

VERAMENDI LIFT STATION

COMAL COUNTY, TEXAS CIVIL CONSTRUCTION PLANS

NBU AS-BUILT REQUIREMENTS:
NBU REQUIRES GPS POINTS FOR CERTAIN ELECTRIC, WATER AND WASTEWATER ATTRIBUTES, SOME OF WHICH MUST BE MEASURED PRIOR TO BACKFILL, DURING CONSTRUCTION.

GPS POINTS ARE REQUIRED FROM THE DEVELOPER'S CONTRACTOR OR ENGINEER. A MINIMUM OF THREE (3) COORDINATE POINTS FOR GEOREFERENCING ARE REQUIRED. THE WATER AND WASTEWATER GPS POINTS SHALL BE TO SURVEY GRADE AND ELECTRIC GPS POINTS SHALL BE MEASURED TO MAP GRADE. PLEASE REFERENCE NBU'S WATER CONNECTION POLICY FOR ADDITIONAL CAD DELIVERABLE REQUIREMENTS.

- REQUIRED MEASUREMENTS FOR THE WATER SYSTEM INCLUDE:**
1. VERTICAL BENDS AND EDGES OF STEEL CASINGS (IF APPLICABLE) PRIOR TO BACKFILL.
 2. HORIZONTAL BENDS PRIOR TO BACKFILL.
 3. TEES PRIOR TO BACKFILL.
 4. FITTINGS (REDUCERS AND COUPLINGS) PRIOR TO BACKFILL.
 5. FIRE HYDRANTS (TOP FLANGE).
 6. VALVES.
 7. METERS (TOP CENTER OF BOX).
 8. BLOW OFF ASSEMBLIES.
 9. CORNER SLAB OF ALL WATER TANKS AND THE ISOLATION GATE VALVE ON THE WATER TANK.

- REQUIRED MEASUREMENTS FOR THE WASTEWATER SYSTEM INCLUDE:**
1. MANHOLES.
 2. CLEANOUTS.
 3. CORNER SLAB OF ALL LIFT STATIONS.

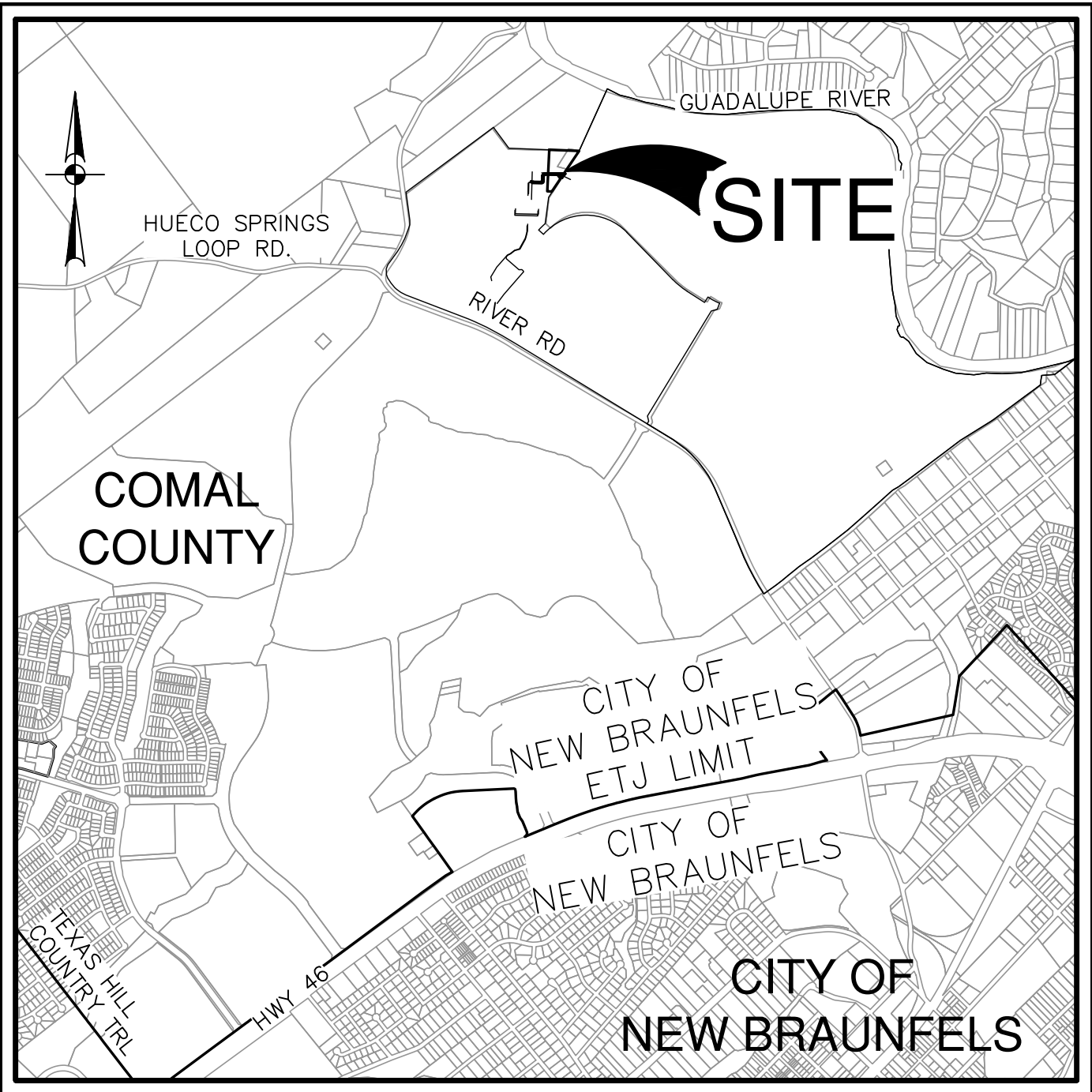
- REQUIRED MEASUREMENTS FOR THE ELECTRIC SYSTEM:**
1. POLES.
 2. TRANSFORMERS, BOTH ABOVE AND UNDERGROUND (FRONT LOCK).
 3. PULL BOXES.
 4. STREET LIGHTS.

COORDINATE GPS REQUIREMENTS WITH NBU INSPECTOR

REPORT
NAME: VERAMENDI LIFT STATION AND FORCE MAIN BASIS OF DESIGN REPORT
FIRM: PAPE-DAWSON ENGINEERS
DATE: MAY 2024

NAME: GEOTECHNICAL ENGINEERING STUDY FOR LIFT STATION -PRECINCT 30, UNIT 3 VERAMENDI
MASTER PLANNED DEVELOPMENT
FIRM: RABA KISTNER
DATE: MAY 2024

LEGAL DESCRIPTION
BEING 0.413 ACRES OF LAND, OUT OF THE 193.732 ACRE TRACT DESCRIBED IN DOCUMENT NUMBER 202206035177 IN THE OFFICIAL PUBLIC RECORDS OF COMAL COUNTY, TEXAS, IN THE JUAN MARTIN VERAMENDI SURVEY NO. 2, ABSTRACT 3, COMAL COUNTY, TEXAS.

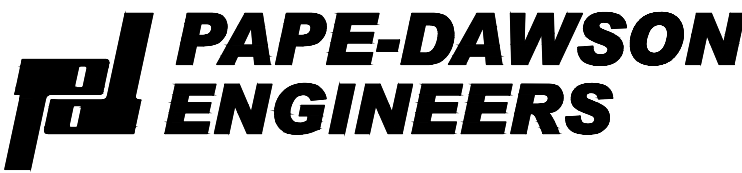


LOCATION MAP
NOT-TO-SCALE

PREPARED FOR:

VERAMENDI PE – FREMANTLE, LLC
2168 OAK RUN PKWY STE 101
NEW BRAUNFELS, TX 78132

JULY 2025



AUSTIN | SAN ANTONIO | HOUSTON | FORT WORTH | DALLAS
10801 N MOPAC EXPY, BLDG 3, STE 200 | AUSTIN, TX 78759 | 512.454.8711
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028801

- NBU NOTES:**
1. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER OF RECORD. IN ACCEPTING THESE PLANS, NEW BRAUNFELS UTILITIES MUST RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER OF RECORD.
 2. THE ENGINEER OF RECORD ACKNOWLEDGES THAT ALL PROPOSED WATER OR WASTEWATER IMPROVEMENTS MUST COMPLY WITH CRITERIA FROM THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY, THE CITY OF NEW BRAUNFELS, NBU W&WW DESIGN CRITERIA, ANY OTHER GOVERNING ENTITY ORDINANCES OR CODES, AND SOUND ENGINEERING JUDGEMENT.
 3. THE ENGINEER OF RECORD ACKNOWLEDGES THAT THE POINT OF DELIVERY FOR THE NBU WATER SYSTEM IS THE MAIN SIDE OF THE SERVICE/LATERAL/LEAD FROM THE CUSTOMER'S METER, BACKFLOW PREVENTER, OR EASEMENT EDGE. THE CUSTOMER IS RESPONSIBLE FOR THE DESIGN, PERMITTING, CONSTRUCTION, OPERATION AND MAINTENANCE BEYOND THE POINT OF DELIVERY AND HAS SOLE CONTROL AND SUPERVISION OVER THE IT'S INSTALLATION.
 4. THE ENGINEER OF RECORD ACKNOWLEDGES THAT THE POINT OF DELIVERY FOR A NBU WASTEWATER SYSTEM IS THE MAIN SIDE OF THE SERVICE LATERAL FROM THE CUSTOMER'S CLEAN OUT OR PROPERTY LINE, WHICHEVER IS NEARER. THE CUSTOMER IS RESPONSIBLE FOR THE DESIGN, CONSTRUCTION, OPERATION AND MAINTENANCE BEYOND THE POINT OF DELIVERY AND HAS SOLE CONTROL AND SUPERVISION OVER ITS INSTALLATION.
 5. WATER IS A PRECIOUS COMMODITY IN THE STATE OF TEXAS AND NEW BRAUNFELS UTILITIES (NBU) IS PASSIONATE ABOUT PROTECTING THE LOCAL RESOURCE. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ACQUIRING A FIRE HYDRANT METER SO THAT ALL WATER USED FOR CONSTRUCTION OR TESTING PURPOSES IS PROPERLY ACCOUNTED FOR. NBU WILL NOT TOLERATE ANY WATER THEFT, REGARDLESS OF THE AMOUNT. IF WATER THEFT IS DISCOVERED, THE CONTRACTOR SHALL BE SUBJECT TO MONETARY PENALTIES, CRIMINAL CHARGES, AND STOPPAGE OF ALL CONSTRUCTION ACTIVITIES RELATED TO THE PROJECT. COSTS ASSOCIATED WITH ANY WORK STOPPAGE RESULTING FROM WATER THEFT SHALL BE AT THE FULL EXPENSE OF THE CONTRACTOR.

- NOTES:**
- TYPE 3 DEVELOPMENT.
 - ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER OF RECORD. IN ACCEPTING THESE PLANS, THE CITY OF NEW BRAUNFELS MUST RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER RECORD.
 - IF CONSTRUCTION HAS NOT COMMENCED WITHIN ONE YEAR OF CITY APPROVAL FOR CONSTRUCTION INSPECTION, THAT APPROVAL IS NO LONGER VALID.
 - THIS PROJECT IS WITHIN THE EDWARDS AQUIFER RECHARGE ZONE.
 - NO PORTION OF ANY LOT ON THIS PROJECT IS WITHIN AN INDICATED SPECIAL FLOOD HAZARD ZONE ACCORDING TO THE FEMA FIRM MAP NO. 48091C0435F EFFECTIVE DATE 9/2/2009.
 - GAS UTILITIES ARE NOT INCLUDED IN THE CIVIL CONSTRUCTION PLANS. FINAL GAS UTILITY DESIGN SHALL BE APPROVED BY THE CITY FOR ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY.
 - FOLLOWING PERMITS ARE REQUIRED PRIOR TO START OF CONSTRUCTION:
 1. CITY OF NEW BRAUNFELS PUBLIC INFRASTRUCTURE PERMIT
 2. NEW BRAUNFELS UTILITY APPROVAL
 3. TCEQ WATER POLLUTION ABATEMENT PLAN APPROVAL
 4. TCEQ SEWAGE COLLECTION SYSTEM APPROVAL



Francisco C. Guerrero
7/8/2025

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[illegible]

PAUL S. DANCOON & ASSOCIATES, INC.
ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10238800

VERAMENDI LIFT STATION
NEW BRAUNFELS, TEXAS
SHEET INDEX

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PLAT NO. _____
JOB NO. 30001-71
DATE JULY 2025
DESIGNER LL
CHECKED FG DRAWN JL
SHEET G-2

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FOR CONSTRUCTION 30007-71

NBU Water Notes

1. The point of delivery for an owned and maintained water line is typically the domestic or irrigation water meter, fire line up to the containment backflow device, or hydrant meter or as determined by NBU.
2. Water infrastructure must be constructed in accordance with the NBU Water Connection Policy.
3. All water mains shall be constructed of AWWA C900 DR 14 PVC, AWWA C900 DR 18 PVC or minimum CL 250 Ductile Iron Pipe.
4. All residential water services shall be single services constructed of 1-inch ASTM B88 Type K Copper tubing, 1-inch AWWA C901 SDR9 CTS polyethylene tubing may be permitted with special approval from NBU only.
5. All 2-inch service lines shall be constructed of AWWA C901 SDR9 CTS polyethylene tubing.
6. Water mains shall have a minimum of 48 inches of cover to finished grade. Concrete encasement will be required if minimum cover cannot be met.
7. Pipe bedding of water lines shall be compliant with NBU specification No. 120 "Utility Trenching and Backfill".
8. Contractor shall install line stoppers at their cost for an outage during construction if system valves are not available or the existing valves do not function. Line stoppers will be required based on the following criteria:
 - a. If the number of residential customers affected is greater than 20 and expected to last more than 4 hours.
 - b. If any commercial customers are affected by the outage then the use of line stoppers will be determined on a case by case basis.
 - c. If any critical care customers are affected by the outage then the use of line stoppers will be determined on a case by case basis.
 - d. System conditions may require a line stopper and may not be known until construction commences.
9. Contractor will keep the area on top of, around, and within the water meter box free of all objects and debris.
10. Placement of meter boxes or vaults in sidewalks, driveways, drive aisles, parking areas, or other areas exposed to vehicular traffic is not permitted. Any meter boxes or vaults set in these areas will be relocated at the contractor's and/or developer's expense.
11. Meter boxes or vaults must be set at proposed grade. Any meter boxes that are not set at the final grade will be adjusted at contractor's and/or developer's expense.
12. Meter boxes for 8/8-inch and 1-inch meters must be DFW Plastics DFW38C-14-AF1MP.
13. Meter boxes for 1.5" meters must be DFW Plastics DFW65C-14-AF1MP.
14. Meter boxes for 2" meters must be DFW Plastics DFW1730C-12-AF1MP.
15. Thrust blocks are not permitted without special approval. Joints must be restrained with restraining systems approved by NBU and restraint length shall be submitted to NBU at the time of plan submittal.
16. Contractor shall install tracer wire on top of non-ferrous water mains in accordance with NBU specifications. Tracer wire should run from valve to valve and exit at a tracer wire access point. The tracer wire should be attached to the top of the pipe using tape. Excess wire should be coiled within the tracer wire access point riser.

NBU Water Notes

17. Contractor shall coordinate with the assigned water/wastewater inspector for completion of the Field Acceptance Checklist. All testing and acceptance shall conform to NBU Specifications, including but not limited to:
 - a. Bacteriological Testing
 - b. Hydrostatic Testing (performed valve to valve)
18. The NBU water system shall be protected from hazards with appropriate backflow prevention assemblies installed on all irrigation systems, fire suppression systems and multi-unit complexes along with multi-level properties on the domestic meter containment. NBU can assist with the decision on appropriate backflow assemblies on a case-by-case basis. Contact NBU backflow prevention specialist for more details. Email questions to crossconnection@nbutexas.com
19. All backflow prevention assemblies shall be tested upon installation and reports sent to NBU via the online tracking system. Contact an NBU backflow prevention specialist for more details. Email questions to crossconnection@nbutexas.com
20. All residential and commercial properties shall have a Customer Service Inspection certificate (CSI Inspection) completed upon completion of the building or home structure. Contact an NBU backflow prevention specialist for more details. Email questions to crossconnection@nbutexas.com



VERAMENDI LIFT STATION
NEW BRAUNFELS, TEXAS
CONSTRUCTION NOTES (2 OF 2)

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- | CYCLE TIMES | |
|-----------------|---------------------------|
| PUMP HORSEPOWER | MINIMUM CYCLE TIME (MIN.) |
| < 50 | 6 |
| 50 – 100 | 10 |
| > 100 | 15 |

WHERE:

V = ACTIVE VOLUME (CUBIC FEET)

Q = PUMP CAPACITY (GALLONS PER MINUTE)

T = CYCLE TIME (MINUTES)

7.48 = CONVERSION FACTOR (GALLONS/CUBIC FOOT)

15. DRY WELL ACCESS.
- (A) AN UNDERGROUND DRY WELL MUST BE ACCESSIBLE.
- (B) A STAIRWAY IN A DRY WELL MUST USE NON-SLIP STEPS AND CONFORM TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS WITH RESPECT TO RISE AND RUN.
- (C) A LADDER IN A DRY WELL MUST BE MADE OF NON-CONDUCTIVE MATERIAL AND RATED FOR THE LOAD NECESSARY FOR STAFF AND EQUIPMENT TO DESCEND AND ASCEND.
12. VENTILATION SHALL BE PROVIDED FOR LIFT STATIONS, INCLUDING BOTH WET AND DRY WELLS.
13. HOISTING EQUIPMENT. A LIFT STATION MUST HAVE PERMANENT HOISTING EQUIPMENT OR BE ACCESSIBLE TO PORTABLE HOISTING EQUIPMENT FOR REMOVAL OF PUMPS, MOTORS, VALVES, PIPES, AND OTHER SIMILAR EQUIPMENT.
14. A FLOOR DRAIN FROM A VALVE VAULT TO A WET WELL MUST PREVENT GAS FROM ENTERING A VALVE VAULT BY INCLUDING FLAP VALVES, "P" TRAPS, SUBMERGED OUTLETS, OR A COMBINATION OF THESE DEVICES.
15. PUMPS.
- (A) GENERAL REQUIREMENTS. A RAW WASTEWATER PUMP, WITH THE EXCEPTION OF A GRINDER PUMP, MUST:
- (1) BE DESIGNED TO PREVENT CLOGGING
- (2) BE CAPABLE OF PASSING A SPHERE OF 2.5 INCHES IN DIAMETER OR GREATER; AND
- (3) HAVE GREATER THAN 3.0 INCH DIAMETER SUCTION AND DISCHARGE OPENINGS.
- (B) SUBMERSIBLE AND NON-SUBMERSIBLE PUMPS.
- (1) A NON-SUBMERSIBLE PUMP MUST HAVE INSPECTION AND CLEANOUT PLATES ON BOTH THE SUCTION AND DISCHARGE SIDES OF EACH PUMPING UNIT THAT FACILITATE LOCATING AND REMOVING BLOCKAGE-CAUSING MATERIALS, UNLESS THE PUMP DESIGN ACCOMMODATES EASY REMOVAL OF THE ROTATION ELEMENTS.
- (2) A PUMP SUPPORT MUST PREVENT MOVEMENT AND VIBRATION DURING OPERATION.
- (3) A SUBMERSIBLE PUMP MUST USE A RAIL-TYPE PUMP SUPPORT SYSTEM WITH MANUFACTURER-APPROVED MECHANISMS DESIGNED TO ALLOW PERSONNEL TO REMOVE AND REPLACE ANY SINGLE PUMP WITHOUT ENTERING OR DEWATERING THE WET WELL.
- (4) SUBMERSIBLE PUMP RAILS AND LIFTING CHAINS MUST BE CONSTRUCTED OF A MATERIAL THAT PERFORMS TO AT LEAST THE STANDARD OF SERIES 300 STAINLESS STEEL.
- (C) LIFT STATION PUMPING CAPACITY. THE FIRM PUMPING CAPACITY OF A LIFT STATION MUST HANDLE THE EXPECTED PEAK FLOW.
- (D) PUMP HEAD CALCULATIONS.
- (1) AN OWNER SHALL SELECT A PUMP BASED UPON ANALYSIS OF THE SYSTEM HEAD AND PUMP CAPACITY CURVES THAT DETERMINE THE PUMPING CAPACITIES ALONE AND WITH OTHER PUMPS AS THE TOTAL DYNAMIC-HEAD INCREASES DUE TO ADDITIONAL FLOWS PUMPED THROUGH A FORCE MAIN.
- (2) THE PIPE HEAD LOSS CALCULATIONS, USING THE HYDRAULIC INSTITUTE STANDARDS, PERTAINING TO HEAD LOSSES THROUGH PIPES, VALVES, AND FITTINGS, MUST BE INCLUDED IN THE REPORT.
- (3) THE SELECTED FRICTION COEFFICIENT (HAZEN-WILLIAMS "C" VALUE) USED IN FRICTION HEAD LOSS CALCULATIONS MUST BE BASED ON THE PIPE MATERIAL SELECTED.
- (4) FOR A LIFT STATION WITH MORE THAN TWO PUMPS, A FORCE MAIN IN EXCESS OF ONE-HALF MILE, OR FIRM PUMPING CAPACITY OF 100 GALLONS PER MINUTE OR GREATER, SYSTEM CURVES MUST BE PROVIDED FOR BOTH THE NORMAL AND PEAK OPERATING CONDITIONS AT C VALUES FOR PROPOSED AND EXISTING PIPE.
- (E) FLOW CONTROL.
- (1) A LIFT STATION OR A TRANSFER PUMPING STATION LOCATED AT OR DISCHARGING DIRECTLY TO A WASTEWATER TREATMENT SYSTEM MUST HAVE A PEAK PUMP CAPACITY EQUAL TO OR LESS THAN THE PEAK DESIGN FLOW, UNLESS EQUALIZATION IS PROVIDED.
- (2) A WASTEWATER TREATMENT SYSTEM WITH A PEAK FLOW THAT IS GREATER THAN 300,000 GALLON PER DAY MUST USE THREE OR MORE PUMPS, UNLESS DUPLEX, AUTOMATICALLY CONTROLLED, VARIABLE CAPACITY PUMPS ARE PROVIDED.
- (F) SELF-PRIMING PUMPS.
- (1) A SELF-PRIMING PUMP MUST BE CAPABLE OF PRIMING WITHOUT RELIANCE UPON A SEPARATE PRIMING SYSTEM, AN INTERNAL FLAP VALVE, OR ANY EXTERNAL MEANS FOR PRIMING.
- (2) A SELF-PRIMING PUMP MUST USE A SUCTION PIPE VELOCITY AT LEAST 3.0 FEET PER SECOND BUT NOT MORE THAN 7.0 FEET PER SECOND, AND MUST INCORPORATE ITS OWN SUCTION PIPE.
- (3) A SELF-PRIMING PUMP MUST VENT AIR BACK INTO THE WET WELL DURING PRIMING.
- (G) VACUUM-PRIMING PUMPS.
- (1) A VACUUM-PRIMED PUMP MUST BE CAPABLE OF PRIMING BY USING A SEPARATE POSITIVE PRIMING SYSTEM WITH A DEDICATED VACUUM PUMP FOR EACH MAIN WASTEWATER PUMP.
- (2) A VACUUM-PRIMING PUMP MUST USE A SUCTION PIPE VELOCITY AT LEAST 3.0 FEET PER SECOND BUT LESS THAN 7.0 FEET PER SECOND AND MUST HAVE ITS OWN SUCTION PIPE.
- (H) VERTICAL POSITIONING OF PUMPS. A RAW WASTEWATER PUMP MUST HAVE POSITIVE STATIC SUCION HEAD DURING NORMAL ON-OFF CYCLING, EXCEPT A SUBMERSIBLE PUMP WITH "NO SUCION" PIPE, A VACUUM-PRIMED PUMP, OR A SELF-PRIMING UNIT CAPABLE OF SATISFACTORY OPERATION UNDER ANY NEGATIVE SUCION HEAD ANTICIPATED FOR THE LIFT STATION.
- (I) INDIVIDUAL GRINDER PUMPS. A GRINDER PUMP SERVING ONLY ONE RESIDENTIAL OR COMMERCIAL STRUCTURE THAT IS PRIVATELY OWNED, MAINTAINED, AND OPERATED IS NOT SUBJECT TO THE RULES OF THIS CHAPTER.
- (J) PUMP FOR LOW-FLOW LIFT STATION. A PUMP USED FOR A LIFT STATION WITH A PEAK FLOW OF LESS THAN 120 GALLONS PER MINUTE MUST BE SUBMERSIBLE AND INCLUDE A GRINDER.

- Page 2 of 2

STATE OF TEXAS
★ ★ ★
FRANCISCO C. GUERRERO
85464
LICENSED
PROFESSIONAL ENGINEER
7/8/2025

**PAPE-DAWSON
ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

VERAMENDI LIFT STATION
NEW BRAUNFELS, TEXAS
TCEQ NOTES

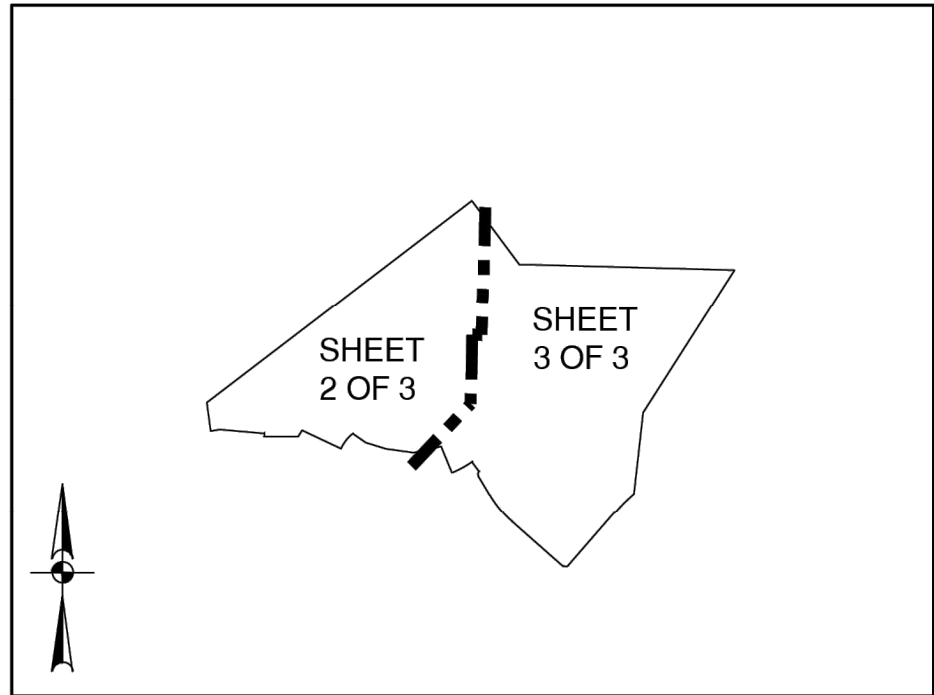
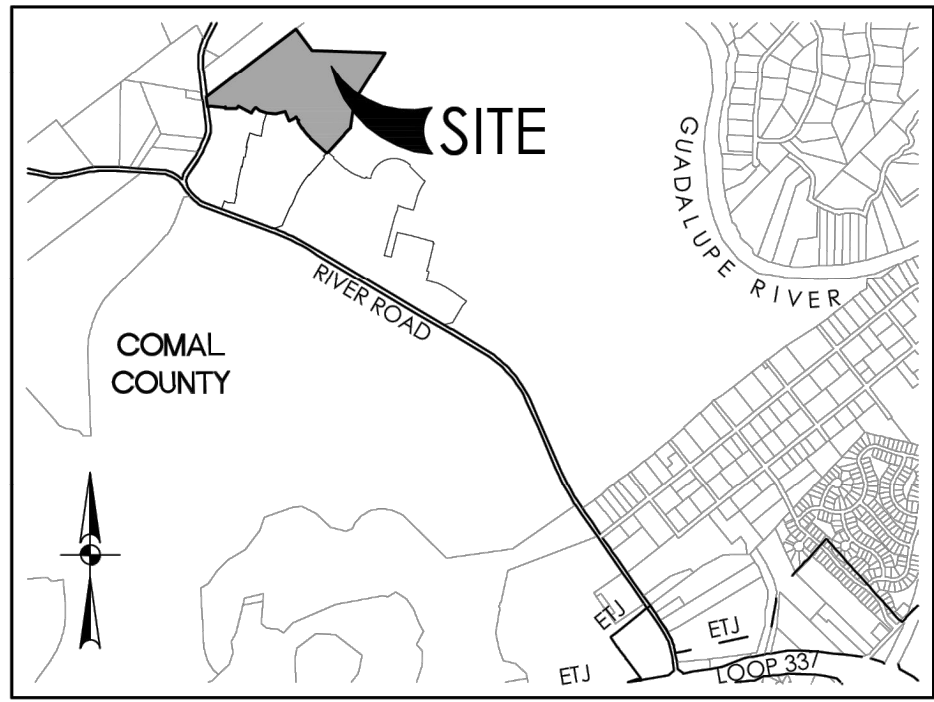
TCEQ NOTES

PLAT NO. _____
JOB NO. 30001-71
DATE JULY 2025
DESIGNER LL
CHECKED FG DRAWN JL
SHEET G-5

FOR CONSTRUCTION 30007-71

Dates: Jul 08, 2025, 14:09am User: ID: jlling
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CERTIFICATE OF APPROVAL

APPROVED THIS THE _____ DAY OF _____, 20____, BY THE PLANNING AND DEVELOPMENT SERVICES DEPARTMENT OF THE CITY OF NEW BRAUNFELS, TEXAS.

PLANNING DIRECTOR

APPROVED FOR ACCEPTANCE

DATE DIRECTOR OF PLANNING

DATE CITY ENGINEER

DATE NEW BRAUNFELS UTILITIES

SURVEYOR'S NOTES:

- MONUMENTS WERE FOUND OR SET AT EACH CORNER OF THE SURVEY BOUNDARY OF THE SUBDIVISION AS NOTED. MONUMENTS AND LOT MARKERS WILL BE SET WITH $\frac{1}{2}$ " IRON ROD WITH CAP MARKED "PAPE-DAWSON" OR MAG NAIL WITH DISK MARKED "PAPE-DAWSON" AFTER THE COMPLETION OF UTILITY INSTALLATION AND STREET CONSTRUCTION UNLESS NOTED OTHERWISE.
- COORDINATES SHOWN ARE BASED ON THE NORTH AMERICAN DATUM OF 1983 NAD83 (NA2011) EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE DISPLAYED IN GRID VALUES DERIVED FROM THE NGS COOPERATIVE CORS NETWORK.
- DIMENSIONS SHOWN ARE SURFACE (SCALE FACTOR = 0.00014)
- BEARINGS ARE BASED ON THE NORTH AMERICAN DATUM OF 1983 NAD83 (NA2011) EPOCH 2010.00, FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE.

STATE OF TEXAS
COUNTY OF COMAL

I, THE UNDERSIGNED KEITH W. WOOLEY, A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, HEREBY CERTIFY THAT THIS PLAT IS TRUE AND CORRECTLY MADE UNDER MY SUPERVISION AND IN COMPLIANCE WITH CITY AND STATE SURVEY REGULATIONS AND LAWS AND MADE ON THE GROUND AND THAT THE CORNER MONUMENTS WERE PROPERLY PLACED UNDER MY SUPERVISION.

PRELIMINARY. THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED OR RELIED UPON AS A FINAL SURVEY DOCUMENT.

KEITH W. WOOLEY
REGISTERED PROFESSIONAL LAND SURVEYOR #5463
PAPE-DAWSON ENGINEERS, INC.,
1672 INDEPENDENCE DR., SUITE 102,
NEW BRAUNFELS, TEXAS 78132

NBU NOTES:

- MAINTENANCE OF DEDICATED UTILITY EASEMENTS IS THE RESPONSIBILITY OF THE PROPERTY OWNER. ANY USE OF AN EASEMENT, OR ANY PORTION OF IT, INCLUDING LANDSCAPING OF DRAINAGE FEATURES, IS SUBJECT TO AND SHALL NOT CONFLICT WITH THE TERMS AND CONDITIONS IN THE EASEMENT, MUST NOT ENDANGER OR INTERFERE WITH THE RIGHTS GRANTED BY THE EASEMENT TO NEW BRAUNFELS UTILITIES, ITS SUCCESSORS AND ASSIGNS, AND SHALL BE SUBJECT TO APPLICABLE PERMIT REQUIREMENTS OF THE CITY OF NEW BRAUNFELS OR ANY OTHER GOVERNING BODY. THE PROPERTY OWNER MUST OBTAIN, IN ADVANCE, WRITTEN AGREEMENT WITH THE UTILITIES TO UTILIZE THE EASEMENT, OR ANY PART OF IT.
- UTILITIES WILL POSSESS A 5' WIDE SERVICE EASEMENT TO THE BUILDING STRUCTURE ALONG THE SERVICE LINE TO THE SERVICE ENTRANCE. THIS EASEMENT WILL VARY DEPENDING UPON LOCATION OF DWELLING AND SERVICE.
- UTILITIES SHALL HAVE ACCESS TO THE METER LOCATIONS FROM THE FRONT YARD AND METER LOCATIONS SHALL NOT BE LOCATED WITHIN A FENCED AREA.
- EACH LOT MUST HAVE ITS OWN WATER AND SEWER SERVICE AT THE OWNER/DEVELOPERS EXPENSE.
- DO NOT COMBINE ANY NEW UTILITY EASEMENTS (UE) WITH DRAINAGE EASEMENTS (DE) OR MAKE CHANGES IN GRADE WITHIN THE UTILITY EASEMENTS (UE) WITHOUT WRITTEN APPROVAL FROM NEW BRAUNFELS UTILITIES.
- NBU IS NOT RESPONSIBLE FOR LANDSCAPING OR IRRIGATION IN UE/LE.
- A PRIVATE BOOSTER PUMP WILL BE REQUIRED WITH HOME CONSTRUCTION ON THE CUSTOMER SIDE OF THE METER FOR ANY LOT HAVING DOMESTIC WATER PRESSURE LESS THAN 50 PSI AND DESIGNATED WITH AN " * " ON THIS SUBDIVISION PLAT.

FLOOD ZONE NOTE:

NO PORTION OF THE SUBDIVISION IS LOCATED WITHIN ANY SPECIAL FLOOD HAZARD AREA (100 YR. FLOOD), AS DEFINED BY THE COMAL COUNTY, TEXAS, FLOOD INSURANCE RATE MAP NO. 48091C0435F EFFECTIVE DATE 9/2/2009 AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.

UTILITY PROVIDER NOTE:

THE PROPERTY WILL BE SERVED BY THE FOLLOWING:
NEW BRAUNFELS UTILITIES (WATER, SEWER, ELECTRIC)
AT&T (TELECOMMUNICATIONS)
SPECTRUM (TELECOMMUNICATIONS)

DRAINAGE EASEMENT NOTES:

- DRAINAGE EASEMENTS SHALL REMAIN FREE OF ALL OBSTRUCTIONS."
- MAINTENANCE OF DRAINAGE EASEMENT SHOWN OUTSIDE OF LOT LINES SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNERS, OR THE PROPERTY OWNER'S ASSOCIATION, OR ITS SUCCESSORS OR ASSIGNS AND NOT THE RESPONSIBILITY OF THE CITY OF NEW BRAUNFELS OR COMAL COUNTY.
- NO STRUCTURES, WALLS OR OTHER OBSTRUCTIONS OF ANY KIND SHALL BE PLACED WITHIN THE LIMITS OF DRAINAGE EASEMENTS SHOWN ON THIS PLAT. NO LANDSCAPING, FENCES, OR OTHER TYPE OF MODIFICATIONS WHICH ALTER THE CROSS SECTIONS OF THE DRAINAGE EASEMENTS OR DECREASES THE HYDRAULIC CAPACITY OF THE EASEMENT, AS APPROVED, SHALL BE ALLOWED WITHOUT THE APPROVAL OF THE CITY ENGINEER. THE CITY OF NEW BRAUNFELS AND COMAL COUNTY SHALL HAVE THE RIGHT OF INGRESS AND EGRESS OVER GRANTORS ADJACENT PROPERTY TO REMOVE ANY OBSTRUCTIONS PLACED WITHIN THE LIMITS OF SAID DRAINAGE EASEMENTS AND TO MAKE ANY MODIFICATIONS OR IMPROVEMENTS WITHIN SAID DRAINAGE EASEMENTS.

SIDEWALK NOTES:

- FOUR (4) FOOT WIDE SIDEWALKS WILL BE CONSTRUCTED BY THE HOME BUILDER PER CITY STANDARDS AT THE TIME OF BUILDING CONSTRUCTION ALONG:
 - APPENDER DR
 - CALIZA LN
 - GREY WOLF TRL
 - LEADTREE DR
 - FLUMBAGO ST
 - SALT CEDAR VW
- FOUR (4) FOOT WIDE SIDEWALKS WILL BE CONSTRUCTED BY THE DEVELOPER PER CITY STANDARDS AT THE TIME OF SUBDIVISION STREET CONSTRUCTION ALONG:
 - APPENDER DR - LOT 901, BLOCK 141; LOT 900, BLOCK 142; LOT 900, BLOCK 140; LOT 900, BLOCK 139
 - CALIZA LN - LOT 900, BLOCK 139; LOT 900, BLOCK 140; LOT 900, BLOCK 138
 - GREY WOLF TRL - LOT 900, BLOCK 142; LOT 900, BLOCK 140; LOT 900, BLOCK 139
 - FLUMBAGO ST - LOT 900, BLOCK 147; LOT 900, BLOCK 144; LOT 900, BLOCK 145
- TEN (10) FOOT WIDE SIDEWALK WILL BE CONSTRUCTED BY THE DEVELOPER PER CITY STANDARDS AT THE TIME OF SUBDIVISION STREET CONSTRUCTION ALONG:
 - LEADTREE DR - LOT 900, BLOCK 144
 - SALT CEDAR VW - LOT 900, BLOCK 138

SUBDIVISION PLAT OF VERAMENDI PRECINCT 30 - UNIT 3

BEING 38,774 ACRES OF LAND, OUT OF THE 193,732 ACRE TRACT DRESCRIBED IN DOCUMENT NUMBER 202204035177 IN THE OFFICIAL PUBLIC RECORDS OF COMAL COUNTY, TEXAS, IN THE JUAN MARTIN VERAMENDI SURVEY NO. 2, ABSTRACT 3, COMAL COUNTY, TEXAS.

PLAT NOTES:

- THIS PLAT IS SUBJECT TO THE REQUIREMENTS AND REGULATIONS OF THE VERAMENDI DEVELOPMENT COMPANY DEVELOPMENT AGREEMENT, RECORDED AS DOCUMENT NO. 201506029547 AND AS AMENDED.
- THIS PLAT IS LOCATED WITHIN THE NEIGHBORHOOD (MIXED DENSITY) RESIDENTIAL PLANNING AREA.
- STANDARDS FOR PLANT MATERIALS SHALL CONFORM TO THE STANDARDS OF THE LATEST EDITION OF THE AMERICAN NATIONAL STANDARD A300 PLANTING AND TRANSPLANTING NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
- TREE REPLACEMENT SHALL OCCUR WITHIN 12 MONTHS OF REMOVAL OF THE HIGH VALUE TREE UNLESS DEFERRED TO AN ADJACENT LOT, WHERE A REPLACEMENT TREE DOES NOT SURVIVE FOR A PERIOD OF AT LEAST 24 MONTHS. THE ORIGINAL APPLICANT OR CURRENT LANDOWNER SHALL REPLACE THE TREE, PREFERABLY DURING OCTOBER - FEBRUARY, UNTIL THE TREE SURVIVES A 12-MONTH PERIOD.
- SHOULD ANY TREE DESIGNATED FOR RETENTION IN AN APPROVED TREE PROTECTION PLAN DIE PRIOR TO, OR WITHIN 12 MONTHS OF THE COMPLETION OF CONSTRUCTION WORKS, THE APPLICANT SHALL REPLACE THE DEAD TREE WITH A REPLACEMENT TREE'S EQUAL TO THE TOTAL CALIPER INCHES OF THE DEAD TREE. NO GRADING, TRENCHING OR EQUIPMENT SHALL BE CONDUCTED IN THE AREA IDENTIFIED IN THE ROOT PROTECTION ZONE. ALL WORK TO BE PERFORMED BY HAND OR UNDER THE SUPERVISION OF A CERTIFIED ARBORIST.
- DURING CONSTRUCTION, THE CLEANING OF EQUIPMENT OR MATERIALS AND/OR THE DISPOSAL OF ANY WASTE MATERIAL, INCLUDING, BUT NOT LIMITED TO PAINT, OIL, SOLVENTS, ASPHALT, CONCRETE, MORTAR, ETC., UNDER THE CANOPY OR DRIP LINE OF ANY HIGH VALUE TREE SHALL BE PROHIBITED. NO GRADING, TRENCHING OR EQUIPMENT SHALL BE CONDUCTED OR USED IN THE AREA IDENTIFIED IN THE ROOT PROTECTION ZONE. ALL WORK SHALL BE PERFORMED BY HAND OR UNDER THE SUPERVISION OF A CERTIFIED ARBORIST. NO ATTACHMENTS OR WIRES OF ANY KIND, OTHER THAN THOSE OF A PROTECTIVE NATURE, SHALL BE ATTACHED TO ANY HIGH VALUE TREE.
- LOTS TO BE HELD IN COMMON PROPERTY BY A HOMEOWNERS' OR PROPERTY OWNERS' ASSOCIATION SHALL BE SHOWN ON THE PLAT AS A SEPARATE LOT.
- NO BUILDING SHALL BE SITED WITHIN THE EXTENT OF A SENSITIVE FEATURE AND ASSOCIATED BUFFER, FOR ANY LOT WHICH CONTAINS A HIGH VALUE TREE, AND A BUILDING ENVELOPE WAS NOT APPROVED AS PART OF A FINAL PLAT, THE LOCATION OF A BUILDING ENVELOPE SHALL BE APPROVED BY THE PLANNING DIRECTOR PRIOR TO A BUILDING PERMIT BEING ISSUED.
- FUTURE DEVELOPMENT IS SUBJECT TO CHAPTER 114 (STREETS, SIDEWALKS AND OTHER PUBLIC SPACES) OF THE NEW BRAUNFELS CODE OF ORDINANCES.
- IMPERVIOUS COVER THE MAXIMUM CUMULATIVE IMPERVIOUS COVER PERCENTAGE FOR THE PROPERTY AS A WHOLE AND FOR EACH SECTOR PLAN SHALL NOT EXCEED SIXTY-FIVE PERCENT (65%).
- AMENDMENTS TO THE PARK PROGRAMMING SCHEDULE, INCLUDING BUT NOT LIMITED TO THE PROVISION OF ADDITIONAL IMPROVEMENTS OR SUBSTITUTING IMPROVEMENTS, SHALL BE ADMINISTRATIVELY APPROVED BY THE PARKS DIRECTOR.
- THIS PLAT WILL COMPLY WITH LOCATION AND AMENITY STANDARDS FOR TRAILS AS SHOWN IN THE SECTOR PLAN.
- 132 RESIDENTIAL LOTS, 8 COMMON SPACE LOTS.

COMMON SPACE NOTE:

LOT 901, BLOCK 141, IS A LANDSCAPE, PEDESTRIAN, & ACCESS EASEMENT.
LOT 900, BLOCK 142, IS A LANDSCAPE, PEDESTRIAN, & ACCESS EASEMENT.
LOT 900, BLOCK 140, IS A LANDSCAPE, PEDESTRIAN, UTILITY, & ACCESS EASEMENT.
LOT 900, BLOCK 139, IS A LANDSCAPE, PEDESTRIAN, UTILITY, & ACCESS EASEMENT.
LOT 900, BLOCK 138, IS A LANDSCAPE, PEDESTRIAN, & ACCESS EASEMENT.
LOT 900, BLOCK 144, IS A LANDSCAPE, PEDESTRIAN, UTILITY, & ACCESS EASEMENT.
LOT 900, BLOCK 145, IS A LANDSCAPE, PEDESTRIAN, & ACCESS EASEMENT.
LOT 900, BLOCK 147, IS A LANDSCAPE, PEDESTRIAN, & ACCESS EASEMENT.
LOT 901, BLOCK 149, IS A SANITARY SEWER EASEMENT.

ALL AFOREMENTIONED LOTS TO BE MAINTAINED BY THE HOMEOWNERS ASSOCIATION OR PROPERTY OWNER AND NOT THE CITY OF NEW BRAUNFELS.



1672 INDEPENDENCE DR., STE 102 | NEW BRAUNFELS, TX 78132 | 830.632.5633
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

DATE OF PREPARATION: June 25, 2025

STATE OF TEXAS
COUNTY OF COMAL

I (WE), THE UNDERSIGNED OWNER(S) OF THE LAND SHOWN ON THIS PLAT, AND DESIGNATED HEREIN AS THE VERAMENDI PRECINCT 30 - UNIT 3 SUBDIVISION TO THE CITY OF NEW BRAUNFELS, COUNTY OF COMAL, TEXAS, AND WHOSE NAME IS SUBSCRIBED HERETO, DO HEREBY SUBDIVIDE SUCH PROPERTY AND DEDICATE TO THE USE OF THE PUBLIC ALL STREETS, ALLEYS, PARKS, DRAINS, EASEMENTS, AND PUBLIC PLACES THEREON SHOWN FOR THE PURPOSES AND CONSIDERATION THEREIN EXPRESSED.

OWNER/DEVELOPER: PETER JAMES VERAMENDI PE - FREMANTLE, LLC
2168 OAK RUN PKWY
NEW BRAUNFELS, TEXAS 78132

STATE OF TEXAS
COUNTY OF COMAL
THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON THIS _____ DAY OF _____, 20____, BY _____

NOTARY PUBLIC
STATE OF TEXAS

MY COMMISSION EXPIRES: _____

STATE OF TEXAS
COUNTY OF COMAL

I (WE), THE UNDERSIGNED OWNER(S) OF THE LAND SHOWN ON THIS PLAT, AND DESIGNATED HEREIN AS VERAMENDI PRECINCT 30 - UNIT 3 SUBDIVISION TO THE CITY OF NEW BRAUNFELS, COUNTY OF COMAL, TEXAS, AND WHOSE NAME IS SUBSCRIBED HERETO, DO HEREBY SUBDIVIDE SUCH PROPERTY AND DEDICATE TO THE USE OF THE PUBLIC ALL STREETS, ALLEYS, PARKS, DRAINS, EASEMENTS, AND PUBLIC PLACES THEREON SHOWN FOR THE PURPOSES AND CONSIDERATION THEREIN EXPRESSED.

OWNER/DEVELOPER: _____ DATE _____
COMAL COUNTY WCID IF:
14755 PRESTON ROAD, SUITE 600
DALLAS, TEXAS 75254

STATE OF TEXAS
COUNTY OF COMAL
THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON THIS _____ DAY OF _____, 20____, BY _____

NOTARY PUBLIC
STATE OF TEXAS

MY COMMISSION EXPIRES: _____

I, _____, DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT WAS FILED FOR RECORD IN THE MAP AND PLAT RECORDS, DOC # _____ OF COMAL COUNTY ON THE _____ DAY OF _____, 20____, AT _____ M.

WITNESS MY HAND OFFICIAL SEAL, THIS THE _____ DAY OF _____, 20____.

COUNTY CLERK, COMAL COUNTY, TEXAS

DEPUTY

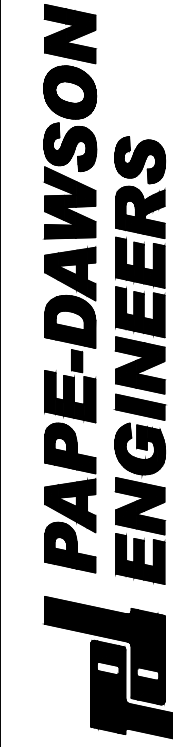
SHEET 1 OF 3

FILED: 2025 JUL 08 10:27 AM AT NEW BRAUNFELS, TEXAS BY: JILLING
FILED: 2025 JUL 08 10:27 AM AT NEW BRAUNFELS, TEXAS BY: JILLING

VERAMENDI PRECINCT 30 - UNIT 3

Civil Job No. 30001-73; Survey Job No. 9093-21

NO.	REVISION	DATE



SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

VERAMENDI LIFT STATION
NEW BRAUNFELS, TEXAS

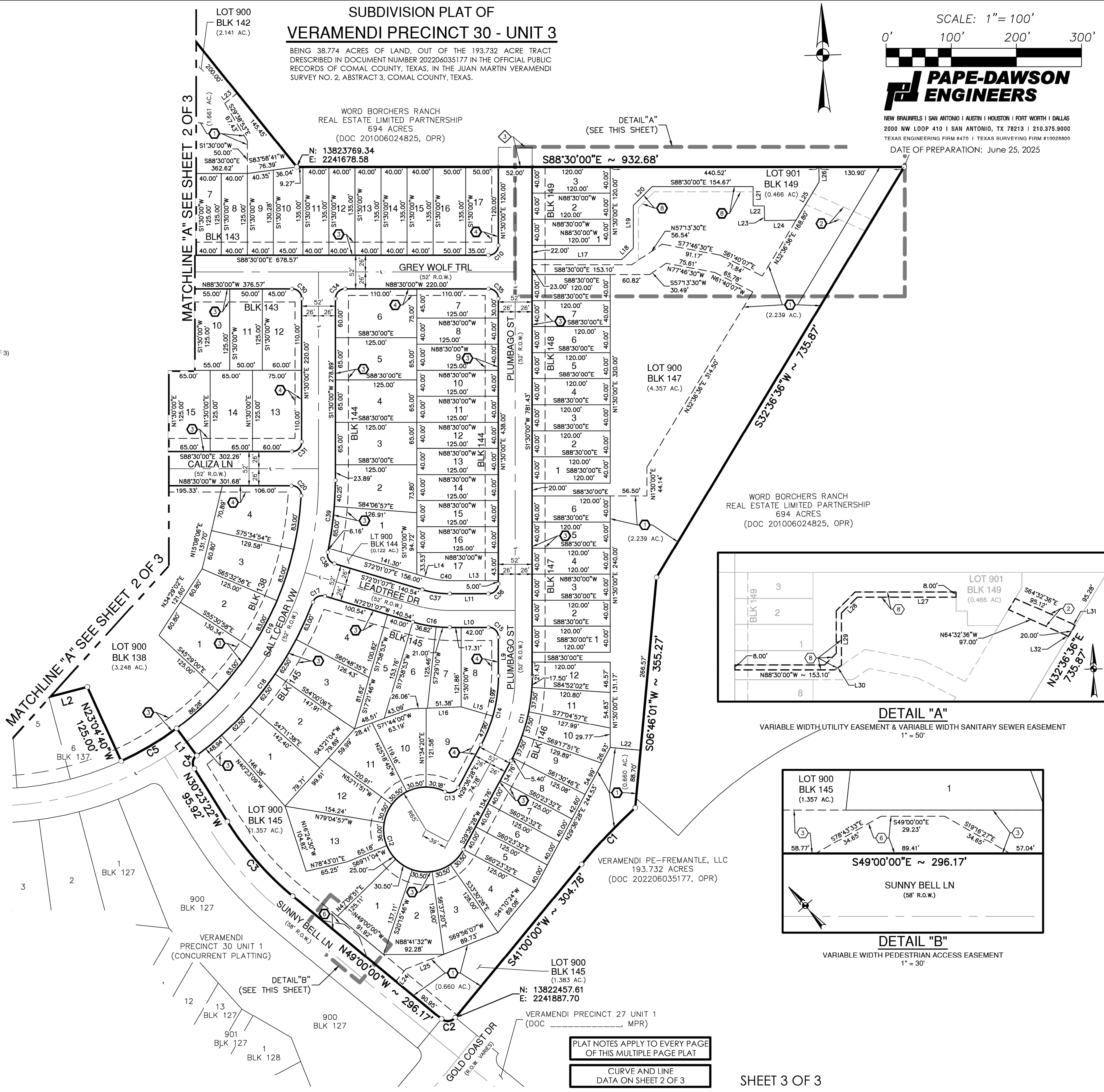
PLAT

PLAT NO. _____
JOB NO. 30001-71
DATE JULY 2025
DESIGNER JLL
CHECKED FG DRAWN JLL
SHEET G-6

FOR CONSTRUCTION 30007-71



AC	ACRE(S)	VOL	VOLUME
CV	CLEAR VISION	PG	PAGE(S)
DED	DEDICATION	ROW	RIGHT-OF-WAY
DOC	DOCUMENT NUMBER	SS	SANITARY SEWER
ESMT	EASEMENT	VAR WID	VARIABLE WIDTH
ETJ	EXTRATERRITORIAL JURISDICTION	VRAE	VEHICULAR NON-ACCESS
ML	MATCHLINE (SURVEYOR)		EASEMENT (NOT-TO-SCALE)
MPR	MAP AND PLAT RECORDS OF COMAL COUNTY, TEXAS	●	FOUND 1/2" IRON ROD (UNLESS NOTED OTHERWISE)
OPR	OFFICIAL PUBLIC RECORDS OF COMAL COUNTY, TEXAS	○	SET 1/2" IRON ROD (PD)
		○	SET 1/2" IRON ROD (PD)-ROW
TEMP	TEMPORARY	*	SEE NBU NOTE 7 (SHEET 1 OF 3)
←	CITY OF NEW BRAUNFELS EXTRATERRITORIAL JURISDICTION		
	← CENTERLINE		
①	VARIABLE WIDTH DRAINAGE EASEMENT	①	20' UTILITY EASEMENT (DOC → MPR)
②	VARIABLE WIDTH SANITARY SEWER EASEMENT	②	10' UTILITY EASEMENT (DOC → MPR)
③	20' UTILITY EASEMENT	③	30'X52' TEMP UTILITY, DRAINAGE, & ACCESS ESMT TO EXPIRE UPON FUTURE FLATTING OF LOT & RIGHT-OF-WAY
④	10' UTILITY EASEMENT		
⑤	15' UTILITY EASEMENT		
⑥	VARIABLE WIDTH PEDESTRIAN ACCESS EASEMENT		
⑦	5' RIGHT-OF-WAY DEDICATION		
⑧	VARIABLE WIDTH UTILITY EASEMENT		



VERAMENDI PRECINCT 30 - UNIT 3

Civil Job No. 30001-73; Survey Job No. 9093-21



**PAPE-DAWSON
ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

VERAMENDI LIFT STATION
NEW BRAUNFELS, TEXAS

PLAT

PLAT NO. _____
JOB NO. 30001-71
DATE JULY 2025
DESIGNER LL
CHECKED FG DRAWN J
SHEET **G-8**

FOR CONSTRUCTION 30007-71

Date: Jul 08, 2025, 11:10am User ID: Jling
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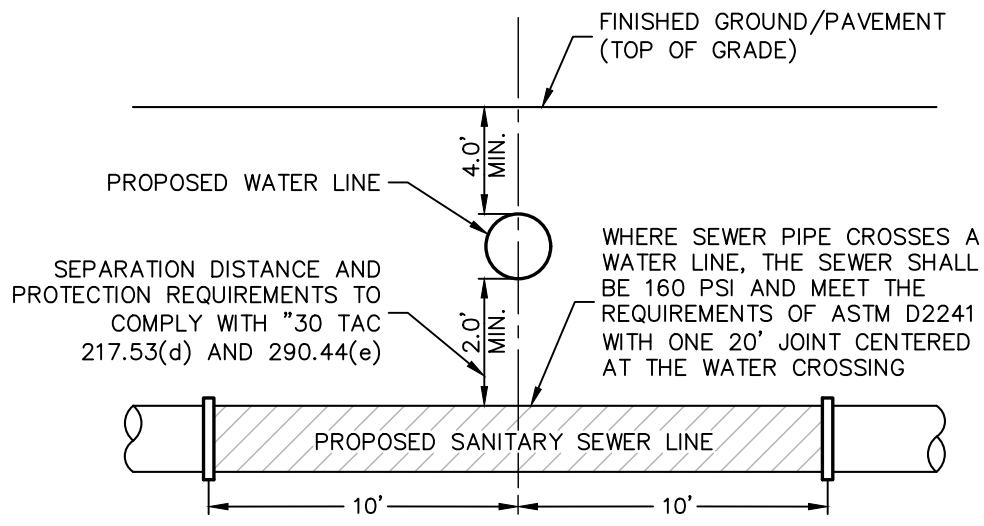
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Point Table			
Point #	Northing	Easting	Description
1	13823745.86	2242384.04	SITE FENCE
2	13823744.33	2242384.00	SITE FENCE
3	13823723.34	2242383.47	SITE FENCE
4	13823743.36	2242479.54	SITE FENCE
5	13823725.32	2242479.69	SITE FENCE
6	13823672.73	2242445.45	SITE FENCE
7	13823673.49	2242399.67	SITE FENCE
8	13823695.70	2242399.91	SITE FENCE
9	13823696.14	2242382.79	SITE FENCE
10	13823739.83	2242389.91	ROAD
11	13823744.12	2242412.53	ROAD
12	13823742.42	2242477.52	ROAD
13	13823724.42	2242477.05	ROAD

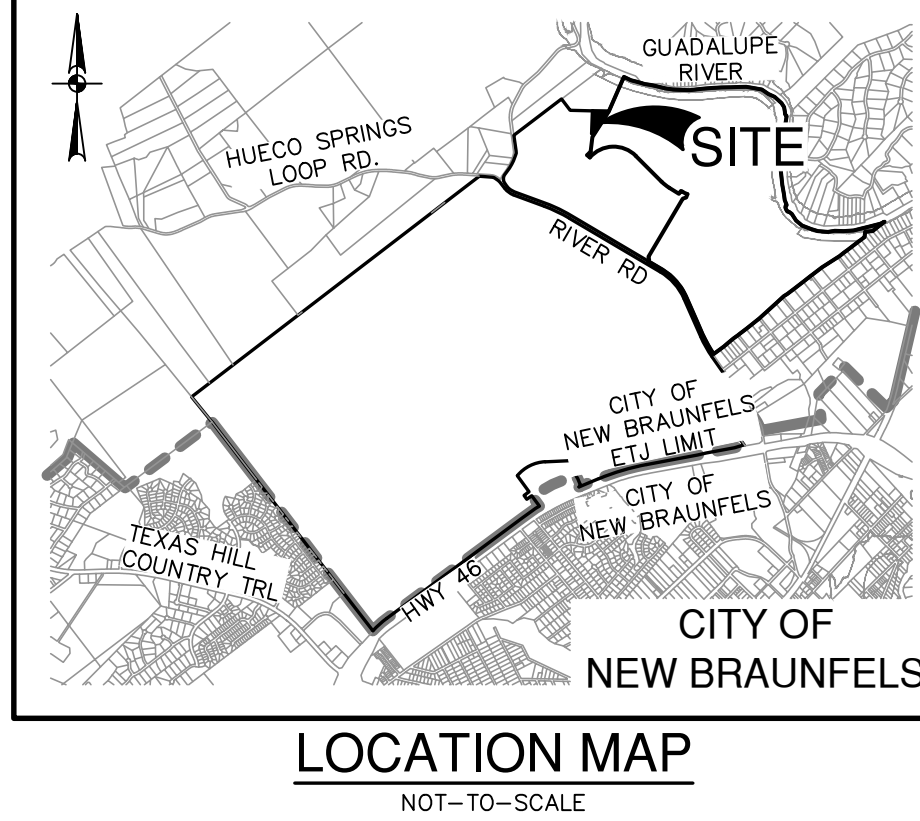
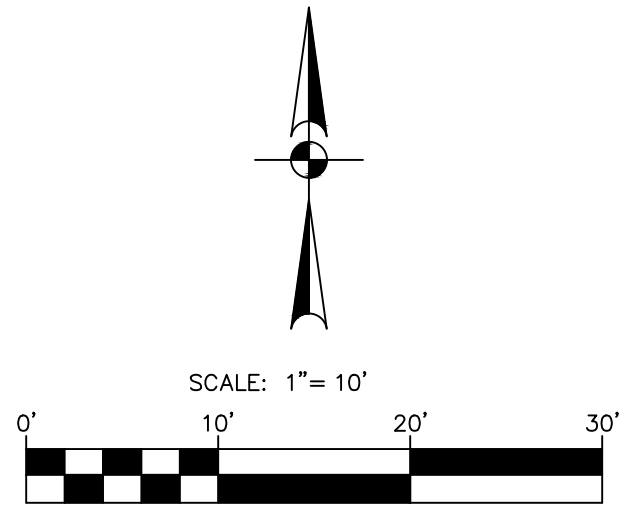
Point Table			
Point #	Northing	Easting	Description
14	13823725.11	2242450.93	ROAD
15	13823705.47	2242430.41	ROAD
16	13823673.97	2242429.85	ROAD
17	13823674.36	2242409.86	ROAD
18	13823692.45	2242410.15	ROAD
19	13823728.02	2242375.73	ROAD
20	13823716.39	2242446.53	WET WELL CORNER
21	13823711.06	2242446.53	WET WELL CORNER
22	13823713.73	2242460.03	WET WELL CENTER
23	13823714.68	2242392.35	HOSE BIB
24	13823703.08	2242457.27	MANHOLE
25	13823738.86	2242460.44	MANHOLE
26	13823721.56	2242374.95	TRANSFORMER
27	13823696.73	2242439.07	PAD CORNER
28	13823681.24	2242448.52	PAD CORNER

Point Table			
Point #	Northing	Easting	Description
29	13823699.47	2242401.95	PAD CORNER
30	13823675.40	2242407.69	PAD CORNER
31	13823730.52	2242223.48	ROAD PT
32	13823742.64	2242207.65	ROAD PT
33	13823708.22	2242172.11	ROAD PC
34	13823696.09	2242187.91	ROAD PC
45	13823714.73	2242389.03	BACKFLOW PREVENTER
56	13823740.92	2242367.86	GATE CARD READER
57	13823718.64	2242466.64	JIB CRANE AND HOIST

WASTEWATER (NBU JOB NO. WW-239913)		
ITEM	UNIT	QUANTITY
8" SANITARY SEWER PIPE	LF	298
12" SANITARY SEWER PIPE	LF	22
48" MANHOLES	EA	1



TYPICAL SANITARY
SEWER/WATER CROSSING DETAIL
NOT-TO-SCALE



WASTEWATER LEGEND

PROPERTY LINE	---
EXISTING WATER	--- W --- W --- W ---
EXISTING WASTEWATER	---
SANITARY SEWER EASEMENT	---
PROPOSED WASTEWATER & MH	---
PROPOSED FORCE MAIN	---
PROPOSED WATER	--- W --- W --- W ---
PROPOSED UNDERGROUND ELECTRIC	--- UE --- UE ---
PROPOSED FENCE	---
PROPOSED CONTOURS	1035
EXISTING CONTOURS	1035
TREES TO BE REMOVED	(X) TR
TREES TO REMAIN	(X) TR

LIFT STATION NOTES:

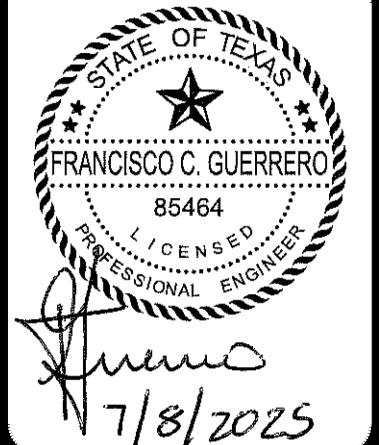
- ALL SUPPORT BRACKETS, HARDWARE, ANCHORS, BOLTS, ETC. INSIDE WET WELL SHALL BE TYPE 316 STAINLESS STEEL.
- ALL GRAVITY PVC PIPE TO BE ASTM D3034 SDR 26 PIPING WITH TRACER TAPE. ALL FM PVC PIPE TO BE ASTM D2241 SDR 26 (CLASS 200) WITH TRACER TAPE.
- ALL PUMP DISCHARGE PIPING IN WET WELL, VALVE VAULT, AND UP TO ADAPTER TO BE FLANGED (INSIDE WET WELL/VAULT) OR TR FLEX RESTRAINED MECHANICAL JOINT (WHEN BURIED) DUCTILE IRON PIPING. ALL DUCTILE IRON PIPING SHALL BE EPOXY LINED WITH TNESEC SERIES 431 PERMA-SHIELD PL CERAMIC EPOXY OR APPROVED EQUAL. ALL PIPING SHOULD BE RESTRAINED.
- ALL EXPOSED DUCTILE IRON PIPING, FITTINGS, AND VALVES SHALL BE SANDBLASTED AND COATED WITH TWO (2) COATS OF TNESEC SERIES 27MB EPOXY APPLIED AT 6.0 TO 8.0 DRY MILS AND TOPCOATED WITH TNESEC SERIES 740 UVV APPLIED AT 3.0 TO 5.0 DRY MILS. FINAL COLOR TO BE APPROVED BY OWNER. SHOP PRIMING WITH TNESEC SERIES N140 IS ACCEPTABLE. BITUMASTIC COATING SHALL NOT BE APPLIED TO EXPOSED DIP PIPING.
- ALL BURIED DUCTILE IRON PIPING, FITTINGS, AND VALVES SHALL BE WRAPPED WITH A POLYETHYLENE ENCASEMENT IN ACCORDANCE WITH THE LATEST REVISION OF AWWA C105.
- ALL MECHANICAL JOINT FITTINGS TO BE RESTRAINED USING SERIES 1100 OR 2000PV MEGALUG JOINT RESTRAINTS.
- PUMP SPACING DIMENSIONS SHOWN ARE APPROXIMATE. ACTUAL DIMENSIONS SHALL BE DETERMINED BY SPECIFIC PUMP MANUFACTURER.
- ELECTRICAL CONTROLS CONCRETE PADS SHALL BE SIZED BASED ON THE SPECIFIC ELECTRICAL EQUIPMENT PROVIDED. CONCRETE PAD SHALL EXTEND A MINIMUM OF 12-INCHES BEYOND THE OUTSIDE EDGE OF EQUIPMENT ON ALL SIDES.
- POSITIVE DRAINAGE SHALL BE MAINTAINED ON ALL SURFACE AREAS WITHIN THE SCOPE OF THIS PROJECT. CONTRACTOR TO GRADE SITE TO DRAIN TOWARDS ROAD RIGHT-OF-WAY OR THE PROPOSED DETENTION POND. CONTRACTOR TO TAKE PRECAUTIONS NOT TO ALLOW ANY PONDING OF WATER.
- PRECAST MANHOLES SHALL BE PROVIDED PER NEW BRAUNFELS UTILITIES SPECIFICATIONS.
- ALL WATER SERVICES SHALL CONFORM TO NBU STANDARD DETAILS.
- WATER LINE SHALL HAVE A MINIMUM COVER OF 4'. CONTRACTOR TO AVOID HIGH POINTS DURING INSTALLATION.
- WATER LINE SHALL BE ASTM B88 TYPE K ANNEALED SEAMLESS COPPER TUBING.

MATCHLINE - SEE SHEET C-2

Dates: Jul 05, 2025, 11:14am User ID: jlling
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DATE	
NO.	
REVISION	

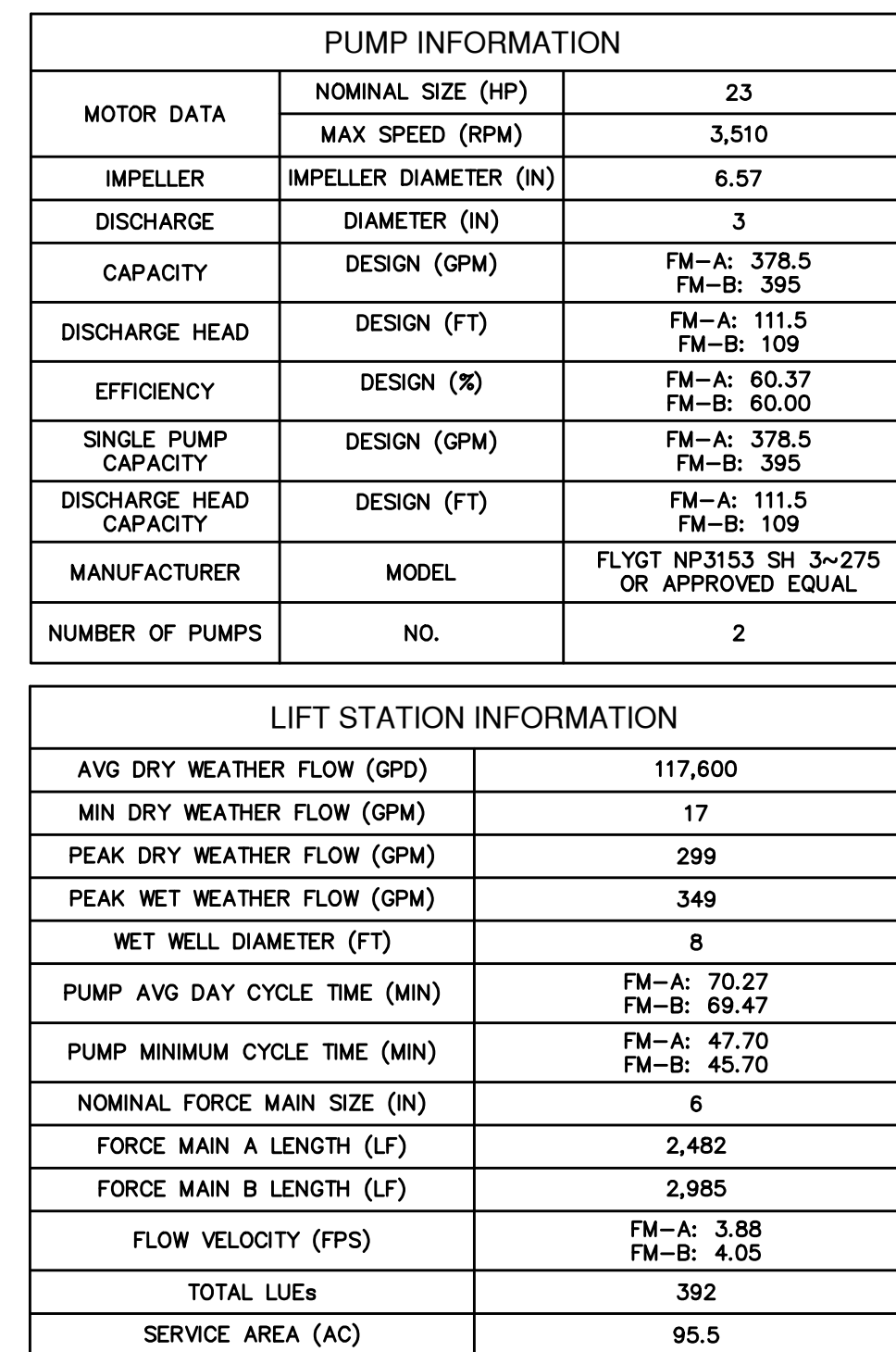
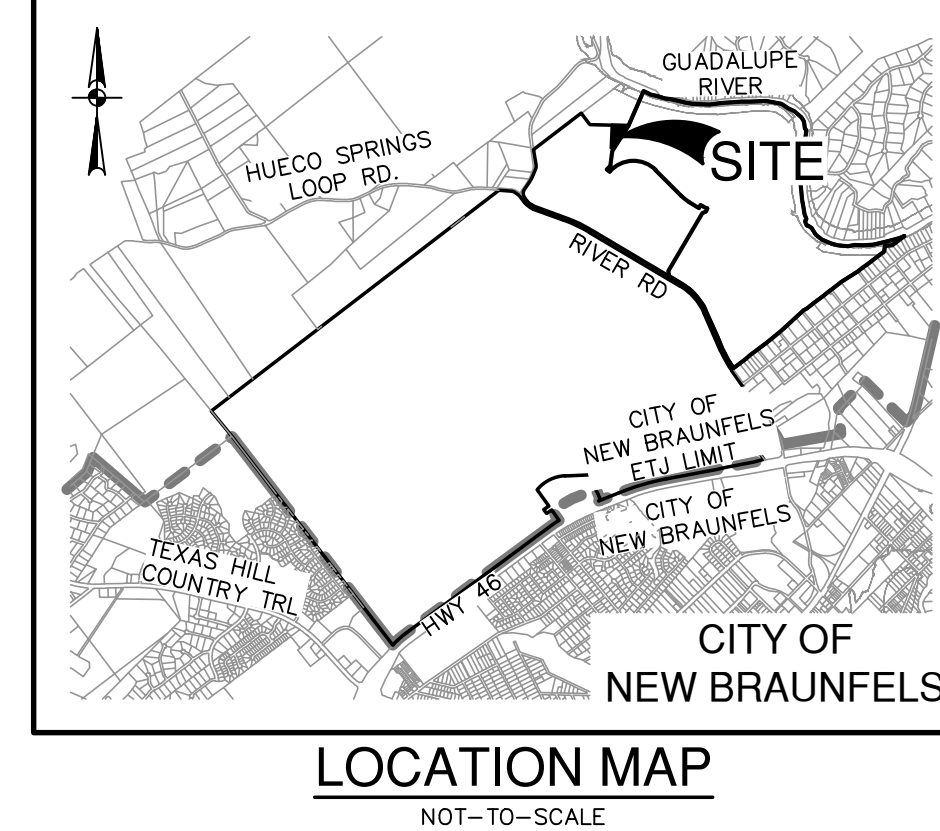


**PAPE-DAWSON
ENGINEERS**
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008800

VERAMENDI LIFT STATION
NEW BRAUNFELS, TEXAS
LIFT STATION SITE PLAN 2

PLAT NO.	
JOB NO.	30001-71
DATE	JULY 2025
DESIGNER	JL
CHECKED	FG
DRAWN	JL
SHEET	C-3

FOR CONSTRUCTION 30007-71



1. ALL SUPPORT BRACKETS, HARDWARE, ANCHORS, BOLTS, ETC. INSIDE WET WELL SHALL BE TYPE 316 STAINLESS STEEL.
2. ALL GRAVITY PVC PIPE TO BE ASTM D2034 SDR 26 PIPING WITH TRACER TAPE. ALL FM PVC PIPE TO BE ASTM D2241 SDR 28 (CLASS 200) WITH TRACER TAPE.
3. ALL INTERIOR SURFACES OF WET WELL SHALL BE COATED PER NUBEL COATING SPECIFICATIONS 506.3-0, INTERIOR SURFACE COATINGS FOR WASTEWATER MANHOLES.
4. ALL PUMP DISCHARGE PIPING IN WET WELL, VALVE VAULT, AND UP TO PVC TRANSITION TO BE FLANGED (INSIDE WET WELL/VAULT) OR TRX RESTRAINED MECHANICAL JOINTS (W/ BURIED) INSIDE WET WELL/VAULT. DISCHARGE PIPING SHALL BE EPOXY LINED WITH TNEDEC SERIES 431 PERMA-SHIELD PL CERAMIC EPOXY OR APPROVED EQUAL.
5. ALL EXPOSED DUCTILE IRON PIPING, FITTINGS, AND VALVES SHALL BE SANDBLASTED AND COATED WITH TWO (2) COATS OF TNEDEC SERIES 27WB TPOXY APPLIED AT 6.0 TO 8.0 MILS. FINISH AND TEST TO BE APPROVED BY THE OWNER. SHOP PRIMING WITH TNEDEC SERIES N140 IS ACCEPTABLE. BITUMASTIC COATING SHALL NOT BE APPLIED TO EXPOSED DUCTILE IRON PIPING.
6. ALL BURIED DUCTILE IRON PIPING, FITTINGS, AND VALVES SHALL BE WRAPPED WITH A POLYETHYLENE ENCASEMENT IN ACCORDANCE WITH THE LATEST REVISION OF AWWA C105.
7. ALL MECHANICAL JOINT FITTINGS TO BE RESTRAINED USING SERIES 1100 OR 2000PVC MEAGALU JOINT RESTRAINTS.
8. PUMP SPACING DIMENSIONS SHOWN ARE APPROXIMATE. ACTUAL DIMENSIONS SHALL BE DETERMINED BY SPECIFIC PUMP MANUFACTURER.
9. LEVEL CONTROL WILL BE PROVIDED BY SUBMERSIBLE LEVEL TRANSMITTERS WITH OPERATION POINTS AS SHOWN ON THE PLANS. HIGH WATER ALARM FLOW SHALL BE USED FOR BACKUP ONLY. RADARS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.
10. ELECTRICAL EQUIPMENT PAD LENGTH SHALL BE SET BASED ON THE SPECIFIC ELECTRICAL EQUIPMENT PROVIDED. CONCRETE PAD SHALL EXTEND A MINIMUM OF 12-INCHES BEYOND THE ELECTRICAL EDGE OF THE EQUIPMENT.
11. CONTRACTOR TO CONFIRM SIZE AND LOCATION OF WET WELL HATCHES PER SELECTED HATCH AND PUMP MANUFACTURERS' REQUIREMENTS.
12. SEE DETAIL AND STRUCTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN.
13. PUMP ANCHOR BOLTS SHALL BE EMBEDDED IN CONCRETE SLAB. CONTRACTOR TO SUBMIT DESIGN OF ANCHOR BOLTS AND PATTERN, INCLUDING CALCULATIONS, DURING SHOP DRAWING SUBMISSION.
14. CONTRACTOR TO PROVIDE ADHESIVE ANCHORS IN LIEU OF WEDGE ANCHORS FOR ALL SUBMITTER CONDITIONS AND SUBMIT DESIGN OF ANCHOR BOLTS DURING SHOP DRAWING SUBMISSION.
15. ALL PIPING IN THE WET WELL SHALL BE FLANGED, NO FLANGED COUPLING ADAPTORS OR VICTAULIC STYLE COUPLINGS SHALL BE PERMITTED INSIDE THE WET WELL.
16. CONTRACTOR TO PROVIDE ENGESS+HAUSER ELECTROMAGNETIC PROMAG 500 FLOW METER OR EQUIVALENT APPROVED APPROXER WITH NO REQUIRED MINIMUM PIPE STRAIGHT RUN BEFORE AND AFTER THE FLOW METER.
17. CONTRACTOR SHALL COORDINATE ALL WET WELL WALL AND TOP SLAB PENETRATIONS WITH THE WET WELL MANUFACTURER.
18. WET WELL TESTING AND EXFILTRATION TEST MUST BE PERFORMED IMMEDIATELY AFTER THE WET WELL HAS BEEN BACKFILLED AND COMPACTED. EXFILTRATION MUST NOT EXCEED 0.142 GALLONS PER HOUR PER FOOT OF DIAMETER PER FOOT OF DEPTH. THE TEST MUST BE PERFORMED BY PLUMBING, PIPING, AND FLOWING. THE TEST IS REFILLED WITH WATER TO EITHER 1'-FT BELOW THE WET WELL TOP SLAB, OR UP TO THE MANHOLE LID WITH THE LOWEST ELEVATION BELOW THE TOP SLAB. THIS LEVEL MUST BE CLEARLY MARKED ON THE WET WELL WALL. AFTER FILLING, THE WET WELL IS LEFT TO STABILIZE FOR 48 HOURS BEFORE CONDUCTING THE EXFILTRATION TEST. THE TEST IS REFILLED WITH WATER TO THE MARK LEFT ON THE WALL. THE TEST IS THEN RUN FOR TWO HOURS, MINIMUM, AND NO WATER IS ADDED. AFTER TWO HOURS, THE WET WELL IS REFILLED TO THE MARK. THE MAXIMUM ALLOWABLE WATER LOSS IS DETERMINED BY THE FOLLOWING EQUATION:

$Water\ Loss\ (gallons) = 0.0142tDh$

where:

t = test time (2 hours)

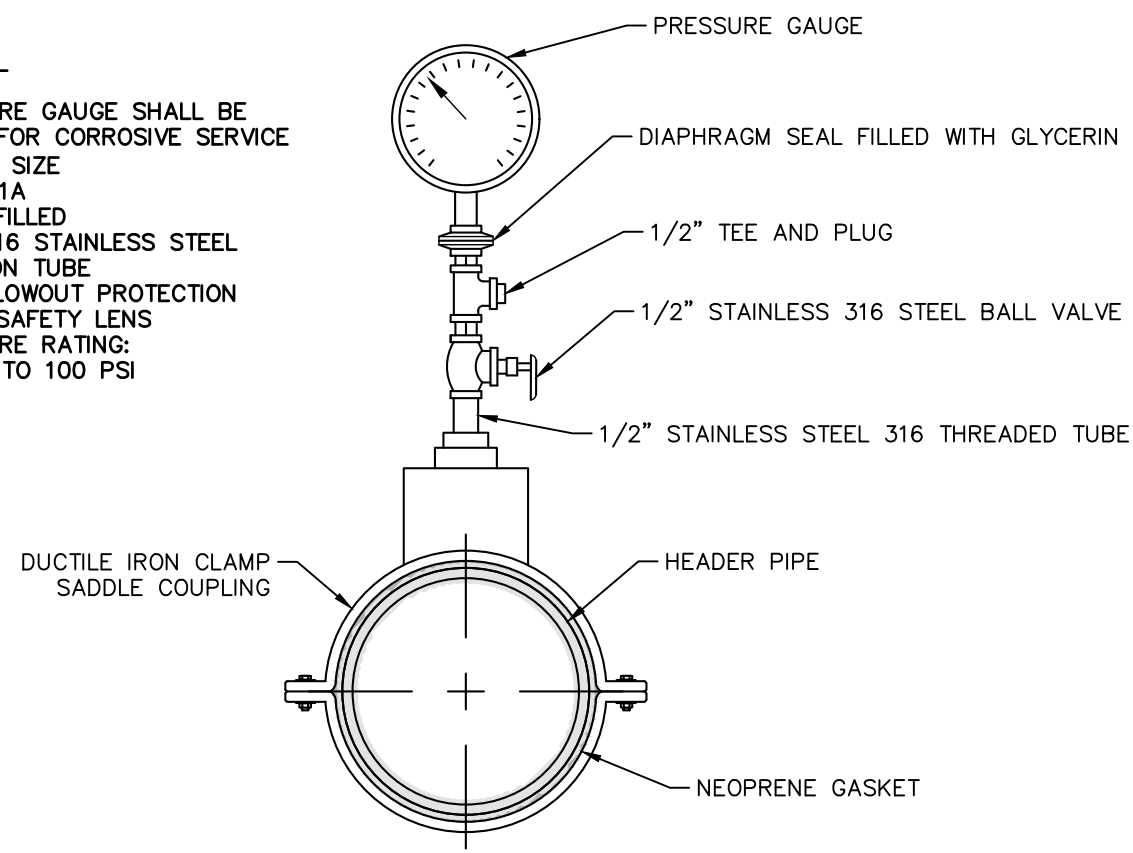
D = wet well diameter (ft), and

h = water level depth within the wet well after 2 hours (ft)

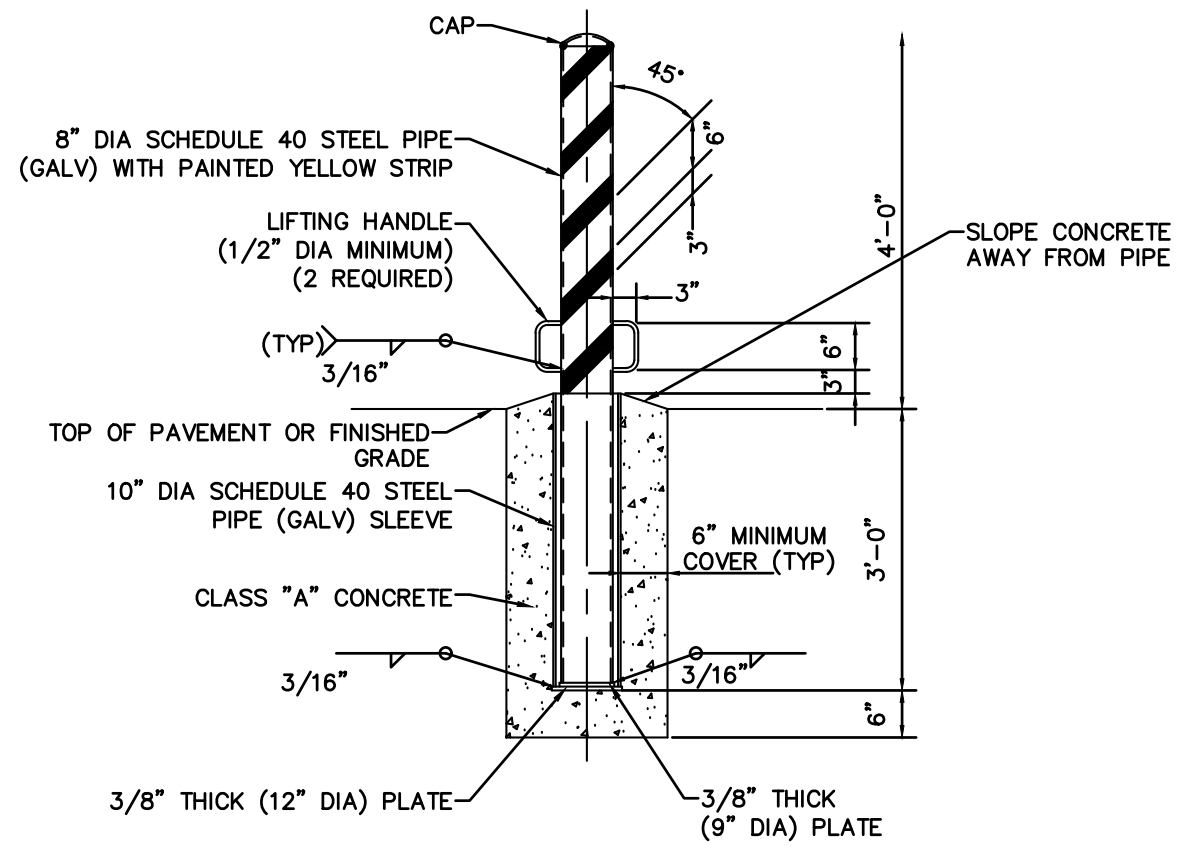
IF THE TEST FAILS, THEE DESIGN ENGINEER MUST WORK WITH THE CONSTRUCTION CONTRACTOR TO DETERMINE WHAT CORRECTIVE ACTIONS MAY BE NECESSARY TO MAKE THE WET WELL WATERTIGHT.

KEY NOTES:

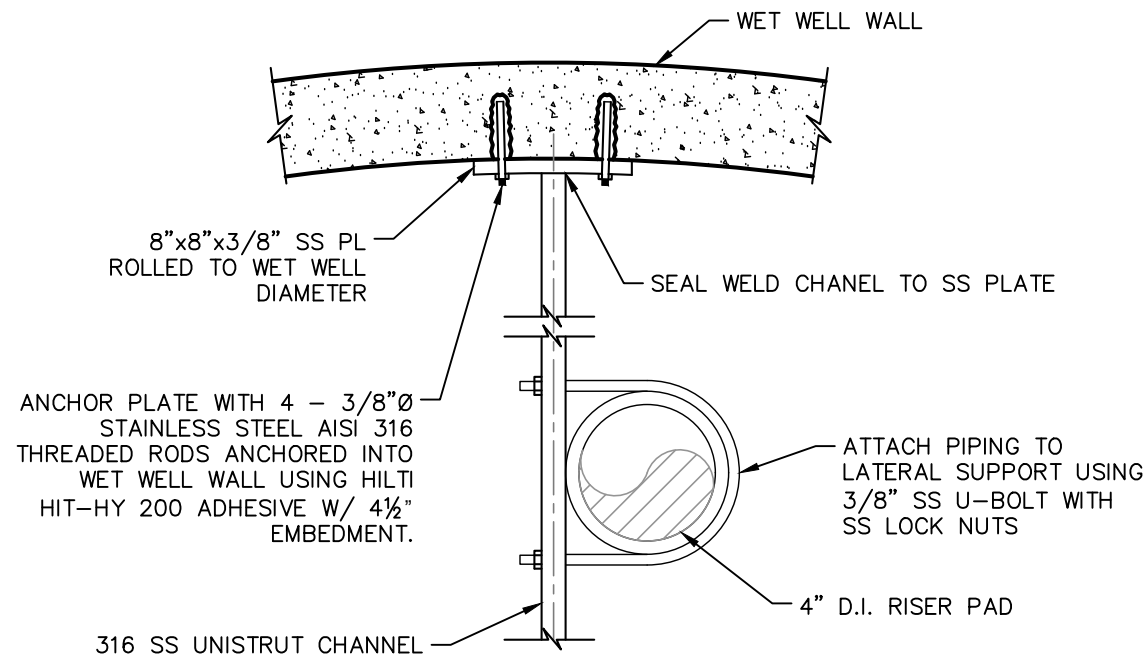
- PRESSURE GAUGE SHALL BE RATED FOR CORROSIVE SERVICE
- 4" DIAL SIZE
- GRADE 1A
- LIQUID FILLED
- TYPE 316 STAINLESS STEEL
- BOURDON TUBE
- FULL BLOWOUT PROTECTION
- GLASS SAFETY LENS
- PRESSURE RATING: 0 PSI TO 100 PSI



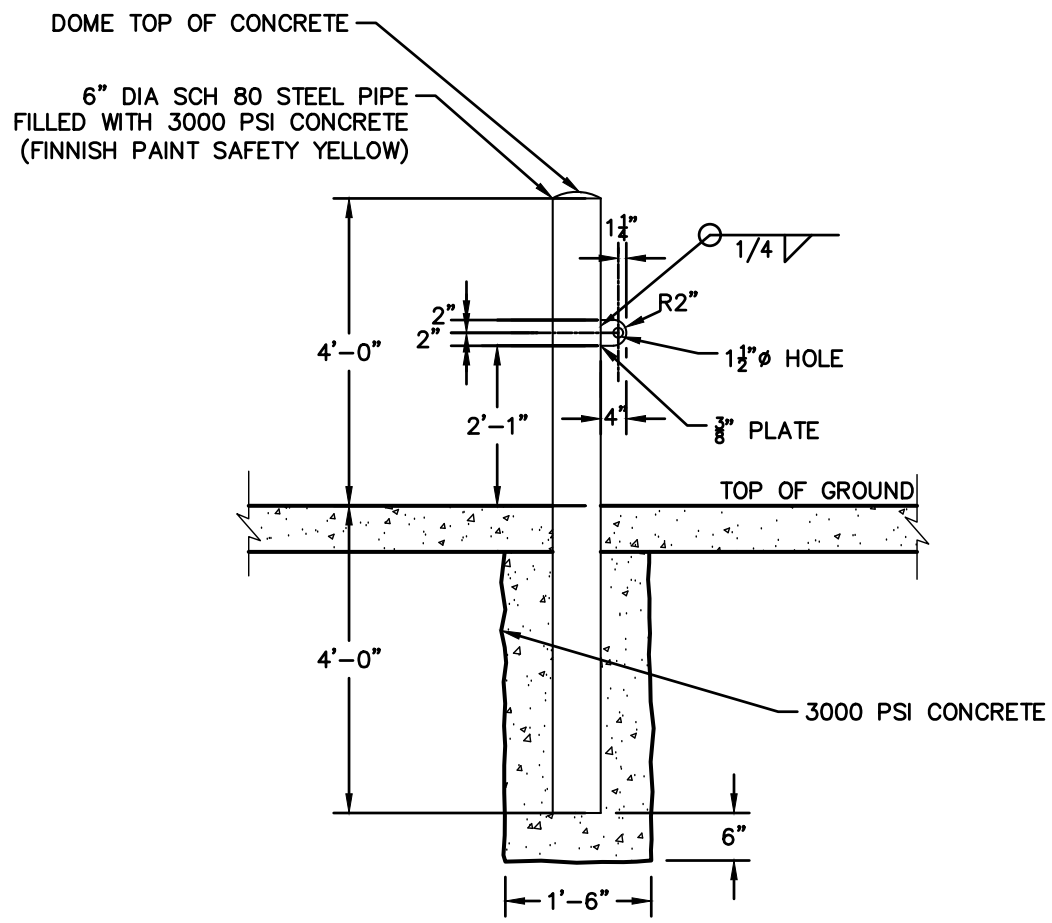
PRESSURE GAUGE INSTALLATION DETAIL
SCALE: N.T.S.



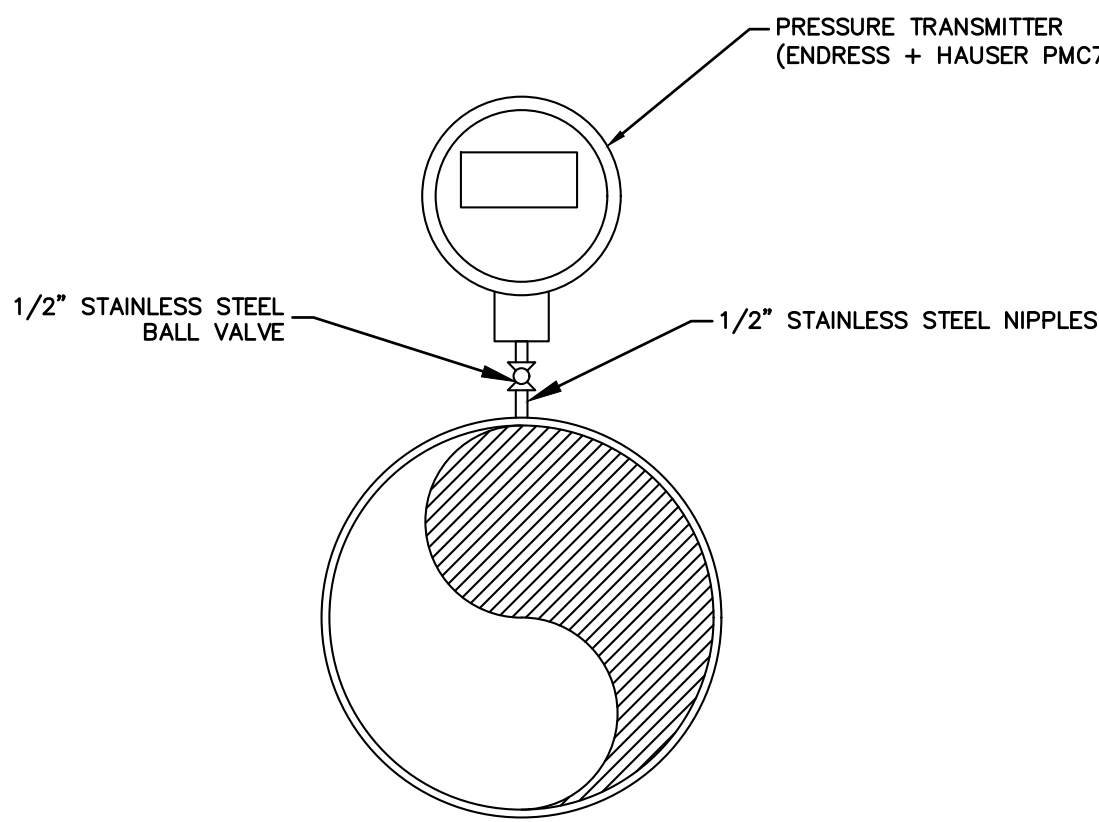
REMOVABLE STEEL BOLLARD DETAIL
SCALE: N.T.S.



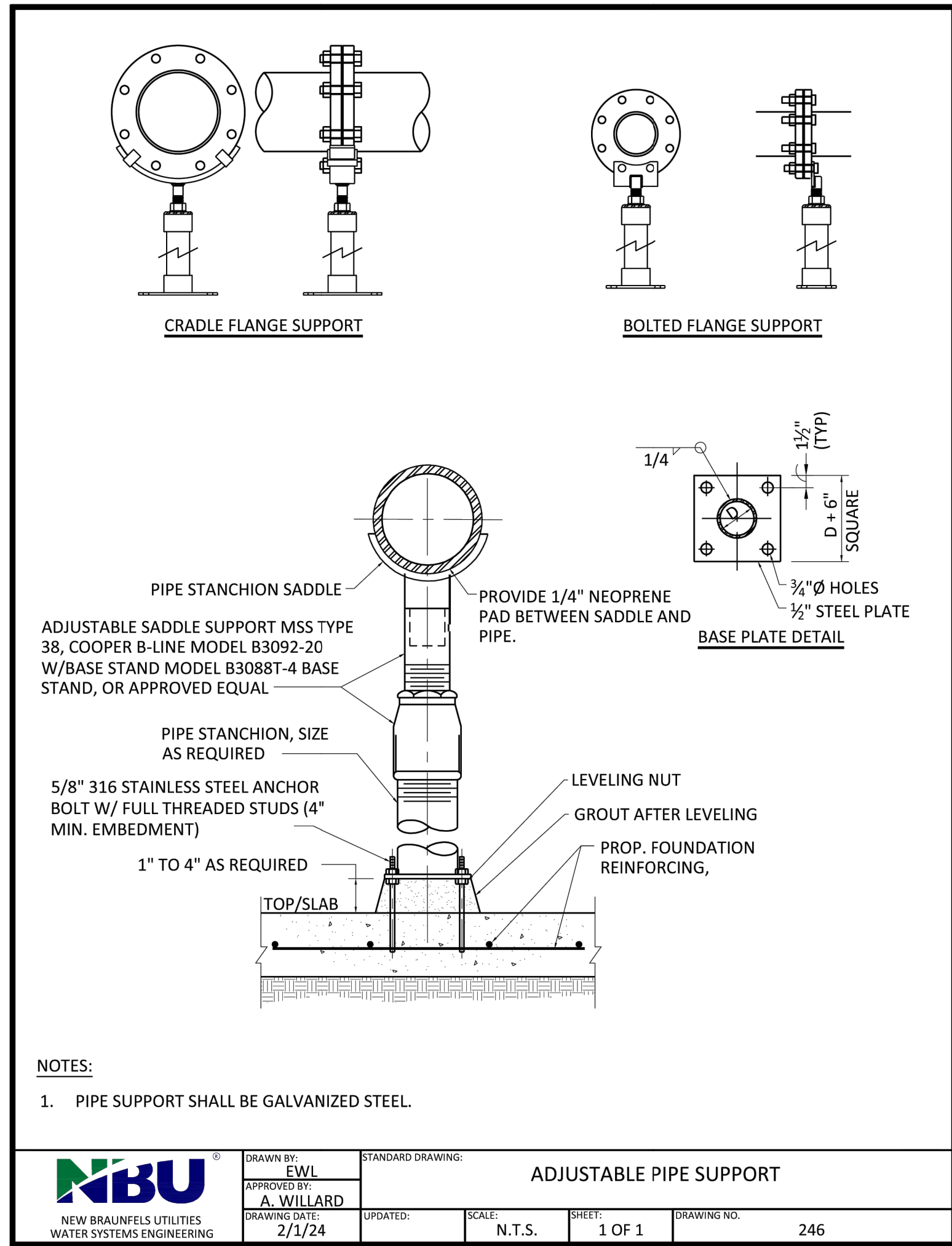
RISER PIPE SUPPORT DETAIL
SCALE: N.T.S.



BOLLARD W/ D-BOLT DETAIL
SCALE: N.T.S.

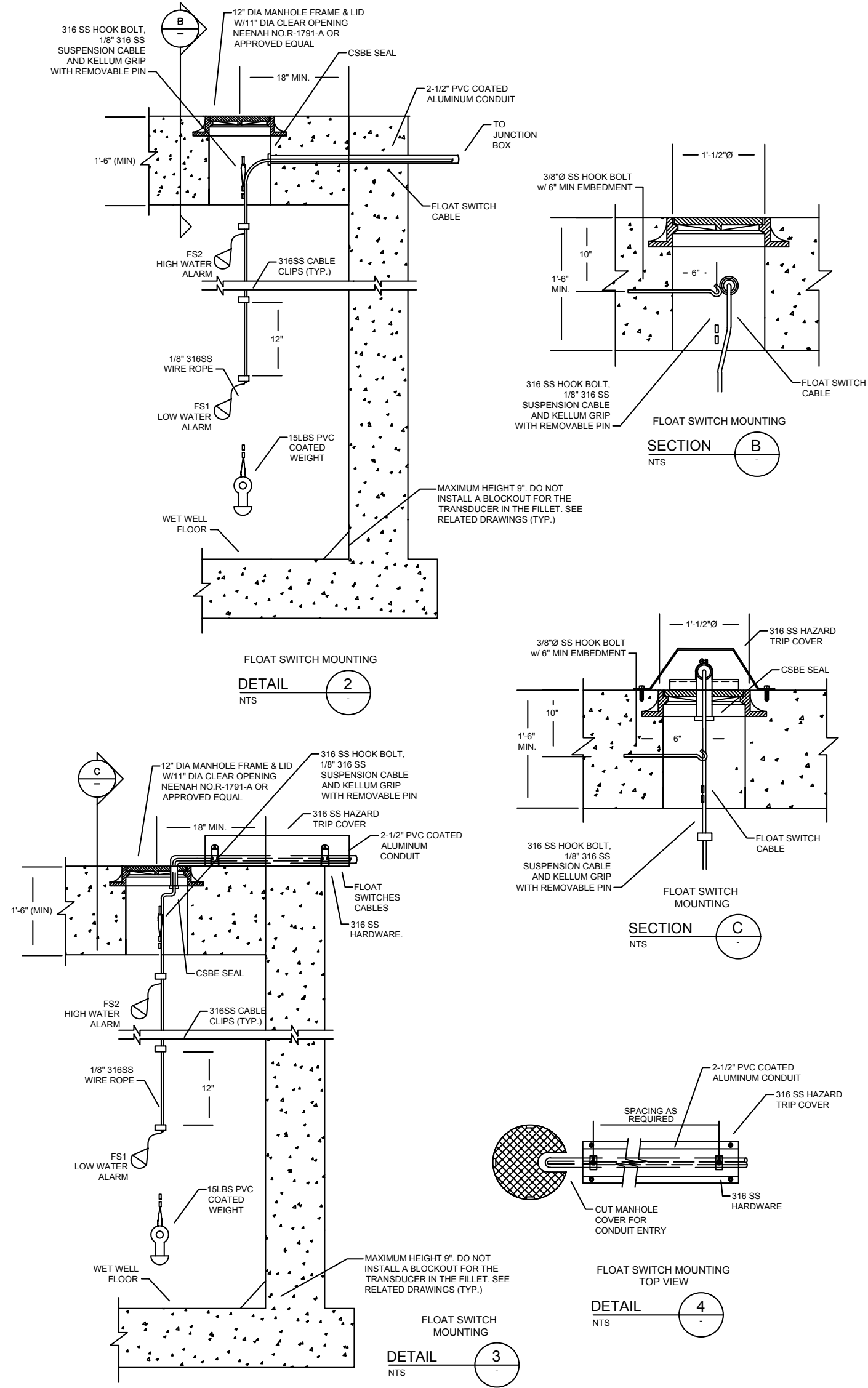


PRESSURE TRANSMITTER INSTALLATION DETAIL
SCALE: N.T.S.



- NOTES:
- PIPE SUPPORT SHALL BE GALVANIZED STEEL.

NBU NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	DRAWN BY: E.W.L.	STANDARD DRAWING: ADJUSTABLE PIPE SUPPORT			
	APPROVED BY: A. WILLARD	UPDATED:	SCALE: N.T.S.	SHEET: 1 OF 1	DRAWING NO.: 246



FLOAT SWITCH MOUNTING DETAIL
SCALE: N.T.S.

PAPE-DAWSON
ENGINEERS

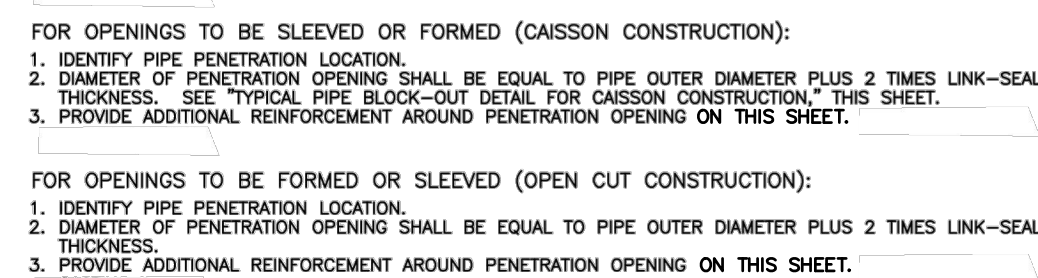
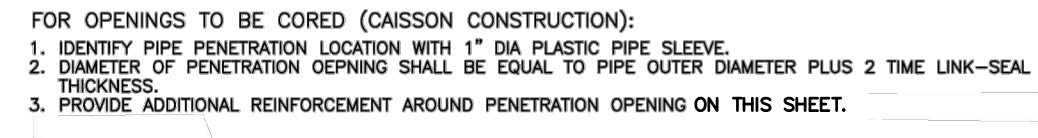
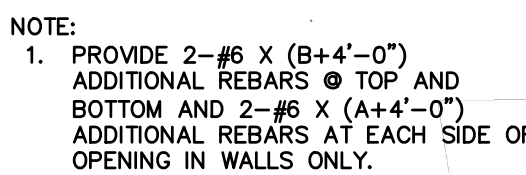
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10088800

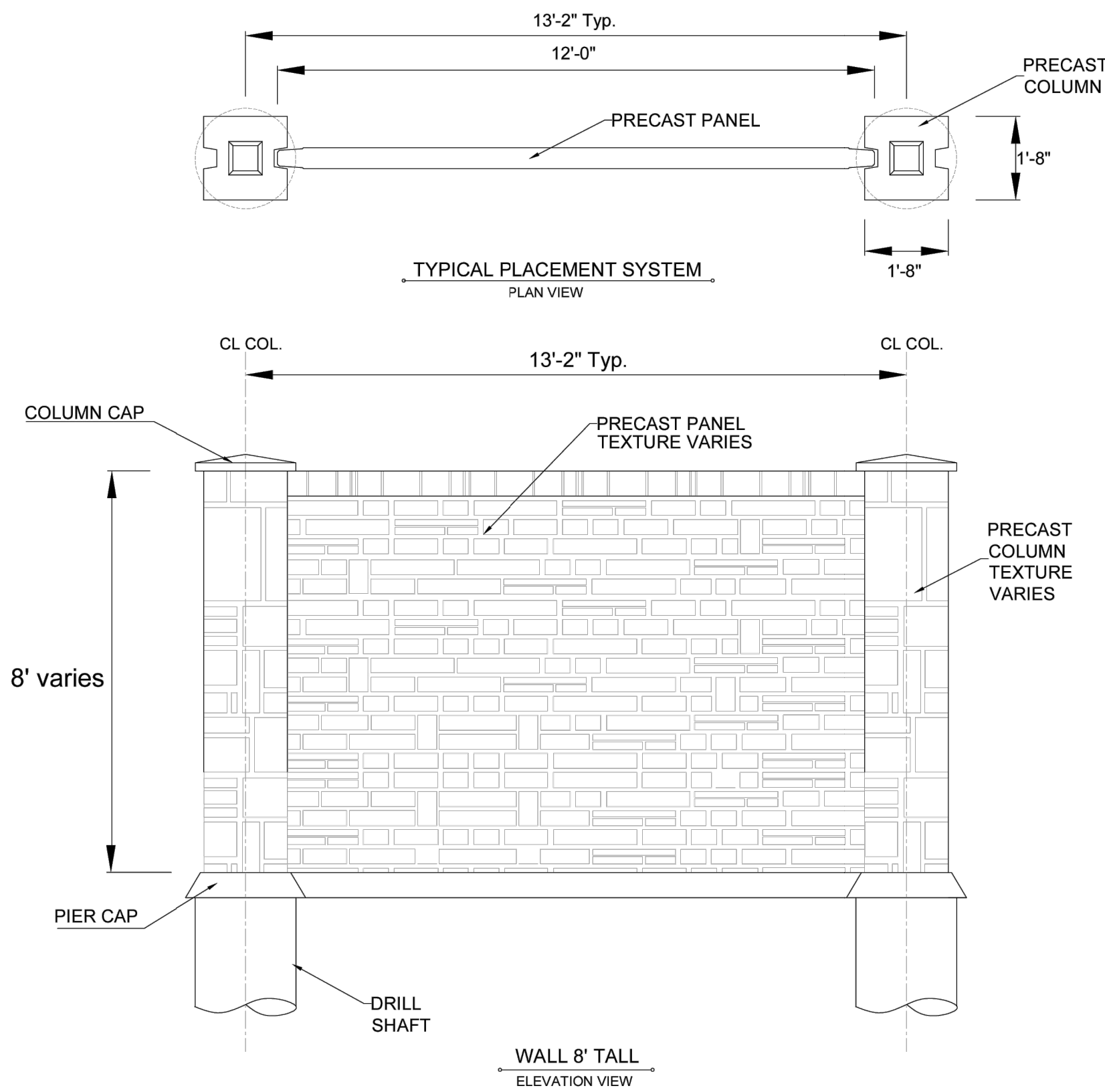
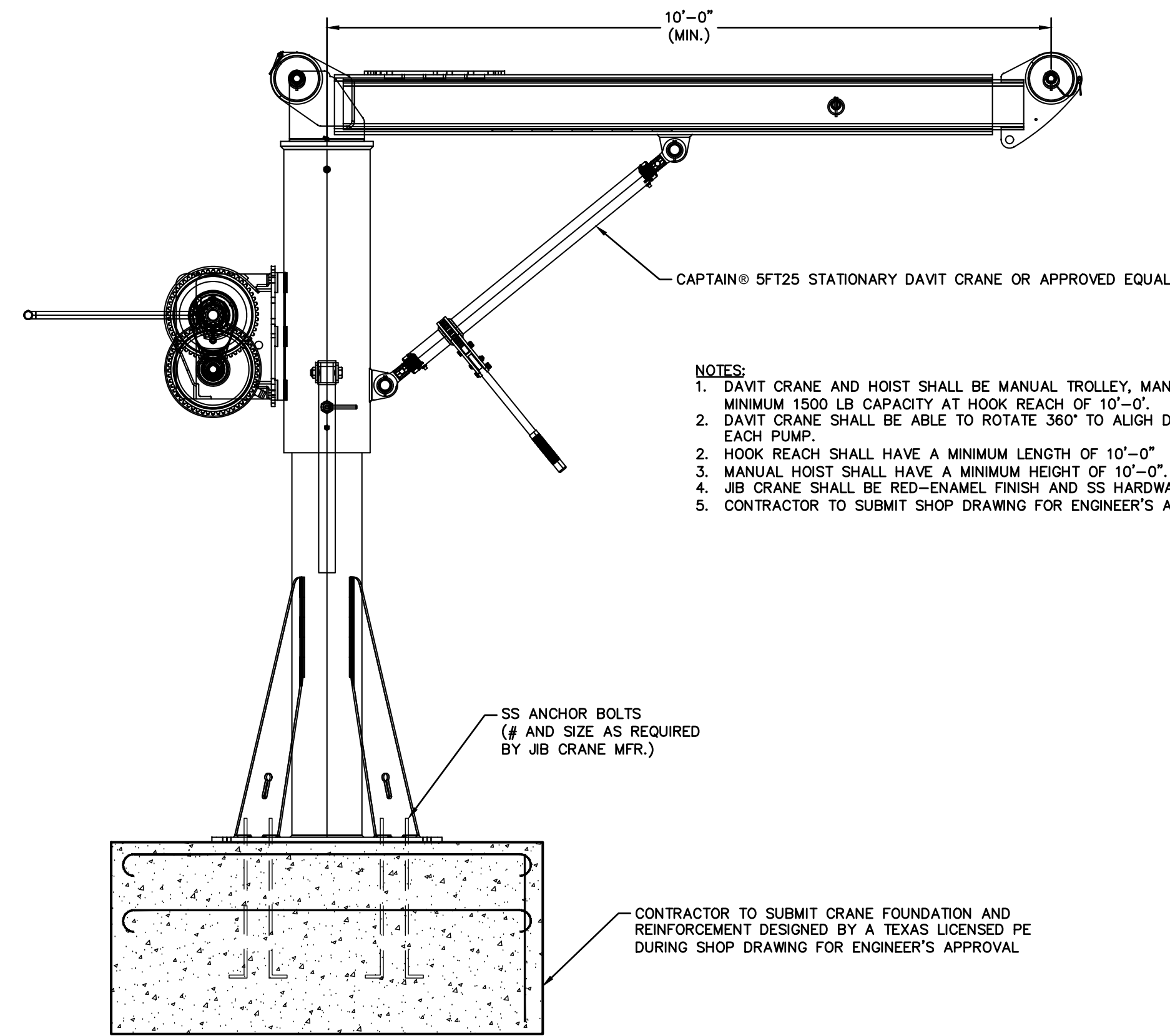
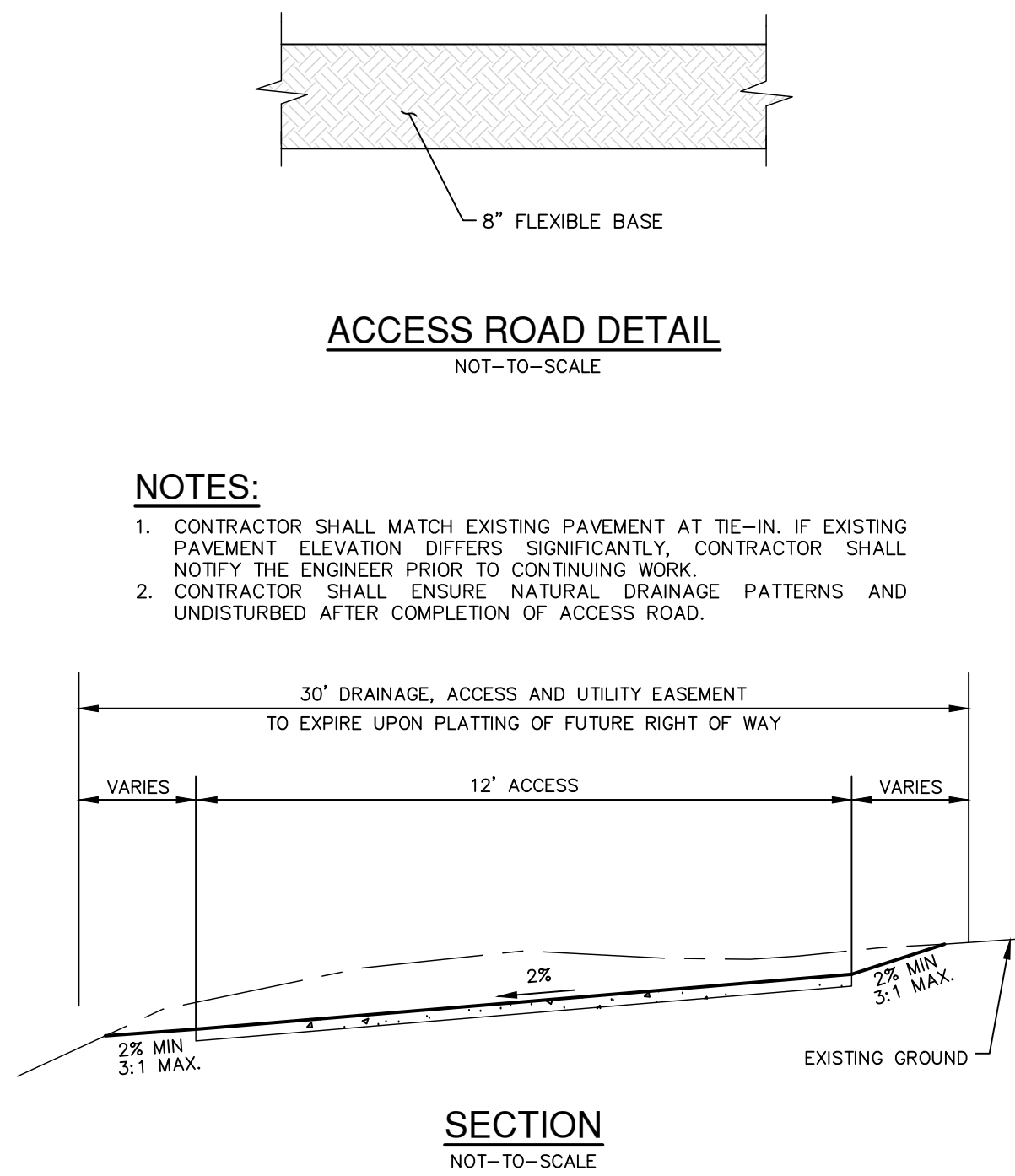
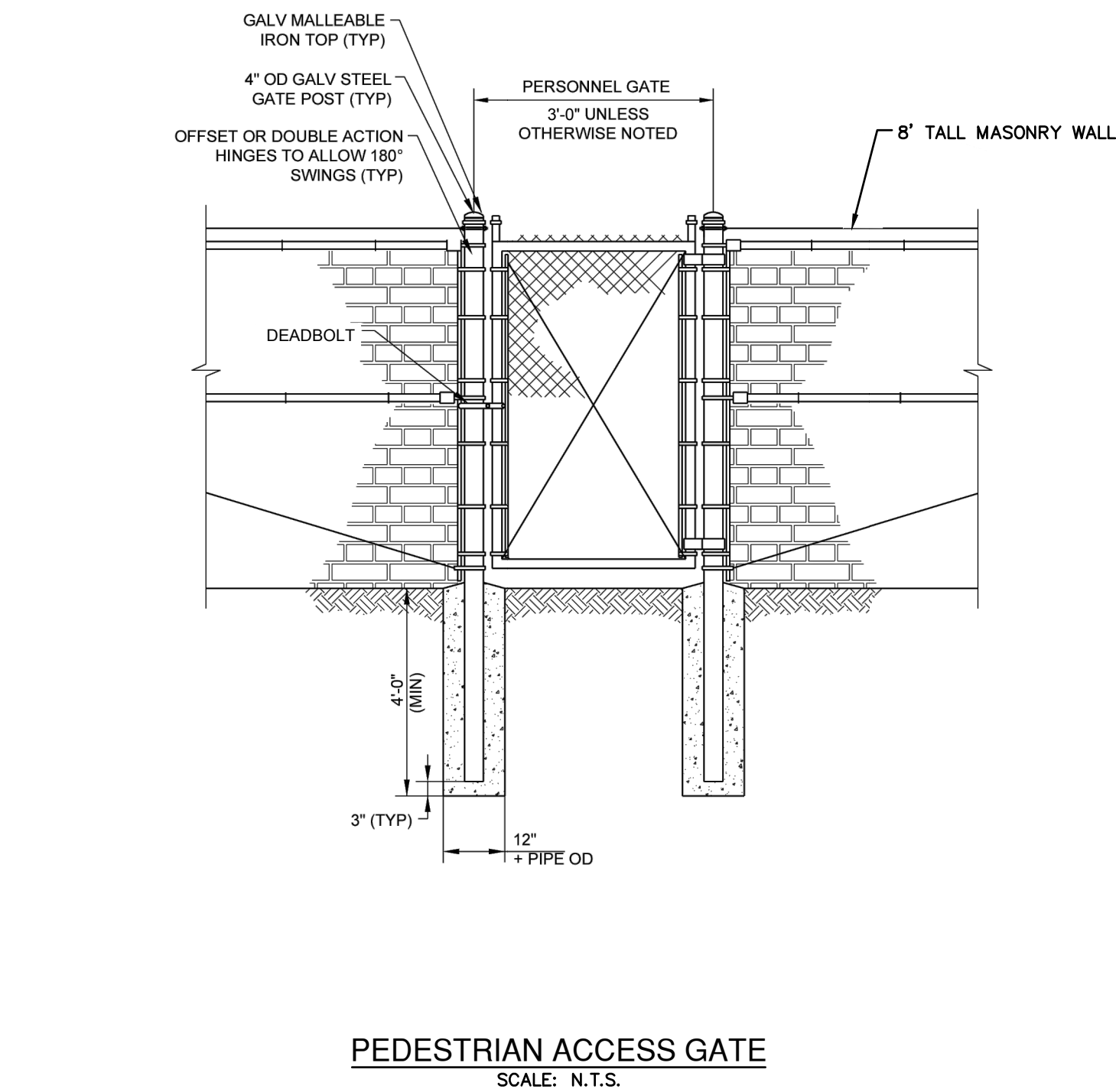
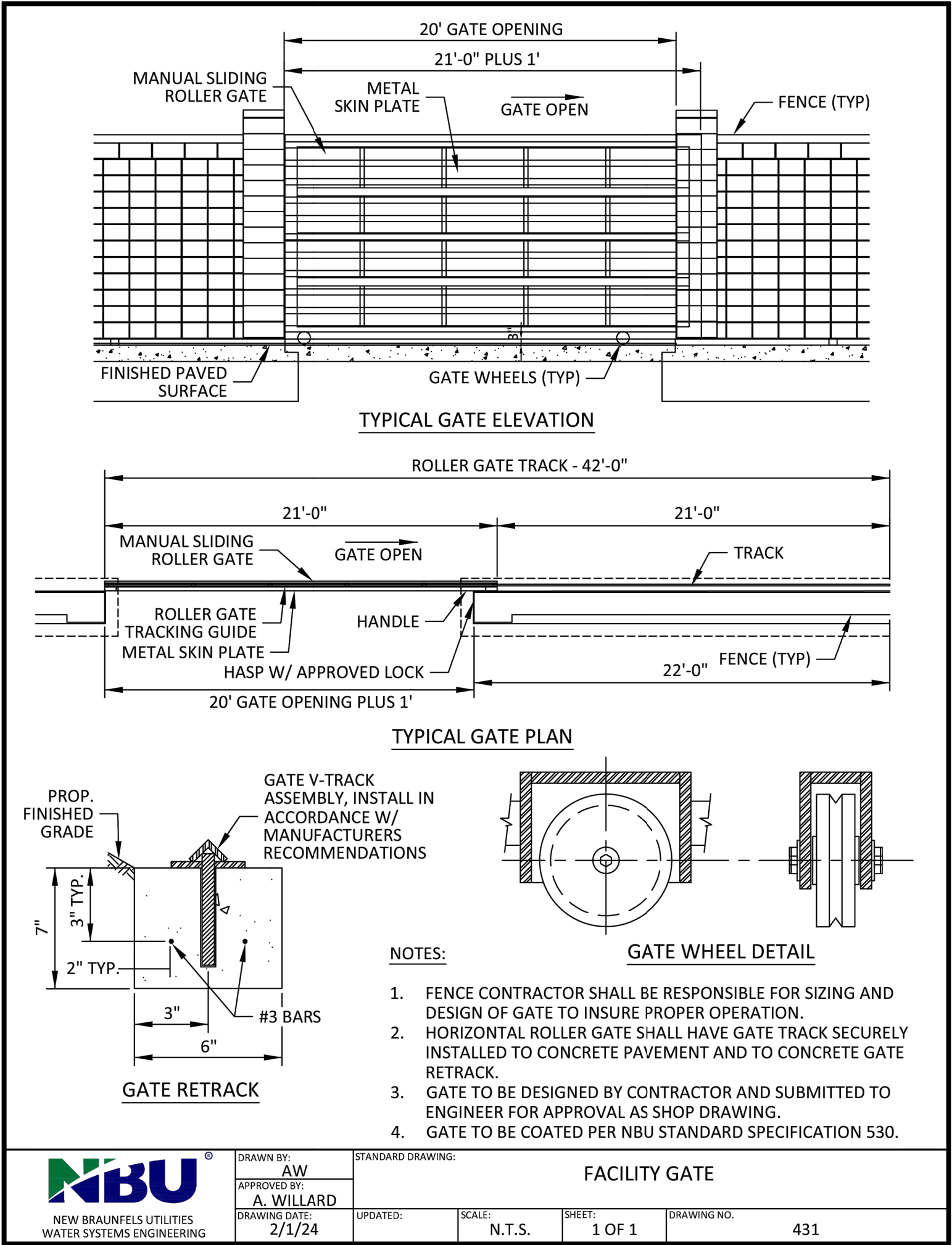
VERAMENDI LIFT STATION
NEW BRAUNFELS, TEXAS

LIFT STATION CONSTRUCTION DETAILS (1 OF 5)

PLAT NO. _____
JOB NO. 30001-71
DATE JULY 2025
DESIGNER LL
CHECKED FG DRAWN JL
SHEET C-5

FOR CONSTRUCTION 30007-71



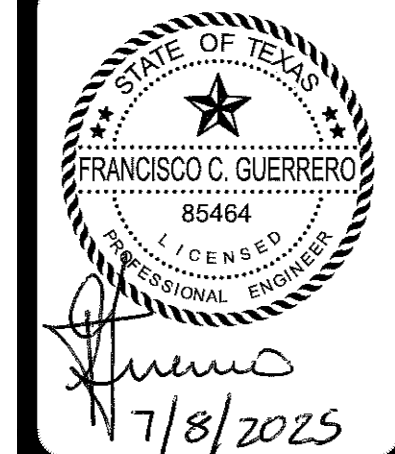


NOTE:

1. DRILL SHAFT DIAMETER & DEPTH TO BE DESIGNED BY LICENSED PE BY APPROVED FENCE VENDOR BASED ON THE GEOTECHNICAL REPORT AS PROVIDED IN THE SPECIFICATION.

MASONRY WALL DETAIL
SCALE: N.T.S.

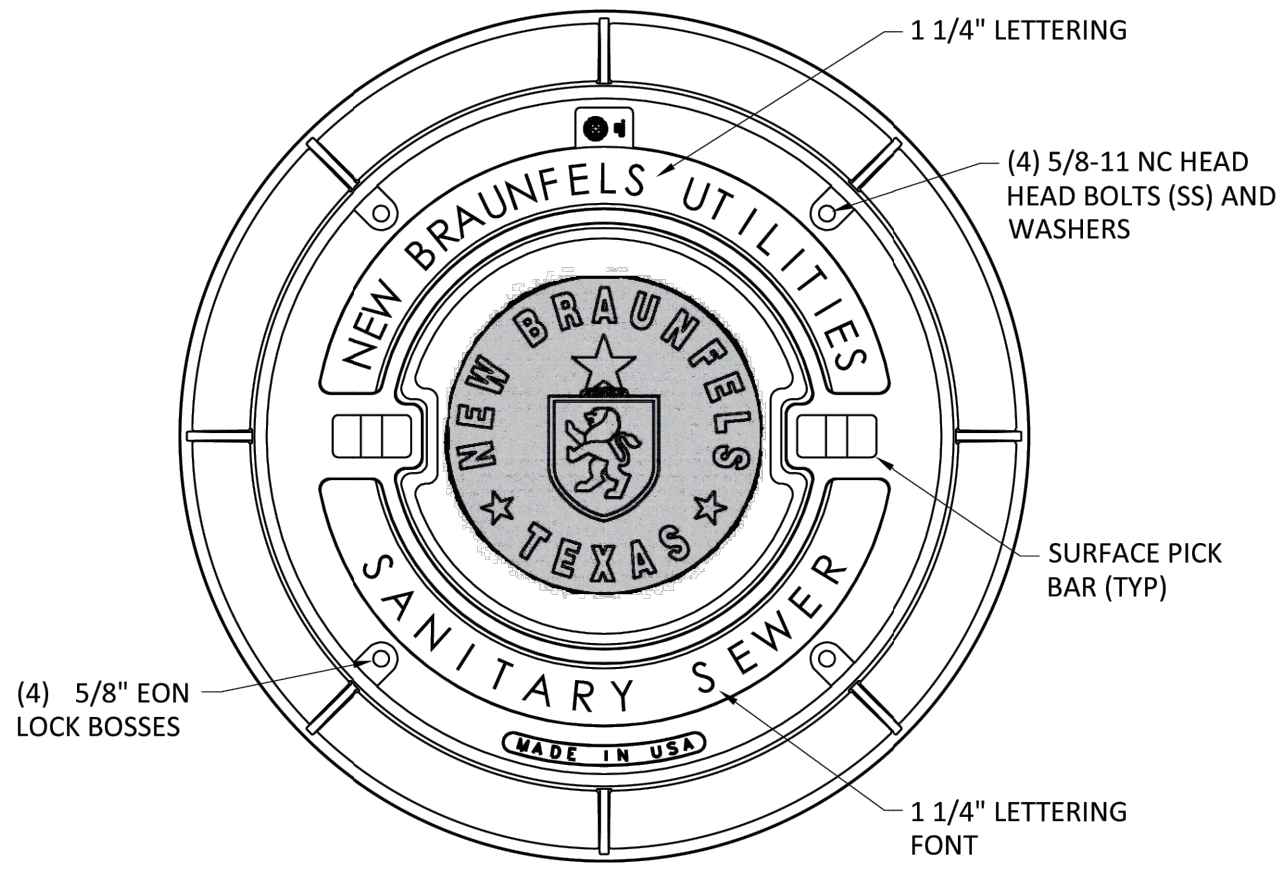
DATE	
NO.	
REVISION	



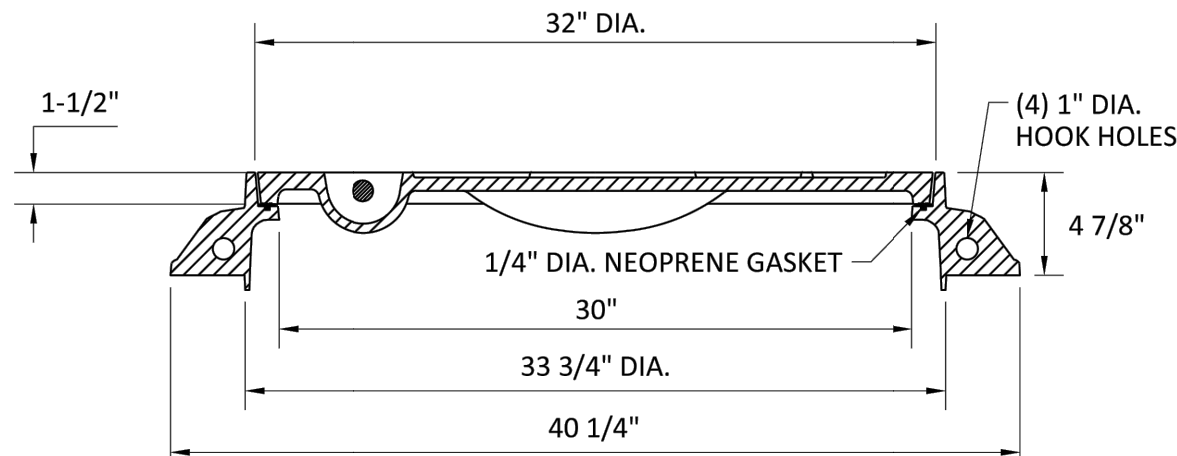
PAPE-DAWSON ENGINEERS
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TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

VERAMENDI LIFT STATION
NEW BRAUNFELS, TEXAS
LIFT STATION CONSTRUCTION DETAILS (3 OF 5)

PLAT NO.	
JOB NO.	30001-71
DATE	JULY 2025
DESIGNER	LL
CHECKED	FG
DRAWN	JL
SHEET	C-7



PLAN VIEW



SECTION VIEW

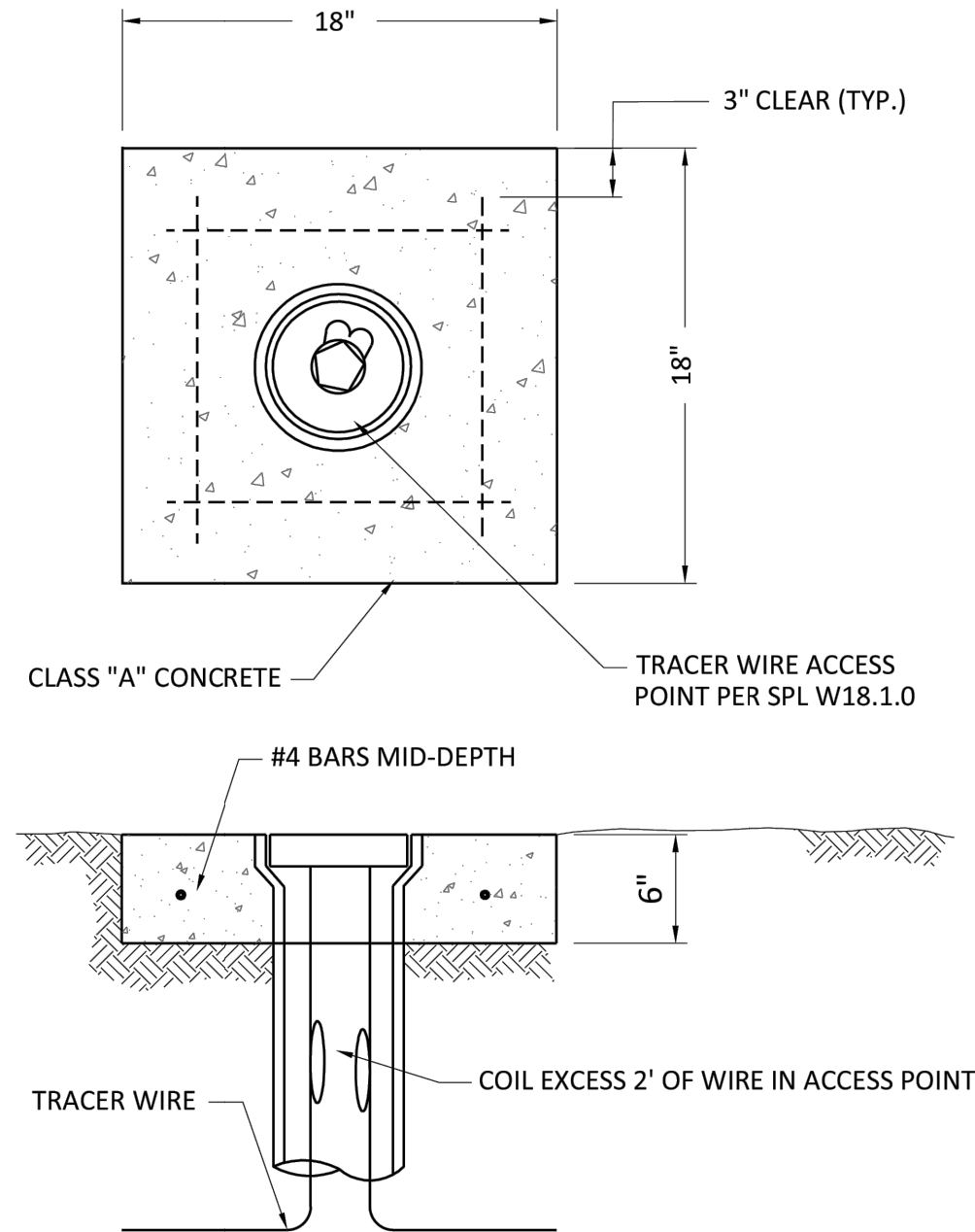
MATERIAL: DUCTILE IRON ASTM A536 GRADE 70-50-05



DRAWN BY: EWL
APPROVED BY: A. WILLARD
DRAWING DATE: 8/17/21

STANDARD DRAWING:
UPDATED: 2023-12-20
SCALE: N.T.S.

SANITARY SEWER
MANHOLE COVER
SHEET: 1 OF 1
DRAWING NO. 331



NOTES:

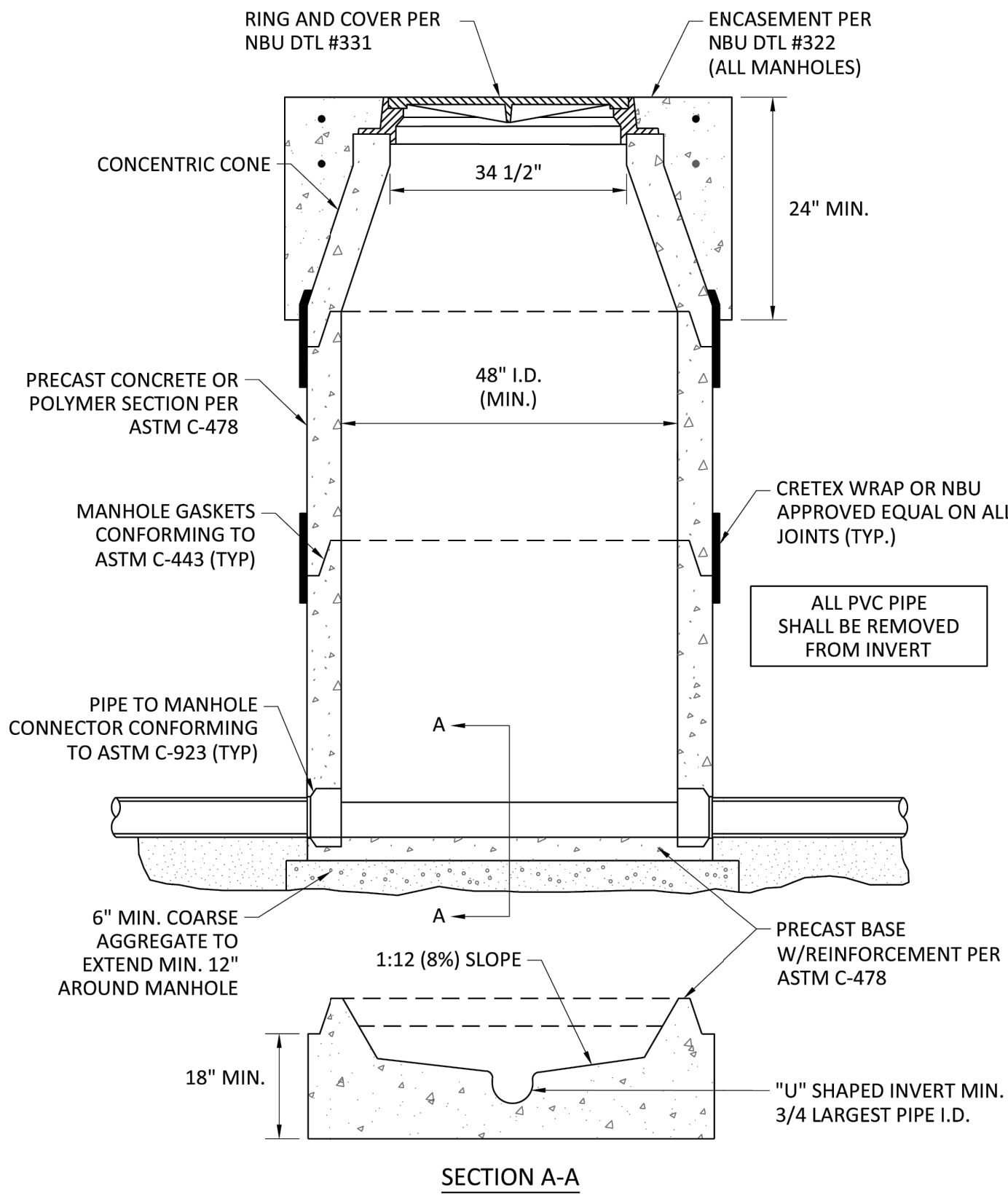
1. TRACER WIRE ACCESS POINTS SHALL BE INSTALLED PER SPECIFICATION ITEM NO. 512 "TRACER WIRE".
2. SEE DETAIL 240 FOR TYPICAL INSTALLATION.
3. TRACER WIRE ACCESS POINTS SHALL NOT BE INSTALLED IN SIDEWALKS, DRIVEWAYS, VALLEY GUTTERS, OR OTHER AREAS OF VEHICULAR TRAFFIC.



DRAWN BY: EWL
APPROVED BY: A. WILLARD
DRAWING DATE: 2/1/24

STANDARD DRAWING:
UPDATED: N.T.S.

TRACER WIRE ACCESS POINT
SHEET: 1 OF 1
DRAWING NO. 245



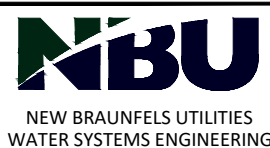
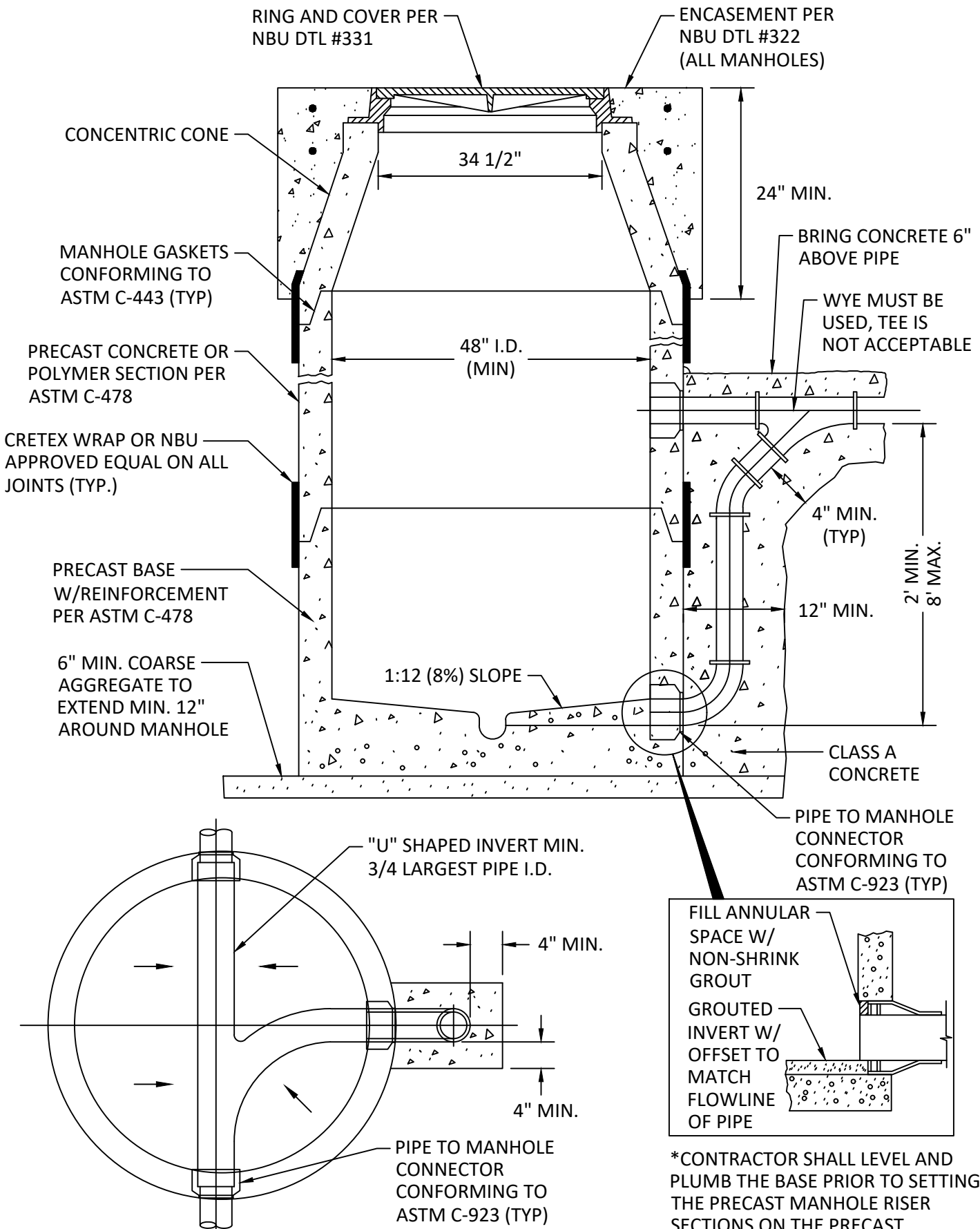
*CONTRACTOR SHALL LEVEL AND PLUMB THE BASE PRIOR TO SETTING THE PRECAST MANHOLE RISER SECTIONS ON THE PRECAST CONCRETE BASE.



DRAWN BY: EWL
APPROVED BY: A. WILLARD
DRAWING DATE: 2/1/24

STANDARD DRAWING:
UPDATED: N.T.S.

WASTEWATER MANHOLE
ON PRECAST BASE
SHEET: 1 OF 1
DRAWING NO. 328



DRAWN BY: EWL
APPROVED BY: A. WILLARD
DRAWING DATE: 2/1/24

STANDARD DRAWING:
UPDATED: N.T.S.

WASTEWATER MANHOLE W/DROP
INLET ON PRECAST BASE
SHEET: 1 OF 1
DRAWING NO. 325

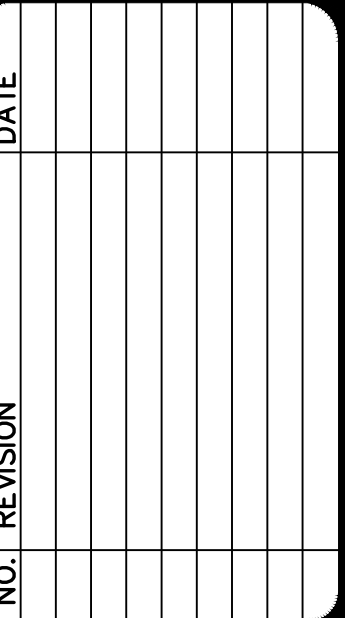
DATE	
NO.	
REVISION	



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VERAMENDI LIFT STATION
NEW BRAUNFELS, TEXAS
LIFT STATION CONSTRUCTION DETAILS (4 OF 5)

PLAT NO. 30001-71
JOB NO. 30001-71
DATE JULY 2025
DESIGNER LL
CHECKED FG DRAWN JL
SHEET C-8

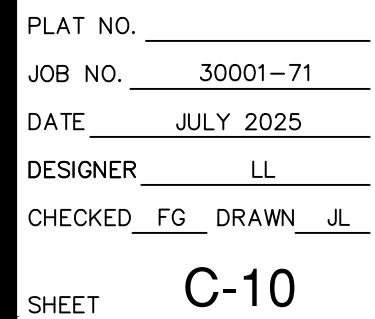
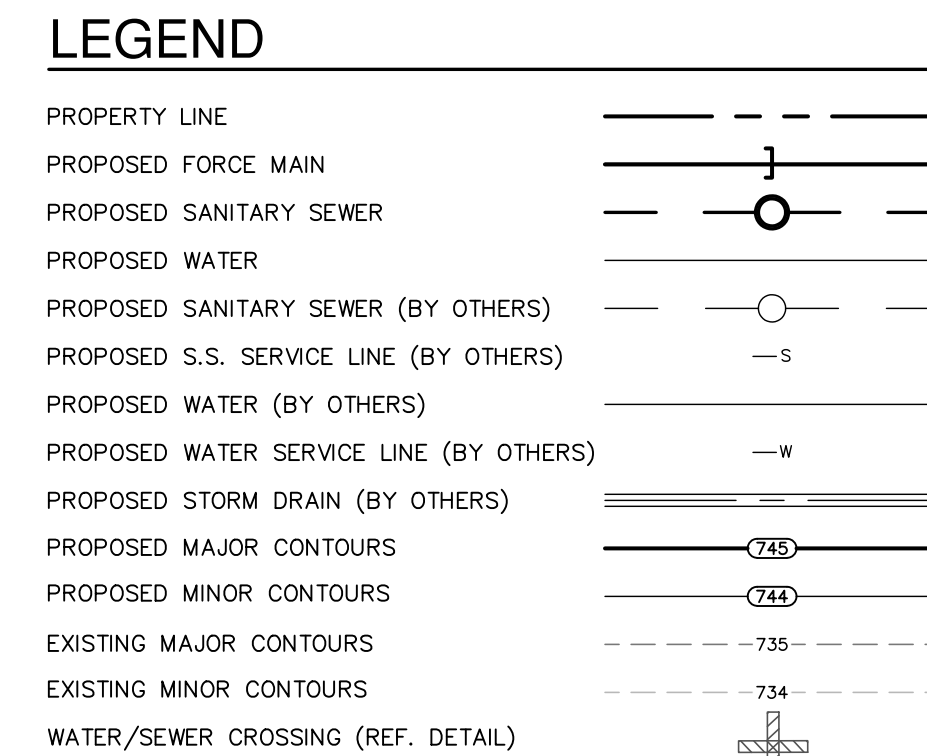
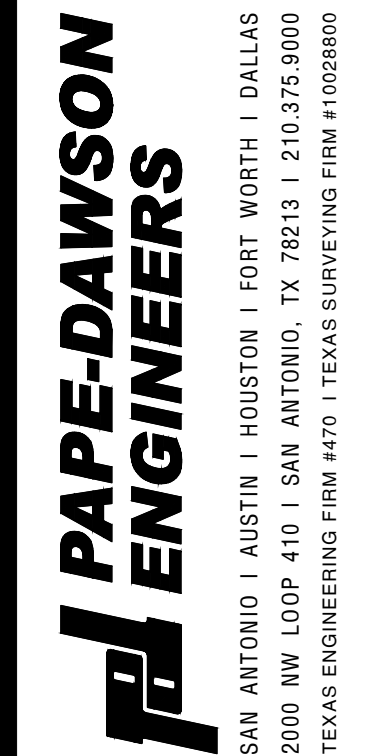
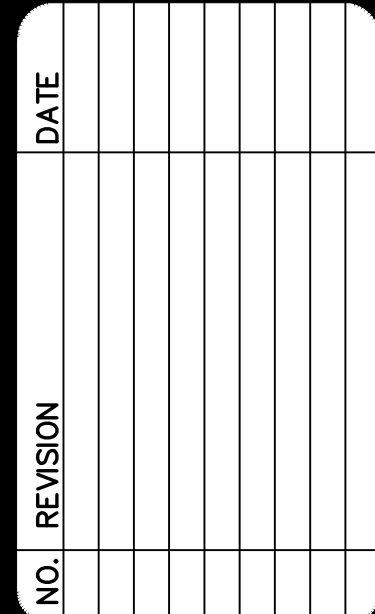


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VERAMENDI LIFT STATION
NEW BRAUNFELS, TEXAS

PLAT NO. _____
JOB NO. 30001-71
DATE JULY 2025
DESIGNER LL
CHECKED FG DRAWN JL
SHEET C-9



NOTES

1. DEPTH OF GRAVEL SUBGRADE FILLER TO BE DETERMINED IN FIELD BY OWNER IN CONDITIONS WHERE TRENCH BOTTOM IS UNSTABLE
2. BEDDING SHALL HAVE A MINIMUM THICKNESS OF 6-INCHES BELOW OUTSIDE DIAMETER OF PIPE AND BE PLACED AND SHAPED TO CONFORM TO PIPE BARREL AND BELL OR FLANGES SUCH THAT THE ENTIRE LENGTH OF THE BARREL IS SUPPORTED BY THE BEDDING MATERIAL, NO SEPARATE PAY ITEM (NSPI).
3. INITIAL BACKFILL TO BE A MINIMUM OF 1-FOOT ABOVE OUTSIDE DIAMETER OF PIPE PLACED WITH A TEMPORARY SHIELD OVER THE PIPE TO PROTECT THE PIPE COATING AND/OR POLYWRAP, NO SEPARATE PAY ITEM (NSPI).
4. ALL BEDDING OR GRAVEL SUBGRADE FILLER IF USED TO BE PLACED ON UNDISTURBED SOILS.
5. CONTRACTOR SHALL INCORPORATE THE USE OF A TRENCH BOX OR OTHER ACCEPTABLE SAFETY SYSTEM IN ANY TRENCH THAT EXCEEDS FIVE (5) FEET IN DEPTH.
6. ALL BACKFILL SHALL BE COMPACTED TO 98% OF THE MAXIMUM DRY DENSITY OR DETERMINED BY TxDOT TEST METHOD TEX-113E.



TYPICAL TRENCH INSTALLATION DETAIL
SCALE: N.T.S.



PLUG VALVE W/ VALVE EXTENSION STEM AND VALVE BOX
SCALE: N.T.S.



SECTION B-B
PLAN VIEW

- NOTES:
1. SUBGRADE SHALL BE COMPACTED AS PER SPECIFICATIONS.
 2. VALVE CASTINGS SHALL BE ADJUSTED TO GRADE AFTER FINAL LIFT OF OVERLAY IS IN PLACE.
 3. CLEAN VALVE BOX OF ALL DEBRIS DOWN TO THE BASE OF THE VALVE.
 4. REMOVE EXISTING RISER PIPE DOWN 18" AND REPLACE TO THE NEW ELEVATION USING NEW PIPE AND A COLLAR CASTING.
 5. WHERE CAST IRON CASTINGS TO BE REMOVED REQUIRE EXCAVATION GREATER THAN 20" DEEP, CONTRACTOR TO FILL EXCAVATION WITH CONTROLLED LOW STRENGTH MATERIAL TO THE UNDERSIDE OF THE CONCRETE PAVEMENT PATCH.
 6. REINFORCING STEEL SHALL MEET SPECIFICATIONS.
 7. CONCRETE DIAMOND SHALL BE INSTALLED BELOW H.M.A.C. IN CITY OF NEW BRAUNFELS ROW.

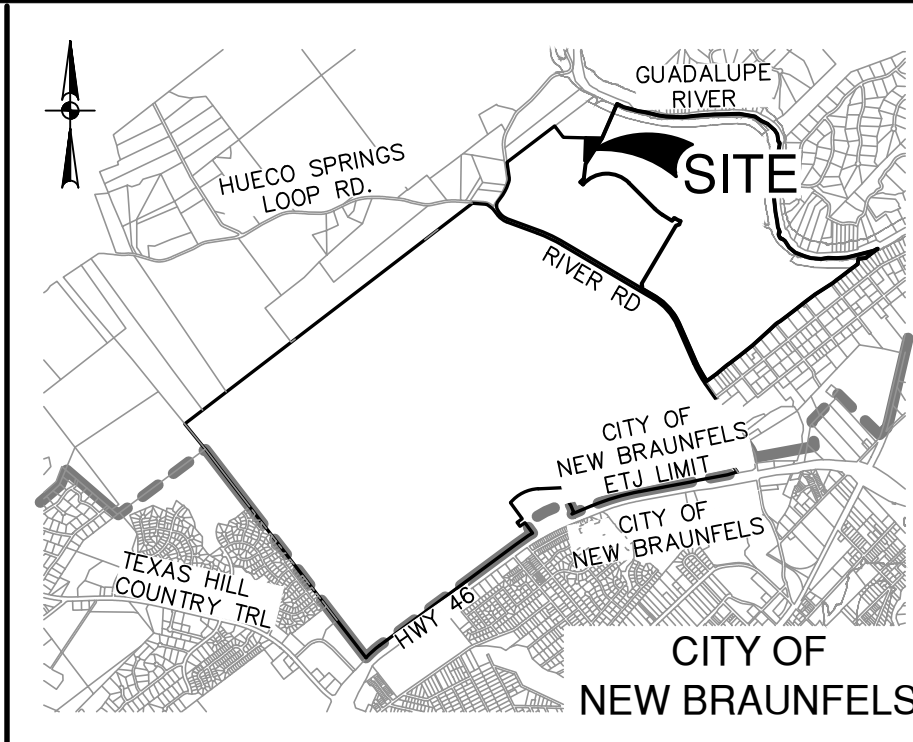
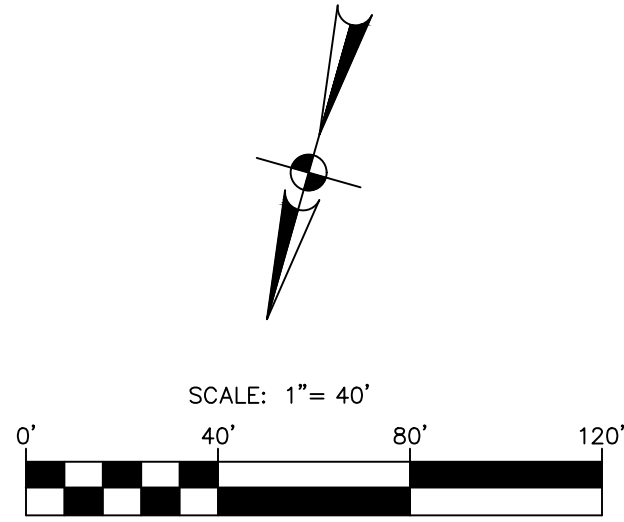
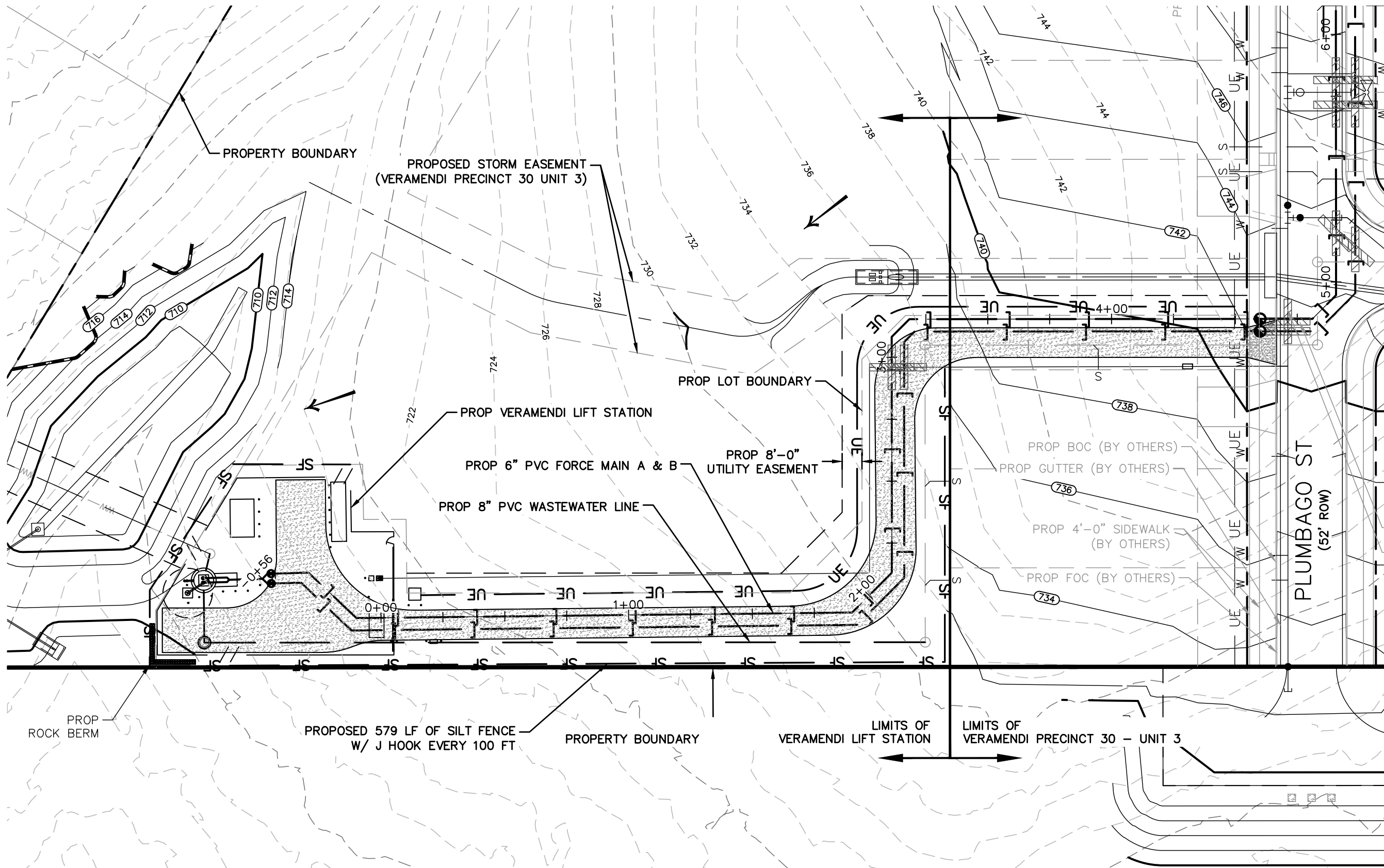


PLAN VIEW



DRAWN BY: EWL
APPROVED BY: A. WILLARD
DRAWING DATE: 2/1/24

STANDARD DRAWING: WATER VALVE BOX ADJUSTMENT TO GRADE W/FULL DEPTH CONCRETE FOR EXISTING STREETS
SCALE: N.T.S.
SHEET: 1 OF 1
DRAWING NO.: 232



LEGEND

PROPERTY LINE	---
PROPOSED FORCE MAIN	—
PROPOSED SANITARY SEWER	—○—
PROPOSED WATER	—
PROPOSED SANITARY SEWER (BY OTHERS)	—
PROPOSED S.S. SERVICE LINE (BY OTHERS)	—S—
PROPOSED WATER (BY OTHERS)	—
PROPOSED WATER SERVICE LINE (BY OTHERS)	—W—
PROPOSED STORM DRAIN (BY OTHERS)	—
PROPOSED MAJOR CONTOURS	—725—
PROPOSED MINOR CONTOURS	—724—
EXISTING MAJOR CONTOURS	—735—
EXISTING MINOR CONTOURS	—734—
PROPOSED SILT FENCE	—SF—
PROPOSED ROCK BERM	—
PROPOSED STABILIZED CONSTRUCTION ENTRANCE	—
PROPOSED LIMIT OF CONSTRUCTION	—
FLOW ARROW	→

CAUTION OVERHEAD UTILITIES

CONTRACTOR TO EXERCISE EXTREME CAUTION WHEN WORKING UNDER "HIGH VOLTAGE TRANSMISSION LINES". A WORKING HEIGHT OF 30' FROM GROUND ELEVATION WILL BE OBSERVED WHEN WORKING UNDER THE HIGH VOLTAGE LINE. COORDINATE ALL WORK WITH THE LOCAL UTILITY PROVIDER.

CAUTION UNDERGROUND UTILITIES

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE, AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCT BANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. THE CONTRACTOR MUST CONTACT 1-800-DIG-TESS AND CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION AND/OR START OF CONSTRUCTION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES (WHETHER SHOWN ON PLANS OR NOT) WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

CITY OF NEW BRAUNFELS NOTES:

1. NO VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
2. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.
3. THIS PROJECT INCLUDES UTILITY INSTALLATION GREATER THAN 5'-FEET IN DEPTH. DEEP TRENCHES POSE COMPACTION TESTING AND CONSTRUCTION CHALLENGES AND CITY METHODS FOR TESTING AND COMPACTION MAY NOT BE ACHIEVABLE. A UTILITY COMPACTION PLAN WILL BE REQUIRED AND MUST BE SUBMITTED FOR APPROVAL TO CITY PRIOR TO UTILITY INSTALLATION.
4. UTILITY TRENCH COMPACTION -ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT/SIDEWALK SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEOTECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORMLY NOT TO EXCEED TWELVE INCHES (12") LOOSE. DETERMINE THE MAXIMUM LIFT THICKNESS BASED ON THE ABILITY OF THE COMPACTING OPERATION AND EQUIPMENT USED TO MEET THE REQUIRED DENSITY. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 200 LF FOR EACH LIFT AND EVERY OTHER SERVICE LINE. UPON COMPLETION OF TESTING THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.
5. PER TPOES REQUIREMENTS, DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAS CEASED (TEMPORARILY OR PERMANENTLY) SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 DAYS. SEEDING DOES NOT CONSTITUTE AS STABILIZATION.

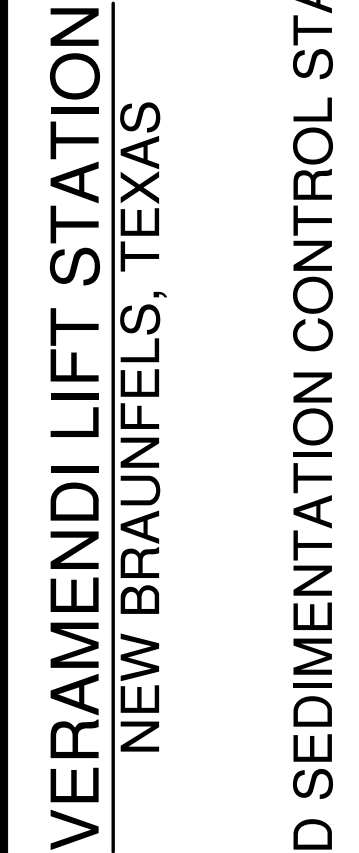
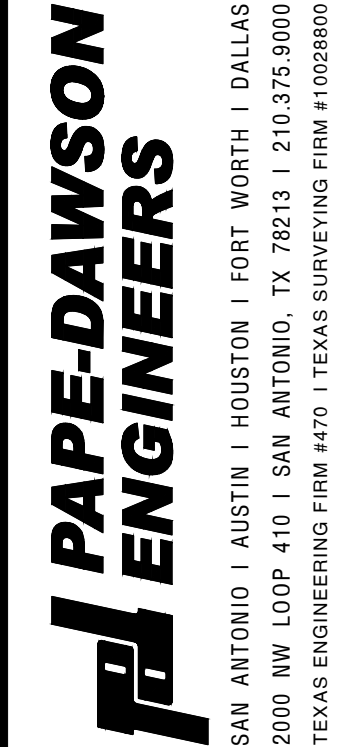
TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/ EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES 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.

NOTE

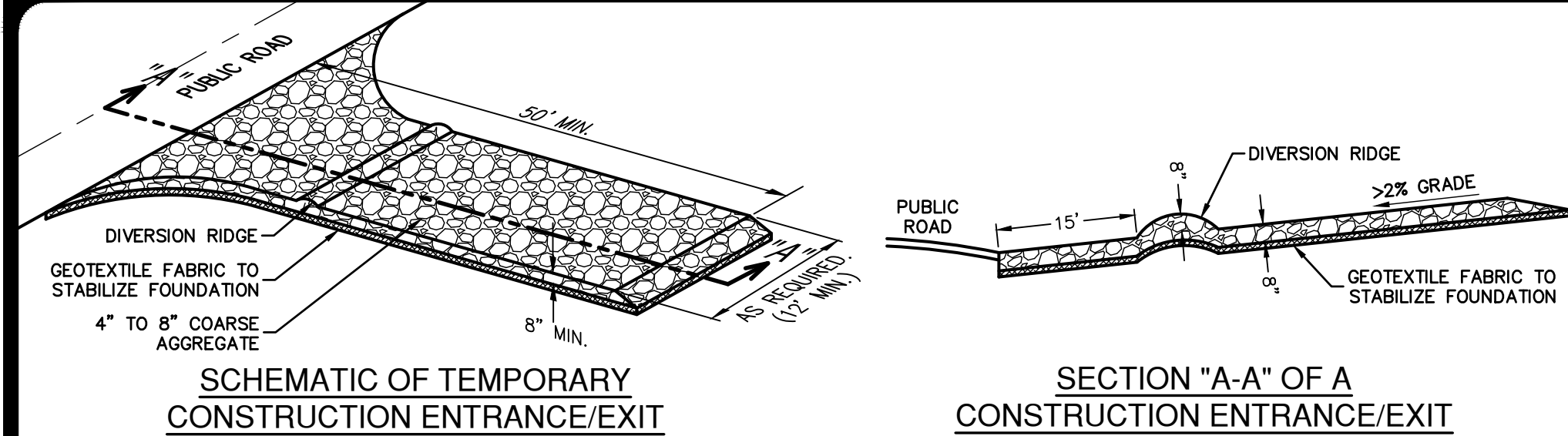
REFERENCE VERAMENDI PRECINCT 30 UNIT 3 (PI2024-0043) FOR LOCATION OF STAGE/STORAGE/SPOILS LOCATIONS.

NO.	REVISION	DATE



PLAT NO.	
JOB NO.	30001-71
DATE	JULY 2025
DESIGNER	LS
CHECKED	FG DRAWN LS
SHEET	C-12

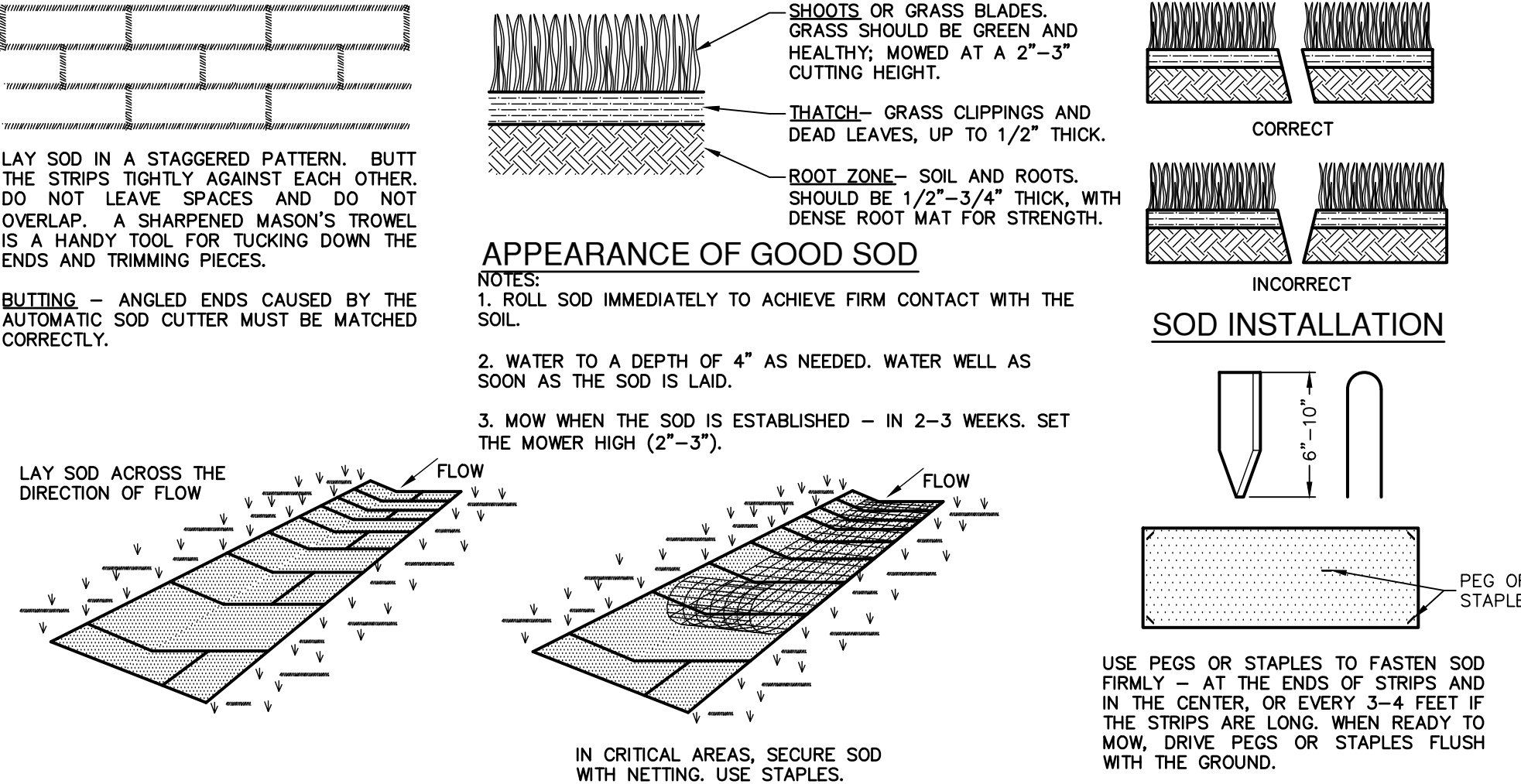
EROSION AND SEDIMENTATION CONTROL START - 3+34.68



- MATERIALS**
1. THE AGGREGATE SHOULD CONSIST OF 4-INCH TO 8-INCH WASHED STONE OVER A STABLE FOUNDATION AS SPECIFIED IN THE PLAN.
 2. THE AGGREGATE SHOULD BE PLACED WITH A MINIMUM THICKNESS OF 8-INCHES.
 3. THE GEOTEXTILE FABRIC SHOULD BE DESIGNED SPECIFICALLY FOR USE AS A SOIL FILTRATION MEDIA WITH AN APPROXIMATE WEIGHT OF 6 OZ/YD², A MULLEN BURST RATING OF 140 LB/IN², AND AN EQUIVALENT OPENING SIZE GREATER THAN A NUMBER 50 SIEVE.
 4. IF A WASHING FACILITY IS REQUIRED, A LEVEL AREA WITH A MINIMUM OF 4-INCH DIAMETER WASHED STONE OR COMMERCIAL ROCK SHOULD BE INCLUDED IN THE PLANS. DIVERT WASTEWATER TO A SEDIMENT TRAP OR BASIN.
- INSTALLATION**
1. AVOID CURVES ON PUBLIC ROADS AND STEEP SLOPES. REMOVE VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA. GRADE CROWN FOUNDATION FOR POSITIVE DRAINAGE.
 2. THE MINIMUM WIDTH OF THE ENTRANCE/EXIT SHOULD BE 12 FEET OR THE FULL WIDTH OF EXIT ROADWAY, WHICHEVER IS GREATER.
 3. THE CONSTRUCTION ENTRANCE SHOULD BE AT LEAST 50 FEET LONG.
 4. IF THE SLOPE TOWARD THE ROAD EXCEEDS 2%, CONSTRUCT A RIDGE, 6-INCHES TO 8-INCHES HIGH WITH 3:1 (H:V) SIDE SLOPES, ACROSS THE FOUNDATION APPROXIMATELY 35 FEET FROM THE ENTRANCE TO DIVERT RUNOFF AWAY FROM THE PUBLIC ROAD.
 5. PLACE GEOTEXTILE FABRIC AND GRADE FOUNDATION TO IMPROVE STABILITY, ESPECIALLY WHERE WET CONDITIONS ARE ANTICIPATED.
 6. PLACE STONE TO DIMENSIONS AND GRADE SHOWN ON PLANS. LEAVE SURFACE SMOOTH AND SLOPE FOR DRAINAGE.
 7. DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE STONE PAD TO A SEDIMENT TRAP OR BASIN.
 8. INSTALL PIPE UNDER PAD AS NEEDED TO MAINTAIN PROPER PUBLIC ROAD DRAINAGE.

STABILIZED CONSTRUCTION ENTRANCE/EXIT DETAIL

NOT-TO-SCALE



- MATERIALS**
1. SOD SHOULD BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4" INCH (± 1/4" INCH) AT THE TIME OF CUTTING. THIS THICKNESS SHOULD EXCLUDE SHOOT GROWTH AND THATCH.
 2. PIECES OF SOD SHOULD BE CUT TO THE SUPPLIER'S STANDARD WIDTH AND LENGTH, WITH A MAXIMUM ALLOWABLE DEVIATION IN ANY DIMENSION OF 5% TORN OR UNEVEN PADS SHOULD NOT BE ACCEPTABLE.
 3. STANDARD SIZE SECTIONS OF SOD SHOULD BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND BE SHAPED TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. CARE SHOULD BE EXERCISED TO ENSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE DRYING OF THE ROOTS (SEE FIGURE ABOVE).
 4. SOD SHOULD BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS.
- SITE PREPARATION**
1. PRIOR TO SOD PREPARATION, AREAS TO BE SODDED SHOULD BE BROUGHT TO FINAL GRADE IN ACCORDANCE WITH THE APPROVED PLAN.
 2. THE SURFACE SHOULD BE CLEARED OF ALL TRASH, DEBRIS AND OF ALL ROOTS, BRUSH, WIRE GRADE STAKES AND OTHER OBJECTS THAT WOULD INTERFERE WITH PLANTING, FERTILIZING OR MAINTENANCE OPERATIONS.
 3. FERTILIZE ACCORDING TO SOIL TESTS. FERTILIZER NEEDS CAN BE DETERMINED BY A SOIL TESTING LABORATORY OR REGIONAL RECOMMENDATIONS CAN BE MADE BY COUNTY AGRICULTURAL EXTENSION AGENTS. FERTILIZER SHOULD BE WORKED INTO THE SOIL TO A DEPTH OF 3 INCHES WITH A DISC, SPRINGTOOTH HARROW OR OTHER SUITABLE EQUIPMENT ON SLOPING LAND, THE FINAL HARROWING OR DISCING OPERATION SHOULD BE ON THE CONTOUR.

INSTALLATION IN CHANNELS

1. SOD STRIPS IN WATERWAYS SHOULD BE LAID PERPENDICULAR TO THE DIRECTION OF FLOW. CARE SHOULD BE TAKEN TO BUTT ENDS OF STRIPS TIGHTLY (SEE FIGURE ABOVE).
2. AFTER ROLLING OR TAMPING, SOD SHOULD BE PEGGED OR STAPLED TO RESIST WASHOUT DURING THE ESTABLISHMENT PERIOD. MESH OR OTHER NETTING MAY BE PEGGED OVER THE SOD FOR EXTRA PROTECTION IN CRITICAL AREAS.

SOD INSTALLATION DETAIL

NOT-TO-SCALE

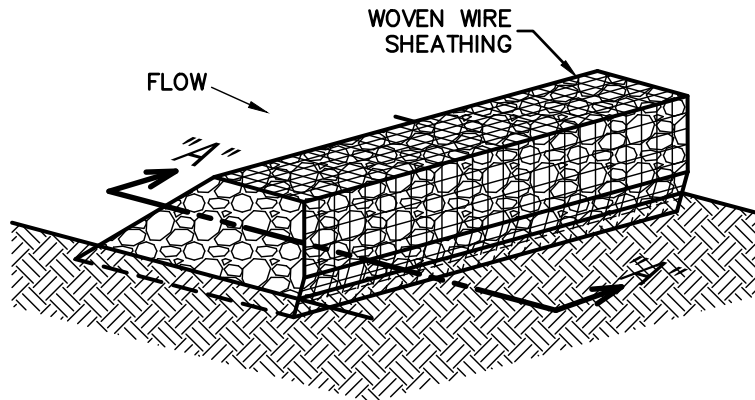
COMMON TROUBLE POINTS

1. INADEQUATE RUNOFF CONTROL—SEDIMENT WASHES ONTO PUBLIC ROAD.
2. STONE TOO SMALL OR GEOTEXTILE FABRIC ABSENT, RESULTS IN MUDDY CONDITION AS STONE IS PRESSED INTO SOIL.
3. PAD TOO SHORT FOR HEAVY CONSTRUCTION TRAFFIC—EXTEND PAD BEYOND THE MINIMUM 50-FOOT LENGTH AS NECESSARY.
4. PAD NOT FLARED SUFFICIENTLY AT ROAD SURFACE, RESULTS IN MUD BEING TRACKED ON TO ROAD AND POSSIBLE DAMAGE TO ROAD.
5. UNSTABLE FOUNDATION — USE GEOTEXTILE FABRIC UNDER PAD AND/OR IMPROVE FOUNDATION DRAINAGE.

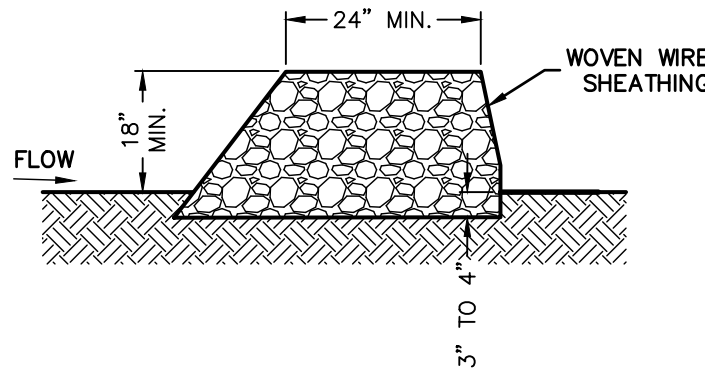
INSPECTION AND MAINTENANCE GUIDELINES

1. THE ENTRANCE SHOULD BE MAINTAINED IN A CONDITION, WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY SHOULD BE REMOVED IMMEDIATELY BY CONTRACTOR.
3. WHEN NECESSARY, WHEELS SHOULD BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
4. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
5. ALL SEDIMENT SHOULD BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATER COURSE BY USING APPROVED METHODS.

ISOMETRIC PLAN VIEW



SECTION "A-A"



ROCK BERMS

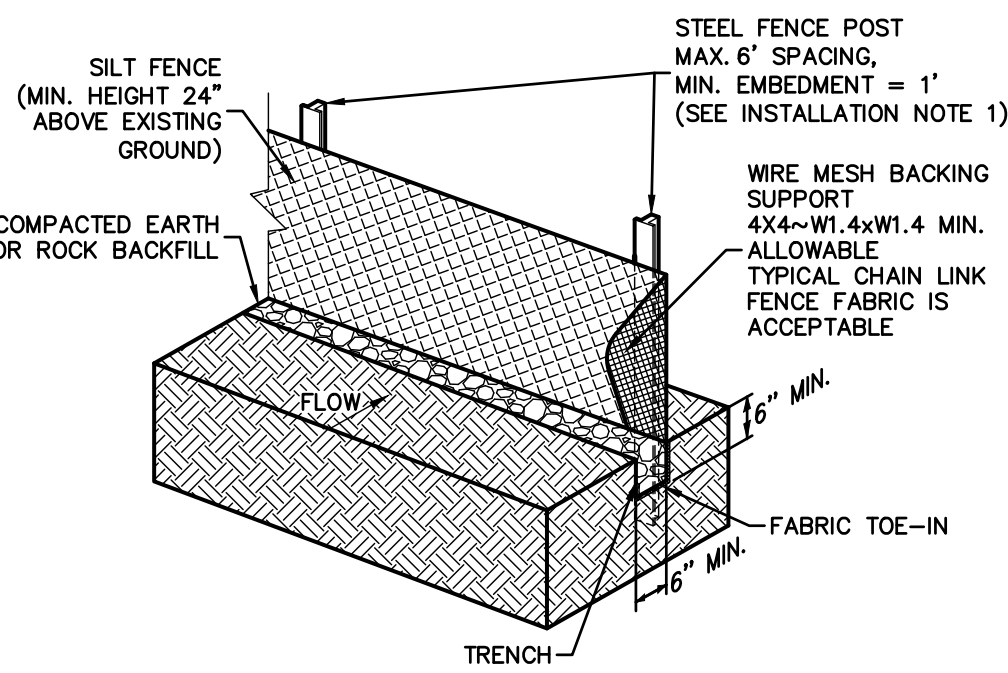
THE PURPOSE OF A ROCK BERM IS TO SERVE AS A CHECK DAM IN AREAS OF CONCENTRATED FLOW, TO INTERCEPT SEDIMENT-LADEN RUNOFF, DETAIN THE SEDIMENT AND RELEASE THE WATER IN SHEET FLOW. THE ROCK BERM SHOULD BE USED WHEN THE CONTRIBUTING DRAINAGE AREA IS LESS THAN 5 ACRES. ROCK BERMS ARE USED IN AREAS WHERE THE VOLUME OF RUNOFF IS TOO GREAT FOR A SILT FENCE TO CONTAIN. THEY ARE LESS EFFECTIVE FOR SEDIMENT REMOVAL THAN SILT FENCES, PARTICULARLY FOR FINE PARTICLES, BUT ARE ABLE TO WITHSTAND HIGHER FLOWS THAN A SILT FENCE. AS SUCH, ROCK BERMS ARE OFTEN USED IN AREAS OF CHANNEL FLOWS (DITCHES, GULLIES, ETC.). ROCK BERMS ARE MOST EFFECTIVE AT REDUCING BED LOAD IN CHANNELS AND SHOULD NOT BE SUBSTITUTED FOR OTHER EROSION AND SEDIMENT CONTROL MEASURES FARTHER UP THE WATERSHED.

INSPECTION AND MAINTENANCE GUIDELINES

1. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL BY THE RESPONSIBLE PARTY. FOR INSTALLATIONS IN STREAMBEDS, ADDITIONAL DAILY INSPECTIONS SHOULD BE MADE.
2. REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES AND DISPOSE OF THE ACCUMULATED SILT IN AN APPROVED MANNER THAT WILL NOT CAUSE ANY ADDITIONAL SILTATION.
3. REPAIR ANY LOOSE WIRE SHEATHING.
4. THE BERM SHOULD BE RESHAPED AS NEEDED DURING INSPECTION.
5. 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.
6. THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.

ROCK BERM DETAIL

NOT-TO-SCALE



ISOMETRIC PLAN VIEW

SILT FENCE

A SILT FENCE IS A BARRIER CONSISTING OF GEOTEXTILE FABRIC SUPPORTED BY METAL POSTS TO PREVENT SOIL AND SEDIMENT LOSS FROM A SITE. WHEN PROPERLY USED SILT FENCES CAN BE HIGHLY EFFECTIVE AT CONTROLLING SEDIMENT FROM DISTURBED AREAS. THEY CAUSE RUNOFF TO POND, ALLOWING HEAVIER SOLIDS TO SETTLE OUT. IF NOT PROPERLY INSTALLED, SILT FENCES ARE NOT LIKELY TO BE EFFECTIVE.

THE PURPOSE OF A SILT FENCE IS TO INTERCEPT AND DETAIN WATER-BORN SEDIMENT FROM UNPROTECTED AREAS OF A LIMITED EXTENT. SILT FENCE IS USED DURING THE PERIOD OF CONSTRUCTION NEAR THE PERIMETER OF A DISTURBED AREA TO INTERCEPT SEDIMENT WHILE ALLOWING WATER TO PERCOLATE THROUGH. THIS FENCE SHOULD REMAIN IN PLACE UNTIL THE DISTURBED AREA IS PERMANENTLY STABILIZED. SILT FENCE SHOULD NOT BE USED WHERE THERE IS A CONCENTRATION OF WATER IN A CHANNEL OR DRAINAGE WAY. IF CONCENTRATED FLOW OCCURS AFTER INSTALLATION, CORRECTIVE ACTION MUST BE TAKEN SUCH AS PLACING A ROCK BERM IN THE AREAS OF CONCENTRATED FLOW.

SILT FENCING WITHIN THE SITE MAY BE TEMPORARILY MOVED DURING THE DAY TO ALLOW CONSTRUCTION ACTIVITY PROVIDED IT IS REPLACED AND PROPERLY ANCHORED TO THE GROUND AT THE END OF THE DAY. SILT FENCES ON THE PERIMETER OF THE SITE OR AROUND DRAINAGE WAYS SHOULD NOT BE MOVED AT ANY TIME.

MATERIALS

1. SILT FENCE MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE, OR POLYAMIDE WOVEN OR NONWOVEN FABRIC. THE FABRIC SHOULD BE 36 INCHES, WITH A MINIMUM UNIT WEIGHT OF 4.5 OZ/YD, MULLEN BURST STRENGTH EXCEEDING 190 LB/IN², ULTRAVIOLET STABILITY EXCEEDING 70%, AND MINIMUM APPARENT OPENING SIZE OF U.S. SIEVE NUMBER 30.
2. FENCE POSTS SHOULD BE MADE OF HOT ROLLED STEEL, AT LEAST 4 FEET LONG WITH TEE OR Y-BAR CROSS SECTION, SURFACE PAINTED OR GALVANIZED, MINIMUM WEIGHT 1.25 LB/FT, AND BRINDELL HARDNESS EXCEEDING 140.
3. WOVEN WIRE BACKING TO SUPPORT THE FABRIC SHOULD BE GALVANIZED 2" X 4" WELDED WIRE, 12 GAUGE MINIMUM.

INSTALLATION

1. STEEL POSTS, WHICH SUPPORT THE SILT FENCE, SHOULD BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POSTS MUST BE EMBEDDED A MINIMUM OF 1-FOOT DEEP AND SPACED NOT MORE THAN 8 FEET ON CENTER. WHERE WATER CONCENTRATES, THE MAXIMUM SPACING SHOULD BE 6 FEET.
2. LAY OUT FENCING DOWN-SLOPE OF DISTURBED AREA, FOLLOWING THE CONTOUR AS CLOSELY AS POSSIBLE. THE FENCE SHOULD BE SITED SO THAT THE MAXIMUM DRAINAGE AREA IS ¼ ACRE/100 FEET OF FENCE.

SILT FENCE DETAIL

NOT-TO-SCALE

MATERIALS

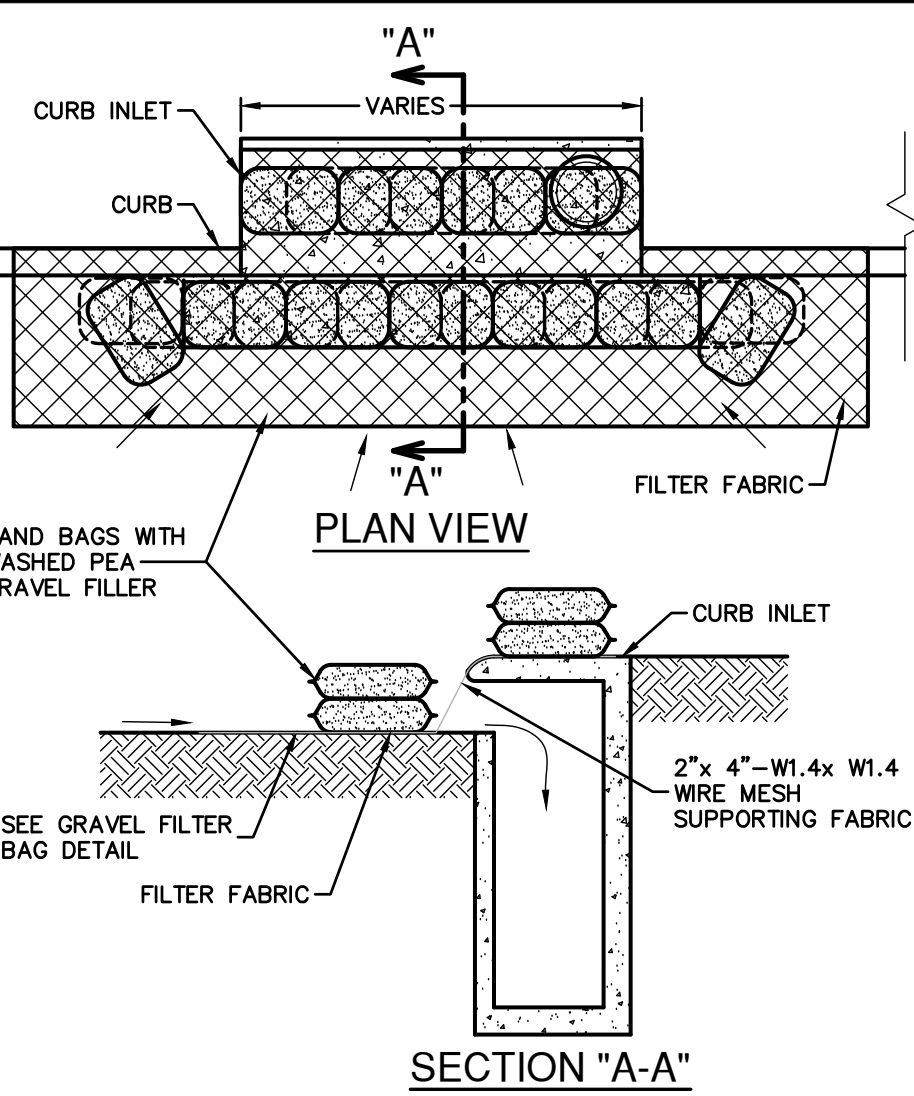
1. THE BERM STRUCTURE SHOULD BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM OPENING OF 1 INCH AND A MINIMUM WIRE DIAMETER OF 20 GAUGE GALVANIZED AND SHOULD BE SECURED WITH SHOAT RINGS.
2. CLEAN, OPEN GRADED 3-INCH TO 5-INCH DIAMETER ROCK SHOULD BE USED, EXCEPT IN AREAS WHERE HIGH VELOCITIES OR LARGE VOLUMES OF FLOW ARE EXPECTED, WHERE 5-INCH TO 8-INCH DIAMETER ROCKS MAY BE USED.

INSTALLATION

1. LAY OUT THE WOVEN WIRE SHEATHING PERPENDICULAR TO THE FLOW LINE. THE SHEATHING SHOULD BE 20 GAUGE WOVEN WIRE MESH WITH 1 INCH OPENINGS.
2. BERM SHOULD HAVE A TOP WIDTH OF 2 FEET MINIMUM WITH SIDE SLOPES BEING 2:1 (H:V) OR FLATTER.
3. PLACE THE ROCK ALONG THE SHEATHING AS SHOWN IN THE DIAGRAM TO A HEIGHT NOT LESS THAN 18".
4. WRAP THE WIRE SHEATHING AROUND THE ROCK AND SECURE WITH THE WIRE SO THAT THE ENDS OF THE SHEATHING OVERLAP AT LEAST 2 INCHES, AND THE BERM RETAINS ITS SHAPE WHEN WALKED UPON.
5. BERM SHOULD BE BUILT ALONG THE CONTOUR AT ZERO PERCENT GRADE OR AS NEAR AS POSSIBLE.
6. THE ENDS OF THE BERM SHOULD BE TIED INTO EXISTING UPSLOPE GRADE AND THE BERM SHOULD BE BURIED IN A TRENCH APPROXIMATELY 3 TO 4 INCHES DEEP TO PREVENT FAILURE OF THE CONTROL.

COMMON TROUBLE POINTS

1. INSUFFICIENT BERM HEIGHT OR LENGTH (RUNOFF QUICKLY ESCAPES OVER THE TOP OR AROUND THE SIDES OF BERM).
2. BERM NOT INSTALLED PERPENDICULAR TO FLOW LINE (RUNOFF ESCAPING ANOTHER ONE SIDE).



GENERAL NOTES

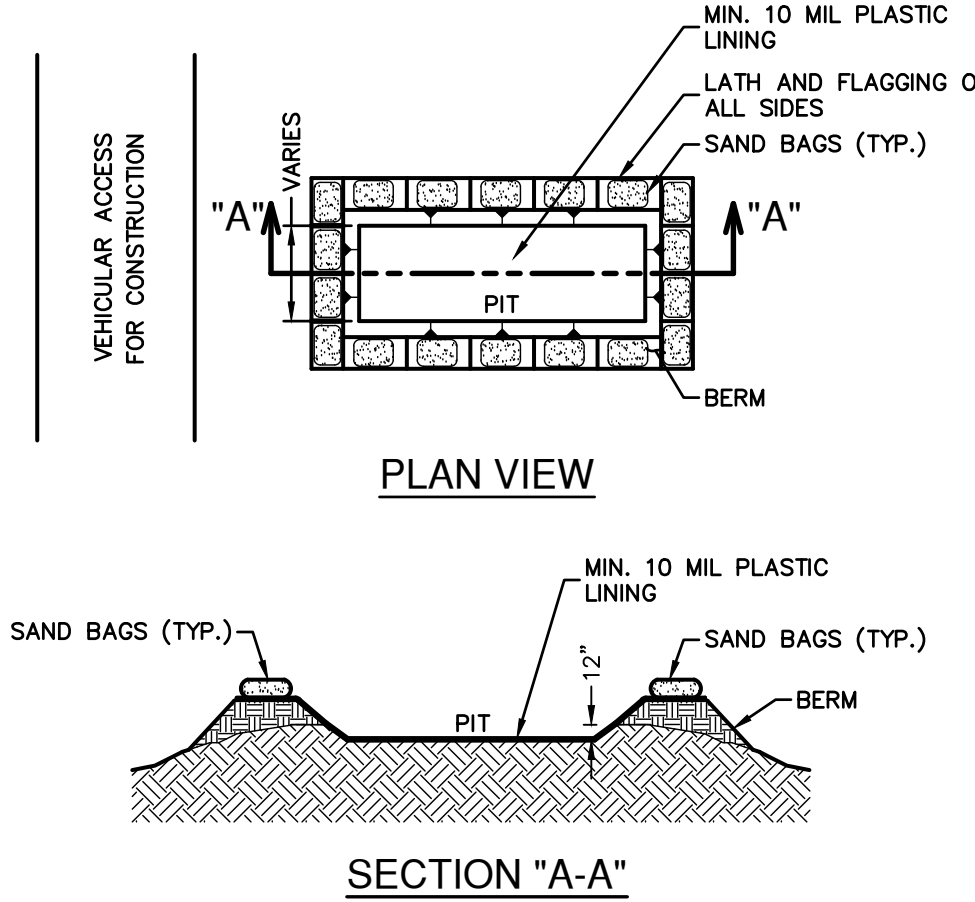
1. CONTRACTOR TO INSTALL 2"x4"-W1.4xW1.4 WIRE MESH SUPPORTING FILTER FABRIC OVER THE INLET OPENING. FABRIC MUST BE SECURED TO WIRE BACKING WITH CLIPS OR WIRE TIES AT THIS LOCATION. SAND BAGS FILLED WITH WASHED PEA GRAVEL SHOULD BE PLACED ON TOP OF WIRE MESH ON TOP OF THE INLET AS SHOWN ON THIS DETAIL TO HOLD WIRE MESH IN PLACE. SANDBAGS FILLED WITH WASHED PEA GRAVEL SHOULD ALSO BE PLACED ALONG THE CUTTER AS SHOWN ON THIS DETAIL TO HOLD WIRE MESH IN PLACE. SAND BAGS TO BE STACKED TO FORM A CONTINUOUS BARRIER AROUND INLETS.
2. THE BAGS SHOULD BE TIGHTLY ABUTTED AGAINST EACH OTHER TO PREVENT RUNOFF FROM FLOWING BETWEEN THE BAGS.

INSPECTION AND MAINTENANCE GUIDELINES

1. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL. REPAIR OR REPLACEMENT SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
2. REMOVE SEDIMENT WHEN BUILDUP REACHES A DEPTH OF 3 INCHES. REMOVED SEDIMENT SHOULD BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
3. CHECK PLACEMENT OF DEVICE TO PREVENT GAPS BETWEEN DEVICE AND CURB.
4. INSPECT FILTER FABRIC AND PATCH OR REPLACE IF TORN OR MISSING.
5. STRUCTURES SHOULD BE REMOVED AND THE AREA STABILIZED ONLY AFTER THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

BAGGED GRAVEL CURB INLET PROTECTION DETAIL

NOT-TO-SCALE



GENERAL NOTES

1. DETAIL ABOVE ILLUSTRATES MINIMUM DIMENSIONS. PIT CAN BE INCREASED IN SIZE DEPENDING ON EXPECTED FREQUENCY OF USE.
2. WASHOUT PIT SHALL BE LOCATED IN AN AREA EASILY ACCESSIBLE TO CONSTRUCTION TRAFFIC.
3. WASHOUT PIT SHALL NOT BE LOCATED IN AREAS SUBJECT TO INUNDATION FROM STORM WATER RUNOFF.
4. LOCATE WASHOUT AREA AT LEAST 50 FEET FROM SENSITIVE FEATURES, STORM DRAINS, OPEN DITCHES OR WATER BODIES.
5. TEMPORARY CONCRETE WASHOUT FACILITY SHOULD BE CONSTRUCTED WITH SUFFICIENT QUANTITY AND VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.

MATERIALS

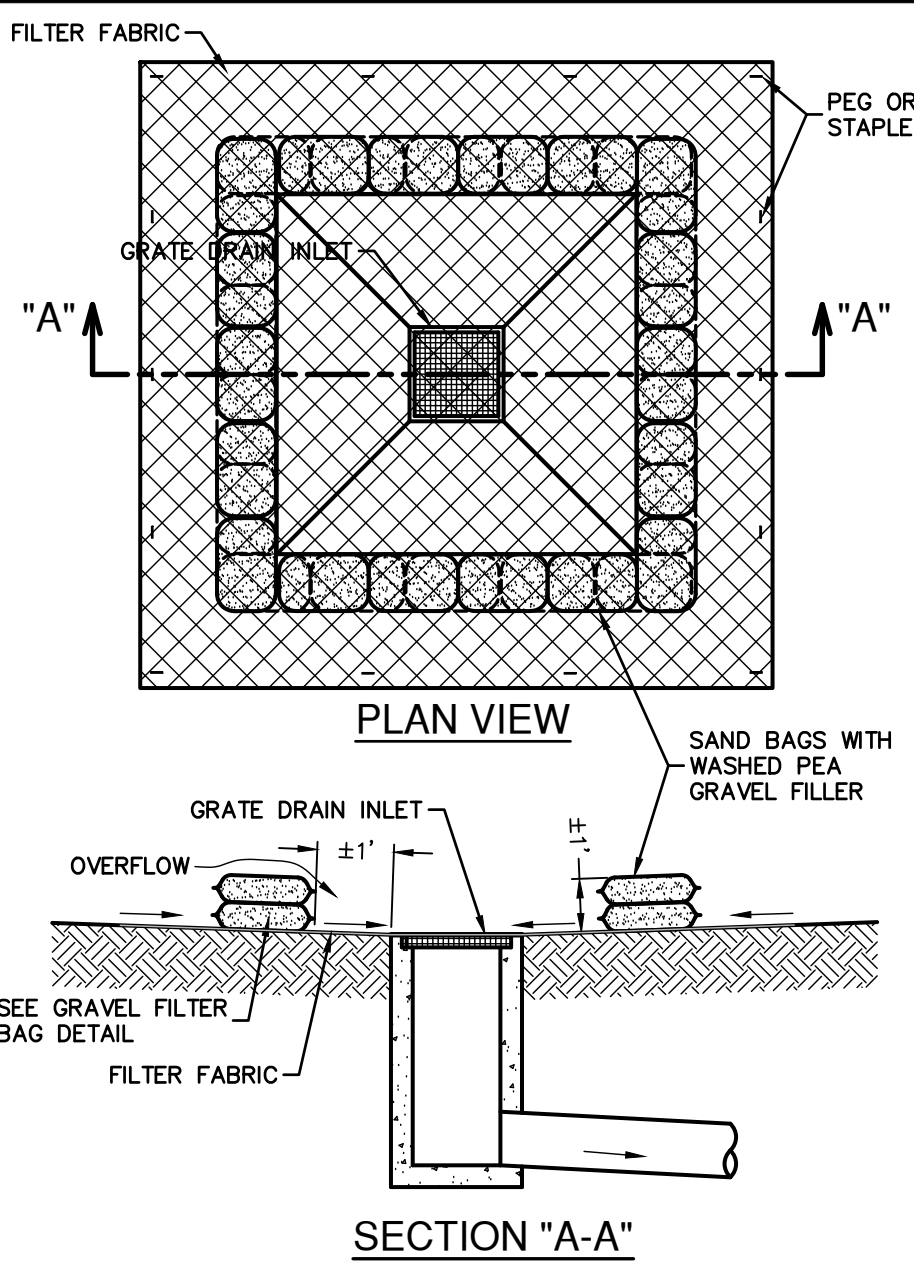
PLASTIC LINING MATERIAL SHOULD BE A MINIMUM OF 10 MIL IN POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.

MAINTENANCE

1. WHEN TEMPORARY CONCRETE WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR THE WORK, THE HARDENED CONCRETE SHOULD BE REMOVED AND DISPOSED OF.
2. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF.
3. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCES CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE BACKFILLED AND REPAIRED.

CONCRETE TRUCK WASHOUT PIT DETAIL

NOT-TO-SCALE



GENERAL NOTES

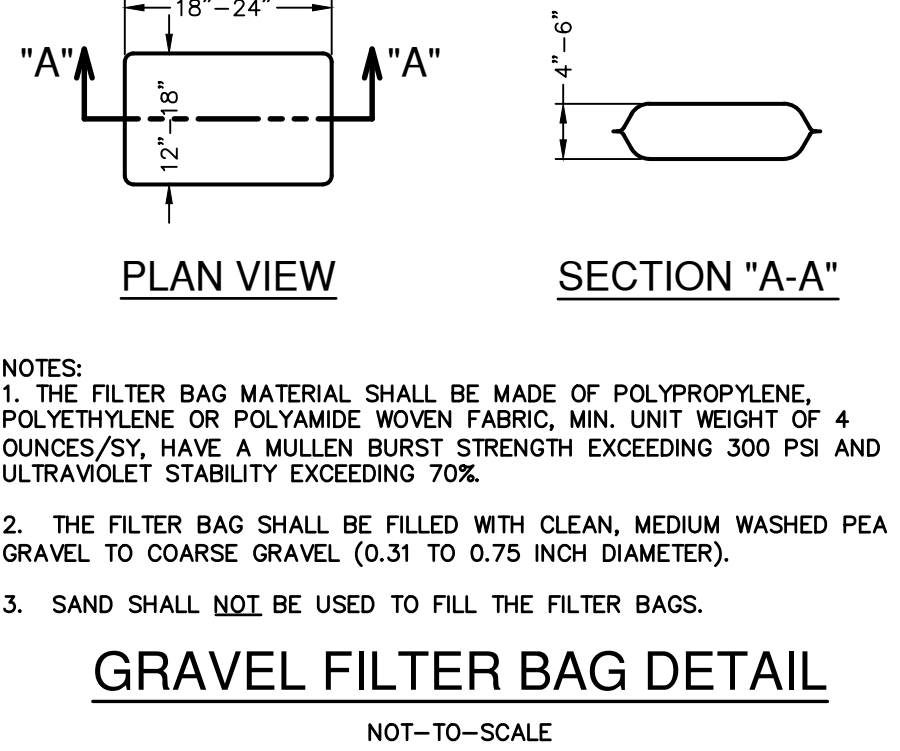
1. THE SANDBAGS SHOULD BE FILLED WITH WASHED PEA GRAVEL AND STACKED TO FORM A CONTINUOUS BARRIER ABOUT 1 FOOT HIGH AROUND INLETS.
2. THE BAGS SHOULD BE TIGHTLY ABUTTED AGAINST EACH OTHER TO PREVENT RUNOFF FROM FLOWING BETWEEN THE BAGS.

INSPECTION AND MAINTENANCE GUIDELINES

1. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL. REPAIR OR REPLACEMENT SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
2. REMOVE SEDIMENT WHEN BUILDUP REACHES A DEPTH OF 3 INCHES. REMOVED SEDIMENT SHOULD BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
3. CHECK PLACEMENT OF DEVICE TO PREVENT GAPS BETWEEN DEVICE AND CURB.
4. INSPECT FILTER FABRIC AND PATCH OR REPLACE IF TORN OR MISSING.
5. STRUCTURES SHOULD BE REMOVED AND THE AREA STABILIZED ONLY AFTER THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

BAGGED GRAVEL GRATE INLET PROTECTION DETAIL

NOT-TO-SCALE

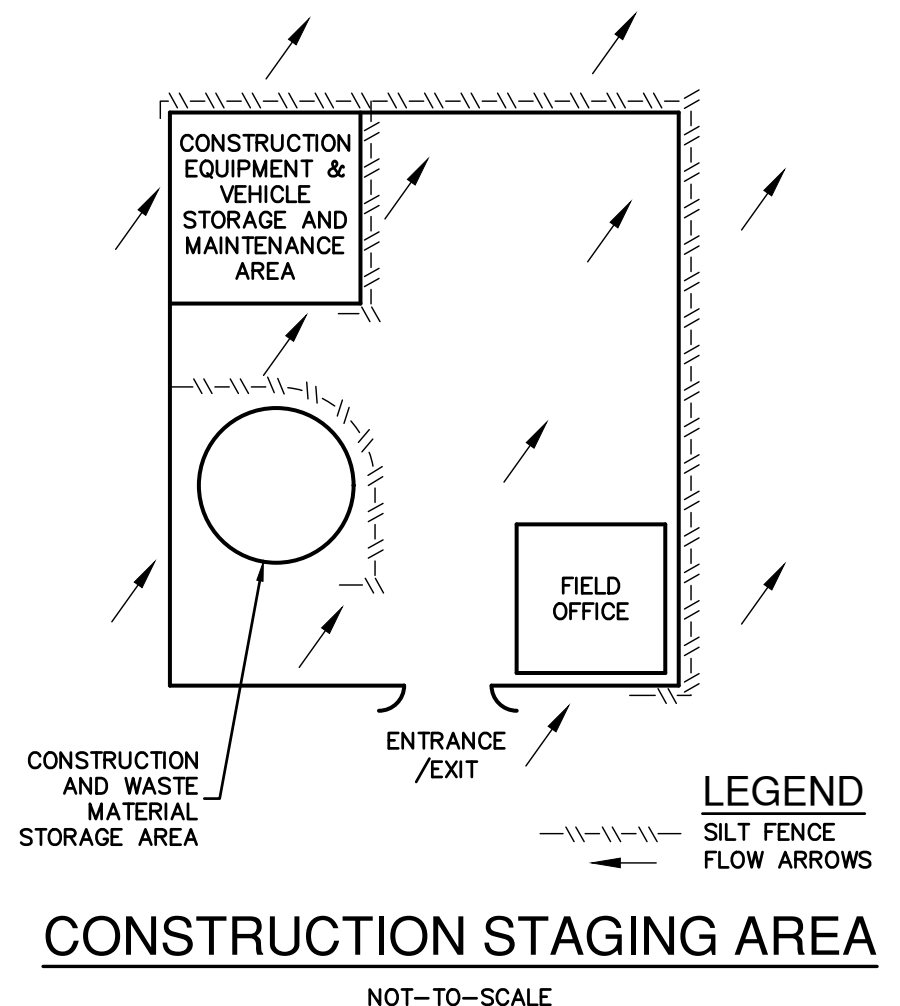


GENERAL NOTES

1. THE FILTER BAG MATERIAL SHALL BE MADE OF POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE WOVEN FABRIC, MIN. UNIT WEIGHT OF 4 OUNCES/SY, HAVE A MULLEN BURST STRENGTH EXCEEDING 300 PSI AND ULTRAVIOLET STABILITY EXCEEDING 70%.
2. THE FILTER BAG SHALL BE FILLED WITH CLEAN, MEDIUM WASHED PEA GRAVEL TO COARSE GRAVEL (0.31 TO 0.75 INCH DIAMETER).
3. SAND SHALL NOT BE USED TO FILL THE FILTER BAGS.

GRAVEL FILTER BAG DETAIL

NOT-TO-SCALE



THE ENGINEERING SEAL HAS BEEN AFFIXED TO THIS SHEET ONLY FOR THE PURPOSE OF DEMONSTRATING COMPLIANCE WITH THE TPDES-STORM WATER POLLUTION PREVENTION PLAN (SWP3) REGULATIONS.

THIS SHEET HAS BEEN PREPARED FOR PURPOSES OF THE SWP3 ONLY. ALL OTHER CIVIL ENGINEERING RELATED INFORMATION SHOULD BE ACQUIRED FROM THE APPROPRIATE SHEET IN THE CIVIL IMPROVEMENT PLANS.

EXHIBIT 3

NO.	REVISION	DATE



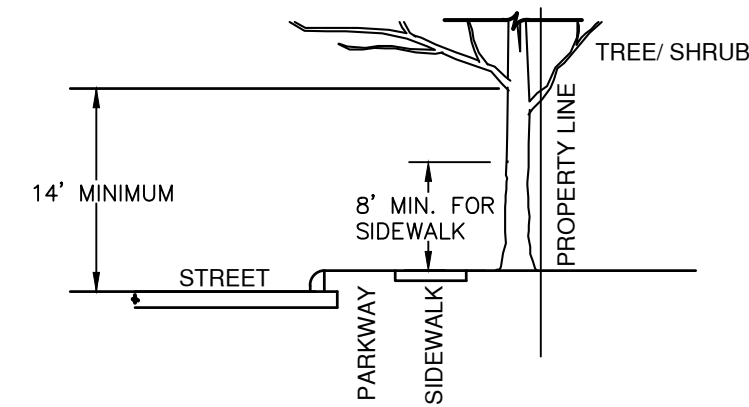
PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1028860

VERAMENDI LIFT STATION
NEW BRAUNFELS, TEXAS

EROSION AND SEDIMENTATION CONTROL DETAIL

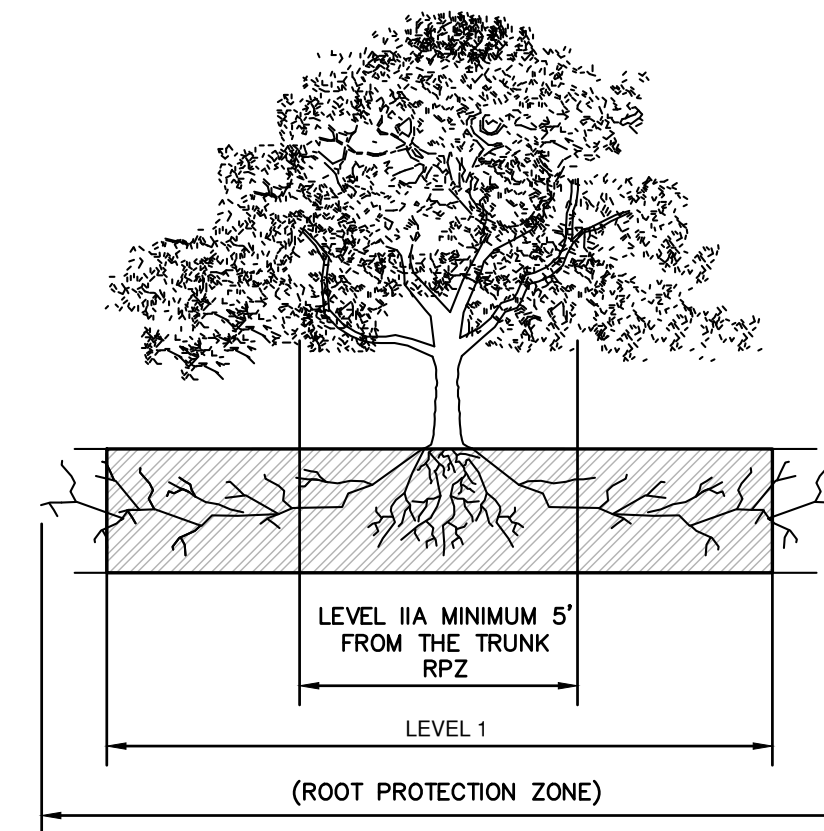
PLAT NO.	30001-71
JOB NO.	30001-71
DATE	JULY 2025
DRAWN	LL
CHECKED	FG
SHEET	C-13

FOR CONSTRUCTION 30007-71



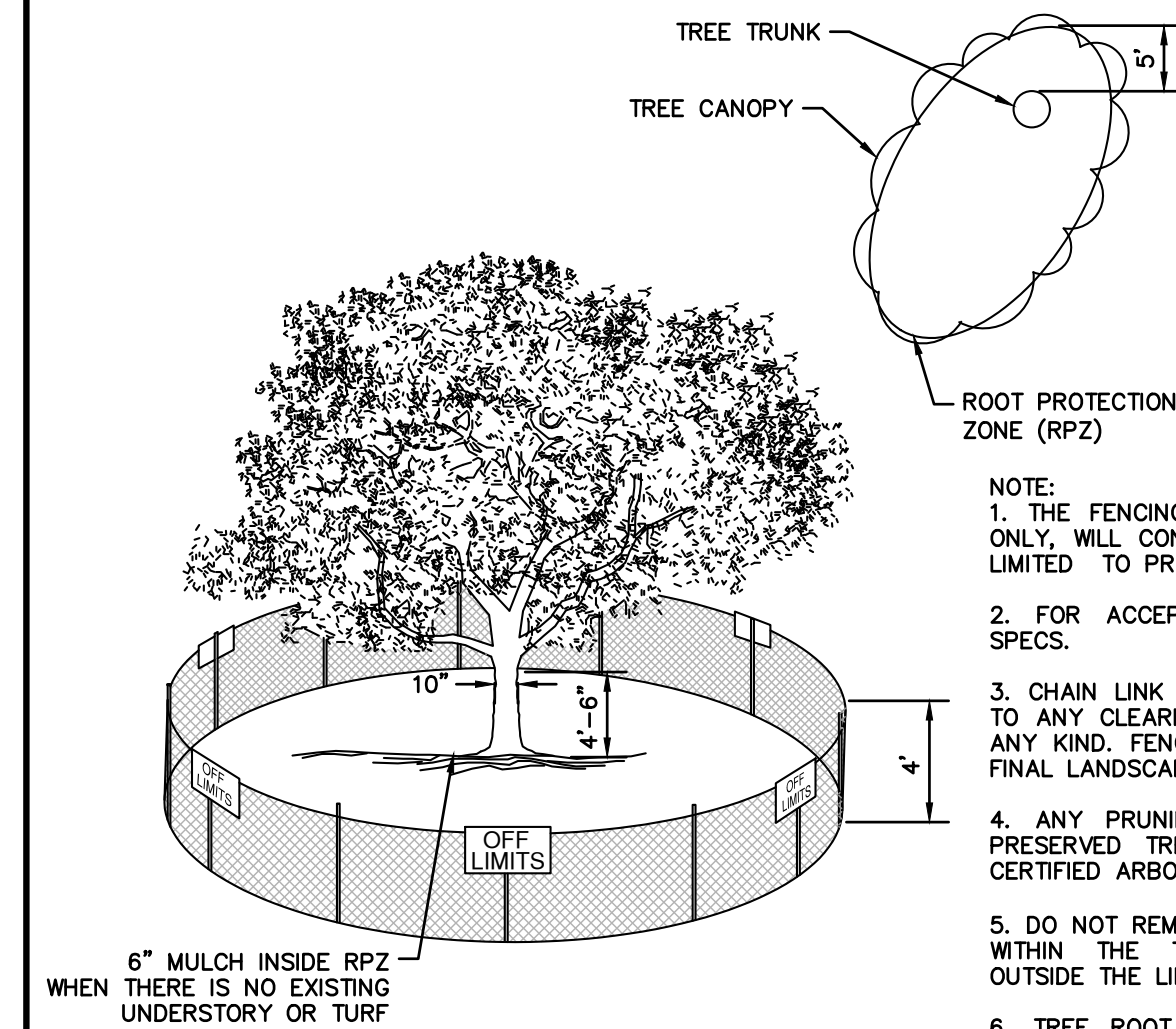
BRANCH CLEARANCE DETAIL

NOT TO SCALE

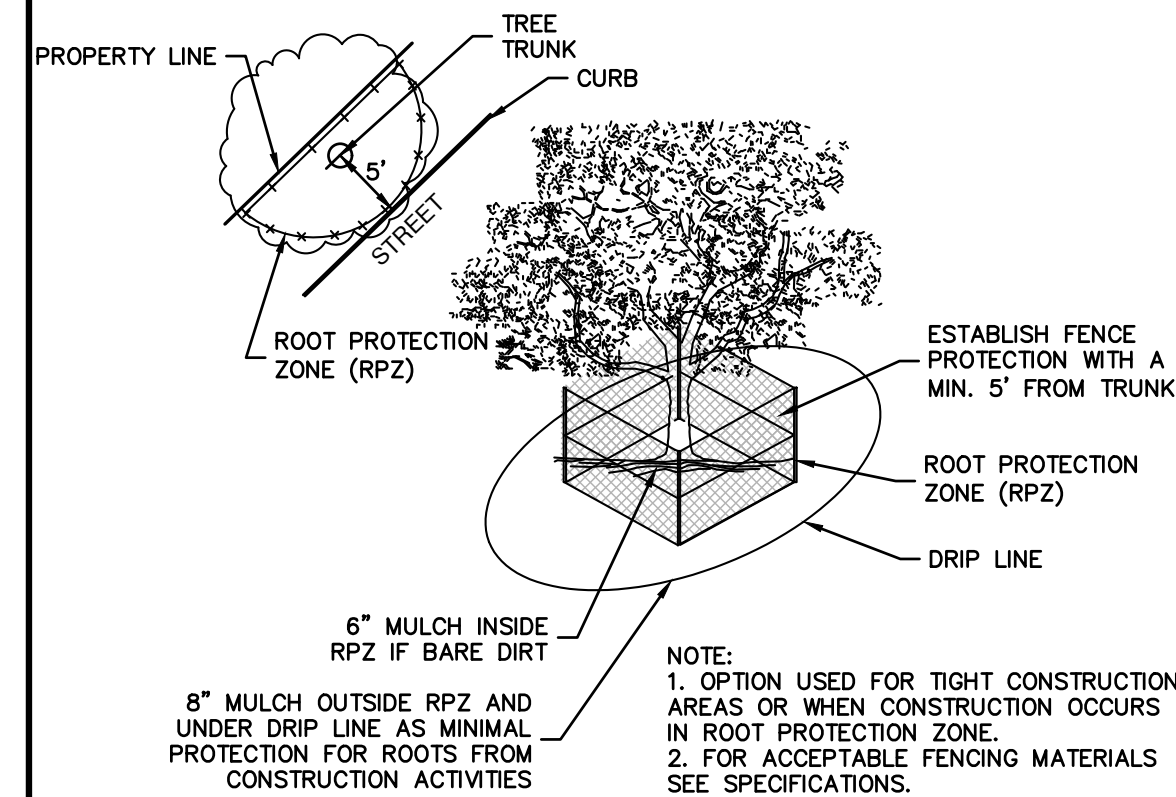


ELEVATION

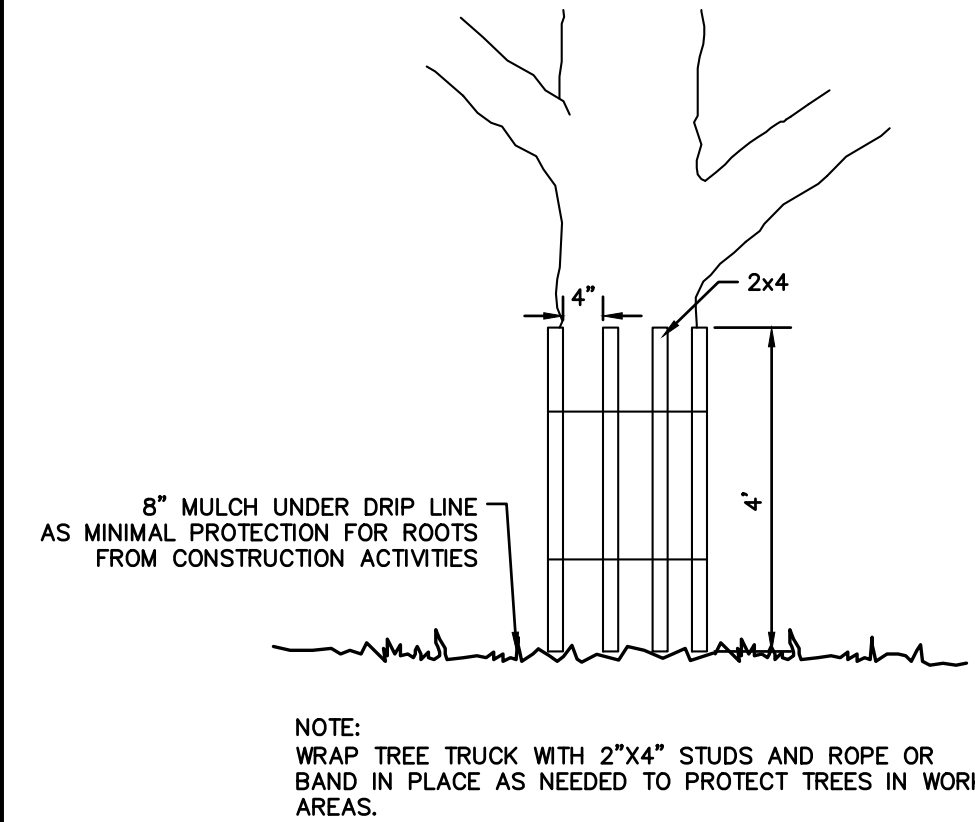
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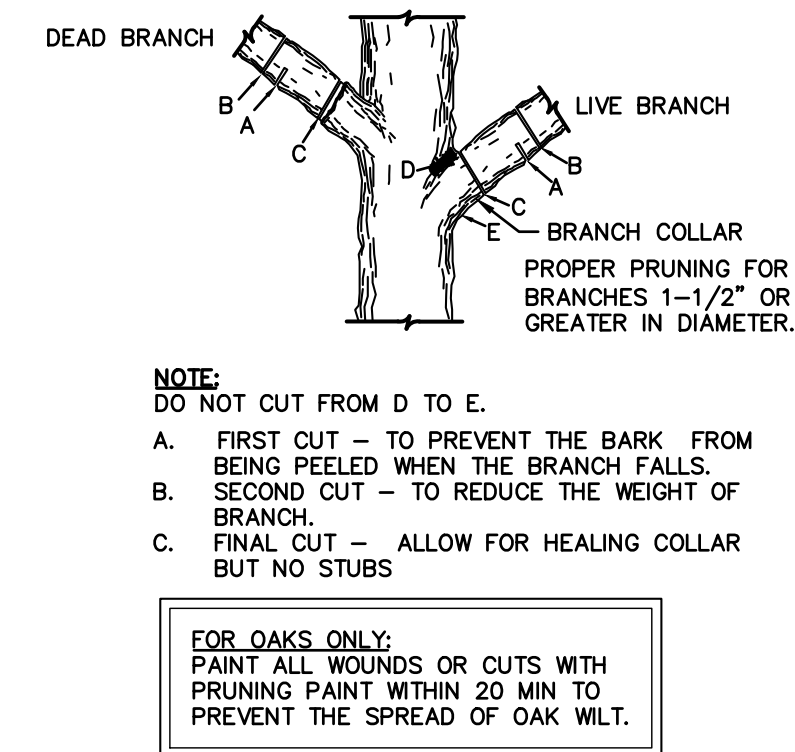
TREE PROTECTION ZONE
NOT TO SCALE



LEVEL II A FENCE PROTECTION
NOT TO SCALE



LEVEL II B FENCE PROTECTION
NOT TO SCALE



BRANCH PRUNING

NOT TO SCALE

[illegible]

**PAPE-DAWSON
ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #4470 | TEXAS SURVEYING FIRM #10028800

VERAMENDI LIFT STATION
NEW BRAUNFELS, TEXAS

TREE PROTECTION DETAILS

LAT NO. _____
 JOB NO. 30001-71
 DATE JULY 2025
 DESIGNER LL
 CHECKED FG DRAWN JL
 SHEET C-14

Plot: Aug 20, 2025, 10:49am, User: ID: rdominguez, File: K:\Projects\2024\3390424 - Pape Dawson - Veramendi Lift Station\01 Design - Phase\CAD\2390424-E10.dwg

ELECTRICAL SYMBOL LEGEND

NOT ALL SYMBOLS SHOWN MAY BE USED

PLAN LEGEND

SYMBOL	DESCRIPTION
	JUNCTION BOX
	DISCONNECT SWITCH
	MOTOR STARTER OR LIGHTING CONTACTOR, SURFACE MOUNTED
	COMBINATION MOTOR STARTER, AND DISCONNECT SWITCH, SURFACE MOUNTED
	MANHOLE, NUMBER OF MANHOLE SHOWN NEXT TO SYMBOL
	COMMUNICATIONS MANHOLE, NUMBER OF MANHOLE SHOWN NEXT TO SYMBOL
	TELECOMMUNICATIONS MANHOLE, NUMBER OF MANHOLE SHOWN NEXT TO SYMBOL
	KEYED NOTE, NUMBER IN POSITION "W" MATCHES NOTE NUMBER
	SWITCH, TOGGLE, WALL MOUNTED, (SINGLE POLE THROW) MOUNT 48" AFF, UON
	SWITCH, TOGGLE, WALL MOUNTED, THREE WAY, (SINGLE POLE DOUBLE THROW) MOUNT 48" AFF, UON
	EXPLOSION PROOF SWITCH, TOGGLE, WALL MOUNTED, (SINGLE POLE THROW) MOUNT 48" AFF, UON
	SWITCH, MOTOR RATED, WITH THERMAL OVERLOADS
	TERMINAL BOARD
	TELEPHONE OUTLET, PRIVATE, MOUNTED 12" AFF, UON
	WATTHOUR METER
	POLE
	TRANSFORMER, PAD MOUNTED, KVA RATING MAY BE DISPLAYED NEXT TO SYMBOL
	TRANSFORMER, DRY TYPE, KVA RATING MAY BE DISPLAYED INSIDE OF SYMBOL
	ANTENNA
	CONDUIT AND/OR WIRING HOMERUN TO PANEL, TERMINAL BOARD, OR CONTROLLER, USED WITH THE FOUR PRECEDING SYMBOLS. DESTINATION EQUIPMENT IDENTIFIER SHOWN IN POSITION "W" CIRCUIT NUMBER SHOWN IN POSITIONS "X", "Y", OR "Z". THESE CIRCUITS MAY ONLY SHOW ONE CIRCUIT NUMBER
	WIRING CONTINUATION
	FLEXIBLE CONDUIT
	HOMERUN
	CONDUIT CAPPED FOR FUTURE USE
	CONDUIT GOING DOWN
	CONDUIT GOING UP
	CONDUIT RUN UNDERGROUND OR CONCEALED
	CONDUIT RUN EXPOSED
	120V RECEPTACLE FLUSH MOUNTED
	250V RECEPTACLE FLUSH MOUNTED
	WELDING OUTLET
	THERMOSTAT
	PANELBOARD SURFACE MOUNTED

GROUNDING LEGEND

SYMBOL	DESCRIPTION
	GROUNDING RECEPTACLE = A, GROUND TEST WELL = B
	CONDUCTOR BARE UON
	GROUNDING CONNECTION
	GROUND BUS BAR LENGTH AS SHOWN BY SYMBOL LENGTH UON
	COPPERCLAD GROUND ROD

SYMBOL	MODIFIERS
(E)	EXISTING
WP	WEATHERPROOF
EP	EXPLOSION PROOF
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
T	TELEPHONE
P	POWER
F	FIRE ALARM
VT	VAPORTIGHT
WT	WATERTIGHT
PT	PAINTTIGHT
P	PRIMARY
O	OVERHEAD
U	UNDERGROUND
S	SECONDARY
FT	FIXED TEMPERATURE
R	RECESSED
G	GROUND
UNG	UNGROUND

ONE LINE AND CONTROL SCHEMATIC LEGEND

SYMBOL	DESCRIPTION
	GROUNDING CONNECTION, WHEN USED WITH TRANSFORMER SYMBOL IT DENOTES A NEUTRAL GROUNDING CONNECTION
	GROUND
	DELTA WINDING CONNECTION
	RELAY OR CONTACTOR CONTACTS
	SEPARABLE CONNECTOR OR CONNECTION FOR DRAWOUT ASSEMBLIES
	CONDUCTOR CONNECTION
	CIRCUIT BREAKER, MOLDED CASE, TRIP CURRENT AND QUANTITY OF POLES (P) SHOWN NEXT TO SYMBOL
	SWITCH, DISCONNECT, NON-FUSED, LOAD BREAK, CONTINUOUS CURRENT RATING AND QUANTITY OF POLES SHOWN NEXT TO SYMBOL
	SWITCH, DISCONNECT, FUSED, LOAD BREAK, FUSED AMPERE RATING AND FUSE TYPE SHOWN NEXT TO SYMBOL
	FUSE, AMPERE RATING AND FUSE TYPE SHOWN NEXT TO SYMBOL
	MOTOR THERMAL OVERLOAD PROTECTOR
	MOTOR STARTER MAIN CONTACTOR
	CONTACTOR OR RELAY COIL, LETTER(S) INSIDE OF SYMBOL MATCH CONTACTS CONTROLLED
	PRESSURE TRANSMITTER
	EQUIPMENT ENCLOSURE
	VOLTMETER SWITCH
	AMMETER SWITCH
	AMMETER
	VOLTMETER
	CURRENT TRANSFORMER WITH RATIO SHOWN
	MOTOR, 10 HORSEPOWER SHOWN
	LIMIT SWITCH NORMALLY CLOSED
	LIMIT SWITCH NORMALLY OPEN
	MOTOR OPERATED VALVE GEARED LIMIT SWITCH
	PRESSURE SWITCH NORMALLY CLOSED OPENS ON INCREASING PRESSURE
	PRESSURE SWITCH NORMALLY OPEN CLOSSES ON INCREASING PRESSURE
	LEVEL SWITCH NORMALLY CLOSED OPENS ON INCREASING LEVEL
	LEVEL SWITCH NORMALLY OPEN CLOSSES ON INCREASING LEVEL
	FLOW SWITCH NORMALLY CLOSED OPENS WITH FLOW
	FLOW SWITCH NORMALLY OPEN CLOSSES ON LOSS OF FLOW
	SPACE HEATER
	PHASE FAILURE RELAY
	DRAW-OUT CIRCUIT BREAKER
	INSTANTANEOUS/TIME OVERCURRENT RELAY
	NEUTRAL TIME OVERCURRENT RELAY
	CABLE TERMINATOR
	UNDERVOLTAGE/PHASE-SEQUENCE RELAY
	LOCKOUT RELAY
	DISSOLVED OXYGEN SENSOR
	FLOW SWITCH
	ANALYTIC INDICATOR
	LEVEL TRANSDUCER
	FLOW METER

CONDUIT AND WIRING LEGEND

_____	NEW
_____	EXISTING TO BE REMOVED
_____	EXISTING TO REMAIN
----- UE ----- UE	UNDERGROUND ELECTRICAL
----- UF ----- UF	UNDERGROUND FIBER OPTIC
----- UT ----- UT	UNDERGROUND TELEPHONE
----- UG ----- UG	UNDERGROUND GROUNDING
_____ OE _____ OE	OVERHEAD ELECTRICAL

ONE LINE AND CONTROL SCHEMATIC LEGEND (CONT'D)

SYMBOL	DESCRIPTION
	INSTRUMENT TRANSFORMER PT--POTENTIAL TRANSFORMER
	CONTROL POWER TRANSFORMER. VOLTAGE AS SHOWN
	LIGHTNING ARRESTER
	SWITCH
	NORMALLY OPEN CONTACT
	NORMALLY CLOSED CONTACT
	MOMENTARY PUSHBUTTON
	THREE POSITION MAINTAINED CONTACT SWITCH
	MOTOR OPERATED VALVE
	SOLENOID VALVE
	ELAPSED TIME METER
	TIME DELAY RELAY. TIMES OUT AFTER ENERGIZATION
	TIME DELAY RELAY. TIMES OUT AFTER DENERGIZATION
	PILOT LIGHT R=RED B=BLUE G=GREEN A=AMBER Y=YELLOW
	HIGH LEVEL FLOAT SWITCH
	LOW LEVEL CUTOFF FLOAT SWITCH
	LEVEL SENSOR TERMINATION ENCLOSURE
	TEMPERATURE SWITCH
	MOISTURE PROBE
	SOLENOID VALVE
	LIMIT SWITCH
	AMMETER SWITCH
	VOLTMETER SWITCH
	PRESSURE SWITCH
	LIGHTING CONTACTOR
	MOTOR STARTER FVNR=FULL VOLTAGE NON-REVERSING VFD=VARIABLE FREQUENCY DRIVE WITH BYPASS SOFT START=ELECTRONIC SOFT START RVNR=REDUCED VOLTAGE NON-REVERSING FVR=FULL VOLTAGE REVERSING MCP=MOTOR CIRCUIT PROTECTOR SIZE=NEMA STARTER SIZE
	LEVEL SENSOR TERMINATION ENCLOSURE
	TEMPERATURE SWITCH
	MOISTURE PROBE
	SOLENOID VALVE
	LIMIT SWITCH
	AMMETER SWITCH
	VOLTMETER SWITCH
	PRESSURE SWITCH
	LIGHTING CONTACTOR

ELECTRICAL DRAWING INDEX

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E6.0	SCADA DETAILS

ABBREVIATIONS

A	AMPERES OR TRIP AMPERES
AC	ALTERNATING CURRENT
ACT	ABOVE COUNTER TOP
A/C	AIR CONDITIONING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	ASYMMETRICAL AMPS INTERRUPTING CAPACITY
AWG	AMERICAN WIRE GAGE
BD	BOARD
BLDG	BUILDING
C	CONDUIT
CAB	CABINET
CAP	CAPACITOR
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CL	CURRENT LIMITING
CONN	CONNECT OR CONNECTION
CONT'D	CONTINUED
CONTR	CONTRACTOR
CT	CONTROL POWER TRANSFORMER
CU	COPPER
DBL	DOUBLE
DIM	DIMENSION
DISC SW	DISCONNECT SWITCH
DC	DIRECT CURRENT
EA	EACH
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
ELEC	ELECTRICAL
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENCL	ENCLOSURE
EQUIP	EQUIPMENT
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE CONDUIT
FIX	FIXTURE
GC	GENERAL CONTRACTOR
GALV	GALVANIZED
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFI	GROUND FAULT INTERRUPTER
GRD	GROUND
HOA	HAND-OFF-AUTO
HP	HORSEPOWER
HT	HEIGHT
HTR	HEATER
HZ	HERTZ
JB	JUNCTION BOX
KCMIL	THOUSAND CIRCULAR MILLS
KVA	KILOVOLT AMPERES
KW	KILOWATT
KWH	KILOWATT HOURS
LA	LIGHTNING ARRESTOR
L-L	LINE TO LINE
L-N	LINE TO NEUTRAL
LIG	LIGHT OR LIGHTING
MC	MECHANICAL CONTRACTOR
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER

ABBREVIATIONS (CONT'D)

MCP	MOTOR CIRCUIT PROTECTOR
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MSB	MAIN SWITCH BOARD
MTD	MOUNTED
MTG	MOUNTING
N.C.	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NEUT	NEUTRAL
NIC	NOT IN THIS CONTRACT
N.O.	NORMALLY OPEN
NTS	NOT TO SCALE
OC	ON CENTER
OH	OVERHEAD
OL	OVERLOAD
Ø	PHASE
P	POLE
PC	PHOTOELECTRIC
PEN	PENDANT
PNL	PANELBOARD
PRV	PRESSURE REDUCING VALVE
PVC	POLYVINYL CHLORIDE
R	RELOCATED
RECP	RECEPTACLE
REQ'D	REQUIRED
REQ'MTS	REQUIREMENTS
RM	ROOM
SCH	SCHEDULE
SE	SERVICE ENTRANCE
SM	SURFACE MOUNT
SN	SOLID NEUTRAL
SOV	SOLENOID OPERATED VALVE
SPACE	SPACES(S) ONLY (NO BREAKER OR DEVICE)
SPARE	SPARE BREAKER OR DEVICE
SPD	SURGE PROTECTIVE DEVICE
SPECS	CONTRACT SPECIFICATIONS
SS	STAINLESS STEEL HARDWARE
SWBD	SWITCHBOARD
SW	SWITCH
SWGR	SWITCH GEAR
TB	TELEPHONE BACKBOARD
TTB	TELEPHONE TERMINAL BOARD
TYP	TYPICAL
UE	UNDERGROUND ELECTRIC
UL	UNDERWRITERS LABORATORIES
UON	UNLESS OTHERWISE NOTED
UT	UNDERGROUND TELEPHONE
VA	VOLT AMPERES
W	WATTS
W/	WITH
WH	WATER HEATER
WP	WEATHER PROOF
XFMR	TRANSFORMER
XMTR	TRANSMITTER
1/C	SINGLE CONDUCTOR CABLE
3/C	THREE CONDUCTOR CABLE

GENERAL NOTES: (APPLICABLE TO ALL ELECTRICAL SHEETS)

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, ALL CITY, COUNTY, AND STATE REGULATIONS, NFPA, ANSI, UL, IEEE, AND THE LOCAL CODE AUTHORITY HAVING JURISDICTION. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS AND INSPECTIONS.
- ALL ELECTRICIANS SHALL BE LICENSED BY THE APPROPRIATE CITY, STATE, OR LOCAL CODE AUTHORITY HAVING JURISDICTION.
- THE ELECTRICAL CONTRACTOR SHALL FOLLOW ALL OSHA AND OWNER SAFETY RULES AS REQUIRED TO WORK ON THIS SITE.
- ALL INSTALLATIONS SHALL BE DONE IN A NEAT AND WORKMAN LIKE MANNER.
- ALL POWER OUTAGES SHALL BE PERFORMED DURING NON-BUSINESS HOURS. COORDINATE ALL POWER OUTAGES WITH THE OWNER. NOTIFY THE OWNER IN WRITING 10 DAYS PRIOR TO SCHEDULING ANY POWER OUTAGES.
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL TEMPORARY ELECTRICAL POWER AND LIGHTING REQUIRED FOR THIS PROJECT.
- THE DEMOLITION DRAWINGS (IF APPLICABLE) ARE DIAGRAMMATIC IN NATURE. THE ELECTRICAL CONTRACTOR SHALL BE THOROUGHLY FAMILIAR WITH THE PROJECT SCOPE OF WORK PRIOR TO SUBMITTING THEIR BID.
- THE ELECTRICAL CONTRACTOR SHALL VERIFY THE ELECTRICAL REQUIREMENTS OF ALL OWNER PROVIDED EQUIPMENT AND SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
- ALL WORK SHOWN ON DRAWINGS IS NEW UNLESS OTHERWISE NOTED.
- ALL GROUNDING SHALL BE PER NEC AND LOCAL CODES.
- ALL ELECTRICAL CONSTRUCTION ON THE PROJECT SHALL CONFORM TO THE NEC AND ALL OTHER AUTHORITIES HAVING JURISDICTION. THE CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED AND PAY ALL FEES.
- ALL WIRING SHALL BE FREE OF SHORTS AND GROUNDS. NO CIRCUIT WIRING SHALL BE LOADED BEYOND THE PERMITTED AMPACITIES ALLOWED BY THE NEC. ALL WIRE SIZES ARE FOR COPPER.
- CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO SUBMITTING BID.
- ELECTRICAL CONTRACTOR SHALL PROVIDE ALL EQUIPMENT AND MATERIALS NECESSARY TO MAKE A COMPLETE AND WORKABLE JOB INCLUDING FINAL HOOK-UP OF ALL EQUIPMENT.
- FIRE STOP SHALL BE PROVIDED AT ALL LOCATIONS WHERE ELECTRICAL EQUIPMENT OR SYSTEMS PENETRATE FIRE RATED WALLS. SEE ARCHITECTURAL PLANS FOR RATED WALL LOCATIONS. CONTROL WIRING TO MECHANICAL EQUIPMENT IS NOT SHOWN ON THESE SHEETS.
- RISE AND ONE-LINE DIAGRAMS ARE MEANT TO SHOW ONLY VERTICAL AND ELECTRICAL RELATIONSHIPS AND THEREFORE MAY NOT INCLUDE ALL REQUIRED EQUIPMENT, DEVICES AND ACCESSORIES.
- EQUIPMENT INTERRUPTING CAPACITIES SPECIFIED IN THE CONTRACT DOCUMENTS ARE BASED UPON EQUIPMENT CHARACTERISTICS AND IMPEDANCES SHOWN ON THE DRAWINGS. IF ACTUAL INSTALLED EQUIPMENT DEVIATES FROM THESE CHARACTERISTICS OR HAS LOWER IMPEDANCES THE CONTRACTOR SHALL INCREASE THE INTERRUPTING CAPACITIES OF ALL ITEMS ON THE LOAD SIDE OF THE DEVIANT EQUIPMENT IN DIRECT PROPORTION TO THE CHANGED CHARACTERISTICS. INTERRUPTING CAPACITIES SHALL NOT BE REDUCED TO VALUES LESS THAN THOSE REQUIRED BY THE CONTRACT DOCUMENTS.
- EQUIPMENT SIZES ARE AS DESIGNED. CIRCUIT BREAKERS, CONDUIT, MOTOR STARTERS, DISCONNECT SWITCHES, PLUG-IN'S, ETC., SHALL BE ADJUSTED TO THE EQUIPMENT SUBMITTED AND APPROVED FOR INSTALLATION ON THIS PROJECT.
- LIGHT FIXTURE MOUNTING HEIGHTS ARE MEASURED BETWEEN THE FLOOR AND THE BOTTOM OF THE FIXTURE.



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SKE PROJECT # 2390424

THE LIFT STATION SHALL OPERATE PER THE SEQUENCE OF OPERATIONS AS NOTED ON THE CIVIL DRAWINGS AND SPECIFICATIONS. PLEASE NOTIFY THE ENGINEER IMMEDIATELY IF THERE ARE ANY DISCREPANCIES.

PAPE-DAWSON
ENGINEERS

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TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

VERAMENDI LIFT STATION
NEW BRAUNFELS, TEXAS

ELECTRICAL NOTES, SYMBOLS
AND ABBREVIATIONS

CITY NO.	
JOB NO.	30001-71
DATE	APRIL 2024
DESIGNER	RM
CHECKED	DRAWN GB
SHEET	E1.0

FOR PERMITTING 30001-71

FOR PERMITTING 30001-71

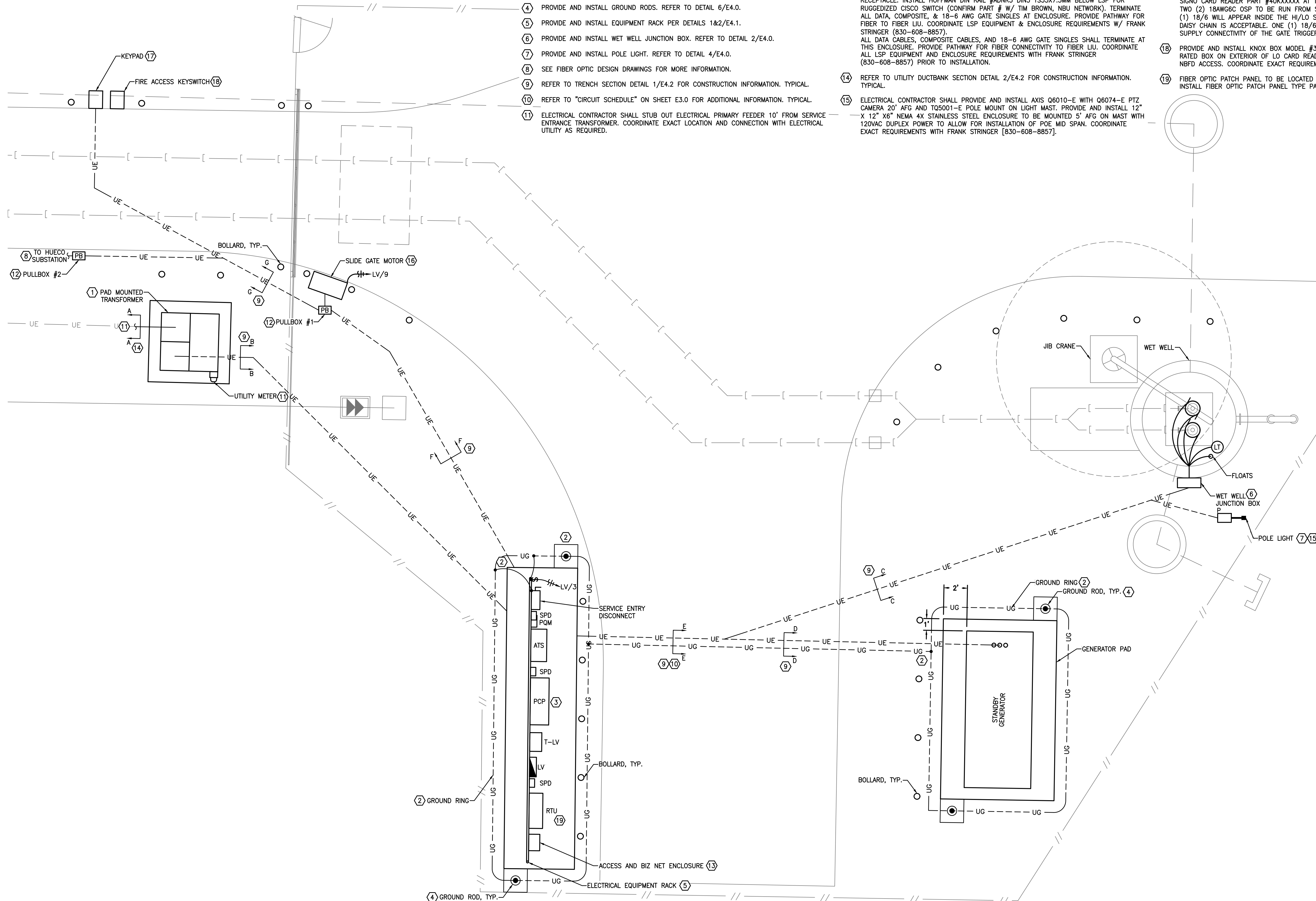
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REFERENCE NOTES

1. INSTALL NEW 150A, 277/480V, 3 PHASE 4 WIRE ELECTRIC SERVICE. CONTRACTOR TO COORDINATE WITH NBU, WWW.NBUTEXAS.COM (830) 629-8400. PROVIDE PULL STRING IN EACH CONDUIT. VERIFY EXACT LOCATION OF TRANSFORMER PRIOR TO INSTALLATION.
2. PROVIDE AND INSTALL #3/0 BARE COPPER GROUNDING RING. BOND EQUIPMENT RACKS, DISCONNECT SWITCH, SCADA TOWER, AND GENERATOR SKID TO GROUNDING ELECTRODE SYSTEM VIA EXOTHERMIC WELD.
3. PROVIDE AND INSTALL PUMP CONTROL PANEL. REFER TO SHEET E5.0 & E5.1.
4. PROVIDE AND INSTALL GROUND RODS. REFER TO DETAIL 6/E4.0.
5. PROVIDE AND INSTALL EQUIPMENT RACK PER DETAILS 1&2/E4.1.
6. PROVIDE AND INSTALL WET WELL JUNCTION BOX. REFER TO DETAIL 2/E4.0.
7. PROVIDE AND INSTALL POLE LIGHT. REFER TO DETAIL 4/E4.0.
8. SEE FIBER OPTIC DESIGN DRAWINGS FOR MORE INFORMATION.
9. REFER TO TRENCH SECTION DETAIL 1/E4.2 FOR CONSTRUCTION INFORMATION. TYPICAL.
10. REFER TO "CIRCUIT SCHEDULE" ON SHEET E3.0 FOR ADDITIONAL INFORMATION. TYPICAL.
11. ELECTRICAL CONTRACTOR SHALL STUB OUT ELECTRICAL PRIMARY FEEDER 10" FROM SERVICE ENTRANCE TRANSFORMER. COORDINATE EXACT LOCATION AND CONNECTION WITH ELECTRICAL UTILITY AS REQUIRED.

12. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL PULLBOX. REFER TO DETAIL 10/E4.0 FOR ADDITIONAL INFORMATION.
13. ACCESS CONTROL & BIZNET ENCLOSURE: PROVIDE AND INSTALL NBU ACCESS CONTROL AND BIZNET ENCLOSURE. NBU BIZNET AND SCADA NETWORKS SHALL BE MECHANICALLY AND LOGICALLY SEPARATED, WITH EACH DATA SWITCH IN SEPARATE ENCLOSURES. ENCLOSURE SHALL BE HOFFMAN NEMA 4X SS, PART #A363612LP W/ BACKPANEL #A36P36G, SIZED FOR LSP UNIT TYPE FP075-B100MBPNL4E2M/74-A W/ OPEN OPTION MERCURY CARD LP 1502 & LATEST MODEL MP 4502, DATA SWITCH, SWITCH PWR SUPPLY, & 120VAC DUPLEX RECEPTACLE. INSTALL HOFFMAN DIN RAIL #ADNR3 DIN3 TS35X7.5MM BELOW LSP FOR RUGGEDIZED CISCO SWITCH (CONFIRM PART # W/ TIM BROWN, NBU NETWORK). TERMINATE ALL DATA, COMPOSITE, & 18-6 AWG GATE SINGLES AT ENCLOSURE. PROVIDE PATHWAY FOR FIBER TO FIBER LIU. COORDINATE LSP EQUIPMENT & ENCLOSURE REQUIREMENTS W/ FRANK STRINGER (830-608-8857).
14. REFER TO UTILITY DUCTBANK SECTION DETAIL 2/E4.2 FOR CONSTRUCTION INFORMATION. TYPICAL.
15. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL AXIS Q6010-E WITH Q6074-E PTZ CAMERA 20' AFG AND T05001-E POLE MOUNT ON LIGHT MAST. PROVIDE AND INSTALL 12" X 12" X 6" NEMA 4X STAINLESS STEEL ENCLOSURE TO BE MOUNTED 5' AFG ON MAST WITH 120VAC DUPLEX POWER TO ALLOW FOR INSTALLATION OF POE MID SPAN. COORDINATE EXACT REQUIREMENTS WITH FRANK STRINGER [830-608-8857].

16. PROVIDE AND INSTALL LIFT MASTER SL3000UL ELITE SERIES SLIDE GATE PEDESTAL PRO MODEL NO. MC-CS-08-E AND MODEL NO. 72-9C-DSP FOR GATE SENSOR. CONTACT ROBERT PINEDA NBU FACILITIES FOR MORE INFORMATION. SEE DETAILS FOR FURTHER INFORMATION.
17. PROVIDE AND INSTALL HI/LO CARD READER STANCHION AT EXTERIOR APPROACH OF GATE PEDESTAL PRO. PART #72-9C-DSP. PROVIDE AND INSTALL TWO (2) CARD READER HOUSINGS PEDESTAL PRO PART #MC-CS-08-E. PROVIDE AND INSTALL ONE (1) HID SIGNO CARD READER PART #40XXXXXX AT THE HI LOCATION. PROVIDE AND INSTALL ONE (1) HID SIGNO CARD READER PART #40KXXXXX AT THE LO LOCATION. GATE CONTROL WILL REQUIRE TWO (2) 18AWG6C OSP TO BE RUN FROM SECURITY ENCLOSURE TO GATE LOCATION. ONE (1) 18/6 WILL APPEAR INSIDE THE HI/LO STANCHION FOR CARD READER CONNECTIVITY. DAISY CHAIN IS ACCEPTABLE. ONE (1) 18/6 WILL APPEAR INSIDE GATE MOTOR HOUSING TO SUPPLY CONNECTIVITY OF THE GATE TRIGGER AND GATE DPS TO MONITOR STATUS.
18. PROVIDE AND INSTALL KNOX BOX MODEL #3502 MOUNTED ON SINGLE GANG OUTDOOR RATED BOX ON EXTERIOR OF LO CARD READER HOUSING FACING AWAY FROM GATE FOR NBFD ACCESS. COORDINATE EXACT REQUIREMENTS WITH FRANK STRINGER [830-608-8857].
19. FIBER OPTIC PATCH PANEL TO BE LOCATED INSIDE SCADA RTU PANEL. PROVIDE AND INSTALL FIBER OPTIC PATCH PANEL TYPE PANDUIT FAP24WAQLCZ OR APPROVED EQUAL.



1 ELECTRICAL SITE PLAN
E2.0
SCALE: 1/4" = 1'-0"

0 1 2 4 8 12
FULL SIZE = 1/4"=1'-0" - HALF SIZE = 1/8"=1'-0"



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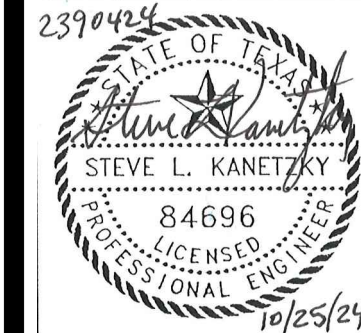
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TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

VERAMENDI LIFT STATION
NEW BRAUNFELS, TEXAS
ELECTRICAL SITE PLAN

CITY NO. _____
JOB NO. 30001-71
DATE APRIL 2024
DESIGNER RM
CHECKED _____ DRAWN GB
SHEET **E2.0**

DATE	
NO.	
REVISION	



CIRCUIT SCHEDULE					
TAG	CONDUIT	CONDUCTORS	FROM	TO	EQUIPMENT/FUNCTION
PF-100-01	2- 4"C	PULL STRING	UTILITY	TRANSFORMER	POWER FEEDER
PF-100-02A	1 1/2"C	4#1/0	TRANSFORMER	SERVICE ENTRANCE DISCONNECT SWITCH	POWER FEEDER
PF-100-03	1 1/2"C	4#1/0, 1#8GND	SERVICE ENTRANCE DISCONNECT SWITCH	AUTOMATIC TRANSFER SWITCH	POWER FEEDER
PF-100-04	1 1/2"C	4#1/0, 1#6GND	AUTOMATIC TRANSFER SWITCH	PUMP CONTROL PANEL	POWER FEEDER
PF-101-01	1"C	2#12, 1#12GND	GENERATOR	PANEL LV	POWER FEEDER
PF-101-02	1"C	2#12, 1#12GND	GENERATOR	PANEL LV	POWER FEEDER
PF-102-01	1 1/2"C	4#1/0, 1#6GND	AUTOMATIC TRANSFER SWITCH	GENERATOR	POWER FEEDER
PF-103-01	1"C	5#6	SERVICE ENTRANCE DISCONNECT SWITCH	SURGE PROTECTION DEVICE	SURGE PROTECTION
PF-104-01	3/4"C	2#12, 1#12GND	POWER QUALITY METER	PANEL LV	POWER FEEDER
PF-200-01	1"C	3#8, 1#10GND	PUMP CONTROL PANEL	PUMP #1	POWER FEEDER
PF-200-02	1"C	3#8, 1#10GND	PUMP CONTROL PANEL	PUMP #2	POWER FEEDER
PF-200-03	2"C	PULL STRING	PUMP CONTROL PANEL	WET WELL J-BOX	SPARE
PF-300-01	1"C	3#10, 1#10GND	PUMP CONTROL PANEL	PANEL LV TRANSFORMER	POWER FEEDER
PF-300-02	1"C	5#10	PANEL LV	SURGE PROTECTION DEVICE	SURGE PROTECTION
PF-300-03	1"C	3#4, 1#10GND	PANEL LV TRANSFORMER	PANEL LV	POWER FEEDER
PF-500-01	1"C	5#6	PUMP CONTROL PANEL	SURGE PROTECTION DEVICE	SURGE PROTECTION
PF-600-01	1"C	2#12, 1#12GND	PANEL LV	SITE LIGHT #1	POWER FEEDER
PF-600-02	1"C	2#12, 1#12GND	PANEL LV	RTU	POWER FEEDER
PF-600-03	1"C	2#12, 1#12GND	PANEL LV	LSP ENCLOSURE	POWER FEEDER
PF-600-04	1"C	2#12, 1#12GND	PANEL LV	LIGHT POLE CAMERA	POWER FEEDER
CC-101-01	1"C	8#14, 1#12 GND	GENERATOR	RTU	ALARMS/STATUS
CC-102-01	1"C	8#14	AUTOMATIC TRANSFER SWITCH	GENERATOR	CONTROLS CIRCUIT
CC-103-01	1"C	CT CONDUCTORS	AUTOMATIC TRANSFER SWITCH	POWER QUALITY METER	INSTRUMENTS
CC-103-02	1"C	1-CAT6	POWER QUALITY METER	SCADA RTU	COMMUNICATION
CC-200-01	1"C	8#14	PUMP CONTROL PANEL	PUMP OVER TEMP & SEAL FAIL	CONTROLS CIRCUIT
CC-200-02	1 1/2"C	18#6 AWG, SHIELDED OSP GRADE	LSP ENCLOSURE	GATE MOTOR	CONTROLS CIRCUIT
CC-200-03	1"C	OSP CAT #6	LSP ENCLOSURE	SECURITY CAMERA	SECURITY
CC-200-04	1 1/2"C	18#6 AWG, SHIELDED OSP GRADE	LSP ENCLOSURE	GATE CARD READER	COMMUNICATION
IC-200-01	1"C	STP CABLE AS REQUIRED	SCADA RTU	LEVEL TRANSDUCER	INSTRUMENTATION CIRCUIT
IC-200-02	1"C	4#14	PUMP CONTROL PANEL	WET WELL FLOATS	INSTRUMENTATION CIRCUIT
IC-200-03	2"C	FIBER	SCADA RTU	PULL BOX #2	INSTRUMENTATION CIRCUIT
IC-200-04	1"C	2 SETS #18AWG6C	LSP ENCLOSURE	GATE CARD READER	CONTROLS CIRCUIT

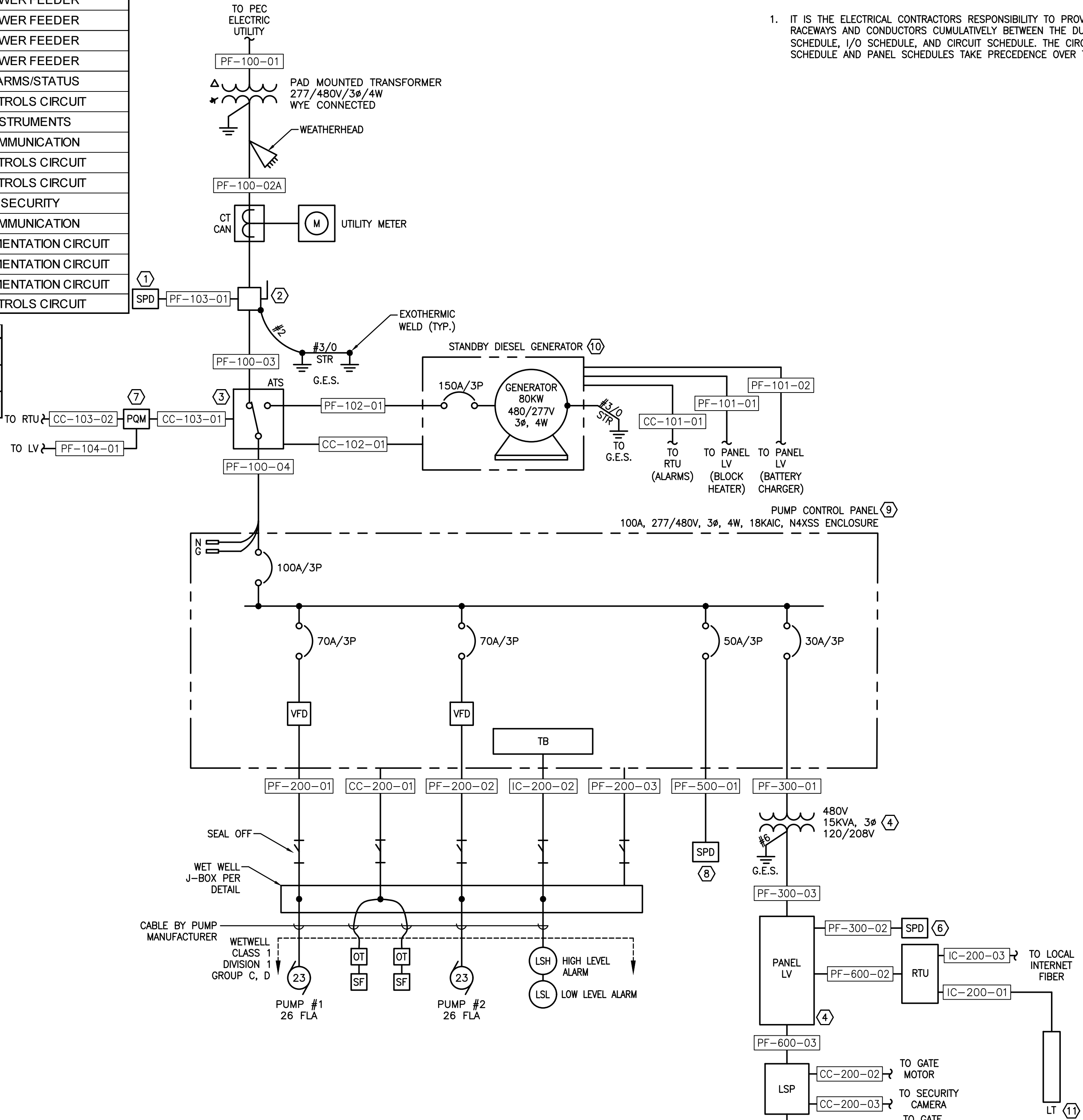
LIGHTING FIXTURE SCHEDULE									
TYPE	MANUFACTURER	CATALOG NO.	LAMP			VOLTS	MOUNTING	REMARKS	
			TYPE	LUMENS	COLOR TEMP				
A	LITHONIA	FEM L48 4000LM IMAFD MD MVOLT GZ10 40K 80CR1	LED	4,000	4000K	23.8	120	SURFACE	HIGH-EFFICIENCY LED. SUITABLE FOR WET, DAMP, AND/OR COLD LOCATIONS
P	LITHONIA	RSX1 LED P4 40K R4 MVOLT RPA PER7 DDBXD	LED	15,085	4000K	133	120	POLE	LED FULL CUTOFF #RSA-16-4C-DM19AS-FBC-VD-DDBXD (16" ROUND ALUMINUM POLE)

[illegible]

LOAD CALCULATION					
	UTILITY			GENERATOR	
	HP	AMPS	KVA	STARTING	STEP
MISC. LIGHTS, CONTROLS, MISC. 120V		18	15	N/A	1
MOTORS PUMP #1 PUMP #2	23 23	26 26	22 22	FVNR FVNR	2 3
25% OF LARGEST MOTOR 25% SPARE		7 18	5 15		
DESIGN KVA TOTAL			78		
DESIGN AMPS @ 277/480 VOLTS, 3 PHASE		94			
NOTE: THE ELECTRICAL SERVICE IS DESIGNED TO RUN TWO 23 HP PUMPS, AND ALL MISC LOADS.					
SHORT CIRCUIT CURRENT CALCULATION:					
ASSUMPTION: 1-75KVA PAD MOUNT TRANSFORMER					
FULL LOAD AMPS: FLA=(1*75)/75KV A (75000)/(480*1.73) = 90.32A <u>FLA</u>					
<u>INFINITE BUS SHORT CIRCUIT CURRENT CALCULATION:</u>					
ASSUMPTION: %Z=1.8					
SCCR = (100 / %Z) * FLA (100/1.8) * 180.636 = 5017.67 A					

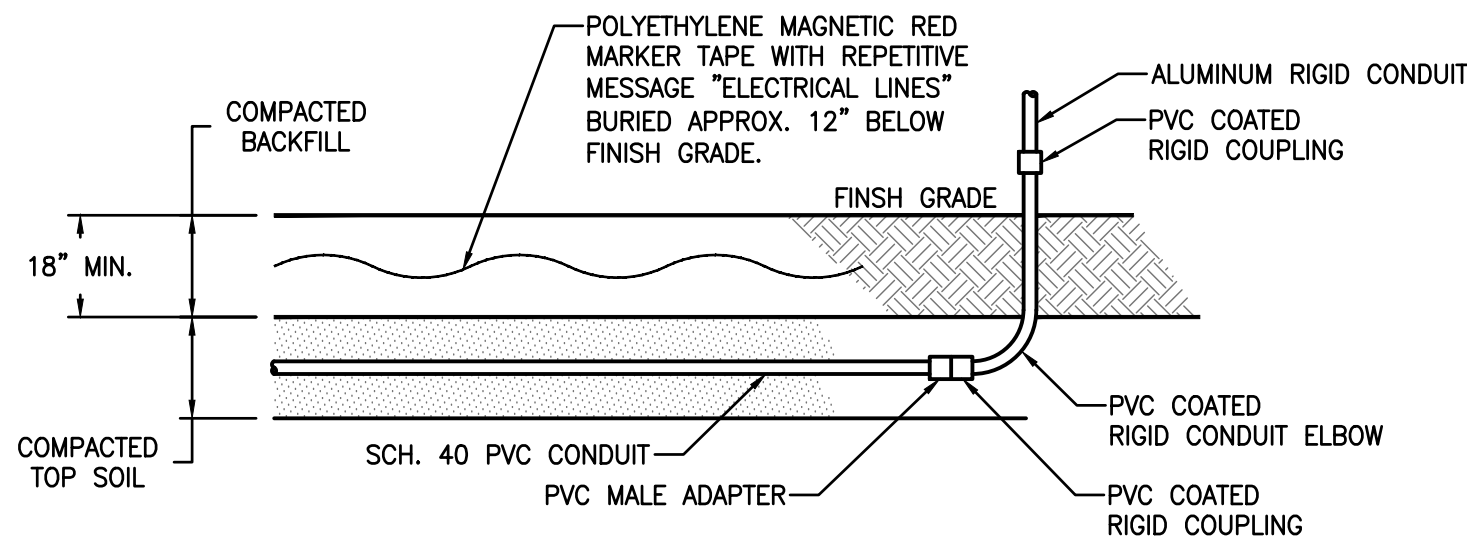
- ① PROVIDE AND INSTALL SPD, EATON SPD-200-480Y-3-P OR EQUAL IN A NEMA 4XSS STAINLESS STEEL ENCLOSURE. CONNECT TO LOAD SIDE.
- ② PROVIDE AND INSTALL MAIN DISCONNECT SWITCH 100A/3P/100AF/N4XSS/600V/SN/SE SQUARE D OR EQUAL. USE BUSSMANN #FRS-R-100 OR EQUAL WITH FACTORY NEUTRAL KIT AND GROUND BAR.
- ③ PROVIDE AND INSTALL AUTOMATIC TRANSFER SWITCH, 150A, 4 POLE, 600V, NEMA 4XSS ASCO OR EQUAL.
- ④ PROVIDE AND INSTALL STAND ALONE 15KVA TRANSFORMER WITH SEPARATE PANEL LV, EATON OR EQUAL. REFER TO PANEL LV SCHEDULE THIS SHEET.
- ⑤ ALL ELECTRICAL EQUIPMENT ENCLOSURES SHALL BE NEMA 4XSS.
- ⑥ PROVIDE AND INSTALL SPD, EATON SPD-050-208Y-3-P OR EQUAL IN A NEMA 4XSS ENCLOSURE. CONNECT TO LOAD SIDE.
- ⑦ PROVIDE AND INSTALL POWER QUALITY METER EATON 2280 OR EQUAL.
- ⑧ PROVIDE AND INSTALL SPD, EATON SPD-100-480Y-3-P OR EQUAL IN A NEMA 4XSS ENCLOSURE. CONNECT TO LOAD SIDE.
- ⑨ ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL PUMP CONTROL PANEL. SEE E5.0 AND E5.1 FOR DETAILS
- ⑩ PROVIDE AND INSTALL STANDBY GENERATOR 80KW, 277/480V, 3 PHASE, 4-WIRE.
- ⑪ PROVIDE AND INSTALL LEVEL TRANSDUCER, PMC VERSALINE PMC1 MODEL VL2000 SERIES.

1. IT IS THE ELECTRICAL CONTRACTORS RESPONSIBILITY TO PROVIDE AND INSTALL ALL RACEWAYS AND CONDUCTORS CUMULATIVELY BETWEEN THE DUCT BANK DETAILS, PANEL SCHEDULE, I/O SCHEDULE, AND CIRCUIT SCHEDULE. THE CIRCUIT SCHEDULE, I/O SCHEDULE AND PANEL SCHEDULES TAKE PRECEDENCE OVER THE DUCT BANK DETAILS.

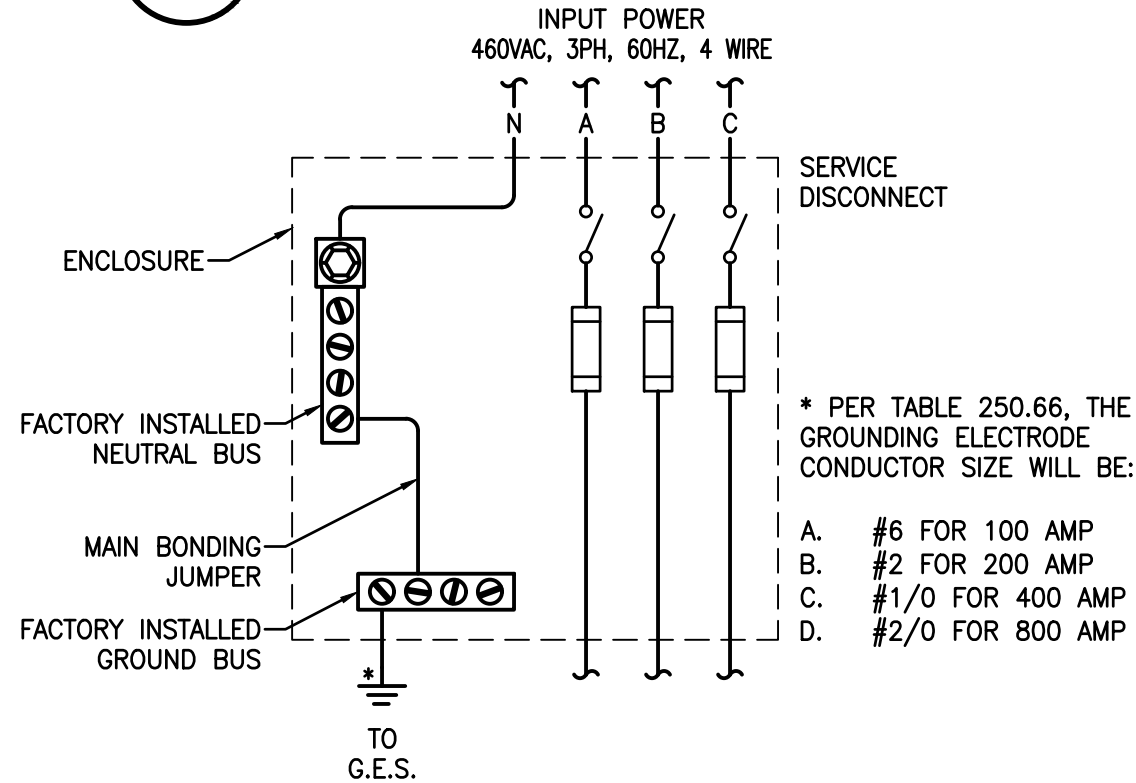


THE LIFT STATION SHALL OPERATE PER THE SEQUENCE OF OPERATIONS AS NOTED ON THE CIVIL DRAWINGS AND SPECIFICATIONS. PLEASE NOTIFY THE ENGINEER IMMEDIATELY IF THERE ARE ANY DISCREPANCIES.

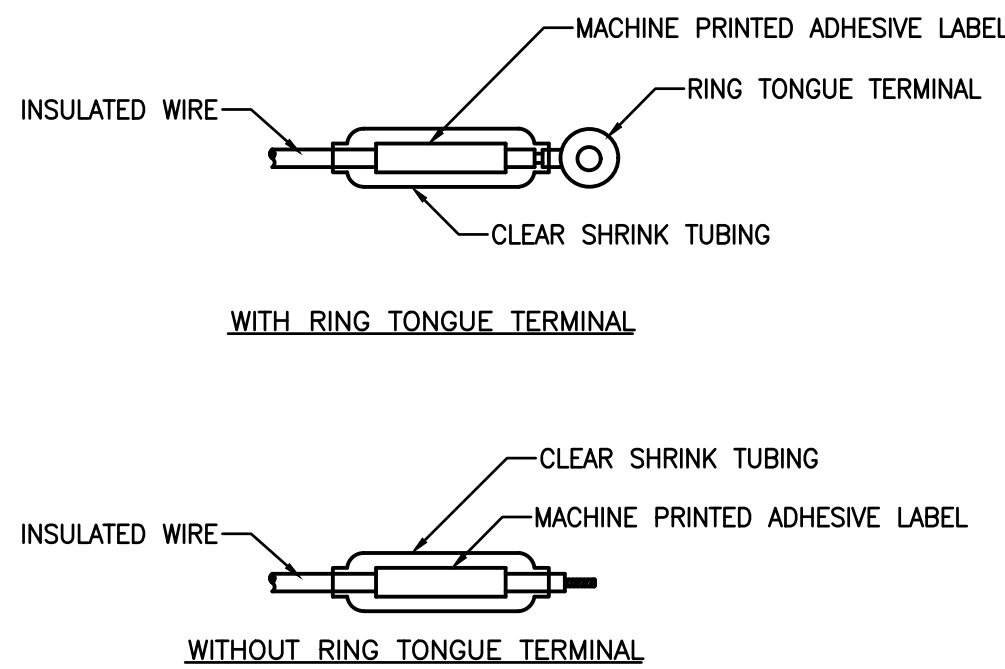
FOR PERMITTING 30001-71



9 DETAIL - TYPICAL UNDERGROUND CONDUIT RUN
E4.0 SCALE: NTS

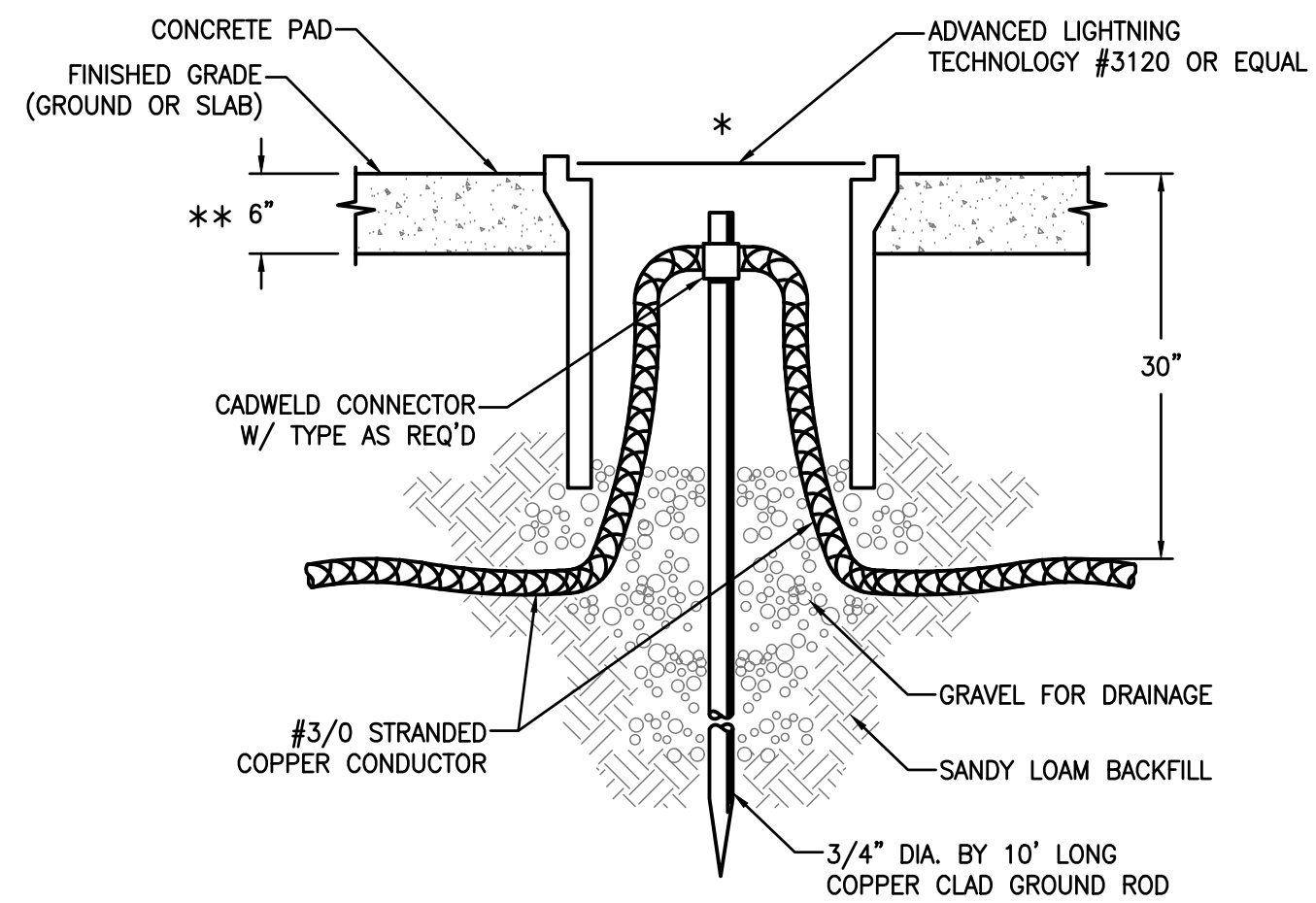


8 DETAIL - GROUNDING SERVICE DISCONNECT
E4.0 SCALE: NTS



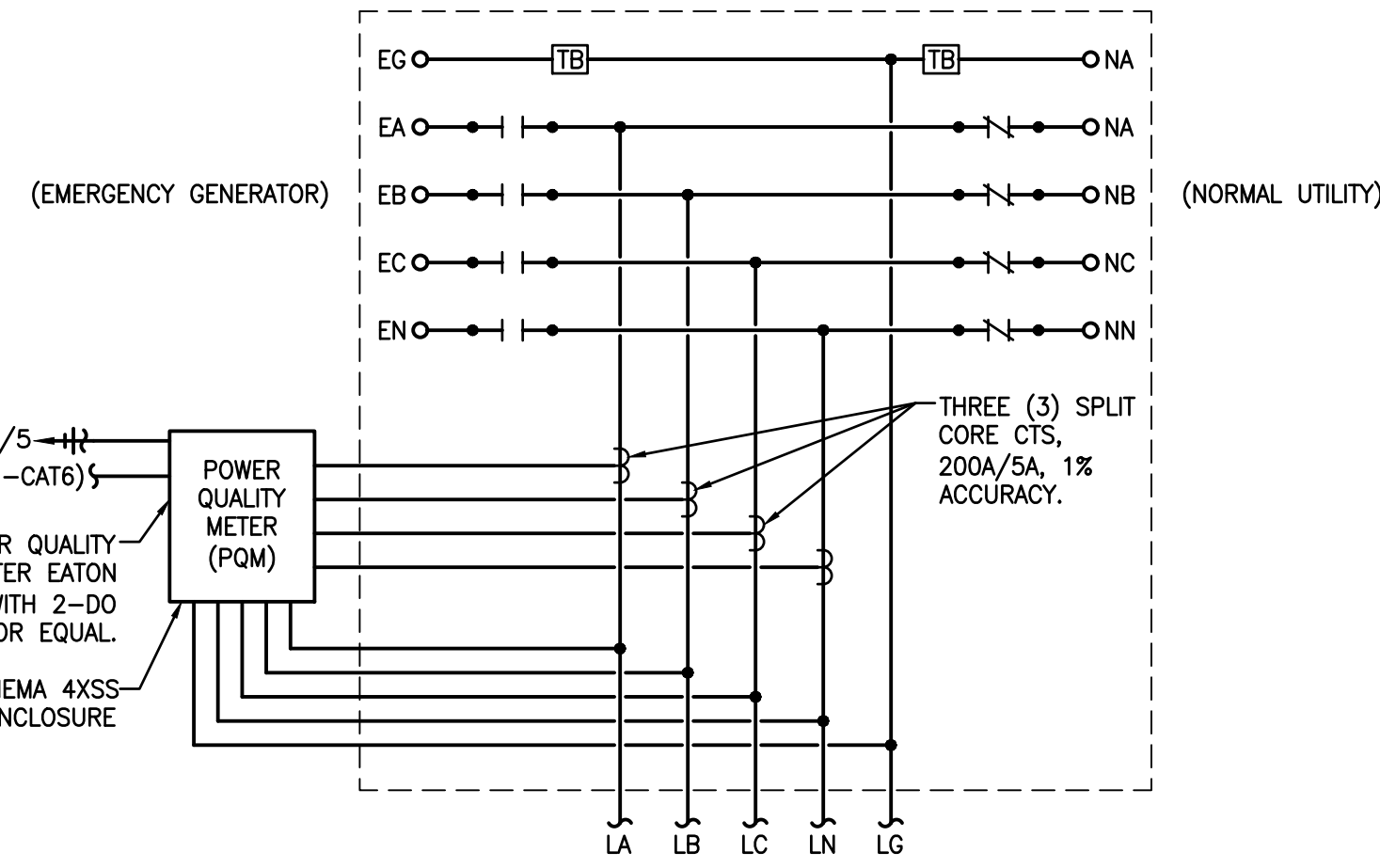
WHERE POSSIBLE RING TERMINALS SHALL BE USED. ONE OF THE ABOVE METHODS MUST BE USED ON ALL WIRE #6 AWG & SMALLER. THE SAME MUST ALSO BE USED ON LARGER WIRE UNLESS AN ALTERNATE METHOD IS SUBMITTED & APPROVED.

7 DETAIL - WIRE TERMINATION AND MARKING
E4.0 SCALE: NTS

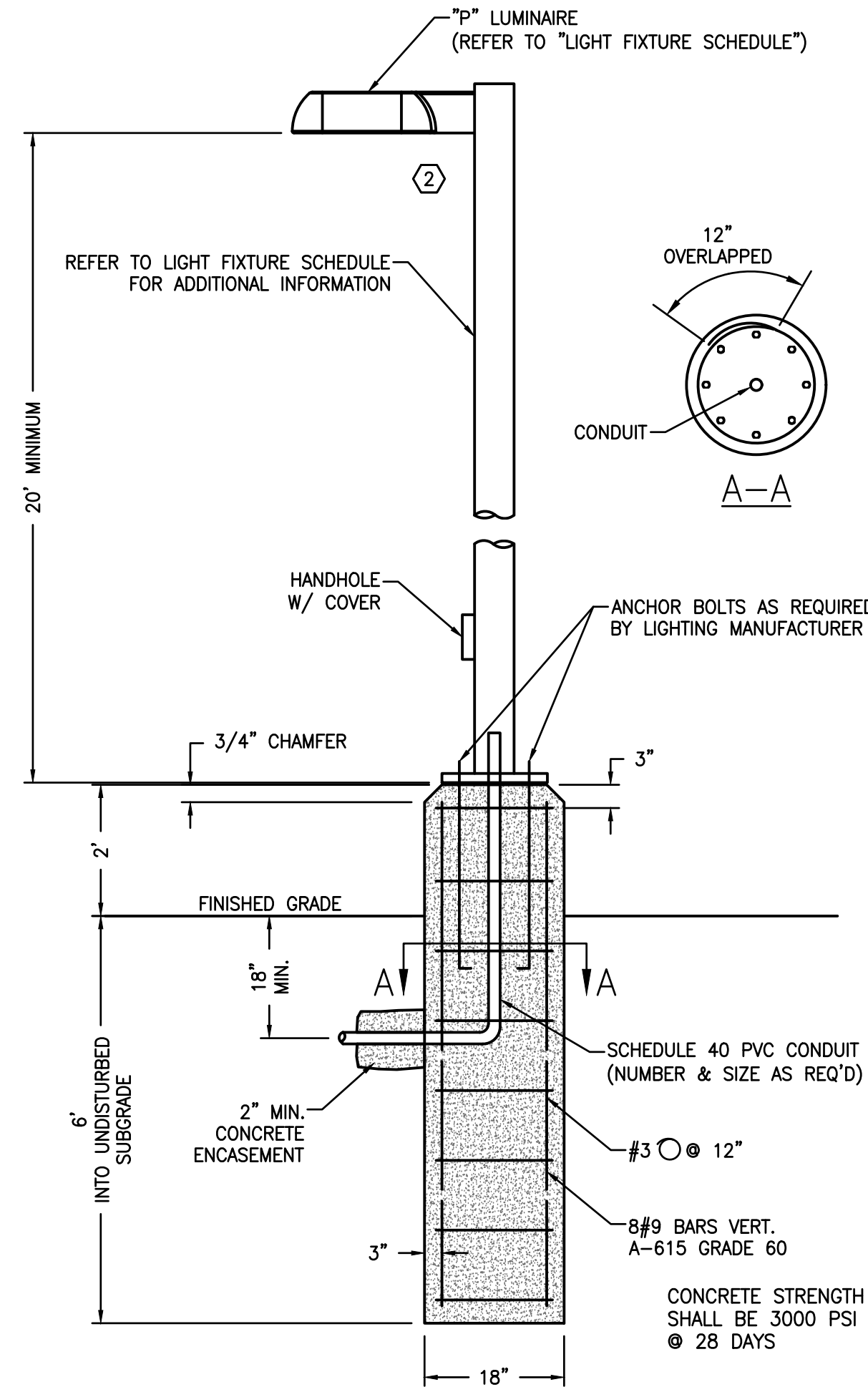


* INSTALL GROUND RODS AWAY FROM HEAVY TRAFFIC AREAS AND SIDEWALKS. COORDINATE EXACT LOCATION WITH CIVIL DRAWINGS.
** INSTALL 2'X2'X6" CONCRETE PAD.

6 DETAIL - 3/4" X 10' GROUND ROD
E4.0 SCALE: NTS



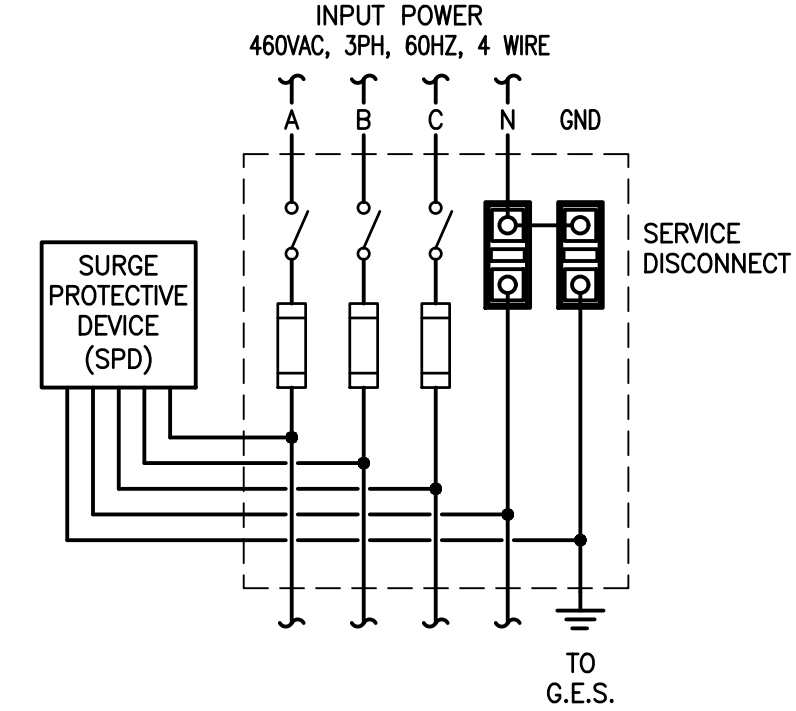
5 DETAIL - POWER QUALITY METER (PQM)
E4.0 SCALE: NTS



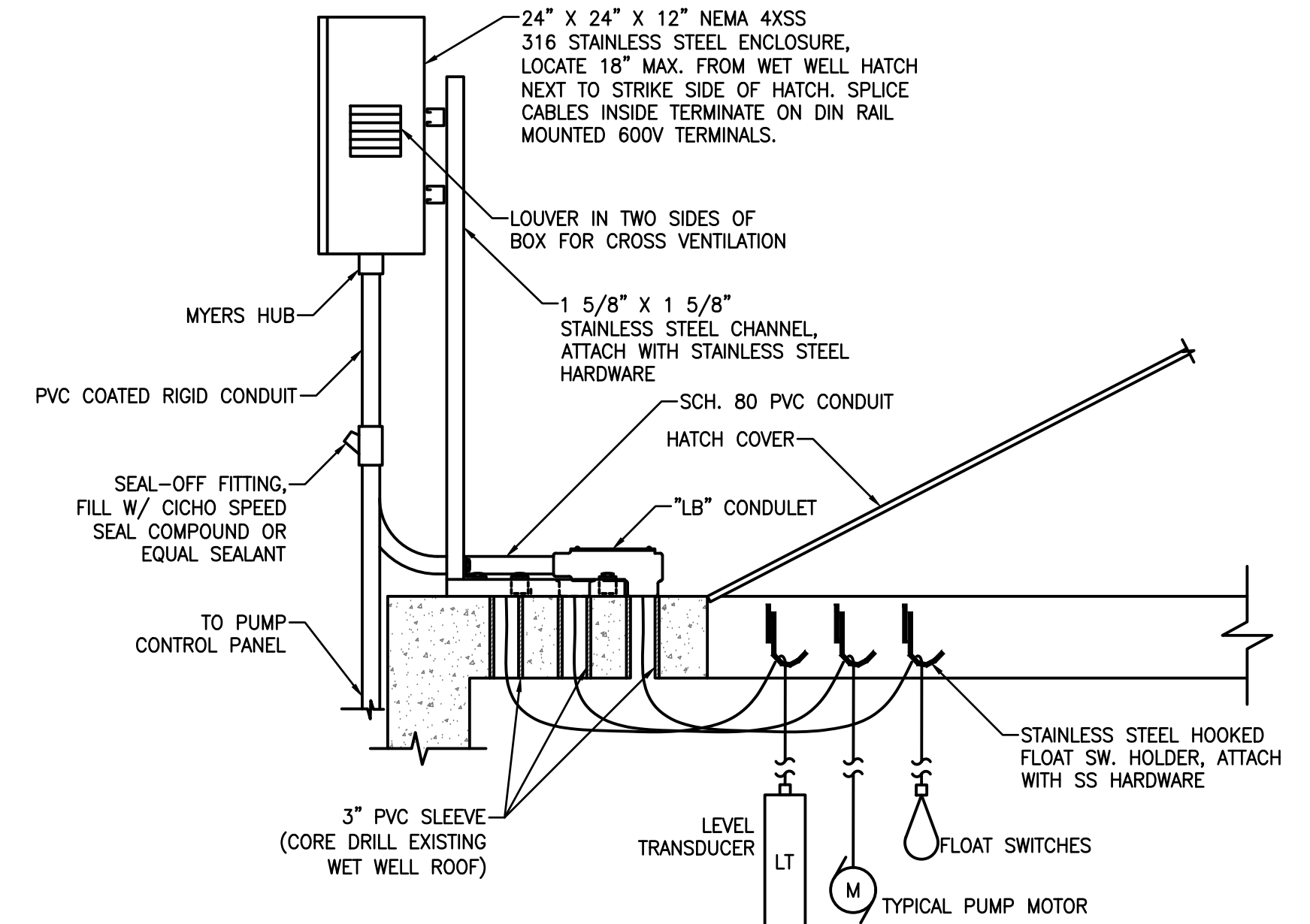
4 DETAIL - POLE MOUNTED LIGHTING FIXTURE
E4.0 SCALE: NTS

REFERENCE NOTES

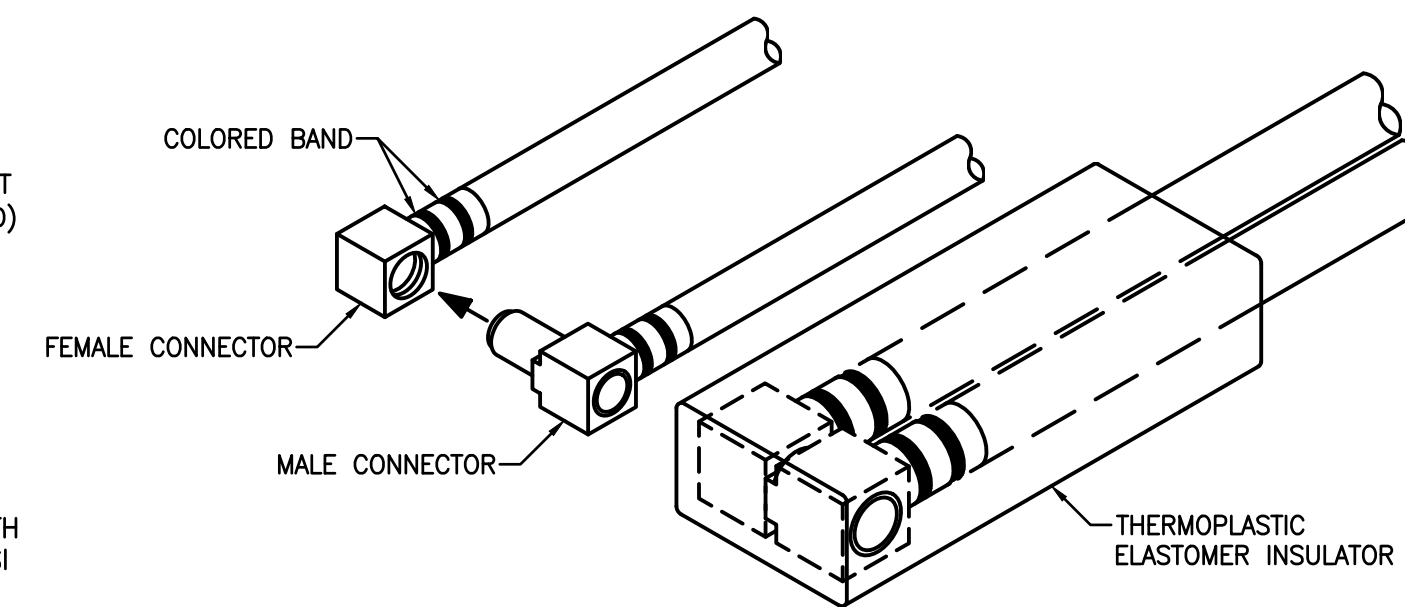
- COORDINATE INSTALLATION OF WET WELL JUNCTION BOX WITH SITE CONDITIONS AND SHEET E2.0.
- CONTRACTOR SHALL INSTALL NBU APPROVED SECURITY CAMERA ON TOP OF POLE LIGHT.
- CONTRACTOR SHALL REFERENCE CIVIL AND STRUCTURAL PLANS FOR ALL WET WELL WALL TOP SLAB PENETRATIONS LOCATIONS AND COORDINATE WITH WET WELL MANUFACTURER.
- PRECAST STRUCTURE SHALL BE DESIGNED TO MEET ASTM C857 AND C858.



3 DETAIL - SURGE PROTECTION DEVICE (SPD)
E4.0 SCALE: NTS



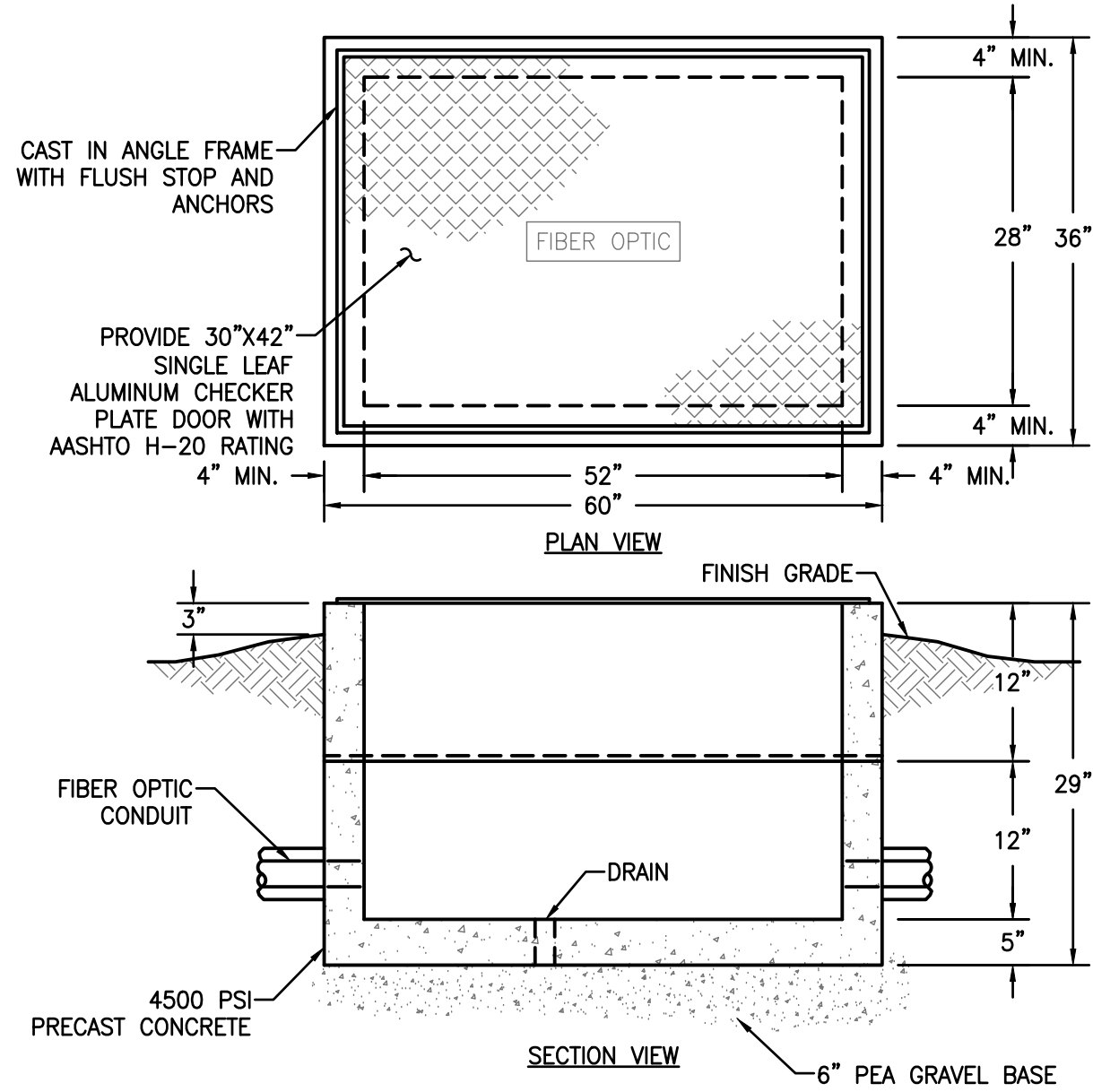
2 DETAIL - WET WELL JUNCTION BOX (1) (3)
E4.0 SCALE: NTS



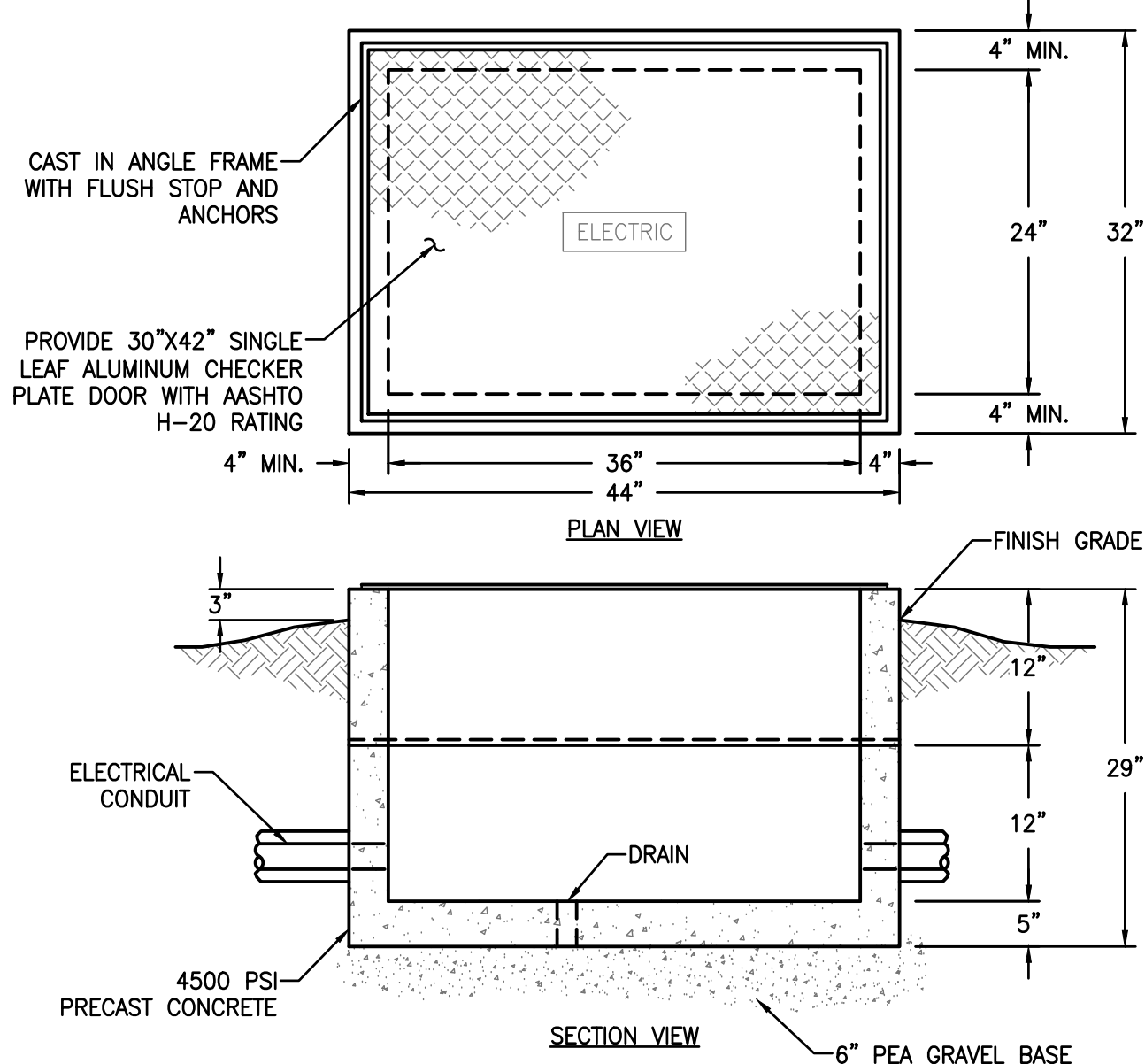
NOTE: MOTOR LEAD CONNECTION KIT SHALL BE TYPE ABB MDXXX-X OR EQUAL. SEE MANUFACTURER INFORMATION FOR EXACT SIZE AND TYPE.

1 DETAIL - MOTOR LEAD DISCONNECT
E4.0 SCALE: NTS

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11 DETAIL - FIBER HAND HOLE (4)
E4.0 SCALE: NTS



10 DETAIL - PULL BOX (4)
E4.0 SCALE: NTS

STATE OF TEXAS
STEVE L. KANETZKY
84696
ELECTRICAL ENGINEER
10/25/24

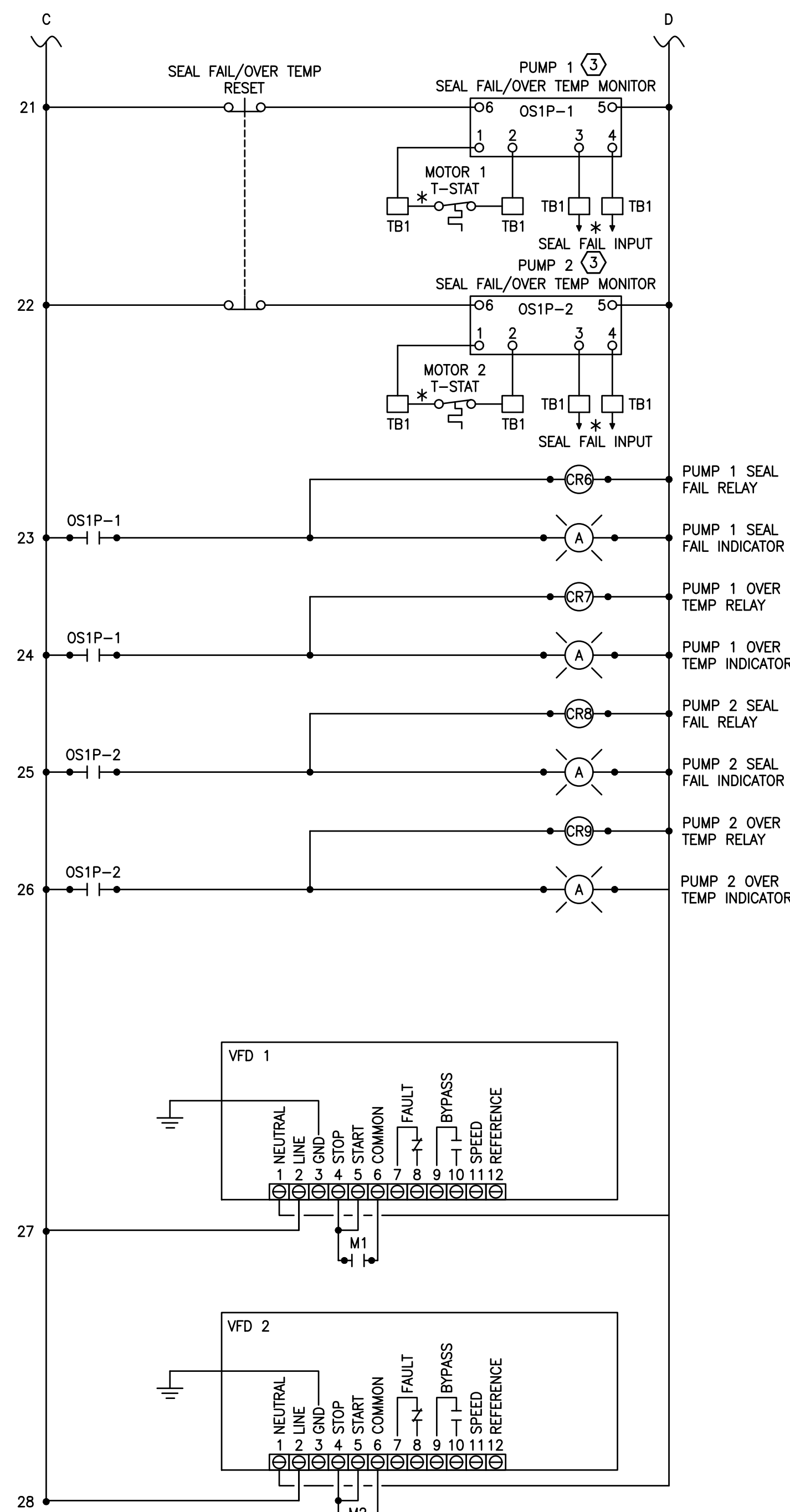
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2000 NW LOOP 4101 | SAN ANTONIO, TX 78213 | 210.375.9000
TYPE FIRM REGISTRATION #470 | TBPE FIRM REGISTRATION #10028800

VERAMENDI LIFT STATION
NEW BRAUNFELS, TEXAS
ELECTRICAL DETAILS

SKE

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TBPE Firm No. F-2356
SKE PROJECT # 2390424

CITY NO. _____
JOB NO. 30001-71
DATE APRIL 2024
DESIGNER RM
CHECKED DRAWN GB
SHEET E4.0



1 CONTROLS SCHEMATIC
E5.1 SCALE: NTS

- ① PUMP CONTROL PANEL WIRING DIAGRAM IS TYPICAL. FINAL HARDWARE CONFIGURATION WILL VARY ACCORDING TO PUMP CONTROL PANEL SPECIFICATIONS FOR THE SUBMERSIBLE PUMPS.
- ② PROVIDE STARTUP AND MINIMUM 4 HOURS TRAINING FOR OPERATOR PERSONNEL. SUBMIT STARTUP REPORT TO ENGINEER.
- ③ MOISTURE/OVER TEMPERATURE MONITOR RELAY SHALL BE INTEGRATED TO THE CONTROL LOGIC TO PROVIDE FAIL SAFE OPERATION. THUS, WHEN THE MOISTURE/OVER TEMPERATURE MONITOR RELAY IS REMOVED FROM THE CONTROL CIRCUIT OR FAILS, THE CORRESPONDING PUMP WILL BE LOCKED OUT.
- ④ ALL SEALED FLOAT SWITCHES SHALL BE CONNECTED TO THE CONTROL LOGIC VIA INTRINSICALLY SAFE RELAYS.

LEVEL CONTROL OPERATION:

THE PUMP CONTROL PANEL SHALL UTILIZE ONE (1) LEVEL SENSOR TO CONTROL THE LEVEL IN THE WELL. ON SUMP LEVEL RISE TO 1ST PUMP TURN-ON LEVEL SETTING, THE CONTROLLER SHALL START THE 1ST PUMP; IF THE LEVEL CONTINUES TO RISE TO THE 2ND PUMP TURN-ON LEVEL SETTING, THE CONTROLLER SHALL START THE 2ND PUMP; SUMP LEVEL SHALL LOWER TO THE 1ST LEVEL TURN-OFF SETTING AND ALL PUMPS SHALL STOP; ALTERNATING RISE SHALL INDEX ON TO THE 2ND PUMP TURN-ON SETTING AND THE 1ST PUMP SHALL START ON OPERATION AND SO ONWARD; IF LEVEL CONTINUES TO RISE AND HIGH LEVEL SETTING IS REACHED, THE CONTROLLER SHALL TRIGGER THE HIGH LEVEL ALARM. ALARM SHALL BE MANUAL RESET. LEVELS SHALL BE SET AS INDICATED IN THE SPECIFICATIONS AND SHOWN ON THE CIVIL PLANS. AN AUTOMATIC BACKUP LEVEL FLOATS SYSTEM SHALL BE PROVIDED; IF ONE PUMP SHOULD FAIL FOR ANY REASON, THE BACKUP PUMP SHALL AUTOMATICALLY TAKE OVER. CONTROLLER SHALL HAVE MANUAL SETTINGS WHICH ARE ADJUSTABLE FROM THE CONTROLLER'S SELECTABLE MENU/SCREEN WITH THE PUMP OPERATING, THE SUMP FLUID LEVEL SHALL LOWER. WHEN THE LOW LEVEL TURN-OFF SETTING IS REACHED THE PUMP RUNNING WILL THEN CEASE TO OPERATE.

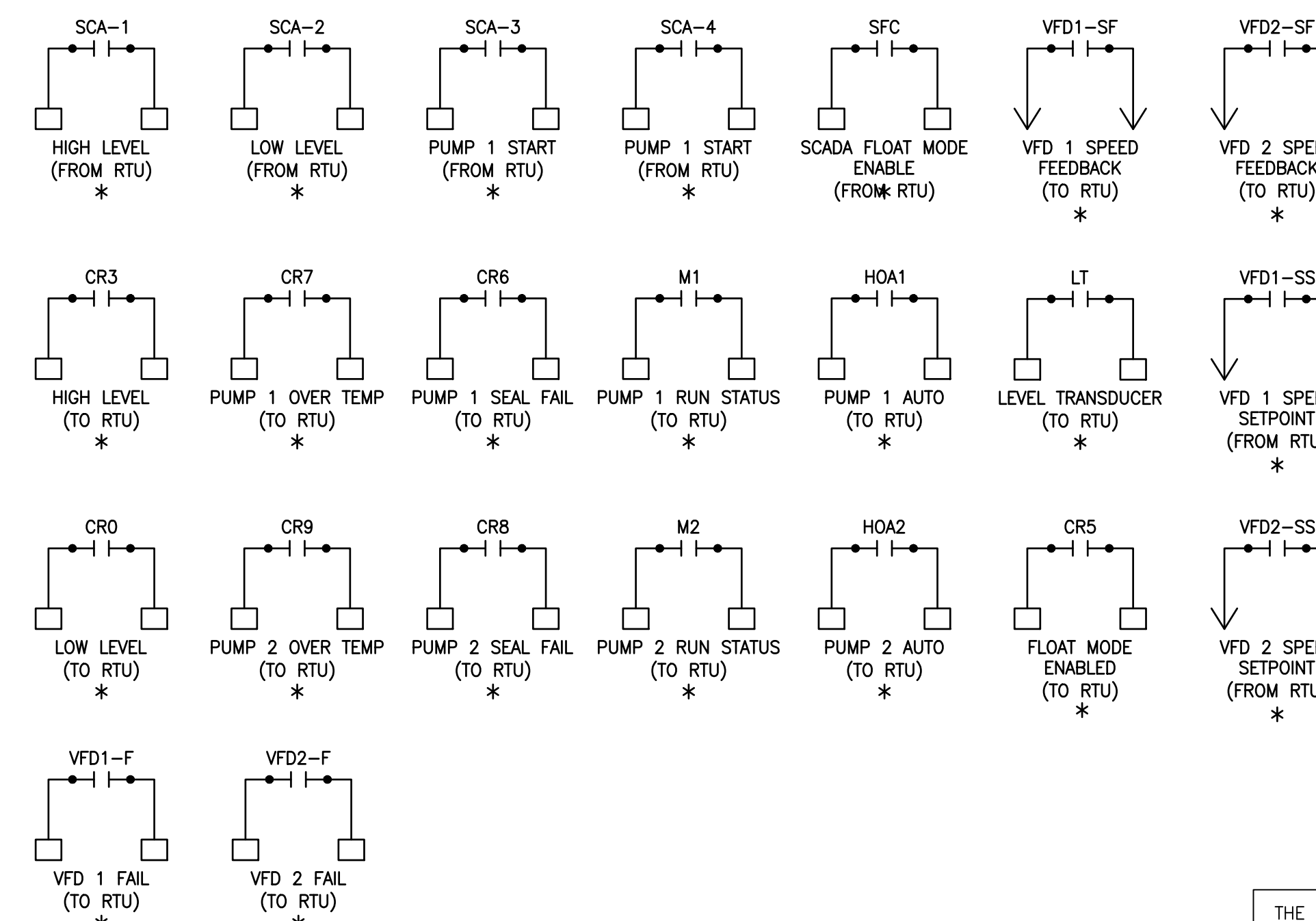
AUTOMATIC BACKUP LEVEL FLOATS OPERATION:

WHEN THE LEVEL TRANSMITTER FAILS THE PUMP CONTROL PANEL SHALL AUTOMATICALLY OPERATE BY THE LEVEL FLOATS ACCORDING TO THE FOLLOWING ORDER.

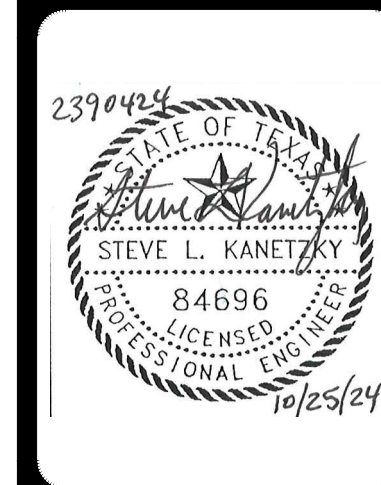
ON SUMP LEVEL RISE, LOWER (OFF) FLOAT SWITCH SHALL FIRST BE ENERGIZED. WITH THE PUMP OPERATING, THE SUMP FLUID LEVEL SHALL LOWER. WHEN THE LEVEL CAUSES THE LOWER (OFF) MERCURY FLOAT SWITCH TO TILT BACK TOWARD HANGING VERTICAL, ITS CONTACT SHALL OPEN CAUSING THE MOTOR CONTRACTOR TO LOSE POWER TO THE COIL AND THUS OPEN THE CIRCUIT TO THE PUMP MOTOR. THE PUMP OR PUMPS RUNNING WILL THEN CEASE TO OPERATE.

IF THE HIGH LEVEL FLOAT IS ACTIVATED ALL PUMPS SHALL BE CALLED TO RUN AT 100% FLOW CAPACITY.

SCADA SHALL HAVE THE ABILITY TO TURN THE BACKUP FLOAT MODE ON AND OFF REMOTELY.



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TYPE FIRM REGISTRATION 4470 | TPBLS FIRM REGISTRATION #1028600

VERAMENDI LIFT STATION
NEW BRAUNFELS, TEXAS
PUMP CONTROL DETAILS



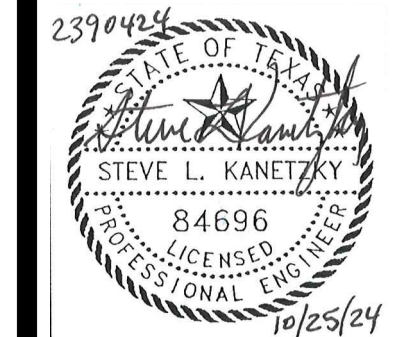
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(512) 326-3380
www.skaneng.com
TBPE Firm No. F-2356
SKE PROJECT # 2390424

I/O LIST					
ITEM	DESCRIPTION	TYP.	CONDUCTOR	FROM	TO
1	UTILITY POWER STATUS (FROM ATS)	DI	2#14	AUTOMATIC TRANSFER SWITCH	RTU
2	ATS IN EMERGENCY	DI	2#14	AUTOMATIC TRANSFER SWITCH	RTU
3	GENERATOR FAIL	DI	2#14	GENERATOR	RTU
4	GENERATOR LOW FUEL	DI	2#14	GENERATOR	RTU
5	GENERATOR COMMON ALARM	DI	2#14	GENERATOR	RTU
6	GENERATOR RUNNING	DI	2#14	GENERATOR	RTU
7	PHASE MONITOR ALARM	DI	2#14	PHASE MONITOR	RTU
8	WET WELL HIGH LEVEL	DI	2#14	PUMP CONTROL PANEL	RTU
9	WET WELL LOW LEVEL	DI	2#14	PUMP CONTROL PANEL	RTU
10	PUMP #1 RUN STATUS	DI	2#14	PUMP CONTROL PANEL	RTU
11	PUMP #2 RUN STATUS	DI	2#14	PUMP CONTROL PANEL	RTU
12	PUMP #1 HOA STATUS	DI	2#14	PUMP CONTROL PANEL	RTU
13	PUMP #2 IN HOA STATUS	DI	2#14	PUMP CONTROL PANEL	RTU
14	PUMP #1 OVER TEMP	DI	2#14	PUMP CONTROL PANEL	RTU
15	PUMP #1 SEAL FAIL	DI	2#14	PUMP CONTROL PANEL	RTU
16	PUMP #2 OVER TEMP	DI	2#14	PUMP CONTROL PANEL	RTU
17	PUMP #2 SEAL FAIL	DI	2#14	PUMP CONTROL PANEL	RTU
18	BACKUP FLOAT CONTROL ENABLED	DI	2#14	PUMP CONTROL PANEL	RTU
19	UPS ALARM	DI	2#14	UPS	RTU
20	SPARE	DI			
21	SPARE	DI			
22	SPARE	DI			
23	SPARE	DI			
24	WET WELL HIGH LEVEL	DO	2#14	RTU	PUMP CONTROL PANEL
25	WET WELL LOW LEVEL	DO	2#14	RTU	PUMP CONTROL PANEL
26	PUMP #1 START	DO	2#14	RTU	PUMP CONTROL PANEL
27	PUMP #2 START	DO	2#14	RTU	PUMP CONTROL PANEL
28	ACTIVATE FLOAT MODE	DO	2#14	RTU	PUMP CONTROL PANEL
29	SPARE	DO			
30	SPARE	DO			
31	SPARE	DO			
32	SPARE	DO			
33	LEVEL TRANSDUCER	AI	1#16TSP	PUMP CONTROL PANEL	RTU
34	PUMP #1 VFD SPEED FEEDBACK	AI	1#16TSP	PUMP CONTROL PANEL	RTU
35	SPARE	AI			
36	SPARE	AI			
37	PUMP #2 VFD SPEED FEEDBACK	AI	1#16TSP	PUMP CONTROL PANEL	RTU
38	PUMP #1 VFD SPEED SETPOINT	AO	1#16TSP	RTU	PUMP CONTROL PANEL
39	PUMP #2 VFD SPEED SETPOINT	AO	1#16TSP	RTU	PUMP CONTROL PANEL
40	SPARE	AO			
41	SPARE	AO			
42	POWER QUALITY METER	E	1-CAT6	POWER QUALITY METER	RTU
43	SECURITY CAMERA	E	1-CAT6	SECURITY CAMERA	RTU
44	PUMP #1 VFD	E	1-CAT6	PUMP #1 VFD	RTU
45	PUMP #2 VFD	E	1-CAT6	PUMP #2 VFD	RTU
46	GENERATOR CONTROL PANEL	E	1-CAT6	GENERATOR	RTU
47	UPS	E	1-CAT6	UPS	RTU



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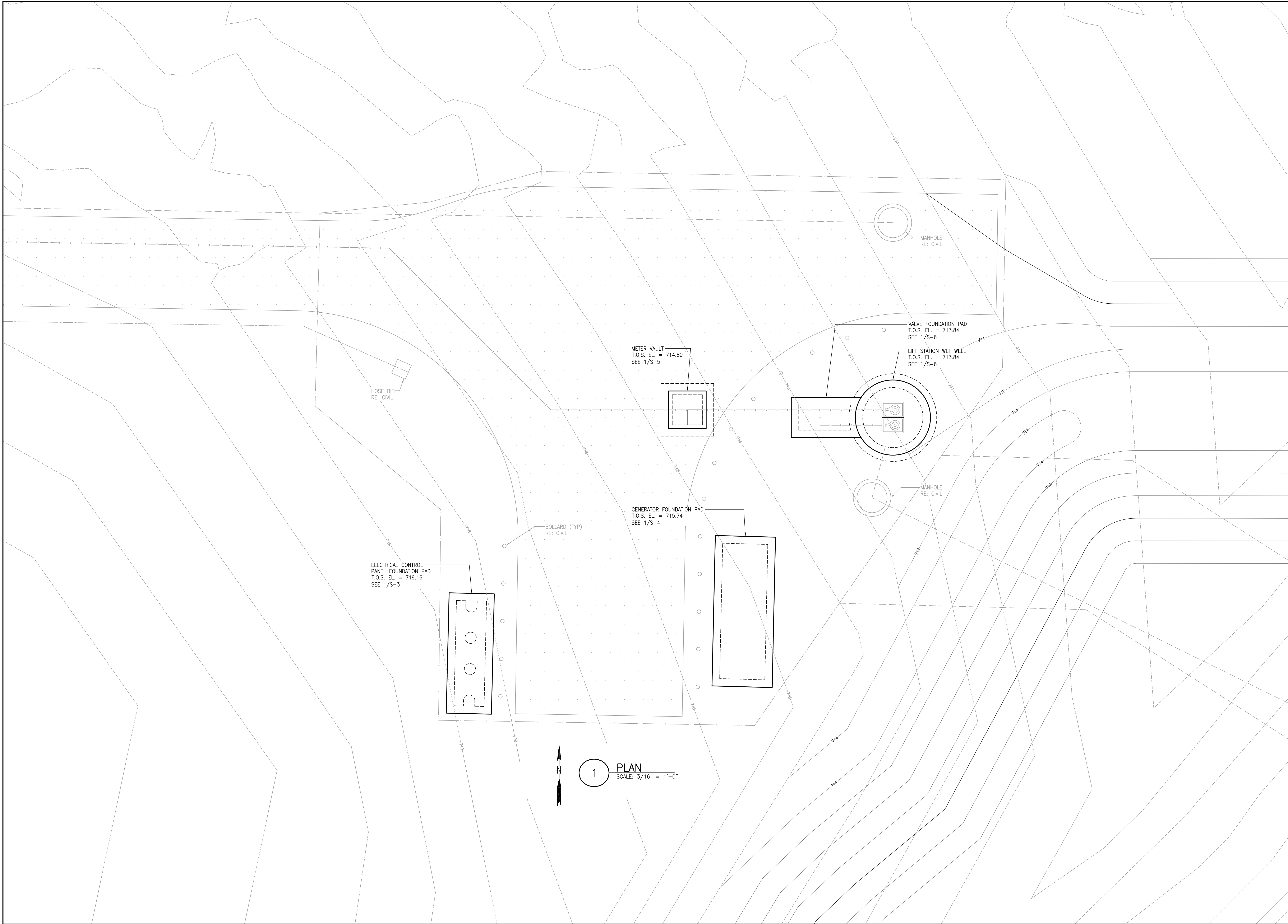
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**PAPE-DAWSON
ENGINEERS**

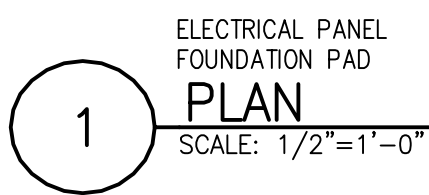
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TBPB FIRM REGISTRATION #470 | TBPB FIRM REGISTRATION #1022800

VERAMENDI LIFT STATION
NEW BRAUNFELS, TEXAS
ELECTRICAL DETAILS

CITY NO. _____
JOB NO. 30001-71
DATE APRIL 2024
DESIGNER RM
CHECKED _____ DRAWN GB
SHEET E6.1



LIFT STATION SITE PLAN	VERAMENDI LIFT STATION	NEW BRAUNFELS, TEXAS	 Pickett, Kelm & Associates, Inc. Consulting Structural Engineers 4100 Duval Road, Bldg. 4, Suite 103 Austin, Texas 78759 • Phone 512-345-5538 Texas Registration No. E-1491	PROJECT NO. 011-6153	DESIGNED BY: ARB	DRAWN BY: ARB	CHECKED BY: ARB	APPROVED BY: ARB	DATE: 5/31/2024		NO.	REVISION	BY	DATE



This technical drawing shows a cross-section of an electrical panel foundation pad. The structure consists of a concrete slab supported by a compacted select fill base, which sits on a proof-rolled natural limestone subgrade. The slab has a width of 6 feet and a thickness of 6 inches. It features four rectangular openings for conduits, each with a minimum depth of 3 feet and a minimum clearance of 3 inches from the sides and bottom. The top of the slab is reinforced with #4 bars at 12 inches on center, forming a single mat. The bottom of the slab is reinforced with #5 bars at 18 inches on center, including stirrups. A 1-inch thick layer of impervious clay cap over backfill is provided at non-paved areas. The drawing includes various dimensions and typical notes for construction.

T.O. SLAB EL.
= 719.16

1'-0" MIN. (TYP)

1'-6" (TYP)

3" CLR. (TYP)

3'-0" MIN. (TYP)

3'-6" (TYP)

#4 @ 12" O.C. E.W. SINGLE MAT

6" SLAB

CANOPY SUPPORT (TYP)
RE: ELECTRICAL

PROVIDE 12" IMPERVIOUS CLAY CAP OVER BACKFILL AT NON-PAVED AREAS

2"-#5 CONT. TOP & BOT. W/ #4 STIRRUPS @ 18" O.C.

FIELD VERIFY DEPTH TO LIMESTONE

3" CLR. (TYP)

2" CLR. (TYP @ TOP & SIDES)

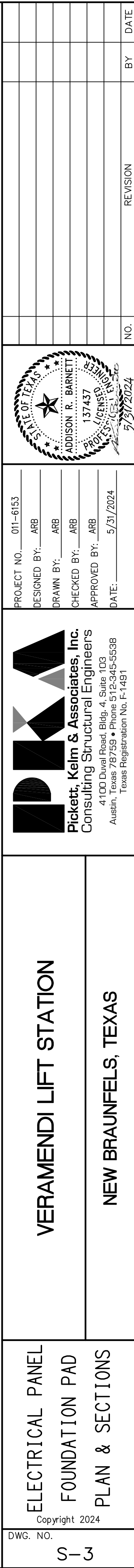
COMPACTED SELECT FILL SEE GEN. NOTES

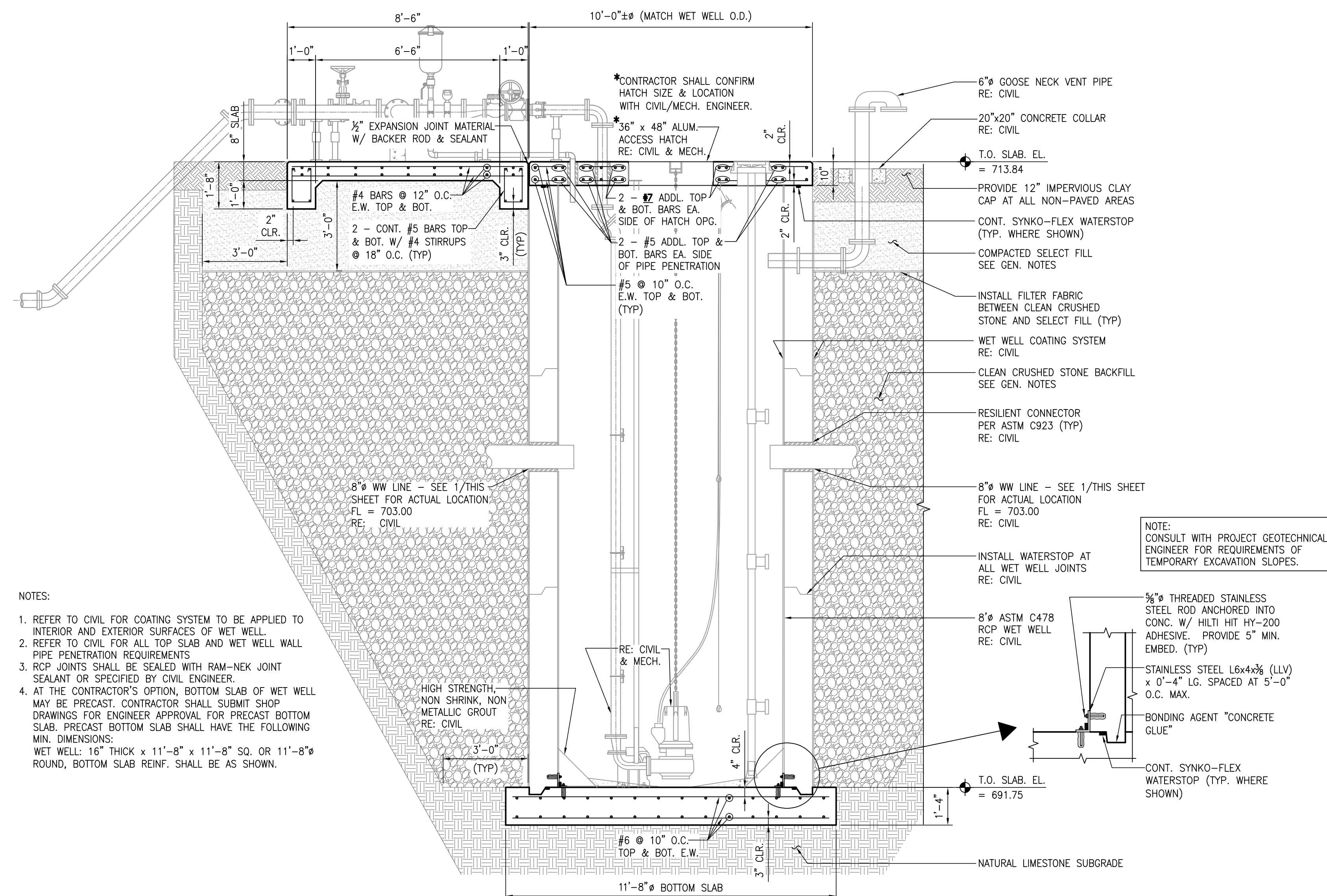
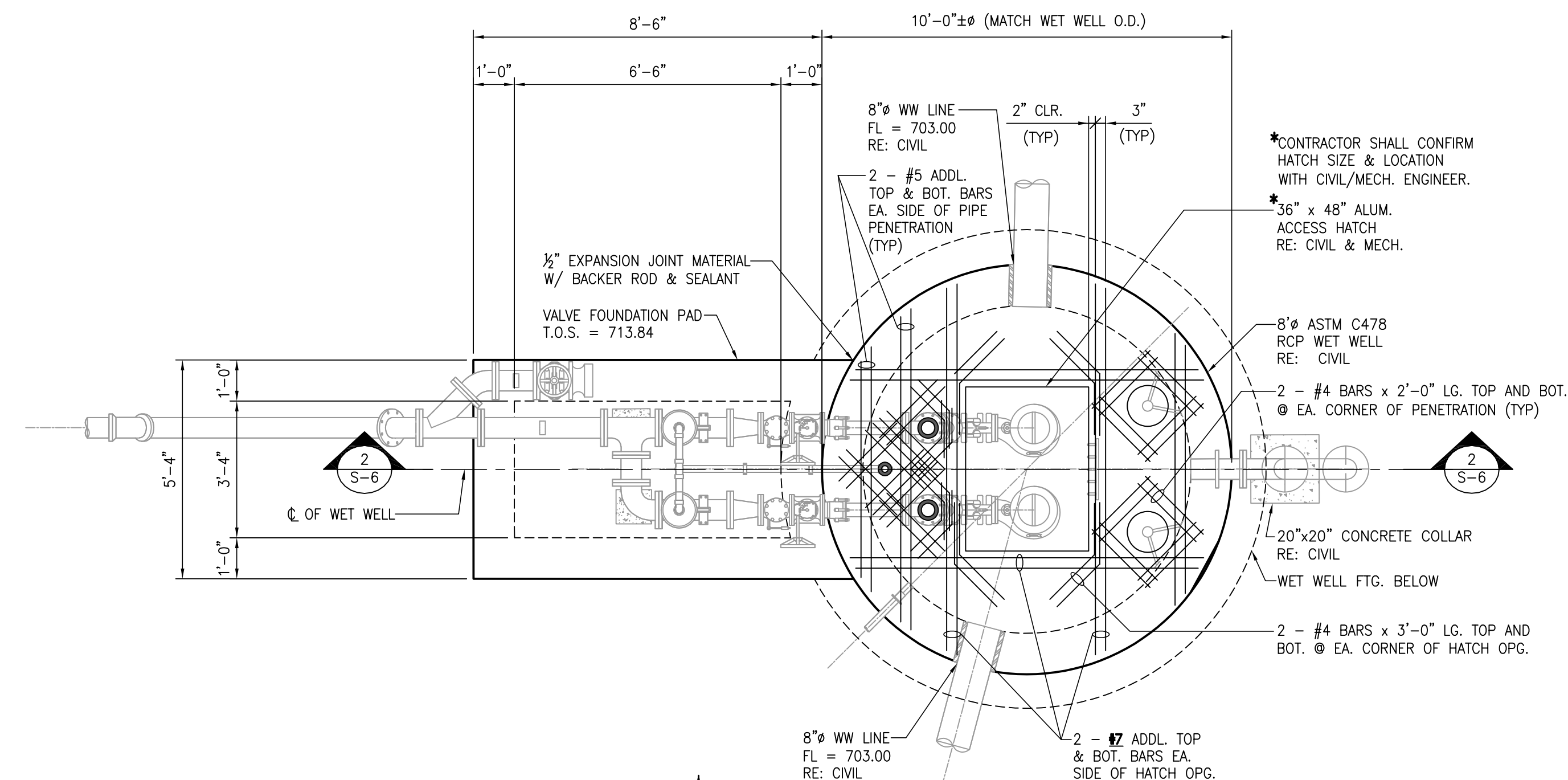
1'-0" (TYP) 3'-0" MIN. (TYP)

PROOF-ROLLED NATURAL LIMESTONE SUBGRADE SEE GEN. NOTES

ELECTRICAL PANEL FOUNDATION PAD SECTION
SCALE: 1/2"=1'-0"

2





NOTES:

1. REFER TO CIVIL FOR COATING SYSTEM TO BE APPLIED TO INTERIOR AND EXTERIOR SURFACES OF WET WELL.
2. REFER TO CIVIL FOR ALL TOP SLAB AND WET WELL WALL PIPE PENETRATION REQUIREMENTS
3. RCP JOINTS SHALL BE SEALED WITH RAM-NEK JOINT SEALANT OR SPECIFIED BY CIVIL ENGINEER.
4. AT THE CONTRACTOR'S OPTION, BOTTOM SLAB OF WET WELL MAY BE PRECAST. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ENGINEER APPROVAL FOR PRECAST BOTTOM SLAB. PRECAST BOTTOM SLAB SHALL HAVE THE FOLLOWING MIN. DIMENSIONS:

WET WELL: 16" THICK $\times$ 11'-8" $\times$ 11'-8" SQ. OR 11'-8" $\times$ ROUND, BOTTOM SLAB REINF. SHALL BE AS SHOWN.

2

WET WELL
SECTION
SCALE: $\frac{3}{8}" = 1'-0"$

SCALE: $3/8" = 1'-0"$

VERAMENDI LIFT STATION

NEW BRAUNFELS, TEXAS

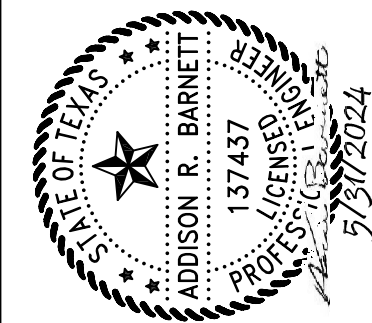
WET WELL & VALVE
FOUNDATION PAD
PLAN & SECTION

PLAN & SECTION

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DWG. NO.

S-6



PROJECT NO. 011-6153

DESIGNED BY: ARB

DRAWN BY: ARB

CHECKED BY: ARB

APPROVED BY: ARB
5/31/2024

DATE: 05/04/2011