

- C9.00 - LIFT STATION SITE PLAN
- C9.01 - WET WELL PLAN & PROFILE
- C9.02 - SANITARY SEWER PLAN & PROFILE - FORCE MAIN
- C9.03 - SANITARY SEWER PLAN & PROFILE - FORCE MAIN
- C9.04 - SANITARY SEWER PLAN & PROFILE - FORCE MAIN
- C9.05 - SANITARY SEWER PLAN & PROFILE - FORCE MAIN
- C9.D1 - LIFT STATION DETAILS
- C9.D2 - LIFT STATION DETAILS
- C9.D3 - LIFT STATION DETAILS

ELECTRICAL PLANS

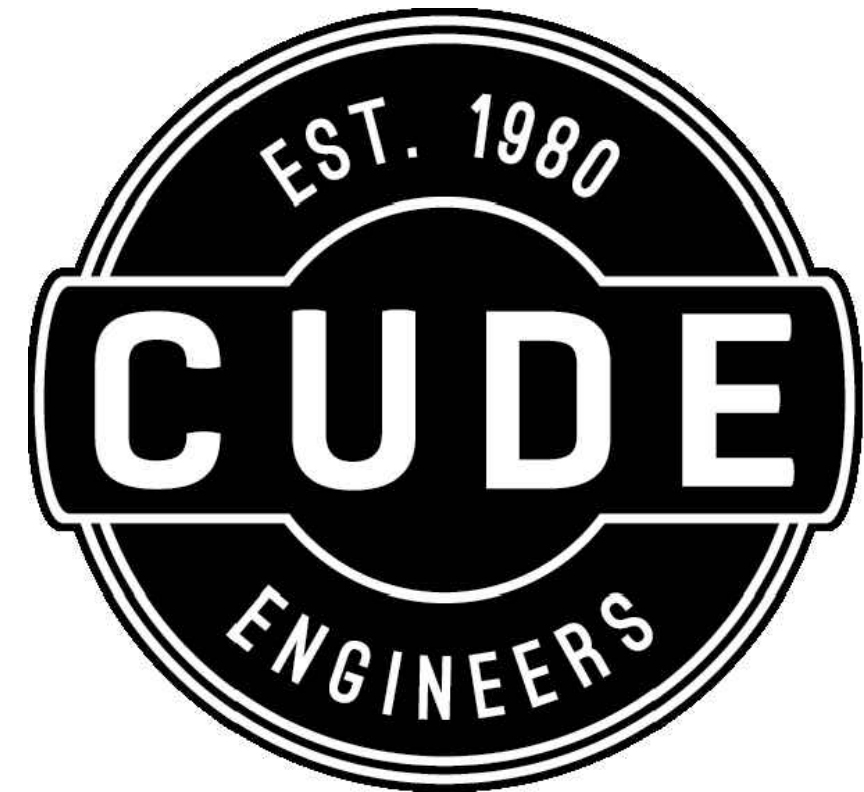
- E-1 ELECTRICAL SYMBOLS AND NOTES
- E-2 ELECTRICAL GENERATOR SPECIFICATIONS
- E-3 ELECTRICAL ATS SPECIFICATIONS
- E-4 ELECTRICAL SITE PLAN
- E-5 ELECTRICAL ONE-LINE DIAGRAM AND SCHEDULES
- E-6 ELECTRICAL PUMP CONTROL PANEL
- E-7 ELECTRICAL PUMP CONTROL PANEL
- E-8 ELECTRICAL SCADA PANEL
- E-9 ELECTRICAL SCADA DETAILS
- E-10 ELECTRICAL GENERAL DETAILS

STRUCTURAL PLANS

- S1 - STRUCTURAL DETAILS
- S2 - STRUCTURAL DETAILS

CONSTRUCTION DOCUMENTS FOR

PARKHOUSE LIFT STATION



SAN ANTONIO | AUSTIN | SAN MARCOS

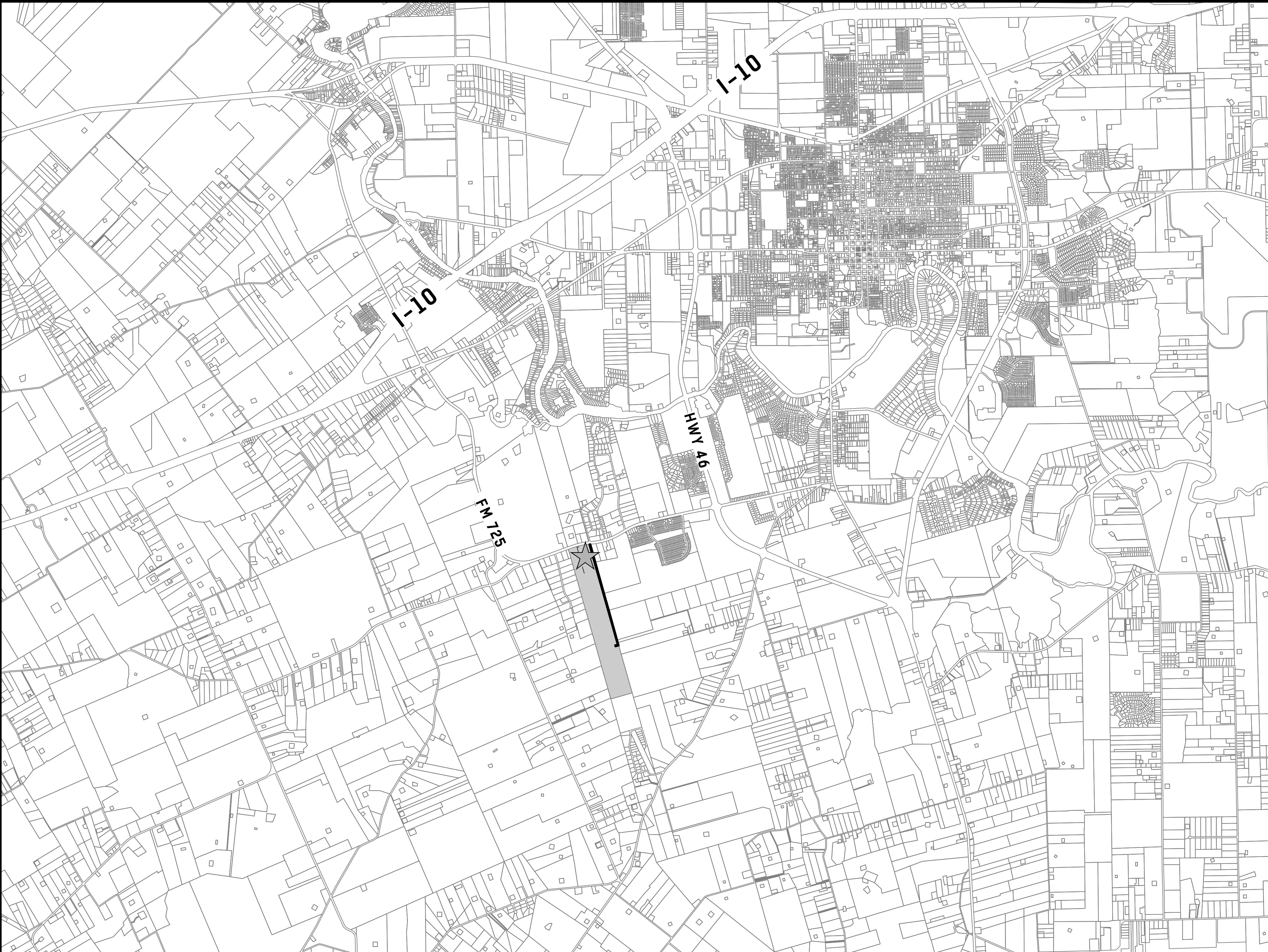
1290 WONDER WORLD DRIVE, SUITE 1240
SAN MARCOS, TEXAS 78666

P:(512) 260.9100

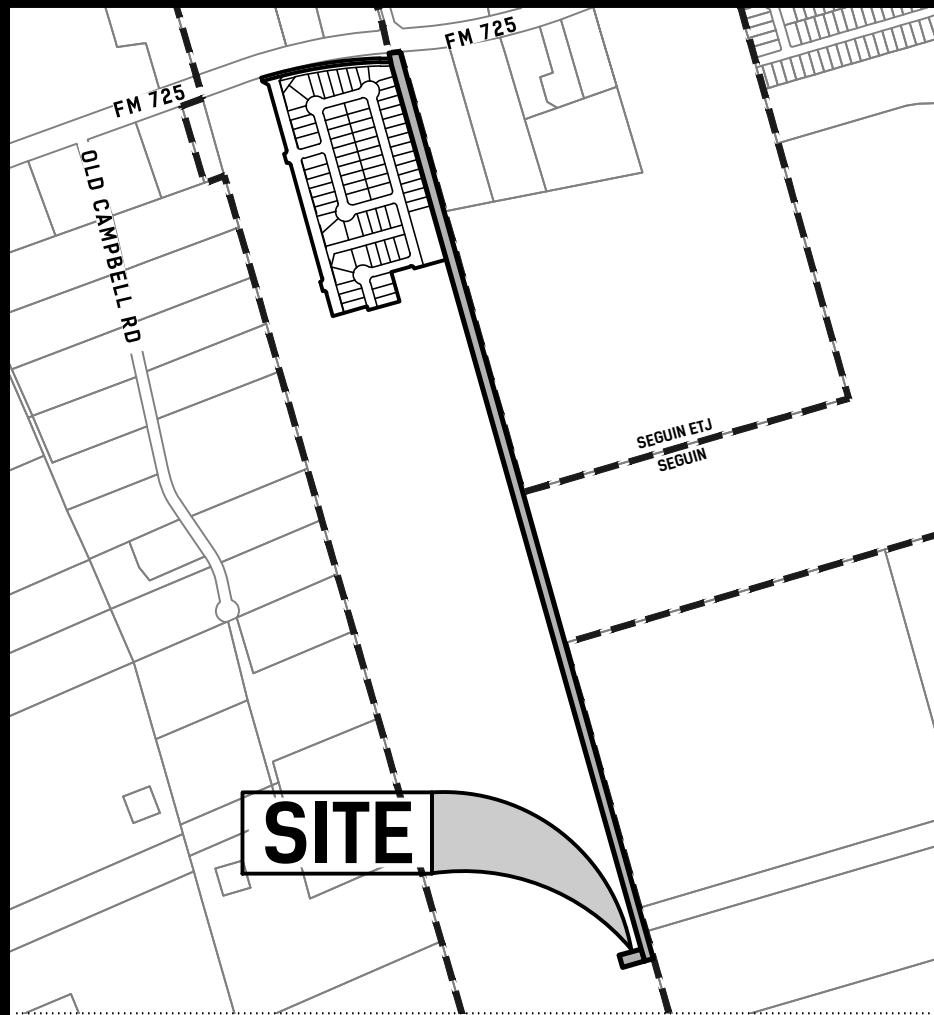
TBPE FIRM NO. 455

TBPLS FIRM NO. 10048500

SBE CERTIFIED FIRM



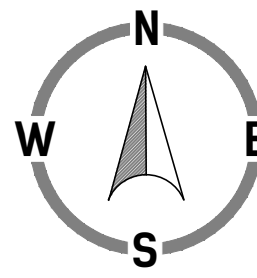
VICINITY MAP
N.T.S.



LOCATION MAP
SCALE: 1" = 1000'



DEVELOPER:
REPUBLIC LAND AND DEVELOPMENT COMPANY, LP
C/O KING FISH DEVELOPMENT, LLC
CONTACT PERSON: OSCAR DOMINGUEZ
2722 WEST BITTERS ROAD, SUITE 106
SAN ANTONIO, TEXAS 78248
TEL: (210) 882-6800



SITE ADDRESS:
FM 725, SEGUIN,
TEXAS 78155

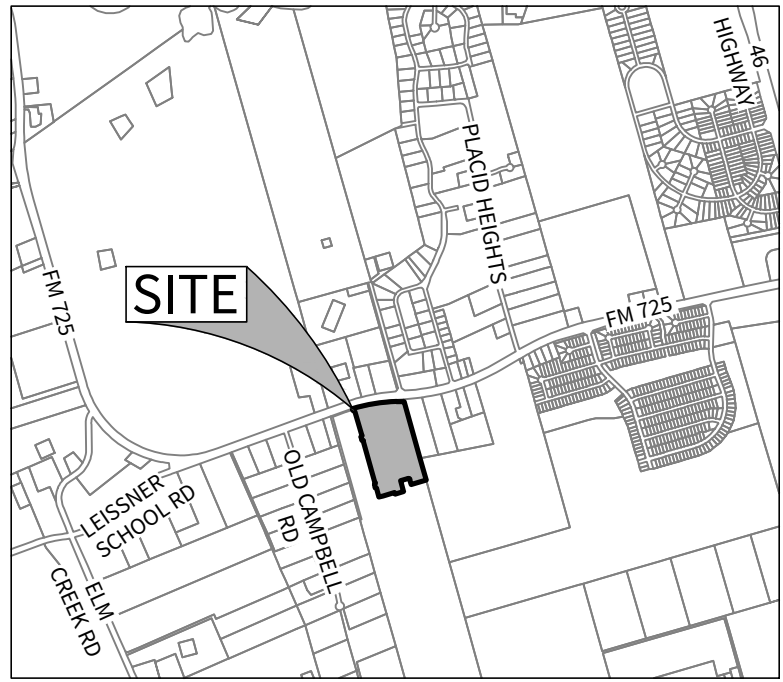
PLAN SET DATE:
APRIL 2025

PROJECT NUMBER:
04154.001



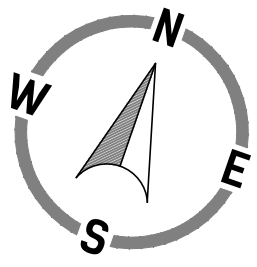
07/31/25

THIS PLAN SET HAS BEEN PREPARED, DESIGNED
AND REVIEWED UNDER MY DIRECT SUPERVISION.



LOCATION MAP
N.T.S.

NOTE: REQUEST AND REFERENCE LIFT STATION TECHNICAL
MANUAL FROM CAPITAL PROJECTS AND ENGINEERING.



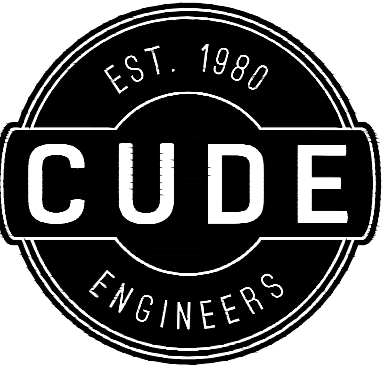
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0 10 20

LEGEND

PROPERTY LINE	---
EASEMENT	---
EXISTING EDGE OF PAVEMENT	---
PROPOSED CHAINLINK FENCE	-x-x-x-
PROPOSED SEWER GRAVITY MAIN	---WW---
PROPOSED SEWER FORCE MAIN	---FM---
PROPOSED CONCRETE PAD	[Pattern]
PROPOSED ASPHALT PAVEMENT	[Pattern]

KEYNOTES:

- 1 CONCRETE SLAB - SEE DETAIL 10 ON SHEET C9.D2
- 2 ASPHALT PAVEMENT - SEE DETAIL 11 ON SHEET C9.D2
- 3 2 - 8' WIDE DOUBLE SWING GATE
- 4 5' PEDESTRIAN GATE
- 5 CHAINLINK FENCE - SEE DETAILS ON SHEET C9.D3
- 6 LIGHT POST
- 7 ELECTRIC POWER SERVICE POLE & METER RACK
- 8 SERVICE RACK AND CANOPY
- 9 EMERGENCY GENERATOR WITH SOUND ATTENUATION ENCLOSURE.
- 10 8" SEWER GRAVITY MAIN
- 11 8" SEWER FORCE MAIN
- 12 36" LID MANHOLE WITH SUMP ADJACENT TO WET WELL
- 13 8" INSIDE DIAMETER WET WELL
- 14 CONCRETE SIDEWALK
- 15 15' UTILITY EASEMENT
- 16 65' x 120' LIFT STATION LOT
- 17 20' BUILDING SETBACK LINE



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PARK HOUSE
UNIT 1
LIFT STATION SITE PLAN

DATE

07/11/2025

PROJECT NO.
04154-000

DRAWN BY
SG/JVA

CHECKED BY
JL/AC

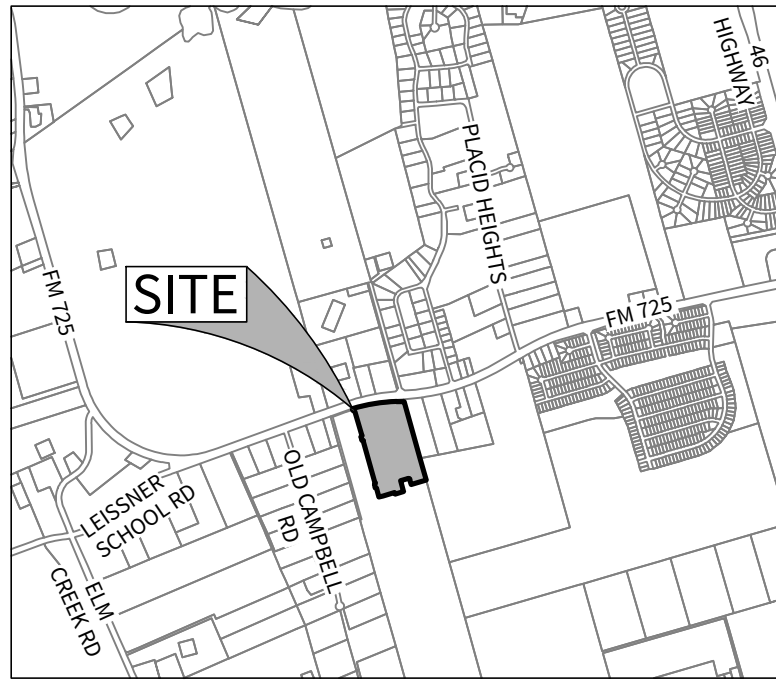
REVISIONS

1. 2. 3. 4. 5. 6. 7. 8.

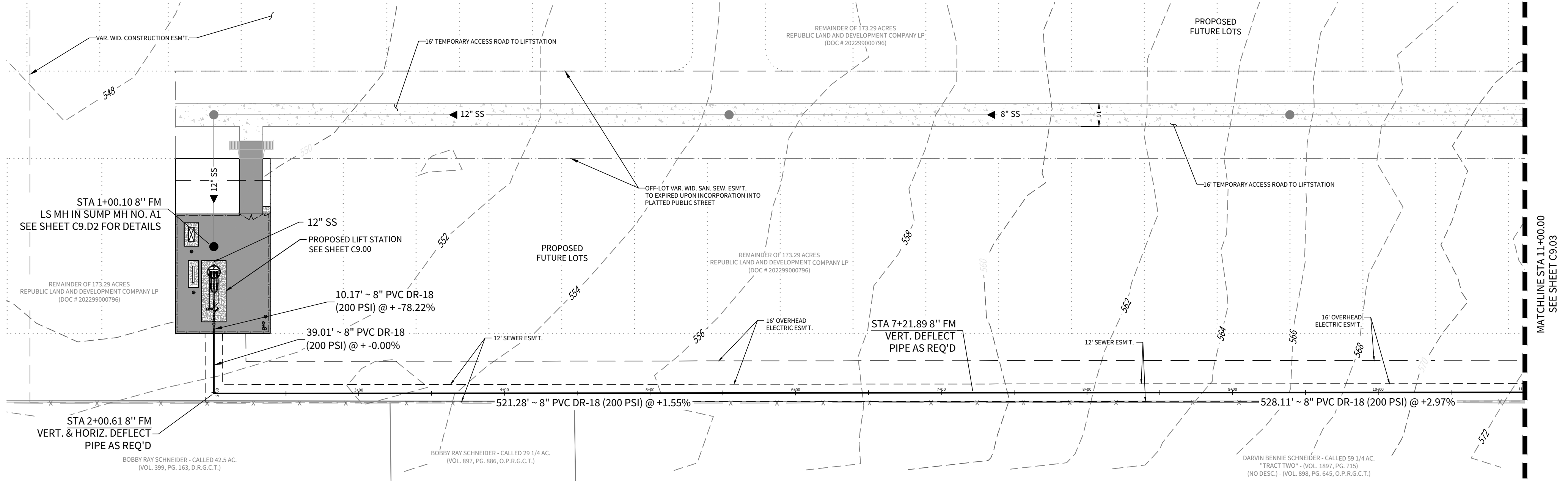
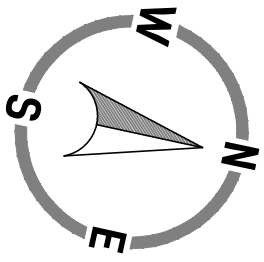


CUDE ENGINEERS
FEEBELS No. 10048500

C9.00



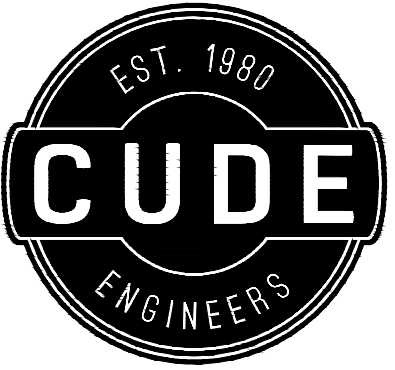
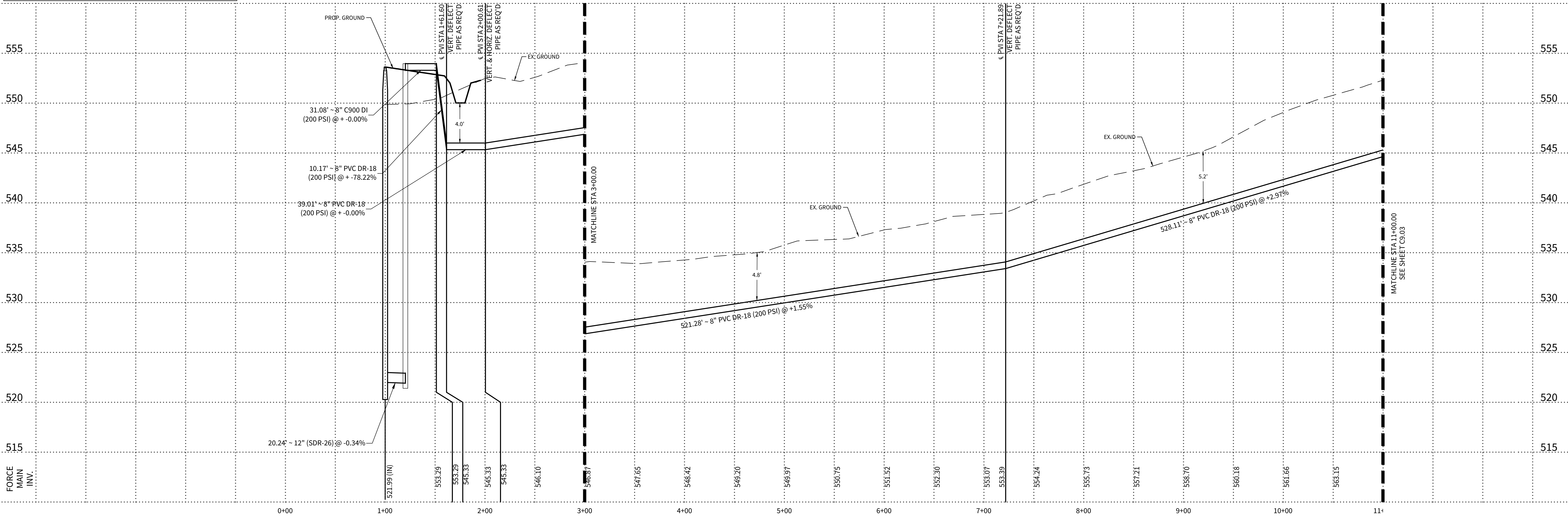
LOCATION MAP
N.T.S.



8" FORCE MAIN
STA. 1+00.00 TO STA. 11+00.00

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

TRENCH EXCAVATION PROTECTION
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.



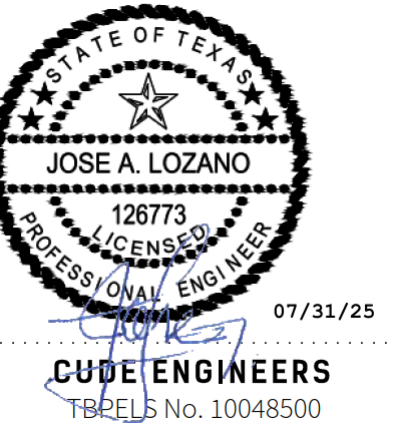
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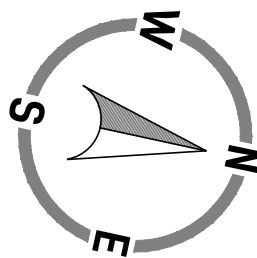
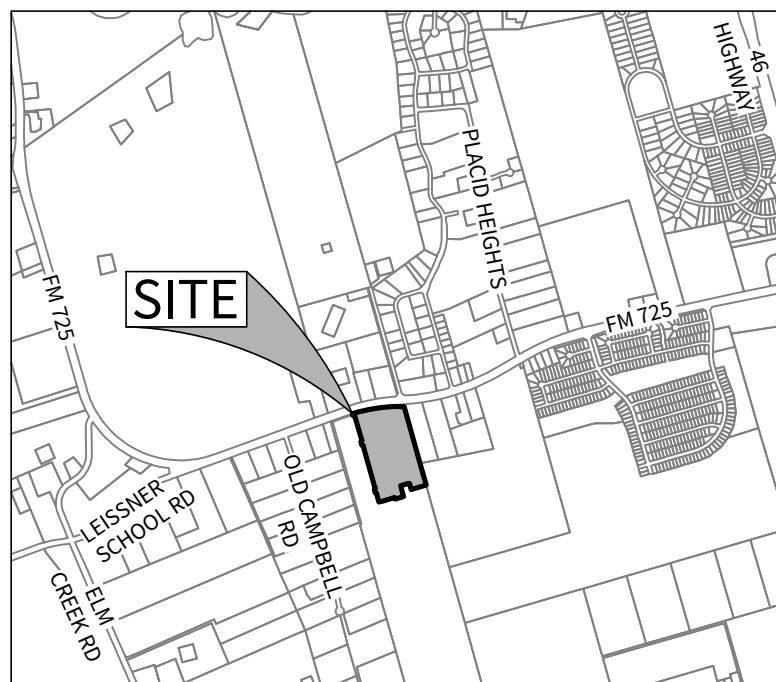
**PARK HOUSE
UNIT 1**

SANITARY SEWER PLAN & PROFILE - FORCE MAIN

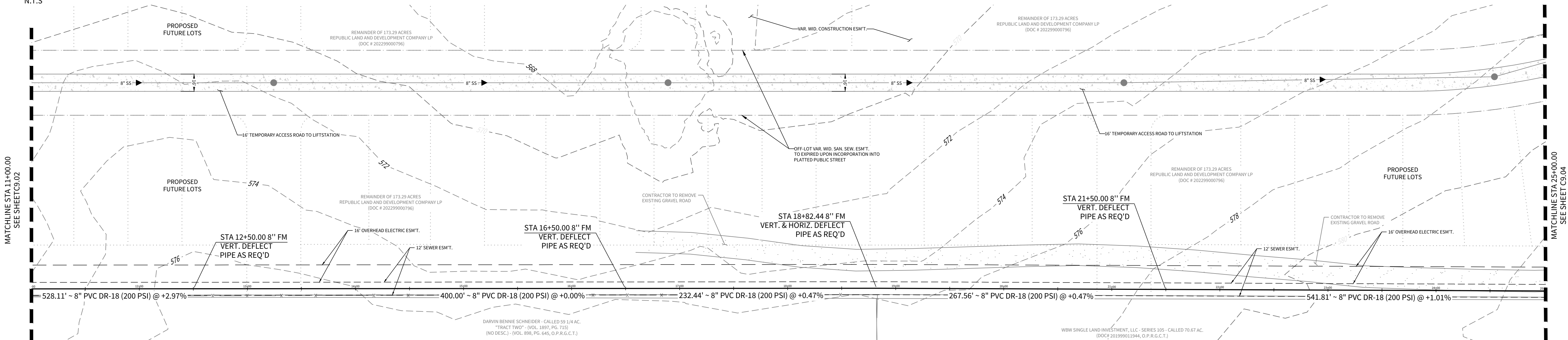
DATE	07/11/2025
PROJECT NO.	04154-000
DRAWN BY	SG/JVA
CHECKED BY	JL/AC

REVISIONS	1.	2.	3.	4.	5.	6.	7.	8.
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LOCATION MAP
N.T.S.

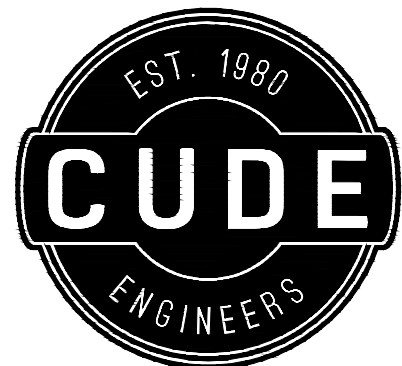
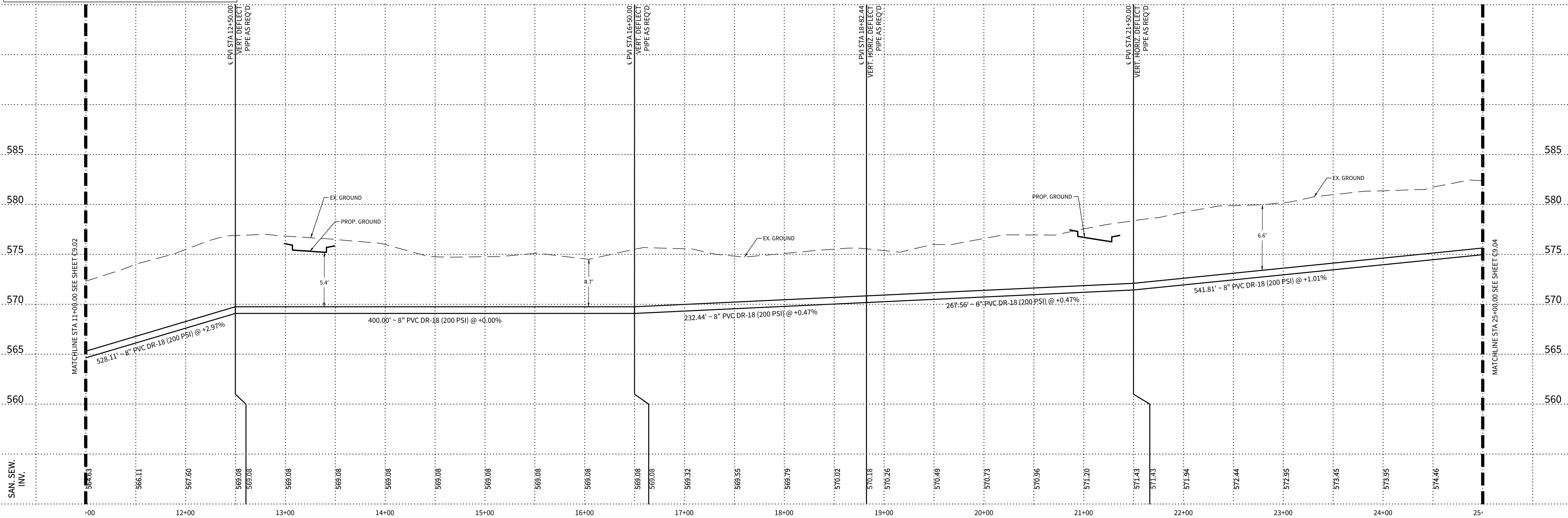


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8" FORCE MAIN

STA. 11+00.00 TO STA. 25+00.00

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

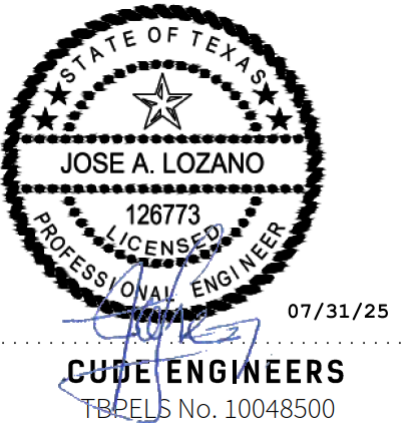


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PARK HOUSE
UNIT 1
SANITARY SEWER PLAN & PROFILE - FORCE MAIN

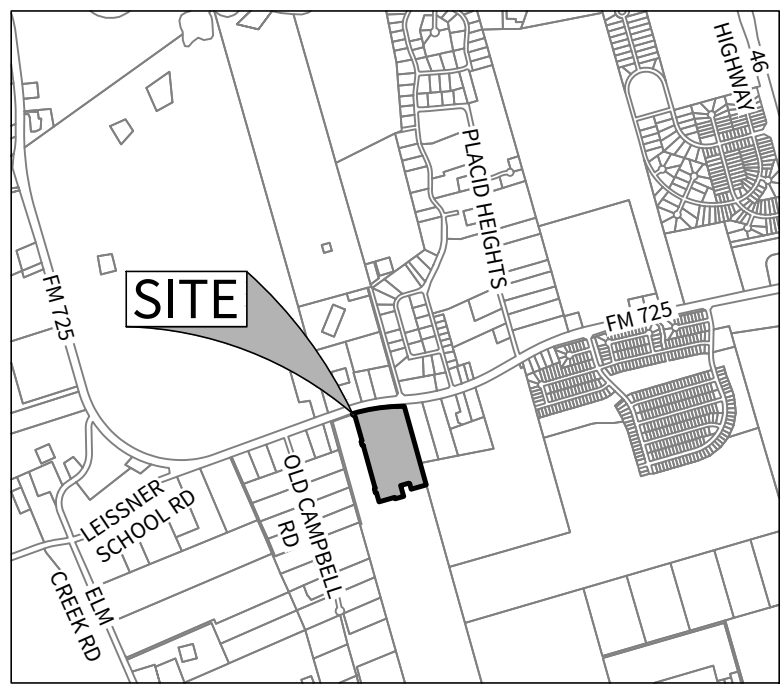
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07/11/2025
PROJECT NO.
04154-000
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JL/AC

REVISIONS
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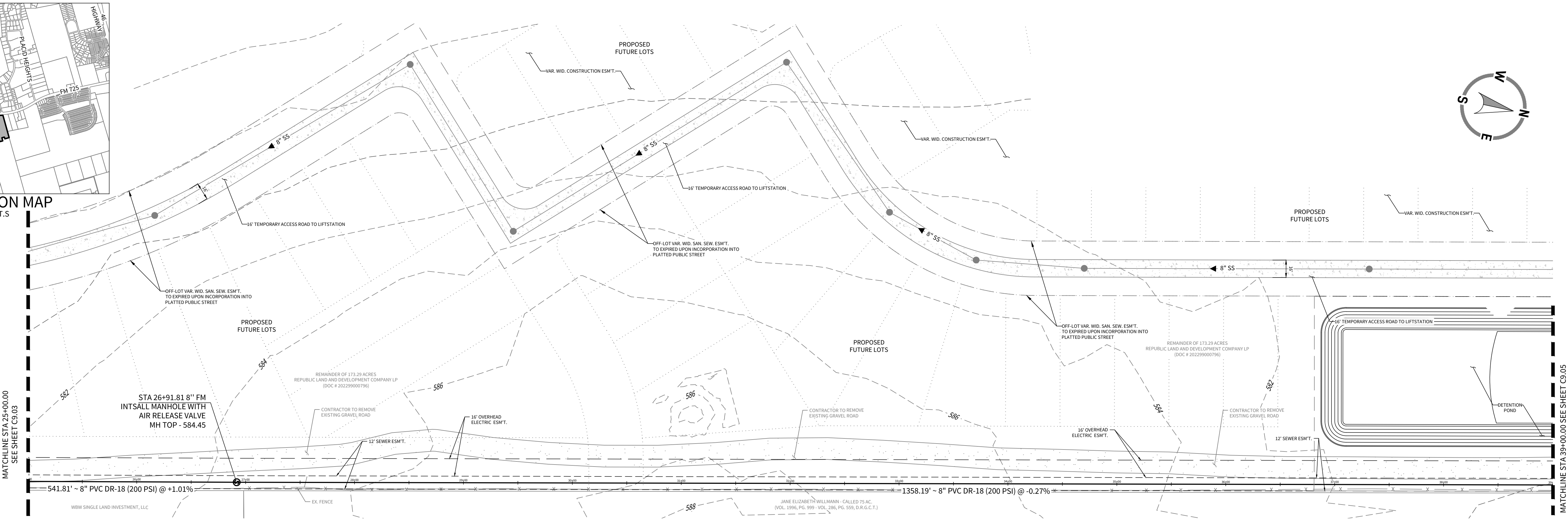


CUDE ENGINEERS
TBEELS No. 10048500

C9.03



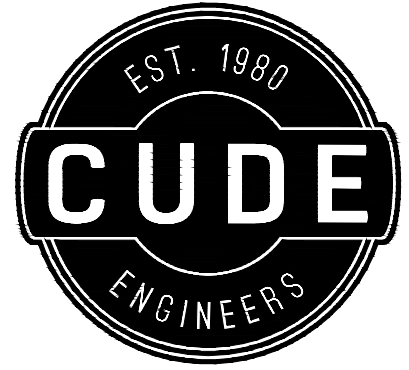
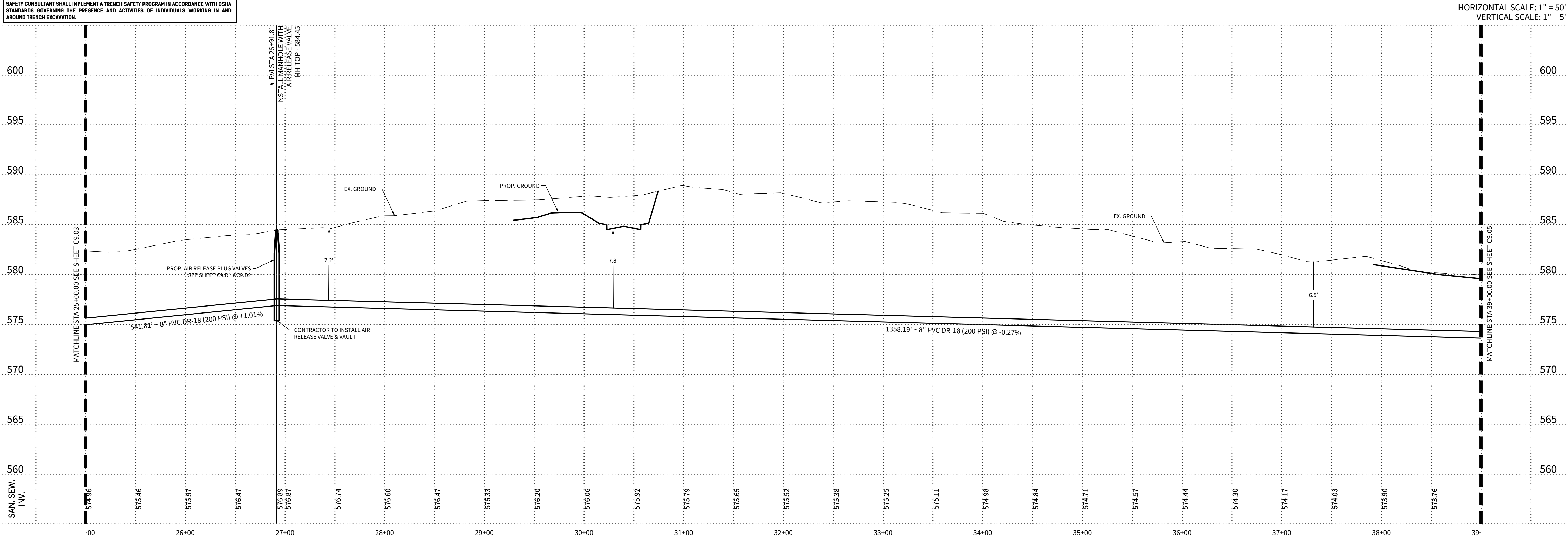
LOCATION MAP
N.T.S.



TRENCH EXCAVATION PROTECTION
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8" FORCE MAIN

STA. 25+00.00 TO STA. 39+00.00

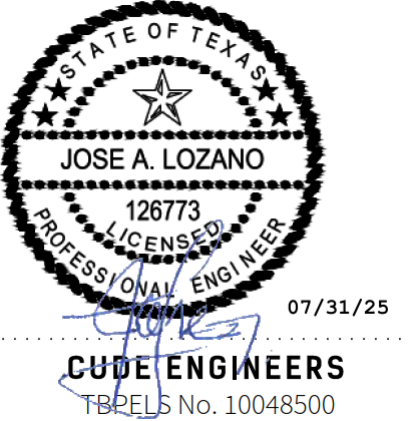


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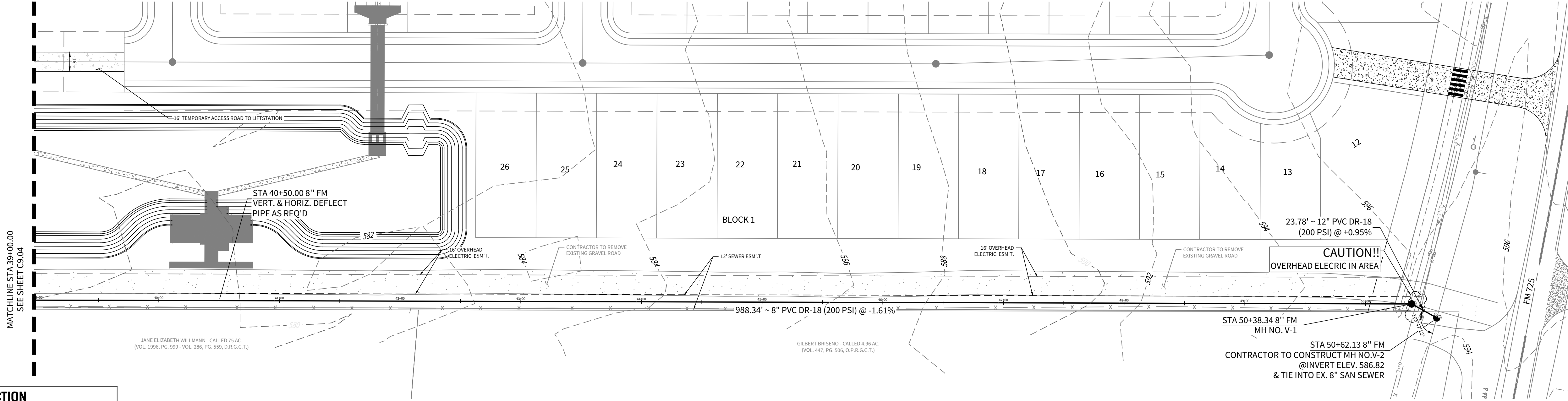
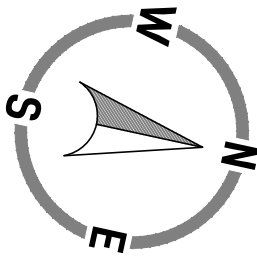
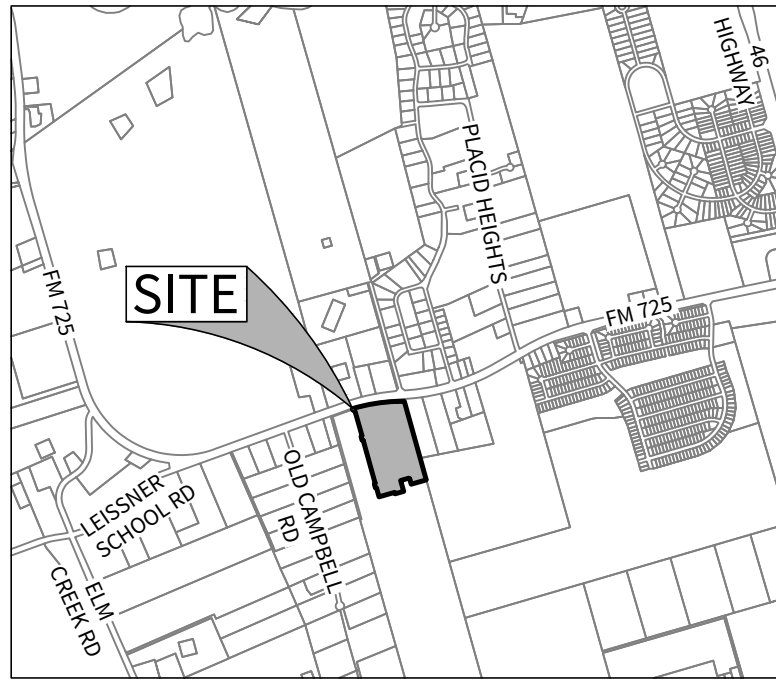
PARK HOUSE
UNIT 1
SANITARY SEWER PLAN & PROFILE - FORCE MAIN

DATE	07/28/2025
PROJECT NO.	04154-000
DRAWN BY	SG/JVA
CHECKED BY	JL/AC

REVISIONS	1.	2.	3.	4.	5.	6.	7.	8.
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C9.04

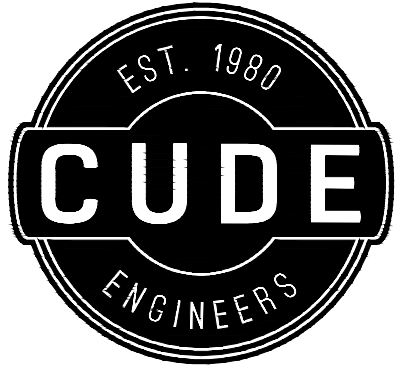
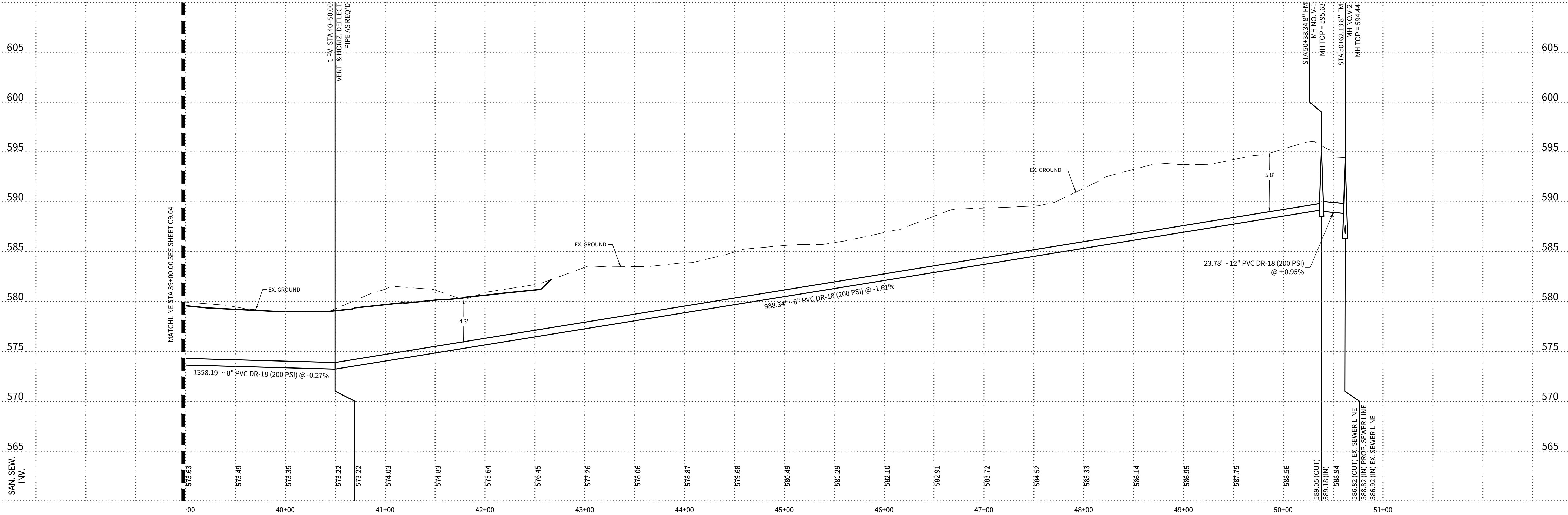


TRENCH EXCAVATION PROTECTION
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8" FORCE MAIN

STA. 39+00.00 TO END

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



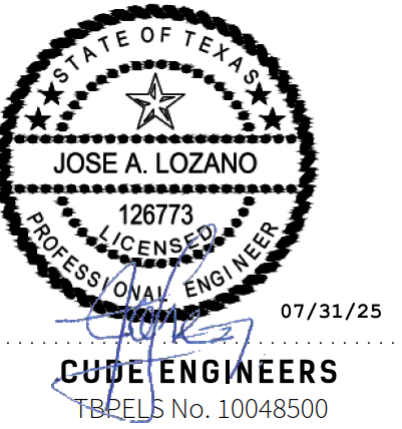
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PARK HOUSE UNIT 1

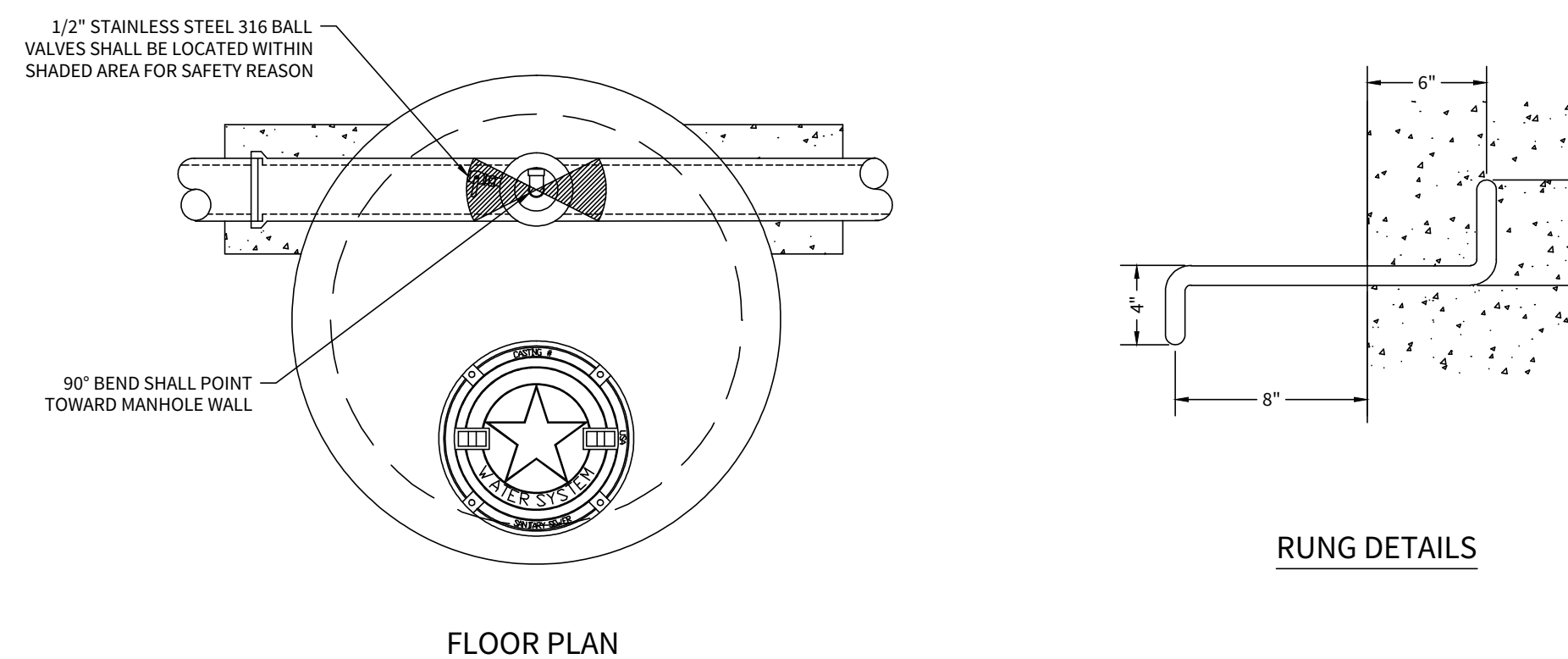
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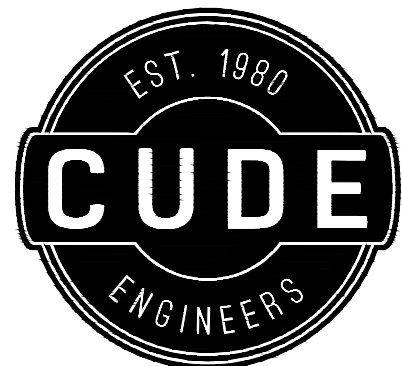
DATE	07/28/2025
PROJECT NO.	04154-000
DRAWN BY	SG/JVA
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REVISIONS	1.	2.	3.	4.	5.	6.	7.	8.
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C9.05



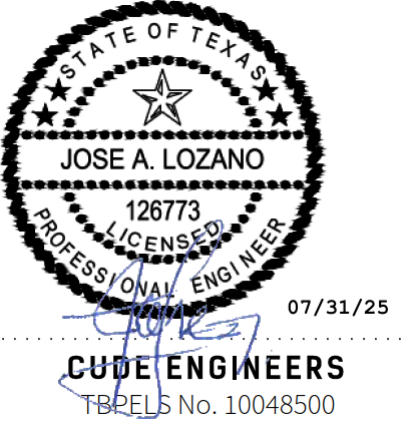


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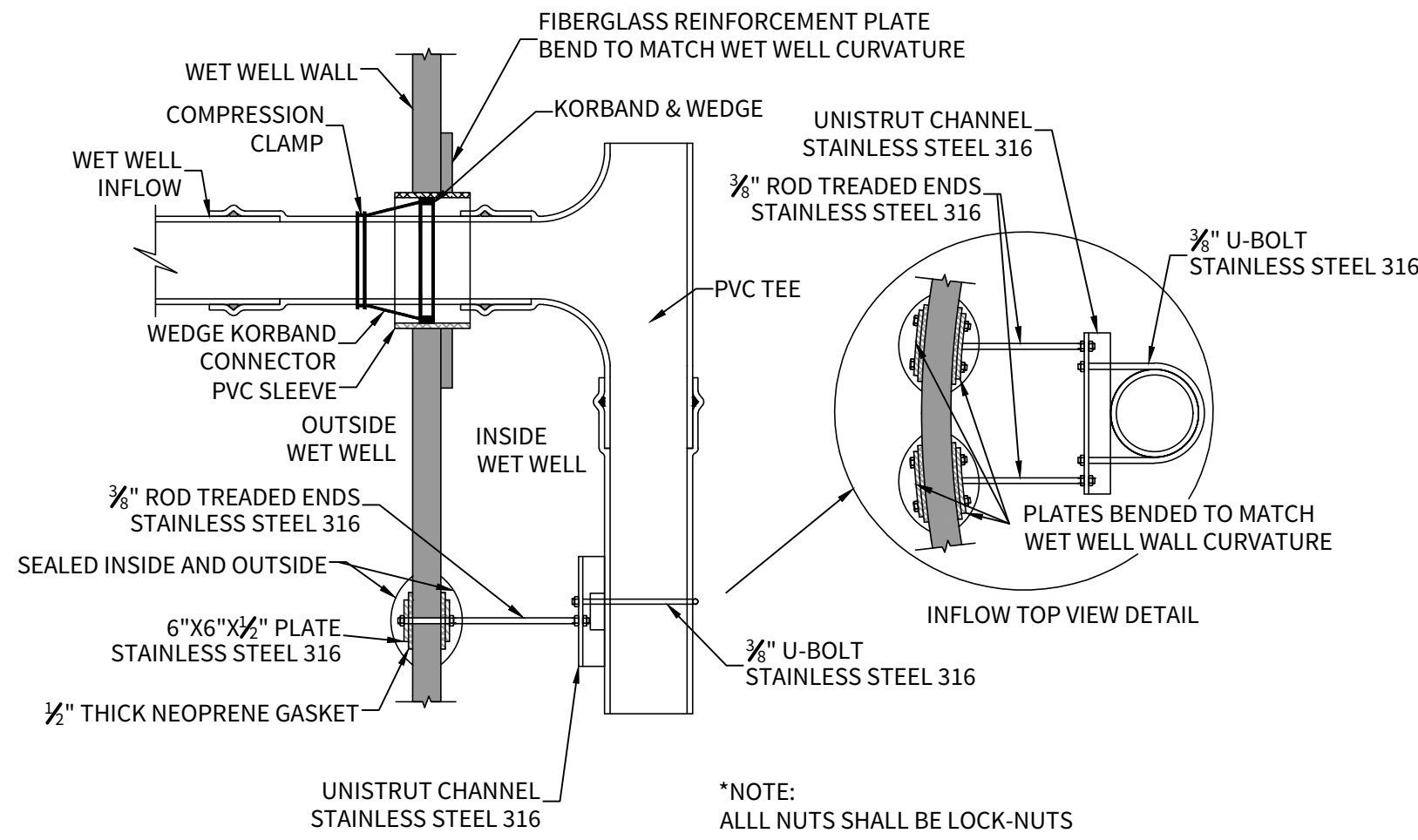
PARK HOUSE
UNIT 1
LIFT STATION DETAILS

DATE
07/31/2025
PROJECT NO.
04154-000
DRAWN BY
SG/JVA
CHECKED BY
JL/AC

REVISIONS							
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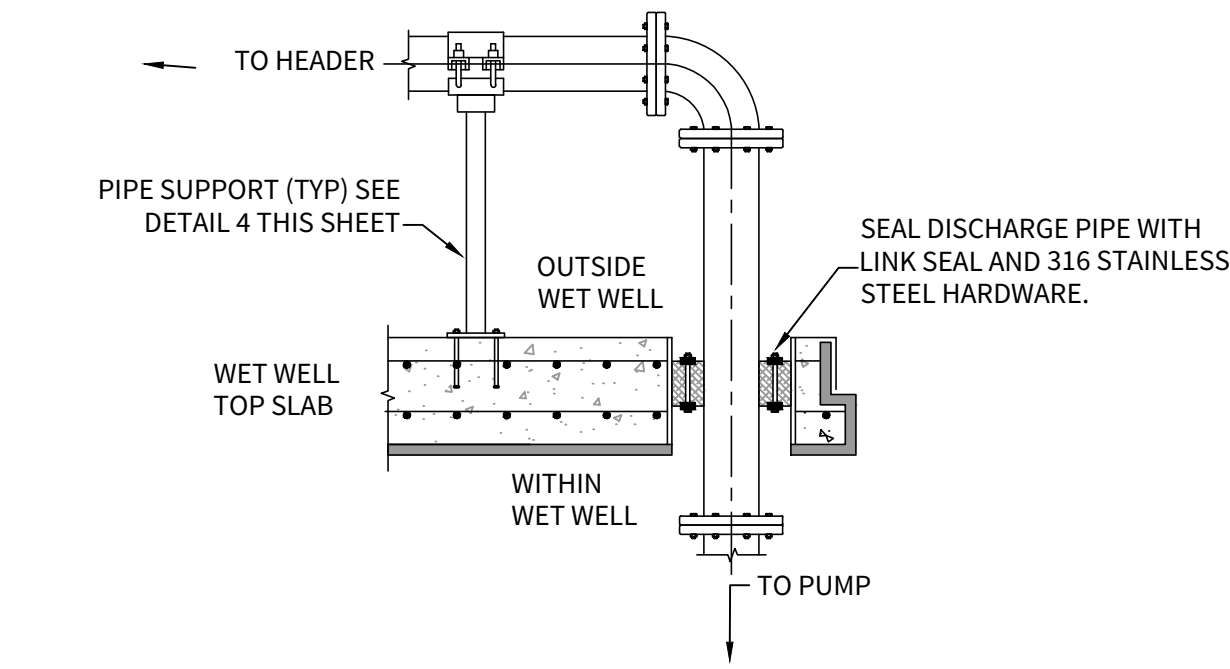
C9.D2



WET WELL INFLOW PENETRATION DETAILS

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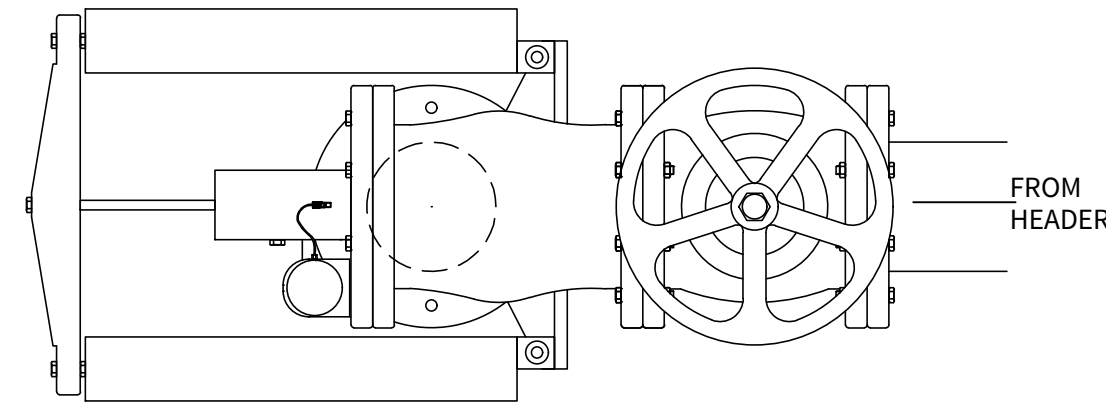
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C9.D2



DISCHARGE PIPE PENETRATION DETAIL

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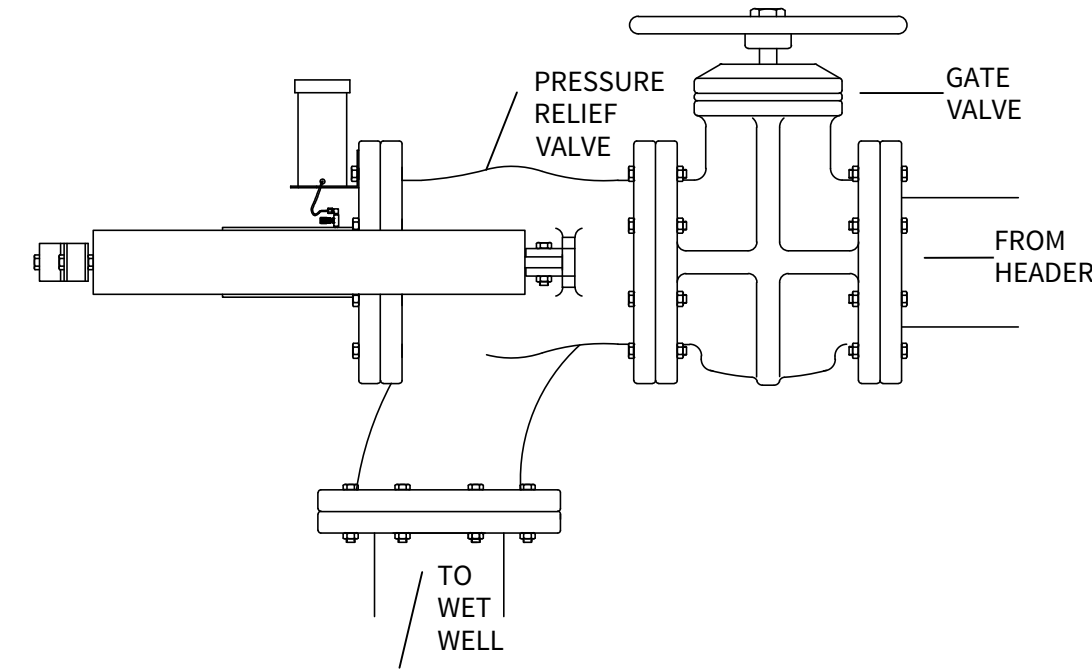
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SURGE CONTROL VALVE PLAN VIEW

SCALE: N.T.S.

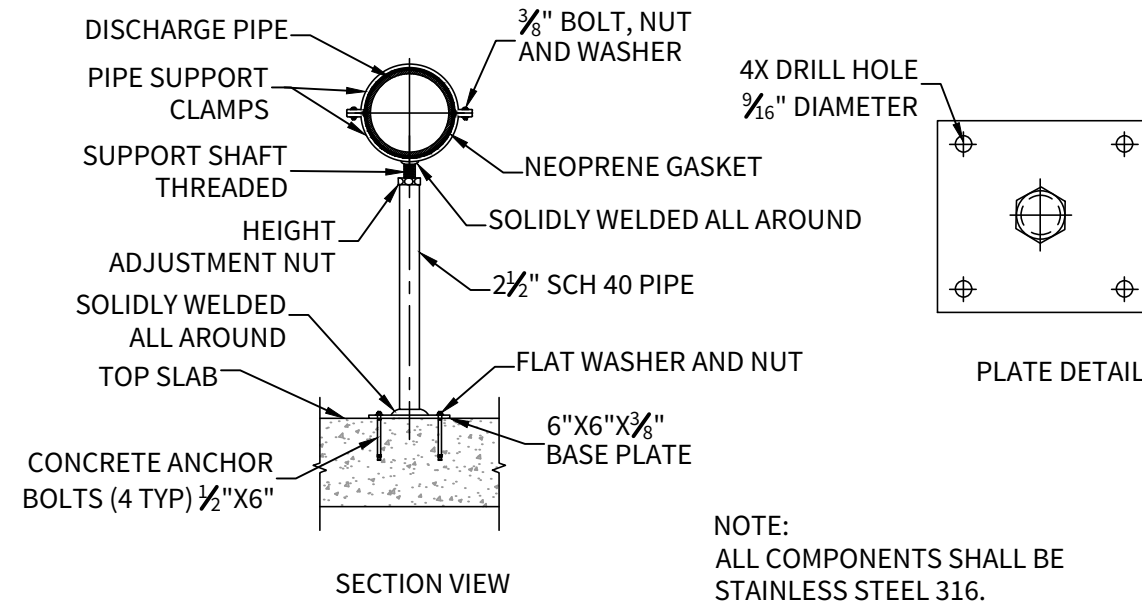
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C9.D2



SURGE CONTROL VALVE PROFILE VIEW

SCALE: N.T.S.

3
C9.D2



PIPE SUPPORT DETAIL

SCALE: N.T.S.

4
C9.D2

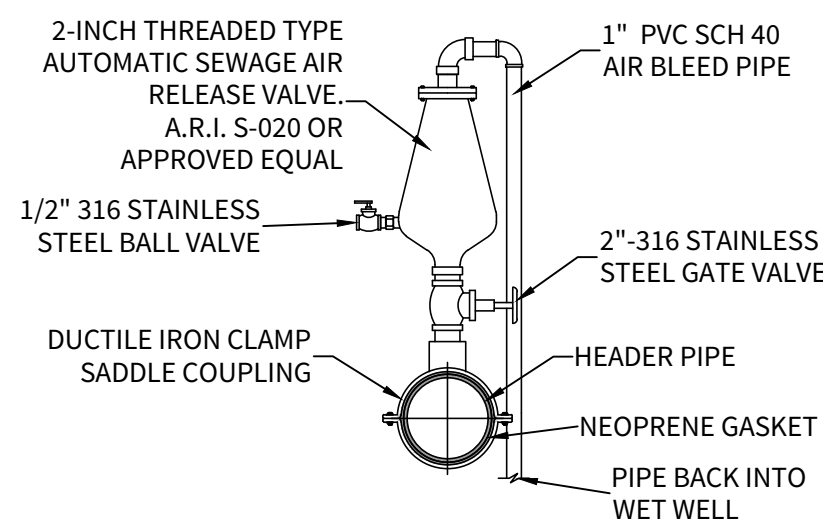
KEY NOTES:

- PRESSURE GAUGE SHALL BE RATED FOR CORROSIVE SERVICE
- 4" DIAL SIZE
- GRADE 1A
- LIQUID FILLED
- TYPE 316 STAINLESS STEEL BOURDON TUBE
- FULL BLOWOUT PROTECTION
- GLASS SAFETY LENS
- PRESSURE RATING: -30 inHG TO 100 PSI

PRESSURE GAUGE
INSTALLATION DETAIL

SCALE: N.T.S.

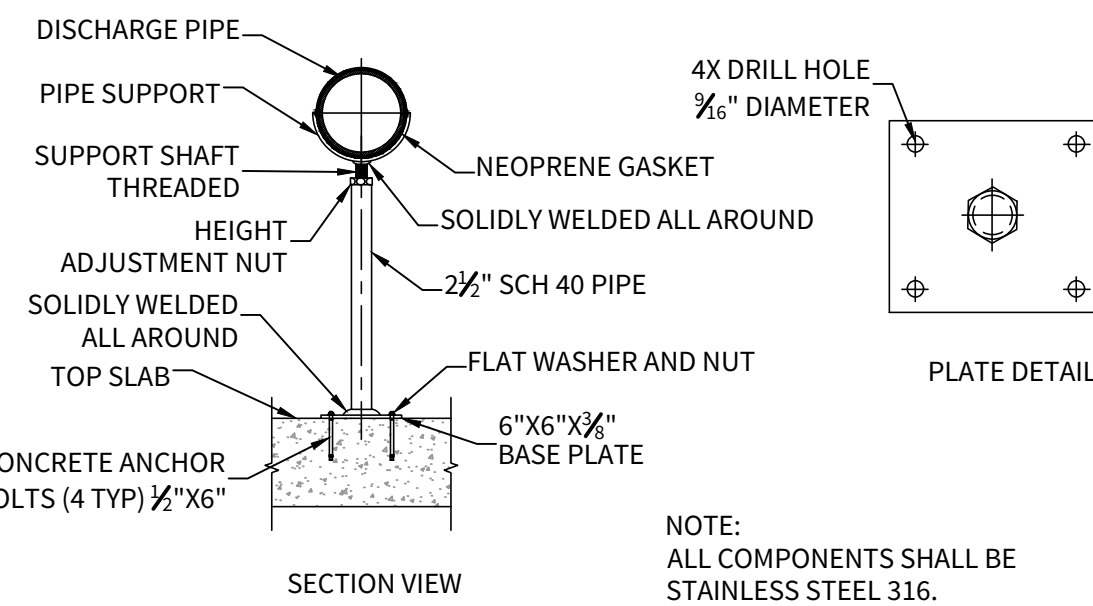
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C9.D2



AIR/VACCU RELEASE VALVE
INSTALLATION DETAIL

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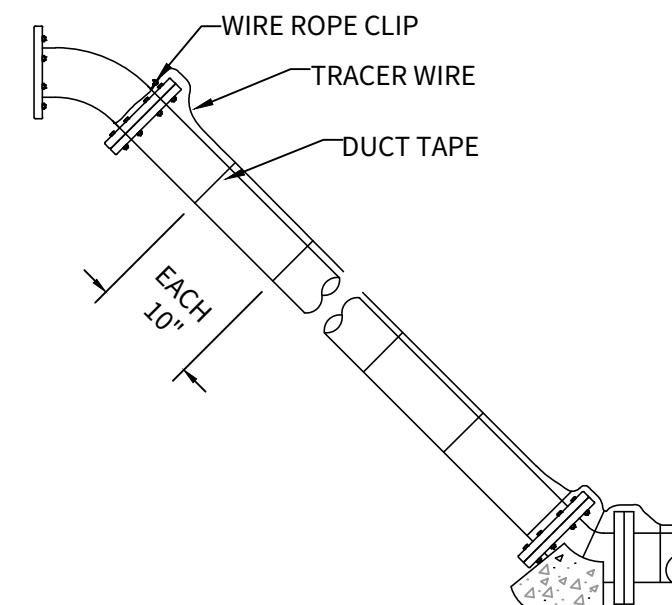
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C9.D2



VALVE SUPPORT DETAIL

SCALE: N.T.S.

7
C9.D2

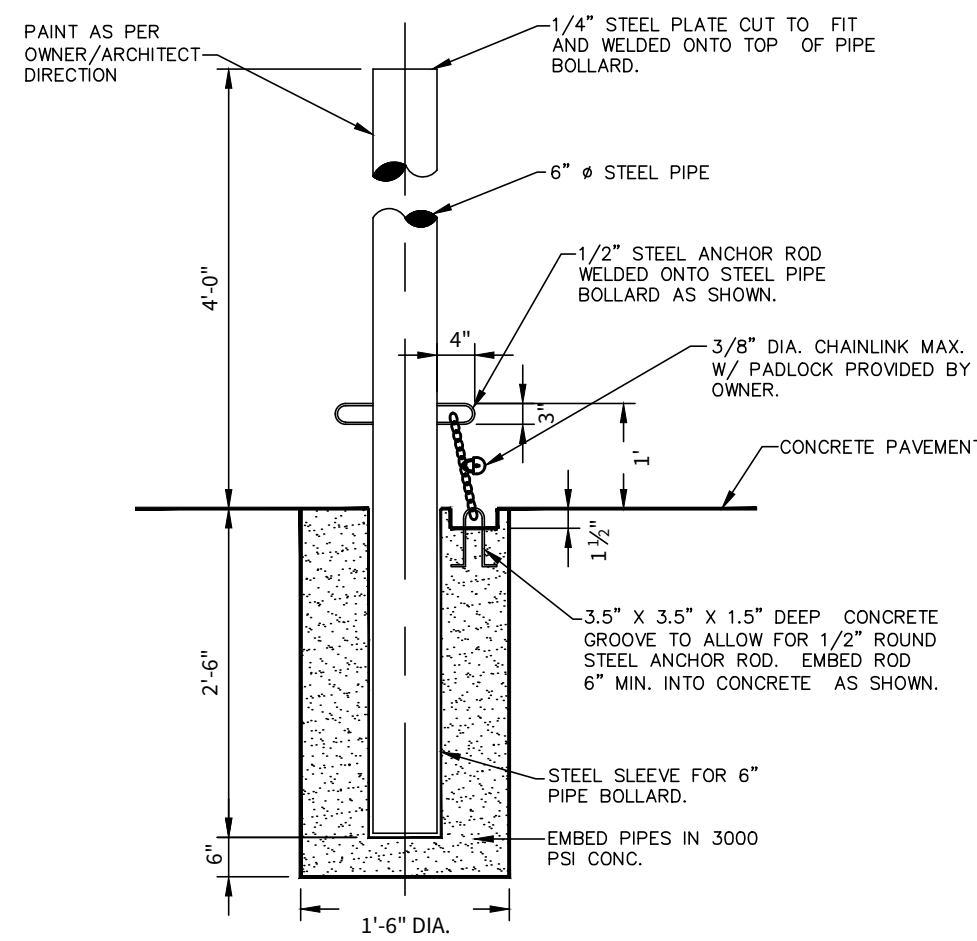


TRACER WIRE DETAIL

SCALE: N.T.S.

8
C9.D2

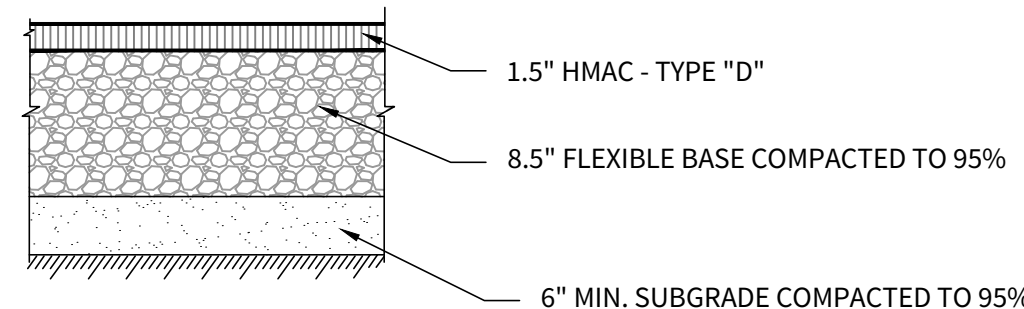
TRACER WIRE NOTE:
TRACER WIRE SHALL BE UTILIZED FOR LOCATION PURPOSES. THE MAXIMUM BURY DEPTH SHALL BE THREE FEET, MINIMUM SHALL BE ONE FOOT. TRACER WIRE SHALL BE OF SOLID CORE (14 GAUGE INSULATED) AND SHALL BE TAPED TO THE MAIN A MINIMUM OF 10" INCREMENTS. WIRE SHALL ALSO COME UP TO THE TOP OF AIR RELEASE, VACUUM VALVES, TOP OF GROUND AT LIFT STATION, AND AT THE MAIN DISCHARGE POINT.



REMOVEABLE BOLLARD DETAIL

SCALE: N.T.S.

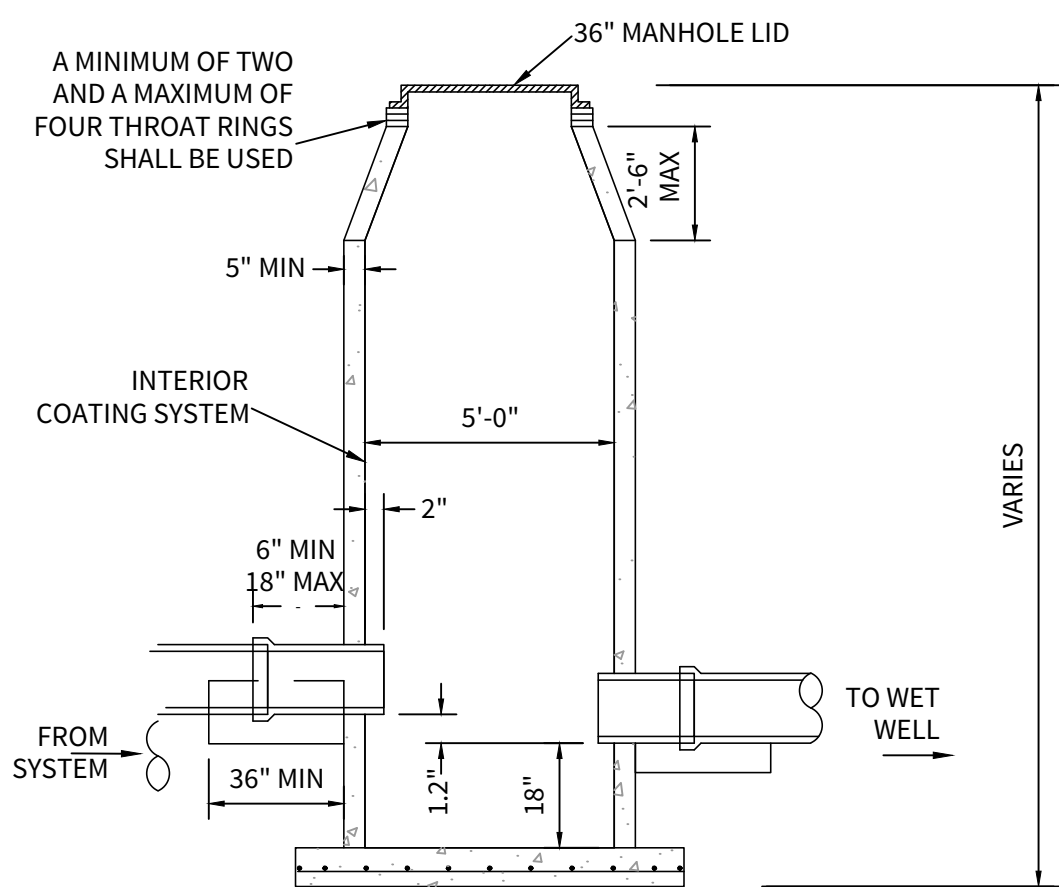
9
C9.D2



ASPHALT PAVEMENT
SECTION DETAIL

SCALE: N.T.S.

11
C9.D2

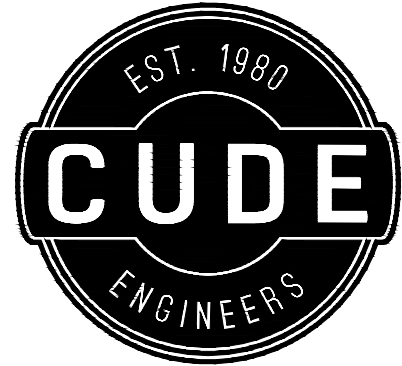


PRECAST REINFORCED CONCRETE MANHOLE SECTIONS ASTM DESIGNATION C-478.
MANHOLE TO BE COATED PER CITY OF SEGUIN SPECIFICATIONS

LIFT STATION SITE MANHOLE
ADJACENT TO WET WELL

SCALE: N.T.S.

14
C9.D2



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PARK HOUSE
UNIT 1
LIFT STATION DETAILS

DATE

07/23/2025

PROJECT NO.
04154-000

DRAWN BY
SG/JVA

CHECKED BY
JL/AC

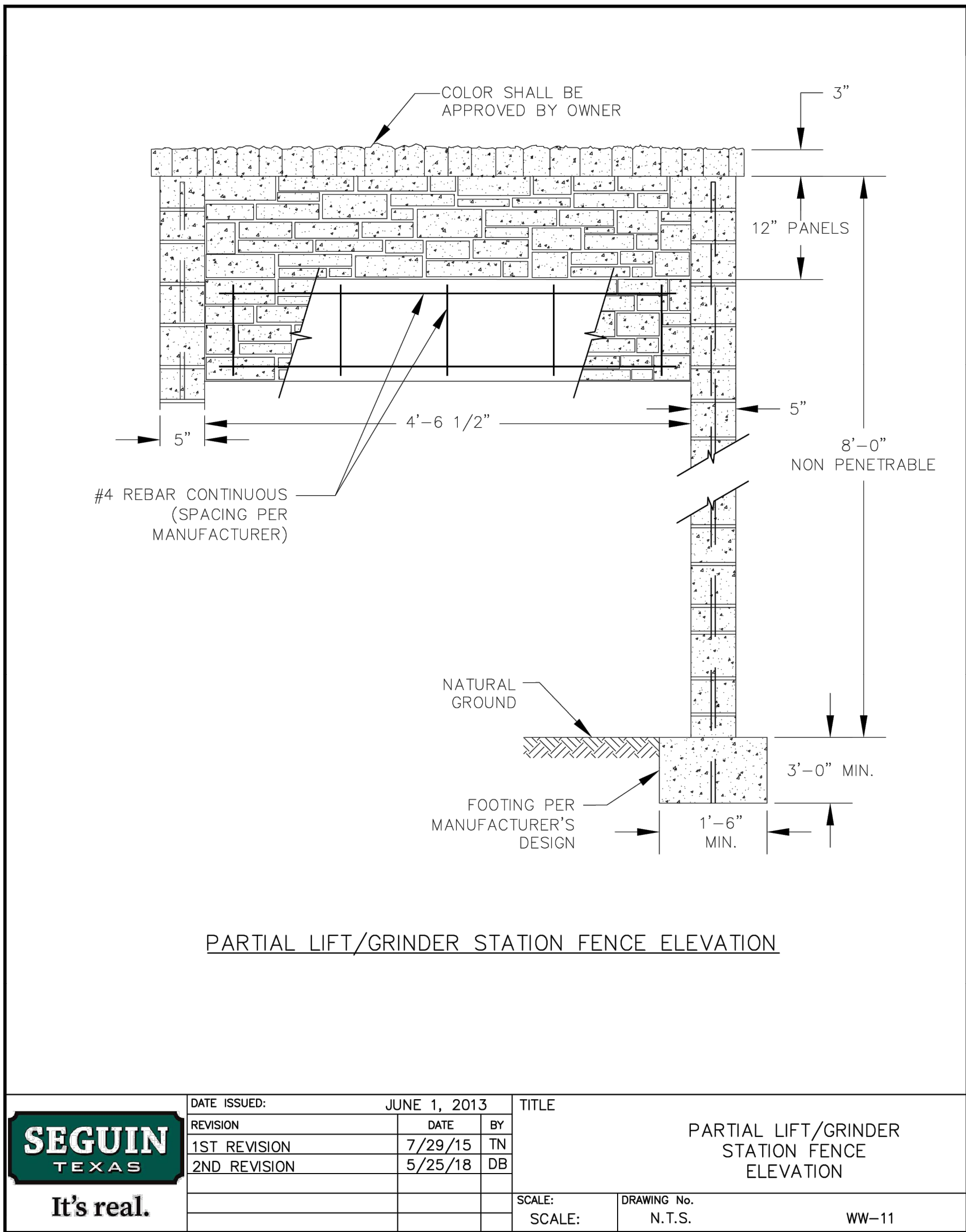
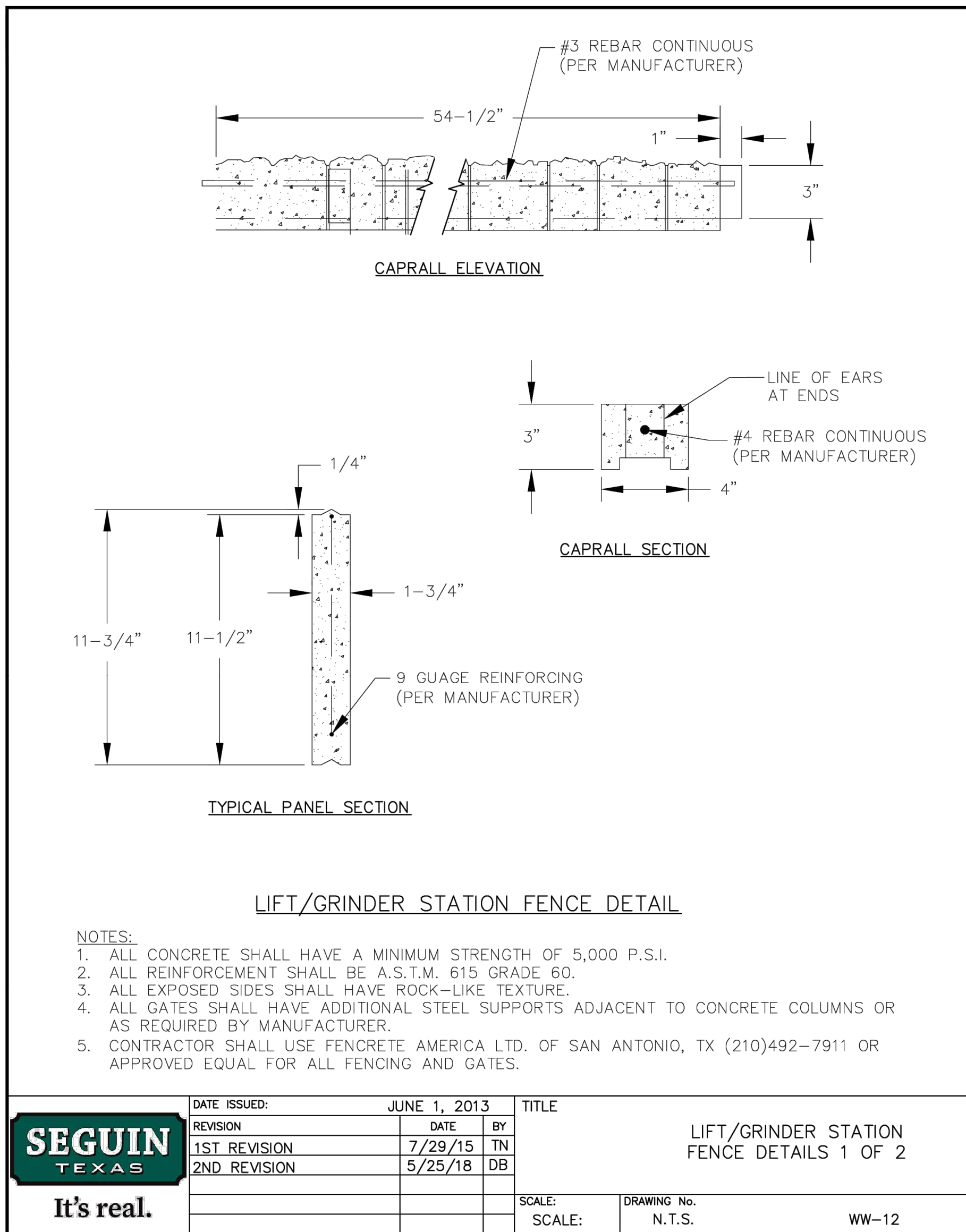
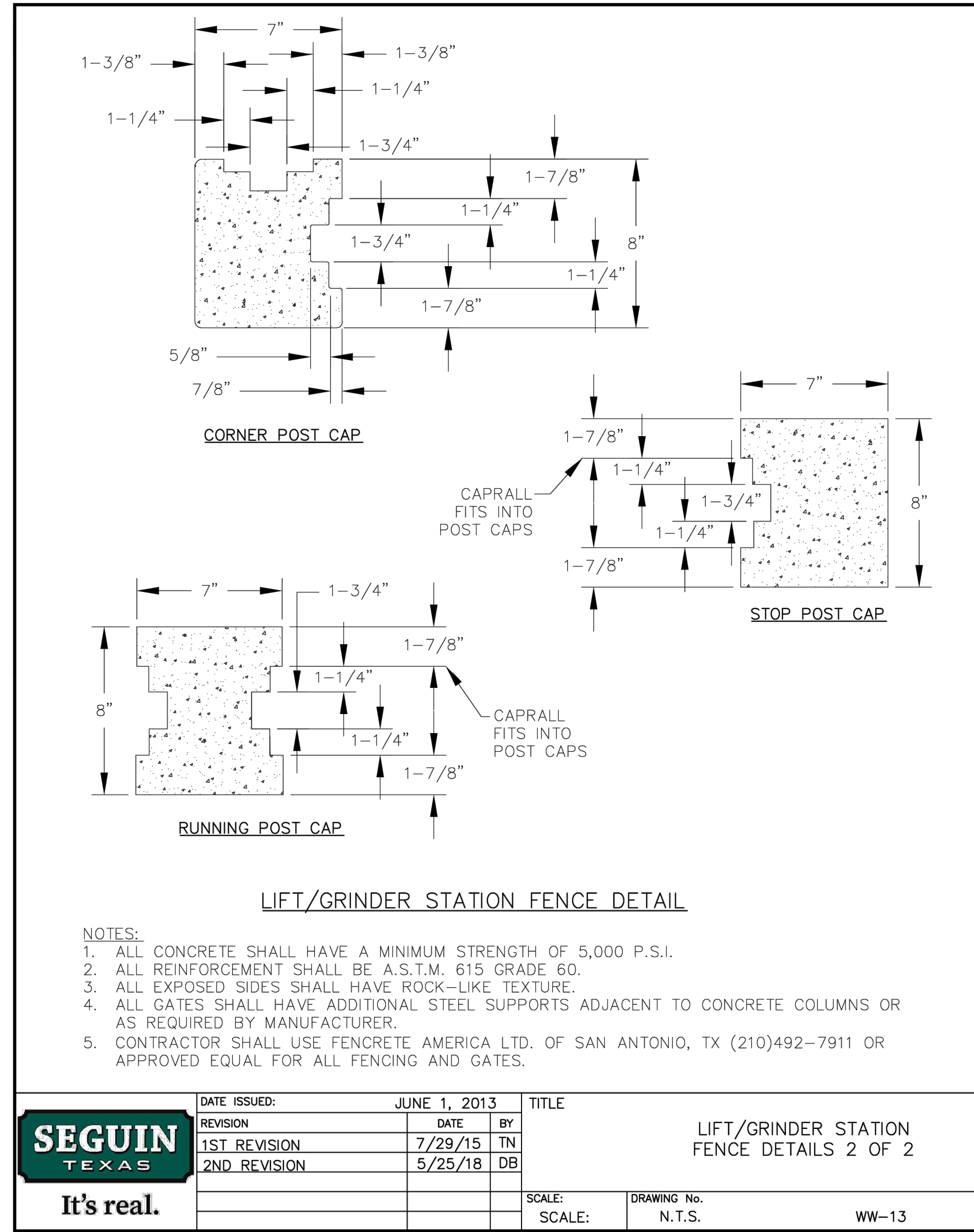
REVISIONS
1. 2. 3. 4. 5. 6. 7. 8.



07/31/25

CUDE ENGINEERS
TBEELS No. 10048500

C9.D3



CONCRETE & REINFORCEMENT GENERAL NOTES:

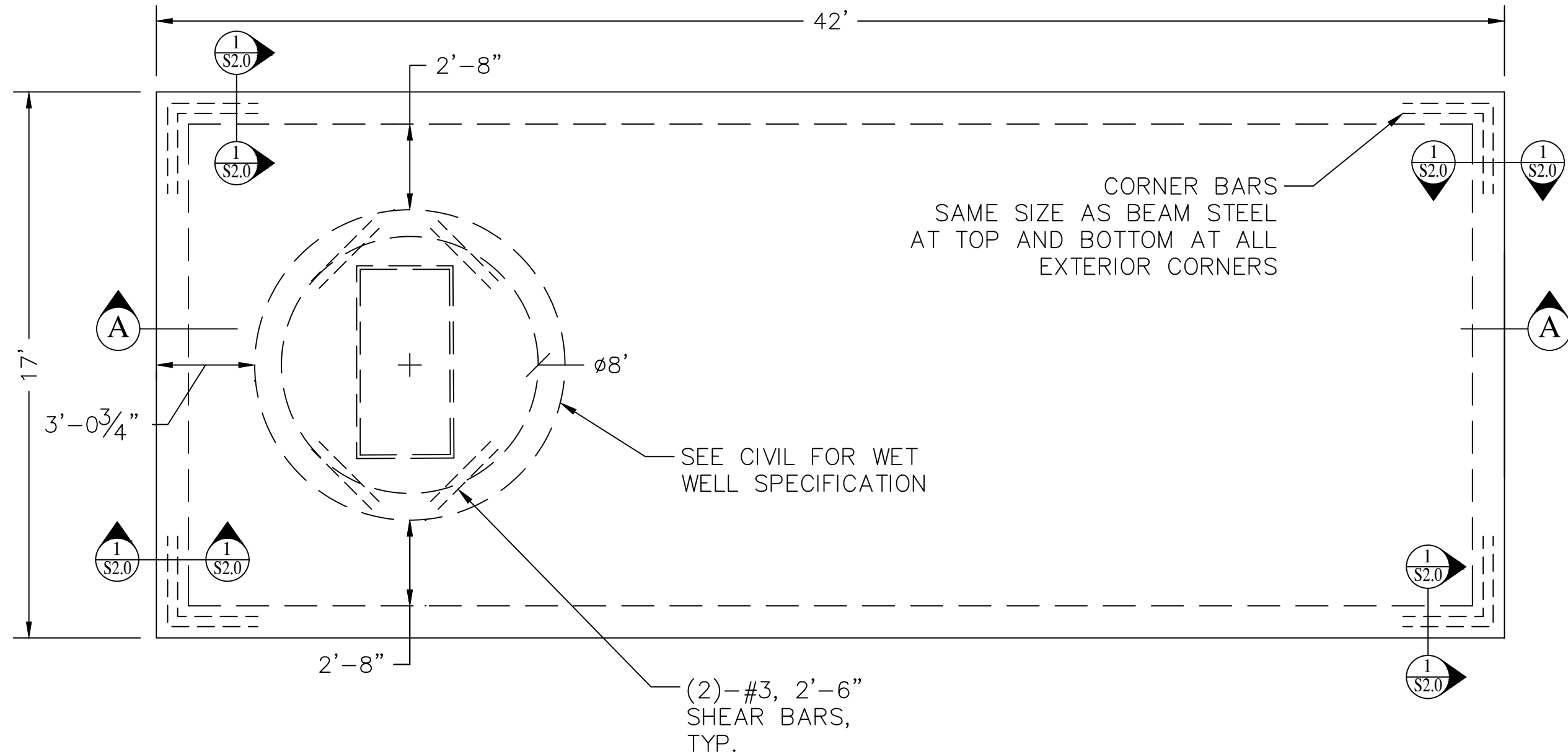
- 1.1 DESIGN, MATERIAL, AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE FOLLOWING STANDARDS:
- ACI 318 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.
 - SP66 ACI DETAILING MANUAL.
 - ACI 301 SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS.
 - CRSI RECOMMENDED PRACTICE FOR PLACING REINFORCING STEEL.
 - SAWS STANDARD SPECIFICATION 307 "CONCRETE STRUCTURES.
- 1.2 CONCRETE SHALL DEVELOP 4000 PSI MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS, EXCEPT AS NOTED ON DRAWINGS. FLY ASH PERMITTED. CLASS G CONCRETE SAWS STANDARD SPECIFICATION 300 "CONCRETE (NATURAL AGGREGATE).
- 1.3. REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A615 GRADE 60. SAWS STANDARD SPECIFICATION 301 "REINFORCING STEEL
- 1.4 WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185, (FLAT SHEETS ONLY).
- 1.5 UNLESS NOTED, CONCRETE COVER OVER REINFORCING SHALL BE:
- 3" WHEN THE CONCRETE IS PLACED DIRECTLY AGAINST THE GROUND.
 - 2" FOR BARS LARGER THAN NO. 5, AND 1 1/2" FOR NO. 5 AND SMALLER, IF AFTER REMOVAL OF FORMS THE CONCRETE IS EXPOSED DIRECTLY TO WEATHER OR GROUND.
 - 1" IN SLABS AND WALLS, AND 1 1/2" FOR BEAMS AND COLUMNS NOT EXPOSED DIRECTLY TO WEATHER OR GROUND.
- 1.4. ALL REINFORCING HOOKS SHALL BE STANDARD HOOKS AS DEFINED BY ACI, UNLESS NOTED OTHERWISE.
- 1.5. ALL EXPOSED EDGES OF CONCRETE SHALL HAVE A 1 INCH, 45 DEGREE CHAMFER.
- 1.6. CONTRACTOR SHALL SUBMIT COMPLETE SHOP AND PLACING DRAWINGS AND OBTAIN APPROVAL PRIOR TO FABRICATION.
- 1.7. MAXIMUM AGGREGATE SHALL BE AS FOLLOWS:
- WALLS, STRUCTURAL SLABS, BEAMS..... 3/4"
 - FOOTING, SLABS ON GRADE..... 1 1/2"
- 1.8. GRIND ALL CONSTRUCTION JOINTS IN SLAB SO AS TO PRODUCE A SMOOTH AND LEVEL SURFACE
- 1.9. WET WELL BOTTOM SLAB TO HAVE 'ROUGH' FINISH. SURFACE SLABS TO HAVE 'ROUGH' FINISH ON SIDES AND 'LIGHT BROOM' FINISH ON TOP.
- 1.10. SLOPE SLAB TO DRAIN AWAY FROM LIFT STATION SITE.
- 1.11. EXCAVATION FOR THE WET WELL STRUCTURE SHALL EXTEND 24" BELOW THE BOTTOM OF THE WET WELL STRUCTURE. NATIVE SOILS SHALL BE COMPACTED TO A DEPTH OF 6" WITH VIBRATORY COMPACTION EQUIPMENT. ABOVE THE NATIVE SOILS PLACE 6" OF FLEXIBLE BASE. COMPACTION OF NATIVE SOILS AND FLEXIBLE BASE SHALL ACHIEVE MINIMUM 98% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE TXDOT TESTING METHOD TEX 113-E AT THE OPTIMUM MOISTURE CONTENT TO +4%. ABOVE THE FLEXIBLE BASE PLACE 18" OF CRUSHED STONE.
- 1.12. SEE "DD-903-04" SAWS LIFT STATION DESIGN GUIDE FOR MORE INFORMATION.
- 1.13. SITE CLASS "D", UNO IN THE GEOTECHNICAL REPORT
- 1.14. REFER TO GEOTECHNICAL REPORT FOR GROUNDWATER CONDITIONS

2.0 FOUNDATION CONSTRUCTION

- 2.1 THIS FOUNDATION DESIGN IS BASED ON FROST GEOSCIENCES, INC. PROJECT NO. FGS-G2113. BORING B-22 IS CLOSEST TO THE LIFT STATION LOCATION PROVIDED TO OUTLIER AND WAS USED TO DESIGN THESE FOUNDATIONS. A MINIMUM OF 12 INCHES OF SELECT FILL TO BE PLACED BENEATH ALL SURFACE SLAB ELEMENTS. THE RECOMMENDED DESIGN PI = 20. SURFACE FOUNDATIONS DESIGNED FOR 2000PSF BEARING PRESSURE. WET WELL FOUNDATION SIZED FOR MINIMUM 2000PSF BEARING PRESSURE.
- 2.2 SELECT FILL TO MEET TXDOT STANDARD SPECIFICATION ITEM 247 ANY GRADE. MAX PI= 20. FLOWABLE FILL MEETING STANDARD SPECIFICATION 401 MAY ALSO BE USED.
- 2.3 GENERATOR AND ELECTRICAL CANOPY SURFACE SLABS TO HAVE A MINIMUM OF 12 INCHES OF SELECT FILL BENEATH ALL SURFACE ELEMENTS.
- 2.4 WET WELL EXCAVATION TO BE COMPLETELY FILLED WITH COMPACTED BACKFILL OR FLOWABLE FILL OR BOTH. THIS APPLIES TO THE PLAN LIMITS OF THE TOP SLAB.
- 2.5 FOLLOWING EXCAVATION, THE EXPOSED SUBGRADE AREAS SHALL BE PROOF-ROLLED TO EXPOSE ANY WEAK, SOFT, WET, OR OTHERWISE UNSUITABLE SOILS THAT SHALL BE REMOVED.
- 2.6 FOLLOWING PROOF-ROLLING, THE EXPOSED SUBGRADE SOILS SHALL BE SCARIFIED TO A DEPTH OF SIX (6) INCHES; MOISTURE CONDITIONED BETWEEN +/- 3 PERCENTAGE POINTS OF OPTIMUM MOISTURE CONTENT AND COMPACTED TO AT LEAST 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED IN ACCORDANCE WITH TEX-114-E.
- 2.7 SOIL FROM SITE EXCAVATIONS SHALL NOT BE USED AS FILL MATERIAL.
- 2.8 SLAB FILL MATERIAL SHALL BE COVERED AND PROTECTED FROM GETTING WET PRIOR TO PLACEMENT IN THE FOUNDATION SLAB AREAS AND AFTER PLACEMENT IN THE FOUNDATION SLAB AREAS.
- 2.9 PLACE SELECT FILL IN THIN, LOOSE LIFTS LESS THAN 8 INCHES THICK. COMPACT TO 95% OF THE MAXIMUM DENSITY DEFINED BY ASTM D 698.
- 2.10 CONDUCT FIELD DENSITY TESTS AT A RATE OF ONE PER 3,000SF PER LIFT AND TWO MINIMUM PER LIFT.
- 2.11 TRENCHING OF GRADE BEAMS SHALL BE EXCAVATED TO PROVIDE THE BEAM CROSS SECTION INDICATED. BEAM AND SLAB DEPTHS AND WIDTHS AS INDICATED ARE MINIMUM ACCEPTABLE SIZES. LARGER SIZE BEAMS AND SLABS FORMED BY LESS ACCURATE TRENCHING MAY REQUIRE ADDITIONAL REINFORCING NOT SHOWN WHICH SHALL BE DETERMINED BY THE ENGINEER DURING CONSTRUCTION REVIEW. ALL LOOSE DIRT FROM SIDES AND BOTTOMS OF TRENCHES SHALL BE REMOVED. HAUNCHES SHALL BE CUT ON EACH SIDE OF TRENCHES OF ADEQUATE SIZE TO MAINTAIN THE VERTICAL SIDES OF THE TRENCH.
- 2.12 PROVIDE A LAYER OF 10 MILL. POLYETHYLENE VAPOR BARRIER MEMBRANE OR EQUIVALENT BENEATH ALL SLAB AREAS. THE VAPOR BARRIER MEMBRANE MUST BE TAPED AT ALL SPLICES AND TEARS. BARRIER MEMBRANE MUST EXTEND TO THE BOTTOM OF THE SIDES OF THE BEAM TRENCHES. IF BARRIER IS EXTENDED ACROSS BOTTOM OF BEAM, BARRIER MUST BE FLAT FORMING A SQUARE BOTTOM TO THE BEAM.
- 2.13 ALL EXTERIOR FOUNDATION BEAMS ARE TO BE EXCAVATED AND EMBEDDED INTO UNDISTURBED SOIL OR PROPERLY COMPACTED LOT FILL MATERIAL TO A MINIMUM DEPTH OF 6 INCHES OR AS NOTED IN THE DETAILS AND DESIGN CHART ON THIS DRAWING, WHICHEVER IS GREATER, OR INTO BEDROCK TO A MINIMUM DEPTH OF 6 INCH.
- 2.14 REMOVE FREE WATER FROM BEAM TRENCHES AND ALL OTHER EXCAVATIONS BEFORE PLACING CONCRETE. CLEAN BOTTOM OF BEAM TRENCHES OF LOOSE SOIL, ROOTS, GRAVEL, AND ALL DEBRIS PRIOR TO PLACING CONCRETE. CONCRETE SHALL NOT BE PLACED ON SOILS THAT HAVE BEEN DISTURBED BY RAINFALL OR WATER SEEPAGE.

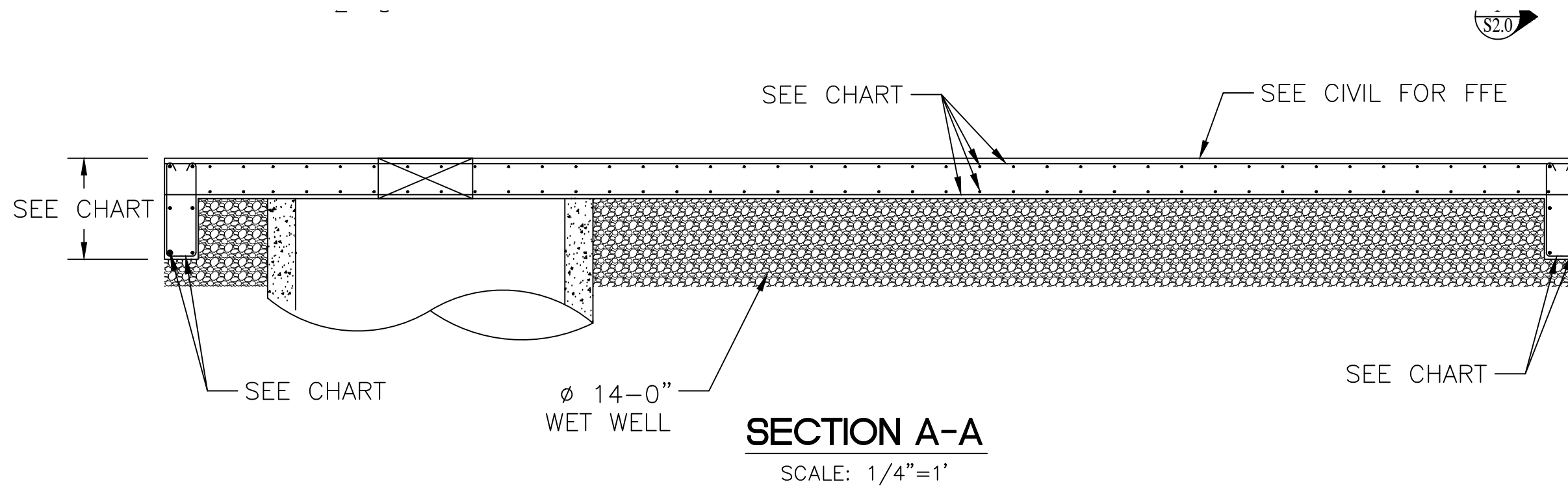
3.0 BOTTOM SLAB CONSTRUCTION

- 3.1 AS PRECAST SEGMENT PROFILES VARY BETWEEN MANUFACTURERS, CONTRACTOR SHALL SUBMIT, BEFORE CONSTRUCTION, DETAILS OF ALL PRECAST TO CAST-IN-PLACE CONCRETE JOINT CONDITIONS INCLUDING LOCATIONS OF SEALANT TO ENGINEER FOR REVIEW.
- 3.2 PROVIDE A CONTINUOUS 7 1/2" TO 8" DEEP X 11" WIDE CIRCLE BLOCKOUT CENTERED ON PRECAST SHELL (SEE CIVIL FOR INSIDE RADIUS) IN MAT SURFACE TO RECEIVE PRECAST. BLOCKOUT MAY BE TAPERED UP 1/2" TO 1" AT TOP FOR EASE OF FORM REMOVAL.
- 3.3 AFTER REMOVAL OF BLOCKOUT, PROVIDE 3 ROWS OF 1/2" X 3/4" CONTINUOUS BEADS OF ADEKA P-21 ELASTIC SEALANT BELOW BOTTOM OF PRECAST SHELL. ALLOW SEALANT TO FULLY CURE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTION BEFORE INSTALLING PRECAST RINGS ABOVE.
- 3.4 AFTER BOTTOMMOST PRECAST SHELL HAS BEEN INSTALLED, COMPLETELY FILL THE INTERIOR AND EXTERIOR ANNULAR SPACES BETWEEN SHELL AND MAT CONCRETE WITH EUCLID NS GROUT (FLOWABLE NON-SHRINK) BY EUCLID CHEMICAL.
- 3.5 INSTALL GROUT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. ALLOW 48 HRS MIN CURING TIME BEFORE INSTALLING ADDITIONAL SHELLS.



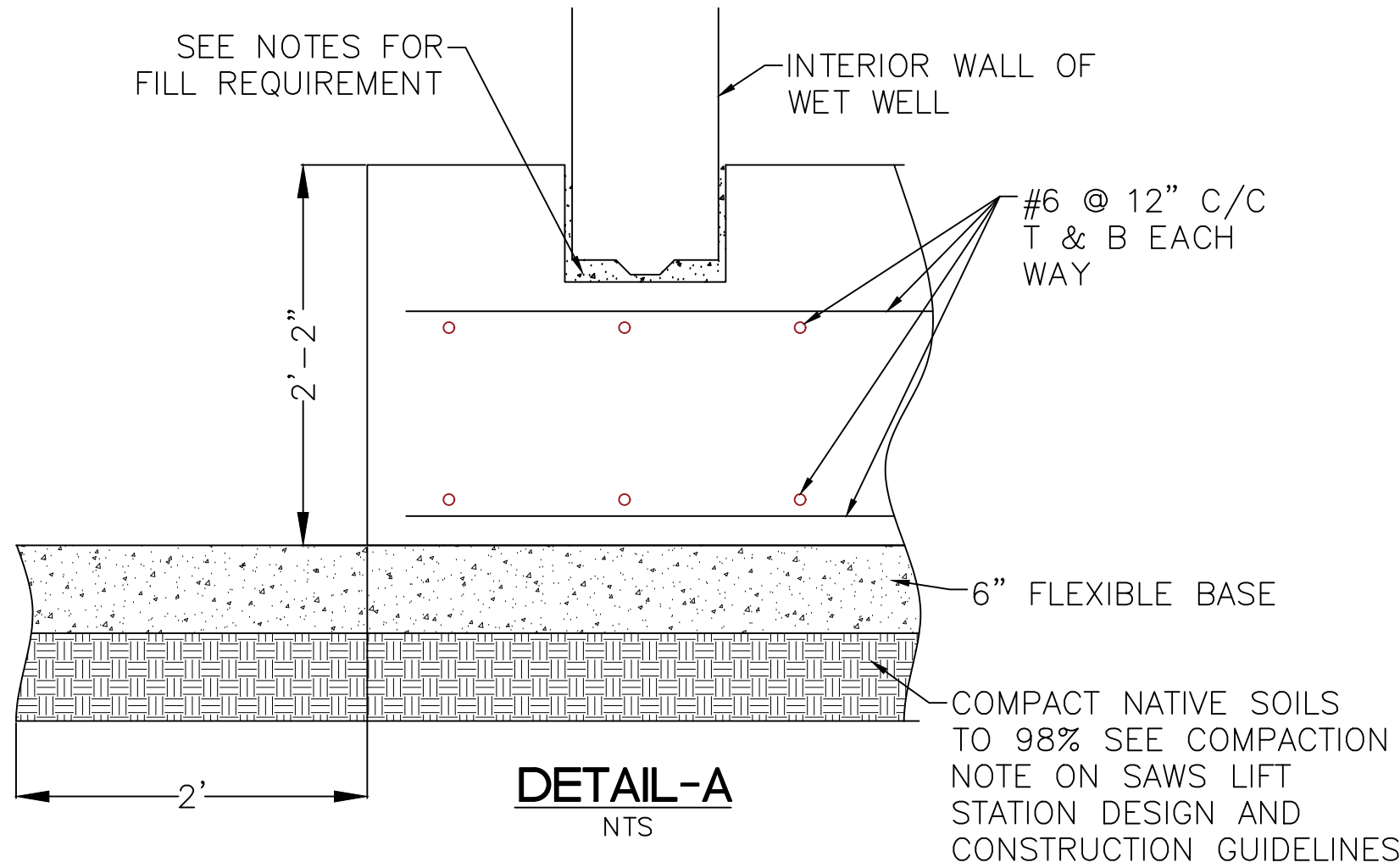
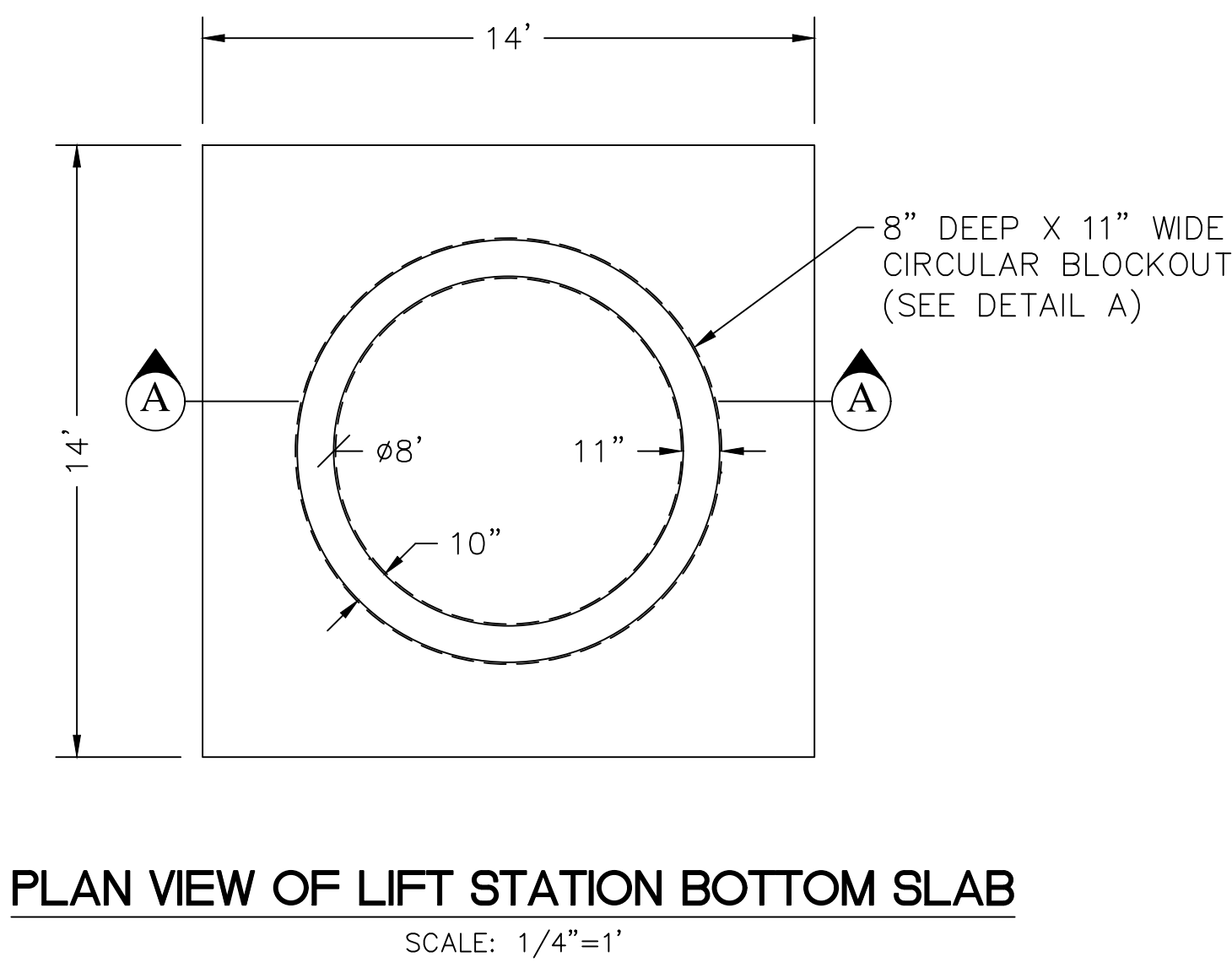
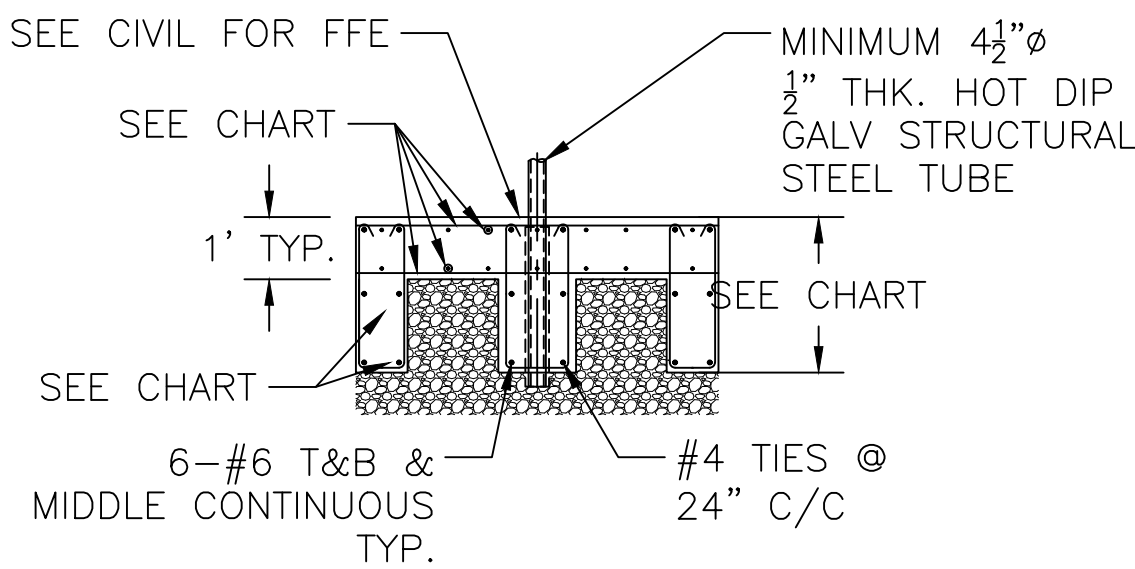
PLAN VIEW OF LIFT STATION TOP SLAB

SCALE: 1/4"=1'



ELECTRICAL CANOPY FOUNDATION

SCALE: 1/4"=1'



TOP SLAB, GENERATOR AND ELECTRICAL CANOPY FOUNDATION CHART

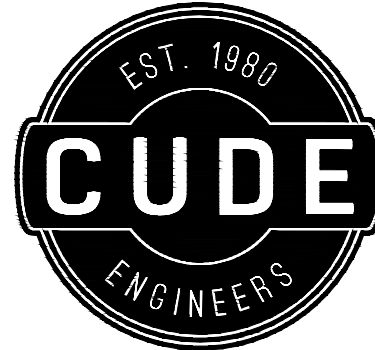
BEAM WIDTH (MINIMUM)	EXT. BEAM DEPTH	EXT.BM. DEPTH IN GRADE	INT. BEAM DEPTH	BEAM BARS T & B	STIRRUP EXT. BEAM	STIRRUP INT. BEAM	PAD BARS	SLAB THICKNESS
12" EXT. 12" INT.	24" MIN.	6" MIN.	24" MIN.	2-#6 BTM 2-#6 TOP	#3 @ 24" O.C.	#3 @ 24" O.C.	2 MATS #4 @ 12" O.C.	12"

BUILDER/CONTRACTOR TO VERIFY ALL DIMENSIONS, DROP AREAS, FLOOR PENETRATIONS, AND BLOCK-OUT LOCATIONS ON SITE.

GRADE BEAM WIDTH SHALL BE REFERENCED FROM CHART, UNO.

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PARKHOUSE UNIT 1
LIFT STATION STRUCTURAL

DATE

05/15/2025

PROJECT NO.

04154-000

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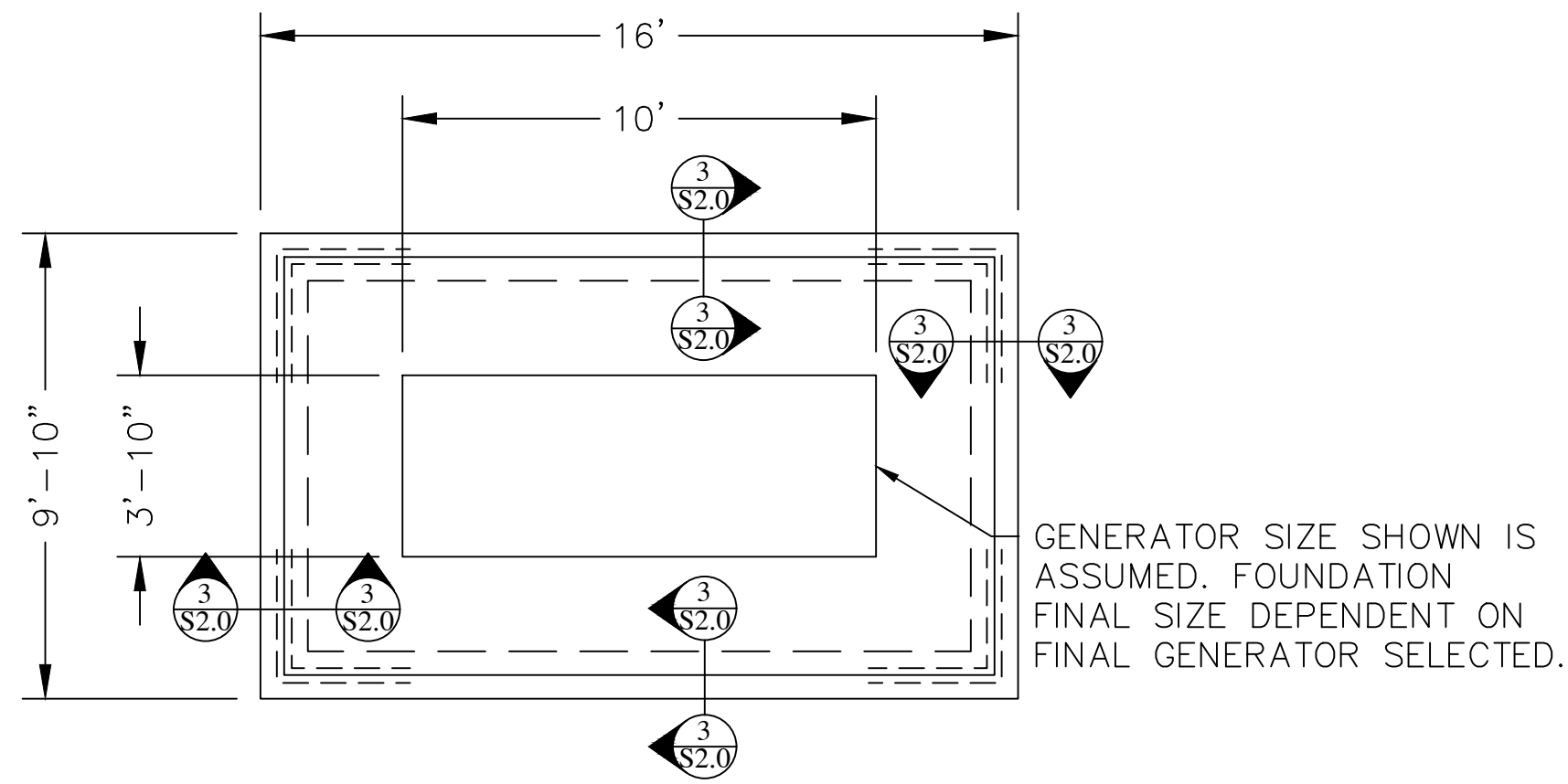
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PLAT NO.

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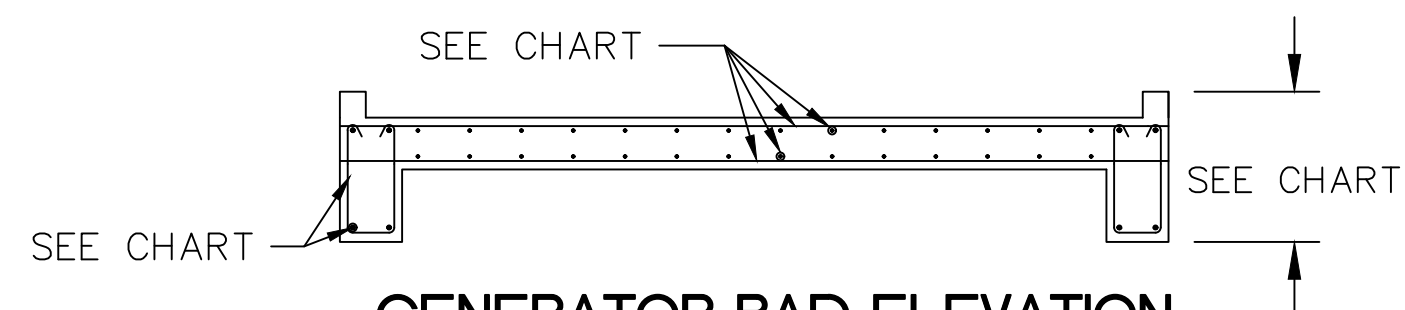
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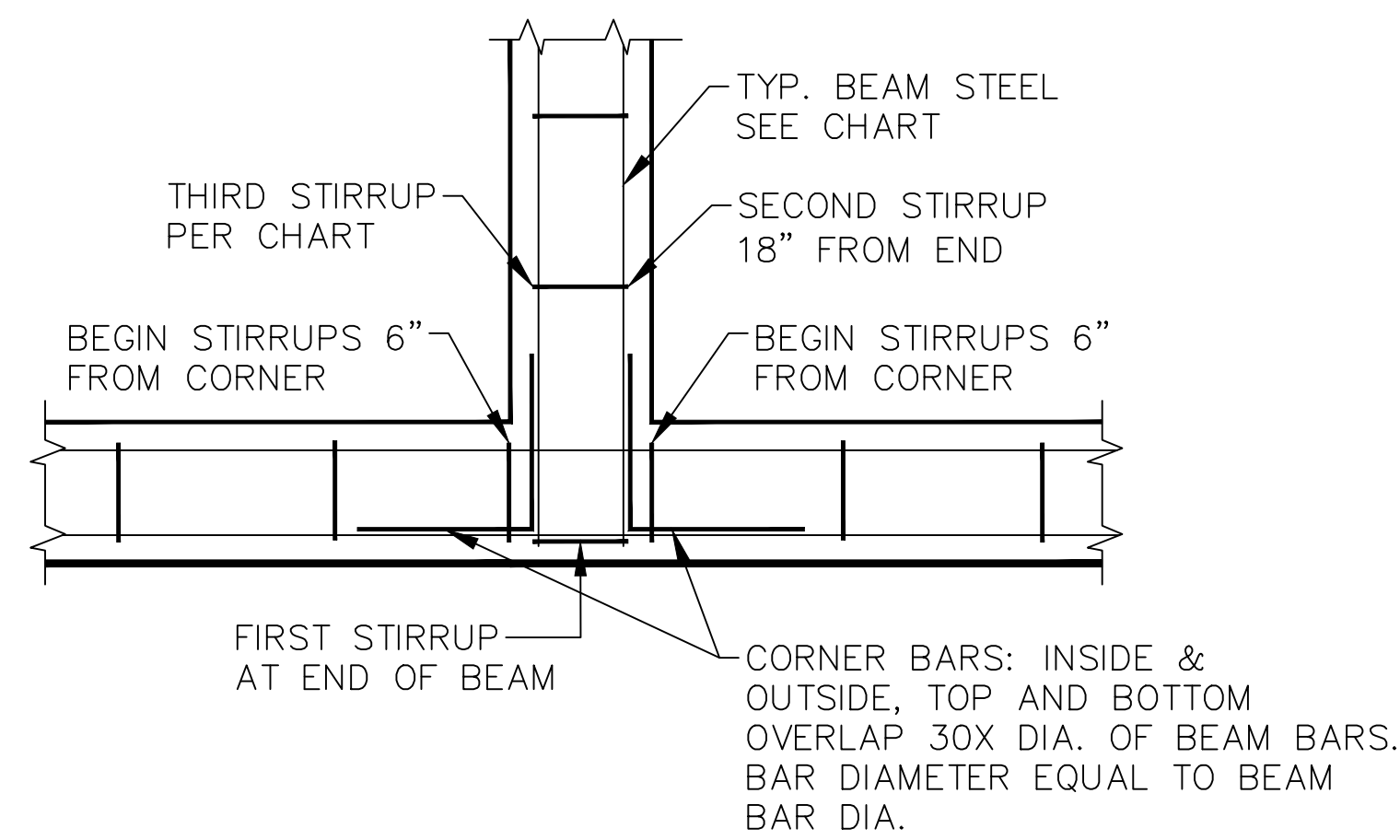
GENERATOR PAD FOUNDATION

SCALE: 1/4"=1'



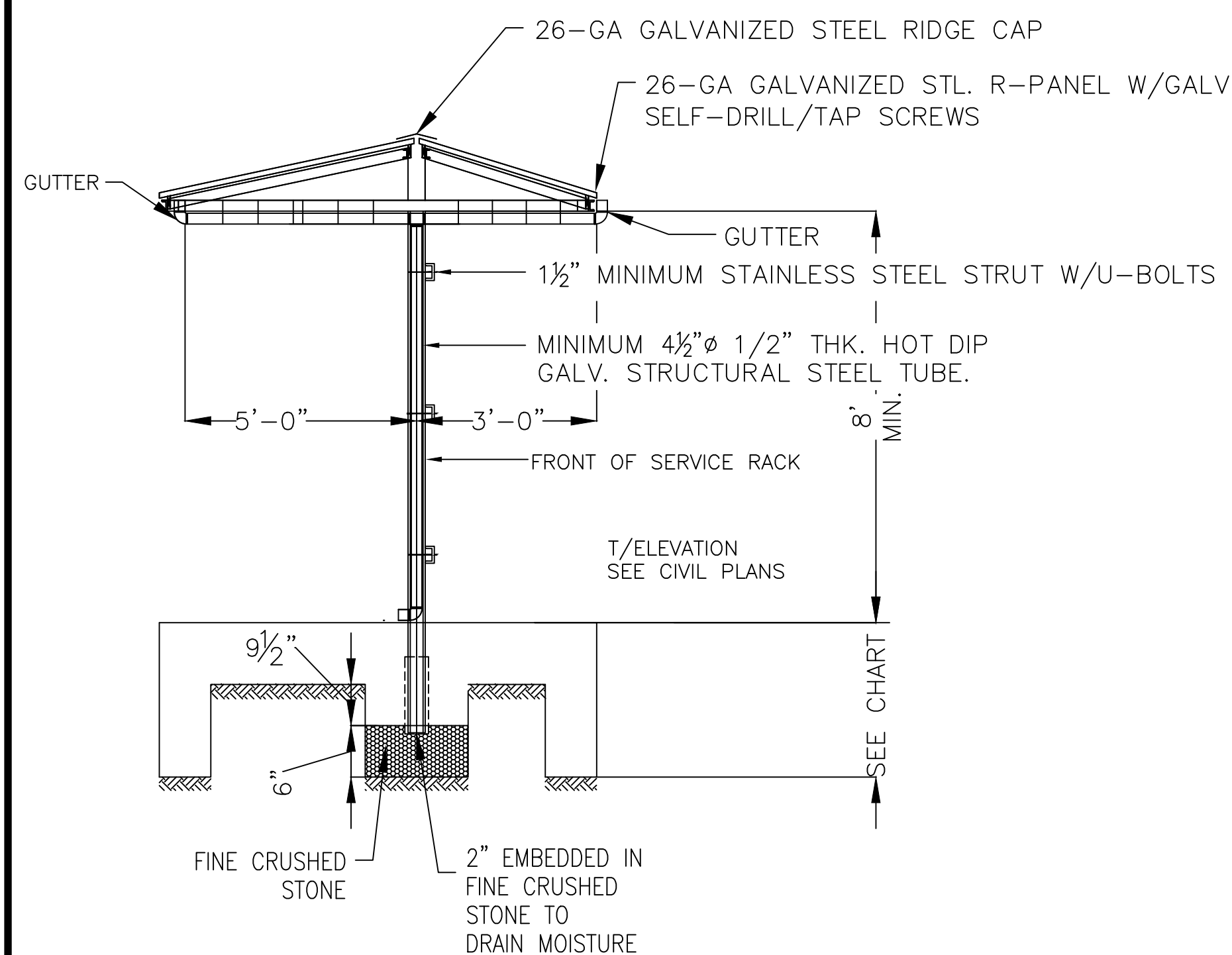
GENERATOR PAD ELEVATION

SCALE: 1/4"=1'



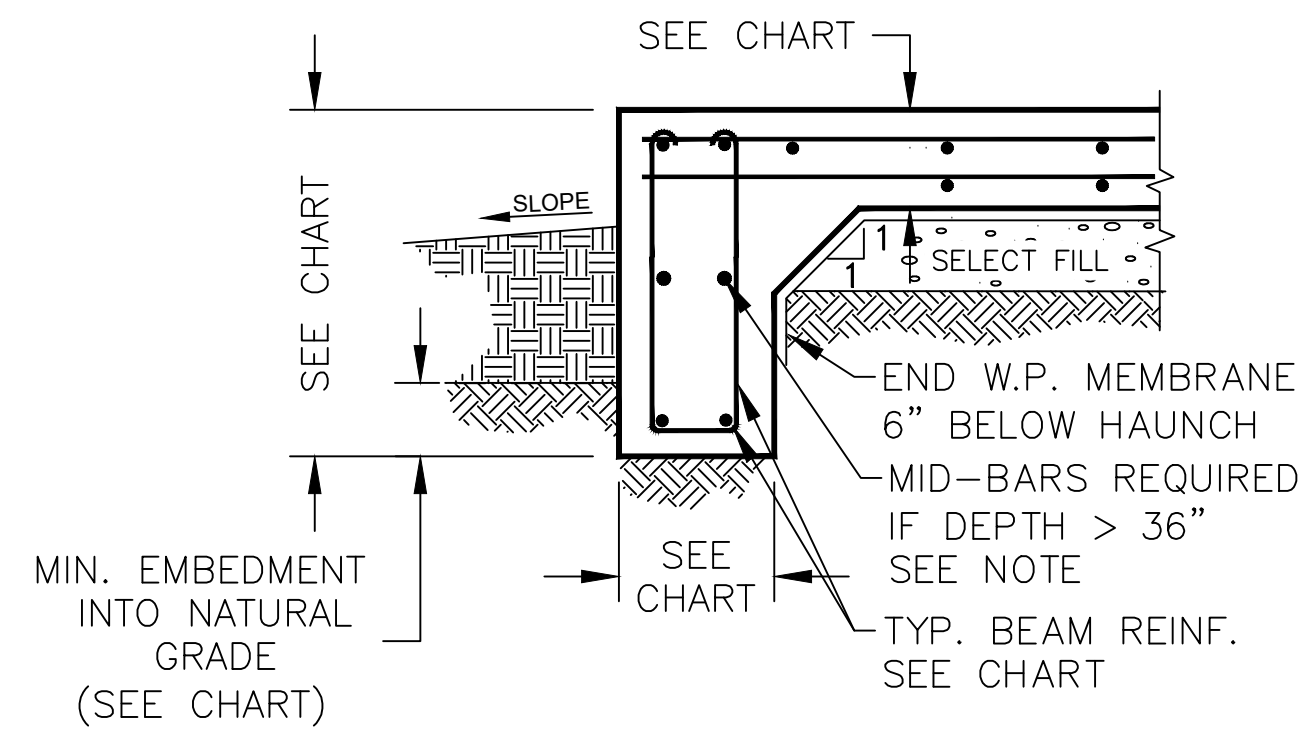
INTERSECTION DETAIL

BEAM INTERSECTION DETAIL



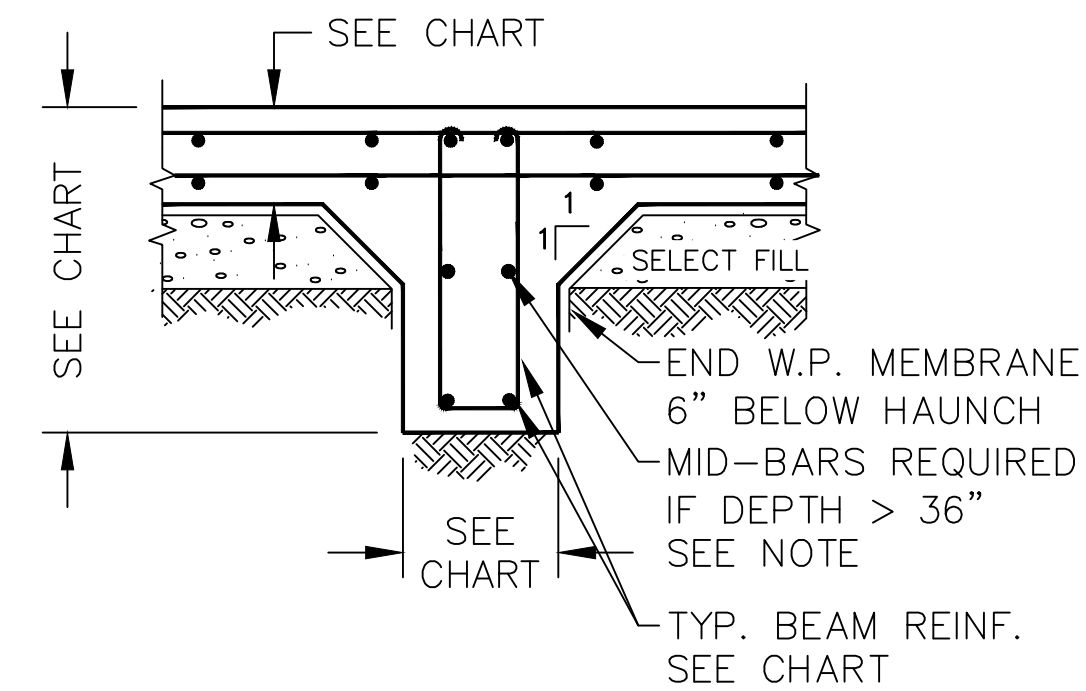
SECTION C-C (ELECTRICAL RACK)

SCALE: 3/8"=1'



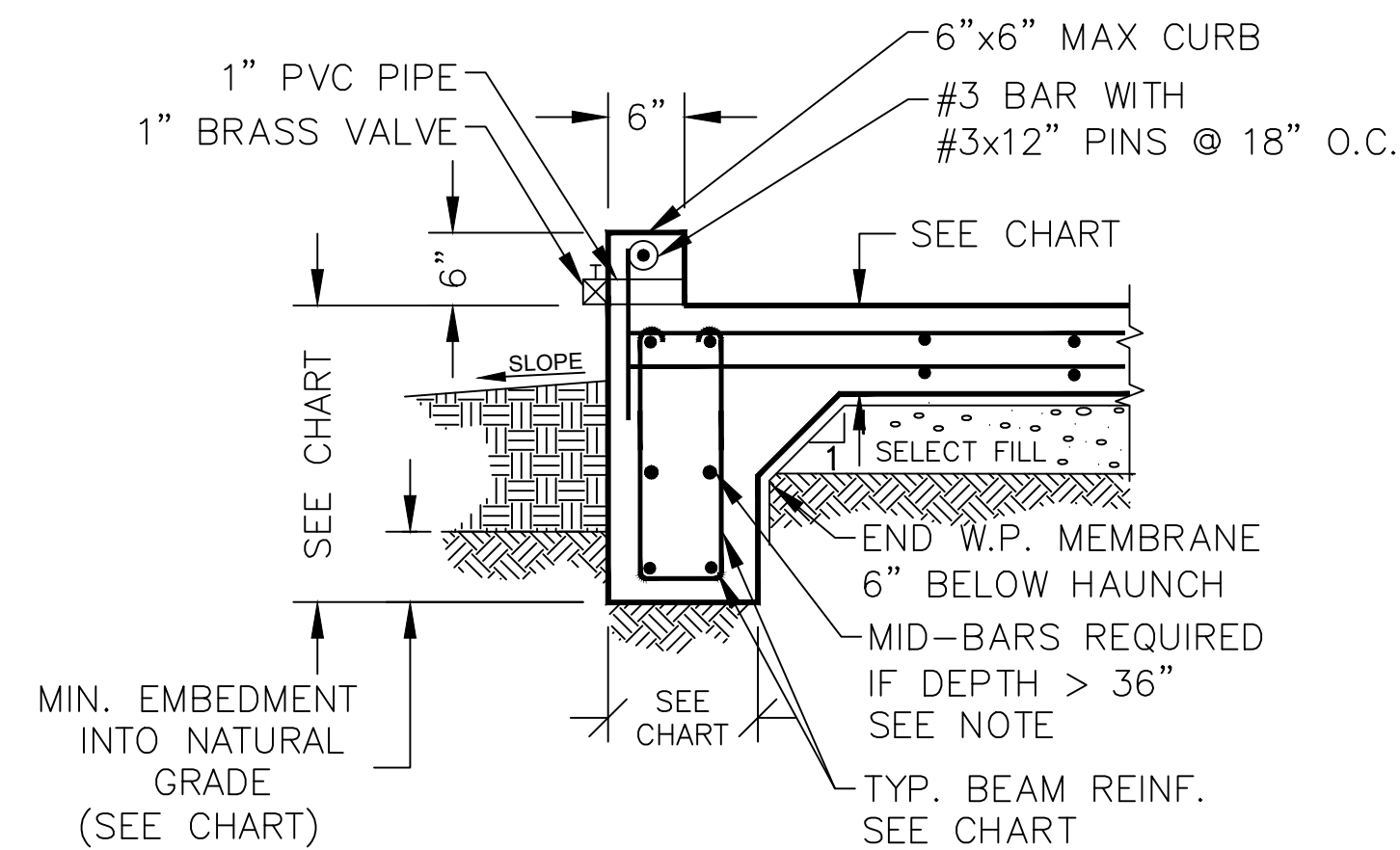
DETAIL-1

EXTERIOR BEAM-NO BRICK LUG



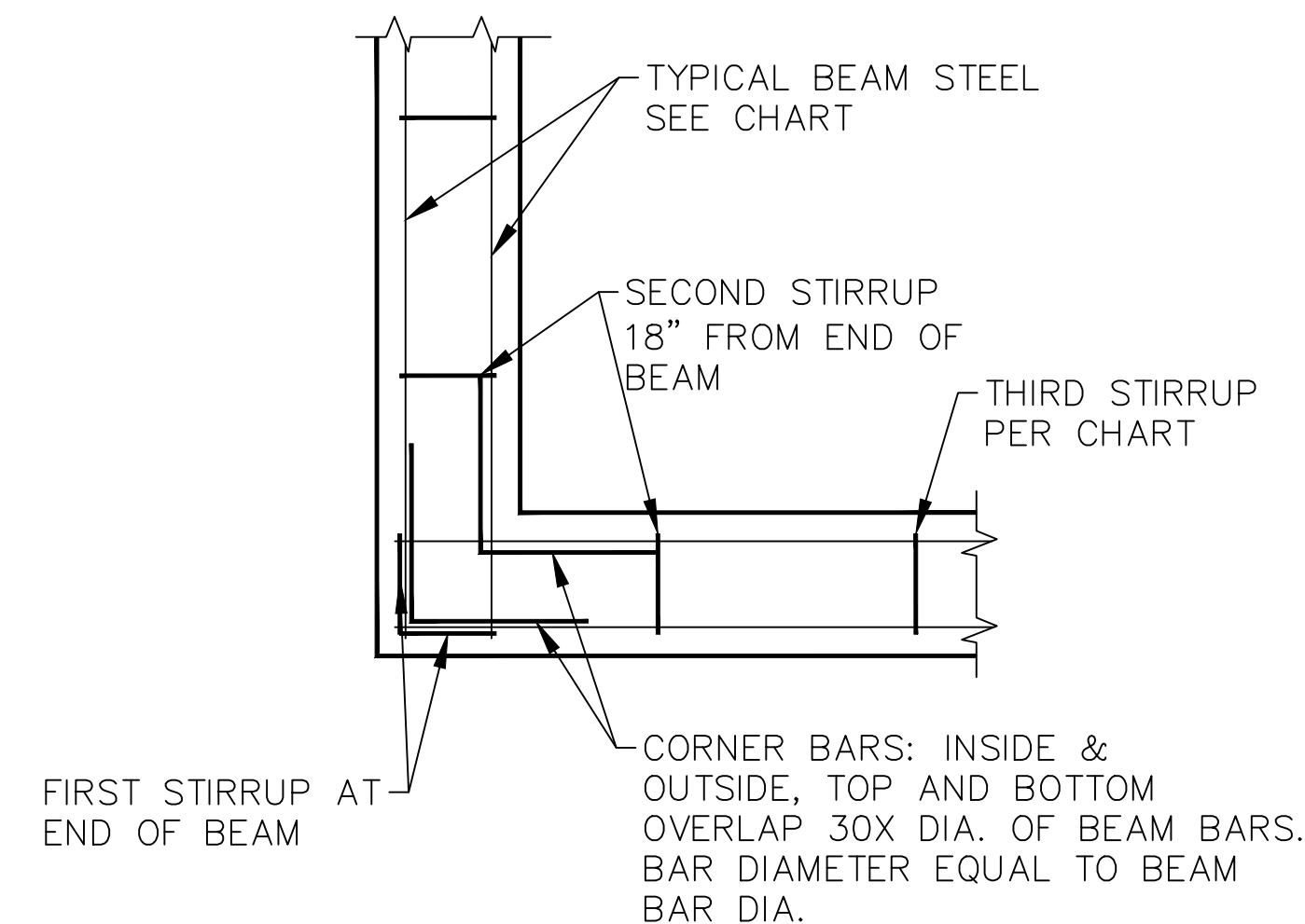
DETAIL-2

TYP. INT. BEAM DETAIL



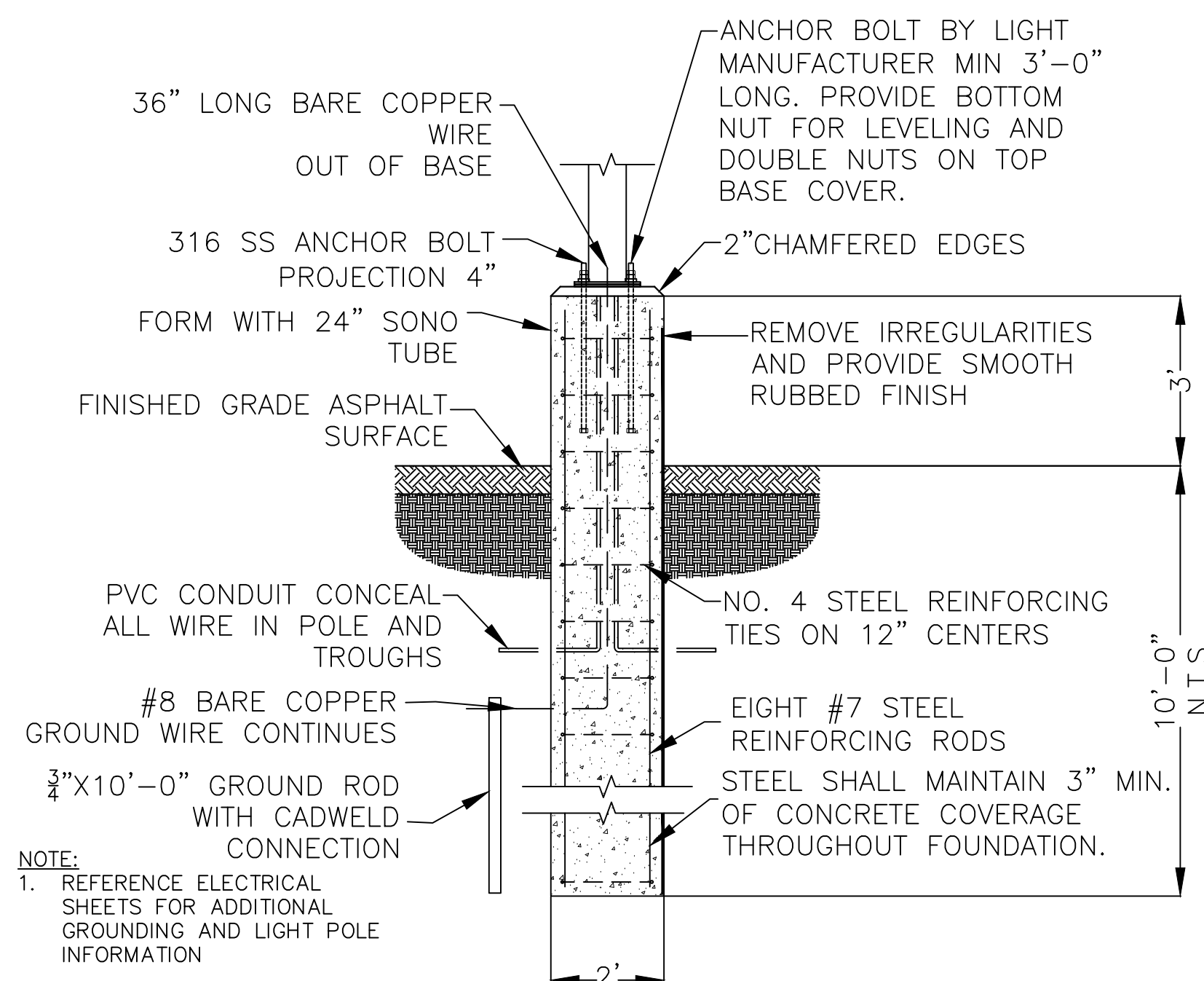
DETAIL-3

EXTERIOR BEAM W/ CURB



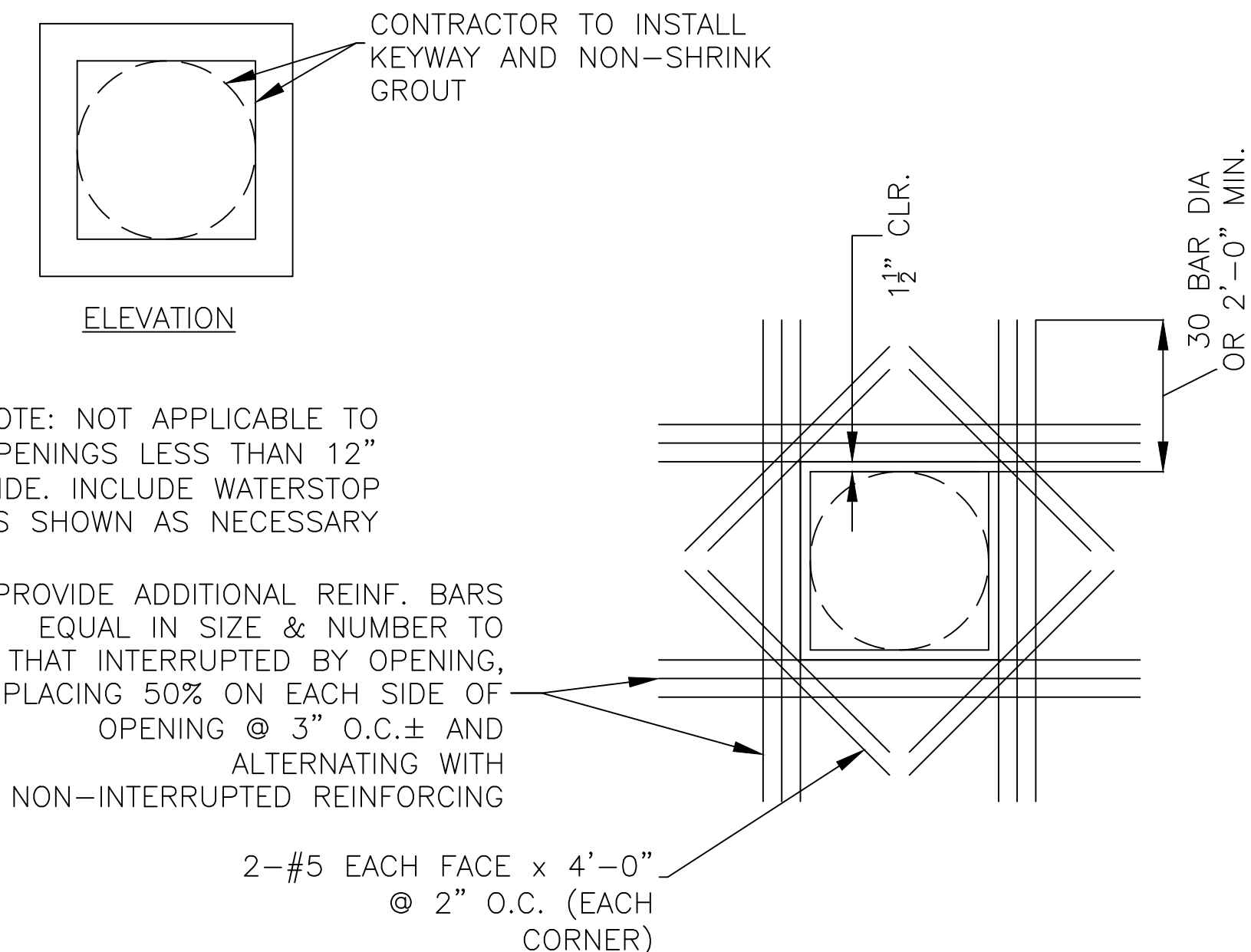
CORNER DETAIL

TYP. EXT. CORNER BEAM



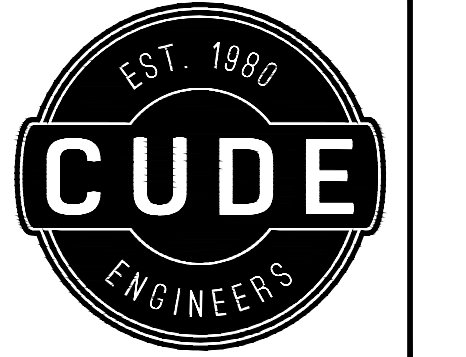
LIGHT POLE FOUNDATION (TYP)

SCALE: 3/8"=1'



PENETRATION DETAIL

N.T.S

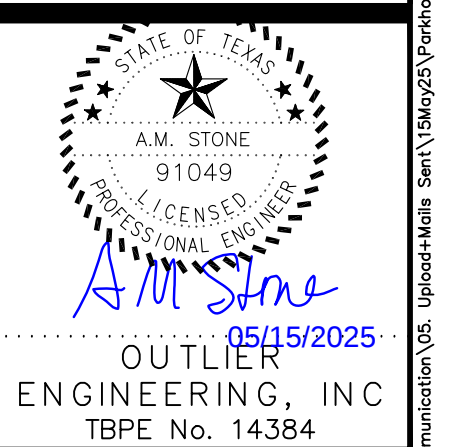


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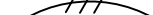
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ABBREVIATIONS

AC	ABOVE COUNTER
AFF	ABOVE FINISHED FLOOR.
CB	CIRCUIT BREAKER.
EP	EXPLOSION PROOF.
GF1	GROUND FAULT CIRCUIT INTERRUPTER.
GND	GROUND.
HP	HORSEPOWER.
LP	LIGHTING PANEL.
MCC	MOTOR CONTROL CENTER.
MH	MOUNTING HEIGHT, MANHOLE.
NEC	NATIONAL ELECTRICAL CODE.
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOC.
NIC	NOT IN CONTRACT.
NL	NIGHT LIGHT.
PH	PHOTOELECTRIC SWITCH
PP	POWER PANEL.
RP	RECEPTACLE PANEL.
UE	UNDERGROUND ELECTRIC.
UON	UNLESS OTHERWISE NOTED.
WP	WEATHER PROOF.

WIRING

	WIRING CONCEALED IN CEILING OR WALLS; SLASH MARKS INDICATE NUMBER OF CONDUCTORS EXCLUDING GROUNDS; CONDUCTOR SIZE AS MARKED; #12 AWG UON.
	UNDERGROUND CABLE OR DUCT; TYPE, SIZE, CONDUCTORS, AND ARRANGEMENT BY NOTATION OR SCHEDULE.
	WIRING RUN EXPOSED.

SWITCHES

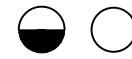
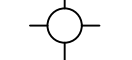
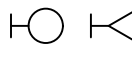
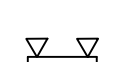
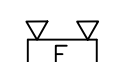
S SWITCH OUTLET; MOUNTED 48" AFF UON; SINGLE POLE UON;
LOWER CASE LETTER, WHEN PRESENT, INDICATES OUTLETS
CONTROLLED.

* ABBREVIATIONS FOR SWITCH OUTLETS

2 DOUBLE POLE SWITCH
4 4-WAY SWITCH
K KEY OPERATED SWITCH
D DOOR SWITCH

D DIMMER SWITCH; MOUNTED 48" AFF UON; LOWER CASE
LETTER, WHEN PRESENT, INDICATES OUTLETS CONTROLLED.

LIGHTING

	LED LIGHT FIXTURE – RECESSED, SURFACE, OR PENDANT MOUNTED
	RECESSED MOUNTED CEILING FIXTURE
	SURFACE MOUNTED CEILING FIXTURE
	WALLPACK FIXTURE
	SURFACE OR PENDANT MOUNT EXIT SIGN FIXTURE; ARROWS INDICATE REQUIRED SIGN ARROWS.
	BATTERY POWERED EMERGENCY LIGHTING FIXTURE
	COMBINATION EMERGENCY LIGHTING FIXTURE AND EXIT SIGN
A	INDICATES FIXTURE TYPE; SEE SCHEDULE.

RECEPTACLES

	GROUNDING DUPLEX RECEPTACLE (NEMA 5-20R); MOUNTED 18" AFF UON; NUMBER INDICATES CIRCUIT.
	GROUNDING DUPLEX RECEPTACLE (NEMA 5-20R); MOUNTED 6" ABOVE COUNTERTOP.
	SPLIT WIRED GROUNDING DUPLEX RECEPTACLE (NEMA 5-20R); MOUNTED 18" AFF UON.
	GROUNDING SINGLE RECEPTACLE (NEMA 5-20); MOUNTED 18" AFF UON.
	GROUNDING QUADRUPLUX RECEPTACLE (NEMA 5-20R); MOUNTED 18" AFF UON.
	DUPLEX RECEPTACLE ON DEDICATED CIRCUIT
	SPECIAL PURPOSE RECEPTACLE; LETTER INDICATES TYPE; TYPE DEFINED BY NOTATION OR SCHEDULE; MOUNTED 18" AFF UON.

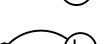
PANELS AND MISC.

	LIGHT OR POWER PANEL
 FSS	FUSED SAFETY (DISCONNECT) SWITCH
 NFSS	NON-FUSED SAFETY (DISCONNECT) SWITCH
 J	JUNCTION BOX
 M	MOTOR
	TELEPHONE OUTLET - WALL PROVIDE 4X4 OUTLET BOX IN-WALL MOUNTED 3 1/2" AFF. CONDUIT TO ABOVE CEILING WITH PULL WIRE. WIRING BY OTHERS.
	COMPUTER OUTLET - WALL - MOUNTED 18" AFF. UON. PROVIDE 4X4 OUTLET BOX IN WALL WITH 3/4" CONDUIT TO ABOVE CEILING WITH PULL WIRE. WIRING BY OTHERS.

ELECTRICAL CONTROL SYMBOLS

	FUSE		NORMALLY OPEN FOOT SWITCH
	FUSE		NORMALLY CLOSED FOOT SWITCH
	CIRCUIT BREAKER		MUSHROOM HEAD MOMENTARY CONTACT SWITCH
	DISCONNECT SWITCH		TWO SINGLE CIRCUIT MAINTAINED CONTACT SWITCH
	THERMAL OVERLOAD		NORMALLY OPEN MOMENTARY CONTACT SWITCH
	SOLENOID		NORMALLY CLOSED MOMENTARY CONTACT SWITCH
	NORMALLY CLOSED CONTACT		DOUBLE BREAK CONTACT
	NORMALLY OPEN CONTACT		NORMALLY CLOSED DOUBLE BREAK CONTACT
	NORMALLY OPEN PRESSURE/VACUUM SWITCH		SINGLE POLE SINGLE THROW TOGGLE SWITCH
	NORMALLY CLOSED PRESSURE/VACUUM SWITCH		SINGLE POLE DOUBLE THROW TOGGLE SWITCH
	NORMALLY OPEN, TIMED CLOSED SWITCH		DOUBLE POLE DOUBLE THROW TOGGLE SWITCH
	NORMALLY CLOSED, TIMED OPEN SWITCH		3 POSITION SELECTOR SWITCH
	NORMALLY OPEN, TIMED OPEN SWITCH		2 POSITION SELECTOR SWITCH
	NORMALLY CLOSED, TIMED CLOSED SWITCH		FIXED CAPACITOR
	TIMED OPEN, TIMED CLOSED SWITCH		DIODE
	NORMALLY OPEN TEMPERATURE SWITCH		RESISTOR
	NORMALLY CLOSED TEMPERATURE SWITCH		VARISTOR
	NORMALLY OPEN LIQUID LEVEL SWITCH		
	NORMALLY CLOSED LIQUID LEVEL SWITCH		
	NORMALLY OPEN FLOW SWITCH		
	NORMALLY CLOSED FLOW SWITCH		
	NORMALLY OPEN LIMIT SWITCH		
	NORMALLY CLOSED LIMIT SWITCH		

ELECTRICAL POWER SYMBOLS

	DOUBLE FOURPLEX RECEPTACLE ON COUNTER TOP
	FLOOR OUTLET
	POWER POLE
	PULL BOX
	TRANSFORMER
	RELAY
	TIME CLOCK
	REMOTE CIRCUIT BREAKER
	HAND-OFF-AUTO SELECTOR SWITCH
	REMOTE TEST SWITCH
	JUNCTION BOX
	WALL MOUNTED JUNCTION BOX
	JUNCTION BOX FOR POWER FEED TO PREWIRED PARTITION
	JUNCTION BOX FOR TELEPHONE FEED TO PARTITION
	FLOOR MOUNTED POWER FEED TO PREWIRED PARTITION
	FLOOR MOUNTED LAN CABLE FEED TO PREWIRED PARTITION
	WALL MOUNTED LAN CABLE FEED TO PREWIRED PARTITION
	BLANK OUTLET BOX
	WALL MOUNTED BLANK OUTLET BOX
	WALL MOUNTED DOUBLE GANG BLANK OUTLET BOX
	WALL MOUNTED TELEPHONE OUTLET
	DATA OUTLET: 4" SQ. BOX W/ SINGLE GANG OPENING, 1" C TO ABOVE ACCESSABLE CEILING.
	MOTOR (NUMBER INDICATES SIZE IN HORSEPOWER)
	208Y/120 VOLT, 3Ø, 4 WIRE PANELBOARD
	480Y/277 VOLT, 3Ø, 4 WIRE PANELBOARD
	480 VOLT, 3Ø, 3 WIRE PANELBOARD
	VARIABLE FREQUENCY DRIVE WITH DISCONNECT SWITCH
	STARTER
	COMBINATION MOTOR STARTER/DISCONNECT SWITCH
	DISCONNECT SWITCH (600V, 30A, 3P)
	CONTROL PANEL

ELECTRICAL NOTES:

1. ALL WORK SHALL MEET THE REQUIREMENTS OF THE LATEST ADOPTED VERSION OF THE NATIONAL ELECTRICAL CODE (NEC).
2. CONTRACTOR SHALL PROVIDE ELECTRICAL INSPECTION CERTIFICATION VIA UL APPROVED AGENCY HAVING AREA JURISDICTION.
3. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL ELECTRICAL PERMITS AND ELECTRICAL INSPECTION.
4. THE CONTRACTOR SHALL FURNISH ALL MATERIALS, LABOR, AND SUPERVISION TO STORE, HANDLE, AND INSTALL.
5. THE CONTRACTOR SHALL STATE THE TYPE OF WORK TO BE DONE AND THE TYPE OF LICENSE REQUIRED BY OTHERS SHALL BE INSTALLED COMPLETE. THE CONTRACTOR SHALL PROVIDE PROOF OF CURRENT LICENSING AS REQUIRED BY CURRENT STATE AND LOCAL REQUIREMENTS.
6. ALL SHALL BE IDENTIFIED BY THE LABEL OR USING OF A NATIONALLY RECOGNIZED INDEPENDENT TESTING LABORATORY, UL, FM, ETC.
7. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS AT SITE PRIOR TO STARTING WORK.
8. ALL ELECTRICAL INSTRUMENT WORK SHALL BE COORDINATED WITH THE ENGINEER AND OWNER TO VERIFY FINAL LOCAL CONDITIONS. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS OF THE EXISTING MOUNTING HEIGHTS, UNLESS OTHERWISE NOTED, SHALL BE: TOP OF PANELS TO FINISHED GRADE "72" A.F.S.
9. ALL DEVICES SHALL BE ADEQUATELY IDENTIFIED WITH PERMANENT NAMEPLATE OR TAGS, WRITING SHALL BE IDENTIFIED AS TO PHASING AND CONDUCTOR IDENTIFICATION. CIRCUIT CHANGES AND ROUTING SHALL BE REFLECTED ON ALL DRAWINGS. THE FOLLOWING PHASE CHARACTERISTICS SHALL BE INCLUDED ON PUMP CONTROL PANELS, MAIN DISCONNECT SWITCHES, AND JUNCTION BOXES.
10. THE COMPLETE INSTALLATION SHALL BE TESTED AT COMPLETION OF WORK TO BE FREE OF SHORT CIRCUIT CONDITIONS. ALL INTERLOCK AND ALARM CIRCUITS SHALL BE TESTED TO VERIFY CORRECT OPERATION OF EACH COMPONENT. INSTRUMENTATION SHALL BE CALIBRATED AND ADJUSTED TO THE REQUIRED PRECISION.
11. THE CONTRACTOR SHALL KEEP ONE SET OF THE LATEST ISSUE OF ELECTRICAL DRAWINGS WHICH SHALL REFLECT THE ACTUAL INSTALLED CONDITIONS AND CONNECTIONS OF ALL EQUIPMENT AND DEVICES. THE CONTRACTOR SHALL HAVE ALL "AS-BUILT" DRAWINGS, RECORDS AND INSTRUCTIONS RECORDED WITH EQUIPMENT AND SYSTEMS. ALL "RECORD" DRAWINGS, EQUIPMENT MANUALS, AND MISCELLANEOUS INFORMATION SHALL BE GIVEN TO THE ENGINEER/OWNER AT COMPLETION OF WORK.

ELECTRICAL MATERIALS SPECIFICATIONS:

NOTE: REFER TO SHEET E-2 FOR GENERATOR SPECIFICATIONS.
REFER TO SHEET E-3 FOR AUTOMATIC TRANSFER SWITCH SPECIFICATIONS.
ADDITIONAL EQUIPMENT SPECIFICATIONS ARE ON SHEET E-5.
REFER TO SHEETS E-6 AND E-7 FOR PUMP CONTROL PANEL SPECIFICATIONS.
REFER TO SHEET E-8 FOR SCADA PANEL SPECIFICATIONS.

CONDUCTORS AND CABLES

POWER AND CONTROL WIRE AND CABLE

- A. UNDERGROUND OR WET LOCATION POWER AND CONTROL WIRE AND CABLE SHALL BE STRANDED COPPER WIRE TYPE XHHW-2, BELDEN, CONTROL, HWC OR EQUAL WITH INSULATION RATED FOR 600V.
- B. ABOVEGROUND POWER AND CONTROL WIRE AND CABLE SHALL BE STRANDED COPPER WIRE TYPE THHN, BELDEN, CONTROL, HWC OR EQUAL WITH INSULATION RATED FOR 600V.
- C. ANALOG SIGNAL CABLE SHALL BE 18AWG MINIMUM WITH 300V INSULATION. ANALOG SIGNAL CABLE TO HAVE TWO TWINDED CONDUCTORS WITH OVERALL SHIELD, DRAIN WIRE, AND COLOR CODED INSULATION.
- D. MINIMUM POWER WIRE SIZE TO BE #12 AWG.
- E. MINIMUM CONTROL WIRE SIZE TO BE #14 AWG.

RACEWAYS AND BOXES

UNLESS OTHERWISE NOTED, CONDUIT SHALL CONFORM TO THE FOLLOWING:

- A. CONDUIT ROUTINGS ARE SHOWN DIAGRAMMATICALLY ON THE DRAWINGS. THE CONTRACTOR SHALL COORDINATE THE SPECIFIC CONDUIT ROUTINGS WITH THE ELECTRICAL CONTRACTOR.
- B. ALL CONDUIT TRANSITION FLOWS FROM UNDERGROUND TO ABOVE GROUND SHALL BE PVC COATED RIGID ALUMINUM.
- C. ALL CONDUIT LEAVING WET WELL SHALL BE PVC COATED RIGID ALUMINUM.
- D. UNLESS OTHERWISE NOTED ALL OUTDOORS ABOVE GROUND CONDUITS SHALL BE RIGID ALUMINUM, MINIMUM SIZE 3/4".
- E. ALL UNDERGROUND CONDUITS SHALL BE 1" MINIMUM.
 - ALL UNDERGROUND CONDUITS TO BE SCHEDULE 40 PVC IN GRAVEL (SEE "TYPICAL DUCTBANK SECTION," SHEET E-4, FOR DETAIL).
- F. INCLUDING A GROUNDING CONDUCTOR IN ALL CONDUITS.
- G. BITUMINOUS COATING IS TO BE PROVIDED FOR ALL METAL PARTS IN CONTACT WITH CONCRETE.

GROUNDING

GROUNDING SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF N.E.C. AVAILABLE AT THE TIME OF INSTALLATION. GROUNDING SHALL MEET ALL LOCAL CODES IN EFFECT AT THE TIME OF INSTALLATION.

A. GROUNDING SYSTEM

A GROUNDING SYSTEM SHALL BE INSTALLED TO THE ALL ELECTRICAL EQUIPMENT ENCLOSURES AND DEVICES TO COMMON REFERENCE. GROUND RODS SHALL BE COPPER CLAD, 3/4"x10' LONG, ALL UNDERGROUND. GROUND RODS SHALL BE SET WITH AN EXOTHERMIC WELD. GROUND RODS SHALL BE BURIED 18" BELOW FINISHED GRADE EXCEPT GROUND ROD IN INSPECTION CELL. GROUND RESISTANCE SHALL NOT EXCEED 5.00 OHMS.

B. GROUND ROD INSPECTION WELLS

GROUND ROD INSPECTION WELLS SHALL BE CROWN 7416B, NOT RATED FOR ROADWAY USE, OR EQUAL. SEE "TYPICAL GROUND ROD INSPECTION WELL TERMINATION," SHEET E-10, FOR DETAILS.

ELECTRICAL SHEET LIST:

- E-1 ELECTRICAL SYMBOLS AND NOTES
- E-2 ELECTRICAL GENERATOR SPECIFICATIONS
- E-3 ELECTRICAL ATS SPECIFICATIONS
- E-4 ELECTRICAL SITE PLAN
- E-5 ELECTRICAL ONE-LINE DIAGRAM AND SCHEDULES
- E-6 ELECTRICAL PUMP CONTROL PANEL
- E-7 ELECTRICAL PUMP CONTROL PANEL
- E-8 ELECTRICAL SCADA PANEL
- E-9 ELECTRICAL SCADA DETAILS
- E-10 ELECTRICAL GENERAL DETAILS

SHEET NUMBER E-1	PARK HOUSE UNIT 1 CITY OF SEGUIN GUADALUPE COUNTY, TEXAS	ELECTRICAL SYMBOLS AND NOTES	TLS PROJECT 107-001 DATE JULY 2025 SCALE: AS SHOWN DESIGNED BY: TEV DRAWN BY: FD CHECKED BY: TEV	 57-29 2025  TLS ENGINEERING 8911 N. CAPITAL OF TEXAS HWY., SUITE 4200 AUSTIN, TX 78759 PHONES: 512.443.1111 FAXES: 512.443.1112 WWW.TEXASLIFTSTATIONENGINEERING.COM TLS ENGINEERING, LLC. TBPE Firm #F-23165	No.	REVISIONS	DATE	BY

[illegible]

1 UTILITY PADMOUNT TRANSFORMER

25FT FRONT CLEARANCE

10FT SIDE/BACK CLEARANCE (TYP)

2/0 CU BARE GROUND (TYP)

GROUND ROD (TYP.)

POLE LIGHT #3

RACK LIGHT FIXTURE "L" (TYP)

WET WELL JUNCTION BOXES

WET WELL

SCADA ANTENNA TOWER

METER DISC.

UTILITY METER

MAIN DISC.

SPD1

ATS

PUMP CONTROL PANEL

SPD2 AND SPD3 (STACKED)

MINI POWER CENTER

FLOW INDICATOR/TRANSMITTER

SCADA PANEL

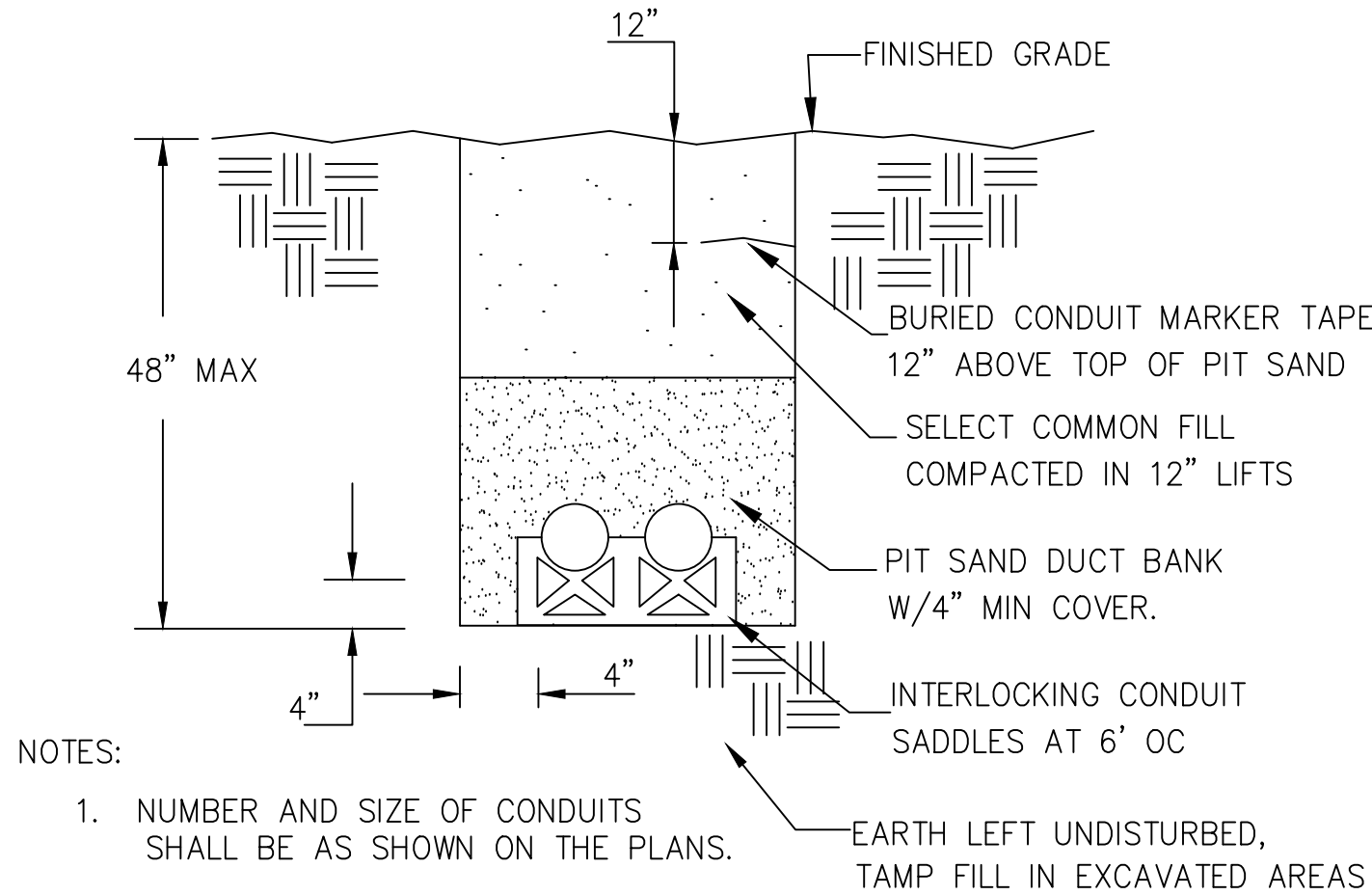
RACK/CANOPY

POLE LIGHT #2

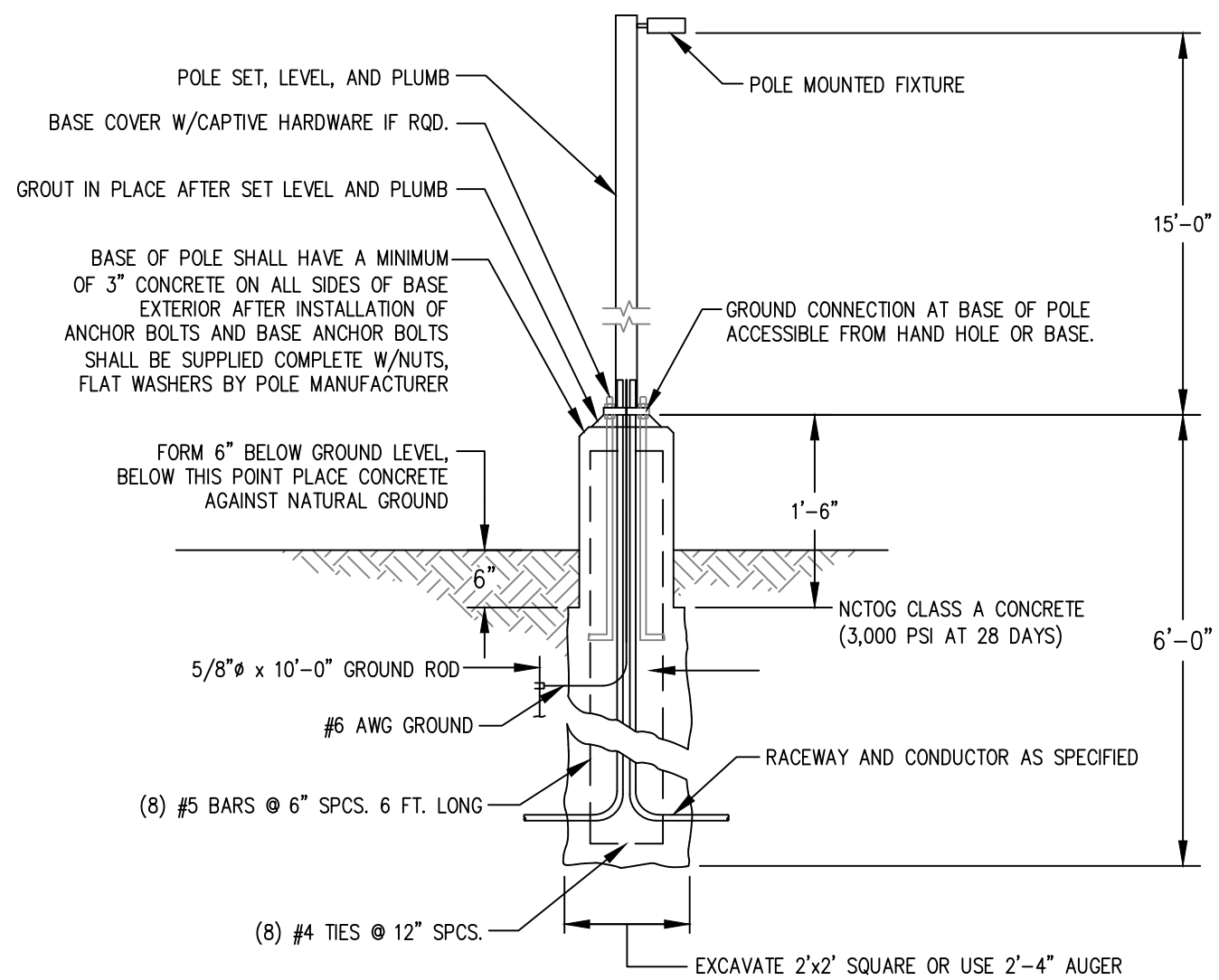
MAG METER

POLE LIGHT #1

FLOWMETER PULLBOX



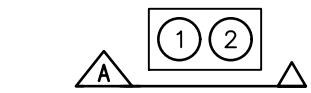
TYPICAL DUCTBANK SECTION (SAND)
SCALE: N.T.S.



POLE LIGHT DETAIL

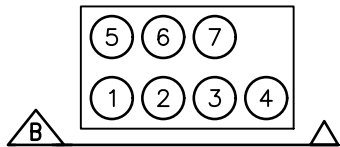
LUMINAIRE SCHEDULE				
FIXTURE ID	QUANTITY	MANUFACTURER/ MODEL	DESCRIPTION	REMARKS
L _k (RACK LIGHTS)	2	COOPER LIGHTING 4V72-LD5-4-DR-UNV LB40-CD1-WL-U	4" LED LIGHT FIXTURE, 4000 LUMENS, 4000K, UNIVERSAL VOLTAGE, 120-277V. DR HIGH IMPACT ADDITIVE LENS	MOUNT UNDER CANOPY.
L _g (POLE LIGHT)	3	COOPER LIGHTING PRV-C40-D-UNV-T4-SA-BZ ADD OPTION: HSS	17,100 NOMINAL LUMENS, 4000K, TYPE IV, UNIVERSAL VOLTAGE, BRONZE POLE SHALL BE COOPER SQUARE STRAIGHT ALUMINUM POLE, 4" SHAFT, BRONZE FINISH. PROVIDE POLE LENGTH AS INDICATED ON "POLE LIGHT DETAIL," THIS SHEET.	PROVIDE NECESSARY MOUNTING ACCESSORIES TO MOUNT LIGHT FIXTURE AS SHOWN ON THIS SHEET. PROVIDE PHOTOCONTROL. LIGHT FIXTURE IS TO BE CONTROLLED BY PHOTOCELL AND SWITCH AT RACK/CANOPY.

- ① PROVIDE AND INSTALL NEW 150A, 277/480V/3PH/4W ELECTRIC SERVICE PER GVEC'S SPECIFICATIONS. CONTRACTOR TO COORDINATE WITH GVEC BEFORE STARTING WORK: (800)--223-4832.
- ② PROVIDE AND INSTALL METER SOCKET PER GVEC'S REQUIREMENTS.
- ③ REFER TO SHEET E-5 KEY NOTES FOR DETAILED EQUIPMENT INFORMATION.
- ④ PROVIDE AND INSTALL POLE LIGHT, PER "POLE LIGHT DETAIL," THIS SHEET.
- ⑤ PROVIDE AND INSTALL CANOPY RACK PER DETAIL ON SHEET E-10.
- ⑥ PROVIDE AND INSTALL WET WELL JUNCTION BOXES PER DETAIL ON SHEET E-10.
- ⑦ LOCATE CU BUS BAR BELOW MAIN DISCONNECT. CU BUS BAR SHALL BE MINIMUM 1/4" X 2", LENGTH AS REQUIRED FOR CONNECTIONS SHOWN ON ONE-LINE DIAGRAM, SHEET E-5.
- ⑧ ORIENT GENERATOR AS SHOWN, WITH AIR INTAKE END OF GENERATOR FURTHEST AWAY FROM WET WELL.
- ⑨ PROVIDE AND INSTALL N4XSS FLOWMETER PULLBOX.
- ⑩ PROVIDE AND INSTALL SCADA ANTENNA TOWER PER SHEET E-9.

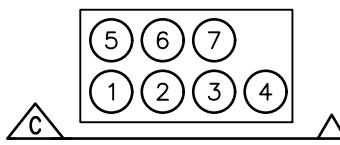


RACEWAY	SIZE	CONTENTS	DESCRIPTION	FROM	TO
1	2"	(4) $\frac{1}{2}$	SERVICE ENTRANCE	MAIN DISCONNECT	ATS
2	2"	PULLCORD W/LABEL	SPARE		STUB UP 6" AFG AT ATS

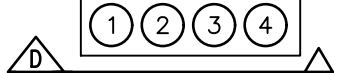
RUN DUCTBANK PER "TYPICAL DUCTBANK SECTION" DETAIL, THIS SHEET.



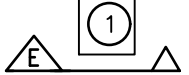
RAILWAY	SIZE	CONTENTS	DESCRIPTION	FROM	TO
1	2"	(4) 1/0, #6G	POWER	ATS	GENERATOR
2	2"	PULLCORD W/LABEL	SPARE		
3	1"	(2) #14	SIGNAL		
4	1"	(8) #14	GEN RUN, FAIL LOW FUEL, FUEL TANK RUPTURE	SCADA PANEL	
5	1"	(2) #12, #12G	BLOCK HEATER	MPC1	POLE LIGHT #3
6	1"	(2) #12, #12G	BATTERY CHARGER		
7	1"	(2) #12, #12G	POLE LIGHT #3 POWER		
RUN DUCTBANK PER "TYPICAL DUCTBANK SECTION" DETAIL, THIS SHEET.					



RACEWAY	SIZE	CONTENTS	DESCRIPTION	FROM	TO
1	1"	(3) #8, #10G	PUMP 1	PUMP CONTROL PANEL	WET WELL J-BOX (POWER)
2	1"	(3) #8, #10G	PUMP 2		
3	1"	(3) #8, #10G	PUMP 3		
4	1"	(20) #14G	PUMP SIGNALS & FLOATS		WET WELL J-BOX (INSTR)
5	1"	(1) #18 TSP	SUBMERSIBLE LEVEL SENSOR		
6	1"	PULLCORD W/ LABEL	WET WELL SPARE		STUB UP 6" AF6 AT WET WELL AND CAP
RUN DUCTBANK PER "TYPICAL DUCTBANK SECTION" DETAIL, THIS SHEET.					

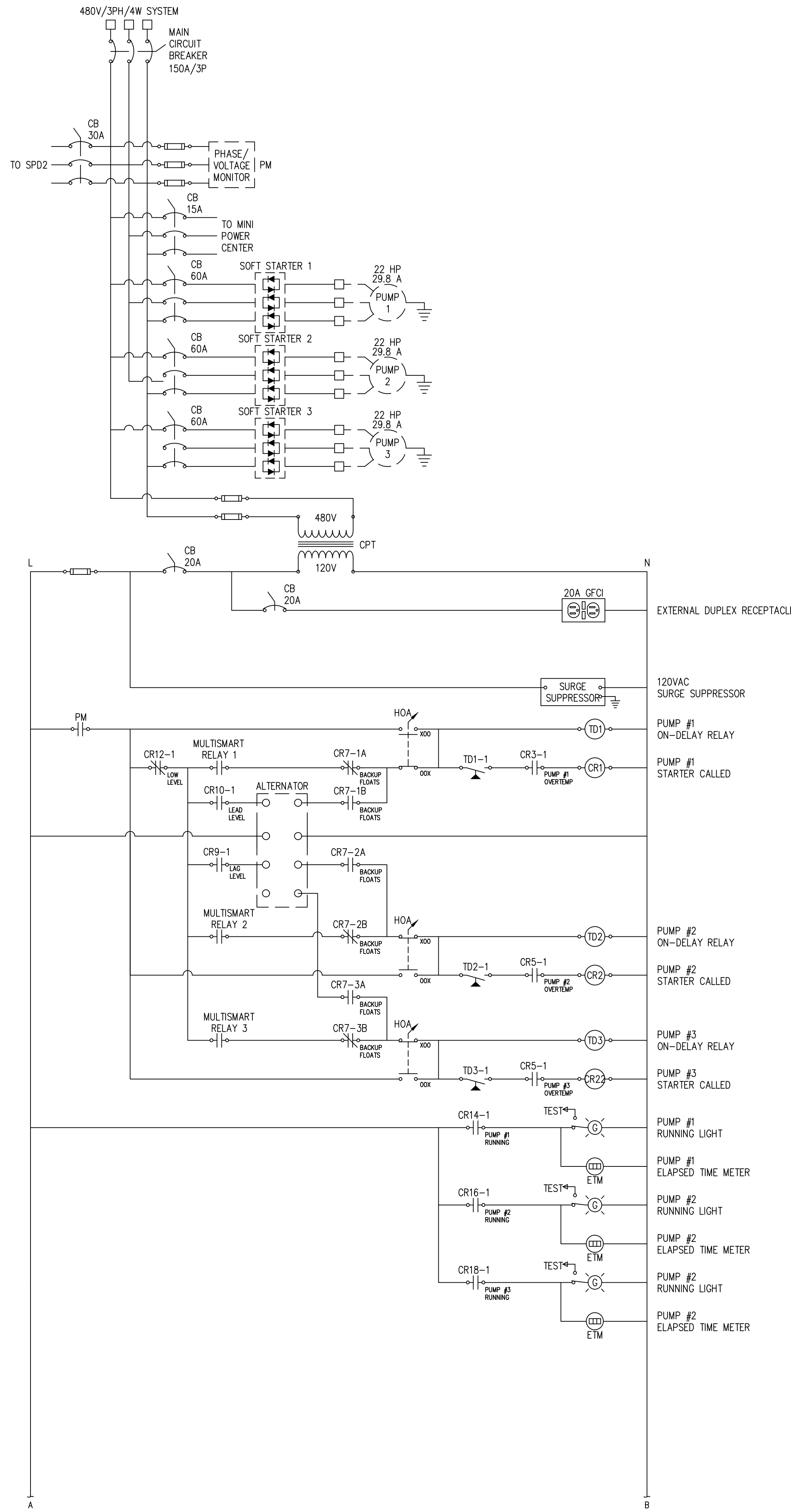


RACEWAY	SIZE	CONTENTS	DESCRIPTION	FROM	TO
1	1"	(2) #12, #12G	POLE LIGHT #1 POWER	MPC1	POLE LIGHT #1
2	1"	(2) #12, #12G	POLE LIGHT #2 POWER		POLE LIGHT #2
3	1"	MANUFACTURER SUPPLIED CABLES	FLOWMETER SIGNAL	FLOW IND/TRANS	FLOWMETER
4	1"	MANUFACTURER SUPPLIED CABLES	FLOWMETER POWER		
RUN DUCTBANK PER "TYPICAL DUCTBANK SECTION" DETAIL, THIS SHEET.					

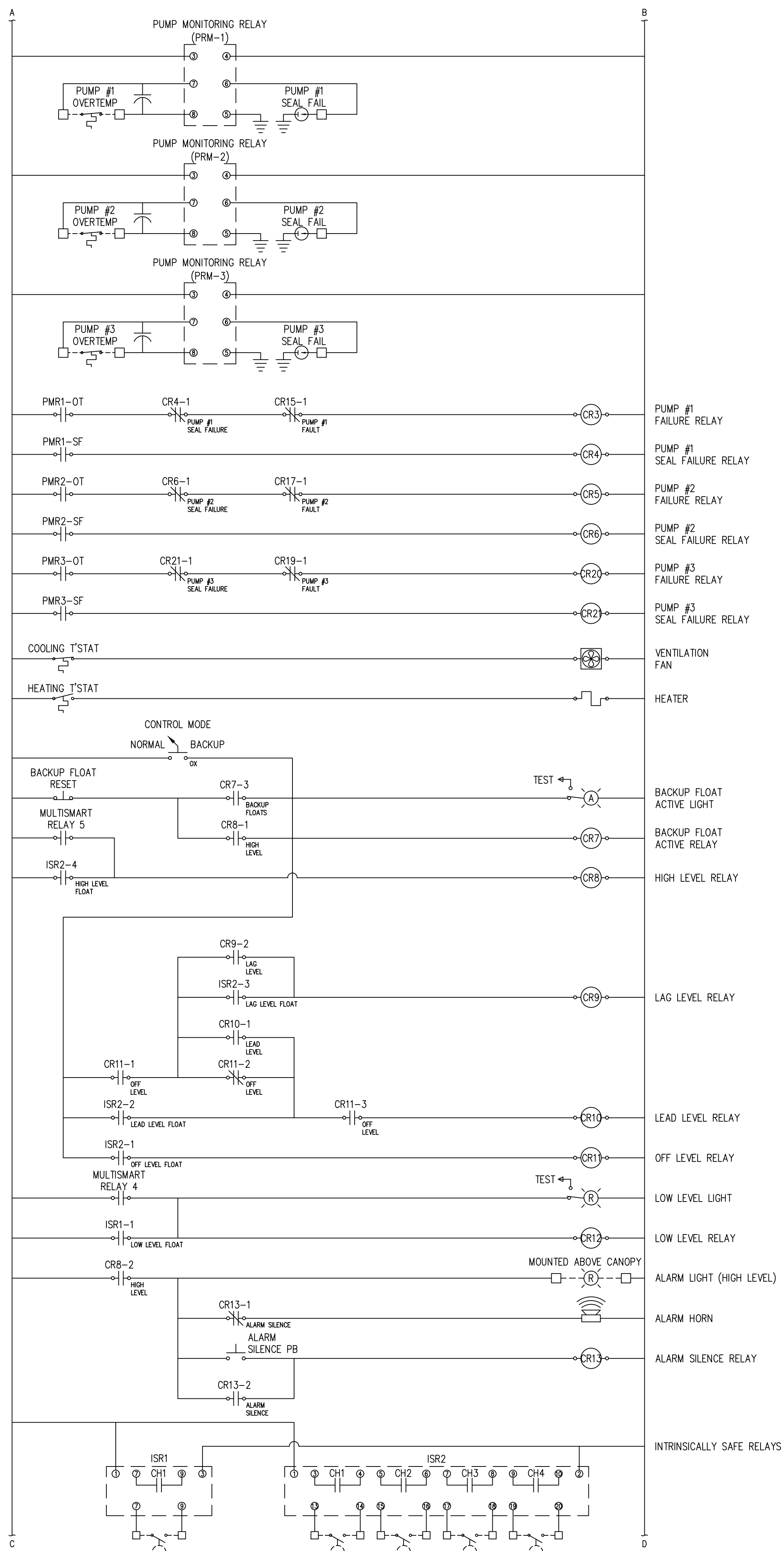


RACEWAY	SIZE	CONTENTS	DESCRIPTION	FROM	TO
1	2"	COAX CABLE	ANTENNA CABLE	SCADA PANEL	ANTENNA TOWER
RUN DUCTBANK PER "TYPICAL DUCTBANK SECTION" DETAIL, THIS SHEET.					

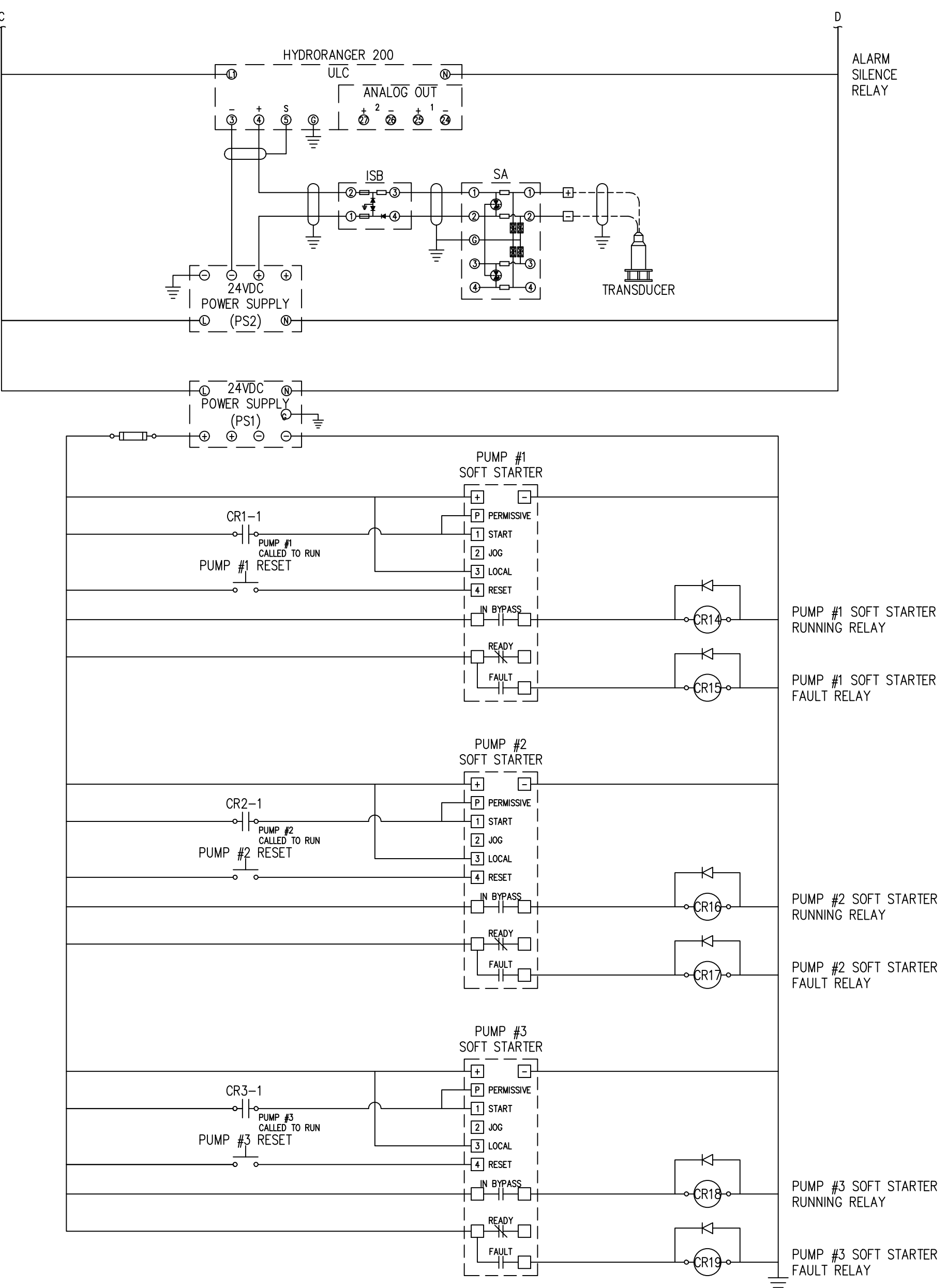
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**PUMP CONTROL PANEL
LADDER DIAGRAM**
NOT TO SCALE



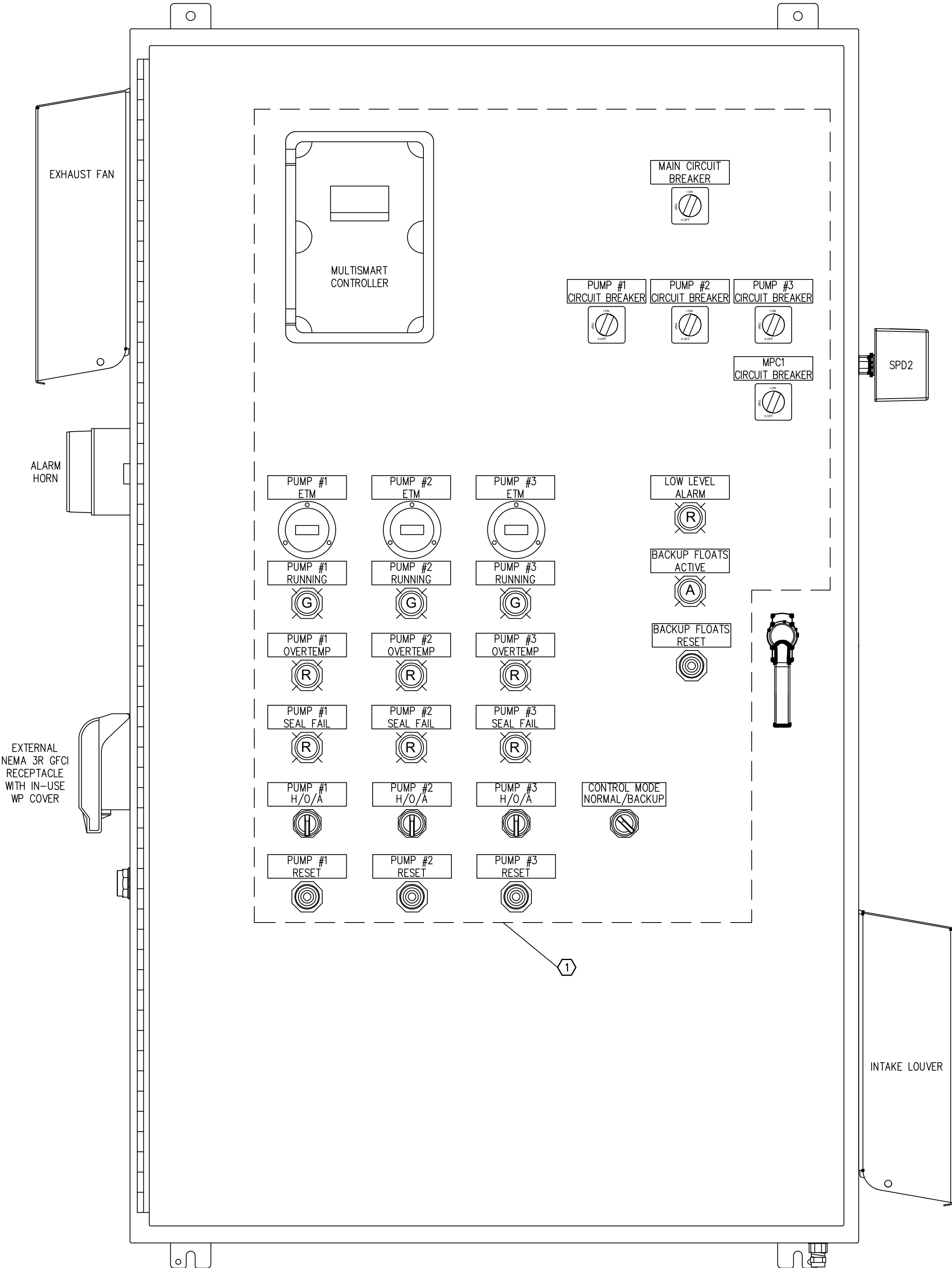
**PUMP CONTROL PANEL
LADDER DIAGRAM (CONTINUED)**
NOT TO SCALE



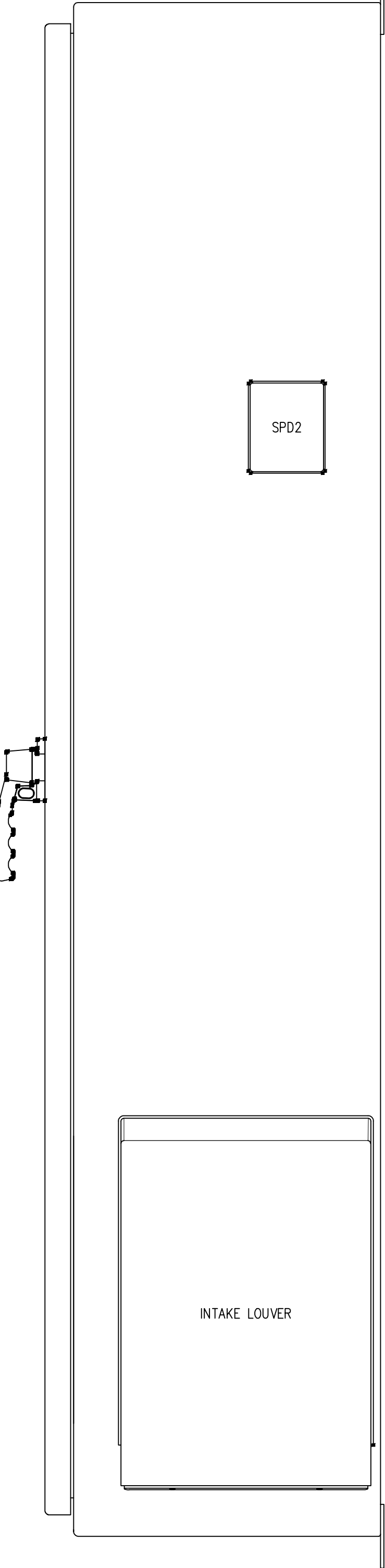
**PUMP CONTROL PANEL
LADDER DIAGRAM (CONTINUED)**
NOT TO SCALE

REVISIONS		DATE	BY
No.			
TLS ENGINEERING 8911 N. CAPITAL OF TEXAS HWY. SUITE 4200 AUSTIN, TX 78759 WWW.TEXASSTATISTATIONENGINEERING.COM TLS ENGINEERING, LLC. TBPE Firm # - 23165 STATE OF TEXAS THOMAS EDWARD VAUGHAN 135335 PROFESSIONAL ENGINEER 07-29 2025			
TLS PROJECT 107-001	DATE JULY 2025	SCALE: AS SHOWN	DESIGNED BY: TEV
DRAWN BY: FD		CHECKED BY: TEV	
ELECTRICAL PUMP CONTROL PANEL			
PARK HOUSE UNIT 1 CITY OF SEGUIN GUADALUPE COUNTY, TEXAS			
SHEET NUMBER E-6			

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PUMP CONTROL PANEL
ENCLOSURE EXTERIOR (FRONT)
NOT TO SCALE



PUMP CONTROL PANEL
ENCLOSURE EXTERIOR (SIDE)
NOT TO SCALE

GENERAL NOTES

1. DIAGRAM IS TYPICAL NATURE, FINAL HARDWARE CONFIGURATION WILL VARY ACCORDING TO CONTROL PANEL SPECIFICATIONS/REQUIREMENTS FOR THE PUMP MODELS PROVIDED.
2. PUMP CONTROL PANEL ENCLOSURE SHALL INCLUDE A DEAD FRONT DOOR, WITH CONTROLS ON INTERIOR DOOR. ENCLOSURE SHALL BE NEMA 4X 316 SS.
3. PUMP CONTROL PANEL SHALL BE PROVIDED BY AN EXPERIENCED PANEL BUILDER, WITH YEARS MINIMUM OF FIELD STATION EXPERIENCE IN PUMP BUILDING EXPERIENCE.
4. PANEL BUILDER MUST HAVE AND MAINTAIN ENVIRONMENT CONTROLLED SPACE DEDICATED TO THE PRODUCTION, ASSEMBLY, CHECK-OUT, AND TESTING OF CONTROL PANELS WITH 4,000 SQ FT MINIMUM DEDICATED SHOP SPACE. THE PANEL BUILDER MUST HAVE A MINIMUM OF 698,000 BBL OF STORAGE SPACE, 100% QUALITY MANAGEMENT STANDARD. PANEL BUILDER TO INCLUDE STATEMENTS OF QUALIFICATIONS WITH THEIR BIDDING PACKAGE, STATING THAT THESE REQUIREMENTS ARE MET.

KEY NOTES

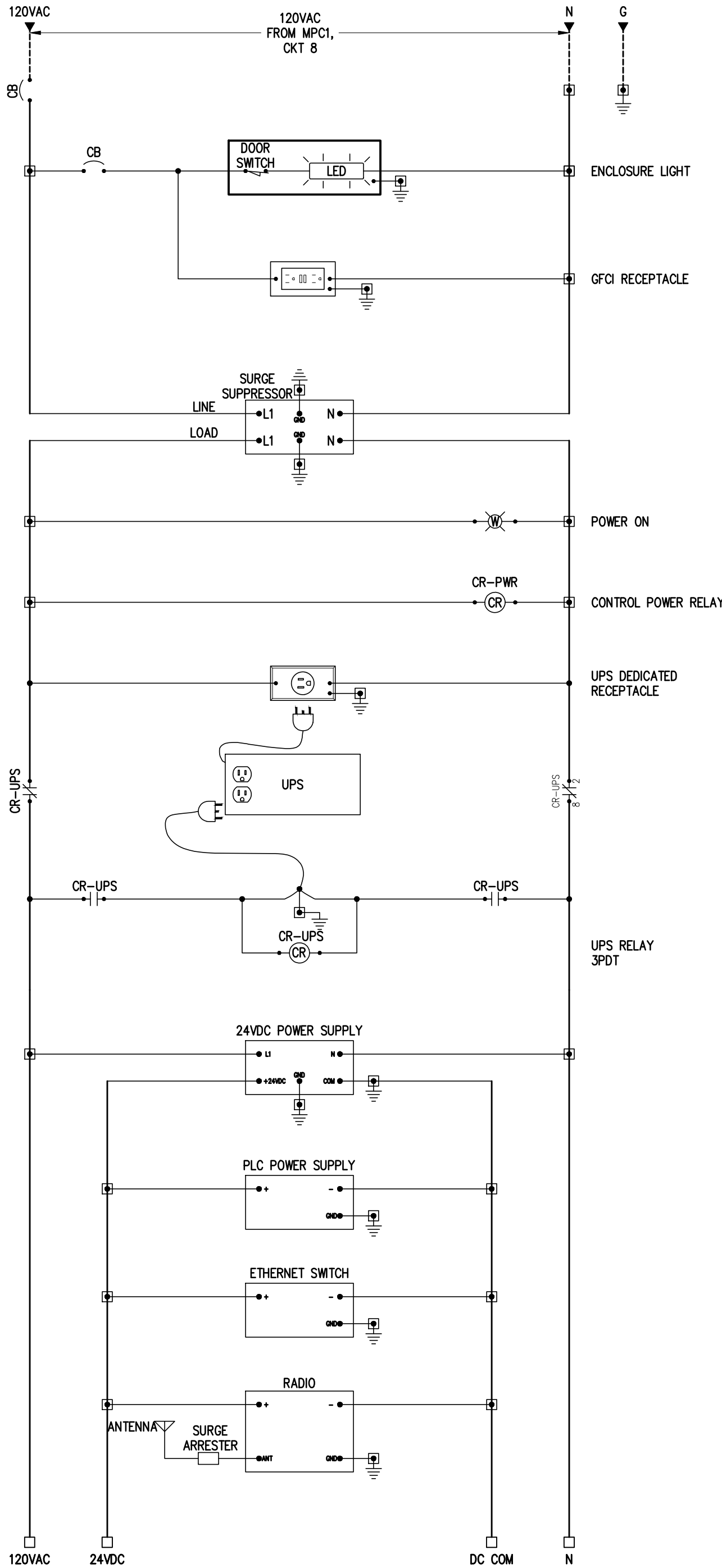
- 1 NOTE THAT CONTROLS SHALL BE ON INTERIOR DOOR. SHOWN HERE FOR CLARITY.

CONTROL STRATEGY

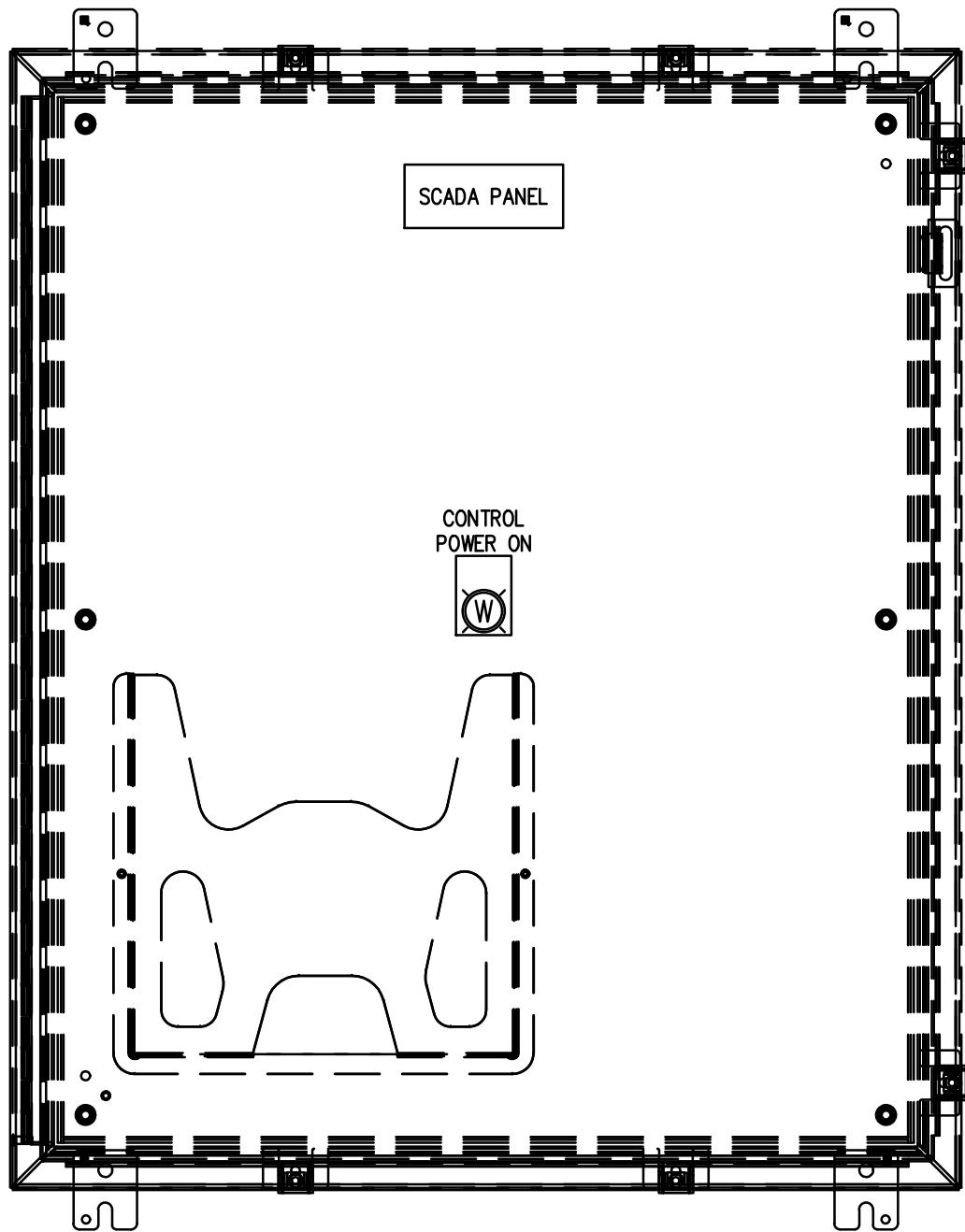
1. LIFT STATION CONTAINS THREE (3) PUMPS: TWO (2) ACTIVE, ONE (1) STANDBY. PUMPS SHALL RUN AS DESCRIBED BELOW. PUMPS: THREE (3) PUMPS SHALL NEVER RUN AT THE SAME TIME.
2. PRIMARY LEVEL SENSING FOR PUMP OPERATION SHALL BE BY A SUBMERSIBLE LEVEL TRANSDUCER IN THE WELL. BACKUP LEVEL SENSING IS TO BE PERFORMED BY FIVE (5) BACK-UP FLOATS:
 - 2.1. LOW LEVEL ALARM
 - 2.2. ALL PUMPS OFF
 - 2.3. LEAD PUMP ON
 - 2.4. LAG PUMP ON
 - 2.5. HIGH LEVEL ALARM
3. PRIMARY LEVEL CONTROL (SUBMERSIBLE LEVEL TRANSDUCER):
 - 3.1. LEVEL SETPOINTS SHALL BE PROGRAMMED INTO CONTROLLER AS SHOWN ON CIVIL PLANS.
 - 3.2. THREE (3) PUMPS SHALL ALTERNATE TO MAINTAIN EQUAL RUN TIMES, WITH ONLY TWO (2) PUMPS (MAXIMUM) RUNNING SIMULTANEOUSLY.
 - 3.3. PUMPS SHALL START WITH TIME DELAYS PER "GENERATOR STEP LOADING" SCHEDULE, SHEET E-1.
 - 3.4. AS WET WELL LEVEL RISES TO "LEAD PUMP ON" SETTING, PUMP 1 SHALL BE CALLED TO RUN. IF WET WELL LEVEL LOWERS TO "ALL PUMPS OFF" SETTING, THE PUMP SHALL STOP. IF WET WELL LEVEL CONTINUES TO RISE TO "LAG PUMP ON" SETTING, PUMP 2 SHALL BE CALLED TO RUN. IF WET WELL LEVEL LOWERS TO "ALL PUMPS OFF" SETTING, THEN ALL PUMPS SHALL STOP. IF WET WELL LEVEL CONTINUES TO RISE TO "HIGH LEVEL ALARM," THIS SHOULD TRIGGER A HORN ALARM AND BEACON ALARM, IN ADDITION TO AN ALARM OUTPUT TO SCADA. LEVEL DROPPING TO "LOW LEVEL ALARM" SHALL TRIGGER AN ALARM LIGHT AND LOCKOUT THE PUMPS FROM RUNNING, IN ADDITION TO AN ALARM OUTPUT TO SCADA.
4. BACKUP LEVEL CONTROL (FIVE (5) BACKUP FLOATS):
 - 4.1. FLOAT ELEVATIONS SHALL BE SET AS SHOWN ON CIVIL PLANS.
 - 4.2. THREE (3) PUMPS SHALL ALTERNATE TO MAINTAIN EQUAL RUN TIMES, WITH ONLY TWO (2) PUMPS (MAXIMUM) RUNNING SIMULTANEOUSLY.
 - 4.3. PUMPS SHALL START WITH TIME DELAYS PER "GENERATOR STEP LOADING" SCHEDULE, SHEET E-1.
 - 4.4. AS WET WELL LEVEL RISES TO "LEAD PUMP ON" FLOAT, PUMP 1 SHALL BE CALLED TO RUN. IF WET WELL LEVEL LOWERS TO "ALL PUMPS OFF" FLOAT, THE PUMP SHALL STOP. IF WET WELL LEVEL CONTINUES TO RISE TO "LAG PUMP ON" FLOAT, PUMP 2 SHALL BE CALLED TO RUN. IF WET WELL LEVEL LOWERS TO "ALL PUMPS OFF" FLOAT, THEN ALL PUMPS SHALL STOP. IF WET WELL LEVEL CONTINUES TO RISE TO "HIGH LEVEL ALARM" FLOAT, THIS SHOULD TRIGGER A HORN ALARM AND BEACON ALARM, IN ADDITION TO AN ALARM OUTPUT TO SCADA. LEVEL DROPPING TO "LOW LEVEL ALARM" FLOAT SHALL TRIGGER AN ALARM LIGHT AND LOCKOUT THE PUMPS FROM RUNNING, IN ADDITION TO AN ALARM OUTPUT TO SCADA.

SHEET NUMBER E-7	PARK HOUSE UNIT 1 CITY OF SEGUIN GUADALUPE COUNTY, TEXAS	ELECTRICAL PUMP CONTROL PANEL	TLS PROJECT 107-001		 <i>7/29/2025</i>	 ENGINEERING 9911 N. CAPITAL OF TEXAS HWY. SUITE 4200 AUSTIN, TX 78759 737.294.2025 WWW.TEXASLISTTATIONENGINEERING.COM TLS ENGINEERING, LLC. TBPE Firm #P-23165	No.	REVISIONS	DATE	BY
			DATE JULY 2025							
			SCALE: AS SHOWN							
			DESIGNED BY: TEV							
			DRAWN BY: FD							
			CHECKED BY: TEV							

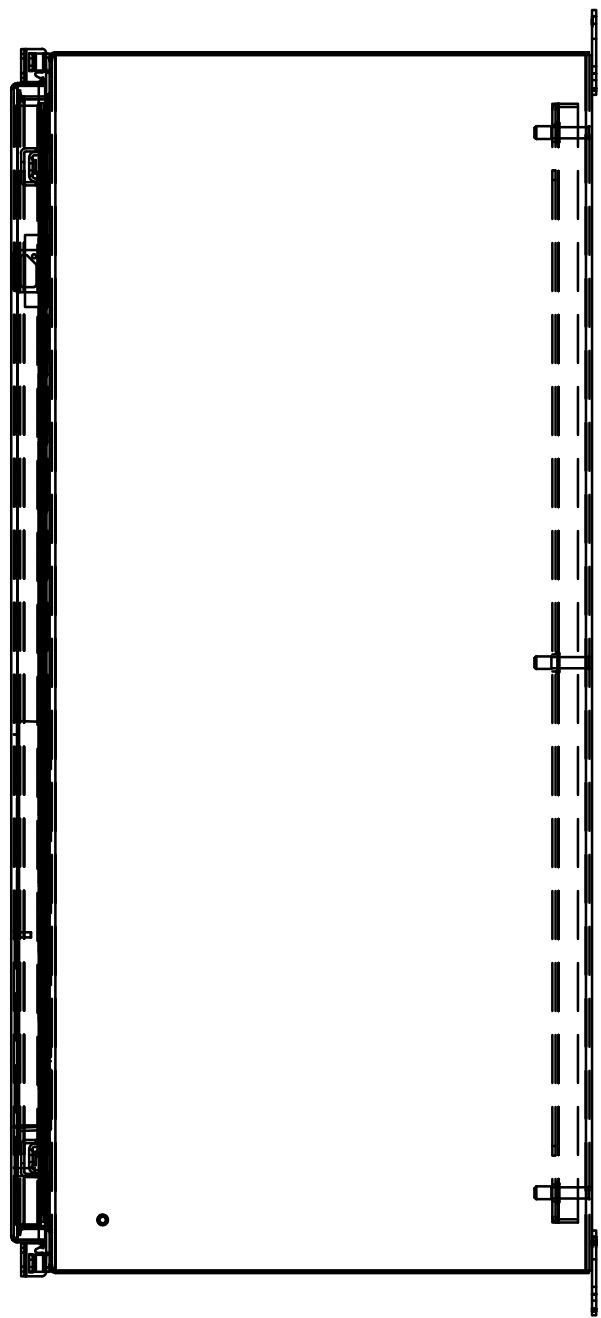
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**SCADA PANEL
LADDER DIAGRAM**
NOT TO SCALE



SCADA PANEL ①
NOT TO SCALE



SYSTEMS INTEGRATOR

A SINGLE PRE-APPROVED SCADA SYSTEM INTEGRATOR SHALL PROVIDE A REMOTE TERMINAL UNIT (RTU) FOR ALL SUPERVISORY CONTROL AND DATA ACQUISITION FUNCTIONS AT THE PROPOSED LIFT STATION. TO ASSURE COMPATIBILITY WITH THE EXISTING SCADA SYSTEM AND CONTINUITY OF EXISTING WARRANTIES, PRIME CONTROLS SHALL PROVIDE THE SCADA RTU AND RELATED EQUIPMENT, INCLUDING DESIGN, INTEGRATION, AND PROGRAMMING SERVICES TO MEET THE NEEDS OF THE OWNER (NO EQUAL). PRIME CONTROLS SHALL PROVIDE LABOR AND MATERIALS AS SPECIFIED, INCLUDING INSURANCE AND WARRANTIES TO MEET THE PROJECT REQUIREMENTS. FOR ALL SCADA RELATED QUESTIONS CONTACT PRIME CONTROLS, JASON FORD, j.ford@prime-controls.com.

SYSTEMS INTEGRATOR DELIVERABLES

PRIME CONTROLS SHALL PROVIDE THE FOLLOWING:

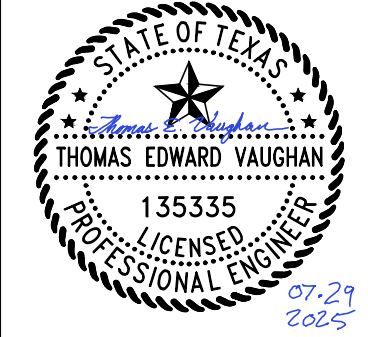
- SCADA REMOTE TERMINAL UNIT
 - THE PROPOSED RTU SHALL BE INSTALLED FOR LIFT STATION MONITORING, DISPLAYING, ALARMING, AND TRENDS FUNCTIONS VIA THE EXISTING SCADA SYSTEM.
 - THE PROPOSED SCADA PANEL SHALL BE COMPATIBLE WITH, AND INTEGRAL TO THE EXISTING SCADA SYSTEM. PROPOSED EQUIPMENT SHALL MATCH THE EXISTING SYSTEM ARCHITECTURE TO THE EXTENT REQUIRED WITH DUE CONSIDERATION GIVEN TO ECONOMY, STANDARDIZATION, AND COMPATIBILITY. THE SYSTEM SHALL INCLUDE:
 - ONE (1) SCADA REMOTE TERMINAL UNIT PANEL - TO INCLUDE ONE ALLEN BRADLEY MICRO LOGIX 1400 PLC IN A NEMA 4X STAINLESS STEEL ENCLOSURE, RADIO COMMUNICATION EQUIPMENT, AND RELATED PANEL EQUIPMENT.
 - PRIME CONTROLS SHALL COMPLETE ALL CONTROL AND MONITORING TERMINATIONS IN THE SCADA PANEL AND LABEL ALL TERMINALS WITH PHENOLIC LABELS.
 - PRIME CONTROLS SCOPE EXCLUDES ONE (1) ANTENNA TOWER/POST FOR RADIO COMMUNICATION BETWEEN THE LIFT STATION RTU AND THE HOST SCADA SITE.
 - NOTE THAT THE INSTALLATION AND MOUNTING OF ANTENNA TOWER/POST SECTIONS AND MASTS, ARE EXCLUDED FROM PRIME CONTROLS SCOPE OF WORK.
 - PRIME CONTROLS SHALL SUPPLY THE RTU TO THE ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING/MOUNTING OF RTU.
 - PLC PROGRAMMING TO MEET FUNCTIONAL REQUIREMENTS, AS SPECIFIED.
 - ELECTRONIC SUBMITTALS, START-UP AND O&M MANUALS
 - ONE-YEAR PARTS AND LABOR WARRANTY

KEY NOTES

- SCADA PANEL COMPONENTS SHALL BE SUPPLIED BY PRIME CONTROLS, IN ACCORDANCE WITH CITY OF SEGUIN STANDARDS.
- CONTRACTOR SHALL PROVIDE AND INSTALL ALL FIELD WIRING. CONTRACTOR SHALL ROUTE WIRE/CONDUIT TO SCADA PANEL AND LEAVE A SERVICE LOOP FOR SYSTEMS INTEGRATOR TO MAKE FINAL TERMINATIONS.

SCADA I/O POINT LIST		
I/O TYPE	DESCRIPTION	FROM
DI	PUMP 1 FAIL	PUMP CONTROL PANEL
DI	PUMP 1 RUNNING	PUMP CONTROL PANEL
DI	PUMP 1 SEAL FAIL	PUMP CONTROL PANEL
DI	PUMP 1 OVERTEMP FAIL	PUMP CONTROL PANEL
DI	PUMP 1 IN HAND	PUMP CONTROL PANEL
DI	PUMP 1 IN AUTO	PUMP CONTROL PANEL
DI	SPARE	-
DI	SPARE	-
DI	PUMP 2 FAIL	PUMP CONTROL PANEL
DI	PUMP 2 RUNNING	PUMP CONTROL PANEL
DI	PUMP 2 SEAL FAIL	PUMP CONTROL PANEL
DI	PUMP 2 OVERTEMP FAIL	PUMP CONTROL PANEL
DI	PUMP 2 IN HAND	PUMP CONTROL PANEL
DI	PUMP 2 IN AUTO	PUMP CONTROL PANEL
DI	SPARE	-
DI	SPARE	-
DI	PUMP 3 FAIL	PUMP CONTROL PANEL
DI	PUMP 3 RUNNING	PUMP CONTROL PANEL
DI	PUMP 3 SEAL FAIL	PUMP CONTROL PANEL
DI	PUMP 3 OVERTEMP FAIL	PUMP CONTROL PANEL
DI	PUMP 3 IN HAND	PUMP CONTROL PANEL
DI	PUMP 3 IN HAND	PUMP CONTROL PANEL
DI	SPARE	-
DI	SPARE	-
DI	GENERATOR RUNNING	GENERATOR
DI	GENERATOR FAIL	GENERATOR
DI	GEN FUEL LOW LEVEL	GENERATOR
DI	GEN FUEL TANK RUPTURE	GENERATOR
DI	ATS IN "E" POSITION	ATS
DI	SPARE	-
DI	SPARE	-
DI	SPARE	-
DI	HIGH LEVEL ALARM	PUMP CONTROL PANEL
DI	LOW LEVEL ALARM	PUMP CONTROL PANEL
DI	PUMP PANEL POWER LOSS	PUMP CONTROL PANEL
DI	PUMP PANEL IN FLOAT BACKUP MODE	PUMP CONTROL PANEL
DI	SPARE	-
DI	SPARE	-
DI	SPARE	-
DI	SPARE	-
AI	SPARE	-
AI	SPARE	-
AI	FLOW SIGNAL	FLOW IND/TRANS
AI	LEVEL TRANSDUCER	PUMP CONTROL PANEL

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TLS ENGINEERING, LLC.
TBPE Firm #F-23165



TLS PROJECT
107-001
DATE
JULY 2025
SCALE: AS SHOWN
DESIGNED BY: TEV
DRAWN BY: FD
CHECKED BY: TEV

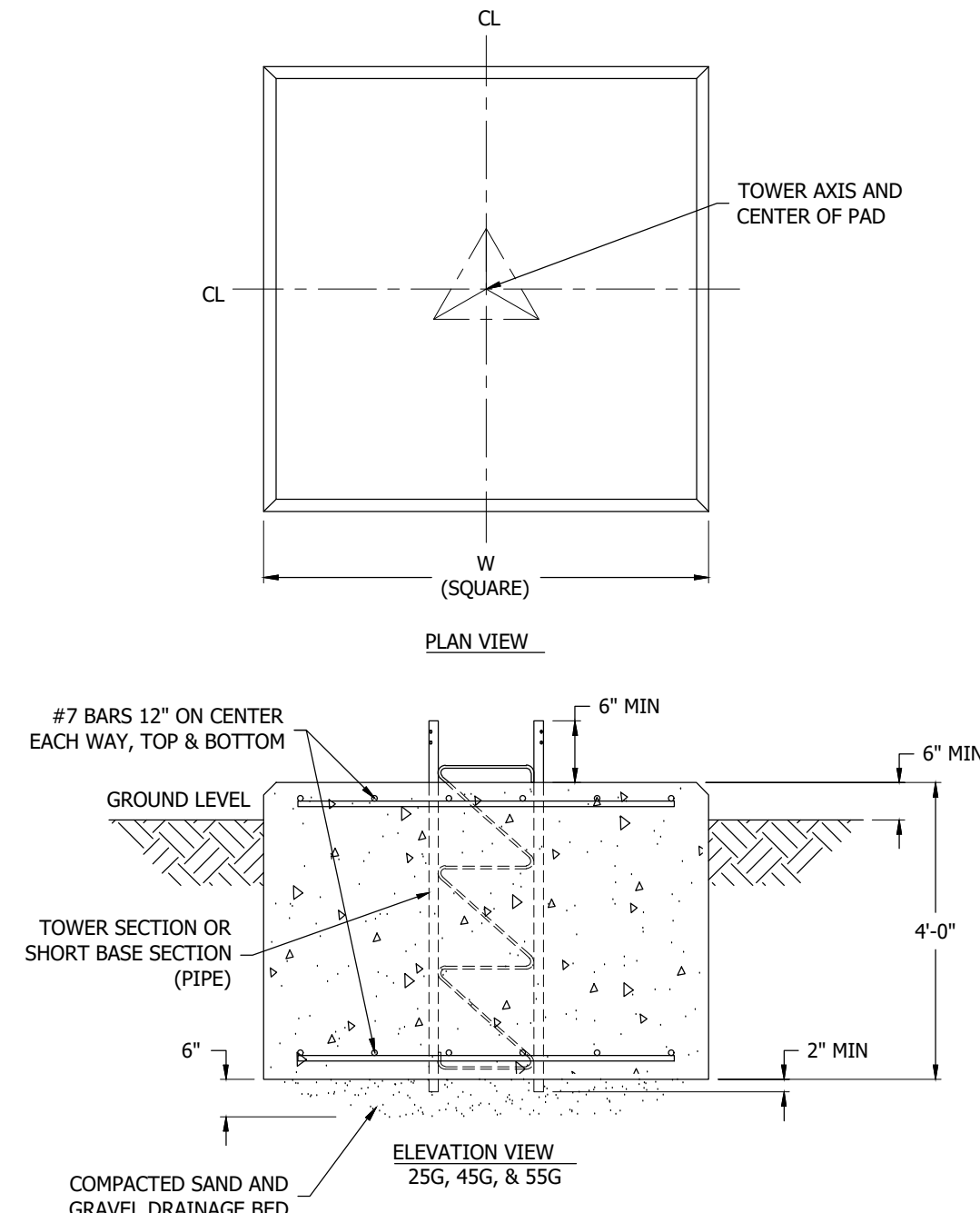
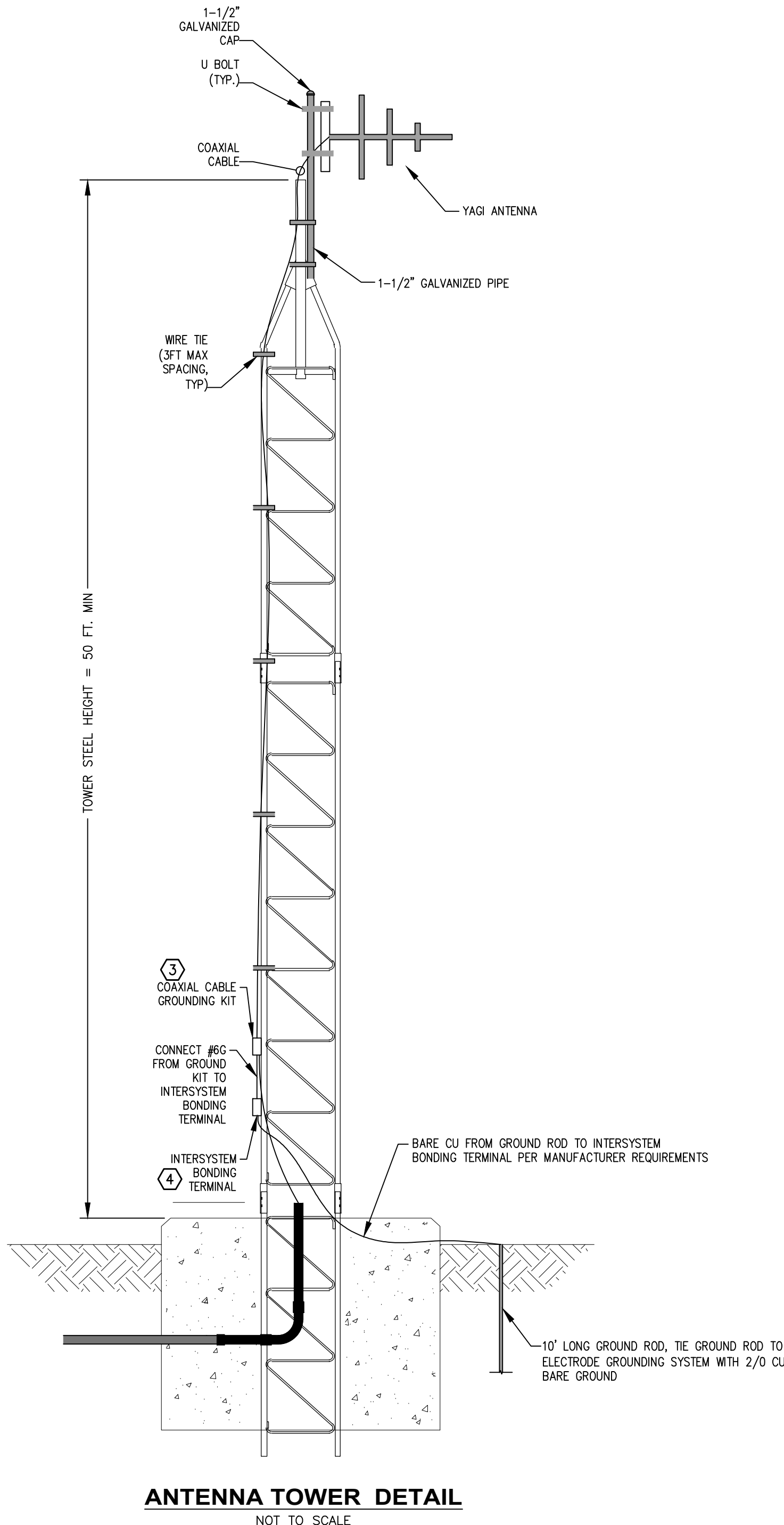
**ELECTRICAL
SCADA PANEL**

**PARK HOUSE UNIT 1
CITY OF SEGUIN
GUADALUPE COUNTY, TEXAS**

SHEET NUMBER
8

BY
DATE
REVISIONS
No.

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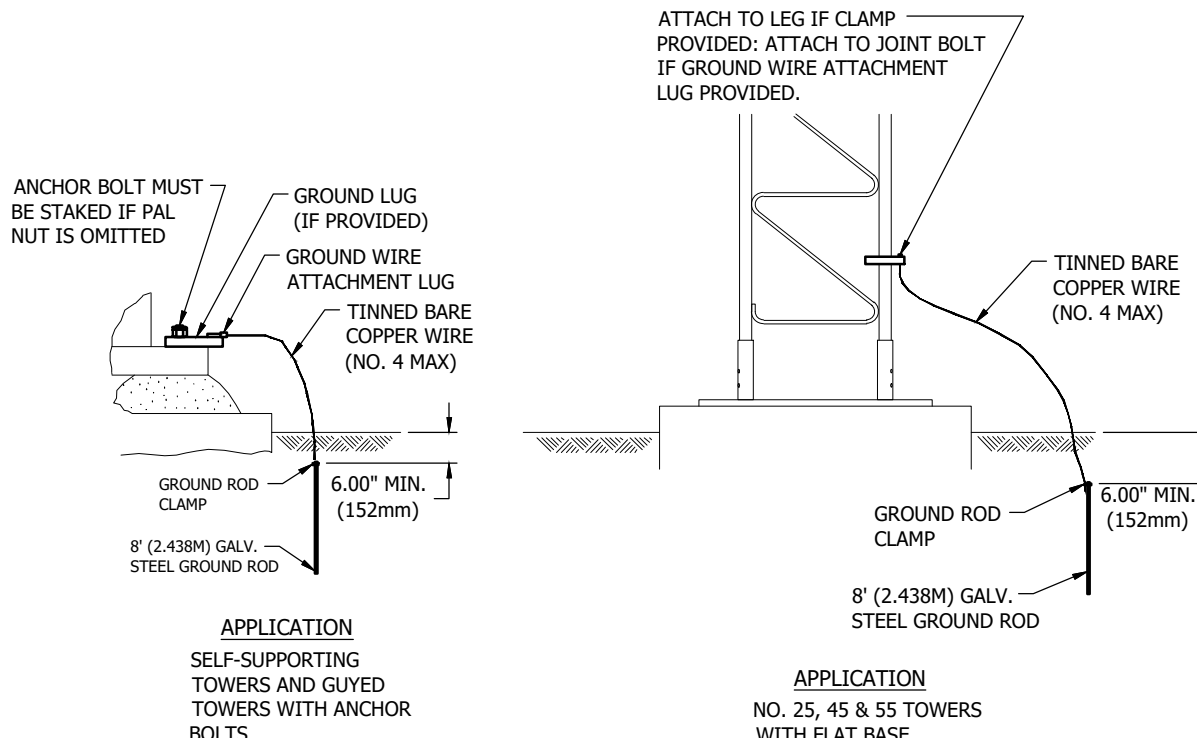
FOUNDATION DETAILS				
TOWER NUMBER	OVER-TURNING MOMENT (FT-LBS)	TOTAL SHEAR (LBS)	MAT WIDTH "W"	CONCRETE VOLUME (CU. YDS.)
25G	7000	500	4'-0"	2.4
45G	12300	1000	5'-3"	4.1
55G	22100	1600	6'-0"	5.3
45GSR/65G	53100	3500	7'-9"	8.9

GENERAL NOTES:

2. FOR 25G, 45G, 55G, 65G, AND 45GR TOWER ASSEMBLY DRAWINGS AND MAXIMUM TOWER HEIGHTS, REFER TO DRAWING NUMBER 25GSS, 45GSS, 55GSS, 65GSS, AND 45GRSS RESPECTIVELY.

ANTENNA TOWER FOUNDATION DETAIL 2

NOT TO SCALE



ANTENNA TOWER GROUNDING DETAILS ²

NOT TO SCALE

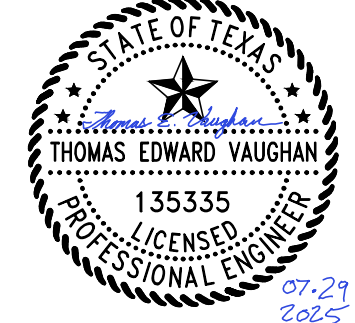
KEY NOTES

- ① FOUNDATION SHALL FOLLOW MANUFACTURER RECOMMENDATIONS FOR THE 45G MODEL.
- ② MANUFACTURER PROVIDED DETAILS.
- ③ COAXIAL GROUNDING KIT SHALL BE ANDREW OR EQUAL, STANDARD GROUNDING KIT FOR 1/4" AND 3/8" CORRUGATED COAXIAL CABLE.
- ④ INTERSYSTEM BONDING TERMINAL SHALL BE ARLINGTON OR EQUAL.

[illegible]

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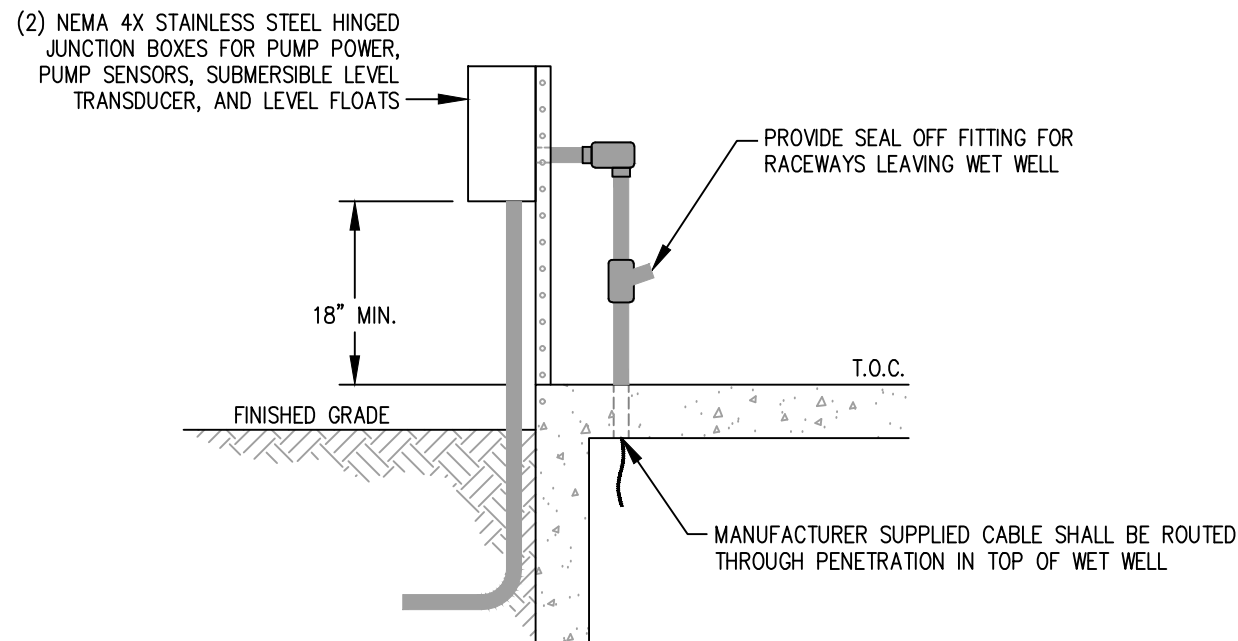
TLS PROJECT 107-001	DATE JULY 2025	SCALE: AS SHOWN	DESIGNED BY: TEV	DRAWN BY: FD	CHECKED BY: TEV
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ELECTRICAL SCADA DETAILS

PARK HOUSE UNIT 1
CITY OF SEGUIN
GUADALUPE COUNTY, TEXAS

SHEET NUMBER
E-9

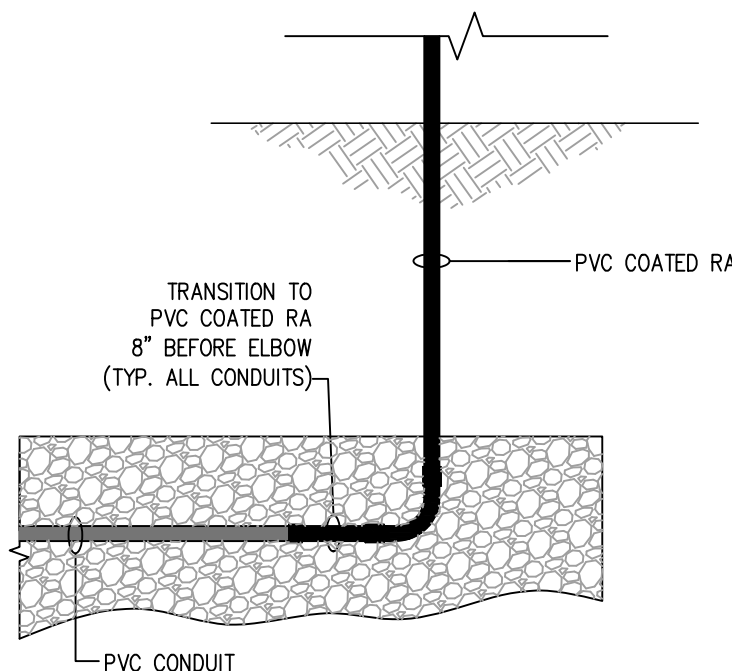
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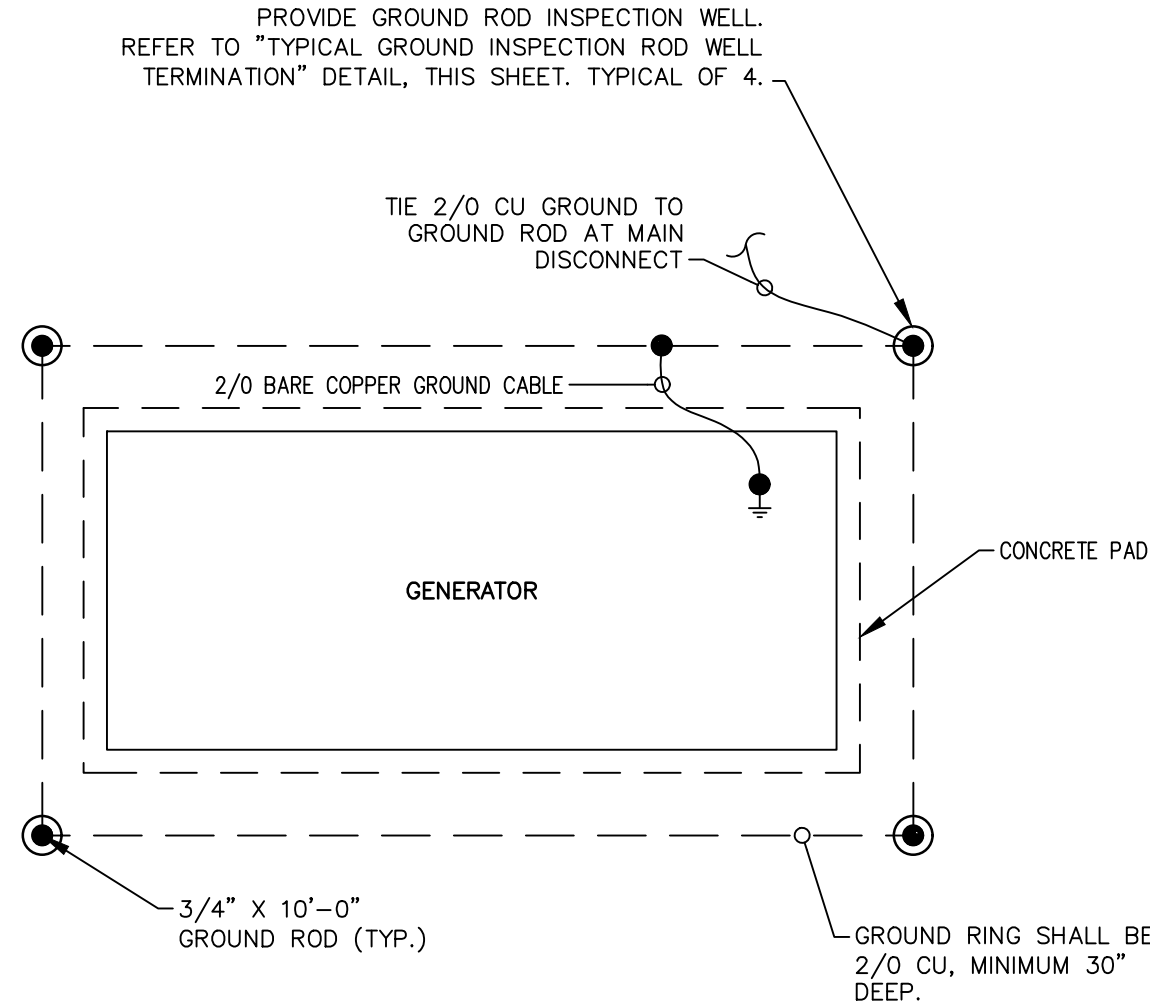
JUNCTION BOX DETAIL
SCALE: N.T.S.

NOTES:

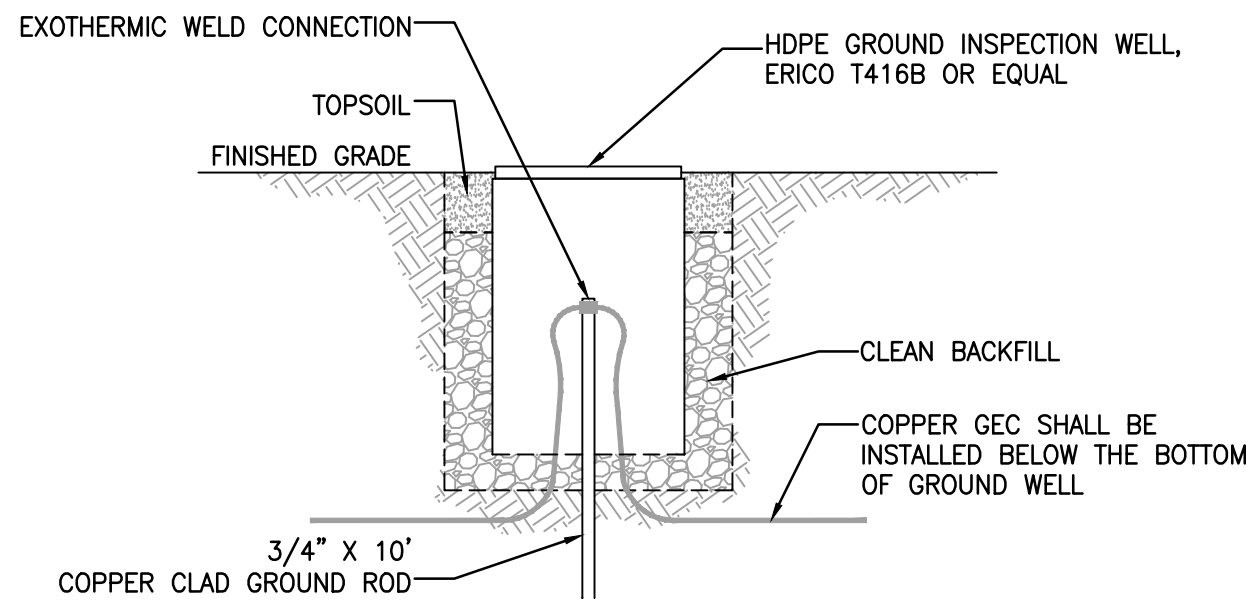
1. TERMINAL BLOCKS SHALL BE INSTALLED IN THE JUNCTION BOXES FOR TERMINATING THE MANUFACTURER SUPPLIED CONDUCTORS TO THE CONDUCTORS PROVIDED BY THE CONTRACTOR.



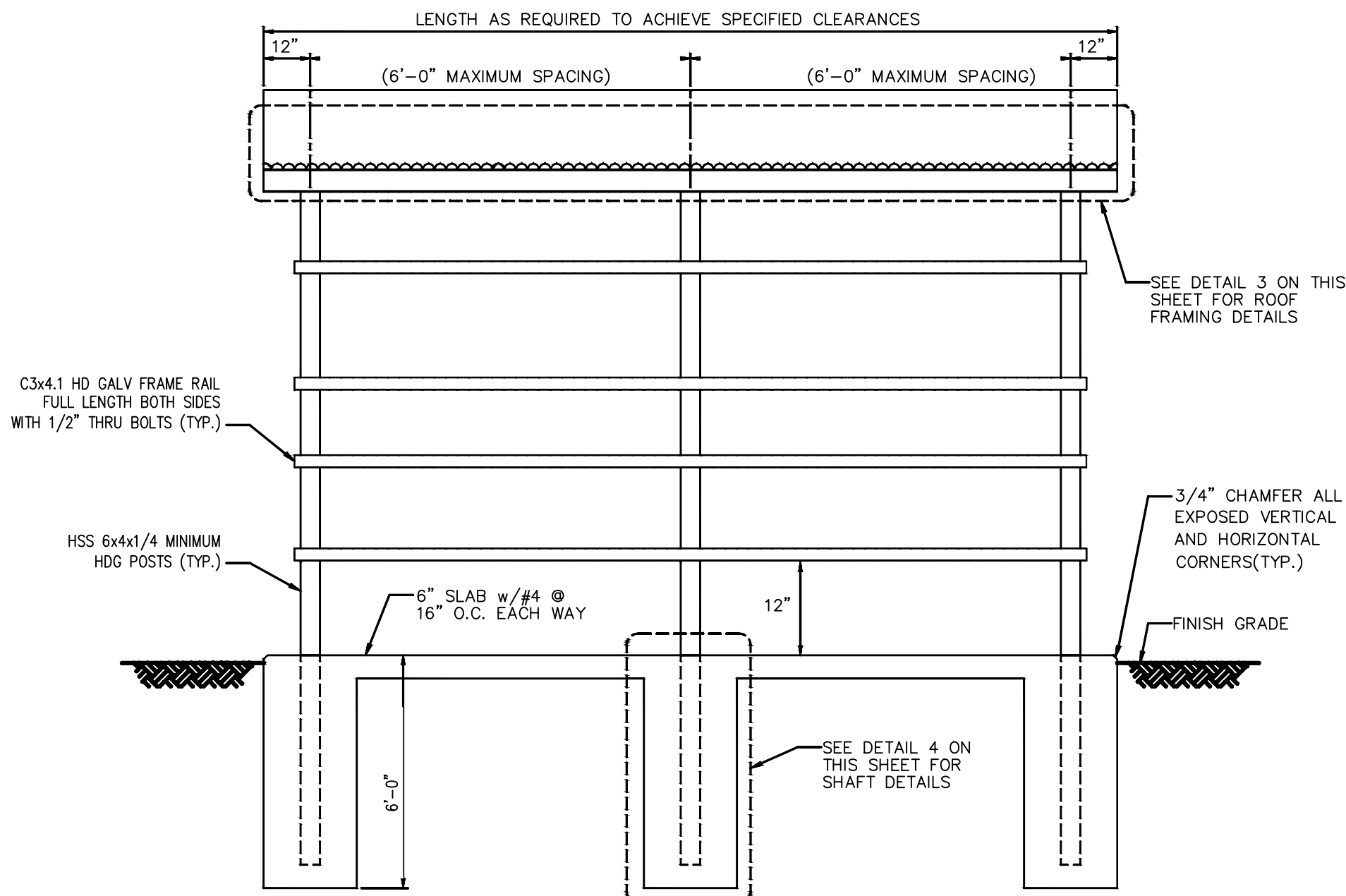
RACEWAY TRANSITION DETAIL
SCALE: N.T.S.



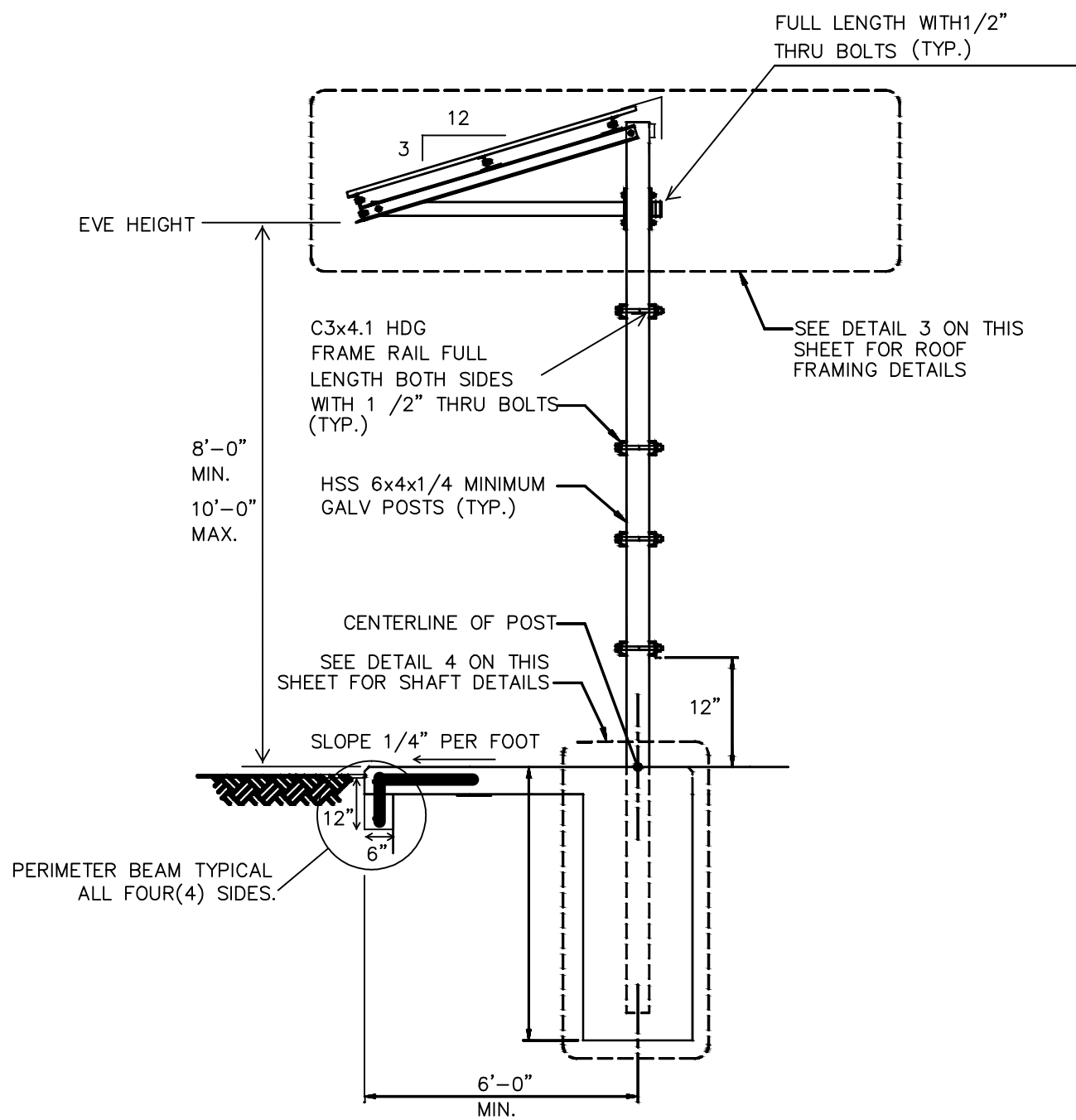
GENERATOR GROUND RING DETAIL
SCALE: N.T.S.



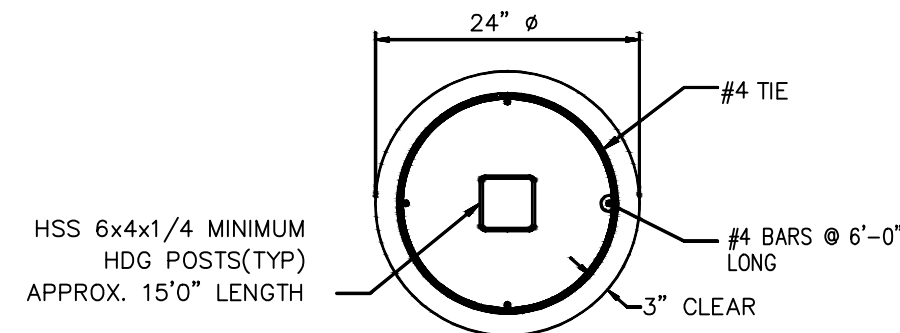
TYPICAL GROUND ROD INSPECTION WELL TERMINATION
SCALE: N.T.S.



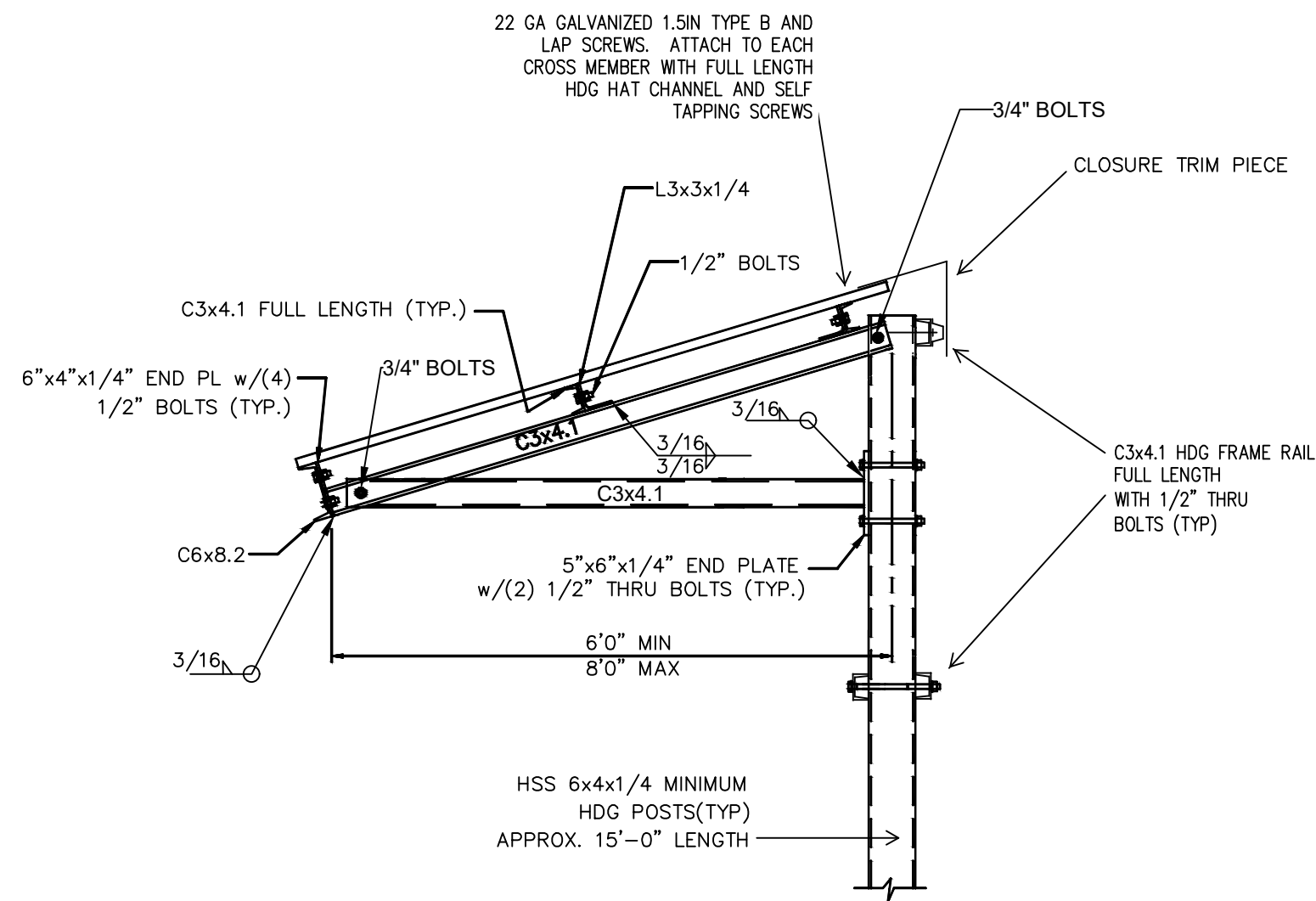
CANOPY (FRONT) DETAIL 1
SCALE: N.T.S.



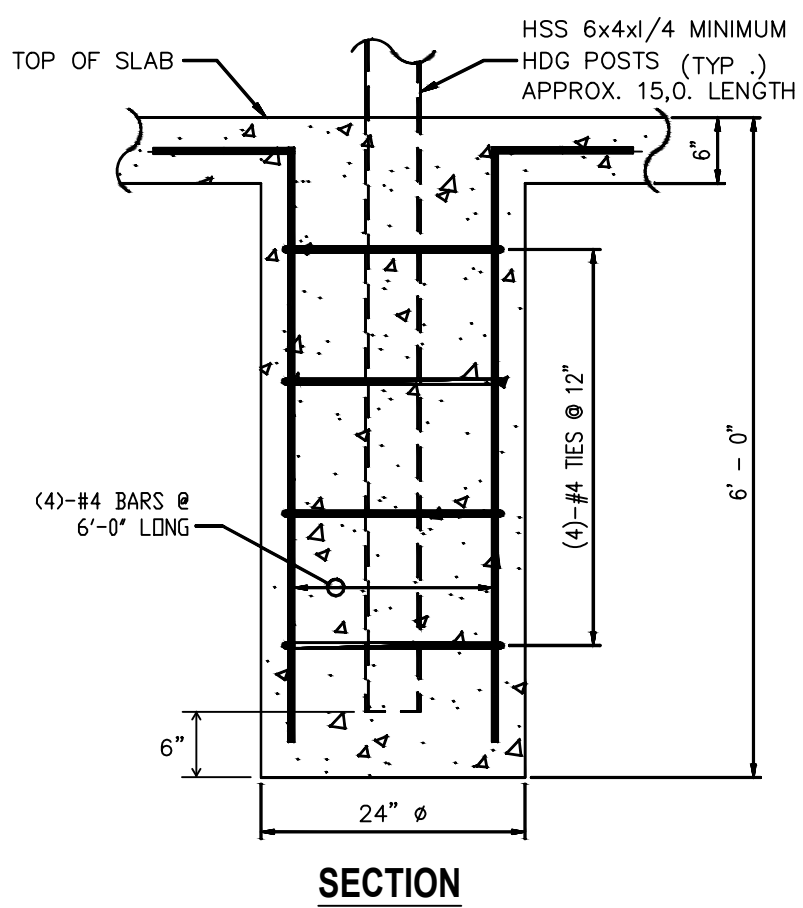
CANOPY (SIDE) DETAIL 2
SCALE: N.T.S.



SHAFT DETAIL 4
SCALE: N.T.S.



ROOF AND WALL DETAIL 3
SCALE: N.T.S.



CANOPY NOTES

1. ALL BOLTS, NUTS, AND HARDWARE TO BE 316SS. FLAT WASHERS AND LOCK WASHERS ARE REQUIRED FOR ALL BOLTS AND NUTS. APPLY ANTI-SEIZE COMPOUND TO THREADS PRIOR TO INSTALLATION.
2. STRUCTURE TO BE HOT DIP GALVANIZED (HDG) AFTER FABRICATION. FIELD CUTTING AND WELDING IS NOT ALLOWED. SPICING OF MATERIAL IS NOT ALLOWED.
3. ATTACH ALL ELECTRICAL ENCLOSURES AND DEVICES TO STRUCTURE WITH VERTICAL 316SS STRUT. CLAMPS AND HARDWARE TO BE 316SS.
4. UNLESS OTHERWISE NOTED, VERTICAL STACKING OF ENCLOSURES IS NOT ALLOWED. PROVIDE 6\"/>
5. ALARM BEACON TO BE MOUNTED 12\"/>