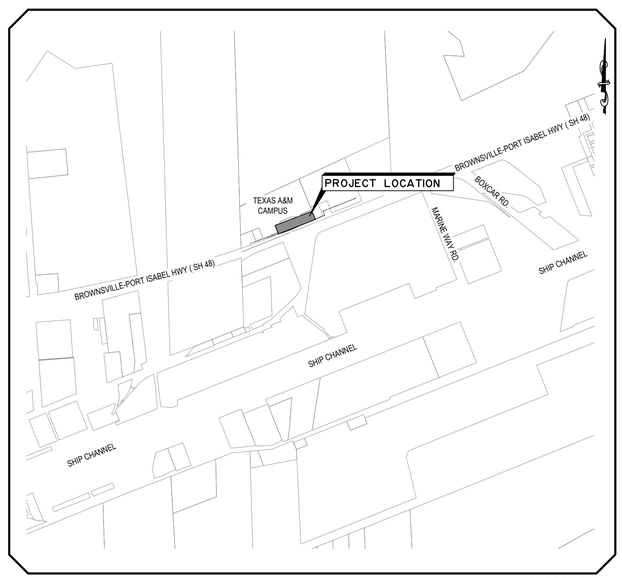
JANUARY 2026

SHEET INDEX

LOCATION MAP



NOT TO SCALE

TEXAS A&M LIFT STATION

Port of Brownsville, Texas

PORT OF BROWNSVILLE BOARD OF COMMISSIONERS

ESTEBAN GUERRA	CHAIRMAN
SERGIO TITO LOPEZ	VICE CHAIRMAN
JOHN REED	SECRETARY OF THE BOARD
JOHN WOOD	COMMISSIONER
ERNESTO GUTIERREZ	COMMISSIONER

SUBMITTED BY:

STATE OF TEXAS
J. DAVID PEREZ
89429
LICENSED
PROFESSIONAL ENGINEER
1-7-26

J. DAVID PEREZ, P.E. DATE:
LICENSED PROFESSIONAL ENGINEER

PCE Texas Registered Engineering Firm F-2158
802 Dicker Ave, McAllen, Texas 78501
(956) 631-4482 Fax (956) 628-1345

CAMERON COUNTY, TEXAS

TEXAS A&M LIFT STATION

CITY OF BROWNSVILLE, TEXAS

COVER SHEET

NO.	REVISION	BY	DATE

PCE JOB NO: JOB #:
FILE: FILE NAME
DATE: 2/5/2020
DESIGNED BY: DESIGNED BY:
DRAWN BY: DRAWN BY:
REVISED: REVISED:
CHECKED BY: CHECKED BY:

VERIFY SCALE
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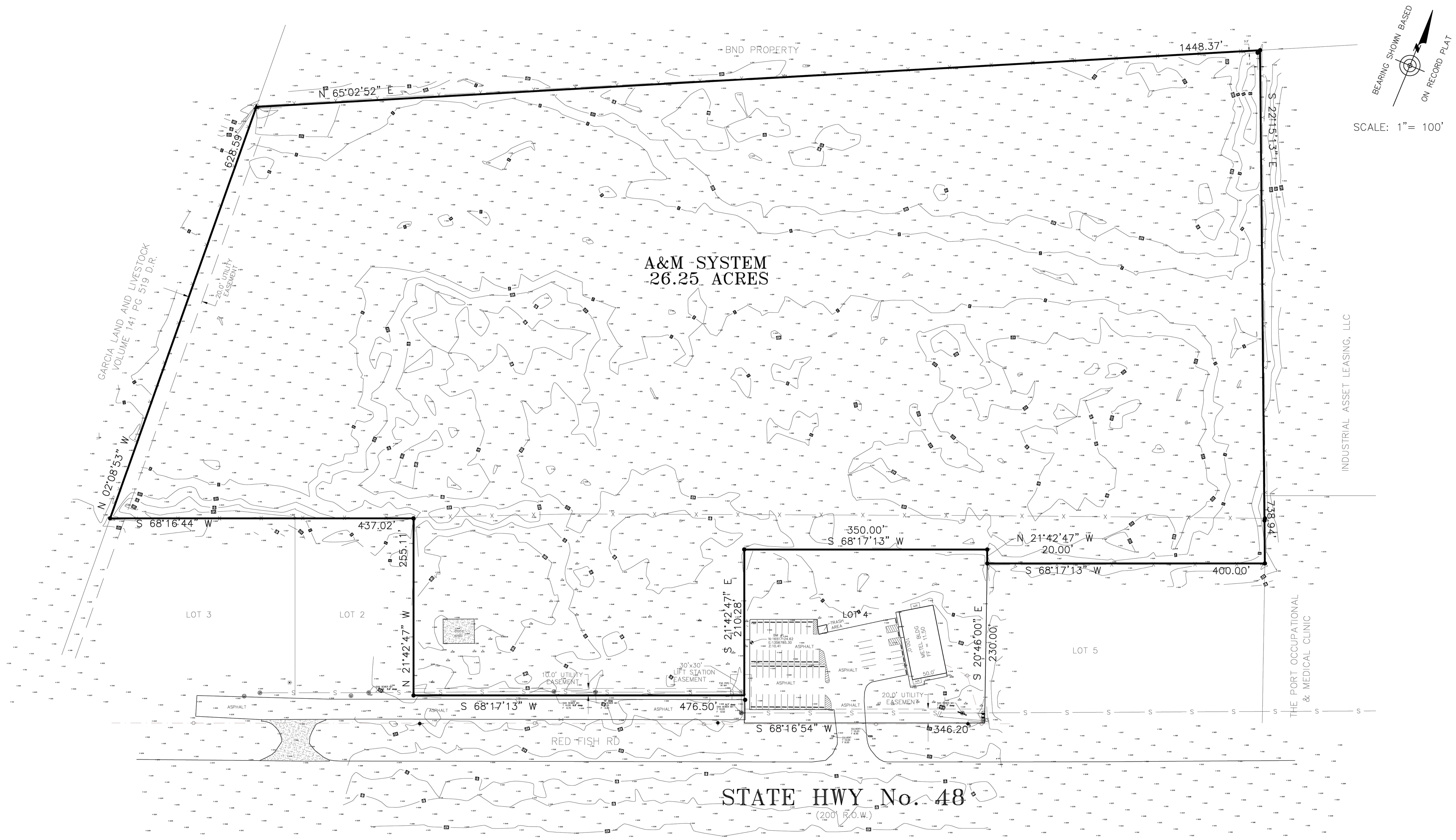
SHEET 1



LEGEND

- FENCE
- FIRE HYDRANT
- SEWER MANHOLE
- PVC ABOVE GROUND
- TOP OF CULVERT
- SAN SEWER LINE
- WATER METER
- WATER VALVE
- FD ROD
- POWER POLE
- OVERHEAD POWER LINE
- SET NAIL - BENCHMARK
- FND SPIKE

TOPOGRAPHIC SURVEY FOR
LOT 4 AND
A 26.25 ACRE TRACT OF LAND
SAN MARTIN GRANT
CAMERON COUNTY, TEXAS

STATE OF TEXAS REGISTERED PROFESSIONAL LAND SURVEYOR JOSE MARIO GONZALEZ 5571

12-18-24

RIO DELTA SURVEYING
24593 FM 88, MONTE ALTO, TX 78538
(TEL) 956-262-0222
EMAIL: MARIO@RIODELTASURVEYING.COM
T.B.P.L.S. FIRM # 10013900

JOB NUMBER
RIO 24 261

EXISTING SURVEY

FOR REFERENCE ONLY

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CAMERON COUNTY, TEXAS

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GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE TO FURNISH ALL MATERIALS AND LABOR TO CONSTRUCT THE FACILITY AS SHOWN AND DESCRIBED IN THE CONSTRUCTION DOCUMENTS IN ACCORDANCE WITH THE APPROPRIATE APPROVING AUTHORITIES, SPECIFICATIONS AND REQUIREMENTS. ALL WORK REQUIRED BY THESE PLANS SHALL BE CONDUCTED IN CONFORMANCE WITH CURRENT SAFETY CODES AND STANDARDS WITH JURISDICTION OVER THIS PROJECT.

2. CONTRACTOR TO DEMOLISH AND REMOVE (AT HIS EXPENSE) ANY EXISTING HINDRANCES INCLUDING, BUT NOT LIMITED TO: STRUCTURES, IRRIGATION LINES, UTILITIES, TREES, SHRUBS AND/OR CONCRETE WORK NECESSARY TO COMPLETE NEW SITE WORK AND UTILITY LINES.

3. THE CONTRACTOR SHALL CONTACT ALL FRANCHISE UTILITY COMPANIES TO HAVE THEM LOCATE EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATION AND DEPTH OF ALL FRANCHISE UTILITY SERVICES AND ANY REQUIRED RELOCATION AND/OR EXTENSIONS. SERVICES SHOWN ON THE PLANS, IF ANY, ARE CONCEPTUAL.

4. THE CONTRACTOR SHALL PROTECT ALL PUBLIC AND PRIVATE UTILITIES IN THE CONSTRUCTION OF THIS PROJECT. ALL MANHOLES, CLEANOUTS, VALVE BOXES, POWER POLES, SIGNS, FIRE HYDRANTS, ETC., MUST BE ADJUSTED TO PROPER GRADE BY THE CONTRACTOR PRIOR TO AND AFTER PLACING OF PERMANENT PAVING. UTILITIES MUST BE MAINTAINED TO PROPER LINE AND GRADE DURING CONSTRUCTION OF THE PAVING FOR THIS PROJECT.

5. BRACING OF UTILITY POLES MAY BE REQUIRED BY UTILITY COMPANIES WHEN TRENCHING OR EXCAVATION IS IN CLOSE PROXIMITY TO THE POLES. THE COST OF BRACING POLES WILL BE BORNE BY THE CONTRACTOR. THERE IS NO SEPARATE PAY ITEM FOR THIS WORK. THE COST IS INCIDENTAL TO THE VARIOUS PAY ITEMS FOR INSTALLATION OF PIPE.

6. THE LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES SHOWN ON THE PLANS WERE OBTAINED FROM AVAILABLE RECORDS AND ARE CONSIDERED APPROXIMATE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS, ELEVATIONS, AND DIMENSIONS OF ADJACENT AND/OR CONFLICTING UTILITIES SUFFICIENTLY IN ADVANCE OF CONSTRUCTION IN ORDER THAT ADJUSTMENTS CAN BE MADE TO PROVIDE ADEQUATE CLEARANCES. THE CONTRACTOR SHALL PRESERVE AND PROTECT PUBLIC UTILITIES AT ALL TIMES DURING CONSTRUCTION. ANY DAMAGE TO UTILITIES RESULTING FROM CONTRACTOR'S OPERATIONS SHALL BE RESTORED AT THE CONTRACTOR'S EXPENSE. THE ENGINEER SHALL BE NOTIFIED WHEN PROPOSED FACILITY GRADES CONFLICT WITH EXISTING UTILITY GRADES.

7. THE CONTRACTOR SHALL IMMEDIATELY REPAIR OR REPLACE ANY PHYSICAL DAMAGE TO PRIVATE PROPERTY, INCLUDING, BUT NOT LIMITED TO SIDEWALKS, FENCES, WALLS, PAVEMENT, GRASS, TREES, AND LAWN SPRINKLER AND IRRIGATION SYSTEMS AT NO COST TO THE OWNER. THIS WORK SHALL BE SUBSIDIARY TO THE CONTRACT (UNLESS OTHERWISE NOTED) AND IS NOT A SEPARATE PAY ITEM.

8. THE CONTRACTOR SHALL REMOVE SURPLUS MATERIAL FROM THE PROJECT AREA. THIS WORK SHALL BE SUBSIDIARY TO THE CONTRACT AND IS NOT A SEPARATE PAY ITEM.

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION.

10. THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE AT ALL TIMES A COPY OF THE CONTRACT DOCUMENTS INCLUDING PLANS, SPECIFICATIONS, AND SPECIAL CONDITIONS, COPIES OF ANY REQUIRED CONSTRUCTION PERMITS, EROSION CONTROL PLANS, SWPPP AND INSPECTION REPORTS.

11. ANY DISCREPANCIES ON THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF ENGINEER BEFORE COMMENCING AREA. NO FIELD CHANGES OR DEVIATIONS FROM DESIGN SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE OWNER AND NOTIFICATION TO THE ENGINEER. NO CONSIDERATION WILL BE GIVEN TO CHANGE ORDERS FOR WHICH THE OWNER AND ENGINEER WERE NOT CONTACTED PRIOR TO CONSTRUCTION OF THE AFFECTED ITEM.

12. ALL COPIES OF COMPACTION, CONCRETE AND OTHER REQUIRED TEST RESULTS SHALL BE SENT TO THE CIVIL ENGINEER, CONTRACTOR AND OWNER DIRECTLY FROM THE TESTING AGENCY.

13. CONTRACTOR SHALL VERIFY BENCHMARKS AND DATUM PRIOR TO COMMENCING CONSTRUCTION OR STAKING OF IMPROVEMENTS.

4. AS DELEGATED DESIGN, THE CONTRACTOR IS RESPONSIBLE FOR THE ELECTRICAL PUMP CONTROL PANEL AND DESIGN AS WELL AS PROVIDING POWER TO LIFTSTATION.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF DUST AND DIRT RISING AND SCATTERING IN THE AIR DURING CONSTRUCTION AND SHALL PROVIDE WATER SPRINKLING OR OTHER SUITABLE METHODS OF CONTROL. THE CONTRACTOR SHALL COMPLY WITH ALL GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION.

6. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE THE CIVIL ENGINEER A COPY OF RECORD DRAWINGS IDENTIFYING ALL DEVIATIONS OR VARIATIONS FROM THE ORIGINAL PLANS.

7. CONTRACTOR SHALL GIVE NOTICE TO ALL AFFECTED PARTIES AND ALL AUTHORIZED INSPECTORS, SUPERINTENDENTS, OR PERSONS IN CHARGE OF PRIVATE AND PUBLIC UTILITIES AFFECTED BY HIS OPERATIONS, AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF WORK.

8. ALL "RECORD" DIMENSIONS SHALL CONFORM TO THE DESIGN DIMENSIONS PLUS OR MINUS 0.02 FEET. ALL "RECORD" SLOPES SHALL CONFORM TO THE DESIGNED SLOPES PLUS OR MINUS 0.005 FOOT/FOOT.

9. CONTRACTOR SHALL CONTACT ENTITY HAVING JURISDICTION BUILDING OFFICIAL TO LEARN OF ANY UNUSUAL CONSTRUCTION SEQUENCING REQUIREMENTS THAT THE ENTITY HAVING JURISDICTION MAY REQUIRE. THE CONTRACTOR IS CAUTIONED THAT THIS AND PERHAPS OTHER SUCH REQUIREMENTS MAY EXIST AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO INVESTIGATE AND COMPLY WITH THEM.

SANITARY SEWER NOTES

1. EXISTING UTILITY DATA IS PROVIDED FOR INFORMATION ONLY. ALTHOUGH THIS DATA IS SHOWN AS ACCURATELY AS POSSIBLE, THE CONTRACTOR IS CAUTIONED THAT THE DEVELOPER AND THE ENGINEER NEITHER ASSUMES NOR IMPLIES ANY RESPONSIBILITY FOR THE ACCURACY OF THIS DATA.

2. WHEN CONNECTING TO NEW LIFT STATION, THE CONTRACTOR SHALL PROVIDE ALL NECESSARY FITTINGS, ADAPTERS, REDUCERS, ETC. TO SUCCESSFULLY MAKE A WATERTIGHT CONNECTION.

3. TRENCHES WHICH LAY OUTSIDE EXISTING OR FUTURE PAVEMENTS SHALL BE BACK FILLED IN ACCORDANCE WITH LOCAL STANDARDS:

   A SAND BEDDING PLACED BEFORE PIPE IS LAID UP TO FLOW LINE OF PIPE (MIN. THICKNESS = 6")
   B SAND BACKFILL PLACED AFTER PIPE IS LAID FROM BOTTOM OF PIPE TO SPRING LINE OF PIPE (4" LIFTS, HAND TAMPED).
   C SAND BACKFILL PLACED FROM SPRING LINE OF PIPE TO 6" ABOVE TOP OF PIPE (6" LIFTS, HAND TAMPED).
   D SAND BACKFILL, CLASS "A" (6" LIFTS, MECHANICAL COMPACTION).
   E EARTH BACKFILL, CLASS "B" (12" LIFTS, MECHANICAL COMPACTION).

   FOUNDATION PREPARATION (WELLPOINTS, GRAVEL OR CEMENT STABILIZATION, OR APPROVED SUBSTITUTE) SHALL BE REQUIRED WHEN TRENCH BOTTOM IS UNSTABLE.

   BACKFILLING AT STRUCTURES SHALL BE PLACED IN UNIFORM LAYERS, MOISTENED AS REQUIRED TO APPROXIMATE OPTIMUM MOISTURE CONTENT, AND COMPACTED TO 95% STD. PROCTOR DENSITY. THE THICKNESS OF EACH LOOSE LAYER SHALL NOT EXCEED 6". STRUCTURE BACKFILL MATERIAL SHALL BE SAND, APPROVED SITE SOIL, OR OTHER APPROVED SUBSTITUTE.

   OR TxDOT ITEM 400 EXCAVATION AND BACKFILL FOR STRUCTURES.

4. ALL FLEXIBLE SANITARY SEWER MAINS SHALL BE TESTED WITH STANDARD 5% DEFLECTION MANDREL.

5. ALL SANITARY SEWER LINES SHALL BE CAPPED WITH AN APPROPRIATE CAP AT THE END OF EACH WORKDAY.

6. WHEN EXISTING GRADES ARE LOWER THAN PROPOSED MAINS, THE FILL AREA OVER THE PIPE SHALL BE FILLED AND COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY TO THE PROPOSED FINISHED GRADE PRIOR TO INSTALLING ANY MAIN.

7. ALL VARIED SEWER LINES SHALL BE CONSTRUCTED OF C900 DR26 PIPE.

STRUCTURAL FILL NOTES

1. STRUCTURAL AND GENERAL FILL SHOULD CONSIST OF APPROVED MATERIALS FREE OF ORGANIC MATTER AND DEBRIS. A SAMPLE OF EACH MATERIAL TYPE SHOULD BE SUBMITTED TO THE GEOTECHNICAL ENGINEER FOR EVALUATION PRIOR TO USE ON THIS SITE. ADDITIONAL GEOTECHNICAL CONSULTATION SHOULD BE PROVIDED PRIOR TO THE USE OF UNIFORMLY GRADED GRAVEL ON THE SITE.

2. CRUSHED LIMESTONE AND CRUSHED CONCRETE MATERIAL SHOULD MEET THE REQUIREMENTS OF 2024 TXDOT ITEM 247, TYPE A, OR D, GRADE 1-2 OR 3. THE STRUCTURAL FILL MATERIALS SHOULD BE FREE OF ORGANIC MATERIAL AND DEBRIS AND SHOULD NOT CONTAIN STONES LARGER THAN 2 INCHES IN THE MAXIMUM DIMENSION. THE CLAYEY GRAVEL MATERIALS SHOULD MEET THE GRADATION REQUIREMENTS OF ITEM 247, TYPE B, GRADE 1-2 OR 3 AND/OR TYPE E (CALICHE) GRADE 4 AS SPECIFIED IN THE 2024 TXDOT STANDARD SPECIFICATIONS MANUAL AND A PLASTICITY INDEX BETWEEN 7 AND 20.

3. FLOWABLE FILL SHOULD HAVE A 28-DAY STRENGTH BETWEEN 80 AND 200 PSI AND MEET THE REQUIREMENTS FOR 2024 TXDOT ITEM 401. ALTHOUGH USUALLY MORE COSTLY, FLOWABLE FILL DOES NOT REQUIRE PLACEMENT IN LIFTS OR MECHANICAL COMPACTION.

4. CEMENT-STABILIZED BACKFILL SHOULD CONSIST OF NON-PLASTIC SAND OR CALICHE AS AGGREGATE WITH A MINIMUM OF 2 SACKS OF TYPE I PORTLAND CEMENT PER CUBIC YARD BASED ON THE DRY WEIGHT OF THE AGGREGATE OR AS INDICATED BY LOCAL STANDARDS. NO MIXING WILL BE ALLOWED ON THE PROJECT SITE SURFACE.

5. 95% OF MDD BELOW FOUNDATIONS AND WITHIN 1 FOOT OF FINISHED PAVEMENT SUBGRADE

6. 95% OF MDD ABOVE FOUNDATIONS, BELOW CONCRETE SLABS, AND MORE THAN 1 FOOT BELOW FINISHED PAVEMENT SUBGRADE

EROSION CONTROL NOTES

1. THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL EROSION, CONSERVATION, AND SILTATION ORDINANCES. THE CONTRACTOR SHALL USE SEDIMENT FILTERS OR OTHER MEASURES APPROVED BY THE ENGINEER AND CONSTRUCTION MANAGER TO PREVENT SILT AND CONSTRUCTION DEBRIS FROM CLOGGING STORM SEWER PIPES OR PROPOSED OR EXISTING INLETS, OR FROM BEING TRANSPORTED TO ADJACENT PROPERTIES AND STREET RIGHT-OF-WAYS. ALL EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO SITE DISTURBANCE AND SHALL REMAIN IN PLACE UNTIL FINAL GRADING AND PAVING IS COMPLETE AND PERMANENT SOIL STABILIZATION IS ACHIEVED.

2. CONSTRUCTION OPERATIONS SHALL BE MANAGED SO THAT AS MUCH OF THE SITE AS POSSIBLE IS LEFT COVERED WITH EXISTING TOPSOIL AND VEGETATION.

3. ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED AREA. THE AREAS SHALL THEN BE SEEDED (OR SODDED), IRRIGATED, AND MAINTAINED UNTIL PERMANENT STAND OF GRASS IS ACHIEVED WITH A MINIMUM OF 70% COVERAGE. UNLESS OTHERWISE NOTED, PRIVATE LAWN AREAS AND PARKWAYS IN FRONT OF PRIVATE LAWN AREAS DISTURBED BY CONSTRUCTION SHALL BE REPLACED WITH BLOCK SOD SIMILAR TO THAT EXISTING.

4. CONTRACTOR SHALL CONSTRUCT A STABILIZED CONSTRUCTION ENTRANCE AT ALL PRIMARY POINTS OF ACCESS. CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL CONSTRUCTION TRAFFIC UTILIZES THE STABILIZED ENTRANCE AT ALL TIMES FOR INGRESS/EGRESS TO THE SITE.

5. CONSTRUCTION ENTRANCE:
   - MINIMUM SIZE STONE: 5-INCHES DIAMETER
   - THICKNESS: NOT LESS THAN 8-INCHES
   - LENGTH: AS SHOWN ON PLAN
   - WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS AND EGRESS.
   - MAINTENANCE REQUIREMENTS: AS NECESSARY TO PREVENT TRACKING OR FLOWING MUD INTO PUBLIC RIGHT-OF-WAY OR PARKING AREAS.

6. SITE ENTRY AND EXIT LOCATIONS SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAYS. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ON A PUBLIC ROADWAY SHALL BE REMOVED IMMEDIATELY. WHEN WASHING IS REQUIRED TO REMOVE SEDIMENT PRIOR TO ENTRANCE TO A PUBLIC ROADWAY, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT BASIN. ALL FINES IMPOSED FOR TRACKING ONTO PUBLIC ROADS SHALL BE PAID BY THE CONTRACTOR.

7. CONTRACTOR IS RESPONSIBLE FOR PROPER MAINTENANCE OF THE REQUIRED EROSION CONTROL DEVICES THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS. EROSION CONTROLS SHALL BE REPAIRED OR REPLACED AS INSPECTION DEEMS NECESSARY, OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE. ACCUMULATED SILT IN ANY EROSION CONTROL DEVICE SHALL BE REMOVED AND SHALL BE DISTRIBUTED ON SITE IN A MANNER NOT CONTRIBUTING TO ADDITIONAL SILTATION. THE CONTRACTOR IS RESPONSIBLE FOR RE-ESTABLISHING ANY EROSION CONTROL DEVICE WHICH IS DISTURBED.

8. THE CONTRACTOR SHALL MAINTAIN ADEQUATE SITE DRAINAGE DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL USE FILTER BARRIER (OR OTHER METHOD APPROVED BY THE ENGINEER AND ENTITY HAVING JURISDICTION) AS REQUIRED TO PREVENT ADVERSE OFF SITE IMPACTS OR STORM WATER QUALITY FROM SILT AND CONSTRUCTION DEBRIS FLOWING ONTO ADJACENT PROPERTIES AS REQUIRED BY THE ENTITY HAVING JURISDICTION.

9. BEFORE ANY EARTHWORK IS DONE, THE CONTRACTOR SHALL STAKE OUT AND MARK THE LIMITS OF CONSTRUCTION AND OTHER ITEMS ESTABLISHED BY THE AREA THE CONTRACTOR SHALL PROTECT AND PRESERVE CONTROL POINTS AT ALL TIMES DURING THE COURSE OF THE PROJECT. THE GRADING CONTRACTOR SHALL PROVIDE ALL NECESSARY ENGINEERING AND SURVEYING FOR LINE AND GRADE CONTROL POINTS RELATED TO EARTHWORK.

10. CONTRACTOR STAGING AREA TO BE AGREED UPON BY OWNER PRIOR TO BEGINNING CONSTRUCTION.

11. THE CONTRACTOR MUST REVIEW AND MAINTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN WITH ALL CONDITIONS, ATTACHMENTS, EXHIBITS, AND PERMIT MODIFICATIONS IN GOOD CONDITION AT THE CONSTRUCTION SITE. THE COMPLETE PERMIT MUST BE AVAILABLE FOR REVIEW UPON REQUEST BY THE T.C.E.Q. OR THE GOVERNING ENTITY HAVING JURISDICTION.

GRADING NOTES

1. IF A GRADING PERMIT IS REQUIRED FROM THE ENTITY HAVING JURISDICTION PRIOR TO STARTING CONSTRUCTION, CONTRACTOR IS RESPONSIBLE FOR OBTAINING PERMIT AND PAYING ALL ASSOCIATED FEES.

2. CONTRACTOR SHALL FIELD VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING UTILITIES (SHOWN OR NOT SHOWN) WITHIN SCOPE OF CONSTRUCTION. IF ANY EXISTING UTILITIES ARE DAMAGED, THE CONTRACTOR SHALL REPLACE THEM AT HIS OWN EXPENSE.

3. ALL SPOT ELEVATIONS SHOWN ARE TO TOP OF PAVING SURFACE OR FINISHED GRADE UNLESS NOTED OTHERWISE.

4. CONTRACTOR TO ENSURE POSITIVE DRAINAGE FROM THE EXISTING AND PROPOSED BUILDINGS AND NO PONDING IN PAVED AREAS. CONTRACTOR ADJUSTMENTS TO SPOT GRADES TO MAINTAIN POSITIVE DRAINAGE IS ALLOWED WITH THE PRIOR APPROVAL OF THE ENGINEER. CONTRACTOR SHALL CONTACT THE ENGINEER PRIOR TO PAVING IF ANY AREAS OF POOR DRAINAGE ARE ENCOUNTERED.

5. THE CONTRACTOR SHALL PROTECT ALL MANHOLE COVERS, VALVE COVERS, VAULT LIDS, FIRE HYDRANTS, POWER POLES, GUY WIRES, AND TELEPHONE BOXES WHICH ARE TO REMAIN IN PLACE AND UNDISTURBED DURING CONSTRUCTION.

6. ALL CLEARING, GRADING, COMPACTION AND SUBGRADE PREPARATION SHALL BE IN ACCORDANCE TO THE GRADING AND DRAINAGE PLANS AND SPECIFICATIONS. PRIOR TO PLACING FILL, THE CONSTRUCTION AREAS SHOULD BE STRIPPED OF EXISTING VEGETATION, TOPSOIL, AND OTHER UNSUITABLE MATERIAL IN THE PROPOSED BUILDING AREA. ADDITIONAL EXCAVATION AS RECOMMENDED IN THIS REPORT OR AS NEEDED SHOULD BE PERFORMED WITHIN THE PROPOSED CONSTRUCTION AREA. ONCE FINAL SUBGRADE ELEVATION HAS BEEN ACHIEVED, THE EXPOSED SUBGRADE SHOULD BE CAREFULLY PROOFROLLED WITH A 15-TON PNEUMATIC ROLLER OR A FULLY LOADED DUMP TRUCK TO DETECT WEAK ZONES IN THE SUBGRADE. SPECIAL CARE SHOULD BE EXERCISED WHEN PROOFROLLING THE FILL SOILS TO DETECT SOFT/WEAK AREAS. WEAK AREAS DETECTED DURING PROOFROLLING SHOULD BE REMOVED AND REPLACED WITH SELECT FILL IN THE PROPOSED BUILDING AREA. PROPER SITE DRAINAGE SHOULD BE MAINTAINED DURING CONSTRUCTION, SO THAT PONDING OF SURFACE RUNOFF DOES NOT OCCUR AND CAUSE CONSTRUCTION DELAYS AND/OR INHIBIT SITE ACCESS.AFTER PROOFROLLING, AND JUST PRIOR TO PLACEMENT OF FILL, THE EXPOSED SUBGRADE WITHIN THE CONSTRUCTION AREAS SHOULD BE EVALUATED FOR MOISTURE AND DENSITY. IF THE MOISTURE, DENSITY, AND/OR THE REQUIREMENTS DO NOT MEET THE CRITERIA DESCRIBED IN THE TABLE BELOW, THE SUBGRADE SHOULD BE SCARIFIED TO A MINIMUM DEPTH OF 10 INCHES, MOISTURE ADJUSTED AND COMPACTED TO AT LEAST 95 PERCENT OF THE STANDARD EFFORT (ASTM D 698) MAXIMUM DRY DENSITY.

7. GRADING CONTRACTOR TO COORDINATE WITH THE FRANCHISE UTILITY COMPANIES FOR ANY REQUIRED UTILITY ADJUSTMENTS AND/OR RELOCATIONS.

8. THE CONTRACTOR SHALL CALCULATE HIS OWN EARTHWORK QUANTITIES AND USE TO DETERMINE HIS BID ACCORDINGLY.

TEXAS 811 CALL BEFORE YOU DIG

SURVEY CONTROL POINT 1

DESCRIPTION	NORTHING	EASTING
ROD	16517110.33	1356266.42

SURVEY CONTROL POINT 2

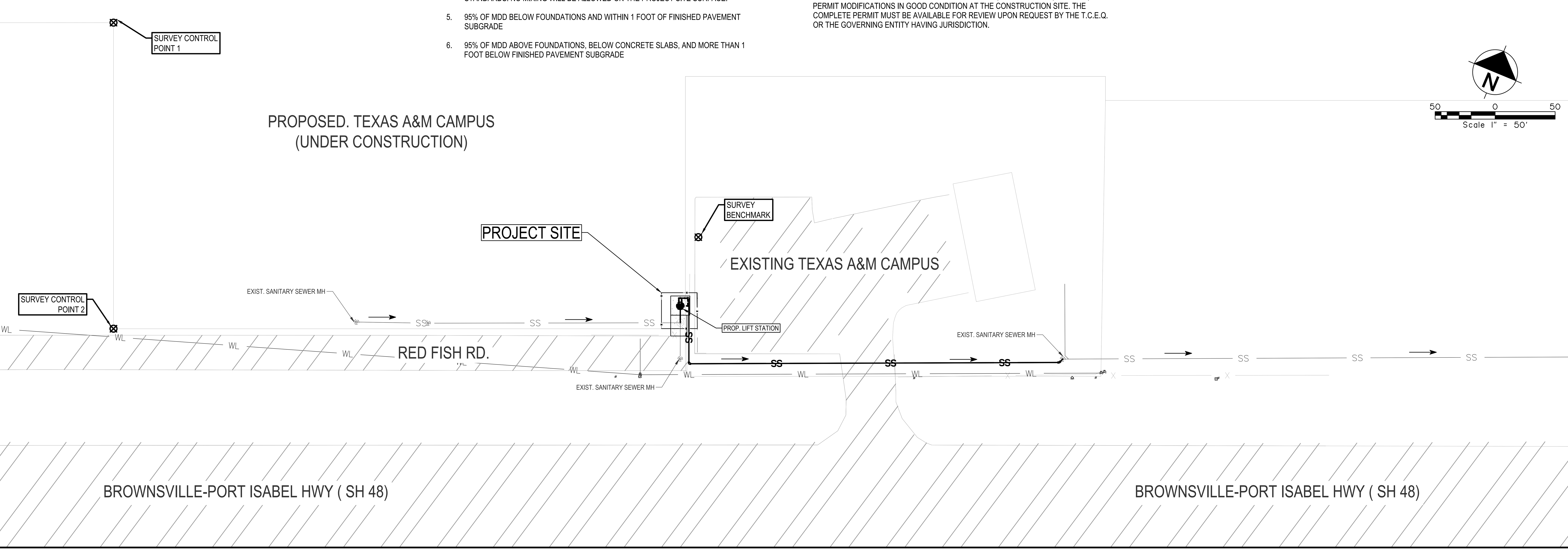
DESCRIPTION	NORTHING	EASTING
ROD	16516873.46	1356360.84

SURVEY BENCHMARK

DESCRIPTION	NORTHING	EASTING	ELEVATION
PK NAIL	16517124.62	1356785.30	10.41

SURVEY CONTROL NOTE:

1. VERTICAL AND HORIZONTAL CONTROL HAVE BEEN PROVIDED TO THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE TO DO ALL HIS CONSTRUCTION AND LAYOUT FIELD STAKING. ALL LAYOUT RELATIVE TO PROPERTY LINES SHALL BE DONE BY A REGISTERED PROFESSIONAL LAND SURVEYOR, LICENSED TO PRACTICE IN THE STATE OF TEXAS.



J. DAVID PEREZ
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LICENSED PROFESSIONAL ENGINEER
1-7-26

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CAMERON COUNTY, TEXAS

TEXAS A&M LIFT STATION

CITY OF BROWNSVILLE, TEXAS

GENERAL NOTES

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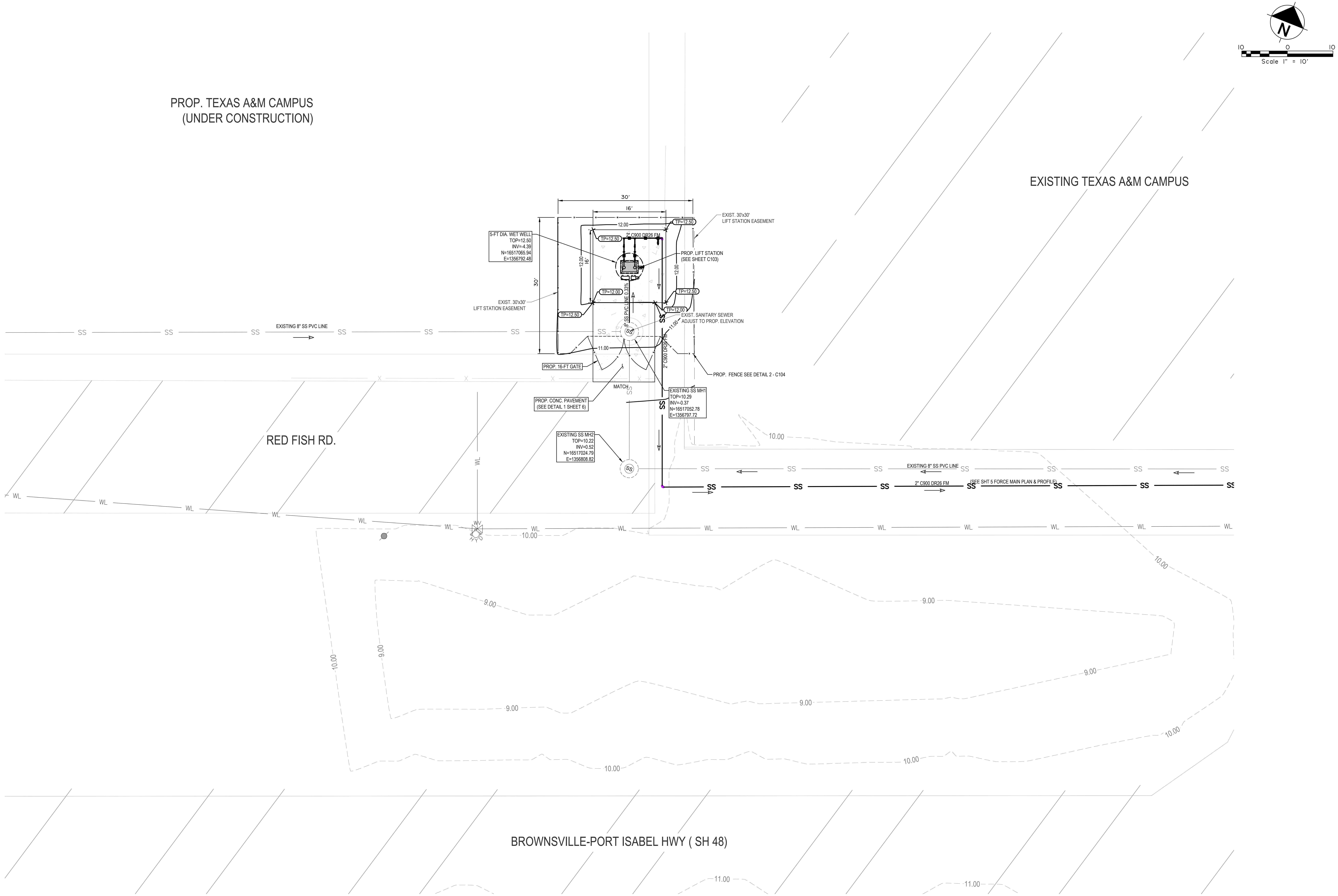

STATE OF TEXAS
J. DAVID PEREZ
89429
LICENSED
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1-7-26

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CAMERON COUNTY, TEXAS

TEXAS A&M LIFT STATION

CITY OF BROWNSVILLE, TEXAS

LIFT STATION SITE PLAN

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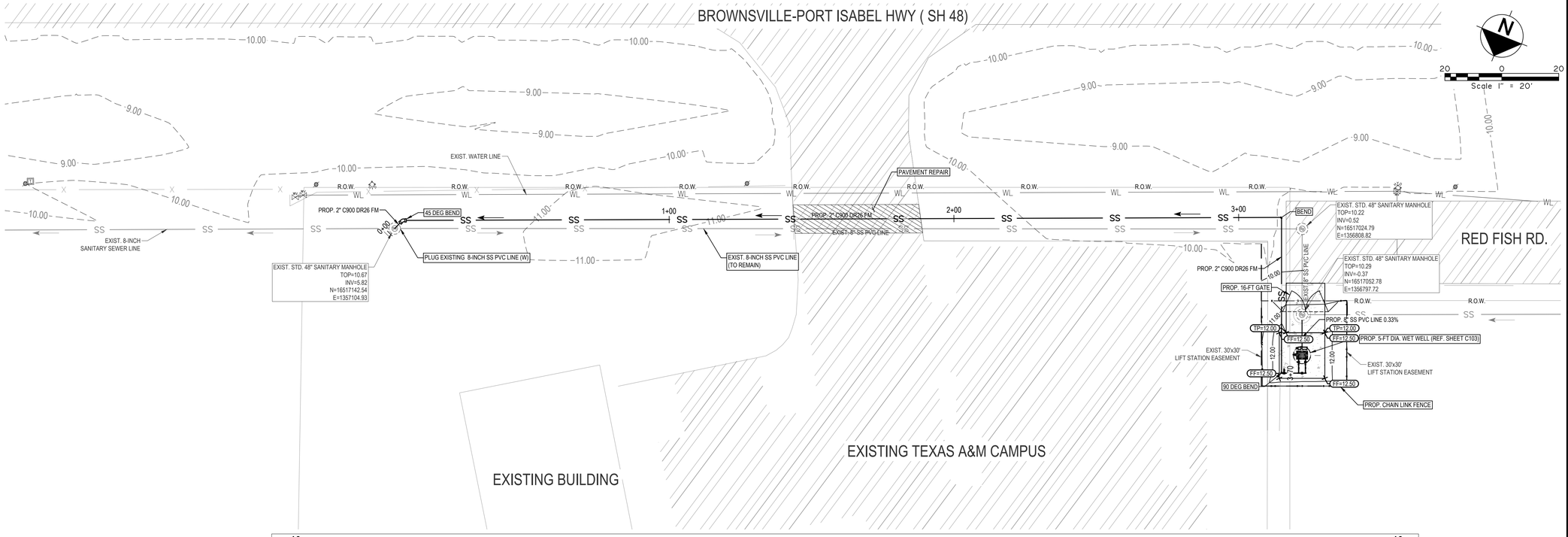

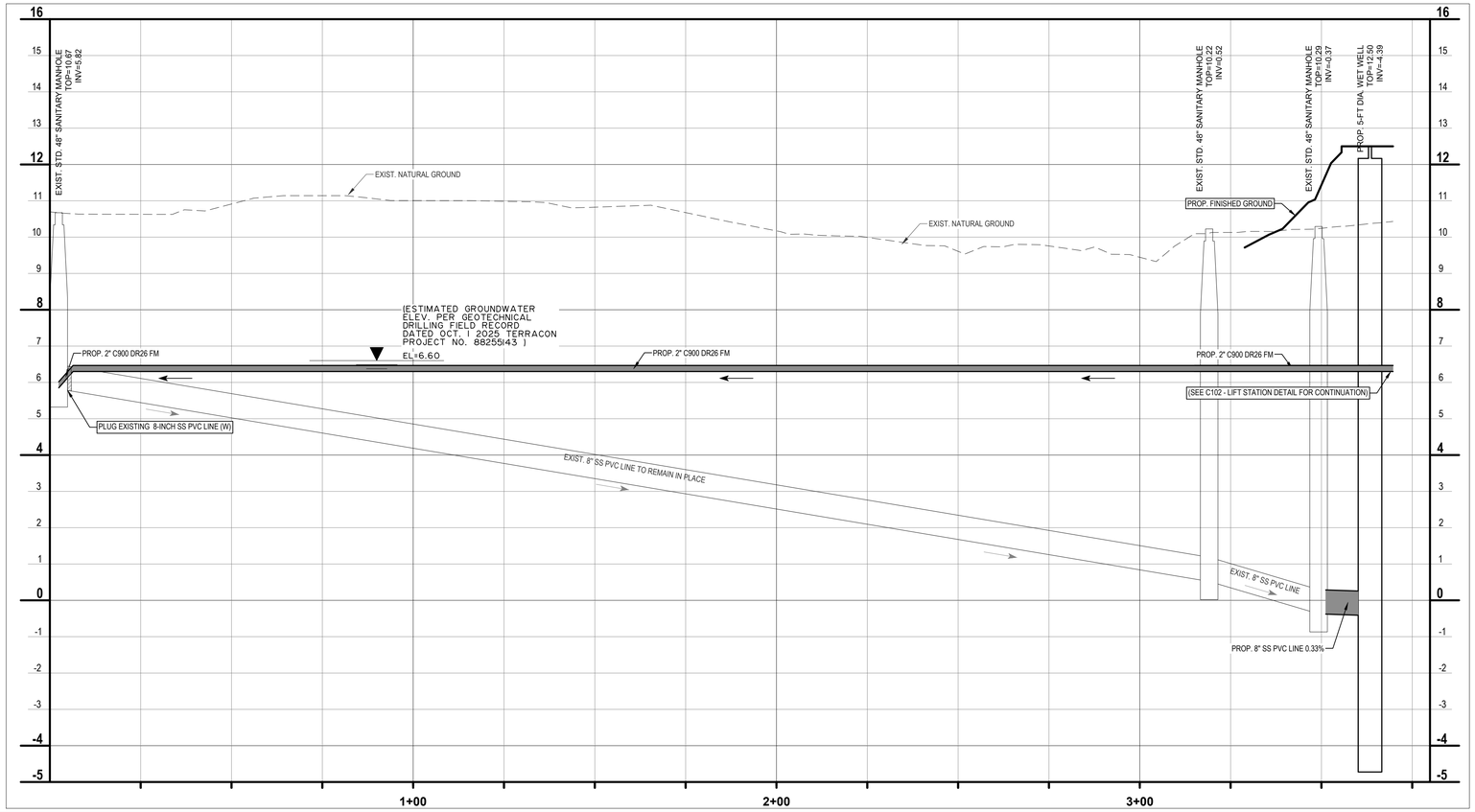

CAMERON COUNTY, TEXAS

TEXAS A&M LIFT STATION

CITY OF BROWNSVILLE, TEXAS

FORCE MAIN PLAN AND PROFILE

L. DAVID PEREZ 89429 LICENSED PROFESSIONAL ENGINEER 1-7-26

PCE Texas Registered Engineering Firm, F-2158 800 Dockum Ave. McAllen, Texas 78501 (956) 631-4402 Fax (956) 682-1545

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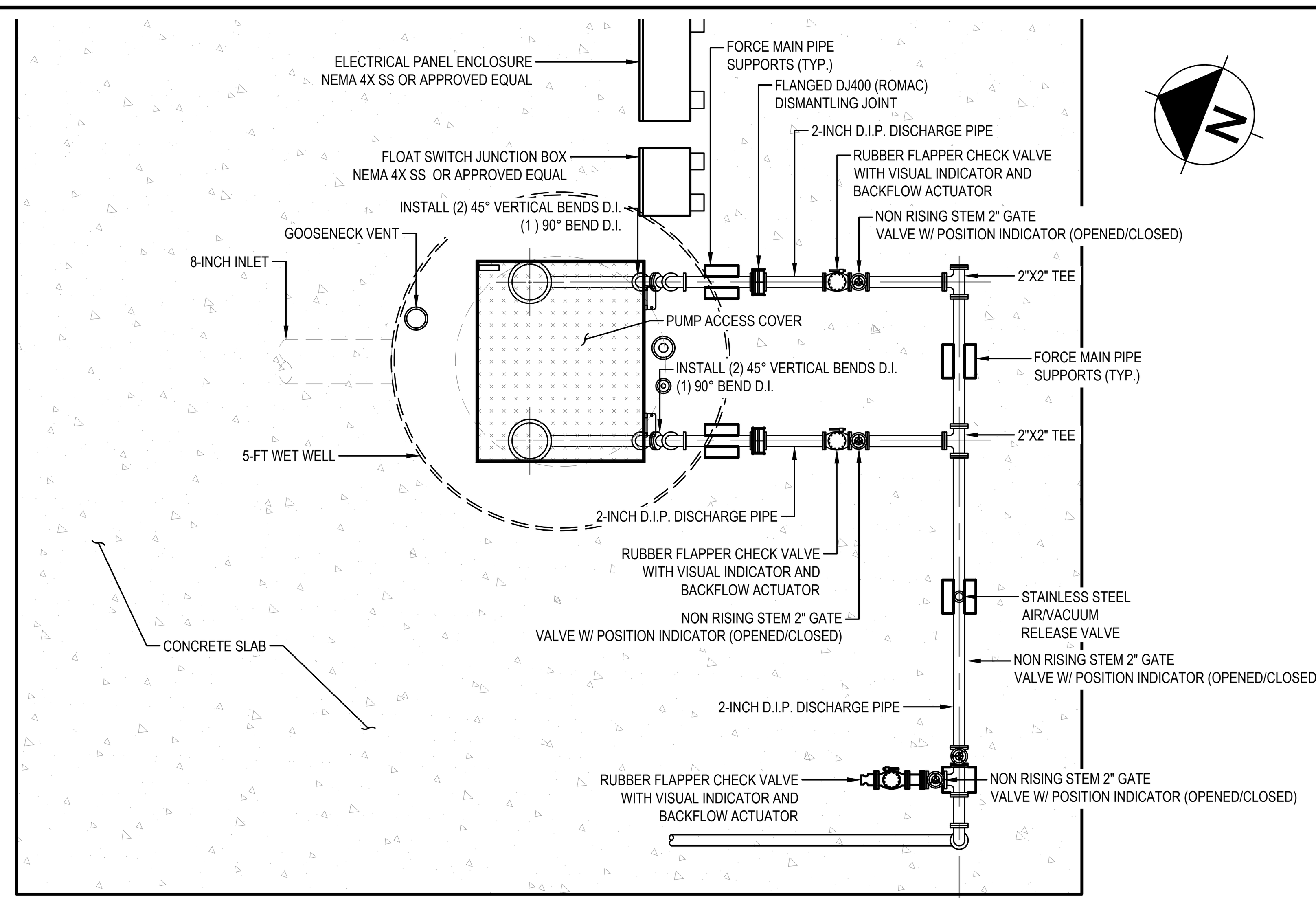
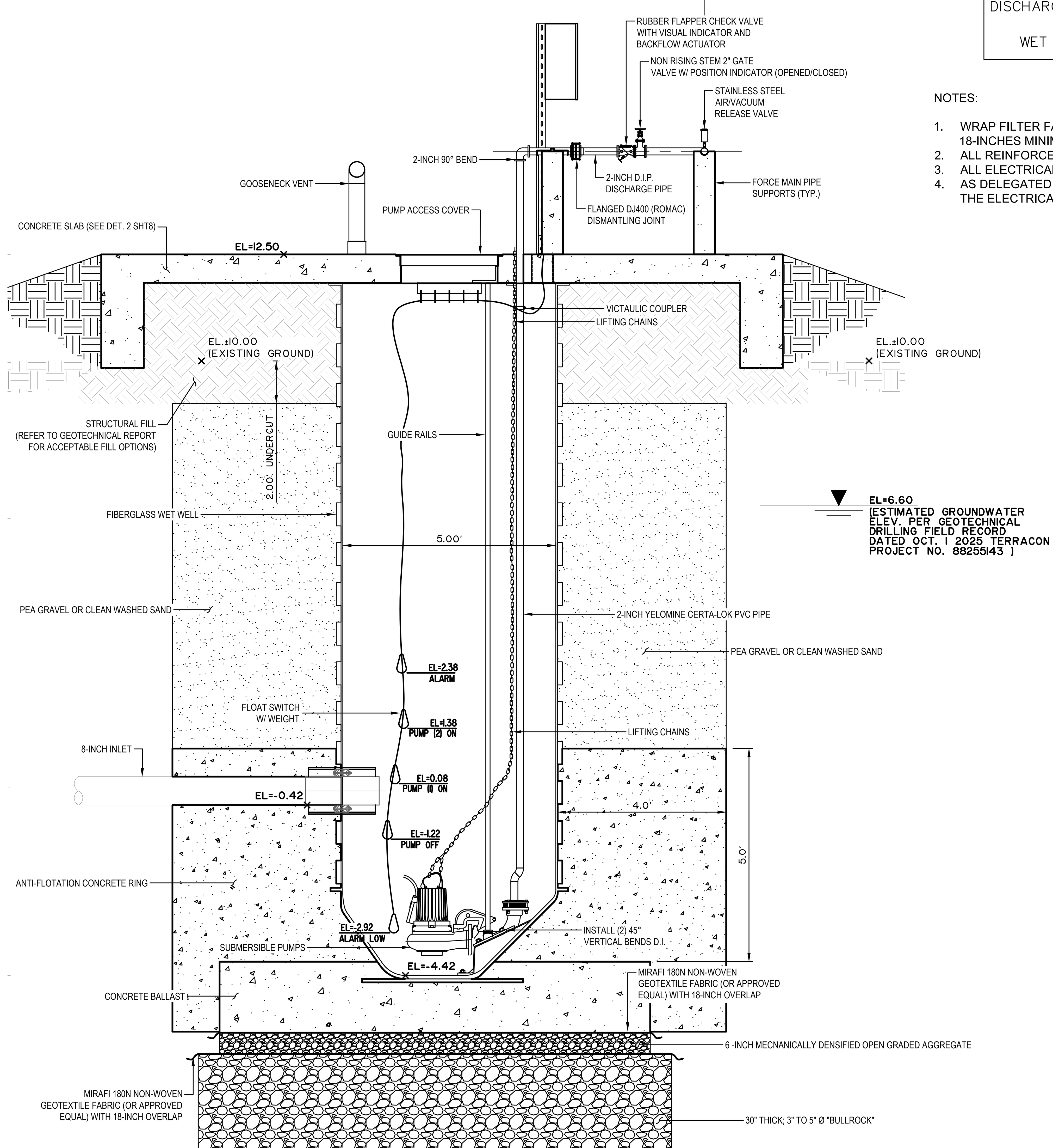
SHEET 5

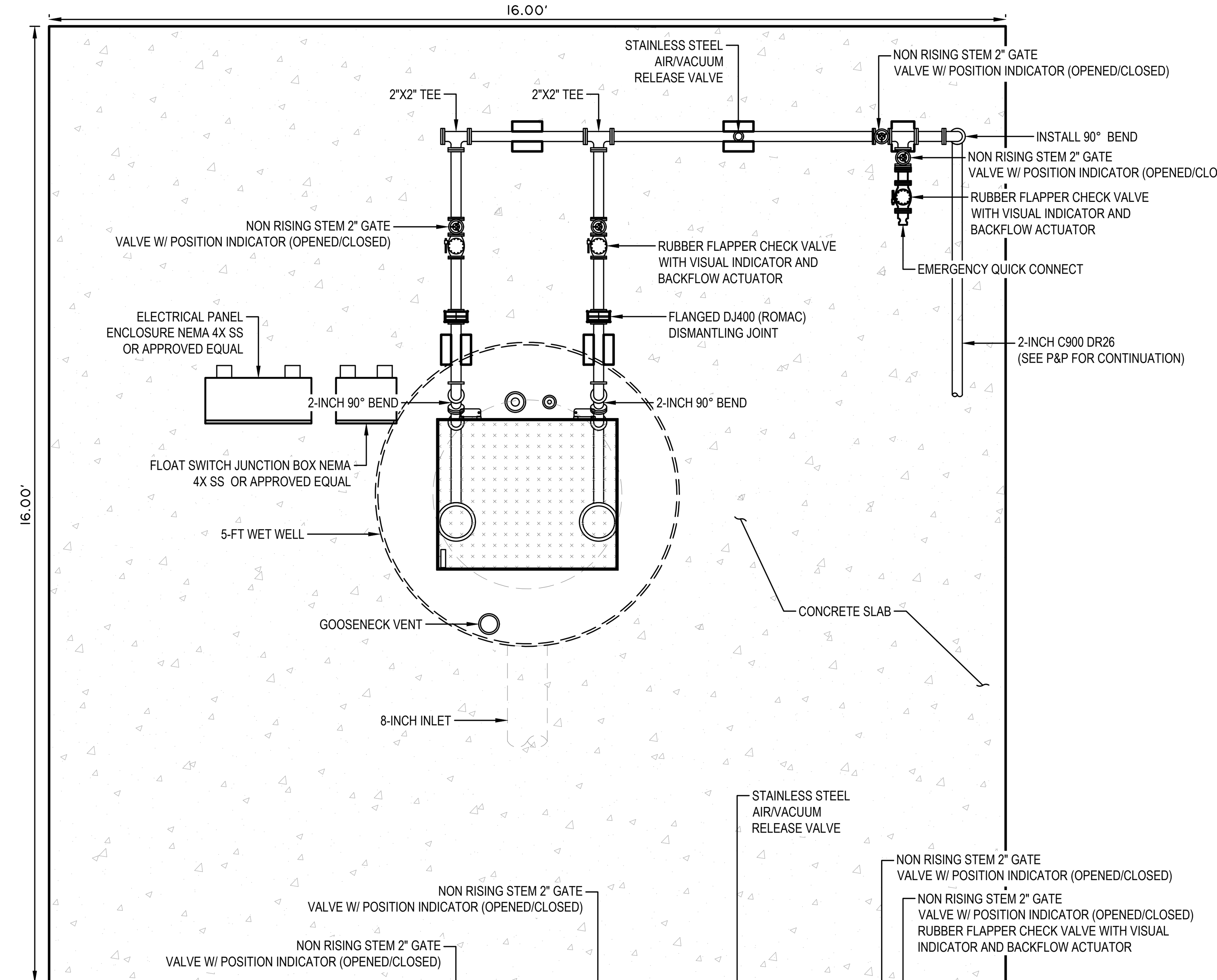


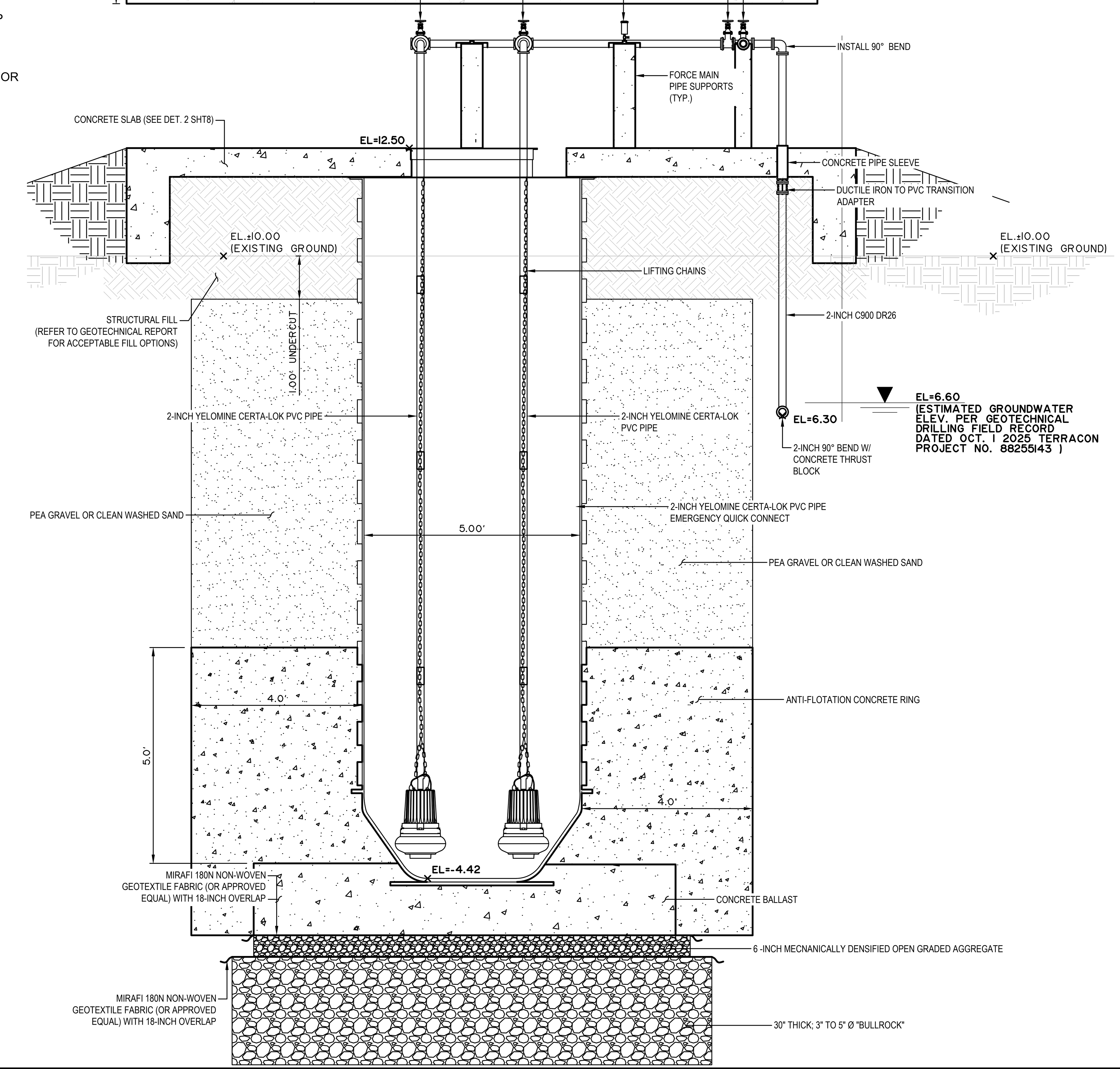


FLYGT MP 3069 HT 3 – 258 PACKAGE SYSTEM (OR APPROVED EQUAL)
PUMP No.1
TOTAL DYNAMIC HEAD : 47.52
PEAK FLOW : 60
AVG FLOW : 29
PUMP No.2
TOTAL DYNAMIC HEAD : 47.52
PEAK FLOW : 60
AVG FLOW : 29
STATION DIAMETER : 5 FT
STATION HEIGHT : 16.92 FT
PUMP DISCHARGE SIZE
MATERIAL : PVC
INTERNAL VALVES
CHECK VALVE : HDL BALL CHECK
ISOLATION VALVE : VAL–MATIC PLUG
VENT
4" CANDY–CANE STYLE
INLET INVERT ELEV. : –0.42 FT
WET WELL INVERT ELEV. : –4.42 FT
DISCHARGE INVERT ELEV. : 6.3 FT
WET WELL TOP ELEV. : 12.5 FT

NOTES:

1. WRAP FILTER FABRIC ALL AROUND AGGREGATE AND OVERLAP 18-INCHES MINIMUM.
2. ALL REINFORCED CONCRETE ENDS ARE TO BE CHAMFERED
3. ALL ELECTRICAL ENCLOSURES ARE TO BE STAINLESS STEEL.
4. AS DELEGATED DESIGN, THE CONTRACTOR IS RESPONSIBLE FOR THE ELECTRICAL PUMP CONTROL PANEL AND DESIGN.





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CAMERON COUNTY, TEXAS

TEXAS A&M LIFT STATION

CITY OF BROWNSVILLE, TEXAS

LIFT STATION DETAILS

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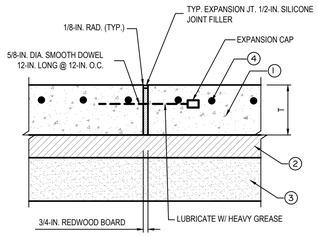
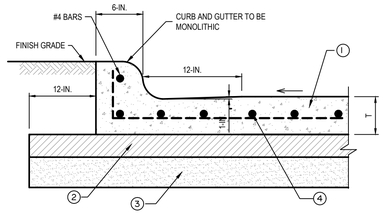
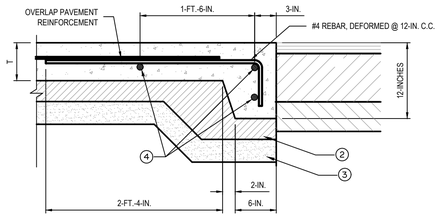


EXPANSION JOINT TYPE "A"



CONCRETE PAVEMENT SECTION



PAVEMENT TERMINATION DETAIL
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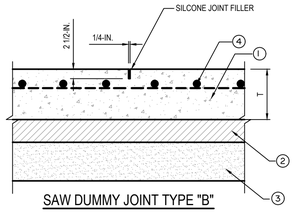
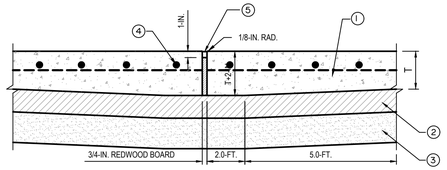


SAW DUMMY JOINT TYPE "B"



ISOLATION JOINT - TYPE "C"

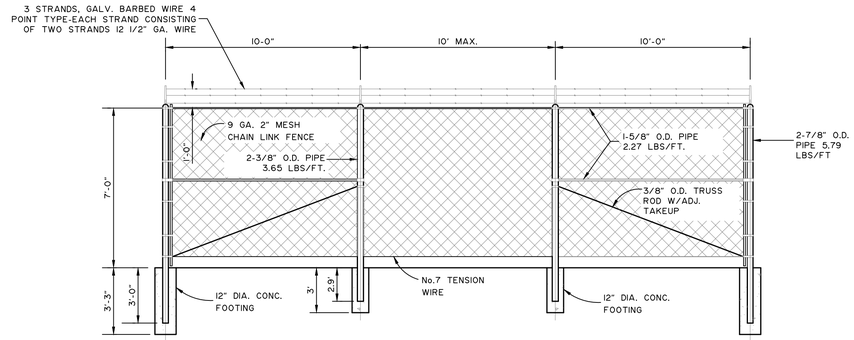
KEYED NOTES:

1. PROPOSED T=8 INCHES (MEDIUM DUTY) REINFORCED CONCRETE PAVEMENT WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 P.S.I. MATERIALS AND PROPERTIES SHALL MEET APPLICABLE REQUIREMENTS IN THE ACI MANUAL OF CONCRETE PRACTICE.
2. PROPOSED 4 INCHES GRANULAR BASE MATERIAL COMPOSED OF CRUSH LIMESTONE MEETING TXDOT 2014 STANDARD ITEM 247 TYPE A OR D, GRADE 1-2 OR 3.(2014 TXDOT STANDARD SPECIFICATIONS) COMPACTED TO 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY IN ACCORDANCE WITH THE MODIFIED MOISTURE-DENSITY RELATIONSHIP (A.S.T.M. 1557), OR APPLICABLE ASTM STANDARD AND MOISTURE CONDITIONED WITHIN 2 PERCENT OF OPTIMUM MOISTURE CONTENT.
3. 8 INCHES OF MOISTURE CONDITION SUBGRADE WITHIN 2 PERCENT OF THE OPTIMUM MOISTURE CONTENT. THE SUBGRADE SHOULD THEN BE COMPACTED TO AT LEAST 95 PERCENT OF THE MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D 698.THIS SHOULD RESULT IN A COMPACTED MOISTURE CONDITION LAYER ABOUT 8 INCHES THICK.
4. REINFORCEMENT SHALL CONSIST OF THE FOLLOWING: NUMBER 4 BARS SPACED AT 12 INCHES ON CENTER IN BOTH DIRECTIONS, GRADE 60.
5. EXPANSION SILICONE JOINT FILLER/SEALER.

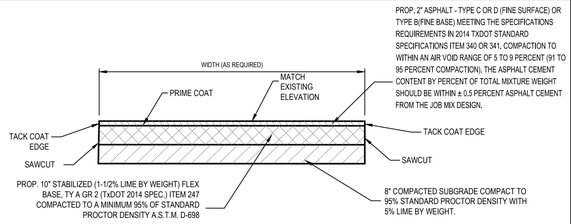
GENERAL NOTES:

1. REINFORCED CONCRETE SHALL MEET APPLICABLE REQUIREMENTS ACI MANUAL OF CONCRETE PRACTICE. THE PORTLAND CONCRETE MIX SHOULD HAVE A MINIMUM OF 28 DAY COMPRESSIVE STRENGTH OF F 4000 PSI.
2. CONTRACTION JOINT SPACING SHALL BE 15 FEET EACH WAY. CONTRACTOR SHALL SUBMIT JOINT LAYOUT PLAN FOR APPROVAL.
3. SAW CUT JOINTS SHOULD BE CUT FROM 6 TO 12 HOURS OF CONCRETE PLACEMENT.

1 TYPICAL REINFORCED CONCRETE PAVEMENT SECTION & JOINT DETAILS
NOT TO SCALE



2 TYPICAL SECURITY CHAIN-LINK FENCE DETAIL
NOT TO SCALE



3 PAVEMENT REPAIR DETAIL
NOT TO SCALE

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CAMERON COUNTY, TEXAS

TEXAS A&M LIFT STATION

CITY OF BROWNSVILLE, TEXAS

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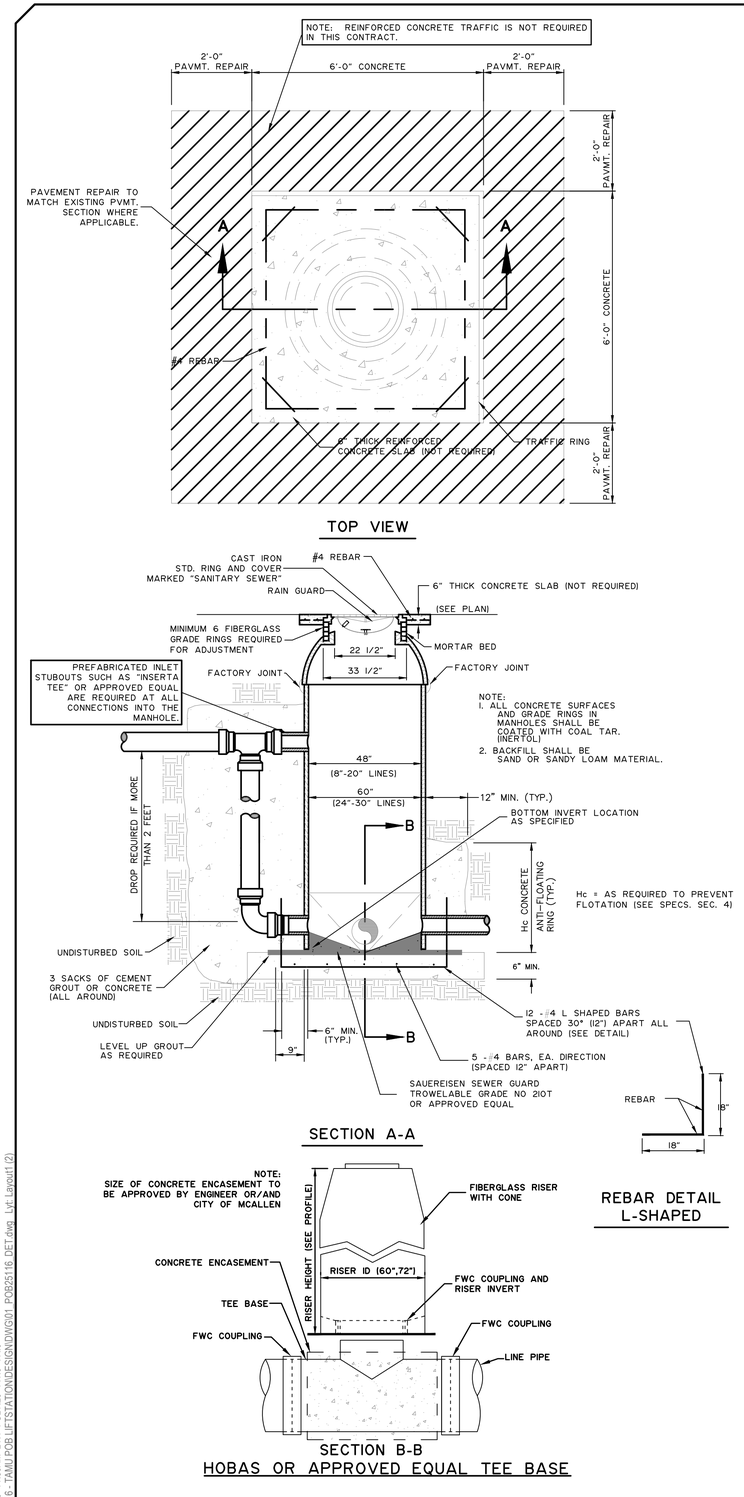
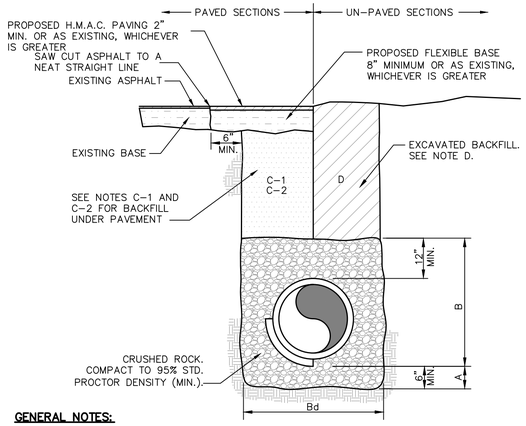


1 TYP. SANITARY SEWER FIBERGLASS MANHOLE DETAIL
NOT TO SCALE



GENERAL NOTES:

A. CRUSHED ROCK BEDDING PLACED, HAND LEVELED, AND COMPACTED BEFORE PIPE IS LAID, UP TO BOTTOM OF PIPE (MIN. THICKNESS = 6").

B. CRUSHED ROCK BACKFILL PLACED AND COMPACTED AFTER PIPE IS LAID, FROM BOTTOM OF PIPE TO 12" ABOVE THE TOP OF PIPE. WORK IN UNDER PIPE HAUNCHES AND COMPACT BY HAND TO SPRING LINE. USE VIBRATORY-TYPE COMPACTORS FOR LIFTS ABOVE THE SPRING LINE. MAXIMUM 6" LIFTS.

Bd. MINIMUM TRENCH WIDTH: PIPE O.D. + 16" (FOR 16" PIPE AND SMALLER); PIPE O.D. X 1.25 + 12" (FOR 18" PIPE AND LARGER)

C-1. (CITY STREETS, PARKING AREA, AND DRIVEWAYS) SELECT EXCAVATED BACKFILL MECHANICALLY COMPACTED TO 95% STANDARD PROCTOR DENSITY IN 8" MAX. LIFTS. C-2 (STATE MAINTAINED ROADWAY) SAND/CEMENT STABILIZED BACKFILL WITH 7% PORTLAND CEMENT COMPACTED TO 95% STANDARD PROCTOR DENSITY.

D. EXCAVATED EARTH BACKFILL MECHANICALLY COMPACTED IN 12" MAX. LIFTS. MINIMUM STANDARD PROCTOR DENSITY: 90% OUTSIDE RIGHT OF WAY; 95% INSIDE RIGHT OF WAY EMBEDMENT SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM D 2321.

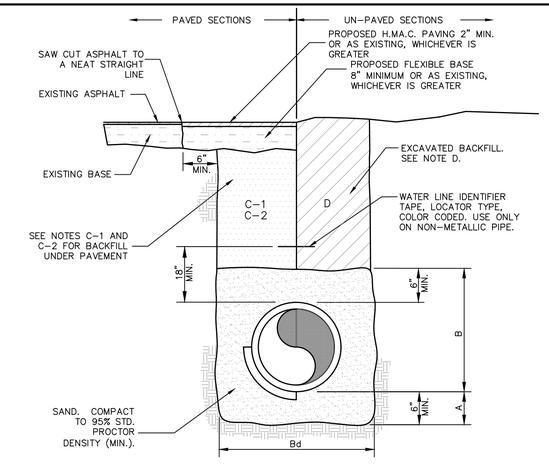
EMBEDMENT MATERIAL SHALL BE CLASS 3 1A (CRUSHED ROCK) OR 1B (CRUSHED ROCK-SAND MIXTURE) WITH LESS THAN 50% PASSING A No. 4 SIEVE. MAXIMUM 4 " SIZE FOR PIPE SIZE ≤ 15". GREATER THAN 90% OF CRUSHED ROCK SHALL HAVE AT LEAST THREE BROKEN FACES. NO MORE THAN 2% UNBROKEN FRACTION ALLOWED.

IN SATURATED OR UNSTABLE SOILS, EMBEDMENT SHALL BE CLASS 1B ONLY (SEE SPECIFICATIONS FOR GRADATION REQUIREMENTS). WHERE THIS STANDARD CONFLICTS WITH THE RECOMMENDATION OF ANY GEOTECHNICAL REPORT, OBTAIN WRITTEN CLARIFICATION FROM THE UTILITY ENGINEER PRIOR TO CONSTRUCTION.

FOUNDATION PREPARATION USING COBBLES, GRAVEL, CEMENT STABILIZATION, OR OTHER METHODS AS APPROVED BY THE ENGINEER SHALL BE REQUIRED WHEN TRENCH BOTTOM IS UNSTABLE.

BACKFILLING AT STRUCTURES SHALL BE PLACED IN UNIFORM LAYERS, AND COMPACTED TO 95% STANDARD PROCTOR DENSITY IN 6" MAXIMUM LIFTS. STRUCTURE BACKFILL MATERIAL SHALL BE SAND.

2 SANITARY SEWER(NON-FORCEMAIN) PIPE BEDDING DETAIL
NOT TO SCALE



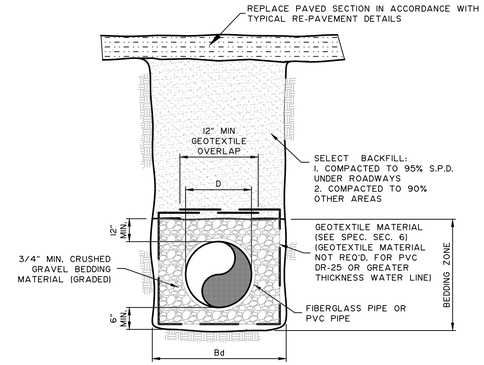
GENERAL NOTES:

A. SAND BEDDING PLACED, HAND LEVELED, AND COMPACTED BEFORE PIPE IS LAID, UP TO BOTTOM OF PIPE (MIN. THICKNESS = 6").
B. SAND BACKFILL PLACED AND COMPACTED AFTER PIPE IS LAID, FROM BOTTOM OF PIPE TO 6" ABOVE THE TOP OF PIPE. WORK IN UNDER PIPE HAUNCHES AND COMPACT BY HAND TO SPRING LINE. USE VIBRATORY-TYPE COMPACTORS FOR LIFTS ABOVE THE SPRING LINE. MAXIMUM 6" LIFTS.
Bd. MINIMUM TRENCH WIDTH: PIPE O.D. + 16" (FOR 16" PIPE AND SMALLER) OR PIPE O.D. X 1.25 + 12" (FOR 18" PIPE AND LARGER)
C-1. (CITY STREETS, PARKING AREA, AND DRIVEWAYS) SELECT EXCAVATED BACKFILL MECHANICALLY COMPACTED TO 95% STANDARD PROCTOR DENSITY IN 8" MAX. LIFTS.
C-2 (STATE MAINTAINED ROADWAY) SAND/CEMENT STABILIZED BACKFILL WITH 7% PORTLAND CEMENT COMPACTED TO 95% STANDARD PROCTOR DENSITY.
D. EXCAVATED EARTH BACKFILL MECHANICALLY COMPACTED IN 12" MAX. LIFTS. MINIMUM STANDARD PROCTOR DENSITY: 90% OUTSIDE RIGHT OF WAY; 95% INSIDE RIGHT OF WAY.
EMBEDMENT SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM D 2321. EMBEDMENT MATERIAL SHALL BE CLASS II OR III WITH < 50% PASSING A No. 200 SIEVE AND PLASTICITY INDEX < 7.
WHERE THIS STANDARD CONFLICTS WITH THE RECOMMENDATION OF ANY GEOTECHNICAL REPORT, OBTAIN WRITTEN CLARIFICATION FROM THE UTILITY ENGINEER PRIOR TO CONSTRUCTION.
FOUNDATION PREPARATION USING COBBLES, GRAVEL, CEMENT STABILIZATION, OR OTHER METHODS AS DIRECTED BY THE ENGINEER SHALL BE REQUIRED WHEN TRENCH BOTTOM IS UNSTABLE.
BACKFILLING AT STRUCTURES SHALL BE PLACED IN UNIFORM LAYERS, AND COMPACTED TO 95% STANDARD PROCTOR DENSITY IN 6" MAXIMUM LIFTS. STRUCTURE BACKFILL MATERIAL SHALL BE SAND.

4 WATERLINE & SEWER FORCEMAIN BEDDING DETAIL
NOT TO SCALE

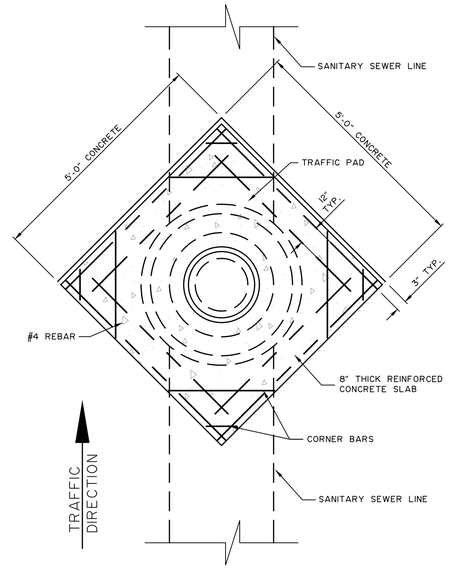
TABLE "A"		
TRENCH WIDTH		
D	Bd (FIBERGLASS)	Bd (PVC)×
8-10"	24"	24"
12"	24"	24"
18"	30"	36"
24"	40"	48"
30"	48"	60"

× UNIBELL RECOMMENDATIONS



NOTE:
STABILIZED TRENCH SHALL BE USED IN AREAS WHERE THE SOIL BEARING CAPACITY AT THE BEDDING ZONE IS 8 BLOWS PER FOOT OR LESS, ACCORDING TO FIELD SOIL INVESTIGATIONS TESTS DURING CONSTRUCTION.

3 STABILIZED TRENCH DETAIL FOR SANITARY SEWER
NOT TO SCALE



5 TYPICAL M.H. REINFORCED CONCRETE TRAFFIC PAD
NOT TO SCALE

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8

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Jan 07, 2026 11:59AM LTT: FSLT:20 TWO: VR:0
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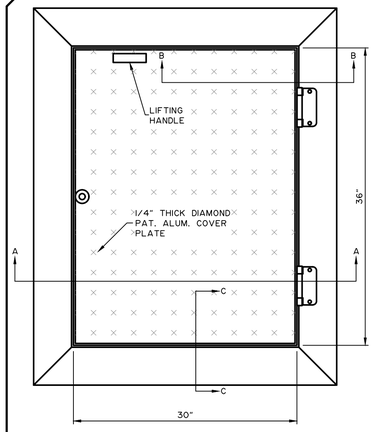
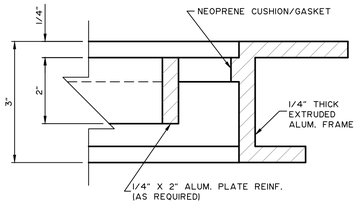
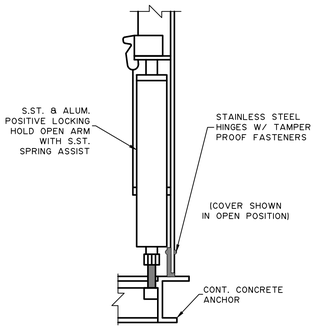


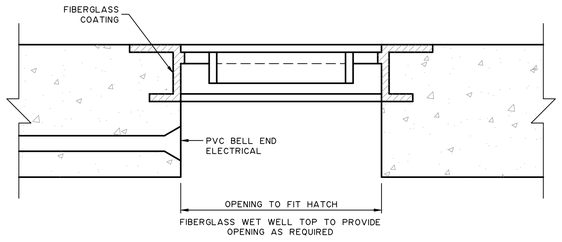
PLAN



SECTION C-C



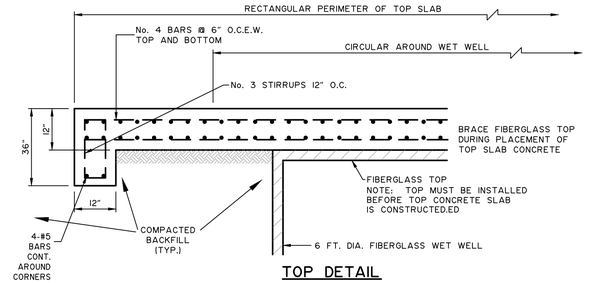
SECTION B-B



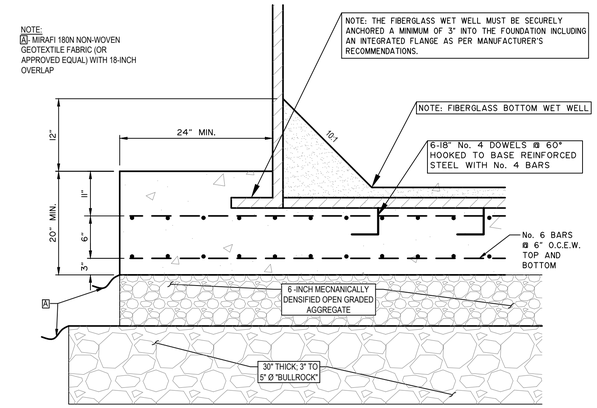
SECTION "A-A"

ALUMINUM HATCH BY HALLIDAY PRODUCTS SERIES K RETRO-GRATING OR APPROVED EQUAL. HATCH SHALL HAVE MINIMUM CLEAR 30" X 36" CLEAR OPENING OR LARGER IF REQUIRED BY PUMP SIZE. FALL PROTECTION SAFE APPROACH OR EQUAL REQUIRED.

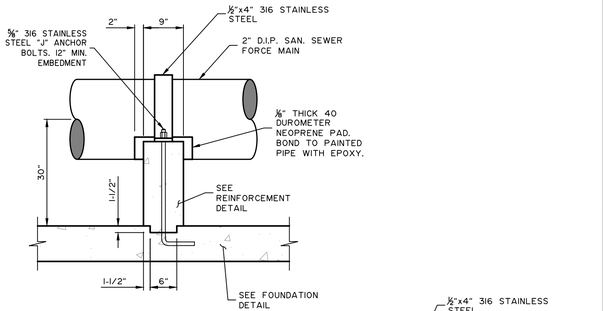
1 TYPICAL ACCESS DOOR DETAIL
NOT TO SCALE

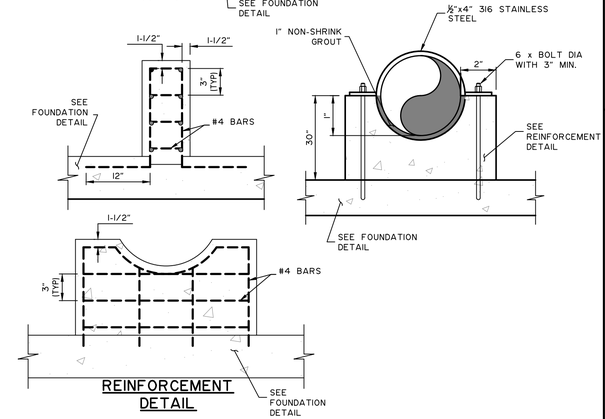


TOP DETAIL
N.T.S.

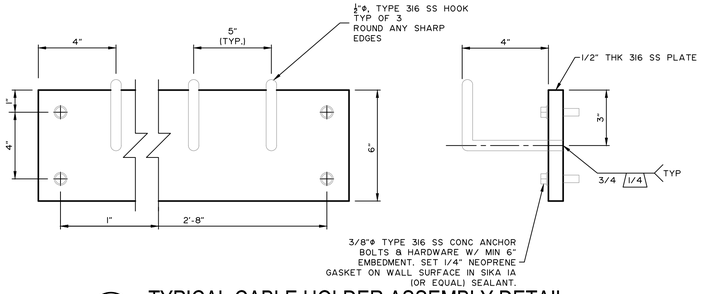


2 FIBERGLASS WET WELL & FOUNDATION DETAIL
NOT TO SCALE

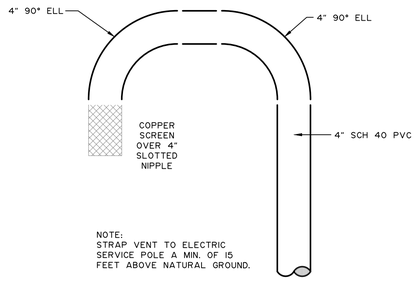




3 FORCE MAIN PIPE SUPPORT DETAIL
NOT TO SCALE



4 TYPICAL CABLE HOLDER ASSEMBLY DETAIL
NOT TO SCALE



5 TYPICAL VENT DETAIL
NOT TO SCALE

THRUST BLOCK REQUIREMENTS VS. FITTING TYPE										
DIAMETER (IN.)	"X" (FT.)	END/TEE AREA (S.F.)	90° BEND AREA (S.F.)		45° BEND AREA (S.F.)		22.5° BEND AREA (S.F.)		11.25° BEND AREA (S.F.)	
4	1	1.4	1.9	3839	1.0	2077	0.5	1059	0.3	532
6	1	2.8	4.0	7932	2.1	4293	1.1	2188	0.5	1100
8	1.25	4.8	6.8	13646	3.7	7385	1.9	3765	0.9	1892
10	1.25	7.3	10.3	20528	5.6	11110	2.8	5664	1.4	2846
12	1.50	10.3	14.5	29030	7.9	11571I	4.0	8009	2.0	4024
14	1.75	13.8	19.5	39001	10.6	21107	5.4	10760	2.7	5406
16	2	17.3	25.2	50442	13.6	27299	7.0	13917	3.5	6992

GENERAL NOTES

1. THRUST BLOCKING TO BE PLACED AT ALL DEAD ENDS, TEES, BENDS, AND OTHER AREAS WHICH MAY REQUIRE THRUST RESISTANCE. WHERE VERTICAL OFFSETS ARE MADE, THE TOP BEND SHALL BE RESTRAINED BY RESTRAINING RODS AND CONCRETE THRUST ANCHOR BLOCKS AS SHOWN.

2. THRUST BLOCK AREAS SHOWN ARE BASED ON TEST PRESSURES OF 150 P.S.I., SOIL BEARING PRESSURE OF 2000 PSF, AND MINIMUM 30" COVER.

3. MINIMUM AREAS SHOWN ARE IN SQUARE FEET, BLOCK WEIGHTS FOR VERTICAL BENDS ARE IN POUNDS.

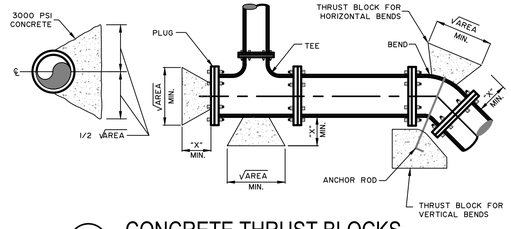
4. BEARING MUST BE ON UNDISTURBED EARTH.

5. THE THRUST BLOCK AREA SHOWN IN THE TABLE ARE CALCULATED USING A SOIL BEARING CAPACITY OF 2000 PSF. IF SOIL BEARING CAPACITY IS GREATER THAN 2000 PSF, THE CONTRACTOR MAY, AFTER REVIEW BY THE ENGINEER, REDUCE THE THRUST BLOCK AREAS SHOWN. ' THE THRUST BLOCK AREA SHALL BE INCREASEDIF THE SOIL IS NOT CAPABLE OF PROVIDING 2000 PSF SOIL BEARING CAPACITY.

6. USE 3000 PSI CONCRETE.

7. RESTRAINING JOINTS MAY BE REQUIRED BY THE ENGINEER AT ALL LOCATIONS.

8. CONCRETE SHALL BEAR ON THE CONCRETE QUADRANT OF PIPE AS A MINIMUM.



6 CONCRETE THRUST BLOCKS
NOT TO SCALE

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