informalities for the best interest of the County. Jefferson County reserves the right to award based upon individual line items, sections, or total bid.

1.14 SILENCE OF SPECIFICATIONS FOR COMPLETE UNITS.
All materials, equipment and/or parts that will become a portion of the completed work, including items not specifically stated herein but, necessary to render the service(s) complete and operational per the specifications, are to be included in the bid price. Vendor may be required to furnish evidence that the service, as bid, will meet or exceed these requirements.

1.15 ADDENDA.
Any interpretations, corrections or changes to the specifications and plans will be made by addenda no later than forty-eight (48) hours prior to the bid opening. Addenda will be posted on the Purchasing web site. Vendors are responsible for monitoring the web site in order to remain informed on addenda. Vendors shall acknowledge receipt of all addenda with submission of bid.

1.16 GENERAL BID BOND/SURETY REQUIREMENTS.
Failure to furnish bid bond/surety, if requested, will result in bid being declared non-responsive. Non-responsive bids will not be considered for award.

1.17 GENERAL INSURANCE REQUIREMENTS.
Failure to furnish Affidavit of Insurance, if required in these specifications, will result in bid being declared non-responsive. Non-responsive bids will not be considered for award.

1.18 RESPONSIVENESS.
A responsive bid shall substantially conform to the requirements of this Invitation to Bid and/or specifications contained herein. Bidders who substitute any other terms, conditions, specifications and/or requirements or who qualify their bids in such a manner as to nullify or limit their liability to the contracting entity shall have their bids

deemed non-responsive. Also, bids containing any clause that would limit contracting authority shall be considered non-responsive. Examples of non-responsive bids include but shall not be limited to: a) bids that fail to conform to required delivery schedules as set forth in the bid request; b) bids with prices qualified in such a manner that the bid price cannot be determined, such as with vague wording that may include "price in effect at the time of delivery," and c) bids made contingent upon award of other bids currently under consideration.

1.19 RESPONSIBLE STANDING OF BIDDER.

To be considered for award, Bidder must at least: have the ability to obtain adequate financial resources, be able to comply with required or proposed delivery/completion schedule, have a satisfactory record of performance; have a satisfactory record of integrity and ethics, and be otherwise qualified and eligible to receive award.

1.20 CONFIDENTIAL/PROPRIETARY INFORMATION.

If any material in the bid submission is considered by Bidder to be confidential or proprietary information (including manufacturing and/or design processes exclusive to the Bidder), Bidder **must** clearly mark the applicable pages of Bidder's bid submission to indicate each claim of confidentiality. Additionally, Bidder must include a statement on company letterhead identifying all Bid Submission section(s) and page(s) that have been marked as confidential. Jefferson County will protect from public disclosure such portions of a bid, unless directed otherwise by legal authority, including existing open records acts. Merely making a blanket claim that the entire bid submission is protected from disclosure because it contains some proprietary information is not acceptable and will make the entire bid submission subject to release under the Texas Public Information Act.

By submitting a bid, Bidder agrees to reproduction by Jefferson County, without cost or liability, of any copyrighted portions of Bidder's bid submission or other information submitted by Bidder.

1.21 PUBLIC BID OPENING.

Bidders are invited to be present at the opening of bids. After the official opening of bids, a period of not less than one week is necessary to evaluate bids. The amount of time necessary for bid evaluation may vary and is determined solely by the County. Following the bid evaluation, all bids submitted are available for public review.

2. PERFORMANCE.

2.1 DESIGN, STRENGTH, AND QUALITY.

Design, strength, and quality of materials and workmanship must conform to the highest standards of manufacturing and engineering practices. The apparent silence of specifications and/or plans as to any detailed description concerning any point shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of these specifications and/or plans shall be made on the basis of this statement.

2.2 AGE AND MANUFACTURE.

All tangible goods being bid must be new and unused, unless otherwise specified, in first-class condition, of current manufacture, and furnished ready to use. All items not specifically mentioned that are required for a complete unit shall be furnished.

2.3 DELIVERY LOCATION.

All deliveries will be made to the address(es) specified on the purchase order during normal working hours of 8:00 am to 4:00 pm, Monday through Friday, unless otherwise authorized by the Purchasing Agent or designee.

2.4 DELIVERY SCHEDULE.

Delivery time may be an important consideration in the evaluation of best value. The maximum number of days necessary for delivery ARO shall be stated in the space, if provided, on the bid form.

2.5 DELIVERY CHARGES.
All delivery and freight charges, F.O.B. destination shown on Jefferson County purchase order, as necessary to perform contract are to be included in the bid price.

2.6 INSTALLATION CHARGES.
All charges for assembly, installation and set-up shall be included in the bid price. Unless otherwise stated, assembly, installation and set-up will be required.

2.7 OPERATING INSTRUCTIONS AND TRAINING.
Clear and concise operating instructions and descriptive literature will be provided in English, if requested. On-site detailed training in the safe and efficient use and general maintenance of item(s) purchased shall be provided as needed at the request of Jefferson County. Instructions and training shall be at no additional cost to the County.

2.8 STORAGE.
Bidder agrees to provide storage of custom ordered materials, if requested, for up to thirty (30) calendar days.

2.9 COMPLIANCE WITH FEDERAL, STATE, COUNTY, AND LOCAL LAWS.
Bids must comply with all federal, state, county, and local laws, including, but not limited to, all applicable standard safety, emission, and noise control requirements. Any vehicles or equipment shall contain all standard safety, emission, and noise control requirements required for the types and sizes of equipment at the time of their manufacture. The contractor agrees, during the performance of work or service, to comply with all applicable codes and ordinances of Jefferson County or the State of Texas as they may apply, as these laws may now read, or as they may hereafter be changed or amended.

2.10 OSHA.
The Bidder will certify all equipment complies with all regulations and conditions stipulated under the Williams-Steiger Occupational Safety and Health Act of 1971, as amended. The successful Bidder will further certify that all items furnished under this project will conform and comply with federal and State of Texas OSHA standards. The successful Bidder will agree to indemnify and hold harmless Jefferson County for any and all damages that may be assessed against the County.

2.11 PATENTS AND COPYRIGHTS.
The successful Vendor agrees to protect the County from claims involving infringements of patents and/or copyrights.

2.12 SAMPLES, DEMONSTRATIONS, AND TESTING.
At Jefferson County's request and direction, Bidder shall provide product samples and/or testing of items bid to ensure compliance with specifications. Samples, demonstrations and/or testing may be requested at any point prior to or following bid award. Samples, demonstrations and/or testing may be requested upon delivery and/or any point during the term of resulting contract. All samples (including return thereof), demonstrations, and/or testing shall be at the expense of the Bidder/Vendor.

2.13 ACCEPTABILITY.
All articles enumerated in the bid shall be subject to inspection by an officer designated for that purpose by Jefferson County. If found inferior to the quality called for, or not equal in value to the specifications, deficient in workmanship or otherwise, this fact shall be certified to the Purchasing Agent, who shall have the right to reject the whole or any part of the same. Items and/or work determined to be contrary to specifications must be replaced at the vendor's expense. Inferior items not retrieved by the vendor within thirty (30) calendar days, or an otherwise agreed upon time, shall become the property of the County. If disposal of such items warrants an expense, an amount equal to the disposal expense will be deducted from amounts payable to the vendor.

2.14 MAINTENANCE.
Maintenance required for equipment bid should be available in Jefferson County by a manufacturer authorized maintenance facility. Cost for this service shall be shown on the bid sheet as requested or on a separate sheet, as required. If Jefferson County opts to include maintenance, it shall be so stated in the purchase order and said cost will be included. Service will commence only upon expiration of applicable warranties and should be priced accordingly.

2.15 MATERIAL SAFETY DATA SHEETS.
Under the "Hazardous Communications Act," commonly known as the "Texas Right to Know Act," a Bidder must provide
the user department, with each delivery, material safety data sheets which are applicable to hazardous substances defined in the Act. Failure of the Bidder to furnish this documentation, will be cause to reject any bid applying thereto.

2.16 EVALUATION.
Evaluation shall be used as a determinant as to which services are the most efficient and/or most economical for the County. It shall be based on all factors having a bearing on price and performance of the items in the user environment. All bids are subject to tabulation by the Jefferson County Purchasing Department and recommendation to Jefferson County Commissioners' Court. Compliance with all bid requirements and needs of the using department are considered in evaluating bids. Pricing is not the only criteria for making a recommendation. The Jefferson County Purchasing Department reserves to right to contact any Bidder, at any time, to clarify, verify or requirement information with regard to this bid.

3. PURCHASE ORDERS AND PAYMENT.

3.1 PURCHASE ORDERS.
A purchase order(s) shall be generated by the Jefferson County Purchasing Agent to the successful vendor. The purchase order number must appear on all itemized invoices and packing slips. The County will not be held responsible for any work orders placed and/or performed without a valid current purchase order number. Payment will be made for all services rendered and accepted by the contract administrator for which a valid invoice has been received.

3.2 INVOICES.
All invoices shall reference the Purchase Order number. Invoices shall reference the bid item number or a detailed description for each item invoiced. If an item purchased and itemized on the invoice does not correspond to an item in any of the categories awarded to the vendor, invoice shall reference the item as "N/C" to indicate that it is a non-contract item. This requirement is to assist the County in verifying contract pricing on all invoices. Payment will be made under terms of net thirty (30) days unless otherwise agreed upon by seller and the purchasing department.

3.3 PROMPT PAYMENT.
In accordance with the State of Texas Prompt Payment Act, Article 601f V.T.C.S., payment will be made after receiving and acceptance by the County of the merchandise ordered and of a valid invoice. Successful Bidder(s) is required to pay subcontractors within ten (10) days after the successful Bidder receives payment from the County.

3.4 FUNDING.
Jefferson County is operated and funded on an October 1 to September 30 basis; accordingly, the County reserves the right to terminate, without liability to the County, any contract for which funding is not available.

4. CONTRACT.

4.1 CONTRACT DEFINITION.
The General Conditions of Bidding and Terms of Contract, Specifications, Plans, Bidding Forms, Addenda, and any other documents made a part of this bid shall constitute the complete bid. This bid, when duly accepted by Jefferson

County shall constitute a contract equally binding between the successful Bidder and Jefferson County.

4.2 CHANGE ORDER.

No different or additional terms will become part of this contract with the exception of a change order. No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated in the resulting contract. All change orders to the contract will be made in writing and at the discretion and approval of Jefferson County. No change order will be binding unless signed by an authorized representative of the County and the vendor.

4.3 PRICE RE-DETERMINATION.

A price re-determination may be requested at the time of annual renewal. All requests for price re-determination shall be in written form. Cause for such request, i.e., manufacturer's direct cost, postage rates, Railroad Commission rates, Federal/State minimum wage law, Federal/State unemployment taxes, F.I.C.A, Insurance Coverage Rates, etc., shall be substantiated in writing by the source of the cost increase. The Bidder's past experience of honoring contracts at the bid price will be an important consideration in the evaluation of the lowest and best bid. Jefferson County reserves the right to accept or reject any/all requests for price re-determination as it deems to be in the best interest of the County.

4.4 TERMINATION.

Jefferson County reserves the right to terminate the contract for default if the Bidder breached any of the terms therein, including warranties of Bidder or if the Bidder becomes insolvent or commits acts of bankruptcy. Such right of termination is in addition to and not in lieu of any other remedies which Jefferson County may have in law or equity. Default may be construed as, but not limited to, failure to deliver the proper goods and/or service within the proper amount of time, and/or to properly perform any and all services required to Jefferson County's satisfaction and/or to meet all other obligations and requirements. Contracts may be terminated without cause upon thirty (30) days' written notice to either party unless otherwise specified. Jefferson County reserves the right to award canceled contract to the next lowest Bidder. Bidder, in submitting this bid, agrees that Jefferson County shall not be liable to prosecution for damages in the event that the County declares the Bidder in default.

4.5 CONFLICT OF INTEREST.

Employees of the County are not permitted to maintain financial interest in, or receive payment, directly or indirectly, borrow from, lend to, invest in, or engage in any substantial financial transaction with any individual, organization, supplier, or subcontractor who does business with the County without disclosure. When conflict of interest is discovered, it shall be grounds for termination of contract.

4.6 INJURIES OR DAMAGES RESULTING FROM NEGLIGENCE.

Successful vendor shall defend, indemnify and save harmless Jefferson County and all its officers, agents and employees from all suits, actions, or other claims of any character, name and description brought for or on account of any injuries or damages received or sustained by any person, persons, or property on account of any negligent act or fault of the successful vendor, or of any agent, employee, subcontractor or supplier in the execution of, or performance under, any contract which may result from bid award. Successful vendor shall pay any judgment with cost which may be obtained against Jefferson County growing out of such injury or damages.

4.7 INTEREST BY PUBLIC OFFICIALS.

No public official shall have interest in this contract, in accordance with Texas Local Government Code.

4.8 PRE-AWARD/CONTRACT CONTACT BETWEEN COUNTY AND VENDORS.

The Jefferson County Purchasing Department will be the primary pre-bid contact for this Invitation for Bid, unless otherwise specified within these bid specifications. **If not written within these specifications, Potential Bidders /Vendors shall not visit or conduct discussions with other County Departments or representatives.**

The Jefferson County Purchasing Department expects to conduct discussions with vendor's representatives

authorized to contractually obligate the vendor with an offer. **Vendors shall not contact any Jefferson County personnel during the IFB process without the express permission from the Jefferson County Purchasing Agent. The Purchasing Agent will disqualify any vendor who has made site visits, contacted Jefferson County personnel, or distributed any literature without authorization from the Jefferson County Purchasing Department.**

All correspondence relating to this IFB, from advertisement to award shall be sent to the Jefferson County Purchasing Department. All presentations and/or meetings between Jefferson County and the vendor relating to this IFB shall be coordinated by the Jefferson County Purchasing Department.

Selected vendors may be expected to make a presentation/product demonstration to an Evaluation Committee. Proposals, vendor presentations, and product/service evaluations may develop into negotiating sessions with the vendor(s) as selected by the Evaluation Committee. Jefferson County expects to conduct negotiations with vendor representatives authorized to contractually obligate the vendor with an offer. If vendor is unable to agree to contract terms and conditions, Jefferson County reserves the right to terminate contract negotiations with that vendor and initiate negotiations with another vendor. In addition to a presentation, visits by the Evaluation Committee to representative vendor client sites may be conducted where the proposed solution can be demonstrated in a production environment.

4.9 WARRANTY.

The successful vendor shall warrant that all materials utilized in the performance of this contract shall conform to the proposed specifications and/or all warranties as stated in the Uniform Commercial Code and be free from all defects in material, workmanship and title.

4.10 UNIFORM COMMERCIAL CODE.

The successful vendor and Jefferson County agree that both parties have all rights, duties, and remedies available as stated in the Uniform Commercial Code.

4.11 VENUE.

This agreement will be governed and construed according to the laws of the State of Texas. This agreement is performable in the County of Jefferson, Texas.

4.12 SALE, ASSIGNMENT, OR TRANSFER OF CONTRACT.

The successful vendor shall not sell, assign, transfer or convey this contract, in whole or in part, without the prior written consent of Jefferson County.

4.13 SILENCE OF SPECIFICATIONS.

The apparent silence of these specifications as to any detailed description concerning any point, shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of these specifications shall be made on the basis of this statement.

5. REJECTION OR WITHDRAWAL.

Submission of additional terms, conditions or agreements with the bid document are grounds for deeming a bid non-responsive and may result in bid rejection. Jefferson County reserves the right to reject any and all bids and to waive any informalities and minor irregularities or defects in bids. Bids may be withdrawn in person by a bidder or authorized representative, provided their identity is made known and a receipt is signed for the bid, but only if the withdrawal is made prior to the time set for receipt of bids. Bids are an irrevocable offer and may not be withdrawn within **120** days after opening date.

6. EMERGENCY/DECLARED DISASTER REQUIREMENTS.

In the event of an emergency or if Jefferson County is declared a disaster area, by the County, State, or Federal Government, this Acceptance of Offer may be subjected to unusual usage. Contractor shall service the county during

such an emergency or declared disaster under the same terms and conditions that apply during non-emergency/disaster conditions. The pricing as specified in this Acceptance of Offer shall apply to serving the County's needs regardless of the circumstances. If Contractor is unable to supply the services under the terms of the Acceptance of Offer, then Contractor shall provide proof of such disruption and a copy of the invoice from Contractor's supplier(s).

Additional profit margin as a result of supplying services during an emergency or declared disaster shall not be permitted. In the event that additional equipment, supplies, and materials are required during the declared disaster, additional shipping, handling, and drayage fees may apply.

7. AWARD.

The bid will be awarded to the responsible, responsive bidder(s) whose bid, conforming to the solicitation, will be most advantageous to Jefferson County – price and other factors considered. Unless otherwise specified in this IFB, Jefferson County reserves the right to accept a bid in whole or in part, and to award by item or by group, whichever is deemed to be in the best interest of Jefferson County. Any bidder who is in default to Jefferson County at the time of submittal of the bid shall have that bid rejected.

Jefferson County reserves the right to clarify any contractual terms with the concurrence of the Contractor; however, any substantial non-conformity in the offer, as determined by Jefferson County, shall be deemed non-responsive and the offer rejected.

In evaluating bids, Jefferson County shall consider the qualifications of the bidders, and, where applicable, operating costs, delivery time, maintenance requirements, performance data, and guarantees of materials and equipment.

In addition, Jefferson County may conduct such investigation as it deems necessary to assist in the evaluation of a bid and to establish the responsibility, qualifications, and financial ability of the bidders to fulfill the contract.

Jefferson County reserves the right to award this contract on the basis of **lowest and best bid** in accordance with the laws of the State of Texas, to waive any formality or irregularity, to make awards to more than one offeror, and/or to reject any or all bids. In the event the lowest dollar offeror meeting specifications is not a awarded a contract, Offeror may appear before the Commissioners' Court and present evidence concerning Offeror responsibility after officially notifying the Office of the Purchasing Agent of Offeror's intent to appear.

8. CONTRACT.

A response to an IFB is an offer to contract with Jefferson County based upon the terms, conditions, and specifications contained in the IFB. Bids do not become contracts unless and until they are executed by Jefferson County, eliminating a formal signing of a separate contract. For that reason, all of the terms and conditions of the contract are contained in the IFB, unless any of the terms and conditions is modified by an IFB Amendment, a Contract Amendment, or by mutually agreed terms and conditions in the contract documents.

9. WAIVER OF SUBROGATION.

Bidder and bidder's insurance carrier waive any and all rights whatsoever with regard to subrogation against Jefferson County as an indirect party to any suit arising out of personal or property damages resulting from bidder's performance under this agreement.

10. FISCAL FUNDING.

A multi-year contract (if requested by the specifications) continuing as a result of an extension option must include fiscal funding out. If, for any reason, funds are not appropriated to continue the contract, said contract shall become null and void.

11. BID RESULTS.

Bid results are not provided in response to telephone inquiries. A preliminary tabulation of bids received will be posted on the Purchasing web page at https://www.co.jefferson.tx.us/Purchasing/ as soon as possible following bid opening. A final tabulation will be posted following bid award and will also be available for review in the Purchasing Department.

12. CHANGES AND ADDENDA TO BID DOCUMENTS.

Each change or addendum issued in relation to this IFB document will be on file in the Office of the Purchasing Agent, and will be posted on the Purchasing web site as soon as possible. It shall be the bidder's responsibility to make inquiry as to change or addenda issued, and to monitor the web site. All such changes or addenda shall become part of the contract and all bidders shall be bound by such addenda. Information on all changes or addenda issued will be available at the Office of the County Purchasing Agent.

13. SPECIFICATIONS.

Unless otherwise stated by the bidder, the bid will be considered as being in accordance with Jefferson County's applicable standard specifications, and any special specifications outlined in the bid document. References to a particular trade name, manufacturer's catalogue, or model number are made for descriptive purposes to guide the bidder in interpreting the requirements of Jefferson County and should not be construed as excluding bids on other types of materials, equipment, and supplies. However, the bidder, if awarded a contract, will be required to furnish the particular item referred to in the specifications or description unless departure or substitution is clearly noted and described in the bid.

Jefferson County reserves the right to determine if equipment/ product being bid is an acceptable alternate. All goods shall be new unless otherwise so stated in the bid. Any unsolicited alternate bid, or any changes, insertions, or omissions to the terms and conditions, specifications, or any other requirements of the bid, may be considered non-responsive.

14. DELIVERY.

Bids shall include all charges for delivery, packing, crating, containers, etc. Unless otherwise stated by the bidder (in writing on the included Bid Form), prices bid will be considered as being based on F.O.B. destination/delivered freight included.

15. INTERPRETATION OF BID AND/OR CONTRACT DOCUMENTS.

All inquiries shall be made within a reasonable time prior to the date and time fixed for the bid opening, in order that a written response in the form of an addendum, if required, can be processed before the bids are opened. Inquiries received that are not made in a timely fashion may or may not be considered.

16. CURRENCY.

Prices calculated by the bidder shall be stated in U.S. dollars.

17. PRICING.

Prices shall be stated in units of quantity specified in the bid documents. In case of discrepancy in computing the amount of the bid, the unit price shall govern.

18. NOTICE TO PROCEED/PURCHASE ORDER.

The successful bidder may not commence work under this contract until authorized to do so by the Purchasing Agent.

19. CERTIFICATION.

By signing the offer section of the Offer and Acceptance page, Bidder certifies:

- The submission of the offer did not involve collusion or other anti-competitive practices.

- The Bidder has not given, offered to give, nor intends to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to any public servant in connection with the submitted offer.

- The Bidder hereby certifies that the individual signing the bid is an authorized agent for the Bidder and has the authority to bind the Bidder to the contract.

20. DEFINITIONS.

"County" – Jefferson County, Texas.
"Contractor" – The Bidder whose proposal is accepted by Jefferson County.

21. MINORITY-OWNED (MWBE), WOMEN-OWNED (WBE) AND HISTORICALLY UNDERUTILIZED (HUB) BUSINESS ENTERPRISE PARTICIPATION.

It is the desire of Jefferson County to increase the participation of Minority-Owned (MBE) , Women-Owned (WBE), and Historically Underutilized (HUB) business enterprises in its contracting and procurement programs. While the County does not have any preference or set aside programs in place, it is committed to a policy of equitable participation for these firms.

SECTION 2: FEDERAL MANDATED CONTRACT PROVISIONS

Some or all of the provisions in this section will be incorporated into a professional service agreement as a result of this solicitation.

Breach of Contract Terms / Remedies

Source: 2 CFR § 200 Appendix II (A)

Applicability: This provision requires Jefferson County, as the Airport Sponsor, to incorporate administrative, contractual, or legal remedies if contractor/consultant violate or breach contract terms. The sponsor must also include appropriate penalties and sanctions. Language acceptable to meet the intent of this requirement will be included in contractual documents.

This requirement applies to all FEMA grant and cooperative agreement programs

Contract Types: This provision is required for all contracts that exceed the simplified acquisition threshold as stated in 2 CFR § 200, Appendix II (A). This threshold is occasionally adjusted for inflation and is now equal to $150,000.

Termination of Contract (for Cause and Convenience)

Source: 2 CFR § 200 Appendix II (B)

FAA Advisory Circular 150/5370-10, Section 80-09

Applicability: This provision requires Jefferson County, as the Airport Sponsor, to incorporate in all contracts over $10,000, a provision that addresses termination for cause and termination for convenience, by the sponsor. The contractual provision must address the manner by which the sponsor's contract will be affected and the basis for settlement. Language acceptable to meet the intent of this requirement will be included in contractual documents.

This requirement applies to all FEMA grant and cooperative agreement programs.

Contract Types: This provision is required for all contracts that exceed $10,000.

Equal Employment Opportunity

Source: 2 CFR § 200 Appendix II (C) 41 CFR § 60-1.4

Executive Order 11246 41 CFR § 60-4.3

Applicability: The purpose of this provision is to provide equal opportunity for all persons, without regard to race, color, religion, sex, or national origin who are employed or seeking employment with contractors performing under a federally assisted construction contract. There are two provisions, a construction clause, and a specification clause.

The equal opportunity contract clause must be included in any contract or subcontract when the amount exceeds $10,000. Once the equal opportunity clause is determined to be applicable, the contract or subcontract must include the clause for the remainder of the year, regardless of the amount of the contract.

This requirement applies to all FEMA grant and cooperative agreement programs.

Contract Types: This provision is required for all contracts that exceed $10,000.

Use of Provision: 41 CFR 60-1.4 provides the mandatory **contract** language. 41 CFR 60-4.3 provides the mandatory **specification** language. The sponsor will incorporate these clauses without modification.

Note: Any contracts resulting from this RFQ will have the requisite language as set forth in 2 CFR 200 App II, 41 CFR 60-1.4, 41 CFR 60-4.3, and Executive Order 11246.

Davis-Bacon Requirements

Source: 2 CFR § 200 Appendix II (D)

29 CFR Part 5

Applicability: The Davis-Bacon Act ensures that laborers and mechanics employed under the contract receive pay no less than the locally prevailing wages and fringe benefits as determined by the Department of Labor.

For Professional Services: The emergence of different project delivery methods has created situations where Professional Service Agreements (PSAs) includes tasks that meet the definition of construction, alteration, or repair as defined in 29 CFR Part 5. If such tasks result in work that qualifies as construction, alteration, or repair and it exceeds $2,000, the PSA must incorporate this clause.

Use of Provision: 29 CFR 5 establishes the specific language the sponsor must use without modification. A/E firms that employ laborers and mechanics on a task that meets the definition of construction, alteration, or repair are acting as a contractor. The sponsor may not substitute the term "Contractor" for "Consultant" in such instances.

Copeland Anti-Kickback

Source: 2 CFR § 200 Appendix II (D)

29 CFR Part 3 & Part 5

Applicability: The Copeland Act (18 USC 874 and 40 USC 3145) makes it unlawful to induce by force, intimidation, threat of dismissal from employment, or by any other manner, any person employed in the construction or repair of public buildings or public works, financed in whole or in part by the United States, to give up any part of the compensation to which that person is entitled under a contract of employment. The Copeland Act also requires each contractor and subcontractor to furnish weekly a statement of compliance with respect to the wages paid each employee during the preceding week.

It DOES NOT apply to the FEMA Public Assistance Program.

For Professional Services: The emergence of different project delivery methods has created situations where Professional Service Agreements (PSAs) includes tasks that meet the definition of construction, alteration, or repair as defined in 29 CFR Part 5. If such tasks result in work that qualifies as construction, alteration, or repair and it exceeds $2,000, the PSA must incorporate the Copeland Anti-kickback provision.

Use of Provision: 29 CFR 5 establishes the specific language the sponsor must use without modification. A/E firms that employ laborers and mechanics on a task that meets the definition of construction, alteration, or repair are acting as a contractor. The sponsor may not substitute the term "Contractor" for "Consultant" in such instances.

Contract Workhours and Safety Standards Act Requirements

Source: 2 CFR § 200 Appendix II (E) 29 CFR Part 5

40 U.S.C. § 3701-3708

Applicability: Contract Workhours and Safety Standards Act Requirements (CWHSSA) requires contractors and subcontractors on covered contracts to pay laborers and mechanics employed in the performance of the contracts one and one-half times their basic rate of pay for all hours worked over 40 in a workweek and prohibits unsanitary, hazardous, or dangerous working conditions on federally assisted projects. The Wage and Hour division (WHD) within the U.S. Department of Labor (DOL) enforces the compensation requirements of this Act, while DOL's Occupational Safety and Health Administration (OSHA) enforces the safety and health requirements.

Jefferson County urges all contractors, regardless of funding sources for projects, to follow all applicable Federal and State labor laws.

For Professional Services: This provision applies to professional service agreements that exceed $100,000 and employs laborers, mechanics, watchmen, and guards This includes members of survey crews and exploratory drilling operations.

Use of Provision: The following text will be included in applicable contracts without modification:

1. *Overtime requirements*. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. *Violation; liability for unpaid wages; liquidated damages.* In the event of any violation of the clause set forth in paragraph (1) of this clause, the Contractor, and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this section, in the sum of $27.00 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this clause.

3. *Withholding for unpaid wages and liquidated damages*. Jefferson County shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this clause.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this clause.

Rights to Inventions

Source: 2 CFR § 200 Appendix II (F)

37 CFR § 401

Applicability: This provision applies to all contracts and subcontracts with small business forms or nonprofit organizations that include performance of *experimental, developmental, or research work*. This clause is not applicable to construction, equipment, or professional service contracts unless the contract includes *experimental, developmental, or research work*. This requirement applies to "funding agreements," but it DOES NOT apply to the Public Assistance, Hazard Mitigation Grant Program, Fire Management Assistance Grant Program, Crisis Counseling Assistance and Training Grant Program, Disaster Case Management Grant Program, and Federal Assistance to Individuals and Households – Other Needs Assistance Grant Program, as FEMA awards under these programs do not meet the definition of "funding agreement."

Use of Provisian: When applicable, the sponsor's language in the contract must fully satisfy the requirements of Appendix II to 2 CFR part 200.

Clean Air and Water Pollution Control

Source: 2 CFR § 200 Appendix II (G)

29 CFR Part 5

Applicability: This provision is required on all contracts and lower tier contracts that exceed $150,000.

Use of Provision: The following language will be included in applicable contracts:

1. Contractor agrees to comply with all applicable standards, orders, and regulations pursuant to the Clean Air Act (42 U.S.C. § 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. § 1251-13870). The contractor agrees to report any violation to the owner immediately upon discovery. The owner assumes responsibility for notifying the EPA and the FAA.

Debarment and Suspension

Source: 2 CFR Part 180 (Subpart C) 2 CFR Part 3000

2 CFR Part 1200 DOT Order 4200.5

Applicability: Required in all FEMA grant and cooperative agreement programs, regardless of amount. This requirement applies to covered transactions as defined in 2 CFR part 180. AIP funded contracts are non-procurement transactions as defined by §180.970. Covered transactions include any AIP-funded contract, regardless of tier, that is awarded by a contractor, subcontractor, supplier, consultant, or its agents or representative in any transaction, if the amount of the contract is expected to equal or exceed $25,000. Jefferson County must verify that the firm or individual that is entering into a contract with is not presently suspended, excluded, or debarred by any Federal department or agency from participating in federally assisted projects. This is accomplished by:

1. Checking SAM.gov to verify the firm's or individual's status;
2. Collecting a certification from the firm or individual that is not suspended, debarred, or excluded; and
3. Incorporating a clause into the contract that requires lower tier contracts to verify that no suspended, debarred, or excluded firm or individual is included in the project.

See **Error! Reference source not found.**, Paragraph **Error! Reference source not found.** above for more information on SAM.gov.

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of Appendix II to 2 CFR part 200.

Lobbying and Influencing Federal Employees

Source: 2 CFR § 200 Appendix II (J) 31 USC § 1352 – Byrd Anti-Lobbying Amendment

49 CFR Part 20, Appendix A 44 CFR Part 18

Applicability: This requirement applies to all FEMA grant and cooperative agreement programs. Consultants and contractors that apply or bid an award of $100,000 or more must certify that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant, or another award covered by 31 USC 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award.

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of Appendix II to 2 CFR part 200 Appendix (J) and 31 USC 1352.

If applicable, contractors ***must sign and submit*** to Jefferson County the **"Certification Regarding Lobbying"** Form included in this bid specification.

Procurement of Recovered Materials

Source: 2 CFR § 200 Appendix II (J) Solid Waste Disposal Act

40 CFR Part 247 2 CFR § 200.322

Applicability: Sponsors of AIP funded development and equipment projects must comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. Section 6002 emphasizes maximizing energy and resource recovery through use of affirmative procurement actions for recovered materials identified in the EPA guidelines. When acquiring items designated in the guidelines, the sponsor must procure items that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition.

This requirement applies to:

- All contracts awarded by a non-Federal entity under FEMA grant and cooperative agreement programs.
- All construction and equipment projects.
- Any contract, professional and property acquisition, that includes procurement of a product that exceeds $10,000.

Information about this requirement, along with the list of EPA designated items, is available at EPA's Comprehensive Procurement Guidelines website:

https://www.epa.gov/smm/comprehensiveprocurement-guideline-cpg-program.

The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act." The Uniform Rules authorize FEMA to require additional provisions for non-Federal entity contracts.

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of Appendix II to 2 CFR part 200.

Access to Records and Reports

Source: 2 CFR § 200.333 FAA Order 5100.38

2 CFR § 200.336

Applicability: 2 CFR § 200.333 requires a sponsor to retain records pertinent to a federal award for a period of three years from submission of final closure documents. 2 CFR § 200.336 establishes that sponsors must provide Federal entities the right to access records pertinent to the Federal award. FAA policy extends these requirements to the sponsor's contracts and subcontracts of AIP funded projects.

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of Appendix II to 2 CFR part 200. The following will be in applicable contracts:

1. The contractor must maintain an acceptable cost accounting system. The Contractor agrees to provide the local/state/federal entity providing funding for this project, the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions.
2. The contractor agrees to maintain all books, records and reports required under this contract for a period of not less than three years after final payment is made and all pending matters have been resolved.
3. The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.

4. The Contractor agrees to provide the FEMA Administrator or their representatives access to construction or other work sites pertaining to the work being completed under the contract.
5. In compliance with the Disaster Recovery Act of 2018, the County and the Contractor acknowledge and agree that no language in this contract is intended to prohibit audits or internal reviews by the FEMA Administrator or the Comptroller General of the United States.

Affirmative Action Requirement

Source: 41 CFR Part 60-4 FAA Order 5100.38

Executive Order 11246

Applicability: Sponsors are required to set goals for minority participation in AIP funded projects exceeding $10,000. The goals for minority participation derive from Economic Area (EA) and Standard Metropolitan Statistical Area (SMSA) as established in Volume 45 of the Federal Register dated 10/03/80. Page 65984 contains a table of all EAs and SMSAs and the associated minority participation goals.

Executive Order 11246 has set a goal of 6.9% nationally for female participation for all construction projects. This value remains constant for all counties and states.

Contract Types:

- Construction: The sponsor must incorporate this notice in all solicitations for bids or requests for proposals for AIP funded construction work contracts and subcontracts that exceed $10,000.
- Equipment: The sponsor must incorporate this notice in all solicitations for equipment project exceeding $10,000 that involves installation of equipment onsite (e.g. electrical vault equipment, generators). This provision does not apply to equipment acquisition projects where the manufacturer of the equipment takes place offsite at a manufacturer's plant (e.g. firefighting and vehicles).
- Professional Services: The sponsor must incorporate this notice in any professional service agreement if the agreement includes tasks that meet the definition of construction work, as defined by the DOL, and exceeds $10,000.

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of 41 CFR Part 60-4. The following will be in applicable contracts:

Solicitation Clause:
Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

   a. Goals for minority participation for each trade: Vol. 45 Federal Register pg. 65984 (10/3/80)

   b. Goals for female participation in each trade: 6.90%

These goals are applicable to all of the contractor's construction work, whether or not it is federal or federally assisted, performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR Part 60-4.3(a) and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project for the sole purpose of meeting the contractor's goals shall be a violation of the contract, the Executive Order, and the regulations in 41 CFR Part 60-4. Compliance with these goals will be measured against the total work hours performed.

The contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs (OFCCP) within 10 working days of award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of these subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

As used in this notice and in the contract resulting from this solicitation, the covered area is Texas, Jefferson County, Beaumont.

Buy American Preferences

Source: 49 USC § 50101

Applicability: the buy American preference requirement in 49 USC § 50101 requires that all still in manufactured goods used on AIP projects be produced in the United States. This statute gives the FAA the ability to issue a waiver to a sponsor to use non-domestic material on an AIP funded project subject to meeting certain conditions a sponsor may request that the FAA issue a waiver from the by American preference requirements if the FA finds that:

1. Applying the provision is not in the public interest;
2. The steel or manufactured goods are not available in sufficient quantity or quality in the United States;
3. The cost of components in subcomponents produced in the United States is more than 60% of the total components of a facility or equipment, and final assembly has taken place in the United States. Items that have an FAA standard specification item number, such as specific airport lighting equipment, are considered the equipment.

4. Applying this provision would increase the cost of the overall project by more than 25%.

For construction and equipment procurement projects, language, forms, and references to 49 USC § 50101 will be included in the solicitation.

Professional Service Agreements typically do not result in a deliverable that meets the definition of a manufactured product. If a PSA includes providing a manufactured good as a deliverable under the contract, the sponsor must include the Buy American Preference provision in the agreement.

Use of Provision: When applicable, the sponsor's language in the contract must fully satisfy the requirements of 49 USC § 50101.

Civil Rights

Source:	49 USC § 47123	Title VI of the Civil Rights Act of 1964
	FAA Order 1400.11	US DOT Order 1050.2

Applicability: Title VI of the Civil Rights Act of 1964, as amended, Title VI, prohibits discrimination on the grounds of race, color, or national origin under any program or activity receiving Federal financial assistance. Sponsors must include appropriate clauses from the Standard DOT Title VI Assurances in all contracts and solicitations.

The text of each individual clause comes from the U.S. DOT Order 1050.2 Standard Title VI Assurances and Nondiscrimination Provisions, effective 04/24/2013. These assurances require the sponsor insert the appropriate clauses in the form provided by the DOT. Where the clause refers to the applicable activity, project, or program, it means the AIP project.

TITLE VI SOLICITATION NOTICE

Jefferson County, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 USC § 2000d to 2000d-4) and the Regulations, hereby notifies all bidders or offerors that it will affirmatively ensure that any contract entered into pursuant to this advertisement, Disadvantaged Business Enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

Title VI List of Pertinent Nondiscrimination Acts and Authorities

During the performance of any contract as a result of this bid, the Contractor, for itself, its assignees, and successors in interest, hereinafter referred to as the Contractor, agrees to comply with the following non-discrimination statutes and authorities, including but not limited to:

- Title VI of the Civil Rights Act of 1964
- 49 CFR part 21
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970
- Section 504 of the Rehabilitation Act of 1973
- The Age Discrimination Act of 1975
- Airport and Airway Improvement Act of 1982
- The Civil Rights Restoration Act of 1987
- Titles II and III of the Americans with Disabilities Act of 1990
- The Federal Aviation Administration's Nondiscrimination Statute
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency
- Title IX of the Education Amendments of 1972

Disadvantaged Business Enterprise

Source: 49 CFR part 26

Applicability: A sponsor that anticipates awarding $250,000 or more in AIP funding prime contracts in a federal fiscal year must have an approved Disadvantaged Business Enterprise (DBE) program on file with the FAA Office of Civil Rights (§26.21). The approved DBE program will identify a 3-year overall program goal that the sponsor bases on the availability of ready, willing, and able DBEs relative to all businesses ready, willing, and able to participate on the project. (§26.45).

Sponsors with a DBE program on file with the FAA must include the three following provisions, if applicable:

- Clause in all solicitations for proposals for which a contract goal has been established;
- Clause in each prime contract, and;
- Clause in solicitations that are obtaining DBE participation through race/gender neutral means.

As a condition of bid responsiveness, the Bidder or Offeror must submit the following information with its proposal on the forms provided herein:

1. Names and addresses of the DBE firms that will participate in the contract;
2. A description of the work each DBE firm will perform;
3. Percentage/dollar amount of the participation of each DBE firm listed under 1.
4. Written statement from Bidder or Offeror that attests their commitment to use the DBE firm(s) listed under (1) to meet the Owner's project goal; and

5. If Bidder or Offeror cannot meet the advertised project DBE goal, evidence of good faith efforts undertaken by the Bidder or Offeror as described in 49 CFR part 26 Appendix A

The requirements of 49 CFR part 26 apply to this contract. It is the policy of Jefferson County to practice nondiscrimination based on race, color, sex, or national origin in the award or performance of this contract. Jefferson County encourages participation by all firms qualifying under this solicitation regardless of business size or ownership.

DBE Contract Assurances

Contracts as a result of this bid will include contract assurances per §26.13, if applicable:

The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 and the award and administration of Department of Transportation-assisted contracts. Failure by contractor to carry out these requirements is a material breach of this contract which may result in the termination of this contract or such other remedy as the owner deems appropriate, which may include but is not limited to:

1. Withholding monthly progress payments;
2. Accessing sanctions;
3. Liquidated damages; and/or
4. Disqualifying the Contractor from future bidding as non-responsible.

Prompt Payment (§26.29) – The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than 30 days from the receipt of each payment the prime contractor receives from Jefferson County. The prime contractor agrees further to return retainage payments to each subcontractor within 30 days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of Jefferson County. This clause applies to both DBE and non-DBE subcontractors.

Distracted Driving

Source: Executive Order 13513 2 CFR §200.67

DOT Order 3902.10

Applicability: The FAA encourages recipients of federal grant funds to adopt and enforce safety policies that decrease crashes by distracted drivers, including policies to ban text messaging while driving when performing work related to a grant or subgrant.

Use of Provision: The following clause will be included in all Federally assisted contracts regardless of amount:

In accordance with executive order 13513, federal leadership on reducing text messaging while driving, Andy OT order 3902.10, text messaging while driving, the FAA encourages recipients of Federal grant funds to adopt and enforce safety policies that decrease crashes by distracted drivers including policies to ban text messaging while driving when performing work related to a grant or subgrant.

In support of this initiative, Jefferson County encourages the contractor to promote policies and initiatives for its employees and other work personnel that decrease crashes by distracted drivers, including policies that ban text messaging while driving motor vehicles Papa forming work activities associated with the project. The contractor must include the substance of this clause and other sub tier contracts exceeding $3,500 that involve driving a motor vehicle and performance of work activities associated with the project.

Compliance with Federal Law, Regulations, and Executive Orders

The recipient and its contractors are required to comply with all Federal laws, regulations, and executive orders.

Applicability: FEMA recommends that all non-Federal entities place into their contracts an acknowledgement that FEMA financial assistance will be used to fund the contract along with the requirement that the contractor will

comply with all applicable Federal law, regulations, executive orders, and FEMA policies, procedures, and directives.

"This is an acknowledgement that FEMA financial assistance will be used to fund all or a portion of the contract. The contractor will comply with all applicable Federal law, regulations, executive orders, FEMA policies, procedures, and directives."

No Obligation by Federal Government

The FAA and or FEMA is not a party to any transaction between the recipient and its contractor. The FAA and or FEMA is not subject to any obligations or liable to any party for any matter relating to the contract.

Applicability: FEMA recommends that the non-Federal entity include a provision in its contract that states that the Federal Government is not a party to the contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract.

"The Federal Government is not a party to this contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract."

Program Fraud and False or Fraudulent Statements or Related Acts

Recipients must comply with the requirements of The False Claims Act (31 U.S.C. §§ 3729-3733) which prohibits the submission of false or fraudulent claims for payment to the federal government. See DHS Standard Terms and Conditions: Version 8.1 (2018); and 31 U.S.C. §§ 3801-3812, which details the administrative remedies for false claims and statements made. The non-Federal entity must include a provision in its contract that the contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to its actions pertaining to the contract.

FEMA recommends that the non-Federal entity include a provision in its contract that the contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to its actions pertaining to the contract.

"The Contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to the Contractor's actions pertaining to this contract."

SECTION 3: SPECIAL REQUIREMENTS/BID SUBMISSION INSTRUCTIONS

The following requirements and instructions **supersede** General Requirements where applicable.

3.1 SUBMISSION OF BID.

Bidder is Responsible for Submitting:

One (1) Original and Two (2) Bid Copies; with all copies to include a Completed Copy of this specifications packet, in its entirety.

The County requests that bid submissions NOT be bound by staples or glued spines.

Each Bidder shall ensure that required parts of their bid submission are completed with accuracy and submitted as per the requirements within this specifications packet, including any addenda.

Additionally, Bidder shall monitor the Jefferson County Purchasing Department Website for any addenda, additional instructions, or bid updates. https://www.co.jefferson.tx.us/Purchasing/

Failure to return and/or complete all required documentation will result in a response being declared as non-responsive.

Bids must be submitted in complete original form by mail or messenger to the following address:
Jefferson County Purchasing Department
1149 Pearl Street, 1st Floor
Beaumont, TX 77701

Bid Packaging: Bidder shall submit response in a tightly sealed opaque envelope or box, plainly marked "SEALED BID." The outside of the envelope of box shall also include the IFB Number, IFB Name, IFB Due Date, and the Bidder's Name and Address; and shall be addressed to the Purchasing Agent.

All submissions must be received by 11:00 am CT, Wednesday, August 24, 2022.

Late bids will not be accepted and will be returned unopened to the Bidder.

Bids will be accepted at the above address until the time and date specified herein, and immediately after will be publicly opened and read aloud.

Jefferson County will not accept any responsibility for bids being delivered by third party carriers.

Jefferson County shall not be responsible for any effort or cost expended in the preparation of a response to this IFB.

All bid responses submitted in response to this invitation shall become the property of Jefferson County and will be a matter of public record available for review.

All protests should be coordinated through the Purchasing Office prior to award recommendation to Commissioners' Court.

Please direct questions to Jamey West, Contract Specialist via e-mail at: jwest@co.jefferson.tx.us

3.2 COURTHOUSE SECURITY.

All visitors to the Courthouse must pass through Security. Respondents planning to hand deliver proposals must allow time to get through Security, as a delay in entering the Courthouse will not be accepted as an excuse for late submittal. Mondays and Tuesdays are particularly heavy days.

In response to the Covid-19 pandemic, Jefferson County has implemented precautionary measures as currently recommended by the CDC within its facilities. Bidders are strongly urged to plan accordingly.

COUNTY HOLIDAYS (2022)

~~**January 17, 2022,**~~	~~Martin Luther King, Jr. Day~~	~~Monday~~
~~**February 21, 2022,**~~	~~President's Day~~	~~Monday~~
~~**April 15, 2022,**~~	~~Good Friday~~	~~Friday~~
~~**May 30, 2022,**~~	~~Memorial Day~~	~~Monday~~
~~**July 4, 2022,**~~	~~Independence Day~~	~~Monday~~
September 5, 2022,	Labor Day	Monday
November 11, 2022,	Veteran's Day	Friday
November 24 & 25, 2022	Thanksgiving	Thursday & Friday
December 23 & 26, 2022	Christmas	Friday & Monday
January 2, 2023,	New Year's	Monday

Submissions During Time of Inclement Weather, Disaster, or Emergency:

In case of inclement weather or any other unforeseen event causing the County to close for business on the date of a bid/proposal/statement of qualifications submission deadline, the RFQ closing will automatically be postponed until the next business day that County offices are open to the public. Should inclement weather conditions or any other unforeseen event cause delays in courier service operations, the County may issue an addendum to all known vendors interested in the project to extend the deadline. It will be the responsibility of the vendor to notify the county of their interest in the project should these conditions impact their ability to submit a bid/proposal/statement of qualifications submission before the stated deadline. The County reserves the right to make the final judgement call to extend any deadline.

Should an emergency or unanticipated event interrupt normal County processes, and bid/proposal/statement of qualifications submissions cannot be received by the Jefferson County Purchasing Department's office by the exact time specified in the RFQ and urgent County requirements preclude amendment to the RFQ, the time specified for receipt of Statements of Qualifications will be deemed to be extended to the same time of day specified in the solicitation on the first business day on which normal County processes resume.

3.3 PRE-BID MEETING AND WALK-THROUGH.

There will be a Pre-Bid Conference and Walk-Through at 2:00 PM CT on Thursday, August 4, 2022, at the Airport Administration Conference Room located at 5000 Jerry Ware Blvd. Beaumont, Texas 77705. This conference will be the Bidder's only opportunity to view secured areas of the project.

3.4 QUESTIONS/DEADLINE FOR QUESTIONS.

Questions may be emailed to **Jamey West, Contract Specialist** at: jwest@co.jefferson.tx.us The Deadline for asking questions or requesting additional information (in writing) is **5:00 pm CT, Monday, August 15, 2022.**

3.5 VENDOR REGISTRATION: SYSTEM FOR AWARD MANAGEMENT.

Vendors doing business with Jefferson County are **required** to be registered with The System for Award Management (SAM), with an "active" status. The System for Award Management (SAM) is the Official U.S. Government system that consolidated the capabilities of CCR/FedReg, ORCA, and EPLS. There is NO fee to register for this site. Entities may register at no cost directly from the SAM website at: https://www.sam.gov

In instances where a vendor has either an "Inactive" SAM Registration or is not currently registered with the System for Award Management, the Purchasing Department may *initially* accept proof (printout from the SAM website) that the vendor has begun the registration process in order for the IFB/RFQ/RFP submission to be considered as "responsive" to the specifications for the project.

However, the SAM Registration must be completed (showing "active" status, with no exclusions) prior to the award and/or execution of an agreement or contract for the project.

3.6 FORM 1295 (Texas Ethics Commission) SUBMISSSION REQUIREMENT/INSTRUCTIONS FOR BIDDERS.

All Non-Exempt Bidders are required to submit a completed FORM 1295 with bid submission.

1. Submit a FORM 1295 online via the Texas Ethics Commission website link below.
Vendors must enter the required information an Form 1295 and print a copy of the completed form.
The form will include a certification of filing that will contain a unique certification number.

2. Submit a FORM 1295 hard copy (completed & signed by an Authorized Agent of the Awarded Vendor), to the Jefferson County Purchasing Department **with bid submission.**

FORM 1295, Completion Instructions, and Login Instructions are available via the Texas Ethics Commission Website at: https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm

A sample of a completed FORM 1295 is included on **PAGE 30**.

FORM 1295 Implementation Background:

In accordance with House Bill 1295 (passed January 1, 2016), Vendors entering into contracts and professional agreements with Jefferson County will be required to complete a Certificate of Interested Parties (FORM 1295), **unless contract is considered exempt as described below.**

In 2017, the Texas legislature amended the law to require Form 1295 to include an "unsworn declaration" which includes, among other things, the date of birth and address of the authorized representative signing the form. The unsworn declaration, including the date of birth and address of the signatory, replaces the notary requirement that applied to contracts entered into before January 1, 2018. The TEC filing application does not capture the date of birth or street address of the signatory and it will not appear on forms that are filed using the TEC filing application.

Changes to the law requiring certain businesses to file a Form 1295 are in effect for contracts entered into or amended on or after January 1, 2018. The changes exempt businesses from filing a Form 1295 for certain types of contracts and replace the need for a completed Form 1295 to be notarized. Instead, the person filing a 1295 needs to complete an "unsworn declaration."

Question: Will the date of birth and address provided appear on the TEC's website when the form is filed?

Answer: No. The TEC filing application does not capture the date of birth or street address of the signatory and it will not appear on forms that are filed using the TEC filing application. Although the TEC does not capture the date of birth and street address of the signatory, the contracting state agency or governmental agency will have

a physical copy of the form that includes the date of birth and address of the signatory. The TEC cannot answer whether the contracting state agency or governmental agency may release such information. Questions regarding the Texas Public Information Act may be directed to the Office of the Attorney General. See also Paxton v. City of Dall., No. 03-13-00546-CV, 2015 Tex. App. LEXIS 5228, at *10-11 (App.—Austin May 22, 2015) (mem. op.) (pet. denied) (available here)

FORM 1295 EXEMPTIONS:

What type of contracts are exempt from the Form 1295 filing requirement under the amended law?
The amended law adds to the list of types of contracts exempt from the Form 1295 filing requirement.

A completed Form 1295 is not required for:

- a sponsored research contract of an institution of higher education
- an interagency contract of a state agency or an institution of higher education
- a contract related to health and human services if: the value of the contract cannot be determined at the time the contract is executed; and any qualified vendor is eligible for the contract
- a contract with a publicly traded business entity, including a wholly owned subsidiary of the business entity
- a contract with an electric utility, as that term is defined by Section 31.002, Utilities Code
- a contract with a gas utility, as that term is defined by Section 121.001, Utilities Code

SAMPLE: FORM 1295

CERTIFICATE OF INTERESTED PARTIES — FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY

1 **Name of business entity filing form, and the city, state and country of the business entity's place of business.**

YOUR FIRM NAME HERE

2 **Name of governmental entity or state agency that is a party to the contract for which the form is being filed.**

JEFFERSON COUNTY, TEXAS

3 **Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.**

BID/CONTRACT/PO NUMBER GOES HERE

4 Name of Interested Party	City, State, Country (place of business)	Nature of Interest (check applicable)	
		Controlling	Intermediary
NAME OF PERSON/PERSONS THAT OWN BUSINESS GOES HERE - MUST LIST ANY PERSON THAT DOES NOT WORK FOR THE COMPANY LISTED IN #1 THAT WILL PROFIT FROM THE BID/CONTRACT/PO			

5 **Check only if there is NO Interested Party.** ☐ **ONLY CHECK IF NO CONTROLLING OR INTERMEDIARY PARTY**

6 **UNSWORN DECLARATION** Vendor is to complete #6 - Unsworn Declaration

My name is _____, and my date of birth is _____.

My address is _____, _____, _____, _____, _____.
(street) (city) (state) (zip code) (country)

I declare under penalty of perjury that the foregoing is true and correct.

Executed in _____ County, State of _____, on the _____ day of _____, 20_____.
(month) (year)

_____
Signature of authorized agent of contracting business entity
(Declarant)

ADD ADDITIONAL PAGES AS NECESSARY

Form provided by Texas Ethics Commission www.ethics.state.tx.us Revised 12/22/2017

Must file online at www.ethics.state.tx.us/File

BIDDER: INSERT COMPLETED FORM 1295 BEHIND THIS PAGE.

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY
CERTIFICATION OF FILING

Certificate Number:
2022-921959

Date Filed:
08/13/2022

Date Acknowledged:

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

SETEX CONSTRUCTION CORP
BEAUMONT, TX United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

Jefferson County

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

IFB 22-028/JW
Rehabilitation of Fuel Farm Pavement at Jack Brooks Regional Airport

4 Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
		Controlling	Intermediary

5 Check only if there is NO Interested Party. [X]

6 UNSWORN DECLARATION

My name is Nathan Rivers, and my date of birth is 4/8/78.

My address is 1660 S 23rd St (street), Beaumont (city), TX (state), 77707 (zip code), USA (country).

I declare under penalty of perjury that the foregoing is true and correct.

Executed in Jefferson County, State of Texas, on the 24th day of August (month), 20 22 (year).

Signature of authorized agent of contracting business entity
(Declarant)

BIDDER: INSERT PROOF OF SYSTEM FOR AWARD MANAGEMENT (SAM) REGISTRATION PROOF HERE.

An official website of the United States government
Here's how you know

You have 2 new alerts

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Entity Registration

Core Data

Business Information

Entity Types

Financial Information

Taxpayer Information

Points of Contact

Security Information

Assertions

Reps and Certs

Exclusions

Responsibility / Qualification

〈 Back to Workspace

SETEX CONSTRUCTION CORP.

Unique Entity ID
XCM1F3PRZ253

CAGE/NCAGE
395P4

Registration Status	*Expiration Date*
Active Registration	Jan 13, 2023

Purpose of Registration
All Awards

Physical Address
1660 S 23RD ST
Beaumont, Texas
77707-4304, United States

Mailing Address
P.O. Box 20678
Beaumont, Texas
77720-0678, United States

Version

Current Record

BUSINESS INFORMATION

Doing Business As
(blank)

URL
http://www.setexconstruction.com

State / Country of Incorporation
Texas, United States

MPIN

Division Name
(blank)

Division Number
(blank)

Congressional District
Texas 14

Registration Dates

BIDDER: INSERT PROOF OF SYSTEM FOR AWARD MANAGEMENT (SAM) REGISTRATION PROOF HERE.

3.7 MULTIPLE VENDOR AWARD.

Jefferson County reserves the right to award this contract to more than one vendor at the County's discretion.

3.8 DELIVERY.

If delivery is required, all items must be packaged so as to be protected from damage during shipping and handling. Any item(s) damaged in shipping must be replaced in kind, or repaired, by the contractor, at the discretion of, and at no additional charge to, Jefferson County.

3.9 PAYMENT.

Jefferson County will pay original invoices that clearly itemize the goods and/or services provided as to quantity, part number, description, price, applicable discount (if any), labor charges showing time differential, if applicable and if previously agreed to, and delivery, installation, and set-up costs, if applicable and if previously agreed to. Only charges as stated on the Bid Form(s) submitted as a part of the bid will be considered.

Invoices must indicate Jefferson County as applicable, the address to which the product(s) and/or service(s) were delivered, and the applicable purchase order number. Invoices will be matched to delivery tickets prior to payment; therefore, all delivery tickets should have an accurate description of the product(s) and/or service(s).

Invoices shall be submitted to:
Jefferson County Auditing Department
Attention: Accounts Payable
1149 Pearl Street, 7th floor Beaumont,
TX 77701.

3.10 USAGE REPORTS.

Jefferson County reserves the right to request, and receive at no additional cost, up to two (2) times during the contract period, a usage report detailing the products and/or services furnished to date under a contract resulting from this IFB. The reports must be furnished no later than five (5) working days after written request and itemize all purchases to date by Jefferson County department, description of each item purchased, including manufacturer, quantity of each item purchased, per unit and extended price of each item purchased, and total amount and price of all items purchased.

3.11 INSURANCE.

The contractor (including any and all subcontractors as defined in Section 3.12.3 below) shall, at all times during the term of this contract, maintain insurance coverages with not less than the type and requirements shown below. Such insurance is to be provided at the sole cost of the contractor. These requirements do not establish limits of the contractor's liability.

All policies of insurance shall waive all rights of subrogation against the County, its officers, employees, and agents; a copy of the policy wording or endorsement is required.

Contractor shall furnish Jefferson County with Certificate of Insurance naming Jefferson County as additional insured and will provide the actual policy wording or endorsement showing as such.

All insurance must be written by an insurer licensed to conduct business in the State of Texas.

Minimum Insurance Requirements:

Public Liability, including Products & Completed Operations	$1,000,000
Excess Liability	$1,000,000

Property Insurance (policy below that is applicable to this project):
Improvements & Betterments Policy: Improvements/Remodeling (for Lease Tenants)
Builder's Risk Policy: Structural Coverage for Construction Projects
Installation Floater Policy: Improvements/Alterations to Existing Structure

Workers' Compensation Statutory Coverage (See Section 9 Below)

3.12 WORKERS' COMPENSATION INSURANCE.

3.12.1 Definitions:

3.12.1.1 **Certificate of coverage ("Certificate")** – A copy of a certificate of insurance, a certificate of authority to self-insure issued by the commission, or a coverage agreement, DWC-81, DWC-82, DWC-83, or DWC-84 showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.

3.12.1.2 **Duration of the project** – Includes the time from the beginning of the work on the project until the contractor's/person's work on the project has been completed and accepted by the governmental entity.

3.12.1.3 **Persons providing services on the project ("subcontractor") in article 406.096** – Includes all persons or entities performing all or part of the services under the contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the contractor and regardless of whether that person has employees. This includes, without limitation, independent contractors, subcontractor, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the project. "Services" includes, without limitation, providing, hauling, or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

3.12.2 The Contractor shall provide coverage, based on proper reporting of classification code and payroll amounts and filing any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the contractor providing services on the project, for the duration of the project.

3.12.3 The Contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract – **refer to Section 3.11 above**.

3.12.4 If the coverage period shown on the Contractor's current certificate of coverage ends during the duration of the project, the Contractor must, prior to the end of the coverage period, file a new certificate of coverage with the governmental entity showing that coverage has been extended.

3.12.5 The Contractor shall obtain from each person providing services on a project, and provide to the governmental entity:

3.12.5.1 A certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and

3.12.5.2 No later than seven (7) days after receipt by the Contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate ends during the duration of the project.

3.12.6 The Contractor shall retain all required certificates of coverage for the duration of the project and for one (1) year thereafter.

3.12.7 The Contractor shall notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.

3.12.8 The Contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Department of Workers' Compensation, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.

3.12.9 The Contractor shall contractually require each person with whom it contracts to provide services on a project to:

3.12.9.1 Provide coverage, based on reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all its employees' providing services on the project, for the duration of the project.

3.12.9.2 Provide to the Contractor, prior to that person beginning work on the project a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project.

3.12.9.3 Provide the Contractor, prior to the end of coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.

3.12.9.4 Obtain from each person with whom it contracts, and provide to the Contractor:

3.12.9.4.1 A certificate of coverage, prior to the other person beginning work on the project; and

3.12.9.4.2 the coverage period, if the coverage period shown on the current certificate of a new certificate of coverage showing extension of coverage, prior to the end of coverage ends during the duration of the project.

3.12.9.5 Retain all required certificates of coverage on file for the duration of the project and for one (1) year thereafter.

3.12.9.6 Notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and

3.12.9.7 Contractually require each person with whom it contracts to perform as required by paragraphs **3.12.1. – 3.12.7**, with the certificates of coverage to be provided to the person for whom they are providing services.

3.12.10 By signing this contract or providing or causing to be provided a certificate of coverage, the Contractor is representing to the governmental entity that all employees of the contractor who will provide services of the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.

3.12.11 The Contractor's failure to comply with any of these provisions is a breach of contract by the Contractor which entitles the governmental entity to declare the contract void if the Contractor does not remedy the breach within ten (10) days after receipt of notice of breach from the governmental entity.

BIDDER: INSERT COPY OF CERTIFICATE OF INSURANCE (COI) BEHIND THIS PAGE.

Note: For bid purposes, a general COI will suffice.

However, a COI that includes the notation that "Jefferson County as an additional insured" will be required from Awarded Bidder(s) prior to the issuance of a Purchase Order.

ACORD®

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 6/3/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
McElveen Insurance LLC
700 W. Prien Lake Road
Lake Charles LA 70601

CONTACT NAME: Heather White
PHONE (A/C, No, Ext): 337-475-7441 **FAX (A/C, No):** 337-564-6934
E-MAIL ADDRESS: hwhite@mcelveenins.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Texas Mutual Insurance Company	22945
INSURER B : Valley Forge Insurance Company	20508
INSURER C : Continental Insurance Company	35289
INSURER D : AGCS Marine Insurance Company	22837
INSURER E : Westchester Surplus Lines Insurance Co	10172
INSURER F :	

INSURED SETECON-01
SETEX Construction Corporation
P. O. Box 20678
Beaumont TX 77720

COVERAGES **CERTIFICATE NUMBER:** 1683942299 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
B	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY [X] PRO-JECT [ ] LOC OTHER:	Y	Y	7018117430	4/1/2022	4/1/2023	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG $	$ 1,000,000 $ 100,000 $ 15,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $
C	AUTOMOBILE LIABILITY [X] ANY AUTO ALL OWNED AUTOS [ ] SCHEDULED AUTOS [X] HIRED AUTOS [X] NON-OWNED AUTOS	Y	Y	7018117444	4/1/2022	4/1/2023	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) $	$ 1,000,000 $ $ $ $
C	[X] UMBRELLA LIAB [X] OCCUR EXCESS LIAB [ ] CLAIMS-MADE [ ] DED [ ] RETENTION $	Y	Y	7018117458	4/1/2022	4/1/2023	EACH OCCURRENCE AGGREGATE $	$ 5,000,000 $ 5,000,000 $
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y / N [ ] (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N / A	Y	TSF0001096795	4/1/2022	4/1/2023	[X] PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000
D E	Equipment Floater Pollution	Y		MXIEAR93088759 G73567798001	4/1/2022 6/1/2022	4/1/2023 6/1/2022	Rented/Leased Occurrence Aggregate	$250,000 1,000,000 2,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Additional Insured provided to Certificate Holder on General Liability, including ongoing & completed operations, and Auto Liability as required by written contract. Waiver of Subrogation provided to Certificate Holder on General Liability, Auto Liability, and Workers' Compensation as required by written contract. General Liability and Auto Liability provide coverage on a Primary & Non-Contributory basis as required by written contract.

CERTIFICATE HOLDER

SAMPLE CERTIFICATE

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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BIDDER: INSERT COPY OF CERTIFICATE OF INSURANCE (COI) BEHIND THIS PAGE.

Note: For bid purposes, a general COI will suffice.

However, a COI that includes the notation that "Jefferson County as an additional insured" will be required from Awarded Bidder(s) prior to the issuance of a Purchase Order.

SECTION 4: MINIMUM SPECIFICATIONS

The following requirements and specifications supersede General Bid Requirements where applicable. Any questions relating to bid submission or bid item specifications requirements should be directed to Jamey West, Contract Specialist via email at: jwest@co.jefferson.tx.us Please reference Bid Number: IFB 22-028/JW.

SCOPE OF PROJECT:

Jefferson County is soliciting bids for the Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport located adjacent to and south of the BPT air traffic control tower (ATCT). Fuel supply trucks enter the property through a secured gate just east of the fuel farm. The pavement at the fuel farm of the Jack Brooks Regional Airport has ongoing deterioration and needs to be rehabilitated or replaced. The estimated PCI of the pavement is approximately 40 or less.

The fuel farm concrete panels will be replaced in such a way to reduce the down time of the fueling area. The panel replacement will be coordinated to not impact the ability of the fuel farm to continue to provide fuel to aircraft using the airport. The subgrade must be adequately tested (density, Soil type, and CBR) to determine if it is sufficient to support the pavement surface. The scope of the project includes: • Full depth panel replacement of concrete at fuel loading and unloading area. • Full replacement of the containment wall. • Repair of underground drainage failure beneath pavement, if necessary. The finished product will meet NFPA 407, DOT, and EPA standards for fuel transfer area containment.

TECHNICAL SPECIFICATIONS:

Technical Specifications for this project may be found starting on **Page 61.**

BID FORM:

The BID FORM for this project may be found on **Page 40.**

BIDDER INFORMATION FORM

Instructions: Complete the form below. Please provide legible, accurate, and complete contact information. PLEASE PRINT.

Bid Number & Name: Invitation for Bid (IFB 22-028/JW)
Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport

Bidder's Company/Business Name: SETEX Construction Corp

Bidder's TAX ID Number: [redacted]

***If Applicable*:** **DBE Vendor No.** N/A **DBE Vendor No.** N/A

Contact Person: Nathan Rivers **Title:** President

Phone Number (with area code): 409.842.8181

Alternate Phone Number if available (with area code):

Fax Number (with area code): 409.842.2274

Email Address: nathanr@setexconstruction.com

Mailing Address (Please provide a physical address for bid bond return, if applicable):

1660 S 23rd St
Address
Beaumont TX 77707
City, State, Zip Code

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

BIDDER: INSERT BID SURETY BEHIND THIS PAGE.

BID FORM

UNIT PRICES: This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures. **All quantities are estimated. The contractor will be paid based upon actual quantities as verified by the Owner**

DESCRIPTION:	☒ Base Bid			
REF. NO. 1	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Mobilization C-105	1	LS	15,714.00	15,714.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 2	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Construction Safety (Barricades, Signs, and Traffic Handling) SS-120	1	LS	11,836.00	11,836.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 3	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Allowance for Storm Sewer Pipe Replacement D-701a	1	LS	7,000.00	7,000.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 4	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Install PVC Pipe (2 Inch) D-701b	6	LF	150.00	900.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 5	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Sawcut, Remove and Dispose Existing Concrete Pavement Full Depth (8 Inches) P-101-5.1a	602	SY	150.00	90,300.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 6	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Sawcut, Remove and Dispose Existing Asphalt Ramp P-101-5.1b	70	SY	150.00	10,500.00

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

BID FORM (CONTINUED)

DESCRIPTION:	☒ Base Bid			
REF. NO. 7	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Sawcut, Remove and Dispose Existing 6" Vertical Curb P-101-5.1c	302	LF	15.00	4,530.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 8	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Embankment in Place P-152-4.2	30	CY	50.00	1,500.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 9	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Unsuitable Excavation P-152-4.4	30	CY	30.00	900.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 10	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Lime Treated Subgrade (8 inches) P-152-8.1	602	SY	35.00	21,070.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 11	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Lime P-152-8.2	31	TON	400.00	12,400.00

DESCRIPTION:	☒ Base Bid			
REF. NO.12	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Reinforced Concrete Pavement (8 Inches) P-501-8.1a	526	SY	200.00	105,200.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 13	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Reinforced Concrete Pavement Ramp (8-12 Inches) P-501-8.1b	76	SY	200.00	15,200.00

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

BID FORM (CONTINUED) REPLACEMENT PAGE 42

DESCRIPTION:	☒ Base Bid			
REF. NO. 14	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Biodegradable Erosion Control Logs (Install) TXDOT 506-6.6.1	200	LF	50.00	10,000.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 15	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Biodegradable Erosion Control Logs (Removal) TXDOT 506-6.6.2	200	LF	25.00	5,000.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 16	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
4" Concrete Curb TXDOT 529	278	LF	25.00	6,950.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 17	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Furnish and Install 4' Steel Bollards	2	EA	1,500.00	3,000.00

DESCRIPTION:	☒ Base Bid			
REF. NO. 18	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Install 6' Rubber Speed Bumps	4	EA	2,000.00	8,000.00

DESCRIPTION:	☒ Base Bid
	TOTAL BID PRICE *($ XXX,XXX.XX)*
TOTAL BID	330,000.00

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

BIDDER ACKNOWLEDGEMENT OF BID ADDENDA (IF APPLICABLE):

Addendum	1	X	Date Received	8/1/22
Addendum	2	X	Date Received	8/17/22
Addendum	3		Date Received	
Addendum	4		Date Received	
Addendum	5		Date Received	

BIDDER: INCLUDE FULL, SIGNED, & ATTESTED COPY OF EACH ADDENDUM ISSUED WITH BID SUBMISSION.

AIA® Document A310™ – 2010

Bid Bond

CONTRACTOR:
(Name, legal status and address)
SETEX Construction Corporation
P.O. Box 20678
Beaumont, TX 77720-0678

SURETY:
(Name, legal status and principal place of business)
Philadelphia Indemnity Insurance Company
One Bala Plaza, Suite 100
Bala Cynwyd, PA 19004

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

OWNER:
(Name, legal status and address)
Jefferson County Purchasing Department
1149 Pearl Street, 1st Floor
Beaumont, TX 77701
BOND AMOUNT: Five Percent (5%) of Total Amount Bid

PROJECT:
(Name, location or address, and Project number, if any)
Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport
Bid No. IFB 22-028/JW

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this **24th** day of **August** **2022**

Linda Clifton
(Witness)

SETEX Construction Corporation
(Principal) *(Seal)*

(Title)

Katie Talbert
(Witness)

Philadelphia Indemnity Insurance Company
(Surety) *(Seal)*

(Title) **Mary Catherine Turner, Attorney-in-Fact**

Init.

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061110

PHILADELPHIA INDEMNITY INSURANCE COMPANY
One Bala Plaza, Suite 100
Bala Cynwyd, PA 19004-0950

Power of Attorney

KNOW ALL PERSONS BY THESE PRESENTS: That **PHILADELPHIA INDEMNITY INSURANCE COMPANY** (the Company), a corporation organized and existing under the laws of the Commonwealth of Pennsylvania, does hereby constitute and appoint **Garrett Turner, Mary Catherine Turner, Meghann Catherine Turner & Ronald T. Turner of Surety Bond Brokers of LA, Inc.,** its true and lawful Attorney-in-fact with full authority to execute on its behalf bonds, undertakings, recognizances and other contracts of indemnity and writings obligatory in the nature thereof, issued in the course of its business and to bind the Company thereby, in an amount not to exceed **$100,000,000.00**

This Power of Attorney is granted and is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of PHILADELPHIA INDEMNITY INSURANCE COMPANY on the 14th of November, 2016.

RESOLVED: That the Board of Directors hereby authorizes the President or any Vice President of the Company: (1) Appoint Attorney(s) in Fact and authorize the Attorney(s) in Fact to execute on behalf of the Company bonds and undertakings, contracts of indemnity and other writings obligatory in the nature thereof and to attach the seal of the Company thereto; and (2) to remove, at any time, any such Attorney-in-Fact and revoke the authority given. And, be it

FURTHER RESOLVED: That the signatures of such officers and the seal of the Company may be affixed to any such Power of Attorney or certificate relating thereto by facsimile, and any such Power of Attorney so executed and certified by facsimile signatures and facsimile seal shall be valid and binding upon the Company in the future with respect to any bond or undertaking to which it is attached.

IN TESTIMONY WHEREOF, PHILADELPHIA INDEMNITY INSURANCE COMPANY HAS CAUSED THIS INSTRUMENT TO BE SIGNED AND ITS CORPORATE SEALTO BE AFFIXED BY ITS AUTHORIZED OFFICE THIS 5TH DAY OF MARCH, 2021.

(Seal)

John Glomb, President & CEO
Philadelphia Indemnity Insurance Company

On this 5th day of March, 2021 before me came the individual who executed the preceding instrument, to me personally known, and being by me duly sworn said that he is the therein described and authorized officer of the **PHILADELPHIA INDEMNITY INSURANCE COMPANY**; that the seal affixed to said instrument is the Corporate seal of said Company; that tbe said Corporate Seal and his signature were duly affixed.

Notary Public: Vanessa McKenzie

residing at: Bala Cynwyd, PA

My commission expires: November 3, 2024

I, Edward Sayago, Corporate Secretary of PHILADELPHIA INDEMNITY INSURANCE COMPANY, do hereby certify that the foregoing resolution of the Board of Directors and the Power of Attorney issued pursuant thereto on the 5th day March, 2021 are true and correct and are still in full force and effect. I do further certify that John Glomb, who executed the Power of Attorney as President, was on the date of execution of the attached Power of Attorney the duly elected President of PHILADELPHIA INDEMNITY INSURANCE COMPANY.

In Testimony Whereof I have subscribed my name and affixed the facsimile seal of each Company this 24th day of August, 2022

Edward Sayago, Corporate Secretary
PHILADELPHIA INDEMNITY INSURANCE COMPANY

VENDOR REFERENCES FORM

Bidder: Please list at least three (3) companies or governmental agencies (preferably a municipality) where the same or equivalent products and/or services as contained in this specification package were recently provided.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

REFERENCE ONE

Government/Company Name: City of Beaumont

Address: 801 Main St, Beaumont TX 77701

Contact Person and Title: David Tingle - Public Works

Phone: 409-785-4781 Fax:

Email Address: david.tingle@beaumonttexas.gov Contract Period: 6/25/21 - 6/24/23

Scope of Work: Curb and gutter repair at various locations throughout the city

REFERENCE TWO

Government/Company Name: Lamar University

Address: 4400 S M L King Jr Pkwy, Beaumont, TX 77705

Contact Person and Title: Lee Nguyen - Construction Project Manager

Phone: 409.880.8109 Fax:

Email Address: nguyenlt@lamar.edu Contract Period: September 2020

Scope of Work: New concrete parking lot

REFERENCE THREE

Government/Company Name: Jefferson County

Address: 1149 Pearl Street, Beaumont TX 77701

Contact Person and Title: Deb Clark - Purchasing Agent

Phone: 409.835.8599 Fax:

Email Address: syphrett@co.jefferson.tx.us Contract Period: April 2020

Scope of Work: Ford Park Midway Drainage

SIGNATURE PAGE

As permitted under Article 4413 (32c) V.A.C.S., other governmental entities may wish to participate under the same terms and conditions contained in this contract (i.e., piggyback). In the event any other entity participates, all purchase orders will be issued directly from and shipped directly to the entity requiring supplies/services. Jefferson County shall not be held responsible for any orders placed, deliveries made or payment for supplies/services ordered by another entity. Each entity reserves the right to determine their participation in this contract.

Would Bidder be willing to allow other governmental entities to piggyback off this contract, if awarded, under the same terms and conditions? ..... **Yes** [X] **No** [ ]

This bid shall remain in effect for ninety (90) days from bid opening and shall be exclusive of federal excise and state and local sales tax (exempt).

The undersigned agrees, if this bid is accepted, to furnish any and all items upon which prices are offered, at the price and upon the terms and conditions contained in the Invitation for Bid, Conditions of Bidding, Terms of Contract, and Specifications and all other items made a part of the accepted contract.

The undersigned affirms that they are duly authorized to execute the contract, that this company, corporation, firm, partnership or individual has not prepared this bid in collusion with any other Bidder, and that the contents of this bid as to prices, terms or conditions of said bid have not been communicated by the undersigned nor by any employee or agent to any other Bidder or to any other person(s) engaged in this type of business prior to the official opening of this bid. And further, that neither the Bidder nor their employees nor agents have been for the past six (6) months directly nor indirectly concerned in any pool or agreement or combination to control the price of goods or services on, nor to influence any person to bid or not to bid thereon.

SETEX Construction Corp	
Bidder (Entity Name)	Signature
1660 S 23rd St / P O Box 20678	Nathan Rivers
Street & Mailing Address	Print Name
Beaumont TX 77707 / 77720	8/24/22
City, State & Zip	Date Signed
409.842.8181	409.842.2274
Telephone Number	Fax Number
nathanr@setexconstruction.com	
E-mail Address	

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

BYRD ANTI-LOBBYING CERTIFICATION

Certification for Contracts, Grants, Loans, and Cooperative Agreements-The undersigned certifies, to the best of his or her knowledge and belief, that:

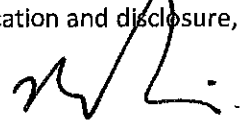
No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor SETEX Construction Corp certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.



Signature of Contractor's Authorized Official

Nathan Rivers - President

Name and Title of Contractor's Authorized Official

8/24/22

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

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LOCAL GOVERNMENT OFFICER
CONFLICTS DISCLOSURE STATEMENT – OFFICE USE ONLY

LOCAL GOVERNMENT OFFICER CONFLICTS DISCLOSURE STATEMENT

FORM CIS

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This is the notice to the appropriate local governmental entity that the following local government officer has become aware of facts that require the officer to file this statement in accordance with Chapter 176, Local Government Code.

OFFICE USE ONLY

Date Received

1 **Name of Local Government Officer**

2 **Office Held**

3 **Name of vendor described by Sections 176.001(7) and 176.003(a), Local Government Code**

4 **Description of the nature and extent of employment or other business relationship with vendor named in item 3**

5 **List gifts accepted by the local government officer and any family member, if aggregate value of the gifts accepted from vendor named in item 3 exceeds $100 during the 12-month period described by Section 176.003(a)(2)(B).**

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

(attach additional forms as necessary)

6 **AFFIDAVIT**

I swear under penalty of perjury that the above statement is true and correct. I acknowledge that the disclosure applies to each family member (as defined by Section 176.001(2), Local Government Code) of this local government officer. I also acknowledge that this statement covers the 12-month period described by Section 176.003(a)(2)(B), Local Government Code.

_____
Signature of Local Government Officer

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said _____, this the _____ day of _____, 20 _____, to certify which, witness my hand and seal of office.

_____
Signature of officer administering oath | Printed name of officer administering oath | Title of officer administering oath

Adopted 8/7/2015

THIS FORM IS FOR OFFICE USE ONLY

DEBARMENT/SUSPENSION CERTIFICATION

Non-Federal entities and contractors are subject to the debarment and suspension regulations implementing Executive Order 12549, Debarment and Suspension (1986) and Executive Order 12689, Debarment and Suspension (1989) at 2 C.F.R. Part 180 and the Department of Homeland Security's regulations at 2 C.F.R. Part 3000 (No procurement Debarment and Suspension).

This requirement applies to all FEMA grant and cooperative agreement programs.

Federal Executive Order (E .O.) 12549 "Debarment" requires that all contractors receiving individual awards, using federal funds, and all sub recipients certify that the organization and its principals are not debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded by any Federal department or agency from doing business with the Federal Government. By signing this document, you certify that your organization and its principals are not debarred. Failure to comply or attempts to edit this language may disqualify your bid. Information on debarment is available at the following websites:

www.sam.gov and https://acguisition.qov/far/index.html (see section 52.209-6).

The Contractor SETEX Construction Corp certifies or affirms by your signature that neither you nor your principal is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.

Signature of Contractor's Authorized Official

Nathan Rivers - President

Name and Title of Contractor's Authorized Official

8/24/22

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

DEBARMENT/SUSPENSION CERTIFICATION

Non-Federal entities and contractors are subject to the debarment and suspension regulations implementing Executive Order 12549, Debarment and Suspension (1986) and Executive Order 12689, Debarment and Suspension (1989) at 2 C.F.R. Part 180 and the Department of Homeland Security's regulations at 2 C.F.R. Part 3000 (No procurement Debarment and Suspension).

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www.sam.gov and https://acguisition.qov/far/index.html (see section 52.209-6).

The Contractor _____ certifies or affirms by your signature that neither you nor your principal is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.

_____

Signature of Contractor's Authorized Official

_____

Name and Title of Contractor's Authorized Official

_____

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

CIVIL RIGHTS COMPLIANCE PROVISIONS

EQUAL EMPLOYMENT OPPORTUNITY (Equal Opportunity Clause)

(For all awarded contracts that meet the definition of "federally assisted construction contract" provided in 41 CFR Part 60-1.3)

During the performance of this contract, the contractor agrees as follows:

The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or order this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

Signature of Contractor's Authorized Official

Nathan Rivers - President

Name and Title of Contractor's Authorized Official

8/24/22

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

GOOD FAITH EFFORT (GFE) DETERMINATION CHECKLIST

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
☒ Yes ☐ No

Instructions: In order to determine if a "Good Faith Effort" was made in soliciting DBEs for subcontracting opportunities, the following checklist and supporting documentation shall be completed by the Prime Contractor/Consultant and returned with the Prime Contractor/ Consultant's bid. This list contains the **minimum** efforts that should be put forth by the Prime Contractor/Consultant when attempting to achieve or exceed the goals of DBE Subcontractor participation. The Prime Contractor/Consultant may extend his/her efforts in soliciting DBE Subcontractor participation beyond what is listed below.

Did the Prime Contractor/Consultant . . .?

☒ Yes ☐ No 1. To the extent practical, and consistent with standard and prudent industry standards, divide the contract work into the smallest feasible portions, to allow for maximum DBE Subcontractor participation?

☒ Yes ☐ No 2. **Notify** in writing a reasonable number of DBEs, allowing sufficient time for effective participation of the planned work to be subcontracted?

☒ Yes ☐ No 3. **Provide** DBEs that were genuinely interested in bidding on a subcontractor, adequate information regarding the project (i.e., plans, specifications, scope of work, bonding and insurance requirements, and a point of contract within the Prime Contractor/Consultant's organization)?

☒ Yes ☐ No 4. **Negotiate** in good faith with interested DBEs, and not reject bids from DBEs that qualify as lowest and responsive Bidders?

☒ Yes ☐ No 5. **Document** reasons DBEs were rejected? Was a written rejection notice, including the reason for rejection, provided to the rejected DBEs?

☒ Yes ☐ No 6. If Prime Contractor/Consultant has zero (0) DBE participation, **please explain the reasons why.**

If "No" was selected, please explain, and include any pertinent documentation with your bid. If necessary, please use a separate sheet to answer the above questions.

Nathan Rivers
Printed Name of Authorized Representative

Signature

President
Title

8/24/22
Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

NOTICE OF INTENT (NOI) TO SUBCONTRACT WITH DISADVANTAGED BUSINESS ENTERPRISE (DBE)

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
[X] Yes [ ] No

Instructions for Prime Contractor/Consultant: Bidder shall submit this form with the bid; however, the information below may be submitted after contract award, but prior to beginning performance on the contract. Please submit one form for each DBE Subcontractor/Subconsultant with proper signatures, per the terms and conditions of your contract.

Contractor Name: SETEX Construction Corp DBE: [ ] Yes [X] No

Address: 1660 S 23rd St (Street) Beaumont (City) TX (State) 77707 (Zip)

Phone (with area code): 409.842.8181 Fax (with area code): 409.842.2274

Project Title & No.: IFB 22-028/JW Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport

Prime Contract Amount: $ X

DBE Subcontractor Name: _____

DBE Status (Gender & Ethnicity): _____

Certifying Agency: [ ] Tx. Bldg. & Procurement Comm. [ ] Jefferson County [ ] Tx Unified Certification Prog.

Address: _____ (Street) _____ (City) _____ (State) _____ (Zip)

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Nathan Rivers		8/24/22
Printed Name of Contractor Representative	Signature of Representative	Date
		8/24/22
Printed Name of DBE	Signature of Representative	Date

Note: Nothing on this Notice of Intent Form is intended to confer any rights, expressed or implied, to any third parties.

Pre-Approval for Subcontractor Substitutions must be obtained from the Jefferson County Purchasing Agent's Representative. The "DBE Subcontractor/Subconsultant Change Form" must be completed and faxed to 409-835-8456.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

DISADVANTAGED BUSINESS ENTERPRISE (DBE)
SUBCONTRACTING PARTICIPATION DECLARATION FORM

Bidder intends to utilize subcontractors/subconsultants in the fulfillment of this contract (if awarded).
☒ Yes ☐ No

Prime Contractor: SETEX Construction Corp DBE: ☐ Yes ☒ No

DBE Status (Gender & Ethnicity): N/A

Address: 1660 S 23rd St (Street) Beaumont (City) TX (State) 77707 (Zip)

Phone (with area code): 409.842.8181 Fax (with area code): 409.842.2274

Project Title & No.: Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport IFB/RFP No.: 22-028/JW

Total Contract: $ X Total DBE Subcontract(s): $ X

Construction DBE Goals: 12.8% MBE: _____ % 12.6% WBE: _____ %

Sub-goals: 1.7 African American, 9.7% Hispanic, 0.7% Native American, 0.8% Asian American.
Use these goals as a guide to diversify.

FOR DBE OFFICE USE ONLY:

Verification date DBE Program Office reviewed and verified DBE Sub information Date: _____ Initials: _____

PART I. DBE SUBCONTRACTOR DISCLOSURE

DBE Subcontractor Name: _____

DBE Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Texas Bldg. & Procurement Comm. ☐ Texas Unified Certification Prog.

Address: _____ (Street) (City) (State) (Zip)

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

DISADVANTAGED BUSINESS ENTERPRISE (DBE)
SUBCONTRACTING PARTICIPATION DECLARATION FORM

DBE Subcontractor Disclosure

PART I: Continuation Sheet (Duplicate as Needed)

DBE Subcontractor Name: _____

DBE Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg. & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

DBE Subcontractor Name: _____

DBE Status (Gender & Ethnicity): _____

Certifying Agency: ☐ Tx. Bldg. & Procurement Comm. ☐ Jefferson County ☐ Tx Unified Certification Prog.

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

All DBE Subcontractor Participation may be verified with the DBE Subcontractor(s) listed on Part I.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

DISADVANTAGED BUSINESS ENTERPRISE (DBE)
SUCONTRACTING PARTICIPATION DECLARATION FORM

PART II: STATEMENT OF NON-COMPLIANCE FOR NOT MEETING DBE SUBCONTRACTING GOALS

Please complete Good Faith Effort (GFE) Checklist and attach any supporting documentation.

Our firm was unable to meet the DBE goals for this project for the following reasons:

- ☐ All subcontractors to be utilized are "Non-DBEs." *(Complete Part III)*
- ☐ DBEs were solicited but did not respond.
- ☐ DBEs solicited were not competitive.
- ☐ DBEs were unavailable for the following trade(s):
- ☐ Other: _____

Was the Jefferson County DBE Office contacted for assistance in locating DBEs? ☒ Yes ☐ No

PART III: DISCLOSURE OF OTHER "NON-DBE" SUBCONTRACTS

The Bidder shall use this area to provide a listing of all "Non-DBE" Subcontractors, including suppliers, who will perform under this project. A list of those "Non-DBE" Subcontractors the Bidder selects, after bid submission, shall be provided to the Purchasing Office not later than five (5) calendar days after being notified that Bidder is the apparent low Bidder. A list of those "Non-DBE" Subcontractors that are selected after contract award must be provided **immediately** after their selection.

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

DISADVANTAGED BUSINESS ENTERPRISE (DBE)
SUBCONTRACTING PARTICIPATION DECLARATION FORM

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

Subcontractor Name: _____

Address: _____
Street City State Zip

Contact person: _____ Title: _____

Phone (with area code): _____ Fax (with area code): _____

Proposed Subcontract Amount: $ _____ Percentage of Prime Contract: _____ %

Description of Subcontract Work to be Performed: _____

I hereby certify that I have read the *DBE Program Instructions and Information*, truthfully completed all applicable parts of this form, and **attach any necessary support documentation as required.** I fully understand that intentionally falsifying information on this document may result in my not receiving a contract award or termination of any resulting contract.

Name (print or type): Nathan Rivers

Title: President

Signature: _____

Date: 409.842.8181

E-mail address: nathanr@setexconstruction.com

Contact person that will be in charge of invoicing for this project:

Name (print or type): Shannan Estes

Title: Accounting Manager

Date: 8/24/22

E-mail address: shannane@setexconstruction.com

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

Minority Communication Report - Jefferson County - Rehab of Fuel Farm Pavement @ Jack Brooks Regional Airport - 8/13/2022 4:40:57 PM

Company Name	Date Time Sent	City, State	Contact	Email	Result	Minority
B R Services LLC	8/13/2022 4:36 PM	Houston, TX	Benjamin Brown	bbrown@brsvc.com	Delivered	DBE
JJ&D Construction, LLC	8/13/2022 4:36 PM	Groves, TX	Richard Smith	rsmith.jjdconstruction@gmail.com	Delivered	DBE
JJ&D Construction, LLC	8/13/2022 4:36 PM	Groves, TX	Joel Hernandez	joelh@jjdconstructionllc.com	Delivered	DBE
JMG Construction Inc.	8/13/2022 4:36 PM	Houston, TX	J. M. Garcia	mariepjmg@sbcglobal.net	Delivered	DBE
Precision Site Services	8/13/2022 4:36 PM	Houston, TX	Delaina Lewis	dlewis@precisionsiteservices.com	Delivered	DBE
Precision Site Services	8/13/2022 4:36 PM	Houston, TX	Hannah Karim	hkarim@precisionsiteservices.com	Delivered	DBE
STI Concrete, LLC	8/13/2022 4:36 PM	Houston, TX	Amy Haymond	amy@sticoncrete.com	Delivered	DBE

HUB INVITES – JEFFERSON COUNTY – REHAB OF FUEL FARM PAVEMENT AT JBRA
SENT 8/13/22

03 – CONCRETE	JJ&D Construction LLC – 1271946973100 STI Concrete LLC – 1810868551400 Precision Site Services LLC – 1202900979700
31 – EARTHWORK	Precision Site Services LLC – 1202900979700 JMG Construction Inc – 1760477500100 B. R. Services LLC – 1841908783000
32 – EXTERIOR IMPROVEMENTS	JJ&D Construction LLC – 1271946973100 STI Concrete LLC – 1810868S51400 JMG Construction Inc – 1760477500100
33 – UTILITIES	Precision Site Services LLC – 1202900979700 STI Concrete LLC – 1810868551400 JJ&D Construction LLC – 1271946973100

For SETEX to self-perform this scope was the best value for the project.

Subcontractor was the best value for the project.

RESIDENCE CERTIFICATION/TAX FORM

Pursuant to Texas Government Code §2252.001 *et seq.*, as amended, Jefferson County requests Resident Certification. §2252.001 *et seq.* of the Government Code provides some restrictions on the awarding of governmental contracts; pertinent provisions of §2252.001 are stated below:

(3) "Non-resident Bidder" refers to a person who is not a resident.

(4) "Resident Bidder" refers to a person whose principal place of business is in this state, including a contractor whose ultimate parent company or majority owner has its principal place of business in this state.

☒ I certify that SETEX Construction Corp [company name] is a Resident Bidder of Texas as defined in Government Code §2252.001.

☐ I certify that _____ [company name] is a Nonresident Bidder as defined in Government Code §2252.001 and our principal place of business is _____ _____ (city and state).

Taxpayer Identification Number (T.I.N.):	[redacted]
Company Name submitting bid/proposal:	SETEX Construction Corp
Mailing address:	P O Box 20678, Beaumont TX 77720
If you are an individual, list the names and addresses of any partnership of which you are a general partner: N/A	

Property: List all taxable property owned by you or above partnerships in Jefferson County.

Jefferson County Tax Acct. No.*	Property address or location**
124902	1660 S 23rd St, Beaumont TX 77707
16144	5555 College St, Beaumont TX 77707
16146	955 Lindbergh Dr, Beaumont TX 77707

* This is the property amount identification number assigned by the Jefferson County Appraisal District.

** For real property, specify the property address or legal description. For business property, specify the address where the property is located. For example, office equipment will normally be at your office, but inventory may be stored as a warehouse or other location.

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

HOUSE BILL 89 VERIFICATION

I, Nathan Rivers, the undersigned representative of (company or business name) SETEX Construction Corp (heretofore referred to as company) being an adult over the age of eighteen (18) years of age, after being duly sworn by the undersigned notary, do hereby depose and verify under oath that the company named above, under the provisions of Subtitle F, Title 10, Government Code Chapter 2270:

1. Does not boycott Israel currently; and
2. Will not boycott Israel during the term of the contract.

Pursuant to Section 2270.002, Texas Government Code:

1. "**Boycott Israel**" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made ordinary business purposes; and

2. "**Company**" means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or a limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of those entities or business association that exist to make a profit.

Signature of Company Representative

8/24/22

Date

On this 24th day of August, 2022, personally appeared

Nathan Rivers, the above-named person, who after by me being duly sworn, did swear and confirm that the above is true and correct.

Notary Seal

LYNIDA CLIFTON
Notary Public, State of Texas
Comm. Expires 11-17-2023
Notary ID 11798700

Lynida Clifton

Notary Signature Lynida Clifton

8/24/22

Date

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

SENATE BILL 252 CERTIFICATION

On this day, I, Deborah L. Clark, Purchasing Agent for Jefferson County, Texas, pursuant to Texas Government Code, Chapter 2252, Section 2252.152 and Section 2252.153, certify that I did review the website of the Comptroller of the State of Texas concerning the listing of companies that is identified under Section 806.051, Section 807.051, or Section 2253.253 and I have ascertained that the below named company is not contained on said listing of companies which do business with Iran, Sudan, or any Foreign Terrorist Organization.

SETEX Construction Corp

Company Name

22-028/JW

IFB/RFP/RFQ number

Certification check performed by:

_____

Purchasing Representative

_____

Date

BID AFFIDAVIT

The undersigned certifies that the bid prices contained in this bid have been carefully reviewed and are submitted as correct and final. Bidder further certifies and agrees to furnish any and/or all commodities upon which prices are extended at the price offered, and upon the conditions contained in the specifications and the Notice to Bidders.

STATE OF Texas COUNTY OF Jefferson

BEFORE ME, the undersigned authority, a Notary Public in and for the State of Texas,

on this day personally appeared Nathan Rivers (name), who

after being by me duly sworn, did depose and say:

"I, Nathan Rivers (name) am a duly authorized officer of/agent

for SETEX Construction Corp (name of firm) and have been duly authorized to execute the

foregoing on behalf of the said SETEX Construction Corp (name of firm).

I hereby certify that the foregoing bid has not been prepared in collusion with any other Bidder or other person or persons engaged in the same line of business prior to the official opening of this bid. Further, I certify that the Bidder is not now, nor has been for the past six (6) months, directly or indirectly concerned in any pool or agreement or combination, to control the price of services/commodities bid on, or to influence any person or persons to bid or not to bid thereon."

Name and address of Bidder: SETEX Construction Corp

P O Box 20678, Beaumont TX 77720

Fax: 409.842.2274 Telephone# 409.842.8181

by: Nathan Rivers (print name) Title: President

Signature:

SUBSCRIBED AND SWORN to before me by the above-named

Nathan Rivers on

this the 24th day of August, 2022.

Lynida Clifton

Notary Public in and for the State of Texas

LYNIDA CLIFTON
Notary Public, State of Texas
Comm. Expires 11-17-2023
Notary ID 11799700

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

BID AFFIDAVIT

The undersigned certifies that the bid prices contained in this bid have been carefully reviewed and are submitted as correct and final. Bidder further certifies and agrees to furnish any and/or all commodities upon which prices are extended at the price offered, and upon the conditions contained in the specifications and the Notice to Bidders.

STATE OF_____ COUNTY OF_____

BEFORE ME, the undersigned authority, a Notary Public in and for the State of _____,

on this day personally appeared _____, who
(name)
after being by me duly sworn, did depose and say:

"I, _____ am a duly authorized officer of/agent
(name)
for _____ and have been duly authorized to execute the
(name of firm)
foregoing on behalf of the said_____.
(name of firm)

I hereby certify that the foregoing bid has not been prepared in collusion with any other Bidder or other person or persons engaged in the same line of business prior to the official opening of this bid. Further, I certify that the Bidder is not now, nor has been for the past six (6) months, directly or indirectly concerned in any pool or agreement or combination, to control the price of services/commodities bid on, or to influence any person or persons to bid or not to bid thereon."

Name and address of Bidder:_____

_____

Fax: _____ Telephone#_____

by: _____ Title:_____
(print name)

Signature:_____

SUBSCRIBED AND SWORN to before me by the above-named

_____ on

this the _____ day of_____, 20___.

_____
Notary Public in and for
the State of _____

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

TECHNICAL SPECIFICATIONS

DAVIS BACON MINIMUM WAGE SCALE AND PAYROLL REQUIREMENTS

1.1 Following 29 CFR 5.5 (a) (1) (v), use the rates listed on the Wage Determination Attachment for minimum wage and benefits for the labor classifications applicable to the Work.

1.2 These rates do not prohibit payment of more than the rates stated.

1.3 Apply rates in this Document 00810 to site work greater than five (5) feet from exterior wall of new building under construction or from exterior wall of existing building.

Certified Payroll Requirements

2.1 The Contractor shall submit the "Certificate from Contractor Appointing Officer or Employee to Supervise Payment of Employees" (Exhibit "A") to the Monitoring Authority prior to final execution of the contract.

2.2 During the course of the work, ALL Subcontractors shall submit the "Certificate from Subcontractor Appointing Officer or Employee to Supervise Payment of Employees" (Exhibit "B") to the Monitoring Authority.

Article 5159a of the Revised Civil Statutes of Texas, passed by the 43rd Legislature Acts of 1933, Page 91, Chapter 45, provides that any government subdivision shall ascertain the general prevailing rate of per diem wages in the locality in which the work is to be per diem wages which shall be paid for each craft type of workman. This Article further provides the CONTRACTOR shall forfeit, as a penalty, to the City, County, or State , or other political subdivision. Ten Dollars ($10.00) per day for each laborer, or workman, or mechanic who is not paid the stipulated wage for the type of work performed by him as set up on the wage scale. The OWNER is authorized to withhold from the CONTRACTOR, after full investigation by the awarding body, the amount of this penalty in any payment that might be claimed by the CONTRACTOR or SUBCONTRACTOR. The Act make the CONTRACTOR responsible for the acts of the SUBCONTRACTOR in this respect. The Article likewise requires that the CONTRACTOR and SUBCONTRACTOR keep an accurate record of the names and occupations of all persons employed by him and show the actual per diem wages paid to each worker, and these records are open to the inspection of the OWNER.

EXHIBIT "A"

Wage Determination Publication Date:
January 7, 2022
for
General Decision Number: **TX20220038 01/07/2022 TX38**
Superseded General Decision Number: TX20210038

State: Texas
Construction Type: Highway
Counties: Austin, Brazoria, Chambers, Fort Bend, Galveston, Hardin, Harris, Jefferson, Liberty, Montgomery, Orange, San Jacinto and Waller Counties in Texas.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022, Executive Order 14026 generally applies to the contract. The contractor must pay all covered workers at least $15.00 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.

If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022, Executive Order 13658 generally applies to the contract. The contractor must pay all covered workers at least $11.25 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/07/2022

LABOR CLASSIFICATIONS AND PREVAILING WAGE RATES
CONSTRUCTION 2022

CLASSIFICATION	RATE	CLASSIFICATION	RATE
Cement Mason / Concrete Finisher-Paving and Structures	$12.98	Power Equipment Operator, Foundation Drill, Truck Mounted	$15.89
Electrician * 3 Journeyman to 2 Apprentices Allowed	$27.11	Power Equipment Operator, Front End Loader, 3 CY or less	$13.32
Form Builder / Form Setter-Paving and Curb	$12.34	Power Equipment Operator, Front End Loader, over 3 CY	$13.17
Form Builder / Form Setter-Structures	$12.23	Power Equipment Operator, Loader/Backhoe	$14.29
Laborer, Asphalt Raker	$12.36	Power Equipment Operator, Mechanic	$16.96
Laborer, Common	$11.02	Power Equipment Operator, Milling Machine	$13.53
Laborer, Flagger	$10.33	Power Equipment Operator, Motor Grader, Fine Grade	$15.69
Laborer, Pipelayer	$12.12	Power Equipment Operator, Motor Greder, Rough	$14.23
Laborer, Utility	$11.73	Power Equipment Operator, Off Road Hauler	$14.60
Laborer, Work Zone Barricade Servicer	$11.67	Power Equipment Operator, Pavement Marking Machine	$11.18
Painter (Structures)	$18.62	Power Equipment Operator, Piledriver	$14.95
Power Equipment Operator, Asphalt Distributor Operator	$14.06	Power Equipment Operator, Roller, Asphalt	$11.95
Power Equipment Operator, Asphalt Paving Machine	$14.32	Power Equipment Operator, Roller, Other	$11.57
Power Equipment Operator, Broom or Sweeper	$12.68	Power Equipment Operator, Scraper	$13.47
Power Equipment Operator, Concrete Paving Finishing Machine	$13.07	Servicer	$13.97
Power Equipment Operator, Concrete Paving, Curing, Float Texturing Machine	$11.71	Power Equipment Operator, Spreader Box	$13.58
Power Equipment Operator, Concrete Saw	$13.99	Steel Worker, Reinforcing Steel	$15.15
Power Equipment Operator, Crane, Hydraulic 80 tons or less	$13.86	Steel Worker, Structural Steel	$14.39
Power Equipment Operator, Crane, Lattice boom 80 tons or less	$14.97	Steel Worker, Structural Steel Welder	$12.85
Power Equipment Operator, Crane, Lattice boom over 80 tons	$15.80	Truck Driver, Low Boy Float	$16.03
Power Equipment Operator, Crawler Tractor	$13.68	Truck Driver, Single Axle	$11.46
Power Equipment Operator, Excavator, 50,000 pounds or less	$12.71	Truck Driver, Single-or Tandem Axle Dump	$11.48
Power Equipment Operator, Excavator, over 50,000 pounds	$14.53	Truck Driver, Tandem Axle Tractor w/ Semi-Trailer	$12.27
Power Equipment Operator, Foundation Drill, Crawler Mounted	$17.43		
Welders - Receive rate prescribed for craft performing operation to which welding is incidental			
* Apprentices- must be in an approved USDOL Program and cannot exceed ratios			

EXHIBIT "B"

CERTIFICATE FROM CONTRACTOR APPOINTING OFFICER OR EMPLOYEE TO SUPERVISE PAYMENT OF EMPLOYEES

Project Name _____

_____

Project WBS#: _____ Date _____

Email Address: _____

(I) (We) hereby certify that (I am) (we are) the Prime Contractor for _____

_____
(specify type of job)

in connection with construction of the above-mentioned Project, and that (I) (we) have appointed _____, whose signature appears below, to supervise the payment of (my) (our) employees beginning _____, 20___; that ___he/she is in a position to have full knowledge of the facts set forth in the payroll documents and in the statement of compliance required by the Copeland Act and Jefferson County, which he/she is to execute with (my) (our) full authority and approval until such time as (I) (we) submit to the Jefferson County a new certificate appointing some other person for the purposes hereinabove stated.

_____ Phone: _____
(Identifying Signature of Appointee)

Attest: _____
(Name of Firm or Corporation)

By: _____ By: _____
(Signature) (Signature)

_____ _____
(Title) (Title)

NOTE: This certificate must be executed by an authorized officer of a corporation or by a member of a partnership, and shall be executed prior to and be submitted with the first payroll. Should the appointee be changed, a new certificate must accompany the first payroll for which the new appointee executes a statement of compliance required by the Copeland Act and Jefferson County.

EXHIBIT "C"

CERTIFICATE FROM SUBCONTRACTOR APPOINTING OFFICER OR EMPLOYEE TO SUPERVISE PAYMENT OF EMPLOYEES

Project Name _____

_____

Project WBS#: _____ Date _____

Email Address: _____

(I) (We) hereby certify that (I am) (we are) the Sub Contractor for _____

_____
(specify type of job)

in connection with construction of the above-mentioned Project, and that (I) (we) have appointed _____, whose signature appears below, to supervise the payment of (my) (our) employees beginning ____, 20__; _____ that ___ he/she is in a position to have full knowledge of the facts set forth in the payroll documents and in the statement of compliance required by the Copeland Act and Jefferson County, which he/she is to execute with (my) (our) full authority and approval until such time as (I) (we) submit to Jefferson County a new certificate appointing some other person for the purposes herein above stated.

_____ Phone: _____
(Identifying Signature of Appointee)

Attest: _____
(Name of Firm or Corporation)

By: _____ By: _____
(Signature) (Signature)

_____ _____
(Title) (Title)

NOTE: This certificate must be executed by an authorized officer of a corporation or by a member of a partnership, and shall be executed prior to and be submitted with the first payroll. Should the appointee be changed, a new certificate must accompany the first payroll for which the new appointee executes a statement of compliance required by the Copeland Act and Jefferson County.

END OF DOCUMENT

TECHNICAL SPECIFICATIONS

REHABILITATION OF FUEL FARM PAVEMENT
JACKBROOKS REGIONAL AIRPORT (BPT)
ISB 22-028/JW

May 2022

ITEM SS-101 SAFETY PLAN COMPLIANCE DOCUMENT (SPCD)

DESCRIPTION

101-1.1 The Contractor shall thoroughly review the approved and shall comply with bid plans and specifications. The Contractor shall certify such compliance by completing the attached SPCD and submitting to the Engineer for approval.

PAGE LEFT INTENTIONALLY BLANK

CONTRACTOR SAFETY PLAN COMPLIANCE DOCUMENTS

Owner Name: Jefferson County

Airport: Jack Brooks Regional Airport

Project Description: Fuel Farm Pavement Reconstruction

Contractor: _____

Each item listed below corresponds to a specific section of the plans. The Contractor shall certify that he/she will comply with each section of the plans. Each section with a "no" response must be fully explained in an attachment to the CSPCD. The document shall be signed and dated by a manager, principal or owner of the Contractor's company. All other requested information shall be completed by the Contractor and submitted to the Engineer for approval.

1. **Section 1 – Correspondence:** This project shall be completed in accordance with the plans.

Owner: Alex Rupp, Airport Manager	Phone: 409.719.4900
Engineer: The Solco Group LLC	
Kelvin Solco, PE	Phone: 817.564.6895
Contractor:	

2. **Section 2 - Phasing:** This project shall be completed in accordance with the plans.

   Yes_____ No_____ N/A_____

3. **Section 3 - Areas of Operations affected by Construction Activity:** This project shall be completed in accordance with the plans.

   Yes_____ No_____ N/A_____

4. **Section 4 - Protection of Navigational Aids (NAVAIDs):** This project shall be completed in accordance with the plans.

   Yes_____ No_____ N/A___X___

5. **Section 5 - Contractor Access:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A_____

6. **Section 6 – Wildlife Management:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A___X_____

7. **Section 7 – Foreign Object Debris (FOD) Management:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A_____

8. **Section 8 – Hazardous Materials (HAZMAT) Management:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A____ X _____

9. **Section 9 – Notification of Construction Activities:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A_____

10. **Section 10 - Inspection Requirements:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A_____

11. **Section 11 – Underground Utilities:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A_____

12. **Section 12 – Penalties:** This project shall be completed in accordance with the plans and specifications.

Yes_____ No_____ N/A_____

13. **Section 13 – Special Conditions:** This project shall be completed in accordance with the plans and specifications.

Yes_____ No_____ N/A_____

14. **Section 14 – Runway and Taxiway Visual Aids:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A___X_____

15. **Section 15 - Marking and Signs for Access Routes:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A_____

16. **Section 16 – Hazard Marking and Lighting:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A____X____

17. **Section 17 - Work Zone Lighting for Nighttime Construction:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A_____

18. **Section 18 – Protection of Safety Areas, Object Free Areas, Object Free Zones, and Approach/Departure Surfaces:** This project shall be completed in accordance with the plans.

Yes_____ No_____ N/A___X____

For the project identified herein, I certify that the responses to the foregoing items are correct as marked and meet the compliance of the plans.

Signed: _____
Contractor's Authorized Representative

Date: _____

_____
Print Name and Title of Contractor's Representative

END OF ITEM SS-101

ITEM C-105
MOBILIZATION

DESCRIPTION

105-1 Description. This item of work shall consist of, but is not limited to, work and operations necessary for the movement of personnel, equipment, material and supplies to and from the project site for work on the project except as provided in the contract as separate pay items.

105-2 Mobilization limit. Mobilization shall be limited to **5** percent of the total project cost.

105-3 Posted notices. Prior to commencement of construction activities, the Contractor must post the following documents in a prominent and accessible place where they may be easily viewed by all employees of the prime Contractor and by all employees of subcontractors engaged by the prime Contractor: Equal Employment Opportunity (EEO) Poster "Equal Employment Opportunity is the Law" in accordance with the Office of Federal Contract Compliance Programs Executive Order 11246, as amended; Davis Bacon Wage Poster (WH 1321) - DOL "Notice to All Employees" Poster; and Applicable Davis-Bacon Wage Rate Determination. These notices must remain posted until final acceptance of the work by the Owner.

~~**105-4 Engineer/RPR field office.** The Contractor shall provide dedicated space for the use of the field RPR and inspectors, as a field office for the duration of the project. This space shall be located conveniently near the construction and shall be separate from any space used by the Contractor. The Contractor shall furnish water, sanitary facilities, heat, air conditioning, and electricity in accordance with local building codes. An Engineer/RPR field office is not required.~~

METHOD OF MEASUREMENT

105-5 Basis of measurement and payment. Based upon the contract lump sum price for "Mobilization" partial payments will be allowed as follows:

a. With first pay request, 50%.

b. When 50% or more of the original contract is earned, an additional 40%.

~~**c.** When ---% or more of the original contract is earned, an additional ---%.~~

d. After Final Inspection, staging area clean-up and delivery of all Project Closeout materials as required by Section 90, paragraph 90-11, *Contractor Final Project Documentation,* the final 10%.

BASIS OF PAYMENT

105-6 Payment will be made under:

Item C-105 -6.1	Mobilization (Maximum 5% of Total Bid Exclusive Mobilization -	per Lump Sum

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Office of Federal Contract Compliance Programs (OFCCP)

Executive Order 11246, as amended

EEOC-P/E-1 – Equal Employment Opportunity is the Law Poster

United States Department of Labor, Wage and Hour Division (WHD)

WH 1321 – Employee Rights under the Davis-Bacon Act Poster

END OF ITEM C-105

ITEM SS-120
CONSTRUCTION SAFETY AND SECURITY

DESCRIPTION

120-1.1 This item covers safety and security for construction of the proposed improvements.

The attention to the bidder is directed to the necessity for careful examination of the entire project site to determine, at the time of bid preparation, the full extent of work to be done under the item "Construction Safety and Security."

The items in the "Construction Safety and Security shall include:

1. Temporary Signs and Barricades
2. Airport Security/Safety Requirements

CONSTRUCTION METHODS

120-2.1 Temporary Signs and Barricades

The contractor shall furnish, install, maintain, and remove barricades and temporary signs in accordance with AC 150/5370-2 Operational Safety on Airports During Construction and details on the plans and as directed by the Engineer.

All work involved in the furnishing, installation, maintenance, fueling and removal of barricades and temporary signs will not be measured for separate payment but will be considered subsidiary to the bid item "Construction Safety and Security."

120-2.2 Airport Security and Safety Requirements

The Contractor shall abide by the Airport Security and Safety requirements that are outlined in the approved CSPP. Any costs associated with Airport Security requirements will not be measured by separate payment but will be considered subsidiary to the bid item "Construction Safety and Security."

MEASUREMENT AND PAYMENT

120-3.1 Construction security and safety will be measured as a lump sum complete item. Work completed and accepted under this item will be paid as a lump sum price bid for "Construction Safety and Security," which include full compensation for furnishing all labor, tools and equipment and incidentals necessary to do complete the work. Payment will be made under:

Item SS -120-3.1 Construction Safety and Security, Barricades, Signs, and Traffic Handling – per Lump Sum

END OF ITEM SS-120

ITEM D-701
PIPE FOR STORM DRAINS AND CULVERTS

DESCRIPTION

701-1.1 This item shall consist of the construction of pipe culverts and storm drains in accordance with these specifications and in close conformity with the lines and grades shown on the plans.

MATERIALS

701-2.1 Materials shall meet the requirements shown on the plans and specified below. Underground piping and components used in drainage systems for terminal and aircraft fueling ramp drainage shall be noncombustible and inert to fuel in accordance with National Fire Protection Association (NFPA) 415.

701-2.2 Pipe. The pipe shall be of the type called for on the plans or in the proposal and shall be in accordance with the following appropriate requirements:

	American Association of State Highway and Transportation Officials (AASHTO) M167 Standard Specification for Corrugated Steel Structural Plate, Zinc-Coated, for Field-Bolted Pipe, Pipe-Arches, and Arches
AASHTO M190	Standard Specification for Bituminous-Coated Corrugated Metal Culvert Pipe and Pipe Arches
AASHTO M196	Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains
AASHTO M219	Standard Specification for Corrugated Aluminum Alloy Structural Plate for Field-Bolted Pipe, Pipe-Arches, and Arches
AASHTO M243	Standard Specification for Field-Applied Coating of Corrugated Metal Structural Plate for Pipe, Pipe-Arches, and Arches
AASHTO M252	Standard Specification for Corrugated Polyethylene Drainage Pipe
AASHTO M294	Standard Specification for Corrugated Polyethylene Pipe, 300- to 1500-mm (12- to 60-in.) Diameter
AASHTO M304	Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Wall Drainpipe and Fittings Based on Controlled Inside Diameter
AASHTO MP20	Standard Specification for Steel Reinforced Polyethylene (PE) Ribbed Pipe, 300- to 900-mm (12- to 36-in.) Diameter
AASHTO R73	Standard Practice for Evaluation of Precast Concrete Drainage Productions
ASTM A760	Standard Specification for Corrugated Steel Pipe, Metallic Coated for Sewers and Drains
ASTM A761	Standard Specification for Corrugated Structural Steel Plate, Zinc-Coated, for Field-Bolted Pipe, Pipe-Arches, and Arches
ASTM A762	Standard Specification for Corrugated Steel Pipe, Polymer Precoated for Sewers and Drains

ASTM A849	Standard Specification for Post Applied Coatings, Pavings, and Linings for Corrugated Steel Sewer and Drainage Pipe
ASTM B745	Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains
ASTM C14	Standard Specification for Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe
ASTM C76	Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
ASTM C506	Standard Specification for Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe
ASTM C507	Standard Specification for Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe
ASTM C655	Standard Specification for Reinforced Concrete D-Load Culvert, Storm Drain, and Sewer Pipe
ASTM C1433	Standard Specification for Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers
ASTM C1479	Standard Practice for Installation of Precast Concrete Sewer, Storm Drain, and Culvert Pipe Using Standard Installations
ASTM C1577	Standard Specification for Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers Designed According to AASHTO LRFD
ASTM C1786	Standard Specification for Segmental Precast Reinforced Concrete Box Sections for Culverts, Storm Drains, and Sewers Designed According to AASHTO LRFD
ASTM C1840	Standard Practice for Inspection and Acceptance of Installed Reinforced Concrete Culvert, Storm Drain, and Storm Sewer Pipe
ASTM D3262	Standard Specification for "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Sewer Pipe
ASTM D4161	Standard Specification for "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe Joints Using Flexible Elastomeric Seals
ASTM F667	Standard Specification for 3 through 24 in Corrugated Polyethylene Pipe and Fittings
ASTM F714	Standard Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Outside Diameter
ASTM F794	Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Gravity Sewer Pipe and Fittings Based on Controlled Inside Diameter
ASTM F894	Standard Specification for Polyethylene (PE) Large Diameter Profile Wall Sewer and Drainpipe
ASTM F949	Standard Specification for Poly (Vinyl Chloride) (PVC) Corrugated Sewer Pipe with a Smooth Interior and Fittings

ASTM F2435	Standard Specification for Steel Reinforced Polyethylene (PE) Corrugated Pipe
ASTM F2562	Specification for Steel Reinforced Thermoplastic Ribbed Pipe and Fittings for Non-Pressure Drainage and Sewerage
ASTM F2736	Standard Specification for 6 to 30 in. (152 to 762 mm) Polypropylene (PP) Corrugated Single Wall Pipe and Double Wall Pipe
ASTM F2764	Standard Specification for 30 to 60 in. (750 to 1500 mm) Polypropylene (PP) Triple Wall Pipe and Fittings for Non-Pressure Sanitary Sewer Applications
ASTM F2881	Standard Specification for 12 to 60 in. (300 to 1500 mm) Polypropylene (PP) Dual Wall Pipe and Fittings for Non-Pressure Storm Sewer Applications
ASTM D3034	Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings

701-2.3 Concrete. Concrete for pipe cradles shall have a minimum compressive strength of 2000 psi (13.8 MPa) at 28 days and conform to the requirements of ASTM C94.

701-2.4 Rubber gaskets. Rubber gaskets for rigid pipe shall conform to the requirements of ASTM C443. Rubber gaskets for PVC pipe, polyethylene, and polypropylene pipe shall conform to the requirements of ASTM F477. Rubber gaskets for zinc-coated steel pipe and precoated galvanized pipe shall conform to the requirements of ASTM D1056, for the "RE" closed cell grades. Rubber gaskets for steel reinforced thermoplastic ribbed pipe shall conform to the requirements of ASTM F477. Not used.

701-2.5 Joint mortar. Pipe joint mortar shall consist of one part Portland cement and two parts sand. The Portland cement shall conform to the requirements of ASTM C150, Type I. The sand shall conform to the requirements of ASTM C144.

701-2.6 Joint fillers. Poured filler for joints shall conform to the requirements of ASTM D6690.

701-2.7 Plastic gaskets. Plastic gaskets shall conform to the requirements of ASTM C990. Not used.

701-2.8. Controlled low-strength material (CLSM). Controlled low-strength material shall conform to the requirements of Item P-153. When CLSM is used, all joints shall have gaskets. Not used.

701-2.9 Precast box culverts. Manufactured in accordance with and conforming to ASTM C1433.

701-2.10 Precast concrete pipe. Precast concrete structures shall be furnished by a plant meeting National Precast Concrete Association Plant Certification Program or American Concrete Pipe Association QCast Plant Certification program.

CONSTRUCTION METHODS

701-3.1 Excavation. The width of the pipe trench shall be sufficient to permit satisfactory jointing of the pipe and thorough tamping of the bedding material under and around the pipe, but it shall not be less than the external diameter of the pipe plus 12 inches (300 mm) on each side. The trench walls shall be vertical.

The Contractor shall comply with all current federal, state, and local rules and regulations governing the safety of men and materials during the excavation, installation, and backfilling operations. Specifically, the Contractor shall observe that all requirements of the Occupational Safety and Health Administration (OSHA) relating to excavations, trenching, and shoring are strictly adhered to. The width of the trench shall be sufficient to permit satisfactorily jointing of the pipe and thorough compaction of the bedding material under the pipe and backfill material around the pipe, but it shall not be greater than the widths shown on the plans trench detail.

Where rock, hardpan, or other unyielding material is encountered, the Contractor shall remove it from below the foundation grade for a depth of at least 8 inch (200 mm) or 1/2 inch (12 mm) for each foot of fill over the top of the pipe (whichever is greater) but for no more than three-quarters of the nominal diameter of the pipe. The excavation below grade should be filled with granular material to form a uniform foundation.

Where a firm foundation is not encountered at the grade established, due to soft, spongy, or other unstable soil, the unstable soil shall be removed and replaced with approved granular material for the full trench width. The RPR shall determine the depth of removal necessary. The granular material shall be compacted to provide adequate support for the pipe.

The excavation for pipes placed in embankment fill shall not be made until the embankment has been completed to a height above the top of the pipe as shown on the plans.

701-3.2 Bedding. The bedding surface for the pipe shall provide a foundation of uniform density to support the pipe throughout its entire length.

a. Rigid pipe. The pipe bedding shall be constructed uniformly for the full length of the pipe barrel, as required on the plans. The maximum aggregate size shall be 1 in when the bedding thickness is less than 6 inches, and 1-1/2 in when the bedding thickness is greater than 6 inches. Bedding shall be loosely placed uncompacted material under the middle third of the pipe prior to placement of the pipe.

b. Flexible pipe. For flexible pipe, the bed shall be shaped to fit the pipe, and a bedding blanket of sand or fine granular material shall be provided as follows:

Flexible Pipe Bedding

Pipe Corrugation Depth		Minimum Bedding Depth	
inch	mm	inch	mm
1/2	12	1	25
1	25	2	50
2	50	3	75
2-1/2	60	3-1/2	90

c. other pipe materials. For PVC, polyethylene, polypropylene, or fiberglass pipe, the bedding material shall consist of coarse sands and gravels with a maximum particle size of

3/4 inches (19 mm). For pipes installed under paved areas, no more than 12% of the material shall pass the No. 200 (0.075 mm) sieve. For all other areas, no more than 50% of the material shall pass the No. 200 (0.075 mm) sieve. The bedding shall have a thickness of at least 6 inches (150 mm) below the bottom of the pipe and extend up around the pipe for a depth of not less than 50% of the pipe's vertical outside diameter.

701-3.3 Laying pipe. The pipe laying shall begin at the lowest point of the trench and proceed upgrade. The lower segment of the pipe shall be in contact with the bedding throughout its full length. Bell or groove ends of rigid pipes and outside circumferential laps of flexible pipes shall be placed facing upgrade.

Paved or partially lined pipe shall be placed so that the longitudinal center line of the paved segment coincides with the flow line.

Elliptical and elliptically reinforced concrete pipes shall be placed with the manufacturer's reference lines designating the top of the pipe within five degrees of a vertical plane through the longitudinal axis of the pipe.

701-3.4 Joining pipe. Joints shall be made with (1) cement mortar, (2) cement grout, (3) rubber gaskets, (4) plastic gaskets, (5) coupling bands or (6).

Mortar joints shall be made with an excess of mortar to form a continuous bead around the outside of the pipe and shall be finished smooth on the inside. Molds or runners shall be used for grouted joints to retain the poured grout. Rubber ring gaskets shall be installed to form a flexible watertight seal.

a. Concrete pipe. Concrete pipe may be either bell and spigot or tongue and groove. Pipe sections at joints shall be fully seated and the inner surfaces flush and even. Concrete pipe joints shall be sealed with rubber gaskets meeting ASTM C443 when leak resistant joints are required or Concrete pipe joints shall be sealed with butyl mastic meeting ASTM C990 or mortar when soil tight joints are required. Joints shall be thoroughly wetted before applying mortar or grout.

b. Metal pipe. Metal pipe shall be firmly joined by form-fitting bands conforming to the requirements of ASTM A760 for steel pipe and AASHTO M196 for aluminum pipe.

c. PVC, Polyethylene, or Polypropylene pipe. Joints for PVC, Polyethylene, or Polypropylene pipe shall conform to the requirements of ASTM D3212 when leak resistant joints are required. Joints for PVC and Polyethylene pipe shall conform to the requirements of AASHTO M304 when soil tight joints are required. Fittings for polyethylene pipe shall conform to the requirements of AASHTO M252 or ASTM M294. Fittings for polypropylene pipe shall conform to ASTM F2881, ASTM F2736, or ASTM F2764.

d. Fiberglass pipe. Joints and fittings shall be as detailed on the plans and in accordance with the manufacturer's recommendations. Joints shall meet the requirements of ASTM D4161 for flexible elastomeric seals. **or** Enter manufacturers joint installation requirements.

701-3.5 Embedment and Overfill. Pipes shall be inspected before any fill material is placed; any pipes found to be out of alignment, unduly settled, or damaged shall be removed and re-laid or replaced at the Contractor's expense.

701-3.5-1 Embedment Material Requirements

a. Concrete Pipe. Embedment material and compaction requirements shall be in accordance with the applicable Type of Standard Installation (Types 1, 2, 3, or 4) per ASTM C1479. If a concrete cradle or CLSM embedment material is used, it shall conform to the plan details.

b. Plastic and fiberglass Pipe. Embedment material shall meet the requirements of ASTM D3282, A-1, A-2-4, A-2-5, or A-3. Embedment material shall be free of organic material, stones

larger than 1.5 inches in the greatest dimension, or frozen lumps. Embedment material shall extend to 12 inches above the top of the pipe.

c. Metal Pipe. Embedment material shall be granular as specified in the contract document and specifications, and shall be free of organic material, rock fragments larger than 1.5 inches in the greatest dimension and frozen lumps. As a minimum, backfill materials shall meet the requirements of ASTM D3282, A-1, A-2, or A-3. Embedment material shall extend to 12 inches above the top of the pipe.

701-3.5-2 Placement of Embedment Material

The embedment material shall be compacted in layers not exceeding 6 inches (150 mm) on each side of the pipe and shall be brought up one foot (30 cm) above the top of the pipe or to natural ground level, whichever is greater. Thoroughly compact the embedment material under the haunches of the pipe without displacing the pipe. Material shall be brought up evenly on each side of the pipe for the full length of the pipe.

When the top of the pipe is above the top of the trench, the embedment material shall be compacted in layers not exceeding 6 inches (150 mm) and shall be brought up evenly on each side of the pipe to one foot (30 cm) above the top of the pipe. All embedment material shall be compacted to a density required under Item P-152.

Concrete cradles and flowable fills, such as controlled low strength material (CLSM) or controlled density fill (CDF), may be used for embedment provided adequate flotation resistance can be achieved by restraints, weighing, or placement technique.

It shall be the Contractor's responsibility to protect installed pipes and culverts from damage due to construction equipment operations. The Contractor shall be responsible for installation of any extra strutting or backfill required to protect pipes from the construction equipment.

701-3.6 Overfill

Pipes shall be inspected before any overfill is in place. Any pipes found to be out of alignment, unduly settled, or damaged shall be removed and re-laid or replaced at the Contractor's expense. Evaluation of any damage to RCP shall be evaluated based on AASHTO R73.

Overfill material shall be place and compacted in layers as required to achieve compaction to at least 95 percent standard proctor per ASTM D698 . The soil shall contain no debris, organic matter, frozen material, or stones with a diameter greater than one half the thickness of the compacted layers being placed.

701-3.7 Inspection Requirements

An initial post installation inspection shall be performed by the RPR no sooner than 30 days after completion of installation and final backfill. Clean or flush all lines prior to inspection.

Use a camera with lighting suitable to allow a clear picture of the entire periphery of the pipe interior. Center the camera in the pipe both vertically and horizontally and be able to pan and tilt to a 90-degree angle with the axis of the pipe rotating 360 degrees. Use equipment to move the camera through the pipe that will not obstruct the camera's view or interfere with proper documentation of the pipe's condition. The video image shall be clear, focused, and relatively free from roll, static, or other image distortion qualities that would prevent the reviewer from evaluating the condition of the pipe.

For pipe sizes larger than 48 inches, a walk-through visual inspection shall be performed.

Incorporate specific inspection requirements for the various types of pipes beneath the general inspection requirements.

Reinforced concrete pipe shall be inspected, evaluated, and reported on in accordance with ASTM C1840, "Standard Practice for Inspection and Acceptance of Installed Reinforced Concrete Culvert, Storm Drain, and Storm Sewer Pipe." Any issues reported shall include still photo and video documentation. The zoom ratio shall be provided for all still or video images that document any issues of concern by the inspection firm.

Flexible pipes shall be inspected for rips, tears, joint separations, soil migration, cracks, localized buckling, settlement, alignment, and deflection. Determine whether the allowable deflection has been exceeded by use of a laser profiler for internal pipe diameters of 48 inches or less, or direct measurement for internal pipe diameters greater than 48 inches. Laser profile equipment shall utilize low barrel distortion video equipment. Deflection of installed pipe shall not exceed the limits provided in the table below, as a percentage of the average inside diameter of the pipe.

Maximum Allowable Pipe Deflection

Type of Pipe	**Maximum Allowable Deflection (%)**
Corrugated Metal Pipe	5
Concrete Lined CMP	3
Thermoplastic Pipe	5
Fiberglass	5

If deflection readings in excess of the allowable deflection are obtained, remove the pipe with excessive deflection and replace with new pipe. Isolated areas may exceed allowable by 2.5% with concurrence of RPR. Repair or replace any pipe with cracks exhibiting displacement across the crack, bulges, creases, tears, spalls, or delamination. The report for flexible pipe shall include as a minimum, the deflection results and final post installation inspection report. The inspection report shall include: a copy of all videos taken, pipe location identification, equipment used for inspection, inspector name, deviation from design line and grade, and inspector's notes.

METHOD OF MEASUREMENT

701-4.1 The length of pipe shall be measured in linear feet (m) of pipe in place, completed, and accepted. It shall be measured along the centerline of the pipe from end or inside face of structure to the end or inside face of structure, whichever is applicable. Identify each class, types and size of pipe shall be measured separately. All fittings shall be included in the footage as typical pipe sections in the pipe being measured.

701-4.2. Precast box culverts shall be measured by individual unit and size.

701-4.3 The volume of concrete for pipe cradles shall be the number of cubic yards (cubic meters) of concrete that is completed in place and accepted.

701-4.4 The volume of rock, hardpan, or other unyielding material shall be the number of cubic yards (cubic meters) excavated. No payment shall be made for the cushion material placed for the bed of the pipe.

BASIS OF PAYMENT

701-5.0 These prices shall fully compensate the Contractor for furnishing all materials and for all preparation, excavation, and installation of these materials; and for all labor, equipment, tools, and incidentals necessary to complete the item.

701-5.1 Payment will be made at the contract unit price per linear foot (meter) for identify each class and size of pipe .

701-5.2 Payment will be made at the contract unit price per unit for identify each class and size of precast box culvert.

701-5.3 Payment will be made at the contract unit price per cubic yard (cubic meter) of concrete for pipe cradles.

701-5.4 Payment will be made at the contract unit price per cubic yard (cubic meter) for rock, hardpan, or other unyielding material excavation.

Payment will be made under:

Item 701-5.1	~~[ ] inch~~ **TBD** per linear foot (meter)
Item 701-5.2	Precast box culvert per unit.
Item 701-5.3	Concrete for pipe cradles - per cubic yard (cubic meter)
Item 701-5.4	Rock, hardpan, or other unyielding material excavation - per cubic yard (cubic meter

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

American Association of State Highway and Transportation Officials (AASHTO)

AASHTO M167	Standard Specification for Corrugated Steel Structural Plate, Zinc-Coated, for Field-Bolted Pipe, Pipe-Arches, and Arches
AASHTO M190	Standard Specification for Bituminous-Coated Corrugated Metal Culvert Pipe and Pipe Arches
AASHTO M196	Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains
AASHTO M219	Standard Specification for Corrugated Aluminum Alloy Structural Plate for Field-Bolted Pipe, Pipe-Arches, and Arches
AASHTO M243	Standard Specification for Field Applied Coating of Corrugated Metal Structural Plate for Pipe, Pipe-Arches, and Arches
AASHTO M252	Standard Specification for Corrugated Polyethylene Drainage Pipe
AASHTO M294	Standard Specification for Corrugated Polyethylene Pipe, 300- to 1500-mm (12- to 60-in.) Diameter
AASHTO M304	Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Wall Drainpipe and Fittings Based on Controlled Inside Diameter
AASHTO MP20	Standard Specification for Steel Reinforced Polyethylene (PE) Ribbed Pipe, 300- to 900-mm (12- to 36-in.) Diameter

ASTM International (ASTM)

ASTM A760	Standard Specification for Corrugated Steel Pipe, Metallic Coated for Sewers and Drains
ASTM A761	Standard Specification for Corrugated Steel Structural Plate, Zinc Coated, for Field-Bolted Pipe, Pipe-Arches, and Arches
ASTM A762	Standard Specification for Corrugated Steel Pipe, Polymer Precoated for Sewers and Drains
ASTM A849	Standard Specification for Post-Applied Coatings, Pavings, and Linings for Corrugated Steel Sewer and Drainage Pipe
ASTM B745	Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains
ASTM C14	Standard Specification for Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe
ASTM C76	Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
ASTM C94	Standard Specification for Ready Mixed Concrete
ASTM C144	Standard Specification for Aggregate for Masonry Mortar
ASTM C150	Standard Specification for Portland Cement
ASTM C443	Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets
ASTM C506	Standard Specification for Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe
ASTM C507	Standard Specification for Reinforced Concrete Elliptical Culvert, Storm Drain and Sewer Pipe
ASTM C655	Standard Specification for Reinforced Concrete D-Load Culvert, Storm Drain and Sewer Pipe
ASTM C990	Standard Specification for Joints for Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants
ASTM C1433	Standard Specification for Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers
ASTM D1056	Standard Specification for Flexible Cellular Materials Sponge or Expanded Rubber
ASTM D3034	Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings
ASTM D3212	Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals
ASTM D3262	Standard Specification for "Fiberglass" (Glass-Fiber Reinforced Thermosetting Resin) Sewer Pipe
ASTM D3282	Standard Practice for Classification of Soils and Soil-Aggregate Mixtures for Highway Construction Purposes

ASTM D4161	Standard Specification for "Fiberglass" (Glass-Fiber Reinforced Thermosetting Resin) Pipe Joints Using Flexible Elastomeric Seals
ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements
ASTM F477	Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe
ASTM F667	Standard Specification for 3 through 24 in. Corrugated Polyethylene Pipe and Fittings
ASTM F714	Standard Specification for Polyethylene (PE) Plastic Pipe (DR PR) Based on Outside Diameter
ASTM F794	Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Gravity Sewer Pipe & Fittings Based on Controlled Inside Diameter
ASTM F894	Standard Specification for Polyethylene (PE) Large Diameter Profile Wall Sewer and Drainpipe
ASTM F949	Standard Specification for Poly (Vinyl Chloride) (PVC) Corrugated Sewer Pipe with a Smooth Interior and Fittings
ASTM F2435	Standard Specification for Steel Reinforced Polyethylene (PE) Corrugated Pipe
ASTM F2562	Specification for Steel Reinforced Thermoplastic Ribbed Pipe and Fittings for Non-Pressure Drainage and Sewerage
ASTM F2736	Standard Specification for 6 to 30 in. (152 to 762 mm) Polypropylene (PP) Corrugated Single Wall Pipe and Double Wall Pipe
ASTM F2764	Standard Specification for 30 to 60 in. (750 to 1500 mm) Polypropylene (PP) Triple Wall Pipe and Fittings for Non-Pressure Sanitary Sewer Applications
ASTM F2881	Standard Specification for 12 to 60 in. (300 to 1500 mm) Polypropylene (PP) Dual Wall Pipe and Fittings for Non-Pressure Storm Sewer Applications

National Fire Protection Association (NFPA)

NFPA 415	Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways

END ITEM D-701

ITEM P-101
PREPARATION/REMOVAL OF EXISTING PAVEMENTS

DESCRIPTION

101-1 This item shall consist of preparation of existing pavement surfaces for overlay, surface treatments, removal of existing pavement, and other miscellaneous items. The work shall be accomplished in accordance with these specifications and the applicable plans.

EQUIPMENT AND MATERIALS

101-2 All equipment and materials shall be specified here and in the following paragraphs or approved by the Resident Project Representative (RPR). The equipment shall not cause damage to the pavement to remain in place.

CONSTRUCTION

101-3.1 Removal of existing pavement.

The Contractor's removal operation shall be controlled to not damage adjacent pavement structure, and base material, cables, utility ducts, pipelines, or drainage structures which are to remain under the pavement.

a. Concrete pavement removal. Full depth saw cuts shall be made perpendicular to the slab surface. The Contractor shall saw through the full depth of the slab including any dowels at the joint, removing the pavement and installing new dowels as shown on the plans and per the specifications. Where the perimeter of the removal limits is not located on the joint and there are no dowels present, the perimeter shall be saw cut the full depth of the pavement. The pavement inside the saw cut shall be removed by methods which will not cause distress in the pavement which is to remain in place. If the material is to be wasted on the airport site, it shall be reduced to a maximum size of 2 inches. Concrete slabs that are damaged by under breaking shall be repaired or removed and replaced as directed by the RPR.

The edge of existing concrete pavement against which new pavement abuts shall be protected from damage at all times. Spall and underbreak repair shall be in accordance with the plans. Any underlaying material that is to remain in place, shall be recompacted and/or replaced as shown on the plans. Adjacent areas damaged during repair shall be repaired or replaced at the Contractor's expense.

b. Asphalt pavement removal. Asphalt pavement to be removed shall be cut to the full depth of the asphalt pavement around the perimeter of the area to be removed. If the material is to be wasted on the airport site , it shall be broken to a maximum size of **2** inches (mm.

c. Repair or removal of Base, Subbase, and/or Subgrade. All failed material including surface, base course, subbase course, and subgrade shall be removed and repaired as shown on the plans or as directed by the RPR. Materials and methods of construction shall comply with the applicable sections of these specifications. Any damage caused by Contractor's removal process shall be repaired at the Contractor's expense.

~~**101-3.2 Preparation of joints and cracks prior to overlay/surface treatment.** Remove all vegetation and debris from cracks to a minimum depth of 1 inch (25 mm). If extensive vegetation exists, treat the specific area with a concentrated solution of a water-based herbicide approved~~

by the RPR. Fill all cracks greater than 1/4 inch (6 mm) wide) with a crack sealant per ASTM D6690. The crack sealant, preparation, and application shall be compatible with the surface treatment/overlay to be used. To minimize contamination of the asphalt with the crack sealant, underfill the crack sealant a minimum of 1/8 inch (3 mm), not to exceed ¼ inch (6 mm). Any excess joint or crack sealer shall be removed from the pavement surface.

101-3.3 Removal of Foreign Substances/contaminates prior to [overlay] [seal-coat] [remarking]. Removal of foreign substances/contaminates from existing pavement that will affect the bond of the new treatment shall consist of removal of rubber, fuel spills, oil, crack sealer, at least 90% of paint, and other foreign substances from the surface of the pavement. Areas that require removal are designated on the plans and as directed by the RPR in the field during construction.

[Chemicals] [high-pressure water] [heater scarifier (asphaltic concrete only)] [cold milling] [rotary grinding] [sandblasting] may be used. If chemicals are used, they shall comply with the state's environmental protection regulations. Removal methods used shall not cause major damage to the pavement, or to any structure or utility within or adjacent to the work area. Major damage is defined as changing the properties of the pavement, removal of asphalt causing the aggregate to ravel, or removing pavement over 1/8 inch (3 mm) deep. If it is deemed by the RPR that damage to the existing pavement is caused by operational error, such as permitting the application method to dwell in one location for too long, the Contractor shall repair the damaged area without compensation and as directed by the RPR.

Removal of foreign substances shall not proceed until approved by the RPR. Water used for high-pressure water equipment shall be provided by the Contractor at the Contractor's expense. No material shall be deposited on the pavement shoulders. All wastes shall be disposed of in areas indicated in this specification or shown on the plans.101-3.4 Concrete spall or failed asphaltic concrete pavement repair.

a. Repair of concrete spalls in areas to be overlaid with asphalt. The Contractor shall repair all spalled concrete as shown on the plans or as directed by the RPR. The perimeter of the repair shall be saw cut a minimum of 2 inches (50 mm) outside the affected area and 2 inches (50 mm) deep. The deteriorated material shall be removed to a depth where the existing material is firm or cannot be easily removed with a geologist pick. The removed area shall be filled with asphalt mixture with aggregate sized appropriately for the depth of the patch. The material shall be compacted with equipment approved by the RPR until the material is dense and no movement or marks are visible. The material shall not be placed in lifts over 4 inches (100 mm) in depth. This method of repair applies only to pavement to be overlaid.

b. Asphalt pavement repair. The Contractor shall repair all spalled concrete as shown on the plans or as directed by the RPR. The failed areas shall be removed as specified in paragraph 101-3.1b. All failed material including surface, base course, subbase course, and subgrade shall be removed. Materials and methods of construction shall comply with the applicable sections of these specifications.

101-3.5 Cold milling. Milling shall be performed with a power-operated milling machine or grinder, capable of producing a uniform finished surface. The milling machine or grinder shall operate without tearing or gouging the underlaying surface. The milling machine or grinder shall be equipped with grade and slope controls, and a positive means of dust control. All millings shall be removed and disposed [off Airport property] [in areas designated on the plans]. If the Contractor mills or grinds deeper or wider than the plans specify, the Contractor shall replace the material removed with new material at the Contractor's Expense.

a. Patching. The milling machine shall be capable of cutting a vertical edge without chipping or spalling the edges of the remaining pavement and it shall have a positive method of controlling the depth of cut. The RPR shall layout the area to be milled with a straightedge in increments of 1-foot (30 cm) widths. The area to be milled shall cover only the failed area. Any excessive area that is milled because the Contractor does not have the appropriate milling machine, or areas that are damaged because of his negligence, shall be repaired by the Contractor at the Contractor's Expense.

b. Profiling, grade correction, or surface correction. The milling machine shall have a minimum width of [7] feet ([2] m) and it shall be equipped with electronic grade control devices that will cut the surface to the grade specified. The tolerances shall be maintained within +0 inch and -1/4 inch (+0 mm and -6mm) of the specified grade. The machine must cut vertical edges and have a positive method of dust control. The machine must have the ability to [windrow the millings or cuttings] [remove the millings or cuttings from the pavement and load them into a truck]. All millings shall be removed and disposed of [off the airport] [in areas designated on the plans].

c. Clean-up. The Contractor shall sweep the milled surface daily and immediately after the milling until all residual materials are removed from the pavement surface. Prior to paving, the Contractor shall wet down the milled pavement and thoroughly sweep and/or blow the surface to remove loose residual material. Waste materials shall be collected and removed from the pavement surface and adjacent areas by sweeping or vacuuming. Waste materials shall be removed and disposed off Airport property. [in areas designated on the plans].

101-3.6. Preparation of asphalt pavement surfaces prior to surface treatment. Existing asphalt pavements to be treated with a surface treatment shall be prepared as follows:

a. Patch asphalt pavement surfaces that have been softened by petroleum derivatives or have failed due to any other cause. Remove damaged pavement to the full depth of the damage and replace with new asphalt pavement similar to that of the existing pavement in accordance with paragraph 101-3.4b.

b. Repair joints and cracks in accordance with paragraph 101-3.2.

c. Remove oil or grease that has not penetrated the asphalt pavement by scrubbing with a detergent and washing thoroughly with clean water. After cleaning, treat these areas with an oil spot primer. [ ]

d. Clean pavement surface immediately prior to placing the surface treatment so that it is free of dust, dirt, grease, vegetation, oil, or any type of objectionable surface film.

101-3.7 Maintenance. The Contractor shall perform all maintenance work necessary to keep the pavement in a satisfactory condition until the full section is complete and accepted by the RPR. The surface shall be kept clean and free from foreign material. The pavement shall be properly drained at all times. If cleaning is necessary or if the pavement becomes disturbed, any work repairs necessary shall be performed at the Contractor's expense.

101-3.8 Preparation of Joints in Rigid Pavement prior to resealing. Prior to application of sealant material, clean and dry the joints of all scale, dirt, dust, old sealant, curing compound, moisture, and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method used cleans the joint and does not damage the joint.

101-3.8.1 Removal of Existing Joint Sealant. All existing joint sealants will be removed by plowing or use of hand tools. Any remaining sealant and or debris will be removed by use of wire brushes or other tools, as necessary. Resaw joints removing no more than 1/16 inch (2 mm) from

~~each joint face. Immediately after sawing, flush out joint with water and other tools as necessary to completely remove the slurry.~~

101-3.8.2 Cleaning prior to sealing. Immediately before sealing, joints shall be cleaned by removing any remaining laitance and other foreign material. Allow sufficient time to dry out joints prior to sealing. Joint surfaces will be surface-dry prior to installation of sealant.

101-3.8.3 Joint sealant. Joint material and installation will be in accordance with Item P-605 ~~[Item P-604]~~.

~~**101-3.9 Preparation of Cracks in Flexible Pavement prior to sealing.** Prior to application of sealant material, clean and dry the joints of all scale, dirt, dust, old sealant, curing compound, moisture, and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method used cleans the cracks and does not damage the pavement.~~

~~**101-3.9.1 Preparation of Crack**. Widen crack with [router] [random crack saw] by removing a minimum of 1/16 inch (2 mm) from each side of crack. Immediately before sealing, cracks will be blown out with a hot air lance combined with oil and water-free compressed air.~~

~~**101-3.9.2 Removal of Existing Crack Sealant**. Existing sealants will be removed by [routing] [random crack saw]. Following [routing] [sawing] any remaining debris will be removed by use of a hot lance combined with oil and water-free compressed air.~~

~~**101-3.9.3 Crack Sealant.** Crack sealant material and installation will be in accordance with [Item P-605].~~

101-3.9.4 Removal of Pipe and other Buried Structures.

a. Removal of Existing Pipe Material. Remove all pipes as recommended by RPR. The pipe material shall be legally disposed of off-site in a timely manner following removal. Trenches shall be backfilled material equal to or better in quality than adjacent embankment. Trenches under paved areas must be compacted to 95% of ASTM D698 .

~~**b. Removal of Inlets/Manholes.** [Where indicated on the plans or as directed by the RPR, inlets and/or manholes shall be removed and legally disposed of off-site in a timely fashion after removal. Excavations after removal shall be backfilled with material equal or better in quality than adjacent embankment. When under paved areas must be compacted to [95%] of ASTM [D1557] [D698], when outside of paved areas must be compacted to [95%] of ASTM D698. [Not used.]]~~

~~**c.** Removal of [ ].~~

METHOD OF MEASUREMENT

~~**101-4.1 Lump sum.** No separate measurement for payment will be made. The work covered by this section shall be considered as a subsidiary obligation of the Contractor and covered under the other contract items.~~

101-4.1 Pavement removal. The unit of measurement for pavement removal shall be the number of square yards ~~(square meters)~~ removed by the Contractor. Any pavement removed outside the limits of removal because the pavement was damaged by negligence on the part of the Contractor shall not be included in the measurement for payment. No direct measurement or payment shall be made for saw cutting. Saw cutting shall be incidental to pavement removal. Dowel bar installation shall be incidental to pavement removal.

~~**101-4.2 Joint and crack repair.** The unit of measurement for joint and crack repair shall be the linear foot (meter) of joint.~~

~~**101-4.3 Removal of Foreign Substances/contaminates.** The unit of measurement for foreign Substances/contaminates removal shall be the square foot (meter).~~

~~**101-4.4 Spalled and failed asphalt pavement repair.** The unit of measure for failed asphalt pavement repair shall be square foot (square meter).~~

~~**101-4.5 Concrete Spall Repair.** The unit of measure for concrete spall repair shall be the number of square feet (square meter). The location and average depth of the patch shall be determined and agreed upon by the RPR and the Contractor.~~

~~**101-4.6 Cold milling.** The unit of measure for cold milling shall be [___] inches of milling per square yard (square meter). The location and average depth of the cold milling shall be as shown on the plans. If the initial cut does not correct the condition, the Contractor shall re-mill the area and will be paid for the total depth of milling.]~~

101-4.7 Removal of Pipe and other Buried Structures. ~~[Not require.] [~~ The unit of measurement for removal of pipe and other buried structures will be Linear Feet. No separate measurement for payment will be made. The work covered by this section shall be considered ~~as a subsidiary obligation of the Contractor and covered under the other contract items.]~~ made at the contract unit price for each completed and accepted item. This price shall be full compensation for all labor, equipment, tools, and incidentals necessary to complete this item in accordance with paragraph 101-3.9.4

BASIS OF PAYMENT

101-5.1 Payment. Payment shall be made at contract unit price for the unit of measurement as specified above. This price shall be full compensation for furnishing all materials and for all preparation, hauling, and placing of the material and for all labor, equipment, tools, and incidentals necessary to complete this item.

Item P 101-5.1a	Sawcut, Remove and Dispose Existing Concrete Pavement Full Depth (8") - per Square Yards
Item P 101-5.1b	Sawcut, Remove and Dispose Existing Asphalt Ramp – per Square Yards
Item P-101-5.1c	Sawcut, Remove and Dispose Existing 6" Vertical Curb –per Linear Feet

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

AC 150/5380-6	Guidelines and Procedures for Maintenance of Airport Pavements.

ASTM International (ASTM)

ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements

END OF ITEM P-101

ITEM P-152
EXCAVATION, SUBGRADE, AND EMBANKMENT

DESCRIPTION

152-1.1 This item covers excavation, disposal, placement, and compaction of all materials within the limits of the work required to construct safety areas, runways, taxiways, aprons, and intermediate areas as well as other areas for drainage, building construction, parking, or other purposes in accordance with these specifications and in conformity to the dimensions and typical sections shown on the plans.

152-1.2 Classification. All material excavated shall be classified as defined below:

a. Unclassified excavation. Unclassified excavation shall consist of the excavation and disposal of all material, regardless of its nature which is not otherwise classified and paid for under one of the following items .

Borrow excavation. Borrow excavation shall consist of approved material required for the construction of embankments or for other portions of the work in excess of the quantity of usable material available from required excavations. Borrow material shall be obtained from areas designated by the Resident Project Representative (RPR) within the limits of the airport property but outside the normal limits of necessary grading, or from areas outside the airport boundaries.

152-1.3 Unsuitable excavation. Unsuitable material shall be disposed of off-site or as directed by the RPR. Materials containing vegetable or organic matter, such as muck, peat, organic silt, or sod shall be considered unsuitable for use in embankment construction. Material suitable for topsoil may be used on the embankment slope when approved by the RPR. *Undercutting of material unsatisfactory for subgrade foundation shall be considered unsuitable excavation and shall be excavated to the depth specified by the Engineer below the subgrade.*

CONSTRUCTION METHODS

152-2.1 General. ~~Before beginning excavation, grading, and embankment operations in any area, the area shall be cleared or cleared and grubbed in accordance with Item P-151.~~

The suitability of material to be placed in embankments shall be subject to approval by the RPR. All unsuitable material shall be disposed of off site. ~~in waste areas as shown on the plans~~. All waste areas shall be graded to allow positive drainage of the area and adjacent areas. The surface elevation of waste areas shall be specified on the plans or approved by the RPR.

When the Contractor's excavating operations encounter artifacts of historical or archaeological significance, the operations shall be temporarily discontinued and the RPR notified per Section 70, paragraph 70-20. At the direction of the RPR, the Contractor shall excavate the site in such a manner as to preserve the artifacts encountered and allow for their removal. Such excavation will be paid for as extra work.

Areas outside the limits of the pavement areas where the top layer of soil has become compacted by hauling or other Contractor activities shall be scarified and disked to a depth of 4 inches (100 mm), to loosen and pulverize the soil. Stones or rock fragments larger than 4 inches (100 mm) in their greatest dimension will not be permitted in the top 6 inches (150 mm) of the subgrade.

If it is necessary to interrupt existing surface drainage, sewers or under-drainage, conduits, utilities, or similar underground structures, the Contractor shall be responsible for and shall take

all necessary precautions to preserve them or provide temporary services. When such facilities are encountered, the Contractor shall notify the RPR, who shall arrange for their removal if necessary. The Contractor, at their own expense, shall satisfactorily repair or pay the cost of all damage to such facilities or structures that may result from any of the Contractor's operations during the period of the contract.

a. Blasting. Blasting shall not be allowed.

152-2.2 Excavation. No excavation shall be started until the work has been staked out by the Contractor and the RPR has obtained from the Contractor, the survey notes of the elevations and measurements of the ground surface. The Contractor and RPR shall agree that the original ground lines shown on the original topographic mapping are accurate, or agree to any adjustments made to the original ground lines.

Volumetric quantities were calculated by comparing DTM files of the applicable design surfaces and generating Triangle Volume Reports. Electronic copies of DTM files and a paper copy of the original topographic map will be issued to the successful bidder.

Volumetric quantities were calculated using design cross sections which were created for this project using the DTM files of the applicable design surfaces and generating End Area Volume Reports. Paper copies of design cross sections and a paper copy of the original topographic map will be issued to the successful bidder.

Existing grades on the design cross sections or DTM's, where they do not match the locations of actual spot elevations shown on the topographic map, were developed by computer interpolation from those spot elevations. Prior to disturbing original grade, Contractor shall verify the accuracy of the existing ground surface by verifying spot elevations at the same locations where original field survey data was obtained as indicated on the topographic map. Contractor shall recognize that, due to the interpolation process, the actual ground surface at any particular location may differ somewhat from the interpolated surface shown on the design cross sections or obtained from the DTM's. Contractor's verification of original ground surface, however, shall be limited to verification of spot elevations as indicated herein, and no adjustments will be made to the original ground surface unless the Contractor demonstrates that spot elevations shown are incorrect. For this purpose, spot elevations which are within 0.1 foot (30 mm) of the stated elevations for ground surfaces, or within 0.04 foot (12 mm) for hard surfaces (pavements, buildings, foundations, structures, etc.) shall be considered "no change". Only deviations in excess of these will be considered for adjustment of the original ground surface. If Contractor's verification identifies discrepancies in the topographic map, Contractor shall notify the RPR in writing at least **1 DAY** before disturbance of existing grade to allow sufficient time to verify the submitted information and make adjustments to the design cross sections or DTM's. Disturbance of existing grade in any area shall constitute acceptance by the Contractor of the accuracy of the original elevations shown on the topographic map for that area.

All areas to be excavated shall be stripped of vegetation and topsoil. Topsoil shall be stockpiled for future use in areas designated on the plans or by the RPR. All suitable excavated material shall be used in the formation of embankment, subgrade, or other purposes **as** shown on the plans. All unsuitable material shall be disposed of ~~as shown on the plans~~.

The grade shall be maintained so that the surface is well drained at all times.

When the volume of the excavation exceeds that required to construct the embankments to the grades as indicated on the plans, the excess shall be used to grade the areas of ultimate development or disposed as directed by the RPR. When the volume of excavation is not sufficient for constructing the embankments to the grades indicated, the deficiency shall be obtained from borrow areas.

a. Selective grading. *When quality of the material varies significantly*, ~~selective grading is indicated on the plans~~, the more suitable material designated by the RPR shall be used in constructing the embankment or in capping the pavement subgrade. If, at the time of excavation, it is not possible to place this material in its final location, it shall be stockpiled in approved areas until it can be placed. The more suitable material shall then be placed and compacted as specified. Selective grading shall be considered incidental to the work involved. The cost of stockpiling and placing the material shall be included in the various pay items of work involved.

b. Undercutting. Rock, shale, hardpan, loose rock, boulders, or other material unsatisfactory for safety areas, subgrades, roads, shoulders, or any areas intended for turf shall be excavated to a minimum depth of 12 inches (300 mm) below the subgrade or to the depth specified by the RPR. Muck, peat, matted roots, or other yielding material, unsatisfactory for subgrade foundation, shall be removed to the depth specified. Unsuitable materials shall be disposed off the airport. The cost is incidental to this item. This excavated material shall be paid for at the contract unit price per cubic yard. The excavated area shall be backfilled with suitable material obtained from the grading operations or borrow areas and compacted to specified densities. The necessary backfill will constitute a part of *Unsuitable Excavation* ~~the embankment~~. Where rock cuts are made, backfill with select material. Any pockets created in the rock surface shall be drained in accordance with the details shown on the plans. Undercutting will be paid as unclassified excavation .

c. Over-break. Over-break, including slides, is that portion of any material displaced or loosened beyond the finished work as planned or authorized by the RPR. All over-break shall be graded or removed by the Contractor and disposed of as directed by the RPR. The RPR shall determine if the displacement of such material was unavoidable and their own decision shall be final. Payment will not be made for the removal and disposal of over-break that the RPR determines as avoidable. Unavoidable over-break will be classified as "Unclassified Excavation."

d. Removal of utilities. The removal of existing structures and utilities required to permit the orderly progress of work will be accomplished by the Contractor as indicated on the plans. All existing foundations shall be excavated at least 2 feet (60 cm) below the top of subgrade or as indicated on the plans, and the material disposed of as directed by the RPR. All foundations thus excavated shall be backfilled with suitable material and compacted as specified for embankment or as shown on the plans.

152-2.3 Borrow excavation. Borrow areas from outside the airport boundary. Embankment quantities shown on plans.

152-2.4 Drainage excavation. Drainage excavation shall consist of excavating drainage ditches including intercepting, inlet, or outlet ditches; or other types as shown on the plans. The work shall be performed in sequence with the other construction. Ditches shall be constructed prior to starting adjacent excavation operations. All satisfactory material shall be placed in embankment fills; unsuitable material shall be placed in designated waste areas or as directed by the RPR. All necessary work shall be performed true to final line, elevation, and cross-section. The Contractor shall maintain ditches constructed on the project to the required cross-section and shall keep them free of debris or obstructions until the project is accepted.

152-2.5 Preparation of cut areas or areas where existing pavement has been removed. In those areas on which a subbase or base course is to be placed, the top 8 inches of subgrade shall be compacted to not less than 100 % of maximum density for non-cohesive soils, and 95% of maximum density for cohesive soils as determined by ASTM D698. As used in this

specification, "non-cohesive" shall mean those soils having a plasticity index (PI) of less than 3 as determined by ASTM D4318.

152-2.6 Preparation of embankment area. All sod and vegetative matter shall be removed from the surface upon which the embankment is to be placed. The cleared surface shall be broken up by plowing or scarifying to a minimum depth of 6 inches (150 mm) and shall then be compacted per paragraph 152-2.10.

Sloped surfaces steeper than one (1) vertical to four (4) horizontal shall be plowed, stepped, benched, or broken up so that the fill material will bond with the existing material. When the subgrade is part fill and part excavation or natural ground, the excavated or natural ground portion shall be scarified to a depth of 12 inches (300 mm) and compacted as specified for the adjacent fill.

No direct payment shall be made for the work performed under this section. The necessary clearing and grubbing and the quantity of excavation removed will be paid for under the respective items of work.

152-2.7 Control Strip. The first half-day of construction of subgrade and/or embankment shall be considered as a control strip for the Contractor to demonstrate, in the presence of the RPR, that the materials, equipment, and construction processes meet the requirements of this specification. The sequence and manner of rolling necessary to obtain specified density requirements shall be determined. The maximum compacted thickness may be increased to a maximum of 12 inches (300 mm) upon the Contractor's demonstration that approved equipment and operations will uniformly compact the lift to the specified density. The RPR must witness this demonstration and approve the lift thickness prior to full production.

Control strips that do not meet specification requirements shall be reworked, re-compacted, or removed and replaced at the Contractor's expense. Full operations shall not begin until the control strip has been accepted by the RPR. The Contractor shall use the same equipment, materials, and construction methods for the remainder of construction, unless adjustments made by the Contractor are approved in advance by the RPR.

152-2.8 Formation of embankments. The material shall be constructed in lifts as established in the control strip, but not less than 6 inches (150 mm) nor more than 12 inches (300 mm) of compacted thickness.

When more than one lift is required to establish the layer thickness shown on the plans, the construction procedure described here shall apply to each lift. No lift shall be covered by subsequent lifts until tests verify that compaction requirements have been met. The Contractor shall rework, re-compact and retest any material placed which does not meet the specifications.

The lifts shall be placed, to produce a soil structure as shown on the typical cross-section or as directed by the RPR. Materials such as brush, hedge, roots, stumps, grass and other organic matter, shall not be incorporated or buried in the embankment.

Earthwork operations shall be suspended at any time when satisfactory results cannot be obtained due to rain, freezing, or other unsatisfactory weather conditions in the field. Frozen material shall not be placed in the embankment nor shall embankment be placed upon frozen material. Material shall not be placed on surfaces that are muddy, frozen, or contain frost. The Contractor shall drag, blade, or slope the embankment to provide surface drainage at all times.

The material in each lift shall be within ±2% of optimum moisture content before rolling to obtain the prescribed compaction. The material shall be moistened or aerated as necessary to achieve a uniform moisture content throughout the lift. Natural drying may be accelerated by blending in dry material or manipulation alone to increase the rate of evaporation.

The Contractor shall make the necessary corrections and adjustments in methods, materials or moisture content to achieve the specified embankment density.

The contractor will take samples of excavated materials which will be used in embankment for testing and develop a Moisture-Density Relations of Soils Report (Proctor) in accordance with ASTM D698. A new Proctor shall be developed for each soil type based on visual classification.

Density tests will be taken by the contractor for every 500 square yards of compacted embankment for each lift which is required to be compacted, or other appropriate frequencies as determined by the RPR.

If the material has greater than 30% retained on the 3/4-inch (19.0 mm) sieve, follow AASHTO T-180 Annex Correction of maximum dry density and optimum moisture for oversized particles.

Rolling operations shall be continued until the embankment is compacted to not less than 100% of maximum density for non-cohesive soils, and 95% of maximum density for cohesive soils as determined by ASTM D698. Under all areas to be paved, the embankments shall be compacted to a depth of 12 inches and to a density of not less than 95 percent of the maximum density as determined by ASTM D698. As used in this specification, "non-cohesive" shall mean those soils having a plasticity index (PI) of less than 3 as determined by ASTM D4318.

There will be no separate measurement of payment for compacted embankment. All costs incidental to placing in lifts, compacting, discing, watering, mixing, sloping, and other operations necessary for construction of embankments will be included in the contract price for excavation, borrow, or other items. Payment for compacted embankment will be made under embankment in-place and no payment will be made for excavation, borrow, or other items.

152-2.9 Proof rolling. The purpose of proof rolling the subgrade is to identify any weak areas in the subgrade and not for compaction of the subgrade. After compaction is completed, the subgrade area shall be proof rolled with a 20 ton (18.1 metric ton) Tandem axle Dual Wheel Dump Truck loaded to the legal limit with tires inflated to 100 psi in the presence of the RPR. Apply a minimum of **50%** coverage, or as specified by the RPR, under pavement areas. A coverage is defined as the application of one tire print over the designated area. Soft areas of subgrade that deflect more than 1 inch (25 mm) or show permanent deformation greater than 1 inch (25 mm) shall be removed and replaced with suitable material or reworked to conform to the moisture content and compaction requirements in accordance with these specifications. Removal and replacement of soft areas is incidental to this item.

152-2.10 Compaction requirements. The subgrade under areas to be paved shall be compacted to a depth of 12 inches (300 mm) and to a density of not less than 95 percent of the maximum dry density as determined by ASTM D698.

The material to be compacted shall be within ±2% of optimum moisture content before being rolled to obtain the prescribed compaction (except for expansive soils). When the material has greater than 30 percent retained on the ¾ inch (19.0 mm) sieve, follow the methods in ASTM D698 procedures in AASHTO T180 Annex for correction of maximum dry density and optimum moisture for oversized particles. Tests for moisture content and compaction will be taken at a minimum of 500 S.Y. of subgrade. All quality assurance testing shall be done by the Contractor's laboratory in the presence of the RPR, and density test results shall be furnished upon completion to the RPR for acceptance determination.

The in-place field density shall be determined in accordance with ASTM D6938 using Procedure A, the direct transmission method, and ASTM D6938 shall be used to determine the moisture content of the material. The machine shall be calibrated in accordance with ASTM D6938 within 12 months prior to its use on this contract. The gauge shall be field standardized daily.

Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

If the specified density is not attained, the entire lot shall be reworked and/or re-compacted and additional random tests made. This procedure shall be followed until the specified density is reached.

All cut-and-fill slopes shall be uniformly dressed to the slope, cross-section, and alignment shown on the plans or as directed by the RPR and the finished subgrade shall be maintained.

152-2.11 Finishing and protection of subgrade. Finishing and protection of the subgrade is incidental to this item. Grading and compacting of the subgrade shall be performed so that it will drain readily. All low areas, holes or depressions in the subgrade shall be brought to grade. Scarifying, blading, rolling and other methods shall be performed to provide a thoroughly compacted subgrade shaped to the lines and grades shown on the plans. All ruts or rough places that develop in the completed subgrade shall be graded, re-compacted, and retested. The Contractor shall protect the subgrade from damage and limit hauling over the finished subgrade to only traffic essential for construction purposes.

The Contractor shall maintain the completed course in satisfactory condition throughout placement of subsequent layers. No subbase, base, or surface course shall be placed on the subgrade until the subgrade has been accepted by the RPR.

152-2.12 Haul. All hauling will be considered a necessary and incidental part of the work. The Contractor shall include the cost in the contract unit price for the pay of items of work involved. No payment will be made separately or directly for hauling on any part of the work.

The Contractor's equipment shall not cause damage to any excavated surface, compacted lift or to the subgrade as a result of hauling operations. Any damage caused as a result of the Contractor's hauling operations shall be repaired at the Contractor's expense.

The Contractor shall be responsible for providing, maintaining and removing any haul roads or routes within or outside of the work area, and shall return the affected areas to their former condition, unless otherwise authorized in writing by the Owner. No separate payment will be made for any work or materials associated with providing, maintaining and removing haul roads or routes.

152-2.13 Surface Tolerances. In those areas on which a subbase or base course is to be placed, the surface shall be tested for smoothness and accuracy of grade and crown. Any portion lacking the required smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches (75 mm), reshaped and re-compacted to grade until the required smoothness and accuracy are obtained and approved by the RPR. The Contractor shall perform all final smoothness and grade checks in the presence of the RPR. Any deviation in surface tolerances shall be corrected by the Contractor at the Contractor's expense.

a. **Smoothness.** The finished surface shall not vary more than +/- ½ inch (12 mm) when tested with a 12-foot (3.7-m) straightedge applied parallel with and at right angles to the centerline. The straightedge shall be moved continuously forward at half the length of the 12-foot (3.7-m) straightedge for the full length of each line on a 50-foot (15-m) grid.

b. **Grade.** The grade and crown shall be measured on a 50-foot (15-m) grid and shall be within +/-0.05 feet (15 mm) of the specified grade.

METHOD OF MEASUREMENT

152-3.1 Measurement for payment specified by the cubic yard shall be computed by the average end areas of design cross sections. The end area is that bound by the original ground line established by ~~field cross-sections~~ and the final theoretical pay line established by cross-sections shown on the plans, subject to verification by the RPR.

In cut sections, the additional cut required to construct the topsoil layer to the plan grade had not been measured and will not be measured for separate payment, but will be subsidiary to "Unclassified Excavation."

No allowance has been made in the measurement of shrink/swell. The Contractor shall make his own determination as to the amount of shrink/swell involved in the construction.

No adjustments have been made to the plan quantities for the construction and demolition of existing drainage structures. The Contractor shall make his/her own determination as to the amount of unsuitable excavated materials which may be encountered and the resulting additional borrow material required embankment required to construct the project if the excavated material is deemed suitable,

The quantity of the unclassified excavation to be paid for shall be the number of Cubic Yards measure in its original position. Measurement shall not include the quantity of materials excavated without authorization beyond normal slope lines or the quantity of material used for purpose other those directed.

152.3.2 The quantity of borrow excavation to be paid for shall be the number of cubic yards measure in its FINAL position. Measurement shall not include the quantity of materials excavated without authorization beyond normal slope lines or the quantity of material used for purpose other those directed.

~~**152-3.2** The quantity of embankment in place shall be the number of cubic yards as measured in its final position.~~

152-3.3 Stockpiled material shall not be measured for payment in the stockpiled position

152-3.4 Unsuitable excavation shall be measured for the surface to the ground., after stripping is accomplished. Measurement will be taken by Engineer, and the volume of excavation will be calculated by the average end area method. The necessary refilling of unsuitable areas will not be measured for separate payment but will be subsidiary to "Unsuitable Excavation". Only the amount of excavation directed by the Engineer will be measured for payment.

BASIS OF PAYMENT

152-4.1 Unclassified excavation. Drainage Excavation payment shall be made at the contract unit price per cubic yard. This price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the item.

152-4.2 For embankment in place, payment shall be made at the contract unit price per cubic yard (cubic meter). This price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the item.

~~**152-4.3** Stockpiled material shall be paid for on the basis of the number of cubic yards measure in the stockpile position.~~

152-4.4 Unsuitable excavation shall be paid at the contract unit price per Cubic Yard for "Unsuitable Excavation." which price shall be full compensation for all excavation, disposal or placement of the material including loading, hauling, spreading and compaction, compaction and preparation of subgrade, for refillling, rolling and compaction of all undercut areas, and for all equipment tools, labor and incidentals necessary to complete the work.

Payment will be made under:

~~Item P-152-4.1~~	~~Unclassified/ Drainage Excavation - per cubic yard.~~
Item P-152-4.2	Embankment in Place - per cubic yard
Item P-152-4.4	Unsuitable Excavation – per cubic yard

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

American Association of State Highway and Transportation Officials (AASHTO)

AASHTO T-180	Standard Method of Test for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop

ASTM International (ASTM)

ASTM D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft^3 (600 kN-m/m^3))
ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
ASTM D1557	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft^3 (2700 kN-m/m^3))
ASTM D6938	Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

Advisory Circulars (AC)

AC 150/5370-2	Operational Safety on Airports During Construction Software

Software

FAARFIELD – FAA Rigid and Flexible Iterative Elastic Layered Design

U.S. Department of Transportation

FAA RD-76-66	Design and Construction of Airport Pavements on Expansive Soils

END OF ITEM P-152

ITEM P-155
LIME-TREATED SUBGRADE

DESCRIPTION

155-1.1 This item shall be used for soil modification that require strength gain to a specific level. This item shall consist of constructing one or more courses of a mixture of soil, lime, and water in accordance with this specification, and in conformity with the lines, grades, thicknesses, and typical cross-sections shown on the plans.

MATERIALS

155-2.1 Lime. Quicklime, hydrated lime, and either high-calcium dolomitic, or magnesium lime, as defined by ASTM C51, shall conform to the requirements of ASTM C977. Lime not produced from calcining limestone is not permitted.

~~**155-2.2 Commercial lime slurry.** Commercial lime slurry shall be a pumpable suspension of solids in water. The water or liquid portion of the slurry shall not contain dissolved material injurious or objectionable for the intended purpose. The solids portion of the mixture, when considered on the basis of "solids content," shall consist principally of hydrated lime of a quality and fineness sufficient to meet the following chemical composition and residue requirements.~~

~~**a. Chemical composition.** The "solids content" of the lime slurry shall consist of a minimum of 70%, by weight, of calcium and magnesium oxides.~~

~~**b. Residue.** The percent by weight of residue retained in the "solids content" of lime slurry shall conform to the following requirements:~~

- ~~Residue retained on a No. 6 (3.35 µm) sieve = maximum 0.0%~~
- ~~Residue retained on a No. 10 (2.00 µm) sieve = maximum 1.0%~~
- ~~Residue retained on a No. 30 (600 µm) sieve = maximum 2.5%~~

~~**c. Grade.** Commercial lime slurry shall conform to one of the following two grades:~~

- ~~Grade 1. The "dry solids content" shall be at least 31% by weight, of the slurry.~~
- ~~Grade 2. The "dry solids content" shall be at least 35%, by weight, of the slurry.~~

155-2.3 Water. Water used in mixing or curing shall be from potable water sources. Other sources shall be tested in accordance with ASTM C1602 prior to use.

155-2.4 Soil. The soil for this work shall consist of on-site materials free of roots, sod, weeds, and stones larger than 2-1/2 inches (60 mm) and have a sulfate content of less than 0.3%.

COMPOSITION

155-3.1 Soil-lime mixture. Lime shall be applied at 8 % dry unit weight of soil for the depth of subgrade treatment as shown on the plans.

155-3.2 Tolerances. At final compaction, the lime and water content for each course of subgrade treatment shall conform to the following tolerances:

Tolerances

Material	Tolerance
Lime	+ 0.5%
Water	+ 2%, -0%

WEATHER LIMITATIONS

155-4.1 Weather limitation. Subgrade shall not be constructed when weather conditions detrimentally affect the quality of the materials. Lime shall not be applied unless the air temperature is at least 40°F (4°C) and rising. Lime shall not be applied to soils that are frozen or contain frost. Protect completed lime-treated areas by approved methods against the detrimental effects of freezing if the air temperature falls below 35°F (2°C). Remove and replace any damaged portion of the completed soil-lime treated area with new soil-lime material in accordance with this specification.

EQUIPMENT

155-5.1 Equipment. All equipment necessary to grade, scarify, spread, mix, and compact the material shall be provided. The Resident Project Representative (RPR) must approve the Contractor's proposed equipment prior to the start of the treatment.

CONSTRUCTION METHODS

155-6.1 General. This specification is to construct a subgrade consisting of a uniform lime mixture which shall be free from loose or segregated areas. The subgrade shall be of uniform density and moisture content, well mixed for its full depth, and have a smooth surface suitable for placing subsequent lifts. The Contractor shall be responsible to meet the above requirements.

Prior to any treatment, the subgrade shall be constructed as specified in Item P-152, Excavation, Subgrade and Embankment, and shaped to conform to the typical sections, lines, and grades as shown on the plans.

The mixing equipment must give visible indication at all times that it is cutting, pulverizing, and mixing the material uniformly to the proper depth over the full width of the cut.

155-6.2 Application. Lime shall be uniformly spread only over an area where the initial mixing operations can be completed during the same workday. Lime shall not be applied when wind conditions are detrimental to proper application. A motor grader shall not be used to spread the lime. Adequate moisture shall be added to the cement/soil mixture to maintain the proper moisture content. Materials shall be handled, stored, and applied in accordance with all federal, state, and local requirements.

155-6.3 Mixing. The mixing procedure shall be as described below:

a. Preliminary mixing. The full depth of the treated subgrade shall be mixed with an approved mixing machine. Lime shall not be left exposed for more than six (6) hours. The mixing machine shall make two coverages. Water shall be added to the subgrade during mixing to

provide a moisture content 3% to 5% above the optimum moisture of the material and to ensure chemical reaction of the lime and subgrade. After mixing, the subgrade shall be lightly rolled to seal the surface and help prevent evaporation of moisture. The water content of the subgrade mixture shall be maintained at a moisture content above the optimum moisture content for a minimum of 4 to 24 hours or until the material becomes friable. During the mellowing period, the material shall be sprinkled as directed by the RPR.

b. Final mixing. After the required mellowing time, the material shall be uniformly mixed by approved methods. Any clods shall be reduced in size by blading, discing, harrowing, scarifying, or by the use of other approved pulverization methods. After curing, pulverize lime treated material until 100% of soil particles pass a one-inch (25.0 mm) sieve and 60% pass the No. 4 (4.75 mm) sieve when tested dry by laboratory sieves. If resultant mixture contains clods, reduce their size by scarifying, remixing, or pulverization to meet specified gradation.

155-6.4 Control Strip. The first half-day of construction shall be considered the control strip. The Contractor shall demonstrate, in the presence of the RPR, that the materials, equipment, and construction processes meet the requirements of the specification. The sequence and manner of rolling necessary to obtain specified density requirements shall be determined. Control strips that do not meet specification requirements shall be reworked, re-compacted, or removed and replaced at the Contractor's expense. Full operations shall not continue until the control strip has been accepted by the RPR. Upon acceptance of the control strip by the RPR, the Contractor shall use the same equipment, materials, and construction methods for the remainder of construction, unless adjustments made by the Contractor are approved in advance by the RPR.

155-6.5 Treatment Application and Depth Checks. The depth and amount of stabilization shall be measured by the Contractor with no less than 2 tests per day of material placed; test shall be witnessed by the RPR. Measurements shall be made in test holes excavated to show the full depth of mixing and the pH checked by spraying the side of the test hole with a pH indicator such as phenolphthalein. Phenolphthalein changes from clear to red between pH 8.3 and 10. The color change indicates the location of the bottom of the mixing zone. pH indicators other than phenolphthalein can be used to measure pH levels. If the pH is not at least 8.3 and/or if the depth of the treated subgrade is more than 1/2 inch (12 mm) deficient, additional lime treatment shall be added and the material remixed. The Contractor shall correct all such areas in a manner satisfactory to the RPR.

155-6.6 Compaction. Compaction of the mixture shall immediately follow the final mixing operation with the mixture compacted within 1 to 4 hours after final mixing. The material shall be at the moisture content specified in paragraph 155-3.2 during compaction. The field density of the compacted mixture shall be at least 95% of the maximum density as specified in paragraph 155-6.10. Perform in-place density test to determine degree of compaction between 24 and 72 hours after final compaction and the 24-hour moist cure period. If the material fails to meet the density requirements, it shall be reworked to meet the density requirements. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

155-6.7 Finishing and curing. After the final lift or course of lime-treated subgrade has been compacted, it shall be brought to the required lines and grades in accordance with the typical sections. The completed section shall then be finished by rolling, as directed by the RPR, with a pneumatic or other suitable roller sufficiently light to prevent hairline cracking. The finished surface shall not vary more than 1/2-inch (12 mm) when tested with a 12-foot (3.7 m) straightedge applied parallel with and at right angles to the pavement centerline. Any variations in excess of this tolerance shall be corrected by the Contractor at the Contractor's expense in a manner satisfactory to the RPR.

The completed section shall be moist cured for a minimum of seven (7) days before further courses are added or any traffic is permitted, unless otherwise directed by the RPR. The final lift should not be exposed for more than 14 days without protection or the placement of a base course material.

155-6.8 Maintenance. The Contractor shall protect and maintain the lime-treated subgrade from yielding until the lime-treated subgrade is covered by placement of the next lift. When material has been exposed to excessive rain, snow, or freeze-thaw conditions, prior to placement of additional material, the Contractor shall verify that materials still meet all specification requirements. The maintenance cost shall be incidental to this item.

155-6.9 Surface tolerance. In those areas on which a subbase or base course is to be placed, the surface shall be tested for smoothness and accuracy of grade and crown. Any portion lacking the required smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches (75 mm), reshaped and re-compacted to grade until the required smoothness and accuracy are obtained and approved by the RPR. The Contractor shall perform all final smoothness and grade checks in the presence of the RPR. Any deviation in surface tolerances shall be corrected by the Contractor at the Contractor's expense.

a. Smoothness. The finished surface shall not vary more than +/- ½ inch (12 mm) when tested with a 12-foot (3.7-m) straightedge applied parallel with and at right angles to the centerline. The straightedge shall be moved continuously forward at half the length of the 12-foot (3.7-m) straightedge for the full length of each line on a 50-foot (15-m) grid.

b. Grade. The grade and crown shall be measured on a 50-foot (15-m) grid and shall be within +/-0.05 feet (15 mm) of the specified grade.

155-6.10 Acceptance sampling and testing. The lime treated subgrade shall be accepted for density and thickness on an area basis. Testing frequency shall be a minimum of one compaction and thickness test per 1000 square yards 840 square meters) of lime treated subgrade, but not less than four (4) tests per day of production. Sampling locations will be determined on a random basis per ASTM D3665.

a. Density. All testing shall be done by the Contractor's laboratory in the presence of the RPR and density test results shall be furnished upon completion to the RPR for acceptance determination.

The field density of the compacted mixture shall be at least 95% of the maximum density of laboratory specimens prepared from samples taken from the material in place. The specimens shall be compacted and tested in accordance with ASTM D698 to determine maximum density and optimum moisture content. The in-place field density shall be determined in accordance with ASTM D1556. If the material fails to meet the density requirements, the area represented by the failed test shall be reworked to meet the density requirements. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

b. Thickness. The thickness of the course shall be within +0 and -1/2 inch (12 mm) of the specified thickness as determined by depth tests taken by the Contractor in the presence of the RPR for each area. Where the thickness is deficient by more than 1/2-inch (12 mm), the Contractor shall correct such areas at no additional cost The Contractor shall replace, at his expense, material where depth tests have been taken.

155-6.11 Handling and safety. The Contractor shall obtain and enforce the lime supplier's instructions for proper safety and handling of the lime to prevent physical eye or skin contact with lime during transport or application.

METHOD OF MEASUREMENT

155-7.1 Lime-treated subgrade shall be paid for by the square yard (square meter) in the completed and accepted work.

155-7.2 Lime shall be paid by the number of tons (kg) of Hydrated Lime applied at the application rate specified in paragraph 155-3.1.

a. Hydrated lime delivered to the project in dry form will be measured according to the actual tonnage either spread on the subgrade or batched on site into a slurry, whichever is applicable.

b. Quicklime delivered to the project in dry form will be measured for payment on the basis of the tons of equivalent hydrated lime using the following formula:

Equivalent Hydrated Lime ($Ca(OH)_2$) = Total Quicklime (CaO) × 1.32

~~**c.** Lime delivered to the project in slurry form will be measured for payment in tons, dry weight of hydrated lime or equivalent hydrated lime in accordance with paragraph b above.~~

BASIS OF PAYMENT

155-8.1 Payment shall be made at the contract unit price per square yard (square meter) for the lime-treated subgrade at the thickness specified. The price shall be full compensation for furnishing all material, except the lime, and for all preparation, delivering, placing, and mixing these materials, and all labor, equipment, tools, and incidentals necessary to complete this item.

155-8.2 Payment shall be made at the contract unit price per ton (kg). This price shall be full compensation for furnishing, delivery, and placing this material.

Payment will be made under:

Item P-155-8.1	Lime-treated subgrade - per square yard (m^2)
Item P-155-8.2	Lime - per ton

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM C51	Standard Terminology Relating to Lime and Limestone (as used by the industry)
ASTM C977	Standard Specification for Quicklime and Hydrated Lime for Soil Stabilization
ASTM C1602	Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete
ASTM D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft^3) (600 kN-m/m^3)
ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method

ASTM D2487	Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)
ASTM D6938	Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

Software

FAARFIELD – FAA Rigid and Flexible Iterative Elastic Layered Design

END OF ITEM P-155

ITEM P-501
CEMENT CONCRETE PAVEMENT

DESCRIPTION

501-1.1 This work shall consist of pavement composed of cement concrete **with reinforcement** constructed on a prepared underlying surface in accordance with these specifications and shall conform to the lines, grades, thickness, and typical cross-sections shown on the plans. The terms cement concrete, hydraulic cement concrete, and concrete are interchangeable in this specification.

MATERIALS

501-2.1 Aggregates.

a. Reactivity. Fine and Coarse aggregates to be used in PCC on this project shall be tested and evaluated by the Contractor for alkali-aggregate reactivity in accordance with both ASTM C1260 and ASTM C1567. Tests must be representative of aggregate sources which will be providing material for production. ASTM C1260 and ASTM C1567 tests may be run concurrently.

(1) Coarse aggregate and fine aggregate shall be tested separately in accordance with ASTM C1260, however, the length of test shall be extended to 28 days (30 days from casting). Tests must have been completed within 6 months of the date of the concrete mix submittal.

(2) The combined coarse and fine aggregate shall be tested in accordance with ASTM C1567, modified for combined aggregates, using the proposed mixture design proportions of aggregates, cementitious materials, and/or specific reactivity reducing chemicals. If the expansion does not exceed 0.10% at 28 days, the proposed combined materials will be accepted. If the expansion is greater than 0.10% at 28 days, the aggregates will not be accepted unless adjustments to the combined materials mixture can reduce the expansion to less than 0.10% at 28 days, or new aggregates shall be evaluated and tested.

(3) If lithium nitrate is proposed for use with or without supplementary cementitious materials, the aggregates shall be tested in accordance with Corps of Engineers (COE) Concrete Research Division (CRD) C662 in lieu of ASTM C1567. If lithium nitrate admixture is used, it shall be nominal 30% ±0.5% weight lithium nitrate in water. If the expansion does not exceed 0.10% at 28 days, the proposed combined materials will be accepted. If the expansion is greater than 0.10% at 28 days, the aggregates will not be accepted unless adjustments to the combined materials mixture can reduce the expansion to less than 0.10% at 28 days, or new aggregates shall be evaluated and tested.

b. Fine aggregate. Grading of the fine aggregate, as delivered to the mixer, shall conform to the requirements of ASTM C33 and the parameters identified in the fine aggregate material requirements below. Fine aggregate material requirements and deleterious limits are shown in the table below.

Fine Aggregate Material Requirements		
Soundness of Aggregates by Use of Sodium Sulfate **or** Magnesium Sulfate	Loss after 5 cycles: 10% maximum using Sodium sulfate - or - 15% maximum using magnesium sulfate	ASTM C88
Sand Equivalent	[45] minimum	ASTM D2419
Fineness Modulus (FM)	2.50 ≤ FM ≤ 3.40	ASTM C136
Limits for Deleterious Substances in Fine Aggregate for Concrete		
Clay lumps and friable particles	1.0% maximum	ASTM C142
Coal and lignite	0.5% using a medium with a density of Sp. Gr. of 2.0	ASTM C123
Total Deleterious Material	1.0% maximum	

c. Coarse aggregate. The maximum size coarse aggregate shall be **1-1/2-inch.**

Aggregates delivered to the mixer shall be clean, hard, uncoated aggregates consisting of crushed stone, crushed or uncrushed gravel, air-cooled iron blast furnace slag, crushed recycled concrete pavement, or a combination. The aggregates shall have no known history of detrimental pavement staining. Steel blast furnace slag shall not be permitted. Coarse aggregate material requirements and deleterious limits are shown in the table below; washing may be required to meet aggregate requirements.

Coarse Aggregate Material Requirements

Material Test	Requirement	Standard
Resistance to Degradation	Loss: 40% maximum	ASTM C131
Soundness of Aggregates by Use of Sodium Sulfate **or** Magnesium Sulfate	Loss after 5 cycles: 12% maximum using Sodium sulfate - or - 18% maximum using magnesium sulfate	ASTM C88
Flat, Elongated, or Flat and Elongated Particles	8% maximum, by weight, of flat, elongated, or flat and elongated particles at 5:1 for any size group coarser than 3/8 (9.5 mm) sieve [1]	ASTM D4791
Bulk density of slag [2]	Weigh not less than 70 pounds per cubic foot (1.12 Mg/cubic meter)	ASTM C29

[1] A flat particle is one having a ratio of width to thickness greater than five (5); an elongated particle is one having a ratio of length to width greater than five (5).

[2] Only required if slag is specified.

The amount of deleterious material in the coarse aggregate shall not exceed the following limits:

Limits for Deleterious Substances in Coarse Aggregate

Deleterious material	ASTM	Percentage by Mass
Clay Lumps and friable particles	ASTM C142	1.0
Material finer than No. 200 sieve (75 µm)	ASTM C117	1.0[1]
Lightweight particles	ASTM C123 using a medium with a density of Sp. Gr. of 2.0	0.5
Chert[2] (less than 2.40 Sp Gr.)	ASTM C123 using a medium with a density of Sp. Gr. of 2.40)	[0.1][3]

[1] The limit for material finer than 75-µm is allowed to be increased to 1.5% for crushed aggregates consisting of dust of fracture that is essentially free from clay or shale. Test results supporting acceptance of increasing limit to 1.5% with statement indicating material is dust of fracture must be submitted with Concrete mix. Acceptable techniques to characterizing these fines include methylene blue adsorption or X-ray diffraction analysis.

[2] Chert and aggregates with less than 2.4 specific gravity.

[3] The limit for chert may be increased to 1.0 percent by mass in areas not subject to severe freeze and thaw.

d. Combined aggregate gradation. This specification is targeted for a combined aggregate gradation developed following the guidance presented in United States Air Force Engineering Technical Letter (ETL) 97-5: Proportioning Concrete Mixtures with Graded Aggregates for Rigid Airfield Pavements. Base the aggregate grading upon a combination of all the aggregates (coarse and fine) to be used for the mixture proportioning. Three aggregate sizes may be required to achieve an optimized combined gradation that will produce a workable concrete mixture for its intended use. Use aggregate gradations that produce concrete mixtures with well-graded or optimized aggregate combinations. The Contractor shall submit complete mixture information necessary to calculate the volumetric components of the mixture. The combined aggregate grading shall meet the following requirements:

(1) The materials selected and the proportions used shall be such that when the Coarseness Factor (CF) and the Workability Factor (WF) are plotted on a diagram as described in paragraph 501-2.1d(4) below, the point thus determined shall fall within the parallelogram described therein.

(2) The CF shall be determined from the following equation:

CF = (cumulative percent retained on the 3/8 in. (9.5 mm) sieve)(100) / (cumulative percent retained on the No. 8 (2.36 mm) sieve)

(3) The WF is defined as the percent passing the No. 8 (2.36 mm) sieve based on the combined gradation. However, WF shall be adjusted, upwards only, by 2.5 percentage points for each 94 pounds (42 kg) of cementitious material per cubic meter yard greater than 564 pounds per cubic yard (335 kg per cubic meter).

(4) A diagram shall be plotted using a rectangular scale with WF on the Y-axis with units from 20 (bottom) to 45 (top), and with CF on the X-axis with units from 80 (left side) to 30 (right side). On this diagram a parallelogram shall be plotted with corners at the following coordinates (CF-75, WF-28), (CF-75, WF-40), (CF-45, WF-32.5), and (CF-45, WF-44.5). If the point determined by the intersection of the computed CF and WF does not fall within the above parallelogram, the grading of each size of aggregate used and the proportions selected shall be changed as necessary. The point determined by the plotting of the CF

and WF may be adjusted during production ±3 WF and ±5 CF. Adjustments to gradation may not take the point outside of the parallelogram.

e. Contractors combined aggregate gradation. The Contractor shall submit their combined aggregate gradation using the following format:

Contractor's Combined Aggregate Gradation

Sieve Size	Contractor's Concrete mix Gradation (Percent passing by weight)
2 inch (50 mm)	
1-1/2 inch (37.5 mm)	
1 inch (25.0 mm)	
3/4 inch (19.0 mm)	
1/2 inch (12.5 mm)	
3/8 inch (9.5 mm)	
No. 4 (4.75 mm)	
No. 8 (2.36 mm)	
No. 16 (1.18 mm)	
No. 30 (600 µm)	
No. 50 (300 µm)	
No. 100 (150 µm)	

501-2.2 Cement. Cement shall conform to the requirements of **ASTM 150 Type I.**

501-2.3 Cementitious materials.

a. Fly ash. Fly ash shall meet the requirements of ASTM C618, with the exception of loss of ignition, where the maximum shall be less than 6%. Fly ash shall have a Calcium Oxide (CaO) content of less than 15% and a total alkali content less than 3% per ASTM C311. The Contractor shall furnish the previous three most recent, consecutive ASTM C618 reports for each source of fly ash proposed in the concrete mix, and shall furnish each additional report as they become available during the project. The reports can be used for acceptance or the material may be tested independently by the Resident Project Representative (RPR).

b. Slag cement (ground granulated blast furnace (GGBF)). Slag cement shall conform to ASTM C989, Grade 100 or Grade 120. Slag cement shall be used only at a rate between 25% and 55% of the total cementitious material by mass.

c. Raw or calcined natural pozzolan. Natural pozzolan shall be raw or calcined and conform to ASTM C618, Class N, including the optional requirements for uniformity and effectiveness in controlling Alkali-Silica reaction and shall have a loss on ignition not exceeding 6%. Class N pozzolan for use in mitigating Alkali-Silica Reactivity shall have a total available alkali content less than 3%.

501-2.4 Joint seal. The joint seal for the joints in the concrete pavement shall meet the requirements of **Item P-605** and shall be of the type specified in the plans.

501-2.5 Isolation joint filler. Premolded joint filler for isolation joints shall conform to the requirements of ASTM D1751 or ASTM D1752 and shall be where shown on the plans. The filler for each joint shall be furnished in a single piece for the full depth and width required for the joint, unless otherwise specified by the RPR. When the use of more than one piece is required for a joint, the abutting ends shall be fastened securely and held accurately to shape by stapling or other positive fastening means satisfactory to the RPR.

501-2.6 Steel reinforcement. Reinforcing shall consist of **Welded Wire Fabric** conforming to the requirements of **ASTM A1064** or **Bar Mats** conforming to the requirements of **ASTM A184 or A704**.

501-2.7 Dowel and tie bars. Dowel bars shall be plain steel bars conforming to ASTM A615 and shall be free from burring or other deformation restricting slippage in the concrete.

a. Dowel Bars. Before delivery to the construction site each dowel bar shall be epoxy coated per ASTM A1078, Type 1, with a coating thickness after curing greater than 10 mils. Patched ends are not required for Type 1 coated dowels. The dowels shall be coated with a bond-breaker recommended by the manufacturer. Dowel sleeves or inserts are not permitted. Grout retention rings shall be fully circular metal or plastic devices capable of supporting the dowel until the grout hardens.

b. Tie Bars. Tie bars shall be deformed steel bars and conform to the requirements of ASTM A615. Tie bars designated as Grade 60 in ASTM A615 or ASTM A706 shall be used for construction requiring bent bars.

501-2.8 Water. Water used in mixing or curing shall be potable. If water is taken from other sources considered non-potable, it shall meet the requirements of ASTM C1602.

501-2.9 Material for curing concrete. Curing materials shall conform to one of the following specifications:

a. Liquid membrane-forming compounds for curing concrete shall conform to the requirements of ASTM C309, Type 2, Class A, or Class B.

b. White polyethylene film for curing concrete shall conform to the requirements of ASTM C171.

c. White burlap-polyethylene sheeting for curing concrete shall conform to the requirements of ASTM C171.

d. Waterproof paper for curing concrete shall conform to the requirements of ASTM C171.

501-2.10 Admixtures. Admixtures shall conform to the following specifications:

a. Air-entraining admixtures. Air-entraining admixtures shall meet the requirements of ASTM C260 and shall consistently entrain the air content in the specified ranges under field conditions. The air-entraining agent and any water reducer admixture shall be compatible.

b. Water-reducing admixtures. Water-reducing admixture shall meet the requirements of ASTM C494, Type A, B, or D.

c. Other admixtures. The use of set retarding and set-accelerating admixtures shall be approved by the RPR prior to developing the concrete mix. Retarding admixtures shall meet the requirements of ASTM C494, Type A, B, or D and set-accelerating admixtures shall meet the requirements of ASTM C494, Type C. Calcium chloride and admixtures containing calcium chloride shall not be used.

d. Lithium Nitrate. The lithium admixture shall be a nominal 30% aqueous solution of Lithium Nitrate, with a density of 10 pounds/gallon (1.2 kg/L), and shall have the approximate chemical form as shown below:

Lithium Admixture

Constituent	Limit (Percent by Mass)
LiNO3 (Lithium Nitrate)	30 ±0.5
SO4 (Sulfate Ion)	0.1 (max)
Cl (Chloride Ion)	0.2 (max)
Na (Sodium Ion)	0.1 (max)
K (Potassium Ion)	0.1 (max)

The lithium nitrate admixture dispensing and mixing operations shall be verified and certified by the lithium manufacturer's representative.

501-2.11 Epoxy-resin. All epoxy-resin materials shall be two-component materials conforming to the requirements of ASTM C881, Class as appropriate for each application temperature to be encountered, except that in addition, the materials shall meet the following requirements:

a. Material for use for embedding dowels and anchor bolts shall be Type IV, Grade 3.

b. Material for use as patching materials for complete filling of spalls and other voids and for use in preparing epoxy resin mortar shall be Type III, Grade as approved.

c. Material for use for injecting cracks shall be Type IV, Grade 1.

d. Material for bonding freshly mixed Portland cement concrete or mortar or freshly mixed epoxy resin concrete or mortar to hardened concrete shall be Type V, Grade as approved.

501-2.12 Bond Breaker. Liquid membrane forming compound shall be in accordance with paragraph 501-2.9a.

CONCRETE MIX

501-3.1. General. No concrete shall be placed until an acceptable concrete mix has been submitted to the RPR for review and the RPR has taken appropriate action. The RPR's review shall not relieve the Contractor of the responsibility to select and proportion the materials to comply with this section.

501-3.2 Concrete Mix Laboratory. The laboratory used to develop the concrete mix shall be accredited in accordance with ASTM C1077. The laboratory accreditation must be current and listed on the accrediting authority's website. All test methods required for developing the concrete mix must be included in the lab accreditation. A copy of the laboratory's current accreditation and accredited test methods shall be submitted to the RPR prior to start of construction.

501-3.3 Concrete Mix Proportions. Develop the mix using the procedures contained in Portland Cement Association (PCA) publication, "Design and Control of Concrete Mixtures." Concrete shall be proportioned to achieve a 28-day Compressive strength that meets or exceeds the acceptance criteria contained in paragraph 501-6.6 for a compressive strength of **4,400 psi** per ASTM C39.

The minimum cementitious material shall be adequate to ensure a workable, durable mix. The minimum cementitious material (cement plus fly ash, or slag cement) shall be **470** pounds per cubic yard. The ratio of water to cementitious material, including free surface moisture on the aggregates but not including moisture absorbed by the aggregates shall be between 0.38 – 0.45 by weight.

Flexural strength test specimens shall be prepared in accordance with ASTM C192 and tested in accordance with ASTM C78. At the start of the project, the Contractor shall determine an allowable slump as determined by ASTM C143 not to exceed 2 inches (50 mm) for slip-form placement. For fixed-form placement, the slump shall not exceed 3 inches (75 mm). For hand placement, the slump shall not exceed 4 inches (100 mm).

When the flexural design strength in paragraph 501-3.3 is to be accepted on the basis of compressive strength, the following procedure establishes the correlation between compressive and flexural strength for the concrete mix. Each concrete mix will require a separate correlation.

Cylinders/Beams

a. Fabricate all beams and cylinders for each mixture from the same batch or blend of batches. Fabricate and cure all beams and cylinders in accordance with ASTM C192, using 6 × 6-inch (150 × 150 mm) steel beam forms and 6 × 12-inch (150 × 300 mm) single-use cylinder forms.

b. Cure test beams from each mixture for 3, 7, 14, and 28 day flexural tests; three (3) beams to be tested per age.

c. Cure test cylinders from each mixture for 3, 7, 14 and 28 day compressive strength tests; three (3) cylinders to be tested per age.

d. Test beams in accordance with ASTM C78, cylinders in accordance with ASTM C39.

e. Using the average strength for each age, plot all results on separate graphs for each w/c versus:

- 3-day flexural strength
- 7-day flexural strength
- 14-day flexural strength
- 28-day flexural strength
- 3-day compressive strength
- 7-day compressive strength
- 14-day compressive strength
- 28-day compressive strength

f. From the above expected strengths for the selected mixture determine the following Correlation Ratios:

(1) Ratio of the 14-day compressive strength of the selected mixture to the 28-day flexural strength of the mixture (for acceptance).

(2) Ratio of the 7-day compressive strength of the selected mixture to the 28-day flexural strength of the mixture (for Contractor QC control).

g. If there is a change in materials, additional mixture design studies shall be made using the new materials and new Correlation Ratios shall be determined.

h. No concrete pavement shall be placed until the Engineer has approved the Contractor's mixture proportions. The approved water-cementitious materials ratio shall not exceed the maximum value specified.

The results of the concrete mix shall include a statement giving the maximum nominal coarse aggregate size and the weights and volumes of each ingredient proportioned on a one cubic yard (meter) basis. Aggregate quantities shall be based on the mass in a saturated surface dry condition.

If a change in source(s) is made, or admixtures added or deleted from the mix, a new concrete mix must be submitted to the RPR for approval.

The RPR may request samples at any time for testing, prior to and during production, to verify the quality of the materials and to ensure conformance with the applicable specifications.

501-3.4 Concrete Mix submittal. The concrete mix shall be submitted to the RPR at least **30** days prior to the start of operations. The submitted concrete mix shall not be more than 180 days old and must use the materials to be used for production for the project. Production shall not begin until the concrete mix is approved in writing by the RPR.

Each of the submitted concrete mixes (i.e, slip form, side form machine finish and side form hand finish) shall be stamped or sealed by the responsible professional Engineer of the laboratory and shall include the following items and quantities as a minimum:

- Certified material test reports for aggregate in accordance with paragraph 501-2.1. Certified reports must include all tests required; reporting each test, test method, test result, and requirement specified (criteria).
- Combined aggregate gradations and analysis; and including plots of the fine aggregate fineness modulus.
- Reactivity Test Results.
- Coarse aggregate quality test results, including deleterious materials.
- Fine aggregate quality test results, including deleterious materials.
- Mill certificates for cement and supplemental cementitious materials.
- Certified test results for all admixtures, including Lithium Nitrate if applicable.
- Specified flexural strength, slump, and air content.
- Recommended proportions/volumes for proposed mixture and trial water-cementitious materials ratio, including actual slump and air content.
- Flexural and compressive strength summaries and plots, including all individual beam and cylinder breaks.
- Correlation ratios for acceptance testing and Contractor QC testing, when applicable.
- Historical record of test results documenting production standard deviation, when applicable.

501-3.5 Cementitious materials.

a. Fly ash. When fly ash is used as a partial replacement for cement, the replacement rate shall be determined from laboratory trial mixes, and shall be between 20 and 30% by weight of the total cementitious material. If fly ash is used in conjunction with slag cement the maximum replacement rate shall not exceed 10% by weight of total cementitious material.

b. Slag cement (ground granulated blast furnace (GGBF)). Slag cement may be used. The slag cement, or slag cement plus fly ash if both are used, may constitute between 25 to 55% of the total cementitious material by weight.

c. Raw or calcined natural pozzolan. Natural pozzolan may be used in the concrete mix. When pozzolan is used as a partial replacement for cement, the replacement rate shall be determined from laboratory trial mixes, and shall be between 20 and 30% by weight of the total cementitious material. If pozzolan is used in conjunction with slag cement the maximum replacement rate shall not exceed 10% by weight of total cementitious material.

501-3.6 Admixtures.

a. Air-entraining admixtures. Air-entraining admixture are to be added in such a manner that will ensure uniform distribution of the agent throughout the batch. The air content of freshly mixed air-entrained concrete shall be based upon trial mixes with the materials to be used in the work adjusted to produce concrete of the required plasticity and workability. The percentage of air in the mix shall be **2.5%.** Air content shall be determined by testing in accordance with ASTM C231 for gravel and stone coarse aggregate and ASTM C173 for slag and other highly porous coarse aggregate.

b. Water-reducing admixtures. Water-reducing admixtures shall be added to the mix in the manner recommended by the manufacturer and in the amount necessary to comply with the specification requirements. Tests shall be conducted with the materials to be used in the work, in accordance with ASTM C494.

c. Other admixtures. Set controlling, and other approved admixtures shall be added to the mix in the manner recommended by the manufacturer and in the amount necessary to comply with the specification requirements. Tests shall be conducted with the materials to be used in the work, in accordance with ASTM C494.

d. Lithium nitrate. Lithium nitrate shall be added to the mix in the manner recommended by the manufacturer and in the amount necessary to comply with the specification requirements in accordance with paragraph 501-2.10d.

CONSTRUCTION METHODS

501-4.1 Control Strip. The control strip(s) shall be to the next planned joint after the initial 250 feet (75 m) of each type of pavement construction (slip-form pilot lane, slip-form fill-in lane, or fixed form). The Contractor shall demonstrate, in the presence of the RPR, that the materials, concrete mix, equipment, construction processes, and quality control processes meet the requirements of the specifications. The concrete mixture shall be extruded from the paver meeting the edge slump tolerance and with little or no finishing. Pilot, fill-in, and fixed-form control strips will be accepted separately. Minor adjustments to the mix design may be required to place an acceptable control strip. The production mix will be the adjusted mix design used to place the acceptable control strip. Upon acceptance of the control strip by the RPR, the Contractor must use the same equipment, materials, and construction methods for the remainder of concrete paving. Any adjustments to processes or materials must be approved in advance by the RPR.

Acceptable control strips will meet edge slump tolerance and surface acceptable with little or no finishing, air content within action limits, strength equal or greater than requirements of P501-3.3. The control strip will be considered one lot for payment (no sublots required for control strip). Payment will only be made for an acceptable control strip in accordance with paragraph 501-8.1 using a lot pay factor equal to 100.

501-4.2 Equipment. The Contractor is responsible for the proper operation and maintenance of all equipment necessary for handling materials and performing all parts of the work to meet this specification.

a. Plant and equipment. The plant and mixing equipment shall conform to the requirements of ASTM C94 and/or ASTM C685. Each truck mixer shall have attached in a prominent place a manufacturer's nameplate showing the capacity of the drum in terms of volume of mixed concrete and the speed of rotation of the mixing drum or blades. The truck mixers shall be examined daily for changes in condition due to accumulation of hard concrete or mortar or wear of blades. The pickup and throwover blades shall be replaced when they have worn down 3/4 inch (19 mm) or more. The Contractor shall have a copy of the manufacturer's design on hand showing dimensions and arrangement of blades in reference to original height and depth.

Equipment for transferring and spreading concrete from the transporting equipment to the paving lane in front of the finishing equipment shall be provided. The equipment shall be specially manufactured, self-propelled transfer equipment which will accept the concrete outside the paving lane and will spread it evenly across the paving lane in front of the paver and strike off the surface evenly to a depth which permits the paver to operate efficiently.

b. Finishing equipment.

(1) Slip-form. The standard method of constructing concrete pavements shall be with an approved slip-form paving equipment designed and operated to spread, consolidate, screed, and finish the freshly placed concrete in one complete pass of the machine so that the end result is a dense and homogeneous pavement which is achieved with a minimum of hand finishing. The paver-finisher shall be a heavy duty, self-propelled machine designed specifically for paving and finishing high quality concrete pavements.

(2) Fixed-form. On projects requiring less than 10,000 cubic yards of concrete pavement or irregular areas at locations inaccessible to slip-form paving equipment, concrete pavement may be placed with equipment specifically designed for placement and finishing using stationary side forms. Methods and equipment shall be reviewed and accepted by the RPR. Hand screeding and float finishing may only be used on small irregular areas as allowed by the RPR.

c. Vibrators. Vibrator shall be the internal type. The rate of vibration of each vibrating unit shall be sufficient to consolidate the pavement without segregation or voids. The number, spacing, and frequency shall be as necessary to provide a dense and homogeneous pavement and meet the recommendations of American Concrete Institute (ACI) 309R, Guide for Consolidation of Concrete. Adequate power to operate all vibrators shall be available on the paver. The vibrators shall be automatically controlled so that they shall be stopped as forward motion ceases. The Contractor shall provide an electronic or mechanical means to monitor vibrator status. The checks on vibrator status shall occur a minimum of two times per day or when requested by the RPR.

Hand held vibrators may only be used in irregular areas and shall meet the recommendations of ACI 309R, Guide for Consolidation of Concrete.

d. Concrete saws. The Contractor shall provide sawing equipment adequate in number of units and power to complete the sawing to the required dimensions. The Contractor shall provide at least one standby saw in good working order and a supply of saw blades at the site of the work at all times during sawing operations.

e. Fixed forms. Straight side fixed forms shall be made of steel and shall be furnished in sections not less than 10 feet (3 m) in length. Forms shall be provided with adequate devices for secure settings so that when in place they will withstand, without visible spring or settlement, the impact and vibration of the consolidating and finishing equipment. Forms with battered top surfaces and bent, twisted or broken forms shall not be used. Built-up forms shall not be used, except as approved by the RPR. The top face of the form shall not vary from a true plane more than 1/8 inch (3 mm) in 10 feet (3 m), and the upstanding leg shall not vary more than 1/4 inch (6 mm). The forms shall contain provisions for locking the ends of abutting sections together tightly for secure setting. Wood forms may be used under special conditions, when approved by the RPR. The forms shall extend the full depth of the pavement section.

501-4.3 Form setting. Forms shall be set to line and grade as shown on the plans, sufficiently in advance of the concrete placement, to ensure continuous paving operation. Forms shall be set to withstand, without visible spring or settlement, the impact and vibration of the consolidating and finishing equipment. Forms shall be cleaned and oiled prior to the concrete placement.

501-4.4 Base surface preparation prior to placement. Any damage to the prepared base, subbase, and subgrade shall be corrected full depth by the Contractor prior to concrete placement. The underlying surface shall be entirely free of frost when concrete is placed. The prepared grade shall be moistened with water, without saturating, immediately ahead of concrete placement to prevent rapid loss of moisture from concrete. Bond breaker shall be applied in accordance with 501-2.12.

501-4.5 Handling, measuring, and batching material. Aggregate stockpiles shall be constructed and managed in such a manner that prevents segregation and intermixing of deleterious materials. Aggregates from different sources shall be stockpiled, weighed and batched separately at the concrete batch plant. Aggregates that have become segregated or mixed with earth or foreign material shall not be used. All aggregates produced or handled by hydraulic methods, and washed aggregates, shall be stockpiled or binned for draining at least 12 hours before being batched. Store and maintain all aggregates at a uniform moisture content prior to use. A continuous supply of materials shall be provided to the work to ensure continuous placement.

501-4.6 Mixing concrete. The concrete may be mixed at the work site, in a central mix plant or in truck mixers. The mixer shall be of an approved type and capacity. Mixing time shall be measured from the time all materials are placed into the drum until the drum is emptied into the truck. All concrete shall be mixed and delivered to the site in accordance with the requirements of ASTM C94 or ASTM C685.

Mixed concrete from the central mixing plant shall be transported in truck mixers, truck agitators, or non-agitating trucks. The elapsed time from the addition of cementitious material to the mix until the concrete is discharged from the truck should not exceed [30] minutes when the concrete is hauled in non-agitating trucks, nor 90 minutes when the concrete is hauled in truck mixers or truck agitators. In no case shall the temperature of the concrete when placed exceed 90°F (32°C). Retempering concrete by adding water or by other means will not be permitted. With transit mixers additional water may be added to the batch materials and additional mixing performed to increase the slump to meet the specified requirements provided the addition of water

is performed within 45 minutes after the initial mixing operations and provided the water/cementitious ratio specified is not exceeded.

501-4.7 Weather Limitations on mixing and placing. No concrete shall be mixed, placed, or finished when the natural light is insufficient, unless an adequate and approved artificial lighting system is operated.

a. Cold weather. Unless authorized in writing by the RPR, mixing and concreting operations shall be discontinued when a descending air temperature in the shade and away from artificial heat reaches 40°F (4°C) and shall not be resumed until an ascending air temperature in the shade and away from artificial heat reaches 35°F (2°C).

The aggregate shall be free of ice, snow, and frozen lumps before entering the mixer. The temperature of the mixed concrete shall not be less than 50°F (10°C) at the time of placement. Concrete shall not be placed on frozen material nor shall frozen aggregates be used in the concrete.

When concreting is authorized during cold weather, water and/or the aggregates may be heated to not more than 150°F (66°C). The apparatus used shall heat the mass uniformly and shall be arranged to preclude the possible occurrence of overheated areas which might be detrimental to the materials.

Curing during cold weather shall be in accordance with paragraph 501-4.13d.

b. Hot weather. During periods of hot weather when the maximum daily air temperature exceeds 85°F (30°C), the following precautions shall be taken.

The forms and/or the underlying surface shall be sprinkled with water immediately before placing the concrete. The concrete shall be placed at the coolest temperature practicable, and in no case shall the temperature of the concrete when placed exceed 90°F (32°C). The aggregates and/or mixing water shall be cooled as necessary to maintain the concrete temperature at or not more than the specified maximum.

The concrete placement shall be protected from exceeding an evaporation rate of 0.2 psf (0.98 kg/m^2 per hour) per hour. When conditions are such that problems with plastic cracking can be expected, and particularly if any plastic cracking begins to occur, the Contractor shall immediately take such additional measures as necessary to protect the concrete surface. If the Contractor's measures are not effective in preventing plastic cracking, paving operations shall be immediately stopped.

Curing during hot weather shall be in accordance with paragraph 501-4.13e.

c. Temperature management program. Prior to the start of paving operation for each day of paving, the Contractor shall provide the RPR with a Temperature Management Program for the concrete to be placed to assure that uncontrolled cracking is avoided. (Federal Highway Administration HIPERPAV 3 is one example of a temperature management program.) As a minimum, the program shall address the following items:

(1) Anticipated tensile strains in the fresh concrete as related to heating and cooling of the concrete material.

(2) Anticipated weather conditions such as ambient temperatures, wind velocity, and relative humidity; and anticipated evaporation rate using Figure 19-9, PCA, Design and Control of Concrete Mixtures.

(3) Anticipated timing of initial sawing of joint.

(4) Anticipated number and type of saws to be used.

d. **Rain.** The Contractor shall have available materials for the protection of the concrete during inclement weather. Such protective materials shall consist of rolled polyethylene sheeting at least 4 mils (0.1 mm) thick of sufficient length and width to cover the plastic concrete slab and any edges. The sheeting may be mounted on either the paver or a separate movable bridge from which it can be unrolled without dragging over the plastic concrete surface. When rain appears imminent, all paving operations shall stop and all available personnel shall begin covering the surface of the unhardened concrete with the protective covering.

501-4.8 Concrete Placement. At any point in concrete conveyance, the free vertical drop of the concrete from one point to another or to the underlying surface shall not exceed 3 feet (1 m). The finished concrete product must be dense and homogeneous, without segregation and conforming to the standards in this specification. Backhoes and grading equipment shall not be used to distribute the concrete in front of the paver. Front end loaders will not be used. All concrete shall be consolidated without voids or segregation, including under and around all load-transfer devices, joint assembly units, and other features embedded in the pavement. Hauling equipment or other mechanical equipment can be permitted on adjoining previously constructed pavement when the concrete strength reaches **a compressive strength of 3,100 psi (21.4 MPa),** based on the average of four field cured specimens per 2,000 cubic yards (1,530 cubic meters) of concrete placed. The Contractor must determine that the above minimum strengths are adequate to protection the pavement from overloads due to the construction equipment proposed for the project.

a. Slip-form construction. The concrete shall be distributed uniformly into final position by a self-propelled slip-form paver without delay. The alignment and elevation of the paver shall be regulated from outside reference lines established for this purpose. The paver shall vibrate the concrete for the full width and depth of the strip of pavement being placed and the vibration shall be adequate to provide a consistency of concrete that will stand normal to the surface with sharp well-defined edges. The sliding forms shall be rigidly held together laterally to prevent spreading of the forms. The plastic concrete shall be effectively consolidated by internal vibration with transverse vibrating units for the full width of the pavement and/or a series of equally placed longitudinal vibrating units. The space from the outer edge of the pavement to longitudinal unit shall not exceed 9 inches (23 cm) for slipform and at the end of the dowels for the fill-in lanes. The spacing of internal units shall be uniform and shall not exceed 18 inches (0.5 m).

The term internal vibration means vibrating units located within the specified thickness of pavement section.

The rate of vibration of each vibrating unit shall be sufficient to consolidate the pavement without, segregation, voids, or vibrator trails and the amplitude of vibration shall be sufficient to be perceptible on the surface of the concrete along the entire length of the vibrating unit and for a distance of at least one foot (30 cm). The frequency of vibration or amplitude should be adjusted proportionately with the rate of travel to result in a uniform density and air content. The paving machine shall be equipped with a tachometer or other suitable device for measuring and indicating the actual frequency of vibrations.

The concrete shall be held at a uniform consistency. The slip-form paver shall be operated with as nearly a continuous forward movement as possible and all operations of mixing, delivering, and spreading concrete shall be coordinated to provide uniform progress with stopping and starting of the paver held to a minimum. If for any reason, it is necessary to stop the forward movement of the paver, the vibratory and tamping elements shall also be stopped

immediately. No tractive force shall be applied to the machine, except that which is controlled from the machine.

When concrete is being placed adjacent to an existing pavement, that part of the equipment which is supported on the existing pavement shall be equipped with protective pads on crawler tracks or rubber-tired wheels on which the bearing surface is offset to run a sufficient distance from the edge of the pavement to avoid breaking the pavement edge.

Not more than 15% of the total free edge of each 500-foot (150 m) segment of pavement, or fraction thereof, shall have an edge slump exceeding 1/4 inch (6 mm), and none of the free edge of the pavement shall have an edge slump exceeding 3/8 inch (9 mm). (The total free edge of 500 feet (150 m) of pavement will be considered the cumulative total linear measurement of pavement edge originally constructed as nonadjacent to any existing pavement; that is, 500 feet (150 m) of paving lane originally constructed as a separate lane will have 1,000 feet (300 m) of free edge, 500 feet (150 m) of fill-in lane will have no free edge, etc.). The area affected by the downward movement of the concrete along the pavement edge shall be limited to not more than 18 inches (0.5 m) from the edge.

When excessive edge slump cannot be corrected before the concrete has hardened, the area with excessive edge slump will be removed the full width of the slip form lane and replaced at the expense of the Contractor as directed by the RPR.

b. Fixed-form construction. Forms shall be drilled in advance of being placed to line and grade to accommodate tie bars / dowel bars where these are specified.

Immediately in advance of placing concrete and after all subbase operations are completed, side forms shall be trued and maintained to the required line and grade for a distance sufficient to prevent delay in placing.

Side forms shall remain in place at least 12 hours after the concrete has been placed, and in all cases until the edge of the pavement no longer requires the protection of the forms. Curing compound shall be applied to the concrete immediately after the forms have been removed.

Side forms shall be thoroughly cleaned and coated with a release agent each time they are used and before concrete is placed against them.

Concrete shall be spread, screed, shaped and consolidated by one or more self-propelled machines. These machines shall uniformly distribute and consolidate concrete without segregation so that the completed pavement will conform to the required cross-section with a minimum of handwork.

The number and capacity of machines furnished shall be adequate to perform the work required at a rate equal to that of concrete delivery. The equipment must be specifically designed for placement and finishing using stationary side forms. Methods and equipment shall be reviewed and accepted by the RPR.

Concrete for the full paving width shall be effectively consolidated by internal vibrators. The rate of vibration of each vibrating unit shall be sufficient to consolidate the pavement without segregation, voids, or leaving vibrator trails.

Power to vibrators shall be connected so that vibration ceases when forward or backward motion of the machine is stopped.

c. Consolidation. Concrete shall be consolidated with the specified type of lane-spanning, gang-mounted, mechanical, immersion type vibrating equipment mounted in front of the paver, supplemented, in rare instances as specified, by hand-operated vibrators. The vibrators shall be inserted into the concrete to a depth that will provide the best full-depth

consolidation but not closer to the underlying material than 2 inches (50 mm). Vibrators shall not be used to transport or spread the concrete. For each paving train, at least one additional vibrator spud, or sufficient parts for rapid replacement and repair of vibrators shall be maintained at the paving site at all times. Any evidence of inadequate consolidation (honeycomb along the edges, large air pockets, or any other evidence) or over-consolidation (vibrator trails, segregation, or any other evidence) shall require the immediate stopping of the paving operation and adjustment of the equipment or procedures as approved by the RPR.

If a lack of consolidation of the hardened concrete is suspected by the RPR, referee testing may be required. Referee testing of hardened concrete will be performed by the RPR by cutting cores from the finished pavement after a minimum of 24 hours curing. The RPR shall visually examine the cores for evidence of lack of consolidation. Density determinations will be made by the RPR based on the water content of the core as taken. ASTM C642 shall be used for the determination of core density in the saturated-surface dry condition. When required, referee cores will be taken at the minimum rate of one for each 500 cubic yards (382 m^2) of pavement, or fraction. The Contractor shall be responsible for all referee testing cost if they fail to meet the required density.

The average density of the cores shall be at least 97% of the original concrete mix density, with no cores having a density of less than 96% of the original concrete mix density. Failure to meet the referee tests will be considered evidence that the minimum requirements for vibration are inadequate for the job conditions. Additional vibrating units or other means of increasing the effect of vibration shall be employed so that the density of the hardened concrete conforms to the above requirements.

501-4.9 Strike-off of concrete and placement of reinforcement. Following the placing of the concrete, it shall be struck off to conform to the cross-section shown on the plans and to an elevation that when the concrete is properly consolidated and finished, the surface of the pavement shall be at the elevation shown on the plans. When reinforced concrete pavement is placed in two layers, the bottom layer shall be struck off to such length and depth that the sheet of reinforcing steel fabric or bar mat may be laid full length on the concrete in its final position without further manipulation. The reinforcement shall then be placed directly upon the concrete, after which the top layer of the concrete shall be placed, struck off, and screed. If any portion of the bottom layer of concrete has been placed more than 30 minutes without being covered with the top layer or if initial set has taken place, it shall be removed and replaced with freshly mixed concrete at the Contractor's expense. When reinforced concrete is placed in one layer, the reinforcement may be positioned in advance of concrete placement or it may be placed in plastic concrete by mechanical or vibratory means after spreading.

Reinforcing steel, at the time concrete is placed, shall be free of mud, oil, or other organic matter that may adversely affect or reduce bond. Reinforcing steel with rust, mill scale or a combination of both will be considered satisfactory, provided the minimum dimensions, weight, and tensile properties of a hand wire-brushed test specimen are not less than the applicable ASTM specification requirements.

501-4.10 Joints. Joints shall be constructed as shown on the plans and in accordance with these requirements. All joints shall be constructed with their faces perpendicular to the surface of the pavement and finished or edged as shown on the plans. Joints shall not vary more than 1/2-inch (12 mm) from their designated position and shall be true to line with not more than 1/4-inch (6 mm) variation in 10 feet (3 m). The surface across the joints shall be tested with a 12-foot (3 m) straightedge as the joints are finished and any irregularities in excess of 1/4 inch (6 mm) shall be corrected before the concrete has hardened. All joints shall be so prepared, finished, or cut to provide a groove of uniform width and depth as shown on the plans.

a. Construction. Longitudinal construction joints shall be slip-formed or formed against side forms as shown in the plans.

Transverse construction joints shall be installed at the end of each day's placing operations and at any other points within a paving lane when concrete placement is interrupted for more than 30 minutes or it appears that the concrete will obtain its initial set before fresh concrete arrives. The installation of the joint shall be located at a planned contraction or expansion joint. If placing of the concrete is stopped, the Contractor shall remove the excess concrete back to the previous planned joint.

b. Contraction. Contraction joints shall be installed at the locations and spacing as shown on the plans. Contraction joints shall be installed to the dimensions required by forming a groove or cleft in the top of the slab while the concrete is still plastic or by sawing a groove into the concrete surface after the concrete has hardened. When the groove is formed in plastic concrete the sides of the grooves shall be finished even and smooth with an edging tool. If an insert material is used, the installation and edge finish shall be according to the manufacturer's instructions. The groove shall be finished or cut clean so that spalling will be avoided at intersections with other joints. Grooving or sawing shall produce a slot at least 1/8 inch (3 mm) wide and to the depth shown on the plans.

c. Isolation (expansion). Isolation joints shall be installed as shown on the plans. The premolded filler of the thickness as shown on the plans, shall extend for the full depth and width of the slab at the joint. The filler shall be fastened uniformly along the hardened joint face with no buckling or debris between the filler and the concrete interface, including a temporary filler for the sealant reservoir at the top of the slab. The edges of the joint shall be finished and tooled while the concrete is still plastic

d. Dowels and Tie Bars for Joints

(1) Tie bars. Tie bars shall consist of deformed bars installed in joints as shown on the plans. Tie bars shall be placed at right angles to the centerline of the concrete slab and shall be spaced at intervals shown on the plans. They shall be held in position parallel to the pavement surface and in the middle of the slab depth and within the tolerances in paragraph 501-4.10(f.). When tie bars extend into an unpaved lane, they may be bent against the form at longitudinal construction joints, unless threaded bolt or other assembled tie bars are specified. Tie bars shall not be painted, greased, or enclosed in sleeves. When slip-form operations call for tie bars, two-piece hook bolts can be installed.

(2) Dowel bars. Dowel bars shall be placed across joints in the proper horizontal and vertical alignment as shown on the plans. The dowels shall be coated with a bond-breaker or other lubricant recommended by the manufacturer and approved by the RPR. Dowels bars at longitudinal construction joints shall be bonded in drilled holes.

(3) Placing dowels and tie bars. Horizontal spacing of dowels shall be within a tolerance of ±3/4 inch (19 mm). The vertical location on the face of the slab shall be within a tolerance of ±1/2 inch (12 mm). The method used to install dowels shall ensure that the horizontal and vertical alignment will not be greater than 1/4 inch per feet (6 mm per 0.3 m), except for those across the crown or other grade change joints. Dowels across crowns and other joints at grade changes shall be measured to a level surface. Horizontal alignment shall be checked perpendicular to the joint edge. The portion of each dowel intended to move within the concrete or expansion cap shall be wiped clean and coated with a thin, even film of lubricating oil or light grease before the concrete is placed. Dowels shall be installed as specified in the following subparagraphs.

Dowels and tie bars shall not be placed closer than 0.6 times the dowel bar or tie bar length to the planned joint line. If the last regularly spaced longitudinal dowel and/or tie bar is closer than that dimension, it shall be moved away from the joint to a location 0.6 times the dowel bar and/or tie bar length, but not closer than 6 inches (150 mm) to its nearest neighbor.

(a) Contraction joints. Dowels and tie bars in longitudinal and transverse contraction joints within the paving lane shall be held securely in place by means of rigid metal frames or basket assemblies of an approved type. The basket assemblies shall be held securely in the proper location by means of suitable pins or anchors. Do not cut or crimp the dowel basket tie wires.

At the Contractor's option, dowels and tie bars in contraction joints may be installed by insertion into the plastic concrete using approved equipment and procedures per the paver manufacturer's design. Approval of installation methods will be based on the results of the control strip showing that the dowels and tie bars are installed within specified tolerances as verified by cores or non-destructive rebar location devices approved by the RPR.

(b) Construction joints. Install dowels and tie bars by the cast-in- place or the drill-and-dowel method. Installation by removing and replacing in preformed holes will not be permitted. Dowels and tie bars shall be prepared and placed across joints where indicated, correctly aligned, and securely held in the proper horizontal and vertical position during placing and finishing operations, by means of devices fastened to the forms.

(c) Joints in hardened concrete. Install dowels in hardened concrete by bonding the dowels into holes drilled into the concrete. The concrete shall have cured for seven (7) days or reached a minimum **compressive strength of 3100 psi ((21.4 MPa)**before drilling begins. Holes 1/8 inch (3 mm) greater in diameter than the dowels shall be drilled into the hardened concrete using rotary-core drills. Rotary-percussion drills may be used, provided that excessive spalling does not occur. Spalling beyond the limits of the grout retention ring will require modification of the equipment and operation. Depth of dowel hole shall be within a tolerance of ±1/2 inch (12 mm) of the dimension shown on the drawings. On completion of the drilling operation, the dowel hole shall be blown out with oil-free, compressed air. Dowels shall be bonded in the drilled holes using epoxy resin. Epoxy resin shall be injected at the back of the hole before installing the dowel and extruded to the collar during insertion of the dowel so as to completely fill the void around the dowel. Application by buttering the dowel will not be permitted. The dowels shall be held in alignment at the collar of the hole by means of a suitable metal or plastic grout retention ring fitted around the dowel.

e. Sawing of joints. Sawing shall commence, without regard to day or night, as soon as the concrete has hardened sufficiently to permit cutting without chipping, spalling, or tearing and before uncontrolled shrinkage cracking of the pavement occurs and shall continue without interruption until all joints have been sawn. All slurry and debris produced in the sawing of joints shall be removed by vacuuming and washing. Curing compound or system shall be reapplied in the initial saw-cut and maintained for the remaining cure period.

Joints shall be cut in locations as shown on the plans. The initial joint cut shall be a minimum 1/8 inch (3 mm) wide and to the depth shown on the plans. Prior to placement of joint sealant or seals, the top of the joint shall be widened by sawing as shown on the plans.

501-4.11 Finishing. Finishing operations shall be a continuing part of placing operations starting immediately behind the strike-off of the paver. Initial finishing shall be provided by the transverse screed or extrusion plate. The sequence of operations shall be transverse finishing, longitudinal machine floating if used, straightedge finishing, edging of joints, and then texturing. Finishing shall be by the machine method. The hand method shall be used only on isolated areas of odd slab widths or shapes and in the event of a breakdown of the mechanical finishing equipment. Supplemental hand finishing for machine finished pavement shall be kept to an absolute minimum. Any machine finishing operation which requires appreciable hand finishing, other than a moderate amount of straightedge finishing, shall be immediately stopped and proper adjustments made or the equipment replaced. Equipment, mixture, and/or procedures which produce more than 1/4 inch (6 mm) of mortar-rich surface shall be immediately modified as necessary to eliminate this condition or operations shall cease. Compensation shall be made for surging behind the screeds or extrusion plate and settlement during hardening and care shall be taken to ensure that paving and finishing machines are properly adjusted so that the finished surface of the concrete (not just the cutting edges of the screeds) will be at the required line and grade. Finishing equipment and tools shall be maintained clean and in an approved condition. At no time shall water be added to the surface of the slab with the finishing equipment or tools, or in any other way. Fog (mist) sprays or other surface applied finishing aids specified to prevent plastic shrinkage cracking, approved by the RPR, may be used in accordance with the manufacturers requirements.

a. Machine finishing with slipform pavers. The slipform paver shall be operated so that only a very minimum of additional finishing work is required to produce pavement surfaces and edges meeting the specified tolerances. Any equipment or procedure that fails to meet these specified requirements shall immediately be replaced or modified as necessary. A self-propelled non-rotating pipe float may be used while the concrete is still plastic, to remove minor irregularities and score marks. Only one pass of the pipe float shall be allowed. Equipment, mixture, and/or procedures which produce more than 1/4 inch (6 mm) of mortar-rich surface shall be immediately modified as necessary to eliminate this condition or operations shall cease. Remove excessive slurry from the surface with a cutting straightedge and wipe off the edge. Any slurry which does run down the vertical edges shall be immediately removed by hand, using stiff brushes or scrapers. No slurry, concrete or concrete mortar shall be used to build up along the edges of the pavement to compensate for excessive edge slump, either while the concrete is plastic or after it hardens.

b. Machine finishing with fixed forms. The machine shall be designed to straddle the forms and shall be operated to screed and consolidate the concrete. Machines that cause displacement of the forms shall be replaced. The machine shall make only one pass over each area of pavement. If the equipment and procedures do not produce a surface of uniform texture, true to grade, in one pass, the operation shall be immediately stopped and the equipment, mixture, and procedures adjusted as necessary.

c. Other types of finishing equipment. Clary screeds, other rotating tube floats, or bridge deck finishers are not allowed on mainline paving, but may be allowed on irregular or odd-shaped slabs, and near buildings or trench drains, subject to the RPR's approval.

Bridge deck finishers shall have a minimum operating weight of 7500 pounds (3400 kg) and shall have a transversely operating carriage containing a knock-down auger and a minimum

of two immersion vibrators. Vibrating screeds or pans shall be used only for isolated slabs where hand finishing is permitted as specified, and only where specifically approved.

d. Hand finishing. Hand finishing methods will not be permitted, except under the following conditions: (1) in the event of breakdown of the mechanical equipment, hand methods may be used to finish the concrete already deposited on the grade and (2) in areas of narrow widths or of irregular dimensions where operation of the mechanical equipment is impractical.

e. Straightedge testing and surface correction. After the pavement has been struck off and while the concrete is still plastic, it shall be tested for trueness with a 12-foot (3.7-m) finishing straightedge swung from handles capable of spanning at least one-half the width of the slab. The straightedge shall be held in contact with the surface in successive positions parallel to the centerline and the whole area gone over from one side of the slab to the other, as necessary. Advancing shall be in successive stages of not more than one-half the length of the straightedge. Any excess water and laitance in excess of 1/8 inch (3 mm) thick shall be removed from the surface of the pavement and wasted. Any depressions shall be immediately filled with freshly mixed concrete, struck off, consolidated, and refinished. High areas shall be cut down and refinished. Special attention shall be given to assure that the surface across joints meets the smoothness requirements. Straightedge testing and surface corrections shall continue until the entire surface is found to be free from observable departures from the straightedge and until the slab conforms to the required grade and cross-section. The use of long-handled wood floats shall be confined to a minimum; they may be used only in emergencies and in areas not accessible to finishing equipment.

501-4.12 Surface texture. The surface of the pavement shall be finished as designated below for all newly constructed concrete pavements. It is important that the texturing equipment not tear or unduly roughen the pavement surface during the operation. The texture shall be uniform in appearance and approximately 1/16 inch (2 mm) in depth. Any imperfections resulting from the texturing operation shall be corrected to the satisfaction of the RPR.

a. Brush or broom finish. Shall be applied when the water sheen has practically disappeared. The equipment shall operate transversely across the pavement surface.

b. Burlap drag finish. Burlap, at least 15 ounces per square yard (555 grams per square meter), will typically produce acceptable texture. To obtain a textured surface, the transverse threads of the burlap shall be removed approximately one foot (30 cm) from the trailing edge. A heavy buildup of grout on the burlap threads produces the desired wide sweeping longitudinal striations on the pavement surface.

c. Artificial turf finish. Shall be applied by dragging the surface of the pavement in the direction of concrete placement with an approved full-width drag made with artificial turf. The leading transverse edge of the artificial turf drag will be securely fastened to a lightweight pole on a traveling bridge. At least 2 feet (60 cm) of the artificial turf shall be in contact with the concrete surface during dragging operations. Approval of the artificial turf will be done only after it has been demonstrated by the Contractor to provide a satisfactory texture. One type that has provided satisfactory texture consists of 7,200 approximately 0.85-inch-long polyethylene turf blades per square foot.

501-4.13 Curing. Immediately after finishing operations are completed and bleed water is gone from the surface, all exposed surfaces of the newly placed concrete shall be cured for a 7-day cure period in accordance with one of the methods below. Failure to provide sufficient cover material of whatever kind the Contractor may elect to use, or lack of water to adequately take care

of both curing and other requirements, shall be cause for immediate suspension of concreting operations. The concrete shall not be left exposed for more than 1/2 hour during the curing period.

When a two-saw-cut method is used to construct the contraction joint, the curing compound shall be applied to the saw-cut immediately after the initial cut has been made. The sealant reservoir shall not be sawed until after the curing period has been completed. When the one cut method is used to construct the contraction joint, the joint shall be cured with wet rope, wet rags, or wet blankets. The rags, ropes, or blankets shall be kept moist for the duration of the curing period.

a. Impervious membrane method. Curing with liquid membrane compounds should not occur until bleed and surface moisture has evaporated. All exposed surfaces of the pavement shall be sprayed uniformly with white pigmented curing compound immediately after the finishing of the surface and before the set of the concrete has taken place. The curing compound shall not be applied during rainfall. Curing compound shall be applied by mechanical sprayers under pressure at the rate of one gallon (4 liters) to not more than 150 square feet (14 sq m). The spraying equipment shall be of the fully atomizing type equipped with a tank agitator. At the time of use, the compound shall be in a thoroughly mixed condition with the pigment uniformly dispersed throughout the vehicle. During application, the compound shall be stirred continuously by mechanical means. Hand spraying of odd widths or shapes and concrete surfaces exposed by the removal of forms will be permitted. When hand spraying is approved by the RPR, a double application rate shall be used to ensure coverage. Should the film become damaged from any cause, including sawing operations, within the required curing period, the damaged portions shall be repaired immediately with additional compound or other approved means. Upon removal of side forms, the sides of the exposed slabs shall be protected immediately to provide a curing treatment equal to that provided for the surface.

b. White burlap-polyethylene sheets. The surface of the pavement shall be entirely covered with the sheeting. The sheeting used shall be such length (or width) that it will extend at least twice the thickness of the pavement beyond the edges of the slab. The sheeting shall be placed so that the entire surface and both edges of the slab are completely covered. The sheeting shall be placed and weighted to remain in contact with the surface covered, and the covering shall be maintained fully saturated and in position for seven (7) days after the concrete has been placed.

c. Water method. The entire area shall be covered with burlap or other water absorbing material. The material shall be of sufficient thickness to retain water for adequate curing without excessive runoff. The material shall be kept wet at all times and maintained for seven (7) days. When the forms are stripped, the vertical walls shall also be kept moist. It shall be the responsibility of the Contractor to prevent ponding of the curing water on the subbase.

d. Concrete protection for cold weather. Maintain the concrete at a temperature of at least 50°F (10°C) for a period of 72 hours after placing and at a temperature above freezing for the remainder of the 7-day curing period. The Contractor shall be responsible for the quality and strength of the concrete placed during cold weather; and any concrete damaged shall be removed and replaced at the Contractor's expense.

e. Concrete protection for hot weather. Concrete should be continuous moisture cured for the entire curing period and shall commence as soon as the surfaces are finished and continue for at least 24 hours. However, if moisture curing is not practical beyond 24 hours, the concrete surface shall be protected from drying with application of a liquid membrane-forming curing compound while the surfaces are still damp. Other curing methods may be approved by the RPR.

501-4.14 Removing forms. Unless otherwise specified, forms shall not be removed from freshly placed concrete until it has hardened sufficiently to permit removal without chipping, spalling, or tearing. After the forms have been removed, the sides of the slab shall be cured in accordance with paragraph 501-4.13.

If honeycombed areas are evident when the forms are removed, materials, placement, and consolidation methods must be reviewed and appropriate adjustments made to assure adequate consolidation at the edges of future concrete placements. Honeycombed areas that extend into the slab less than approximately 1 inch (25 mm), shall be repaired with an approved grout, as directed by the RPR. Honeycombed areas that extend into the slab greater than a depth of 1 inch (25 mm) shall be considered as defective work and shall be removed and replaced in accordance with paragraph 501-4.19.

501-4.15 Saw-cut grooving. If shown on the plans, grooved surfaces shall be provided in accordance with the requirements of Item P-621.

501-4.16 Sealing joints. The joints in the pavement shall be sealed in accordance with Item **P-605.**

501-4.17 Protection of pavement. The Contractor shall protect the pavement and its appurtenances against both public traffic and traffic caused by the Contractor's employees and agents until accepted by the RPR. This shall include watchmen to direct traffic and the erection and maintenance of warning signs, lights, pavement bridges, crossovers, and protection of unsealed joints from intrusion of foreign material, etc. Any damage to the pavement occurring prior to final acceptance shall be repaired or the pavement replaced at the Contractor's expense.

Aggregates, rubble, or other similar construction materials shall not be placed on airfield pavements. Traffic shall be excluded from the new pavement by erecting and maintaining barricades and signs until the concrete is at least seven (7) days old, or for a longer period if directed by the RPR.

In paving intermediate lanes between newly paved pilot lanes, operation of the hauling and paving equipment will be permitted on the new pavement after the pavement has been cured for seven (7) days, the joints are protected, the concrete has attained a minimum field cured flexural strength of [450 psi (3100 kPa)], and the slab edge is protected.

All new and existing pavement carrying construction traffic or equipment shall be kept clean and spillage of concrete and other materials shall be cleaned up immediately.

Damaged pavements shall be removed and replaced at the Contractor's expense. Slabs shall be removed to the full depth, width, and length of the slab.

501-4.18 Opening to construction traffic. The pavement shall not be opened to traffic until test specimens molded and cured in accordance with ASTM C31 have **compressive strength of 3100 psi (21.4 MPa).** If such tests are not conducted, the pavement shall not be opened to traffic until 14 days after the concrete was placed. Prior to opening the pavement to construction traffic, all joints shall either be sealed or protected from damage to the joint edge and intrusion of foreign materials into the joint. As a minimum, backer rod or tape may be used to protect the joints from foreign matter intrusion.

501-4.19 Repair, removal, or replacement of slabs. New pavement slabs that are broken or contain cracks or are otherwise defective or unacceptable as defined by acceptance criteria in paragraph 501-6.6 shall be removed and replaced or repaired, as directed by the RPR, at the Contractor's expense. Spalls along joints shall be repaired as specified. Removal of partial slabs is not permitted. Removal and replacement shall be full depth, shall be full width of the slab, and the limit of removal shall be normal to the paving lane and to each original transverse joint. The

RPR will determine whether cracks extend full depth of the pavement and may require cores to be drilled on the crack to determine depth of cracking. Such cores shall be have a diameter of 2 inches (50 mm) to 4 inches (100 mm), shall be drilled by the Contractor and shall be filled by the Contractor with a well consolidated concrete mixture bonded to the walls of the hole with a bonding agent, using approved procedures. Drilling of cores and refilling holes shall be at no expense to the Owner. Repair of cracks as described in this section shall not be allowed if in the opinion of the RPR the overall condition of the pavement indicates that such repair is unlikely to achieve an acceptable and durable finished pavement. No repair of cracks shall be allowed in any panel that demonstrates segregated aggregate with an absence of coarse aggregate in the upper 1/8 inch (3 mm) of the pavement surface.

a. Shrinkage cracks. Shrinkage cracks which do not exceed one-third of the pavement depth shall be cleaned and either high molecular weight methacrylate (HMWM) applied; or epoxy resin (Type IV, Grade 1) pressure injected using procedures recommended by the manufacturer and approved by the RPR. Sandblasting of the surface may be required following the application of HMWM to restore skid resistance. Care shall be taken to ensure that the crack is not widened during epoxy resin injection. All epoxy resin injection shall take place in the presence of the RPR. Shrinkage cracks which exceed one-third the pavement depth shall be treated as full depth cracks in accordance with paragraphs 501-4.19b and 501-19c.

b. Slabs with cracks through interior areas. Interior area is defined as that area more than 6 inches (150 mm) from either adjacent original transverse joint. The full slab shall be removed and replaced at no cost to the Owner, when there are any full depth cracks, or cracks greater than one-third the pavement depth, that extend into the interior area.

c. Cracks close to and parallel to joints. All full-depth cracks within 6 inches (150 mm) either side of the joint and essentially parallel to the original joints, shall be treated as follows.

(1) Full depth cracks and original joint not cracked. The full-depth crack shall be treated as the new joint and the original joint filled with an epoxy resin.

i. Full-depth crack. The joint sealant reservoir for the crack shall be formed by sawing to a depth of 3/4 inches (19 mm), ±1/16 inch (2 mm), and to a width of 5/8 inch (16 mm), ±1/8 inch (3 mm). The crack shall be sawed with equipment specially designed to follow random cracks. Any equipment or procedure which causes raveling or spalling along the crack shall be modified or replaced to prevent raveling or spalling. The joint shall be sealed with sealant in accordance with P-605 or as directed by the RPR.

ii. Original joint. If the original joint sealant reservoir has been sawed out, the reservoir and as much of the lower saw cut as possible shall be filled with epoxy resin, Type IV, Grade 2, thoroughly tooled into the void using approved procedures.

If only the original narrow saw cut has been made, it shall be cleaned and pressure injected with epoxy resin, Type IV, Grade 1, using approved procedures.

Where a parallel crack goes part way across paving lane and then intersects and follows the original joint which is cracked only for the remained of the width, it shall be treated as specified above for a parallel crack, and the cracked original joint shall be prepared and sealed as originally designed.

(2) Full depth cracks and original joint cracked. If there is any place in the lane width where a parallel crack and a cracked portion of the original joint overlap, the entire slab containing the crack shall be removed and replaced.

d. Removal and replacement of full slabs. Make a full depth cut perpendicular to the slab surface along all edges of the slab with a concrete saw cutting any dowels or tie-bars. Remove damaged slab protecting adjacent pavement from damage. Damage to adjacent slabs may result in removal of additional slabs as directed by the RPR at the Contractor's expense.

The underlying material shall be repaired, re-compacted and shaped to grade.

Dowels of the size and spacing specified for other joints in similar pavement on the project shall be installed along all four (4) edges of the new slab in accordance with paragraph 501-4.10d.

Placement of concrete shall be as specified for original construction. The joints around the new slab shall be prepared and sealed as specified for original construction.

e. Spalls along joints.

(1) Spalls less than one inch wide and less than the depth of the joint sealant reservoir, shall be filled with joint sealant material.

(2) Spalls larger than one inch and/or deeper than the joint reservoir, but less than ½ the slab depth, and less than 25% of the length of the adjacent joint shall be repaired as follows:

i. Make a vertical saw cut at least one inch (25 mm) outside the spalled area and to a depth of at least 2 inches (50 mm). Saw cuts shall be straight lines forming rectangular areas surrounding the spalled area.

ii. Remove unsound concrete and at least 1/2 inch (12 mm) of visually sound concrete between the saw cut and the joint or crack with a light chipping hammer.

iii. Clean cavity with high-pressure water jets supplemented with compressed air as needed to remove all loose material.

iv. Apply a prime coat of epoxy resin, Type III, Grade I, to the dry, cleaned surface of all sides and bottom of the cavity, except any joint face.

v. Fill the cavity with low slump concrete or mortar or with epoxy resin concrete or mortar.

vi. An insert or other bond-breaking medium shall be used to prevent bond at all joint faces.

vii. A reservoir for the joint sealant shall be sawed to the dimensions required for other joints, or as required to be routed for cracks. The reservoir shall be thoroughly cleaned and sealed with the sealer specified for the joints.

(3) Spalls deeper than 1/2 of the slab depth or spalls longer than 25% of the adjacent joint require replacement of the entire slab.

f. Diamond grinding of Concrete surfaces. Diamond grinding shall be completed prior to pavement grooving. Diamond grinding of the hardened concrete should not be performed until the concrete is at least 14 days old and has achieved full minimum strength. Equipment that causes ravels, aggregate fractures, spalls or disturbance to the joints will not be permitted. The depth of diamond grinding shall not exceed 1/2 inch (13 mm) and all areas in which diamond grinding has been performed will be subject to the final pavement thickness tolerances specified.

Diamond grinding shall be performed with a machine specifically designed for diamond grinding capable of cutting a path at least 3 feet (0.9 m) wide. The saw blades shall be 1/8-inch (3-mm) wide with sufficient number of flush cut blades that create grooves between 0.090 and 0.130 inches (2 and 3.5 mm) wide; and peaks and ridges approximately 1/32 inch (1 mm) higher than the bottom of the grinding cut. The Contractor shall determine the number and

type of blades based on the hardness of the aggregate. Contractor shall demonstrate to the RPR that the grinding equipment will produce satisfactory results prior to making corrections to surfaces.

Grinding will be tapered in all directions to provide smooth transitions to areas not requiring grinding. The slurry resulting from the grinding operation shall be continuously removed and the pavement left in a clean condition. All grinding shall be at the expense of the Contractor.

CONTRACTOR QUALITY CONTROL (CQC)

501-5.1 Quality control tests. The Contractor shall provide Quality Control Tests.

501-5.2 Contractor Quality Control (CQC). The Contractor shall provide or contract for testing facilities in accordance with Item C-100. The RPR shall be permitted unrestricted access to inspect the Contractor's QC facilities and witness QC activities. The RPR will advise the Contractor in writing of any noted deficiencies concerning the QC facility, equipment, supplies, or testing personnel and procedures. When the deficiencies are serious enough to be adversely affecting the test results, the incorporation of the materials into the work shall be suspended immediately and will not be permitted to resume until the deficiencies are satisfactorily corrected

501-5.3 Contractor QC testing. The Contractor shall perform all QC tests necessary to control the production and construction processes applicable to this specification. The testing shall include, but not necessarily be limited to, tests for aggregate gradation, aggregate moisture content, slump, and air content.

The RPR may at any time, notwithstanding previous plant acceptance, reject and require the Contractor to dispose of any batch of concrete mixture which is rendered unfit for use due to contamination, segregation, or improper slump. Such rejection may be based on only visual inspection. In the event of such rejection, the Contractor may take a representative sample of the rejected material in the presence of the RPR, and if it can be demonstrated in the laboratory, in the presence of the RPR, that such material was erroneously rejected, payment will be made for the material at the contract unit price.

a. Fine aggregate.

(1) Gradation. A sieve analysis shall be made at least twice daily in accordance with ASTM C136 from randomly sampled material taken from the discharge gate of storage bins or from the conveyor belt.

(2) Moisture content. If an electric moisture meter is used, at least two direct measurements of moisture content shall be made per week to check the calibration. If direct measurements are made in lieu of using an electric meter, two tests shall be made per day. Tests shall be made in accordance with ASTM C70 or ASTM C566.

(3) Deleterious substances. Fine aggregate as delivered to the mixer shall be tested for deleterious substances in fine aggregate for concrete as specified in paragraph 501-2.1b, prior to production of the control strip, and a minimum of every 30-days during production or more frequently as necessary to control deleterious substances.

b. Coarse Aggregate.

(1) Gradation. A sieve analysis shall be made at least twice daily for each size of aggregate. Tests shall be made in accordance with ASTM C136 from randomly sampled material taken from the discharge gate of storage bins or from the conveyor belt.

(2) Moisture content. If an electric moisture meter is used, at least two direct measurements of moisture content shall be made per week to check the calibration. If direct measurements are made in lieu of using an electric meter, two tests shall be made per day. Tests shall be made in accordance with ASTM C566.

(3) Deleterious substances. Coarse aggregate as delivered to the mixer shall be tested for deleterious substances in coarse aggregate for concrete as specified in paragraph 501-2.1c, prior to production of the control strip, and a minimum of every 30-days during production or more frequently as necessary to control deleterious substances.

c. Slump. One test shall be made for each sublot. Slump tests shall be performed in accordance with ASTM C143 from material randomly sampled from material discharged from trucks at the paving site. Material samples shall be taken in accordance with ASTM C172.

d. Air content. One test shall be made for each sublot. Air content tests shall be performed in accordance with ASTM C231 for gravel and stone coarse aggregate and ASTM C173 for slag or other porous coarse aggregate, from material randomly sampled from trucks at the paving site. Material samples shall be taken in accordance with ASTM C172.

e. Unit weight and Yield. One test shall be made for each sublot. Unit weight and yield tests shall be in accordance with ASTM C138. The samples shall be taken in accordance with ASTM C172 and at the same time as the air content tests.

f. Temperatures. Temperatures shall be checked at least four times per lot at the job site in accordance with ASTM C1064.

g. Smoothness for Contractor Quality Control.

The Contractor shall perform smoothness testing in transverse and longitudinal directions daily to verify that the construction processes are producing pavement with variances less than ¼ inch in 12 feet, identifying areas that may pond water which could lead to hydroplaning of aircraft. If the smoothness criteria is not met, appropriate changes and corrections to the construction process shall be made by the Contractor before construction continues

The Contractor may use a 12-foot (3.7 m) "straightedge, a rolling inclinometer meeting the requirements of ASTM E2133 or rolling external reference device that can simulate a 12-foot (3.7m) straightedge approved by the RPR. Straight-edge testing shall start with one-half the length of the straightedge at the edge of pavement section being tested and then moved ahead one-half the length of the straightedge for each successive measurement. Testing shall be continuous across all joints. The surface irregularity shall be determined by placing the freestanding (unleveled) straightedge on the pavement surface and allowing it to rest upon the two highest spots covered by its length, and measuring the maximum gap between the straightedge and the pavement surface in the area between the two high points. If the rolling inclinometer or external reference device is used, the data may be evaluated using either the FAA profile program, ProFAA, or FHWA profile program ProVal, using the 12-foot straightedge simulation function.

Smoothness readings shall not be made across grade changes or cross slope transitions. The transition between new and existing pavement shall be evaluated separately for conformance with the plans.

(1) Transverse measurements. Transverse measurements shall be taken for each day's production placed. Transverse measurements shall be taken perpendicular to the pavement centerline each 50 feet (15 m) or more often as determined by the RPR. The joint between lanes shall be tested separately to facilitate smoothness between lanes.

(2) Longitudinal measurements. Longitudinal measurements shall be taken for each day's production placed. Longitudinal tests shall be parallel to the centerline of paving; at the center of paving lanes when widths of paving lanes are less than 20 feet (6 m); and at the third points of paving lanes when widths of paving lanes are 20 ft (6 m) or greater. When placement abuts previously placed material the first measurement shall start with one half the length of the straight edge on the previously placed material.

Deviations on the final surface course in either the transverse or longitudinal direction that will trap water greater than 1/4 inch (6 mm) shall be corrected with diamond grinding per paragraph 501-4.19f or by removing and replacing the surface course to full depth. Grinding shall be tapered in all directions to provide smooth transitions to areas not requiring grinding. All areas in which diamond grinding has been performed shall be subject to the final pavement thickness tolerances specified in paragraph 501-6.6.

Control charts shall be kept to show area of each day's placement and the percentage of corrective grinding required. Corrections to production and placement shall be initiated when corrective grinding is required. If the Contractor's machines and/or methods produce significant areas that need corrective actions in excess of 10 percent of a day's production, production shall be stopped until corrective measures are implemented by the Contractor.

h. Grade. Grade will be evaluated prior to and after placement of the concrete surface.

Measurements will be taken at appropriate gradelines (as a minimum at center and edges of paving lane) and longitudinal spacing as shown on cross-sections and plans. The final surface of the pavement will not vary from the gradeline elevations and cross-sections shown on the plans by more than 1/2 inch (12 mm) vertically or 0.1 feet (30 mm) laterally. The documentation will be provided by the Contractor to the RPR ~~[within 48 hours]~~ by the end of the following working day.

Areas with humps or depression that that exceed grade or smoothness and that retain water on the surface must be ground off provided the course thickness after grinding is not more than 1/2 inch (12 mm) less than the thickness specified on the plans. If these areas cannot be corrected with grinding then the slabs that are retaining water must be removed and replaced in accordance with paragraph 501-4.19d. Grinding shall be in accordance with paragraph 501-4.19f. All corrections will be at the Contractors expense.

501-5.4 Control charts. The Contractor shall maintain linear control charts for fine and coarse aggregate gradation, slump, and air content. The Contractor shall also maintain a control chart plotting the coarseness factor/workability factor from the combined gradations in accordance with paragraph 501-2.1d.

Control charts shall be posted in a location satisfactory to the RPR and shall be kept up to date at all times. As a minimum, the control charts shall identify the project number, the contract item number, the test number, each test parameter, the Action and suspension Limits, or Specification limits, applicable to each test parameter, and the Contractor's test results. The Contractor shall use the control charts as part of a process control system for identifying potential problems and assignable causes before they occur. If the Contractor's projected data during production indicates a potential problem and the Contractor is not taking satisfactory corrective action, the RPR may halt production or acceptance of the material.

a. Fine and coarse aggregate gradation. The Contractor shall record the running average of the last five gradation tests for each control sieve on linear control charts. Superimposed on the control charts shall be the action and suspension limits. Gradation tests shall be performed by the Contractor per ASTM C136. The Contractor shall take at least [two]

samples per lot to check the final gradation. Sampling shall be per ASTM D75 from the flowing aggregate stream or conveyor belt.

b. Slump and air content. The Contractor shall maintain linear control charts both for individual measurements and range (that is, difference between highest and lowest measurements) for slump and air content in accordance with the following Action and Suspension Limits.

c. Combined gradation. The Contractor shall maintain a control chart plotting the coarseness factor and workability factor on a chart in accordance with paragraph 501-2.1d.

Control Chart Limits[1]

Control Parameter	Individual Measurements	
	Action Limit	Suspension Limit
Gradation[2]	*[3]	*[3]
Coarseness Factor (CF)	±3.5	±5
Workability Factor (WF)	±2	±3
Slump	+0.5 to -1 inch (+13 to -25 mm)	+1 to -1.5 inch (+25 to -38 mm)
Air Content	±1.5%	±2.0%

[1] Control charts shall developed and maintained for each control parameter indicated.
[2] Control charts shall be developed and maintained for each sieve size.
[3] Action and suspension limits shall be determined by the Contractor.

501-5.5 Corrective action at Suspension Limit. As a minimum, the contractor quality control process shall be deemed out of control and corrective action taken if any one of the following conditions exists.

a. Fine and coarse aggregate gradation. When two consecutive averages of five tests are outside of the suspension limits, immediate steps, including a halt to production, shall be taken to correct the grading.

b. Coarseness and Workability factor. When the CF or WF reaches the applicable suspension limits, the Contractor, immediate steps, including a halt to production, shall be taken to correct the CF and WF.

c. Fine and coarse aggregate moisture content. Whenever the moisture content of the fine or coarse aggregate changes by more than 0.5%, the scale settings for the aggregate batcher and water batcher shall be adjusted.

d. Slump. The Contractor shall halt production and make appropriate adjustments whenever:

(1) one point falls outside the Suspension Limit line for individual measurements

OR

(2) two points in a row fall outside the Action Limit line for individual measurements.

e. Air content. The Contractor shall halt production and adjust the amount of air-entraining admixture whenever:

(1) one point falls outside the Suspension Limit line for individual measurements

OR

(2) two points in a row fall outside the Action Limit line for individual measurements.

MATERIAL ACCEPTANCE

501-6.1 Quality Assurance (QA) Acceptance sampling and testing. All acceptance sampling and testing necessary to determine conformance with the requirements specified in this section, with the exception of coring for thickness determination, will be performed by the RPR. The Contractor shall provide adequate facilities for the initial curing of beams. The Contractor shall bear the cost of providing initial curing facilities and coring and filling operations, per paragraph 501-6.5b(1).

The samples will be transported while in the molds. The curing, except for the initial cure period, will be accomplished using the immersion in saturated lime water method. During the 24 hours after molding, the temperature immediately adjacent to the specimens must be maintained in the range of 60° to 80°F (16° to 27°C), and loss of moisture from the specimens must be prevented. The specimens may be stored in tightly constructed wooden boxes, damp sand pits, temporary buildings at construction sites, under wet burlap in favorable weather, or in heavyweight closed plastic bags, or using other suitable methods, provided the temperature and moisture loss requirements are met.

501-6.2 Quality Assurance (QA) testing laboratory. Quality assurance testing organizations performing these acceptance tests will be accredited in accordance with ASTM C1077. The quality assurance laboratory accreditation must be current and listed on the accrediting authority's website. All test methods required for acceptance sampling and testing must be listed on the lab accreditation. A copy of the laboratory's current accreditation and accredited test methods will be submitted to the RPR prior to start of construction.

501-6.3 Lot size. Concrete will be accepted for strength and thickness on a lot basis. A lot will consist of a day's production not to exceed 2,000 cubic yards. Each lot will be divided into approximately equal sublots with individual sublots between 400 to 600 cubic yards. Where three sublots are produced, they will constitute a lot. Where one or two sublots are produced, they will be incorporated into the previous or next lot. Where more than one plant is simultaneously producing concrete for the job, the lot sizes will apply separately for each plant.

501-6.4 Partial lots. When operational conditions cause a lot to be terminated before the specified number of tests have been made for the lot or for overages or minor placements to be considered as partial lots, the following procedure will be used to adjust the lot size and the number of tests for the lot.

Where three sublots have been produced, they will constitute a lot. Where one or two sublots have been produced, they will be incorporated into the next lot or the previous lot and the total number of sublots will be used in the acceptance criteria calculation, that is, n=5 or n=6.

501-6.5 Acceptance Sampling and Testing.

a. Strength.

(1) Sampling. One sample will be taken for each sublot from the concrete delivered to the job site. Sampling locations will be determined by the RPR in accordance with random sampling procedures contained in ASTM D3665. The concrete will be sampled in accordance with ASTM C172.

(2) Test Specimens. The RPR will be responsible for the casting, initial curing, transportation, and curing of specimens in accordance with ASTM C31. Two (2) specimens will be made from each sample and slump, air content, unit weight, and temperature tests will be conducted for each set of strength specimens. Within 24 to 48 hours, the samples will be transported from the field to the laboratory while in the molds. Samples will be cured in saturated lime water.

The strength of each specimen will be determined in accordance with **ASTM C39.** The strength for each sublot will be computed by averaging the results of the two test specimens representing that sublot.

(3) Acceptance. Acceptance of pavement for strength will be determined by the RPR in accordance with paragraph 501-6.6b(1). All individual strength tests within a lot will be checked for outliers in accordance with ASTM E178, at a significance level of 5%. Outliers will be discarded and the remaining test values will be used to determine acceptance in accordance with paragraph 501-6.5b.

b. Pavement thickness.

(1) Sampling. One core will be taken by the Contractor for each sublot in the presence of the RPR. Sampling locations will be determined by the RPR in accordance with random sampling procedures contained in ASTM D3665. Areas, such as thickened edges, with planned variable thickness, will be excluded from sample locations.

Cores shall be a minimum 4 inch (100 mm) in diameter neatly cut with a core drill. The Contractor will furnish all tools, labor, and materials for cutting samples and filling the cored hole. Core holes will be filled by the Contractor with a non-shrink grout approved by the RPR within one day after sampling.

(2) Testing. The thickness of the cores will be determined by the RPR by the average caliper measurement in accordance with ASTM C174. Each core shall be photographed and the photograph included with the test report.

(3) Acceptance. Acceptance of pavement for thickness will be determined by the RPR in accordance with paragraph 501-6.6.

501-6.6 Acceptance criteria.

a. General. Acceptance will be based on the following characteristics of the completed pavement discussed in paragraph 501-6.5b:

(1) Strength

(2) Thickness

(3) Grade

(4) Profilograph smoothness [Not used]

(5) Adjustments for repairs

Acceptance for strength, thickness, and grade, will be based on the criteria contained in accordance with paragraph 501-6.6b(1), 501-6.6b(2), and 501-6.6b(3), respectively.

(3) Grade. The final finished surface of the pavement of the completed project will not vary from the gradeline elevations and cross-sections shown on the plans by more than 1/2 inch vertically or 0.1 feet laterally. The documentation, stamped and signed by a licensed surveyor shall be in accordance with paragraph 501-5.3h. Payment for sublots that do not meet grade for over 25% of the sublot shall be reduced by 5% and not be more than 95%.

(4) Profilograph roughness for QA Acceptance. ~~[Not used.]~~

METHOD OF MEASUREMENT

501-7.1 Concrete pavement shall be measured by the number of square yards of plain or reinforced pavement as specified in-place, completed and accepted.

BASIS OF PAYMENT

501-8.1 Payment. Payment for concrete pavement meeting all acceptance criteria as specified in paragraph 501-6.6. Acceptance Criteria shall be based on results of strength and thickness tests. Payment for acceptable lots of concrete pavement shall be adjusted in accordance with paragraph 501-8.1a for strength and thickness; 501-8.1b for repairs; 501-8.1c for grinding; and 501-8.1d for smoothness, subject to the limitation that:

The total project payment for concrete pavement shall not exceed **100** percent of the product of the contract unit price and the total number of square yards of concrete pavement used in the accepted work.

Payment shall be full compensation for all labor, materials, tools, equipment, and incidentals required to complete the work as specified herein and on the drawings.

~~**a. Basis of adjusted payment.** The pay factor for each individual lot shall be calculated in accordance with the Price Adjustment Schedule table below. A pay factor shall be calculated for both strength and thickness. The lot pay factor shall be the higher of the two values when calculations for both strength and thickness are 100% or higher. The lot pay factor shall be the product of the two values when only one of the calculations for either strength or thickness is 100% or higher. The lot pay factor shall be the lower of the two values when calculations for both strength and thickness are less than 100%.~~

~~**Price Adjustment Schedule**[1]~~

~~**Percentage of Materials Within Specification Limits (PWL)**~~	~~**Lot Pay Factor (Percent of Contract Unit Price)**~~
~~96—100~~	~~106~~
~~90—95~~	~~PWL + 10~~
~~75—90~~	~~0.5 PWL + 55~~
~~55—74~~	~~1.4 PWL—12~~
~~Below 55~~	~~Reject~~[2]

~~[1] Although it is theoretically possible to achieve a pay factor of 106% for each lot, actual payment in excess of 100% shall be subject to the total project payment limitation specified in paragraph 501-8.1.~~

~~[2] The lot shall be removed and replaced unless, after receipt of FAA concurrence, the Owner and Contractor agree in writing that the lot will remain; the lot paid at 50% of the contract unit price; and the total project payment limitation reduced by the amount withheld for that lot.~~

~~For each lot accepted, the adjusted contract unit price shall be the product of the lot pay factor for the lot and the contract unit price. Payment shall be subject to the total project payment limitation specified in paragraph 501-8.1. Payment in excess of 100% for accepted lots of concrete pavement shall be used to offset payment for accepted lots of concrete pavement that achieve a lot pay factor less than 100%; except for rejected lots which remain in place and/or sublots with adjustments for repairs.~~

~~**b. Adjusted payment for repairs.** The PWL lot pay factor shall be reduced by 5% and be no higher than 95% for sublots which contain repairs in accordance with paragraph 501-4.19 on more than 20% of the slabs within the sublot. Payment factors greater than 100 percent for the strength and thickness cannot be used to offset adjustments for repairs.~~

~~**c. Adjusted payment for grinding.** The PWL lot pay factor shall be reduced by 5% and be no higher than 95% for sublots with grinding over 25% of a sublot.~~

e. Payment. Payment shall be made under:

Item P-501-8.1a	Reinforced Concrete Pavement (8 inches) - per square yard
Item P-501-8.1b	Reinforced Concrete Pavement Ramp (8-12 inches) – per square yard

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM A184	Standard Specification for Welded Deformed Steel Bar Mats for Concrete Reinforcement
ASTM A615	Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
ASTM A704	Standard Specification for Welded Steel Plain Bar or Rod Mats for Concrete Reinforcement
ASTM A706	Standard Specification for Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement
ASTM A775	Standard Specification for Epoxy-Coated Steel Reinforcing Bars
ASTM A884	Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Reinforcement
ASTM A934	Standard Specification for Epoxy-Coated Prefabricated Steel Reinforcing Bars
ASTM A996	Standard Specification for Rail-Steel and Axle-Steel Deformed Bars for Concrete Reinforcement
ASTM A1035	Standard Specification for Deformed and Plain, Low-Carbon, Chromium, Steel Bars for Concrete Reinforcement
ASTM A1064	Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete
ASTM A1078	Standard Specification for Epoxy-Coated Steel Dowels for Concrete Pavement
ASTM C29	Standard Test Method for Bulk Density ("Unit Weight") and Voids in Aggregate
ASTM C31	Standard Practice for Making and Curing Concrete Test Specimens in the Field

ASTM C33	Standard Specification for Concrete Aggregates
ASTM C39	Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
ASTM C70	Standard Test Method for Surface Moisture in Fine Aggregate
ASTM C78	Standard Test Method for Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)
ASTM C88	Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
ASTM C94	Standard Specification for Ready-Mixed Concrete
ASTM C114	Standard Test Methods for Chemical Analysis of Hydraulic Cement
ASTM C117	Standard Test Method for Materials Finer than 75-µm (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C123	Standard Test Method for Lightweight Particles in Aggregate
ASTM C136	Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
ASTM C131	Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C136	Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates
ASTM C138	Standard Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete
ASTM C142	Standard Test Method for Clay Lumps and Friable Particles in Aggregates
ASTM C143	Standard Test Method for Slump of Hydraulic-Cement Concrete
ASTM C150	Standard Specification for Portland Cement
ASTM C171	Standard Specification for Sheet Materials for Curing Concrete
ASTM C172	Standard Practice for Sampling Freshly Mixed Concrete
ASTM C173	Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method
ASTM C174	Standard Test Method for Measuring Thickness of Concrete Elements Using Drilled Concrete Cores
ASTM C227	Standard Test Method for Potential Alkali Reactivity of Cement-Aggregate Combinations (Mortar-Bar Method)
ASTM C231	Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
ASTM C260	Standard Specification for Air-Entraining Admixtures for Concrete
ASTM C295	Standard Guide for Petrographic Examination of Aggregates for Concrete

ASTM C309	Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete
ASTM C311	Standard Test Methods for Sampling and Testing Fly Ash or Natural Pozzolans for Use in Portland Cement Concrete
ASTM C494	Standard Specification for Chemical Admixtures for Concrete
ASTM C566	Standard Test Method for Total Evaporable Moisture Content of Aggregates by Drying
ASTM C595	Standard Specification for Blended Hydraulic Cements
ASTM C618	Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
ASTM C642	Standard Test Method for Density, Absorption, and Voids in Hardened Concrete
ASTM C666	Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing
ASTM C685	Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing
ASTM C881	Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete
ASTM C989	Standard Specification for Slag Cement for Use in Concrete and Mortars
ASTM C1017	Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete
ASTM C1064	Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete
ASTM C1077	Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation
ASTM C1157	Standard Performance Specification for Hydraulic Cement
ASTM C1260	Standard Test Method for Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)
ASTM C1365	Standard Test Method for Determination of the Proportion of Phases in Portland Cement and Portland-Cement Clinker Using X-Ray Powder Diffraction Analysis
ASTM C1567	Standard Test Method for Determining the Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials and Aggregate (Accelerated Mortar-Bar Method)
ASTM C1602	Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete
ASTM D75	Standard Practice for Sampling Aggregates

ASTM D1751	Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)
ASTM D1752	Standard Specification for Preformed Sponge Rubber and Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction
ASTM D2419	Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate
ASTM D3665	Standard Practice for Random Sampling of Construction Materials
ASTM D4791	Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
ASTM E178	Standard Practice for Dealing with Outlying Observations
ASTM E1274	Standard Test Method for Measuring Pavement.Roughness Using a Profilograph
ASTM E2133	Standard Test Method for Using a Rolling Inclinometer to Measure Longitudinal and Transverse Profiles of a Traveled Surface

American Concrete Institute (ACI)

ACI 305R	Guide to Hot Weather Concreting
ACI 306R	Guide to Cold Weather Concreting
ACI 309R	Guide for Consolidation of Concrete

Advisory Circulars (AC)

AC 150/5320-6	Airport Pavement Design and Evaluation

Federal Highway Administration (FHWA)

HIPERPAV 3, version 3.2

Portland Concrete Association (PCA)

PCA	Design and Control of Concrete Mixtures, 16th Edition

U.S. Army Corps of Engineers (USACE) Concrete Research Division (CRD)

CRD C662	Determining the Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials, Lithium Nitrate Admixture and Aggregate (Accelerated Mortar-Bar Method)

United States Air Force Engineering Technical Letter (ETL)

ETL 97-5	Proportioning Concrete Mixtures with Graded Aggregates for Rigid Airfield Pavements

END ITEM P-501

ITEM P-605
JOINT SEALANTS FOR PAVEMENTS

DESCRIPTION

605-1.1 This item shall consist of providing and installing a resilient and adhesive joint sealing material capable of effectively sealing joints in pavement; joints between different types of pavements; and cracks in existing pavement.

MATERIALS

605-2.1 Joint sealants. Joint sealant materials shall meet the requirements of ASTM D5893 Standard Specifications for Cold Applied, Single Component, Chemically Curing Silicone Joint Sealant for Portland Cement Concrete Pavements.

Each lot or batch of sealant shall be delivered to the jobsite in the manufacturer's original sealed container. Each container shall be marked with the manufacturer's name, batch or lot number, the safe heating temperature, and shall be accompanied by the manufacturer's certification stating that the sealant meets the requirements of this specification.

605-2.2 Backer rod. The material furnished shall be a compressible, non-shrinking, non-staining, non-absorbing material that is non-reactive with the joint sealant in accordance with ASTM D5249. The backer-rod material shall be 25% ± 5 % larger in diameter than the nominal width of the joint.

605-2.3 Bond breaking tapes. Provide a bond breaking tape or separating material that is a flexible, non-shrinkable, non-absorbing, non-staining, and non-reacting adhesive-backed tape. The material shall have a melting point at least 5°F (3°C) greater than the pouring temperature of the sealant being used when tested in accordance with ASTM D789. The bond breaker tape shall be approximately 1/8 inch (3 mm) wider than the nominal width of the joint and shall not bond to the joint sealant.

CONSTRUCTION METHODS

605-3.1 Time of application. Joints shall be sealed as soon after completion of the curing period as feasible and before the pavement is opened to traffic, including construction equipment. The pavement temperature shall be 50°F (10°C) and rising at the time of application of the poured joint sealing material. Do not apply sealant if moisture is observed in the joint.

605-3.2 Equipment. Machines, tools, and equipment used in the performance of the work required by this section shall be approved before the work is started and maintained in satisfactory condition at all times. Submit a list of proposed equipment to be used in performance of construction work including descriptive data, **14 Calendar** days prior to use on the project.

a. Tractor-mounted routing tool. Provide a routing tool, used for removing old sealant from the joints, of such shape and dimensions and so mounted on the tractor that it will not damage the sides of the joints. The tool shall be designed so that it can be adjusted to remove the old material to varying depths as required. The use of V-shaped tools or rotary impact routing devices will not be permitted. Hand-operated spindle routing devices may be used to clean and enlarge random cracks.

b. Concrete saw. Provide a self-propelled power saw, with water-cooled diamond or abrasive saw blades, for cutting joints to the depths and widths specified.

c. Sandblasting equipment. Sandblasting is not allowed.

d. Waterblasting equipment. The Contractor must demonstrate waterblasting equipment including the pumps, hose, guide and nozzle size, under job conditions, before approval in accordance with paragraph 605-3.3. The Contractor shall demonstrate, in the presence of the RPR, that the method cleans the joint and does not damage the joint.

e. Hand tools. Hand tools may be used, when approved, for removing defective sealant from a crack and repairing or cleaning the crack faces. Hand tools should be carefully evaluated for potential spalling effects prior to approval for use.

f. Hot-poured sealing equipment. The unit applicators used for heating and installing ASTM D6690 joint sealant materials shall be mobile and shall be equipped with a double-boiler, agitator-type kettle with an oil medium in the outer space for heat transfer; a direct-connected pressure-type extruding device with a nozzle shaped for inserting in the joint to be filled; positive temperature devices for controlling the temperature of the transfer oil and sealant; and a recording type thermometer for indicating the temperature of the sealant. The applicator unit shall be designed so that the sealant will circulate through the delivery hose and return to the inner kettle when not in use.

g. Cold-applied, single-component sealing equipment. The equipment for installing ASTM D5893 single component joint sealants shall consist of an extrusion pump, air compressor, following plate, hoses, and nozzle for transferring the sealant from the storage container into the joint opening. The dimension of the nozzle shall be such that the tip of the nozzle will extend into the joint to allow sealing from the bottom of the joint to the top. Maintain the initially approved equipment in good working condition, serviced in accordance with the supplier's instructions, and unaltered in any way without obtaining prior approval. Small hand-held air-powered equipment (i.e., caulking guns) may be used for small applications.

605-3.3 Preparation of joints. Pavement joints for application of material in this specification must be dry, clean of all scale, dirt, dust, curing compound, and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method cleans the joint and does not damage the joint.

a. Sawing. All joints shall be sawed in accordance with specifications and plan details. Immediately after sawing the joint, the resulting slurry shall be completely removed from joint and adjacent area by flushing with a jet of water, and by use of other tools as necessary.

b. Sealing. Immediately before sealing, the joints shall be thoroughly cleaned of all remaining laitance, curing compound, filler, protrusions of hardened concrete, old sealant and other foreign material from the sides and upper edges of the joint space to be sealed. Cleaning shall be accomplished by tractor-mounted routing equipment, concrete saw or waterblaster as specified in paragraph 605-3.2. The newly exposed concrete joint faces and the pavement surface extending a minimum of 1/2 inch (12 mm) from the joint edge shall be sandblasted clean. Sandblasting shall be accomplished in a minimum of two passes. One pass per joint face with the nozzle held at an angle directly toward the joint face and not more than 3 inches (75 mm) from it. After final cleaning and immediately prior to sealing, blow out the joints with compressed air and leave them completely free of debris and water. The joint faces shall be surface dry when the seal is applied.

c. Backer Rod. When the joint opening is of a greater depth than indicated for the sealant depth, plug or seal off the lower portion of the joint opening using a backer rod in accordance

with paragraph 605-2.2 to prevent the entrance of the sealant below the specified depth. Take care to ensure that the backer rod is placed at the specified depth and is not stretched or twisted during installation.

d. Bond-breaking tape. Where inserts or filler materials contain bitumen, or the depth of the joint opening does not allow for the use of a backup material, insert a bond-separating tape breaker in accordance with paragraph 605-2.3 to prevent incompatibility with the filler materials and three-sided adhesion of the sealant. Securely bond the tape to the bottom of the joint opening so it will not float up into the new sealant.

605-3.4 Installation of sealants. Joints shall be inspected for proper width, depth, alignment, and preparation, and shall be approved by the RPR before sealing is allowed. Sealants shall be installed in accordance with the following requirements:

Immediately preceding, but not more than 50 feet (15 m) ahead of the joint sealing operations, perform a final cleaning with compressed air. Fill the joints from the bottom up to **1/8 inch ±1/16 inch** below the top of pavement surface; or bottom of groove for grooved pavement. Remove and discard excess or spilled sealant from the pavement by approved methods. Install the sealant in such a manner as to prevent the formation of voids and entrapped air. In no case shall gravity methods or pouring pots be used to install the sealant material. Traffic shall not be permitted over newly sealed pavement until authorized by the RPR. When a primer is recommended by the manufacturer, apply it evenly to the joint faces in accordance with the manufacturer's instructions. Check the joints frequently to ensure that the newly installed sealant is cured to a tack-free condition within the time specified.

605-3.5 Inspection. The Contractor shall inspect the joint sealant for proper rate of cure and set, bonding to the joint walls, cohesive separation within the sealant, reversion to liquid, entrapped air and voids. Sealants exhibiting any of these deficiencies at any time prior to the final acceptance of the project shall be removed from the joint, wasted, and replaced as specified at no additional cost to the airport.

605-3.6 Clean-up. Upon completion of the project, remove all unused materials from the site and leave the pavement in a clean condition.

METHOD OF MEASUREMENT

605-4.1 No Direct Measurement. All work shall be considered incidental to the bid items for specification P-501

BASIS OF PAYMENT

605-5.1 No Direct Payment. All the work under this item including furnishing all materials, for all preparation, delivering, and placing of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the work item shall be considered incidental to the bid items for specification P-501.

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM D789	Standard Test Method for Determination of Relative Viscosity of Polyamide (PA)
ASTM D5249	Standard Specification for Backer Material for Use with Cold- and Hot-Applied Joint Sealants in Portland-Cement Concrete and Asphalt Joints
ASTM D5893	Standard Specification for Cold Applied, Single Component, Chemically Curing Silicone Joint Sealant for Portland Cement Concrete Pavements
ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt
ASTM D7116	Standard Specification for Joint Sealants, Hot Applied, Jet Fuel Resistant Types for Portland Cement Concrete Pavements

Advisory Circulars (AC)

AC 150/5340-30	Design and Installation Details for Airport Visual Aids

END ITEM P-605

ITEM P-610
CONCRETE FOR MISCELLANEOUS STRUCTURES

DESCRIPTION

610-1.1 This item shall consist of concrete and reinforcement, as shown on the plans, prepared and constructed in accordance with these specifications. This specification shall be used for all concrete other than airfield pavement which are cast-in-place.

MATERIALS

610-2.1 General. Only approved materials, conforming to the requirements of these specifications, shall be used in the work. Materials may be subject to inspection and tests at any time during their preparation or use. The source of all materials shall be approved by the Resident Project Representative (RPR) before delivery or use in the work. Representative preliminary samples of the materials shall be submitted by the Contractor, when required, for examination and test. Materials shall be stored and handled to ensure preservation of their quality and fitness for use and shall be located to facilitate prompt inspection. All equipment for handling and transporting materials and concrete must be clean before any material or concrete is placed in them.

The use of pit-run aggregates shall not be permitted unless the pit-run aggregate has been screened and washed, and all fine and coarse aggregates stored separately and kept clean. The mixing of different aggregates from different sources in one storage stockpile or alternating batches of different aggregates shall not be permitted.

a. Reactivity. Fine aggregate and coarse aggregates to be used in all concrete shall have been tested separately within six months of the project in accordance with ASTM C1260. Test results shall be submitted to the RPR. The aggregate shall be considered innocuous if the expansion of test specimens, tested in accordance with ASTM C1260, does not exceed 0.08% at 14 days (16 days from casting). If the expansion either or both test specimen is greater than 0.08% at 14 days, but less than 0.20%, a minimum of 25% of Type F fly ash, or between 40% and 55% of slag cement shall be used in the concrete mix.

If the expansion is greater than 0.20%, the aggregates shall not be used, and test results for other aggregates must be submitted for evaluation; or aggregates that meet P-501 reactivity test requirements may be utilized.

610-2.2 Coarse aggregate. The coarse aggregate for concrete shall meet the requirements of ASTM C33 and the requirements of Table 4, Class Designation 5S; and the grading requirements shown below, as required for the project.

Coarse Aggregate Grading Requirements

Maximum Aggregate Size	ASTM C33, Table 3 Grading Requirements (Size No.)
1 1/2 inch (37.5 mm)	467 or 4 and 67
1 inch (25 mm)	57
¾ inch (19 mm)	67
½ inch (12.5 mm)	7

610-2.2.1 Coarse Aggregate susceptibility to durability (D) cracking. ~~[Not used]~~

610-2.3 Fine aggregate. The fine aggregate for concrete shall meet all fine aggregate requirements of ASTM C33.

610-2.4 Cement. Cement shall conform to the requirements of **ASTM C150 Type I.**

610-2.5 Cementitious materials.

a. Fly ash. Fly ash shall meet the requirements of ASTM C618, with the exception of loss of ignition, where the maximum shall be less than 6%. Fly ash shall have a Calcium Oxide (CaO) content of less than [15%] and a total available alkali content less than 3% per ASTM C311. Fly ash produced in furnace operations using liming materials or soda ash (sodium carbonate) as an additive shall not be acceptable. The Contractor shall furnish the previous three most recent, consecutive ASTM C618 reports for each source of fly ash proposed in the concrete mix and shall furnish each additional report as they become available during the project. The reports can be used for acceptance, or the material may be tested independently by the RPR.

b. Slag cement (ground granulated blast furnace (GGBF)). Slag cement shall conform to ASTM C989, Grade 100 or Grade 120. Slag cement shall be used only at a rate between 25% and 55% of the total cementitious material by mass.

610-2.6 Water. Water used in mixing or curing shall be from potable water sources. Other sources shall be tested in accordance with ASTM C1602 prior to use.

610-2.7 Admixtures. The Contractor shall submit certificates indicating that the material to be furnished meets all of the requirements indicated below. In addition, the RPR may require the Contractor to submit complete test data from an approved laboratory showing that the material to be furnished meets all of the requirements of the cited specifications. Subsequent tests may be made of samples taken by the RPR from the supply of the material being furnished or proposed for use on the work to determine whether the admixture is uniform in quality with that approved.

a. Air-entraining admixtures. Air-entraining admixtures shall meet the requirements of ASTM C260 and shall consistently entrain the air content in the specified ranges under field conditions. The air-entrainment agent and any water reducer admixture shall be compatible.

b. Water-reducing admixtures. Water-reducing admixture shall meet the requirements of ASTM C494, Type A, B, or D. ASTM C494, Type F and G high range water reducing admixtures and ASTM C1017 flowable admixtures shall not be used.

c. Other chemical admixtures. The use of set retarding and set-accelerating admixtures shall be approved by the RPR. Retarding shall meet the requirements of ASTM C494, Type A,

B, or D and set accelerating shall meet the requirements of ASTM C494, Type C. Calcium chloride and admixtures containing calcium chloride shall not be used.

~~**610-2.8 Premolded joint material.** Premolded joint material for expansion joints shall meet the requirements of ASTM [ ].~~

~~**610-2.9 Joint filler.** The filler for joints shall meet the requirements of Item P-605, unless otherwise specified.~~

610-2.10 Steel reinforcement. Reinforcing shall consist of **Reinforcing Steel** conforming to the requirements of ASTM A615, ASTM A706, ASTM A775, ASTM A934

610-2.11 Materials for curing concrete. Curing materials shall conform to White-pigmented Liquid Membrane-Forming Compound, Type 2, Class B, ASTM C309.

CONSTRUCTION METHODS

610-3.1 General. The Contractor shall furnish all labor, materials, and services necessary for, and incidental to, the completion of all work as shown on the drawings and specified here. All machinery and equipment used by the Contractor on the work, shall be of sufficient size to meet the requirements of the work. All work shall be subject to the inspection and approval of the RPR.

610-3.2 Concrete Mixture. The concrete shall develop a compressive strength of **4000** psi in 28 days as determined by test cylinders made in accordance with ASTM C31 and tested in accordance with ASTM C39. The concrete shall contain not less than 470 pounds of cementitious material per cubic yard (280 kg per cubic meter). The water cementitious ratio shall not exceed 0.45 by weight. The air content of the concrete shall be 5% +/- 1.2% as determined by ASTM C231 and shall have a slump of not more than 4 inches (100 mm) as determined by ASTM C143.

610-3.3 Mixing. Concrete may be mixed at the construction site, at a central point, or wholly or in part in truck mixers. The concrete shall be mixed and delivered in accordance with the requirements of ASTM C94 or ASTM C685.

The concrete shall be mixed only in quantities required for immediate use. Concrete shall not be mixed while the air temperature is below 40°F (4°C) without the RPRs approval. If approval is granted for mixing under such conditions, aggregates or water, or both, shall be heated and the concrete shall be placed at a temperature not less than 50°F (10°C) nor more than 100°F (38°C). The Contractor shall be held responsible for any defective work, resulting from freezing or injury in any manner during placing and curing, and shall replace such work at his expense.

Retempering of concrete by adding water or any other material is not permitted.

The rate of delivery of concrete to the job shall be sufficient to allow uninterrupted placement of the concrete.

610-3.4 Forms. Concrete shall not be placed until all the forms and reinforcements have been inspected and approved by the RPR. Forms shall be of suitable material and shall be of the type, size, shape, quality, and strength to build the structure as shown on the plans. The forms shall be true to line and grade and shall be mortar-tight and sufficiently rigid to prevent displacement and sagging between supports. The surfaces of forms shall be smooth and free from irregularities, dents, sags, and holes. The Contractor shall be responsible for their adequacy.

The internal form ties shall be arranged so no metal will show in the concrete surface or discolor the surface when exposed to weathering when the forms are removed. All forms shall be wetted with water or with a non-staining mineral oil, which shall be applied immediately before the

concrete is placed. Forms shall be constructed so they can be removed without injuring the concrete or concrete surface.

610-3.5 Placing reinforcement. All reinforcement shall be accurately placed, as shown on the plans, and shall be firmly held in position during concrete placement. Bars shall be fastened together at intersections. The reinforcement shall be supported by approved metal chairs. Shop drawings, lists, and bending details shall be supplied by the Contractor when required.

610-3.6 Embedded items. Before placing concrete, all embedded items shall be firmly and securely fastened in place as indicated. All embedded items shall be clean and free from coating, rust, scale, oil, or any foreign matter. The concrete shall be spaded and consolidated around and against embedded items. The embedding of wood shall not be allowed.

610-3.7 Concrete Consistency. The Contractor shall monitor the consistency of the concrete delivered to the project site; collect each batch ticket; check temperature; and perform slump tests on each truck at the project site in accordance with ASTM C143.

610-3.8 Placing concrete. All concrete shall be placed during daylight hours, unless otherwise approved. The concrete shall not be placed until the depth and condition of foundations, the adequacy of forms and falsework, and the placing of the steel reinforcing have been approved by the RPR. Concrete shall be placed as soon as practical after mixing, but in no case later than one (1) hour after water has been added to the mix. The method and manner of placing shall avoid segregation and displacement of the reinforcement. Troughs, pipes, and chutes shall be used as an aid in placing concrete when necessary. The concrete shall not be dropped from a height of more than 5 feet (1.5 m). Concrete shall be deposited as nearly as practical in its final position to avoid segregation due to rehandling or flowing. Do not subject concrete to procedures which cause segregation. Concrete shall be placed on clean, damp surfaces, free from running water, or on a properly consolidated soil foundation.

610-3.9 Vibration. Vibration shall follow the guidelines in American Concrete Institute (ACI) Committee 309R, Guide for Consolidation of Concrete.

610-3.10 Joints. Joints shall be constructed as indicated on the plans.

610-3.11 Finishing. All exposed concrete surfaces shall be true, smooth, and free from open or rough areas, depressions, or projections. All concrete horizontal plane surfaces shall be brought flush to the proper elevation with the finished top surface struck-off with a straightedge and floated.

610-3.12 Curing and protection. All concrete shall be properly cured in accordance with the recommendations in American Concrete Institute (ACI) 308R, Guide to External Curing of Concrete. The concrete shall be protected from damage until project acceptance.

610-3.13 Cold weather placing. When concrete is placed at temperatures below 40°F (4°C), follow the cold weather concreting recommendations found in ACI 306R, Cold Weather Concreting.

610-3.14 Hot weather placing. When concrete is placed in hot weather greater than 85°F (30 °C), follow the hot weather concreting recommendations found in ACI 305R, Hot Weather Concreting.

QUALITY ASSURANCE (QA)

610-4.1 Quality Assurance sampling and testing. Concrete for each day's placement will be accepted on the basis of the compressive strength specified in paragraph 610-3.2. The RPR will sample the concrete in accordance with ASTM C172; test the slump in accordance with ASTM

C143; test air content in accordance with ASTM C231; make and cure compressive strength specimens in accordance with ASTM C31; and test in accordance with ASTM C39. The QA testing agency will meet the requirements of ASTM C1077.

The Contractor shall provide adequate facilities for the initial curing of cylinders.

610-4.2 Defective work. Any defective work that cannot be satisfactorily repaired as determined by the RPR, shall be removed and replaced at the Contractor's expense. Defective work includes, but is not limited to, uneven dimensions, honeycombing and other voids on the surface or edges of the concrete.

METHOD OF MEASUREMENT

610-5.1 Concrete shall be considered incidental, and no separate measurement shall be made of concrete complete in place and accepted.

BASIS OF PAYMENT

610-6.1 Concrete shall be considered incidental, and no separate payment shall be made.

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM A184	Standard Specification for Welded Deformed Steel Bar Mats for Concrete Reinforcement
ASTM A615	Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
ASTM A704	Standard Specification for Welded Steel Plain Bar or Rod Mats for Concrete Reinforcement
ASTM A706	Standard Specification for Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement
ASTM A775	Standard Specification for Epoxy-Coated Steel Reinforcing Bars
ASTM A884	Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Reinforcement
ASTM A934	Standard Specification for Epoxy-Coated Prefabricated Steel Reinforcing Bars
ASTM A1064	Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete
ASTM C31	Standard Practice for Making and Curing Concrete Test Specimens in the Field
ASTM C33	Standard Specification for Concrete Aggregates
ASTM C39	Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens

ASTM C94	Standard Specification for Ready-Mixed Concrete
ASTM C136	Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates
ASTM C114	Standard Test Methods for Chemical Analysis of Hydraulic Cement
ASTM C136	Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
ASTM C143	Standard Test Method for Slump of Hydraulic-Cement Concrete
ASTM C150	Standard Specification for Portland Cement
ASTM C171	Standard Specification for Sheet Materials for Curing Concrete
ASTM C172	Standard Practice for Sampling Freshly Mixed Concrete
ASTM C231	Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
ASTM C260	Standard Specification for Air-Entraining Admixtures for Concrete
ASTM C309	Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete
ASTM C311	Standard Test Methods for Sampling and Testing Fly Ash or Natural Pozzolans for Use in Portland-Cement Concrete
ASTM C494	Standard Specification for Chemical Admixtures for Concrete
ASTM C618	Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
ASTM C666	Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing
ASTM C685	Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing
ASTM C989	Standard Specification for Slag Cement for Use in Concrete and Mortars
ASTM C1017	Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete
ASTM C1077	Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation
ASTM C1157	Standard Performance Specification for Hydraulic Cement
ASTM C1260	Standard Test Method for Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)
ASTM C1365	Standard Test Method for Determination of the Proportion of Phases in Portland Cement and Portland-Cement Clinker Using X-Ray Powder Diffraction Analysis
ASTM C1602	Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete

ASTM D1751	Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Asphalt Types)
ASTM D1752	Standard Specification for Preformed Sponge Rubber Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction

American Concrete Institute (ACI)

ACI 305R	Hot Weather Concreting
ACI 306R	Cold Weather Concreting
ACI 308R	Guide to External Curing of Concrete
ACI 309R	Guide for Consolidation of Concrete

END OF ITEM P-610

ITEM 506
TEMPORARY EROSION, SEDIMENTATION,AND ENVIRONMENTAL CONTROLS

1. DESCRIPTION

Install, maintain, and remove erosion, sedimentation, and environmental control measures to prevent or reduce the discharge of pollutants in accordance with the Storm Water Pollution Prevention Plan (SWP3) onthe plans and the Texas Pollutant Discharge Elimination System (TPDES) General Permit TXR150000.

Control measures are defined as Best Management Practices used to prevent or reduce the discharge of pollutants. Control measures include, but are not limited to, rock filter dams, temporary pipe slope drains, temporary paved flumes, construction exits, earthwork for erosion control, pipe, construction perimeter fence, sandbags, temporary sediment control fence, biodegradable erosion control logs, vertical tracking, temporary or permanent seeding, and other measures. Erosion and sediment control devices must be selected from the *Erosion Control Approved Products* or *Sediment Control Approved Products* lists. Perform work in a manner to prevent degradation of receiving waters, facilitate project construction, and comply with applicable federal, state, and local regulations. Ensure the installation and maintenance of control measures is performed in accordance with the manufacturer's or designer's specifications.

Provide the Contractor Certification of Compliance before performing SWP3 or soil disturbing activities. By signing the Contractor Certification of Compliance, the Contractor certifies they have read and understand the requirements applicable to this project pertaining to the SWP3, the plans, and the TPDES General Permit TXR150000. The Contractor is responsible for any penalties associated with non-performance of installation or maintenance activities required for compliance. Ensure the most current version of the certificate is executed for this project.

2. MATERIALS

2.1. Construction Exits. Provide materials that meet the details shown on the plans and this Section.

2.1.1. **Rock Construction Exit**. Provide crushed aggregate for long- and short-term construction exits. Furnish aggregates that are clean, hard, durable, and free from adherent coatings such as salt, alkali, dirt, clay, loam, shale, soft or flaky materials, and organic and injurious matter. Use 4- to 8-in. aggregate for Type 1. Use 2- to 4-in. aggregate for Type 3.

2.1.2. **Foundation Course**. Provide a foundation course consisting of flexible base, bituminous concrete, hydraulic cement concrete, or other materials as shown on the plans or directed.

2.2. Embankment for Erosion Control. Provide rock, loam, clay, topsoil, or other earth materials that will form a stable embankment to meet the intended use.

2.3. Construction Perimeter Fence.

2.3.1. **Posts.** Provide essentially straight wood or steel posts that are at least 60 in. long. Furnish soft wood posts with a minimum diameter of 3 in., or use nominal 2 × 4 in. boards. Furnish hardwood posts with a minimum cross-section of 1-1/2 × 1-1/5 in. Furnish T- or L-shaped steel posts with a minimum weight of 1.25 lb. per foot.

2.3.2. **Fence.** Provide orange construction fencing as approved.

2.3.3. **Fence Wire.** Provide 14 gauge or larger galvanized smooth or twisted wire. Provide 16 gauge or larger tiewire.

2.3.4. **Flagging.** Provide brightly-colored flagging that is fade-resistant and at least 3/4 in. wide to provide maximum visibility both day and night.

2.3.5. **Staples.** Provide staples with a crown at least 1/2 in. wide and legs at least 1/2 in. long.

2.3.6. **Used Materials.** Previously used materials meeting the applicable requirements may be used if approved.

2.4. Sandbags. Provide sandbag material of polypropylene, polyethylene, or polyamide woven fabric with a minimum unit weight of 4 oz. per square yard, a Mullen burst-strength exceeding 300 psi, and an ultraviolet stability exceeding 70%.

Use natural coarse sand or manufactured sand meeting the gradation given in Table 1 to fill sandbags. Filled sandbags must be 24 to 30 in. long, 16 to 18 in. wide, and 6 to 8 in. thick.

Table 1 Sand Gradation

Sieve Size	Retained (% by Weight)
#4	Maximum 3%
#100	Minimum 80%
#200	Minimum 95%

Aggregate may be used instead of sand for situations where sandbags are not adjacent to traffic. The aggregate size must not exceed 3/8 in.

2.5. Temporary Sediment Control Fence. Provide a net-reinforced fence using woven geo-textile fabric. Logos visible to the traveling public will not be allowed.

2.5.1. **Fabric.** Provide fabric materials in accordance with DMS-6230, "Temporary Sediment Control Fence Fabric."

2.5.2. **Posts.** Provide essentially straight wood or steel posts with a minimum length of 48 in., unless otherwise shown on the plans. Furnish soft wood posts at least 3 in. in diameter, or use nominal 2 × 4 in. boards. Furnish hardwood posts with a minimum cross-section of 1-1/2 × 1-1/2 in. Furnish T- or L-shaped steel postswith a minimum weight of 1.25 lb. per foot.

2.5.3. **Net Reinforcement.** Provide net reinforcement of at least 12.5 gauge (SWG) galvanized welded wire mesh, with a maximum opening size of 2 × 4 in., at least 24 in. wide, unless otherwise shown on the plans.

2.5.4. **Staples**. Provide staples with a crown at least 3/4 in. wide and legs 1/2 in. long.

2.5.5. **Used Materials.** Use recycled material meeting the applicable requirements if approved.

2.6. Biodegradable Erosion Control Logs.

2.6.1. **Core Material.** Furnish core material that is biodegradable or recyclable. Use compost, mulch, aspen excelsior wood fibers, chipped site vegetation, agricultural rice or wheat straw, coconut fiber, 100% recyclable fibers, or any other acceptable material unless specifically called out on the plans. Permit no more than 5% of the material to escape from the containment mesh. Furnish compost meeting the requirements ofItem 161, "Compost."

2.6.2. **Containment Mesh**. Furnish containment mesh that is 100% biodegradable, photodegradable, or recyclable such as burlap, twine, UV photodegradable plastic, polyester, or any other acceptable material.

Furnish biodegradable or photodegradable containment mesh when log will remain in place as part of a vegetative system.

Furnish recyclable containment mesh for temporary installations.

2.6.3. **Size**. Furnish biodegradable erosion control logs with diameters shown on the plans or as directed. Stuff containment mesh densely so logs do not deform.

3. QUALIFICATIONS, TRAINING, AND EMPLOYEE REQUIREMENTS

3.1. Contractor Responsible Person Environmental (CRPE) Qualifications and Responsibilities. Provide and designate in writing at the preconstruction conference a CRPE and alternate CRPE who have overall responsibility for the storm water management program. The CRPE will implement storm water and erosion control practices; will oversee and observe storm water control measure monitoring and management; will monitor the project site daily and produce daily monitoring reports as long as there are BMPs in place or soil disturbing activities are evident to ensure compliance with the SWP3 and TPDES General Permit TXR150000. During time suspensions when work is not occurring or on contract non-work days, daily inspections are not required unless a rain event has occurred. The CRPE will provide recommendations on how to improve the effectiveness of control measures. Attend the Department's preconstruction conference for the project. Ensure training is completed as identified in Section 506.3.3., "Training," by all applicable personnel before employees work on the project. Document and submit a list, signed by the CRPE, of all applicable Contractor and subcontractor employees who have completed the training. Include the employee's name, the training course name, and date the employee completed the training. Provide the most current list at the preconstruction conference or before SWP3 or soil disturbing activities. Update the list as needed and provide the updated list when updated.

3.2. Contractor Superintendent Qualifications and Responsibilities. Provide a superintendent that is competent, has experience with and knowledge of storm water management, and is knowledgeable of the requirements and the conditions of the TPDES General Permit TXR150000. The superintendent will manage and oversee the day to day operations and activities at the project site; work with the CRPE to provide effective storm water management at the project site; represent and act on behalf of the Contractor; and attend the Department's preconstruction conference for the project.

3.3. Training. All Contractor and subcontractor employees involved in soil disturbing activities, small or large structures, storm water control measures, and seeding activities must complete training as prescribed by the Department.

4. CONSTRUCTION

4.1. Contractor Responsibilities. Implement the SWP3 for the project site in accordance with the plans and specifications, TPDES General Permit TXR150000, and as directed. Coordinate storm water management with all other work on the project. Develop and implement an SWP3 for project-specific material supply plants within and outside of the Department's right of way in accordance with the specific or general storm water permit requirements. Prevent water pollution from storm water associated with construction activity from entering any surface water or private property on or adjacent to the project site.

4.2. Implementation. The CRPE, or alternate CRPE, must be accessible by phone and able to respond to project-related storm water management or other environmental emergencies 24 hr. per day.

4.2.1. **Commencement**. Implement the SWP3 as shown and as directed. Contractor-proposed recommendations for changes will be allowed as approved. Conform to the established guidelines in the TPDES General Permit TXR150000 to make changes. Do not implement changes until approval has been received and changes have been incorporated into the plans. Minor adjustments to meet field conditions are allowed and will be recorded in the SWP3.

4.2.2. **Phasing**. Implement control measures before the commencement of activities that result in soil disturbance. Phase and minimize the soil disturbance to the areas shown on the plans. Coordinate temporary control measures with permanent control measures and all other work activities on the project to assure economical, effective, safe, and continuous water pollution prevention. Provide control measures that are appropriate to the construction means, methods, and sequencing allowed by the Contract. Exercise precaution throughout the life of the project to prevent pollution of ground waters and surface waters. Schedule and perform clearing and grubbing operations so that stabilization measures will follow immediately thereafter if project conditions permit. Bring all grading sections to final grade as soon as possible and implement temporary and permanent control measures at the earliest time possible. Implement temporary control measures when required by the TPDES General Permit TXR150000 or otherwise necessitated by project conditions.

Do not prolong final grading and shaping. Preserve vegetation where possible throughout the project, and minimize clearing, grubbing, and excavation within stream banks, bed, and approach sections.

4.3. General.

4.3.1. **Temporary Alterations or Control Measure Removal**. Altering or removal of control measures is allowed when control measures are restored within the same working day.

4.3.2. **Stabilization**. Initiate stabilization for disturbed areas no more than 14 days after the construction activities in that portion of the site have temporarily or permanently ceased. Establish a uniform vegetative cover or use another stabilization practice in accordance with the TPDES General Permit TXR150000.

4.3.3. **Finished Work**. Remove and dispose of all temporary control measures upon acceptance of vegetative cover or other stabilization practice unless otherwise directed. Complete soil disturbing activities and establish a uniform perennial vegetative cover. A project will not be considered for acceptance until a vegetative cover of 70% density of existing adjacent undisturbed areas is obtained or equivalent permanent stabilization is obtained in accordance with the TPDES General Permit TXR150000. An exception will be allowed in arid areas as defined in the TPDES General Permit TXR150000.

4.3.4. **Restricted Activities and Required Precautions**. Do not discharge onto the ground or surface waters any pollutants such as chemicals, raw sewage, fuels, lubricants, coolants, hydraulic fluids, bitumens, or any other petroleum product. Operate and maintain equipment on-site to prevent actual or potential water pollution. Manage, control, and dispose of litter on-site such that no adverse impacts to water quality occur. Prevent dust from creating a potential or actual unsafe condition, public nuisance, or condition endangering the value, utility, or appearance of any property. Wash out concrete trucks only as described in the TPDES General Permit TXR150000. Use appropriate controls to minimize the offsite transport of suspended sediments and other pollutants if it is necessary to pump or channel standing water (i.e., dewatering). Prevent discharges that would contribute to a violation of Edwards Aquifer Rules, water quality standards, the impairment of a listed water body, or other state or federal law.

4.4. Installation, Maintenance, and Removal Work. Perform work in accordance with the SWP3, according to manufacturers' guidelines, and in accordance with the TPDES General Permit TXR150000. Install and maintain the integrity of temporary erosion and sedimentation control devices to accumulate silt and debris until soil disturbing activities are completed and permanent erosion control features are in place or the disturbed area has been adequately stabilized as approved.

The Department will inspect and document the condition of the control measures at the frequency shown on the plans and will provide the Construction SWP3 Field Inspection and Maintenance Reports to the Contractor. Make corrections as soon as possible before the next anticipated rain event or within 7 calendar days after being able to enter the worksite for each control measure. The only acceptable reason for not accomplishing the corrections with the time frame specified is when site conditions are "Too Wet to Work." Take immediate action if a correction is deemed critical as directed. When corrections are not made within the established time frame, all work will cease on the project and time charges will continue while the control measures are brought into compliance. Commence work once the Engineer reviews and documents the project is in compliance. Commencing work does not release the Contractor of the liability for noncompliance of the SWP3, plans, or TPDES General Permit TXR150000.

The Engineer may limit the disturbed area if the Contractor cannot control soil erosion and sedimentation resulting from the Contractor's operations. Implement additional controls as directed.

Remove devices upon approval or as directed. Finish-grade and dress the area upon removal. Stabilize disturbed areas in accordance with the permit, and as shown on the plans or directed. Materials removed are considered consumed by the project. Retain ownership of stockpiled material and remove it from the project when new installations or replacements are no longer required.

4.4.1.1. **Type 4 (Sack Gabions)**. Unfold sack gabions and smooth out kinks and bends. Connect the sides by lacing in a single loop–double loop pattern on 4- to 5-in. spacing for vertical filling. Pull the end lacing rod at one end until tight, wrap around the end, and twist 4 times. Fill with stone at the filling end, pull the rod tight, cut the wire with approximately 6 in. remaining, and twist wires 4 times.

4.4.2. **Construction Exits**. Prevent traffic from crossing or exiting the construction site or moving directly onto a public roadway, alley, sidewalk, parking area, or other right of way areas other than at the location of construction exits when tracking conditions exist. Construct exits for either long- or short-term use.

4.4.2.1. **Long-Term**. Place the exit over a foundation course as required. Grade the foundation course or compacted subgrade to direct runoff from the construction exits to a sediment trap as shown on the plans or as directed. Construct exits with a width of at least 14 ft. for one-way and 20 ft. for two-way traffic for the full width of the exit, or as directed.

4.4.4.1.1. **Type 1**. Construct to a depth of at least 8 in. using crushed aggregate as shown on the plans or as directed.

4.4.2.2. **Short-Term**.

4.4.4.2.1. **Type 3**. Construct using crushed aggregate, plywood, or wafer board. This type of exit may be used for daily operations where long-term exits are not practical.

4.4.4.2.2. **Type 4**. Construct as shown on the plans or as directed.

4.4.3. **Earthwork for Erosion Control**. Perform excavation and embankment operations to minimize erosion and to remove collected sediments from other erosion control devices.

4.4.3.1. **Excavation and Embankment for Erosion Control Features**. Place earth dikes, swales, or combinations of both along the low crown of daily lift placement, or as directed, to prevent runoff spillover. Place swales and dikes at other locations as shown on the plans or as directed to prevent runoff spillover or to divert runoff. Construct cuts with the low end blocked with undisturbed earth to prevent erosion of hillsides. Construct sediment traps at drainage structures in conjunction with other erosion control measures as shown on the plans or as directed.

Create a sediment basin, where required, providing 3,600 cu. ft. of storage per acre drained, or equivalent control measures for drainage locations that serve an area with 10 or more disturbed acres at one time, not including offsite areas.

4.4.3.2. **Excavation of Sediment and Debris.** Remove sediment and debris when accumulation affects theperformance of the devices, after a rain, and when directed.
4.4.3.3.

4.4.4. **Construction Perimeter Fence**. Construct, align, and locate fencing as shown on the plans or as directed.

4.4.4.1. **Installation of Posts.** Embed posts 18 in. deep or adequately anchor in rock, with a spacing of 8 to 10 ft.

4.4.4.2. **Wire Attachment**. Attach the top wire to the posts at least 3 ft. from the ground. Attach the lower wire midway between the ground and the top wire.

4.4.4.3. **Flag Attachment**. Attach flagging to both wire strands midway between each post. Use flagging at least 18 in. long. Tie flagging to the wire using a square knot.

4.4.5. **Sandbags for Erosion Control.** Construct a berm or dam of sandbags that will intercept sediment-laden storm water runoff from disturbed areas, create a retention pond, detain sediment, and release water in sheet flow. Fill each bag with sand so that at least the top 6 in. of the bag is unfilled to allow for proper tying of the open end. Place the sandbags with their tied ends in the same direction. Offset subsequent rows of sandbags 1/2 the length of the preceding row. Place a single layer of sandbags downstream as a secondary debris trap. Place additional sandbags as necessary or as directed for supplementary support to berms or dams of sandbags or earth.

4.4.6. **Temporary Sediment-Control Fence**. Provide temporary sediment-control fence near the downstream perimeter of a disturbed area to intercept sediment from sheet flow. Incorporate the fence into erosion-control measures used to control sediment in areas of higher flow. Install the fence as shown on the plans, as specified in this Section, or as directed.

4.4.6.1. **Installation of Posts.** Embed posts at least 18 in. deep, or adequately anchor, if in rock, with a spacing of 6 to 8 ft. and install on a slight angle toward the runoff source.

4.4.6.2. **Fabric Anchoring.** Dig trenches along the uphill side of the fence to anchor 6 to 8 in. of fabric. Provide a minimum trench cross-section of 6 × 6 in. Place the fabric against the side of the trench and align approximately 2 in. of fabric along the bottom in the upstream direction. Backfill the trench, then hand-tamp.

4.4.6.3. **Fabric and Net Reinforcement Attachment.** Attach the reinforcement to wooden posts with staples, or tosteel posts with T-clips, in at least 4 places equally spaced unless otherwise shown on the plans. Sewn vertical pockets may be used to attach reinforcement to end posts. Fasten the fabric to the top strand of reinforcement by hog rings or cord every 15 in. or less.

4.4.6.4. **Fabric and Net Splices.** Locate splices at a fence post with a minimum lap of 6 in. attached in at least 6 places equally spaced unless otherwise shown on the plans. Do not locate splices in concentrated flow areas.

Requirements for installation of used temporary sediment-control fence include the following:

- fabric with minimal or no visible signs of biodegradation (weak fibers),
- fabric without excessive patching (more than 1 patch every 15 to 20 ft.),
- posts without bends, and
- backing without holes.

4.4.7. **Biodegradable Erosion Control Logs.** Install biodegradable erosion control logs near the downstream perimeter of a disturbed area to intercept sediment from sheet flow. Incorporate the biodegradable erosion control logs into the erosion measures used to control sediment in areas of higher flow. Install, align, and locate the biodegradable erosion control logs as specified below, as shown on the plans, or as directed.

Secure biodegradable erosion control logs in a method adequate to prevent displacement as a result of normal rain events, prevent damage to the logs, and as approved, such that flow is not allowed under the logs. Temporarily removing and replacing biodegradable erosion logs as to facilitate daily work is allowed at the Contractor's expense.

4.4.8. **Vertical Tracking.** Perform vertical tracking on slopes to temporarily stabilize soil. Provide equipment with atrack undercarriage capable of producing a linear soil impression measuring a minimum of 12 in. long × 2 to4 in. wide × 1/2 to 2 in. deep. Do not exceed 12 in. between track impressions. Install continuous linear track impressions where the 12 in. length impressions are perpendicular to the slope. Vertical tracking is required on projects where soil disturbing activities have occurred unless otherwise approved.

4.5. Monitoring and Documentation. Monitor the control measures on a daily basis as long as there are BMPs in place and/or soil disturbing activities are evident to ensure compliance with the SWP3 and TPDES General Permit TXR150000. During time suspensions when work is not occurring or contract non-work days, daily inspections are not required unless a rain event has occurred. Monitoring will consist of, but is not limited to, observing, inspecting, and documenting site locations with control measures and discharge points to provide maintenance and inspection of controls as described in the SWP3. Keep written records of daily monitoring. Document in the daily monitoring report the control measure condition, the date of inspection, required corrective actions, responsible person for making the corrections, and the date corrective actions were completed. Maintain records of all monitoring reports at the project site or at an approved place. Provide copies within 7 days. Together, the CRPE and an Engineer's representative will complete the Construction Stage Gate Checklist on a periodic basis as directed.

5. MEASUREMENT

5.2. Earthwork for Erosion and Sediment Control.

5.2.1. **Equipment and Labor Measurement.** Equipment and labor used will be measured by the actual number of hours the equipment is operated and the labor is engaged in the work.

5.2.2. **Volume Measurement.**

5.2.2.1. **In Place.**

5.2.2.1.1. **Excavation.** Excavation will be measured by the cubic yard in its original position and the volume computed by the method of average end areas.

5.2.2.1.2. **Embankment.** Embankment will be measured by the cubic yard in its final position by the method of average end areas. The volume of embankment will be determined between:

- the original ground surfaces or the surface upon that the embankment is to be constructed for the feature and
- the lines, grades and slopes of the accepted embankment for the feature.

5.3. Construction Perimeter Fence. Construction perimeter fence will be measured by the foot.

5.4. Sandbags for Erosion Control. Sandbags will be measured as each sandbag or by the foot along the top of sandbag berms or dams.

5.5. Temporary Sediment-Control Fence. Installation or removal of temporary sediment-control fence will be measured by the foot.

5.6. Biodegradable Erosion Control Logs. Installation or removal of biodegradable erosion control logs will be measured by the foot along the centerline of the top of the control logs.

5.7. Vertical Tracking. Vertical tracking will not be measured or paid for directly but is considered subsidiary to this Item.

6. PAYMENT

The following will not be paid for directly but are subsidiary to pertinent Items:

- erosion-control measures for Contractor project-specific locations (PSLs) inside and outside the right of way (such as construction and haul roads, field offices, equipment and supply areas, plants, and material sources);
- removal of litter, unless a separate pay item is shown on the plans;
- repair to devices and features damaged by Contractor operations;
- added measures and maintenance needed due to negligence, carelessness, lack of maintenance, and failure to install permanent controls;
- removal and reinstallation of devices and features needed for the convenience of the Contractor;
- finish grading and dressing upon removal of the device; and
- minor adjustments including but not limited to plumbing posts, reattaching fabric, minor grading to maintain slopes on an erosion embankment feature, or moving small numbers of sandbags.

Stabilization of disturbed areas will be paid for under pertinent Items except vertical tacking which is subsidiary.

Furnishing and installing pipe for outfalls associated with sediment traps and ponds will not be paid for directly but is subsidiary to the excavation and embankment under this Item.

6.1. Construction Exits. Contractor-required construction exits from off right of way locations or on-right of way PSLs will not be paid for directly but are subsidiary to pertinent Items.

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" for construction exits needed on right of way access to work areas required by the Department will be paid for at the unit price bid for "Construction Exits (Install)" of the type specified or "Construction Exits (Remove)." This price is full compensation for furnishing and placing materials, excavating, removal and disposal, cleaning vehicles, labor, tools, and incidentals.

When the Engineer directs that a construction exit or portion thereof be removed and replaced, payment will be made at the unit prices bid for "Construction Exit (Remove)" and "Construction Exit (Install)" of the type specified. These prices are full compensation for the removal and replacement of the construction exit and for equipment, labor, tools, and incidentals.

Construction of sediment traps used in conjunction with the construction exit will be measured and paid for under "Earthwork for Erosion and Sediment Control."

6.2. Earthwork for Erosion and Sediment Control.

6.2.1. **Initial Earthwork for Erosion and Sediment Control.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Excavation (Erosion and Sediment Control, In Place)," "Embankment (Erosion and Sediment Control, In Place)," "Excavation (Erosion and Sediment Control, In Vehicle)," "Embankment (Erosion and Sediment Control, (In Vehicle)," or "Earthwork (Erosion and Sediment Control, In Vehicle)."

This price is full compensation for excavation and embankment including hauling, disposal of material not used elsewhere on the project; embankments including furnishing material from approved sources and construction of erosion-control features; and equipment, labor, tools, and incidentals.

Sprinkling and rolling required by this Item will not be paid for directly but will be subsidiary to this Item.

6.3. Construction Perimeter Fence. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Construction Perimeter Fence." This price is full compensation for furnishing and placing the fence; digging, fence posts, wire, and flagging; removal and disposal; and materials, equipment, labor, tools, and incidentals.

Removal of construction perimeter fence will be not be paid for directly but is subsidiary to the installation Item. When the Engineer directs that the perimeter fence installation or portions thereof be removed and replaced, payment will be made at the unit price bid for "Construction Perimeter Fence," which is full compensation for the removal and reinstallation of the construction perimeter fence.

6.4. Sandbags for Erosion Control. Sandbags will be paid for at the unit price bid for "Sandbags for Erosion Control" (of the height specified when measurement is by the foot). This price is full compensation for materials, placing sandbags, removal and disposal, equipment, labor, tools, and incidentals.

Removal of sandbags will not be paid for directly but is subsidiary to the installation Item. When the Engineer directs that the sandbag installation or portions thereof be replaced, payment will be made at the unit price bid for "Sandbags for Erosion Control," which is full compensation for the reinstallation of the sandbags.

6.5. Temporary Sediment-Control Fence. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid as follows:

6.5.1. **Installation**. Installation will be paid for as "Temporary Sediment-Control Fence (Install)." This price is full compensation for furnishing and operating equipment finish backfill and grading, lacing, proper disposal, labor, materials, tools, and incidentals.

6.5.2. **Removal**. Removal will be paid for as "Temporary Sediment-Control Fence (Remove)." This price is full compensation for furnishing and operating equipment, proper disposal, labor, materials, tools, and incidentals.

6.6. Biodegradable Erosion Control Logs. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid as follows:

6.6.1. **Installation**. Installation will be paid for as "Biodegradable Erosion Control Logs (Install)" of the size specified. This price is full compensation for furnishing and operating equipment finish backfill and grading, staking, proper disposal, labor, materials, tools, and incidentals.

6.6.2. **Removal**. Removal will be paid for as "Biodegradable Erosion Control Logs (Remove)." This price is full compensation for furnishing and operating equipment, proper disposal, labor, materials, tools, and incidentals.

6.7. Vertical Tracking. Vertical tracking will not be measured or paid for directly but is considered subsidiary to this Item.

ITEM 529
CONCRETE CURB, GUTTER,COMBINED CURB AND GUTTER

DESCRIPTION

Construct hydraulic cement concrete curb, gutter, and combined curb and gutter.

MATERIALS

Furnish materials conforming to:

- Item 360, "Concrete Pavement"
- Item 420, "Concrete Substructures"
- Item 421, "Hydraulic Cement Concrete"
- Item 440, "Reinforcement for Concrete"

Use Class A concrete or material specified on the plans. Use Grade 8 coarse aggregate for extruded Class Aconcrete. Use other grades if approved.

When approved, use fibers meeting the requirements of DMS-4550, "Fibers for Concrete," to replace reinforcing steel in Class A concrete. Dose fibers in accordance with the Department's MPL of pre-qualified fibers for concrete.

CONSTRUCTION

Provide finished work with a well-compacted mass and a surface free from voids and honeycomb, in the required shape, line, and grade. Round exposed edges with an edging tool of the radius shown on the plans. Mix, place, and cure concrete in accordance with Item 420, "Concrete Substructures." Construct joints at locations shown on the plans. Cure for at least 72 hr.

Furnish and place reinforcing steel in accordance with Item 440, "Reinforcement for Concrete."

Set and maintain a guideline that conforms to alignment data shown on the plans, with an outline that conforms to the details shown on the plans. Ensure that changes in curb grade and alignment do not exceed 1/4 in. between any 2 contacts on a 10-ft. straightedge.

3.1 Conventionally Formed Concrete. Shape and compact subgrade, foundation, or pavement surface to theline, grade, and cross-section shown on the plans. Lightly sprinkle subgrade or foundation material immediately before concrete placement.

Pour concrete into forms and strike off with a template 1/4 to 3/8 in. less than the dimensions of the finishedcurb unless otherwise approved. After initial set, plaster surface with mortar consisting of 1-part hydraulic cement and 2 parts fine aggregate. Brush exposed surfaces to a uniform

texture.

Place curbs, gutters, and combined curb and gutters in 50-ft. maximum sections unless otherwise approved.

3.2 Extruded or Slipformed Concrete. Hand-tamp and sprinkle subgrade or foundation material before concrete placement. Provide clean surfaces for concrete placement. Coat cleaned surfaces, if required, with approved adhesive or coating at the rate of application shown on the plans or as directed. Place concrete with approved self-propelled equipment.

The forming tube of the extrusion machine or the form of the slipform machine must be easily adjustable vertically during the forward motion of the machine to provide variable heights necessary to conform to the established grade line.

Attach a pointer or gauge to the machine so that a continual comparison can be made between the extruded or slipform work and the grade guideline. Other methods may be used when approved.

Finish surfaces immediately after extrusion or slipforming.

MEASUREMENT

This Item will be measured by the lineal foot.

PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under"Measurement" will be paid for at the unit price bid for "Concrete Curb," "Concrete Curb (Mono)," or "Concrete Curb and Gutter" of the type specified. This price is full compensation for surface preparation of curb foundation, equipment, labor, materials, tools, and incidentals.

END OF ITEM 529

EXHIBIT A: PLANS

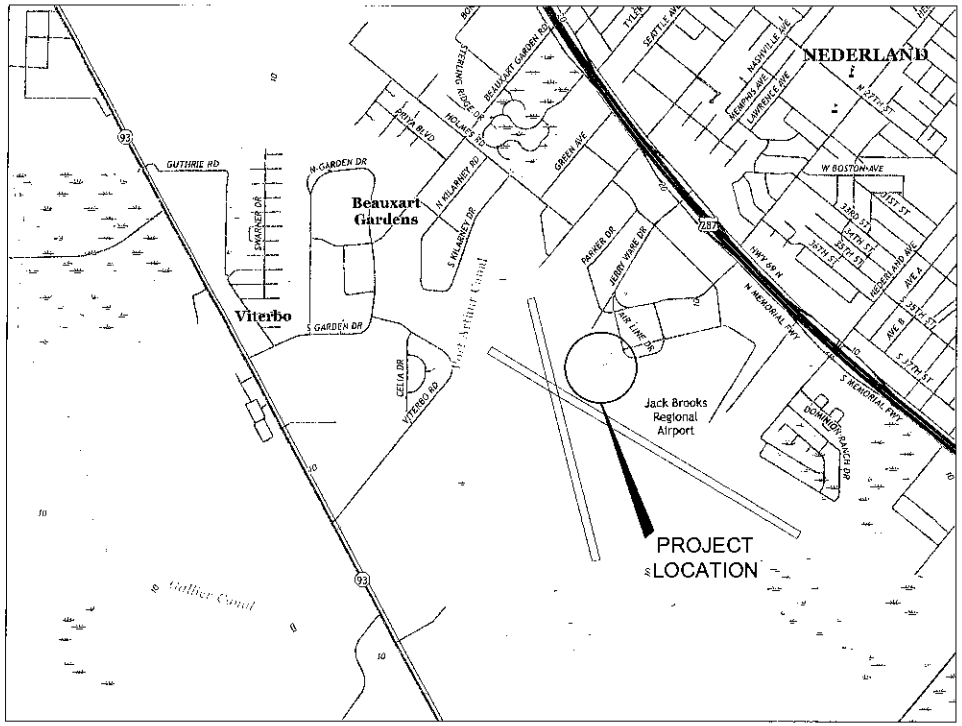
IFB 22-028/JW
EXHIBIT A: PAGE A-2

REHABILITATION OF FUEL FARM PAVEMENT
JACK BROOKS REGIONAL AIRPORT (BPT)

ISSUED FOR BIDDING

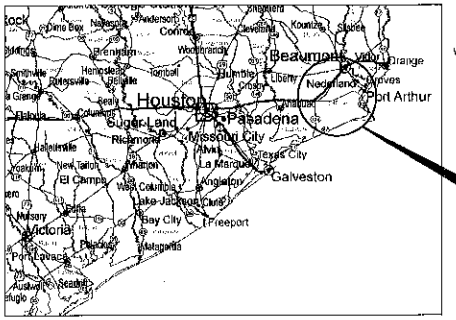
PROJECT CONSISTS OF RECONSTRUCTION OF EXISTING CONCRETE PAVEMENT AT THE JACK BROOKS REGIONAL AIRPORT FUEL FARM

FAA AIRPORT IMPROVEMENT PROGRAM (AIP) PN: AIP 3-480018-37-20
JEFFERSON COUNTY PN: ISB 22-028/JW
THE SOLCO GROUP PN: 2021-10-1092
MAY 2022



VICINITY MAP
N.T.S

SHEET INDEX		
SHEET NO.	DWG NO.	SHEET TITLE
1	G-000	COVER PAGE
2	G-001	GENERAL NOTES AND SUMMARY OF QUANTITIES
3	C-001	PROJECT LAYOUT AND PHASING PLAN
4	C-002	SURVEY PLAN
5	C-003	SITE DEMOLITION PLAN
6	C-004	GRADING, PLAN AND PROFILE
7	C-005	SITE PAVING, JOINTING AND SPOT ELEVATIONS
8	C-006	PAVEMENT DETAILS
9	C-007	PAVEMENT DETAILS
10	EC(9)-16	TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES EROSION CONTROL LOG
11	BC(8)-21	BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES



LOCATION MAP
N.T.S

JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #22626

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
COVER PAGE

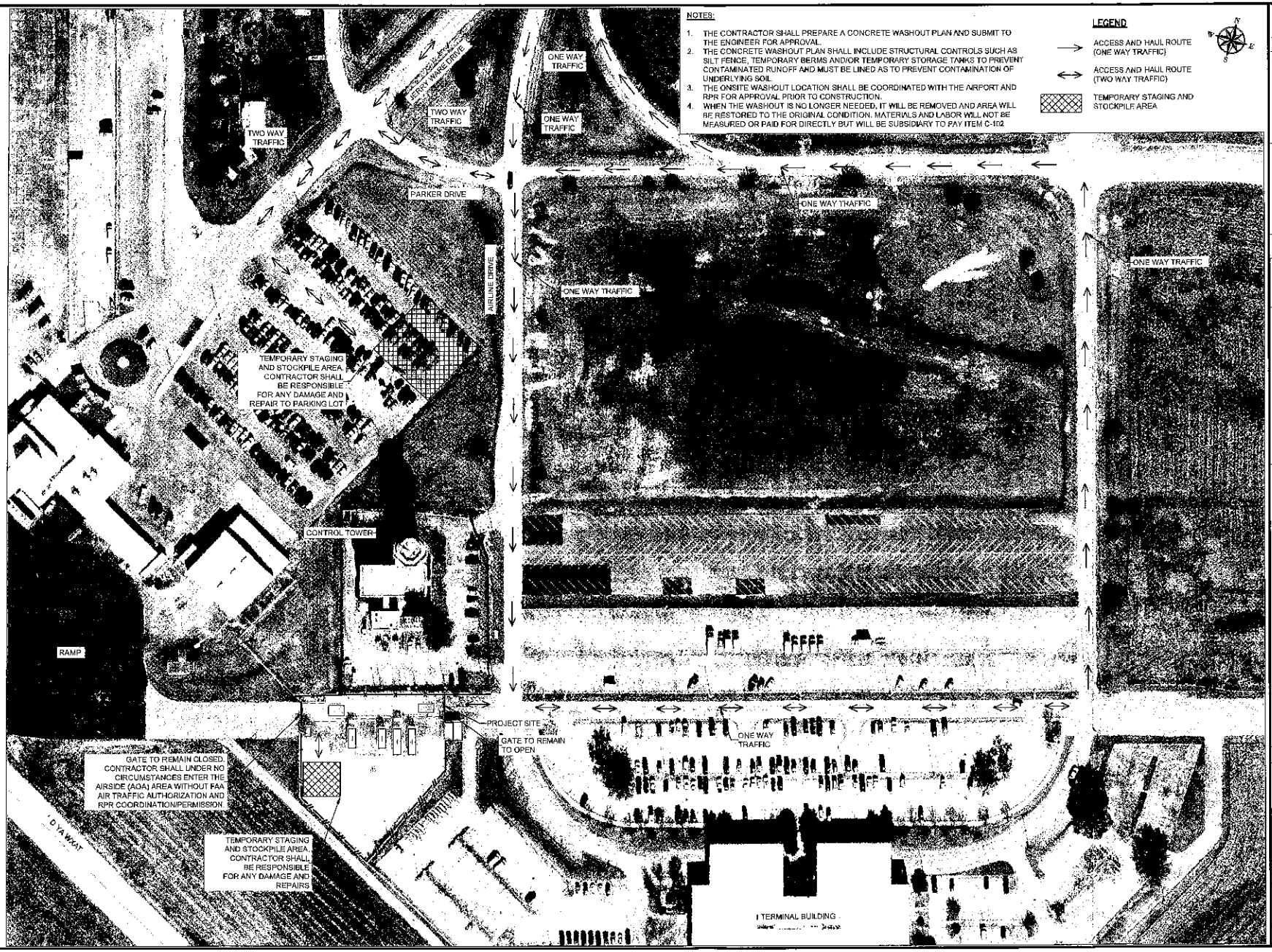
DRAWING NUMBER:
G-000

SHEET NUMBER: 1 SHEET TOTAL: 11

SCALE: N.T.S

DRAWN BY: AM CHECKED BY: KS

FILE:C:\The Solco Group\Jack Brooks Regional\13. CADD\2021092-BPT-COVER PAGE.dwg



NOTES:

1. THE CONTRACTOR SHALL PREPARE A CONCRETE WASHOUT PLAN AND SUBMIT TO THE ENGINEER FOR APPROVAL.
2. THE CONCRETE WASHOUT PLAN SHALL INCLUDE STRUCTURAL CONTROLS SUCH AS SILT FENCE, TEMPORARY BERMS AND/OR TEMPORARY STORAGE TANKS TO PREVENT CONTAMINATED RUNOFF AND MUST BE LINED AS TO PREVENT CONTAMINATION OF UNDERLYING SOIL.
3. THE ONSITE WASHOUT LOCATION SHALL BE COORDINATED WITH THE AIRPORT AND RPR FOR APPROVAL PRIOR TO CONSTRUCTION.
4. WHEN THE WASHOUT IS NO LONGER NEEDED, IT WILL BE REMOVED AND AREA WILL BE RESTORED TO THE ORIGINAL CONDITION. MATERIALS AND LABOR WILL NOT BE MEASURED OR PAID FOR DIRECTLY BUT WILL BE SUBSIDIARY TO PAY ITEM C-102

LEGEND

- ACCESS AND HAUL ROUTE (ONE WAY TRAFFIC)
- ACCESS AND HAUL ROUTE (TWO WAY TRAFFIC)
- TEMPORARY STAGING AND STOCKPILE AREA

JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #22626

KELVIN L. SOLKO 78181 LICENSED PROFESSIONAL ENGINEER

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
PROJECT LAYOUT AND PHASING PLAN

DRAWING NUMBER: C-001

SHEET NUMBER: 3 SHEET TOTAL: 11

SCALE: 1" = 60' (FULL) 1"=120' (HALF)

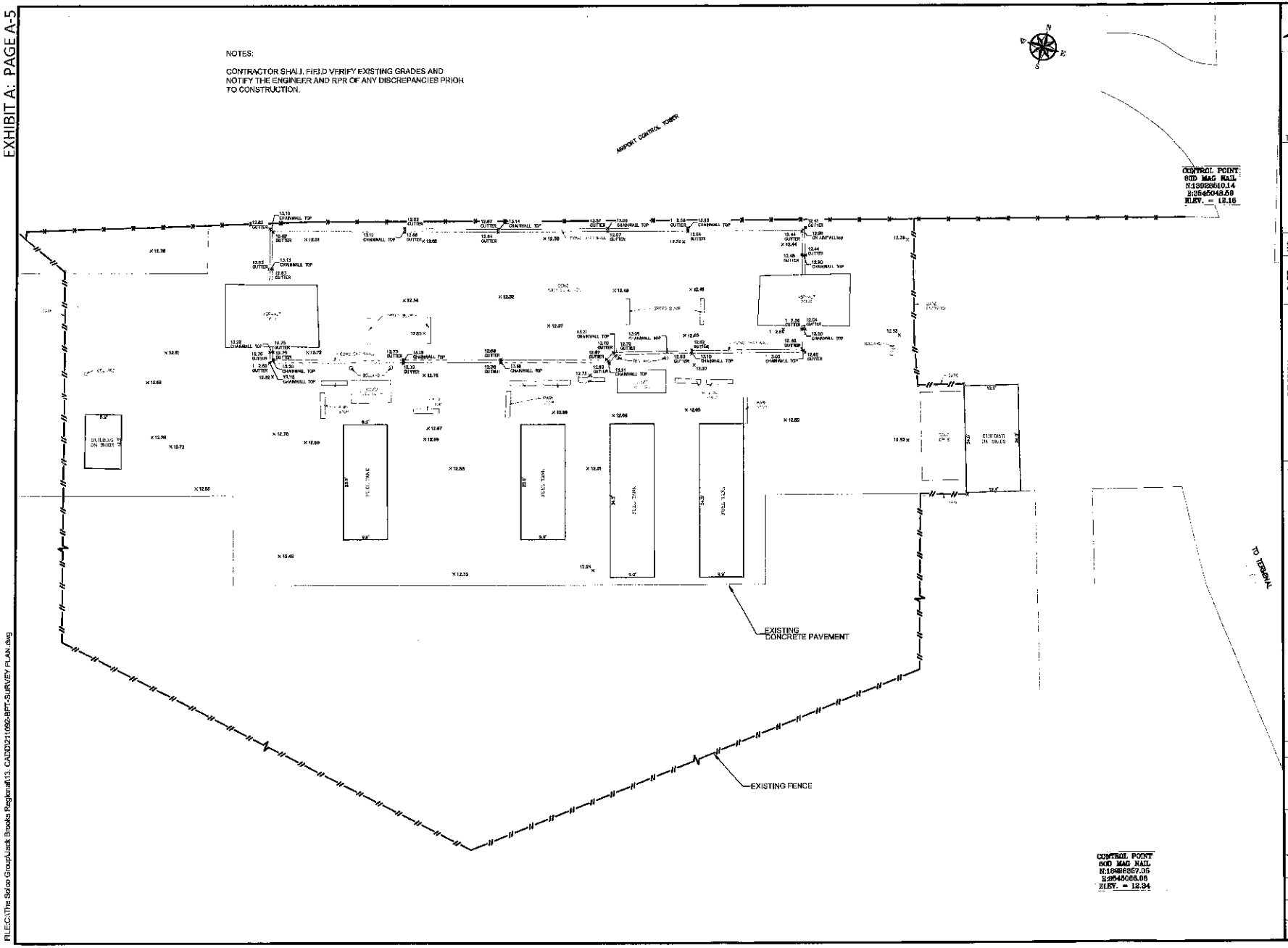
DRAWN BY: AM CHECKED BY: KS

FILE:C:\The Solos Group\Jack Brooks Regional\13. CADD\211092-BPT-PROJECT LAYOUT.dwg

EXHIBIT A: PAGE A-5

NOTES:

CONTRACTOR SHALL FIELD VERIFY EXISTING GRADES AND NOTIFY THE ENGINEER AND RPR OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.



JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #22626

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
SURVEY PLAN

DRAWING NUMBER: C-002

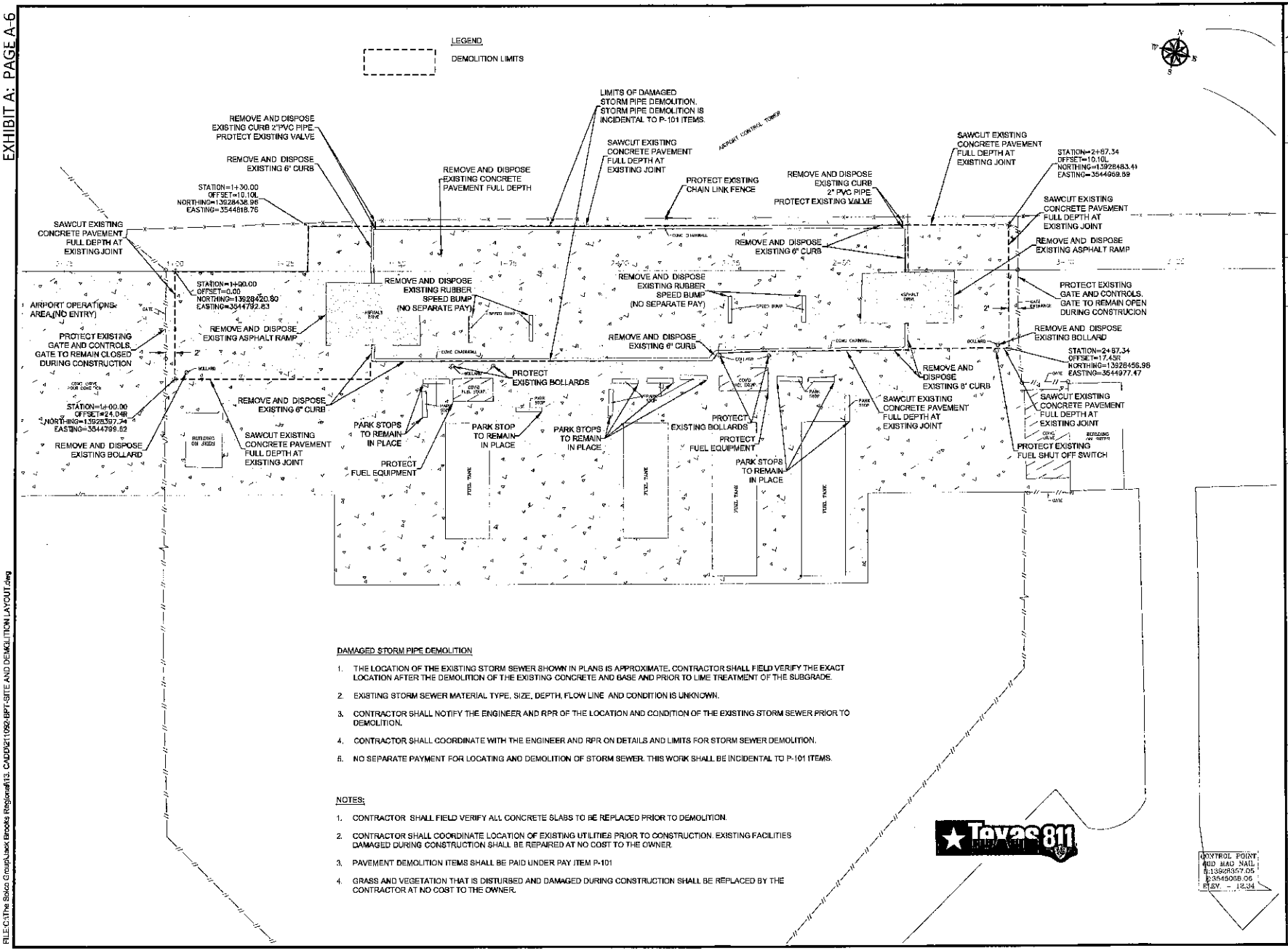
SHEET NUMBER: 4 SHEET TOTAL: 11

SCALE: 1" = 10' (FULL) 1"=20' (HALF)

DRAWN BY: AM CHECKED BY: KS

FILE:C:\The Silon Group\Jack Brooks Regional\13. CAD\D21109-BPT-SURVEY PLAN.dwg

FB 2228/pw



DAMAGED STORM PIPE DEMOLITION

1. THE LOCATION OF THE EXISTING STORM SEWER SHOWN IN PLANS IS APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATION AFTER THE DEMOLITION OF THE EXISTING CONCRETE AND BASE AND PRIOR TO LIME TREATMENT OF THE SUBGRADE.
2. EXISTING STORM SEWER MATERIAL TYPE, SIZE, DEPTH, FLOW LINE AND CONDITION IS UNKNOWN.
3. CONTRACTOR SHALL NOTIFY THE ENGINEER AND RPR OF THE LOCATION AND CONDITION OF THE EXISTING STORM SEWER PRIOR TO DEMOLITION.
4. CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND RPR ON DETAILS AND LIMITS FOR STORM SEWER DEMOLITION.
5. NO SEPARATE PAYMENT FOR LOCATING AND DEMOLITION OF STORM SEWER. THIS WORK SHALL BE INCIDENTAL TO P-101 ITEMS.

NOTES:

1. CONTRACTOR SHALL FIELD VERIFY ALL CONCRETE SLABS TO BE REPLACED PRIOR TO DEMOLITION.
2. CONTRACTOR SHALL COORDINATE LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. EXISTING FACILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED AT NO COST TO THE OWNER.
3. PAVEMENT DEMOLITION ITEMS SHALL BE PAID UNDER PAY ITEM P-101
4. GRASS AND VEGETATION THAT IS DISTURBED AND DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER.

Texas 811

JACK BROOKS REGIONAL AIRPORT

TSG

TBPE FIRM #22826

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
SITE DEMOLITION PLAN

DRAWING NUMBER: C-003

SHEET NUMBER: 5 SHEET TOTAL: 11

SCALE: 1" = 10' (FULL) 1"=20' (HALF)

DRAWN BY: AM CHECKED BY: KS

FILE:C:\The Stico Group\Jack Brooks Regional\13. CAD\D21092-BPT-SITE AND DEMOLITION LAYOUT.dwg

EXHIBIT A: PAGE A-7

LEGEND

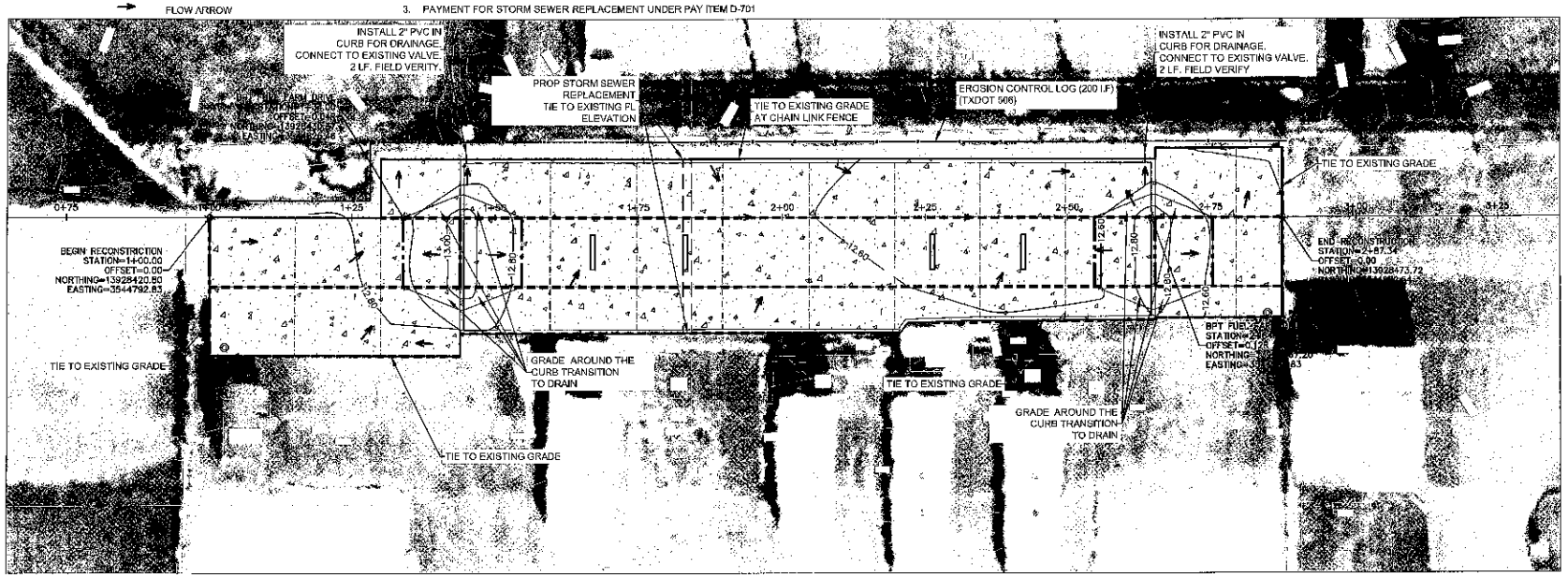
- XX — PROPOSED GRADE AT 0.2' INTERVAL
- XX — EXISTING GRADE AT 0.2' INTERVAL
- EROSION CONTROL LOG
- FLOW ARROW

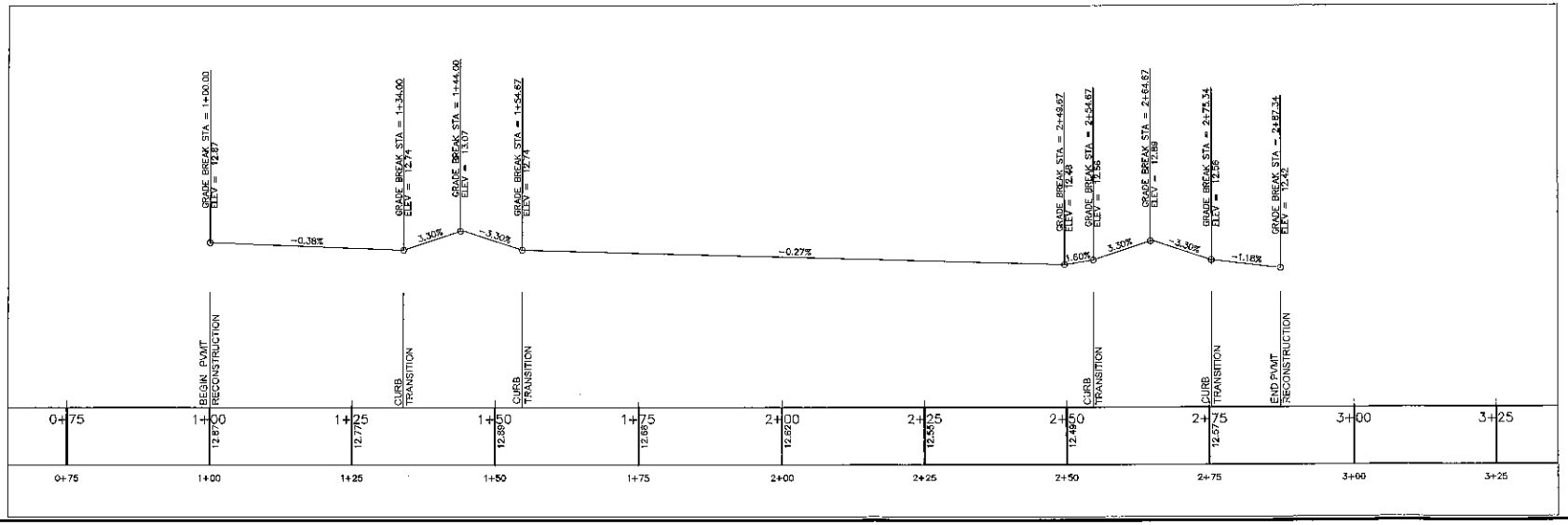
DAMAGED STORM PIPE REPLACEMENT

1. THE LOCATION OF THE DAMAGED STORM SEWER REPLACEMENT SHOWN IN PLANS IS APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATION.
2. CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND RPR ON DETAILS FOR STORM SEWER MATERIAL TYPE AND CONSTRUCTION PRIOR TO REPLACEMENT.
3. PAYMENT FOR STORM SEWER REPLACEMENT UNDER PAY ITEM D-701

NOTES:

CONTRACTOR SHALL FIELD VERIFY EXISTING GRADES AND NOTIFY THE ENGINEER AND RPR OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.





JACK BROOKS REGIONAL AIRPORT

TSG

TBPE FIRM #22626

KELVIN L. SOLCO 76161 Licensed Professional Engineer

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
GRADING, PLAN AND PROFILE

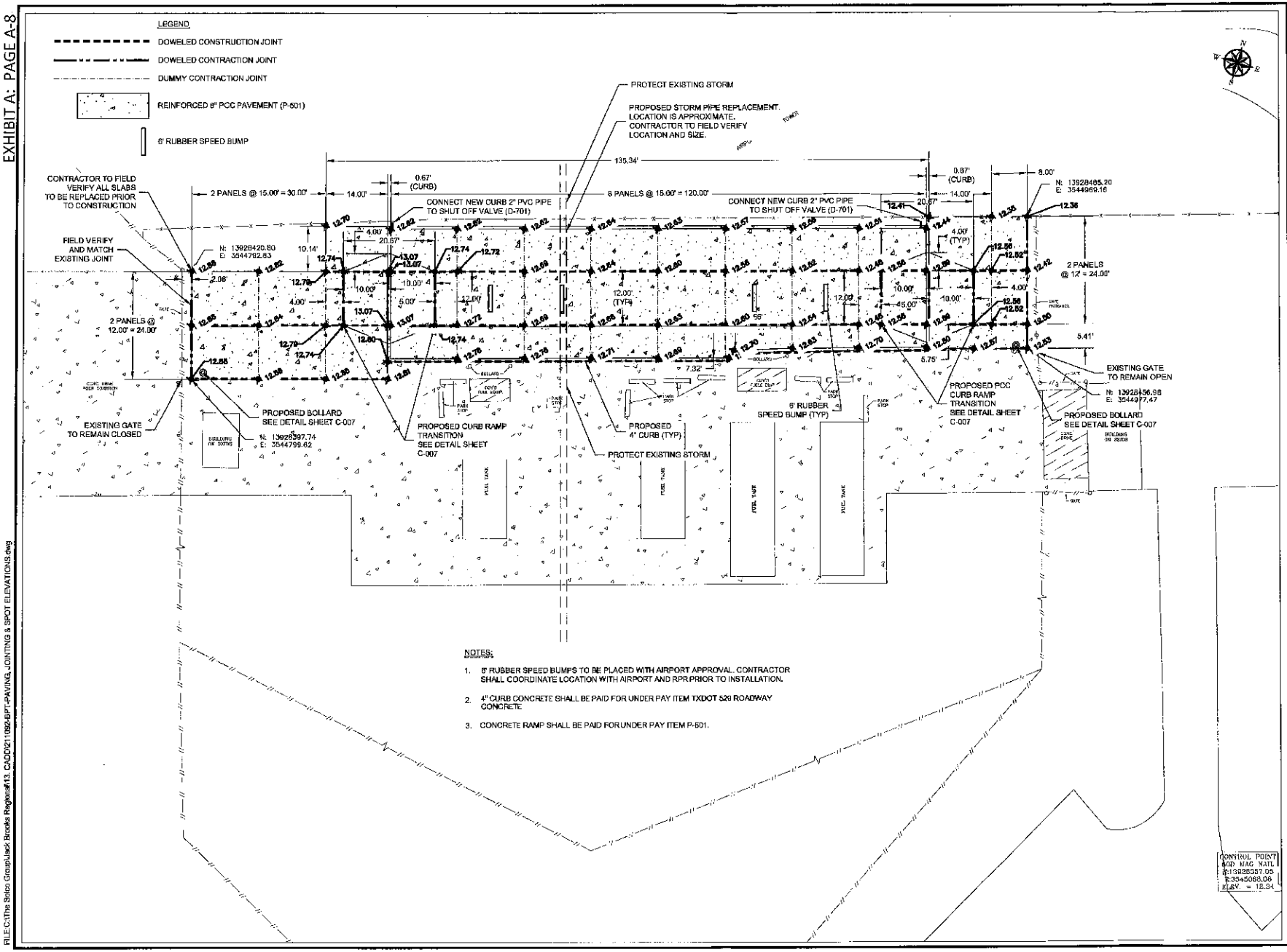
DRAWING NUMBER: C-004

SHEET NUMBER: 6 SHEET TOTAL: 11

SCALE: 1" = 10' (FULL) 1"=20' (HALF)

DRAWN BY: AM CHECKED BY: KS

FILE:C:\The Solco Group\Jack Brooks Regional\13. CADD\211082-BPT-GRADING, PLAN & PROFILE.dwg



NOTES:

1. 6' RUBBER SPEED BUMPS TO BE PLACED WITH AIRPORT APPROVAL. CONTRACTOR SHALL COORDINATE LOCATION WITH AIRPORT AND RPR PRIOR TO INSTALLATION.
2. 4" CURB CONCRETE SHALL BE PAID FOR UNDER PAY ITEM TXDOT 529 ROADWAY CONCRETE
3. CONCRETE RAMP SHALL BE PAID FOR UNDER PAY ITEM P-501.

JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #22626

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
SITE PAVING, JOINTING AND SPOT ELEVATIONS

DRAWING NUMBER: C-005

SHEET NUMBER: 7 SHEET TOTAL: 11

SCALE: 1" = 10' (FULL) 1"=20' (HALF)

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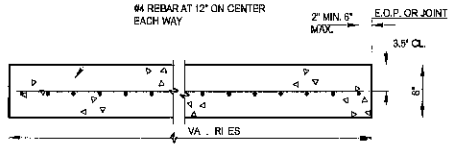
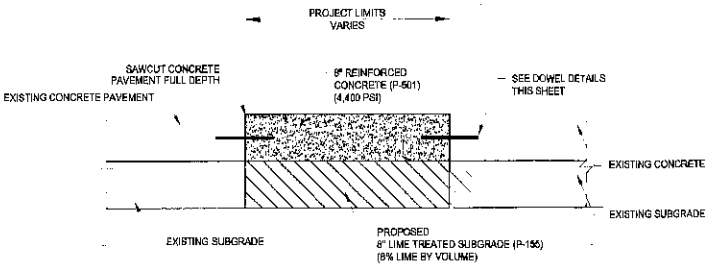
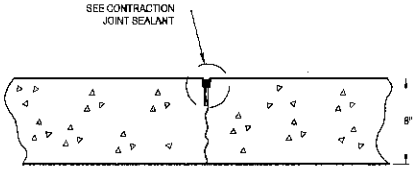


TYPICAL REINFORCED CONCRETE PAVEMENT SLAB
N.T.S.

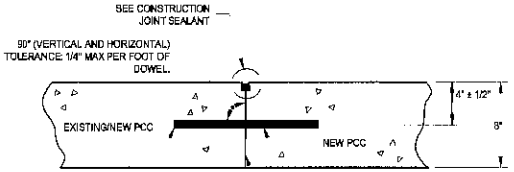


FUEL FARM ROAD PAVEMENT
N.T.S.

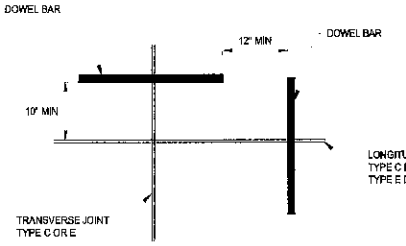


DUMMY CONTRACTION JOINT (JOINT D)
N.T.S.

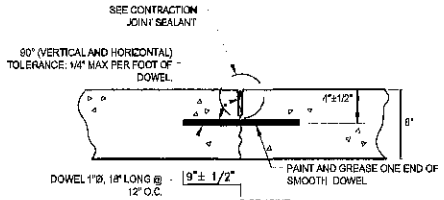
CONCRETE JOINTS NOTE:
PAYMENT FOR CONCRETE JOINTS AND SEALANT SHALL BE INCIDENTAL TO PAY ITEM P-501



DOWELED CONSTRUCTION JOINT (TYPE E)
N.T.S.

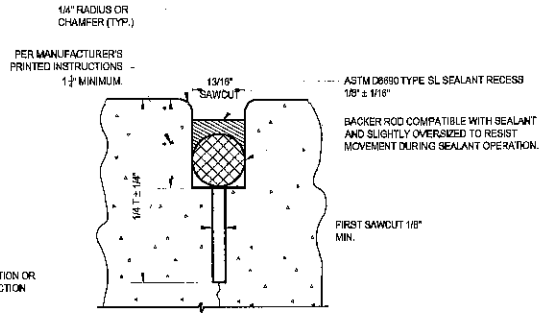


POSITION OF DOWELS AT EDGE OF JOINT TYPE C, E
N.T.S.



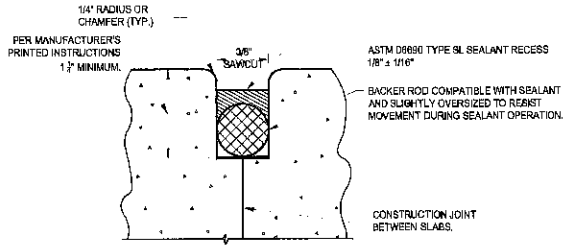
DOWELED CONTRACTION JOINT (TYPE C)
N.T.S.

SMOOTH DOWEL BAR SCHEDULE			
PCC SLAB DEPTH	DIAMETER	LENGTH	SPACING
8"	1"	18"	12"
12"	1"	18"	12"



NOTE:
ALL SEALANT MATERIALS MUST BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS AS APPROVED BY ENGINEER.

CONTRACTION JOINT SEALANT
N.T.S.



NOTE:
ALL SEALANT MATERIALS MUST BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS AS APPROVED BY ENGINEER.

CONSTRUCTION JOINT SEALANT
N.T.S.

JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #22626

KELVIN T. SOLOO 78161 LICENSED PROFESSIONAL ENGINEER

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION OF FUEL FARM PAVEMENT

DRAWING TITLE:
PAVEMENT DETAILS

DRAWING NUMBER: C-006

SHEET NUMBER: 8 SHEET TOTAL: 11

SCALE: N.T.S

DRAWN BY: AM CHECKED BY: KS

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EXHIBIT A: PAGE A-10
TxB 22-028/jvw
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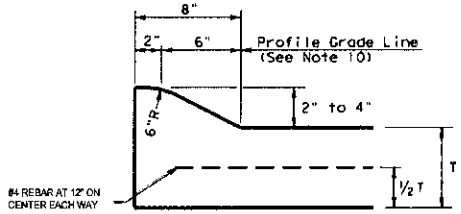
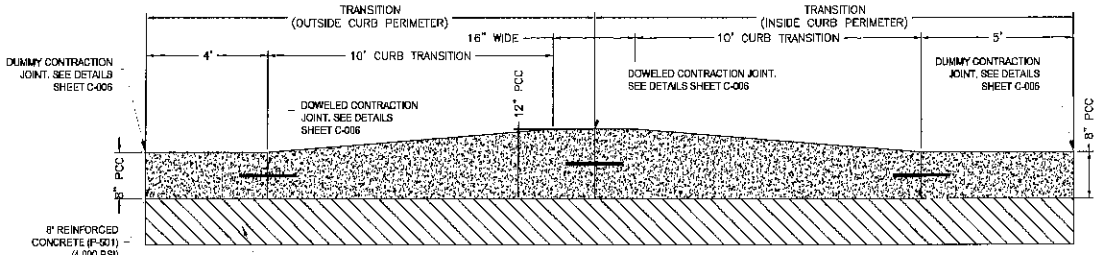
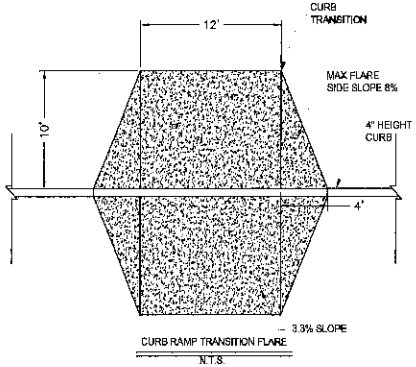


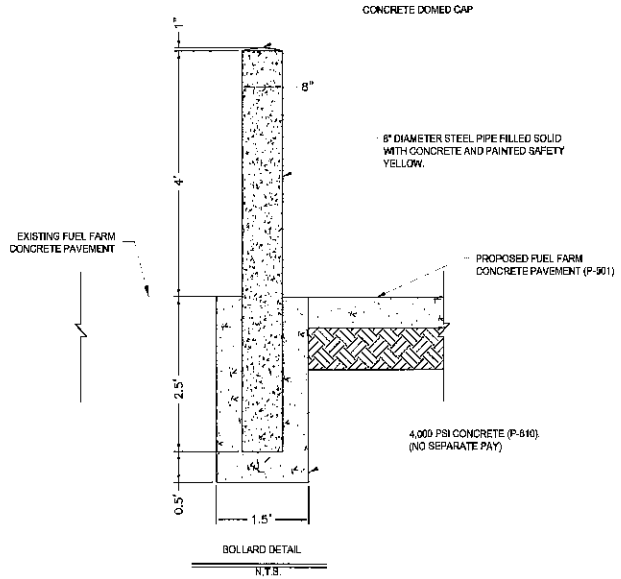
4' HEIGHT CURB DETAIL
N.T.S.



CURB RAMP TRANSITION DETAIL
N.T.S.



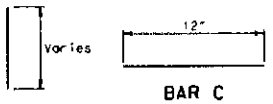
CURB RAMP TRANSITION FLARE
N.T.S.



BOLLARD DETAIL
N.T.S.

GENERAL NOTES

1. All materials and construction shall be in accordance with Item 529, "Concrete Curb, Gutter, and Combined Curb and Gutter."
2. Concrete shall be Class A.
3. When reinforcing bars are used, they shall be No.4 unless otherwise shown. The use of fiber reinforced concrete in lieu of reinforcing steel is acceptable. Use fibers meeting the requirements of DMS 4550, "Fibers for Concrete," and dose fibers in accordance with Material Producers List (MPL) "Fibers for Class A and B Concrete Applications."
4. Round exposed sharp edges with a rounding tool, to a minimum radius of ¼ inch.
5. All existing curbs and driveways to be removed shall be sawed or removed at existing joints.
6. Where concrete curb is to be placed on existing concrete pavement, Bar B may be drilled and the grouted in place, or may be inserted into fresh concrete.
7. Expansion and contraction joints shall be constructed to match pavement joints in all curbs and curb and gutter adjacent to jointed concrete pavement. Where placement of curb or curb and gutter is not adjacent to concrete pavement, expansion joints shall be provided at structures, curb returns at streets, and at locations directed by The Engineer.
8. Vertical and horizontal dowel bars and transverse reinforcing bars shall be placed at four feet C-C.
9. Dimension 'T' shown is the thickness of concrete pavement. When curb is installed adjacent to flexible pavement dimension 'T' is 8" maximum.
10. Usual profile grade line. Refer to typical sections and plan-profile sheets for exact locations.
11. One-half inch expansion joint material shall be provided where curb or curb and gutter is adjacent to sidewalk or riprap.
12. When horizontal permissible construction joints are used, the longitudinal pavement steel shall be placed in accordance with pavement details shown elsewhere in the plans. Reinforcing steel for curb section shall then conform to that required for concrete curb.
13. Bar B used as needed to support curb reinforcing steel during concrete placement.



BAR B BAR C

JACK BROOKS REGIONAL AIRPORT

TBPE FIRM #22626

KELVIN L. SOLCO 78164 REGISTERED PROFESSIONAL ENGINEER

NO.	DATE	REVISION

GENERAL NOTES:

DATE: MAY 2022

PROJECT TITLE:
REHABILITATION
OF FUEL FARM PAVEMENT

DRAWING TITLE:
PAVEMENT DETAILS

DRAWING NUMBER: C-007

SHEET NUMBER: 8 SHEET TOTAL: 11

SCALE: N.T.S

DRAWN BY: AM CHECKED BY: KS

TPB 22-028/JW

EXHIBIT A: PAGE A-11

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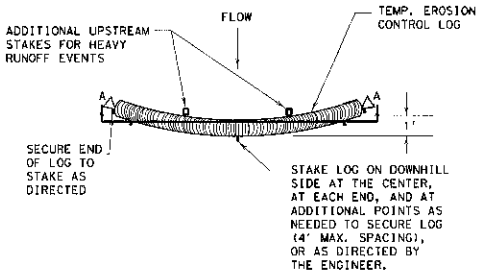
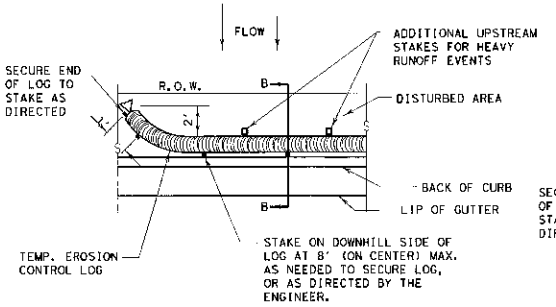
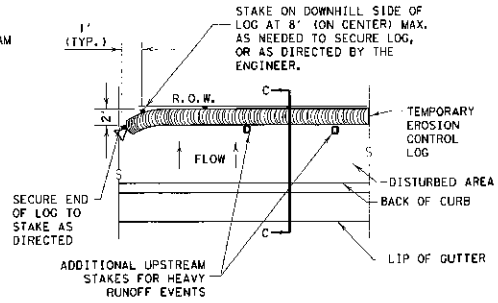
DATE:
FILE:



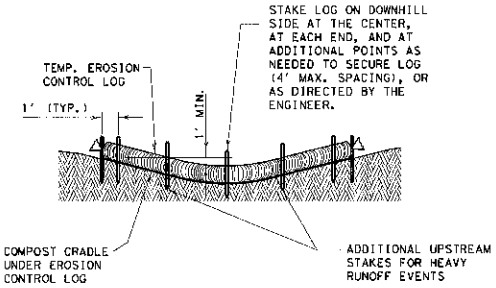
PLAN VIEW



PLAN VIEW



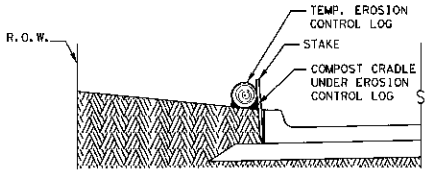
PLAN VIEW



SECTION A-A

EROSION CONTROL LOG DAM

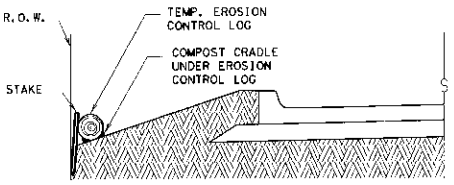
CL-D



SECTION B-B

EROSION CONTROL LOG AT BACK OF CURB

CL-BOC



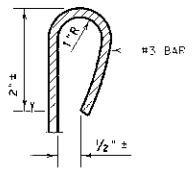
SECTION C-C

EROSION CONTROL LOG AT EDGE OF RIGHT-OF-WAY

CL-ROW

LEGEND

- CL-D — EROSION CONTROL LOG DAM
- CL-BOC — EROSION CONTROL LOG AT BACK OF CURB
- CL-ROW — EROSION CONTROL LOG AT EDGE OF RIGHT-OF-WAY



REBAR STAKE DETAIL

SEDIMENT BASIN & TRAP USAGE GUIDELINES

An erosion control log sediment trap may be used to filter sediment out of runoff draining from an unstabilized area.

Log Traps: The drainage area for a sediment trap should not exceed 5 acres. The trap capacity should be 1800 CF/Acre (0.5" over the drainage area).

Control logs should be placed in the following locations:

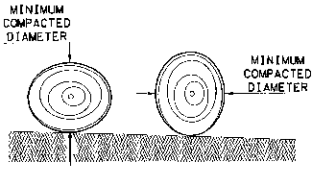
1. Within drainage ditches spaced as needed or min. 500' on center
2. Immediately preceding ditch inlets or drain inlets
3. Just before the drainage enters a water course
4. Just before the drainage leaves the right of way
5. Just before the drainage leaves the construction limits where drainage flows away from the project.

The logs should be cleaned when the sediment has accumulated to a depth of 1/2 the log diameter.

Cleaning and removal of accumulated sediment deposits is incidental and will not be paid for separately.

GENERAL NOTES:

1. EROSION CONTROL LOGS SHALL BE INSTALLED IN ACCORDANCE WITH MANFACTURER'S RECOMMENDATIONS, OR AS DIRECTED BY THE ENGINEER.
2. LENGTHS OF EROSION CONTROL LOGS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND AS REQUIRED FOR THE PURPOSE INTENDED.
3. UNLESS OTHERWISE DIRECTED, USE BIODEGRADABLE OR PHOTODEGRADABLE CONTAINMENT MESH ONLY WHERE LOG WILL REMAIN IN PLACE AS PART OF A VEGETATIVE SYSTEM. FOR TEMPORARY INSTALLATIONS, USE RECYCLABLE CONTAINMENT MESH.
4. FILL LOGS WITH SUFFICIENT FILTER MATERIAL TO ACHIEVE THE MINIMUM COMPACTED DIAMETER SPECIFIED IN THE PLANS WITHOUT EXCESSIVE DEFORMATION.
5. STAKES SHALL BE 2" X 2" WOOD OR #3 REBAR, 2'-4' LONG, EMBEDDED SUCH THAT 2" PROTRUDES ABOVE LOG, OR AS DIRECTED BY THE ENGINEER.
6. DO NOT PLACE STAKES THROUGH CONTAINMENT MESH.
7. COMPOST CRADLE MATERIAL IS INCIDENTAL & WILL NOT BE PAID FOR SEPARATELY.
8. SANDBAGS USED AS ANCHORS SHALL BE PLACED ON TOP OF LOGS & SHALL BE OF SUFFICIENT SIZE TO HOLD LOGS IN PLACE.
9. TURN THE ENDS OF EACH ROW OF LOGS UPSLOPE TO PREVENT RUNOFF FROM FLOWING AROUND THE LOG.
10. FOR HEAVY RUNOFF EVENTS, ADDITIONAL UPSTREAM STAKES MAY BE NECESSARY TO KEEP LOG FROM FOLDING IN ON ITSELF.



DIAMETER MEASUREMENTS OF EROSION CONTROL LOGS SPECIFIED IN PLANS

SHEET 1 OF 3

Texas Department of Transportation

Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

EROSION CONTROL LOG

EC(9)-16

FILE: ec916	DN: TxDOT	CK: RW	DW: LS/PS	CK: LS
©TxDOT: JULY 2016	CONT	SECT	JOB	HIGHWAY
REVISIONS				
	DIST	COUNTY		SHEET NO.

TFB 22-028/JW
EXHIBIT A: PAGE A-12

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GENERAL NOTES

1. For long term stationary work zones on freeways, drums shall be used as the primary channelizing device.
2. For intermediate term stationary work zones on freeways, drums should be used as the primary channelizing device but may be replaced in tangent sections by vertical panels, or 42" two-piece cones. In tangent sections, one-piece cones may be used with the approval of the Engineer but only if personnel are present on the project at all times to maintain the cones in proper position and location.
3. For short term stationary work zones on freeways, drums are the preferred channelizing device but may be replaced in tapers, transitions and tangent sections by vertical panels, two-piece cones or one-piece cones as approved by the Engineer.
4. Drums and all related items shall comply with the requirements of the current version of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) and the "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
5. Drums, bases, and related materials shall exhibit good workmanship and shall be free from objectionable marks or defects that would adversely affect their appearance or serviceability.
6. The Contractor shall have a maximum of 24 hours to replace any plastic drums identified for replacement by the Engineer/Inspector. The replacement device must be an approved device.

GENERAL DESIGN REQUIREMENTS

Pre-qualified plastic drums shall meet the following requirements:

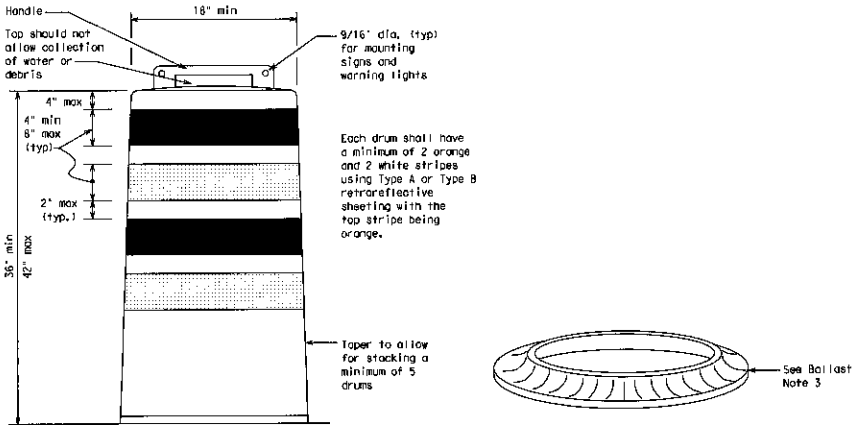
1. Plastic drums shall be a two-piece design; the "body" of the drum shall be the top portion and the "base" shall be the bottom.
2. The body and base shall lock together in such a manner that the body separates from the base when impacted by a vehicle traveling at a speed of 20 MPH or greater but prevents accidental separation due to normal handling and/or air turbulence created by passing vehicles.
3. Plastic drums shall be constructed of lightweight flexible, and deformable materials. The Contractor shall NOT use metal drums or single piece plastic drums as channelization devices or sign supports.
4. Drums shall present a profile that is a minimum of 18 inches in width at the 36 inch height when viewed from any direction. The height of drum unit (body installed on base) shall be a minimum of 36 inches and a maximum of 42 inches.
5. The top of the drum shall have a built-in handle for easy pickup and shall be designed to drain water and not collect debris. The handle shall have a minimum of two widely spaced 9/16 inch diameter holes to allow attachment of a warning light, warning reflector unit or approved compliant sign.
6. The exterior of the drum body shall have a minimum of four alternating orange and white retroreflective circumferential stripes not less than 4 inches nor greater than 8 inches in width. Any non-reflectorized space between any two adjacent stripes shall not exceed 2 inches in width.
7. Bases shall have a maximum width of 36 inches, a maximum height of 4 inches, and a minimum of two footholds of sufficient size to allow base to be held down while separating the drum body from the base.
8. Plastic drums shall be constructed of ultra-violet stabilized, orange, high-density polyethylene (HDPE) or other approved material.
9. Drum body shall have a maximum unballasted weight of 11 lbs.
10. Drum and base shall be marked with manufacturer's name and model number.

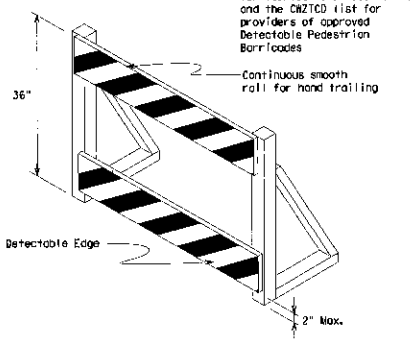
RETROREFLECTIVE SHEETING

1. The stripes used on drums shall be constructed of sheeting meeting the color and retroreflectivity requirements of Departmental Materials Specification DMS-8300, "Sign Face Materials." Type A or Type B reflective sheeting shall be supplied unless otherwise specified in the plans.
2. The sheeting shall be suitable for use on and shall adhere to the drum surface such that, upon vehicular impact, the sheeting shall remain adhered in-place and exhibit no delaminating, cracking, or loss of retroreflectivity other than that loss due to abrasion of the sheeting surface.

BALLAST

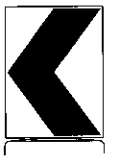
1. Unballasted bases shall be large enough to hold up to 50 lbs. of sand. This base, when filled with the ballast material, should weigh between 35 lbs (minimum) and 50 lbs (maximum). The ballast may be sand in one to three sandbags separate from the base, sand in a sand-filled plastic base, or other ballasting devices as approved by the Engineer. Stacking of sandbags will be allowed, however height of sandbags above pavement surface may not exceed 12 inches.
2. Bases with built-in ballast shall weigh between 40 lbs. and 50 lbs. Built-in ballast can be constructed of an integral crumb rubber base or a solid rubber base.
3. Recycled truck tire sidewalls may be used for ballast on drums approved for this type of ballast on the CWZTCD list.
4. The ballast shall not be heavy objects, water, or any material that would become hazardous to motorists, pedestrians, or workers when the drum is struck by a vehicle.
5. When used in regions susceptible to freezing, drums shall have drainage holes in the bottoms so that water will not collect and freeze becoming a hazard when struck by a vehicle.
6. Ballast shall not be placed on top of drums.
7. Adhesives may be used to secure base of drums to pavement.



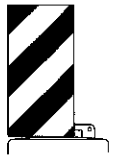


DETECTABLE PEDESTRIAN BARRICADES

1. When existing pedestrian facilities are disrupted, closed, or relocated in a TTC zone, the temporary facilities shall be detectable and include accessibility features consistent with the features present in the existing pedestrian facility. Refer to WZ(BTS-2) for Pedestrian Control requirements for Sidewalk Diversions, Sidewalk Detours and Crosswalk Closures.
2. Where pedestrians with visual disabilities normally use the closed sidewalk, a Detectable Pedestrian Barricade shall be placed across the full width of the closed sidewalk instead of a Type 3 Barricade.
3. Detectable pedestrian barricades similar to the one pictured above, longitudinal channelizing devices, some concrete barriers, and wood or chain link fencing with a continuous detectable edging can satisfactorily delineate a pedestrian path.
4. Tape, rope, or plastic chain strung between devices are not detectable, do not comply with the design standards in the "Americans with Disabilities Act Accessibility Guidelines (ADAAG)" and should not be used as a control for pedestrian movements.
5. Warning lights shall not be attached to detectable pedestrian barricades.
6. Detectable pedestrian barricades should use 8" nominal barricade rails as shown on BC(10) provided that the top rail provides a smooth continuous rail suitable for hand trailing with no splinters, burrs, or sharp edges.



18" x 24" Sign (Maximum Sign Dimension) Chevron CW1-6, Opposing Traffic Lane Divider, Driveway sign D70a, Keep Right R4 series or other signs as approved by Engineer



12" x 24" Vertical Panel mount with diagonals sloping down towards travel way

Plywood, Aluminum or Metal sign substrates shall NOT be used on plastic drums

SIGNS, CHEVRONS, AND VERTICAL PANELS MOUNTED ON PLASTIC DRUMS

1. Signs used on plastic drums shall be manufactured using substrates listed on the CWZTCD.
2. Chevrons and other work zone signs with an orange background shall be manufactured with Type B_{FL} or Type C_{FL} Orange sheeting meeting the color and retroreflectivity requirements of DMS-8300, "Sign Face Material," unless otherwise specified in the plans.
3. Vertical Panels shall be manufactured with orange and white sheeting meeting the requirements of DMS-8300 Type A or Type B. Diagonal stripes on Vertical Panels shall slope down toward the intended traveled lane.
4. Other sign messages (text or symbolic) may be used as approved by the Engineer. Sign dimensions shall not exceed 18 inches in width or 24 inches in height, except for the R9 series signs discussed in note 8 below.
5. Signs shall be installed using a 1/2 inch bolt (nominal) and nut, two washers, and one locking washer for each connection.
6. Mounting bolts and nuts shall be fully engaged and adequately torqued. Bolts should not extend more than 1/2 inch beyond nuts.
7. Chevrons may be placed on drums on the outside of curves, on merging tapers or on shifting tapers. When used in these locations, they may be placed on every drum or spaced not more than on every third drum. A minimum of three (3) should be used at each location called for in the plans.
8. R9-9, R9-10, R9-11 and R9-11a Sidewalk Closed signs which are 24 inches wide may be mounted on plastic drums, with approval of the Engineer.

Texas Department of Transportation | Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(8)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS				
4-03 8-14	DIST	COUNTY		SHEET NO.
9-07 5-21				
7-13				

DATE:
FILE:

JEFFERSON COUNTY PURCHASING DEPARTMENT
Deborah L. Clark, Purchasing Agent

1149 Pearl Street
1st Floor, Beaumont, TX 77701

OFFICE MAIN: (409) 835-8593
FAX: (409) 835-8456

Addendum to IFB

IFB NUMBER: IFB 22-028/JW

IFB TITLE: Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional Airport

IFB DUE BY: **11:00 am CT, Wednesday, August 24, 2022**

ADDENDUM NO.: 1

ISSUED (DATE): August 1, 2022

To Bidder: This Addendum is an integral part of the IFB package under consideration by you as a Bidder in connection with the subject matter herein identified. Jefferson County deems all sealed bids to have been proffered in recognition and consideration of the entire IFB Specifications Package – *including all addenda.* For purposes of clarification, **receipt of this present Addendum by a Bidder should be evidenced by returning it (signed) as part of the Bidder's sealed bid submission.** If the bid submission has already been received by the Jefferson County Purchasing Department, Bidder should return this addendum in a separate sealed envelope, clearly marked with the IFB Title, IFB Number, and IFB Opening Date and Time, as stated above.

Reason for Issuance of this Addendum: Clarifications (Attachment)

The information included herein is hereby incorporated into the documents of this present bid matter and supersedes any conflicting documents or portion thereof previously issued.

Receipt of this Addendum is hereby acknowledged by the undersigned Respondent:

ATTEST:

Lynida Clifton
Witness Lynida Clifton

Witness

Approved by ____ Date: 8/1/22

Authorized Signature (Respondent)

Nathan Rivers - President
Title of Person Signing Above

SETEX Construction Corp
Typed Name of Business or Individual

1660 S 23rd St, Beaumont TX 77707
Address

JEFFERSON COUNTY PURCHASING DEPARTMENT
Deborah L. Clark, Purchasing Agent

1149 Pearl Street
1st Floor, Beaumont, TX 77701

OFFICE MAIN: (409) 835-8593
FAX: (409) 835-8456

Addendum to IFB

IFB NUMBER: IFB 22-028/JW

IFB TITLE: Rehabilitation of Fuel Farm Pavement at the Jack Brooks Regional

IFB DUE BY: Airport **11:00 am CT, Wednesday, August 24, 2022**

ADDENDUM NO.: 2

ISSUED (DATE): August 17, 2022

To Bidder: This Addendum is an integral part of the IFB package under consideration by you as a Bidder in connection with the subject matter herein identified. Jefferson County deems all sealed bids to have been proffered in recognition and consideration of the entire IFB Specifications Package – *including all addenda*. For purposes of clarification, **receipt of this present Addendum by a Bidder should be evidenced by returning it (signed) as part of the Bidder's sealed bid submission.** If the bid submission has already been received by the Jefferson County Purchasing Department, Bidder should return this addendum in a separate sealed envelope, clearly marked with the IFB Title, IFB Number, and IFB Opening Date and Time, as stated above.

REASONS FOR ISSUANCE OF THIS ADDENDUM:

- **Clarifications (See Pages 1-4)**
- **REVISED PLAN SHEET NO. 3**
- **REVISED BID FORM PAGE 42 (REPLACEMENT PAGE)**

The information included herein is hereby incorporated into the documents of this present bid matter and supersedes any conflicting documents or portion thereof previously issued.

Receipt of this Addendum is hereby acknowledged by the undersigned Respondent:

ATTEST:

Lynida Clifton
Witness Lynida Clifton

Witness

Approved by NR Date: 8/17/22

Authorized Signature (Respondent)

Nathan Rivers - President
Title of Person Signing Above

SETEX Construction Corp
Typed Name of Business or Individual

1660 S 23rd St, Beaumont TX 77707
Address

TSG
The Solco Group, LLC

FB 22-028/JW ADDENDUM N0. 2

DATE: 8/10/2022

OWNER: Jefferson County/Jack Brooks Regional Airport

PROJECT: FB 22-028/JW Rehabilitation of Fuel Farm Pavement at Jack Brooks Regional Airport

TSG Project No: 2021-10-1092

DEADLINE FOR QUESTIONS: Email questions to Jamey West. Contract Specialist at jwest@co.jefferson.tx.us by **Thursday, August 18, 2022, at 5:00 p.m.**

SUBMITTAL DEADLINE: Bid date **Wednesday, August 24, 2022, at 11:00 a.m.**, Central Standard Time.

The additions, omissions, clarifications, and corrections herein shall be made to the contract documents, plans and specifications, for the Rehabilitation of Fuel Farm Pavement Project. **All Bidders must acknowledge receipt of this addendnm on the appropriate section of the Bid Form and include with the Contract Documents.**

Addendum references to answer questions posted by potential bidders are summarized below.

1. CONTRACT TIME: Can the time of completion be revised to 45 or 60 calendar days? Given the phasing and access issues, 30 days is going to be difficult. **30 days is preferred timeframe. The access issues and project phasing concerns are clarified in section 5 of this addendum.**

   Can we work Sundays? **Yes**

2. ALLOWANCE FOR STORM SEWER PIPE: Is the County going to provide an amount to input for the allowance? **No**

   Without more information, it is very difficult to assess what is required. **A core sample taken during a geotechnical investigation indicated an accumulation of water beneath a section of the concrete panels. This accumulation of water is the likely cause of the panel failures. The purpose of the allowance is to provide compensation for the contractor to locate the source of the water accumulation and repair a broken water line if encountered. The onsite resident project representative (RPR) will work with contractor after the panels are removed to examine the area and resolve the issue before new concrete is placed.**

PO BOX 22001 BEAUMONT, TEXAS 77720
817-564-6895 / 833-591-5780
https://thesolcogroup.com

3. CONCRETE SLUMP/PUMPING: Can the max slump allowed be revised to 5" to 6" so we can pump the concrete? It would help speed up the schedule if pumping is allowed but the slump requirements would have to be modified.

No. The contract specifications apply as indicated in P-501-7 - Flexural strength. Test specimens shall be prepared in accordance with ASTM C192 and tested in accordance with ASTM C78. At the start of the project, the Contractor shall determine an allowable slump as determined by ASTM C143 not to exceed 2 inches (50 mm) for slip-form placement. For fixed-form placement, the slump shall not exceed 3 inches (75 mm). For hand placement, the slump shall not exceed 4 inches (100 mm)

4. CONCRETE FINISHING EQUIPMENT: Can you clarify what finishing equipment will be allowed? Is this area considered irregular?

This is considered irregular. Any appropriate equipment may be used as long as the concrete requirements are met, such as smoothness, etc.

A slip form paver cannot be used in this location. Would a vibratory screed be allowed?
Yes – as long as concrete as specified is achieved.

5. ACCESS: Please clarify the extent we must accommodate airport access. Will we have to shutdown work at anytime to allow planes to fuel, etc.?

This construction project shall take place outside of the Aircraft Operational Area (AOA). The contractor shall NOT access the AOA without the explicit permission of the airport owner. Further clarification on the possibility of accommodating fueling operations during the construction project includes the following:

a. **Aircraft will not enter into the construction area.**
b. **All construction equipment shall remain outside of the AOA.**
c. **Fuel trucks will be used to provide fuel to aircraft in the AOA when needed.**
d. **Fueling operations will cease during the concrete demolition phase of this project.**
e. **In the event that emergency access to the fuel farm tanks is needed, or anticipated to be needed during this construction period, the airport owner and the engineer will coordinate with the contractor to phase the concrete placement in a manner that allows an emergency lane for fuel truck access. Emergency fueling operations will only use this temporary emergency lane after sufficient concrete curing has occurred.**

f. **The contractor will need to be prepared to accommodate a temporary interruption of work only for a brief period of time to allow for emergency fueling operations.**
g. **The contractor will need to ensure there is a safe distance between ongoing construction activities and emergency fueling operations.**

Addendum Prepared By:

Kelvin Solco, PE,
Principal

The Solco Group, LLC

FB 22-028/JW ADDENDUM N0. 2

DATE: 8/15/2022

OWNER: Jefferson County/Jack Brooks Regional Airport

PROJECT: FB 22-028/JW Rehabilitation of Fuel Farm Pavement at Jack Brooks Regional Airport

TSG Project No: 2021-10-1092

DEADLINE FOR QUESTIONS: email questions to Jamey West. Contract Specialist at jwest@co.jefferson.tx.us by **Thursday, August 15, 2022, at 5:00 p.m.**,

SUBMITTAL DEADLINE: Bid date **Wednesday, August 24, 2022, at 11:00 a.m.**, Central Standard Time.

The additions, omissions, clarifications, and corrections herein shall be made to the contract documents, plans and specifications, for the Rehabilitation of Fuel Farm Pavement Project. **All Bidders must acknowledge receipt of this addendum on the appropriate section of the Bid Form and include with the Contract Documents.**

Addendum references to answer questions posted by potential bidders are summarized below.

1. Who is responsible for Materials Testing? All quality assurance testing shall be done by the Contractor. Please see the Items below:
    a. Item 152-5, section 152-2.10 under paragraph 2, last sentence.
    b. Item 155-4, section 155-6.10 and a. Density Paragraph
    c. Item 501-7, section 501-3.3 f., 501-3.4 Concrete Mix Submittal, 501-4.8 c. Consolidation, 501-4-11 e. Straightedge testing and surface correction., P-501-24 CONTRACTOR QUALITY CONTROL (CQC)
    d. Page 8 of 61 of bid documents section 2.12.
2. DRAWING PLAN SHEET 3 – Replace Sheet 3 with New Sheet 3. Arrow for "One-Way" traffic corrected.
3. BID DOCUMENTS – Replace pg. 42 with New Page to include TOTAL BID LINE.

Addendum Prepared By:

Kelvin Solco, PE,
President / CEO

STATE OF TEXAS
KELVIN L SOLCO
78161
LICENSED
PROFESSIONAL ENGINEER

PO BOX 22001 BEAUMONT, TEXAS 77720
817-564-6895 / 833-591-5780
https://thesolcogroup.com

ADDENDUM NO. 2 - REVISED PLAN SHEET NO. 3 (IFB 22-028/JW)

BID FORM (CONTINUED) REPLACEMENT PAGE 42

DESCRIPTION:	Base Bid			
REF. NO. 14	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Biodegradable Erosion Control Logs (Install) TXDOT 506-6.6.1	200	LF		

DESCRIPTION:	Base Bid			
REF. NO. 15	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Biodegradable Erosion Control Logs (Removal) TXDOT 506-6.6.2	200	LF		

DESCRIPTION:	Base Bid			
REF. NO. 16	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
4" Concrete Curb TXDOT 529	278	LF		

DESCRIPTION:	Base Bid			
REF. NO. 17	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Furnish and Install 4' Steel Bollards	2	EA		

DESCRIPTION:	Base Bid			
REF. NO. 18	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*
Install 6' Rubber Speed Bumps	4	EA		

DESCRIPTION:	Base Bid
	TOTAL BID PRICE *($ XXX,XXX.XX)*
TOTAL BID	

REQUIRED FORM
Bidder: Please complete this form and include with bid submission.

BIDDER ACKNOWLEDGEMENT OF BID ADDENDA (IF APPLICABLE):

Addendum 1 _____ Date Received _____
Addendum 2 _____ Date Received _____
Addendum 3 _____ Date Received _____
Addendum 4 _____ Date Received _____
Addendum 5 _____ Date Received _____

BIDDER: INCLUDE FULL, SIGNED, & ATTESTED COPY OF EACH ADDENDUM ISSUED WITH BID SUBMISSION.

1344

SETEX CONSTRUCTION CORP.

Sealed Proposal Enclosed

SETEX CONSTRUCTION CORP.

Rehabilitation of Fuel Farm Pavement @ JBRA
IFB 22-028/JW
Jefferson County Purchasing Department
1149 Pearl St, 1st Fl
Beaumont TX 77701
Due August 24th @ 11:00 am

RECVD JEFFCOPURCH 10:48 AM AUG 24 2022

CONTRACT RENEWAL FOR IFB 19-041/YS
TERM CONTRACT FOR HYDRATED LIME FOR JEFFERSON COUNTY

The County entered into a contract with Lhoist North America for one (1) year, from September 16, 2019 to September 15, 2020, with an option to renew the contract for up to a five (5) year period.

Pursuant to the contract, Jefferson County hereby exercises its third one-year option to renew the contract for one (1) additional year from September 13, 2022 to September 12, 2023.

ATTEST:

Laurie Leister, County Clerk 8-30-22

JEFFERSON COUNTY, TEXAS

Jeff Branick, County Judge

COMMISSIONERS COURT JEFFERSON COUNTY, TEXAS

CONTRACTOR:
Lhoist North America

(Armando Sotelo)

IFB 19-041/YS
Term Contract for Hydrated Lime for Jefferson County
Awarded: September 16, 2019

Current Pricing

Renewal 1: 9/15/2020 – 9/14/2021
Renewal 2: 9/14/2021 – 9/13/2022

		Lhoist North America
Item	Description	Price per ton FOB delivered various locations in Jefferson County
1	264.2 Type A Hydrated Lime	No Bid
2	264.2 Type B Commercial Lime Slurry	~~$175.00~~ $295.00
3	264.2 Type C Quicklime Grade DS	No Bid
4	264.2 Type D Quicklime Grade S	No Bid

$0.75 per ton of lime fuel surcharge for every $0.20 increase in diesel fuel price above $2.50 per gallon

Lhoist North America
801 North 16th Street
LaPorte TX 77571
attn: Armando Sotelo
armando.sotelo@lhoist.com
ph: 713-203-9517

Jefferson County Courthouse
1149 Pearl St., 4th Floor
Beaumont, Texas 77701

Office (409) 835-8442
Fax (409) 835-8628
vernon.pierce@jeffcotx.us

Vernon Pierce
Jefferson County
Commissioner Pct. #1

MEMORANDUM

TO: **Fran Lee, Auditing**

FROM: **Pct. #1 Road and Bridge**

DATE: **08-23-22**

RE: **Funds Transfer**

Transfer from Acct. #	111-0102-431-30-80	Cover Stone			$ 12,000.
Transfer to Acct. #	111-0105-431.40-08	Automobiles & Trucks		$ 12,000.	

This transfer request is to cover Equipment repairs.

Please put this on the Agenda for 8-30-22.

Thank you,

Pct. #1 Road and Bridge

1225 Pearl Street, Suite 118
Beaumont, Texas 77701

Office: (409) 839-2333
Fax: (409) 839-2303

RANSON "DUCE" JONES
Justice of the Peace
Precinct 6

Deidra Jackson
Associate Court Administrator

Takisha Morrisey
Senior Court Clerk

LaVerne Jones
Senior Court Clerk

MEMORANDUM

TO: FRAN LEE, BUDGET MANAGER

FROM: DEIDRA F. JACKSON, ASSOC. COURT ADMINISTRATOR

SUBJECT: TRANSFER LINE ITEM(S)

DATE: 08/19/2022

Fran,

Please transfer $1,000.00 from Acct# 120-2047-412-5062 (Travel) into Acct # 120-2047-412-3084 (Minor Equipment). This is to purchase a shredder that can keep up with the amount of paper that we need shredded. We will be shredding even more with the new Odyessy system, being that we will scan in all paperwork and then shred it.

If you have any questions, please contact me at 839-2333.

MEMORANDUM

TO: COMMISSIONERS COURT

FROM: **FRAN LEE**

SUBJECT: BUDGET TRANSFER

DATE: AUGUST 25, 2022

The following budget transfer for the 58th District Court is necessary for additional cost for sound system repairs:

120-2033-412-3084	Minor Equipment	$1,300	
120-2033-412-1095	Education Pay		$1,300

Texas Dept. of Family and Protective Services

Budget for Title IV-E
County Child Welfare Services Contract

Form 2030 CWIVE
Last Updated December 2021

CWIVE Summary

Please select your County and Budget Effective Date from drop down boxes below.

County: JEFFERSON COUNTY
Contract Number: HHS000285000032
Budget Effective Date: 10/1/2022-9/30/2023

Cost Category		Estimated Total Expenses Allocable to Title IV-E	Total Anticipated Federal Reimbursement	Total Anticipated County Match
A. Administration				
A.1. Direct Personnel Salaries		$0.00	$0.00	$0.00
A.2. Direct Personnel Fringe Benefits		$0.00	$0.00	$0.00
A.3. Direct Personnel Travel		$0.00	$0.00	$0.00
A.4. Direct Materials and Supplies		$1,500.00	$238.33	$1,261.67
A.5. Direct Equipment		$0.00	$0.00	$0.00
A.6. Direct Other Costs		$6,800.00	$1,080.42	$5,719.58
Total Administration:		**$8,300.00**	**$1,318.75**	**$6,981.25**
B. Training				
B.1. Title IV-E Training (75%)		$0.00	$0.00	$0.00
B.2. Title IV-E Fostering Connections Training (75%)		$0.00	$0.00	$0.00
B.3. Non-Title IV-E Training (50%)		$0.00	$0.00	$0.00
Total Training:		**$0.00**	**$0.00**	**$0.00**
C. Supplemental Foster Care Maintenance (SFCM)				
Total SFCM:		**$183,000.00**	**$120,908.10**	**$62,091.90**
D. Indirect Costs (if applicable)				
Total Indirect Costs:	$0.00	**$0.00**	**$0.00**	**$0.00**
Grand Total:		**$191,300.00**	**$122,226.85**	**$69,073.15**

*Estimated Federal Reimbursement for expenses based on Eligible Population Rate (EPR) during 2nd quarter of the preceding fiscal year. Actual reimbursement will be based on EPR in effect for the county during the month in which expenses were	**31.78%**
**Estimated Federal Reimbursement for Supplemental Foster Care Maintenance expenses based on Federal Medicaid Assistance Percentage (FMAP) rate in effect during preceding fiscal year. Actual reimbursement will be based on FMAP rate in effect at the time reimbursement is made to contractor.	**66.07%**
Indirect Cost Rate, if applicable (attach a copy of the approved Certificate of Indirect Costs):	**0.00%**

Contractor Certification

Signature

8/30/2022
Date

Jeff R. Branick, County Judge
Printed Name & Title

Texas Dept. of Family
and Protective Services

Budget for Title IV-E
County Child Welfare Services Contract

Form 2030 CWIVE
Last Updated December 2021

Administration
A.1. Direct Personnel Salaries

County: JEFFERSON COUNTY
Contract Number: HHS000285000032
Budget Effective Date: 10/1/2022-9/30/2023

Position or Title	Monthly Salary	% of Time Spent on IV-E Activities	Number of Months of Service	Estimated Total Expense* (AxBxC)
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
Total Direct Personnel Salaries:				**$0.00**

Texas Dept. of Family
and Protective Services

Budget for Title IV-E
County Child Welfare Services Contract

Form 2030 CWIVE
Last Updated December 2021

Administration
A.2. Direct Personnel Fringe Benefits

County: JEFFERSON COUNT
Contract Number: HHS000285000032
Budget Effective Date: 10/1/2022-9/30/2023

Type of Fringe Benefits	Estimated Total Expense*
Total Direct Personnel Fringe Benefits:	$0.00

Texas Dept. of Family and Protective Services

Budget for Title IV-E
County Child Welfare Services Contract

Form 2030 CWIVE
Last Updated December 2021

Administration
A.3. Direct Personnel Travel

County: JEFFERSON COUNT
Contract Number: HHS000285000032
Budget Effective Date: 10/1/2022-9/30/2023

Type of Travel Expense Note: only include travel NOT related to personnel training	**Estimated Total Expense***
Total Direct Personnel Travel:	**$0.00**

Texas Dept. of Family and Protective Services

Budget for Title IV-E
County Child Welfare Services Contract

Form 2030 CWIVE
Last Updated December 2021

Administration
A.4. Direct Materials and Supplies

County: **JEFFERSON COUNT**
Contract Number: **HHS000285000032**
Budget Effective Date: **10/1/2022-9/30/2023**

Materials and Supplies (description)	**Estimated Total Expense***
Recruitment materials and supplies	$500.00
Overhead expenses	$500.00
General office supplies	$500.00
Total Direct Materials and Supplies:	**$1,500.00**

Texas Dept. of Family and Protective Services

Budget for Title IV-E
County Child Welfare Services Contract

Form 2030CWIVE
Last Updated December 2021

Administration
A.5. Direct Equipment

County: JEFFERSON COUNTY
Contract Number: HHS000285000032
Budget Effective Date: 10/1/2022-9/30/2023

Equipment (description)	**Method Used** (rent/lease/ purchase)	**Estimated Total Expense***
	Total Direct Equipment:	**$0.00**

Texas Dept. of Family and Protective Services

Budget for Title IV-E
County Child Welfare Services Contract

Form 2030 CWIVE
Last Updated December 2021

Administration
A.6. Direct Other Costs

County: **JEFFERSON COUNT**
Contract Number: **HHS000285000032**
Budget Effective Date: **10/1/2022-9/30/2023**

Other Costs (description)	**Estimated Total Expense***
Storage room rental	$4,800.00
Citations	$500.00
Birth certificates	$500.00
Resources books and publications	$500.00
Film & Photo Processing & Related Costs	$500.00
Total Other Costs:	**$6,800.00**

Texas Dept. of Family and Protective Services

Budget for Title IV-E
County Child Welfare Services Contract

Form 2030 CWIVE
Last Updated December 2021

Training
B.1. Title IV-E Training (75%)

County: JEFFERSON COUNTY
Contract Number: HHS000285000032
Budget Effective Date: 10/1/2022-9/30/2023

Training (Description and Title)	**Registration*** (amount allocable to Title IV-E)	**Lodging*** (amount allocable to Title IV-E)	**Meals*** (amount allocable to Title IV-E)	**Transportation** (amount allocable to Title IV-E)	**Subtotal**	**Number of Employees Attending**	**Estimated Total Expense***
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					Total Training:		**$0.00**

* estimated amount allocable to Title IV-E

NOTE: Form 9321 Training Expense Documentation Form must be submitted to DFPS for review/approval by Federal Funds prior to training.

Texas Dept. of Family and Protective Services

Budget for Title IV-E
County Child Welfare Services Contract

Form 2030 CWIVE
Last Updated December 2021

Training
B.2. Title IV-E Fostering Connections Training (75%)

County: **JEFFERSON COUNTY**

Contract Number: **HHS000285000032**

Budget Effective Date: **10/1/2022-9/30/2023**

Training (Description and Title)	**Registration*** (amount allocable to Title IV-E)	**Lodging*** (amount allocable to Title IV-E)	**Meals*** (amount allocable to Title IV-E)	**Transportation*** (amount allocable to Title IV-E)	**Subtotal**	**Number of Attendees**	**Estimated Total Expense***
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					Total Training:		**$0.00**

Texas Dept. of Family
and Protective Services

Budget for Title IV-E
County Child Welfare Services Contract

Form 2030 CWIVE
Last Updated December 2021

Training
B.3. Non-Title IV-E Training (50%)

County: JEFFERSON COUNTY
Contract Number: HHS000285000032
Budget Effective Date: 10/1/2022-9/30/2023

Training (Description and Title)	Registration* (amount allocable to Title IV-E)	Lodging* (amount allocable to Title IV-E)	Meals* (amount allocable to Title IV-E)	Transportation* (amount allocable to Title IV-E)	Subtotal	Number of Employees Attending	Estimated Total Expense*
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
				Total Training:			**$0.00**

Texas Dept. of Family and Protective Services

Budget for Title IV-E
County Child Welfare Services Contract

Form 2030 CWIVE
Last Updated December 2021

Supplemental Foster Care Maintenance (SFCM)

County: **JEFFERSON COUNT**
Contract Number: **HHS000285000032**
Budget Effective Date: **10/1/2022-9/30/2023**

Supplemental FC Maintenance (description)	**Estimated Total Expense***
Clothing	$150,000.00
Daycare	$1,000.00
Gifts	$25,000.00
Graduation Expenses	$1,500.00
Personal Items	$3,500.00
School Supplies	$1,000.00
Reasonable Child Specific Travel	$1,000.00
Total SFCM Costs:	**$183,000.00**

Texas Dept. of Family and Protective Services

Budget for Title IV-E
County Child Welfare Services Contract

Form 2030 CWIVE
Last Updated November 2020

Budget Narrative

County: **JEFFERSON COUNTY**
Contract Number: **HHS000285000032**
Budget Effective Date: **10/1/2022-9/30/2023**

characters, you will have to either manually insert a return at the end of each line (Alt-Enter) or go to the next row/cell below to type the remaining text.

Clearly describe each expense to be incurred and billed to this contract. Refer to Title IV-E Finance Handbook for detailed information regarding allowable expenses, documentation requirements, etc.
http://www.dfps.state.tx.us/handbooks/Title_IVE_County/default.asp

A. Administration

A.1. Direct Personnel Salaries

A.2. Direct Personnel Fringe Benefits

A.3. Direct Personnel Travel

A.4. Direct Materials and Supplies
Includes supplies for recruitment of foster home; public/community awareness expenses related to recruitment of foster homes; office supplies for record keeping and DFPS files; and overhead expenses including, but not limited to, stationery, postage, and banking

A.5. Direct Equipment

A.6. Direct Other Costs

Budget for Title IV-E
County Child Welfare Services Contract

Includes citation by publication, costs of documentation to establish identity (birth cerificates); resource books and publications for DFPS eligibility and guidelines; film for documentation and records of DFPS cases; and storage room rental to store supplies for Title IV-E events

B. Training

B.1. Title IV-E Training (75%)

B.2. Title IV-E Fostering Connections Training (75%)

B.3. Non-Title IV-E Training (50%)

C. Supplemental Foster Care Maintenance (SFCM)
Includes clothing, daycare, gifts, graduation expenses, personal items, school supplies, and reasonable travel provided for the child to visit parents, siblings, relatives, or other caretakers at home or other appropriate location.

D. Indirect Costs (if applicable)

Texas Dept. of Family and Protective Services

Budget for Title IV-E
County Legal Services Contract

Form 2030 CLIVE PR
Last Updated November 2020

CLIVE Summary

Please select your County and Budget Effective Date from drop down boxes below.

County: JEFFERSON COUNTY
Contract Number: HHS000285100022
Budget Effective Date: 10/1/2022-9/30/2023

Cost Category	Estimated Total Expenses Allocable to Title IV-E	Total Anticipated Federal Reimbursement	Total Anticipated County Match
A. Administration			
A.1. Direct Personnel Salaries	$353,392.66	$56,148.79	$297,243.86
A.2. Direct Personnel Fringe Benefits	$168,191.06	$26,723.04	$141,468.02
A.3. Direct Personnel Travel	$0.00	$0.00	$0.00
A.4. Direct Materials and Supplies	$5,050.00	$802.37	$4,247.63
A.5. Direct Equipment	$16,400.00	$2,605.71	$13,794.29
A.6. Direct Other Costs	$15,650.00	$2,486.55	$13,163.45
Total Administration	**$558,683.72**	**$88,766.46**	**$469,917.25**
B. Training			
B.1. Title IV-E Training (75%)	$13,725.00	$3,271.04	$10,453.96
B.2. Title IV-E Fostering Connections Training (75%)	$0.00	$0.00	$0.00
B.3. Non-Title IV-E Training (50%)	$0.00	$0.00	$0.00
Total Training	**$13,725.00**	**$3,271.04**	**$10,453.96**
C. Indirect Costs (if applicable)			
Total Indirect Costs $0.00	**$0.00**	**$0.00**	**$0.00**
D. Other Administration Independent Legal Representation			
D.1. Other Admin Independent Legal Representation Personnel Salaries	$0.00	$0.00	$0.00
D.2. Other Admin Independent Legal Representation Personnel Fringe Benefits	$0.00	$0.00	$0.00
D.3. Other Admin Independent Legal Representation Personnel Travel	$0.00	$0.00	$0.00
D.4. Other Admin Independent Legal Representation Materials and Supplies	$0.00	$0.00	$0.00
D.5. Other Admin Independent Legal Representation Equipment	$0.00	$0.00	$0.00
D.6. Other Admin Independent Legal Representation Other Costs	$400,000.00	$63,554.00	$336,446.00
Other Administration Independent Legal Representation	**$400,000.00**	**$63,554.00**	**$336,446.00**
Grand Total	**$972,408.72**	**$155,591.51**	**$816,817.21**

*Estimated Federal Reimbursement for expenses based on Eligible Population Rate (EPR) during 2nd quarter of the preceding fiscal year. Actual reimbursement will be based on EPR in effect for the county during the month in which expenses were incurred.	**31.78%**
Indirect Cost Rate, if applicable (attach a copy of the approved Certificate of Indirect Costs):	**0.00%**

Contractor Certification

Signature

8/30/2022
Date

Jeff R. Branick, County Judge
Printed Name & Title

Texas Dept. of Family
and Protective Services

Budget for Title IV-E
County Legal Services Contract

Form 2030 CLIVE PR
Last Updated November 2020

Administration
A.1. Direct Personnel Salaries

County: JEFFERSON COUNTY
Contract Number: HHS000285100022
Budget Effective Date: 10/1/2022-9/30/2023

Position or Title	Monthly Salary	% of Time Spent on IV-E Activities	Number of Months of Service	Estimated Total Expense* (BxCxD)
Chief Assistant District Attorney-King	$11,766.95	100%	12	$141,203.40
Assistant District Attorney-Nelson	$9,651.68	10%	12	$11,582.02
Assistant District Attorney-Brister	$7,632.48	100%	12	$91,589.76
Senior Secretary-Jones	$4,495.30	10%	12	$5,394.36
Senior Secretary-Harrison	$4,553.08	100%	12	$54,636.96
Senior Secretary-Albanese	$4,082.18	100%	12	$48,986.16
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
			Total Direct Personnel Salaries:	**$353,392.66**

Texas Dept. of Family and Protective Services

Budget for Title IV-E
County Legal Services Contract

Form 2030 CLIVE PR
Last Updated November 2020

A.2. Direct Personnel Fringe Benefits

County: JEFFERSON COUNTY
Contract Number: HHS000285100022
Budget Effective Date: 10/1/2022-9/30/2023

Type of Fringe Benefits	Estimated Total Expense*
Retirement	$71,738.73
FICA	$21,910.35
Medicare	$5,124.20
Heath Insurance	$67,742.93
Life Insurance	$593.69
Dental Insurance	$1,081.16
Total Direct Personnel Fringe Benefits:	**$168,191.06**

*estimated total cost for Title IV-E related activities

Refer to Title IV-E Financial Handbook for additional information:

Texas Dept. of Family and Protective Services

Budget for Title IV-E
County Legal Services Contract

Form 2030 CLIVE PR
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Administration
A.3. Direct Personnel Travel

County: **JEFFERSON COUNT**
Contract Number: **HHS000285100022**
Budget Effective Date: **10/1/2022-9/30/2023**

Type of Travel Expense Note: only include travel **NOT** related to personnel	**Estimated Total Expense***
Total Direct Personnel Travel:	**$0.00**

Texas Dept. of Family
and Protective Services

Budget for Title IV-E
County Legal Services Contract

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Administration
A.4. Direct Materials and Supplies

County: **JEFFERSON COUN**
Contract Number: **HHS000285100022**
Budget Effective Date: **10/1/2022-9/30/2023**

Materials and Supplies (description)	**Estimated Total Expense***
General Office Supplies	$5,050.00
Total Direct Materials and Supplies:	**$5,050.00**

Texas Dept. of Family and Protective Services

Budget for Title IV-E
County Legal Services Contract

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Administration
A.5. Direct Equipment

County: JEFFERSON COUNTY
Contract Number: HHS000285100022
Budget Effective Date: 10/1/2022-9/30/2023

Equipment (description)	Method Used (rent/lease/ purchase)	Estimated Total Expense*
Computer Laser Jet Printer	Purchase	$4,800.00
Computer Monitor	Purchase	$1,600.00
Computer & Laptop Computer and Accessories with Software	Purchase	$10,000.00
	Total Direct Equipment:	**$16,400.00**

Texas Dept. of Family and Protective Services

Budget for Title IV-E
County Legal Services Contract

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Administration
A.6. Direct Other Costs

County: **JEFFERSON COUNT**
Contract Number: **HHS000285100022**
Budget Effective Date: **10/1/2022-9/30/2023**

Other Costs (description)	**Estimated Total Expense***
Postage	$15,000.00
Software licenses	$650.00
Total Other Costs:	**$15,650.00**

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Training
B.1. Title IV-E Training (75%)

County: JEFFERSON COUNTY
Contract Number: HHS000285100022
Budget Effective Date: 10/1/2022-9/30/2023

Training (Description and Title)	Registration* (amount allocable to Title IV-E)	Lodging* (amount allocable to Title IV-E)	Meals* (amount allocable to Title IV-E)	Transportation * (amount allocable to	Subtotal	Number of Employees Attending	Estimated Total Expense*
Crimes Against Children	$800.00	$1,000.00	$500.00	$600.00	$2,900.00	1	$2,900.00
TDCAA Conference Update (30% IV-E Eligible)	$700.00	$2,000.00	$650.00	$600.00	$3,950.00	2	$7,900.00
Texas Advanced Family Law Conference	$825.00	$1,000.00	$500.00	$600.00	$2,925.00	1	$2,925.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					Total Training:		**$13,725.00**

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Budget for Title IV-E
County Legal Services Contract

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Training
B.2. Title IV-E Fostering Connections Training (75%)

County: JEFFERSON COUNTY

Contract Number: HHS000285100022

Budget Effective Date: 10/1/2022-9/30/2023

Training (Description and Title)	Registration* (amount allocable to Title IV-E)	Lodging* (amount allocable to Title IV-E)	Meals* (amount allocable to Title IV-E)	Transportation* (amount allocable to Title IV-E)	Subtotal	Number of Employees Attending	Estimated Total Expense*
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					Total Training:		**$0.00**

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County Legal Services Contract

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Training
B.2. Title IV-E Fostering Connections Training (75%)

County: JEFFERSON COUNTY

Contract Number: HHS000285100022

Budget Effective Date: 10/1/2022-9/30/2023

Training (Description and Title)	Registration* (amount allocable to Title IV-E)	Lodging* (amount allocable to Title IV-E)	Meals* (amount allocable to Title IV-E)	Transportation * (amount allocable to Title IV-E)	Subtotal	Number of Employees Attending	Estimated Total Expense*
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00
					Total Training:		**$0.00**

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Budget for Title IV-E
County Legal Services Contract

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Training
B.3. Non-Title IV-E Training (50%)

County: JEFFERSON COUNTY
Contract Number: HHS000285100022
Budget Effective Date: 10/1/2022-9/30/2023

Training (Description and Title)	Registration* (amount allocable to Title IV-E)	Lodging* (amount allocable to Title IV-E)	Meals* (amount allocable to Title IV-E)	Transportation* (amount allocable to Title IV-E)	Subtotal	Number of Employees Attending	Estimated Total Expense*
					$0.00		$0.00
					$0.00		$0.00
					$0.00		$0.00

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Budget for Title IV-E
County Legal Services Contract

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Other Administration - Independent Legal Representation
D.1. Personnel Salaries

County: JEFFERSON COUNTY
Contract Number: HHS000285100022
Budget Effective Date: 10/1/2022-9/30/2023

Position or Title	Monthly Salary	% of Time Spent on IV-E Activities	Number of Months of Service	Estimated Total Expense* (BxCxD)
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
Total PR Personnel Salaries:				**$0.00**

Texas Dept. of Family
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Budget for Title IV-E
County Legal Services Contract

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Other Administration - Independent Legal Representation
D.2. Fringe Benefits

County: JEFFERSON COUN
Contract Number: HHS000285100022
Budget Effective Date: 10/1/2022-9/30/2023

Type of Fringe Benefits	Estimated Total Expense*
Total PR Personnel Fringe Benefits:	$0.00

Texas Dept. of Family
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Budget for Title IV-E
County Legal Services Contract

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Other Administration - Independent Legal
D.3. Travel

County: **JEFFERSON COUN**
Contract Number: **HHS000285100022**
Budget Effective Date: **10/1/2022-9/30/2023**

Type of Travel Expense Note: only include travel NOT related to personnel training	**Estimated Total Expense***
Total PR Personnel Travel:	**$0.00**

Texas Dept. of Family and Protective Services

Budget for Title IV-E
County Legal Services Contract

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Other Administration - Independent Legal Representation
D.4. Materials and Supplies

County: JEFFERSON COUN
Contract Number: HHS000285100022
Budget Effective Date: 10/1/2022-9/30/2023

Materials and Supplies (description)	Estimated Total Expense*
Total PR Materials and Supplies:	$0.00

Texas Dept. of Family
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Budget for Title IV-E
County Legal Services Contract

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Other Administration - Independent Legal Representation
D.5. Equipment

County: JEFFERSON COUNTY
Contract Number: HHS000285100022
Budget Effective Date: 10/1/2022-9/30/2023

Equipment (description)	**Method Used** (rent/lease/ purchase)	**Estimated Total Expense***
	Total PR Equipment:	**$0.00**

Texas Dept. of Family
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Budget for Title IV-E
County Legal Services Contract

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Other Administration - Independent Legal Representation
D.6. Other Costs

County: **JEFFERSON COUN**
Contract Number: **HHS000285100022**
Budget Effective Date: **10/1/2022-9/30/2023**

Other Costs (description)	**Estimated Total Expense***
Court-appointed independent legal representation	$400,000.00
of parents and children	
Total PR Other Costs:	**$400,000.00**

Texas Dept. of Family
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Budget for Title IV-E
County Legal Services Contract

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Budget Narrative

County: **JEFFERSON COUNTY**
Contract Number: **HHS000285100022**
Budget Effective Date: **10/1/2022-9/30/2023**

Note: Each cell is limted to 1024 characters in order for word wrap to function properly. If you need to type more than 1024 characters, you will have to either manually insert a return at the end of each line (Alt-Enter) or go to the next row/cell below to type

Clearly describe each expense to be incurred and billed to this contract, including justification for expense.

Refer to Title IV-E Financial Handbook for additional information:
http://www.dfps.state.tx.us/handbooks/Title_IVE_County/default.asp

A. Administration

A.1. Direct Personnel Salaries

Chief Assistant District Attorney, Randi King: Ms. King is the chief prosecutor in the family law division. She represents the Texas Department of Family and protective services in cases filed in Jefferson County. Ms. King provides legal advice to the department prior to and throughout legal action, handles the filing of CPS lawsuits ranging from suits affecting parent child relationship to orders to cooperate, and handles court appearances, court preparation, discovery and trials in these cases. Other duties include attending various meetings on CPS related matters and assisting with training. She estimates that approximately 100% of her time is allocable to CPS/Title IV-E activities. She is a full-time salaried employee. She will certify CPS related time on a monthly basis.

Assistant District Attorney, John Nelson: Mr. Nelson represents the Texas Department of Family and protective services in cases filed in Jefferson County. Mr. Nelson provides legal advice to the department prior to and throughout legal action, handles the filing of CPS lawsuits ranging from suits affecting parent child relationship to orders to cooperate, and handles court appearances, court preparation, discovery and trials in these cases. Other duties include attending various meetings on CPS related matters and assisting with training. He estimates that approximately 10% of his time is allocable to CPS/Title IV-E activities. He is a full-time salaried employee and will certify CPS related time on a monthly basis.

Assistant District Attorney, Michelle Brister: Ms. Brister represents the Texas Department of Family and protective services in cases filed in Jefferson County. Ms. Brister provides legal advice to the department prior to and throughout legal action, handles the filing of CPS lawsuits ranging from suits affecting parent child relationship to orders to cooperate, and handles court appearances, court preparation, discovery and trials in these cases. Other duties include attending various meetings on CPS related matters and assisting with training. She estimates that approximately 100% of her time is allocable to CPS/Title IV-E activities. She is a full-time salaried employee and will certify CPS related time on a monthly basis.

Senior Secretary, Beth Jones: Ms. Jones provides clerical assistance to Randi King and Michelle Brister, including activities such as preparing paperwork for the filing of lawsuits, preparing orders, coordinating service of process, providing proper notice to parties, locating witnesses and records, and general paralegeal services. She estimates that approximately 10% of her time is allocable to CPS/Title IV-E activities. She is a full-time salaried employee and will certify CPS related time on a monthly basis.

Senior Secretary, Johanna Harrison: Ms. Harrison provides clerical assistance to Ms.King, including activities such as preparing paperwork for the filing of lawsuits, preparing orders, coordinating service of process, providing proper notice to parties, locating witnesses and records, and general paralegeal services. She estimates that approximately 100% of her time is allocable to CPS/Title IV-E activities. She is a full-time salaried employee and will certify CPS related time on a monthly basis.

Senior Secretary, Brittany Albanese: Ms. Albanese provides clerical assistance to Randi King and Michelle Brister, including activities such as preparing paperwork for the filing of lawsuits, preparing orders, coordinating service of process, providing proper notice to parties, locating witnesses and records,

A.2. Direct Personnel Fringe Benefits

Budget for Title IV-E
County Legal Services Contract

Fringe benefits consist of all non-salary items that are paid on behalf of employees by the county. Fringe costs are allocated to each employee in accordance with the percentage of time that each employee is allocated to Title IV-E allowable activities.

These benefits are paid at the rates adopted by the Commissioners' Court of the County and consist of:

- FICA at 6.20% of gross salary per month (all employees)
- Medicare at 1.45% of gross salary per month (all employees)
- Retirement at 20.30% of gross salary per month (all employees)
- Health insurance (per *pay period):
  - J. Nelson, B. Jones – Family Coverage at $739.42
  - R. King - Employee & Spouse Coverage at $661.87
  - J. Harrison, B. Albanese, M. Brister – Employee & Child Coverage at $598.58

- Dental insurance at $9.90 per person per *pay period (all employees)
- Life insurance (varies according to age and gross salary) per *pay period:
  - B. Jones – estimated $3.92
  - J. Harrison – estimated $3.92
  - J. Nelson – estimated $7.69
  - R. King – estimated $7.69
  - B. Albanese – estimated $3.54
  - M. Brister – estimated $6.53

If, in any event, staff work less than the estimated percentage of time, actual time worked will be billed to the Title IV-E contract. No other direct or indirect expenditures are contained in this budget.

A.3. Direct Personnel Travel

None anticipated at this time.

A.4. Direct Materials and Supplies

Budget for Title IV-E
County Legal Services Contract

- General Offices Supplies (as detailed below).
- Ink toner used for printing of CPS case documents and communications.
- Folders used to store and file documentation related to CPS cases.
- White envelopes used to send and receive documentation related to CPS cases.
- Sharpie Marks-a-Lot pens for case file paperwork and labeling case files.
- Post-It Tabs for separating documents in case files maintained.
- Scotch tape.
- Pens.
- Manilla File Folders used for filing CPS case documents.
- Staples.

Budget for Title IV-E
County Legal Services Contract

A.5. Direct Equipment

- Monitor to replace obsolete equipment.
- Printer to replace obsolete equipment.
- Computer and Laptop Computer with Software and Accessories to replace obsolete equipment. Used to prepare documents and send communications regarding CPS cases.

A.6. Direct Other Costs

- Postage expenses for mailing Title IV-E related case materials and correspondence via United States Postal Service and/or overnight carriers. Estimated average of $1,250 per month.
- Software licensing for computer software used to prepare legal documentation for CPS cases.
- Software licensing for computer anti-virus software used to protect all CPS computers.

B. Training

B.1. Title IV-E Training (75%)
Two employees to attend Crimes Against Children conference. Two employees to attend the Texas District and County Attorneys Association Conference (TDCAA) update. One employee to attend the Texas Advanced Family Law Conference. Conference workshops are related to Title IV-E activities and pre-approval is requested from Federal Funds prior to attendance. Travel reimbursement will be made at current rates approved by Commissioners' Court for travel, per diem, and actual cost for lodging, not to exceed current Texas Comptroller rate plus taxes.

B.2. Title IV-E Fostering Connections Training (75%)

None anticipated at this time.

B.3. Non-Title IV-E Training (50%)

None anticipated at this time.

C. Indirect Costs (if applicable)

None anticipated at this time.

Budget for Title IV-E
County Legal Services Contract

D. Other Administration - Independent Legal Representation

D.1. Independent Legal Representation - Salaries

None anticipated at this time.

Budget for Title IV-E
County Legal Services Contract

D.2. Independent Legal Representation - Fringe Benefits

None anticipated at this time.

D.3. Independent Legal Representation - Travel

None anticipated at this time.

D.4. Independent Legal Representation - Materials and Supplies

None anticipated at this time.

D.5. Independent Legal Representation - Equipment

None anticipated at this time.

D.6. Independent Legal Representation - Other Costs

Attorney fees for court-appointed independent legal representation of parents and children in CPS cases.

NAME	AMOUNT	CHECK NO.	TOTAL
JURY FUND			
DAWN DONUTS	61.50	498382	
CHAPMAN VENDING	892.67	498420	
TAYLOR PRINT & VISUAL IMPRESSIONS	11,361.29	498422	
			12,315.46**
ROAD & BRIDGE PCT.#1			
M&D SUPPLY	186.16	498264	
AT&T	73.08	498283	
ADVANCE AUTO PARTS	252.61	498370	
FUNCTION 4 LLC - WELLS FARGO FINANC	99.00	498414	
MUNRO'S UNIFORM SERVICES, LLC	1,762.60	498433	
			2,373.45**
ROAD & BRIDGE PCT.#2			
SPIDLE & SPIDLE	4,211.21	498231	
MID-COUNTY ALTERNATOR	165.00	498267	
SMART'S TRUCK & TRAILER, INC.	207.15	498279	
DEPARTMENT OF INFORMATION RESOURCES	.34	498296	
TRANSIT & LEVEL CLINIC LLC	124.94	498383	
FUNCTION 4 LLC - WELLS FARGO FINANC	99.00	498414	
MUNRO'S UNIFORM SERVICES, LLC	20.00	498433	
			4,827.64**
ROAD & BRIDGE PCT. # 3			
BEAUMONT TRACTOR COMPANY	2,225.43	498234	
GULF COAST AUTOMOTIVE, INC.	53.74	498252	
ENTERGY	274.75	498253	
ENTERGY	35.30	498254	
PHILPOTT MOTORS, INC.	830.00	498270	
S.E. TEXAS BUILDING SERVICE	65.00	498281	
SOUTHERN TIRE MART, LLC	50.00	498291	
O'REILLY AUTO PARTS	257.16	498393	
GULF COAST	3,639.60	498403	
GERALD T PELTIER JR	200.00	498404	
			7,630.98**
ROAD & BRIDGE PCT.#4			
CHUCK'S WRECKER SERVICE	1,225.00	498237	
KINSEL FORD, INC.	2,671.86	498260	
PORT ARTHUR NEWS, INC.	87.00	498272	
JASON'S DELI	1,226.00	498297	
UNITED STATES POSTAL SERVICE	109.13	498316	
INTERSTATE ALL BATTERY CENTER - BMT	142.95	498351	
ON TIME TIRE	165.00	498364	
ASCO	699.32	498371	
LESTER SMITH INSURANCE	71.00	498374	
MARTIN MARIETTA MATERIALS	578.88	498380	
O'REILLY AUTO PARTS	487.43	498393	
BASE-SEAL INTERNATIONAL INC	21,780.00	498410	
FUNCTION 4 LLC - WELLS FARGO FINANC	99.00	498414	
MUNRO'S UNIFORM SERVICES, LLC	90.78	498433	
THE SHOP	506.25	498435	
			29,939.60**
ENGINEERING FUND			
FUNCTION 4 LLC - WELLS FARGO FINANC	275.00	498414	
			275.00**
PARKS & RECREATION			
PRO CHEM INC	721.40	498367	
ALL TERRAIN EQUIPMENT CO	964.84	498387	
			1,686.24**
GENERAL FUND			
CITY OF PORT ARTHUR	4,359.64	498239	
ORTIZ TAING LAW FIRM PC	30.00	498437	
			4,389.64*
TAX OFFICE			

NAME	AMOUNT	CHECK NO.	TOTAL
ACE IMAGEWEAR	39.42	498278	
DEPARTMENT OF INFORMATION RESOURCES	.18	498296	
UNITED STATES POSTAL SERVICE	480.78	498316	
ROCHESTER ARMORED CAR CO INC	378.40	498358	
FUNCTION 4 LLC - WELLS FARGO FINANC	396.00	498414	
SUMMIT FIRE & SECURITY	131.25	498423	
			1,426.03*
COUNTY HUMAN RESOURCES			
MOORMAN & ASSOCIATES, INC.	1,360.00	498268	
UNITED STATES POSTAL SERVICE	.49	498316	
SOUTHEAST TEXAS OCCUPATIONAL MEDICI	149.00	498384	
FUNCTION 4 LLC - WELLS FARGO FINANC	99.00	498414	
			1,608.49*
AUDITOR'S OFFICE			
UNITED STATES POSTAL SERVICE	9.50	498316	
FUNCTION 4 LLC - WELLS FARGO FINANC	211.00	498414	
			220.50*
COUNTY CLERK			
UNITED STATES POSTAL SERVICE	271.23	498316	
FUNCTION 4 LLC - WELLS FARGO FINANC	409.00	498414	
ODP BUSINESS SOLUTIONS, LLC	144.23	498432	
			824.46*
COUNTY JUDGE			
JOHN E MACEY ATTORNEY AT LAW PLLC	500.00	498265	
UNITED STATES POSTAL SERVICE	4.00	498316	
ROCKY LAWDERMILK	3,200.00	498326	
JEFF R BRANICK	421.52	498341	
HARVEY L WARREN III	1,800.00	498355	
DUNHAM HALLMARK PLLC	500.00	498360	
FUNCTION 4 LLC - WELLS FARGO FINANC	99.00	498414	
			6,524.52*
RISK MANAGEMENT			
UNITED STATES POSTAL SERVICE	23.03	498316	
FUNCTION 4 LLC - WELLS FARGO FINANC	99.00	498414	
			122.03*
COUNTY TREASURER			
UNITED STATES POSTAL SERVICE	188.60	498316	
ODP BUSINESS SOLUTIONS, LLC	135.11	498432	
			323.71*
PRINTING DEPARTMENT			
TRIANGLE BLUE PRINT CO., INC.	50.00	498288	
CIT TECHNOLOGY FINANCING SERVICE	499.00	498350	
			549.00*
PURCHASING DEPARTMENT			
BEAUMONT ENTERPRISE	497.25	498243	
PORT ARTHUR NEWS, INC.	1,654.44	498271	
UNITED STATES POSTAL SERVICE	110.44	498316	
FUNCTION 4 LLC - WELLS FARGO FINANC	99.00	498414	
			2,361.13*
GENERAL SERVICES			
CASH ADVANCE ACCOUNT	80.00	498258	
SPINDLETOP MHMR	34,666.91	498262	
ADVANCED STAFFING	97.50	498293	
CROWN CASTLE INTERNATIONAL	1,833.43	498332	
ROCHESTER ARMORED CAR CO INC	6,356.94	498358	
			43,034.78*
DATA PROCESSING			
CDW COMPUTER CENTERS, INC.	245.25	498294	
FUNCTION 4 LLC - WELLS FARGO FINANC	99.00	498414	
STEEPMEADOW SOLUTIONS, LLC	2,500.00	498425	
CBTS TECHNOLOGY SOLUTIONS LLC	12,835.00	498428	
			15,679.25*
VOTERS REGISTRATION DEPT			

NAME	AMOUNT	CHECK NO.	TOTAL
UNITED STATES POSTAL SERVICE	276.24	498316	
			276.24*
ELECTIONS DEPARTMENT			
CASH ADVANCE ACCOUNT	941.56	498258	
RUNBECK ELECTION SERVICES, INC	277.95	498398	
FUNCTION 4 LLC - WELLS FARGO FINANC	99.00	498414	
			1,318.51*
DISTRICT ATTORNEY			
FED EX	25.19	498245	
UNITED STATES POSTAL SERVICE	92.98	498316	
MCM ELEGANTE HOTEL	311.78	498336	
HIGGINBOTHAM INSURANCE AGENCY INC	71.00	498378	
LAUREN KEMP	1,148.04	498389	
FUNCTION 4 LLC - WELLS FARGO FINANC	508.00	498414	
ANDREW HUEBEL	1,413.79	498436	
			3,570.78*
DISTRICT CLERK			
KIRKSEY'S SPRINT PRINTING	225.50	498261	
UNITED STATES POSTAL SERVICE	235.01	498316	
FUNCTION 4 LLC - WELLS FARGO FINANC	99.00	498414	
AERIALINK, LLC	160.76	498416	
			720.27*
CRIMINAL DISTRICT COURT			
TODD W LEBLANC	3,400.00	498230	
DONALD W. DUESLER & ASSOC.	1,936.29	498242	
WENDELL RADFORD	900.00	498275	
BRUCE N. SMITH	990.00	498280	
JOHN D WEST	800.00	498298	
LANGSTON ADAMS	800.00	498327	
RYAN GERTZ	4,696.25	498353	
JASON ROBERT NICKS	800.00	498354	
JAMES R. MAKIN, P.C.	1,365.30	498359	
MATUSKA LAW FIRM	4,381.25	498377	
MARVIN LEWIS JR	2,000.00	498396	
BACY LAW PLLC	6,112.50	498402	
FUNCTION 4 LLC - WELLS FARGO FINANC	198.00	498414	
ODP BUSINESS SOLUTIONS, LLC	187.70	498432	
			28,567.29*
58TH DISTRICT COURT			
THOMSON REUTERS-WEST	114.00	498372	
FUNCTION 4 LLC - WELLS FARGO FINANC	99.00	498414	
			213.00*
60TH DISTRICT COURT			
FUNCTION 4 LLC - WELLS FARGO FINANC	99.00	498414	
			99.00*
136TH DISTRICT COURT			
THOMSON REUTERS-WEST	48.54	498372	
ODP BUSINESS SOLUTIONS, LLC	39.98	498432	
			88.52*
172ND DISTRICT COURT			
FUNCTION 4 LLC - WELLS FARGO FINANC	99.00	498414	
			99.00*
252ND DISTRICT COURT			
UNITED STATES POSTAL SERVICE	.98	498316	
SUMMER TANNER	2,555.95	498342	
FUNCTION 4 LLC - WELLS FARGO FINANC	99.00	498414	
			2,655.93*
279TH DISTRICT COURT			
ANITA F. PROVO	440.00	498274	
WENDELL RADFORD	350.00	498275	
NATHAN REYNOLDS, JR.	660.00	498276	
JOEL WEBB VAZQUEZ	220.00	498333	
TONYA CONNELL TOUPS	110.00	498347	

NAME	AMOUNT	CHECK NO.	TOTAL
BRITTANIE HOLMES	990.00	498368	
THOMSON REUTERS-WEST	57.00	498372	
WILLIAM FORD DISHMAN	330.00	498375	
MATUSKA LAW FIRM	110.00	498377	
SHELANDER LAW OFFICE	550.00	498421	
			3,817.00*
317TH DISTRICT COURT			
JOEL WEBB VAZQUEZ	150.00	498333	
WILLIAM FORD DISHMAN	250.00	498375	
MATUSKA LAW FIRM	220.00	498377	
FUNCTION 4 LLC - WELLS FARGO FINANC	99.00	498414	
			719.00*
JUSTICE COURT-PCT 1 PL 1			
CASH ADVANCE ACCOUNT	398.00	498258	
UNITED STATES POSTAL SERVICE	21.89	498316	
THOMSON REUTERS-WEST	129.50	498372	
FUNCTION 4 LLC - WELLS FARGO FINANC	99.00	498414	
			648.39*
JUSTICE COURT-PCT 1 PL 2			
CASH ADVANCE ACCOUNT	670.05	498258	
UNITED STATES POSTAL SERVICE	39.44	498316	
THOMSON REUTERS-WEST	259.00	498372	
ODP BUSINESS SOLUTIONS, LLC	110.64	498432	
			1,079.13*
JUSTICE COURT-PCT 2			
POSTMASTER	1,772.00	498273	
			1,772.00*
JUSTICE COURT-PCT 4			
CASH ADVANCE ACCOUNT	426.75	498258	
DEPARTMENT OF INFORMATION RESOURCES	.35	498296	
			427.10*
JUSTICE COURT-PCT 6			
UNITED STATES POSTAL SERVICE	29.26	498316	
FUNCTION 4 LLC - WELLS FARGO FINANC	99.00	498414	
			128.26*
JUSTICE COURT-PCT 7			
AT&T	36.54	498283	
DEPARTMENT OF INFORMATION RESOURCES	.26	498296	
			36.80*
JUSTICE OF PEACE PCT. 8			
FUNCTION 4 LLC - WELLS FARGO FINANC	99.00	498414	
			99.00*
COUNTY COURT AT LAW NO.1			
STATE BAR OF TEXAS - JUDICIAL SEC.	30.00	498284	
UNITED STATES POSTAL SERVICE	6.38	498316	
SIERRA SPRING WATER CO. - BT	96.36	498317	
FUNCTION 4 LLC - WELLS FARGO FINANC	99.00	498414	
			231.74*
COUNTY COURT AT LAW NO. 2			
THOMAS J. BURBANK PC	250.00	498236	
UNITED STATES POSTAL SERVICE	3.52	498316	
JOEL WEBB VAZQUEZ	650.00	498333	
THE SAMUEL FIRM, PLLC	300.00	498399	
FUNCTION 4 LLC - WELLS FARGO FINANC	99.00	498414	
			1,302.52*
COUNTY COURT AT LAW NO. 3			
EDWARD B. GRIPON, M.D., P.A.	595.00	498251	
SIERRA SPRING WATER CO. - BT	48.87	498318	
MATUSKA LAW FIRM	250.00	498377	
THE SAMUEL FIRM, PLLC	550.00	498399	
			1,443.87*
COURT MASTER			

NAME	AMOUNT	CHECK NO.	TOTAL
BUDDIE J HAHN	2,194.43	498405	
FUNCTION 4 LLC - WELLS FARGO FINANC	99.00	498414	
			2,293.43*
MEDIATION CENTER			
SOUTHEAST TEXAS WATER	75.50	498282	
ODP BUSINESS SOLUTIONS, LLC	128.97	498432	
			204.47*
COMMUNITY SUPERVISION			
FUNCTION 4 LLC - WELLS FARGO FINANC	396.00	498414	
			396.00*
SHERIFF'S DEPARTMENT			
FAST SIGNS, INC.	18.00	498244	
FED EX	27.96	498246	
GT DISTRIBUTORS, INC.	865.99	498249	
JEFFERSON CTY. SHERIFF'S DEPARTMENT	1,520.00	498256	
CASH ADVANCE ACCOUNT	1,265.08	498258	
MCNEILL INSURANCE AGENCY	71.00	498266	
CDW COMPUTER CENTERS, INC.	169.67	498294	
DEPARTMENT OF INFORMATION RESOURCES	537.28	498296	
VERIZON WIRELESS	3,457.09	498311	
UNITED STATES POSTAL SERVICE	1,933.72	498316	
BEAUMONT OCCUPATIONAL SERVICE, INC.	174.75	498323	
BOONE'S TOWING & RECOVERY	250.00	498338	
RITA HURT	275.00	498363	
SILSBEE FORD INC	6,476.35	498376	
GALLS LLC	275.00	498379	
COVENANT TACTICAL LLC	3,273.83	498407	
FUNCTION 4 LLC - WELLS FARGO FINANC	495.00	498414	
ODP BUSINESS SOLUTIONS, LLC	73.17	498432	
			21,158.89*
CRIME LABORATORY			
AGILENT TECHNOLOGIES	717.02	498233	
COLLABORATIVE TESTING SERVICES	2,314.00	498241	
FED EX	47.10	498247	
FISHER SCIENTIFIC	392.55	498248	
THERMAL SCIENTIFIC, INC.	85.35	498287	
CERILLIANT	206.00	498328	
LIPOMED	48.80	498357	
ANSI-ASQ NAT ACCREDITATION BOARD	14,800.00	498394	
AIRGAS USA, LLC	525.18	498395	
FUNCTION 4 LLC - WELLS FARGO FINANC	99.00	498414	
ODP BUSINESS SOLUTIONS, LLC	349.78	498432	
			19,584.78*
JAIL - NO. 2			
CITY OF BEAUMONT - WATER DEPT.	20,983.20	498238	
W.W. GRAINGER, INC.	280.28	498250	
JACK BROOKS REGIONAL AIRPORT	776.64	498257	
DEPARTMENT OF INFORMATION RESOURCES	.82	498296	
COOK'S CORRECTIONAL KITCHEN EQUIP	460.84	498319	
EPIC BUSINESS ESSENTIALS, LLC	221.36	498408	
FUNCTION 4 LLC - WELLS FARGO FINANC	818.00	498414	
			23,541.14*
JUVENILE PROBATION DEPT.			
CASH ADVANCE ACCOUNT	351.29	498258	
DEPARTMENT OF INFORMATION RESOURCES	.03	498296	
UNITED STATES POSTAL SERVICE	4.53	498316	
US FLAG AND FLAGPOLE SUPPLY	955.87	498392	
FUNCTION 4 LLC - WELLS FARGO FINANC	297.00	498414	
			1,608.72*
JUVENILE DETENTION HOME			
CITY OF BEAUMONT - WATER DEPT.	3,898.22	498238	
SANITARY SUPPLY, INC.	95.58	498277	
SERVICE GRAPHICS	1,750.00	498292	
FUNCTION 4 LLC - WELLS FARGO FINANC	99.00	498414	
			5,842.80*
CONSTABLE PCT 1			

NAME	AMOUNT	CHECK NO.	TOTAL
UNITED STATES POSTAL SERVICE	38.18	498316	
TX TAG	5.63	498381	
FUNCTION 4 LLC - WELLS FARGO FINANC	99.00	498414	
			142.81*
CONSTABLE-PCT 2			
CASH ADVANCE ACCOUNT	188.00	498258	
THIRD COAST TINT	200.00	498349	
			388.00*
CONSTABLE-PCT 6			
CDW COMPUTER CENTERS, INC.	217.34	498294	
UNITED STATES POSTAL SERVICE	6.38	498316	
THOMSON REUTERS-WEST	129.50	498372	
			353.22*
CONSTABLE PCT. 7			
AT&T	36.54	498283	
ODP BUSINESS SOLUTIONS, LLC	140.35	498432	
			176.89*
CONSTABLE PCT. 8			
THIRD COAST TINT	275.00	498349	
COTTON CARGO	40.00	498401	
FUNCTION 4 LLC - WELLS FARGO FINANC	99.00	498414	
			414.00*
AGRICULTURE EXTENSION SVC			
FUNCTION 4 LLC - WELLS FARGO FINANC	211.00	498414	
			211.00*
HEALTH AND WELFARE NO. 1			
ENTERGY	70.00	498255	
CLAYBAR HAVEN OF REST	7,625.00	498313	
CLAYBAR HAVEN OF REST	1,040.00	498314	
UNITED STATES POSTAL SERVICE	47.20	498316	
AMERICAN CORPORATE SERVICES	136.25	498348	
PROCTOR'S MORTUARY INC	1,500.00	498356	
FUNCTION 4 LLC - WELLS FARGO FINANC	198.00	498414	
EZEA D EDE MD	3,245.08	498415	
			13,861.53*
HEALTH AND WELFARE NO. 2			
BROUSSARD'S MORTUARY	1,500.00	498235	
AT&T	36.54	498283	
MCKESSON MEDICAL-SURGICAL INC	215.36	498295	
CLAYBAR HAVEN OF REST	7,625.00	498313	
VECTOR SECURITY	134.85	498386	
FUNCTION 4 LLC - WELLS FARGO FINANC	198.00	498414	
EZEA D EDE MD	3,245.08	498415	
			12,954.83*
NURSE PRACTITIONER			
SERVET MUHITTIN SATIR	1,000.00	498419	
			1,000.00*
CHILD WELFARE UNIT			
J.C. PENNEY'S	5,006.77	498324	
ROSS DRESS FOR LESS, INC.	2,094.79	498340	
			7,101.56*
ENVIRONMENTAL CONTROL			
DEPARTMENT OF INFORMATION RESOURCES	.06	498296	
US POSTAL SERVICE	360.00	498321	
FUNCTION 4 LLC - WELLS FARGO FINANC	99.00	498414	
			459.06*
INDIGENT MEDICAL SERVICES			
CARDINAL HEALTH 110 INC	11,524.12	498373	
TDS OPERATING INC	128.70	498391	
SHAMECA MALBROUGH	10.00	498409	
			11,662.82*
MAINTENANCE-BEAUMONT			

NAME	AMOUNT	CHECK NO.	TOTAL
JOHNSTONE SUPPLY	1,774.22	498232	
CITY OF BEAUMONT - WATER DEPT.	13,769.88	498238	
W.W. GRAINGER, INC.	109.90	498250	
ENTERGY	44,190.66	498253	
ACE IMAGEWEAR	208.40	498278	
AT&T	4,908.55	498283	
DEPARTMENT OF INFORMATION RESOURCES	897.04	498296	
THOMAS A/C SUPPLY INC	1,195.09	498310	
SOLAR	174.40	498320	
AT&T GLOBAL SERVICES	233.75	498329	
OTIS ELEVATOR COMPANY	2,808.46	498331	
REXEL USA INC	568.47	498390	
ODP BUSINESS SOLUTIONS, LLC	410.59	498432	
			71,249.41*
MAINTENANCE-PORT ARTHUR			
JOHNSTONE SUPPLY	93.84	498232	
JOHNSON CONTROLS, INC.	1,878.76	498259	
NOACK LOCKSMITH	9.00	498269	
AT&T	72.06	498283	
DEPARTMENT OF INFORMATION RESOURCES	5.22	498296	
LOWE'S HOME CENTERS, INC.	269.14	498325	
NORTHERN TOOL AND EQUIPMENT	1,399.00	498362	
ALL TERRAIN EQUIPMENT CO	15.89	498387	
THE HOME DEPOT PRO	867.60	498400	
FUNCTION 4 LLC - WELLS FARGO FINANC	99.00	498414	
CHARTER COMMUNICATIONS	106.78	498429	
PARKER'S BUILDING SUPPLY	56.62	498434	
			4,872.91*
MAINTENANCE-MID COUNTY			
ACE IMAGEWEAR	37.22	498278	
			37.22*
SERVICE CENTER			
CHUCK'S WRECKER SERVICE	125.00	498237	
KINSEL FORD, INC.	1,569.96	498260	
PHILPOTT MOTORS, INC.	1,261.57	498270	
TATE & CO., INC.	100.00	498286	
VINS PAINT & BODY, INC.	471.00	498290	
JEFFERSON CTY. TAX OFFICE	7.50	498299	
JEFFERSON CTY. TAX OFFICE	7.50	498300	
JEFFERSON CTY. TAX OFFICE	7.50	498301	
JEFFERSON CTY. TAX OFFICE	7.50	498302	
JEFFERSON CTY. TAX OFFICE	7.50	498303	
JEFFERSON CTY. TAX OFFICE	7.50	498304	
JEFFERSON CTY. TAX OFFICE	7.50	498305	
JEFFERSON CTY. TAX OFFICE	16.75	498306	
JEFFERSON CTY. TAX OFFICE	7.50	498307	
JEFFERSON CTY. TAX OFFICE	7.50	498308	
JEFFERSON CTY. TAX OFFICE	7.50	498309	
BUMPER TO BUMPER	1,610.23	498334	
AIRPORT GULF TOWING LLC	250.00	498337	
MIGHTY OF SOUTHEAST TEXAS	58.50	498361	
SPANKY'S WRECKER SERVICE INC	150.00	498366	
ADVANCE AUTO PARTS	22.68	498370	
MIDNIGHT AUTO	209.90	498385	
			5,920.59*
VETERANS SERVICE			
UNITED STATES POSTAL SERVICE	.49	498316	
FUNCTION 4 LLC - WELLS FARGO FINANC	99.00	498414	
ODP BUSINESS SOLUTIONS, LLC	146.56	498432	
			246.05*
			332,059.02**
MOSQUITO CONTROL FUND			
CLARKE MOSQUITO CONTROL	50,352.50	498240	
JACK BROOKS REGIONAL AIRPORT	1,851.75	498257	
UNITED PARCEL SERVICE	22.38	498289	
MUNRO'S UNIFORM SERVICES, LLC	71.94	498433	
			52,298.57**
BREATH ALCOHOL TESTING			

NAME	AMOUNT	CHECK NO.	TOTAL
CASH ADVANCE ACCOUNT	1,464.92	498258	
J.C. FAMILY TREATMENT			1,464.92**
MARY BEVIL	20.00	498411	
SECURITY FEE FUND			20.00**
ALLIED UNIVERSAL SECURITY SERVICES	9,141.46	498406	
LAW LIBRARY FUND			9,141.46**
THOMSON REUTERS-WEST	2,484.00	498372	
FUNCTION 4 LLC - WELLS FARGO FINANC	99.00	498414	
EMPG GRANT			2,583.00**
FUNCTION 4 LLC - WELLS FARGO FINANC	275.00	498414	
COMMUNITY SUPERVISION FND			275.00**
CASH ADVANCE ACCOUNT	1,546.82	498258	
DEPARTMENT OF INFORMATION RESOURCES	49.46	498296	
UNITED STATES POSTAL SERVICE	73.77	498316	
CLEAN HARBORS ENVIRONMENTAL SERVICE	341.12	498330	
REDWOOD TOXICOLOGY LABORATORY, INC	303.85	498343	
FUNCTION 4 LLC - WELLS FARGO FINANC	99.00	498414	
CHARTER COMMUNICATIONS	166.72	498430	
ODP BUSINESS SOLUTIONS, LLC	615.11	498432	
MENTALLY IMPAIRED OFFEND.			3,195.85**
CASH ADVANCE ACCOUNT	237.00	498258	
COMMUNITY CORRECTIONS PRG			237.00**
M&D SUPPLY	65.00	498264	
FUNCTION 4 LLC - WELLS FARGO FINANC	99.00	498414	
DRUG DIVERSION PROGRAM			164.00**
FUNCTION 4 LLC - WELLS FARGO FINANC	99.00	498414	
COUNTY CLERK - RECORD MGT			99.00**
MANATRON	8,613.00	498345	
DEPT STATE HEALTH GRANT			8,613.00**
IMELDA TRISTAN	4,300.00	498426	
MARCUS LAMBERT	4,300.00	498427	
HOTEL OCCUPANCY TAX FUND			8,600.00**
ENTERGY	1,924.81	498253	
DEPARTMENT OF INFORMATION RESOURCES	3.04	498296	
UNITED STATES POSTAL SERVICE	4.56	498316	
DISTRICT CLK RECORDS MGMT			1,932.41**
FUNCTION 4 LLC - WELLS FARGO FINANC	198.00	498414	
CAPITAL PROJECTS FUND			198.00**
FREESE AND NICHOLS, INC	3,341.00	498424	
CETRZ/CTIF GRANT			3,341.00**
MARTIN PRODUCT SALES LLC	32,043.94	498339	
AIRPORT FUND			32,043.94**
ACE GLASS & MIRROR, INC.	447.65	498229	

NAME	AMOUNT	CHECK NO.	TOTAL
JOHNSON CONTROLS, INC.	671.80	498259	
LOUIS' YAZOO SALES & SERVICE, LLC	24.95	498263	
SANITARY SUPPLY, INC.	287.16	498277	
UNITED STATES POSTAL SERVICE	3.03	498316	
LOWE'S HOME CENTERS, INC.	58.78	498325	
RUTTY & MORRIS LLC	375.00	498344	
CRAWFORD ELECTRIC SUPPLY COMPANY	590.79	498369	
TITAN AVIATION FUELS	145,748.89	498397	
FUNCTION 4 LLC - WELLS FARGO FINANC	99.00	498414	
CHAPMAN VENDING	122.50	498420	
			148,429.55**
SE TX EMP. BENEFIT POOL			
EXPRESS SCRIPTS INC	137,104.15	498388	
BAY BRIDGE ADMINISTRATORS LLC	173,991.47	498417	
			311,095.62**
SETEC FUND			
CDW COMPUTER CENTERS, INC.	2,934.00	498294	
			2,934.00**
WORKER'S COMPENSATION FD			
TRISTAR RISK MANAGEMENT	2,437.57	498335	
			2,437.57**
SHERIFF'S FORFEITURE FUND			
SILSBEE FORD INC	37,941.20	498376	
			37,941.20**
GLO DISASTER RECOVERY			
LJA ENGINEERING INC	24,904.00	498365	
DE CORP	19,050.29	498418	
			43,954.29**
MARINE DIVISION			
JACK BROOKS REGIONAL AIRPORT	294.91	498257	
SUN COAST RESOURCES, INC.	16,975.32	498285	
VERIZON WIRELESS	151.96	498312	
SABINE PASS PORT AUTHORITY	360.48	498322	
THE DINGO GROUP-PETE JORGENSON MARI	234.50	498346	
ATTABOY TERMITE & PEST CONTROL	71.67	498352	
VECTOR SECURITY	44.95	498386	
			18,133.79**
			1,080,240.56***

Democratic Judges

Comm	PCT	Loc ID	Party	ED Location	Role	First Name	Last Name	Address	City	ST	Zip Code	Phone Number
1	1	1-1	D	Amelia Elementary School	PRESIDING JUDGE	Gwen	Britton	1156 GREEN MEADOW ST	BEAUMONT	TX	77706	713-305-2805
1	2	1-2	d	West Brook High School	PRESIDING JUDGE	Stella	Smith	8010 GLADYS	BEAUMONT	TX	77706	409-720-7942
1	3	1-3	D	Bevil Oaks City Hall	ALTERNATE JUDGE	Janet	Sterling	1380 AGGIE DRIVE	BEAUMONT	TX	77713	409-781-0024
1	4	1-4	D	BISD Administration	ALTERNATE JUDGE	Mac	English	9605 MEADOWBROOK DR	BEAUMONT	TX	77706	409-550-8884
1	6	1-6	D	Dishman Elementary	ALTERNATE JUDGE	Deryl	Holden	7650 MERION DRIVE	BEAUMONT	TX	77707	409-658-5154
1	7	1-7	D	O.C. Mike Taylor Career Center	PRESIDING JUDGE	Laura	Grimes	5215 RICHARD DR	BEAUMONT	TX	77708	409-553-5015
1	8	1-8	D	Precinct One Service Center	ALTERNATE JUDGE	Althea	Courtney	148 S. DOWLEN ROAD	BEAUMONT	TX	77707	409-504-1883
1	9	1-9	D	Rogers Park Comm Ctr	ALTERNATE JUDGE	David	James	6570 POINTE PARK DR	BEAUMONT	TX	77706	409-658-3174
2	1	2-1	D	Hebert Library	ALTERNATE JUDGE	Lynell	Landry	716 SIERRA CIRCLE	PORT NECHES	TX	77651	409-718-0731
2	2	2-2	D	Jeff. Co. WCID 10 Fire Station	ALTERNATE JUDGE	Deborah	Welch	6200 PINE AVE	PORT ARTHUR	TX	77640	409-344-2113
2	3	2-3	D	Groves Public Library	ALTERNATE JUDGE	Carolyn	Theall	440 WEST 18TH ST	PORT ARTHUR	TX	77640	409-293-1742
2	4	2-4	D	Nederland City Hall	ALTERNATE JUDGE	Sylvia	McDuffie	2828 AVENUE G	NEDERLAND	TX	77627	409-963-8293
2	5	2-5	D	Jerry Ware Airport Terminal	ALTERNATE JUDGE	Kay	Wall	198 W CIRCUIT DR	BEAUMONT	TX	77706	409-679-2829
2	6	2-6	D	Ray Chesson Office Building	ALTERNATE JUDGE	Gerald	Bob	5900 HUMMINGBIRD LANE	BEAUMONT	TX	77713	409-350-6468
2	7	2-7	D	Jeff. Co. ESD #4	ALTERNATE JUDGE	Rosemary	Martin	215 JOSEPH ST.	BEAUMONT	TX	77705	409-363-2523
2	8	2-8	D	Marion & Ed Hughes Public Library	ALTERNATE JUDGE	Linda	Batiste	3943 BLACKBERRY LN	PORT ARTHUR	TX	77642	409-344-3279
2	9	2-9	D	Port Neches City Hall	ALTERNATE JUDGE	Dorothy	Jackson	4900 BEAUMONT AVE	PORT ARTHUR	TX	77640	409-548-8583
2	10	2-10	D	Groves Activity Building	ALTERNATE JUDGE	Melba	LeDoux	3124 HIGH AVE	GROVES	TX	77619	409-504-9460
3	1	3-1	D	DeQueen Elementary	PRESIDING JUDGE	Melissa	Zambrano	5027 7TH ST	PORT ARTHUR	TX	77642	409-549-5286
3	2	3-2	D	Zion Hill Baptist Church	PRESIDING JUDGE	Theressa	Levine	2060 NORA ST	BEAUMONT	TX	77705	409-351-2434
3	3	3-3	D	Jeff. Co. Sub Courthouse	PRESIDING JUDGE	Audry	Blanchette	1412 E 9TH ST	PORT ARTHUR	TX	77640	409-543-4660
3	4	3-4	D	Former Dowling Elem. Campus	ALTERNATE JUDGE	Jacquelyn	Foreman	6010 DAISY AVE	PORT ARTHUR	TX	77640	409-728-0824
3	5	3-5	D	O.W. Collins Retirement Ctr.	PRESIDING JUDGE	Madita	Perez	5104 WOODLAND BLVD	GROVES	TX	77619	409-549-8096
3	6	3-6	D	Port Arthur Library	PRESIDING JUDGE	Azzie	Mills	PO BOX 2762	PORT ARTHUR	TX	77643	409-963-7515
3	7	3-7	D	Queen of Vietnam Catholic Church	PRESIDING JUDGE	Cynthia	McKenzie	4741 LAKESHORE DR	PORT ARTHUR	TX	77640	982-0808
3	8	3-8	D	R.L. Gabby Eldridge Center	ALTERNATE JUDGE	Lorena	Jerry	748 E 9TH ST	PORT ARTHUR	TX	77640	409-983-7468
3	9	3-9	D	Travis Elementary	PRESIDING JUDGE	Craig	Guidry	3501 E 12TH STREET APT 3002	PORT ARTHUR	TX	77640	409-719-1282
3	10	3-10	D	Willie Ryman Comm Ctr	PRESIDING JUDGE	Harold	Joseph	2137 CASHMERE DR.	PORT ARTHUR	TX	77640	409-201-3433
4	1	4-1	D	Alice Keith Park Recreation Ctr.	PRESIDING JUDGE	Charlie	Mingo	1425 PIPKIN STREET	BEAUMONT	TX	77705	409-225-1780
4	2	4-2	D	Charlton-Pollard Elementary	PRESIDING JUDGE	Gregg	Pumphrey	2470 WASHINGTON BLVD	BEAUMONT	TX	77705	409-201-3860
4	3	4-3	D	Lamar Univ - Montagne Center	PRESIDING JUDGE	Wilburean	Benard	1425 WASHINGTON PKWY APT 103	BEAUMONT	TX	77707	409-504-6218
4	4	4-4	D	Hamshire VFD and Comm Ctr	ALTERNATE JUDGE	Sheila	Henderson	2247 LIBERTY STREET	BEAUMONT	TX	77701	409-998-1552
4	5	4-5	D	Jeff. Co. Courthouse	PRESIDING JUDGE	Doris	Bishop	5510 CATHERINE LANE	BEAUMONT	TX	77708	409-351-1383
4	6	4-6	D	MLK Middle School	PRESIDING JUDGE	Ray	Nelson	95 ROSINE	BEAUMONT	TX	77707	409-382-8099
4	7	4-7	D	John Paul Davis Comm Ctr.	PRESIDING JUDGE	Vernon	Tubbs	PO BOX 6421	BEAUMONT	TX	77725	409-351-9804
4	8	4-8	D	Precinct 4 Service Center	ALTERNATE JUDGE	Phyllis	Bland	1201 BRIARMEADOW DR	BEAUMONT	TX	77706	409-781-8330
4	9	4-9	D	Sterling Pruitt Center	PRESIDING JUDGE	Katherine	Campbell	1067 WIESS STREET	BEAUMONT	TX	77703	409-553-1983
4	10	4-10	D	Theodore Johns Library	PRESIDING JUDGE	Edward	Clark	3190 ELINOR STREET	BEAUMONT	TX	77705	409-893-2928
4	11	4-11	D	Roy Guess Elementary	PRESIDING JUDGE	Deborah	Celestine	4950 RICHARD DRIVE	BEAUMONT	TX	77708	409-767-1640

Democratic Judges

Comm	PCT	Loc ID	Party	ED Location	Role	First Name	Last Name	Address	City	ST	Zip Code	Phone Number
1	1	1-1	D	Amelia Elementary School	PRESIDING JUDGE	Gwen	Britton	1156 GREEN MEADOW ST	BEAUMONT	TX	77706	713-305-2805
1	2	1-2	d	West Brook High School	PRESIDING JUDGE	Stella	Smith	8010 GLADYS	BEAUMONT	TX	77706	409-720-7942
1	3	1-3	D	Bevil Oaks City Hall	ALTERNATE JUDGE	Janet	Sterling	1380 AGGIE DRIVE	BEAUMONT	TX	77713	409-781-0024
1	4	1-4	D	BISD Administration	ALTERNATE JUDGE	Mac	English	9605 MEADOWBROOK DR	BEAUMONT	TX	77706	409-550-8884
1	6	1-6	D	Dishman Elementary	ALTERNATE JUDGE	Deryl	Holden	7650 MERION DRIVE	BEAUMONT	TX	77707	409-658-5154
1	7	1-7	D	O.C. Mike Taylor Career Center	PRESIDING JUDGE	Laura	Grimes	5215 RICHARD DR	BEAUMONT	TX	77708	409-553-5015
1	8	1-8	D	Precinct One Service Center	ALTERNATE JUDGE	Althea	Courtney	148 S. DOWLEN ROAD	BEAUMONT	TX	77707	409-504-1883
1	9	1-9	D	Rogers Park Comm Ctr	ALTERNATE JUDGE	David	James	6570 POINTE PARK DR	BEAUMONT	TX	77706	409-658-3174
2	1	2-1	D	Hebert Library	ALTERNATE JUDGE	Lynell	Landry	716 SIERRA CIRCLE	PORT NECHES	TX	77651	409-718-0731
2	2	2-2	D	Jeff. Co. WCID 10 Fire Station	ALTERNATE JUDGE	Deborah	Welch	6200 PINE AVE	PORT ARTHUR	TX	77640	409-344-2113
2	3	2-3	D	Groves Public Library	ALTERNATE JUDGE	Carolyn	Theall	440 WEST 18TH ST	PORT ARTHUR	TX	77640	409-293-1742
2	4	2-4	D	Nederland City Hall	ALTERNATE JUDGE	Sylvia	McDuffie	2828 AVENUE G	NEDERLAND	TX	77627	409-963-8293
2	5	2-5	D	Jerry Ware Airport Terminal	ALTERNATE JUDGE	Kay	Wall	198 W CIRCUIT DR	BEAUMONT	TX	77706	409-679-2829
2	6	2-6	D	Ray Chesson Office Building	ALTERNATE JUDGE	Gerald	Bob	5900 HUMMINGBIRD LANE	BEAUMONT	TX	77713	409-350-6468
2	7	2-7	D	Jeff. Co. ESD #4	ALTERNATE JUDGE	Rosemary	Martin	215 JOSEPH ST.	BEAUMONT	TX	77705	409-363-2523
2	8	2-8	D	Marion & Ed Hughes Public Library	ALTERNATE JUDGE	Linda	Batiste	3943 BLACKBERRY LN	PORT ARTHUR	TX	77642	409-344-3279
2	9	2-9	D	Port Neches City Hall	ALTERNATE JUDGE	Dorothy	Jackson	4900 BEAUMONT AVE	PORT ARTHUR	TX	77640	409-548-8583
2	10	2-10	D	Groves Activity Building	ALTERNATE JUDGE	Melba	LeDoux	3124 HIGH AVE	GROVES	TX	77619	409-504-9460
3	1	3-1	D	DeQueen Elementary	PRESIDING JUDGE	Melissa	Zambrano	5027 7TH ST	PORT ARTHUR	TX	77642	409-549-5286
3	2	3-2	D	Zion Hill Baptist Church	PRESIDING JUDGE	Theressa	Levine	2060 NORA ST	BEAUMONT	TX	77705	409-351-2434
3	3	3-3	D	Jeff. Co. Sub Courthouse	PRESIDING JUDGE	Audry	Blanchette	1412 E 9TH ST	PORT ARTHUR	TX	77640	409-543-4660
3	4	3-4	D	Former Dowling Elem. Campus	ALTERNATE JUDGE	Jacquelyn	Foreman	6010 DAISY AVE	PORT ARTHUR	TX	77640	409-728-0824
3	5	3-5	D	O.W. Collins Retirement Ctr.	PRESIDING JUDGE	Madita	Perez	5104 WOODLAND BLVD	GROVES	TX	77619	409-549-8096
3	6	3-6	D	Port Arthur Library	PRESIDING JUDGE	Azzie	Mills	PO BOX 2762	PORT ARTHUR	TX	77643	409-963-7515
3	7	3-7	D	Queen of Vietnam Catholic Church	PRESIDING JUDGE	Cynthia	McKenzie	4741 LAKESHORE DR	PORT ARTHUR	TX	77640	982-0808
3	8	3-8	D	R.L. Gabby Eldridge Center	ALTERNATE JUDGE	Lorena	Jerry	748 E 9TH ST	PORT ARTHUR	TX	77640	409-983-7468
3	9	3-9	D	Travis Elementary	PRESIDING JUDGE	Craig	Guidry	3501 E 12TH STREET APT 3002	PORT ARTHUR	TX	77640	409-719-1282
3	10	3-10	D	Willie Ryman Comm Ctr	PRESIDING JUDGE	Harold	Joseph	2137 CASHMERE DR.	PORT ARTHUR	TX	77640	409-201-3433
4	1	4-1	D	Alice Keith Park Recreation Ctr.	PRESIDING JUDGE	Charlie	Mingo	1425 PIPKIN STREET	BEAUMONT	TX	77705	409-225-1780
4	2	4-2	D	Charlton-Pollard Elementary	PRESIDING JUDGE	Gregg	Pumphrey	2470 WASHINGTON BLVD	BEAUMONT	TX	77705	409-201-3860
4	3	4-3	D	Lamar Univ - Montagne Center	PRESIDING JUDGE	Wilburean	Benard	1425 WASHINGTON PKWY APT 103	BEAUMONT	TX	77707	409-504-6218
4	4	4-4	D	Hamshire VFD and Comm Ctr	ALTERNATE JUDGE	Sheila	Henderson	2247 LIBERTY STREET	BEAUMONT	TX	77701	409-998-1552
4	5	4-5	D	Jeff. Co. Courthouse	PRESIDING JUDGE	Doris	Bishop	5510 CATHERINE LANE	BEAUMONT	TX	77708	409-351-1383
4	6	4-6	D	MLK Middle School	PRESIDING JUDGE	Ray	Nelson	95 ROSINE	BEAUMONT	TX	77707	409-382-8099
4	7	4-7	D	John Paul Davis Comm Ctr.	PRESIDING JUDGE	Vernon	Tubbs	PO BOX 6421	BEAUMONT	TX	77725	409-351-9804
4	8	4-8	D	Precinct 4 Service Center	ALTERNATE JUDGE	Phyllis	Bland	1201 BRIARMEADOW DR	BEAUMONT	TX	77706	409-781-8330
4	9	4-9	D	Sterling Pruitt Center	PRESIDING JUDGE	Katherine	Campbell	1067 WIESS STREET	BEAUMONT	TX	77703	409-553-1983
4	10	4-10	D	Theodore Johns Library	PRESIDING JUDGE	Edward	Clark	3190 ELINOR STREET	BEAUMONT	TX	77705	409-893-2928
4	11	4-11	D	Roy Guess Elementary	PRESIDING JUDGE	Deborah	Celestine	4950 RICHARD DRIVE	BEAUMONT	TX	77708	409-767-1640

Republican Judges

Comm	PCT	Loc ID	Party	ED Location	Role	First Name	Last Name	Address	City	ST	Zip Code	Phone Number
1	1	1-1	R	Amelia Elementary School	ALTERNATE JUDGE	Rhonda	Lomonte	6875 SIERRA CR	BEAUMONT	TX	77708	409-679-2511
1	2	1-2	R	West Brook High School	ALTERNATE JUDGE	Doris	Williams	555 NORVELL	BEAUMONT	TX	77707	409-790-1483
1	3	1-3	R	Bevil Oaks City Hall	PRESIDING JUDGE	Elizabeth	Bordelon	3196 MAJOR DRIVE	BEAUMONT	TX	77707	
1	4	1-4	R	BISD Administration	PRESIDING JUDGE	Ronnie	Mudd	4790 CHADWICK STREET	BEAUMONT	TX	77706	(409) 454-6963
1	6	1-6	R	Dishman Elementary	PRESIDING JUDGE	Ramona	Hutchinson	3660 WINGED FOOT	BEAUMONT	TX	77707	830-822-4200
1	7	1-7	R	O.C. Mike Taylor Career Center	ALTERNATE JUDGE	Nancy	Dickey	3410 REDWOOD DRIVE	BEAUMONT	TX	77703	409-730-3418
1	8	1-8	R	Precinct One Service Center	PRESIDING JUDGE	Susan	Tindall	PO BOX 105	NOME	TX	77629	409 782-8999
1	9	1-9	R	Rogers Park Comm Ctr	PRESIDING JUDGE	Joan	Yates	6252 AFTON LANE	BEAUMONT	TX	77706	409-781-0093
2	1	2-1	R	Hebert Library	PRESIDING JUDGE	Cindy	Drake	4621 BOYD AVENUE	GROVES	TX	77619	(409) 790-4159
2	2	2-2	R	Jeff. Co. WCID 10 Fire Station	PRESIDING JUDGE	Lanora	Read	2606 9TH STREET	PORT NECHES	TX	77651	(409) 550-8488
2	3	2-3	R	Groves Public Library	PRESIDING JUDGE	Blaine	Hall	2301 ROSEDALE DR	PORT ARTHUR	TX	77642	(409) 549-2138
2	4	2-4	R	Nederland City Hall	PRESIDING JUDGE	Linda	Sherman	3608 AVENUE F	NEDERLAND	TX	77627	(409) 201-1982
2	5	2-5	R	Jerry Ware Airport Terminal	PRESIDING JUDGE	Patricia	Greene	2225 STILLWATER DRIVE	BEAUMONT	TX	77705	409-626-2585
2	6	2-6	R	Ray Chesson Office Building	PRESIDING JUDGE	Chris	Betar	21148 BURRELL WINGATE RD	BEAUMONT	TX	77705	409-720-8004
2	7	2-7	R	Jeff. Co. ESD #4	PRESIDING JUDGE	Ruth	Sherman	22300 FM 365	BEAUMONT	TX	77705	409-679-3974
2	8	2-8	R	Marion & Ed Hughes Public Library	PRESIDING JUDGE	Redell	Fontenot	3001 8TH ST. TRLR #12	PORT NECHES	TX	77651	409-719-8720
2	9	2-9	R	Port Neches City Hall	PRESIDING JUDGE	Anna	Christian	4840 80TH ST	PORT ARTHUR	TX	77642	409-749-0509
2	10	2-10	R	Groves Activity Building	PRESIDING JUDGE	Nola	Hall	2301 ROSEDALE DR	PORT ARTHUR	TX	77642	409-549-2422
3	1	3-1	R	DeQueen Elementary	ALTERNATE JUDGE	Randy	Chataganier	8110 HEATHERBROOK TRAIL	PORT ARTHUR	TX	77642	409-228-2109
3	2	3-2	R	Zion Hill Baptist Church	ALTERNATE JUDGE	Tina	Woodle	PO BOX 1482	GROVES	TX	77619	409-720-9914
3	3	3-3	R	Jeff. Co. Sub Courthouse	ALTERNATE JUDGE	Rodney	Pacetti	6323 JEFFERSON BLVD	GROVES	TX	77619	409-749-4048
3	4	3-4	R	Former Dowling Elem. Campus	PRESIDING JUDGE	David	Badgett	2310 ELM	NEDERLAND	TX	77627	409-719-7697
3	5	3-5	R	O.W. Collins Retirement Ctr.	ALTERNATE JUDGE	Kim	Taylor	4732 BELLAIRE AVE	GROVES	TX	77619	409-540-7684
3	6	3-6	R	Port Arthur Library	ALTERNATE JUDGE	Kenneth	Young	2419 AVENUE G	NEDERLAND	TX	77627	409-728-2695
3	7	3-7	R	Queen of Vietnam Catholic Church	ALTERNATE JUDGE	Danny	Miller	902 WAGNER ST	PORT NECHES	TX	77651	409-549-4668
3	8	3-8	R	R.L. Gabby Eldridge Center	PRESIDING JUDGE	Anne	Ochoa	1190 MONTERREY DR	BEAUMONT	TX	77706	409-543-6870
3	9	3-9	R	Travis Elementary	ALTERNATE JUDGE	Marie	Errington	4021 WENTWORTH AVE.	PORT ARTHUR	TX	77642	409-543-2845
3	10	3-10	R	Willie Ryman Comm Ctr	ALTERNATE JUDGE	Robert	Leger	2108 JEFFERSON	NEDERLAND	TX	77627	409-626-4288
4	1	4-1	R	Alice Keith Park Recreation Ctr.	ALTERNATE JUDGE	Marya	Harris	2120 EUCLID ST	BEAUMONT	TX	77705	409-347-4501
4	2	4-2	R	Charlton-Pollard Elementary	ALTERNATE JUDGE	Mary Beth	Bowling	37 SANDELWOOD TRL	BEAUMONT	TX	77706	409-626-1818
4	3	4-3	R	Lamar Univ - Montagne Center	ALTERNATE JUDGE	Sam	Moffit	1650 REYNOLDS ROAD	BEAUMONT	TX	77707	409-223-2090
4	4	4-4	R	Hamshire VFD and Comm Ctr	PRESIDING JUDGE	Stacie	Hill	12810 LABELLE ROAD	BEAUMONT	TX	77705	409-791-5112
4	5	4-5	R	Jeff. Co. Courthouse	ALTERNATE JUDGE	Glenda	Bush	4010 INEZ	BEAUMONT	TX	77705	409-728-2559
4	6	4-6	R	MLK Middle School	ALTERNATE JUDGE	Mark	Godley	2743 SABA LN	PORT NECHES	TX	77651	409-749-0952
4	7	4-7	R	John Paul Davis Comm Ctr.	ALTERNATE JUDGE	Dale	Leslie	2104 WILD FLOWER	BEAUMONT	TX	77713	409-673-4682
4	8	4-8	R	Precinct 4 Service Center	PRESIDING JUDGE	Dorothy	Curl	2635 GRAND BLVD	PORT NECHES	TX	77651	409-728-4177
4	9	4-9	R	Sterling Pruitt Center	ALTERNATE JUDGE	James	Linder	5590 DUFF AVE	BEAUMONT	TX	77706	409-554-0191
4	10	4-10	R	Theodore Johns Library	ALTERNATE JUDGE	Glen	Rabalais	5750 SUL ROSS LANE	BEAUMONT	TX	77706	409-679-7413
4	11	4-11	R	Roy Guess Elementary	ALTERNATE JUDGE	Billie	Blackburn	7195 HURLEY DRIVE	BEAUMONT	TX	77708	409-673-0497

Republican Judges

Comm	PCT	Loc ID	Party	ED Location	Role	First Name	Last Name	Address	City	ST	Zip Code	Phone Number
1	1	1-1	R	Amelia Elementary School	ALTERNATE JUDGE	Rhonda	Lomonte	6875 SIERRA CR	BEAUMONT	TX	77708	409-679-2511
1	2	1-2	R	West Brook High School	ALTERNATE JUDGE	Doris	Williams	555 NORVELL	BEAUMONT	TX	77707	409-790-1483
1	3	1-3	R	Bevil Oaks City Hall	PRESIDING JUDGE	Elizabeth	Bordelon	3196 MAJOR DRIVE	BEAUMONT	TX	77707	
1	4	1-4	R	BISD Administration	PRESIDING JUDGE	Ronnie	Mudd	4790 CHADWICK STREET	BEAUMONT	TX	77706	(409) 454-6963
1	6	1-6	R	Dishman Elementary	PRESIDING JUDGE	Ramona	Hutchinson	3660 WINGED FOOT	BEAUMONT	TX	77707	830-822-4200
1	7	1-7	R	O.C. Mike Taylor Career Center	ALTERNATE JUDGE	Nancy	Dickey	3410 REDWOOD DRIVE	BEAUMONT	TX	77703	409-730-3418
1	8	1-8	R	Precinct One Service Center	PRESIDING JUDGE	Susan	Tindall	PO BOX 105	NOME	TX	77629	409 782-8999
1	9	1-9	R	Rogers Park Comm Ctr	PRESIDING JUDGE	Joan	Yates	6252 AFTON LANE	BEAUMONT	TX	77706	409-781-0093
2	1	2-1	R	Hebert Library	PRESIDING JUDGE	Cindy	Drake	4621 BOYD AVENUE	GROVES	TX	77619	(409) 790-4159
2	2	2-2	R	Jeff. Co. WCID 10 Fire Station	PRESIDING JUDGE	Lanora	Read	2606 9TH STREET	PORT NECHES	TX	77651	(409) 550-8488
2	3	2-3	R	Groves Public Library	PRESIDING JUDGE	Blaine	Hall	2301 ROSEDALE DR	PORT ARTHUR	TX	77642	(409) 549-2138
2	4	2-4	R	Nederland City Hall	PRESIDING JUDGE	Linda	Sherman	3608 AVENUE F	NEDERLAND	TX	77627	(409) 201-1982
2	5	2-5	R	Jerry Ware Airport Terminal	PRESIDING JUDGE	Patricia	Greene	2225 STILLWATER DRIVE	BEAUMONT	TX	77705	409-626-2585
2	6	2-6	R	Ray Chesson Office Building	PRESIDING JUDGE	Chris	Betar	21148 BURRELL WINGATE RD	BEAUMONT	TX	77705	409-720-8004
2	7	2-7	R	Jeff. Co. ESD #4	PRESIDING JUDGE	Ruth	Sherman	22300 FM 365	BEAUMONT	TX	77705	409-679-3974
2	8	2-8	R	Marion & Ed Hughes Public Library	PRESIDING JUDGE	Redell	Fontenot	3001 8TH ST. TRLR #12	PORT NECHES	TX	77651	409-719-8720
2	9	2-9	R	Port Neches City Hall	PRESIDING JUDGE	Anna	Christian	4840 80TH ST	PORT ARTHUR	TX	77642	409-749-0509
2	10	2-10	R	Groves Activity Building	PRESIDING JUDGE	Nola	Hall	2301 ROSEDALE DR	PORT ARTHUR	TX	77642	409-549-2422
3	1	3-1	R	DeQueen Elementary	ALTERNATE JUDGE	Randy	Chataganier	8110 HEATHERBROOK TRAIL	PORT ARTHUR	TX	77642	409-228-2109
3	2	3-2	R	Zion Hill Baptist Church	ALTERNATE JUDGE	Tina	Woodle	PO BOX 1482	GROVES	TX	77619	409-720-9914
3	3	3-3	R	Jeff. Co. Sub Courthouse	ALTERNATE JUDGE	Rodney	Pacetti	6323 JEFFERSON BLVD	GROVES	TX	77619	409-749-4048
3	4	3-4	R	Former Dowling Elem. Campus	PRESIDING JUDGE	David	Badgett	2310 ELM	NEDERLAND	TX	77627	409-719-7697
3	5	3-5	R	O.W. Collins Retirement Ctr.	ALTERNATE JUDGE	Kim	Taylor	4732 BELLAIRE AVE	GROVES	TX	77619	409-540-7684
3	6	3-6	R	Port Arthur Library	ALTERNATE JUDGE	Kenneth	Young	2419 AVENUE G	NEDERLAND	TX	77627	409-728-2695
3	7	3-7	R	Queen of Vietnam Catholic Church	ALTERNATE JUDGE	Danny	Miller	902 WAGNER ST	PORT NECHES	TX	77651	409-549-4668
3	8	3-8	R	R.L. Gabby Eldridge Center	PRESIDING JUDGE	Anne	Ochoa	1190 MONTERREY DR	BEAUMONT	TX	77706	409-543-6870
3	9	3-9	R	Travis Elementary	ALTERNATE JUDGE	Marie	Errington	4021 WENTWORTH AVE.	PORT ARTHUR	TX	77642	409-543-2845
3	10	3-10	R	Willie Ryman Comm Ctr	ALTERNATE JUDGE	Robert	Leger	2108 JEFFERSON	NEDERLAND	TX	77627	409-626-4288
4	1	4-1	R	Alice Keith Park Recreation Ctr.	ALTERNATE JUDGE	Marya	Harris	2120 EUCLID ST	BEAUMONT	TX	77705	409-347-4501
4	2	4-2	R	Charlton-Pollard Elementary	ALTERNATE JUDGE	Mary Beth	Bowling	37 SANDELWOOD TRL	BEAUMONT	TX	77706	409-626-1818
4	3	4-3	R	Lamar Univ - Montagne Center	ALTERNATE JUDGE	Sam	Moffit	1650 REYNOLDS ROAD	BEAUMONT	TX	77707	409-223-2090
4	4	4-4	R	Hamshire VFD and Comm Ctr	PRESIDING JUDGE	Stacie	Hill	12810 LABELLE ROAD	BEAUMONT	TX	77705	409-791-5112
4	5	4-5	R	Jeff. Co. Courthouse	ALTERNATE JUDGE	Glenda	Bush	4010 INEZ	BEAUMONT	TX	77705	409-728-2559
4	6	4-6	R	MLK Middle School	ALTERNATE JUDGE	Mark	Godley	2743 SABA LN	PORT NECHES	TX	77651	409-749-0952
4	7	4-7	R	John Paul Davis Comm Ctr.	ALTERNATE JUDGE	Dale	Leslie	2104 WILD FLOWER	BEAUMONT	TX	77713	409-673-4682
4	8	4-8	R	Precinct 4 Service Center	PRESIDING JUDGE	Dorothy	Curl	2635 GRAND BLVD	PORT NECHES	TX	77651	409-728-4177
4	9	4-9	R	Sterling Pruitt Center	ALTERNATE JUDGE	James	Linder	5590 DUFF AVE	BEAUMONT	TX	77706	409-554-0191
4	10	4-10	R	Theodore Johns Library	ALTERNATE JUDGE	Glen	Rabalais	5750 SUL ROSS LANE	BEAUMONT	TX	77706	409-679-7413
4	11	4-11	R	Roy Guess Elementary	ALTERNATE JUDGE	Billie	Blackburn	7195 HURLEY DRIVE	BEAUMONT	TX	77708	409-673-0497

Comm	PCT	Loc ID	Party	ED Location	Role	First Name	Last Name
1	1	1-1	D	Amelia Elementary School	PRESIDING JUDGE	Gwen	Britton
1	1	1-1	R	Amelia Elementary School	ALTERNATE JUDGE	Rhonda	Lomonte
1	2	1-2	d	West Brook High School	PRESIDING JUDGE	Stella	Smith
1	2	1-2	R	West Brook High School	ALTERNATE JUDGE	Doris	Williams
1	3	1-3	R	Bevil Oaks City Hall	PRESIDING JUDGE	Elizabeth	Bordelon
1	3	1-3	D	Bevil Oaks City Hall	ALTERNATE JUDGE	Janet	Sterling
1	4	1-4	R	BISD Administration	PRESIDING JUDGE	Ronnie	Mudd
1	4	1-4	D	BISD Administration	ALTERNATE JUDGE	Mac	English
1	6	1-6	R	Dishman Elementary	PRESIDING JUDGE	Ramona	Hutchinson
1	6	1-6	D	Dishman Elementary	ALTERNATE JUDGE	Deryl	Holden
1	7	1-7	D	O.C. Mike Taylor Career Center	PRESIDING JUDGE	Laura	Grimes
1	7	1-7	R	O.C. Mike Taylor Career Center	ALTERNATE JUDGE	Nancy	Dickey
1	8	1-8	R	Precinct One Service Center	PRESIDING JUDGE	Susan	Tindall
1	8	1-8	D	Precinct One Service Center	ALTERNATE JUDGE	Althea	Courtney
1	9	1-9	R	Rogers Park Comm Ctr	PRESIDING JUDGE	Joan	Yates
1	9	1-9	D	Rogers Park Comm Ctr	ALTERNATE JUDGE	David	James
2	1	2-1	R	Hebert Library	PRESIDING JUDGE	Cindy	Drake
2	1	2-1	D	Hebert Library	ALTERNATE JUDGE	Lynell	Landry
2	2	2-2	R	Jeff. Co. WCID 10 Fire Station	PRESIDING JUDGE	Lanora	Read
2	2	2-2	D	Jeff. Co. WCID 10 Fire Station	ALTERNATE JUDGE	Deborah	Welch
2	3	2-3	R	Groves Public Library	PRESIDING JUDGE	Blaine	Hall
2	3	2-3	D	Groves Public Library	ALTERNATE JUDGE	Carolyn	Theall
2	4	2-4	R	Nederland City Hall	PRESIDING JUDGE	Linda	Sherman
2	4	2-4	D	Nederland City Hall	ALTERNATE JUDGE	Sylvia	McDuffie
2	5	2-5	R	Jerry Ware Airport Terminal	PRESIDING JUDGE	Patricia	Greene
2	5	2-5	D	Jerry Ware Airport Terminal	ALTERNATE JUDGE	Kay	Wall
2	6	2-6	R	Ray Chesson Office Building	PRESIDING JUDGE	Chris	Betar
2	6	2-6	D	Ray Chesson Office Building	ALTERNATE JUDGE	Gerald	Bob
2	7	2-7	R	Jeff. Co. ESD #4	PRESIDING JUDGE	Ruth	Sherman
2	7	2-7	D	Jeff. Co. ESD #4	ALTERNATE JUDGE	Rosemary	Martin

2	8	2-8	R	Marion & Ed Hughes Public Library	PRESIDING JUDGE	Redell	Fontenot
2	8	2-8	D	Marion & Ed Hughes Public Library	ALTERNATE JUDGE	Linda	Batiste
2	9	2-9	R	Port Neches City Hall	PRESIDING JUDGE	Anna	Christian
2	9	2-9	D	Port Neches City Hall	ALTERNATE JUDGE	Dorothy	Jackson
2	10	2-10	R	Groves Activity Building	PRESIDING JUDGE	Nola	Hall
2	10	2-10	D	Groves Activity Building	ALTERNATE JUDGE	Melba	LeDoux
3	1	3-1	D	DeQueen Elementary	PRESIDING JUDGE	Melissa	Zambrano
3	1	3-1	R	DeQueen Elementary	ALTERNATE JUDGE	Randy	Chataganier
3	2	3-2	D	Zion Hill Baptist Church	PRESIDING JUDGE	Theressa	Levine
3	2	3-2	R	Zion Hill Baptist Church	ALTERNATE JUDGE	Tina	Woodle
3	3	3-3	D	Jeff. Co. Sub Courthouse	PRESIDING JUDGE	Audry	Blanchette
3	3	3-3	R	Jeff. Co. Sub Courthouse	ALTERNATE JUDGE	Rodney	Pacetti
3	4	3-4	R	Former Dowling Elem. Campus	PRESIDING JUDGE	David	Badgett
3	4	3-4	D	Former Dowling Elem. Campus	ALTERNATE JUDGE	Jacquelyn	Foreman
3	5	3-5	D	O.W. Collins Retirement Ctr.	PRESIDING JUDGE	Madita	Perez
3	5	3-5	R	O.W. Collins Retirement Ctr.	ALTERNATE JUDGE	Kim	Taylor
3	6	3-6	D	Port Arthur Library	PRESIDING JUDGE	Azzie	Mills
3	6	3-6	R	Port Arthur Library	ALTERNATE JUDGE	Kenneth	Young
3	7	3-7	D	Queen of Vietnam Catholic Church	PRESIDING JUDGE	Cynthia	McKenzie
3	7	3-7	R	Queen of Vietnam Catholic Church	ALTERNATE JUDGE	Danny	Miller
3	8	3-8	R	R.L. Gabby Eldridge Center	PRESIDING JUDGE	Anne	Ochoa
3	8	3-8	D	R.L. Gabby Eldridge Center	ALTERNATE JUDGE	Lorena	Jerry
3	9	3-9	D	Travis Elementary	PRESIDING JUDGE	Craig	Guidry
3	9	3-9	R	Travis Elementary	ALTERNATE JUDGE	Marie	Errington
3	10	3-10	D	Willie Ryman Comm Ctr	PRESIDING JUDGE	Harold	Joseph
3	10	3-10	R	Willie Ryman Comm Ctr	ALTERNATE JUDGE	Robert	Leger
4	1	4-1	D	Alice Keith Park Recreation Ctr.	PRESIDING JUDGE	Charlie	Mingo
4	1	4-1	R	Alice Keith Park Recreation Ctr.	ALTERNATE JUDGE	Marya	Harris
4	2	4-2	D	Charlton-Pollard Elementary	PRESIDING JUDGE	Gregg	Pumphrey
4	2	4-2	R	Charlton-Pollard Elementary	ALTERNATE JUDGE	Mary Beth	Bowling
4	3	4-3	D	Lamar Univ - Montagne Center	PRESIDING JUDGE	Wilburean	Benard

4	3	4-3	R	Lamar Univ - Montagne Center	ALTERNATE JUDGE	Sam	Moffit
4	4	4-4	R	Hamshire VFD and Comm Ctr	PRESIDING JUDGE	Stacie	Hill
4	4	4-4	D	Hamshire VFD and Comm Ctr	ALTERNATE JUDGE	Sheila	Henderson
4	5	4-5	D	Jeff. Co. Courthouse	PRESIDING JUDGE	Doris	Bishop
4	5	4-5	R	Jeff. Co. Courthouse	ALTERNATE JUDGE	Glenda	Bush
4	6	4-6	D	MLK Middle School	PRESIDING JUDGE	Ray	Nelson
4	6	4-6	R	MLK Middle School	ALTERNATE JUDGE	Mark	Godley
4	7	4-7	D	John Paul Davis Comm Ctr.	PRESIDING JUDGE	Vernon	Tubbs
4	7	4-7	R	John Paul Davis Comm Ctr.	ALTERNATE JUDGE	Dale	Leslie
4	8	4-8	R	Precinct 4 Service Center	PRESIDING JUDGE	Dorothy	Curl
4	8	4-8	D	Precinct 4 Service Center	ALTERNATE JUDGE	Phyllis	Bland
4	9	4-9	D	Sterling Pruitt Center	PRESIDING JUDGE	Katherine	Campbell
4	9	4-9	R	Sterling Pruitt Center	ALTERNATE JUDGE	James	Linder
4	10	4-10	D	Theodore Johns Library	PRESIDING JUDGE	Edward	Clark
4	10	4-10	R	Theodore Johns Library	ALTERNATE JUDGE	Glen	Rabalais
4	11	4-11	D	Roy Guess Elementary	PRESIDING JUDGE	Deborah	Celestine
4	11	4-11	R	Roy Guess Elementary	ALTERNATE JUDGE	Billie	Blackburn

JOINT ELECTION AGREEMENT AND
ELECTION SERVICES CONTRACT
BETWEEN JEFFERSON COUNTY AND
City of Bevil Oaks

This agreement made and entered into, by and between Jefferson County, hereinafter referred to as "County", acting herein by and through its County Judge and Commissioner's Court, joined herein by the **County Election Officer, Laurie Leister, County Clerk**, and **City of Bevil Oaks** hereinafter referred to as "Political Subdivision", acting herein by and through its Executive Board.

WHEREAS, Political Subdivision is required to conduct an election on **November 8, 2022**;

THIS JOINT ELECTION AGREEMENT AND ELECTION SERVICES CONTRACT is made this _____ day of _____, 2022, by and between the Political Subdivision of **City of Bevil Oaks** hereinafter called "Political Subdivision" and Jefferson County, Texas, by its County Judge and joined herein by its County Elections Officer, **Laurie Leister**, hereinafter called "Contracting Officer," pursuant to Texas Election Code Section 31.092. The parties agree to enter into a Joint Election Agreement and an election services contract with each other in accordance with Chapter 271 of the Texas Election Code and this Agreement. This Agreement is entered into in consideration of the mutual covenants and promises hereinafter set out:

1. **RECITALS.** Contracting Officer is the County Clerk of Jefferson County, Texas, and is the County Officer in charge of election duties. Political Subdivision is a political entity situated wholly or partially within Jefferson County, Texas. Political Subdivision and Contracting Officer have determined that it is in the public interest of Jefferson County voters that the following contract be made and entered into for the purpose of having Contracting Officer furnish to Political Subdivision certain election services and equipment needed by Political Subdivision in connection with the holding of its **November 8, 2022,** Election. Jefferson County's voting equipment is to be used in this Political Subdivision Election.

2. **DUTIES AND SERVICES OF CONTRACTING OFFICER.** Contracting Officer shall be responsible for performing the following duties and shall furnish the following services and equipment:

(a) Notify and coordinate presiding election judges, alternate judges, and all other election officials appointed by Commissioner's Court to conduct county elections required to administer this Election. Jefferson County will make emergency appointments of election officials if necessary. Compensate all election workers for time worked at the approved hourly rate by Commissioners' Court.

(b) Arrange for poll worker training through a third party or conduct necessary training. Notify all early voting and Election Day officials of the date, time and place thereof.

(c) Arrange for the use of early voting locations and Election Day polling locations. If emergency replacement polling locations are needed, Contracting Officer shall make necessary alternate arrangements to locate another public place (or if unavailable, a private building), and shall notify Political Subdivision as soon as possible.

(d) Procure election kits and supplies and distribute to the precinct judges and early voting deputies. Obtain from the Tax -Assessor /Voter Registrar lists of registered voters to be used in conducting the election in conformity with the boundaries of Political Subdivision and the election precincts established for the election. The Election Day list of registered voters shall be arranged in alphabetical order.

(e) Prepare and test all electronic voting equipment, format ballot styles, secure audio, oversee all equipment and voter registration database programming, assure compliance with equipment security requirements. Arrange for transport of equipment to and from polling locations.

(f) Serve as Early Voting Clerk for this Joint Election and process, print, mail, and tabulate ballots for any eligible voter, who applies for a ballot by mail including all eligible FPCA applicants. Supervise the conduct of early voting in person and appoint sufficient personnel to serve as deputy early voting clerks. Provide lists of early voters as provided by law if requested by Political Subdivision.

(g) Publish legal notice of the date, time and place of the public logic and accuracy test. Prepare test materials and conduct internal election testing, public logic and accuracy test, and tests of tabulation equipment.

(h) Arrange for the early ballot board, signature verification committee, tabulation personnel, and all equipment and supplies needed at central counting station. Tabulate early voting, election night, paper mail ballots and provisional ballots. Tabulate unofficial returns and assist in preparing the tabulation for the official canvass. Provide Political Subdivision its voter history report following the election if requested.

(i) Serve as Custodian of Records for election records in Contracting Officer's custody and provide for the retention of said election records as provided by law.

(j) Provide information services for voters and election officers.

(k) Maintain accurate records of all expenses incurred in connection with the responsibilities under this Agreement and provide Political Subdivision a final invoice after the conduct of the election. Provide any detailed backup to such invoice, if requested, reflecting the charges or components of the costs set forth on the invoice submitted to Political Subdivision.

(l) The Contracting Office is responsible for collecting the compensations sheets for the election

judges, clerks, and early voting ballot board. The Contracting Officer will also pay the aforementioned for their services and time in accordance with their rate of pay policy.

(m) Contracting Officer shall conduct a manual count as prescribed by Section 127.201 of the Texas Election Code, unless waived by the Secretary of State. A written report shall be submitted to the Secretary of State as required by Section 127.201(E) of the aforementioned Election Code. If requested, Contracting Officer shall provide a written report to Political Subdivision in a timely manner.

(n) The Contracting Officer shall place the funds paid by Political Subdivision hereunder in a "contract fund" as prescribed by Section 31.100 of the Texas Election Code.

3. **DUTIES AND SERVICES OF POLITICAL SUBDIVISION**. Political Subdivision shall be responsible for performing the following duties:

(a) Prepare all election orders, resolutions, notices, and other pertinent documents for adoption and execution by the appropriate Political Subdivision officer or body. Take all actions necessary for calling the Political Subdivision Election which are required by the Texas Election Code and/or the Political Subdivision's governing body, charter, ordinances, or other applicable laws. Execute an Election Services Contract Agreement with Jefferson County Clerk for the purpose of election administration. Serve as Custodian of Records for all election records in its possession as provided by law.

(b) Political Subdivision shall be responsible for the legal sufficiency of any order calling their election. Political Subdivision shall be responsible for all substantive and procedural legal issues governing the conduct of their election. Political Subdivision understands and agrees that Contracting Officer provides no legal advice to Political Subdivision.

(c) Adopt the county voting precincts for this election. Political Subdivision shall adopt the early voting locations used by the county located in the Political Subdivision's jurisdictional boundaries with the stipulation to add additional locations and adopt all early voting dates, and hours recommended by the Contracting Officer in accordance with the Texas Election Code. Political Subdivision shall adopt the Election Day Vote Center polling locations for each county voting precinct that is within its jurisdictional boundaries. Political Subdivision shall confirm the accuracy of its jurisdictional boundaries and precincts.

(d) Prepare, post and publish all required election notices for Political Subdivision except for the Public Test Notice that Contracting Officer shall publish. In addition, if this election's polling locations are different than Political Subdivision's previous election, Political Subdivision shall post notice at the entrance to any previous polling places in its jurisdiction stating that the location has changed and provide the polling location and address for those voters for this election, pursuant to Texas Election Code Section 43.062, unless County has posted the notice of the change for their election. Educate the voters in Political Subdivision on early voting times and places and Election Day polling locations.

(e) Political Subdivision shall confirm with Tax-Assessor/Voter Registrar its boundaries, county

voting precincts and street details within those boundaries. Political Subdivision will validate all boundaries are defined properly within Jefferson County voter registration database, maps and street lists with block ranges and odd/even/both indicators before the coding and programming of the ballot begins. If changes are necessary after programming has begun, the Political Subdivision responsible will incur the cost of re-programming for all entities involved. Political Subdivision must proof and approve all programming work done for the jurisdiction according to the Election Day Calendar published by the Secretary of State of Texas for the **November 8, 2022 General Election**, known as the SOS Election Day Calendar for **November 8, 2022**.

(f) Deliver to Contracting Officer, according to the above mentioned Election Day Calendar, ballot language with Spanish translations, candidate names or measures, the order in which they are to be printed on the ballot with the exact form and spelling. Provide pronunciation for difficult names or words to use on the audio recording. Timely review and sign off on ballot proofs.

(g) Any requests for early voting ballots to be voted by mail received by Political Subdivision must be hand delivered or faxed to Contracting Officer on the day of receipt. If the application is faxed, the original application must be mailed to Contracting Officer. Contracting Officer will process applications, mail appropriate ballots, and tabulate.

(h) If requested, assist Contracting Officer in recruiting bilingual poll workers. Provide documentation on Political Subdivision's efforts to recruit bilingual poll workers if requested by the U. S. Department of Justice.

(i) Pay prorated additional costs incurred by Contracting Officer if a recount for said election is required, the election is contested in any manner, or a runoff is required.

(j) Canvass the returns and declare the election results for Political Subdivision. Political Subdivision is responsible for filing any precinct reports required by the Secretary of State.

(k) The deposit will be waived for this Election Agreement for all Political Subdivisions. All costs will be assessed and a detailed billed will be rendered within a reasonable time after the canvassing of the election or the receipt of all invoices needed to validate the billing. Any discrepancies in billing should be addressed immediately.

(l) Political Subdivision agrees to enter into a Joint Election Agreement with any other political subdivision in Jefferson County which enters into an Election Services Contract with Contracting Officer and which holds an election on **November 8, 2022.**

4. **COST OF SERVICES.** Political Subdivision shall share some expenses for the above services, supplies and equipment. Additional elections may lower costs for each entity, and election cancellations may raise costs for each entity. It is understood that other political entities may wish to participate in the use of the County's electronic voting equipment and polling locations, and it is agreed that Contracting Officer may enter into other contracts with entities for those purposes on terms and conditions generally similar to those set forth in this Agreement. Only the actual expenses directly attributable to this

Agreement and any prorated shared expenses may be charged to Political Subdivision, plus a 10% administrative fee.

(a.) Costs for early voting, election day, equipment delivery, supplies, mail ballots, payroll, equipment leasing, programming, and other costs will be shared proportionally between all political subdivisions which enter into a joint election agreement with County.

(b.)GENERAL CONDITIONS.

(a) The parties agree that the timing is critical on all duties in this Agreement. Lack of adherence to any deadline in the Election Day Calendar without prior agreement of Contracting Officer may result in cancellation of Contracting Officer's duties and obligations to conduct Political Subdivision's election under this Agreement or, at the discretion of Contracting Officer, a late penalty surcharge in an amount not to exceed 10% of the final election cost. Adherence to the Secretary of State of Texas' Election Day Calendar is critical because of Jefferson County's obligation to complete all programming and testing and to process, print and mail military and overseas ballots by state/federal deadlines and our duty to conduct federal, state, county elections and/or other contracted elections.

(b) In accordance with Section 31.098 of the Texas Election Code, Contracting Officer is authorized to contract with third persons for election services and supplies and is authorized to hire necessary temporary personnel to perform contracted duties. Part-time personnel will be compensated at the hourly rate set by Jefferson County.

(c) Political Subdivision acknowledges that electronic voting equipment is highly technical and it is conceivable that, despite the best effort of the parties and technical assistance, it might fail during the election. Contracting Officer will do whatever is possible to remedy the situation, but Political Subdivision agrees that should such equipment fail, it will not make any claim for damages of any kind.

(d) Any qualified voter in the Joint Election may vote early by personal appearance at any of the joint early voting locations or at any Vote Center/Polling Location on Election Day.

(e) Jefferson County Elections Department may contract with numerous political entities for the Joint Election, and the parties agree that all ballot styles will be programmed into one voting system. Each voter will receive one ballot which contains all races and issues in the Joint Election for which the voter is eligible at the address and in the precinct in which the voter is currently registered. One joint voter sign in process consisting of a common list of registered voters and common signature rosters shall be used in precincts in which the county polling locations are used.

(f) The Contracting Officer shall file copies of this Agreement with the Auditor and Treasurer of Jefferson County not later than the 10th day from receipt of the fully executed contract by Contracting Officer.

(g) Jefferson County is self-insured for personal liability issues. Should Political Subdivision

desire insurance for injuries during this election or other liabilities, entity shall make such arrangements separate from this Agreement.

(h) In the event that the performance by Contracting Officer of any of its obligations hereunder shall be interrupted or delayed by any occurrence not occasioned by its own conduct, whether such occurrence be an act of God or the result of war, riot, civil commotion, sovereign conduct, or the act or condition of any persons not a party thereof, then it shall be excused from such performance for such period of time as is reasonably necessary after such occurrence to remedy the effects thereof.

(i) The parties to this Agreement agree that Political Subdivision may cancel this Agreement in the event that it has no need to conduct an election by 60th day before Election Day. If Political Subdivision's election is cancelled after deadline, a $200 contract preparation and processing fee will be due in addition to any costs incurred by Contracting Officer on behalf of Political Subdivision prior to said cancellation.

(j) The Political Subdivision has the option of extending the terms of this Agreement through its runoff election, if applicable. Political Subdivision may reduce the number of the adopted early voting locations and/or Election Day voting locations in which precincts are not involved in a runoff election. In the event of a runoff which Political Subdivision wants Contracting Officer to conduct, Political Subdivision agrees to attempt to coordinate the date with other entities participating in this Joint Election. If Political Subdivision elects to have Contracting Officer conduct a runoff election, the cost will be determined by the number of entities participating and the actual costs plus administrative fees. Political Subdivision will be responsible for all orders, notices, and publications required for their runoff except the publication of the public logic and accuracy test which Contracting Officer will publish.

(C.) DISPUTE RESOLUTION PROCEDURE

The parties agree to use dispute resolution process provided for in Chapter 2260 of the Texas Government Code to attempt to resolve all disputes arising under this Agreement. Either party must give written notice to the other party of a claim for breach of this Agreement not later than the 180th day after the date of the event, giving rise to the claim. By their execution of their Agreement, the parties acknowledge and knowingly and voluntarily agree that neither the execution of this Agreement; nor the conduct, act or inaction by any person in the execution, administration, or performance of this Agreement constitutes or is intended to constitute a waiver of the party's immunity from suit with respect to claims of third parties.

(D.) ENTIRE AGREEMENT/AMENDMENT

This Agreement constitutes the entire agreement between **City of Bevil Oaks** and Contracting Officer. This Agreement may be amended only in writing and signed by the parties.

(E.) NOTICES

Except as otherwise provided in this section, all notices, consents, approvals, demands, request, or other communications provided for or permitted to be given under any of the provisions of this Agreement shall be in writing and shall be deemed to have duly given or served when

delivered by hand delivery or when deposited in the U.S. mail by registered or certified mail, return receipt requested, postage prepaid, and addressed as set forth below or to such other person or address as may be given in writing by either party to the other in accordance with this section:

City of Bevil Oaks:

Barbara Emmons
Mayor, City of Bevil Oaks
13560 River Oaks Boulevard
Beaumont, Texas 77713

Jefferson County:

Laurie Leister, County Clerk
P. O. Box 1151
Beaumont, TX 77704

IN WITNESS WHEREOF, each of the parties agrees to the terms of this Agreement and has caused this Agreement to be executed on the _____ day of _____, 2022.

City of Bevil Oaks:

By: _____ Attest: _____
Name:

IN WITNESS WHEREOF, each of the parties agrees to the terms of this Agreement and has caused this Agreement to be executed on the 30 day of August, 2022.

Jefferson County, Texas

By: _____ Attest: _____
Name: Jeff Branick
Title: County Judge

By: _____
Name: Laurie Leister
Title: County Clerk

COMMISSIONERS COURT
JEFFERSON COUNTY, TEXAS

EARLY VOTING
October 24, 2022 – November 4, 2022

November General Election – Countywide Polling – All precincts may vote at any Vote Center.
(Elecciones generals de noviembre – Lugares de votacion en todo el condado – Todos los precintos pueden votar en cualquier centro de votacion.)

Election Day Polling Places *Localizaciones*	**Address** *Direccion*	**City, State, Zip Code** *Cuidad, Estado, Codigo postal*
Precinct 1 Service Center (Front Conference Room)	20205 W. Hwy 90	China, TX 77613
Rogers Park Community Center	6540 Gladys Ave	Beaumont, TX 77706
Hebert Library (Community Room)	2025 Merriman St	Port Neches, TX 77651
Ray Chesson Office Building (Courtroom)	19217 FM 365	Beaumont, TX 77705
Marion & Ed Hughes Public Library (Meeting Room)	2712 Nederland Ave	Nederland, TX 77627
Groves Activity Building (Lounge)	6150 39th Street	Groves, TX 77619
Jefferson County Sub-Courthouse (Foyer)	525 Lakeshore Dr	Port Arthur, TX 77640
Port Arthur Library (Lucy Stiefel Gallery)	4615 9th Avenue	Port Arthur, TX 77642
Jefferson County Courthouse (Lobby) **MAIN LOCATION**	1085 Pearl St	Beaumont, TX 77701
John Paul Davis Community Center	3580 E. Lucas Dr	Beaumont, TX 77703
Theodore Johns Library (Meeting Room)	4255 Fannett Rd	Beaumont, TX 77705

DATES AND HOURS FOR ALL ABOVE LOCATIONS:

(Fechas y Horas para todas las localizaciones anteriores):

October 24 – 28, 2022 (Octubre 24 – 28, 2022)	Monday - Friday (Lunes -Viernes)	8:00 a.m. - 5:00 p.m.
October 29, 2022 (Octubre 29, 2022)	Saturday (Sábado)	7:00 a.m. - 7:00 p.m.
October 30, 2022 (Octubre 30, 2022)	Sunday (Domingo)	12:00 p.m. - 6:00 p.m.
October 31 – November 4, 2022 (Octubre 31 – Noviembre 4, 2022)	Monday – Friday (Lunes – Viernes)	7:00 a.m. – 7:00 p.m.

ELECTION DAY
November 8, 2022

November General Election – Countywide Polling – All precincts may vote at any Vote Center.
(Elecciones generals de noviembre – Lugares de votacion en todo el condado – Todos los precintos pueden votar en cualquier centro de votacion.)

Election Day Polling Places	**Address**	**City, State, Zip Code**
Localizaciones	*Direccion*	*Cuidad, Estado, Codigo postal*
Amelia Elementary School (Gymnasium)	565 S. Major Dr	Beaumont, TX 77707
West Brook High School (Mary Nixon Room – Library)	8750 Phelan Blvd	Beaumont, TX 77706
Bevil Oaks City Hall	13560 River Oaks Blvd	Bevil Oaks, TX 77713
BISD Adminisration Building (Boardroom)	3395 Harrison Ave	Beaumont, TX 77706
Dishman Elementary (Gymnasium)	3475 Champions Dr	Beaumont, TX 77707
O.C. Mike Taylor Career Center (First Floor Old Library)	2330 North St.	Beaumont, TX 77702
Precinct 1 Service Center (Front Conference Room)	20205 W. Hwy 90	China, TX 77613
Rogers Park Community Center	6540 Gladys Ave	Beaumont, TX 77706
Roy Guess Elementary (Hallway near Gymnasium)	8055 Voth Rd.	Beaumont, TX 77708
Hebert Library (Community Room)	2025 Merriman St	Port Neches, TX 77651
Jefferson County WCID 10 Fire Station (Front Lobby)	2024 Spurlock Rd.	Nederland, TX 77627
Groves Public Library (Front Meeting Room)	5600 West Washington	Groves, TX 77619
Nederland City Hall	207 N. 12th Street	Nederland, TX 77627
Jerry Ware Airport Terminal (Conference Room off Main Lobby)	5000 Jerry Ware Dr	Beaumont, TX 77705
Ray Chesson Office Building (Courtroom)	19217 FM 365	Beaumont, TX 77705
Jefferson County ESD #4 (Main Meeting Room)	12880 FM 365	Beaumont, TX 77705
Marion & Ed Hughes Public Library (Meeting Room)	2712 Nederland Ave	Nederland, TX 77627
Port Neches City Hall (Council Chambers – Room 104)	1005 Merriman	Port Neches, TX 77651
Groves Activity Building (Lounge)	6150 39th Street	Groves, TX 77619
DeQueen Elementary (Fifth Grade Hall)	740 DeQueen Blvd	Port Arthur, TX 77640
Zion Hill Baptist Church (Education Building)	5848 Roosevelt Ave	Port Arthur, TX 77640
Jefferson County Sub-Courthouse (Foyer)	525 Lakeshore Dr	Port Arthur, TX 77640
Former Dowling Elementary (Library)	6301 Pat Ave	Port Arthur, TX 77640
O.W. Collins Retirement Center (Social Service Room)	4440 Gulfway Dr	Port Arthur, TX 77642
Port Arthur Library (Lucy Stiefel Gallery)	4615 9th Avenue	Port Arthur, TX 77642
Queen of Vietnam Catholic Church (St. Joseph Hall)	801 9th Avenue	Port Arthur, TX 77642
R.L. Gabby Eldridge Center	5262 S. Gulfway Dr	Sabine Pass, TX 77655
Travis Elementary (Library)	1115 Lakeview Ave	Port Arthur, TX 77642
Willie Ryman Community Center	3248 39th Street	Port Arthur, TX 77642
Alice Keith Park Recreation Center	4075 Highland Ave	Beaumont, TX 77705
Charlton-Pollard Elementary (Gymnasium)	825 Jackson St	Beaumont, TX 77701
Lamar University Montagne Center (Cardinal Club Room)	4401 S. MLK Pkwy	Beaumont, TX 77705
Hamshire VFD and Community Center	12318 2nd St	Hamshire, TX 77622
Jefferson County Courthouse (Lobby)**Main Polling Location**	1085 Pearl St	Beaumont, TX 77701
MLK Middle School (Gymnasium)	1400 Avenue A	Beaumont, TX 77701
John Paul Davis Community Center	3580 E. Lucas Dr	Beaumont, TX 77703
Precinct 4 Service Center (Conference Room)	7780 Boyt Rd	Beaumont, TX 77713
Sterling Pruitt Center (Multi-purpose Room)	2930 Gulf St	Beaumont, TX 77703
Theodore Johns Library (Meeting Room)	4255 Fannett Rd	Beaumont, TX 77705

CONTRACT COSTS

Voting Equipment	
Judge's Booth Controller	$330.00
eSlate	$330.00
Disable Access Unit (DAU)	$396.00
Privacy Booth	$20.00
Ballot Box	$5.00

Communication Devices	
EA Tablet + WIFI	$125.00
Cell Phone	$35.00

Mandatory Signs	
Large A-Frame (ID Required)	$15.00
Large A-Frame (Notices)	$15.00

PROGRAMMING	COUNTY COST
1 - 5 RACES	$1,125.00
6 - 10 RACES	$1,898.00
11-20 RACES	$2,475.00
21-40 RACES	$3,135.00
41-75 RACES	$3,960.00
76-100 RACES	$4,704.00

BALLOT PRINTING	COUNTY COST
8.5 X 11	$0.25
8.5 X 14	$0.27
8.5 X 17	$0.30
Sample Ballots	$0.06
SUPPLIES	
ELECTION KITS / w Seals EV & ED	$45.00
Mail Ballots (Per Set)	$2.30
Supply Bag Consumables (per location)	$25.00

JOINT ELECTION AGREEMENT AND
ELECTION SERVICES CONTRACT
BETWEEN JEFFERSON COUNTY AND
Beaumont Municipal Management District No 1

This agreement made and entered into, by and between Jefferson County, hereinafter referred to as "County", acting herein by and through its County Judge and Commissioner's Court, joined herein by the **County Election Officer, Laurie Leister, County Clerk**, and **Beaumont Municipal Management District No 1** hereinafter referred to as "Political Subdivision", acting herein by and through its Executive Board.

WHEREAS, Political Subdivision is required to conduct an election on **November 8, 2022**;

THIS JOINT ELECTION AGREEMENT AND ELECTION SERVICES CONTRACT is made this _____ day of _____, 2022, by and between the Political Subdivision of **Beaumont Municipal Management District No 1** hereinafter called "Political Subdivision" and Jefferson County, Texas, by its County Judge and joined herein by its County Elections Officer, **Laurie Leister**, hereinafter called "Contracting Officer," pursuant to Texas Election Code Section 31.092. The parties agree to enter into a Joint Election Agreement and an election services contract with each other in accordance with Chapter 271 of the Texas Election Code and this Agreement. This Agreement is entered into in consideration of the mutual covenants and promises hereinafter set out:

1. **RECITALS.** Contracting Officer is the County Clerk of Jefferson County, Texas, and is the County Officer in charge of election duties. Political Subdivision is a political entity situated wholly or partially within Jefferson County, Texas. Political Subdivision and Contracting Officer have determined that it is in the public interest of Jefferson County voters that the following contract be made and entered into for the purpose of having Contracting Officer furnish to Political Subdivision certain election services and equipment needed by Political Subdivision in connection with the holding of its **November 8, 2022,** Election. Jefferson County's voting equipment is to be used in this Political Subdivision Election.

2. **DUTIES AND SERVICES OF CONTRACTING OFFICER.** Contracting Officer shall be responsible for performing the following duties and shall furnish the following services and equipment:

(a) Notify and coordinate presiding election judges, alternate judges, and all other election officials appointed by Commissioner's Court to conduct county elections required to administer this Election. Jefferson County will make emergency appointments of election officials if necessary.

Compensate all election workers for time worked at the approved hourly rate by Commissioners' Court.

(b) Arrange for poll worker training through a third party or conduct necessary training. Notify all early voting and Election Day officials of the date, time and place thereof.

(c) Arrange for the use of early voting locations and Election Day polling locations. If emergency replacement polling locations are needed, Contracting Officer shall make necessary alternate arrangements to locate another public place (or if unavailable, a private building), and shall notify Political Subdivision as soon as possible.

(d) Procure election kits and supplies and distribute to the precinct judges and early voting deputies. Obtain from the Tax -Assessor /Voter Registrar lists of registered voters to be used in conducting the election in conformity with the boundaries of Political Subdivision and the election precincts established for the election. The Election Day list of registered voters shall be arranged in alphabetical order.

(e) Prepare and test all electronic voting equipment, format ballot styles, secure audio, oversee all equipment and voter registration database programming, assure compliance with equipment security requirements. Arrange for transport of equipment to and from polling locations.

(f) Serve as Early Voting Clerk for this Joint Election and process, print, mail, and tabulate ballots for any eligible voter, who applies for a ballot by mail including all eligible FPCA applicants. Supervise the conduct of early voting in person and appoint sufficient personnel to serve as deputy early voting clerks. Provide lists of early voters as provided by law if requested by Political Subdivision.

(g) Publish legal notice of the date, time and place of the public logic and accuracy test. Prepare test materials and conduct internal election testing, public logic and accuracy test, and tests of tabulation equipment.

(h) Arrange for the early ballot board, signature verification committee, tabulation personnel, and all equipment and supplies needed at central counting station. Tabulate early voting, election night, paper mail ballots and provisional ballots. Tabulate unofficial returns and assist in preparing the tabulation for the official canvass. Provide Political Subdivision its voter history report following the election if requested.

(i) Serve as Custodian of Records for election records in Contracting Officer's custody and provide for the retention of said election records as provided by law.

(j) Provide information services for voters and election officers.

(k) Maintain accurate records of all expenses incurred in connection with the responsibilities under this Agreement and provide Political Subdivision a final invoice after the conduct of the election. Provide any detailed backup to such invoice, if requested, reflecting the charges or components of the costs set forth on the invoice submitted to Political Subdivision.

(l) The Contracting Office is responsible for collecting the compensations sheets for the election judges, clerks, and early voting ballot board. The Contracting Officer will also pay the aforementioned for their services and time in accordance with their rate of pay policy.

(m) Contracting Officer shall conduct a manual count as prescribed by Section 127.201 of the Texas Election Code, unless waived by the Secretary of State. A written report shall be submitted to the Secretary of State as required by Section 127.201(E) of the aforementioned Election Code. If requested, Contracting Officer shall provide a written report to Political Subdivision in a timely manner.

(n) The Contracting Officer shall place the funds paid by Political Subdivision hereunder in a "contract fund" as prescribed by Section 31.100 of the Texas Election Code.

3. **DUTIES AND SERVICES OF POLITICAL SUBDIVISION**. Political Subdivision shall be responsible for performing the following duties:

(a) Prepare all election orders, resolutions, notices, and other pertinent documents for adoption and execution by the appropriate Political Subdivision officer or body. Take all actions necessary for calling the Political Subdivision Election which are required by the Texas Election Code and/or the Political Subdivision's governing body, charter, ordinances, or other applicable laws. Execute an Election Services Contract Agreement with Jefferson County Clerk for the purpose of election administration. Serve as Custodian of Records for all election records in its possession as provided by law.

(b) Political Subdivision shall be responsible for the legal sufficiency of any order calling their election. Political Subdivision shall be responsible for all substantive and procedural legal issues governing the conduct of their election. Political Subdivision understands and agrees that Contracting Officer provides no legal advice to Political Subdivision.

(c) Adopt the county voting precincts for this election. Political Subdivision shall adopt the early voting locations used by the county located in the Political Subdivision's jurisdictional boundaries with the stipulation to add additional locations and adopt all early voting dates, and hours recommended by the Contracting Officer in accordance with the Texas Election Code. Political Subdivision shall adopt the Election Day Vote Center polling locations for each county voting precinct that is within its jurisdictional boundaries. Political Subdivision shall confirm the accuracy of its jurisdictional boundaries and precincts.

(d) Prepare, post and publish all required election notices for Political Subdivision except for the Public Test Notice that Contracting Officer shall publish. In addition, if this election's polling locations are different than Political Subdivision's previous election, Political Subdivision shall post notice at the entrance to any previous polling places in its jurisdiction stating that the location has changed and provide the polling location and address for those voters for this election, pursuant to Texas Election Code Section 43.062, unless County has posted the notice of the change for their election. Educate the voters in Political Subdivision on early voting times and places and Election Day polling locations.

(e) Political Subdivision shall confirm with Tax-Assessor/Voter Registrar its boundaries, county voting precincts and street details within those boundaries. Political Subdivision will validate all boundaries are defined properly within Jefferson County voter registration database, maps and street lists with block ranges and odd/even/both indicators before the coding and programming of the ballot begins. If changes are necessary after programming has begun, the Political Subdivision responsible will incur the cost of re-programming for all entities involved. Political Subdivision must proof and approve all programming work done for the jurisdiction according to the Election Day Calendar published by the Secretary of State of Texas for the **November 8, 2022 General Election**, known as the SOS Election Day Calendar for **November 8, 2022**.

(f) Deliver to Contracting Officer, according to the above mentioned Election Day Calendar, ballot language with Spanish translations, candidate names or measures, the order in which they are to be printed on the ballot with the exact form and spelling. Provide pronunciation for difficult names or words to use on the audio recording. Timely review and sign off on ballot proofs.

(g) Any requests for early voting ballots to be voted by mail received by Political Subdivision must be hand delivered or faxed to Contracting Officer on the day of receipt. If the application is faxed, the original application must be mailed to Contracting Officer. Contracting Officer will process applications, mail appropriate ballots, and tabulate.

(h) If requested, assist Contracting Officer in recruiting bilingual poll workers. Provide documentation on Political Subdivision's efforts to recruit bilingual poll workers if requested by the U. S. Department of Justice.

(i) Pay prorated additional costs incurred by Contracting Officer if a recount for said election is required, the election is contested in any manner, or a runoff is required.

(j) Canvass the returns and declare the election results for Political Subdivision. Political Subdivision is responsible for filing any precinct reports required by the Secretary of State.

(k) The deposit will be waived for this Election Agreement for all Political Subdivisions. All costs will be assessed and a detailed billed will be rendered within a reasonable time after the canvassing of the election or the receipt of all invoices needed to validate the billing. Any discrepancies in billing should be addressed immediately.

(l) Political Subdivision agrees to enter into a Joint Election Agreement with any other political subdivision in Jefferson County which enters into an Election Services Contract with Contracting Officer and which holds an election on **November 8, 2022.**

4. **COST OF SERVICES.** Political Subdivision shall share some expenses for the above services, supplies and equipment. Additional elections may lower costs for each entity, and election cancellations may raise costs for each entity. It is understood that other political entities may wish to participate in the use of the County's electronic voting equipment and polling locations, and it is agreed that Contracting Officer may enter into

other contracts with entities for those purposes on terms and conditions generally similar to those set forth in this Agreement. Only the actual expenses directly attributable to this Agreement and any prorated shared expenses may be charged to Political Subdivision, plus a 10% administrative fee.

(a.) Costs for early voting, election day, equipment delivery, supplies, mail ballots, payroll, equipment leasing, programming, and other costs will be shared proportionally between all political subdivisions which enter into a joint election agreement with County.

(b.)GENERAL CONDITIONS.

(a) The parties agree that the timing is critical on all duties in this Agreement. Lack of adherence to any deadline in the Election Day Calendar without prior agreement of Contracting Officer may result in cancellation of Contracting Officer's duties and obligations to conduct Political Subdivision's election under this Agreement or, at the discretion of Contracting Officer, a late penalty surcharge in an amount not to exceed 10% of the final election cost. Adherence to the Secretary of State of Texas' Election Day Calendar is critical because of Jefferson County's obligation to complete all programming and testing and to process, print and mail military and overseas ballots by state/federal deadlines and our duty to conduct federal, state, county elections and/or other contracted elections.

(b) In accordance with Section 31.098 of the Texas Election Code, Contracting Officer is authorized to contract with third persons for election services and supplies and is authorized to hire necessary temporary personnel to perform contracted duties. Part-time personnel will be compensated at the hourly rate set by Jefferson County.

(c) Political Subdivision acknowledges that electronic voting equipment is highly technical and it is conceivable that, despite the best effort of the parties and technical assistance, it might fail during the election. Contracting Officer will do whatever is possible to remedy the situation, but Political Subdivision agrees that should such equipment fail, it will not make any claim for damages of any kind.

(d) Any qualified voter in the Joint Election may vote early by personal appearance at any of the joint early voting locations or at any Vote Center/Polling Location on Election Day.

(e) Jefferson County Elections Department may contract with numerous political entities for the Joint Election, and the parties agree that all ballot styles will be programmed into one voting system. Each voter will receive one ballot which contains all races and issues in the Joint Election for which the voter is eligible at the address and in the precinct in which the voter is currently registered. One joint voter sign in process consisting of a common list of registered voters and common signature rosters shall be used in precincts in which the county polling locations are used.

(f) The Contracting Officer shall file copies of this Agreement with the Auditor and Treasurer of Jefferson County not later than the 10th day from receipt of the fully executed contract by Contracting Officer.

(g) Jefferson County is self-insured for personal liability issues. Should Political Subdivision desire insurance for injuries during this election or other liabilities, entity shall make such arrangements separate from this Agreement.

(h) In the event that the performance by Contracting Officer of any of its obligations hereunder shall be interrupted or delayed by any occurrence not occasioned by its own conduct, whether such occurrence be an act of God or the result of war, riot, civil commotion, sovereign conduct, or the act or condition of any persons not a party thereof, then it shall be excused from such performance for such period of time as is reasonably necessary after such occurrence to remedy the effects thereof.

(i) The parties to this Agreement agree that Political Subdivision may cancel this Agreement in the event that it has no need to conduct an election by 60th day before Election Day. If Political Subdivision's election is cancelled after deadline, a $200 contract preparation and processing fee will be due in addition to any costs incurred by Contracting Officer on behalf of Political Subdivision prior to said cancellation.

(j) The Political Subdivision has the option of extending the terms of this Agreement through its runoff election, if applicable. Political Subdivision may reduce the number of the adopted early voting locations and/or Election Day voting locations in which precincts are not involved in a runoff election. In the event of a runoff which Political Subdivision wants Contracting Officer to conduct, Political Subdivision agrees to attempt to coordinate the date with other entities participating in this Joint Election. If Political Subdivision elects to have Contracting Officer conduct a runoff election, the cost will be determined by the number of entities participating and the actual costs plus administrative fees. Political Subdivision will be responsible for all orders, notices, and publications required for their runoff except the publication of the public logic and accuracy test which Contracting Officer will publish.

(C.) DISPUTE RESOLUTION PROCEDURE

The parties agree to use dispute resolution process provided for in Chapter 2260 of the Texas Government Code to attempt to resolve all disputes arising under this Agreement. Either party must give written notice to the other party of a claim for breach of this Agreement not later than the 180th day after the date of the event, giving rise to the claim. By their execution of their Agreement, the parties acknowledge and knowingly and voluntarily agree that neither the execution of this Agreement; nor the conduct, act or inaction by any person in the execution, administration, or performance of this Agreement constitutes or is intended to constitute a waiver of the party's immunity from suit with respect to claims of third parties.

(D.) ENTIRE AGREEMENT/AMENDMENT

This Agreement constitutes the entire agreement between **Beaumont Municipal Management District No 1** and Contracting Officer. This Agreement may be amended only in writing and signed by the parties.

(E.) NOTICES

Except as otherwise provided in this section, all notices, consents, approvals, demands, request, or other communications provided for or permitted to be given under any of the provisions of this Agreement shall be in writing and shall be deemed to have duly given or served when delivered by hand delivery or when deposited in the U.S. mail by registered or certified mail, return receipt requested, postage prepaid, and addressed as set forth below or to such other person or address as may be given in writing by either party to the other in accordance with this section:

Beaumont Municipal Management District No 1:

Beaumont Municipal Management District No. 1
Allen Boone Humphries Robinson LLP 3200
Southwest Freeway, Suite 2600
Houston, Texas 77027

Jefferson County:

Laurie Leister, County Clerk
P. O. Box 1151
Beaumont, TX 77704

IN WITNESS WHEREOF, each of the parties agrees to the terms of this Agreement and has caused this Agreement to be executed on the 25th day of August, 2022.

Beaumont Municipal Management District No 1:

By: Vivian Pieterneile
Name: Vivian Pieterneile

Attest: _____

IN WITNESS WHEREOF, each of the parties agrees to the terms of this Agreement and has caused this Agreement to be executed on the 30 day of August, 2022.

Jefferson County, Texas

By: _____
Name: Jeff Branick
Title: County Judge

Attest: Laurie Leister

By: Laurie Leister
Name: Laurie Leister
Title: County Clerk

COMMISSIONERS COURT
JEFFERSON COUNTY, TEXAS

EARLY VOTING
October 24, 2022 – November 4, 2022

November General Election – Countywide Polling – All precincts may vote at any Vote Center.
(Elecciones generals de noviembre – Lugares de votacion en todo el condado – Todos los precintos pueden votar en cualquier centro de votacion.)

Election Day Polling Places *Localizaciones*	**Address** *Direccion*	**City, State, Zip Code** *Cuidad, Estado, Codigo postal*
Precinct 1 Service Center (Front Conference Room)	20205 W. Hwy 90	China, TX 77613
Rogers Park Community Center	6540 Gladys Ave	Beaumont, TX 77706
Hebert Library (Community Room)	2025 Merriman St	Port Neches, TX 77651
Ray Chesson Office Building (Courtroom)	19217 FM 365	Beaumont, TX 77705
Marion & Ed Hughes Public Library (Meeting Room)	2712 Nederland Ave	Nederland, TX 77627
Groves Activity Building (Lounge)	6150 39th Street	Groves, TX 77619
Jefferson County Sub-Courthouse (Foyer)	525 Lakeshore Dr	Port Arthur, TX 77640
Port Arthur Library (Lucy Stiefel Gallery)	4615 9th Avenue	Port Arthur, TX 77642
Jefferson County Courthouse (Lobby) **MAIN LOCATION**	1085 Pearl St	Beaumont, TX 77701
John Paul Davis Community Center	3580 E. Lucas Dr	Beaumont, TX 77703
Theodore Johns Library (Meeting Room)	4255 Fannett Rd	Beaumont, TX 77705

DATES AND HOURS FOR ALL ABOVE LOCATIONS:

(Fechas y Horas para todas las localizaciones anteriores):

October 24 – 28, 2022 (Octubre 24 – 28, 2022)	Monday - Friday (Lunes -Viernes)	8:00 a.m. - 5:00 p.m.
October 29, 2022 (Octubre 29, 2022)	Saturday (Sábado)	7:00 a.m. - 7:00 p.m.
October 30, 2022 (Octubre 30, 2022)	Sunday (Domingo)	12:00 p.m. - 6:00 p.m.
October 31 – November 4, 2022 (Octubre 31 – Noviembre 4, 2022)	Monday – Friday (Lunes – Viernes)	7:00 a.m. – 7:00 p.m.

ELECTION DAY
November 8, 2022

November General Election – Countywide Polling – All precincts may vote at any Vote Center.
(Elecciones generals de noviembre – Lugares de votacion en todo el condado – Todos los precintos pueden votar en cualquier centro de votacion.)

Election Day Polling Places	**Address**	**City, State, Zip Code**
Localizaciones	*Direccion*	*Cuidad, Estado, Codigo postal*
Amelia Elementary School (Gymnasium)	565 S. Major Dr	Beaumont, TX 77707
West Brook High School (Mary Nixon Room – Library)	8750 Phelan Blvd	Beaumont, TX 77706
Bevil Oaks City Hall	13560 River Oaks Blvd	Bevil Oaks, TX 77713
BISD Adminisration Building (Boardroom)	3395 Harrison Ave	Beaumont, TX 77706
Dishman Elementary (Gymnasium)	3475 Champions Dr	Beaumont, TX 77707
O.C. Mike Taylor Career Center (First Floor Old Library)	2330 North St.	Beaumont, TX 77702
Precinct 1 Service Center (Front Conference Room)	20205 W. Hwy 90	China, TX 77613
Rogers Park Community Center	6540 Gladys Ave	Beaumont, TX 77706
Roy Guess Elementary (Hallway near Gymnasium)	8055 Voth Rd.	Beaumont, TX 77708
Hebert Library (Community Room)	2025 Merriman St	Port Neches, TX 77651
Jefferson County WCID 10 Fire Station (Front Lobby)	2024 Spurlock Rd.	Nederland, TX 77627
Groves Public Library (Front Meeting Room)	5600 West Washington	Groves, TX 77619
Nederland City Hall	207 N. 12th Street	Nederland, TX 77627
Jerry Ware Airport Terminal (Conference Room off Main Lobby)	5000 Jerry Ware Dr	Beaumont, TX 77705
Ray Chesson Office Building (Courtroom)	19217 FM 365	Beaumont, TX 77705
Jefferson County ESD #4 (Main Meeting Room)	12880 FM 365	Beaumont, TX 77705
Marion & Ed Hughes Public Library (Meeting Room)	2712 Nederland Ave	Nederland, TX 77627
Port Neches City Hall (Council Chambers – Room 104)	1005 Merriman	Port Neches, TX 77651
Groves Activity Building (Lounge)	6150 39th Street	Groves, TX 77619
DeQueen Elementary (Fifth Grade Hall)	740 DeQueen Blvd	Port Arthur, TX 77640
Zion Hill Baptist Church (Education Building)	5848 Roosevelt Ave	Port Arthur, TX 77640
Jefferson County Sub-Courthouse (Foyer)	525 Lakeshore Dr	Port Arthur, TX 77640
Former Dowling Elementary (Library)	6301 Pat Ave	Port Arthur, TX 77640
O.W. Collins Retirement Center (Social Service Room)	4440 Gulfway Dr	Port Arthur, TX 77642
Port Arthur Library (Lucy Stiefel Gallery)	4615 9th Avenue	Port Arthur, TX 77642
Queen of Vietnam Catholic Church (St. Joseph Hall)	801 9th Avenue	Port Arthur, TX 77642
R.L. Gabby Eldridge Center	5262 S. Gulfway Dr	Sabine Pass, TX 77655
Travis Elementary (Library)	1115 Lakeview Ave	Port Arthur, TX 77642
Willie Ryman Community Center	3248 39th Street	Port Arthur, TX 77642
Alice Keith Park Recreation Center	4075 Highland Ave	Beaumont, TX 77705
Charlton-Pollard Elementary (Gymnasium)	825 Jackson St	Beaumont, TX 77701
Lamar University Montagne Center (Cardinal Club Room)	4401 S. MLK Pkwy	Beaumont, TX 77705
Hamshire VFD and Community Center	12318 2nd St	Hamshire, TX 77622
Jefferson County Courthouse (Lobby)**Main Polling Location**	1085 Pearl St	Beaumont, TX 77701
MLK Middle School (Gymnasium)	1400 Avenue A	Beaumont, TX 77701
John Paul Davis Community Center	3580 E. Lucas Dr	Beaumont, TX 77703
Precinct 4 Service Center (Conference Room)	7780 Boyt Rd	Beaumont, TX 77713
Sterling Pruitt Center (Multi-purpose Room)	2930 Gulf St	Beaumont, TX 77703
Theodore Johns Library (Meeting Room)	4255 Fannett Rd	Beaumont, TX 77705

CONTRACT COSTS

Voting Equipment	
Judge's Booth Controller	$330.00
eSlate	$330.00
Disable Access Unit (DAU)	$396.00
Privacy Booth	$20.00
Ballot Box	$5.00

Communication Devices	
EA Tablet + WIFI	$125.00
Cell Phone	$35.00

Mandatory Signs	
Large A-Frame (ID Required)	$15.00
Large A-Frame (Notices)	$15.00

PROGRAMMING	COUNTY COST
1 - 5 RACES	$1,125.00
6 - 10 RACES	$1,898.00
11-20 RACES	$2,475.00
21-40 RACES	$3,135.00
41-75 RACES	$3,960.00
76-100 RACES	$4,704.00

BALLOT PRINTING	COUNTY COST
8.5 X 11	$0.25
8.5 X 14	$0.27
8.5 X 17	$0.30
Sample Ballots	$0.06
SUPPLIES	
ELECTION KITS / w Seals EV & ED	$45.00
Mail Ballots (Per Set)	$2.30
Supply Bag Consumables (per location)	$25.00

PROCLAMATION

STATE OF TEXAS	§	COMMISSIONERS COURT
	§	
COUNTY OF JEFFERSON	§	OF JEFFERSON COUNTY, TEXAS

BE IT REMEMBERED at a meeting of Commissioners' Court of Jefferson County, Texas, held

on the 30 day of August, 2022, on motion made by Darrell Bush, Commissioner of Precinct No. 2, and seconded by Vernon Pierce, Commissioner of Precinct No. 1, the following Proclamation was adopted:

Julie Rogers "Gift of Life" Program

2022 Prostate Cancer Awareness Month

WHEREAS, September 2022 is National Prostate Cancer Awareness Month; and

WHEREAS, prostate cancer is the most frequently diagnosed cancer in men aside from skin cancer, and about **1** in **8** men will be diagnosed with prostate cancer during their lifetime; and

WHEREAS, Texas is the medically uninsured capital of the United States, with more than **4.3 million** Texans without coverage; and

WHEREAS, in 2022, it is estimated that **17,850** men in Texas will be diagnosed with prostate cancer and approximately **2,260** will die from the disease; and

WHEREAS, Gift of Life, in collaboration with its medical partners, makes available men's free healthcare services, including prostate-specific antigen (PSA) screenings, primary care, HIV and Hepatitis C tests, along with on-site physicians who review outcomes and navigate men to care; and

WHEREAS, Gift of Life will host **two** significant Saturday regional screening events on **September 10** at the Industry Safety Training Council Conference Center in Beaumont and **September 17** at the Orange Baptist Outpatient Lobby; and

WHEREAS, since 2000, more than **10,700** Southeast Texas men have received Gift of Life free prostate cancer screenings, helping to extend the lives of **77** men who were diagnosed with cancer and who were provided access to diagnostic evaluations and treatment; and

Jefferson County, and I also urge all men in our community to pursue preventative health practices and early detection efforts.

NOW, THEREFORE, BE IT RESOLVED that the Commissioners Court of Jefferson County, does hereby proclaim September 2022 as Prostate Cancer Awareness Month and Monday, August 29, 2022, as the Gift of Life Prostate Cancer Awareness Day in Jefferson County, and we urge all men in our community to pursue preventative health practices and early detection efforts.

Signed this 30 day of August, 2022.

JUDGE JEFF R. BRANICK
County Judge

COMMISSIONER VERNON PIERCE
Precinct No. 1

COMMISSIONER MICHAEL S. SINEGAL
Precinct No. 3

COMMISSIONER DARRELL W. BUSH
Precinct No. 2

COMMISSIONER EVERETTE D. ALFRED
Precinct No. 4

STATE OF TEXAS
COUNTY OF JEFFERSON

KNOWN ALL MEN BY THESE PRESENTS, THAT DOGUET'S DIAMOND D. RANCH, LTD., A TEXAS LIMITED PARTNERSHIP, OWNER OF 385.53 ACRES OF LAND OUT OF THE ALEXANDER HORTON SURVEY, ABSTRACT 29 IN JEFFERSON COUNTY, TEXAS, BEING RECORDED IN THE COUNTY CLERK'S FILE NO. 2020018894 OF THE OFFICIAL PUBLIC RECORDS OF JEFFERSON COUNTY, TEXAS DOES HEREBY SUBDIVIDE SAID 385.53 ACRE TRACT TO BE KNOWN AS 4.284 ACRES OF LAND CALLED HIGHLAND VILLAGE PHASE 1 IN ACCORDANCE WITH THE PLAT SHOWN HEREON, SUBJECT TO ANY AND ALL EASEMENT OR RESTRICTIONS HERETOFORE GRANTED AND DO HEREBY DEDICATE TO THE PUBLIC THE STREETS AND EASEMENTS SHOWN HEREON.

BY: DOGUET'S DIAMOND D RANCH, LTD., A TEXAS LIMITED LIABILITY COMPANY, ITS GENERAL PARTNER

MICHAEL D. DOGUET, MANAGER

STATE OF TEXAS
COUNTY OF JEFFERSON

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED MICHAEL D. DOGUET, MANAGER OF DOGUET'S DIAMOND D RANCH, LTD., A TEXAS LIMITED LIABILITY COMPANY, GENERAL PARTNER OF DOGUET'S DIAMOND D. RANCH, LTD., A TEXAS LIMITED PARTNERSHIP, KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATION THEREIN EXPRESSED, IN THE CAPACITIES THEREIN STATED ON BEHALF OF THE OF SAID GP DIAMOND D RANCH, L.L.C., AND ON BEHALF OF SAID DOGUET'S DIAMOND D. RANCH, LTD.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS THE 17th DAY OF August A.D., 2022.

NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

MONICA BROWN
Notary Public, State of Texas
My Commission Expires
September 25, 2023
NOTARY ID 130381549

STATE OF TEXAS
COUNTY OF JEFFERSON

TEXAS FIRST BANK ("LENDER") WHICH HOLDS A LIEN OR LIENS ON THE 4.284 ACRE TRACT OF LAND SUBDIVIDED BY AND DESCRIBED ON THIS MAP OF HIGHLAND VILLAGE PHASE 1, A SUBDIVISION IN JEFFERSON COUNTY, TEXAS (THE "SUBDIVISION"), ACTING BY AND THROUGH ITS DULY AUTHORIZED AGENT WHOSE NAME IS Michelle Bowen SUBORDINATES LENDER'S LIEN(S) TO THE SUBDIVISION DESIGNATION, DEDICATION, EASEMENTS, AND IMPOSITIONS ESTABLISHED OR CREATED BY THIS MAP AND MADE BY DOGUET'S DIAMOND D. RANCH, LTD., A TEXAS LIMITED PARTNERSHIP AS ("OWNER"), AND JOINS WITH OWNER IN THE MAKING OF THE SUBDIVISION, DESIGNATION, DEDICATION, EASEMENTS, AND IMPOSITIONS AS DEPICTED ON THIS MAP OR AS INDICATED IN ANY OF THE NOTES/COMMENTS, FOR THE SUBDIVISION.

DATED: August 17, 2022

TEXAS FIRST BANK

BY: Michelle Bowen

ITS: AVP

STATE OF TEXAS
COUNTY OF JEFFERSON

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED Michelle Bowen OF THE TEXAS FIRST BANK, A BANK ORGANIZED UNDER THE LAWS OF THE UNITED STATES OF AMERICA, KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATION THEREIN EXPRESSED, IN THE CAPACITIES THEREIN STATED ON BEHALF OF SAID BANK.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS THE 17th DAY OF August A.D., 2022.

NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

REBECCA L. PELLERIN
My Notary ID # 11965411
Expires May 9, 2024

CERTIFICATE OF RECORDING

I, _____, COUNTY CLERK OF JEFFERSON COUNTY, TEXAS DO HEREBY CERTIFY THAT THIS INSTRUMENT WAS FILED FOR REGISTRATION IN MY OFFICE ON _____, 2022, AT _____ O'CLOCK __M. RECORDED IN FILE # _____, JEFFERSON COUNTY OFFICIAL PUBLIC RECORDS.

WITNESS MY HAND AND SEAL OF OFFICE AT _____ THE DAY AND DATE LAST ABOVE WRITTEN.

_____
COUNTY CLERK
JEFFERSON COUNTY, TEXAS

BY: _____, DEPUTY

RESTRICTIONS RECORDED: _____

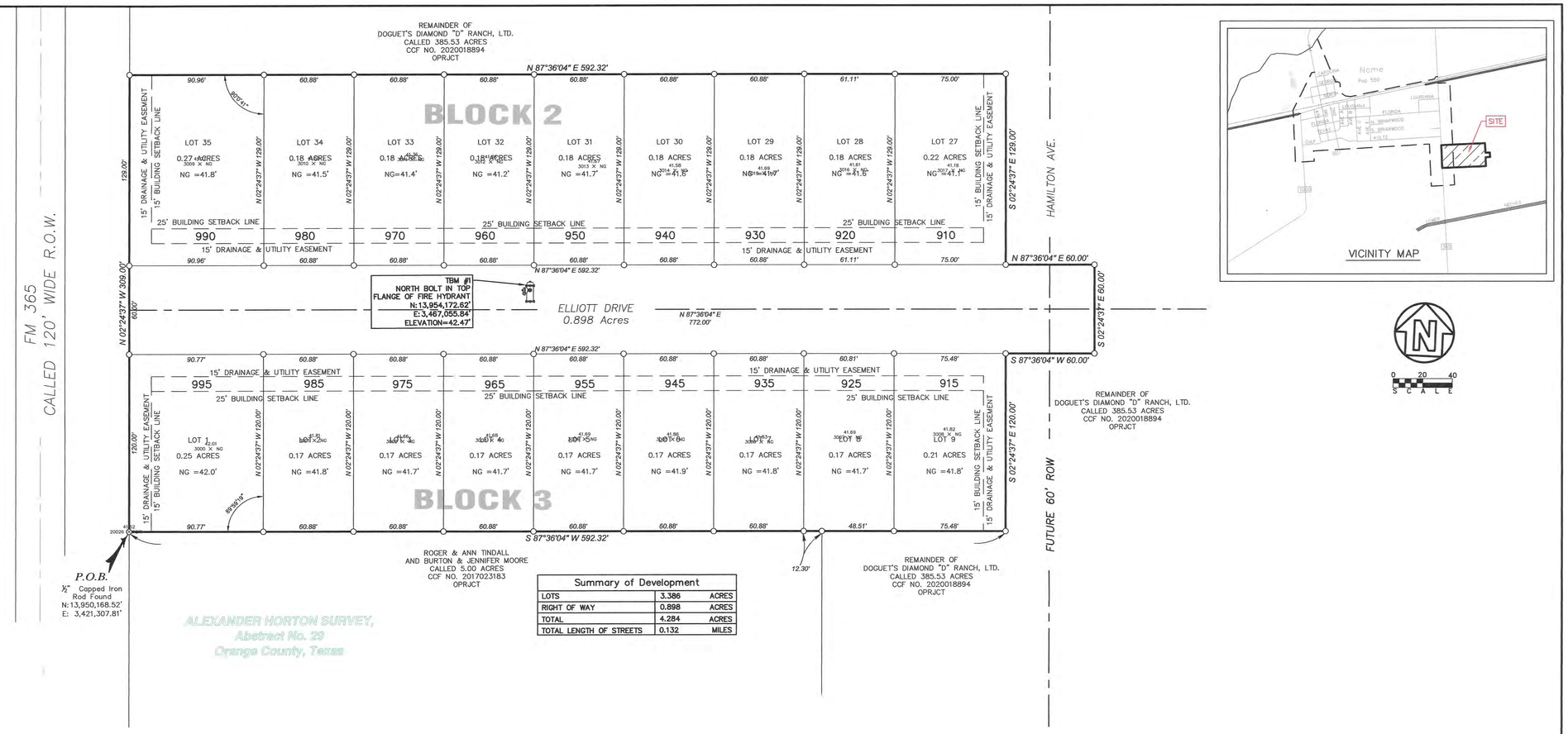
COUNTY DIRECTOR OF ENGINEERING CERTIFICATE

I, MICHELLE FALGOUT, P.E., COUNTY ENGINEER OF JEFFERSON COUNTY, DO HEREBY CERTIFY THAT THE PLAT OF THIS SUBDIVISION COMPLIES WITH ALL EXISTING RULES AND REGULATIONS OF THIS OFFICE AS ADOPTED BY THE COMMISSIONER'S COURT OF JEFFERSON COUNTY, TEXAS.

_____
MICHELLE FALGOUT, P.E. COUNTY ENGINEER

SUBSCRIBED AND SWORN TO BEFORE ME BY MICHELLE FALGOUT, COUNTY ENGINEER AND GIVEN MY HAND AND SEAL OF OFFICE, THIS _____ DAY OF _____, 2022.

_____
NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS



Summary of Development		
LOTS	3.386	ACRES
RIGHT OF WAY	0.898	ACRES
TOTAL	4.284	ACRES
TOTAL LENGTH OF STREETS	0.132	MILES

SURVEYORS CERTIFICATE

THAT I, MITCHELL LEE BRACKIN, DO HEREBY CERTIFY THAT THIS PLAT REFLECTS AN ACTUAL SURVEY MADE ON THE GROUND AND ACCORDING TO LAW, AND THAT THE LIMITS, BOUNDARIES, AND CORNERS ARE TRULY DESCRIBED JUST AS I FOUND OR SET THEM. GIVEN UNDER MY HAND AND SEAL THIS _____ DAY OF _____, 2022.

MITCHELL LEE BRACKIN
REGISTERED PROFESSIONAL LAND SURVEYOR NO. 5163

STATE OF TEXAS
REGISTERED
Mitchell Lee Brackin
5163
PROFESSIONAL
LAND SURVEYOR

SUBSCRIBED AND SWORN TO BEFORE ME BY MITCHELL LEE BRACKIN AND GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS 17th DAY OF August, 2022.

NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

MY COMMISSION EXPIRES: 2-24-2025 (DATE)

PATRICIA ALT
My Notary ID # 7154544
Expires February 24, 2025

CERTIFICATION OF ENGINEER

I, DONALD R, KING, P.E., A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, CERTIFY THAT THE CONSTRUCTION PLANS, PAVEMENT DESIGNS, AND THE LOCATION AND APPROXIMATE SIZES OF THE DRAINAGE STRUCTURE(S) SET FORTH IN THIS FINAL PLAT ARE IN ACCORDANCE WITH THE COUNTY'S ROAD AND DRAINAGE SPECIFICATIONS AND ARE IN COMPLIANCE WITH THE JEFFERSON COUNTY SUBDIVISION RULES AND DEVELOPMENT REGULATIONS.

DONALD R. KING, P.E.
REGISTERED PROFESSIONAL ENGINEER NO. 48461

STATE OF TEXAS
DONALD R. KING
48461
REGISTERED
ENGINEER
8.17.22

THE STATE OF TEXAS
COUNTY OF JEFFERSON

THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON THE 17th DAY OF August, 2022. BY DON KING, REGISTERED PROFESSIONAL ENGINEER NO. 48461.

NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

MY COMMISSION EXPIRES 2-24-2025 (DATE)

PATRICIA ALT
My Notary ID # 7154544
Expires February 24, 2025

CERTIFICATE OF COUNTY APPROVAL
STATE OF TEXAS
JEFFERSON COUNTY

APPROVED BY THE COMMISSIONER'S COURT OF JEFFERSON COUNTY, TEXAS ON THE _____ DAY OF _____ A.D. 2022, AUTHORIZING THE FILING FOR RECORD OF THIS PLAT. JEFFERSON COUNTY ASSUMES NO OBLIGATION FOR THE MAINTENANCE OF STREETS/ROADS, DRAINAGE, OR ANY OTHER IMPROVEMENTS.

_____ COMMISSIONER, PRECINCT 1 JEFFERSON COUNTY, TEXAS

_____ COMMISSIONER, PRECINCT 2 JEFFERSON COUNTY, TEXAS

_____ COMMISSIONER, PRECINCT 3 JEFFERSON COUNTY, TEXAS

_____ COMMISSIONER, PRECINCT 4 JEFFERSON COUNTY, TEXAS

_____ COUNTY JUDGE JEFFERSON COUNTY, TEXAS

CITY OF NOME

THIS IS TO CERTIFY THAT THE CITY OF NOME, TEXAS, HAS APPROVED THIS PLAT AND SUBDIVISION.

IN TESTIMONY WHEREOF, WITNESS THE OFFICIAL SIGNATURE OF THE MAYOR OF THE CITY OF NOME, TEXAS, THIS _____ DAY OF _____ A.D., 2022.

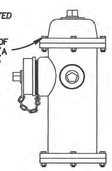
MAYOR

ATTESTED AND APPROVED FOR ADMINISTRATION:

SECRETARY

NOTES:

1. ALL UTILITY EASEMENTS SHOWN HEREON INCLUDE THE RIGHT TO TRIM OVERHANGING TREES AND SHRUBS LOCATED IN THE PROPERTY BELONGING TO OR BEING A PART OF THIS ADDITION.
2. JEFFERSON COUNTY REQUIRES CONSTRUCTION OF ALL OCCUPIED STRUCTURES TO HAVE MINIMUM FIRST FLOOR ELEVATION THAT IS ONE (1) FOOT ABOVE THE BFE (BASE FLOOD ELEVATION). NG = DENOTES NATURAL GROUND ELEVATION OF LOT ON FINAL PLAT.
3. JEFFERSON COUNTY ASSUMES NO OBLIGATION FOR THE ADEQUACY OF SAID LOT SIZES AND OR LOT DIMENSIONS FOR SUITABILITY OR COMPLIANCE WITH TCEQ REGULATIONS FOR ON SITE SEWAGE TREATMENT FACILITIES.
4. ALL BEARING INDICATED HEREON ARE BASED ON THE STATE PLANE COORDINATE VALUES – SOUTH CENTRAL ZONE 4204.
5. INSTALLATION OF DRIVEWAYS SHALL BE COORDINATED WITH JEFFERSON COUNTY PRECINCT OFFICE.
6. NO MORE THAN ONE SINGLE FAMILY DETACHED DWELLING SHALL BE LOCATED ON EACH LOT.
7. SUBDIVISION BENCHMARK #1 = IS A NORTH BOLT IN THE TOP FLANGE OF FIRE HYDRANT NEAR THE NORTH RIGHT-OF-WAY LINE OF ELLIOTT DRIVE (A PUBLIC ROADWAY) N: 13,954,172.62' AND E: 3,467,055.84' ELEVATION = 42.47'
8. THE UNDERSIGNED SURVEY DOES NOT WARRANT THE ACCURACY OF PROPOSED ROAD, WASTEWATER TREATMENT DATA, OR OTHER ENGINEERING DATA HEREON.
9. LOT LINES ARE NOT ALIGNED 90° OFF STREETS.
10. ALL SIDE YARD SETBACKS SHALL BE 5 FEET.



LEGEND

P.O.B. – POINT OF BEGINNING
○ – IRON ROD SET W/CAP "F&S 409 832-7238"
● – IRF W/CAP "F&S 409 832-7238"

A FINAL PLAT of Highland Village Phase 1 A

BLOCK 2, LOTS 27 - 35
BLOCK 3, LOTS 1 - 9

BEING A 4.284 ACRE SUBDIVISION OUT OF A 385.53 ACRE TRACT RECORDED IN CCF No. 2020018894 OPRJCT IN THE ALEXANDER HORTON SURVEY, A-29 JEFFERSON COUNTY, TEXAS BEING DEVELOPED BY: DOGUET'S DIAMOND D RANCH LTD.

AUGUST 2022

Fittz&Shipman INC.
Consulting Engineers and Land Surveyors
1405 CORNERSTONE COURT, BEAUMONT, TEXAS
(409) 832-7238 FAX (409) 832-7303
T.B.P.E. FIRM #1160 • T.X.L.S. FIRM #100186

SHT 1 OF 2

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DEVELOPMENT REGULATIONS NOTES:
NO CONSTRUCTION OR OTHER DEVELOPMENT WITHIN THIS SUBDIVISION MAY BEGIN UNTIL ALL JEFFERSON COUNTY DEVELOPMENT REQUIREMENTS HAVE BEEN MET.

MUNICIPAL ETJ NOTE:

THIS SUBDIVISION LIES WITHIN THE EXTRATERRITORIAL JURISDICTION OF THE CITY OF NOME, TEXAS. AND AS SUCH, JEFFERSON COUNTY CONSTRUCTION STANDARDS AND REGULATIONS APPLY.

SCHOOL DISTRICT PLAT NOTE:

THIS SUBDIVISION IS WITHIN THE BOUNDARIES OF THE HARDIN–JEFFERSON INDEPENDENT SCHOOL DISTRICT.

FEMA FLOOD PLAIN NOTE:

ALL OF THE SUBDIVISION LIES WITHIN THE BOUNDARIES OF FLOOD ZONE C AS DELINEATED ON THE FEMA FLOOD INSURANCE RATE MAP OF JEFFERSON COUNTY, COMMUNITY PANEL # 480385 0100 B DATED JUNE 1, 1983. FEMA FLOOD ZONE C IS DEFINED AS AREA OF MINIMAL FLOOD HAZARD, USUALLY DEPICTED ON FIRMS AS ABOVE THE 500–YEAR FLOOD LEVEL.

UTILITY NOTES:

ELECTRIC UTILITY SERVICE WILL BE PROVIDED BY: ENTERGY TEXAS, INC.

TELEPHONE UTILITY SERVICE WILL BE PROVIDED BY: A T & T

WATER UTILITY SERVICE WILL BE PROVIDED BY: CITY OF NOME, TEXAS

SEWER UTILITY SERVICE WILL BE PROVIDED BY: CITY OF NOME, TEXAS

GAS UTILITY SERVICE WILL BE PROVIDED BY: CENTERPOINT ENERGY

CABLE UTILITY SERVICE WILL BE PROVIDED BY: –NONE–

SEWAGE DISPOSAL NOTE:

NO STRUCTURE IN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL CONNECTED TO A PUBLIC SEWER SYSTEM OR TO AN ON–SITE WASTEWATER SYSTEM, WHICH HAS BEEN APPROVED AND PERMITTED BY JEFFERSON COUNTY.

INDIVIDUAL WATER SUPPLY NOTE:

NO STRUCTURE IN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL CONNECTED TO AN INDIVIDUAL WATER SUPPLY, OR STATE APPROVED COMMUNITY WATER SYSTEM.

WATER SUPPLY NOTE:

NO STRUCTURE IN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL THE STRUCTURE HAS A CUSTOMER SERVICE INSPECTION PERFORMED BY A CITY OF NOME REPRESENTATIVE.

CITY OF NOME, TEXAS, AN APPROVED PUBLIC WATER SUPPLY SYSTEM, HAS ADEQUATE QUANTITY TO SUPPLY THE SUBDIVISION AND PROVISIONS HAVE BEEN MADE TO PROVIDE SERVICE TO EACH LOT IN ACCORDANCE WITH THE POLICIES OF THE WATER SUPPLY SYSTEM.

Terry Ahrns — 8/12/22

CITY OF NOME, TEXAS — DATE

PIPELINE EASEMENT NOTE:

THERE ARE NO PIPELINE EASEMENTS WITHIN THE LIMITS OF THIS SUBDIVISION.

DRAINAGE EASEMENT NOTE:

ALL DRAINAGE EASEMENTS SHOWN HEREON SHALL BE KEPT CLEAR OF FENCES, BUILDINGS, PLANTINGS AND OTHER OBSTRUCTIONS TO THE OPERATION AND MAINTENANCE OF THE DRAINAGE FACILITIES. EASEMENTS SHOWN HEREON INCLUDE THE RIGHT TO TRIM OR REMOVE ALL TREES AND SHRUBS ON OR OVERHANGING. DRAINAGE OUTFALL CHANNEL R.O.W.S WILL BE DEEDED TO JEFFERSON COUNTY DRAINAGE DISTRICT NO. 6.

FIELD NOTE DESCRIPTION:

BEING a 4.284 acre tract of land lying in the ALEXANDER HORTON SURVEY, Abstract No. 29 in Jefferson County, Texas, being out of and a portion of that certain 385.53 acre tract of land described in an instrument to Doguet's Diamond D. Ranch, Ltd., a Texas limited partnership of record in County Clerk's File No. 2020018894 of the Official Public Records of Jefferson County, Texas, said 4.284 acres being more particularly described as follows:

BEGINNING at Capped Iron Rod found marking the East right–of–way line of State Highway 365 (a called 120' wide public roadway), the Northwest corner of that certain 5.00 acre tract of land described in an instrument to Roger & Ann Tindall & Burton and Jennifer Moore of record in County Clerk's File No. 2017023183 of the said Official Public Records, a point on the West line of said 385.53 acre tract and being the Southwest corner of the herein described tract;

THENCE N 02°24'37" W along and with the East right–of–way of State Highway 365, the West line of said 385.53 acre tract and with the West line of the herein described tract for a distance of 309.00 feet to a 1/2" Capped Iron Rod set (T&S 409 832–7238") marking the Northwest corner of the herein described tract;

THENCE N 87°36'04" E, over and across the said 385.53 acre tract and with the North line of the herein described tract for a distance of 592.32 feet to a 1/2" Capped Iron Rod set (T&S 409 832–7238") marking the Northeast corner of the herein described tract;

THENCE S 02°24'37" E, over and across the said 385.53 acre tract and with the East line of the herein described tract for a distance of 129.00 feet to a 1/2" Capped Iron Rod set (T&S 409 832–7238") marking an angle point on the East line of the herein described tract;

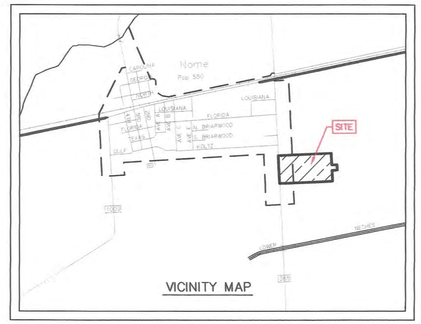
THENCE N 87°36'04" E, over and across the said 385.53 acre tract and with the East line of the herein described tract for a distance of 60.00 feet to a 1/2" Capped Iron Rod set (T&S 409 832–7238") marking an angle point on the East line of the herein described tract;

THENCE S 02°24'37" E, over and across the said 385.53 acre tract and with the East line of the herein described tract for a distance of 60.00 feet to a 1/2" Capped Iron Rod set (T&S 409 832–7238") marking an angle point on the East line of the herein described tract;

THENCE S 87°36'04" W, over and across the said 385.53 acre tract and with the East line of the herein described tract for a distance of 60.00 feet to a 1/2" Capped Iron Rod set (T&S 409 832–7238") marking an angle point on the East line of the herein described tract;

THENCE S 02°24'37" E, over and across the said 385.53 acre tract and with the East line of the herein described tract for a distance of 120.00 feet to a 1/2" Capped Iron Rod set (T&S 409 832–7238") marking the Southeast corner of the herein described tract;

THENCE S 87°36'04" W, over and across the said 385.53 acre tract, the North line of said 5.00 acre tract and with the South line of the herein described tract for a distance of 592.32 feet to the POINT AND PLACE OF BEGINNING, containing an area, 4.284 acres of land, more or less.



A FINAL PLAT of

Highland Village Phase I A

BLOCK 2, LOTS 27 - 35
BLOCK 3, LOTS 1 - 9

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T.B.P.E. FIRM #1160 • T.X.L.S. FIRM #100186

SHT 2 OF 2

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Donations from Judge John Stevens to the Jefferson County Historical Commission

"Southwestern Historical Quarterly" Vol. CXXIV, No. 3 January, 2021

"Southwestern Historical Quarterly" Vol. CXXIV, No. 4 April, 2021

"Southwestern Historical Quarterly" Vol. CXXV, No. 3 January, 2022

"Southwestern Historical Quarterly" Vol. CXXV, No. 4 April, 2022

"Southwestern Historical Quarterly" Vol. CXXVI, No. 1 July, 2022

Donations from the South Park Heritage Association to the Jefferson County Historical Commission

South Park High School Yearbooks listed as Year / condition/ "original owner" with supplemental notes

1917 good, hard cover "Presented to South Park High School by Mr.& Mrs. Wilbert H. Marmion 10-15-42"

1918 good, soft cover "Hannah Hoyt" given by Ray Asbury, August 1990

1919 good, soft cover

tip in: List of names and addresses (circa 1940s probably for a reunion)

1920 very good, soft cover

1922 very good

1924 very good "Pearl Shanna (Banner)"

1925 very good

1926 very good "Fredy Kate Brown"

1928 good, soft cover

1938 very good "Wayman Wentz"

tip in: "South Park High School

Graduates -1938

1939 very good

1940 good loose binding

1941 very good "Marris S. Claninger"

1942 very good "Robert Adair " tip in: several obituaries

1945 fair "Sarah Jane Gooch"

1946 fair "Francis Bixler"

1947 very good "Bernice Craig"

1948 very good "Bernice Craig"

1949 good, loose binding "George R. Shayne" tip in: "Evaluation Committees"

1951 good "Bennie Patterson"

Resolution

STATE OF TEXAS	§	COMMISSIONERS' COURT
	§	
COUNTY OF JEFFERSON	§	OF JEFFERSON COUNTY, TEXAS

BE IT REMEMBERED at a meeting of Commissioners' Court of Jefferson County, Texas, held on the 30 day of August, 2022, on motion made by Everette Alfred Commissioner of Precinct No. 4, and seconded by Darrell Bush, Commissioner of Precinct No. 2, the following RESOLUTION was adopted:

WHEREAS, ***Cary Erickson***, has devoted 29 years of his life serving the citizens and employees of Jefferson County with pride and professionalism; and

WHEREAS, ***Cary Erickson,*** was hired on August 30, 1993 as the first Director of Human Resources for Jefferson County and then promoted in 2006 to the Director of Human Resources & Risk Management where he has dedicated his talents and valuable services to the betterment of the County and its employees; and

WHEREAS, ***Cary Erickson,*** being known for his exceptional work ethic, personal integrity, professionalism and dependability, has won the respect of his colleagues, peers, elected officials and other county employees; and

WHEREAS, ***Cary Erickson,*** has served the public in other ways by serving as a Mediator for the Dispute Resolution Center for 35 years, and by promoting the Human Resource Profession in Southeast Texas and the State by serving on the Texas State Council and the Southeast Texas HR Association as President and Legislative Chair; and

WHEREAS, ***Cary Erickson,*** having made significant contributions to Jefferson County during response and recovery efforts, serving in the EOC for natural disasters such a Hurricanes Rita, Humberto, Ike, Harvey and Imelda and working tirelessly to ensure the County received all insurance proceeds and Public Assistance from the Federal Government; and

WHEREAS, ***Cary Erickson***, has distinguished himself as a leader that has provided knowledge, guidance, advice and counsel to employees, department heads and elected officials of Jefferson County. Cary is recognized for his unselfish devotion to the common good and welfare of the citizens of Jefferson County; and will be missed by his friends and co-workers.

NOW, THEREFORE, BE IT RESOLVED that the Commissioner's Court of Jefferson County, Texas, does hereby honor and commend ***Cary Erickson*** for his dedicated service as an employee of Jefferson County and wishes him well in his retirement.

SIGNED this 30 day of August, 2022.

JUDGE JEFF R. BRANICK
County Judge

VERNON PIERCE
Commissioner, Precinct No. 1

MICHEAL S. SINEGAL
Commissioner, Precinct No. 3

DARRELL W. BUSH
Commissioner, Precinct No. 2

EVERETTE D. ALFRED
Commissioner, Precinct No. 4

JEFFERSON COUNTY SHERIFF'S OFFICE
Zena Stephens, Sheriff
5030 Hwy 69 S.
Beaumont, TX 77705
(409) 726-2500

Donta Miller
Chief of Law Enforcement
dmiller@co.jefferson.tx.us

John Shauberger
Chief of Corrections
jshauberger@co.jefferson.tx.us

MEMORANDUM

DATE: August 24, 2022

TO: Honorable Judge Jeff Branick
Commissioner Vernon Pierce
Commissioner Darrell Bush
Commissioner Michael Sinegal
Commissioner Everette "Bo" Alfred

FROM: Chief John Shauberger

RE: Kenneth H. Briggs retirement

Please consider and possibly approve a resolution for Kenneth H. Briggs a Corrections Officer for 32 years and 9 months of service and wishing him well in his retirement.

Sincerely,

Chief John Shauberger

Resolution

STATE OF TEXAS § COMMISSIONERS COURT
§
COUNTY OF JEFFERSON § OF JEFFERSON COUNTY, TEXAS

BE IT REMEMBERED at a meeting of Commissioners Court of Jefferson County, Texas, held on the 30 day of August, 2022, on motion made by Darrell Bush, Commissioner of Precinct No. 2, and seconded by Everette"Bo"Alfred, Commissioner of Precinct No. 4, the following Resolution was adopted:

WHEREAS, ***Kenneth H. Briggs Jr.***, has devoted 32 years and 9 months of his life serving the people of Jefferson County with pride and professionalism; and

WHEREAS, ***Kenneth H. Briggs Jr.***, has dedicated his talents and services as a Corrections Officer and as a Peace Officer, in the Correctional Facility for the Jefferson County Sheriff's Office; and

WHEREAS, ***Kenneth H. Briggs Jr.,*** has pledged his services as a Corrections Officer, working in the dorms, in Book In, in Releases, and as a Peace Officer for the Court House as a Bailiff at the Jefferson County Correctional Facility, which includes following policies, procedures, rules and regulations for the care and custody of inmates, also responding to an emergency situations involving the evacuation of inmates for several hurricanes, and emergency operations for COVID-19 for the Jefferson County Sheriff's Office; and

WHEREAS, through hard work and commitment to excellence, ***Kenneth H. Briggs Jr.,*** has earned the respect of his colleagues and the citizens of Jefferson County; and

WHEREAS, having made a significant contribution to the Jefferson County Sheriffs' Office, ***Kenneth H. Briggs Jr.,*** is recognized for his unselfish devotion to the common good and welfare of the citizens of Jefferson County; and will always be missed by his friends and co-workers.

NOW THEREFORE, BE IT RESOLVED that the Jefferson County Commissioners Court does hereby honor and commend ***Kenneth H. Briggs***, for his dedicated service as a valuable employee of Jefferson County and wishes him well in his retirement.

SIGNED this 30 day of August, 2022.

JUDGE JEFF R. BRANICK
County Judge

COMMISSIONER VERNON PIERCE
Precinct No. 1

COMMISSIONER MICHAEL S. SINEGAL
Precinct No. 3

COMMISSIONER DARRELL W. BUSH
Precinct No. 2

COMMISSIONER EVERETTE D. ALFRED
Precinct No. 4

delivered by hand delivery or when deposited in the U.S. mail by registered or certified mail, return receipt requested, postage prepaid, and addressed as set forth below or to such other person or address as may be given in writing by either party to the other in accordance with this section:

City of Bevil Oaks:

Barbara Emmons
Mayor, City of Bevil Oaks
13560 River Oaks Boulevard
Beaumont, Texas 77713

Jefferson County:

Laurie Leister, County Clerk
P. O. Box 1151
Beaumont, TX 77704

IN WITNESS WHEREOF, each of the parties agrees to the terms of this Agreement and has caused this Agreement to be executed on the 25th day of August, 2022.

City of Bevil Oaks:

By: Barbara Emmons
Name: Mayor, Barbara Emmons

Attest: Doug Mullins
City Secretary, Doug Mullins

IN WITNESS WHEREOF, each of the parties agrees to the terms of this Agreement and has caused this Agreement to be executed on the _____ day of _____, 20_____.

Jefferson County, Texas

By:_____
Name: Jeff Branick
Title: County Judge

Attest: _____

By: _____
Name: Laurie Leister
Title: County Clerk