



# CITY OF GEORGETOWN, TEXAS DOVE SPRINGS WWTP REHABILITATION

## PROJECT NO. PRJ000261

PROPOSAL NO.202407 CONTRACT ID NO. 24-0043-CIP

## NOVEMBER 2023

CITY COUNCIL

MAYOR

JOSH SCHROEDER

CITY COUNCIL MEMBERS

- AMANDA PARR DISTRICT 1
- SHAWN HOOD DISTRICT 2
- MIKE TRIGGS DISTRICT 3
- RON GARLAND DISTRICT 4
- KEVIN PITTS MAYOR PRO TEM / DISTRICT 5
- JAKE FRENCH DISTRICT 6
- BEN STEWART DISTRICT 7

CITY MANAGER

DAVID MORGAN

ASSISTANT CITY MANAGER

LAURIE BREWER  
WAYNE NERO  
NICK WOOLERY

WATER SERVICES UTILITY DIRECTOR

CHELSEA SOLOMON, P.E.

SYSTEMS ENGINEERING DIRECTOR

WESLEY WRIGHT, P.E.

UTILITY ENGINEER

DAVID MUNK, P.E.



LOCATION PLAN

NTS


DOVE SPRINGS WWTP  
ROCK DOVE LANE  
GEORGETOWN, TX 78626



AUSTIN, TEXAS  
Transportation

## CONFORMED DRAWINGS

 10-27-23  
CITY OF GEORGETOWN, CIP MANAGER DATE

 10/27/23  
CITY OF GEORGETOWN, SYSTEM ENGINEERING DIRECTOR DATE

 10/27/23  
CITY OF GEORGETOWN, ASSISTANT WATER UTILITY DIRECTOR DATE



PREPARED BY:

Alexandra T Doody

Digitally signed by Alexandra T Doody  
DN: CN=Alexandra T Doody,  
dnQualifier=A01410D000017F62A89FFF001E09AB, O=CDM SMITH, C=US  
Location: Austin, TX  
Reason: I have reviewed this document  
Date: 2023.11.28 17:43:37-06'00'

CDM Smith  
TEXAS REGISTRATION NUMBER F--3043

DATE

**Water**

**Environment**

**Transportation**

**Energy**

**Facilities**

XREFs: [CDMS\_2234\_REVW\_A\_D000Y-SEA] Images: [ ]  
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GENERAL				PROCESS MECHANICAL				ELECTRICAL			
1	G	1	COVER SHEET	56	M	1	PROCESS MECHANICAL LEGEND	114	DS-EY	2	DOVE SPRINGS WWTP ELECTRICAL CONTROL SCHEMATICS II
2	G	2	DRAWING INDEX	57	DS-MA	1	DOVE SPRINGS WWTP FILTRATE LIFT STATION PLAN AND SECTION	115	DS-EY	3	DOVE SPRINGS WWTP ELECTRICAL CONTROL SCHEMATICS III
3	G	3	GENERAL / CIVIL LEGEND	58	DS-MB	1	DOVE SPRINGS WWTP RENTAL PACKAGE PLANT AERATION BLOWER PLAN	116	DS-EY	4	DOVE SPRINGS WWTP ELECTRICAL CONTROL SCHEMATICS IV
4	G	4	GENERAL NOTES	59	DS-MB	2	DOVE SPRINGS WWTP RENTAL PACAKGE PLANT AERATION BLOWER SECTTIONS	117	DS-EY	5	NOT USED
5	G	5	ABBREVIATIONS I	60	DS-MB	3	DOVE SPRINGS WWTP HEADWORKS MODIFICATION PLAN AND SECTIONS	118	EZ	1	ELECTRICAL STANDARD DETAILS I
6	G	6	ABBREVIATIONS II	61	DS-MB	4	DOVE SPRINGS WWTP RENTAL PACKAGE PLANT PLAN	119	EZ	2	ELECTRICAL STANDARD DETAILS II
7	G	7	ABBREVIATIONS III	62	DS-MC	1	DOVE SPRINGS WWTP TREATMENT STRUCTURE #1 AERATION PIPING MODIFICATIONS	120	EZ	3	ELECTRICAL STANDARD DETAILS III
8	DS-G	1	DOVE SPRINGS WWTP PROPOSED PROCESS FLOW DIAGRAM	63	DS-MC	2	DOVE SPRINGS WWTP TREATMENT STRUCTURE #2 AERATION PIPING LOWER PLAN MODIFICATIONS	121	EZ	4	ELECTRICAL STANDARD DETAILS IV
9	DS-G	2	DOVE SPRINGS WWTP DESIGN CRITERIA	64	DS-MC	3	DOVE SPRINGS WWTP TREATMENT STRUCTURE #2 AERATION PIPING UPPER PLAN MODIFICATIONS	122	EZ	5	ELECTRICAL STANDARD DETAILS V
10	DS-G	3	DOVE SPRINGS WWTP AREA CLASSIFICATION	65	DS-MD	1	DOVE SPRINGS WWTP TREATMENT UNIT NO. 1 BLOWER AREA PLAN AND SECTIONS	<b>INSTRUMENTATION</b>			
11	DS-G	4	DOVE SPRINGS WWTP MATERIALS SCHEDULE	66	DS-MD	2	DOVE SPRINGS WWTP TREATMENT UNIT NO. 2 BLOWER AREA PLAN AND SECTIONS				123
12	DS-G	5	DOVE SPRINGS WWTP HYDRAULIC PROFILE I	67	MZ	1	STANDARD MECHANICAL DETAILS I	124	I	2	INSTRUMENTATION LEGEND II
13	DS-G	6	DOVE SPRINGS WWTP HYDRAULIC PROFILE II	68	MZ	2	STANDARD MECHANICAL DETAILS II	125	DS-I	1	DOVE SPRINGS WWTP CONTROL SYSTEM ARCHITECTURE
<b>DEMOLITION</b>				69	MZ	3	STANDARD MECHANICAL DETAILS III	126	DS-IA	1	DOVE SPRINGS WWTP FILTRATE LIFT STATION P&ID
14	DS-D	1	DOVE SPRINGS WWTP OVERALL DEMOLITION PLAN AND GENERAL DEMOLITION NOTES	70	MZ	4	STANDARD MECHANICAL DETAILS IV	127	DS-IB	1	DOVE SPRINGS WWTP PACKAGE PLANT P&ID
15	DS-DA	1	DOVE SPRINGS WWTP FILTRATE LIFT STATION DEMOLITION PLAN AND SECTION	71	MZ	5	STANDARD MECHANICAL DETAILS V	128	DS-IB	2	DOVE SPRINGS WWTP PACKAGE PLANT P&ID (BLOWER RELOCATION)
16	DS-DC	1	DOVE SPRINGS WWTP TREATMENT STRUCTURE # 1 AERATION PIPING DEMOLITION PLAN	72	MZ	6	STANDARD MECHANICAL DETAILS VI	129	DS-IC	1	DOVE SPRINGS WWTP TREATMENT UNIT NO. 1 P&ID
17	DS-DC	2	DOVE SPRINGS WWTP TREATMENT STRUCTURE # 2 AERATION PIPING DEMOLITION LOWER PLAN	73	MZ	7	STANDARD MECHANICAL DETAILS VII	130	DS-IC	2	DOVE SPRINGS WWTP TREATMENT UNIT NO. 2 P&ID
18	DS-DC	3	DOVE SPRINGS WWTP TREATMENT STRUCTURE # 2 AERATION PIPING DEMOLITION UPPER PLAN	<b>HVAC</b>				131	DS-ID	1	DOVE SPRINGS WWTP TREATMENT UNIT NO. 1 AERATION BLOWER SYSTEM P&ID
19	DS-DD	1	DOVE SPRINGS WWTP BLOWER BUILDING DEMOLITION PLAN	74	H	1	HVAC LEGEND, SYMBOLS, AND ABBREVIATIONS	132	DS-ID	2	DOVE SPRINGS WWTP TREATMENT UNIT NO. 2 AERATION BLOWER SYSTEM P&ID
<b>CIVIL</b>				75	H	2	HVAC SCHEDULE	133	IZ	1	INSTRUMENTATION INSTALLATION DETAILS I
20	DS-C	1	DOVE SPRINGS WWTP OVERALL PROPERTY OWNERSHIP PLATS	76	DS-HI	1	DOVE SPRINGS WWTP COORDINATED ELECTRICAL HOUSE HVAC PLAN	134	IZ	2	RTU-DSWWTP PANEL MODIFICATIONS
21	DS-C	2	DOVE SPRINGS WWTP EXISTING SITE PLAN AND SURVEY CONTROL	77	HZ	1	HVAC DETAILS	<b>ELECTRICAL</b>			
22	DS-C	3	DOVE SPRINGS WWTP PROPOSED SITE PLAN	78	E	1	ELECTRICAL LEGEND I				
23	DS-C	4	DOVE SPRINGS WWTP GRADING AND PAVING PLAN	79	E	2	ELECTRICAL LEGEND II				
24	DS-C	5	DOVE SPRINGS WWTP EROSION CONTROL PLAN AND CONTRACTOR STAGING AREA	80	E	3	ELECTRICAL NOTES				
25	DS-C	6	DOVE SPRINGS WWTP YARD PIPING PLAN	81	E	4	ELECTRICAL LIGHTING FIXTURE SCHEDULE				
26	CZ	1	CIVIL DETAILS I	82	DS-D	100	DOVE SPRINGS WWTP OVERALL SITE ELECTRICAL MODIFICATION PLAN				
27	CZ	2	CIVIL DETAILS II	83	DS-D	200	DOVE SPRINGS WWTP EXISTING MOTOR CONTROL CENTER MCC1 DEMOLITION ONE-LINE DIAGRAM				
28	CZ	3	CIVIL DETAILS III	84	DS-E	1	DOVE SPRINGS WWTP OVERALL SITE ELECTRICAL NEW WORK PLAN				
29	CZ	4	CIVIL DETAILS IV	85	DS-E	2	DOVE SPRINGS WWTP SWITCHGEAR SWGR-1 ONE-LINE DIAGRAM				
30	CZ	5	CIVIL DETAILS V	86	DS-E	3	DOVE SPRINGS WWTP GENERATOR CONTROL RISER DIAGRAM				
<b>ARCHITECTURAL</b>				87	DS-E	4	DOVE SPRINGS WWTP MOTOR CONTROL CENTER MCC-1 ONE-LINE DIAGRAM				
31	A	1	ARCHITECTURAL LEGENDS, ABBREVIATIONS, SYMBOLS AND NOTES	88	DS-E	5	DOVE SPRINGS WWTP MOTOR CONTROL CENTER MCC-2 ONE-LINE DIAGRAM				
32	DS-AD	1	DOVE SPRINGS ARCHITECTURAL TREATMENT UNIT 1 AND UNIT 2 BLOWERS FLOOR PLANS, ELEVATIONS AND SECTIONS	89	DS-E	6	DOVE SPRINGS WWTP MOTOR CONTROL CENTER MCC-3 ONE-LINE DIAGRAM				
33	DS-AE	1	DOVE SPRINGS EXISTING OPERATIONS BUILDING - ADA LANDINGS AND RAMPS LAYOUT	90	DS-E	6A	DOVE SPRINGS WWTP MOTOR CONTROL CENTER MCC-3 ONE-LINE DIAGRAM (BLOWER RELOCATION)				
34	DS-AE	1	DOVE SPRINGS EXISTING OPERATIONS BUILDING - ADA LANDINGS AND RAMPS SECTIONS	91	DS-E	7	DOVE SPRINGS WWTP PANELBOARD SCHEDULES				
35	DS-AI	1	DOVE SPRINGS - ARCHITECTURAL COORDINATED ELECTRICAL HOUSES LIFE SAFETY PLANS	92	DS-E	8	DOVE SPRINGS WWTP PANELBOARD SCHEDULES				
<b>STRUCTURAL</b>				93	DS-E	9	DOVE SPRINGS WWTP ELECTRICAL DUCTBANK SCHEDULE I				
36	S	1	STRUCTURAL DESIGN CRITERIA AND GENERAL NOTES	94	DS-E	10	DOVE SPRINGS WWTP ELECTRICAL DUCTBANK SCHEDULE II				
37	S	2	STRUCTURAL GENERAL NOTES, SYMBOLS AND ABBREVIATIONS	95	DS-E	11	DOVE SPRINGS WWTP ELECTRICAL DUCTBANK SCHEDULE III				
38	DS-SA	1	DOVE SPRINGS WWTP FILTRATE LIFT STATION PLANS AND SECTION	96	DS-EA	1	EXISTING FILTRATE LIFT STATION POWER PLAN				
39	DS-SB	1	DOVE SPRINGS WWTP RENTAL PACKAGE PLANT FOUNDATION PLAN	97	DS-EA	2	EXISTING FILTRATE LIFT STATION CONTROL PLAN				
40	DS-SB	2	DOVE SPRINGS WWTP RENTAL PACKAGE PLANT SECTION AND DETAILS	98	DS-EB	1	DOVE SPRINGS WWTP EXISTING HEADWORKS AREA POWER AND CONTROL PLANS				
41	DS-SD	1	DOVE SPRINGS WWTP BLOWER UNIT NO. 1 PAD FOUNDATION AND ROOF PLANS	99	DS-EB	2	DOVE SPRINGS WWTP RENTAL PACKAGE PLANT BLOWERS POWER AND CONTROL PLANS				
42	DS-SD	2	DOVE SPRINGS WWTP BLOWER UNIT NO. 2 PAD FOUNDATION AND ROOF PLANS	100	DS-EB	2A	DOVE SPRINGS WWTP RENTAL PACKAGE PLANT BLOWERS MODIFIED POWER AND CONTROL PLANS				
43	DS-SD	3	DOVE SPRINGS WWTP BLOWER PAD SECTIONS	101	DS-EB	3	DOVE SPRINGS WWTP PACKAGE PLANT CLARIFIER POWER AND CONTROL PLANS				
44	DS-SD	4	DOVE SPRINGS WWTP BLOWER PAD DETAILS	102	DS-EB	4	DOVE SPRINGS WWTP PACKAGE PLANT SLUDGE PUMP POWER AND CONTROL PLANS				
45	DS-SI	1	DOVE SPRINGS WWTP CONDUIT SUPPORT AND ELECTRICAL HOUSE PLAN AND SECTION	103	DS-EB	5	DOVE SPRINGS WWTP PACKAGE PLANT LIGHTING PLAN				
46	DS-SI	2	DOVE SPRINGS WWTP GENERATOR AND TRANSFORMER PAD PLAN AND SECTION	104	DS-EC	1	DOVE SPRINGS WWTP TREATMENT STRUCTURE NO. 1 AND NO. 2 ELECTRICAL MODIFICATION PLAN				
47	SZ	1	STRUCTURAL STANDARD DETAILS I	105	DS-ED	1	DOVE SPRINGS WWTP TREATMENT UNIT NO. 1 AND NO. 2 BLOWER AREA POWER AND CONTROL PLANS				
48	SZ	2	STRUCTURAL STANDARD DETAILS II	106	DS-ED	2	DOVE SPRINGS WWTP EXISTING BLOWER ROOM POWER PLAN				
49	SZ	3	STRUCTURAL STANDARD DETAILS III	107	DS-EE	1	DOVE SPRINGS WWTP EXISTING BFP AREA ELECTRICAL MODIFICATION PLAN				
50	SZ	4	STRUCTURAL STANDARD DETAILS IV	108	DS-EE	2	BFP AREA FIRE ALARM SYSTEM RISER DIAGRAM AND CAUSE AND EFFECT MATRIX				
51	SZ	5	STRUCTURAL STANDARD DETAILS V	109	DS-EG	1	DOVE SPRINGS WWTP EXISTING NPW AREA ELECTRICAL MODIFICATION PLAN				
52	SZ	6	STRUCTURAL STANDARD DETAILS VI	110	DS-EI	1	DOVE SPRINGS WWTP COORDINATED ELECTRICAL HOUSE ENLARGED PLAN				
53	SZ	7	STRUCTURAL STANDARD CONCRETE REPAIR DETAILS	111	DS-EI	2	DOVE SPRINGS WWTP RENTAL PACKAGE MCC-3 AND GENERATOR ENLARGED PLAN				
54	SZ	8	STRUCTURAL SPECIAL INSPECTIONS I	112	DS-EI	3	DOVE SPRINGS WWTP OPERATIONS BUILDING AND LAB POWER AND INSTRUMENTATION PLAN				
55	SZ	9	STRUCTURAL SPECIAL INSPECTIONS II	113	DS-EY	1	DOVE SPRINGS WWTP ELECTRICAL CONTROL SCHEMATICS I				

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JAM	ATD	CONFORMED DRAWINGS
4	1/4/24	JAM	ATD	REVISED FOR ADDENDUM NO. 4
3	1/4/24	JAM	ATD	REVISED FOR ADDENDUM NO. 3

DESIGNED BY: J. MAYER  
 DRAWN BY: S. MALPASS  
 SHEET CHK'D BY: A. DOODY  
 CROSS CHK'D BY: A. WOELKE  
 APPROVED BY: A. DOODY  
 DATE: DECEMBER 2023

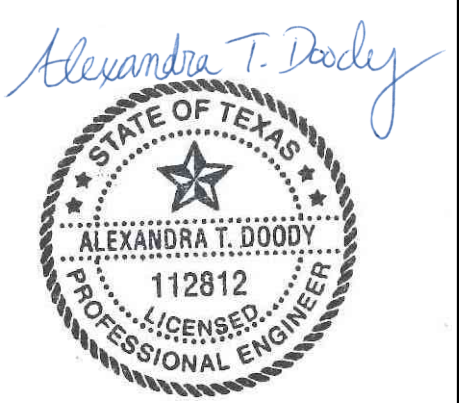


8310-1 N. Capital of Texas Hwy, Suite 250  
 Austin, TX 78731  
 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

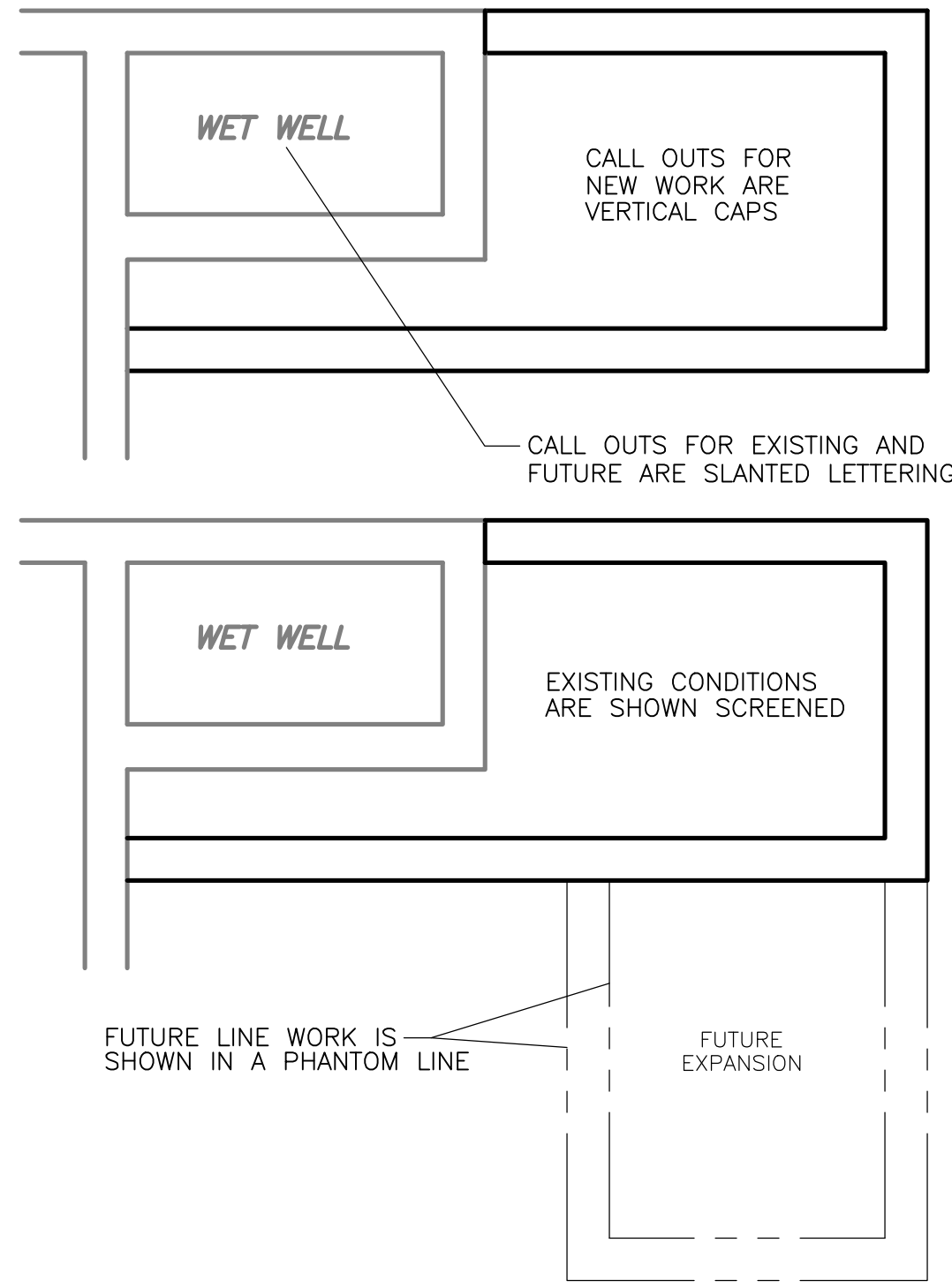
CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

**DRAWING INDEX**  
 SHEET NO.  
**G-2**

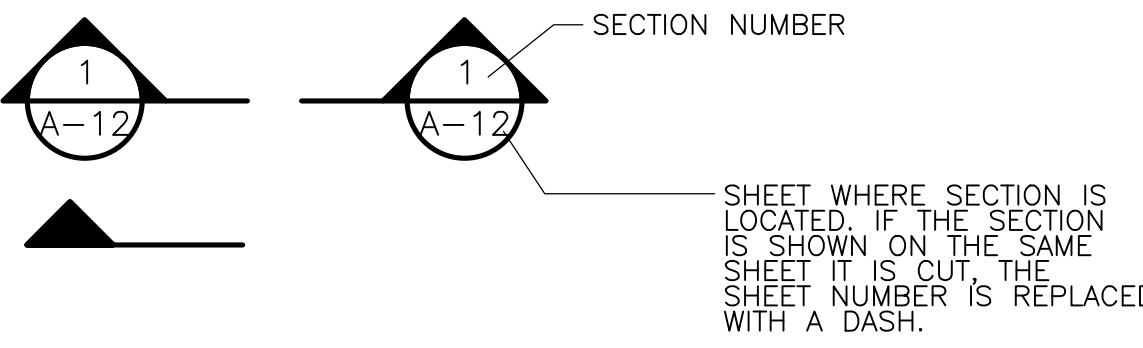
PROJECT NO. 2048-264953  
 FILE NAME: G002NFIN.DWG  
 1/10/2024



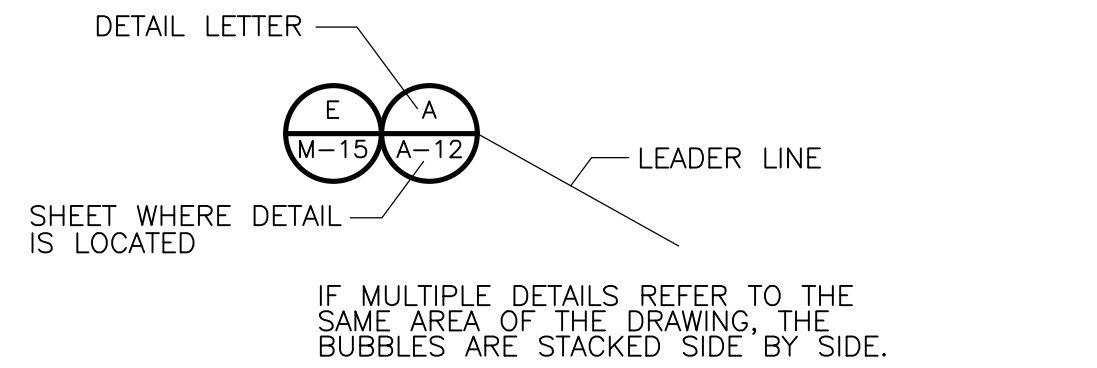
**EXISTING OR FUTURE CONDITION DESIGNATION**



**SECTION CUT SYMBOLS**



**DETAIL CALL OUT SYMBOLS**



**DRAWING, SECTION & DETAIL TITLES**

SUBTITLE OR DESCRIPTION (AS REQ'D)

**PLAN**

1/4" = 1'-0"

SUBTITLE OR DESCRIPTION (AS REQ'D)

**ELEVATION**

1/4" = 1'-0"

**SECTION** 1 SECTION NUMBER  
3/4" = 1'-0" S-6 SHEET WHERE SECTION CUT IS TAKEN \*

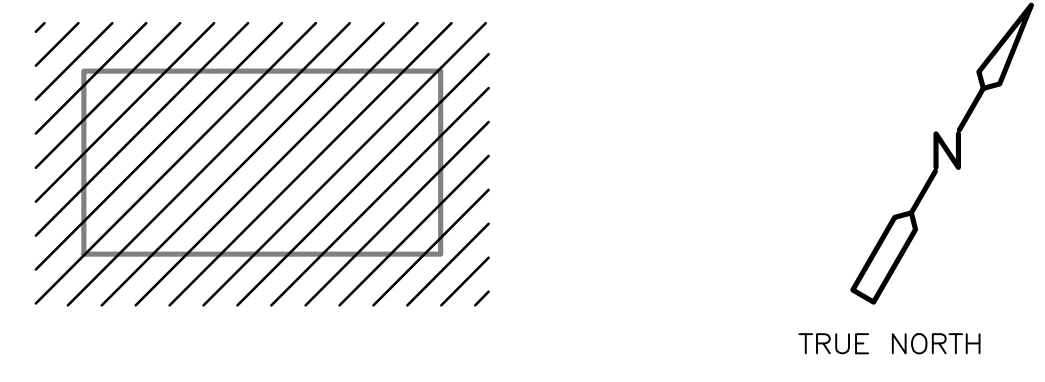
**DETAIL** A DETAIL LETTER  
3/4" = 1'-0" A-3 SHEET WHERE DETAIL IS TAKEN \*

**SCHEMATIC** 1 SCHEMATIC NUMBER  
3/4" = 1'-0" M-6 SHEET WHERE SCHEMATIC IS TAKEN \*

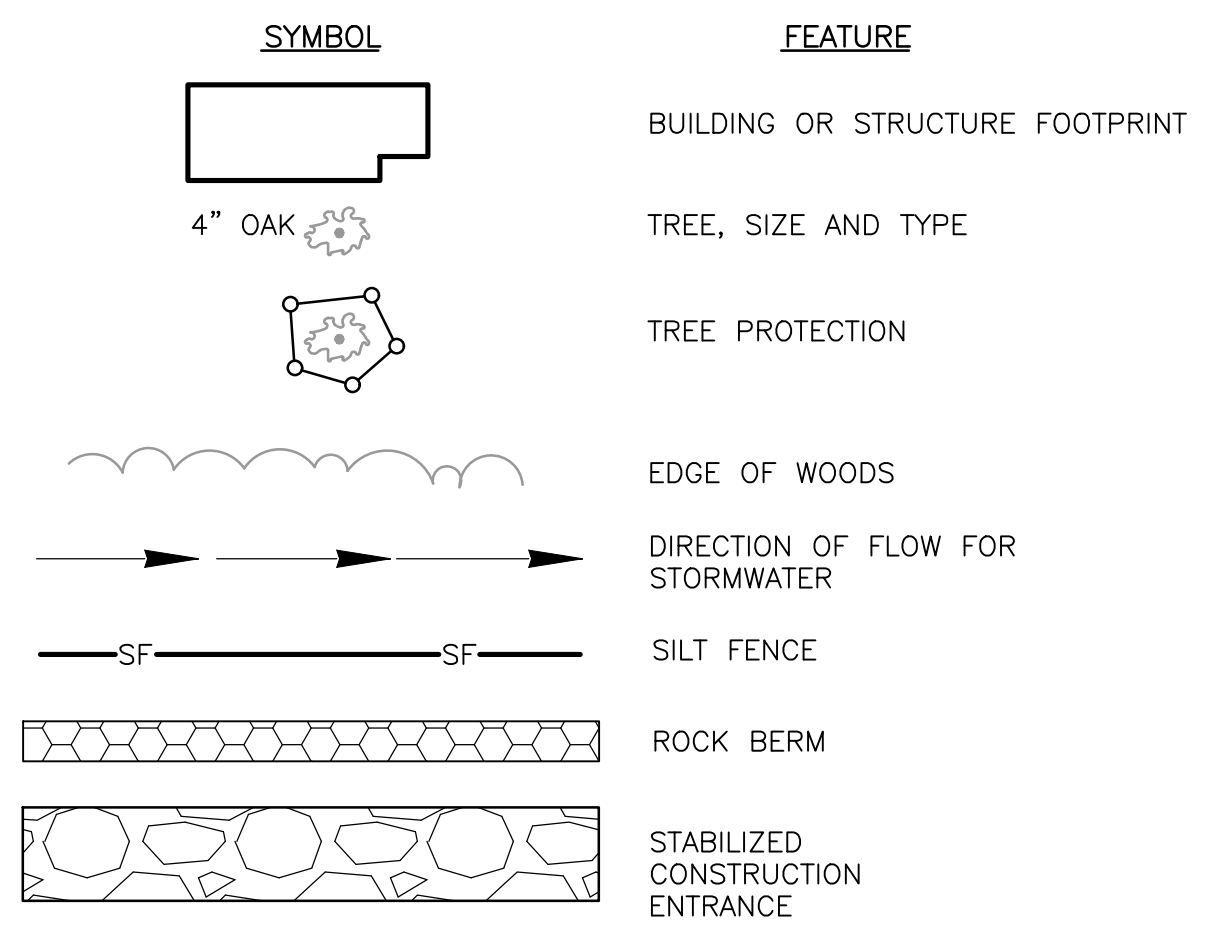
**DIAGRAM** 1 DIAGRAM NUMBER  
3/4" = 1'-0" I-6 SHEET WHERE DIAGRAM IS TAKEN \*

\* IF SECTION, DETAIL, SCHEMATIC OR DIAGRAM IS DRAWN ON THE SAME SHEET THAT IT IS TAKEN FROM, THE SHEET NUMBER IS REPLACED WITH A HYPHEN. IF THE SECTION IS REFERENCED ON MULTIPLE SHEETS, THE SHEET NUMBER SHOWN INDICATES THE FIRST SHEET THE SECTION IS TAKEN FROM.

**ITEMS TO BE REMOVED OR DEMOLISHED NORTH ARROW ORIENTATION**

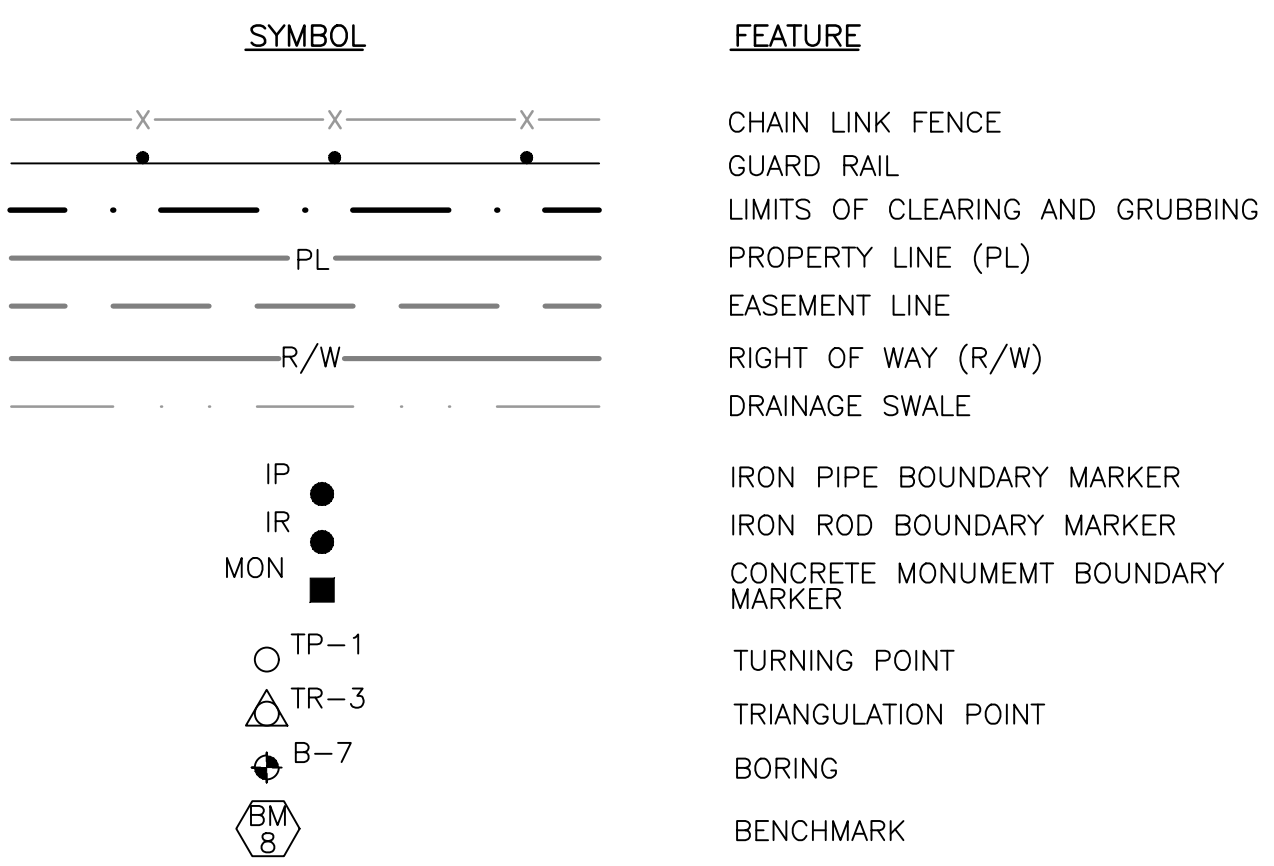


**LANDSCAPE & DRAINAGE SYMBOLS**

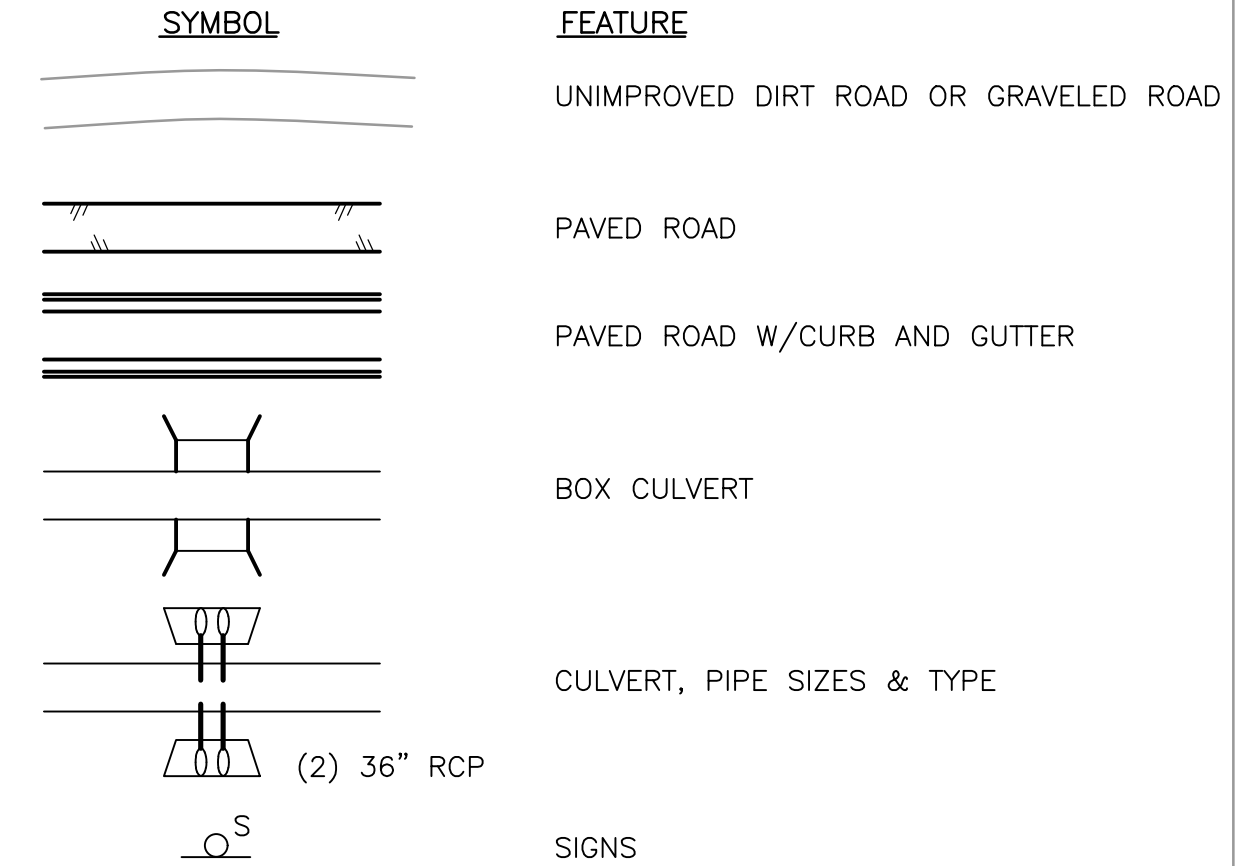


EXISTING ELEVATIONS & DIMENSIONS SHOWN ON DRAWINGS ARE APPROXIMATE. FIELD VERIFY EXISTING CONDITIONS.

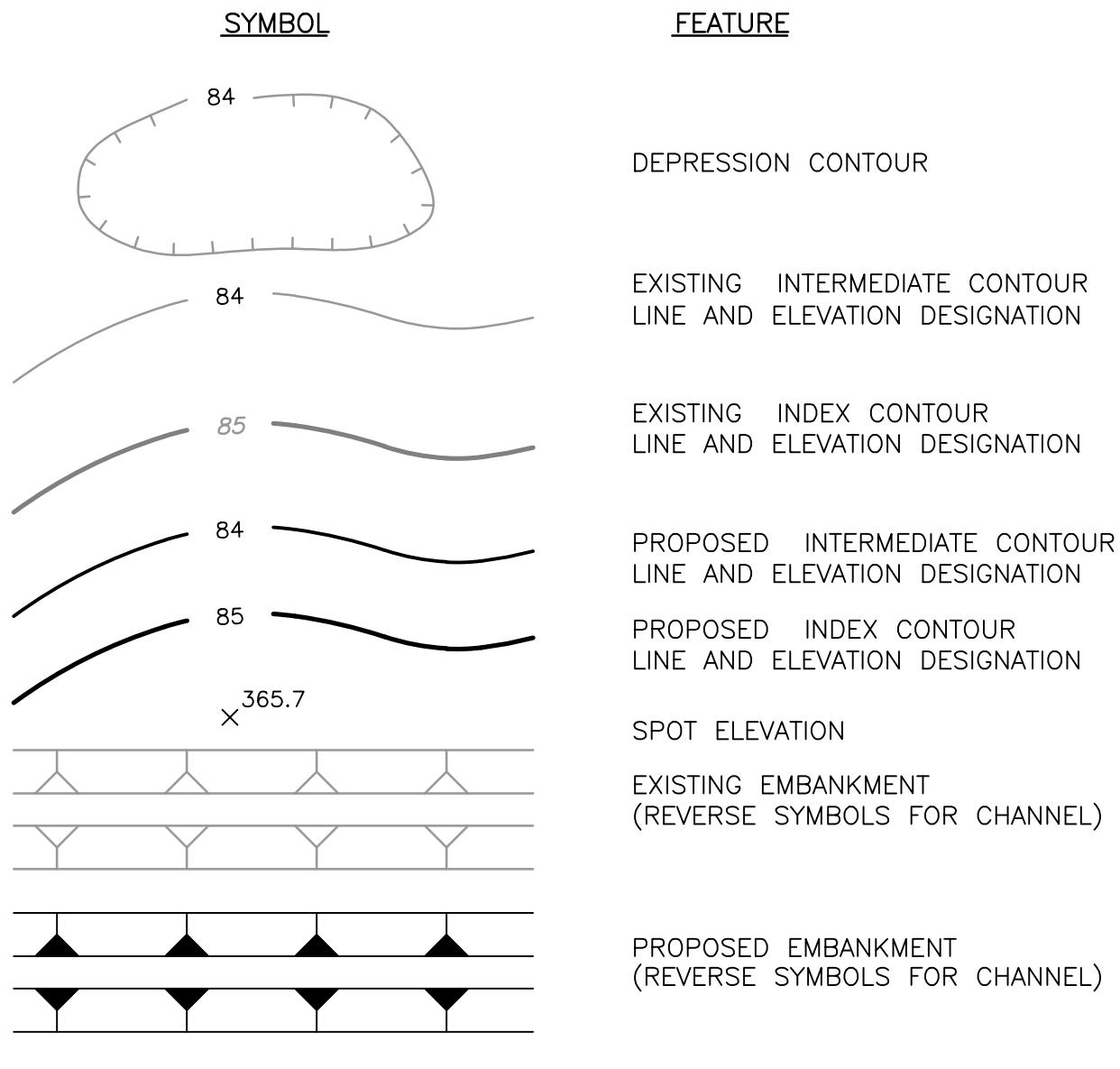
**BOUNDARY & MARKER SYMBOLS**



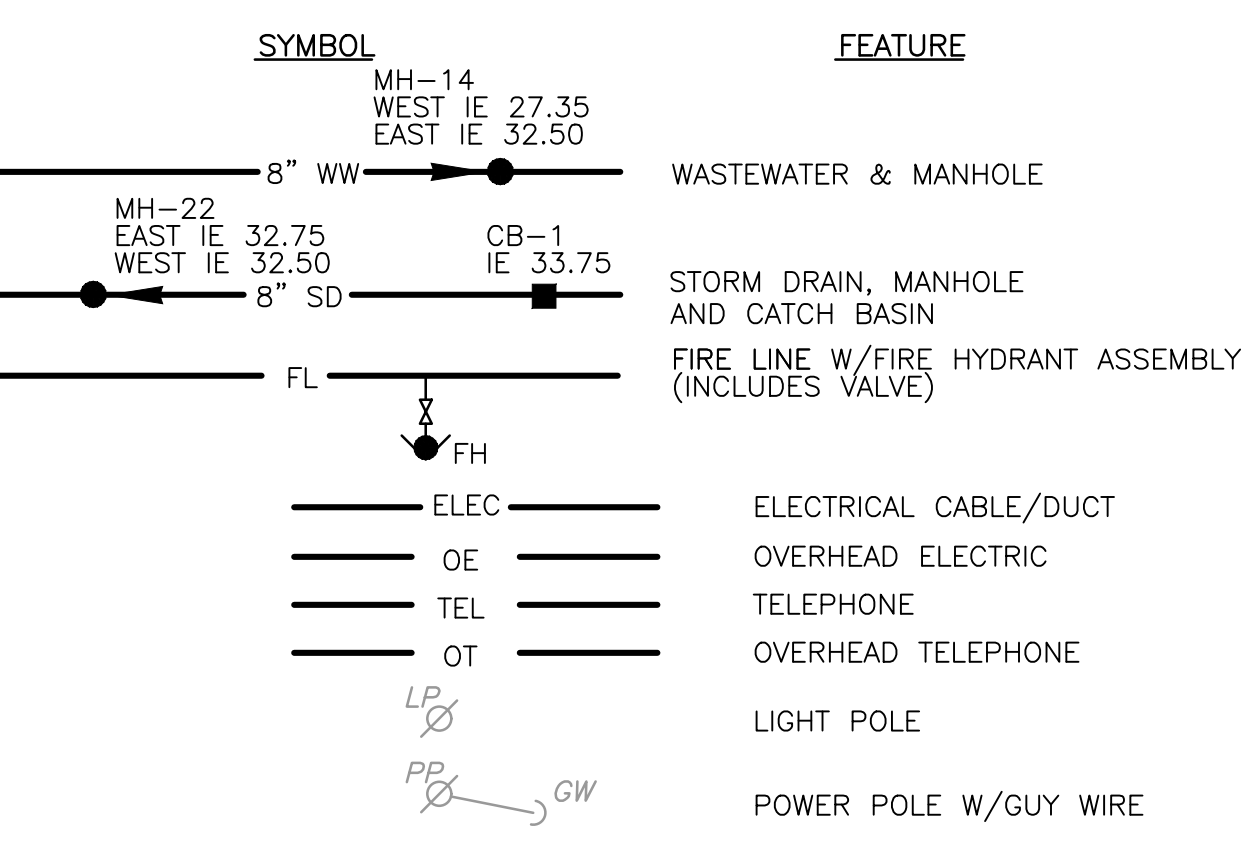
**TRAVELED WAY SYMBOLS**



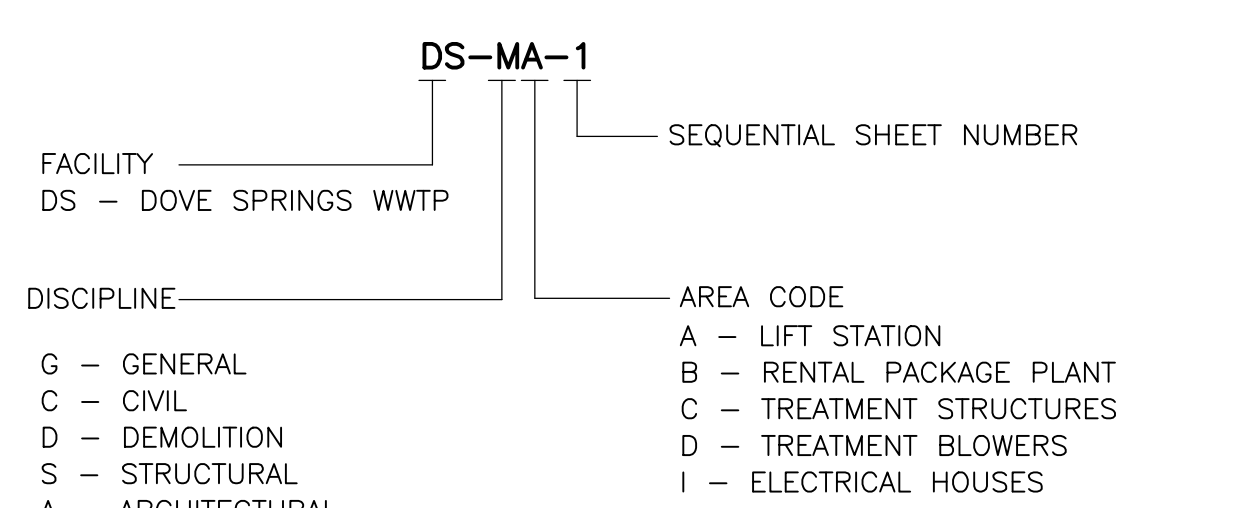
**SURFACE ELEVATION SYMBOLS**



**UNDERGROUND/OVERHEAD UTILITY SYMBOLS**

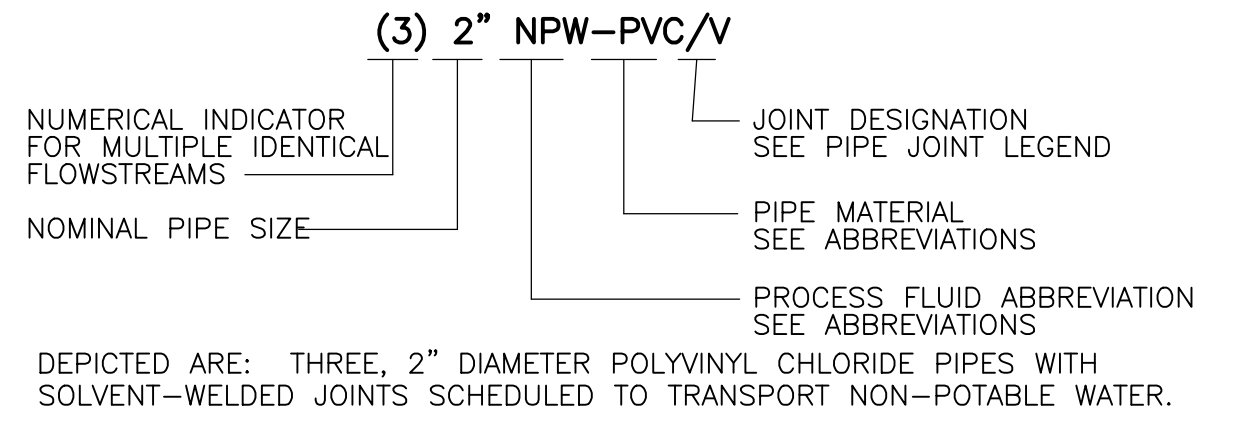


**DRAWING IDENTIFICATION SYSTEM**



DEPICTED IS: DOVE SPRINGS WWTP PROCESS MECHANICAL SHEET NO. 1 OF THE LIFT STATION.

**PIPE TAG**



- CONTRACTOR SHALL PROVIDE "AS BUILT" DRAWINGS TO THE ENGINEER SO THAT THE REPRODUCIBLE OF THE ENGINEERING DRAWINGS MAY BE CORRECTED TO REFLECT "RECORD DRAWING" CONDITIONS AS INDICATED IN SPECIFICATION 017700 "CLOSEOUT PROCEDURES"
- THE CONTRACTOR WILL BE REQUIRED TO PROVIDE AND MAINTAIN ALL NECESSARY WARNING AND SAFETY DEVICES TO PROTECT WORKMEN AND THE PUBLIC SAFETY AND HEALTH UNTIL THE WORK HAS BEEN COMPLETED AND ACCEPTED BY THE CITY.
- THE LOCATIONS OF EXISTING UTILITIES & STRUCTURES SHOWN ON THESE DRAWINGS ARE APPROXIMATE & ALL MAY NOT BE SHOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE AND VERIFY IN THE FIELD THE LOCATION OF ALL EXISTING UTILITIES & STRUCTURES PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION. AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION IN THE VICINITY OF UTILITIES, NOTIFY THE FOLLOWING AS APPLICABLE.  
CITY OF GEORGETOWN 512-930-3555  
FRONTIER 512-869-2231  
CITY OF GEORGETOWN ELECTRIC ENGINEERING 512-930-3651  
TEXAS ONE CALL 811 OR 800-344-8377
- TREES NOT SHOWN TO BE REMOVED SHALL NOT BE REMOVED WITHOUT ENGINEER'S APPROVAL. TREES APPROVED BY THE ENGINEER TO BE TRIMMED, SHALL BE CUT USING PROPER TOOLS AND THE TREE CUT SHALL BE PROPERLY SEALED AS INDICATED IN SECTION 015639 AND CIP9.
- ELECTRICAL LINES ARE LOCATED CLOSE TO THE PROJECT. THE ATTENTION OF THE CONTRACTOR IS DIRECTED TO THE STATE LAW (VERNON'S ANNOTATED TEXAS STATUTES, ARTICLE 1436(C)) CONCERNING OPERATIONS IN THE VICINITY OF ELECTRICAL LINES AND THE NEED FOR EFFECTIVE PRECAUTIONARY MEASURES.
- CONTRACTOR SHALL PARTICIPATE IN A PRE-CONSTRUCTION MEETING WITH THE OWNER, ENGINEER, AND OTHER AFFECTED PARTIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.
- NO BURNING OF TREES, BRUSH, RUBBISH, VEGETATION, OR OTHER OBJECTIONABLE MATTER WILL BE ALLOWED ON THE PROJECT SITE. ALL CLEARED AND GRUBBED MATERIAL SHALL BE DISPOSED OF IN A MANNER ACCEPTABLE TO THE CITY OF GEORGETOWN. ALL EXCESS EXCAVATED MATERIALS SHALL BE HAULED OFF-SITE.
- NO BLASTING WILL BE ALLOWED.
- ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF EACH SEDIMENTATION/EROSION CONTROL MEASURE ON THIS PROJECT.
- UNSUITABLE MATERIAL, STUMPS, OR EXCESS EXCAVATED MATERIALS SHALL BE KNOWN AS "WASTE" AND SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND IT SHALL BECOME HIS SOLE RESPONSIBILITY TO DISPOSE OF THIS MATERIAL OFF THE LIMITS OF THE PROJECT IN AN ENVIRONMENTALLY SOUND & LEGALLY APPROVED MANNER. THE CONTRACTOR SHALL NOTIFY THE CITY OF GEORGETOWN PRIOR TO OFFSITE DISPOSAL. THIS NOTIFICATION SHALL INCLUDE THE DISPOSAL LOCATION AND COPY OF THE PERMIT ISSUED TO RECEIVE THE MATERIAL.
- THE CONTRACTOR SHALL GIVE THE OWNER A MINIMUM OF 48 HOURS NOTICE BEFORE BEGINNING EACH PHASE OF CONSTRUCTION. THE PHASES OF CONSTRUCTION ARE AS FOLLOWS:  
A. INSTALL EROSION AND SEDIMENTATION CONTROL.  
B. INSTALL TREE PROTECTION.  
C. SITE VISIT BY OWNER'S INSPECTOR.  
D. AFTER INSPECTOR APPROVAL, BEGIN CONSTRUCTION.  
E. UPON CONSTRUCTION COMPLETION, RESTORE ALL DISTURBED AREAS.  
F. ARRANGE FOR FINAL INSPECTION.  
G. REMOVE TEMPORARY EROSION CONTROL MEASURES.
- ALL EXISTING UTILITIES, STRUCTURES, AND PIPES SHALL BE PROTECTED BY CONTRACTOR.
- CARE SHALL BE TAKEN TO PROTECT EXISTING FACILITIES.
- FINISHED GRADES SHALL SLOPE UNIFORMLY.
- TRACK EQUIPMENT WILL NOT BE ALLOWED ON PAVED ROADWAYS WITHOUT APPROPRIATE PROTECTION FOR THE PAVEMENT AS APPROVED BY THE ENGINEER.
- SURVEY CONTROL POINTS ARE SHOWN ON CIVIL SHEETS. THIS INFORMATION SERVES AS ONE-TIME BENCHMARK INFORMATION. CONTRACTOR TO PROVIDE ADDITIONAL LINES AND GRADES AS REQUIRED.
- ALL POTABLE WATER PIPING SHALL BE RESTRAINED PER AWWA GUIDELINES WITH A MINIMUM FACTOR OF SAFETY OF TWO. PROCESS PIPING RESTRAINED JOINTS SHALL BE PROVIDED AT ALL FITTINGS, AS DESCRIBED BELOW, UP TO THE FIRST JOINT OF PIPE WITHOUT A FITTING, AND SHALL BE DESIGNED PER AWWA GUIDELINES WITH A MINIMUM FACTOR OF SAFETY OF TWO. FITTINGS INCLUDE ALL VERTICAL AND HORIZONTAL CHANGES IN PIPE DIAMETER (REDUCERS), OR DIRECTION (E.G. TEES, BENDS, ELBOWS, AND CROSSES), PLUGS, VALVES, OTHER LOCATIONS SHOWN ON THE DRAWINGS, AND ON ALL BURIED PIPING HAVING FLEXIBLE JOINTS. JOINTS SHOULD BE DESIGNED TO PREVENT THE PIPE FROM MOVING WHEN SUBJECTED TO OPERATING AND TEST PRESSURES. RESTRAINED JOINTS SHALL HAVE CADMIUM PLATED OR OTHER APPROVED CORROSION RESISTANT BOLTS, NUTS, ETC. RESTRAINED JOINTS SHALL BE LOCK-FAST BY AMERICAN CAST IRON PIPE COMPANY, TR FLEX BY U.S. PIPE COMPANY, OR AN APPROVED EQUAL". REFER TO SECTION W1.
- ALL CONSTRUCTION MATERIAL/DEBRIS SHALL BE PLACED IN AN ON-SITE CONTAINER AND DISPOSED OF PROPERLY AT AN AUTHORIZED LANDFILL.
- AT THE COMPLETION OF WORK AND IMMEDIATELY PRIOR TO FINAL INSPECTION, CLEANING OF THE ENTIRE PROJECT SHALL BE ACCOMPLISHED IN ACCORDANCE WITH SECTIONS CIP14, CIP17 AND G8.
- CONTRACTOR SHALL FIELD VERIFY ALL EXISTING FACILITIES (SIGNS, UTILITIES, POLES, STRUCTURES, ETC). NOT ALL FACILITIES, ETC, ARE SHOWN.
- ANY EXISTING PAVEMENT, CURBS, AND/OR SIDEWALKS DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED OR REPAIRED AT THE CONTRACTOR'S EXPENSE.
- ANY EXISTING FENCES, WALLS, AND FACILITIES DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED OR REPAIRED AT THE CONTRACTOR'S EXPENSE.
- ALL DISTURBED AREAS SHALL BE GRADED, HYDROMULCHED OR SODDED, AS INDICATED ON THE DRAWINGS AND RESTORED AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL FOLLOW SEQUENCE OF CONSTRUCTION SPECIFIED IN SECTION CIP3 AND SHALL NOT DEVIATE WITHOUT WRITTEN AUTHORIZATION FROM ENGINEER.
- UNLESS OTHERWISE NOTED, ALL FLEXIBLE COUPLINGS, FLANGE COUPLING ADAPTERS, ETC, SHALL BE RESTRAINED PER SPECIFICATIONS & DETAILS.
- WHEN MAKING CONNECTIONS TO NEW OR EXISTING PIPING, CONTRACTOR SHALL PROVIDE ALL FITTINGS, ADAPTERS, CONNECTING PIECES, SLEEVES, FLEXIBLE COUPLINGS, ETC REQUIRED TO MAKE THE CONNECTIONS IN A MANNER SATISFACTORY TO THE ENGINEER REGARDLESS OF WHETHER OR NOT THESE COMPONENTS ARE SHOWN ON THE DRAWINGS.
- WHEN CONNECTING TO EXISTING MANHOLES, FIELD VERIFY EXISTING INVERT ELEVATIONS AND MODIFY PROPOSED INVERT ELEVATIONS TO ACHIEVE CONTINUOUS DOWNWARD SLOPE.
- ALL CONNECTIONS BETWEEN NEW AND/OR EXISTING PIPING, VALVES, FITTINGS, ETC, WHERE DISSIMILAR METALS WILL BE IN CONTACT SHALL BE PROTECTED BY INSULATING SYSTEMS AS APPROVED BY THE ENGINEER.
- ALL CAPS/PLUGS NOT SHOWN ON YARD PIPING PLAN SHEETS. CONTRACTOR IS RESPONSIBLE FOR ALL CAPS/PLUGS. ALL EXPOSED ENDS OF PIPES TO BE ABANDONED IN PLACE SHALL BE CAPPED/PLUGGED WITH CONCRETE OR MECHANICAL CAPS/PLUGS. RESTRAINED MECHANICAL CAPS OR PLUGS ARE REQUIRED FOR PIPES THAT WILL REMAIN IN SERVICE OR FOR FUTURE STUBOUTS.
- ALL PIPING UNDER STRUCTURES SHALL BE CONCRETE ENCASED, UNLESS SPECIFICALLY NOTED OTHERWISE.
- CLEARING IS NOT ALLOWED BETWEEN MARCH 1ST AND SEPTEMBER 1ST.
- PIPE ALIGNMENT BENDS OF LESS THAN MANUFACTURER'S PUBLISHED ACCEPTABLE DEFLECTION MAY BE MADE BY DEFLECTING THE JOINTS PER ENGINEER'S APPROVAL. BENDS OF MORE THAN MANUFACTURER'S PUBLISHED ACCEPTABLE DEFLECTION SHALL BE MADE WITH MANUFACTURER'S STANDARD FITTINGS PER ENGINEER'S APPROVAL.

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DESIGNED BY:	J. MAYER
DRAWN BY:	J. MAYER
SHEET CHK'D BY:	A. DOODY
CROSS CHK'D BY:	A. WOELKE
APPROVED BY:	A. DOODY
DATE:	NOVEMBER 2023

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JAM	ATD	CONFORMED DRAWINGS

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CITY OF GEORGETOWN, TEXAS  
**DOVE SPRINGS WWTP REHABILITATION**

PROJECT NO. 2048-264953  
FILE NAME: G003NFLG.DWG  
SHEET NO. G-3

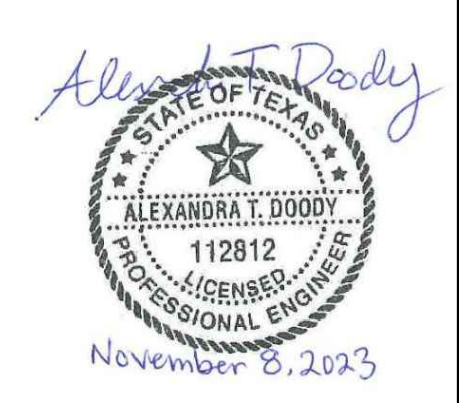
**GENERAL / CIVIL LEGEND**

Alexandra T. Doody  
ALEXANDRA T. DOODY  
112812  
PROFESSIONAL ENGINEER  
November 8, 2023



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#	NUMBER	B	BORING	CGV	CHLORINE GAS (VACUUM)	CT	CURRENT TRANSFORMER	E	EMERGENCY WATER	FCC	FILTER CONTROL CONSOLE
&	AND	B TO B	BACK TO BACK	CH	CONCRETE HARDENER	CTG	COATING	EAT	ENTERING AIR TEMPERATURE	FCV	FLOW CONTROL VALVE
<	ANGLE	BCP	BLOWER CONTROL PANEL	CHAM	CHAMFER	CTR	CENTER (ED)	EB	EXPANSION BOLT	FD	FLOOR DRAIN
⊙	AT	BCV	BALL CHECK VALVE	CHAN	CHANNEL	CTU	CENTRAL TELEMETRY UNIT	EC	EMPTY CONDUIT	FDMPR	FIRE DAMPER
2S1W	TWO SPEED, ONE WINDING	BD	BOARD	CHKD	CHECKERED	CU	COPPER	ECC	ECCENTRIC	FDN	FOUNDATION
2S2W	TWO SPEED, TWO WINDING	BDD	BACKDRAFT DAMPER	CHL	CHLORINATOR	CU	CUBIC	ED-F	EQUIPMENT DRAIN (FLUSH TYPE)	FE	FILTER EFFLUENT
2S2W	TWO SPEED, TWO WINDING	BEL	BELOW	CHR	CHLOROPRENE RUBBER (NEOPRENE)	CU FT	CUBIC FOOT (FEET)	ED-O	EQUIPMENT DRAIN (EXTENDED TYPE-OPEN)	FE	FIRE EXTINGUISHER
A	AIR (COMPRESSED)	BEV	BEVEL (ED)	CI	CAST IRON	CU YD	CUBIC YARD	ED-S	EQUIPMENT DRAIN (EXTENDED TYPE-SEALED)	Fe CL3	FERRIC CHLORIDE
A, AMP	AMPERE	BF	BLIND FLANGE	CIGL	CAST IRON PIPE GLASS LINED	CUH	CABINET UNIT HEATER	EDH	ELECTRIC DUCT HEATER	FES	FERROUS SULFATE
A/C	AIR CONDITIONING	BFD	BUTTERFLY VALVE DAMPER	CINF	CLARIFIER INFLUENT	CUP	COPPER PIPE	EF	EACH FACE	FF	FACTORY FINISH
AA	AERATION AIR	BFP	BELT FILTER PRESS	CIP	CAST IN PLACE	CV	CHECK VALVE	EFF	EFFLUENT	FF	FAR FACE
AB	AERATION BASIN	BFPV	BACK FLOW PREVENTER	CIP	CAST IN PLACE	CVR	CONVECTOR	EFM	EFFLUENT FLOW METER	FGL	FIBERGLASS
ABA	AEROBIC BASIN AERATOR	BFV	BUTTERFLY VALVE	CIR	CIRCLE	CW	CLOCKWISE	EG	EMERGENCY GENERATION SYSTEM	FH	FIRE HYDRANT
ABC	ASBESTOS CEMENT	BFVM	BUTTERFLY VALVE MOTOR OPERATED	CIRC	CIRCUMFERENTIAL	CW	CLOCKWISE	EG	EMERGENCY GENERATION SYSTEM	FHMS	FLATHEAD MACHINE SCREW
ABDN	ABANDON	BGO	BURIED GEAR OPERATOR	CIS	CAST IRON SOIL PIPE	CWO	CLEARWELL OVERFLOW	EGC	EQUIPMENT GROUNDING CONDUCTOR	FHWS	FLATHEAD WOOD SCREW
ABS	ACRYLONITRILE-BUTADIENE-STYRENE	CIU	CAST IRON PIPE UNLINED	CJ	CONSTRUCTION JOINT	CWR	COOLING WATER RETURN	EGO	ELEVATED GEAR OPERATOR	FI	FILTER INFLUENT
ABV	ABOVE	BL	BASELINE	CJ	CONSTRUCTION JOINT	CWS	COOLING WATER SUPPLY	EL	ELEVATION	FIG	FIGURE
AC	AIR COMPRESSOR	BLDG	BUILDING	CKT	CIRCUIT	D	PENNY	ELEC	ELECTRIC(AL)	FIN	FINISH(ED)
ACCU	AIR CONDITIONING CONDENSING UNIT	BLK	BLOCK	CL or C	CENTERLINE	CL2	CHLORINE SYSTEM	ELEV	ELEVATOR	FINW	FINISHED WATER
ACCV	AIR CUSHION CHECK VALVE	BLKG	BLOCKING	CL2G	CHLORINE (GAS)	CL2L	CHLORINE (LIQUID)	EMERG	EMERGENCY	FL	FIRE LINE
ACMU	ACOUSTICAL MASONRY UNIT	BLR	BLOWER	CL2L	CHLORINE (LIQUID)	DAL	DISSOLVED ALUM	EMG	EMERGENCY GENERATOR	FL	FLASHING
ACP	ASBESTOS CEMENT PIPE	BLM	BENCHMARK	CL2S	CHLORINE SOLUTION	DAP	DIAPHRAGM AIR PURGE	ENGR	ENGINEER	FL	FLOOR
ACT	ACOUSTICAL TILE	BOT	BOTTOM	CL2V	CHLORINE VENT	DAV	DIAPHRAGM AIR VENT	ENT	ENTERING, ENTRANCE	FLD	FUSIBLE LINK DAMPER
ACU	AIR CONDITIONING UNIT	BP	BOOSTER PUMP	CLF	CURRENT LIMITING FUSE	DB	DECIBEL	EOP	EDGE OF PAVEMENT	FLEX	FLEXIBLE
ADDL	ADDITIONAL	BPRV	BACK PRESSURE REGULATING VALVE	CLG	CEILING	DB	DRY BULB	EP	ELECTRICAL PANEL	FLG	FLANGE(D)
ADH	ADHESIVE	BRC	BRIDGE CRANE	CLJ	CONTROL JOINT	DC	DIRECT CURRENT	EPDM	ETHYLENE PROPYLENE RUBBER	FLG	FLOORING
ADJ	ADJUSTABLE, ADJUST	BRG	BEARING	CLKG	CAULKING	DCU	DISTRIBUTED CONTROL UNIT	EQ	EQUAL (LY)	FLM	FLASH MIXER
ADPT	ADAPTER	BRK	BRICK	CLR	CLARIFIER	DEMO	DEMOLITION	EQPT	EQUIPMENT	FLP	FAIL LAST POSITION
AFD	ADJUSTABLE FREQUENCY DRIVE	BRS	BRASS	CLSM	CONTROLLED LOW STRENGTH MATERIAL	DEPT	DEPARTMENT	EQUIV	EQUIVALENT	FLR	FILLER
AFF	ABOVE FINISHED FLOOR	BRZ	BRONZE	CLW	CLARIFIED WATER (CLARIFIER EFFLUENT)	DET	DETAIL	ESMT	EASEMENT	FLT	FILTRATE
AFG	ABOVE FINISHED GRADE	BS	BLENDED SLUDGE	CM	CORRUGATED METAL	DFI	DISK FILTER INFLUENT	ESP	EFFLUENT SAMPLE PUMPS	FLW	FILTERED WATER
AFM	AIR FLOW METER	BS	BOTH SIDES	CMON	CONCRETE MONUMENT	DI	DUCTILE IRON	EST	ESTIMATE (D)	FM	FLOW METER
AGG	AGGREGATE	BSMT	BASEMENT	CMP	CORRUGATED METAL PIPE	DIA	DIAMETER	ETC	ETCETERA	FO	FAIL OPEN
AHP	AIR HORSEPOWER	BSP	BLACK STEEL PIPE	CMU	CONCRETE MASONRY UNITS	DIAG	DIAGONAL	EUH	ELECTRIC UNIT HEATER	FO	FUEL OIL
AHU	AIR HANDLING UNIT	BTU	BRITISH THERMAL UNIT	CND	CONDUIT	DIFF	DIFFUSER	EV	EVAPORATOR VENT	FOB	FLAT ON BOTTOM
AI	AIR INSTRUMENT	BTWN	BETWEEN	CNR	CONDENSATE RETURN	DIGL	DUCTILE IRON GLASS LINED	EVA	ELECTRICAL GEAR ACTUATOR	FOR	FUEL OIL RETURN
AI	ANALOG INPUT	BUR	BUILT UP ROOF (ING)	CNS	CONDENSATE SUPPLY	DIM	DIMENSION	EVAP	EVAPORATOR (ION)	FOS	FUEL OIL SUPPLY
AL	ALUMINUM	BV	BALL VALVE	COL	CLEAN OUT	DIP	DUCTILE IRON PIPE	EW	EACH WAY	FOT	FLAT ON TOP
AL VT	ALUM VENT	BVM	MOTORIZED BALL VALVE	COMB	COMBINATION	DIR	DIRECTION	EWC	ELECTRIC WATER COOLER	FOV	FUEL OIL VENT
ALS	ALUM SOLUTION	BWP	BACK WASH PUMP	COMB	COMBINATION	DISCH	DISCHARGE	EXA	EXHAUST AIR	FP	FILTER PRESS
ALSS	ALUM SYSTEM	BWR	BACKWASH RETURN	COMB	COMBUSTION	DISP	DISPENSER	EXH	EXHAUST	FPM	FEET PER MINUTE
ALST	ALUM STORAGE TANK	BWS	BACKWASH SUPPLY	COMP	COMPRESSIBLE	DIV	DIVISION	EXP	EXPANSION	FPT	FEMALE PIPE THREAD
ALT	ALTERNATE (ING)	BWW	BACKWASH WATER	COMP JT	COMPRESSION JOINT	DIW	DEIONIZED WATER	EXP	EXPOSED	FR	FRAME
ALT	ALTITUDE	BYP	BYPASS	CONC	CONCRETE	DL	DEAD LOAD	EXP JT	EXPANSION JOINT	FRP	FIBERGLASS REINFORCED PLASTIC
ALU	ALUMINUM SULFATE	C TO C	CENTER TO CENTER	COND	CONDUCTIVITY	DN	DOWN	EXT	EXISTING	FRR	FLUORINE RUBBER(viton)
ALUM	ALUM (CHEMICAL)	CA	COMPRESSED AIR	CONN	CONNECTION	DO	DISSOLVED OXYGEN	EXTD	EXTENDED	FS	FLOOR STAND
ANOD	ANODIZE	CAB	CABINET	CONST	CONSTRUCTION	DOI	DOOR INTERLOCK	EY	EPOXY	FT	FEET/FOOT
AO	ANALOG OUTPUT	CAD	COMPRESSED AIR, DRIED	CONT	CONTINUOUS	DP	DAMPPOOFING	F	FAHRENHEIT OR FILTRATE	FTG	FOOTING/FITTING
AP	ACCESS PANEL	CAP	CAPACITY	COR	CORNER(S)	DR	DRAIN	FAC	FACILITY	FTR	FINNED TUBE RADIATION
APPROX	APPROXIMATE (LY)	CARP	CARPET	CORR	CORRUGATED	DR	DRIVE	FAC	FLANGED ADAPTOR COUPLING	FTW	FILTER TO WASTE
AR	AIR RECEIVER	CATV	CABLE TV	CPLG	COUPLING	DSCL	DEWATERED SLUDGE CAKE	FAM	FIRST ANOXIC MIXERS	FU	FUSE
ARCH	ARCHITECT (URAL) (URE)	CB	CATCH BASIN	CPOL	CATIONIC POLYMER	DT	DRAIN TANK	FAP	FILTRATE AIR PURGE	FURN	FURNISHED
ARND	AROUND	CB	CIRCUIT BREAKER	CPP	CONCRETE PRESSURE PIPE	DT	DRAIN TANK	FAP	FILTRATE AIR PURGE	FXD	FIXED
ARV	AIR RELEASE VALVE	CC	CLOSED LOOP COOLING SYSTEM	CPT	CONTROL POWER TRANSFORMER	DV	DIAPHRAGM VALVE	FAC	FACILITY	G	NATURAL GAS
ARVV	AIR RELEASE VALVE/VACUUM	CC	COOLING COIL, CONTROL CONDUIT	CPVC	CHLORINATED POLYVINYLCHLORIDE PIPE	DW	DISTILLED WATER	FAC	FLANGED ADAPTOR COUPLING	GA	GAGE
AS	ACTIVATED SLUDGE, AIR SUPPLY	CC	CENTRAL CONTROL CONSOLE	CR	CHLORINE RESIDUAL	DWG	DRAWING	FAC	FLANGED ADAPTOR COUPLING	GALV	GALVANIZED
ASHT	AERATED SLUDGE HOLDING TANK	CCC	CENTRAL CONTROL CONSOLE	CRS	COURSE (S)	DWL	DOWEL	FAM	FIRST ANOXIC MIXERS	GALVS	GALVANIZED STEEL
ASPH	ASPHALT	CCS	CHLORINE CYLINDER SCALE	CS	CARBON STEEL	DWP	DEWATERING PUMP	FAP	FILTRATE AIR PURGE	GALVSP	GALVANIZED STEEL PIPE
ASSOC	ASSOCIATION	CCW	COUNTER CLOCKWISE	CS	CONTROL SWITCH	DWTR	DEWATER(ED)	FB	FLOOR BOX (BUSHING TYPE)	GC	GRIT CLASSIFIER
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS	CD	CONDENSATE DRAIN	CSC	CONCRETE STEEL CYLINDER			FBO	FURNISHED BY OTHERS	GCR	GRIT CONCENTRATOR
ATC	AUTOMATIC TEMPERATURE CONTROL	CEFF	CLARIFIER DRIVE MECHANISM	CSK	COUNTERSINK			FBR	FULL VOLTAGE REVERSING	GEC	GROUNDING ELECTRODE CONDUCT
ATS	AUTOMATIC TRANSFER SWITCH	CEM	CEMENT	CSL	CONDITIONED SLUDGE			FC	FAIL CLOSED	GEN	GENERATOR
AUTO	AUTOMATIC	CENT	CENTRIFUGAL	CSM	CHLORINE SULPHONILE POLYETHYLENE (HYPALON)			FC	FLEX CONNECTION	GFI	GROUND FAULT INTERRUPTER
AUX	AUXILIARY	CF	COMPRESSIBLE FILLER	CSMP	CAUSTIC METERING PUMPS			FCA	FLANGED COUPLING ADAPTOR	GI	GALVANIZED IRON
AUX	AUXILIARY	CFM	CUBIC FEET PER MINUTE	CSTG	CASTING					GL	GLASS
AV	ACID VENT	CFS	CUBIC FEET PER SECOND	CT	CERAMIC TILE					GLB	GLASS BLOCK
AVG	AVERAGE	CG	CHLORINE GAS (PRESSURE)							GLV	GLOBE VALVE
AW	ACID WASTE	CGFB	CEMENTITIOUS GLASS FIBER BOARD							GOV	GLOBE VALVE
AWG	AMERICAN WIRE GAUGE									GP	GLASS PIPE
AWL	AVERAGE WATER LEVEL										
AX	CURRENT TRANSDUCER										



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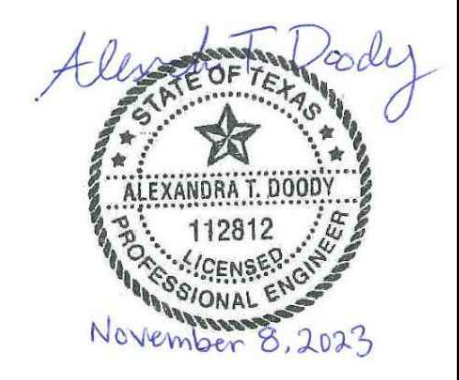
CITY OF GEORGETOWN, TEXAS  
**DOVE SPRINGS WWTP  
 REHABILITATION**

**ABBREVIATIONS I**

PROJECT NO.	2048-264953
FILE NAME:	G005NFAB.DWG
SHEET NO.	<b>G-5</b>



SOFL	SODIUM FLUORIDE	TOB	TOP OF BERM/BANK	W	WEST
SOJ	SLIP ON JOINT	TOC	TOP OF CURB/CONCRETE	W	WIDE
SOLN	SOLUTION	TOIL	TOILET	W/	WITH
SOLV	SOLENOID VALVE	TOPG	TOPPING	W/A	WHERE APPLICABLE
SP	SUMP PUMP	TOS	TOP OF STEEL	W/O	WITHOUT
SPEC	SPECIFICATION, SPECIFIED	TOW	TOP OF WALL	WAP	WALL PIPE
SPL	SAMPLE	TOXS	THICKENED OXIDIZED SLUDGE	WAS	WASTE ACTIVATED SLUDGE
SPL	SAMPLE LINE	TP	TURNING POINT	WB	WET BULB
SPR	SPRING	TPRP	THERMOPLASTIC REINFORCED PIPE	WBW	WASTE BACKWASH WATER
SPR	SPRINKLER LINE	TPS	THICKENED PRIMARY SLUDGE	WC	WATER CLOSET
SPTG	SEPTAGE	TR	TRIANGULATION POINT	WD	WIDTH
SPW	SPRAY WATER	TRNSN	TRANSITION	WD	WOOD
SQ	SQUARE	TRNSV	TRANSVERSE	WDW	WINDOW
SR	SLUDGE RETURN	TS	STRUCTURAL TUBING (STEEL UNLESS NOTED)	WF	WIDE FLANGE
SS	SANITARY SEWER OR STAINLESS STEEL	TSL	TOP OF SLAB OR THICKENED SLUDGE	WG	WASTE GAS
SSC	SECONDARY SCUM	TUBV	TIME UNION BALL VALVE	WH	WATER HEATER
SSFL	SODIUM SILICO FLUORIDE	TURB	TURBIDITY	WHDM	WATTHOUR DEMAND METER
SSIL	SODIUM SILICATE	TV	TELESCOPING VALVE	WHDR	WATTHOUR DEMAND RECORDER
SSK	SERVICE SINK	TWAS	THICKENED WASTE ACTIVATED SLUDGE	WHM	WATTHOUR METER
SSL	SECONDARY SLUDGE	TWF	THROUGH WALL FLASHING	WIPA	WASTE ISOPROPYL ALCOHOL
SST	STAINLESS STEEL	TYP	TYPICAL	WJ	WELDED JOINT
ST PR	STATIC PRESSURE OR SPACE (D)	U	HEAT TRANSFER COEFFICIENT	WL	WATER LEVEL
STA	STATION	UC	UNDERCUT	WL	WATER LINE
STD	STANDARD	UD	UNDERDRAIN	WM	WATER MAIN
STIF	STIFFENER	UGND	UNDERGROUND	WM	WATTMETER
STIR	STIRRUP (S)	UGTC	UNDERGROUND TELEPHONE CABLE	WNBA	WASTE N. BUTYL ACETATE
STL	STEEL	UH	UNIT HEATER	WNC	WASTE NON-CHLORINATED
STOR	STORAGE	UL	UNDERWRITERS LABORATORY	WOAS	WASTE OXYGEN ACTIVATED SLUDGE
STR	STRAINER	UN	UNION	WP	WELDED PIPE
STRUC	STRUCTURE (S, URAL)	UNO	UNLESS NOTED OTHERWISE	WP	WORKING POINT
STWY	STAIRWAY	UPVC	UN-PLASTICISED POLYVINYL CHLORIDE	WPG	WATERPROOFING
SUPT	SUPERINTENDENT	UR	URINAL	WR	WASHWATER RECOVERY
SUSP	SUSPENDED	V	VOLTS	WS	WATER SURFACE OR WATERSTOP
SW	SWITCH	VA	VENT AIR	WSD	WASHWATER DRAIN
SWBD	SWITCHBOARD	VA-H	HYDRAULIC VALVE OPERATOR	WSH	WASHWATER
SWD	SIDE WATER DEPTH	VA-M	MOTOR VALVE OPERATOR	WSL	WASTE SLUDGE
SWGR	SWITCHGEAR	VA-P	PNEUMATIC VALVE OPERATOR	WSM	WASTE ACTIVATED SLUDGE METER
SWK	SIDEWALK	VA-S	SOLENOID VALVE OPERATOR	WSP	WASTE ACTIVATED SLUDGE PUMPS
SYM	SYMMETRICAL	VAC	VACUUM	WSV	WALL SLEEVE
T	TREAD(S)	VAR	VARIOUS/VARIABLE	WT	STEEL TEE-SHAPE DESIGNATION
T&B	TOP AND BOTTOM	VAV	VARIABLE AIR VOLUME	WT	WEIGHT
T&G	TONGUE AND GROOVE	VB	VALVE BOX	WTHPRF	WEATHERPROOF
TAN	TANGENCY	VAV	VARIABLE AIR VOLUME	WTP	WATER TREATMENT PLANT
TAS	THICKENED ACTIVATED SLUDGE	VB	VALVE BOX	WW	WASTE WATER
TD	TEMPERATURE DIFFERENCE	VB	VAPOR BARRIER	WWF	WELDED WIRE FABRIC
TD	TRENCH DRAIN	VBR	VACUUM BREAKER	WWP	WASHWATER PUMPS
TDC	TIME DELAY ON CLOSING	VC	VICTAULIC COUPLING (SHOULDERED ENDS)	WWTP	WASTEWATER TREATMENT PLANT
TDD	TIME DELAY AFTER DEENERGIZATION-OFF DELAY	VC	VITRIFIED CLAY	WX	WATT TRANSDUCER
TDE	TIME DELAY AFTER ENERGIZATION-ON DELAY	VCP	VITRIFIED CLAY PIPE	XFER	TRANSFER
TDO	TIME DELAY ON OPENING	VCT	VINYL COMPOSITION TILE	XFMR	TRANSFORMER
TECH	TECHNICAL	VD	VOLUME DAMPER	XP	EXPLOSION PROOF
TEL	TELEPHONE	VE	VACUUM EXHAUST	YD	YARD
TEMP	TEMPERATURE	VEL	VELOCITY	YR	YEAR
TEMP	TEMPERED	VERT	VERTICAL	ZOPH	ZINC ORTHOPHOSPHATE
TEMP	TEMPORARY	VFD	VARIABLE FREQUENCY DRIVE		
TER	TERRAZZO	VIB	VIBRATION		
TERB	TERRAZZO BASE	VIPA	VIRGIN ISOPROPHYL ALCOHOL		
TF	TOP FACE	VNBA	VIRGIN N. BUTYL ACETATE		
TF	TRANSFER FAN	VOL	VOLUME		
TFP	TRANSFER PUMP	VS	VARIABLE SPEED		
TG	TRANSFER GRILLE	VSD	VARIABLE SPEED DRIVE		
THD	THREADED	VT	VENT		
THK	THICK(NESS)	VTR	VENT THRU ROOF		
THR	THRESHOLD				
TKBD	TACKBOARD				
TKD	TANK DRAIN				
TLV	TELESCOPING VALVE				
TM	TELEMETER OR TIME				



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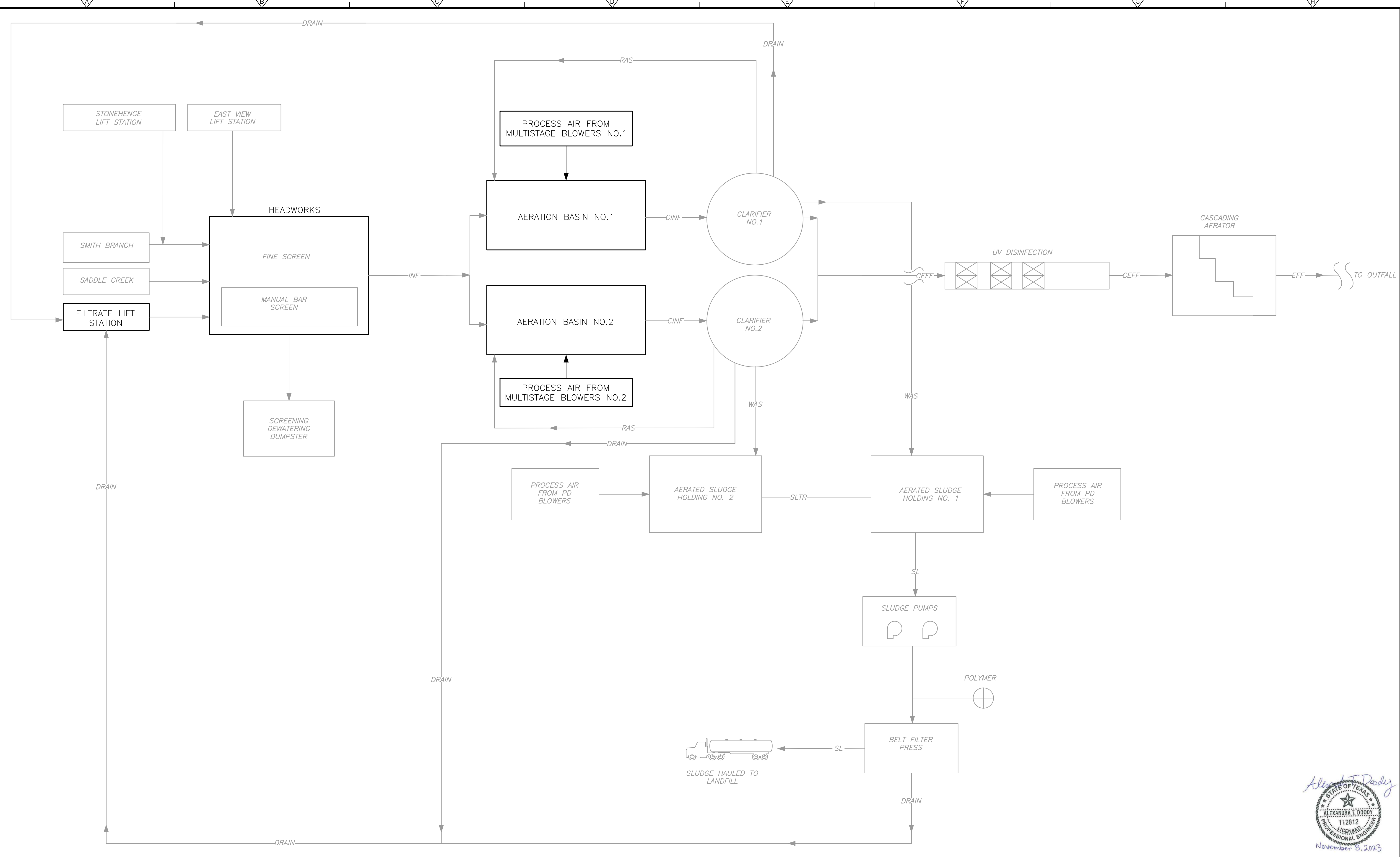
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CITY OF GEORGETOWN, TEXAS  
**DOVE SPRINGS WWTP  
 REHABILITATION**

ABBREVIATIONS III

PROJECT NO. 2048-264953
FILE NAME: G007NFAB.DWG
SHEET NO. <b>G-7</b>

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November 8, 2023

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JAM	ATD	CONFORMED DRAWINGS

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 DRAWN BY: J. MAYER  
 SHEET CHK'D BY: A. DOODY  
 CROSS CHK'D BY: A. WOELKE  
 APPROVED BY: A. DOODY  
 DATE: NOVEMBER 2023



CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP  
 PROPOSED PROCESS FLOW DIAGRAM

PROJECT NO. 2048-264953  
 FILE NAME: DSG1.DWG  
 SHEET NO. DS-G-1



# DOVE SPRINGS DESIGN CRITERIA

INFLUENT WASTEWATER CHARACTERISTICS	
WASTEWATER FLOWS (MGD)	
ANNUAL AVERAGE DAY (ADF)	2.50
PEAK 2-HOUR	6.25
WASTEWATER CHARACTERISTICS	
AVERAGE INFLUENT BOD5, mg/l	182
AVERAGE INFLUENT TSS, mg/l	225
AVERAGE INFLUENT AMMONIA-N, mg/l	35
MAXIMUM MONTH INFLUENT BOD5 LOAD, lb/d	5,200
MAXIMUM MONTH INFLUENT TSS LOAD, lb/d	6,880
MAXIMUM MONTH INFLUENT AMMONIA-N LOAD, lb/d	1,150

HEADWORKS	
INLFUENT SCREEN	
NUMBER	1
TYPE	Inclined Drum Screen
SPACING	3mm
WASH WATER FLOW REQUIREMENT, gpm	70
WASH WATER PRESSURE REQUIREMENT, psi	100-125
SCREENINGS HANDLING	
NUMBER	1
TYPE	12-inch diameter Shaftless Screw Conveyor
MOTOR, hp	2

FILTRATE LIFT STATION	
TYPE	Submersible, Constant Speed
NUMBER	2
CAPACITY, gpm	400
TDH, ft	34
MOTOR, hp	7.50

NON-POTABLE WATER PUMP HOUSE	
NUMBER	2
TYPE	End Suction Centrifugal
MOTOR, hp	10
CAPACITY, gpm	100
PRESSURE, psi	100

AERATION TANKS	
GENERAL	
TYPE	Bullseye
NUMBER	2
SIDE WATER DEPTH, ft	15.50
BASIN 1 VOLUME, mg	1.03
BASIN 2 VOLUME, mg	0.56
DIFFUSERS	9-inch Ceramic Fine Bubble Discs
AVERAGE AIR FLOW, scfm	3,525
MAX DAY AIR FLOW, scfm	6,330
BLOWERS	
NUMBER	4 (2 duty, 2 standby)
TYPE	Multistage Centrifugal
MOTOR, hp	200
CAPACITY, scfm, each	3,165
PRESSURE, psig	8.25

CLARIFIERS	
DIAMETER, ft	75
SIDE WATER DEPTH, ft	15
SURFACE AREA EACH, sf	4,420
PEAK 2-HOUR OVERFLOW RATE, gpd/sf	707

UV DISINFECTION	
TYPE	AQUARAY 40 HO LAMP VERTICAL
NUMBER	3 MODULES
NOMINAL CAPACITY, mgd	6.25

AERATED SLUDGE HOLDING TANKS	
GENERAL	
NUMBER	2
TOTAL VOLUME, gal	260,000
MAXIMUM SIDE WATER DEPTH, ft	15.5
DIGESTED SLUDGE SOLIDS CONCENTRATION, %	0.8 - 3.0
MINIMUM MIXING AIR REQUIRED, scfm	770
MIXING TYPE ASHT NO. 1	Wide band Coarse Bubble Diffusers
MIXING TYPE ASHT NO. 2	Wide band Coarse Bubble Diffusers
BLOWERS	
NUMBER	2 (Existing)
TYPE	Positive Displacement
MOTOR, hp	150
CAPACITY, scfm	1,050
DESIGN PRESSURE, psig	7.5
MOTOR, hp	150
CAPACITY, scfm	1,050
DESIGN PRESSURE, psig	7.5

BELT FILTER PRESS	
NUMBER	1
TYPE	2 Meter, Belt Filter Press
DESIGN LOADING RATE, gpm	210 @ 1% solids, 70 @ 3% solids
SOLIDS CONCENTRATION, %	1 - 3
PROCESSING RATE, lbs/hr	1,050
DEWATERED SOLIDS CONCENTRATION, %	16 - 18
POLYMER PACKAGE SYSTEM	
NUMBER	1
TYPE	Emulsion
CAPACITY, gph	0.42 - 0.48 (NEAT POLYMER)

BFP FEED PUMPS	
NUMBER	2
TYPE	Progressing Cavity
MOTOR, hp	20
DESIGN FLOW, gpm	250
DESIGN TDH, ft	80

TEMPORARY PACKAGE PLANT (UNDER SEPARATE CITY CONTRACT)	
DESIGN AVERAGE DAILY FLOW, mgd	1.0
DESIGN PEAK FLOW, gpm	1,360
SLUDGE TRANSFER PUMPS	
NUMBER OF PUMPS	2 (1 duty, 1 shelf spare)
TYPE	Submersible, Constant Speed
DESIGN CAPACITY, gpm	130
DESIGN TDH, ft	21
DISCHARGE, in	3
MAX MOTOR, hp	5

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REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JAM	ATD	CONFORMED DRAWINGS

DESIGNED BY: J. MAYER  
 DRAWN BY: B. FEBA  
 SHEET CHK'D BY: A. DOODY  
 CROSS CHK'D BY: A. WOELKE  
 APPROVED BY: A. DOODY  
 DATE: DECEMBER 2023

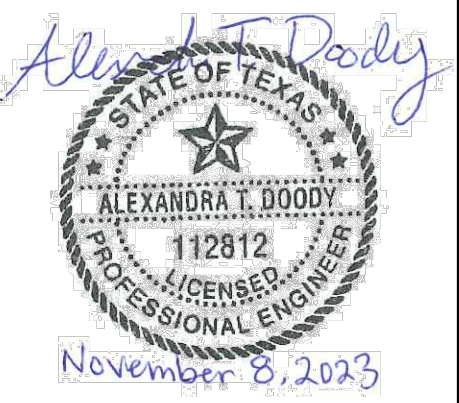
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 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP  
 DESIGN CRITERIA

PROJECT NO.	2048-264953
FILE NAME:	DSG4.DWG
SHEET NO.	DS-G-2



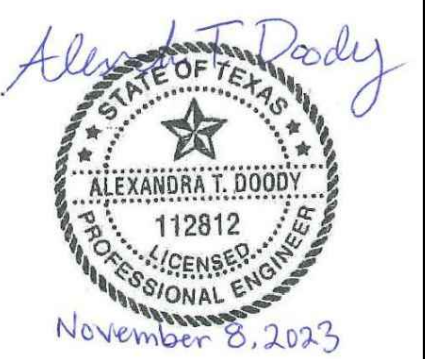


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TAG	BUILDING STRUCTURE	ENVIRONMENTAL DESIGNATION	NFP 820 CLASSIFICATION	NEMA 250 ENCLOSURE CLASSIFICATION	NEMA 250 ENCLOSURE MATERIALS (SEE NOTE 4)	CONDUIT TYPE (SEE NOTE 5)	ELECTRICAL FRAMING CHANNEL AND CONDUIT/CABLE TRAY SUPPORTS MATERIAL	DUCTWORK MATERIALS	MATERIALS FOR DUCTWORK SUPPORTS (SEE NOTES 3 AND 4)	PIPING SUPPORTS (ALL TRADES) (SEE NOTES 3 AND 4)	GRATING	HANDRAIL	ANCHOR BOLTS FOR ALL TRADES	MOUNTING HARDWARE FOR ALL TRADES (SEE NOTE 2)
1	TREATMENT STRUCTURE NO. 1	WET/CORROSIVE	CLASS 1, DIV 2	NEMA 7	316 SST	RIGID ALUMINUM	316 SST	ALUMINUM, FRP	316 SST	316 SST	ALUMINUM	ALUMINUM	316 SST	316 SST
2	TREATMENT STRUCTURE NO. 2	WET/CORROSIVE	CLASS 1, DIV 2	NEMA 7	316 SST	RIGID ALUMINUM	316 SST	ALUMINUM, FRP	316 SST	316 SST	ALUMINUM	ALUMINUM	316 SST	316 SST
3	BLOWERS	DRY	UNCLASSIFIED	NEMA 4X	PAINTED STEEL	RIGID ALUMINUM	HOT DIPPED GALVANIZED STEEL	GALVANIZED STEEL, ALUMINUM	HOT DIPPED GALVANIZED STEEL	HOT DIPPED GALVANIZED STEEL	N/A	ALUMINUM	HOT DIPPED GALVANIZED STEEL	HOT DIPPED GALVANIZED STEEL
4	FILTRATE LIFT STATION	WET/CORROSIVE	CLASS 1, DIV 1	NEMA 7	316 SST	RIGID ALUMINUM	316 SST	ALUMINUM, FRP	316 SST	316 SST	FRP ALUMINUM	ALUMINUM	316 SST	316 SST
5	TEMPORARY PACKAGE PLANT	WET/CORROSIVE	CLASS 1, DIV 1	NEMA 7	316 SST	RIGID ALUMINUM	316 SST	ALUMINUM, FRP	316 SST	316 SST	ALUMINUM	ALUMINUM	316 SST	316 SST
6	HEADWORKS	WET/CORROSIVE	CLASS 1, DIV 2	NEMA 7	316 SST	RIGID ALUMINUM	316 SST	ALUMINUM, FRP	316 SST	316 SST	ALUMINUM	ALUMINUM	316 SST	316 SST
7	BELT FILTER PRESS	WET/CORROSIVE	CLASS 1, DIV 2	NEMA 7	316 SST	RIGID ALUMINUM	316 SST	ALUMINUM, FRP	316 SST	316 SST	ALUMINUM	ALUMINUM	316 SST	316 SST
8	NPW PUMP HOUSE	WET	UNCLASSIFIED	NEMA 7	PAINTED STEEL	RIGID ALUMINUM	HOT DIPPED GALVANIZED STEEL	GALVANIZED STEEL	HOT DIPPED GALVANIZED STEEL	HOT DIPPED GALVANIZED STEEL	N/A	ALUMINUM	316 SST	316 SST
9	UV DISINFECTION	WET	UNCLASSIFIED	NEMA 7	PAINTED STEEL	RIGID ALUMINUM	HOT DIPPED GALVANIZED STEEL	GALVANIZED STEEL	HOT DIPPED GALVANIZED STEEL	HOT DIPPED GALVANIZED STEEL	N/A	ALUMINUM	316 SST	316 SST

**NOTES:**

- THIS TABLE IS INCLUDED FOR CONTRACTOR CONVENIENCE BUT IT DOES NOT OVERRIDE THE SPECIFICATIONS.
- HARDWARE MATERIALS SHALL BE SIMILAR FOR PROCESS MECHANICAL, PLUMBING, FIRE, HVAC, ELECTRICAL AND INSTRUMENTATION AND CONTROLS SYSTEM UNLESS OTHERWISE NOTED.
- PIPE SUPPORT MATERIALS SHALL BE SIMILAR FOR PROCESS MECHANICAL, PLUMBING, FIRE HVAC PIPING SYSTEMS.
- MATERIALS NOTED ABOVE APPLY TO ALL AREAS OF THE PROJECT UNLESS OTHERWISE NOTED.



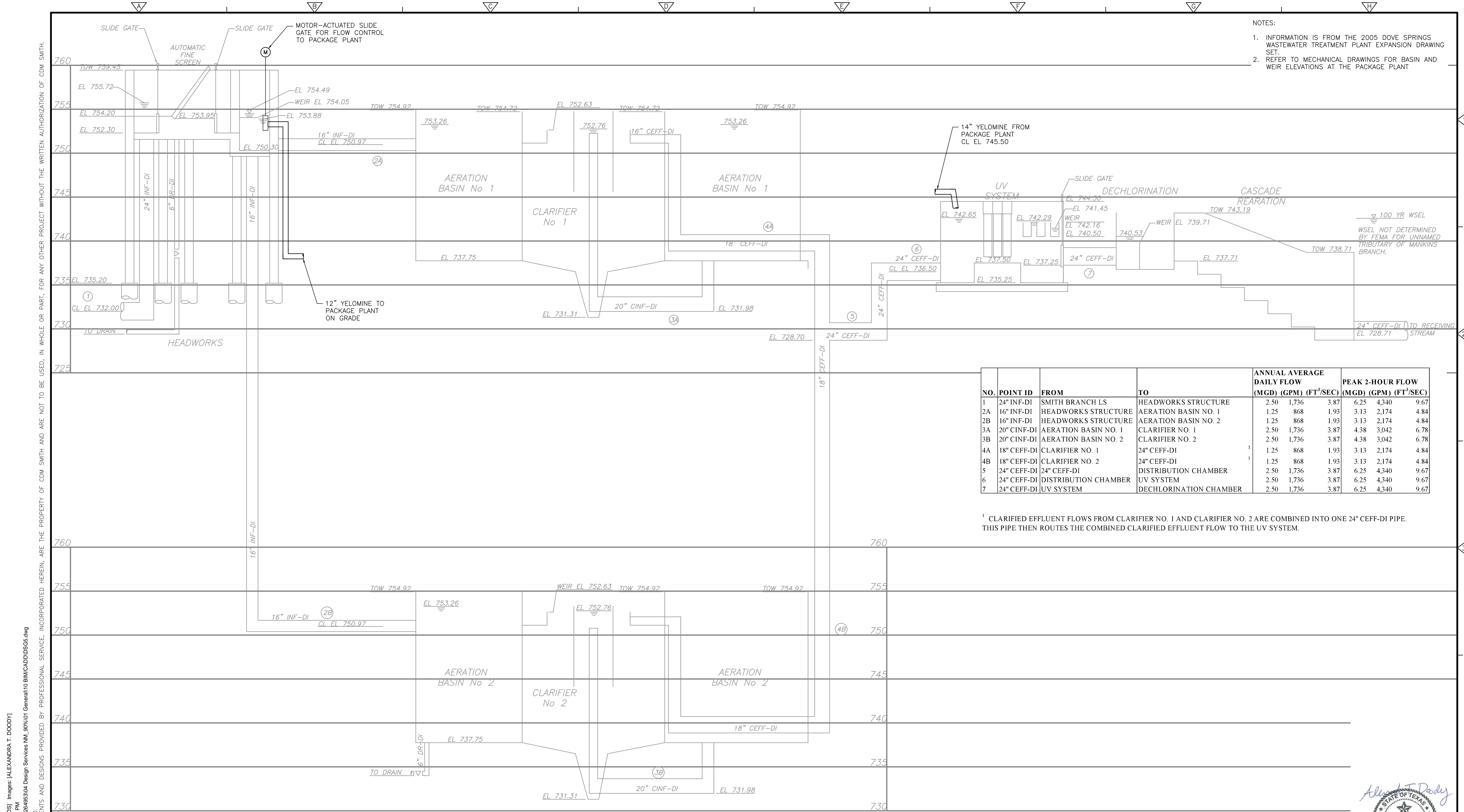
DESIGNED BY: J. MAYER
DRAWN BY: R. MESQUITA
SHEET CHK'D BY: A. DOODY
CROSS CHK'D BY: A. WOELKE
APPROVED BY: A. DOODY
DATE: NOVEMBER 2023

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 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP  
 MATERIALS SCHEDULE

PROJECT NO. 2048-264953
FILE NAME: G104STAC.DWG
SHEET NO. DS-G-4

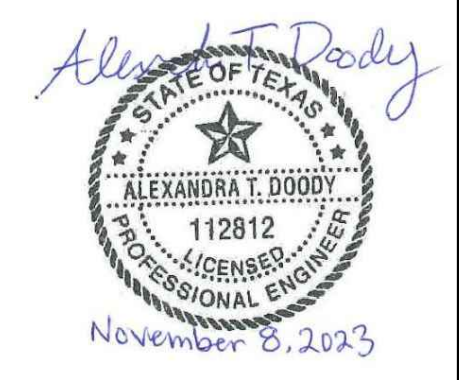


- NOTES:
1. INFORMATION IS FROM THE 2005 DOVE SPRINGS WASTEWATER TREATMENT PLANT EXPANSION DRAWING SET.
  2. REFER TO MECHANICAL DRAWINGS FOR BASIN AND WEIR ELEVATIONS AT THE PACKAGE PLANT

NO.	POINT ID	FROM	TO	ANNUAL AVERAGE DAILY FLOW			PEAK 2-HOUR FLOW		
				(MGD)	(GPM)	(FT <sup>3</sup> /SEC)	(MGD)	(GPM)	(FT <sup>3</sup> /SEC)
1	24" INF-DI	SMITH BRANCH LS	HEADWORKS STRUCTURE	2.50	1,736	3.87	6.25	4,340	9.67
2A	16" INF-DI	HEADWORKS STRUCTURE	AERATION BASIN NO. 1	1.25	868	1.93	3.13	2,174	4.84
2B	16" INF-DI	HEADWORKS STRUCTURE	AERATION BASIN NO. 2	1.25	868	1.93	3.13	2,174	4.84
3A	20" CINF-DI	AERATION BASIN NO. 1	CLARIFIER NO. 1	2.50	1,736	3.87	4.38	3,042	6.78
3B	20" CINF-DI	AERATION BASIN NO. 2	CLARIFIER NO. 2	2.50	1,736	3.87	4.38	3,042	6.78
4A	18" CEFF-DI	CLARIFIER NO. 1	24" CEFF-DI	1.25	868	1.93	3.13	2,174	4.84
4B	18" CEFF-DI	CLARIFIER NO. 2	24" CEFF-DI	1.25	868	1.93	3.13	2,174	4.84
5	24" CEFF-DI	24" CEFF-DI	DISTRIBUTION CHAMBER	2.50	1,736	3.87	6.25	4,340	9.67
6	24" CEFF-DI	DISTRIBUTION CHAMBER	UV SYSTEM	2.50	1,736	3.87	6.25	4,340	9.67
7	24" CEFF-DI	UV SYSTEM	DECHLORINATION CHAMBER	2.50	1,736	3.87	6.25	4,340	9.67

<sup>1</sup> CLARIFIED EFFLUENT FLOWS FROM CLARIFIER NO. 1 AND CLARIFIER NO. 2 ARE COMBINED INTO ONE 24" CEFF-DI PIPE. THIS PIPE THEN ROUTES THE COMBINED CLARIFIED EFFLUENT FLOW TO THE UV SYSTEM.

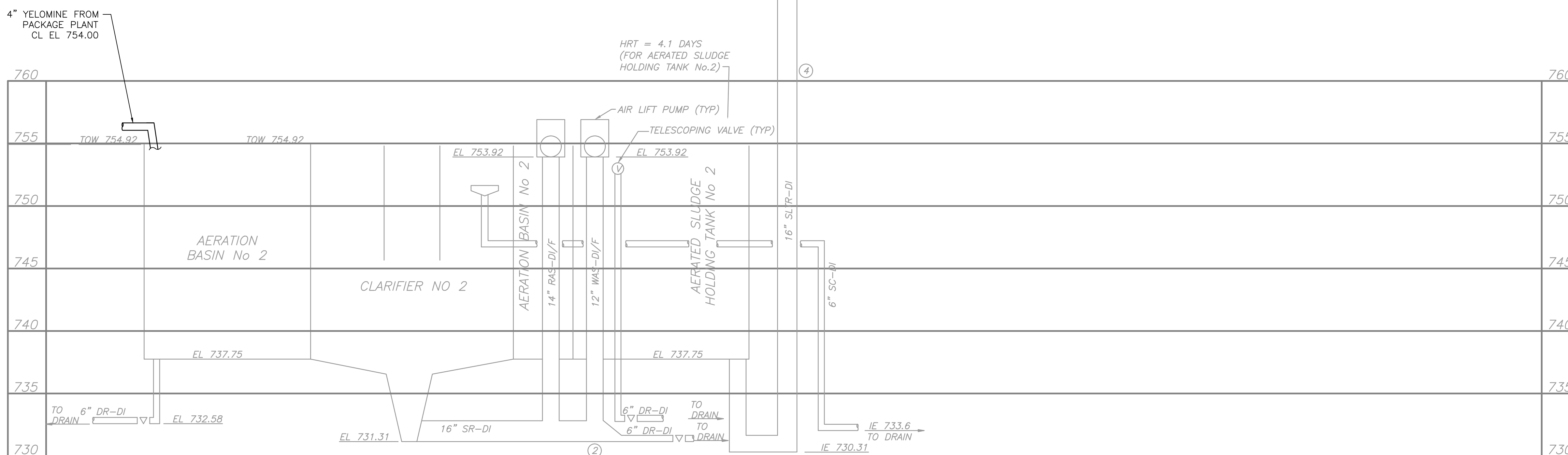
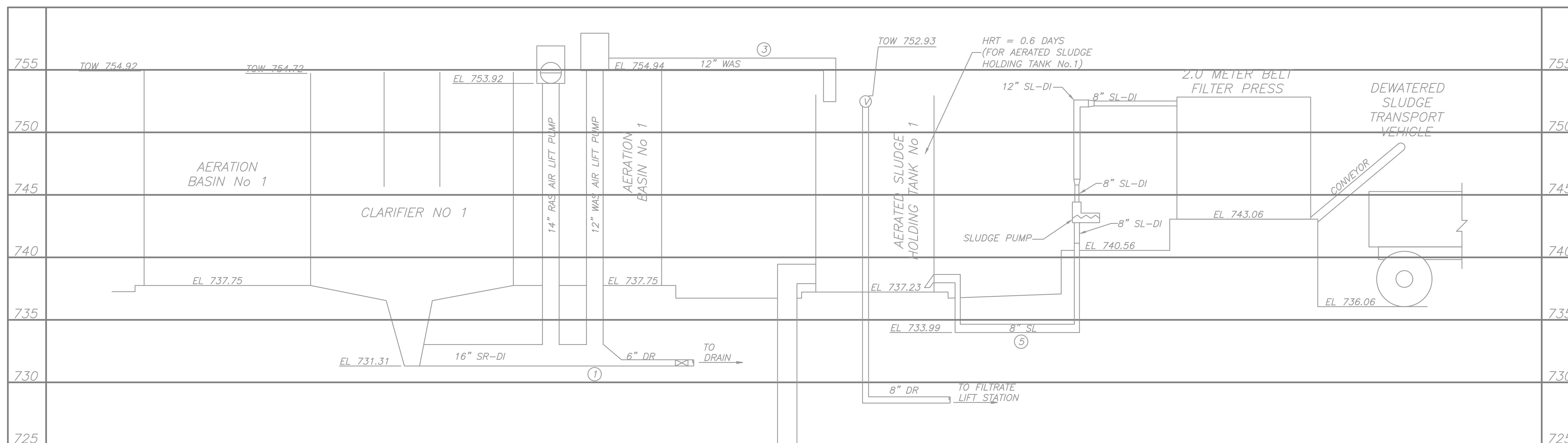
TREATMENT PROFILE



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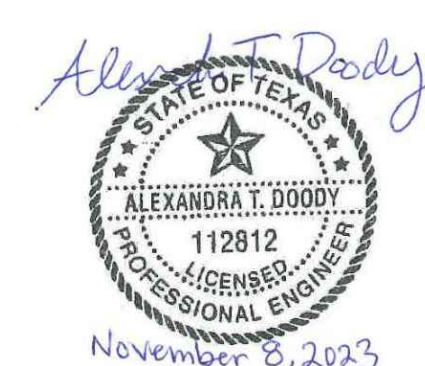
DESIGNED BY: J. MAYER DRAWN BY: B. FEBA SHEET CHK'D BY: A. DOODY CROSS CHK'D BY: A. WOELKE APPROVED BY: A. DOODY DATE: NOVEMBER 2023				 8310-1 N. Capital of Texas Hwy, Suite 250 Austin, TX 78731 Tel: (512) 346-1100 TBPE Firm Registration No. F-3043		CITY OF GEORGETOWN, TEXAS DOVE SPRINGS WWTP REHABILITATION		DOVE SPRINGS WWTP PROCESS HYDRAULIC PROFILE I		PROJECT NO. 2048-264953 FILE NAME: DSG5.DWG SHEET NO. DS-G-5	
REV. NO.	DATE	DRWN	CHKD	REMARKS							
A	1/10/24	JAM	ATD	CONFORMED DRAWINGS							

NOTES:  
 1. INFORMATION IS FROM THE 2005 DOVE SPRINGS WASTEWATER TREATMENT PLANT EXPANSION DRAWING SET.



WAS/RAS PROFILE

LOCATION No.	SOLIDS (LB/DAY)	FLOW (GAL/DAY)	FLOW (GAL/MIN)
①	2,252	27,000	105
②	2,252	27,000	105
③	2,252	27,000	105
④	4,504	54,000	210
⑤	4,504	54,000	210



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A	1/10/24	JAM	ATD	CONFORMED DRAWINGS

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 DRAWN BY: B. FEBA  
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 APPROVED BY: A. DOODY  
 DATE: NOVEMBER 2023

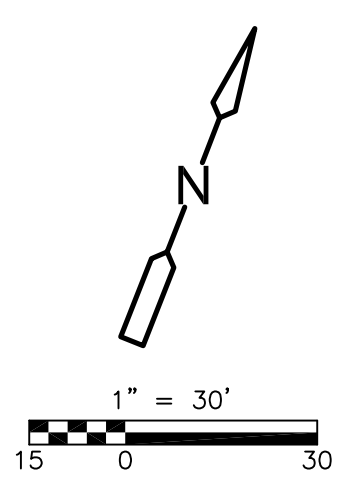


CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP  
 PROCESS HYDRAULIC PROFILE II

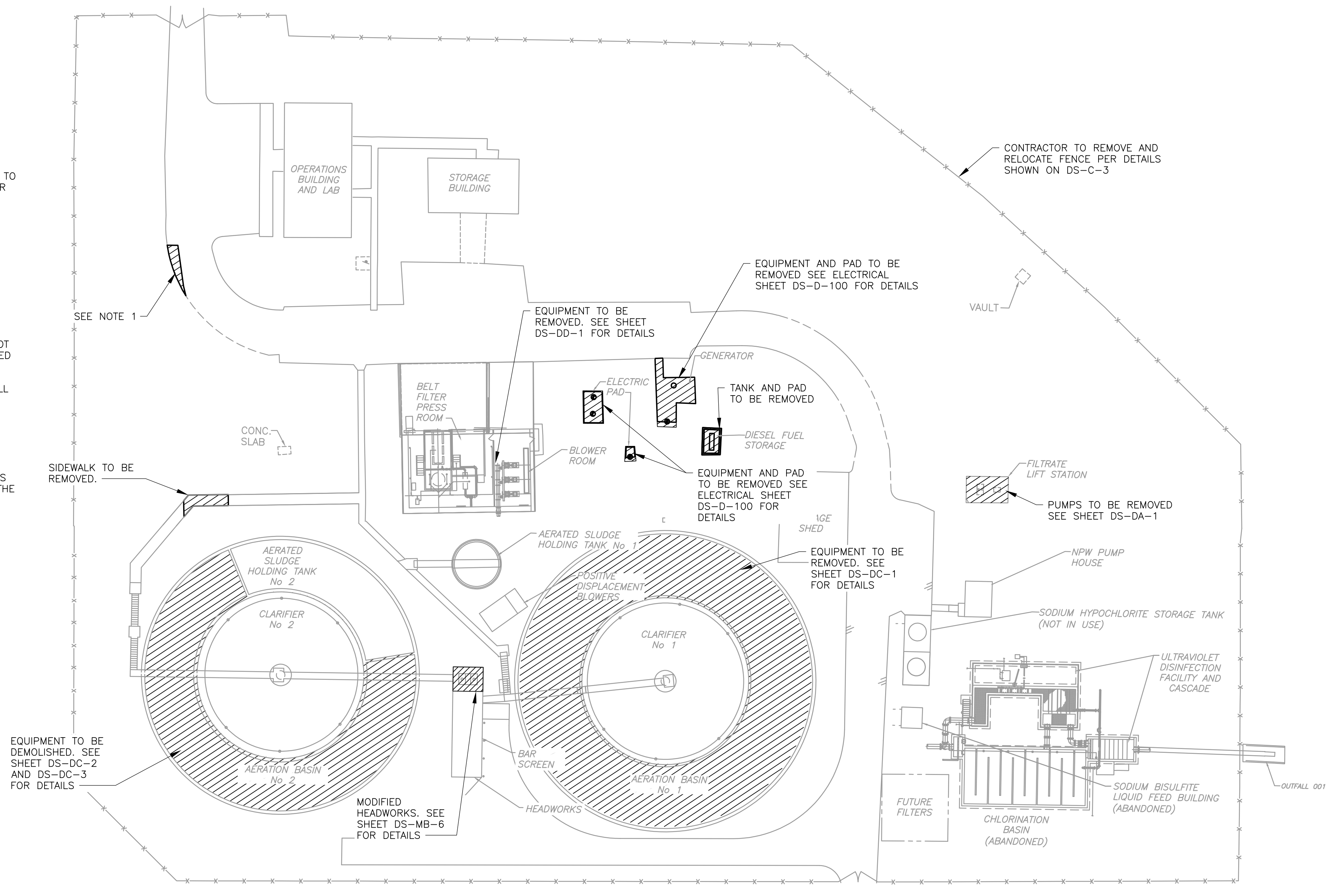
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**GENERAL DEMOLITION NOTES:**

1. REFER TO PAVING AND GRADING PLAN SHEET FOR DEMOLITION AND REPLACEMENT OF PAVEMENT.
2. NOT ALL ITEMS TO BE DEMOLISHED ARE SHOWN ON THIS SHEET. REFER TO MECHANICAL, STRUCTURAL, ELECTRICAL AND OTHER DISCIPLINE SHEETS FOR ADDITIONAL ITEMS TO BE DEMOLISHED.
3. PERIMETER SECURITY FENCE (TEMPORARY AND/OR PERMANENT) SHALL BE MAINTAINED AROUND WWTP AT ALL TIMES.
4. PLANT SHALL REMAIN IN OPERATION AT ALL TIMES. MAINTAIN ROAD AND EQUIPMENT ACCESS.
5. COORDINATE WITH PLANT STAFF BEFORE ANY DEMOLITION BEGINS. CONTRACTOR IS NOT ALLOWED TO OPEN AND CLOSE ANY VALVES, GATES, ETC WITHOUT PERMISSION FROM PLANT STAFF. ONLY PLANT STAFF CAN SHUT DOWN THE OPERATION OF ANY EXISTING FACILITIES.
6. ALL MECHANICAL EQUIPMENT, TANKS, PUMPS, MOTORS, ETC. THAT WILL NOT BE SALVAGED BY OWNER SHALL BE DISPOSED OF, SALVAGED, OR RECYCLED ACCORDING TO GOVERNMENT REGULATIONS BY CONTRACTOR.
7. CONTRACTOR IS RESPONSIBLE FOR ALL SAFETY DURING CONSTRUCTION. ALL SAFETY ISSUES SHALL BE ADDRESSED IMMEDIATELY AS IDENTIFIED BY ENGINEER AND PLANT STAFF.
8. CONTRACTOR SHALL DISCOVER AND PROTECT ALL EXISTING UTILITIES AND STRUCTURES THAT ARE REQUIRED TO REMAIN IN SERVICE DURING ALL PHASES OF DEMOLITION.
9. ALL PHOTOS, TAKEN IN 2021-2022, INCLUDED IN THE DEMOLITION SHEETS ARE FOR ILLUSTRATION PURPOSES ONLY. THEY DO NOT REPRESENT ALL THE EQUIPMENT, FACILITIES, ETC THAT REQUIRE REMOVAL ALONG WITH THE CONCRETE STRUCTURES.



REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JAM	ATD	CONFORMED DRAWINGS

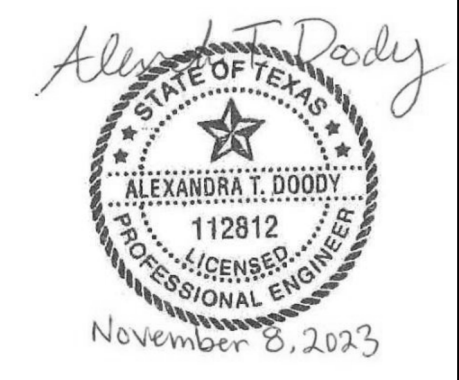
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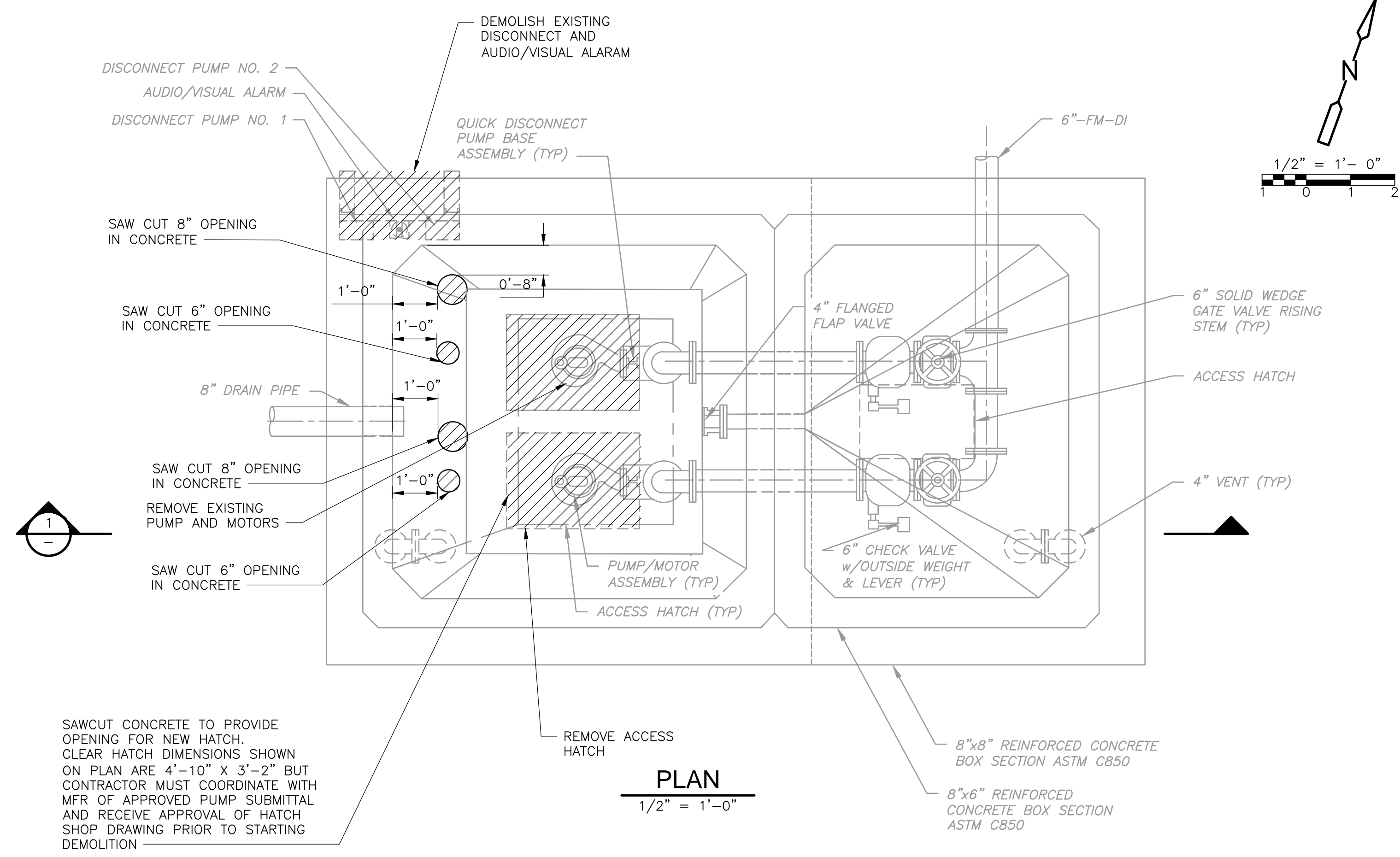
CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP  
 OVERALL DEMOLITION PLAN AND  
 GENERAL DEMOLITION NOTES

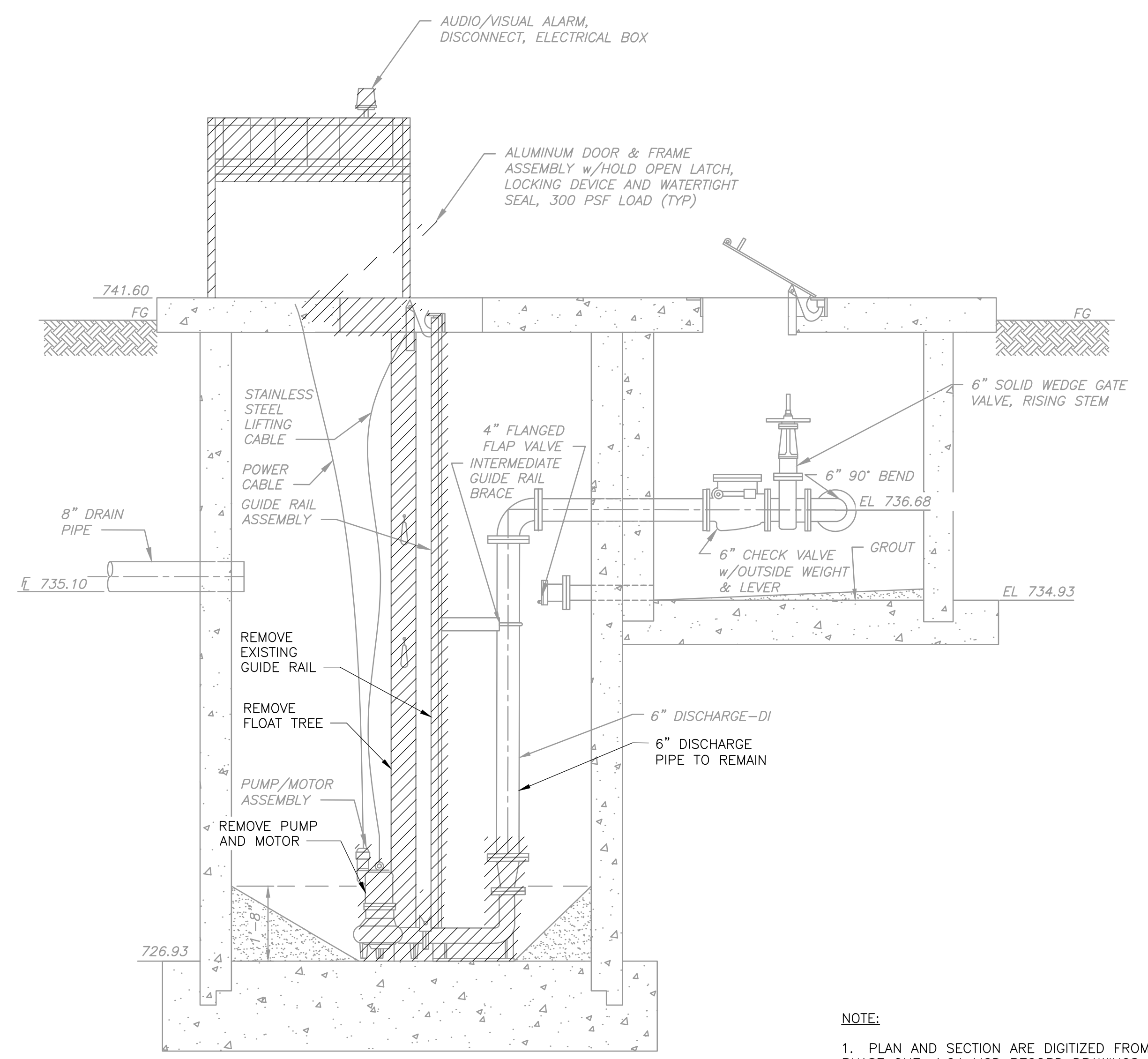
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**PHOTO**  
NTS



**SECTION 1**  
1/2" = 1'-0"

**NOTE:**  
 1. PLAN AND SECTION ARE DIGITIZED FROM 1991 PHASE ONE, 1.24 MGD RECORD DRAWINGS. CONTRACTOR TO FIELD VERIFY DIMENSIONS PRIOR TO SUBMITTING PUMP SHOP DRAWINGS AND CONCRETE MODIFICATIONS SHOP DRAWINGS FOR APPROVAL. COORDINATE WITH OWNER TO DRAIN DOWN WET WELL AND GAIN ACCESS WHEN BFP AND SANITARY FACILITIES AT ADMIN BUILDING ARE NOT BEING USED.

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JAM	ATD	CONFORMED DRAWINGS

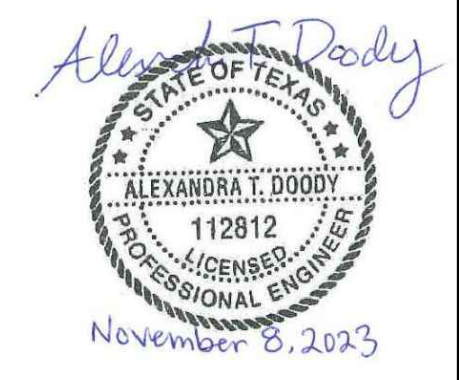
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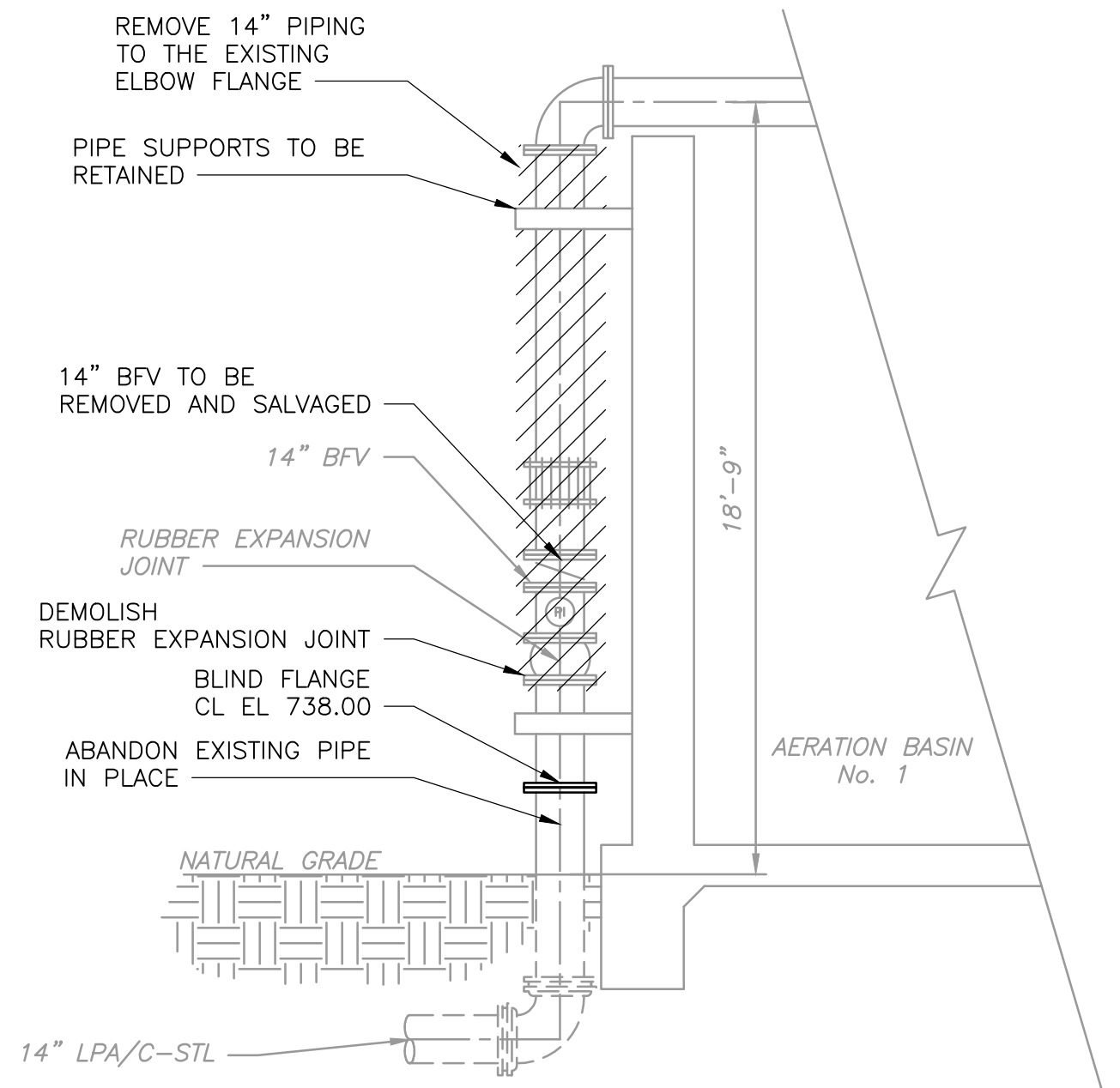
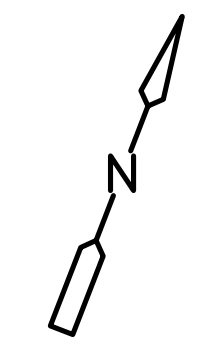
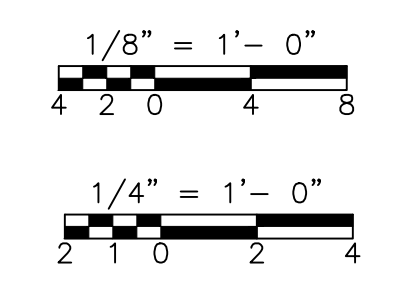
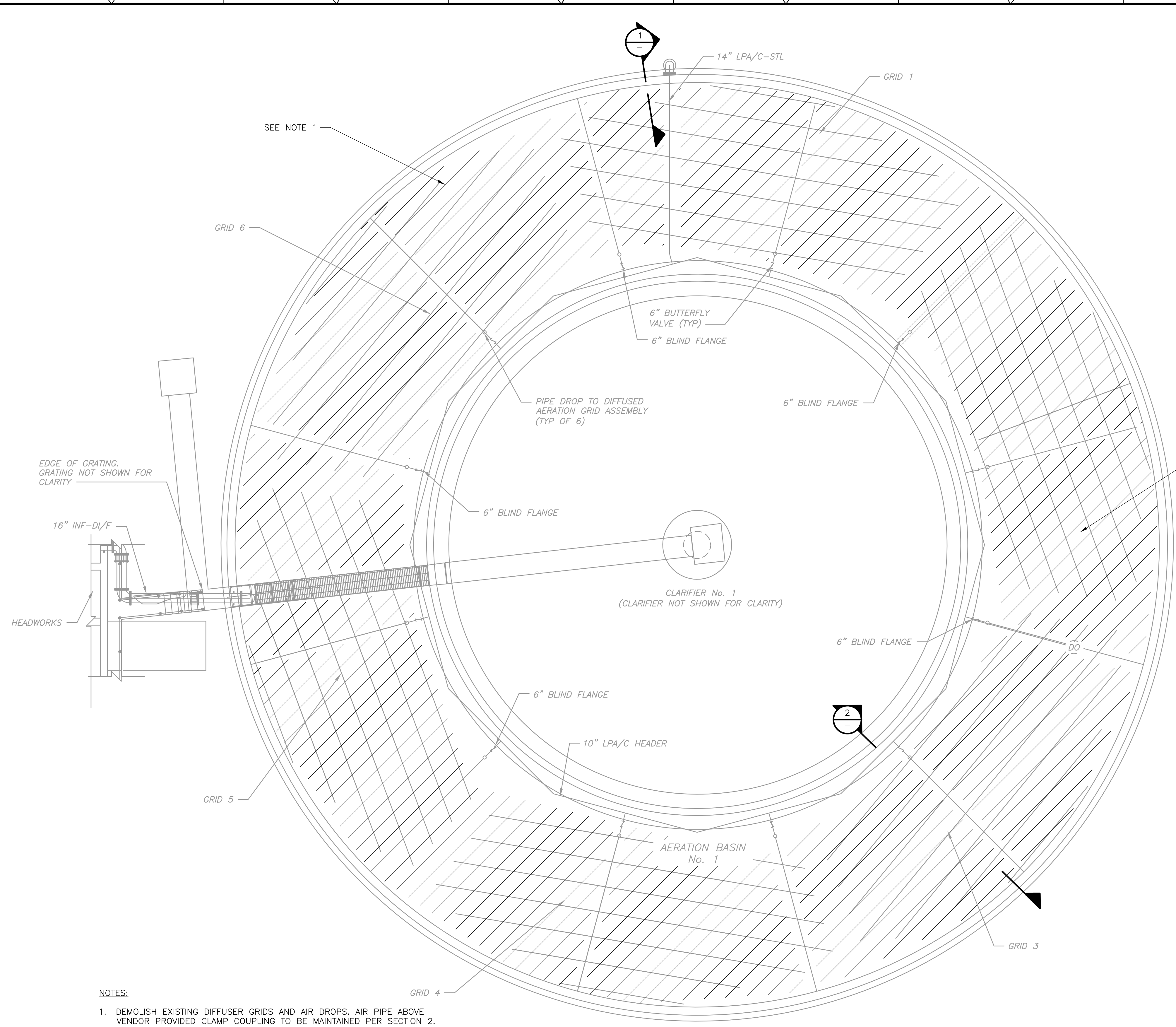
CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP  
 FILTRATE LIFT STATION  
 DEMOLITION PLAN AND SECTION  
 SHEET NO. DS-DA-1

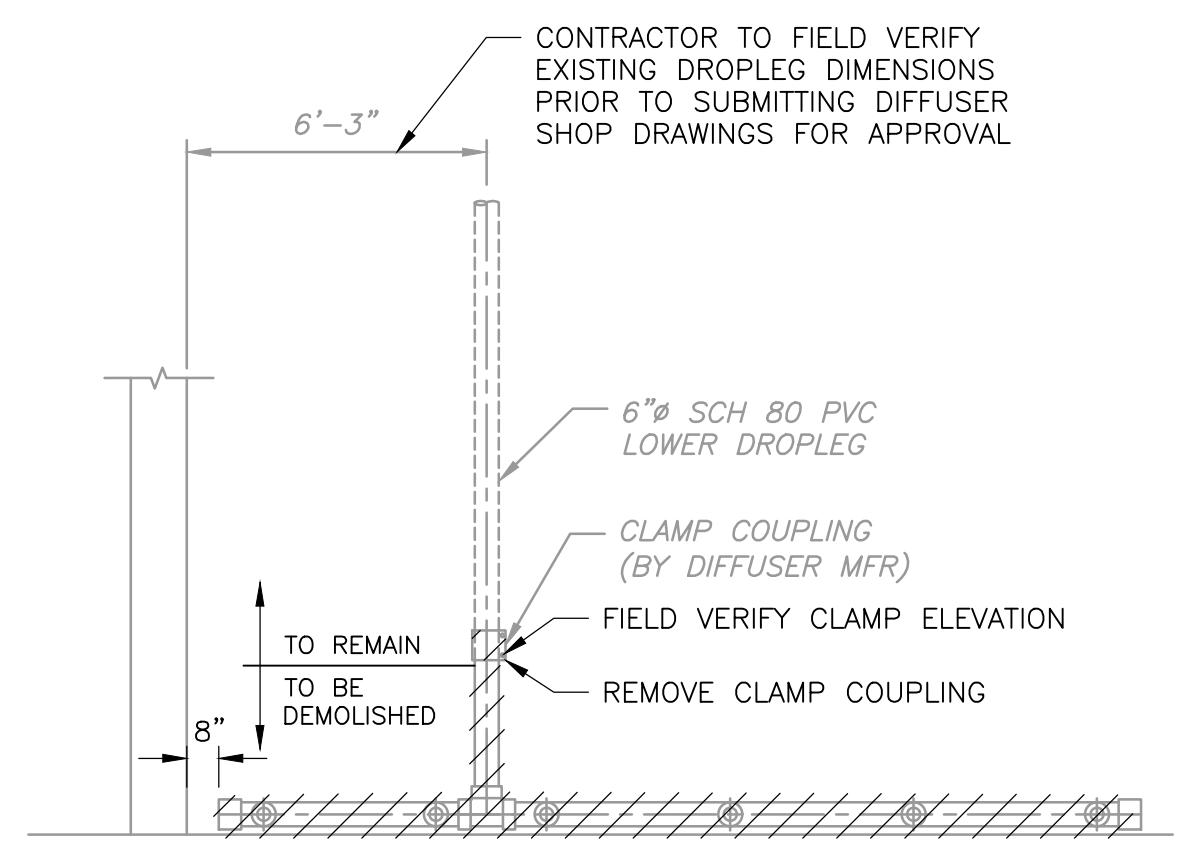
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 FILE NAME: DSDA1.DWG  
 SHEET NO. DS-DA-1



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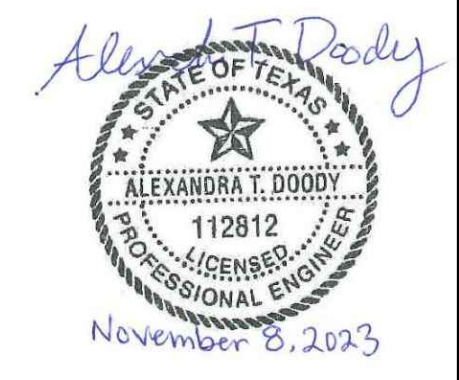
**SECTION 1**  
1/4" = 1'-0"



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

- NOTES:**
- DEMOLISH EXISTING DIFFUSER GRIDS AND AIR DROPS. AIR PIPE ABOVE VENDOR PROVIDED CLAMP COUPLING TO BE MAINTAINED PER SECTION 2.
  - FIELD VERIFY ALL CENTERLINE PIPING ELEVATIONS AND TIE-IN LOCATIONS.

**PLAN**  
1/8" = 1'-0"



REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JAM	ATD	CONFORMED DRAWINGS

DESIGNED BY: J. MAYER  
 DRAWN BY: G. GANESH  
 SHEET CHK'D BY: A. DOODY  
 CROSS CHK'D BY: A. WOELKE  
 APPROVED BY: A. DOODY  
 DATE: NOVEMBER 2023

8310-1 N. Capital of Texas Hwy, Suite 250  
 Austin, TX 78731  
 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

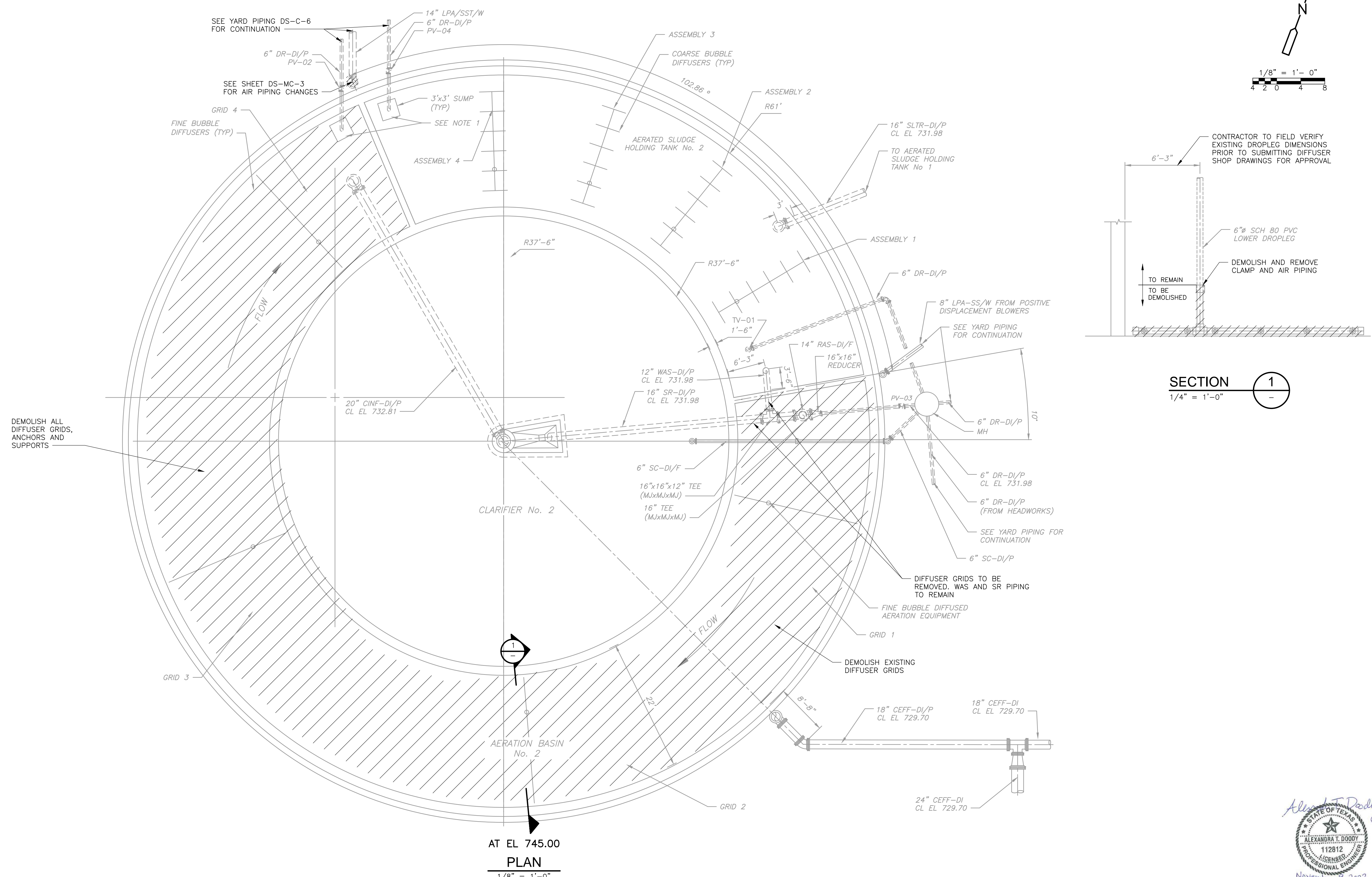
CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP  
 TREATMENT STRUCTURE #1  
 AERATION PIPING DEMOLITION PLAN

PROJECT NO.	2048-264953
FILE NAME:	DSDC1.DWG
SHEET NO.	DS-DC-1



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REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JAM	ATD	CONFORMED DRAWINGS

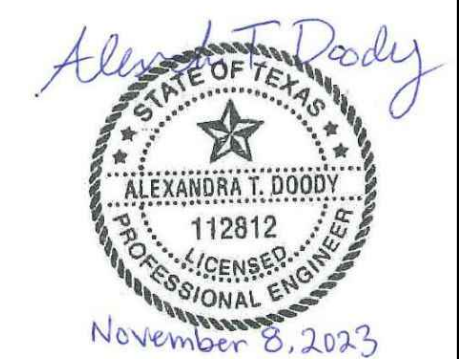
DESIGNED BY: J. MAYER  
 DRAWN BY: G. GANESH  
 SHEET CHK'D BY: A. DOODY  
 CROSS CHK'D BY: A. WOELKE  
 APPROVED BY: A. DOODY  
 DATE: NOVEMBER 2023



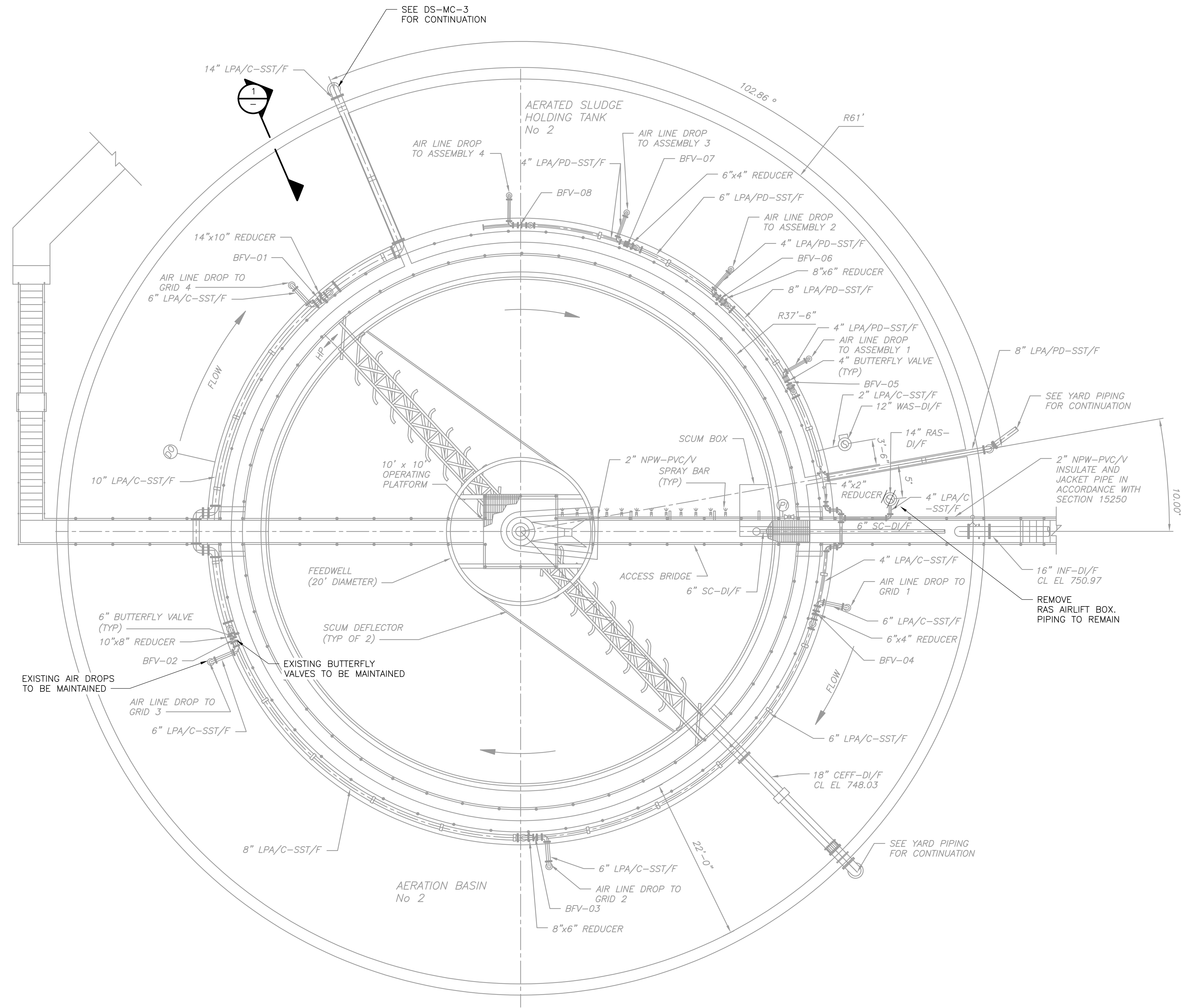
CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP  
 TREATMENT STRUCTURE #2  
 AERATION PIPING DEMOLITION LOWER PLAN

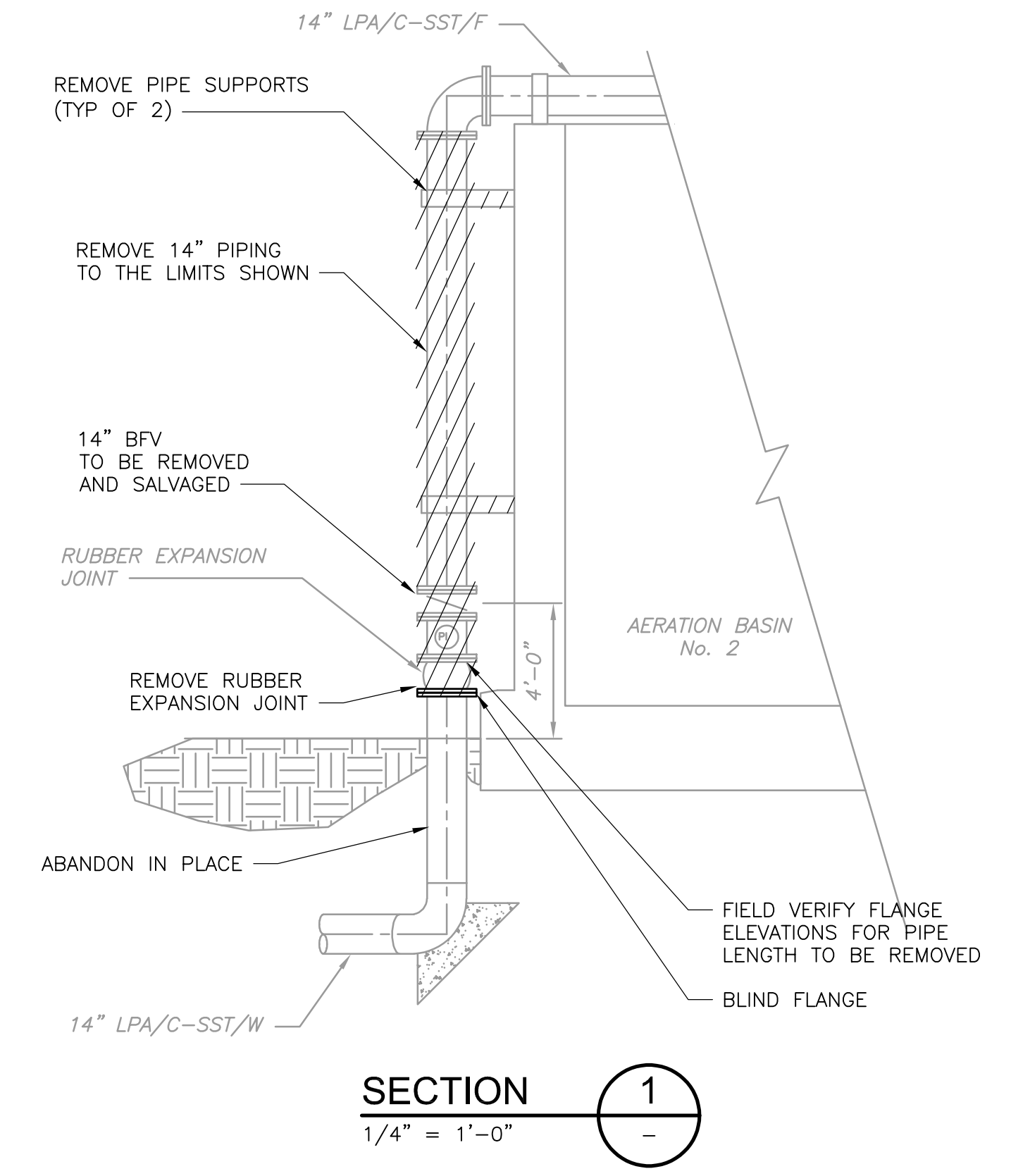
PROJECT NO. 2048-264953  
 FILE NAME: DSDC2.DWG  
 SHEET NO. DS-DC-2



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AT EL 760.00  
**PLAN**  
 1/8" = 1'-0"



**SECTION 1**  
 1/4" = 1'-0"



**PHOTO 1**  
 NTS

STATE OF TEXAS  
 ALEXANDRA T. DOODY  
 112812  
 LICENSED PROFESSIONAL ENGINEER  
 November 8, 2023

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JAM	ATD	CONFORMED DRAWINGS

DESIGNED BY: J. MAYER  
 DRAWN BY: G. GANESH  
 SHEET CHK'D BY: A. DOODY  
 CROSS CHK'D BY: A. WOELKE  
 APPROVED BY: A. DOODY  
 DATE: NOVEMBER 2023

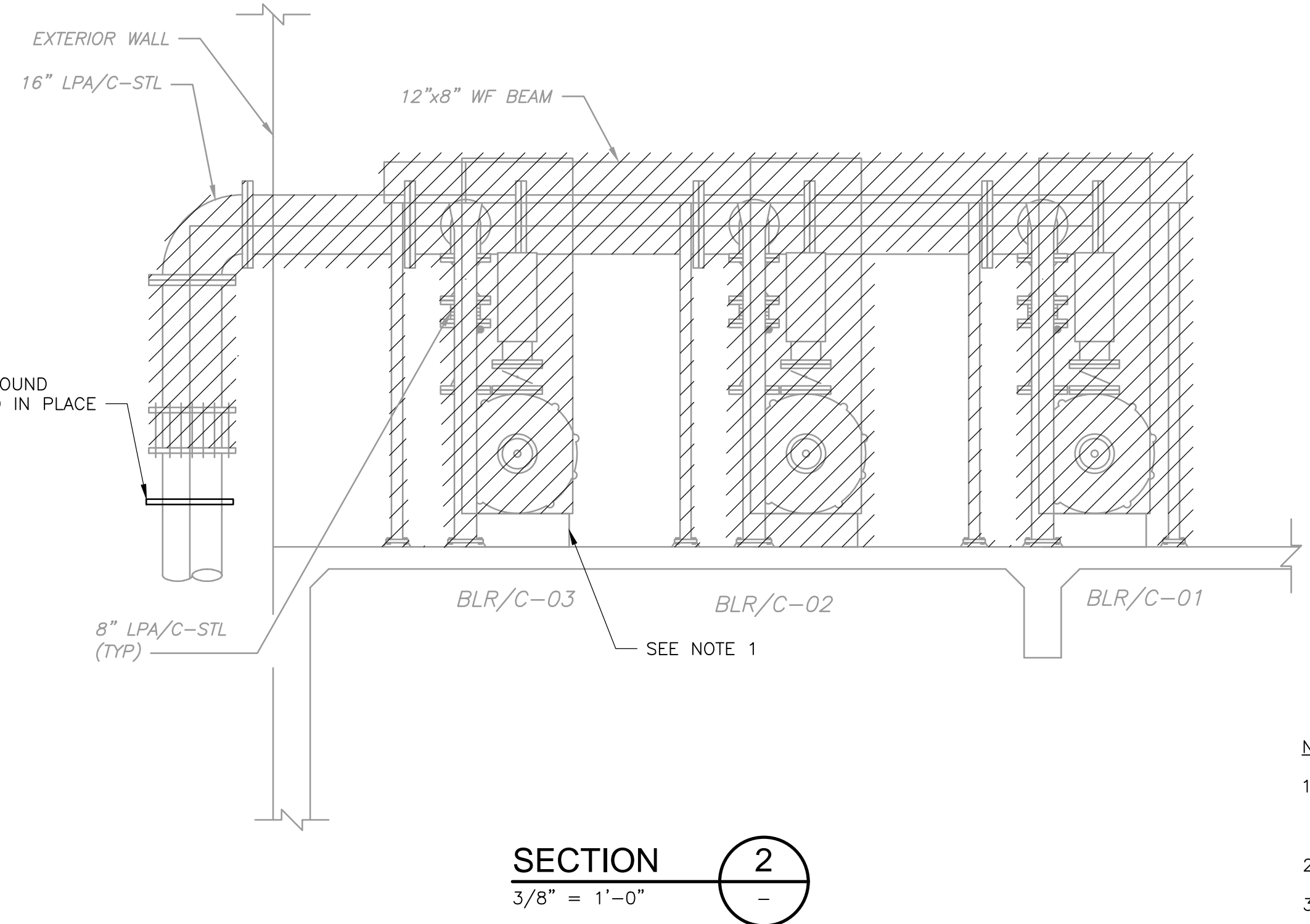
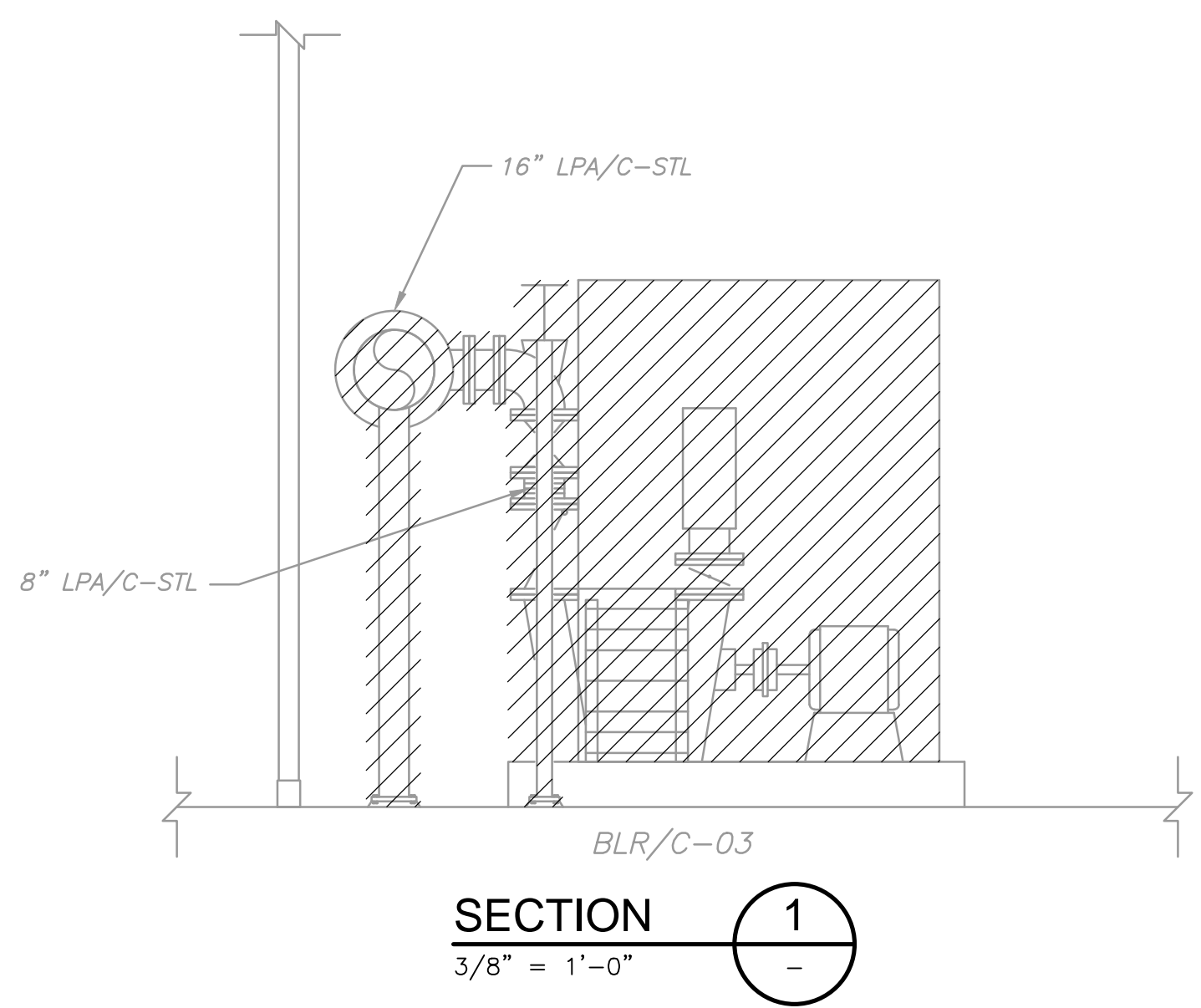
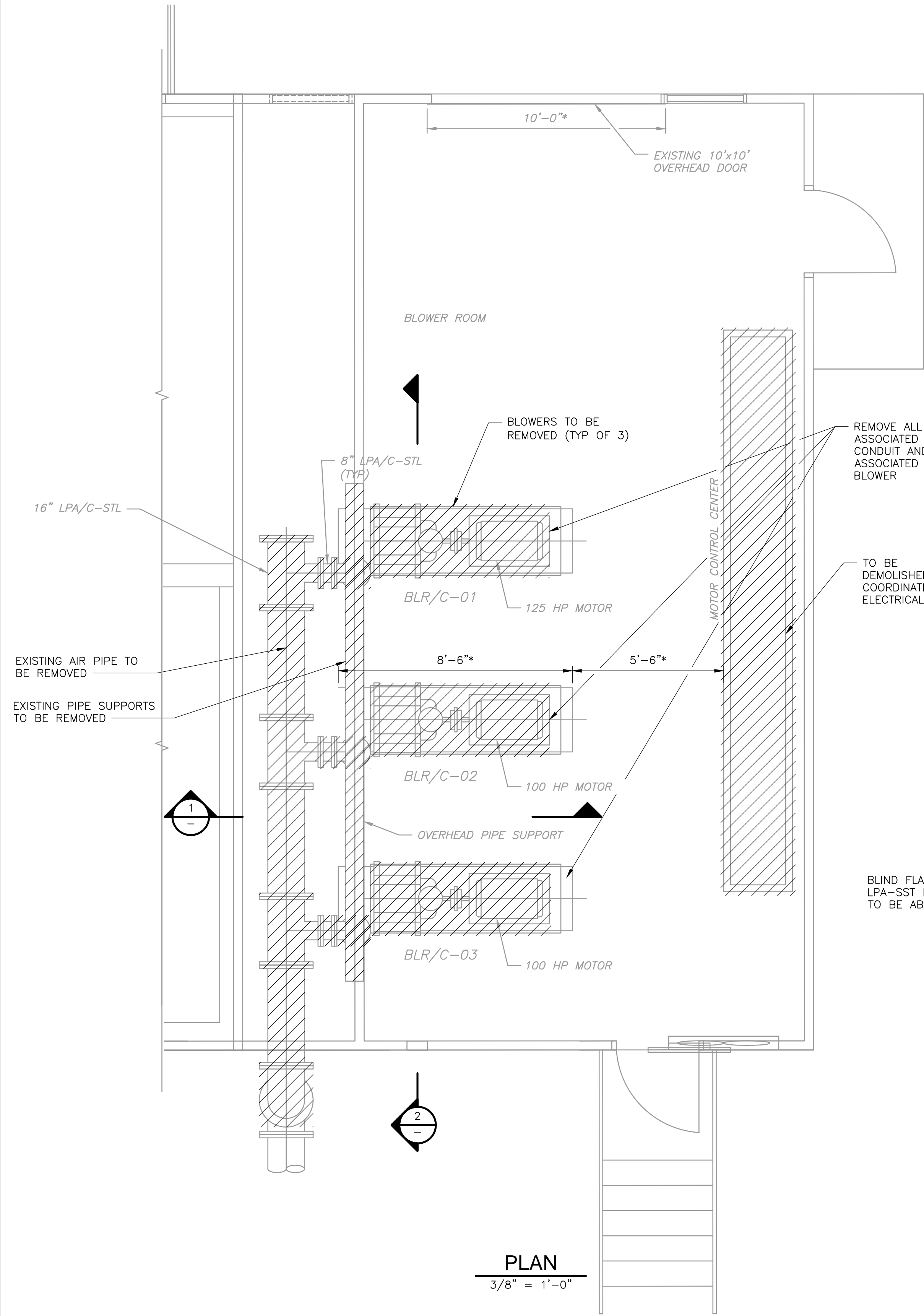
**CDM Smith**  
 8310-1 N. Capital of Texas Hwy, Suite 250  
 Austin, TX 78731  
 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS  
**DOVE SPRINGS WWTP  
 REHABILITATION**

**DOVE SPRINGS WWTP  
 TREATMENT STRUCTURE #2  
 AERATION PIPING DEMOLITION UPPER PLAN**

PROJECT NO.	2048-264953
FILE NAME:	DSDC3.DWG
SHEET NO.	<b>DS-DC-3</b>

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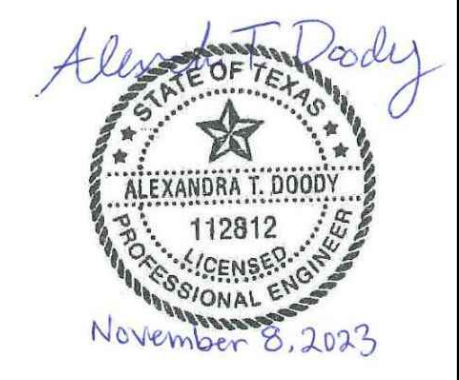


**PHOTO 1**  
NTS

CONTRACTOR TO CAREFULLY REMOVE BLOWERS AS THEY MAY BE REFURBISHED AND THEN RELOCATED UNDER BID ALTERNATE A-1.

**NOTES:**

1. COMPLETELY REMOVE AND REPLACE ALL ANCHOR BOLTS AND GROUTING FOR DEMOLISHED BLOWERS. DRILL ALL DEMOLISHED ANCHORS AND COVER WITH EPOXY.
2. \* DIMENSIONS PER FIELD MEASUREMENTS.
3. CONTRACTOR TO PROCEED WITH CAUTION WHEN REMOVING THE BLOWERS, MOTORS AND ASSOCIATED EQUIPMENT TO BE REFURBISHED AND RELOCATED.
4. AT THE LOCATION OF THE DEMOLISHED AIR PIPE PROVIDE METAL PANEL PATCH MATCHING THE PROFILE AND GAUGE OF THE EXISTING, PAINTED TO MATCH. INSTALL AT THE EXTERIOR WITH A 3 INCH MINIMUM OVERLAP. PROVIDE SEALANT AND MECHANICALLY FASTEN AT 8" INTERVALS ALONG PERIMETER OF PATCH.



REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JAM	ATD	CONFORMED DRAWINGS

DESIGNED BY: J. MAYER  
 DRAWN BY: G. GANESH  
 SHEET CHK'D BY: A. DOODY  
 CROSS CHK'D BY: A. WOELKE  
 APPROVED BY: A. DOODY  
 DATE: NOVEMBER 2023

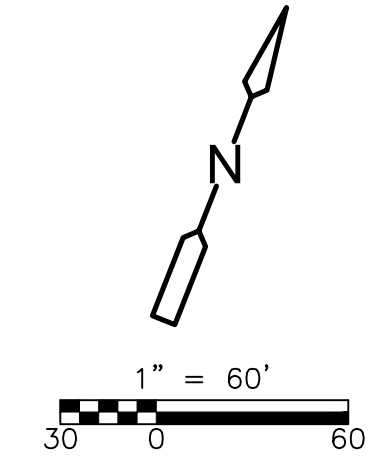
**CDM Smith**  
 8310-1 N. Capital of Texas Hwy, Suite 250  
 Austin, TX 78731  
 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP  
 BLOWER BUILDING DEMOLITION PLAN

PROJECT NO.	2048-264953
FILE NAME:	DSDD1.DWG
SHEET NO.	DS-DD-1

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NOTE:  
 THIS DRAWING IS FOR REFERENCE TO INDICATE THAT ALTHOUGH PLAT DIFFERENTIATION EXISTS ON RECORD, THE CORRESPONDING SHADED PLATS ARE UNDER COMMON OWNERSHIP OF THE CITY OF GEORGETOWN. THUS, ON SUBSEQUENT DRAWINGS ONLY THE CITY OF GEORGETOWN OUTER PROPERTY BOUNDARY IS SHOWN.

PARCEL NUMBERS AFFECTED INCLUDE:  
 R107957, R103173, R103136, R103137, R103138, R103139, R103140, R103141, R103142, R103143, R103144, R103145, R103146, R103147, R103148, R103149, R103155, R103156R, R103157, R103158, R103159, R103177, R103176, R103175, R103174, R103168, R103168, R103169, R103170, R103171

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JAM	ATD	CONFORMED DRAWINGS

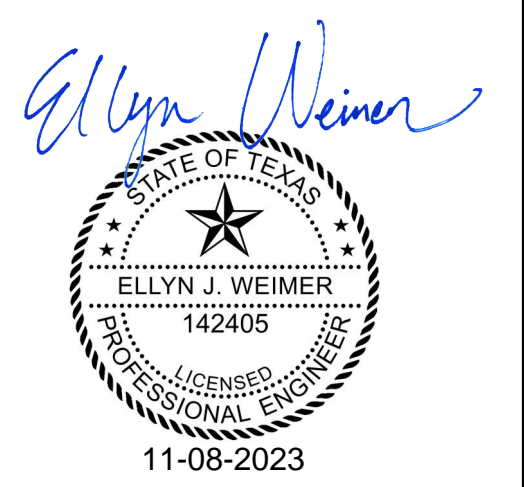
DESIGNED BY: J. MAYER  
 DRAWN BY: S. MALPASS  
 SHEET CHK'D BY: A. DOODY  
 CROSS CHK'D BY: A. WOELKE  
 APPROVED BY: A. DOODY  
 DATE: NOVEMBER 2023



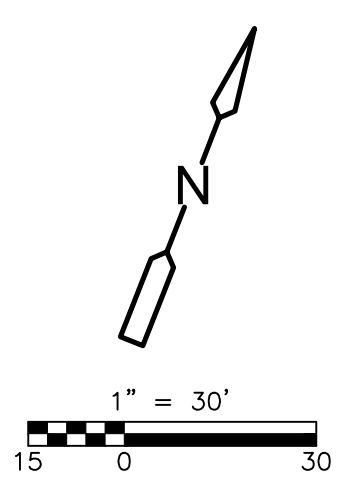
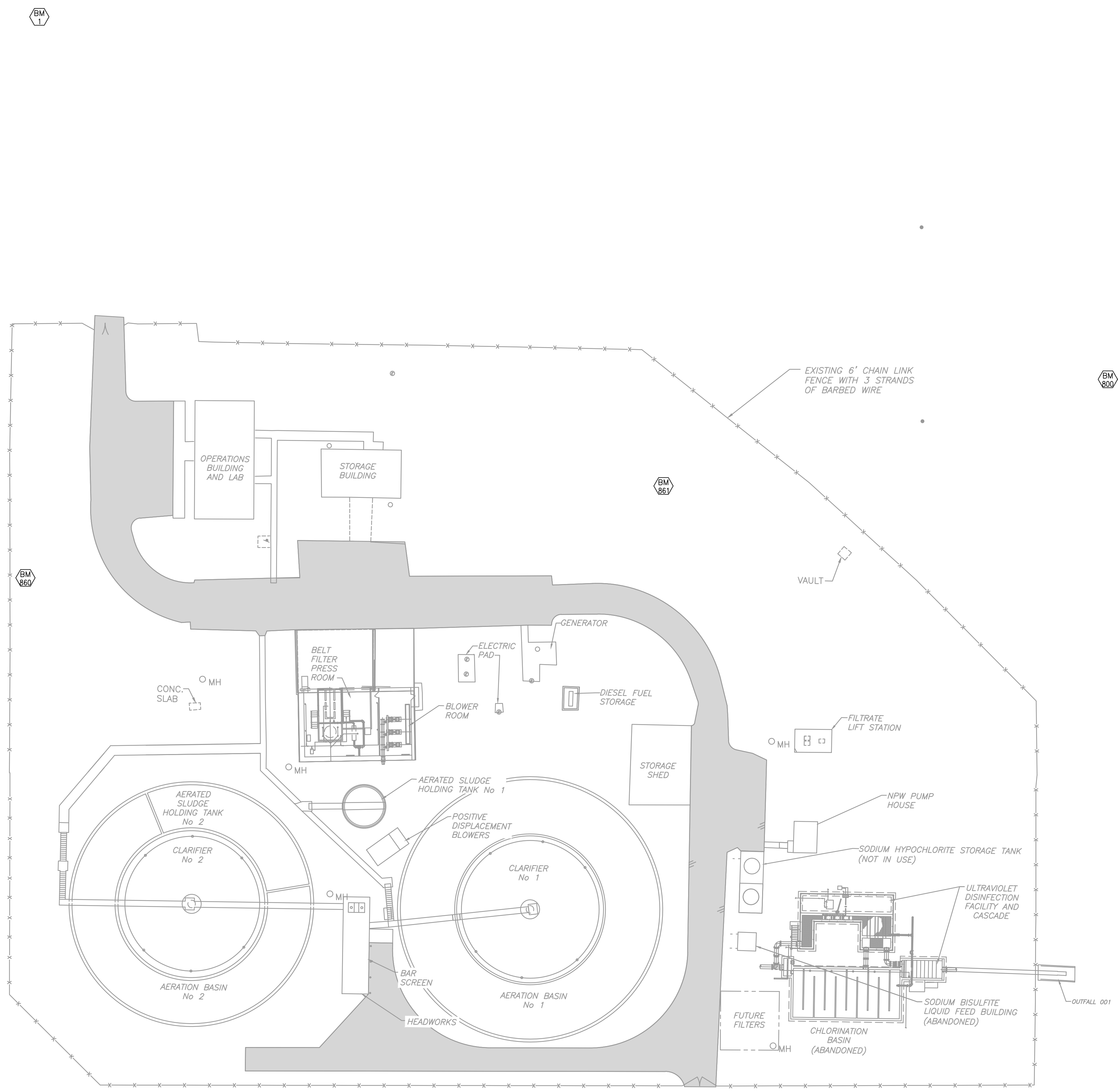
CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP  
 OVERALL PROPERTY OWNERSHIP  
 PLATS

PROJECT NO. 2048-264953  
 FILE NAME: C101PROP.DWG  
 SHEET NO.  
 DS-C-1



XREFS: [CEP100ST, CEP101ST, CDMS\_2234, CEP102A, CDMSM-DOVE SPRINGS REPLAT, REW\_A\_DOODY-SEAL] Images: [ ]  
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CONTROL LIST				
PNT#	NORTHING	EASTING	ELEV.	DESC.
1	10205104.9200	3145857.2280	743.68	TPT-IRSC-IC
800	10205132.0310	3146433.2230	738.95	TPT-IRSC-IC
860	10204835.5007	3145955.3353	737.06	TPT-80D/W
861	10204998.3317	3146241.7263	737.43	TPT-80D/W

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JAM	ATD	CONFORMED DRAWINGS

DESIGNED BY: E. WEIMER  
 DRAWN BY: S. MALPASS  
 SHEET CHK'D BY: A. DOODY  
 CROSS CHK'D BY: A. WOELKE  
 APPROVED BY: A. DOODY  
 DATE: NOVEMBER 2023



8310-1 N. Capital of Texas Hwy, Suite 250  
 Austin, TX 78731  
 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

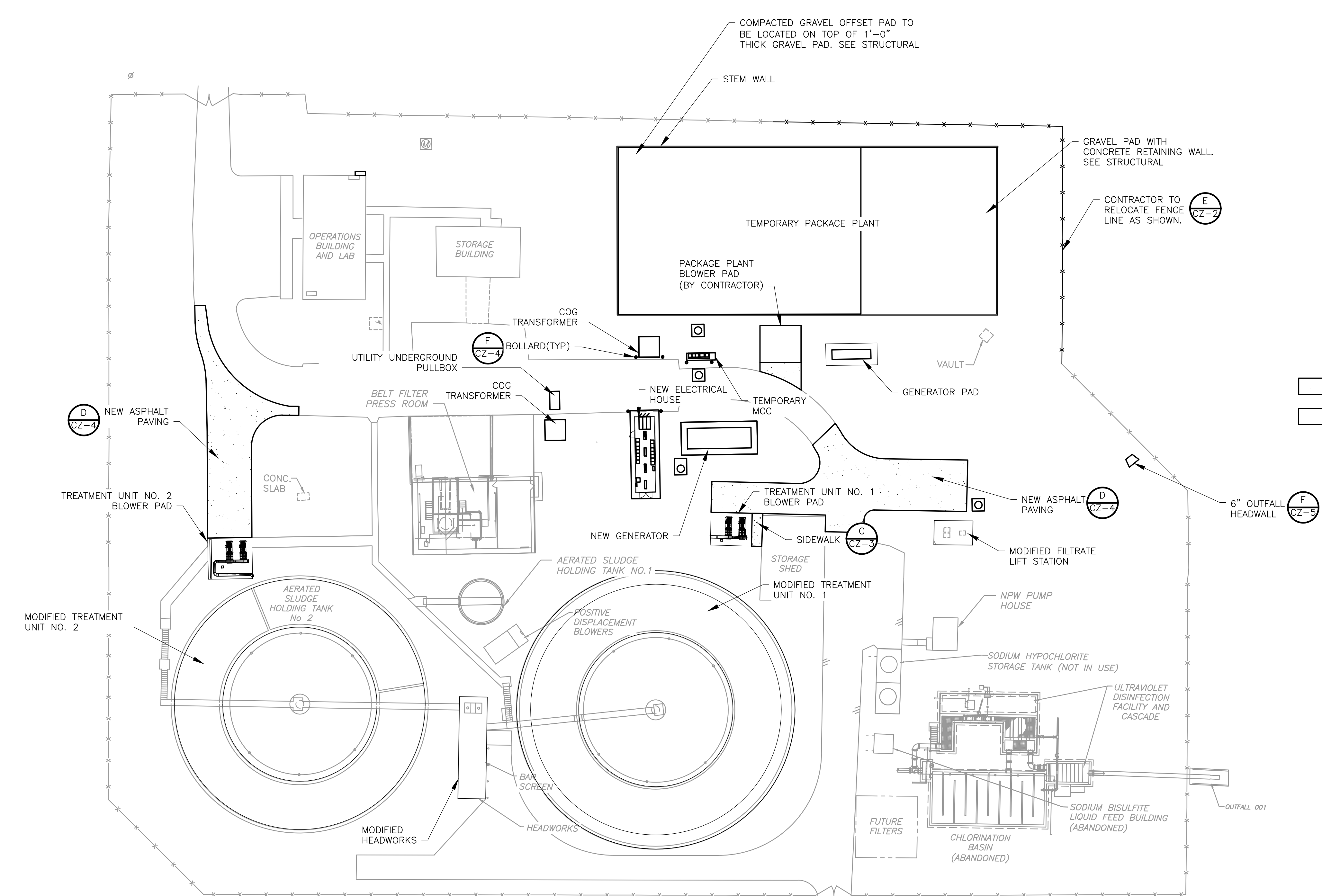
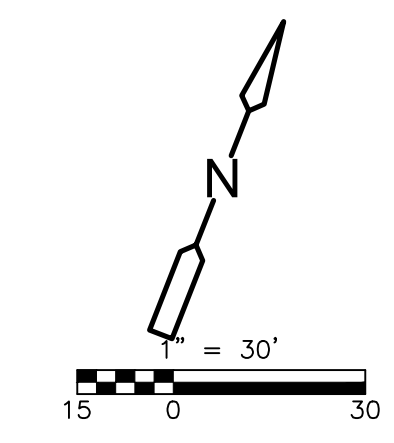
CITY OF GEORGETOWN, TEXAS  
**DOVE SPRINGS WWT  
 REHABILITATION**

**DOVE SPRINGS WWT  
 EXISTING SITE PLAN  
 AND SURVEY CONTROL**

PROJECT NO.	2048-264953
FILE NAME:	C102STPL.DWG
SHEET NO.	<b>DS-C-2</b>



XREFS: [CEP]00ST, CEP101ST, CDMS.2234, CWP101PL, MWFO13BF, CDMSM-DOVE SPRINGS REPLAT, MWFO23BL, MWFO24BL, REVW\_A\_DOODY-SEAL, EWP001PL] Images: [ ]  
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**LEGEND**

[Stippled Area] NEW ASPHALT PAVING

[Solid Line Area] MODIFIED FACILITIES

**PLAN**  
1" = 30'

*Alexandra J. Doody*  
 STATE OF TEXAS  
 ALEXANDRA J. DOODY  
 112812  
 PROFESSIONAL ENGINEER  
 November 8, 2023

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JAM	ATD	CONFORMED DRAWINGS

DESIGNED BY: J. MAYER  
 DRAWN BY: S. MALPASS  
 SHEET CHK'D BY: A. DOODY  
 CROSS CHK'D BY: A. WOELKE  
 APPROVED BY: A. DOODY  
 DATE: NOVEMBER 2023

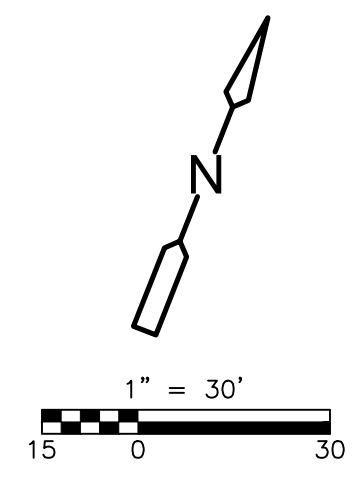
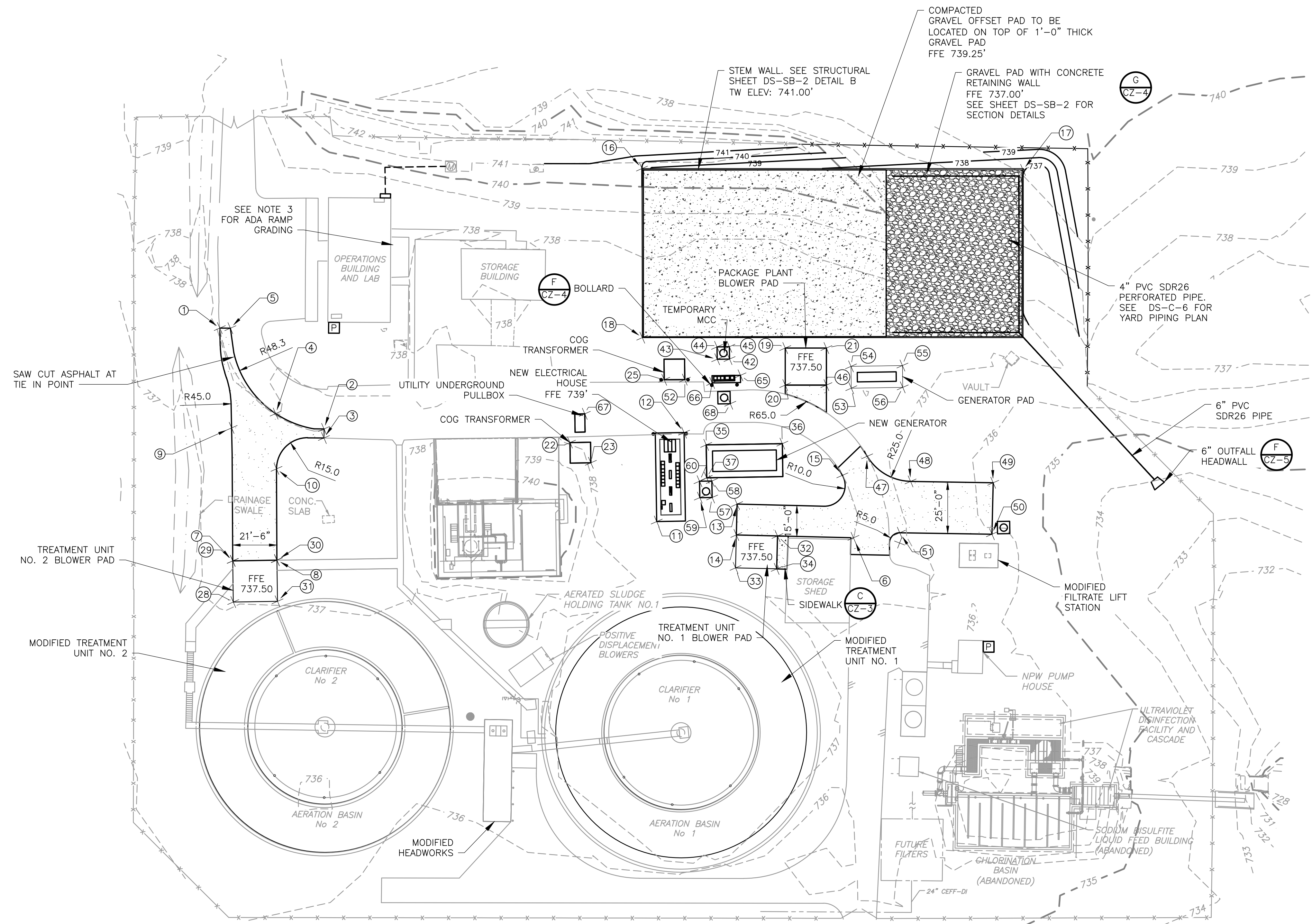
**CDM Smith**  
 8310-1 N. Capital of Texas Hwy, Suite 250  
 Austin, TX 78731  
 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP  
 PROPOSED SITE PLAN

PROJECT NO. 2048-264953  
 FILE NAME: C103STPL.DWG  
 SHEET NO.  
**DS-C-3**

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- NOTES
1. MAINTAIN EXISTING CHAIN LINK FENCE & GATES AT PLANT DURING CONSTRUCTION. REPAIR FENCE & ALL OTHER EXISTING FEATURES AFFECTED BY CONSTRUCTION TO PRE-CONSTRUCTION CONDITION OR BETTER.
  2. COORDINATES ARE SURFACE VALUES BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NAD 83, CENTRAL ZONE 4203. TO CONVERT COORDINATES AND DISTANCES TO GRID VALUES MULTIPLY BY A COMBINED SURFACE ADJUSTMENT FACTOR OF 0.99987102. ELEVATIONS REPORTED ARE ORTHOMETRIC HEIGHTS BASED ON NAVD 88.
  3. SEE SHEET DS-AE-1 FOR ADA RAMP PAVEMENT AND GRADING TO THE OPERATIONS BUILDING. GRADE DOWN FROM PROPOSED EDGE OF PAVEMENT ELEVATION AT 4:1 TO TIE INTO EXISTING GRADE.

POINT TABLE			
POINT NO.	ELEVATION	NORTHING	EASTING
1	738.00	10204873.96	3145976.83
2	737.86	10204846.84	3146041.86
3	737.79	10204842.72	3146043.43
4	737.97	10204845.20	3146017.28
5	738.07	10204875.78	3145981.66
6	737.16	10204891.59	3146300.67
7	737.08	10204770.98	3146023.98
8	737.39	10204779.17	3146043.86
9	737.60	10204830.92	3145999.89
10	737.40	10204820.35	3146027.46
11	739.00	10204864.02	3146208.79
12	739.00	10204909.11	3146205.38
13	737.50	10204886.19	3146242.05
14	737.50	10204872.10	3146247.19
15	737.18	10204917.87	3146284.57
16	741.00	10205021.05	3146139.49
17	741.00	10205088.07	3146312.10
18	737.50	10204944.62	3146169.66
19	737.50	10204965.29	3146236.15
20	737.50	10204948.53	3146242.73
21	737.50	10204972.60	3146254.77
22	738.67	10204884.34	3146155.54
23	738.67	10204878.89	3146168.59
25	737.50	10204929.45	3146187.01
28	737.50	10204752.47	3146031.57
29	737.50	10204770.98	3146023.98
30	737.50	10204779.13	3146043.88
31	737.50	10204760.63	3146051.46
32	737.50	10204878.94	3146265.98
33	737.50	10204857.07	3146252.66
34	737.50	10204863.91	3146271.46
35	737.53	10204907.46	3146217.57

POINT TABLE			
POINT NO.	ELEVATION	NORTHING	EASTING
36	737.29	10204921.53	3146251.78
37	737.47	10204892.66	3146223.65
38	737.31	10204906.73	3146257.87
39	737.30	10204900.18	3146241.93
40	737.30	10204889.17	3146246.45
41	737.30	10204895.73	3146262.40
42	737.50	10204950.41	3146212.89
43	737.50	10204948.13	3146207.34
44	737.50	10204953.68	3146205.06
45	737.50	10204955.96	3146210.61
46	737.50	10204955.84	3146261.35
47	737.22	10204930.86	3146292.41
48	736.77	10204927.21	3146316.49
49	735.78	10204941.30	3146354.09
50	736.19	10204917.81	3146362.66
51	737.13	10204902.10	3146320.72
52	737.50	10204933.18	3146196.29
53	737.50	10204958.88	3146273.15
54	737.50	10204968.69	3146269.12
55	737.50	10204978.19	3146292.22
56	737.50	10204968.38	3146296.26
57	737.30	10204884.77	3146229.59
58	737.30	10204892.16	3146226.55
59	737.30	10204882.48	3146224.04
60	737.30	10204889.88	3146221.00
65	737.50	10204945.03	3146220.73
66	737.50	10204936.54	3146209.27
67	737.91	10204899.95	3146157.13
68	737.60	10204930.36	3146221.14

PLAN  
1" = 30'

LEGEND

- NEW ASPHALT PAVING
- MODIFIED FACILITIES
- GRAVEL PAD
- GRAVEL OFF-SET PAD

ELLYN J. WEIMER  
 142405  
 PROFESSIONAL ENGINEER  
 11/08/2023

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JAM	ATD	CONFORMED DRAWINGS

DESIGNED BY: E. WEIMER  
 DRAWN BY: S. MALPASS  
 SHEET CHK'D BY: A. DOODY  
 CROSS CHK'D BY: A. WOELKE  
 APPROVED BY: A. DOODY  
 DATE: NOVEMBER 2023

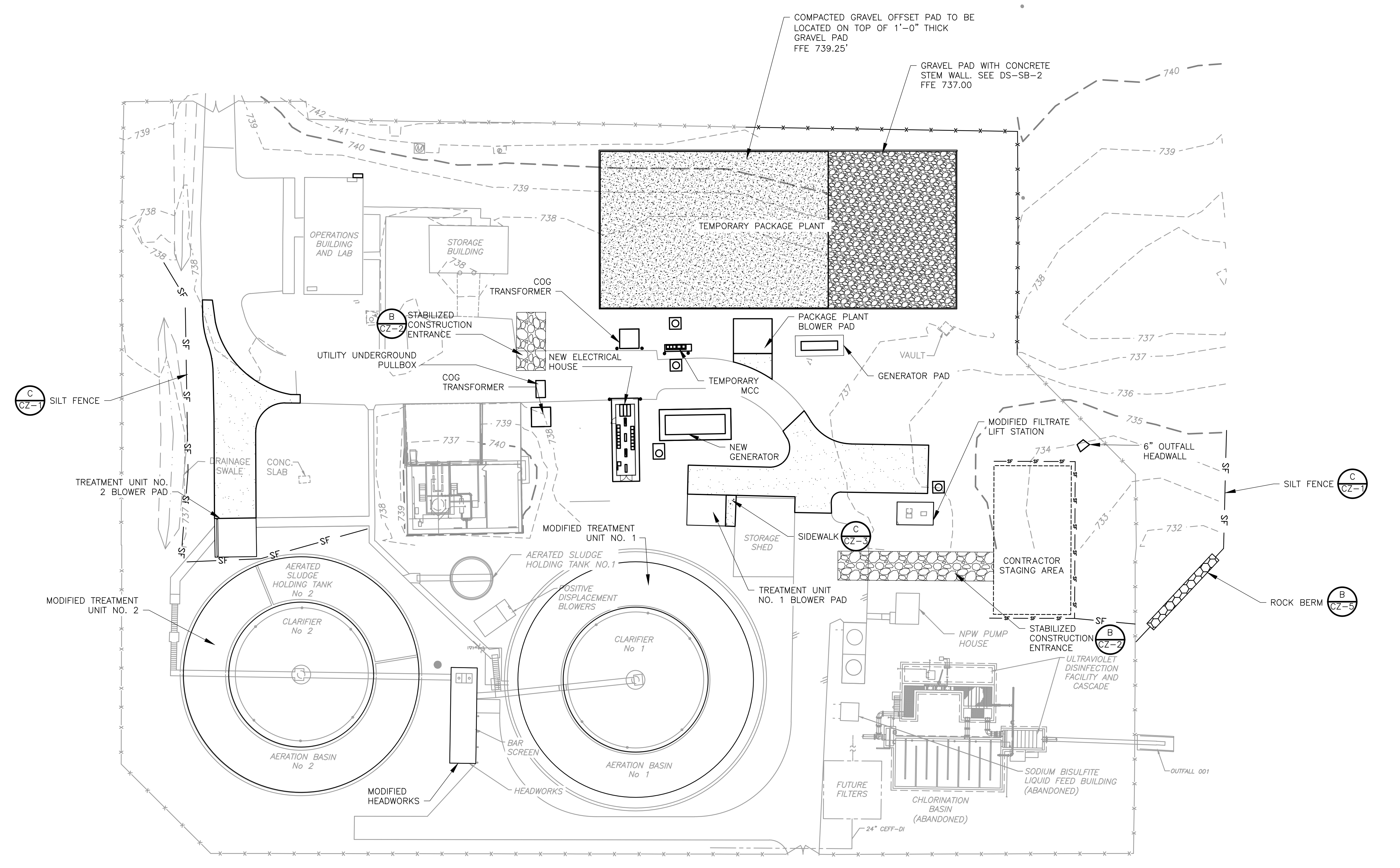
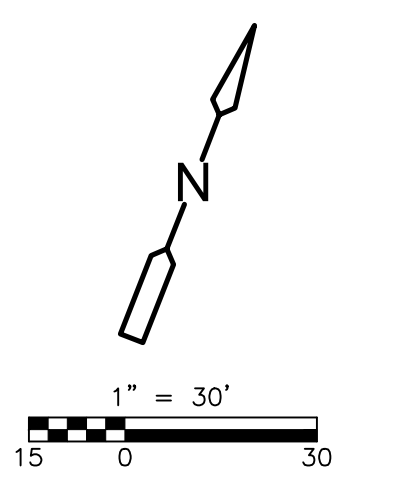
**CDM Smith**  
 8310-1 N. Capital of Texas Hwy, Suite 250  
 Austin, TX 78731  
 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP  
 GRADING AND PAVING PLAN

PROJECT NO. 2048-264953  
 FILE NAME: C104STPL.DWG  
 SHEET NO. DS-C-4

XREFS: [CDMS\_2234, CEP100ST, CEP101ST, CWP101PL, MWP013BF, CDMSM-DOVE SPRINGS REPLAT, REW\_A\_DOODY-SEAL, MWP023BL, MWP024BL, EWP003LP] Images: [ ]  
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- NOTES
1. LOCATION & SIZE OF CONTRACTOR'S STAGING AREAS FOR FIELD OFFICES, STORAGE, EQUIPMENT & MATERIAL ARE GENERAL. CONTRACTOR SHALL SUBMIT STAGING PLAN TO OWNER FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION ACTIVITIES.
  2. CONTRACTOR SHALL MAINTAIN A SECURITY FENCE (TEMPORARY &/OR PERMANENT) AROUND WWTPL AT ALL TIMES.
  3. MAINTAIN EXISTING CHAIN LINK FENCE & GATES AT PLANT DURING CONSTRUCTION. REPAIR FENCE & ALL OTHER EXISTING FEATURES AFFECTED BY CONSTRUCTION TO PRE-CONSTRUCTION CONDITION OR BETTER.

LEGEND

	NEW ASPHALT PAVING
	MODIFIED FACILITIES
	GRAVEL PAD
	STABILIZED CONSTRUCTION ENTRANCE
	GRAVEL OFF-SET PAD

PLAN  
1" = 30'

*Ellyn J. Weimer*  
 STATE OF TEXAS  
 ELLYN J. WEIMER  
 142405  
 LICENSED PROFESSIONAL ENGINEER  
 11/08/2023

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JAM	ATD	CONFORMED DRAWINGS

DESIGNED BY: E. WEIMER  
 DRAWN BY: S. MALPASS  
 SHEET CHK'D BY: A. DOODY  
 CROSS CHK'D BY: A. WOELKE  
 APPROVED BY: A. DOODY  
 DATE: NOVEMBER 2023

**CDM Smith**  
 8310-1 N. Capital of Texas Hwy, Suite 250  
 Austin, TX 78731  
 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

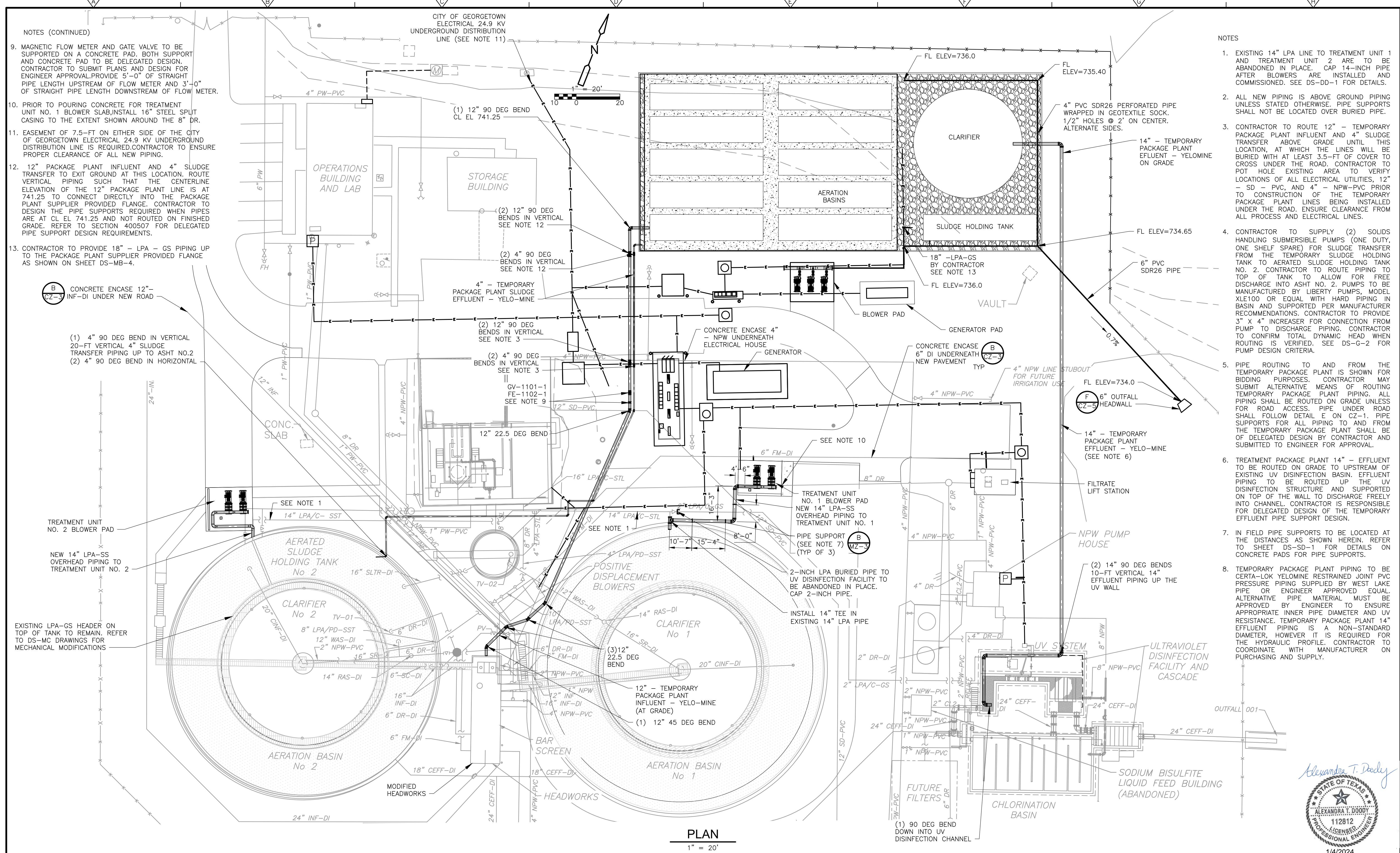
CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTPL  
 REHABILITATION

DOVE SPRINGS WWTPL  
 EROSION CONTROL PLAN AND  
 CONTRACTOR STAGING AREA

PROJECT NO. 2048-264953  
 FILE NAME: C105STPL.DWG  
 SHEET NO.  
**DS-C-5**



XREFS: [CEP101ST, CDM-2234, CWP101PL, MWP013BF, MWP009BL, MWP024BL, MWP015SH, MWP001PL] Images: []  
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- NOTES (CONTINUED)
- MAGNETIC FLOW METER AND GATE VALVE TO BE SUPPORTED ON A CONCRETE PAD. BOTH SUPPORT AND CONCRETE PAD TO BE DELEGATED DESIGN. CONTRACTOR TO SUBMIT PLANS AND DESIGN FOR ENGINEER APPROVAL. PROVIDE 5'-0" OF STRAIGHT PIPE LENGTH UPSTREAM OF FLOW METER AND 3'-0" OF STRAIGHT PIPE LENGTH DOWNSTREAM OF FLOW METER.
  - PRIOR TO POURING CONCRETE FOR TREATMENT UNIT NO. 1 BLOWER SLAB, INSTALL 16" STEEL SPLIT CASING TO THE EXTENT SHOWN AROUND THE 8" DR.
  - EASEMENT OF 7.5-FT ON EITHER SIDE OF THE CITY OF GEORGETOWN ELECTRICAL 24.9 KV UNDERGROUND DISTRIBUTION LINE IS REQUIRED. CONTRACTOR TO ENSURE PROPER CLEARANCE OF ALL NEW PIPING.
  - 12" PACKAGE PLANT INFLUENT AND 4" SLUDGE TRANSFER TO EXIT GROUND AT THIS LOCATION. ROUTE VERTICAL PIPING SUCH THAT THE CENTERLINE ELEVATION OF THE 12" PACKAGE PLANT LINE IS AT 741.25 TO CONNECT DIRECTLY INTO THE PACKAGE PLANT SUPPLIER PROVIDED FLANGE. CONTRACTOR TO DESIGN THE PIPE SUPPORTS REQUIRED WHEN PIPES ARE AT CL EL 741.25 AND NOT ROUTED ON FINISHED GRADE. REFER TO SECTION 400507 FOR DELEGATED PIPE SUPPORT DESIGN REQUIREMENTS.
  - CONTRACTOR TO PROVIDE 18" - LPA - GS PIPING UP TO THE PACKAGE PLANT SUPPLIER PROVIDED FLANGE AS SHOWN ON SHEET DS-MB-4.

- NOTES
- EXISTING 14" LPA LINE TO TREATMENT UNIT 1 AND TREATMENT UNIT 2 ARE TO BE ABANDONED IN PLACE. CAP 14-INCH PIPE AFTER BLOWERS ARE INSTALLED AND COMMISSIONED. SEE DS-DD-1 FOR DETAILS.
  - ALL NEW PIPING IS ABOVE GROUND PIPING UNLESS STATED OTHERWISE. PIPE SUPPORTS SHALL NOT BE LOCATED OVER BURIED PIPE.
  - CONTRACTOR TO ROUTE 12" - TEMPORARY PACKAGE PLANT INFLUENT AND 4" SLUDGE TRANSFER ABOVE GRADE UNTIL THIS LOCATION, AT WHICH THE LINES WILL BE BURIED WITH AT LEAST 3.5-FT OF COVER TO CROSS UNDER THE ROAD. CONTRACTOR TO POT HOLE EXISTING AREA TO VERIFY LOCATIONS OF ALL ELECTRICAL UTILITIES, 12" - SD - PVC, AND 4" - NPW-PVC PRIOR TO CONSTRUCTION OF THE TEMPORARY PACKAGE PLANT LINES BEING INSTALLED UNDER THE ROAD. ENSURE CLEARANCE FROM ALL PROCESS AND ELECTRICAL LINES.
  - CONTRACTOR TO SUPPLY (2) SOLIDS HANDLING SUBMERSIBLE PUMPS (ONE DUTY, ONE SHIF SPARE) FOR SLUDGE TRANSFER FROM THE TEMPORARY SLUDGE HOLDING TANK TO AERATED SLUDGE HOLDING TANK NO. 2. CONTRACTOR TO ROUTE PIPING TO TOP OF TANK TO ALLOW FOR FREE DISCHARGE INTO ASHT NO. 2. PUMPS TO BE MANUFACTURED BY LIBERTY PUMPS, MODEL XLE100 OR EQUAL WITH HARD PIPING IN BASIN AND SUPPORTED PER MANUFACTURER RECOMMENDATIONS. CONTRACTOR TO PROVIDE 3" X 4" INCREASER FOR CONNECTION FROM PUMP TO DISCHARGE PIPING. CONTRACTOR TO CONFIRM TOTAL DYNAMIC HEAD WHEN ROUTING IS VERIFIED. SEE DS-G-2 FOR PUMP DESIGN CRITERIA.
  - PIPE ROUTING TO AND FROM THE TEMPORARY PACKAGE PLANT IS SHOWN FOR BIDDING PURPOSES. CONTRACTOR MAY SUBMIT ALTERNATIVE MEANS OF ROUTING TEMPORARY PACKAGE PLANT PIPING. ALL PIPING SHALL BE ROUTED ON GRADE UNLESS FOR ROAD ACCESS. PIPE UNDER ROAD SHALL FOLLOW DETAIL E ON CZ-1. PIPE SUPPORTS FOR ALL PIPING TO AND FROM THE TEMPORARY PACKAGE PLANT SHALL BE OF DELEGATED DESIGN BY CONTRACTOR AND SUBMITTED TO ENGINEER FOR APPROVAL.
  - TREATMENT PACKAGE PLANT 14" - EFFLUENT TO BE ROUTED ON GRADE TO UPSTREAM OF EXISTING UV DISINFECTION BASIN. EFFLUENT PIPING TO BE ROUTED UP THE UV DISINFECTION STRUCTURE AND SUPPORTED ON TOP OF THE WALL TO DISCHARGE FREELY INTO CHANNEL. CONTRACTOR IS RESPONSIBLE FOR DELEGATED DESIGN OF THE TEMPORARY EFFLUENT PIPE SUPPORT DESIGN.
  - IN FIELD PIPE SUPPORTS TO BE LOCATED AT THE DISTANCES AS SHOWN HEREIN. REFER TO SHEET DS-SD-1 FOR DETAILS ON CONCRETE PADS FOR PIPE SUPPORTS.
  - TEMPORARY PACKAGE PLANT PIPING TO BE CERTA-LOK YELOMINE RESTRAINED JOINT PVC PRESSURE PIPING SUPPLIED BY WEST LAKE PIPE OR ENGINEER APPROVED EQUAL. ALTERNATIVE PIPE MATERIAL MUST BE APPROVED BY ENGINEER TO ENSURE APPROPRIATE INNER PIPE DIAMETER AND UV RESISTANCE. TEMPORARY PACKAGE PLANT 14" EFFLUENT PIPING IS A NON-STANDARD DIAMETER, HOWEVER IT IS REQUIRED FOR THE HYDRAULIC PROFILE. CONTRACTOR TO COORDINATE WITH MANUFACTURER ON PURCHASING AND SUPPLY.

(1) 4" 90 DEG BEND IN VERTICAL  
20-FT VERTICAL 4" SLUDGE  
TRANSFER PIPING UP TO ASHT NO.2  
(2) 4" 90 DEG BEND IN HORIZONTAL

EXISTING LPA-GS HEADER ON  
TOP OF TANK TO REMAIN. REFER  
TO DS-MC DRAWINGS FOR  
MECHANICAL MODIFICATIONS

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JAM	ATD	CONFORMED DRAWINGS
3	1/2/24	JAM	ATD	REVISED FOR ADDENDUM NO.3
2	12/19/23	JAM	ATD	REVISED FOR ADDENDUM NO.2
1	12/18/23	JAM	ATD	REVISED FOR ADDENDUM NO.1

DESIGNED BY: J. MAYER  
 DRAWN BY: S. MALPASS  
 SHEET CHK'D BY: A. DOODY  
 CROSS CHK'D BY: A. WOELKE  
 APPROVED BY: A. DOODY  
 DATE: NOVEMBER 2023

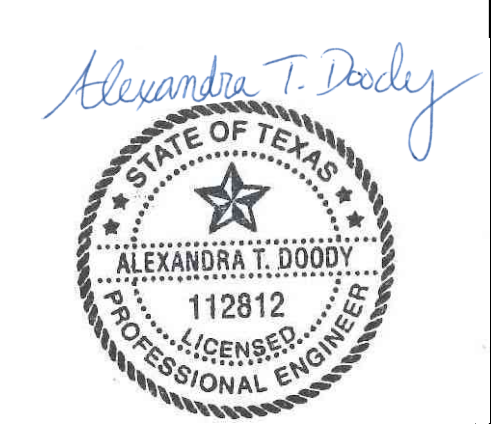
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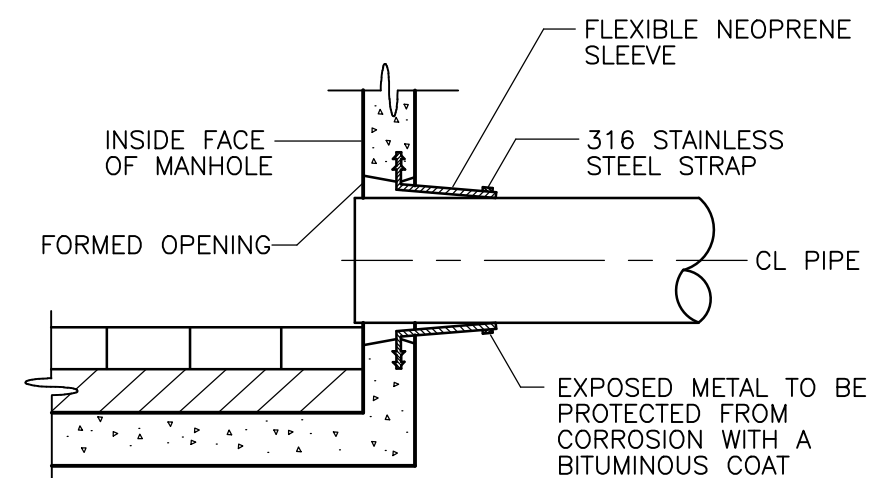
CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP  
 YARD PIPING PLAN

PROJECT NO. 2048-264953  
 FILE NAME: C106YPLP.DWG  
 SHEET NO.  
**DS-C-6**

1/4/2024





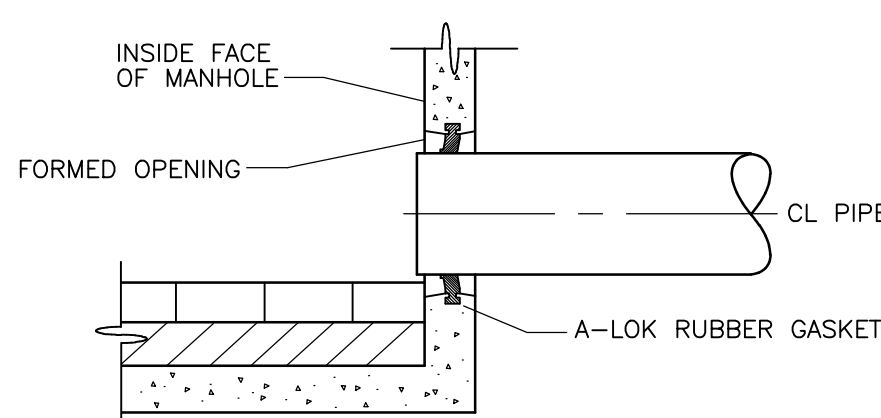
NOTE

- 1 OPENING IN WALL > PIPE OD - TO FIT SLEEVE OD.
- 2 PROVIDE GASKETED "SMOOTH" MANHOLE ADAPTOR FOR PROFILE - WALL PVC PIPE.

**FLEXIBLE SLEEVE PIPE CONNECTION**

DETAIL A

NTS



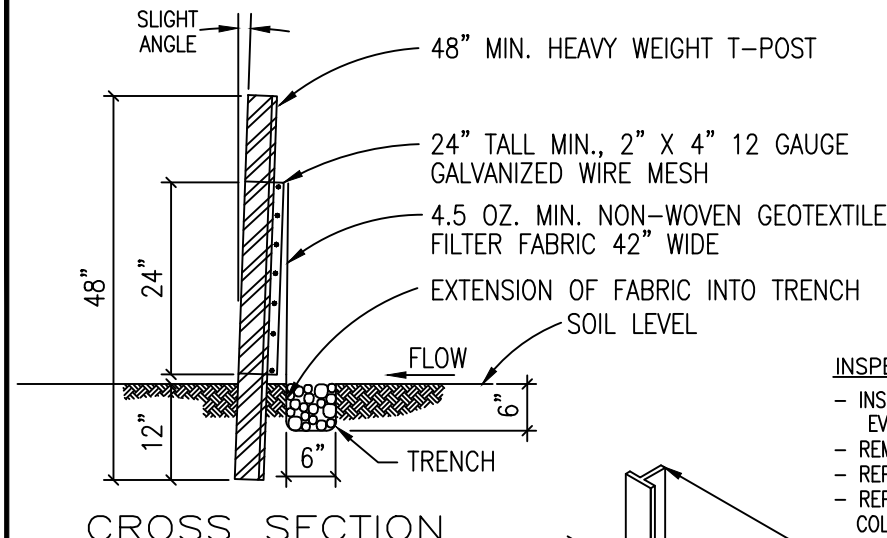
NOTE

- 1 PROVIDE GASKETED "SMOOTH" MANHOLE ADAPTOR FOR PROFILE - WALL PVC PIPE.

**A-LOK SYSTEM PIPE CONNECTION**

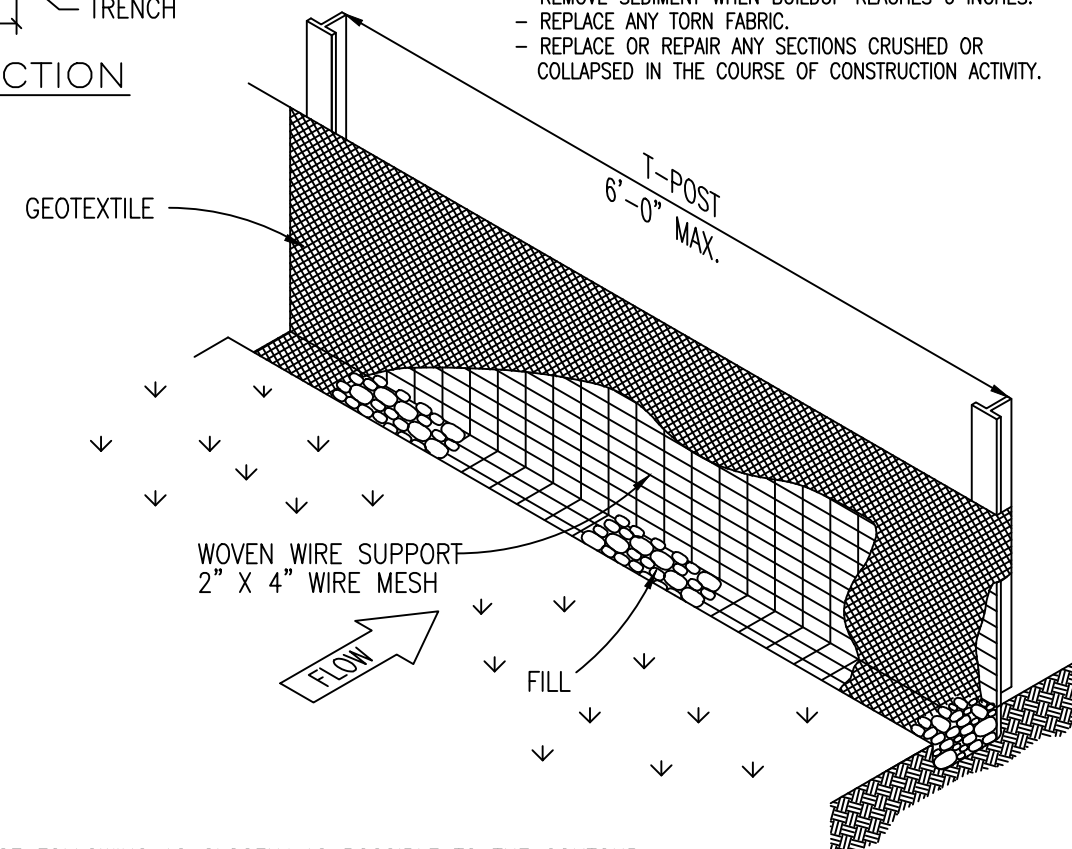
DETAIL B

NTS



- INSPECTION AND MAINTENANCE GUIDELINES:**
- INSPECT ALL FENCING WEEKLY, AND AFTER ANY RAINFALL EVENT.
  - REMOVE SEDIMENT WHEN BUILDUP REACHES 6 INCHES.
  - REPLACE ANY TORN FABRIC.
  - REPLACE OR REPAIR ANY SECTIONS CRUSHED OR COLLAPSED IN THE COURSE OF CONSTRUCTION ACTIVITY.

CROSS SECTION



INSTALLATION:

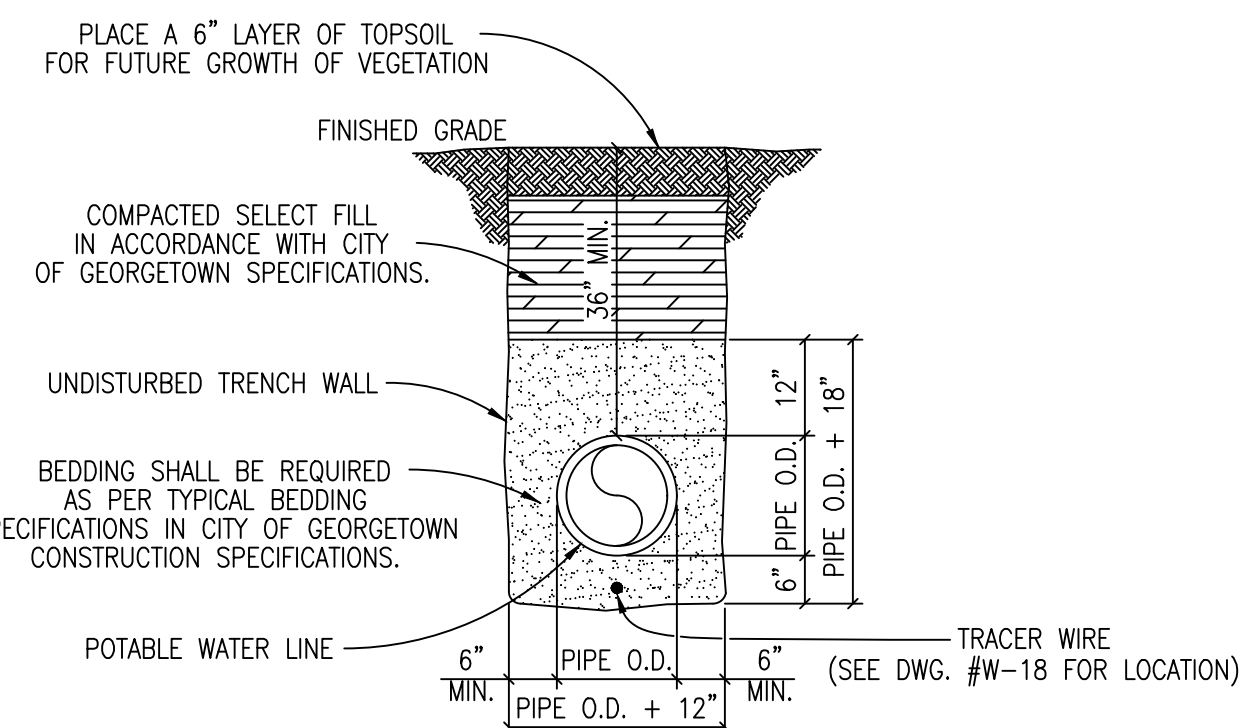
- LAYOUT THE SILT FENCE FOLLOWING AS CLOSELY AS POSSIBLE TO THE CONTOUR.
- CLEAR THE GROUND OF DEBRIS, ROCKS, PLANTS (INCLUDING GRASSES TALLER THAN 2') TO PROVIDE A SMOOTH FLOW APPROACH SURFACE. EXCAVATE 6" DEEP X 6" WIDE TRENCH ON UPSTREAM SIDE OF FACE PER PLANS.
- DRIVE THE HEAVY DUTY T-POST AT LEAST 12 INCHES INTO THE GROUND AND AT A SLIGHT ANGLE TOWARDS THE FLOW.
- ATTACH THE 2" X 4" 12 GAUGE WELDED WIRE MESH TO THE T-POST WITH 11 1/2 GAUGE GALVANIZED T-POST CLIPS. THE TOP OF THE WIRE TO BE 24" ABOVE GROUND LEVEL. THE WELDED WIRE MESH TO BE OVERLAPPED 6" AND TIED AT LEAST 6 TIMES WITH HOG RINGS.
- THE SILT FENCE TO BE INSTALLED WITH A SKIRT A MINIMUM OF 6" WIDE PLACED ON THE UPHILL SIDE OF THE FENCE INSIDE EXCAVATED TRENCH. THE FABRIC TO OVERLAP THE TOP OF THE WIRE BY 1'.
- ANCHOR THE SILT FENCE BY BACKFILLING WITH EXCAVATED DIRT AND ROCKS (NOT LARGER THAN 2").
- GEOTEXTILE SPLICES SHOULD BE A MINIMUM OF 18" WIDE ATTACHED IN AT LEAST 6 PLACES. SPLICES IN CONCENTRATED FLOW AREAS WILL NOT BE ACCEPTED.
- SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

ADOPTED 6/21/2006

	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	EC02
	SILT FENCE DETAIL	
SCALE: NTS	DATE: 1/2003	APPROVED BY: TRB
DRAWN BY: MRS	DATE: 1/2003	APPROVED BY: TRB

DETAIL C

NTS



- TRENCH WIDTHS**
- \*PIPE LESS THAN 20" DIAMETER 1'-0" + PIPE O.D.
  - \*20" DIAMETER PIPE AND LARGER 2'-0" + PIPE O.D.

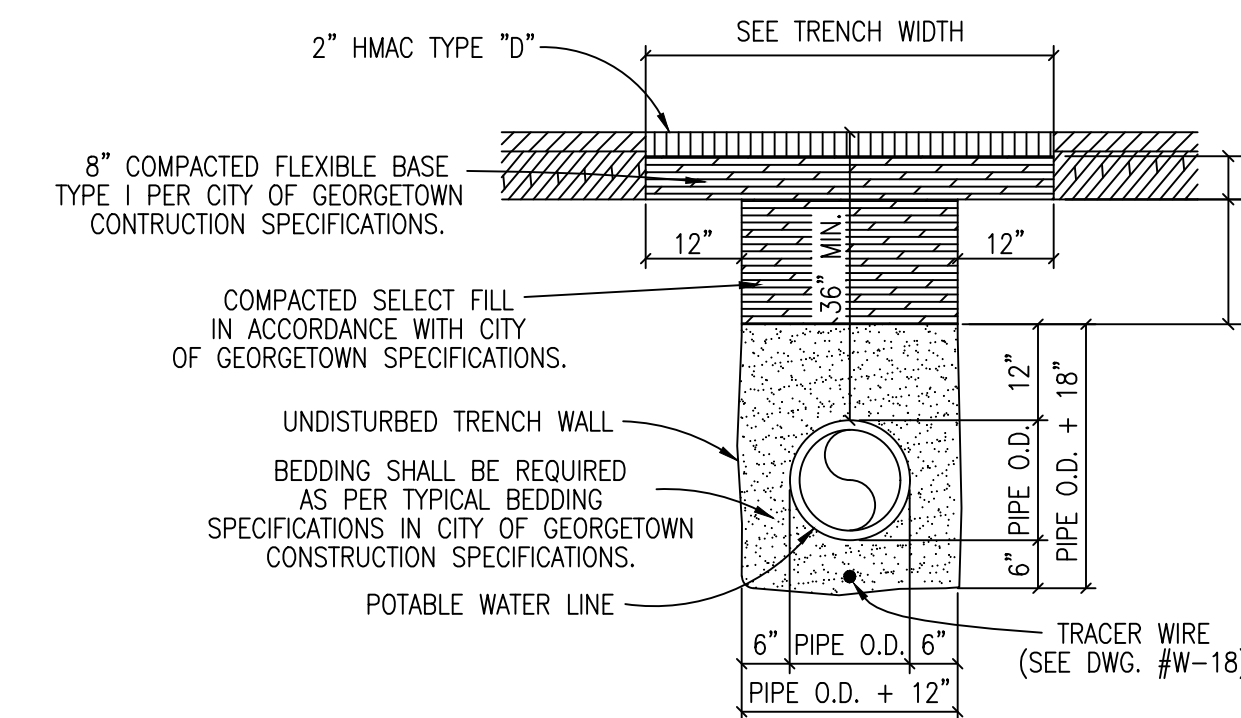
The Architect/Engineer assumes responsibility for appropriate use of this standard.

ADOPTED 6/21/2006

	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	W02
	TRENCH AND EMBEDMENT DETAIL UNDER NON-PAVED AREAS	
SCALE: NTS	DATE: 1/2003	APPROVED BY: TRB
DRAWN BY: MRS	DATE: 1/2003	APPROVED BY: TRB

DETAIL D

NTS



- TRENCH WIDTHS**
- \*PIPE LESS THAN 20" DIAMETER 1'-0" + PIPE O.D.
  - \*20" DIAMETER PIPE AND LARGER 2'-0" + PIPE O.D.

- NOTES:
1. REPLACED BASE MATERIAL OVER DITCH SHALL BE TWICE THE THICKNESS OF THE ORIGINAL BASE.
  2. BASE MATERIAL SHALL BE IN LIFTS NOT TO EXCEED 6" AND EACH LIFT THOROUGHLY ROLLED OR TAMPED TO SPECIFIED MAXIMUM DENSITY.
  3. ASPHALT CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWS.
  4. SURFACE MATERIAL WILL BE CONSISTENT WITH THE EXISTING SURFACE.
  5. DENSITY TESTS SHALL BE TAKEN IN ACCORDANCE WITH THE CITY OF GEORGETOWN CONSTRUCTION SPECIFICATIONS AND STANDARDS.
  6. CONTRACTOR OR ENGINEER MAY USE FLOWABLE BACKFILL AS AN ALTERNATE BACKFILL MATERIAL (SEE C9 FLOWABLE BACKFILL FOR THE SPECIFICATION).

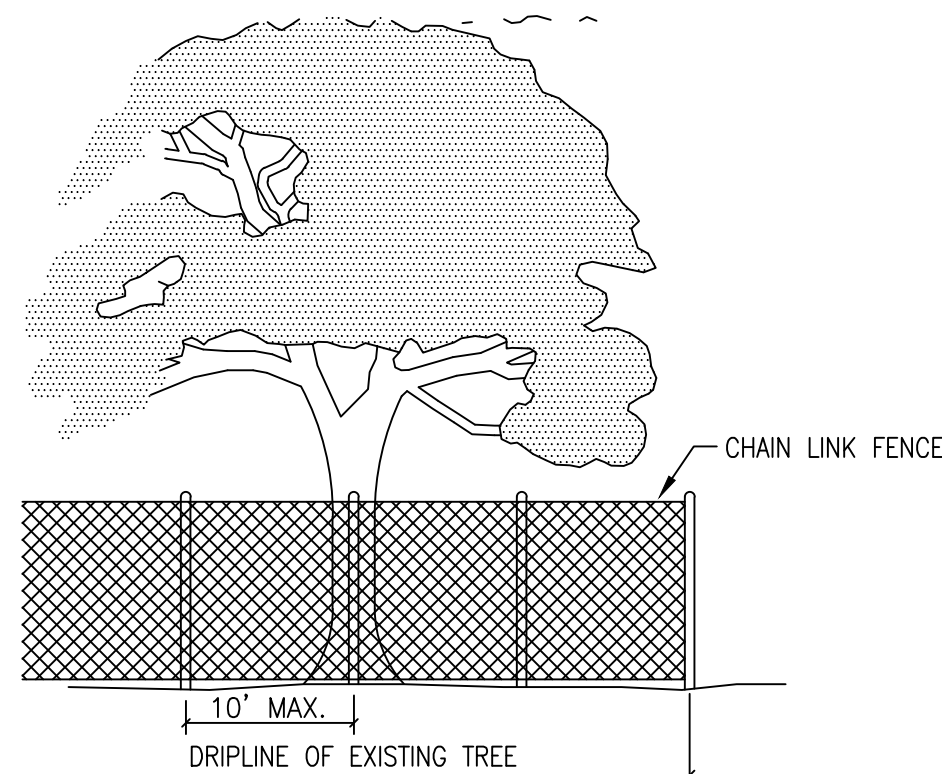
The Architect/Engineer assumes responsibility for appropriate use of this standard.

ADOPTED 6/21/2006

	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	W17
	TRENCH AND EMBEDMENT AND PAVEMENT REPLACEMENT DETAIL UNDER EXISTING ROADWAY	
SCALE: NTS	DATE: 1/2003	APPROVED BY: TRB
DRAWN BY: MRS	DATE: 1/2003	APPROVED BY: TRB

DETAIL E

NTS



NOTES:

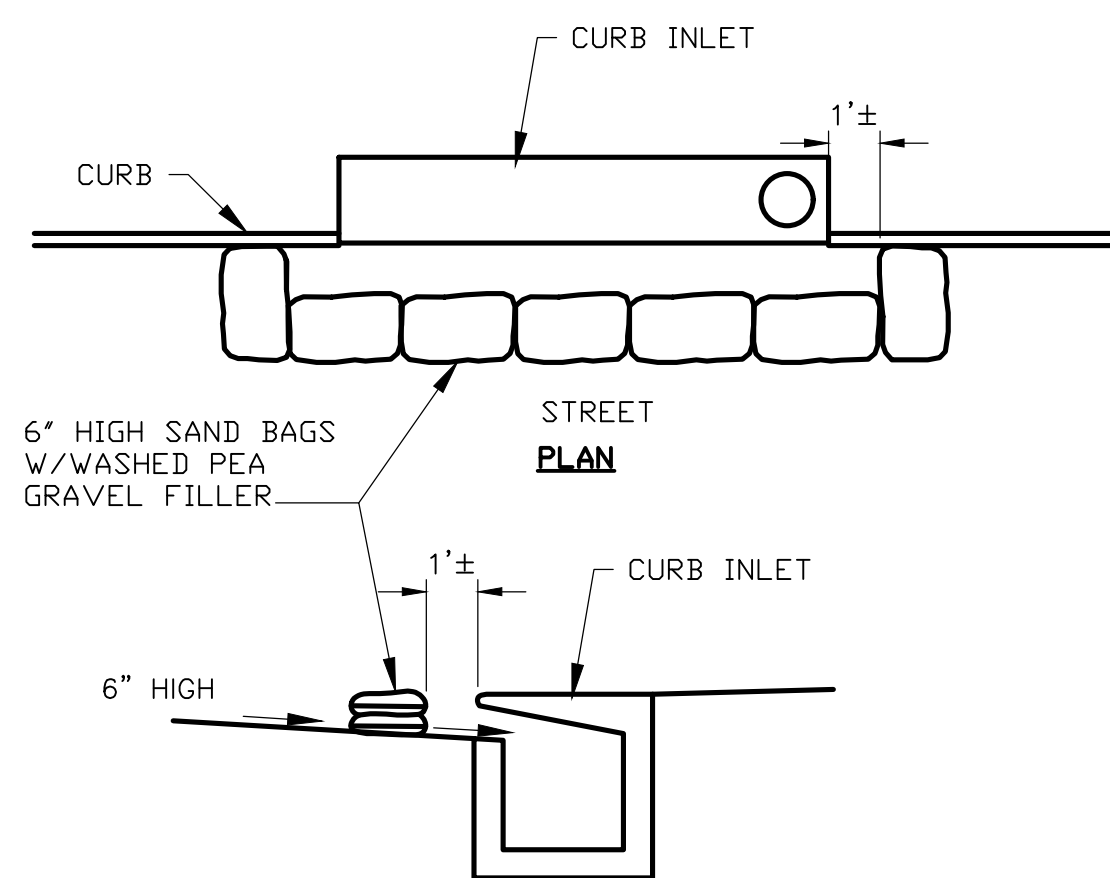
1. TREE PROTECTION FENCES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR GRADING).
2. FENCES SHALL COMPLETELY SURROUND THE TREE, OR CLUSTERS OF TREES; WILL BE LOCATED AT THE OUTERMOST LIMIT OF THE TREE BRANCHES (DRIPLINE), AND WILL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROJECT IN ORDER TO PREVENT THE FOLLOWING:
  - A. SOIL COMPACTION IN THE ROOT ZONE AREA RESULTING FROM VEHICULAR TRAFFIC, OR STORAGE OF EQUIPMENT OR MATERIALS
  - B. ROOT ZONE DISTURBANCES DUE TO GRADE CHANGES (GREATER THAN SIX INCHES (6") CUT OR FILL, OR TRENCHING NOT REVIEWED AND AUTHORIZED BY THE CITY.
  - C. WOUNDS TO EXPOSED ROOTS, TRUNKS OR LIMBS BY MECHANICAL EQUIPMENT.
  - D. OTHER ACTIVITIES DETRIMENTAL TO TREES, SUCH AS CHEMICAL STORAGE, CEMENT TRUCK CLEANING AND FIRE.
3. EXCEPTIONS TO INSTALLING FENCES AT TREE DRIPLINES MAY BE PERMITTED IN THE FOLLOWING CASES:
  - A. WHERE PERMEABLE PAVING IS TO BE INSTALLED, ERECT THE FENCE AT THE OUTER LIMITS OF THE PERMEABLE PAVING AREA.
  - B. WHERE TREES ARE CLOSE TO PROPOSED BUILDINGS, ERECT THE FENCE NO CLOSER THAN SIX FEET (6'-0") TO BUILDING.

ADOPTED 6/21/2006

	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	EC09
	TREE PROTECTION - CHAIN LINK FENCE	
SCALE: NTS	DATE: 1/2003	APPROVED BY: TRB
DRAWN BY: MRS	DATE: 1/2003	APPROVED BY: TRB

DETAIL F

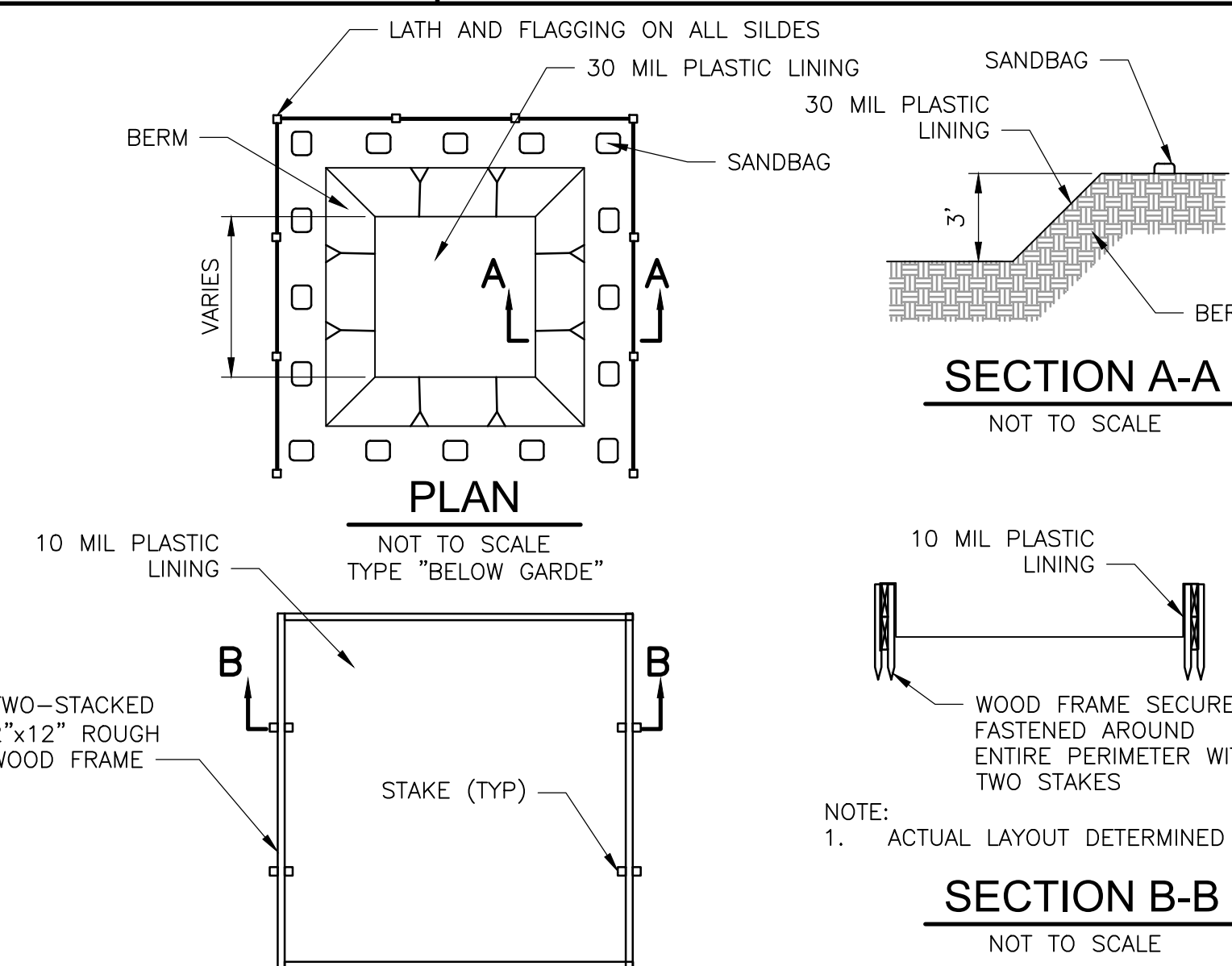
NTS



CURB INLET PROTECTION

DETAIL G

NTS



CONCRETE WASHOUT AREA

DETAIL H

NTS

NOTE:

1. BASED ON SITE CONDITIONS, THE CONTRACTOR MAY SELECT BELOW OR ABOVE GRADE CONCRETE WASHOUT AREA.



11/08/2023

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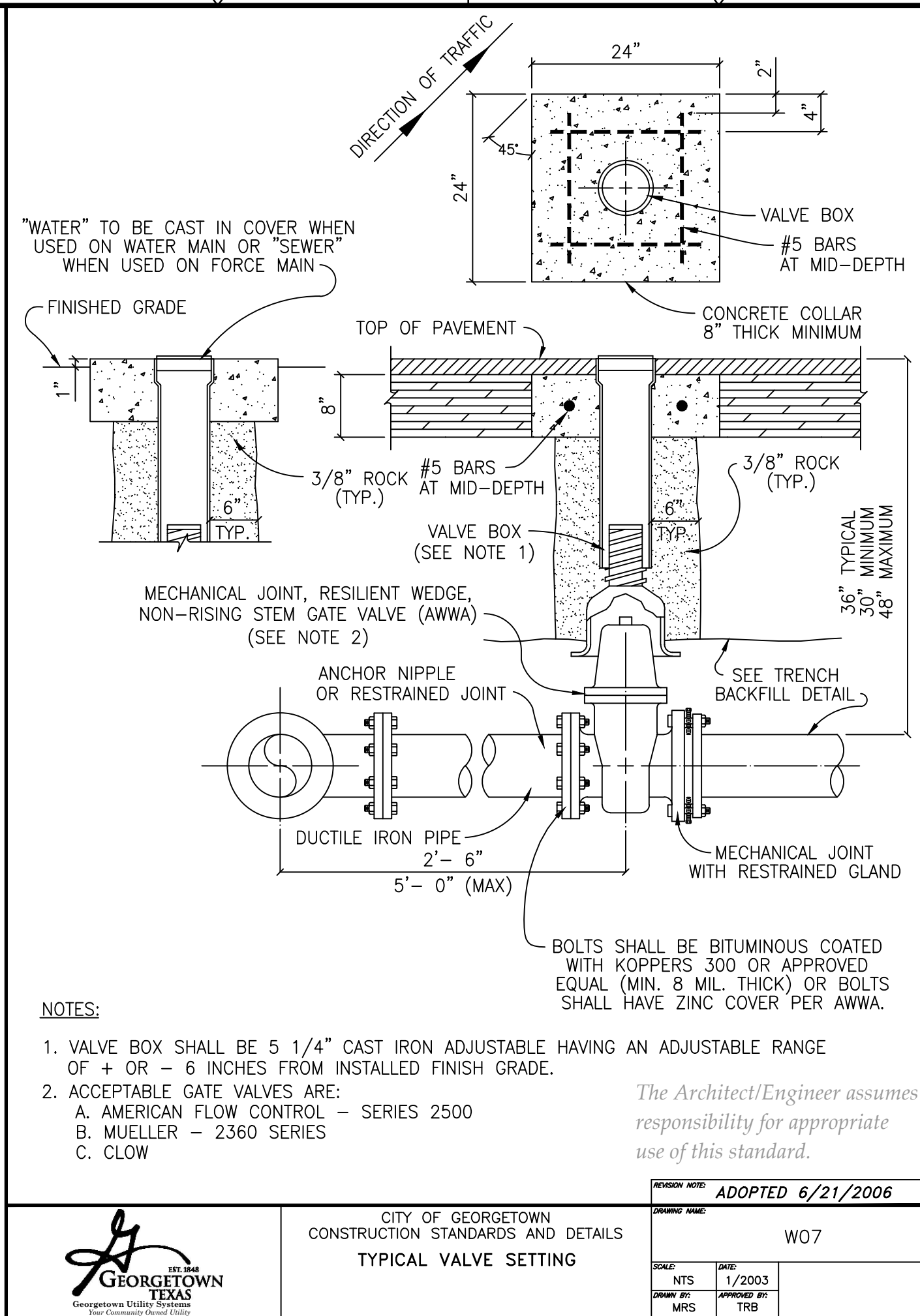
DESIGNED BY: E. WEIMER	DATE: NOVEMBER 2023
DRAWN BY: S. SRIHARI	
SHEET CHK'D BY: A. DOODY	
CROSS CHK'D BY: A. WOELKE	
APPROVED BY: A. DOODY	

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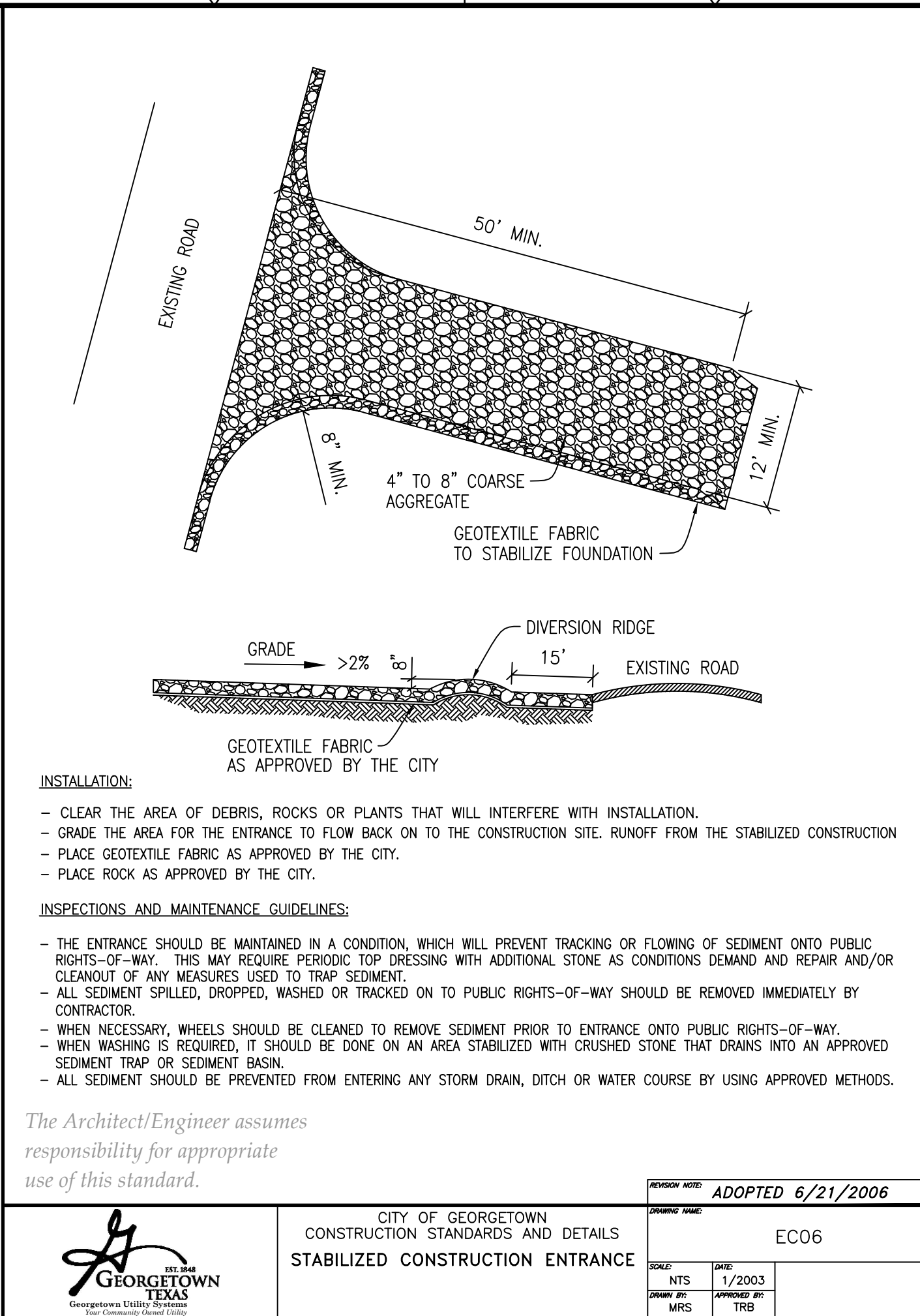
CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

CIVIL DETAILS I  
 SHEET NO. CZ-1

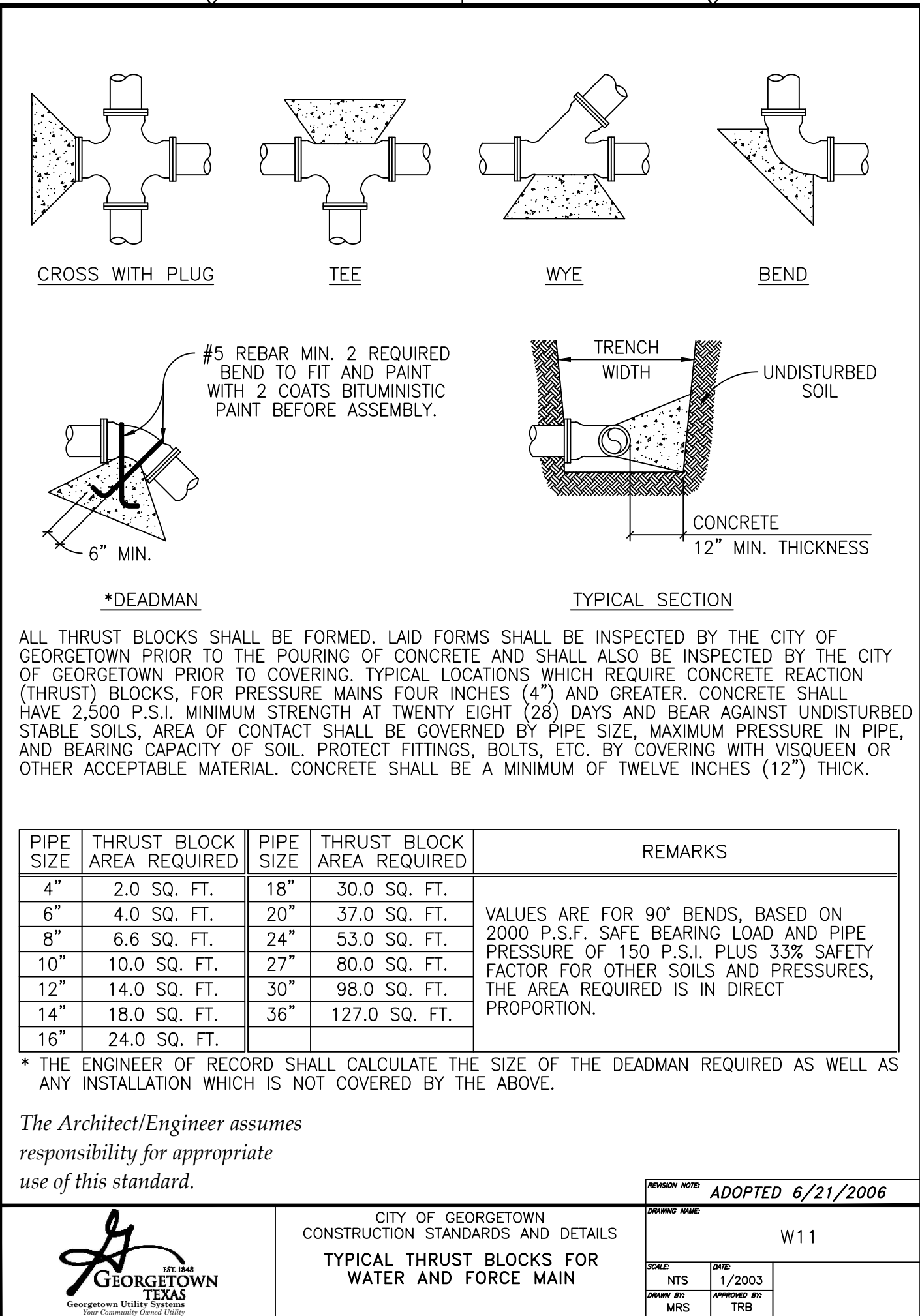
PROJECT NO. 2048-264953
FILE NAME: CZ06CLDT.DWG
SHEET NO. CZ-1



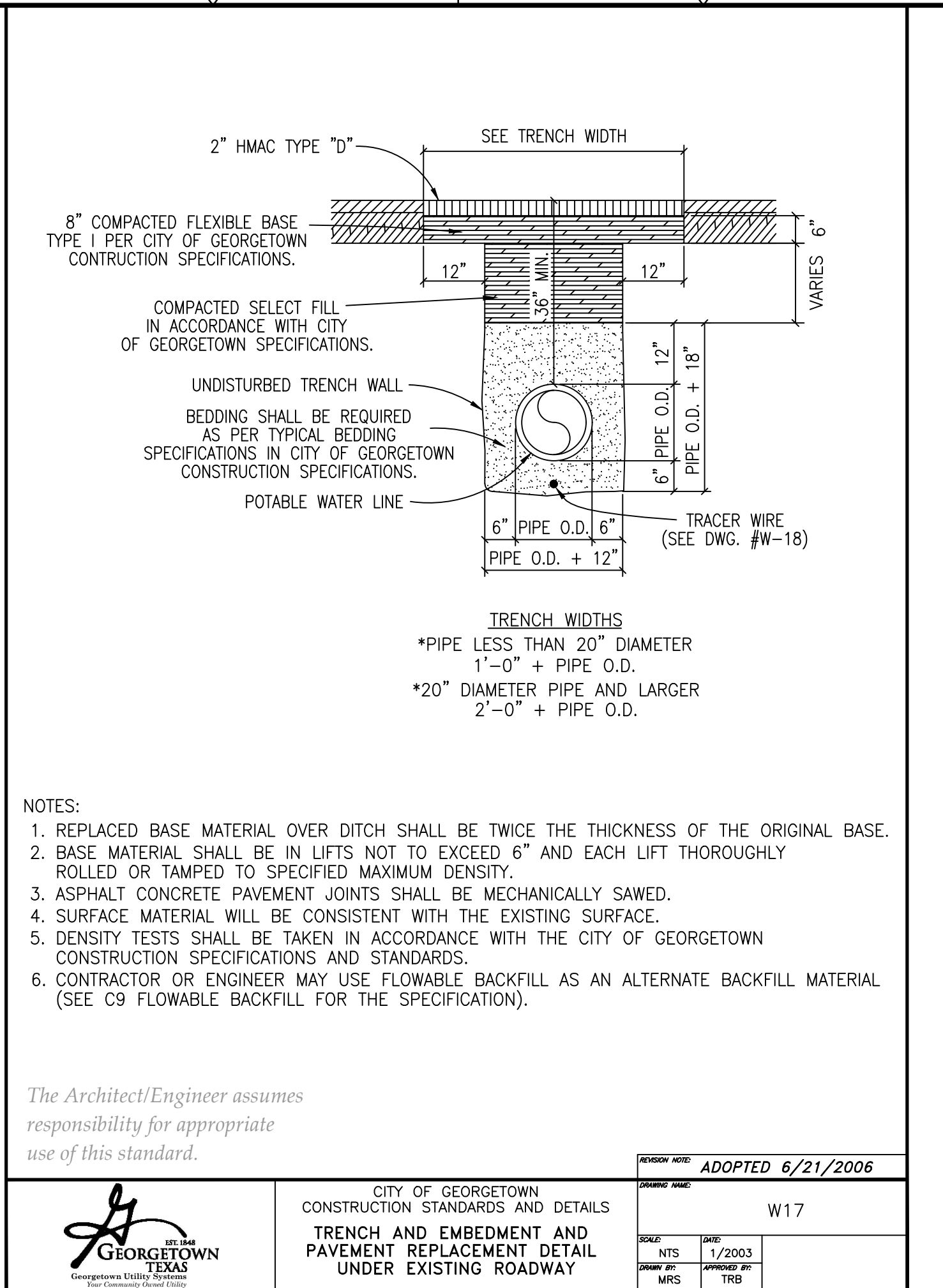
**DETAIL A**  
NTS



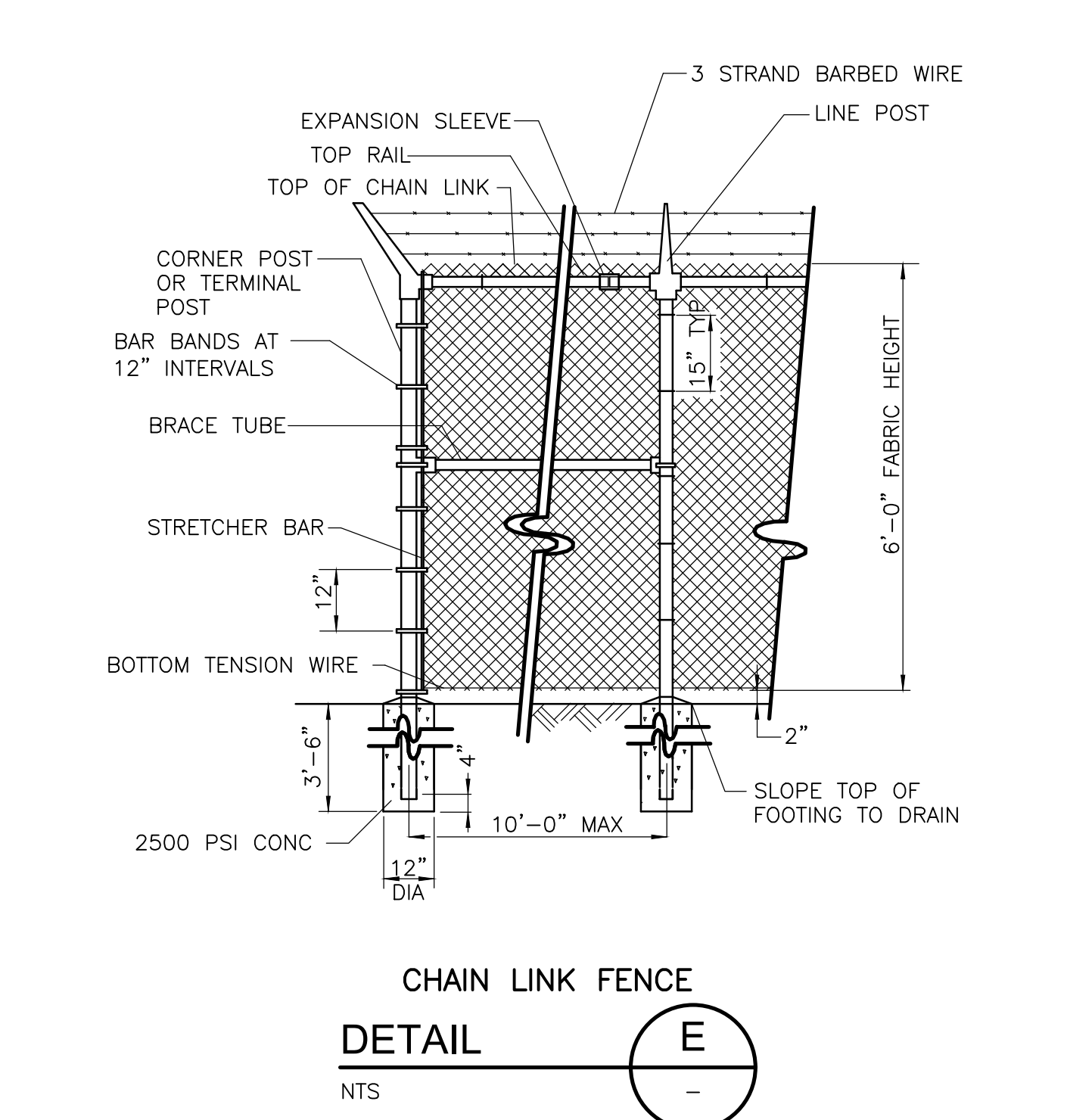
**DETAIL B**  
NTS



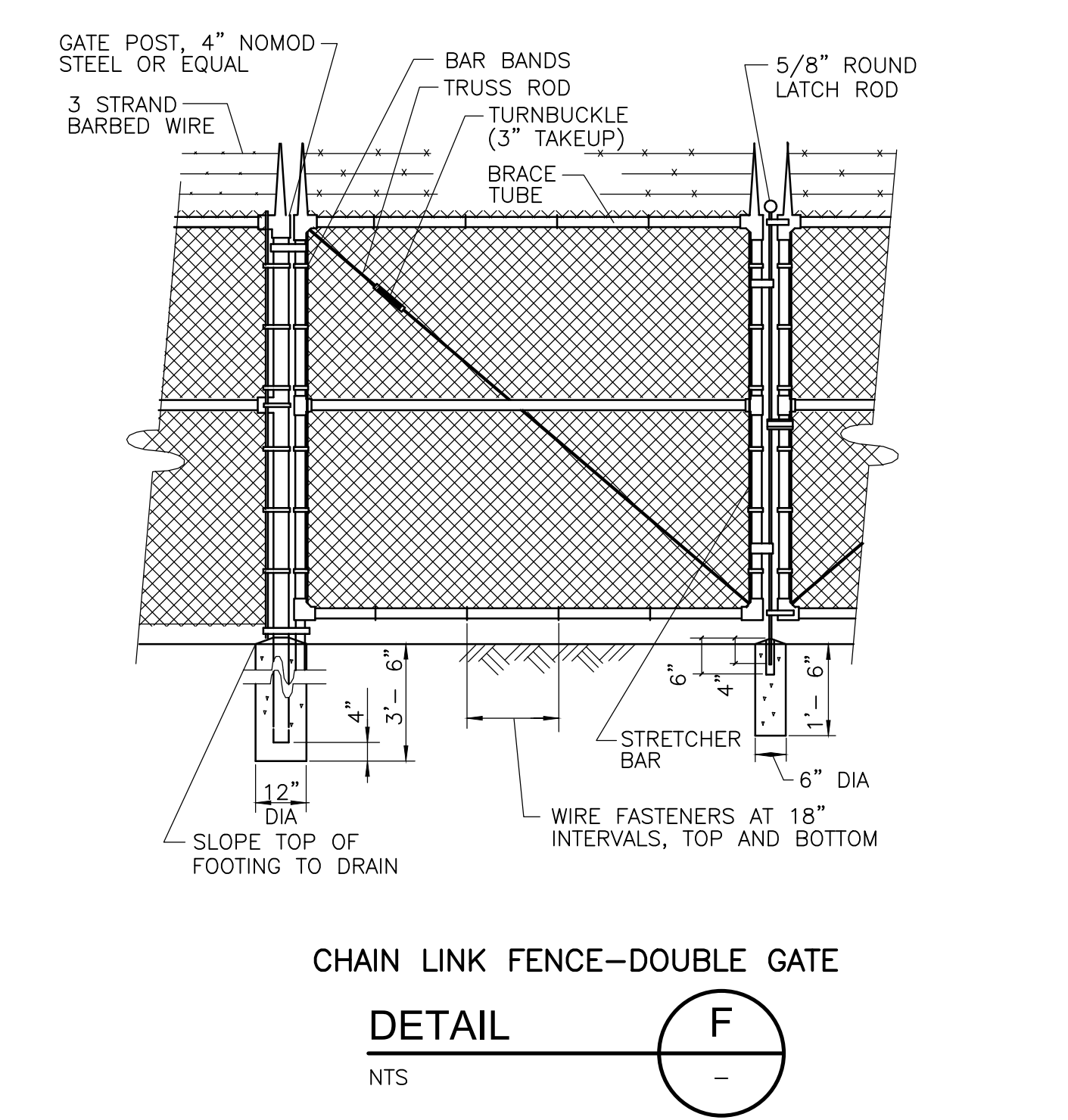
**DETAIL C**  
NTS



**DETAIL D**  
NTS



**DETAIL E**  
NTS



**DETAIL F**  
NTS

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REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JAM	ATD	CONFORMED DRAWINGS

DESIGNED BY: E. WEIMER  
 DRAWN BY: S. SRIHARI  
 SHEET CHK'D BY: A. DOODY  
 CROSS CHK'D BY: A. WOELKE  
 APPROVED BY: A. DOODY  
 DATE: NOVEMBER 2023

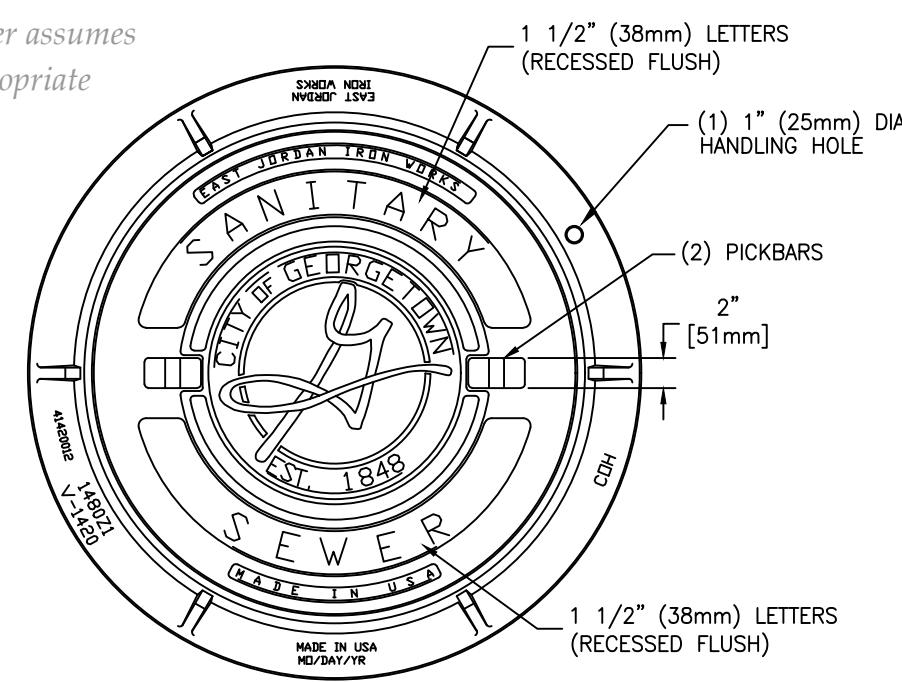
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 Austin, TX 78731  
 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

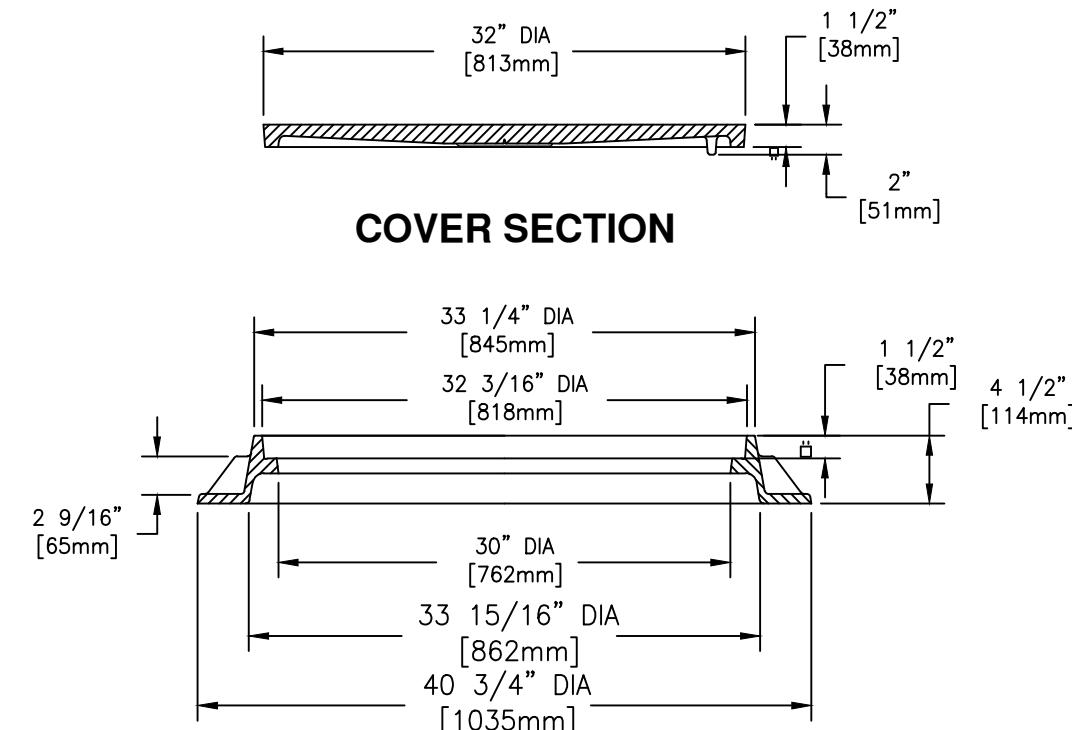
PROJECT NO. 2048-264953  
 FILE NAME: CZ07CLDT.DWG  
 SHEET NO. CZ-2

ELLYN J. WEIMER  
 142405  
 LICENSED PROFESSIONAL ENGINEER  
 11/08/2023

The Architect/Engineer assumes responsibility for appropriate use of this standard.



COVER SECTION



FRAME SECTION

- NOTES:
- STANDARD WASTEWATER MANHOLE SET TO BE EAST JORDAN IRON WORKS, INC. CATALOG NO. 1480A V-1420/1480Z1, COVER TO BE STAMPED WITH "SANITARY SEWER".
  - STANDARD WASTEWATER MANHOLE SET TO BE HEAVY DUTY LOAD RATED.
  - FOR MORE DETAILED SPECIFICATIONS REFER TO EAST JORDAN IRON WORKS, INC. REFERENCE PRODUCT DRAWING 41420012 00148390.
  - FOR BOLTED WASTEWATER MANHOLE SET REFER TO DETAIL WW07A.

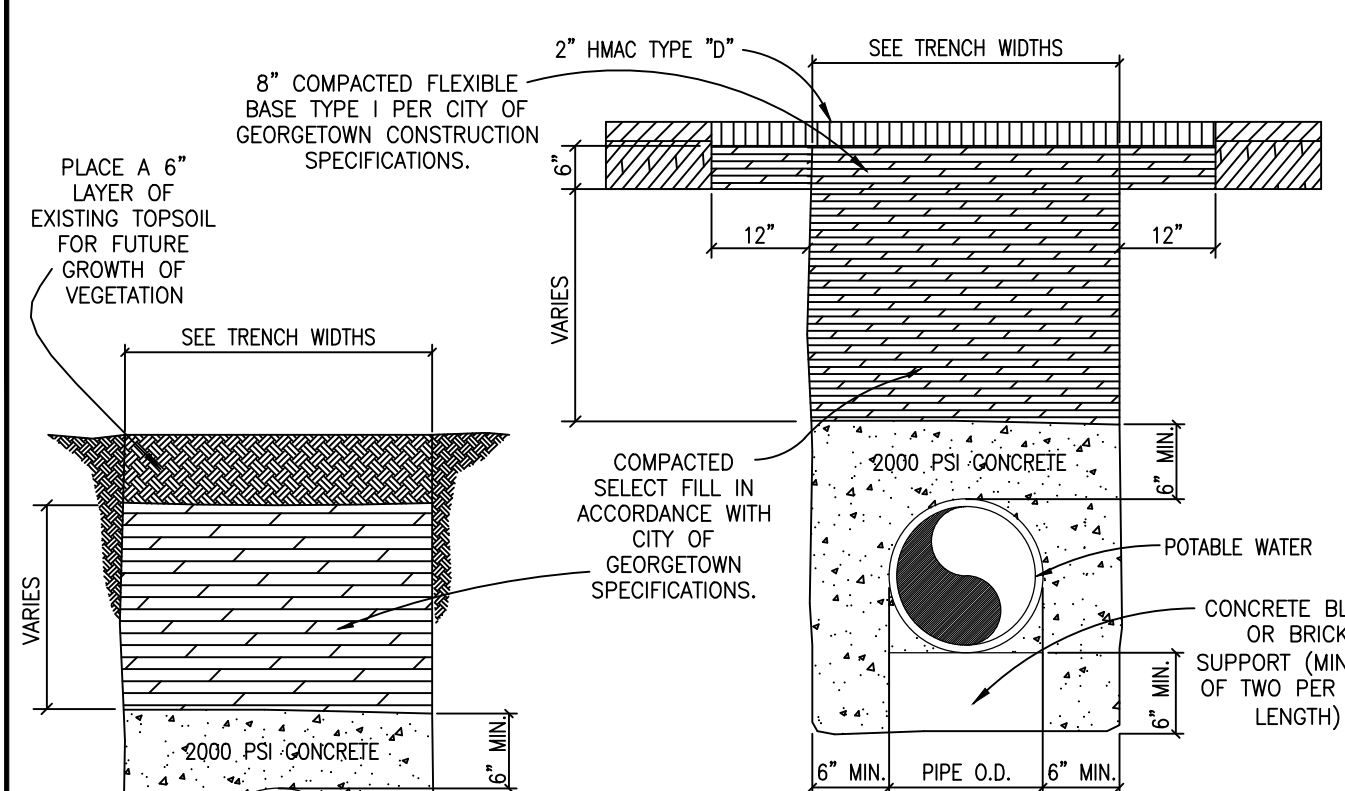
REVISION: ADOPTED 6/21/2006



CITY OF GEORGETOWN  
CONSTRUCTION STANDARDS AND DETAILS  
STANDARD WASTEWATER  
MANHOLE SET

DATE: 1/2003  
DRAWN BY: MRS  
APPROVED BY: TRB

DETAIL A



CONCRETE ENCASUREMENT UNDER EXISTING AND PROPOSED ROADWAY

CONCRETE ENCASUREMENT UNDER NATURAL GROUND

- NOTES:
- ENCASUREMENT TO BE CONSTRUCTED WHERE SEWER LINES PASS OVER OR UNDER A WATER MAIN WITH LESS THAN TWELVE INCHES (12") CLEAR DISTANCE.
  - AT CROSSINGS, ENCASEMENT SHALL EXTEND TEN FEET (10'-0") ON EITHER SIDE OF CROSSING.
  - BEGINNING AND ENDING OF ENCASEMENTS SHALL NOT BE MORE THAN SIX INCHES (6") FROM A PIPE JOINT.
  - WHERE WATER AND SEWER LINES PARALLEL WITH LESS THAN TEN FEET (10'-0") HORIZONTAL CLEAR DISTANCE, NO ENCASEMENT IS REQUIRED IF BOTH LINES ARE 150 PSI PRESSURE PIPE.
  - RAW WATER MAINS SHALL BE 150 PSI PRESSURE RATED WHEN PARALLELING POTABLE WATER MAINS WITH LESS THAN NINE FEET (9'-0") HORIZONTAL CLEARANCE.
  - WHERE MINIMUM COVER, THIRTY SIX INCHES (36") IS NOT AVAILABLE, ENCASEMENT WILL BE REQUIRED.
  - ALL CONCRETE ENCASEMENTS MUST BE FORMED AND INSPECTED BY THE CITY OF GEORGETOWN INSPECTOR PRIOR TO PLACING CONCRETE AND BACKFILLING.
  - CONTRACTOR OR ENGINEER MAY USE FLOWABLE BACKFILL AS AN ALTERNATE BACKFILL MATERIAL (SEE C9 FLOWABLE BACKFILL FOR THE SPECIFICATION).

The Architect/Engineer assumes responsibility for appropriate use of this standard.

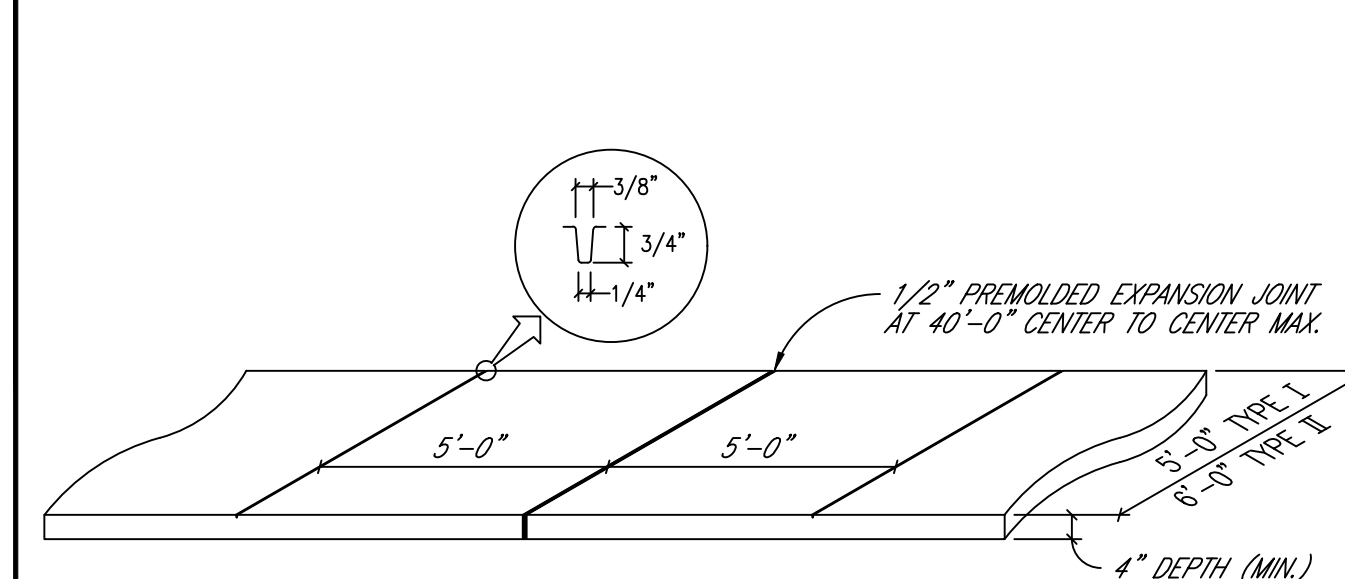


CITY OF GEORGETOWN  
CONSTRUCTION STANDARDS AND DETAILS  
CONCRETE ENCASUREMENT DETAIL

REVISION: ADOPTED 6/21/2006

DATE: 1/2003  
DRAWN BY: MRS  
APPROVED BY: TRB

DETAIL B



TYPE I - AS REQUIRED FOR SINGLE FAMILY, DUPLEXES AND TOWNHOUSES.  
TYPE II - AS REQUIRED FOR APARTMENTS, OFFICE AND PARKING LOTS, COMMERCIAL AND INDUSTRIAL.

- NOTES:
- FOR ROLLER STAMPED SIDEWALK: MATCH TO SPECIFICATIONS.
  - STANDARD LOCATION OF SIDEWALK IS OFF BACK OF CURB. SPECIAL DESIGNS MAY BE APPROVED BY THE CITY ENGINEER, PRIOR TO FINAL DESIGN.
  - SIDEWALK SHALL CONFORM TO CURRENT AMERICANS WITH DISABILITIES ACT STANDARDS.
  - IF REQUIRED ALL SIDEWALKS SHALL BE SUBMITTED AND APPROVED BY THE TEXAS DEPARTMENT OF LICENSING AND REGULATION BY THE ENGINEER RECORD.
  - ANY VARIANCE IN TEXTURE, GRADE OR ALIGNMENT MUST BE APPROVED BY THE TEXAS DEPARTMENT OF LICENSING AND REGULATION.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

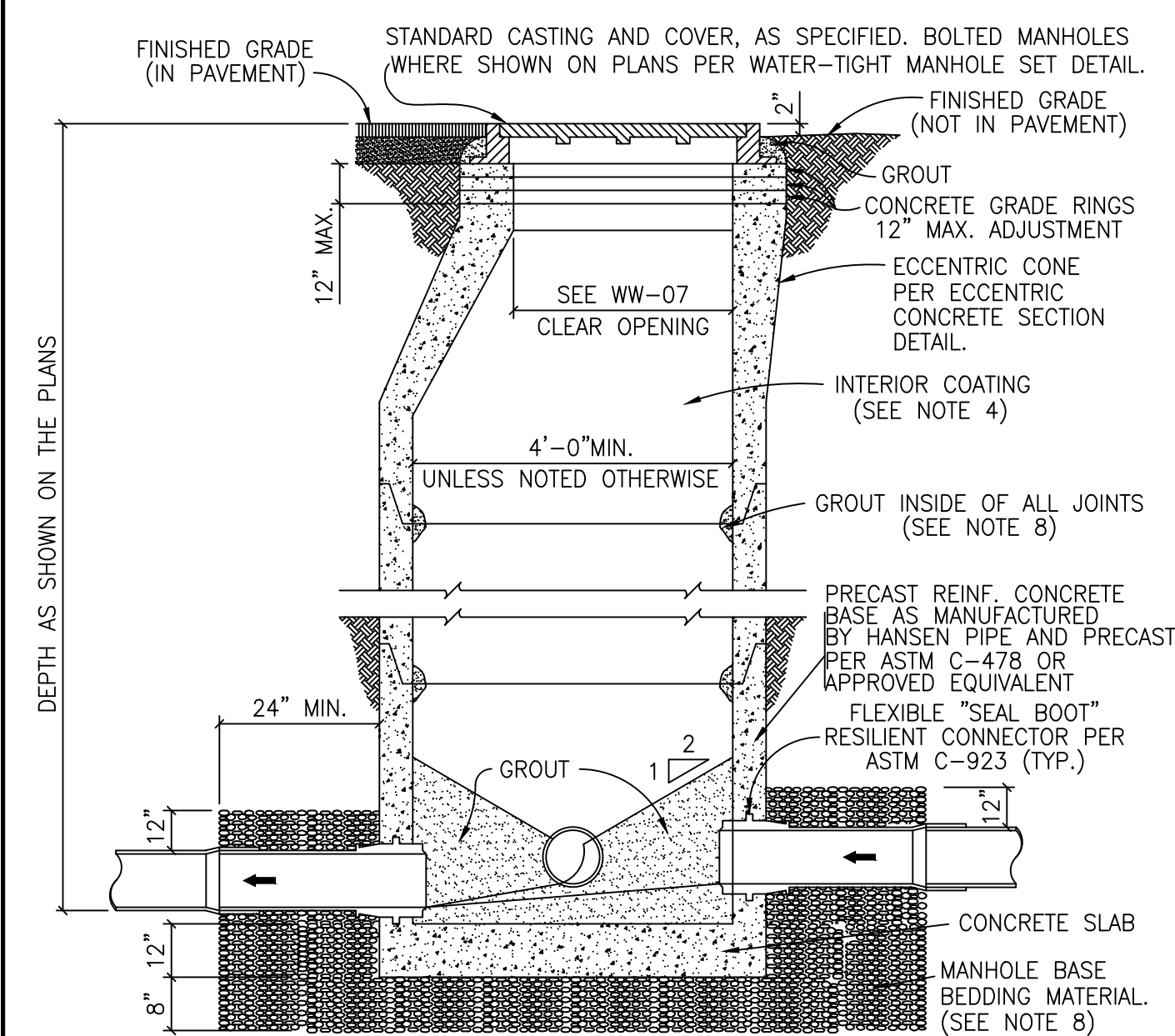


CITY OF GEORGETOWN  
CONSTRUCTION STANDARDS AND DETAILS  
SIDEWALK SECTION AND JOINT DETAIL

REVISION: ADOPTED 6/21/2006

DATE: 1/2003  
DRAWN BY: MRS  
APPROVED BY: TRB

DETAIL C



- NOTES:
- MANHOLES SHALL BE PRECAST ASTM C-478 BELL AND SPIGOT WITH PROFILE GASKET - SINGLE OFF-SET JOINTS.
  - SEE PLANS AND MANHOLE SCHEDULE, FOR MANHOLE SIZE, LOCATION, CONFIGURATION, TYPE OF TOP SECTION, VENTING REQUIREMENTS, PIPE SIZE AND TYPES.
  - SEE SPECIFICATIONS ON MATERIALS AND CONSTRUCTION.
  - AN 80 MIL COAT OF RAVEN LINING SYSTEMS, RAVEN 405 ULTRA HIGH BUILD EPOXY COATING, OR SPRAY WALL EPOXY COATING, OR APPROVED EQUAL, TO BE APPLIED TO ENTIRE INTERIOR OF EACH WASTEWATER MANHOLE AND UNDERSIDE OF FLAT TOPS.
  - ALL MANHOLE COVERS SHALL BE BOLTED AND GASKETED WHEN MANHOLES ARE LOCATED OUT FROM PAVEMENT.
  - MANHOLES TO BE VENTED ARE IDENTIFIED ON MANHOLE SCHEDULE. REFERENCE MANHOLE VENT DETAIL.
  - MANHOLES ARE TO BE DESIGNED TO RESIST LATERAL AND VERTICAL SOIL FORCES RESULTING FROM MANHOLE DEPTH. ADDITIONALLY, MANHOLES LOCATED IN PAVEMENT TO BE DESIGNED FOR HS-20 TRAFFIC LOADS.
  - GROUND SHALL MEET THE REQUIREMENTS AS STATED BY THE COATING MANUFACTURER.
  - MANHOLE BASE BEDDING MATERIAL SPECS. FOR 3/4" WASHED GRAVEL:  
SIEVE SIZE 2", PERCENT (%) RETAINED 0  
SIEVE SIZE 1 1/2", % RETAINED 0-10  
SIEVE SIZE 1", % RETAINED 45-80  
SIEVE SIZE 3/4", % RETAINED 85-100  
SIEVE SIZE 3/8", % RETAINED 95-100

The Architect/Engineer assumes responsibility for appropriate use of this standard.

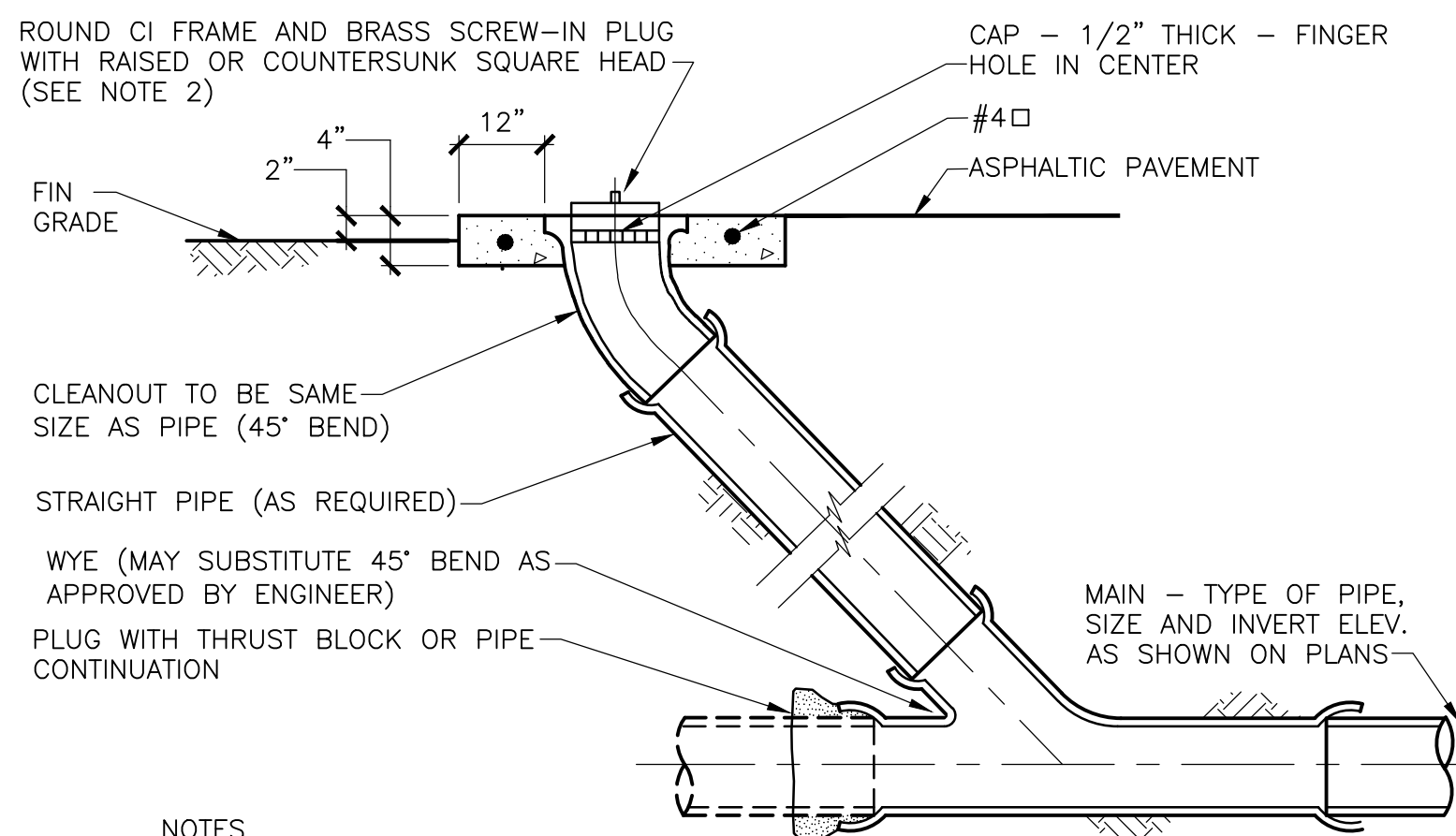


CITY OF GEORGETOWN  
CONSTRUCTION STANDARDS AND DETAILS  
STANDARD MANHOLE - SECTION

REVISION: ADOPTED 6/21/2006

DATE: 1/2003  
DRAWN BY: MRS  
APPROVED BY: TRB

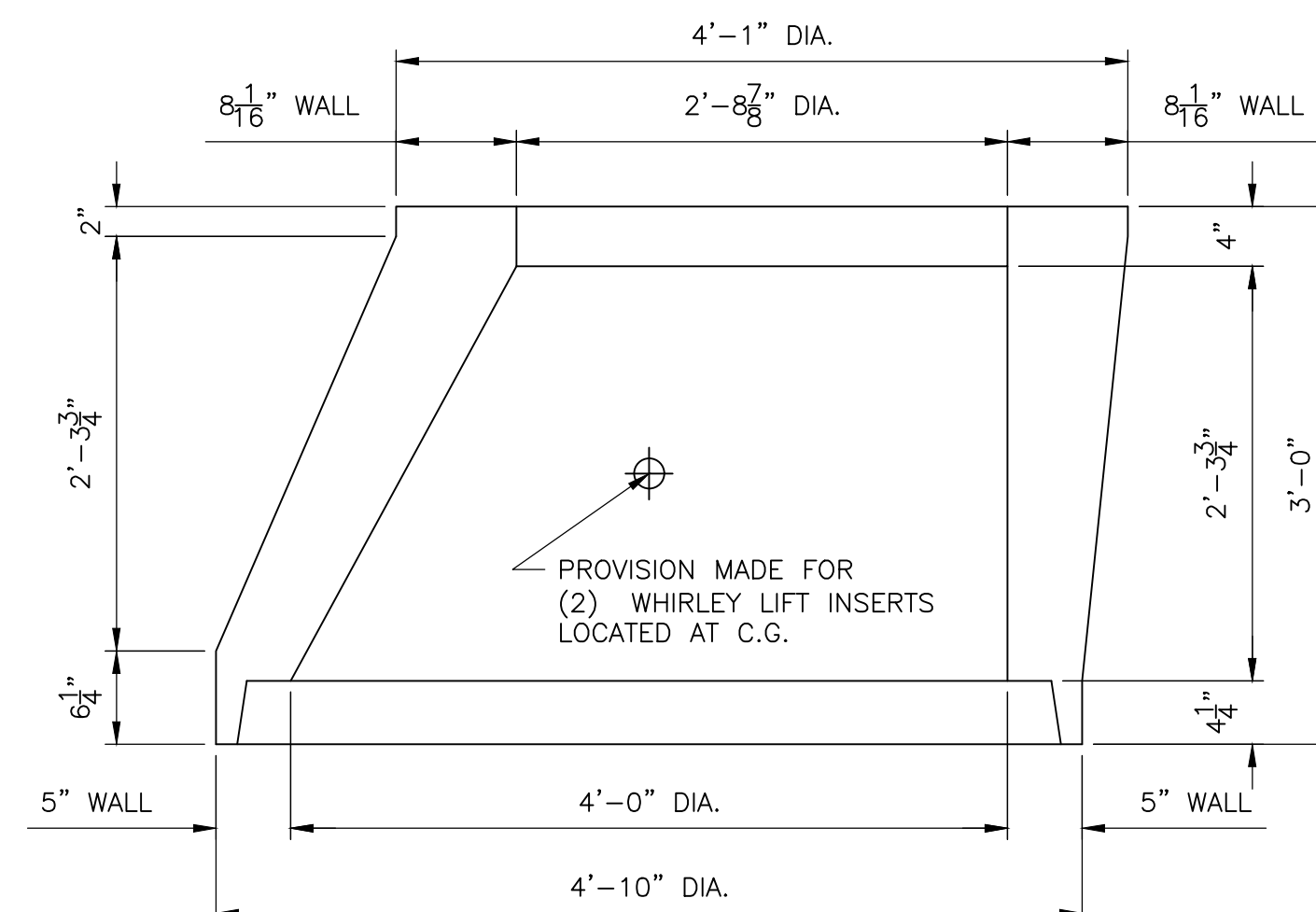
DETAIL D



- NOTES:
- CLEANOUT DETAIL AS SHOWN FOR GRAVITY SYSTEM. PIPE JOINTS SHALL BE RESTRAINED FOR PRESSURE SYSTEM (FORCE MAIN)
  - PROVIDE 1" FEMALE QUICK-DISCONNECT CONNECTION AND PLUG PER SECTION 15120 UNLESS IN ROADWAY
  - ADD REDUCER AS REQUIRED TO CONNECT THE MAIN TO THE CLEANOUT AS CALLED OUT ON THE DRAWINGS.

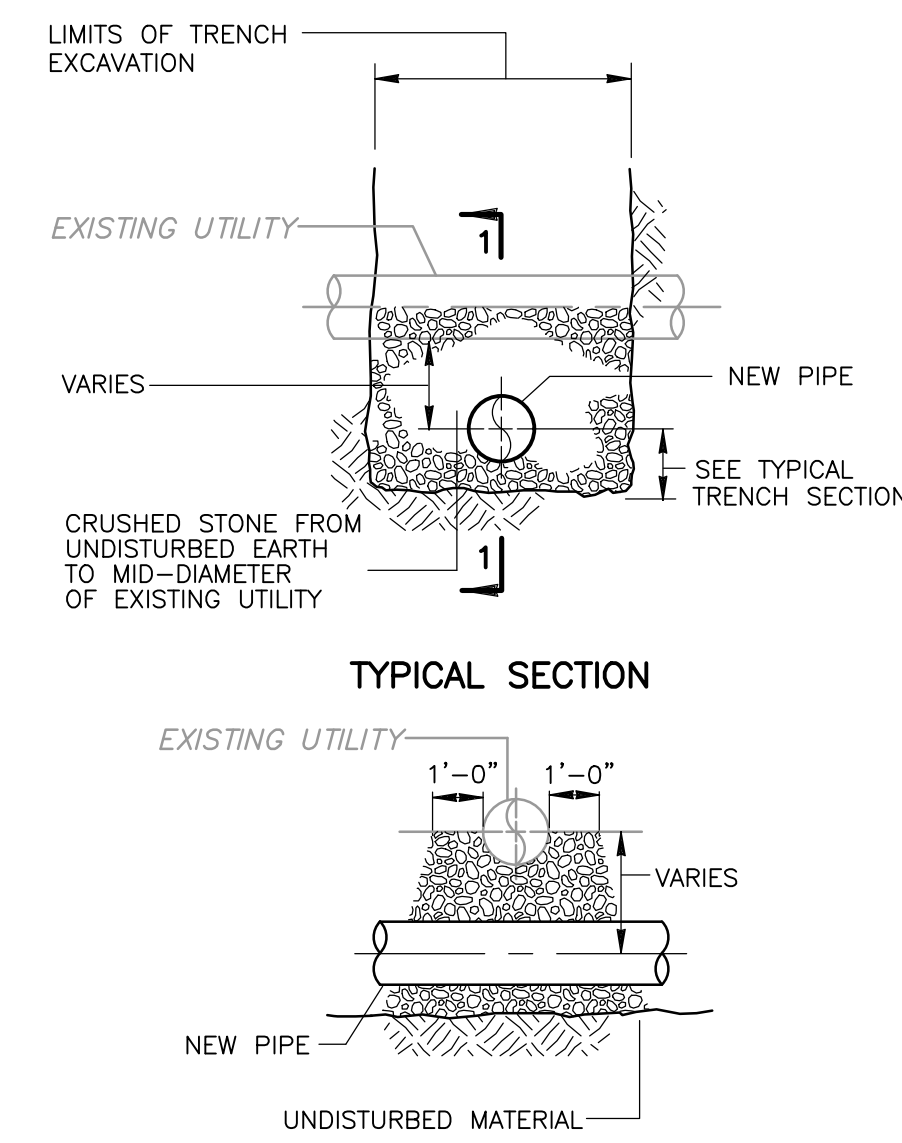
PIPE LINE CLEANOUT

DETAIL E



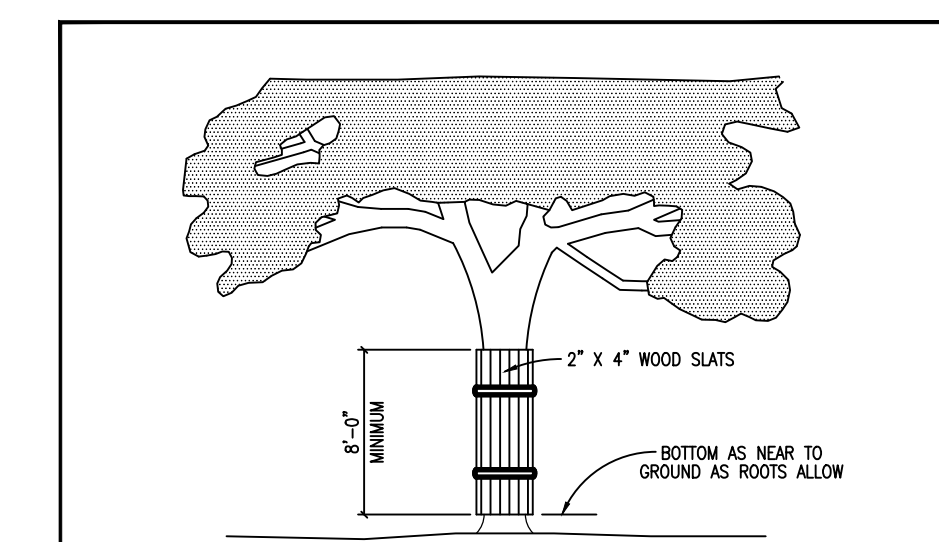
ECCENTRIC CONCRETE SECTION

DETAIL F



SECTION 1  
UTILITIES CROSSING: FOR CROSSINGS SEPARATED BY LESS THAN 12"

DETAIL G



- NOTES:
- WHERE ANY EXCEPTIONS RESULT IN A FENCE BEING CLOSER THAN FOUR FEET (4'-0") TO A TREE TRUNK, PROTECT THE TRUNK WITH STRAPPED-ON PLANKING TO A HEIGHT OF EIGHT FEET (8'-0"), OR TO THE LIMITS OF LOWER BRANCHING IN ADDITION TO THE REDUCED FENCING PROVIDED.
  - ANY ROOTS EXPOSED BY CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH WITH THE SOIL. BACKFILL ROOT AREAS WITH GOOD QUALITY TOP SOIL AS SOON AS POSSIBLE. IF EXPOSED ROOT AREAS ARE NOT BACKFILLED WITHIN TWO (2) DAYS, COVER THEM WITH ORGANIC MATERIAL IN A MANNER WHICH REDUCES SOIL TEMPERATURE, AND MINIMIZES WATER LOSS DUE TO EVAPORATION.
  - PRIOR EXCAVATION OR GRADE CUTTING WITHIN TREE DRIFELINE, MAKE A CLEAN CUT BETWEEN THE DISTURBED AND UNDISTURBED ROOT ZONES WITH A ROCK SAW OR SIMILAR EQUIPMENT, TO MINIMIZE DAMAGE TO REMAINING ROOTS.
  - TREES MOST HEAVILY IMPACTED BY CONSTRUCTION ACTIVITIES SHOULD BE WATERED DEEPLY ONCE A WEEK DURING PERIODS OF HOT, DRY WEATHER. TREE CROWNS SHOULD BE SPRAYED WITH WATER PERIODICALLY TO REDUCE DUST ACCUMULATION ON THE LEAVES.
  - ANY TRENCHING REQUIRED FOR THE INSTALLATION OF LANDSCAPE IRRIGATION SHALL BE PLACED AS FAR FROM EXISTING TREE TRUNKS AS POSSIBLE.
  - NO LANDSCAPE TOPSOIL DRESSING GREATER THAN FOUR INCHES (4") SHALL BE PERMITTED WITHIN THE DRIFELINE OF A TREE. NO SOIL IS PERMITTED ON THE ROOT FLANKS OF ANY TREE.
  - PRUNING TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC AND EQUIPMENT SHALL TAKE PLACE BEFORE CONSTRUCTION BEGINS.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

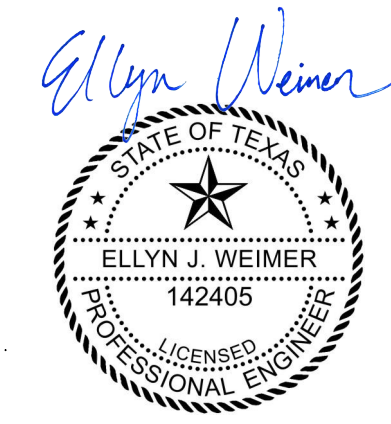


CITY OF GEORGETOWN  
CONSTRUCTION STANDARDS AND DETAILS  
TREE PROTECTION - WOOD SLATS

REVISION: ADOPTED 6/21/2006

DATE: 1/2003  
DRAWN BY: MRS  
APPROVED BY: TRB

DETAIL H



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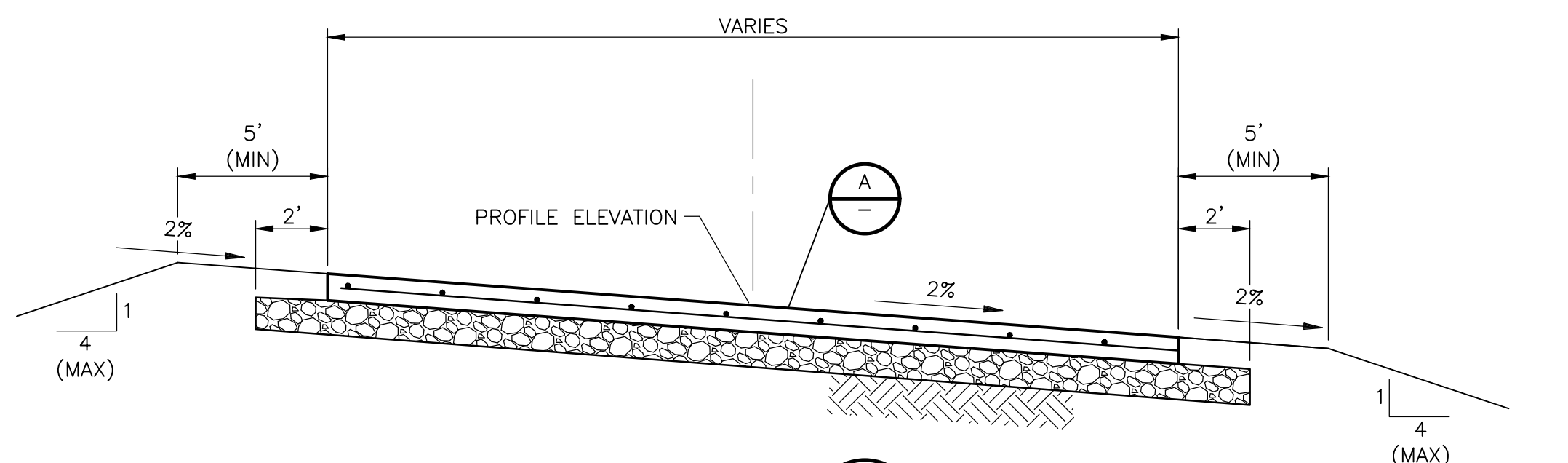
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DRAWN BY: S. SRIHARI  
SHEET CHK'D BY: A. DOODY  
CROSS CHK'D BY: A. WOELKE  
APPROVED BY: A. DOODY  
DATE: NOVEMBER 2023

**CDM Smith**  
8310-1 N. Capital of Texas Hwy, Suite 250  
Austin, TX 78731  
Tel: (512) 346-1100  
TBPE Firm Registration No. F-3043

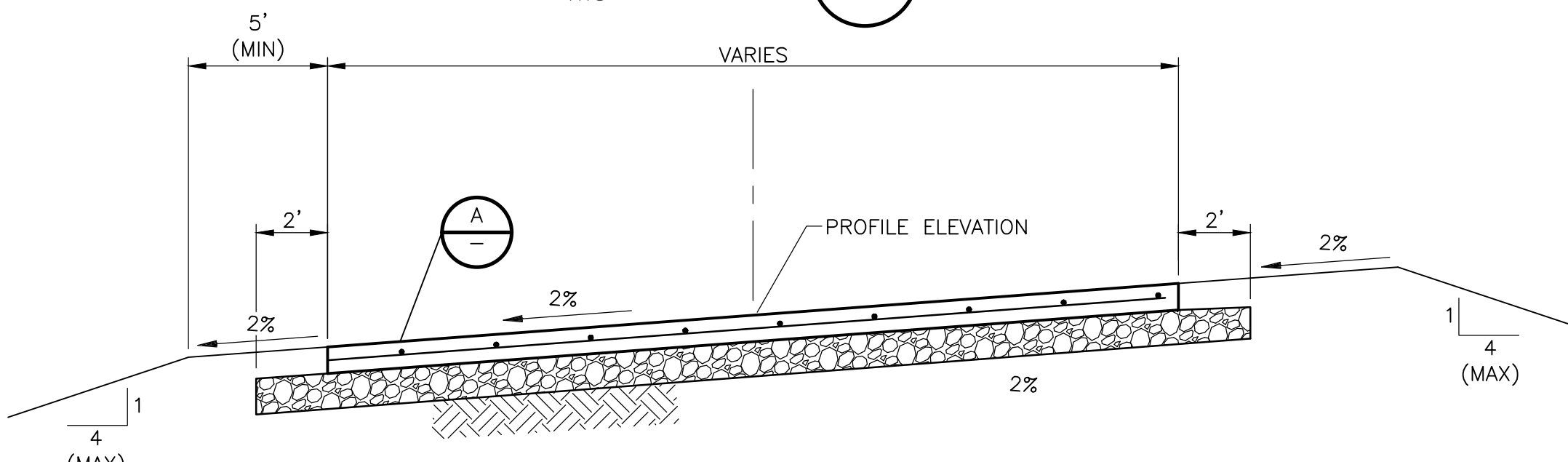
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DOVE SPRINGS WWTP  
REHABILITATION

CIVIL DETAILS III

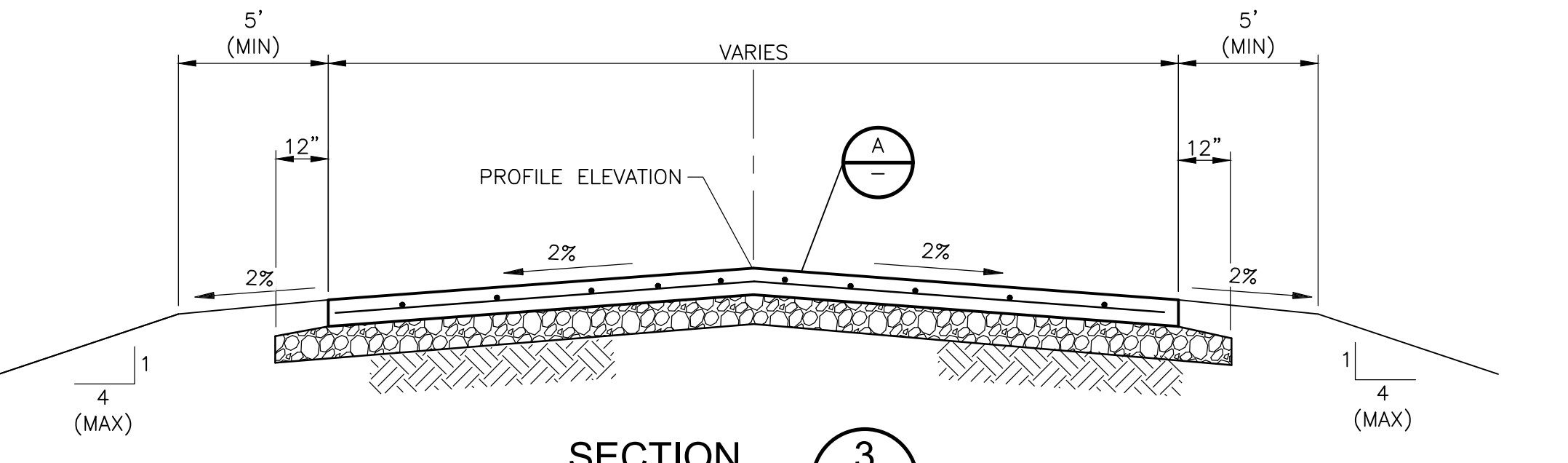
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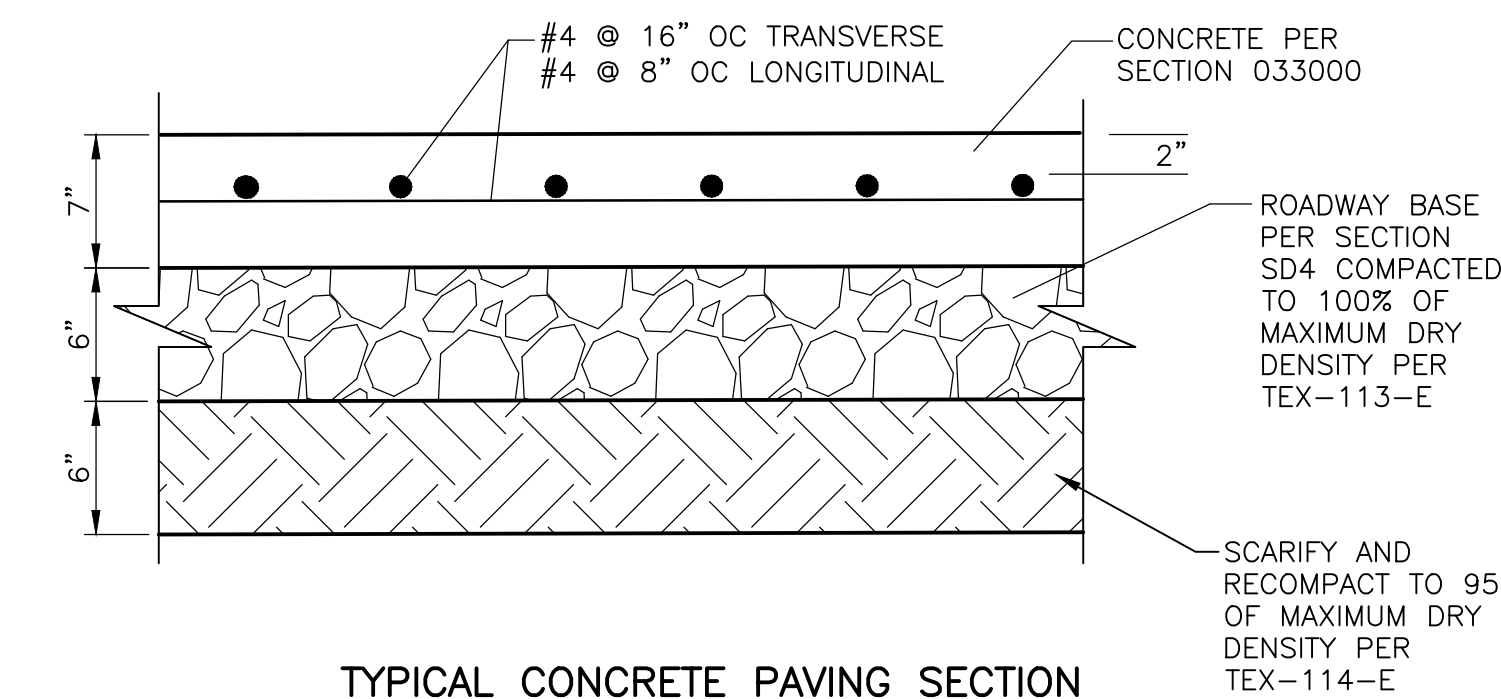
SECTION 1  
NTS



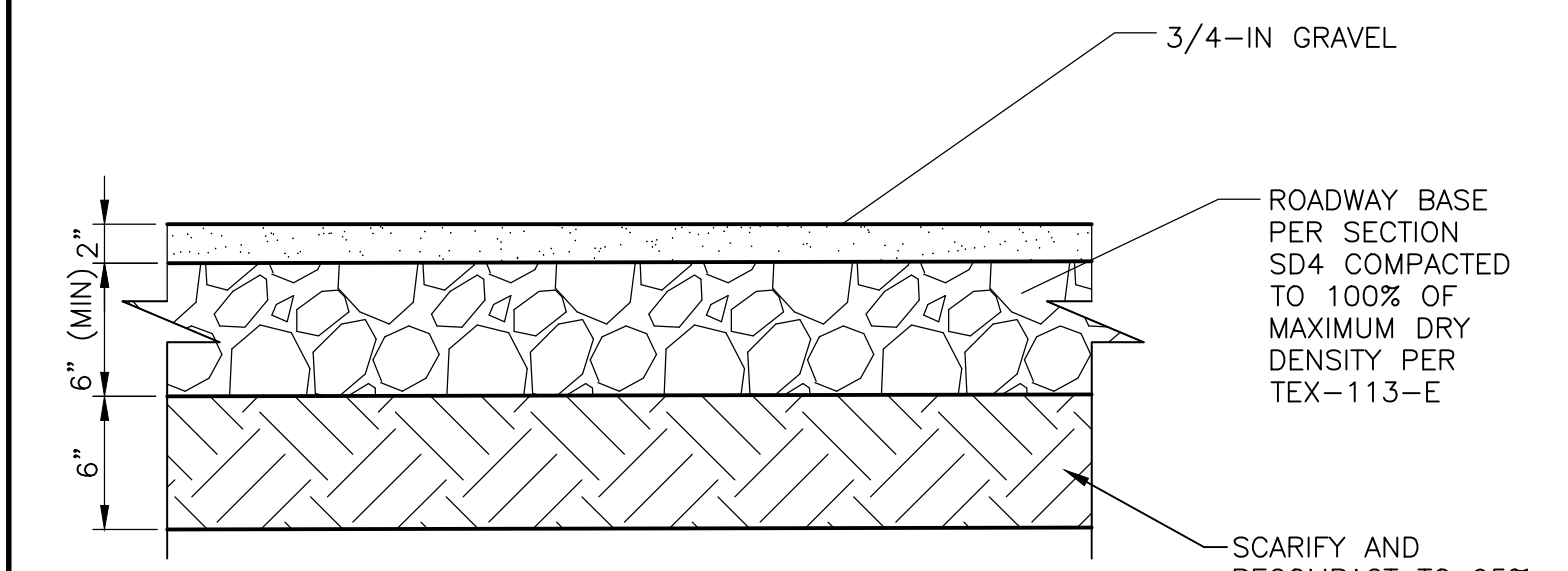
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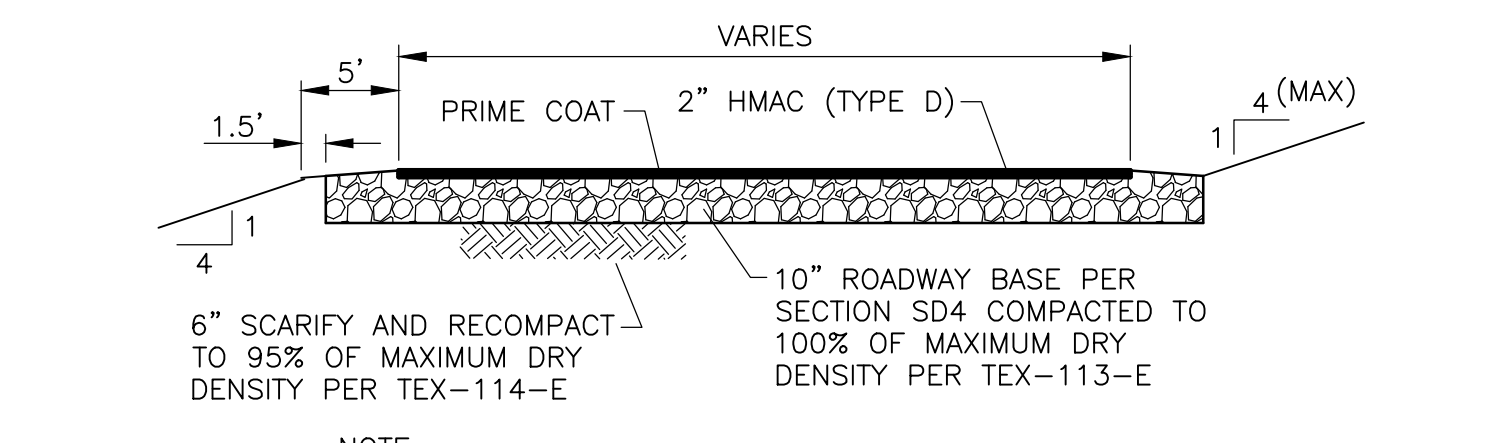
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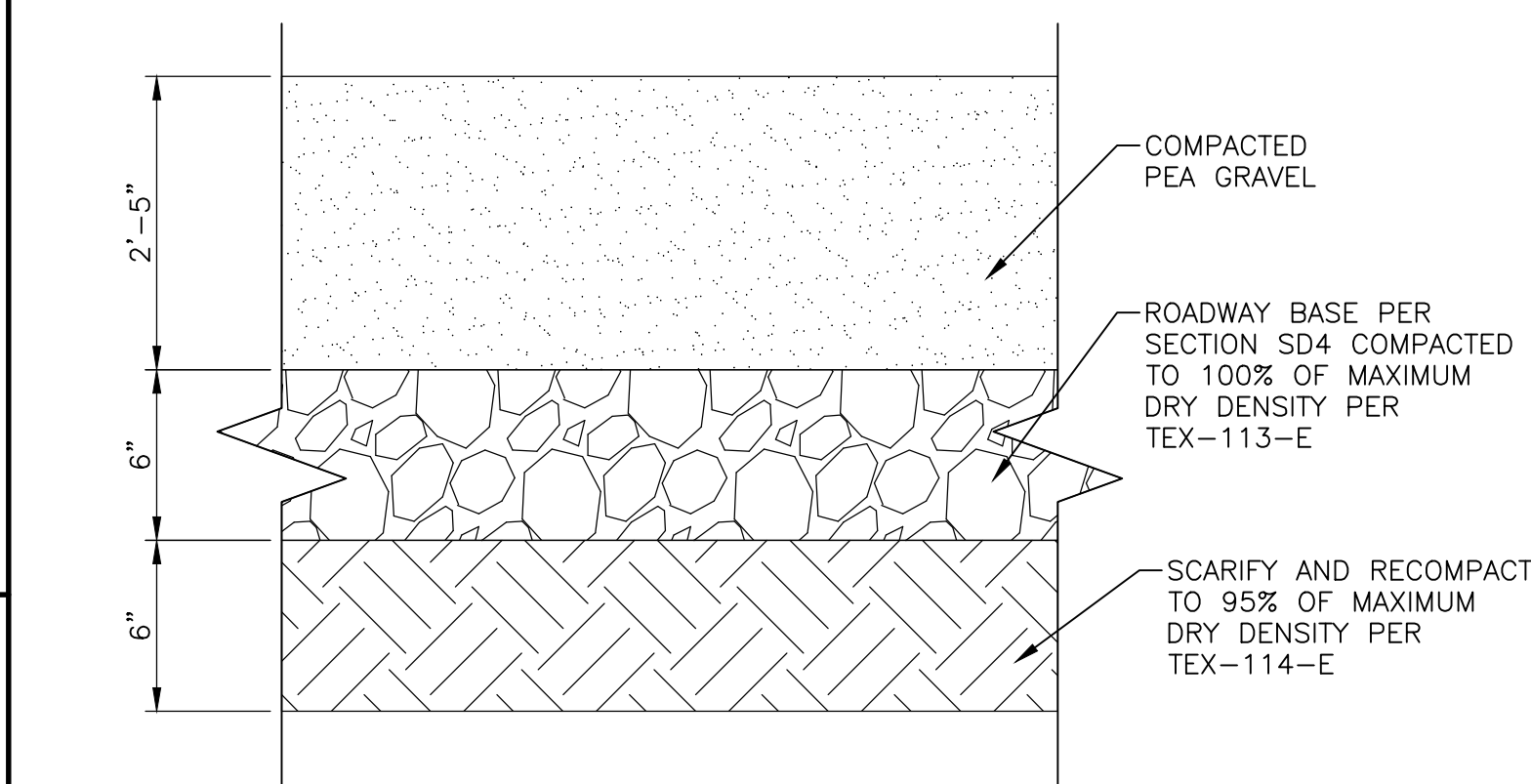
TYPICAL CONCRETE PAVING SECTION  
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NTS



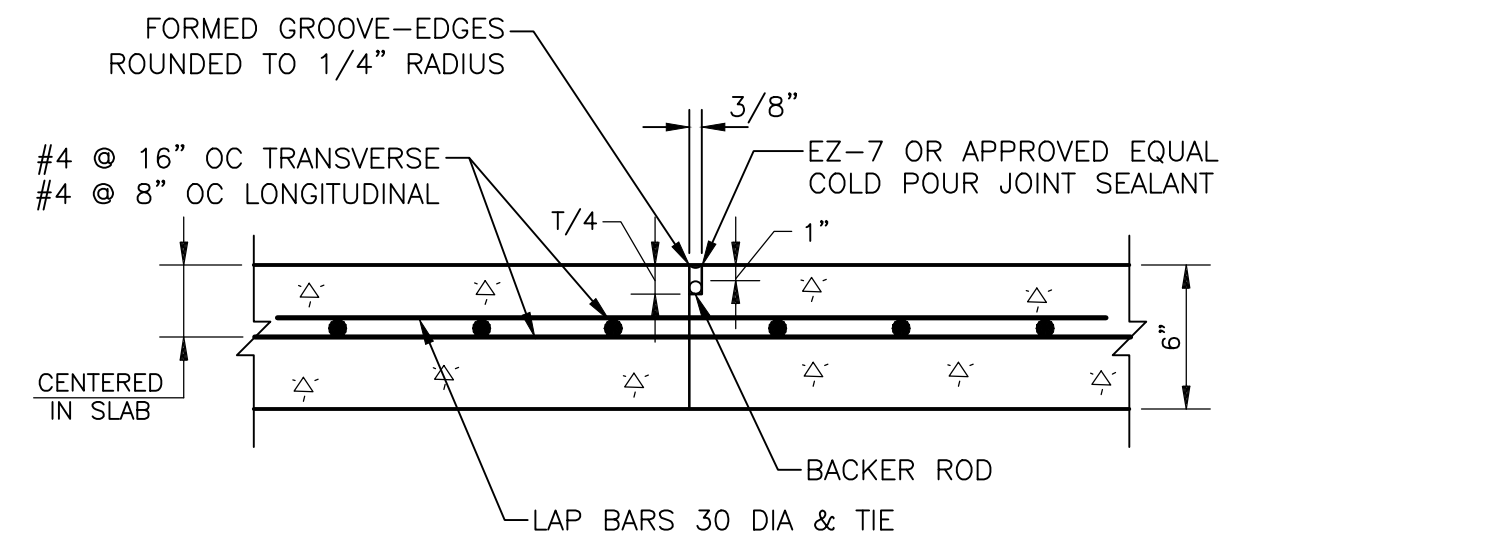
TYPICAL GRAVEL PAD SECTION  
DETAIL G  
NTS



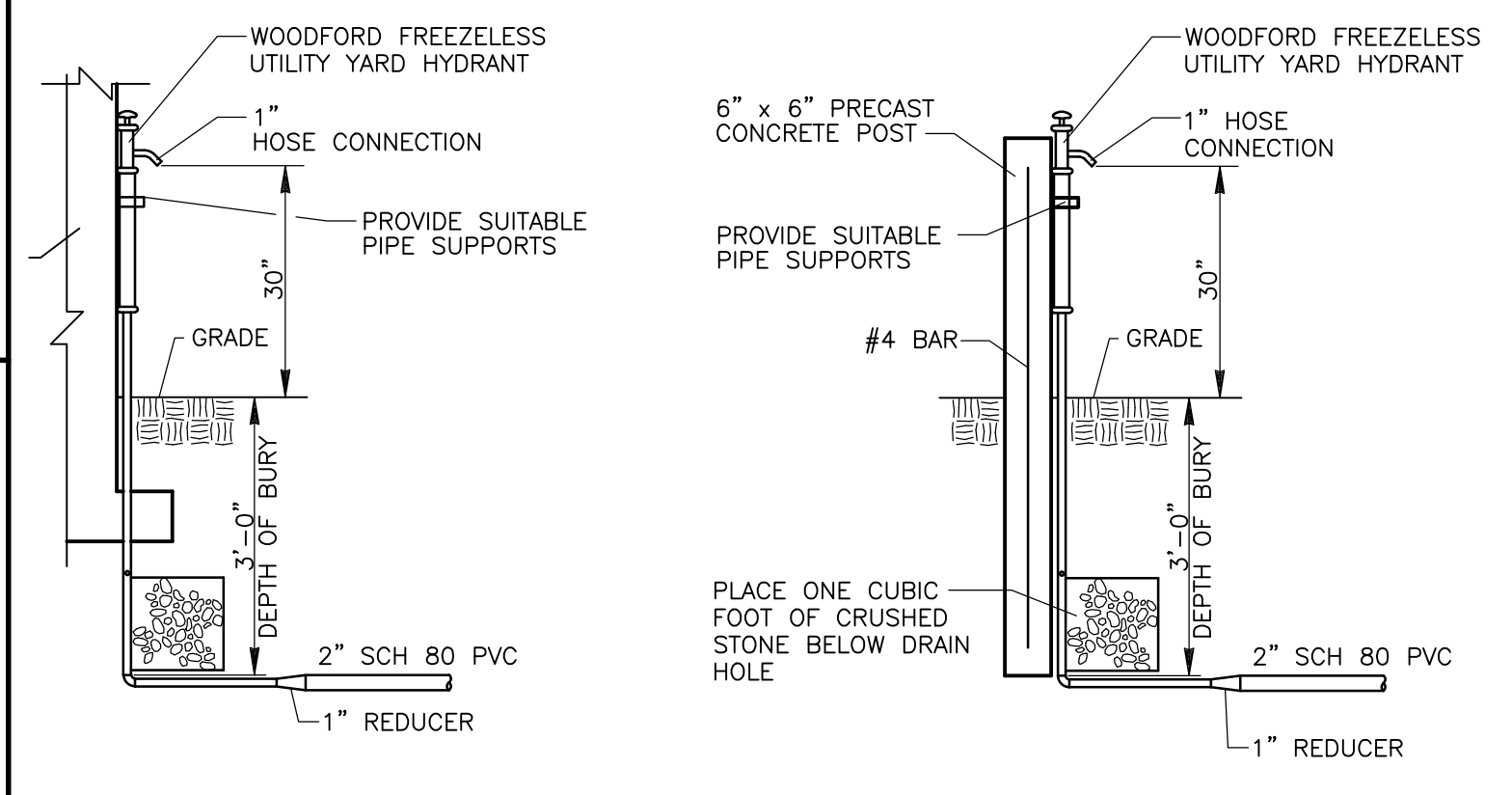
ASPHALT ROAD  
DETAIL D  
NTS



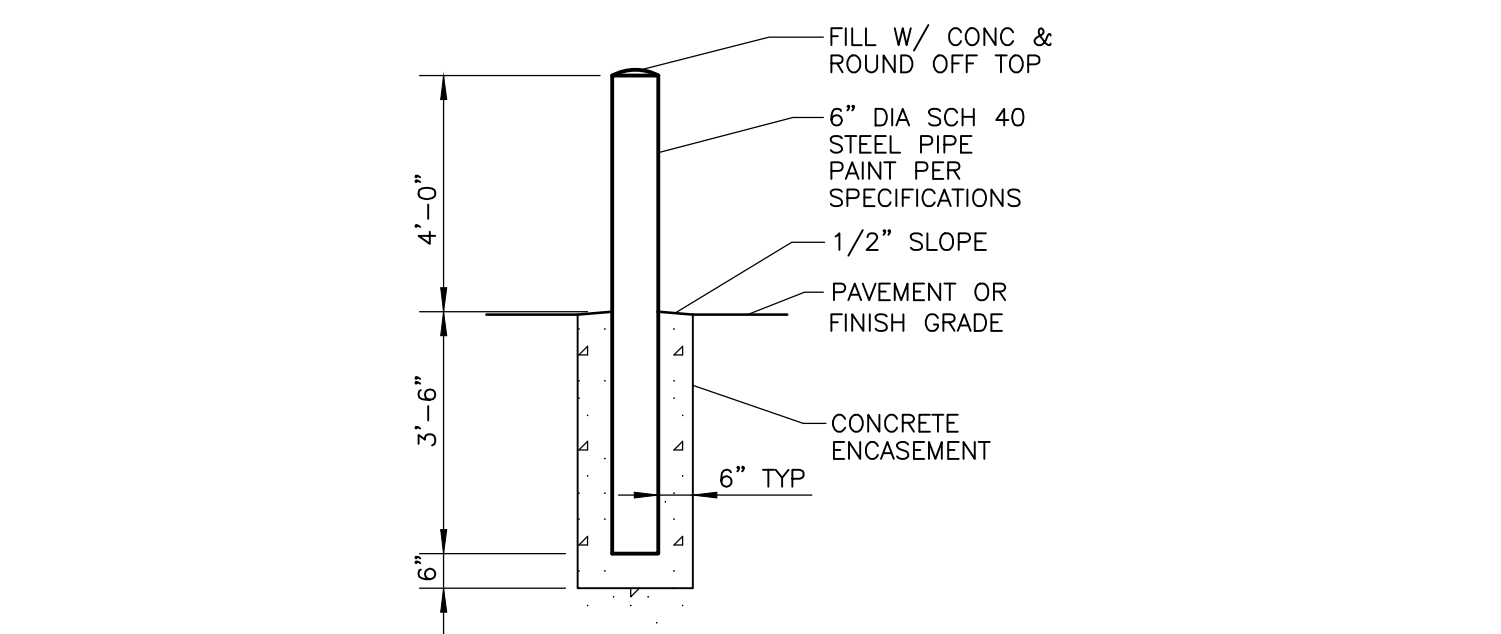
TYPICAL COMPACTED GRAVEL OFFSET GRAVEL PAD SECTION  
DETAIL H  
NTS



CONSTRUCTION JOINT  
DETAIL E  
NTS

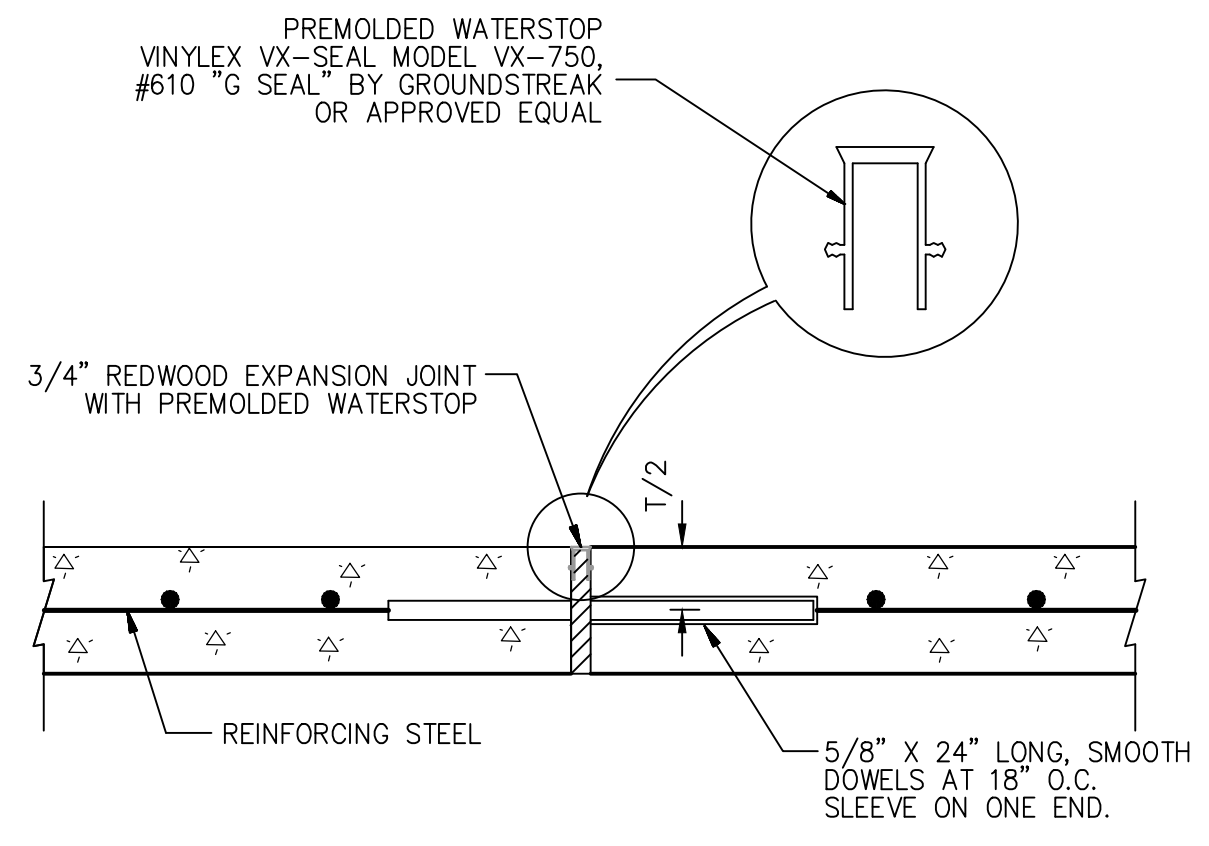


YARD HYDRANT  
DETAIL I  
NTS

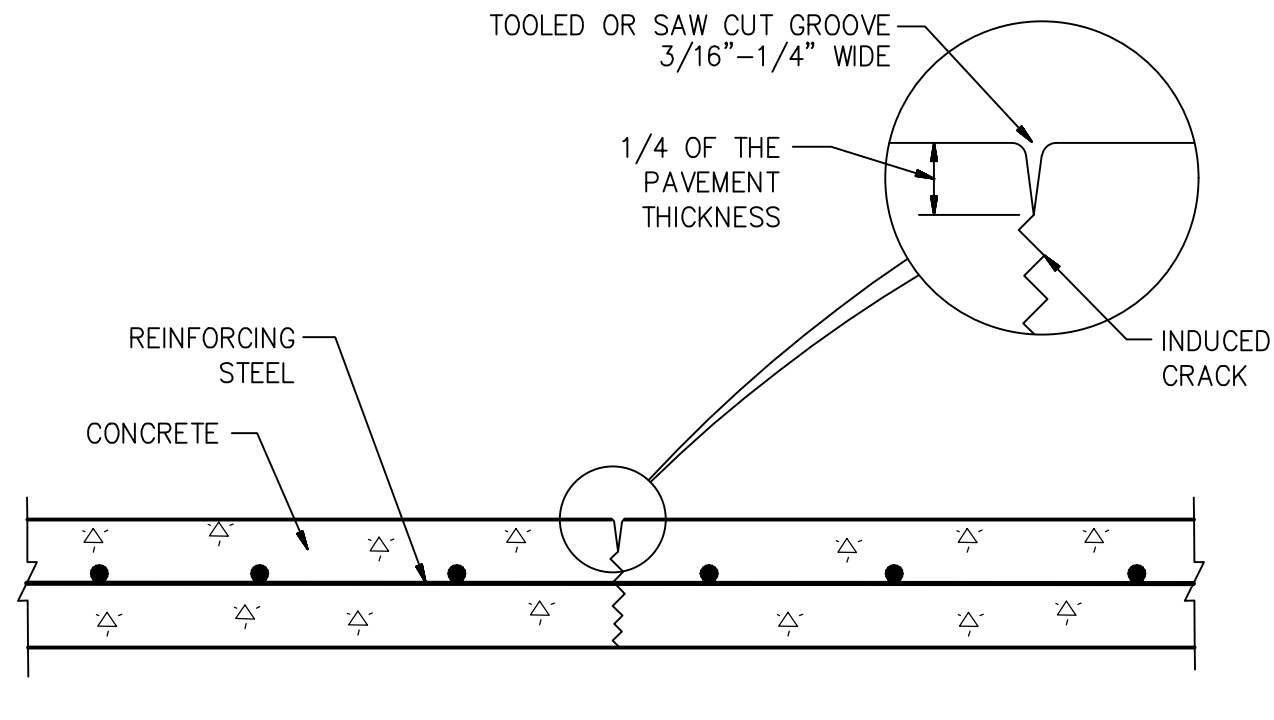


EXTERIOR BOLLARD  
DETAIL F  
NTS

- NOTES:
- TOOLED OR SAW CUT CONTRACTION JOINTS SHALL BE AT REGULAR INTERVALS THROUGHOUT THE PAVEMENT AT EVEN INTERVALS BETWEEN EXPANSION JOINTS AS INDICATED ON THE PLAN. FOR SIDEWALKS LESS THAN 6 FEET WIDE, THE JOINT SPACING SHALL EQUAL THE SIDEWALK WIDTH.
  - JOINTS SHALL BE SPACED SO THAT THE RESULTING PANELS ARE SQUARE. IN NO CASE SHOULD THE LENGTH OF A PANEL EXCEED 1.5 TIMES THE WIDTH.



EXPANSION JOINT  
DETAIL A  
NTS



CONTRACTION JOINT  
DETAIL B  
NTS

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DESIGNED BY:	E. WEIMER
DRAWN BY:	S. SRIHARI
SHEET CHK'D BY:	A. DOODY
CROSS CHK'D BY:	A. WOELKE
APPROVED BY:	A. DOODY
DATE:	NOVEMBER 2023

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JAM	ATD	CONFORMED DRAWINGS

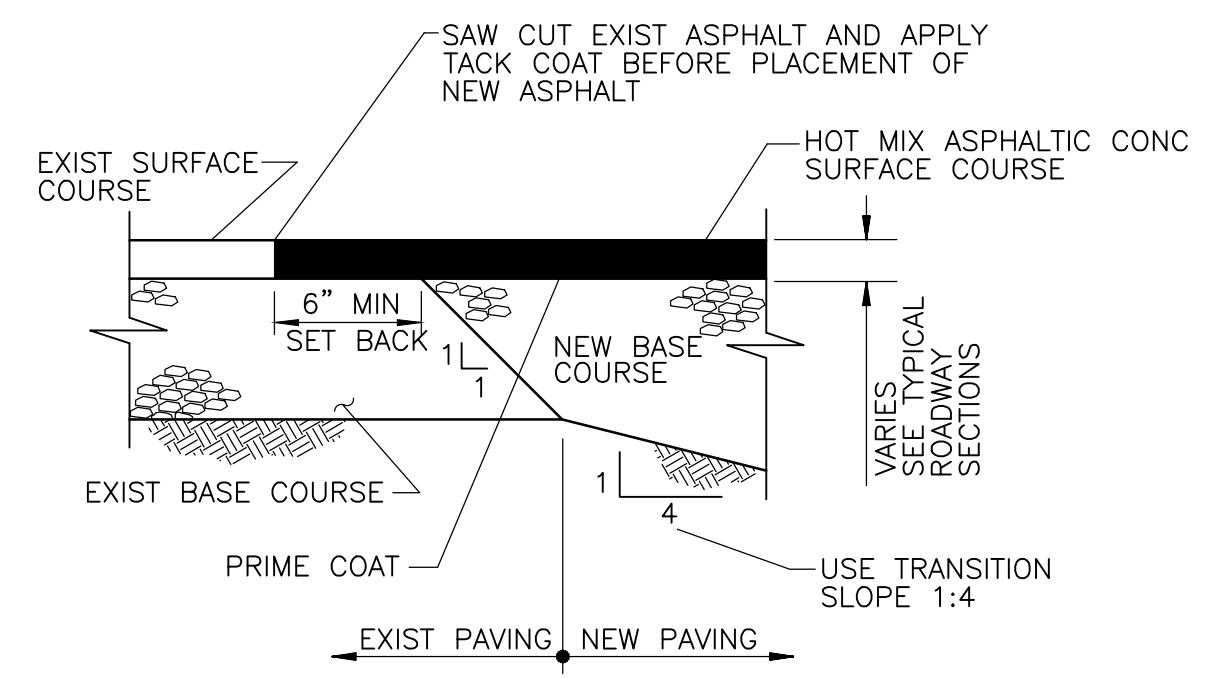
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CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

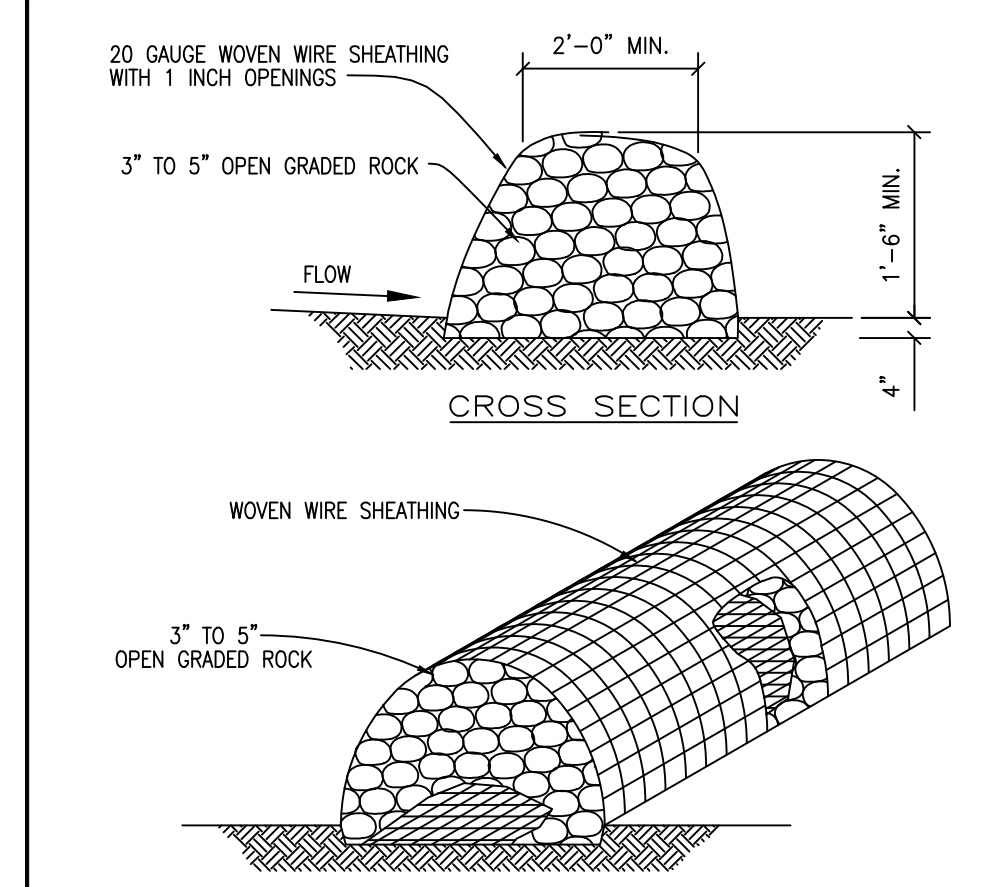
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PAVEMENT TRANSITION BETWEEN NEW AND EXISTING ASPHALT PAVEMENTS  
**DETAIL A**  
 NTS



**INSTALLATION:**

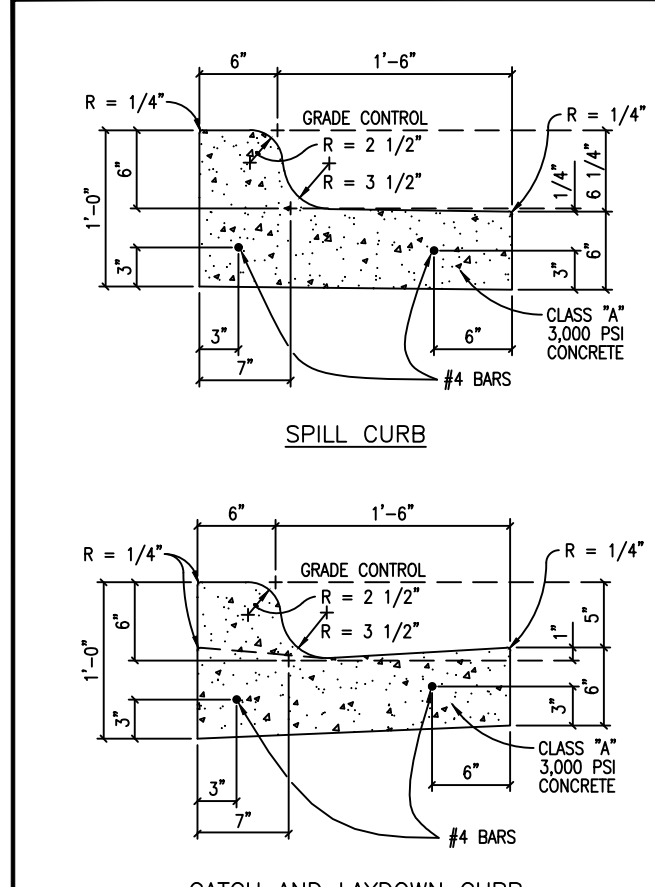
- LAYOUT THE ROCK BERM FOLLOWING AS CLOSELY AS POSSIBLE TO THE CONTOUR.
- CLEAR THE GROUND OF DEBRIS, ROCKS OR PLANTS THAT WILL INTERFERE WITH INSTALLATION.
- PLACE WOVEN WIRE FABRIC ON THE GROUND ALONG THE PROPOSED INSTALLATION WITH ENOUGH OVERLAP TO COMPLETELY ENCRUISE THE INWARD SIDE OF THE BERM.
- PLACE THE ROCK ALONG THE CENTER OF THE WIRE TO THE DESIGNATED HEIGHT.
- WEAR THE STRUCTURE WITH THE PREVIOUSLY PLACED WIRE MESH SECURE ENOUGH SO THAT WHEN WALKED ACROSS THE STRUCTURE REMAINS ITS SHAPE.
- SECURE WITH TIE WIRE.
- THE ENDS OF THE BERM SHOULD BE TIED INTO EXISTING UPSLOPE GRADE AND THE BERM SHOULD BE BURIED IN A TRENCH APPROX. 4 INCHES DEEP TO PREVENT FAILURE OF THE CONTROL.
- THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.

**INSPECTION AND MAINTENANCE GUIDELINES:**

- INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL EVENT BY THE RESPONSIBLE PARTY. FOR INSTALLATIONS IN STREAMBEDS, ADDITIONAL DAILY INSPECTIONS SHOULD BE MADE.
- REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES AND DISPOSE OF THE ACCUMULATED SILT IN AN APPROVED MANNER.
- REPAIR ANY LOOSE WIRE SHEATHING.
- THE BERM SHOULD BE RESHAPED AS NEEDED DURING INSPECTION.
- THE BERM SHOULD BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

CITY OF GEORGETOWN  
 CONSTRUCTION STANDARDS AND DETAILS  
 ROCK BERM DETAIL  
 EC03  
 ADOPTED 6/21/2006

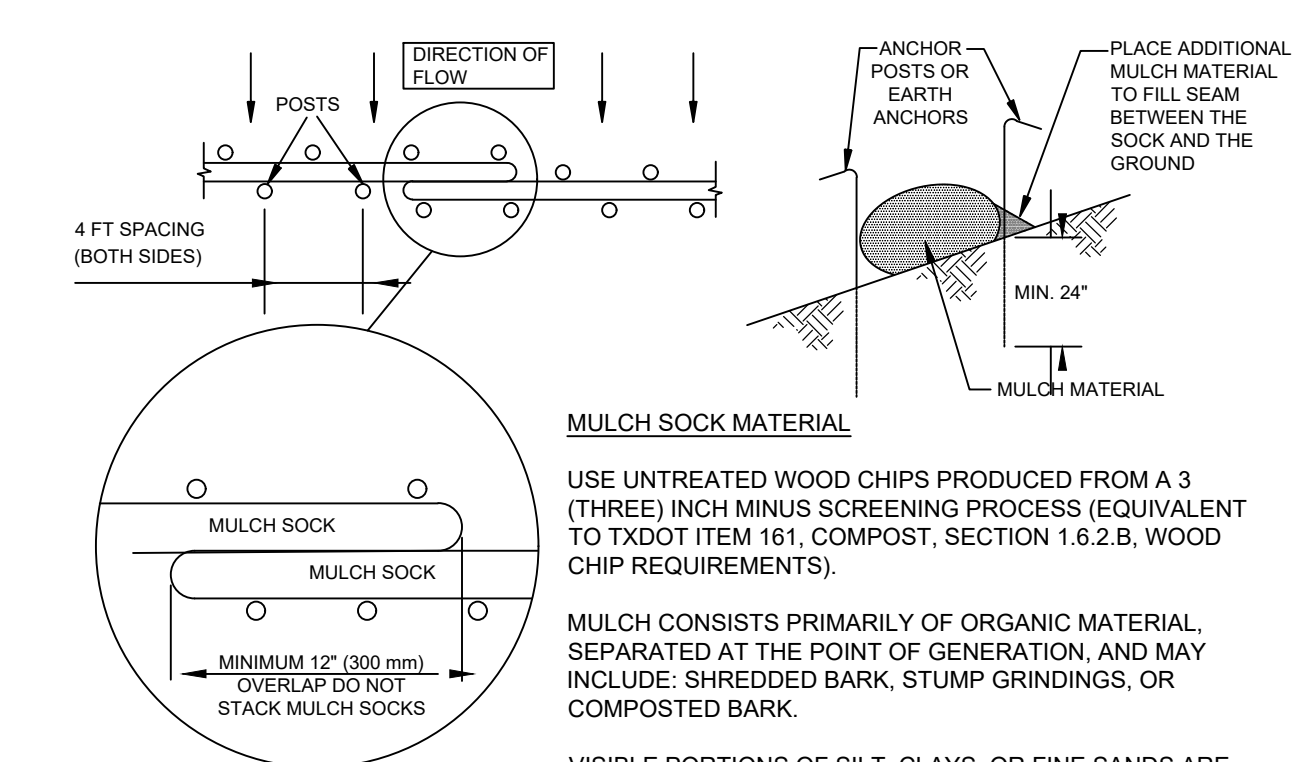


**NOTES:**

1. ALL WORK AND MATERIAL SHALL CONFORM TO ASTM A615, A615M, C309, AND D1752. BROOM FINISH EXPOSED SURFACE.
2. CONTRACTION JOINT SPACING 10' MAX.
3. EXPANSION JOINTS AS PER STD. ASTM D-1752.
4. 1/2" EXPANSION JOINT MATERIAL SHALL BE PROVIDED WHERE CURB IS ADJACENT TO SIDEWALK OR RIP-RAP.
5. TRANSITIONS BETWEEN CURBS OR DIFFERING CROSS SECTIONS SHALL OCCUR OVER A 20 FOOT LENGTH AS APPROVED BY THE ENGINEER OR THE CITY OF GEORGETOWN.
6. ALL CONCRETE SHALL BE CLASS A, 3000 PSI.
7. ALL SURFACES THAT ARE CHIPPED OR OTHERWISE DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED.
8. THE FOLLOWING SCHEME OF REINFORCEMENT SHALL BE REQUIRED. THE MANNER OF PLACEMENT AND LOCATION SHALL BE TO THE SATISFACTION OF THE ENGINEER OR THE CITY OF GEORGETOWN.
9. REINFORCING BARS SHALL BE LAPPED A MINIMUM OF 15 INCH.
10. REINFORCING BARS SHALL BE SUPPORTED WITH REBAR CHAIRS OR OTHER APPROVED METHODS.
11. REBAR SUPPORTS ARE NOT REQUIRED ON MACHINE PLACED CURB PROVIDED THAT REBAR IS PROPERLY GUIDED INTO THE CURB SECTION.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

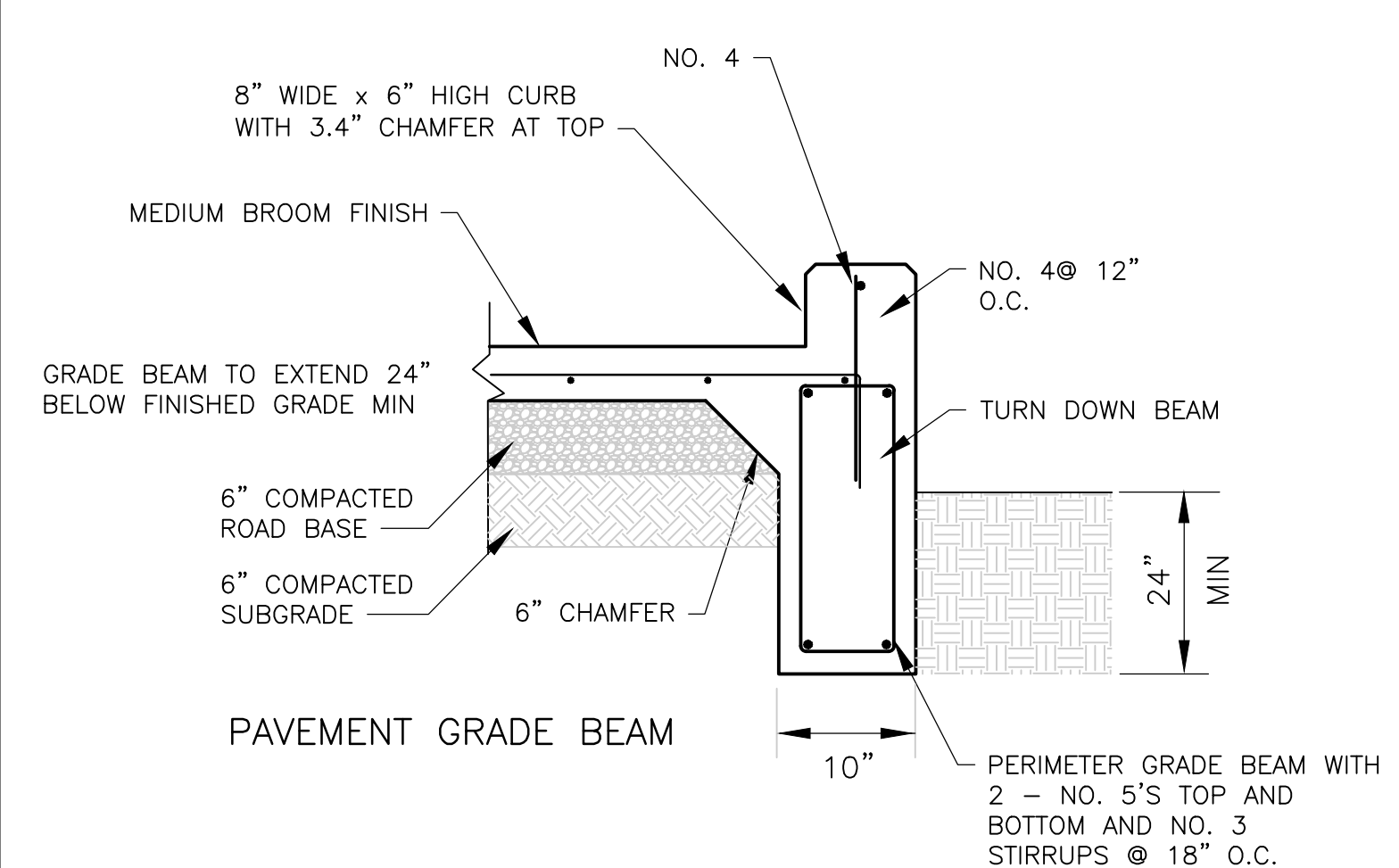
CITY OF GEORGETOWN  
 CONSTRUCTION STANDARDS AND DETAILS  
 CURB AND GUTTER DETAILS  
 SD06  
 ADOPTED 6/21/2006



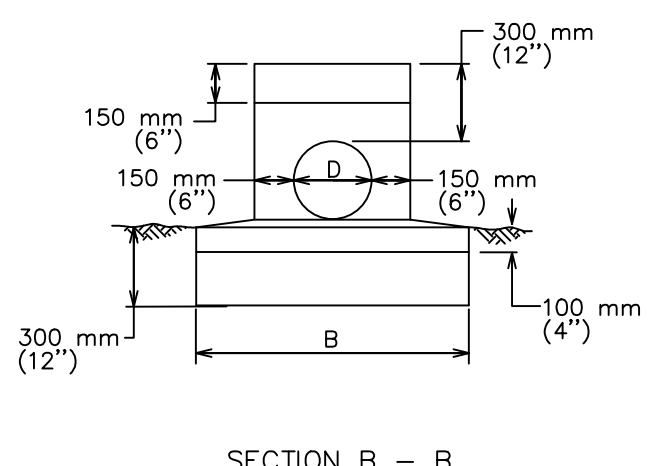
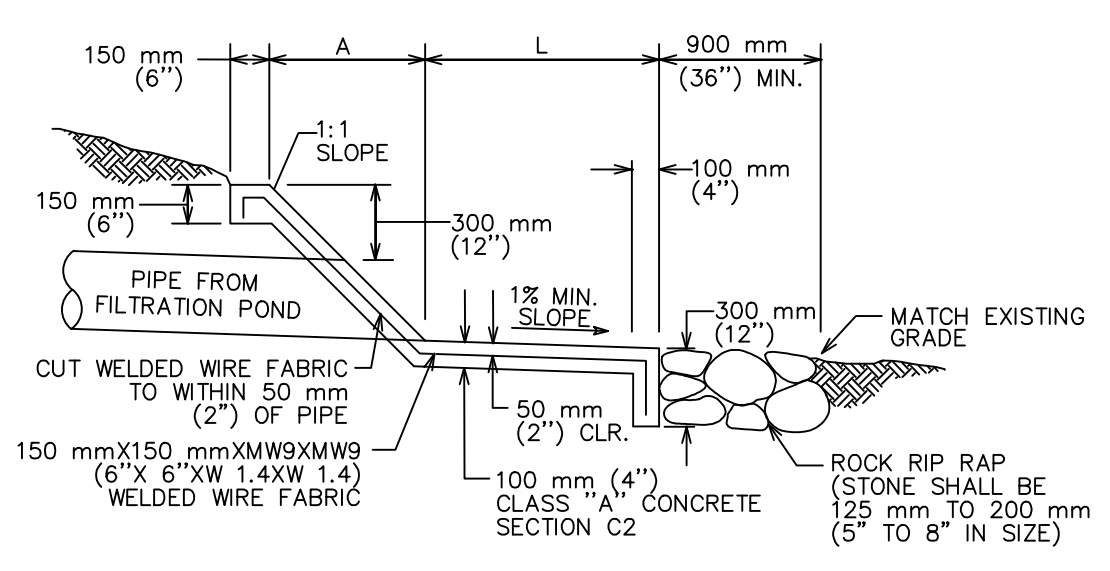
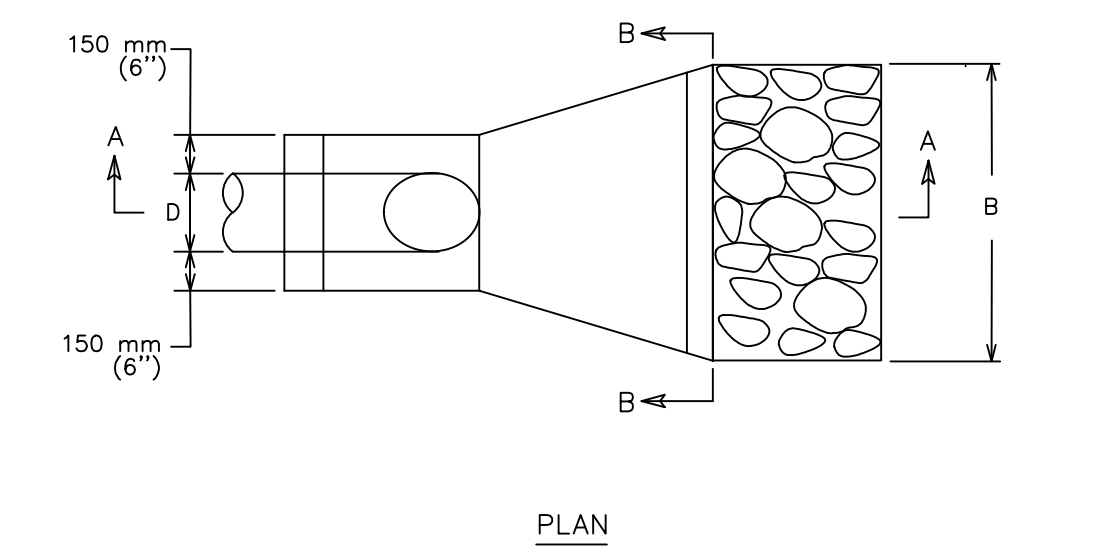
**NOTES:**

1. STEEL OR WOOD POSTS WHICH SUPPORT THE MULCH SOCK SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 600mm (24 inches). IF WOOD POSTS CANNOT ACHIEVE 600mm (24 inches) DEPTH, USE STEEL POSTS. EARTH ANCHORS ARE ALSO ACCEPTABLE.
2. THE TOE OF THE MULCH SOCK SHALL BE PLACED SO THAT THE MULCH SOCK IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. IN ORDER TO PREVENT WATER FROM FLOWING BETWEEN THE JOINTS OF ADJACENT ENDS OF MULCH SOCKS, LAP THE ENDS OF ADJACENT MULCH SOCKS A MINIMUM OF 300mm (12 inches).
3. MULCH MATERIAL MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH; IT IS NOT ACCEPTABLE FOR THE MULCH MATERIAL TO CONTAIN GROUND CONSTRUCTION DEBRIS, BIOSOLIDS, OR MANURE.
4. SOCK MATERIAL WILL BE 100% BIODEGRADABLE, PHOTODEGRADABLE, OR RECYCLABLE SUCH AS BURLAP, TWINE, UV PHOTODEGRADABLE PLASTIC, POLYESTER, OR ANY OTHER ACCEPTABLE MATERIAL.
5. MULCH SOCKS SHOULD BE USED AT THE BASE OF SLOPES NO STEEPER THAN 2:1.
6. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150mm (6 inches). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.
7. THE CROSS SECTIONAL AREA OF THE MULCH SOCK SHALL EQUAL OR EXCEED THE CROSS SECTIONAL AREA OF AN 18-INCH DIAMETER CIRCLE.

MULCH SOCK  
**DETAIL D**  
 NTS



PAVEMENT GRADE BEAM  
**DETAIL E**  
 NTS



	A	B	C	D	E	F
A	450 mm (18")	500 mm (20")	550 mm (22")	600 mm (24")	675 mm (27")	
B	750 mm (30")	800 mm (32")	850 mm (34")	1,05 m (42")	1,27 m (51")	
D	150 mm (6")	200 mm (8")	250 mm (10")	300 mm (12")	375 mm (15")	
L	600 mm (24")	600 mm (24")	750 mm (30")	900 mm (36")	1,2 m (48")	

HEADWALL FOR FILTRATION PONDS W/OUTFALL  
**DETAIL F**  
 NTS

ELLYN J. WEIMER  
 142405  
 PROFESSIONAL ENGINEER  
 11/08/2023

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JAM	ATD	CONFORMED DRAWINGS

DESIGNED BY: E. WEIMER  
 DRAWN BY: S. SRIHARI  
 SHEET CHK'D BY: A. DOODY  
 CROSS CHK'D BY: A. WOELKE  
 APPROVED BY: A. DOODY  
 DATE: NOVEMBER 2023

CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

PROJECT NO. 2048-264953  
 FILE NAME: CZ10CLDT.DWG  
 SHEET NO. CZ-5

ABBREVIATIONS

Table of abbreviations including symbols like &, <, @, AB, ACUM, AFF, AFG, AL, ALUM, AMP, ANOD, ASSY, BBT, BD, BEV, BLDG, BLK, BLKG, BRG, BRK, BRS, BRZ, BTM, C TO C, CAB, CARP, CEM, CF, CLFB, CH, CHAMF, CHAN, CIP, CJ, CL OR C, CLG, CLKG, CMU, COL, COMP, CONC, CONT, CRS, CT, DET, DF, DIA, DIAG, DIM, DISP, DN, DP, DR, ELEC, EQ, EQPT, EWC, EXP, EJ, EXIST, (E), FD, FE, FF, FGL, FIN, FLG, FL, FLR, FR, FRP, FO, FV, FXD, GA, GALV, GL.

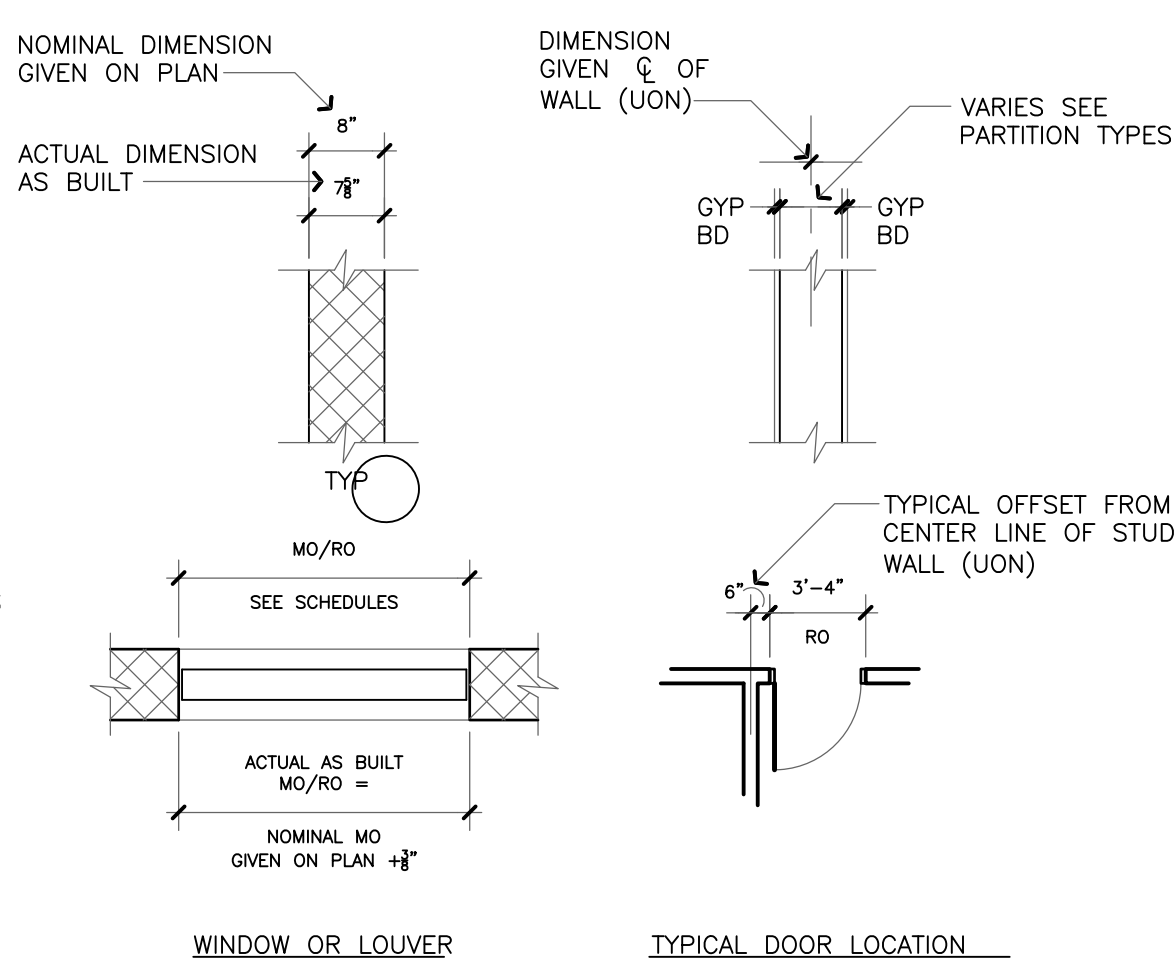
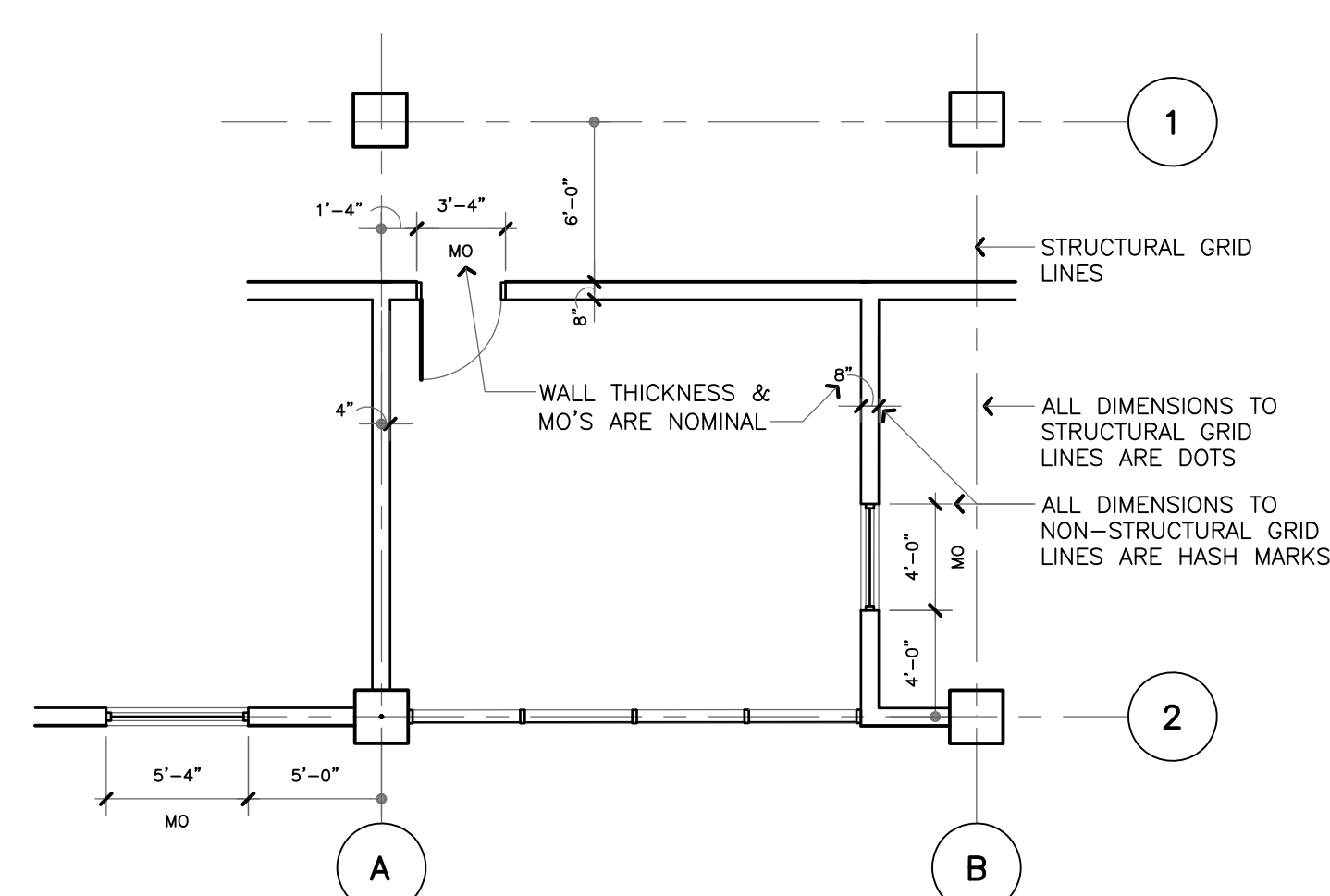
LINE TYPES

Table of line types: CONTINUOUS - NEW CONSTRUCTION, CONTINUOUS - EXISTING STRUCTURE, DASHED ON CONSTRUCTION PLANS/SHEETS - HIDDEN ELEMENTS ABOVE, BELOW, OR BEYOND.

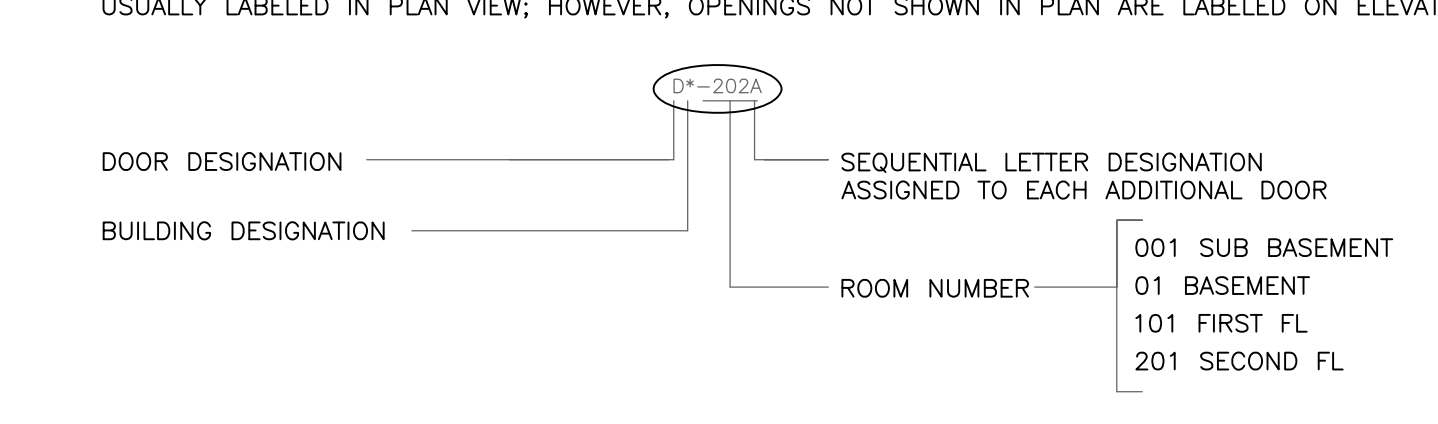
MATERIAL SYMBOLS

Table of material symbols with patterns: EARTH, SOIL; GRAVEL; BRICK; CONCRETE BLOCK; PRECAST CONCRETE; CONC CAST IN PLACE; WOOD-BLOCKING; WOOD-FINISH; PLYWOOD; RIGID INSULATION; BLANKET INSULATION; STEEL; ALUMINUM; GROUT; CAULK; GLASS; SHEET METAL, STEEL, GLASS, WATERPROOFING.

DIMENSIONING SYSTEM



OPENINGS



ACCESSORIES & EQUIPMENT

Table of accessories and equipment symbols: GB42 (Equipment, Laboratory Casework, or Accessory Symbol as Noted), R-13 (Toilet Room Accessories).

SYMBOLS

Table of symbols: E (Column Tag & Center Line), EL 501.25 (Elevation Tag), FE (Fire Extinguisher), Building Section Indicator, Wall Section Indicator, Detail Indicator.

GENERAL NOTES

- 1. SEE "G" SHEETS FOR ADDITIONAL GENERAL NOTES.
2. NOT ALL EQUIPMENT IS SHOWN FOR CLARITY. REFER TO THE APPROPRIATE DISCIPLINE SHEETS FOR SPECIFIC EQUIPMENT LAYOUT AND OTHER REQUIREMENTS.
3. SEE "C" SHEETS FOR SIDEWALK, ROAD PAVING AND FINISH GRADE ELEVATIONS.
4. SEE "S" SHEETS FOR SIZE AND LOCATION OF CONCRETE PADS, TRENCHES, VAULTS, SUMPS, ETC.
5. SEE "S" SHEETS FOR CONCRETE REINFORCEMENT.
6. DO NOT SCALE FROM THE DRAWINGS.
7. NOTIFY ARCHITECT IF CONSTRUCTION DOCUMENTS DIFFER FROM ACTUAL FIELD CONDITIONS PRIOR TO FABRICATION OR NEW CONSTRUCTION.
8. THE EXISTING BUILDING FLOOR PLANS AND DIMENSIONS ARE BASED ON THE RECORD DRAWINGS PROVIDED BY THE OWNER. FIELD VERIFY ALL EXISTING CONDITIONS REQUIRED FOR THE SCOPE OF WORK.
9. IN NO WAY DO THE DIMENSIONS SHOWN ON THE PLANS REPRESENT AN EXACT QUANTITY OF MATERIALS. THE BIDDER IS SOLELY RESPONSIBLE FOR THE QUANTITIES IN THIS BID.
10. THE DRAWINGS REPRESENT GENERAL LOCATIONS OF IMPROVEMENTS. IT SHALL BE THE GENERAL CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL IMPROVEMENTS ON THE SITE PRIOR TO ALTERATION OR TIE-IN. DAMAGE DURING DEMOLITION SHALL BE PROPERLY REPAIRED BY THE CONTRACTOR'S EXPENSE.
11. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES.

ARCHITECTURAL SHEET INDEX

Table of architectural sheet index: A-1 (Architectural Legends, Abbreviations, Symbols and Notes), DS-AD-1 (Treatment Unit 1 and Unit 2 Blowers Floor Plans, Elevations and Sections), DS-AE-1 (Existing Operations Building ADA Landings and Ramps Layout), DS-AE-2 (Existing Operations Building ADA Landings and Ramps Sections), DS-AI-1 (Coordinated Electrical House - Life Safety Plan).

Vertical text on the left margin: XREFS: [CDMS\_2234; REVW\_CHARLOTTE\_THROOP-SEA] Images: [ ] Last saved by: NIHHYAJ Time: 21-10-2022 16:00:08 pw\\cdm-smith-0202-pw-bentley.com\PIW\_PL1\2048\264953\04 Design Services NM\_908\03 Architectural\10 BIM\CADD\A001ALS.N.dwg © 2022 CDM SMITH ALL RIGHTS RESERVED. REUSE OF DOCUMENTS: THESE DOCUMENTS AND DESIGNS PROVIDED BY PROFESSIONAL SERVICE, INCORPORATED HEREIN, ARE THE PROPERTY OF CDM SMITH AND ARE NOT TO BE USED, IN WHOLE OR PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF CDM SMITH.

Table with columns: REV. NO., DATE, DRWN, CHKD, REMARKS. Row 1: A, 01/10/24, ZB, RD, CONFORMED DRAWINGS.

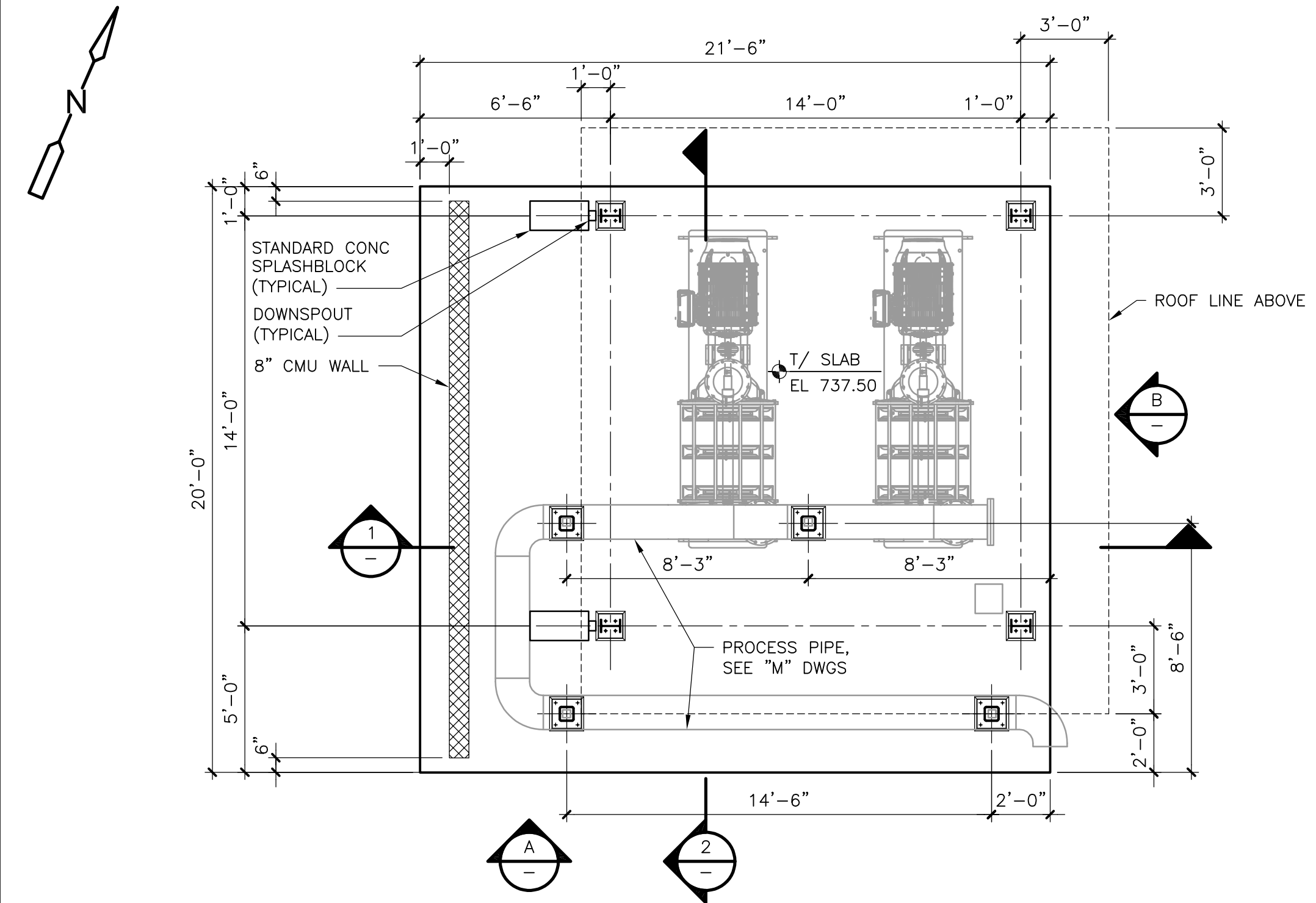
Table with columns: DESIGNED BY, DRAWN BY, SHEET CHK'D BY, CROSS CHK'D BY, APPROVED BY, DATE. Values: DE GUZMAN FM, POOJA W, ANANDARAJ, DE GUZMAN FM, THROOP\_C, NOVEMBER 2023.



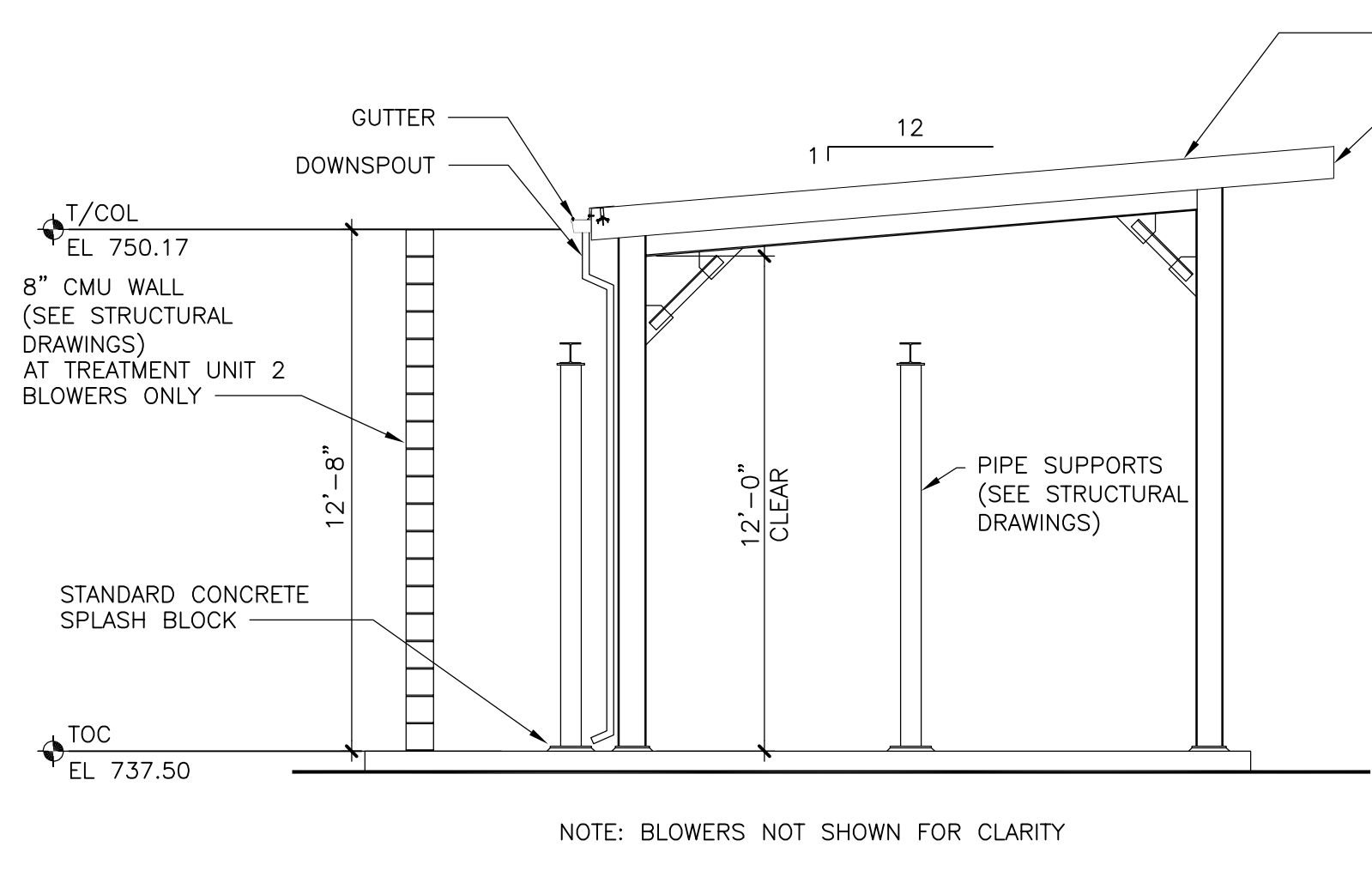
CITY OF GEORGETOWN, TEXAS
DOVE SPRINGS WWTP
REHABILITATION

ARCHITECTURAL LEGENDS, ABBREVIATIONS, SYMBOLS AND NOTES
PROJECT NO. 2048-264953
FILE NAME: A001ALS.N.DWG
SHEET NO. A-1
REGISTERED ARCHITECT CHARLOTTE A. THROOP STATE OF TEXAS 22340 10.04.2023

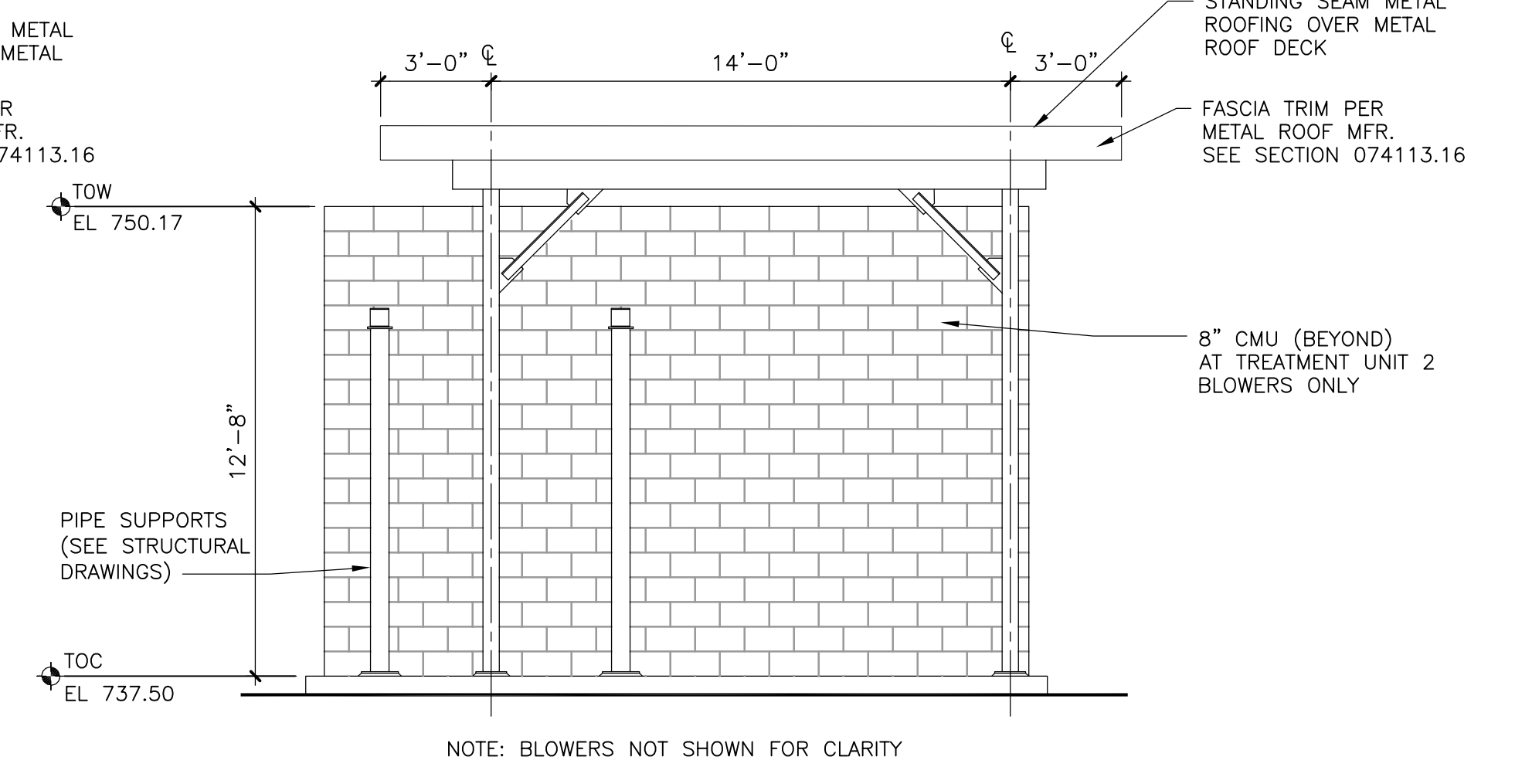
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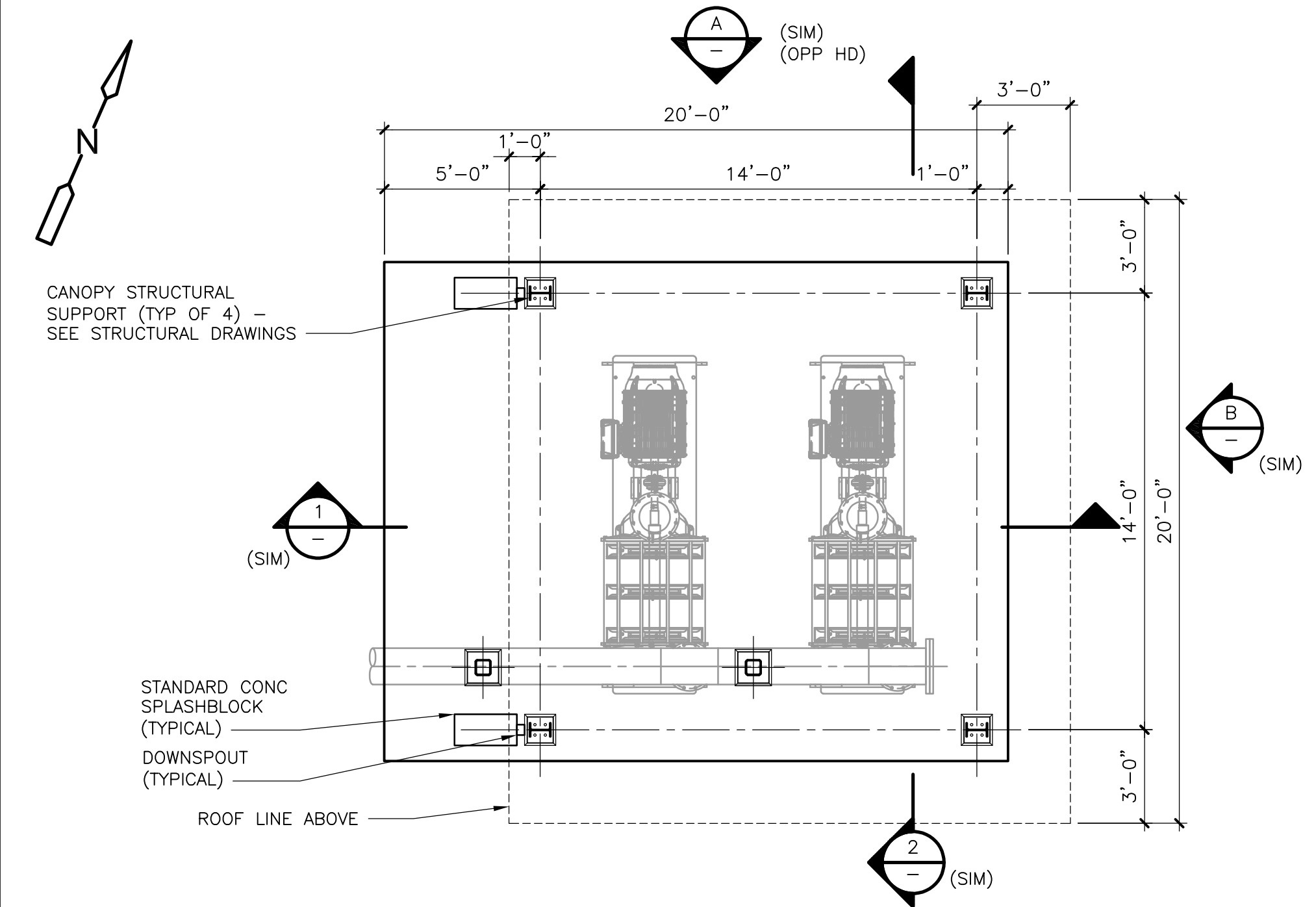
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**PLAN**  
 1/4" = 1'-0"



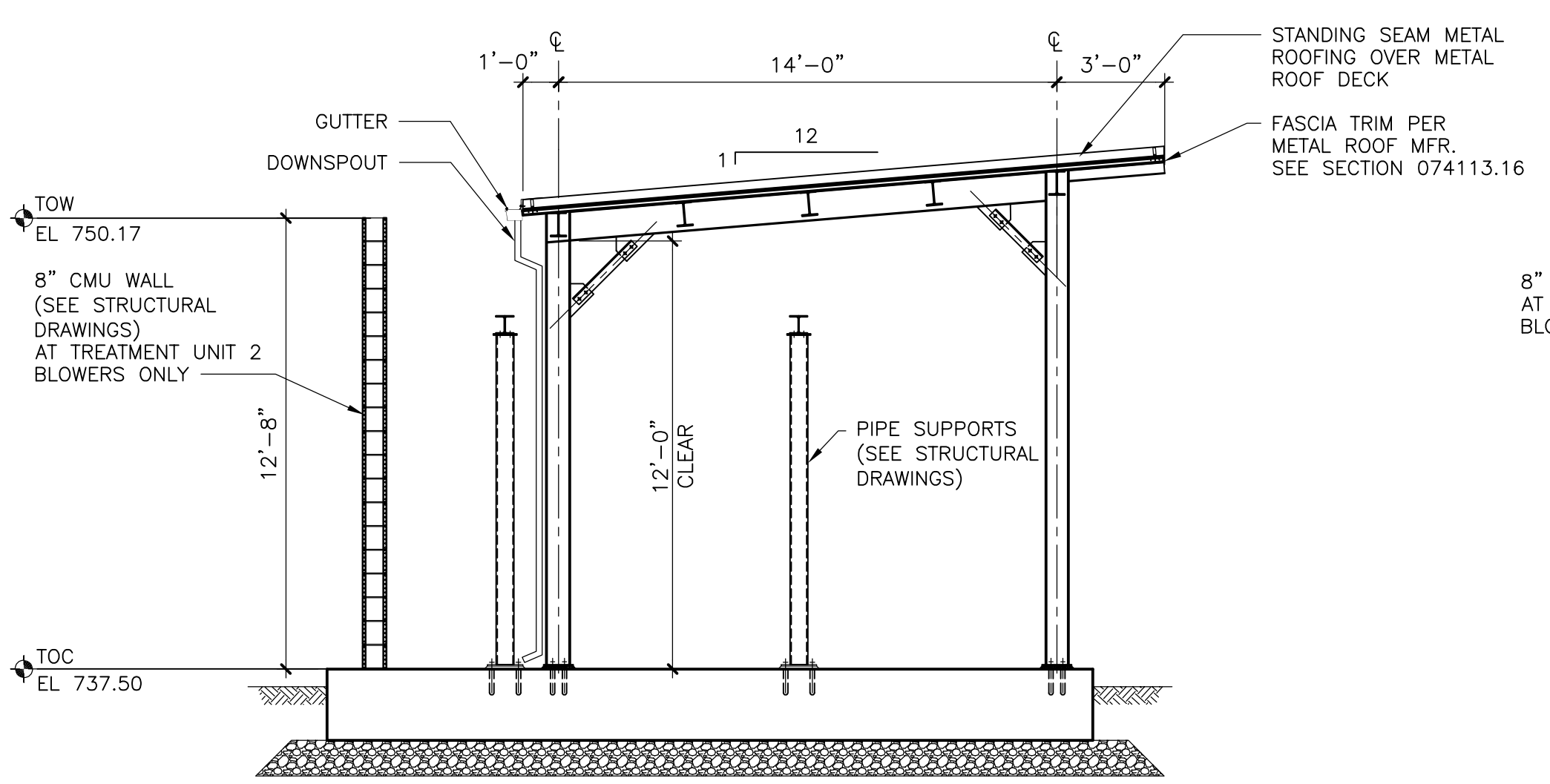
**TREATMENT UNIT 2 BLOWERS**  
**(SIMILAR TO TREATMENT UNIT 1 BLOWERS)**  
**A ELEVATION**  
 1/4" = 1'-0"



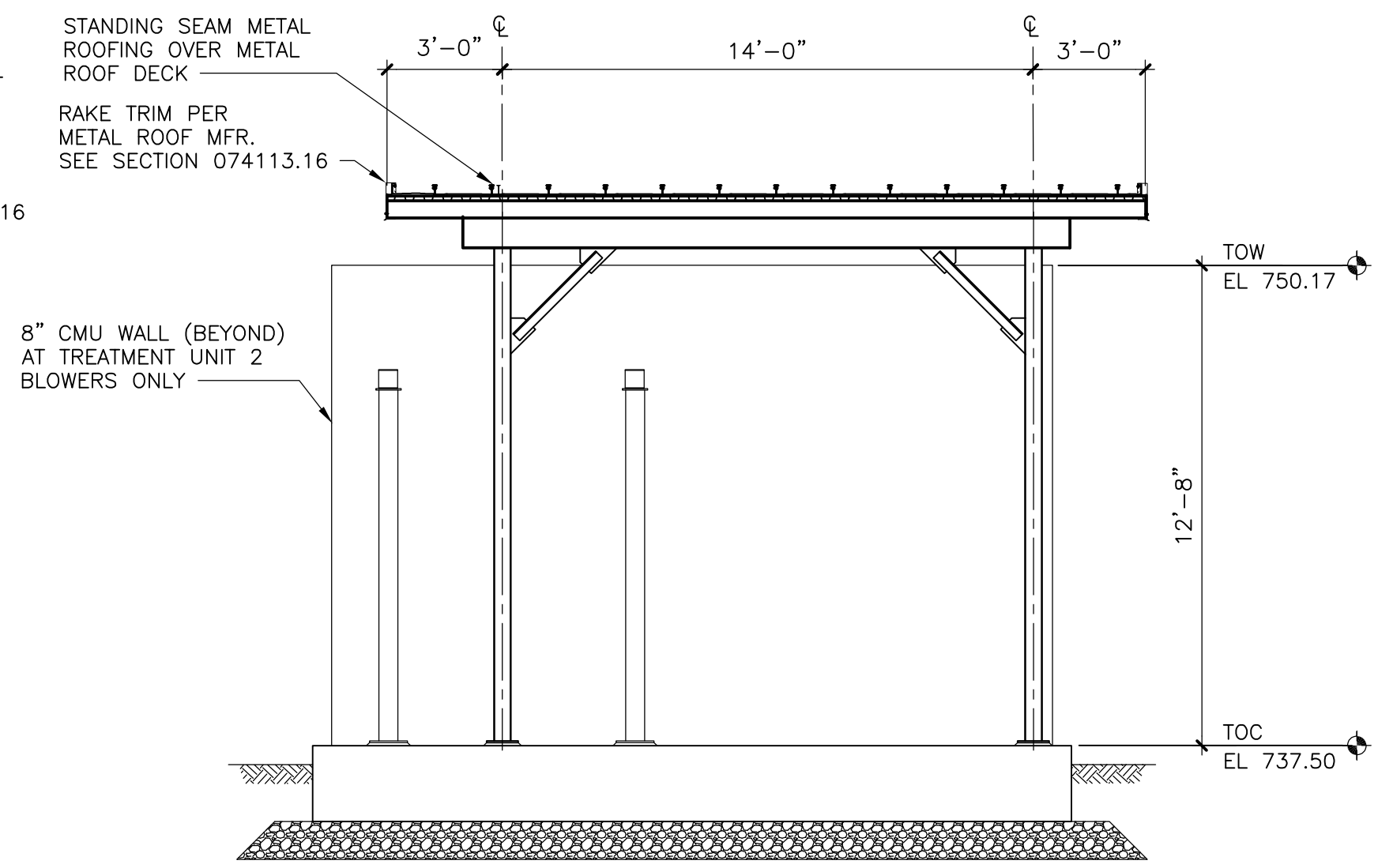
**TREATMENT UNIT 2 BLOWERS**  
**(SIMILAR TO TREATMENT UNIT 1 BLOWERS)**  
**B ELEVATION**  
 1/4" = 1'-0"



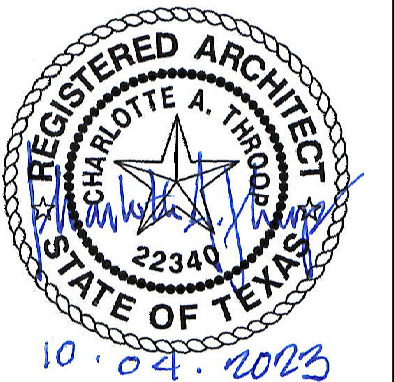
**TREATMENT UNIT 1 BLOWERS**  
**PLAN**  
 1/4" = 1'-0"



**TREATMENT UNIT 2 BLOWERS BUILDING**  
**(SIMILAR TO TREATMENT UNIT 1 BLOWERS)**  
**SECTION 1**  
 1/4" = 1'-0"



**TREATMENT UNIT 2 BLOWERS BUILDING**  
**(SIMILAR TO TREATMENT UNIT 1 BLOWERS)**  
**SECTION 2**  
 1/4" = 1'-0"



DESIGNED BY:	DEGUZMAN R
DRAWN BY:	BRITO Z
SHEET CHK'D BY:	ANANDARAJ
CROSS CHK'D BY:	DEGUZMAN R
APPROVED BY:	THROOP C
DATE:	NOVEMBER 2023

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	ZB	RD	CONFORMED DRAWINGS

**CDM Smith**  
 8310-1 N. Capital of Texas Hwy, Suite 250  
 Austin, TX 78731  
 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS  
**DOVE SPRINGS WWTP**  
**REHABILITATION**

**ARCHITECTURAL**  
**TREATMENT UNIT 1 AND UNIT 2 BLOWERS**  
**FLOOR PLANS, ELEVATIONS,**  
**AND SECTIONS**

PROJECT NO.	2048-264953
FILE NAME:	AWP004DS
SHEET NO.	DS-AD-1



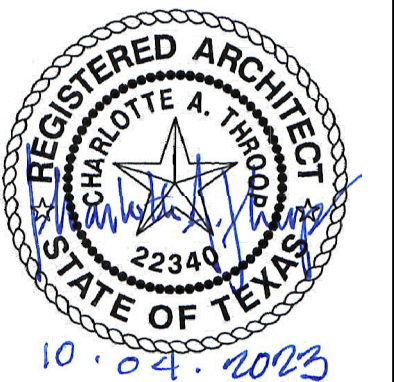
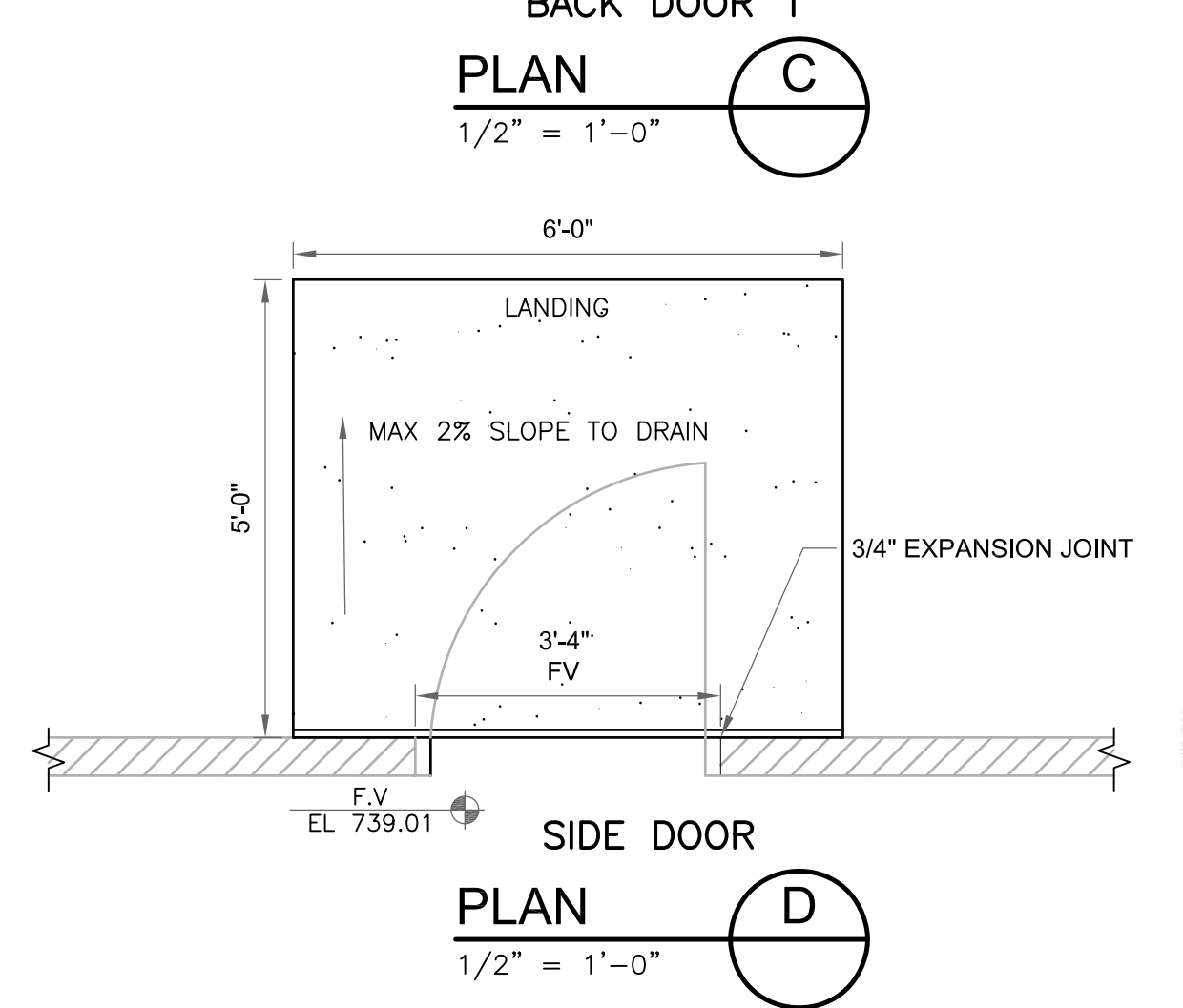
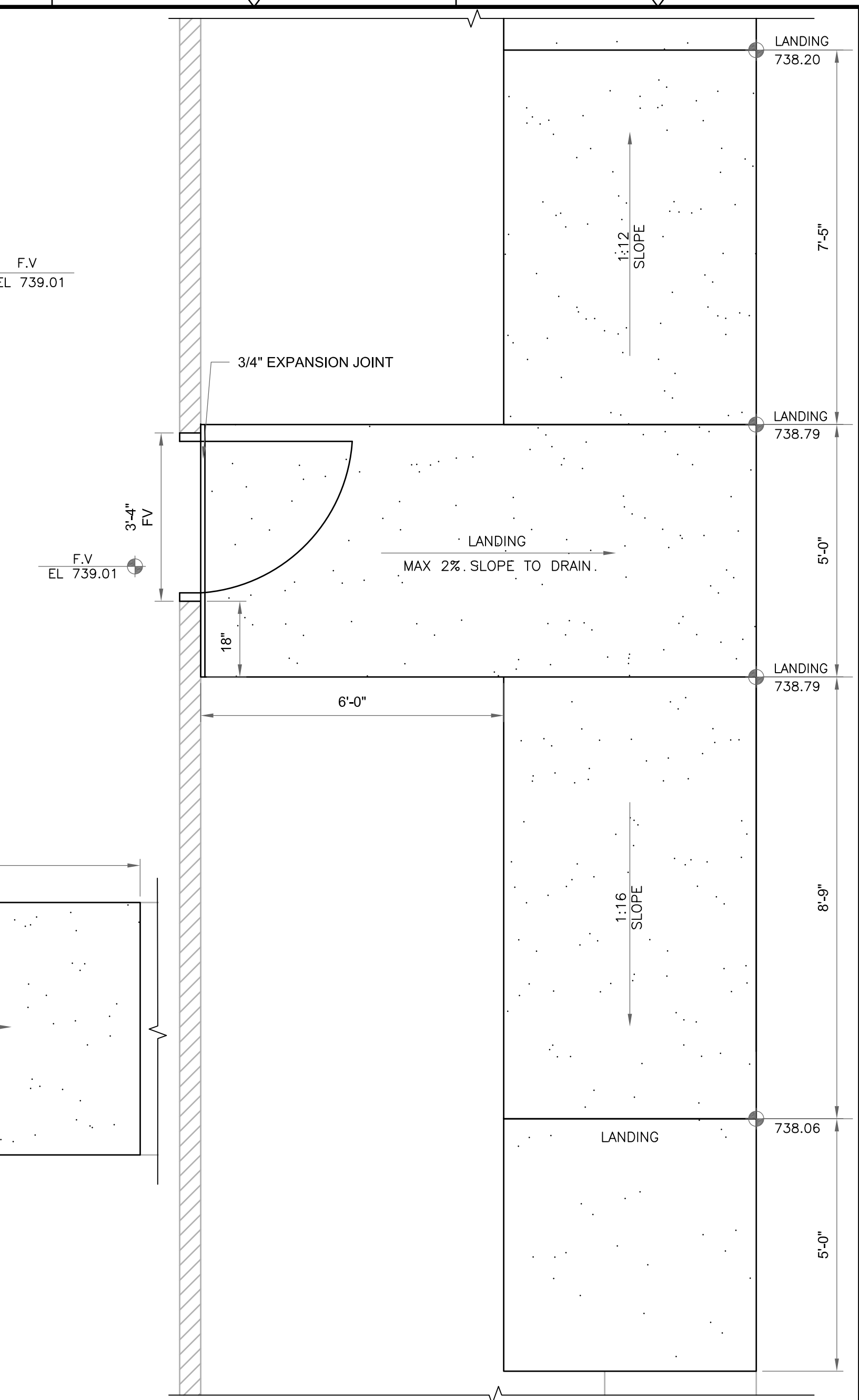
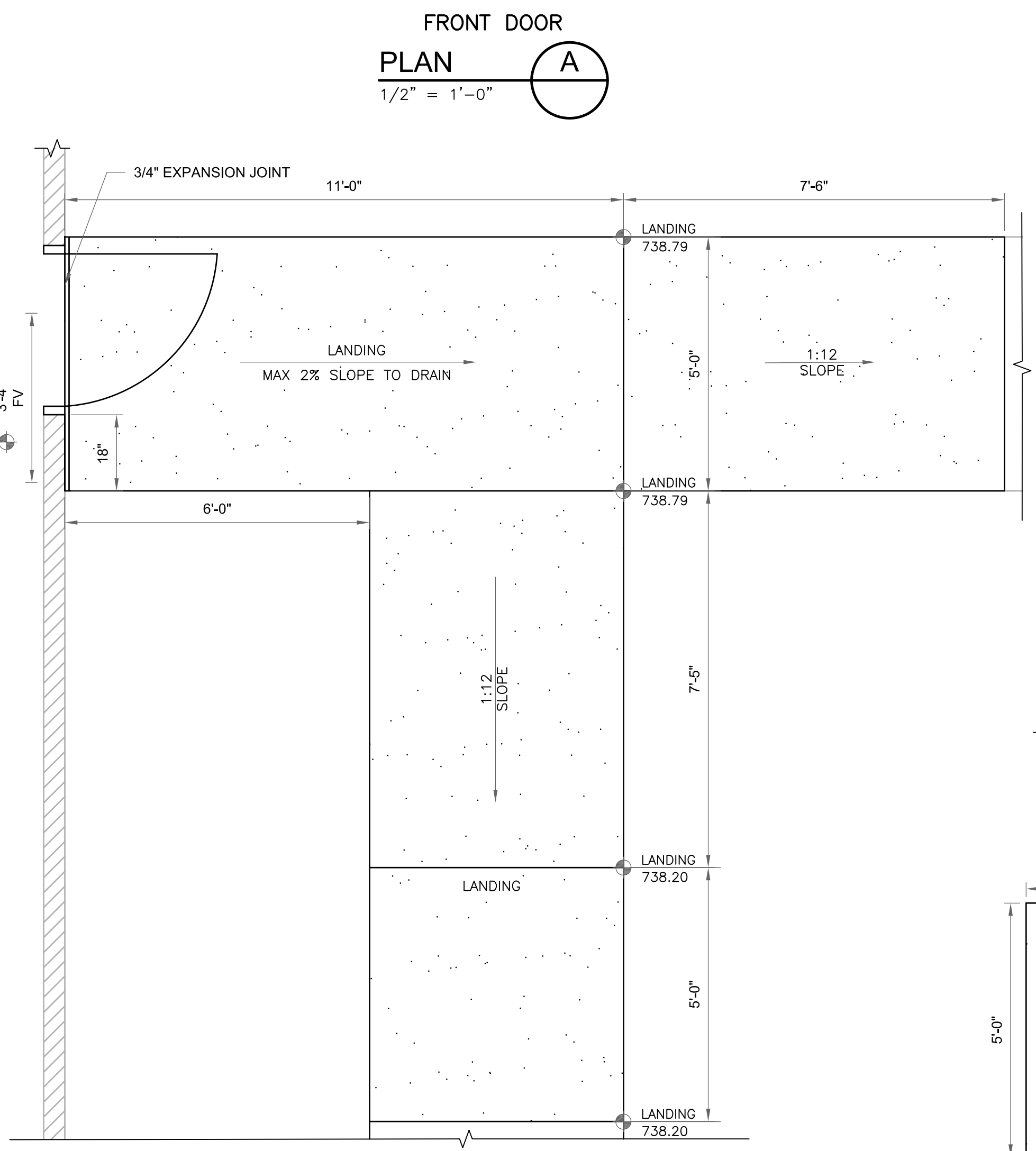
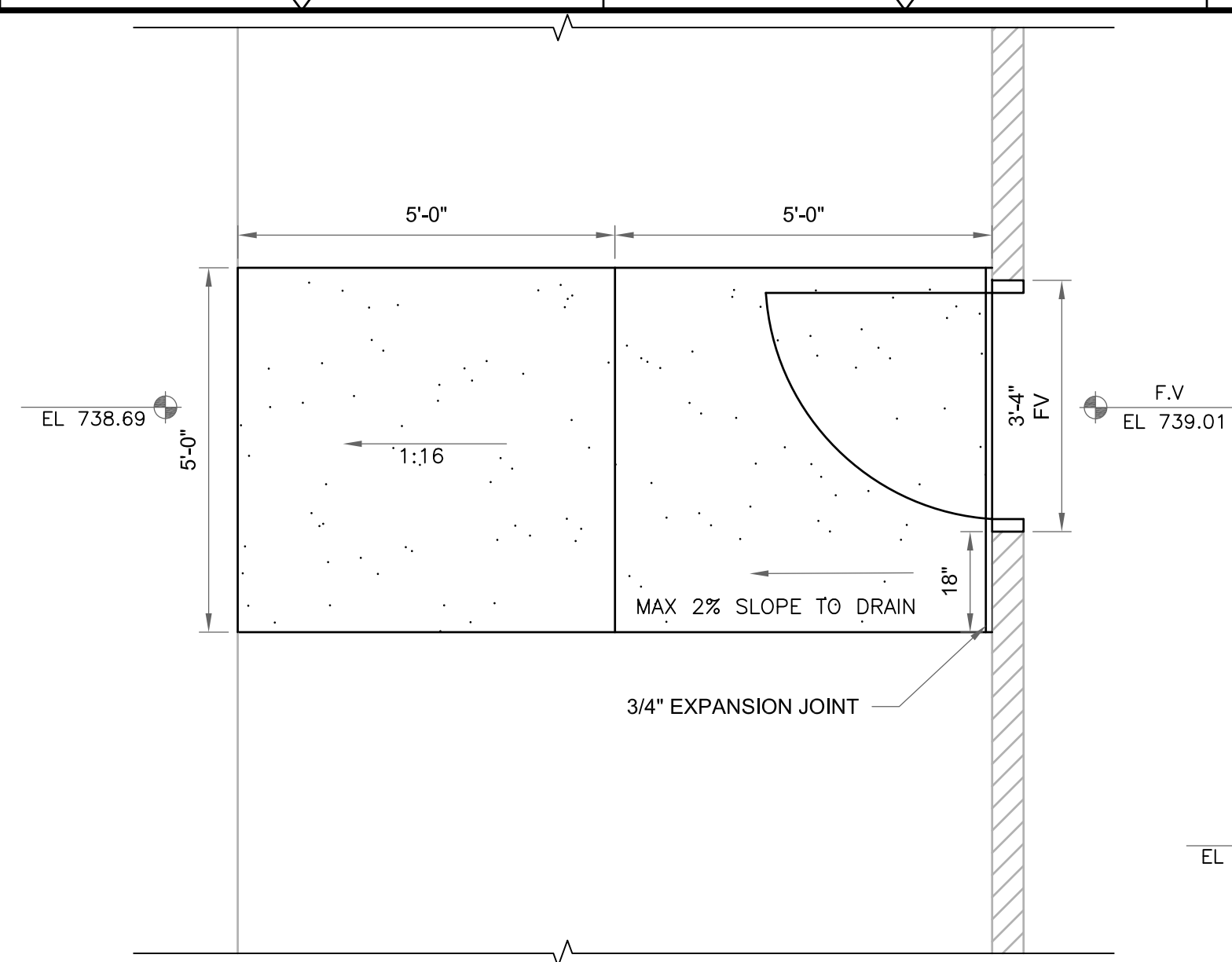
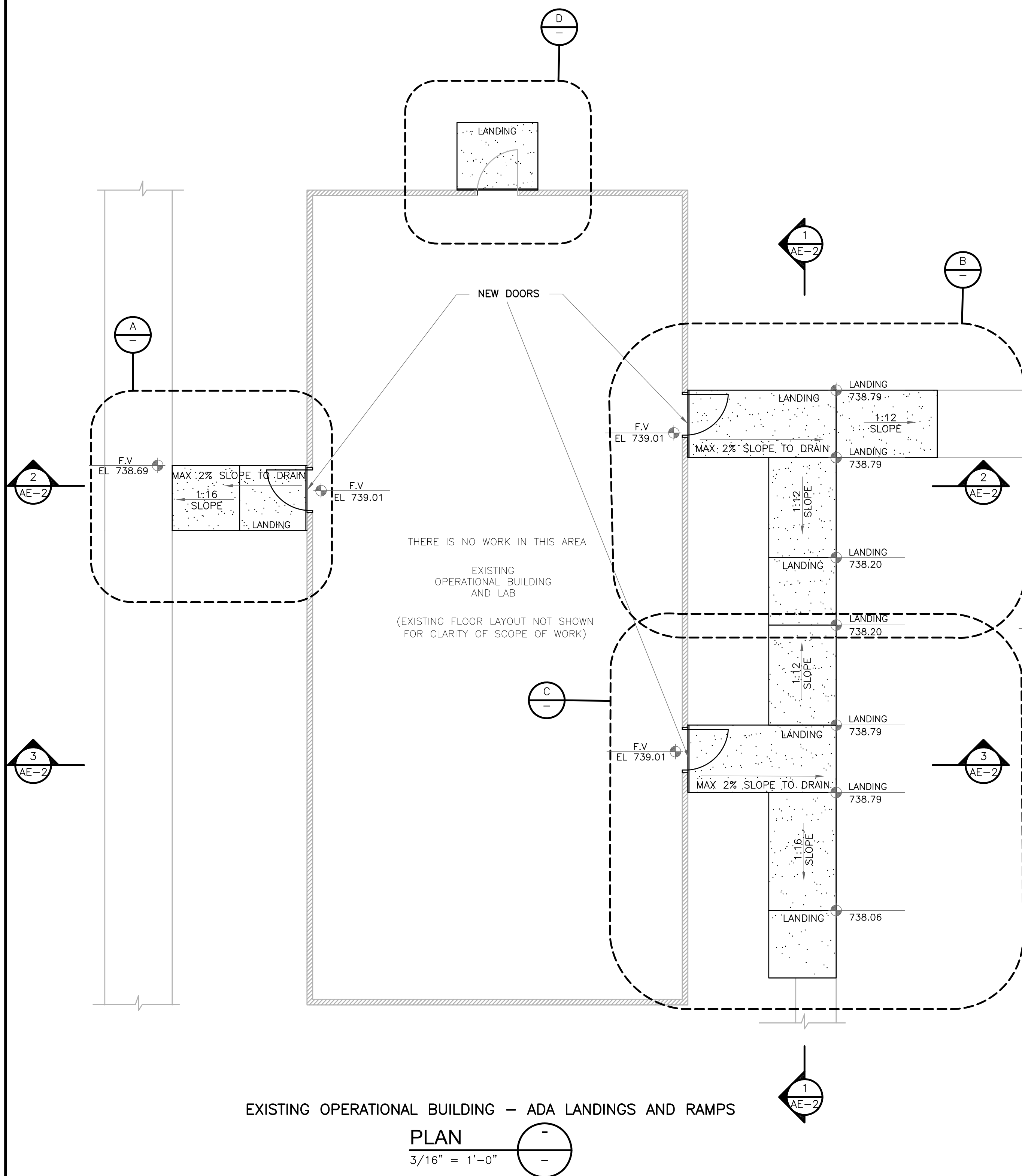
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**GENERAL DOOR NOTES:**

1. REMOVE AND REPLACE EXISTING DOOR AND FRAME AND HARDWARE WITH SAME TYPE. FIELD VERIFY ACTUAL DIMENSION.

**GENERAL NOTES:**

1. PERFORMED ALL WORK IN ACCORDANCE WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES, INCLUDING 2012 TEXAS ACCESSIBILITY STANDARDS.
2. PROVIDE ADA COMPLIANT CROSS SLOPE ON THE RAMPS AND LANDINGS PER 2012 TEXAS ACCESSIBILITY STANDARDS.
3. REFER CIVIL SHEETS FOR CONCRETE PAVING DETAILS.



REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	ZB	RD	CONFORMED DRAWINGS

DESIGNED BY: DE GUZMAN FM  
 DRAWN BY: BRITO Z  
 SHEET CHK'D BY: ANANDARAJ  
 CROSS CHK'D BY: DE GUZMAN FM  
 APPROVED BY: THROOP C  
 DATE: NOVEMBER 2023



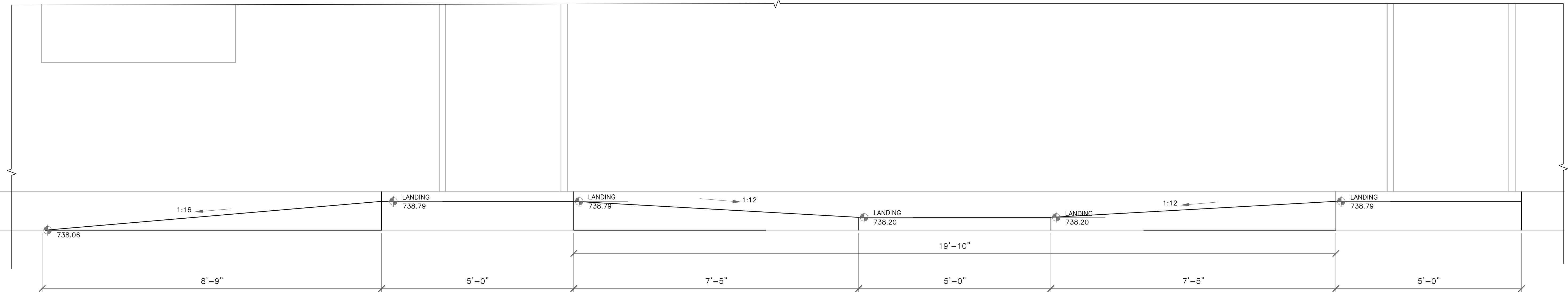
CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS  
 EXISTING OPERATIONS BUILDING  
 ADA LANDINGS AND RAMPS LAYOUT

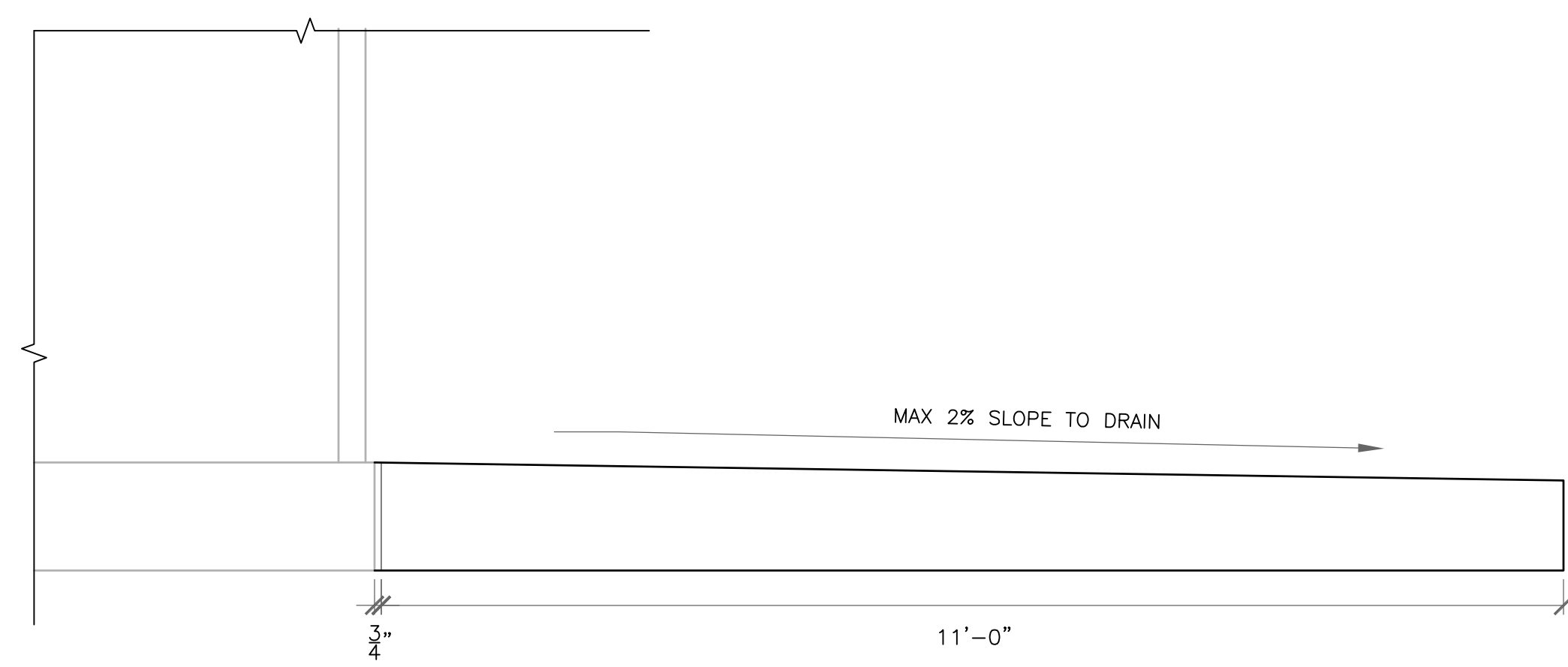
PROJECT NO. 2048-264953  
 FILE NAME: AWP006DS  
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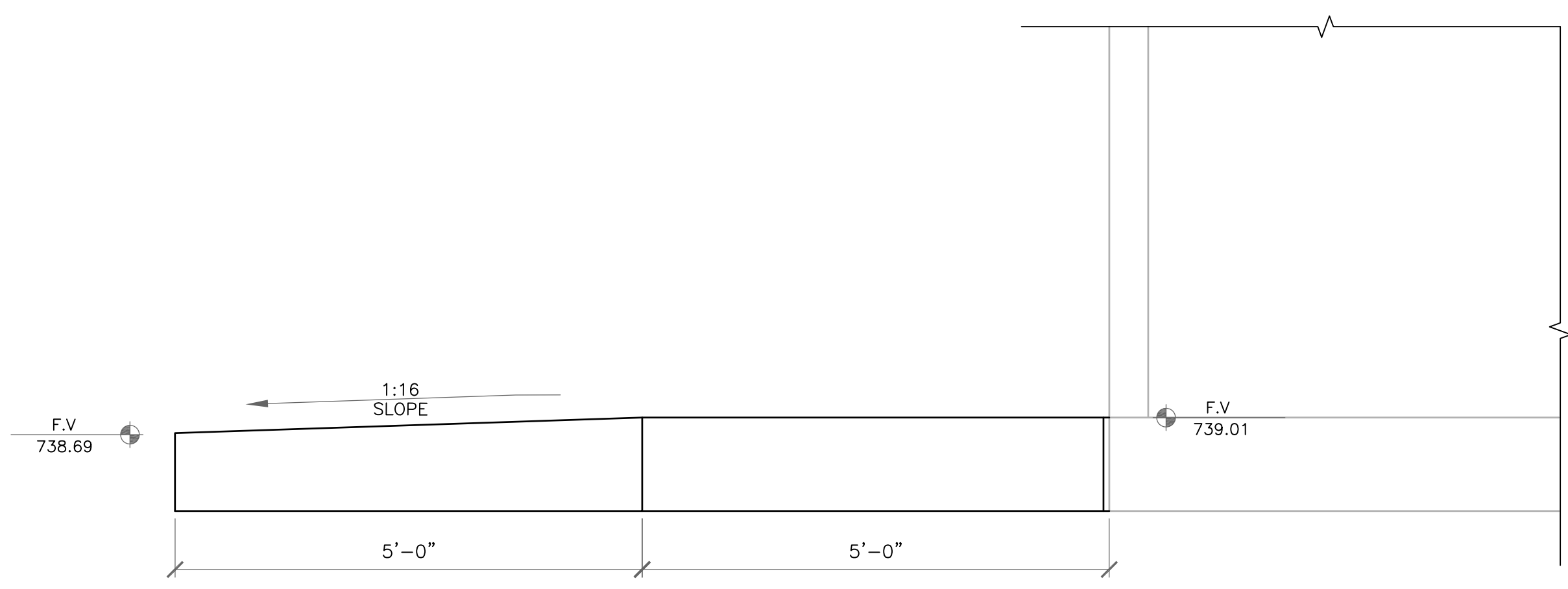
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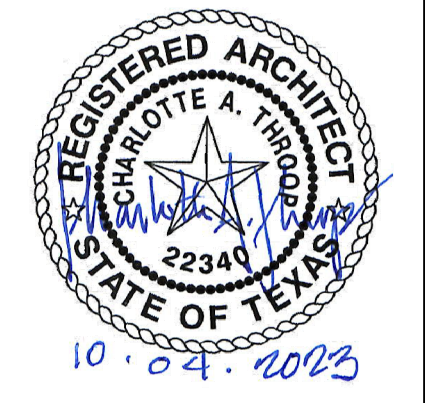
OPERATIONAL BUILDING AND LAB  
**SECTION 1**  
 3/4" = 1'-0"



OPERATIONAL BUILDING AND LAB  
**SECTION 3**  
 3/4" = 1'-0"



OPERATIONAL BUILDING AND LAB  
**SECTION 2**  
 3/4" = 1'-0"



REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	ZB	RD	CONFORMED DRAWINGS

DESIGNED BY: DE GUZMAN FM  
 DRAWN BY: BRITO Z  
 SHEET CHK'D BY: ANANDARAJ  
 CROSS CHK'D BY: DE GUZMAN FM  
 APPROVED BY: THROOP C  
 DATE: NOVEMBER 2023



8310-1 N. Capital of Texas Hwy, Suite 250  
 Austin, TX 78731  
 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS  
 EXISTING OPERATIONS BUILDING  
 ADA LANDINGS AND RAMPS SECTIONS

PROJECT NO.	2048-264953
FILE NAME:	AWP006DS
SHEET NO.	DS-AE-2

**BUILDING CODE KEY DETERMINATIONS**

OWNER: CITY OF GEORGETOWN  
 PROJECT NAME: DOVE SPRINGS WWTP  
 PROJECT NUMBER: 2048-264953  
 BUILDING NAME: DOVE SPRINGS WWTP - COORDINATED ELECTRICAL HOUSE

CODES REVIEWED: 2021 INTERNATIONAL BUILDING CODE WITH LOCAL AMENDMENTS  
 2021 INTERNATIONAL MECHANICAL CODE  
 2021 INTERNATIONAL FIRE CODE WITH LOCAL AMENDMENTS  
 2021 INTERNATIONAL ENERGY CONSERVATION CODE  
 CITY OF GEORGETOWN CODE OF ORDINANCES  
 2012 TEXAS ACCESSIBILITY STANDARD (TAS)  
 2021 INTERNATIONAL EXISTING BUILDING CODE  
 2023 NATIONAL ELECTRICAL CODE

**GENERAL NOTES:**

- 1. PRE-FABRICATED ELECTRICAL HOUSE IS SPECIFIED UNDER SECTION 26 61 00.

**OCCUPANCY, CONSTRUCTION TYPE, BUILDING LIMITATIONS:**

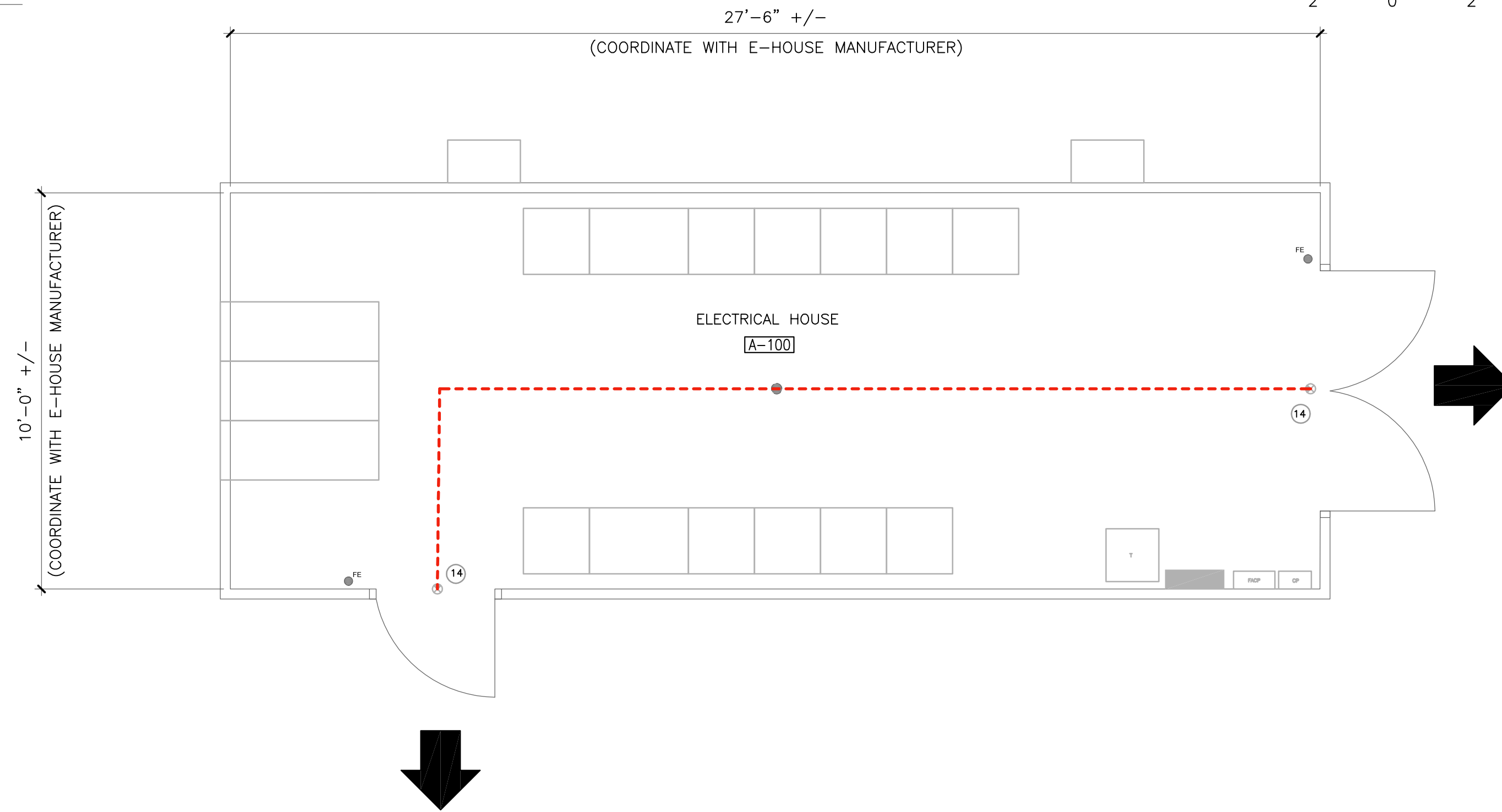
Occupancy: GROUP F-1 (FACTORY INDUSTRIAL)  
 Construction Type: IIB Manual Fire Alarm Required: NOT REQUIRED  
 Sprinkler Required: NOT REQUIRED Max Allowable Sq Footage: 15,500 SF/STORY  
 Square Footage: TOTAL = 275 SF Max Allowable Height: 55 FT  
 Height: LESS THAN MAXIMUM ALLOWABLE  
 Number of Floors: 1 STORY Handicap Accessible: NO  
 Mezzanine: NO

**FIRE RESISTANCE RATINGS:**

Rated Partitions:  
 Corridors: TABLE 1020.2 (OCC LOAD IS LESS THAN 30) 0 Hour Opening Protective Fire Resistance Rating:  
 Corridors: N/A Hour  
 Stairwells: N/A 0 Hour Stairwells: N/A Hour  
 Electrical Room: N/A 0 Hour Electrical Room: N/A Hour  
 HVAC: N/A 0 Hour HVAC: N/A Hour  
 Occupancy Separation: N/A 0 Hour Generator Rm: N/A Hour

**MEANS OF EGRESS:**

Occupant Load Factor: 300 GROSS Max Common Path of Egress Allowable: 75  
 Max Exit Access Travel Dist Allowable: 200  
 Occupant Load: ELECTRICAL ROOM = 294/300 = 1 Max Travel Dist Provided: 31 FT  
 Exit Doors Provided: ELECTRICAL ROOM = 2  
 TOTAL OCC LOAD = 1  
 Exit Doors Required: 1 Exit Width Provided: 36 (min)  
 Exit Width Required: 0.2 INCHES Min Tread Depth: N/A  
 Stairs: Max/Min Riser Height: N/A Rated Enclosure Required: N/A  
 Min Clear Width: N/A  
 Open Risers Allowed: N/A



DOVE SPRINGS WWTP - COORDINATED ELECTRICAL HOUSE LIFE SAFETY

**PLAN**

3/8" = 1'-0"

**LIFE SAFETY LEGEND**

- EXIT DISCHARGE
- AREA OR SPACE EXIT
- EXIT SIGN
- FIRE EXTINGUISHER
- EGRESS PATH
- TRAVEL DISTANCE (FEET)
- COMMON PATH OF TRAVEL (FEET)



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REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/19/24	ZB	RD	CONFORMED DRAWINGS
Δ	12/18/23	ZB	RD	REVISED FOR ADDENDUM NO.2

DESIGNED BY: DEGUZMAN FM  
 DRAWN BY: POOJA W  
 SHEET CHK'D BY: ANANDARAJ  
 CROSS CHK'D BY: DEGUZMAN FM  
 APPROVED BY: THROOP C  
 DATE: NOVEMBER 2023

**CDM Smith**  
 8310-1 N. Capital of Texas Hwy, Suite 250  
 Austin, TX 78731  
 Tel: (512) 348-1100  
 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

ARCHITECTURAL  
 COORDINATED ELECTRICAL HOUSE  
 LIFE SAFETY PLAN

PROJECT NO.	2048-264953
FILE NAME:	AE-1
SHEET NO.	DS-AI-1



SYMBOLS

- DECK AND GRATING SPAN DIRECTION.
- WATERSTOP (SEE SPEC FOR TYPE AND MATERIALS)
- ROUGHEN THE CONCRETE SURFACES TO 1/4" AMP, CLEAN & APPLY BONDING AGENT
- INDICATES EQUIPMENT PAD PER DETAIL B ON SHEET SZ-2. COORD SIZE W/EQUIP REQMTS.
- INDICATES HOUSEKEEPING PAD PER DETAIL H ON SHEET SZ-2. COORD SIZE W/EQUIP REQMTS.

	COMPACTED SELECT STRUCTURAL FILL		CONCRETE MASONRY
	UNDISTURBED EARTH		BRICK
	BEDROCK OR LIMESTONE		STEEL
	GRANULAR FILL		ALUMINUM
	SAND		GRATING
	GROUT		CHECKERED PLATE
	CONCRETE		IMPERVIOUS FILL

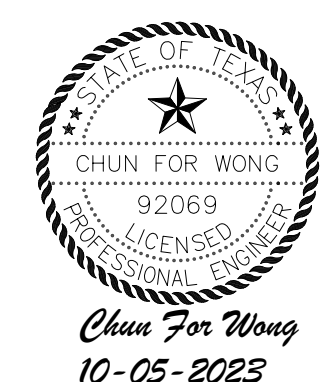
K. PRE-ENGINEERED METAL BUILDING AND STRUCTURE NOTES (IF THIS PROJECT REQUIRES SUCH BUILDING)

1. THE NEW BUILDINGS SHALL BE A MANUFACTURER'S STANDARD OR CUSTOM DESIGNED PRE-ENGINEERED METAL STRUCTURE OF THE AREAS SHOWN. RIGID FRAMES SHALL BE SPACED AS SHOWN ON THE DRAWINGS. THE CONSTRUCTION DETAILS MAY VARY TO SUIT MANUFACTURER'S STANDARD DESIGN.
2. THE BUILDING SHALL BE DESIGNED AND FABRICATED ACCORDING TO AISC, MBMA AND AISI LATEST SPECIFICATIONS WHICHEVER IS MORE RESTRICTIVE. THE DIMENSIONAL TOLERANCES OUTLINED IN THE AWS CODE UNDER WORKMANSHIP AND THE TOLERANCES APPLICABLE TO ROLL FROM STEEL UNDER THE AISI "STANDARD MILL PRACTICE", SECTION SHALL BE REQUIRED IN THE FABRICATION OF THE STEEL BUILDING FRAMES.
3. PROVIDE SINGLE-SPAN RIGID FRAMES WITH PINNED COLUMN ENDS FOR INTERIOR FRAMES. MULTIPLE-SPAN FRAMES WITH PINNED COLUMN ENDS MAY BE USED FOR END FRAMES. COLUMN ENDS SHALL NOT TRANSFER MOMENTS TO FOUNDATIONS
4. DESIGN, FABRICATION AND CONSTRUCTION SHALL INCLUDE STRUCTURAL STEEL FRAMING, SUPPORTS, BRACING AND ACCESSORIES FOR ROOFTOP HVAC UNITS, EXHAUST SYSTEM, PIPING, PROCESS EQUIPMENT AND OTHER SUCH DEVICES SHOWN ON THE PLANS AND AS SPECIFIED.
5. THE BUILDING FRAME SHALL BE DESIGNED TO LIMIT THE LATERAL DEFLECTION TO H/200 DUE TO ANY DESIGN LOAD COMBINATIONS AT THE BUILDING EAVE, WHERE H IS THE HEIGHT OF THE BUILDING EAVE.
6. LIMIT THE MAXIMUM COMBINED VERTICAL DEFLECTION OF PURLINS AND FRAMES TO L/240 UNDER DESIGN SNOW OR LIVE LOADS, WHERE L IS THE SPAN LENGTH OF THE MEMBER BETWEEN CENTERLINE OF THE SUPPORTS.
7. LIMIT THE MAXIMUM HORIZONTAL DEFLECTION OF GIRTS TO L/240 UNDER DESIGN WIND LOADS, WHERE L IS THE SPAN LENGTH OF THE MEMBER BETWEEN CENTERLINE OF THE SUPPORTS.
8. BUILDING SHALL BE DESIGNED TO INCLUDE LOADS INDUCED BY THE HVAC, MECHANICAL, PROCESS EQUIPMENT, PIPING SPRINKLERS, EXHAUST SYSTEM, AND OTHER SUCH DEVICES SHOWN ON THE PLANS AND AS SPECIFIED. ADDITIONAL GIRTS OR PURLINS SHALL BE DESIGNED AND PLACED IN CONVENIENT LOCATIONS FOR ATTACHMENT OF ALL DEVICES OR EQUIPMENT. CONTRACTOR SHALL PROVIDE BUILDING MANUFACTURER WITH THE EQUIPMENT LOADS AND OTHER INFORMATION THAT IS NEEDED FOR THE BUILDING DESIGN.
9. PROVIDE FRAMING MADE OF STRUCTURAL TUBE SHAPES AROUND OVERHEAD DOORS. COLD-FORM CHANNEL JAMBS ARE NOT ALLOWED. DESIGN THE FRAMING FOR ALL EFFECTS OF WIND AND DEAD LOADS.
10. PROVIDE PURLIN BRACING AT INTERVALS NOT EXCEEDING 1/4 SPAN. PROVIDE ANTIROLL CLIPS AT ALL PURLIN BEARING POINTS.
11. USE RODS OR ANGLES, NOT CABLES, FOR WALL AND ROOF BRACING. PROVIDE BACKUP PLATES (MIN. 6" WIDE X 3/4" THICK) BEHIND ALL BRACE ROD CONNECTIONS TO FRAME WEBS. WELD PLATES TO FRAME FLANGES.
12. UNLESS CROSS BRACING IS USED TO RESIST LATERAL LOADS, LOAD TESTS ON METAL PANEL WALLS AND ROOF MUST BE SUBMITTED WHERE THESE ARE USED AS A DIAPHRAGM.
13. PERMANENT BUILDING BRACING MAY BE INSUFFICIENT DURING ERECTION. DESIGN AND PROVIDE TEMPORARY LATERAL BRACING DURING CONSTRUCTION UNTIL PERMANENT BRACING IS IN PLACE.
14. ANCHOR RODS SHALL BE ASTM F1554, GRADE 36. PROVIDE A MINIMUM OF FOUR (4) ANCHOR RODS FOR EACH COLUMN. ANCHOR ROD SHALL NOT BE LESS THAN 3/4" IN DIAMETER.
15. COLUMN AND BASE PLATE SIZE SHALL ALLOW FOR A MINIMUM ANCHOR BOLT EDGE DISTANCE OF 10" TO ANY VERTICAL EDGE OF CONCRETE. UNLESS OTHERWISE INDICATED ON THE PLANS, THE MINIMUM ANCHOR ROD EMBEDMENT DEPTH IS 2'-0".
16. ANCHOR RODS SHALL BE DESIGNED BY THE BUILDING MANUFACTURER AND FURNISHED BY THE CONTRACTOR. THE ANCHOR BOLT SIZES, LAYOUT AND FOUNDATION REACTIONS SHALL BE SUBMITTED FOR REVIEW.

STRUCTURAL ABBREVIATIONS

STRUCTURAL ABBREVIATIONS	
AB	ANCHOR BOLT
ADH	ADHESIVE
AFF	ABOVE FINISH FLOOR
ALUM	ALUMINUM
ALT	ALTERNATE
ANCH	ANCHOR
ANOD	ANODIZED
APPROX	APPROXIMATELY
ARCH	ARCHITECT(URAL)
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM
BRG	BEARING
BOT	BOTTOM
BEL	BELOW
BTWN	BETWEEN
BIT	BITUMEN
BLK	BLOCK
C/C	CENTER TO CENTER
CIP	CAST IRON PIPE OR CAST IN PLACE
CONST JT OR	CONSTRUCTION JOINT
CJ	CENTERLINE
CL	CLEAR
CLSM	CONTROLLED LOW STRENGTH MATERIAL
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN(X)	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CLJ	CONTROL JOINT
CTRD	CENTERED
D	DEPTH
DTL	DETAIL
DIA/Ø	DIAMETER
DIAG	DIAGONAL
DN	DOWN
DWG	DRAWING
DWL	DOWEL
EA	EACH
EF	EACH FACE
EL	ELEVATION
ELEC	ELECTRIC(AL)
ELEV	ELEVATOR/ELEVATION
EJ OR	EXPANSION JOINT
EXP JT	EQUAL
EQ	EQUIPMENT
EQUIP	EACH WAY
EW	EXISTING
EXIST	EXTERIOR
EXT	FLOOR DRAIN
FD	FOUNDATION
FND	FINISH FLOOR
FF	FINISH FLOOR ELEVATION
FFE	FLOOR
FIN	FEET
FL/FLR	FOOTING
FT	GAUGE
FTG	GALVANIZED
GA	GRADE BEAM
GALV	GROUND
GB	GRADE
GND	HOLLOW METAL
GR	HORIZONTAL
HM	HORIZONTAL
HORIZ	HOUR
HP	HEADED STUDS
HR	HOLLOW STRUCTURAL SECTION
HS	HEIGHT
HSS	INSIDE DIAMETER
HT	INSIDE FACE
ID	INCH
IF	INTERIOR
IN	JOINT
INT	KEYED CONSTRUCTION JOINT
JT	
KCJ	
L	LENGTH OR ANGLE
LL	LIVE LOAD DOUBLE ANGLE
LLBB	LONG LEG BACK TO BACK
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LONG	LONGITUDINAL
LP	LOW POINT
MAS	MASONRY
MAT	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MTL	METAL
NO	NUMBER
NOM	NOMINAL
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OPPO	OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE
PGL	PROFILE GRADE LINE
PL	PLATE
PNL	PANEL
PSI	POUNDS PER SQUARE INCH
PVMT	PAVEMENT
R	RADIUS
RAD	RADIUS
RF	ROOF DRAIN
RE	REFER TO
REF	REFERENCE
REINF	REINFORCING (REINFORCED)
REQ'D	REQUIRED
RET	RETAINING
RTNG	RETAINING
SCHED	SCHEDULE, SCHEDULED
SEC	SECTION
SF	SQUARE FEET
SHT	SHEET
SIM	SIMILAR
SJ	SAWCUT JOINT
SPEC(S)	SPECIFICATIONS
SQ	SQUARE
SS	STAINLESS STEEL
STA	STATION
STD	STANDARD
STIFF	STIFFENER
STIR	STIRRUP
STL	STEEL
STRUCT	STRUCTURAL
SYM	SYMMETRICAL
T	TREAD OR THICKNESS
T&B	TOP AND BOTTOM
TC	TOP OF CURB
TOB	TOP OF BEAM
TOJ	TOP OF JOIST
TOS	TOP OF STEEL
TOW	TOP OF WALL
TRANS	TRANSVERSE
TS	TUBE STEEL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
VOL	VOLUME
W	WIDTH
W/	WITH
WD	WOOD
W/O	WITHOUT
WP	WORKING POINT
WS	WATER STOP
WT	WEIGHT
WWF	WELDED WIRE FABRIC
*	FIELD VERIFICATION AND/OR COORDINATION WITH THE PRODUCT MANUFACTURER IS REQUIRED

NOTE:  
STANDARD DETAILS SHOWN ON SZ SHEETS SHALL BE USED AT ALL APPLICABLE LOCATIONS, UNLESS NOTED OTHERWISE ON DRAWINGS.



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DESIGNED BY:	J. EULL
DRAWN BY:	P. ANUSHA
SHEET CHK'D BY:	C. WONG
CROSS CHK'D BY:	J. EULL
APPROVED BY:	C. WONG
DATE:	NOVEMBER 2023

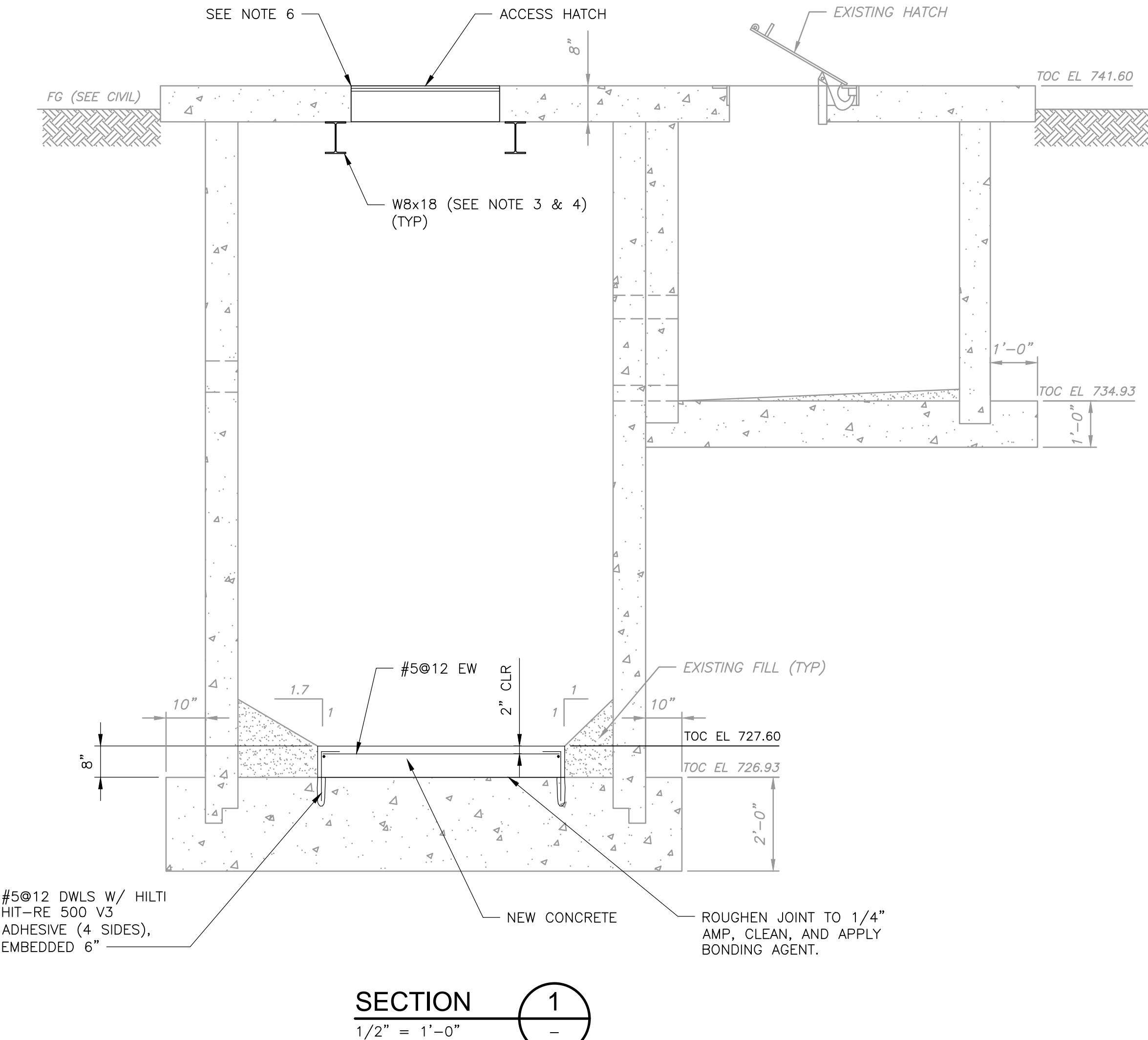
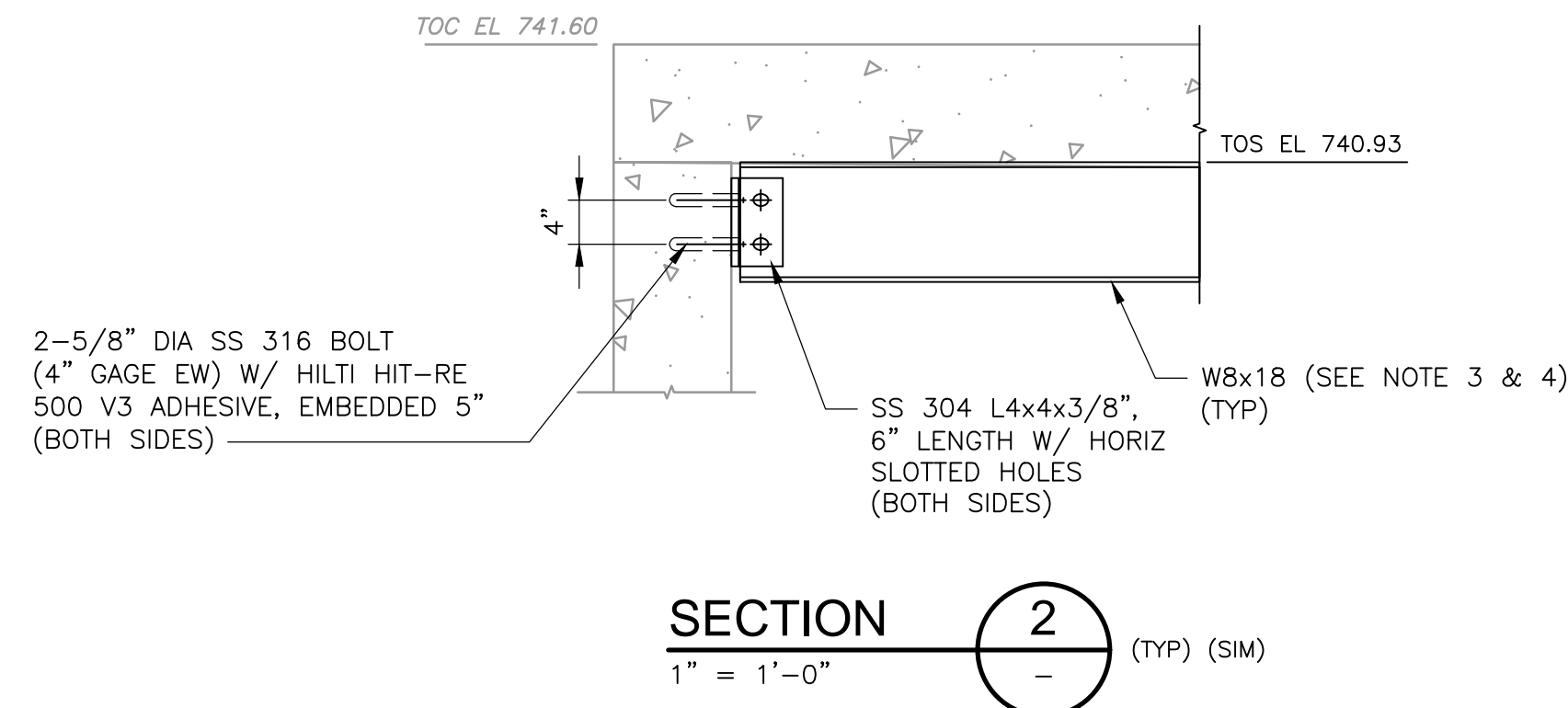
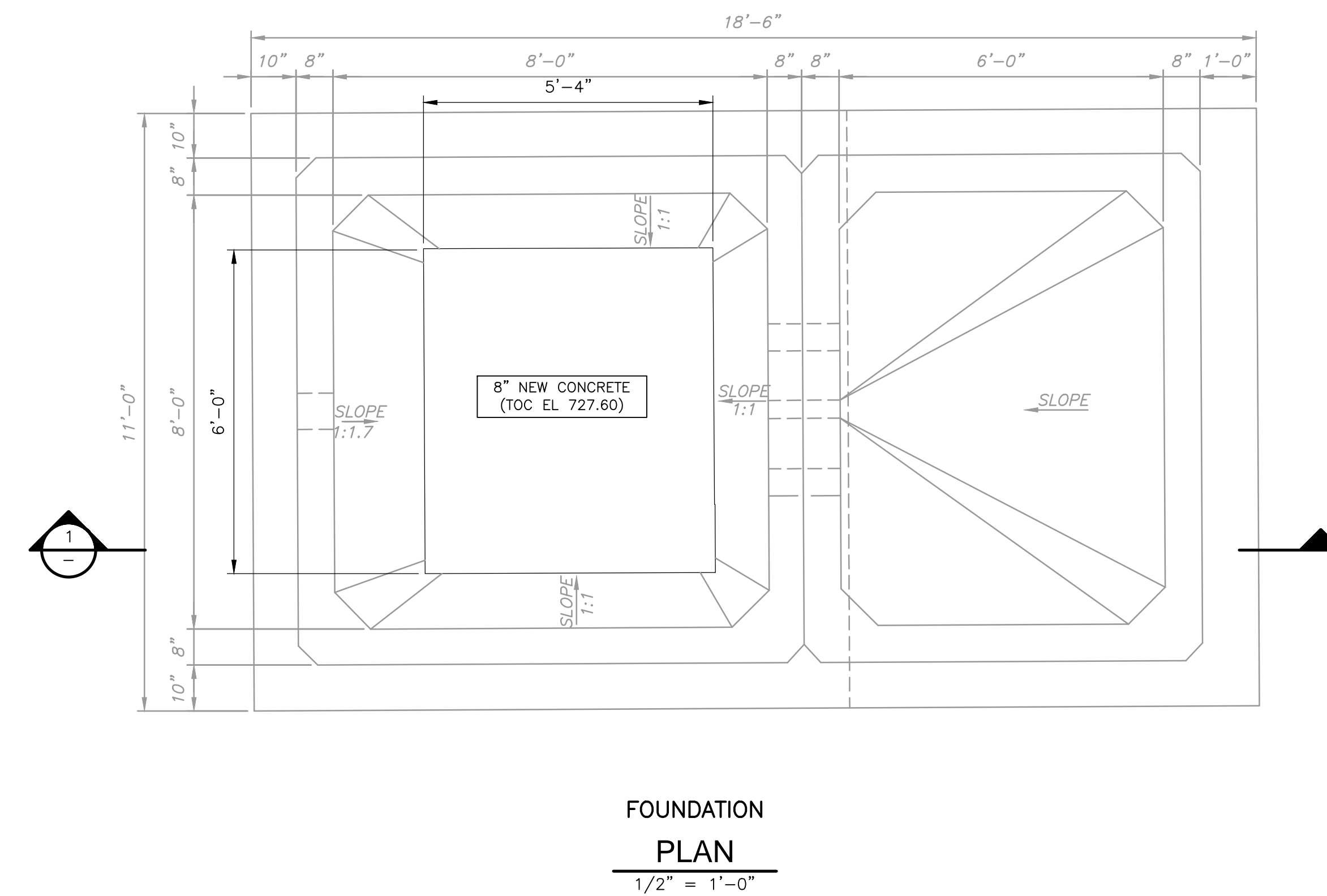
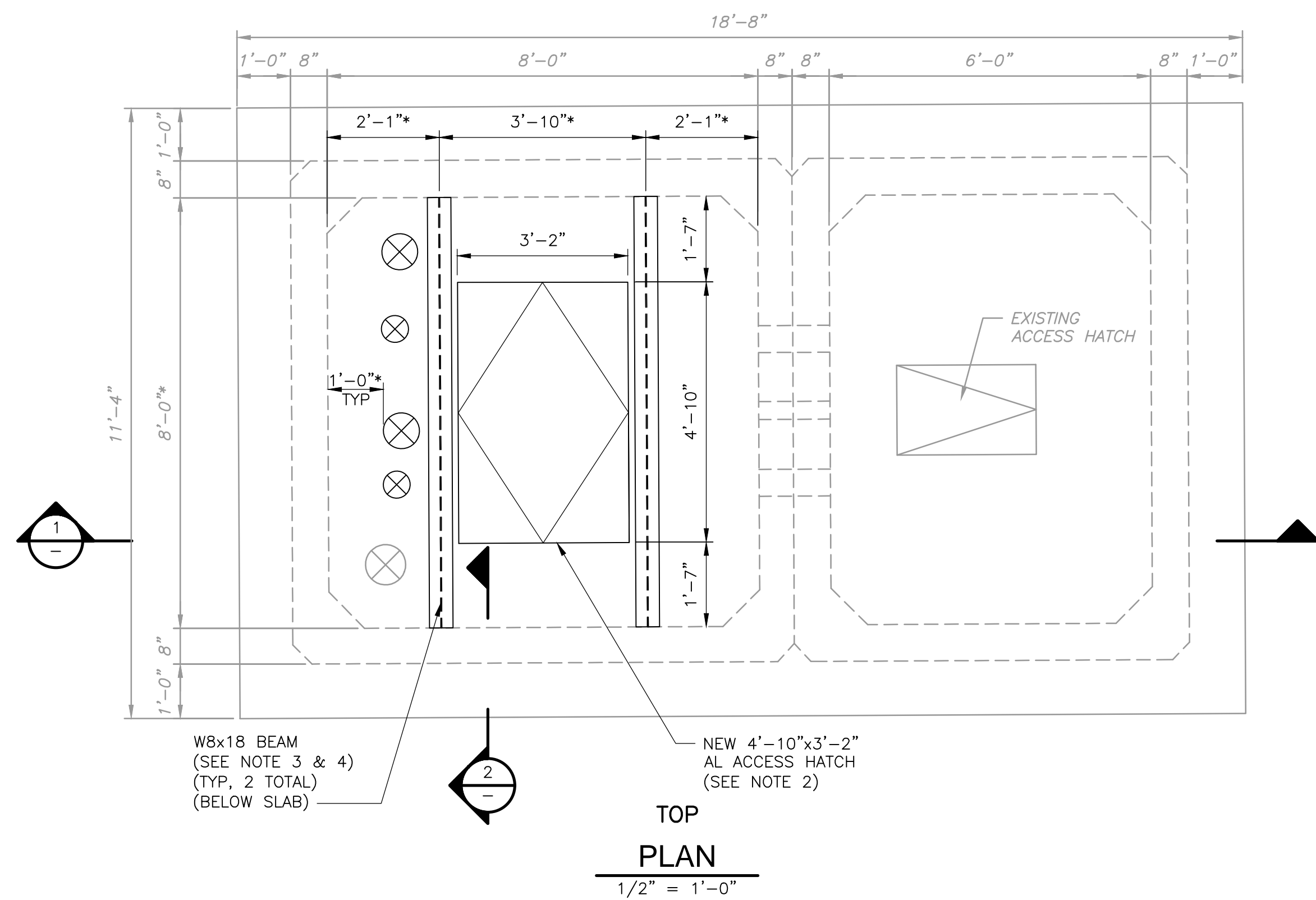
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CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

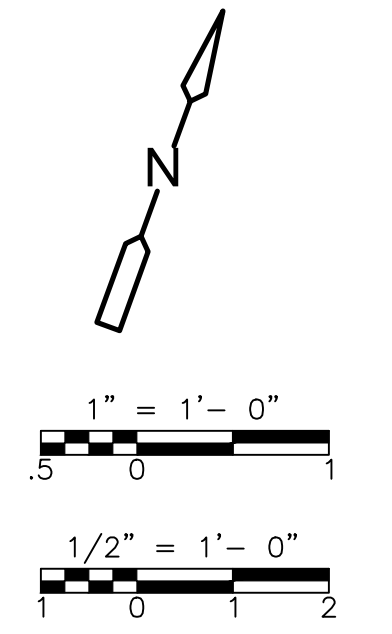
STRUCTURAL GENERAL NOTES, SYMBOLS  
 AND ABBREVIATIONS

PROJECT NO.	2048-264953
FILE NAME:	S002NFNT.DWG
SHEET NO.	S-2

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- NOTES:**
- \* INDICATES DIMENSION OR ELEVATION TO BE COORDINATED WITH THE APPROVED EQUIPMENT DRAWINGS.
  - EXISTING 2'-7" x 1'-8" HATCH OPENINGS TO BE ENLARGED, SEE K/ SZ-1 FOR REBAR PROTECTION.
  - SS 304 STEEL BEAMS TO BE INSTALLED PRIOR TO ENLARGEMENT OF HATCH OPENINGS
  - SS 304 STEEL BEAM TO BE SNUG-TIGHT WITH THE BOTTOM FACE OF THE EXISTING CONCRETE ROOF SLAB, AND APPLY EPOXY GROUT AS NEEDED TO ACHIEVE FULL CONTACT AT THE INTERFACE (NO VOID ALLOWED).
  - FIELD VERIFY ALL REQUIRED BEAM LENGTH PRIOR TO THE FABRICATION.
  - CONNECTION OF THE HATCH TO THE EXISTING CONCRETE PER THE HATCH MANUFACTURER RECOMMENDATION WITH ENGINEERS APPROVAL.



REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JNE	CFW	CONFORMED DRAWINGS

DESIGNED BY: J. EULL  
 DRAWN BY: M. SIDDIQ  
 SHEET CHK'D BY: C. WONG  
 CROSS CHK'D BY: J. EULL  
 APPROVED BY: C. WONG  
 DATE: NOVEMBER 2023



CITY OF GEORGETOWN, TEXAS  
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 REHABILITATION

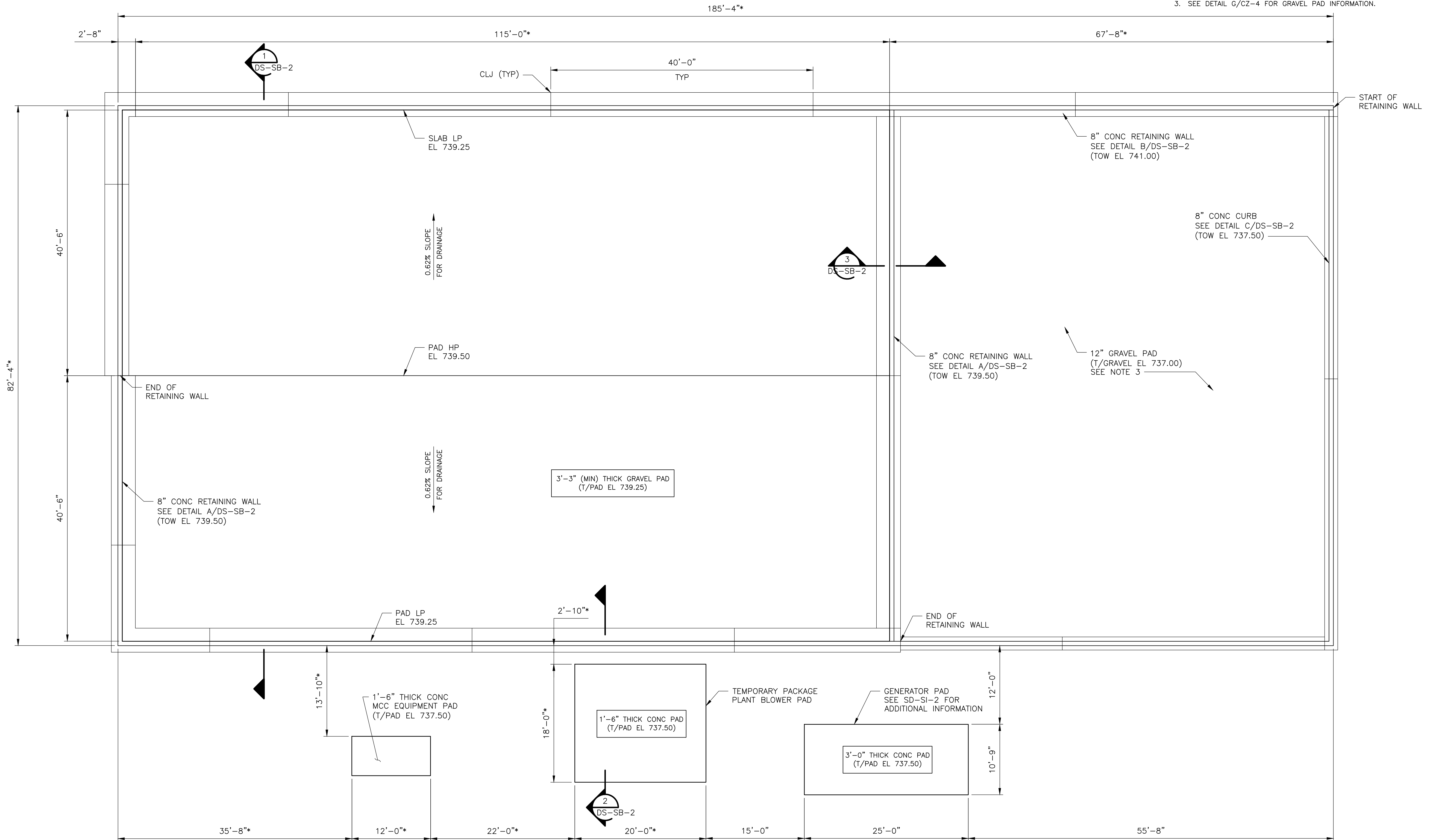
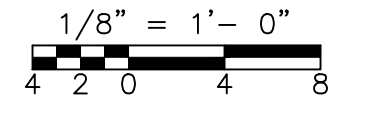
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 FILTRATE LIFT STATION  
 PLANS AND SECTION

PROJECT NO. 2048-264953  
 FILE NAME: S001FLPL.DWG  
 SHEET NO.  
**DS-SA-1**



NOTES:

1. \* INDICATES DIMENSION OR ELEVATION TO BE COORDINATED WITH THE APPROVED EQUIPMENT DRAWINGS AND PIPING PLAN.
2. SEE DS-MB AND DS-C-4 SHEETS FOR ADDITIONAL TEMPORARY PACKAGE PLANT INFORMATION.
3. SEE DETAIL G/CZ-4 FOR GRAVEL PAD INFORMATION.



RENTAL PACKAGE PLANT

PLAN

1/8" = 1'-0"



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A	1/10/24	JNE	CFW	CONFORMED DRAWINGS
1	12/8/23	JNE	CFW	REVISION FOR ADDENDUM NO. 1

DESIGNED BY: J. EULL  
 DRAWN BY: M. SIDDIQ  
 SHEET CHK'D BY: C. WONG  
 CROSS CHK'D BY: J. EULL  
 APPROVED BY: C. WONG  
 DATE: OCTOBER 2023

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CITY OF GEORGETOWN, TEXAS  
**DOVE SPRINGS WWTP  
 REHABILITATION**

**DOVE SPRINGS WWTP  
 RENTAL PACKAGE PLANT  
 FOUNDATION PLAN**

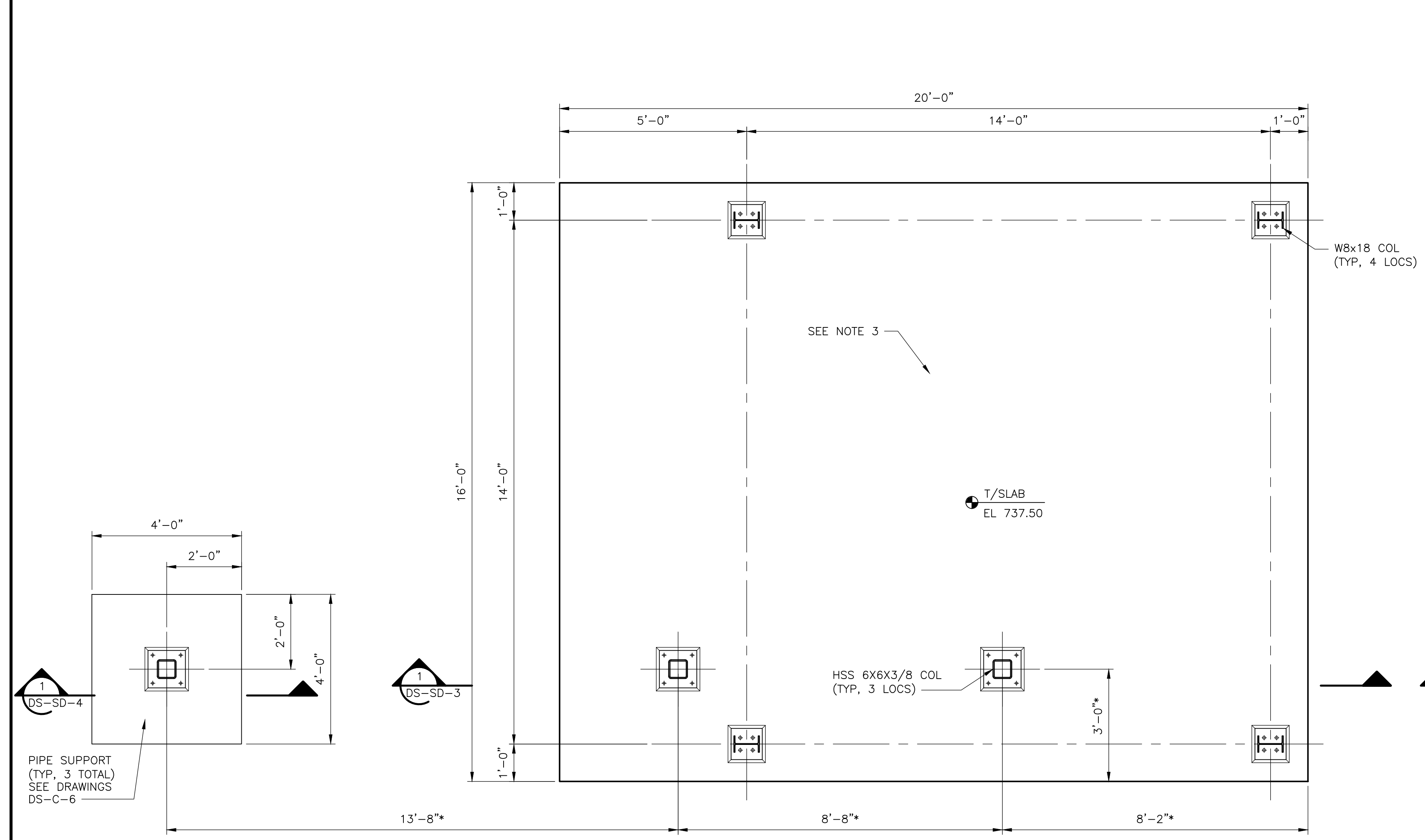
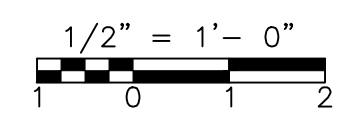
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SHEET NO.	DS-SB-1



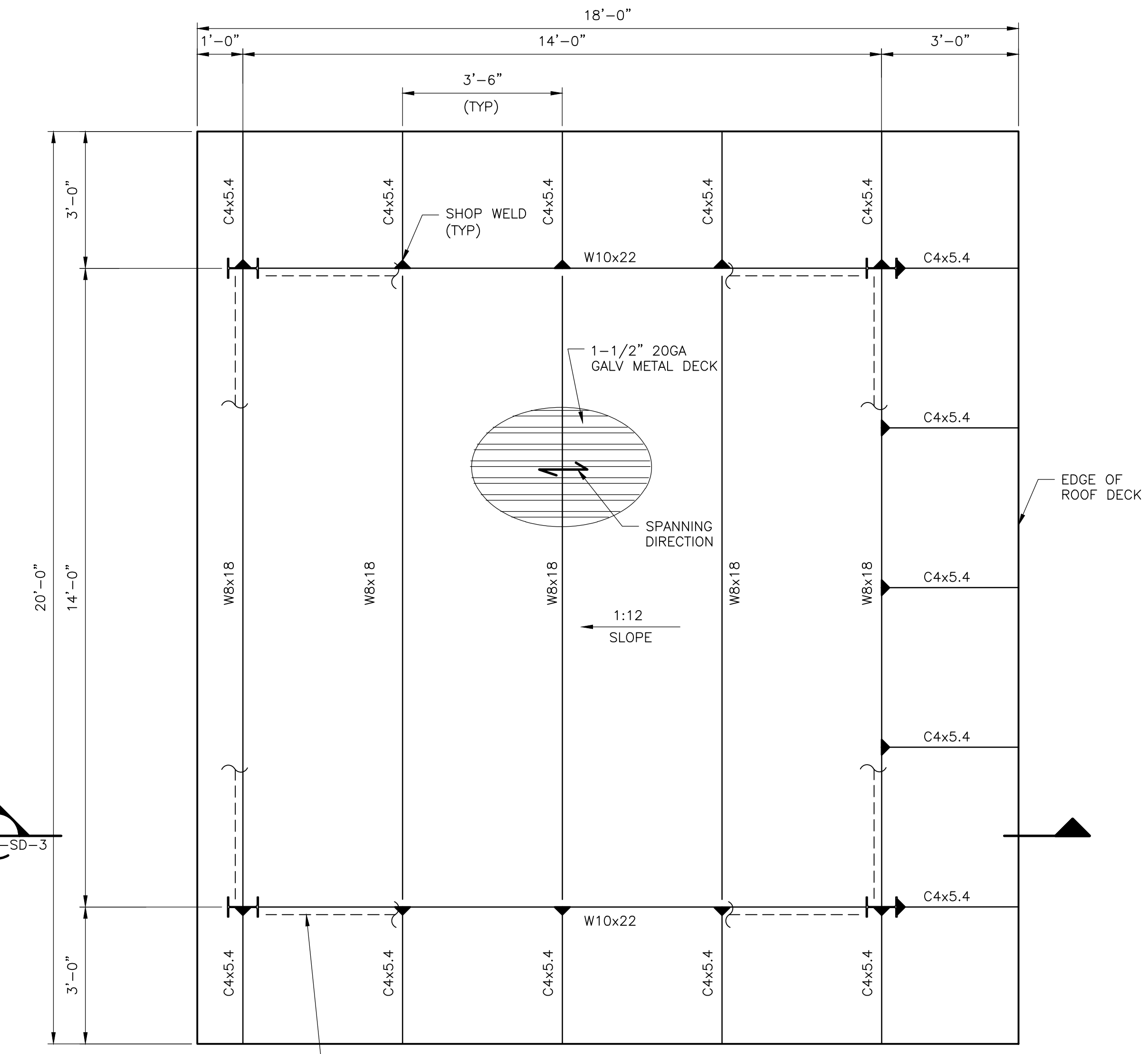


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- NOTES:**
- \* INDICATES DIMENSION OR ELEVATION TO BE COORDINATED WITH THE APPROVED EQUIPMENT DRAWINGS AND PIPING PLAN.
  - SEE CIVIL DRAWINGS FOR LOCATIONS AND ORIENTATION OF BLOWER PADS.
  - SEE DRAWING DS-MD-1 FOR LOCATION OF BLOWERS ON FOUNDATION.
  - SEE DETAIL N/SZ-5 FOR DECK CONNECTION.
  - SEE DETAIL D/DS-SD-4 FOR ROOF DECK CONNECTION SCHEDULE.



**FOUNDATION PLAN**  
1/2" = 1'-0"



**CANOPY ROOF PLAN**  
1/2" = 1'-0"

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JNE	CFW	CONFORMED DRAWINGS

DESIGNED BY: J. EULL  
 DRAWN BY: K. RAJENDRAN  
 SHEET CHK'D BY: C. WONG  
 CROSS CHK'D BY: J. EULL  
 APPROVED BY: C. WONG  
 DATE: NOVEMBER 2023



CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

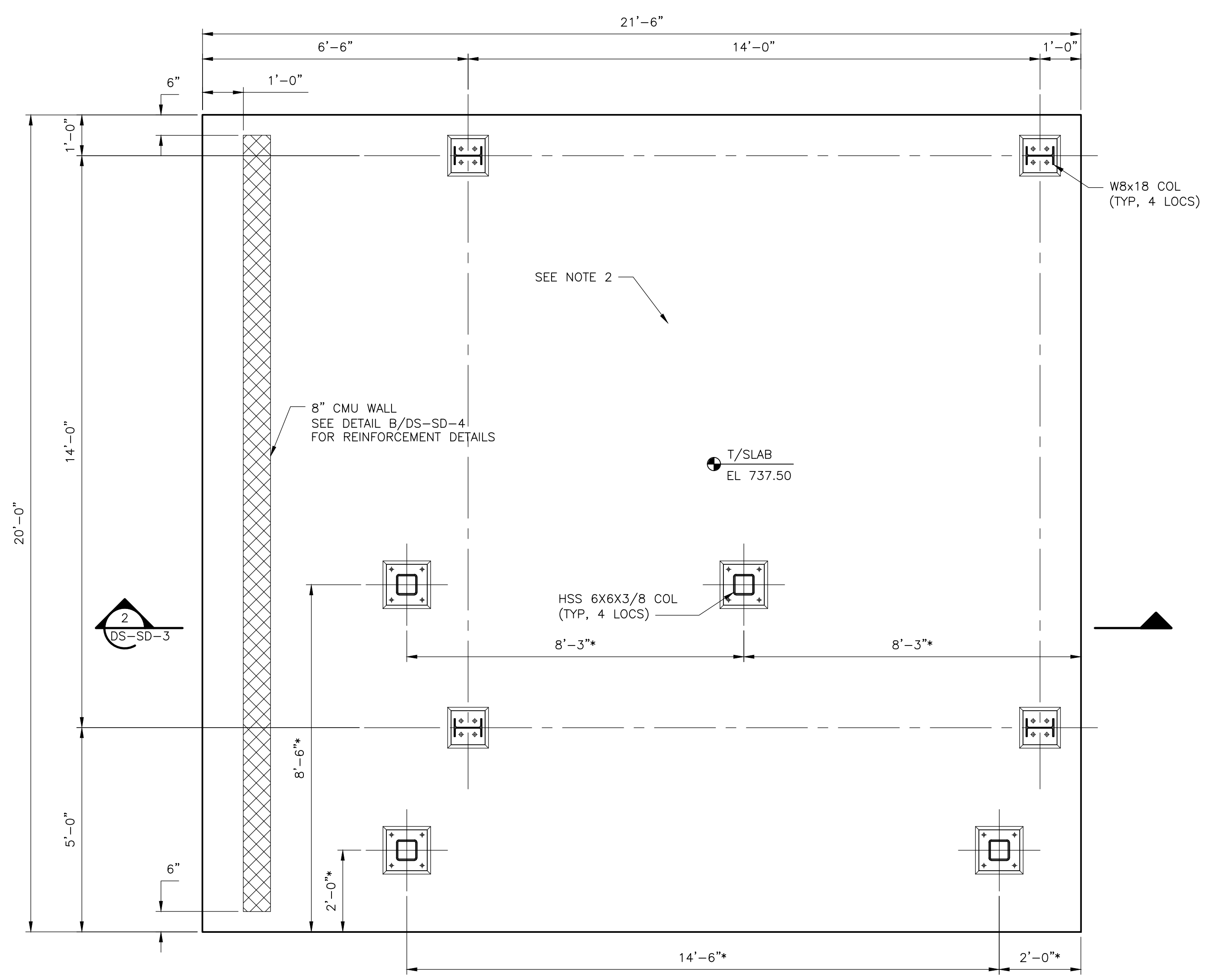
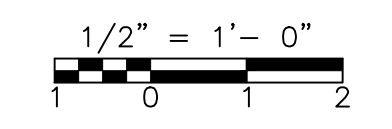
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 BLOWER UNIT NO. 1 PAD  
 FOUNDATION AND ROOF PLANS

PROJECT NO. 2048-264953  
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 SHEET NO.  
**DS-SD-1**

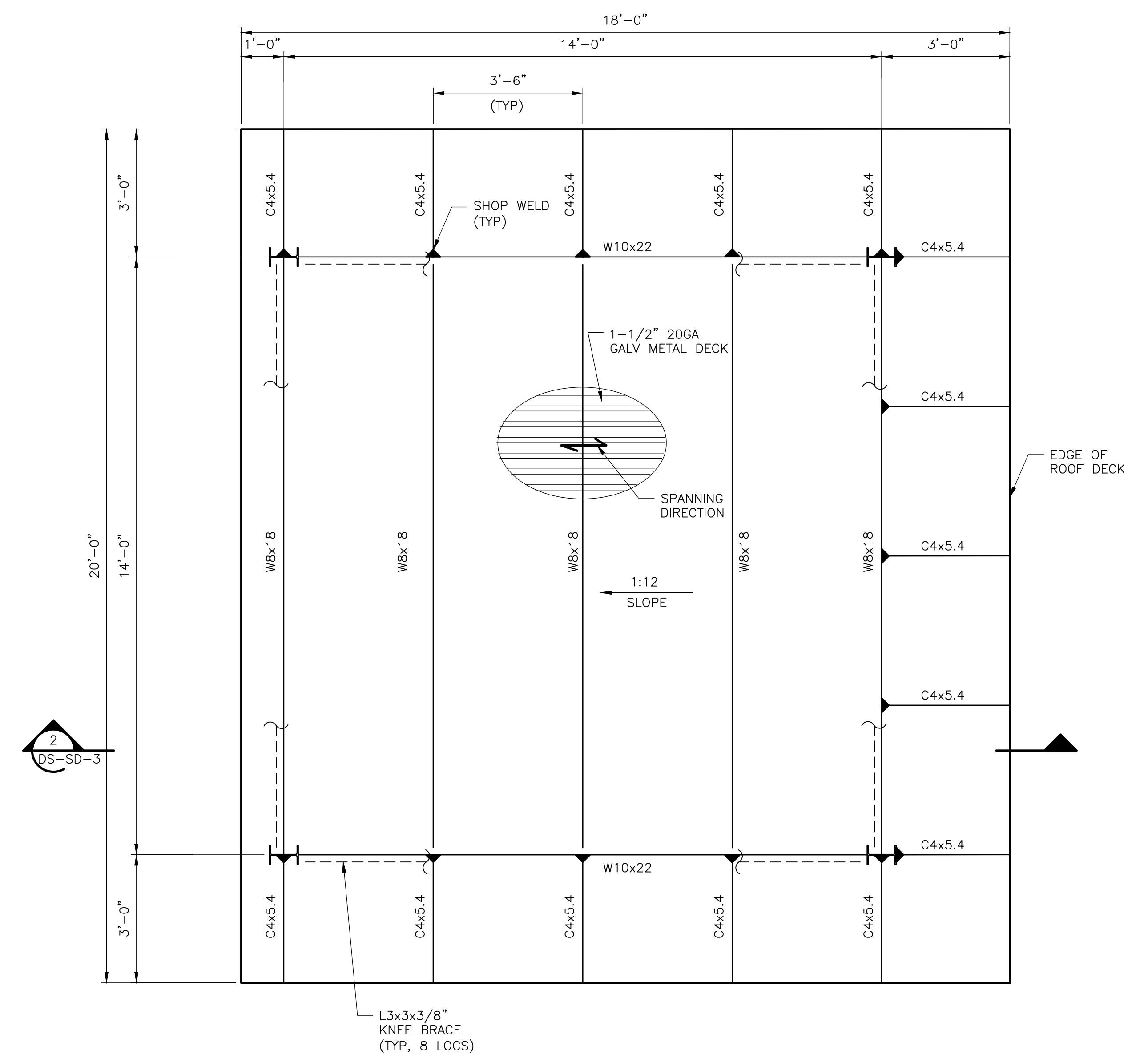


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- NOTES:**
- SEE CIVIL DRAWINGS FOR LOCATIONS AND ORIENTATION OF BLOWER PADS.
  - SEE DRAWING DS-MD-2 FOR LOCATION OF BLOWERS ON FOUNDATION.
  - SEE DETAIL N/SZ-5 FOR DECK CONNECTION.
  - \* INDICATES DIMENSION OR ELEVATION TO BE COORDINATED WITH THE APPROVED EQUIPMENT DRAWINGS AND PIPING PLAN.
  - SEE DETAIL D/DS-SD-4 FOR ROOF DECK CONNECTION SCHEDULE.



**FOUNDATION PLAN**  
1/2" = 1'-0"



**CANOPY ROOF PLAN**  
1/2" = 1'-0"

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JNE	CFW	CONFORMED DRAWINGS

DESIGNED BY: J. EULL  
 DRAWN BY: K. RAJENDRAN  
 SHEET CHK'D BY: C. WONG  
 CROSS CHK'D BY: J. EULL  
 APPROVED BY: C. WONG  
 DATE: NOVEMBER 2023



CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

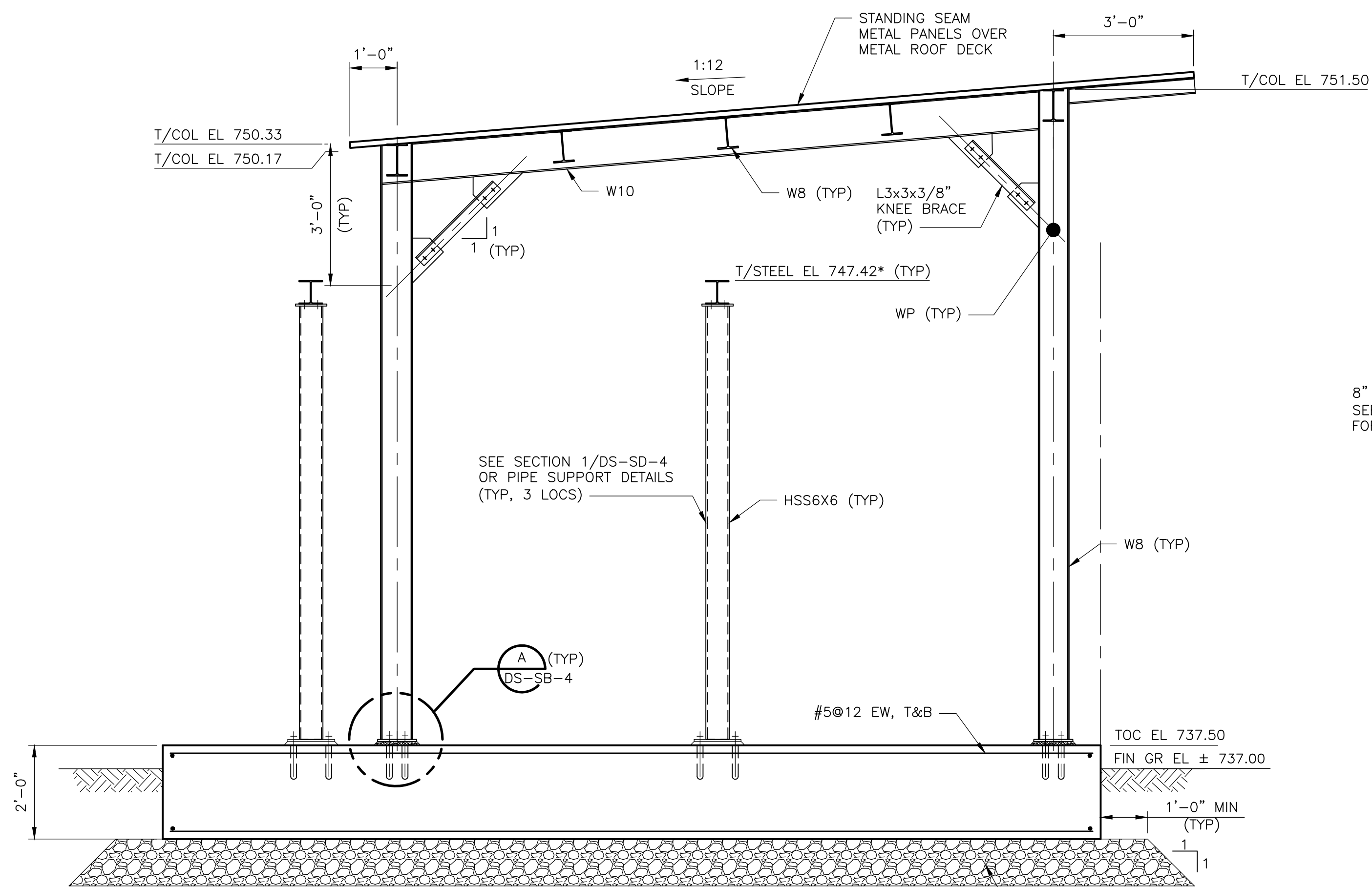
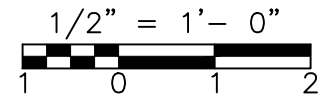
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 BLOWER UNIT NO. 2 PAD  
 FOUNDATION AND ROOF PLANS

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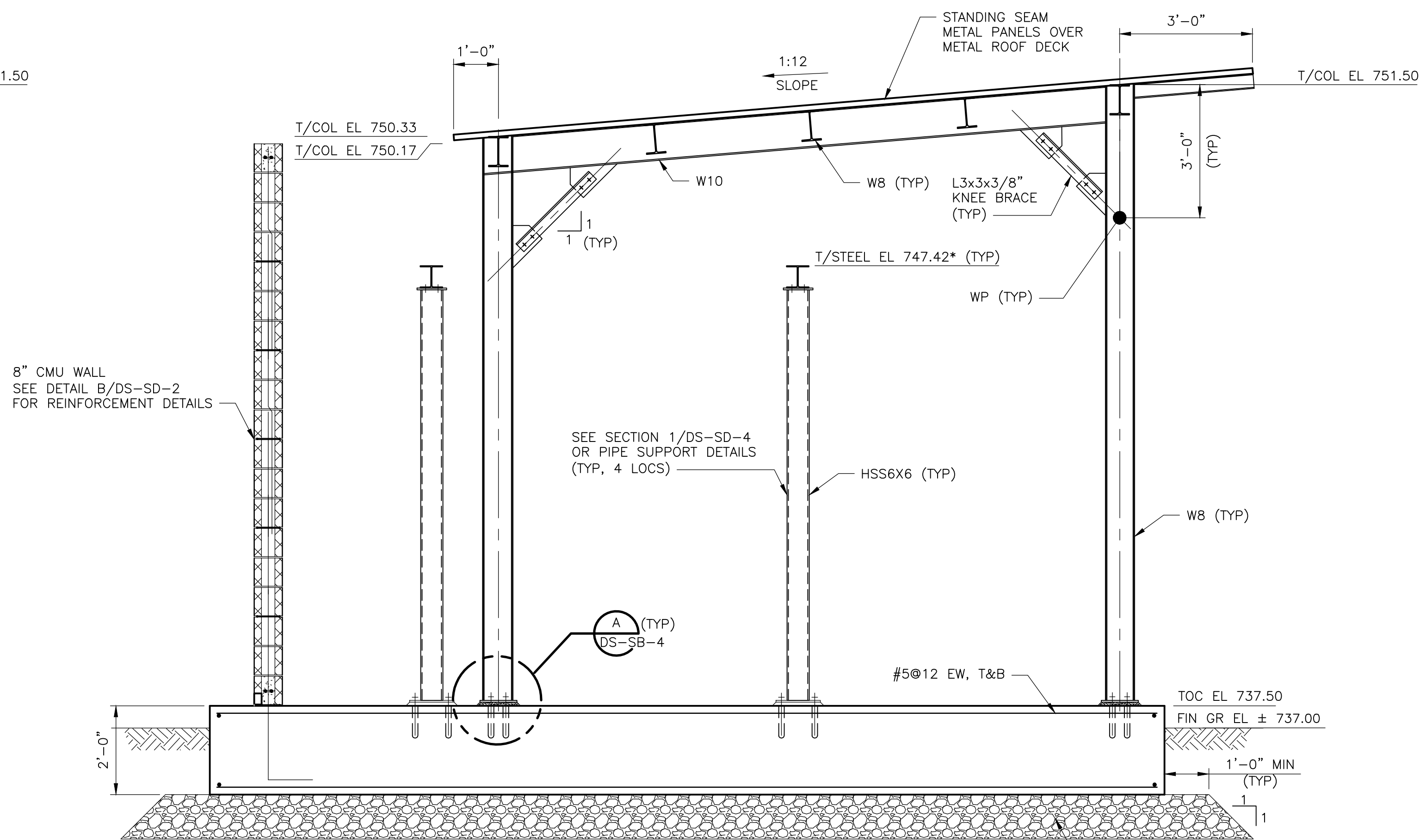


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**NOTES:**  
 1. SEE CIVIL DRAWINGS FOR LOCATIONS AND ORIENTATION OF BLOWER PADS.  
 2. SEE DETAIL N/SZ-5 FOR DECK CONNECTION.  
 3. \* INDICATES DIMENSION OR ELEVATION TO BE COORDINATED WITH THE APPROVED EQUIPMENT DRAWINGS AND PIPING PLAN.



**SECTION 1**  
 1/2" = 1'-0"  
 DS-SB-1



**SECTION 1**  
 1/2" = 1'-0"  
 DS-SB-2

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JNE	CFW	CONFORMED DRAWINGS

DESIGNED BY: J. EULL  
 DRAWN BY: M. SIDDIQ  
 SHEET CHK'D BY: C. WONG  
 CROSS CHK'D BY: J. EULL  
 APPROVED BY: C. WONG  
 DATE: NOVEMBER 2023

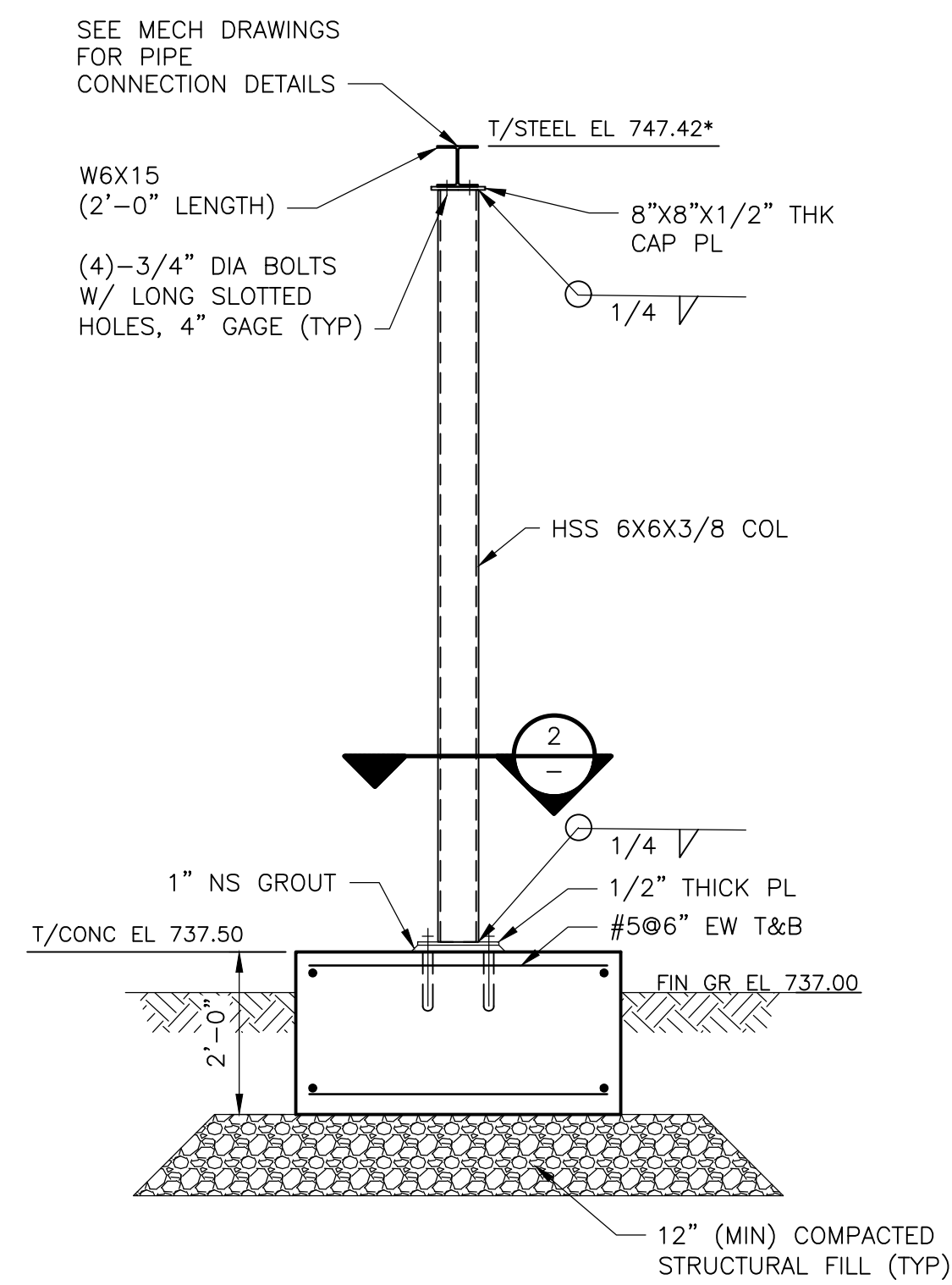
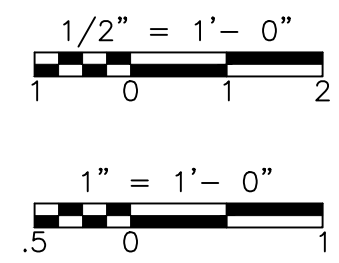


CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

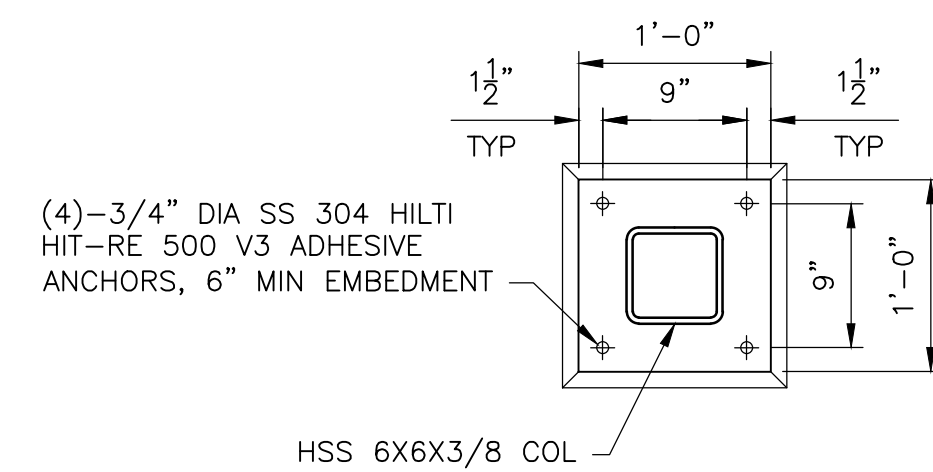
DOVE SPRINGS WWTP  
 BLOWER PAD SECTIONS  
 SHEET NO. DS-SB-3

PROJECT NO. 2048-264953  
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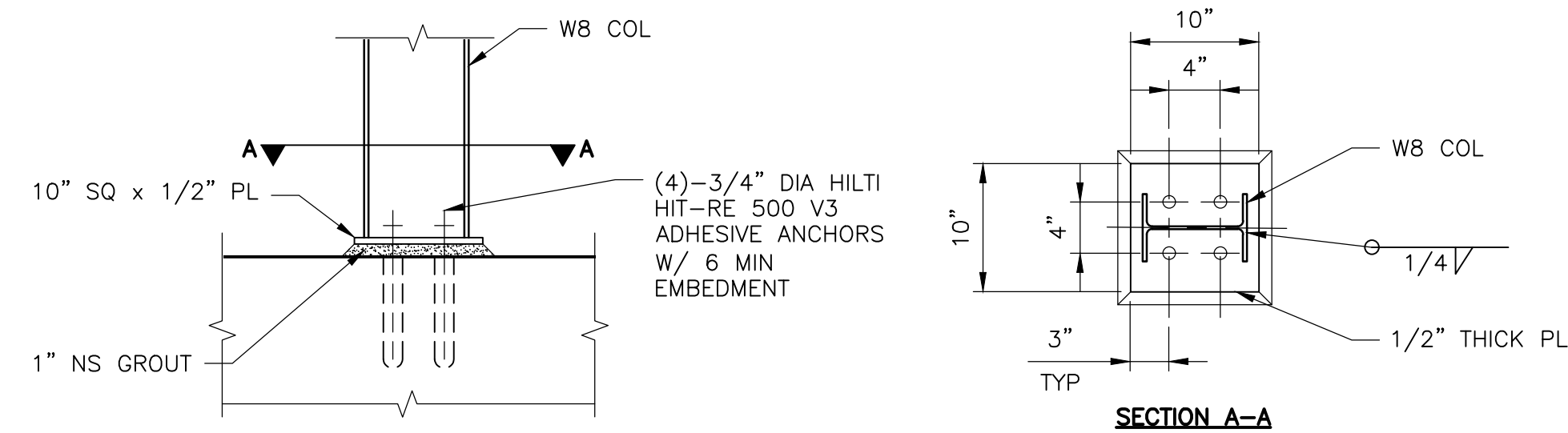




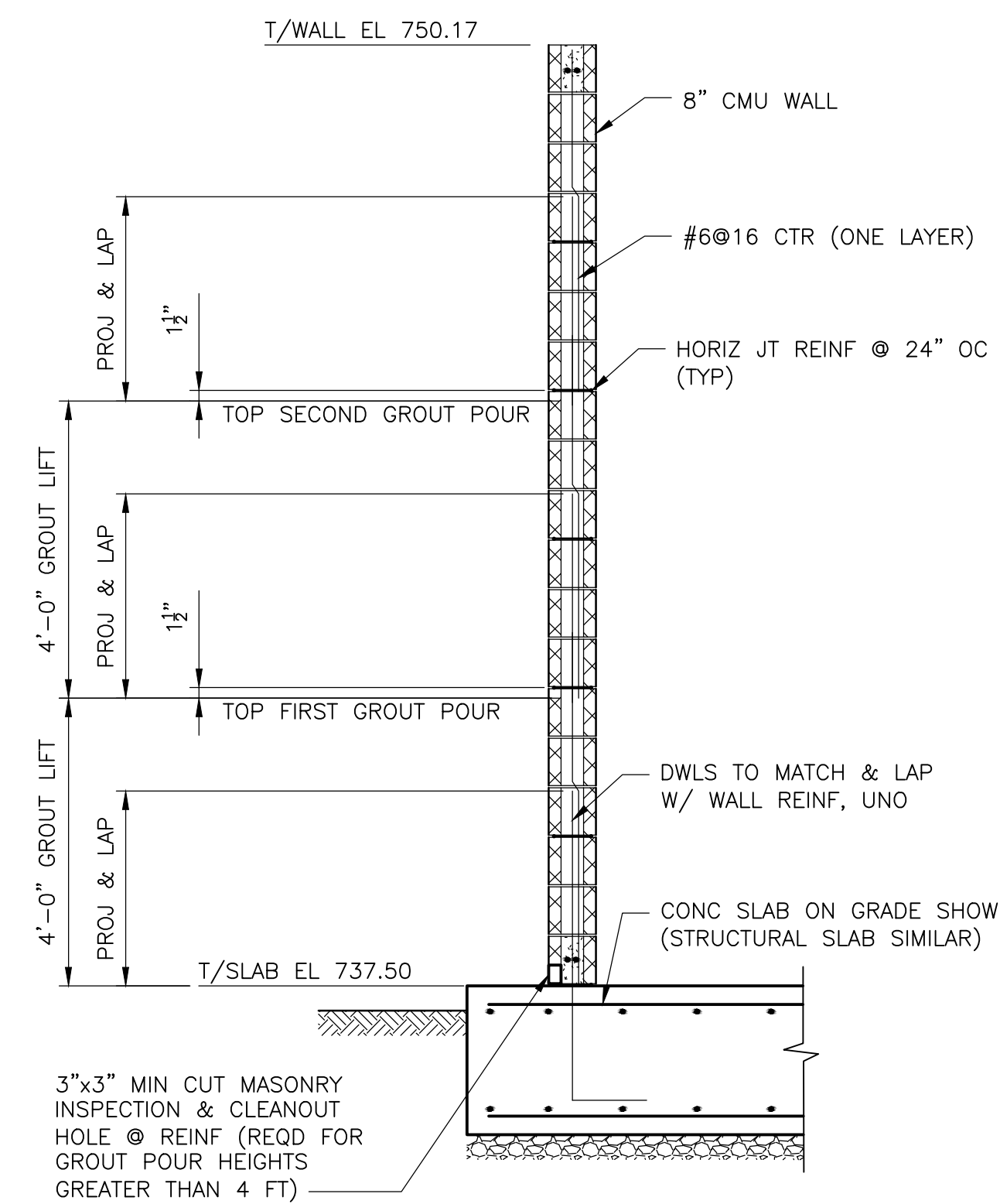
**SECTION 1**  
1/2" = 1'-0"



**SECTION 2**  
1" = 1'-0"



**DETAIL A**  
1" = 1'-0"



**CMU WALL REINFORCEMENT DETAILS**  
**DETAIL B**  
NTS

BAR SIZE	LAP SPLICE LENGTH [IN]			
	8" BLOCK		12" BLOCK	
	CTR	EF	CTR	EF
4	2'-8"	2'-8"	2'-8"	2'-8"
5	3'-4"	3'-4"	3'-4"	3'-4"
6	4'-0"	6'-2"	4'-0"	6'-2"
7	4'-11"	8'-11"	4'-8"	8'-4"

- NOTES:**
- MASONRY LAP SPLICES APPLICABLE FOR ACI 530 & IBC 2015.
  - SEE DRAWINGS OR CONTACT ENGINEER FOR SPLICE LENGTHS NOT SHOWN.

**LAP SPLICE SCHEDULE**  
**DETAIL C**  
NTS

LOCATION	DECK		WELDS AT SUPPORTS PERPENDICULAR TO FLUTES		WELDS AT SUPPORTS PARALLEL TO FLUTES		SIDELAP FASTENERS	
	DEPTH	GAGE	TYPE	LAYOUT	TYPE	LAYOUT	TYPE	LAYOUT
DS BLOWER UNIT NO. 1 PAD CANOPY	1-1/2" BA	18	PUDDLE WELD	36/4	PUDDLE WELD	18" OC	#12 TEK SCREWS	12" OC
DS BLOWER UNIT NO. 2 PAD CANOPY	1-1/2" BA	18	PUDDLE WELD	36/4	PUDDLE WELD	18" OC	#12 TEK SCREWS	12" OC

- DETAIL NOTES:**
- WHERE POSSIBLE, FABRICATE DECK TO EXTEND CONTINUOUSLY OVER THREE SPANS.
  - DECK FASTENERS SHALL BE AS SHOWN.
  - PUDDLE WELDS SHALL BE 1/2" EFFECTIVE WELD DIAMETER WITH A MINIMUM 1" DIAMETER VISIBLE WELD.

**ROOF DECK CONNECTION SCHEDULE**  
**DETAIL D**  
NTS



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A	1/10/24	JNE	CFW	CONFORMED DRAWINGS

DESIGNED BY:	J. EULL
DRAWN BY:	M. SIDDIQ
SHEET CHK'D BY:	C. WONG
CROSS CHK'D BY:	J. EULL
APPROVED BY:	C. WONG
DATE:	NOVEMBER 2023

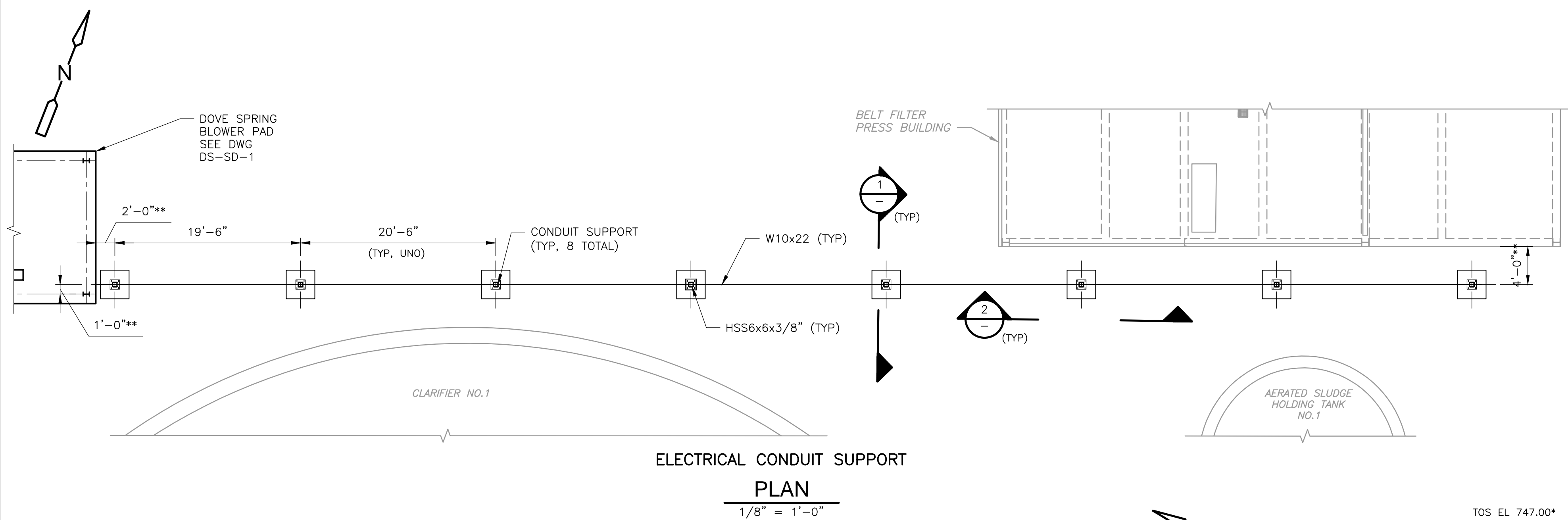
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CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

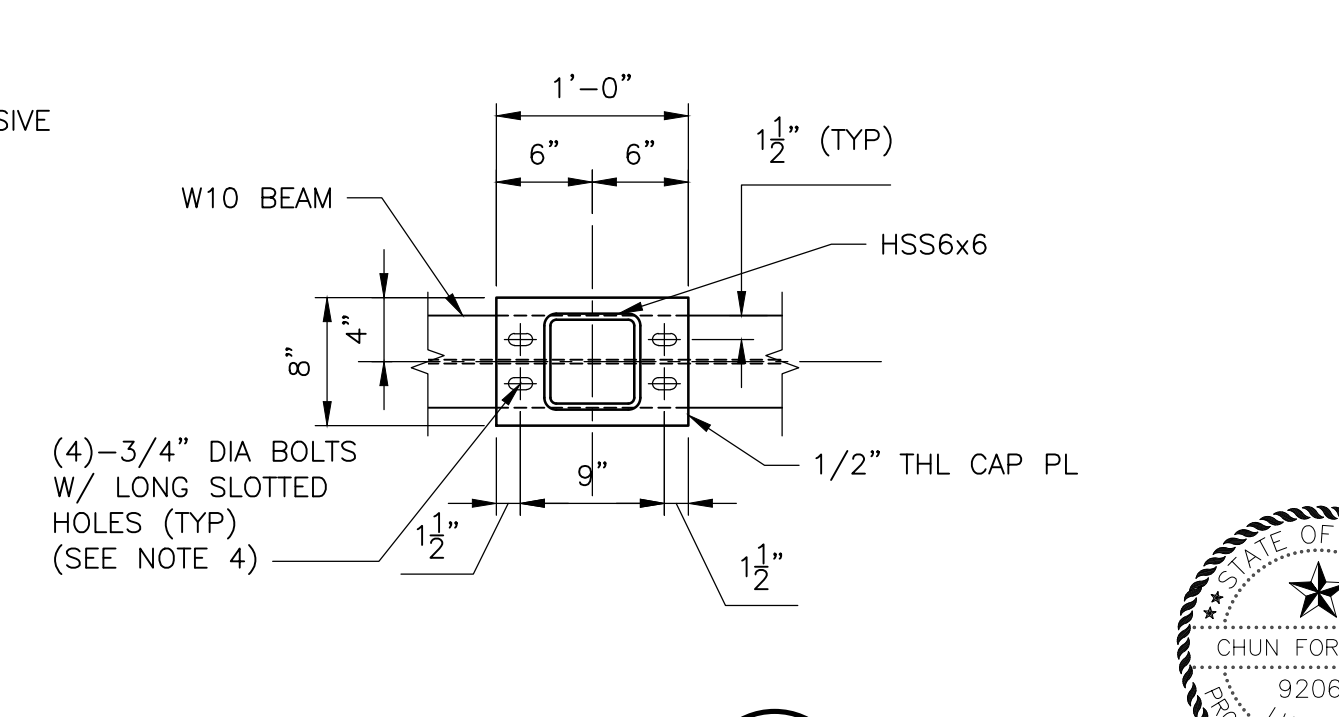
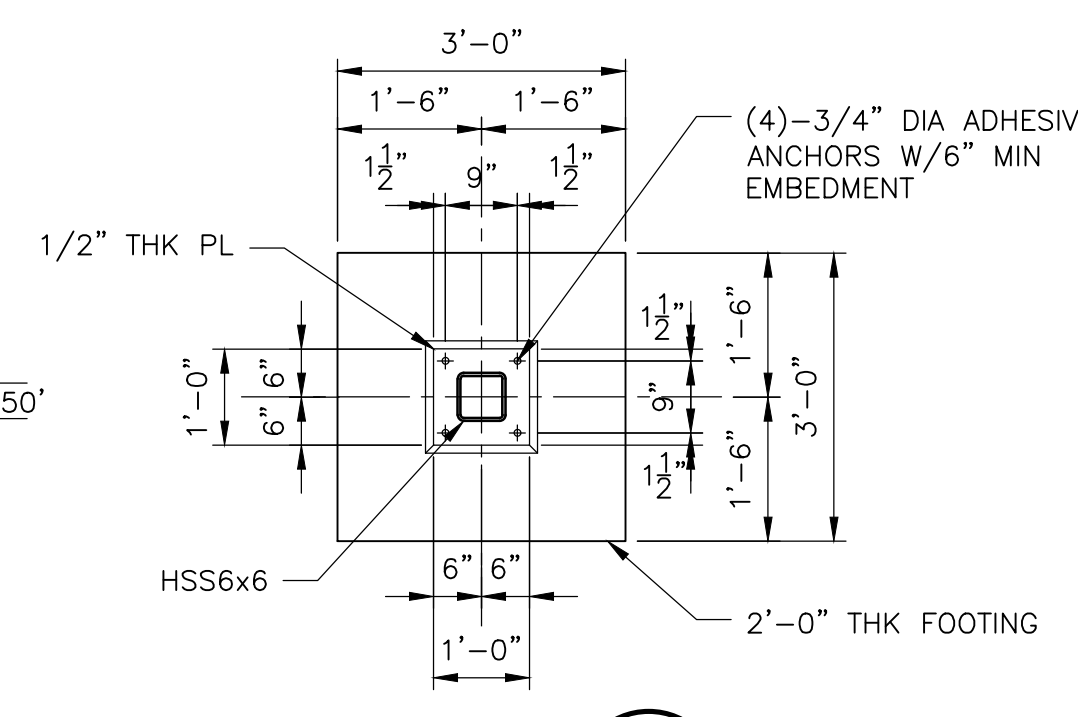
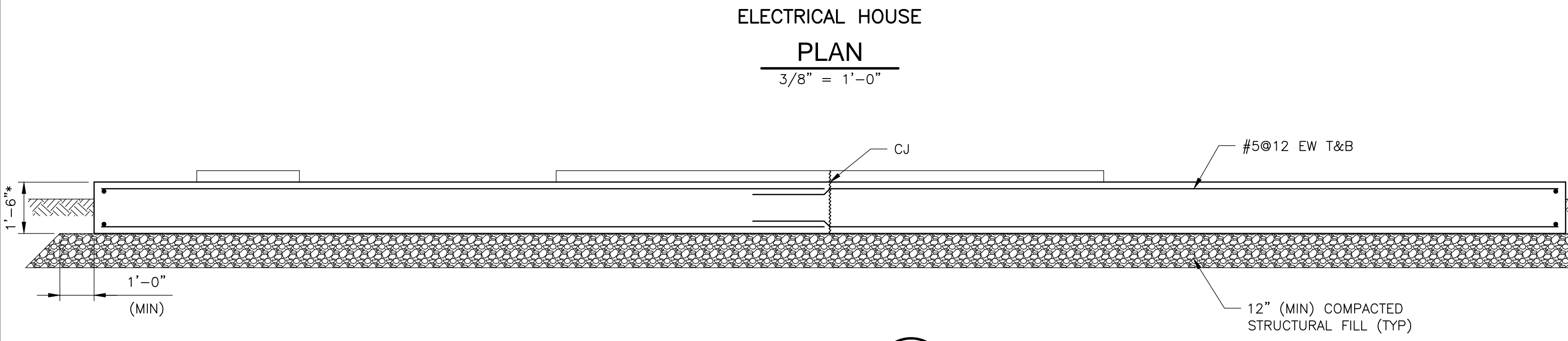
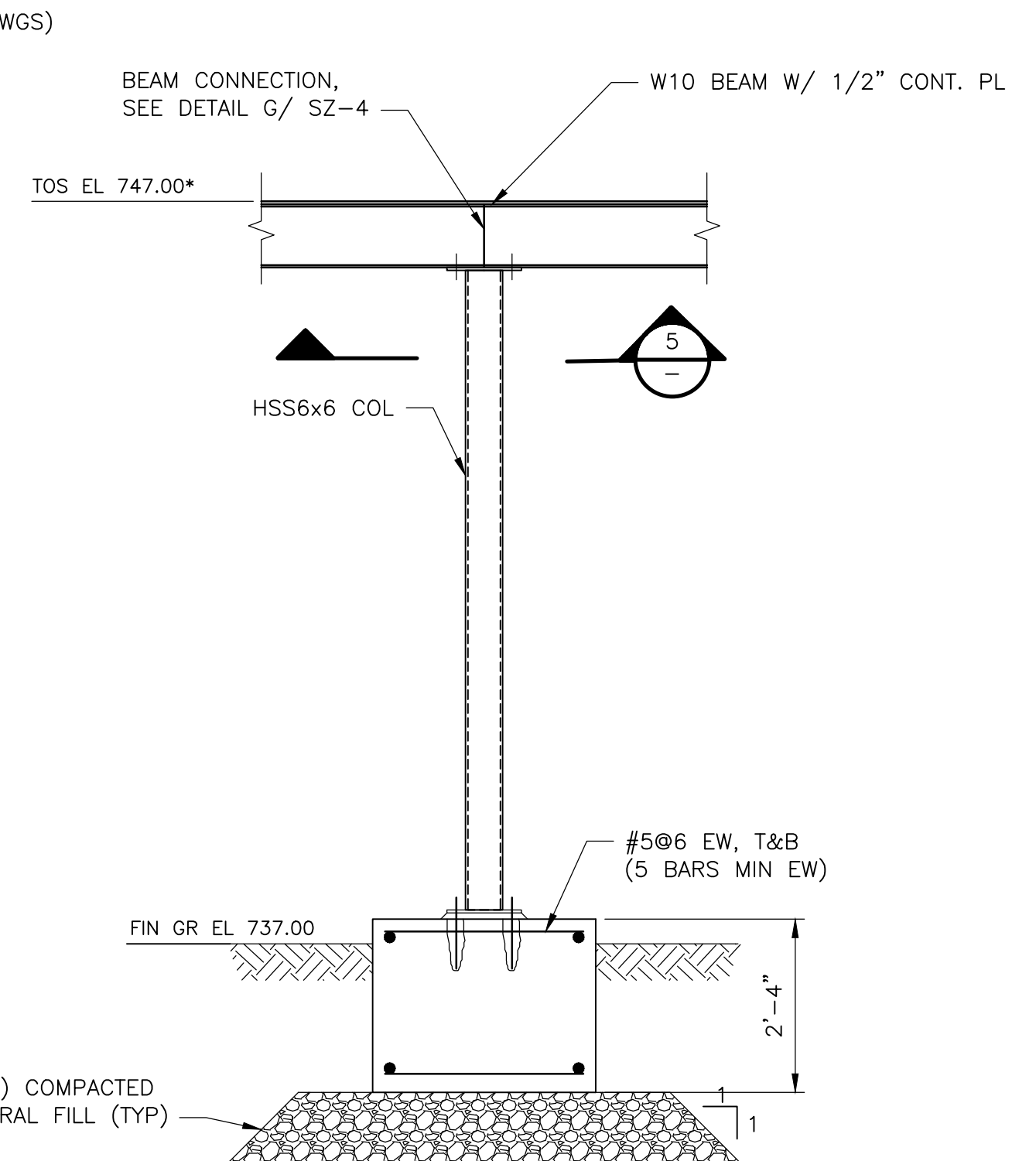
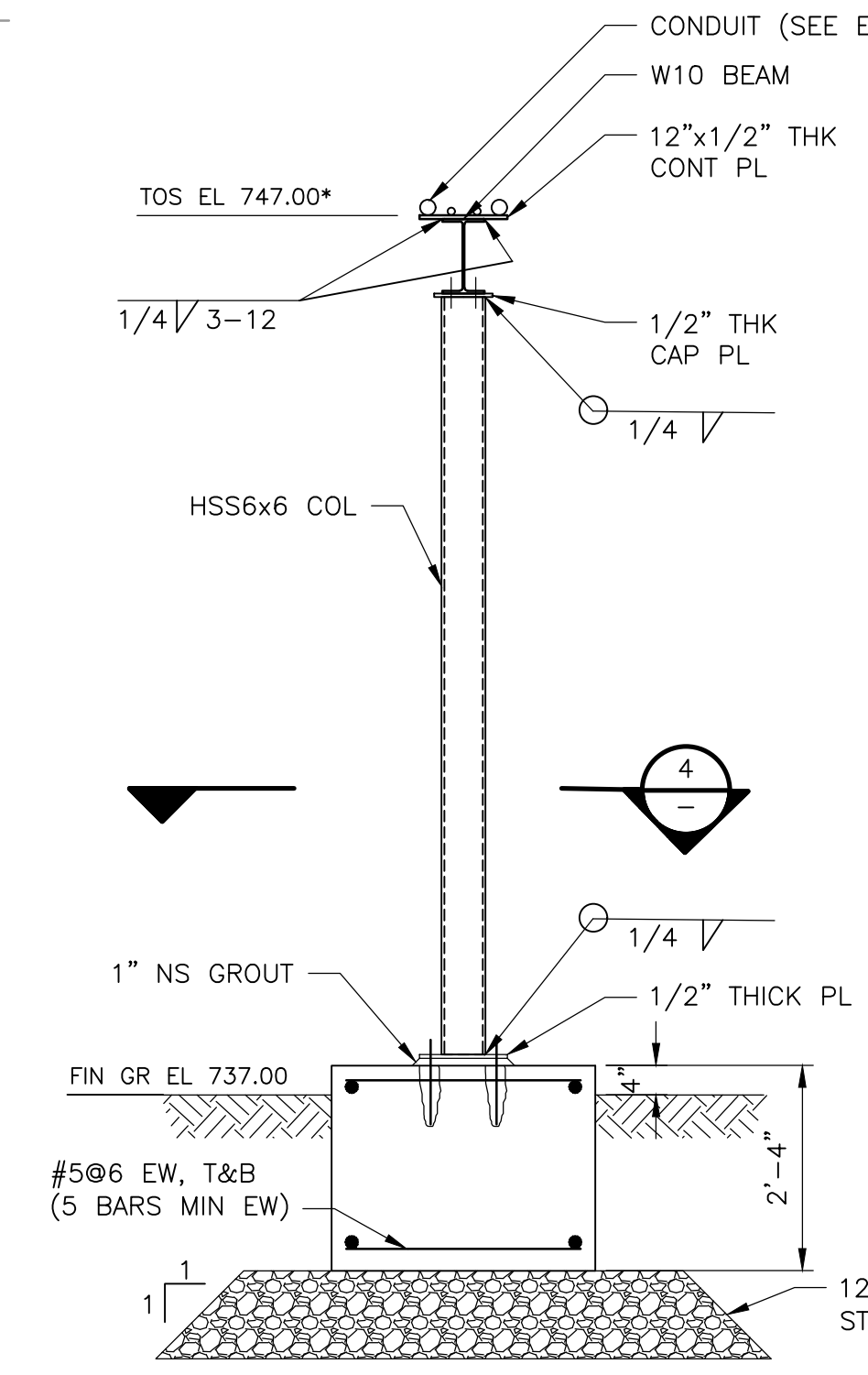
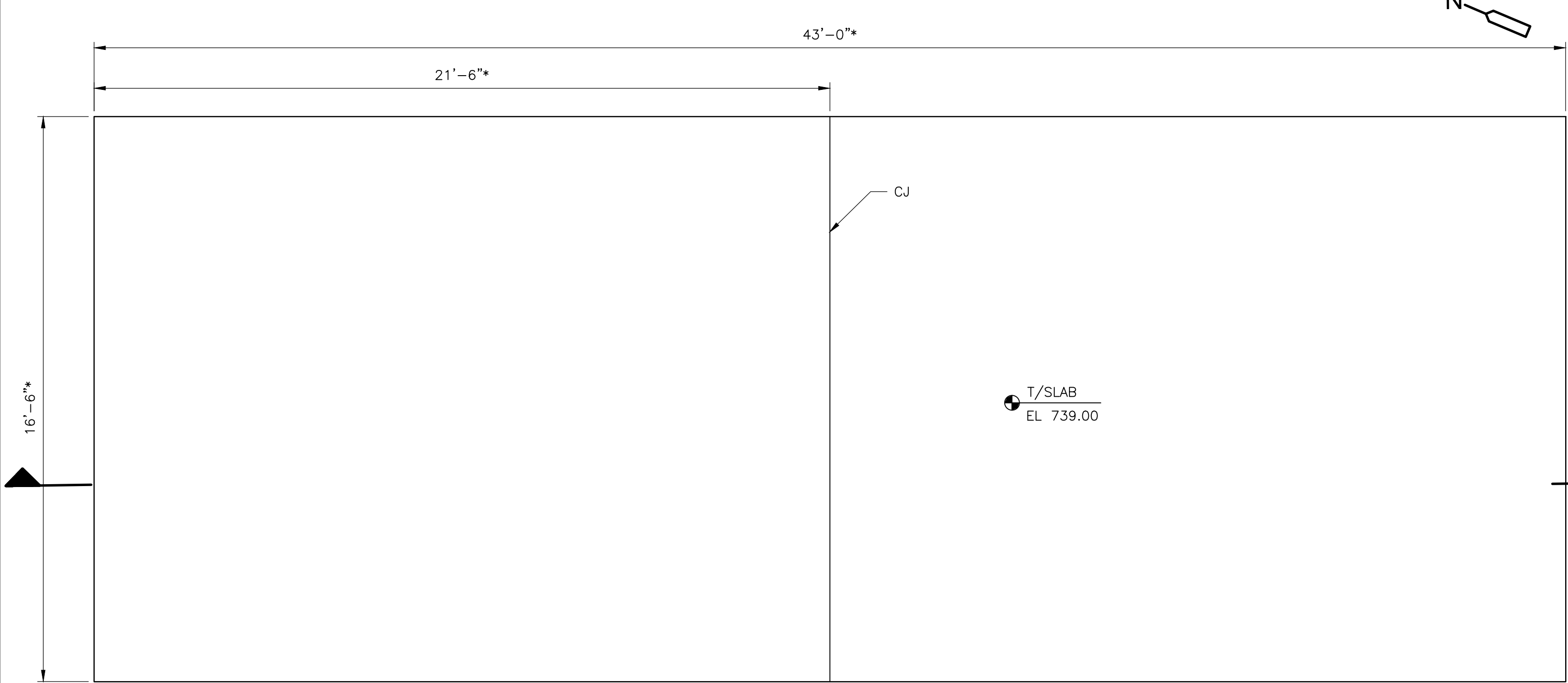
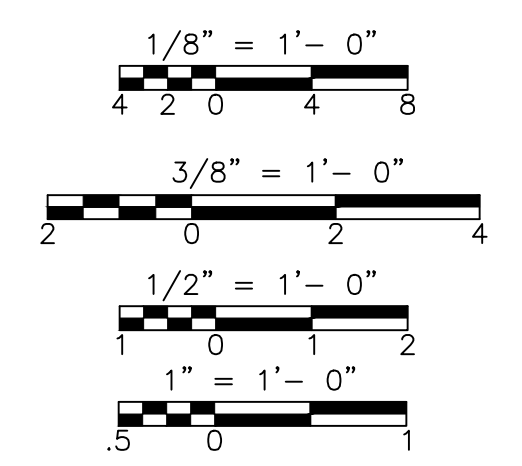
DOVE SPRINGS WWTP  
 BLOWER PAD DETAILS

PROJECT NO.	2048-264953
FILE NAME:	S004BBSC.DWG
SHEET NO.	DS-SD-4

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- NOTES:**
- \* INDICATES DIMENSION TO BE COORDINATED WITH APPROVED ENCLOSURE MANUFACTURER.
  - REFERENCE DRAWING DS-E-1 FOR LOCATION ON OVERALL SITE PLAN.
  - \*\* INDICATES DIMENSIONS TO BE COORDINATED WITH ELECTRICAL DRAWINGS.
  - EACH BOLT CONNECTION ASSEMBLY SHALL INCLUDE WASHERS, DOUBLE NUTS, AND LOCK WASHER, TYP



REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JNE	CFW	CONFORMED DRAWINGS

DESIGNED BY: J. EULL  
 DRAWN BY: DEEPAK K  
 SHEET CHK'D BY: C. WONG  
 CROSS CHK'D BY: J. EULL  
 APPROVED BY: C. WONG  
 DATE: NOVEMBER 2023

**CDM Smith**  
 8310-1 N. Capital of Texas Hwy, Suite 250  
 Austin, TX 78731  
 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

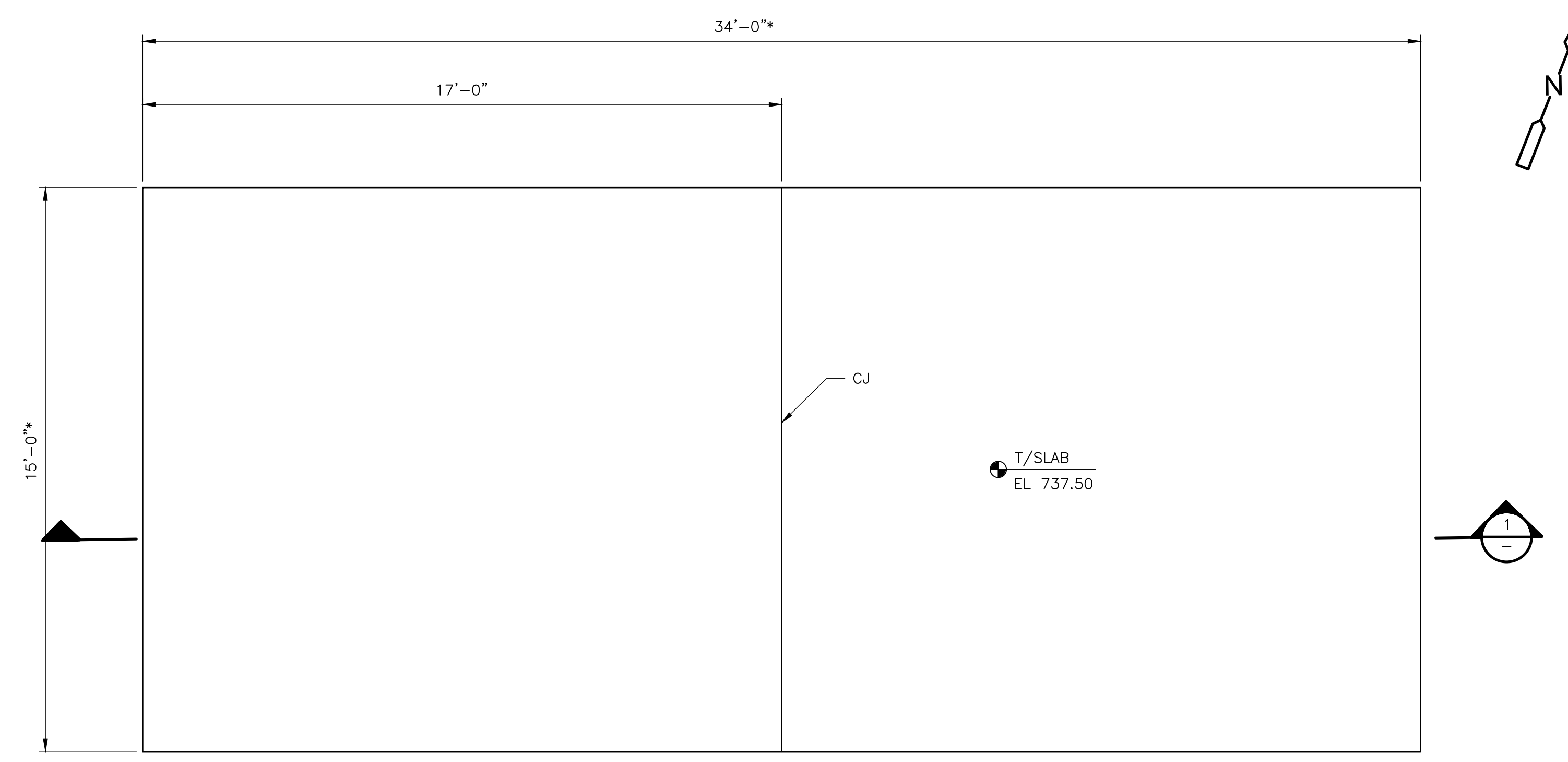
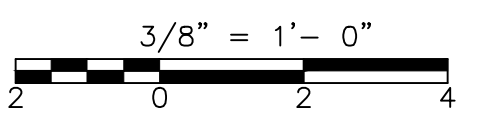
CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP  
 CONDUIT SUPPORT AND ELECTRICAL HOUSE  
 PLAN AND SECTION

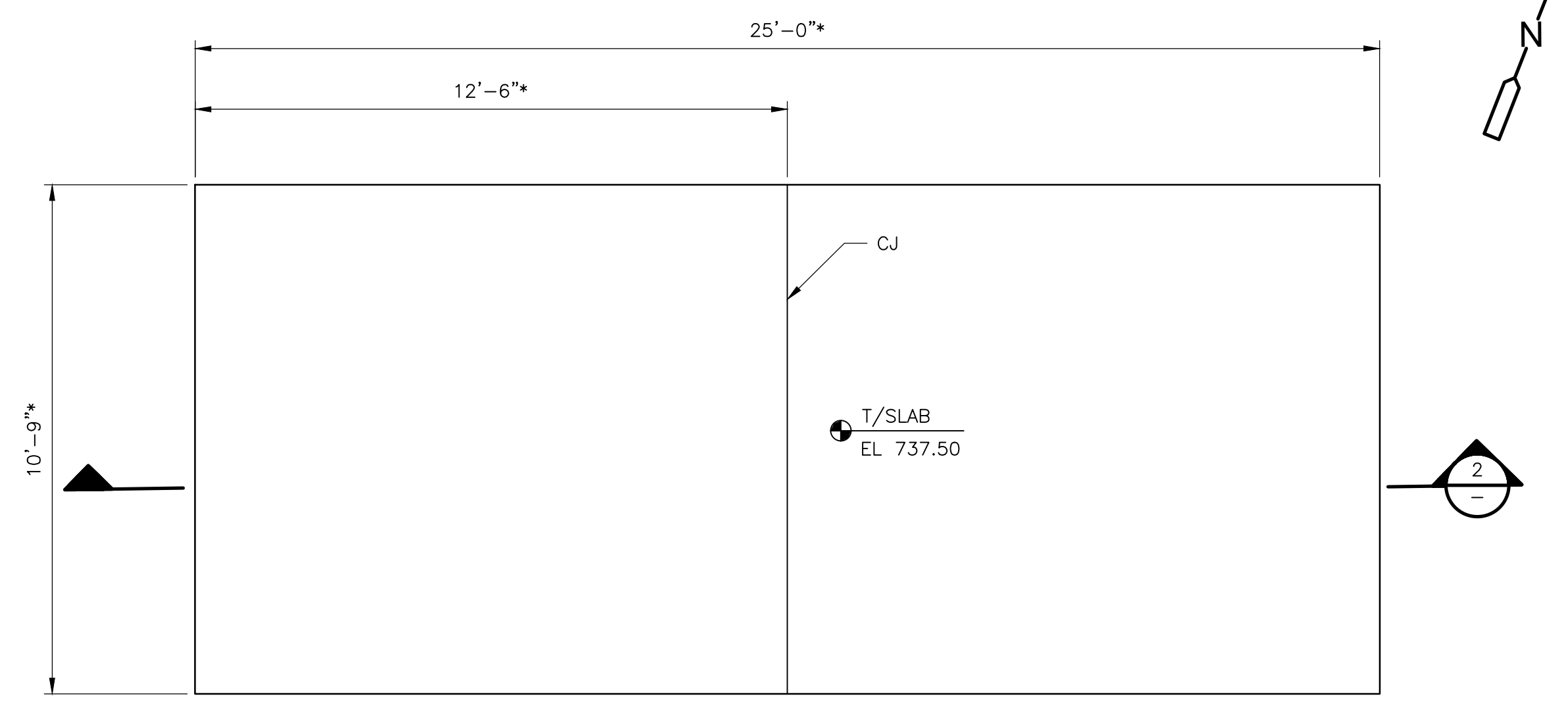
PROJECT NO.	2048-264953
FILE NAME:	S002ELPL.DWG
SHEET NO.	DS-SI-1

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- NOTES:**
- \* INDICATES DIMENSION TO BE COORDINATED WITH APPROVED EQUIPMENT MANUFACTURER.
  - REFERENCE DRAWING DS-E-1 FOR LOCATION ON OVERALL SITE PLAN.
  - THIS IS A LIQUID CONTAINMENT STRUCTURE AND HYDROSTATIC (WATER-TIGHTNESS) TEST IS REQUIRED.

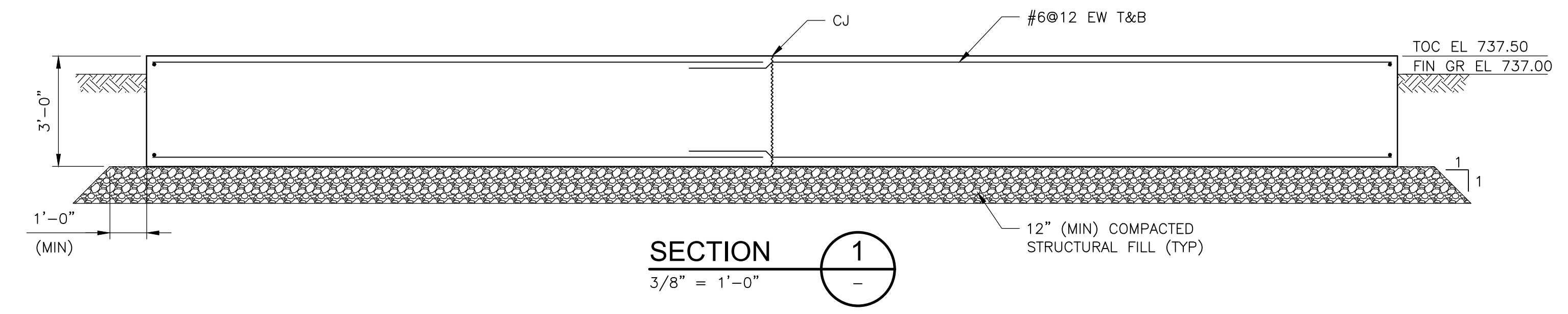


GENERATOR PAD  
 PLAN  
 3/8" = 1'-0"

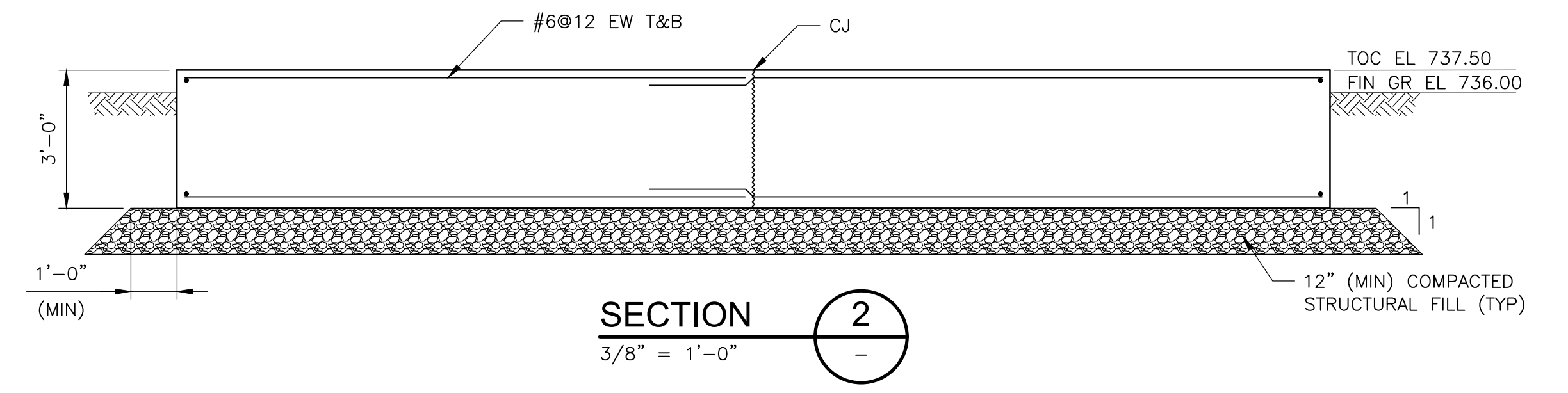


GENERATOR PAD  
 PLAN  
 3/8" = 1'-0"

NOTE: REFERENCE DRAWING DS-SB-1 FOR LOCATION



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



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



REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JNE	CFW	CONFORMED DRAWINGS

DESIGNED BY: J. EULL  
 DRAWN BY: DEEPAK K  
 SHEET CHK'D BY: C. WONG  
 CROSS CHK'D BY: J. EULL  
 APPROVED BY: C. WONG  
 DATE: NOVEMBER 2023



CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP  
 GENERATOR AND TRANSFORMER PAD  
 PLAN AND SECTION

PROJECT NO. 2048-264953  
 FILE NAME: S004ELPL.DWG  
 SHEET NO. DS-SI-2

**TYPICAL DEVELOPMENT & CLASS B SPLICE LENGTHS (INCHES)**

BAR SIZE	TENSION					COMPRESSION
	90° HOOK		STRAIGHT		ALL	
	ldh	A	TOP BARS	OTHER BARS		
3	6	6	16	16	12	
4	7	8	20	16	15	
5	9	10	25	19	19	
6	10	12	29	23	23	
7	12	14	48	37	26	
8	14	16	61	47	30	
9	15	19	75	58	34	
10	17	22	91	70	37	
11	19	24	109	84	41	

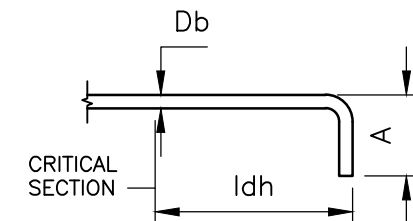
**TYPICAL DEVELOPMENT & CLASS B SPLICE LENGTHS (INCHES)**

BAR SIZE	TENSION					COMPRESSION
	90° HOOK		STRAIGHT		ALL	
	ldh	A	TOP BARS	OTHER BARS		
3	6	6	16	16	12	
4	7	8	20	16	15	
5	9	10	25	19	19	
6	10	12	29	23	23	
7	12	14	43	33	26	
8	14	16	49	37	30	
9	15	19	60	46	34	
10	17	22	74	57	37	
11	19	24	89	68	41	

**NOTES**

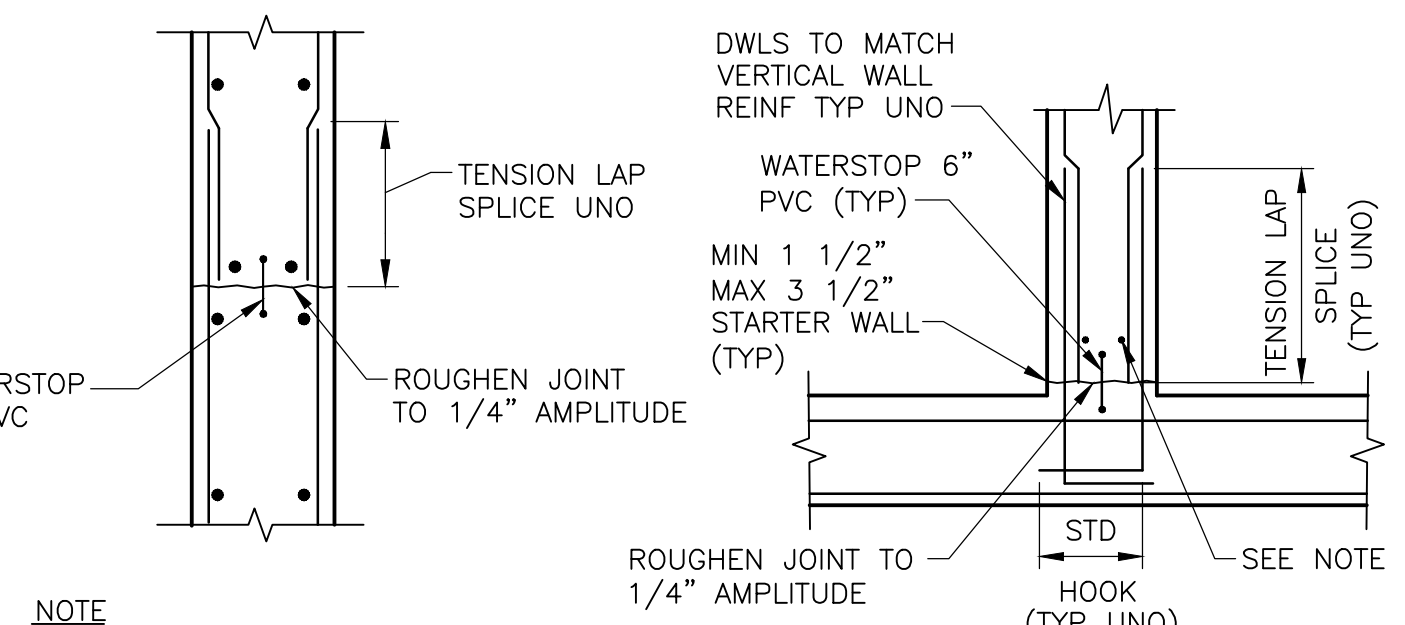
- TOP BARS ARE HOR BARS PLACED SUCH THAT MORE THAN 12" OF CONC IS CAST BELOW THE BAR. HORIZONTAL WALL BARS ARE TOP BARS.
- FOR EPOXY COATED REINFORCING BARS, INCREASE STRAIGHT SPLICE LENGTH BY 50%.
- 90° HOOKS SHALL BE LOCATED WITHIN THE CONFINED CORE OF A COLUMN OR BOUNDARY ELEMENT.
- TABLE IS VALID FOR DESIGNS BASED ON ACI 318-08.
- TABLE IS BASED ON  $f'_c = 4000$  PSI. LAP SPLICE AND DEVELOPMENT LENGTHS SHALL BE ADJUSTED FOR OTHER CONCRETE COMPRESSIVE STRENGTHS AS FOLLOWS:
 

$f'_c$	MULTIPLIER
3000 PSI	1.16
3500 PSI	1.07
4500 PSI	0.94
- FOR COVER AND SPACING GEOMETRY NOT SHOWN ALL HOOKS, SPLICES AND DEVELOPMENT LENGTHS SHALL BE APPROVED IN WRITING BY THE ENGINEER.
- APPLICABLE FOR BAR SPACING  $\geq 6$ -INCH.



**STANDARD HOOK, LAP SPLICE AND DEVELOPMENT LENGTHS**

**DETAIL A**  
NTS



**NOTE**

- DETAIL SHOWN FOR WALLS; SLABS SIMILAR.

**INTERMEDIATE WALL**

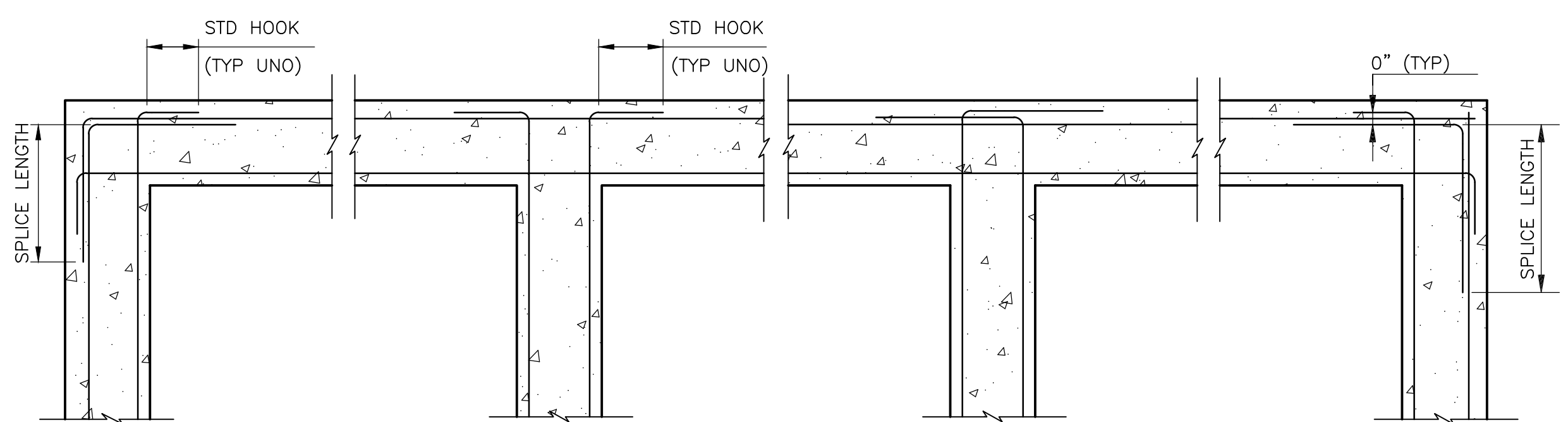
**END WALL**

**NOTES**

- APPLY WATERSTOP WHERE INDICATED ON PLANS OR WHERE WATER TIGHT JOINT IS REQUIRED.
- STARTER WALL MAY BE ELIMINATED AT JOINTS WITHOUT WATERSTOP.
- SEE INTERMEDIATE WALL FOR INFORMATION NOT GIVEN FOR END WALL.
- EXTEND BAR HOOKED ENDS TO BOTTOM OF SLAB OR FAR FACE OF WALL WITH CONCRETE COVER INDICATED ON SHEET S-1.
- WHERE NOT SHOWN ON INDIVIDUAL DRAWINGS, DOUBLE REINFORCEMENT IS REQUIRED FOR ALL LIQUID TIGHT STRUCTURES. PROVIDE ADDITIONAL REINFORCEMENT EF TO 1/4 OF TOTAL WALL HEIGHT (OR 4'-0" MIN). BARS SHALL BE OF SAME SIZE AS HOR REINFORCEMENT AND LOCATED HALFWAY BETWEEN TYPICAL HOR REINFORCEMENT.

**CONSTRUCTION JOINT**

**DETAIL B**  
NTS

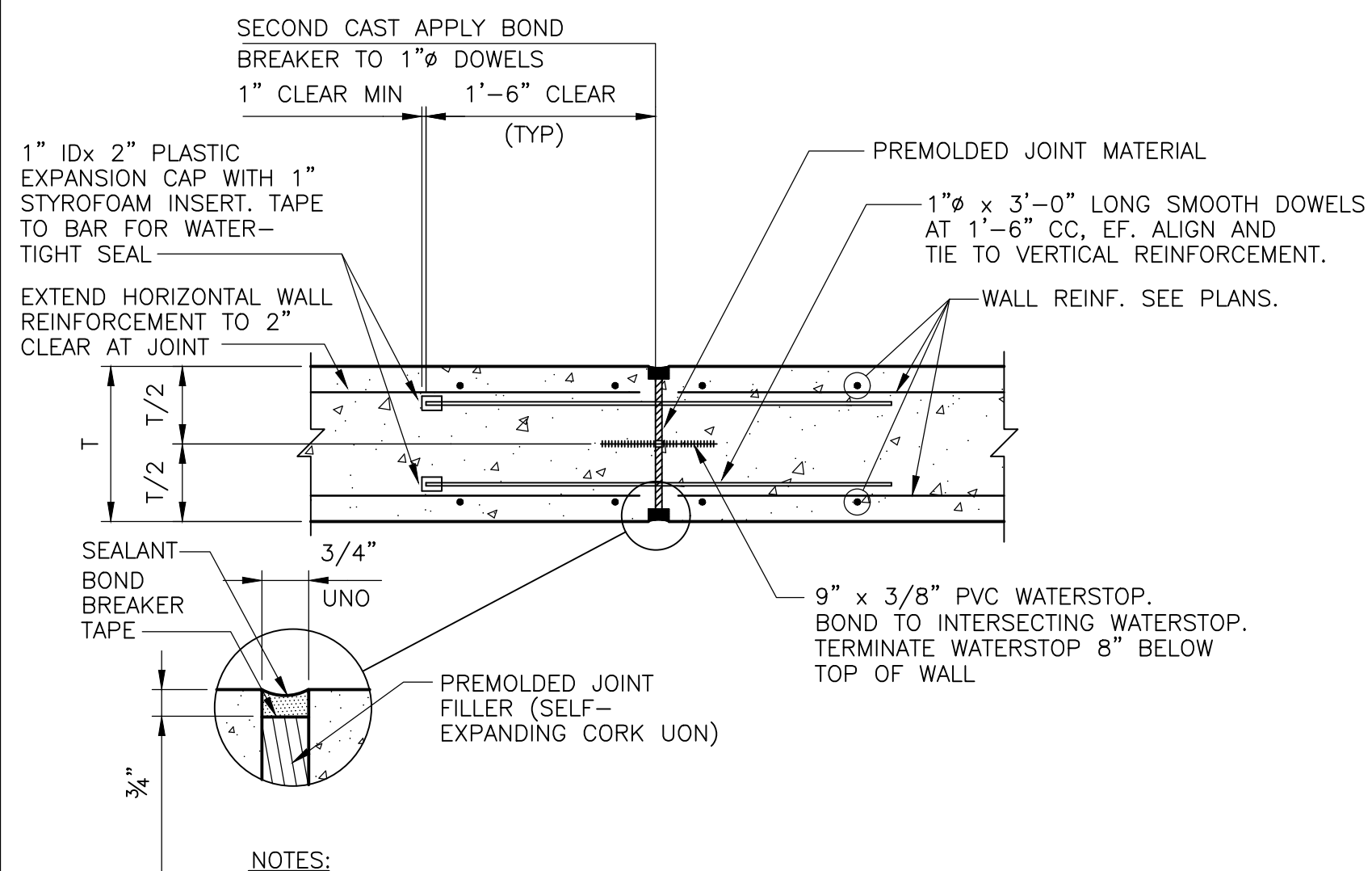


**REINFORCING AT WALL AND CURB CORNERS**

**DETAIL C**  
NTS

**NOTES:**

- ALL 90 BENDS SHALL BE STANDARD HOOKS PER ACI 315 UNLESS OTHERWISE SPECIFIED.
- EXTEND BAR HOOKED ENDS TO FAR FACE OF WALL WITH CONCRETE COVER INDICATED ON SHEET S-1.
- DETAILS SHOWN ARE FOR WALLS, CONTINUOUS GRADE BEAMS AND BEAMS.
- SEE PLANS FOR ADDITIONAL REINFORCEMENT AT WALL CORNERS AND INTERSECTIONS.

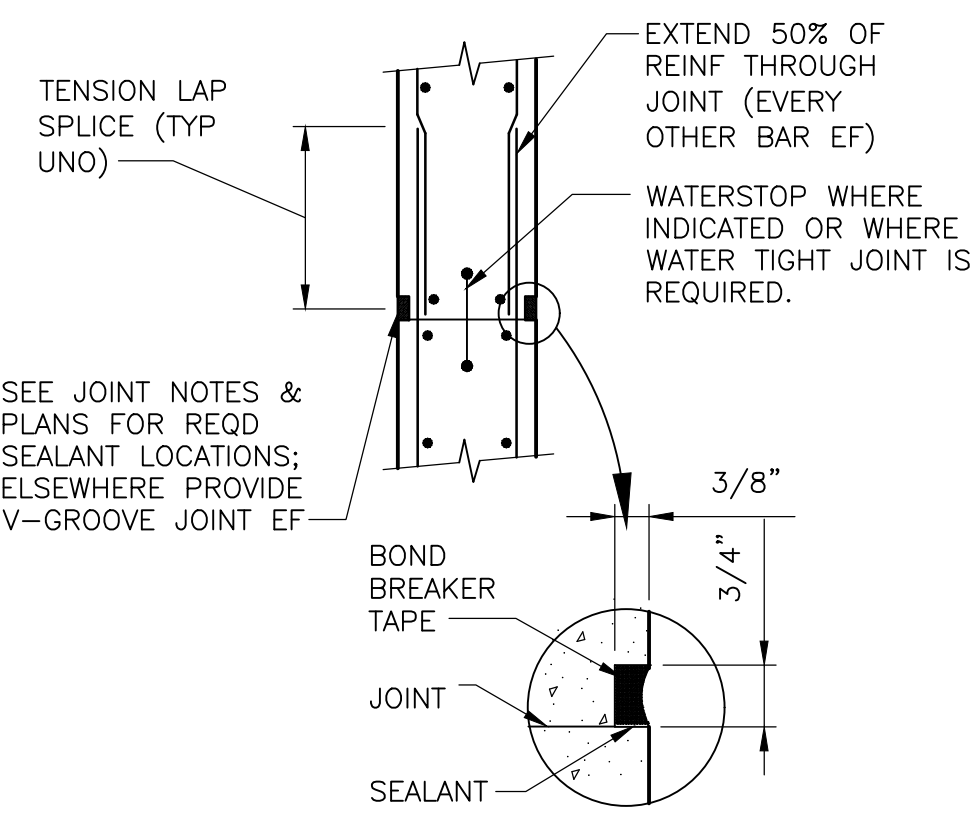


**NOTES:**

- DETAIL SHOWN FOR WALLS. SLABS SIMILAR EXCEPT NO SEALANT REQ'D AT UNDERSIDE OF SLABS ON GRADE.

**EXPANSION JOINT**

**DETAIL D**  
NTS

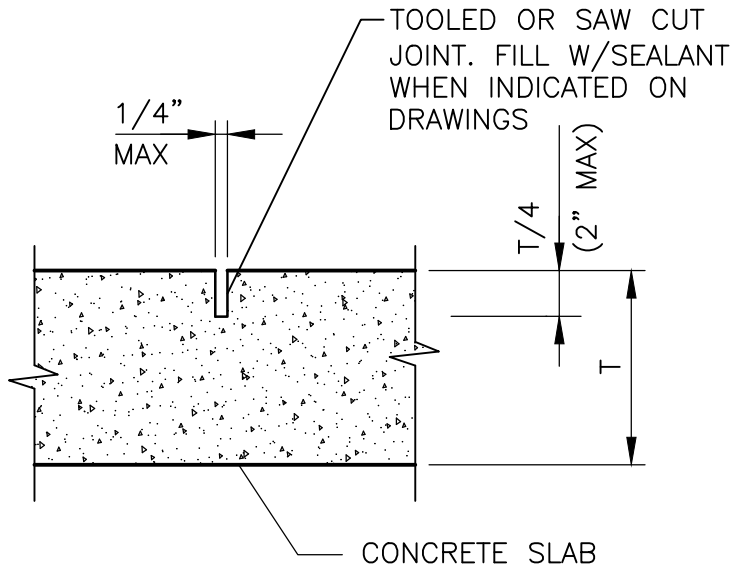


**NOTES:**

- DETAIL SHOWN FOR WALLS. SLABS SIMILAR EXCEPT NO SEALANT REQ'D AT UNDERSIDE OF SLABS ON GRADE.

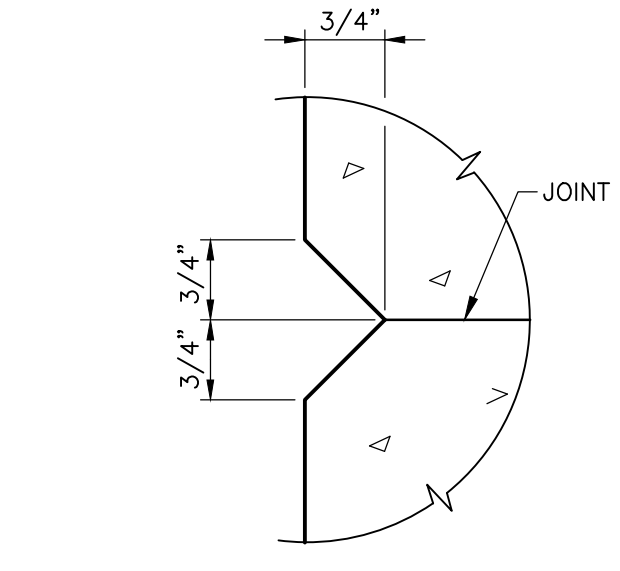
**CONTROL JOINT AND SEALANT**

**DETAIL E**  
NTS



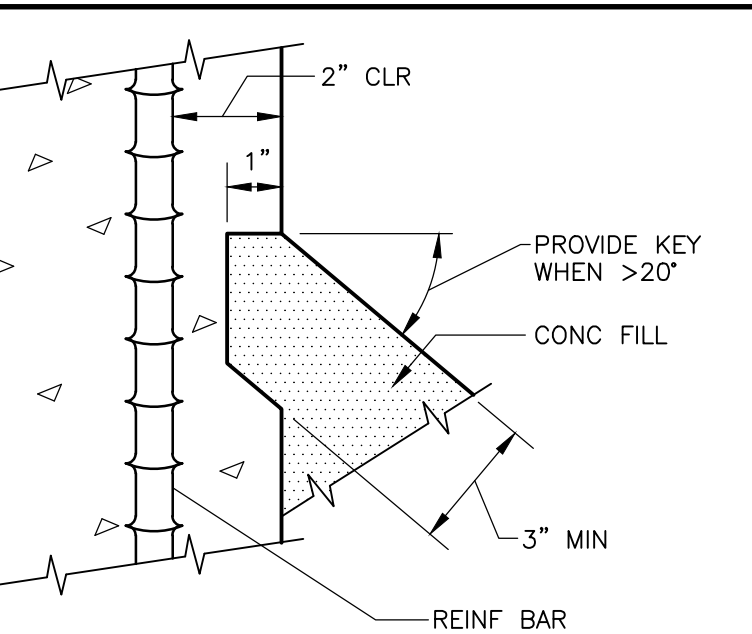
**TOOLED CONTROL JOINT**

**DETAIL F**  
NTS



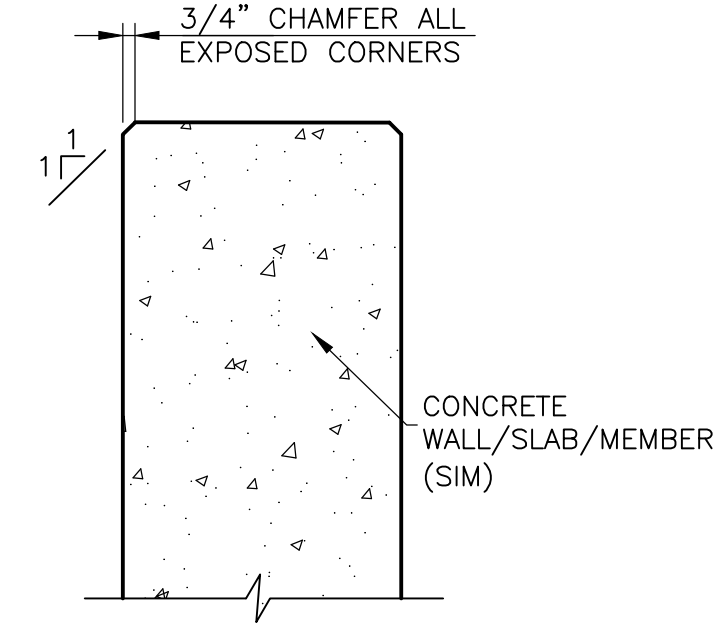
**V-GROOVE JOINT**

**DETAIL G**  
NTS



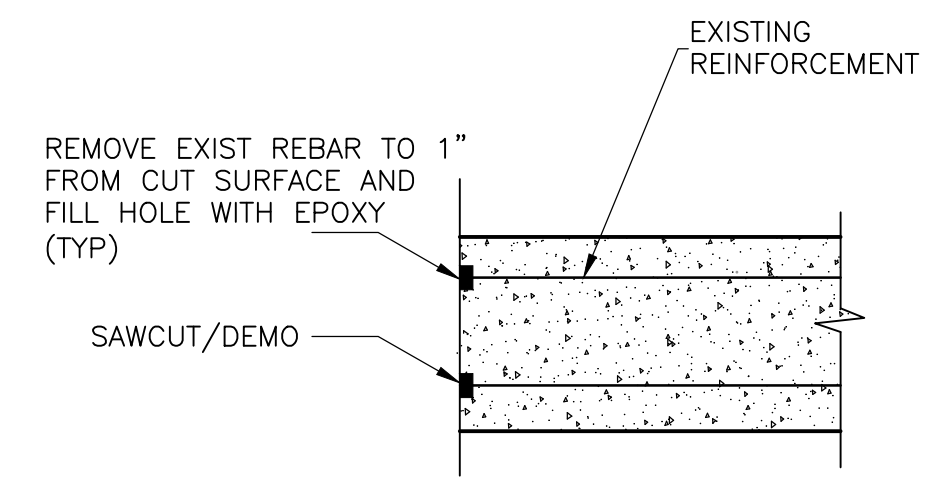
**KEY AT CONCRETE FILL**

**DETAIL H**  
NTS



**CHAMFER**

**DETAIL J**  
NTS



**EXISTING REBAR PROTECTION (SIM)**

**DETAIL K**  
NTS



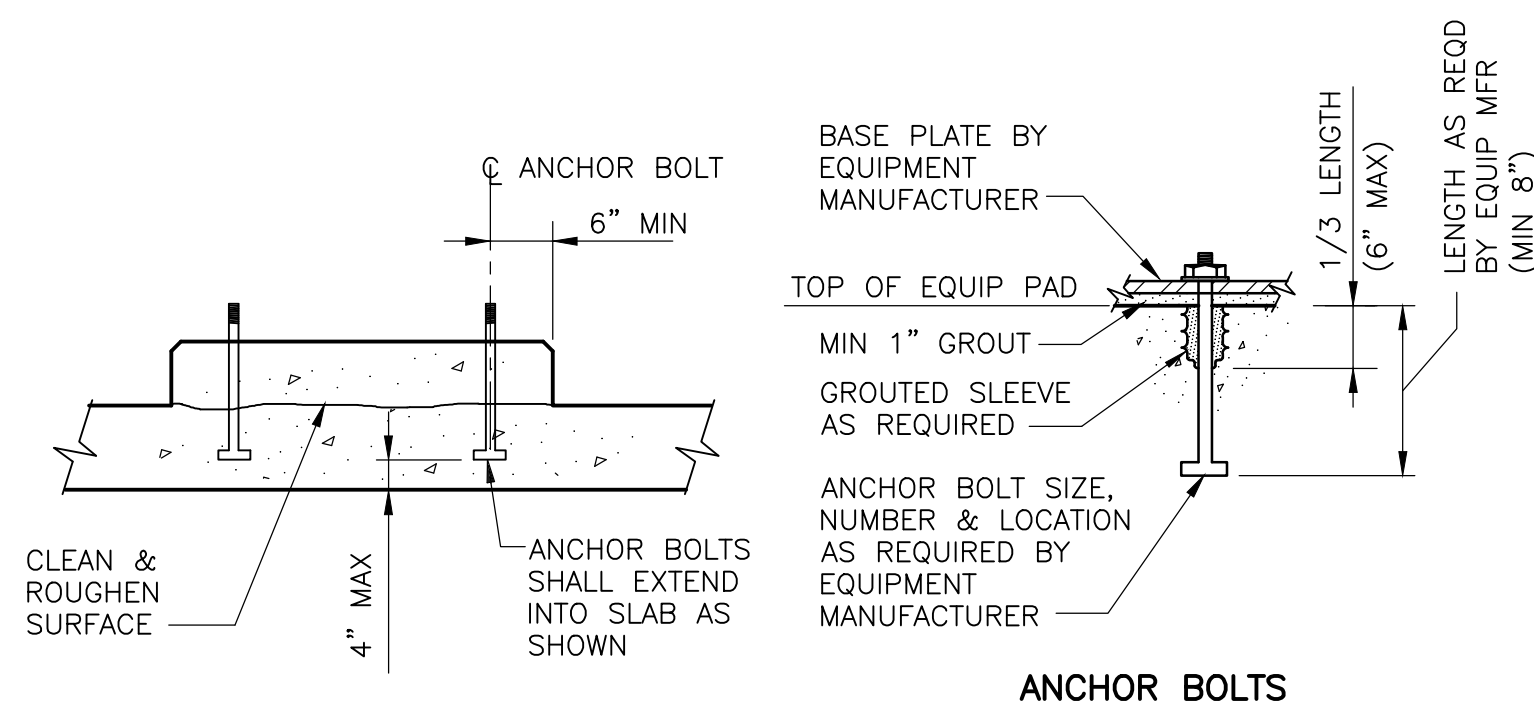
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DESIGNED BY:	J. EULL
DRAWN BY:	P. ANUSHA
SHEET CHK'D BY:	C. WONG
CROSS CHK'D BY:	J. EULL
APPROVED BY:	C. WONG
DATE:	NOVEMBER 2023

**CDM Smith**  
 8310-1 N. Capital of Texas Hwy, Suite 250  
 Austin, TX 78731  
 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

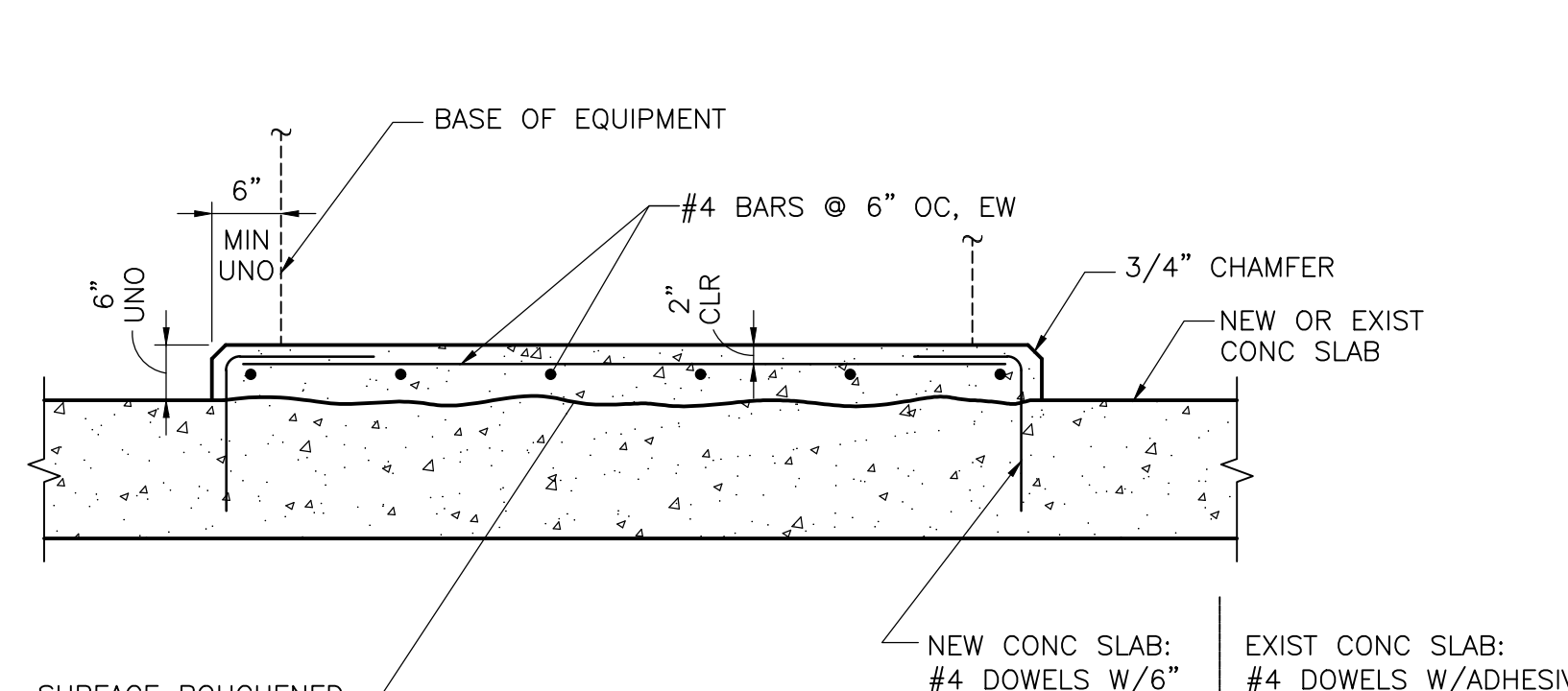
CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

STRUCTURAL STANDARD DETAILS I  
 PROJECT NO. 2048-264953  
 FILE NAME: S001STD.DWG  
 SHEET NO. SZ-1



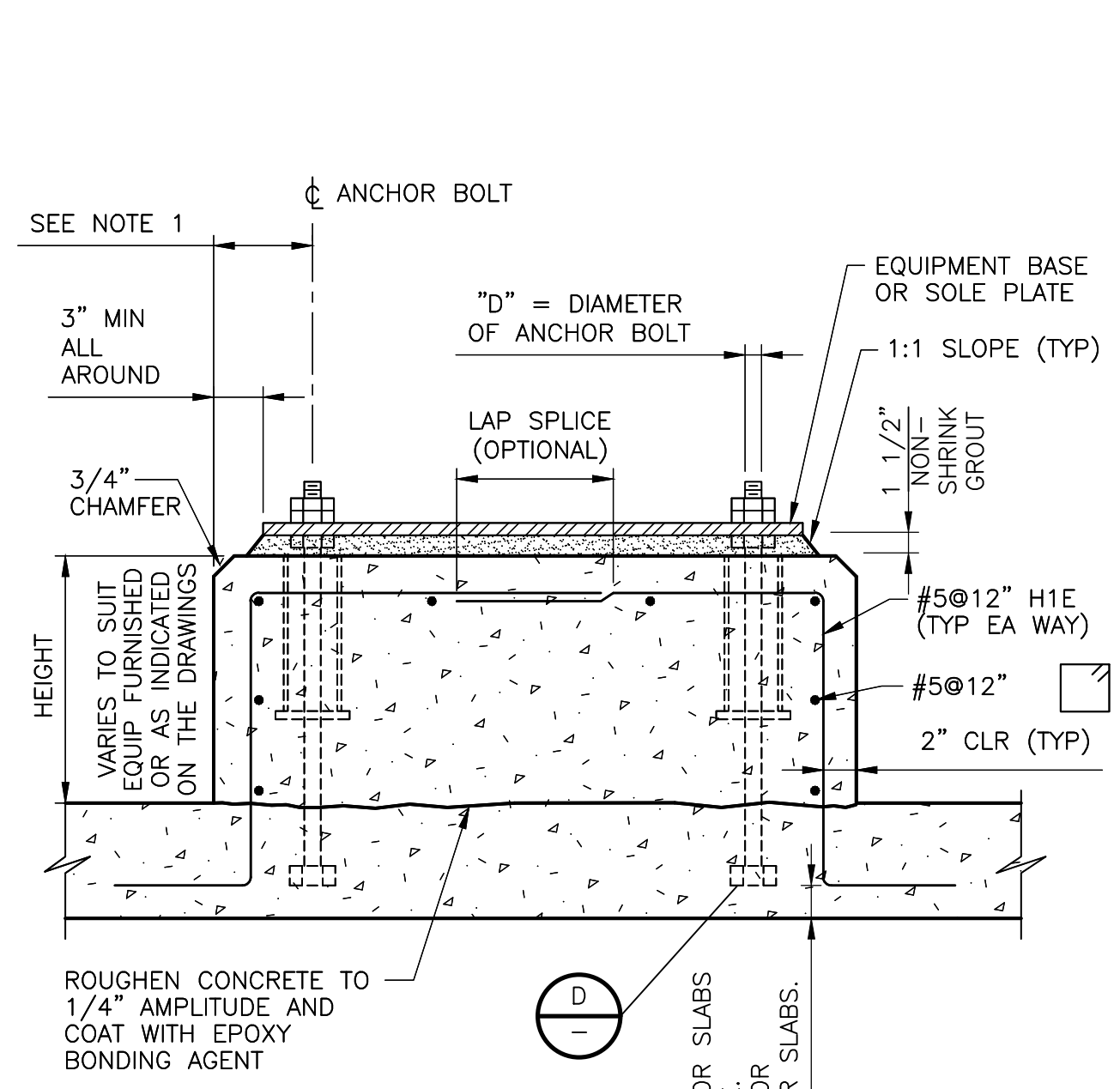
**NOTE:**  
1. DIMENSIONS OF PAD AS REQD TO SUIT EQUIP (4\"/>

**EQUIPMENT PAD - ANCHOR BOLTS**  
**DETAIL A**  
NTS



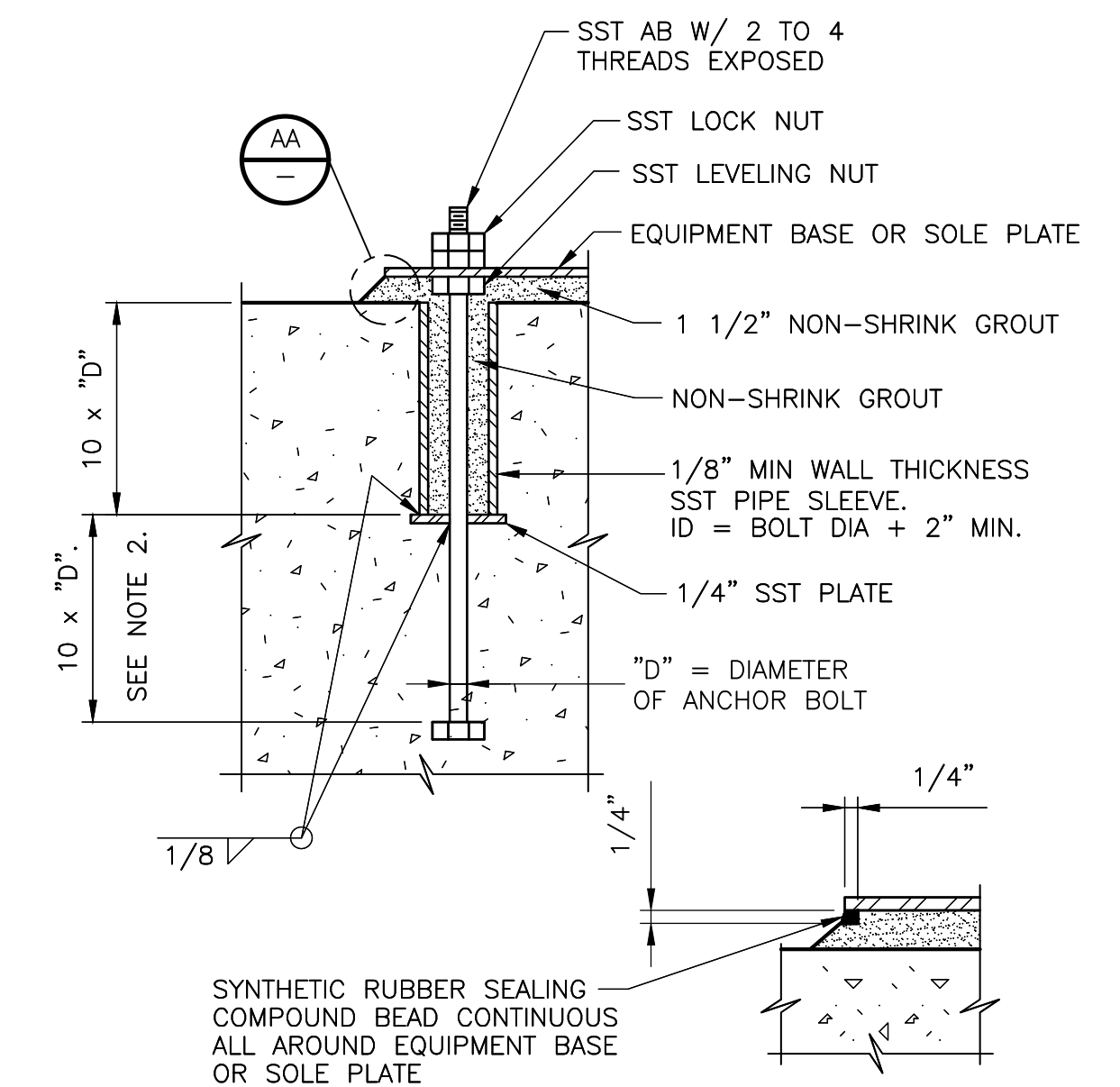
**NOTE:**  
1. COORDINATE PAD DIMENSIONS AND ANCHORAGE WITH THE APPROVED EQUIPMENT MANUFACTURER

**EQUIPMENT PAD - REINFORCING**  
**DETAIL B**  
NTS



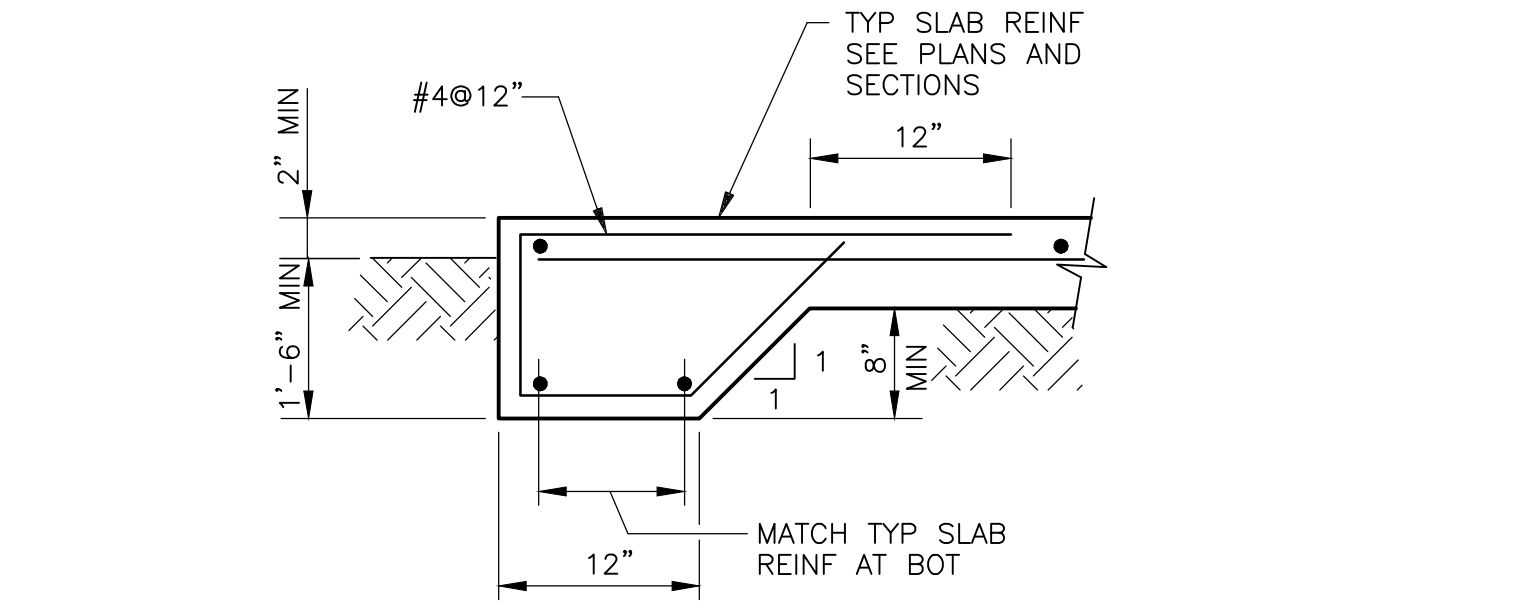
**NOTE:**  
1. THE EDGE DISTANCE ON THE ANCHOR BOLTS SHALL NOT BE LESS THAN 6\"/>

**PUMP SUPPORT**  
**DETAIL C**  
NTS

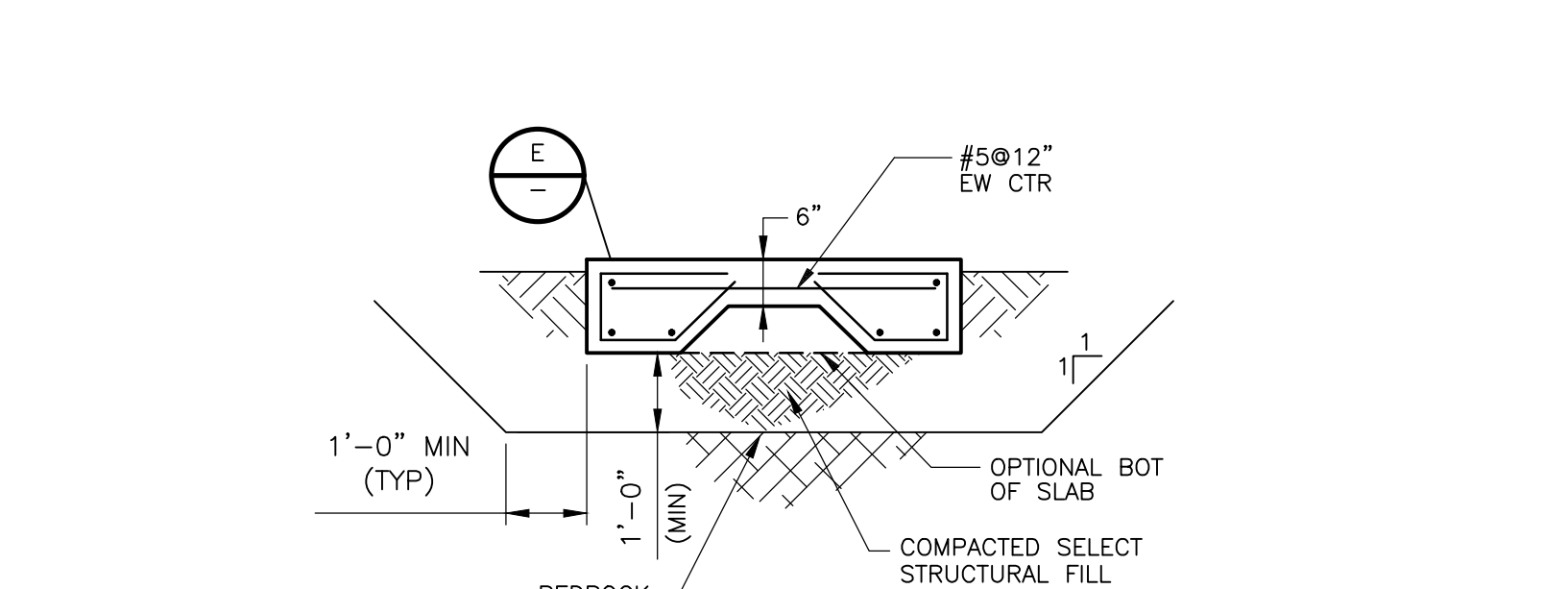


**NOTES:**  
1. ANCHOR BOLT DIAMETER AS INDICATED ON THE DRAWINGS. IF NOT INDICATED ON THE DRAWINGS, THE ANCHOR BOLT SIZE SHALL BE AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER.  
2. WHERE CONCRETE SLAB OR BEAM THICKNESS WILL NOT ACCOMMODATE THE ANCHOR BOLT, PROVIDE EXTRA THICKNESS OF SLAB OR BEAM.  
3. PREFABRICATED PLASTIC ANCHOR BOLT SLEEVE OPTIONAL.

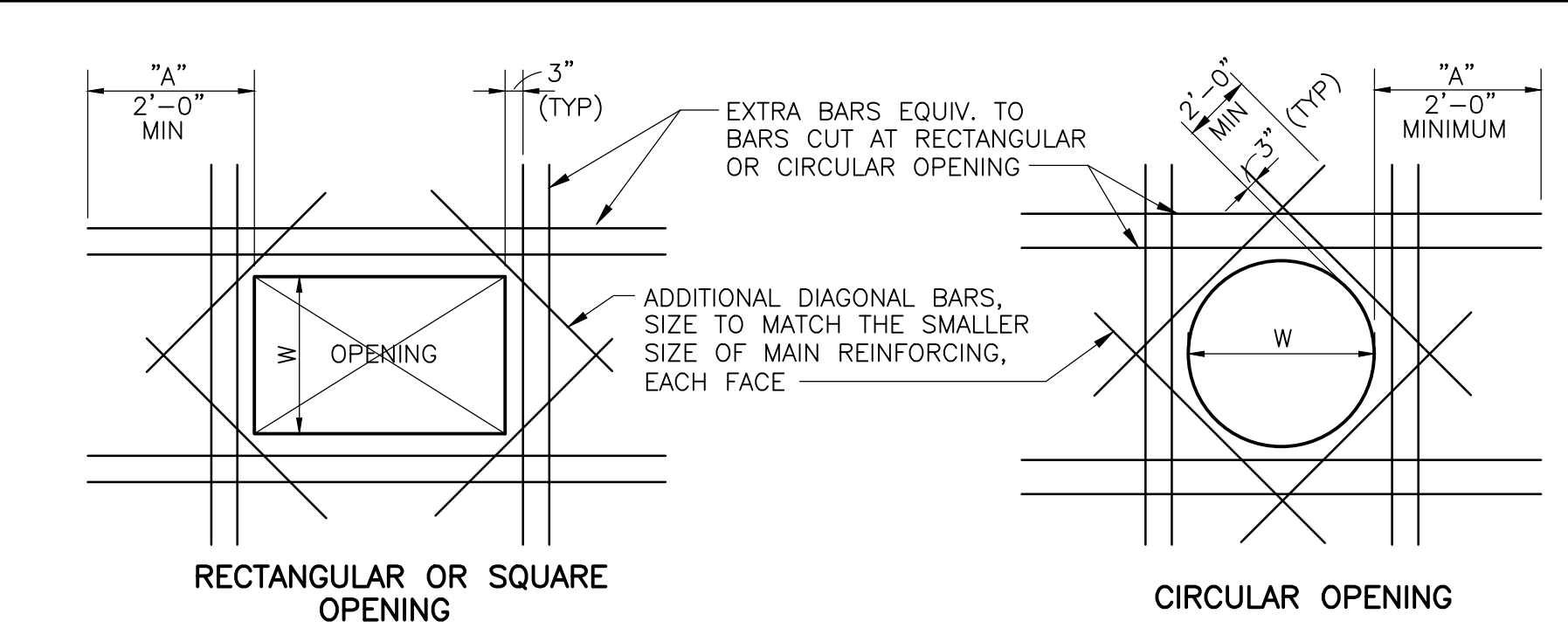
**ANCHOR BOLT**  
**DETAIL D**  
NTS



**THICKENED SLAB EDGE**  
**DETAIL E**  
NTS

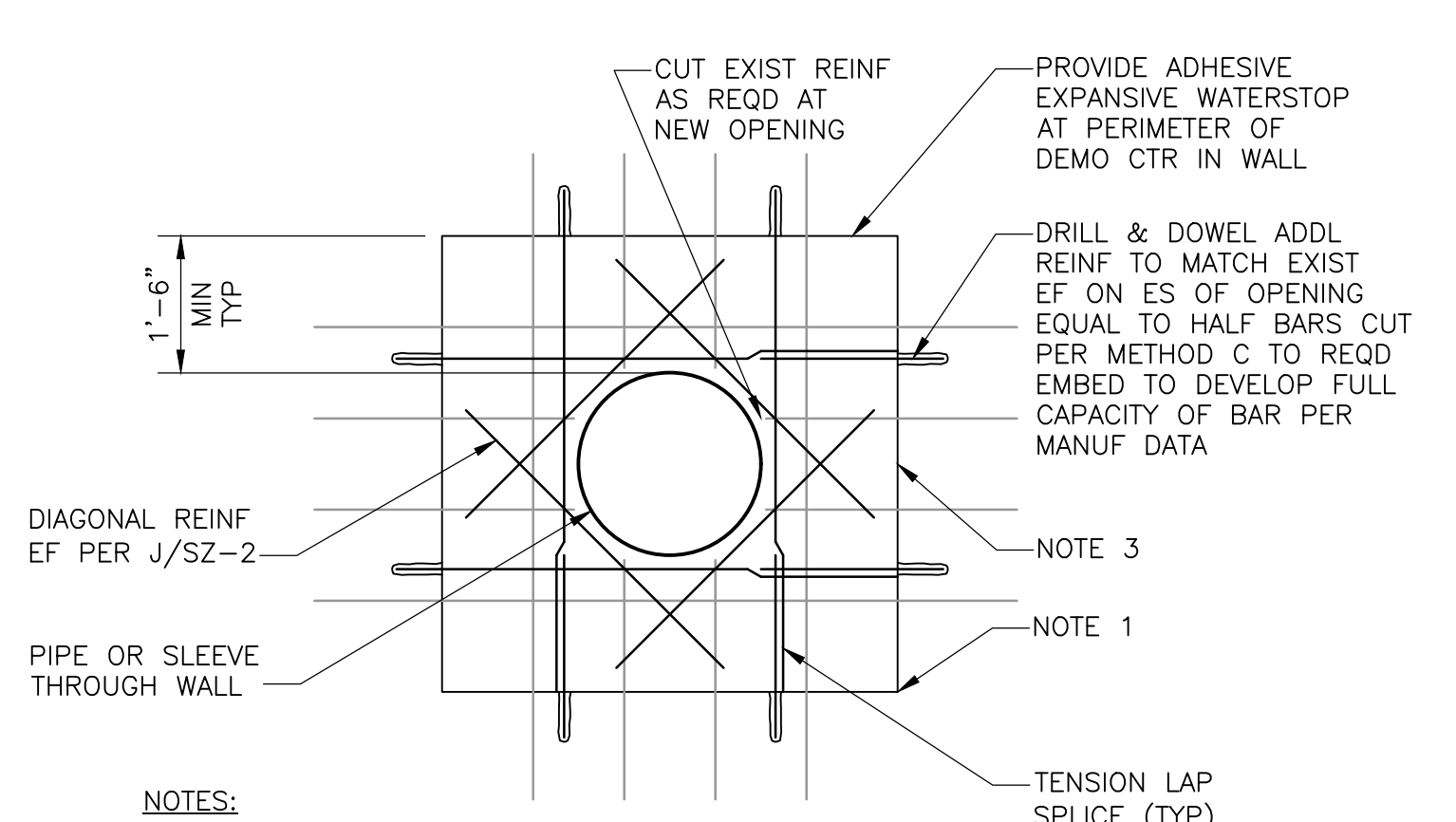


**ACCESS PAD**  
**DETAIL F**  
NTS



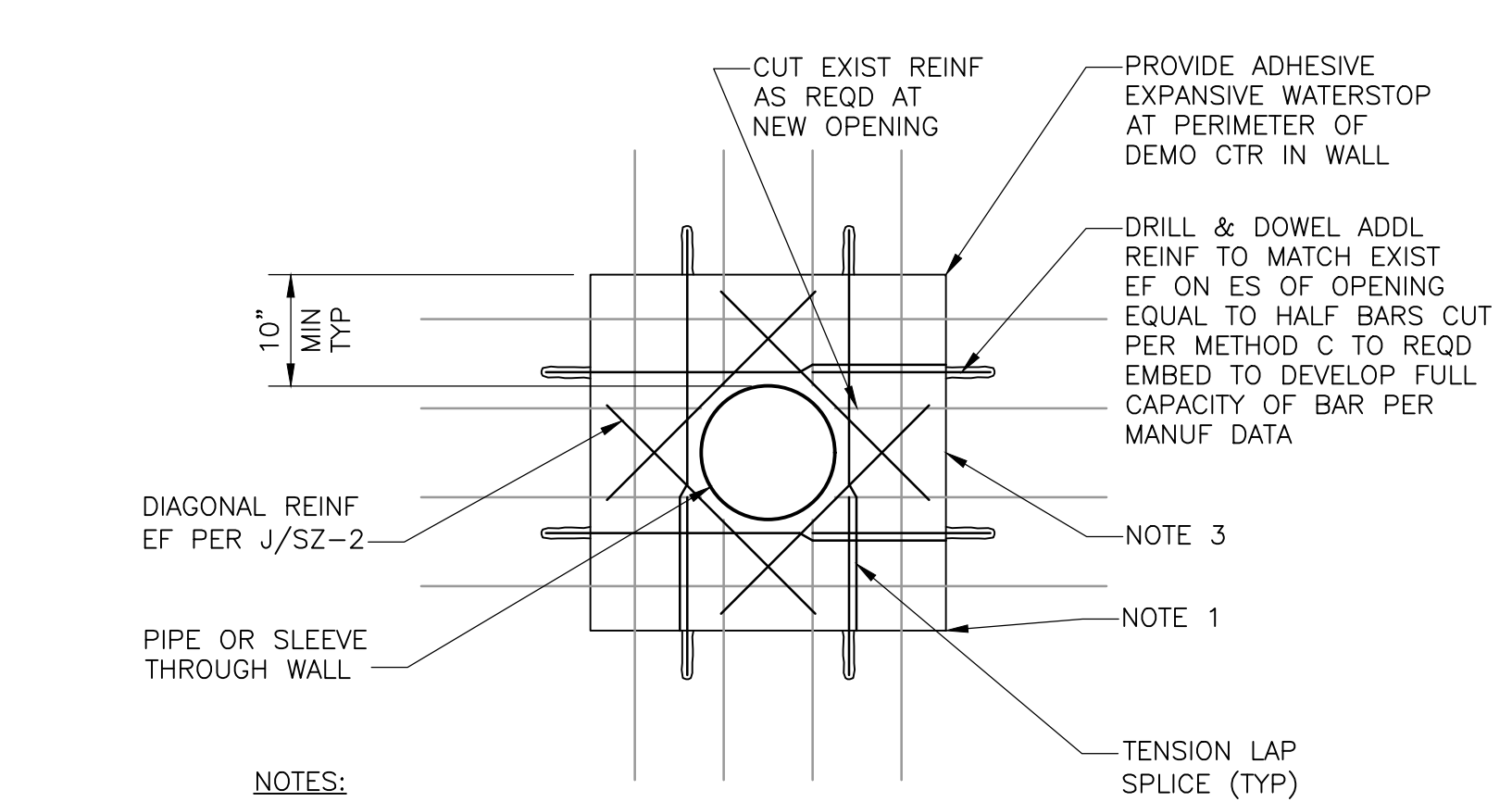
**NOTES:**  
1. DISCONTINUE TYPICAL REINFORCING AT OPENING.  
2. PLACE ADDITIONAL BARS IN SAME ORIENTATION AND POSITION AS BARS CUT BY OPENING. PROVIDE ONE SET OF BARS FOR EACH LAYER OF REINFORCING CUT.  
3. "A" = TOP BAR EMBEDMENT LENGTH (24" MINIMUM). PROVIDE STANDARD HOOK IF FULL EMBEDMENT LENGTH IS NOT POSSIBLE.  
4. REINFORCING STEEL IS TO BE CARRIED ACROSS ALL CONSTRUCTION JOINTS.  
5. SEE MECHANICAL, ELECTRICAL, PLUMBING AND ARCHITECTURAL DRAWINGS FOR SLAB AND WALL OPENINGS NOT SHOWN ON STRUCTURAL DRAWINGS.  
6. ADDITIONAL REINFORCING MAY BE OMITTED ONLY WHERE OPENING IS FRAMED BY BEAMS OR WALLS.  
7. ADDITIONAL REINFORCING NOT REQUIRED WHEN SPECIFIED REINFORCING IS NOT CUT.  
8. ALL REINFORCING SPACING SHALL BE GREATER THAN 3" CENTER TO CENTER.

**TYPICAL WALL OR SLAB OPENING ADDITIONAL REINFORCEMENT**  
**DETAIL J**  
NTS



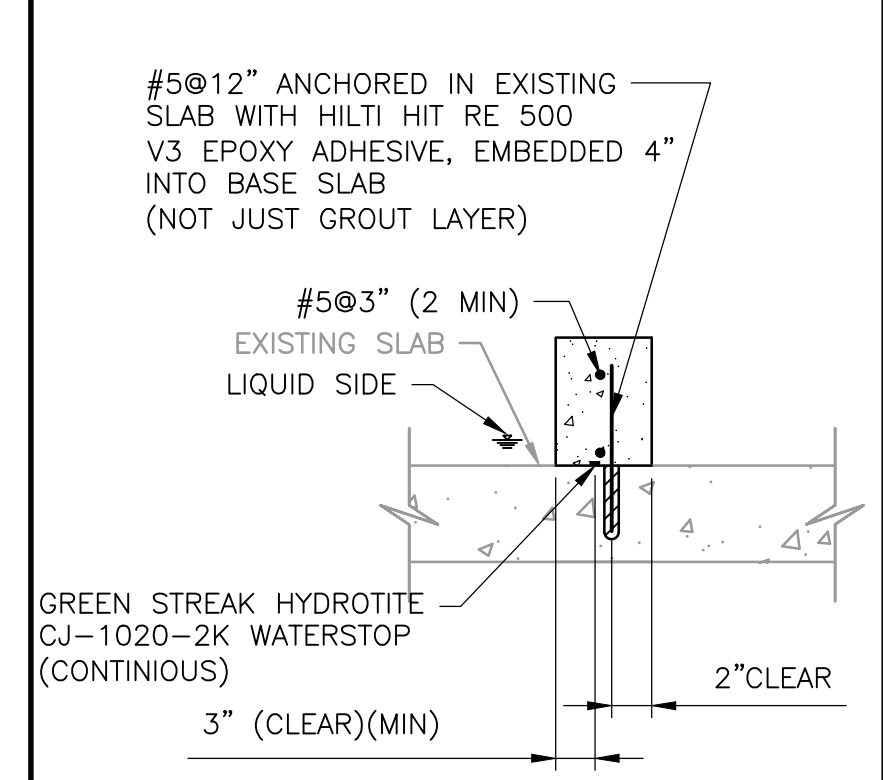
**NOTES:**  
1. DO NOT OVERCUT CORNERS W/ 1\"/>

**NEW OPENING FOR 18\"/>**



**NOTES:**  
1. DO NOT OVERCUT CORNERS W/ 1\"/>

**NEW OPENING FOR 18\"/>**



**CURB ON EXISTING SLAB**  
**DETAIL K**  
NTS



XREFS: [REVW\_WONG\_SEAL\_CDMs\_2234\_SG\_CDMs\_2234\_DS] Images: []  
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DESIGNED BY:	J. EULL
DRAWN BY:	P. ANUSHA
SHEET CHK'D BY:	C. WONG
CROSS CHK'D BY:	J. EULL
APPROVED BY:	C. WONG
DATE:	NOVEMBER 2023

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JNE	CFW	CONFORMED DRAWINGS

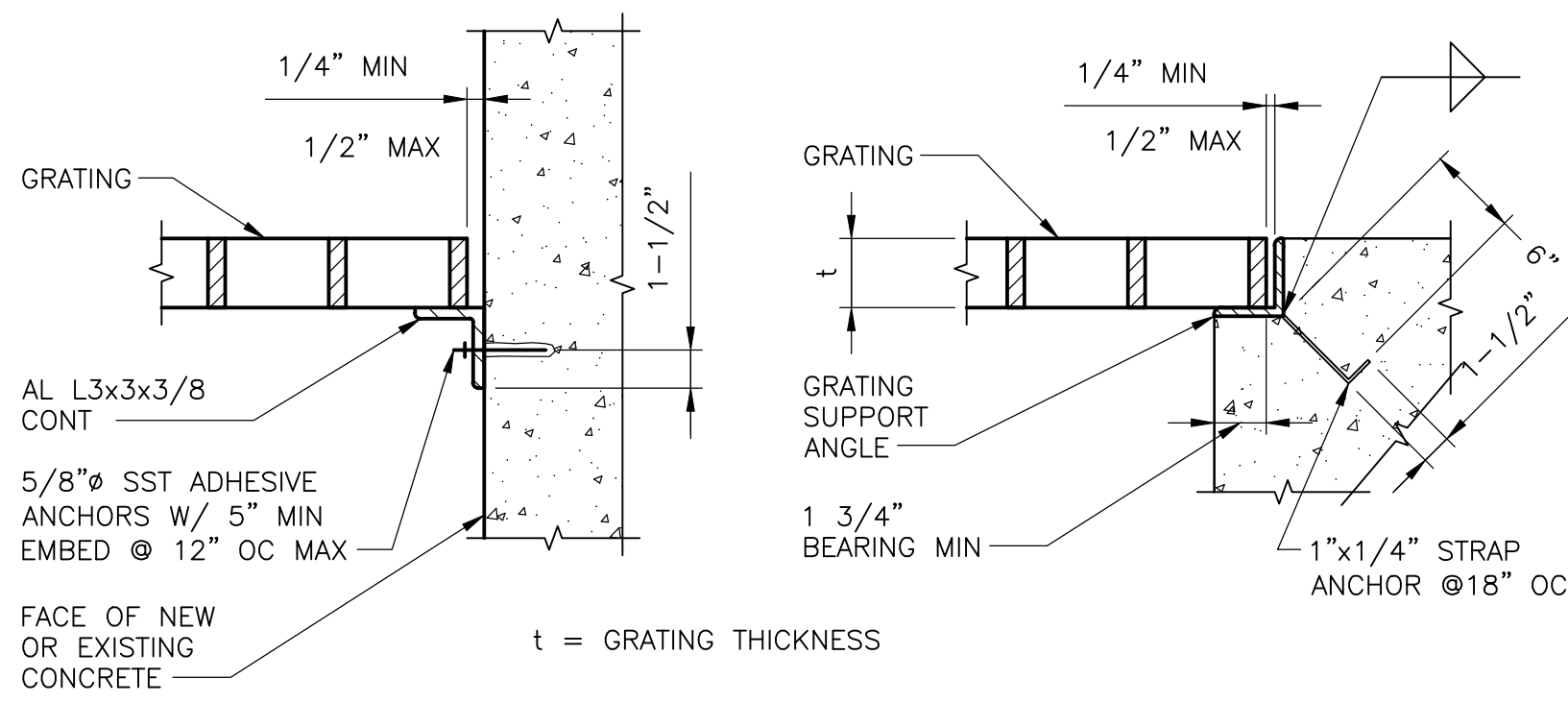
**CDM Smith**  
3510-1 N. Capital of Texas Hwy, Suite 250  
Austin, TX 78731  
Tel: (512) 346-1100  
TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS  
DOVE SPRINGS WWTP  
REHABILITATION

STRUCTURAL STANDARD DETAILS II  
SHEET NO. SZ-2

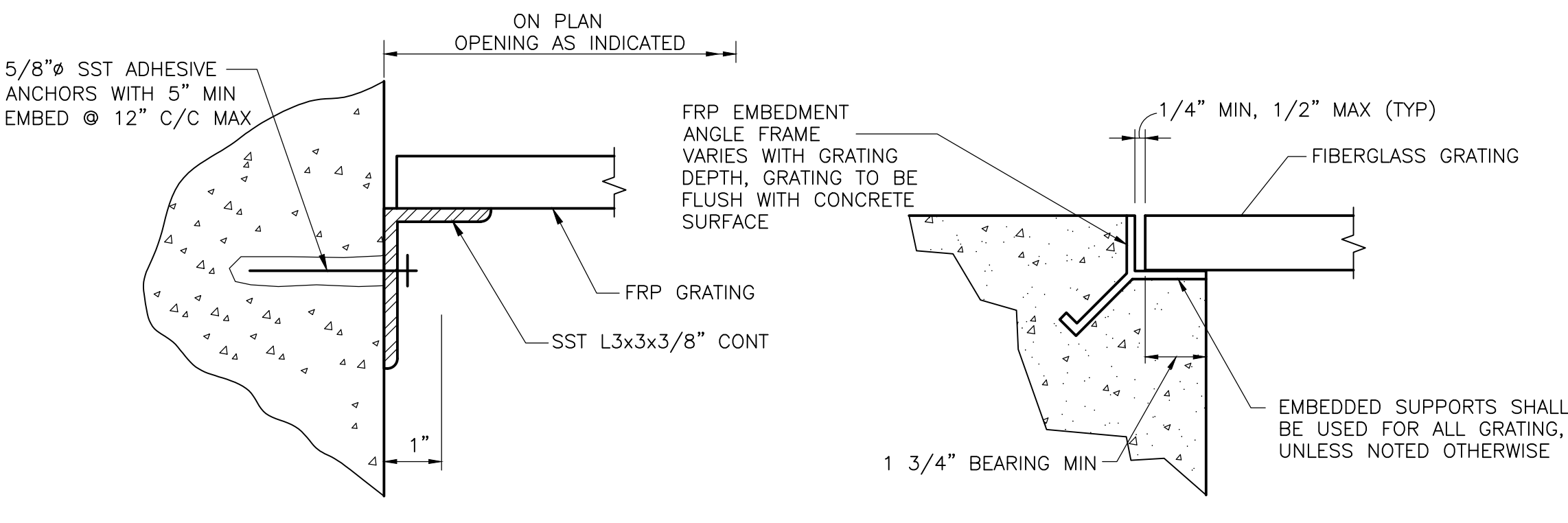
PROJECT NO.	2048-264953
FILE NAME:	S002STD.DWG
SHEET NO.	SZ-2





NOTE:  
WHERE ALUMINUM CONTACTS MASONRY OR CONCRETE, APPLY A HEAVY COAT OF ZINC CHROMATE PRIMER TO THE SURFACE OF THE ALUMINUM.

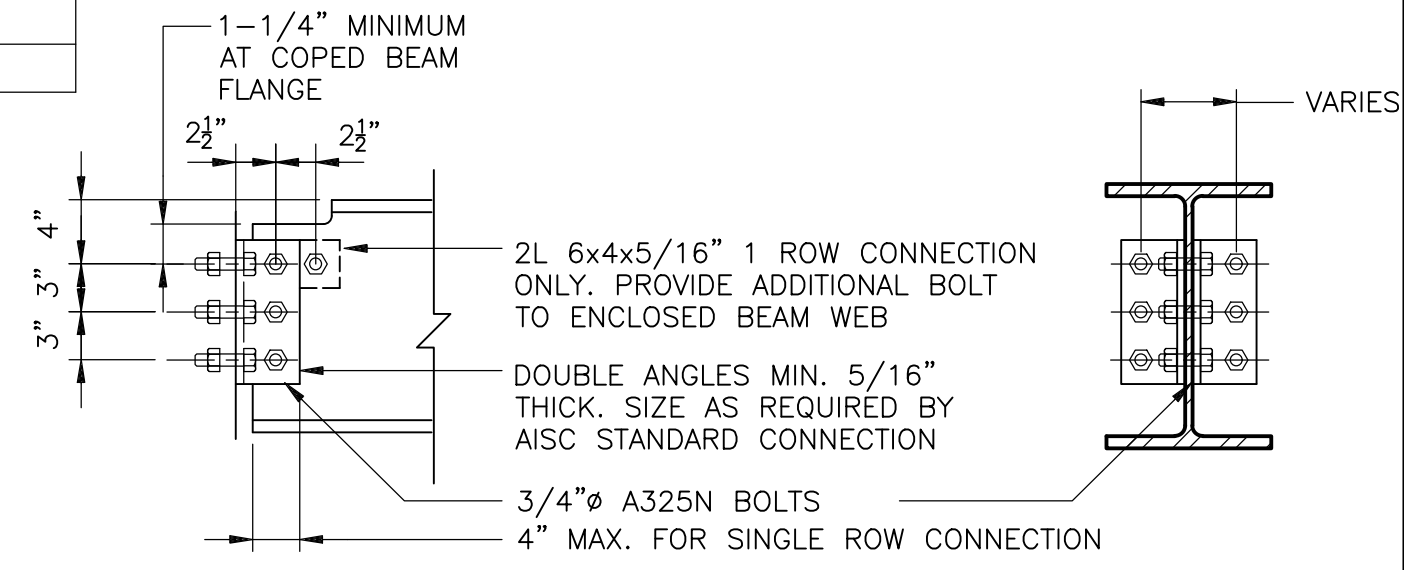
ALUMINUM GRATING SUPPORTS  
DETAIL A  
NTS



FRP GRATING SUPPORT  
DETAIL B  
NTS

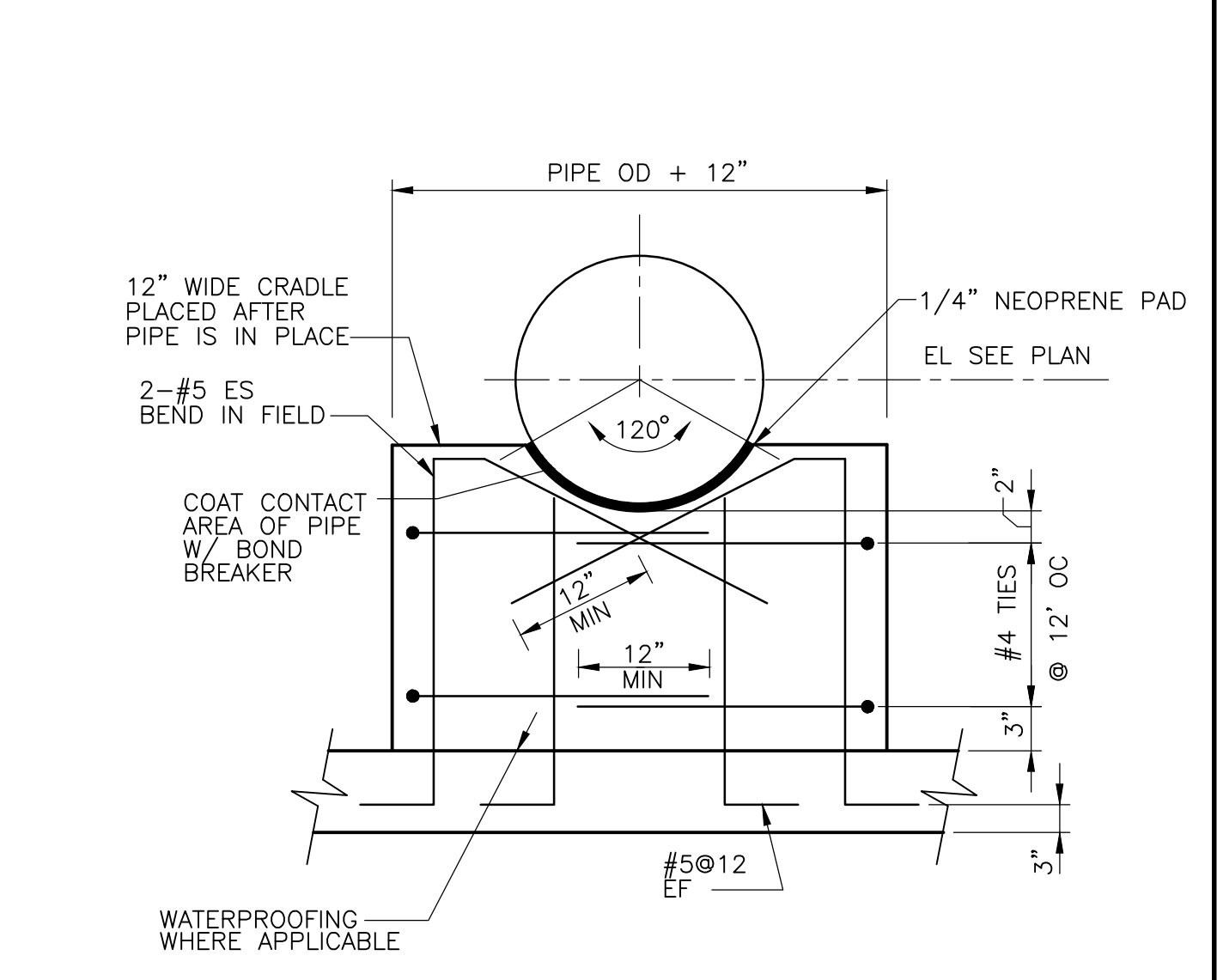
NOMINAL BEAM DEPTH, INCHES	ROWS OF BOLTS	LENGTH (3) OF ANGLE
36	7	1'-8 1/2"
30-33	6	1'-5 1/2"
24-27	5	1'-2 1/2"
16-21	4	11 1/2"
12-15	3	8 1/2"
8-10	2	5 1/2"
6	1	

- NOTES:
- NUMBER OF ROWS IS EQUAL TO NUMBER OF BOLTS TO ENCLOSED WEB.
  - ALL FRAMING CONNECTIONS SHALL CONFORM TO SCHEDULE UNLESS DETAILED OTHERWISE ON FRAMING DRAWINGS.
  - ADD 1-1/2" TO ANGLE LENGTH FOR STAGGERED BOLT CONNECTIONS.
  - USE SST BOLTS FOR ALL ALUMINUM FRAMING.

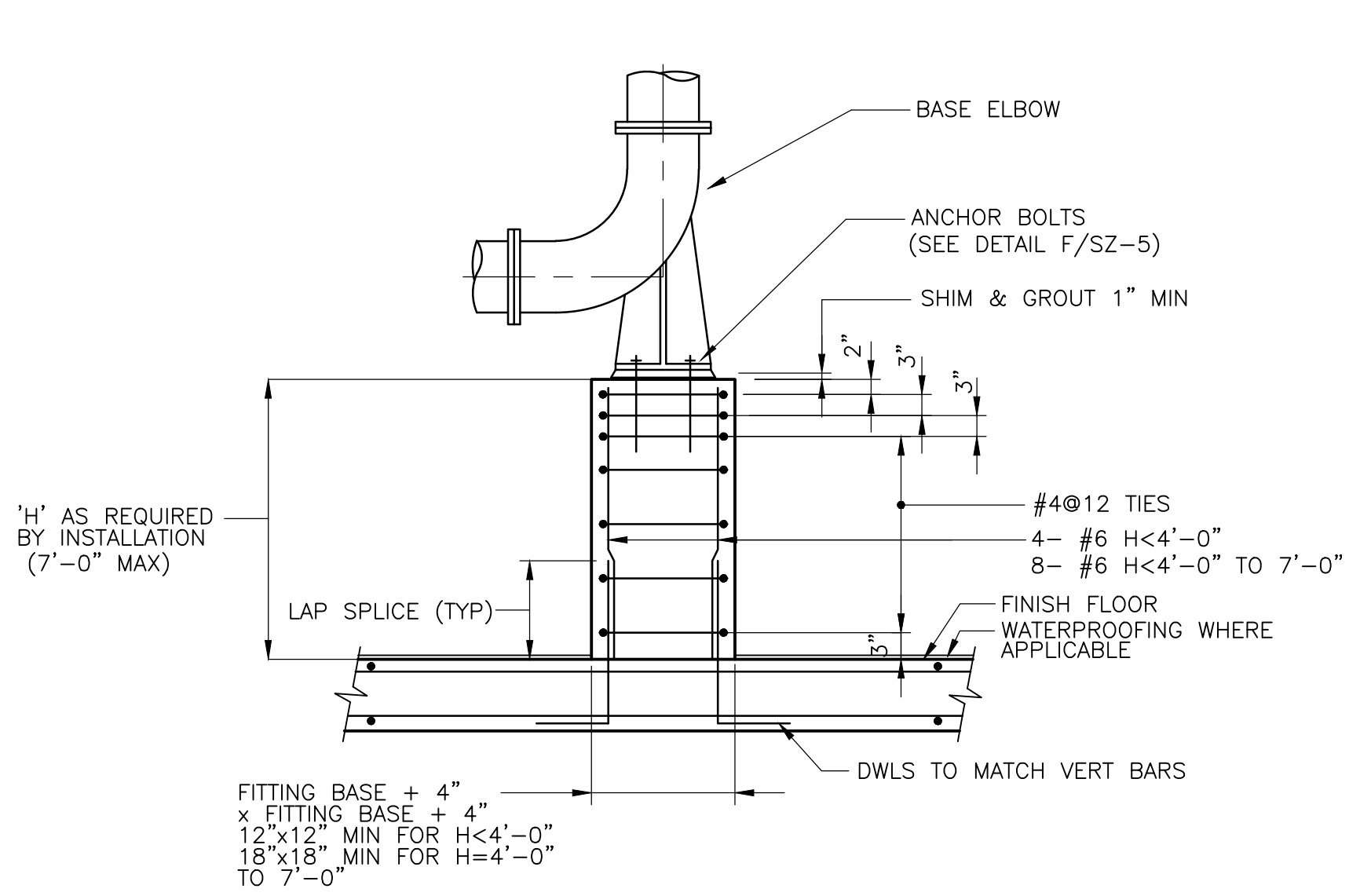


NOTE:  
3" DIMENSION TYPICAL EXCEPT AS RECOMMENDED BY AISC FOR LARGER MEMBERS

TYPICAL FRAMING CONNECTION  
DETAIL C  
NTS

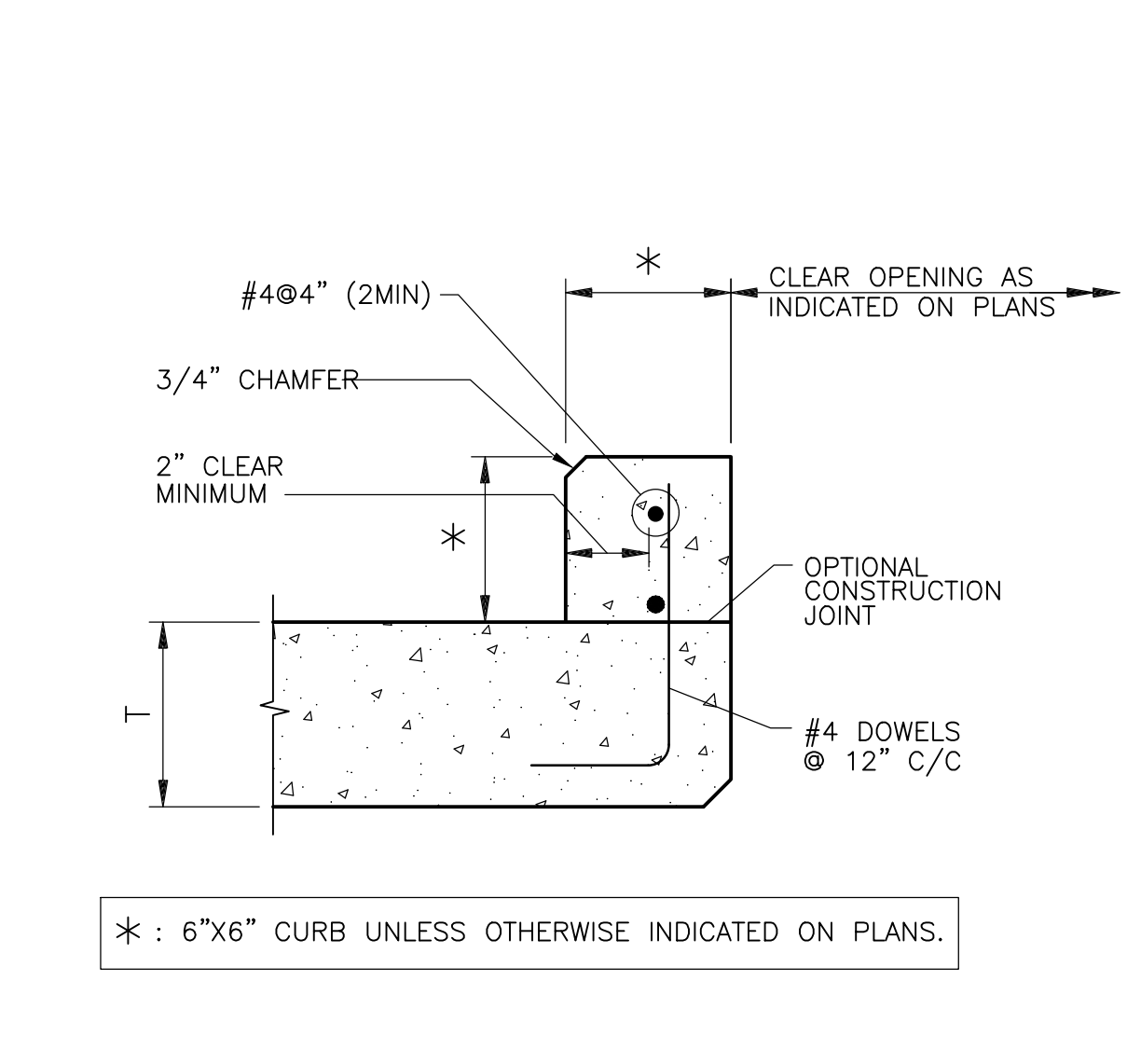


CONCRETE PIPE CRADLE  
DETAIL D  
NTS



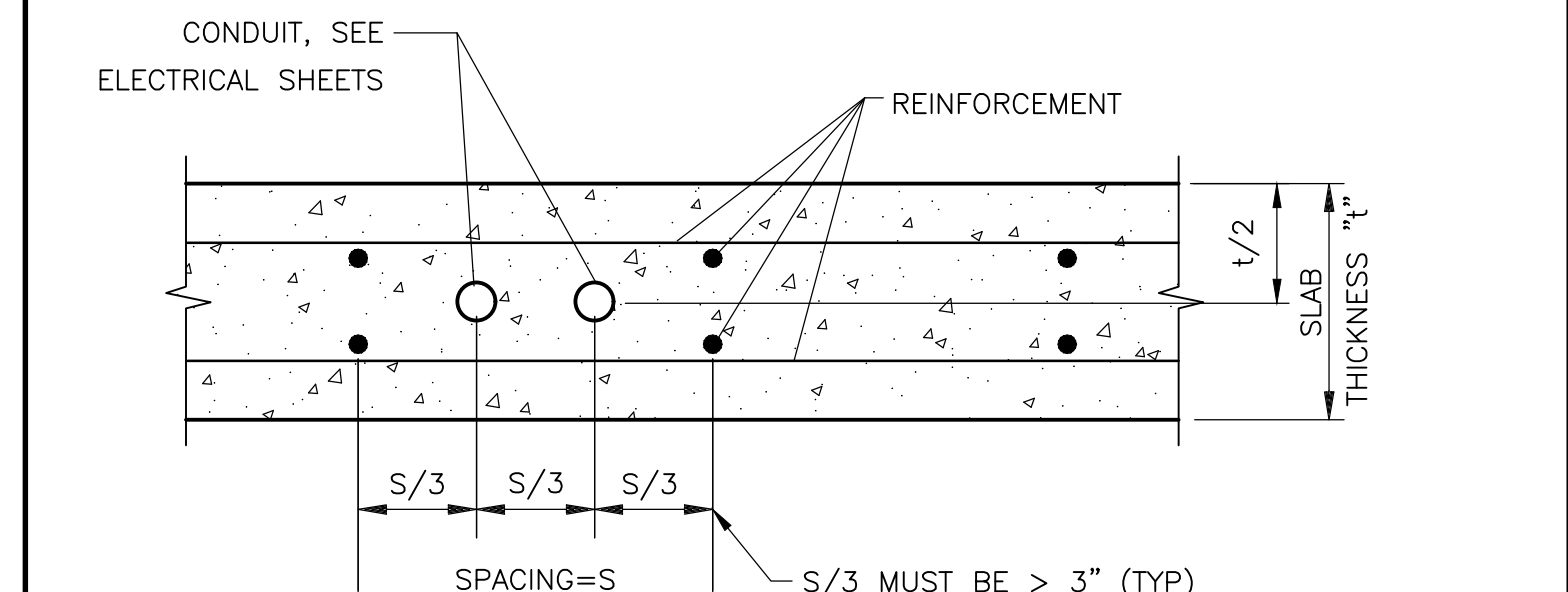
FITTING BASE + 4" x FITTING BASE + 4" 12"x12" MIN FOR H<4'-0" 18"x18" MIN FOR H=4'-0" TO 7'-0"

BASE ELBOW SUPPORT  
DETAIL E  
NTS



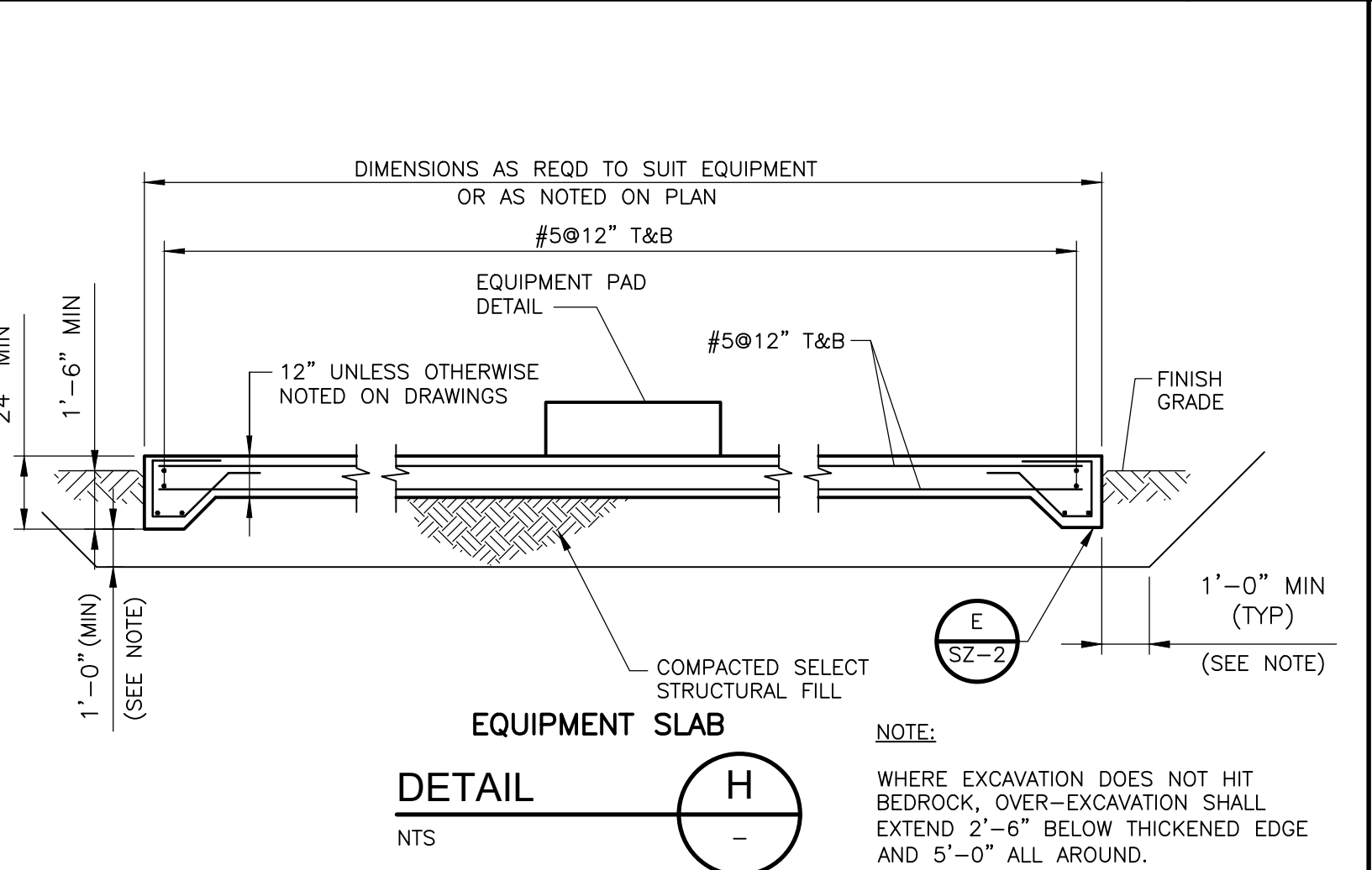
\* : 6"x6" CURB UNLESS OTHERWISE INDICATED ON PLANS.

CONCRETE CURB  
DETAIL F  
NTS



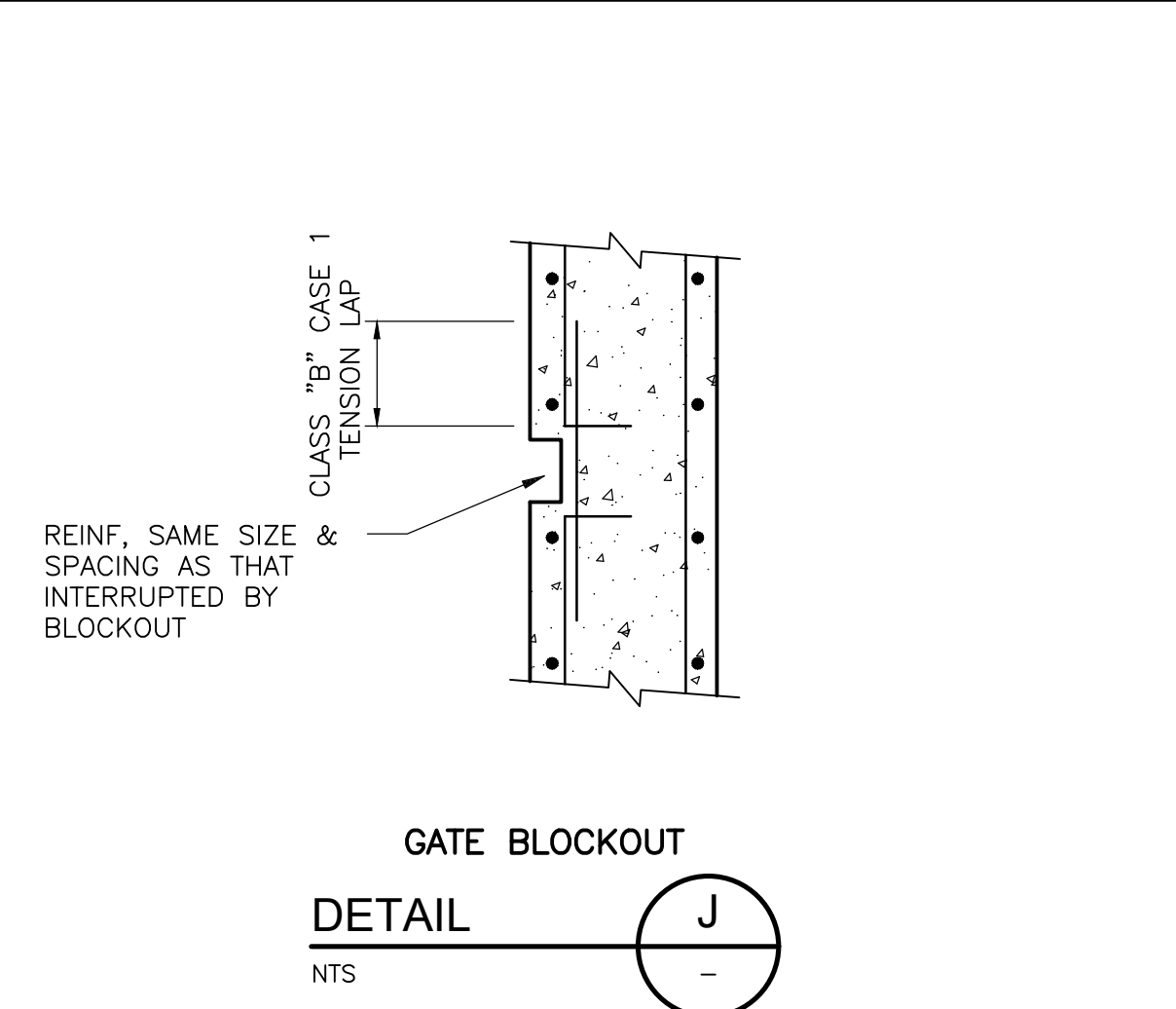
- NOTES:
- CONDUIT TO BE PLACED IN SLABS SHALL BE EVENLY SPACED BETWEEN REINF.
  - ALL CONDUITS SHALL BE PLACED PARALLEL OR NORMAL TO REINF.
  - CONDUITS SHALL NOT PENETRATE VERTICALLY THROUGH BEAMS.
  - THIS DETAIL IS FOR CONDUIT EMBEDDED IN WALL OR SLAB ONLY. DO NOT EMBED CONDUIT WITHIN COLUMNS OR BEAMS WITHOUT ENGINEER APPROVAL.
  - ALL CONDUITS SHALL BE 2" MAX PVC OR RIGID METAL COATED WITH PVC.
  - DO NOT EMBED CONDUIT > 2" DIAMETER WITHOUT ENGINEER APPROVAL.
  - DO NOT EMBED CONDUIT WITHIN LIQUID CONTAINMENT STRUCTURE WITHOUT ENGINEER APPROVAL. CONTRACTOR SHALL SUBMIT THE PROPOSED CONDUIT ROUTE 3 WEEKS PRIOR TO CONSTRUCTION.
  - FOR SINGLE ROW EMBEDDED CONDUITS, THE MINIMUM WALL OR SLAB THICKNESS SHALL BE 16"
  - WHEN CONSTRUCTABILITY ISSUES ARISE. CONTRACTOR SHALL INFORM THE ENGINEER WITH RFI AND THE ISSUE WILL BE REVIEWED ON A CASE BY CASE BASIS.

EMBEDDED CONDUITS  
DETAIL G  
NTS



NOTE:  
WHERE EXCAVATION DOES NOT HIT BEDROCK, OVER-EXCAVATION SHALL EXTEND 2'-6" BELOW THICKENED EDGE AND 5'-0" ALL AROUND.

EQUIPMENT SLAB  
DETAIL H  
NTS



GATE BLOCKOUT  
DETAIL J  
NTS

XREFS: [CDMS 2234-D, REVW, WONG, SEAL, CDMS 2234\_SG] Images: []  
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REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JNE	CFW	CONFORMED DRAWINGS

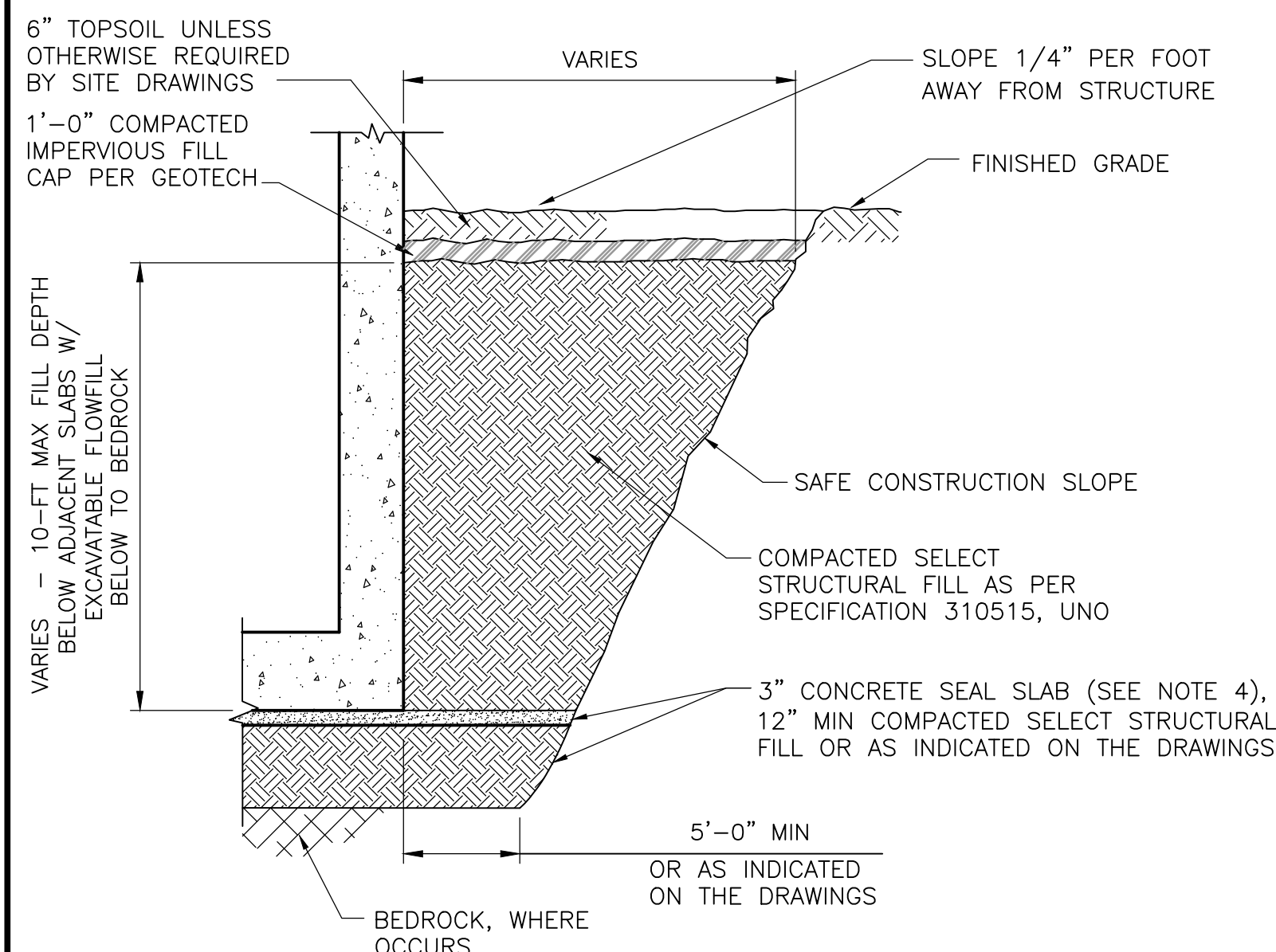
DESIGNED BY: J. EULL  
DRAWN BY: P. ANUSHA  
SHEET CHK'D BY: C. WONG  
CROSS CHK'D BY: J. EULL  
APPROVED BY: C. WONG  
DATE: NOVEMBER 2023

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Tel: (512) 346-1100  
TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS  
DOVE SPRINGS WWTP  
REHABILITATION

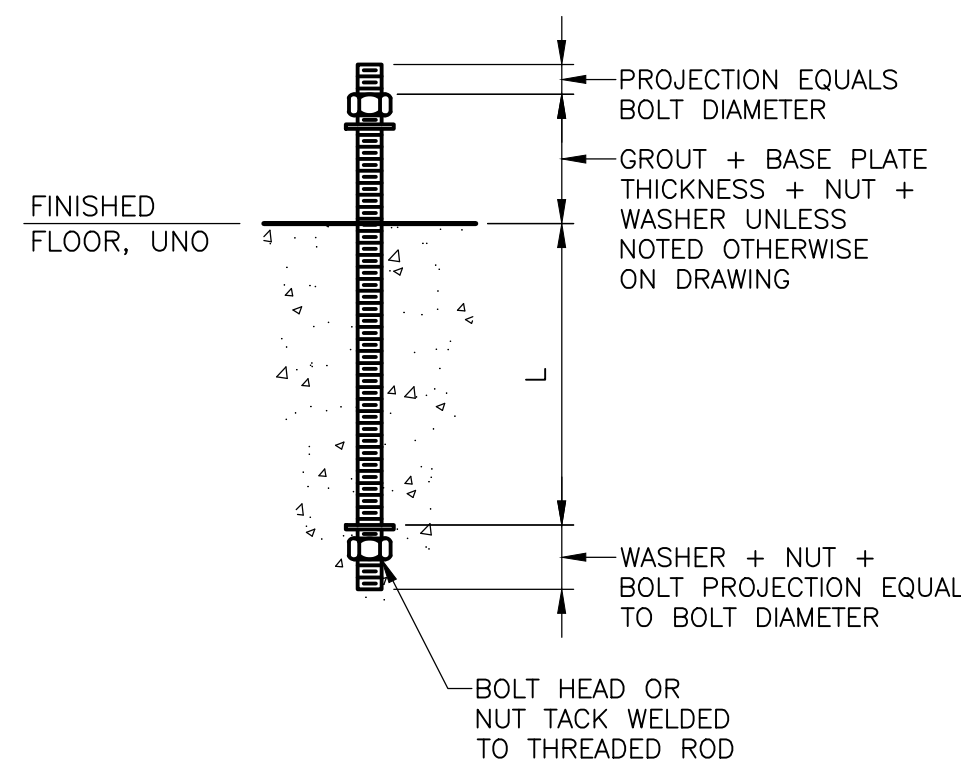
STRUCTURAL STANDARD DETAILS III

PROJECT NO. 2048-264953  
FILE NAME: S003STD.DWG  
SHEET NO. SZ-3



- NOTES:**
- UNLESS OTHERWISE INDICATED ON THE PLANS, THIS DETAIL IS REPRESENTATIVE OF THE REQUIRED EXCAVATION AND BACKFILL FOR ALL BELOW GRADE STRUCTURES IN THIS CONTRACT.
  - EXCAVATION LINE IS FOR REFERENCE ONLY AND NOT SHOWN TO ANY SCALE OR SLOPE. EXCAVATION SHALL CONFORM TO SPECIFICATIONS AND TRENCH SAFETY REQUIREMENTS.
  - BACKFILL SOILS SHALL BE COMPACTED IN LIFTS AS SPECIFIED.
  - PROVIDE SEAL SLAB WHERE SUBGRADE WILL BE EXPOSED FOR MORE THAN 24 HOURS OR AS NEEDED BY THE CONTRACTOR.

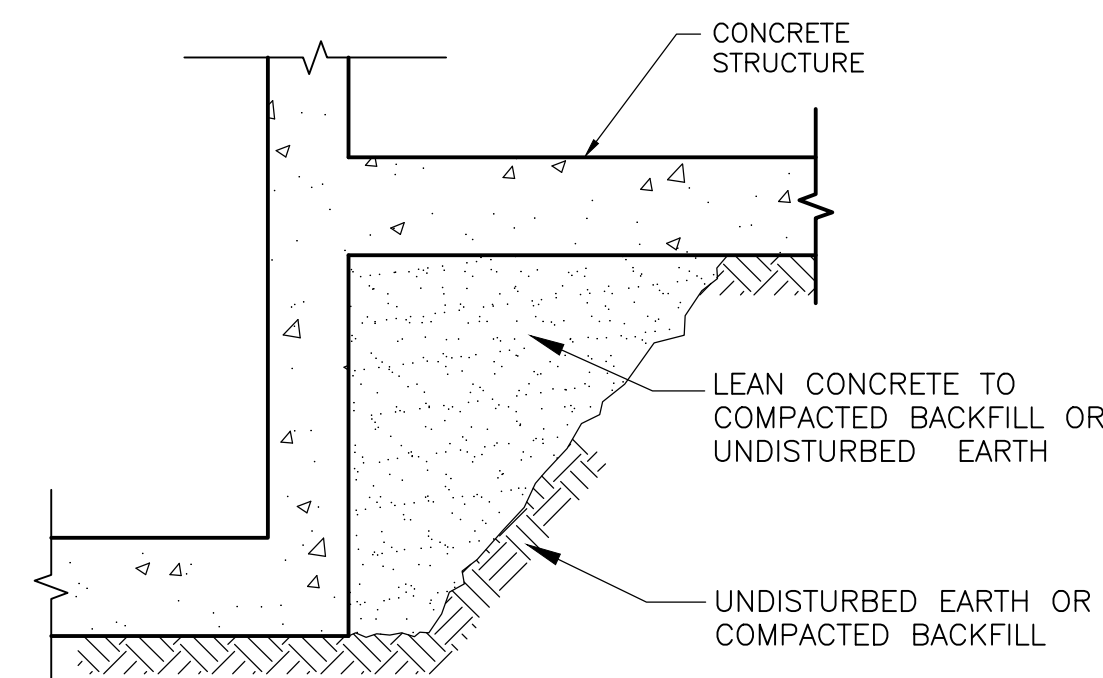
**EXCAVATION AND BACKFILL**  
**DETAIL A**  
NTS



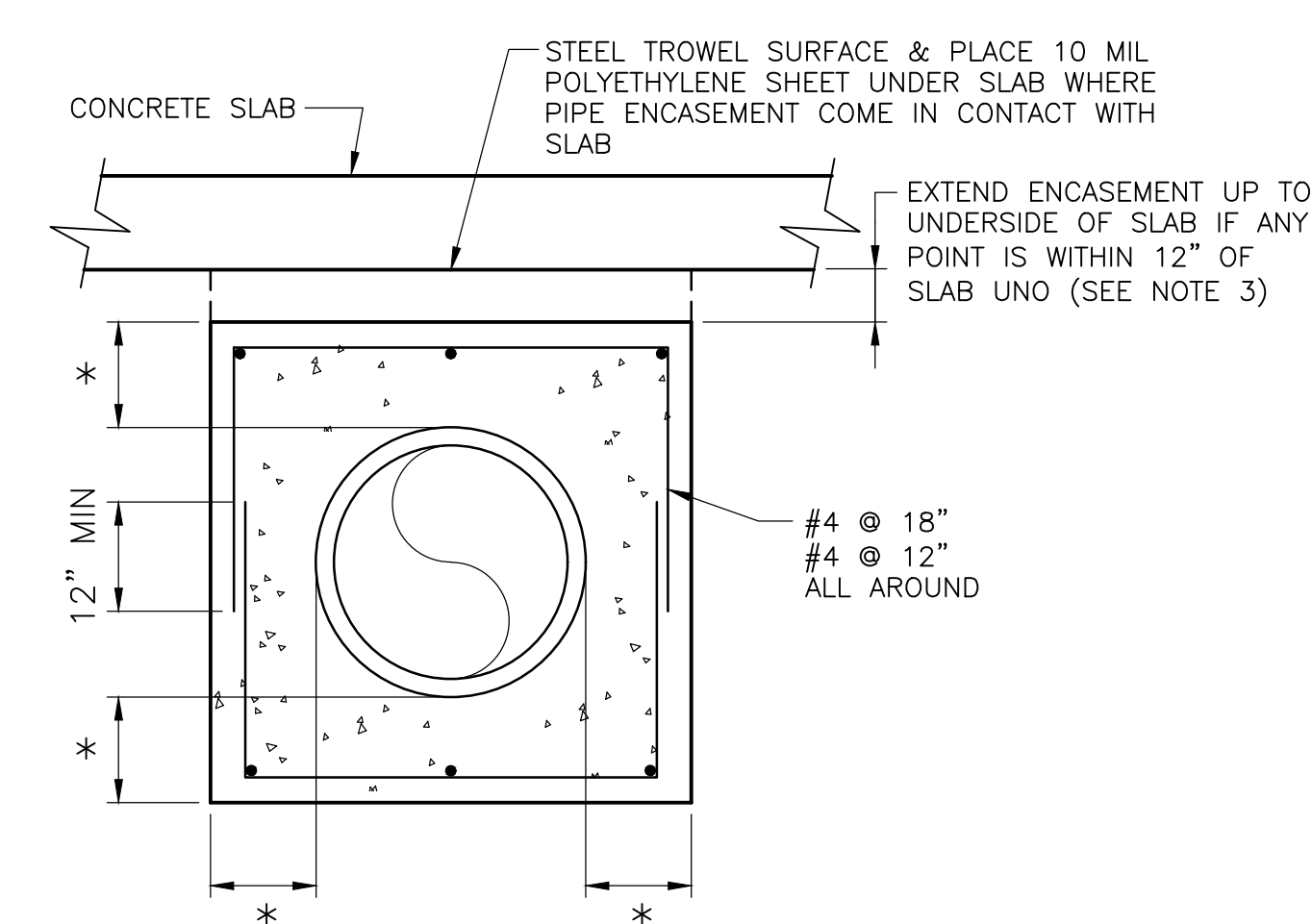
BOLT (DIA)	L (MIN)	L (MIN) IN COLUMNS, PIERS, PEDESTALS OR PILASTERS
1/2"	4"	7"
5/8"	4 1/2"	8 1/2"
3/4"	5"	9"
7/8"	6"	10 1/2"
1"	7"	12"
1 1/8"	8"	13 1/2"
1 1/4"	9"	15"

- NOTES:**
- 1" GROUT UNDER BASE PLATE UNLESS SHOWN OTHERWISE ON DRAWING.
  - BOLT SHALL BE ASTM F1554, GRADE 36.
  - NUT SHALL BE ASTM A563, GRADE A, HEX.
  - WASHER SHALL BE ASTM F436.

**ANCHOR BOLTS**  
**DETAIL F**  
NTS

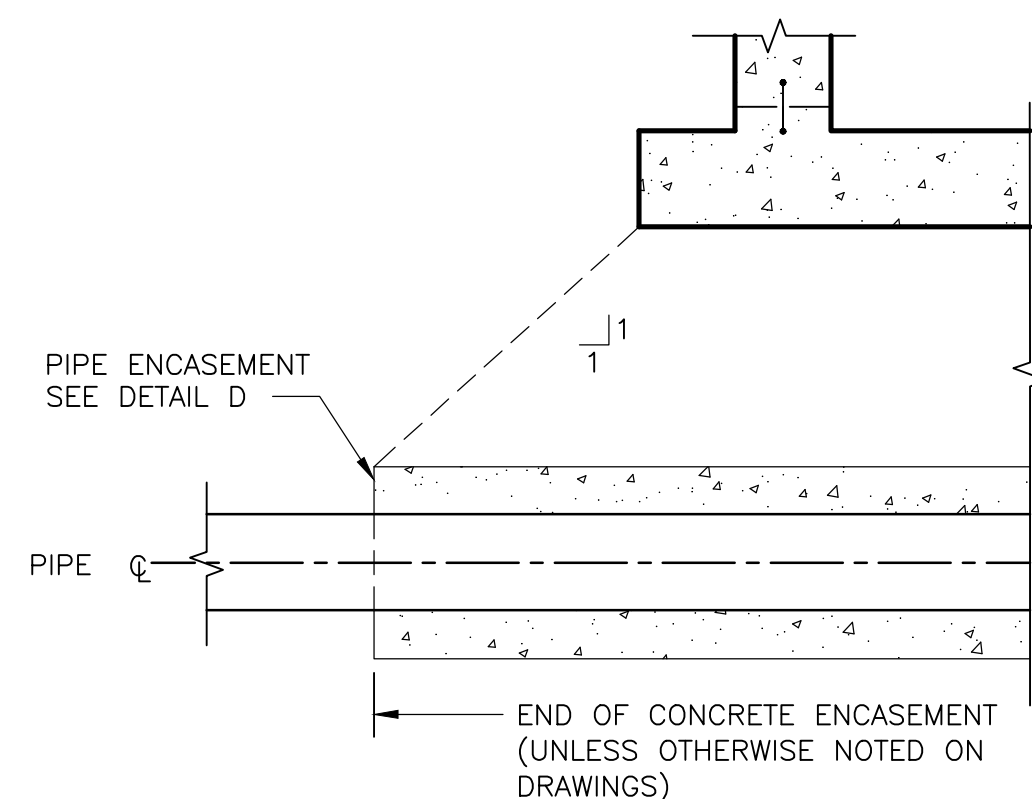


**LEAN CONCRETE FILL AT STEPPED FOUNDATION**  
**DETAIL C**  
NTS

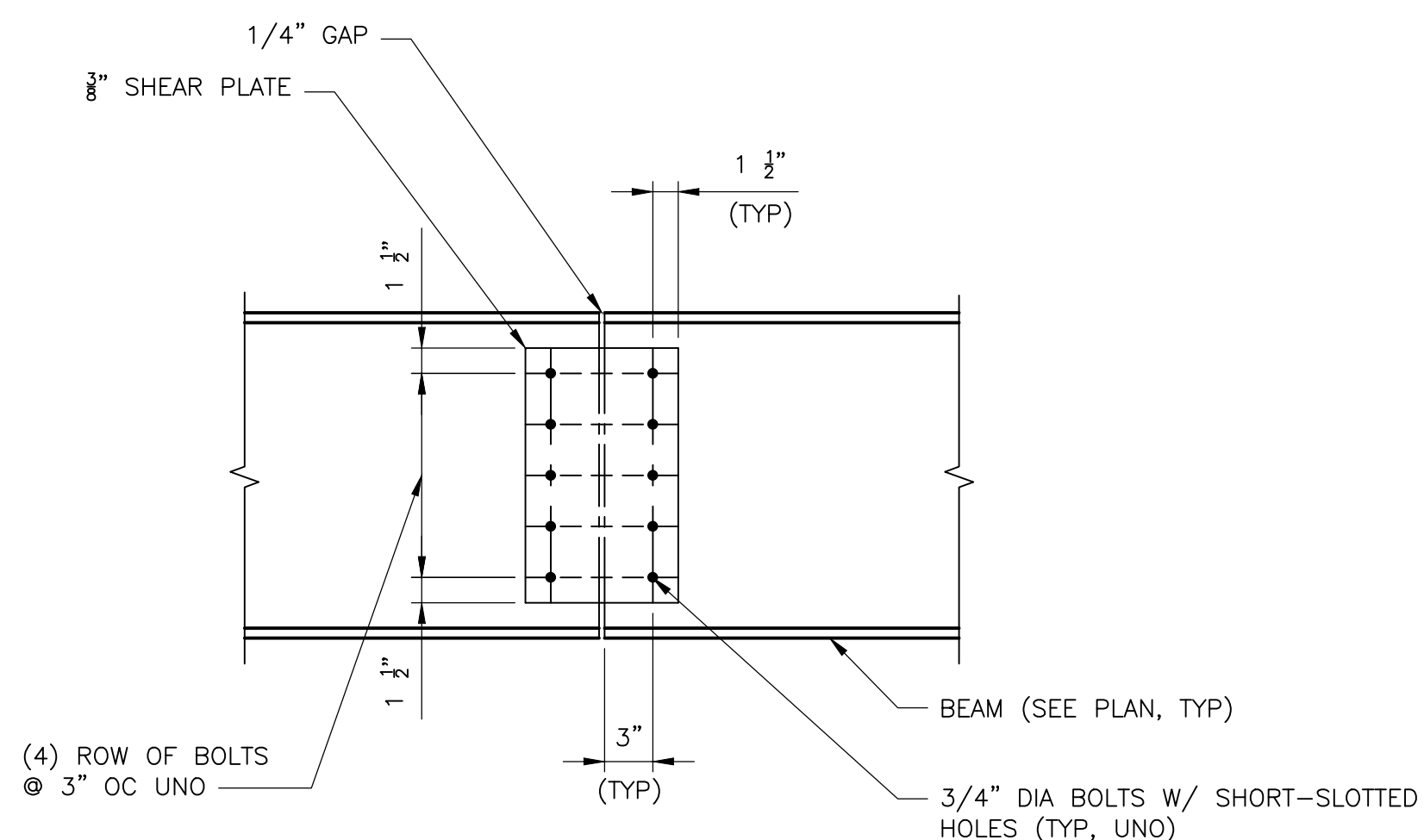


- NOTES:**
- \* = 8" MIN FOR PIPE ≤ 24"Ø, 12" MIN FOR PIPE > 24"Ø.
  - CONCRETE ENCASMENT SHALL BE TERMINATED AT PIPE JOINTS ONLY.
  - FILL BACK TRENCH W/LEAN CONCRETE OR COMPACTED SELECT STRUCTURAL FILL BELOW STRUCTURE.

**PIPE ENCASMENT**  
**DETAIL D**  
NTS



**END OF PIPE ENCASMENT UNDER STRUCTURES**  
**DETAIL E**  
NTS



**BEAM SPLICE**  
**DETAIL G**  
NTS

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JNE	CFW	CONFORMED DRAWINGS

DESIGNED BY: J. EULL  
DRAWN BY: P. ANUSHA  
SHEET CHK'D BY: C. WONG  
CROSS CHK'D BY: J. EULL  
APPROVED BY: C. WONG  
DATE: NOVEMBER 2023

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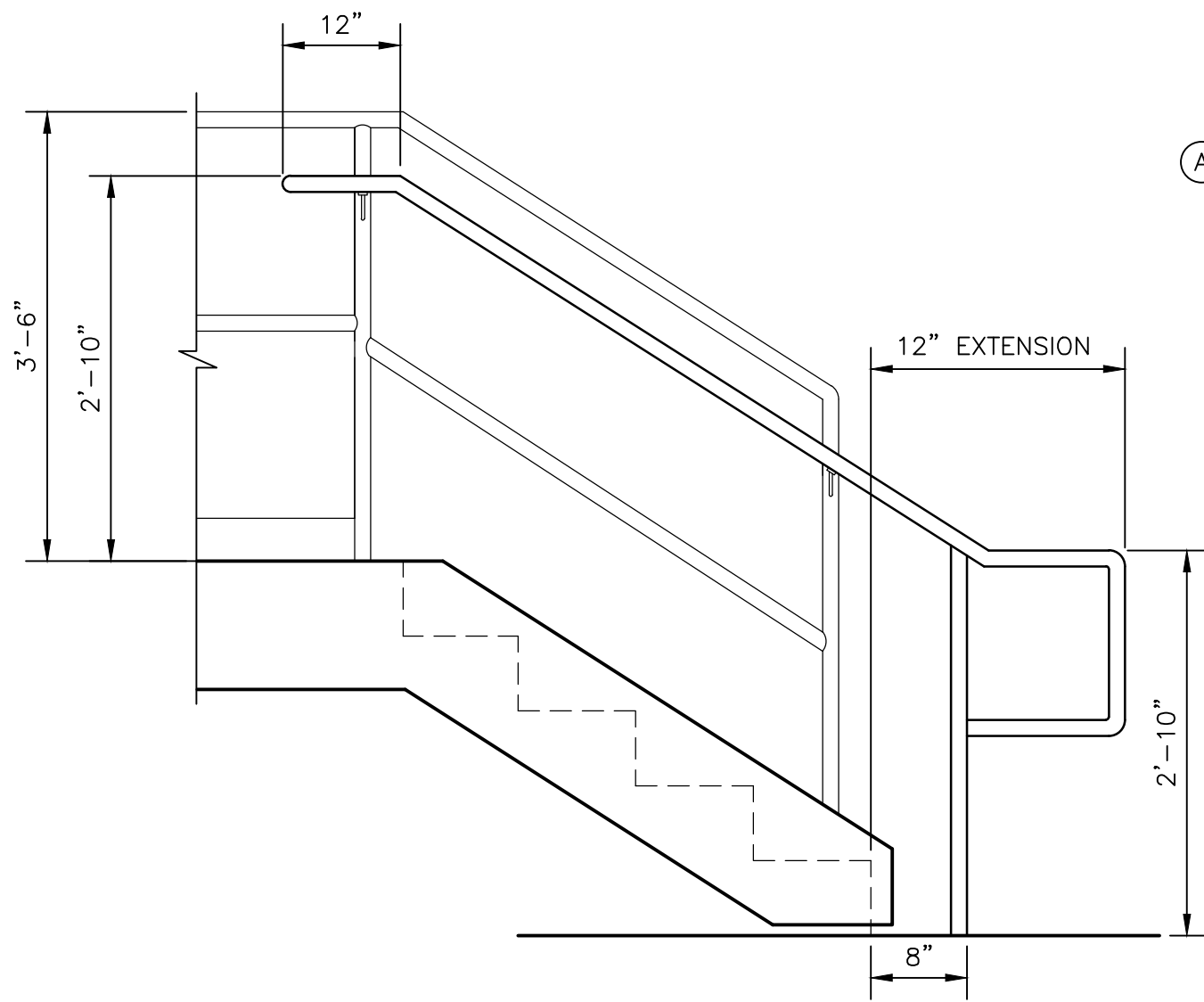
CITY OF GEORGETOWN, TEXAS  
DOVE SPRINGS WWTP  
REHABILITATION

STRUCTURAL STANDARD DETAILS IV

PROJECT NO.	2048-264953
FILE NAME:	S004STDT.DWG
SHEET NO.	SZ-4

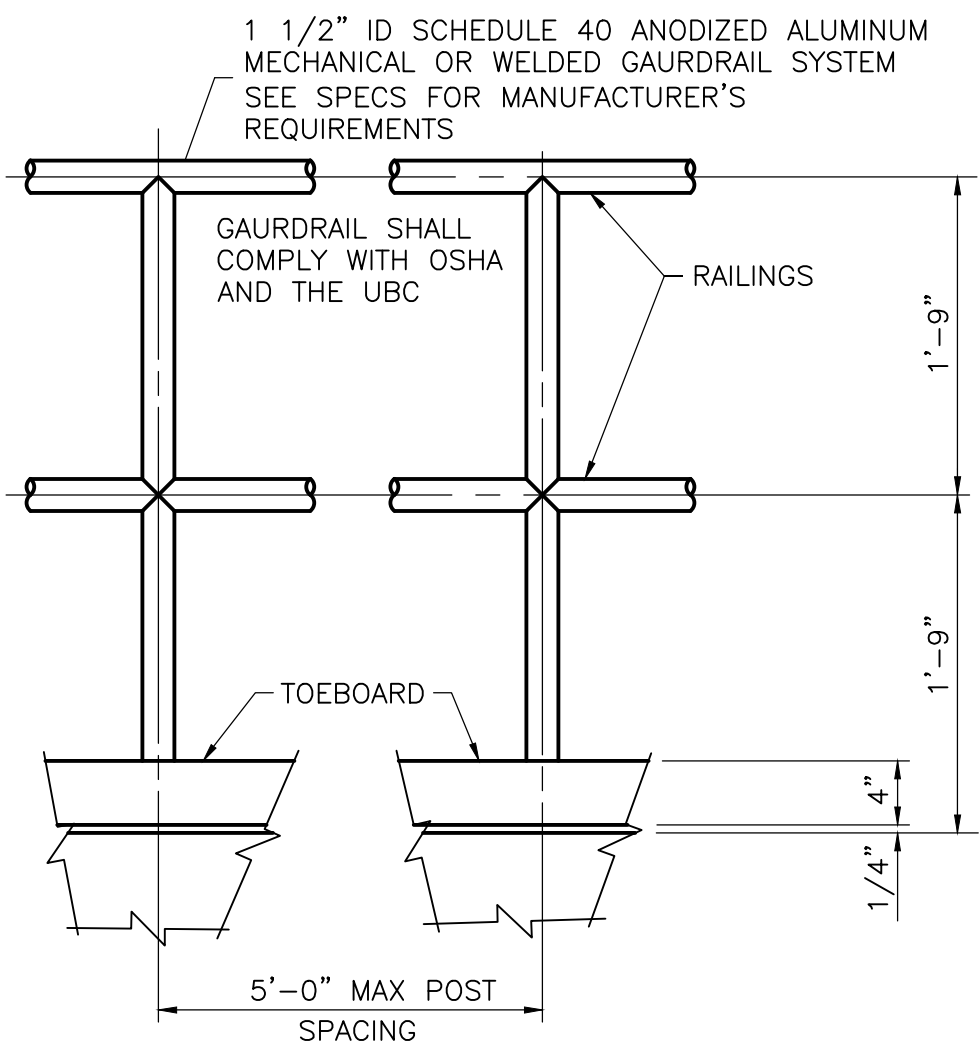


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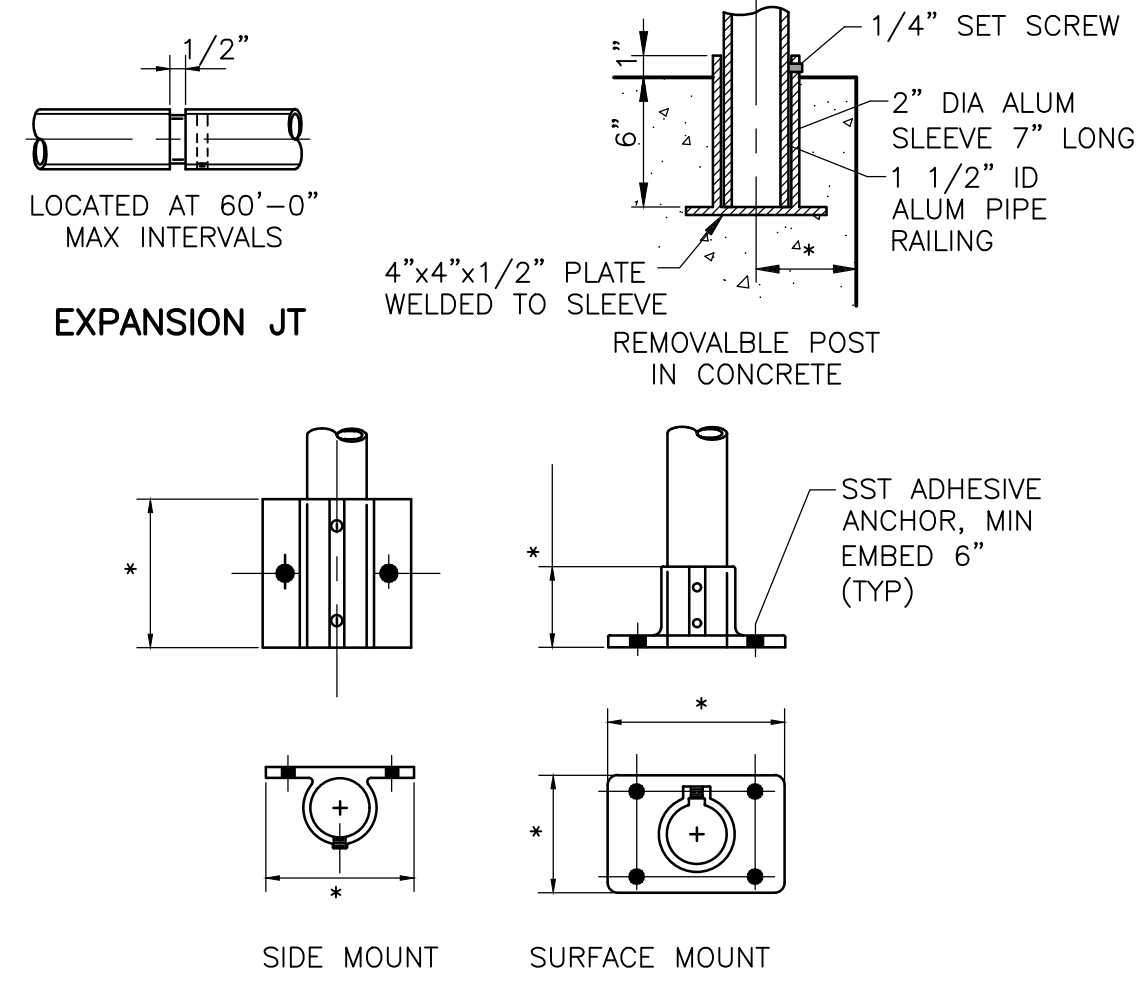


RAILING AT STAIRS  
DETAIL A  
NTS

**ALUMINUM GUARDRAIL AND HANDRAIL SYSTEMS:**  
 GUARDRAILS SHALL BE TWO RAIL, 1.5" DIA SYSTEM AS DESCRIBED BELOW -  
 THE CENTERLINE OF THE INTERMEDIATE PARALLEL RAIL SHALL BE AT THE THE POST MID-POINT BETWEEN TOP RAIL AND KICKPLATE (AT HORIZ SURFACES) AND BETWEEN TOP RAIL AND STRINGER (AT STAIRS/STEPS). HOWEVER, MAXIMUM CLEAR DISTANCE BETWEEN RAILS MEASURED AT RIGHT ANGLES TO RAILS SHALL BE 21".  
 GUARDRAILS AT HORIZONTAL SURFACES (LANDINGS, MEZZANINES, ETC) SHALL BE 42" HIGH AND SHALL BE PROVIDED WITH A 4" KICKPLATE. AT STAIRS/STEPS, PROVIDE STRINGER-MOUNTED GUARDRAIL SYSTEM PARALLEL TO STRINGER SLOPE, 42" HIGH ABOVE LEADING EDGE OF TREAD AND PROVIDE ADDITIONAL INSIDE MOUNTED HANDRAIL(S) MEETING THE REQUIREMENTS FOR HANDRAILS AS DESCRIBED BELOW.  
 HANDRAILS (WALL OR GUARDRAIL MOUNTED) SHALL BE -  
 AT STAIRS/STEPS, PROVIDE 1.5" DIA WALL AND/OR GUARDRAIL MOUNTED (AS APPLICABLE) ALUMINUM HANDRAILS AT BOTH SIDES OF STAIRS/STEPS. HANDRAILS SHALL BE MOUNTED PARALLEL TO STRINGER SLOPE, 36" HIGH ABOVE LEADING EDGE OF TREAD. HANDRAILS SHALL EXTEND 12" BEYOND TOP RISER, AND SHALL EXTEND 24" BEYOND THE BOTTOM RISER. AT THE BOTTOM, HANDRAILS SHALL CONTINUE TO SLOPE FOR A DISTANCE OF THE DEPTH OF ONE TREAD BEYOND THE BOTTOM RISER; THE REMAINDER SHALL BE HORIZONTAL. THE FINGER CLEARANCE BETWEEN HANDRAIL AND THE WALL, GUARD, OR OTHER OBSTRUCTION SHALL BE 1.5".

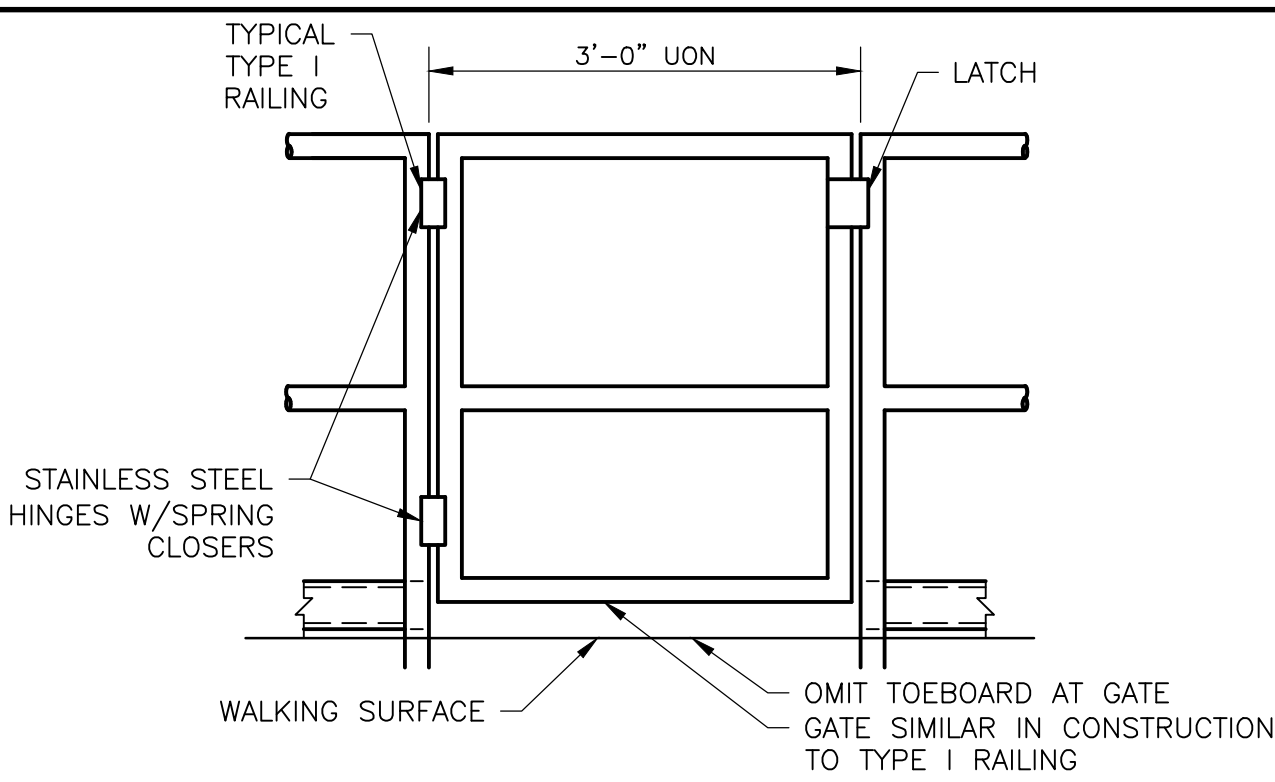


GUARDRAIL  
DETAIL B  
NTS

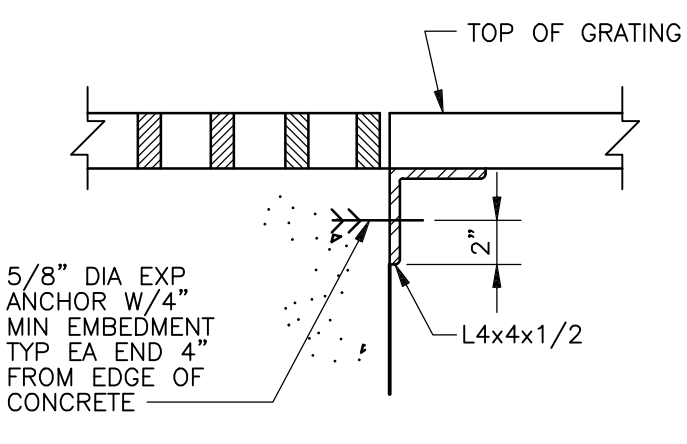


EXPANSION JT  
MINIMUM CONNECTIONS \*  
GUARDRAIL CONNECTION  
DETAIL C  
NTS

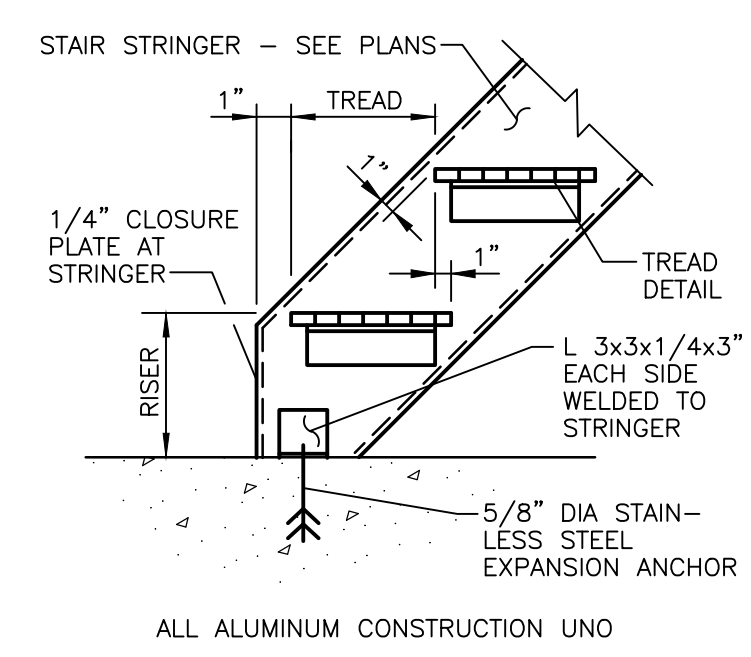
- NOTES:
- ALUMINUM EMBEDDED IN CONCRETE MUST BE PAINTED WITH ONE SHOP COAT OF HEAVY BITUMASTIC.
  - ALUMINUM SHAPES IN CONTACT WITH CONCRETE MUST BE SEPARATED BY A 1/32" NEOPRENE GASKET OR ANY CASE WHERE TWO DIFFERENT METALS ARE TO BE IN CONTACT. A NEOPRENE GASKET MUST BE PROVIDED. HANDRAILS, GUARDRAILS, POSTS, BRACKETS AND MOUNTINGS
  - SHALL MEET THE UNIFORM BUILDING CODE (U.B.C.) AND OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) LOADING REQUIREMENTS.
  - TOP OF ALL GUARDRAILS SHOULD BE 42" HIGH ABOVE THE FINISH FLOOR OR WALKWAY. THE CLEAR DISTANCE BETWEEN THE TOP AND INTERMEDIATE RAILS MEASURED AT RIGHT ANGLES TO THE RAILS SHALL NOT EXCEED 21".
  - ALL WALKWAYS SHALL USE GRATING UNLESS CHECKERED PLATE IS SHOWN ELSEWHERE ON THE DRAWINGS.



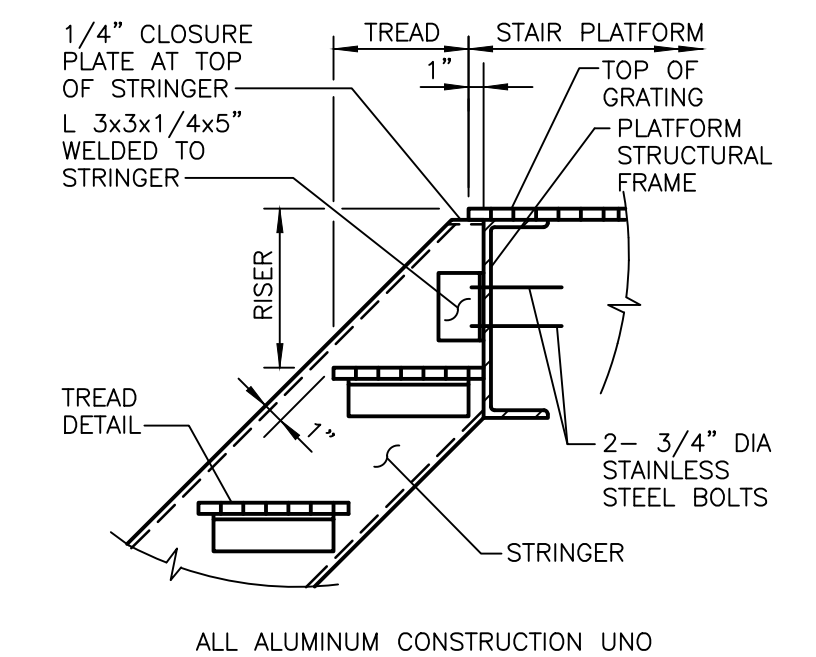
GUARDRAIL GATE  
DETAIL D  
NTS



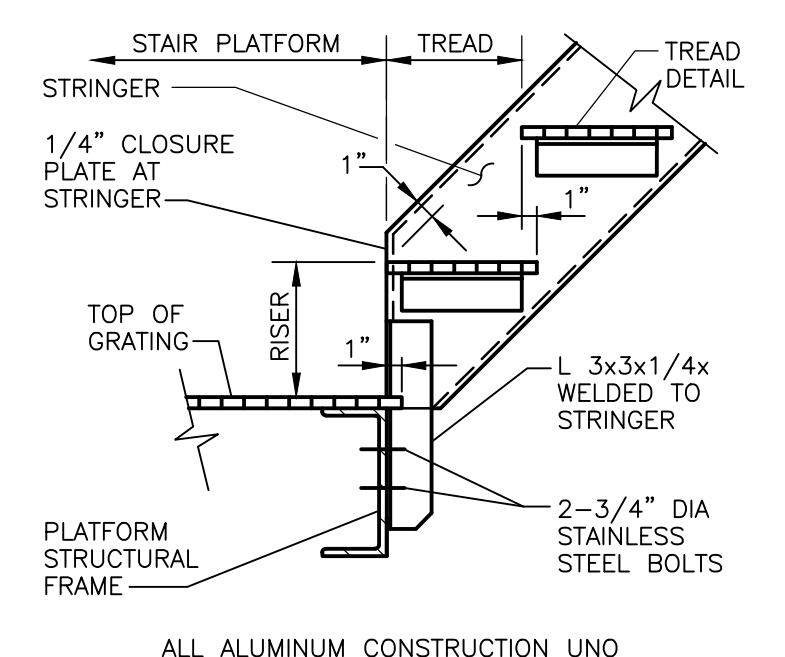
GRATING SUPPORT AT TRENCH INTERSECTIONS  
DETAIL E  
NTS



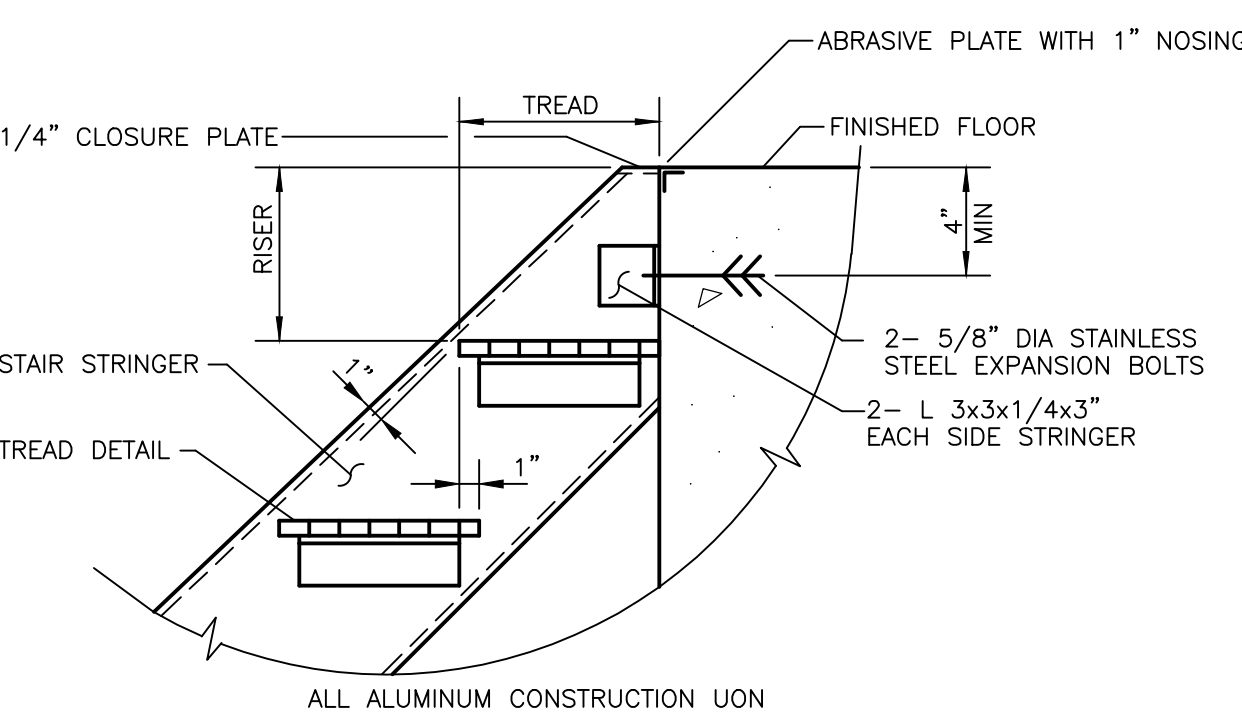
STRINGER CONNECTION AT CONCRETE SLAB (BOTTOM)  
DETAIL F  
NTS



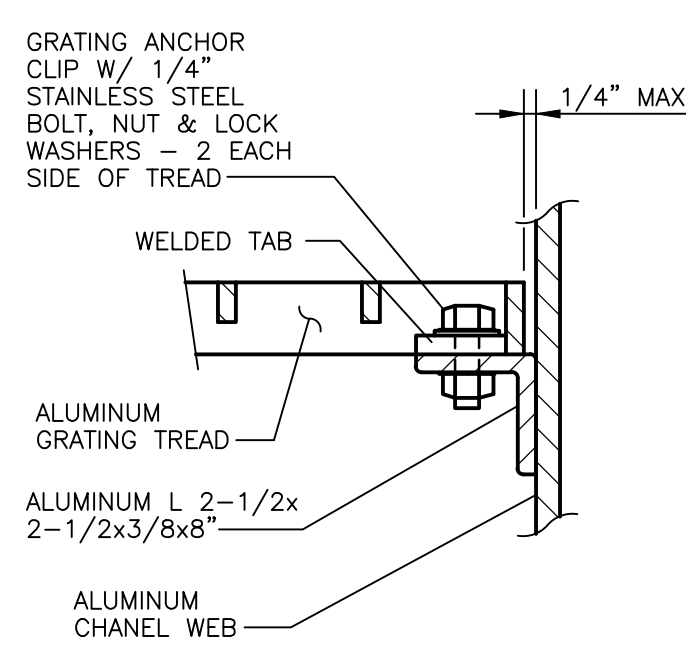
STRINGER CONNECTION AT PLATFORM (TOP)  
DETAIL G  
NTS



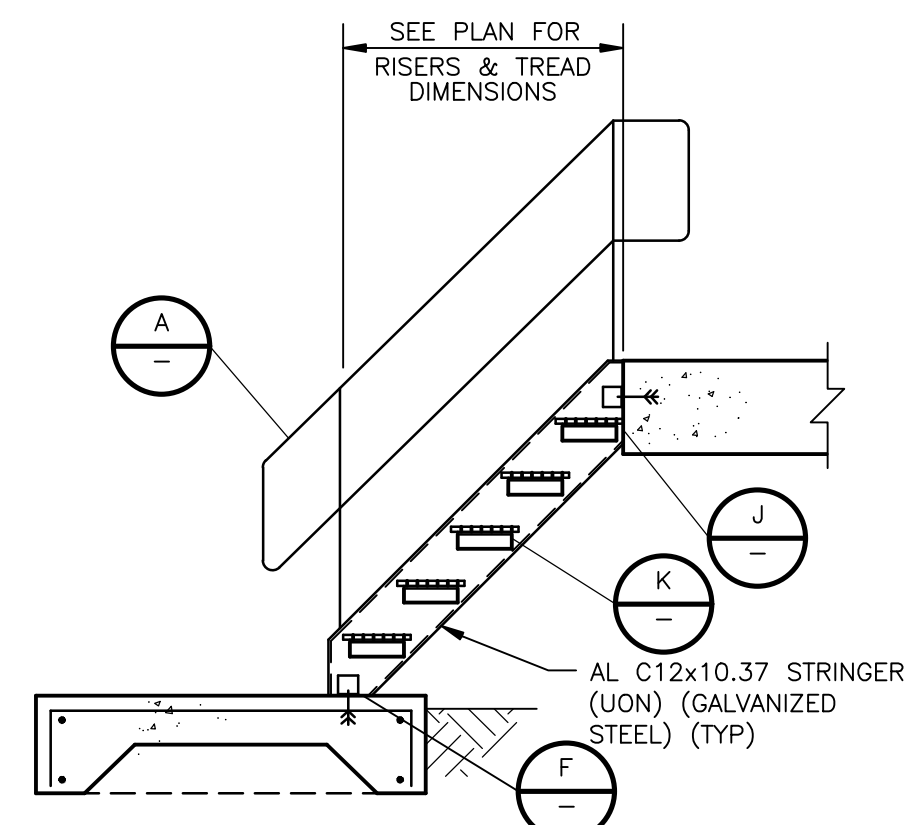
STRINGER CONNECTION AT PLATFORM (BOTTOM)  
DETAIL H  
NTS



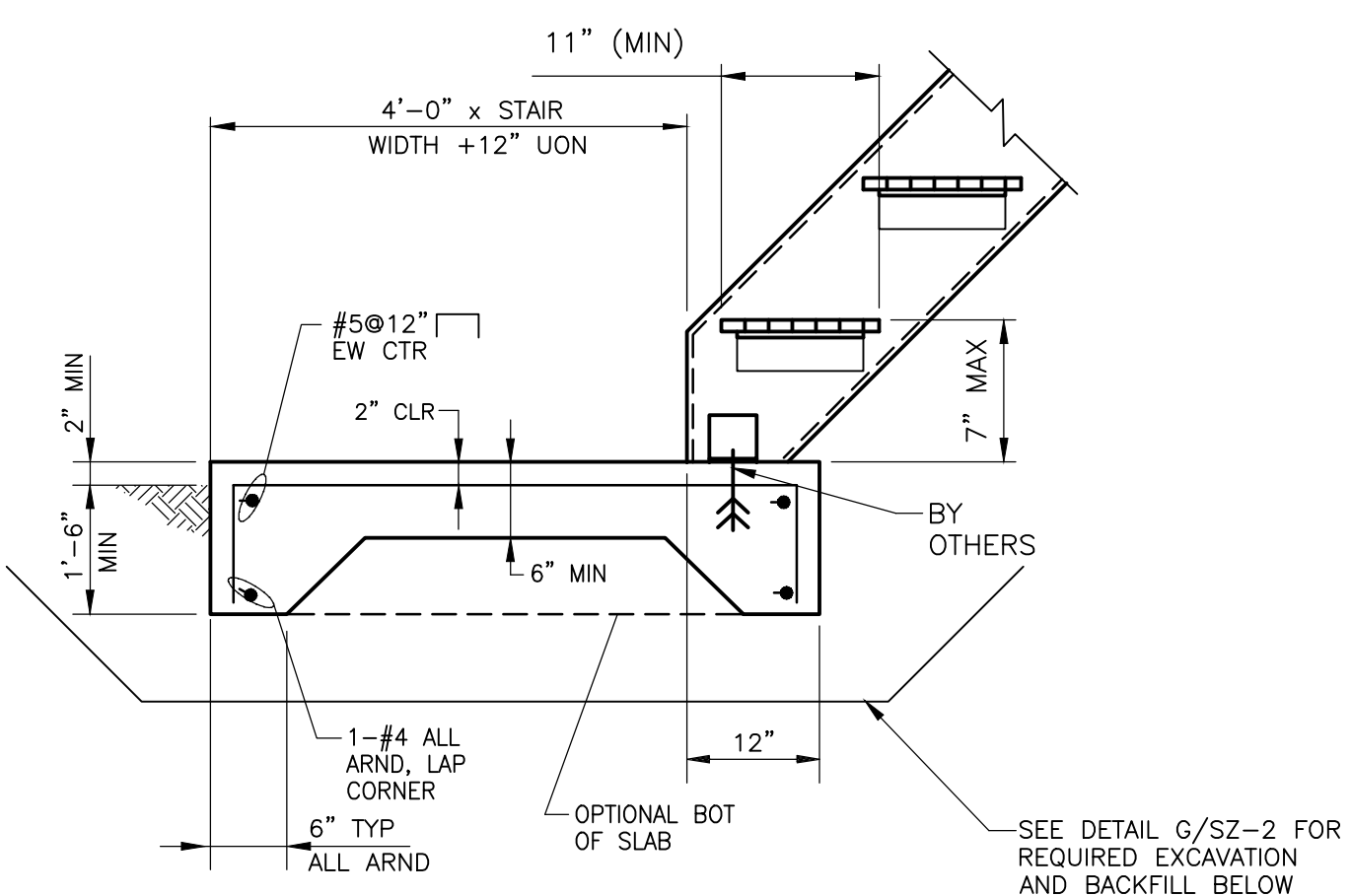
STRINGER CONNECTION AT CONCRETE WALL (TOP)  
DETAIL J  
NTS



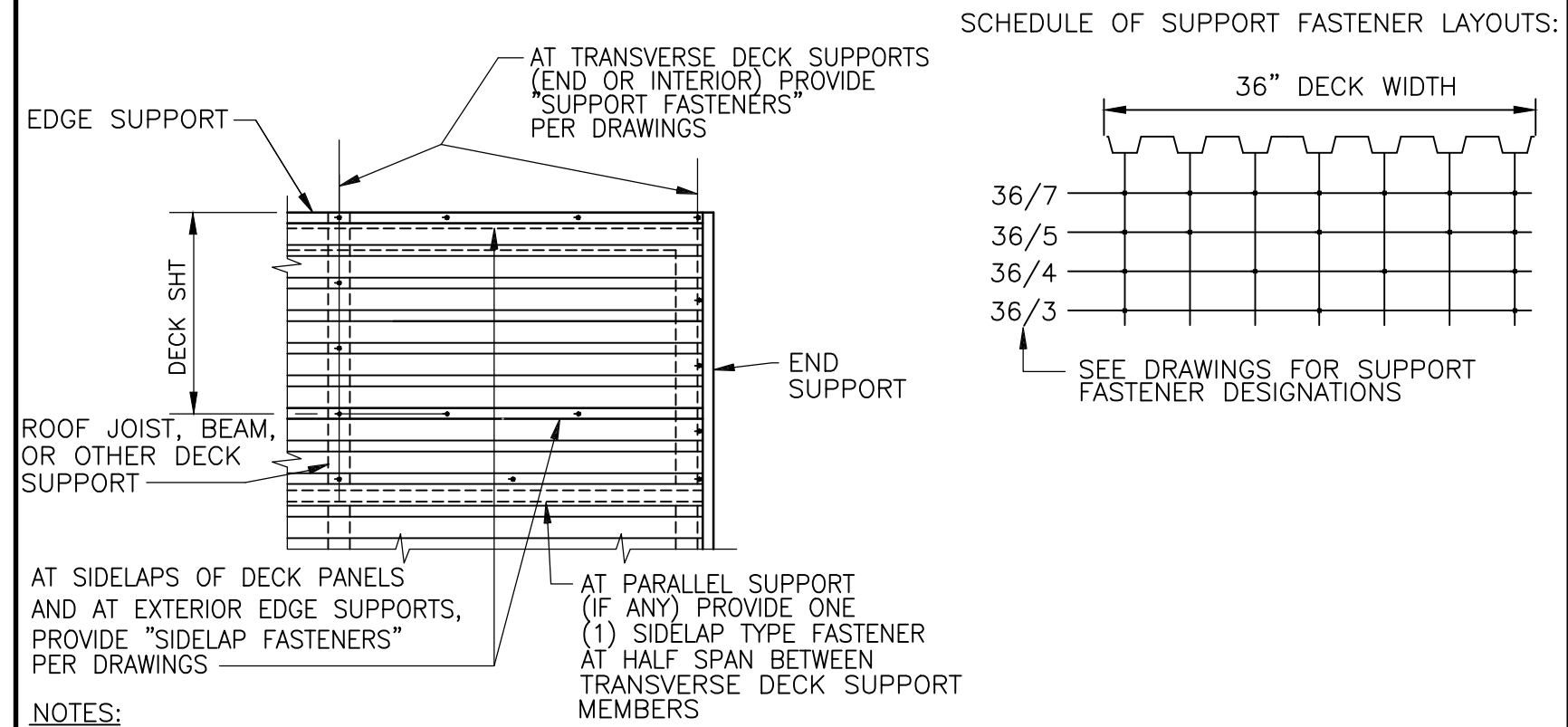
GRATING STAIR TREAD  
DETAIL K  
NTS



STAIR  
DETAIL L  
NTS



STAIR LANDING SLAB  
DETAIL M  
NTS



ROOF DECK FASTENING  
DETAIL N  
NTS



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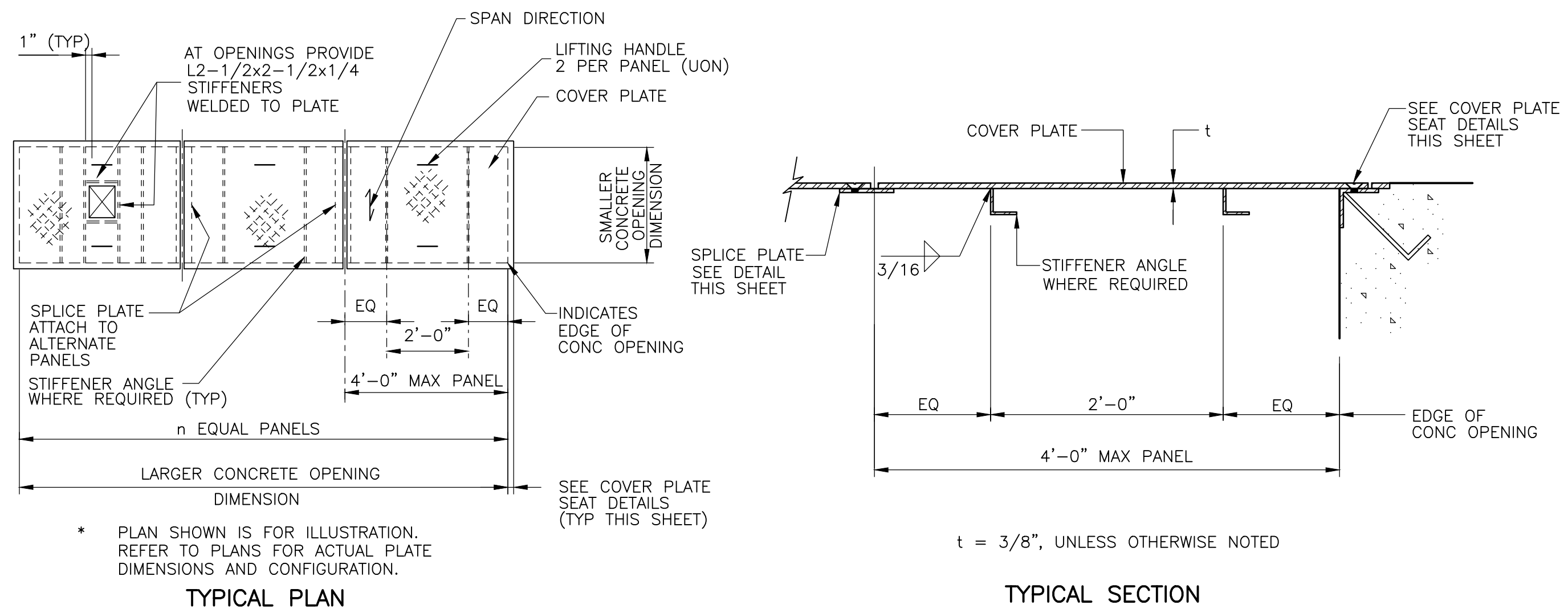
DESIGNED BY:	J. EULL
DRAWN BY:	P. ANUSHA
SHEET CHK'D BY:	C. WONG
CROSS CHK'D BY:	J. EULL
APPROVED BY:	C. WONG
DATE:	NOVEMBER 2023

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JNE	CFW	CONFORMED DRAWINGS

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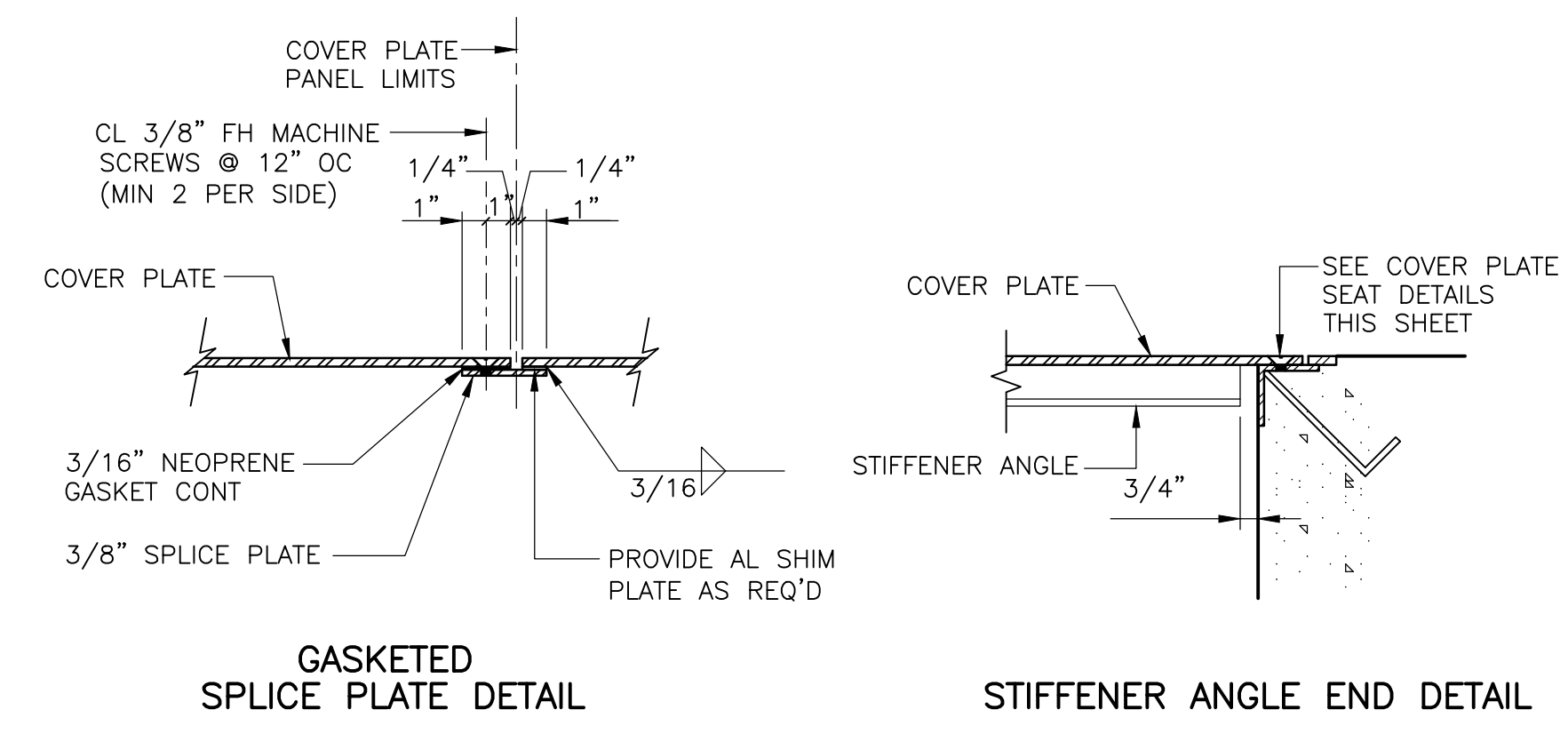
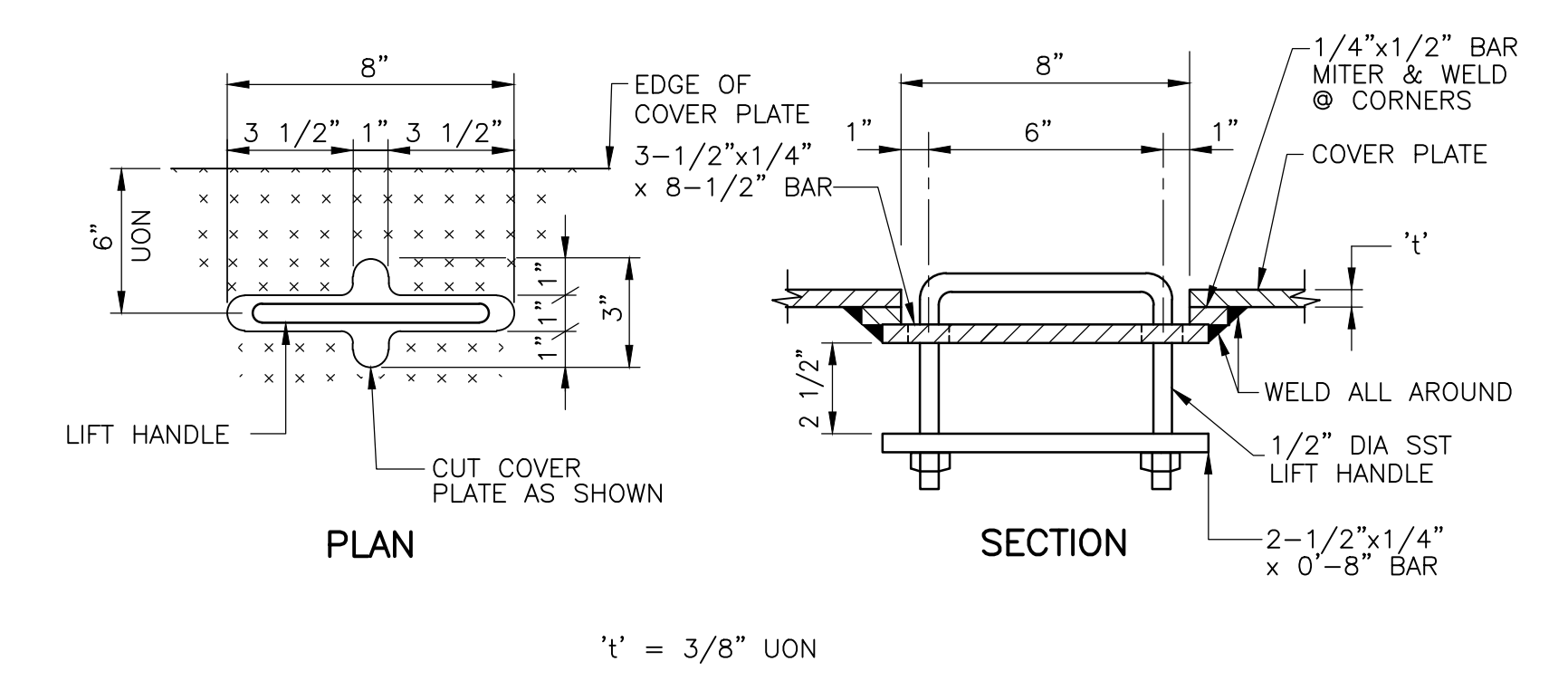
CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

STRUCTURAL STANDARD DETAILS V  
 PROJECT NO. 2048-264953  
 FILE NAME: S005STD.DWG  
 SHEET NO. SZ-5



- NOTES
- COVER PLATES, ANGLE FRAMES, STIFFENERS AND SUPPORTS SHALL BE STAINLESS STEEL TYPE 304.
  - FASTENERS, ANCHORS, BOLTS, NUTS AND WASHERS FOR COVER PLATES AND SUPPORTS SHALL BE STAINLESS STEEL TYPE 304.
  - ALL ANGLE FRAMES FOR COVER PLATES ARE TO BE MITERED AND WELDED AT CORNERS.
  - ALL COVER PLATES SHALL BE SECURELY FASTENED TO SUPPORTS WITH 3/8" STAINLESS STEEL FLAT-HEAD MACHINE SCREWS AT 2'-0" ON CENTER, UNLESS OTHERWISE NOTED.
  - PLACE STIFFENERS PARALLEL TO THE SHORTER SPAN BETWEEN SUPPORTS OF THE PLATE OR AS INDICATED ON THE PLANS. PLACE LONG LEG OF STIFFENERS TO PERPENDICULAR TO THE PLATES.
  - UNLESS OTHERWISE NOTED, SPACING BETWEEN STIFFENERS AND BETWEEN EXTERIOR STIFFENER AND SUPPORT OF THE PLATE SHALL NOT EXCEED 2 FT MAXIMUM DISTANCE FROM EDGE OF THE PLATE TO THE VERTICAL LEG OF THE STIFFENER IS 2 INCHES.
  - ALL PLATES SHALL BE PROVIDED IN SECTIONS WITH LIFTING HANDLE AS DETAILED. A MINIMUM OF TWO STIFFENERS SHALL BE PROVIDED IN EACH PLATE SECTION. OPENINGS IN PLATE SHALL BE LOCATED WITHOUT INTERFERING WITH STIFFENERS.
  - SIZE OF THE STIFFENERS SHALL BE PROVIDED AS FOLLOWS:

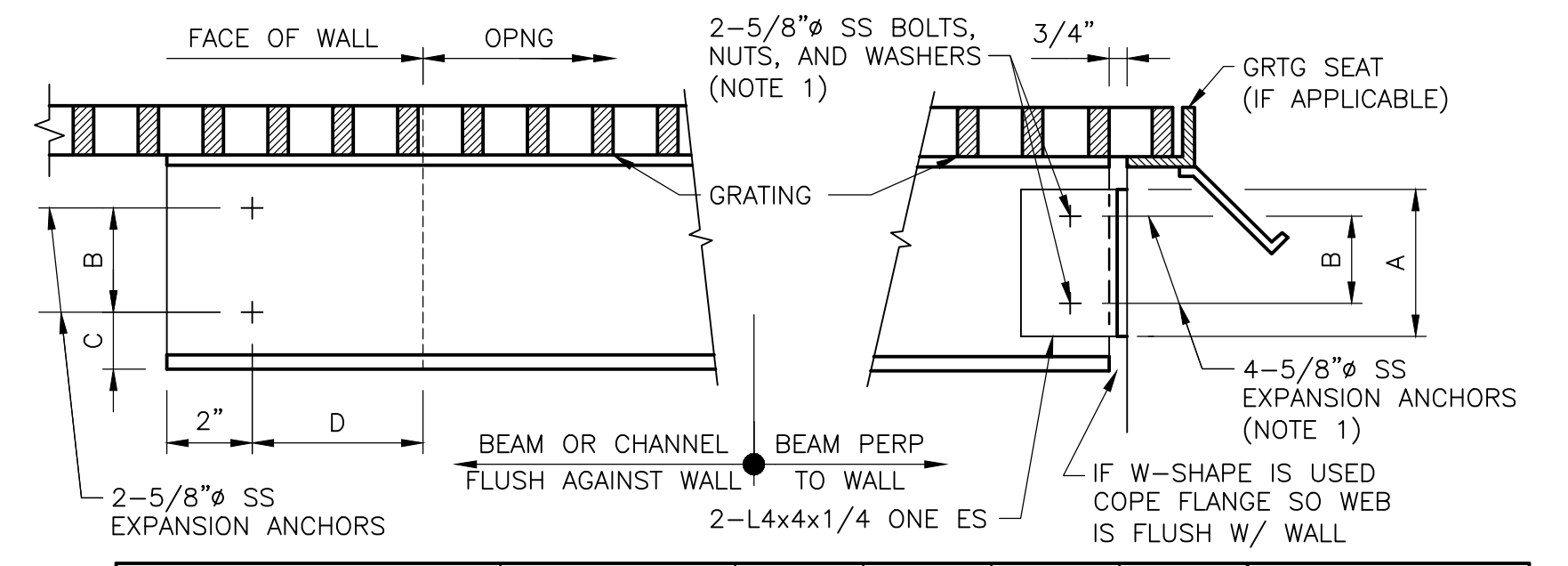
SPAN	STIFFENER SIZE
<=3'-6"	L2½ X 1½ X ¼"
<=4'-6"	L3 X 2 X 3/8"
<=6'-0"	L3½ X 3 X 3/8"



**COVER PLATE DETAILS**

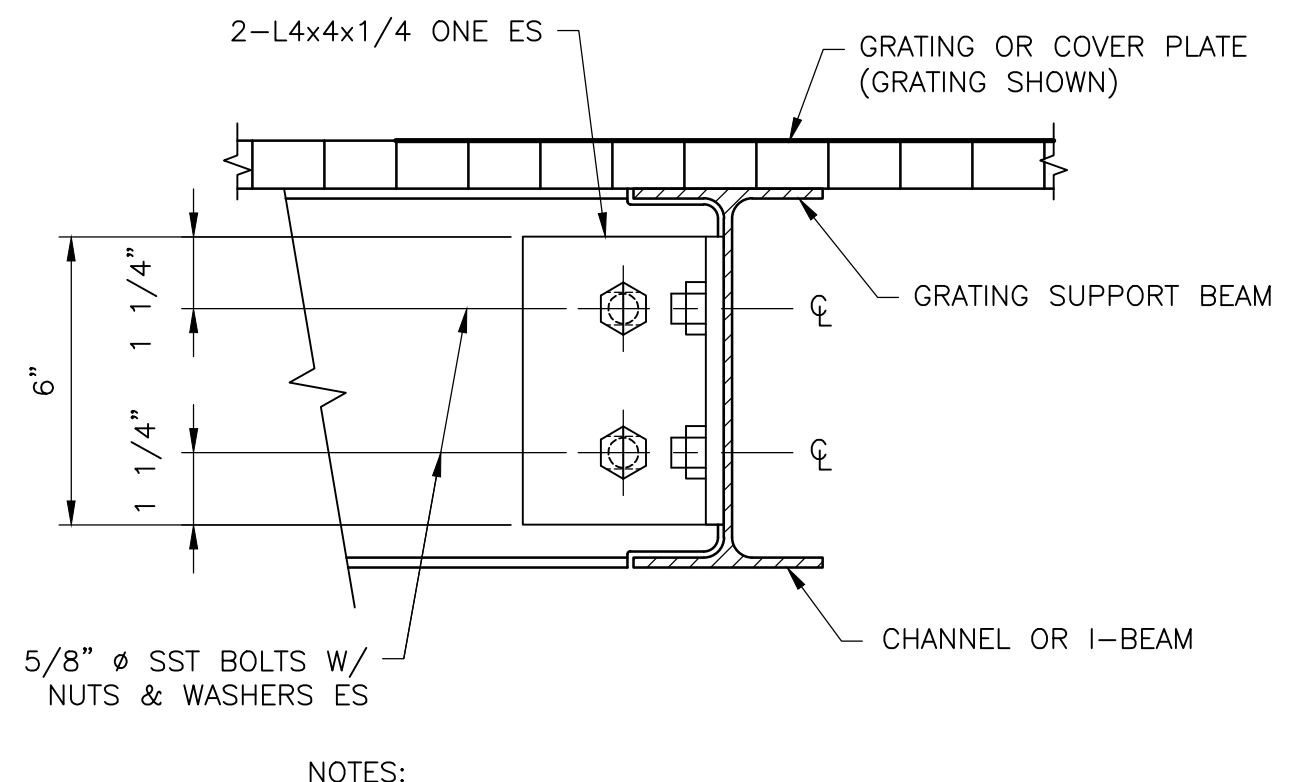
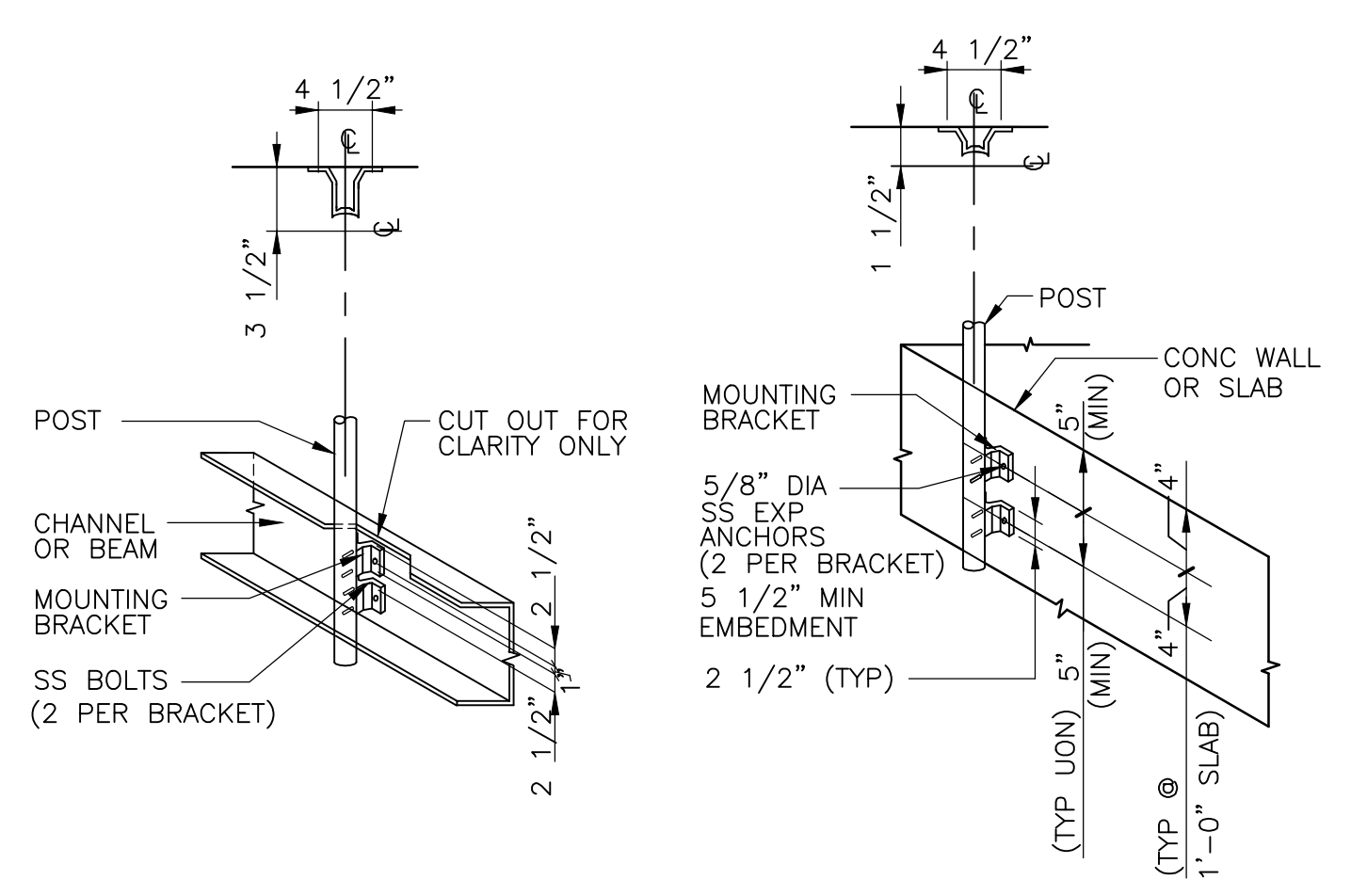
**DETAIL A**

NTS

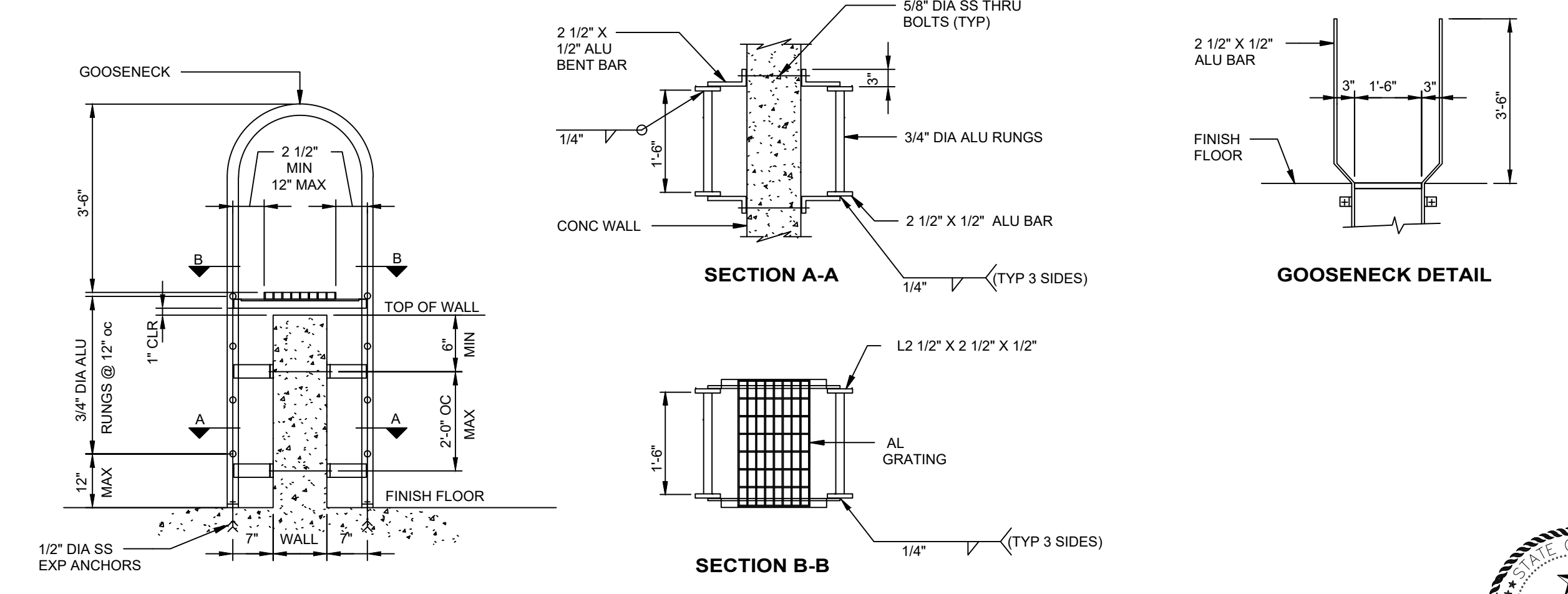


TYPE	BEAM	A	B	C	D	NOTES
AL ASSOC. BEAM	W 8 x 6.12	6"	3 1/2"	-	-	-

- NOTES:
- PROVIDE GALVANIZED STEEL ANCHOR BOLTS AT GALVANIZED STEEL BEAM CONNECTIONS.
  - USE STANDARD MANUFACTURER EMBED FOR ANCHORS, UNO.



- NOTES:
- ALL ALUMINUM CONSTRUCTION UNO.
  - SIMILAR FOR BEAMS FRAMING IN ON EACH SIDE.



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DESIGNED BY: J. EULL  
 DRAWN BY: P. ANUSHA  
 SHEET CHK'D BY: C. WONG  
 CROSS CHK'D BY: J. EULL  
 APPROVED BY: C. WONG  
 DATE: NOVEMBER 2023

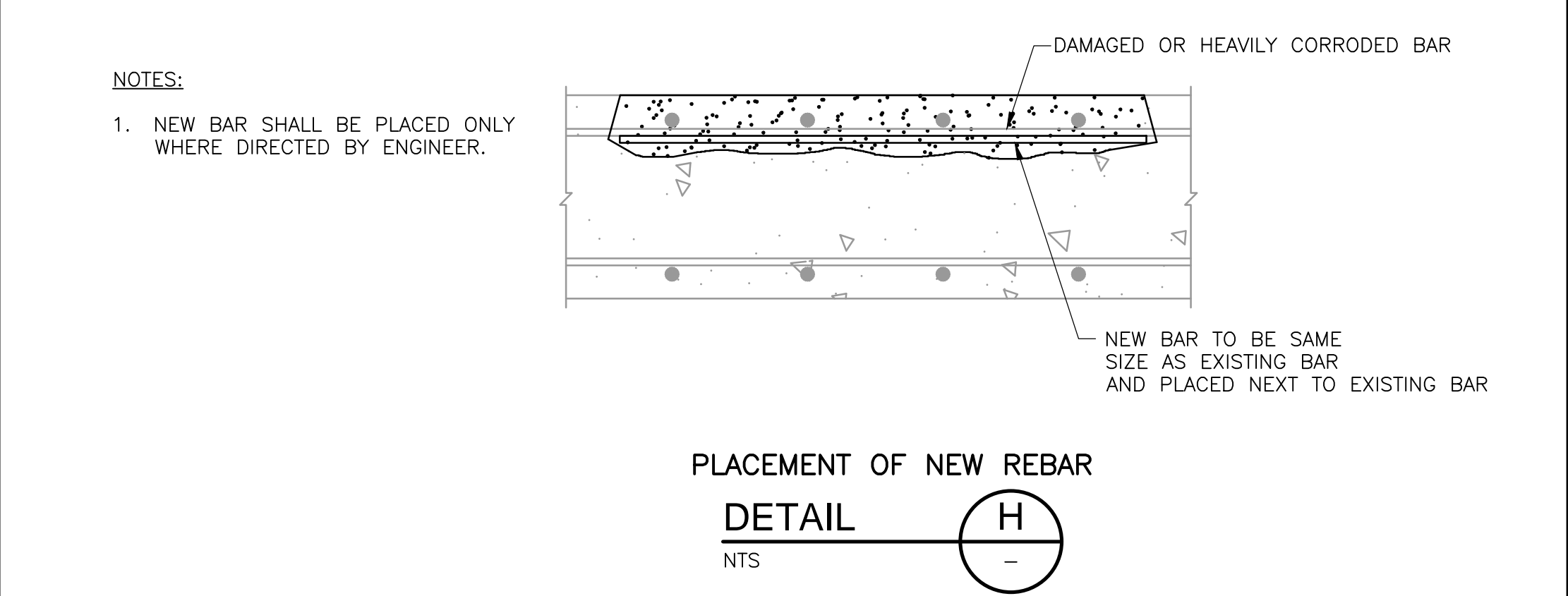
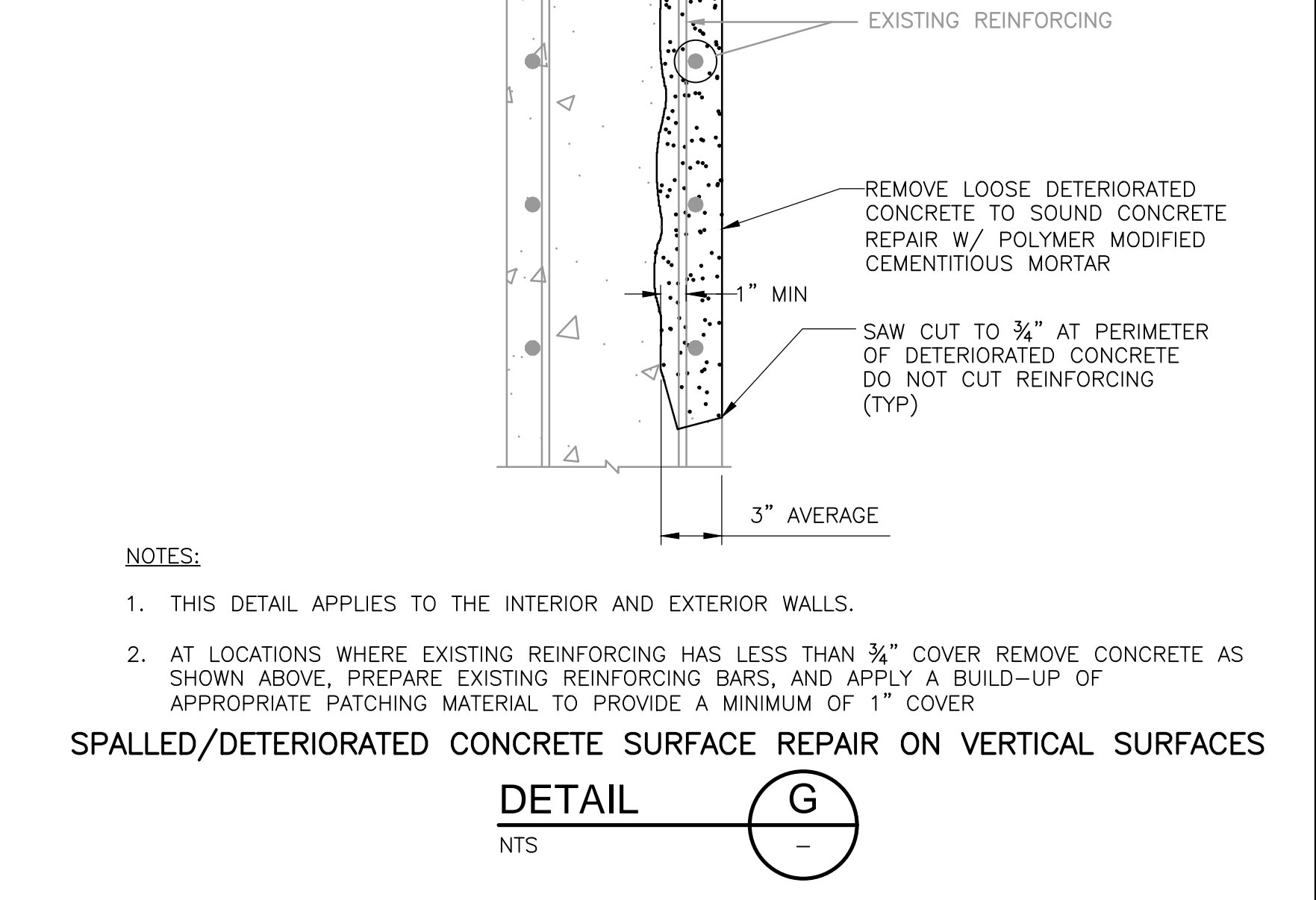
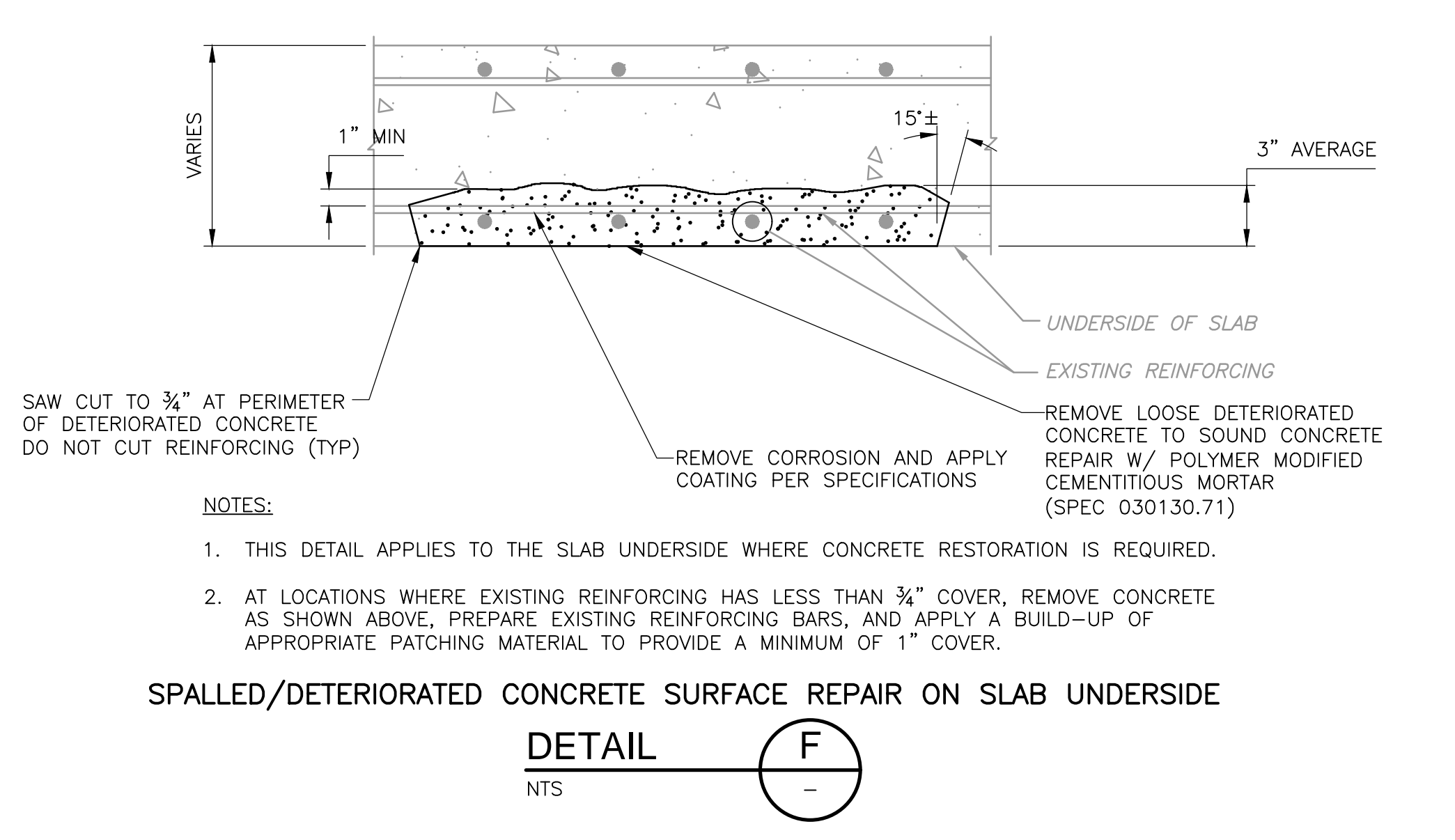
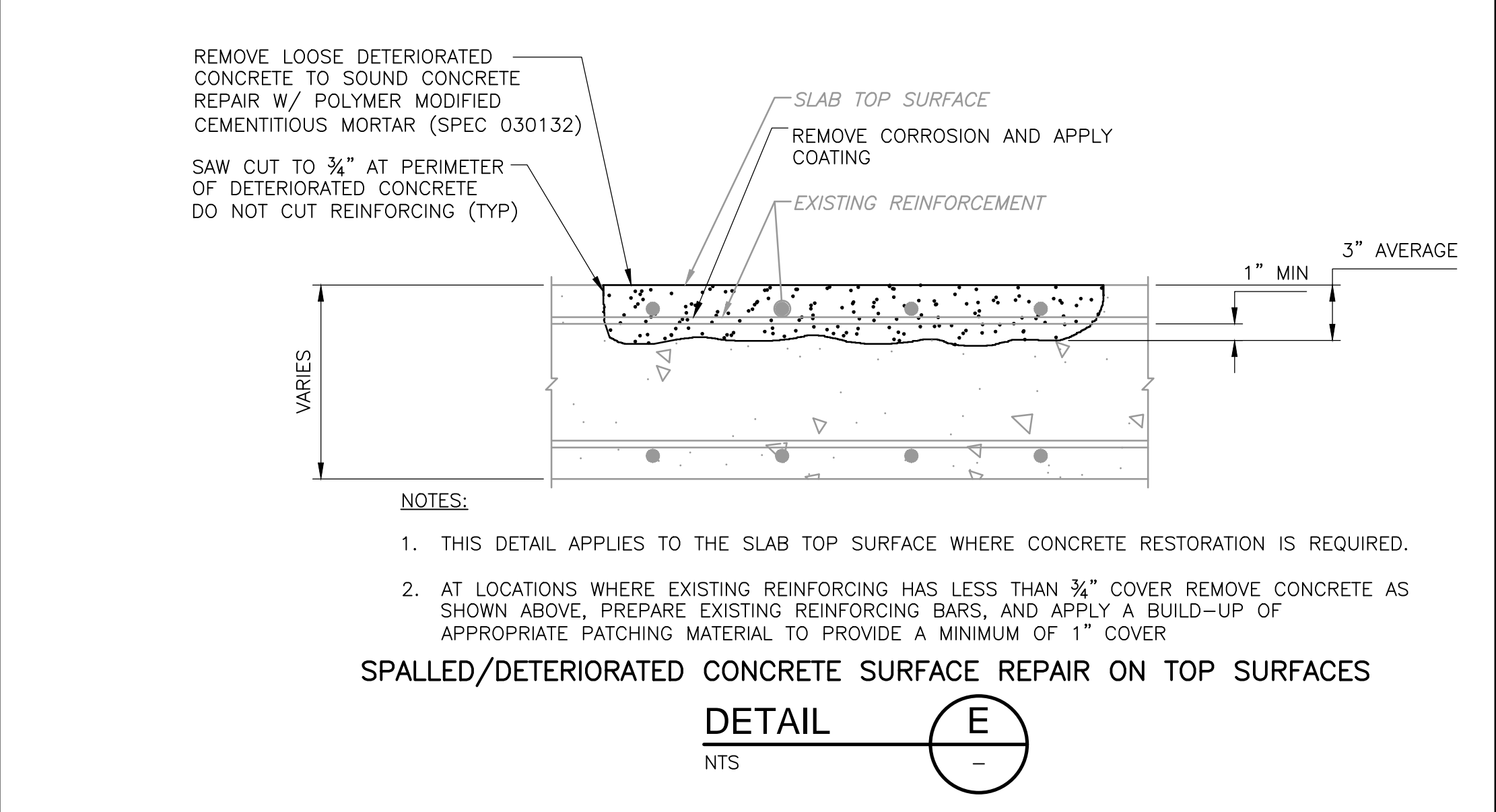
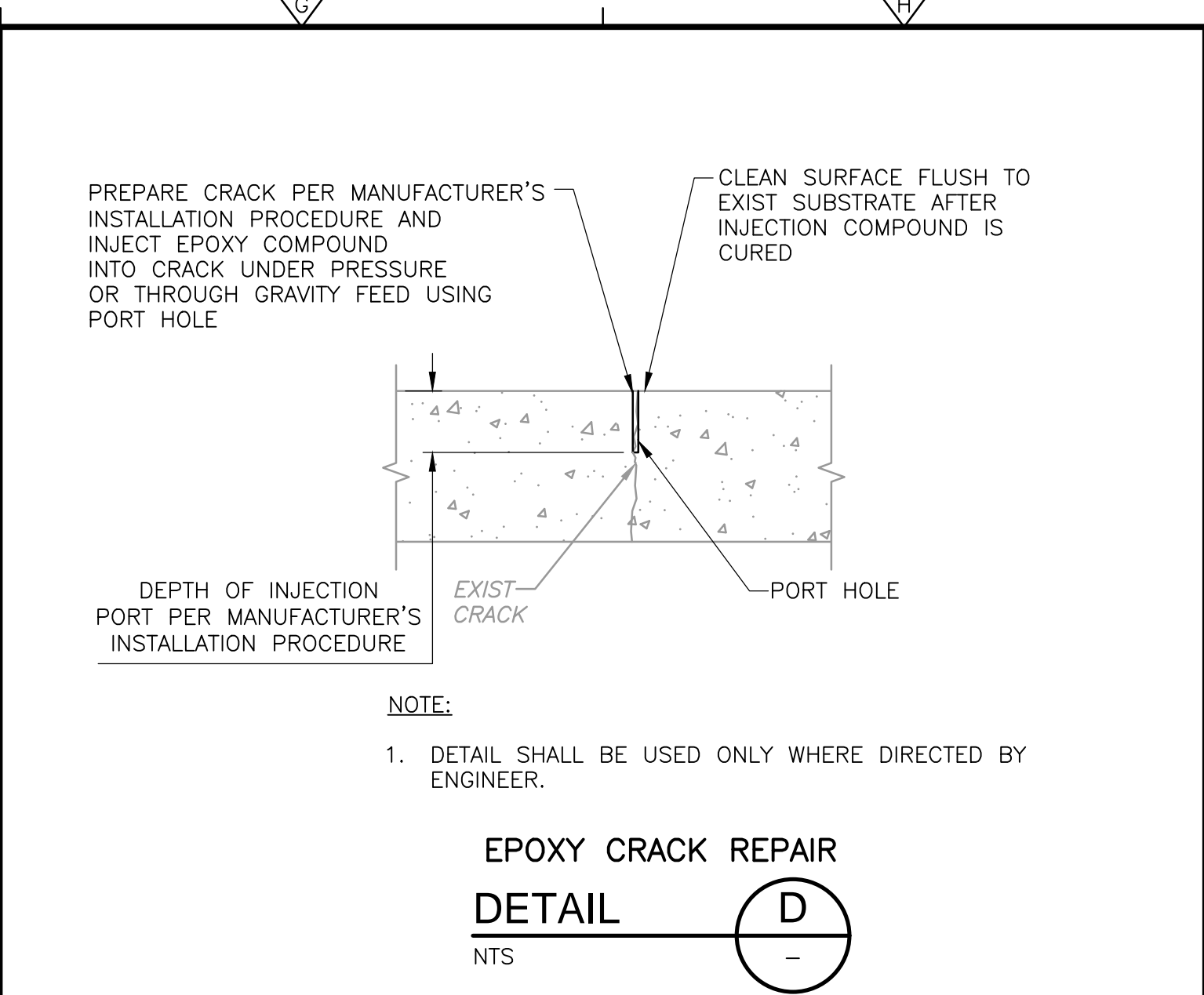
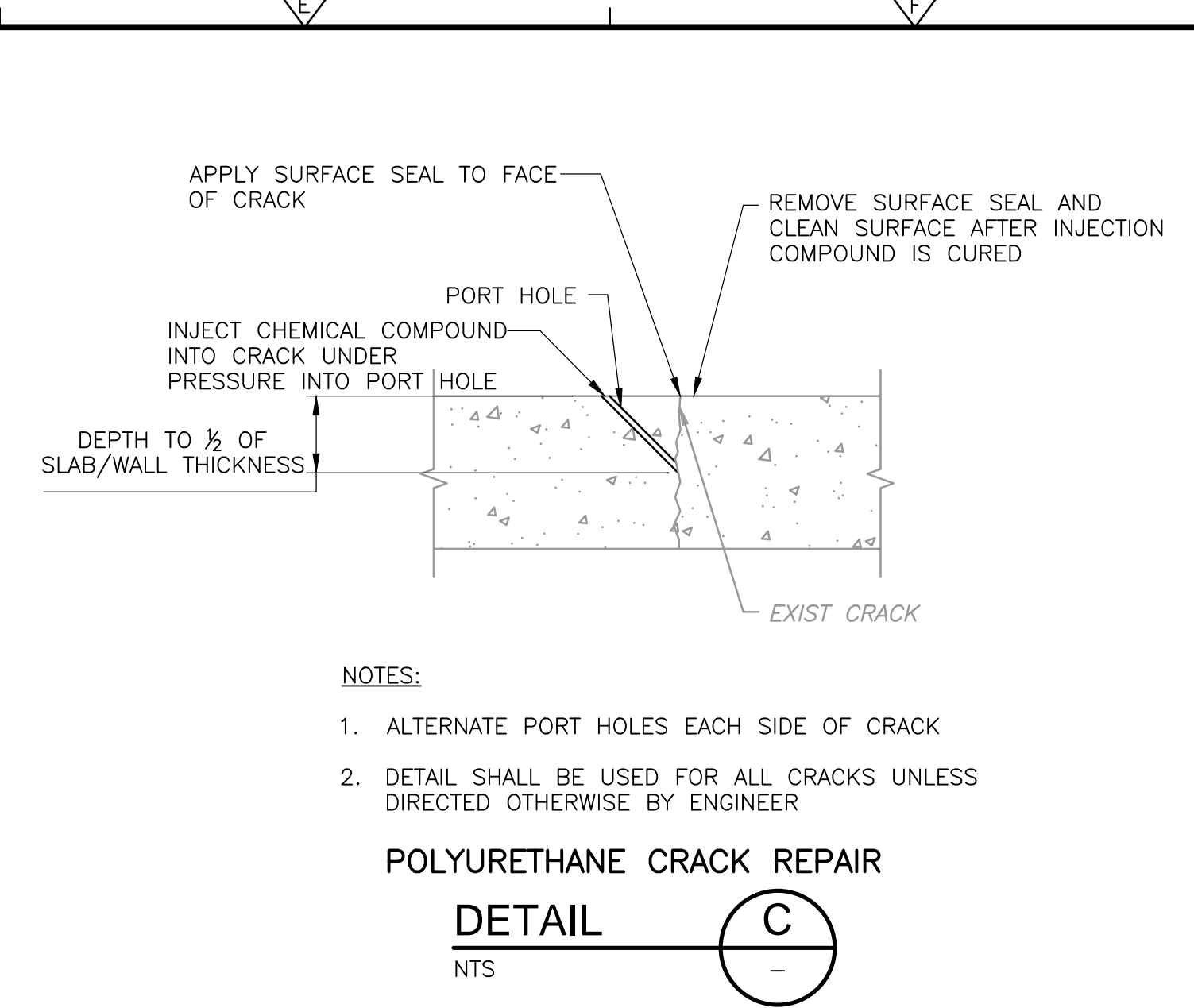
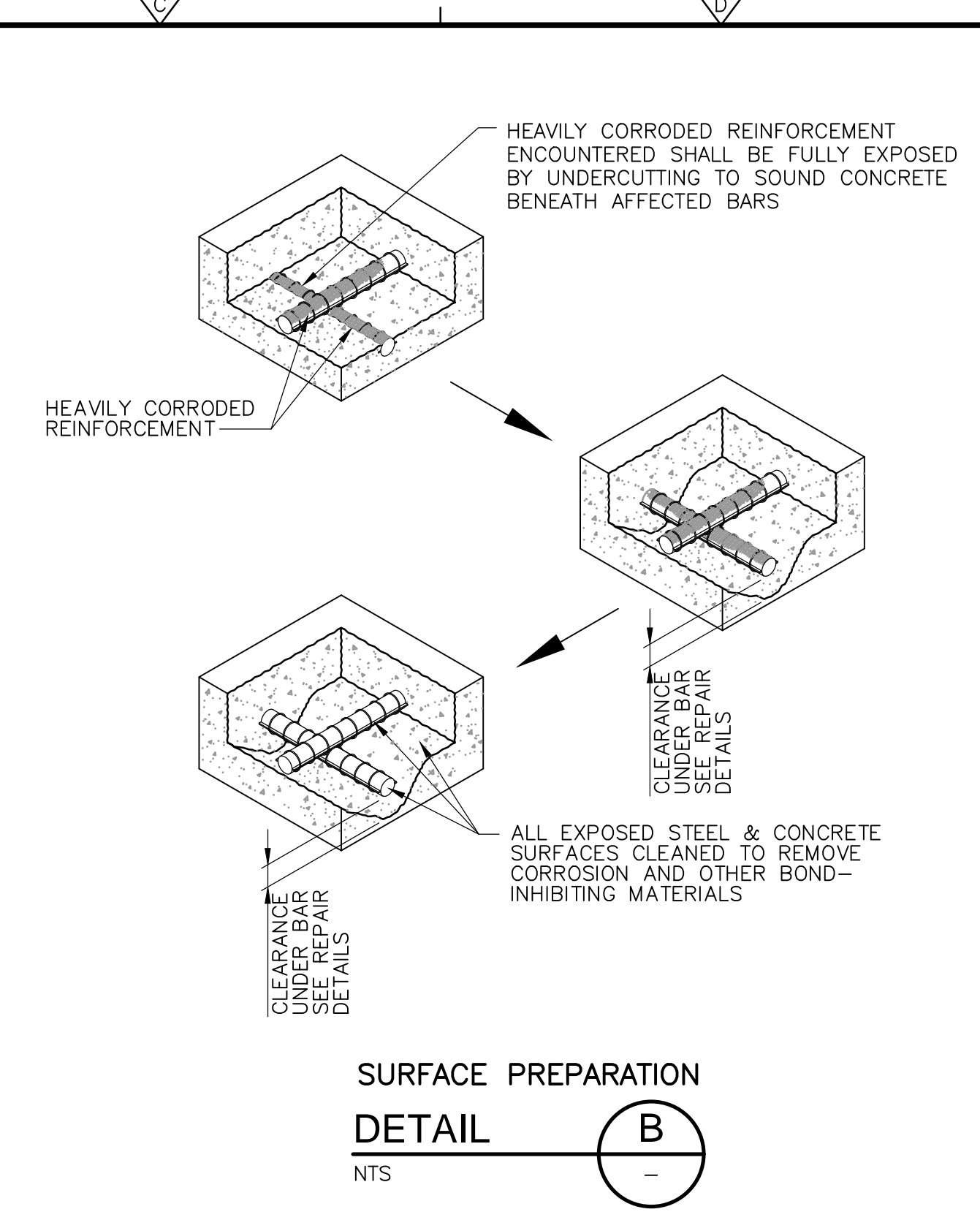
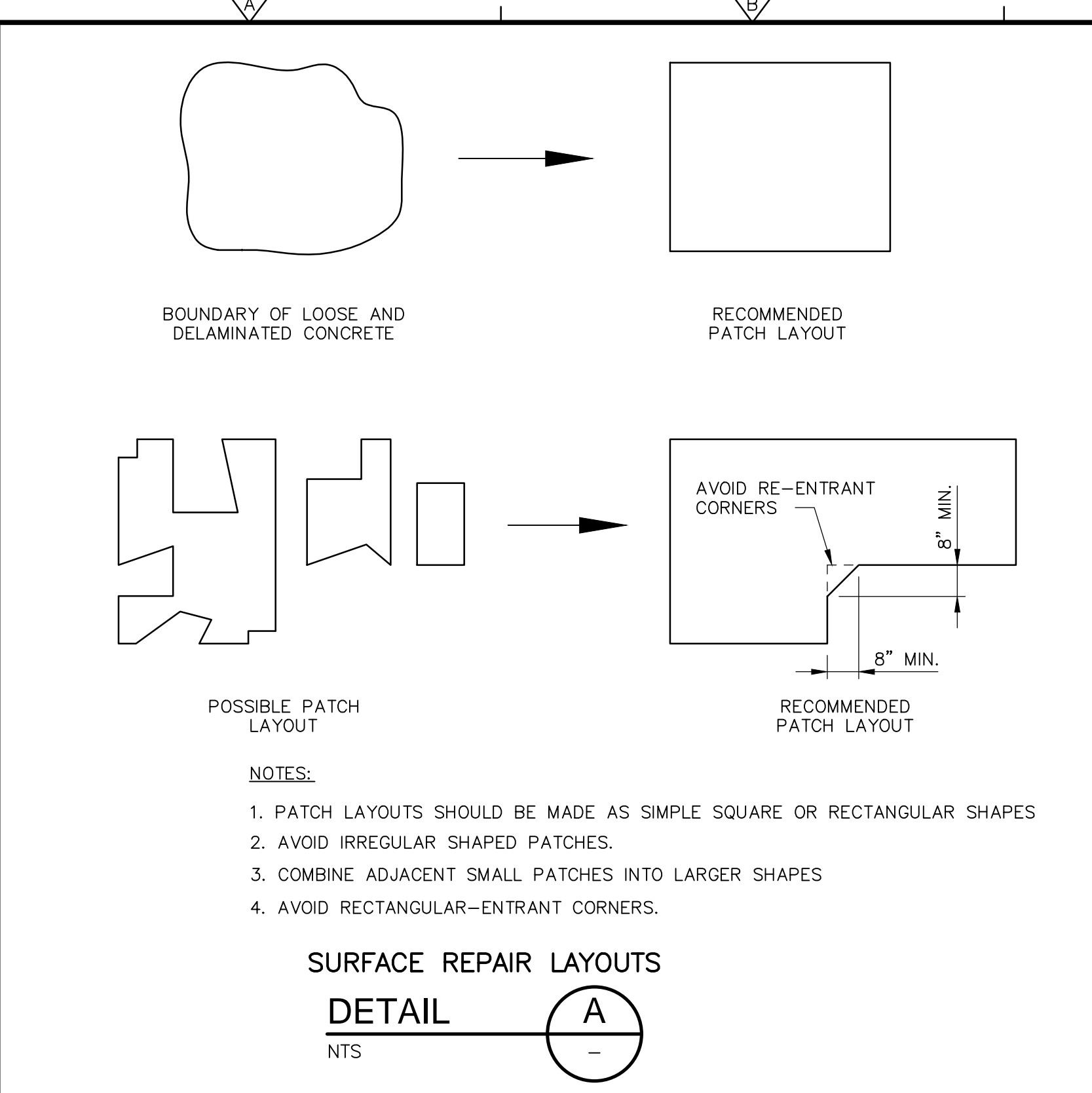


CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

STRUCTURAL STANDARD DETAILS VI  
 SZ-6

PROJECT NO. 2048-264953  
 FILE NAME: S006STD.DWG  
 SHEET NO. SZ-6

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**NOTES:**

- FOR BIDDING PURPOSE, THE CONTRACTOR SHALL ASSUME 50 SF OF TOTAL AREA OF SURFACE SPALLING REPAIR, 100 LF FOR SURFACE CRACKING REPAIR, AND 30 LF FOR EXPOSED REBAR REPLACEMENT. CONTRACTOR SHALL SUBMIT UNIT PRICES IN THE BIDS FOR COST ADJUSTMENT AFTER FINAL QUANTITIES OF REPAIRS HAVE BEEN DETERMINED DURING CONSTRUCTION.



REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JNE	CFW	CONFORMED DRAWINGS

DESIGNED BY: J. EULL  
 DRAWN BY: J. EULL  
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CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

**STRUCTURAL STANDARD  
 CONCRETE REPAIR DETAILS**

PROJECT NO. 2048-264953  
 FILE NAME: S007STD.DWG  
 SHEET NO. SZ-7

**SCHEDULE OF SPECIAL INSPECTIONS AND TESTS**

**NOTES:**

- THIS DRAWING IS PROVIDED TO OUTLINE THE MINIMUM LEVEL OF SPECIAL INSPECTIONS DURING CONSTRUCTION TO ENSURE CONFORMANCE TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. A STATEMENT OF SPECIAL INSPECTIONS WILL BE PREPARED BY A REGISTERED DESIGN PROFESSIONAL AND SUBMITTED WITH THE BUILDING PERMIT APPLICATION.
- SPECIAL INSPECTIONS WILL BE CONDUCTED IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH IN CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE (IBC).
- IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE, THE OWNER WILL PROVIDE AN APPROVED AGENCY OR AGENCIES, INDEPENDENT FROM THE CONTRACTOR AND EMPLOYING QUALIFIED PERSONNEL TO PERFORM SPECIAL INSPECTIONS IDENTIFIED IN THE STATEMENT OF SPECIAL INSPECTIONS. THE APPROVED AGENCY WILL FURNISH INSPECTION REPORTS TO THE DP, RC AND BUILDING OFFICIAL.
- SPECIAL INSPECTIONS SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR QUALITY CONTROL OF THE WORK OR FOR CONFORMANCE TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. DETECTION, OR FAILURE TO DETECT, DEFECTS IN THE WORK SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY TO CORRECT ALL DEFECTS IN THE WORK, WHETHER DETECTED OR NOT, AND OF RESPONSIBILITY FOR CONFORMANCE TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
- REMOVE AND REPLACE, OR REPAIR, DEFECTS IN THE WORK AND WORK NOT IN CONFORMANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR SHALL BEAR THE COSTS FOR THE INSPECTION OF ANY REPLACED OR REPAIRED PORTIONS OF THE WORK.
- CONTRACTOR SHALL COOPERATE WITH SPECIAL INSPECTIONS BY PROVIDING SUFFICIENT NOTICE FOR THE SCHEDULING OF PERSONNEL AND BY ALLOWING FREE AND SAFE ACCESS TO THE WORK FOR OBSERVATION, VERIFICATION, SAMPLING AND INSPECTION. PROVIDE AND PERMIT THE USE OF LADDERS, SCAFFOLDING, INCIDENTAL EQUIPMENT, AND SAFETY EQUIPMENT AS MAY BE REQUIRED TO CONDUCT SPECIAL INSPECTIONS. ALL SUCH PROVISIONS FOR FREE AND SAFE ACCESS AND EQUIPMENT SHALL BE SAFE, IN GOOD WORKING CONDITION, AND ERECTED, MAINTAINED, AND HANDLED BY QUALIFIED PERSONNEL.
- SPECIAL INSPECTIONS DO NOT APPLY TO CONTRACTOR'S EQUIPMENT, TEMPORARY STRUCTURES USED FOR CONSTRUCTION, MEANS AND METHODS OF CONSTRUCTION, OR SITE SAFETY. CONTRACTOR SHALL REMAIN RESPONSIBLE FOR ADEQUACY AND SAFETY OF EQUIPMENT, TEMPORARY STRUCTURES USED FOR CONSTRUCTION, MEANS AND METHODS OF CONSTRUCTION AND SITE SAFETY.
- SCHEDULE OF SPECIAL INSPECTIONS CONTINUED ON SHEET SZ-9.

**TABLE 1 – REQUIRED SPECIAL INSPECTIONS AND TESTS OF SOILS (IBC, TABLE 1705.6)**

VERIFICATION AND INSPECTION	IBC REFERENCE	INSPECTION FREQUENCY		REFERENCE STANDARD	REMARKS
		CONTINUOUS	PERIODIC		
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	1705.6		X	CONTRACT DOCUMENTS AND GEOTECHNICAL REPORT	REFER TO THE FOLLOWING TABLES FOR ADDITIONAL RELATED SPECIAL INSPECTIONS
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL			X		
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS			X		
VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL		X			
PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY			X		

**TABLE 2 – REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION (IBC, TABLE 1705.3)**

VERIFICATION AND INSPECTION	IBC REFERENCE	INSPECTION FREQUENCY		REFERENCE STANDARD
		CONTINUOUS	PERIODIC	
INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT	1705.3 1908.4		X	ACI 318: CH 20, 25.2, 25.3, 26.5.1–26.5.3
REINFORCING BAR WELDING: a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A 706 b. INSPECT SINGLE PASS FILLET WELDS MAX 5/16" c. INSPECT ALL OTHER WELDS	1705.3		X	AWS D1.4 ACI 318: 26.5.4
		X		
INSPECT ANCHORS CAST IN CONCRETE	1705.3		X	ACI 318: 17.8.2
INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS: a. ADHESIVE ANCHORS INSTALLED HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN a	1705.3	X		ACI 318: 17.8.2.4
			X	ACI 318: 17.8.2
VERIFYING USE OF REQUIRED DESIGN MIX	1705.3 1904.1 1904.2 1908.2 1908.3		X	ACI 318: CH 19, 26.4.3, 26.4.4
PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	1705.3 1908.10	X		ACI 318: 26.4.5, 26.12 ASTM C172 ASTM C31
INSPECT CONCRETE AND SHORTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	1705.3 1908.6 1908.7 1908.8	X		ACI 318: 26.4.5
VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	1705.3 1908.9		X	ACI 318: 26.4.7–26.4.9
INSPECTION OF PRESTRESSED CONCRETE FOR: a. APPLICATION OF PRESTRESSING FORCES b. GROUTING OF BONDED PRESTRESSING TENDONS	1705.3	X		ACI 318: 26.9.2.1
		X		ACI 318: 26.9.2.3
INSPECT ERECTION OF PRECAST CONCRETE MEMBERS	1705.3		X	ACI 318: 26.8
VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS	1705.3		X	ACI 318: 26.10.2
INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED	1705.3		X	ACI 318: 26.10.1(b)

**TABLE 3 – REQUIRED SPECIAL INSPECTIONS AND TESTS OF STRUCTURAL STEEL CONSTRUCTION (AISC 360, PER IBC 1705.2)**

VERIFICATION AND INSPECTION	IBC REFERENCE	INSPECTION FREQUENCY		REFERENCE STANDARD
		CONTINUOUS	PERIODIC	
MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS AND WASHERS a. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS b. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED	1705.2		X	AISC 360, SECTION A3.3 AND APPLICABLE ASTM MATERIAL STANDARDS
			X	
INSPECTION OF HIGH-STRENGTH BOLTING: a. SNUG-TIGHT JOINTS b. PRETENSIONED AND SLIP-CRITICAL JOINTS USING TURN-OF-NUT WITH MATCHMARKING, TWIST-OFF BOLT OR DIRECT TENSION INDICATOR METHODS OF INSTALLATION c. PRETENSIONED AND SLIP-CRITICAL JOINTS USING TURN-OF-NUT WITHOUT MATCHMARKING OR CALIBRATED WRENCH METHODS OF INSTALLATION	1705.2		X	AISC 360, SECTION M2.5
		X		
MATERIAL VERIFICATION OF STRUCTURAL STEEL: a. IDENTIFICATION MARKINGS TO CONFORM TO AISC 360 b. MANUFACTURER'S CERTIFIED MILL TEST REPORTS	1705.2		X	AISC 360, SECTION M5.5
			X	
MATERIAL VERIFICATION OF WELD FILLER MATERIALS: a. IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATION IN THE APPROVED CONSTRUCTION DOCUMENTS b. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED	1705.2		X	AISC 360, SECTION A3.5 AND APPLICABLE AWS A5 DOCUMENTS
			X	
INSPECTION OF WELDING: a. COMPLETE AND PARTIAL PENETRATION GROOVE WELDS b. MULTIPASS FILLET WELDS c. SINGLE-PASS FILLET WELDS >5/16" d. PLUG AND SLOT WELDS e. SINGLE-PASS FILLET WELDS < OR = 5/16"	1705.2 1704.3.1	X		AWS D1.1
		X		
		X		
		X		
INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE: a. DETAILS SUCH AS BRACING AND STIFFENING b. MEMBER LOCATIONS c. APPLICATION OF JOINT DETAILS AT EACH CONNECTION	1705.2 1704.3.2		X	
			X	
			X	

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REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JNE	CFW	CONFORMED DRAWINGS

DESIGNED BY: J. EULL  
 DRAWN BY: P. ANUSHA  
 SHEET CHK'D BY: C. WONG  
 CROSS CHK'D BY: J. EULL  
 APPROVED BY: C. WONG  
 DATE: NOVEMBER 2023



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CITY OF GEORGETOWN, TEXAS  
**DOVE SPRINGS WWTP  
 REHABILITATION**

**STRUCTURAL SPECIAL INSPECTIONS I**

PROJECT NO. 2048-264953  
 FILE NAME: S008NFNT.DWG  
 SHEET NO.  
**SZ-8**



**SCHEDULE OF SPECIAL INSPECTIONS (CONTINUED)**

NOTE:  
1. SEE SHEET SZ-8 FOR NOTES.

VERIFICATION AND INSPECTION	IBC REFERENCE	INSPECTION FREQUENCY		REFERENCE STANDARD
		CONTINUOUS	PERIODIC	
MATERIAL VERIFICATION OF COLD-FORMED STEEL DECK: a. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS b. MANUFACTURER'S CERTIFIED MILL TEST REPORTS	1705.2.2		X	APPLICABLE ASTM MATERIAL STANDARDS
INSPECTION OF WELDING: a. COLD-FORMED STEEL DECK 1) FLOOR AND ROOF DECK WELDS b. REINFORCING STEEL (WHEN WELDING IS SPECIFIED OR APPROVED IN WRITING) 1) VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A 706 2) REINFORCING STEEL RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, AND BOUNDARY ELEMENTS OF SPECIAL STRUCTURAL REINFORCED CONCRETE SHEAR WALLS AND SHEAR REINFORCEMENT 3) SHEAR REINFORCEMENT 4) OTHER REINFORCING STEEL	1705.2.2 1705.3.1	X	X	AWS D1.3  AWS D1.4 AND ACI 318: SECTION 3.5.2
COLD-FORMED STEEL TRUSSES SPANNING 60 FEET OR GREATER: a. VERIFY TEMPORARY AND PERMANENT RESTRAINT/BRACING ARE INSTALLED IN ACCORDANCE WITH THE APPROVED TRUSS SUBMITTAL PACKAGE	1705.2.4		X	

VERIFICATION AND INSPECTION	IBC REFERENCE	INSPECTION FREQUENCY		REFERENCE STANDARD	
		CONTINUOUS	PERIODIC		
MATERIAL VERIFICATION OF BOLTS, NUTS AND WASHERS a. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS b. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED	1701.2		X		
MATERIAL VERIFICATION OF ALUMINUM STRUCTURAL MEMBERS: a. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS b. MANUFACTURER'S CERTIFIED MILL TEST REPORTS			X	APPLICABLE ASTM MATERIAL STANDARDS	
MATERIAL VERIFICATION OF WELD FILLER MATERIALS: a. IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATION IN THE APPROVED CONSTRUCTION DOCUMENTS b. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED			X	APPLICABLE AWS DOCUMENTS	
INSPECTION OF WELDING: a. ALUMINUM STRUCTURES 1) COMPLETE AND PARTIAL PENETRATION GROOVE WELDS 2) MULTIPASS FILLET WELDS 3) SINGLE-PASS FILLET WELDS > 5/16" 4) PLUG AND SLOT WELDS 5) SINGLE-PASS FILLET WELDS < OR = 5/16"			X	X	AWS D1.2
INSPECTION OF FRAME JOINT DETAILS FOR COMPLIANCE: a. DETAILS SUCH AS BRACING AND STIFFENING b. MEMBER LOCATIONS c. APPLICATION OF JOINT DETAILS AT EACH CONNECTION				X	

SYSTEM OR MATERIAL	IBC REFERENCE	INSPECTION FREQUENCY		REFERENCE STANDARD
		CONTINUOUS	PERIODIC	
THE STATEMENT OF SPECIAL INSPECTIONS WILL INCLUDE WIND REQUIREMENTS FOR STRUCTURES CONSTRUCTED IN THE FOLLOWING AREAS: a. IN WIND EXPOSURE CATEGORY B, WHERE THE 3-SECOND-GUST BASIC WIND SPEED IS 120 MILES PER HOUR (MPH) (52.8M/S) OR GREATER b. IN WIND EXPOSURE CATEGORY C OR D, WHERE THE 3-SECOND-GUST BASIC WIND SPEED IS 110 MPH (49 M/S) OR GREATER	1705.11		X	CONTRACT DOCUMENTS
ROOF COVERING, ROOF DECK AND FRAMING CONNECTIONS			X	
EXTERIOR WALL COVERING AND WALL CONNECTIONS TO ROOF AND FLOOR DIAPHRAGMS AND FRAMING			X	

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REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JNE	CFW	CONFORMED DRAWINGS

DESIGNED BY: J. EULL  
DRAWN BY: P. ANUSHA  
SHEET CHK'D BY: C. WONG  
CROSS CHK'D BY: J. EULL  
APPROVED BY: C. WONG  
DATE: NOVEMBER 2023



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CITY OF GEORGETOWN, TEXAS  
DOVE SPRINGS WWTP  
REHABILITATION

STRUCTURAL SPECIAL INSPECTIONS II  
SZ-9

PROJECT NO.	2048-264953
FILE NAME:	S009NFNT.DWG
SHEET NO.	SZ-9



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### PIPING SYMBOLS

DOUBLE LINE SYMBOL	SINGLE LINE SYMBOL	FEATURE
		WELDED JOINT
		BLIND FLANGE
		FLANGED JOINT COMPLEX REPRESENTATION.
		MECHANICAL JOINT COMPLEX REPRESENTATION.
		PUSH ON JOINT OR CAULKED BELL & SPIGOT JOINT SIMPLIFIED REPRESENTATION
		PUSH ON JOINT OR CAULKED BELL & SPIGOT JOINT COMPLEX REPRESENTATION
		PUSH ON JOINT OR CAULKED BELL & SPIGOT JOINT RESTRAINED
		BALL JOINT
		DIRECTION OF FLOW
		PLAIN END x PLAIN END PIPE COUPLING
		PLAIN END x PLAIN END PIPE COUPLING RESTRAINED
		FLANGE x PLAIN END PIPE COUPLING
		FLEXIBLE COUPLING OR EXPANSION JOINT (SLEEVE TYPE)
		FLEXIBLE COUPLING OR EXPANSION JOINT (BELLOWS TYPE)
		COUPLING FOR GROOVED END JOINTS: Ⓣ FLEXIBLE Ⓡ RIGID
		FLANGE GUARD
		FLANGE FILLER
		UNION
		QUICK CONNECT COUPLING
		HOSE COUPLING

**PIPE AND FITTING SYMBOL NOTES:**

- SIMPLIFIED JOINT SYMBOL IS USED FOR ALL SINGLE LINE PIPING SHOWN ON THE INTERIOR & EXTERIOR PIPING DRAWINGS.
- UNLESS MODIFIED BY THE GENERAL PROJECT NOTES OR DETAILED ON THE LAYOUT AND SCHEMATIC DRAWINGS PIPE & FITTING JOINT REQUIREMENTS FOR THE VARIOUS PIPE MATERIALS ARE DEFINED IN THE SPECIFICATIONS.

### EQUIPMENT / VALVE TAG

NOTE: ONLY NEW VALVES 4" OR LARGER WILL BE TAGGED.

SHFP-01	EQUIPMENT CODE
16"-PTW-GV-01	NUMERICAL INDICATOR UNIQUE NUMBER ASSIGNED TO EACH PIECE OF EQUIPMENT
	NUMERICAL INDICATOR UNIQUE NUMBER ASSIGNED TO EACH VALVE
	ABBREVIATION INDICATING TYPE OF VALVE, I.E. GATE
	PROCESS FLUID ABBREVIATION
	VALVE SIZE

### VALVE SYMBOLS

SYMBOL	FEATURE
	CAP OR PLUG
	UNCLASSIFIED. TYPE AS SHOWN ON THE DRAWINGS ADJACENT TO SYMBOL
	FLOW METER
	TELESCOPING VALVE
	VALVE WITH HOSE END (FLUSHING CONNECTION)
	GATE VALVE
	KNIFE GATE VALVE
	GLOBE VALVE
	BALL VALVE
	3-WAY BALL VALVE
	4-WAY BALL VALVE
	CONE VALVE
	NEEDLE VALVE
	PINCH VALVE
	DIAPHRAGM VALVE
	BUTTERFLY VALVE
	BUTTERFLY VALVE DAMPER (AIR PIPING)
	PLUG VALVE
	CHECK VALVE, GENERAL SYMBOL
	BALL CHECK VALVE
	DOUBLE DOOR CHECK VALVE
	ANGLE VALVE
	SOLENOID VALVE
	THREE WAY SOLENOID VALVE
	MOTOR OPERATED VALVE
	FLAP VALVE
	SHEAR GATE
	MUD VALVE
	FLOOR DRAIN
	EQUIPMENT DRAIN
	ECCENTRIC REDUCER OR REDUCING BUSHING
	CONCENTRIC REDUCER OR REDUCING BUSHING
	Y-STRAINER
	YARD HOSE STATION
	CALIBRATION CYLINDER
	AIR RELEASE VALVE
	CLEAN OUT
	DOWN
	UP
	DROP OR RISE
	PRESSURE RELIEF VALVE
	BALL VALVE - CHLORINE SERVICE
	VACUUM REGULATOR
	SELF-CONTAINED PRESSURE REGULATING VALVE
	BACK PRESSURE REGULATION VALVE

### VALVE SYMBOLS (CONTINUED)

SYMBOL	FEATURE
	SPRING RETURN BALL VALVE
	DIAPHRAGM SEAL STANDARD
	DIAPHRAGM SEAL SPECIAL SERVICE
	DIAPHRAGM CHECK VALVE

### GATE SYMBOLS

PLAN	FEATURE
	SLUICE GATE (SG)
	SLIDE GATE (SLG)
	WEIR SLIDE GATE (WSLG)
	STOP PLATE (SP)
SECTION (OPERATOR ONLY)	FEATURE
	SLUICE GATE (SG)
	SLIDE GATE (SLG)
	WEIR SLIDE GATE (WSLG)

### PROCESS FLUID ABBREVIATIONS

ABE	AERATION BASIN EFFLUENT
BWW	BACKWASH WATER
BYP	BYPASS
CA	COMPRESSED AIR
CEFF	CLARIFIER EFFLUENT
CINF	CLARIFIER INFLUENT
DR	DRAIN
DS	DEWATERED SLUDGE
EFF	EFFLUENT
FLT	FILTRATE WATER
IRR	IRRIGATION WATER
INF	INFLUENT
LPA	LOW PRESSURE AIR
NPW	NON-POTABLE WATER
OVF	OVERFLOW
PW	POTABLE WATER
RAS	RETURN ACTIVATED SLUDGE
SC	SCUM
SD	STORM DRAIN
SL	SLUDGE
SR	SLUDGE RETURN
STS	STORM SEWER
VT	VENT
WAS	WASTE ACTIVATED SLUDGE
WW	WASTE WATER

### PIPE JOINT LEGEND

DESIGNATION	PIPE JOINT
BSM	BELL & SPIGOT-MORTAR JOINT
BSO	BELL & SPIGOT-RUBBER O RING COMPRESSION (TUBE FITTINGS)
C	COMPRESSION (TUBE FITTINGS)
F	FLANGED
G	GROOVED
P	MECHANICAL JOINT
S	SOLDERED
SW	SOCKET WELDED
T	THREADED
V	SOCKET CEMENTED
W	BUTT WELDED

### PIPE MATERIAL

CI	CAST IRON
CIS	CAST IRON - SOIL
CM	CORRUGATED METAL
CPVC	CHLORINATED POLYVINYL CHLORIDE
CS	CARBON STEEL
CU	COPPER
DI	DUCTILE IRON
EPDM	ETHYLENE PROPYLENE RUBBER
FRP	FIBER REINFORCED PLASTIC
GS	GALVANIZED CARBON STEEL
PCCP	PRESTRESSED CYLINDER
POLY	POLYETHYLENE
POLYP	POLYPROPYLENE
PVC	POLYVINYL CHLORIDE
RC	REINFORCED CONCRETE
RCC	REINFORCED CONCRETE CYLINDER
SST	STAINLESS STEEL
STL	STEEL

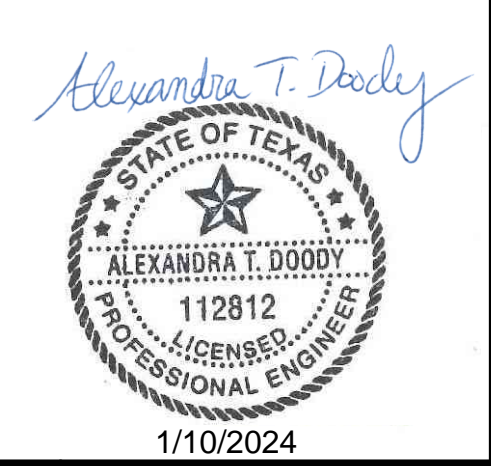
**NOTES:**

- PROCESS PIPE SUPPORTS SHOWN FOR BIDDING PURPOSES. REFER TO SECTION 400507 FOR CONTRACTOR'S DELEGATED DESIGN REQUIREMENTS FOR PIPE SUPPORTS.
- ALL PIPING INSTALLED BELOW A PROCESS STRUCTURE SHALL BE ENCASED IN ACCORDANCE WITH DETAIL C ON SHEET SZ-2 UNLESS NOTED OTHERWISE.

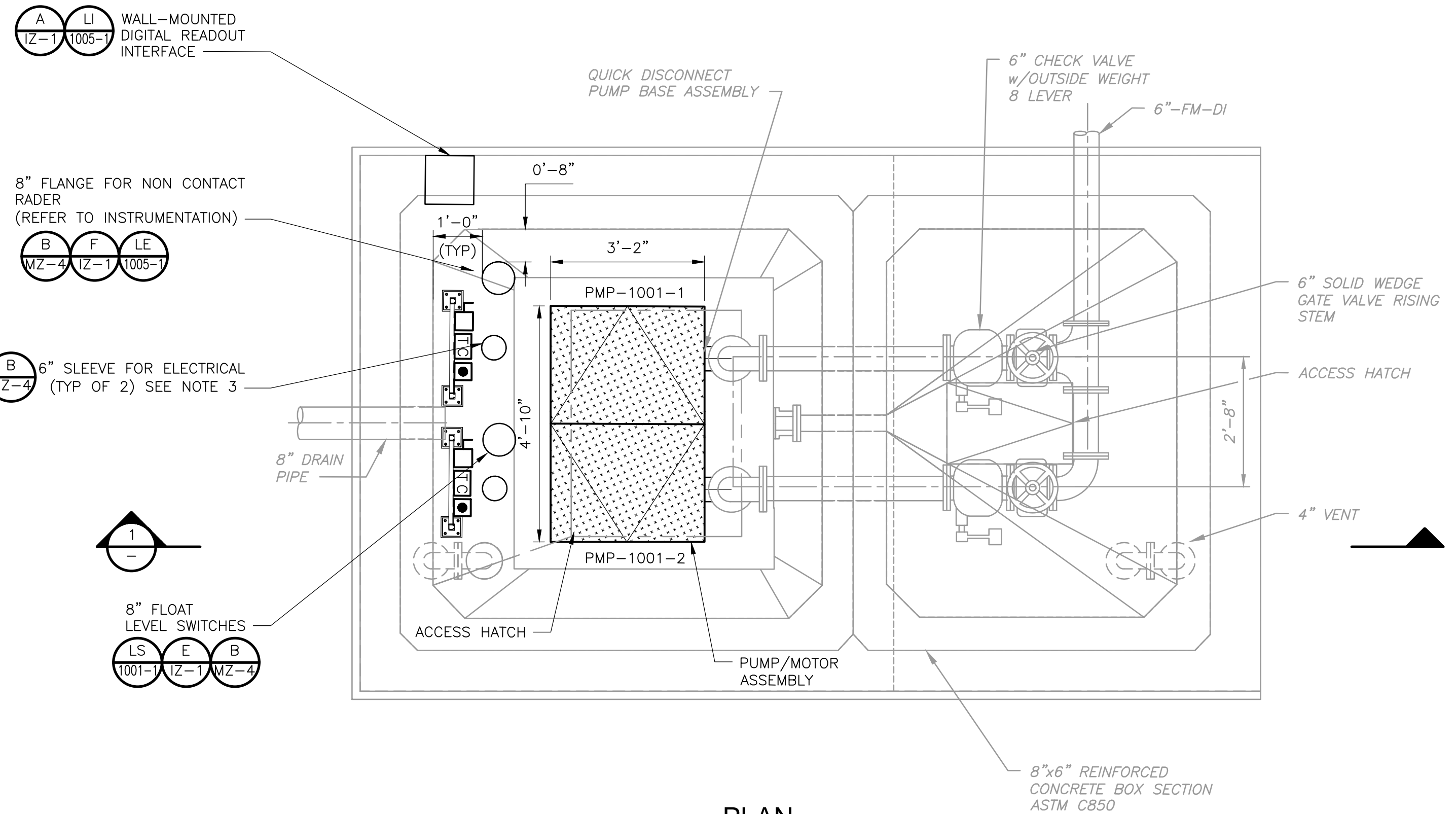
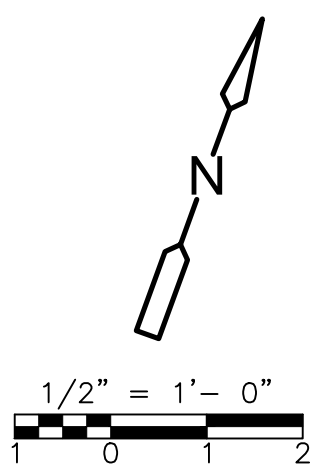
### PROCESS PIPE SCHEDULE

SERVICE ABBREVIATION	LOCATION AND PROCESS AREA	SIZE	SPEC SECTION	PIPE MATERIAL	OPERATING PRESSURE (PSIG)	TEST PRESSURE (PSIG)	MIN/MAX TEMPERATURE (F)
<b>BURIED</b>							
PACKAGE PLANT INFLUENT	DS-C-6	12"	-	YELO-MINE	10	15	50/77
PACKAGE PLANT SLUDGE TRANSFER	DS-C-6	4"	-	YELO-MINE	20	30	50/77
<b>ABOVE - GRADE</b>							
LPA PACKAGE PLANT	DS-MB	18"	400524	GALVANIZED STEEL	8	15	0/330
LPA	DS-MD	12"-18"	400523	STAINLESS STEEL	8	15	0/330
PACKAGE PLANT INFLUENT	DS-C-6	12"	-	YELO-MINE	10	15	50/77
PACKAGE PLANT EFFLUENT	DS-C-6	14"	-	YELO-MINE	10	15	50/77
PACKAGE PLANT SLUDGE TRANSFER	DS-C-6	4"	-	YELO-MINE	20	30	50/77

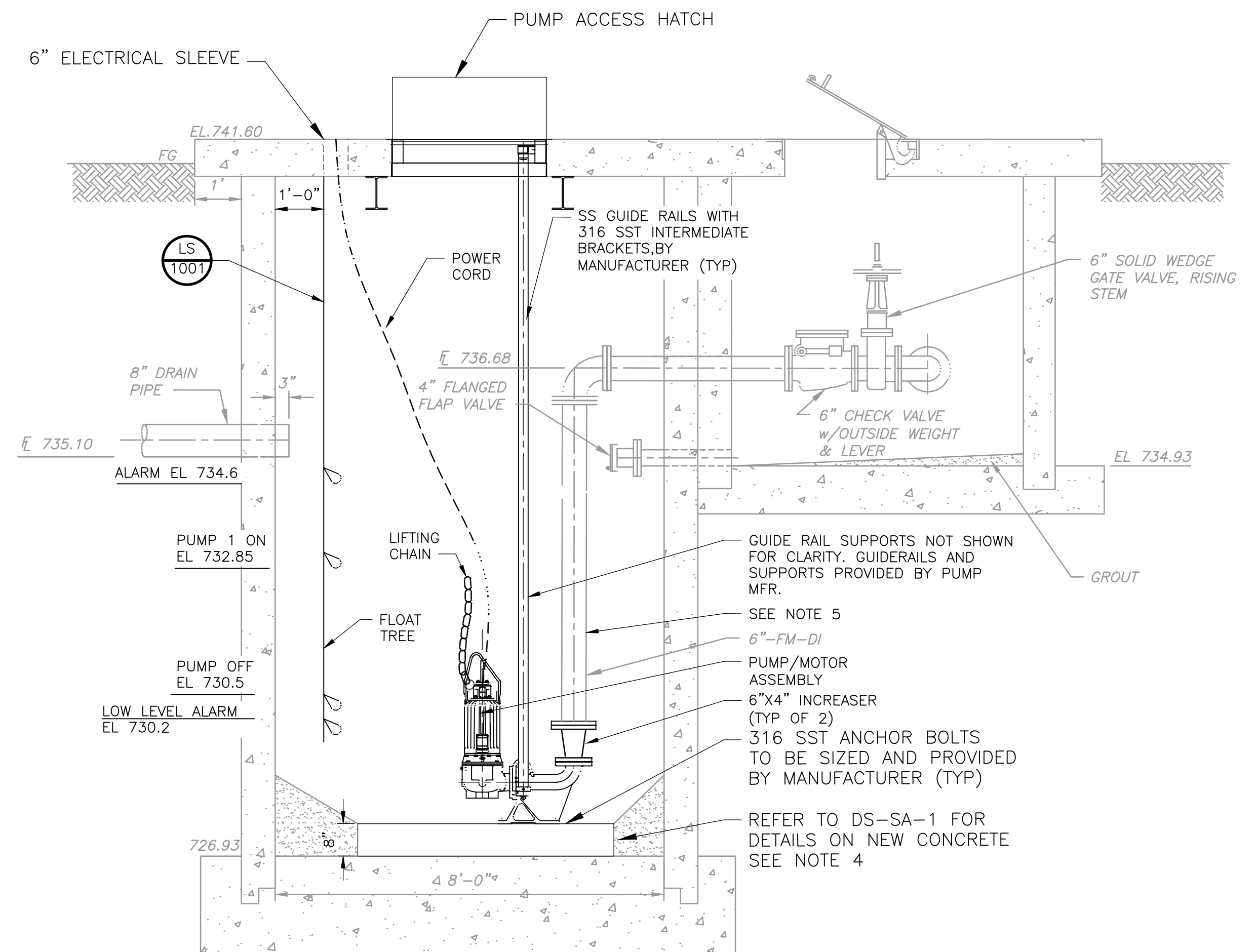
DESIGNED BY: J. MAYER	 8310-1 N. Capital of Texas Hwy, Suite 250 Austin, TX 78731 Tel: (512) 346-1100 TBPE Firm Registration No. F-3043
DRAWN BY: J. MAYER	
SHEET CHK'D BY: A. DOODY	
CROSS CHK'D BY: A. WOELKE	
APPROVED BY: A. DOODY	DATE: NOVEMBER 2023





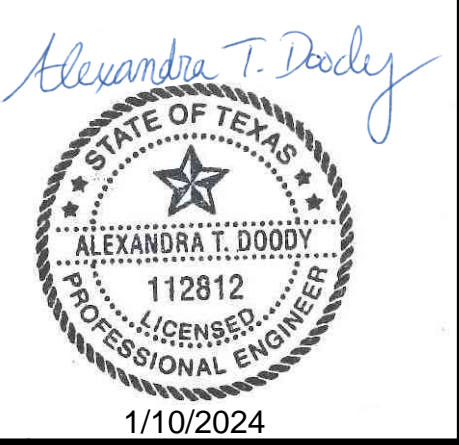


**PLAN**  
1/2" = 1'-0"



**SECTION 1**  
1/2" = 1'-0"

- NOTES:**
- PUMP ACCESS HATCH DIMENSIONS SHOWN ARE THE MAXIMUM ALLOWABLE OUTER HATCH. DIMENSIONS ALLOWED PER STRUCTURAL DESIGN.
  - CONTRACTOR TO COORDINATE WITH APPROVED PUMP MFR THE INTERIOR CLEAR DIMENSIONS REQUIRED FOR PUMP REMOVAL. PROVIDE CONFIRMATION FROM PUMP MFR IN HATCH SHOP DRAWING SUBMITTAL.
  - COORDINATE THE LOCATION OF THE PIPE PENETRATIONS PRIOR TO INSTALLATION TO CONFIRM THAT THEY WILL BE ACCESSIBLE AND HAVE SUFFICIENT CLEARANCE FROM THE CABINETS PER NFPA REQUIREMENTS.
  - DISTANCES, DIMENSIONS, AND ELEVATIONS MAY VARY WITH MANUFACTURER. ANY CHANGES BASED ON MANUFACTURE SELECTION SHALL BE APPROVED BY THE ENGINEER AND AT NO COST TO THE OWNER. DIMENSIONS, SIZES, ETC., SHALL BE IN COMPLIANCE WITH THE CURRENT HYDRAULIC INSTITUTE STANDARDS. PLANS ARE BASED OFF WILCO MANUFACTURER.
  - CONTRACTOR TO RECOAT ALL EXISTING PIPING INSIDE THE WET WELL AND VALVE VAULT. REFER TO SECTION 099676.23 AND 099679 FOR DETAILS.



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REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JAM	ATD	CONFORMED DRAWINGS
4	1/10/24	JAM	ATD	REVISED FOR ADDENDUM NO.4
2	12/28/23	JAM	ATD	REVISED FOR ADDENDUM NO.2

DESIGNED BY: J. MAYER  
 DRAWN BY: J. MAYER  
 SHEET CHK'D BY: A. DOODY  
 CROSS CHK'D BY: A. WOELKE  
 APPROVED BY: A. DOODY  
 DATE: NOVEMBER 2023

8310-1 N. Capital of Texas Hwy, Suite 250  
 Austin, TX 78731  
 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

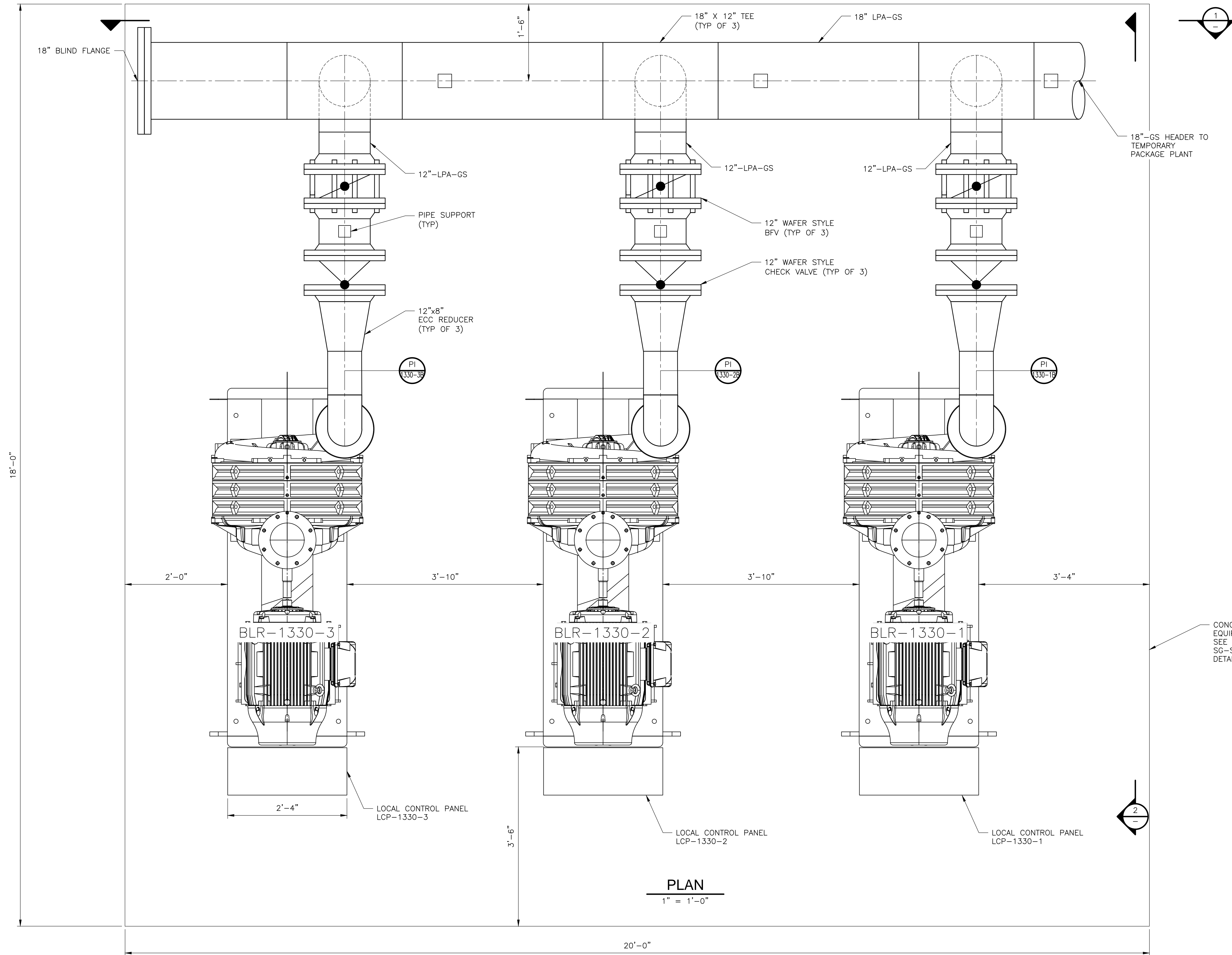
CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP  
 FILTRATE LIFT STATION  
 PLAN AND SECTION

PROJECT NO.	2048-264953
FILE NAME:	DSMA1.DWG
SHEET NO.	DS-MA-1

XREFS: CDM S 2204\_DS\_REVW\_A\_DOODY\_SEAL\_MWP025B1 Images: ALEXANDRA T. DOODY, NOV 8 23

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- NOTES:
1. RENTAL BLOWERS AND SKID SUPPORTED LOCAL CONTROL PANEL WILL BE FURNISHED AND SUPPLIED BY OTHERS UNDER A SEPARATE CITY SOLICITATION. GENERAL CONTRACTOR IS RESPONSIBLE FOR PROCURING THE MISCELLANEOUS EQUIPMENT, BLOWER CONCRETE PAD, AND THE DELEGATED DESIGN OF PIPE SUPPORTS FOR THE BLOWER DISCHARGE AND BLOWER HEADER PIPING. PIPE SUPPORTS SHOWN ON THE DRAWINGS ARE NOT DESIGNED SPECIFIC TO THE APPLICATION. REFER TO SECTION 400507 FOR REQUIREMENTS.
  2. COORDINATE WITH OWNER AND ENGINEER ON THE RELOCATION OF THE EXISTING BLOWERS FROM THE DOVE SPRINGS BLOWER ROOM TO THE TEMPORARY PACKAGE PLANT BLOWER PAD, PER DETAILS IN SECTION 431117.

CONCRETE EQUIPMENT PAD, SEE STRUCTURAL SG-SB-1 FOR DETAILS\*

**PLAN**  
1" = 1'-0"

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JAM	ATD	CONFORMED DRAWINGS
3	1/4/24	JAM	ATD	REVISED FOR ADDENDUM NO.3
1	12/8/23	JAM	ATD	REVISED FOR ADDENDUM NO.1

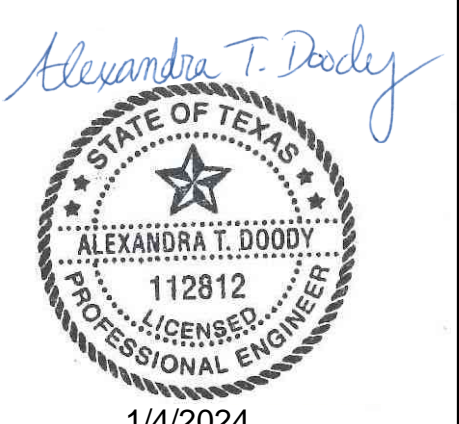
DESIGNED BY: J. MAYER  
 DRAWN BY: V. CHERANJEEVI  
 SHEET CHK'D BY: A. DOODY  
 CROSS CHK'D BY: R. GUJJA  
 APPROVED BY: A. DOODY  
 DATE: NOVEMBER 2023

**CDM Smith**  
 8310-1 N. Capital of Texas Hwy, Suite 250  
 Austin, TX 78731  
 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

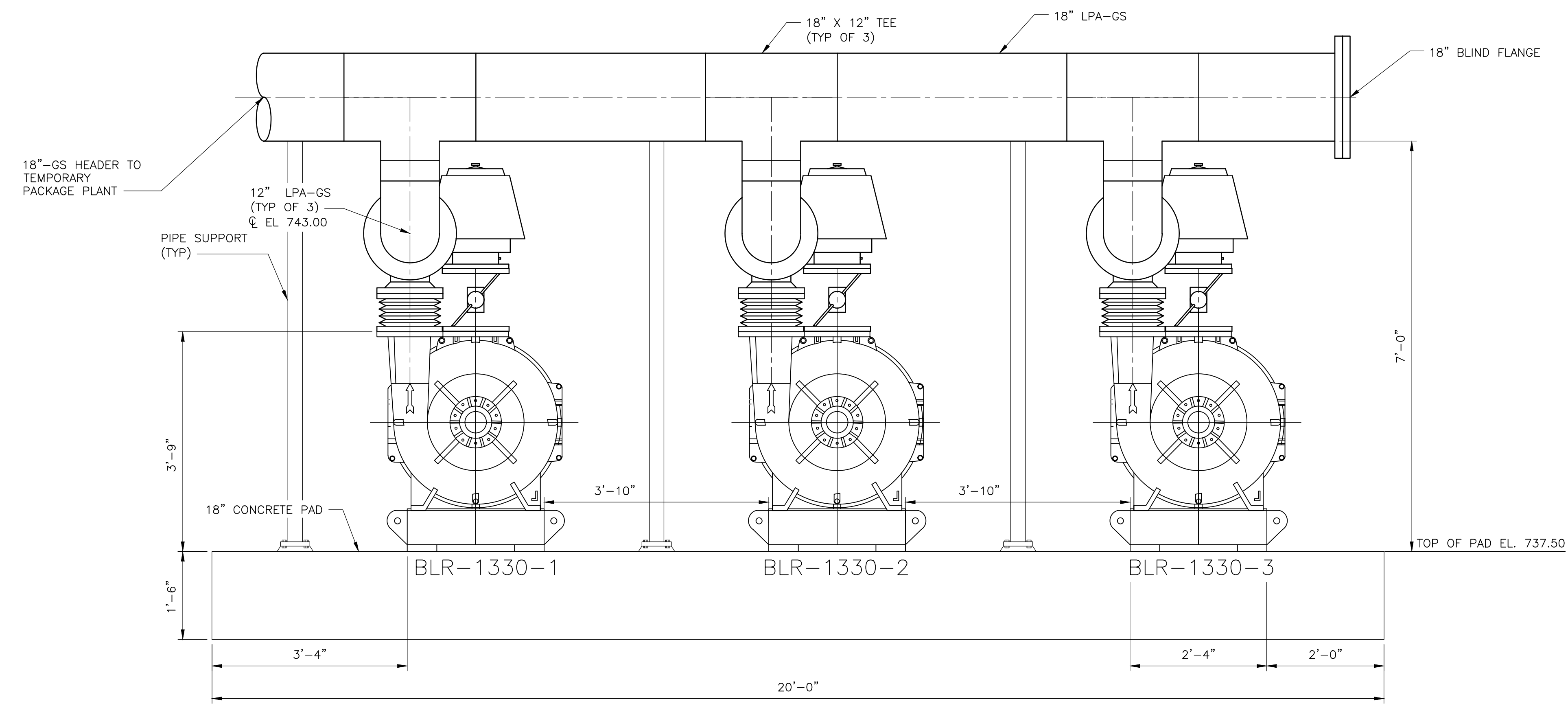
CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP  
 RENTAL PACKAGE PLANT  
 AERATION BLOWER PLAN

PROJECT NO.	2048-264953
FILE NAME:	DSMB1.DWG
SHEET NO.	DS-MB-1

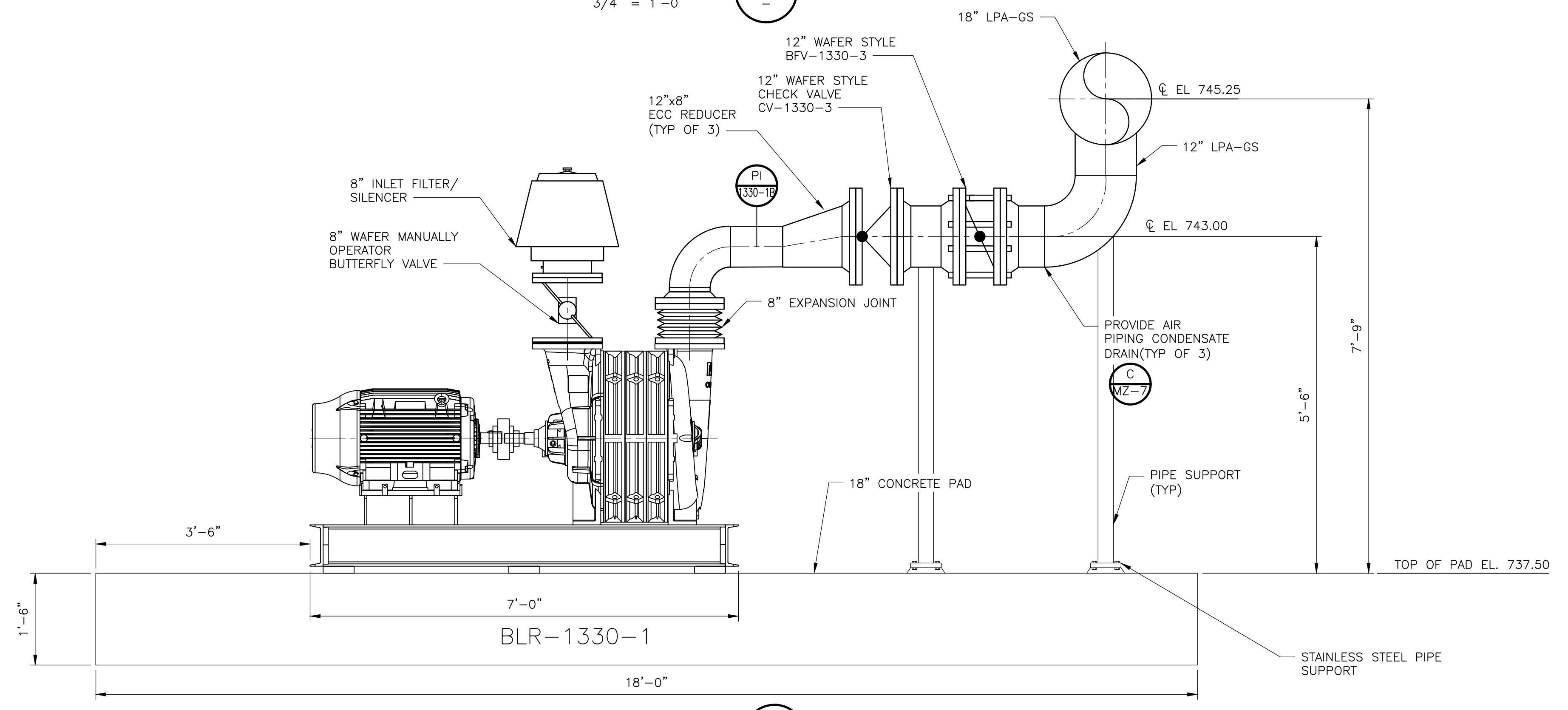


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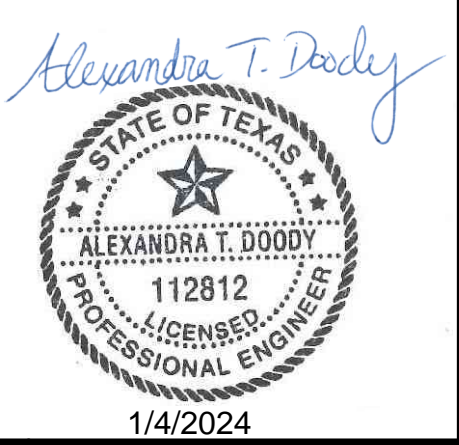


- NOTES:
- RENTAL BLOWERS AND SKID SUPPORTED LOCAL CONTROL PANEL WILL BE FURNISHED AND SUPPLIED BY OTHERS UNDER A SEPARATE CITY SOLICITATION. GENERAL CONTRACTOR IS RESPONSIBLE FOR PROCURING THE MISCELLANEOUS EQUIPMENT, BLOWER CONCRETE PAD, AND THE DELEGATED DESIGN OF PIPE SUPPORTS FOR THE BLOWER DISCHARGE AND BLOWER HEADER PIPING. PIPE SUPPORTS SHOWN ON THE DRAWINGS ARE NOT DESIGNED SPECIFIC TO THE APPLICATION. REFER TO SECTION 400507 FOR REQUIREMENTS.
  - COORDINATE WITH OWNER AND ENGINEER ON THE RELOCATION OF THE EXISING BLOWERS FROM THE DOVE SPRINGS BLOWER ROOM TO THE TEMPORARY PACKAGE PLANT BLOWER PAD, PER DETAILS IN SECTION 431117.

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



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



REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JAM	ATD	CONFORMED DRAWINGS
3	1/4/24	JAM	ATD	REVISED FOR ADDENDUM NO.3
1	12/8/23	JAM	ATD	REVISED FOR ADDENDUM NO.1

DESIGNED BY: J. MAYER  
 DRAWN BY: V. CHERANJEEVI  
 SHEET CHK'D BY: A. DOODY  
 CROSS CHK'D BY: R. GUJJA  
 APPROVED BY: A. DOODY  
 DATE: NOVEMBER 2023

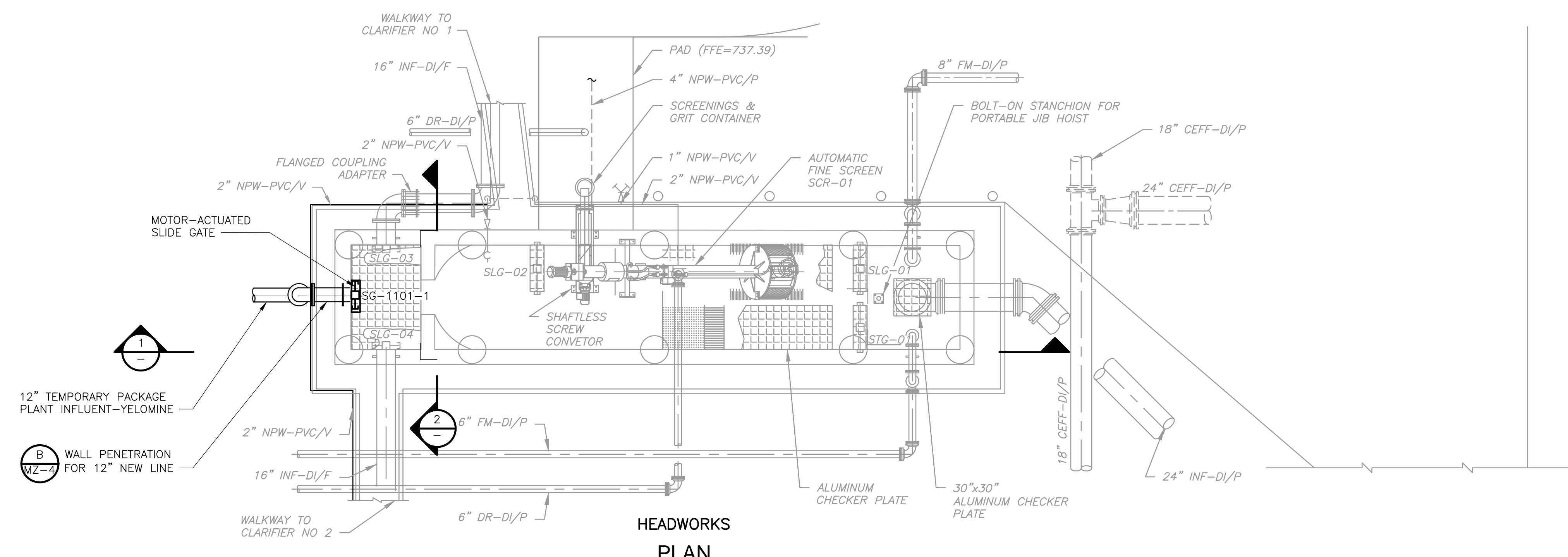
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CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

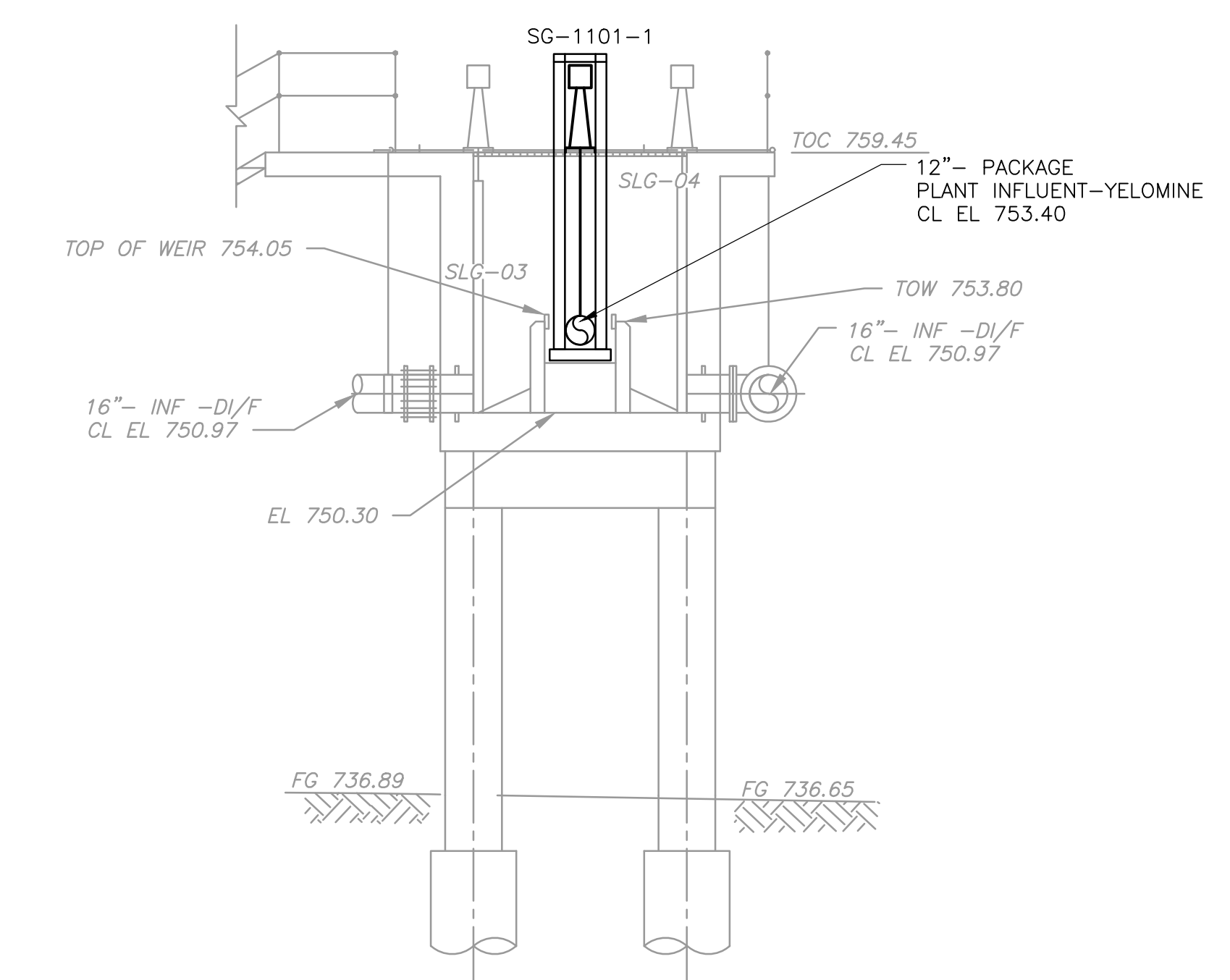
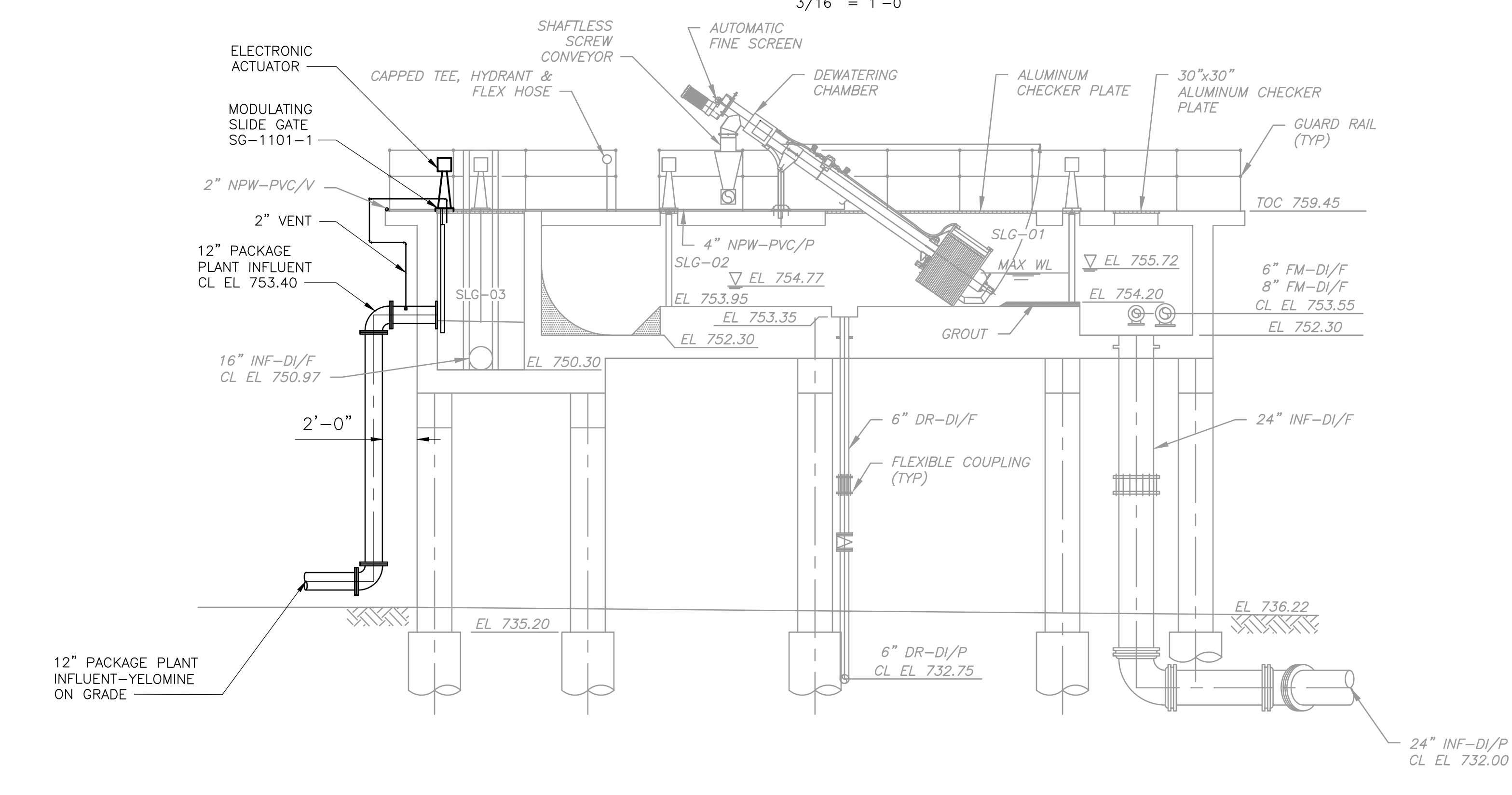
DOVE SPRINGS WWTP  
 RENTAL PACKAGE PLANT  
 AERATION BLOWER SECTIONS

PROJECT NO. 2048-264953  
 FILE NAME: DSMB2.DWG  
 SHEET NO.  
**DS-MB-2**

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- NOTES:
- CONTRACTOR IS RESPONSIBLE FOR DELEGATED DESIGN OF PIPE SUPPORTS ON ALL PROCESS PIPE. 12" - TEMPORARY PACKAGE PLANT INFLUENT VERTICAL PIPE ROUTING TO BE SUPPORTED OFF THE SIDE OF THE HEADWORKS STRUCTURE. DESIGN OF PIPE SUPPORTS TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL. REFER TO SECTION 400507 FOR REQUIREMENTS.
  - CONTRACTOR TO ROUTE YELO-MINE, OR ENGINEER APPROVED EQUAL, PIPING ON GRADE UNTIL UNDER THE ROAD. POT HOLE SURROUNDING AREA TO AVOID ANY CONFLICT WITH ELECTRICAL UTILITY OR EXISTING PROCESS PIPING.
  - FIELD VERIFY EXISTING CLEARANCES BETWEEN THE WEIR WALLS PRIOR TO SUBMITTING SLIDE GATE SHOP DRAWINGS FOR REVIEW. WORK WITH OWNER TO LIMIT FLOW FROM SMITH BRANCH LIFT STATION TO HEADWORKS TO OBTAIN SAFE ACCESS FOR FIELD VERIFICATION.
  - CONTRACTOR TO SUBMIT PLANS AND DETAILS FOR 12" WALL PENETRATION AND THE GRATING MODIFICATION FOR SLIDE GATE INSTALLED TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO COMMENCEMENT OF WORK IN AREA. MODIFY THE GRATING TO ALLOW FOR GATE FRAME PER SHOP DRAWINGS.
  - EXISTING AMMONIA ANALYZER TO BE RELOCATED DOWNSTREAM OF THE FINE SCREEN DURING CONSTRUCTION ACTIVITIES TO AVOID CONFLICT WITH INSTALLATION OF SLIDE GATE SG-1101-1.



REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JAM	ATD	CONFORMED DRAWINGS
2	12/19/23	JAM	ATD	REVISED FOR ADDENDUM NO.2

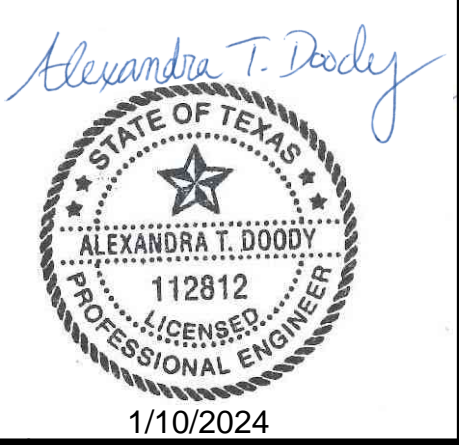
DESIGNED BY: J. MAYER  
 DRAWN BY: V. CHERANJEEVI  
 SHEET CHK'D BY: A. DOODY  
 CROSS CHK'D BY: R. GUJJA  
 APPROVED BY: A. DOODY  
 DATE: NOVEMBER 2023

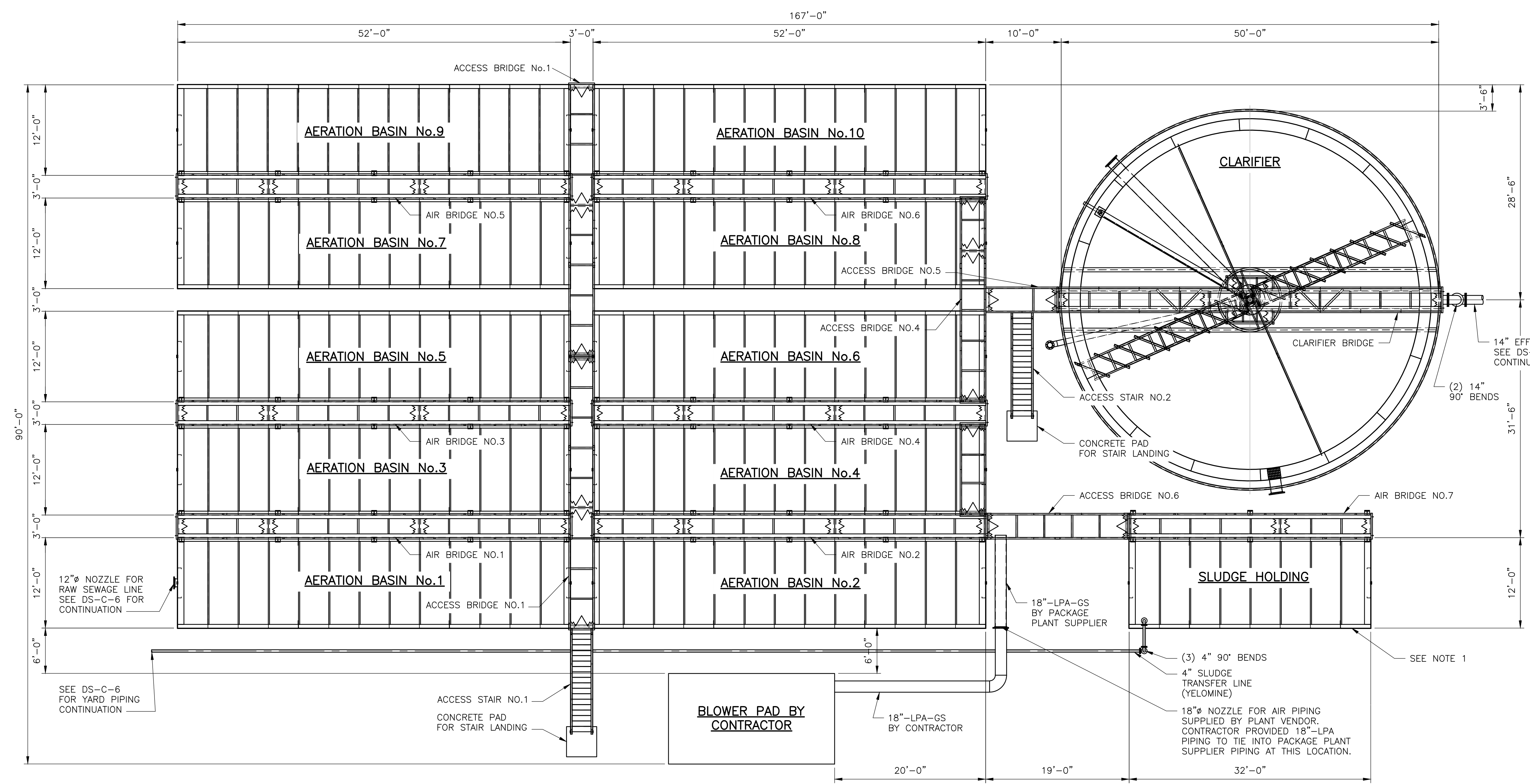
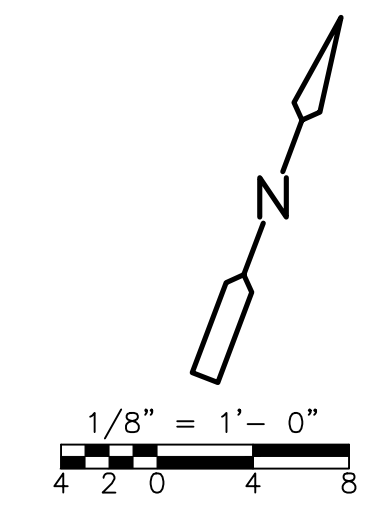


CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP  
 HEADWORKS MODIFICATION PLAN AND SECTIONS

PROJECT NO. 2048-264953  
 FILE NAME: DSMB3.DWG  
 SHEET NO.  
**DS-MB-3**





**NOTES:**

1. SLUDGE TRANSFER PUMPS AND SLUDGE HOLDING TANK FLOAT SWITCH LEVELS TO BE PROVIDED BY GENERAL CONTRACTOR. FLOAT SWITCH LEVELS ARE AS FOLLOWS:  
 LSHH = 747.67  
 LSH = 746.00  
 LSL = 741.00  
 LSLI = 740.00
2. UNLESS NOTED OTHERWISE HEREIN, ALL WORK SHOWN IS BY THE PACKAGE PLANT SUPPLIER UNDER SEPARATE CITY CONTRACT. REFER TO SECTION 015353 FOR SCOPE OF WORK DELINEATION TABLE.
3. PIPE SUPPORTS FOR THE TEMPORARY PACKAGE PLANT PROCESS PIPING BY THE GENERAL CONTRACTOR ARE REQUIRED TO BE DELEGATED DESIGN, SUBMITTED TO THE ENGINEER FOR APPROVAL. PIPE SUPPORTS SHOWN ON THE DRAWINGS ARE NOT DESIGNED SPECIFIC TO THE APPLICATION.

**PLAN**  
1/8" = 1'-0"

XREFS: (CDMS 2234\_DS\_REVW\_A\_DOODY-SEAL) Images: (ALEXANDRA T. DOODY\_NOV 8 23)  
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REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JAM	ATD	CONFORMED DRAWINGS
3	1/4/24	KBR	ATD	REVISED PER ADDENDUM NO.3

DESIGNED BY: J. MAYER  
 DRAWN BY: G. GANESH  
 SHEET CHK'D BY: A. DOODY  
 CROSS CHK'D BY: R. GUJJA  
 APPROVED BY: A. DOODY  
 DATE: NOVEMBER 2023

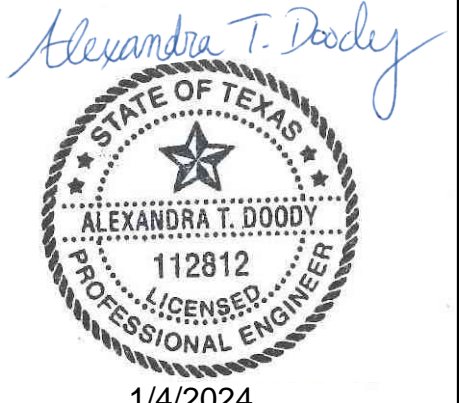


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 TBPE Firm Registration No. F-3043

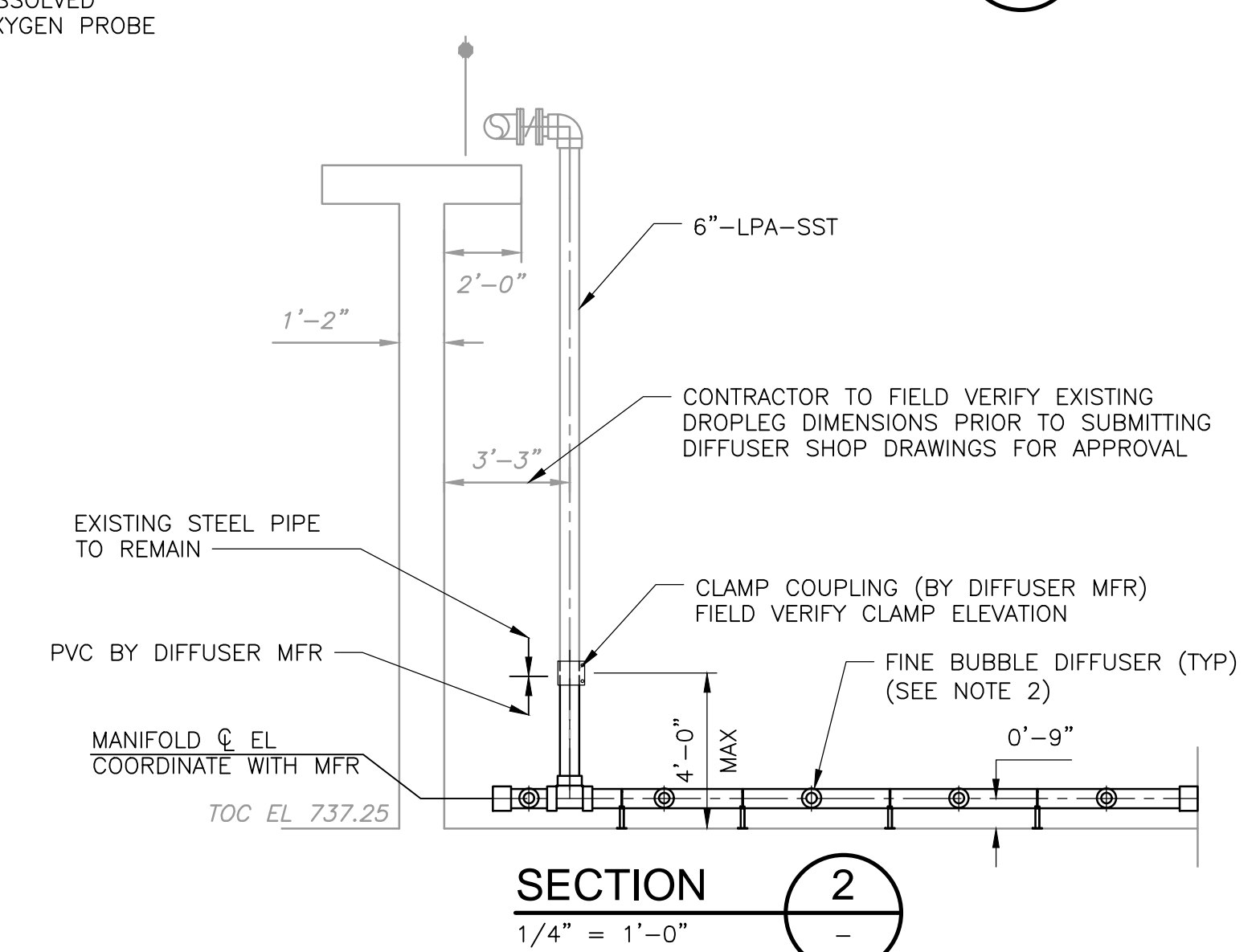
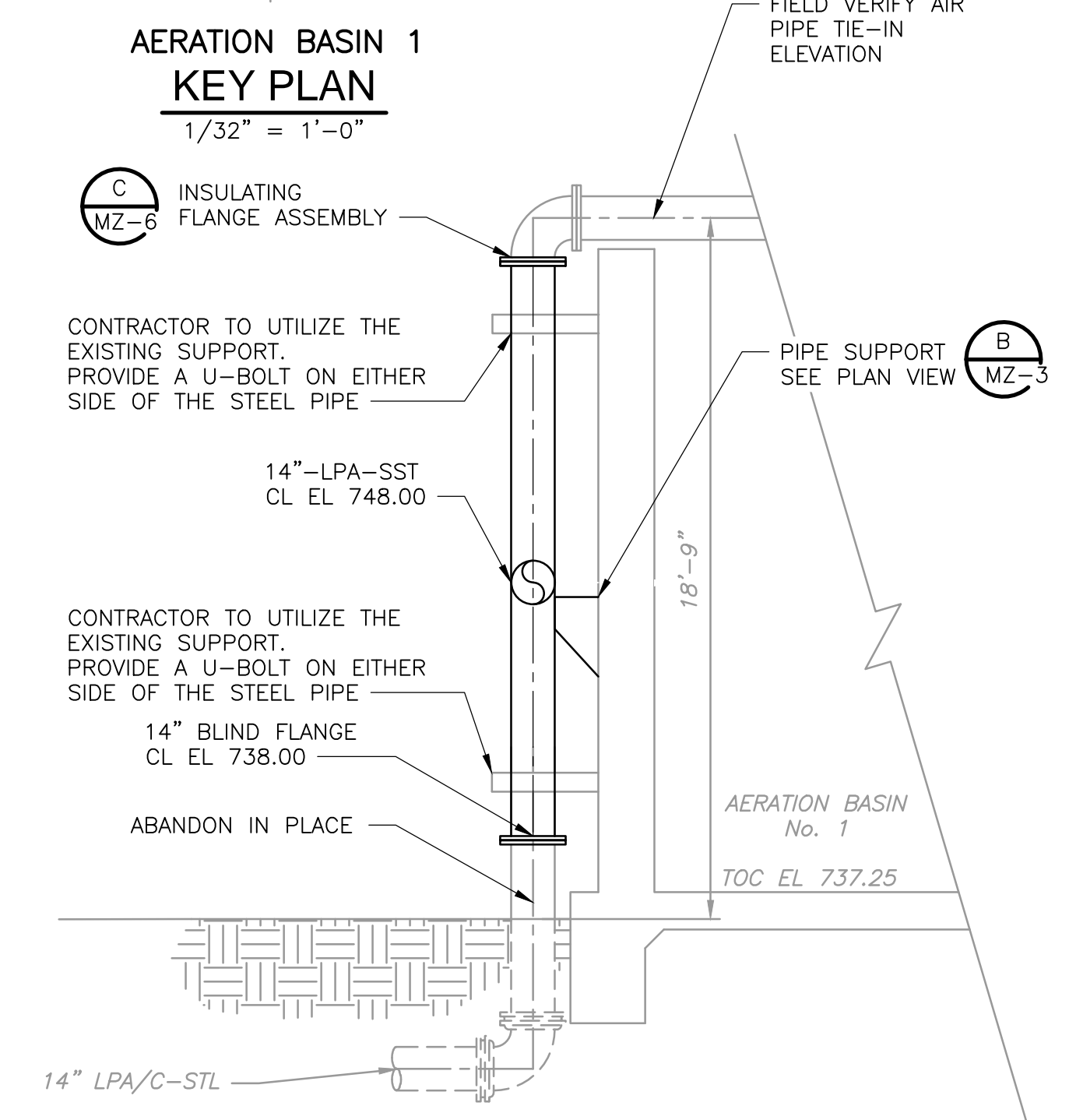
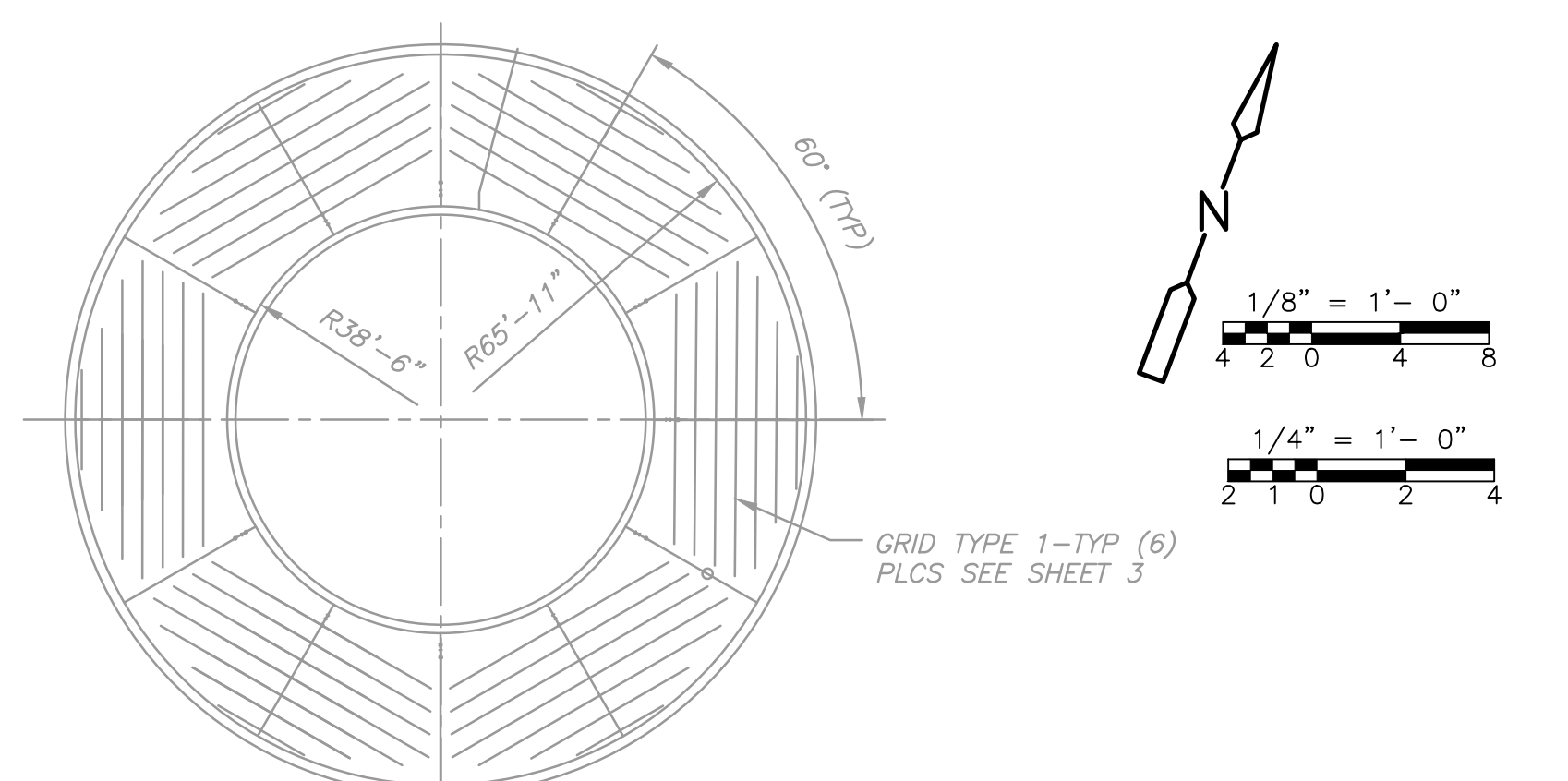
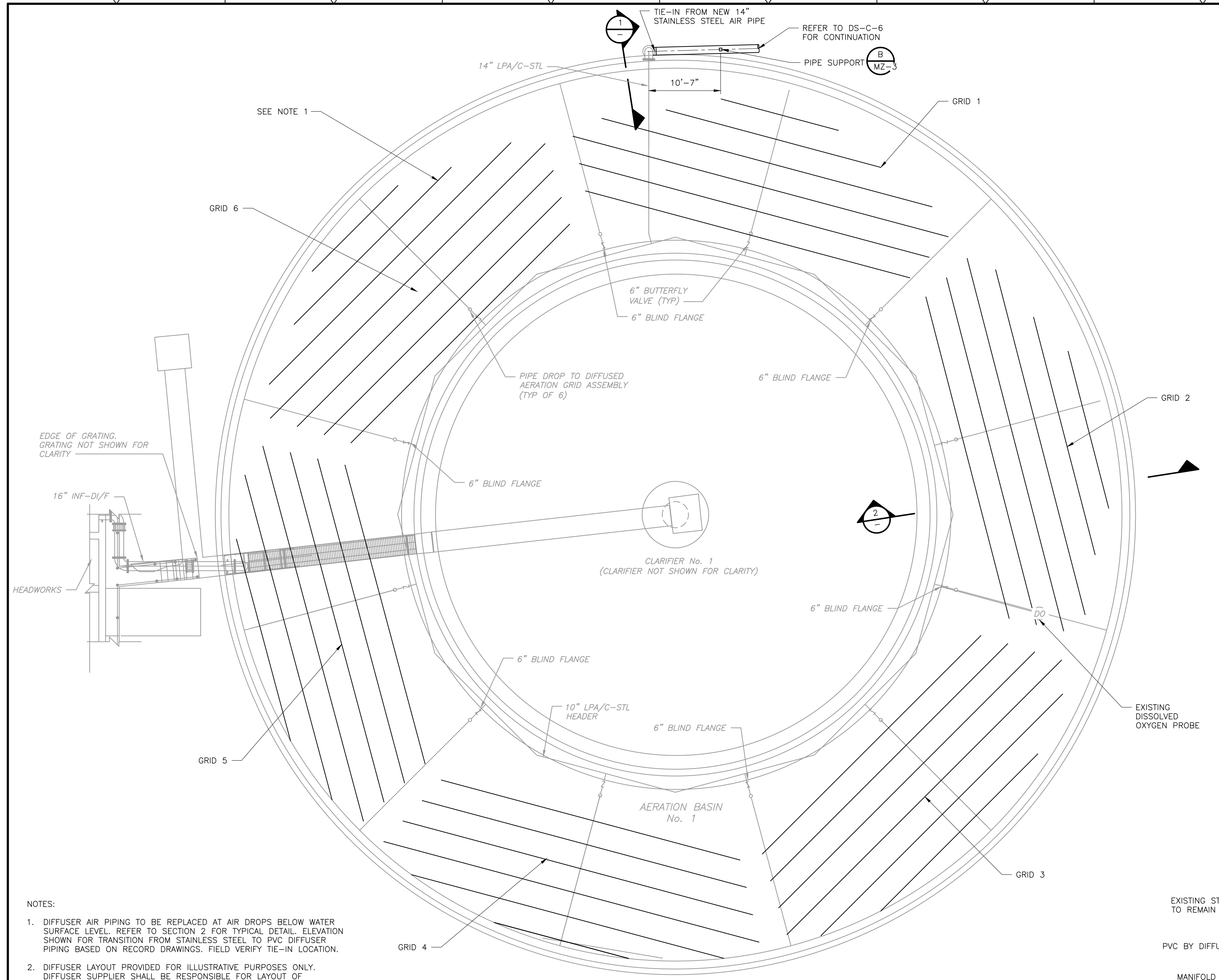
CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP  
 RENTAL PACKAGE PLANT PLAN  
 SHEET NO.  
**DS-MB-4**

PROJECT NO. 2048-264953  
 FILE NAME: DSMB4-NEW.DWG  
 SHEET NO.  
**DS-MB-4**



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- NOTES:
1. DIFFUSER AIR PIPING TO BE REPLACED AT AIR DROPS BELOW WATER SURFACE LEVEL. REFER TO SECTION 2 FOR TYPICAL DETAIL. ELEVATION SHOWN FOR TRANSITION FROM STAINLESS STEEL TO PVC DIFFUSER PIPING BASED ON RECORD DRAWINGS. FIELD VERIFY TIE-IN LOCATION.
  2. DIFFUSER LAYOUT PROVIDED FOR ILLUSTRATIVE PURPOSES ONLY. DIFFUSER SUPPLIER SHALL BE RESPONSIBLE FOR LAYOUT OF DIFFUSERS, INCLUDING DETERMINATION OF NUMBER OF REQUIRED DIFFUSERS, ARRANGEMENTS, AND SUPPORTS.

**PLAN**  
1/8" = 1'-0"

**SECTION 1**  
1/4" = 1'-0"

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

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JAM	ATD	CONFORMED DRAWINGS

DESIGNED BY: J. MAYER  
 DRAWN BY: G. GANESH  
 SHEET CHK'D BY: A. DOODY  
 CROSS CHK'D BY: A. WOELKE  
 APPROVED BY: A. DOODY  
 DATE: NOVEMBER 2023

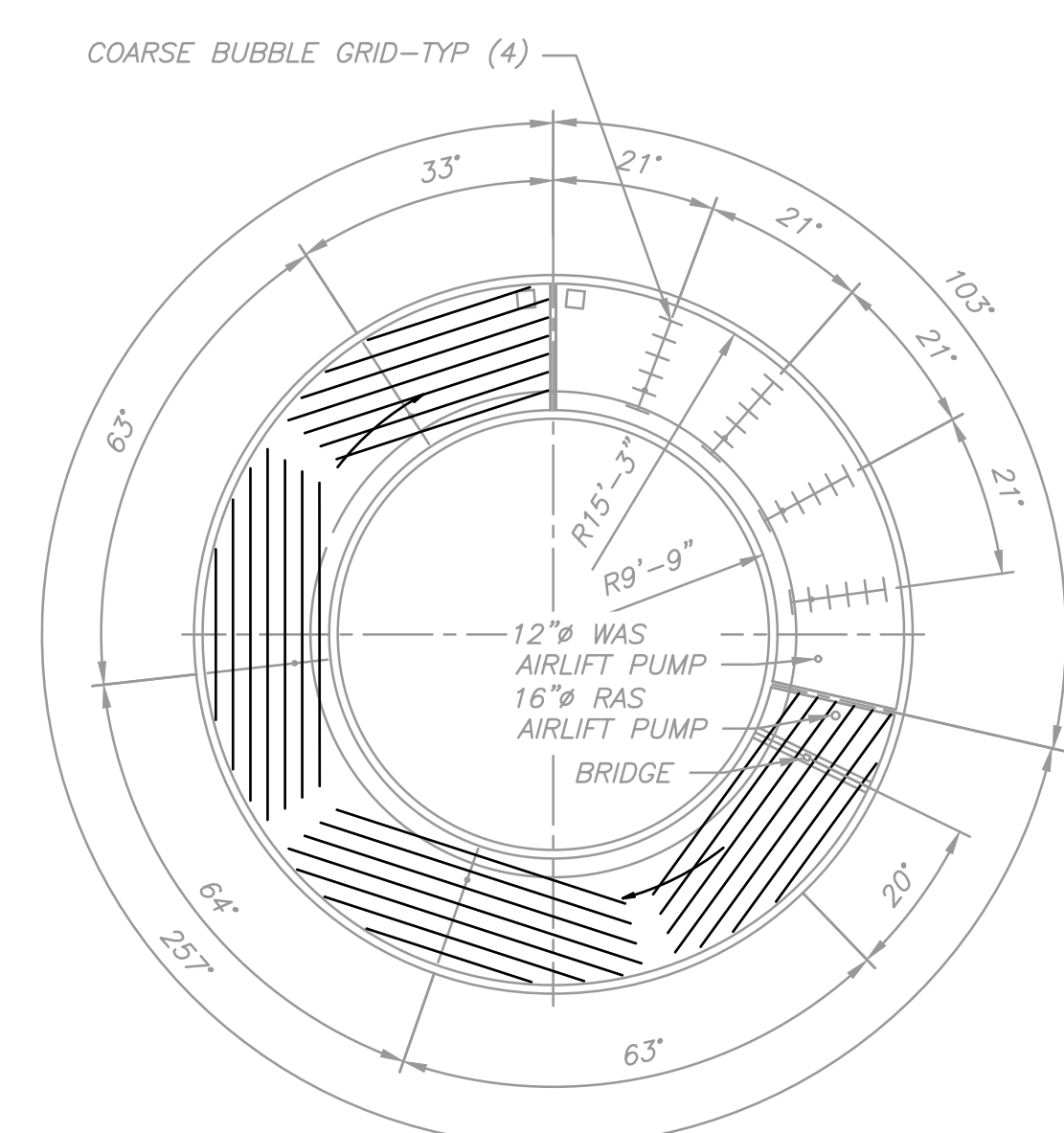
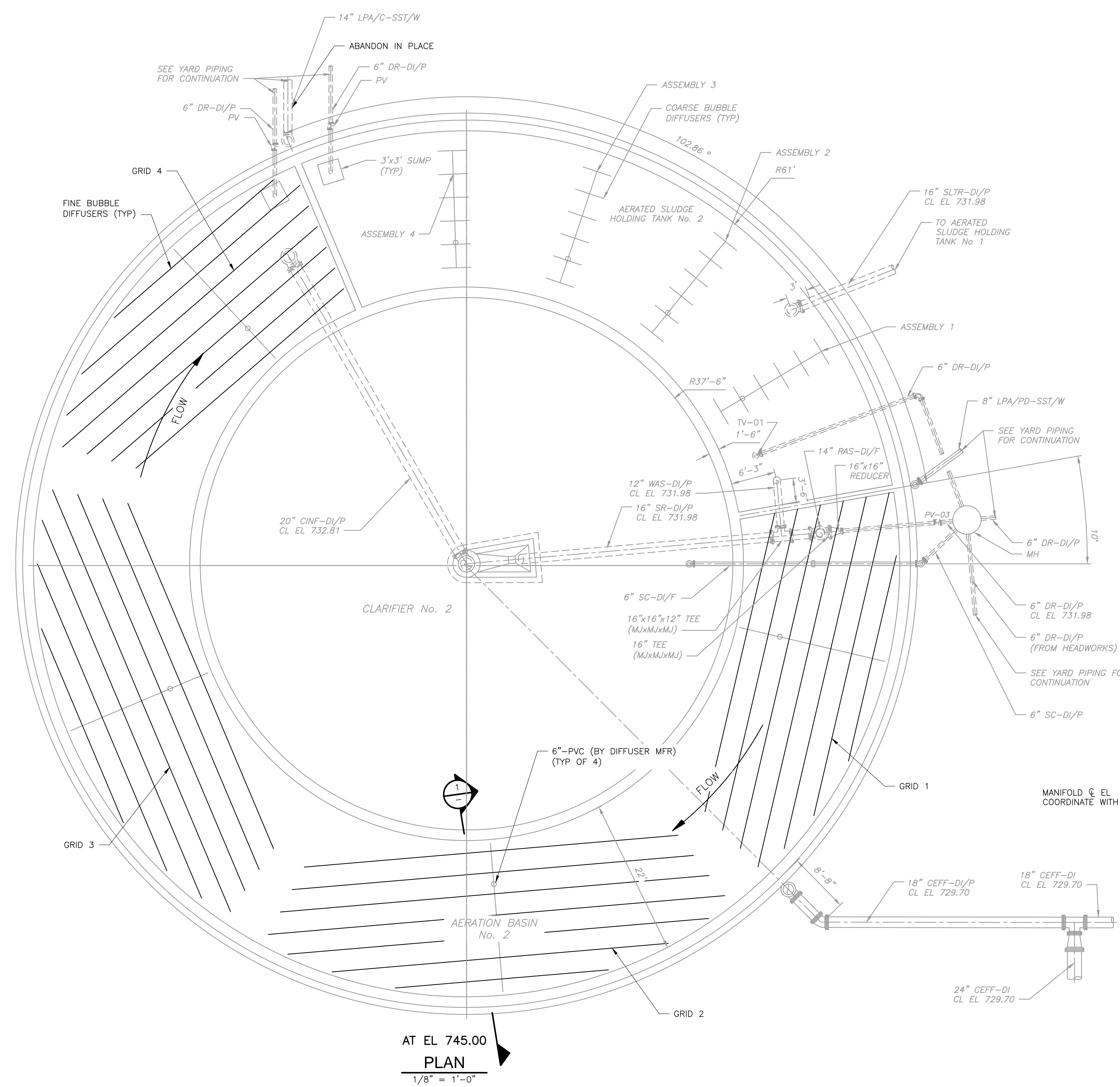
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 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

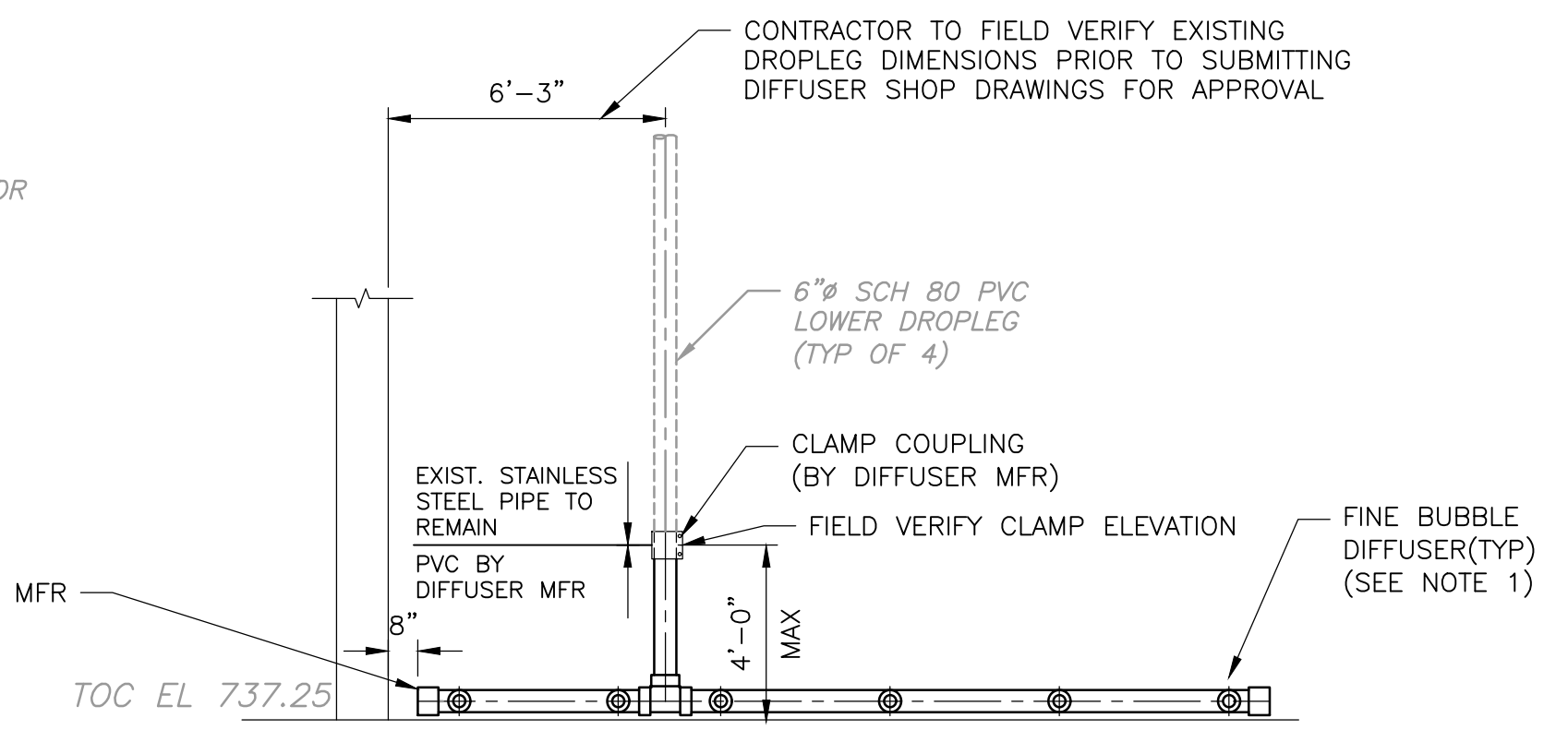
DOVE SPRINGS WWTP  
 TREATMENT STRUCTURE #1  
 AERATION PIPING MODIFICATIONS

PROJECT NO. 2048-264953  
 FILE NAME: DSMC1.DWG  
 SHEET NO. DS-MC-1

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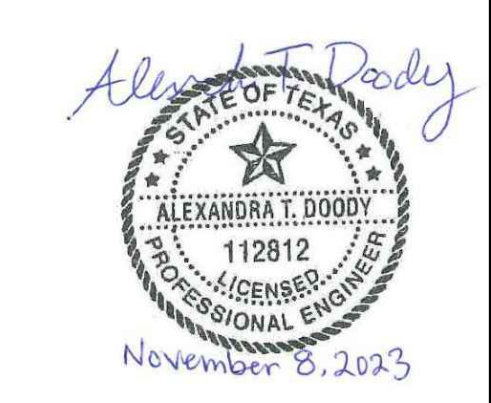


**AERATION BASIN 2/SLUDGE HOLDING TANK 2**  
**KEY PLAN**  
 1/32" = 1'-0"



**SECTION 1**  
 1/4" = 1'-0"

- NOTE:
- DIFFUSER LAYOUT PROVIDED FOR ILLUSTRATIVE PURPOSES ONLY. DIFFUSER SUPPLIER SHALL BE RESPONSIBLE FOR LAYOUT OF DIFFUSERS INCLUDED DETERMINATION OF NUMBER OF REQUIRED DIFFUSERS, ARRANGEMENTS, AND SUPPORTS.
  - DIFFUSER AIR PIPING TO BE REPLACED AT AIR DROPS BELOW WATER SURFACE LEVEL. REFER TO SECTION 2 FOR TYPICAL DETAIL. ELEVATION SHOWN FOR TRANSITION FROM STAINLESS STEEL TO PVC DIFFUSER PIPING BASED ON RECORD DRAWINGS. FIELD VERIFY TIE-IN LOCATION.



**AT EL 745.00**  
**PLAN**  
 1/8" = 1'-0"

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JAM	ATD	CONFORMED DRAWINGS

DESIGNED BY: J. MAYER  
 DRAWN BY: G. GANESH  
 SHEET CHK'D BY: A. DOODY  
 CROSS CHK'D BY: A. WOELKE  
 APPROVED BY: A. DOODY  
 DATE: NOVEMBER 2023

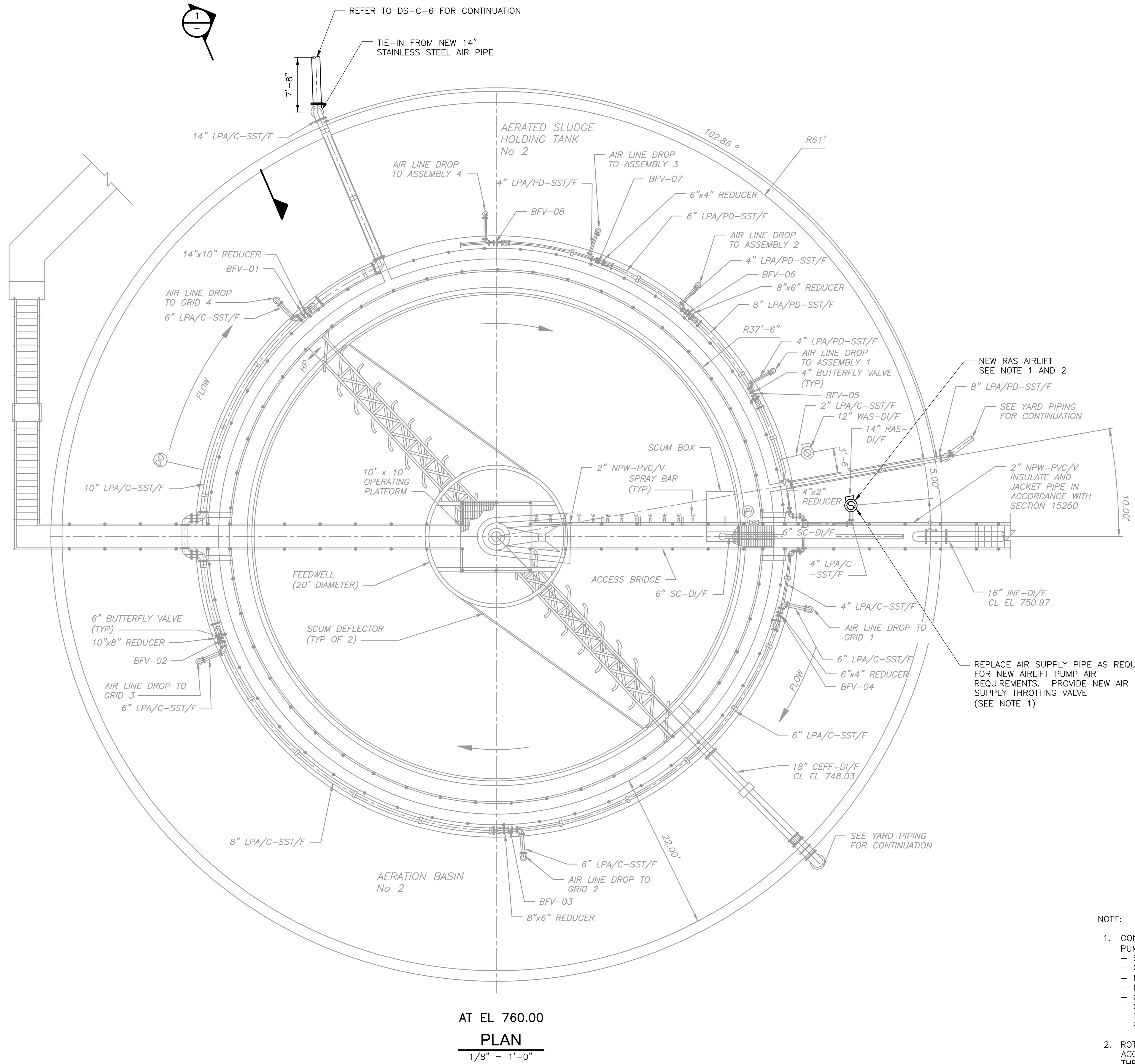
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 Austin, TX 78731  
 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS  
**DOVE SPRINGS WWTP**  
**REHABILITATION**

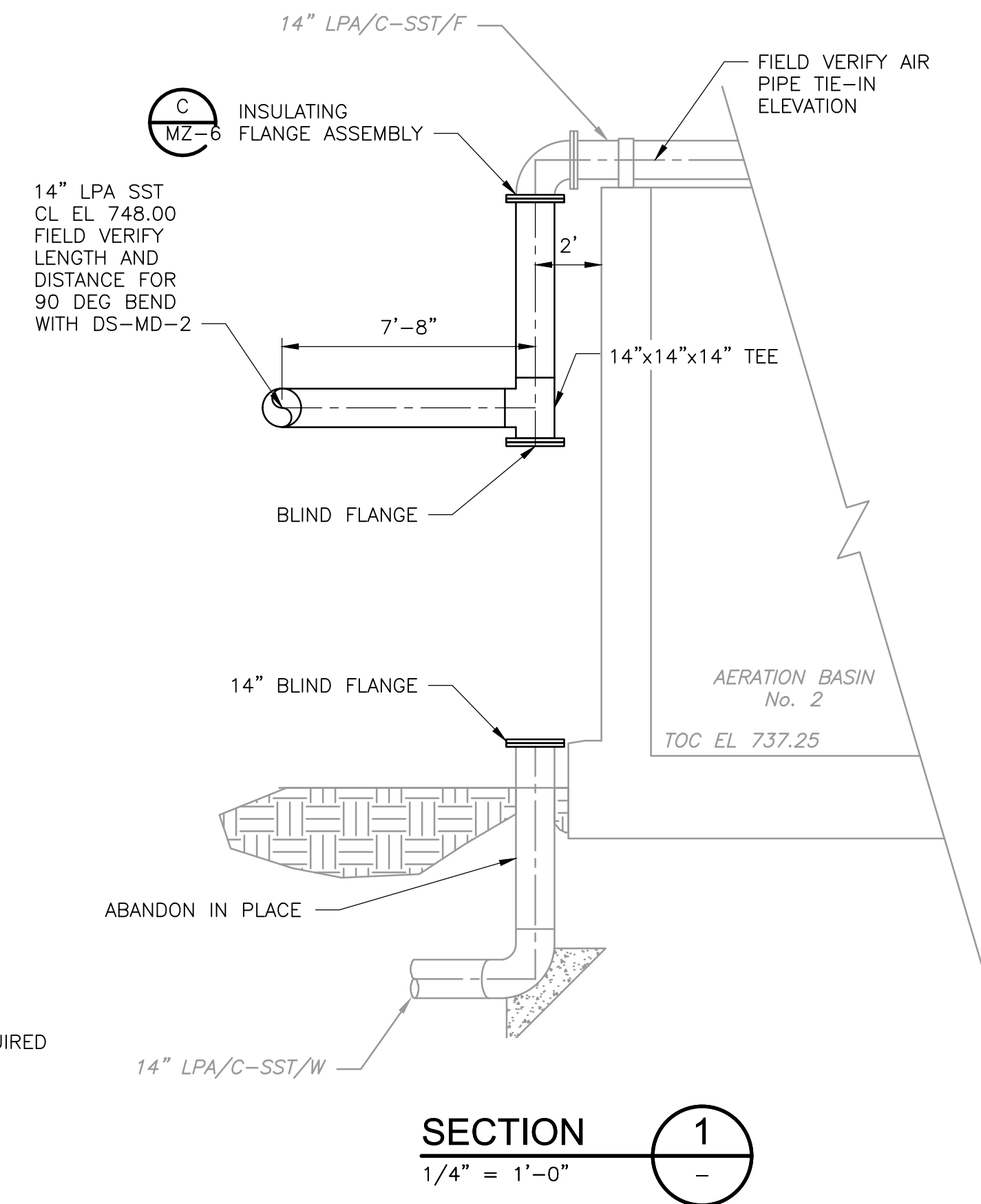
**DOVE SPRINGS WWTP**  
**TREATMENT STRUCTURE #2**  
**AERATION PIPING LOWER PLAN MODIFICATIONS**

PROJECT NO.	2048-264953
FILE NAME:	DSMC2.DWG
SHEET NO.	<b>DS-MC-2</b>

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AT EL 760.00  
**PLAN**  
 1/8" = 1'-0"



**SECTION 1**  
 1/4" = 1'-0"

- NOTE:
- CONTRACTOR TO PROVIDE NEW RAS AIRLIFT PUMP SIMILAR IN DESIGN TO THE AIRLIFT PUMP AT TREATMENT STRUCTURE #1 TO MEET THE FOLLOWING SPECIFICATIONS:
    - SIZE: 14-INCH RISER PIPE
    - CAPACITY: 1,200 GPM
    - MAXIMUM LIFT: 19'-0"
    - MAXIMUM AIRFLOW: 130 SCFM
    - CAPABLE OF THROTTLING AIR TO VARY RAS DISCHARGE FLOW WITHOUT LOSING FLOW
    - CONTROL VALVE TYPE: 4-INCH DIAMETER MANUAL BALL VALVE. FIELD VERIFY EXISTING BALL VALVE SIZE OF 4-INCH PRIOR TO PROCUREMENT OF NEW VALVE. MATCH EXITING FIELD CONDITIONS.
  - ROTATE THE RAS AIRLIFT DURING INSTALLATION SUCH THAT THE OPENING IS TOWARD THE ACCESS WALKWAY TO CONVEY THE RETURNED SLUDGE IN THE SAME DIRECTION OF FLOW IN THE AERATION BASIN.

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JAM	ATD	CONFORMED DRAWINGS
1	12/18/23	JAM	ATD	REVISED FOR ADDENDUM NO.1

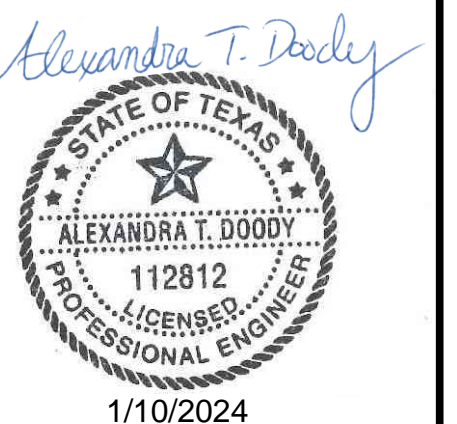
DESIGNED BY: J. MAYER  
 DRAWN BY: G. GANESH  
 SHEET CHK'D BY: A. DOODY  
 CROSS CHK'D BY: A. WOELKE  
 APPROVED BY: A. DOODY  
 DATE: NOVEMBER 2023

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 Austin, TX 78731  
 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS  
**DOVE SPRINGS WWTP  
 REHABILITATION**

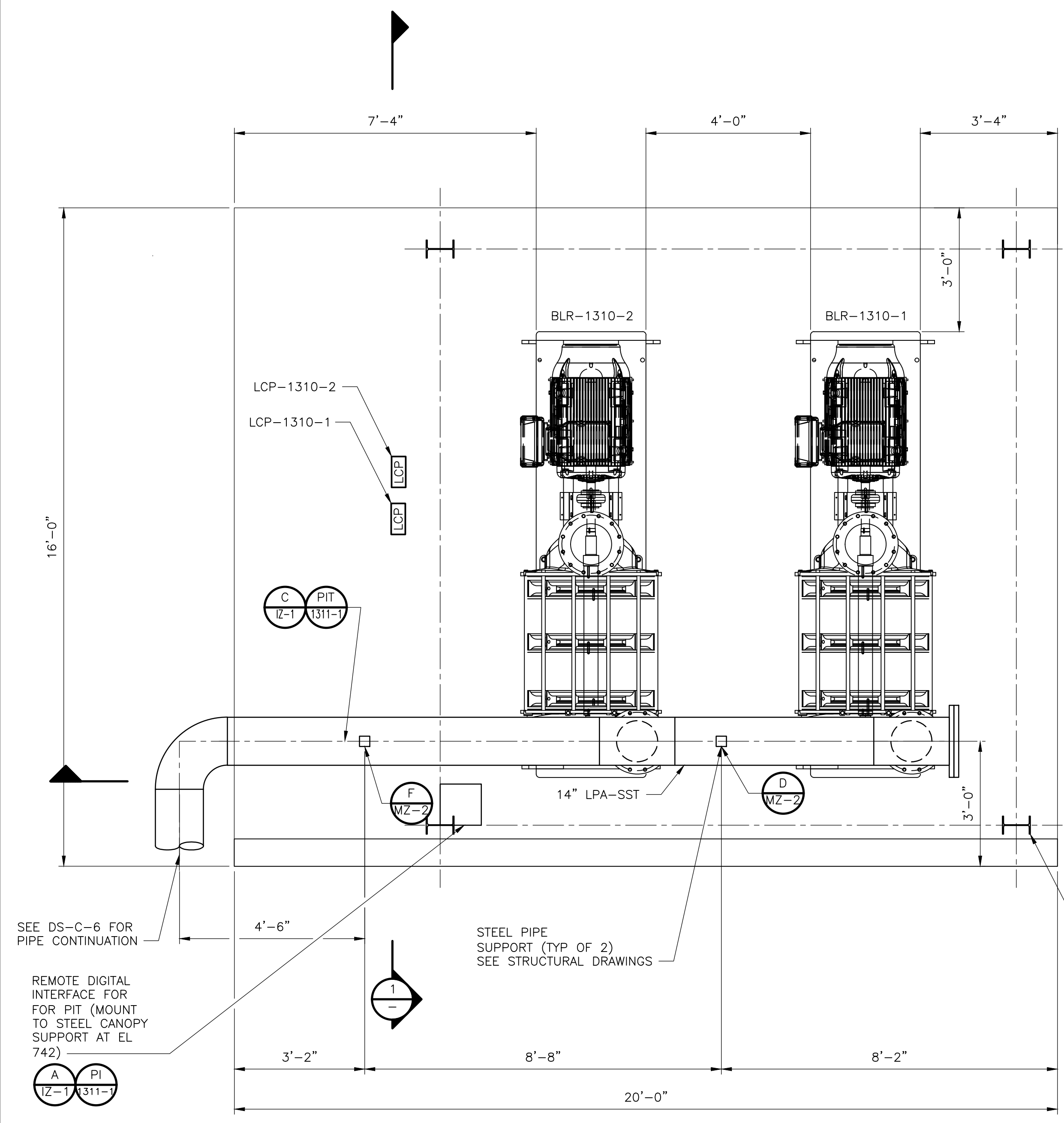
**DOVE SPRINGS WWTP  
 TREATMENT STRUCTURE #2  
 AERATION PIPING UPPER PLAN MODIFICATIONS**

PROJECT NO. 2048-264953  
 FILE NAME: DSMC3.DWG  
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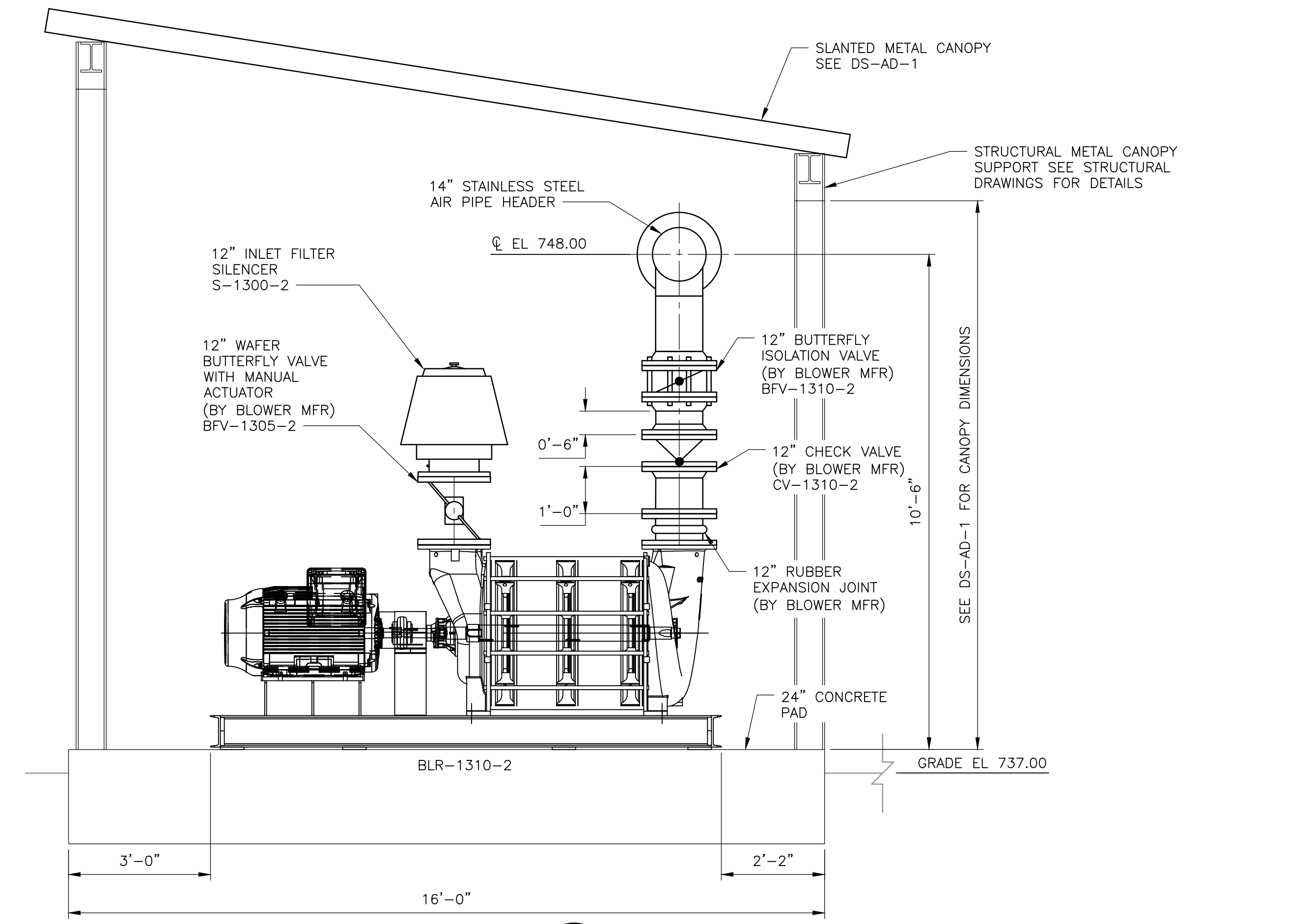




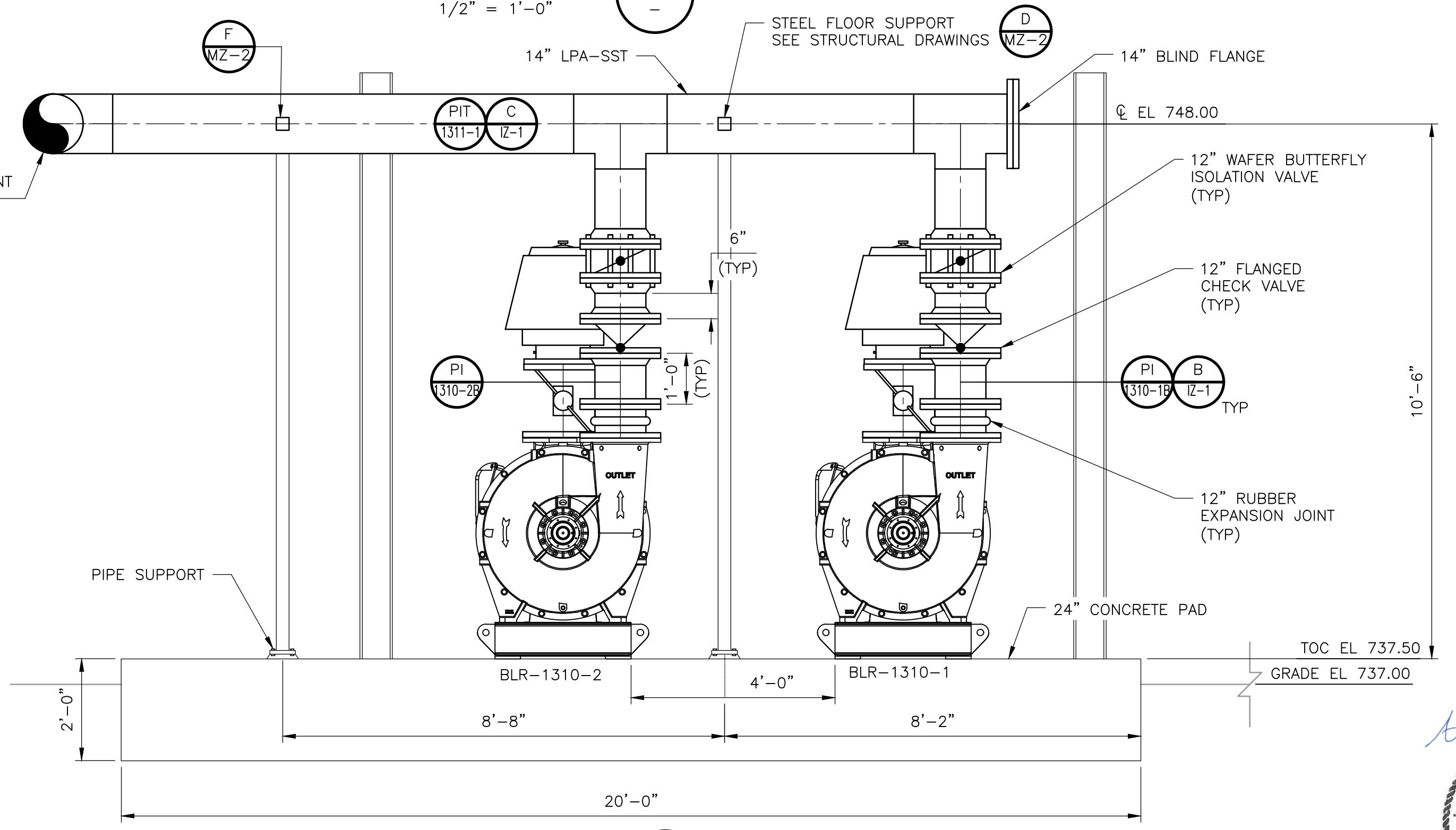
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**PLAN**  
1/2" = 1'-0"



**SECTION 1**  
1/2" = 1'-0"



**SECTION 2**  
1/2" = 1'-0"

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JAM	ATD	CONFORMED DRAWINGS
2	12/21/23	JAM	ATD	REVISED FOR ADDENDUM NO.2

DESIGNED BY: A. KOWALKOWSKI  
 DRAWN BY: G. GANESH  
 SHEET CHK'D BY: A. DOODY  
 CROSS CHK'D BY: A. WOELKE  
 APPROVED BY: A. DOODY  
 DATE: NOVEMBER 2023




8310-1 N. Capital of Texas Hwy, Suite 250  
 Austin, TX 78731  
 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

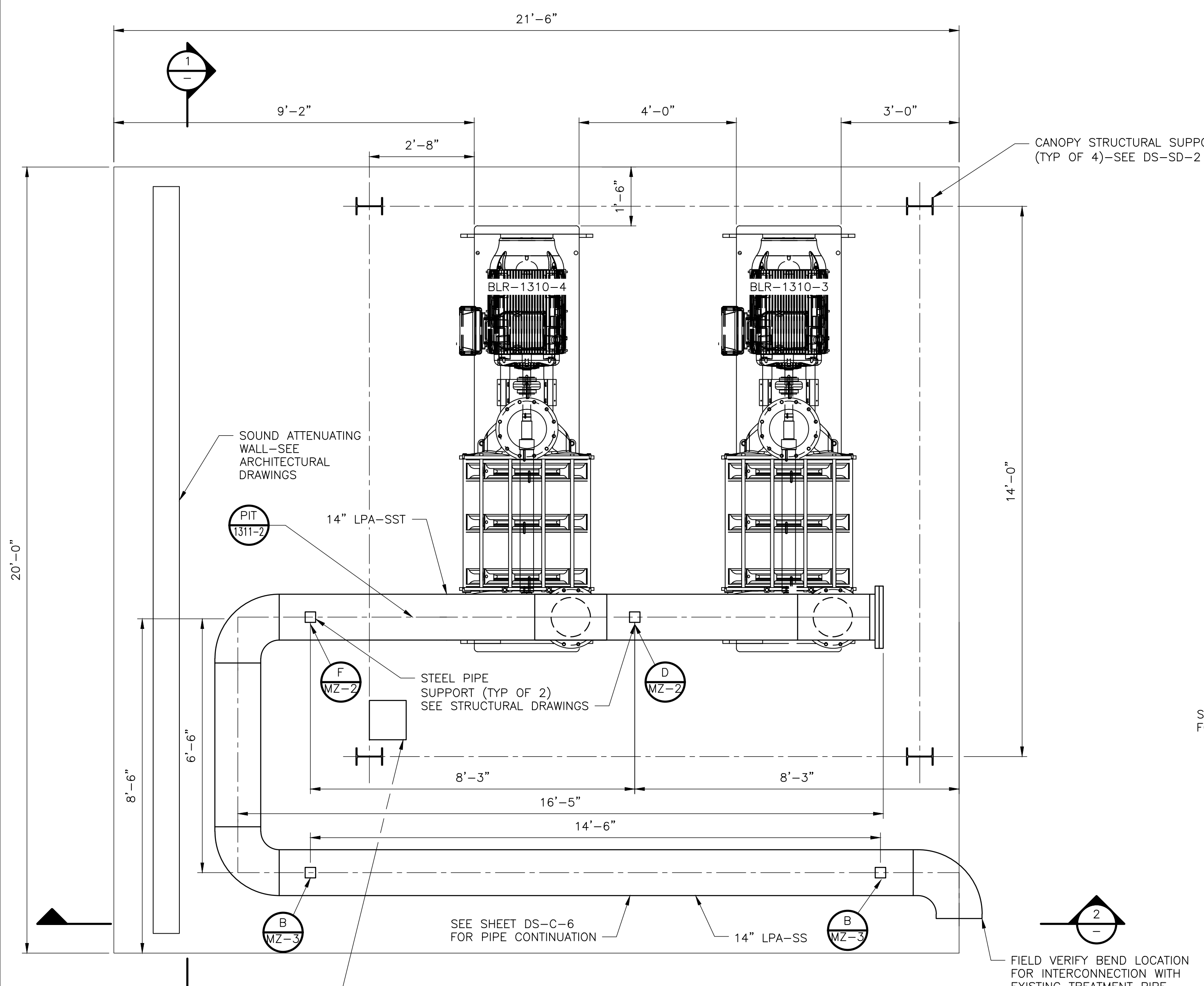
DOVE SPRINGS WWTP  
 TREATMENT UNIT NO. 1 BLOWER  
 AREA PLAN AND SECTIONS

PROJECT NO. 2048-264953  
 FILE NAME: DSMD1.DWG  
 SHEET NO. DS-MD-1

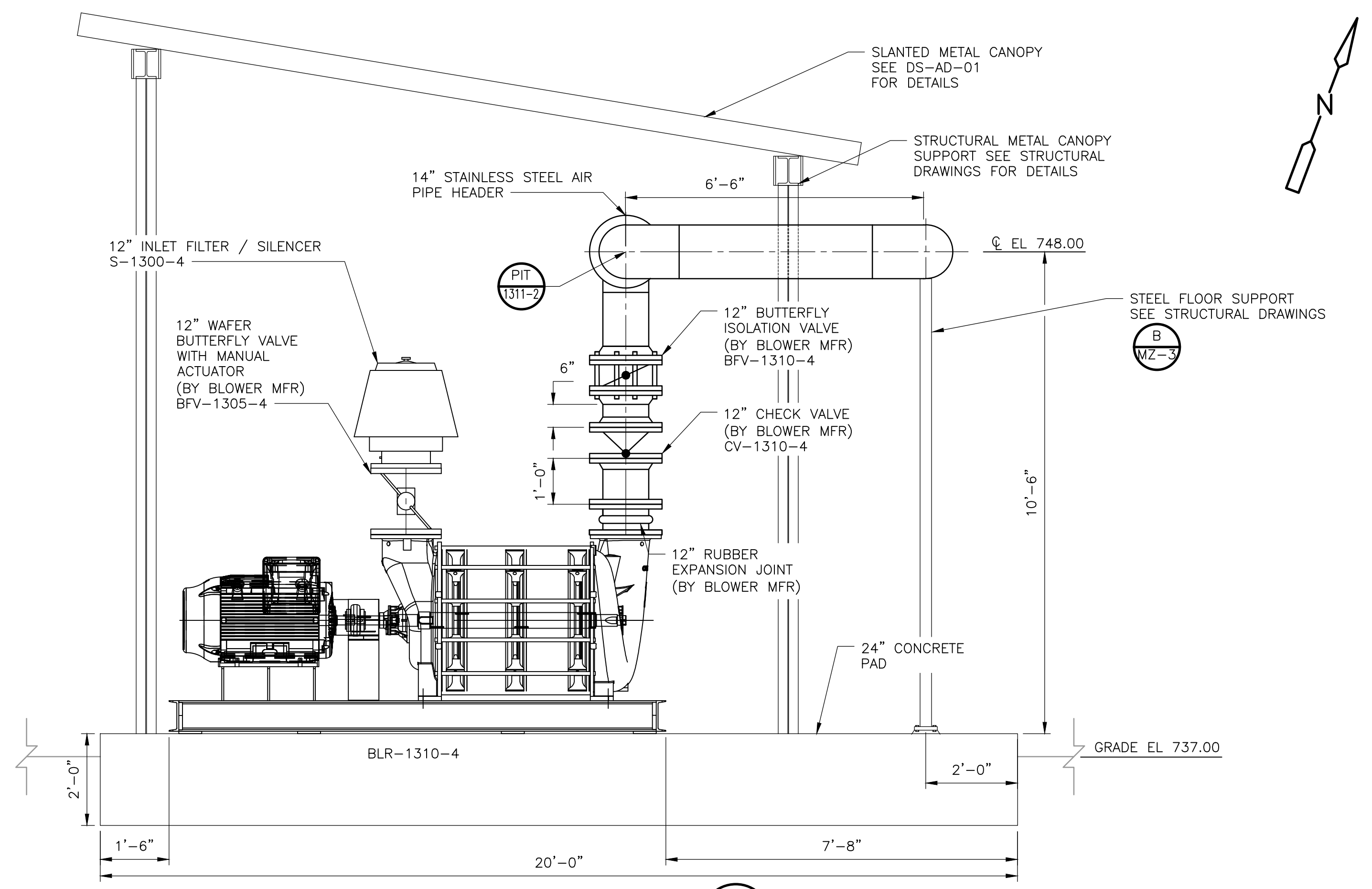


1/10/2024

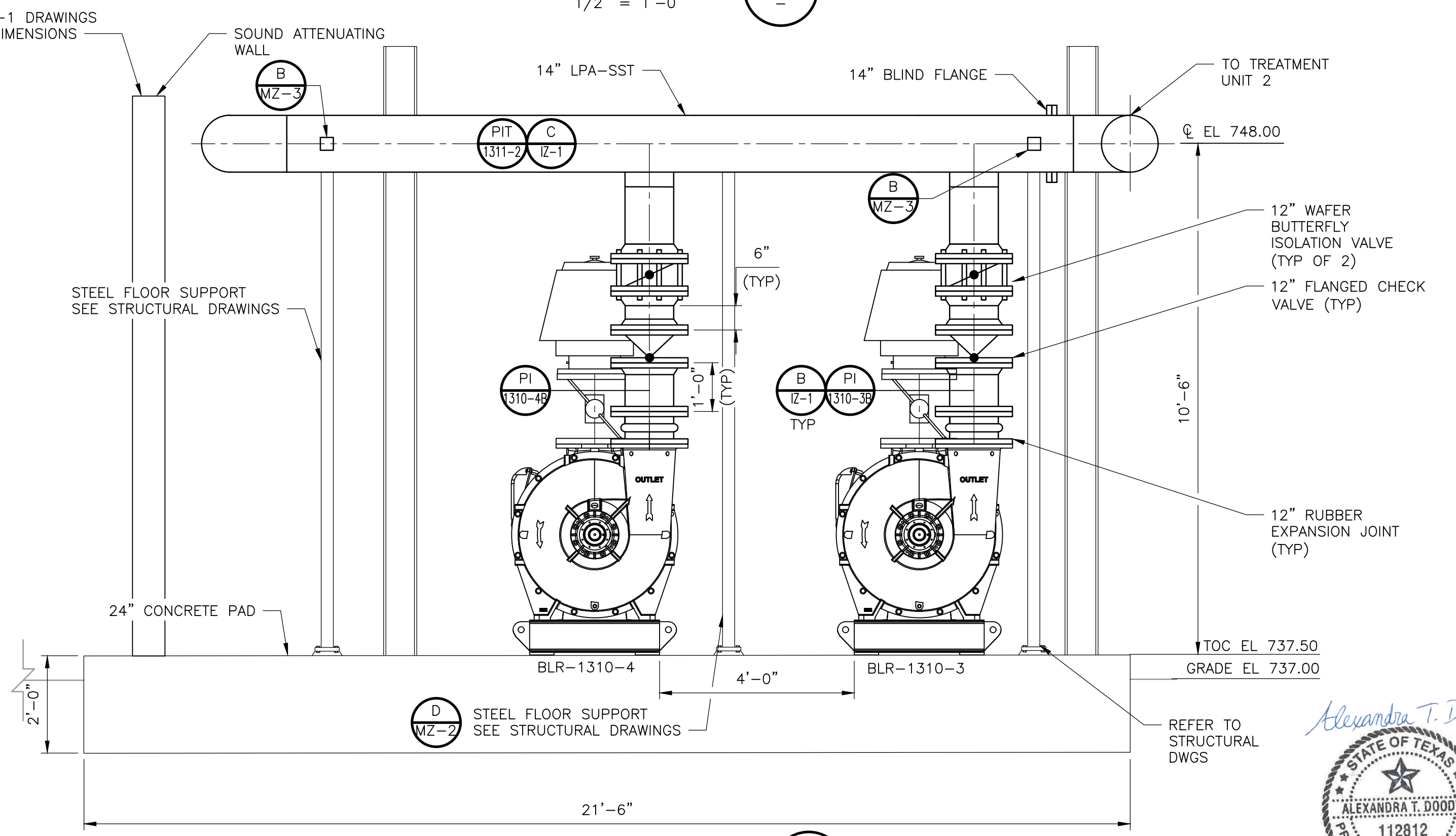
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**PLAN**  
1/2" = 1'-0"



**SECTION 1**  
1/2" = 1'-0"



**SECTION 2**  
1/2" = 1'-0"

REMOTE DIGITAL INTERFACE FOR PIT (MOUNT TO STEEL CANOPY SUPPORT AT EL 742)  
 A IZ-1  
 PI 1311-2

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JAM	ATD	CONFORMED DRAWINGS
2	12/21/23	JAM	ATD	REVISED FOR ADDENDUM NO.2

DESIGNED BY: A. KOWALKOWSKI  
 DRAWN BY: G. GANESH  
 SHEET CHK'D BY: A. DOODY  
 CROSS CHK'D BY: A. WOELKE  
 APPROVED BY: A. DOODY  
 DATE: NOVEMBER 2023

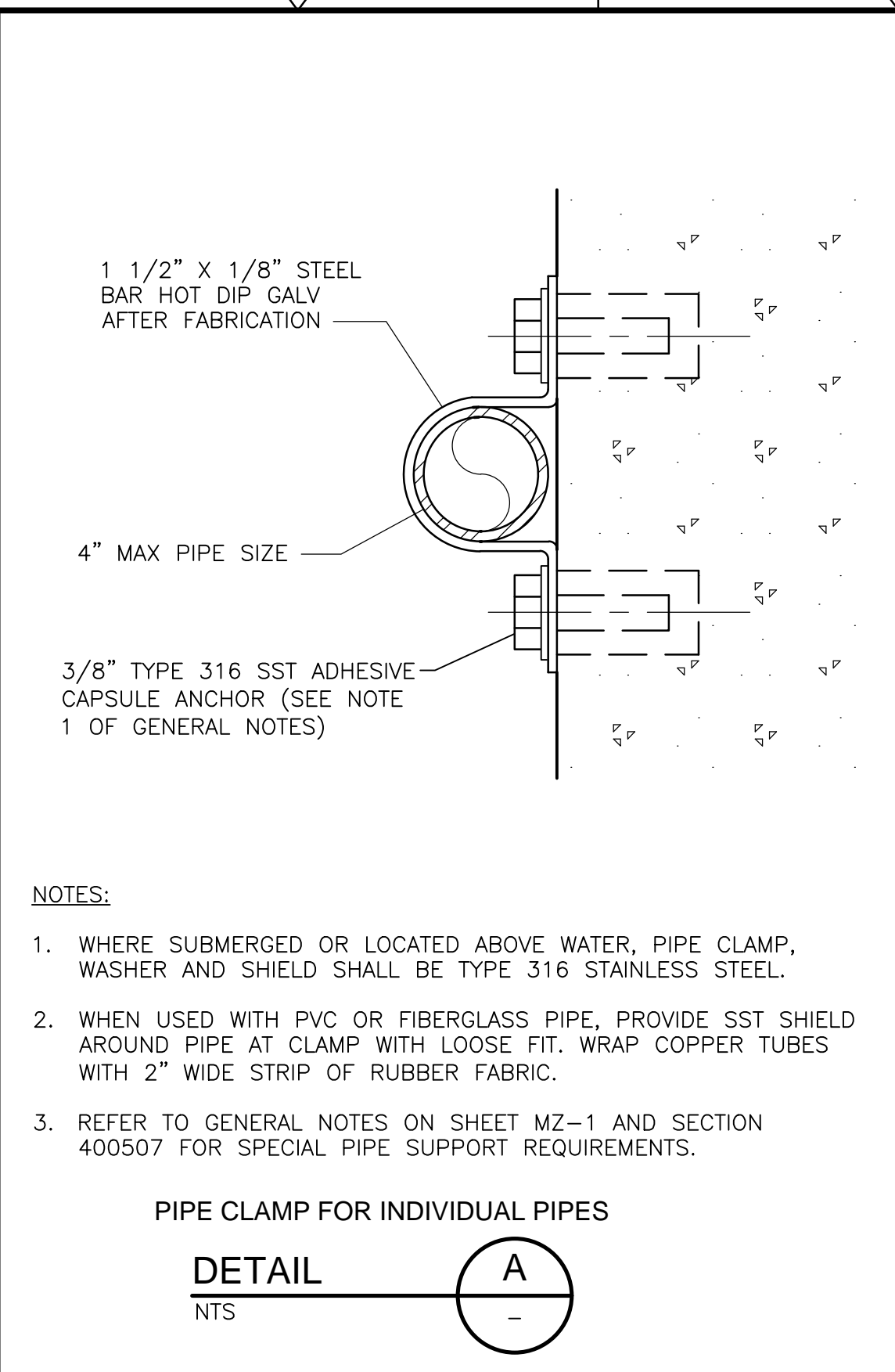
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 Austin, TX 78731  
 Tel: (512) 346-1100  
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CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP  
 TREATMENT UNIT NO. 2 BLOWER  
 AREA PLAN AND SECTIONS

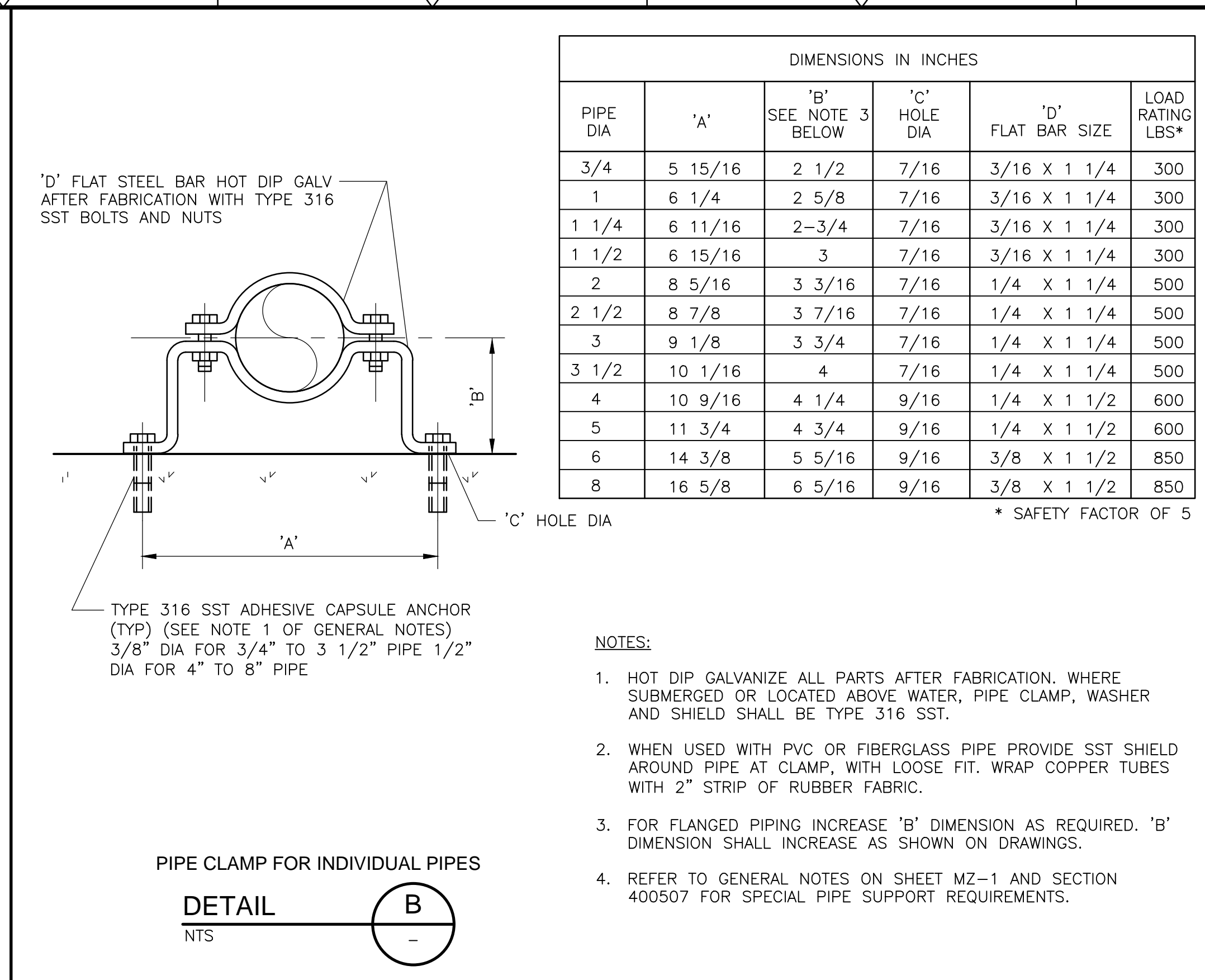
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 FILE NAME: DSMD2.DWG  
 SHEET NO. DS-MD-2

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- NOTES:**
- WHERE SUBMERGED OR LOCATED ABOVE WATER, PIPE CLAMP, WASHER AND SHIELD SHALL BE TYPE 316 STAINLESS STEEL.
  - WHEN USED WITH PVC OR FIBERGLASS PIPE, PROVIDE SST SHIELD AROUND PIPE AT CLAMP WITH LOOSE FIT. WRAP COPPER TUBES WITH 2" WIDE STRIP OF RUBBER FABRIC.
  - REFER TO GENERAL NOTES ON SHEET MZ-1 AND SECTION 400507 FOR SPECIAL PIPE SUPPORT REQUIREMENTS.

PIPE CLAMP FOR INDIVIDUAL PIPES  
**DETAIL A**  
 NTS



DIMENSIONS IN INCHES

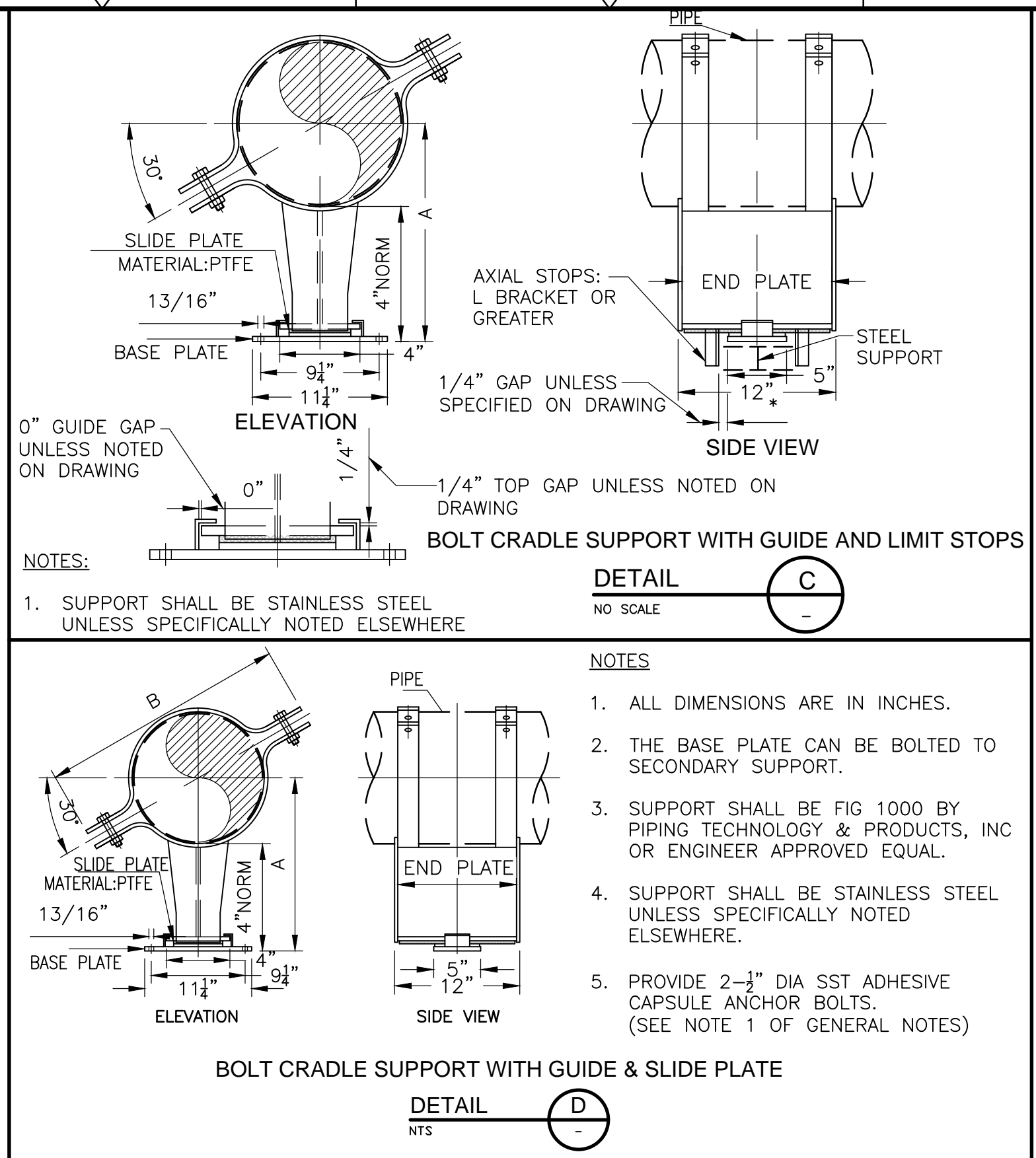
PIPE DIA	'A'	'B' SEE NOTE 3 BELOW	'C' HOLE DIA	'D' FLAT BAR SIZE	LOAD RATING LBS*
3/4	5 15/16	2 1/2	7/16	3/16 X 1 1/4	300
1	6 1/4	2 5/8	7/16	3/16 X 1 1/4	300
1 1/4	6 11/16	2-3/4	7/16	3/16 X 1 1/4	300
1 1/2	6 15/16	3	7/16	3/16 X 1 1/4	300
2	8 5/16	3 3/16	7/16	1/4 X 1 1/4	500
2 1/2	8 7/8	3 7/16	7/16	1/4 X 1 1/4	500
3	9 1/8	3 3/4	7/16	1/4 X 1 1/4	500
3 1/2	10 1/16	4	7/16	1/4 X 1 1/4	500
4	10 9/16	4 1/4	9/16	1/4 X 1 1/2	600
5	11 3/4	4 3/4	9/16	1/4 X 1 1/2	600
6	14 3/8	5 5/16	9/16	3/8 X 1 1/2	850
8	16 5/8	6 5/16	9/16	3/8 X 1 1/2	850

\* SAFETY FACTOR OF 5

TYPE 316 SST ADHESIVE CAPSULE ANCHOR (TYP) (SEE NOTE 1 OF GENERAL NOTES) 3/8" DIA FOR 3/4" TO 3 1/2" PIPE 1/2" DIA FOR 4" TO 8" PIPE

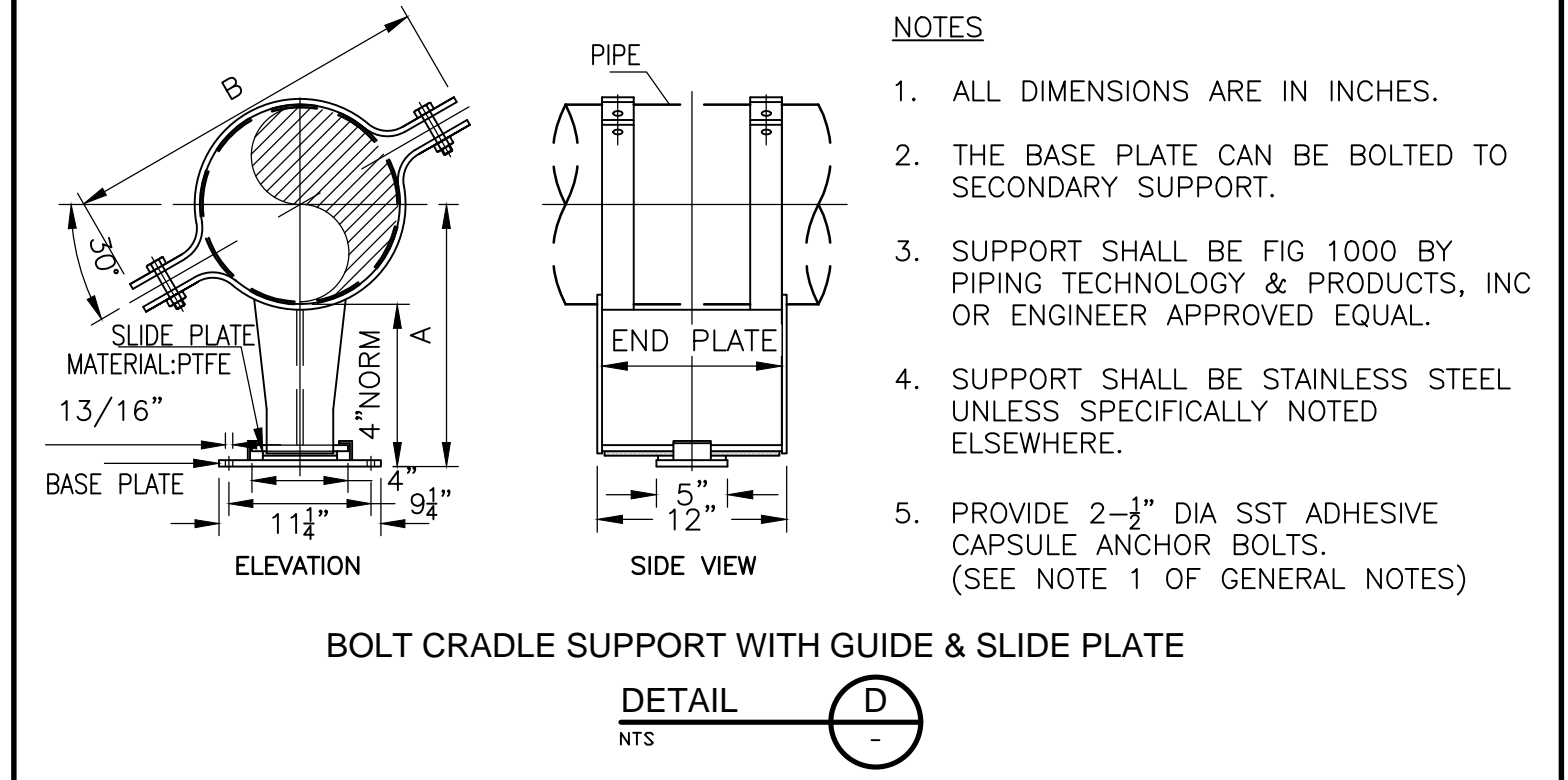
- NOTES:**
- HOT DIP GALVANIZE ALL PARTS AFTER FABRICATION. WHERE SUBMERGED OR LOCATED ABOVE WATER, PIPE CLAMP, WASHER AND SHIELD SHALL BE TYPE 316 SST.
  - WHEN USED WITH PVC OR FIBERGLASS PIPE PROVIDE SST SHIELD AROUND PIPE AT CLAMP, WITH LOOSE FIT. WRAP COPPER TUBES WITH 2" STRIP OF RUBBER FABRIC.
  - FOR FLANGED PIPING INCREASE 'B' DIMENSION AS REQUIRED. 'B' DIMENSION SHALL INCREASE AS SHOWN ON DRAWINGS.
  - REFER TO GENERAL NOTES ON SHEET MZ-1 AND SECTION 400507 FOR SPECIAL PIPE SUPPORT REQUIREMENTS.

PIPE CLAMP FOR INDIVIDUAL PIPES  
**DETAIL B**  
 NTS



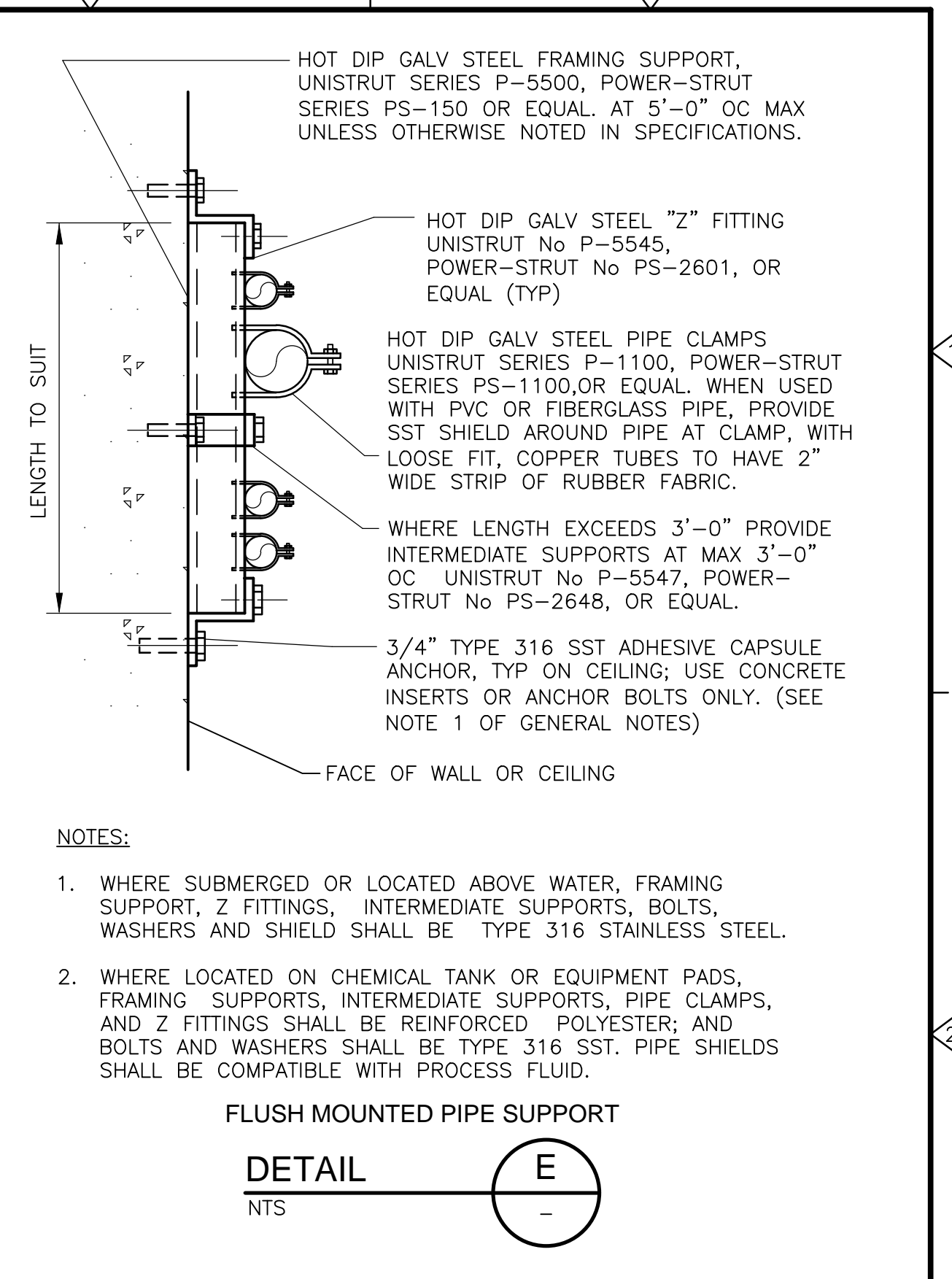
- NOTES:**
- SUPPORT SHALL BE STAINLESS STEEL UNLESS SPECIFICALLY NOTED ELSEWHERE

**DETAIL C**  
 NO SCALE



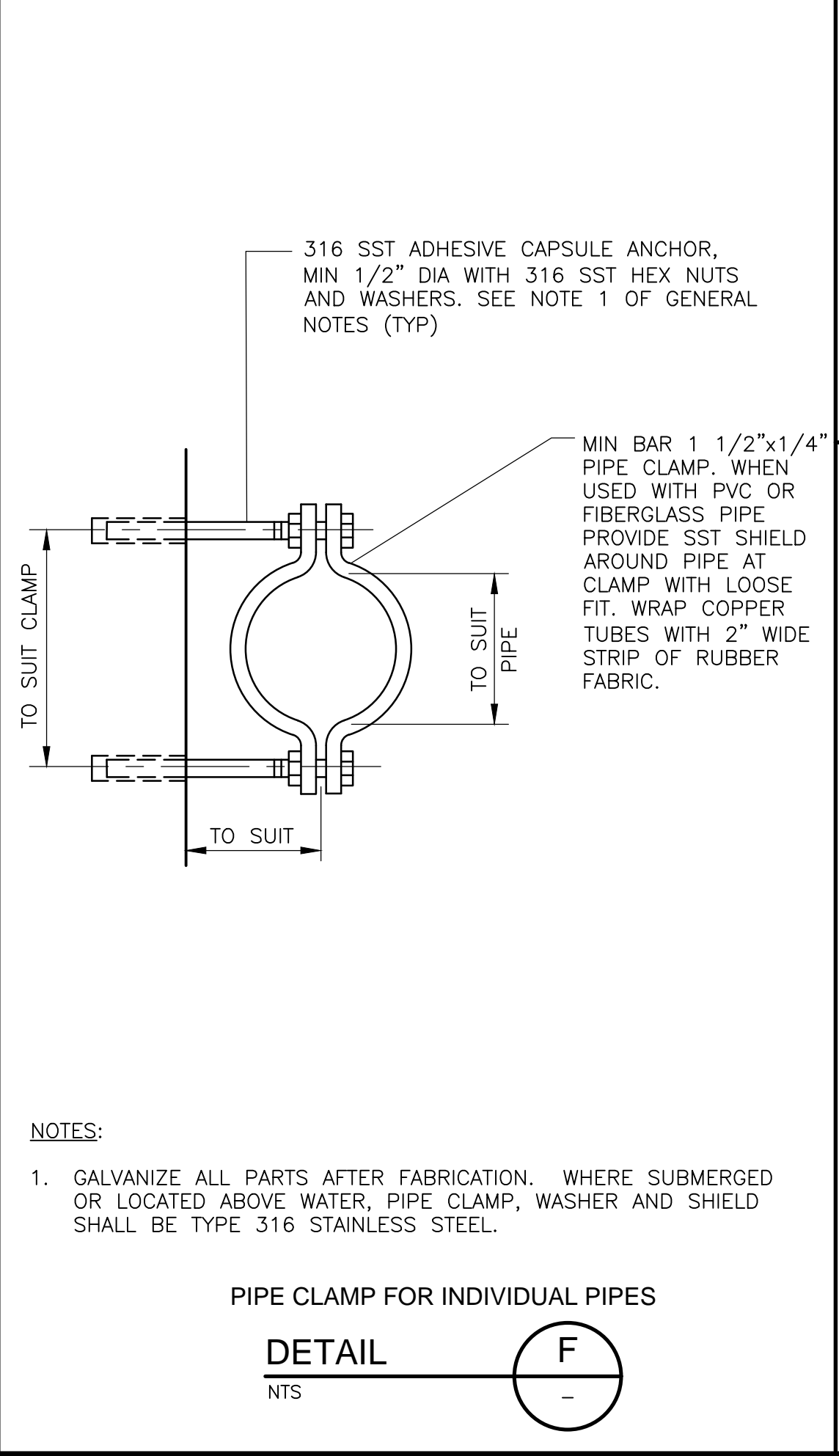
- NOTES:**
- ALL DIMENSIONS ARE IN INCHES.
  - THE BASE PLATE CAN BE BOLTED TO SECONDARY SUPPORT.
  - SUPPORT SHALL BE FIG 1000 BY PIPING TECHNOLOGY & PRODUCTS, INC OR ENGINEER APPROVED EQUAL.
  - SUPPORT SHALL BE STAINLESS STEEL UNLESS SPECIFICALLY NOTED ELSEWHERE.
  - PROVIDE 2-3" DIA SST ADHESIVE CAPSULE ANCHOR BOLTS. (SEE NOTE 1 OF GENERAL NOTES)

**DETAIL D**  
 NTS



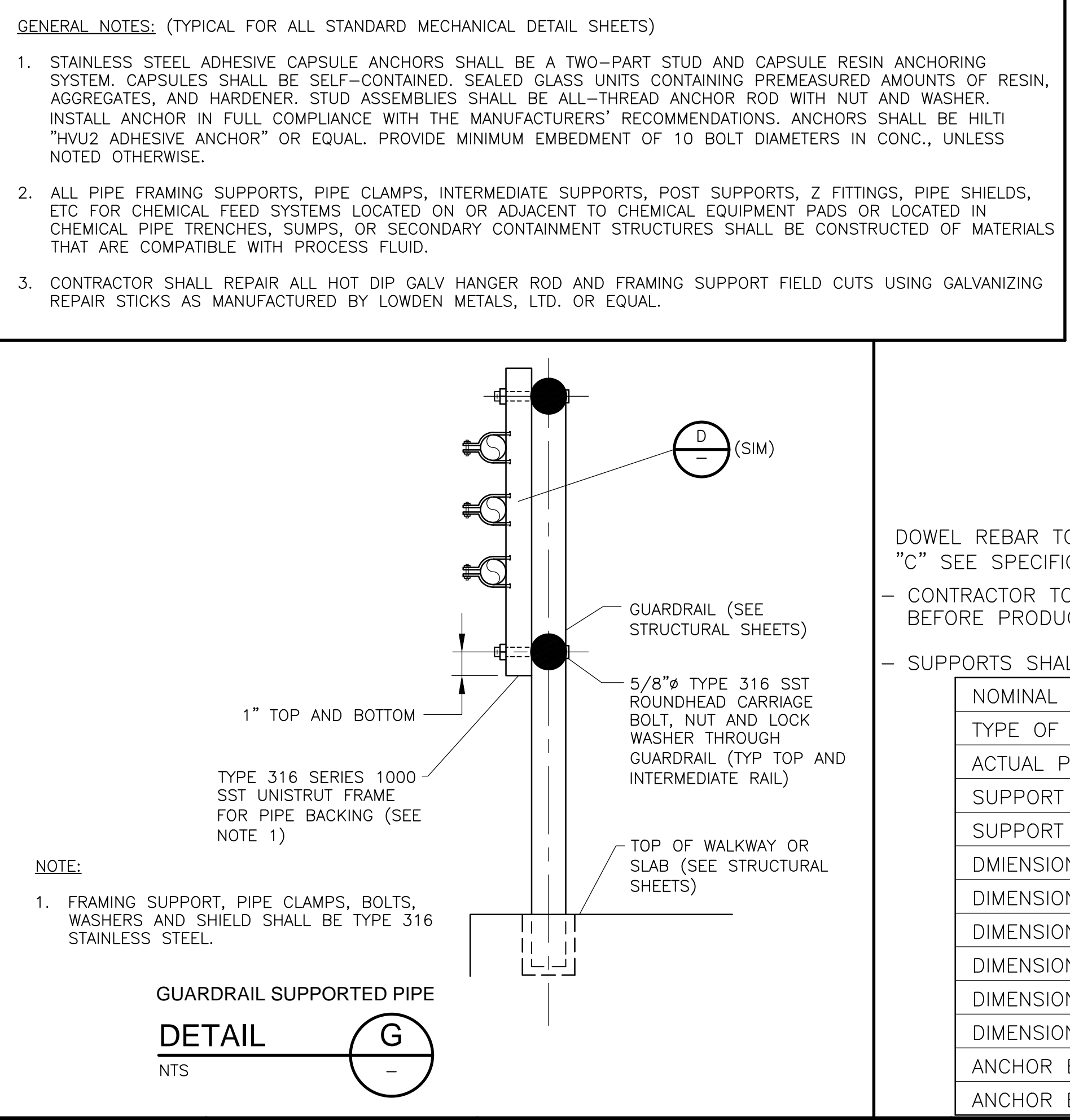
- NOTES:**
- WHERE SUBMERGED OR LOCATED ABOVE WATER, FRAMING SUPPORT, Z FITTINGS, INTERMEDIATE SUPPORTS, BOLTS, WASHERS AND SHIELD SHALL BE TYPE 316 STAINLESS STEEL.
  - WHERE LOCATED ON CHEMICAL TANK OR EQUIPMENT PADS, FRAMING SUPPORTS, INTERMEDIATE SUPPORTS, PIPE CLAMPS, AND Z FITTINGS SHALL BE REINFORCED POLYESTER; AND BOLTS AND WASHERS SHALL BE TYPE 316 SST. PIPE SHIELDS SHALL BE COMPATIBLE WITH PROCESS FLUID.

FLUSH MOUNTED PIPE SUPPORT  
**DETAIL E**  
 NTS



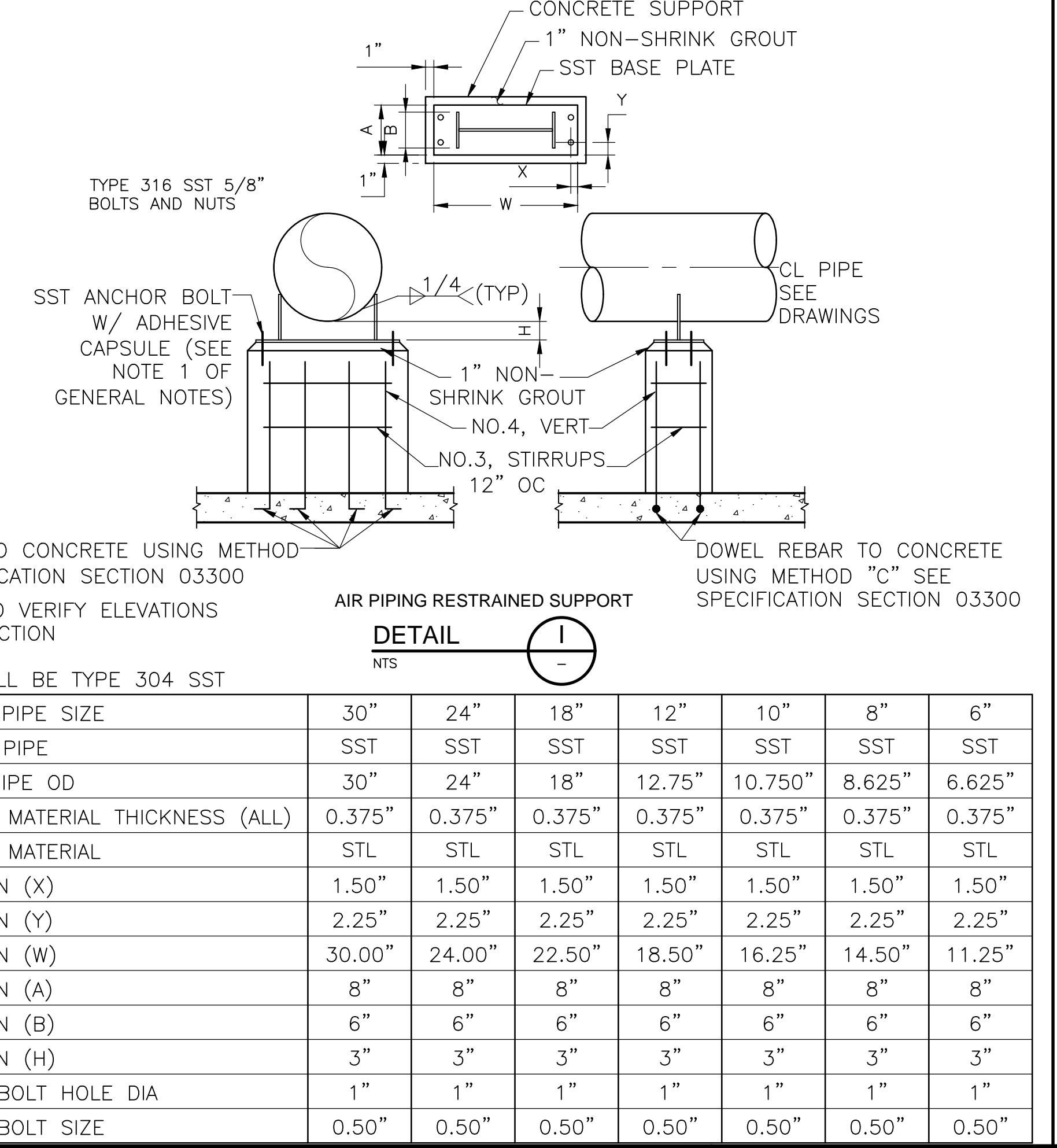
- NOTES:**
- GALVANIZE ALL PARTS AFTER FABRICATION. WHERE SUBMERGED OR LOCATED ABOVE WATER, PIPE CLAMP, WASHER AND SHIELD SHALL BE TYPE 316 STAINLESS STEEL.

PIPE CLAMP FOR INDIVIDUAL PIPES  
**DETAIL F**  
 NTS



- NOTE:**
- FRAMING SUPPORT, PIPE CLAMPS, BOLTS, WASHERS AND SHIELD SHALL BE TYPE 316 STAINLESS STEEL.

GUARDRAIL SUPPORTED PIPE  
**DETAIL G**  
 NTS



- DOWEL REBAR TO CONCRETE USING METHOD "C" SEE SPECIFICATION SECTION 03300
- CONTRACTOR TO VERIFY ELEVATIONS BEFORE PRODUCTION
- SUPPORTS SHALL BE TYPE 304 SST

**DETAIL H**  
 NTS

NOMINAL PIPE SIZE	30"	24"	18"	12"	10"	8"	6"
TYPE OF PIPE	SST	SST	SST	SST	SST	SST	SST
ACTUAL PIPE OD	30"	24"	18"	12.75"	10.750"	8.625"	6.625"
SUPPORT MATERIAL THICKNESS (ALL)	0.375"	0.375"	0.375"	0.375"	0.375"	0.375"	0.375"
SUPPORT MATERIAL	STL	STL	STL	STL	STL	STL	STL
DMIENSION (X)	1.50"	1.50"	1.50"	1.50"	1.50"	1.50"	1.50"
DIMENSION (Y)	2.25"	2.25"	2.25"	2.25"	2.25"	2.25"	2.25"
DIMENSION (W)	30.00"	24.00"	22.50"	18.50"	16.25"	14.50"	11.25"
DIMENSION (A)	8"	8"	8"	8"	8"	8"	8"
DIMENSION (B)	6"	6"	6"	6"	6"	6"	6"
DIMENSION (H)	3"	3"	3"	3"	3"	3"	3"
ANCHOR BOLT HOLE DIA	1"	1"	1"	1"	1"	1"	1"
ANCHOR BOLT SIZE	0.50"	0.50"	0.50"	0.50"	0.50"	0.50"	0.50"

- NOTES:**
- SWAY BRACE SHALL NOT SUPPORT VERTICAL LOADS.
  - FOR USE WHEN "X" IS GREATER THAN 12". FOR "X" 12" OR LESS, USE DETAIL F ON THIS SHEET OR AS OTHERWISE NOTED.
  - SWAY BRACES SHALL BE HOT DIP GALVANIZED AFTER FABRICATION. WHERE SUBMERGED OR LOCATED ABOVE WATER, PIPE SWAY BRACE ASSEMBLY SHALL BE TYPE 316 STAINLESS STEEL.
  - REFER TO GENERAL NOTES ON SHEET MZ-1 AND SECTION 400507 FOR SPECIAL PIPE SUPPORT REQUIREMENTS.

ALEXANDRA T. DOODY  
 112812  
 PROFESSIONAL ENGINEER  
 November 8, 2023

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JAM	ATD	CONFORMED DRAWINGS

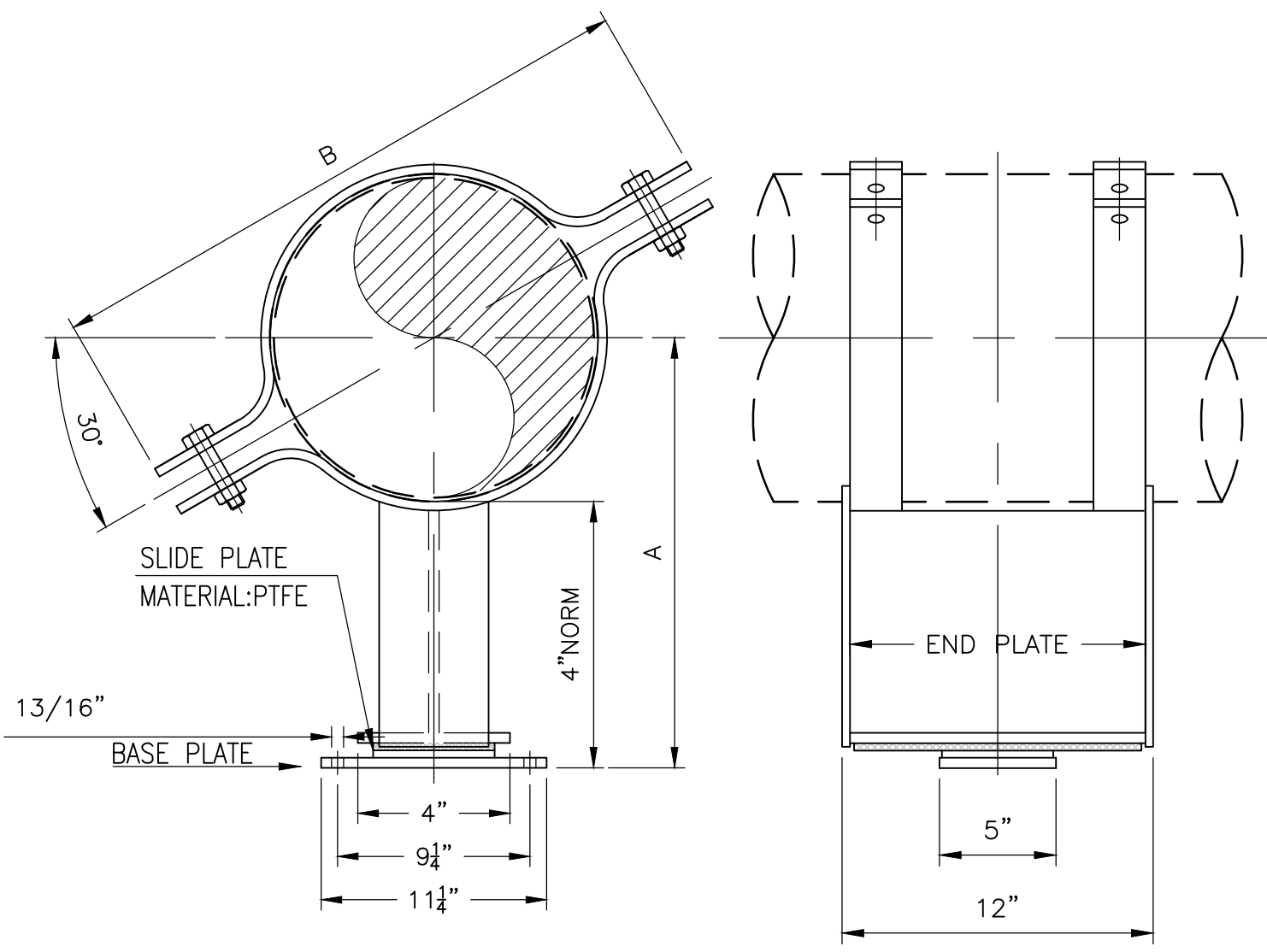
DESIGNED BY: J. MAYER  
 DRAWN BY: J. MAYER  
 SHEET CHK'D BY: A. DOODY  
 CROSS CHK'D BY: A. WOELKE  
 APPROVED BY: A. DOODY  
 DATE: NOVEMBER 2023

**CDM Smith**  
 8310-1 N. Capital of Texas Hwy, Suite 250  
 Austin, TX 78731  
 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

STANDARD MECHANICAL DETAILS I  
 MZ-1

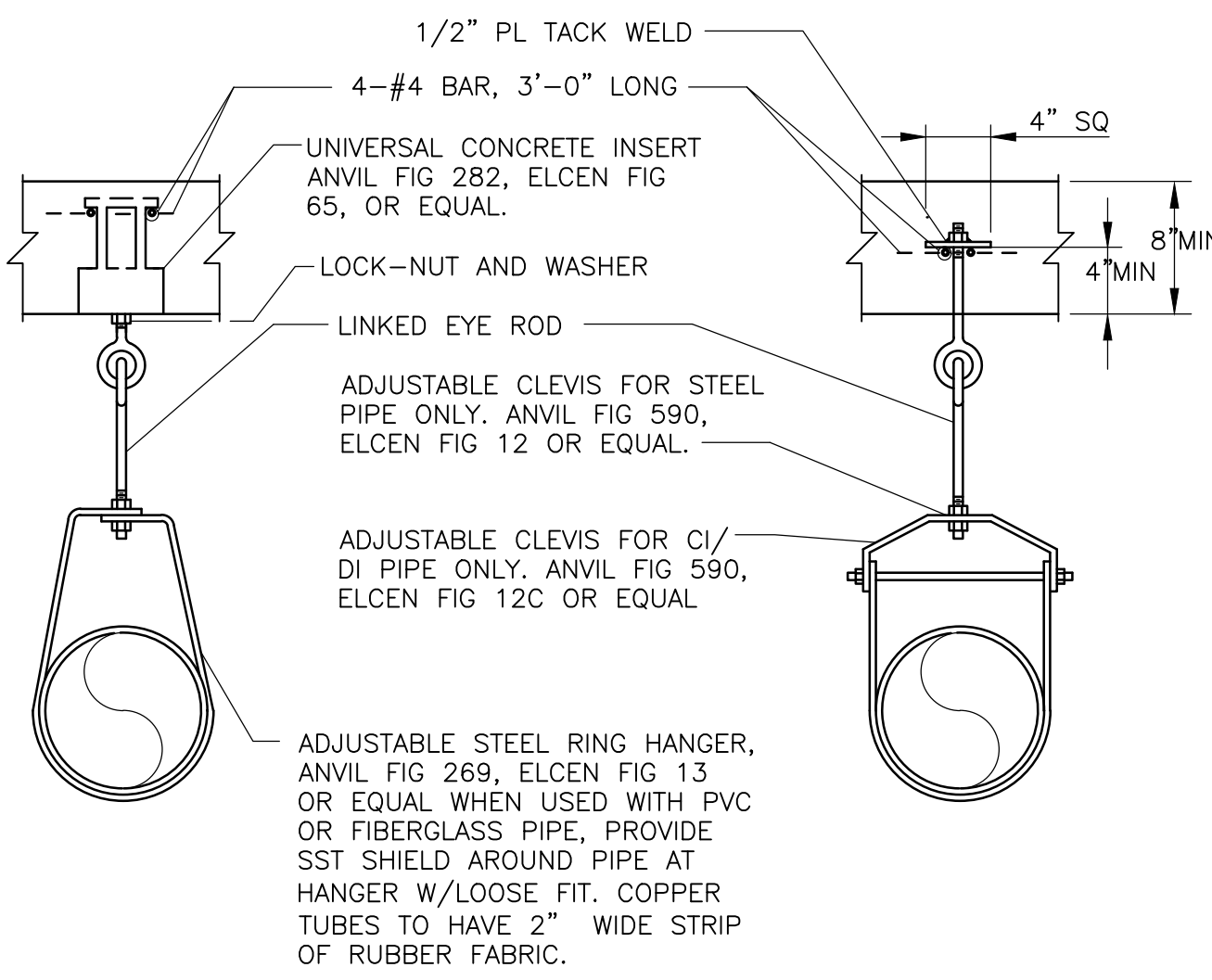
PROJECT NO.	2048-264953
FILE NAME:	MZ-1.DWG
SHEET NO.	MZ-1



**BOLT CRADLE SUPPORT WITH BONDED SLIDE PLATE**

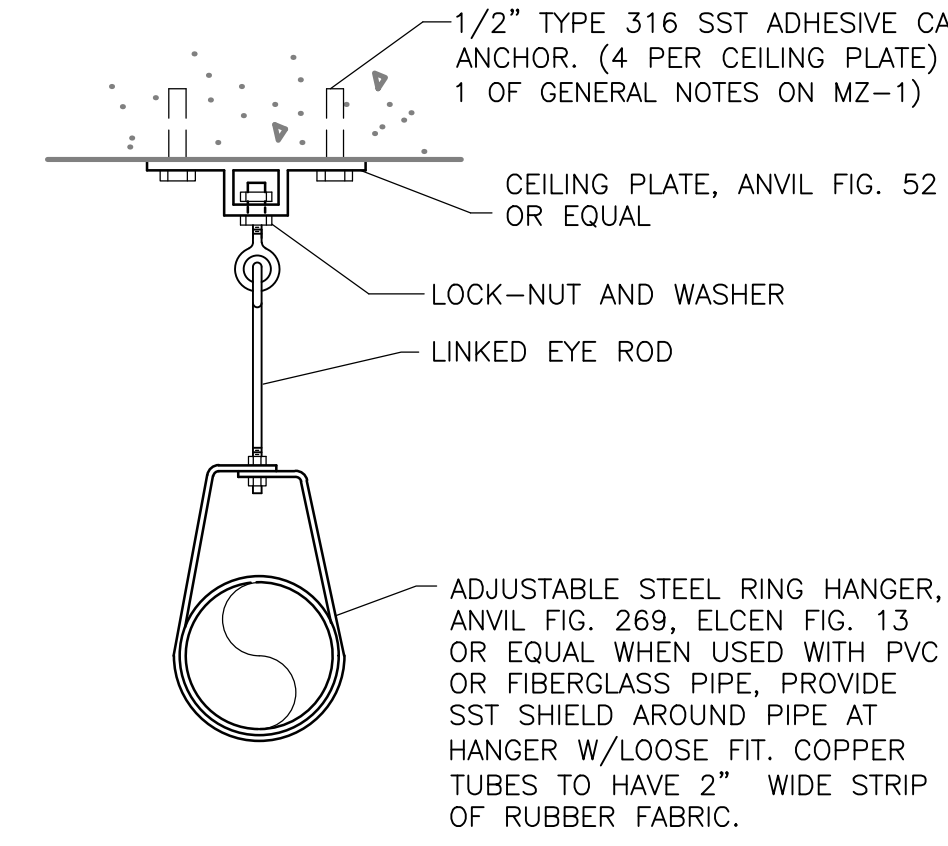
**DETAIL A**  
NTS

- NOTES**
1. ALL DIMENSIONS ARE IN INCHES.
  2. THE BASE PLATE CAN BE BOLTED TO SECONDARY SUPPORT.
  3. SUPPORT SHALL BE FIG 1000 BY PIPING TECHNOLOGY & PRODUCTS, INC OR ENGINEER APPROVED EQUAL.
  4. SUPPORT SHALL BE STAINLESS STEEL UNLESS SPECIFICALLY NOTED ELSEWHERE.
  5. PROVIDE 2-1/2" DIA SST ADHESIVE CAPSULE ANCHOR BOLTS (SEE NOTE 1 OF GENERAL NOTES)

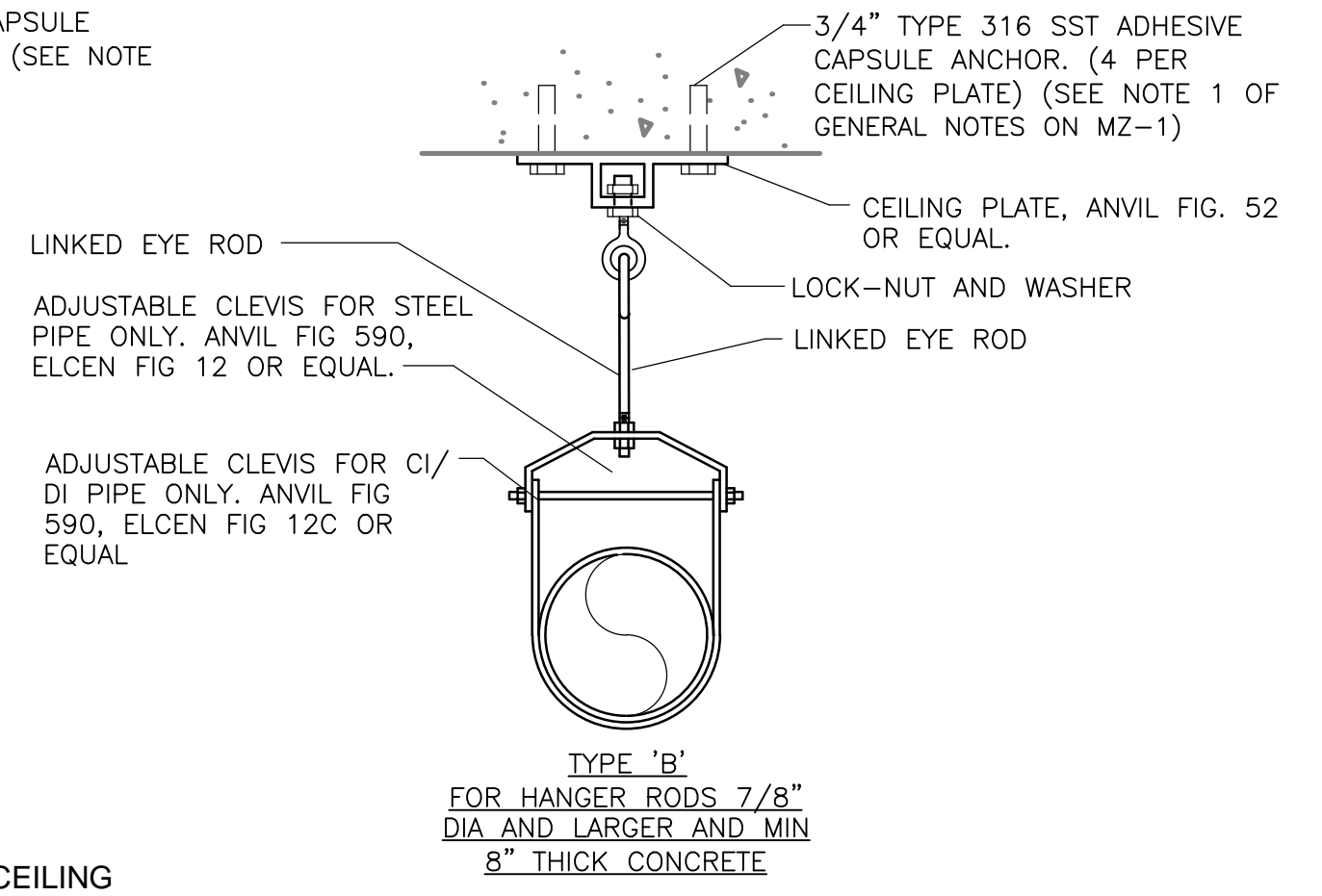


**PIPE HANGER DETAIL B**  
NTS

- NOTES:**
1. WHERE LOCATED ABOVE WATER, PIPE SUPPORT SYSTEMS SHALL BE TYPE 316 STAINLESS STEEL MATERIALS OF CONSTRUCTION.
  2. REFER TO GENERAL NOTES ON SHEET MZ-1 AND SECTION 400507 FOR SPECIAL PIPE SUPPORT REQUIREMENTS.
  3. FOR CONNECTION OF PIPE HANGER TO STRUCTURAL STEEL MEMBER, USE BEAM CLAMP. SEE DETAIL G ON DRAWING MZ-2.



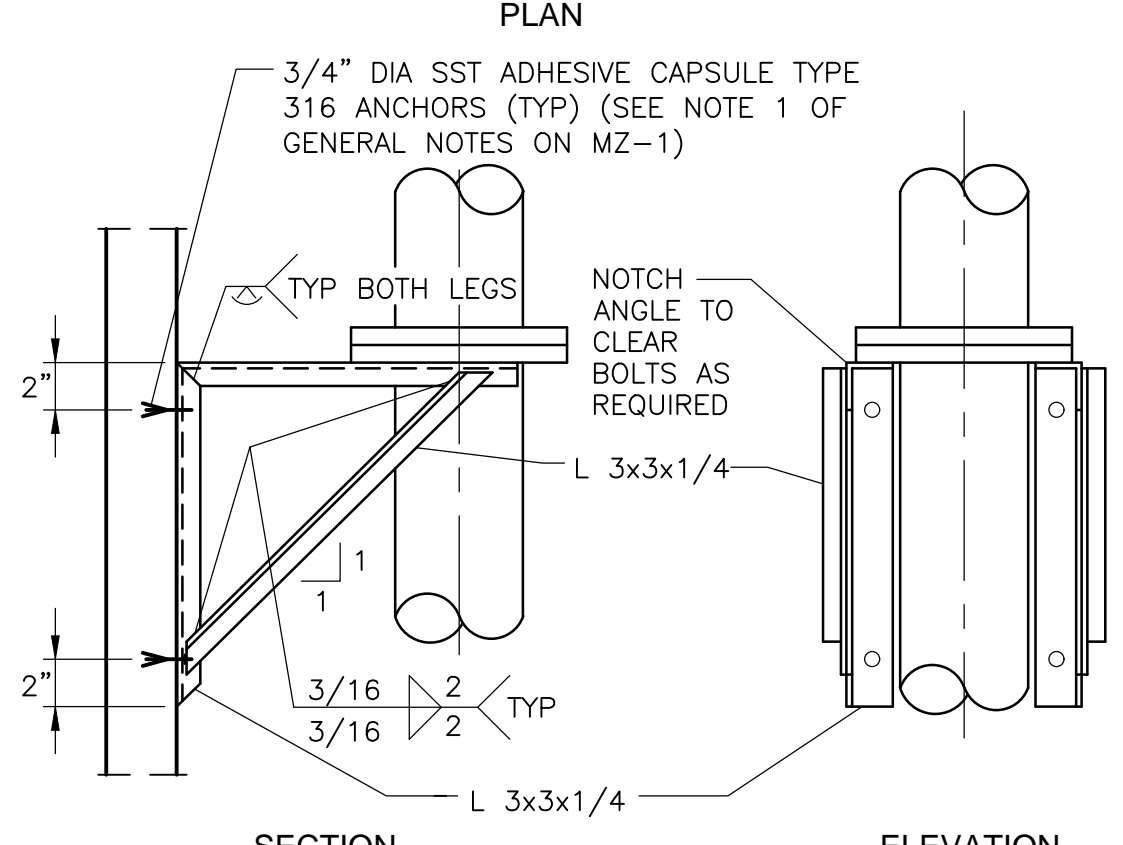
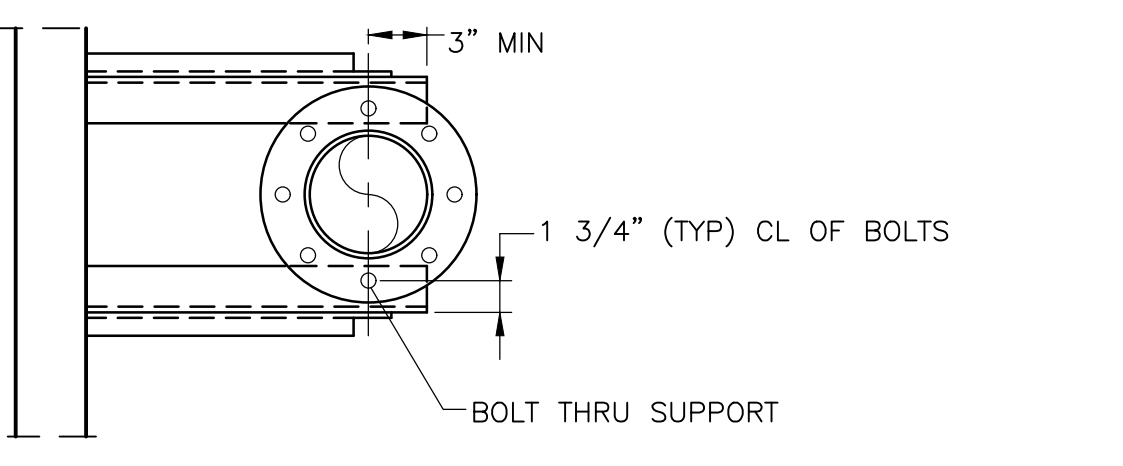
**PIPE HANGER DETAIL A**  
NTS



**PIPE HANGER DETAIL B**  
NTS

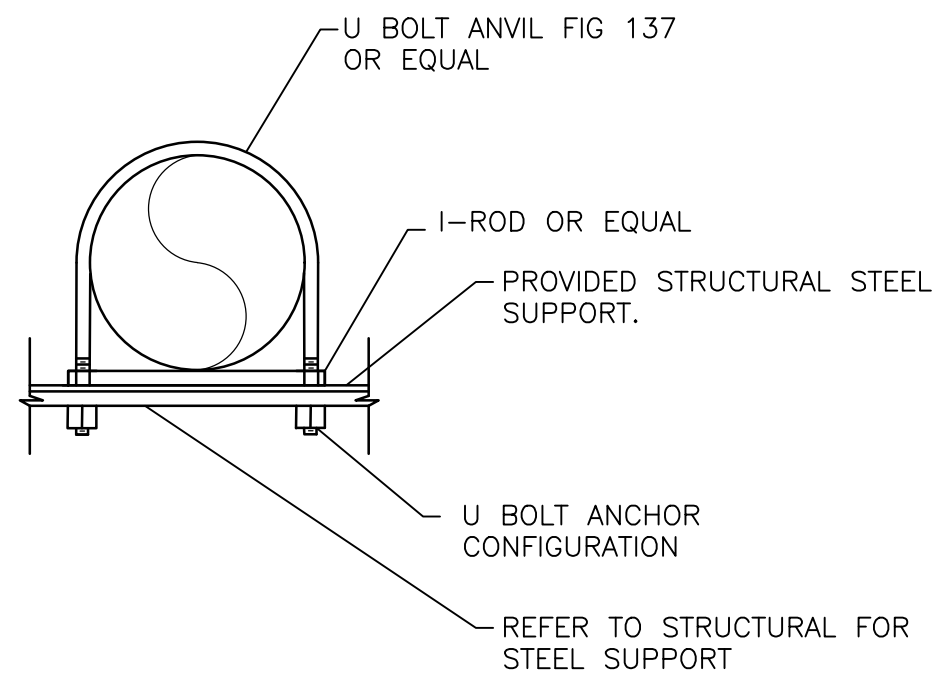
PIPE DIA (INCHES)	ROD DIA (INCHES)	WEIGHT LIMIT (LBS)	
		TYPE 'A'	TYPE 'B'
1 AND SMALLER	3/8	610	---
1 1/4 TO 2	3/8	610	---
2 1/2 TO 3 1/2	1/2	1130	---
4 TO 5	5/8	1430	---
6	3/4	1430	3800
8,10,12	7/8	---	3800
14,16,18	1	---	3800

NOTE: ALL PARTS SHALL BE HOT DIP GALVANIZED AFTER FABRICATION.



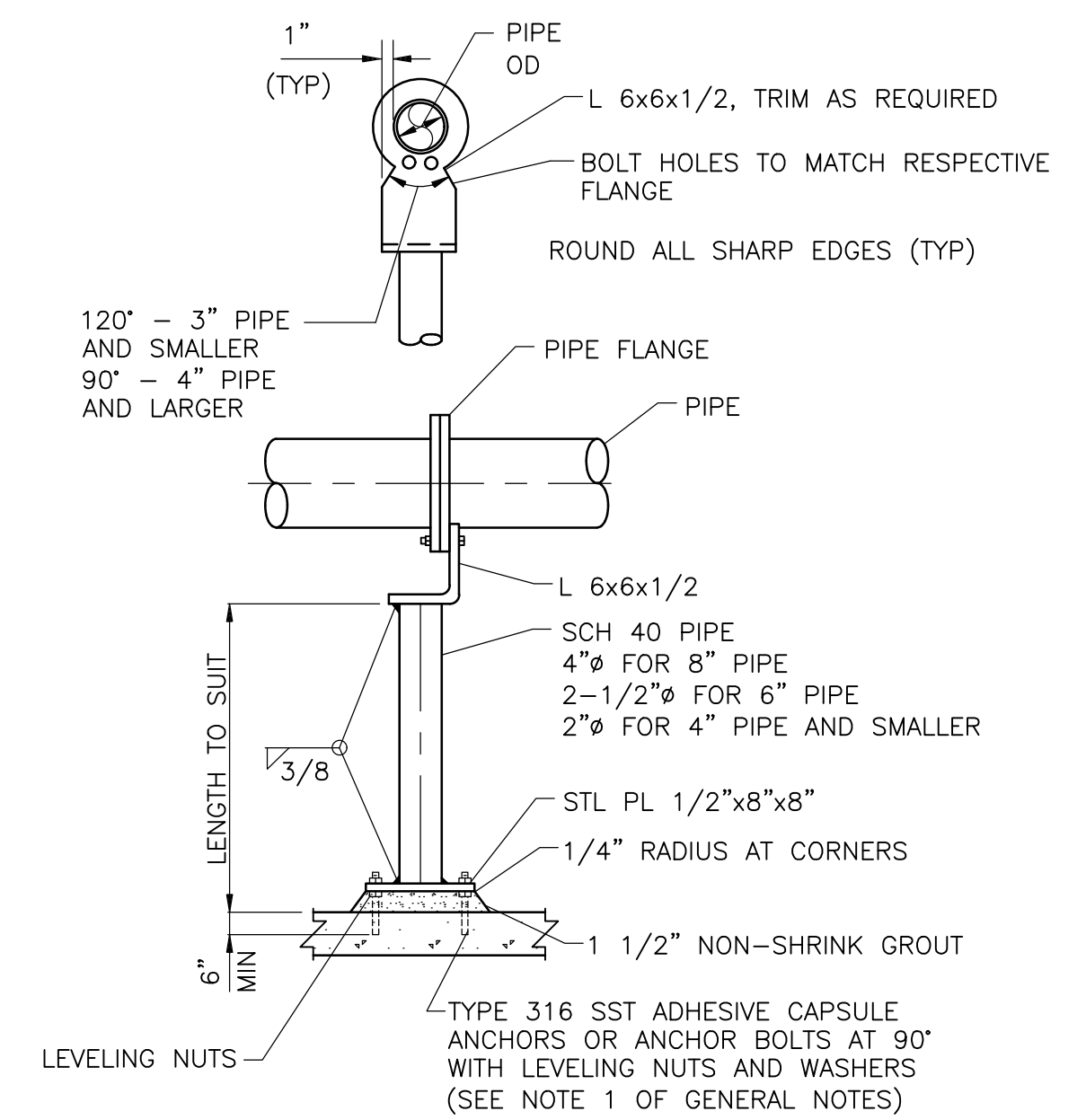
**PIPE SUPPORT DETAIL C**  
NTS

- NOTES:**
1. FOR 4" AND LARGER PIPE.
  2. SUPPORT SHALL BE 316 SST. WHERE SUBMERGED OR LOCATED OVER WATER, PIPE BRACKET ASSEMBLY AND BOLTS SHALL BE TYPE 316 SST.
  3. MAXIMUM VERTICAL LOAD EQUALS 900 POUNDS.
  4. FOR PIPE WITH JOINT TYPE OTHER THAN FLANGED, WELD SINGLE SLIP-ON TYPE FLANGE TO PIPE AT LOCATION OF EACH SUPPORT.
  5. PIPE BRACKET ASSEMBLY AND BOLTS SHALL BE TYPE 316 SST WHEN USED FOR SUPPORT OF SST PIPING.



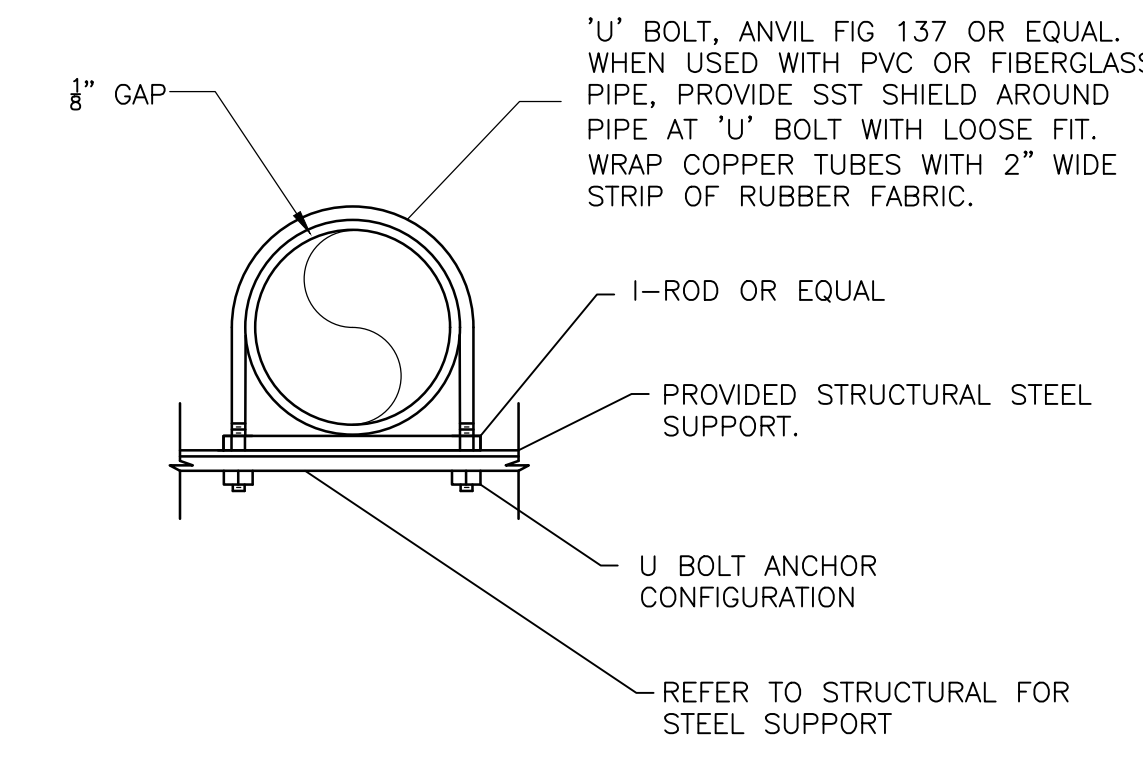
**PIPE SUPPORT DETAIL D**  
NTS

- NOTES:**
1. HOT DIP GALVANIZE ALL PARTS AFTER FABRICATION. WHERE SUBMERGED OR LOCATED OVER WATER, SST SHIELDS, BRACKETS, 'U' BOLTS, AND BOLTS SHALL BE TYPE 316 SST.
  2. ALL SHIELDS, BRACKETS, BOLTS, AND HARDWARE SHALL BE TYPE 316 SST WHEN USED FOR SUPPORT OF SST PIPING, OR WHERE SUBMERGED OR LOCATED ON OR ABOVE HYDRAULIC STRUCTURE.
  3. REFER TO GENERAL NOTES ON SHEET G-4 AND SECTION 400507 FOR SPECIAL PIPE SUPPORT REQUIREMENTS.



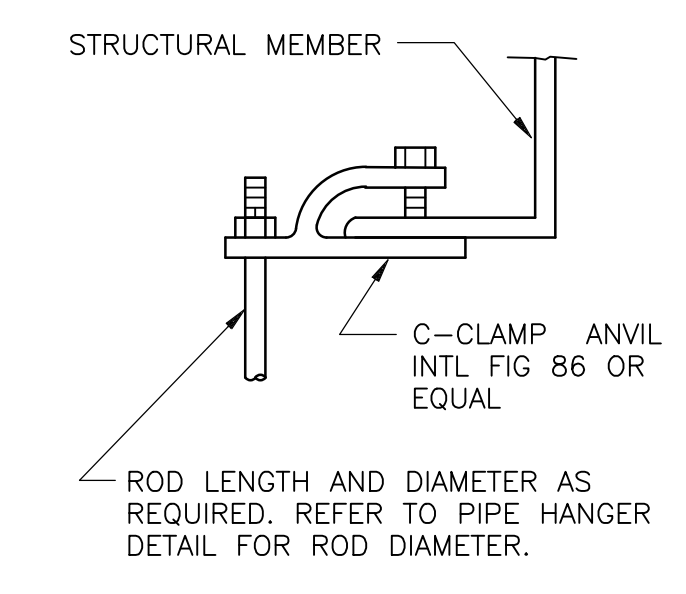
**PIPE FLANGE SUPPORT DETAIL E**  
NTS

- NOTES:**
1. PROVIDE FIELD PAINTING IN ACCORDANCE WITH 09902 FOR INTERIOR APPLICATIONS AND HOT DIP ALL MATERIALS AFTER FABRICATION FOR EXTERIOR APPLICATIONS.
  2. REFER TO GENERAL NOTES ON SHEET MZ-1 AND SECTION 400507 FOR SPECIAL PIPE SUPPORT REQUIREMENTS.

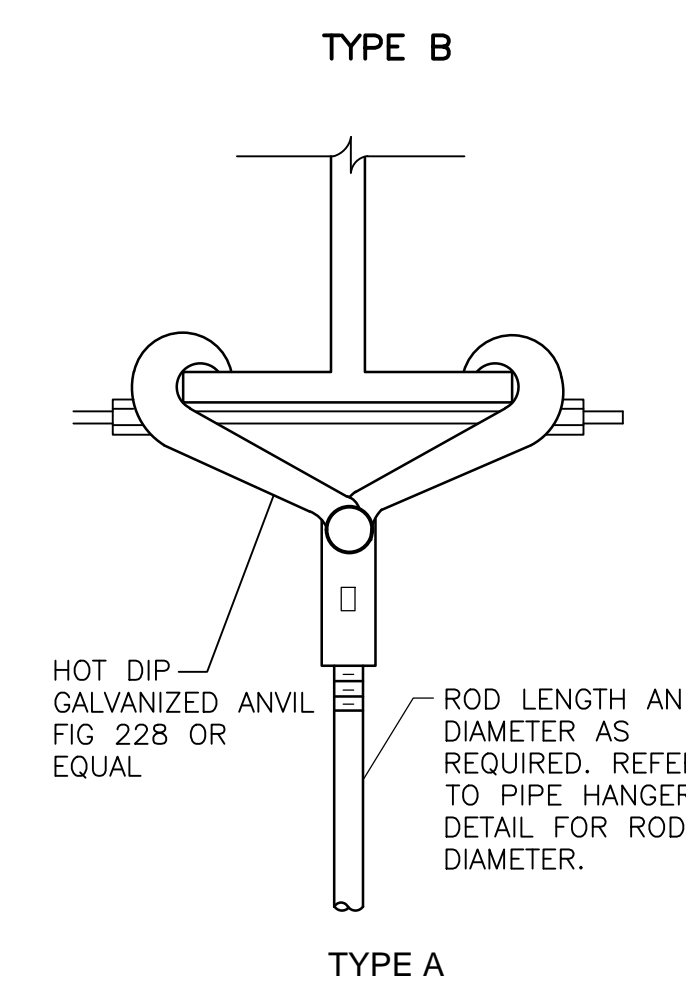


**PIPE BRACKET DETAIL F**  
NTS

- NOTES:**
1. HOT DIP GALVANIZE ALL PARTS AFTER FABRICATION. WHERE SUBMERGED OR LOCATED OVER WATER, SST SHIELDS, BRACKETS, 'U' BOLTS, AND BOLTS SHALL BE TYPE 316 SST.
  2. ALL SHIELDS, BRACKETS, BOLTS, AND HARDWARE SHALL BE TYPE 316 SST WHEN USED FOR SUPPORT OF SST PIPING, OR WHERE SUBMERGED OR LOCATED ON OR ABOVE HYDRAULIC STRUCTURE.
  3. REFER TO GENERAL NOTES ON SHEET G-4 AND SECTION 400507 FOR SPECIAL PIPE SUPPORT REQUIREMENTS.



**BEAM CLAMP DETAIL G**  
NTS



**PIPE BRACKET DETAIL A**  
NTS

XREFS: [CDMS\_2234\_DS] Images: [ALEXANDRA T. DOODY\_NOV 8 23] PROJECT NO. 2048-264953  
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DESIGNED BY: J. MAYER  
 DRAWN BY: J. MAYER  
 SHEET CHK'D BY: A. DOODY  
 CROSS CHK'D BY: A. WOELKE  
 APPROVED BY: A. DOODY  
 DATE: NOVEMBER 2023

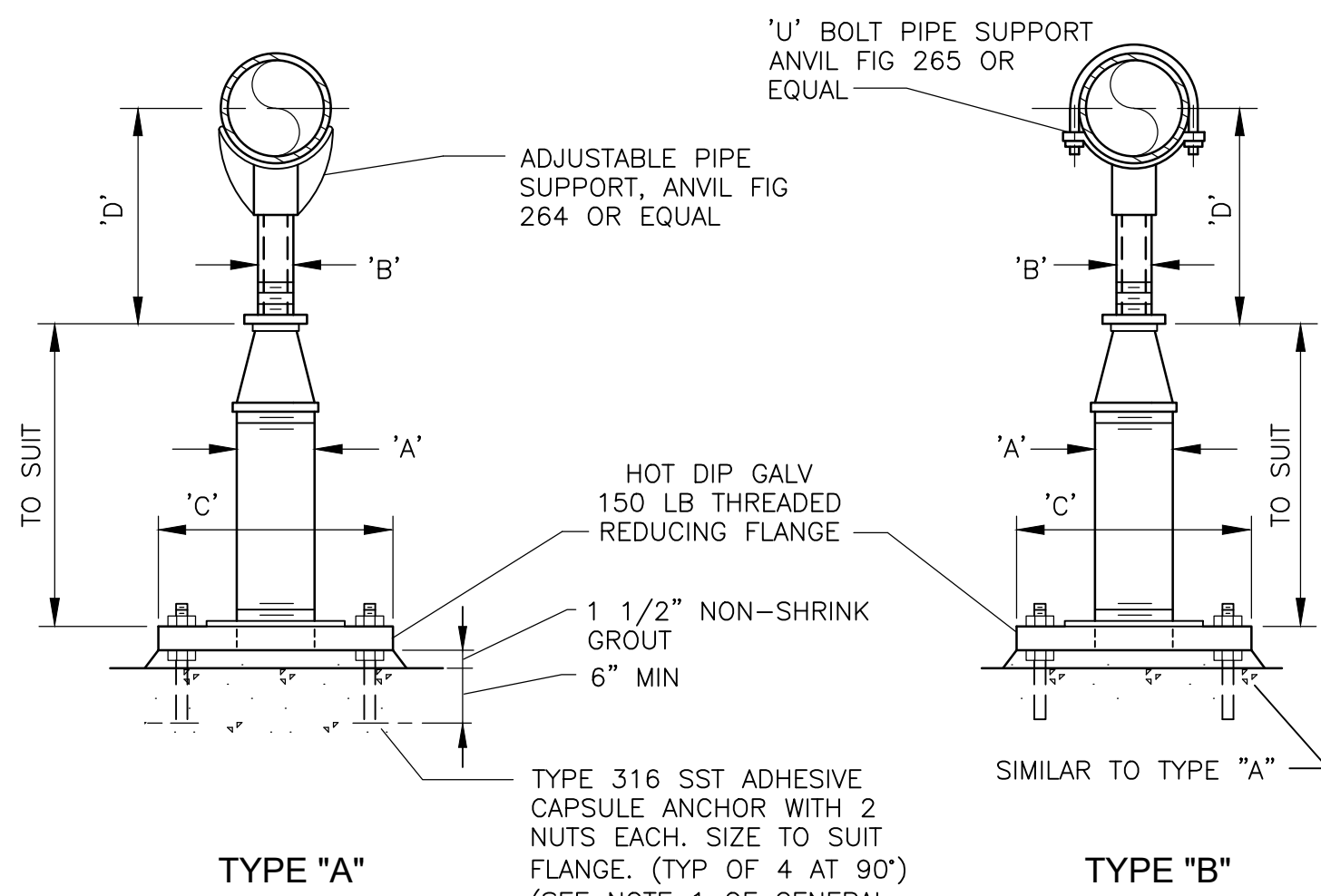
**CDM Smith**  
 8310-1 N. Capital of Texas Hwy, Suite 250  
 Austin, TX 78731  
 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

STANDARD MECHANICAL DETAILS II

PROJECT NO. 2048-264953  
 SHEET NO. MZ-2

ALEXANDRA T. DOODY  
 112812  
 LICENSED PROFESSIONAL ENGINEER  
 November 8, 2023



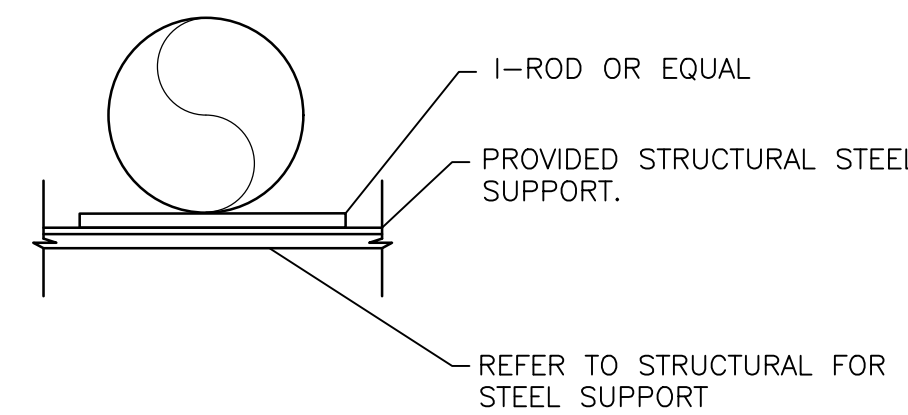
**NOTES:**

1. UNDER VALVES, METERS OR OTHER SPECIAL APPURTENANCES, A FABRICATED SUPPORT PIECE MAY BE UTILIZED AS ACCEPTABLE TO ENGINEER.
2. PROVIDE FIELD PAINTING IN ACCORDANCE WITH 09902 FOR INTERIOR APPLICATIONS AND HOT DIP GALV ALL MATERIALS AFTER FABRICATION FOR EXTERIOR APPLICATIONS.
3. PROVIDE CONCRETE BASE BENEATH PIPE SUPPORT WHERE SHOWN IN DRAWINGS. CONCRETE BASE SUPPORT SHALL BE DIMENSION 'C' PLUS 4" SQ
4. REFER TO GENERAL NOTES ON SHEET MZ-1 AND SECTION 400507 FOR SPECIAL PIPE SUPPORT REQUIREMENTS.

ADJUSTABLE PIPE SUPPORT APPROX. DIMENSIONS IN INCHES					
PIPE SIZE	A	B	C	D MIN	D MAX
2 1/2	2 1/2	1 1/2	9	8	11 1/2
3	2 1/2	1 1/2	9	8 1/4	11 3/4
3 1/2	2 1/2	1 1/2	9	8 1/2	12
4	3	2 1/2	9	10 1/4	14
6	3	2 1/2	9	11 5/8	15 1/4
8	3	2 1/2	9	13 5/8	16 1/2
10	3	2 1/2	9	14 5/8	18 1/4
12	3	2 1/2	9	15 5/8	19 3/4
14	4	3	11	18 7/8	20 3/4
16	4	3	11	19 7/8	22 1/4
18	6	3 1/2	13 1/2	21 1/4	24
20	6	3 1/2	13 1/2	23 1/4	25 1/2
24	6	4	13 1/2	26 1/2	28 1/4
30	6	4	13 1/2	29 5/8	31 1/2
32	6	4	13 1/2	30 5/8	32 3/4
36	6	4	13 1/2	32 5/8	34 3/4

**ADJUSTABLE PIPE SUPPORT  
DETAIL A**  
NTS

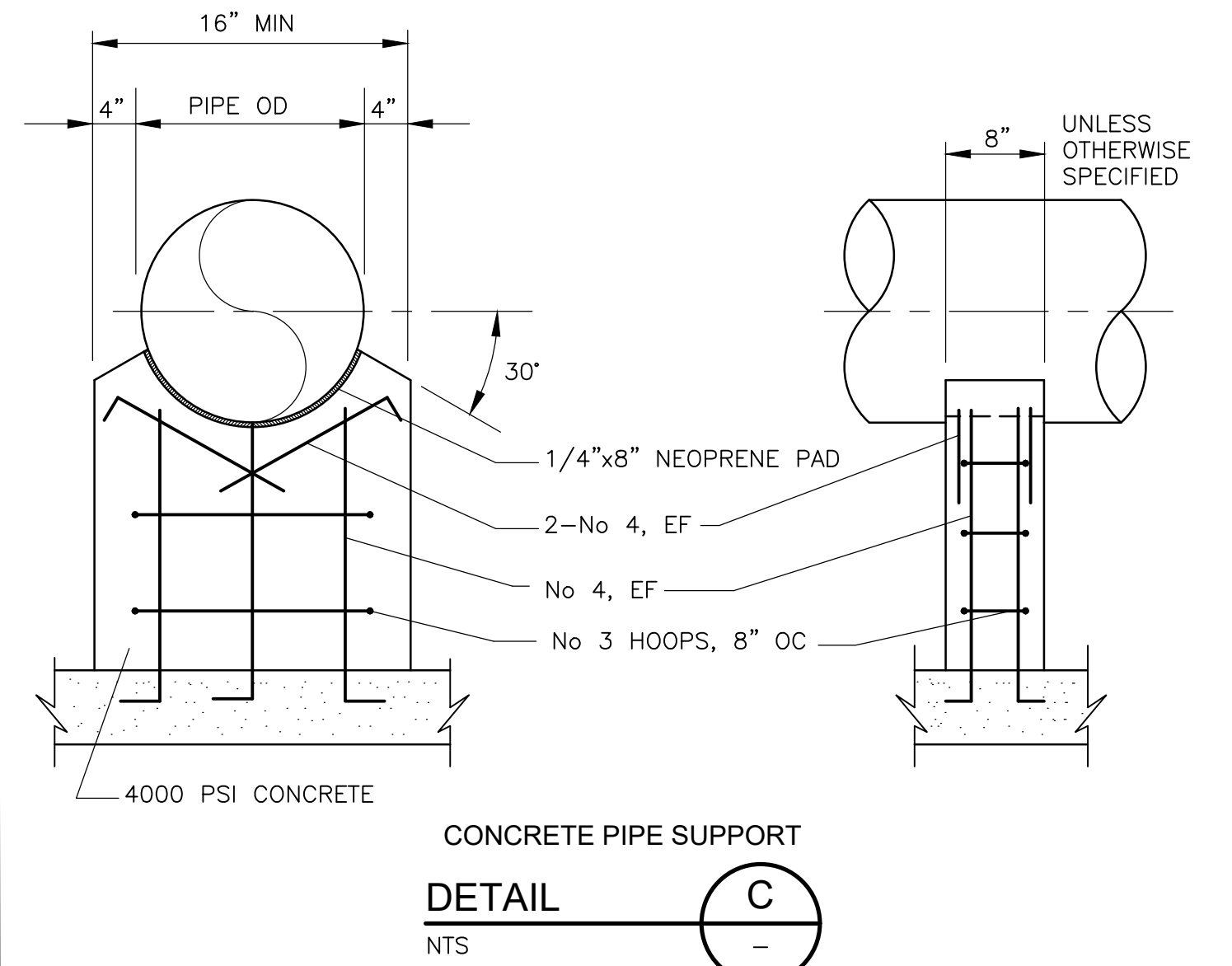
ELBOW 'A' DIA	DIMENSIONS IN INCHES			
	'B' DIA	'C' THICK	'D' SQ	'E' DIA
4	2	3/8	6	5/8
6	2 1/2	3/8	7	5/8
8	4	1/2	9	5/8
10	4	1/2	9	5/8
12	6	1/2	11	3/4
14	6	1/2	11	3/4
16	6	1/2	11	3/4
18	8	1/2	13 1/2	3/4
20	8	1/2	13 1/2	3/4
24	8	1/2	13 1/2	3/4
30	10	3/4	16	7/8
36	12	3/4	19	7/8
42	16	3/4	23 1/2	1
48	18	3/4	25	1 1/8



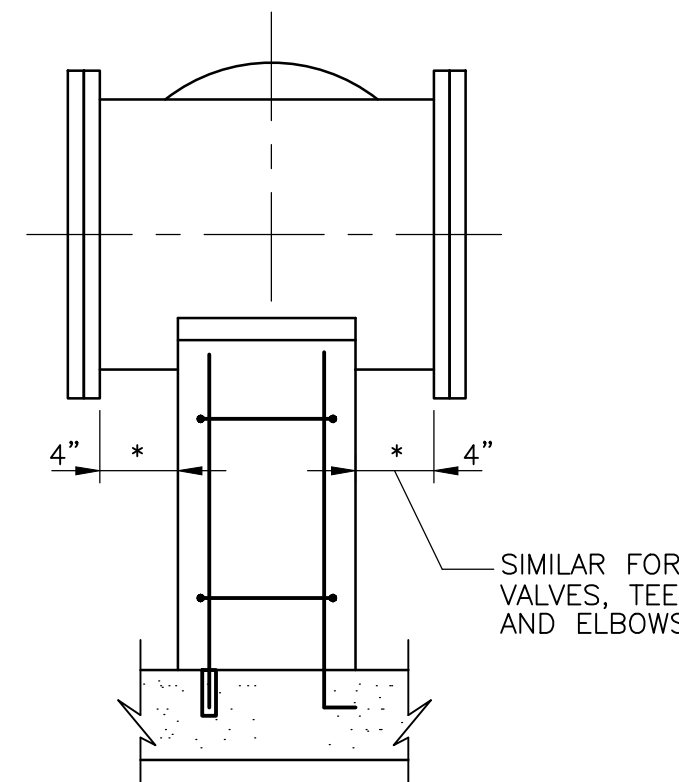
**NOTES:**

1. HOT DIP GALVANIZE ALL PARTS AFTER FABRICATION. WHERE SUBMERGED OR LOCATED OVER WATER, SST SHIELDS, BRACKETS, 'U' BOLTS, AND BOLTS SHALL BE TYPE 316 SST.
2. ALL SHIELDS, BRACKETS, BOLTS, AND HARDWARE SHALL BE TYPE 316 SST WHEN USED FOR SUPPORT OF SST PIPING, OR WHERE SUBMERGED OR LOCATED ON OR ABOVE HYDRAULIC STRUCTURE.
3. REFER TO GENERAL NOTES ON SHEET G-4 AND SECTION 400507 FOR SPECIAL PIPE SUPPORT REQUIREMENTS.

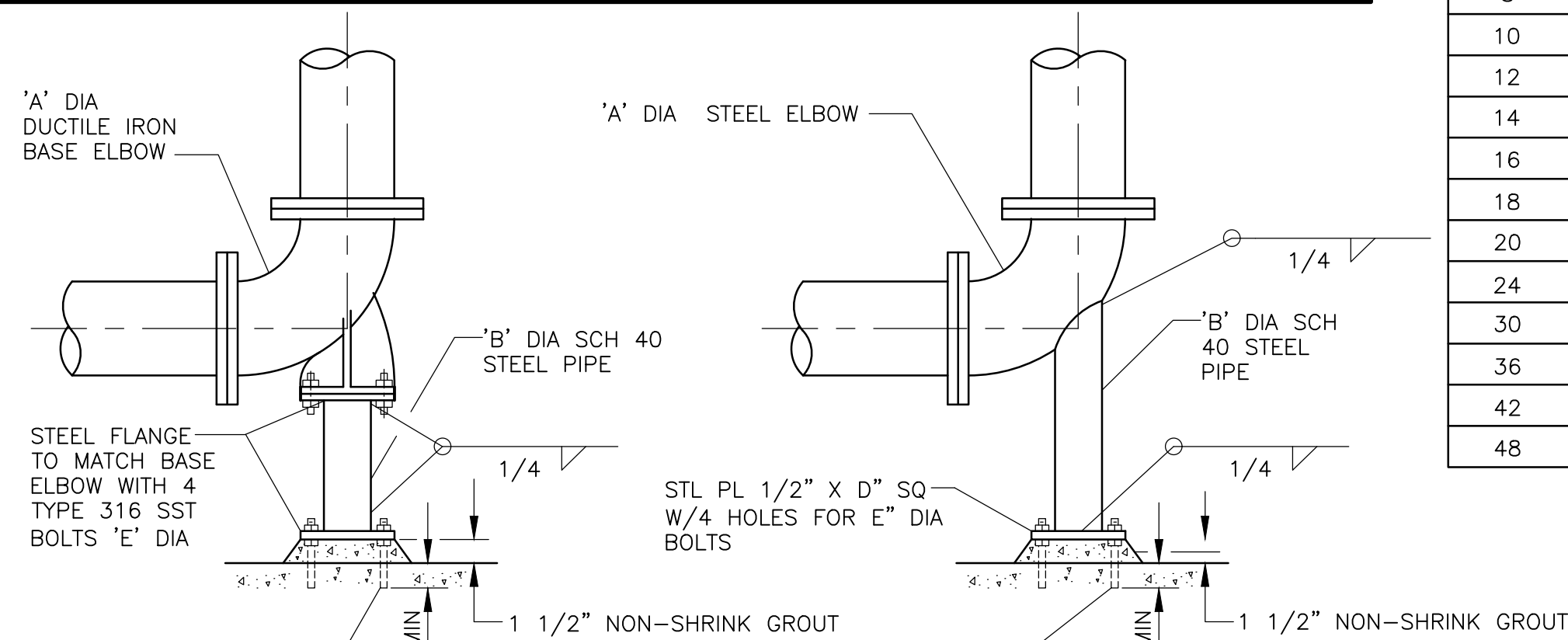
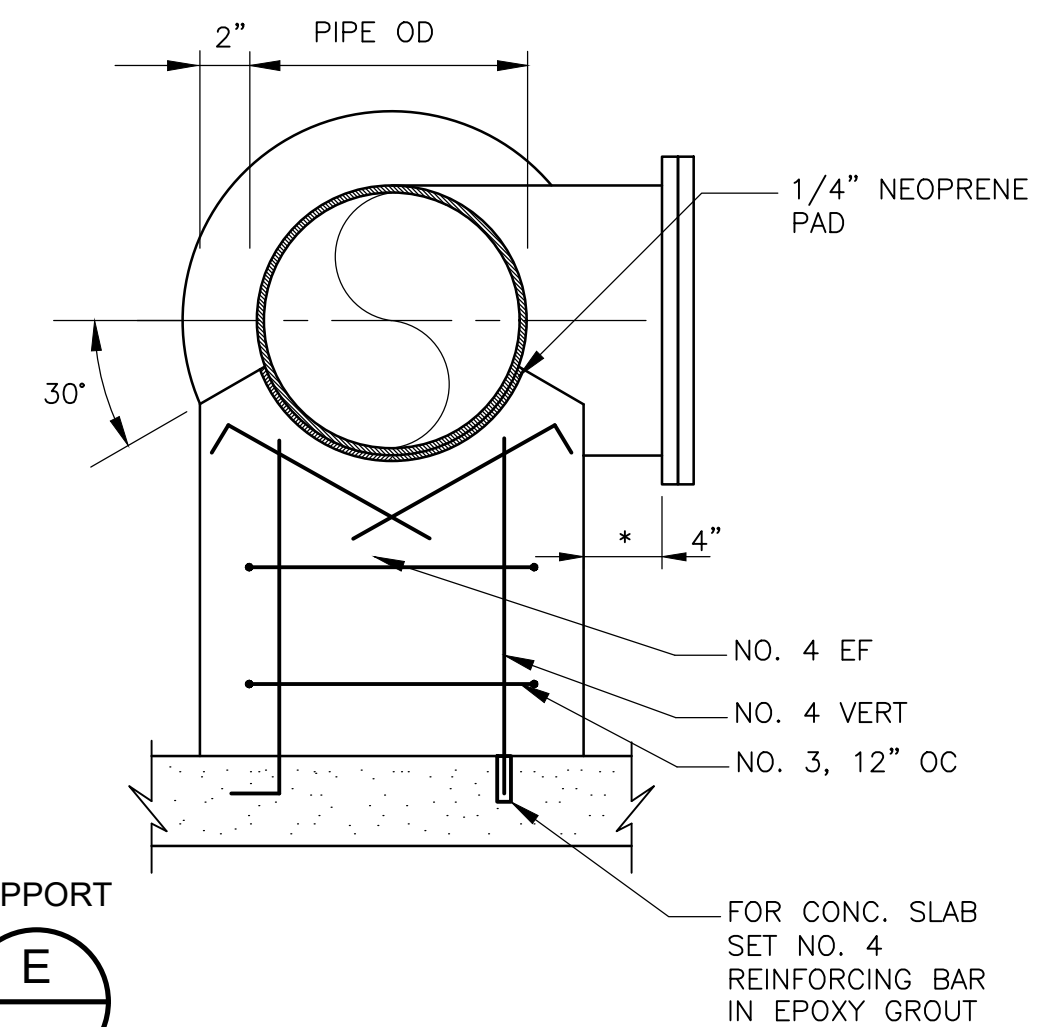
**PIPE BRACKET  
DETAIL B**  
NTS



\* INCREASE 4" CLEARANCE AS REQUIRED IF BOLT HAS TO BE INSERTED FROM THE SUPPORT SIDE OF THE CONNECTION.



**CONCRETE FITTING SUPPORT  
DETAIL E**  
NTS



**DUCTILE IRON ELBOW**

**STEEL ELBOW**

**PIPE ELBOW SUPPORT**

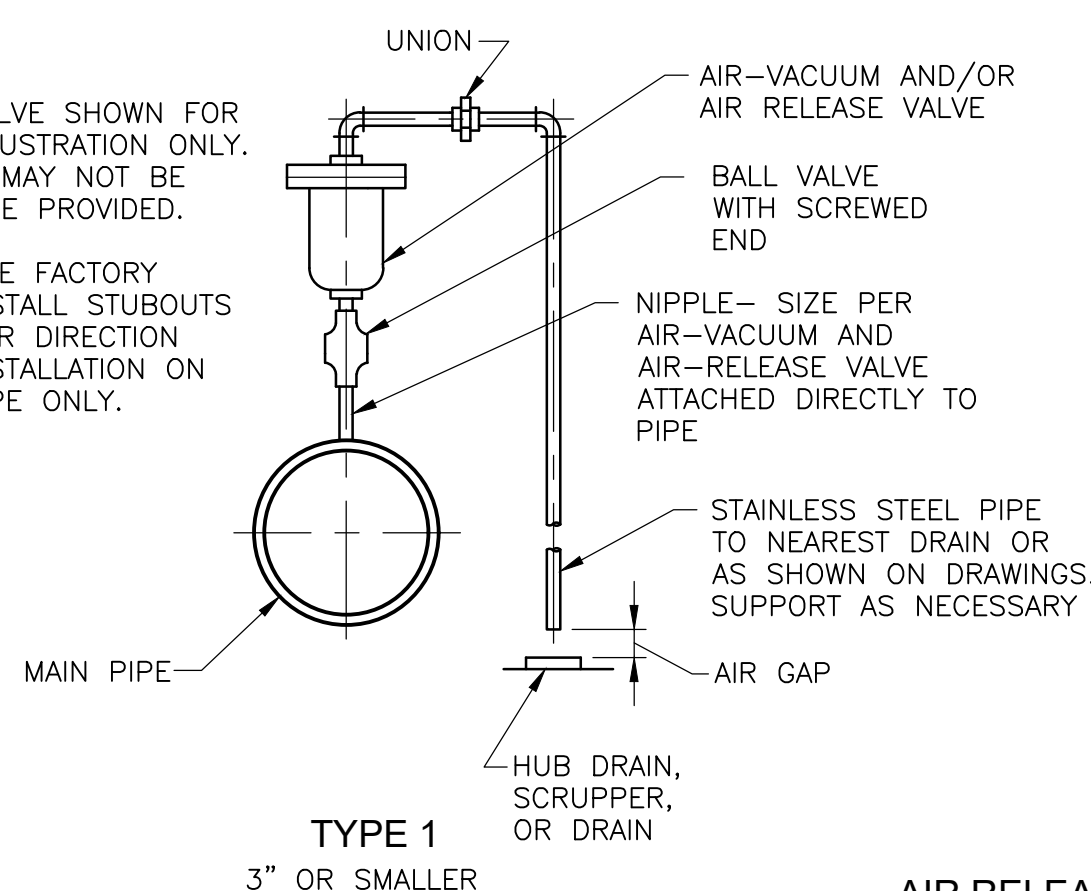
**DETAIL D**  
NTS

**NOTES:**

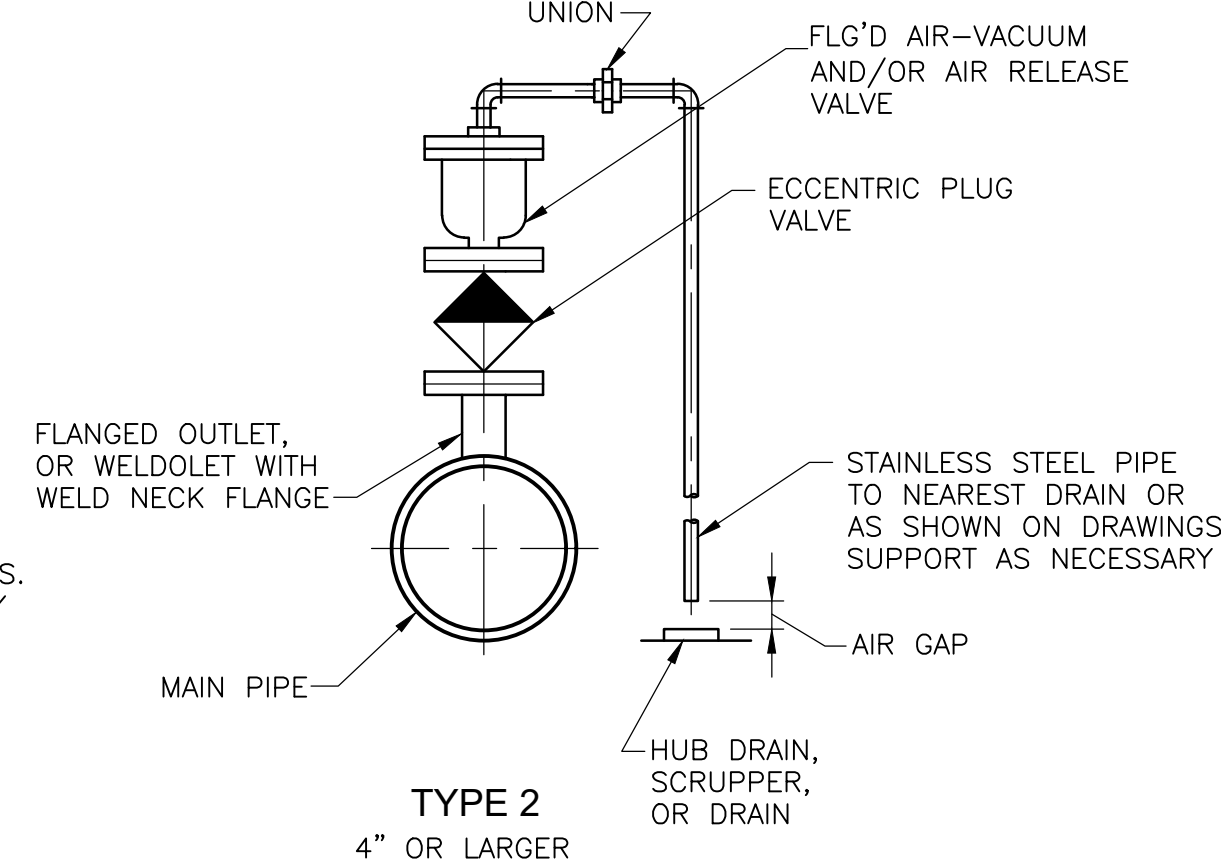
1. PROVIDE FIELD PAINTING IN ACCORDANCE WITH 09902.
2. REFER TO GENERAL NOTES ON SHEET MZ-1 AND SECTION 400507 FOR SPECIAL PIPE SUPPORT REQUIREMENTS.

**NOTES:**

1. VALVE SHOWN FOR ILLUSTRATION ONLY. IT MAY NOT BE ONE PROVIDED.
2. USE FACTORY INSTALL STUBOUTS FOR DIRECTION INSTALLATION ON PIPE ONLY.

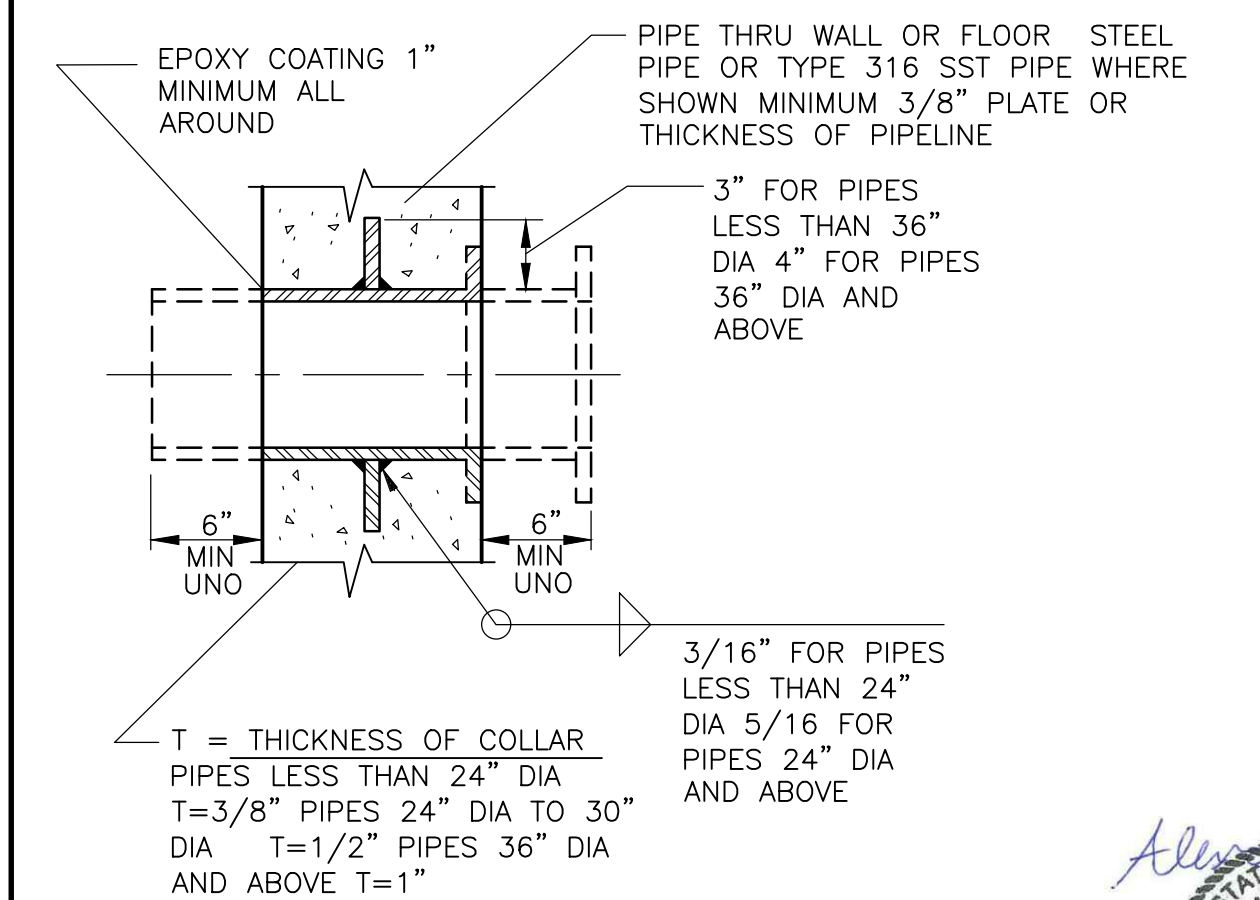


**TYPE 1  
3" OR SMALLER**



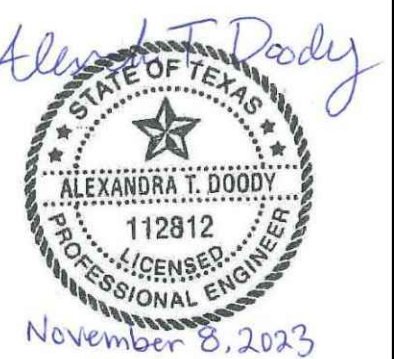
**TYPE 2  
4" OR LARGER**

**AIR RELEASE VALVE  
DETAIL F**  
NTS



**STEEL FLANGE x PLAIN END WALL PIPE**

**DETAIL G**  
NTS



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A	1/10/24	JAM	ATD	CONFORMED DRAWINGS

DESIGNED BY: J. MAYER  
 DRAWN BY: J. MAYER  
 SHEET CHK'D BY: A. DOODY  
 CROSS CHK'D BY: A. WOELKE  
 APPROVED BY: A. DOODY  
 DATE: NOVEMBER 2023

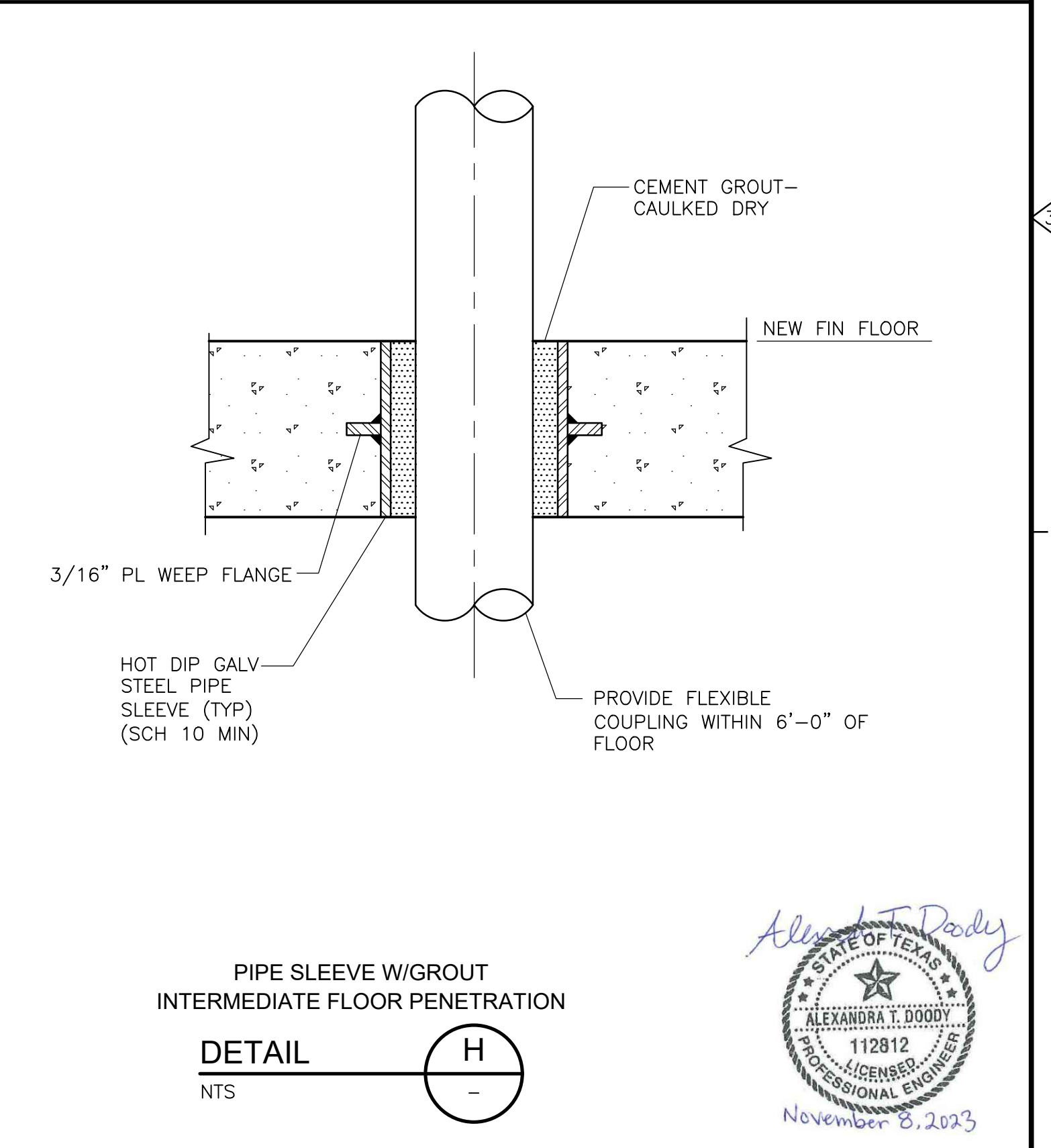
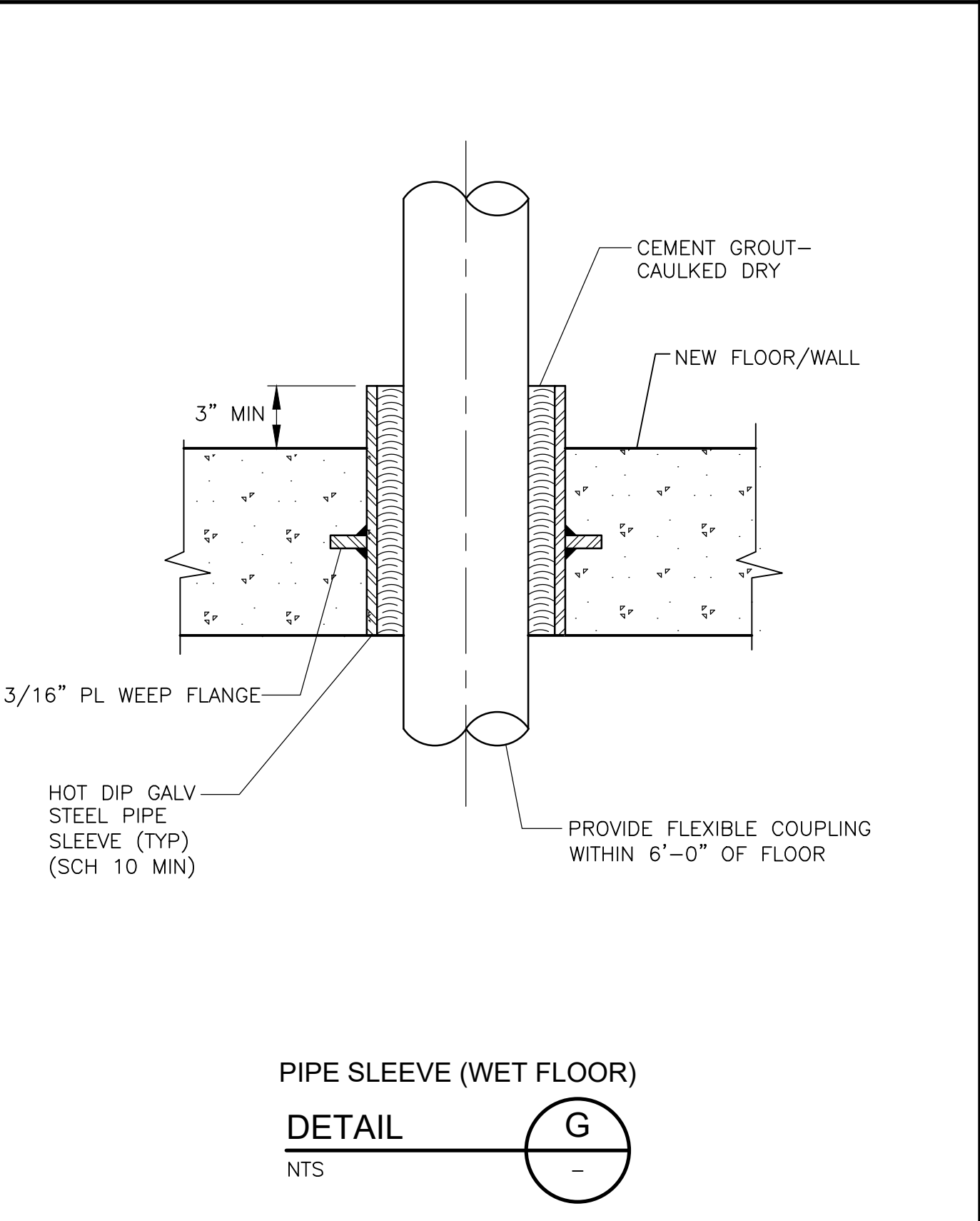
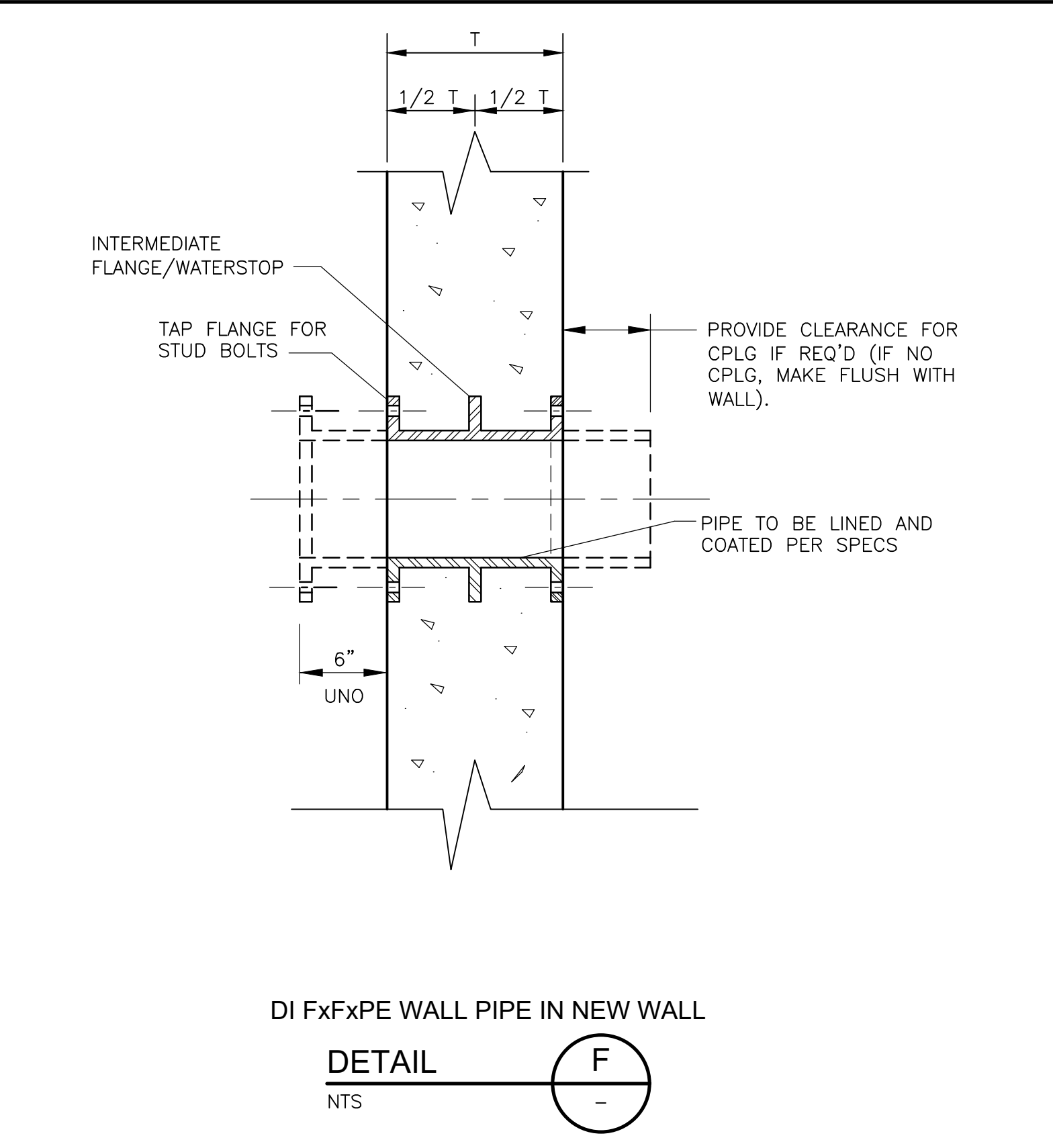
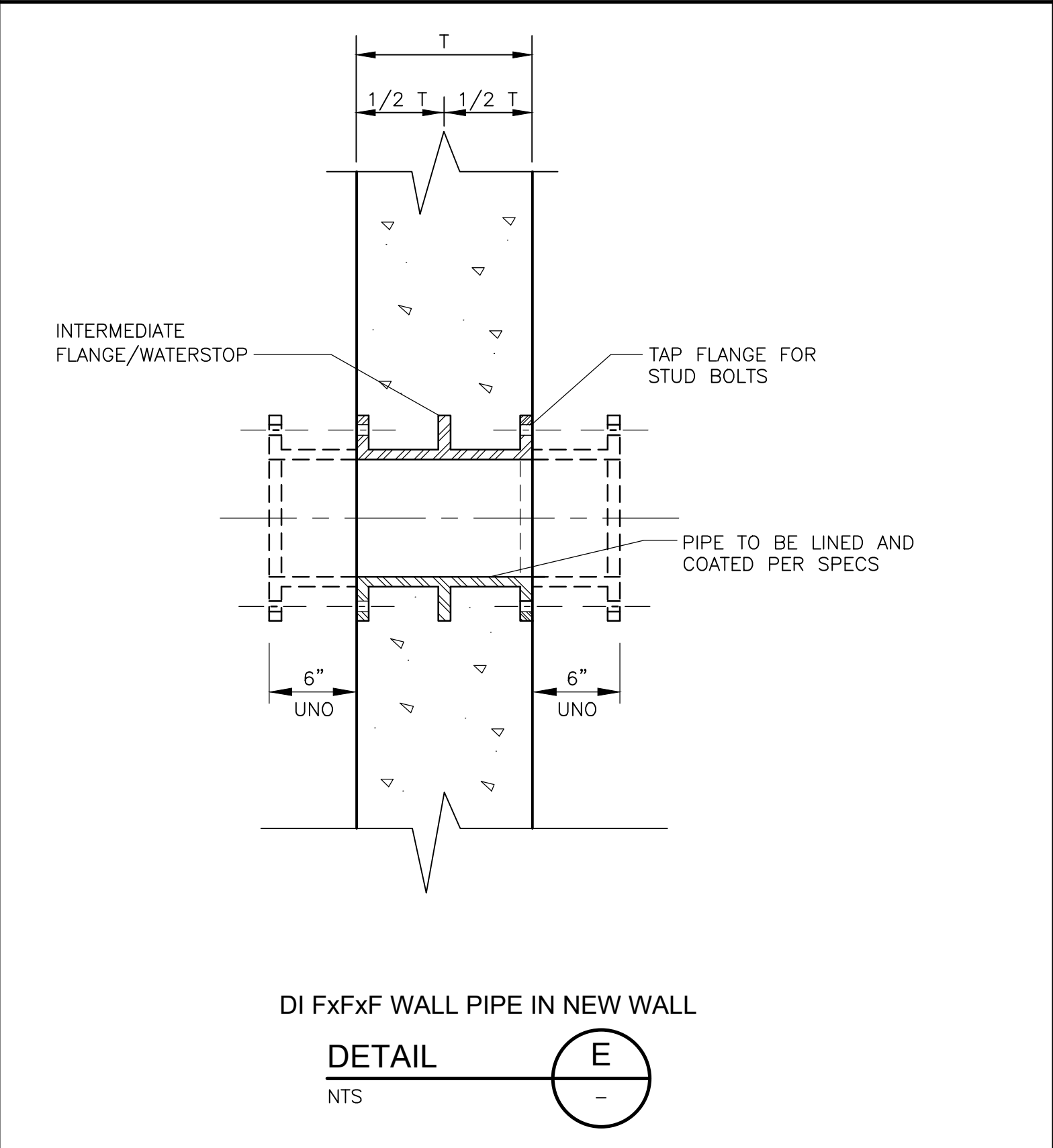
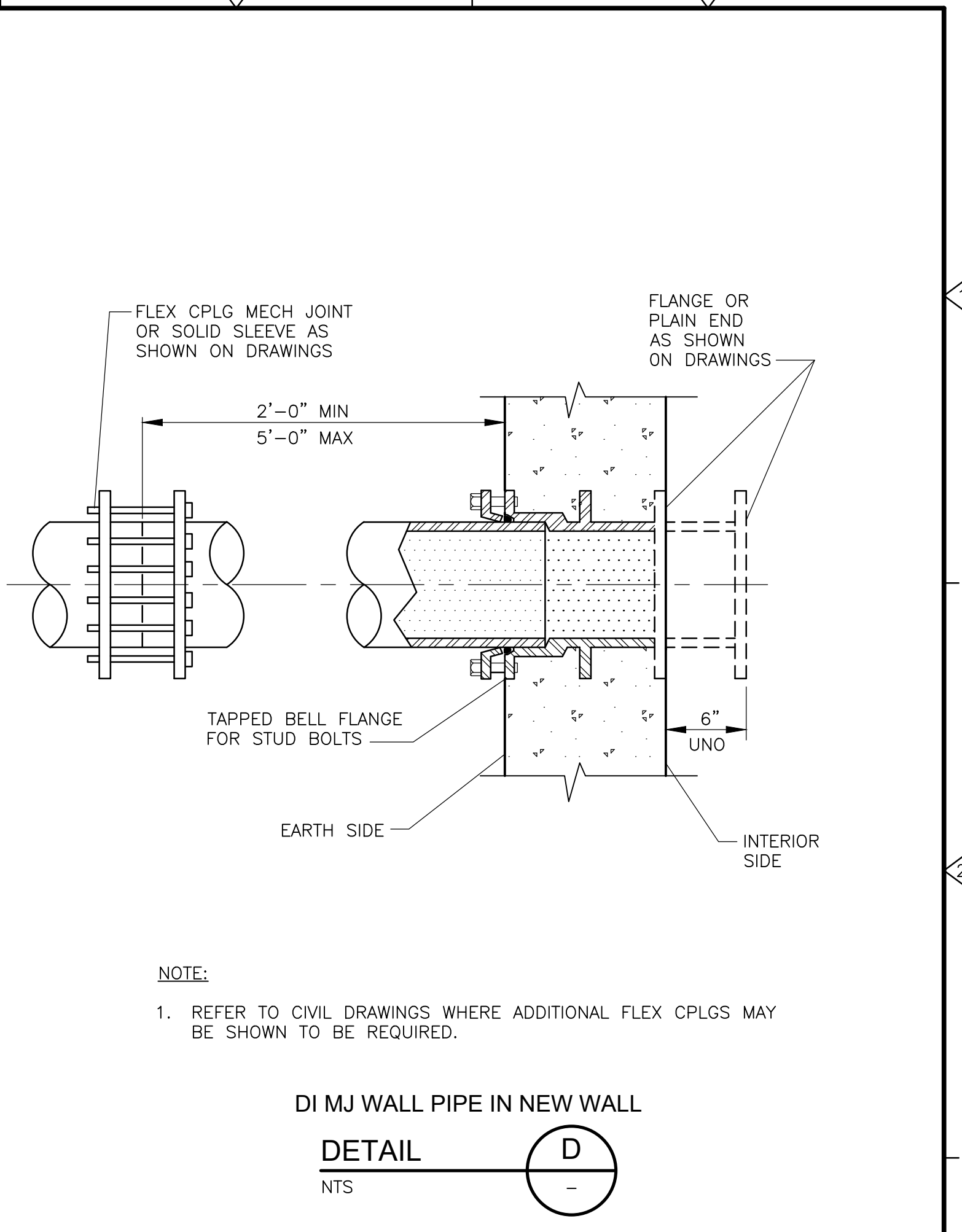
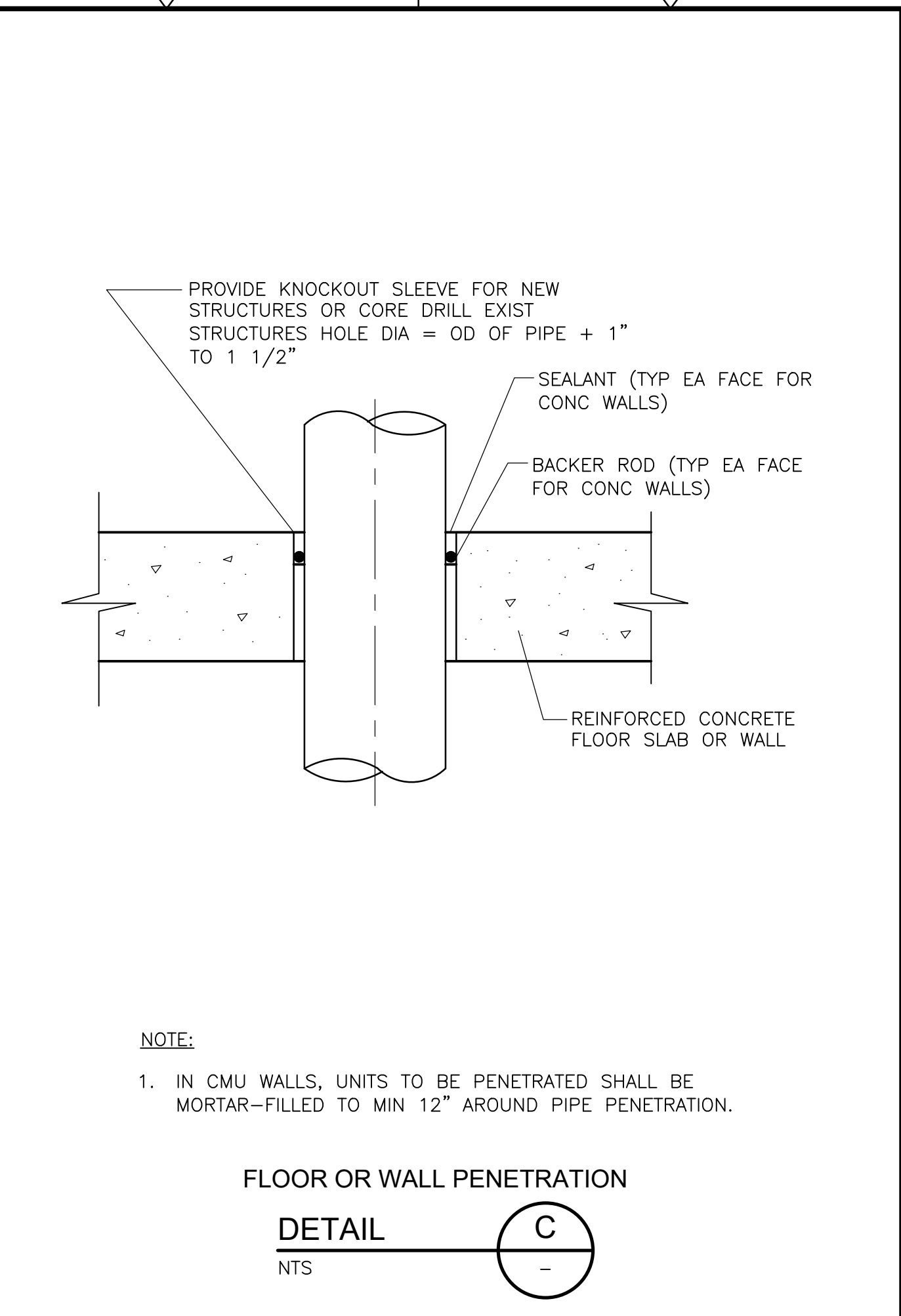
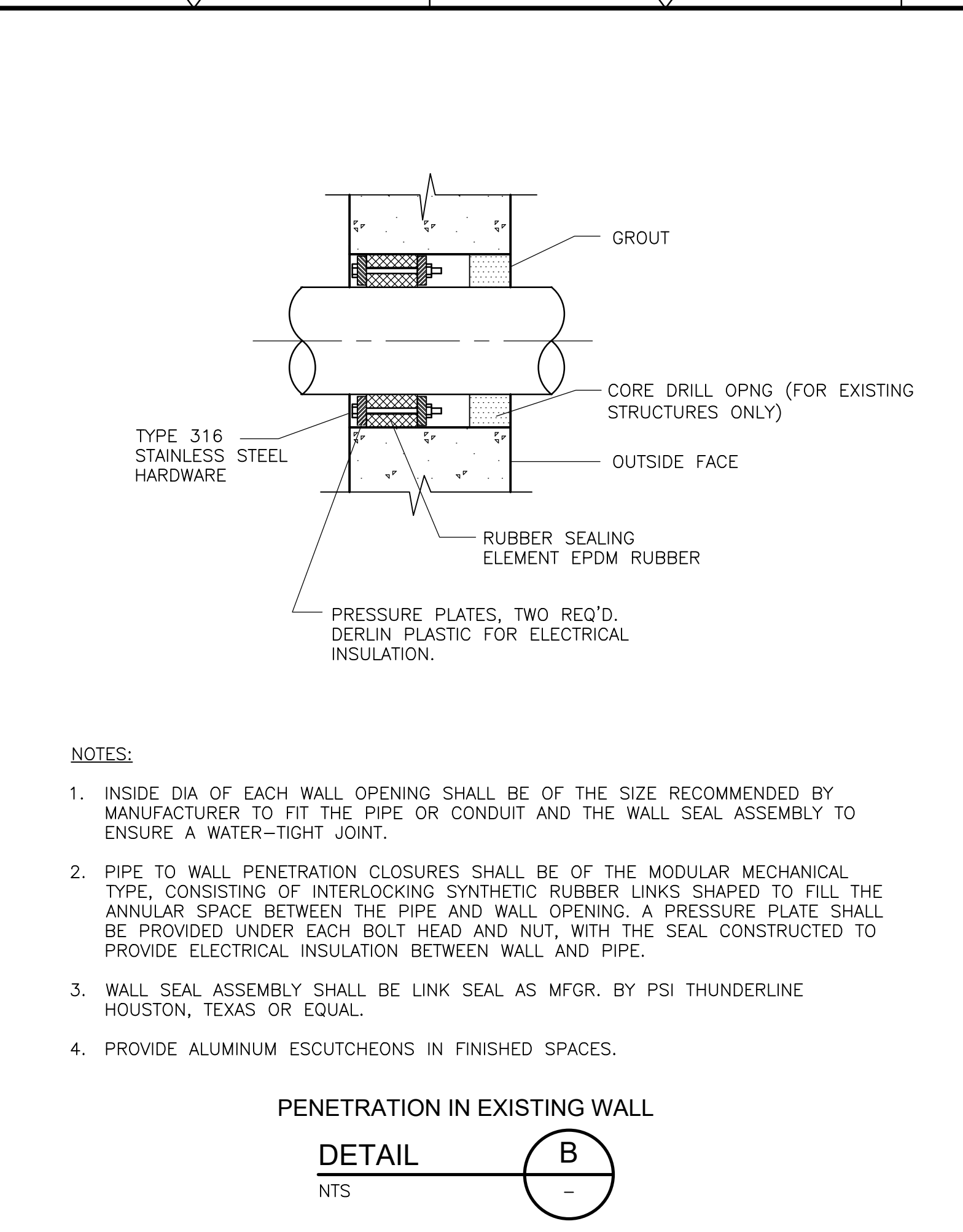
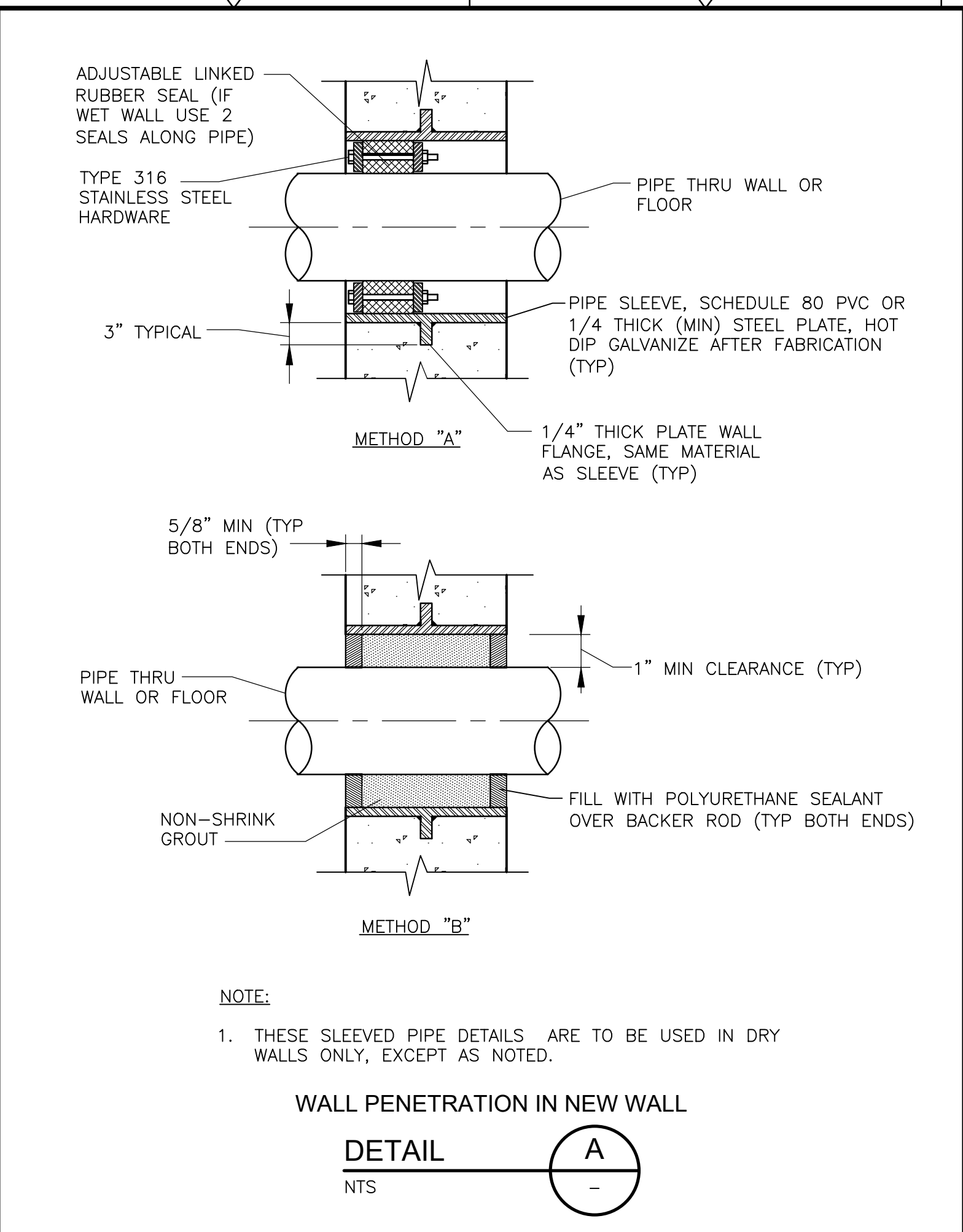
**CDM Smith**  
 8310-1 N. Capital of Texas Hwy, Suite 250  
 Austin, TX 78731  
 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

STANDARD MECHANICAL DETAILS III

PROJECT NO.	2048-264953
FILE NAME:	MZ-3.DWG
SHEET NO.	MZ-3

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 SHEET CHK'D BY: A. DOODY  
 CROSS CHK'D BY: A. WOELKE  
 APPROVED BY: A. DOODY  
 DATE: NOVEMBER 2023

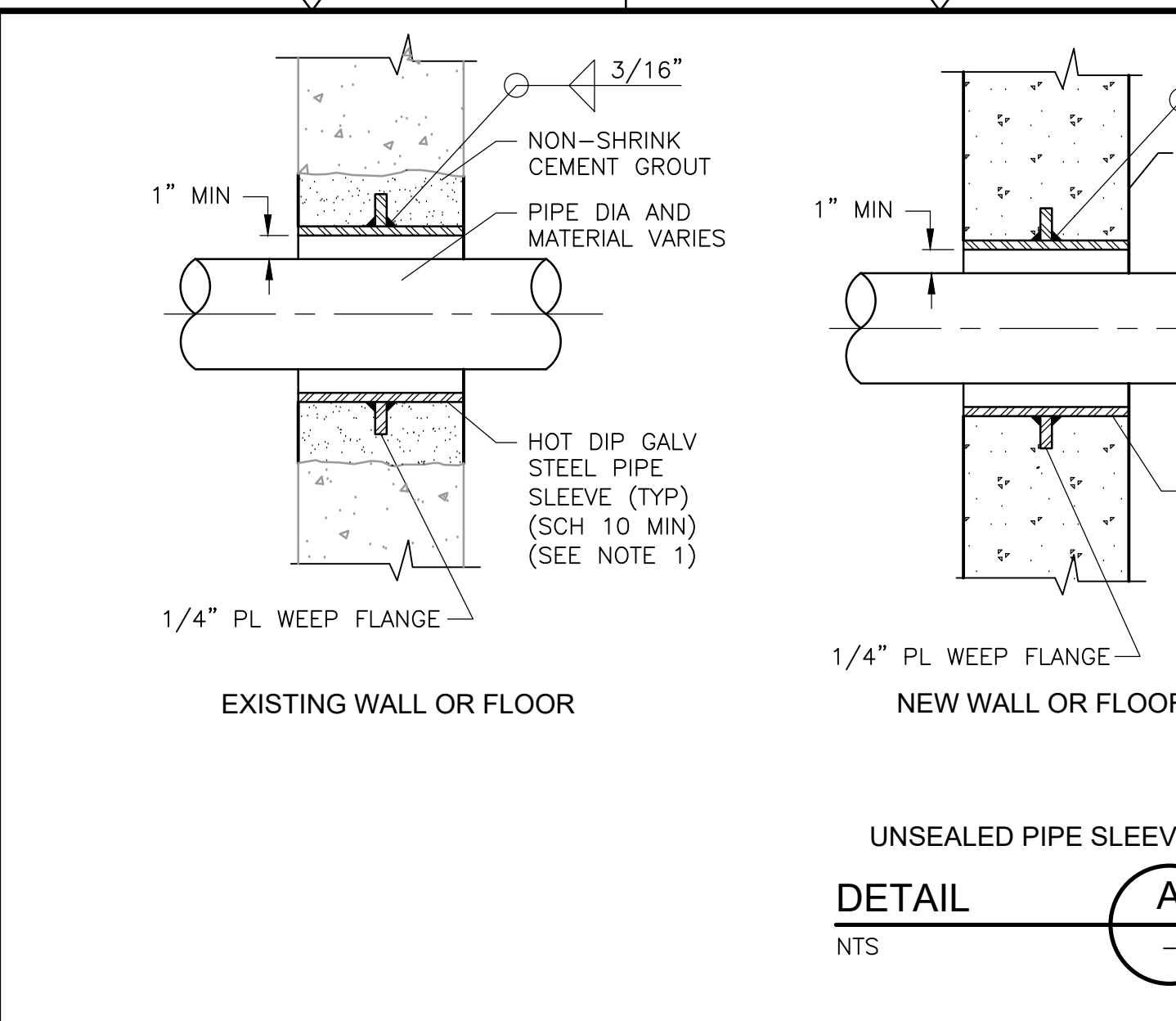
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CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
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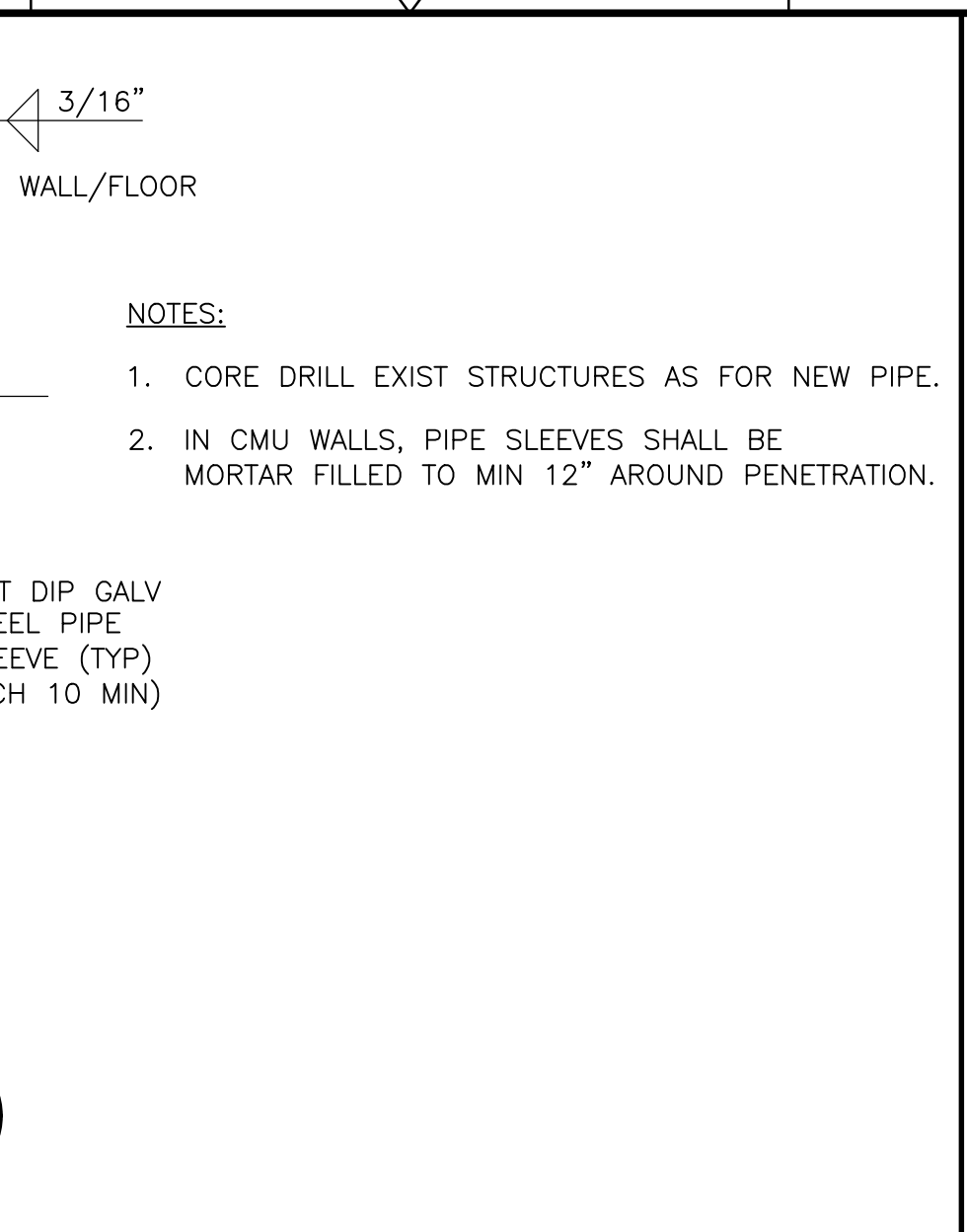
**STANDARD MECHANICAL DETAILS IV**

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SHEET NO. MZ-4

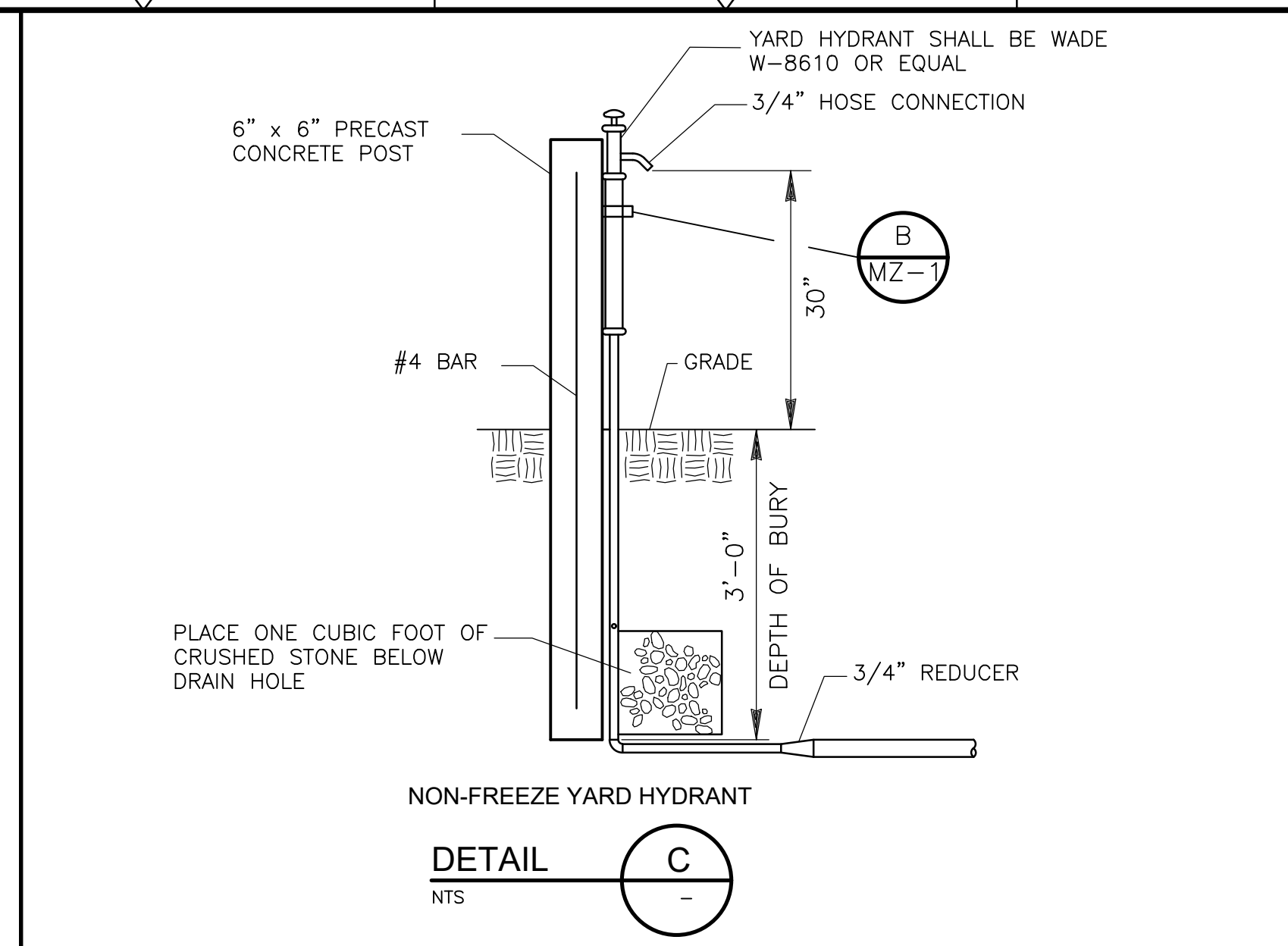
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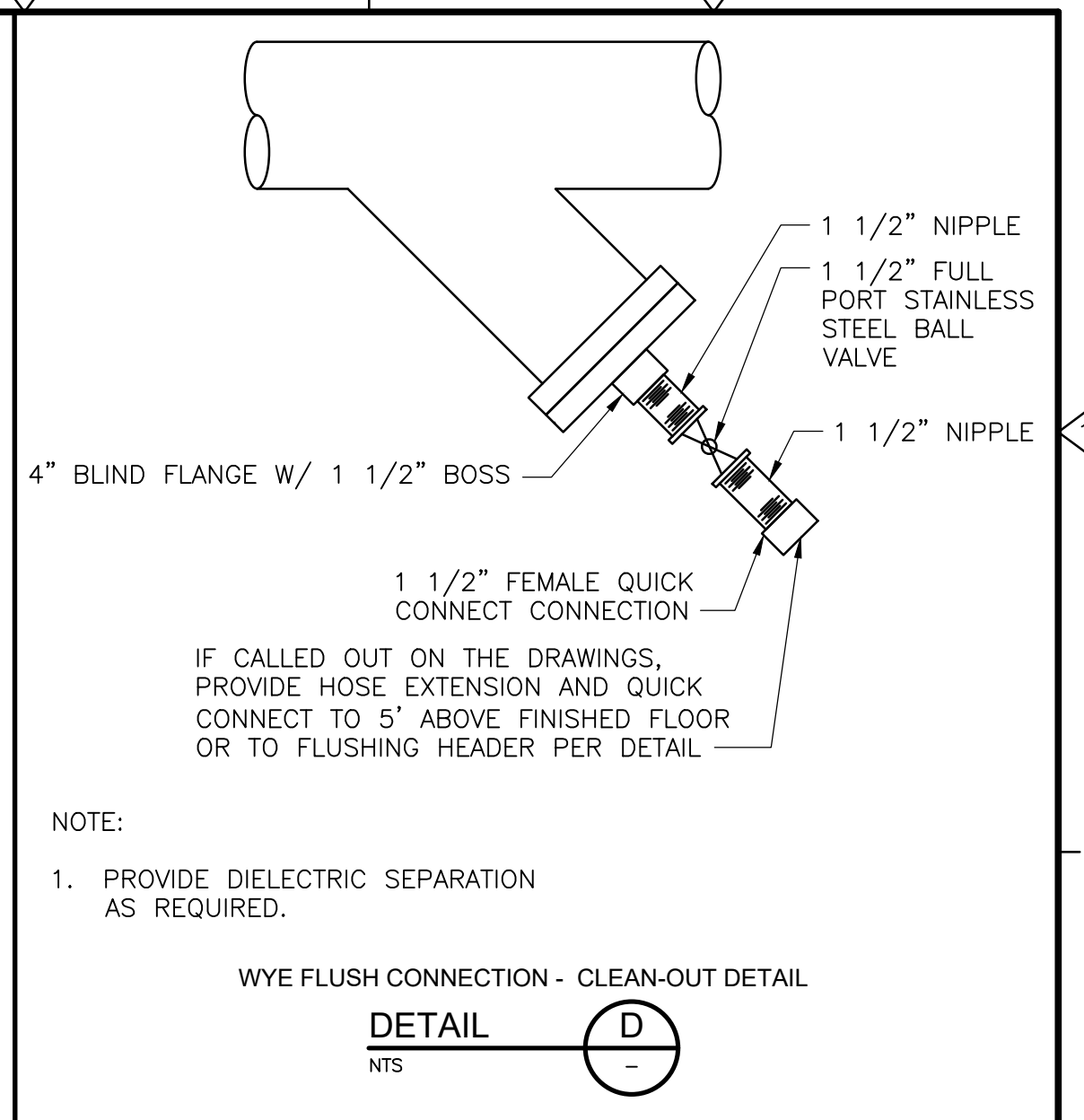
UNSEALED PIPE SLEEVE  
**DETAIL A**  
 NTS



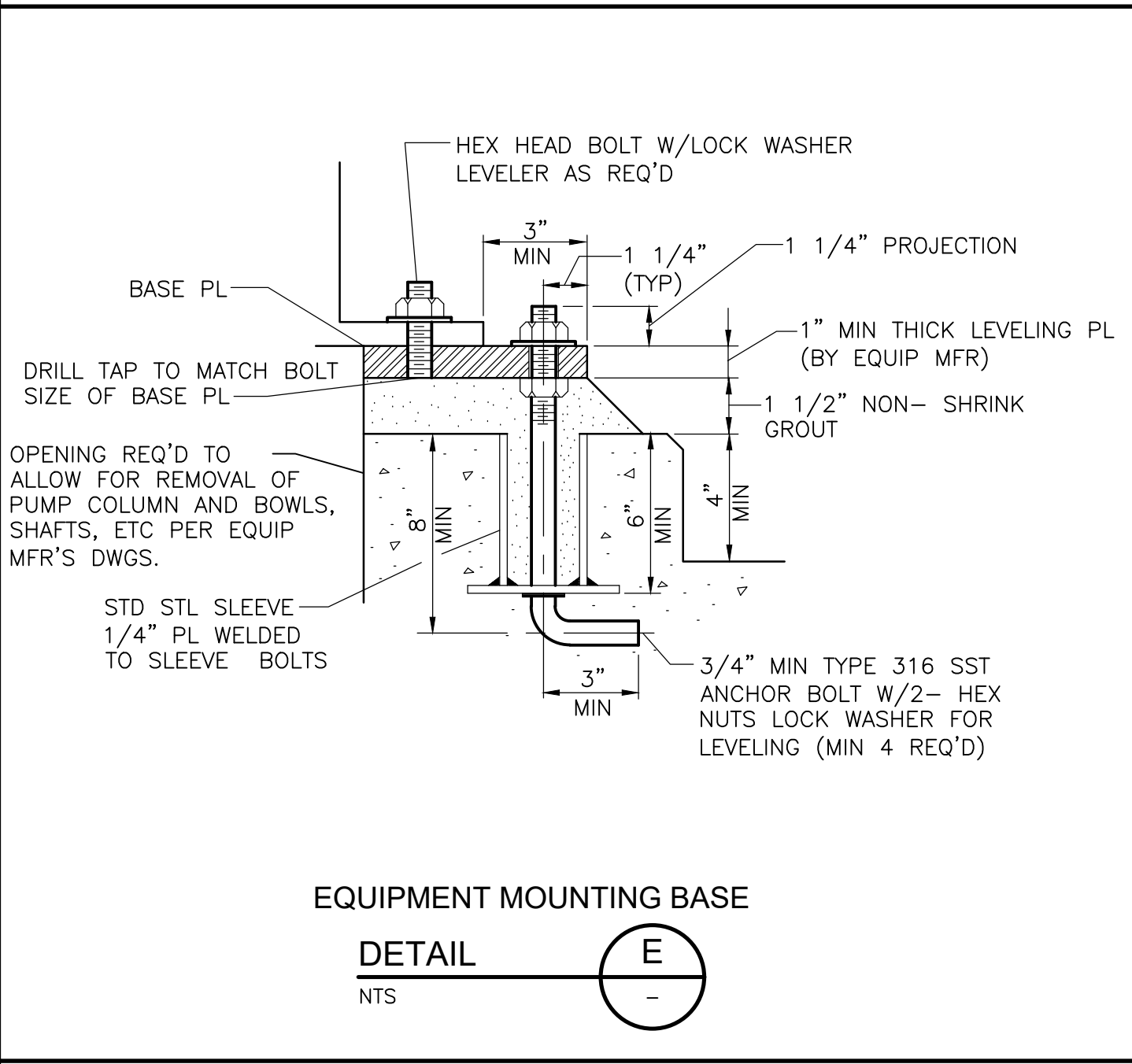
GENERAL FLUSHING CONNECTION  
**DETAIL B**  
 NTS



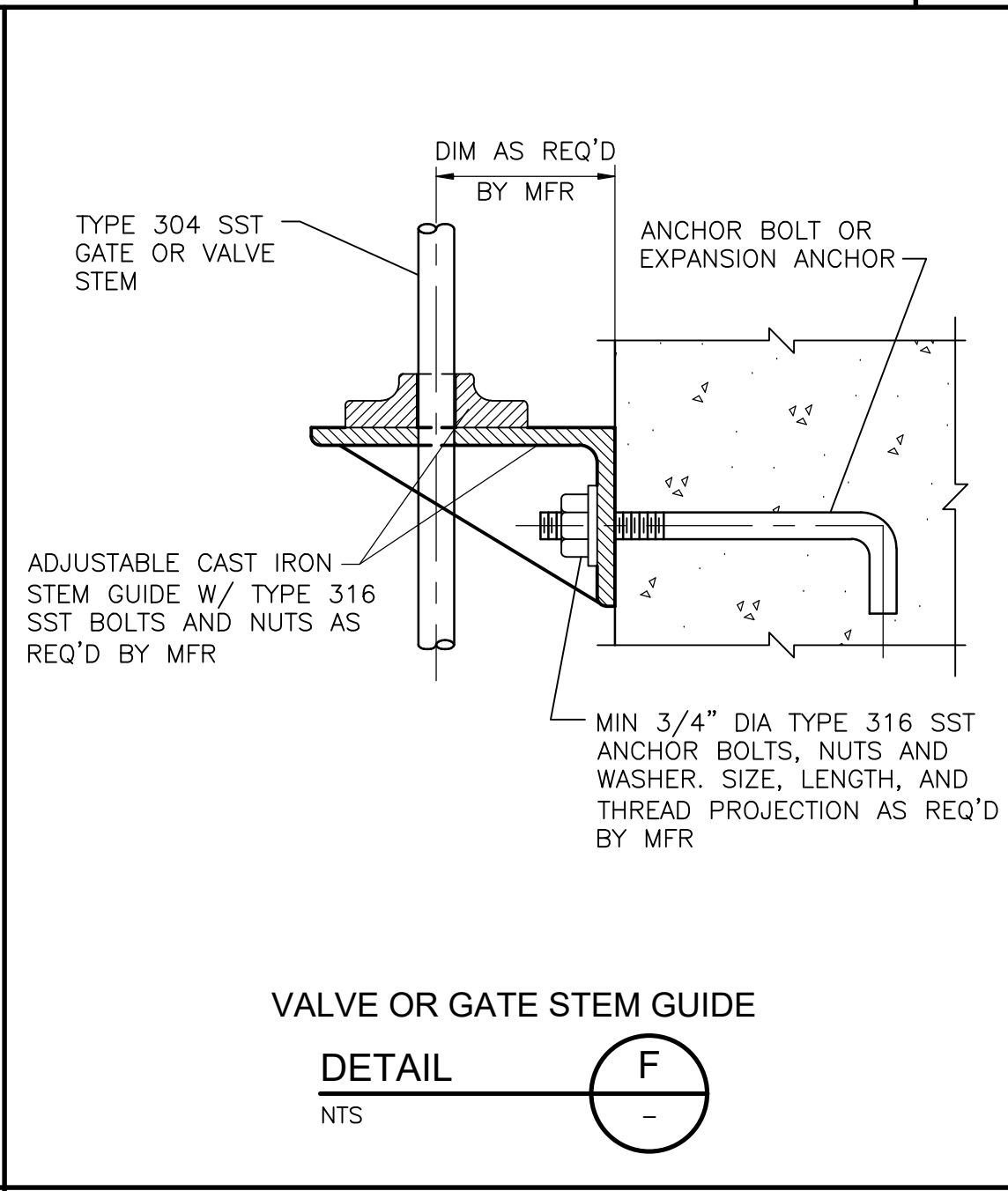
NON-FREEZE YARD HYDRANT  
**DETAIL C**  
 NTS



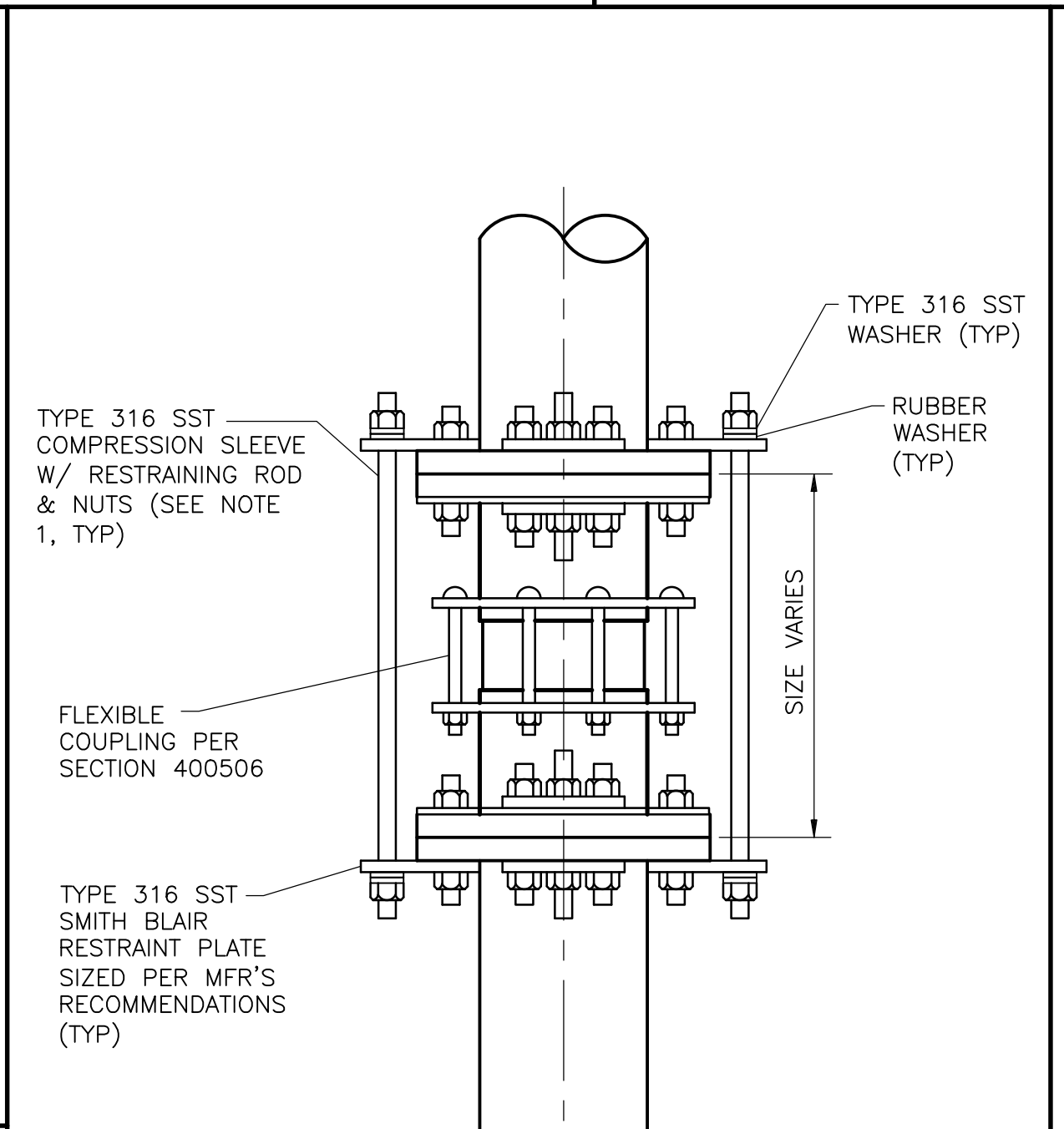
WYE FLUSH CONNECTION - CLEAN-OUT DETAIL  
**DETAIL D**  
 NTS



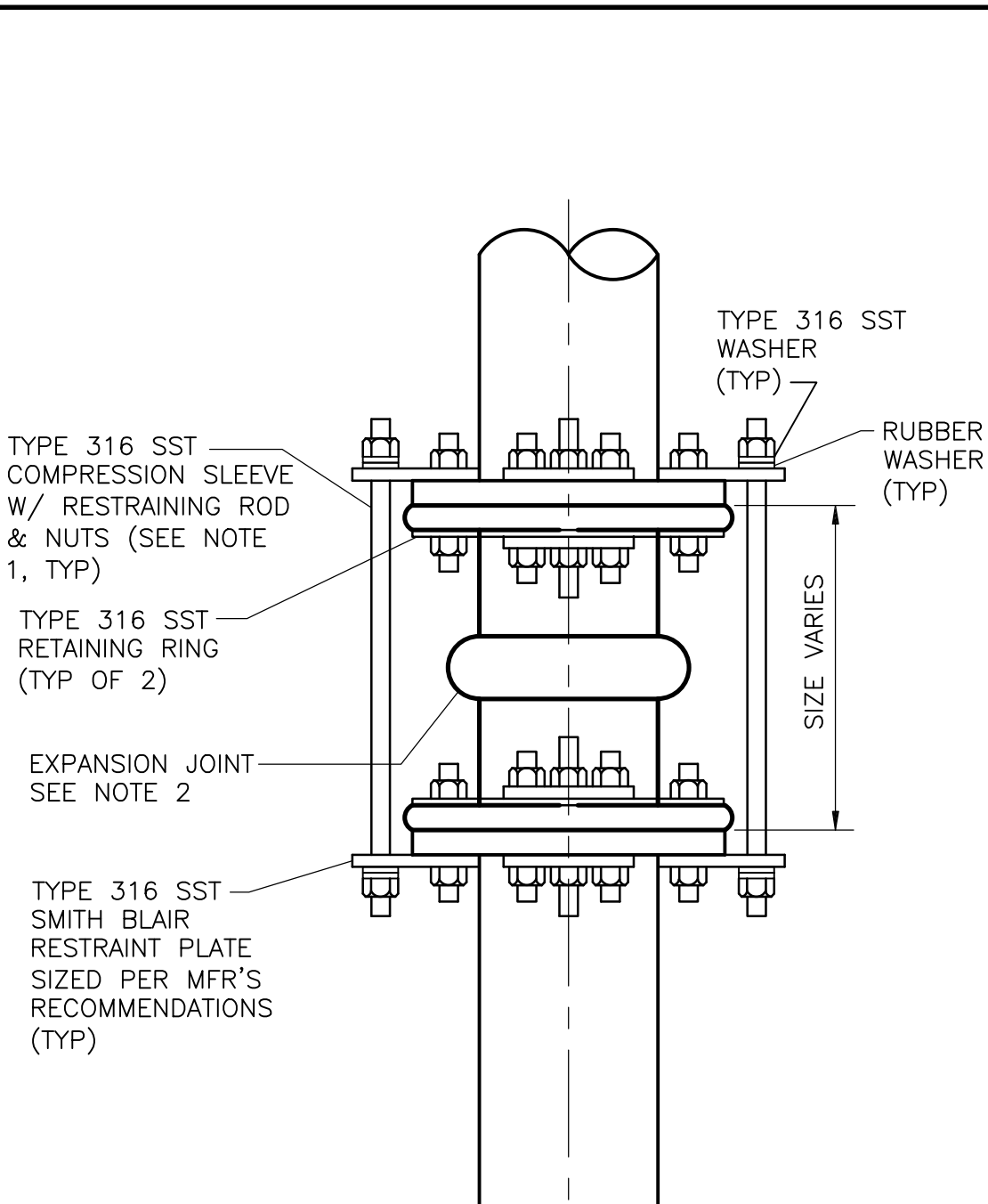
EQUIPMENT MOUNTING BASE  
**DETAIL E**  
 NTS



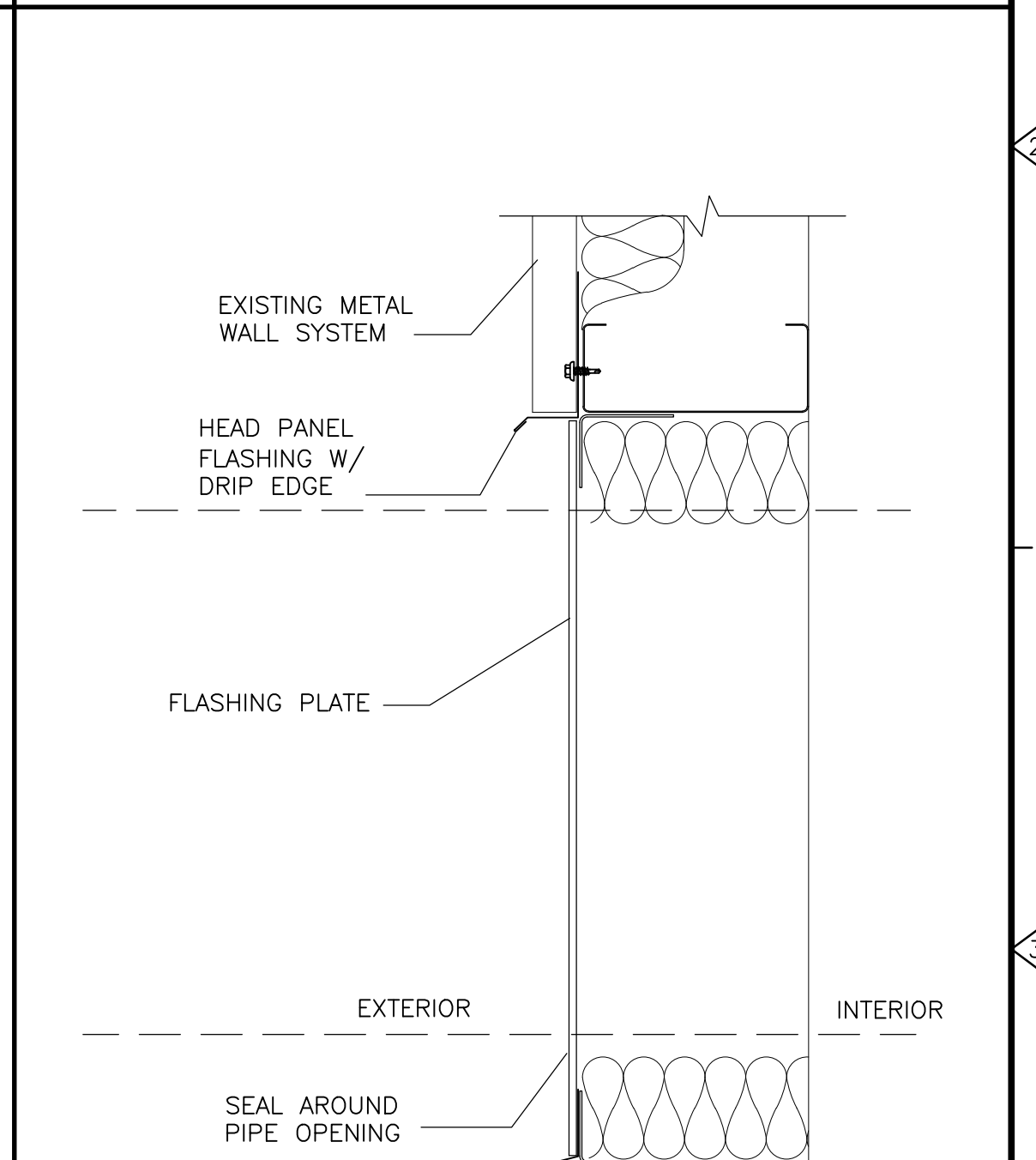
VALVE OR GATE STEM GUIDE  
**DETAIL F**  
 NTS



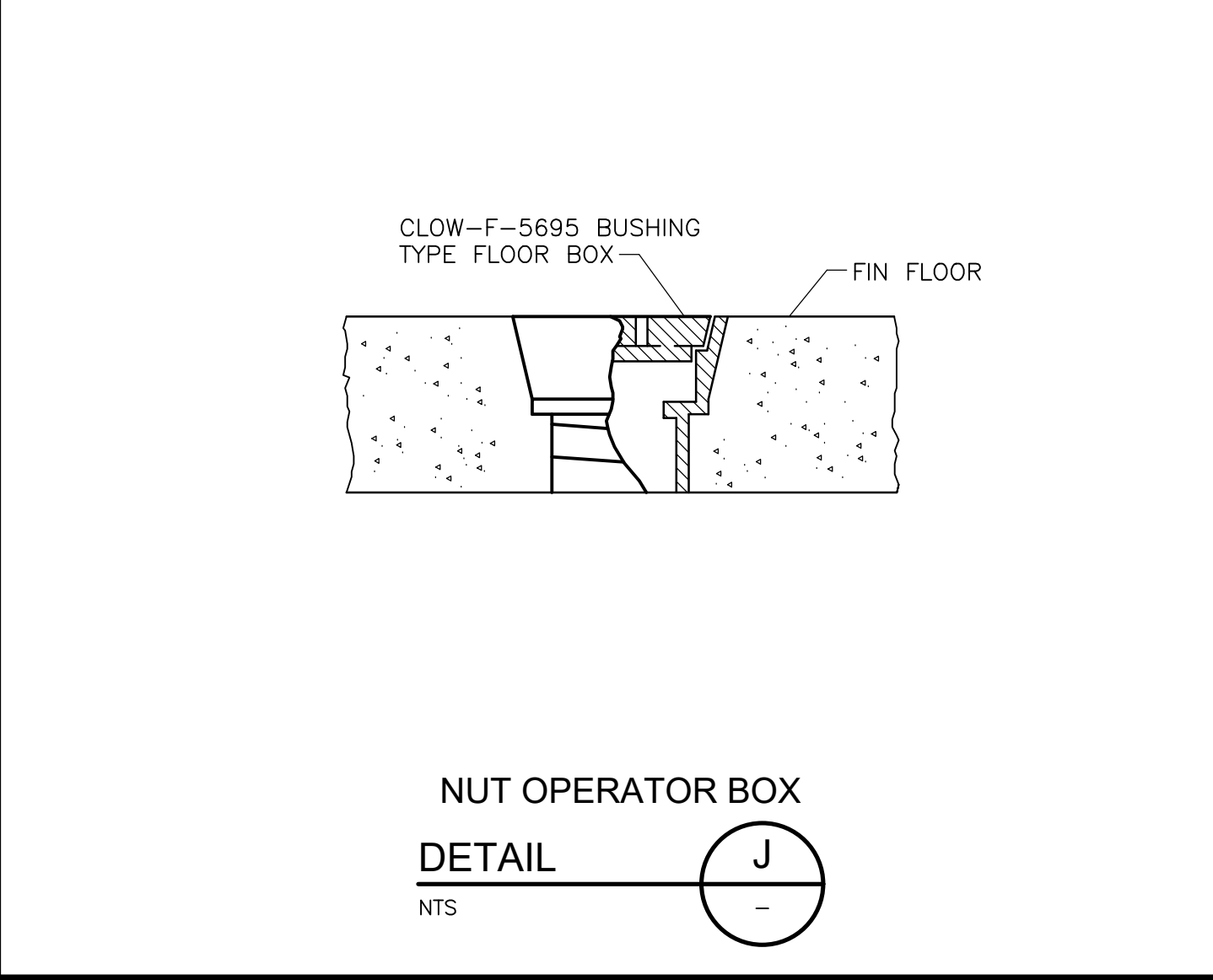
THRUST HARNESS FOR FLEXIBLE COUPLING  
**DETAIL G**  
 NTS



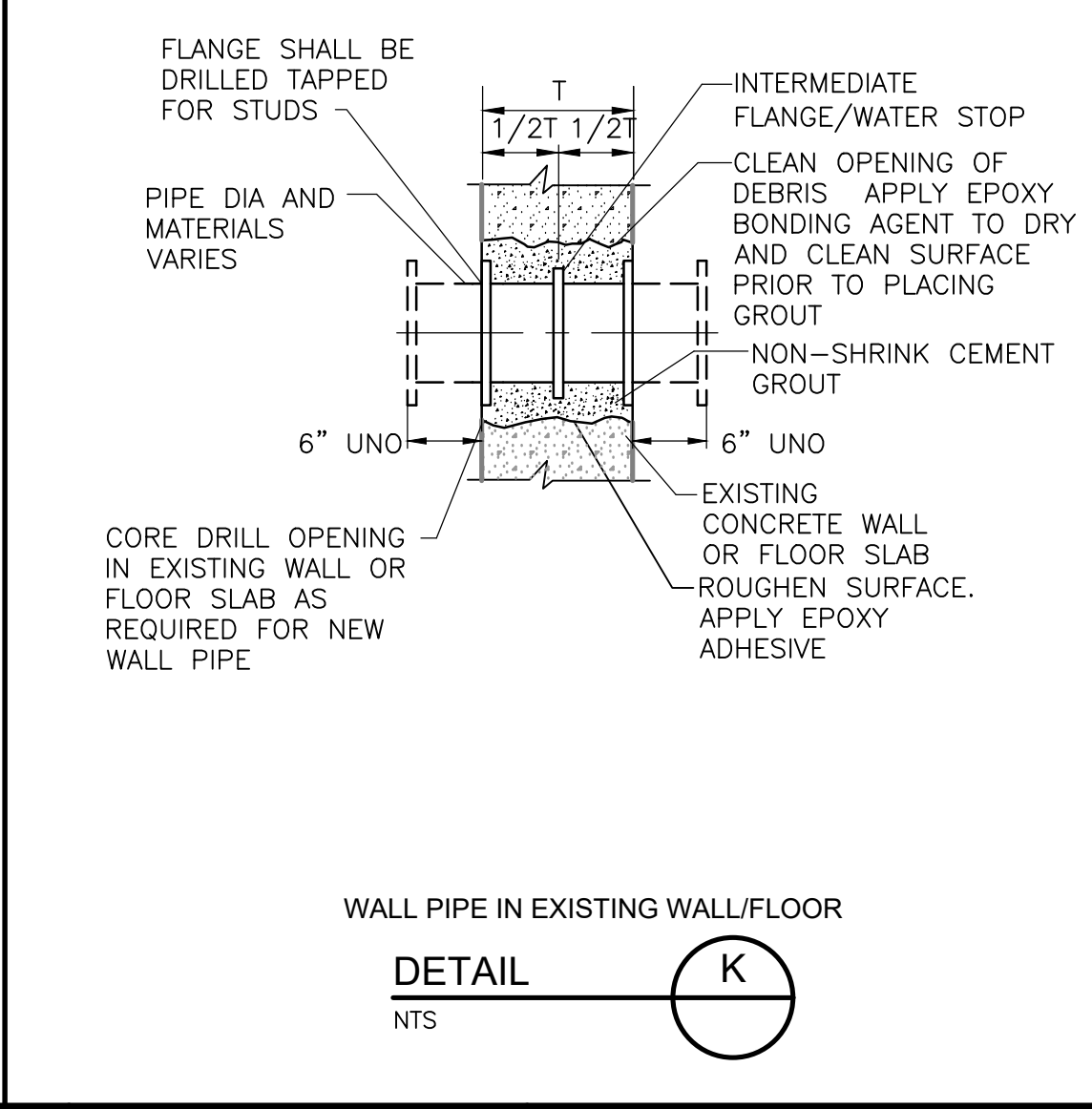
RESTRAINED EXPANSION JOINT (BELLOW TYPE)  
**DETAIL H**  
 NTS



PIPE WALL PENETRATION  
**DETAIL I**  
 NTS



NUT OPERATOR BOX  
**DETAIL J**  
 NTS



WALL PIPE IN EXISTING WALL/FLOOR  
**DETAIL K**  
 NTS

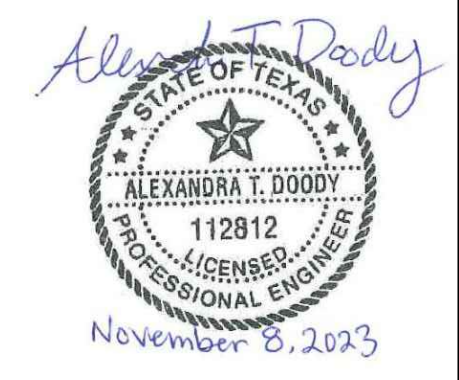
REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JAM	ATD	CONFORMED DRAWINGS

DESIGNED BY: J. MAYER  
 DRAWN BY: J. MAYER  
 SHEET CHK'D BY: A. DOODY  
 CROSS CHK'D BY: A. WOELKE  
 APPROVED BY: A. DOODY  
 DATE: NOVEMBER 2023

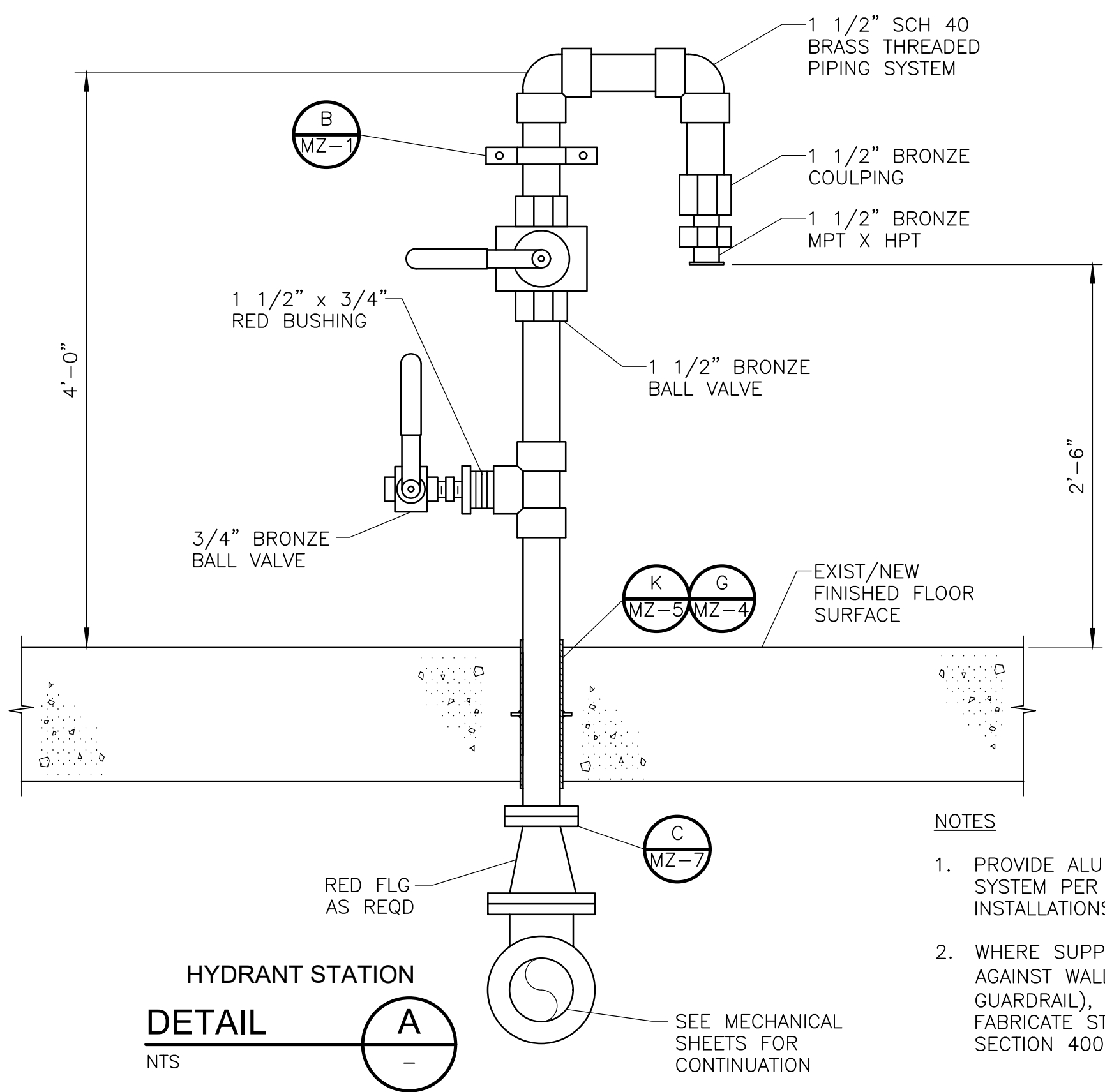


CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
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STANDARD MECHANICAL DETAILS V  
 PROJECT NO. 2048-264953  
 FILE NAME: MZ-5.DWG  
 SHEET NO. MZ-5

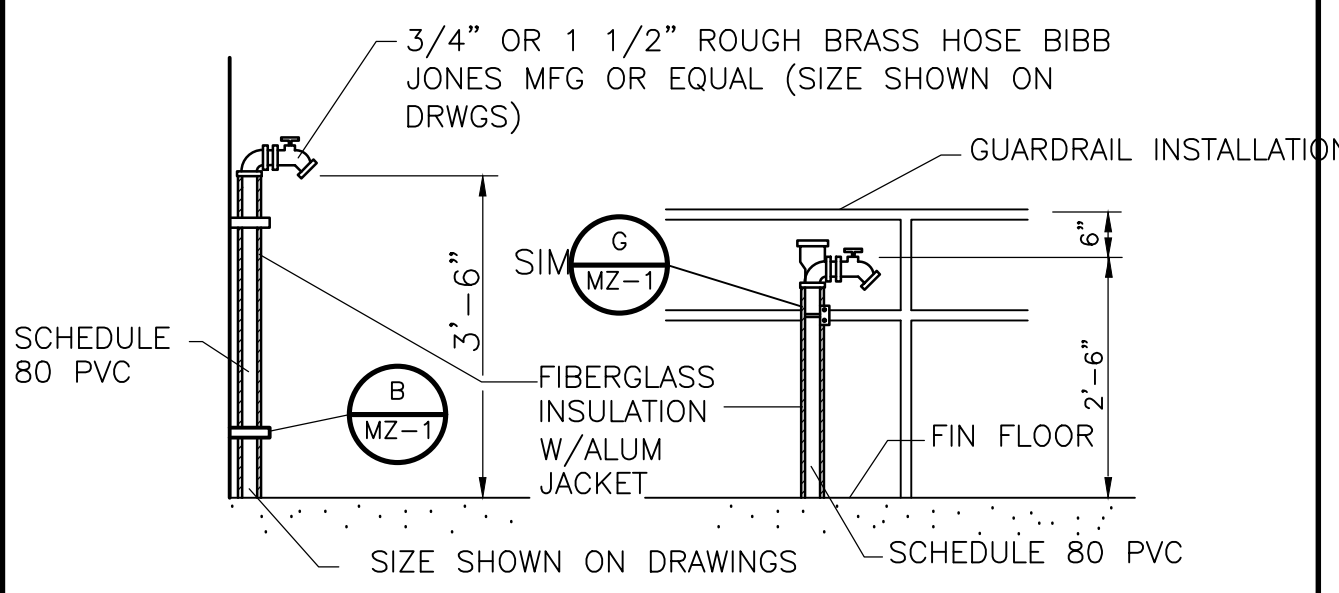


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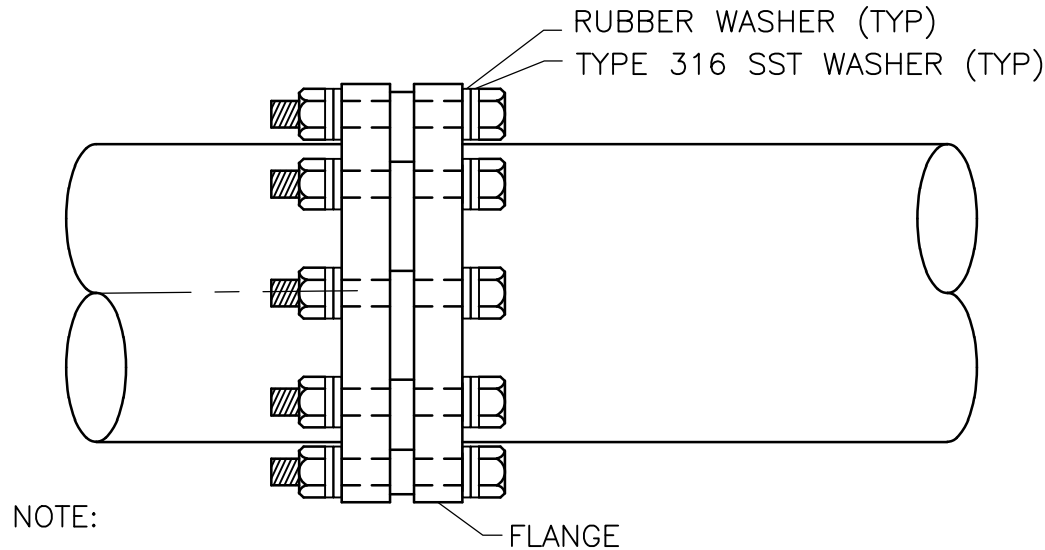
**HYDRANT STATION**  
**DETAIL A**  
 NTS

- NOTES:**
1. PROVIDE ALUMINUM JACKETED INSULATION SYSTEM PER DIVISION 15 FOR EXTERIOR INSTALLATIONS.
  2. WHERE SUPPORTING HYDRANT STATION AGAINST WALL IS NOT PRACTICAL (E.G., GUARDRAIL), CONTRACTOR SHALL FABRICATE STEEL PIPE SUPPORT PER SECTION 400507.



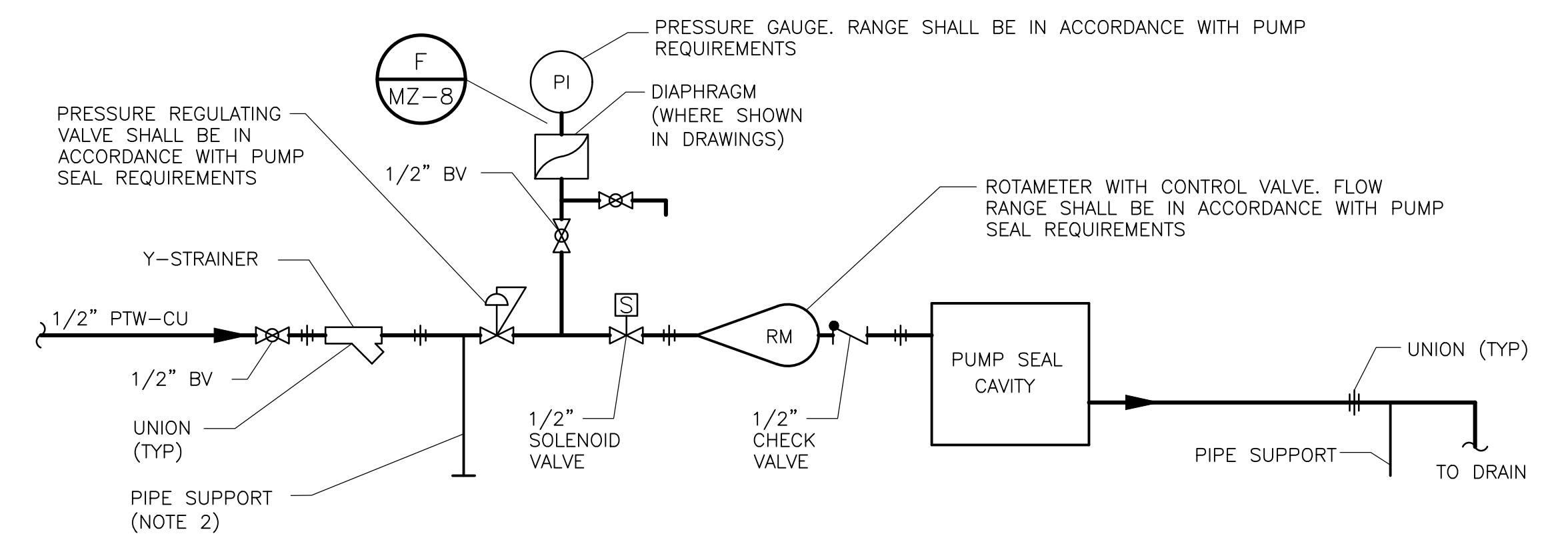
**HOSE BIB**  
**DETAIL B**  
 NTS

- NOTES:**
1. ALL HOSE BIBBS TO BE CONTROLLED BY INDIVIDUAL SHUT-OFF VALVES (BALL OR PLUG VALVES)
  2. FOR SIZE AND LOCATION SEE DRAWINGS.



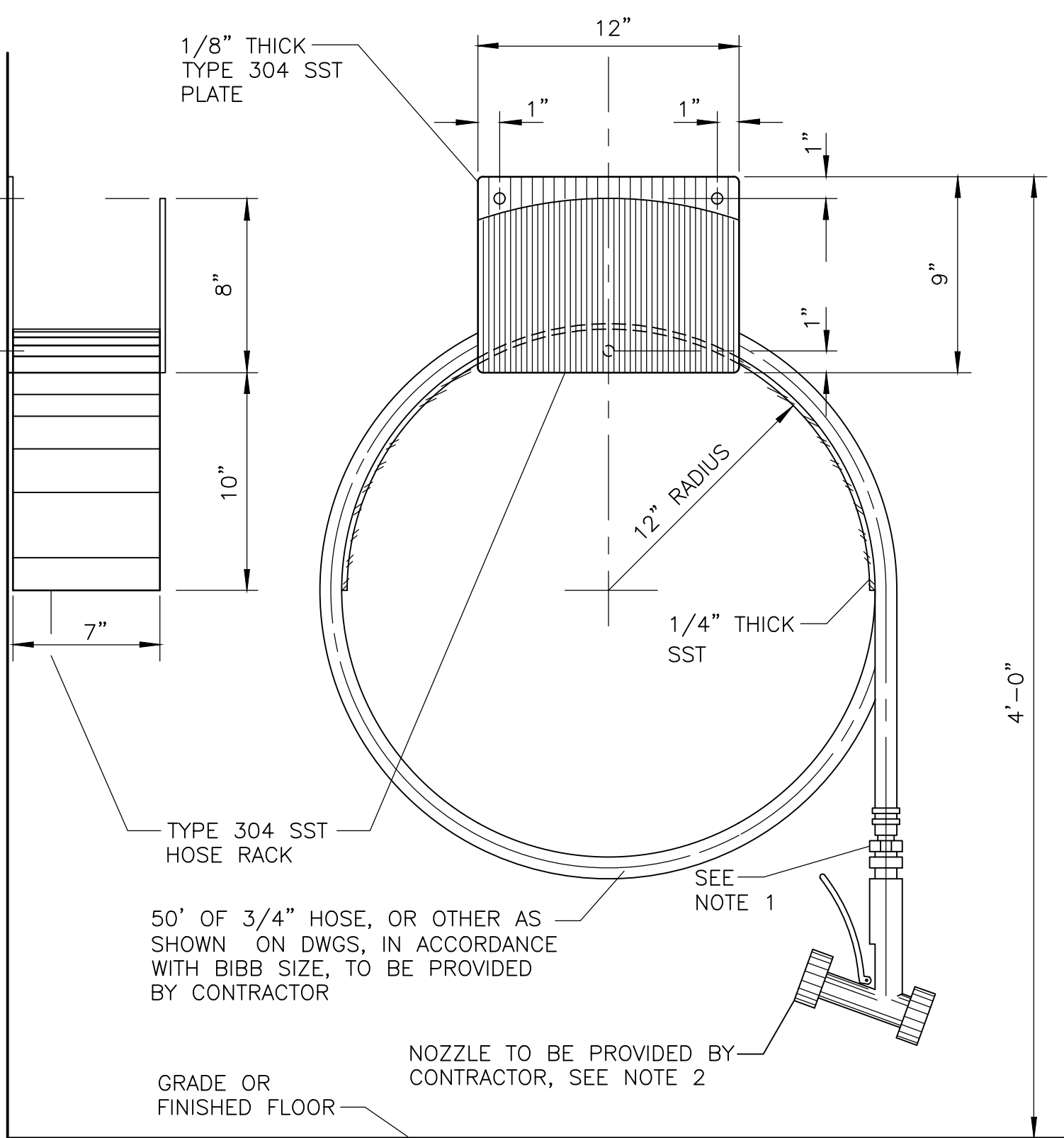
- NOTE:**
1. ALL NUTS, BOLTS, AND WASHERS SHALL BE TYPE 316 SST MATERIALS.

**INSULATING FLANGE ASSEMBLY**  
**DETAIL C**  
 NTS



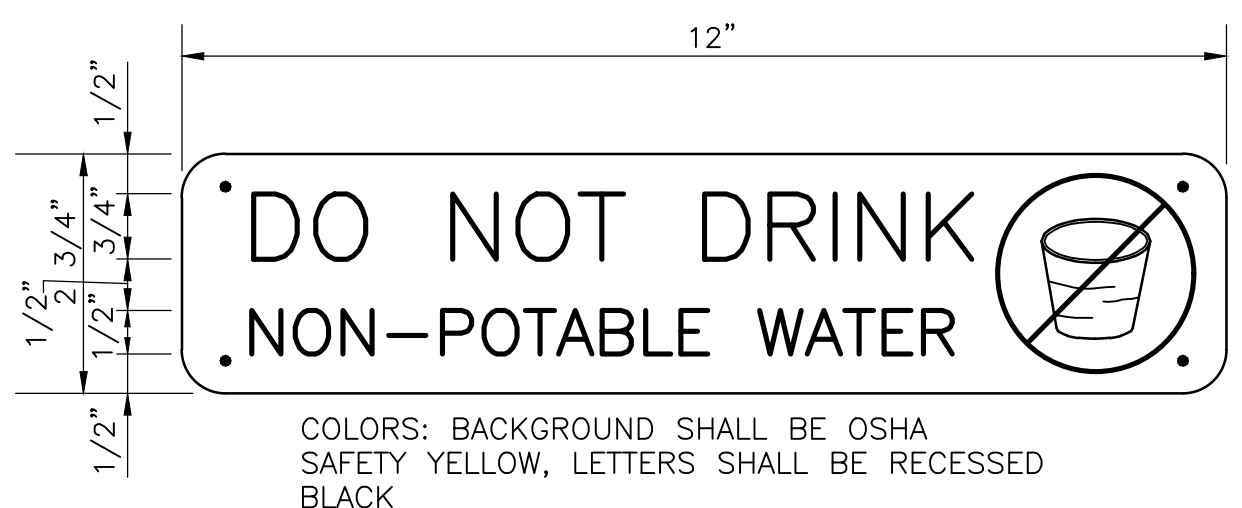
- NOTES:**
1. SOLENOID VALVE MAY BE RELOCATED DOWNSTREAM OF PUMP SEAL CAVITY IF REQUIRED BY PUMP MANUFACTURER.
  2. PROVIDE PIPE SUPPORTS PER SECTION 400507.

**SEAL WATER**  
**DETAIL F**  
 NTS



**WASH HOSE STATION**  
**DETAIL D**  
 NTS

- NOTES:**
1. PROVIDE 3/4 inch, OR OTHER AS SHOWN ON DWGS, MALE QUICK DISCONNECT ADAPTER AND REDUCING BUSHING (IF REQUIRED) FOR FLUSHING CONNECTION TIE-IN ON CHEMICAL FEED EQUIPMENT AND OTHER. QUICK DISCONNECT ADAPTER SHALL BE PVDF MATERIALS AS MANUFACTURED BY THE DYMAX GROUP, PLEASANTON, CA, OR EQUAL.
  2. CONTRACTOR SHALL PROVIDE ELKHART BRASS No 6ZF47 FIRE HOSE NOZZLES AND DIXON THERMOPLASTIC No FNB150NST 1.5 inch NOZZLES. CONTRACTOR SHALL VERIFY AND COORDINATE THE THREAD TYPE ON THE NOZZLES AND ON THE QUICK CONNECTS. EACH NOZZLE SHALL BE PROVIDED WITH A FEMALE QUICK CONNECT THAT CAN BE THREADED INTO THE NOZZLE.
  3. HOSE SHALL HAVE A MINIMUM WORKING PRESSURE OF 100 PSI AND BE CONSTRUCTED OF ULTRA VIOLET RESISTANT RUBBER HOSE. ONE END OF HOSE SHALL BE PROVIDED WITH A MALE QUICK DISCONNECT AND THE OTHER END SHALL BE PROVIDED WITH A FEMALE QUICK DISCONNECT. CONTRACTOR SHALL PROVIDE ONE (1) MADE UP HOSE INCLUDING NOZZLE AND QUICK DISCONNECTS AND RECEIVE WRITTEN APPROVAL BY THE OWNER PRIOR TO ORDERING THE REMAINING HOSES.
  4. SUBMIT HOSE RACKS, NOZZLES AND HOSES IN ACCORDANCE WITH SECTION 013300 FOR OWNER/ENGINEER APPROVAL.



**NON-POTABLE WATER SIGN**  
**DETAIL E**  
 NTS

- NOTES:**
1. FURNISH AND INSTALL THE ABOVE SIGN ABOVE ALL NEW NON-POTABLE AND PLANT WATER HOSE BIBB AND HYDRANT STATIONS WHETHER SHOWN ON DRAWINGS OR NOT. ATTACH THE SIGN TO THE STRUCTURE, GUARDRAIL OR POST WITH STAINLESS STEEL HARDWARE AND MOUNTING BRACKET.
  2. FURNISH ONE SIGN AND RECEIVE APPROVAL FROM OWNER PRIOR TO ORDERING REMAINDER OF SIGNS.

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JAM	ATD	CONFORMED DRAWINGS

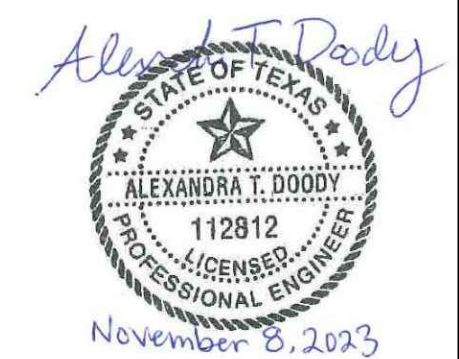
DESIGNED BY: J. MAYER  
 DRAWN BY: J. MAYER  
 SHEET CHK'D BY: A. DOODY  
 CROSS CHK'D BY: A. WOELKE  
 APPROVED BY: A. DOODY  
 DATE: NOVEMBER 2023



CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

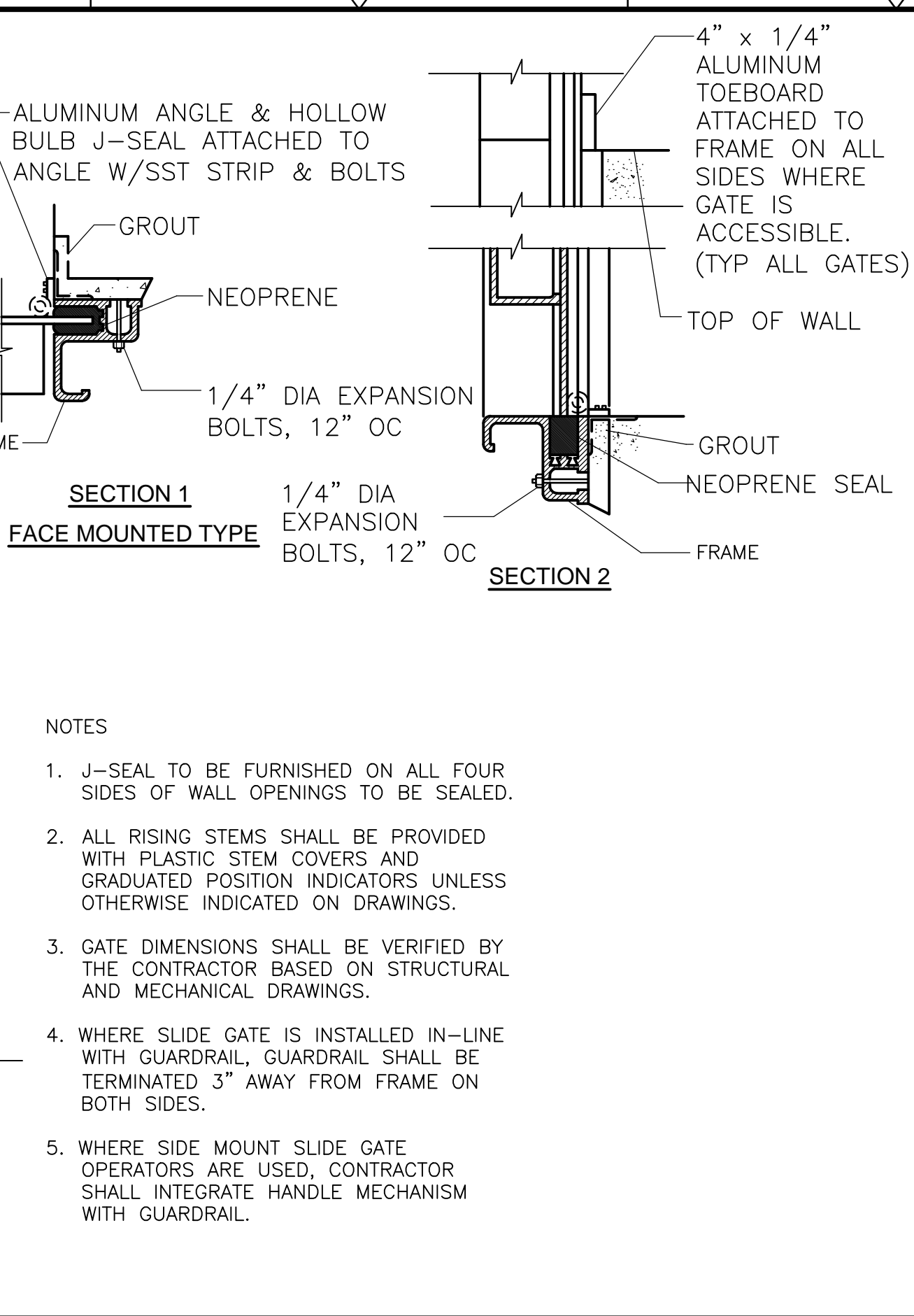
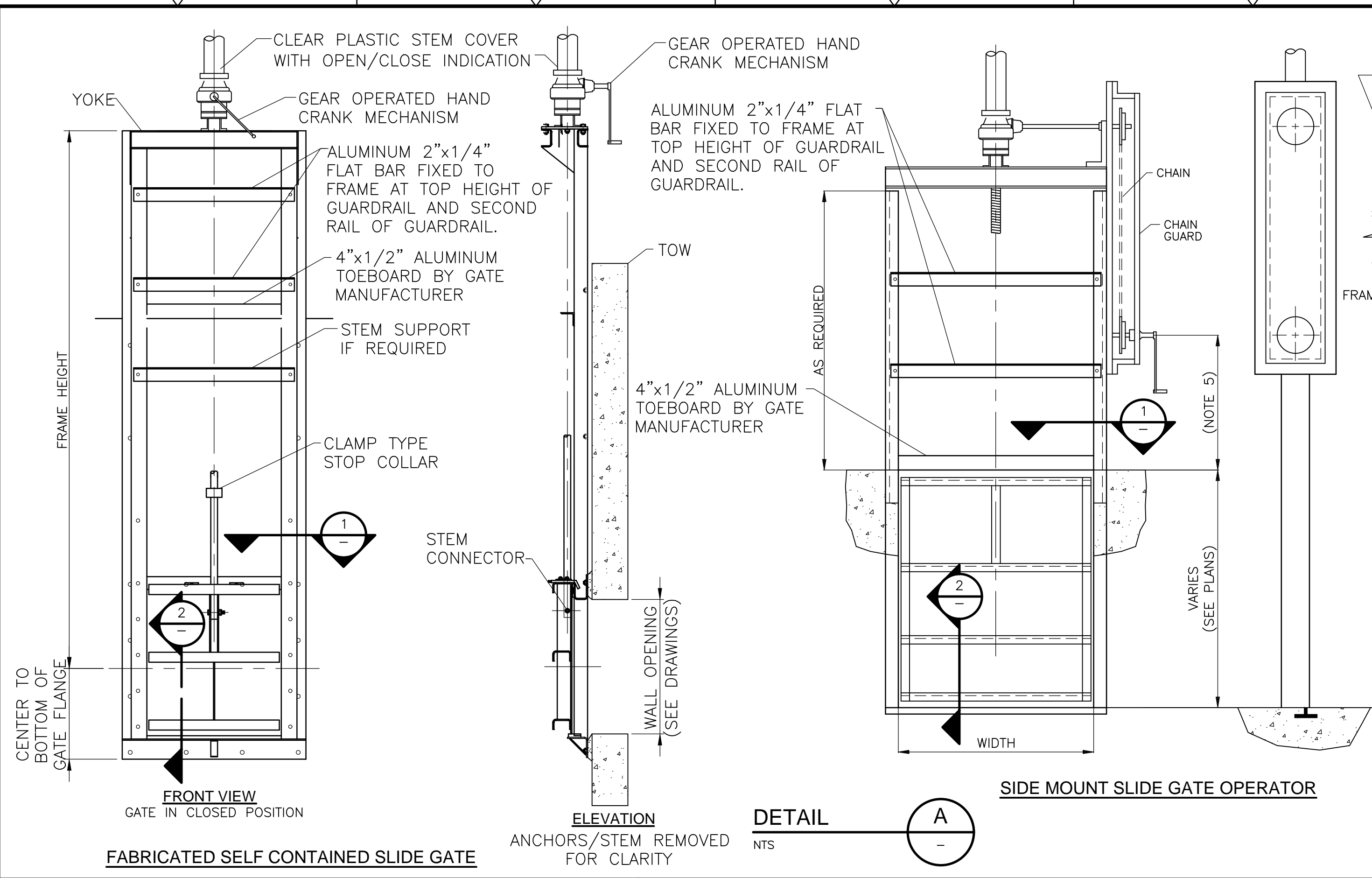
STANDARD MECHANICAL DETAILS VI  
 MZ-6

PROJECT NO. 2048-264953  
 FILE NAME: MZ-6.DWG  
 SHEET NO. MZ-6

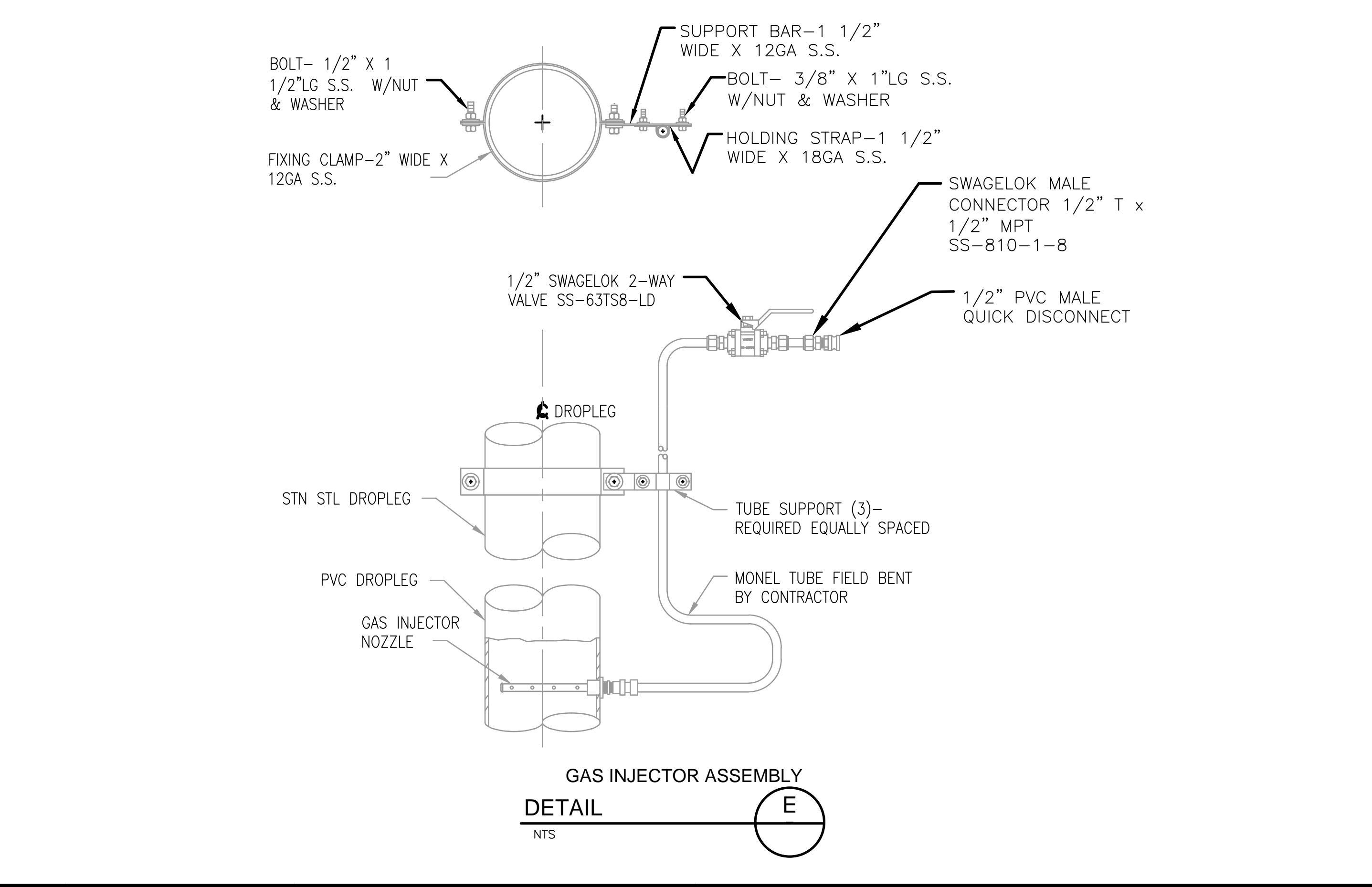
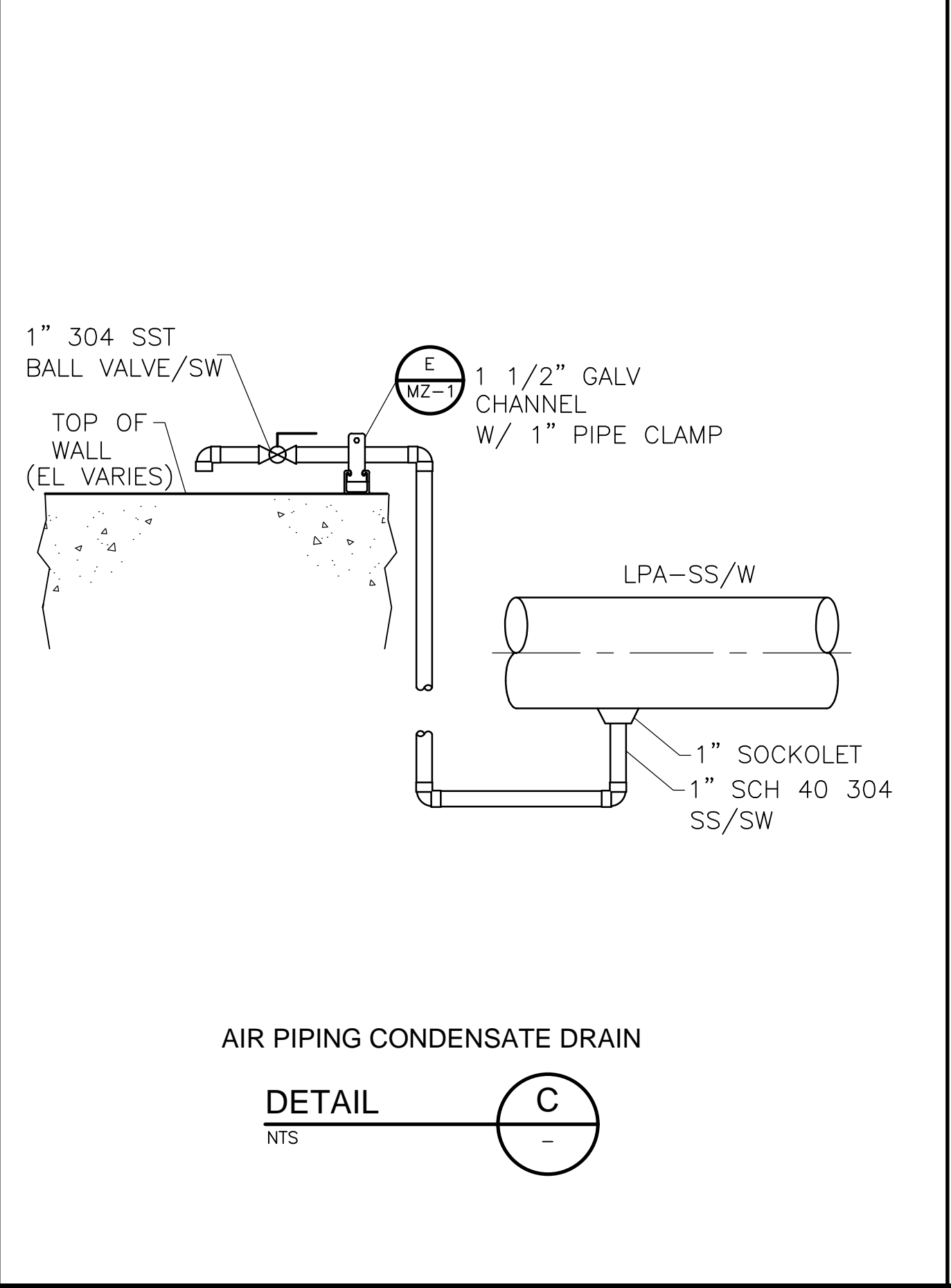
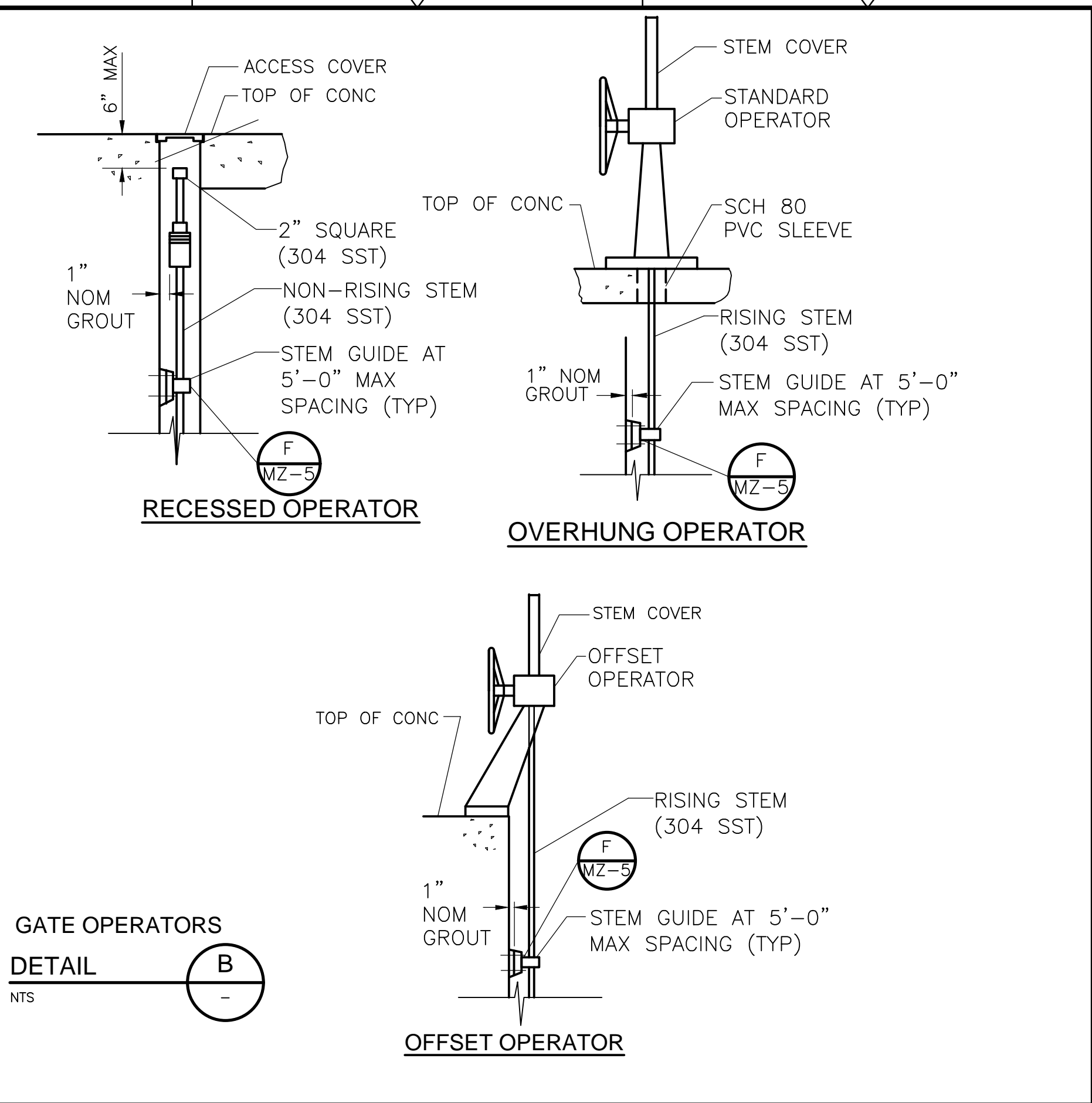




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- NOTES
1. J-SEAL TO BE FURNISHED ON ALL FOUR SIDES OF WALL OPENINGS TO BE SEALED.
  2. ALL RISING STEMS SHALL BE PROVIDED WITH PLASTIC STEM COVERS AND GRADUATED POSITION INDICATORS UNLESS OTHERWISE INDICATED ON DRAWINGS.
  3. GATE DIMENSIONS SHALL BE VERIFIED BY THE CONTRACTOR BASED ON STRUCTURAL AND MECHANICAL DRAWINGS.
  4. WHERE SLIDE GATE IS INSTALLED IN-LINE WITH GUARDRAIL, GUARDRAIL SHALL BE TERMINATED 3" AWAY FROM FRAME ON BOTH SIDES.
  5. WHERE SIDE MOUNT SLIDE GATE OPERATORS ARE USED, CONTRACTOR SHALL INTEGRATE HANDLE MECHANISM WITH GUARDRAIL.



REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	JAM	ATD	CONFORMED DRAWINGS

DESIGNED BY: J. MAYER  
 DRAWN BY: J. MAYER  
 SHEET CHK'D BY: A. DOODY  
 CROSS CHK'D BY: A. WOELKE  
 APPROVED BY: A. DOODY  
 DATE: NOVEMBER 2023

**CDM Smith**  
 8310-1 N. Capital of Texas Hwy, Suite 250  
 Austin, TX 78731  
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CITY OF GEORGETOWN, TEXAS  
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PROJECT NO. 2048-264953  
 FILE NAME: MZ-7.DWG  
 SHEET NO. MZ-7

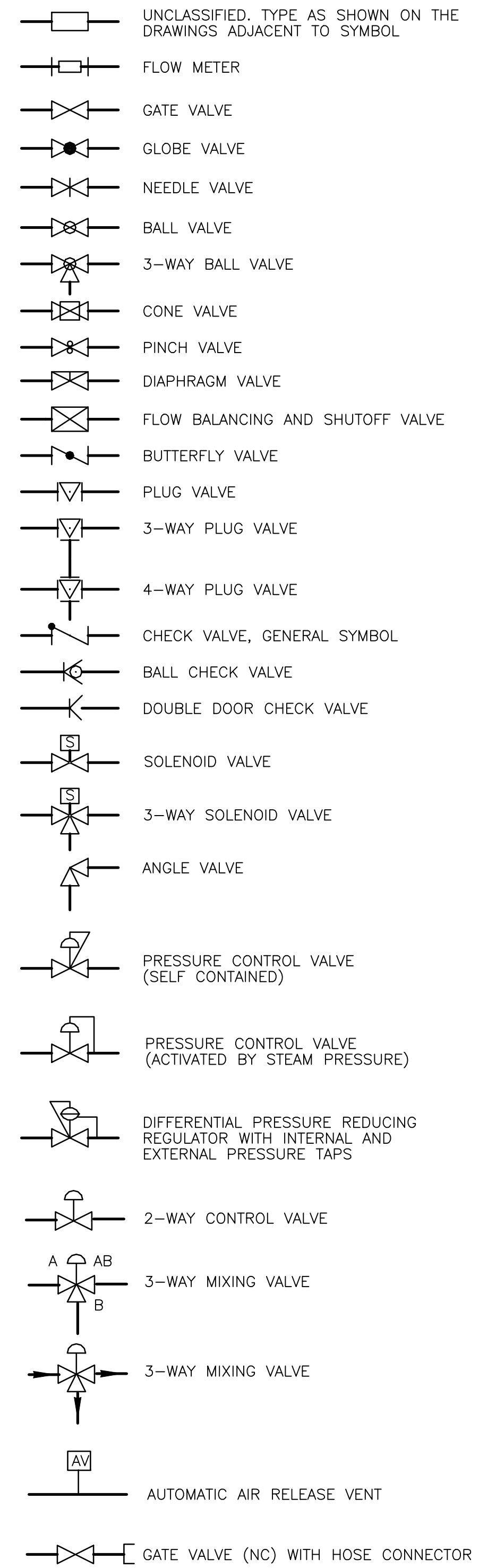
STANDARD MECHANICAL DETAILS VII

STATE OF TEXAS  
 ALEXANDRA T. DOODY  
 112812  
 LICENSED PROFESSIONAL ENGINEER  
 November 8, 2023

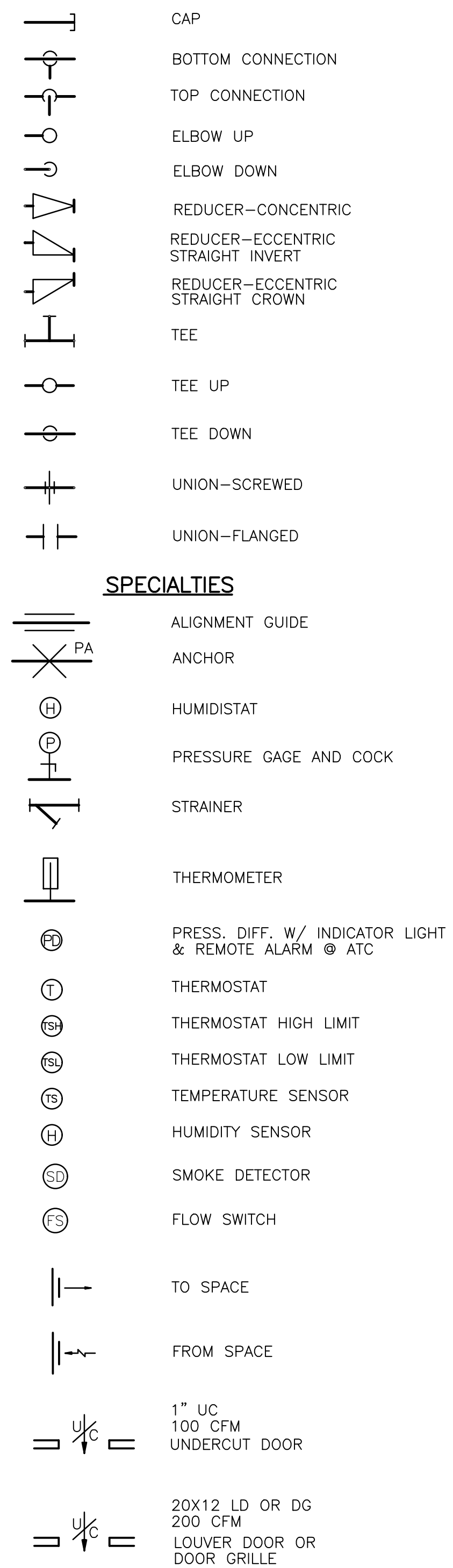
**GENERAL ABBREVIATIONS**

<b>A</b>	ACC ACU AFF AG AHU AL ALT AP AD ATC AUTO AUX AVG AV	AIR COOLED CONDENSER AIR CONDITIONER UNIT (W/DX OR CHILL. WATER COILS) ABOVE FINISHED FLOOR ABOVE GRADE AIR HANDLING UNIT ALUMINUM ALTITUDE ACCESS PANEL ACCESS DOOR AUTOMATIC TEMPERATURE CONTROL AUTOMATIC AUXILIARY AVERAGE AUTOMATIC AIR RELEASE VENT	<b>M</b>	M MBH MATL MAX MCA MCC MD MECH MFR MIN MISC MOCP MTD	MOTOR THOUSAND BTU PER HOUR MATERIAL MAXIMUM MINIMUM CIRCUIT AMPACITY MOTOR CONTROL CENTER MOTORIZED DAMPER MECHANICAL MANUFACTURER MINIMUM MISCELLANEOUS MAXIMUM OVERCURRENT PROTECTION MOUNTED
<b>B</b>	B TO B BHP BI BOT BTU BDB BBH	BACK TO BACK BRAKE HORSEPOWER BACKWARD INCLINE BOTTOM BRITISH THERMAL UNIT BACK DRAFT SELF ACTING DAMPER BASE BOARD HEATER	<b>N</b>	NC NG NO NOM NPT NTS	NORMALLY CLOSED NATURAL GAS NORMALLY OPEN NOMINAL AMERICAN NATIONAL TAPER PIPE THREAD NOT TO SCALE
<b>C</b>	C TO C CCW CENT CFM CGP CHIL CL CLG CLR COL CTR CW	CENTER TO CENTER COUNTER CLOCKWISE CENTRIFUGAL CUBIC FEET PER MINUTE CHILLED WATER GLYCOL PUMP CHILLER (WATER OR AIR COOLED) CENTER LINE CEILING CLEAR COLUMN CENTER VALVE FLOW COEFFICIENT CLOCKWISE	<b>O</b>	OA OAT OC OD OPP	OUTSIDE AIR OUTSIDE AIR TEMPERATURE ON CENTER OUTSIDE DIAMETER OPPOSITE
<b>D</b>	D DB DIA DISCH DN DWG DX	TO DRAIN (NEAREST) DOOR GRILLE DRY BULB DIAMETER DISCHARGE DOWN DRAWING DIRECT EXPANSION COIL	<b>P</b>	PSI PSIA PSIG	POUNDS PER SQUARE IN PSI ABSOLUTE PSI GAUGE
<b>E</b>	EAT EUH EA EAF EER ENT ELEC ELEV EMERG ESP EXH EXP	ENTERING AIR TEMPERATURE ELECTRIC UNIT HEATER EACH EXHAUST AIR FAN ENERGY EFFICIENCY RATIO ENTERING ELECTRICAL ELEVATION EMERGENCY EXTERNAL STATIC PRESSURE EXHAUST EXPANSION/COMPRESSION TANK	<b>R</b>	RA RAF REG RH RPM RED RL RS	RETURN AIR RETURN AIR FAN REGISTER RELATIVE HUMIDITY REVOLUTIONS PER MINUTE REDUCER REFRIGERANT LIQUID REFRIGERANT SUCTION
<b>F</b>	F FBV FC FD FG FLR FLG FOB FOT FPM FD FS FTR	FARENHEIT FLOW BALANCE & SHUTOFF VALVE FORWARD CURVE FIRE DAMPER FLOOR GRILLE FLOOR FLANGE FLAT ON BOTTOM FLAT ON TOP FEET PER MINUTE FIRE DAMPER FLOW SENSOR FIN-TUBE RADIATION	<b>S</b>	SA SCH SEER SEER SP SPEC SS	SUPPLY AIR SCHEDULE SEASONAL ENERGY EFFICIENCY RATIO SUPPLY FAN STATIC PRESSURE SPECIFICATION STAINLESS STEEL
<b>G</b>	GPM	GALLONS PER MINUTE	<b>T</b>	TAF TD TEMP TOS TXV TYP	TRANSFER AIR FAN TEMPERATURE DIFFERENCE TEMPERATURE TOP OF STEEL THERMAL EXPANSION VALVE TYPICAL
<b>H</b>	H-O-A HG HP H&V HVAC HZ	HAND-OFF-AUTO HOT GAS HORSEPOWER HEATING AND VENTILATING HEATING, VENTILATING AND AIR CONDITIONING HERTZ	<b>U</b>	U UH UL	HEAT TRANSFER COEFFICIENT UNIT HEATER UNDERWRITERS LABORATORY
<b>I</b>	ID IEER INS INSTR	INSIDE DIAMETER INTEGRATED ENERGY EFFICIENCY RATIO INSULATE, INSULATION INSTRUMENT(ATION)	<b>V</b>	V VAV VEL	VOLTS VARIABLE AIR VOLUME VELOCITY
<b>K</b>	KW	KILOWATT	<b>W</b>	W/ W/O WG	WITH WITHOUT WET BULB WALL GRILLE
<b>L</b>	LAT LCP LWT LVG	LEAVING AIR TEMPERATURE LOCAL CONTROL PANEL LEAVING WATER TEMPERATURE LEAVING			

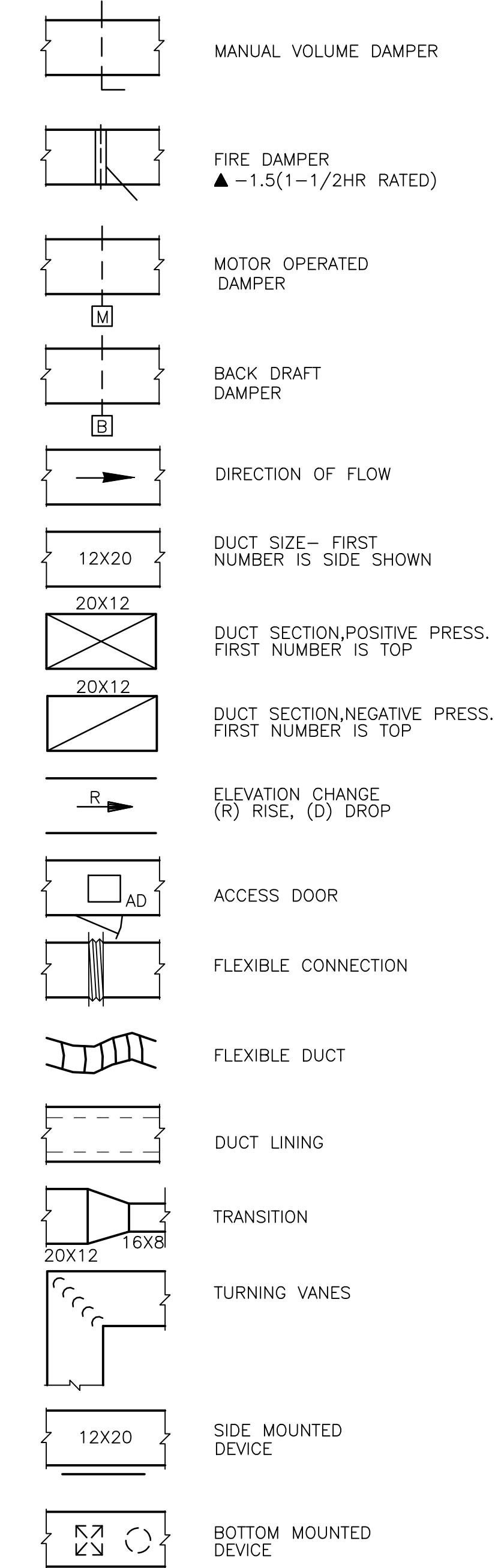
**SYMBOLS VALVES**



**SYMBOLS PIPE FITTINGS**



**SYMBOLS DUCTWORK**



**GENERAL NOTES:**

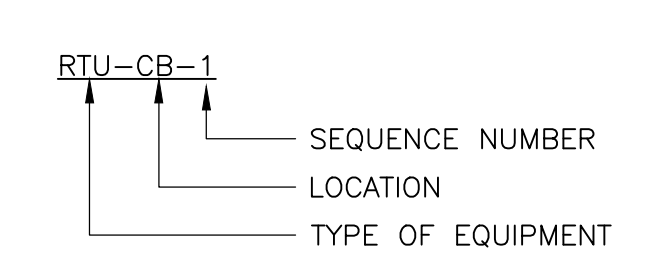
- HVAC EQUIPMENT DIMENSIONS, LOCATIONS, DUCTWORK AND PIPING SYSTEM LAYOUTS ARE BASED ON EQUIPMENT SELECTED BY THE ENGINEER. IF THE CONTRACTOR PROPOSES TO FURNISH EQUIPMENT THAT REQUIRES AN ARRANGEMENT OR SPACE DIFFERING FROM THAT INDICATED ON THE DRAWINGS OR SPECIFIED, THE CONTRACTOR SHALL PREPARE AND SUBMIT TO THE ENGINEER FOR APPROVAL, DETAILED ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, INSTRUMENTATION, HVAC AND ELECTRICAL DRAWINGS AND EQUIPMENT LISTS SHOWING ALL NECESSARY CHANGES AND EMBODYING ALL FEATURES OF THE EQUIPMENT HE PROPOSES TO FURNISH. THIS INFORMATION SHALL INCLUDE BUT NOT BE LIMITED TO PLANS, SECTIONS, DETAILS, AND SCHEMATICS OF ALL APPURTENANCES REQUIRE(SUCH CHANGES IF APPROVED BY THE ENGINEER SHALL BE AT NO EXTRA COST TO THE OWNER. THE CONTRACTOR SHALL ASSUME THE COST OF, AND THE RESPONSIBILITY FOR SATISFACTORILY ACCOMPLISHING ALL THE NECESSARY CHANGES CORRESPONDING TO THE DIMENSIONS AND CHARACTERISTICS OF THE EQUIPMENT SUBMITTED AND APPROVED BY THE ENGINEER. REFER TO SPECIFICATIONS FOR FURTHER DETAILS.
- SIZES OF EQUIPMENT PADS INDICATED ON THE DRAWINGS ARE APPROXIMATE. EXACT DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FOR THE EQUIPMENT FURNISHED. ALL FLOOR MOUNTED EQUIPMENT SHALL BE SET ON CONCRETE PADS CONFORMING TO DETAILS SHOWN ON THE STRUCTURAL DRAWINGS.
- DIELECTRIC COUPLINGS, FLANGES OR UNIONS SHALL BE INSTALLED AT ALL CONNECTIONS OF COPPER PIPE TO OTHER TYPES OF METALLIC PIPING.
- HVAC PIPING AND DUCTWORK DRAWINGS DO NOT SHOW ALL DRAINS, VENTS, OFFSETS AND FITTINGS etc. REQUIRED FOR THE COMPLETE SYSTEM. SMALL PIPING IS SHOWN APPROXIMATELY TO SCALE BUT NOT EVERY FITTING AND OFFSET IS SHOWN. SOME VALVES AND APPURTENANCES MAY BE OMITTED FOR THE SAKE OF CLARITY. THE CONTRACTOR SHALL FURNISH, INSTALL AND TEST ALL HVAC SYSTEMS SHOWN ON THE DRAWINGS AND DETAILS, AND/OR AS DEFINED IN THE SPECIFICATIONS TO PROVIDE THE COMPLETE SYSTEM.
- UNLESS OTHERWISE SHOWN ON THE DRAWING ALL FLOOR SLAB AND WALL PENETRATIONS SHALL BE AS SHOWN ON THE WALL PENETRATION DETAILS. ABOVE GROUND EXTERIOR WALL AND ROOF PENETRATIONS SHALL BE AS SHOWN ON THE ARCHITECTURAL DRAWINGS. IF APPROVED BY THE ENGINEER, THE CONTRACTOR MAY SUBSTITUTE ALTERNATE METHODS PROVIDING THEY MEET INTENDED DESIGN REQUIREMENTS.
- NOT ALL AND ONLY CERTAIN TYPES OF SUPPORTS ARE SHOWN ON THE HVAC DRAWINGS. UNLESS OTHERWISE DETAILED ON THE DRAWINGS ALL PIPE AND DUCT SUPPORTS SHALL BE DESIGNED, FURNISHED AND INSTALLED BY THE CONTRACTOR AS SPECIFIED AND TO THE APPROVAL OF THE ENGINEER.

NOTE: THIS IS A GENERAL LIST OF SYMBOLS AND ABBREVIATIONS. NOT ALL ITEMS SHOWN HERE APPEAR ON THE CONTRACT DRAWINGS.

**REGISTERS GRILLES AND DIFFUSERS**

EAG	EXHAUST GRILLE
EAR	EXHAUST REGISTER
RAG	RETURN GRILLE
RAR	RETURN REGISTER
SAD	SUPPLY DIFFUSER
SAG	SUPPLY GRILLE
SAR	SUPPLY REGISTER
TAG	TRANSFER GRILLE
WAG	WALL GRILLE

**TYPICAL TAG**



**PIPE MATERIAL CODES**

CU	COPPER
FRP	FIBER REINFORCED PLASTIC
GS	GALVANIZED STEEL
PVC	POLYVINYL CHLORIDE
STL	BLACK STEEL

**FLOW STREAM CODE**

D	DRAIN
RS	REFRIGERANT SUPPLY
RL	REFRIGERANT LIQUID
RG	REFRIGERANT-HOT GAS
	REFRIGERANT LIQUID

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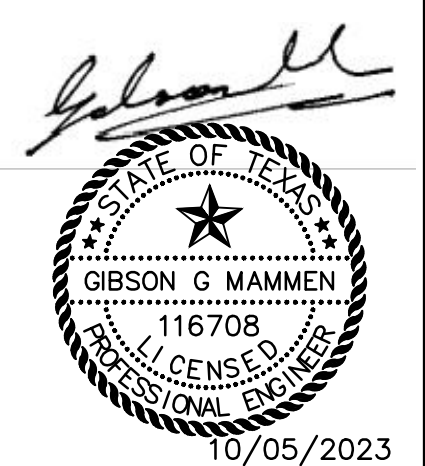
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SHEET CHK'D BY:	G. MAMMEN
CROSS CHK'D BY:	S. BURDETT
APPROVED BY:	M. MAMMEN
DATE:	NOVEMBER 2023

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CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

HVAC LEGEND, SYMBOLS,  
 AND ABBREVIATIONS

PROJECT NO.	2048-264953
FILE NAME:	H001DSGN.DWG
SHEET NO.	H-1

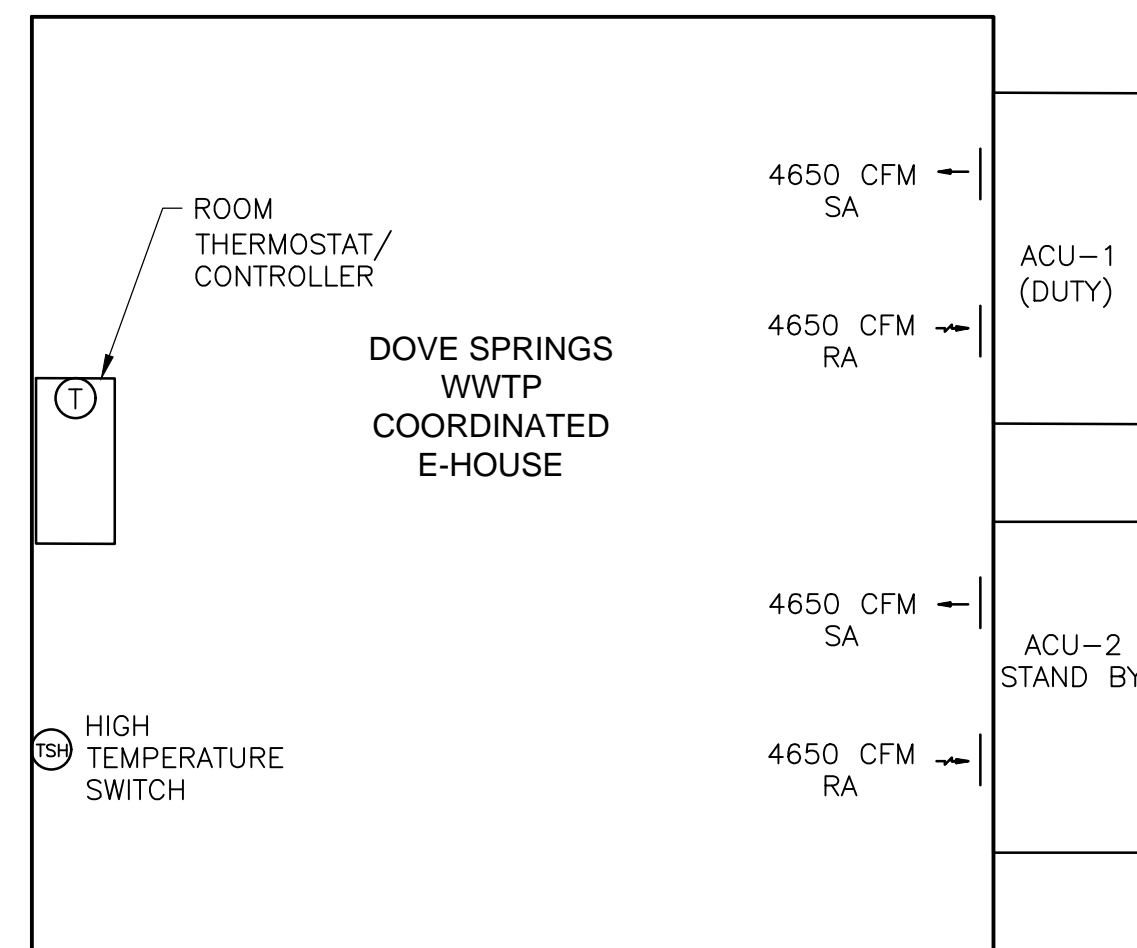


**AIR CONDITIONING UNIT SCHEDULE**

TAG NO.	LOCATION	AREA SERVED	SUPPLY FAN							COOLING SECTION					ELECTRIC HEAT	FILTERS		UNIT CHARACTERISTICS		ELECTRICAL	MANUFACTURER AND MODEL	NOTES	
			TOTAL CFM	TYPE	OUTSIDE AIR MIN. (CFM)	EXT. SP. IN. WG.	FAN (QTY)	MIN. HP	MOTOR RPM	VOLTS/PH/HZ	EAT DB/WB *F	LAT DB/WB *F	TOTAL CLG. CAP (MBH)	SEN CAP (MBH)	FLUID	ELECTRIC HEAT CAPACITY (KW)	TYPE	FILTER LEVEL	WEIGHT (LBS)	INSTALLTION			MCA/MOCP
ACU-1	DOVE SPRINGS WWTP	E-HOUSE	4650	DIRECT	0	0.35	1	2.0	1500	460/3/60	85/72	54.8/53.0	123.1	83.2	R410A	9	2" PLEATED	MERV 8	1250	WALL MOUNTED	27/40	BARD MEGA-TEC W120APC09	1 THRU 12
ACU-2	DOVE SPRINGS WWTP	E-HOUSE	4650	DIRECT	0	0.35	1	2.0	1500	460/3/60	85/72	54.8/53.0	123.1	83.2	R410A	9	2" PLEATED	MERV 8	1250	WALL MOUNTED	27/40	BARD MEGA-TEC W120APC09	1 THRU 12

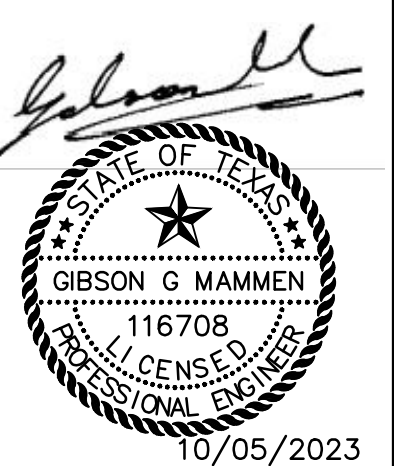
**NOTES:**

1. A ONE-PIECE WALL-MOUNTED, FACTORY PRE CHARGED, PRE WIRED, TESTED AND READY-TO-OPERATE AIR HANDLING UNIT.
2. PROVIDE HACR-RATED BREAKER.
3. PROVIDE WITH MOUNTING BRACKETS.
4. EVAPORATOR AND CONDENSER COIL SHALL BE PHENOLIC COATED AND CABINET SHALL BE EPOXY COATED.
5. PROVIDE WITH FACTORY INSTALLED LOW AMBIENT CONTROL DOWN TO 0° F.
6. UNIT SHALL BE UL, ETL OR CSA LISTED.
7. PROVIDE WITH ALUMINUM SUPPLY AND RETURN GRILLES.
8. PROVIDE WITH WALL MOUNTED ROOM THERMOSTAT/CONTROLLER (BARD LC6000 OR EQUAL). CONTROLLER MUST INCLUDE AUTOMATIC HEATING-COOLING CHANGEOVER, LEAD-LAG CONTROL, AND LEAD-LAG ALTERNATION FUNCTIONALITY.
9. PROVIDE UNIT WITH DUAL COMPRESSOR AND 3-STAGE COOLING OPTION.
10. LIQUID LINE FILTER DRIER.
11. OUTSIDE AIR BLANKOFF PLATE.
12. SCHEDULE IS INCOMPLETE WITHOUT SPECIFICATION SECTION 238113.13.



**ACU CONTROL SEQUENCE:**

1. AIR CONDITIONING UNIT ACU-1 AND ACU-2 SHALL BE CONTROLLED BY ROOM THERMOSTAT/CONTROLLER AND SHALL PROVIDE COOLING AND HEATING. ROOM THERMOSTAT/CONTROLLER SHALL PROVIDE LEAD/LAG CONTROL AND LEAD-LAG ALTERNATION AUTOMATICALLY.
2. EACH UNIT IS SIZED TO HANDLE 100% OF THE COOLING AND HEATING LOAD. THE LEAD UNIT WILL FUNCTION AS DUTY AND LAG UNIT WILL FUNCTION AS STAND-BY.
3. COOLING TEMPERATURE SETPOINT SHALL BE 85°F. WHEN TEMPERATURE RISES 2°F ABOVE SETPOINT, UNIT SHALL ENERGIZE. WHEN TEMPERATURE DROPS 2°F BELOW SETPOINT, UNIT SHALL DE-ENERGIZE.
4. HEATING TEMPERATURE SETPOINT SHALL BE 55°F. WHEN TEMPERATURE DROPS 2°F BELOW SETPOINT, UNIT SHALL ENERGIZE. WHEN TEMPERATURE RISES 2°F ABOVE SETPOINT, UNIT SHALL DE-ENERGIZE.
5. HIGH TEMPERATURE SWITCH (TSH) SHALL BE PROVIDED UNDER DIV 40 AND CONNECTED TO SCADA. A HIGH TEMPERATURE ALARM WILL BE SENT TO SCADA WHEN THE TEMPERATURE SWITCH DETECTS A TEMPERATURE OF 100°F OR HIGHER.



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DESIGNED BY: S. SALEEM	DATE: 1/10/24	SS	GM	CONFORMED DRAWINGS
DRAWN BY: G. NITHIYAN	REV. NO.	DATE	DRWN	CHKD
SHEET CHK'D BY: M. MAMMEN				REMARKS
CROSS CHK'D BY: S. BURDETT				
APPROVED BY: M. MAMMEN				
DATE: NOVEMBER 2023				

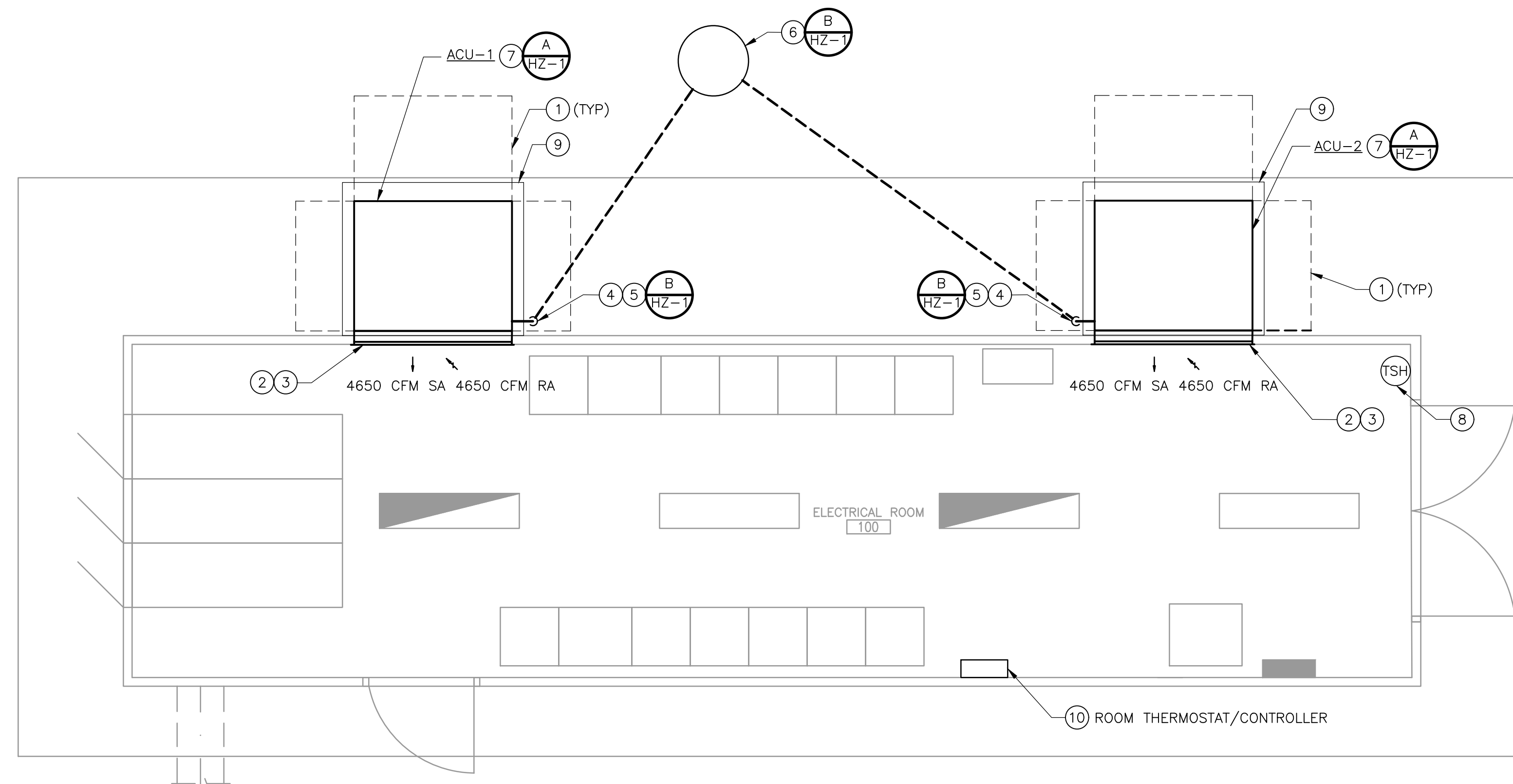
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CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

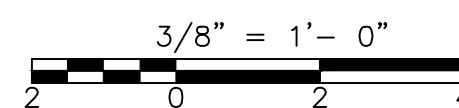
**HVAC SCHEDULE**

PROJECT NO. 2048-264953
FILE NAME: H002DSMD.DWG
SHEET NO. H-2

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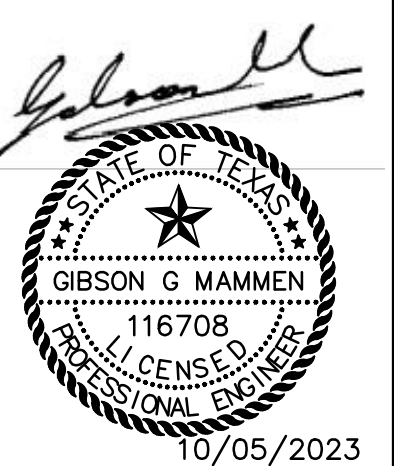


COORDINATED ELECTRICAL HOUSE  
PLAN



**KEY NOTES:**

- ① EQUIPMENT SERVICE CLEARANCE REQUIREMENT. DO NOT BLOCK.
- ② SUPPLY AIR DUCT THROUGH WALL. CONTRACTOR MUST COORDINATE SA DUCT OPENING DIMENSIONS FOR SELECTED ACU UNIT WITH E-HOUSE MANUFACTURER. TOP OF DUCT MAX 9'-0" AFF OF ELECTRICAL ROOM.
- ③ RETURN AIR DUCT THROUGH WALL. CONTRACTOR MUST COORDINATE RA DUCT OPENING DIMENSIONS FOR SELECTED ACU UNIT WITH E-HOUSE MANUFACTURER.
- ④ PROVIDE 1" PVC CONDENSATE DRAIN PIPING DISCHARGES TO PIPE HUB.
- ⑤ PROVIDE 2" PVC PIPE HUB AT THIS LOCATION AS PER REFERENCED DETAIL. PROVIDE PENETRATION THROUGH CONCRETE PAVEMENT.
- ⑥ PROVIDE DRY WELL AT THIS LOCATION. CONTRACTOR SHALL FIELD VERIFY AREA TO AVOID CONFLICT WITH EXISTING BURIED PIPING.
- ⑦ BOTTOM OF UNIT APPROXIMATELY 12" AFF. CONTRACTOR MUST COORDINATE BOTTOM OF UNIT ELEVATION WITH E-HOUSE MANUFACTURER BASED ON ACU DIMENSIONS.
- ⑧ HIGH TEMPERATURE SWITCH (TSH-1001-1). REFER TO INSTRUMENTATION DRAWINGS. MOUNT HIGH TEMPERATURE SWITCH 4'-0" AFF.
- ⑨ CONCRETE PAD UNDER A/C UNIT. CONTRACTOR TO COORDINATE PAD SIZE BASED ON A/C UNIT DIMENSIONS.
- ⑩ MOUNT THERMOSTAT 4'-0" AFF.



10/05/2023

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DRAWN BY:	G. NITHIYAN
SHEET CHK'D BY:	M. MAMMEN
CROSS CHK'D BY:	S. BURDETT
APPROVED BY:	M. MAMMEN
DATE:	NOVEMBER 2023

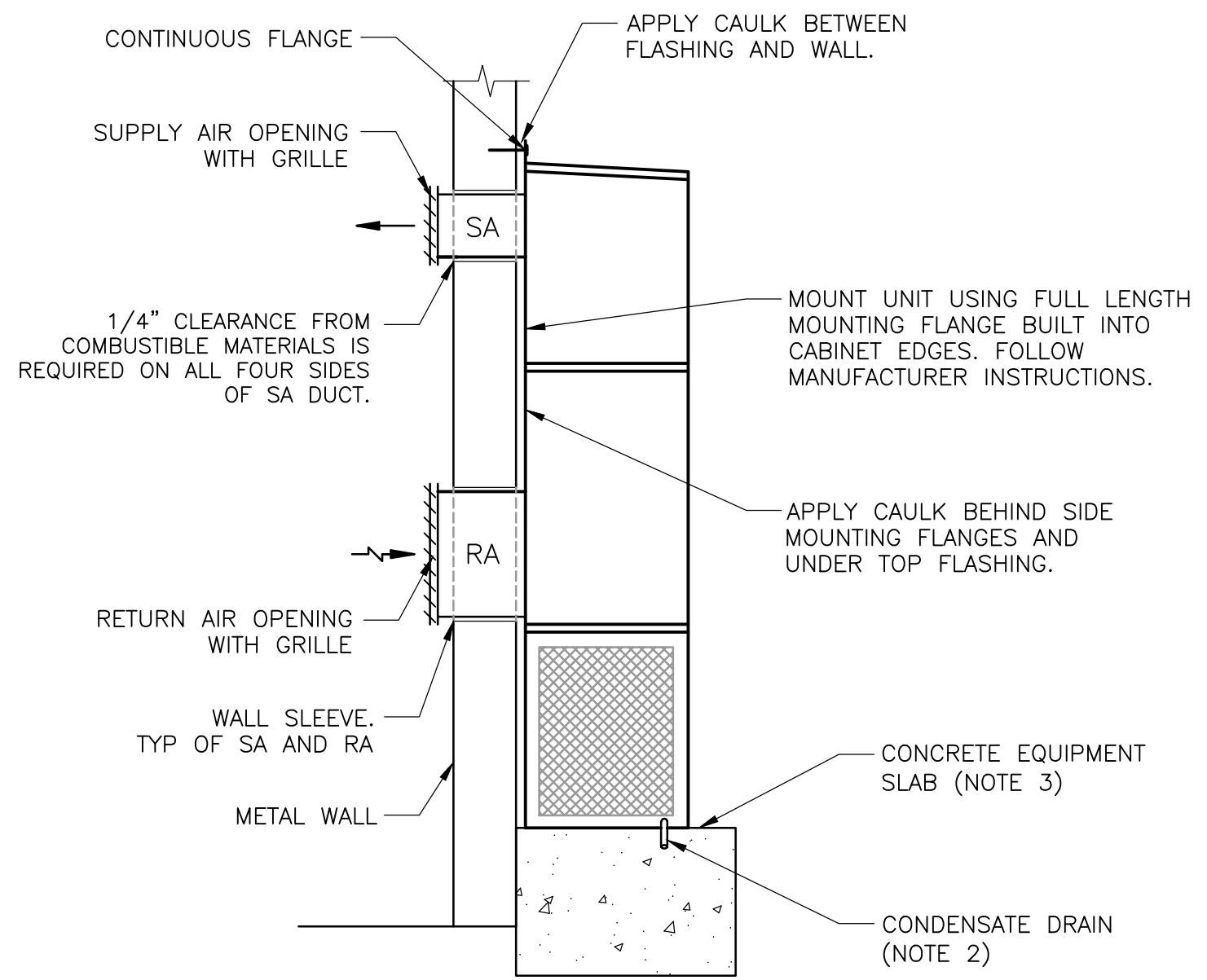
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DOVE SPRINGS WWTP  
 COORDINATED ELECTRICAL HOUSE  
 HVAC PLAN

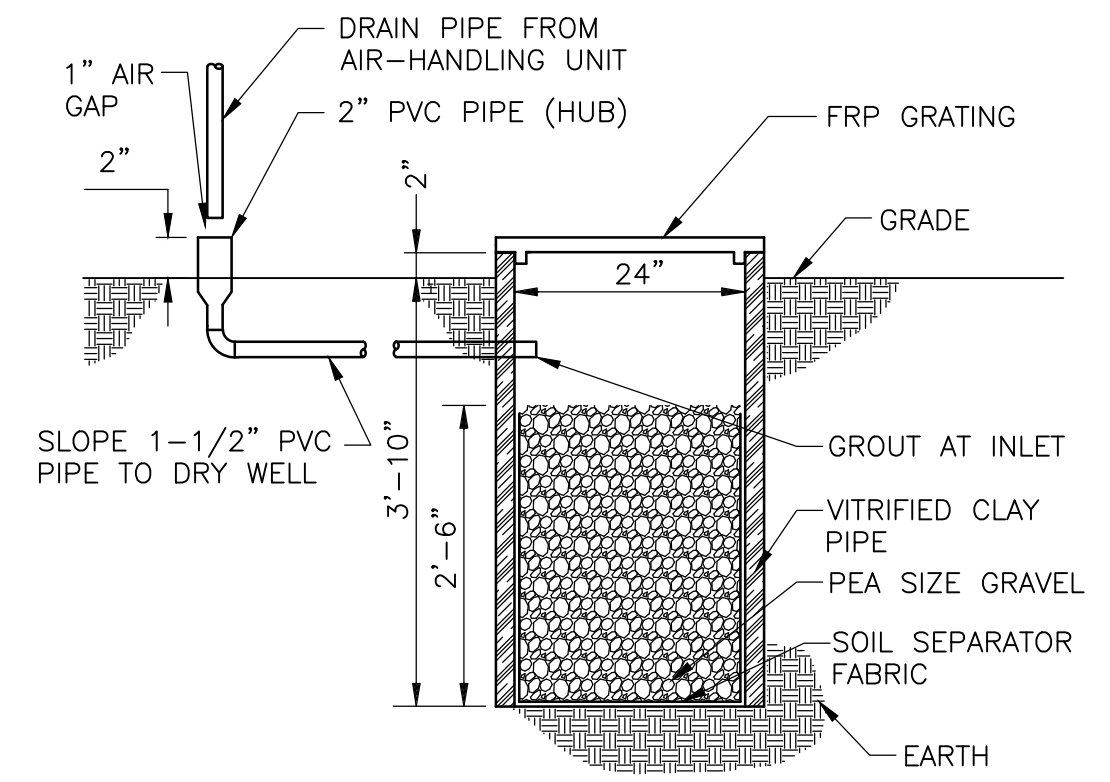
PROJECT NO.	2048-264953
FILE NAME:	DSHI1ELPL.DWG
SHEET NO.	DS-HI-1

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- NOTES:**
1. COORDINATE WALL OPENING SIZES WITH ACTUAL SIZES REQUIRED BY THE UNITS FURNISHED, PER APPROVED SUBMITTALS.
  2. COORDINATE CONDENSATE DRAIN WITH EQUIPMENT SLAB.
  3. CONTRACTOR TO PROVIDE CONCRETE EQUIPMENT SLAB BENEATH WALL MOUNTED AC UNIT. REFERENCE STRUCTURAL DETAIL B/SZ-2 FOR PAD DIMENSIONS. COORDINATE SLAB HEIGHT WITH REQUIRED WALL OPENING LOCATIONS PER APPROVED SUBMITTALS.

**WALL MOUNTED  
AIR CONDITIONING UNIT  
DETAIL A**  
NTS



**DRY WELL  
DETAIL B**  
NTS

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/10/24	SS	GM	CONFORMED DRAWINGS

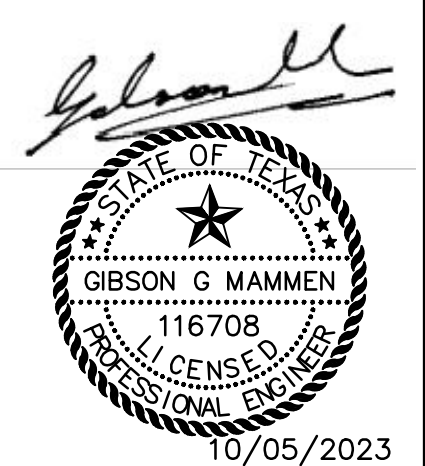
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CITY OF GEORGETOWN, TEXAS  
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 REHABILITATION

**HVAC  
DETAILS**

PROJECT NO.	2048-264953
FILE NAME:	H009DSL.DWG
SHEET NO.	<b>HZ-1</b>



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ONE LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION
	---	MEDIUM VOLTAGE DRAWOUT TYPE POWER CIRCUIT BREAKER CS=CONTROL SWITCH
	CB	LOW VOLTAGE AIR OR MOLDED CASE CIRCUIT BREAKER, 3 POLE UNLESS OTHERWISE NOTED.
	⊠	COMBINATION MOTOR CIRCUIT PROTECTOR AND MAGNETIC MOTOR STARTER, FULL VOLTAGE NON-REVERSING UNLESS OTHERWISE NOTED: * FVR - FULL VOLTAGE REVERSING * RVNR - REDUCED VOLTAGE NON-REVERSING RVAT - REDUCED VOLTAGE AUTOTRANSFORMER RVSS - REDUCED VOLTAGE SOLID STATE 2S1W - TWO SPEED, ONE WINDING 2S2W - TWO SPEED, TWO WINDING (DIAGRAMMATICALLY SHOWN, CONTRACTOR SHALL FIELD LOCATE)
	□	NON-FUSIBLE DISCONNECT SWITCH, 600 VOLT, 3 POLE * AMPERE RATING NOTED IF OTHER THAN 30A (DIAGRAMMATICALLY SHOWN, CONTRACTOR SHALL FIELD LOCATE)
	F	FUSIBLE DISCONNECT SWITCH, 600 VOLT, 3 POLE. * AMPERE RATING AND FUSE SIZE AS NOTED * AMPERE RATING NOTED IF OTHER THAN 30A FUSE RATING (DIAGRAMMATICALLY SHOWN, CONTRACTOR SHALL FIELD LOCATE)
	P 2	MANUAL MOTOR STARTER WITH THERMAL OVERLOAD HEATER, 1 POLE UNLESS OTHERWISE NOTED "P" INDICATES WITH PILOT LIGHT "2" INDICATES TWO POLE (DIAGRAMMATICALLY SHOWN, CONTRACTOR SHALL FIELD LOCATE)
	---	DRAWOUT TYPE EQUIPMENT OR DEVICE
	---	MEDIUM VOLTAGE CABLE TERMINATION
	---	MEDIUM VOLTAGE AIR INTERRUPTER SWITCH
	---	MEDIUM VOLTAGE FUSED AIR INTERRUPTER SWITCH * FUSE RATING
	---	FAULT INTERRUPTER
	---	MEDIUM VOLTAGE FUSED MOTOR CONTROLLER
	T	TRANSFORMER, RATINGS AND CONNECTIONS AS NOTED, UNLESS OTHERWISE NOTED ON THE SINGLE LINE DIAGRAMS. ALL DRY TYPE TRANSFORMERS SERVICING ADMINISTRATIVE AND LABORATORY SPACES SHALL HAVE A K FACTOR OF 4. ISOLATION TRANSFORMERS SHALL HAVE A K-20 RATING
	A TO 5	CURRENT TRANSFORMER * QUANTITY A = PRIMARY AMPERES # = POLARITY
	V TO 120	POTENTIAL TRANSFORMER * QUANTITY V = PRIMARY VOLTAGE
	G	GENERATOR, RATINGS AND CONNECTIONS AS NOTED
	---	AUTOMATIC OR MANUAL TRANSFER SWITCH NO.1 (ATS-1), (MTS-1) "N" INDICATES NORMAL OR PREFERRED SOURCE "S" INDICATES STANDBY OR ALTERNATE SOURCE 100A INDICATES CONTINUOUS CURRENT RATING
	*	VARIABLE SPEED DRIVE CONTROLLER * D.C. = D.C. DRIVE CONTROLLER SCR = SILICON CONTROLLED RECTIFIER VFD = VARIABLE FREQUENCY DRIVE
	#KW	UNIT HEATER - ELECTRIC HEATING COIL AND FAN # - RATING
	U	UNIT HEATER - GAS FIRED, STEAM OR WATER HEATING COIL AND FAN
	M	MOTOR, NUMERAL INDICATES HORSEPOWER
	VS	VOLTMETER WITH SWITCH, 3 PHASE
	AS	AMMETER WITH SWITCH, 3 PHASE

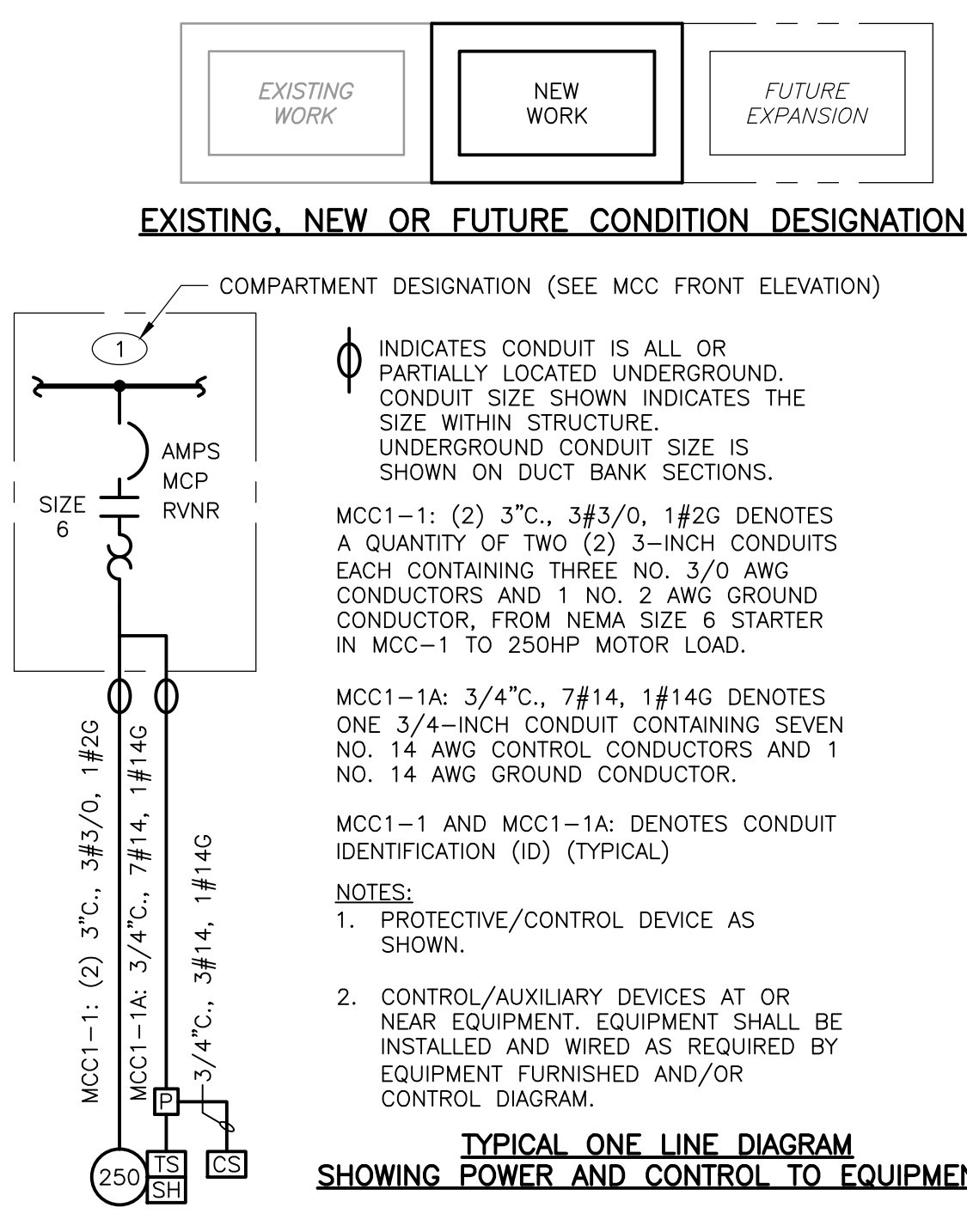
ONE LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION																
	---	METER * WM - WATTMETER WHM - WATTHOUR METER WHDM - WATTHOUR DEMAND METER WHDR - WATTHOUR DEMAND RECORDER PF - POWER FACTOR METER DMU - DIGITAL METERING UNIT																
	---	TRANSDUCER AX - CURRENT TRANSDUCER WX - WATT TRANSDUCER WHX - WATTHOUR TRANSDUCER																
	---	RELAY, NO. AS INDICATED 25 - SYNCHRONISM CHECK RELAY 27 - UNDERVOLTAGE RELAY 32 - DIRECTIONAL POWER 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 49 - MACHINE OR TRANSFORMER THERMAL RELAY 50/51 - INSTANTANEOUS/TIME OVERCURRENT RELAY 50C - INSTANTANEOUS GROUND 51 - TIME OVERCURRENT RELAY 51C - TIME OVERCURRENT RELAY, GROUNDING RESISTOR TYPE 51N - TIME OVERCURRENT RELAY, RESIDUAL TYPE 51V - TIME OVERCURRENT RELAY WITH VOLTAGE RESTRAINT 51X - AUXILIARY RELAY (TRIPS CB AND ALARMS) 59 - OVERVOLTAGE RELAY 60 - NEGATIVE SEQUENCE VOLTAGE RELAY 62 - TIME DELAY RELAY 63 - OVERPRESSURE RELAY 64 - GENERATOR FIELD GROUND RELAY 67 - AC DIRECTIONAL OVERCURRENT RELAY 74 - ALARM LATCHING 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 ST - SHUNT TRIP T - SUFFIX INDICATES "TRANSFORMER" X - SUFFIX INDICATES "AUXILIARY"																
	---	SPECIAL CAPACITOR * SC - SURGE CAPACITOR PF - POWER FACTOR CORRECTION CAPACITOR																
	---	TUNED POWER FACTOR CORRECTION CAPACITOR																
	---	PUSHBUTTON, MOMENTARY CONTACT, SPRING RETURN, NORMALLY CLOSED																
	---	PUSHBUTTON, MOMENTARY CONTACT, SPRING RETURN, NORMALLY OPEN																
	ES	EMERGENCY STOP PUSHBUTTON WITH RED MUSHROOM HEAD OPERATOR (MAINTAINED CONTACT)																
	PBL	START-STOP PUSHBUTTON CONTROL STATION (MOMENTARY CONTACT) WITH LOCKOUT DEVICE ON STOP																
	PBM	START-STOP PUSHBUTTON CONTROL STATION, MAINTAINED CONTACT WITH LOCKOUT DEVICE ON STOP																
	S/S	OFF/ON SELECTOR SWITCH																
	LR	LOCAL/REMOTE SELECTOR SWITCH																
	---	3 POSITION SELECTOR SWITCH, MAINTAINED CONTACT O-OPEN X-CLOSED <table border="1"> <tr> <th>POSITION</th> <th>TOP CONTACT</th> <th>MIDDLE CONTACT</th> <th>BOTTOM CONTACT</th> </tr> <tr> <td>A</td> <td>X</td> <td>O</td> <td>O</td> </tr> <tr> <td>B</td> <td>O</td> <td>X</td> <td>O</td> </tr> <tr> <td>C</td> <td>O</td> <td>O</td> <td>X</td> </tr> </table> NAMEPLATE (A/B/C) HOA - HAND/OFF/AUTO HOR - HAND/OFF/REMOTE LOR - LOCAL/OFF/REMOTE RSL - RAISE/STOP/LOWER TOA - TEST/OFF/AUTO	POSITION	TOP CONTACT	MIDDLE CONTACT	BOTTOM CONTACT	A	X	O	O	B	O	X	O	C	O	O	X
POSITION	TOP CONTACT	MIDDLE CONTACT	BOTTOM CONTACT															
A	X	O	O															
B	O	X	O															
C	O	O	X															
	GD/VF	GAS DETECTOR / VENTILATION FAILURE ALARM # INDICATES TYPE OF UNIT 1=MASTER, 2=REMOTE																
	---	MOTOR STARTER COIL, NUMBER AS INDICATED TO DENOTE INTERLOCKING ONLY																
	---	CONTROL RELAY COIL, NUMBER AS INDICATED																

ONE LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION
	---	PILOT LIGHT, COLOR AS NOTED * R - RED G - GREEN B - BLUE W - WHITE A - AMBER
	---	PILOT LIGHT, PUSH-TO-TEST TYPE, COLOR AS NOTED ABOVE.
	---	TIME DELAY RELAY RANGE AS NOTED SETPOINT AS NOTED # NUMBER AS INDICATED * TDE - TIME DELAY AFTER ENERGIZATION ON DELAY TDD - TIME DELAY AFTER DE-ENERGIZATION OFF 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. AS INDICATED * INDICATES INSTRUMENT TYPE DEFINED ON LOOP SHEETS OR P & ID ## INDICATES LOOP NO.
	LS OR ■	LIQUID LEVEL (FLOAT) SWITCH NORMALLY OPEN, CLOSING ON RISING LEVEL
	---	NORMALLY CLOSED, OPENS ON RISING LEVEL
	PS OR ■	PRESSURE OR VACUUM SWITCH NORMALLY OPEN, CLOSING ON RISING PRESSURE
	---	NORMALLY CLOSED, OPENS ON RISING PRESSURE
	---	NORMALLY CLOSED, OPENS ON DROPPING PRESSURE
	TS OR T OR ■	TEMPERATURE SWITCH OR THERMOSTAT
	---	NORMALLY OPEN, CLOSING ON RISING TEMPERATURE
	---	NORMALLY OPEN, CLOSING ON DROPPING TEMPERATURE
	---	NORMALLY CLOSED, OPENS ON RISING TEMPERATURE
	---	NORMALLY CLOSED, OPENS ON DROPPING TEMPERATURE
	FS OR ■	FLOW SWITCH (AIR, WATER, ETC.) NORMALLY OPEN, CLOSING 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
	WS OR ■	TORQUE SWITCH NORMALLY OPEN, CLOSING ON HIGH TORQUE
	---	NORMALLY CLOSED, OPENS ON HIGH TORQUE
	---	UTILIZED IN CONJUNCTION WITH OTHER CONTROL SCHEMATIC SYMBOLS TO DEPICT THE PHYSICAL LOCATION OF THE DEVICE # REPRESENTS LOCATION SEE LOCATION LEGEND ON DRAWING
	---	CONDUCTORS OR CONDUITS CROSSING PATHS BUT NOT CONNECTED
	---	CONDUCTORS ELECTRICALLY CONNECTED
	S	SOLENOID VALVE

ONE LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION
	---	LIGHTNING ARRESTER
	---	GROUND OR GROUND ROD
	---	FUSE, AMPERE RATING AS NOTED
	HTR	STRIP HEATER OR HEATING ELEMENT
	---	INDUCTOR
	TG	TACHOMETER GENERATOR
	---	CONTACT, NORMALLY OPEN (NO)
	---	CONTACT, NORMALLY CLOSED (NC)
	---	OVERLOAD RELAY HEATER
	---	* = KEY INTERLOCK E = ELECTRICAL INTERLOCK
	TB	TERMINAL OR TEST BLOCK
	RTD	RESISTANCE TEMPERATURE DETECTOR
	VE OR VE	VIBRATION DETECTOR
	DM	DAMPER MOTOR
	ETM	ELAPSED TIME METER
	M	MOTOR OPERATED VALVE OR GATE
	---	INDICATES LIMITS OF ELECTRICAL EQUIPMENT OR WIRING ENCLOSURE

**NOTES:**

- IN GENERAL CONDUIT ROUTING FOR EQUIPMENT AND DEVICES IS NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ROUTING ALL CONDUITS WHICH SHALL INCLUDE CONDUITS SHOWN ON ONE-LINE AND RISER DIAGRAMS AND HOME-RUNS SHOWN ON PLAN DRAWINGS. REFER TO SPECIFICATIONS FOR MATERIALS AND INSTALLATION REQUIREMENTS.
- THE WIRING DIAGRAMS, QUANTITY AND SIZE OF WIRES AND CONDUITS REPRESENT A SUGGESTED ARRANGEMENT BASED UPON SELECTED STANDARD COMPONENTS OF ELECTRICAL EQUIPMENT. MODIFICATIONS ACCEPTABLE TO THE ENGINEER MAY BE MADE BY THE CONTRACTOR TO ACCOMMODATE EQUIPMENT ACTUALLY PURCHASED. THE BASIC SEQUENCE AND METHOD OF CONTROL MUST BE MAINTAINED AS INDICATED ON THE DRAWINGS AND/OR SPECIFICATIONS.
- SWITCHGEAR AND MOTOR CONTROL CENTER COMPARTMENT DESIGNATIONS AS INDICATED BELOW:  
BLANK: NOT INTENDED FOR USE. PLATE ONLY  
SPACE: EQUIPPED WITH REQUIRED BUS AND HARDWARE FOR THE FUTURE ADDITION OF BREAKERS AND/OR STARTERS WITHIN THE SIZE AND RANGE SHOWN  
SPARE: CONTAINS A COMPLETELY INSTALLED BREAKER AND/OR STARTER OF SIZE AND TYPE INDICATED FOR FUTURE USE.
- INTERPRETATION OF ELECTRICAL DRAWINGS: CIRCUIT IDENTIFICATION, ROUTING, AND SIZES OF CONDUITS AND WIRES ARE SHOWN ON THE FOLLOWING DRAWINGS:  
A. ONE LINE POWER DIAGRAMS: POWER, CONTROL AND SIGNAL WIRING REQUIREMENTS FOR ELECTRICAL DISTRIBUTION EQUIPMENT AND UTILIZATION EQUIPMENT POWERED FROM SWITCHGEAR, SWITCHBOARDS, MOTOR CONTROL CENTERS AND MAJOR POWER DISTRIBUTION PANELBOARDS ARE TYPICALLY SHOWN ON THE ONE LINE DIAGRAMS. THE PARAMETERS IDENTIFIED ON THE ONE LINE DIAGRAMS ARE: CIRCUIT IDENTIFICATION, CIRCUIT ORIGIN AND DESTINATION, CONDUIT SIZE, WIRE SIZE AND QUANTITY FOR COMPLETE CIRCUIT LENGTH, AND AUXILIARY DEVICES ASSOCIATED WITH THE CONTROL/PROTECTION OF THE POWERED EQUIPMENT, AND SIZE OF THE GROUNDING ELECTRODE CONDUCTORS.  
B. INSTRUMENTATION AND CONTROL RISER DIAGRAMS: POWER, CONTROL, SIGNAL AND DATA HIGHWAY WIRING REQUIREMENTS FOR INSTRUMENTS AND CONTROL DEVICES CONTROLLED/MONITORED FROM INSTRUMENTATION AND CONTROL PANELS SUCH AS RTUS, PLCs, TERMINAL CABINETS, AND REMOTE I/O PANELS ARE TYPICALLY SHOWN ON THE INSTRUMENTATION AND CONTROL ONE LINE DIAGRAMS. THE PARAMETERS IDENTIFIED ON THE ONE LINE DIAGRAMS ARE: CIRCUIT IDENTIFICATION, CIRCUIT ORIGIN AND DESTINATION, CONDUIT SIZE, WIRE SIZE, QUANTITY AND TYPE FOR COMPLETE CIRCUIT LENGTH, AND AUXILIARY DEVICES ASSOCIATED WITH THE CONTROL/PROTECTION OF THE POWERED EQUIPMENT.  
C. FLOOR PLANS: FOR DETERMINING THE LENGTH OF CIRCUITS LOCATED WITHIN STRUCTURES, FLOOR PLANS SHOW THE LOCATION OF ELECTRICAL DISTRIBUTION EQUIPMENT, CONTROL PANELS, UTILIZATION EQUIPMENT, INSTRUMENTS, ANCILLARY EQUIPMENT AND DEVICES AND THE ANTICIPATED PENETRATION LOCATIONS WHERE CONDUITS EXIT/ENTER THE STRUCTURE. HOMERUNS MAY ALSO BE SHOWN FROM MISCELLANEOUS EQUIPMENT NOT SHOWN ON A ONE LINE OR RISER DIAGRAM.  
D. SITE PLANS: FOR DETERMINING THE LENGTH OF CIRCUITS EXTERIOR TO STRUCTURES AND TO IDENTIFY THE SPECIFIC REQUIREMENTS OF THE UNDERGROUND CONDUITS OR DUCT BANKS, SITE PLANS SHOW THE GENERAL ROUTING OF UNDERGROUND CONDUITS AND DUCT BANKS WITH SECTIONS INDICATING THE CONDUIT SIZE, ARRANGEMENT AND CIRCUIT ROUTING.  
E. NOTE THAT CONDUIT SIZE WITHIN THE STRUCTURE IS INDICATED ON ONE-LINE DIAGRAM AND UNDERGROUND SIZE IS INDICATED ON DUCT BANK SECTIONS.



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REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	STC	JCS	CONFORMED DRAWINGS

PROJECT NO. 2048-264953	SHEET NO. E-1
FILE NAME: E001NFLG.DWG	

**ELECTRICAL LEGEND I**

Juan Carlos Saeenz  
138331  
LICENSED PROFESSIONAL ENGINEER  
11/28/2023

PROJECT NO. 2048-264953
FILE NAME: E001NFLG.DWG
SHEET NO. E-1

XREFS: CDMIS 2204\_SG\_JCS-INTERIM/STAMP\_CDMIS 2234\_DS Images: I Last saved by: VIDHUJ Time: 10/16/2023 12:04:42 PM p:\v\cdms\mha-2020-pw-bentley.com\pw\_01\20482649504\_Electrical\0 BIM\CADD\002NFLG.dwg © 2022 CDM SMITH ALL RIGHTS RESERVED. REUSE OF DOCUMENTS: THESE DOCUMENTS AND DESIGNS PROVIDED BY PROFESSIONAL SERVICE, INCORPORATED HEREIN, ARE THE PROPERTY OF CDM SMITH AND ARE NOT TO BE USED, IN WHOLE OR PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF CDM SMITH.

SYMBOL	DESCRIPTION
	LIGHTING FIXTURE "A" - FIXTURE TYPE (SEE LIGHTING FIXTURE SCHEDULE) "b" - CONTROLLED BY SWITCH "b" "3" - CIRCUIT NUMBER
	LIGHTING FIXTURE, NOTATIONS SAME AS ABOVE
	WALL MOUNTED TYPE LIGHTING FIXTURE, NOTATIONS SAME AS ABOVE
	CROSS HATCH INDICATES LIGHTING FIXTURE THAT IS UNSWITCHED AND SHALL REMAIN ON AT ALL TIMES. NOTATIONS SAME AS ABOVE.
	SHADED AREA INDICATES LIGHTING FIXTURE THAT IS EQUIPPED WITH EMERGENCY BACKUP POWER SOURCE. NOTATIONS SAME AS ABOVE.
	POLE MOUNTED AREA TYPE LIGHTING FIXTURE, NOTATIONS SAME AS ABOVE
	POLE MOUNTED ROADWAY TYPE LIGHTING FIXTURE, NOTATIONS SAME AS ABOVE
	EMERGENCY LIGHTING BATTERY UNIT WITH TWO LAMP HEADS "EM" - FIXTURE TYPE (SEE LIGHTING FIXTURE SCHEDULE) "3" - SUPERVISORY CIRCUIT * - FIXTURE TAG #
	REMOTE EMERGENCY ADJUSTABLE WALL LIGHTING FIXTURE WITH TWO LAMP HEADS "R-2" - FIXTURE TYPE (SEE LIGHTING FIXTURE SCHEDULE) * - HOME RUN TO BATTERY UNIT INDICATED. CONDUIT SHALL BE 3/4" AND CONTAIN (2) NO. 12 AWG BRANCH CIRCUIT CONDUCTORS AND (1) NO. 12 AWG GROUND CONDUCTOR UNLESS OTHERWISE INDICATED.
	COMBINATION BATTERY UNIT AND EXIT SIGN. FILLED QUADRANT REPRESENTS FACE SIDE OF SIGN.
	CEILING MOUNTED EXIT SIGN, NOTATIONS SAME AS ABOVE. WHEN USED, ARROW INDICATES DIRECTION OF EGRESS. FILLED QUADRANT REPRESENTS FACE SIDE OF SIGN. (DOUBLE FACE DOUBLE CHEVRONS SHOWN)
	WALL MOUNTED EXIT SIGN, NOTATIONS SAME AS ABOVE. WHEN USED, ARROW INDICATES DIRECTION OF EGRESS. FILLED QUADRANT REPRESENTS FACE SIDE OF SIGN.
	REMOTE EMERGENCY CEILING LIGHTING FIXTURE. "RH-3" - FIXTURE TYPE (SEE LIGHTING FIXTURE SCHEDULE) "3" - SUPERVISORY CIRCUIT * - HOME RUN TO BATTERY UNIT INDICATED. CONDUIT SHALL BE 3/4" AND CONTAIN 2 NO. 12 AWG BRANCH CIRCUIT CONDUCTORS AND 1 NO. 12 AWG GROUND CONDUCTOR UNLESS OTHERWISE INDICATED.
	HOME RUN TO DESIGNATED EQUIPMENT. BRANCH CIRCUIT CONDUIT WITH 2 NO. 12 AWG BRANCH CIRCUIT CONDUCTORS AND 1 NO. 12 AWG GROUND CONDUCTOR UNLESS OTHERWISE NOTED. NUMBER OF ARROWS INDICATE NUMBER OF CIRCUITS. FOR MINIMUM SIZE CONDUIT PERMITTED REFER TO THE SPECIFICATIONS.
	CONDUIT CONCEALED IN WALL, IN SLAB ABOVE, OR ABOVE CEILING.
	CONDUIT CONCEALED IN OR BELOW FLOOR OR UNDERGROUND.
	CONDUIT RUN EXPOSED. RUN PARALLEL OR PERPENDICULAR TO STRUCTURE OR WALL.
	'X' INDICATES EXPLOSION PROOF CONDUIT SEAL FITTING.
	CONCRETE ENCASED DUCTBANK. WIDTH VARIES, SEE DUCTBANK SECTION/DETAILS FOR REQUIREMENTS AND WIDTH
	CONDUIT STUBBED OUT AND CAPPED
	DENOTES A QUANTITY OF TWO (2) 3-INCH CONDUITS EACH CONTAINING THREE NO. 3/0 AWG CONDUCTORS AND 1 NO. 2 AWG GROUND CONDUCTOR.
	DENOTES A QUANTITY OF TWO INSTRUMENT CABLES. EACH CABLE TO CONSIST OF TWO NO. 16 AWG CONDUCTORS TWISTED TOGETHER AND COVERED WITH A METALLIC SHIELD AND AN OVERALL PROTECTIVE JACKET. REFER TO THE SPECIFICATIONS FOR THE EXACT CABLE TO BE PROVIDED.
	SAME AS ABOVE EXCEPT CABLE TO CONSIST OF THREE NO. 16 AWG CONDUCTORS TWISTED, SHIELDED AND COVERED WITH AN OVERALL PROTECTIVE JACKET. REFER TO THE SPECIFICATIONS FOR THE EXACT CABLE TO BE PROVIDED.
	THREE 4-INCH CONDUITS
	FLEXIBLE METAL CONDUIT "WHIP" (3/4"C., 2#12, 1#12G UNLESS OTHERWISE NOTED) FOR LIQUID TIGHT MOTOR CONNECTIONS
	'X' INDICATES CONDUIT SEAL FITTING IN OTHER THAN CODE REQUIRED LOCATIONS.
	INDICATES MOTOR STARTER AND/OR MOTOR CONTROL EQUIPMENT WITHIN THE ENCLOSURE.

SYMBOL	DESCRIPTION
	SINGLE POLE SWITCH "o" INDICATES FIXTURES CONTROLLED.
	DOUBLE POLE SWITCH "o" INDICATES FIXTURES CONTROLLED.
	THREE WAY SWITCH "c" INDICATES FIXTURES CONTROLLED.
	FOUR WAY SWITCH "o" INDICATES FIXTURES CONTROLLED.
	DIMMER SWITCH "o" INDICATES FIXTURES CONTROLLED
	SINGLE POLE SWITCH "OS" INDICATES A PASSIVE INFRARED OCCUPANCY SENSOR
	DOUBLE POLE SWITCH "DOS" INDICATES PROGRAMMABLE OCCUPANCY SENSOR CAPABLE OF INBOARD/OUTBOARD SWITCHING
	SINGLE POLE SWITCH "DT" INDICATES DUAL TECHNOLOGY PROGRAMMABLE OCCUPANCY SENSOR CAPABLE OF SENSING MOTION AND SOUND
	SINGLE POLE SWITCH "M" INDICATES MOTOR RATED SWITCH
	LIGHTING CONTACTOR WITH NUMBER OF POLES AS INDICATED
	TIME SWITCH
	PUSH BUTTON STATION
	INDICATES ALL LIGHTING FIXTURES WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL BE TYPE "A" UNLESS OTHERWISE NOTED. SEE LIGHTING FIXTURE SCHEDULE FOR TYPES
	LIGHTING PANELBOARD (LP-#) SHOWN ON PLAN PER ACTUAL PANEL DIMENSIONS
	POWER PANELBOARD (PP-#) OR DISTRIBUTION PANELBOARD (DP-#) SHOWN ON PLAN PER ACTUAL PANEL DIMENSIONS
	LIGHTING CONTACTOR PANELBOARD (LCP-#) SHOWN ON PLAN PER ACTUAL PANEL DIMENSIONS
	DUPLEX RECEPTACLE, 20A, 120V, 2P, 3W * GFCI - GROUND FAULT CIRCUIT INTERRUPTER TYPE WP - WEATHERPROOF XP - EXPLOSION PROOF T - TRANSIENT VOLTAGE SURGE SUPPRESSOR IC - ISOLATED GROUND 4 - CIRCUIT NUMBER
	DUPLEX RECEPTACLE, 20A, 120V, 2P, 3W MOUNTED ABOVE COUNTER-TOP OR 42" AFF * NOTATIONS SAME AS ABOVE
	SPECIAL PURPOSE RECEPTACLE * - VOLT RATING "3" - NUMBER OF POLES "60" - AMPERE RATING "4W" - 4 WIRES IN ADDITION TO GROUND
	MULTI-OUTLET ASSEMBLY, SYMBOL DENOTES RECEPTACLE TYPE
	FLUSH FLOOR OUTLET BOX WITH TYPE OUTLET INDICATED
	UNDER FLOOR DUCT SYSTEM WITH TYPE OUTLETS INDICATED
	THREE CELL UNDER FLOOR DUCT SYSTEM JUNCTION BOX
	JUNCTION BOX
	PULL BOX
	TERMINAL CABINET
	OCCUPANCY SENSOR
	PHOTOCELL
	EMERGENCY EYEWASH/SHOWER ALARM STATION WITH FLOW SWITCH(ES)
	INDICATED EQUIPMENT AND MATERIALS TO BE DEMOLISHED
	GROUND SYSTEM GRID OR LOOP, 36" BELOW FINISHED GRADE UNLESS OTHERWISE NOTED.
	EXOTHERMIC WELD CONNECTION
	3/4" x 10'-0" GROUND ROD, UNLESS SPECIFIED OTHERWISE.
	GROUND ROD TEST WELL STATION (SEE DETAIL SHEET FOR REQUIREMENTS)

SYMBOL	DESCRIPTION
COMMUNICATION SYSTEMS	
	TELEPHONE OUTLET FOR DESK TYPE HANDSET K = KEY SYSTEM
	TELEPHONE OUTLET FOR WALL TYPE HANDSET (MOUNT UP 4'-6") K = KEY SYSTEM
	PAGE/PARTY TELEPHONE OUTLET FOR DESK TYPE HANDSET
	PAGE/PARTY TELEPHONE OUTLET FOR WALL TYPE HANDSET, MOUNT UP 4'-6"
	PAGING SPEAKER, WALL MOUNTED H = HORN TYPE W = WIDE ANGLE TYPE
	PAGING SPEAKER, WALL MOUNTED, BI-DIRECTIONAL, HORN TYPE W = WIDE ANGLE TYPE
	PAGING SPEAKER, FLUSH MOUNTED CEILING TYPE
	PAGING SPEAKER, SURFACE MOUNTED CEILING TYPE
	REMOTE WALL MOUNTED VOLUME CONTROL FOR CEILING SPEAKER, MOUNT UP 5'-0"
	PAGING SPEAKER AMPLIFIER ASSEMBLY
	TELEPHONE CABINET OR BACKBOARD AS NOTED
	"C" - DATA INPUT/OUTPUT CABLE OUTLET "P" - PROCESS COMPUTER SYSTEM (CAT6 RJ-45 JACK)
	GAS DETECTION/VENTILATION FAILURE WEATHERPROOF DUAL-LITE BEACON MOUNT TOP OF DEVICE UP 6'-8" A.F.F.
	GAS DETECTION/VENTILATION FAILURE HORN/STROBE MOUNT TOP OF DEVICE UP 6'-8" A.F.F.
	GAS DETECTION/VENTILATION FAILURE HORN, MOUNT TOP OF DEVICE UP 6'-8" A.F.F.
	GAS DETECTION/VENTILATION FAILURE STROBE, MOUNT TOP OF DEVICE UP 6'-8" A.F.F.
SECURITY SYSTEMS	
	SECURITY ALARM CONTROL PANEL
	SECURITY ALARM DOOR SWITCH
	SECURITY ALARM KEY PAD
	SECURITY SYSTEM CARD ACCESS READER
	SECURITY ALARM WINDOW SWITCH
	SECURITY ALARM MOTION DETECTOR
	CLOSED CIRCUIT TV CAMERA
	PAN, TILT, ZOOM CAMERA LENS CONTROLS
	GLASS BREAK DETECTOR
FIRE ALARM SYSTEMS	
	FIRE ALARM HEAT DETECTOR 135 FIXED TEMPERATURE UNLESS OTHERWISE NOTED. "200" - 200 FIXED TEMPERATURE "R" - FIXED TEMPERATURE RATE-OF-RISE TYPE
	FIRE ALARM SMOKE DETECTOR PHOTOELECTRIC TYPE UNLESS OTHERWISE NOTED. "I" - IONIZATION TYPE.
	FIRE ALARM DUCT SMOKE DETECTOR
	FIRE ALARM CONTROL PANEL
	FIRE ALARM VENTILATION PANEL WITH GRAPHIC PANEL
	REMOTE FIRE ALARM ANNUNCIATOR PANEL
	FIRE ALARM MASTER BOX
	FIRE ALARM HORN, MOUNT UP 7'-6"
	FIRE ALARM STROBE, MOUNT UP 6'-8" 15 = CANDELA RATING

SYMBOL	DESCRIPTION
	FIRE ALARM HORN AND STROBE LIGHT COMBINATION, MOUNT UP 6'-8" 15 = CANDELA RATING
	FIRE ALARM MANUAL PULL STATION, MOUNT UP 4'-0"
	SPRINKLER VALVE SUPERVISORY SWITCH
	SPRINKLER FLOW ALARM SWITCH
	FIRE ALARM BELL
	WEATHERPROOF HI-INTENSITY FIRE ALARM STROBE LIGHT WITH HORN
	PASSIVE INFRARED DETECTOR
	SMOKE BEAM DETECTOR (RECEIVER)
	SMOKE BEAM DETECTOR (TRANSMITTER)
	FIRE ALARM SMOKE DETECTOR REMOTE INDICATOR AND TEST SWITCH

ABBREVIATIONS (CONTINUED)	
EM	EMERGENCY
ENCL	ENCLOSURE OR ENCLOSED EQUIPMENT
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EX	EXISTING
FO	FIBER OPTIC
FU	FUSE
GCP	GENERATOR CONTROL PANEL
GEN	GENERATOR
G, GND	GROUND
GFI	GROUND FAULT INTERRUPTER
GRS	GALVANIZED RIGID STEEL
HACR	HEATING & AIR CONDITIONING RATED HANDHOLE
HH	HEIGHT
HT	HIGH INTENSITY DISCHARGE HORSEPOWER
HID	HERTZ
HP	IDENTIFICATION INSTRUMENT
HZ	KILO (PREFIX)
ID	1000 CIRCULAR MILS
INSTR	KILOVOLT AMPERES
K	KILOWATTS
kmil	LIGHTNING ARRESTER
KVA	LIGHTING PANEL
KW	LOW VOLTAGE
LA	MAXIMUM
LTG	MAIN CIRCUIT BREAKER
LP	MOTOR CONTROL CENTER
LV	MOTOR CIRCUIT PROTECTOR
MAX	MAIN DISTRIBUTION PANEL
MCB	MANUFACTURER
MCC	MANHOLE
MCP	MINIMUM
MDP	MAIN LUGS ONLY
MFR	MOISTURE SWITCH
MH	MOUNTED
MIN	MANUAL TRANSFER SWITCH
MLO	MEDIUM VOLTAGE
MS	NEUTRAL
MTD	NORMALLY CLOSED
MTS	NORMALLY OPEN OR NUMBER NOT TO SCALE
MV	NTS
N	OH
NC	OVERLOAD
NO	PULL BOX
NTS	PUMP CONTROL PANEL
OH	PHASE
OL	POWER MANHOLE
PB	PANEL OR PANELBOARD
PCP	PAIR
PH	PRIMARY
PMH	POTENTIAL TRANSFORMER
PNL	POLYVINYL CHLORIDE
PR	RECEPTACLE
PRI	REQUIRED
PT	QUANTITY
PVC	DOWN
RECPT	SA
REQD	SECONDARY
QTY	SH
SA	SHIELDED OR SPACE HEATER
SEC	SIGNAL HANDHOLE
SH	SOLENOID VALVE
SHH	SW
SPD	SWBD
SS	SWGB
SV	TEL
SW	TO
SWBD	TS
SWGB	TYP
TC	UG
TEL	UPS
TO	V
TS	VA
TYP	VFD
UG	W
UPS	WP
V	XP
VA	XFMR
VFD	
W	
WP	
XP	
XFMR	

ABBREVIATIONS	
A	AMPS
AC	ALTERNATING CURRENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AL	ALUMINUM
AIC	AMPERE INTERRUPTING CAPACITY
AMP	AMPERE
ATC	AUTOMATIC TRANSFER CONTROL
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
BKR	BREAKER
BLDG	BUILDING
C	CONDUIT
CB	CIRCUIT BREAKER
CGD	COMBUSTIBLE GAS DETECTOR
CKT	CIRCUIT
CLB	CURRENT LIMITING BREAKER
CLF	CURRENT LIMITING FUSE
CP	CONTROL PANEL
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY
CS	CONTROL SWITCH/CONTROL STATION
CT	CURRENT TRANSFORMER
CU	COPPER
CWS	CONDUIT WALL SEAL
DC	DIRECT CURRENT
DIA	DIAMETER
DMU	DIGITAL METERING UNIT
DN	DOWN
EC	EMPTY CONDUIT
ELEC	ELECTRICAL
ELEV	ELEVATION

SHEET NO. WHERE DETAIL IS DRAWN  
SYMBOL WHERE THERE IS A DETAIL

SHEET NO. WHERE THERE IS A DETAIL  
DETAIL  
1/4" = 1'-0"

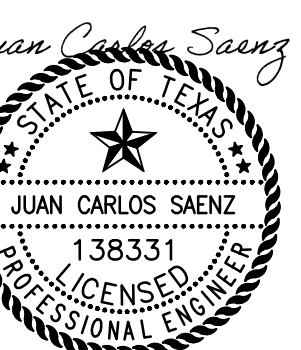
SHEET NO. WHERE SECTION IS DRAWN  
DETAIL SYMBOL

SHEET NO. WHERE SECTION IS DRAWN  
SYMBOL WHERE THERE IS A SECTION

SHEET NO. WHERE SECTION IS TAKEN  
SECTION  
1/4" = 1'-0"  
SYMBOL WHERE SECTION IS DRAWN

SECTION SYMBOL

**GENERAL NOTE**  
THIS IS A STANDARD LEGEND.  
SOME SYMBOLS MAY NOT APPEAR ON THE DRAWINGS.



REV.	NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	STC	JCS		CONFORMED DRAWINGS

DESIGNED BY:	S. KAMAL
DRAWN BY:	S. KAMAL
SHEET CHK'D BY:	M. CZACH
CROSS CHK'D BY:	G. PRABHU
APPROVED BY:	J. SAENZ
DATE:	NOVEMBER 2023

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TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS  
DOVE SPRINGS WWTP  
REHABILITATION

ELECTRICAL LEGEND II

PROJECT NO.	2048-264953
FILE NAME:	E002NFLG.DWG
SHEET NO.	E-2

XREFS: CDMIS\_2204\_SG\_JCS-INTERIMRV STAMP\_CDMIS\_2204\_DS\_Images-1

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**SCOPE OF WORK:**

1. PROVIDE ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO INSTALL, COMPLETE, AND MAKE OPERATIONAL, ELECTRICAL IMPROVEMENTS SUCH AS BUT NOT LIMITED TO REPLACING THE EXISTING SWITCHBOARD AND MOTOR CONTROL CENTER(S) (MCC) WITH NEW SWITCHGEAR AND MCCS WHILE MAINTAINING OPERATIONS AT THE DOVE SPRINGS WWTP AS SHOWN ON THE DRAWINGS.
2. PROVIDE POWER SYSTEM STUDIES IN ACCORDANCE WITH SPECIFICATION 26 05 73.

**GENERAL NOTES:**

1. ELECTRICAL DRAWINGS ARE INTENDED TO SHOW THE GENERAL LAYOUT OF WORK TO BE INSTALLED UNDER THIS CONTRACT WITHOUT ATTEMPTING TO SHOW ALL DETAILS. FURNISH LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS REQUIRED FOR A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM AS SHOWN ON THE CONTRACT DOCUMENTS.
2. COORDINATE WORK WITH OTHER TRADES AND THE OWNER.
3. MAINTAIN EXISTING PROCESS OPERATIONS. POWER INTERRUPTIONS TO ELECTRICAL EQUIPMENT SHALL BE AT OWNER'S CONVENIENCE WITH 7 CALENDER DAYS MINIMUM NOTICE. EACH INTERRUPTION SHALL HAVE PRIOR WRITTEN APPROVAL.
4. FIELD VERIFY EXISTING UNDERGROUND ELECTRICAL CONDUIT, CONCRETE DUCT BANKS, MANHOLES, PULL BOXES, ETC. AND MECHANICAL PIPING. CONTRACTOR SHALL INCLUDE IN BID COSTS ASSOCIATED WITH RELOCATION OR REMOVAL OF UNDERGROUND EQUIPMENT AS REQUIRED BY THIS CONTRACT. USE DUE CARE IN CONGESTED AREAS TO AVOID DAMAGE TO EXISTING UNDERGROUND UTILITIES.
5. CONTRACTOR'S WORK SHALL INCLUDE COMPLETE TESTING OF EQUIPMENT AND WIRING INCLUDING MAKING MINOR CORRECTIONS, CHANGES, OR ADJUSTMENTS NECESSARY FOR THE PROPER FUNCTIONING OF THE SYSTEM AND EQUIPMENT. WORKMANSHIP SHALL BE OF THE HIGHEST QUALITY; SUBSTANDARD WORK WILL BE REJECTED.
6. DO NOT SCALE ELECTRICAL DRAWINGS. REFER TO MECHANICAL, STRUCTURAL DRAWINGS, AND APPROVED MANUFACTURER'S SHOP DRAWINGS FOR EXACT LOCATION OF EQUIPMENT. EXCEPT WHERE DIMENSIONS ARE SHOWN, LOCATIONS OF EQUIPMENT, FIXTURES, OUTLETS, AND SIMILAR DEVICES ARE APPROXIMATE.
7. WORK SHALL COMPLY WITH NEC AND LOCAL CODES.
8. DO NOT SPLICE CONDUCTORS EXCEPT AS NOTED.
9. POWER AND CONTROL CONDUITS SHALL HAVE AN EQUIPMENT GROUNDING CONDUCTOR WIRE SIZED PER TABLE 250.122 OF THE NEC (UON).
10. COORDINATE SEQUENCE OF CONSTRUCTION WITH CIVIL, MECHANICAL, AND STRUCTURAL DISCIPLINES. PROVIDE TEMPORARY POWER AND CONTROL CIRCUITS AS REQUIRED TO MAINTAIN FACILITY OPERATION. VERIFY EXISTING UTILITIES IN AREA OF CONSTRUCTION. REFER TO CIVIL DRAWINGS FOR ADDITIONAL UNDERGROUND INFORMATION.
11. REPAIR, IN ACCORDANCE WITH SPECIFICATIONS, SIDEWALKS, WALLS, ROADWAYS, ETC. DISTURBED BY CONSTRUCTION ACTIVITIES WHETHER OR NOT SHOWN FOR REPAIR/REPAVING ON CIVIL DRAWINGS.
12. CONCEAL CONDUITS TO GREATEST EXTENT PRACTICABLE. CONDUITS RUN AT EXISTING STRUCTURES SHALL BE RUN EXPOSED.
13. WHERE LOCAL DISCONNECTS AND CONTROL PANELS ARE SHOWN ON PLAN VIEWS, LOCATIONS ARE APPROXIMATE. ADJUST LOCATION AS REQUIRED TO COMPLY WITH NEC ARTICLE 110 FOR WORKING CLEARANCES.
14. DO NOT INSTALL MAJOR CONDUIT RUNS THROUGH AREAS DESIGNATED FOR FUTURE STRUCTURES.

**SUBMITTALS:**

1. SUBMIT SHOP DRAWINGS FOR EQUIPMENT, MATERIALS AND OTHER ITEMS FURNISHED UNDER DIVISION 26.
2. SUBMIT CONDUIT SHOP DRAWINGS FOR YARD ELECTRICAL, WITHIN AND UNDER ROADS, BUILDINGS AND STRUCTURES PRIOR TO COMMENCING WORK. DO NOT POUR CONCRETE UNTIL ENGINEER HAS APPROVED THE ASSOCIATED SHOP DRAWING.
3. SUBMIT POWER SYSTEM STUDY IN ACCORDANCE WITH SECTION 26 05 73.
4. SUBMIT OPERATION AND MAINTENANCE MANUALS FOR EQUIPMENT FURNISHED UNDER DIVISION 26.
5. SUBMIT STARTUP/COMMISSIONING PLANS FOR EQUIPMENT FURNISHED UNDER DIVISION 26.
6. SUBMIT TESTING AND SERVICE REPORTS FOR EQUIPMENT AND MATERIALS FURNISHED UNDER DIVISION 26.
7. SUBMIT TRAINING PLANS FOR EQUIPMENT FURNISHED UNDER DIVISION 26.
8. SUBMIT RECORD DOCUMENTATION TO ACCURATELY SHOW COMPLETED INSTALLATION. INCLUDE MODIFICATIONS TO CONTRACT DOCUMENTS (ONE LINE POWER DIAGRAMS, EQUIPMENT ELEVATIONS, PANEL SCHEDULES, ELEMENTARY CONTROL DIAGRAMS, RISER DIAGRAMS, PLANS, CONDUIT AND DUCTBANK ROUTING, ETC) ALONG WITH ADDITIONAL DRAWINGS OR SKETCHES CREATED TO CONVEY COMPLETED INSTALLATION.

**INTERPRETATION OF CONTRACT DOCUMENTS:**

1. IF DURING PERFORMANCE OF WORK, THERE IS A CONFLICT, ERROR, OR DISCREPANCY BETWEEN OR AMONG CONTRACT DOCUMENTS AND LAWS AND REGULATIONS, PROVIDE THE HIGHER PERFORMANCE STANDARD UNLESS OTHERWISE DIRECTED BY ENGINEER.
2. PRIORITY OF DOCUMENTS: FIGURED DIMENSIONS GOVERN OVER SCALED DIMENSIONS, DETAILED DRAWINGS GOVERN OVER GENERAL DRAWINGS, LARGER SCALE DRAWINGS TAKE PRECEDENCE OVER SMALLER SCALE DRAWINGS, CHANGE ORDER DRAWINGS SUPERCEDE ORIGINAL CONTRACT DRAWINGS, AND CONTRACT DRAWINGS GOVERN SHOP DRAWINGS.
3. IN GENERAL, DRAWINGS DO NOT SHOW CONDUIT ROUTING. PLAN AND ROUTE CONDUITS IN COMPLIANCE WITH SPECIFICATIONS AND DRAWING DETAILS. COORDINATE INSTALLATION WITH OTHER TRADES AND ACTUAL SUPPLIED EQUIPMENT.
4. DUCTBANK ROUTING SHOWN ON ELECTRICAL SITE PLANS IS DIAGRAMMATIC IN NATURE AND MAY NOT INCLUDE INTERFERENCES THAT MAY BE PRESENT.
5. SEE ADDITIONAL NOTES ON ELECTRICAL LEGEND II SHEET E-2.

**ENCLOSURE TYPES:**

PROVIDE THE FOLLOWING NEMA TYPE ELECTRICAL ENCLOSURES, UNLESS OTHERWISE NOTED:

1. NEMA 1 IN DRY, NON-PROCESS INDOOR LOCATIONS.
2. NEMA 12 IN "DUST" LOCATIONS SHOWN ON THE DRAWINGS.
3. NEMA 4X IN OUTDOOR LOCATIONS, ROOMS BELOW GRADE INCLUDING BASEMENTS AND BURIED VAULTS AND "DAMP" OR "WET" LOCATIONS SHOWN ON THE DRAWINGS.
4. NEMA 4X IN "CORROSIVE" LOCATIONS SHOWN ON THE DRAWINGS.
5. NEMA 7 AND LISTED FOR THE SPECIFIC NEC HAZARDOUS AREA CLASSIFICATION AS SHOWN ON THE DRAWINGS.

**NEC CLASSIFIED HAZARDOUS AREAS:**

1. THIS PROJECT INCLUDES NEC CLASSIFIED HAZARDOUS AREAS. THE FOLLOWING NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) STANDARDS APPLY: NFPA 820-2020.
2. REFER TO SHEET DS-G-3 FOR ADDITIONAL INFORMATION ON CLASSIFICATION BOUNDARIES.
3. EQUIPMENT, MATERIALS, AND INSTALLATION SHALL COMPLY WITH NEC ARTICLES 500, 501, 502, AND 503.

**MATERIALS AND EQUIPMENT:**

1. PROVIDE NEW MATERIALS AND EQUIPMENT UNLESS SPECIFICALLY NOTED OTHERWISE.
2. ELECTRICAL EQUIPMENT AND MATERIALS SHALL BE LISTED BY UNDERWRITER'S LABORATORIES, INC., AND SHALL BEAR APPROPRIATE UL LISTING MARK OR CLASSIFICATION MARKING. EQUIPMENT, MATERIALS, ETC. UTILIZED NOT BEARING A UL CERTIFICATION SHALL BE FIELD OR FACTORY UL CERTIFIED PRIOR TO EQUIPMENT ACCEPTANCE AND USE.
3. PROVIDE MAJOR ELECTRICAL EQUIPMENT BY A SINGLE MANUFACTURER: I.E. UNIT SUBSTATIONS, SWITCHGEAR, MOTOR CONTROL CENTERS, DISCONNECT SWITCHES, TRANSFORMERS, PANELBOARDS, ETC.

**EQUIPMENT SIZE, HANDLING AND STORAGE:**

1. COORDINATE WITH EQUIPMENT MANUFACTURER SHIPPING SPLITS TO PERMIT SAFE HANDLING AND PASSAGE OF EQUIPMENT TO FINAL INSTALLATION LOCATION.
2. COMPLY WITH MANUFACTURER'S INSTRUCTIONS FOR UPRIGHT EQUIPMENT ORIENTATION DURING TRANSPORTATION.
3. PROTECT EQUIPMENT FROM MECHANICAL INJURY, OR EXPOSURE TO MOISTURE, CHEMICALS, OR CORROSIVE GASES. DO NOT STORE ELECTRICAL EQUIPMENT OUTDOORS.
4. PROVIDE AND ENERGIZE TEMPORARY SPACE HEATERS IF REQUIRED TO CONTROL MOISTURE DURING STORAGE.

**CUTTING AND PATCHING:**

1. CUT AND PATCH IN A WORKMANLIKE MANNER AS REQUIRED TO INSTALL ELECTRICAL WORK.
2. CUTTING OF STRUCTURAL MEMBERS SUCH AS JOISTS, BEAMS, GIRDERS OR COLUMNS IS PROHIBITED.
3. PATCH SURFACES TO RESTORE TO ORIGINAL INTEGRITY (WATERPROOF OR FIREPROOF AS REQUIRED) AND APPEARANCE.

**SERVICE AND METERING:**

1. THE POWER COMPANY SERVING THIS PROJECT IS CITY OF GEORGETOWN ELECTRIC (COG). SERVICE AT THE DOVE SPRINGS WASTE WATER TREATMENT PLANT WILL BE OBTAINED AT 480V, 3PHASE, 4WIRE, 60HZ FROM PAD MOUNTED TRANSFORMER FURNISHED BY COG. COMPLY WITH POWER COMPANY STANDARDS.
2. COORDINATE THE ELECTRICAL SERVICE REQUIREMENTS WITH POWER COMPANY AND MEET WITH THE ELECTRICAL DIVISION REPRESENTATIVE BEFORE CONSTRUCTION STARTS.
3. PAY FOR FEES AND CHARGES FOR TEMPORARY POWER FOR THE PACKAGE PLANT VIA BID ALLOWANCE AND SUBMIT POWER COMPANY INVOICES TO OWNER FOR SUBSTANTIATION.
4. PAY FEES AND CHARGES FOR PERMANENT SERVICE VIA BID ALLOWANCE AND SUBMIT POWER COMPANY INVOICES TO OWNER FOR SUBSTANTIATION.
5. POWER COMPANY WORK:
  - FURNISH AND INSTALL PRIMARY UNDERGROUND CONDUCTORS.
  - FURNISH AND INSTALL PAD MOUNTED TRANSFORMER(S).
  - TERMINATE PRIMARY UNDERGROUND CONDUCTORS AT RISER POLE.
  - TERMINATE PRIMARY UNDERGROUND CONDUCTORS AT PAD MOUNTED TRANSFORMER(S), JUNCTION BOX, AND PULLBOX.
  - FURNISH AND INSTALL METERING CURRENT TRANSFORMERS (CT'S), POTENTIAL TRANSFORMERS (PT'S), METER(S) AND METER WIRING.
  - TERMINATE SECONDARY UNDERGROUND CONDUCTORS AT PAD MOUNTED TRANSFORMER.
  - REMOVAL OF EXISTING 500 KVA UTILITY PAD MOUNTED TRANSFORMERS.

**CONTRACTOR WORK:**

- ARRANGEMENTS WITH POWER COMPANY TO OBTAIN SERVICES, PAY POWER COMPANY FEES, AND PROVIDE LABOR AND MATERIALS REQUIRED FOR ELECTRICAL SERVICE.
- FURNISH AND INSTALL PRIMARY UNDERGROUND CONDUITS FROM UTILITY RISER POLE TO PAD MOUNTED TRANSFORMER.
- FURNISH AND INSTALL PAD MOUNTED TRANSFORMER CONCRETE PAD AND GROUNDING PER POWER COMPANY REQUIREMENTS.
- FURNISH AND INSTALL UTILITY PRIMARY PULLBOX PER POWER COMPANY REQUIREMENTS.
- FURNISH AND INSTALL SECONDARY UNDERGROUND CONDUITS AND CONDUCTORS.
- MANDREL TEST ALL NEW UNDERGROUND CONDUITS. COORDINATE WITH POWER COMPANY FOR A REPRESENTATIVE TO BE PRESENT TO WITNESS THE MANDREL TEST.
- COORDINATE WITH POWER COMPANY TO HAVE A REPRESENTATIVE INSPECT WORK PRIOR TO COMPLETION.
- COORDINATE WITH POWER COMPANY FOR REMOVAL OF EXISTING UTILITY PAD MOUNTED TRANSFORMER.

**CLEANING:**

1. REMOVE ALL RUBBISH AND DEBRIS FROM INSIDE AND AROUND ELECTRICAL EQUIPMENT AND ENCLOSURES.
2. REMOVE DIRT, DUST OR CONCRETE SPATTER FROM INTERIOR AND EXTERIOR OF EQUIPMENT USING BRUSHES, VACUUM CLEANER OR CLEAN LINT-FREE RAGS. DO NOT USE COMPRESSED AIR.

**DELEGATED DESIGN / PROFESSIONAL ENGINEERING SERVICES:**

1. WHEN ENGINEERING SERVICES ARE SPECIFIED TO BE PROVIDED BY CONTRACTOR, CONTRACTOR SHALL RETAIN A LICENSED PROFESSIONAL ENGINEER TO PERFORM THE SERVICES. ENGINEER SHALL BE LICENSED AT THE TIME SERVICES ARE PERFORMED AND LICENSED IN THE STATE IN WHICH PROJECT IS LOCATED. IF THE STATE ISSUES DISCIPLINE SPECIFIC LICENSES, ENGINEER SHALL BE LICENSED IN THE APPLICABLE DISCIPLINE. ENGINEER SHALL BE EXPERIENCED IN THE TYPE OF WORK BEING PERFORMED.
2. ENGINEERING WORK SHALL BE DONE ACCORDING TO THE APPLICABLE REGULATIONS FOR PROFESSIONAL ENGINEERS TO INCLUDE SIGNING, SEALING AND DATING DOCUMENTS.

**DEMOLITION AND DISPOSITION OF EQUIPMENT:**

1. DRAWING PLANS SHOWING REMOVAL OF MAJOR MECHANICAL AND ELECTRICAL EQUIPMENT IS NOT INTENDED TO SHOW ALL COMPONENTS TO BE DEMOLISHED. NOT ALL PIPING, CONDUITS, DUCTS, EQUIPMENT, ANCILLARY DEVICES, ETC. ARE SHOWN. THE CONTRACTOR IS TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO BID.
2. UNLESS OTHERWISE SPECIFICALLY NOTED, REMOVE UNUSED EXPOSED CONDUIT AND SUPPORT SYSTEMS BACK TO SOURCE AND/OR POINT OF CONCEALMENT INCLUDING ABOVE ACCESSIBLE CEILING FINISHES. WIRING SHALL BE REMOVED BACK TO SOURCE.
3. CUT FLUSH WITH SLAB, CEILING, OR WALL ABANDONED CONCEALED CONDUIT. SUITABLY PLUG CONDUITS.
4. REPAIR AND RESTORE ADJACENT CONSTRUCTION AND FINISHES AFTER DEMOLITION IS COMPLETE.
5. MATERIAL AND EQUIPMENT INDICATED FOR REMOVAL OR DEMOLITION IS TO BECOME CONTRACTOR'S PROPERTY UPON REMOVAL, UNLESS NOTED OTHERWISE. REMOVED MATERIAL TO BE PROPERLY HANDLED AND DISPOSED.
6. LIMIT FULL OR PARTIAL SHUTDOWNS TO THE CONSTRAINTS SPECIFIED FOR MAINTENANCE OF PLANT OPERATIONS AND SEQUENCE OF CONSTRUCTION. WHEN REQUIRED BY THE OWNER, THE CONTRACTOR SHALL RESTORE POWER AND OPERATIONS DURING ANY SHUTDOWN.
7. THERE SHALL BE NO SHUTDOWNS PERFORMED UNTIL ALL ELECTRICAL EQUIPMENT IS APPROVED AND HAS BEEN DELIVERED TO THE PLANT SITE AND INSTALLED TO THE GREATEST EXTENT POSSIBLE.

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	STC	JCS	CONFORMED DRAWINGS

DESIGNED BY: S. KAMAL  
 DRAWN BY: S. KAMAL  
 SHEET CHK'D BY: M. CZACH  
 CROSS CHK'D BY: G. PRABHU  
 APPROVED BY: J. SAENZ  
 DATE: NOVEMBER 2023

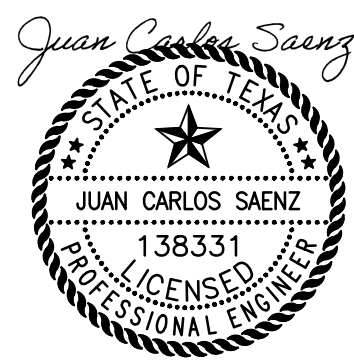


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CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

ELECTRICAL NOTES  
 SHEET NO. E-3

PROJECT NO.	2048-264953
FILE NAME:	E003NFNT.DWG
SHEET NO. E-3	





XREFS: [CDMS 2234.SG, JCS-INTERIMRV STAMP, CDMS, 2234\_DS] Images: []  
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LIGHTING FIXTURE SCHEDULE							
TYPE	LAMPS	MOUNTING	DESCRIPTION	VOLTAGE	MINIMUM LUMEN OUTPUT	MAXIMUM WATTAGE	MANUFACTURER
AL1	LED	PENDANT	4 FOOT LINEAR LED STRIP FIXTURE WITH UL LISTED FOR DAMP LOCATION, 4000K, 80 CRI	120V	6996	46	EATON METALUX 4ILED-LD5-7-W-UNV-L840-CD1 OR EQUAL
AL1E	LED	PENDANT	4 FOOT LINEAR LED STRIP FIXTURE WITH UL LISTED FOR DAMP LOCATION, 4000K, 80 CRI AND EMERGENCY BATTERY PACK	120V	6996	46	EATON METALUX 4ILED-LD5-7-W-UNV-L840-EL7W-CD1 OR EQUAL
AL2	LED	PENDANT	4 FOOT LONG ENCLOSED AND GASKETED LINEAR LED WIDE DISTRIBUTION ACRYLIC, DEEP FROSTED LENS UL LISTED FOR WET LOCATION, 4000K, 80CRI	120V	6000	37.8	LITHONIA FEM-L48-6000LM-AMAFD-WD-IMVOLT-GZ10-40K-80CRI1-STSL OR EQUAL
CL1	LED	PENDANT	INDUSTRIAL HIGH BAY LIGHTING, SEALED DIE CAST HOUSING, 80 CRI, 4000K, L80 HOURS = 170,000 @ 25 DEGREES CELSIUS, WET LOCATION LISTED, RATED FOR CORROSIVE ENVIRONMENT, AND INTEGRATED OCCUPANCY AND DAYLIGHT SENSOR.	120V	16326	74	EATON METALUX BMK-15-MCL-UNV-L840-CD1-SVPD3-U OR EQUAL
CL2	LED	STANCHION	STANCHION MOUNTED NEMA 4X SUITABLE FOR WET LOCATIONS AND HOSE DOWN ENVIRONMENTS, TYPE I OPTIC DISTRIBUTION, 5000K, DIFFUSED LENS WITH PHOTOCELL OPTION	120V	3250	28	EATON PVML-3-P-R1-UNV1 OR EQUAL
-		STANCHION MOUNT POLE	TELESCOPIC ADJUSTABLE RAISED HEIGHT LIGHT POLE FOR TYPE CL2 FIXTURE SUITABLE FOR HAND RAIL MOUNTING WITH STAINLESS STEEL TUBULAR RAIL HANDRAIL MOUNTING KIT, NEMA 4 RATED, HARDWARE: 316 STAINLESS STEEL, XYLAN 1400 COATED FOR CORROSION PROTECTION				CROUSE HINDS V65H(MHK-RTS)-A OR EQUAL
WLE1	LED	WALL	LED ARCHITECTURAL WALL SCONCE, DIE CAST ALUMINUM BACK PLATE, TYPE 3 DISTRIBUTION, BRONZE FINISH WITH INTEGRAL PHOTOCELL AND OCCUPANCY SENORS, WET LOCATION UL LISTED, WITH BATTERY BACK UP. (PROVIDE ONE SCP REMOTE CONTROL)	120V	1556	15	HUBELL LIGHTING LNC2-9L-4K-3-U-DBT-PCU-E OR EQUAL
E1	LED	UNIVERSAL	EXIT SIGN SINGLE FACE SELF POWERED WITH RED LETTERS, WHITE FINISH, MAINTENANCE FREE SEALED NICKEL-CADMIUM BATTERY WITH 90 MINUTES OF EMERGENCY POWER, SELF DIAGNOSTICS	120V		1.3	LITHONIA LES1RELNSD OR EQUAL

LIGHTING FIXTURE  
 SCHEDULE  
 NTS

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	STC	JCS	CONFORMED DRAWINGS
1	01/09/24	SS	JCS	REVISED PER ADDENDUM NO. 4

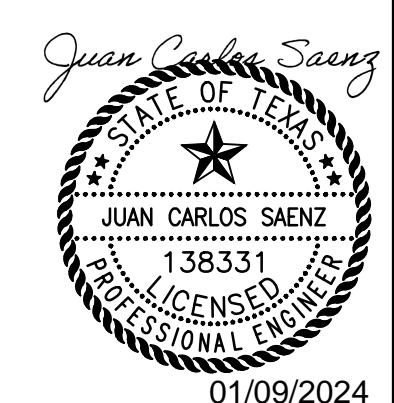
DESIGNED BY: V. MANJU  
 DRAWN BY: V. MANJU  
 SHEET CHK'D BY: M. CZACH  
 CROSS CHK'D BY: G. PRABHU  
 APPROVED BY: J. SAENZ  
 DATE: DECEMBER 2023



CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

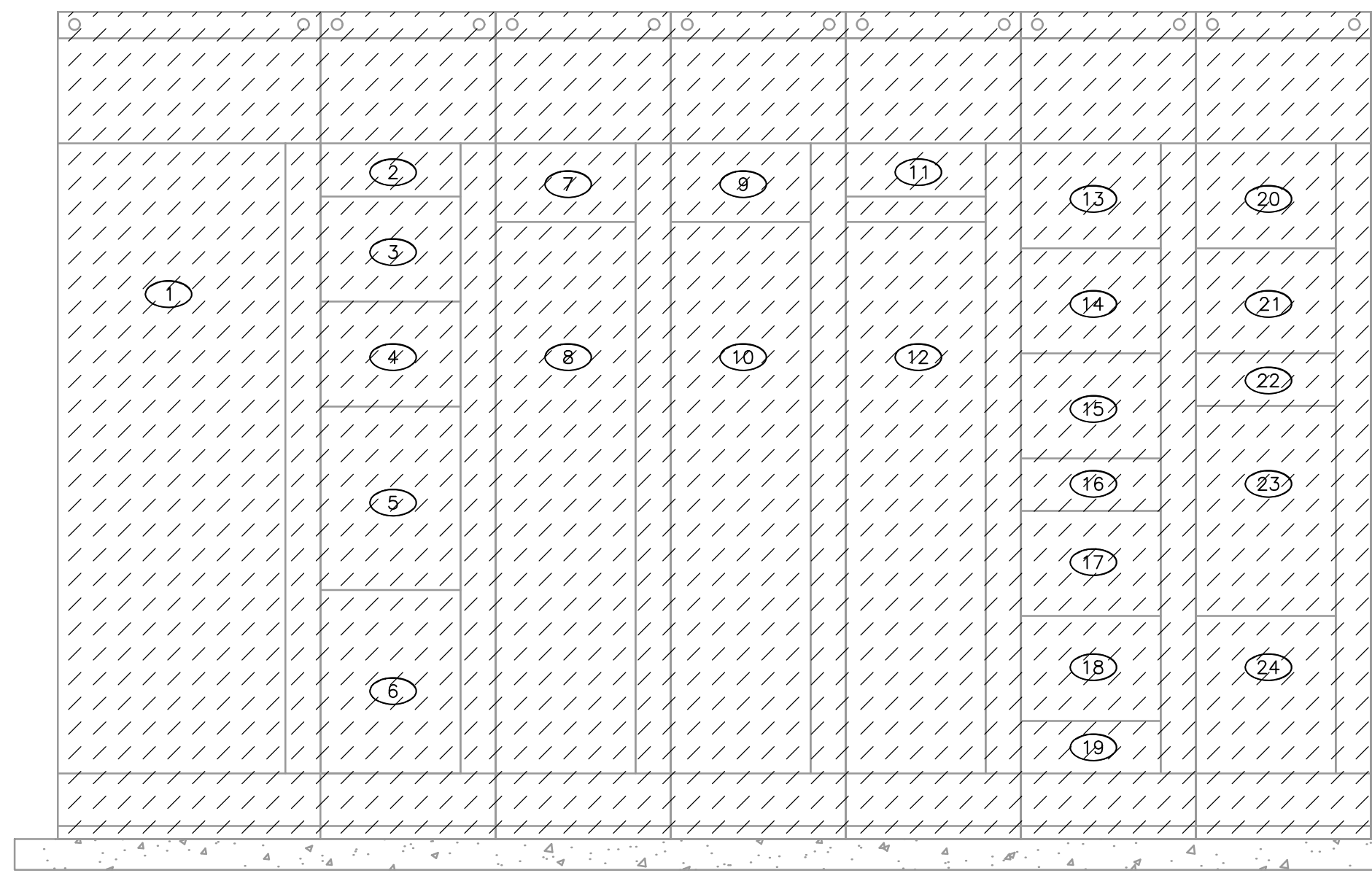
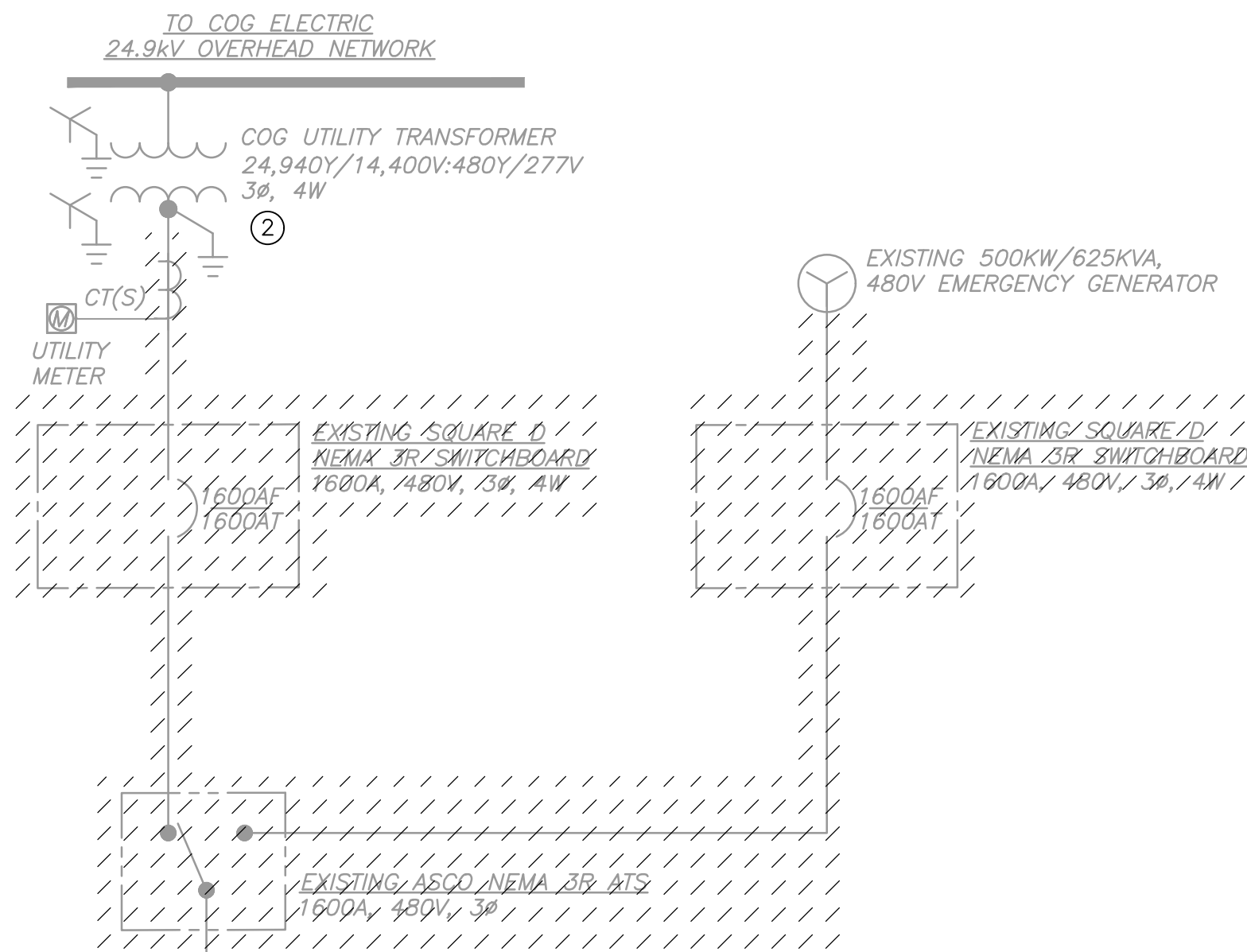
ELECTRICAL  
 LIGHTING FIXTURE SCHEDULE

PROJECT NO. 2048-264953  
 FILE NAME: E004LFC.DWG  
 SHEET NO. E-4





**LEGEND:**  
 CONTRACTOR TO REMOVE ELECTRICAL EQUIPMENT, CONDUIT, WIRE, AND SUPPORT MATERIAL UNDER THIS CONTRACT.



EXISTING MOTOR CONTROL CENTER MCC1  
**ELEVATION**  
 NTS

EXISTING EQUIPMENT PAD

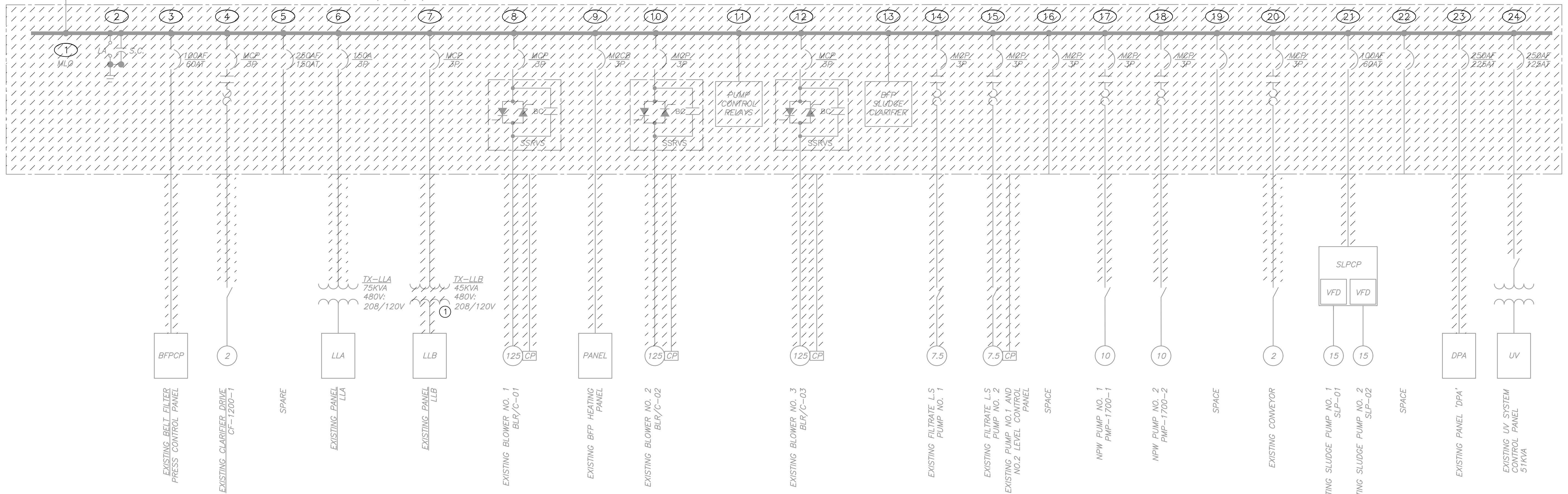
**GENERAL ELECTRICAL NOTES:**

1. THIS DRAWING REPRESENTS THE LATEST DOCUMENTED INFORMATION AVAILABLE ON THE EXISTING SYSTEM. HOWEVER, UNDOCUMENTED CHANGES MAY EXIST THAT MAY REQUIRE FIELD INVESTIGATION.
2. EQUIPMENT CONNECTIONS AT THE PLANT REQUIRE TEMPORARY OR PARTIAL SHUTDOWNS. THE CONTRACTOR SHALL MAKE EVERY EFFORT NECESSARY TO MINIMIZE THE SHUTDOWN TIME AND COORDINATE WITH THE OWNER PRIOR TO ATTEMPTING ANY SUCH POWER INTERRUPTIONS. FULL OR PARTIAL SHUTDOWNS SHALL BE LIMITED TO THE CONSTRAINTS SPECIFIED UNDER SECTION OIP NO. 01. WHEN REQUIRED BY THE OWNER, THE CONTRACTOR SHALL RESTORE POWER AND OPERATIONS DURING ANY SHUTDOWN.
3. THE OWNER SHALL BE NOTIFIED 7 CALENDER DAYS IN ADVANCE OF WORK REQUIRING POWER INTERRUPTIONS. ALL POWER SHUTDOWNS AND SWITCHOVERS SHALL BE REQUESTED IN WRITING TO THE OWNER FOR APPROVAL. MANDATORY SHUTDOWN MEETINGS BETWEEN THE CONTRACTOR AND OWNER SHALL BE HELD TO REVIEW EACH OUTAGE REQUEST PRIOR TO APPROVAL OF ANY OUTAGE.
4. DURING SHUTDOWNS, SWITCHOVERS, TESTING, START-UP, ETC. THE CONTRACTOR SHALL HAVE THE MANPOWER, EQUIPMENT AND MANUFACTURER'S REPRESENTATIVES REQUIRED TO MAKE ANY NECESSARY ADJUSTMENTS, REPAIRS, RESTORATION OF POWER, TRAINING, ETC. IN ORDER TO KEEP THE PLANT OPERATIONAL.
5. THERE SHALL BE NO SHUTDOWNS PERFORMED UNTIL ALL ELECTRICAL EQUIPMENT IS APPROVED AND HAS BEEN DELIVERED TO THE PLANT SITE AND INSTALLED TO THE GREATEST EXTENT POSSIBLE.
6. THE OWNER RETAINS THE RIGHT TO KEEP ANY ELECTRICAL EQUIPMENT, CONDUIT, AND WIRES REMOVED FROM THE EXISTING INSTALLATION. MOVE EQUIPMENT TO DESIGNATED STORAGE LOCATION ONSITE. CONTRACTOR IS RESPONSIBLE FOR OFFSITE DISPOSAL OF UNWANTED MATERIAL.
7. IN ALL AREAS INVOLVED DEMOLITION, ALL EQUIPMENT, UNUSED WIRING, UNUSED CONDUIT, PULLBOXES, AND SUPPORT MATERIAL MARKED FOR DEMOLITION SHALL BE COMPLETELY REMOVED. THE AREAS SHALL BE CLEANED OF DEMOLITION DEBRIS.
8. CONTRACTOR SHALL DISCONNECT ELECTRICAL CIRCUITS IDENTIFIED FOR DEMOLITION TO ALLOW FOR SAFE AND COMPLETE REMOVAL OF DESIGNATED EQUIPMENT. REFER TO MECHANICAL DEMO PLANS AND DEMO ONE-LINES FOR ADDITIONAL INFORMATION.

**KEY NOTES:**

- 1 SCHEDULED FOR RELOCATION.
- 2 UTILITY COMPANY TO REMOVE EXISTING TRANSFORMER.

EXISTING SQUARE D MOTOR CONTROL CENTER  
 1600A, 480V, 3Ø, 4W



EXISTING MOTOR CONTROL CENTER MCC1 DEMOLITION  
**ONE-LINE DIAGRAM**  
 NTS

XREFS: [CDMS\_2234; JCS-INTERIMV STAMP] Images: []  
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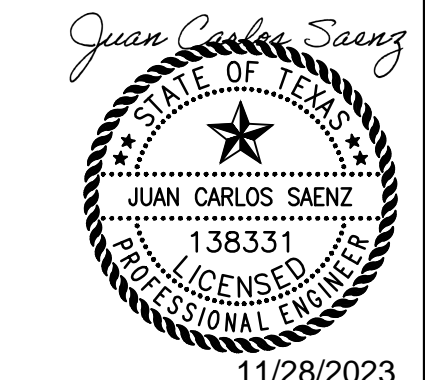
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 CROSS CHK'D BY: G. PRABHU  
 APPROVED BY: J. SAENZ  
 DATE: NOVEMBER 2023

**CDM Smith**  
 8310-1 N. Capital of Texas Hwy, Suite 250  
 Austin, TX 78731  
 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

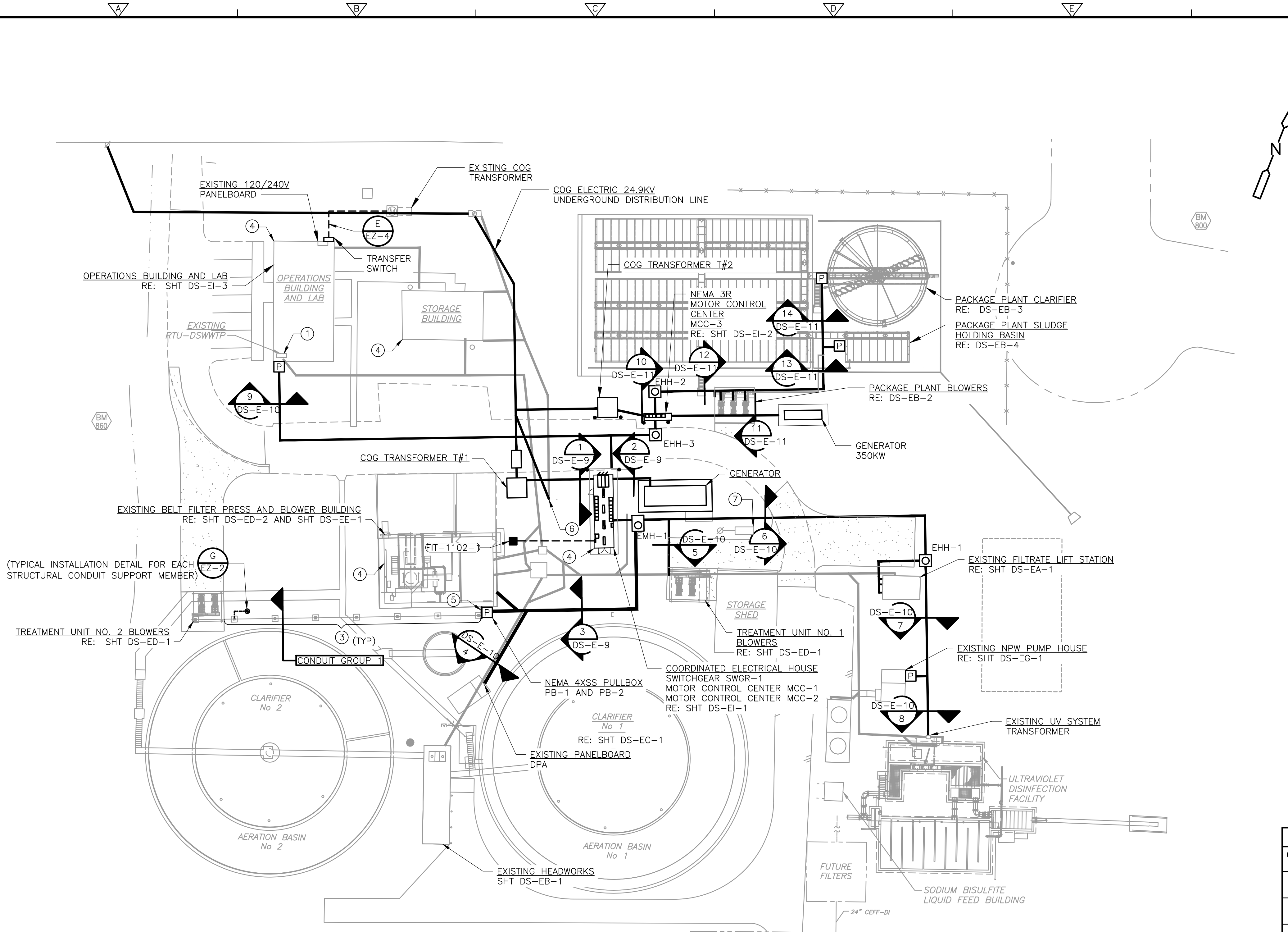
CITY OF GEORGETOWN, TEXAS  
**DOVE SPRINGS WWTP  
 REHABILITATION**

**DOVE SPRINGS WWTP  
 EXISTING MOTOR CONTROL CENTER MCC1  
 DEMOLITION ONE-LINE DIAGRAM**

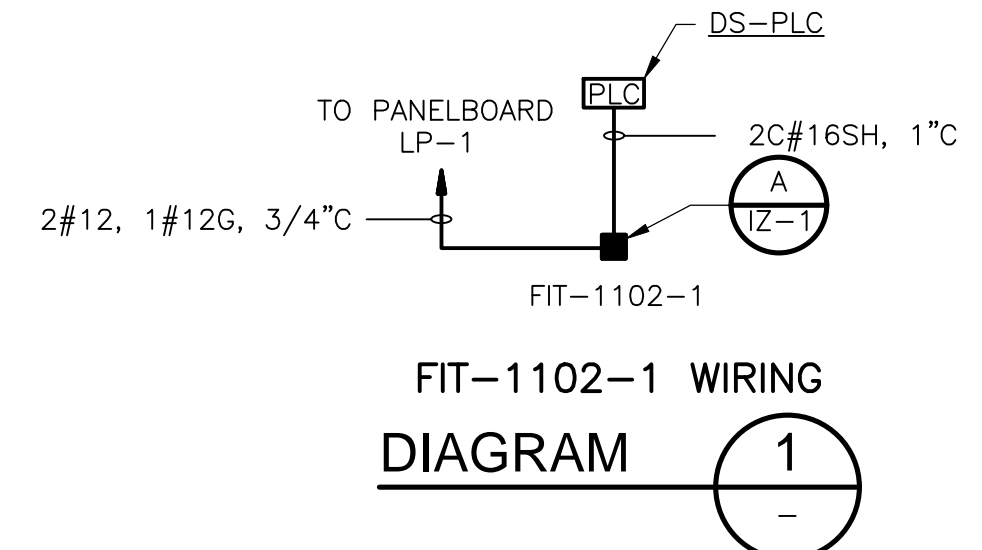


PROJECT NO. 2048-264953  
 FILE NAME: DSD200NFOL.DWG  
 SHEET NO. **DS-D-200**

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DOVE SPRINGS ELECTRICAL SITE PLAN  
 1" = 30'  
 15 0 30



**GENERAL ELECTRICAL NOTES:**

- ELECTRICAL DRAWINGS ARE INTENDED TO SHOW THE GENERAL LAYOUT OF WORK TO BE INSTALLED UNDER THIS CONTRACT WITHOUT ATTEMPTING TO SHOW ALL DETAILS. FURNISH LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS REQUIRED FOR A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM AS SHOWN ON THE CONTRACT DOCUMENTS.
- COORDINATE WORK WITH OTHER TRADES AND THE OWNER.
- FIELD VERIFY EXISTING UNDERGROUND ELECTRICAL CONDUIT, CONCRETE DUCT BANKS, MANHOLES, PULL BOXES, ETC. AND MECHANICAL PIPING. CONTRACTOR SHALL INCLUDE IN BID COSTS ASSOCIATED WITH RELOCATION OR REMOVAL OF UNDERGROUND EQUIPMENT AS REQUIRED BY THIS CONTRACT. USE DUE CARE IN CONGESTED AREAS TO AVOID DAMAGE TO EXISTING UNDERGROUND UTILITIES.
- REPAIR, IN ACCORDANCE WITH SPECIFICATIONS, SIDEWALKS, WALLS, ROADWAYS, ETC. DISTURBED BY CONSTRUCTION ACTIVITIES WHETHER OR NOT SHOWN FOR REPAIR/REPAVING ON CIVIL DRAWINGS.
- CONCEAL CONDUITS TO GREATEST EXTENT PRACTICABLE. CONDUITS RUN AT EXISTING STRUCTURES SHALL BE RUN EXPOSED.

**KEY NOTES:**

- APPROXIMATE LOCATION OF EXISTING EQUIPMENT. FIELD VERIFY EXACT LOCATION.
- CONDUIT TRANSITION FROM UNDERGROUND DUCTBANK TO CONDUIT SUPPORT SYSTEM.
- CONDUIT SUPPORT SYSTEM REFERENCE STRUCTURAL DRAWINGS. FOR EACH CONDUIT SUPPORT STRUCTURE, PROVIDE #6 BARE COPPER GROUNDING CONDUCTOR FROM STRUCTURAL STEEL TO GROUND PLATE.
- PROVIDE A LIGHTNING PROTECTION SYSTEM FOR THE STRUCTURE IN ACCORDANCE WITH NFPA 780.
- PROVIDE NEMA 4XSS PULLBOXES SIZED PER NEC. SUPPORT PULLBOXES FROM CONDUIT SUPPORT STRUCTURES USING STAINLESS STEEL CHANNEL FRAMING.
- CONDUITS TO BE ABANDONED IN PLACE. CUT FLUSH WITH GRADE AND FILL.
- PLACE THE RELOCATED LIGHTS TO BEST SUIT FIELD CONDITIONS. INTERCEPT EXISTING LIGHTING CIRCUIT. REFER TO DETAIL F/EZ-4 FOR POLE BASE DETAILS.

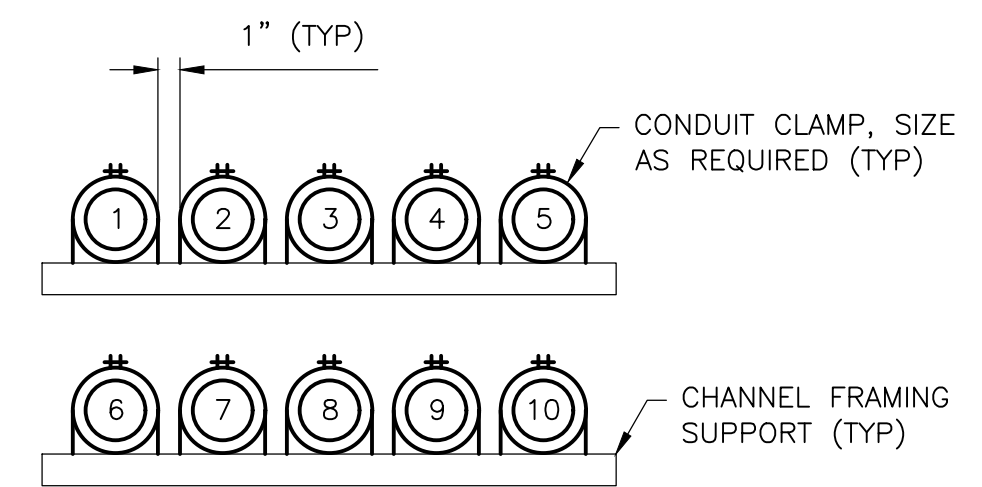
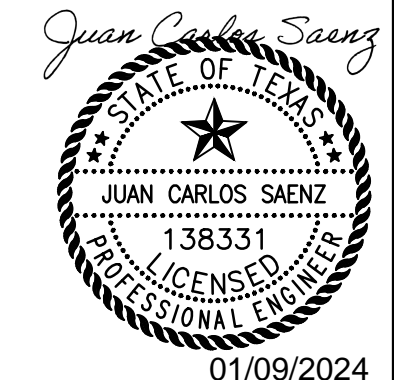


TABLE FOR CONDUIT GROUP 1	
CONDUIT NO.	DESCRIPTION
1	EXPOSED CONDUIT FROM MCC-2 TO BLR-1310-3 MOTOR VIA DUCTBANK/PULLBOX PB-1
2	EXPOSED CONDUIT FROM MCC-2 TO BLR-1310-3 MOTOR ANCILLARY DEVICES VIA DUCTBANK/ PULLBOX PB-1
3	EXPOSED CONDUIT FROM MCC-2 TO LCP-1310-3 VIA DUCTBANK/ PULLBOX PB-2
4	EXPOSED CONDUIT FROM DS-RI02 TO LCP-1310-3 VIA DUCTBANK/PULLBOX PB-2
5	EXPOSED CONDUIT FROM MCC-2 TO MPZ-2 VIA DUCTBANK/PULLBOX PB-1
6	EXPOSED CONDUIT FROM MCC-2 TO BLR-1310-4 MOTOR VIA DUCTBANK/PULLBOX PB-1
7	EXPOSED CONDUIT FROM MCC-2 TO BLR-1310-4 MOTOR ANCILLARY DEVICES VIA DUCTBANK/PULLBOX PB-1
8	EXPOSED CONDUIT FROM MCC-2 TO LCP-1310-4 VIA DUCTBANK/ PULLBOX PB-2
9	EXPOSED CONDUIT FROM DS-RI02 TO LCP-1310-4 VIA DUCTBANK/PULLBOX PB-2
10.	EXPOSED CONDUIT FROM DS-RI02 TO PIT-1311-2 VIA DUCTBANK/ PULLBOX PB-2



REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	STC	JCS	CONFORMED DRAWINGS
B	01/09/24	SS	JCS	REVISED PER ADDENDUM NO. 4
C	12/19/23	LES	JCS	REVISED PER ADDENDUM NO. 2

DESIGNED BY: S. KAMAL  
 DRAWN BY: S. KAMAL  
 SHEET CHK'D BY: M. CZACH  
 CROSS CHK'D BY: G. PRABHU  
 APPROVED BY: J. SAENZ  
 DATE: DECEMBER 2023

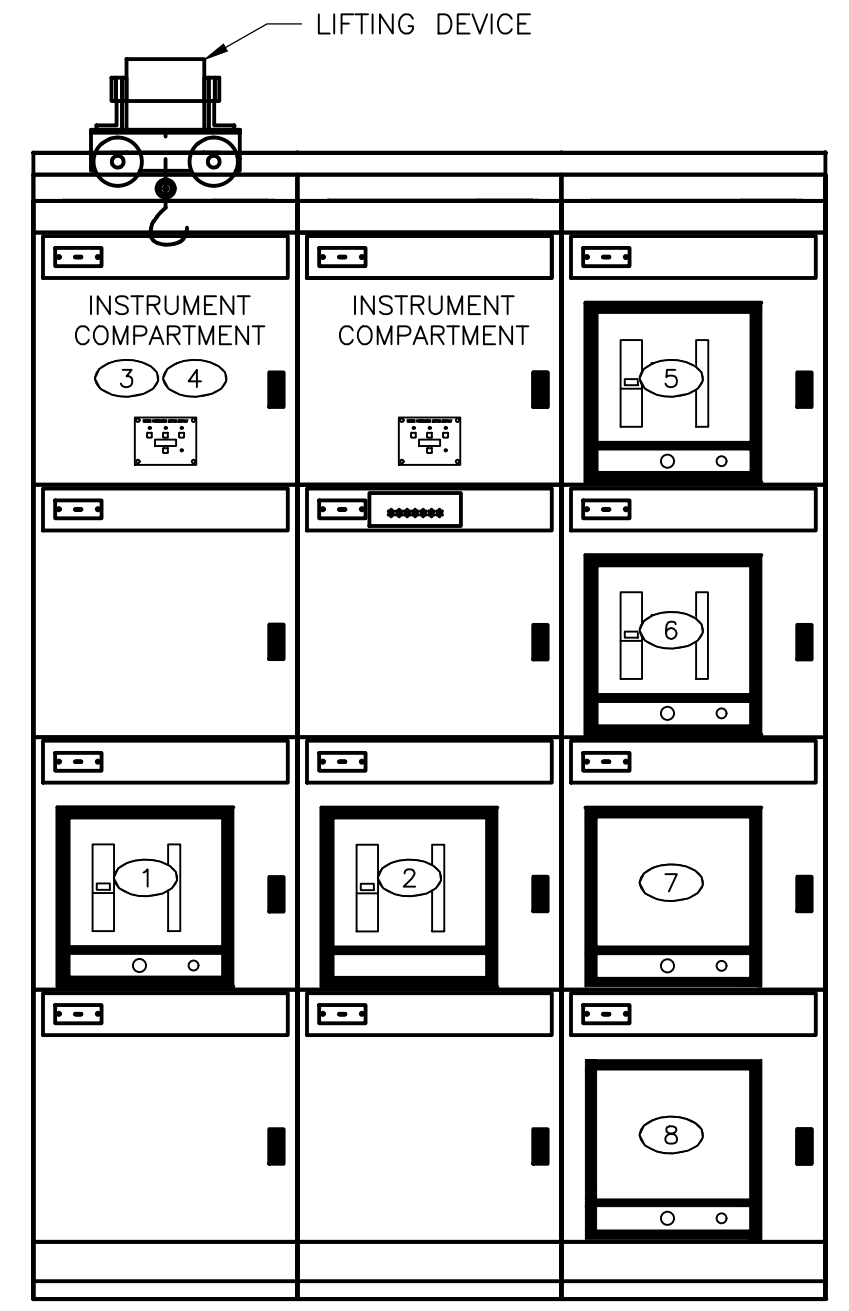
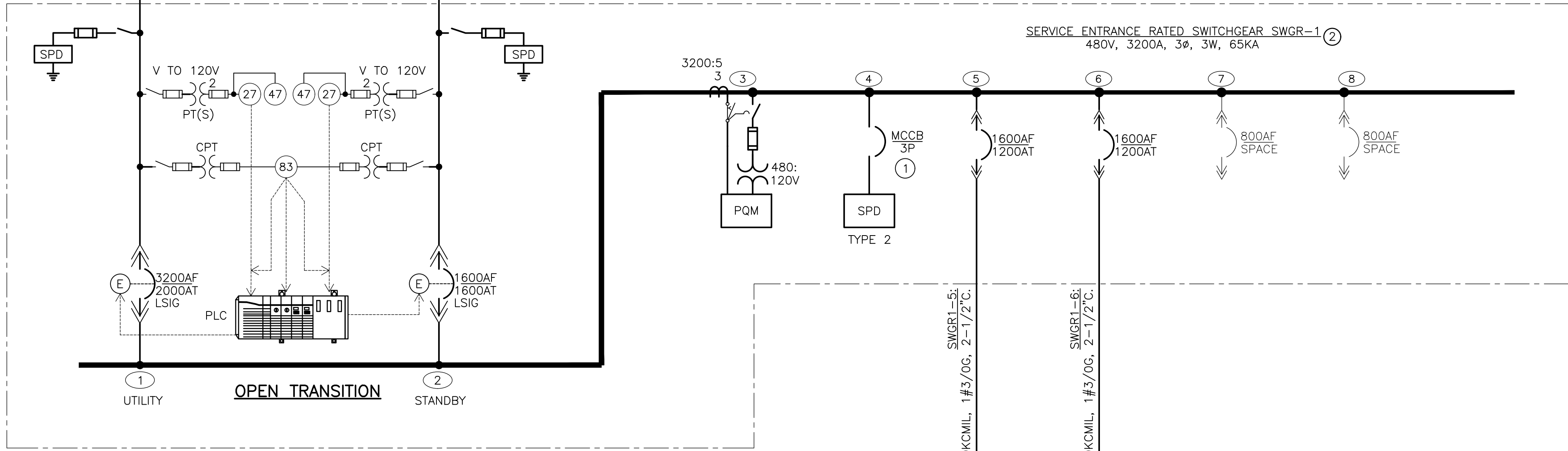
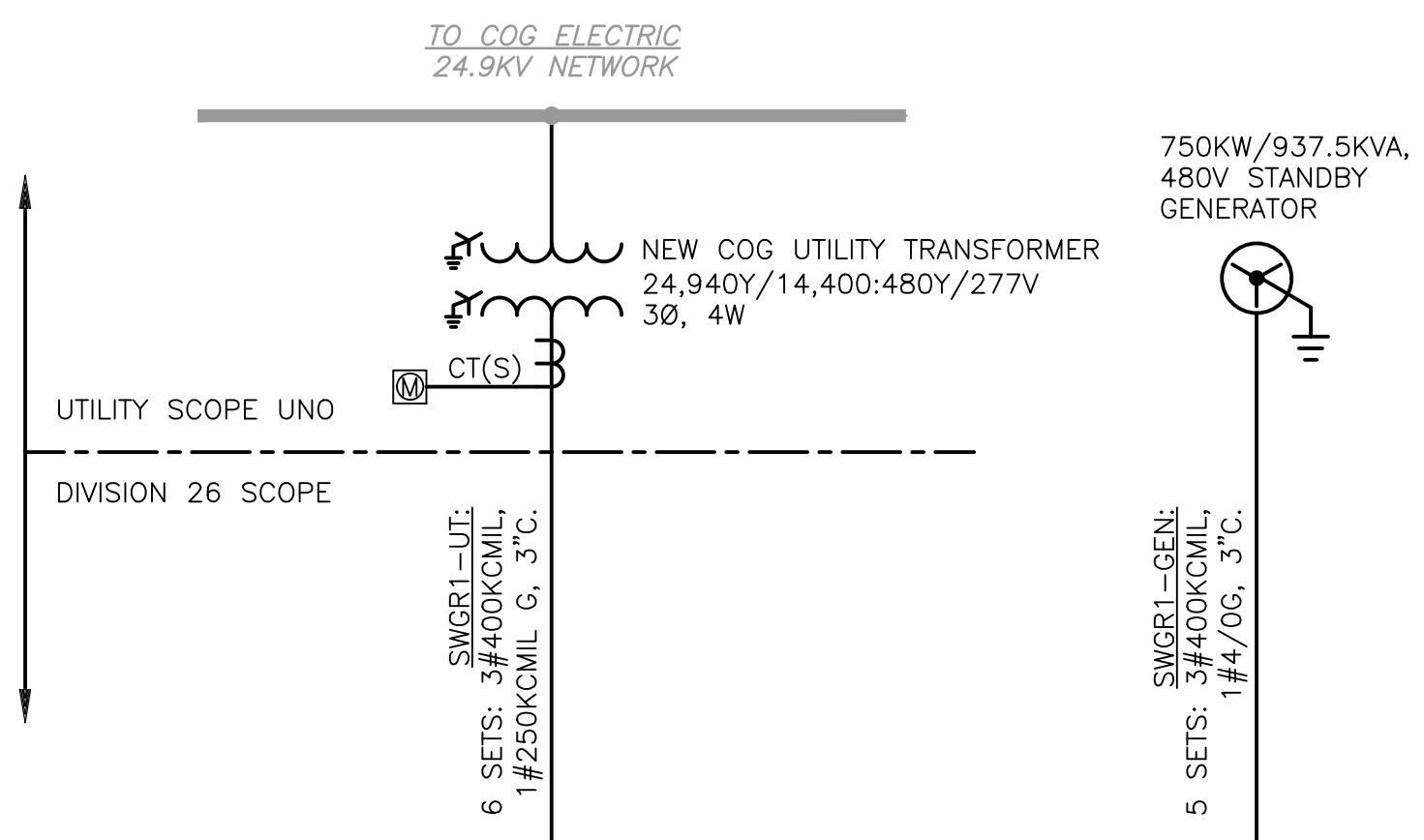
**CDM Smith**  
 8310-1 N. Capital of Texas Hwy, Suite 250  
 Austin, TX 78731  
 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTW  
 REHABILITATION

DOVE SPRINGS WWTW  
 OVERALL SITE  
 ELECTRICAL NEW WORK PLAN

PROJECT NO. 2048-264953  
 FILE NAME: DSE01STPL.DWG  
 SHEET NO.  
**DS-E-1**

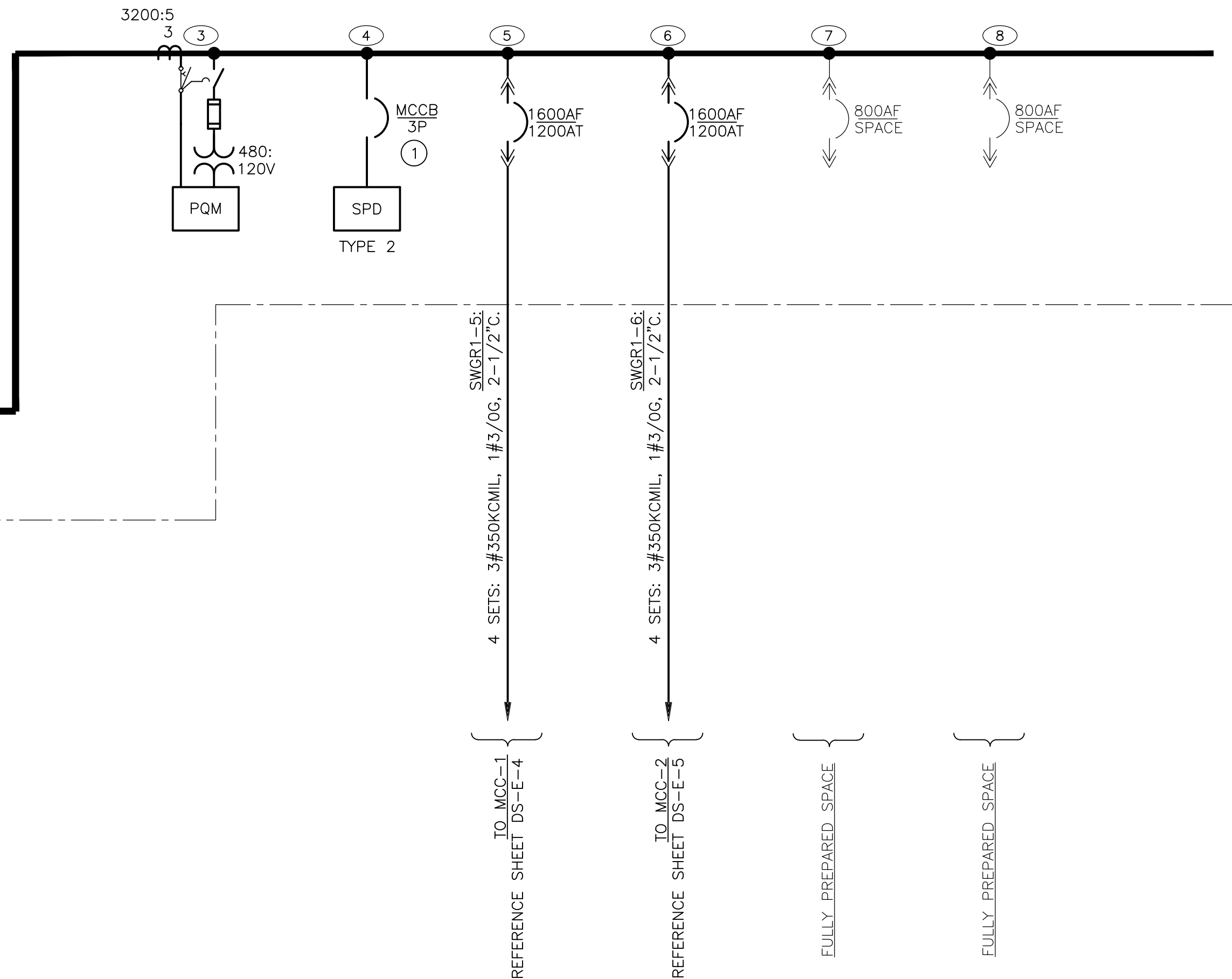
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**SWITCHGEAR SWGR-1  
ELEVATION**  
NTS

- KEY NOTES:**
- MOLDED CASE CIRCUIT BREAKER (MCCB) FOR TYPE 2 SURGE PROTECTION DEVICE (SPD) SIZED BY SWITCHGEAR MANUFACTURER.
  - PROVIDE AND INSTALL PHASE AND GROUND FAULT ZONE SELECTIVE INTERLOCK (ZSI) SYSTEM FOR ALL MAIN AND FEEDER CIRCUIT BREAKERS.

**SERVICE ENTRANCE RATED SWITCHGEAR SWGR-1**  
480V, 3200A, 3Ø, 3W, 65KA



**SWITCHGEAR SWGR-1  
ONE-LINE DIAGRAM**  
NTS

**ANSI STANDARD DEVICE DESIGNATION:**  
 27-UNDERVOLTAGE RELAY  
 47-PHASE-SEQUENCE RELAY  
 83-AUTOMATIC SELECTIVE CONTROL OR TRANSFER RELAY

**LEGEND:**  
 ..... COMMUNICATIONS OR CONTROL  
 (E) ELECTRICALLY OPERATED CIRCUIT BREAKER

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	STC	JCS	CONFORMED DRAWINGS

DESIGNED BY: S. KAMAL  
 DRAWN BY: S. KAMAL  
 SHEET CHK'D BY: M. CZACH  
 CROSS CHK'D BY: G. PRABHU  
 APPROVED BY: J. SAENZ  
 DATE: NOVEMBER 2023

**CDM Smith**  
 8310-1 N. Capital of Texas Hwy, Suite 250  
 Austin, TX 78731  
 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP  
 SWITCHGEAR SWGR-1  
 ONE-LINE DIAGRAM

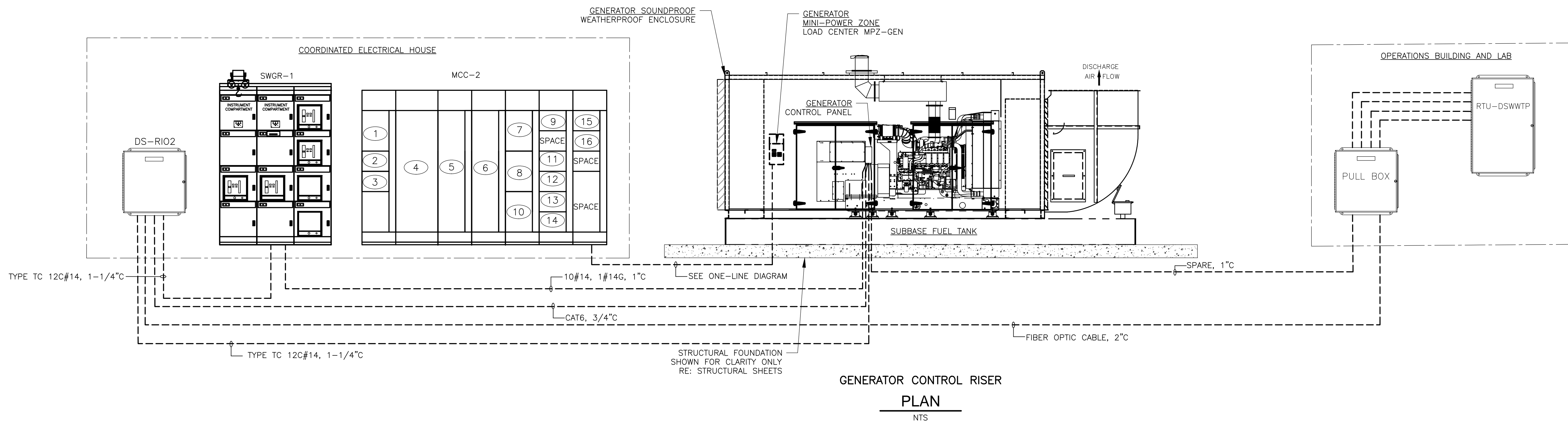
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 FILE NAME: DSE02NFOL.DWG  
 SHEET NO.  
**DS-E-2**



11/28/2023

**GENERAL ELECTRICAL NOTES:**

1. THE CONTROL DIAGRAMS, ALONG WITH ANY WRITTEN OPERATIONAL DESCRIPTIONS PRESENT THE INTENDED FUNCTIONS OF THE OVERALL SYSTEM BUT DO NOT SUPERCEDE MANUFACTURER'S RECOMMENDATIONS.
2. CONTRACTOR'S WORK SHALL INCLUDE COMPLETE TESTING OF EQUIPMENT AND WIRING INCLUDING MAKING MINOR CORRECTIONS, CHANGES OR ADJUSTMENTS NECESSARY FOR THE PROPER FUNCTIONING OF THE SYSTEM AND EQUIPMENT.



GENERATOR LOAD LIST			
STEP NO.	EQUIPMENT SERVED	LOAD SIZE	STARTER TYPE
1.	MISC. POWER	100 KVA	N/A
2.	UV SYSTEM	51 KVA	N/A
3.	AERATION BLOWER	200 HP	SSRVS
4.	AERATION BLOWER	200 HP	SSRVS
5.	FINE SCREEN	2 HP	FVNR
6.	CLARIFIER	2 HP	FVNR
7.	CLARIFIER	2 HP	FVNR
8.	NPW PUMP	10 HP	FVNR

**GENERATOR LOAD LIST**  
NTS

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REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	STC	JCS	CONFORMED DRAWINGS

DESIGNED BY: M. SAYED AASIF  
 DRAWN BY: M. SAYED AASIF  
 SHEET CHK'D BY: M. CZACH  
 CROSS CHK'D BY: G. PRABHU  
 APPROVED BY: J. SAENZ  
 DATE: NOVEMBER 2023



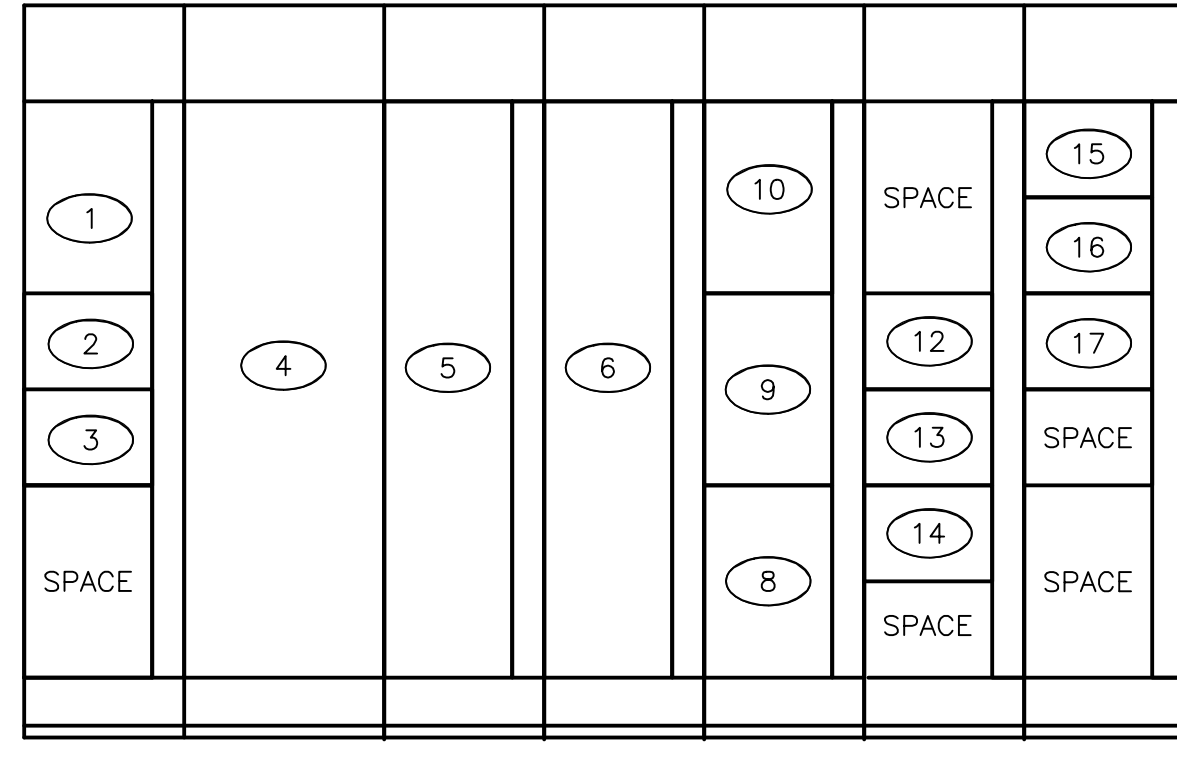
CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP  
 GENERATOR  
 CONTROL RISER DIAGRAM

PROJECT NO. 2048-264953  
 FILE NAME: DSE03NFOL.DWG  
 SHEET NO.  
**DS-E-3**

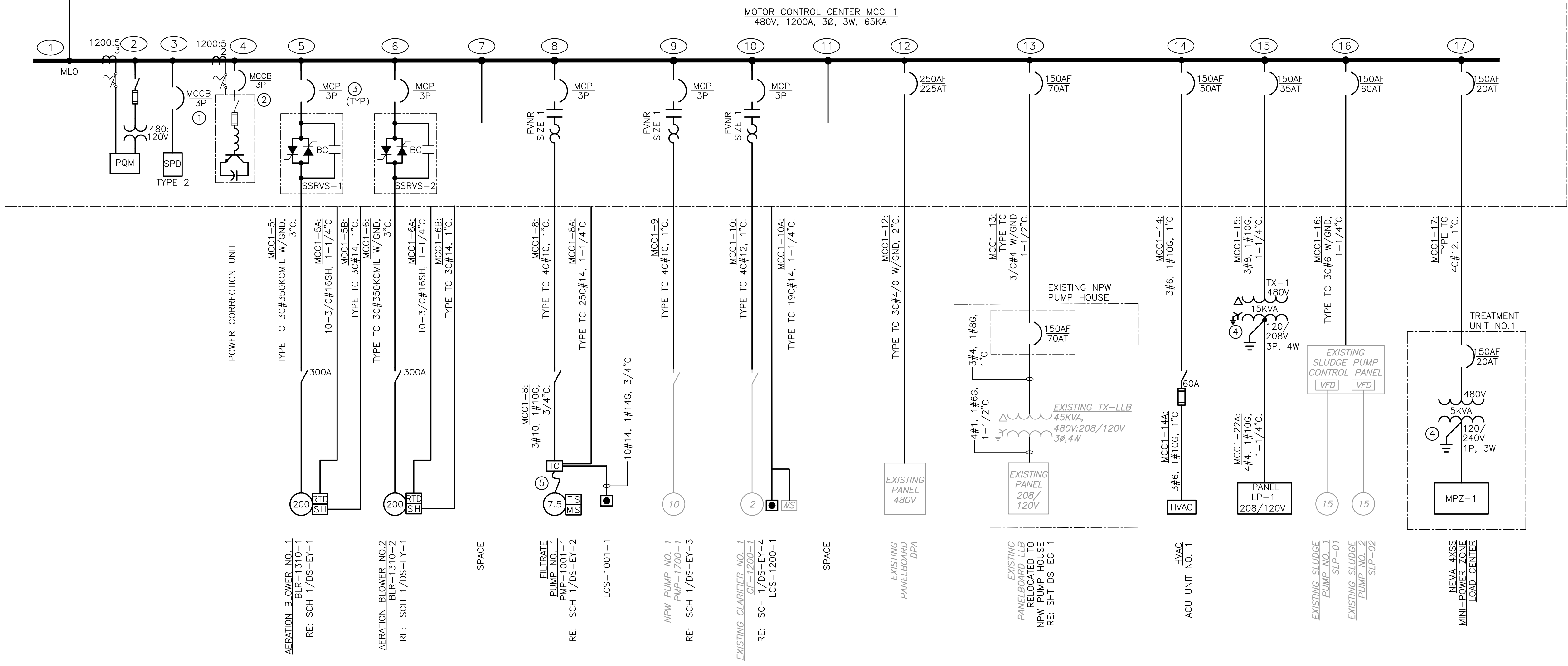


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MOTOR CONTROL CENTER MCC-1  
ELEVATION  
NTS

- KEY NOTES:**
- MOLDED CASE CIRCUIT BREAKER (MCCB) SIZED BY MOTOR CONTROL CENTER (MCC) MANUFACTURER.
  - MCC MANUFACTURER SHALL SIZE MOLDED CASE CIRCUIT BREAKER (MCCB) AND SHALL PROVIDE CURRENT TRANSFORMER(S) ON BUS PER ACTIVE FILTER MANUFACTURER'S REQUIREMENTS. REFER TO POWER CORRECTION UNIT SPECIFICATIONS.
  - MOTOR CIRCUIT PROTECTOR (MCP) SIZED BY MCC MANUFACTURER.
  - SEPARATELY DERIVED SYSTEM SHALL BE BONDED TO THE NEAREST GROUNDING ELECTRODE PER NEC.
  - MANUFACTURER PROVIDED CABLE, 1" (MIN). COORDINATE FINAL CONDUIT SIZE WITH SELECTED PUMP MANUFACTURER MOTOR CABLE.



MOTOR CONTROL CENTER MCC-1  
ONE-LINE DIAGRAM  
NTS

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	STC	JCS	CONFORMED DRAWINGS

DESIGNED BY:	S. KAMAL
DRAWN BY:	S. KAMAL
SHEET CHK'D BY:	M. CZACH
CROSS CHK'D BY:	G. PRABHU
APPROVED BY:	J. SAENZ
DATE:	NOVEMBER 2023



CITY OF GEORGETOWN, TEXAS  
DOVE SPRINGS WWTP  
REHABILITATION

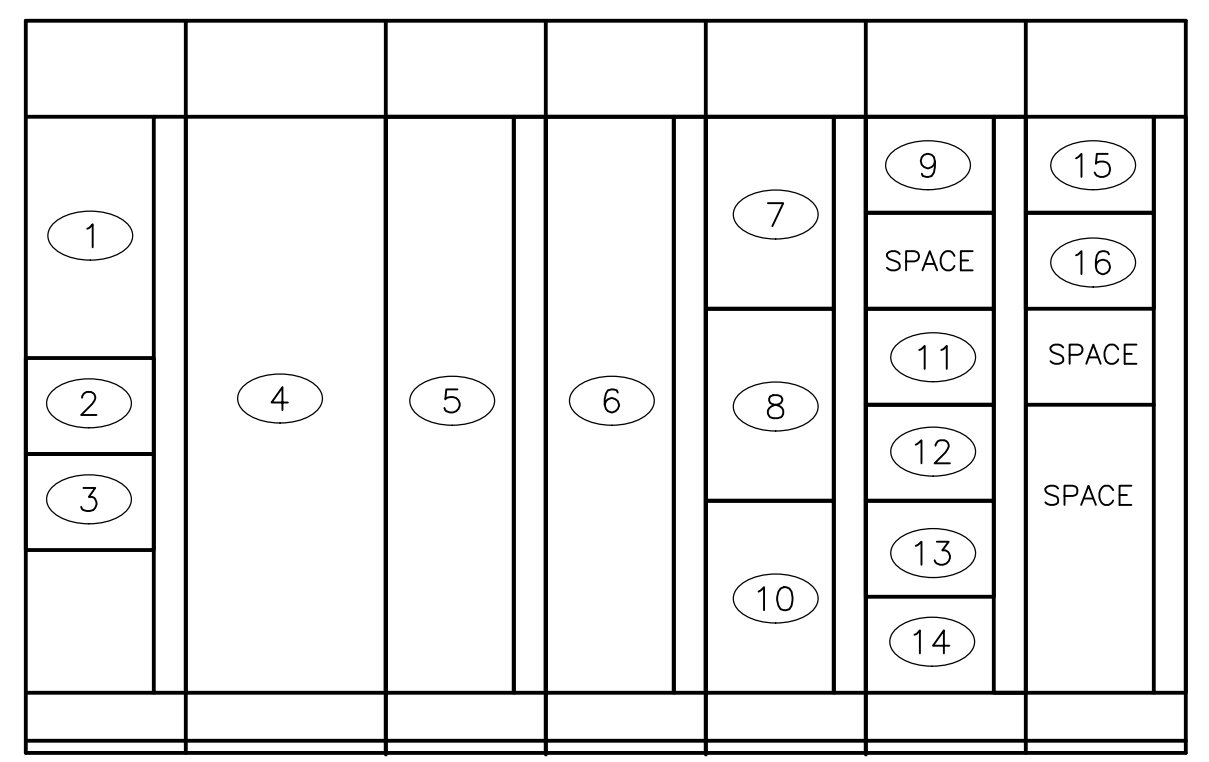
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MOTOR CONTROL CENTER MCC-1  
ONE-LINE DIAGRAM

PROJECT NO.	2048-264953
FILE NAME:	DSE04NFOL.DWG
SHEET NO.	DS-E-4



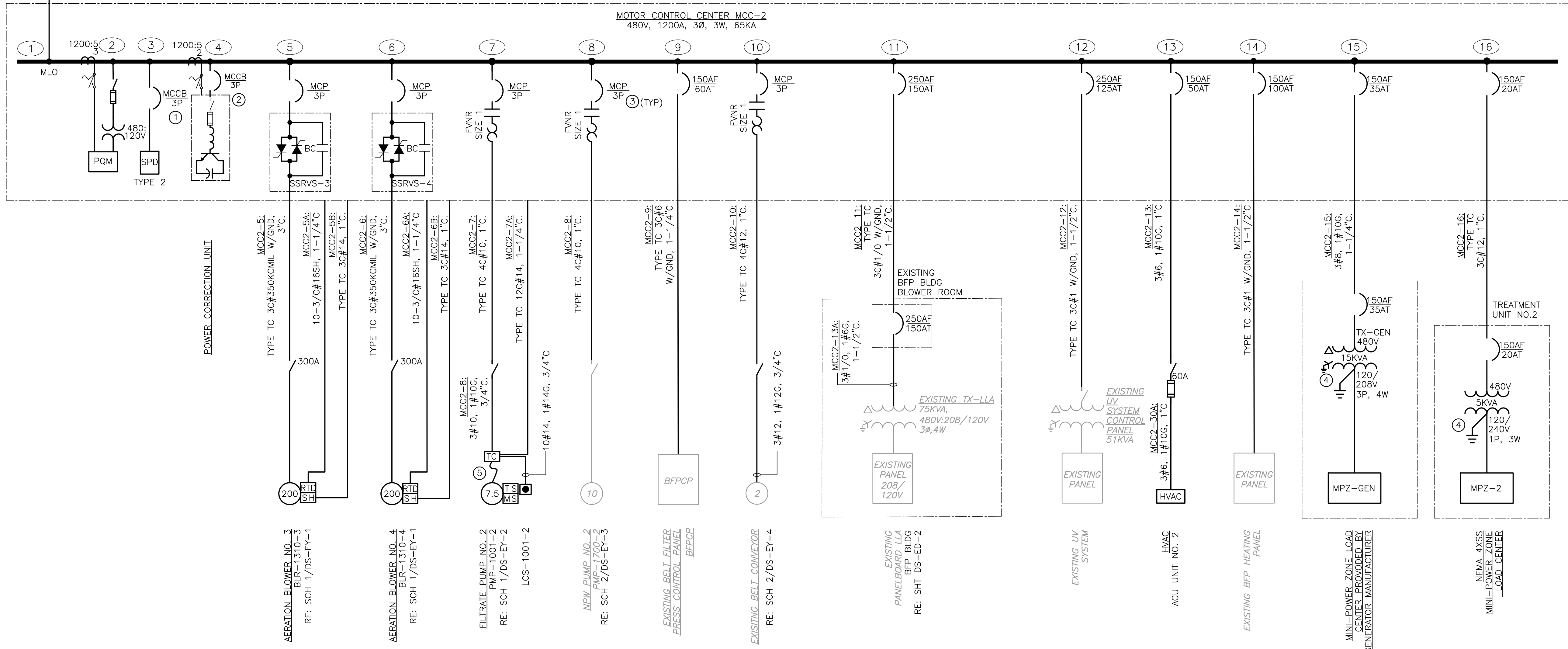
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MOTOR CONTROL CENTER MCC-2  
ELEVATION  
NTS

- KEY NOTES:**
- MOLDED CASE CIRCUIT BREAKER (MCCB) SHALL BE SIZED BY MOTOR CONTROL CENTER (MCC) MANUFACTURER.
  - MCC MANUFACTURER SHALL SIZE MOLDED CASE CIRCUIT BREAKER (MCCB) AND SHALL PROVIDE CURRENT TRANSFORMER(S) ON BUS PER ACTIVE FILTER MANUFACTURER'S REQUIREMENTS. REFER TO POWER CORRECTION UNIT SPECIFICATIONS.
  - MOTOR CIRCUIT PROTECTOR (MCP) SIZED BY MCC MANUFACTURER.
  - SEPARATELY DERIVED SYSTEM SHALL BE BONDED TO THE NEAREST GROUNDING ELECTRODE PER NEC.
  - MANUFACTURER PROVIDED CABLE, 1" (MIN). COORDINATE FINAL CONDUIT SIZE WITH SELECTED PUMP MANUFACTURER MOTOR CABLE.



MOTOR CONTROL CENTER MCC-2  
ONE-LINE DIAGRAM  
NTS

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	STC	JCS	CONFORMED DRAWINGS

DESIGNED BY: S. KAMAL  
 DRAWN BY: S. KAMAL  
 SHEET CHK'D BY: M. CZACH  
 CROSS CHK'D BY: G. PRABHU  
 APPROVED BY: J. SAENZ  
 DATE: NOVEMBER 2023



CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP  
 MOTOR CONTROL CENTER MCC-2  
 ONE-LINE DIAGRAM

PROJECT NO. 2048-264953  
 FILE NAME: DSE05NFOL.DWG  
 SHEET NO. DS-E-5





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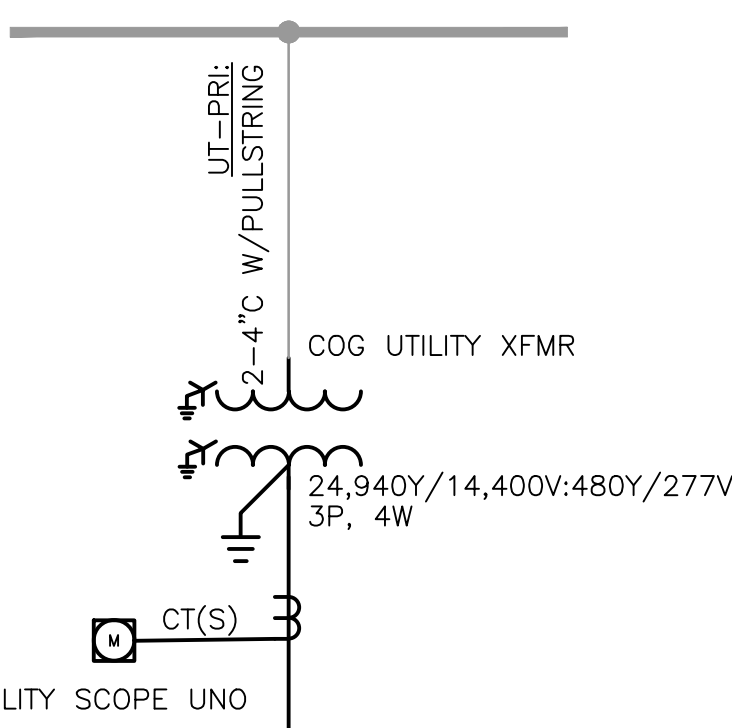
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TO COG ELECTRIC  
24.9KV UNDERGROUND NETWORK

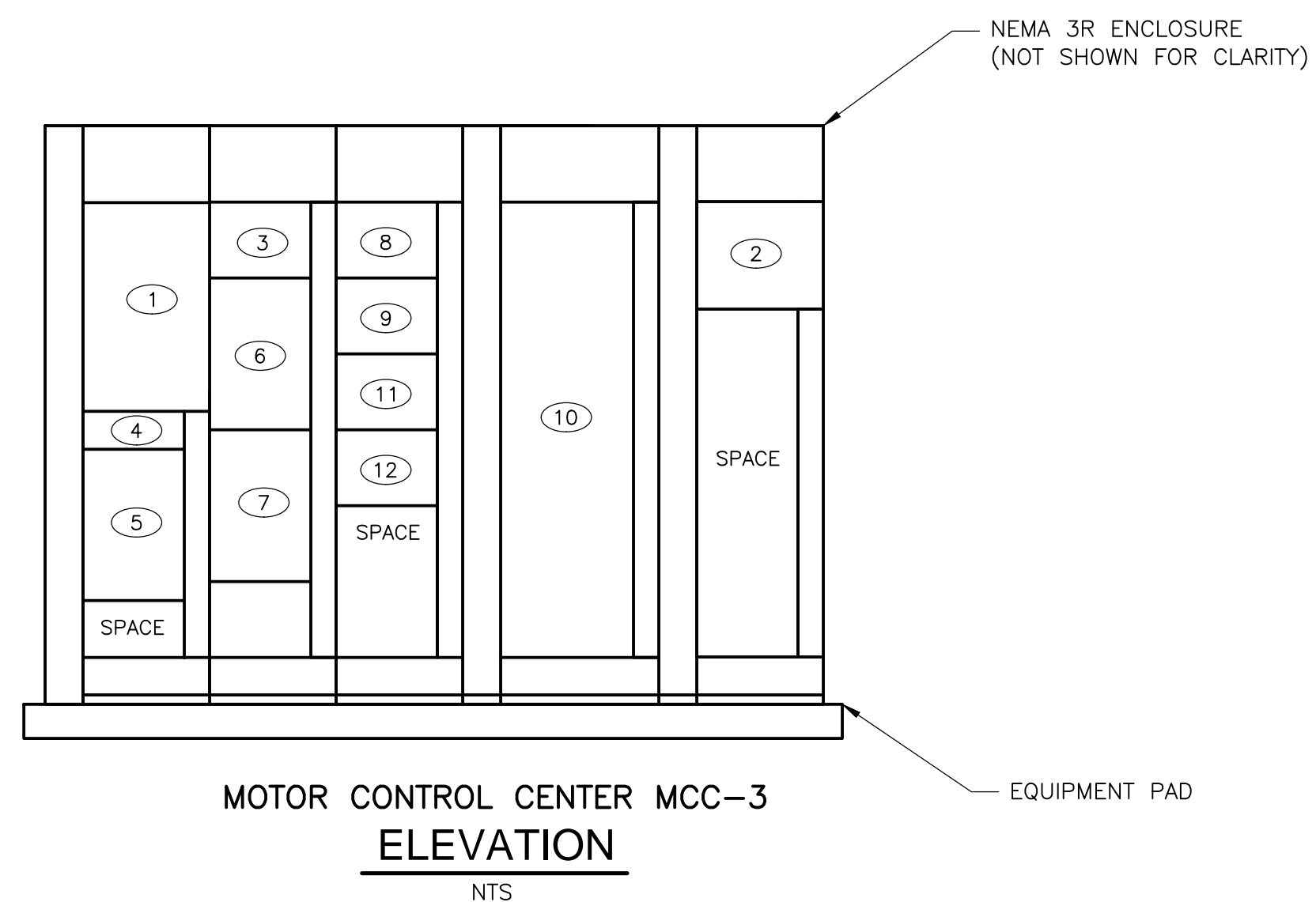


NEW 350KW GENERATOR  
480V, 3PH, 4W

UTILITY SCOPE UNO  
DIVISION 26 SCOPE

UT-SEC: 3#350KCMIL, 1#2/0G, 3°C  
3-SETS: 1#2/0G, 3°C

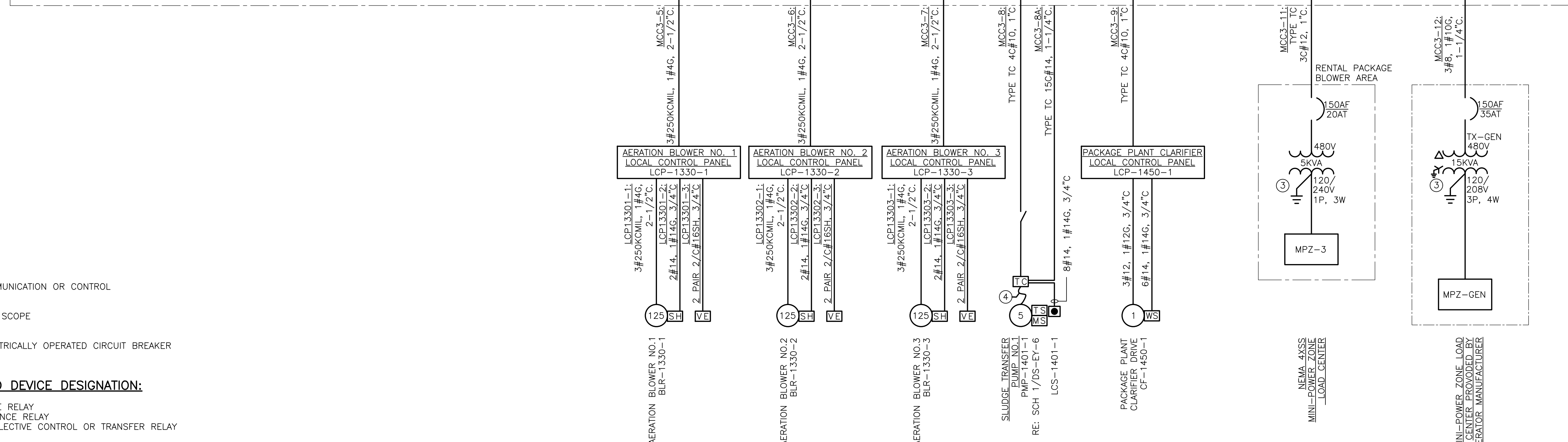
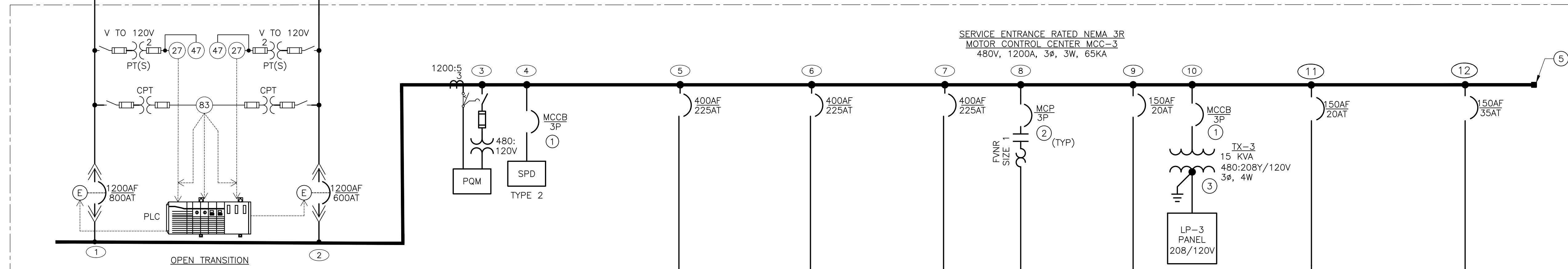
MCC3-2:  
3 SETS: 3#350KCMIL, 1#2/0G, 3°C



MOTOR CONTROL CENTER MCC-3  
ELEVATION  
NTS

KEY NOTES:

- 1 MOLDED CASE CIRCUIT BREAKER (MCCB) SIZED BY MOTOR CONTROL CENTER (MCC) MANUFACTURER.
- 2 MOTOR CIRCUIT PROTECTOR (MCP) SIZED BY MCC MANUFACTURER.
- 3 SEPARATELY DERIVED SYSTEM SHALL BE BONDED TO THE NEAREST GROUNDING ELECTRODE PER NEC.
- 4 MANUFACTURER PROVIDED CABLE, 1" (MIN), COORDINATE FINAL CONDUIT SIZE WITH SELECTED PUMP MANUFACTURER MOTOR CABLE.
- 5 PROVIDE PROVISIONS REQUIRED TO SPLICE THE MCC HORIZONTAL BUS FOR RELOCATED BLOWER STARTERS INDICATED IN DS-E-6A.



**LEGEND:**  
 - - - - - COMMUNICATION OR CONTROL  
 \_\_\_\_\_ NEW SCOPE  
 (E) ELECTRICALLY OPERATED CIRCUIT BREAKER

**ANSI STANDARD DEVICE DESIGNATION:**  
 27 - UNDERVOLTAGE RELAY  
 47 - PHASE-SEQUENCE RELAY  
 83 - AUTOMATIC SELECTIVE CONTROL OR TRANSFER RELAY

MOTOR CONTROL CENTER MCC-3  
ONE-LINE DIAGRAM  
NTS

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	STC	JCS	CONFORMED DRAWINGS
Δ	01/09/24	SS	JCS	REVISED PER ADDENDUM NO. 4

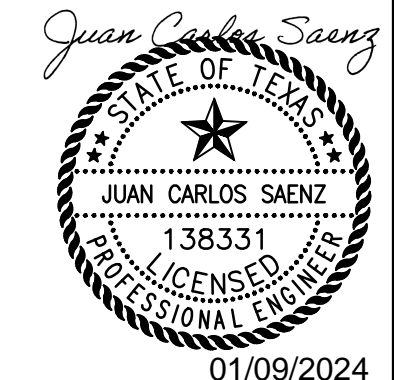
DESIGNED BY: M. SAYED AASIF  
 DRAWN BY: M. SAYED AASIF  
 SHEET CHK'D BY: M. CZACH  
 CROSS CHK'D BY: G. PRABHU  
 APPROVED BY: J. SAENZ  
 DATE: DECEMBER 2023



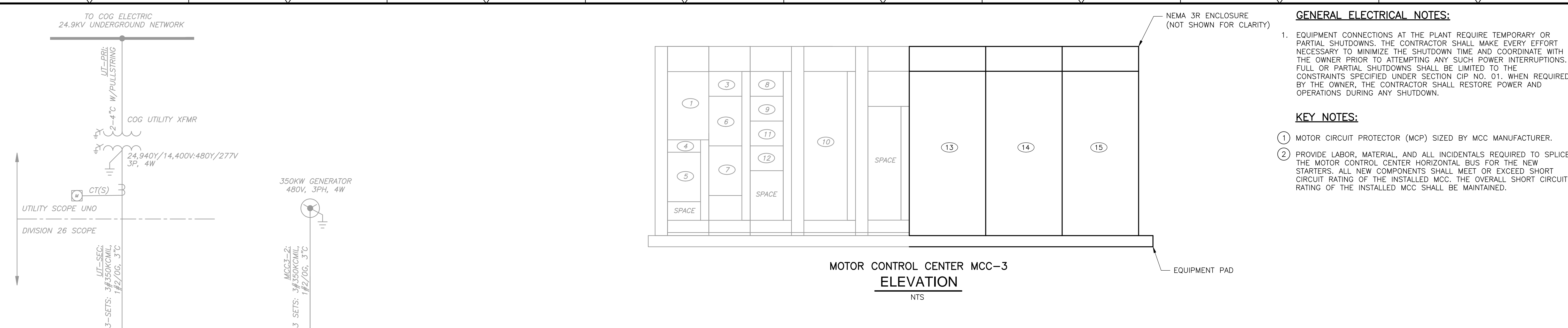
CITY OF GEORGETOWN, TEXAS  
DOVE SPRINGS WWTP  
REHABILITATION

DOVE SPRINGS WWTP  
MOTOR CONTROL CENTER MCC-3  
ONE-LINE DIAGRAM

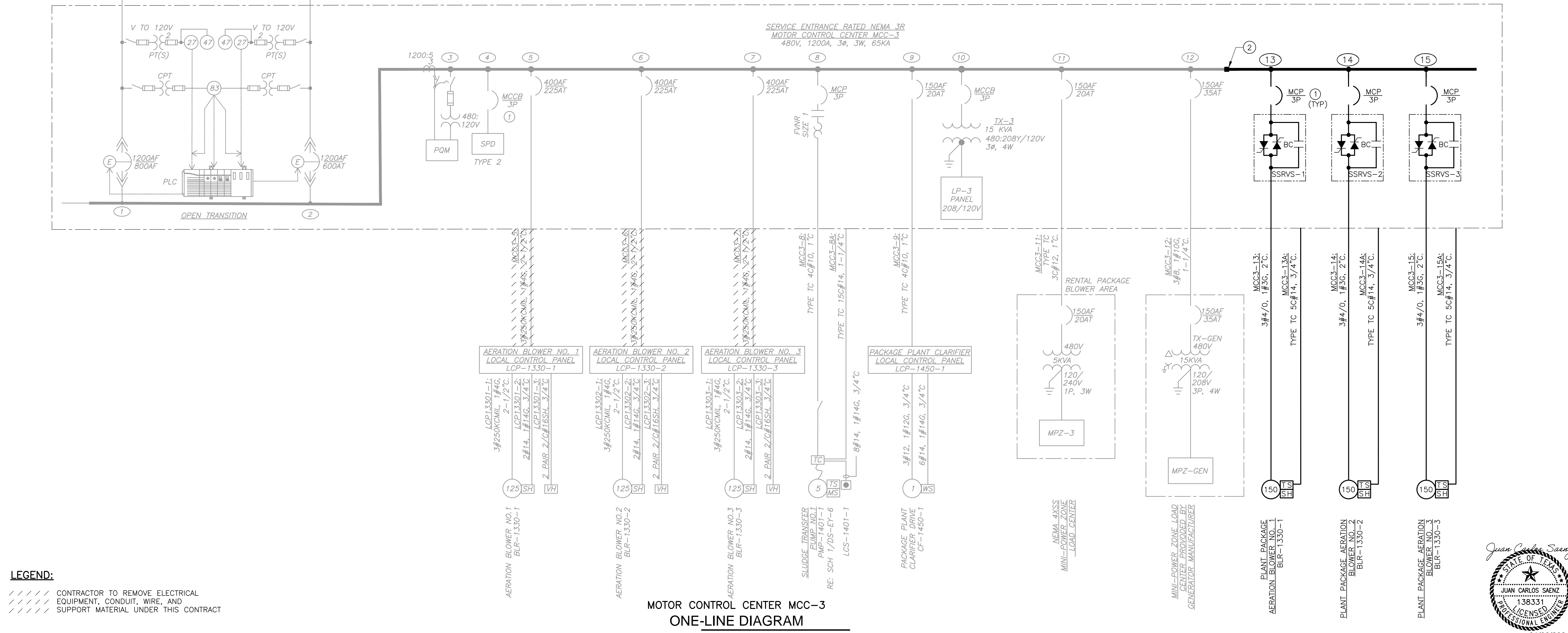
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FILE NAME: DSE06NFOL.DWG  
SHEET NO. DS-E-6



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- GENERAL ELECTRICAL NOTES:**
- EQUIPMENT CONNECTIONS AT THE PLANT REQUIRE TEMPORARY OR PARTIAL SHUTDOWNS. THE CONTRACTOR SHALL MAKE EVERY EFFORT NECESSARY TO MINIMIZE THE SHUTDOWN TIME AND COORDINATE WITH THE OWNER PRIOR TO ATTEMPTING ANY SUCH POWER INTERRUPTIONS. FULL OR PARTIAL SHUTDOWNS SHALL BE LIMITED TO THE CONSTRAINTS SPECIFIED UNDER SECTION CIP NO. 01. WHEN REQUIRED BY THE OWNER, THE CONTRACTOR SHALL RESTORE POWER AND OPERATIONS DURING ANY SHUTDOWN.
- KEY NOTES:**
- MOTOR CIRCUIT PROTECTOR (MCP) SIZED BY MCC MANUFACTURER.
  - PROVIDE LABOR, MATERIAL, AND ALL INCIDENTALS REQUIRED TO SPLICE THE MOTOR CONTROL CENTER HORIZONTAL BUS FOR THE NEW STARTERS. ALL NEW COMPONENTS SHALL MEET OR EXCEED SHORT CIRCUIT RATING OF THE INSTALLED MCC. THE OVERALL SHORT CIRCUIT RATING OF THE INSTALLED MCC SHALL BE MAINTAINED.



**LEGEND:**

// // CONTRACTOR TO REMOVE ELECTRICAL EQUIPMENT, CONDUIT, WIRE, AND SUPPORT MATERIAL UNDER THIS CONTRACT  
 - - - - - CONTRACTOR TO REMOVE ELECTRICAL EQUIPMENT, CONDUIT, WIRE, AND SUPPORT MATERIAL UNDER THIS CONTRACT  
 - - - - - CONTRACTOR TO REMOVE ELECTRICAL EQUIPMENT, CONDUIT, WIRE, AND SUPPORT MATERIAL UNDER THIS CONTRACT

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	STC	JCS	CONFORMED DRAWINGS
A	01/09/24	SS	JCS	REVISED PER ADDENDUM NO. 4

DESIGNED BY:	M. SAYED AASIF
DRAWN BY:	M. SAYED AASIF
SHEET CHK'D BY:	M. CZACH
CROSS CHK'D BY:	G. PRABHU
APPROVED BY:	J. SAENZ
DATE:	DECEMBER 2023



CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

**DOVE SPRINGS WWTP  
MOTOR CONTROL CENTER MCC-3  
ONE-LINE DIAGRAM (BLOWER RELOCATION)**

PROJECT NO. 2048-264953  
 FILE NAME: DSE06ANFOL.DWG  
 SHEET NO.  
**DS-E-6A**



XREFS: (CDMS 2204\_DS) Images: [] Last saved by: SATC Time: 1/23/2024 12:02:34 PM p:\cdmsmith-a205-pw\benley.com\pw\_012024\026495304 Design Services NM\_90%09 Electrical\0 BIM\CADD\DS\07PBSC.dwg © 2022 CDM SMITH ALL RIGHTS RESERVED. REUSE OF DOCUMENTS: THESE DOCUMENTS AND DESIGNS PROVIDED BY PROFESSIONAL SERVICE, INCORPORATED HEREIN, ARE THE PROPERTY OF CDM SMITH AND ARE NOT TO BE USED, IN WHOLE OR PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF CDM SMITH.

225 AMP MAIN BREAKER 400 AMP BUS RATING 18 POLES 480 VOLTS 3 PHASE 3 WIRE 60 Hz.						EXISTING PANELBOARD DPA 65 KA SHORT CIRCUIT RATING ELECTRONIC GRADE: NO					LOCATION: HEADWORKS ENCLOSURE RATING: NEMA 4x, MOUNTING: SURFACE		
CIRCUIT NO.	DESCRIPTION	PHASE A	PHASE B	PHASE C	BREAKER AMPS/ POLES	NOTES	CIRCUIT NO.	DESCRIPTION	PHASE A	PHASE B	PHASE C	BREAKER AMPS/ POLES	NOTES
1	HCP-1	2.00	2.00		20 /3		2	POSITIVE DISPLACEMENT BLOWER CONTROL PANEL	18.00	18.00		200 /3	
3			2.00				4			18.00	18.00		
5				2.00			6	PDBCP			18.00		
7	CLARIFIER CONTROL PANEL CLRCP-2	2.00			20 /3		8		5.00				
9			2.00				10	MINI-LOAD CENTER MPA		5.00			
11				2.00			12				5.00		
13	MOTORIZED VALVE SG-1101-1	0.33			20 /3		14						/2
15			0.33				16						
17				0.33			18						/1
TOTAL PHASE KVA THIS SIDE		4.33	4.33	4.33			TOTAL PHASE KVA THIS SIDE		23.00	23.00	23.00		
							TOTAL KVA PER PHASE		27.33	27.33	27.33		
							TOTAL THREE PHASE KVA		81.99				
NOTES:						NOTES CONT.:							
1. PROVIDE LOCKING HARDWARE						2. 5 ma GROUND FAULT INTERRUPTER (GFI) CIRCUIT BREAKER							
3. 30 ma GFI CIRCUIT BREAKER FOR EQUIPMENT PROTECTION ONLY (HEAT TRACE)						4. PROVIDE LOCKING HARDWARE & PAINT BREAKER HANDLE RED (FACP)							
5. BRANCH CIRCUIT WIRING: 3/4"C, 3#12 & 1#12G						6. BRANCH CIRCUIT WIRING: 3/4"C, 3#10 & 1#10G							
7. BRANCH CIRCUIT WIRING: 3/4"C, 2#12 & 1#12G						8. BRANCH CIRCUIT WIRING: 3/4"C, 3#12 & 1#12G							
9. BRANCH CIRCUIT WIRING: 3"C, 3#350KCMIL & 1#3G						10. BRANCH CIRCUIT WIRING: 1"C, 3#8 & 1#10G							
11. BRANCH CIRCUIT WIRING: 1-1/2"C, 3#2 & 1#6G						12.							

**GENERAL ELECTRICAL NOTES:**

- 1. THIS DRAWINGS REPRESENTS THE LATEST DOCUMENTED INFORMATION AVAILABLE ON THE EXISTING SYSTEM. HOWEVER, UNDOCUMENTED CHANGES MAY EXIST THAT MAY REQUIRE FIELD INVESTIGATION.
- 2. PROVIDE A NEW TYPED PANELBOARD DIRECTORY BY UPDATING THE MODIFICATION.

**KEY NOTES:**

- 1. UTILIZE EXISTING SPACE TO HOUSE NEW CIRCUIT BRAEKER TO FEED NEW LOAD. ALL NEW COMPONENTS SHOULD MEET OR EXCEED SHORT CIRCUIT RATING OF THE EXISTING PANELBOARD.

**EXISTING PANELBOARD DPA  
SCHEDULE**

NTS

60 AMP MAIN BREAKER 100 AMP BUS RATING 42 POLES 208/120 VOLTS 3 PHASE 4 WIRE 60 Hz.						PANELBOARD LP-1 10 KA SHORT CIRCUIT RATING INTERNAL SPD: YES					LOCATION: EHOUSE ENCLOSURE RATING: NEMA 1 , MOUNTING: SURFACE		
CIRCUIT NO.	DESCRIPTION	PHASE A	PHASE B	PHASE C	BREAKER AMPS/ POLES	NOTES	CIRCUIT NO.	DESCRIPTION	PHASE A	PHASE B	PHASE C	BREAKER AMPS/ POLES	NOTES
1	EHOUSE LIGHTS	0.22			20 /1		2	EHOUSE RECEPTACLES	0.90			20 /1	7
3	LEVEL RELAY PANEL,LRP-1001-1		0.10		20 /1		4	BFP FACP		0.50		20 /1	4
5	FIT-1102-1			0.25	20 /1		6	SPARE				20 /1	
7	SPARE				20 /1		8	SPARE				20 /1	
9	SPARE				20 /1		10	LI-1005-1		0.50		20 /1	7
11	SPARE				20 /1		12	SPARE				20 /1	
13	SPARE				20 /1		14	SPARE				20 /1	
15	SPARE				20 /1		16	NETWORK SWITCH DS-RIO2		0.25		20 /1	7
17	SPACE				/1		18	SPACE				/1	
19	SPACE				/1		20	SPACE				/1	
21	SPACE				/1		22	SPACE				/1	
23	SPACE				/1		24	SPACE				/1	
25	SPACE				/1		26	SPACE				/1	
27	SPACE				/1		28	SPACE				/1	
29	SPACE				/1		30	SPACE				/1	
31	SPACE				/1		32	SPACE				/1	
33	SPACE				/1		34	SPACE				/1	
35	SPACE				/1		36	SPACE				/1	
37	SPACE				/1		38	SPACE				/1	
39	SPACE				/1		40	SPACE				/1	
41	SPACE				/1		42	SPACE				/1	
TOTAL PHASE KVA THIS SIDE		0.22	0.1	0.25			TOTAL PHASE KVA THIS SIDE		0.90	1.25	0.00		
							TOTAL KVA PER PHASE		1.12	1.35	0.25		
							TOTAL THREE PHASE KVA		2.72				
NOTES:						NOTES CONT.:							
1. PROVIDE LOCKING HARDWARE						2. 5 ma GROUND FAULT INTERRUPTER (GFI) CIRCUIT BREAKER							
3. 30 ma GFI CIRCUIT BREAKER FOR EQUIPMENT PROTECTION ONLY (HEAT TRACE)						4. PROVIDE LOCKING HARDWARE & PAINT BREAKER HANDLE RED (FACP)							
5. BRANCH CIRCUIT WIRING: 3/4"C, 3#12 & 1#12G						6. BRANCH CIRCUIT WIRING: 3/4"C, 3#10 & 1#10G							
7. BRANCH CIRCUIT WIRING: 3/4"C, 2#12 & 1#12G						8. BRANCH CIRCUIT WIRING: 3/4"C, 3#12 & 1#12G							
9. BRANCH CIRCUIT WIRING: 3"C, 3#350KCMIL & 1#3G						10. BRANCH CIRCUIT WIRING: 1"C, 3#8 & 1#10G							
11. BRANCH CIRCUIT WIRING: 1-1/2"C, 3#2 & 1#6G						12.							

**PANELBOARD LP-1  
SCHEDULE**

NTS

60 AMP MAIN BREAKER 100 AMP BUS RATING 24 POLES 208/120 VOLTS 3 PHASE 4 WIRE 60 Hz.						PANELBOARD LP-3 10 KA SHORT CIRCUIT RATING ELECTRONIC GRADE: NO					LOCATION: MCC-3 ENCLOSURE RATING: NEMA 1 , MOUNTING: SURFACE		
CIRCUIT NO.	DESCRIPTION	PHASE A	PHASE B	PHASE C	BREAKER AMPS/ POLES	NOTES	CIRCUIT NO.	DESCRIPTION	PHASE A	PHASE B	PHASE C	BREAKER AMPS/ POLES	NOTES
1	SPARE				20 /1		2	NETWORK SWITCH DS-RIO1	0.50			20 /1	7
3	SPARE				20 /1		4	PACKAGE AERATION BASIN LIGHTS		0.99		20 /1	7
5	SPARE				20 /1		6	SPARE				20 /1	
7	SPARE				20 /1		8	SPARE				20 /1	
9	SPACE				/1		10	SPACE				/1	
11	SPACE				/1		12	SPACE				/1	
13	SPACE				/1		14	SPACE				/1	
15	SPACE				/1		16	SPACE				/1	
17	SPACE				/1		18	SPACE				/1	
19	SPACE				/1		20	SPACE				/1	
21	SPACE				/1		22	SPACE				/1	
23	SPACE				/1		24	SPACE				/1	
TOTAL PHASE KVA THIS SIDE		0	0	0			TOTAL PHASE KVA THIS SIDE		0.50	0.99	0.00		
							TOTAL KVA PER PHASE		0.50	0.99	0.00		
							TOTAL THREE PHASE KVA		1.49				
NOTES:						NOTES CONT.:							
1. PROVIDE LOCKING HARDWARE						2. 5 ma GROUND FAULT INTERRUPTER (GFI) CIRCUIT BREAKER							
3. 30 ma GFI CIRCUIT BREAKER FOR EQUIPMENT PROTECTION ONLY (HEAT TRACE)						4. PROVIDE LOCKING HARDWARE & PAINT BREAKER HANDLE RED (FACP)							
5. BRANCH CIRCUIT WIRING: 3/4"C, 3#12 & 1#12G						6. BRANCH CIRCUIT WIRING: 3/4"C, 3#10 & 1#10G							
7. BRANCH CIRCUIT WIRING: 3/4"C, 2#12 & 1#12G						8. BRANCH CIRCUIT WIRING: 3/4"C, 3#12 & 1#12G							
9. BRANCH CIRCUIT WIRING: 3"C, 3#350KCMIL & 1#3G						10. BRANCH CIRCUIT WIRING: 1"C, 3#8 & 1#10G							
11. BRANCH CIRCUIT WIRING: 1-1/2"C, 3#2 & 1#6G						12.							

**PANELBOARD LP-3  
SCHEDULE**

NTS



DESIGNED BY:	S. KAMAL
DRAWN BY:	S. KAMAL
SHEET CHK'D BY:	M. CZACH
CROSS CHK'D BY:	G. PRABHU
APPROVED BY:	J. SAENZ
DATE:	DECEMBER 2023

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CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP  
 PANELBOARD SCHEDULES  
 SHEET NO.  
**DS-E-7**

PROJECT NO.	2048-264953
FILE NAME:	DSE07PBSC.DWG
SHEET NO. <b>DS-E-7</b>	

MINI POWER ZONE MPZ-1													
5 KVA 1-PHASE TRANSFORMER				480 VOLT PRIMARY				20 AMP 2 POLE PRIMARY MAIN BREAKER				65 KA	
30 AMP 2 POLE SECONDARY MAIN BREAKER				LOCATION: TREATMENT UNIT NO. 1									
30 AMP BUS RATING 12 POLES				10 KA SHORT CIRCUIT RATING				ENCLOSURE RATING: NEMA 4X				MOUNTING: SURFACE	
120/240 VOLTS SECONDARY 1 PHASE 3 WIRE				60 Hz.				ELECTRONIC GRADE: NO					
CIRCUIT NO.	DESCRIPTION	LOAD KVA LINE 1	LINE 2	AMPS/ POLES	BREAKER NOTES	CIRCUIT NO.	DESCRIPTION	LOAD KVA LINE 1	LINE 2	AMPS/ POLES	BREAKER NOTES		
1	TREATMENT 1 BLOWER LIGHTS	0.12		20 /1	5	2	TREATMENT 1 BLOWER RECEPTACLE	0.18		20 /1	5		
3	LCP-1310-1		0.5	20 /1	5	4	LCP-1310-2		0.5	20 /1	5		
5	NETWORK SWITCH DS-TU1	0.5		20 /1	5	6	PIT-1311-1	0.1		20 /1	5		
7	VIT-1310-1A/-1B		0.2	20 /1	5	8	VIT-1310-2A/-2B		0.2	20 /1	5		
9	SPARE			20 /1		10	SPARE			20 /1			
11	SPARE			20 /1		12	SPARE			20 /1			
TOTAL LINE KVA THIS SIDE		0.62	0.7			TOTAL LINE KVA THIS SIDE		0.28	0.7				
						TOTAL KVA PER LINE		0.9	1.4				
						TOTAL KVA		2.3					
NOTES:						NOTES CONT.:							
1. PROVIDE LOCKING HARDWARE						2. 5 ma GROUND FAULT INTERRUPTER (GFI) CIRCUIT BREAKER							
3. 30 ma GFI CIRCUIT BREAKER FOR EQUIPMENT PROTECTION ONLY (HEAT TRACE)						4. PROVIDE LOCKING HARDWARE & PAINT BREAKER HANDLE RED (FACP)							
5. BRANCH CIRCUIT WIRING: 3/4"C, 2#12 & 1#12G						6.							
7.						8.							

PANELBOARD MPZ-1  
SCHEDULE  
NTS

MINI POWER ZONE MPZ-2													
5 KVA 1-PHASE TRANSFORMER				480 VOLT PRIMARY				20 AMP 2 POLE PRIMARY MAIN BREAKER				65 KA	
30 AMP 2 POLE SECONDARY MAIN BREAKER				LOCATION: TREATMENT UNIT NO. 2									
30 AMP BUS RATING 12 POLES				10 KA SHORT CIRCUIT RATING				ENCLOSURE RATING: NEMA 4X				MOUNTING: SURFACE	
120/240 VOLTS SECONDARY 1 PHASE 3 WIRE				60 Hz.				ELECTRONIC GRADE: NO					
CIRCUIT NO.	DESCRIPTION	LOAD KVA LINE 1	LINE 2	AMPS/ POLES	BREAKER NOTES	CIRCUIT NO.	DESCRIPTION	LOAD KVA LINE 1	LINE 2	AMPS/ POLES	BREAKER NOTES		
1	TREATMENT 2 BLOWER LIGHTS	0.12		20 /1	5	2	TREATMENT 2 BLOWER RECEPTACLE	0.18		20 /1	5		
3	LCP-1310-3		0.5	20 /1	5	4	LCP-1310-4		0.5	20 /1	5		
5	VIT-1310-3A/-3B	0.2		20 /1	5	6	PIT-1311-2	0.1		20 /1	5		
7	SPARE			20 /1		8	VIT-1310-4A/-4B		0.2	20 /1	5		
9	SPARE			20 /1		10	SPARE			20 /1			
11	SPARE			20 /1		12	SPARE			20 /1			
TOTAL LINE KVA THIS SIDE		0.32	0.5			TOTAL LINE KVA THIS SIDE		0.28	0.7				
						TOTAL KVA PER LINE		0.6	1.2				
						TOTAL KVA		1.8					
NOTES:						NOTES CONT.:							
1. PROVIDE LOCKING HARDWARE						2. 5 ma GROUND FAULT INTERRUPTER (GFI) CIRCUIT BREAKER							
3. 30 ma GFI CIRCUIT BREAKER FOR EQUIPMENT PROTECTION ONLY (HEAT TRACE)						4. PROVIDE LOCKING HARDWARE & PAINT BREAKER HANDLE RED (FACP)							
5. BRANCH CIRCUIT WIRING: 3/4"C, 2#12 & 1#12G						6.							
7.						8.							

PANELBOARD MPZ-2  
SCHEDULE  
NTS

MINI POWER ZONE MPZ-3													
5 KVA 1-PHASE TRANSFORMER				480 VOLT PRIMARY				20 AMP 2 POLE PRIMARY MAIN BREAKER				65 KA	
30 AMP 2 POLE SECONDARY MAIN BREAKER				LOCATION: RENTAL PACKAGE BLOWER									
30 AMP BUS RATING 12 POLES				10 KA SHORT CIRCUIT RATING				ENCLOSURE RATING: NEMA 4X				MOUNTING: SURFACE	
120/240 VOLTS SECONDARY 1 PHASE 3 WIRE				60 Hz.				ELECTRONIC GRADE: NO					
CIRCUIT NO.	DESCRIPTION	LOAD KVA LINE 1	LINE 2	AMPS/ POLES	BREAKER NOTES	CIRCUIT NO.	DESCRIPTION	LOAD KVA LINE 1	LINE 2	AMPS/ POLES	BREAKER NOTES		
1	PACKAGE BLOWER LIGHTS	0.12		20 /1	5	2	PACKAGE BLOWER RECEPTACLE	0.18		20 /1	5		
3	LEVEL RELAY PANEL LRP-1401-1		0.25	20 /1	5	4	PACKAGE CLARIFIER LIGHTS		0.19	20 /1	5		
5	SOLENOID VALVE PANEL	0.25		20 /1	5	6	PACKAGE SLUDGE PUMP LIGHTS	0.19		20 /1	5		
7	SPARE			20 /1		8	SPARE			20 /1			
9	SPARE			20 /1		10	SPARE			20 /1			
11	SPACE			/1		12	SPACE			/1			
TOTAL LINE KVA THIS SIDE		0.37	0.25			TOTAL LINE KVA THIS SIDE		0.37	0.19				
						TOTAL KVA PER LINE		0.74	0.44				
						TOTAL KVA		1.18					
NOTES:						NOTES CONT.:							
1. PROVIDE LOCKING HARDWARE						2. 5 ma GROUND FAULT INTERRUPTER (GFI) CIRCUIT BREAKER							
3. 30 ma GFI CIRCUIT BREAKER FOR EQUIPMENT PROTECTION ONLY (HEAT TRACE)						4. PROVIDE LOCKING HARDWARE & PAINT BREAKER HANDLE RED (FACP)							
5. BRANCH CIRCUIT WIRING: 3/4"C, 2#12 & 1#12G						6.							
7.						8.							

PANELBOARD MPZ-3  
SCHEDULE  
NTS

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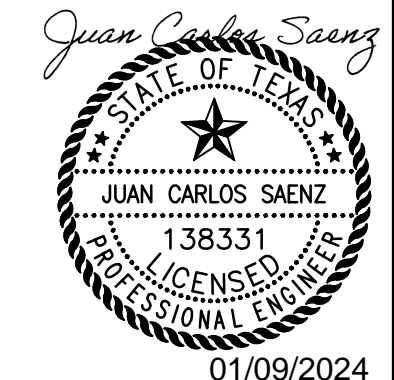
DESIGNED BY:	S. KAMAL
DRAWN BY:	S. KAMAL
SHEET CHK'D BY:	M. CZACH
CROSS CHK'D BY:	G. PRABHU
APPROVED BY:	J. SAENZ
DATE:	DECEMBER 2023

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CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP  
 PANELBOARD SCHEDULES  
 SHEET NO.  
**DS-E-8**

PROJECT NO. 2048-264953  
 FILE NAME: DSE08PBSC.DWG  
 SHEET NO.  
**DS-E-8**



**GENERAL ELECTRICAL NOTES:**

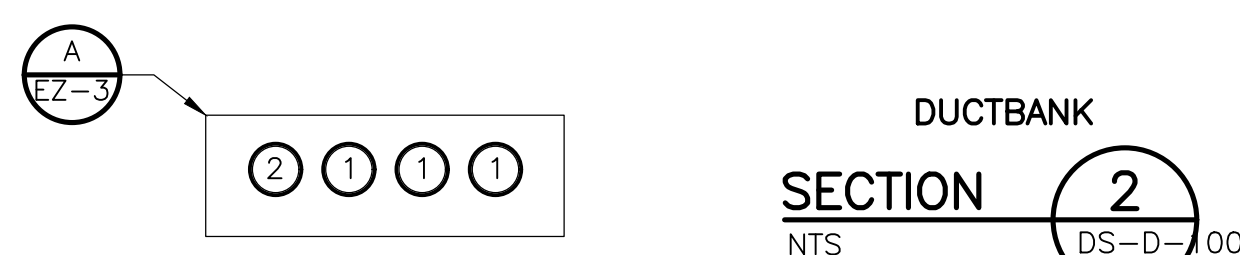
1. CONCRETE REINFORCED DUCTBANKS SHALL BE EXTENDED UNDERNEATH STRUCTURES OR ELECTRICAL EQUIPMENT AND ARE NOT SHOWN FOR CLARITY BUT THE RESPONSIBILITY OF ELECTRICAL CONTRACTOR.
2. PROVIDE PULLSTRING FOR SPARE CONDUITS.
3. DETAILS SHOWN ON THIS SHEET ARE FOR DIAGRAMMATICAL PURPOSES AND SHOW INTENT. DUCTBANK SECTIONS DO NOT NECESSARILY REFLECT ACTUAL CONDUIT PLACEMENT.



DUCTBANK  
SECTION 1  
NTS DS-D-00

TABLE FOR SECTION 1		
CONDUIT NO.	CONDUIT TAG/ SIZE	DESCRIPTION
1	UT-PRI/ 2"C. W/PULLSTRING	FROM UTILITY RISER POLE TO UTILITY JUNCTION BOX

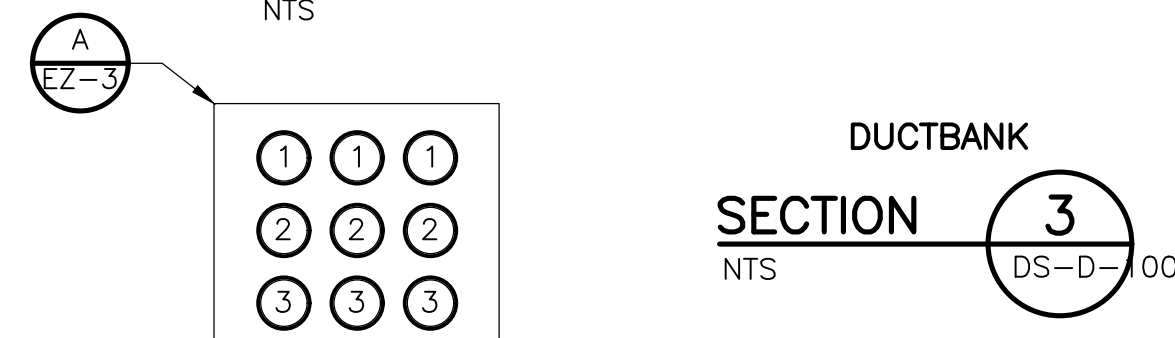
UTILITY PRIMARY DUCTBANK  
**SCHEDULE**  
NTS



DUCTBANK  
SECTION 2  
NTS DS-D-00

TABLE FOR SECTION 2		
CONDUIT NO.	CONDUIT TAG/ SIZE	DESCRIPTION
1	UT-PRI/ 2"C. W/PULLSTRING	FROM UTILITY RISER POLE TO UTILITY JUNCTION BOX
2	UT-PRI1/ 2"C. W/PULLSTRING	FROM UTILITY JUNCTION BOX TO EXISTING UTILITY TRANSFORMER

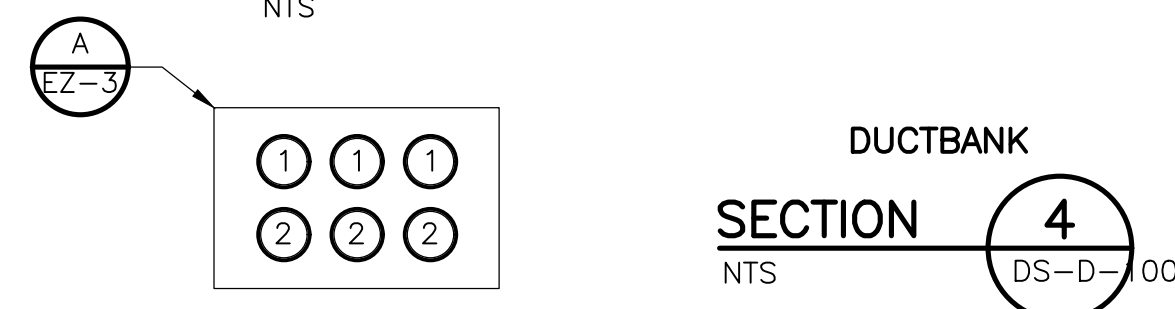
UTILITY PRIMARY DUCTBANK  
**SCHEDULE**  
NTS



DUCTBANK  
SECTION 3  
NTS DS-D-00

TABLE FOR SECTION 3		
CONDUIT NO.	CONDUIT TAG/ SIZE	DESCRIPTION
1	UT-PRI2/ 2"C. W/PULLSTRING	FROM UTILITY JUNCTION BOX TO EXISTING UTILITY TRANSFORMER
2	UT-PRI3/ 2"C. W/PULLSTRING	FROM UTILITY JUNCTION BOX TO UTILITY TRANSFORMER T#1
3	UT-PRI4/ 2"C. W/PULLSTRING	FROM UTILITY JUNCTION BOX TO UTILITY TRANSFORMER T#2

UTILITY PRIMARY DUCTBANK  
**SCHEDULE**  
NTS



DUCTBANK  
SECTION 4  
NTS DS-D-00

TABLE FOR SECTION 4		
CONDUIT NO.	CONDUIT TAG/ SIZE	DESCRIPTION
1	UT-PRI2/ 2"C. W/PULLSTRING	FROM UTILITY JUNCTION BOX TO EXISTING UTILITY TRANSFORMER
2	UT-PRI3/ 2"C. W/PULLSTRING	FROM UTILITY JUNCTION BOX TO UTILITY TRANSFORMER T#1

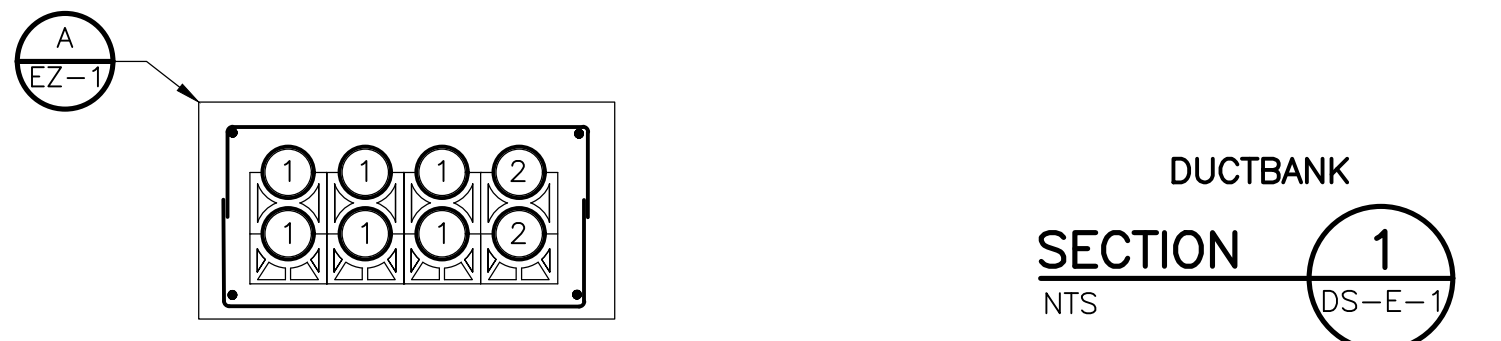
UTILITY PRIMARY DUCTBANK  
**SCHEDULE**  
NTS



DUCTBANK  
SECTION 5  
NTS DS-D-00

TABLE FOR SECTION 5		
CONDUIT NO.	CONDUIT TAG/ SIZE	DESCRIPTION
1	UT-PRI4/ 2"C. W/PULLSTRING	FROM UTILITY JUNCTION BOX TO UTILITY TRANSFORMER T#2

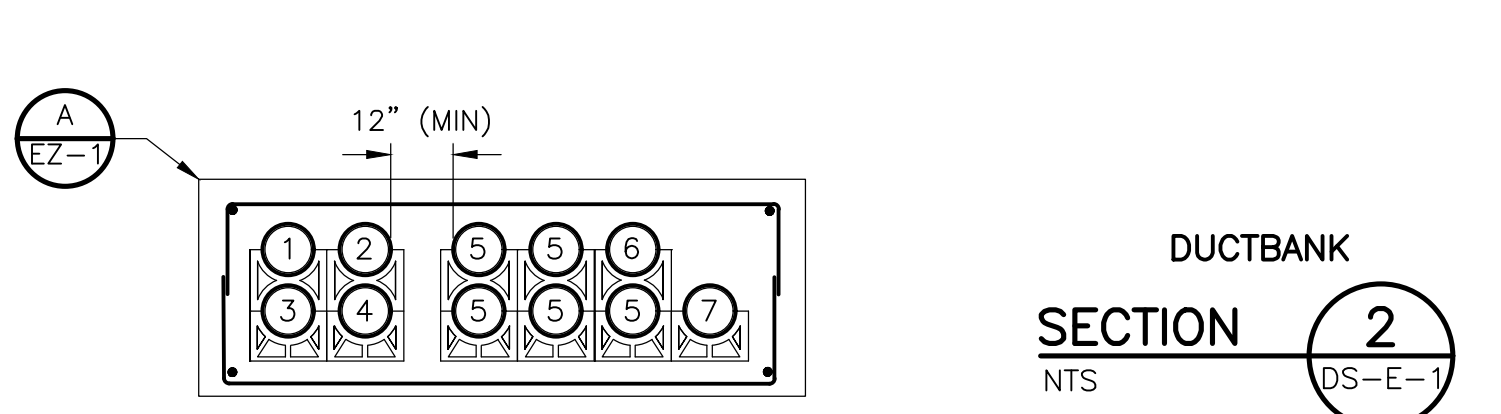
UTILITY PRIMARY DUCTBANK  
**SCHEDULE**  
NTS



DUCTBANK  
SECTION 1  
NTS DS-E-1

TABLE FOR SECTION 1		
CONDUIT NO.	CONDUIT TAG/ SIZE	DESCRIPTION
1	SWGR1-UT/ 3"C.	FROM UTILITY TRANSFORMER T#1 TO SWITCHGEAR SWGR-1
2	SPARE 3"C. W/PULLSTRING	FROM UTILITY TRANSFORMER T#1 TO SWITCHGEAR SWGR-1

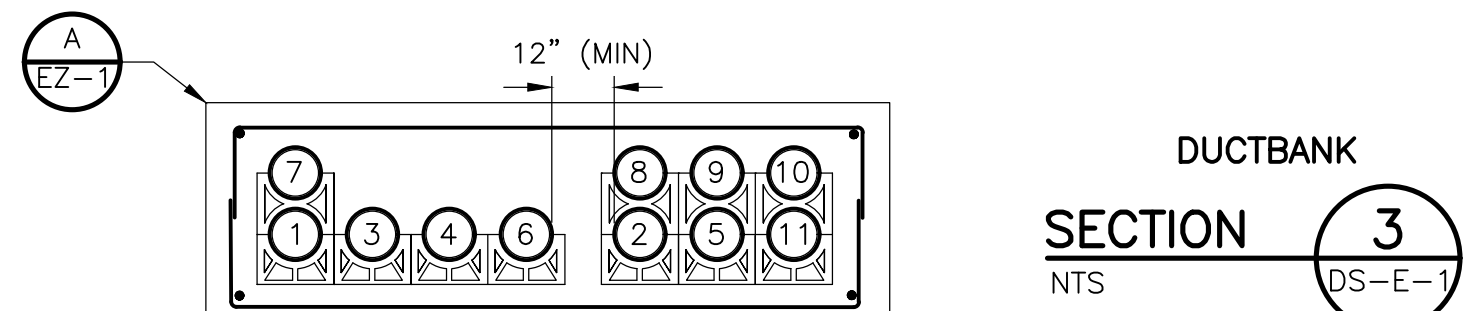
CONCRETE ENCASED DUCTBANK  
**SCHEDULE**  
NTS



DUCTBANK  
SECTION 2  
NTS DS-E-1

TABLE FOR SECTION 2		
CONDUIT NO.	CONDUIT TAG/ SIZE	DESCRIPTION
1	GENC-1/ 1"C.	FROM GENERATOR CONTROL PANEL TO SWITCHGEAR SWGR-1
2	GENC-2/ 1"C.	FROM GENERATOR CONTROL PANEL TO DS-RI02
3	GENC-3/ 1"C.	FROM GENERATOR CONTROL PANEL TO DS-RI02
4	SPARE 1"C. W/PULLSTRING	FROM GENERATOR CONTROL PANEL TO DS-RI02
5	SWGR1-GEN/ 3"C.	FROM GENERATOR TO SWITCHGEAR SWGR-1
6	SPARE 3"C. W/PULLSTRING	FROM GENERATOR TO SWITCHGEAR SWGR-1
7	MCC2-15/ 1-1/4"C.	FROM MOTOR CONTROL CENTER MCC-2 TO GENERATOR MINI-POWER ZONE LOAD CENTER MPZ-GEN

CONCRETE ENCASED DUCTBANK  
**SCHEDULE**  
NTS



DUCTBANK  
SECTION 3  
NTS DS-E-1

TABLE FOR SECTION 3		
CONDUIT NO.	CONDUIT TAG/ SIZE	DESCRIPTION
1	MCC1-10/ 1"C.	FROM MOTOR CONTROL CENTER MCC-1 TO EXISTING CLARIFIER NO.1 CF-1200-1
2	MCC1-10A/ 1-1/4"C.	FROM MOTOR CONTROL CENTER MCC-1 TO EXISTING CLARIFIER NO.1 CF-1200-1
3	MCC1-12/ 2"C.	FROM MOTOR CONTROL CENTER MCC-1 TO EXISTING PANELBOARD DPA
4	SPARE 1"C. W/PULLSTRING	FROM MOTOR CONTROL CENTER MCC-1 TO PULLBOX PB-3
5	MCC2-5/ 3"C.	FROM MOTOR CONTROL CENTER MCC-2 TO AERATION BLOWER NO.3 BLR-1310-3
6	MCC2-5A/ 1-1/4"C.	FROM MOTOR CONTROL CENTER MCC-2 TO AERATION BLOWER NO.3 BLR-1310-3
7	MCC2-5B/ 1"C.	FROM MOTOR CONTROL CENTER MCC-2 TO AERATION BLOWER NO.3 BLR-1310-3
8	MCC2-6/ 3"C.	FROM MOTOR CONTROL CENTER MCC-2 TO AERATION BLOWER NO.4 BLR-1310-4
9	MCC2-6A/ 1-1/4"C.	FROM MOTOR CONTROL CENTER MCC-2 TO AERATION BLOWER NO.4 BLR-1310-4
10	MCC2-6B/ 1"C.	FROM MOTOR CONTROL CENTER MCC-2 TO AERATION BLOWER NO.4 BLR-1310-4
11	MCC2-16/ 1"C.	FROM MOTOR CONTROL CENTER MCC-2 TO MINI-POWER ZONE LOAD CENTER MPZ-2
12	LCP13103-1/ 1"C	FROM MOTOR CONTROL CENTER MCC-2 TO AERATION BLOWER NO.3 LCP-1310-3
13	LCP13103-2/ 1"C	FROM DS-RI02 TO AERATION BLOWER NO.3 LCP-1310-3
14	LCP13104-1/ 1"C	FROM MOTOR CONTROL CENTER MCC-2 TO AERATION BLOWER NO.4 LCP-1310-4
15	LCP13104-2/ 1"C	FROM DS-RI02 TO AERATION BLOWER NO.4 LCP-1310-4
16	PI-1311-1/ 1"C	FROM DS-RI02 TO PRESSURE INDICATOR PI-1311-2
17	SPARE 1"C. W/ PULLSTRING	FROM MOTOR CONTROL CENTER MCC-2 TO PULLBOX PB-1
18	SPARE 1"C. W/ PULLSTRING	FROM DS-RI02 TO PULLBOX PB-2
19	MCC1-16/ 1-1/4"C.	FROM MOTOR CONTROL CENTER MCC-1 TO EXISTING SLUDGE PUMP CONTROL PANEL
20	MCC2-9/ 1-1/4"C.	FROM MOTOR CONTROL CENTER MCC-2 TO EXISTING BELT FILTER PRESS CONTROL PANEL BFPCP
21	MCC2-10/ 1"C.	FROM MOTOR CONTROL CENTER MCC-2 TO EXISTING BELT CONVEYOR
22	MCC2-10A/ 1"C.	FROM MOTOR CONTROL CENTER MCC-2 TO EXISTING BELT FILTER PRESS CONTROL PANEL (BELT CONVEYOR STARTER)
23	MCC2-11/ 1-1/2"C.	FROM MOTOR CONTROL CENTER MCC-2 TO EXISTING TRANSFORMER TX-LLA
24	MCC2-14/ 1-1/2"C.	FROM MOTOR CONTROL CENTER MCC-2 TO EXISTING BFP HEATING PANEL
25	LP1-4/ 1"C.	FROM PANELBOARD LP-1 TO BFP FACP
26	FACP-1/ 1"C.	FROM DS-RI02 TO BFP FACP
27	FACP-2/ 2"C.	FROM BFP FACP TO ADMIN FACP
28	SPARE 1"C. W/ PULLSTRING	FROM MOTOR CONTROL CENTER MCC-2 TO BFP PULLBOX
29	SPARE 1"C. W/ PULLSTRING	FROM DS-RI02 TO BFP PULLBOX

CONCRETE ENCASED DUCTBANK  
**SCHEDULE**  
NTS

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REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	STC	JCS	CONFORMED DRAWINGS

DESIGNED BY:	S. KAMAL
DRAWN BY:	S. KAMAL
SHEET CHK'D BY:	M. CZACH
CROSS CHK'D BY:	G. PRABHU
APPROVED BY:	J. SAENZ
DATE:	NOVEMBER 2023

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 8310-1 N. Capital of Texas Hwy, Suite 250  
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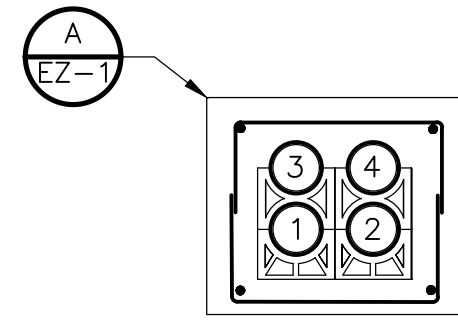
CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

ELECTRICAL DUCTBANK SCHEDULE I

PROJECT NO.	2048-264953
FILE NAME:	DSE09DTSC.DWG
SHEET NO.	DS-E-9



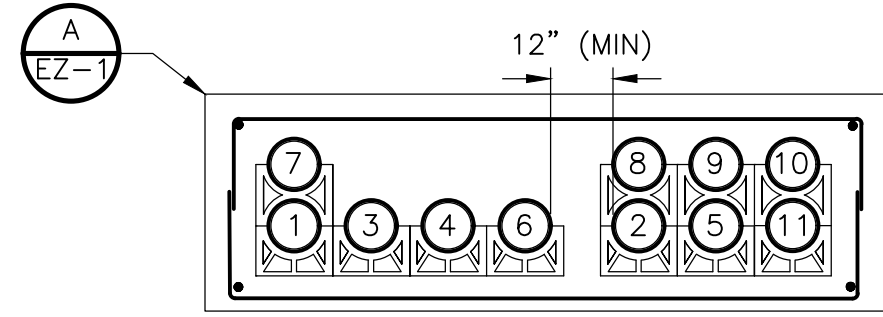
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DUCTBANK  
SECTION 4  
NTS DS-E-1

TABLE FOR SECTION 4		
CONDUIT NO.	CONDUIT TAG/ SIZE	DESCRIPTION
1	MCC1-10/ 1" C.	FROM MOTOR CONTROL CENTER MCC-1 TO EXISTING CLARIFIER NO.1 CF-1200-1
2	MCC1-10A/ 1-1/4" C.	FROM MOTOR CONTROL CENTER MCC-1 TO EXISTING CLARIFIER NO.1 CF-1200-1
3	MCC1-12/ 2" C.	FROM MOTOR CONTROL CENTER MCC-1 TO EXISTING PANELBOARD DPA
4	SPARE 1" C. W/PULLSTRING	FROM MOTOR CONTROL CENTER MCC-1 TO PULLBOX PB-3

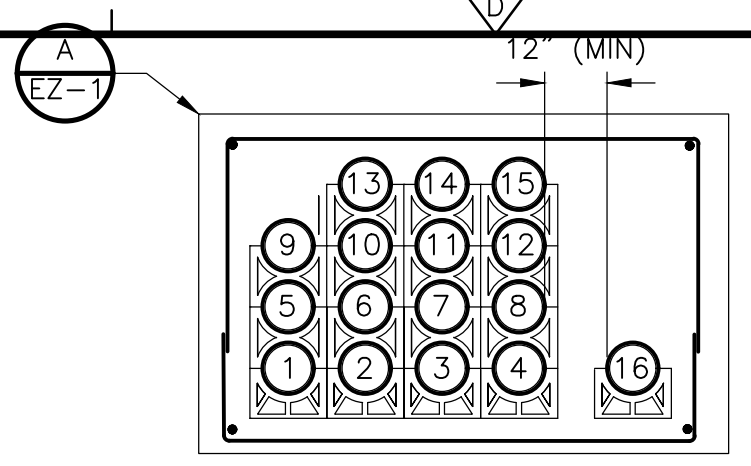
CONCRETE ENCASED DUCTBANK  
SCHEDULE  
NTS



DUCTBANK  
SECTION 5  
NTS DS-E-1

TABLE FOR SECTION 5		
CONDUIT NO.	CONDUIT TAG/ SIZE	DESCRIPTION
1	MCC1-5/ 3" C.	FROM MOTOR CONTROL CENTER MCC-1 TO AERATION BLOWER NO.1 BLR-1310-1
2	MCC1-5A/ 1-1/4" C.	FROM MOTOR CONTROL CENTER MCC-1 TO AERATION BLOWER NO.1 BLR-1310-1
3	MCC1-5B/ 1" C.	FROM MOTOR CONTROL CENTER MCC-1 TO AERATION BLOWER NO.1 BLR-1310-1
4	MCC1-6/ 3" C.	FROM MOTOR CONTROL CENTER MCC-1 TO AERATION BLOWER NO.2 BLR-1310-2
5	MCC1-6A/ 1-1/4" C.	FROM MOTOR CONTROL CENTER MCC-1 TO AERATION BLOWER NO.2 BLR-1310-2
6	MCC1-6B/ 1" C.	FROM MOTOR CONTROL CENTER MCC-1 TO AERATION BLOWER NO.2 BLR-1310-2
7	MCC1-17/ 1" C.	FROM MOTOR CONTROL CENTER MCC-1 TO MINI-POWER ZONE LOAD CENTER MPZ-1
8	LCP1310-1/ 1" C	FROM MOTOR CONTROL CENTER MCC-1 TO AERATION BLOWER NO.1 LCP-1310-1
9	LCP1310-2/ 1" C	FROM MOTOR CONTROL CENTER MCC-1 TO AERATION BLOWER NO.2 LCP-1310-2
10	PI-1311-1/ 1" C	FROM DS-RIO2 TO PRESSURE INDICATOR PI-1311-1
11	DSTU-1/ 2" C	FROM RTU-DSWTP TO FIBER OPTIC PATCH PANEL DS-TU1

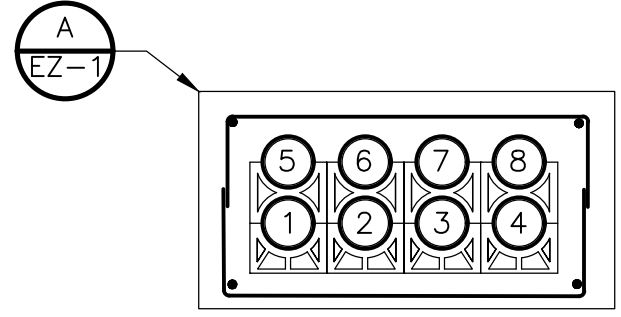
CONCRETE ENCASED DUCTBANK  
SCHEDULE  
NTS



DUCTBANK  
SECTION 6  
NTS DS-E-1

TABLE FOR SECTION 6		
CONDUIT NO.	CONDUIT TAG/ SIZE	DESCRIPTION
1	MCC2-13/ 1-1/2" C.	FROM MOTOR CONTROL CENTER MCC-2 TO EXISTING UV SYSTEM DISCONNECT SWITCH
2	SPARE 1" C. W/PULLSTRING	FROM DS-RIO2 TO UV SYSTEM AREA
3	MCC1-9/ 1" C.	FROM MOTOR CONTROL CENTER MCC-1 TO NPW PUMP NO.1 PMP-1700-1
4	SPARE 1" C. W/PULLSTRING	FROM MOTOR CONTROL CENTER MCC-1 TO NPW PUMP NO.1 PMP-1700-1
5	MCC2-8/ 1" C.	FROM MOTOR CONTROL CENTER MCC-2 TO NPW PUMP NO.2 PMP-1700-2
6	SPARE 1" C. W/PULLSTRING	FROM MOTOR CONTROL CENTER MCC-1 TO NPW PUMP NO.2 PMP-1700-2
7	MCC1-13/ 1-1/2" C.	FROM MOTOR CONTROL CENTER MCC-1 TO TRANSFORMER TX-LLB DISCONNECT SWITCH
8	SPARE 1" C. W/PULLSTRING	FROM DS-RIO2 TO NPW HOUSE PULLBOX
9	MCC1-8/ 1" C.	FROM MOTOR CONTROL CENTER MCC-1 TO FILTRATE PUMP NO.1 PMP-1001-1
10	MCC1-8A/ 1-1/4" C.	FROM MOTOR CONTROL CENTER MCC-1 TO FILTRATE PUMP NO.1 PMP-1001-1
11	MCC2-7/ 1" C.	FROM MOTOR CONTROL CENTER MCC-2 TO FILTRATE PUMP NO.2 PMP-1001-2
12	MCC2-7A/ 1-1/4" C.	FROM MOTOR CONTROL CENTER MCC-2 TO FILTRATE PUMP NO.2 PMP-1001-2
13	LP1-3/ 1" C.	FROM PANELBOARD LP-1 TO LEVEL RELAY PANEL LRP-1001-1
14	LP1-10/ 1" C.	FROM PANELBOARD LP-1 TO LEVEL INDICATOR LI-1005-1
15	LRP1001-1/ 1" C	FROM DS-RIO2 TO LEVEL RELAY PANEL LRP-1001-1
16	LI10051-1/ 1" C	FROM DS-RIO2 TO LEVEL INDICATOR LI-1005-1

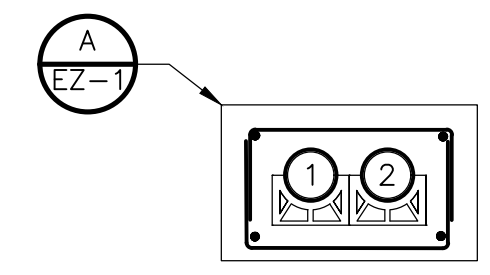
CONCRETE ENCASED DUCTBANK  
SCHEDULE  
NTS



DUCTBANK  
SECTION 7  
NTS DS-E-1

TABLE FOR SECTION 7		
CONDUIT NO.	CONDUIT TAG/ SIZE	DESCRIPTION
1	MCC2-13/ 1-1/2" C.	FROM MOTOR CONTROL CENTER MCC-2 TO EXISTING UV SYSTEM DISCONNECT SWITCH
2	SPARE 1" C. W/PULLSTRING	FROM DS-RIO2 TO UV SYSTEM AREA
3	MCC1-9/ 1" C.	FROM MOTOR CONTROL CENTER MCC-1 TO NPW PUMP NO.1 PMP-1700-1
4	SPARE 1" C. W/PULLSTRING	FROM MOTOR CONTROL CENTER MCC-1 TO NPW PUMP NO.1 PMP-1700-1
5	MCC2-8/ 1" C.	FROM MOTOR CONTROL CENTER MCC-2 TO NPW PUMP NO.2 PMP-1700-2
6	SPARE 1" C. W/PULLSTRING	FROM MOTOR CONTROL CENTER MCC-1 TO NPW PUMP NO.2 PMP-1700-2
7	MCC1-13/ 1-1/2" C.	FROM MOTOR CONTROL CENTER MCC-1 TO TRANSFORMER TX-LLB DISCONNECT SWITCH
8	SPARE 1" C. W/PULLSTRING	FROM DS-RIO2 TO NPW HOUSE PULLBOX

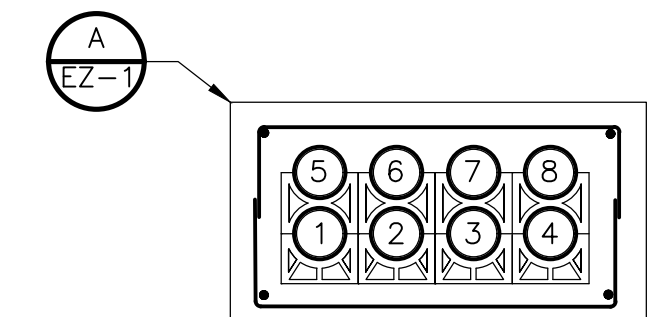
CONCRETE ENCASED DUCTBANK  
SCHEDULE  
NTS



DUCTBANK  
SECTION 8  
NTS DS-E-1

TABLE FOR SECTION 8		
CONDUIT NO.	CONDUIT TAG/ SIZE	DESCRIPTION
1	MCC2-13/ 1-1/2" C.	FROM MOTOR CONTROL CENTER MCC-2 TO EXISTING UV SYSTEM DISCONNECT SWITCH
2	SPARE 1" C. W/PULLSTRING	FROM DS-RIO2 TO UV SYSTEM AREA

CONCRETE ENCASED DUCTBANK  
SCHEDULE  
NTS



DUCTBANK  
SECTION 9  
NTS DS-E-1

TABLE FOR SECTION 9		
CONDUIT NO.	CONDUIT TAG/ SIZE	DESCRIPTION
1	FO-1/ 2" C.	FROM RTU-DSWTP TO DS-RIO2
2	SPARE 2" C. W/PULLSTRING	FROM RTU-DSWTP TO DS-RIO2
3	DSTU-1/ 2" C	FROM RTU-DSWTP TO FIBER OPTIC PATCH PANEL DS-TU1
4	FACP-2/ 2" C.	FROM BFP FACP TO ADMIN FACP
5	FO-2/ 2" C.	FROM RTU-DSWTP TO DS-RIO1
6	SPARE 2" C. W/PULLSTRING	FROM RTU-DSWTP TO DS-RIO1

CONCRETE ENCASED DUCTBANK  
SCHEDULE  
NTS

GENERAL ELECTRICAL NOTES:

1. CONCRETE REINFORCED DUCTBANKS SHALL BE EXTENDED UNDERNEATH STRUCTURES OR ELECTRICAL EQUIPMENT AND ARE NOT SHOWN FOR CLARITY BUT THE RESPONSIBILITY OF ELECTRICAL CONTRACTOR.
2. PROVIDE PULLSTRING FOR SPARE CONDUITS.
3. DETAILS SHOWN ON THIS SHEET ARE FOR DIAGRAMMATICAL PURPOSES AND SHOW INTENT. DUCTBANK SECTIONS DO NOT NECESSARILY REFLECT ACTUAL CONDUIT PLACEMENT.

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	STC	JCS	CONFORMED DRAWINGS

DESIGNED BY: S. KAMAL  
 DRAWN BY: S. KAMAL  
 SHEET CHK'D BY: M. CZACH  
 CROSS CHK'D BY: G. PRABHU  
 APPROVED BY: J. SAENZ  
 DATE: NOVEMBER 2023



CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

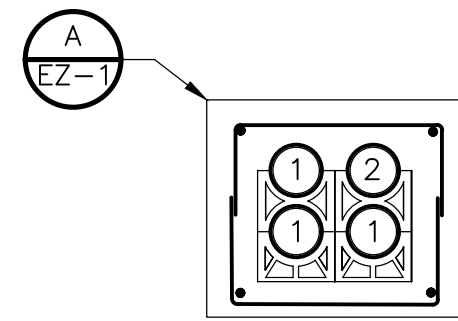
ELECTRICAL DUCTBANK SCHEDULE II  
 DS-E-10

PROJECT NO. 2048-264953  
 FILE NAME: DSE10DTSC.DWG  
 SHEET NO. DS-E-10



**GENERAL ELECTRICAL NOTES:**

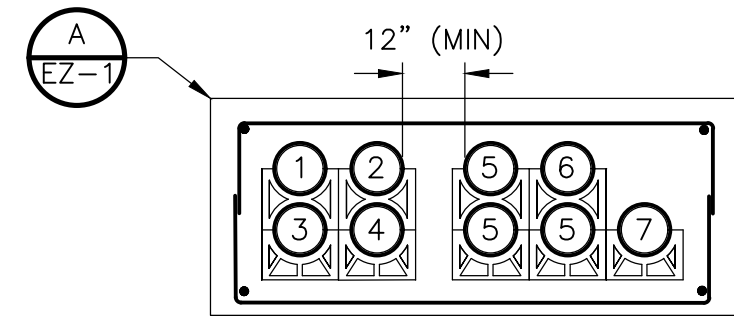
1. CONCRETE REINFORCED DUCTBANKS SHALL BE EXTENDED UNDERNEATH STRUCTURES OR ELECTRICAL EQUIPMENT AND ARE NOT SHOWN FOR CLARITY BUT THE RESPONSIBILITY OF ELECTRICAL CONTRACTOR.
2. PROVIDE PULLSTRING FOR SPARE CONDUITS.
3. DETAILS SHOWN ON THIS SHEET ARE FOR DIAGRAMMATICAL PURPOSES AND SHOW INTENT. DUCTBANK SECTIONS DO NOT NECESSARILY REFLECT ACTUAL CONDUIT PLACEMENT.



DUCTBANK  
SECTION 10  
NTS DS-E-1

TABLE FOR SECTION 10		
CONDUIT NO.	CONDUIT TAG/ SIZE	DESCRIPTION
1	UT-SEC/ 3" C.	FROM UTILITY TRANSFORMER T#2 TO MOTOR CONTROL CENTER MCC-3
2	SPARE 3" C. W/PULLSTRING	FROM UTILITY TRANSFORMER T#2 TO MOTOR CONTROL CENTER MCC-3

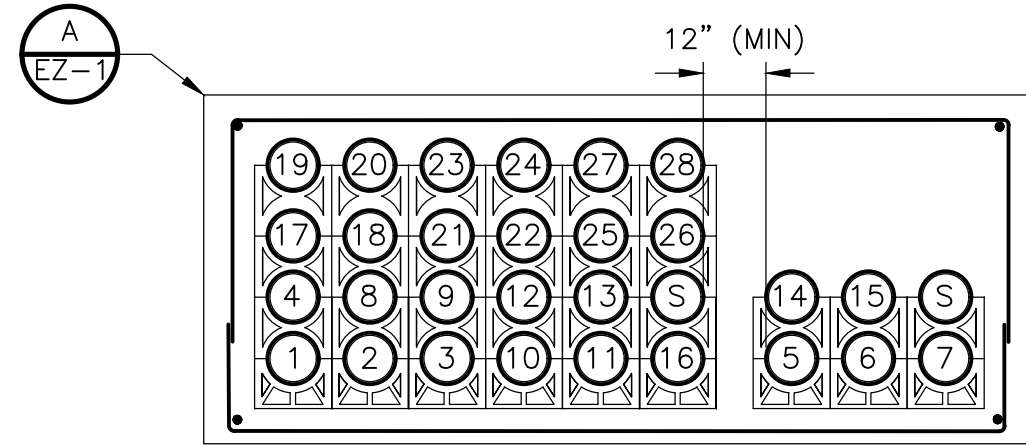
CONCRETE ENCASED DUCTBANK  
**SCHEDULE**  
NTS



DUCTBANK  
SECTION 11  
NTS DS-E-1

TABLE FOR SECTION 11		
CONDUIT NO.	CONDUIT TAG/ SIZE	DESCRIPTION
1	GENC-1/ 1" C.	FROM GENERATOR CONTROL PANEL TO MOTOR CONTROL CENTER MCC-3
2	GENC-2/ 1" C.	FROM GENERATOR CONTROL PANEL TO DS-RI01
3	GENC-3/ 1" C.	FROM GENERATOR CONTROL PANEL TO DS-RI01
4	SPARE 1" C. W/PULLSTRING	FROM GENERATOR CONTROL PANEL TO DS-RI01
5	MCC3-2/ 3" C.	FROM GENERATOR TO MOTOR CONTROL CENTER MCC-3
6	SPARE 3" C. W/PULLSTRING	FROM GENERATOR TO MOTOR CONTROL CENTER MCC-3
7	MCC3-12/ 1-1/4" C.	FROM MOTOR CONTROL CENTER MCC-3 TO GENERATOR MINI-POWER ZONE LOAD CENTER MPZ-GEN

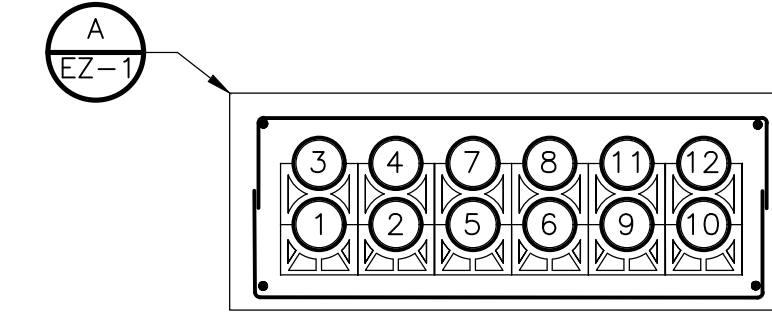
CONCRETE ENCASED DUCTBANK  
**SCHEDULE**  
NTS



DUCTBANK  
SECTION 12  
NTS DS-E-1

TABLE FOR SECTION 12		
CONDUIT NO.	CONDUIT TAG/ SIZE	DESCRIPTION
1	MCC3-5/ 2-1/2" C.	FROM MOTOR CONTROL CENTER MCC-3 TO PACKAGE PLANT AERATION BLOWER BLR-1330-1
2	MCC3-6/ 2-1/2" C.	FROM MOTOR CONTROL CENTER MCC-3 TO PACKAGE PLANT AERATION BLOWER BLR-1330-2
3	MCC3-7/ 2-1/2" C.	FROM MOTOR CONTROL CENTER MCC-3 TO PACKAGE PLANT AERATION BLOWER BLR-1330-3
4	MCC3-11/ 1" C.	FROM MOTOR CONTROL CENTER MCC-3 TO PACKAGE PLANT AERATION BLOWER AREA MINI-POWER ZONE MPZ-3
5	LCP1330-1/ 1" C.	FROM DS-RI01 TO PACKAGE PLANT AERATION BLOWER LCP-1330-1
6	LCP1330-1/ 1" C.	FROM DS-RI01 TO PACKAGE PLANT AERATION BLOWER LCP-1330-1
7	LCP1330-1/ 1" C.	FROM DS-RI01 TO PACKAGE PLANT AERATION BLOWER LCP-1330-1
8	MCC3-13/ 2" C.	FROM MOTOR CONTROL CENTER MCC-3 TO PACKAGE PLANT AERATION BLOWER BLR-1330-1
9	MCC3-13A/ 3/4" C.	FROM MOTOR CONTROL CENTER MCC-3 TO PACKAGE PLANT AERATION BLOWER BLR-1330-1
10	MCC3-14/ 2" C.	FROM MOTOR CONTROL CENTER MCC-3 TO PACKAGE PLANT AERATION BLOWER BLR-1330-2
11	MCC3-14A/ 3/4" C.	FROM MOTOR CONTROL CENTER MCC-3 TO PACKAGE PLANT AERATION BLOWER BLR-1330-2
12	MCC3-15/ 2" C.	FROM MOTOR CONTROL CENTER MCC-3 TO PACKAGE PLANT AERATION BLOWER BLR-1330-3
13	MCC3-15A/ 3/4" C.	FROM MOTOR CONTROL CENTER MCC-3 TO PACKAGE PLANT AERATION BLOWER BLR-1330-3
14	DSRI01-1/ 2" C.	FROM DS-RI01 TO PACKAGE PLANT AERATION BLOWER LOCAL CONTROL STATION LCS-1330-1, LCS-1330-2, LCS-1330-3
15	MCC3-A/ 2" C.	FROM MOTOR CONTROL CENTER MCC-3 TO PACKAGE PLANT AERATION BLOWER LCS-1330-1, LCS-1330-2, LCS-1330-3
16	LP3-4/ 1" C.	FROM PANELBOARD LP-3 TO PACKAGE PLANT AERATION BASIN AREA LIGHTS
17	MCC3-9/ 1" C.	FROM MOTOR CONTROL CENTER MCC-3 TO PACKAGE PLANT CLARIFIER LCP-1450-1
18	LCP1450-1/ 1" C.	FROM DS-RI01 TO PACKAGE PLANT CLARIFIER LCP-1450-1
19	MPZ3-4/ 1" C.	FROM MINI-POWER ZONE MPZ-3 TO PACKAGE PLANT CLARIFIER LIGHTS
20	SPARE 1" C W/PULLSTRING.	FROM HANDHOLE EHH-2 TO PACKAGE PLANT CLARIFIER PULLBOX
21	MCC3-8/ 1" C.	FROM MOTOR CONTROL CENTER MCC-3 TO PACKAGE PLANT SLUDGE TRANSFER PUMP PMP-1401-1
22	MCC3-8A/ 1-1/4" C.	FROM MOTOR CONTROL CENTER MCC-3 TO PACKAGE PLANT SLUDGE TRANSFER PUMP PMP-1401-1
23	LRP1401-1/ 1" C.	FROM DS-RI01 TO PACKAGE PLANT LEVEL RELAY LRP-1401-1
24	MPZ3-3/ 1" C.	FROM MINI-POWER ZONE MPZ-3 TO PACKAGE PLANT LEVEL RELAY LRP-1401-1
25	SOL1/ 1" C.	FROM DS-RI01 TO PACKAGE PLANT SOLENOID VALVE PANEL
26	MPZ3-5/ 1" C.	FROM MINI-POWER ZONE MPZ-3 TO PACKAGE PLANT SOLENOID VALVE PANEL
27	MPZ3-6/ 1" C.	FROM MINI-POWER ZONE MPZ-3 TO PACKAGE PLANT SLUDGE TRANSFER PUMP LIGHTS
28	SPARE 1" C W/PULLSTRING.	FROM HANDHOLE EHH-2 TO PACKAGE PLANT SLUDGE TRANSFER PUMP PULLBOX

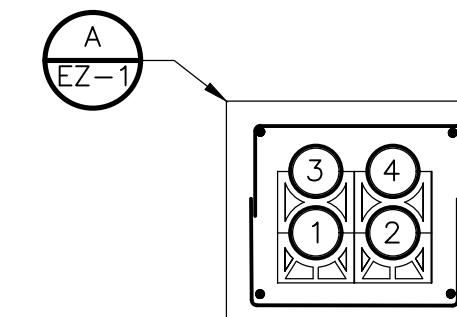
CONCRETE ENCASED DUCTBANK  
**SCHEDULE**  
NTS



DUCTBANK  
SECTION 13  
NTS DS-E-1

TABLE FOR SECTION 13		
CONDUIT NO.	CONDUIT TAG/ SIZE	DESCRIPTION
1	MCC3-9/ 1" C.	FROM MOTOR CONTROL CENTER MCC-3 TO PACKAGE PLANT CLARIFIER LCP-1450-1
2	LCP1450-1/ 1" C.	FROM DS-RI01 TO PACKAGE PLANT CLARIFIER LCP-1450-1
3	MPZ3-4/ 1" C.	FROM MINI-POWER ZONE MPZ-3 TO PACKAGE PLANT CLARIFIER LIGHTS
4	SPARE 1" C W/PULLSTRING.	FROM HANDHOLE EHH-2 TO PACKAGE PLANT CLARIFIER PULLBOX
5	MCC3-8/ 1" C.	FROM MOTOR CONTROL CENTER MCC-3 TO PACKAGE PLANT SLUDGE TRANSFER PUMP PMP-1401-1
6	MCC3-8A/ 1-1/4" C.	FROM MOTOR CONTROL CENTER MCC-3 TO PACKAGE PLANT SLUDGE TRANSFER PUMP PMP-1401-1
7	LRP1401-1/ 1" C.	FROM DS-RI01 TO PACKAGE PLANT LEVEL RELAY LRP-1401-1
8	MPZ3-3/ 1" C.	FROM MINI-POWER ZONE MPZ-3 TO PACKAGE PLANT LEVEL RELAY LRP-1401-1
9	SOL1/ 1" C.	FROM DS-RI01 TO PACKAGE PLANT SOLENOID VALVE PANEL
10	MPZ3-5/ 1" C.	FROM MINI-POWER ZONE MPZ-3 TO PACKAGE PLANT SOLENOID VALVE PANEL
11	MPZ3-6/ 1" C.	FROM MINI-POWER ZONE MPZ-3 TO PACKAGE PLANT SLUDGE TRANSFER PUMP LIGHTS
12	SPARE 1" C W/PULLSTRING.	FROM HANDHOLE EHH-2 TO PACKAGE PLANT SLUDGE TRANSFER PUMP PULLBOX

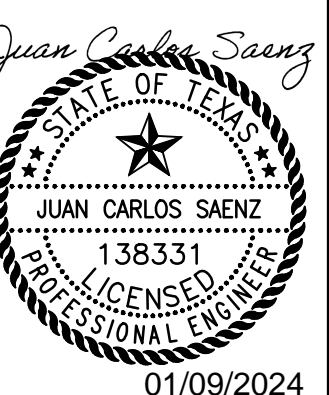
CONCRETE ENCASED DUCTBANK  
**SCHEDULE**  
NTS



DUCTBANK  
SECTION 14  
NTS DS-E-1

TABLE FOR SECTION 14		
CONDUIT NO.	CONDUIT TAG/ SIZE	DESCRIPTION
1	MCC3-9/ 1" C.	FROM MOTOR CONTROL CENTER MCC-3 TO PACKAGE PLANT CLARIFIER LCP-1450-1
2	LCP1450-1/ 1" C.	FROM DS-RI01 TO PACKAGE PLANT CLARIFIER LCP-1450-1
3	MPZ3-4/ 1" C.	FROM MINI-POWER ZONE MPZ-3 TO PACKAGE PLANT CLARIFIER LIGHTS
4	SPARE 1" C W/PULLSTRING.	FROM HANDHOLE EHH-2 TO PACKAGE PLANT CLARIFIER PULLBOX

CONCRETE ENCASED DUCTBANK  
**SCHEDULE**  
NTS



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REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	STC	JCS	CONFORMED DRAWINGS
A	01/09/24	SS	JCS	REVISED PER ADDENDUM NO. 4

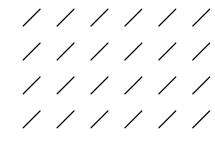
DESIGNED BY: S. KAMAL	 8310-1 N. Capital of Texas Hwy, Suite 250 Austin, TX 78731 Tel: (512) 346-1100 TBPE Firm Registration No. F-3043
DRAWN BY: S. KAMAL	
SHEET CHK'D BY: M. CZACH	
CROSS CHK'D BY: G. PRABHU	
APPROVED BY: J. SAENZ	
DATE: DECEMBER 2023	

CITY OF GEORGETOWN, TEXAS  
DOVE SPRINGS WWTP  
REHABILITATION

ELECTRICAL DUCTBANK SCHEDULE III  
DS-E-11

PROJECT NO. 2048-264953
FILE NAME: DSE11DTSC.DWG
SHEET NO. DS-E-11

LEGEND:



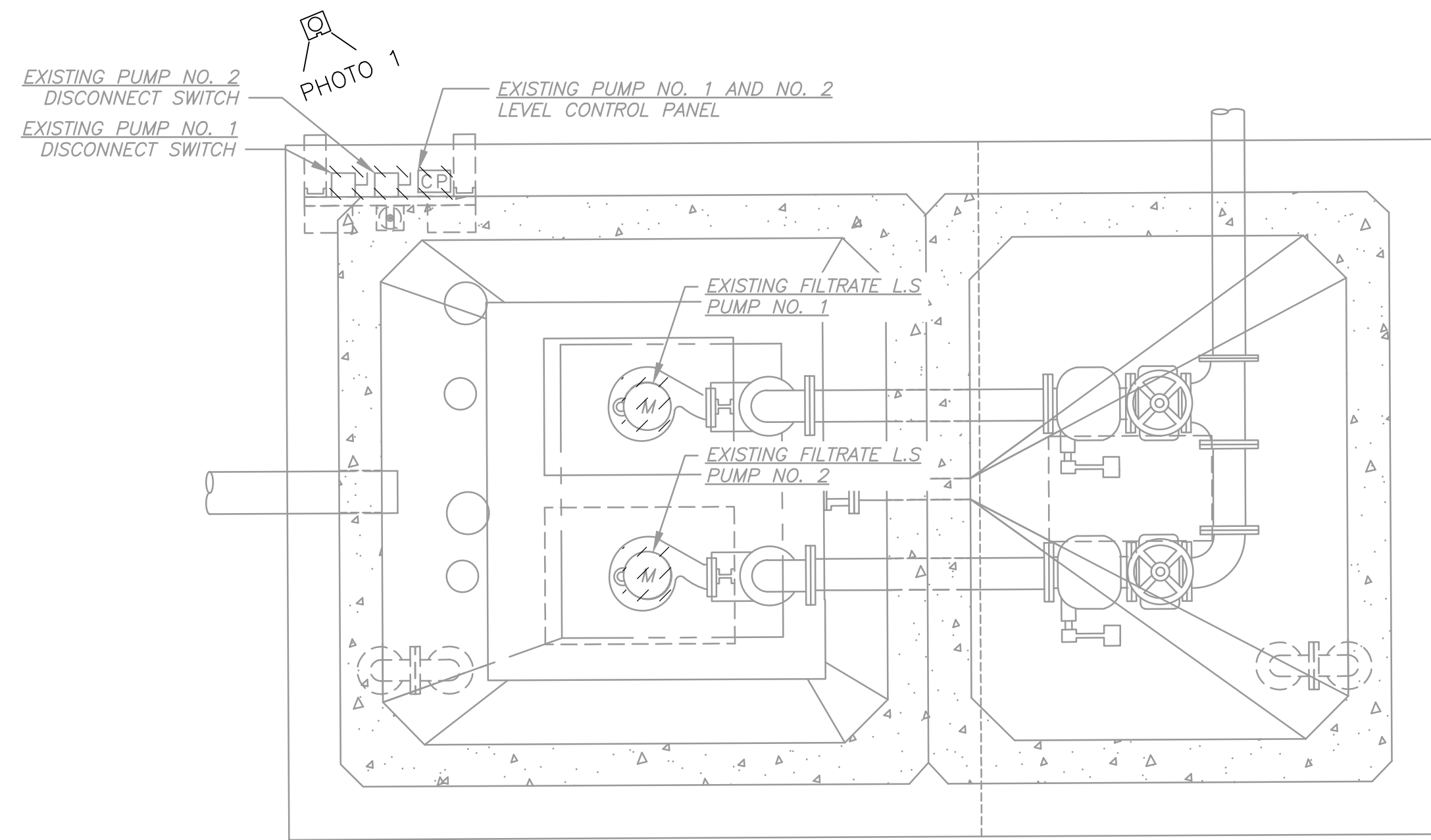
CONTRACTOR TO REMOVE ELECTRICAL EQUIPMENT, CONDUIT, WIRE, AND SUPPORT MATERIAL UNDER THIS CONTRACT.

GENERAL ELECTRICAL NOTES:

1. CONTRACTOR SHALL COORDINATE DEMOLITION OF ELECTRICAL CONDUIT, WIRE AND DEVICES WITH PROCESS/MECHANICAL DEMOLITION AND SCHEDULE. THE DRAWINGS ARE INTENDED TO CONVEY THE GENERAL SCOPE OF DEMOLITION WORK. NOT ALL ITEMS TO BE DEMOLISHED ARE SHOWN.
2. REFER SHEET DS-D-200 FOR DEMOLITION ONE-LINE DIAGRAM.
3. CONDUIT SEALS ARE NOT ILLUSTRATED. PROVIDE CONDUIT SEAL-OFF(S) AS REQUIRED BY NEC CHAPTER 5 SPECIAL OCCUPANCIES.

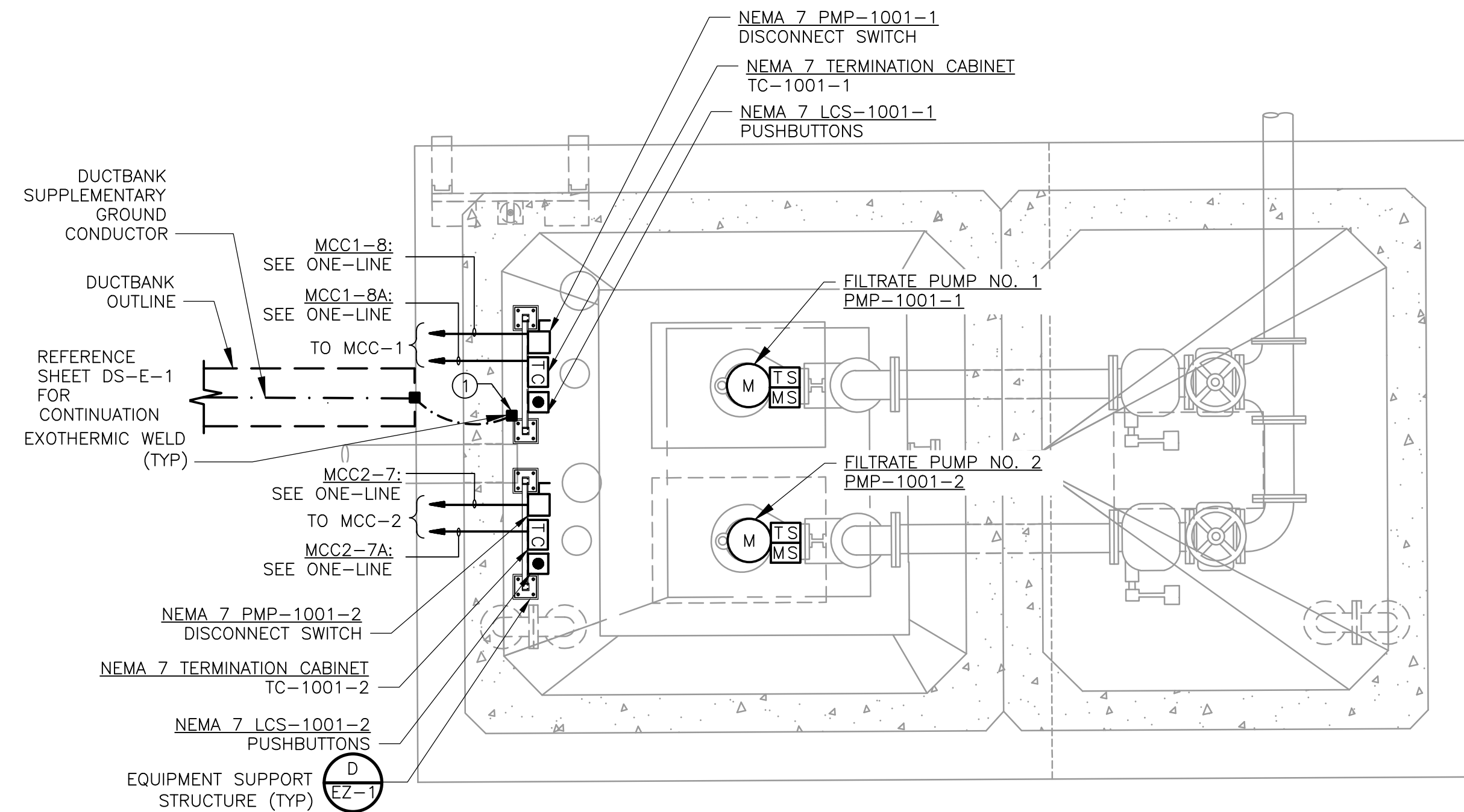
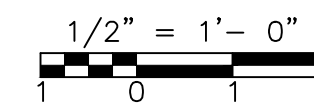


DEMOLITION PHOTO 1  
NTS



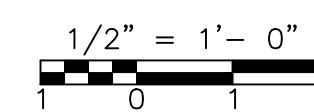
FILTRATE LIFT STATION DEMOLITION

PLAN



FILTRATE LIFT STATION POWER

PLAN



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REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	STC	JCS	CONFORMED DRAWINGS

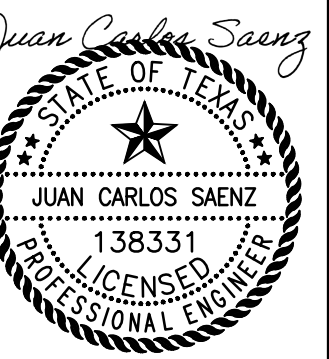
DESIGNED BY: J. SAENZ  
 DRAWN BY: V. MANJU  
 SHEET CHK'D BY: M. CZACH  
 CROSS CHK'D BY: G. PRABHU  
 APPROVED BY: J. SAENZ  
 DATE: NOVEMBER 2023

8310-1 N. Capital of Texas Hwy, Suite 250  
 Austin, TX 78731  
 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

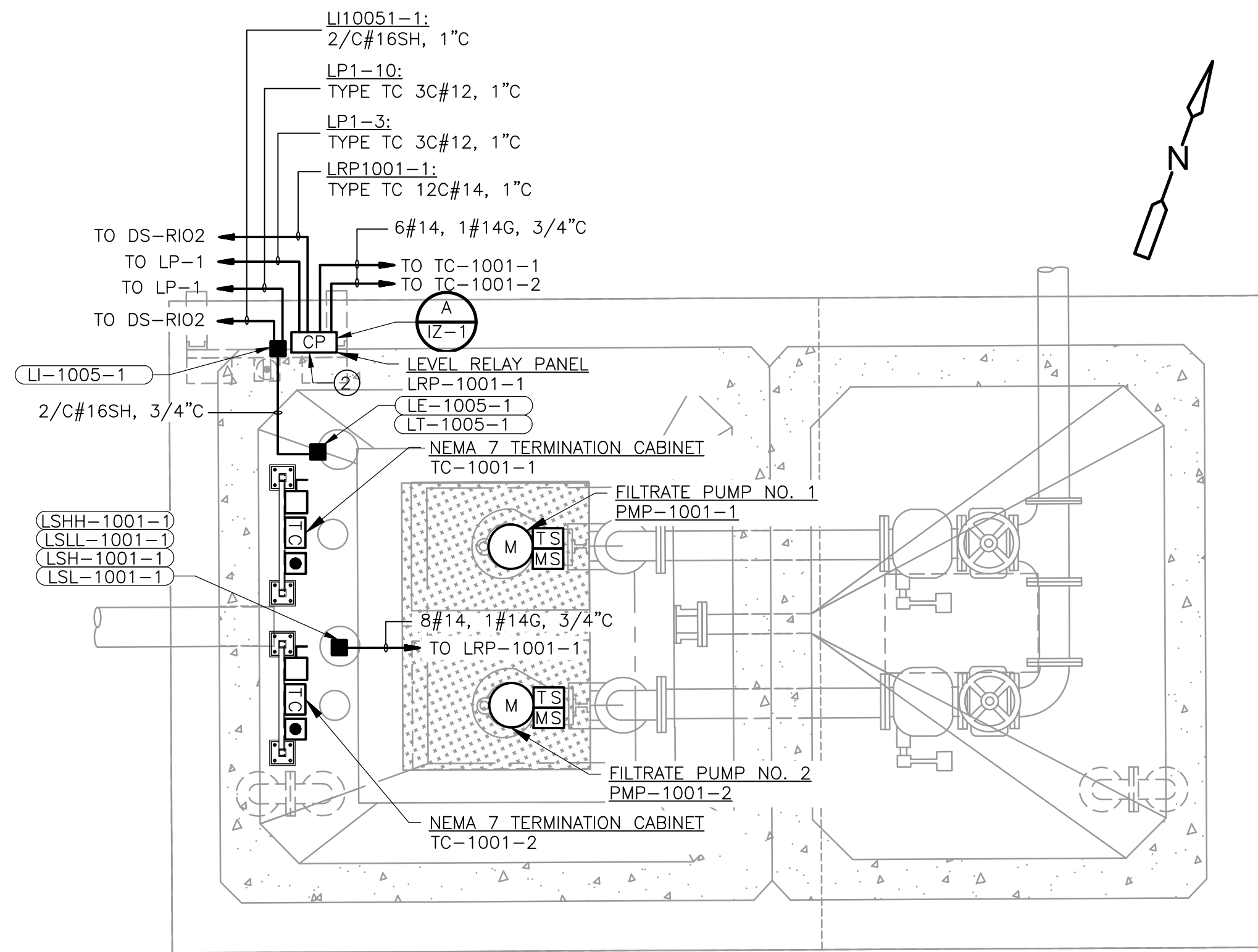
EXISTING FILTRATE LIFT STATION  
 POWER PLAN  
 SHEET NO.  
 DS-EA-1

PROJECT NO. 2048-264953  
 FILE NAME: DSEA1LSPL.DWG  
 SHEET NO.  
 DS-EA-1

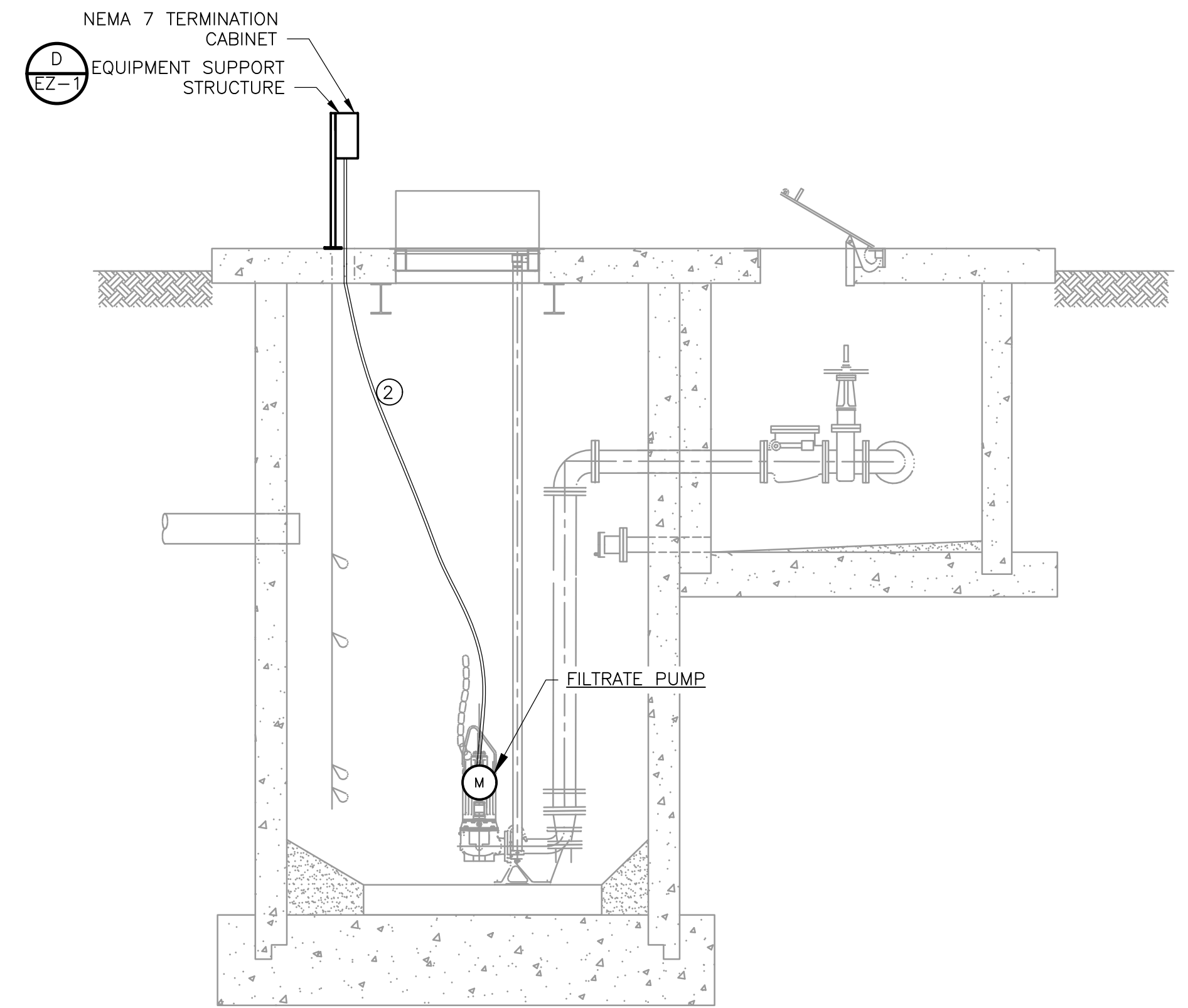




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FILTRATE LIFT STATION CONTROL  
 PLAN  
 1/2" = 1'-0"  
 1 0 1 2



TYPICAL SUBMERSIBLE MOTOR CABLE INSTALLATION  
 SECTION  
 NTS

- GENERAL ELECTRICAL NOTES:**
- REFER TO SHEETS DS-E-4 AND DS-E-5 FOR ONE-LINE DIAGRAM.
  - ALL EXTERIOR FASTENERS, UNISTRUT AND ASSOCIATED MOUNTING MATERIAL SHALL BE 316 STAINLESS STEEL.
  - CONDUIT SEALS ARE NOT ILLUSTRATED. PROVIDE CONDUIT SEAL-OFF(S) AS REQUIRED BY NEC CHAPTER 5 SPECIAL OCCUPANCIES.
- KEY NOTES:**
- BOND #4/0 BARE COPPER CONDUCTOR TO EQUIPMENT RACKS.
  - PROVIDED BY DIVISION 40.

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	STC	JCS	CONFORMED DRAWINGS

DESIGNED BY: J. SAENZ  
 DRAWN BY: V. MANJU  
 SHEET CHK'D BY: M. CZACH  
 CROSS CHK'D BY: G. PRABHU  
 APPROVED BY: J. SAENZ  
 DATE: NOVEMBER 2023

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 Austin, TX 78731  
 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

EXISTING FILTRATE LIFT STATION  
 CONTROL PLAN  
 SHEET NO.  
 DS-EA-2

PROJECT NO. 2048-264953  
 FILE NAME: DSEA2LSPL.DWG  
 SHEET NO.  
 DS-EA-2



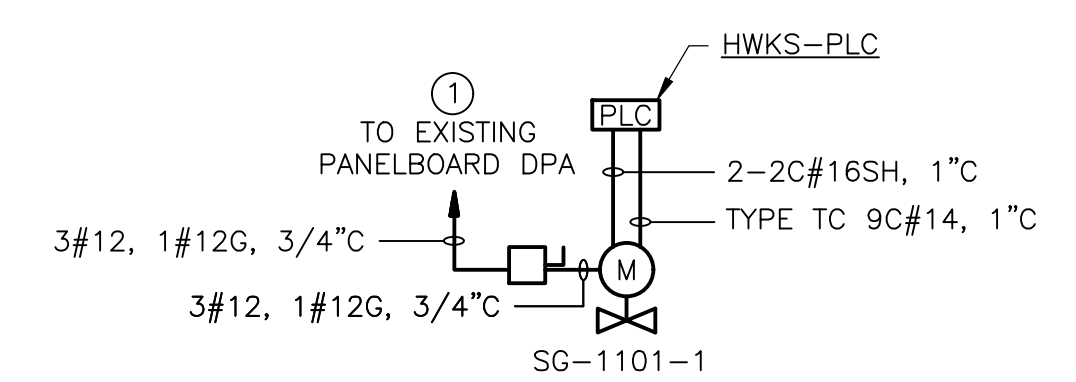
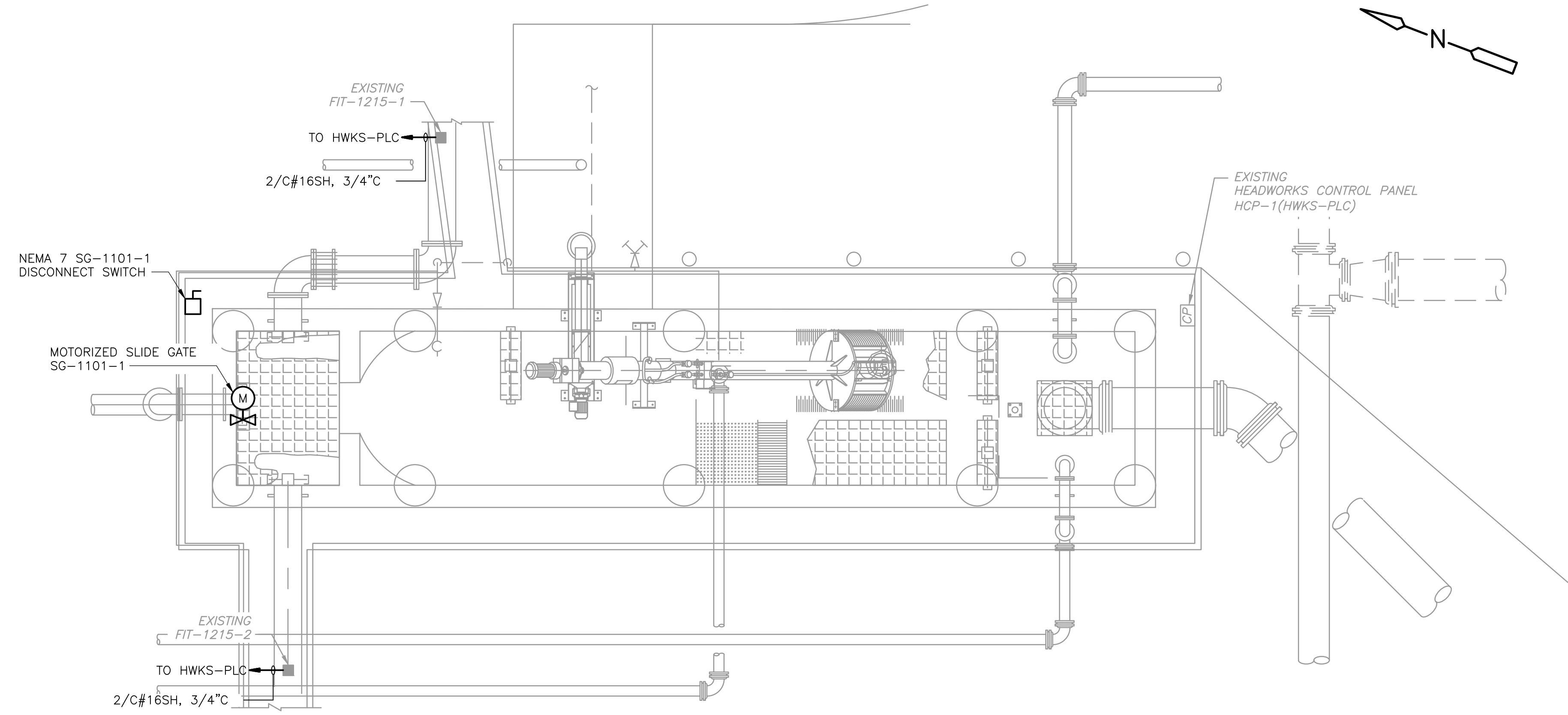
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**GENERAL ELECTRICAL NOTES:**

1. ALL EXTERIOR FASTENERS, UNISTRUCT AND ASSOCIATED MOUNING MATERIAL SHALL BE 316 STAINLESS STEEL.
2. CONDUIT SEALS ARE NOT ILLUSTRATED. PROVIDE CONDUIT SEAL-OFF(S) AS REQUIRED BY NEC CHAPTER 5 SPECIAL OCCUPANCIES.

**KEY NOTES:**

- ① PROVIDE LABOR, MATERIAL, AND INCIDENTALS REQUIRED TO INSTALL NEW 480V, 3 PHASE, 20AT CIRCUIT BREAKER IN EXISTING PANELBOARD. ALL NEW COMPONENTS SHALL MEET OR EXCEED SHORT CIRCUIT RATING OF THE EXISTING PANELBOARD. THE OVERALL SHORT CIRCUIT RATING OF THE EXISTING PANELBOARD SHALL BE MAINTAINED.



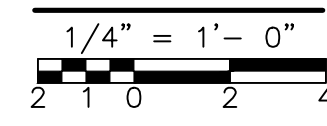
SG-1101-1 MOTORIZED SLIDE GATE WIRING

**DIAGRAM**

1  
-

EXISTING HEADWORKS AREA POWER AND CONTROL

**PLAN**



REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	STC	JCS	CONFORMED DRAWINGS

DESIGNED BY:	J. SAENZ
DRAWN BY:	V. MANJU
SHEET CHK'D BY:	M. CZACH
CROSS CHK'D BY:	G. PRABHU
APPROVED BY:	J. SAENZ
DATE:	NOVEMBER 2023

**CDM Smith**  
 8310-1 N. Capital of Texas Hwy, Suite 250  
 Austin, TX 78731  
 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP  
 EXISTING HEADWORKS AREA  
 POWER AND CONTROL PLANS

PROJECT NO.	2048-264953
FILE NAME:	DSEB1HDPL.DWG
SHEET NO.	DS-EB-1



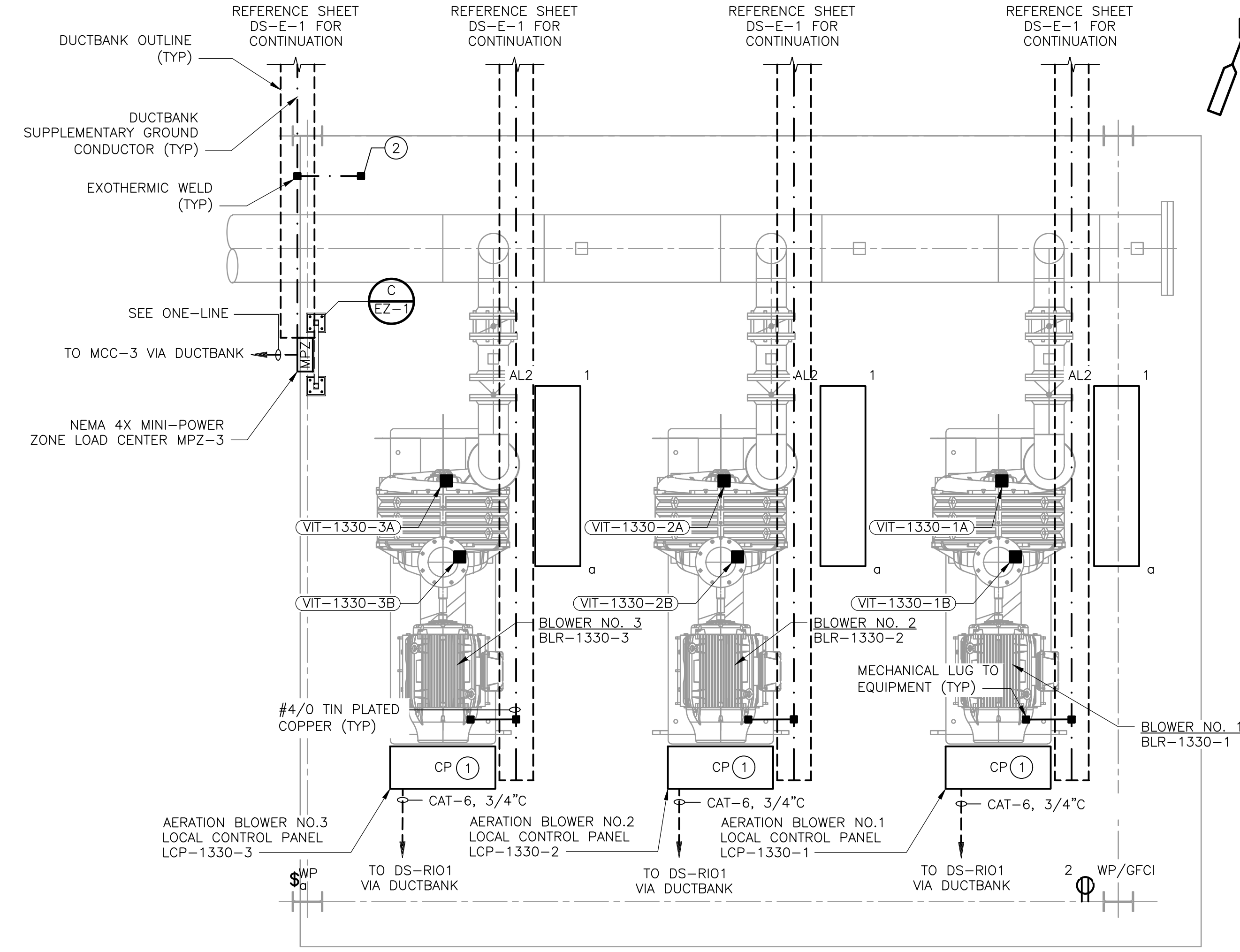
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**GENERAL ELECTRICAL NOTES:**

1. PROVIDE ALL LABOR, MATERIAL, AND INCIDENTALS REQUIRED TO INSTALL THE NEW CIRCUITS AS SCHEDULED IN THIS CONTRACT. DETAILS SHOWN ON THIS SHEET ARE FOR DIAGRAMMATICAL PURPOSES AND SHOW INTENT. FITTINGS SUCH AS CONDULETS, PULL BOXES, JUNCTION BOXES, OR CONDUIT PENETRATIONS ARE TYPICALLY NOT SHOWN FOR CLARITY. ALL DIMENSIONS GIVEN ARE APPROXIMATE. FIELD VERIFY AND ADJUST AS REQUIRED FOR FULLY FUNCTIONAL SYSTEM.
2. REFER TO SHEET DS-E-6 FOR ONE-LINE DIAGRAM.
3. REFER TO SHEET DS-E-8 FOR PANELBOARD SCHEDULE.

**KEY NOTES:**

- ① PROVIDED BY DIVISION 43.
- ② BOND #4/0 TIN PLATED COPPER TO STRUCTURAL STEEL.
- ③ EQUIPMENT LOCATIONS ARE APPROXIMATE. COORDINATE FINAL LOCATIONS WITH PACKAGE PLANT SUPPLIER.



RENTAL PACKAGE BLOWER POWER AND CONTROL

PLAN ③  
 1/2" = 1'-0"  
 0 1 2

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	STC	JCS	CONFORMED DRAWINGS
1	01/09/24	SS	JCS	REVISED PER ADDENDUM NO. 4

DESIGNED BY: J. SAENZ  
 DRAWN BY: V. MANJU  
 SHEET CHK'D BY: M. CZACH  
 CROSS CHK'D BY: G. PRABHU  
 APPROVED BY: J. SAENZ  
 DATE: DECEMBER 2023



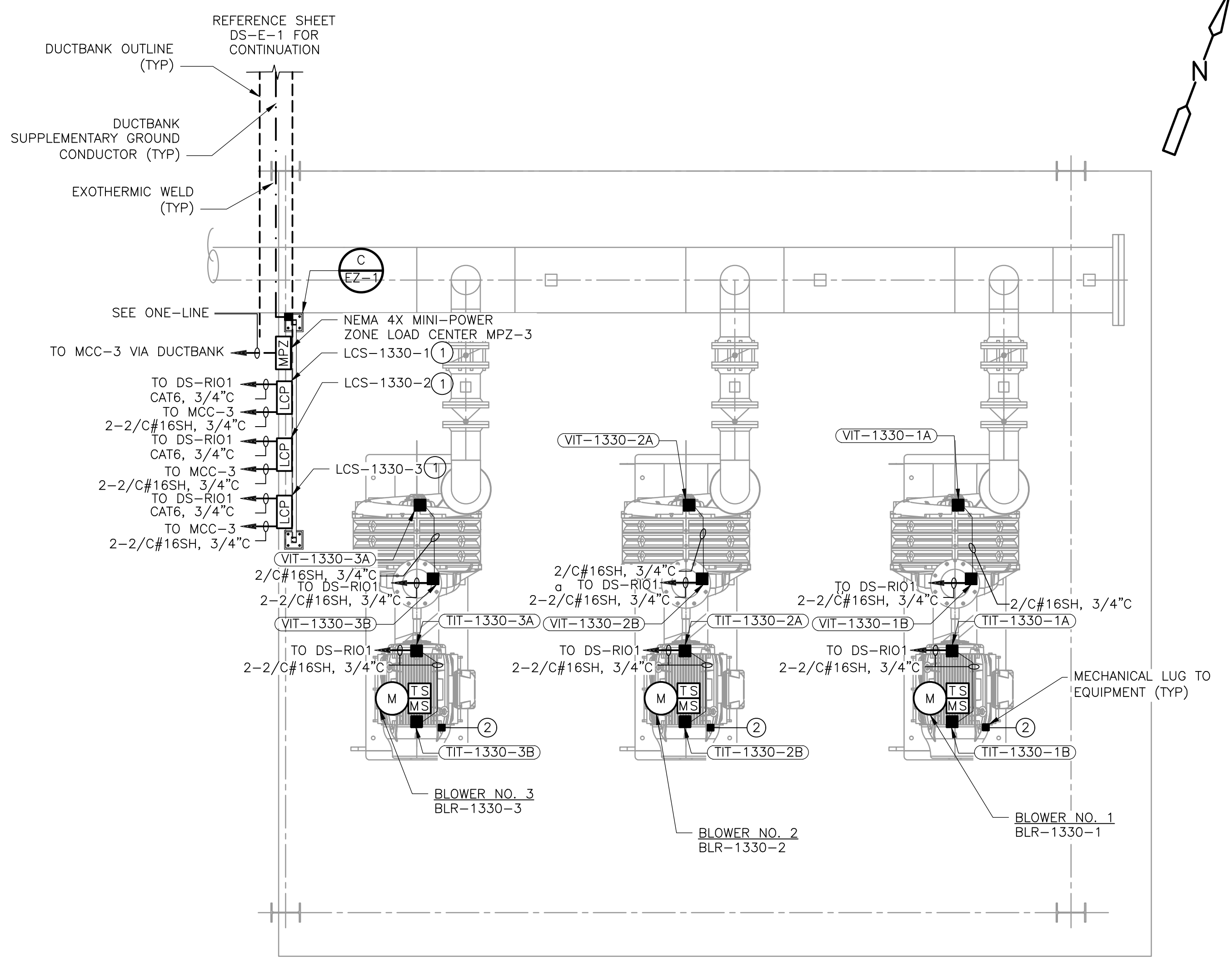
CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP  
 RENTAL PACKAGE PLANT BLOWERS  
 POWER AND CONTROL PLANS

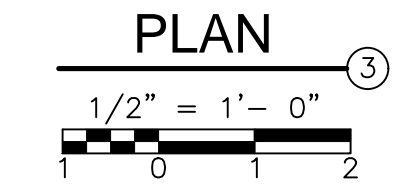
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 SHEET NO. DS-EB-2



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RENTAL PACKAGE PLANT MODIFIED BLOWER POWER AND CONTROL



**GENERAL ELECTRICAL NOTES:**

1. PROVIDE ALL LABOR, MATERIAL, AND INCIDENTALS REQUIRED TO REPLACE RENTAL BLOWERS WITH PERMANENT REFURBISHED BLOWERS. INSTALL THE NEW CIRCUITS AS SCHEDULED IN THIS CONTRACT. DETAILS SHOWN ON THIS SHEET ARE FOR DIAGRAMMATICAL PURPOSES AND SHOW INTENT. FITTINGS SUCH AS CONDULETS, PULL BOXES, JUNCTION BOXES, OR CONDUIT PENETRATIONS ARE TYPICALLY NOT SHOWN FOR CLARITY. ALL DIMENSIONS GIVEN ARE APPROXIMATE. FIELD VERIFY AND ADJUST AS REQUIRED FOR FULLY FUNCTIONAL SYSTEM.
2. CONTRACTOR SHALL DISCONNECT ELECTRICAL CIRCUITS IDENTIFIED FOR REMOVAL TO ALLOW FOR SAFE AND COMPLETE REMOVAL OF DESIGNATED EQUIPMENT. REFER TO SECTION CIP3 FOR PROPOSED CONSTRUCTION SEQUENCE.
3. REFER TO SHEET DS-E-6A FOR ONE-LINE DIAGRAM.
4. REFER TO SHEET DS-E-8 FOR PANELBOARD SCHEDULE.

**KEY NOTES:**

- ① PROVIDED BY DIVISION 43.
- ② BOND #4/0 TIN PLATED COPPER TO EXISTING GROUND GRID.
- ③ EQUIPMENT LOCATIONS ARE APPROXIMATE. COORDINATE FINAL LOCATIONS WITH OWNER.

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	STC	JCS	CONFORMED DRAWINGS
1	01/09/24	SS	JCS	REVISED PER ADDENDUM NO. 4

DESIGNED BY: J. SAENZ  
 DRAWN BY: V. MANJU  
 SHEET CHK'D BY: M. CZACH  
 CROSS CHK'D BY: G. PRABHU  
 APPROVED BY: J. SAENZ  
 DATE: DECEMBER 2023

8310-1 N. Capital of Texas Hwy, Suite 250  
 Austin, TX 78731  
 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

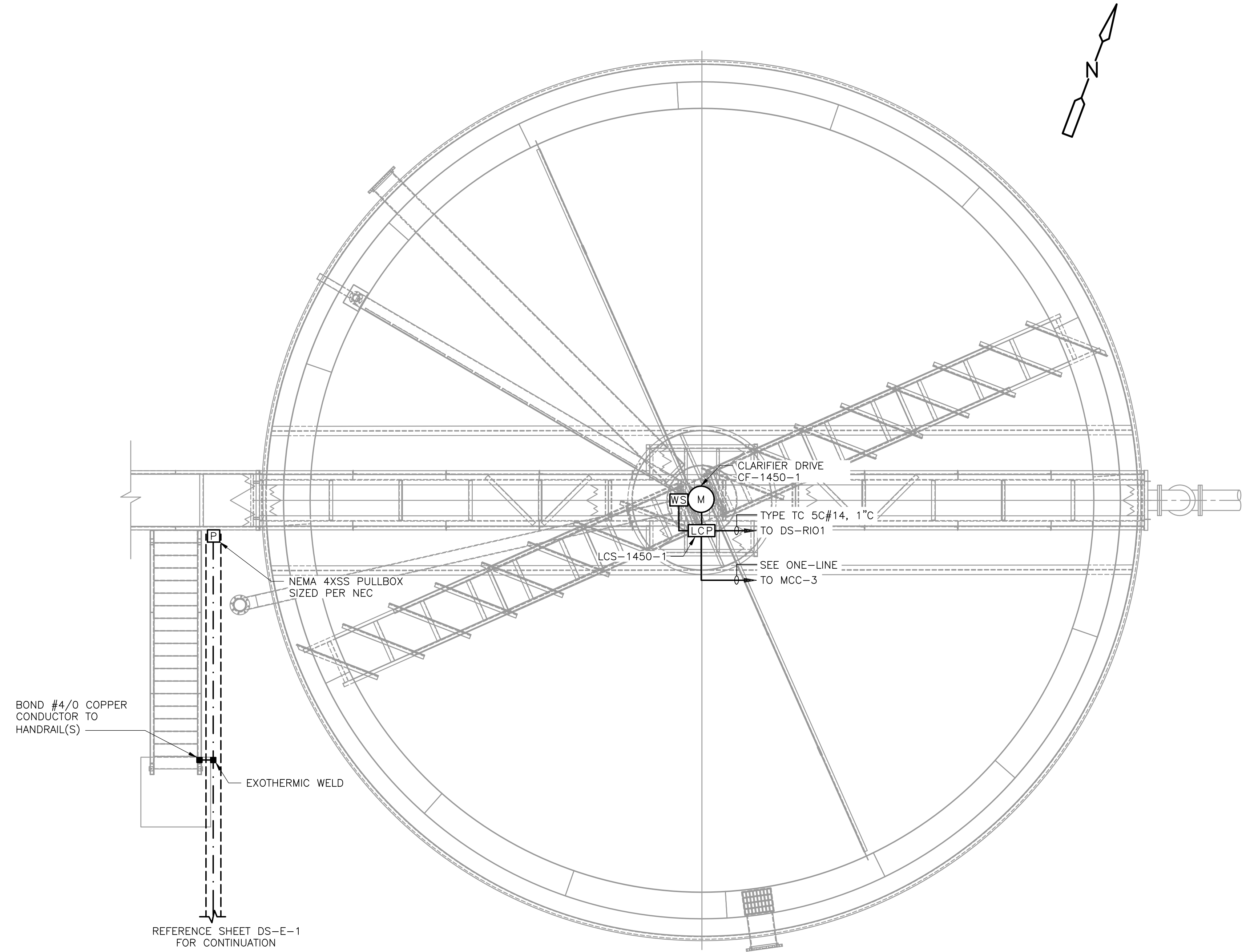
DOVE SPRINGS WWTP  
 RENTAL PACKAGE PLANT BLOWERS  
 MODIFIED POWER AND CONTROL PLANS

Juan Carlos Saenz  

 PROJECT NO. 2048-264953  
 FILE NAME: DSEB2ABBPL.DWG  
 SHEET NO. DS-EB-2A  
 01/09/2024

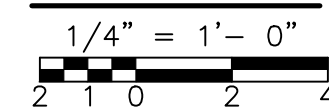
**GENERAL ELECTRICAL NOTES:**

1. REFER TO SHEET DS-E-6 FOR ONE-LINE DIAGRAM.
2. REFER TO SHEET DS-E-8 FOR PANELBOARD SCHEDULE.
3. CONDUIT SEALS ARE NOT ILLUSTRATED. PROVIDE CONDUIT SEAL-OFF(S) AS REQUIRED BY NEC CHAPTER 5 SPECIAL OCCUPANCIES.



**PACKAGE PLANT CLARIFIER POWER AND CONTROL**

**PLAN**



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A	01/10/24	STC	JCS	CONFORMED DRAWINGS
1	01/09/24	SS	JCS	REVISED PER ADDENDUM NO. 4

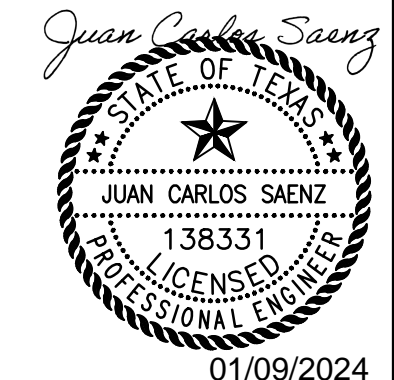
DESIGNED BY:	J. SAENZ
DRAWN BY:	V. MANJU
SHEET CHK'D BY:	M. CZACH
CROSS CHK'D BY:	G. PRABHU
APPROVED BY:	J. SAENZ
DATE:	DECEMBER 2023

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 Austin, TX 78731  
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 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

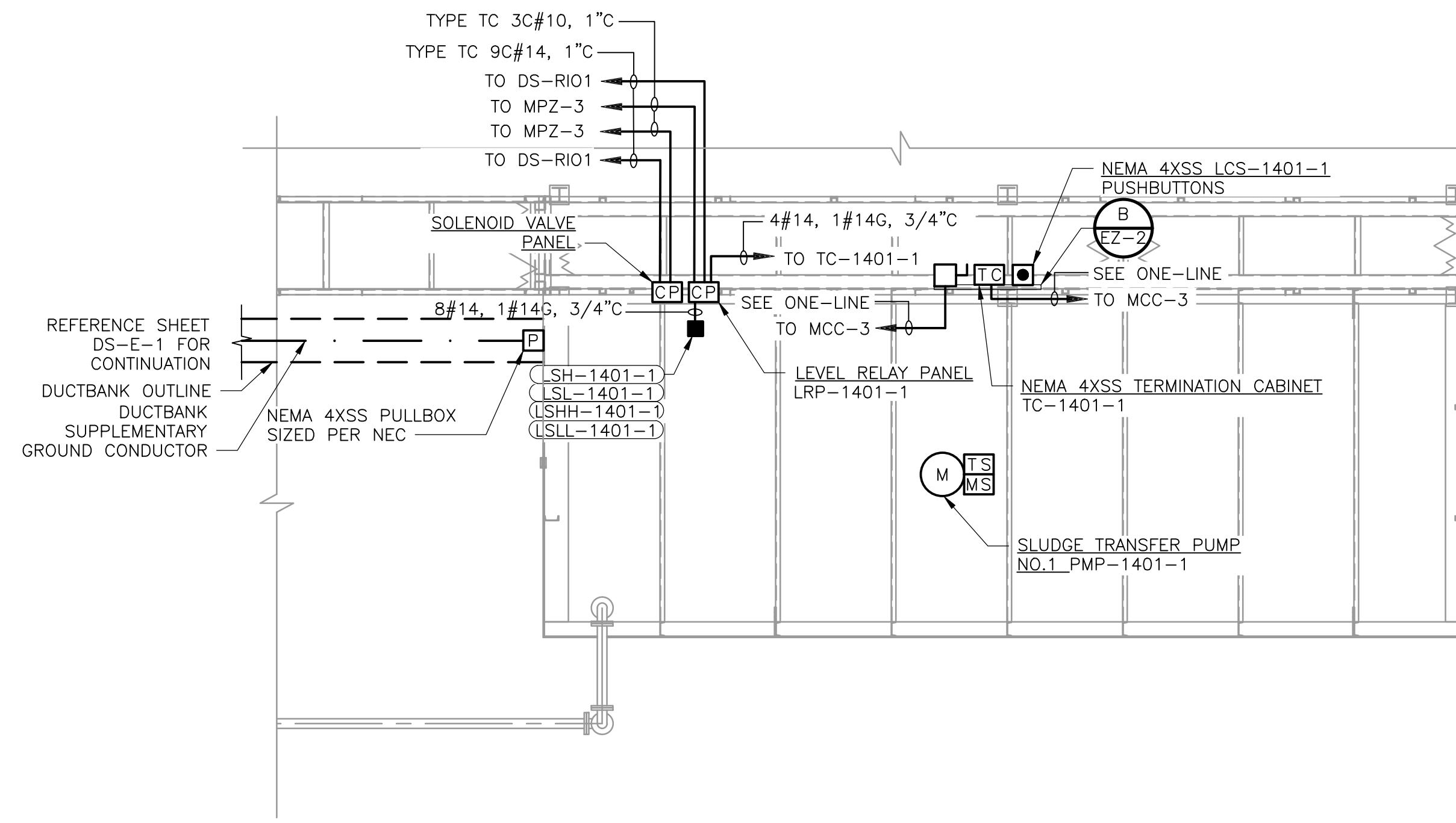
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 PACKAGE PLANT CLARIFIER  
 POWER AND CONTROL PLANS

PROJECT NO.	2048-264953
FILE NAME:	DSEB3ABPL.DWG
SHEET NO.	DS-EB-3



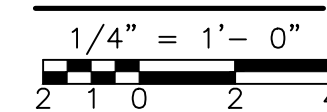
**GENERAL ELECTRICAL NOTES:**

1. REFER TO SHEET DS-E-6 FOR ONE-LINE DIAGRAM.
2. REFER TO SHEET DS-E-8 FOR PANELBOARD SCHEDULE.
3. CONDUIT SEALS ARE NOT ILLUSTRATED. PROVIDE CONDUIT SEAL-OFF(S) AS REQUIRED BY NEC CHAPTER 5 SPECIAL OCCUPANCIES.



PACKAGE PLANT SLUDGE PUMP POWER AND CONTROL

**PLAN**



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REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	STC	JCS	CONFORMED DRAWINGS
1	01/09/24	SS	JCS	REVISED PER ADDENDUM NO. 4

DESIGNED BY: J. SAENZ  
 DRAWN BY: V. MANJU  
 SHEET CHK'D BY: M. CZACH  
 CROSS CHK'D BY: G. PRABHU  
 APPROVED BY: J. SAENZ  
 DATE: NOVEMBER 2023



CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

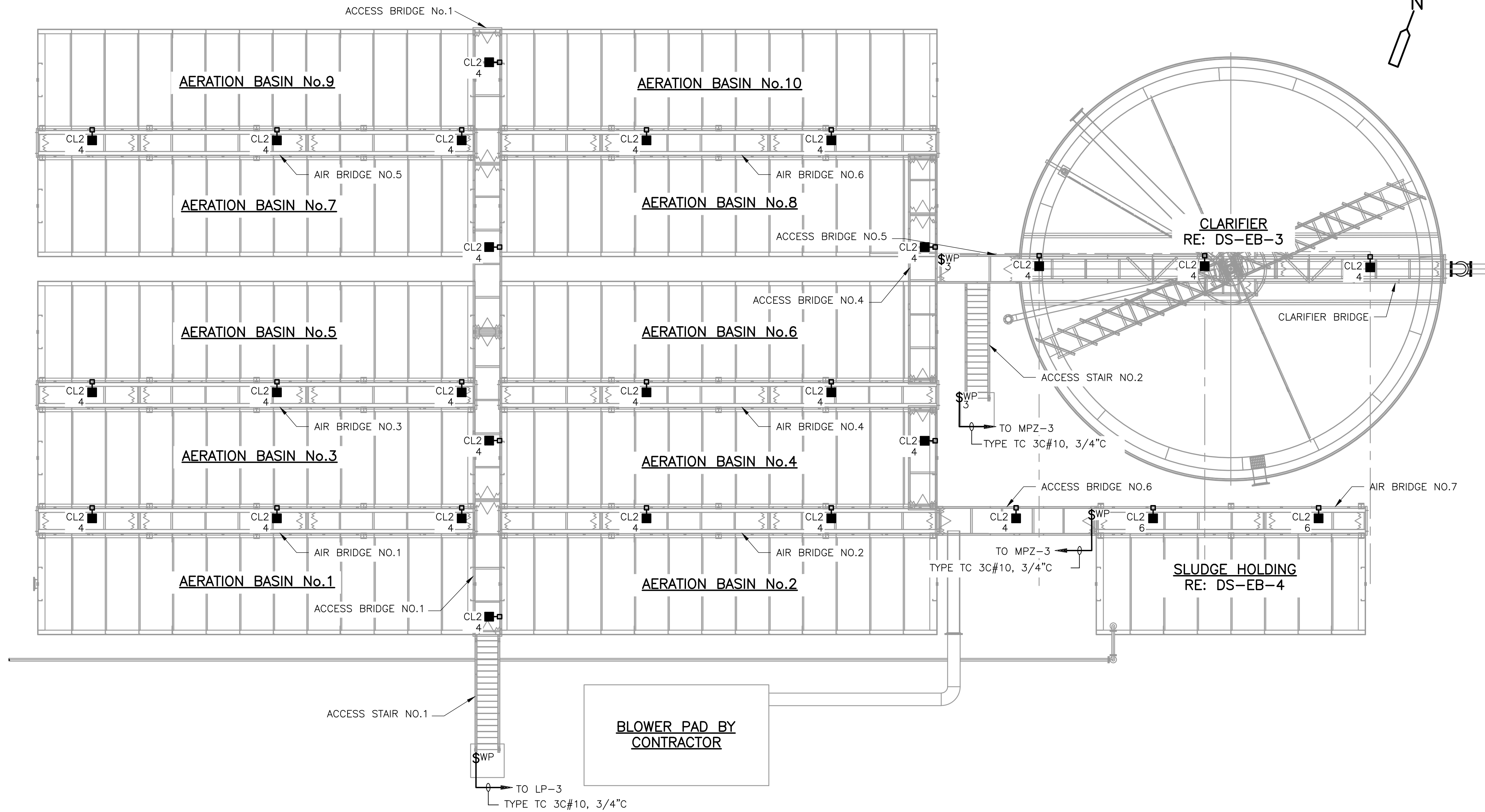
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 PACKAGE PLANT SLUDGE PUMP  
 POWER AND CONTROL PLANS

PROJECT NO. 2048-264953  
 FILE NAME: DSEB4PSPL.DWG  
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**DS-EB-4**

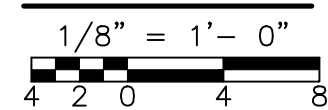


**GENERAL ELECTRICAL NOTES:**

1. REFER TO SHEET DS-E-7 AND DS-E-8 FOR PANELBOARD SCHEDULE.
2. CONDUIT SEALS ARE NOT ILLUSTRATED. PROVIDE CONDUIT SEAL-OFF(S) AS REQUIRED BY NEC CHAPTER 5 SPECIAL OCCUPANCIES.



PACKAGE PLANT LIGHTING  
PLAN



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REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	STC	JCS	CONFORMED DRAWINGS
1	01/09/24	SS	JCS	REVISED PER ADDENDUM NO. 4

DESIGNED BY: \_\_\_\_\_  
 DRAWN BY: \_\_\_\_\_  
 SHEET CHK'D BY: \_\_\_\_\_  
 CROSS CHK'D BY: \_\_\_\_\_  
 APPROVED BY: J. SAENZ  
 DATE: NOVEMBER 2023

**CDM Smith**  
 8310-1 N. Capital of Texas Hwy, Suite 250  
 Austin, TX 78731  
 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

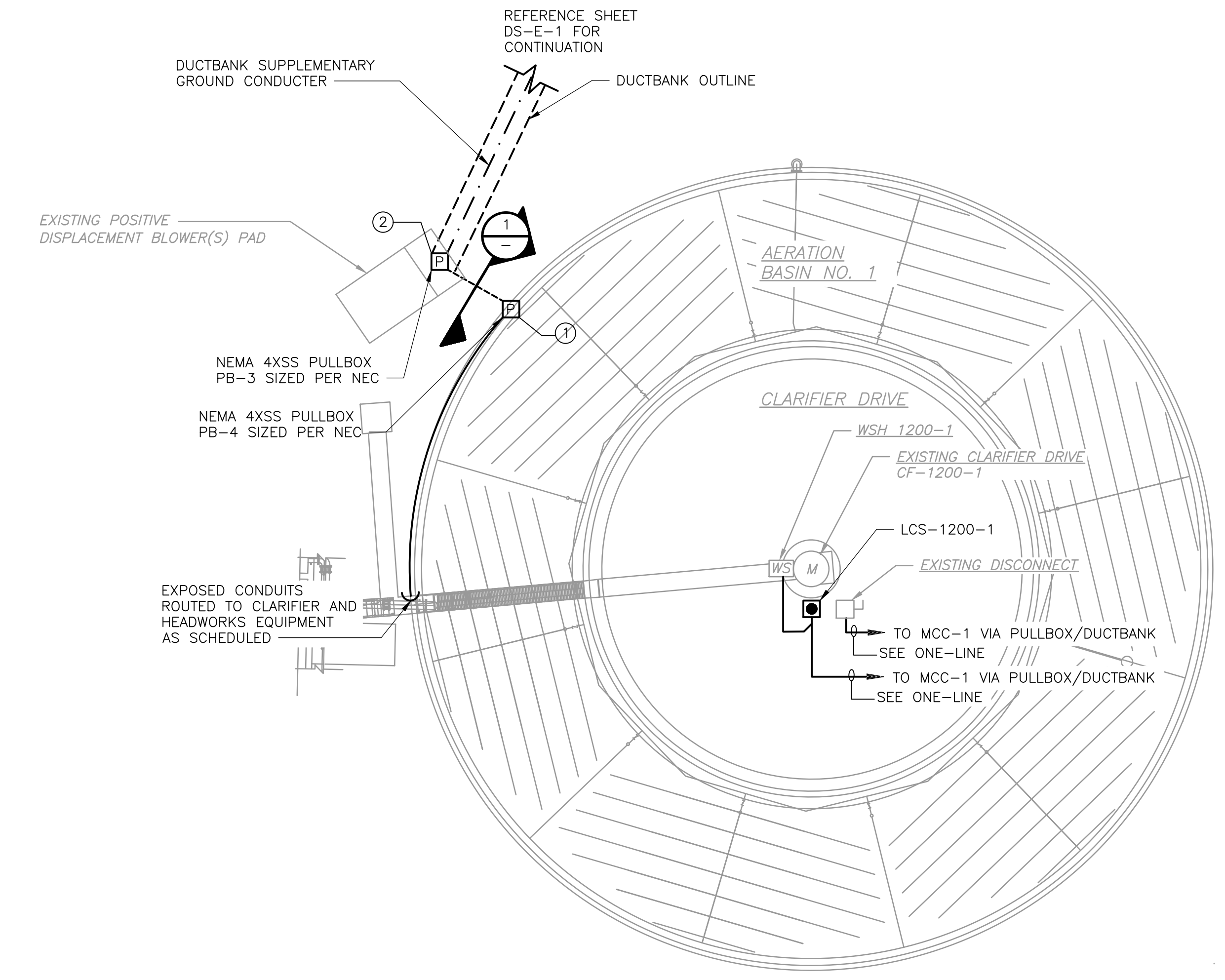
CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP  
 PACKAGE PLANT LIGHTING PLAN  
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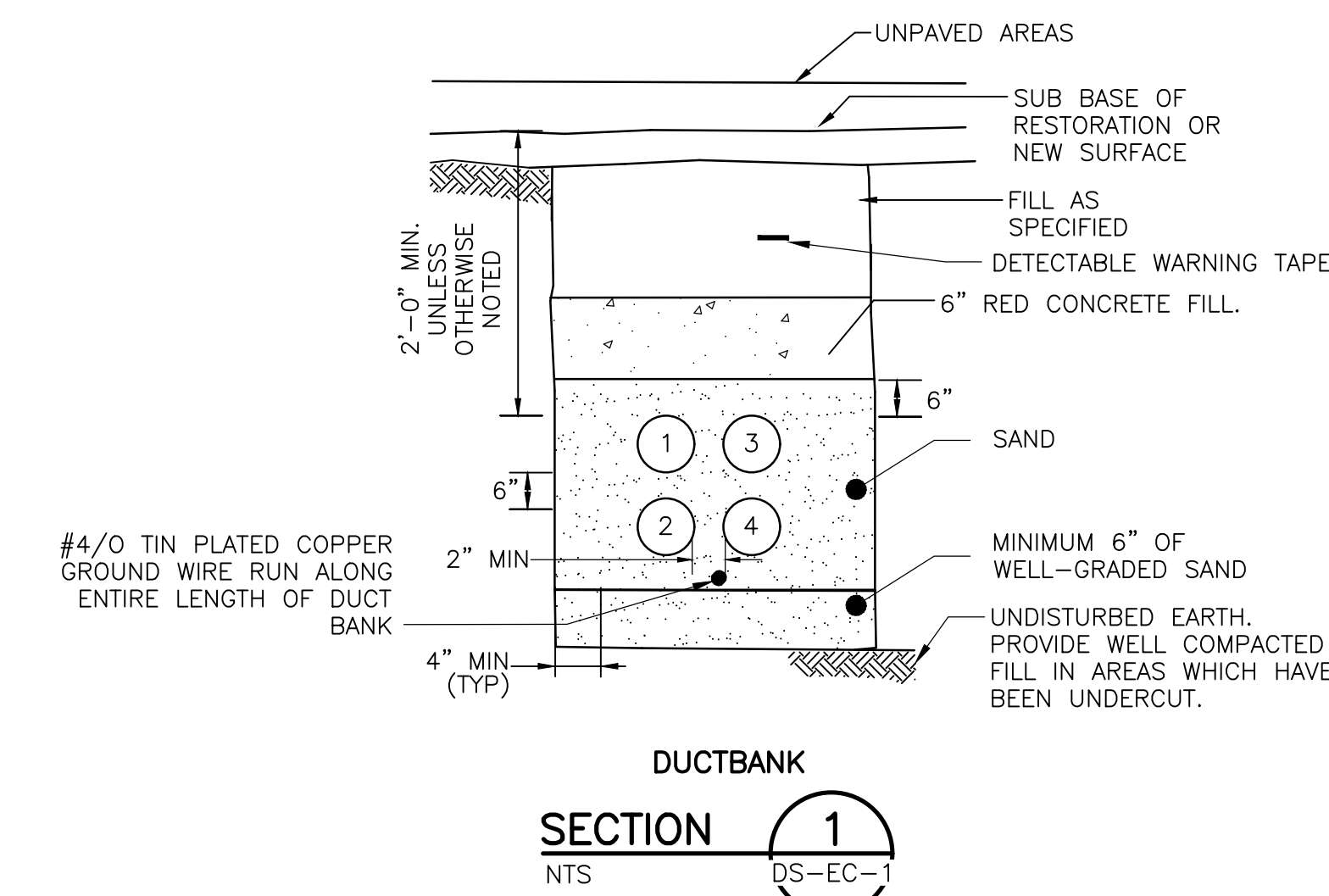
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**DS-EB-5**



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TREATMENT STRUCTURE NO. 1 POWER  
 PLAN  
 1/16" = 1'-0"  
 8 4 0 8 16



DUCTBANK  
 SECTION 1  
 NTS DS-EC-1

TABLE FOR SECTION 1		
CONDUIT NO.	CONDUIT TAG/ SIZE	DESCRIPTION
1	MCC1-10	FROM MCC-1 TO EXISTING CLARIFIER DRIVE CF-1200-1
2	MCC1-10A	FROM MCC-1 TO CLARIFIER DRIVE CF-1200-1 LOCAL CONTROL STATION AND TORQUE SWITCH
3	1"C., SPARE	SPARE CONDUIT FROM PB-3 TO PB-4; PROVIDE PULLSTRING
4	DPA-SG/1"C	FROM PANELBOARD DPA TO SLIDE GATE SG-1101-1

LOW VOLTAGE SAND ENCASED DUCTBANK  
 SCHEDULE  
 NTS

- GENERAL ELECTRICAL NOTES:**
- TO PROVIDE ALL LABOR, MATERIAL, AND INCIDENTALS REQUIRED TO INSTALL THE NEW CIRCUITS AS SCHEDULED IN THIS CONTRACT. DETAILS SHOWN ON THIS SHEET ARE FOR DIAGRAMMATICAL PURPOSES AND SHOW INTENT. FITTINGS SUCH AS CONDULETS, PULL BOXES, JUNCTION BOXES, OR CONDUIT PENETRATIONS ARE TYPICALLY NOT SHOWN FOR CLARITY. ALL DIMENSIONS GIVEN ARE APPROXIMATE. FIELD VERIFY AND ADJUST AS REQUIRED FOR FULLY FUNCTIONAL SYSTEM.
  - REFER TO SHEET DS-E-4 FOR ONE-LINE DIAGRAM.
  - CONDUIT SEALS ARE NOT ILLUSTRATED. PROVIDE CONDUIT SEAL-OFF(S) AS REQUIRED BY NEC CHAPTER 5 SPECIAL OCCUPANCIES.

- KEY NOTES:**
- PROVIDE NEMA 4XSS PULLBOX PB-3 SIZED PER NEC. TRANSITION CONDUITS FROM UNDERGROUND PULLBOX PB-3 TO PULLBOX PB-4 AND ROUTE EXPOSED CONDUITS ALONG CLARIFIER WALL.
  - TRANSITION DUCTBANK TO NEMA 4XSS PULLBOX SIZED PER NEC. BOND #4/0 TIN PLATED COPPER TO PULLBOX ENCLOSURE WITH MECHANICAL LUG.



REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	STC	JCS	CONFORMED DRAWINGS

DESIGNED BY: S. KAMAL  
 DRAWN BY: S. KAMAL  
 SHEET CHK'D BY: M. CZACH  
 CROSS CHK'D BY: G. PRABHU  
 APPROVED BY: J. SAENZ  
 DATE: NOVEMBER 2023

8310-1 N. Capital of Texas Hwy, Suite 250  
 Austin, TX 78731  
 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

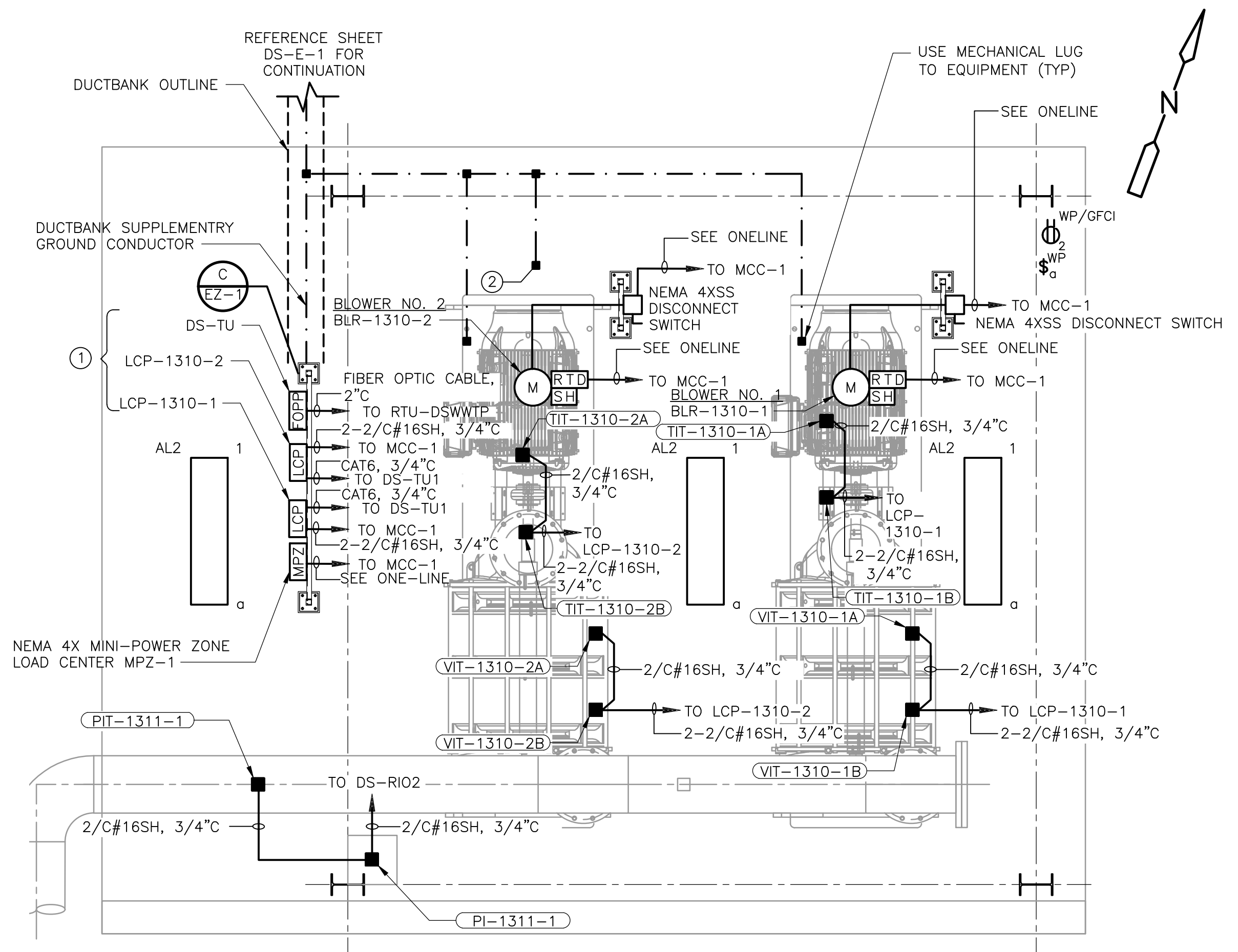
DOVE SPRINGS WWTP  
 TREATMENT STRUCTURE NO. 1 AND NO. 2  
 ELECTRICAL MODIFICATION PLAN

PROJECT NO.	2048-264953
FILE NAME:	DSEC1BBPL.DWG
SHEET NO.	DS-EC-1

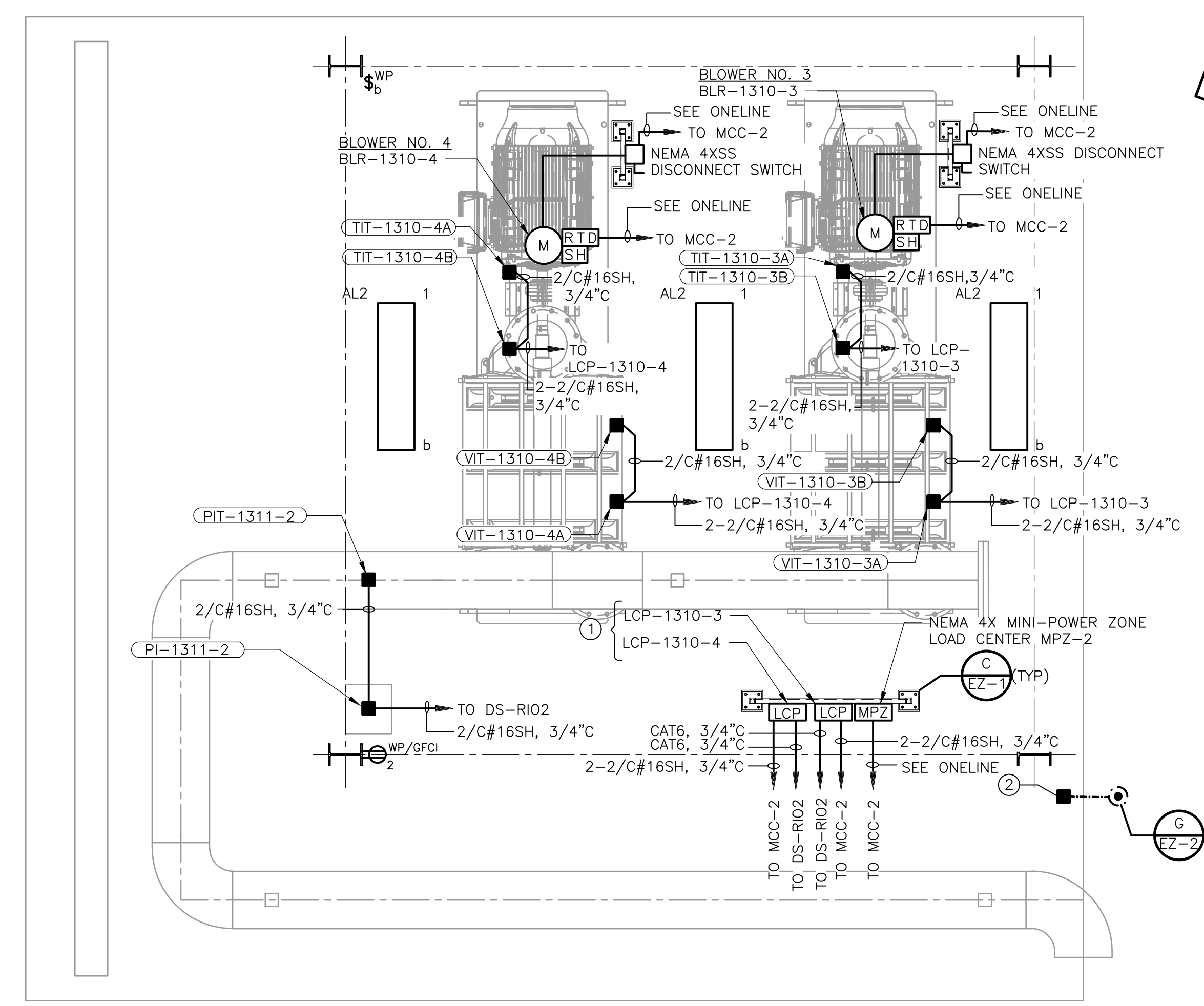


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- KEY NOTES:**
- PROVIDED BY OTHERS. COORDINATE AND ADJUST SUPPORT STRUCTURE AS REQUIRED.
  - BOND #4/0 TIN PLATED COPPER TO STRUCTURAL STEEL.
- GENERAL ELECTRICAL NOTES:**
- PROVIDE ALL LABOR, MATERIAL, AND INCIDENTALS REQUIRED TO INSTALL THE NEW CIRCUITS AS SCHEDULED IN THIS CONTRACT. DETAILS SHOWN ON THIS SHEET ARE FOR DIAGRAMMATICAL PURPOSES AND SHOW INTENT. FITTINGS SUCH AS CONDULETS, PULL BOXES, JUNCTION BOXES, OR CONDUIT PENETRATIONS ARE TYPICALLY NOT SHOWN FOR CLARITY. ALL DIMENSIONS GIVEN ARE APPROXIMATE. FIELD VERIFY AND ADJUST AS REQUIRED FOR FULLY FUNCTIONAL SYSTEM.
  - REFER TO SHEETS DS-E-4 AND DS-E-5 FOR ONE-LINE DIAGRAM.
  - PENDANT MOUNT LIGHT FIXTURE TYPE "AL2" AT 9'-0" A.F.F.
  - REFER TO SHEET E-4 FOR LIGHTING FIXTURE SCHEDULE.
  - REFER TO SHEET DS-E-8 FOR PANELBOARD SCHEDULE.



TREATMENT UNIT NO. 1 BLOWER POWER AND CONTROL  
**PLAN**  
 1/2" = 1'-0"  
 0 1 2



TREATMENT UNIT NO. 2 BLOWER POWER AND CONTROL  
**PLAN**  
 1/2" = 1'-0"  
 0 1 2

DESIGNED BY:	S. KAMAL
DRAWN BY:	S. KAMAL
SHEET CHK'D BY:	M. CZACH
CROSS CHK'D BY:	G. PRABHU
APPROVED BY:	J. SAEZ
DATE:	NOVEMBER 2023

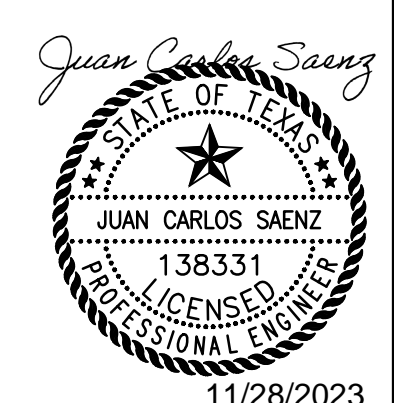
REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	STC	JCS	CONFORMED DRAWINGS

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 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP  
 TREATMENT UNIT NO. 1 AND NO. 2 BLOWER AREA  
 POWER AND CONTROL PLANS

PROJECT NO. 2048-264953  
 FILE NAME: DSED1BBPL.DWG  
 SHEET NO.  
**DS-ED-1**



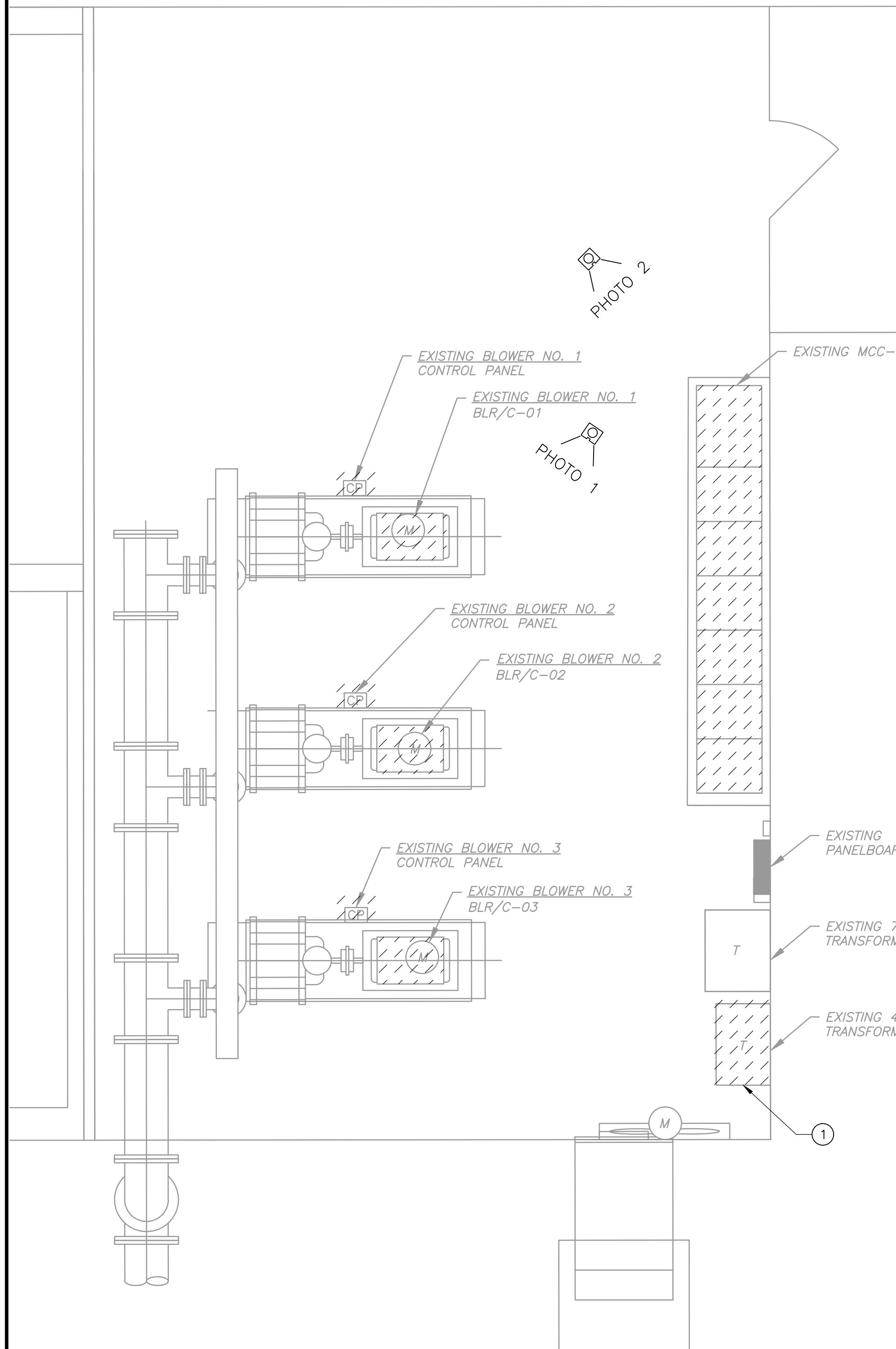
**LEGEND:**  
 // CONTRACTOR TO REMOVE ELECTRICAL EQUIPMENT, CONDUIT, WIRE, AND SUPPORT MATERIAL UNDER THIS CONTRACT.

**KEY NOTE:**

- RELOCATE 45 KVA TRANSFORMER TO EXISTING NPW PUMP HOUSE. RE: DS-EG-1.
- INTERCEPT EXISTING CIRCUITS, EXTEND CONDUITS TO PULLBOXES AND ROUTE TO NEW MOTOR CONTROL CENTER MCC-1 AND MCC-2.
- TRANSITION DUCTBANK TO NEMA 4XSS PULLBOX SIZED PER NEC, BOND #4/0 TIN PLATED COPPER TO PULL BOX ENCLOSURE WITH MECHANICAL LUG.

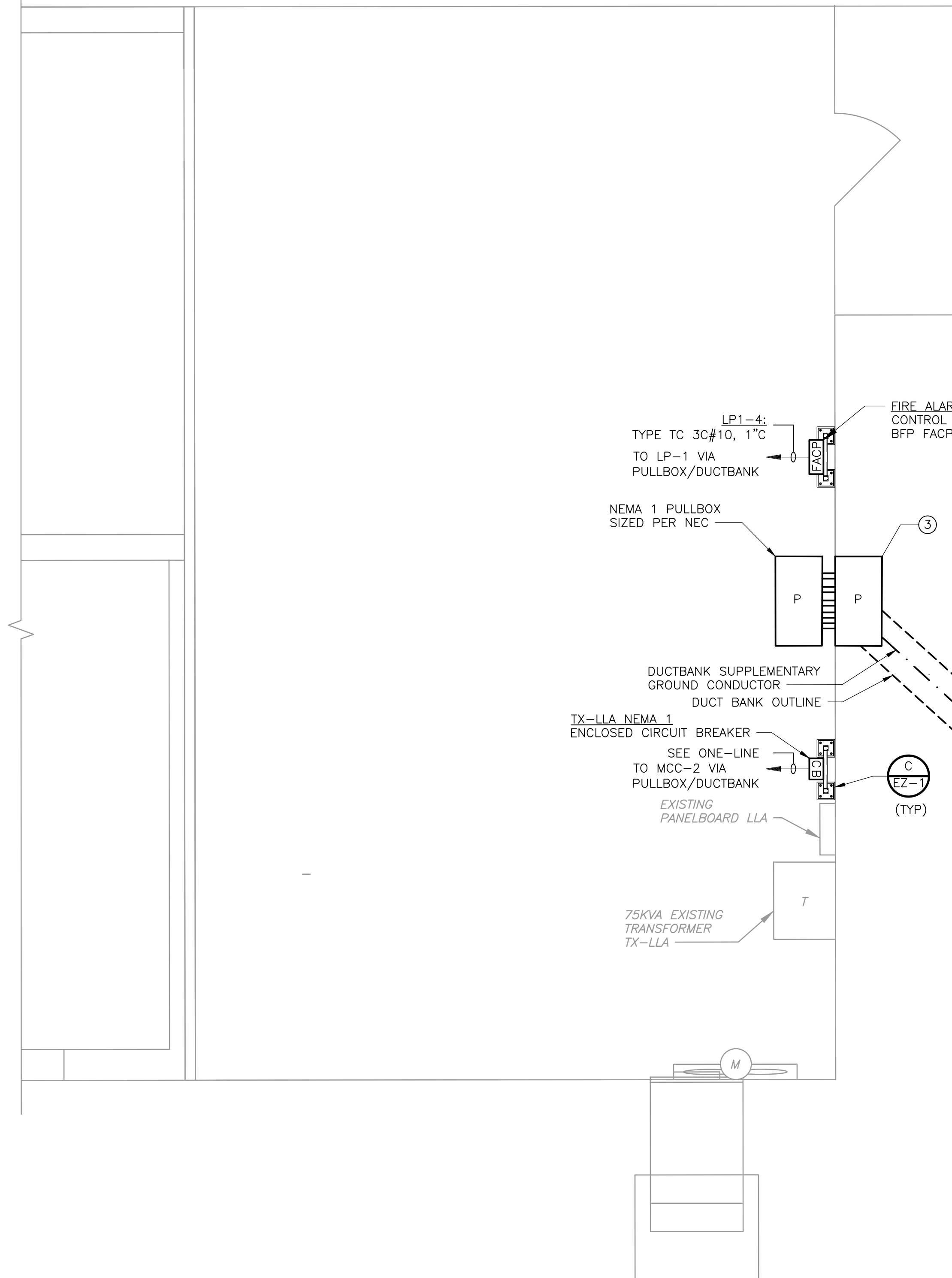
**GENERAL ELECTRICAL NOTES:**

- CONTRACTOR SHALL COORDINATE DEMOLITION OF ELECTRICAL CONDUIT, WIRE AND DEVICES WITH PROCESS/MECHANICAL DEMOLITION AND SCHEDULE. THE DRAWINGS ARE INTENDED TO CONVEY THE GENERAL SCOPE OF DEMOLITION WORK. NOT ALL ITEMS TO BE DEMOLISHED ARE SHOWN.
- PROVIDE ALL LABOR, MATERIAL, AND INCIDENTALS REQUIRED TO INSTALL THE NEW CIRCUITS AS SCHEDULED IN THIS CONTRACT. DETAILS SHOWN ON THIS SHEET ARE FOR DIAGRAMMATICAL PURPOSES AND SHOW INTENT. FITTINGS SUCH AS CONDULETS, PULL BOXES, JUNCTION BOXES, OR CONDUIT PENETRATIONS ARE TYPICALLY NOT SHOWN FOR CLARITY. ALL DIMENSIONS GIVEN ARE APPROXIMATE. FIELD VERIFY AND ADJUST AS REQUIRED FOR FULLY FUNCTIONAL SYSTEM



EXISTING BLOWER ROOM DEMOLITION  
 PLAN

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

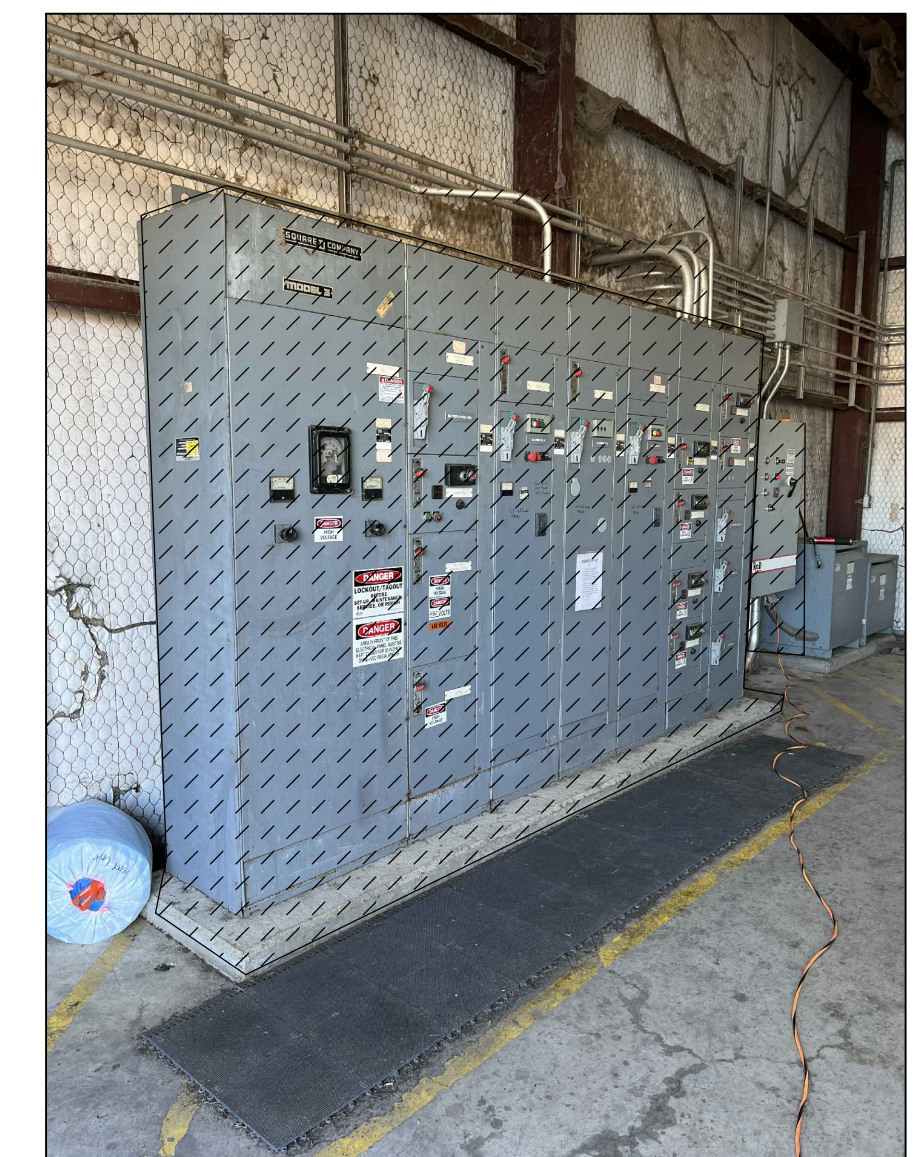


EXISTING BLOWER ROOM POWER AND CONTROL  
 PLAN

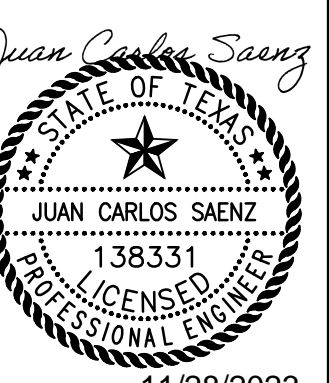
3/8" = 1'-0"  
 2 0 2 4



EQUIPMENT DEMOLITION  
 PHOTO 1  
 NTS



EXISTING MCC-1 DEMOLITION  
 PHOTO 2  
 NTS



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DESIGNED BY:	S. KAMAL
DRAWN BY:	S. KAMAL
SHEET CHK'D BY:	M. CZACH
CROSS CHK'D BY:	G. PRABHU
APPROVED BY:	J. SAEENZ
DATE:	NOVEMBER 2023

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	STC	JCS	CONFORMED DRAWINGS

**CDM Smith**  
 8310-1 N. Capital of Texas Hwy, Suite 250  
 Austin, TX 78731  
 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

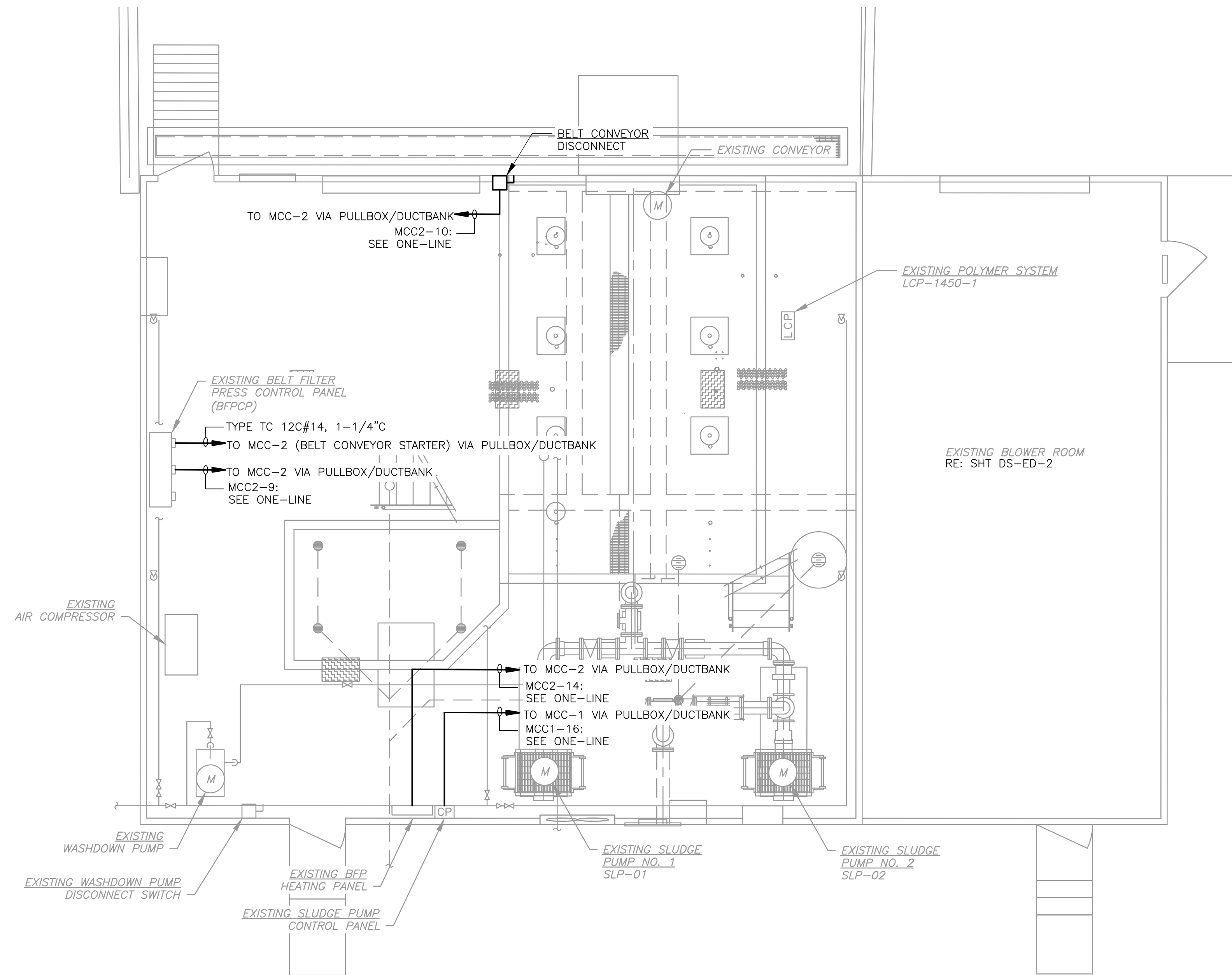
CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP  
 EXISTING BLOWER ROOM  
 POWER PLAN

PROJECT NO.	2048-264953
FILE NAME:	DSED2BBPL.dwg
SHEET NO.	DS-ED-2

**GENERAL ELECTRICAL NOTES:**

1. CONTRACTOR SHALL COORDINATE DEMOLITION OF ELECTRICAL CONDUIT, WIRE AND DEVICES WITH PROCESS/MECHANICAL DEMOLITION AND SCHEDULE. THE DRAWINGS ARE INTENDED TO CONVEY THE GENERAL SCOPE OF DEMOLITION WORK. NOT ALL ITEMS TO BE DEMOLISHED ARE SHOWN.
2. REFER SHEET DS-D-200 FOR DEMOLITION ONE-LINE DIAGRAM.



**EXISTING BFP AREA MODIFICATION PLAN**

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

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REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	STC	JCS	CONFORMED DRAWINGS

DESIGNED BY:	S. KAMAL
DRAWN BY:	S. KAMAL
SHEET CHK'D BY:	M. CZACH
CROSS CHK'D BY:	G. PRABHU
APPROVED BY:	J. SAENZ
DATE:	NOVEMBER 2023

**CDM Smith**  
 8310-1 N. Capital of Texas Hwy, Suite 250  
 Austin, TX 78731  
 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

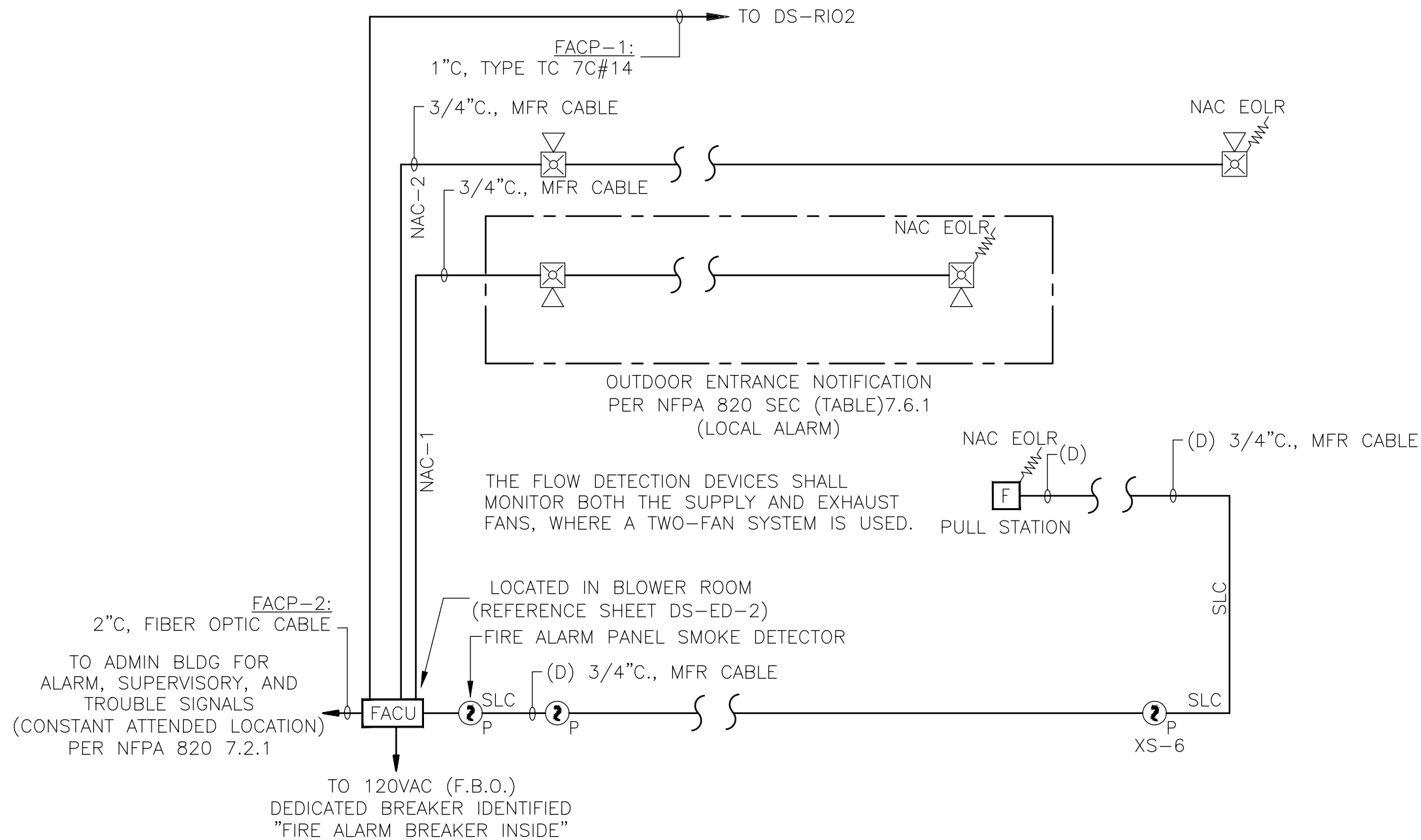
DOVE SPRINGS WWTP  
 EXISTING BFP AREA  
 ELECTRICAL MODIFICATION PLAN

PROJECT NO.	2048-264953
FILE NAME:	DSEE1SHPL.DWG
SHEET NO.	DS-EE-1



GENERAL ELECTRICAL NOTES:

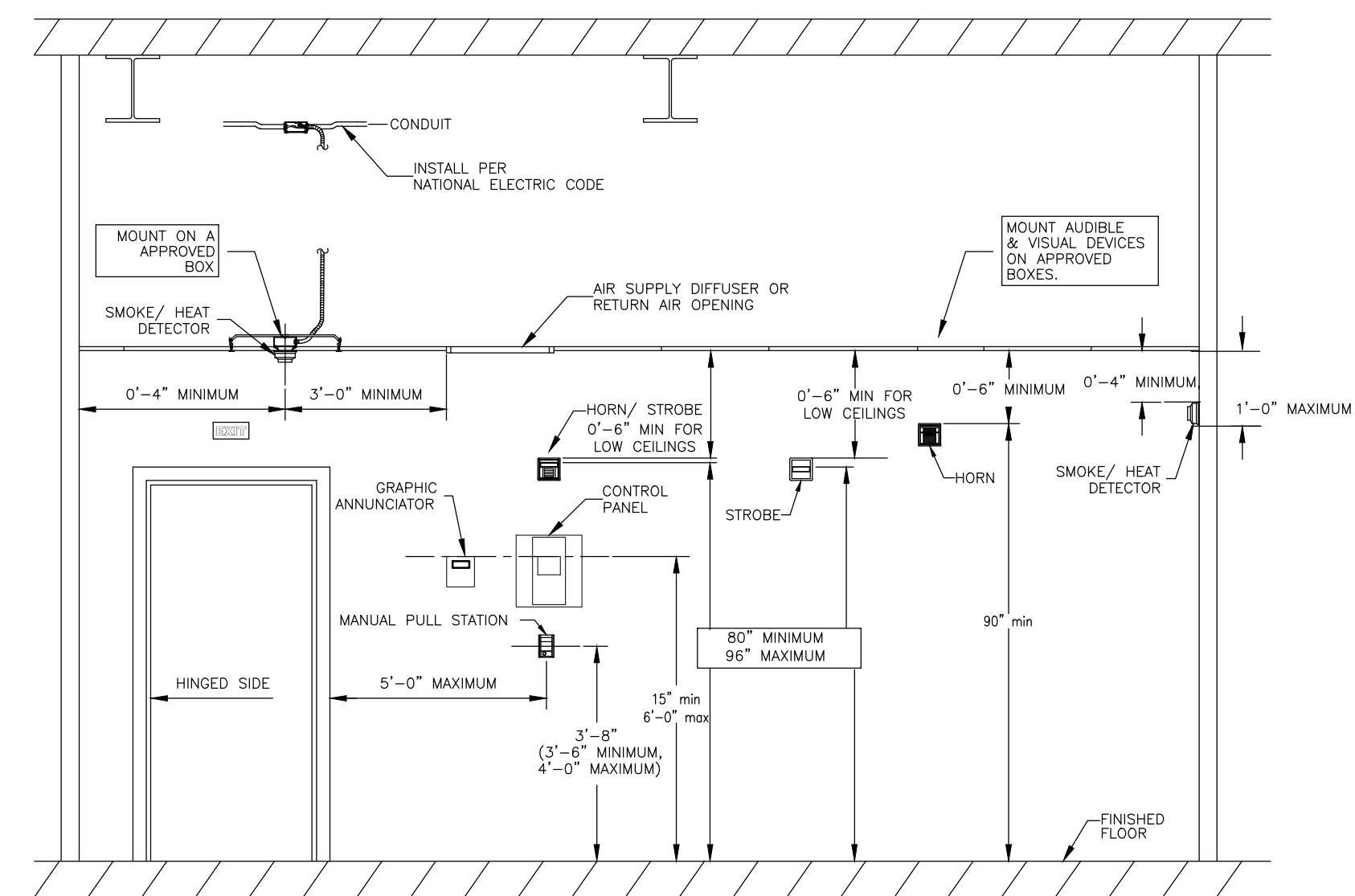
- 1. REFER SHEET DS-E-2,3, AND 4 FOR ELECTRICAL ONE-LINE DIAGRAM.



BFP AREA FIRE ALARM SYSTEM RISER DIAGRAM  
NTS

	CONTROL UNIT ANNUNCIATION											REQ'D SAFETY CTRLS	
	A	B	C	D	E	F	H	I	J	K	L		
1	MANUAL PULL STATION	X	X					X	X				
2	SMOKE DETECTOR	X	X					X	X				
3	HEAT DETECTOR	X	X					X	X				
4	DUCT DETECTORS			X	X			X		X			X
5	LOW BATTERY					X	X	X				X	
6	OPEN CIRCUIT					X	X	X				X	
7	GROUND FAULT					X	X	X				X	
8	NOTIFICATION APPLIANCE CIRCUIT SHORT					X	X	X				X	

BFP AREA FIRE ALARM SYSTEM CAUSE AND EFFECT MATRIX  
NTS



FIRE ALARM SYSTEM EQUIPMENT MOUNTING ELEVATIONS  
NTS

ABBREVIATIONS

AHJ	AUTHORITY HAVING JURISDICTION
OD	OUTDOOR
ID	INDOOR
RMC	RIGID METALLIC CONDUIT
JB	JUNCTION BOX
TYP	TYPICAL
FBO	FURNISHED BY OTHERS
ZX-Y	DENOTES X ZONE # AND Y SEQ IN CKT
cdXX	DENOTES STROBE CANDELA RATING
dBXX	DENOTES HORN/SOUNDER dB RATING
UG	UNDERGROUND
NAC	NOTIFICATION APPLIANCE CIRCUIT
SLC	SIGNALING LINE CIRCUIT
RTS	REMOTE TEST SWITCH

LEGENDS AND SYMBOLS

SYMBOL	DESCRIPTION
	SPOT SMOKE DETECTOR--PHOTOELECTRIC
	DUCT DETECTOR
	FIRE ALARM CONTROL UNIT
	MANUAL FIRE ALARM BOX
	ADDRESSABLE MONITOR MODULE
	ADDRESSABLE RELAY MODULE
	REMOTE TEST SWITCH
	EXHAUST/SUPPLY FAN
	AIR FLOW DETECTION/MEASUREMENT DEVICE
	FIRE ALARM STROBE LIGHT
	FIRE ALARM HORN
	FIRE ALARM HORN/STROBE
	END OF LINE RESISTOR
	ELECTRICAL METAL TUBING

FIRE ALARM WIRE LEGEND

CABLE TAG	CIRCUIT TYPE	OPEN WIRE CABLE	CABLE IN CONDUIT OR UNDER GROUND
D	INITIATION CIRCUIT - SLC CIRCUIT(DATA) + SPARE	#16/4 FPLR	4#14
Z	CONVENTIONAL ZONE CIRCUIT	#16/2 FPLR	2#14
N	NAC CIRCUIT	#12/2 FPLR	2#12
P	AUXILIARY POWER 24VDC	#14/2 FPLR	2#14
X	SPARE CIRCUIT	#14/2 FPLR	2#14

CONDUIT FILL CHART

CONDUIT TRADE SIZE	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	3-1/2"
INTERNAL DIAM./INCHES	.622	.824	1.050	1.380	1.610	2.067	2.469	3.068	3.548
TOTAL AREA SQ./INCHES	.304	.533	.864	1.496	2.036	3.356	4.788	7.393	9.887
40% AREA SQ. INCHES	.122	.213	.346	.598	.814	1.342	1.915	2.957	3.955
CONDUIT TRADE SIZE	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	3-1/2"
WIRE TYPE	16	15	26	43	76	104	169		
FPL	14	13	24	39	69	94	154		
FPLR	12	10	18	29	51	70	114		
THHN	10	6	10	18	32	44	73	104	160
	8	3	5	9	16	22	36	51	79

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	STC	JCS	CONFORMED DRAWINGS

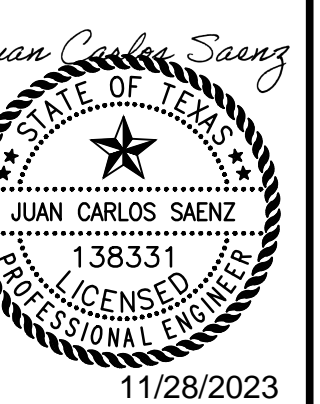
DESIGNED BY: P. VELDENIAN
DRAWN BY: P. VELDENIAN
SHEET CHK'D BY: J. SAENZ
CROSS CHK'D BY: X
APPROVED BY: J. SAENZ
DATE: NOVEMBER 2023

**CDM Smith**  
 8310-1 N. Capital of Texas Hwy, Suite 250  
 Austin, TX 78731  
 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

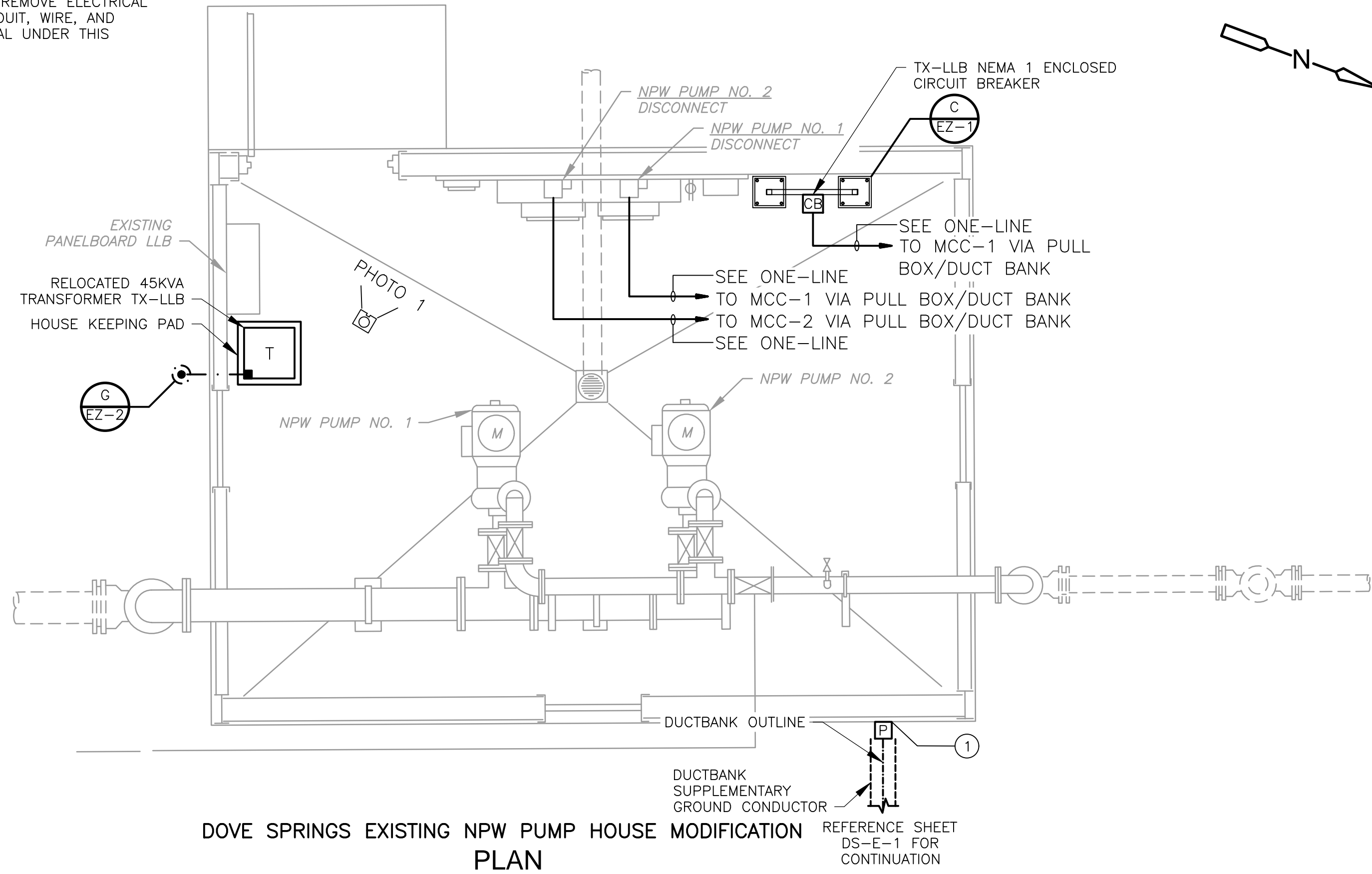
BFP AREA FIRE ALARM SYSTEM RISER DIAGRAM  
 AND CAUSE AND EFFECT MATRIX

PROJECT NO. 2048-264953
FILE NAME: DSEE2SHPL.DWG
SHEET NO. DS-EE-2



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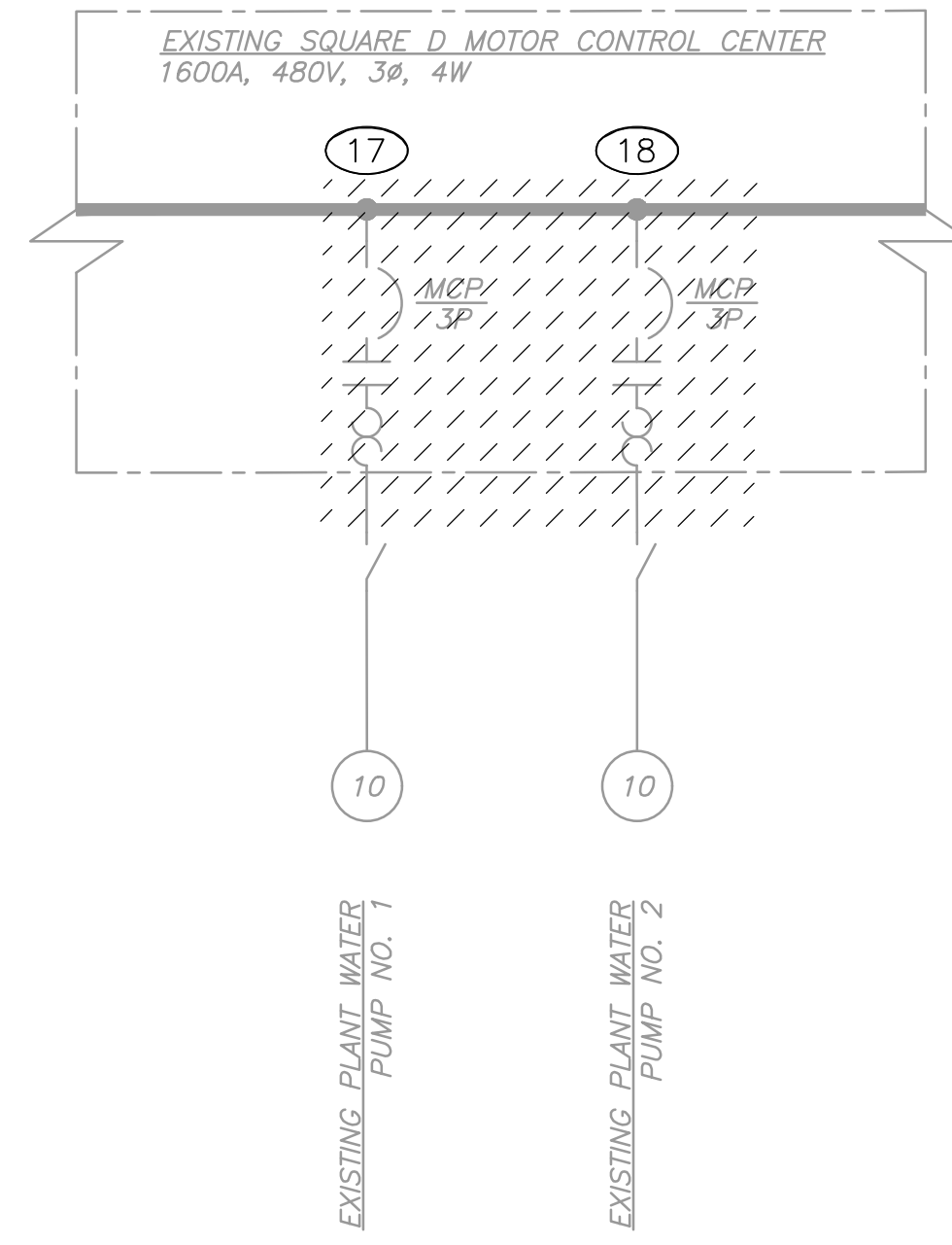
**LEGEND:**  
 // CONTRACTOR TO REMOVE ELECTRICAL EQUIPMENT, CONDUIT, WIRE, AND SUPPORT MATERIAL UNDER THIS CONTRACT.



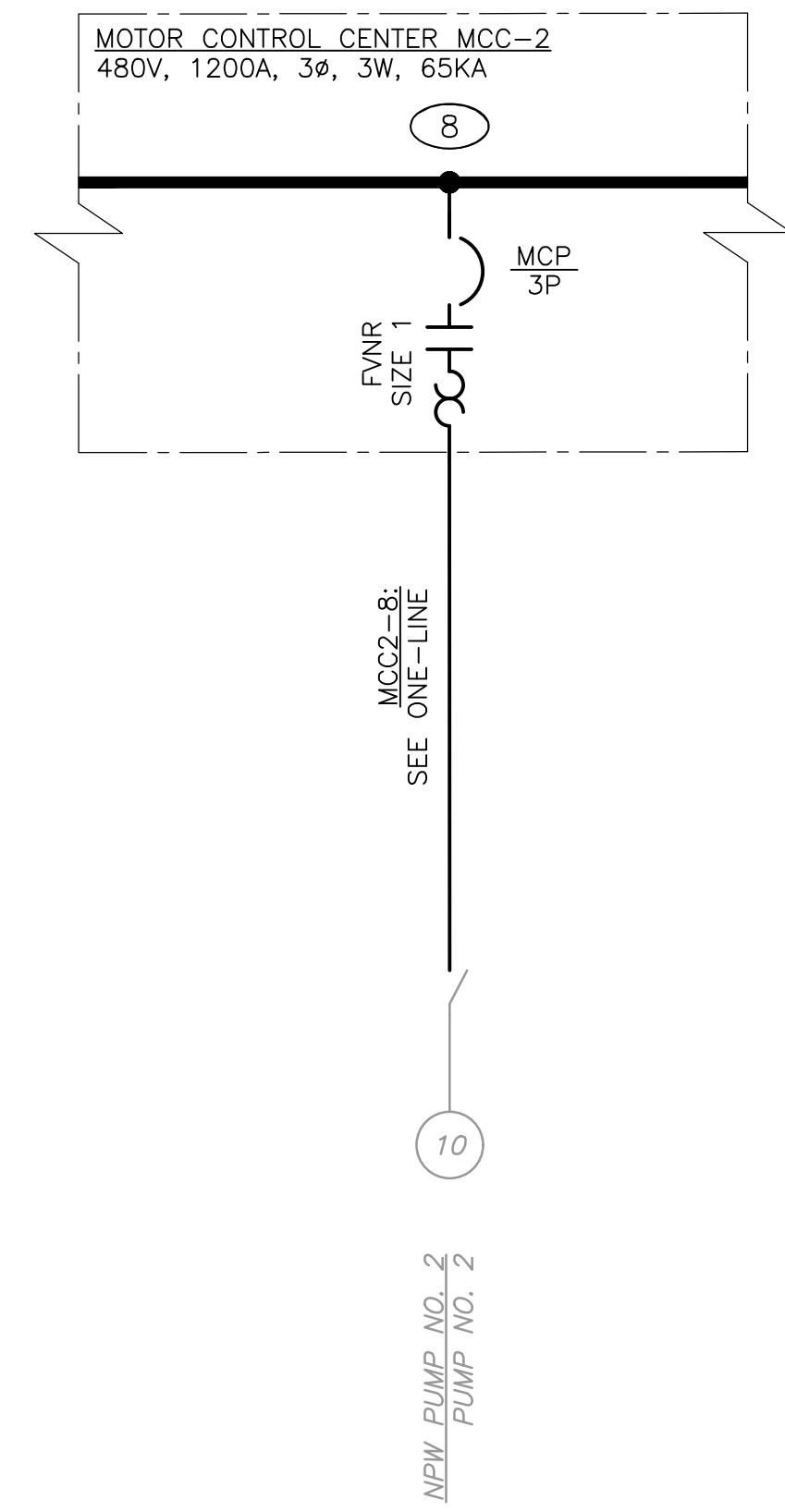
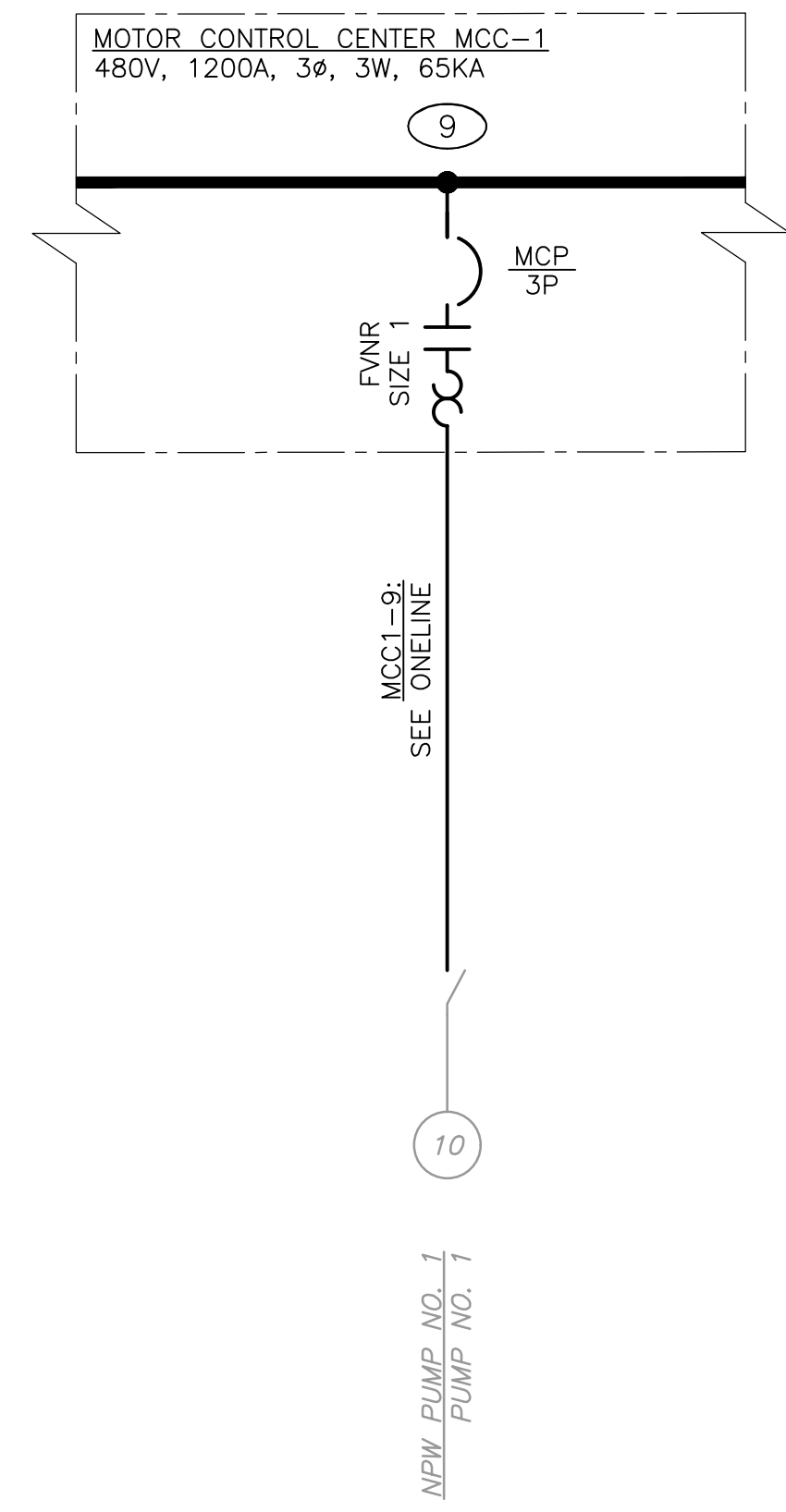
1/2" = 1'-0"



EXISTING DISCONNECT SWITCHES  
 PHOTO 1  
 SCALE



EXISTING MOTOR CONTROL CENTER MCC1 PARTIAL DEMOLITION  
 ONE-LINE DIAGRAM  
 NTS



NEW MOTOR CONTROL CENTER MCC-1/MCC-2 PARTIAL  
 ONE-LINE DIAGRAM  
 NTS

**GENERAL ELECTRICAL NOTES:**

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3. REFER SHEET DS-D-200 FOR DEMOLITION ONE-LINE DIAGRAM.

**KEY NOTES:**

1. TRANSITION DUCTBANK TO NEMA 4XSS PULLBOX SIZED PER NEC. BOND #4/0 TIN PLATED COPPER TO PULL BOX ENCLOSURE WITH MECHANICAL LUG.

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A	01/10/24	STC	JCS	CONFORMED DRAWINGS

DESIGNED BY: S. KAMAL  
 DRAWN BY: S. KAMAL  
 SHEET CHK'D BY: M. CZACH  
 CROSS CHK'D BY: G. PRABHU  
 APPROVED BY: J. SAENZ  
 DATE: NOVEMBER 2023



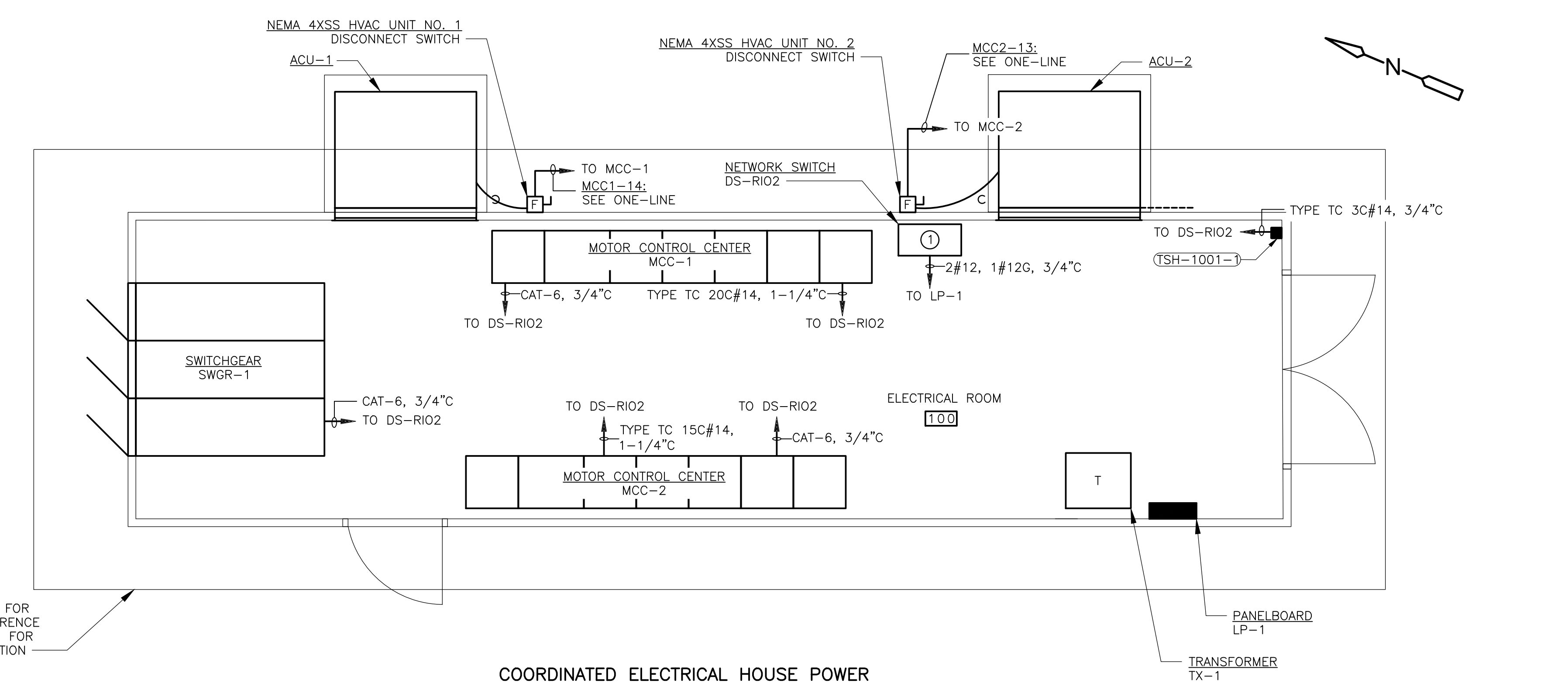
CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP  
 EXISTING NPW AREA  
 ELECTRICAL MODIFICATION PLAN

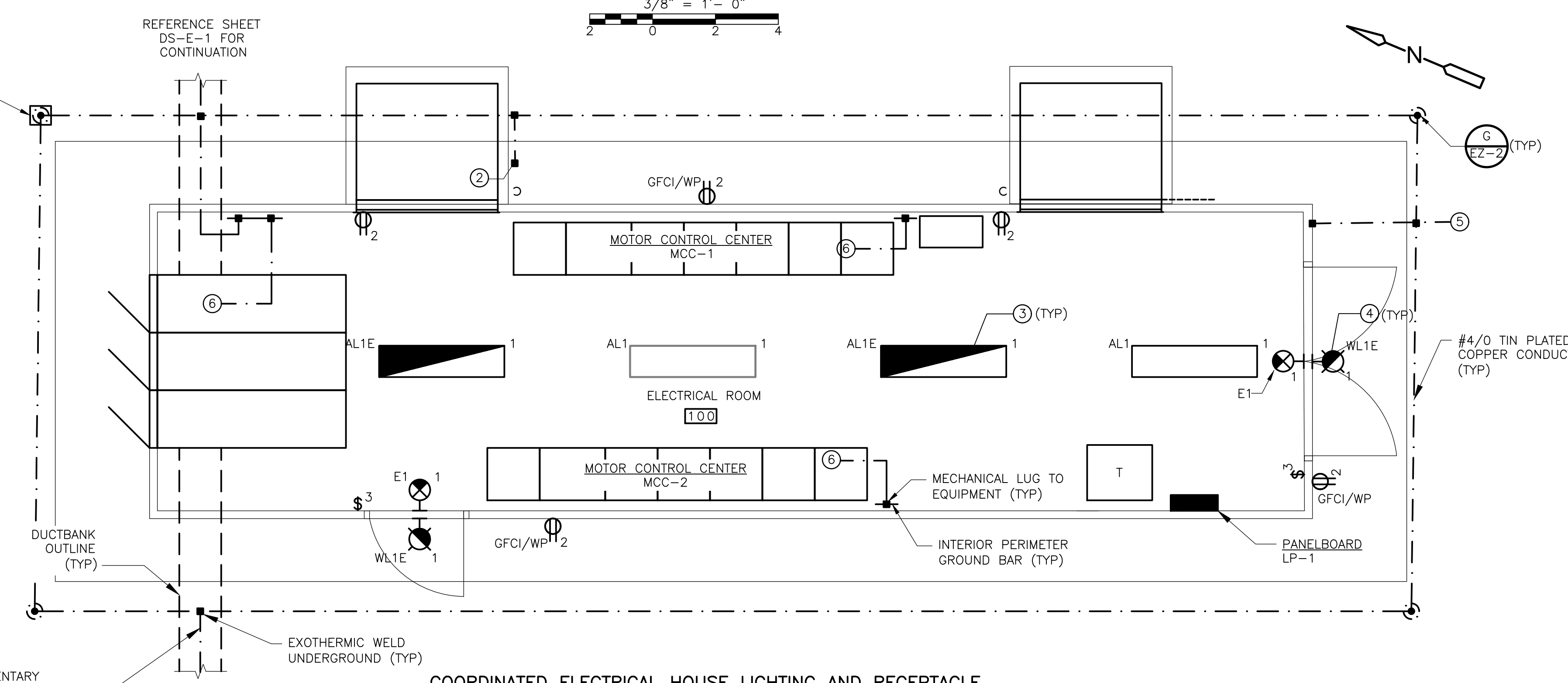
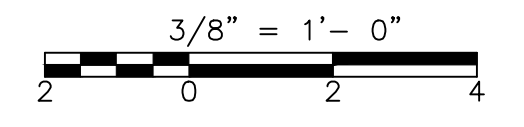
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 SHEET NO. DS-EG-1



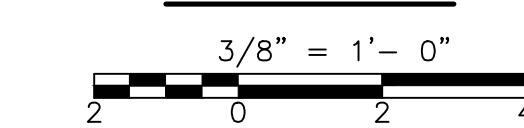
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COORDINATED ELECTRICAL HOUSE POWER  
PLAN



COORDINATED ELECTRICAL HOUSE LIGHTING AND RECEPTACLE  
PLAN



**GENERAL ELECTRICAL NOTES:**

1. REFER TO SHEETS DS-E-2, DS-E-4 AND DS-E-5 FOR ONE-LINE DIAGRAM.
2. REFER TO SHEET E-4 FOR LIGHTING FIXTURE SCHEDULE.
3. REFER TO SHEET DS-E-7 FOR PANELBOARD SCHEDULE.
4. EXIT AND EMERGENCY LIGHTS SHALL BE CONNECTED TO CONSTANT HOT AHEAD OF SWITCH ON CIRCUITS AS SCHEDULED THIS SHEET.
5. DETAILS ON THIS SHEET ARE FOR DIAGRAMMATICAL PURPOSES AND SHOW INTENT. ALL DIMENSIONS GIVEN ARE APPROXIMATIONS.
6. LOCATION OF GROUND LOOP SHALL BE AT A MINIMUM OF 30" FROM ANY FOUNDATION WALLS AND COLUMNS. GROUNDING LOOP SHALL BE BURIED 30" BELOW GRADE LEVEL.

**KEY NOTES:**

- ① PROVIDED BY DIVISION 40.
- ② BOND #4/0 TIN PLATED COPPER TO STRUCTURAL STEEL.
- ③ PENDANT MOUNT TYPE 'AL1' AND TYPE 'AL1E' LIGHTING FIXTURE AT 9'-0" A.F.F. UNLESS OTHERWISE NOTED.
- ④ WALL MOUNT LIGHT FIXTURE TYPE 'WL1E' AT 8'-0" A.F.F. UNLESS OTHERWISE NOTED.
- ⑤ BOND TO LIGHTNING PROTECTING DOWN LEADS WITH #4/0 TIN PLATED COPPER CONDUCTOR UNLESS REQUIRED OTHERWISE BY THE LIGHTNING PROTECTION SYSTEM DESIGNER.
- ⑥ BOND #4/0 TIN PLATED COPPER TO EHOUSE INTERIOR PERIMETER GROUND BAR.



REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	STC	JCS	CONFORMED DRAWINGS

DESIGNED BY: J. SAEZJC  
 DRAWN BY: V. MANJUI  
 SHEET CHK'D BY: M. CZACH  
 CROSS CHK'D BY: G. PRABHU  
 APPROVED BY: J. SAEZJC  
 DATE: NOVEMBER 2023

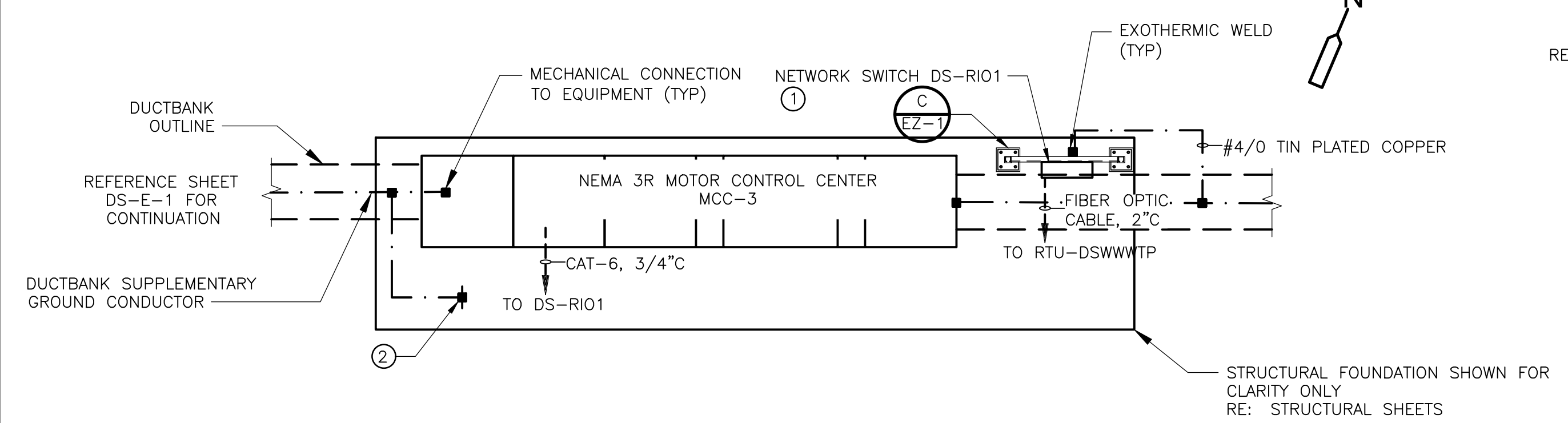


CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

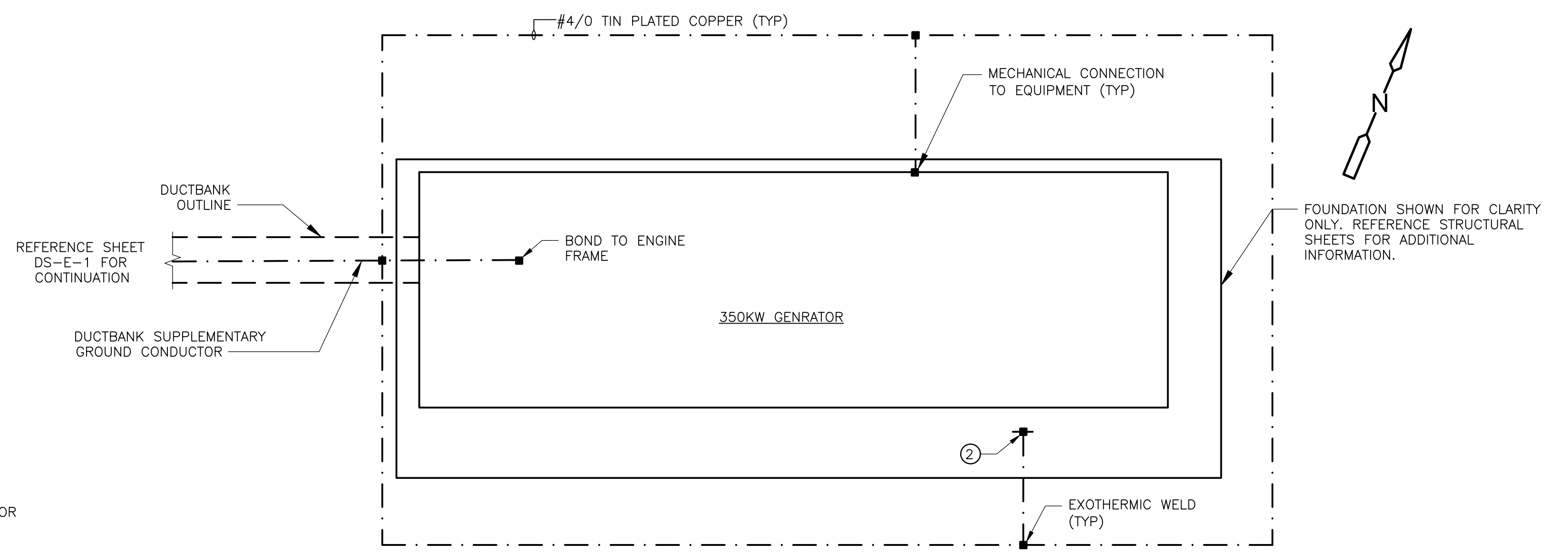
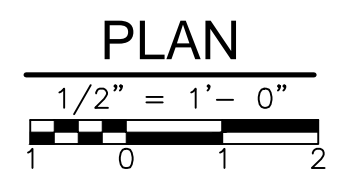
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 COORDINATED ELECTRICAL HOUSE  
 ENLARGED PLAN

PROJECT NO.	2048-264953
FILE NAME:	DSEI01ELPL.DWG
SHEET NO.	DS-EI-1

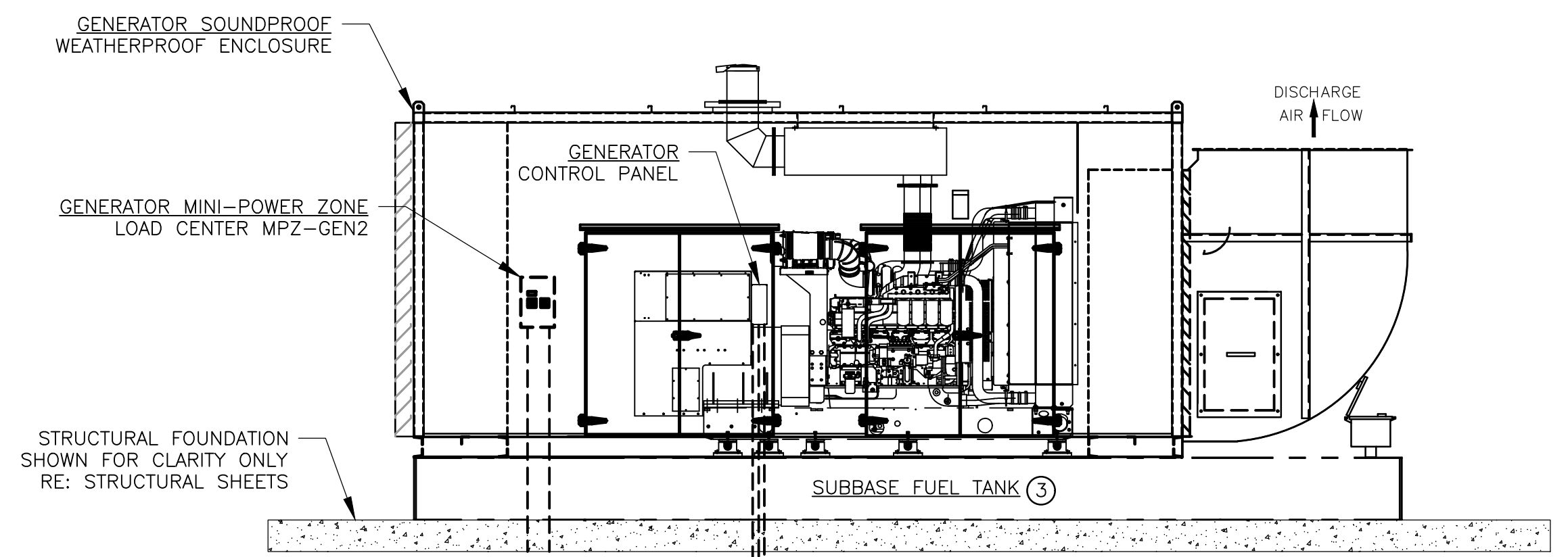
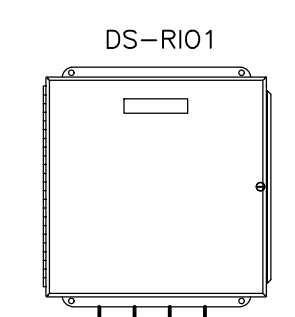
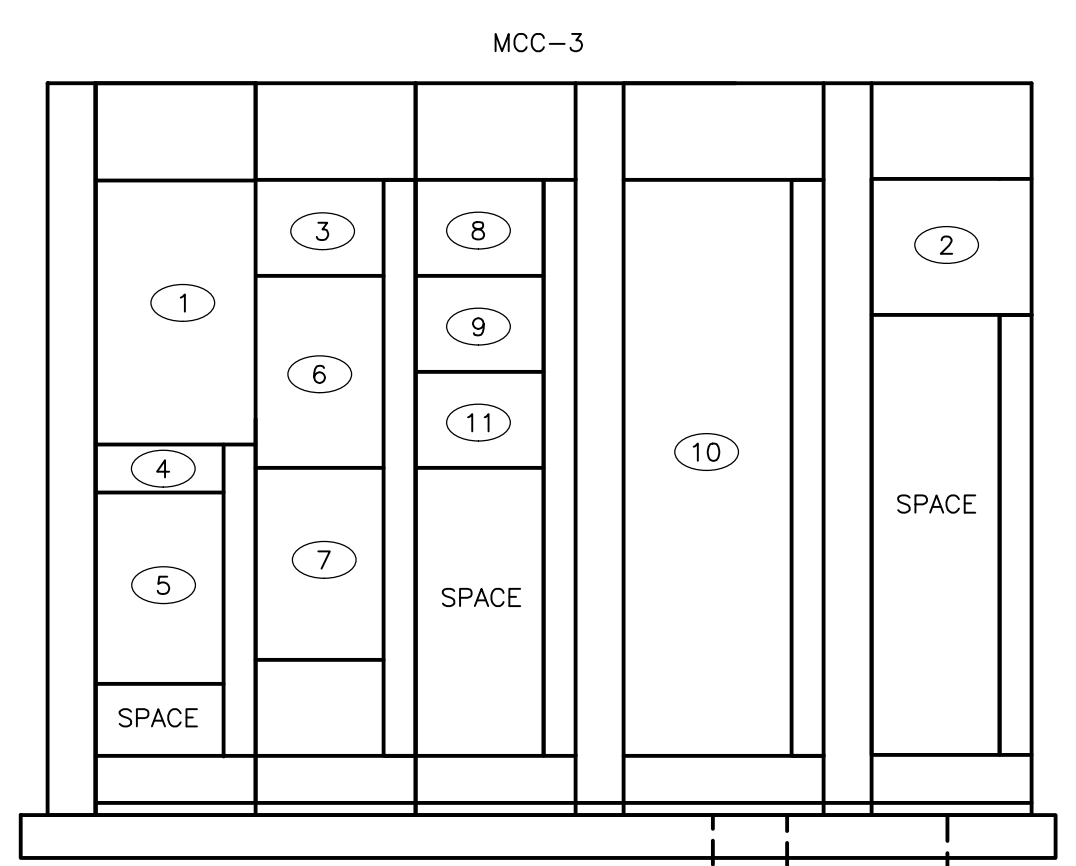
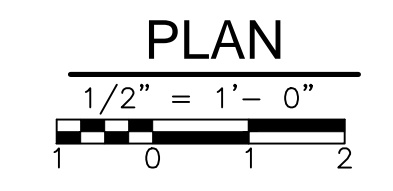
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NEMA 3R MOTOR CONTROL CENTER MCC-3 GROUNDING



PACKAGE PLANT GENERATOR



GENERATOR CONTROL RISER

PLAN  
NTS

**GENERAL ELECTRICAL NOTES:**

- REFER TO SHEET DS-E-6 FOR ONE-LINE DIAGRAM.
- THE CONTROL DIAGRAMS, ALONG WITH ANY WRITTEN OPERATIONAL DESCRIPTIONS PRESENT THE INTENDED FUNCTIONS OF THE OVERALL SYSTEM BUT DO NOT SUPERCEDE MANUFACTURER'S RECOMMENDATIONS.
- CONTRACTOR'S WORK SHALL INCLUDE COMPLETE TESTING OF EQUIPMENT AND WIRING INCLUDING MAKING MINOR CORRECTIONS, CHANGES OR ADJUSTMENTS NECESSARY FOR THE PROPER FUNCTIONING OF THE SYSTEM AND EQUIPMENT.

**KEY NOTES:**

- PROVIDED BY DIVISION 40.
- BOND #4/0 TIN PLATED COPPER TO STRUCTURAL STEEL.
- PROVIDE 24 HOUR RUNTIME. FUEL TANK SHALL NOT EXCEED 500 GALLON CAPACITY.

GENERATOR LOAD LIST			
STEP NO.	EQUIPMENT SERVED	LOAD SIZE	STARTER TYPE
1	MISC. POWER	15 KVA	N/A
2	AERATION BLOWER	150 HP	SSRVS
3	AERATION BLOWER	150 HP	SSRVS
4	SLUDGE PUMP	5 HP	FVNR
5	CLARIFIER	1 HP	FVNR

GENERATOR LOAD LIST  
NTS

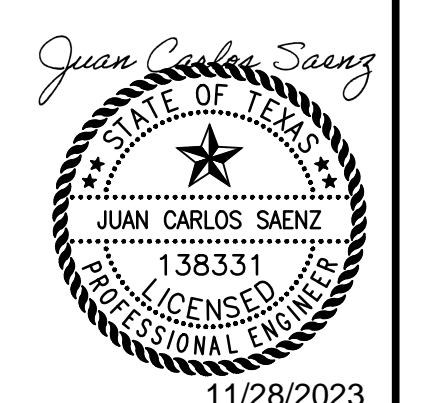
DESIGNED BY: J. C. SAENZ	
DRAWN BY: V. MANJU	
SHEET CHK'D BY: M. CZACH	
CROSS CHK'D BY: G. PRABHU	
APPROVED BY: J. SAENZ	
DATE: NOVEMBER 2023	

**CDM Smith**  
 8310-1 N. Capital of Texas Hwy, Suite 250  
 Austin, TX 78731  
 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

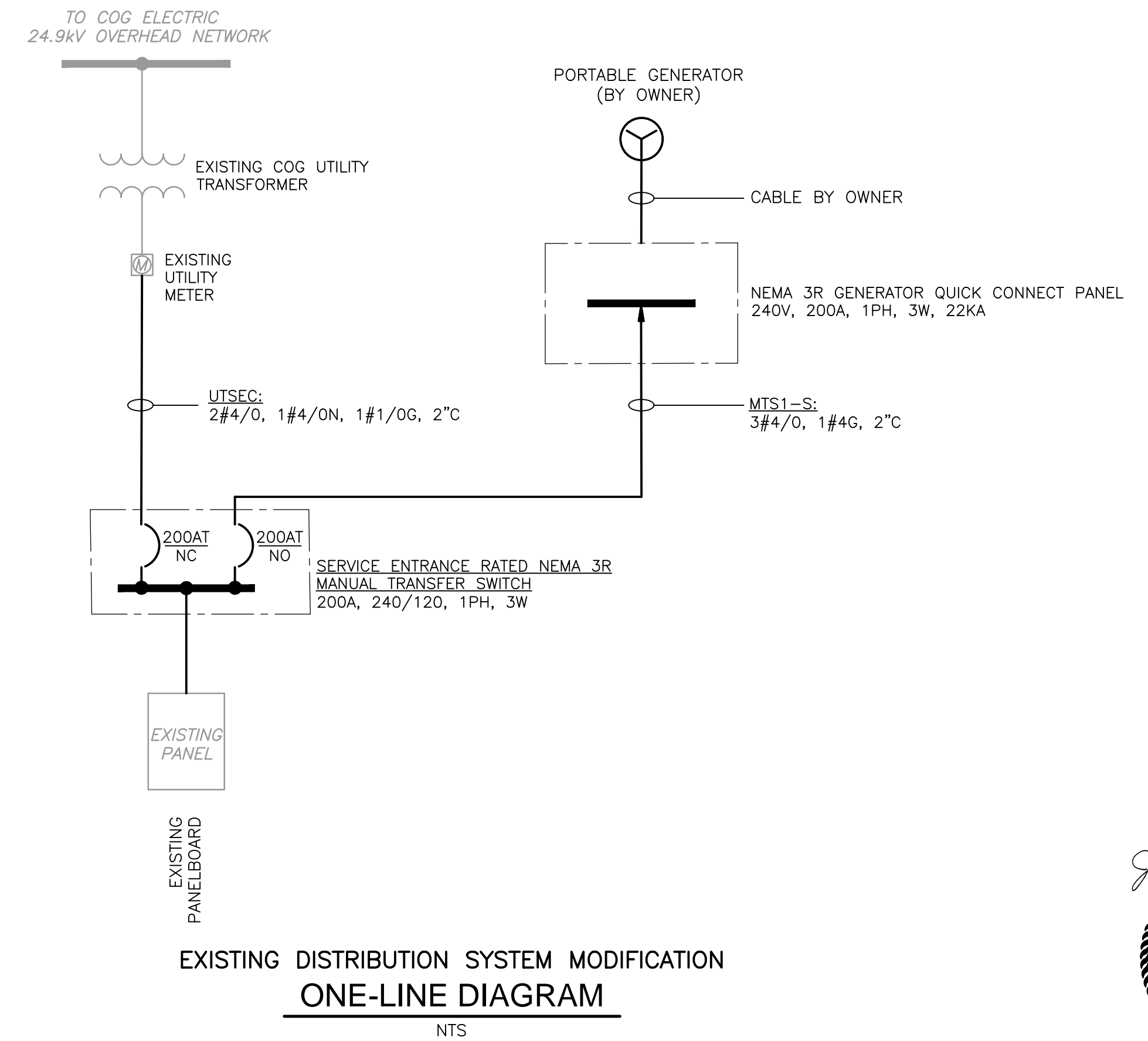
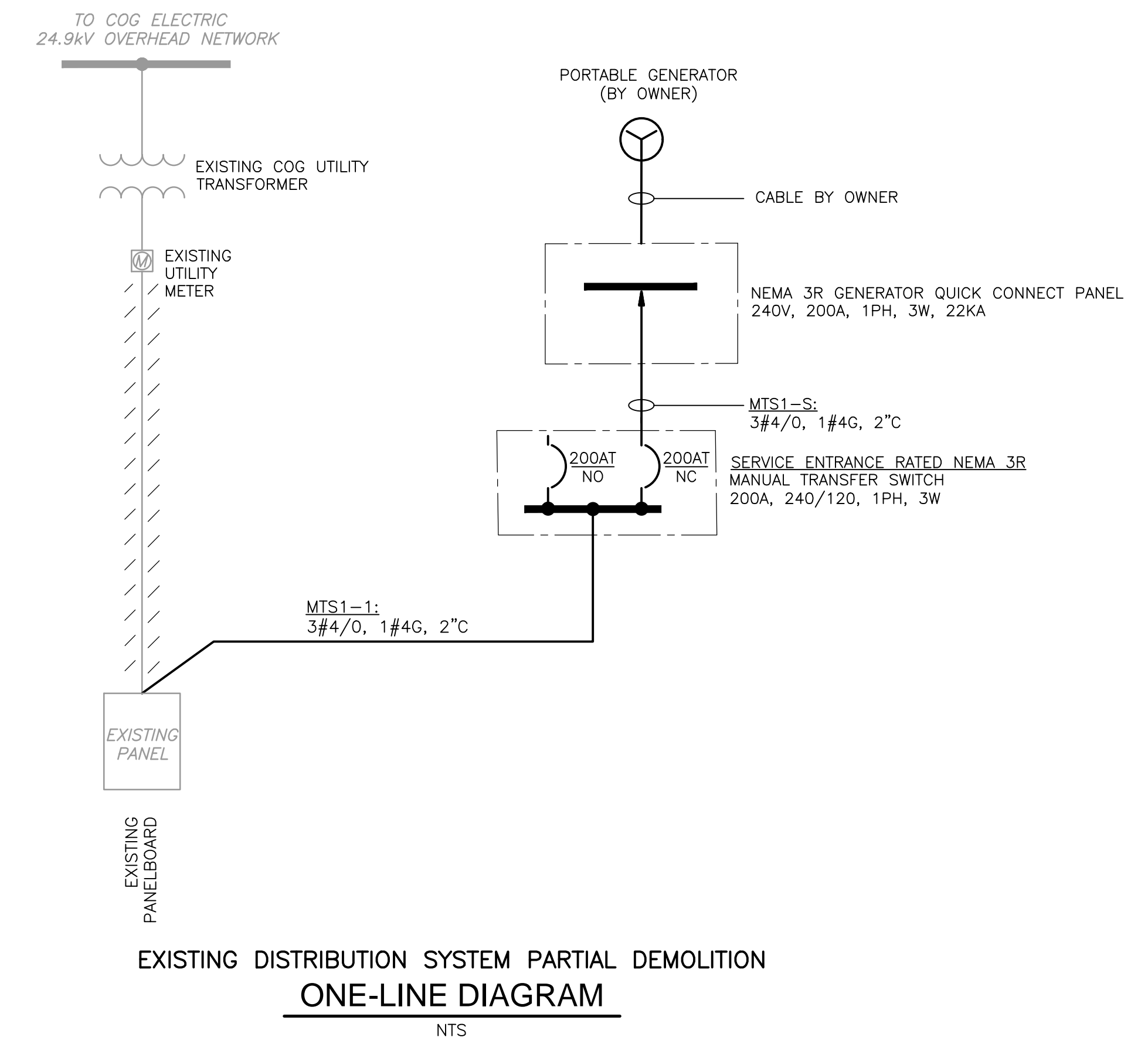
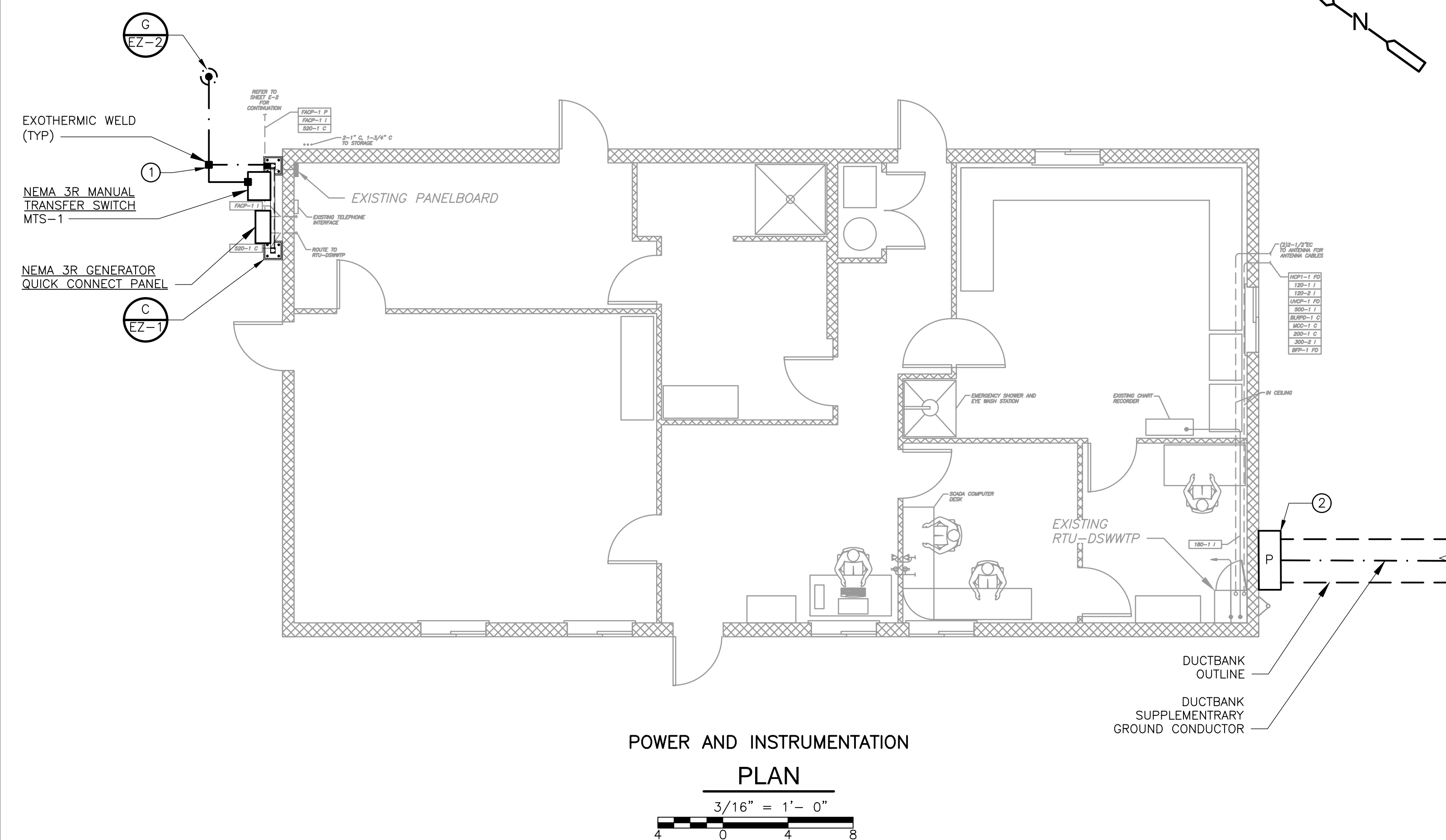
CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP RENTAL PACKAGE  
 MCC-3 AND GENERATOR  
 ENLARGED PLAN

PROJECT NO. 2048-264953
FILE NAME: DSEI02ELPL.DWG
SHEET NO.
DS-EI-2



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**KEY NOTES:**

- ① BOND #4/0 TIN PLATED COPPER TO MANUAL TRANSFER SWITCH ENCLOSURE WITH MECHANICAL LUG. PROVIDE EQUIPMENT PAD AS REQUIRED.
- ② TRANSITION DUCTBANK TO NEMA 4XSS PULLBOX SIZED PER NEC. BOND #4/0 TIN PLATED COPPER TO PULLBOX ENCLOSURE WITH MECHANICAL LUG.



REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	STC	JCS	CONFORMED DRAWINGS

DESIGNED BY: J. SAENZ  
 DRAWN BY: M. SAYED AASIF  
 SHEET CHK'D BY: M. CZACH  
 CROSS CHK'D BY: G. PRABHU  
 APPROVED BY: J. SAENZ  
 DATE: NOVEMBER 2023



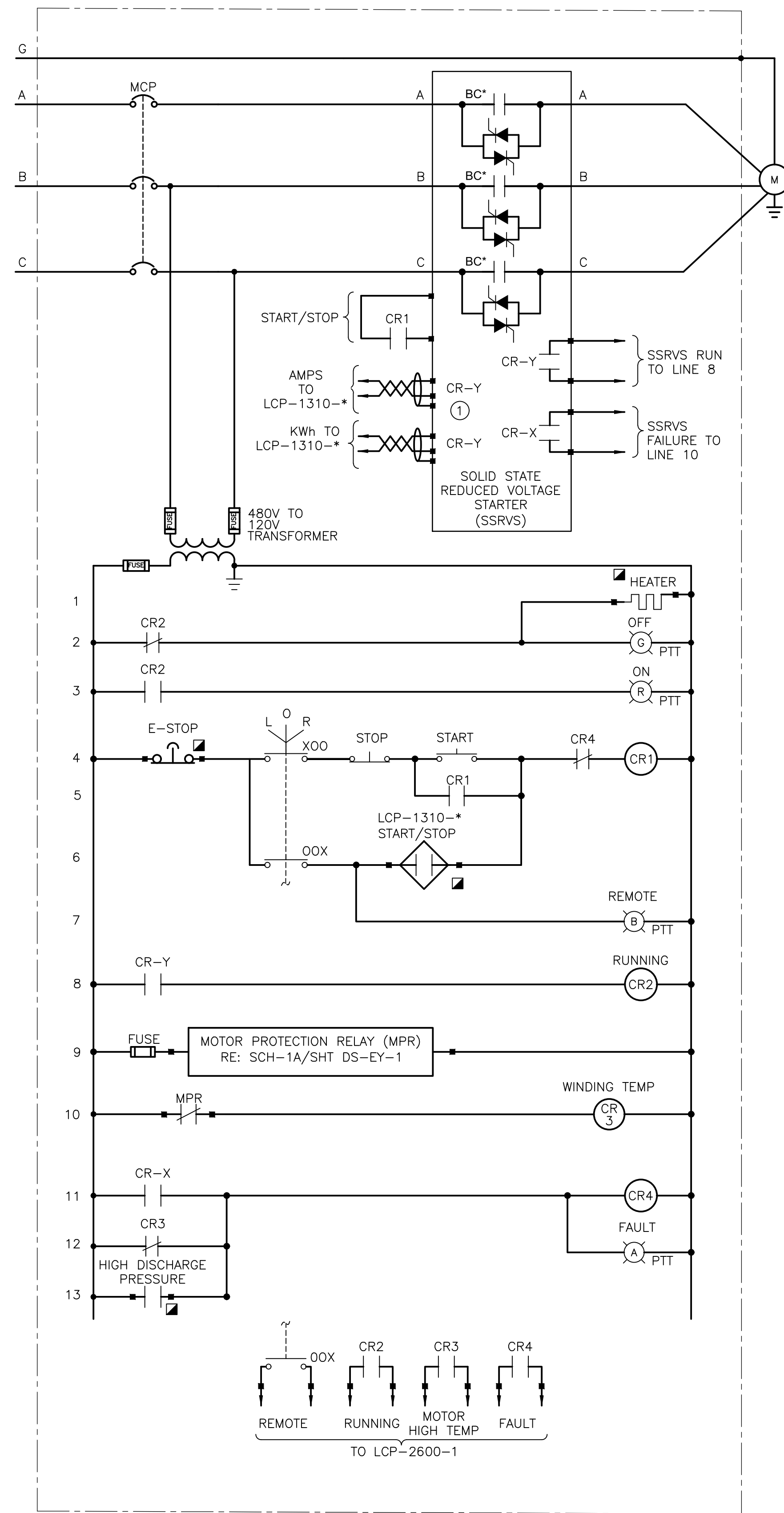
CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP  
 OPERATIONS BUILDING AND LAB  
 POWER AND INSTRUMENTATION PLAN

PROJECT NO. 2048-264953  
 FILE NAME: DSEI03ELPL.DWG  
 SHEET NO. DS-EI-3

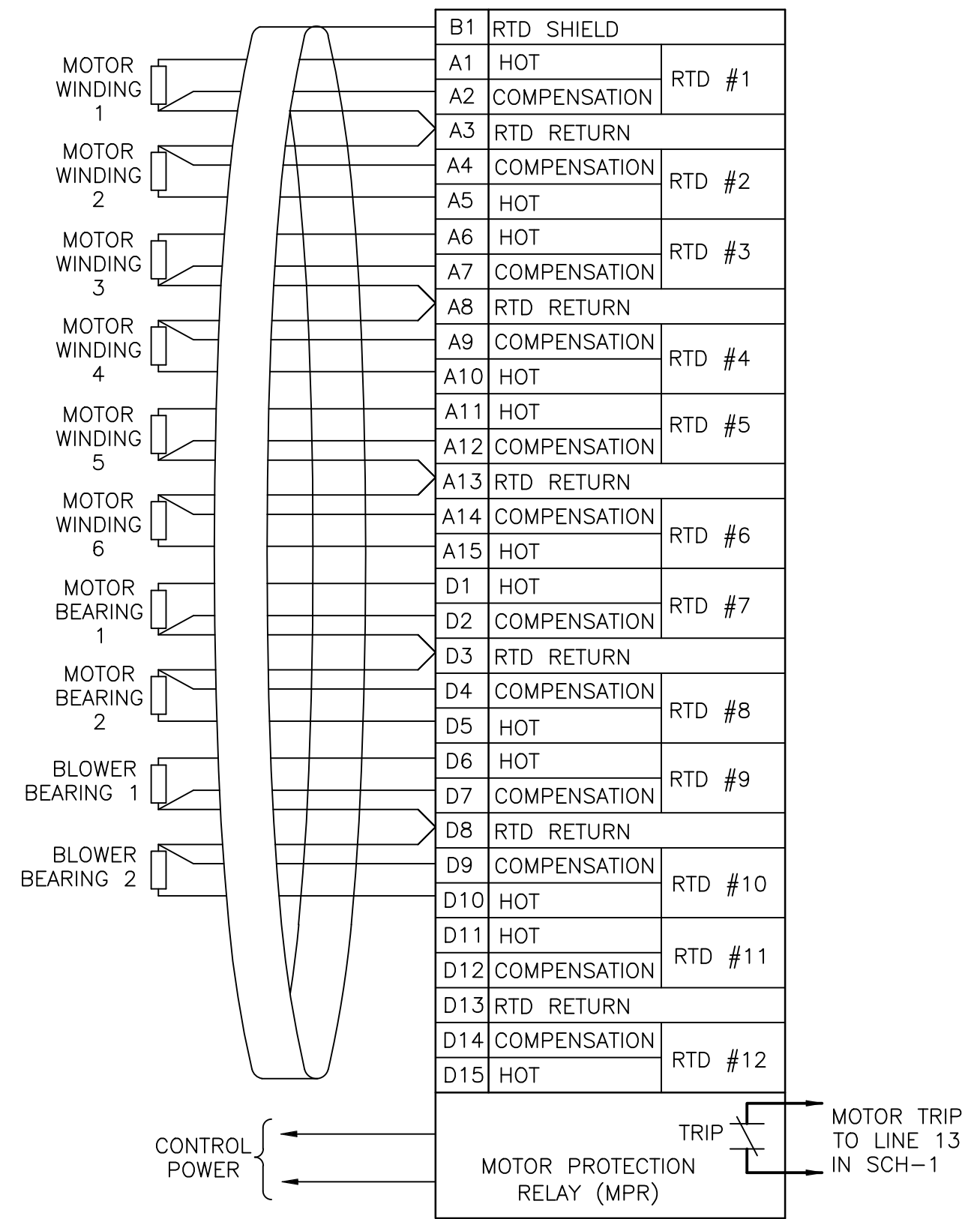


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**AERATION BLOWERS**  
**SCHEMATIC 1**  
 TYP OF 4

EQUIPMENT SCHEDULE	
EQUIPMENT NO.	LCP-13101-*
BLR-1310-1 AERATION BLOWER NO. 1	LCP-13101-1
BLR-1310-2 AERATION BLOWER NO. 2	LCP-13101-2
BLR-1310-3 AERATION BLOWER NO. 3	LCP-13101-3
BLR-1310-4 AERATION BLOWER NO. 4	LCP-13101-4



**MOTOR PROTECTION RELAY (MPR)**  
**SCHEMATIC 1A**  
 TYP FOR 4

**GENERAL ELECTRICAL NOTES:**  
 THE CONTROL DIAGRAMS, ALONG WITH ANY WRITTEN OPERATIONAL DESCRIPTIONS IN THE SPECIFICATIONS AND/OR LOOP DIAGRAMS, SHOW THE INTENDED FUNCTIONS OF THE SYSTEMS AND CIRCUITS.  
 ALL MOTOR STARTER CONTROL TRANSFORMERS SHALL BE A MINIMUM OF 100VA AND, IF NECESSARY, BE INCREASED IN SIZE SO AS TO PROVIDE SUFFICIENT VOLT-AMPERE CAPACITY FOR OPERATING ALL ELECTRICAL DEVICES ASSOCIATED WITH THE CONTROL OF THE MOTOR. THIS SHALL INCLUDE STARTER COIL, RELAYS, TIMERS, MOTOR HEATERS, INDICATING LIGHTS, ETC.  
 REFERENCE PLANS FOR CONDUIT AND WIRE REQUIREMENTS.

**KEY NOTES:**  
 PROVIDE MINIMUM TWO (2) ANALOG PROGRAMMABLE OUTPUTS. PROVIDE ADDITIONAL I/O CARDS AS REQUIRED.

**SCHEMATIC LEGEND**  
 ■ EXTERNAL DEVICE TERMINAL CONNECTIONS  
 ■ DEVICE LOCATED IN FIELD  
 ▲ DEVICE LOCATED IN LCS  
 ON (PUSH-TO-TEST LED PILOT LIGHT)  
 PTT (PILOT LIGHT)

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	STC	JCS	CONFORMED DRAWINGS

DESIGNED BY: J. SAENZ  
 DRAWN BY: V. MANJU  
 SHEET CHK'D BY: M. CZACH  
 CROSS CHK'D BY: G. PRABHU  
 APPROVED BY: J. SAENZ  
 DATE: NOVEMBER 2023

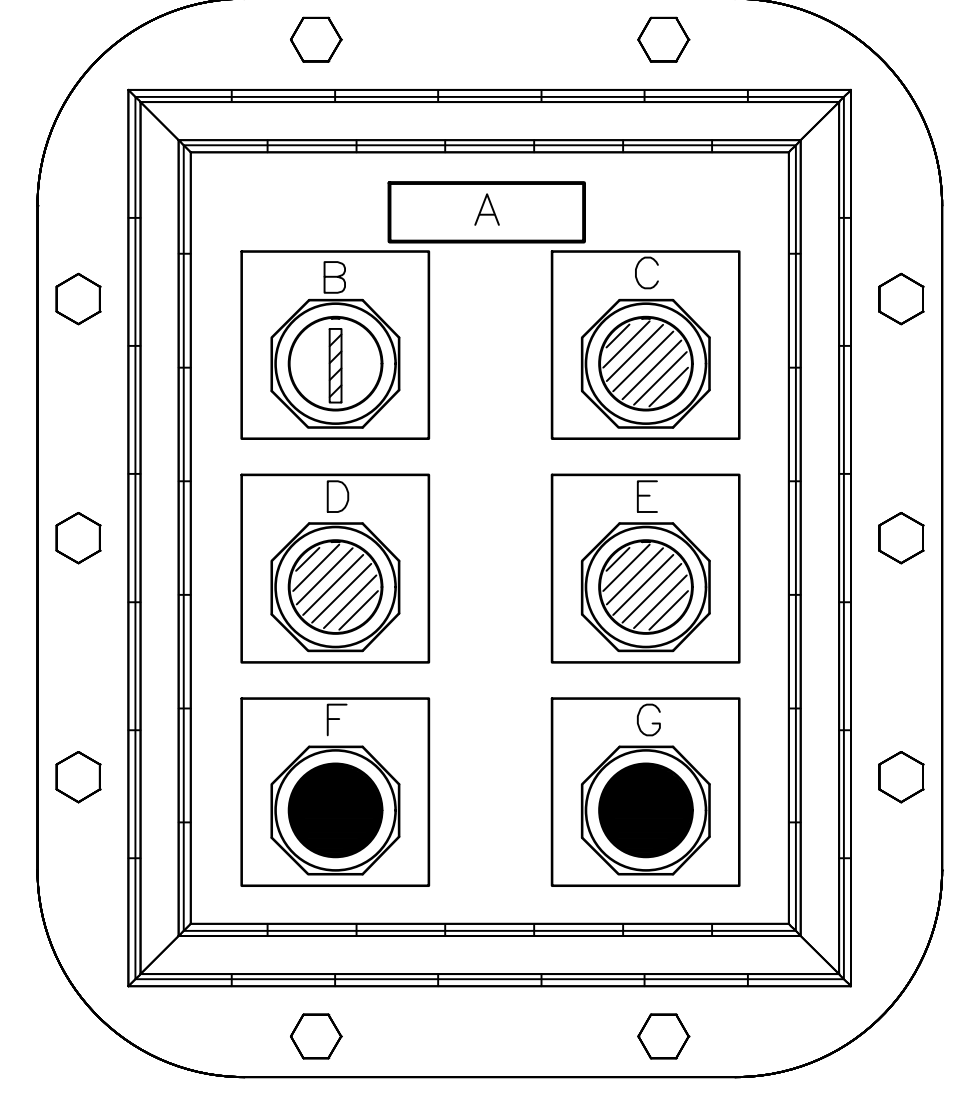
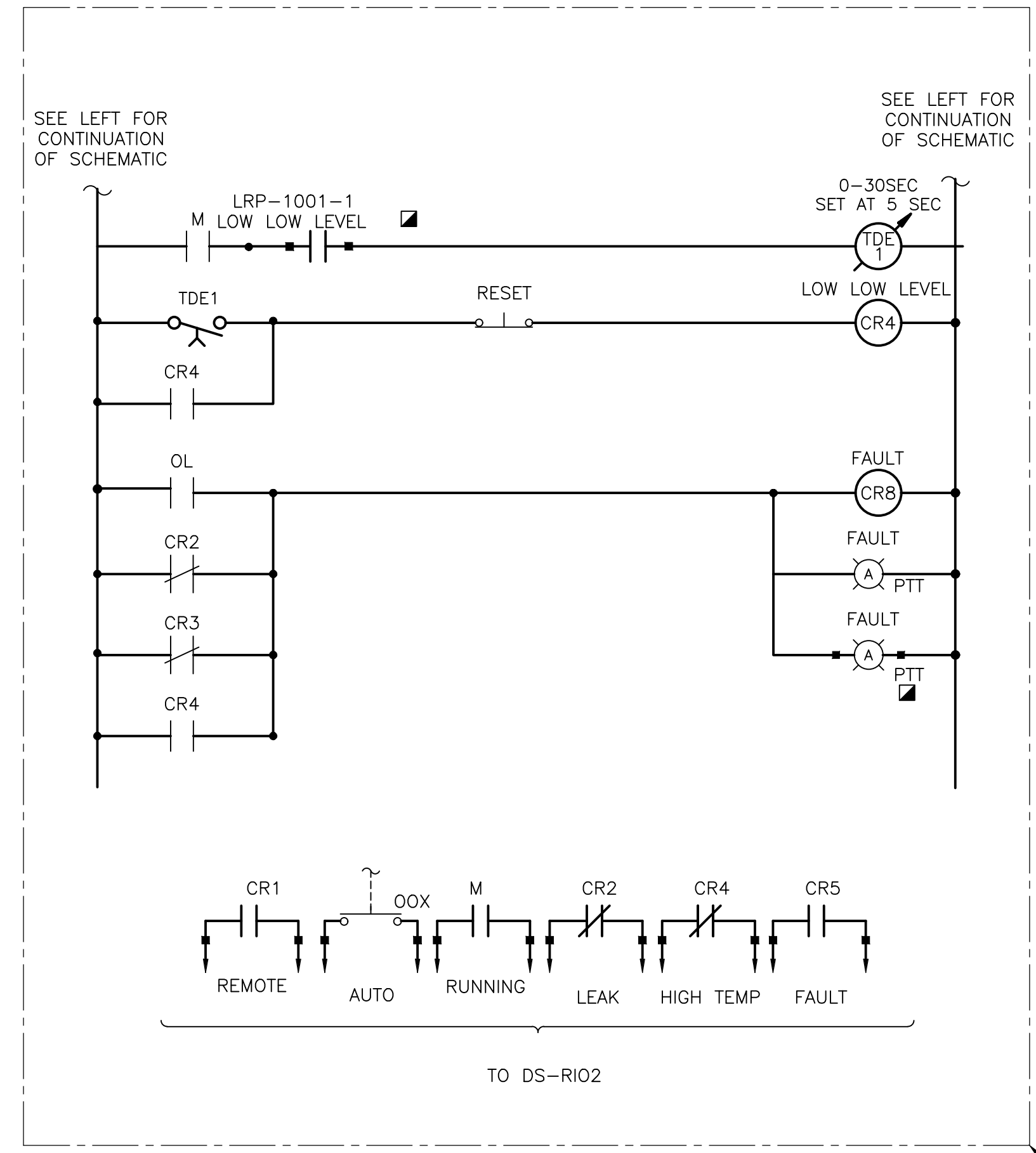
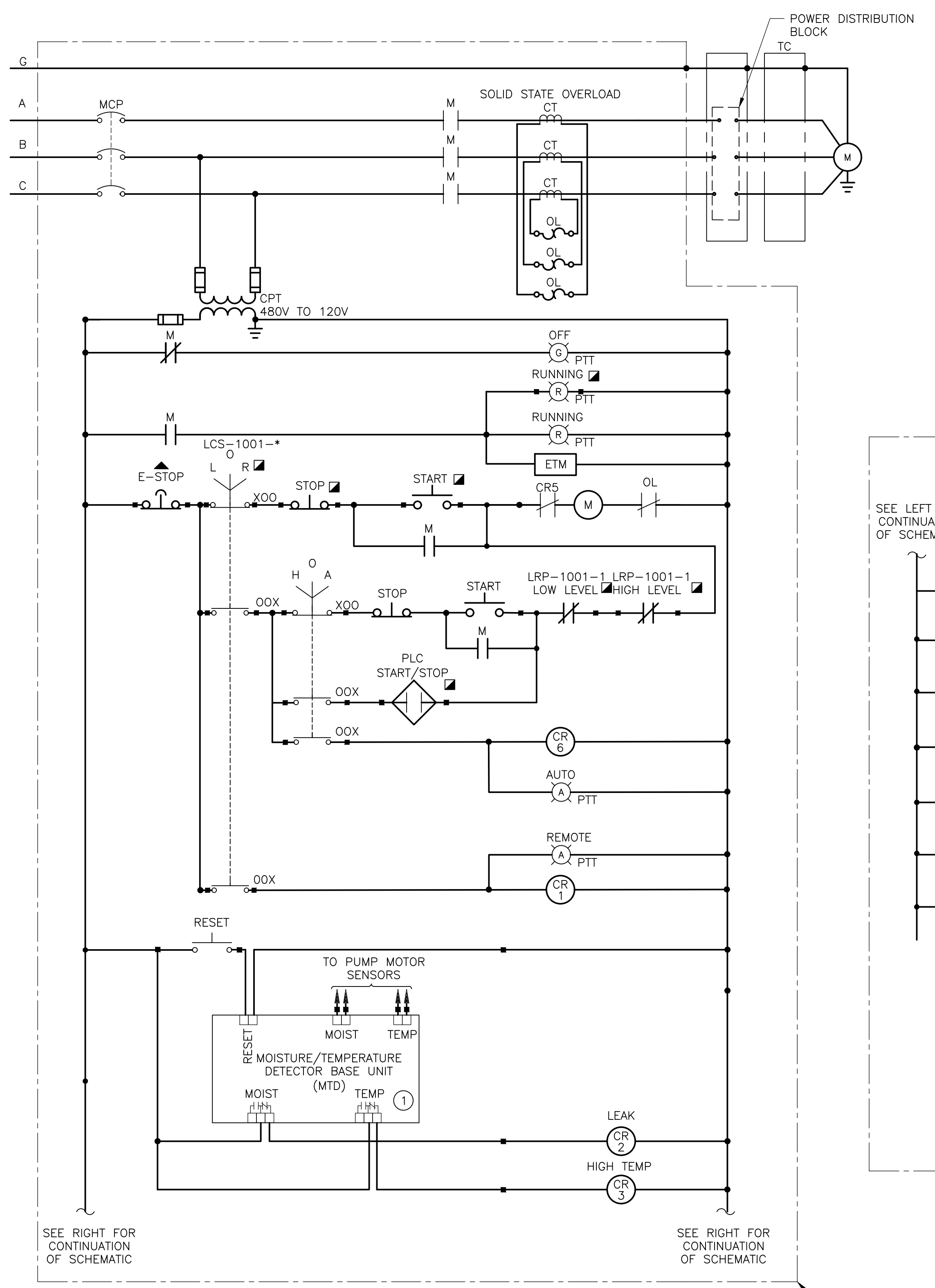


CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

PROJECT NO. 2048-264953  
 FILE NAME: DSEY1NFSC.DWG  
 SHEET NO. DS-EY-1  
 ELECTRICIAN  
 CONTROL SCHEMATICS I



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ITEM	TAG DESCRIPTION	MODEL #
A	"EQUIPMENT TAG"	SEE TABLE BELOW
B	LOR	AKRON OR APPROVED EQUAL XP3SSD SERIES
C	E-STOP	AKRON OR APPROVED EQUAL XPB5EG2C
D	START	AKRON OR APPROVED EQUAL XPB5ER2C
E	STOP	AKRON OR APPROVED EQUAL XPB5ER2C
F	RUNNING	AKRON OR APPROVED EQUAL XPLSB120R
G	FAULT	AKRON OR APPROVED EQUAL XPLSB120A

PUSHBUTTON DESIGNATION	EQUIPMENT TAG	EQUIPMENT SERVED	REFERENCE SHEET
LCS-1001-1	PMP-1001-1	FILTRATE PUMP NO.1	DS-EA-1
LCS-1001-2	PMP-1001-2	FILTRATE PUMP NO.2	DS-EA-1

EQUIPMENT SCHEDULE		
EQUIPMENT NO.	TSH-1001-*	LCS-1001-*
PMP-1001-1 FILTRATE PUMP NO. 1	TSH-1001-1	LCS-1001-1
PMP-1001-2 FILTRATE PUMP NO. 2	TSH-1001-2	LCS-1001-2

**NEMA 7 PUSHBUTTON STATION**  
NTS



**KEY NOTES:**

1. PROVIDE SPACE WITHIN MOTOR CONTROL CENTER FOR SUBMERSIBLE PUMP PROTECTION UNIT PROVIDED BY DIVISION 43 AND INSTALLED BY DIVISION 26. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL, AND INCIDENTALS REQUIRED TO PROVIDE A COMPLETE AND OPERABLE SYSTEM AT NO ADDITIONAL COST.

**GENERAL ELECTRICAL NOTES:**

1. THE CONTROL DIAGRAMS, ALONG WITH ANY WRITTEN OPERATIONAL DESCRIPTIONS IN THE SPECIFICATIONS AND/OR LOOP DIAGRAMS, SHOW THE INTENDED FUNCTIONS OF THE SYSTEMS AND CIRCUITS.
2. ALL MOTOR STARTER CONTROL TRANSFORMERS SHALL BE A MINIMUM OF 100VA AND, IF NECESSARY, BE INCREASED IN SIZE SO AS TO PROVIDE SUFFICIENT VOLT-AMPERE CAPACITY FOR OPERATING ALL ELECTRICAL DEVICES ASSOCIATED WITH THE CONTROL OF THE MOTOR. THIS SHALL INCLUDE STARTER COIL, RELAYS, TIMERS, MOTOR HEATERS, INDICATING LIGHTS, ETC.
3. REFERENCE PLANS FOR CONDUIT AND WIRE REQUIREMENTS.

**SCHEMATIC LEGEND**

- EXTERNAL DEVICE TERMINAL CONNECTIONS
- ▣ DEVICE LOCATED IN FIELD
- ▲ DEVICE LOCATED IN LCS
- ON (R) PTT PUSH-TO-TEST LED PILOT LIGHT
- PTT

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	STC	JCS	CONFORMED DRAWINGS

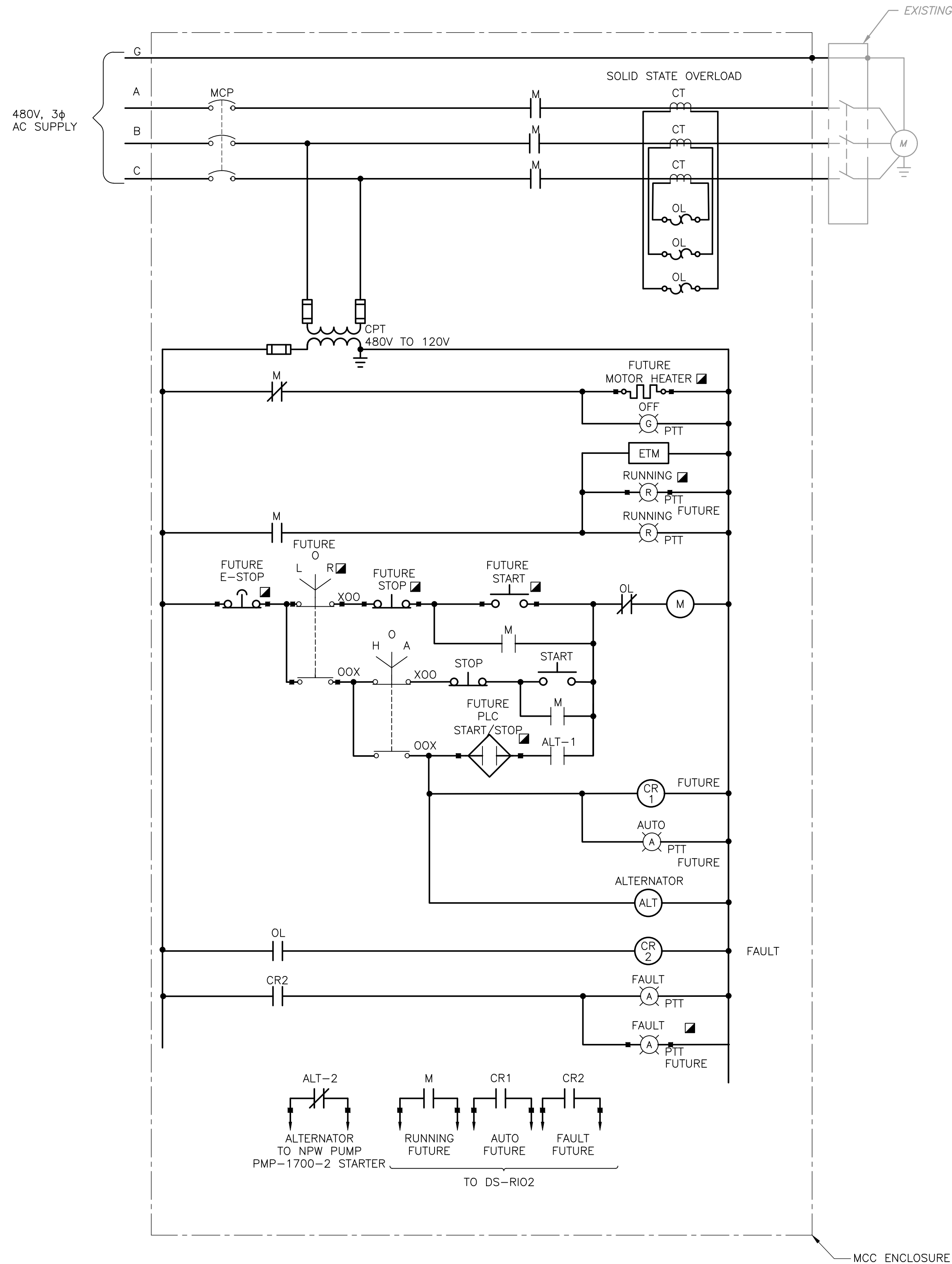
DESIGNED BY: J. SAENZ  
 DRAWN BY: V. MANJU  
 SHEET CHK'D BY: M. CZACH  
 CROSS CHK'D BY: G. PRABHU  
 APPROVED BY: J. SAENZ  
 DATE: NOVEMBER 2023



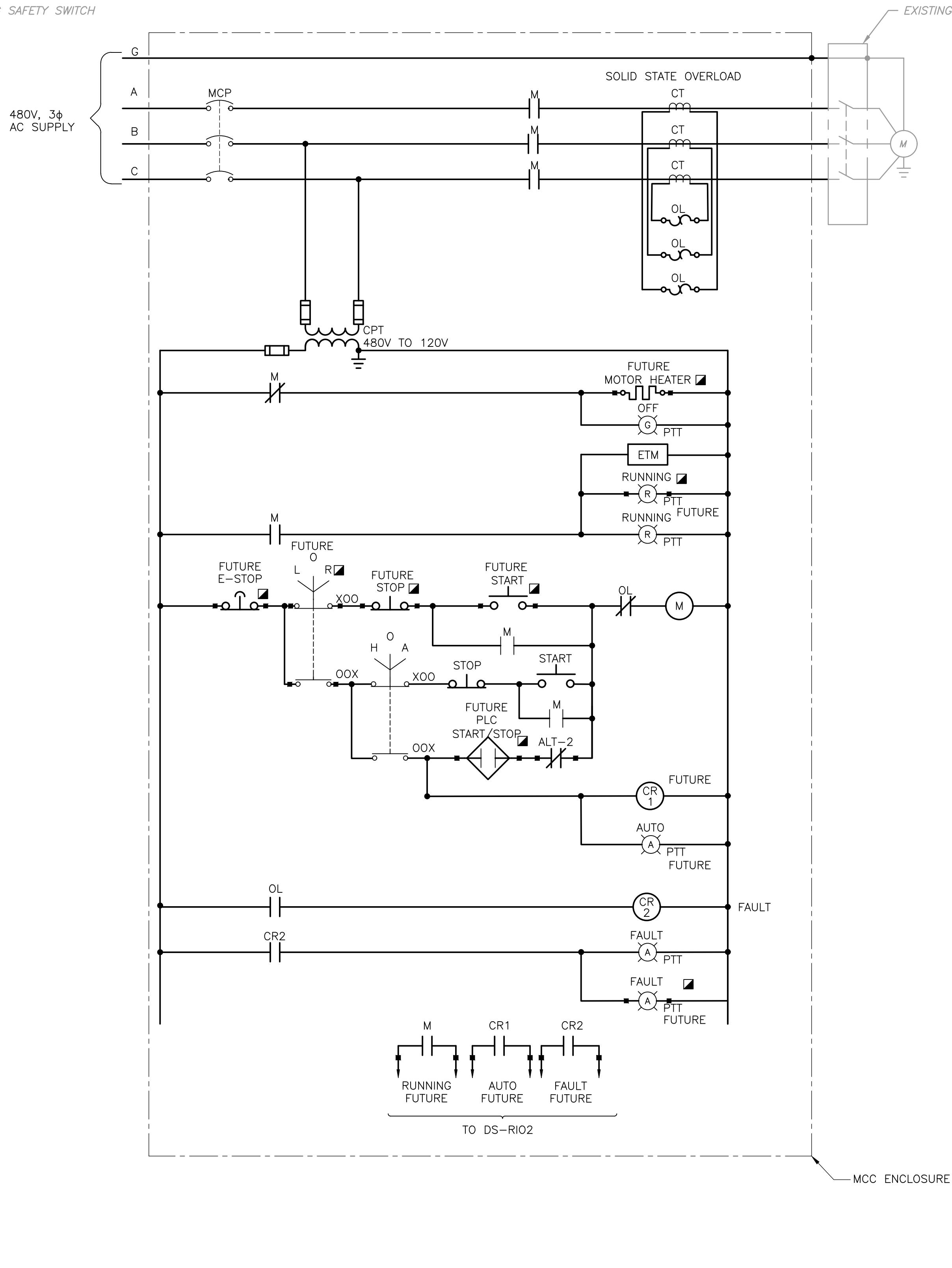
CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

**ELECTRICAL CONTROL SCHEMATICS II**  
 PROJECT NO. 2048-264953  
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 SHEET NO. DS-EY-2

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NPW PUMP PMP-1700-1  
**SCHEMATIC 1**  
 TYP OF 1



NPW PUMP PMP-1700-2  
**SCHEMATIC 2**  
 TYP OF 1

**GENERAL ELECTRICAL NOTES:**

1. THE CONTROL DIAGRAMS, ALONG WITH ANY WRITTEN OPERATIONAL DESCRIPTIONS IN THE SPECIFICATIONS AND/OR LOOP DIAGRAMS, SHOW THE INTENDED FUNCTIONS OF THE SYSTEMS AND CIRCUITS.
2. ALL MOTOR STARTER CONTROL TRANSFORMERS SHALL BE A MINIMUM OF 100VA AND, IF NECESSARY, BE INCREASED IN SIZE SO AS TO PROVIDE SUFFICIENT VOLT-AMPERE CAPACITY FOR OPERATING ALL ELECTRICAL DEVICES ASSOCIATED WITH THE CONTROL OF THE MOTOR. THIS SHALL INCLUDE STARTER COIL, RELAYS, TIMERS, MOTOR HEATERS, INDICATING LIGHTS, ETC.
3. REFERENCE PLANS FOR CONDUIT AND WIRE REQUIREMENTS.

**SCHEMATIC LEGEND**

- EXTERNAL DEVICE TERMINAL CONNECTIONS
- ▣ DEVICE LOCATED IN FIELD
- ON (R) PUSH-TO-TEST LED PILOT LIGHT
- (R) PTT

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	STC	JCS	CONFORMED DRAWINGS

DESIGNED BY:	J. SAENZ
DRAWN BY:	V. MANJU
SHEET CHK'D BY:	M. CZACH
CROSS CHK'D BY:	G. PRABHU
APPROVED BY:	J. SAENZ
DATE:	NOVEMBER 2023



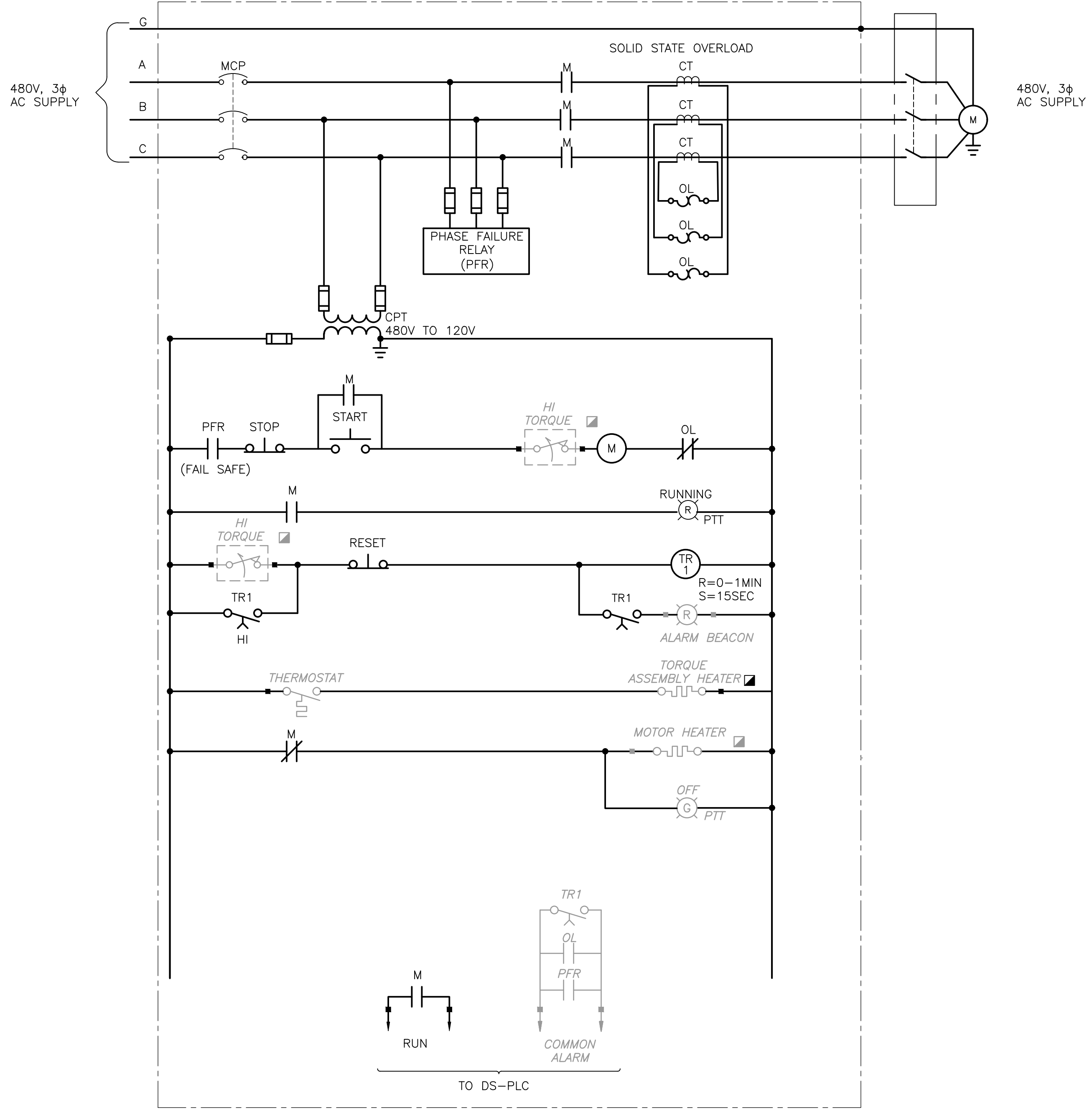
CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

ELECTRICAL  
 CONTROL SCHEMATICS III  
 DS-EY-3

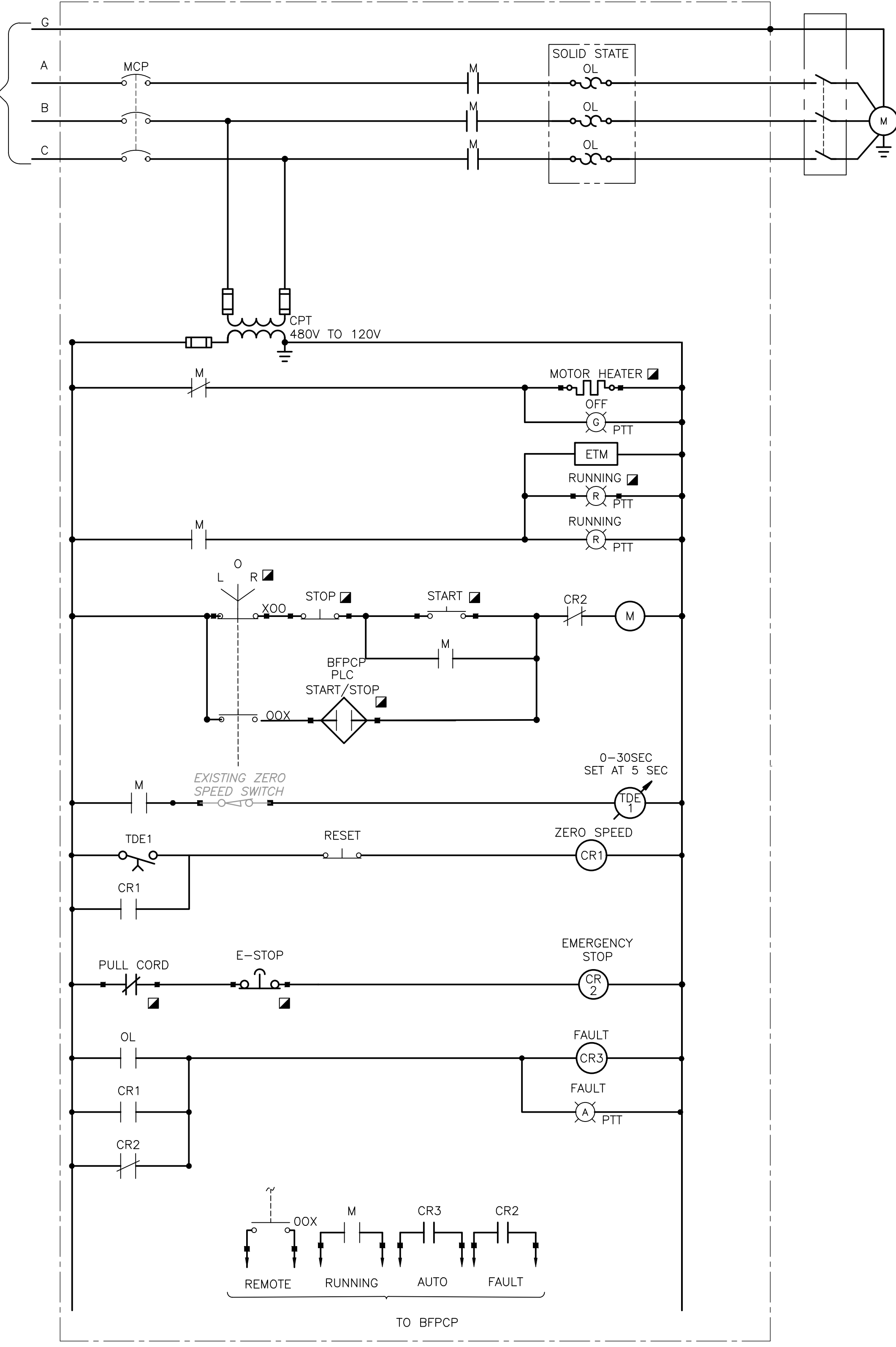
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SHEET NO.	DS-EY-3



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CLARIFIER NO.1 CF-1200-1  
**SCHEMATIC 1**  
 TYP OF 1



EXISTING CONVEYOR  
**SCHEMATIC 2**  
 TYP OF 1

- GENERAL ELECTRICAL NOTES:**
- THE CONTROL DIAGRAMS, ALONG WITH ANY WRITTEN OPERATIONAL DESCRIPTIONS IN THE SPECIFICATIONS AND/OR LOOP DIAGRAMS, SHOW THE INTENDED FUNCTIONS OF THE SYSTEMS AND CIRCUITS.
  - ALL MOTOR STARTER CONTROL TRANSFORMERS SHALL BE A MINIMUM OF 100VA AND, IF NECESSARY, BE INCREASED IN SIZE SO AS TO PROVIDE SUFFICIENT VOLT-AMPERE CAPACITY FOR OPERATING ALL ELECTRICAL DEVICES ASSOCIATED WITH THE CONTROL OF THE MOTOR. THIS SHALL INCLUDE STARTER COIL, RELAYS, TIMERS, MOTOR HEATERS, INDICATING LIGHTS, ETC.
  - REFERENCE PLANS FOR CONDUIT AND WIRE REQUIREMENTS.

**SCHEMATIC LEGEND**  
 ■ EXTERNAL DEVICE TERMINAL CONNECTIONS

- KEY NOTES:**
- AUXILIARY CONTACT IN DISCONNECT SWITCH, FOLLOWS POSITION OF DISCONNECT BLADES BUT OPENS BEFORE BLADES.

**SCHEMATIC LEGEND**  
 ■ EXTERNAL DEVICE TERMINAL CONNECTIONS  
 ◻ DEVICE LOCATED IN FIELD  
 ▲ DEVICE LOCATED IN LCS  
 ON  
 (R) PUSH-TO-TEST LED PILOT LIGHT  
 PTT

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	STC	JCS	CONFORMED DRAWINGS

DESIGNED BY: J. SAENZ  
 DRAWN BY: V. MANJU  
 SHEET CHK'D BY: M. CZACH  
 CROSS CHK'D BY: G. PRABHU  
 APPROVED BY: J. SAENZ  
 DATE: NOVEMBER 2023

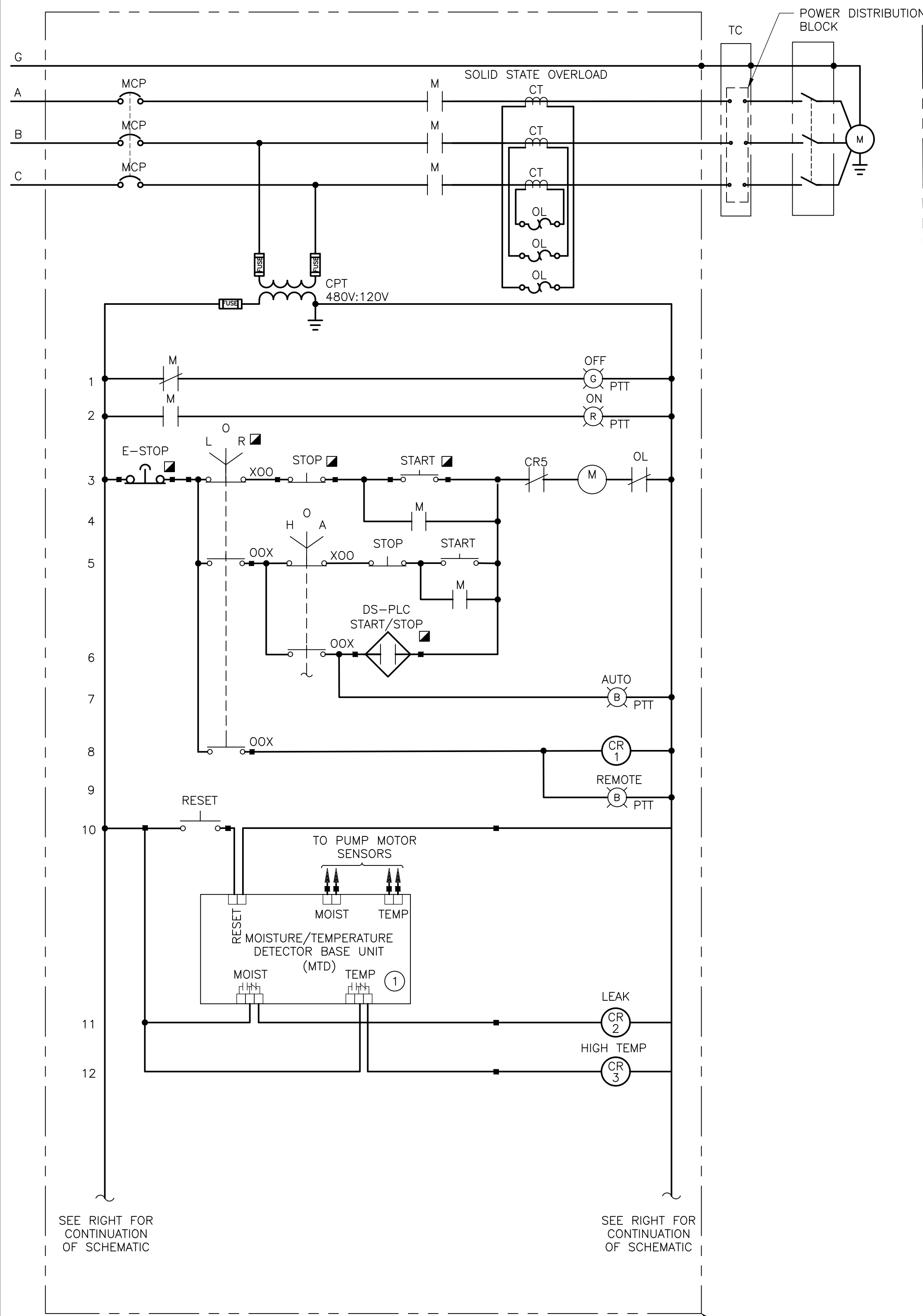


CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

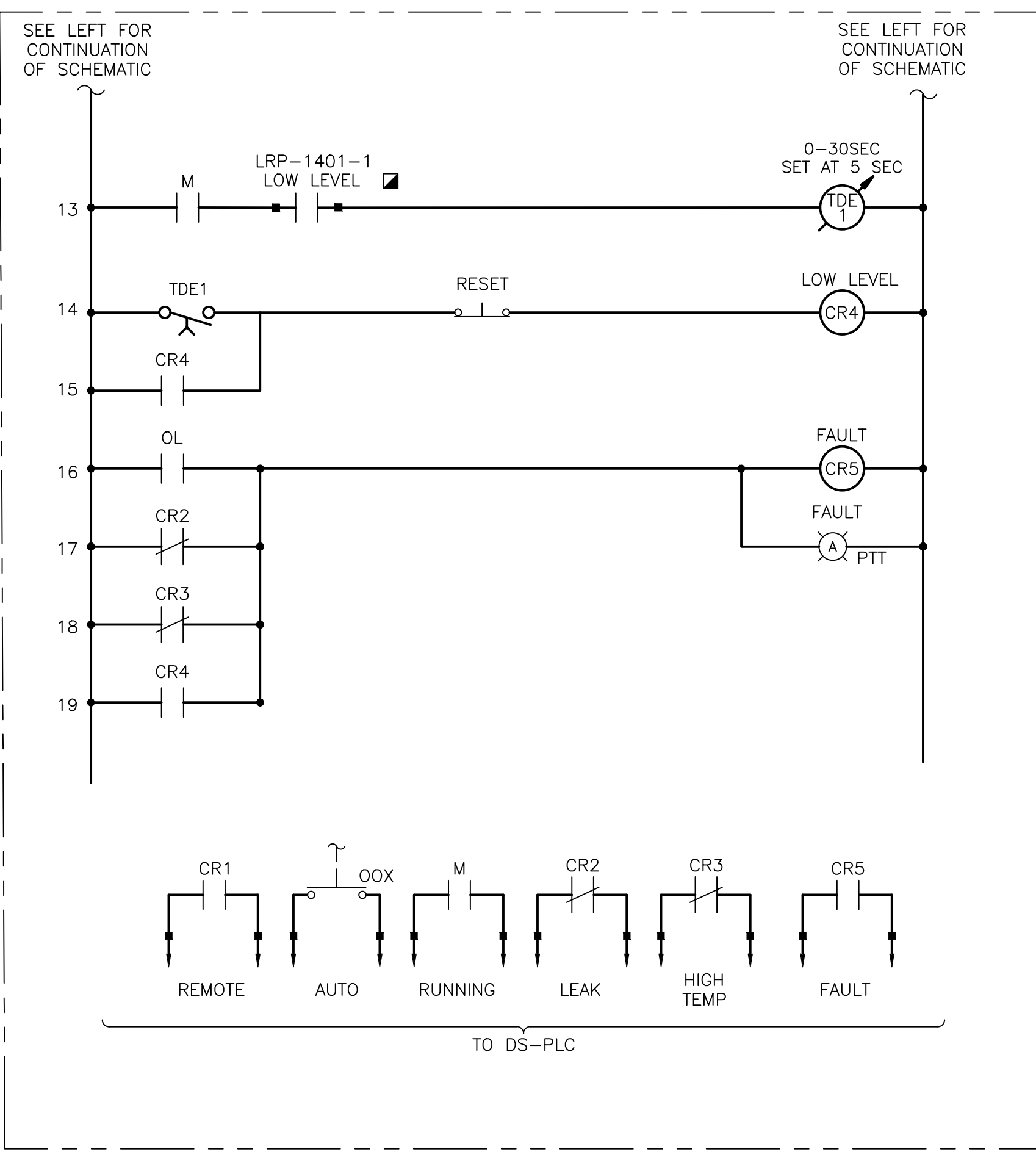
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 SHEET NO. DS-EY-4  
 ELECTRICIAN  
 CONTROL SCHEMATICS IV  
 11/28/2023



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PMP-1401-1  
**SLUDGE TRANSFER PUMP**  
**SCHMATIC 2**  
 TYP FOR 1



PMP-1401-1  
**SLUDGE TRANSFER PUMP**  
**SCHMATIC 2**  
 TYP FOR 1

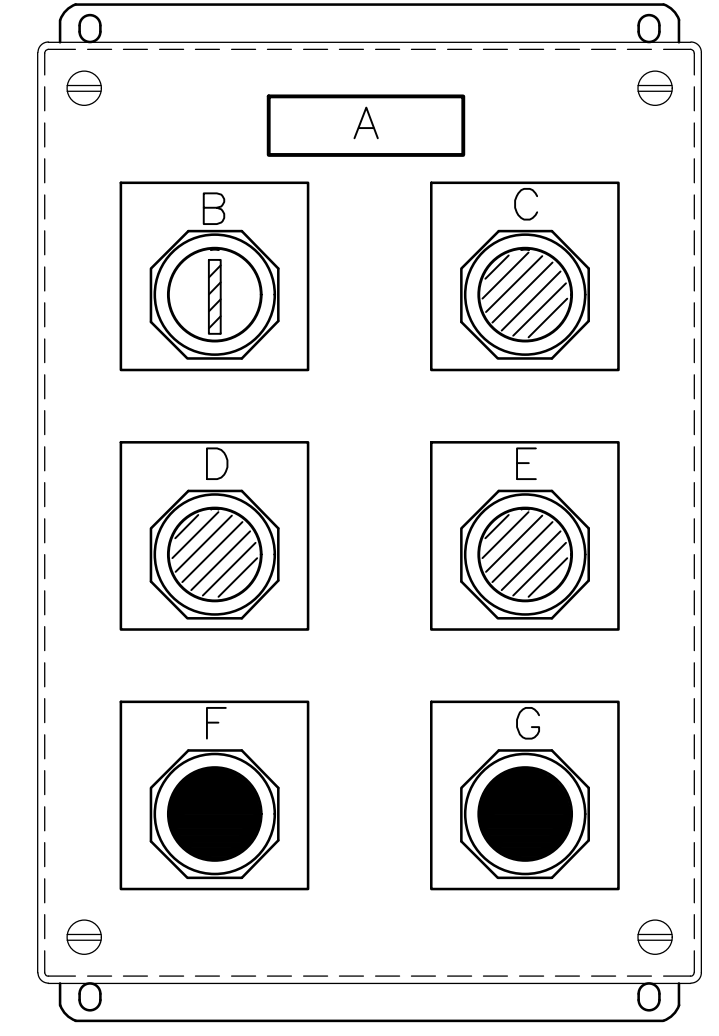
**KEY NOTES:**

- 1 PROVIDE SPACE WITHIN MOTOR CONTROL CENTER FOR SUBMERSIBLE PUMP PROTECTION UNIT PROVIDED BY DIVISION 43 AND INSTALLED BY DIVISION 26. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL, AND INCIDENTALS REQUIRED TO PROVIDE A COMPLETE AND OPERABLE SYSTEM AT NO ADDITIONAL COST.

**GENERAL ELECTRICAL NOTES:**

1. THE CONTROL DIAGRAMS, ALONG WITH ANY WRITTEN OPERATIONAL DESCRIPTIONS IN THE SPECIFICATIONS AND/OR LOOP DIAGRAMS, SHOW THE INTENDED FUNCTIONS OF THE SYSTEMS AND CIRCUITS.
2. ALL MOTOR STARTER CONTROL TRANSFORMERS SHALL BE A MINIMUM OF 100VA AND, IF NECESSARY, BE INCREASED IN SIZE SO AS TO PROVIDE SUFFICIENT VOLT-AMPERE CAPACITY FOR OPERATING ALL ELECTRICAL DEVICES ASSOCIATED WITH THE CONTROL OF THE MOTOR. THIS SHALL INCLUDE STARTER COIL, RELAYS, TIMERS, MOTOR HEATERS, INDICATING LIGHTS, ETC.
3. REFERENCE PLANS FOR CONDUIT AND WIRE REQUIREMENTS.

- SCHEMATIC LEGEND**
- EXTERNAL DEVICE TERMINAL CONNECTIONS
  - ▣ DEVICE LOCATED IN FIELD
  - ▲ DEVICE LOCATED IN LCS
  - ON (R) PTT PUSH-TO-TEST LED PILOT LIGHT



ITEM	TAG DESCRIPTION	MODEL #
A	"EQUIPMENT TAG"	SEE TABLE BELOW
B	LOR	AKRON OR APPROVED EQUAL XP3SSD SERIES
C	E-STOP	AKRON OR APPROVED EQUAL XPBSEG2C
D	START	AKRON OR APPROVED EQUAL XPBSER2C
E	STOP	AKRON OR APPROVED EQUAL XPBSER2C
F	RUNNING	AKRON OR APPROVED EQUAL XPLSB120R
G	FAULT	AKRON OR APPROVED EQUAL XPLSB120A

PUSHBUTTON DESIGNATION	EQUIPMENT TAG	EQUIPMENT SERVED	REFERENCE SHEET
LCS-1401-1	PMP-1401-1	SLUDGE TRANSFER PUMP	-

**NEMA 7 PUSHBUTTON STATION**  
 NTS



REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	STC	JCS	CONFORMED DRAWINGS

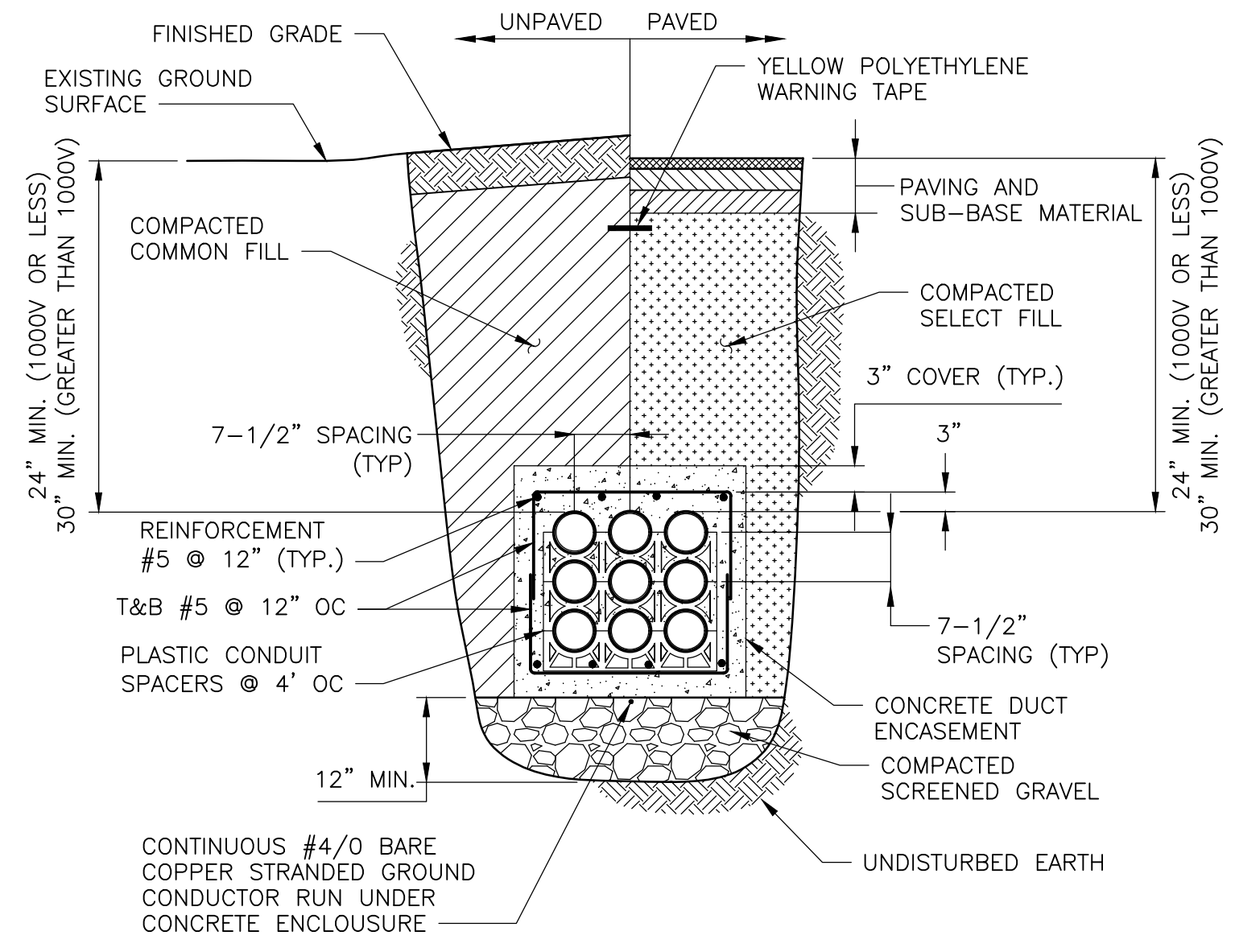
DESIGNED BY:	J. SAENZ
DRAWN BY:	V. MANJU
SHEET CHK'D BY:	M. CZACH
CROSS CHK'D BY:	G. PRABHU
APPROVED BY:	J. SAENZ
DATE:	NOVEMBER 2023



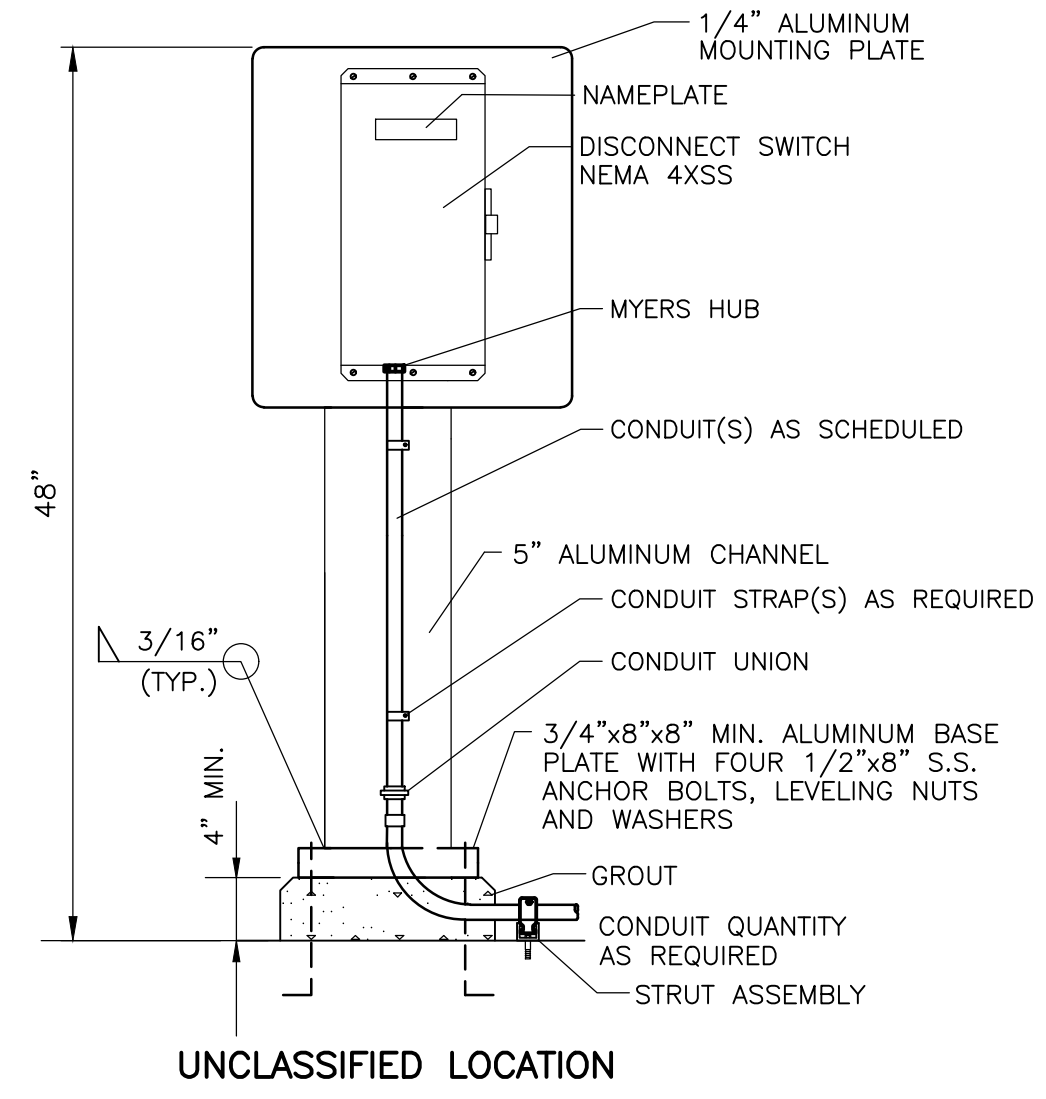
CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

**ELECTRICAL**  
**CONTROL SCHEMATICS VI**

PROJECT NO.	2048-264953
FILE NAME:	DS-EY-6
SHEET NO.	DS-EY-6

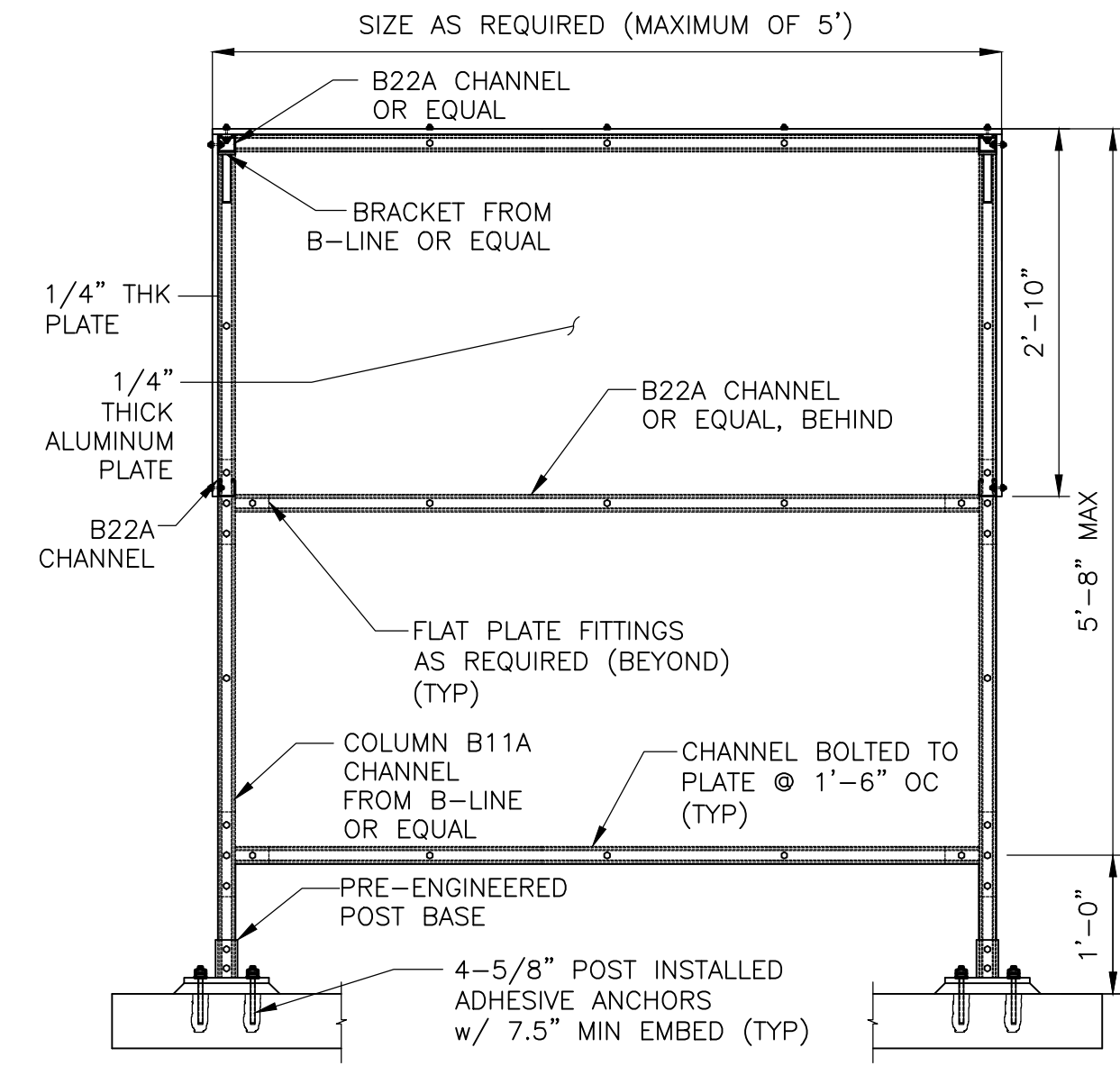


**UNDERGROUND POWER DUCT BANK**  
**DETAIL A**  
 NTS



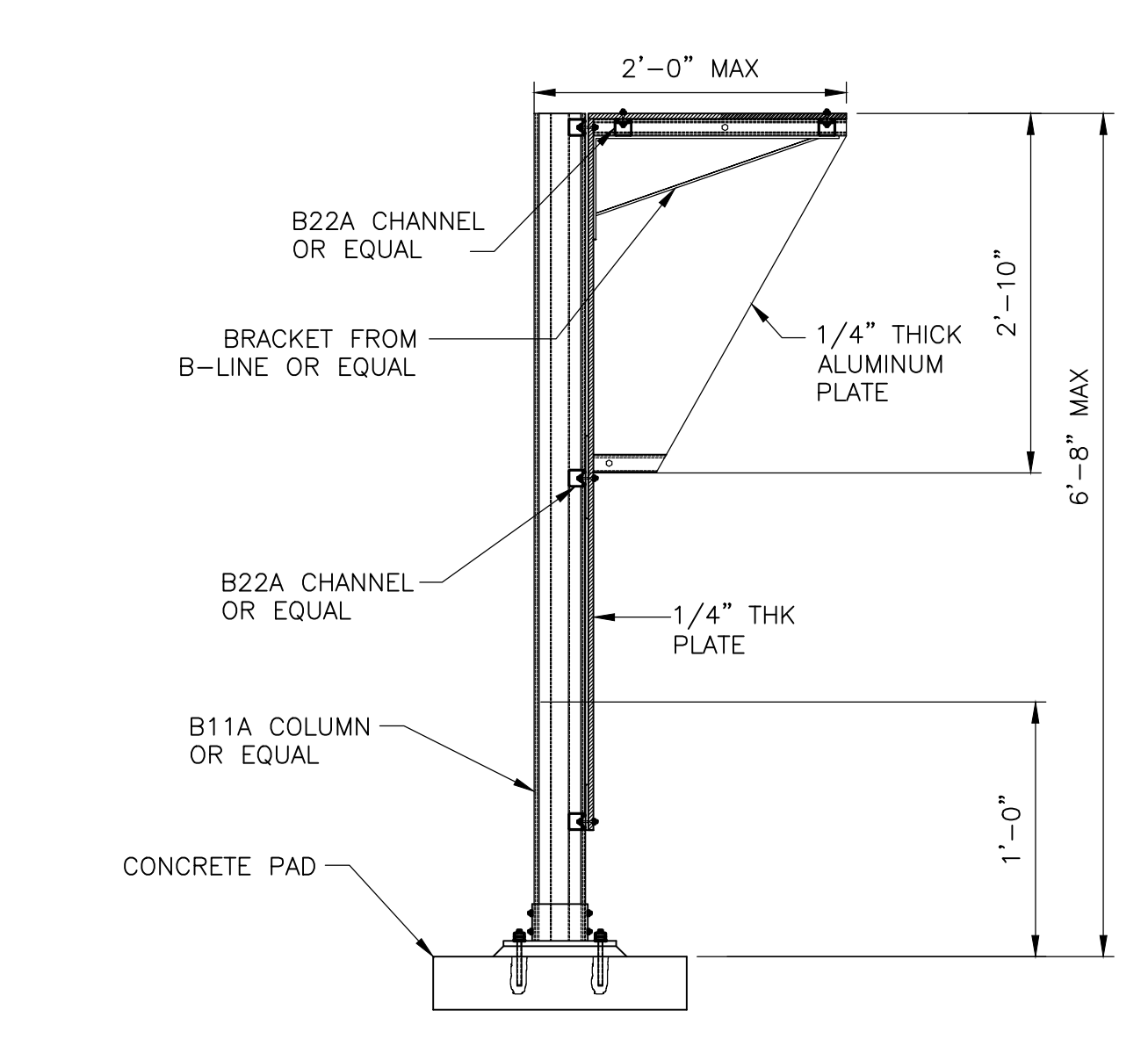
**UNCLASSIFIED LOCATION**  
**DETAIL B**  
 NTS

NOTES:  
 1. PROVIDE DISCONNECT WITH AUXILIARY CONTACT.  
 2. PUSHBUTTONS AS REQUIRED.  
 3. CONTRACTOR TO DESIGN MOUNTING STAND. MINIMUM DIMENSIONS ARE SHOWN.  
 4. SUBMITTALS SHALL BE IN ACCORDANCE WITH SPECIFICATIONS.

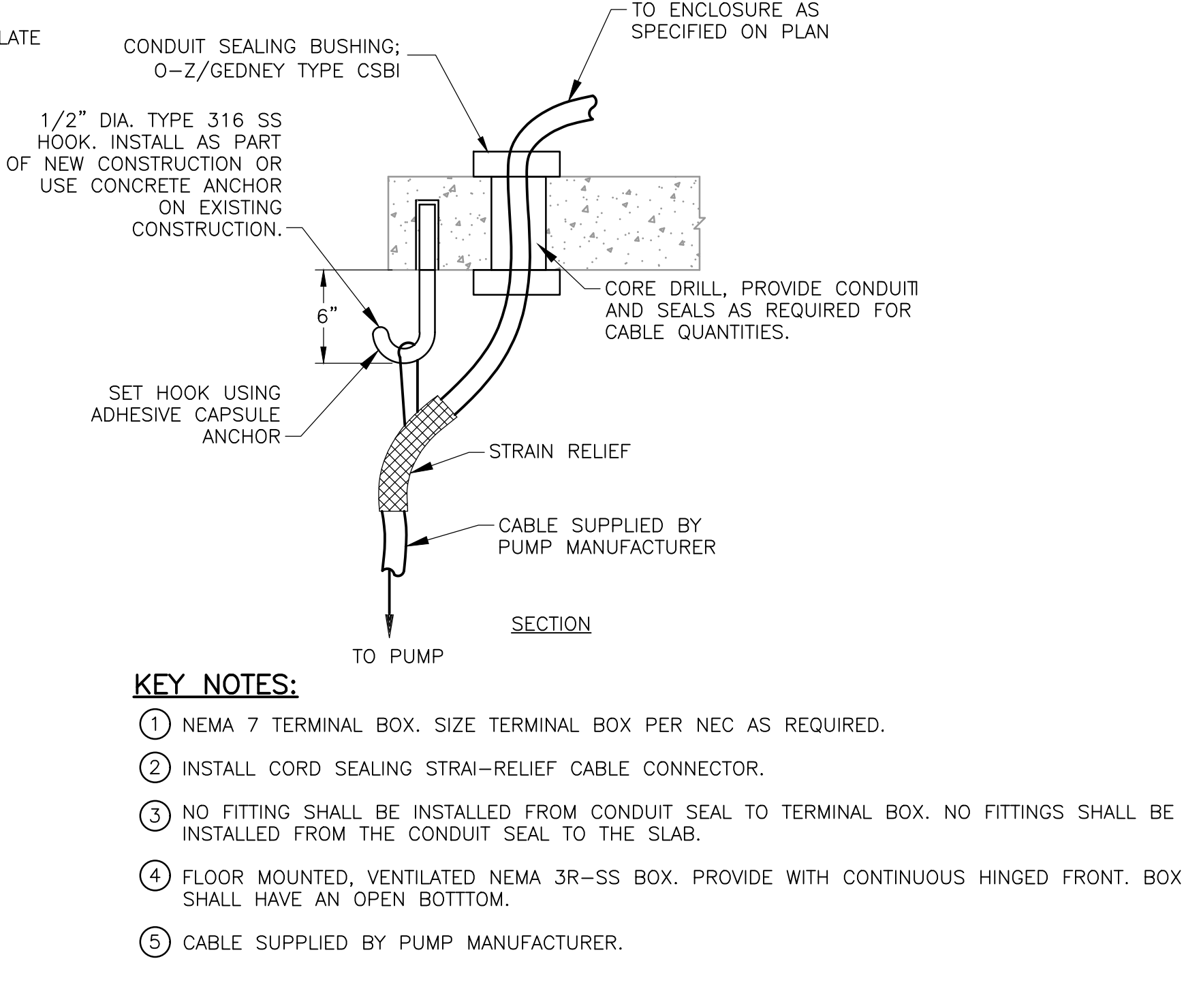
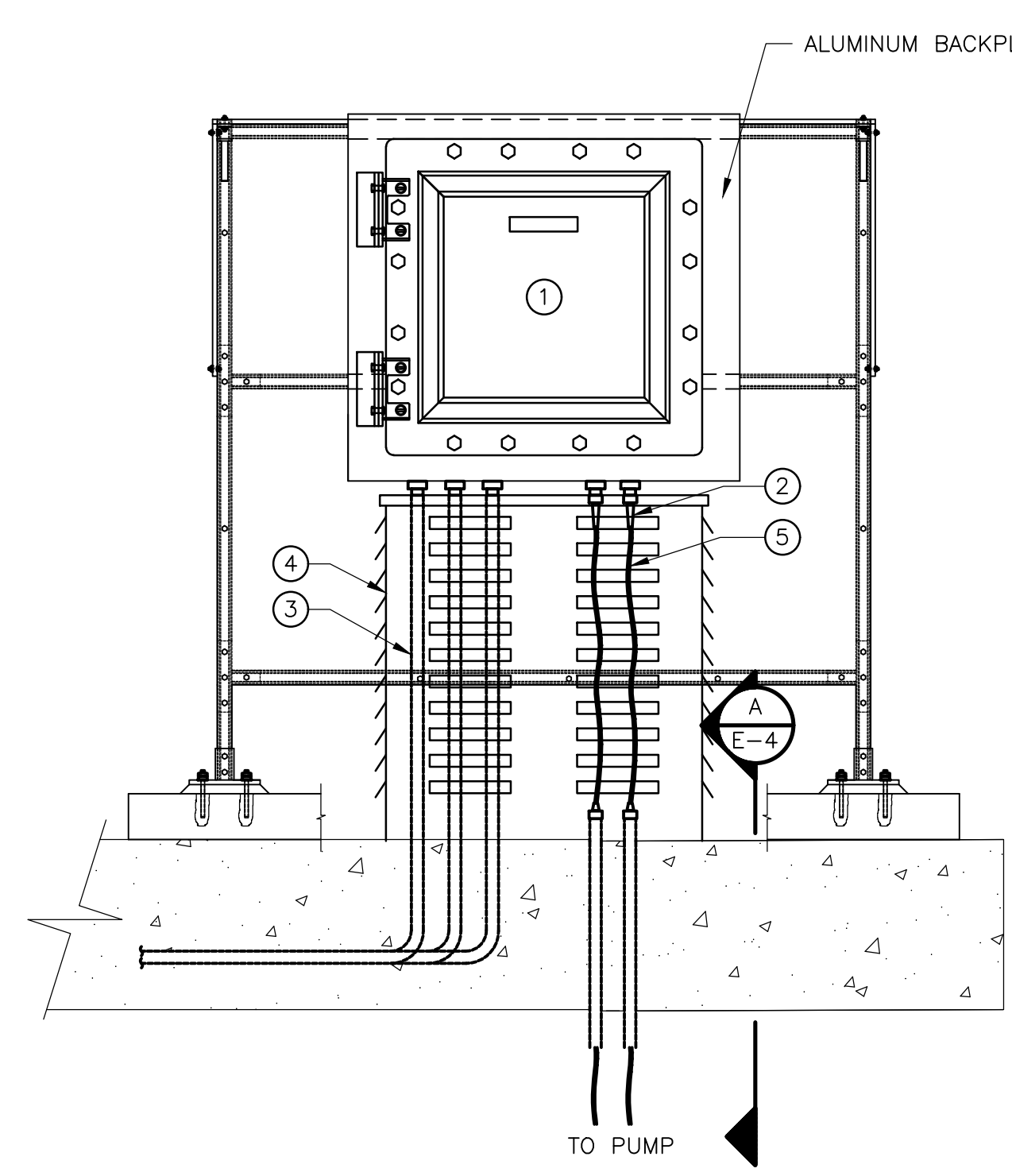


**EQUIPMENT SUPPORT STRUCTURE**  
**DETAIL C**  
 NTS

NOTES:  
 1. ALL MEMBERS SHALL BE ALUMINUM.  
 2. PROVIDE STRUCTURAL CALCULATION FOR EQUIPMENT SUPPORT STRUCTURE DESIGNED BY CONTRACTOR.

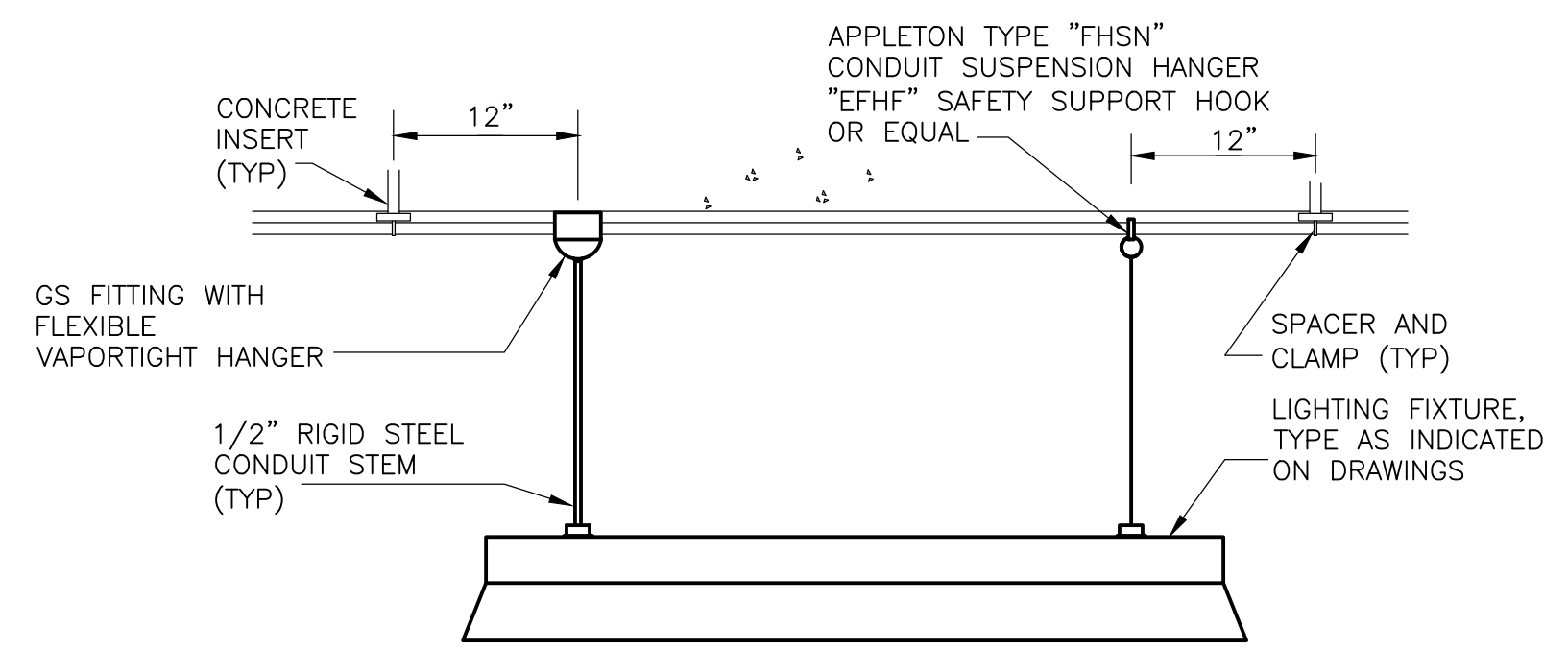


**EQUIPMENT SUPPORT STRUCTURE**  
**DETAIL C**  
 NTS



**SUBMERSIBLE CABLE APPLICATION**  
**DETAIL D**  
 NTS

- KEY NOTES:**
- 1 NEMA 7 TERMINAL BOX. SIZE TERMINAL BOX PER NEC AS REQUIRED.
  - 2 INSTALL CORD SEALING STRAI-RELIEF CABLE CONNECTOR.
  - 3 NO FITTING SHALL BE INSTALLED FROM CONDUIT SEAL TO TERMINAL BOX. NO FITTINGS SHALL BE INSTALLED FROM THE CONDUIT SEAL TO THE SLAB.
  - 4 FLOOR MOUNTED, VENTILATED NEMA 3R-SS BOX. PROVIDE WITH CONTINUOUS HINGED FRONT. BOX SHALL HAVE AN OPEN BOTTTOM.
  - 5 CABLE SUPPLIED BY PUMP MANUFACTURER.



**PENDENT MOUNTED LIGHTING FIXTURE**  
**DETAIL E**  
 N.T.S.

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A	01/10/24	STC	JCS	CONFORMED DRAWINGS

DESIGNED BY: V. MANJU  
 DRAWN BY: V. MANJU  
 SHEET CHK'D BY: M. CZACH  
 CROSS CHK'D BY: G. PRABHU  
 APPROVED BY: J. SAENZ  
 DATE: NOVEMBER 2023

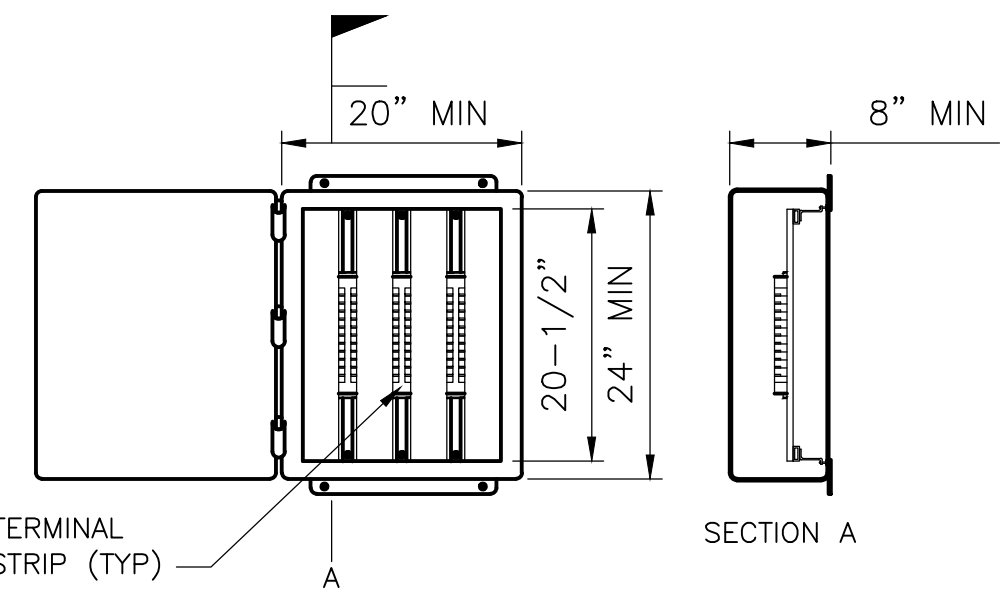


CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

ELECTRICAL  
 STANDARD DETAILS I  
 EZ-1

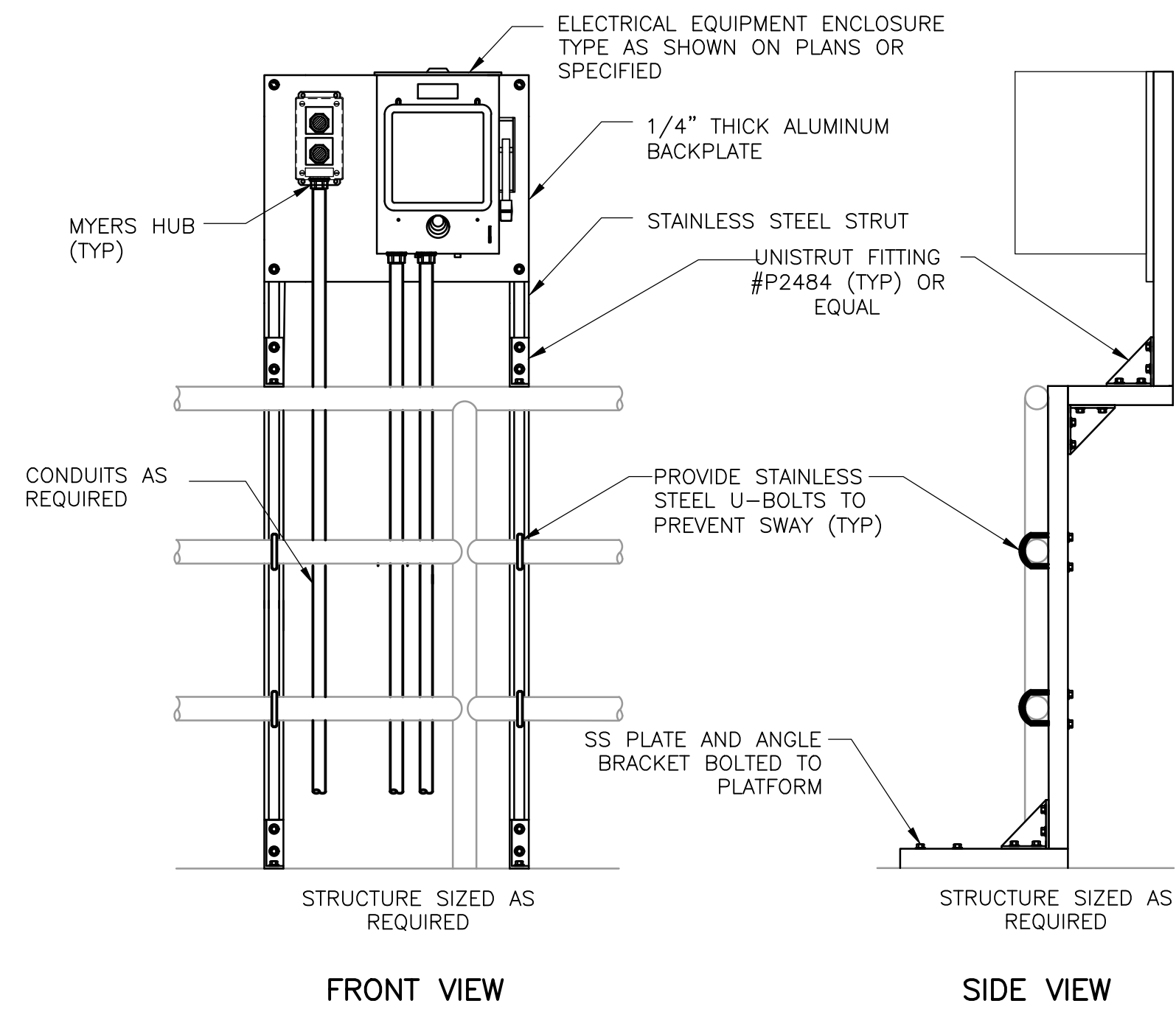
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 FILE NAME: EZ01NFD1.DWG  
 SHEET NO. EZ-1



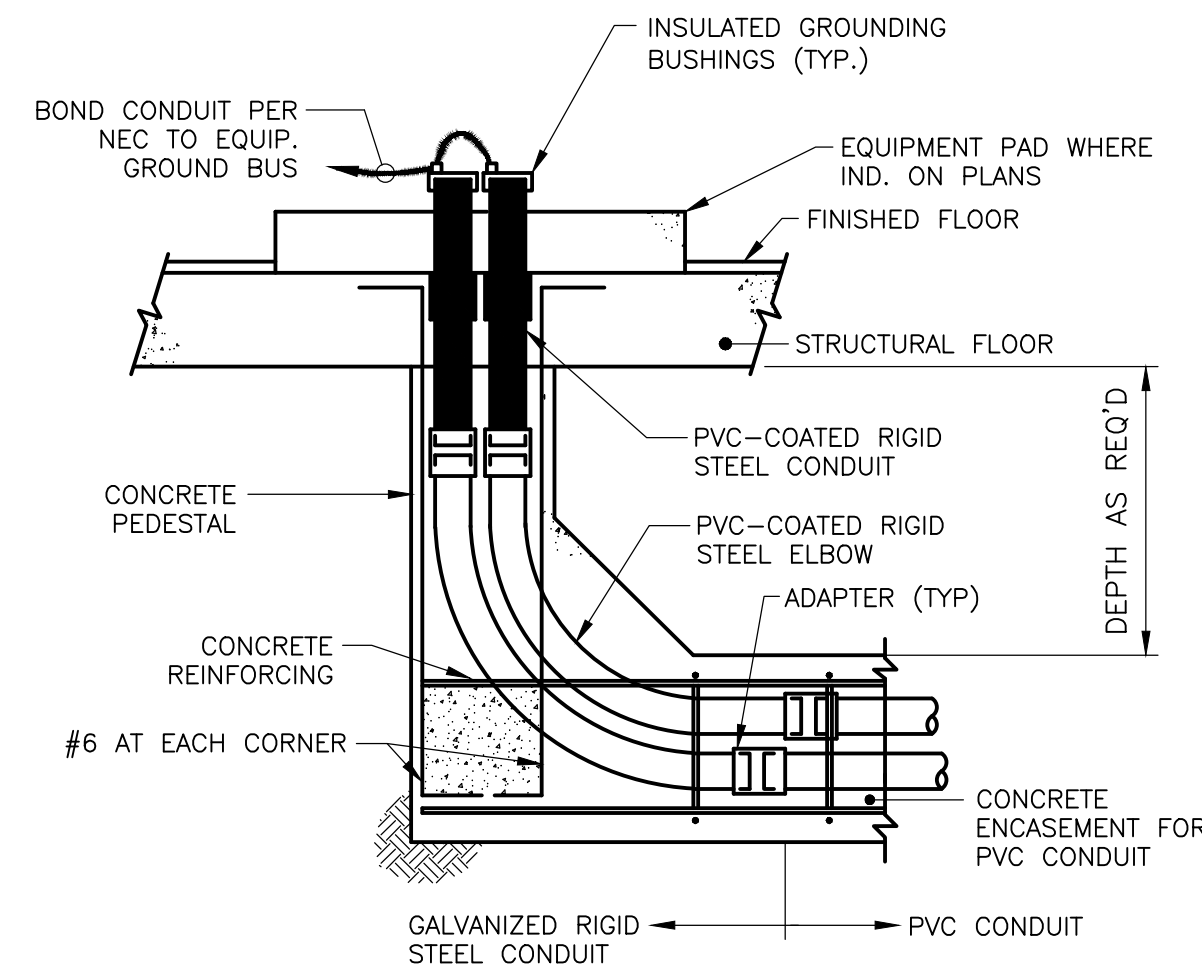


- NOTES:**
1. PROVIDE AND INSTALL NEMA 4XSS ENCLOSURE UNLESS NOTED OTHERWISE (UNO).
  2. PROVIDE AND INSTALL ENOUGH TERMINALS TO SUPPORT DEVICES SHOWN ON CORRESPONDING SHEETS. PROVIDE SPARE TERMINALS PER DIV 16 SPECIFICATIONS.
  3. UNIQUELY LABEL AND TERMINATE ALL CONDUCTORS.
  4. DIMENSIONS GIVEN ARE MINIMUM. SIZE ENCLOSURE PER NEC WHERE APPLICABLE.

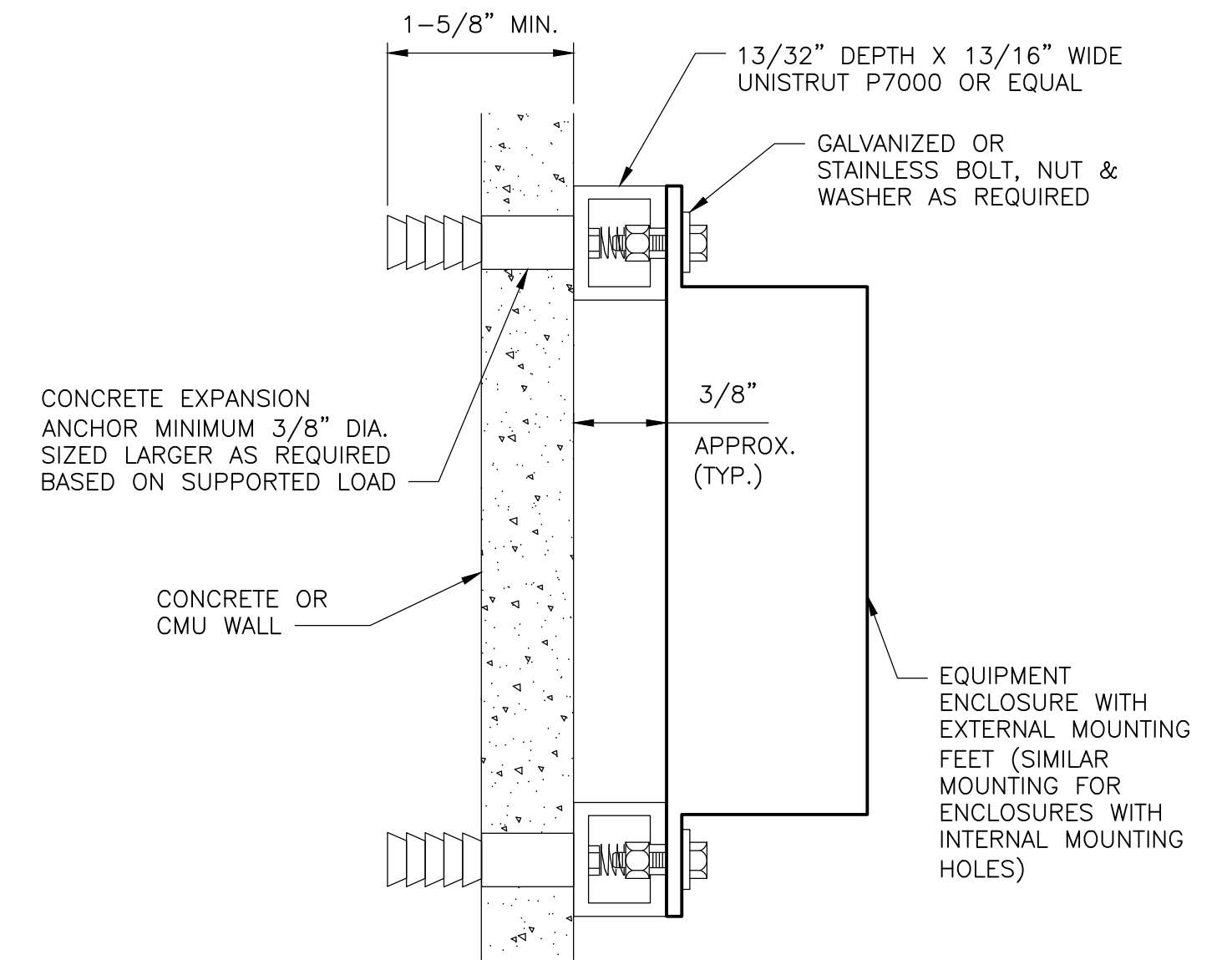
TERMINAL CABINET  
**DETAIL A**  
NTS



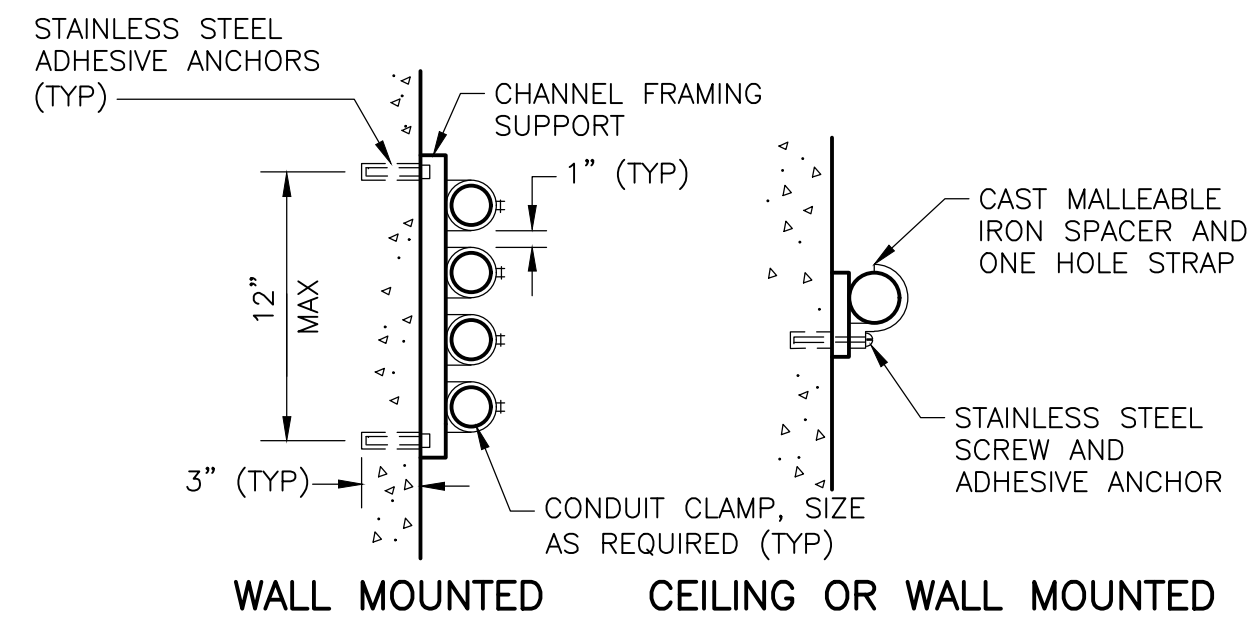
HANDRAIL MOUNTED DEVICE INSTALLATION  
**DETAIL B**  
NTS



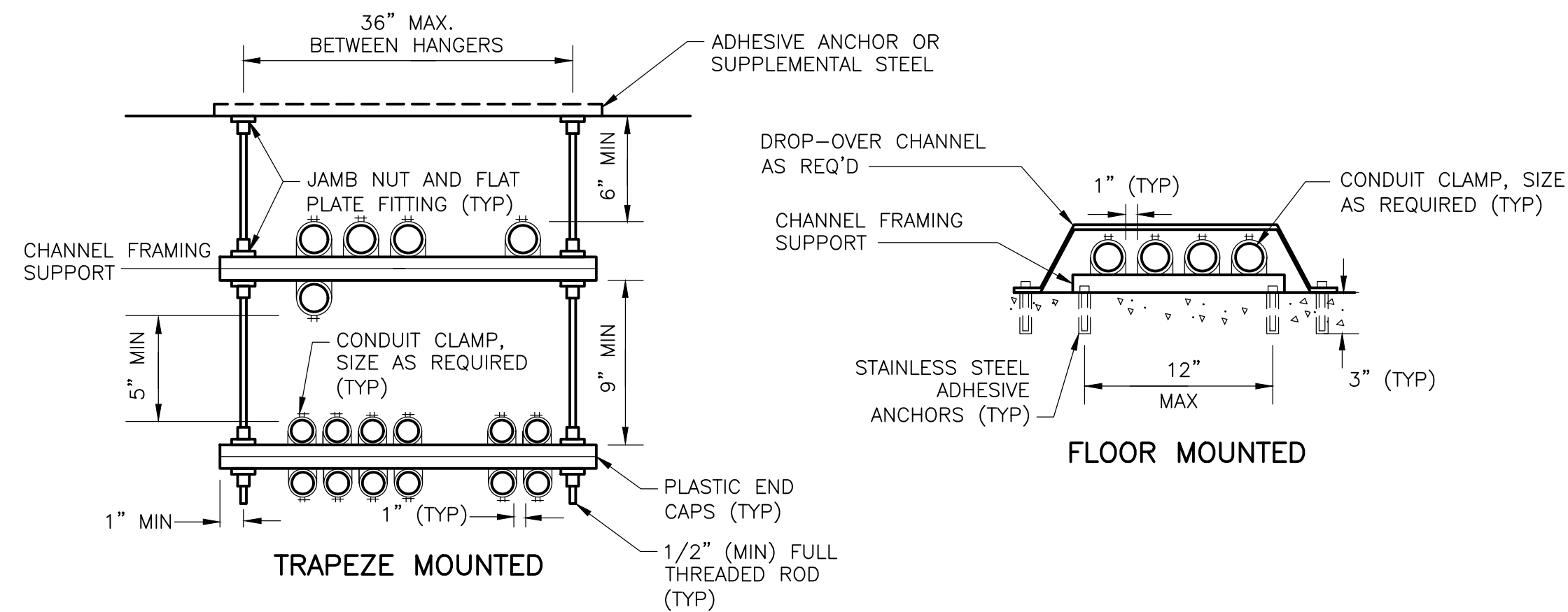
RISER FROM NON-METALLIC DUCT  
**DETAIL C**  
NTS



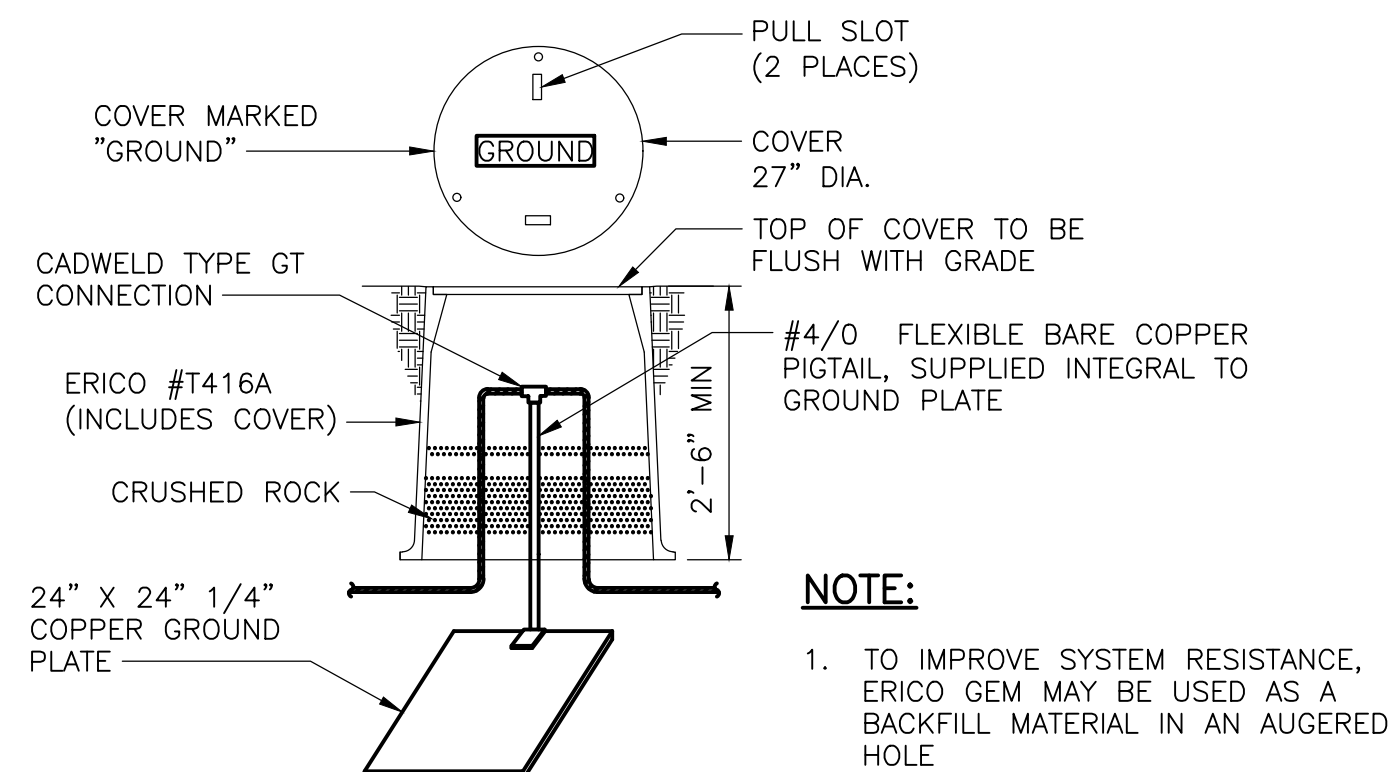
EQUIPMENT ENCLOSURE MOUNTED ON CONCRETE WALL  
**DETAIL D**  
NTS



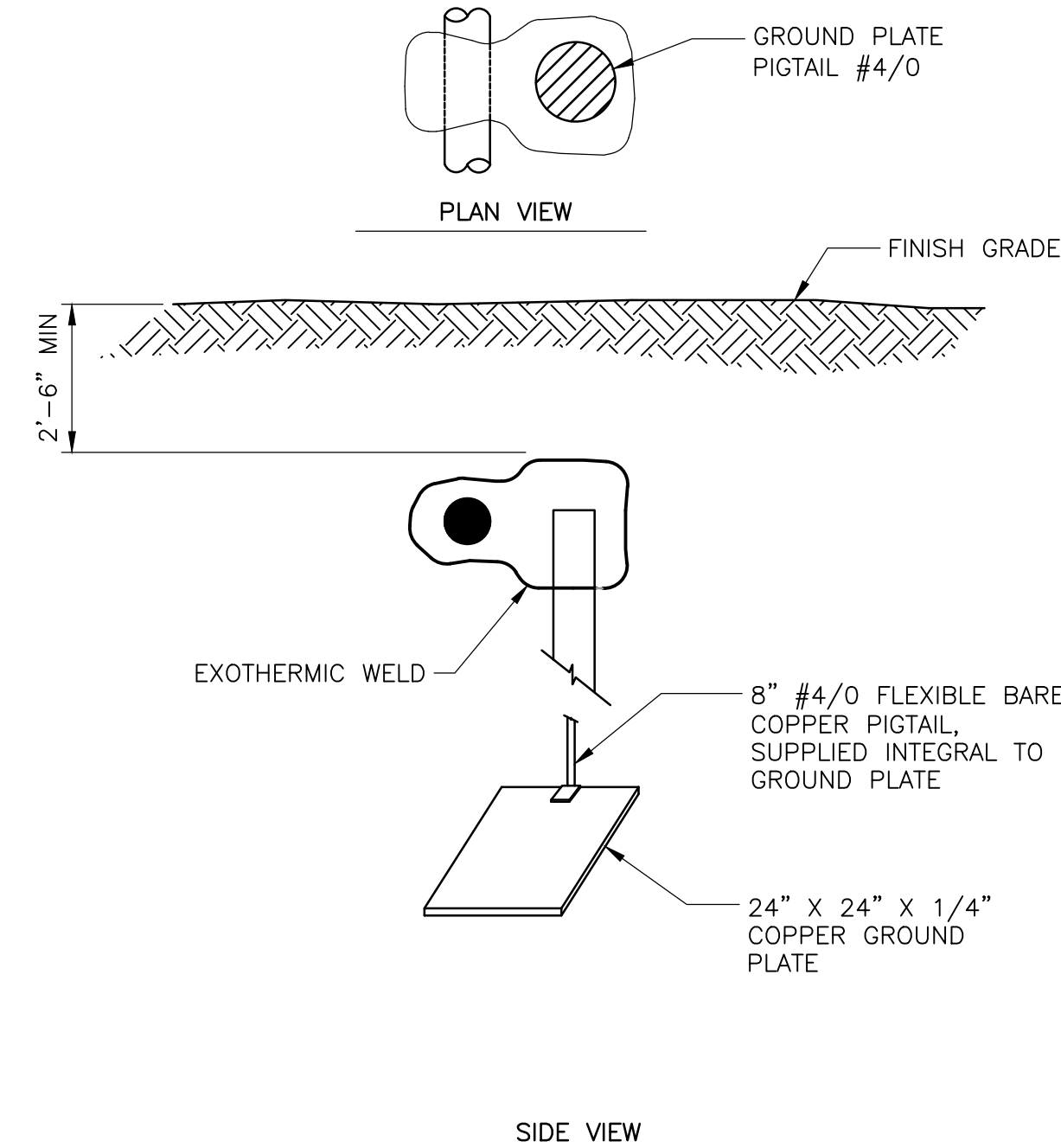
WALL MOUNTED CEILING OR WALL MOUNTED



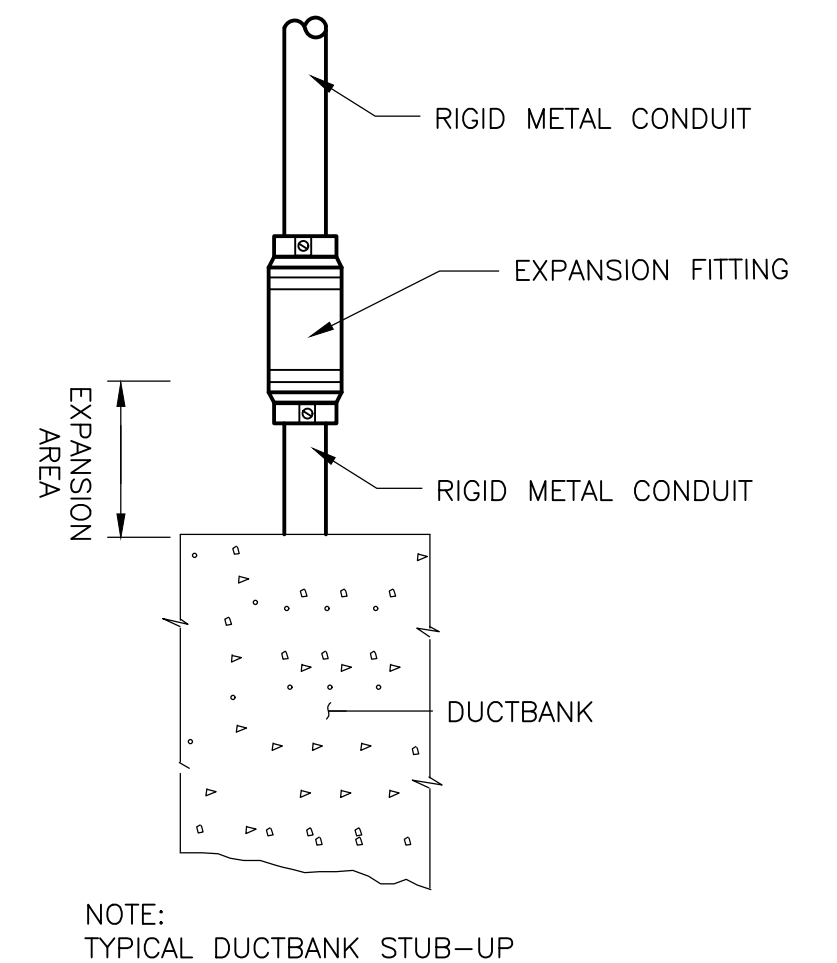
TRAPEZE MOUNTED  
**DETAIL E**  
NTS



GROUND PLATE TEST WELL  
**DETAIL F**  
NTS



GROUND GRID CONNECTION TO GROUND PLATE  
**DETAIL G**  
NTS



EXPANSION FITTING  
**DETAIL H**  
NTS

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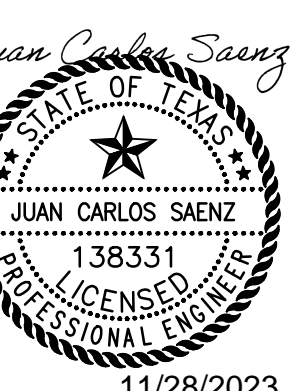
DESIGNED BY: V. MANJU  
DRAWN BY: V. MANJU  
SHEET CHK'D BY: M. CZACH  
CROSS CHK'D BY: G. PRABHU  
APPROVED BY: J. SAENZ  
DATE: NOVEMBER 2023

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TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS  
DOVE SPRINGS WWTP  
REHABILITATION

ELECTRICAL  
STANDARD DETAILS II

PROJECT NO. 2048-264953  
FILE NAME: EZ02NFDT.DWG  
SHEET NO. EZ-2



REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/10/24	STC	JCS	CONFORMED DRAWINGS

**NOTES:**

- All electric primary conduit shall be installed below all other utilities and private underground lines whenever possible. All electric secondary conduit shall be installed under water lines whenever possible. Any exception to this specification must have written approval from the City.
- Electric primary conduit shall be installed with a minimum of 2' vertical and 2' horizontal clearance from water mains, wastewater, storm water, and private underground lines. Any exception to this specification must have written approval from the City.
- Electric primary conduit shall be installed with a minimum of 2' vertical and 2' horizontal clearance from natural gas lines. Any exception to this specification must have written approval from the City.
- Electric primary conduit shall be installed with a minimum of 1' vertical clearance from communications lines. Any exception to this specification must have written approval from the City.
- Electric primary conduit when installed above water mains and pressurized wastewater lines, with 2' of vertical clearance or greater, shall be capped with 6" of concrete when crossing these lines. The concrete cap shall be installed 4" above electric conduit(s); 5" each side of the outside diameter of the water main or pressurized wastewater lines.
- Electric primary conduit when installed below water mains and pressurized wastewater lines with 2' vertical clearance or greater, does not require a concrete cap when crossing these lines.
- Electric primary conduit installed with less than 2' of vertical and 2' of horizontal clearance from water mains, pressurized wastewater and private underground lines, shall be encased in 6" of concrete. Concrete encasement to be installed around the conduit until a minimum of 2' of vertical and 2' of horizontal clearance has been met. Concrete encasements will begin 5' before and end 5' from the end where conduit are installed less than 2' vertical and 2' horizontal from the above lines. This must have City approval before installation of conduit.
- All concrete shall have red dye or coloring added to the top surface of the concrete.
- Conduit shall be electrical grade, gray schedule #40 PVC conduit. Conduit shall meet the NEC and ASTM standards for installation of underground electrical conduit.
- All conduit installations shall be owned by the City and shall be inspected by the City before backfill of trench.
- Where conduit terminates in a pad, install bell end on each conduit.
- Where multiple rows of conduit are required, duct spacers are to be installed every 5' with 3" of separation between conduits and trench wall. Then sand backfill is to be installed around conduit.
- Primary conduit shall have 12" of sand bedding prior to placing 6" wide "CAUTION" tape. Final backfilling can then be placed.
- 2500 lbs Mule Tape with sequential footage markings, or equivalent, shall be run through all conduit and tied off on both ends of conduit.
- All conduit for future use shall be either stubbed up and capped, or dead-ended underground with a cap and an electric marker.
- Secondary service conduit to be stubbed out 5' outside of the utility easement into prospective lots. End of conduit to be staked with a piece of PVC conduit 30" above ground line.
- Long sweep elbows shall be used at all bends in Primary conduit runs. 2" and 3" conduit shall require a minimum bend radius of 36". 4" conduit shall require a minimum bend radius of 48". 6" conduit shall require a minimum bend radius of 60".
- Use galvanized steel conduit elbows on all 90 degree bends.
- Water services and taps shall be placed above electric conduit with a minimum separation of 12". Water services and taps may be placed below electric conduit only with City's written approval.
- Where electric conduit crosses areas of vehicular traffic (subject to but not limited to roadways, driveways, parking lots, etc.), the trench shall be backfilled with 3/8" F washed gravel and then backfilled with flowable backfill in accordance with City specifications. All trenches outside of roadways shall be backfilled and compacted to 95% standard density in accordance with City specifications. Any exception to this rule must have written approval from the City.
- Where electric conduit crosses roadways, the minimum depth of cover is 30" from the top of proposed finished roadway elevation.
- Use 24" sweeping elbows on all Secondary conduit runs.

**References:**  
 GUM50 Conduit Specifications  
 GUR3 3/8" F washed gravel or approved equal

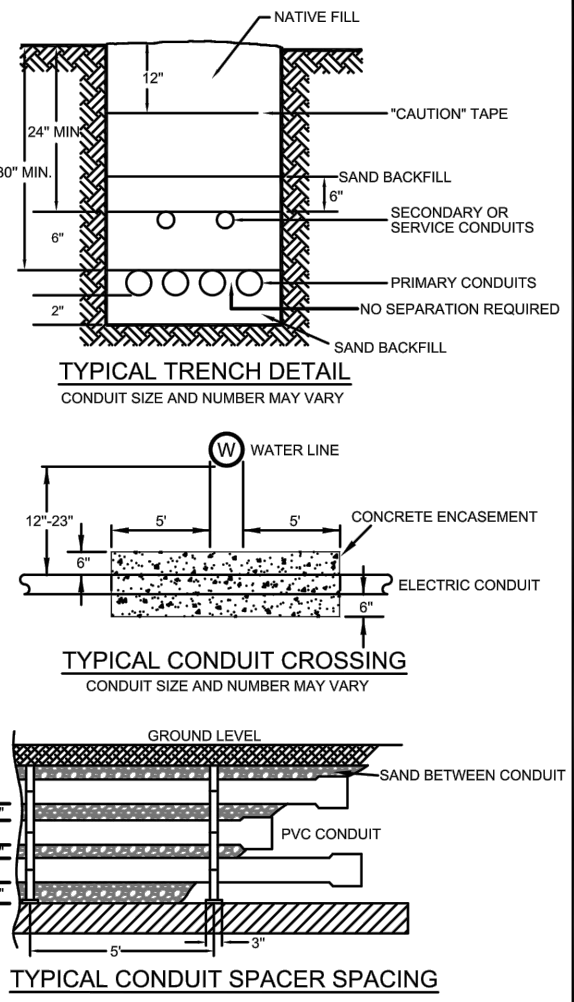
**Specification letter codes**  
 GUR2-R or S + (size)  
 Example: GUR2-R (42" x 12")  
 is a trench in rock at 42" deep x 12" wide

ADOPTED 01-06-2022

The Architect/Engineer assumes responsibility for appropriate use of this standard.

CITY OF GEORGETOWN  
 CONSTRUCTION STANDARDS AND DETAILS  
 ELECTRIC CONDUIT  
 INSTALLATION SPECIFICATIONS  
 FOR ELECTRIC UTILITIES WITHIN ETJ  
 PAGE 2 OF 2

DESIGNED BY: V. MANJU  
 DRAWN BY: T. AMOGHA  
 SHEET CHK'D BY: M. CZACH  
 CROSS CHK'D BY: G. PRABHU  
 APPROVED BY: J. SAENZ  
 DATE: NOVEMBER 2023



**DETAIL**

**LEGEND**  
 (M) MAIN CONDUIT  
 (S) SPARE CONDUIT

3-PHASE TRANSFORMER SIZE (KVA)	DIMENSIONS IN INCHES							REINFORCING BARS					NUMBER OF SECONDARY SERVICE CONDUITS
	A	B	C	D	E	F	G	MK1	MK2	MK3	MK4	MKS	
75, 112.5, 150, 225, 300, 500	84	84	32	18	6	17	18	9 #4 8"1"	4 #4 14"	4 #4 8"1"	7 #4 9"	7 #4 9"	6
750, 1000	120	120	36	24	8	30	18	11 #4 11"7"	4 #4 27"	6 #4 11"7"	7 #4 8"7"	7 #4 9"	12
1500, 2000, 2500	120	120	36	24	12	30	24	10 #4 11"7"	6 #4 27"	6 #4 11"7"	7 #4 8"1"	7 #4 9"	16

**Notes:**

- Concrete testing, 4000 lbs. per sq. inch; 3% ± 1.5% entrained air, 3/4" maximum size aggregate.
- Reinforcing steel, ATSM-A615 grade 60, place approximately 8" to 9" on-center each way and securely tied together.
- Minimum concrete cover over reinforcing steel 2", unless noted otherwise.
- Wood float finish, leaving no depressions.
- Fill conduit window with 5" of select base backfill and 1" of concrete.
- Ground Rods are to be bonded together.
- Use flowable fill for backfill, not native soil, under pad.
- Number of secondary service conduits shown in table above shall be installed. Spare conduits not installed to meter shall be stubbed up and capped five feet outside of pad.
- Ground rods shall extend 6" above the concrete pad.
- Stub primary conduits out 10' from the edge of pad in the direction of feed.
- Clearance requirements for all COG pad-mounted equipment and pull-boxes are as follows:  
 Ten feet at the doors, and five feet on all other sides  
 (Note: Pad-mounted equipment is classified as, but not limited to, transformers, junction boxes, and switchgears)
- See Manhole, Pad, and Pull Box grounding detail specification for additional grounding information.

CITY OF GEORGETOWN  
 24, 9/14.4 kV PRIMARY  
 THREE-PHASE CONCRETE PAD  
 (Pad-Mounted Transformer)  
 PAGE 2 OF 2

DESIGNED BY: V. MANJU  
 DRAWN BY: T. AMOGHA  
 SHEET CHK'D BY: M. CZACH  
 CROSS CHK'D BY: G. PRABHU  
 APPROVED BY: J. SAENZ  
 DATE: NOVEMBER 2023

**GUARD POST INSTALLATION**

**TYPICAL LAYOUT FOR TRAFFIC AND PARKING**

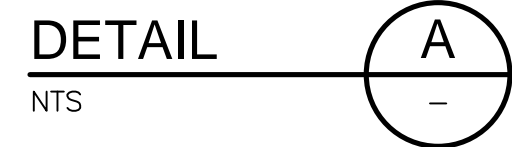
**Notes:**

- Install guard post where protection from damage due to vehicular traffic is needed.
- Distance between posts should not exceed 4 feet. Add additional where necessary to meet this condition.
- Increase height to 48" and depth to 36" in truck loading areas, and increase size to 6" galvanized pipe.
- Verify location of post in front of transformer to allow for door opening. Bollard needs to be removable. Install sleeve in concrete to allow for this standard.

CITY OF GEORGETOWN  
 4" Galvanized Steel  
 Protection Bollard  
 PAGE 2 OF 2

DESIGNED BY: V. MANJU  
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 SHEET CHK'D BY: M. CZACH  
 CROSS CHK'D BY: G. PRABHU  
 APPROVED BY: J. SAENZ  
 DATE: NOVEMBER 2023

ELECTRIC CONDUIT INSTALLATION



THREE-PHASE CONCRETE PAD  
 (PAD-MOUNTED TRANSFORMER) INSTALLATION



4" GALVANIZED STEEL PROTECTION BOLLARD



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A	01/10/24	STC	JCS	CONFORMED DRAWINGS

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 DATE: NOVEMBER 2023

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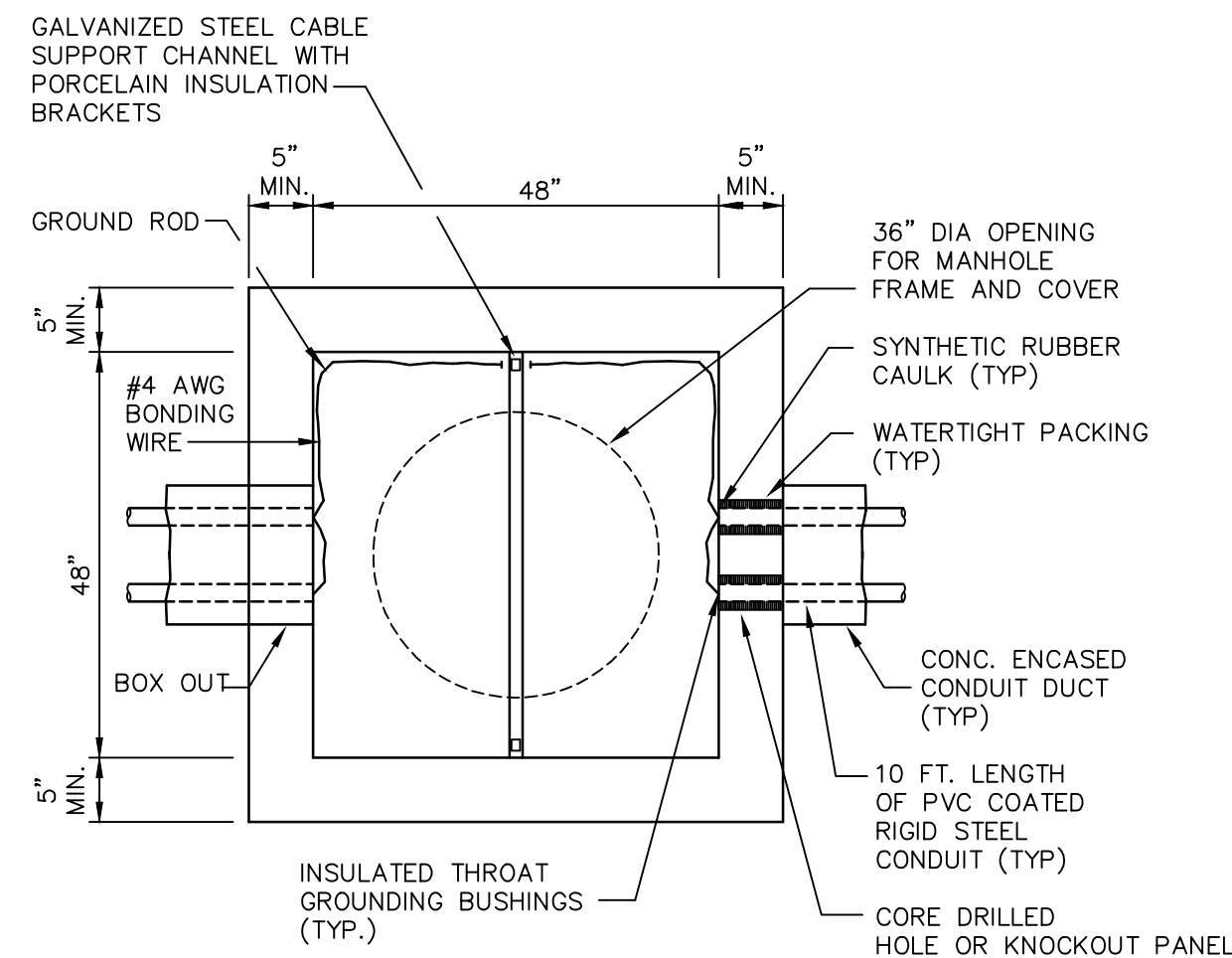
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 SAN GABRIEL WWTP  
 REHABILITATION

ELECTRICAL  
 STANDARD DETAILS III  
 EZ-3

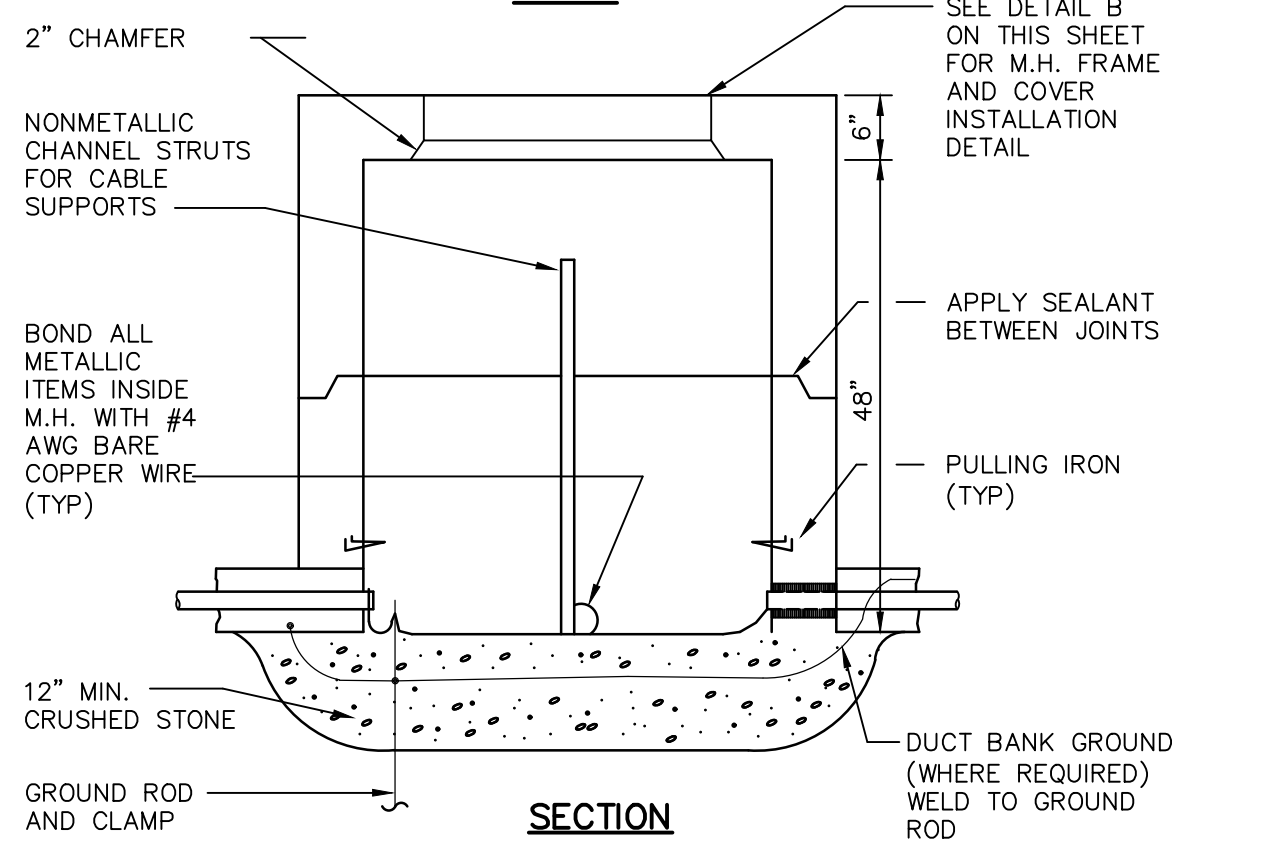
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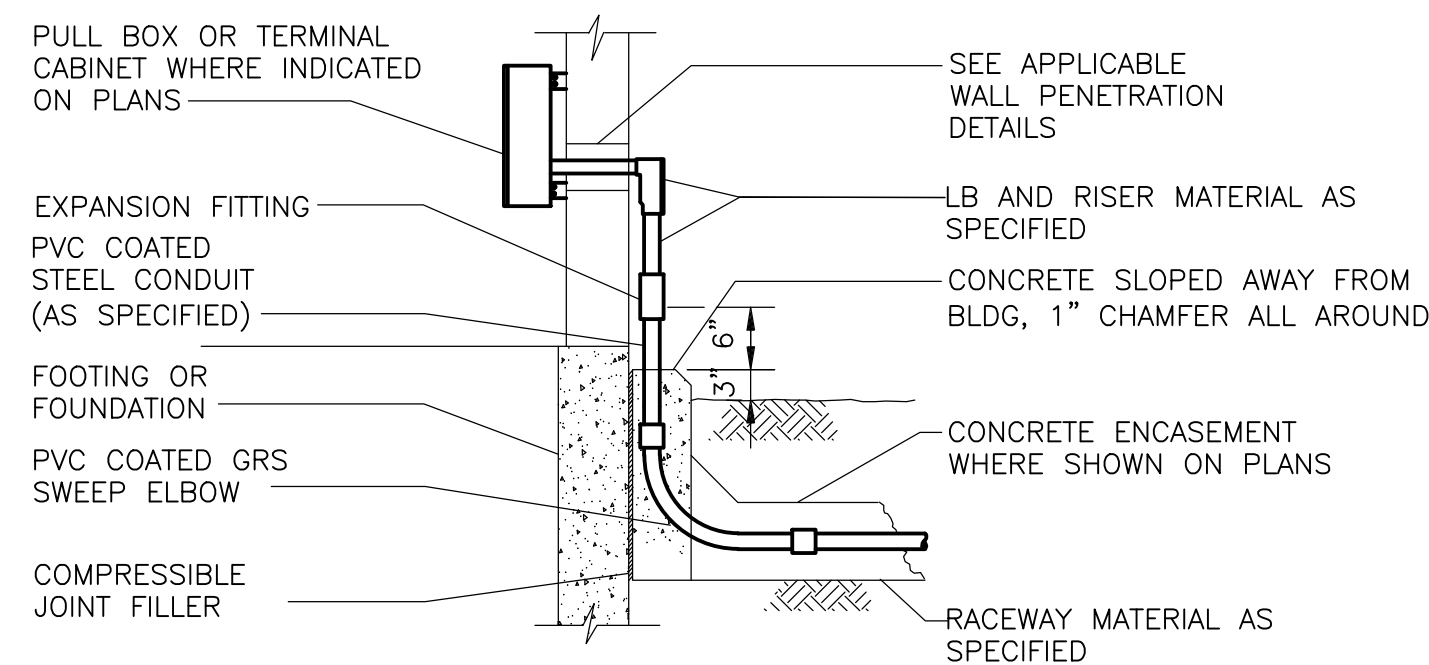
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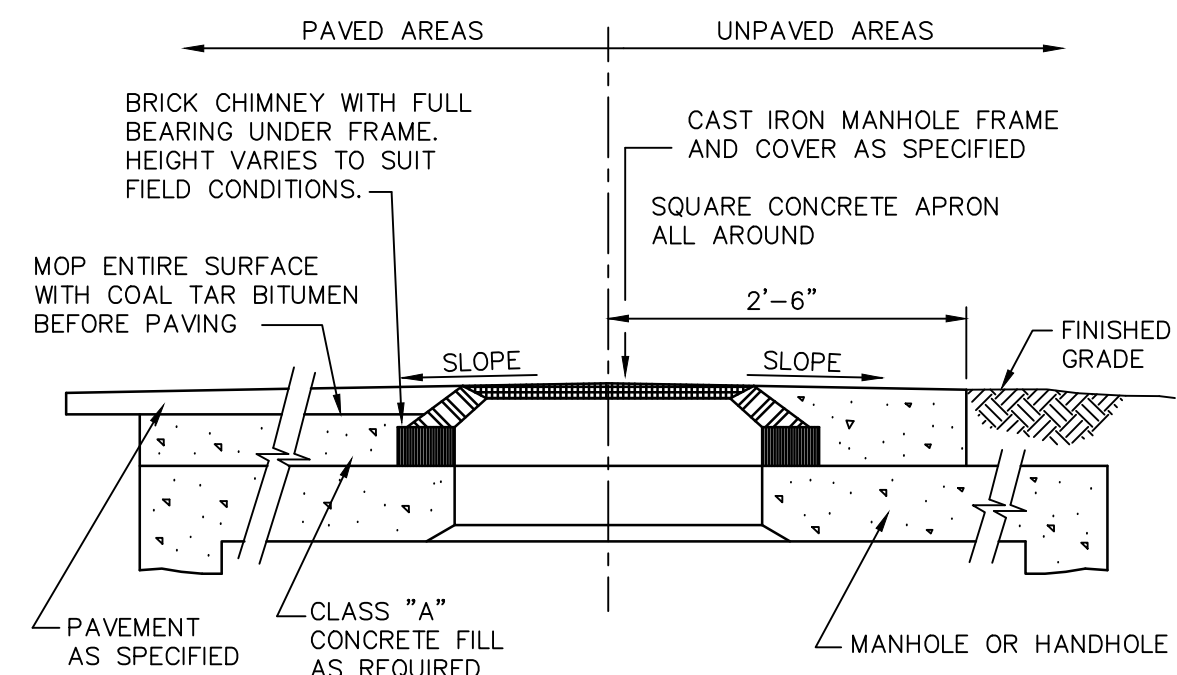
SECTION

- NOTES:
- BOND ALL METALLIC ITEMS INSIDE EHH TO GROUND W/MIN. #4 AWG BARE COPPER CABLE UNO.
  - HANDHOLES SHALL BE REINFORCED FOR H20 WHEEL LOAD.
  - CABLES SHALL BE RACKED ON PORCELAIN INSULATION CLAMPS.

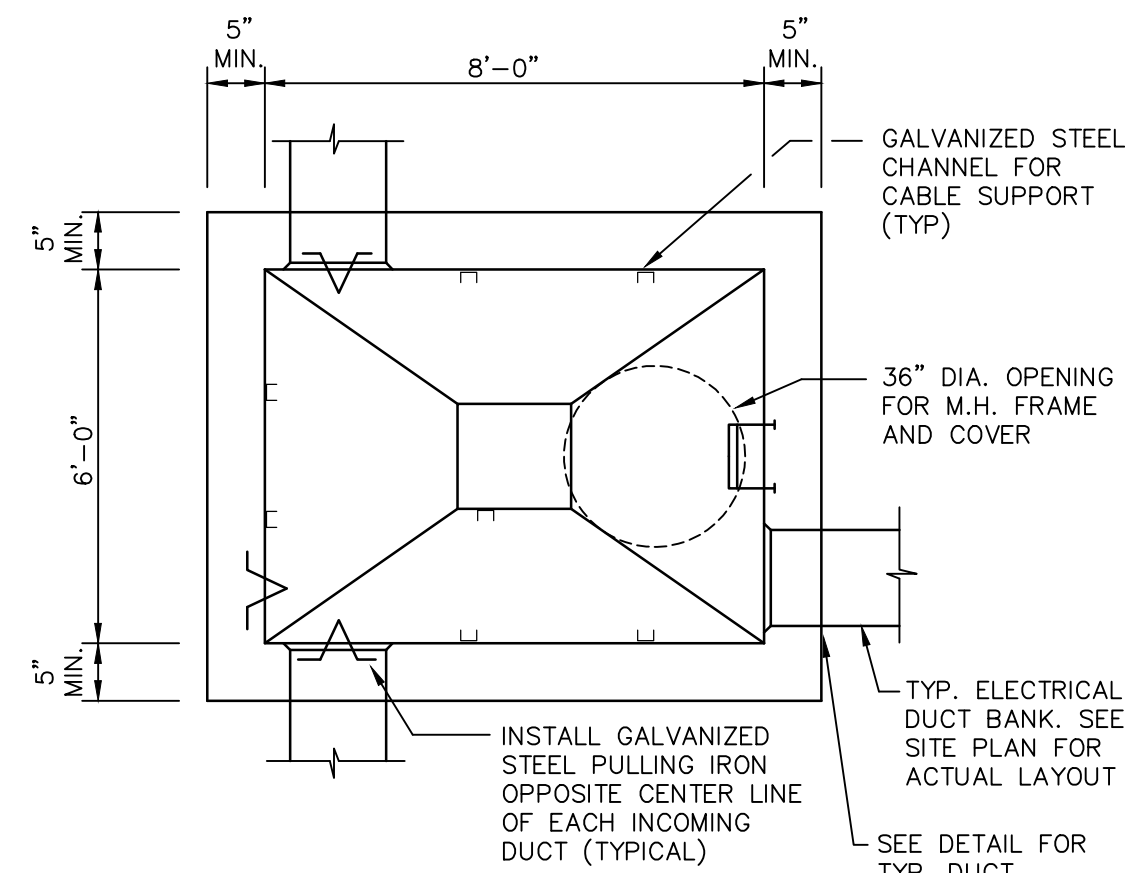
ELECTRICAL HANDHOLE (EHH)



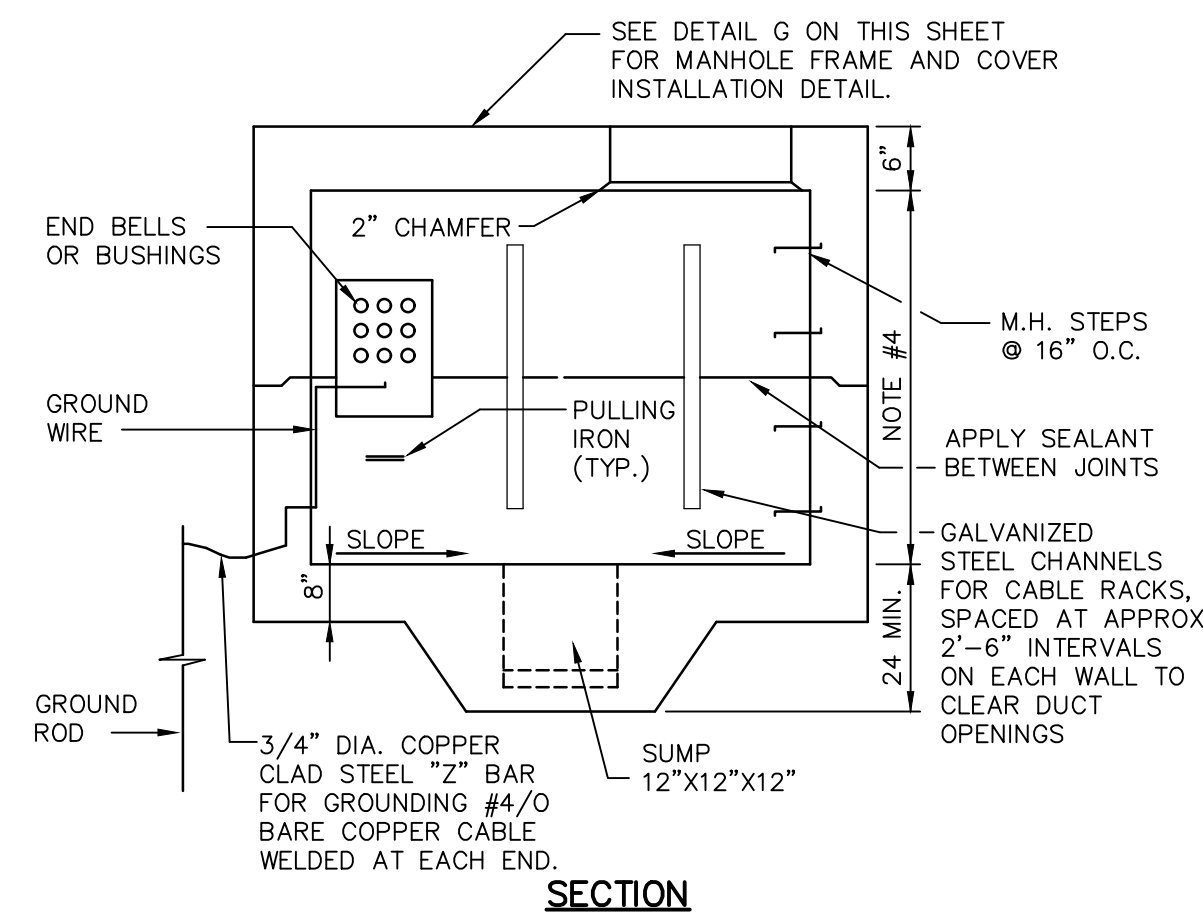
ABOVE GRADE CONDUIT PENETRATION THROUGH EXISTING BUILDINGS OR STRUCTURES



- NOTE:
- FINAL GRADING SHALL PROVIDE ADEQUATE DRAINAGE AWAY FROM MANHOLE COVER IN ALL DIRECTIONS.
- MANHOLE OR HANDHOLE FRAME AND COVER



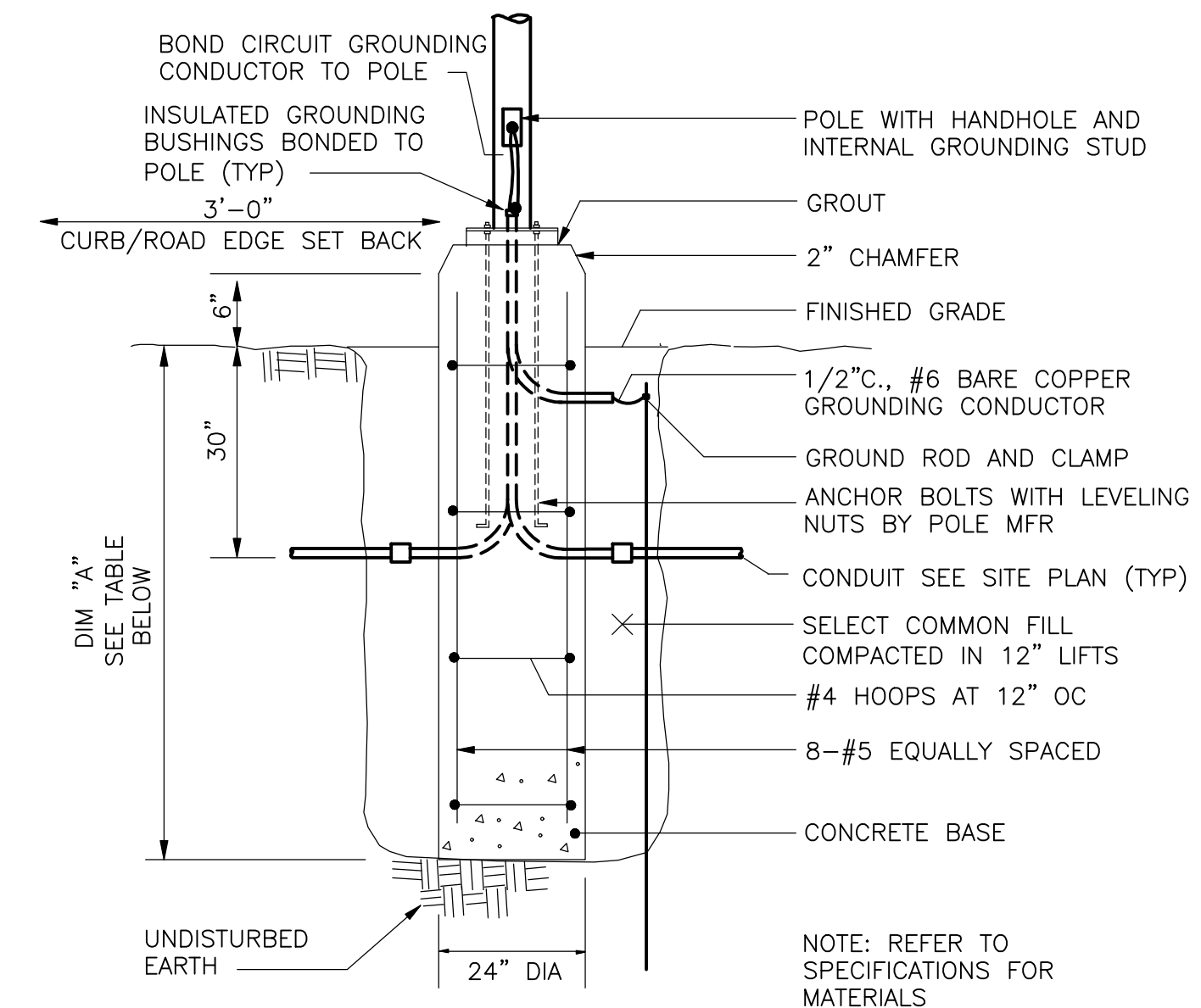
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SECTION

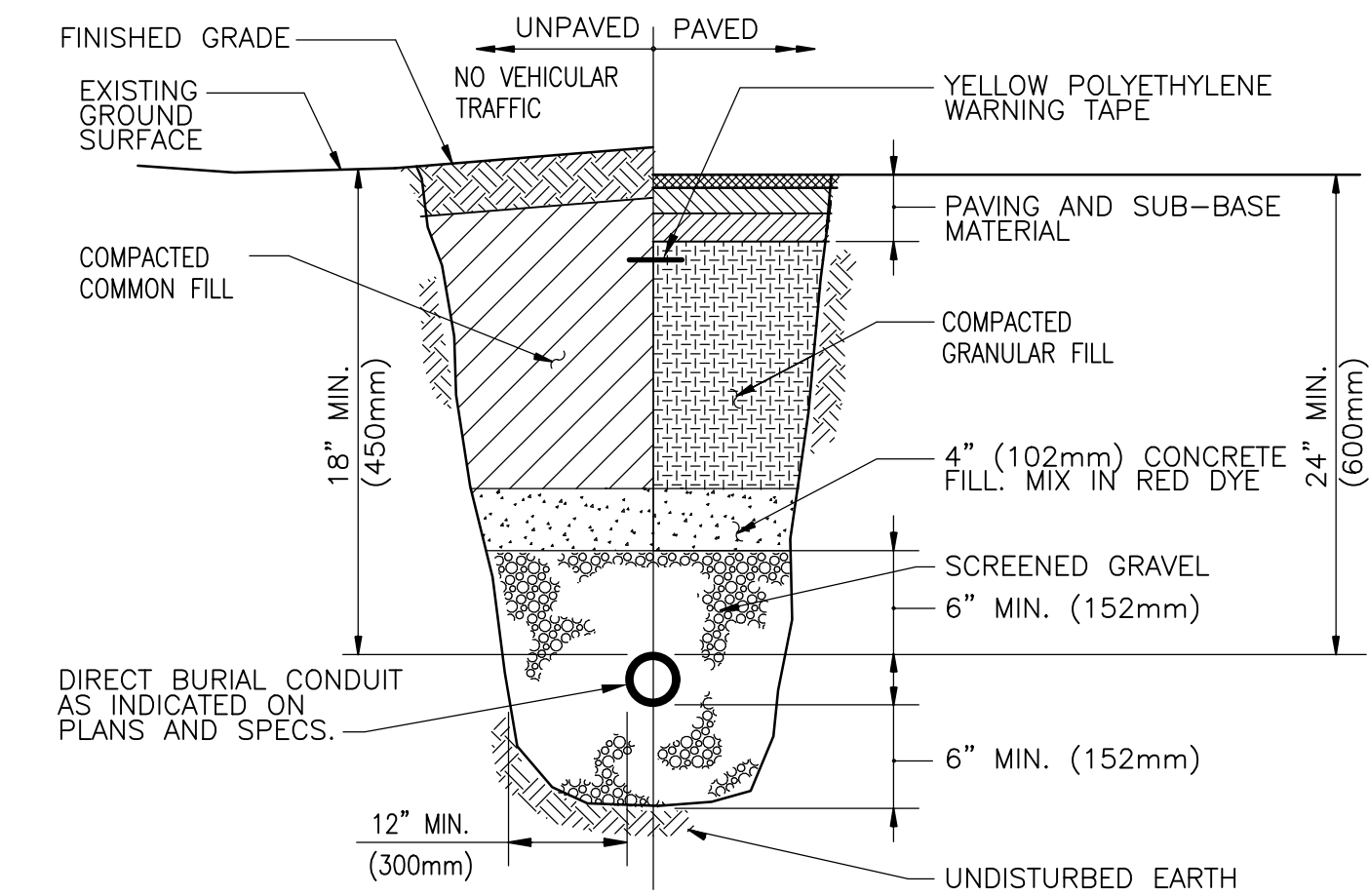
- NOTES:
- BOND ALL METALLIC ITEMS INSIDE MH TO GROUND BAR W/MIN. #4 AWG BARE COPPER CABLE. ADJUST SIZE IF REQUIRED BY NEC.
  - MANHOLES SHALL BE REINFORCED FOR H20 WHEEL LOAD.
  - CABLES SHALL BE RACKED ON PORCELAIN INSULATION CLAMPS.
  - MINIMUM DEPTH SHALL BE 8', CONTRACTOR SHALL PROVIDE STACKING RINGS AS REQUIRED TO MEET THE FIELD CONDITIONS.

ELECTRICAL MANHOLE (EMH)



POLE HEIGHT	DIMENSION "A"
10'-0"	4'-6"
20'-0"	4'-6"
30'-0"	6'-6"
40'-0"	6'-6"

STANDARD LIGHTING BASE



TYPICAL DIRECT BUIAL CONDUIT INSTALLATION



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1	12/19/23	LES	JCS	REVISED PER ADDENDUM NO. 2

DESIGNED BY:	V. MANJU
DRAWN BY:	V. MANJU
SHEET CHK'D BY:	M. CZACH
CROSS CHK'D BY:	G. PRABHU
APPROVED BY:	J. SAENZ
DATE:	DECEMBER 2023

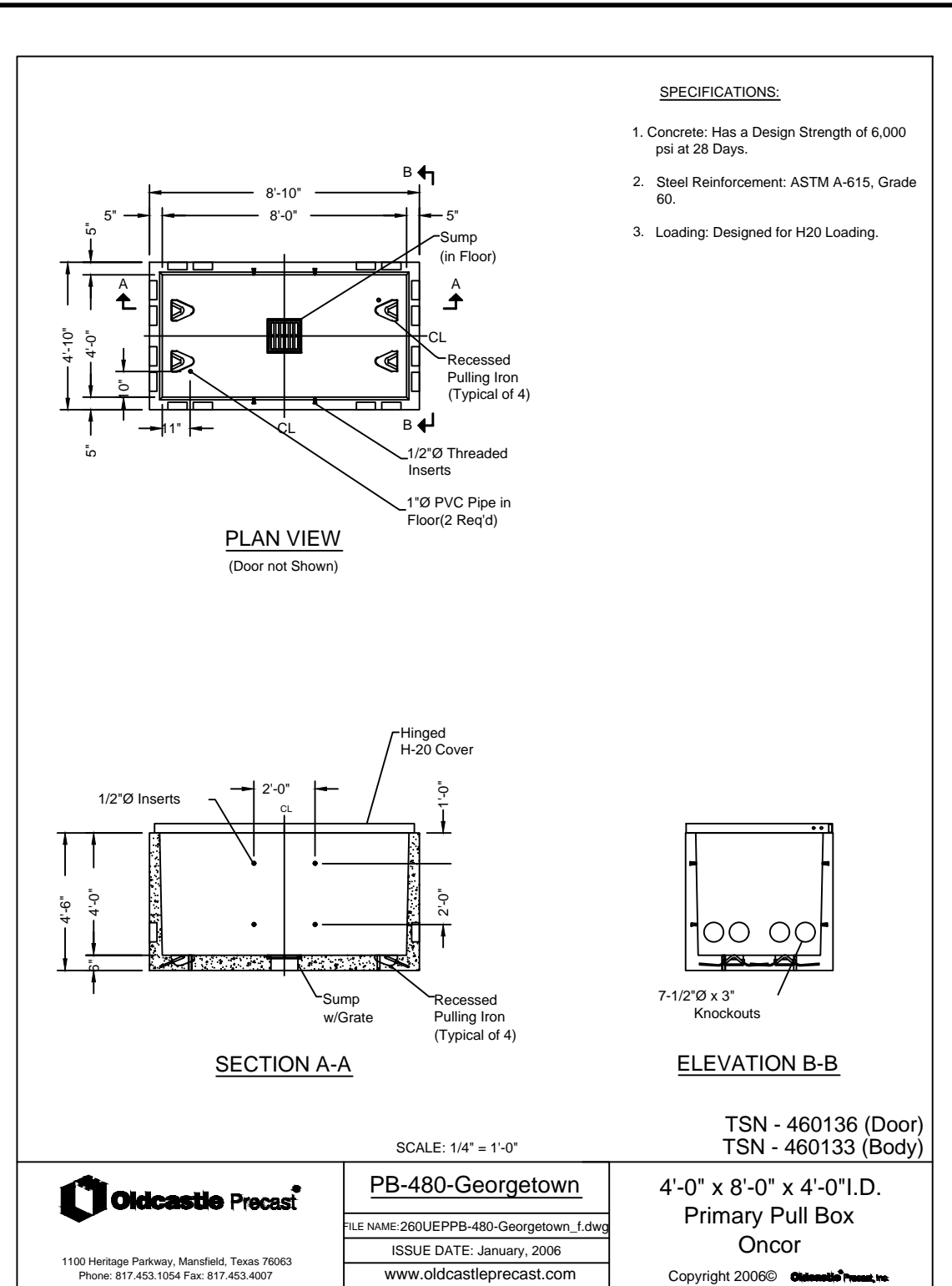
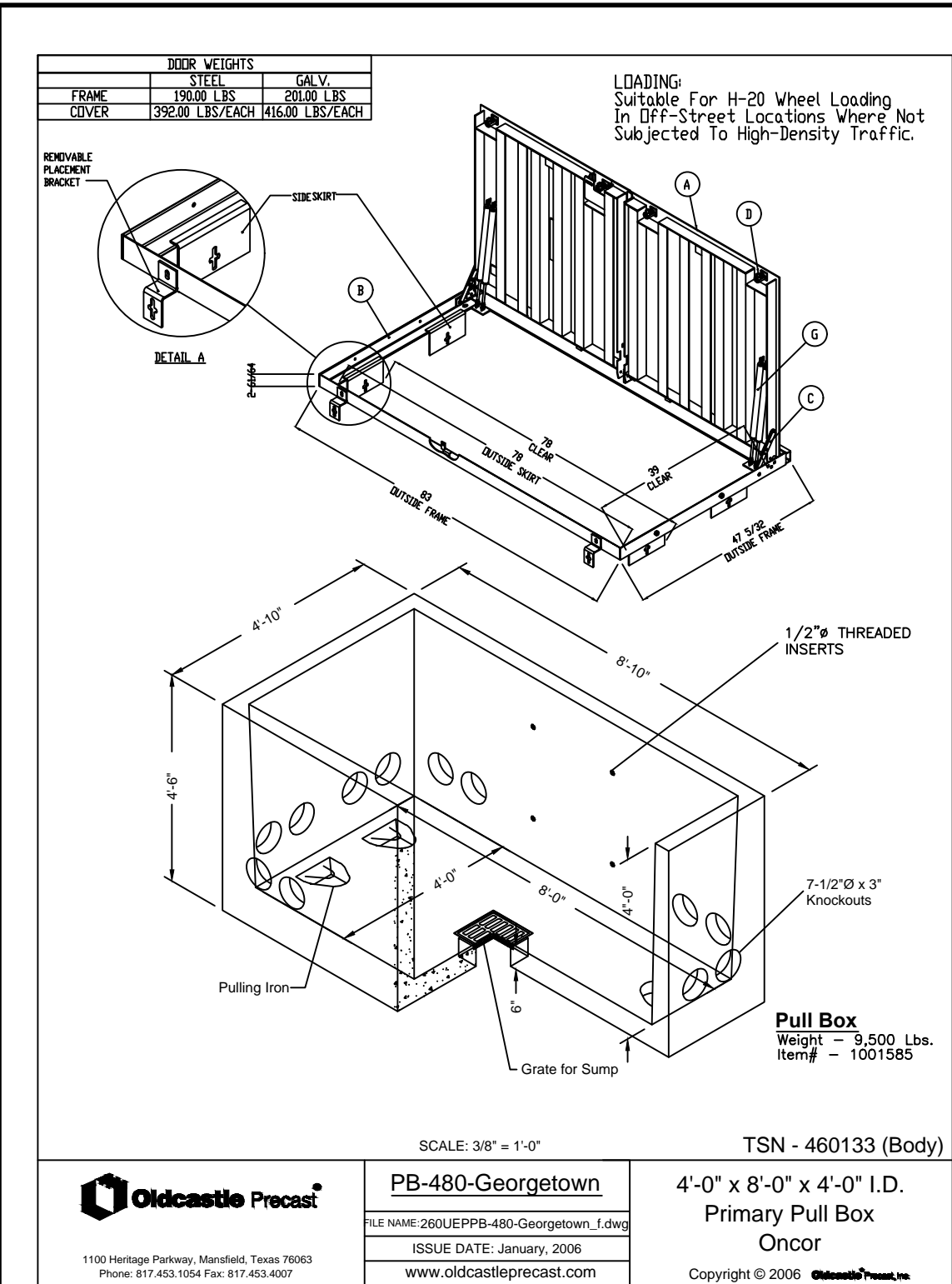


CITY OF GEORGETOWN, TEXAS  
DOVE SPRINGS WWTP  
REHABILITATION

ELECTRICAL  
STANDARD DETAILS IV  
EZ-4

PROJECT NO.	2048-264953
FILE NAME:	EZ04NFDT.DWG
SHEET NO.	EZ-4

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**SPECIFICATIONS:**

- Concrete: Has a Design Strength of 6,000 psi at 28 Days.
- Steel Reinforcement: ASTM A-615, Grade 60.
- Loading: Designed for H20 Loading.

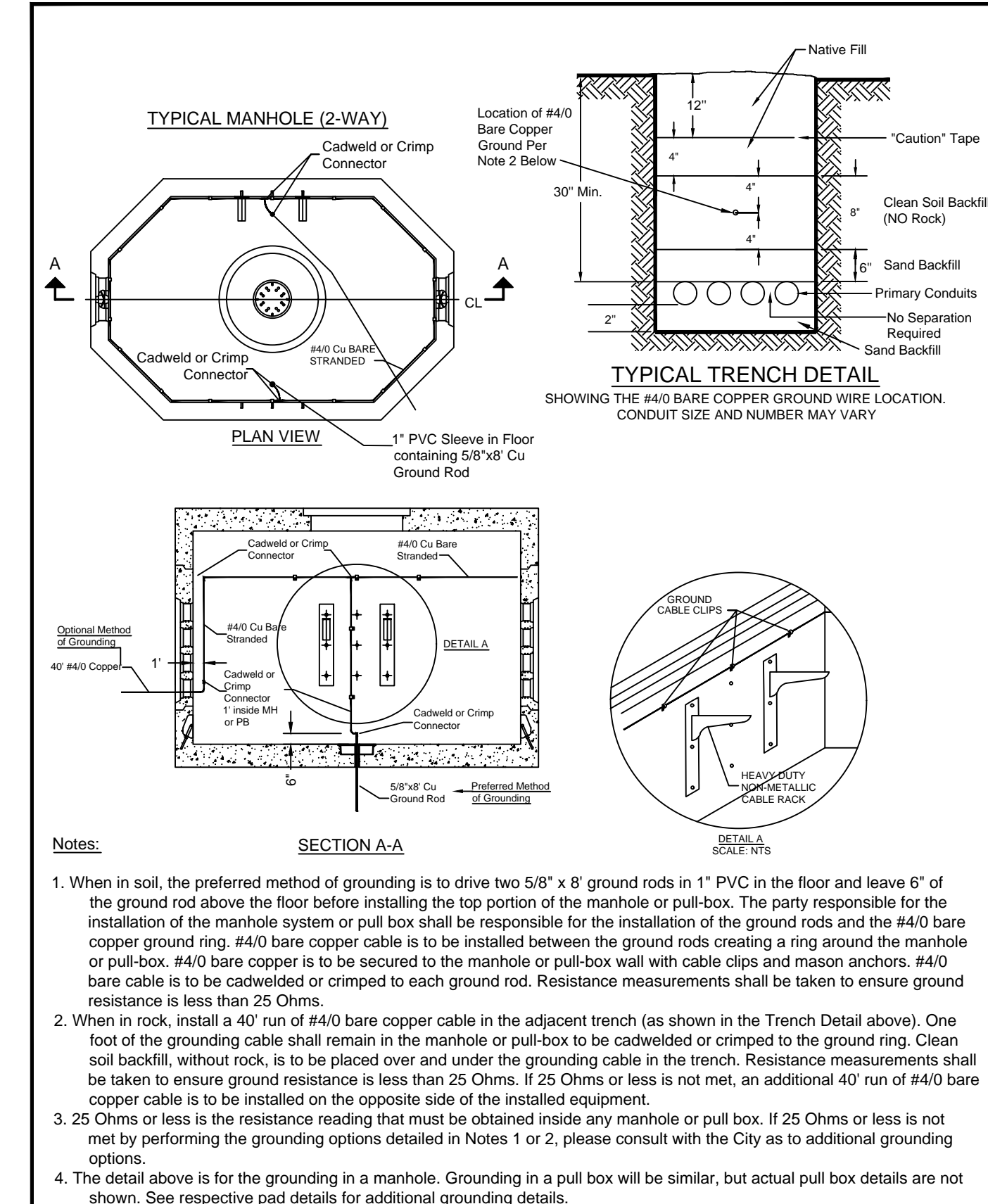
**NOTES:**

- The minimum working load for each pulling anchor is 16,800 lbs.
- The minimum working load for each lifting anchor is 2,000 lbs.
- The exact location and orientation of the pull box shall be specified on the construction drawings.
- Engineering shall verify the strength of the pull box will not be adversely affected, prior to approving any field modifications such as cuts to form slots or holes.
- Drive ground rod and leave 6" of the ground rod above the floor before installing the top portion of the pull box. The party responsible for the installation of the conduit system shall be responsible for the installation of the ground rod.
- Clean joint surfaces with a brush and ensure joints are dry. Firmly press joint filler onto surface end-to-end around the entire joint. Allow 1" overlaps when abutting.
- Preformed butyl joint sealer sufficient for setting the pull box shall be supplied by the manufacturer.
- Minimum excavation requirements to set pull box in place are 7' x 11' x 6' with 18" of 3/4" crushed rock in the bottom excavation for pull box to rest on.
- Pull box to have 6" thick walls and floor.
- Torsion & Shock Assiat. 90Deg. H-20. Padlock Door Frame & Cover Assembly. Constructed of galvanized steel, drop lift handles, secured with penta head bolts, and ELECTRICAL imprinted into the steel.
- Pull box lid is to be flush with final grade. City to approve final grade of box.
- Clearance requirements for all COG pad-mounted equipment and pull-boxes are as follows:  
Ten feet at the doors, and five feet on all other sides.  
(Note: Pad-mounted equipment is classified as, but not limited to, transformers, junction boxes, and switchgears)
- Bell ends to be installed on all conduits entering pad sites and facilities (Pull Boxes & Manholes)
- See Manhole, Pad, and Pull Box grounding detail specification for additional grounding information.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS (4' X 8' X 4') PRECAST PULL BOX		DRAWING NO: 03-14-22 GEO-229 SCALE: NTS DATE: 11-16-11 DRAWN BY: MRC APPROVED BY: GUM-PB
PAGE 1 OF 1		

PRECAST PULLBOX  
DETAIL A  
NTS



CITY OF GEORGETOWN MANHOLE, PAD, AND PULL BOX GROUNDING DETAIL		DRAWING NO: GEO-260 SCALE: NTS DATE: 12-10-09 DRAWN BY: MRC APPROVED BY: GUM-GND
PAGE 2 OF 2		

PULLBOX GROUNDING  
DETAIL B  
NTS

DESIGNED BY: V. MANJU	DATE: NOVEMBER 2023
DRAWN BY: T. AMOGHA	
SHEET CHK'D BY: M. CZACH	
CROSS CHK'D BY: G. PRABHU	
APPROVED BY: J. SAENZ	

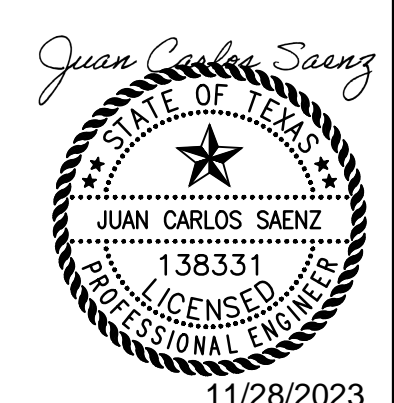
**CDM Smith**

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Austin, TX 78731  
Tel: (512) 346-1100  
TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS  
DOVE SPRINGS WWTP  
REHABILITATION

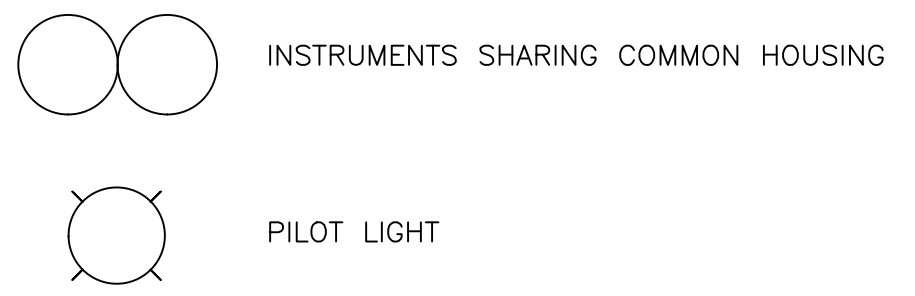
ELECTRICAL  
STANDARD DETAILS V

PROJECT NO. 2048-264953  
FILE NAME: EZ05NFD.T.DWG  
SHEET NO. EZ-5



**GENERAL INSTRUMENT OR FUNCTION SYMBOLS**

SHARED DISPLAY/ SHARED CONTROL				
PRIMARY CHOICE	SECONDARY CHOICE	COMPUTER SOFTWARE	DISCRETE	LOCATION AND ACCESSIBILITY
				FIELD MOUNTED AND NORMALLY OPERATOR ACCESSIBLE
				PRIMARY CONTROL PANEL MOUNTED AND NORMALLY OPERATOR ACCESSIBLE
				PRIMARY CONTROL PANEL MOUNTED AND NOT NORMALLY OPERATOR ACCESSIBLE
				SECONDARY CONTROL PANEL MOUNTED AND NORMALLY OPERATOR ACCESSIBLE
				SECONDARY CONTROL PANEL MOUNTED AND NOT NORMALLY OPERATOR ACCESSIBLE

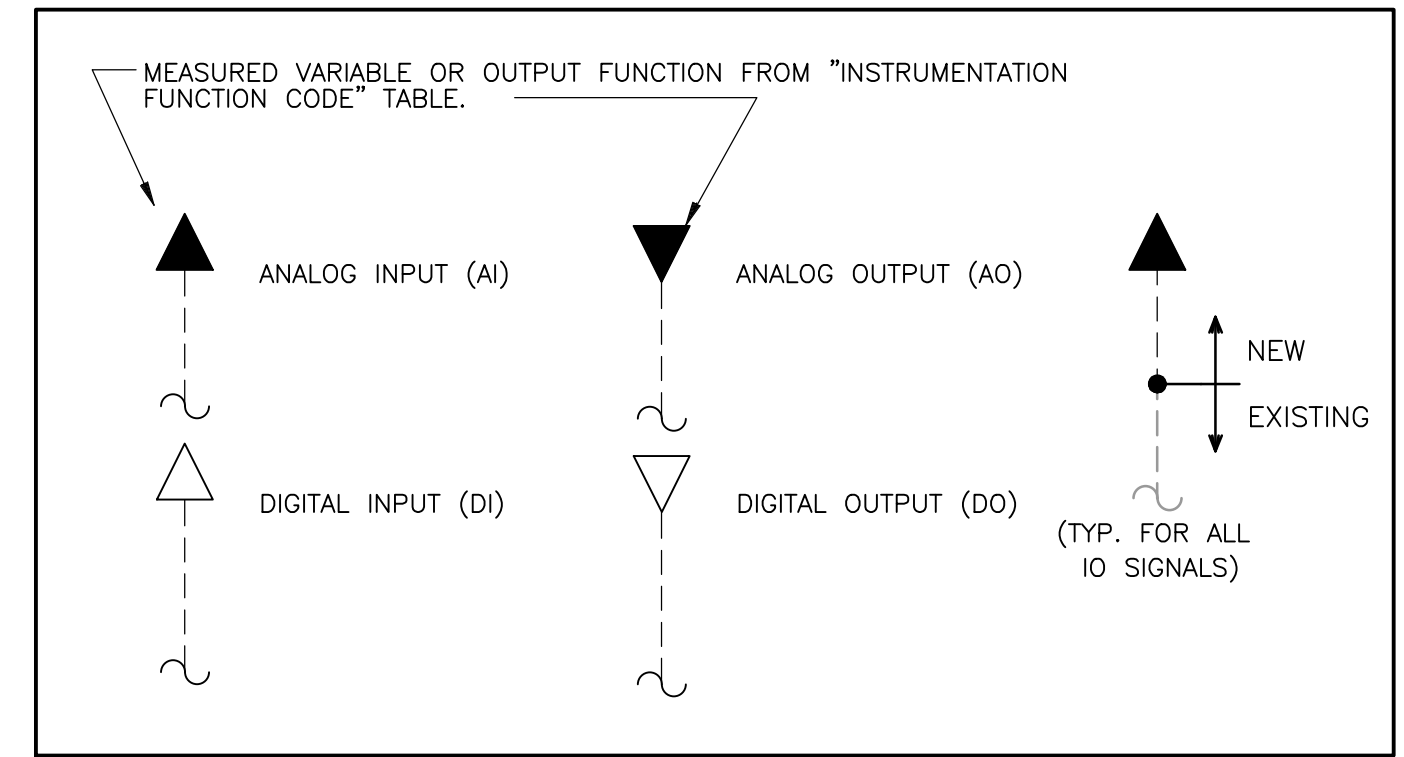


**INSTRUMENTATION FUNCTION CODE**

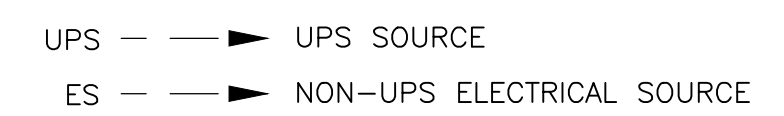
FIRST LETTERS		SUCCEEDING LETTERS		
COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5
MEASURED/INITIATING VARIABLE	VARIABLE MODIFIER	READOUT/PASSIVE FUNCTION	OUTPUT/ACTIVE FUNCTION	FUNCTION MODIFIER
A ANALYSIS		ALARM		
B BURNER, COMBUSTION		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
C USER'S CHOICE			CONTROL	CLOSED
D USER'S CHOICE	DIFFERENCE, DIFFERENTIAL			DEVIATION
E VOLTAGE		SENSOR, PRIMARY ELEMENT		
F FLOW, FLOW RATE	RATIO			
G USER'S CHOICE		GLASS, GAUGE, VIEWING DEVICE		
H HAND				HIGH
I CURRENT		INDICATE		
J POWER		SCAN		
K TIME, SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L LEVEL		LIGHT		LOW
M MOISTURE		MOMENTARY		MIDDLE, INTERMEDIATE
N USER'S CHOICE		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
O USER'S CHOICE		ORIFICE, RESTRICTION		OPEN
P PRESSURE		POINT (TEST CONNECTION)		
Q QUANTITY	INTEGRATE, TOTALIZE	INTEGRATE, TOTALIZE		
R RADIATION		RECORD		RUN
S SPEED, FREQUENCY	SAFETY		SWITCH	STOP
T TEMPERATURE			TRANSMIT	
U MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	
V VIBRATION, MECHANICAL, ANALYSIS			VALVE, DAMPER, LOUVER	
W WEIGHT, FORCE		WELL, PROBE		
X UNCLASSIFIED (1)	X-AXIS	ACCESSORY DEVICES, UNCLASSIFIED (1)	UNCLASSIFIED (1)	UNCLASSIFIED (1)
Y EVENT, STATE, PRESENCE	Y-AXIS		AUXILIARY DEVICES	
Z POSITION, DIMENSION	Z-AXIS, SAFETY INSTRUMENT SYSTEM		DRIVER, ACTUATOR, UNCLASSIFIED, FINAL CONTROL ELEMENT	

TABLE NOTES:  
(1) WHEN USED SYMBOL OR SIGNAL LINE IS ANNOTATED.

**I/O SIGNALS**



**ELECTRICAL / AIR SOURCES**



**GENERAL NOTES**

- THIS LEGEND APPLIES TO P&IDS ONLY AND MAY DIFFER FROM LEGENDS FOR OTHER SHEETS.
- IN GENERAL THIS LEGEND SHEET AND THE P&IDS ARE BASED ON THE INTERNATIONAL SOCIETY OF AUTOMATION (ISA) STANDARDS FOR PRACTICES FOR INSTRUMENTATION. SOME MODIFICATIONS, ADDITIONS AND ALTERATIONS HAVE BEEN MADE AS REQUIRED TO ACCOMMODATE PROJECT REQUIREMENTS.
- SOME PROCESS ITEMS SUCH AS EQUIPMENT ISOLATION VALVES, BYPASS LINES, ETC., WHICH ARE NOT CRITICAL FOR AN UNDERSTANDING OF THE INSTRUMENTATION FUNCTIONS ARE NOT SHOWN ON THE P&IDS.
- SEE ELECTRICAL AND MECHANICAL SHEETS AND SPECIFICATIONS FOR ADDITIONAL CONTROL AND INTERLOCK REQUIREMENTS.
- LIGHTER WEIGHT LINES, SHOWN AS \_\_\_\_\_, INDICATE EQUIPMENT, INSTRUMENTS OR PIPING THAT ARE EXISTING. WEIGHTED LINES, SHOWN AS \_\_\_\_\_ OR HEAVIER \_\_\_\_\_, INDICATE EQUIPMENT, INSTRUMENTS OR PIPING THAT ARE NEW. DASHED WEIGHTED LINES, SHOWN AS \_\_\_\_\_, INDICATED EQUIPMENT, INSTRUMENTS OR PIPING THAT ARE GROUPED AS A PACKAGE.

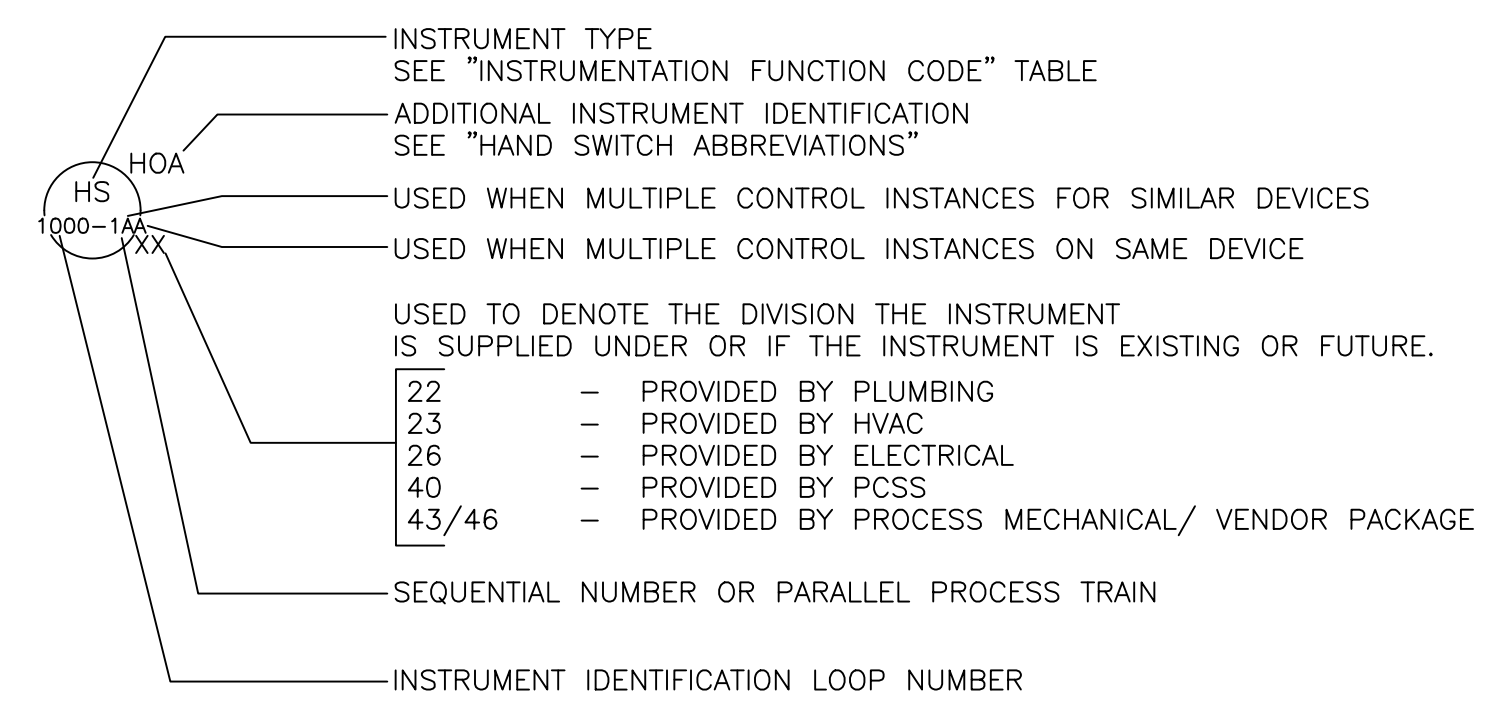
**PIPE SERVICE IDENTIFICATION**

FOR PIPE SERVICE IDENTIFICATION REFER GENERAL SHEETS.

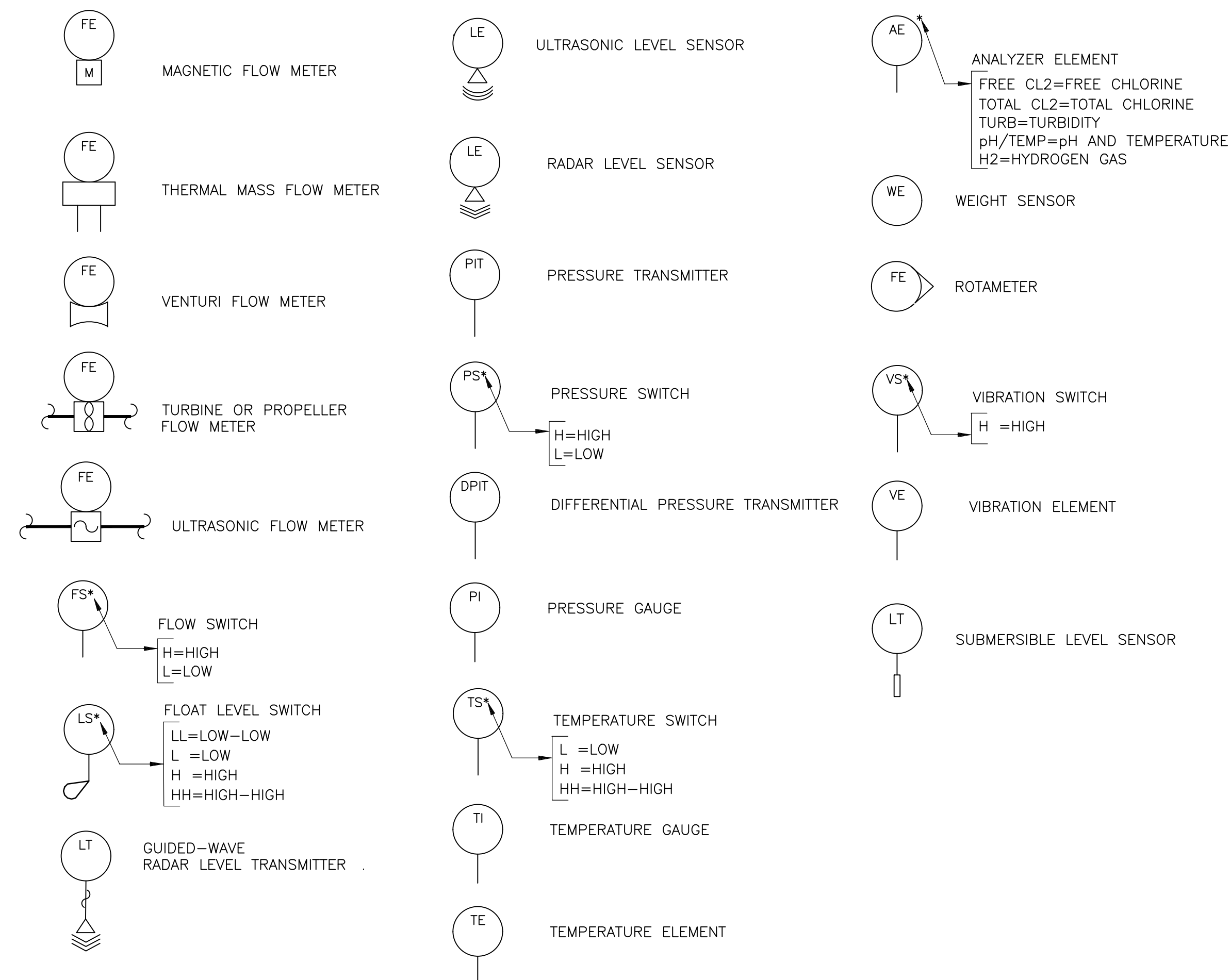
**PIPE SPECIFICATION IDENTIFICATION**

FOR PIPE SPECIFICATION IDENTIFICATION REFER GENERAL SHEETS.

**TYPICAL TAG NUMBERS & DESIGNATION**



**PRIMARY ELEMENTS**



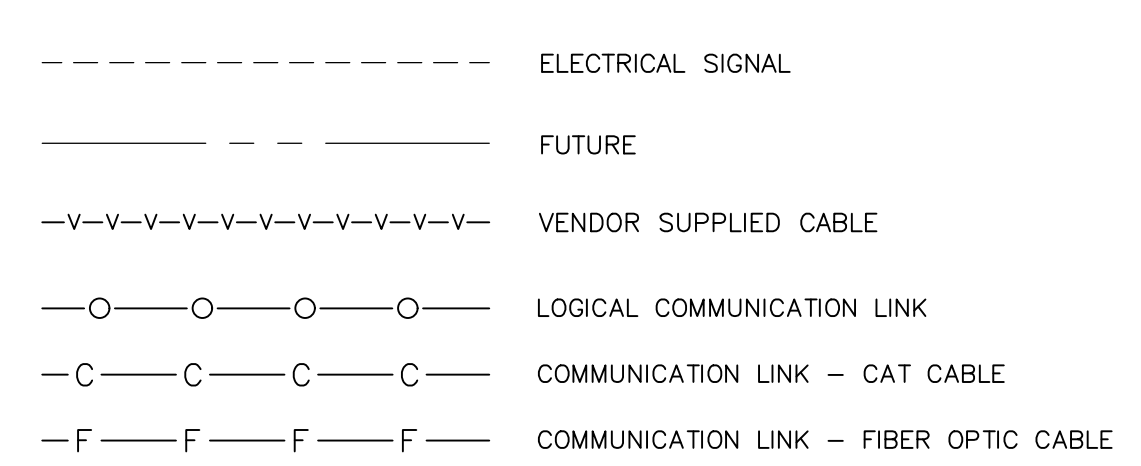
**GENERAL ABBREVIATIONS**

- AI ANALOG INPUT
- AO ANALOG OUTPUT
- DI DIGITAL INPUT
- DO DIGITAL OUTPUT
- ELEC ELECTRICAL BUILDING
- ETM ELAPSED TIME METER
- FOC FIBER OPTIC CABLE
- FOPP FIBER OPTIC PATCH PANEL
- FRW FIREWALL
- HIM HUMAN INTERFACE MODULE
- HMI HUMAN MACHINE INTERFACE
- ISR INTRINSIC SAFE RELAY
- LCP LOCAL CONTROL PANEL
- LCS LOCAL CONTROL STATION
- MC MEDIA CONVERTER
- MCC MOTOR CONTROL CENTER
- MES MANAGED ETHERNET SWITCH
- MM MULTIMODE
- MPR MOTOR PROTECTION RELAY
- NC NORMALLY CLOSED
- NO NORMALLY OPEN
- OIT OPERATOR INTERFACE TERMINAL
- PLC PROGRAMMABLE LOGIC CONTROLLER
- PRN PRINTER
- PS POWER SUPPLY
- RIO REMOTE INPUT/OUTPUT
- SECEQR SECURITY EQUIPMENT RACK
- SM SINGLE MODE
- SPD SURGE PROTECTION DEVICE
- SRV SERVER
- SRVCAB SERVER CABINET
- UPS UNINTERRUPTIBLE POWER SUPPLY
- VFD VARIABLE FREQUENCY DRIVE
- WAP WIRELESS ACCESS POINT
- WS WORKSTATION

**HAND SWITCH ABBREVIATIONS**

- E-STOP = EMERGENCY STOP
- HOA = HAND/OFF/AUTO
- LOR = LOCAL/OFF/REMOTE
- LR = LOCAL/REMOTE
- OC = OPEN/CLOSE
- OSA = OPEN/STOP/AUTO
- OSC = OPEN/STOP/CLOSE
- SS = START/STOP
- SRTC = SPRING RETURN TO CENTER

**INSTRUMENT LINE SYMBOLS**



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DESIGNED BY: M. CLARK	DRWN	PP	MC	CONFORMED DRAWINGS
DRAWN BY: A. MAXWELL	DATE	1/24/24	REMARKS	
SHEET CHK'D BY: S. RAJESH				
CROSS CHK'D BY: A. DOODY				
APPROVED BY: M. CLARK				
DATE: NOVEMBER 2023				

**CDM Smith**

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Austin, TX 78731  
Tel: (512) 346-1100  
TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS

DOVE SPRINGS WWTP REHABILITATION

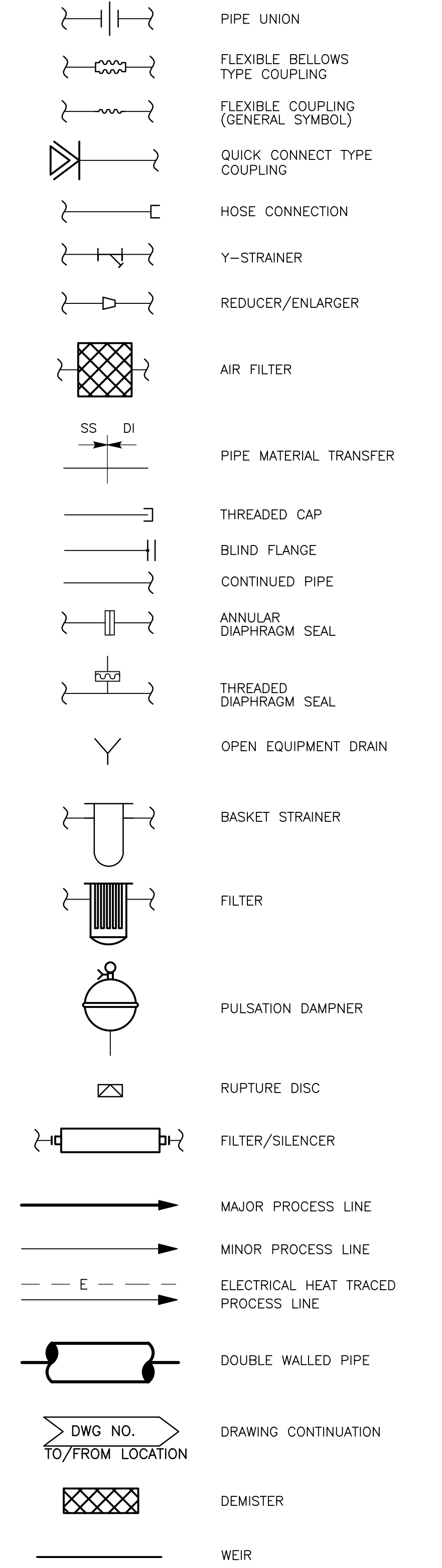
INSTRUMENTATION LEGEND I

PROJECT NO. 2048-264953	SHEET NO. I-1
FILE NAME: I-1.DWG	

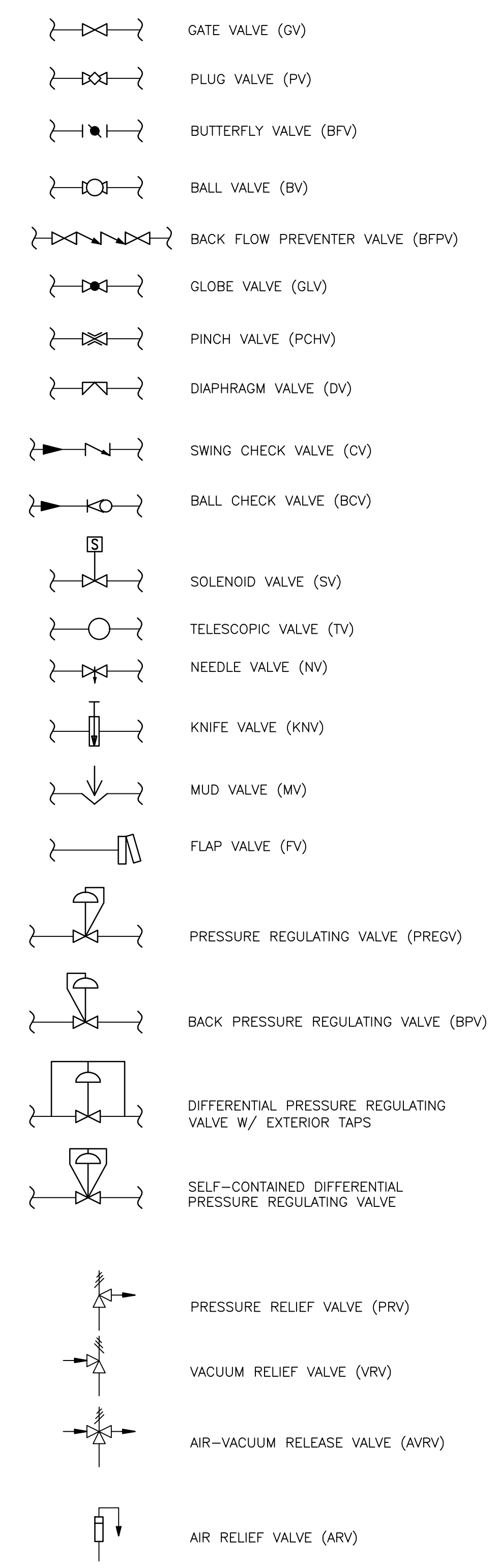


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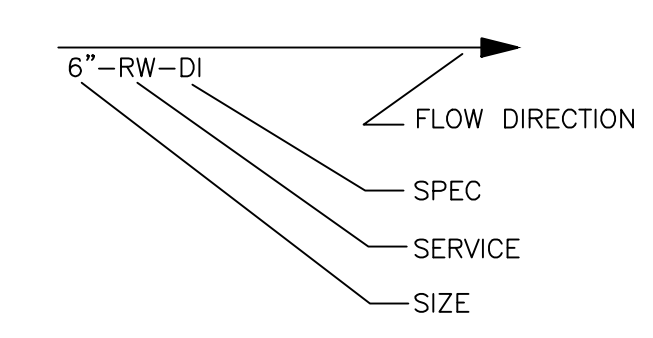
### PIPE LINE SYMBOLS



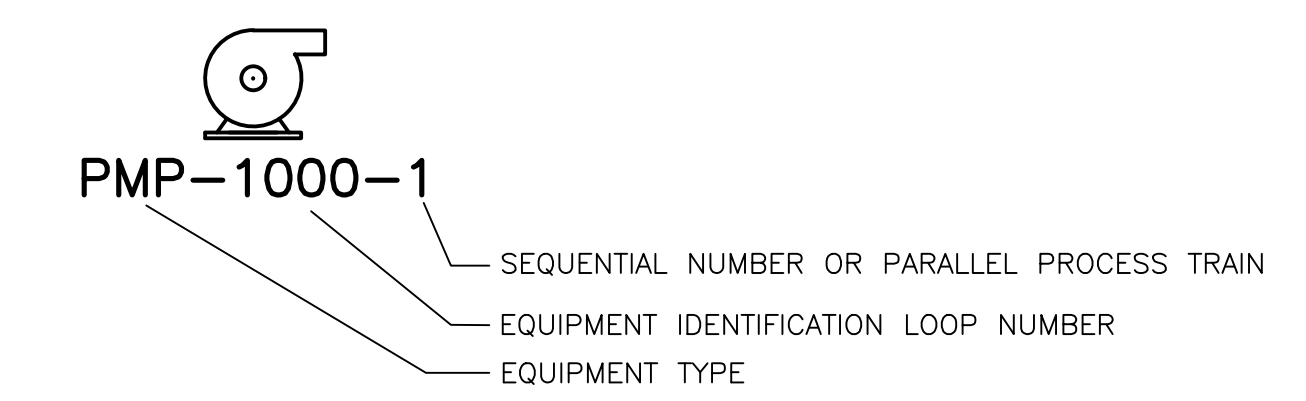
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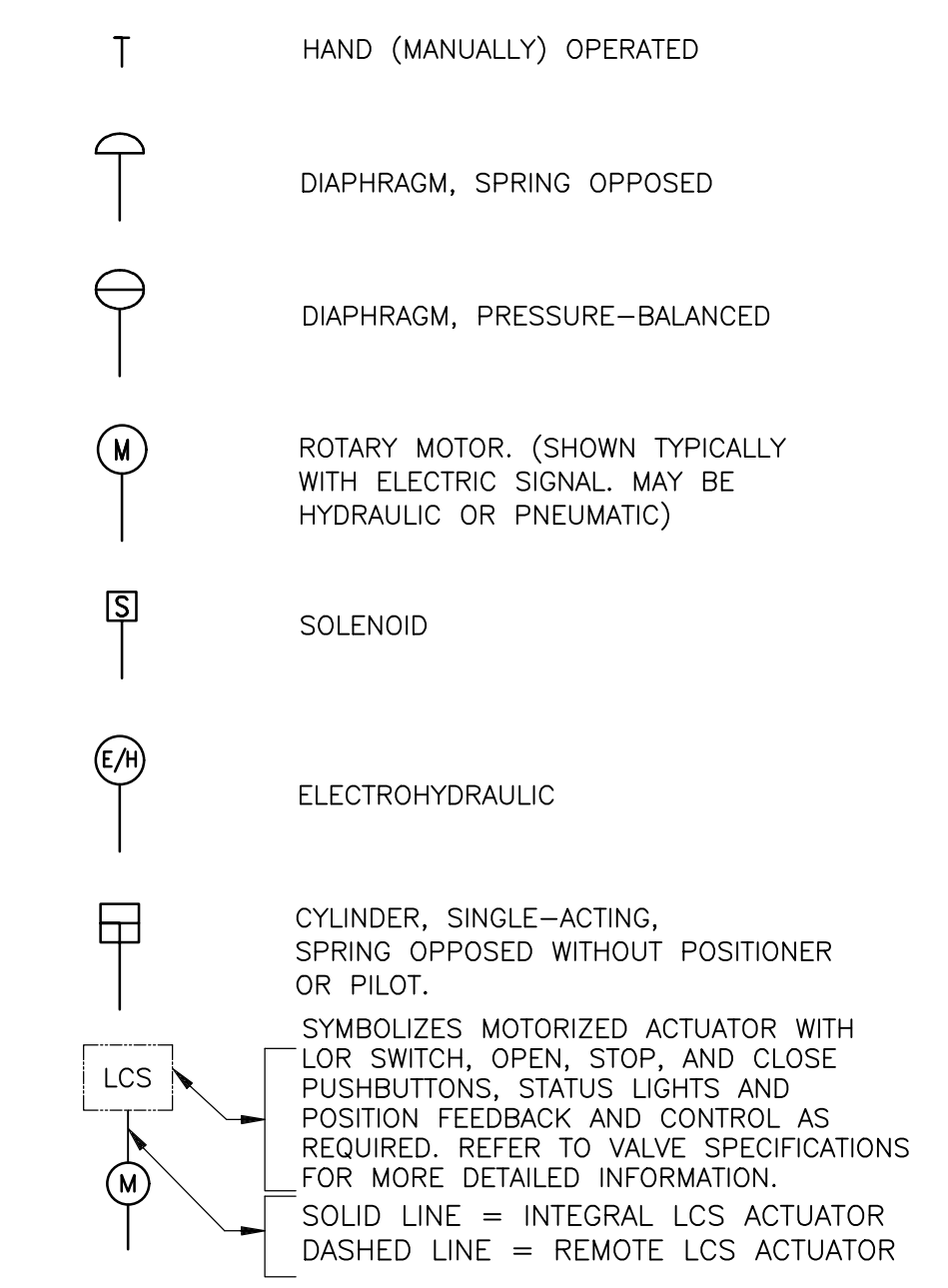
### TYPICAL PIPE TAG NUMBERS & DESIGNATION



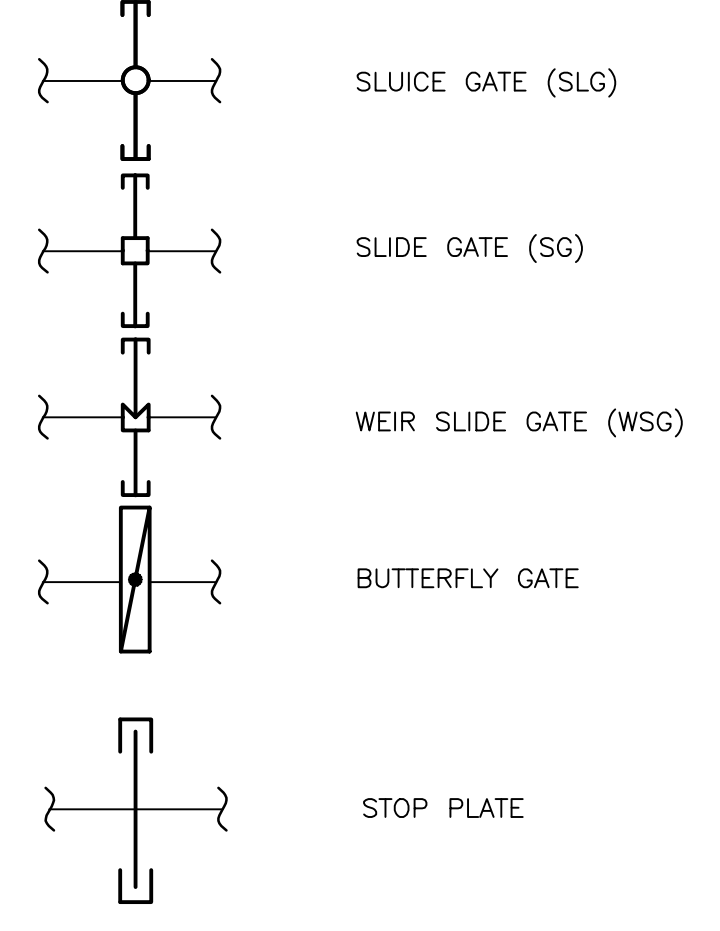
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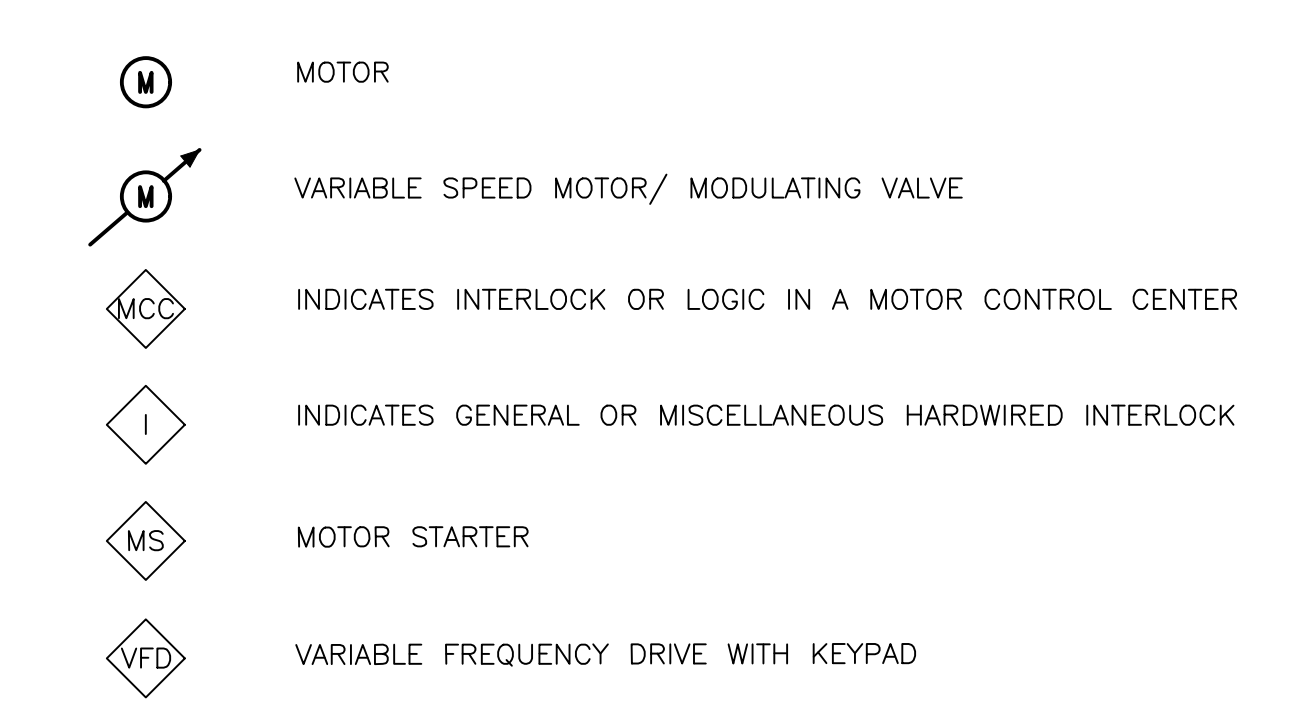
### VALVE ACTUATORS



### GATE SYMBOLS

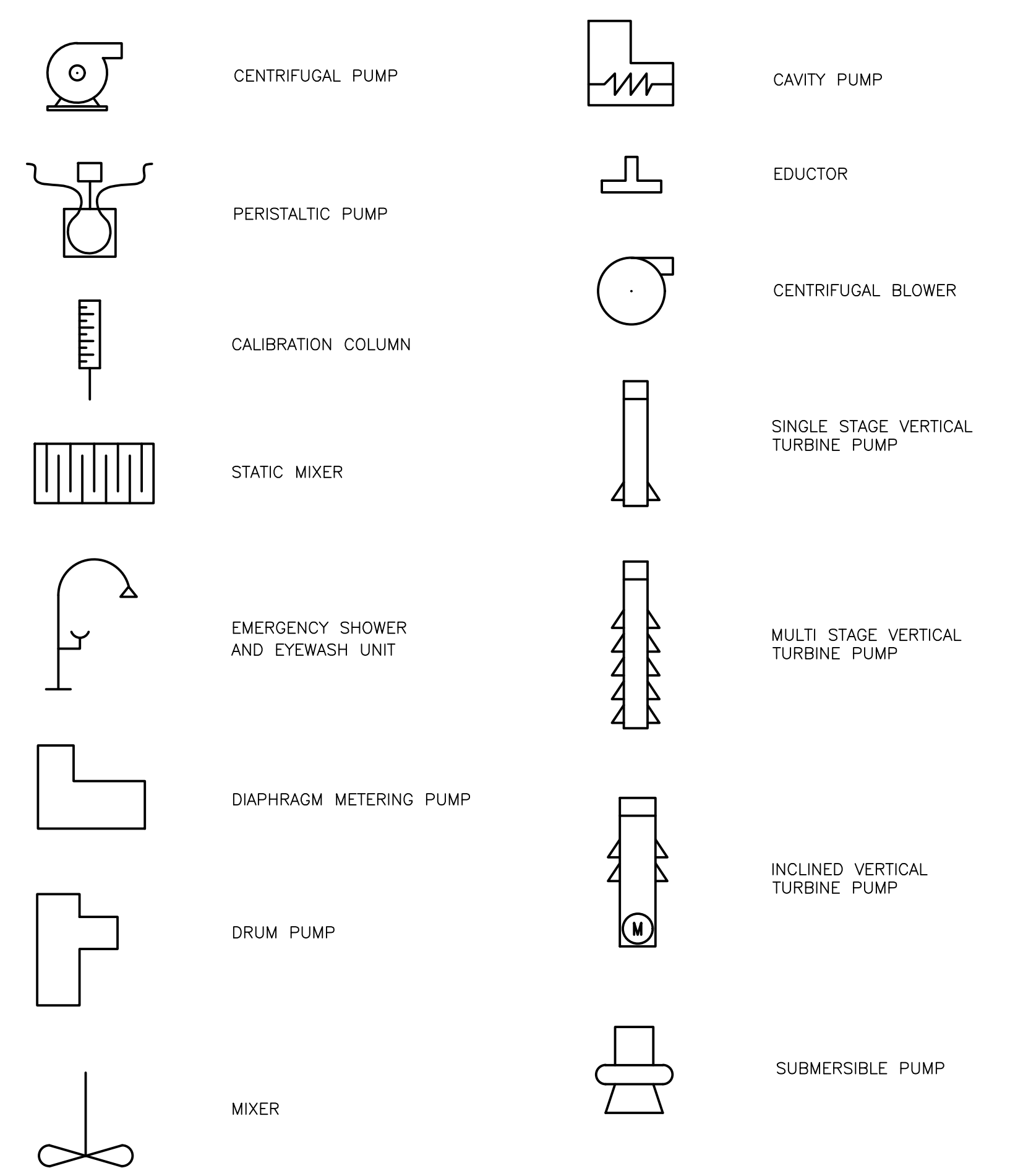


### MISCELLANEOUS SYMBOLS



### PROCESS EQUIPMENT SYMBOLS

PARTIAL LIST  
ADDITIONAL SYMBOLS MAY BE  
SHOWN ON THE FLOW DIAGRAMS



DESIGNED BY:	M. CLARK
DRAWN BY:	A. MAXWELL
SHEET CHK'D BY:	S. RAJESH
CROSS CHK'D BY:	A. DOODY
APPROVED BY:	M. CLARK
DATE:	NOVEMBER 2023

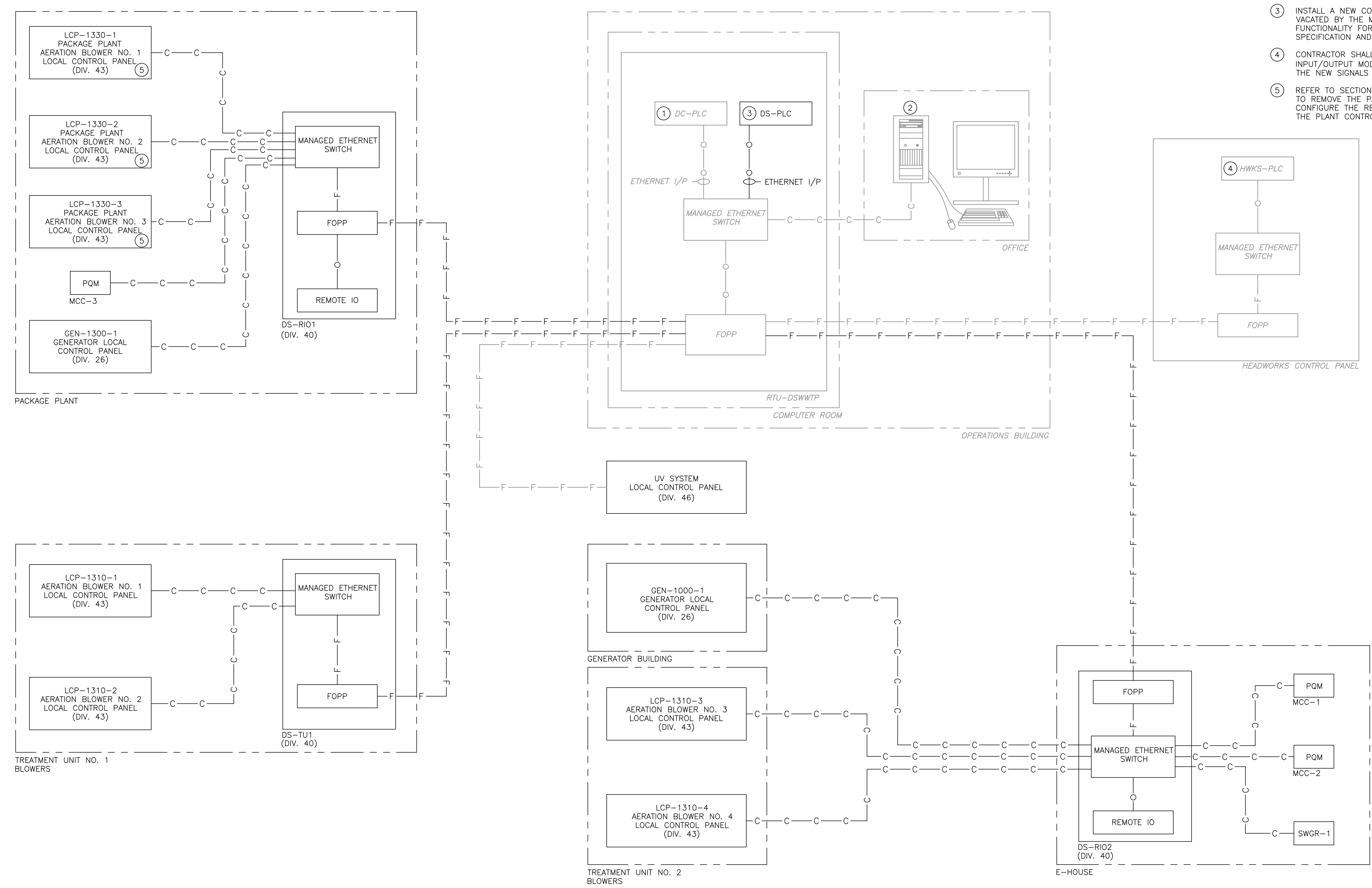
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 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

INSTRUMENTATION LEGEND II  
 SHEET NO. 1-2

PROJECT NO.	2048-264953
FILE NAME:	1-2.DWG
SHEET NO.	1-2

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- NOTES:
- ① REMOVE EXISTING MOSCAD RTU AND TURN OVER TO OWNER. TRANSFER ALL THE LOGIC, INPUT/OUTPUT AND NETWORK CONNECTION ASSOCIATED FROM MOSCAD RTU TO EXISTING PLC (DC-PLC) FOR FULLY FUNCTIONAL.
  - ② CONTRACTOR SHALL HAVE SCOPE TO MODIFY THE EXISTING HMI GRAPHICS TO ACCOMMODATE THE PLC TRANSITION FROM MOSCAD RTU TO EXISTING PLC (DC-PLC) FOR FULLY FUNCTIONAL.
  - ③ INSTALL A NEW CONTROLLOGIX PLC(DS-PLC) IN THE SPACE VACATED BY THE MOSCAD RTU TO FACILITATE ALL THE NEW FUNCTIONALITY FOR DOVE SPRINGS IN ACCORDANCE WITH SPECIFICATION AND DRAWINGS.
  - ④ CONTRACTOR SHALL HAVE SCOPE TO ADD REQUIRED INPUT/OUTPUT MODULES TO HAVE FULL FUNCTIONALITY FOR THE NEW SIGNALS WITH 20% SPARE PER SPECIFICATION.
  - ⑤ REFER TO SECTION 431118-C FOR ADDITIONAL PCSS SCOPE TO REMOVE THE PACKAGE PLANT BLOWER LCP AND CONFIGURE THE RELOCATION OF EXISTING BLOWER LCP INTO THE PLANT CONTROL SYSTEM.

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/24/24	PP	MC	CONFORMED DRAWINGS

DESIGNED BY: M. CLARK  
 DRAWN BY: A. MAXWELL  
 SHEET CHK'D BY: S. RAJESH  
 CROSS CHK'D BY: A. DOODY  
 APPROVED BY: M. CLARK  
 DATE: NOVEMBER 2023

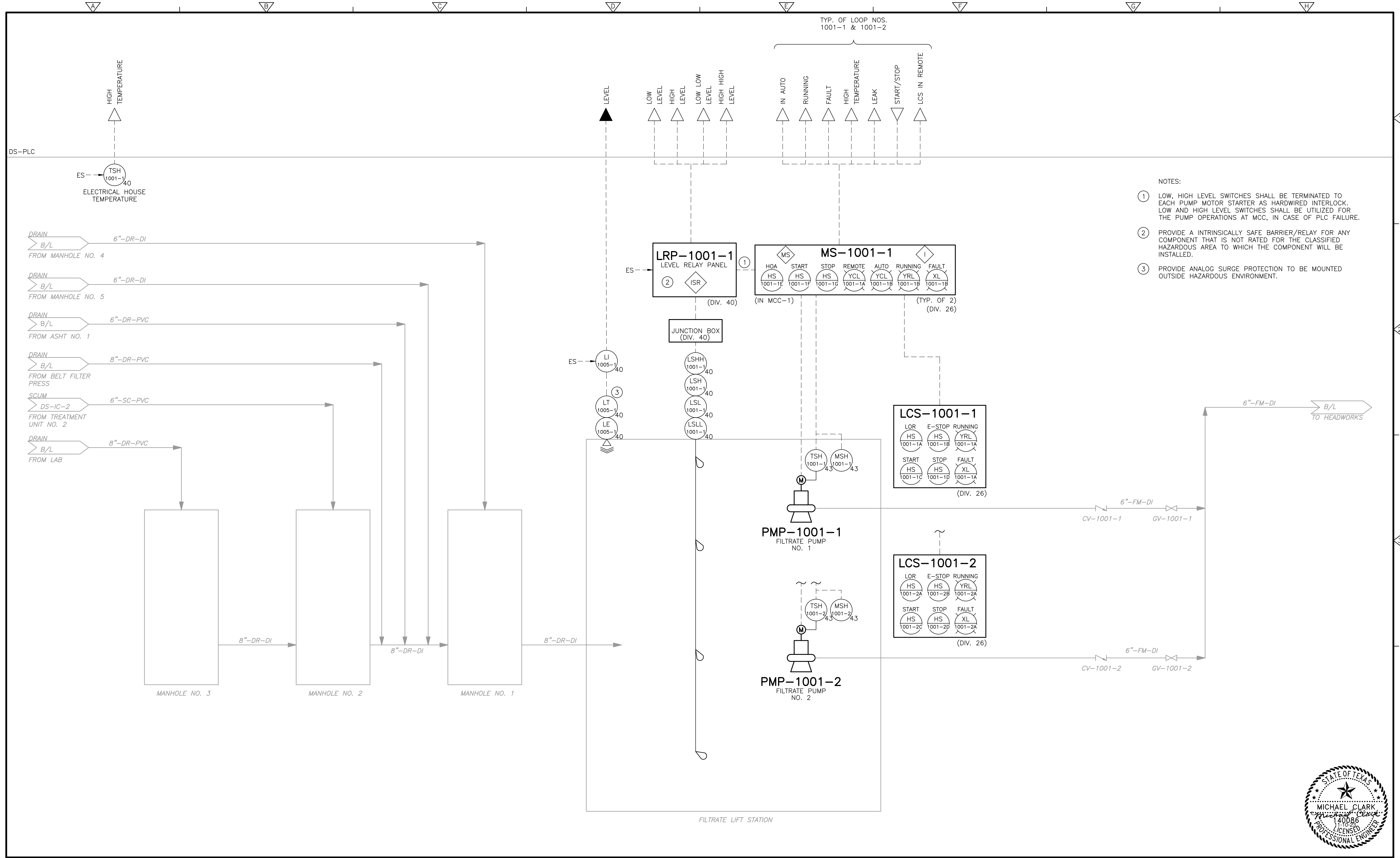


CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

PROJECT NO. 2048-264953  
 FILE NAME: DS-I-1.DWG  
 SHEET NO. DS-I-1



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- NOTES:
- ① LOW, HIGH LEVEL SWITCHES SHALL BE TERMINATED TO EACH PUMP MOTOR STARTER AS HARDWIRED INTERLOCK. LOW AND HIGH LEVEL SWITCHES SHALL BE UTILIZED FOR THE PUMP OPERATIONS AT MCC, IN CASE OF PLC FAILURE.
  - ② PROVIDE AN INTRINSICALLY SAFE BARRIER/RELAY FOR ANY COMPONENT THAT IS NOT RATED FOR THE CLASSIFIED HAZARDOUS AREA TO WHICH THE COMPONENT WILL BE INSTALLED.
  - ③ PROVIDE ANALOG SURGE PROTECTION TO BE MOUNTED OUTSIDE HAZARDOUS ENVIRONMENT.

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/24/24	PP	MC	CONFORMED DRAWINGS

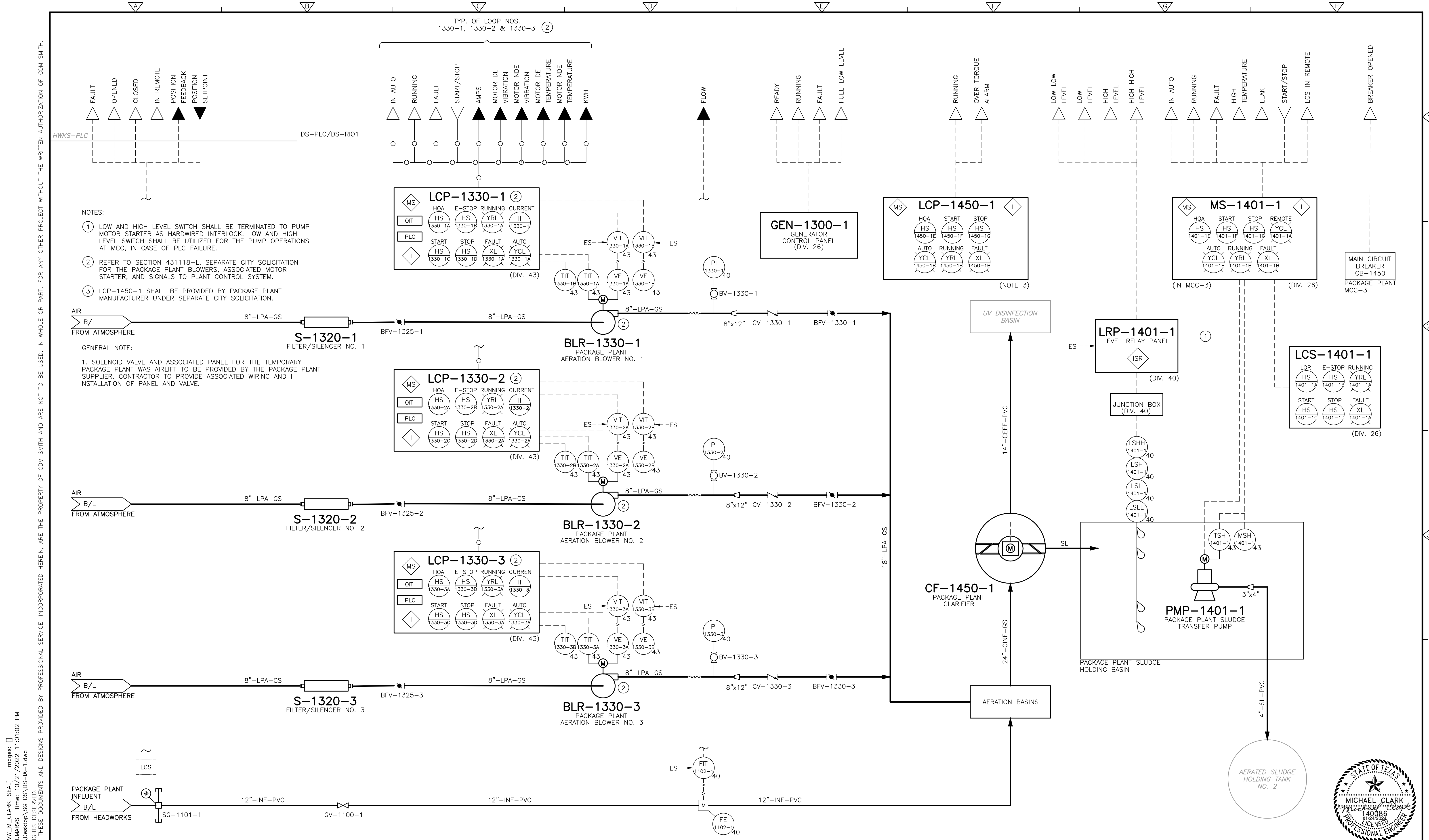
DESIGNED BY: M. CLARK  
 DRAWN BY: A. MAXWELL  
 SHEET CHK'D BY: S. RAJESH  
 CROSS CHK'D BY: A. DOODY  
 APPROVED BY: M. CLARK  
 DATE: NOVEMBER 2023



CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

PROJECT NO. 2048-264953  
 FILE NAME: DS-IA-1.DWG  
 SHEET NO. DS-IA-1





- NOTES:
- LOW AND HIGH LEVEL SWITCH SHALL BE TERMINATED TO PUMP MOTOR STARTER AS HARDWIRED INTERLOCK. LOW AND HIGH LEVEL SWITCH SHALL BE UTILIZED FOR THE PUMP OPERATIONS AT MCC, IN CASE OF PLC FAILURE.
  - REFER TO SECTION 431118-L, SEPARATE CITY SOLICITATION FOR THE PACKAGE PLANT BLOWERS, ASSOCIATED MOTOR STARTER, AND SIGNALS TO PLANT CONTROL SYSTEM.
  - LCP-1450-1 SHALL BE PROVIDED BY PACKAGE PLANT MANUFACTURER UNDER SEPARATE CITY SOLICITATION.

GENERAL NOTE:  
 1. SOLENOID VALVE AND ASSOCIATED PANEL FOR THE TEMPORARY PACKAGE PLANT WAS AIRLIFT TO BE PROVIDED BY THE PACKAGE PLANT SUPPLIER. CONTRACTOR TO PROVIDE ASSOCIATED WIRING AND INSTALLATION OF PANEL AND VALVE.

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REV. NO.	DATE	DRWN	CHKD	REMARKS
A	01/24/24	PP	MC	CONFORMED DRAWINGS
4	01/09/24	PP	MC	REVISED FOR ADDENDUM NO. 4
2	12/28/23	PP	MC	REVISED FOR ADDENDUM NO. 2

DESIGNED BY: M. CLARK  
 DRAWN BY: S. SUPREETHA  
 SHEET CHK'D BY: S. RAJESH  
 CROSS CHK'D BY: A. DOODY  
 APPROVED BY: M. CLARK  
 DATE: NOVEMBER 2023



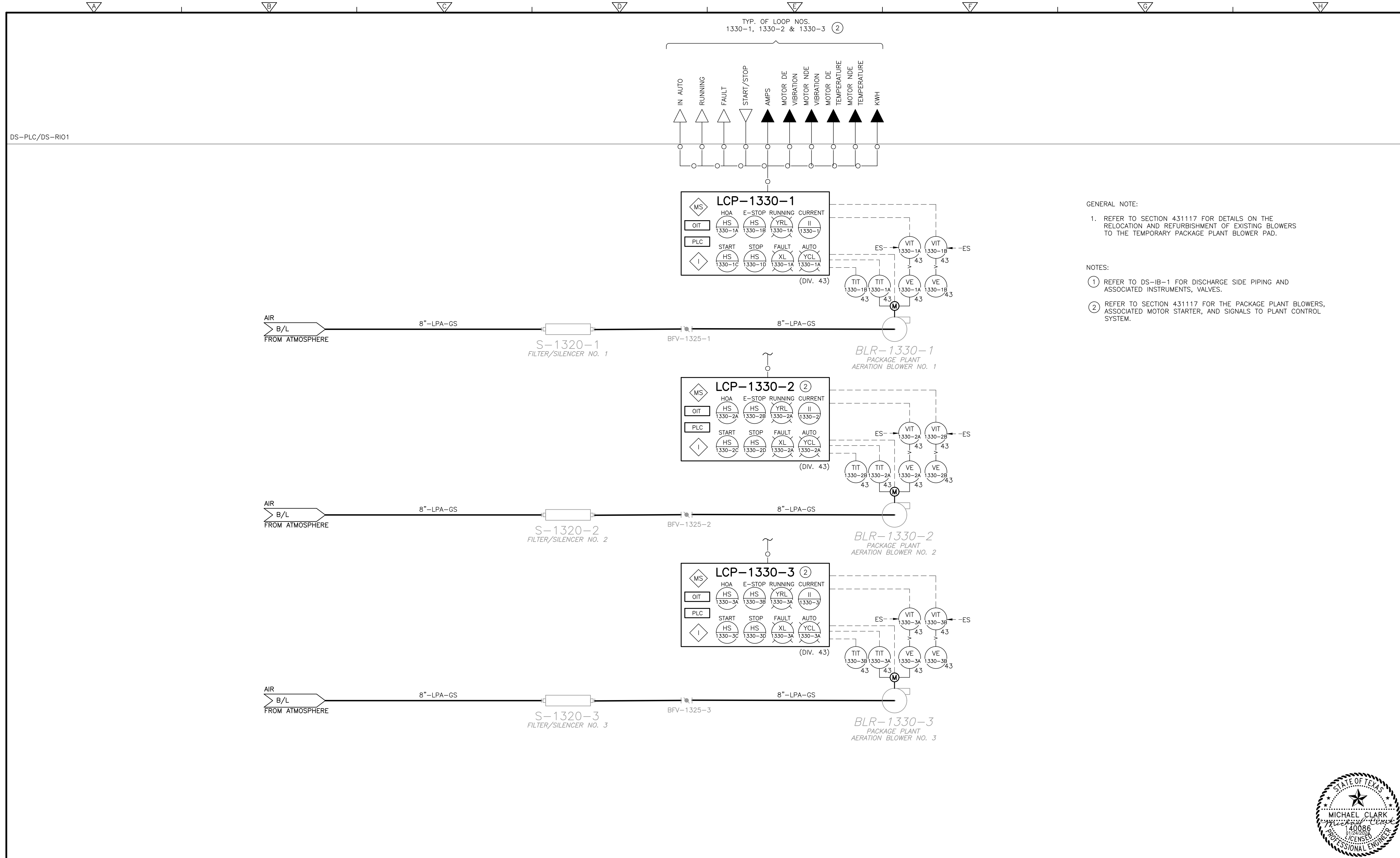
CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP  
 PACKAGE PLANT P&ID

PROJECT NO. 2048-264953  
 FILE NAME: DS-1B-1.DWG  
 SHEET NO.  
**DS-1B-1**



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- GENERAL NOTE:
- REFER TO SECTION 431117 FOR DETAILS ON THE RELOCATION AND REFURBISHMENT OF EXISTING BLOWERS TO THE TEMPORARY PACKAGE PLANT BLOWER PAD.
- NOTES:
- REFER TO DS-IB-1 FOR DISCHARGE SIDE PIPING AND ASSOCIATED INSTRUMENTS, VALVES.
  - REFER TO SECTION 431117 FOR THE PACKAGE PLANT BLOWERS, ASSOCIATED MOTOR STARTER, AND SIGNALS TO PLANT CONTROL SYSTEM.

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/24/24	PP	MC	CONFORMED DRAWINGS
2	12/28/23	PP	MC	REVISED FOR ADDENDUM NO. 2

DESIGNED BY: M. CLARK  
 DRAWN BY: S. SUPREETHA  
 SHEET CHK'D BY: S. RAJESH  
 CROSS CHK'D BY: A. DOODY  
 APPROVED BY: M. CLARK  
 DATE: NOVEMBER 2023



CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

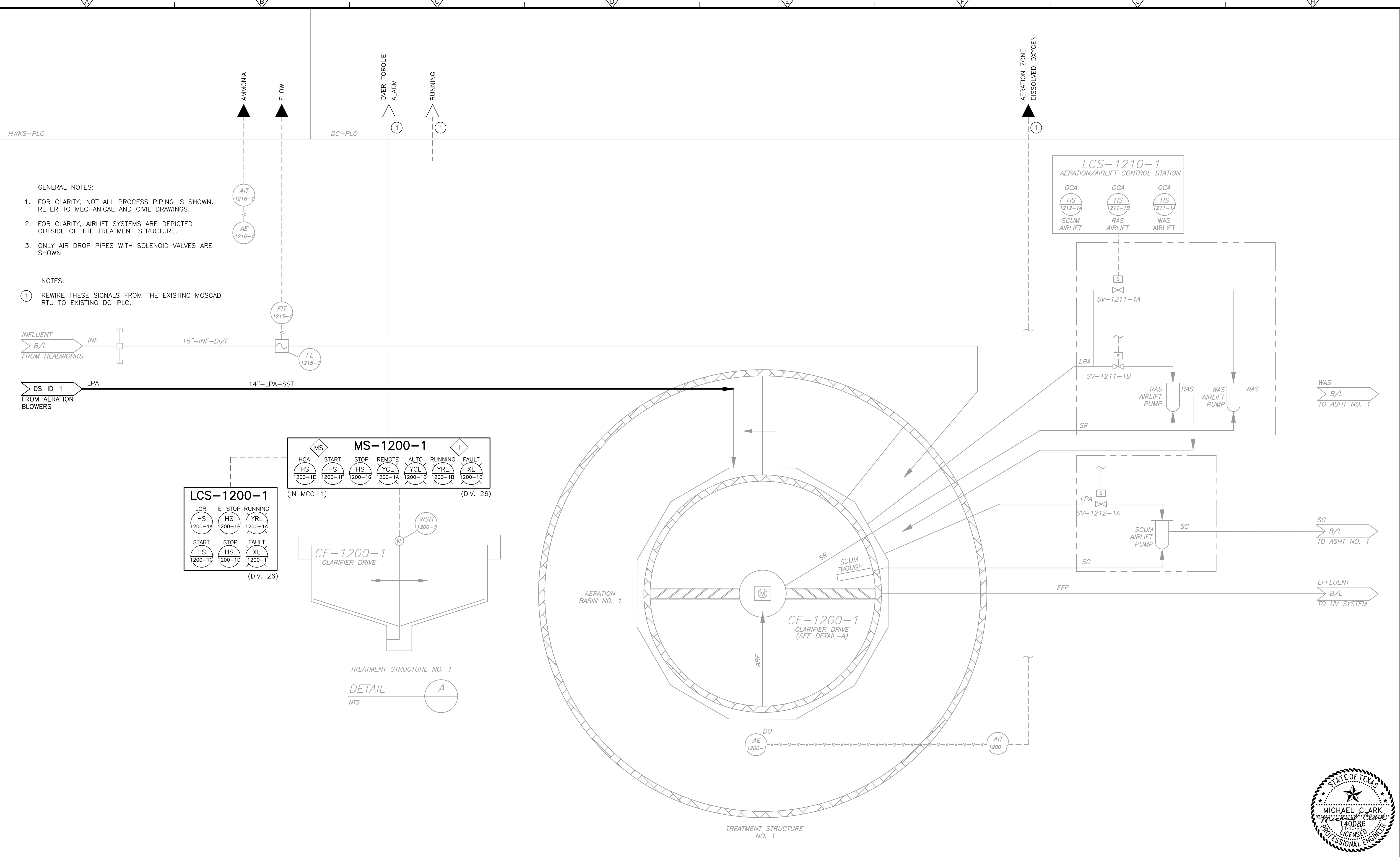
DOVE SPRINGS WWTP  
 PACKAGE PLANT P&ID (BLOWER RELOCATION)

PROJECT NO. 2048-264953  
 FILE NAME: DS-IB-2.DWG  
 SHEET NO. DS-IB-2





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- GENERAL NOTES:**
- FOR CLARITY, NOT ALL PROCESS PIPING IS SHOWN. REFER TO MECHANICAL AND CIVIL DRAWINGS.
  - FOR CLARITY, AIRLIFT SYSTEMS ARE DEPICTED OUTSIDE OF THE TREATMENT STRUCTURE.
  - ONLY AIR DROP PIPES WITH SOLENOID VALVES ARE SHOWN.

- NOTES:**
- ① REWIRE THESE SIGNALS FROM THE EXISTING MOSCAD RTU TO EXISTING DC-PLC.

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/24/24	PP	MC	CONFORMED DRAWINGS

DESIGNED BY: M. CLARK  
 DRAWN BY: A. MAXWELL  
 SHEET CHK'D BY: S. RAJESH  
 CROSS CHK'D BY: A. DOODY  
 APPROVED BY: M. CLARK  
 DATE: NOVEMBER 2023

**CDM Smith**  
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 Tel: (512) 346-1100  
 TBPE Firm Registration No. F-3043

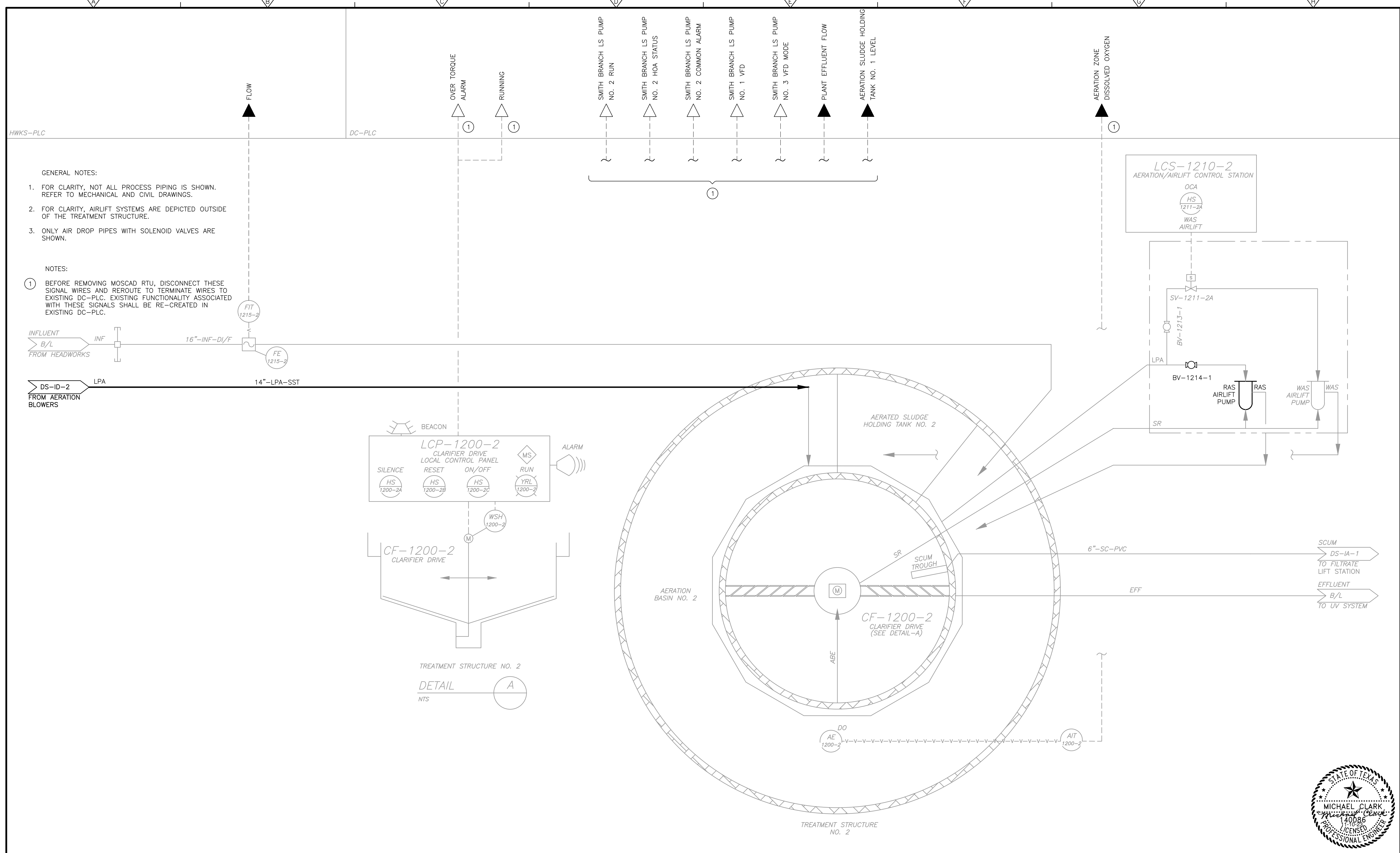
CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP  
 TREATMENT STRUCTURE NO. 1 P&ID

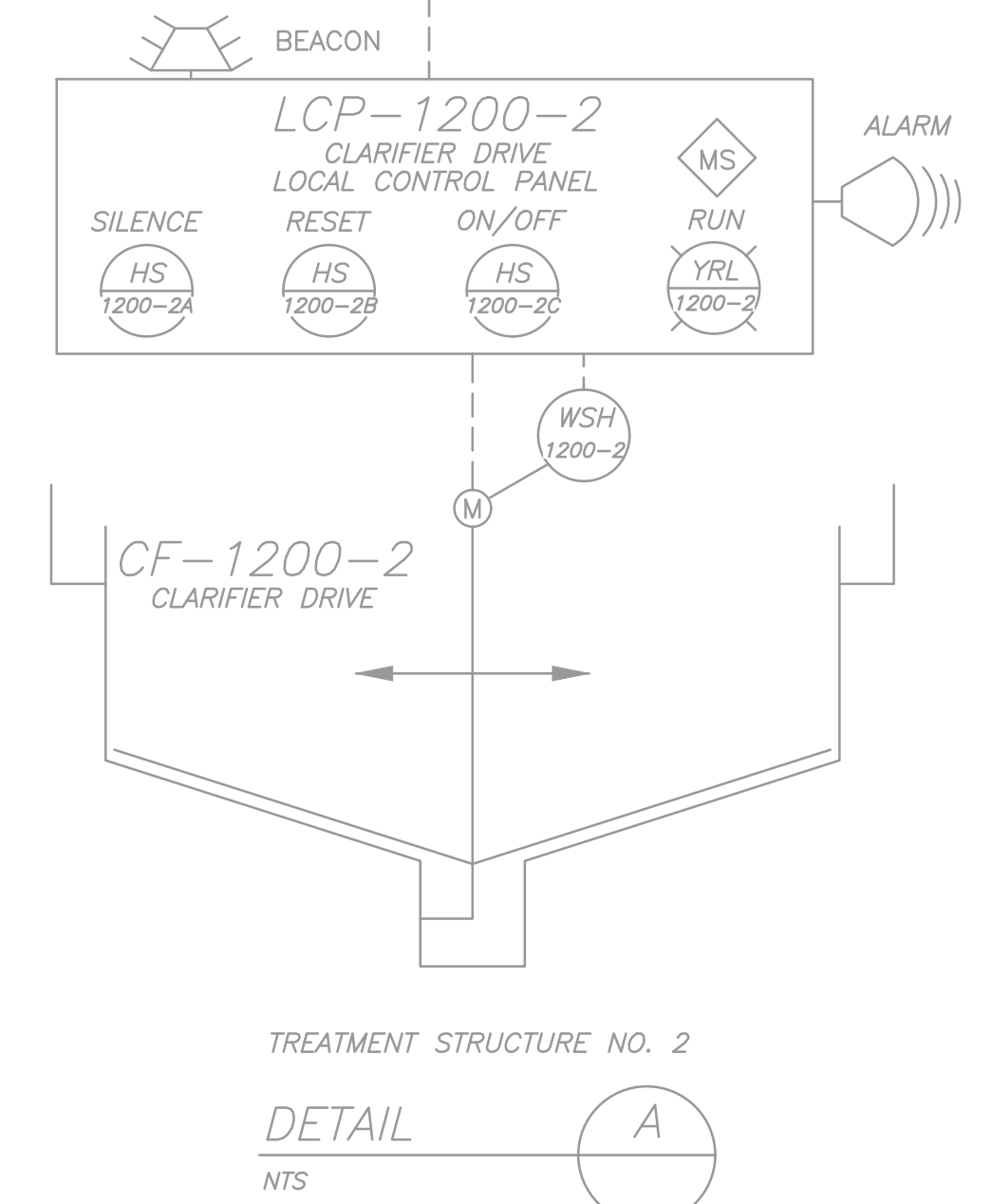
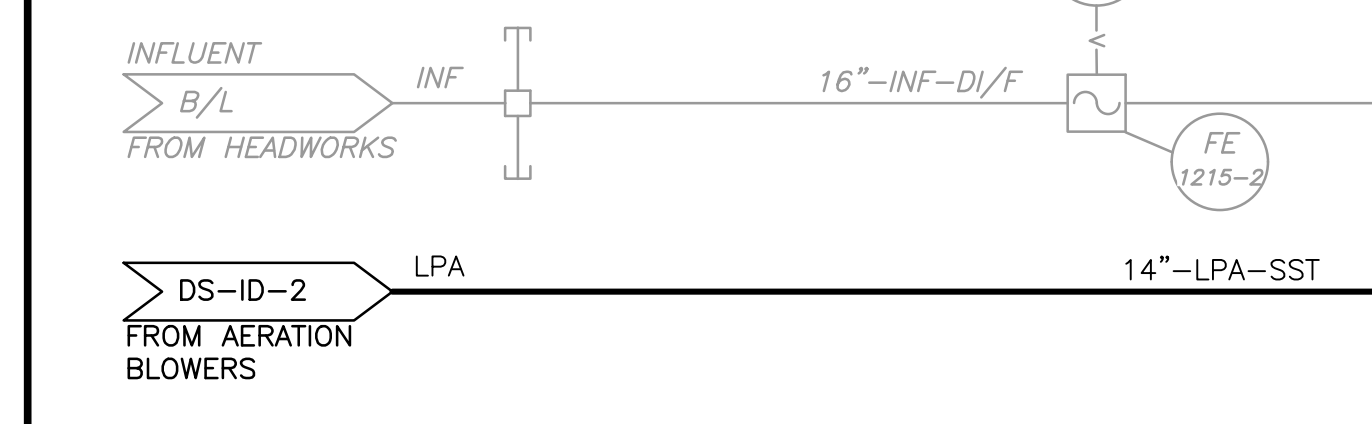
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  - FOR CLARITY, AIRLIFT SYSTEMS ARE DEPICTED OUTSIDE OF THE TREATMENT STRUCTURE.
  - ONLY AIR DROP PIPES WITH SOLENOID VALVES ARE SHOWN.
- NOTES:
- ① BEFORE REMOVING MOSCAD RTU, DISCONNECT THESE SIGNAL WIRES AND REROUTE TO TERMINATE WIRES TO EXISTING DC-PLC. EXISTING FUNCTIONALITY ASSOCIATED WITH THESE SIGNALS SHALL BE RE-CREATED IN EXISTING DC-PLC.



REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/24/24	PP	MC	CONFORMED DRAWINGS

DESIGNED BY: M. CLARK  
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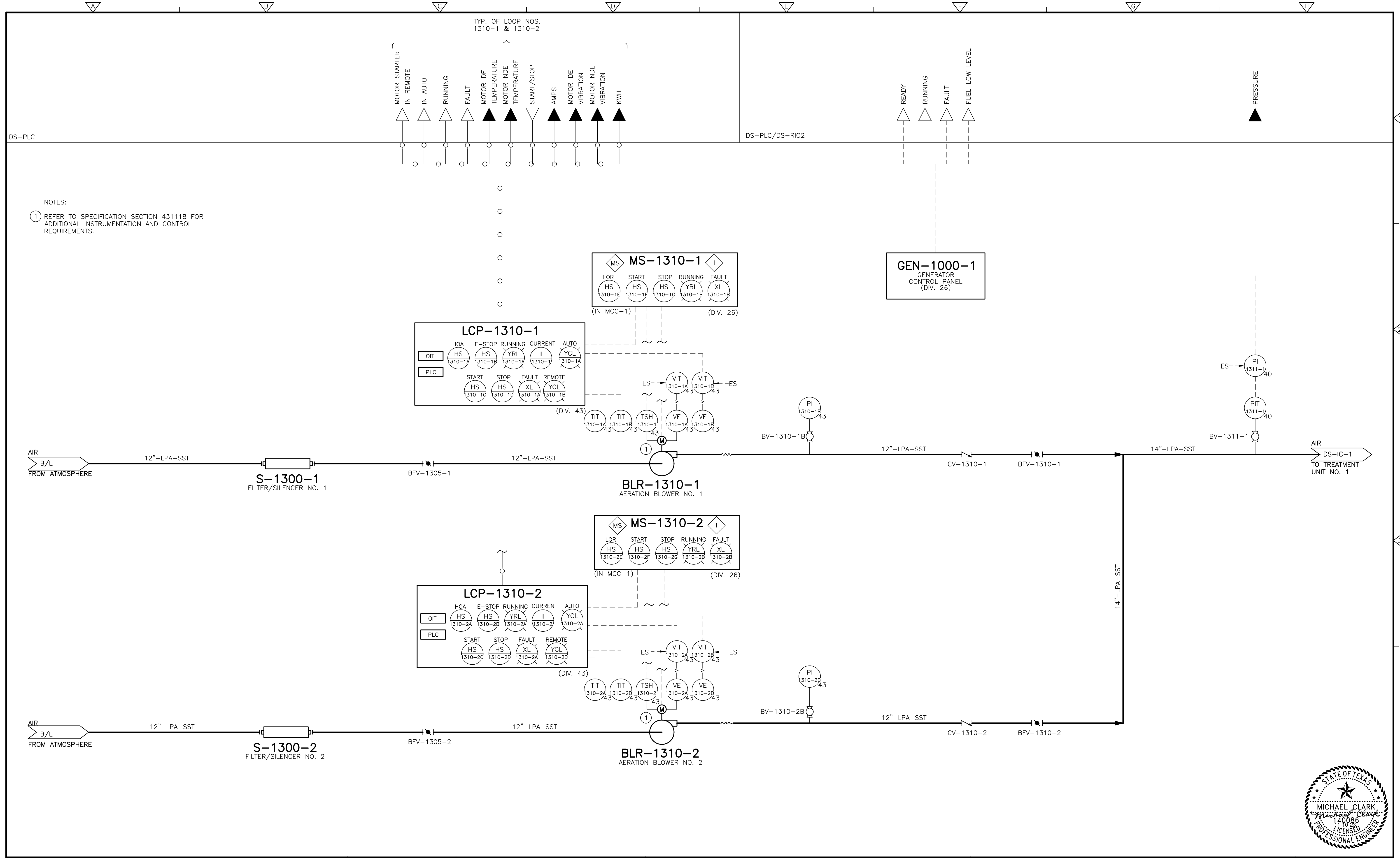
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CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP  
 TREATMENT STRUCTURE NO. 2 P&ID

PROJECT NO. 2048-264953  
 FILE NAME: DS-IC-2.DWG  
 SHEET NO.  
**DS-IC-2**

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NOTES:  
 ① REFER TO SPECIFICATION SECTION 431118 FOR ADDITIONAL INSTRUMENTATION AND CONTROL REQUIREMENTS.

DESIGNED BY:	M. CLARK
DRAWN BY:	A. MAXWELL
SHEET CHK'D BY:	S. RAJESH
CROSS CHK'D BY:	A. DOODY
APPROVED BY:	M. CLARK
DATE:	NOVEMBER 2023

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/24/24	PP	MC	CONFORMED DRAWINGS

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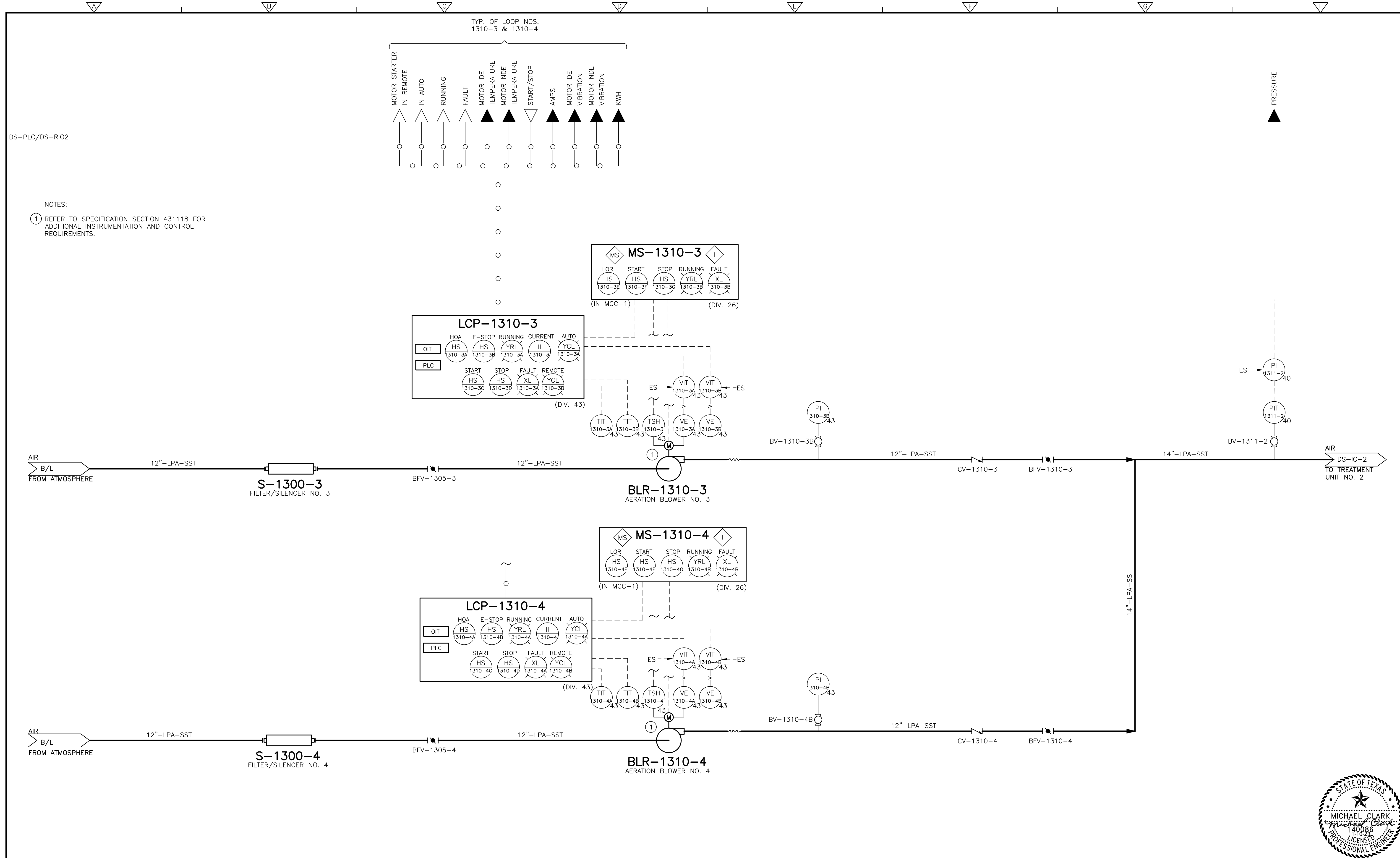
CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

DOVE SPRINGS WWTP  
 TREATMENT UNIT NO. 1  
 AERATION BLOWER SYSTEM P&ID

PROJECT NO.	2048-264953
FILE NAME:	DS-ID-1.DWG
SHEET NO.	DS-ID-1



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NOTES:  
 ① REFER TO SPECIFICATION SECTION 431118 FOR ADDITIONAL INSTRUMENTATION AND CONTROL REQUIREMENTS.

DESIGNED BY:	M. CLARK
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SHEET CHK'D BY:	S. RAJESH
CROSS CHK'D BY:	A. DOODY
APPROVED BY:	M. CLARK
DATE:	NOVEMBER 2023

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/24/24	PP	MC	CONFORMED DRAWINGS

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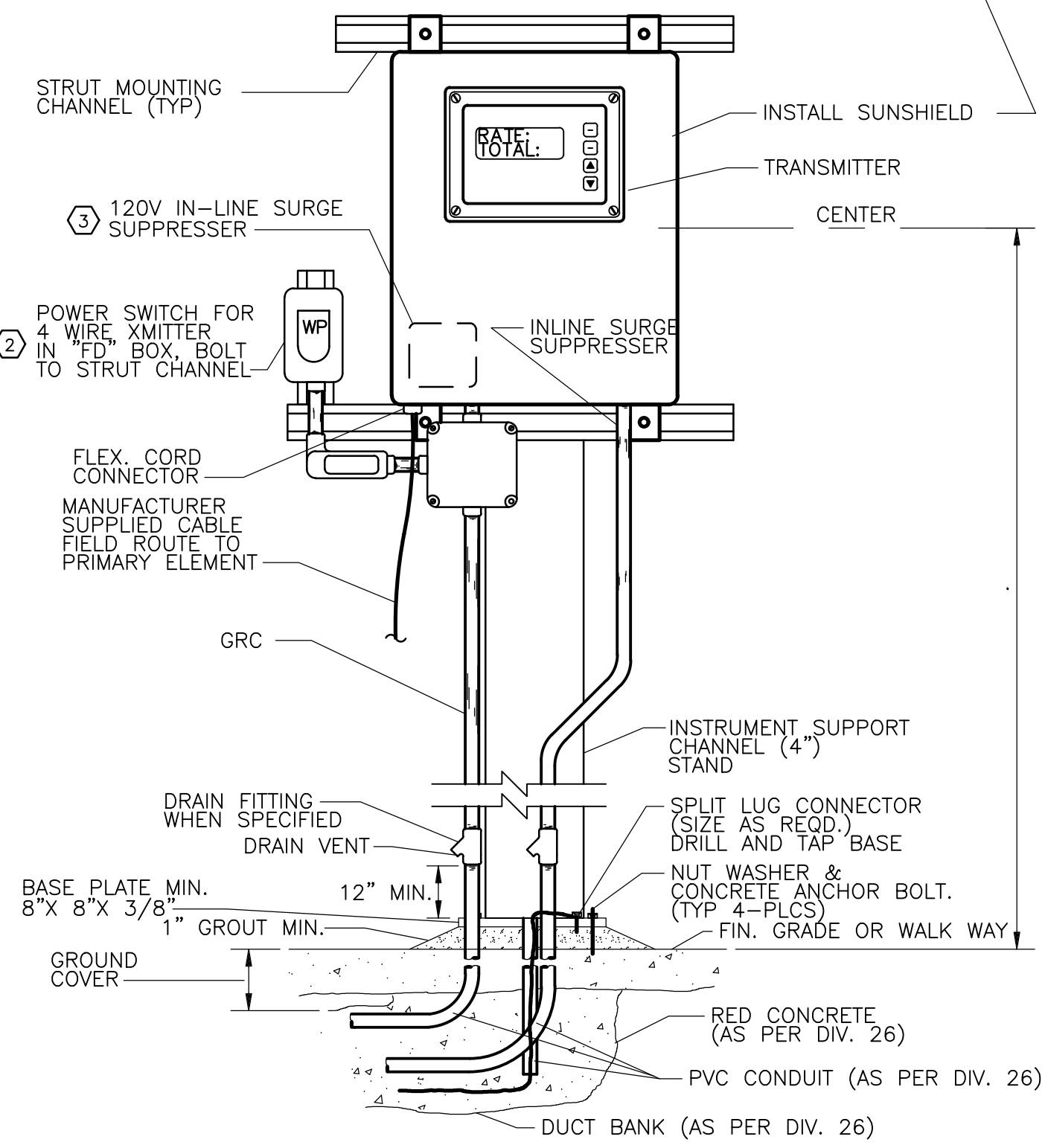
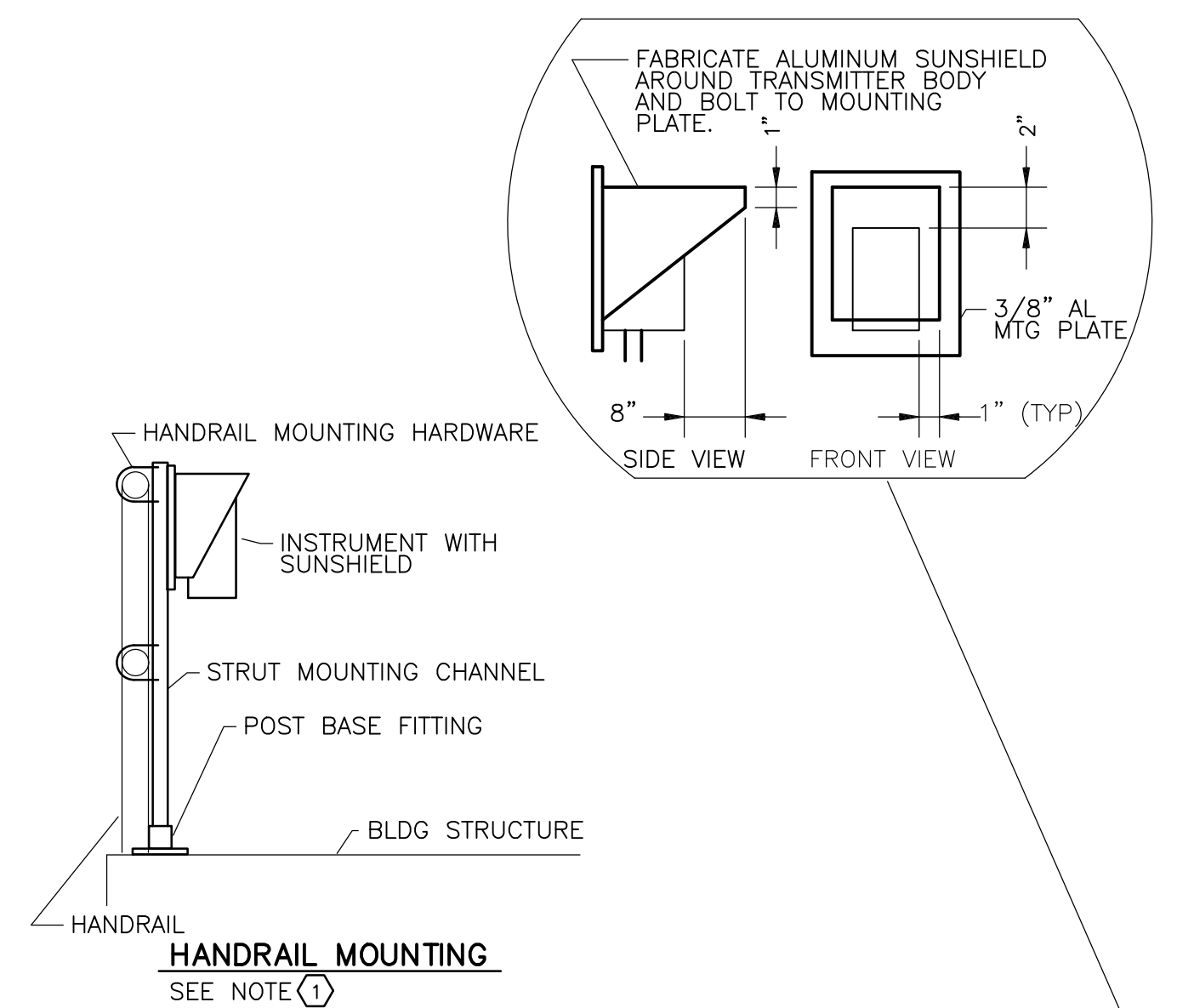
CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTreatment  
 REHABILITATION

DOVE SPRINGS WWTreatment  
 TREATMENT UNIT NO. 2  
 AERATION BLOWER SYSTEM P&ID

PROJECT NO.	2048-264953
FILE NAME:	DS-ID-2.DWG
SHEET NO.	DS-ID-2

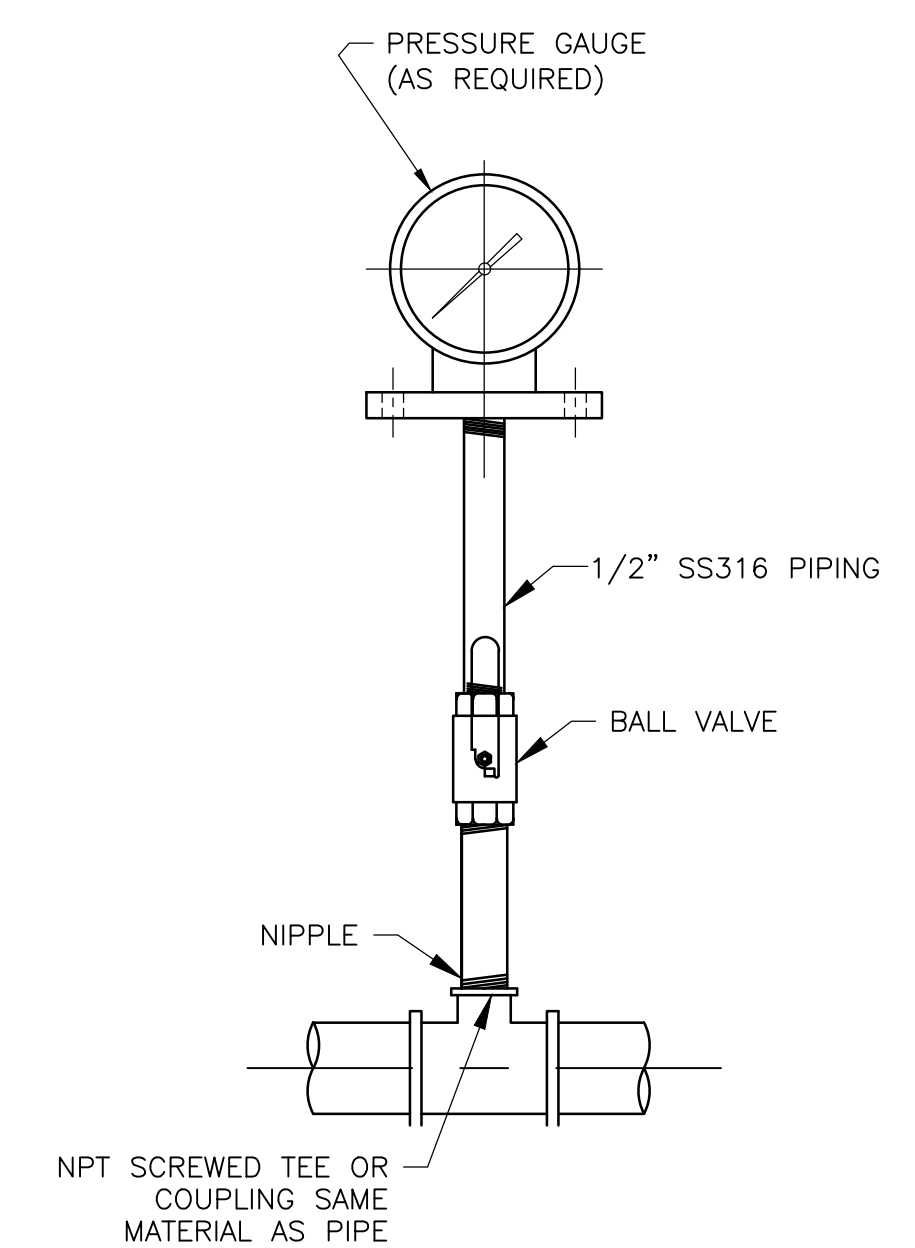


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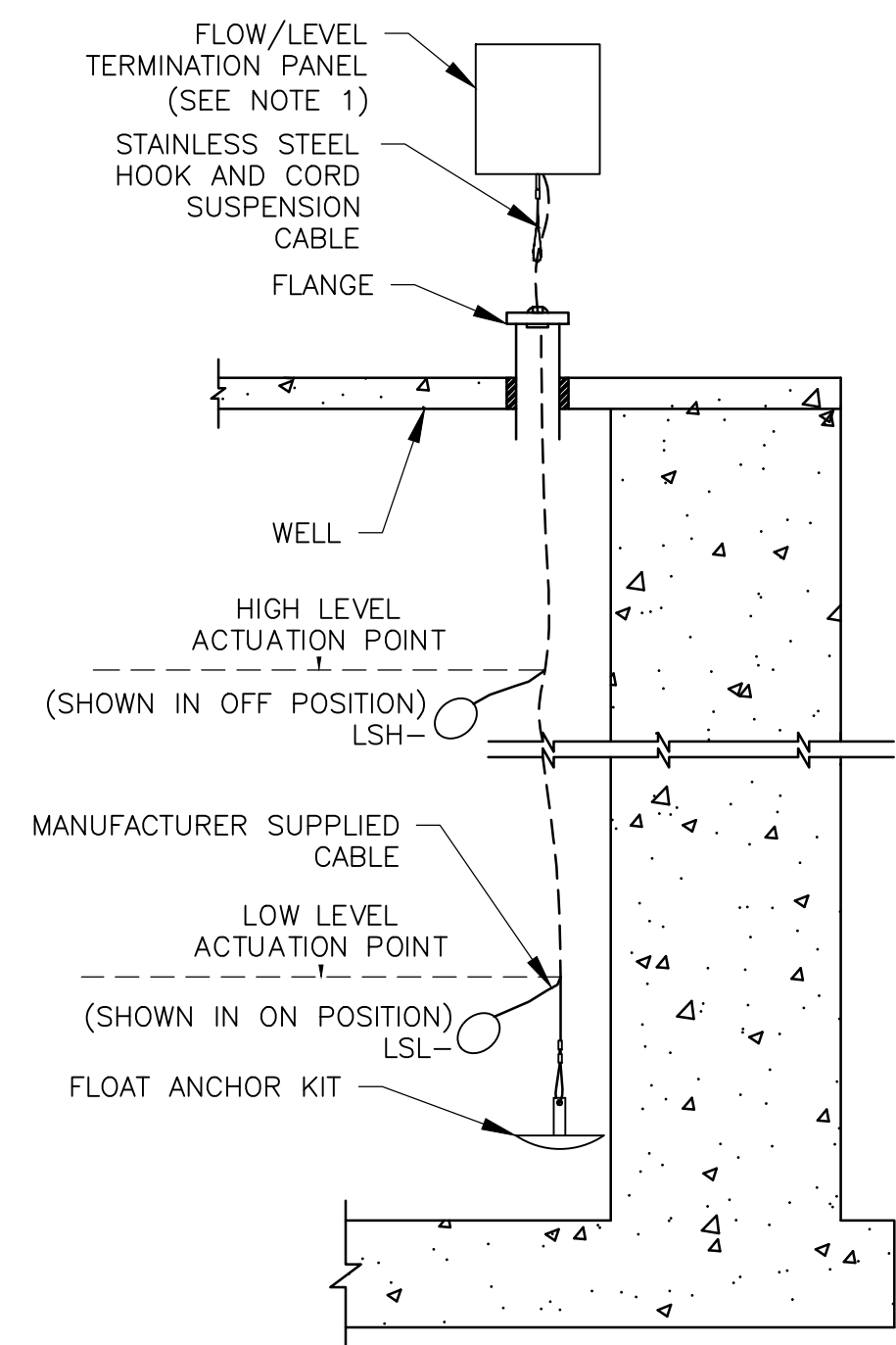
- NOTES:
- ① THIS DETAIL IS APPLICABLE FOR HANDRAIL MOUNTING. CONTRACTOR TO MODIFY INSTALLATION AS REQUIRED BY SITE CONDITIONS.
  - ② SWITCH REQUIRED WHEN UNIT IS REMOTE MOUNTED, OUT OF SIGHT OF CONTROLLING CIRCUIT BREAKER.
  - ③ DIN RAIL MOUNTED SILICON DIODE TYPE SUPPRESSOR FOR REMOTE UNITS MOUNTED OUTSIDE ONLY.

**TYPICAL INSTRUMENT INSTALLATION**  
**DETAIL A**  
NTS



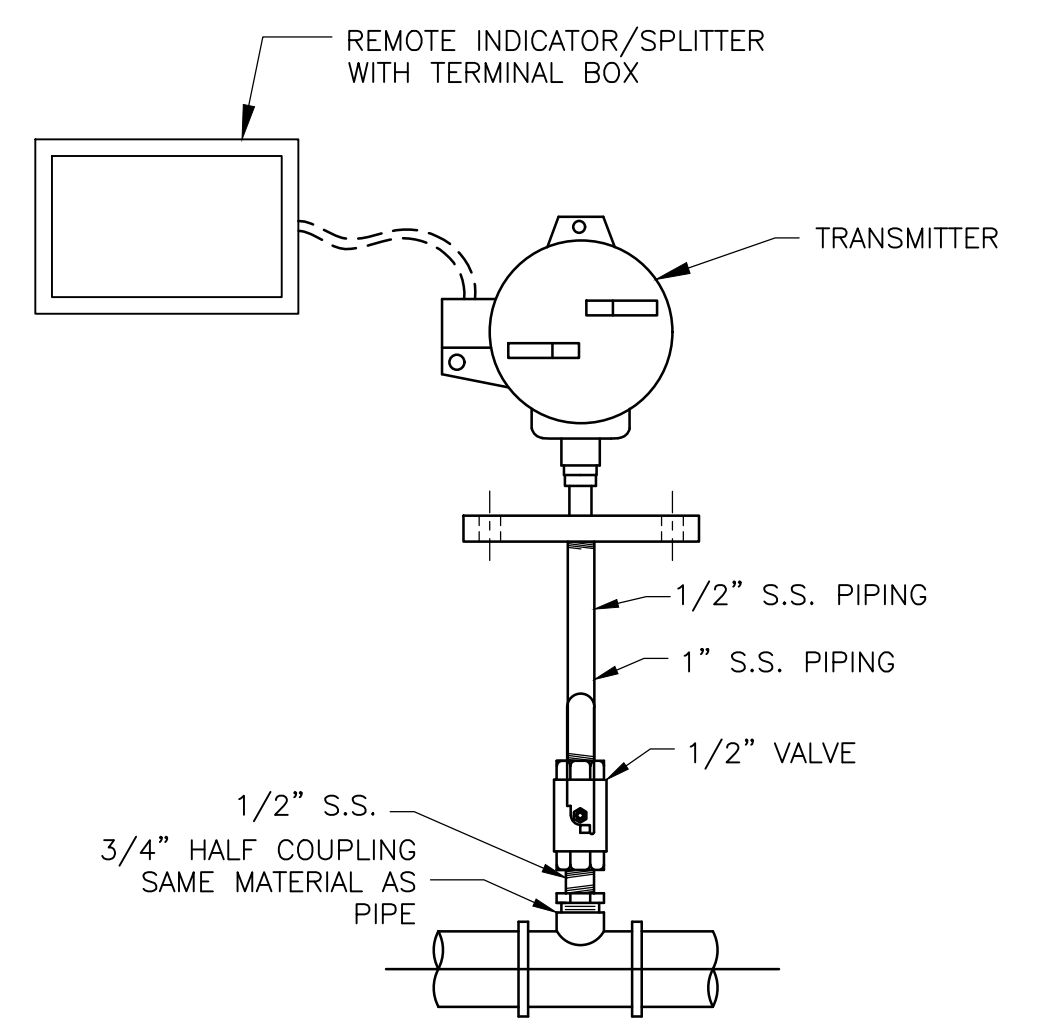
- GENERAL NOTE:
1. THIS IS THE STANDARD DETAIL, ALL PIPING AND VALVES SHALL BE COMPATIBLE TO PROCESS FLUID.

**PRESSURE GAUGE INSTALLATION (WITHOUT DIAPHRAGM SEAL)**  
**DETAIL B**  
NTS



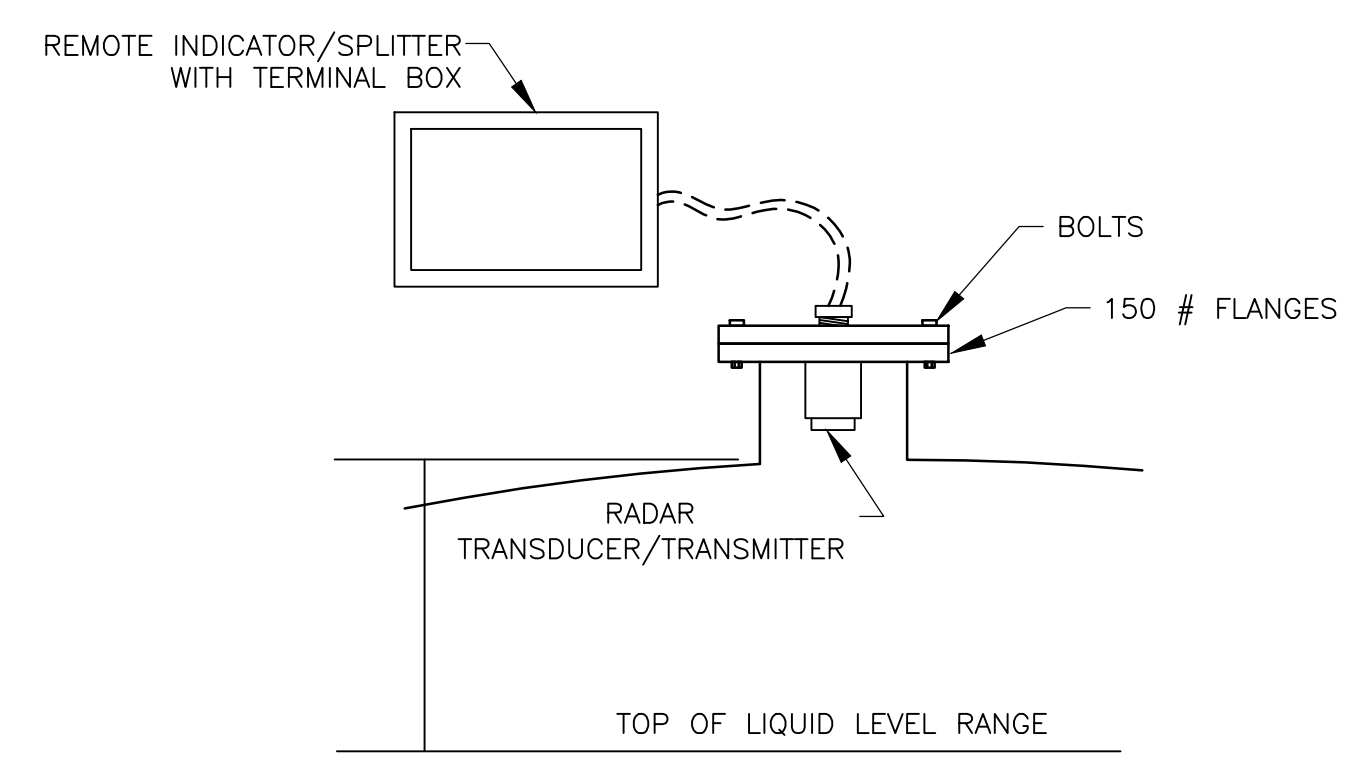
- NOTES:
1. PROVIDE 15" X 15" MINIMUM SIZED FLOAT TERMINATION PANEL. PROVIDE J-HOOK INSIDE PANEL TO COIL EXTRA CABLE. PROVIDE TERMINATION BLOCKS. ALL CABLES AND WIRES SHALL BE LABELED.

**FLOAT SWITCH (CABLE SUSPENSION)**  
**DETAIL E**  
NTS



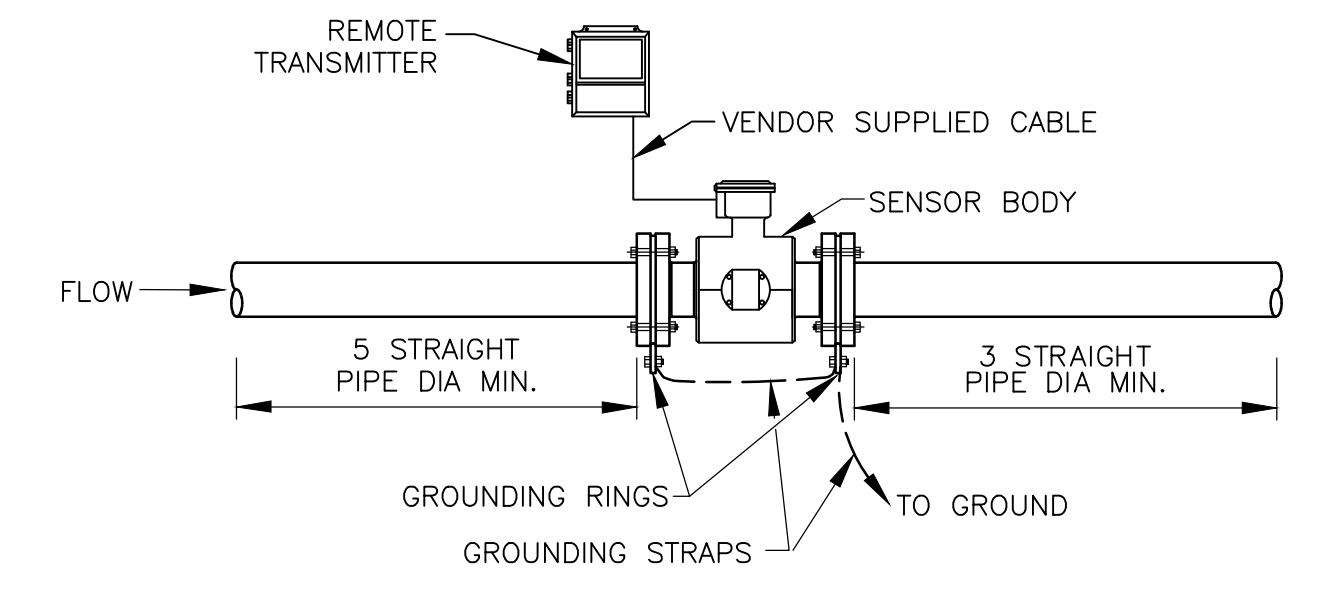
- GENERAL NOTE:
1. THIS IS THE STANDARD DETAIL, ALL PIPING AND VALVES SHALL BE COMPATIBLE TO PROCESS FLUID.

**PRESSURE TRANSMITTER**  
**DETAIL C**  
NTS



- NOTES:
1. REFER PROCESS MECHANICAL SHEET, FOR PROPER FLANGE SIZE.
  2. MAINTAIN ALL DISTANCES PER MANUFACTURER RECOMMENDATIONS.

**RADAR LEVEL (CLOSED TANK)**  
**DETAIL F**  
NTS



- NOTES:
1. PROVIDE GROUNDING RING(S) AS RECOMMENDED BY MANUFACTURER.
  2. PROVIDE SENSOR LINING TO PREVENT BUILDUP ON METER.

**MAGNETIC FLOW METER**  
**DETAIL D**  
NTS

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/24/24	PP	MC	CONFORMED DRAWINGS

DESIGNED BY: M. CLARK  
 DRAWN BY: A. MAXWELL  
 SHEET CHK'D BY: S. RAJESH  
 CROSS CHK'D BY: A. DOODY  
 APPROVED BY: M. CLARK  
 DATE: NOVEMBER 2023



CITY OF GEORGETOWN, TEXAS  
 DOVE SPRINGS WWTP  
 REHABILITATION

INSTRUMENTATION INSTALLATION DETAILS I  
 IZ-1

PROJECT NO. 2048-264953  
 FILE NAME: IZ-1.DWG  
 SHEET NO. IZ-1



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RTU-DSWTP PANEL MODIFICATIONS

PHOTOGRAPH 1  
 NTS

GENERAL NOTES:

1. REMOVE AND REPLACE THE MOSCAD RTU AND ITS ASSOCIATED DEVICES WITH THE NEW CONTROLLOGIX PLC-DS.
2. THE CONTRACTOR SHALL DE-TERMINATE ALL EXISTING FIELD WIRING CONNECTED WITH THE MOSCAD RTU SIGNALS AND LABEL IT WITH ITS LOOP/TAG NUMBER BEFORE DEMOLITION OR TRANSFERRING TO THE EXISTING PLC-DC.
3. THE CONTRACTOR SHALL SALVAGE THE EXISTING MOSCAD RTU WITH ITS ASSOCIATED DEVICES AND TURN THEM OVER TO THE OWNER.
4. THE CONTRACTOR SHALL RE-TERMINATE THE EXISTING I/O WIRING RELATED TO MOSCAD RTU TO THE EXISTING PLC-DC.

REV. NO.	DATE	DRWN	CHKD	REMARKS
A	1/24/24	PP	MC	CONFORMED DRAWINGS

DESIGNED BY: M. CLARK  
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CITY OF GEORGETOWN, TEXAS  
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 REHABILITATION

RTU-DSWTP PANEL MODIFICATIONS

PROJECT NO. 2048-264953  
 FILE NAME: IZ-2  
 SHEET NO. IZ-2

