CALL BEFORE YOU DIG!

Texas 811 Know what's below. Call before you dig.

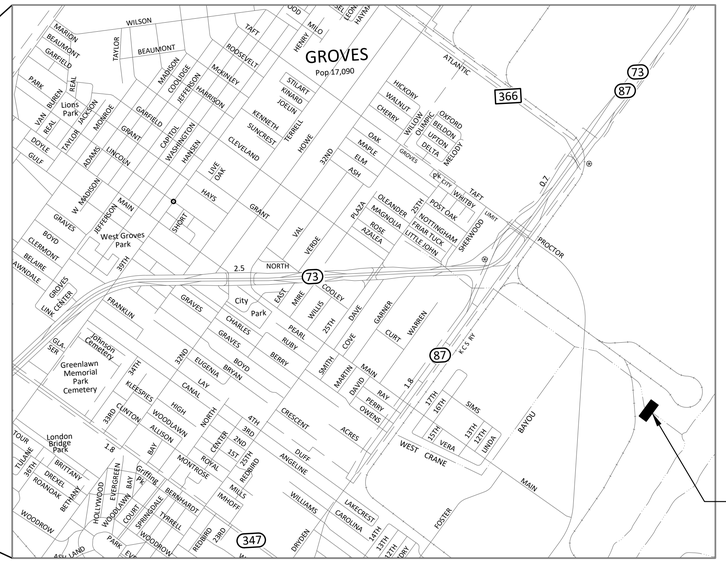
PARTICIPANTS REQUEST 48 HOURS NOTICE BEFORE YOU DIG, DRILL, OR BLAST - STOP AND CALL

811

THE LONE STAR NOTIFICATION COMPANY AT 1-800-669-8344

CRANE BAYOU PUMP STATION GENERATORS AND BUILDING

1 G-1 LOCATION MAP
NOT TO SCALE



PROJECT LOCATION
LATITUDE: 29.9292277
LONGITUDE: -93.880833
PORT ARTHUR, TEXAS

NORTH 2 G-1 VICINITY MAP
NOT TO SCALE

JEFFERSON COUNTY TEXAS

JEFFERSON COUNTY, TX

MAY 2023

PREPARED BY:

FREESE AND NICHOLS

10497 Town and Country Way,
Suite 500
Houston, Texas 77024
Phone – (713) 600–6800
Web – www.freese.com
Engineering Firm F–2144

STATE OF TEXAS
LEWIS J. BERNARD
140614
LICENSED PROFESSIONAL ENGINEER
5/15/23

ISSUED FOR BID

Seq. No.	Sheet No.	Title
		GENERAL
1	G-1	COVER SHEET
2	G-2	SHEET INDEX
		CIVIL
3	C-1	SURVEY
4	C-2	SITE PLAN
		ARCHITECTURAL
5	A-1	ARCHITECTURE LIFE SAFETY PLAN & CODE REVIEW
6	A-2	ARCHITECTURE GENERAL NOTES & SYMBOLS
7	A-3	ARCHITECTURE FLOOR AND ROOF PLAN
8	A-4	ARCHITECTURE REFLECTED CEILING PLAN - LEVEL 1
9	A-5	ARCHITECTURE EXTERIOR ELEVATIONS
10	A-6	ARCHITECTURE BUILDING SECTIONS
11	A-7	ARCHITECTURE DOOR & FRAME - LEGEND
12	A-8	ARCHITECTURE DETAILS
13	A-9	ARCHITECTURE ISOMETRIC VIEWS
		STRUCTURAL
14	S-1	STRUCTURAL GENERAL NOTES I
15	S-2	STRUCTURAL GENERAL NOTES II
16	S-3	STRUCTURAL GENERATOR BUILDING FOUNDATION AND ROOF FRAMING PLAN
17	S-4	STRUCTURAL GENERATOR BUILDING SECTIONS AND DETAILS I
18	S-5	STRUCTURAL GENERATOR BUILDING SECTIONS AND DETAILS II
19	S-6	STRUCTURAL GENERATOR BUILDING SECTIONS AND DETAILS III
20	S-7	STRUCTURAL STANDARD SECTIONS AND DETAILS
		MECHANICAL
21	M-1	MECHANICAL NOTES, SYMBOLS & ABBREVIATIONS
22	M-2	MECHANICAL FLOOR PLAN
23	M-3	MECHANICAL DETAILS AND SCHEDULE
		ELECTRICAL
24	E-1	ELECTRICAL LEGEND I
25	E-2	ELECTRICAL LEGEND II
26	E-3	ELECTRICAL PUMP BUILDING ELECTRICAL DEMOLITION
27	E-4	ELECTRICAL GENERATOR BUILDING LIGHTING PLAN
28	E-5	ELECTRICAL GENERATOR BUILDING POWER PLANS
29	E-6	ELECTRICAL GENERATOR BUILDING ENLARGED POWER PLAN
30	E-7	ELECTRICAL DETAILS I
31	E-8	ELECTRICAL DETAILS II
32	E-9	ELECTRICAL DETAILS III
33	E-10	ELECTRICAL ONE-LINE DIAGRAM
34	E-11	ELECTRICAL PANEL SCHEDULE AND LIGHT FIXTURE SCHEDULE
35	E-12	ELECTRICAL INTERCONNECTION DIAGRAM

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Texas Registered Engineering Firm F-2144

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JEFFERSON COUNTY, TX
CRANE BAYOU PUMP STATION
GENERATORS AND BUILDING
GENERAL

SHEET INDEX

NO.	ISSUE	BY	DATE

F&N JOB NO. JFF22292
DATE 05/15/2023
DESIGNED LJB
DRAWN JSG
REVISED
CHECKED JVW
FILE NAME GN-ALL-INDEX.dwg

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1

SHEET G-2
SEQ. 2

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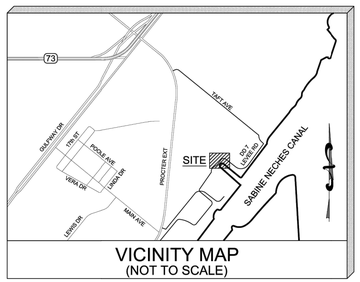


VICINITY MAP
(NOT TO SCALE)

GRAPHIC SCALE

30 0 15 30

1 inch = 30 ft.

BENCHMARK NOTE:

VERTICAL DATUM REFERENCED HEREON IS BASED ON NAVD88, GEOID18.

TEMPORARY BENCHMARK A:

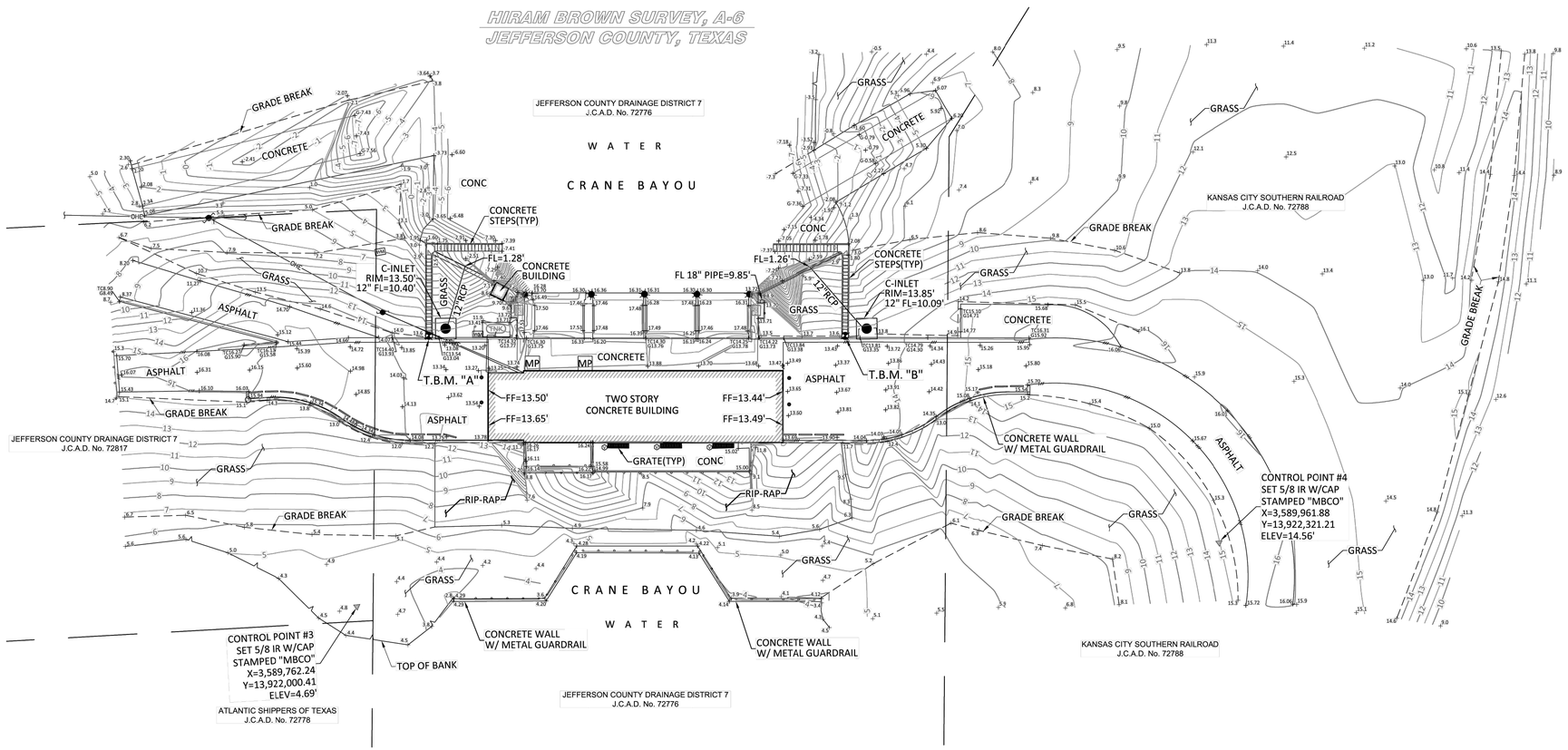
T.B.M. "A" IS A BOX CUT IN CONCRETE ON TOP OF CONCRETE STEPS.
X=3,589,685.30; Y=13,922,095.58
ELEVATION=13.62 FEET.

TEMPORARY BENCHMARK B:

T.B.M. "B" IS A BOX CUT IN CONCRETE ON TOP OF CONCRETE STEPS.
X=3,589,792.56; Y=13,922,242.46
ELEVATION=13.68 FEET.

COMBINED SCALE FACTOR NOTE:

COORDINATES REFERENCED HEREON ARE BASED ON SURFACE VALUES. TO CONVERT TO GRID VALUES, MULTIPLY BY THE COMBINED SCALE FACTOR OF 1.0000795520.



SYMBOLS LEGEND

- BENCHMARK
- BOLLARD
- C INLET
- GATE CONTROL BOX
- GUY ANCHOR
- FOUND IRON ROD
- LIGHT STANDARD
- POWER POLE
- POWER POLE W/TRANSFORMER
- TANK
- WATER METER
- WHEEL STOP

ABBREVIATIONS LEGEND:

CONC	CONCRETE
FF	FINISHED FLOOR
FL	FLOWLINE
G	GUTTER
J.C.A.D.	JEFFERSON COUNTY APPRAISAL DISTRICT
MP	METAL PLATE
No.	NUMBER
OHE	OVERHEAD ELECTRIC
RCP	REINFORCED CONCRETE PIPE
TNK	STORAGE TANK
TYP	TYPICAL
W/	WITH
WM	WATER METER

NOTES:

1. This survey represents a topographic survey of subject property and is not a boundary survey. Property lines referenced hereon are based on GIS line work from the appraisal district and was performed without the benefit of a title commitment. Easements and restrictions may exist which are not referenced hereon; no additional research regarding the existence of easements or restrictions of record has been performed by MBCO Engineering LLC.
2. This tract lies in Zone "A10 (EL8)" (shaded), designated as "Areas of 100 year flood; base flood elevations and flood hazard factors determined", as per the National Flood Insurance Program FIRM Community Panel Number 485499 0035 E, latest available published revision dated April 17, 1984.
3. A Zoning Report was not provided at the time of this survey; however, this tract is subject to the developmental requirements of the City of Port Arthur and Jefferson County, Texas.
4. Mineral Rights and/or Lease Rights are not survey related and therefore not a part of this survey.
5. Surface or subsurface faulting, hazardous waste or other environmental issues have not been addressed within the scope of this survey.
6. All bearings shown hereon are based on the Texas Coordinate System of 1983, South Central Zone No. 4204.

I hereby certify that this plat correctly represents a survey made on the ground under my supervision on April 4, 2022, and that said survey complies with the current Texas Society of Professional Surveyors Standards for Land Surveys for a Category 6, Condition II Topographic Survey.

Marion R. Clark
Registered Professional
Land Surveyor
Texas Registration No. 1881

STATE OF TEXAS
REGISTERED
1881
MARION R. CLARK
PROFESSIONAL
LAND SURVEYOR

ISSUED FOR BID

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Texas Registered Engineering Firm F-2144

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JEFFERSON COUNTY, TX
CRANE BAYOU PUMP STATION
GENERATORS AND BUILDING
CIVIL
SURVEY

NO.	ISSUE	BY	DATE

F&N JOB NO. JFF22292
DATE 05/15/2023
DESIGNED LJB
DRAWN JSG
REVISED
CHECKED JVW
FILE NAME CV-ALL-TOPO.dwg

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
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SHEET C-1
SEQ. 3

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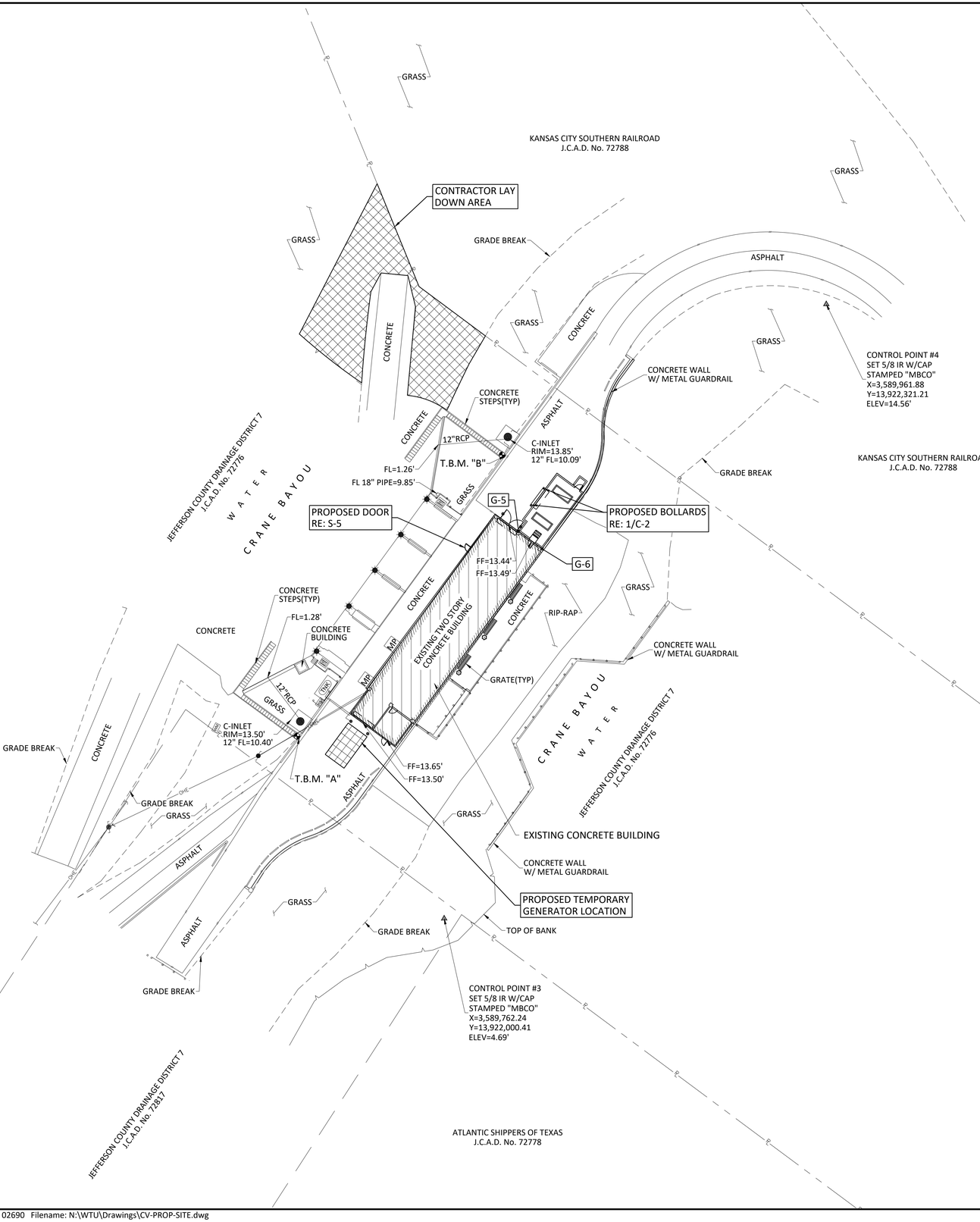

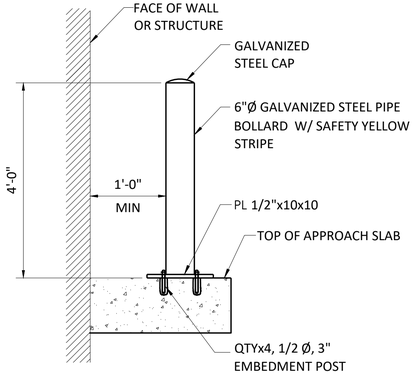

1 BOLLARD DETAIL
NOT TO SCALE

NOTES:

1. CONTRACTOR SHALL NOT PARK ANY VEHICLE LARGER THAN A 3/4 TON TRUCK ON TOP OF THE LEVEE OR WITHIN THE TOE (INDICATED BY A GRADE BREAK ON THIS SHEET) WITHOUT WRITTEN APPROVAL FROM THE OWNER.
2. EQUIPMENT AND VEHICLES LARGER THAN A 3/4 TON TRUCK MAY STAGE ON THE LEVEE FOR THE PURPOSES OF LOADING AND UNLOADING ONLY.
3. CONTRACTOR IS CAUTIONED THAT THE OWNER WILL BE OPERATING THE PUMP STATION THROUGHOUT CONSTRUCTION AND SHALL KEEP ROADWAYS AND ACCESS POINTS CLEAR TO ALLOW FREE MOVEMENT FOR OWNER'S OPERATIONS AND MAINTENANCE STAFF.
4. TEMPORARY GENERATOR SHALL BE TRAILER MOUNTED. CONTRACTOR SHALL COORDINATE WITH OWNER IF GENERATOR NEEDS TO BE TEMPORARILY RELOCATED TO ALLOW ACCESS TO THE SOUTHWEST ROLL UP DOOR.

BUILDING TABLE				
POINT NO.	LABEL NO.	NORTHING	EASTING	POINT DESCRIPTION
1	G-1	13922222.70	3589835.09	GENERATOR RM
2	G-2	13922233.02	3589821.17	GENERATOR RM
3	G-3	13922208.76	3589803.18	GENERATOR RM
4	G-4	13922207.59	3589804.75	GENERATOR RM
5	G-5	13922202.67	3589801.10	GENERATOR RM
6	G-6	13922193.45	3589813.40	GENERATOR RM

NORTH

0 10' 20' 30' 60'
SCALE IN FEET

ISSUED FOR BID

Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144
STATE OF TEXAS LEWIS J. BERNARD 140614 LICENSED PROFESSIONAL ENGINEER
5/15/23
FREESE NICHOLS
10497 Town and Country Way,
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Web - www.freese.com

JEFFERSON COUNTY, TX
CRANE BAYOU PUMP STATION
GENERATORS AND BUILDING
CIVIL
SITE PLAN

NO.	ISSUE	BY	DATE

F&N JOB NO. JFF22292
DATE 05/15/2023
DESIGNED LJB
DRAWN JSG
REVISED
CHECKED JVW
FILE NAME CV-PROP-SITE.dwg

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1

SHEET C-2
SEQ. 4

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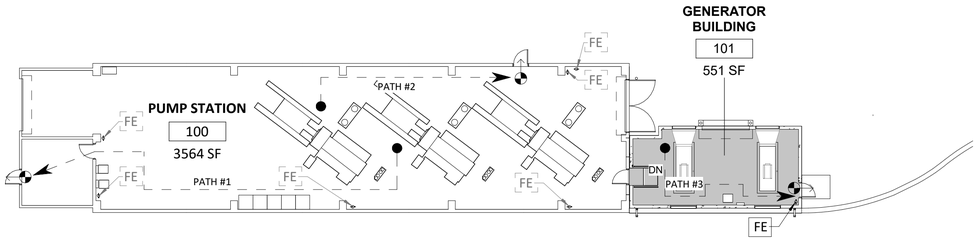

1 LIFE SAFETY PLAN
1/16" = 1'-0"

FE EXISTING TO REMAIN FIRE EXTINGUISHER & BRACKET

FE NEW FIRE EXTINGUISHER & BRACKET

EGRESS PATHWAY

OCCUPANCY LEGEND

Factory-Industrial

TRAVEL DISTANCES

Travel Path	Travel Distance
PATH #1	93' - 11"
PATH #2	46' - 2"
PATH #3	42' - 8"

CODE REVIEW - IBC - 2015

PROJECT: CRANE BAYOU PUMP STATION GENERATORS AND BUILDING

LOCATION: PORT ARTHUR, TX

CODES:

2015 INTERNATIONAL BUILDING CODE AS AMENDED
2015 INTERNATIONAL FIRE CODE AS AMENDED
2015 INTERNATIONAL PLUMBING CODE AS AMENDED
2015 INTERNATIONAL MECHANICAL CODE AS AMENDED
2015 INTERNATIONAL ENERGY CONSERVATION CODE AS AMENDED
2014 NATIONAL ELECTRICAL CODE AS AMENDED

SCOPE:

ADDITION & REMOVAL OF AN EXISTING PUMP STATION.
REMODEL SCOPE - ADDITIONAL EXIT DOOR FOR THE PUMP STATION.
ADDITION SCOPE - THE ADDITION ENTAILS AN ENCLOSURE OF SIMILAR CONSTRUCTION AS THE EXISTING, HOUSING (2) FUEL FED GENERATOR SETS. THE FUEL TANKS ARE TO BE LOCATED OUTSIDE OF THE ENCLOSURE

BUILDINGS & OCCUPANCIES: S-1 MODERATE-HAZARD, STORAGE - IBC SEC 311.2 (EXISTING BUILDING)
F-1 MODERATE-HAZARD INDUSTRIAL GROUP - IBC SEC 306.2 (ADDITION)

PRIMARY OCCUPANCY: BASED ON THE MORE RESTRICTIVE VALUE FOUND IN TABLE 506.2 - F-1 PRIMARY OCCUPANCY
NO SEPARATION REQUIRED - IBC TABLE 508.4

TYPE OF CONSTRUCTION: II-B IBC TABLE 601

AUTOMATIC FIRE SUPPRESSION: NOT REQUIRED - IBC SEC 903.2.4, FOR F-1 OCCUPANCIES < 12,000 SF

BUILDING AREA AND HEIGHT LIMITATIONS: ALLOWABLE AREA, IBC TABLE 506.2 FOR NON-SPRINKLERED BLDGS: F-1 - 15,500 SF
ALLOWABLE HEIGHTS, IBC TABLE 504.3 & 504.4 FOR NON-SPRINKLERED BLDGS
F = 55 FT
F-1 = 2 STORIES
(BUILDINGS MEET REQUIREMENTS)

BUILDING SIZE:

GENERATOR RM	550 SF
PUMP STATION	3,793 SF
TOTAL AREA	4,343 SF

EGRESS (IBC TABLE 1004.1.2)

BUILDING AREAS/ LOADS	LOAD FACTOR	OCCUPANTS BY USE
GENERATOR ROOM	550/300	2
PUMP STATION	4,343/500	9
TOTAL OCCUPANTS		11 PEOPLE

COMMON EGRESS REQUIREMENTS

NO. OF EXITS REQUIRED	USE	NO. OF EXITS (TABLE 1006.2.1 & 1006.3.2 (2))
GENERATOR ROOM	F-1	1
PUMP STATION	S-1	2

EXITS PROVIDED

GENERATOR ROOM	2 EXITS
PUMP STATION	2 EXITS

COMMON PATH OF TRAVEL DISTANCE
75' - IBC TABLE 1006.2.1 FOR F USE, OCCUPANT LOAD <=30 (NON-SPRINKLERED)

EXIT ACCESS TRAVEL DISTANCE
200' - IBC TABLE 1017.2 FOR F-1

EGRESS WIDTHS

EXIT	= .2" / OCCUPANT - IBC SEC 1005.3.2
GENERATOR ROOM	= .2" X 2 = .4" REQ +/- 64" PROVIDED WITH (2) EXITS
PUMP STATION	= .2" X 9 = 1.8" REQ +/- 64" PROVIDED WITH (2) EXITS

SIZE OF SWING DOOR: 32" CLEAR MIN OR 48" CLEAR MAX OPENINGS PER SEC 1010.1.1

PANIC HARDWARE: F-1 ELECTRICAL ROOMS PER SEC 1010.1.10

SECONDARY DRAINS/SCUPPERS: REQUIRED ON FLAT ROOFS PER [P] SEC 1503.4

ROOF FIRE CLASSIFICATION: FOR TYPE IIB CONSTRUCTION TYPE CLASSIFICATION C PER TABLE 1505.1

REQUIRED INTERIOR FINISH CLASSIFICATION FOR ROOM WALLS AND CEILINGS: FOR F GROUP - CLASS C, NON-SPRINKLERED PER TABLE 803.11 FLAME SPREAD INDEX, 76-200; SMOKE-DEVELOPED INDEX, 0-450 PER SEC 803.1.1

INTERNATIONAL ENERGY CODE COMPLIANCE INFORMATION:

SITE LOCATION	JEFFERSON COUNTY
CLIMATE ZONE	2A PER IECC TABLE C301.1

TDI WINDSTORM REQUIREMENTS: INLAND-1 CATEGORY. 158 MPH PER STRUCTURAL WIND LOAD. REF: S-1.

SUPPLEMENTARY ENERGY CODE INFORMATION

PER CONVERSATIONS WITH THE CITY OF PORT ARTHUR BUILDING OFFICIAL, THE GENERATOR ENCLOSURE DOES NOT REQUIRE ENERGY CODE COMPLIANCE FOR ENVELOPE AS IT IS UNOCCUPIED. THE DEFINITION OF CONDITIONED SPACE, IECC SEC C202, "A SPACE THAT IS ENCLOSED WITHIN THE BUILDING THERMAL ENVELOPE AND IS DIRECTLY OR INDIRECTLY HEATED OR COOLED" MUST BE LOOKED AT IN THE CONTEXT OF OCCUPIED SPACE.

DOOR AND EGRESS KEY

1 (2) 3'-0" DOORS = 64" CLEAR

2 3'-0" DOORS = 32" CLEAR

0 8' 16' 32'
1/16"=1'-0"

ISSUED FOR BID

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Texas Registered Engineering Firm F- 2144

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Houston, TX 77024
Phone - (713) 600-6800
Web - www.freese.com

REGISTERED ARCHITECT KEVIN MICHAEL MOLDEN SAINZ 25041 STATE OF TEXAS 05/15/2023

JEFFERSON COUNTY, TX
CRANE BAYOU PUMP STATION
GENERATORS AND BUILDING
ARCHITECTURE

LIFE SAFETY PLAN & CODE REVIEW

F&M JOB NO.	JFF22392
DATE	05/15/2023
DESIGNED	HS
DRAWN	KM
REVISED	KM
CHECKED	PJ

NO.	ISSUE	BY	DATE

FILE NAME AR-JFF22292-R21.RVT

VERIFY SCALE 0 1
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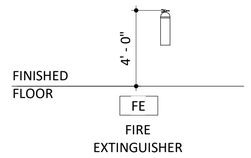
SHEET A-1

SEQ. 5

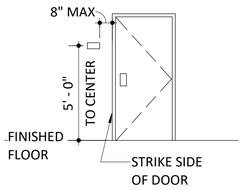
Plot Date: 5/12/2023 8:25:15 AM

FIXTURE ACCESSORIES AND MOUNTING HEIGHTS



SPECIALTY MOUNTING HEIGHTS

1/4"=1'-0"

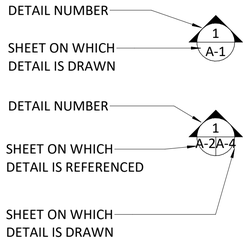


TYP SIGNAGE MOUNTING LOCATION

1/4"=1'-0"

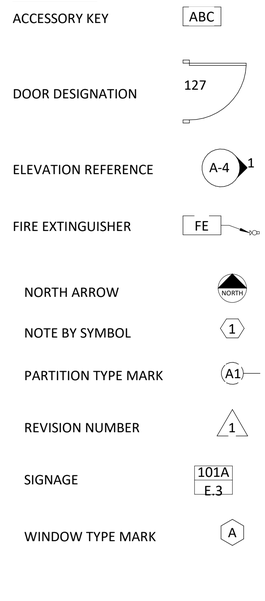
PLAN GRAPHICS

REFERENCE

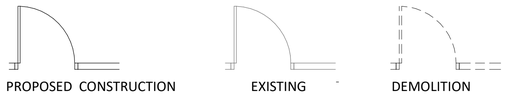


*DOUBLE DASH INDICATES SAME SHEET

SYMBOLS



LINEWORK



GENERAL NOTES

A. GENERAL NOTES:

1. THE CONTRACTOR SHALL PROVIDE COMPLETE PROJECT SYSTEMS AND COMPONENTS AND COMPLY WITH ALL REQUIREMENTS INDICATED ON THE PROJECT DOCUMENTS.
2. WORK WITHIN THE AREA BOUNDARIES INDICATED IN THE PROJECT DOCUMENTS AND COMPLY WITH ALL APPLICABLE BUILDING CODE, REGULATION AND ORDINANCE REQUIREMENTS. OCCUPANTS ADJACENT TO THE PROJECT AREA BOUNDARIES SHALL CONTINUE UNINTERRUPTED OCCUPANCY DURING CONSTRUCTION OF THE PROJECT.
3. VERIFY FIELD CONDITIONS AND COORDINATION WITH THE PROJECT DOCUMENTS PRIOR TO PROCEEDING WITH THE WORK.
4. COORDINATE THE WORK WITH ALL REQUIREMENTS INDICATED IN THE PROJECT DOCUMENTS.
5. PERFORM THE WORK AT THE PROJECT SITE DURING NORMAL BUSINESS HOURS, UNLESS OTHERWISE NOTED.
6. COORDINATE THE WORK WITH EQUIPMENT, FURNISHINGS, AND SYSTEMS PROVIDED BY THE OWNER.
7. THE CONTRACTOR SHALL PROVIDE COMPLETE PROJECT SYSTEMS AND COMPONENTS AND COMPLY WITH ALL REQUIREMENTS INDICATED ON THE PROJECT DOCUMENTS.

B. DEFINITIONS:

1. "TYPICAL" OR "TYP." INDICATES IDENTICAL COMPLETE SYSTEM SHALL BE PROVIDED FOR EACH OCCURRENCE OF THE CONDITION NOTED.
2. "SIMILAR" OR "SIM." INDICATES COMPONENTS SHALL BE PROVIDED COMPARABLE TO THE CHARACTERISTICS FOR THE CONDITION NOTED.
3. "AS REQUIRED" INDICATES COMPONENTS REQUIRED TO COMPLETE THE NOTED SYSTEM AS INDICATED IN THE PROJECT DOCUMENTS SHALL BE PROVIDED.
4. "ALIGN" INDICATES ACCURATELY PROVIDE FINISH FACES OF MATERIALS IN STRAIGHT, TRUE AND PLUMB RELATION TO ADJACENT MATERIALS.

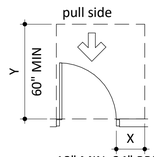
C. DIMENSIONS:

1. DIMENSIONS ARE INDICATED TO THE CENTERLINE OF THE STRUCTURAL GRID, FACE OF CONCRETE WALL, NOMINAL FACE OF CMU WALL, FINISH FACE OF PARTITION TYPE AS SCHEDULED, UNLESS OTHERWISE NOTED.
2. ALIGNMENT OF PARTITIONS AND FINISHES AS SCHEDULED SHALL BE STRAIGHT, TRUE AND PLUMB. THE PRIORITY FOR THE PROJECT DIMENSIONS SHALL BE IN THE FOLLOWING ORDER:
   A. MIN. DIMENSIONS FOR THE ACCESSIBILITY CLEARANCE AND BUILDING CODE REQUIREMENTS.
   B. LARGE SCALE DETAILS
   C. SMALL SCALE DETAILS
   D. ENLARGED VIEWS
   E. FLOOR PLANS AND ELEVATIONS
3. FLOOR ELEVATIONS ARE INDICATED TO THE FACE OF THE STRUCTURAL SLAB, UNLESS OTHERWISE NOTED.
4. VERTICAL DIMENSIONS ARE INDICATED FROM THE FLOOR ELEVATION TO FACE OF FINISHED MATERIAL AT THE DIMENSION POINT, UNLESS NOTED ABOVE FINISH FLOOR - "AFF".
5. DIMENSIONS SHOWN ON THE DRAWINGS SHALL INDICATE THE REQUIRED SIZE, CLEARANCE AND DIMENSIONAL RELATIONSHIP BETWEEN PROJECT SYSTEMS AND COMPONENTS. DIMENSIONS SHALL NOT BE DETERMINED BY SCALING THE DRAWINGS.

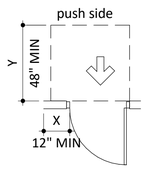
D. DOOR & FIXTURES:

1. ALL DOOR DIMENSIONS ARE CLEAR, FROM EDGE OF DOOR STOP TO EDGE OF DOOR IN 90° OPEN POSITION.

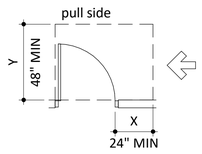
DOOR CLEARANCES



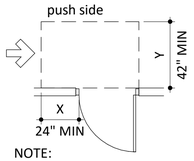
NOTE:
'X'=12" IF DOOR HAS BOTH
A LATCH AND CLOSER



FRONT APPROACH - SWINGING DOORS

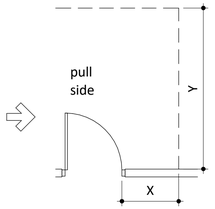


NOTE:
'Y'=54" MIN. IF DOOR
HAS A CLOSER

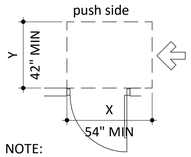


NOTE:
'X'=12" IF DOOR HAS BOTH
A LATCH AND CLOSER

LATCH SIDE APPROACH - SWINGING DOORS

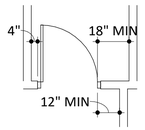


NOTE:
'X'=36" MIN. IF Y=60"
'X'=42" MIN. IF Y=54"



NOTE:
'Y'=48" MIN. IF DOOR HAS
BOTH A LATCH AND CLOSER

HINGE SIDE APPROACH - SWINGING DOORS



NOTES:
LOCATE DOORS ADJACENT TO
A FLANKING WALL AS SHOWN
LEFT OR AS SPECIFICALLY
DIMENSIONED PER FLOOR
PLAN

TYPICAL DOOR LOCATION U.N.O.

SCHEDULE OF TYPICAL ARCHITECTURAL ABBREVIATIONS

(NOT ALL ABBREVIATIONS MAY BE USED)

A		**E**		**M**		SIM	SIMILAR
ACOUST	ACOUSTICAL	EA	EACH	MAINT	MAINTENANCE	SPEC	SPECIFICATIONS
ADA	AMERICAN DISABILITIES ACT	E.J.	EXPANSION JOINT	MAX	MAXIMUM	SS	STAINLESS STEEL
ACT	ACOUSTICAL CEILING TILE	EL	ELEVATION	MECH	MECHANICAL	SSM	SOLID SURFACE MATERIAL
ADJ	ADJACENT OR ADJUSTABLE	ELEC	ELECTRIC(AL)	MFR	MANUFACTURER	STD	STANDARD
AFF	ABOVE FINISH FLOOR	ELEV	ELEVATOR/ELEVATION	MH	MANHOLE	STL	STEEL
ALUM	ALUMINUM	EMERG	EMERGENCY	MIN	MINIMUM	STOR	STORAGE
ALT	ALTERNATE	EQ	EQUAL	MO	MASONRY OPENING	STRUCT	STRUCTURAL
APPROX	APPROXIMATELY	EQUIP	EQUIPMENT	MTL	METAL	SYM	SYMMETRICAL
ARCH	ARCHITECT(URAL)	EWC	ELECTRIC WATER COOLER	**N**		**T**	
B		EXIST	EXISTING	NO	NUMBER	TAS	TEXAS ACCESSIBILITY
BLDG	BUILDING	EXT	EXTERIOR	NIC	NOT IN CONTRACT		STANDARDS
BLKG	BLOCKING	**F**		NTS	NOT TO SCALE	TEMP	TEMPERATURE
BIT	BITUMEN	FDC	FIRE DEPT. CONNECTION	**O**		TLT	TOILET
BLK	BLOCK	FD	FLOOR DRAIN	OC	ON CENTER	TS	TUBE STEEL
BTWN	BETWEEN	FF	FINISH FLOOR	OD	OUTSIDE DIAMETER	T-STAT	THERMOSTAT
C		FL/FLR	FLOOR	OFD	OVERFLOW DRAIN	TYP	TYPICAL
CG	CORNER GUARD	FT	FEET OR FOOT	OPNG	OPENING	**U**	
CIP	CAST IN PLACE	**G**		OPP	OPPOSITE	UL	UNDERWRITERS
CJ	CONTROL JOINT	GALV	GALVANIZED	OSB	ORIENTED STRAND BOARD		LABORATORIES INC.
CL	CENTERLINE	GWB	GYPSUM WALLBOARD	**P**		UNO	UNLESS NOTED OTHERWISE
CLG	CEILING	GYP	GYPSUM	PART	PARTITION	**V**	
CLR	CLEAR	**H**		PLAM	PLASTIC LAMINATE	VCT	VINYL COMPOSITION TILE
CMU	CONCRETE MASONRY UNIT	HB	HOSE BIBB	PR	PAIR	VERT	VERTICAL
CO	CLEANOUT	HDWR	HARDWARE	PSI	POUNDS PER SQUARE INCH	**W**	
COL	COLUMN	HM	HOLLOW METAL	PVC	POLYVINYL CHLORIDE	W/	WITH
COMP	COMPOSITION	HORIZ	HORIZONTAL	PVMT	PAVEMENT	WC	WATER CLOSET
CONC	CONCRETE	HR	HOUR	**R**		WD	WOOD
CONST	CONSTRUCTION	HVAC	HEATING/VENTILATION/ AIR CONDITIONING	RD	ROOF DRAIN	WDW	WINDOW
CONT	CONTINUOUS			RE	REFER TO	W/O	WITHOUT
CTR	CENTER	**I**		REF	REFERENCE		
D		IN	INCH	REINF	REINFORCING (REINFORCED)		
DBL	DOUBLE	INSUL	INSULATION	REQ'D	REQUIRED		
DIA	DIAMETER	INT	INTERIOR	RM	ROOM		
DIAG	DIAGONAL	**J**		RO	ROUGH OPENING		
DN	DOWN	JAN	JANITOR				
DR	DOOR	**L**		**S**			
DS	DOWNSPOUT	LAM	LAMINATE	SCHED	SCHEDULE, SCHEDULED		
DWG	DRAWING	LAV	LAVATORY	SECT	SECTION		
DTL	DETAIL	LBS.	POUNDS	SF	SQUARE FEET		
		LTG	LIGHTING	SHT	SHEET		
		LVL	LEVEL				

0 2' 4' 8'
1/4"=1'-0"

ISSUED FOR BID

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10497 Town and Country Way,
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JEFFERSON COUNTY, TX
CRANE BAYOU PUMP STATION
GENERATORS AND BUILDING
ARCHITECTURE

GENERAL NOTES & SYMBOLS

F&N JOB NO.	JFF22392
DATE	05/15/2023
DESIGNED	HS
DRAWN	KM
REVISED	KM
CHECKED	PJ

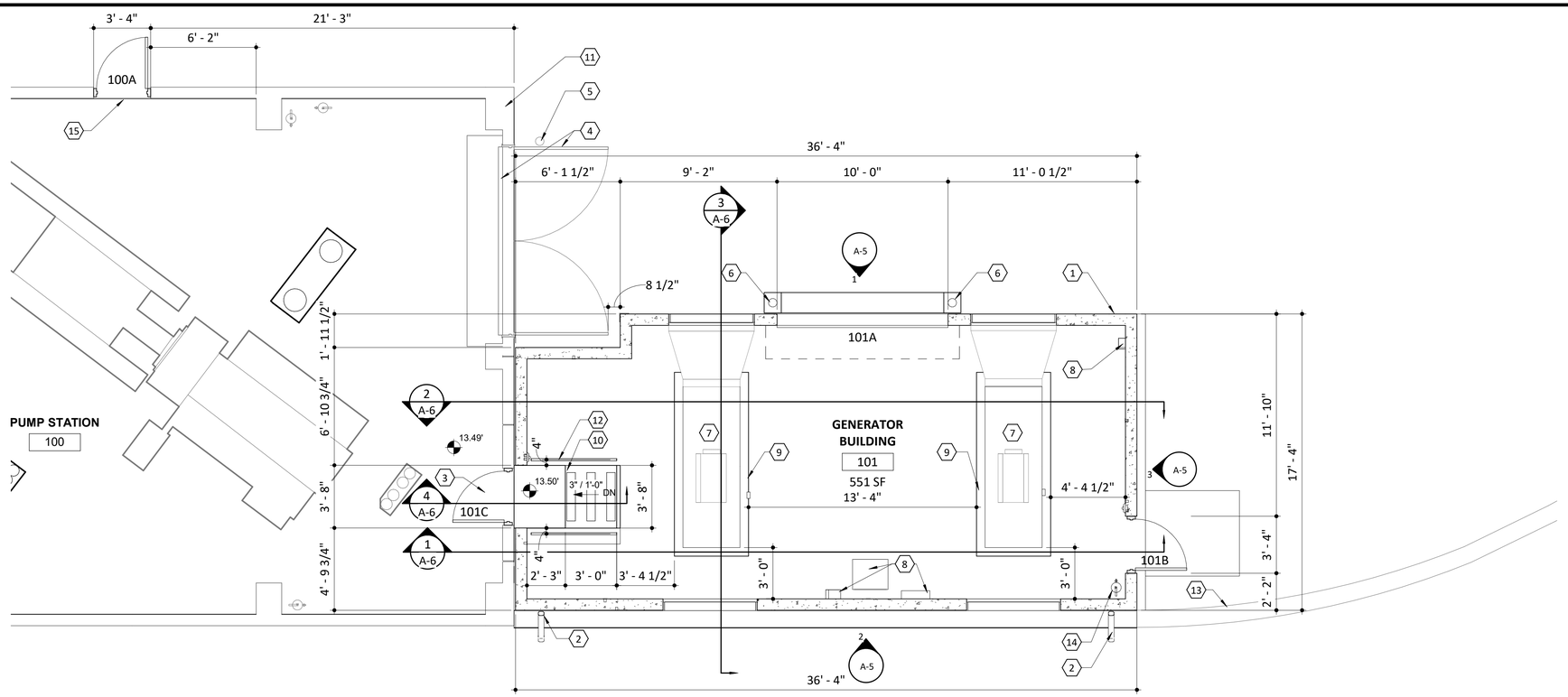
NO.	ISSUE	BY	DATE
1	VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.		

FILE NAME AR-JFF22392-R21.RVT

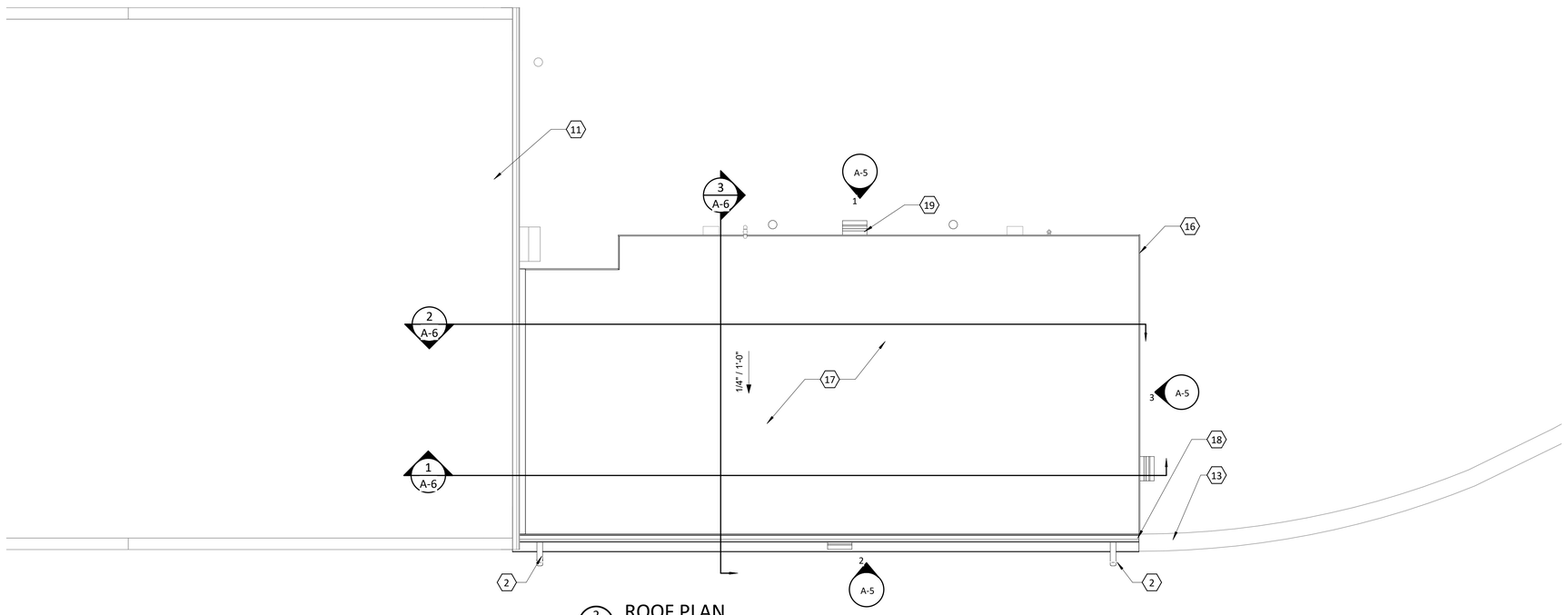
SHEET A-2

SEQ. 6

Plot Date: 5/12/2023 8:25:15 AM



1 FLOOR PLAN
1/4" = 1'-0"



2 ROOF PLAN
1/4" = 1'-0"

GENERAL NOTES

1. ALL DIMENSIONS ARE GIVEN TO:
   A. FACE OF CONCRETE.
   B. CENTER LIVE OF COLUMNS WHERE INDICATED.
2. REFER TO LIFE SAFETY PLAN FOR LOCATION OF FIRE EXTINGUISHERS (FE).
3. REFER TO SHEET A-2 FOR GENERAL NOTES & ABBREVIATIONS.

FLOOR PLAN NOTES BY SYMBOL " (X) "

1 8" CAST-IN-PLACE CONCRETE PANELS
2 4" PREFINISHED METAL DOWNSPOUT
3 DEMO EXISTING DOOR AND FRAME. CUT EXISTING CONCRETE WALL PANEL AS REQUIRED TO INSTALL NEW HOLLOW METAL DOOR AND FRAME
4 EXISTING OVERHEAD COILING DOOR WITH STORM DOORS
5 EXISTING BOLLARD
6 BOLLARD. RE: SHEET C-2
7 DUAL WALL TANK WITH STACKED GENERATOR. RE: ELECTRICAL 1/E-5
8 EQUIPMENT, RE: ELECTRICAL SHEET E-5
9 EQUIPMENT PADS; RE: STRUCTURAL SHEET S-7
10 RAMP AND LANDING. RAMP TO HAVE OHSA COMPLIANT ANTI-SLIP CLEATS, SPACED AS SHOWN
11 EXISTING PUMP STATION BUILDING
12 REMOVABLE HANDRAIL WITH FLANGE-MOUNTED RAILING BASE FLANGE. RE: EASYFIT.COM PART # EF12G-40
13 EXISTING RETAINING WALL
14 FIRE EXTINGUISHER
15 NEW DOOR AND FRAME AT PUMP STATION WALL. CUT EXISTING CONCRETE WALL PANEL AS REQUIRED TO INSTALL. RE: STRUCTURAL SHEET S-5
16 PREFINISHED METAL FASCIA
17 TDI WINDSTORM PRODUCT MEMBRANE ROOFING SYSTEM OVER 2" TOPPING SLAB AND 8" PRECAST CONCRETE ROOF PANELS
18 5" X 5" PREFINISHED METAL GUTTER
19 LIGHT FIXTURE, RE: ELECTRICAL SHEET E-4 & E-11

0 2' 4' 8'
1/4"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Texas Registered Engineering Firm F- 2144

REGISTERED ARCHITECT
HOMER SAENZ
25041
STATE OF TEXAS
05/15/2023

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JEFFERSON COUNTY, TX
CRANE BAYOU PUMP STATION GENERATORS AND BUILDING
ARCHITECTURE

FLOOR AND ROOF PLAN

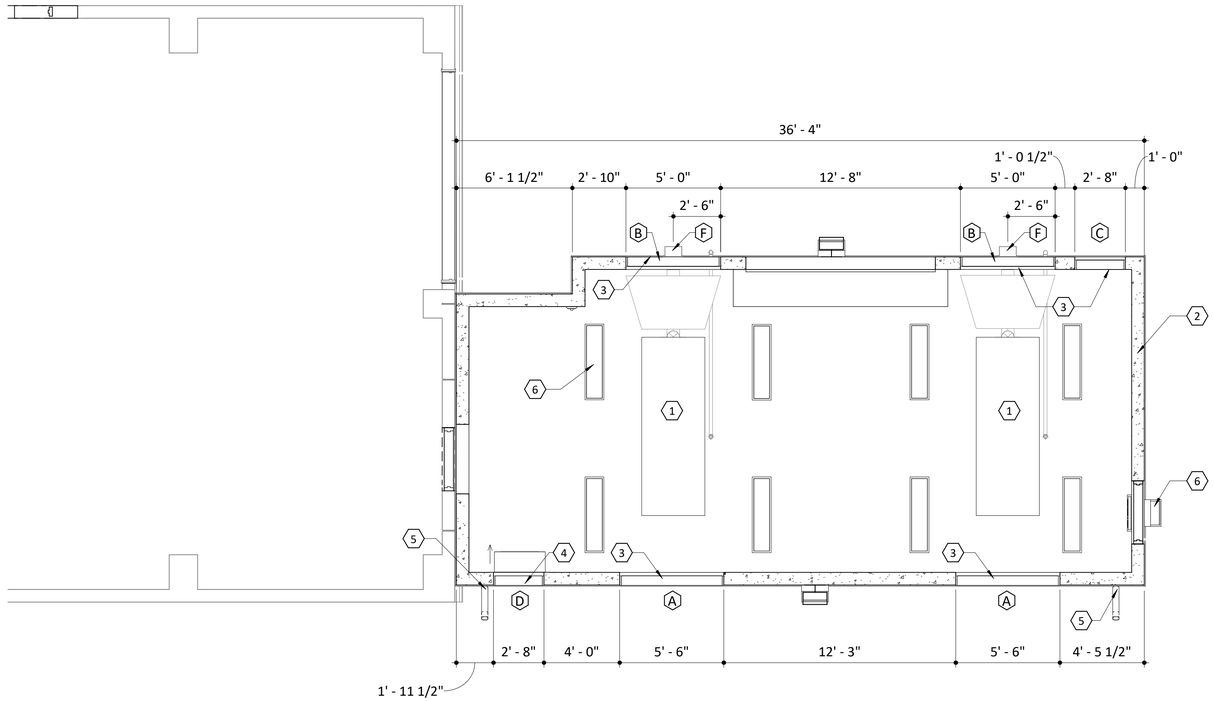
F&N JOB NO.	JFF22292
DATE	05/15/2023
DESIGNED	HS
DRAWN	KM
REVISED	KM
CHECKED	PJ
FILE NAME	AR-JFF22292-R21.RVT

NO.	ISSUE	BY	DATE

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
1 0

SHEET A-3
SEQ. 7

Plot Date: 5/12/2023 8:25:16 AM



1 REFLECTED CEILING PLAN
1/4" = 1'-0"

GENERAL NOTES

1. REFER TO SHEET A-2 FOR GENERAL NOTES & ABBREVIATIONS.
2. REFER TO BUILDING SECTIONS (SHEET A-6) FOR EXPOSED STRUCTURE AND DECK HEIGHTS ABOVE FINISH FLOOR (NO CEILINGS).
3. NOT ALL LIGHTING FIXTURES AND DEVICES ARE SHOWN ON THIS PLAN. REFER TO LIGHTING SHEET E-4.
4. REFER TO ELECTRICAL PLAN, SHEET E-6, FOR MORE INFORMATION.
5. REFER TO SHEET A-7 FOR DOOR SCHEDULE.

NOTES BY SYMBOL " (X) "

1 GENERATOR WITH UL 142 BELLY TANK BELOW.
2 8" CAST-IN-PLACE CONCRETE PANELS.
3 LOUVER, RE: MECHANICAL SHEET M-3
4 SUPPLY FAN LOUVER, RE: MECHANICAL SHEET M-3.
5 4" PREFINISHED METAL DOWNSPOUT.
6 LIGHT FIXTURE, RE: ELECTRICAL SHEET E-4 & E-11

0 2' 4' 8'
1/4"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Texas Registered Engineering Firm F- 2144

REGISTERED ARCHITECT HOMER SALAZ 25041 STATE OF TEXAS 05/15/2023

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JEFFERSON COUNTY, TX
CRANE BAYOU PUMP STATION
GENERATORS AND BUILDING
ARCHITECTURE

REFLECTED CEILING PLAN - LEVEL 1

F&N JOB NO. JFF22292
DATE 05/15/2023
DESIGNED HS
DRAWN KM
REVISED KM
CHECKED PJ

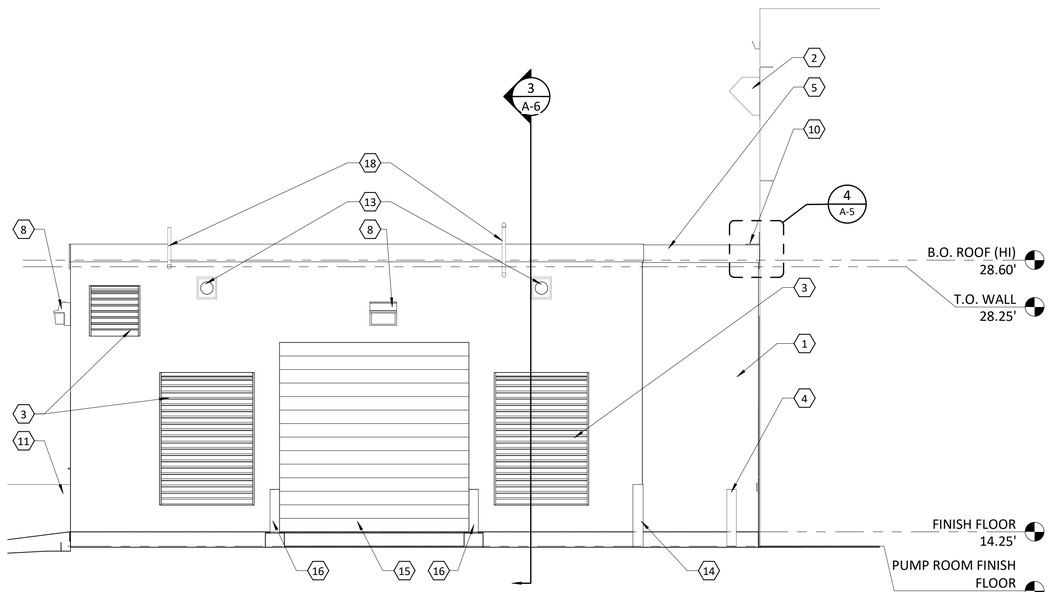
NO.	ISSUE	BY	DATE

FILE NAME AR-JFF22292-R21.RVT

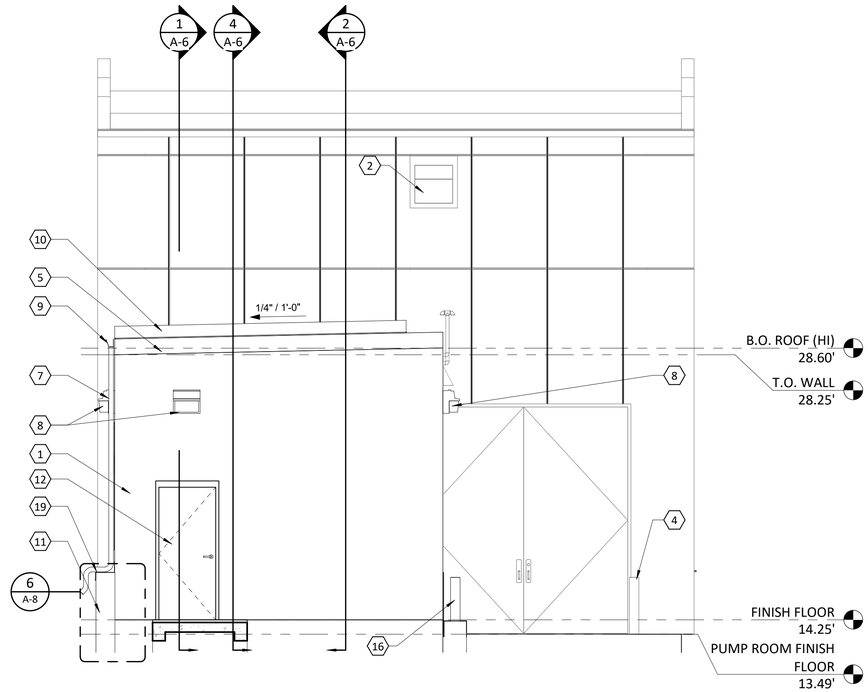
VERIFY SCALE 0 1
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

SHEET A-4
SEQ. 8

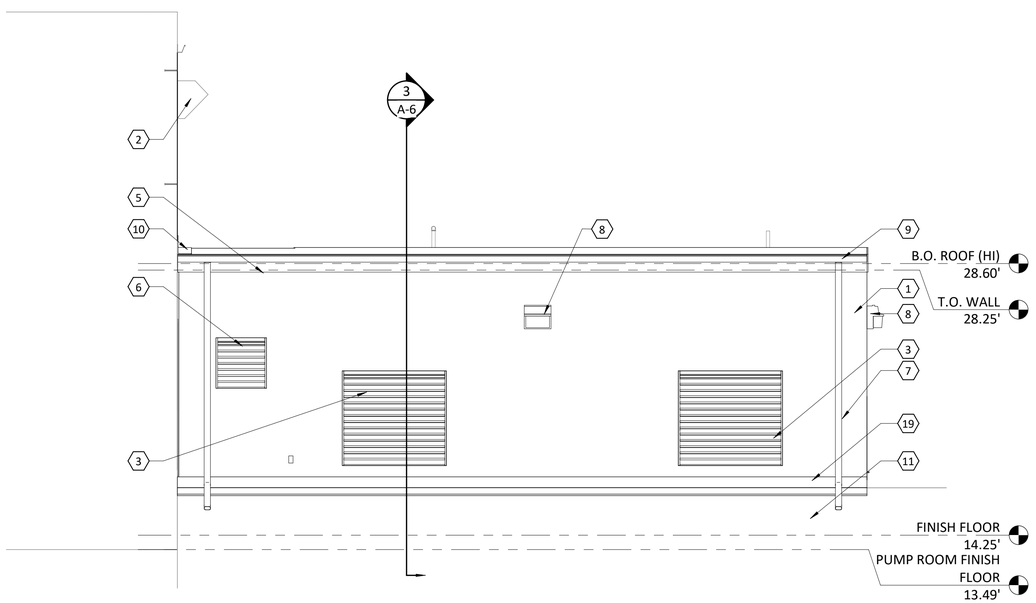
Plot Date: 5/12/2023 8:25:16 AM



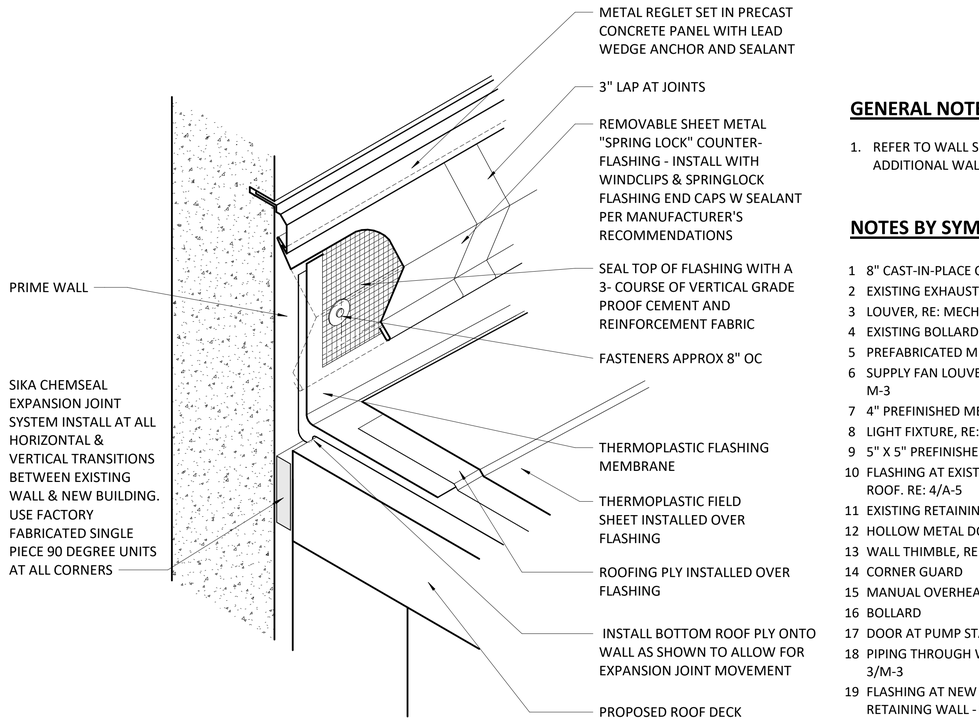
1 A-3 NORTH ELEVATION
1/4" = 1'-0"



3 A-3 EAST ELEVATION
1/4" = 1'-0"



2 A-3 SOUTH ELEVATION
1/4" = 1'-0"



4 A-5 FLASHING AT EXISTING CONCRETE WALL PANEL
3" = 1'-0"

GENERAL NOTES

1. REFER TO WALL SECTIONS FOR ADDITIONAL WALL FINISH LOCATIONS.

NOTES BY SYMBOL " ⟨X⟩ "

1 8" CAST-IN-PLACE CONCRETE PANELS
2 EXISTING EXHAUST FAN
3 LOUVER, RE: MECHANICAL SHEET M-3
4 EXISTING BOLLARD
5 PREFABRICATED METAL FASCIA
6 SUPPLY FAN LOUVER, RE: MECHANICAL SHEET M-3
7 4" PREFINISHED METAL DOWNSPOUT
8 LIGHT FIXTURE, RE: ELECTRICAL SHEET E-4 & E-11
9 5" X 5" PREFINISHED METAL GUTTER
10 FLASHING AT EXISTING CONCRETE WALL TO NEW ROOF. RE: 4/A-5
11 EXISTING RETAINING WALL
12 HOLLOW METAL DOOR AND FRAME
13 WALL THIMBLE, RE: MECHANICAL 3/M-3
14 CORNER GUARD
15 MANUAL OVERHEAD COILING DOOR
16 BOLLARD
17 DOOR AT PUMP STATION
18 PIPING THROUGH WALL. RE: MECHANICAL SHEET 3/M-3
19 FLASHING AT NEW BUILDING TO EXISTING RETAINING WALL - RE: 6/A-8

0 2' 4' 8'
1/4"=1'-0"

ISSUED FOR BID

Freese and Nichols, Inc.
Texas Registered Engineering Firm F- 2144

REGISTERED ARCHITECT ROLANDO SAENZ 25041 STATE OF TEXAS 05/15/2023

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JEFFERSON COUNTY, TX
CRANE BAYOU PUMP STATION
GENERATORS AND BUILDING
ARCHITECTURE

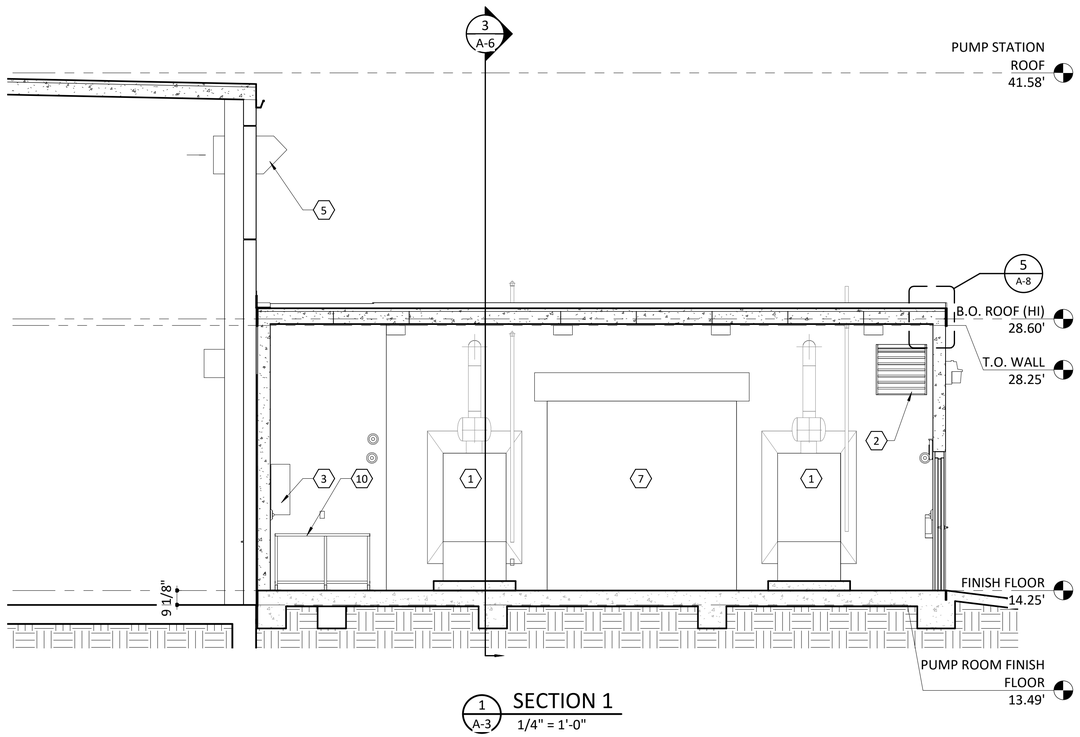
EXTERIOR ELEVATIONS

F&N JOB NO.	JFF22292
DATE	05/15/2023
DESIGNED	HS
DRAWN	KM
CHECKED	PJ
REVISED	KM
DATE	
BY	
ISSUE	
NO.	
FILE NAME	AR-JFF22292-R21.RVT

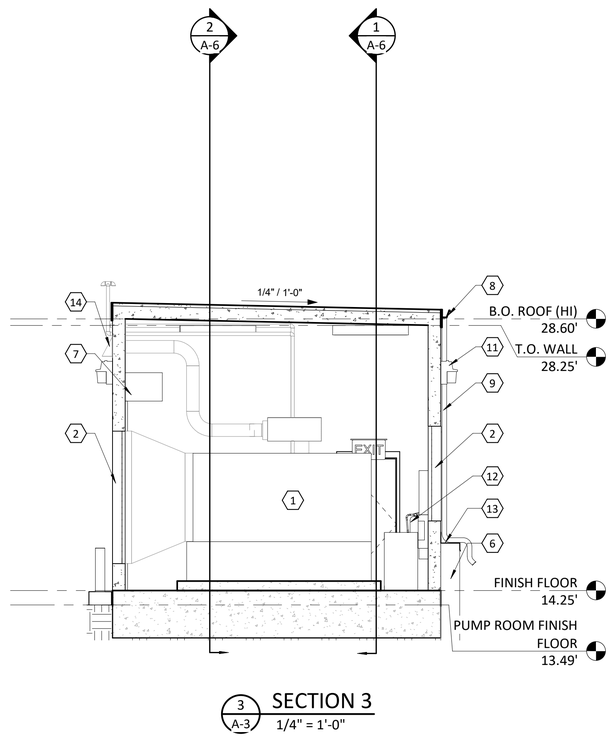
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale. 0 1

SHEET A-5
SEQ. 9

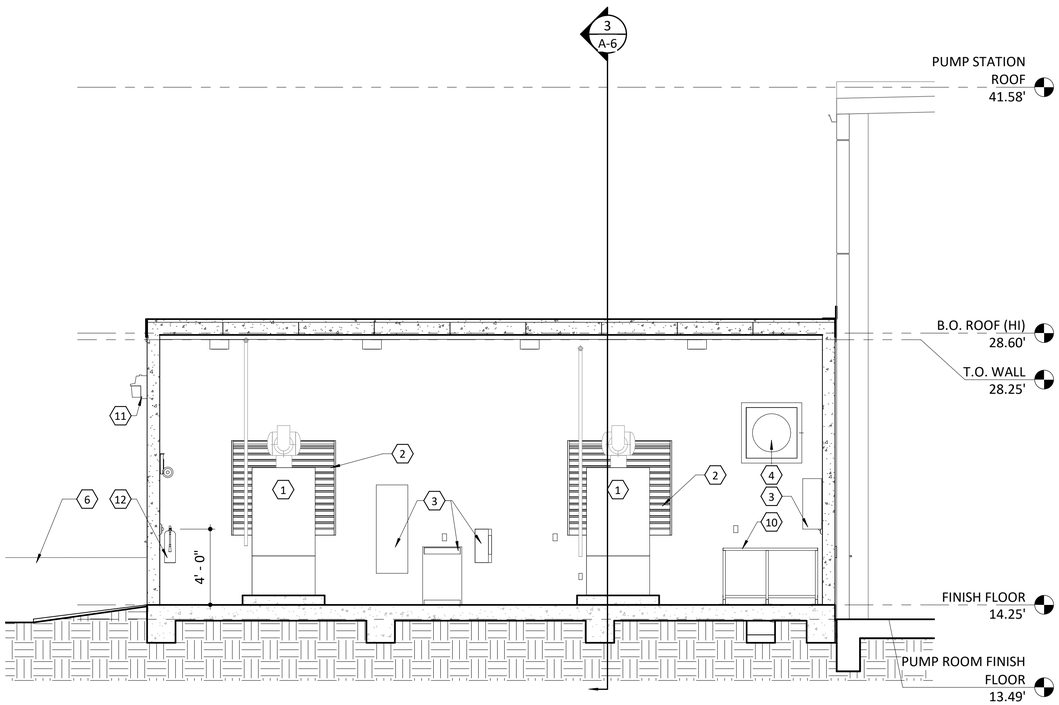
Plot Date: 5/12/2023 8:25:17 AM



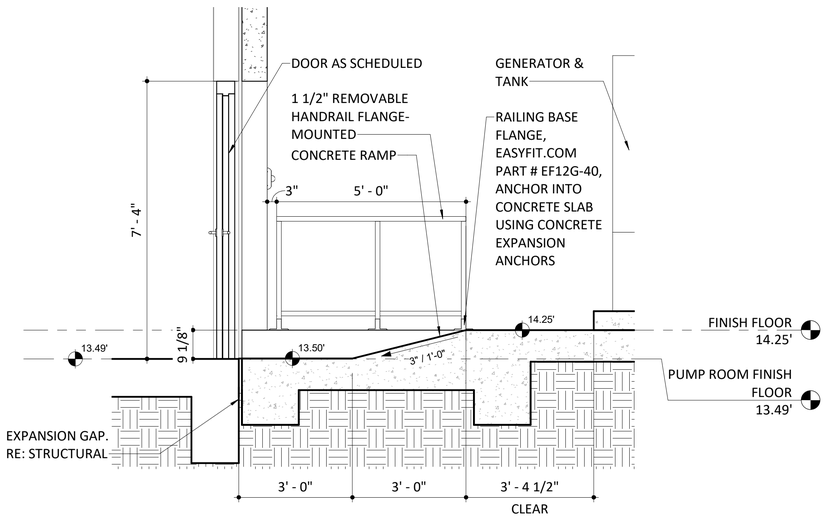
1 A-3 SECTION 1
1/4" = 1'-0"



3 A-3 SECTION 3
1/4" = 1'-0"



2 A-3 SECTION 2
1/4" = 1'-0"



4 A-3 SECTION THROUGH RAMP
1/2" = 1'-0"

NOTES BY SYMBOL " X "

1 GENERATOR WITH UL 142 SUB BASE BELOW. RE: ELECTRICAL SHEET E-3
2 LOUVER, RE: MECHANICAL SHEET M-3
3 EQUIPMENT, RE: ELECTRICAL SHEET E-5
4 SUPPLY FAN. RE: MECHANICAL SHEET M-3
5 EXISTING EXHAUST FAN.
6 EXISTING RETAINING WALL, REF: STRUCTURAL DETAIL 3/S-4
7 MANUAL OVERHEAD COILING DOOR
8 5" X 5" PREFINISHED METAL GUTTER
9 4" PREFINISHED METAL DOWNSPOUT
10 REMOVABLE HANDRAIL WITH FLANGE-MOUNTED RAILING BASE FLANGE. RE: EASYFIT.COM PART # EF12G-40
11 LIGHT FIXTURE, RE: ELECTRICAL SHEET E-4 & E-11
12 FIRE EXTINGUISHER
13 FLASHING AT NEW BUILDING TO EXISTING RETAINING WALL - RE: 6/A-8
14 WALL THIMBLE, RE: MECHANICAL 3/M-3

0 1' 2' 4'
1/2"=1'-0"
0 2' 4' 8'
1/4"=1'-0"

ISSUED FOR BID

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Texas Registered Engineering Firm F- 2144
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JEFFERSON COUNTY, TX
CRANE BAYOU PUMP STATION GENERATORS AND BUILDING
ARCHITECTURE

BUILDING SECTIONS

F&N JOB NO. JFF22292
DATE 05/15/2023
DESIGNED HS
DRAWN KM
REVISED KM
CHECKED PJ

NO.	ISSUE	BY	DATE

FILE NAME AR-JFF22292-R21.RVT

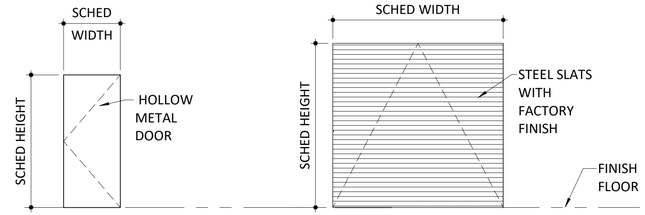
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
VERIFY SCALE 1 0

SHEET A-6
SEQ. 10

Plot Date: 5/12/2023 8:25:19 AM

DOOR & FRAME SCHEDULE - GEN SET BUILDING														
		DOOR DESCRIPTION					FRAME DESCRIPTION							
		SIZE							DOOR DETAILS					
DOOR NO.	SIGN TYPE	WIDTH	HEIGHT	THICKNESS	MAT	DOOR TYPE	MAT	FRAME TYPE	HEAD	JAMB	JAMB	SILL	FIRE RATING	COMMENTS
101A		10' - 0"	10' - 0"	1 1/2"	STL	C	STL	OC-1	7/A-7	8/A-7	8/A-7	9/A-7	NA	TDI WINDSTORM PRODUCT
101B		3' - 0"	7' - 0"	1 3/4"	HM	A	HM	HM-1	4/A-7	5/A-7	5/A-7	6/A-7	NA	TDI WINDSTORM PRODUCT
101C		3' - 0"	7' - 0"	1 3/4"	HM	A	HM	HM-1	4/A-7	5/A-7	5/A-7	-	NA	

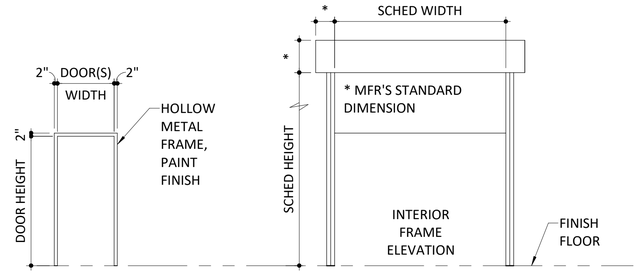
DOOR & FRAME SCHEDULE - PUMP STATION														
		DOOR DESCRIPTION					FRAME DESCRIPTION							
		SIZE							DOOR DETAILS					
DOOR NO.	SIGN TYPE	WIDTH	HEIGHT	THICKNESS	MAT	DOOR TYPE	MAT	FRAME TYPE	HEAD	JAMB	JAMB	SILL	FIRE RATING	COMMENTS
100A		3' - 0"	7' - 0"	1 3/4"	HM	A	HM	HM-1	4/A-7	5/A-7	5/A-7	6/A-7	NA	TDI WINDSTORM PRODUCT



A
HOLLOW METAL

C
OVERHEAD COILING

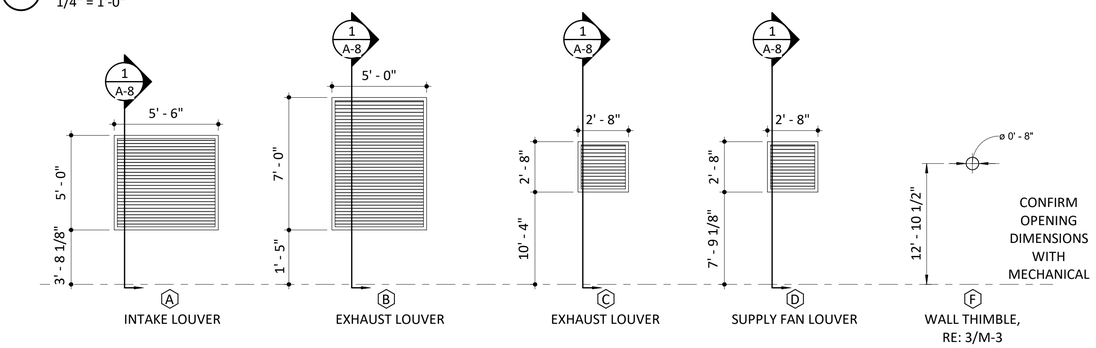
1 DOOR TYPES
1/4" = 1'-0"



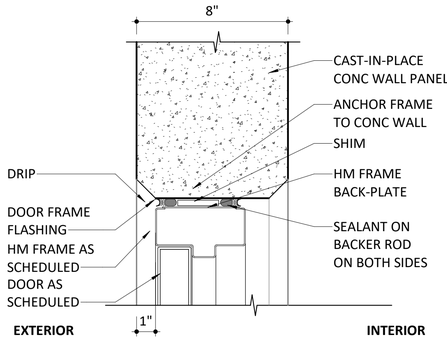
HM-1
HOLLOW METAL

OC-1
OVERHEAD COILING STEEL

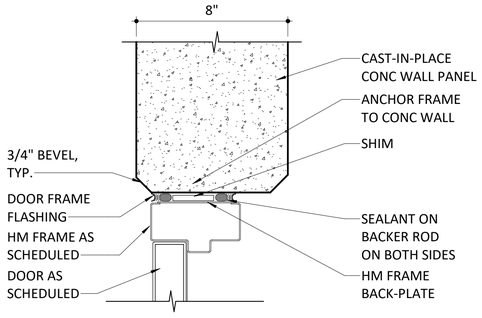
2 FRAME TYPES
1/4" = 1'-0"



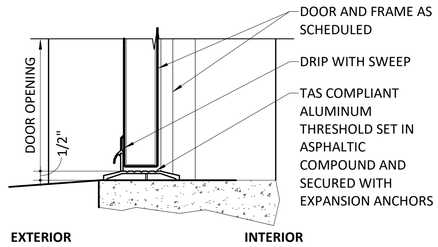
3 WINDOW & OPENING TYPES
NTS



4 DOOR HEAD DETAIL
3" = 1'-0"



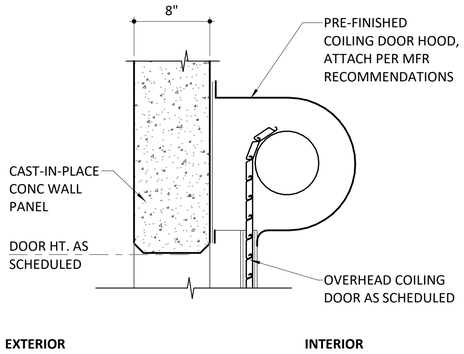
5 DOOR JAMB DETAIL
3" = 1'-0"



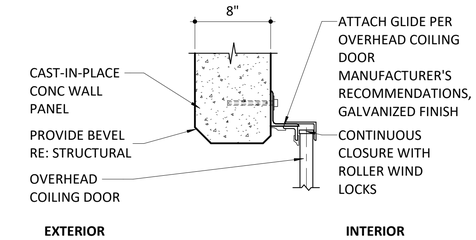
6 DOOR SILL DETAIL
3" = 1'-0"

GENERAL NOTES

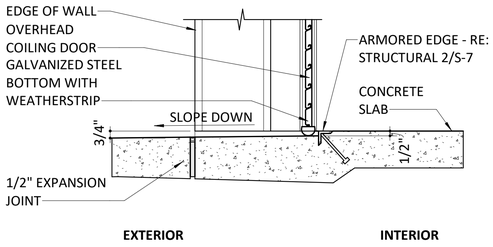
1. PANIC HARDWARE TO MATCH DOOR FRAME.
2. ALL FRAMES TO BE HOLLOW METAL U.N.O.
3. ALL MOUNTING DIMENSIONS SHALL COMPLY WITH REQUIREMENTS OF TAS (ADA). CONTRACTOR MUST VERIFY EACH SUCH DIMENSION.
4. ALL DOOR DIMENSIONS ARE CLEAR, FROM EDGE OF DOOR STOP TO EDGE OF DOOR IN 90° OPEN POSITION.



7 OH COILING DOOR HEAD DETAIL
1 1/2" = 1'-0"



8 OH COILING DOOR JAMB DETAIL
1 1/2" = 1'-0"



9 OH COILING DOOR SILL DETAIL
1 1/2" = 1'-0"

0 4" 8" 1'
1-1/2"=1'-0"

0 1" 2" 4" 8"
3"=1'-0"

ISSUED FOR BID

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JEFFERSON COUNTY, TX
CRANE BAYOU PUMP STATION
GENERATORS AND BUILDING
ARCHITECTURE

DOOR & FRAME - LEGEND

F&N JOB NO.	JFF22292
DATE	05/15/2023
DESIGNED	HS
DRAWN	KM
CHECKED	PJ

NO.	ISSUE	BY	DATE	REVISED
				KM

FILE NAME AR-JFF22292-R21.RVT

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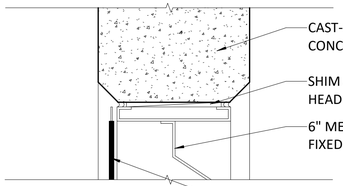
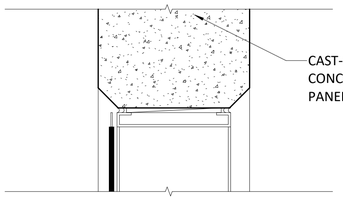
SHEET A-7

SEQ. 11

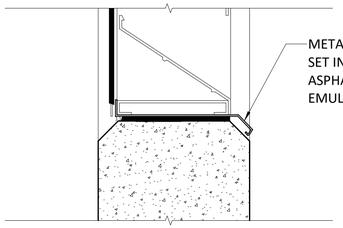
Plot Date: 5/12/2023 8:25:19 AM



HEAD



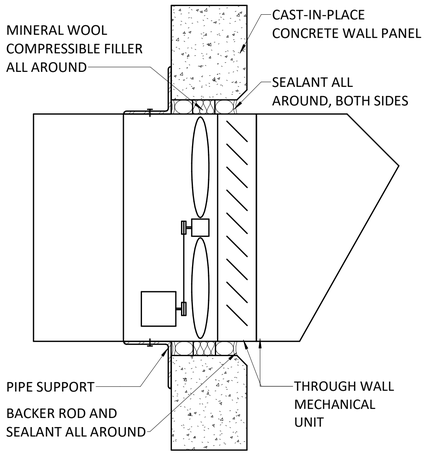
JAMB



SILL

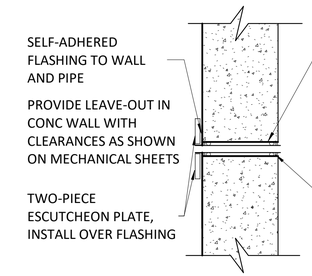
LOUVER ASSEMBLY & FASTENERS SHALL BE WINDSTORM & MISSLE RESISTANT PER TDI REQUIREMENTS. RE: HVAC FOR MORE INFORMATION.

1 LOUVER OPENING THROUGH WALL
3" = 1'-0"

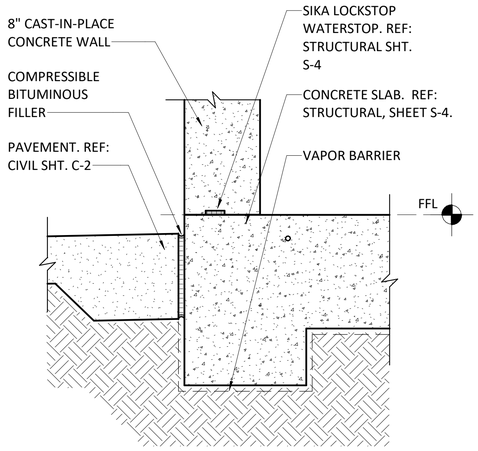


2 MECHANICAL FAN THROUGH WALL
1 1/2" = 1'-0"

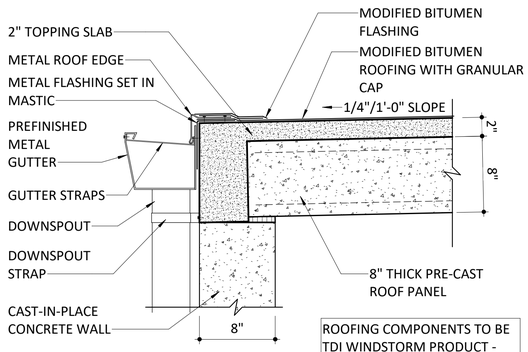
EXTERIOR **INTERIOR**



3 PIPING PENETRATION DETAIL
1 1/2" = 1'-0"

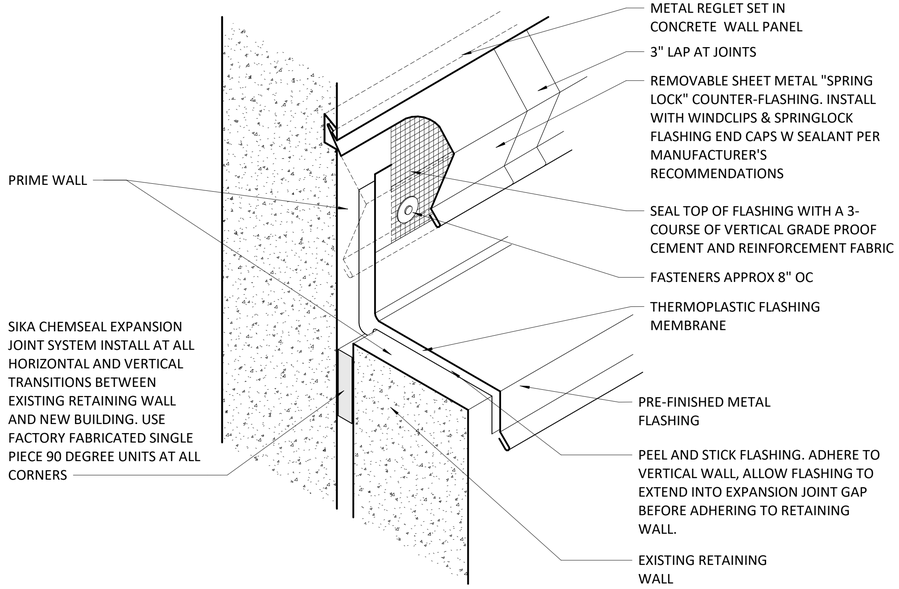


4 WALL BASE DETAIL
1 1/2" = 1'-0"



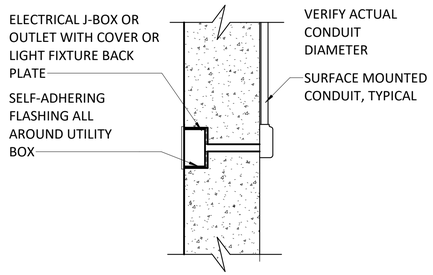
ROOFING COMPONENTS TO BE TDI WINDSTORM PRODUCT - ROOFING SYSTEM

5 GUTTER DETAIL
1 1/2" = 1'-0"



6 FLASHING AT EXISTING RETAINING WALL
3" = 1'-0"

EXTERIOR **INTERIOR**



7 SMALL PIPE WALL PENETRATION DETAIL
1 1/2" = 1'-0"

0 4" 8" 1'
1-1/2"=1'-0"

0 1" 2" 4" 8"
3"=1'-0"

ISSUED FOR BID

Plot Date: 5/12/2023 8:25:20 AM

Freese and Nichols, Inc.
Texas Registered Engineering Firm F- 2144

REGISTERED ENGINEER HOWARD SAMUEL SMITH 125041 STATE OF TEXAS 05/15/2023

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JEFFERSON COUNTY, TX
CRANE BAYOU PUMP STATION GENERATORS AND BUILDING
ARCHITECTURE

DETAILS

F&N JOB NO.	JFF22392
DATE	05/15/2023
DESIGNED	HS
DRAWN	KM
REVISED	KM
CHECKED	PJ

NO.	ISSUE	BY	DATE
1	VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.		

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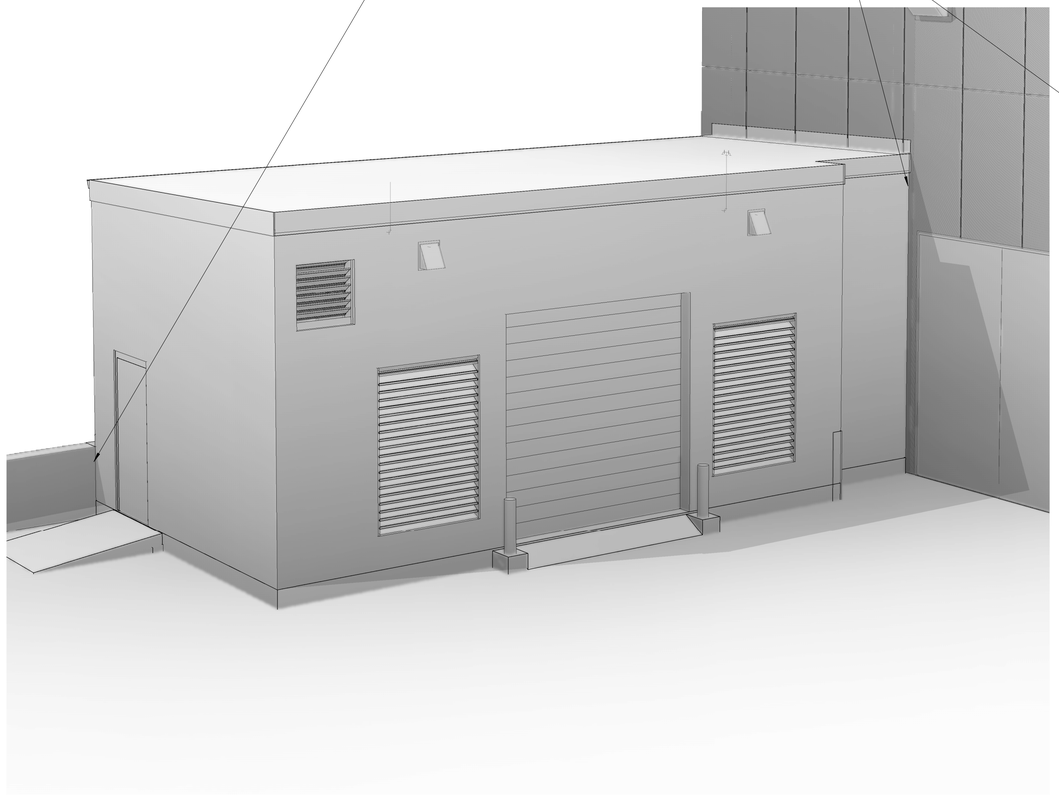
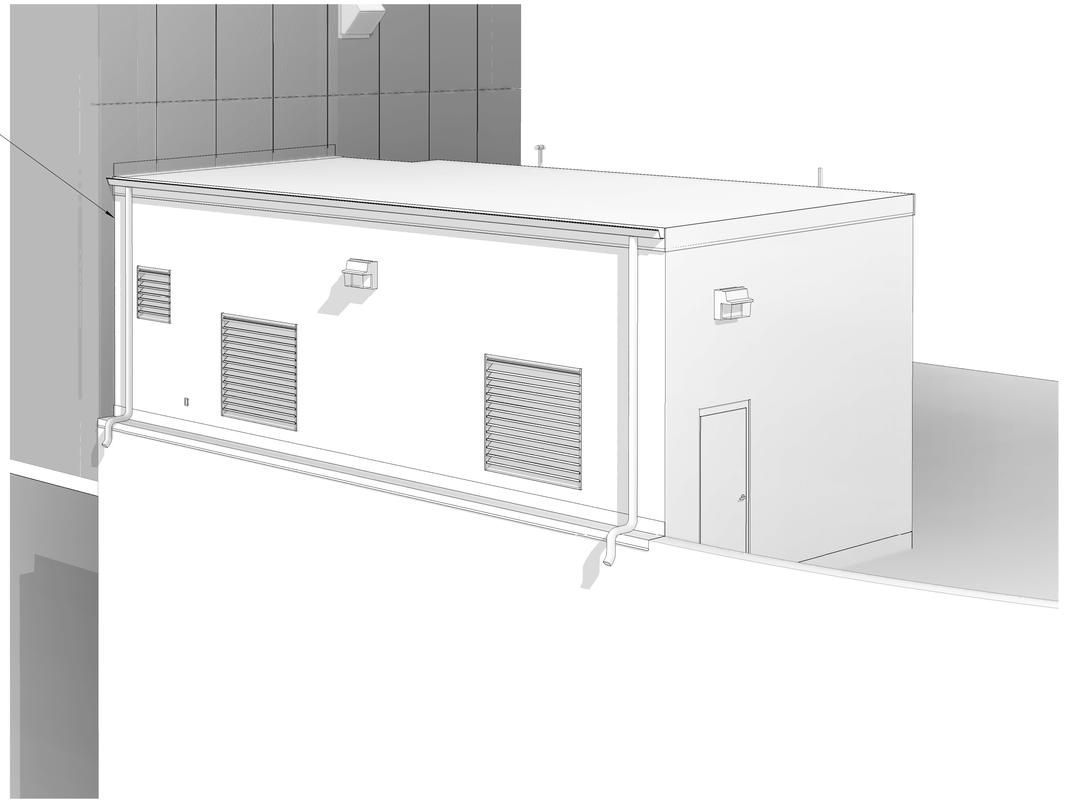
SHEET A-8

SEQ. 12

SIKA CHEMSEAL EXPANSION JOINT SYSTEM INSTALL AT ALL HORIZONTAL AND VERTICAL TRANSITIONS BETWEEN EXISTING BUILDING WALL/RETAINING WALL AND NEW BUILDING. USE FACTORY FABRICATED SINGLE PIECE 90 DEGREE UNITS AT ALL CORNERS



1 VIEW LOOKING SOUTHEAST



2 VIEW LOOKING NORTHWEST

ISSUED FOR BID

Plot Date: 5/12/2023 8:25:25 AM

Freese and Nichols, Inc.
Texas Registered Engineering Firm F- 2144

REGISTERED ARCHITECT
ZEKE SALAZAR
25041
STATE OF TEXAS
05/15/2023

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JEFFERSON COUNTY, TX
CRANE BAYOU PUMP STATION GENERATORS AND BUILDING
ARCHITECTURE

ISOMETRIC VIEWS

F&N JOB NO.	JFF22292
DATE	05/15/2023
DESIGNED	HS
DRAWN	KM
REVISED	KM
CHECKED	PJ

NO.	ISSUE	BY	DATE

FILE NAME AR-JFF22292-R21.RVT

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SHEET A-9
SEQ. 13

GENERAL NOTES:

1. DESIGN IS IN ACCORDANCE WITH 2015 INTERNATIONAL BUILDING CODE, LOCAL AMENDMENTS, AND APPLICABLE CODE REFERENCED STANDARDS.

2. CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH APPLICABLE OSHA, STATE, AND LOCAL REGULATIONS. THIS DESIGN IS NOT INTENDED TO CONFLICT WITH SAFETY OR APPLICABLE REGULATIONS OR TO RELIEVE THE CONTRACTOR OF COMPLIANCE WITH THESE REQUIREMENTS. IN CASE OF CONFLICT WITH SAFETY OR APPLICABLE REGULATIONS, CONTACT THE ENGINEER FOR GUIDANCE BEFORE PROCEEDING WITH FABRICATION OR CONSTRUCTION.

3. PRIOR TO FABRICATION OR CONSTRUCTION:
   A. REVIEW OTHER DISCIPLINE DRAWINGS FOR SIZE AND LOCATION OF ALL OPENINGS, DEPRESSIONS, OFFSETS, SLEEVES, CURBS, PADS, INSERTS, EQUIPMENT REQUIREMENTS, ETCETERA, WHICH ARE NOT SHOWN ON STRUCTURAL DRAWINGS.
   B. VERIFY DIMENSIONS AND LOCATIONS OF ALL OPENINGS, DEPRESSIONS, OFFSETS, SLEEVES, CURBS, PADS, INSERTS, EQUIPMENT REQUIREMENTS, ETCETERA.
   C. FIELD VERIFY ALL EXISTING CONDITIONS, INCLUDING LOCATION AND DIMENSIONS OF ALL EXISTING CONSTRUCTION AND UTILITIES.
   D. NOTIFY OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES BETWEEN DISCIPLINES, CONSTRUCTABILITY ISSUES, OR EXISTING CONDITIONS.

4. REMOVE ALL ABANDONED FOUNDATIONS, UTILITIES, PIPELINES, ETCETERA THAT INTERFERE WITH PROPOSED CONSTRUCTION.

5. PROVIDE EXCAVATION SHORING TO PROTECT AND SUPPORT FOUNDATION SOILS UNDER EXISTING STRUCTURES.

6. THE STRUCTURE IS DESIGNED FOR STABILITY IN THE FINAL CONDITION ONLY. PROVIDE TEMPORARY BRACING AND SHORING AS REQUIRED FOR STABILITY DURING CONSTRUCTION.

7. PLANS, SECTIONS, AND DETAILS ARE NOT TO BE SCALED FOR DETERMINATION OF QUANTITIES, LENGTHS, OR FIT OF MATERIALS.

8. THE GENERAL NOTES AND TYPICAL DETAILS ARE GENERAL AND APPLY TO THE ENTIRE PROJECT EXCEPT WHERE THERE ARE SPECIFIC INDICATIONS TO THE CONTRARY.

LOADS

1. SUPERIMPOSED DEAD LOADS (NOT INCLUDING STRUCTURAL FRAMING SELF-WEIGHT):
   A. ROOF (COLLATERAL LOAD): 20 PSF
   B. FLOORS: 8 PSF

2. FLOOR LIVE LOADS:
   A. MECH, ELECT, AND EQUIP ROOMS: 150 PSF

3. ROOF LIVE LOAD:
   A. ROOF: 20 PSF

4. GROUND SNOW LOAD: Pg = 5 PSF

5. LATERAL LOADS:
   A. RISK CATEGORY IV
   B. WIND LOAD:
      1. BASIC WIND SPEED: V = 158 MPH
      2. WIND EXPOSURE: C
      3. INTERNAL PRESSURE COEFFICIENT: GCpi = +/-0.18
      4. COMPONENTS AND CLADDING PRESSURES PER ASCE-7, FOR VARIOUS ZONES USING AN EFFECTIVE WIND AREA OF 10 FT^2 ARE AS FOLLOWS:

LRFD DESIGN WIND PRESSURE FOR COMPONENTS AND CLADDING (PSF)		
ZONE	POSITIVE PRESSURE	NEGATIVE PRESSURE
1	+18	-68
2	+18	-90
3	+18	-107
4	+43	-47
5	+43	-52
PRESSURES SHOWN HAVE BEEN MULTIPLIED BY A 1.0 LOAD FACTOR		

   C. SEISMIC LOAD:
      1. SEISMIC IMPORTANCE FACTOR: I = 1.5
      2. MAPPED SPECTRAL ACCELERATIONS: S_S = 0.075, S_1 = 0.044
      3. SITE CLASS: C
      4. SPECTRAL RESPONSE COEFFICIENT: SD_S = 0.065, SD_1 = 0.044
      5. SEISMIC DESIGN CATEGORY: A
      6. BASIC SEISMIC FORCE-RESISTING SYSTEM:
         1. ORDINARY REINFORCED CONCRETE SHEAR WALLS
      7. DESIGN BASE SHEAR V = 0.01W

FOUNDATION

1. FOUNDATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT "GEOTECHNICAL ENGINEERING REPORT; EMERGENCY GENERATOR BUILDING CRANE BAYOU PUMPING STATION; JEFFERSON COUNTY DRAINAGE DISTRICT NO. 7; PORT ARTHUR, TEXAS", DATED MAY 13, 2022, PREPARED BY TOLUNAY-WONG ENGINEERS, INC. (REPORT NO. 129545). THE GEOTECHNICAL REPORT IS NOT PART OF THE CONTRACT DOCUMENTS.

2. EXCAVATION DESIGN AND SAFETY IS THE RESPONSIBILITY OF THE CONTRACTOR. ANY SLOPES SHOWN ARE A MAXIMUM AND SHALL BE DECREASED AS REQUIRED FOR SAFETY OR TO MEET OSHA REQUIREMENTS.

3. AT THE LOCATIONS WHERE UTILITY TRENCHES CROSS THE BUILDING LINE, 5'-0" OF EACH TRENCH CENTERED ON THE BUILDING LINE SHALL BE BACKFILLED AS FOLLOWS: OUTSIDE THE BUILDING LINE BACKFILL ABOVE THE UTILITY WITH A COMPACTED, LOW-PERMEABILITY CLAY; INSIDE THE BUILDING LINE BACKFILL ABOVE THE UTILITY WITH SPECIFIED STRUCTURAL FILL; EMBEDMENT MATERIAL BELOW AND AROUND THE UTILITY SHALL BE FLOWABLE FILL.

4. BACKFILL SHALL BE ON-SITE NATIVE SOILS.

5. EXTERIOR SLABS SHALL SLOPE AWAY FROM THE STRUCTURE A MINIMUM OF 1/4" PER FOOT UNLESS NOTED OTHERWISE. GRADING AROUND STRUCTURES SHALL BE SUCH AS TO DRAIN ALL WATER AWAY FROM BUILDINGS.

6. ALL FOUNDATIONS SHALL BEAR ON SOUND, UNDISTURBED, LEVEL EXCAVATIONS. REMOVE ANY AND ALL LOOSE DEBRIS FROM EXPOSED BEARING SURFACE. SUITABLE BEARING MATERIAL SHALL BE VERIFIED BY A GEOTECHNICAL PROFESSIONAL ENGINEER

7. MOISTURE CONTENT IN FOOTING EXCAVATIONS SHALL BE MAINTAINED UNTIL FOOTING IS PLACED. FOOTINGS SHALL BE PLACED AS SOON AS PRACTICAL AFTER EXCAVATIONS ARE COMPLETED.

CONCRETE

1. CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI.

2. ALL REINFORCING SHALL BE IN ACCORDANCE WITH ASTM A615, GRADE 60, DEFORMED.

3. CONCRETE CLEAR COVER OVER REINFORCING SHALL BE AS LISTED BELOW, UNLESS NOTED OTHERWISE.
   A. CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"
   B. EXPOSED TO EARTH, WATER, OR WEATHER:
      1. SLABS
         1. #6 AND LARGER: 2-1/2"
         2. #5 AND SMALLER: 2"
      2. BEAMS AND COLUMNS: 2-1/2"
      3. WALLS
         1. ALL OTHERS: 2"
   C. FORMED CONCRETE SURFACES NOT PERMANENTLY EXPOSED TO WEATHER NOR IN CONTACT WITH GROUND:
      1. BEAMS AND COLUMNS: 2"
      2. SLABS AND WALLS: 1-1/2"

4. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 3/4" INSIDE FORMS OR TOOLED TO 3/4" RADIUS ON SLABS UNLESS NOTED OTHERWISE.

5. ALL CONSTRUCTION JOINTS (CXJ) SHALL BE THOROUGHLY CLEANED AND PURPOSELY ROUGHENED TO 1/4" PRIOR TO PLACING ADJACENT CONCRETE.

6. PENETRATIONS OTHER THAN SHOWN SHALL NOT BE ALLOWED WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

7. IN CASES WHERE REINFORCING BARS CANNOT BE EXTENDED AS FAR AS REQUIRED DUE TO THE LIMITED EXTENT OF THE ADJACENT CONCRETE STRUCTURE, THE BARS SHALL EXTEND AS FAR AS POSSIBLE AND END IN STANDARD HOOKS.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL FORMING, TEMPORARY BRACING AND SHORING.

9. CONDUITS AND PIPING EMBEDDED IN CONCRETE SHALL BE SPACED A MINIMUM OF FOUR DIAMETERS AND THE OUTSIDE DIAMETER SHALL BE LESS THAN 30% OF THE MEMBER THICKNESS PLACED BETWEEN LAYERS OF REINFORCING.

10. UNLESS NOTED OTHERWISE, HOOKS SHOWN ON DRAWINGS SHALL BE ASSUMED TO BE STANDARD HOOKS PER ACI 318.

11. ALL REINFORCING SHALL BE CONTINUOUS. CONTINUOUS BARS SHALL LAP 48 BAR DIAMETERS OF SMALLER BAR LAPPED, UNLESS NOTED OTHERWISE. ALL REBAR EMBEDMENT LENGTHS SHALL BE 36 BAR DIAMETERS, UNLESS NOTED OTHERWISE.

POST-INSTALLED ANCHORS (ADHESIVE)

1. INSTALL IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII), BUT NOT LESS THAN THAT INDICATED BELOW.

2. INSTRUCTIONS BELOW ARE NOT INTENDED TO CONFLICT WITH APPLICABLE SAFETY OR OSHA REGULATIONS OR TO RELIEVE CONTRACTOR OF COMPLIANCE WITH ALL APPLICABLE SAFETY AND OSHA REGULATIONS. IN CASE OF CONFLICT WITH SAFETY OR OSHA REGULATIONS, CONTACT THE ENGINEER FOR GUIDANCE BEFORE PROCEEDING WITH FABRICATION OR CONSTRUCTION.

3. ADHESIVE ANCHORS SHALL ONLY BE INSTALLED BY CONSTRUCTION PERSONNEL CERTIFIED UNDER ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM OR APPROVED EQUAL. SUBMIT CERTIFICATIONS AS RECORD DATA PRIOR TO ANCHOR INSTALLATION.

4. ANCHOR DIAMETER AND EMBEDMENT SHALL BE AS INDICATED.

5. HOLES SHALL BE DRILLED USING ROTARY HAMMER DRILLS WITH ANSI MATCHED TOLERANCE CARBIDE-TIPPED DRILL BITS. DRILL BIT DIAMETER SHALL MATCH DIAMETER RECOMMENDED BY MANUFACTURER. DRILL HOLES USING HILTI SAFESET TECHNOLOGY OR APPROVED EQUAL.

6. USE CARE AND CAUTION WHEN INSTALLING TO AVOID CUTTING OR DAMAGING EXISTING REINFORCING STEEL. FIELD VERIFY EXISTING REINFORCING LOCATIONS PRIOR TO FABRICATION OR CONSTRUCTION, AND THEN COORDINATE REBAR LOCATIONS WITH SHOP DRAWINGS.

7. ADHESIVE ANCHORS SHALL BE DEFORMED REINFORCING BARS (ASTM A615, GR 60) OR GALVANIZED THREADED ROD (ASTM F1554 GRADE 36) UNLESS NOTED OTHERWISE, AND AS NOTED BELOW:
   A. ADHESIVE SHALL BE HILTI HIT-RE 500 V3 OR AN APPROVED EQUAL. SUBMIT PUBLISHED COMPARISONS BETWEEN EACH SPECIFIED AND EACH ALTERNATE ANCHOR.
   B. PRIOR TO INSTALLATION: ALL DEFORMED BARS AND THREADED ROD SHALL BE CLEAN, FREE OF OIL, GREASE, OR OTHER RESIDUE, IN ACCORDANCE WITH MPII.
   C. VERIFY HOLE IS CLEAR OF DUST AND DEBRIS.
   D. INSTALL ADHESIVE STARTING AT BACK OF HOLE. AS REQUIRED BY MPII, USE MANUFACTURER SUPPLIED PISTON PLUG INJECTION SYSTEM FOR ALL HORIZONTAL AND VERTICALLY INCLINED HOLES.
   E. INSTALL ANCHOR BY SIMULTANEOUSLY TWISTING AND INSERTING INTO HOLE.
   F. ALLOW ANCHOR TO SET REQUIRED TIME. DO NOT DISTURB.
   G. TIGHTEN NUT. DO NOT OVER-TORQUE.
   H. MINIMUM CONCRETE AGE AT TIME OF INSTALLATION: 28 DAYS
   I. CONCRETE TEMPERATURE RANGE AT TIME OF INSTALLATION SHALL BE: 41DEG F TO 104DEG F.
   J. CONCRETE MOISTURE CONDITION AT TIME OF INSTALLATION: DRY.

PRECAST HOLLOW CORE

1. 8" PRECAST CONCRETE HOLLOWCORE MEMBERS SHALL SPAN FROM CONCRETE BEARING WALLS AS INDICATED IN DRAWINGS

2. PRECAST CONCRETE HOLLOWCORE SLAB MANUFACTURER SHALL DETERMINE FINAL ROOF SLAB LAYOUT AND SUBMIT FOR APPROVAL.

3. CONTRACTOR SHALL AVOID PRESTRESS TENDONS IN PRECAST CONCRETE HOLLOW CORE SLABS WHEN DRILLING FOR ANCHOR PLACEMENT. CONTRACTOR SHALL COORDINATE ANCHOR LOCATIONS WITH PRECAST CONCRETE HOLLOWCORE SLAB MANUFACTURER. THE PRECAST MANUFACTURER MAY PROPOSE ALTERNATE ANCHOR DETAIL FOR APPROVAL.

4. PRECAST CONCRETE HOLLOW CORE SLABS SHALL BE NORMAL WEIGHT CONCRETE AND HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 5,000 PSI.

5. A STANDARD FINISH SHALL BE PROVIDED ON THE HOLLOW CORE ROOF SLABS.

ISSUED FOR BID

Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

STATE OF TEXAS
BRAD B. WATSON
80918
REGISTERED
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PROFESSIONAL
5-15-23

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JEFFERSON COUNTY, TX
CRANE BAYOU PUMP STATION
GENERATORS AND BUILDING
STRUCTURAL

GENERAL NOTES I

F&N JOB NO. JFF22292
DATE 05/15/2023
DESIGNED BBW
DRAWN JLM
CHECKED PAB

NO.	ISSUE	BY	DATE
1	Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.		

VERIFY SCALE 0 1

FILE NAME ST-JFF22292-R21.RVT

SHEET S-1

SEQ. 14

Plot Date: 5/12/2023 2:05:56 PM

STRUCTURAL MODIFICATIONS

1. REFER TO OTHER DISCIPLINE DRAWINGS FOR RELOCATION AND DEMOLITION OF PIPING, CONDUITS, FIXTURES, INSTRUMENTS, ETC. ASSOCIATED WITH STRUCTURES SHOWN TO BE DEMOLISHED.

2. ALL DEMOLITION, REMOVAL AND CONSTRUCTION ACTIVITIES SHALL BE CONDUCTED WITH CONSIDERATION FOR EXISTING FACILITIES STRUCTURES, EQUIPMENT, ETC. ANY DAMAGE WHICH MAY OCCUR BEYOND DESCRIBED DEMOLITION AND CONSTRUCTION SHALL BE REMEDIED AT CONTRACTOR'S EXPENSE AND OWNER/ENGINEER NOTIFIED.

3. CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL DEMOLISHED CONCRETE AND OTHER MATERIALS FROM THE EXISTING STRUCTURES OFF SITE PRIOR TO THE PROPOSED CONSTRUCTION.

4. UNLESS NOTED OTHERWISE ON PLANS, CUTTING EMBEDDED REBARS DUE TO PIPING, CONDUITS OR ANY OTHER PENETRATION THROUGH EXISTING CONCRETE STRUCTURE IS PROHIBITED. CONTRACTOR SHALL DETECT THE EXISTING REBAR LOCATIONS BY NONDESTRUCTIVE TESTING METHODS AND KEEP PENETRATION AWAY FROM THE EMBEDDED REBARS.

5. WHERE REMOVING EXISTING CONCRETE BUT RETAINING REBARS IS INDICATED ON DRAWINGS, SAWCUT EXISTING CONCRETE TO THE LIMITS SHOWN ON PLANS BUT NOT MORE THAN 3/4" DEEP TO AVOID DAMAGING OR NICKING THE REINFORCING.

6. WHERE DEMOLITION OF EXISTING CONCRETE WILL LEAVE EMBEDDED EXISTING REBARS EXPOSED, AN ADDITIONAL 1 1/2" CONCRETE AND REINFORCEMENT BEYOND LIMITS OF THE DEMOLITION SHALL BE REMOVED. THE 1 1/2" AREAS BEING REMOVED SHALL THEN BE PLACED BACK WITH CONCRETE STRUCTURAL REPAIR MATERIAL AS SPECIFIED TO PROVIDE CORROSION PROTECTION FOR THE EXPOSED EXISTING REBARS, UNLESS NOTED OTHERWISE ON PLAN.

7. ROUGHEN THE EXISTING CONCRETE SURFACES THAT WILL ENCOUNTER NEW CONCRETE. "ROUGHENED SURFACE" SHALL HAVE A UNIFORMLY ROUGHENED CONCRETE SURFACE TO A FULL AMPLITUDE (DISTANCE BETWEEN HIGH AND LOW POINTS OR SIDE TO SIDE) OF APPROXIMATELY 1/4" WITH SUITABLE TOOLS TO EXPOSE A FRESH FACE. APPLY BONDING AGENT TO THE EXISTING CONCRETE SURFACES PRIOR TO THE PLACEMENT OF NEW CONCRETE PER MANUFACTURER'S INSTRUCTIONS.

8. ALL EXPOSED EXISTING REBARS SHALL BE CLEANED BY ABRASIVE BLASTING AND COATED WITH AN EPOXY RESIN/PORTLAND CEMENT ADHESIVE BONDING AGENT TO PROVIDE CORROSION PROTECTION.

DEFERRED SUBMITTALS

1. FORWARD THE FOLLOWING DEFERRED COMPONENT SUBMITTALS TO THE BUILDING OFFICIAL FOR APPROVAL AFTER RECEIPT OF APPROVAL FROM THE OWNER'S REPRESENTATIVE. DO NOT FABRICATE OR INSTALL DEFERRED SUBMITTAL ITEMS UNTIL APPROVED BY THE BUILDING OFFICIAL.
2. THE FOLLOWING IS A LIST OF DEFERRED SUBMITTALS:
   A. PRECAST CONCRETE HOLLOW CORE ROOF SYSTEMS: SPECIFICATION 03 41 00
   B. OTHER SUBMITTALS AS INDICATED IN THE SPECIFICATIONS.

IBC CHAPTER 17 SPECIAL INSPECTION REQUIREMENTS

1. THE OWNER OR THE OWNER'S REPRESENTATIVE IS REQUIRED TO PERFORM SPECIAL INSPECTIONS IN ACCORDANCE WITH IBC 2015 AND AS OUTLINED IN THE STATEMENT OF SPECIAL INSPECTION.

2. THE CONTRACTOR IS REQUIRED TO ACCOMMODATE THE ABOVE INSPECTIONS AND PROVIDE ACCESS TO THE ELEMENTS REQUIRING INSPECTION. IN ADDITION, THE CONTRACTOR SHALL PROVIDE 48 HOURS ADVANCED NOTICE TO THE OWNER OR THE OWNER'S REPRESENTATIVE REGARDING ALL CONSTRUCTION ACTIVITIES RELATED TO AND/OR AFFECTING THE REQUIRED SPECIAL INSPECTIONS.

ISSUED FOR BID

Freese and Nichols, Inc.
Texas Registered Engineering Firm F- 2144

STATE OF TEXAS
BRAD B. WATSON
80918
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5-15-23

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JEFFERSON COUNTY, TX
CRANE BAYOU PUMP STATION
GENERATORS AND BUILDING
STRUCTURAL

GENERAL NOTES II

F&N JOB NO. JFF22292
DATE 05/15/2023
DESIGNED BBW
DRAWN JLM
CHECKED PAB

NO.	ISSUE	BY	DATE	REVISED

FILE NAME ST-JFF22292-R21.RVT

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0 1

SHEET S-2
SEQ. 15

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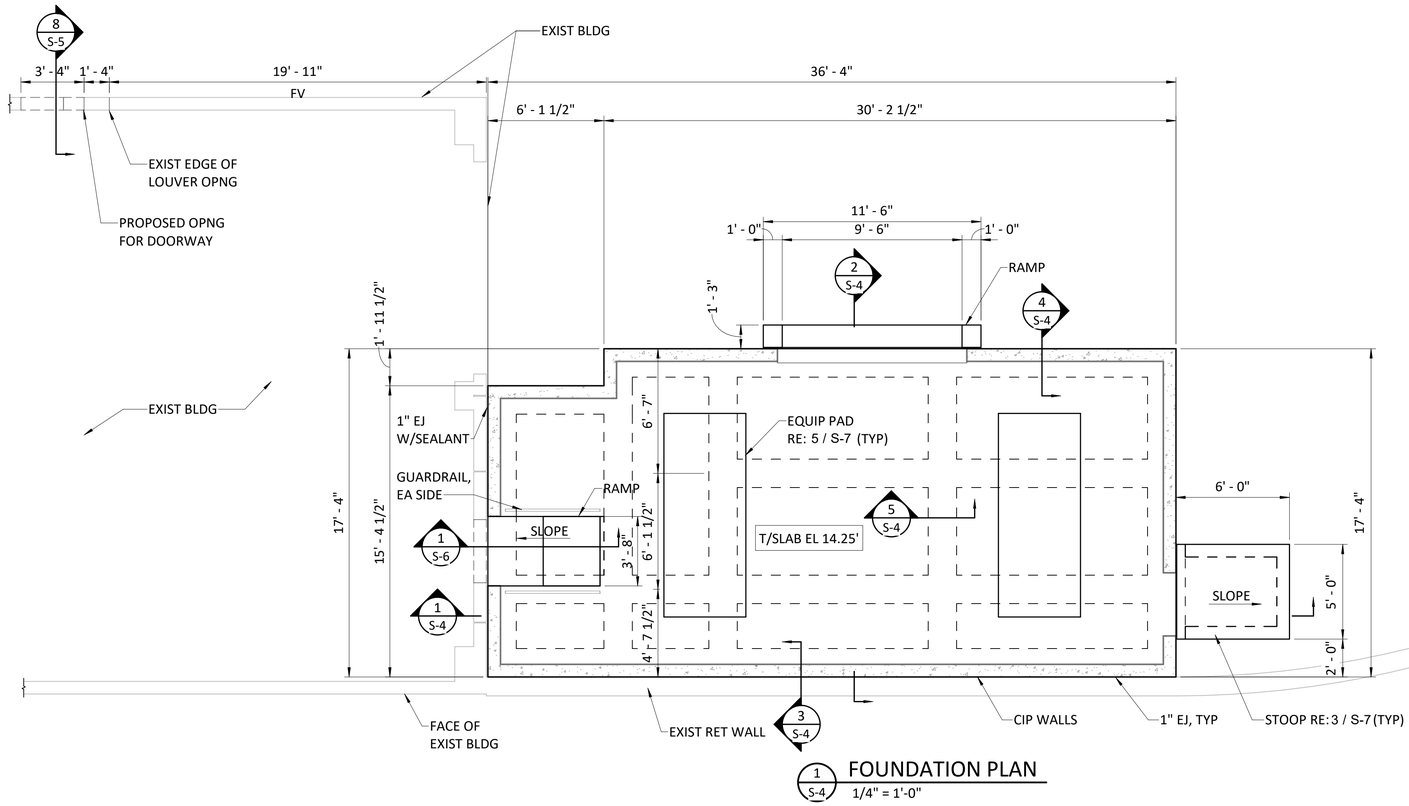
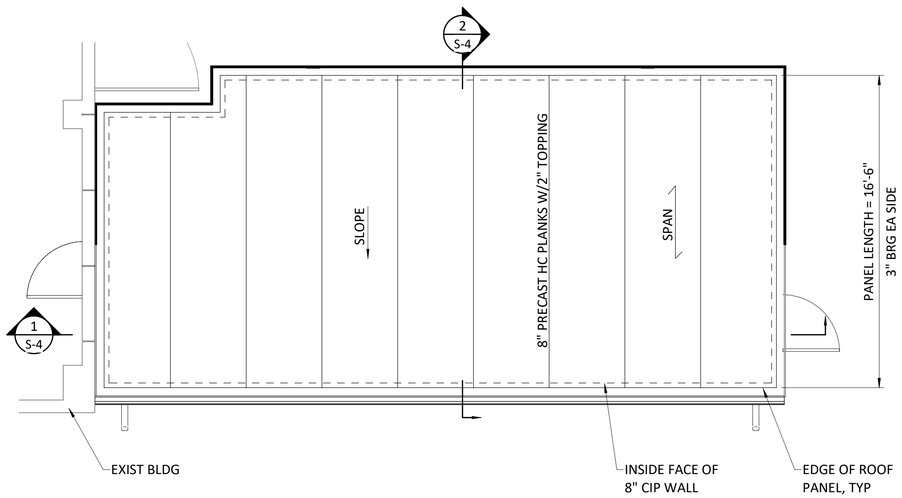


1 S-4 FOUNDATION PLAN
1/4" = 1'-0"

FOUNDATION PLAN NOTES:

1. REFER TO S-1 AND S-2 FOR GENERAL NOTES.
2. FINISH FLOOR ELEVATION INDICATED: T/SLAB EL XXX.XX'
3. FIELD VERIFY ALL EXISTING DIMENSIONS PRIOR TO FABRICATION OR CONSTRUCTION.
4. REFER TO CIVIL OR ARCHITECTURAL DRAWINGS PAVING, UNLESS NOTED OTHERWISE.
5. PROVIDE 1-INCH EXPANSION JOINT WITH SEALANT BETWEEN ALL SITE PAVING AND BUILDING FOUNDATIONS, UNLESS NOTED OTHERWISE.
6. COORDINATE LEDGE LOCATIONS AND CONFIGURATIONS WITH ARCHITECTURAL DRAWINGS.
7. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR LANDING AND RAMP DIMENSIONS AND LOCATIONS.
8. PROVIDE ADDITIONAL REINFORCING WHEN SLAB REINFORCING IS INTERRUPTED BY CONDUITS. DO NOT CORE SLAB, REFER TO S-7. NOT ALL CONDUIT PENETRATIONS SHOWN. COORDINATE WITH ELECTRICAL, MECHANICAL, AND PLUMBING DRAWINGS FOR EXACT LOCATIONS, QUANTITIES, AND SIZES. SEE SHEETS M-2, AND E-5.



2 ROOF FRAMING PLAN
1/4" = 1'-0"

ROOF PLAN NOTES:

1. 8" PRECAST HOLLOWCORE (HC) SLABS WITH 2" CONCRETE TOPPING SLAB TO BE DESIGNED BY MANUFACTURER (MFR). HC SLABS SHALL BE DESIGNED TO SUPPORT THE UNIFORM AND CONCENTRATED LOADS PROVIDED IN ACCORDANCE WITH ALL APPLICABLE CODES AND SPECIFICATIONS.
2. ROOF DESIGN LOADS
   -UNIFORM LOADS: (RE: GENERAL NOTES AND S-5)
   -LATERAL LOADS: (RE: 1/S-5 AND 4/S-5)
3. PRECAST HC SLAB MFG SHALL DETERMINE FINAL PLANK LAYOUT AND SUBMIT FOR APPROVAL.
4. CONTRACTOR SHALL COORDINATE WITH PRECAST HC SLAB MFG TO AVOID PRESTRESS TENDONS IN PRECAST HC SLAB WHEN DRILLING FOR ANCHORS. THE PRECAST HC SLAB MFG MAY PROPOSE ALTERNATE ANCHOR DETAILS FOR APPROVAL.

0 2' 4' 8'
1/4"=1'-0"

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GENERATOR BUILDING
FOUNDATION AND ROOF FRAMING PLAN

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0 1"

SHEET
S-3
SEQ.
16

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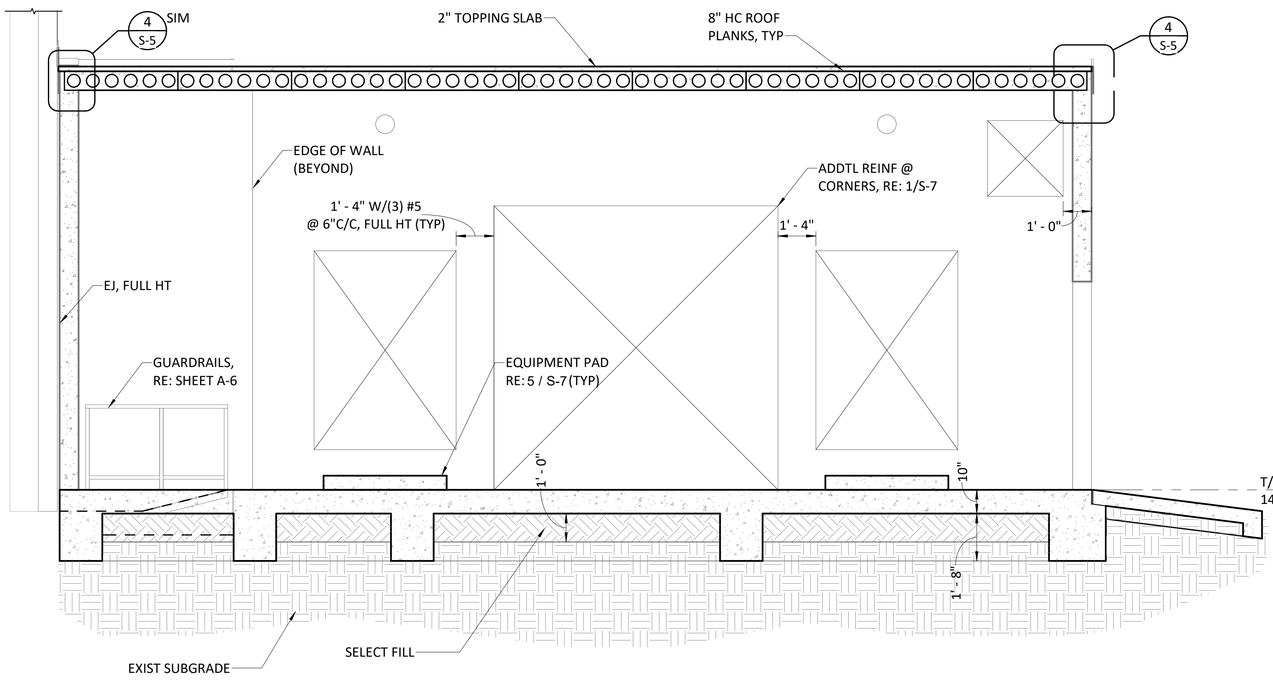
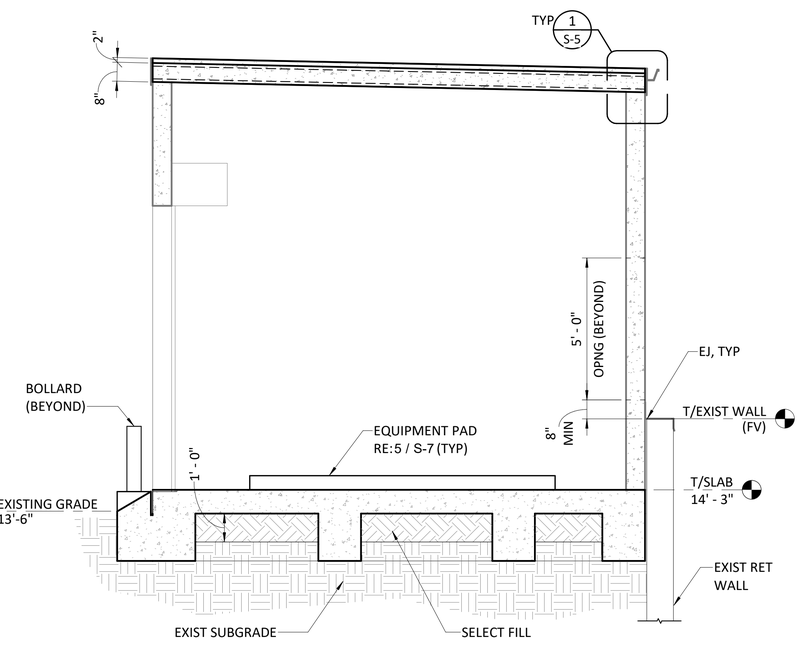
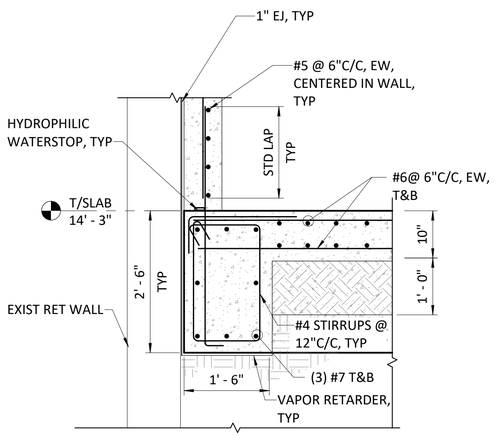


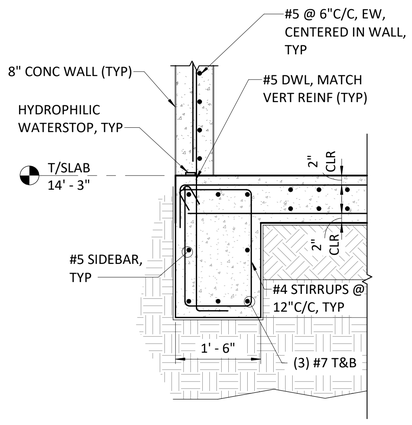
1 S-3 SECTION I
3/8" = 1'-0"



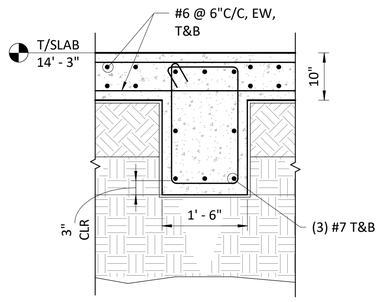
2 S-3 SECTION II
3/8" = 1'-0"



3 S-3 DETAIL @ EXIST RETAINING WALL
3/4" = 1'-0"



4 S-3 DETAIL @ WEST WALL
3/4" = 1'-0"



5 S-3 DETAIL @ INTERIOR BEAM
3/4" = 1'-0"

0 4" 8" 1'
1-1/2"=1'-0"

0 6" 1' 2'
3/4"=1'-0"

0 1' 2' 4'
3/8"=1'-0"

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JEFFERSON COUNTY, TX
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GENERATOR BUILDING
SECTIONS AND DETAILS I

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SHEET S-4
SEQ. 17

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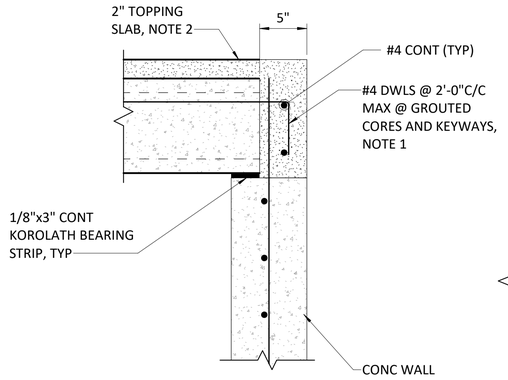
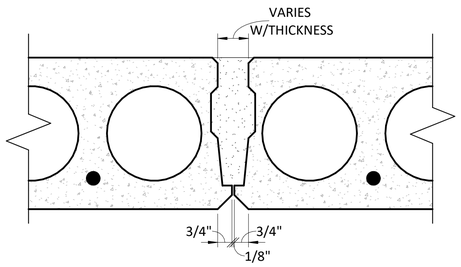


DETAIL NOTES:

1. CONNECTION TO WALL DESIGN FOR UPLIFT AND 180 PLF IN-PLANE LATERAL LOAD AT TOP OF WALL AND 390 PLF OUT-OF-PLANE LOAD AT TOP OF WALL.
2. GROUT, REFER TO SPECIFICATION 03 41 00.

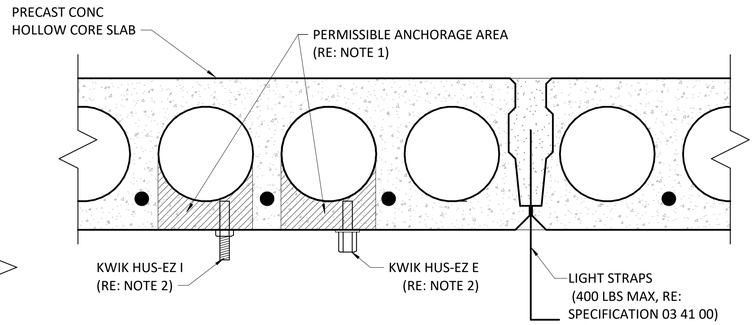
1 S-4 HOLLOW CORE ROOF @ LOAD BEARING WALL
NOT TO SCALE



DETAIL NOTES:

1. ALL JOINTS BETWEEN HOLLOW CORE PLANKS SHALL BE FULLY FILLED WITH GROUT, RE: SPECIFICATION 03 41 00.

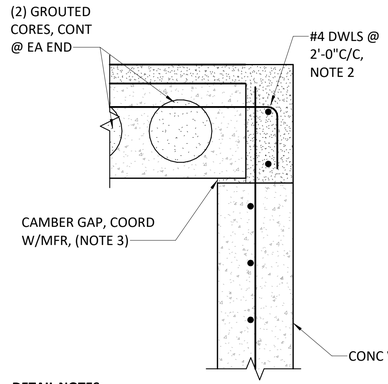
2 TYPICAL GROUTED KEYWAY
3" = 1'-0"



DETAIL NOTES:

1. PERMISSIBLE ANCHOR LOCATION MUST BE ESTABLISHED TO PREVENT DAMAGE TO PRESTRESSED CABLE DURING DRILLING PROCESS. COORDINATE WITH HOLLOW CORE SUPPLIER TO VERIFY LOCATION OF STRESSING STRANDS.
2. FOR HANGER LOADS OF LESS THAN 500 LBS, USE HILTI POST-INSTALLED ANCHORS. USE GALVANIZED HILTI KWIK HUS-EZ I OR HUS-EZ E, 3/8"Ø WITH 1 3/8" MIN EMBEDMENT. INSTALL PER MANUFACTURERS REQUIREMENTS AND SPECIFICATIONS.

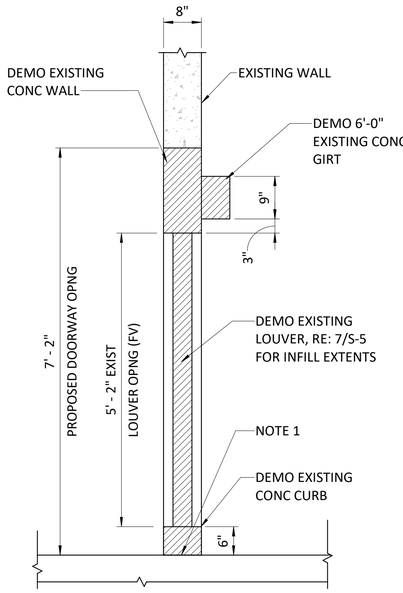
3 MISC HANGER DETAILS
3" = 1'-0"



DETAIL NOTES:

1. REFER TO 1 / S-5 FOR ADDITIONAL INFORMATION.
2. CONNECTION TO WALL DESIGN FOR UPLIFT AND 780 PLF IN-PLANE LATERAL LOAD AT TOP OF WALL AND 390 PLF OUT-OF-PLANE LATERAL LOAD AT TOP OF WALL.
3. COORDINATE MAXIMUM MIDSPAN CAMBER GAP WITH MANUFACTURER. APPROXIMATE MIDSPAN CAMBER GAP SHALL BE 0.4 INCHES. CAMBER GAP SHALL BE GROUT FILLED IMMEDIATELY AFTER PLANK PLACEMENT.

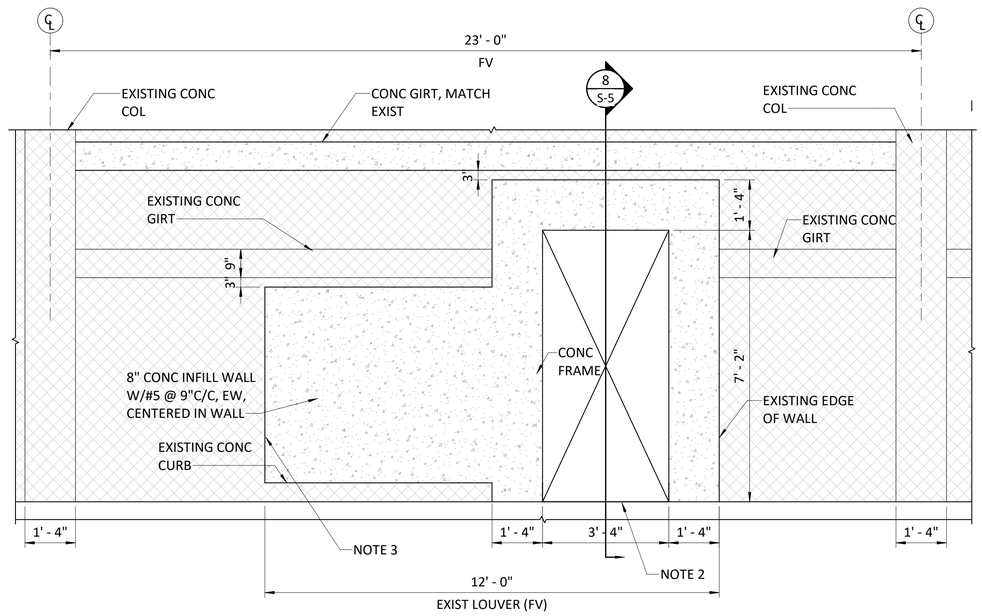
4 S-4 HOLLOW CORE ROOF @ END WALLS
NOT TO SCALE



NOTES:

1. REPAIR EXIST CONCRETE, TYPICAL, REFER TO 2/S-6.

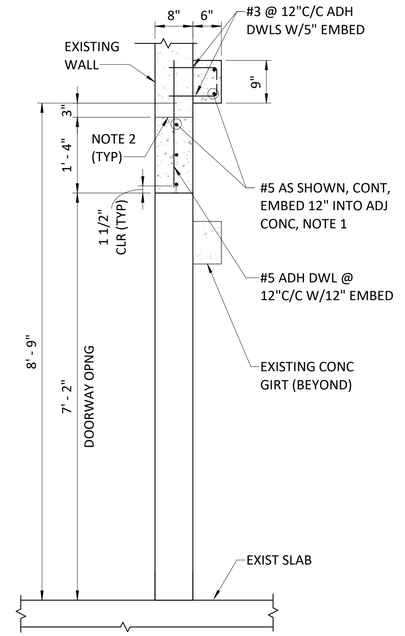
5 DOORWAY OPENING DEMOLITION DETAIL
3/4" = 1'-0"



NOTES:

1. REFER TO 5/S-5 FOR REQUIRED DEMOLITION PRIOR TO FABRICATION OR CONSTRUCTION.
2. REPAIR CONCRETE AT THRESHOLD. SEE DETAIL 2/S-6.
3. EMBED REBAR 12" INTO EXISTING ADJACENT CONCRETE AT (3) SIDES. DO NOT OVER CUT AT CORNERS. APPLY A SINGLE BEAD OF ADEKA P-201 OR APPROVED EQUAL AT ALL JOINT INTERFACES, TYPICAL.

7 DOORWAY OPENING
1/2" = 1'-0"



NOTES:

1. EMBED REBAR 12" INTO EXISTING ADJACENT CONCRETE AT ALL SIDES OF HEAD AND JAMB, TYPICAL.
2. SURFACE ROUGHENED TO 1/4" AMPLITUDE TO WITHIN 1" OF EDGE, TYPICAL.

8 S-3 DOORWAY OPENING SECTION
3/4" = 1'-0"

0 1" 2" 4" 8"
3"=1'-0"
0 6" 1' 2'
3/4"=1'-0"
0 1' 2' 4'
1/2"=1'-0"

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JEFFERSON COUNTY, TX
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GENERATORS AND BUILDING
STRUCTURAL
GENERATOR BUILDING
SECTIONS AND DETAILS II

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CHECKED	PAB

NO.	ISSUE	BY	DATE	FILE NAME
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SHEET S-5
SEQ. 18

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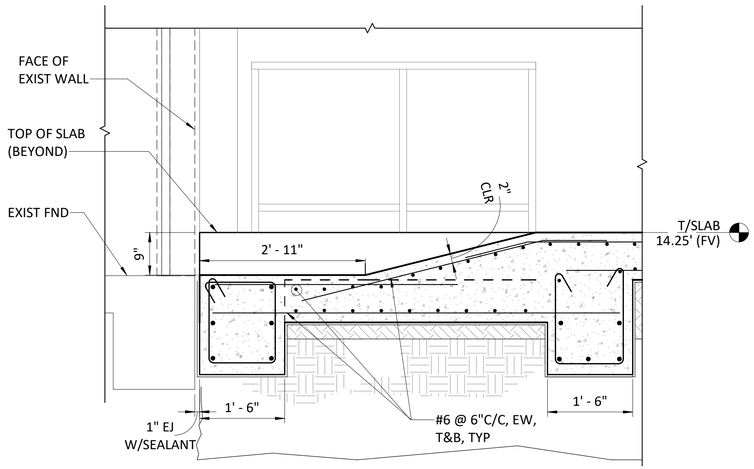
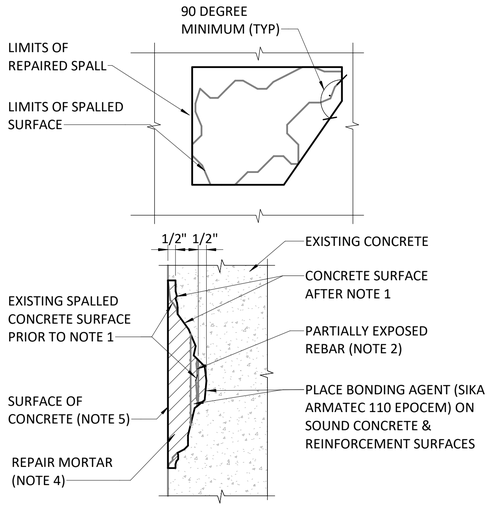


1 S-3 RAMP SECTION
3/4" = 1'-0"



DETAIL NOTES:

1. SAW CUT PERIMETER OF SPALLED AREA. REMOVE CONCRETE WITHIN CUT PERIMETER AS REQUIRED TO PROVIDE A 1/2" MINIMUM REPAIR DEPTH. REMOVE ALL UNSOUND CONCRETE. CLEAN REBAR OF CORROSION AND CONTAMINATES USING MECHANICAL MEANS.
2. IF ANY REBAR HAS MORE THAN HALF ITS CROSS-SECTION EXPOSED, THEN REMOVE CONCRETE FROM AROUND THE BAR TO A MINIMUM DEPTH OF 1/2".
3. CRACKS IN SOUND CONCRETE, THAT EXTEND OUT FROM THE SPALLED AREA TO BE REPAIRED, SHALL BE PRESSURE INJECTED WITH HIGH STRENGTH, LOW VISCOSITY EPOXY. USE SIKADUR 35, HI-MOD LV. PROVIDE SUPPORT PRODUCTS AND CRACK PREPARATION AS RECOMMENDED BY SIKA.
4. REPAIR MORTAR SHALL BE SIKATOP 122 PLUS (FOR HORIZONTAL SURFACES) OR SIKATOP 123 PLUS (FOR VERTICAL AND OVERHEAD SURFACES), BY SIKA CORPORATION. PREPARE, INSTALL IN MULTIPLE LIFTS, FINISH, AND CURE AS RECOMMENDED BY MANUFACTURER.
5. FINISHED SURFACE TEXTURE SHALL MATCH EXISTING FINISH TEXTURE.

2 TYPICAL CONCRETE SPALL & CRACK REPAIR
NOT TO SCALE

0 6" 1' 2'
3/4"=1'-0"

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SECTIONS AND DETAILS III

F&N JOB NO.	JFF22292
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FILE NAME
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SHEET
S-6

SEQ.
19

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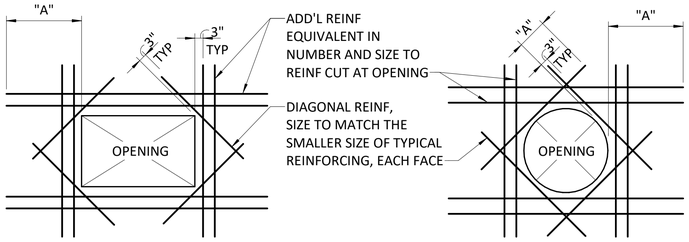


RECTANGULAR OPENING

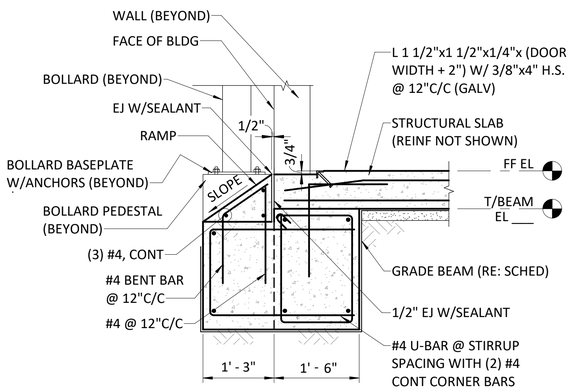
CIRCULAR OPENING

DETAIL NOTES:

1. CUT TYPICAL REINFORCING TO PROVIDE 3 INCHES CLEAR ON ALL SIDES OF OPENING.
2. REFER TO DRAWINGS FOR POSSIBLE EXCEPTIONS TO THIS TYPICAL DETAIL.
3. PLACE ADDITIONAL REINFORCING IN SAME ORIENTATION AND POSITION AS REINFORCING CUT BY OPENING, HALF ON EACH SIDE OF OPENING. PROVIDE ONE SET OF REINFORCING FOR EACH LAYER OF REINFORCING CUT.
4. ADDITIONAL REINFORCING SHALL BE INTERSPERSED WITH TYPICAL REINFORCING FOR A MINIMUM CENTER-TO-CENTER SPACING OF 3 INCHES. CLEAR SPACING BETWEEN REINFORCING SHALL NOT BE LESS THAN 2 INCHES.
5. "A" = 48 BAR DIAMETER LENGTH BEYOND OPENING.
6. REINFORCING IS TO EXTEND ACROSS ALL ADJACENT CONSTRUCTION JOINTS. PROVIDE STANDARD HOOK IF FULL EMBEDMENT LENGTH IS NOT POSSIBLE.
7. SEE OTHER DISCIPLINES' DRAWINGS FOR OPENINGS NOT SHOWN ON STRUCTURAL DRAWINGS.
8. ADDITIONAL AND DIAGONAL REINFORCING MAY BE OMITTED WHEN OPENING IS FRAMED BY BEAMS, WALLS, OR SLABS.
9. ADDITIONAL REINFORCING IS NOT REQUIRED WHEN SPECIFIED REINFORCING IS NOT CUT. DIAGONAL REINFORCING IS REQUIRED REGARDLESS IF ADDITIONAL REINFORCING IS NOT CUT.

1 TYPICAL WALL OR SLAB OPENING ADDITIONAL REINFORCEMENT

NOT TO SCALE

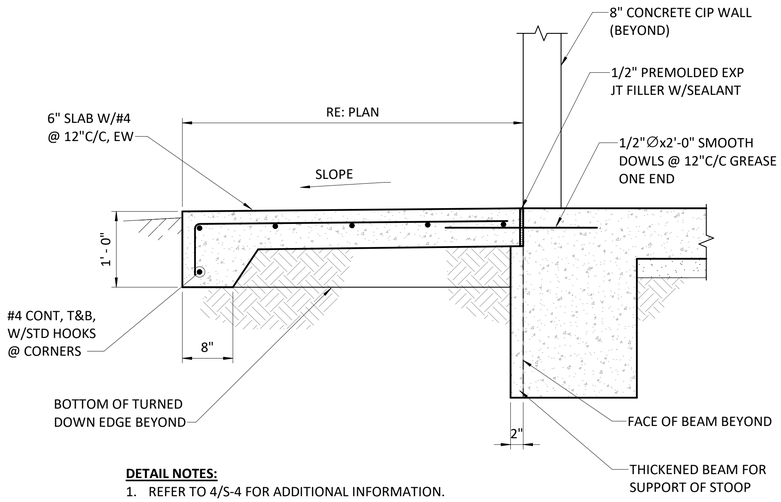


DETAIL NOTES:

1. REFER TO S-4 FOR ADDITIONAL INFORMATION.
2. REFER TO ARCH FOR ADDITIONAL INFORMATION AT OVERHEAD DOOR.

2 RAMP SECTION

NOT TO SCALE

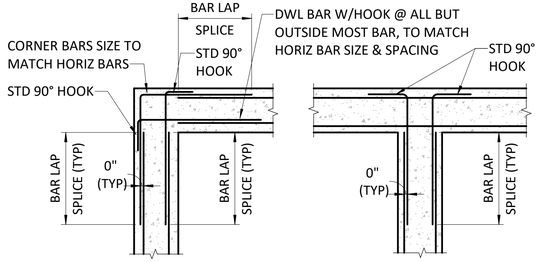


DETAIL NOTES:

1. REFER TO 4/S-4 FOR ADDITIONAL INFORMATION.

3 STOOP SECTION

NOT TO SCALE

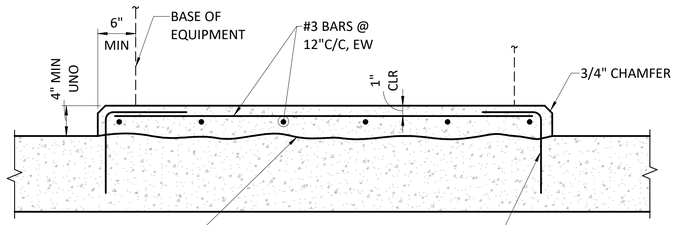


DETAIL NOTES:

1. REINFORCING SHOWN APPLIES TO ALL TOP, BOTTOM AND SIDE BARS. ALL REQUIRED BARS ARE NOT SHOWN IN DETAIL.
2. AT CONTRACTOR'S OPTION, UNLESS NOTED OTHERWISE, ELIMINATE DOWELS AND CORNER BAR AND TERMINATE HORIZONTAL BARS WITH STANDARD HOOKS.

4 CORNER @ INTERSECTION REINFORCING

NOT TO SCALE

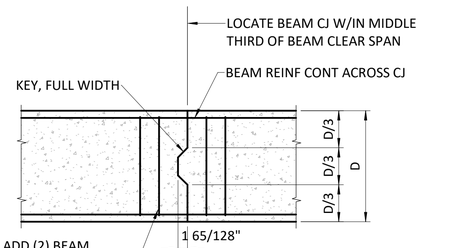


DETAIL NOTES:

1. REFER TO SHEET E-7 FOR ELECTRICAL EQUIPMENT ATTACHMENTS TO CONCRETE PAD.

5 INTERIOR EQUIPMENT PAD

NOT TO SCALE

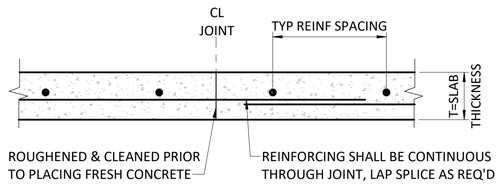


DETAIL NOTE:

1. BEAM TYPICAL STIRRUP AND SIDE REINFORCING NOT SHOWN.

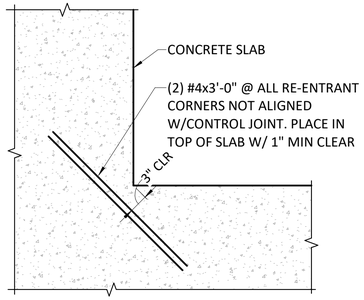
6 TYPICAL GRADE BEAM CONSTRUCTION JOINT

NOT TO SCALE



7 SLAB CONSTRUCTION JOINT

NOT TO SCALE



8 RE-ENTRANT CORNER REINFORCING DETAIL

NOT TO SCALE

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GENERATORS AND BUILDING
STRUCTURAL

STANDARD SECTIONS AND DETAILS

F&N JOB NO. JFF22292
DATE 05/15/2023
DESIGNED BBW
DRAWN JLM
CHECKED PAB
REVISED
DATE
BY
ISSUE
NO.
FILE NAME ST-JFF22292-R21.RVT
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale. 0 1

SHEET S-7
SEQ. 20

Plot Date: 5/12/2023 2:05:59 PM

HVAC SYMBOLS

(ALL SYMBOLS SHOWN ARE NOT NECESSARILY USED ON THE DRAWINGS)

ABBREVIATIONS

A/C	AIR CONDITIONING	HP	HORSEPOWER
AFF	ABOVE FINISHED FLOOR	HTG	HEATING
AI	ANALOG INPUT	IN	INCHES
AO	ANALOG OUTPUT	KW	KILOWATT
APPROX	APPROXIMATELY	LAT	LEAVING AIR TEMPERATURE
ARCH	ARCHITECTURE/ARCHITECTURAL	LWT	LEAVING WATER TEMPERATURE
AV	ANALOG VALUE	MAX	MAXIMUM
BI	BINARY INPUT	MECH	MECHANICAL
BHP	BRAKE HORSEPOWER	MCA	MINIMUM CIRCUIT AMPACITY
BO	BINARY OUTPUT	MBH	THOUSANDS BTU's PER HOUR
BOD	BOTTOM OF DUCT	MIN	MINIMUM
BTUH	BRITISH THERMAL UNIT PER HOUR	MOCP	MAXIMUM OVERCURRENT PROTECTION
BV	BINARY VALUE	NFPA	NATIONAL FIRE PROTECTION ASSOC.
C	CELSIUS	NC	NOISE CRITERIA
CC	COOLING COIL	NOM	NOMINAL
CFM	CUBIC FEET PER MINUTE	NTS	NOT TO SCALE
CD	CONDENSATE DRAIN	NO	NUMBER
CONN	CONNECTION	N.C.	NORMALLY CLOSED
dB	DECIBELS	N.O.	NORMALLY OPEN
DI	DIGITAL INPUT	OA	OUTSIDE AIR
DIA	DIAMETER	P/PH	PHASE
DB	DRY BULB	PLBG	PLUMBING
DDC	DIRECT DIGITAL CONTROL	PSI	POUNDS PER SQUARE INCH
DEG	DEGREE	RE	REFER/REFERENCE
DO	DIGITAL OUTPUT	RA	RETURN AIR
DX	DIRECT EXPANSION	RPM	REVOLUTIONS PER MINUTE
DWGS	DRAWINGS	SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOC.
ELEC	ELECTRIC/ELECTRICAL		
EAT	ENTERING AIR TEMPERATURE	SQ FT	SQUARE FEET
EWT	ENTERING WATER TEMPERATURE	SP	STATIC PRESSURE
EFF	EFFICIENCY	SA	SUPPLY AIR
EL	ELEVATION	TEMP	TEMPERATURE
EMCS	ENERGY MONITORING AND CONTROL SYSTEM	T-STAT	THERMOSTAT
EXH	EXHAUST	TYP	TYPICAL
F	FAHRENHEIT	VAV	VARIABLE AIR VOLUME
FLEX	FLEXIBLE	VFD	VARIABLE FREQUENCY DRIVE
FPM	FEET PER MINUTE	VD	VOLUME DAMPER
FT	FEET, FOOT	WT	WATTS
GPM	GALLONS PER MINUTE	WTR	WATER
HC	HEATING COIL	WC	WATER COLUMN
HVAC	HEATING, VENTILATION AND AIR CONDITIONING	WG	WATER GAUGE
HZ	HERTZ	WB	WET BULB

DUCTWORK SYMBOLS

- SUPPLY AIR DIFFUSER - ARROWS INDICATE PATTERN. NO ARROWS SHOWN EQUALS 4-WAY.
- RETURN/TRANSFER AIR GRILLE
- EXHAUST GRILLE
- SUPPLY AIR PLENUM SLOT DIFFUSER
- 12" — ROUND DUCTWORK
- 12/12 — RECTANGULAR DUCTWORK. SIZE INDICATED IN INCHES, FIRST NUMBER IS SIDE SHOWN
- FLEXIBLE DUCT
- RADIUS DUCTWORK ELBOW ROUND OR RECTANGULAR
- RECTANGULAR DUCTWORK BRANCH TAKE-OFF W/DAMPER AND 45 DEGREE BRANCH INLET
- ROUND DUCT BRANCH TAKE-OFF FROM RECTANGULAR OR FLAT OVAL MAIN WITH CONICAL TAP. PROVIDE BALANCE DAMPER FOR LOW PRESSURE DUCTWORK ONLY
- DUCTWORK SIZE TRANSITION.
- FLEXIBLE DUCT CONNECTION TO EQUIPMENT
- SUPPLY AIR DUCT UP
- SUPPLY AIR DUCT DOWN
- RETURN AIR DUCT UP
- RETURN AIR DUCT DOWN
- RELIEF OR EXHAUST AIR DUCT UP
- RELIEF OR EXHAUST AIR DUCT DOWN
- 90° ELBOW WITH TURNING VANES
- M — MOTORIZED DAMPER
- MANUAL VOLUME (BALANCE) DAMPER
- FD — FD - FIRE DAMPER; SD - SMOKE DAMPER; CD - COMBINATION FIRE/SMOKE DAMPER

PLAN SYMBOLOGY

NEW PLANS		DOUBLE LINE
DUCTWORK	EXISTING TO REMAIN	
	DEMOLITION	
	NEW	
PIPING	EXISTING TO REMAIN	
	DEMOLITION	
	NEW	
EXISTING EQUIPMENT (FANS, AIR DEVICES, PUMPS, ETC.) TO BE RELOCATED.		R
NEW EQUIPMENT		

EQUIPMENT DESIGNATIONS

L	LOUVER
SF	SUPPLY FAN

MISCELLANEOUS

- A200 — DIFFUSER/GRILLE/REGISTER LABEL: "A" - TYPE/DESIGNATION; "200" - AIRFLOW (CFM)
- T — THERMOSTAT (LOCAL CONTROL "X" INDICATES ZONE)
- T — TEMPERATURE SENSOR
- H — HUMIDITY SENSOR
- P — PRESSURE SENSOR
- C — CO2 SENSOR
- SP — DUCT MOUNTED STATIC PRESSURE SENSOR
- S — DUCT SMOKE DETECTOR
- DRAWING NOTE REFERENCE
- ∅ — DIAMETER/PHASE
- POINT OF NEW CONNECTION BETWEEN NEW AND EXISTING WORK
- SENSOR WITH LOCKING PROTECTIVE GUARD — X

GENERAL NOTES

1. THIS PROJECT IS DESIGNED BASED ON THE FOLLOWING CODES: INTERNATIONAL MECHANICAL CODE 2015, INTERNATIONAL ENERGY CONSERVATION CODE 2015, ASHRAE 62.1.
2. ALL INFORMATION REQUIRED FOR DESIGN MAY NOT BE COVERED IN THE DRAWINGS. REFER TO DIVISION 23 TECHNICAL SPECIFICATIONS AND OTHER RELATED SECTIONS FOR ADDITIONAL INFORMATION.
3. ALL DUCT SIZES SHOWN ON THE DRAWINGS ARE NET INSIDE CLEAR DIMENSIONS.
4. UTILIZE LONG RADIUS ELBOWS WHERE SPACE PERMITS UNLESS OTHERWISE NOTED. ALL RECTANGULAR ELBOWS SHALL CONTAIN TURNING VANES.
5. COORDINATE WITH OTHER UTILITIES TO AVOID INTERFERENCES WHEN INSTALLING DUCTWORK, PIPING AND EQUIPMENT.
6. FURNISH AND INSTALL ALL EQUIPMENT AS PER MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS. PROVIDE MODIFICATIONS AND ACCESSORIES AS REQUIRED AND RECOMMENDED BY THE MANUFACTURER TO ASSURE PROPER OPERATION OF THE EQUIPMENT.
7. VERIFY DIMENSIONS, LOCATIONS, ELEVATIONS AND CONFIGURATION OF ALL ITEMS ASSOCIATED WITH THE INSTALLATION OF DUCTWORK AND EQUIPMENT.
8. EQUIPMENT, DUCTWORK AND PIPING SHALL NOT BE SUPPORTED OR SECURED TO OTHER EQUIPMENT, DUCTWORK, PIPING OR OTHER UTILITIES.
9. PAINT ALL EQUIPMENT VISIBLE THROUGH AIR DEVICES MATT BLACK.
10. PROVIDE MANUAL VOLUME DAMPERS IN ALL DUCTWORK AT ALL DUCT SPLITS, BRANCH RUNOUTS AND DUCT COLLARS FOR REGISTERS. ALL MANUAL DAMPERS MAY NOT BE SHOWN ON DRAWINGS.
11. ALL DUCTWORK SHALL BE CONSTRUCTED, SEALED AND INSTALLED IN CONFORMANCE TO SMACNA DUCT CONSTRUCTION STANDARDS.
12. TO RESOLVE FIELD PROBLEMS IN ROUTING DUCTWORK THE CONTRACTOR SHALL USE THE SAME CIRCULAR EQUIVALENT DIAMETER TO TRANSFORM DUCT SIZE FROM THAT SPECIFIED ON THE DRAWINGS.

$$DE = \frac{1.30\,(AB)^{0.625}}{(A+B)^{0.250}}$$

DE = CIRCULAR EQUIVALENT OF RECTANGULAR DUCT IN INCHES
A = LENGTH OF ONE SIDE OF DUCT IN INCHES
B = LENGTH OF OTHER SIDE OF DUCT IN INCHES

13. PROVIDE FIRE DAMPERS IN DUCTWORK AT ALL FIRE BARRIER PENETRATIONS. PROVIDE ACCESS DOORS IN DUCTWORK TO VIEW AND SERVICE FIRE DAMPERS PER SMACNA AND APPLICABLE LOCAL CODES.
14. PROVIDE FIRE RESISTANT FLEXIBLE CONNECTION WHENEVER DUCTWORK IS CONNECTED TO MOTORIZED EQUIPMENT.
15. DUCT MATERIAL SHALL BE ZINC-COATED STEEL WITH METAL AND GALVANIZING THICKNESS AS PER SMACNA CONSTRUCTION STANDARDS.
16. PROVIDE OSHA-REQUIRED CLEARANCES AROUND ALL HVAC EQUIPMENT AND COMPONENTS FOR PERSONNEL ACCESS AND MAINTENANCE.
17. ALL PIPE HANGERS AND SUPPORTS SHALL COMPLY WITH MANUFACTURER'S STANDARDIZATION SOCIETY (MSS) STANDARDS. VERTICAL PIPES MUST BE SUPPORTED AT EACH FLOOR WITH PIPE CLAMPS.
18. INSULATE BACKS AND PLENUMS OF SUPPLY AIR DEVICES WITH MINIMUM 1" MINERAL FIBER.
19. ALL AIR MOVING EQUIPMENT CONTAINING PARTICULATE FILTERS SHALL NOT BE OPERATED WITHOUT PARTICULATE FILTERS IN PLACE.
20. ADD DIELECTRIC CONNECTIONS BETWEEN PIPES OF DIFFERENT METALS.
21. MAINTAIN A VERTICAL SLOPE OF 1/8" PER FOOT IN THE DIRECTION OF FLOW FOR ALL HORIZONTAL CONDENSATE PIPING. ROUTE CONDENSATE DRAIN ALONG WALL TO TERMINATE OPEN-SITE AT MOP SINK.
22. INSTALL ALL PIPING PARALLEL TO BUILDING LINES UNLESS STATED OTHERWISE IN DRAWINGS.

Freese and Nichols, Inc.
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STATE OF TEXAS — AI SEXTON — 143505 — LICENSED PROFESSIONAL ENGINEER — 05/12/2023

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CRANE BAYOU PUMP STATION
GENERATORS AND BUILDING
MECHANICAL

NOTES, SYMBOLS & ABBREVIATIONS

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DATE 05/15/2023
DESIGNED MRB
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VERIFY SCALE 0 1
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SHEET M-1
SEQ. 21

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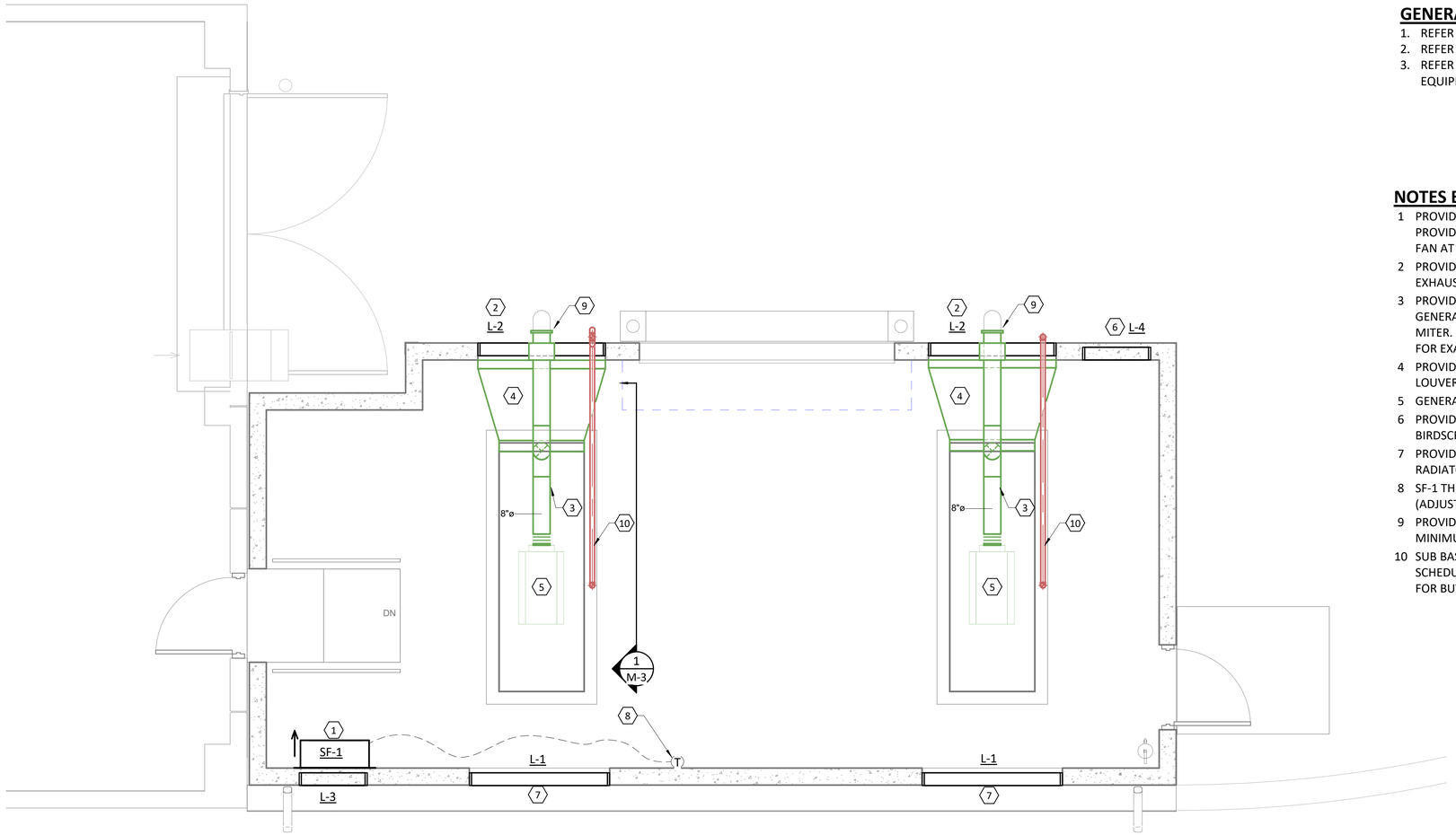

1 HVAC FLOOR PLAN
3/8" = 1'-0"

GENERAL NOTES

1. REFER TO M-1 FOR LEGEND, GENERAL NOTES AND ABBREVIATIONS.
2. REFER TO DIVISION 23 FOR TECHNICAL SPECIFICATIONS.
3. REFER TO SHEET E-6 FOR POWER ROUTING/CONNECTION TO MECHANICAL EQUIPMENT.

NOTES BY SYMBOL "⬡"

1 PROVIDE WALL MOUNTED SUPPLY FAN AND 32" X 32" INTAKE HURRICANE LOUVER. PROVIDE WITH BIRDSCREEN ON THE INSIDE OF THE LOUVER. MOUNT WITH BOTTOM OF FAN AT 8'-0" AFF. COORDINATE TO MAINTAIN A MINIMUM OF 1' CLEARANCE.

2 PROVIDE 84" X 60" EXHAUST HURRICANE LOUVER FOR GENERATOR AIRFLOW. CONNECT EXHAUST DUCT TO LOUVER. PROVIDE WITH BIRDSCREEN ON THE INSIDE OF THE LOUVER.

3 PROVIDE 8" ROUND EXHAUST PIPE WITH CALCIUM SILICATE INSULATION FOR GENERATOR EXHAUST. PROVIDE WITH REMOVABLE FLANGED OUTLET WITH 45 DEGREE MITER. PROVIDE WITH MANUFACTURES' BIRDSCREEN. FIELD VERIFY AND COORDINATE FOR EXACT LOCATIONS.

4 PROVIDE 2-HOUR RATED DUCT AND CONNECT FROM GENERATOR EXHAUST OPENING TO LOUVER. PROVIDE FLEXIBLE CONNECTOR AT EXHAUST CONNECTION.

5 GENERATOR EXHAUST MUFFLER PROVIDED BY OTHERS.

6 PROVIDE 32" X 32" EXHAUST HURRICANE LOUVER FOR ROOM AIRFLOW. PROVIDE WITH BIRDSCREEN ON THE INSIDE OF THE LOUVER.

7 PROVIDE 66" X 60"' INTAKE HURRICANE LOUVER FOR GENERATOR COMBUSTION AND RADIATOR AIRFLOW. PROVIDE WITH BIRDSCREEN ON THE INSIDE OF THE LOUVER.

8 SF-1 THERMOSTAT MOUNTED AT 4'-0" AFF. SETPOINT TEMPERATURE AT 90 DEGREES F (ADJUSTABLE).

9 PROVIDE COWL AND BIRDSCREEN WITH A VENTILATED STAINLESS STEEL WALL THIMBLE MINIMUM OF 9" DIAMETER LARGER THAN THE EXHAUST PIPE.

10 SUB BASE FUEL TANK 2" VENT TO EXTERIOR. PIPE TO BE ASTM A 53/A 53M, BLACK STEEL, SCHEDULE 40, TYPE E OR S, GRADE B. STEEL WELDING FITTINGS: ASTM A 234/A 234M, FOR BUTT AND SOCKET WELDING.

0 1' 2' 4'
3/8"=1'-0"

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STATE OF TEXAS · AI SEXTON · 143505 · LICENSED PROFESSIONAL ENGINEER · 05/12/2023

JEFFERSON COUNTY, TX
CRANE BAYOU PUMP STATION
GENERATORS AND BUILDING
MECHANICAL

FLOOR PLAN

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DRAWN MRB
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BY
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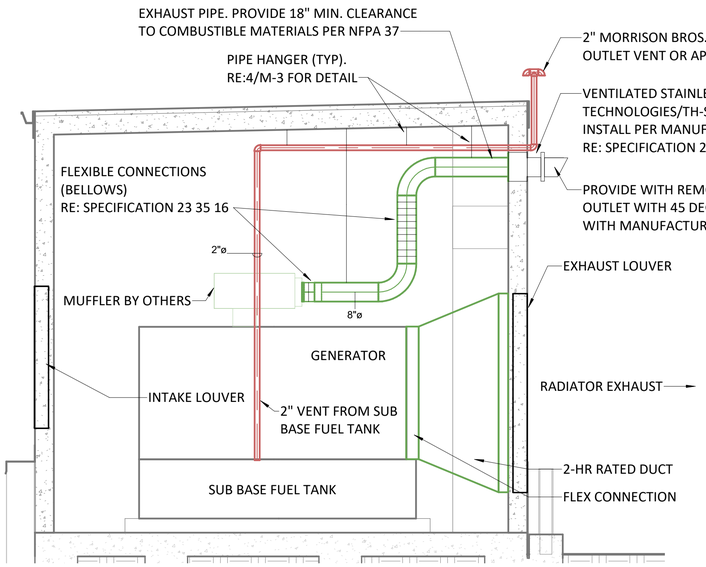
0 1"
FILE NAME HV-JFF22292-R21.RVT

SHEET M-2
SEQ. 22

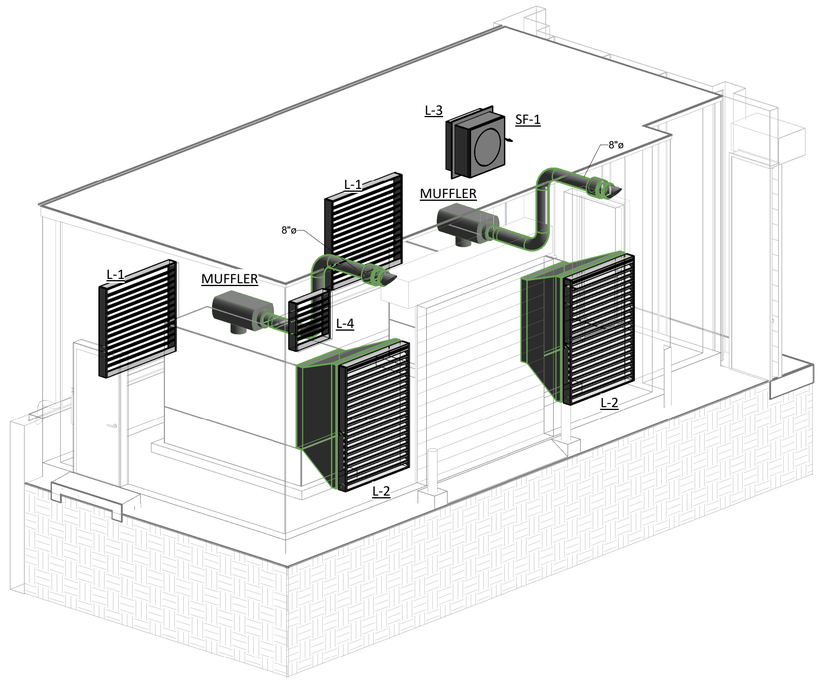
Plot Date: 5/12/2023 12:50:26 PM



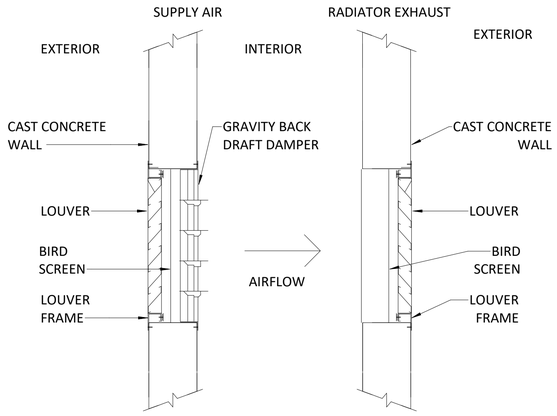
1 M-2 SECTION VIEW
3/8" = 1'-0"

SUPPLY FAN SCHEDULE										
						UNIT ELECTRICAL				
MARK	TYPE	SERVICE	CFM	ESP (IN W.G)	MAX. SONES	HP	RPM	VOLTAGE	PHASE	MANUFACTURER/MODEL
SF-1	SUPPLY	GENERATOR ROOM	1,000	0.50	16.3	0.25	1160	110	1	GREENHECK/AER-24-03-0603

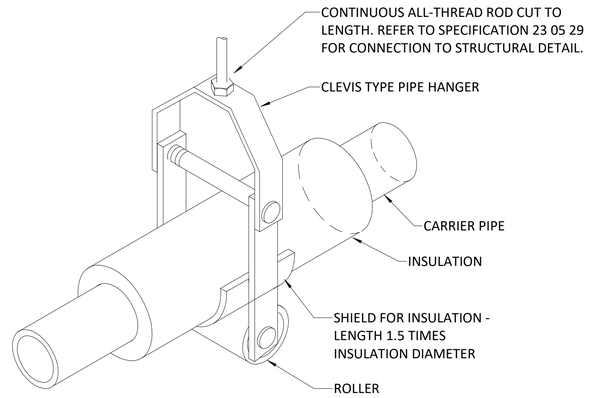
LOUVER SCHEDULE									
MARK	COUNT	TYPE	AREA SERVED	CFM	ESP (IN W.G)	WIDTH	HEIGHT	FREE AREA (SQFT)	MANUFACTURER/MODEL
L-1	2	INTAKE	GENERATOR ROOM	12,800	0.09	66	60	16.6	GRRENHECK ESD-635X-66X60
L-2	2	EXHAUST	GENERATOR ROOM	10,800	0.03	60	84	22	GRRENHECK ESD-635X-60X84
L-3	1	INTAKE	GENERATOR ROOM	900	0.01	32	32	3.8	GRRENHECK ESD-635X-32X32
L-4	1	EXHAUST	GENERATOR ROOM	900	0.01	32	32	3.8	GRRENHECK ESD-635X-32X32



2 HVAC ISOMETRIC



3 LOUVER DETAIL
NOT TO SCALE



4 ROLLER CLEVIS TYPE PIPE/DUCT HANGER
NOT TO SCALE

0 1' 2' 4'
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CRANE BAYOU PUMP STATION GENERATORS AND BUILDING
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DETAILS AND SCHEDULE

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SHEET M-3
SEQ. 23

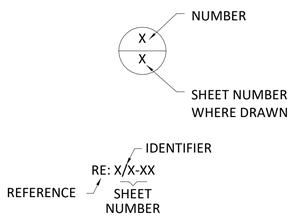
Plot Date: 5/12/2023 12:50:28 PM

ABBREVIATIONS	
AC	ALTERNATING CURRENT
AF	AMP FRAME
AFD	ADJUSTABLE FREQUENCY DRIVE
AFF	ABOVE FINISHED FLOOR OR GRADE
AG	ABOVE GRADE
AGSB	ABOVE GROUND SPLICE BOX
AIC	AMPERES INTERRUPTING CAPACITY
AL OR ALUM	ALUMINUM
AMP OR A	AMPERE
AT	AMP TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
C.	CONDUIT
CB	CIRCUIT BREAKER
C/C	CENTER TO CENTER
CHH	COMMUNICATION HANDHOLE
CKT	CIRCUIT
CLF	CURRENT LIMITING FUSE
CMH	COMMUNICATION MANHOLE
CONT.	CONTINUATION
CP	CONTROL PANEL
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY
CS	CONTROL SWITCH OR COMBINATION STARTER
CT	CURRENT TRANSFORMER
CU	COPPER
DC	DIRECT CURRENT
DI	DOOR INTERLOCK
DN	DOWN
DP	DIFFERENTIAL PRESSURE
DWG	DRAWING
EMH	ELECTRICAL MANHOLE
EC	EMPTY CONDUIT
ELEC	ELECTRICAL
ELEV	ELEVATION
EM	EMERGENCY
EHH	ELECTRICAL MANHOLE
EO	ELECTRICALLY OPERATED
ETM	ELAPSED TIME METER
EUC	ELECTRIC UTILITY CO.
EXIST.	EXISTING
FBO	FURNISHED BY OTHERS
FO	FIBER OPTIC
FRP	FIBERGLASS REINFORCED POLYESTER
FT	FEET
FU	FUSE
G. OR GRD	GROUND
GA.	GAUGE
GCP	GENERATOR CONTROL PANEL
GEN	GENERATOR
GFI	GROUND FAULT INTERRUPTER
GFS	GROUND FAULT SENSING
GO	GATE OPERATOR
GRS	GALVANIZED RIGID STEEL
HH	HANDHOLE
HP	HORSEPOWER
HT	HEIGHT
HTP	HEAT TRACE PANEL
HTR	HEATER
HZ	HERTZ
ID	INTERNAL DIAMETER
IMH	INSTRUMENT MANHOLE
INST	INSTRUMENT
IRP	INTERPOSING RELAY PANEL
JB	JUNCTION BOX
KVA	KILOVOLT-AMPERE
KW	KILOWATT
LA	LIGHTNING ARRESTER
LC	LIGHTNING CONTACTOR
LED	LIGHT EMITTING DIODE
LGTS ON LTG	LIGHTS/LIGHTING
LP	LIGHTING PANEL
LSIG	LONG, SHORT, INSTANTANEOUS, GROUND
MBFV	MOTOR OPERATED BUTTERFLY VALVE
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MFR	MANUFACTURER
MFR'S	MANUFACTURER'S
MH	MANHOLE
ML	MULTILIN
MM	MULTIMODE
MOV	MOTOR OPERATED VALVE
MLO	MAIN LUGS ONLY
MPR	MOTOR PROTECTION RELAY
MR	MULTIRATIO
MTD	MOUNTED

ABBREVIATIONS	
MTG	MOUNTING
MTS	MANUAL TRANSFER SWITCH
NC or N.C.	NORMALLY CLOSED
NF	NON-FUSED
NO or N.O.	NORMALLY OPEN OR NUMBER
NO.	NUMBER
OD	OUTSIDE DIAMETER
OHE	OVERHEAD ELECTRIC
OL	OVERLOAD
OLX	OVERLOAD CONTROL RELAY
P	POLE
PB	PULL BOX OR PUSH BUTTON
PC	PHOTOCELL
PCC	PUMP CONTROL CONSOLE
PFR	PHASE FAILURE RELAY
PH	PHASE
PL.	PLATE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PPR	PHASE PROTECTIVE RELAY
PR.	PAIR OR PAIR CABLE
PT	POTENTIAL TRANSFORMER
PTT	PUSH TO TEST TYPE
PVC	POLYVINYL CHLORIDE
QTY	QUANTITY
RC	REMOTE CONTROL
RCP	RELAY CONTROL PANEL
REC.	CIRCUIT RECLOSURE
RECP	RECEPTACLES
REQD.	REQUIRED
RTD	RESISTANCE TEMPERATURE DETECTOR
RTU	REMOTE TERMINAL UNIT
RVAT	REDUCED VOLTAGE AUTO-TRANSFORMER
SC	SURGE CAPACITOR
SCH	SCHEMATIC
SCTB	SHORT CIRCUIT TERMINAL BLOCK
SEC	SECONDS OR SECONDARY
SHLD. OR SH	SHIELD OR SHIELDED
SHT	SHEET
SM	SINGLE-MODE
SN OR S/N	SOLID NEUTRAL
SPD	SURGE PROTECTION DEVICES
SSRVS	SOLID-STATE REDUCED VOLTAGE STARTER
SS	STAINLESS STEEL
ST	STARTER
STA.	STATION
STC	SIGNAL TERMINATION CABINET
SV	SOLENOID VALVE
SW	SWITCH
SWGR	SWITCHGEAR
TC	TERMINATION CABINET OR TRAY CABLE
TEL	TELEPHONE
TO	TIME DELAY ON OPENING
TPR	TRANSFORMER PROTECTION RELAY
TR	TRIAD
TS	TEMPERATURE SWITCH
TW	TWISTED
TYP	TYPICAL
UG	UNDERGROUND
UPS	UNINTERRUPTIBLE POWER SUPPLY
UTP	UNSHIELDED TWISTED PAIR CABLE
V	VOLTS
VAR.	VARIABLE
VFD	VARIABLE FREQUENCY DRIVE
VFI	VACUUM FAULT INTERUPTER
VO	VALVE OPERATOR
W	WITH, WIRE OR WATT
WP	WEATHERPROOF
WR	WEATHER RESISTANT
XFMR	TRANSFORMER
XMTR	TRANSMITTER
XP	EXPLOSION PROOF

NOTE:

THIS IS A STANDARD LEGEND. THEREFORE NOT ALL OF THIS INFORMATION MAY BE USED ON THIS PROJECT.



PLAN SYMBOL	DESCRIPTION
b A	LIGHTING FIXTURE "A" - FIXTURE TYPE "b" - SWITCH NUMBER
A	EMERGENCY BATTERY PACK LIGHT FIXTURE "A" - FIXTURE TYPE
X	CEILING MOUNTED EXIT SIGN "X" - FIXTURE TYPE
X	WALL MOUNTED EXIT SIGN ARROW INDICATES DIRECTION OF EGRESS "X" - FIXTURE TYPE
FACP	FIRE ALARM CONTROL PANEL
F	MANUAL PULL STATION
	CEILING MOUNTED STROBE
	WALL MOUNTED STROBE
	SMOKE DETECTOR
	HEAT DETECTOR
	HORN
	COMBINATION STROBE/HORN
	CONDUIT, EXPOSED/SURFACE MOUNTED
	CONDUIT OR DUCTBANK, CONCEALED
	CONDUIT, EXPOSED/SURFACE MOUNTED, TURNING UP
	CONDUIT, EXPOSED/SURFACE MOUNTED, TURNING DOWN
	CONDUIT STUBBED OUT AND CAPPED
OHE	OVERHEAD ELECTRIC LINE
UGE	UNDERGROUND ELECTRIC LINE
OHP	OVERHEAD PRIMARY LINE
UGP	UNDERGROUND PRIMARY LINE
OHS	OVERHEAD SECONDARY LINE
UGS	UNDERGROUND SECONDARY LINE
OHC	OVERHEAD COMMUNICATION LINE
UGC	UNDERGROUND COMMUNICATION LINE
OHFO	OVERHEAD FIBER OPTIC LINE
UGFO	UNDERGROUND FIBER OPTIC LINE
	FLEXIBLE METAL CONDUIT
	HEAT TRACE
2(3 #3/0, #2G., 3"C.)	DENOTES A QUANTITY OF TWO (2) 3-INCH CONDUITS EACH CONTAINING THREE NO. 3/0 AWG CONDUCTORS AND ONE NO.2 AWG GROUND CONDUCTOR
2-2/C #16	DENOTES A QUANTITY OF TWO INSTRUMENT CABLES. EACH CONSISTS OF TWO NO.16 AWG CONDUCTORS
3-4"C	THREE 4-INCH CONDUITS
MC1-XXX 4 #14, #14G., 3/4"C. (2 #14 SPARE)	CABLE TAG FOUR #14 CONTROL OR POWER CONDUCTORS, ONE #14 GROUND CONDUCTOR. ALL CONDUCTORS IN A 3/4" CONDUIT. TWO OF THE FOUR #14 CONTROL OR POWER CONDUCTORS ARE SPARE.
LA-1,3	HOMERUN, CIRCUITS 1 AND 3 RUN TO PANEL LA 2 #12, #12G., 3/4"C. UNLESS NOTED OTHERWISE
$b	SINGLE POLE SWITCH "b" - INDICATES SWITCH LEG SHALL CONTROL LIGHT FIXTURES WITH "b" - DESIGNATION
$Xc	MULTI POLE SWITCH "x" - INDICATES NUMBER OF POLE "c" - INDICATES SWITCH SHALL CONTROL LIGHT FIXTURES WITH "c" DESIGNATION
$M	MANUAL MOTOR STARTER /DISCONNECT
$3	3 WAY SWITCH
$4	4 WAY SWITCH
$D D	DIMMER LIGHTING CONTROL SWITCH
$TM TM	TIME SWITCH
	DUPLEX RECEPTACLE, 20A, 120V, 2P, 3W "C" - MOUNTED ABOVE COUNTERTOP "GFI" OR "GF" - GROUND FAULT INTERRUPTER TYPE "WP" - WEATHERPROOF
F	FLOOR MOUNTED RECEPTACLE
	SIMPLEX RECEPTACLE, GROUNDED TYPE
	QUADPLEX RECEPTACLE

PLAN SYMBOL	DESCRIPTION
J J	JUNCTION BOX
PB	PULL BOX
TC	TERMINAL CABINET
OS	OCCUPANCY SENSOR
PC	PHOTOCELL
PW	PREWIRED
MH	MANHOLE
M	UTILITY METER
M	MOTORIZED LOUVER
DAMP	INDICATES THAT ALL ELECTRICAL EQUIPMENT AND MATERIALS INSTALLED WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL BE OF NEMA 12 CONSTRUCTION UNLESS OTHERWISE NOTED
WET	INDICATES THAT ALL ELECTRICAL EQUIPMENT AND MATERIALS INSTALLED WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL BE OF NEMA 4 CONSTRUCTION UNLESS OTHERWISE NOTED
CORROSIVE	INDICATES THAT ALL ELECTRICAL EQUIPMENT AND MATERIALS INSTALLED WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL BE OF NEMA 4X CONSTRUCTION UNLESS OTHERWISE NOTED
CLASS I, DIV.1, GROUP D	INDICATES THAT ALL ELECTRICAL EQUIPMENT AND MATERIALS INSTALLED WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL CONFORM TO N.E.C REQUIREMENTS FOR THE HAZARDOUS AREA CLASSIFICATION SHOWN

ONE-LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION
	OR	PANEL
5	M	MOTOR, NUMBER DESIGNATES HORSEPOWER
VM ✳	-	VOLTMETER (WITH SWITCH IF 3-PHASE)
AM ✳	-	AMMETER (WITH SWITCH IF 3-PHASE)
✳	-	✳ METER WM - WATTMETER WHM - WATTHOUR METER WHDM - WATTHOUR DEMAND METER WHDR - WATTHOUR DEMAND RECORDER PF - POWER FACTOR METER ETM - ELAPSED TIME METER TRANSDUCER AX - CURRENT TRANSDUCER WX - WATT TRANSDUCER
#	-	RELAY, NO. AS INDICATED 25 - SYNCHRONISM CHECK RELAY 27 - UNDER VOLTAGE RELAY 38 - BEARING PROTECTIVE DEVICE 40 - LOSS OF EXCITATION RELAY 42 - RUNNING CONTACTOR/PILOT RELAY 46 - REVERSE PHASE/PHASE BALANCE/CURRENT RELAY 47 - PHASE SEQUENCE VOLTAGE RELAY 48 - MACHINE OR TRANSFORMER THERMAL RELAY 50 - INSTANTANEOUS OVERCURRENT RELAY 50G - INSTANTANEOUS GROUND 51 - TIME OVER CURRENT RELAY, GROUNDING RESISTOR TYPE 51N - TIME OVERCURRENT RELAY, RESIDUAL TYPE 51V - TIME OVERCURRENT RELAY WITH VOLTAGE RESTRAINT 59 - OVER VOLTAGE RELAY 60 - NEGATIVE SEQUENCE VOLTAGE RELAY 62 - TIME DELAY RELAY 63 - OVER PRESSURE RELAY 67 - AC DIRECTIONAL OVERCURRENT RELAY 83 - AUTOMATIC SELECTIVE CONTROL OR TRANSFER RELAY 86 - LOCKING-OUT RELAY 87 - DIFFERENTIAL PROTECTIVE RELAY B - SUFFIX INDICATES "BUS" G - SUFFIX INDICATES "GENERATOR" GF - GROUND FAULT IR - INTERPOSING RELAY PFR - PHASE FAILURE, PHASE REVERSAL, UNDERVOLTAGE, OVERVOLTAGE RELAY ST - SHUNT TRIP T - SUFFIX INDICATES "TRANSFORMER" TRP CAP - CAPACITOR TRIP X - SUFFIX INDICATES "AUXILIARY"

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JEFFERSON COUNTY, TX
CRANE BAYOU PUMP STATION
GENERATORS AND BUILDING
ELECTRICAL

LEGEND I

F&N JOB NO.	JFF22292
DATE	05/15/2023
DESIGNED	MCD
DRAWN	GTN
REVISED	-
CHECKED	JMC

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FILE NAME EL-JFF22292-R21.RVT

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SHEET E-1

SEQ. 24

ONE-LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION
CR#	-	AC INDUSTRIAL CONTROL RELAY COIL, # - NUMBER AS INDICATED
M#	-	MOTOR STARTER COIL, # - NUMBER AS INDICATED
	-	SPECIAL CAPACITOR ✳ SC - SURGE CAPACITOR PF - POWER FACTOR CORRECTION CAPACITOR
	-	PUSH BUTTON, MOMENTARY CONTACT, SPRING RETURN, NORMALLY CLOSED
	-	PUSH BUTTON, MOMENTARY CONTACT, SPRING RETURN, NORMALLY OPEN
	-	EMERGENCY STOP PUSH BUTTON WITH RED MUSHROOM HEAD OPERATOR (MAINTAINED CONTACT)
OFF ON	-	OFF/ON SELECTOR SWITCH
B A C X00 00X	-	3 POSITION SELECTOR SWITCH, MAINTAINED CONTACT O-OPEN X-CLOSED (A/B/C) HOA - HAND/OFF/AUTO HOR - HAND/OFF/REMOTE LOR - LOCAL/OFF/REMOTE OCS - OPEN/CLOSE/STOP OOA - ON/OFF/AUTO NOTE: 2 POSITION MULTI-CONTACT SWITCH FOLLOWS SAME CONVENTION
PTT	-	INDICATING LAMP, COLOR INDICATED ✳ R - RED G - GREEN B - BLUE W - WHITE A - AMBER O - ORANGE PTT - PUSH TO TEST
52	-	MEDIUM VOLTAGE DRAWOUT TYPE POWER CIRCUIT BREAKER
AF AT A P	CB	LOW VOLTAGE CIRCUIT BREAKER, 3 POLE UNLESS OTHERWISE NOTED A - AMP TRIP, P - POLES
MCP		MOTOR CIRCUIT PROTECTOR
MCP ✳ Sz#	☒	COMBINATION MOTOR CIRCUIT PROTECTOR AND MAGNETIC MOTOR STARTER ✳ FULL VOLTAGE NON-REVERSING UNLESS OTHERWISE NOTED: FVR - FULL VOLTAGE REVERSING FVNR - FULL VOLTAGE, NON REVERSING RVNR - REDUCED VOLTAGE NON-REVERSING 2S1W - TWO SPEED, ONE WINDING 2S2W - TWO SPEED, TWO WINDING Sz# - NEMA SIZE OF STARTER
✳	□	NON-FUSIBLE DISCONNECT SWITCH, 600 VOLT, 3 POLE ✳ AMPERE RATING NOTED
✳ ✱	◪	FUSIBLE DISCONNECT SWITCH, 600 VOLT, 3 POLE, AMPERE RATING AND FUSE SIZE AS NOTED ✳ AMPERE RATING NOTED ✱ FUSE RATING
	-	DRAWOUT TYPE EQUIPMENT OR DEVICE
	-	MEDIUM VOLTAGE CABLE TERMINATION
	-	MEDIUM VOLTAGE AIR INTERRUPTER SWITCH
	-	MEDIUM VOLTAGE FUSED AIR INTERRUPTER SWITCH
	-	MEDIUM VOLTAGE FUSED MOTOR CONTROLLER FUSED CONTACTOR DRAWOUT TYPE
VAC	-	VACUUM CONTACTOR
	-	SPEED POTENTIOMETER

ONE-LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION
TR#	-	TIMING RELAY RANGE AS NOTED, SET POINT AS NOTED #-NUMBER AS INDICATED TDD-TIME DELAY AFTER DE-ENERGIZATION-OFF DELAY TDE-TIME DELAY AFTER ENERGIZATION-ON DELAY NOTC-NORMALLY OPEN, TIMED CLOSING WHEN ENERGIZED NCTO-NORMALLY CLOSED, TIMED OPENING WHEN ENERGIZED NOTO-NORMALLY OPEN, TIMED OPENING WHEN DE-ENERGIZED NCTC-NORMALLY CLOSED, TIMED CLOSING WHEN DE-ENERGIZED
✳ -##	✳ -## ⊗	FIELD INSTRUMENT, TAG NO. OR LOOP NO. AS INDICATED ✳ - INDICATES INSTRUMENT TYPE DEFINED ON LOOP SHEETS ## - INDICATES LOOP NO.
	OR ⊗	LIQUID LEVEL (FLOAT) SWITCH NORMALLY CLOSED, OPENS ON FALLING LEVEL NORMALLY OPEN, CLOSES ON FALLING LEVEL NORMALLY CLOSED, OPENS ON RISING LEVEL NORMALLY OPEN, CLOSES ON RISING LEVEL
	PS OR ⊗	PRESSURE OR VACUUM SWITCH NORMALLY OPEN, CLOSES ON RISING PRESSURE NORMALLY CLOSED, OPENS ON RISING PRESSURE NORMALLY OPEN, CLOSES ON DROPPING PRESSURE NORMALLY CLOSED, OPENS ON DROPPING PRESSURE
	Ⓣ OR TS OR ⊗	TEMPERATURE SWITCH OR THERMOSTAT NORMALLY OPEN, CLOSES ON RISING TEMPERATURE NORMALLY OPEN, CLOSES ON DROPPING TEMPERATURE NORMALLY CLOSED, OPENS ON RISING TEMPERATURE NORMALLY CLOSED, OPENS ON DROPPING TEMPERATURE
	FS OR ⊗	FLOW SWITCH (AIR, WATER, ETC.) NORMALLY OPEN, CLOSES ON INCREASED FLOW NORMALLY CLOSED, OPENS ON INCREASED FLOW
	ZS OR ⊗	POSITION (LIMIT) SWITCH NORMALLY OPEN NORMALLY OPEN - HELD CLOSED NORMALLY CLOSED NORMALLY CLOSED - HELD OPEN
	TQ OR ⊗	TORQUE SWITCH NORMALLY CLOSED, OPENS ON HIGH TORQUE
	T	TRANSFORMER, RATINGS AND CONNECTIONS AS NOTED
#CT'S A	-	CURRENT TRANSFORMER # - QUANTITY A - RATIO
#PT'S	-	POTENTIAL TRANSFORMER # - QUANTITY
#CT'S A	-	GROUND CURRENT SENSOR TRANSFORMER # - QUANTITY A - RATIO
	-	CONTROL TRANSFORMER
	-	CONTROL POWER TRANSFORMER
G	-	GENERATOR, RATINGS AND CONNECTIONS AS NOTED
#A ATS-1 N S	-	TRANSFER SWITCH ATS - AUTOMATIC TRANSFER SWITCH MTS - MANUAL TRANSFER SWITCH "N" INDICATES NORMAL SOURCE "S" INDICATES STANDBY SOURCE #A INDICATES CONTINUOUS CURRENT RATING
	-	MOTOR OVERLOAD OVERLOAD RELAY HEATER

SYMBOL	DESCRIPTION
▽	DATA
▼	TELEPHONE
◫	COMBINATION TELEPHONE/DATA
▼	FLOOR MOUNTED DATA OUTLET
⌀	FLOOR MOUNTED TELEPHONE OUTLET
⌀	POKE-THRU DEVICE COMBINATION POWER/DATA/VOICE OUTLET
⌀	FLOOR COMBINATION POWER/DATA/VOICE OUTLET
▽	CATV
✳	SECURITY CAMERA ✳ F - FIXED Z - PAN/TILT/ZOOM
##	SECURITY DEVICE SEC - SECURITY PANEL MAG - MAGNETIC LOCK CR - CARD READERS DR - REMOTE DOOR RELEASE MD - MOTION DETECTOR SK - SECURITY KEYPAD ES - ELECTRIC STRIKE DS - DOOR SWITCH IC - INTERCOM STATION SB - SECURITY PANIC BUTTON

NOTE:
THIS IS A STANDARD LEGEND. THEREFORE NOT ALL OF THIS INFORMATION MAY BE USED ON THIS PROJECT.

ONE-LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION
	-	CONDUCTORS OR CONDUITS CROSSING PATHS BUT NOT CONNECTED
	-	CONDUCTORS ELECTRICALLY CONNECTED
	-	INDICATES LIMITS OF EQUIPMENT OR WIRING ENCLOSURE
LA	-	LIGHTNING ARRESTER
	⊙G ◎	GROUND ROD GROUND ROD TEST WELL
30A	-	FUSE, AMPERE RATING AS NOTED
	-	HEATER
	-	INDUCTOR
	-	CONTACT, NORMALLY OPEN (NO)
	-	CONTACT, NORMALLY CLOSED (NC)
OL	-	OVERLOAD CONTACT
K	-	KIRK KEY INTERLOCK
	-	MECHANICAL INTERLOCK
○	-	TERMINAL
•	-	NODE
TB	-	TERMINAL OR TEST BLOCK
OR	-	PUSH BUTTON STATION, REFER TO ELECTRICAL SHEET REFERENCE SCHEMATIC FOR NUMBER OF DEVICES.
▲	-	LOCATED AT SCADA RTU
◪	-	LOCATED REMOTE
■	-	LOCATED AT MOTOR
	-	FUSED SWITCH/FUSED CUTOUT
Ⓜ	Ⓜ	UTILITY METER

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STATE OF TEXAS · JOSE MANUEL CURET · 126134 · LICENSED PROFESSIONAL ENGINEER · 05/12/2023

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JEFFERSON COUNTY, TX
CRANE BAYOU PUMP STATION
GENERATORS AND BUILDING
ELECTRICAL

LEGEND II

F&N JOB NO. JFF22292
DATE 05/15/2023
DESIGNED MCD
DRAWN GTN
CHECKED JMC

NO.	ISSUE	BY	DATE	REVISED
1				-

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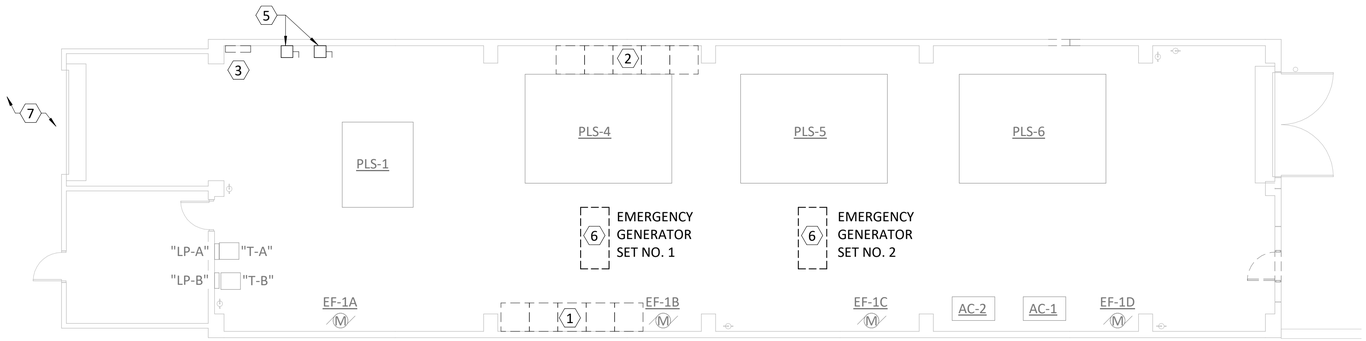
FILE NAME EL-JFF22292-R21.RVT

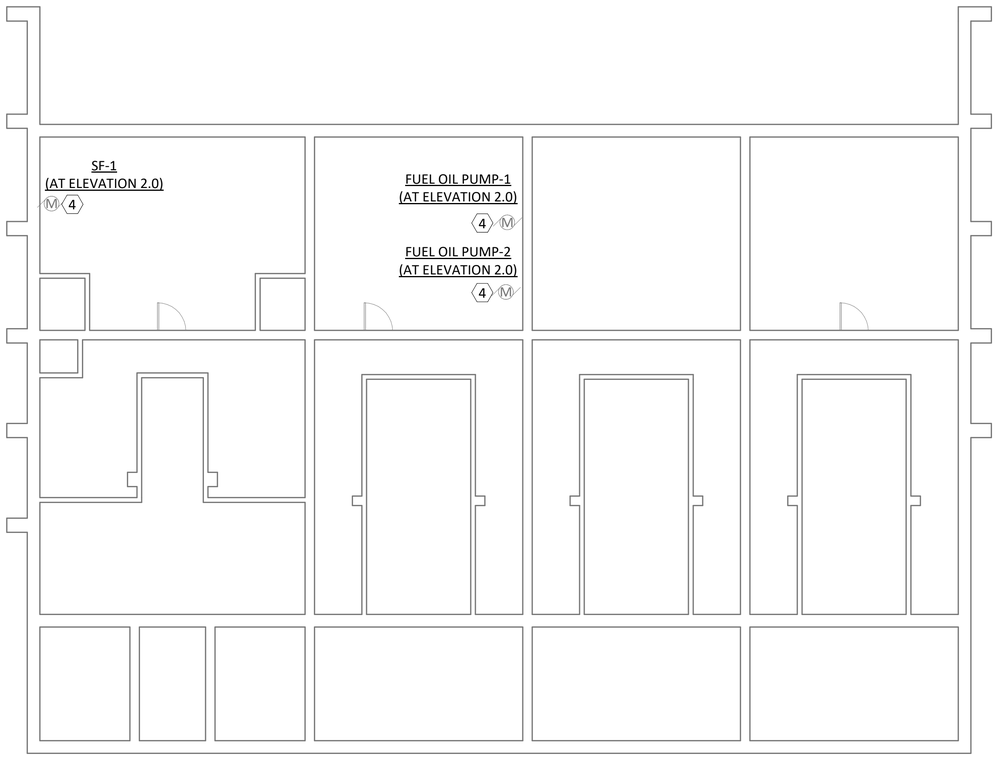
SHEET E-2
SEQ. 25

Plot Date: 5/12/2023 5:04:37 PM



DEMOLITION PUMP BUILDING - FLOOR PLAN AT ELEVATION 13.5

1 — 1/8" = 1'-0"



EXISTING PUMP BUILDING - GRADE LEVEL PLAN AT ELEVATION 4.5

2 — 1/8" = 1'-0"

NOTES BY SYMBOL "⬡"

1. EXISTING MCC TO BE REMOVED PER THE DEMOLITION ORDER OF SEQUENCE NOTES.
2. PROPOSED LOCATION OF TEMPORARY 'MCC' WITH MTS, FINAL LOCATION TO BE DETERMINED BY CONTRACTOR WITH THE OWNER'S APPROVAL. FIELD VERIFY EXISTING CONDITIONS PRIOR TO PLACEMENT.
3. EXISTING 'MDP' TO BE REMOVED.
4. LOCATION OF EXISTING EQUIPMENT TO RECONNECT TO PROPOSED MCC. RE: E-10
5. DISCONNECT AND REMOVE EXISTING DISCONNECT SWITCHES FEEDING SUMP PUMPS 1 AND 2. REMOVE EXISTING WIRE AND CONDUIT BACK TO SOURCE. FIELD VERIFY EXISTING CONDITIONS PRIOR TO START OF DEMOLITION WORK.
6. DISCONNECT AND REMOVE EXISTING GENERATOR SETS 1 AND 2. SALVAGE AND RETURN GENERATOR SETS BACK TO OWNER UNLESS OWNER INDICATES TO RECYCLE. CONTRACTOR MUST HAVE APPROVAL FROM THE OWNER PRIOR TO DEMOLISHING THE EMERGENCY GENERATOR SETS.
7. PROVIDE A TEMPORARY 200KW PORTABLE STANDBY EMERGENCY GENERATOR SET TO CONNECT TEMPORARY MTS AND MCC. LOCATION TO BE DETERMINED AND COORDINATED WITH DD7. FIELD VERIFY EXISTING CONDITIONS PRIOR TO MAKING FINAL CONNECTION.
8. ELECTRICAL DEMOLITION DRAWING DOES NOT SHOW ALL EQUIPMENT FED FROM THE EXISTING MCC TO BE TRANSFERRED TO THE TEMPORARY MCC. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL THE EQUIPMENT FED FROM THE EXISTING MCC TO ESTABLISH THE BEST ROUTE TO TRANSFER THE LOAD TO THE TEMPORARY MCC.

DEMOLITION NOTES:

1. THE CONTRACTOR SHALL INSTALL A TEMPORARY 'MCC' INSIDE THE PUMPS STATION JUST ACROSS THE ROOM FROM THE EXISTING 'MCC'. EXACT LOCATION AND CONDUIT ROUTE SHOULD BE COORDINATED WITH THE ENGINEER.
2. THE CONTRACTOR SHALL NOT LEAVE THE PUMP STATION OUT OF OPERATION WHILE TRANSFERING THE LOAD TO/FROM THE TEMPORARY 'MCC' FROM THE MAIN PANEL LOCATED INSIDE THE PUMP STATION. THIS INCLUDES A NEW TEMPORARY 300A BREAKER.
3. CONTRACTOR SHALL COORDINATE WITH OWNER THE ORDER OF THE LOAD TO BE TRANSFERRED TO THE TEMPORARY 'MCC'. SPECIAL CONSIDERATION SHALL BE GIVEN TO THE LOAD THAT HAS REDUNDANCY.
4. UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER, A SUGGESTED LOAD RELOCATION SHALL BE IN THE FOLLOWING ORDER FROM THE EXISTING 'MCC' TO THE TEMPORARY 'MCC':
   - AIR COMPRESSOR #1(APPROXIMATE LOCATION REFER TO DETAIL 1 THIS SHEET)
   - OIL PUMP #1(REFER TO DETAIL 2 AND CONTRACTOR TO FIELD VERIFY EXACT LOCATION)
   - LP-A (30KVA TRANSFORMER)(APPROXIMATE LOCATION REFER TO DETAIL 1 THIS SHEET)
   - LP-B (30KVA TRANSFORMER)(APPROXIMATE LOCATION REFER TO DETAIL 1 THIS SHEET)
   - RAKE FEED #1(LOCATED OUTSIDE OF THE BAR SCREENS)
   - MOV#1(CONTRACTOR TO FIELD VERIFY EXACT LOCATION)
   - MOV#2(CONTRACTOR TO FIELD VERIFY EXACT LOCATION)
   - MOV#3(CONTRACTOR TO FIELD VERIFY EXACT LOCATION)
   - EXHAUST FAN 1A(APPROXIMATE LOCATION REFER TO DETAIL 1 THIS SHEET)
   - EXHAUST FAN 1B(APPROXIMATE LOCATION REFER TO DETAIL 1 THIS SHEET)
   - EXHAUST FAN 1C(APPROXIMATE LOCATION REFER TO DETAIL 1 THIS SHEET)
   - SUPPLY FAN 1A(APPROXIMATE LOCATION REFER TO DETAIL 1 THIS SHEET)
   - AIR COMPRESSOR #2(APPROXIMATE LOCATION REFER TO DETAIL 1 THIS SHEET)
   - OIL PUMP #2(REFER TO DETAIL 2 AND CONTRACTOR TO FIELD VERIFY EXACT LOCATION)
   - RAKE FEED #2(LOCATED OUTSIDE OF THE BAR SCREENS)
5. THE TWO SUMP PUMP (60HP) COULD CONTINUE TO BE FED FROM THEIR ACTUAL SOURCE, EXISTING 'MDP', WHILE THE OLD 'MCC ' IS BEING REPLACED.
6. CONTRACTOR TO COORDINATE WITH OWNER ON DOWNTIME TIMEFRAME AND PROVIDE 2 WEEKS OF WRITTEN NOTICE TO THE OWNER PRIOR TO START OF DEMOLITION WORK . AFTER RECEIVING THE OWNER'S AUTHORIZATION TO START WORK , IT IS REQUIRED THAT THE CONTRACTOR PROVIDE A DETAILED STEP PLAN OF THE PROCEDURE TO REPLACE THE EXISTING 'MCC' THAT INCLUDES, BUT WITHOUT LIMITATION, THE SAFETY PROCEDURES (INCLUDING THE LOCKOUT- TAGOUT), THE RISK AND THE MITIGATION ACTION FOR EVERY STEP. CONTRACTOR TO GIVE THE OWNER 48 HOURS NOTICE PRIOR TO A SHUTDOWN, DUE TO WEATHER THE OWNER HAS A RIGHT TO REFUSAL.
7. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE A PRE-WORK WALK TO GO THROUGH THE DETAILED STEP PLAN FOR APPROVAL BY OWNER.

0 4' 8' 16'

1/8"=1'-0"

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Texas Registered Engineering Firm F- 2144

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JEFFERSON COUNTY, TX
CRANE BAYOU PUMP STATION
GENERATORS AND BUILDING
ELECTRICAL
PUMP BUILDING
ELECTRICAL DEMOLITION

F&N JOB NO.	JFF22292
DATE	05/15/2023
DESIGNED	MCD
DRAWN	GTN
REVISED	
CHECKED	JMC
FILE NAME	EL-JFF22292-R21.RVT

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SHEET E-3

SEQ. 26

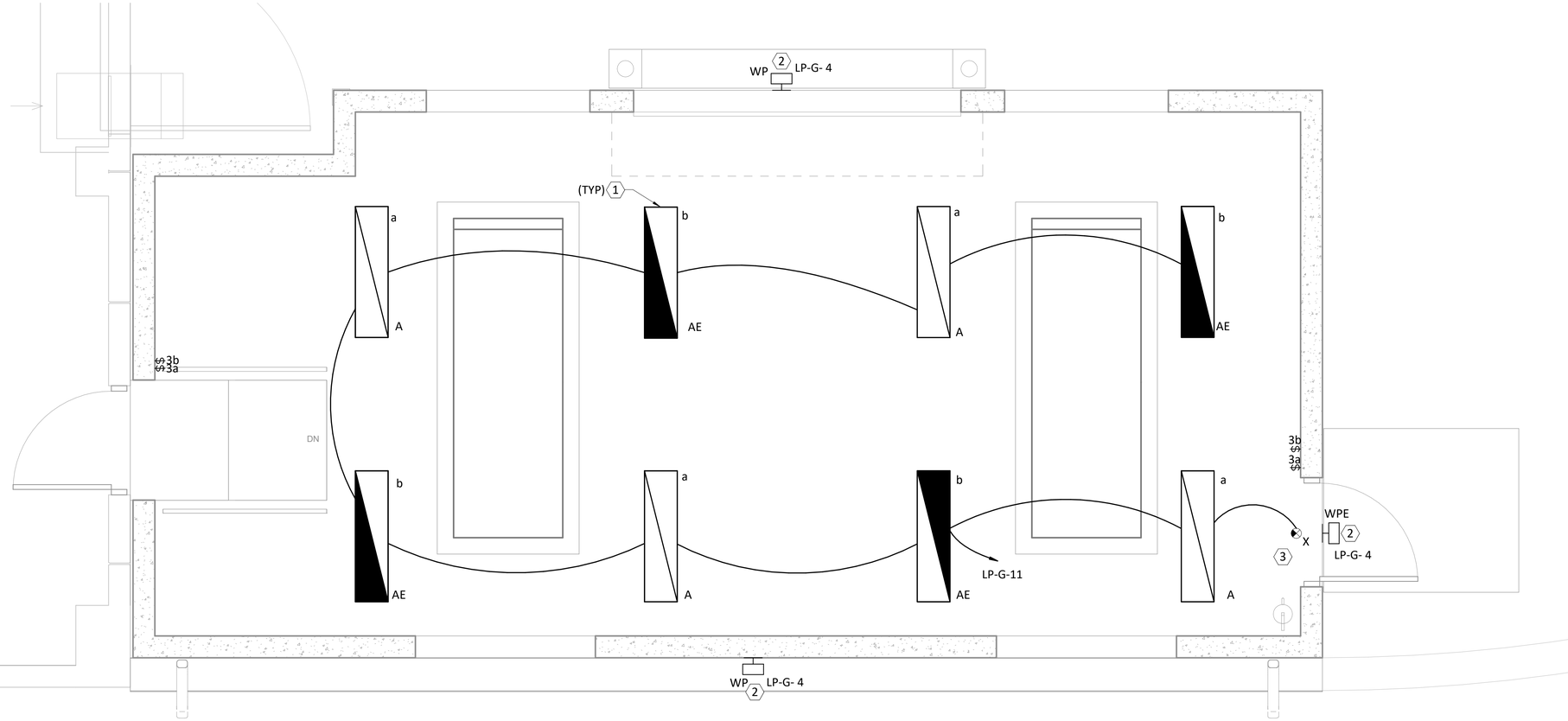
Plot Date: 5/12/2023 5:04:38 PM

GENERAL NOTES:

1. ALL EQUIPMENT SHOWN BOLD TO BE PROVIDED UNDER THIS CONTRACT.
2. ALL RECEPTACLE, LIGHTING, AND MISCELLANEOUS EQUIPMENT WIRING LESS THAN 150'-0" IN LENGTH WILL BE 2 #12, #12G., #3/4"C. MINIMUM. ALL RECEPTACLE, LIGHTING, & MISCELLANEOUS EQUIPMENT WIRING OVER 150'-0" IN LENGTH WILL BE 2 #10, #10G., 1"C. MINIMUM UNLESS SPECIFIED OTHERWISE.
3. PROVIDE AN UNSWITCHED "HOT" CONNECTION TO THE CHARGING CIRCUIT OF ALL FIXTURES THAT ARE BEING PROVIDED WITH INTEGRAL BATTERY PACKS.

NOTES BY SYMBOL "⬡ "

1. MOUNT LIGHT FIXTURE TYPE "A" SURFACE MOUNTED AT 14'-0" AFF.
2. MOUNT LIGHT FIXTURE AT 11'-6" AFF.
3. EXIT SIGN SHALL NOT BE FED THROUGH A SWITCH. IT SHALL REMAIN ON. MOUNT EXIT SIGN AT 1'-0" ABOVE DOORWAY.



1 LIGHTING PLAN
1/2" = 1'-0"

0 1' 2' 4'
1/2"=1'-0"

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STATE OF TEXAS
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JEFFERSON COUNTY, TX
CRANE BAYOU PUMP STATION GENERATORS AND BUILDING
ELECTRICAL
GENERATOR BUILDING LIGHTING PLAN

F&N JOB NO. JFF22292
DATE 05/15/2023
DESIGNED MCD
DRAWN GTN
CHECKED JMC
REVISED
DATE
BY
NO.
ISSUE
FILE NAME EL-JFF22292-R21.RVT

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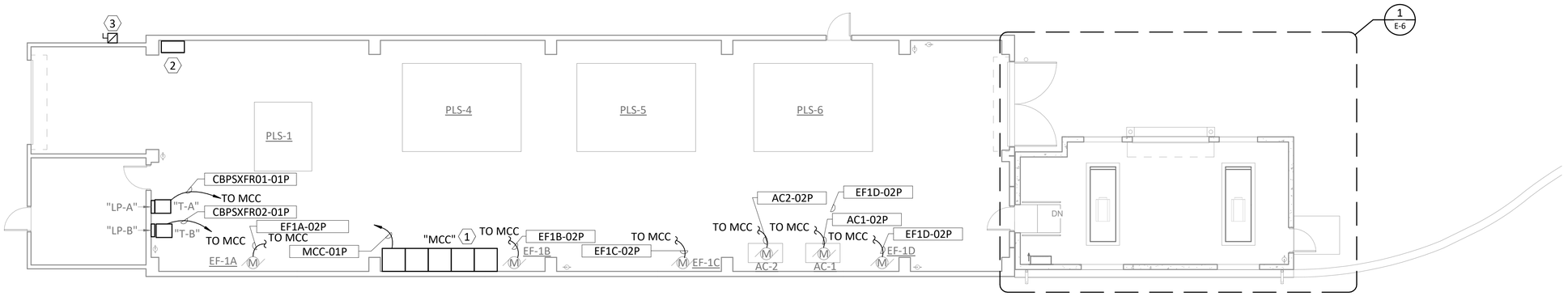
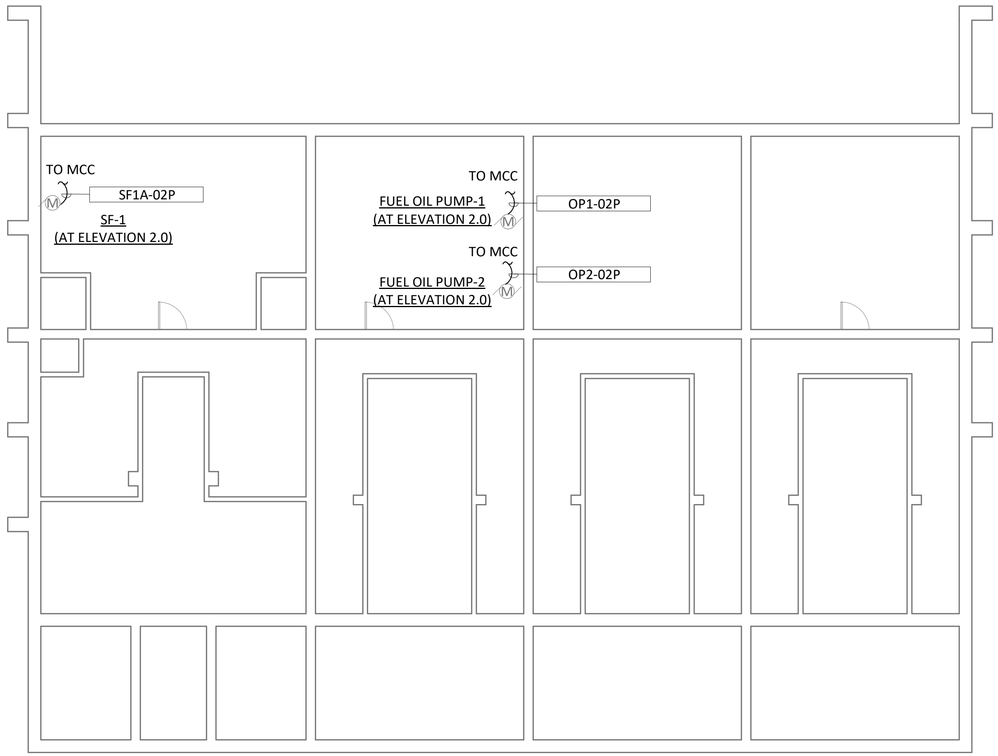
0" 1"

SHEET E-4
SEQ. 27

Plot Date: 5/12/2023 5:04:38 PM



1 POWER PLAN PUMP ROOM AT 13.5 ELEVATION
1/8" = 1'-0"



2 EXISTING PUMP BUILDING - GRADE LEVEL POWER PLAN AT 4.5 ELEVATION
1/8" = 1'-0"

GENERAL NOTES:

1. ALL EQUIPMENT SHOWN BOLD TO BE PROVIDED UNDER THIS CONTRACT.
2. THE CONTRACTOR WILL BE RESPONSIBLE FOR SIZING AND PROVIDING ALL PULL BOXES AND JUNCTION BOXES AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.
3. REFER TO ONE-LINE DIAGRAM FOR FINAL DESTINATIONS OF CABLES AND CONDUITS. ALL CIRCUITS AND FEEDERS SHALL BE ROUTED IN SEPARATE CONDUITS PER ONE-LINE DIAGRAMS UNLESS NOTED OTHERWISE.
4. POWER, DISCRETE, ANALOG SIGNAL AND COMMUNICATION CONDUCTORS SHALL BE ROUTED IN SEPARATE CONDUITS.
5. ALL RECEPTACLE, LIGHTING, AND MISCELLANEOUS EQUIPMENT WIRING LESS THAN 150'-0" IN LENGTH WILL BE 2 #12, #12G., #3/4"C. MINIMUM. ALL RECEPTACLE, LIGHTING, & MISCELLANEOUS EQUIPMENT WIRING OVER 150'-0" IN LENGTH WILL BE 2 #10, #10G., 1"C. MINIMUM UNLESS SPECIFIED OTHERWISE.
6. STUB AND CAP ALL SPARE CONDUITS AT THE FLOOR WITH A PULL STRING.
7. PROVIDE A LOCAL FIRE ALARM ON THE OUTSIDE OF THE BUILDING FOR EMERGENCY SHUTDOWN.
8. ALL ANALOG (4-20mA) SIGNALS, AND COMMUNCATION SIGNALS (CAT 6) WILL BE ROUTED IN PVC COATED RIGID STEEL CONDUIT FOR ALL UNDERGROUND APPLICATIONS.
9. POWER PLANS DRAWING DOES NOT SHOW ALL EQUIPMENT FED FROM THE TEMPORARY MCC TO BE TRANSFERRED TO THE NEW MCC.

NOTES BY SYMBOL "⬡"

1. PROPOSED 600A 'MCC'.
2. PROPOSED 800A 480Y/277V, 3-PHASE, 4-WIRE 'MDP'. RE: E-10
3. PROPOSED SERVICE ENTRANCE 800A FUSED DISCONNECT SWITCH. RE: E-10

0 4' 8' 16'
1/8"=1'-0"

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Texas Registered Engineering Firm F- 2144

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JEFFERSON COUNTY, TX
CRANE BAYOU PUMP STATION
GENERATORS AND BUILDING
ELECTRICAL
GENERATOR BUILDING
POWER PLANS

F&N JOB NO.	JFF22292
DATE	05/15/2023
DESIGNED	MCD
DRAWN	GTN
CHECKED	JMC

NO.	ISSUE	BY	DATE
1	Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.		

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FILE NAME EL-JFF22292-R21.RVT

SHEET E-5
SEQ. 28

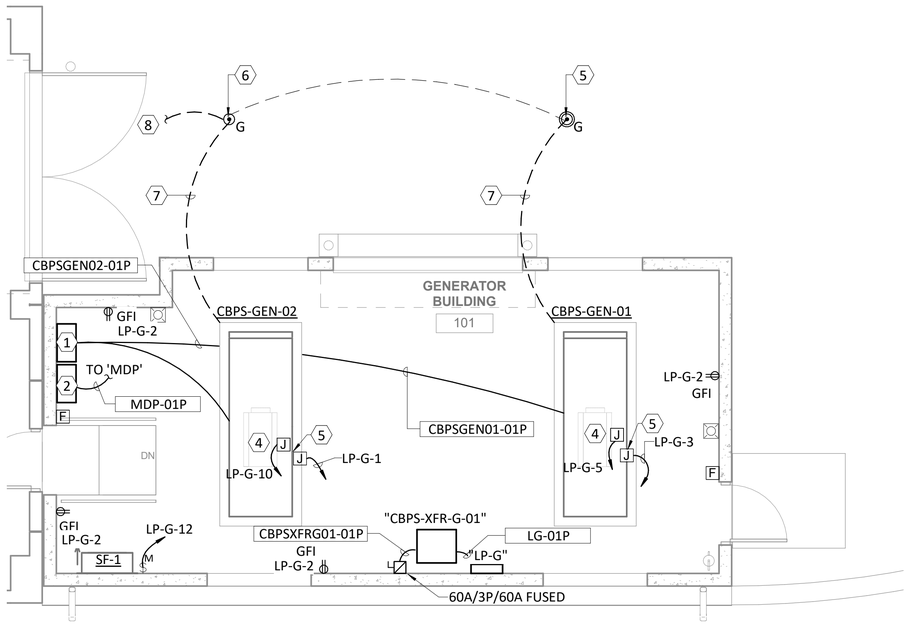
Plot Date: 5/12/2023 5:04:39 PM

GENERAL NOTES:

1. ALL EQUIPMENT SHOWN BOLD TO BE PROVIDED UNDER THIS CONTRACT.
2. THE CONTRACTOR WILL BE RESPONSIBLE FOR SIZING AND PROVIDING ALL PULL BOXES AND JUNCTION BOXES AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.
3. REFER TO ONE-LINE DIAGRAM FOR FINAL DESTINATIONS OF CABLES AND CONDUITS. ALL CIRCUITS AND FEEDERS SHALL BE ROUTED IN SEPARATE CONDUITS PER ONE-LINE DIAGRAMS UNLESS NOTED OTHERWISE.
4. POWER, DISCRETE, ANALOG SIGNAL AND COMMUNICATION CONDUCTORS SHALL BE ROUTED IN SEPARATE CONDUITS.
5. ALL RECEPTACLE, LIGHTING, AND MISCELLANEOUS EQUIPMENT WIRING LESS THAN 150'-0" IN LENGTH WILL BE 2 #12, #12G., #3/4"C. MINIMUM. ALL RECEPTACLE, LIGHTING, & MISCELLANEOUS EQUIPMENT WIRING OVER 150'-0" IN LENGTH WILL BE 2 #10, #10G., 1"C. MINIMUM UNLESS SPECIFIED OTHERWISE.
6. STUB AND CAP ALL SPARE CONDUITS AT THE FLOOR WITH A PULL STRING.
7. PROVIDE A LOCAL FIRE ALARM ON THE OUTSIDE OF THE BUILDING FOR EMERGENCY SHUTDOWN.
8. ALL ANALOG (4-20mA) SIGNALS, AND COMMUNCATION SIGNALS (CAT 6) WILL BE ROUTED IN PVC COATED RIGID STEEL CONDUIT FOR ALL UNDERGROUND APPLICATIONS. RE: E-12
9. CONTRACTOR WILL PROVIDE ALL MATERIALS AS REQUIRED FOR A COMPLETE GROUNDING SYSTEM. THE GROUNDING PLAN DOES NOT SHOW ALL GROUNDING AS REQUIRED BY CODES, STANDARDS, AND THE SPECIFICATIONS. THE CONTRACTOR WILL GROUND ALL EQUIPMENT IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND SPECIFICATION SECTION 26 06 26, GROUNDING AND BONDING FOR ELECTRICAL SYSTEM.
10. THE GROUNDING RING CONDUCTOR WILL BE #4/0 BARE TINNED COPPER.
11. PROVIDE ALL REQUIRED MONITOR MODULES, RELAYS, WIRING AND CONDUITS FOR COMPLETE OPERATIONAL SYSTEM.
12. A/V DEVICE LAYOUT INDICATED IS BASED ON 75cd MINIMUM STROBES. STROBE INTENSITY SHALL FIELD SELECTABLE TO ACHIEVE THE REQUIRED COVERAGE THROUGHOUT THE SPACE IN ACCORDANCE WITH THE REQUIREMENTS OF NFPA 72 AND THE SPECIFICATIONS.
13. DEVICES SHALL BE SUITABLE FOR THE ENVIRONMENT AND APPLICATION OF ASSOCIATED SPARE/AREA.
14. A LICENSED FIRE PROTECTION ENGINEER SHALL REVIEW AND STAMP/SEAL THE FINAL ALARM SYSTEM DESIGN. DEVICES ON THESE PLANS ARE BASED ON PRESCRIPTION BASED REQUIREMENTS.

NOTES BY SYMBOL "⬡"

1. 400A GENERATOR SELECTOR SWITCH. RE: E-10
2. 400A 'ATS'. RE: E-10
3. GENERATOR BATTERY CHARGER.
4. GENERATOR BLOCK HEATER.
5. GROUND ROD TEST WELL.
6. 3/4" X 10' COPPER CLAD GROUND ROD.
7. GENERATOR GROUND CONNECTION. COORDINATE WITH THE GENERATOR MANUFACTURER FOR EXACT LOCATION OF GROUND CONNECTION.
8. CONNECT GROUNDING ELECTRODE CONDUCTOR TO EXISTING BUILDING GROUND SYSTEM. FIELD VERIFY LOCATION OF EXISTING GROUND PRIOR TO START OF WORK.



POWER, GROUNDING AND FA PLAN GENERATOR BUILDING

1/E-5 1/4" = 1'-0"

0 2' 4' 8'
1/4"=1'-0"

ISSUED FOR BID

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Texas Registered Engineering Firm F- 2144

STATE OF TEXAS
JOSE MANUEL CURET
126134
LICENSED PROFESSIONAL ENGINEER
05/12/2023

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JEFFERSON COUNTY, TX
CRANE BAYOU PUMP STATION
GENERATORS AND BUILDING
ELECTRICAL
GENERATOR BUILDING
ENLARGED POWER PLAN

F&N JOB NO. JFF22292
DATE 05/15/2023
DESIGNED MCD
DRAWN GTN
CHECKED JMC

NO.	ISSUE	BY	DATE	REVISED

FILE NAME EL-JFF22292-R21.RVT

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET E-6
SEQ. 29

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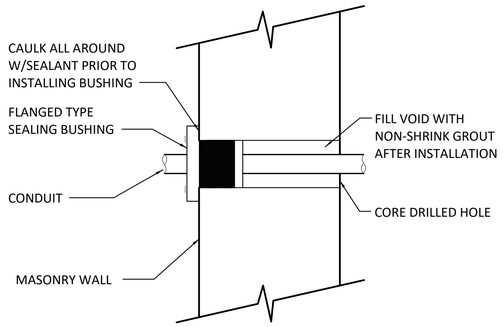
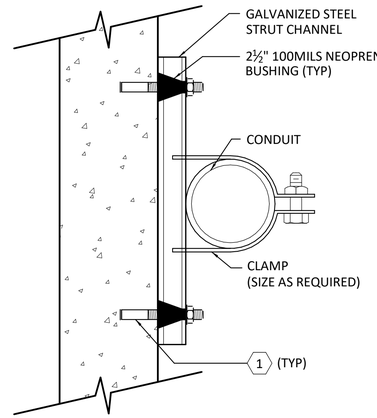


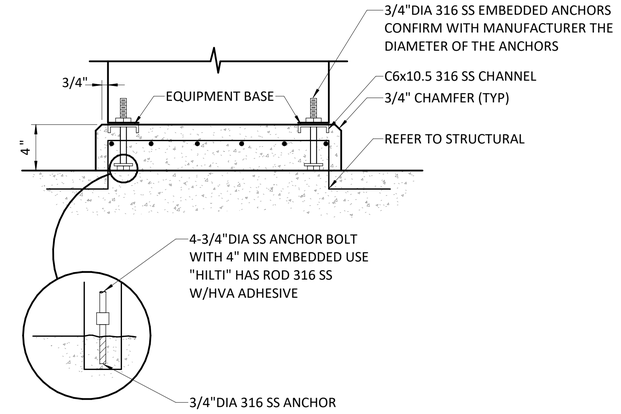
1 WATERTIGHT CONDUIT PENETRATION
NOT TO SCALE



NOTES BY SYMBOL "1"

1. ANCHORS SHALL BE ½"DIA STAINLESS STEEL KWIK BOLT III WITH 3½" EMBEDMENT. DO NOT DAMAGE EXISTING STRUCTURE DURING ANCHOR INSTALLMENT.

2 CEILING OR WALL EXPOSED CONDUIT INSTALLATION
NOT TO SCALE



NO. 3 GENERAL NOTES:

1. CONTRACTOR SHALL VERIFY FLOOR SLAB THICKNESS IS ADEQUATE TO ACCOMMODATE MINIMUM EMBED LENGTH PRIOR TO DRILLING.

3 NEW TRANSFORMER HOUSEKEEPING PAD DETAIL
NOT TO SCALE

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JEFFERSON COUNTY, TX
CRANE BAYOU PUMP STATION
GENERATORS AND BUILDING
ELECTRICAL
DETAILS I

F&N JOB NO.	JFF22292
DATE	05/15/2023
DESIGNED	MCD
DRAWN	GTN
REVISED	
CHECKED	JMC

NO.	ISSUE	BY	DATE

FILE NAME EL-JFF22292-R21.RVT

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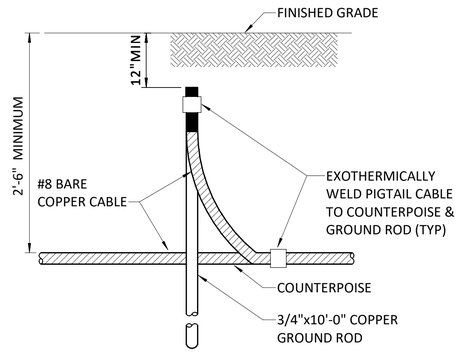
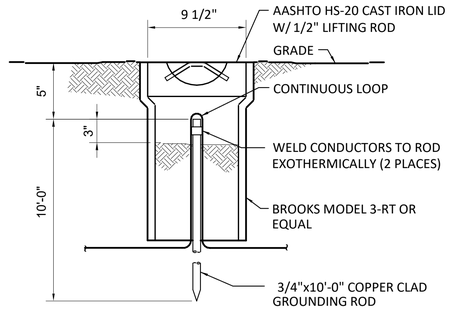
0 1

SHEET E-7
SEQ. 30



1 GROUND ROD/COUNTERPOISE INSTALLATION (TYPICAL)

12" = 1'-0"



2 GROUND ROD DETAIL

12" = 1'-0"

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JEFFERSON COUNTY, TX

CRANE BAYOU PUMP STATION GENERATORS AND BUILDING

ELECTRICAL

DETAILS II

F&N JOB NO.	JFF22292
DATE	05/15/2023
DESIGNED	MCD
DRAWN	MCD
REVISED	-
CHECKED	JMC

NO.	ISSUE	BY	DATE

FILE NAME EL-JFF22292-R21.RVT

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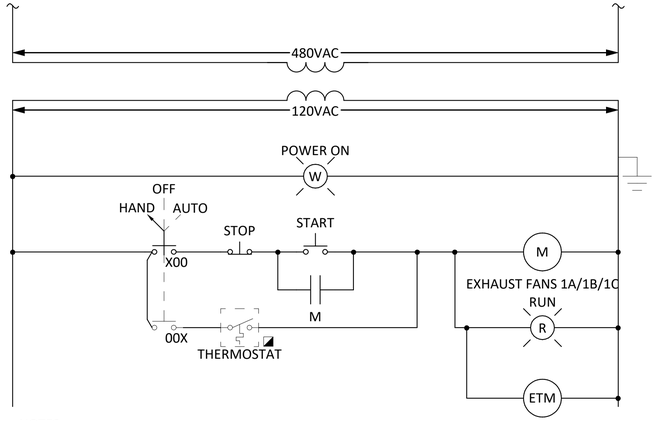
0 1

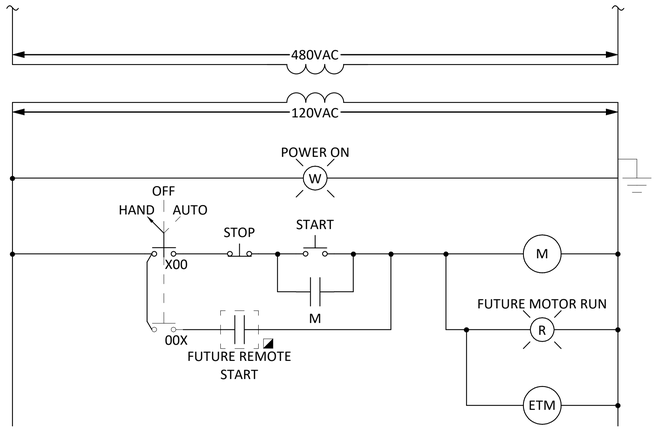
SHEET E-8

SEQ. 31

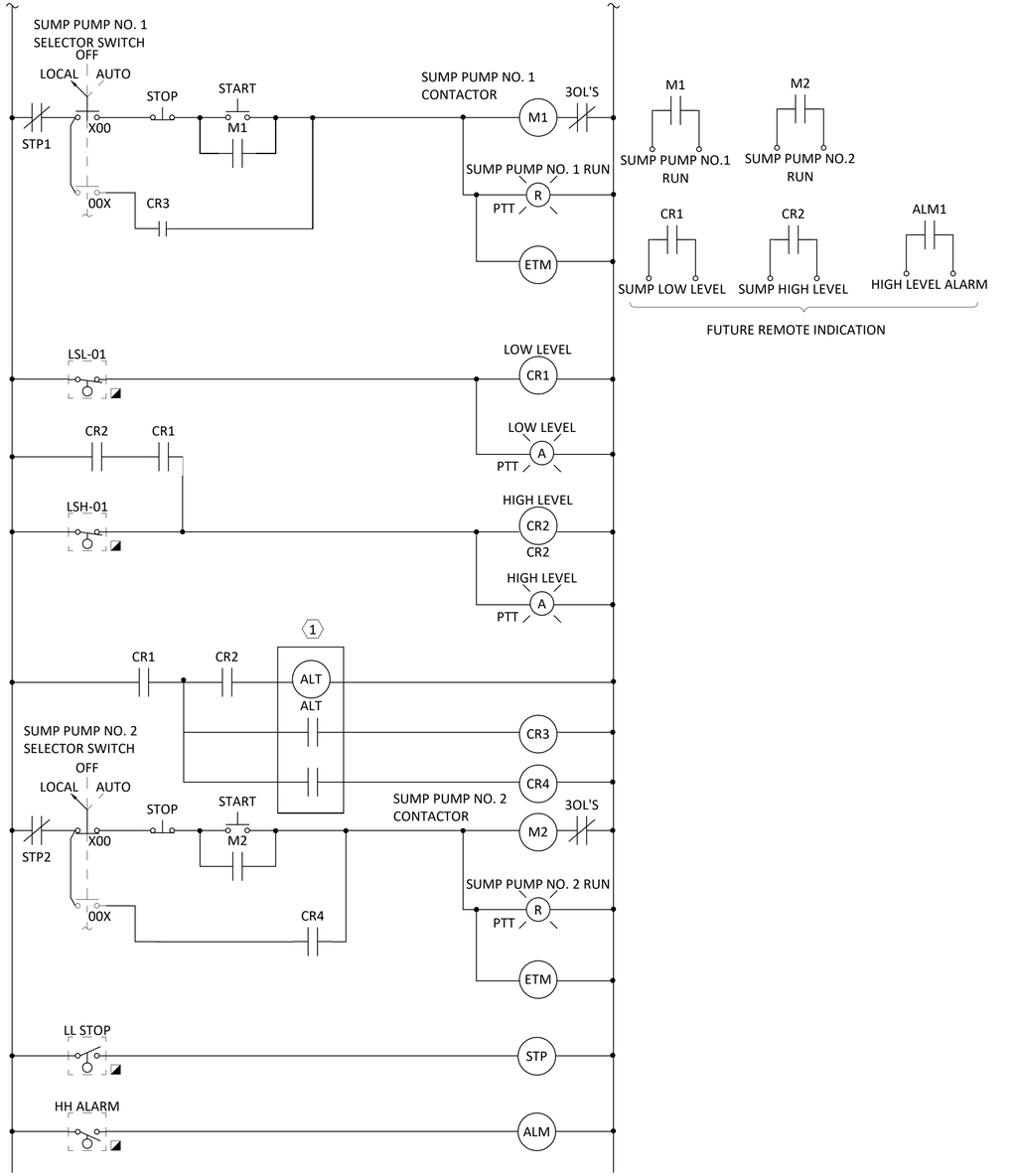


NOTES:
1. TYPICAL FOR EF-1A, EF-1B AND EF-1C.

1 EXHAUST FAN CONTROL SCHEMATIC
NOT TO SCALE



2 MOTOR CONTROL SCHEMATIC
NOT TO SCALE



NOTES BY SYMBOL "⬡ "
1. PROVIDE ALTERNATING RELAY BY EATON MODEL NUMBER: DS5 OR APPROVED EQUAL.

3 SP-1 AND SP-2 MOTOR CONTROL SCHEMATIC
NOT TO SCALE

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JEFFERSON COUNTY, TX
CRANE BAYOU PUMP STATION
GENERATORS AND BUILDING
ELECTRICAL
DETAILS III

F&N JOB NO.	JFF22292
DATE	05/15/2023
DESIGNED	MCD
DRAWN	GTN
CHECKED	JMC
REVISED	
BY	
DATE	
ISSUE	
NO.	
FILE NAME	EL-JFF22292-R21.RVT

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VERIFY SCALE 0 1

SHEET E-9
SEQ. 32

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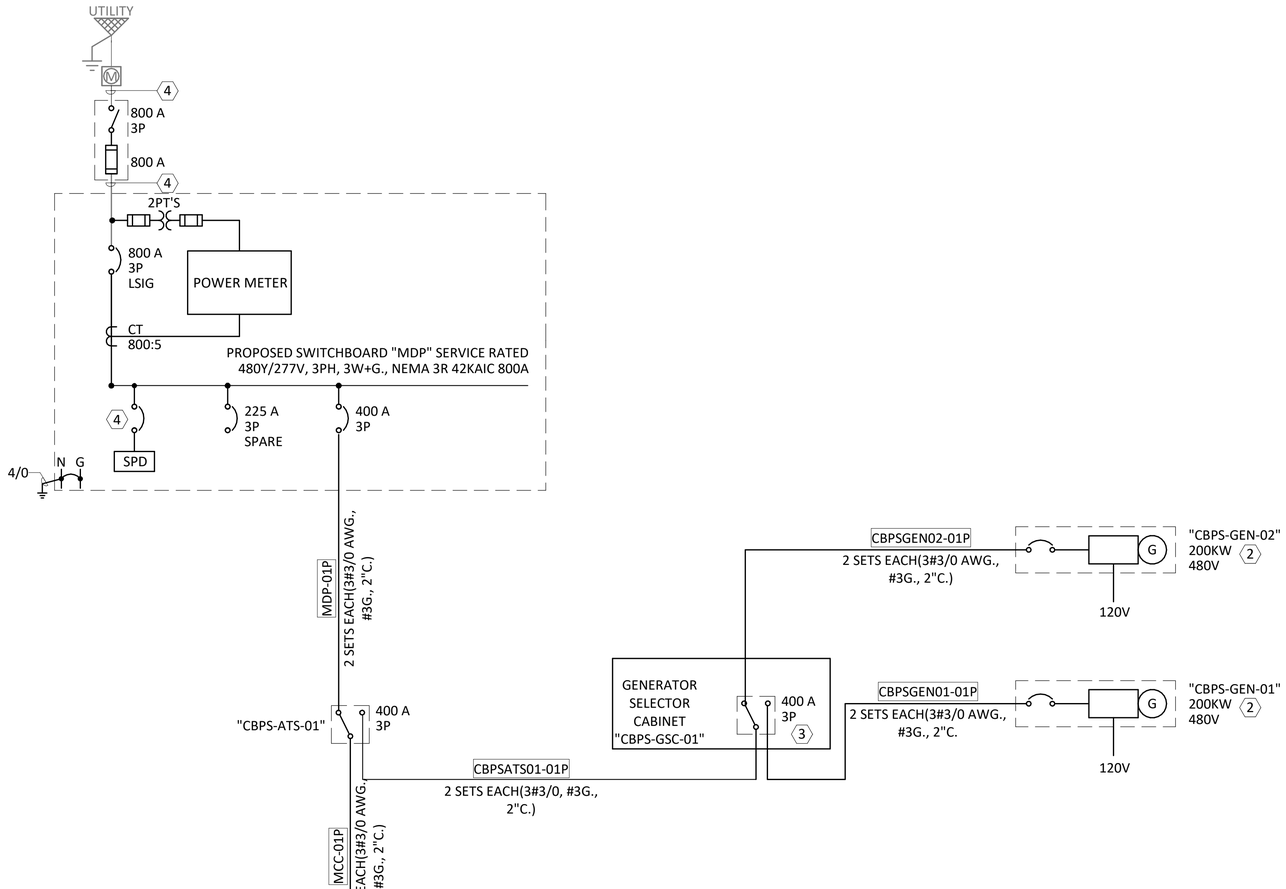

GENERAL NOTES:

1. ALL EQUIPMENT SHOWN BOLD WILL BE PROVIDED UNDER THIS CONTRACT. ALL EQUIPMENT SHOWN LIGHT WILL BE EXISTING AS INDICATED.
2. CONDUIT SIZES SHOWN ARE MINIMUM SIZES. PROVIDE LARGER SIZED CONDUIT WHERE INDICATED IN PLAN SHEETS.
3. RECONNECT EXISTING REMOTE CONTROL DEVICES FROM EXISTING ELECTRICAL EQUIPMENT TO PROPOSED MCC CONTROLS. FIELD VERIFY EXISTING CONDITIONS PRIOR TO FINAL ROUGH-IN.

NOTES BY SYMBOL "⬡"

1. MANUFACTURER SHALL SIZE SPD CIRCUIT BREAKER ACCORDINGLY.
2. MINIMUM GENSET REQUIRED. RE: SPECIFICATION 26 32 12 ENGINE GENERATORS FOR MORE INFORMATION ON SIZING REQUIREMENTS.
3. PROVIDE GENERATOR SELECTOR CABINET FOR DUAL STANDBY OPERATION, CUMMINS MODEL NUMBER T-011, UPON LOSS OF UTILITY POWER TO THE AUTOMATIC TRANSFER SWITCH (ATS), A SIGNAL IS SENT FROM THE ATS TO START THE SELECTED GENERATOR. WHEN THE ATS SENSES THE GENERATOR VOLTAGE IT TRANSFERS THE LOAD TO THE GENERATOR. IF THE SELECTED GENERATOR FAILS TO START, A SIGNAL IS SENT TO THE BACKUP GENERATOR TO START. IF THE SELECTED GENERATOR BECOMES AVAILABLE WHILE THE BACKUP IS ACTIVE, A RETRANSFER PROCESS IS INITIATED AND THE LOAD IS TRANSFERRED TO THE SELECTED GENERATOR. A TIME DELAY COOL-DOWN PERIOD IS INITIATED BEFORE TURNING OFF THE BACKUP GENERATOR.
4. EXTEND EXISTING WIRE AND CONDUIT TO NEW FUSED DISCONNECT SWITCH. FIELD VERIFY EXISTING CONDITIONS PRIOR TO FINAL ROUGH-IN.

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JEFFERSON COUNTY, TX

CRANE BAYOU PUMP STATION GENERATORS AND BUILDING

ELECTRICAL

ONE-LINE DIAGRAM

F&N JOB NO.	JFF22292		
DATE	05/15/2023		
DESIGNED	MCD		
DRAWN	GTN		
CHECKED	JMC		

NO.	ISSUE	BY	DATE
	REVISED		
	FILE NAME		EL-JFF22292-R21.RVT

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SHEET E-10

SEQ. 33

ISSUED FOR BID

Plot Date: 5/12/2023 5:04:44 PM

PANEL NO. LP-G

SERVICE VOLTAGE 208Y/120V
A.I.C. 22,000
MCB RATING 100 A
BUS RATING 100 A
NEUTRAL BUS 100%
LOCATION GENERATOR BUILDING 101
FEED FROM
SECTIONS 1

CKT NO.	DESCRIPTION	POLE	TRIP	A		B		C		TRIP	POLE	DESCRIPTION	CKT NO.
1	GENERATOR BLOCK HEATER - GENERATO...	1	20 A	1500	720					20 A	1	RECEPTACLES - GENERATOR BUILDING	2
3	GENERATOR BLOCK HEATER - GENERATO...	1	20 A			1500	141			20 A	1	EXTERIOR LIGHTING	4
5	GENERATOR BATTERY CHARGER -...	1	20 A					1800	0	20 A	1	SPARE	6
7	SPARE	1	20 A	0	0					20 A	1	SPARE	8
9	SPARE	1	20 A			0	1800			20 A	1	GENERATOR BATTERY CHARGER -...	10
11	LIGHTING	1	20 A					538	696	20 A	1	SF-1	12
13	SPARE	1	20 A	0	0					20 A	1	SPARE	14
15	SPARE	1	20 A			0	0			20 A	1	SPARE	16
17	SPARE	1	20 A					0	0	20 A	1	SPARE	18
19	SPARE	1	20 A	0	0					20 A	1	SPARE	20
21	SPARE	1	20 A			0	0			20 A	1	SPARE	22
23	SPARE	1	20 A					0	0	20 A	1	SPARE	24
25	SPARE	1	20 A	0	0					20 A	1	SPARE	26
27	SPARE	1	20 A			0	0			20 A	1	SPARE	28
29	SPARE	1	20 A					0	0	20 A	1	SPARE	30
31	PREPARED SPACE	1	--	--	--					--	1	PREPARED SPACE	32
33	PREPARED SPACE	1	--			--	--			--	1	PREPARED SPACE	34
35	PREPARED SPACE	1	--					--	--	--	1	PREPARED SPACE	36
37	PREPARED SPACE	1	--	--	--					--	1	PREPARED SPACE	38
39	PREPARED SPACE	1	--			--	--			--	1	PREPARED SPACE	40
41	PREPARED SPACE	1	--					--	--	--	1	PREPARED SPACE	42
	PHASE TOTALS			2220 VA		3434 VA		3012 VA					
				19 A		30 A		26 A					
	PANEL UNBALANCE			23 %									

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND
Lighting	679 VA	125.00%	849 VA
Other	696 VA	100.00%	696 VA
Receptacle	720 VA	100.00%	720 VA
Other Equipment/Apparatus	6600 VA	100.00%	6600 VA

PANEL TOTALS	
TOTAL CONNECTED LOAD:	8664 VA
TOTAL CONNECTED AMPS:	24 A
NON COINCIDENT LOAD:	0 VA
NON COINCIDENT AMPS:	0 A
TOTAL DEMAND LOAD:	8826 VA
TOTAL DEMAND LOAD AMPS:	24 A

NOTES:

LIGHTING FIXTURE SCHEDULE						
TYPE	MANUFACTURER	CATALOG NO.	DESCRIPTION	LAMPS	VOLT.	WATTS
A	HOLOPHANE	EMX-L48-10000LM-FGCL-MD-40K-90CRI-DGXD	LED ENCLOSED AND GASKETED 4' 4000K 10,000 LUMENS RIBBED FROSTED ACRYLIC 0-10V DIMMING 120-277V	LED	120 V	67 VA
AE	HOLOPHANE	EMX-L48-10000LM-FGCL-MD-40K-90CRI-DGXD-E10WLCP	SAME AS LIGHT FIXTURE 'A', EXCEPT WITH EMERGENCY BATTERY PACK	LED	120 V	67 VA
WP	HOLOPHANE	HLWPC2-P20-40K-AS-T3M-BKSDP-MASL	LED EXTERIOR WALLPACK WITH FULL CUTOFF, MOTION SENSOR AND PHOTOCELL	LED	120 V	47 VA
WPE	HOLOPHANE	HLWPC2-P20-40K-AS-T3M-BKSDP-MASL-EM	SAME AS LIGHT FIXTURE 'WP', EXCEPT WITH EMERGENCY BATTERY PACK	LED	120 V	47 VA
X	LITHONIA	LQC W 1 R ELN	DIE CAST ALUMIMUM LED EXIT SIGN WITH 120VAC INPUT AND NICKEL-CADMINUM BATTERY BACK-UP	LED	120 V	2 VA

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JEFFERSON COUNTY, TX
CRANE BAYOU PUMP STATION
GENERATORS AND BUILDING
ELECTRICAL

PANEL SCHEDULE AND LIGHT FIXTURE SCHEDULE

F&N JOB NO. JFF22292
DATE 05/15/2023
DESIGNED MCD
DRAWN GTN
CHECKED JMC
FILE NAME EL-JFF22292-R21.RVT

NO.	ISSUE	BY	DATE	REVISED

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SHEET E-11
SEQ. 34

INTERCONNECTION DIAGRAM

LOOP	EQUIPMENT DESCRIPTION	FIELD DEVICE/FIELD WIRING				
(1)	GENERATOR #1 ON/OFF SIGNAL AUTOMATIC TRANSFER SWITCH	GENERATOR #1	ATS-001C 12#14, #14G.,1"C. (2#14 SPARE)	ATS		
(1)	GENERATOR #2 ON/OFF SIGNAL AUTOMATIC TRANSFER SWITCH	GENERATOR #2	ATS-002C 2#14, #14G.,1"C. (2#14 SPARE)	ATS		
(1)	GENERATOR #1 ON/OFF SIGNAL SELECTOR SWITCH	GENERATOR #1	SSW-001C 4#14, #14G.,1"C. (2#14 SPARE)	SELECTOR SWITCH		
(1)	GENERATOR #2 ON/OFF SIGNAL SELECTOR SWITCH	GENERATOR #2	SSW-002C 4#14, #14G.,1"C. (2#14 SPARE)	SELECTOR SWITCH		
(1)	GENERATOR 1 LEVEL SWITCH	LSHH-01 LSH-01 LOW LEVEL ALARM	LS-01C 12#14, #14G.,1"C. (2#14 SPARE)	GENERATOR #1		
(1)	GENERATOR 2 LEVEL SWITCH	LSHH-02 LSH-02 LOW LEVEL ALARM	LS-02C 12#14, #14G.,1"C. (2#14 SPARE)	GENERATOR #2		
	EXHAUST FAN 1A	EF1A-01	EF1A-01C 2#14, #14G.,1"C. (2#14 SPARE)	MCC		
	EXHAUST FAN 1B	EF1B-01	EF1B-01C 2#14, #14G.,1"C. (2#14 SPARE)	MCC		
	EXHAUST FAN 1C	EF1C-01	EF1C-01C 2#14, #14G.,1"C. (2#14 SPARE)	MCC		
	HIGH LEVEL SWITCH(SP-1 &2)	LSH-03	MP-01 MANUFACTURER PROVIDED	J-BOX	LSH-03C 2#14, #14G.,1"C. (2#14 SPARE)	MCC
	LOW LEVEL SWITCH(SP-1 & 2)	LSL-01	MP-02 MANUFACTURER PROVIDED	J-BOX	LSL-01C 12#14, #14G.,1"C. (2#14 SPARE)	MCC
	LOW LEVEL STOP(SP-1 &2)	LLS-01	MP-03 MANUFACTURER PROVIDED	J-BOX	LLS-01A 2#14, #14G.,1"C. (2#14 SPARE)	MCC
	HIGH LEVEL ALARM(SP-1 & 2)	HLA-01	MP-04 MANUFACTURER PROVIDED	J-BOX	HLA-01A 2#14, #14G.,1"C. (2#14 SPARE)	MCC

NOTES BY SYMBOL "⬡ "

1. LOCATION TO BE VERIFIED WITH GENERATOR MANUFACTURER.

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INTERCONNECTION DIAGRAM

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FILE NAME EL-JFF22292-R21.RVT

VERIFY SCALE
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0 1

SHEET E-12
SEQ. 35

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