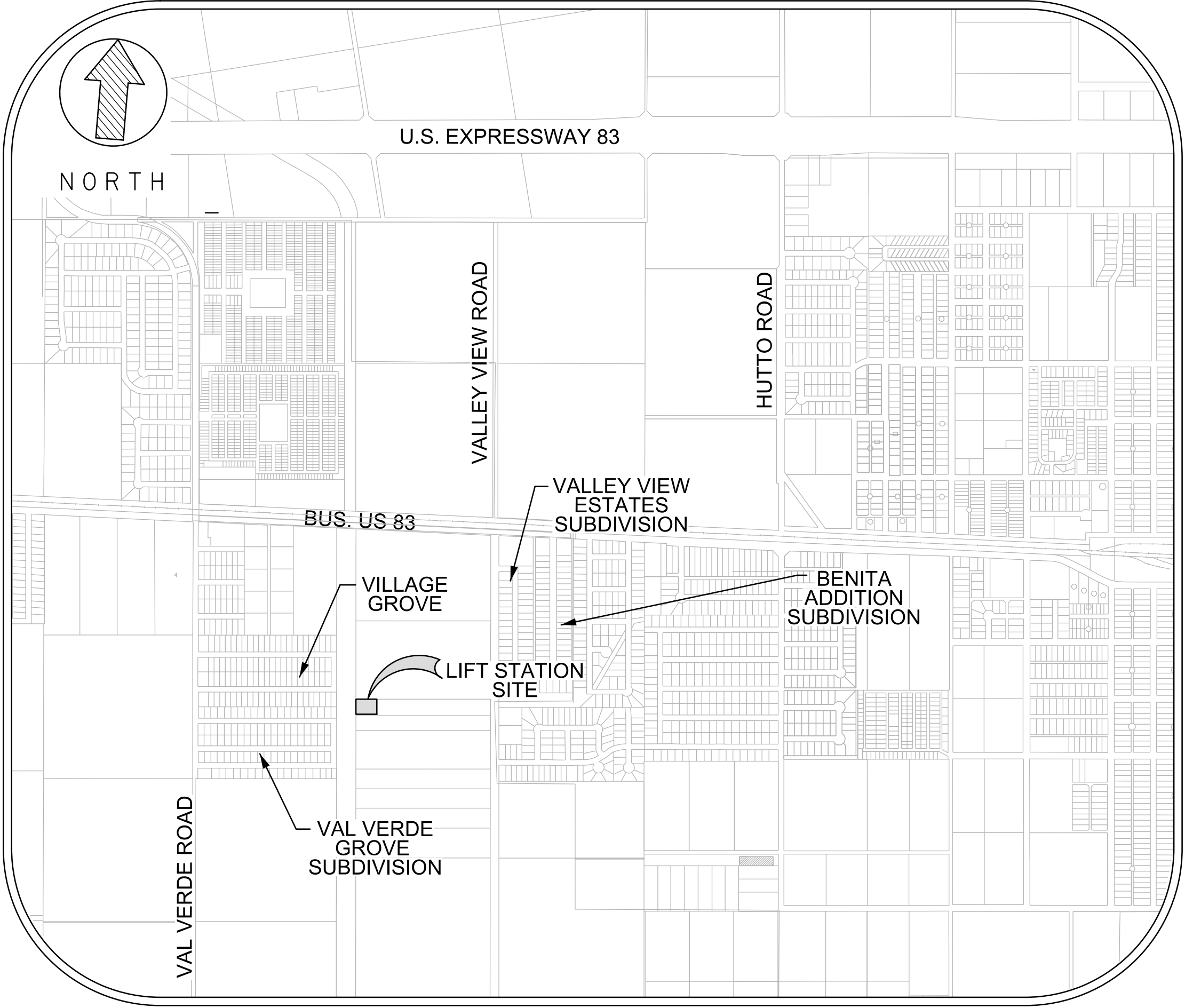
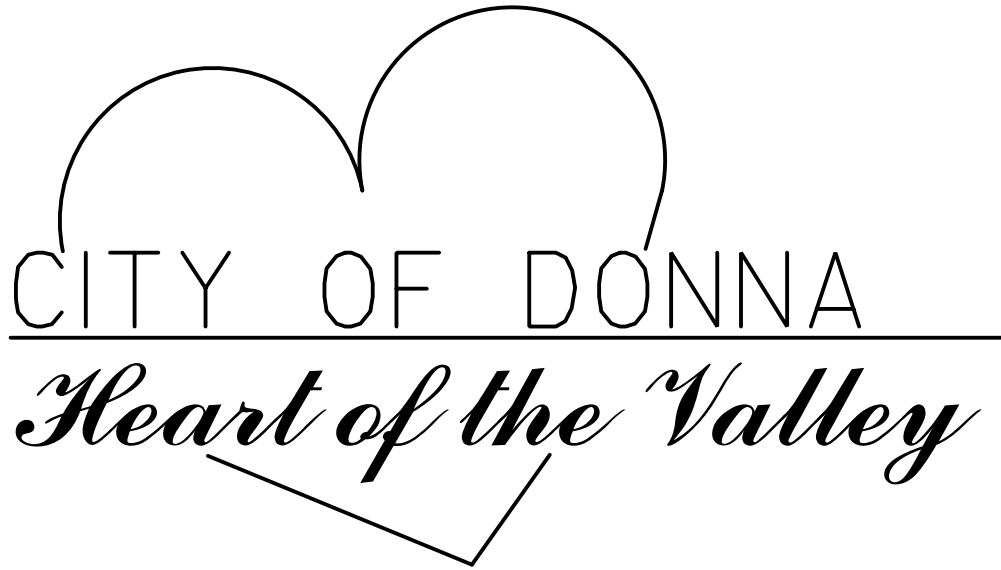


CITY OF DONNA
VALLEY VIEW ROAD LIFT STATION
SITE IMPROVEMENTS

DONNA, TEXAS



Vicinity Map
NTS

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GENERAL CONSTRUCTION NOTES:

- 1) ALL IMPROVEMENTS TO BE IN ACCORDANCE WITH CITY OF DONNA CODES AND STATE AND FEDERAL REGULATIONS.
- 2) CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING FACILITIES PRIOR TO CONSTRUCTION.
- 3) CONTRACTOR IS RESPONSIBLE FOR PROTECTION AND/OR SAFETY OF THE WORK SITE, WORKERS, SUBCONTRACTORS, MATERIALS AND/OR EQUIPMENT.
- 4) CONTRACTOR SHALL COORDINATE WITH TxDOT REGARDING ALL WORK LOCATED WITHIN TxDOT R.O.W. 72 HOURS PRIOR TO COMMENCEMENT
- 5) ANY DAMAGE TO EXISTING PAVEMENT, DRAINAGE OR EXISTING STRUCTURES SHALL BE REPAIRED TO PRE-CONSTRUCTION CONDITION AT CONTRACTOR'S EXPENSE. ANY DAMAGES TO FENCES, WALKS, OR PRIVATE PROPERTY SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.
- 6) *THESE PLANS, PREPARED BY HALFF ASSOCIATES, INC. DO NOT EXTEND TO OR INCLUDE DESIGN OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR ITS EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF HALFF ASSOCIATES, INC. REGISTERED PROFESSIONAL ENGINEER (S) HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED IN THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS, INCLUDING THE PLANS AND SPECIFICATIONS REQUIRED BY THE HOUSE BILLS 662 AND 665 ENACTED BY THE TEXAS LEGISLATURE IN THE 70TH LEGISLATURE REGULAR SESSION.*
- 7) CONTRACTOR SHALL GIVE NOTICE TO ALL AUTHORIZED INSPECTORS, SUPERINTENDENTS, OR PERSONS IN CHARGE OF PRIVATE AND PUBLIC UTILITIES AFFECTED BY HIS OPERATIONS 72 HOURS PRIOR TO COMMENCEMENT OF WORK. NOTIFY TEXAS ONE CALL & ANY AFFECTED UTILITY COMPANIES FOR UTILITY LOCATIONS PRIOR TO ANY & ALL EXCAVATIONS. CONTRACTOR IS RESPONSIBLE FOR COST OF ALL RETESTS.
- 8) CONTRACTOR TO COORDINATE WITH THE CITY OF DONNA ON WORK SCHEDULES, TESTING, GENERAL INSPECTION, AND EXISTING LINES.
- 9) CONTRACTOR TO EXPOSE ANY EXISTING FACILITY THAT MAY BE IN CONFLICT PRIOR TO THE LAYING OF ANY PIPE.
- 10) CONTRACTOR TO EXERCISE CAUTION WHEN WORKING NEAR EXISTING FACILITIES AND/OR UTILITIES. ALL DAMAGE TO BE REPAIRED AT CONTRACTOR'S EXPENSE. ALL COSTS FOR INTERRUPTION OF GAS, ELECTRICAL, COMMUNICATIONS AND/OR WATER SERVICE DUE TO CONTRACTOR'S WORK SHALL BE BORNE BY THE CONTRACTOR.
- 11) INFORMATION ON EXISTING UTILITIES IS FROM BEST AVAILABLE INFORMATION OF RECORD. NEITHER THE ENGINEER NOR THE CITY TAKE RESPONSIBILITY FOR ACCURACY OF LOCATION. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION AND LOCATION OF THESE UNDERGROUND UTILITIES AS REQUIRED AT NO SEPARATE PAY. CITY OF DONNA PERSONNEL WILL BE AVAILABLE FOR ASSISTANCE AND OPERATION OF VALVES AS REQUIRED. CONTRACTOR TO COORDINATE WITH OTHER UTILITIES COMPANIES SUCH AS ELECTRICAL UTILITIES, GAS UTILITIES AND TELEPHONE UTILITIES.
- 12) ALL SPOIL MATERIAL AND DEBRIS SHALL BE DISPOSED OFF SITE BY CONTRACTOR IN A LEGAL MANNER. FURNISHING AND TRANSPORTATION OF ALL OFF SITE MATERIAL TO BE AT CONTRACTOR'S EXPENSE.
- 13) UPON COMPLETION OF CONSTRUCTION CONTRACTOR SHALL RETURN THE SITE TO ORIGINAL CONTOURS UNLESS DIFFERENT FINISHED ELEVATIONS ARE SHOWN ON PLANS. CONTRACTOR TO INSURE NO AREAS OF PONDING ARE PRESENT.
- 14) CONCRETE NOTES:
A) ALL CONCRETE WORK TO BE FORMED, UNLESS OTHERWISE APPROVED.
B) ALL CONCRETE TO BE 4000-PSI MINIMUM AT 28 DAYS, UNLESS OTHERWISE SHOWN. STRENGTH TO BE DETERMINED BY CYLINDER BREAK TEST.
C) ALL REINFORCING STEEL TO BE ASTM A-615, GRADE 60, UNLESS OTHERWISE SHOWN.
D) ALL EXPOSED CONCRETE WORK TO BE CHAMFERED.
- 15) CONTRACTOR SHALL AT ALL TIMES ALLOW ACCESS TO EXISTING DRIVEWAYS OR PROVIDE/ MAINTAIN AN ALTERNATIVE, ALL-WEATHER ROUTE FOR ALL RESIDENCES AND BUSINESSES ADJACENT TO THE CONSTRUCTION SITE.
- 16) DEMOLITION, REMOVAL & DISPOSAL OF ALL EXCESS CONCRETE, CURBS, RUBBLE, ETC. TO BE DONE IN A LEGAL MANNER AT CONTRACTOR'S EXPENSE.
- 17) THE CONTRACTOR SHALL PROVIDE A SAFE WORK SITE AND LEAVE NO OPEN EXCAVATIONS OVERNIGHT.
- 18) A TRENCH PROTECTION PLAN IS REQUIRED FOR ALL EXCAVATIONS. TRENCHES 5 FEET DEEP OR GREATER REQUIRED A PROTECTIVE SYSTEM. TRENCHES 20 FEET OR GREATER REQUIRE THAT THE PROTECTIVE SYSTEM BE DESIGN BY A REGISTERED PROFESSIONAL ENGINEER. THE CONTRACTOR SHALL PROVIDE TRENCH SAFETY EQUIPMENT FOR ALL EXCAVATIONS IN ACCORDANCE WITH OSHA REGULATIONS. NO CONFINED ENTRIES WILL BE PERMITTED WITHOUT PROPER EXPERIENCED PERSONAL, EQUIPMENT AND NOTIFICATION TO FIRE DEPARTMENT BEING IN PLACE FIRST.
- 19) DEWATERING, PLUGGING OF LINES, AND BACKFILL OF TRENCHES ARE SUBSIDIARY TO THE COST OF PIPE.
- 20) ALL STRUCTURES SHALL BE ADJUSTED BY THE CONTRACTOR TO MEET FINAL GRADES. A MAXIMUM OF 5 GRADE RINGS WILL BE ALLOWED.
- 21) WORK TO OCCUR DURING REGULAR WORKING HOURS. MONDAY THROUGH FRIDAY, UNLESS APPROVED BY OWNER.
- 22) CONSTRUCTION STAKING SHALL BE PROVIDED BY THE CONTRACTOR AT CONTRACTOR'S EXPENSE. CONTROL POINTS ARE LOCATED AS SHOWN ON PLANS.
- 23) CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS NEEDED FOR CONSTRUCTION AT HIS EXPENSE.
- 24) MAILBOXES, DRIVEWAYS, SIGNS, ETC. LOCATED WITHIN THE CONSTRUCTION LIMITS MAY NEED TO BE TEMPORARILY REMOVED AND REPLACED BY CONTRACTOR, AT CONTRACTOR'S EXPENSE, UPON COMPLETION OF CONSTRUCTION IN IMMEDIATE AREA. ALL REPAIRS AND/OR REPLACEMENTS SHALL BE CONSTRUCTED OF LIKE MATERIAL TO PRE-CONSTRUCTION CONDITIONS, OR BETTER.

WASTEWATER COLLECTION LINE CONSTRUCTION NOTES:

- 1) ALL PROPOSED WASTEWATER COLLECTION LINES WILL BE SDR 26 PIPE MATERIAL (UNLESS OTHERWISE NOTED).
- 2) ALL PROPOSED SEWER FORCE MAIN SHALL BE GREEN COLORED, PVC C900 DR18. COMPLETE SYSTEM INCLUDING PIPE, JOINT, AND FITTINGS SHALL BE RATED FOR 150 PSI MINIMUM.
- 3) CONTRACTOR TO PROVIDE DEFLECTION TEST IN ACCORDANCE WITH T.C.E.O. CHAPTER 217.57 (b). MANDREL TO BE PULLED IN BOTH DIRECTIONS
- 4) CONTRACTOR TO PROVIDE LOW PRESSURE AIR TEST IN ACCORDANCE WITH T.C.E.O. CHAPTER 217.57 (a), (1), 30 DAYS AFTER INSTALLATION. NO WATER TEST ALLOWED.
- 5) CONTRACTOR TO FIELD VERIFY THE LOCATION OF EXISTING UTILITIES & FACILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- 6) ALL CROSSING OF WASTEWATER COLLECTION LINES AND WATERLINES CONSTRUCTED IN ACCORDANCE WITH T.C.E.O. REGULATIONS CHAPTER 290 AND 217.
- 7) CONTRACTOR TO PROVIDE LEAKAGE TEST FOR MANHOLE IN ACCORDANCE WITH T.C.E.O. CHAPTER 217.58 (a), (b) OF THE STATE WASTEWATER CODE NO WATER TEST ALLOWED.
- 8) CONTRACTOR TO PROVIDE RECORD DRAWING IDENTIFYING LOCATION OF ALL LATERALS.
- 9) NO WATER JETTING ALLOWED, MECHANICAL COMPACTION REQUIRED.
- 10) WASTEWATER MANHOLES SHALL INCLUDE A RAIN GUARD.
- 11) THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID SEWAGE SPILLAGE IN ALL PHASES OF THE PROJECT.
- 12) CONTRACTOR SHALL PLAN AND EXECUTE ALL CONSTRUCTION IN A MANNER TO AVOID INTERRUPTION OF SERVICE. ANY BYPASS PUMPING THAT MAY BE NECESSARY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 13) CONTRACTOR SHALL PLACE A METALLIC MARKING TAPE OVER THE FORCE MAIN. COST SHALL BE INCLUDED IN COST OF PIPE. MARKING TAPE SHALL BE DETECTABLE BY METAL DETECTOR.
- 14) FITTINGS TO BE USED IN FORCE MAIN AND WATER LINE DEFLECTIONS AS NEEDED AT NO EXTRA COST.

WATERLINE CONSTRUCTION NOTES:

- 1) ALL WATER LINES TO BE C-900 (DR 18) (AS PER SPEC) CLASS 150 PVC UNLESS OTHERWISE NOTED.
- 2) DOUBLE CHECK VALVE WILL BE REQUIRED WHEN FILLING NEW WATERLINE FOR PRESSURE TESTING.
- 3) ALL WATER & WASTEWATER COLLECTION LINE CROSSING TO BE CONSTRUCTED IN ACCORDANCE WITH TCEQ REGULATION, CHAPTER 290 & 217.
- 4) CONTRACTOR TO FIELD LOCATE EXISTING METERS & PROPOSED SERVICE CONNECTION LOCATIONS PRIOR TO CONSTRUCTION OF MAIN.
- 5) CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING LINES TO BE TIED IN TO NEW MAIN PRIOR TO SETTING LOCATION OF TIE-IN TEE & VALVE ON MAIN.
- 6) WATERLINE MAINS TO BE HYDROSTATICALLY & BACTERIOLOGICALLY TESTED PER CITY OF DONNA/ NORTH ALAMO WATER SUPPLY CORPORATION REQUIREMENTS PRIOR TO TIE-INS. CITY OF DONNA APPROVAL OF TESTING IS REQUIRED.
- 7) CONTRACTOR SHALL MAINTAIN AS MINIMUM 10 FEET HORIZONTAL AND 2 FEET VERTICAL SEPARATION BETWEEN WATER LINES AND ANY OTHER SEWER.
- 8) NO WATER JETTING ALLOWED, MECHANICAL COMPACTION REQUIRED.
- 9) CONTRACTOR SHALL MAINTAIN A MINIMUM OF 3 FT OF COVER ON ALL WATER LINES.
- 10) TEES & FITTINGS TO BE USED FOR WATERLINE IMPROVEMENTS INSTALLATION ARE SUBSIDIARY TO THE COST OF THE PIPE.
- 11) ALL PROPOSED WATER LINES TO BE TESTED AND CHLORINATED PRIOR TO BEING PLACED IN OPERATION.

CONTRACTOR SHALL CONTACT THE FOLLOWING UTILITY COMPANIES 48 HOURS PRIOR TO CONSTRUCTION:

DIG TESS.....	(800) DIG-TESS
AT&T TEXAS.....	(800) 288-2020
TEXAS GAS SERVICE (SUG).....	(800) 700-2443
MAGIC VALLEY ELECTRIC COOP....	(866) 225-5683
CPL RETAIL ENERGY.....	(866) 223-8508
OML.....	(956) 464-7861
CITY OF DONNA PUBLIC WORKS....	(956) 464-6960
NORTH ALAMO WATER SUPPLY....	(956) 383-1618

DEMOLITION NOTES:

- 1) EXISTING LIFT STATION TO BE SIMULTANEOUSLY IN OPERATION WITH PROPOSED LIFT STATION BEFORE DECOMMISSIONING. EXTENSION OF EXISTING 15" SANITARY SEWER HAS SAME ALIGNMENT AS EXISTING 8" SANITARY SEWER LINE. CONTRACTOR TO PROVIDE A DEMOLITION SEQUENCE WORK SCHEDULE PRIOR TO COMMENCING ANY DEMOLITION WORK FOR APPROVAL BY THE CITY OF DONNA. EXISTING LIFT STATION TO REMAIN ACTIVE UNTIL NEW LIFT STATION IS IN PLACE AND OPERATIONAL.

CITY OF DONNA
VALLEY VIEW ROAD LIFT STATION
SITE IMPROVEMENTS
DONNA, TEXAS



8000 N. MILITARY SUITE 100
MCALLEN, TEXAS 78503
TEL (956) 664-0286
FAX (956) 664-0282
TDC FIRM #512

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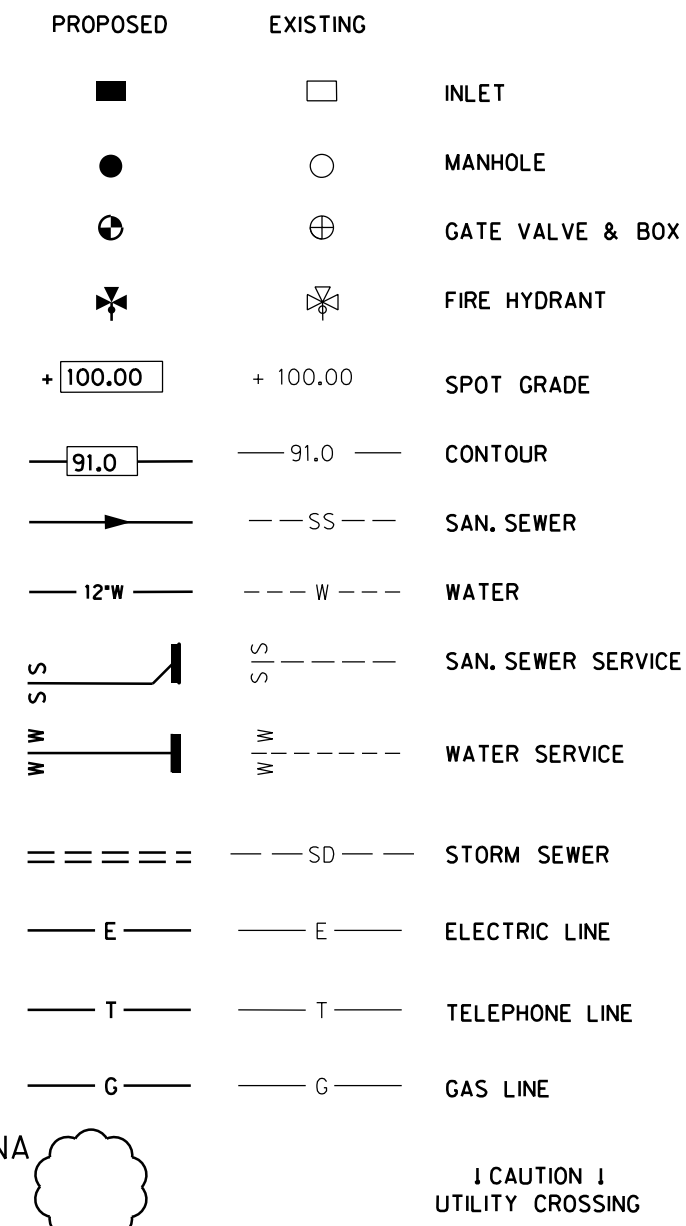


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Project No.: 30194
Issued: OCTOBER 2015
Drawn By: I.E.
Checked By: R.L.S
Scale: AS NOTED
Sheet Title

GENERAL NOTES

G-1
Sheet Number



**CITY OF DONNA
VALLEY VIEW ROAD LIFT STATION
SITE IMPROVEMENTS
DONNA, TEXAS**



5000 WEST MILITARY, SUITE 100
MCALLEN, TEXAS 78503
TEL (956) 664-0286
FAX (956) 664-0282

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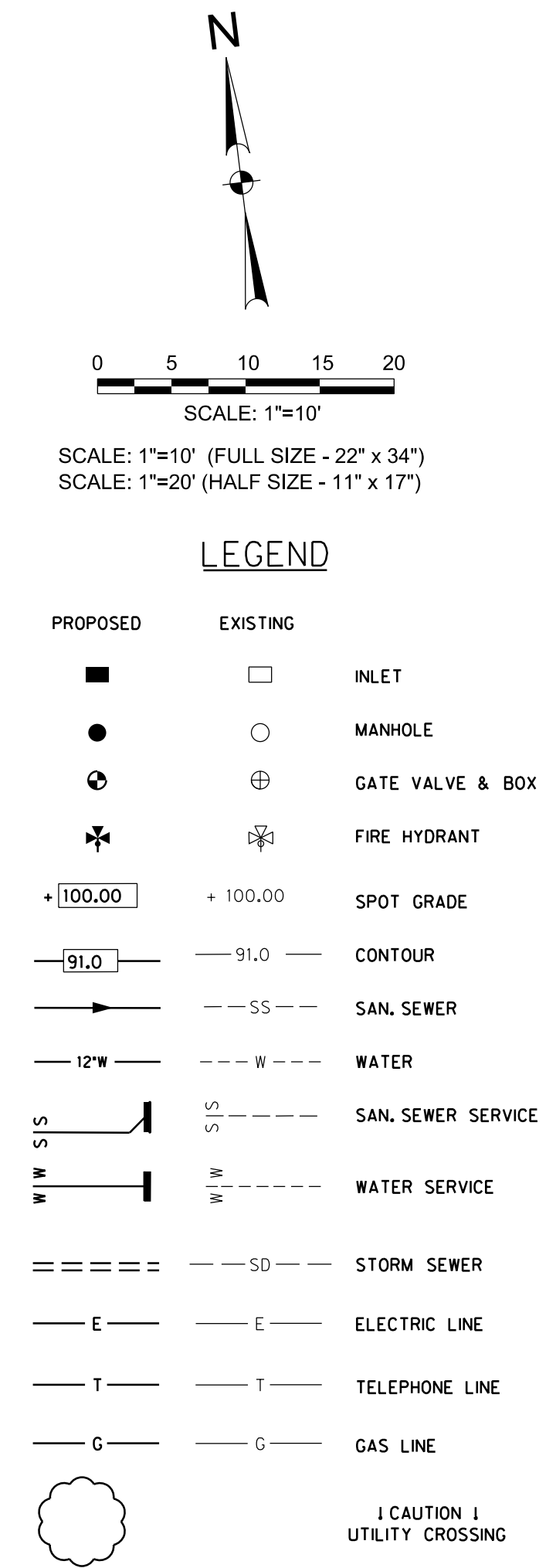
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Project No.:	30194
Issued:	OCTOBER 2015
Drawn By:	I.E.
Checked By:	R.L.S
Scale:	AS NOTED
Sheet Title	

DEMO PLAN

D-1

Sheet Number



Sheet Title	WASTEWATER PLAN & PROFILE
Sheet Number	C-2

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MACA
10/20/2015

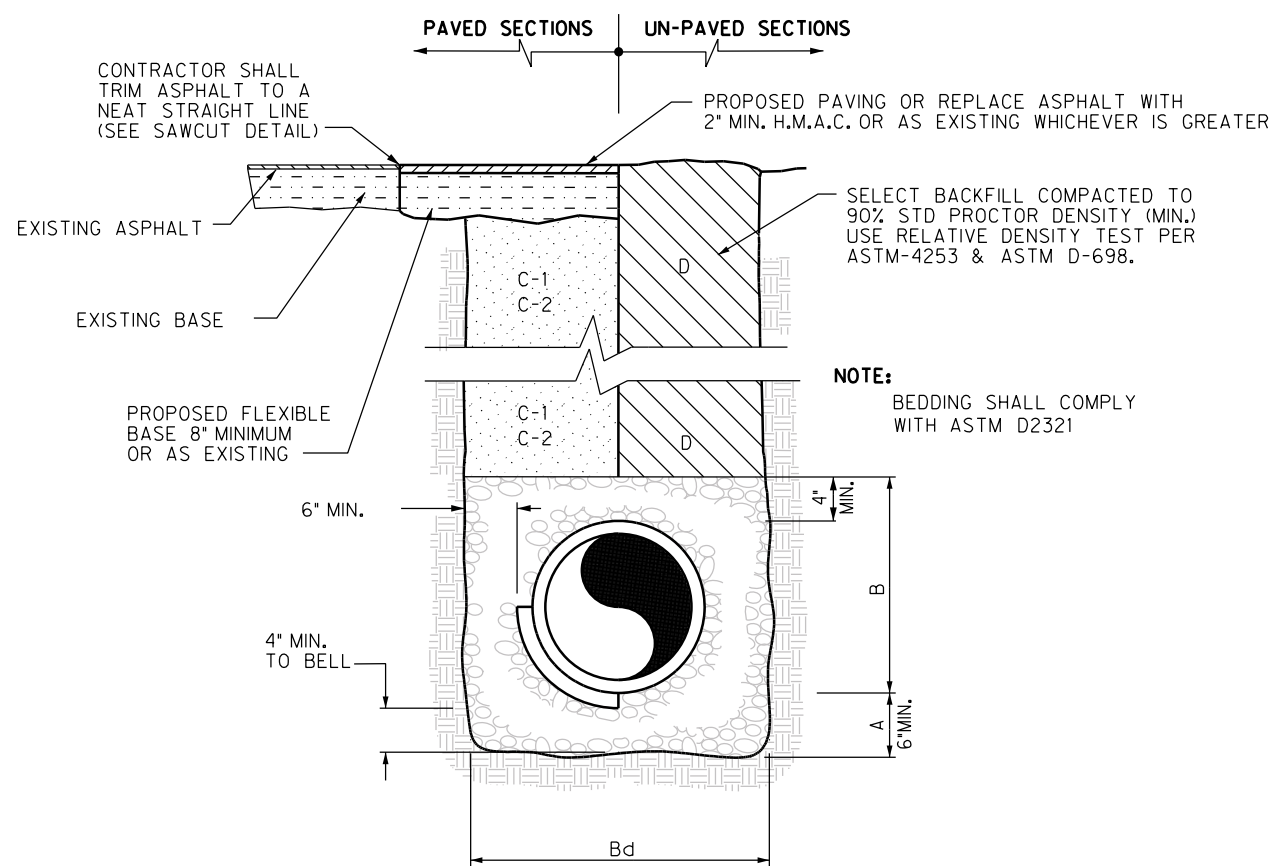
...UNLIFTED/ASSEMBLY DETAIL
REV. 10/20/2015, P. 1 OF 1

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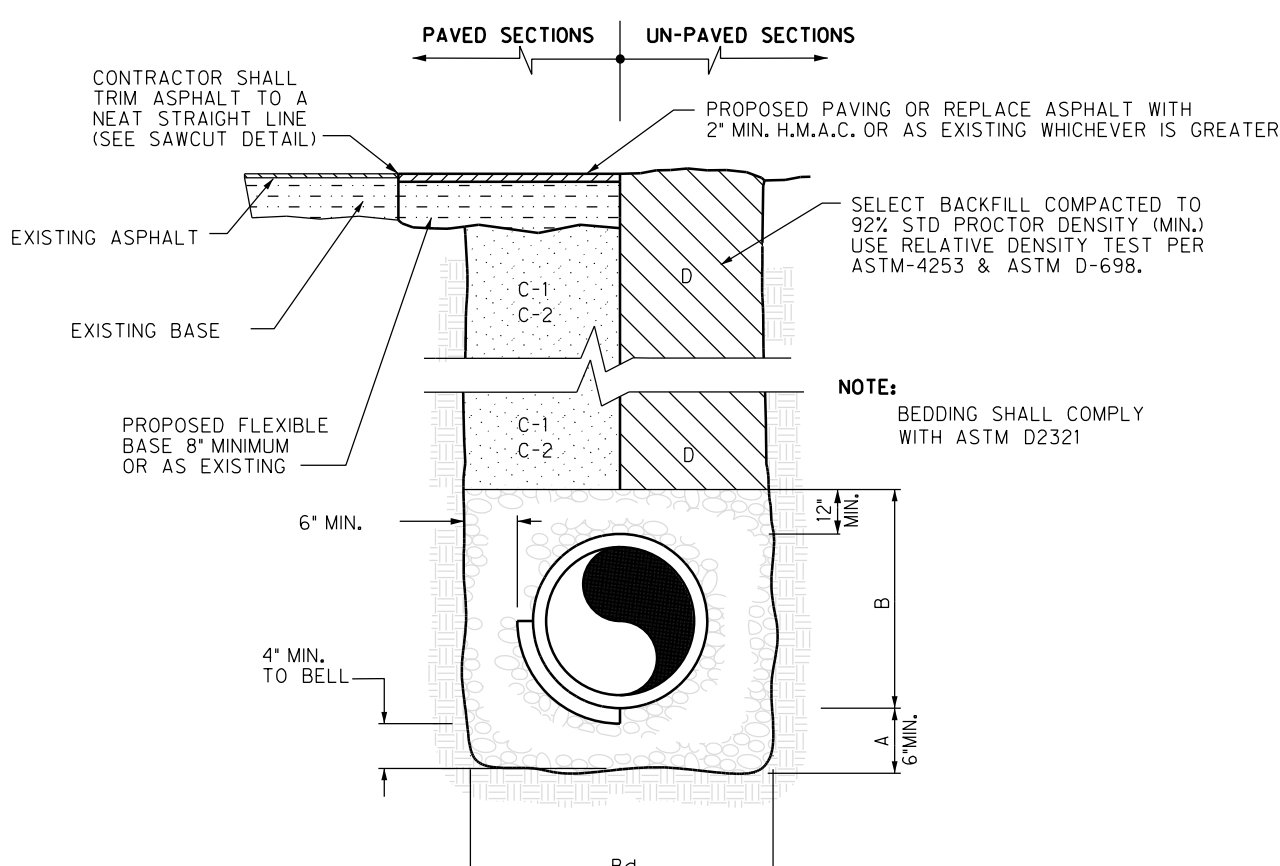
10/20/2015



- A. GRAVEL BEDDING PLACED BEFORE PIPE IS LAID (MIN. THICKNESS = 6"). PIT RUN GRAVEL 3/4" MAX. SIZE.
- B. GRAVEL PLACED AFTER PIPE IS LAID, FROM BOTTOM OF PIPE TO 4" ABOVE THE TOP OF PIPE. PIT RUN GRAVEL 3/4" MAX. SIZE.
- Bd. TRENCH WIDTHS SHALL BE EQUAL TO PIPE BELL O.D. + 16" OR IN ACCORDANCE WITH ASTM D2321.
- C-1. CITY STREETS, PARKING AREA, DRIVEWAYS: SELECTED BACKFILL SHALL BE PLACED IN 8" LIFTS MECHANICALLY COMPACTED TO 95% MODIFIED PROCTOR DENSITY.
- C-2. STATE MAINTAINED ROADWAYS: SAND/CEMENT STABILIZED BACKFILL, WITH 7% PORTLAND CEMENT, COMPACTED AS PER ASTM D-4253 AND ASTM D-698.
- D. SELECTED EARTH BACKFILL MECHANICALLY COMPACTED TO 90% STD. PROCTOR DENSITY (12" LIFTS). 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 (USE RELATIVE DENSITY TEST PER ASTM D-4253 & ASTM D-698). THE THICKNESS OF EACH LOOSE LAYER SHALL NOT EXCEED 6". STRUCTURAL BACKFILL MATERIAL SHALL BE AS APPROVED BY THE ENGINEER.

SANITARY SEWER BEDDING

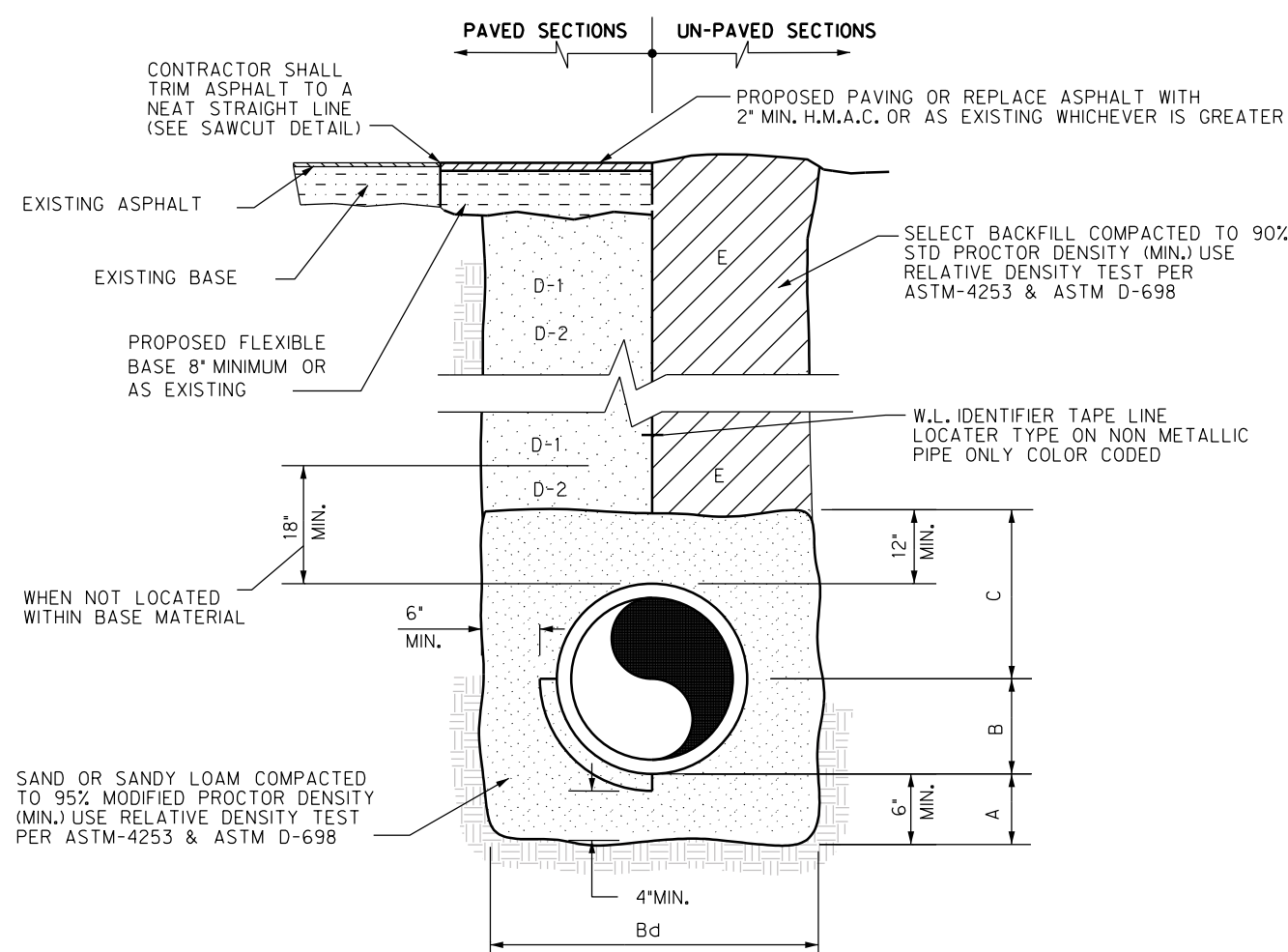
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- D. SELECTED EARTH BACKFILL MECHANICALLY COMPACTED TO 90% STD. PROCTOR DENSITY (12" LIFTS). FOUNDATION PREPARATION (WELLPOINTS, GRAVEL OR CEMENT STABILIZATION, OR APPROVED SUBSTITUTE) SHALL BE REQUIRED WHEN TRENCH BOTTOM IS UNSTABLE. BACKFILLING AT STRUCTURES SHALL BE PLACED IN UNIFORM LAYERS, MOISTENED AS REQUIRED TO APPROXIMATE OPTIMUM MOISTURE CONTENT, AND COMPACTED TO 95% STD. PROCTOR DENSITY (USE RELATIVE DENSITY TEST PER ASTM D-4253 & ASTM D-698). THE THICKNESS OF EACH LOOSE LAYER SHALL NOT EXCEED 6". STRUCTURAL BACKFILL MATERIAL SHALL BE AS APPROVED BY THE ENGINEER.

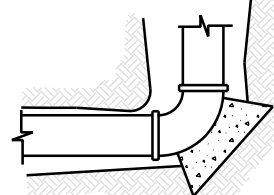
FORCEMAIN LINE BEDDING

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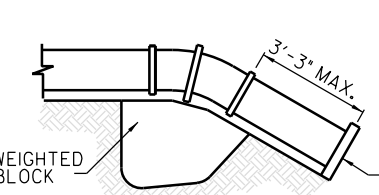


- A. SAND OR SANDY LOAM BEDDING PLACED BEFORE PIPE IS LAID UP TO FLOW LINE OF PIPE. (MIN. THICKNESS = 6")
- B. SAND OR SANDY LOAM BACKFILL PLACED AFTER PIPE IS LAID FROM BOTTOM OF PIPE TO SPRING LINE OF PIPE. (4" LIFTS, HAND TAMPED) Bd TRENCH WIDTHS SHALL BE PIPE O.D. + 16" OR IN ACCORDANCE WITH ASTM D2321 FOR PVC PIPE.
- C. SAND OR SANDY LOAM BACKFILL PLACED FROM SPRING LINE OF PIPE TO 12" ABOVE TOP OF PIPE. (6" LIFTS, HAND TAMPED)
- D-1. CITY STREETS, PARKING AREA, SELECT EXCAVATED BACKFILL MATERIAL COMPACTED TO 95% SPD. (8" LIFTS, MECHANICAL COMPACTION)
- D-2. STATE MAINTAINED ROADWAY: COMPACTED SAND/CEMENT STABILIZED BACKFILL WITH 7% PORTLAND CEMENT COMPACTED AS PER ASTM D-4253 AND ASTM D-698.
- E. SELECT EARTH BACKFILL COMPACTED TO 90% SPD. (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 (USE RELATIVE DENSITY TEST PER ASTM D-4253 & ASTM D-698). THE THICKNESS OF EACH LOOSE LAYER SHALL NOT EXCEED 6". STRUCTURE BACKFILL MATERIAL SHALL BE SAND, APPROVED SITE SOIL, OR OTHER APPROVED SUBSTITUTE.

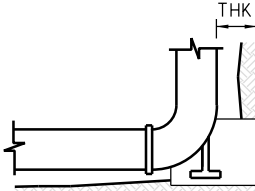
CONSTRUCTION NOTES
A. SIMPLEX COUPLING
B. ANCHOR ROD



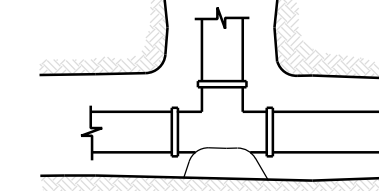
HORIZONTAL BENDS



VERTICAL BENDS



HYDRANT BURYS



TEES & DEAD ENDS

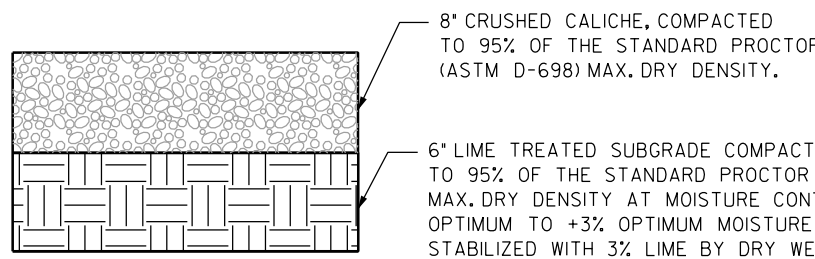
GENERAL NOTES
1. SEE THRUST BLOCK SIZE CHART FOR PROPER THICKNESS AND SURFACE AREAS. (SHEET 2 OF 2)

2. THE LOCATION OF THRUST BLOCKS DEPENDS UPON THE DIRECTION OF THRUST AND TYPE FITTINGS.

TYPICAL THRUST BLOCK DETAILS

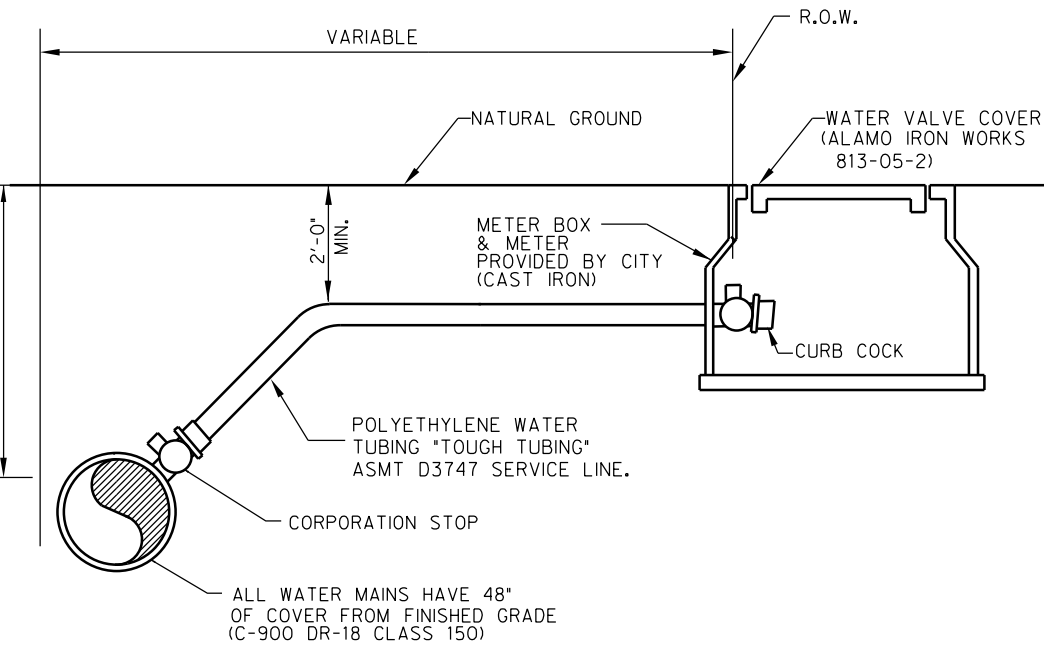
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THRUST BLOCK SIZE				
DIAMETER OF PIPE INCHES	HORIZONTAL BEND SURFACE AREA SQ. FEET	THICKNESS INCHES	WEIGHT AT 12" BENDS LBS.	WEIGHT AT 18" BENDS LBS.
22-1/2" BENDS				
6 OR LESS	2	8	1700	
8	3	8	3,000	
10	3.5	12	4,500	
12	4	14	6,600	
14	5	18	9,000	
16	6	18	11,800	
45" BENDS				
6 OR LESS	4	12	3,200	
8	5	14	5,800	
10	6	18	9,000	
12	7	18	13,000	
14	8	24	17,000	
16	11.5	24	23,200	
90" BENDS				
6 OR LESS	6	12	6,000	
8	8	15	10,700	
10	10	18	16,700	
12	12	18	24,000	
14	18	24	32,600	
16	21	24	42,700	
TEES & DEAD ENDS				
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16	15	24		



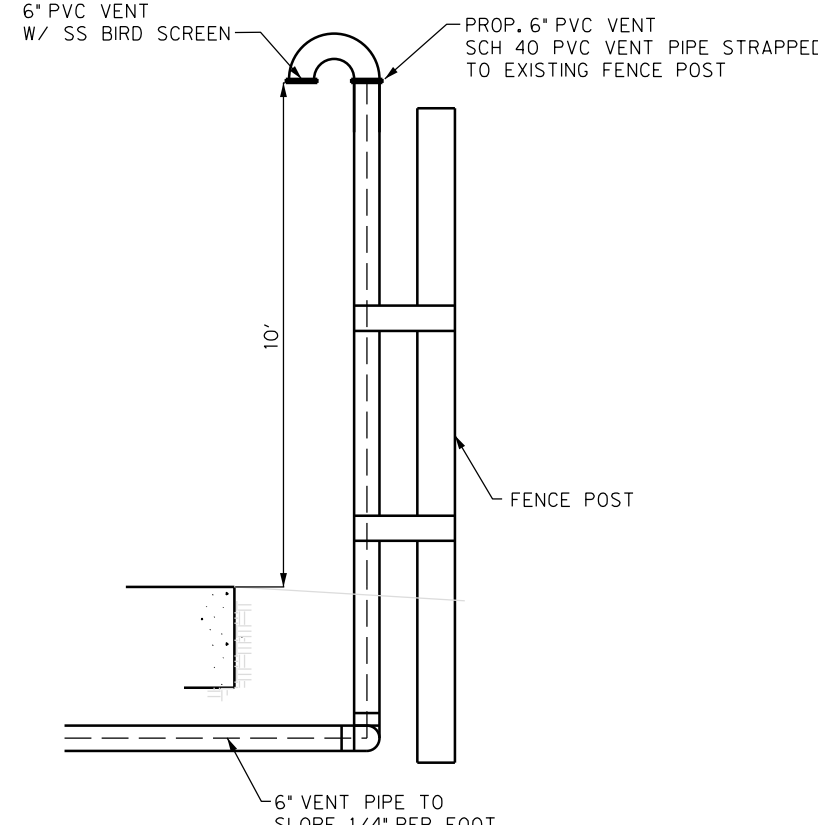
LIFT STATION PAVEMENT SECTION

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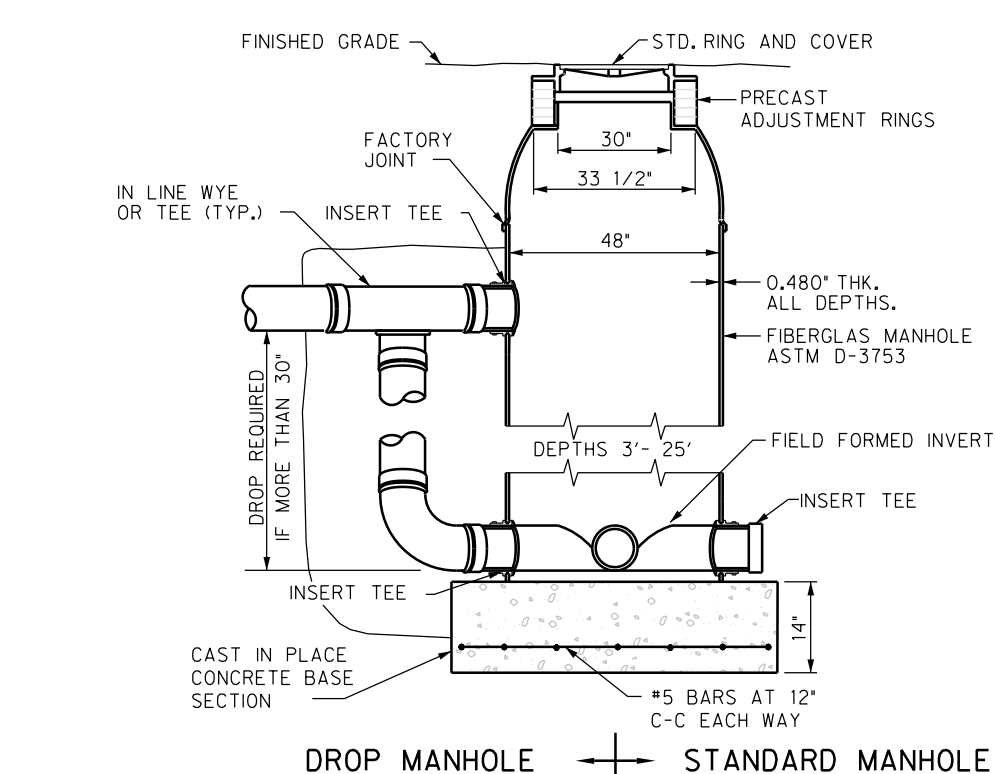
TYPICAL SERVICE CONNECTION

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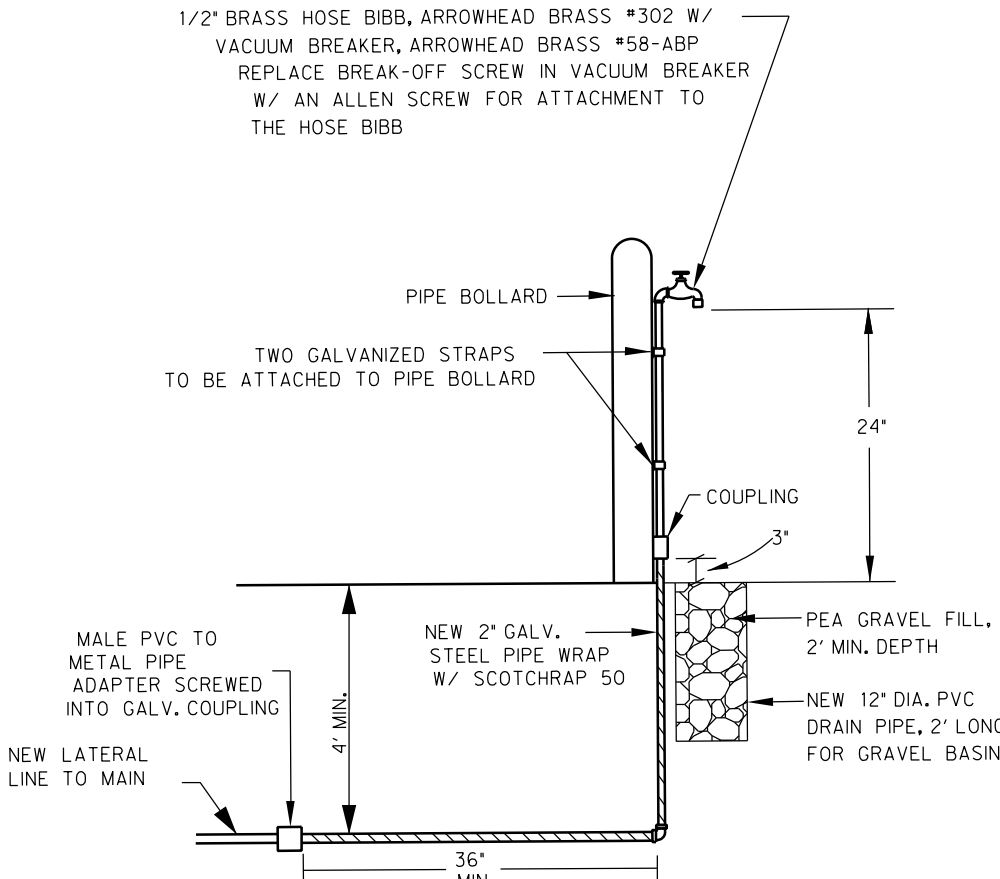
TYPICAL LIFT STATION VENT

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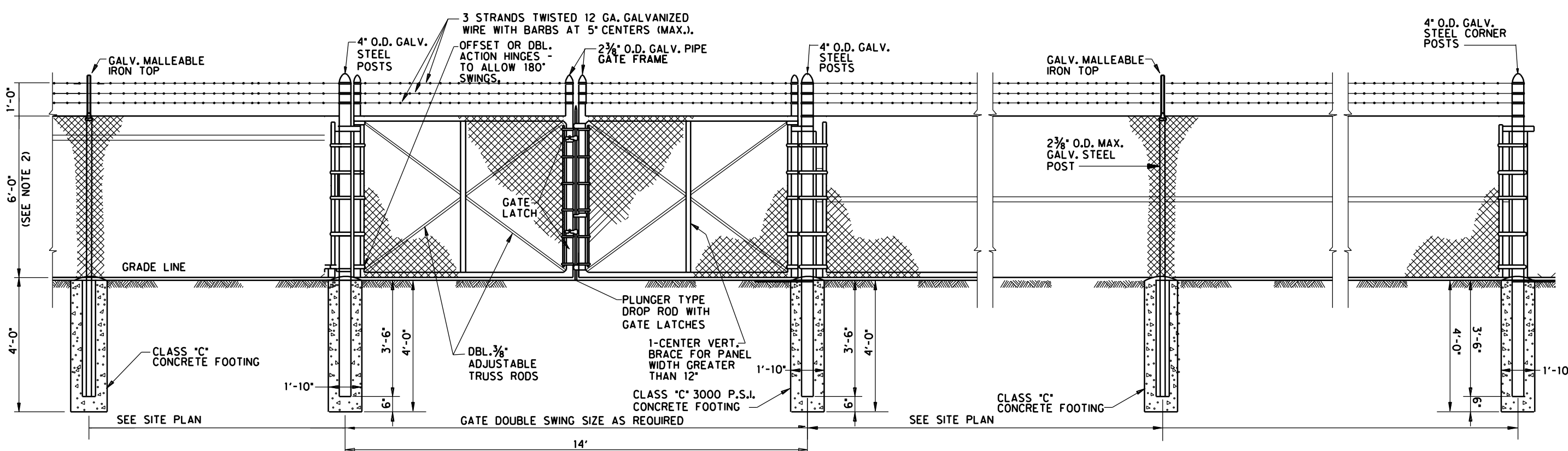
TYPICAL FIBERGLASS MANHOLE

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PROPOSED WATER HOSE BIB ASSEMBLY

NTS



TYPICAL ELEV. FENCE CHAIN LINK FABRIC FENCE

NTS

CITY OF DONNA

VALLEY VIEW ROAD LIFT STATION

SITE IMPROVEMENTS

DONNA, TEXAS

HALFF

5000 WEST MILITARY SUITE 100
MCALLEN, TEXAS 78503
TEL (956) 664-4286
FAX (956) 664-4282
TDC FIRM #512

Revision	Description	No.	Date



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Project No.:	30194
Issued:	OCTOBER 2015
Drawn By:	I.E.
Checked By:	R.L.S.
Scale:	AS NOTED
Sheet Title	MISCELLANEOUS DETAILS

C-3

Sheet Number



- | HYDRAULIC OPERATING CONDITIONS | |
|---|--------------|
| PUMP ON ELEVATION (LEAD) | 67.00 |
| PUMP OFF ELEVATION | 63.50 |
| DESIGN DISCHARGE RATE MINIMUM REQUIRED (O PUMP) | 783 GPM |
| PUMP CYCLE TIME, MIN. | 6 MIN |
| WETWELL STORAGE VOLUME | 376 GAL./VFT |
| FORCE MAIN VELOCITY | 3.2 FT./S |
| TOTAL DYNAMIC HEAD (TDH) | 46.90 FT |

CITY OF DONNA
VALLEY VIEW ROAD LIFT STATION
SITE IMPROVEMENTS
DONNA, TEXAS



Revision	No.	Date	Description
	1	10/10/2018	1
	2	10/10/2018	2
	3	10/10/2018	3
	4	10/10/2018	4
	5	10/10/2018	5
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	100	10/10/2018	100



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Sheet Title	

IFT STATION DETAILS

M-1

Sheet Number

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GENERAL

1. THE STRUCTURAL DESIGN IS IN ACCORDANCE WITH THE 2015 INTERNATIONAL BUILDING CODE AND ALL APPLICABLE PROVISIONS OF THE CITY OF DONNA, TEXAS.
2. COMPLETE SHOP DRAWINGS FOR THE STRUCTURAL WORK SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO COMMENCEMENT OF CONSTRUCTION, IN ACCORDANCE WITH THE SPECIFICATIONS. A PERIOD OF AT LEAST 10 WORKING DAYS SHALL BE PROVIDED FOR THIS REVIEW. REVIEW OF SHOP DRAWINGS BY THE ENGINEER DOES NOT RELIEVE THE CONTRACTOR OF FULL RESPONSIBILITY FOR CORRECT FABRICATION AND CONSTRUCTION OF THE WORK.
3. ANY DEVIATION FROM, ADDITION TO, SUBSTITUTION FOR, OR MODIFICATION TO THE STRUCTURE OR ANY PART OF THE STRUCTURE SHOWN ON THESE DRAWINGS SHALL BE SUBMITTED IN WRITING TO THE ENGINEER FOR REVIEW. SHOP DRAWINGS THAT ARE SUBMITTED FOR REVIEW DO NOT CONSTITUTE "IN-WRITING" UNLESS IT IS CLEARLY NOTED THAT SPECIFIC CHANGES ARE BEING SUGGESTED.
4. THE CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS AT THE SITE AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN THE ACTUAL CONDITIONS AND INFORMATION SHOWN ON THE DRAWINGS BEFORE PROCEEDING WITH THE WORK.
5. PRINCIPAL OPENINGS ARE SHOWN ON THE STRUCTURAL DRAWINGS. THE CONTRACTOR SHALL REFER TO MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR SLEEVES, CURBS, INSERTS AND SIMILAR DETAILS NOT SHOWN. SIZE AND LOCATION OF ALL OPENINGS SHALL BE VERIFIED BY THE CONTRACTOR. ANY DEVIATION FROM OPENINGS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION FOR APPROVAL PRIOR TO CONSTRUCTION.
6. THE STRUCTURAL DRAWINGS ARE NOT TO BE SCALED FOR DETERMINATION OF QUANTITIES, LENGTHS, OR FIT OF MATERIALS.
7. THE STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHODS OF CONSTRUCTION UNLESS SO STATED OR NOTED. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE WORKMEN AND OTHER PERSONS DURING CONSTRUCTION.
8. THE CONTRACTOR SHALL PROVIDE TEMPORARY ERECTION BRACING AND SHORING OF ALL STRUCTURAL WORK AS REQUIRED FOR STABILITY OF THE STRUCTURE DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY CONDITION WHICH, IN HIS OPINION, MIGHT ENDANGER THE STABILITY OF THE STRUCTURE OR CAUSE DISTRESS IN THE STRUCTURE.
9. ANY INCONSISTENCIES OR DISCREPANCIES THAT MAY OCCUR WITHIN OR BETWEEN THE DRAWINGS AND SPECIFICATIONS, THE GREATER QUANTITY OF ITEMS SHOWN, AND THE MOST COSTLY PRODUCT OR INSTALLATION METHOD, SHALL BE PROVIDED, UNLESS INSTRUCTED OTHERWISE BY THE ARCHITECT/ENGINEER. IT SHALL BE DEEMED THAT THE CONTRACTOR BID AND INTEND TO EXECUTE THE MORE STRINGENT OR HIGHER QUALITY REQUIREMENT WITHOUT ANY INCREASE TO THE CONTRACT SUM OR CONTRACT TIME.
10. ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE SPECIAL TECHNICAL PROVISIONS IN THE CONTRACT DOCUMENTS.

EARTHWORK AND FOUNDATIONS

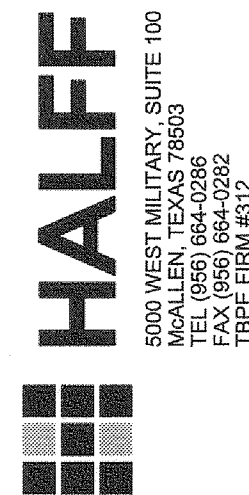
1. THE FOUNDATION DESIGN IS IN ACCORDANCE WITH A SUBGRADE INVESTIGATION AND REPORT BY RABA-KISTNER CONSULTANTS, INC. REPORT NUMBER AMA14-047-00, DATED DECEMBER 19, 2014. EXCERPTS FROM THE AFOREMENTIONED REPORT ARE PROVIDED BELOW FOR INFORMATION ONLY. PREPARATION OF THE SUBGRADE FOR FOUNDATION SUPPORT SHALL BE BASED UPON THE GEOTECHNICAL REPORT.
2. A QUALIFIED GEOTECHNICAL ENGINEER SHALL BE RETAINED BY THE HCRMA TO OBSERVE ALL GRADING OPERATIONS AND THE REQUIRED TESTING FOR IMPLEMENTING THE RECOMMENDATIONS OF THE AFOREMENTIONED SUBSURFACE INVESTIGATION AND REPORT. THESE TESTS AND OBSERVATIONS SHOULD INCLUDE BUT NOT NECESSARILY BE LIMITED TO THE FOLLOWING:
 - o OBSERVATIONS AND TESTING DURING SITE PREPARATION AND EARTHWORK
 - o CONSULTATION AS REQUIRED DURING CONSTRUCTION
 - o VERIFICATION THAT THE WELL PAD IS SUITABLE FOR CONSTRUCTION
3. THE PROJECT PLANS AND SPECIFICATIONS SHALL BE REVIEWED BY A GEOTECHNICAL ENGINEER TO VERIFY COMPATIBILITY BETWEEN THE GEOTECHNICAL RECOMMENDATIONS AND THE DRAWINGS AND SPECIFICATIONS.
4. ALL EXISTING VEGETATION BENEATH THE FOUNDATION AREA SUCH AS TREES, BRUSH, AND STUMPS SHOULD BE REMOVED FROM THE SITE.
5. BACKFILL SHALL BE COMPOSED OF PROPERLY COMPACTED ON-SITE MATERIALS. THE FILL SHALL BE PLACED IN 12 INCH LOOSE LIFTS AND SHALL BE UNIFORMLY COMPACTED TO A MINIMUM OF 95% OF ASTM D-698 (STANDARD PROCTOR) DENSITY AT A MOISTURE CONTENT NEAR OPTIMUM VALUE. IF WATER MUST BE ADDED, IT SHALL BE UNIFORMLY APPLIED AND THOROUGHLY MIXED INTO THE SOIL.
6. EACH LIFT OF COMPACTED BACKFILL SHALL BE TESTED BY A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF SUBSEQUENT LIFTS.
7. CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO EXCAVATION.
8. ALL AREAS TO RECEIVE FILL AND FILL MATERIALS SHALL BE FREE OF ANY VEGETATION OR DEBRIS PRIOR TO PLACING THE FILL.
9. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DESIGNING AND CONSTRUCTING STABLE, TEMPORARY EXCAVATIONS AND SHALL SHORE, SLOPE, OR BENCH THE SIDES OF THE EXCAVATIONS AS REQUIRED TO MAINTAIN STABILITY OF BOTH THE EXCAVATION OF BOTH EXCAVATION SIDES AND BOTTOM. THE CONTRACTOR'S "RESPONSIBLE PERSON", AS DEFINED IN 29 CFR PART 1926, SHALL EXCAVATE THE SOIL EXPOSED IN THE EXCAVATIONS AS PART OF THE CONTRACTOR'S SAFETY PROCEDURES. IN NO CASE SHALL SLOPE HEIGHT, SLOPE INCLINATION, OR EXCAVATION DEPTH EXCEED THOSE SPECIFIED IN LOCAL, STATE, AND FEDERAL SAFETY REGULATIONS. THE SOILS ABOVE A DEPTH OF 10 FEET AND ABOVE THE WATER TABLE COULD BE CONSIDERED TO BE OSHA TYPE "B" AND SHALL HAVE MAXIMUM ALLOWABLE SHORT-TERM SLOPES OF 1.0H: 1.0V. DEEPER THAN 10 FEET OR BELOW THE WATER TABLE SHOULD BE CONSIDERED OSHA TYPE "C" SOILS AND SHALL HAVE MAXIMUM ALLOWABLE SHORT-TERM SLOPES OF 1.5H: 1.0V. FLATTER SLOPES WILL LIKELY BE REQUIRED AT THIS SITE FOR LONG TERM SLOPES,

CAST IN PLACE REINFORCED CONCRETE

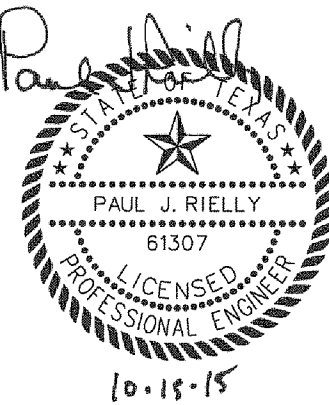
1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE MOST RECENT EDITION OF ACI 318 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.
2. MILD STEEL REINFORCING BARS SHALL CONFORM TO ASTM A-615. NO. 3 BARS SHALL BE GRADE 40. NO. 4 AND LARGER BARS SHALL BE GRADE 60.
3. MILD STEEL REINFORCEMENT AND ACCESSORIES SHALL BE DETAILED AND FABRICATED IN ACCORDANCE WITH ACI SP-66.
4. PORTLAND CEMENT SHALL BE A SINGLE BRAND CONFORMING TO ASTM C-150, TYPE I/II, UNLESS OTHERWISE APPROVED.
5. NORMAL WEIGHT AGGREGATES SHALL CONFORM TO ASTM C-33. ALL CONCRETE SHALL USE NORMAL WEIGHT AGGREGATES, UNLESS NOTED OTHERWISE.
6. ALL ADDITIVES FOR AIR ENTRAINMENT, WATER REDUCTION, AND SET CONTROL SHALL BE USED IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS. THE USE OF CALCIUM CHLORIDE AND FLY ASH IS PROHIBITED.
7. MIXES SHALL BE DESIGNED TO PROVIDE CONCRETE WITH A COMPRESSIVE STRENGTH PSI AT 28 DAYS OF 4000 PSI
8. THE MAXIMUM NOMINAL SIZE OF COARSE AGGREGATE SHALL BE 1".
9. CONCRETE EXPOSED TO WEATHER SHALL BE AIR ENTRAINED TO 3% TO 6% AIR CONTENT, AS CHECKED BY AN A.C.I. APPROVED TESTER WITH AN AIR METER.
10. CONCRETE SLUMPS SHALL BE AS FOLLOWS:
CONCRETE CONTAINING SUPER PLASTICIZER 8" MAX.
ALL OTHER CONCRETE 4" MAX.
11. MILD STEEL REINFORCEMENT SHALL BE PLACED AND SECURED IN ACCORDANCE WITH CRSI RECOMMENDED PRACTICE FOR PLACING REINFORCING BARS."
12. CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE AS FOLLOWS:
GRADE BEAMS 2" TOP
. 3" SIDES AND BOTTOM
SLABS ON GRADE 2" TOP
. 3" BOTTOM
13. REINFORCING BARS NO. 11 AND SMALLER SHALL BE CONTACT LAP SPLICED 40 BAR DIAMETERS, UNLESS SHOWN OTHERWISE. ALL SPLICES SHALL BE STAGGERED.
14. WELDING OF MILD STEEL REINFORCEMENT SHALL CONFORM TO THE AMERICAN WELDING SOCIETY "STRUCTURAL WELDING CODE-REINFORCING STEEL," AWS D-1.4.
15. NO CONCRETE SHALL BE PLACED UNTIL THE PLACEMENT AND POSITION OF ALL STEEL REINFORCEMENT AND EMBEDS ARE CHECKED AND APPROVED BY THE RESIDENT INSPECTOR.
16. ¾" CHAMFERS SHALL BE PROVIDED AT EXPOSED CORNERS.

10. PRIOR TO WELL EXCAVATION, THE CONTRACTOR SHALL SUBMIT A SHORING PLAN OR AN EXCAVATION PLAN WHICH WILL RESULT IN A STABILIZED SLOPE EMBANKMENT. THE SHORING OR EXCAVATION PLAN SHALL BE PREPARED BY A LICENSED ENGINEER AND SHALL BEAR THE SEAL OF AN ENGINEER LICENSED IN THE STATE OF TEXAS.
11. THE FOUNDATION EXCAVATION SHALL BE OBSERVED BY A GEOTECHNICAL REPRESENTATIVE DESIGNATED BY THE HCRMA PRIOR TO STEEL OR CONCRETE PLACEMENT TO ASSESS THAT THE FOUNDATION MATERIALS ARE CAPABLE OF SUPPORTING THE LIFT STATION. SOFT OR LOOSE SOIL ZONES ENCOUNTERED AT THE BOTTOM OF THE EXCAVATION SHALL BE REMOVED TO THE LEVEL OF DENSE SOILS AS DIRECTED BY GEOTECHNICAL ENGINEER. CAVITIES FORMED AS RESULT OF EXCAVATION OF SOFT OR LOOSE SOIL ZONES SHALL BE BACKFILLED WITH LEAN CONCRETE OR COMPACTED CRUSHED LIMESTONE, AS DETERMINED BY GEOTECHNICAL ENGINEER
12. AFTER OPENING, THE EXCAVATION SHALL BE OBSERVED AND CONCRETE PLACED AS QUICKLY AS POSSIBLE TO AVOID EXPOSURE OF BOTTOM TO WETTING AND DRYING, SURFACE RUN-OFF SHALL BE DRAINED AWAY FROM EXCAVATION. THE EXCAVATION SHALL BE PROTECTED TO REDUCE EVAPORATION OR ENTRY OF MOISTURE.
13. THE FINE-GRAINED CLAY SOILS ENCOUNTERED AT THIS SITE ARE EXPECTED TO BE SENSITIVE TO DISTURBANCES CAUSED BY CONSTRUCTION TRAFFIC AND CHANGES IN MOISTURE CONTENT. DURING WET WEATHER PERIODS, INCREASES IN THE MOISTURE CONTENT OF THE SOIL CAN CAUSE SIGNIFICANT REDUCTION IN THE SOIL STRENGTH AND SUPPORT CAPABILITIES. IN ADDITION, SOILS, WHICH BECOME WET, MAY BE SLOW TO DRY AND THUS SIGNIFICANTLY RETARD THE PROGRESS OF COMPACTION ACTIVITIES. IT WILL THEREFORE, BE ADVANTAGEOUS TO PREFORM EARTHWORK, BACKFILLING AND FOUNDATION CONSTRUCTION ACTIVITIES DURING DRY WEATHER.
14. WATER SHALL NOT BE ALLOWED TO COLLECT IN THE FOUNDATION EXCAVATIONS OR ON PREPARED SUBGRADES OF THE CONSTRUCTION AREAS EITHER DURING OR AFTER CONSTRUCTION. UNDERCUT OR EXCAVATED AREAS SHALL BE SLOPED TOWARD ONE CORNER OF EXCAVATION TO FACILITATE REMOVAL OF ANY COLLECTED RAINWATER, OR SURFACE RUNOFF. POSITIVE SITE SURFACE DRAINAGE SHALL BE PROVIDED TO REDUCE INFILTRATION OF SURFACE WATER AROUND THE PERIMETER OF THE EXCAVATION.
15. ANY WATER ACCUMULATION SHALL BE REMOVED FROM EXCAVATIONS BY PUMPING. SHOULD EXCESSIVE AND UNCONTROLLED AMOUNTS OF SEEPAGE OCCUR, THE GEOTECHNICAL ENGINEER SHOULD BE CONSULTED.
16. COMPACT EXCAVATED AREA AROUND PERIMETER OF LIFT STATION ACCORDINGLY.
17. BACKFILL ALL SIDES OF WET WELL SIMUTANEOUSLY IN EQUAL LIFTS. BACKFILLING ONE SIDE BEFORE BACKFILLING THE REMAINING SIDES IS PROHIBITED.

CITY OF DONNA
VALLEY VIEW ROAD LIFT STATION
SITE IMPROVEMENTS
DONNA, TEXAS



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Project No.:	30194
Issued:	OCTOBER 15, 2015
Drawn By:	SG
Checked By:	PJR
Scale:	AS NOTED
Sheet Title	
GENERAL NOTES	
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Sheet Number	

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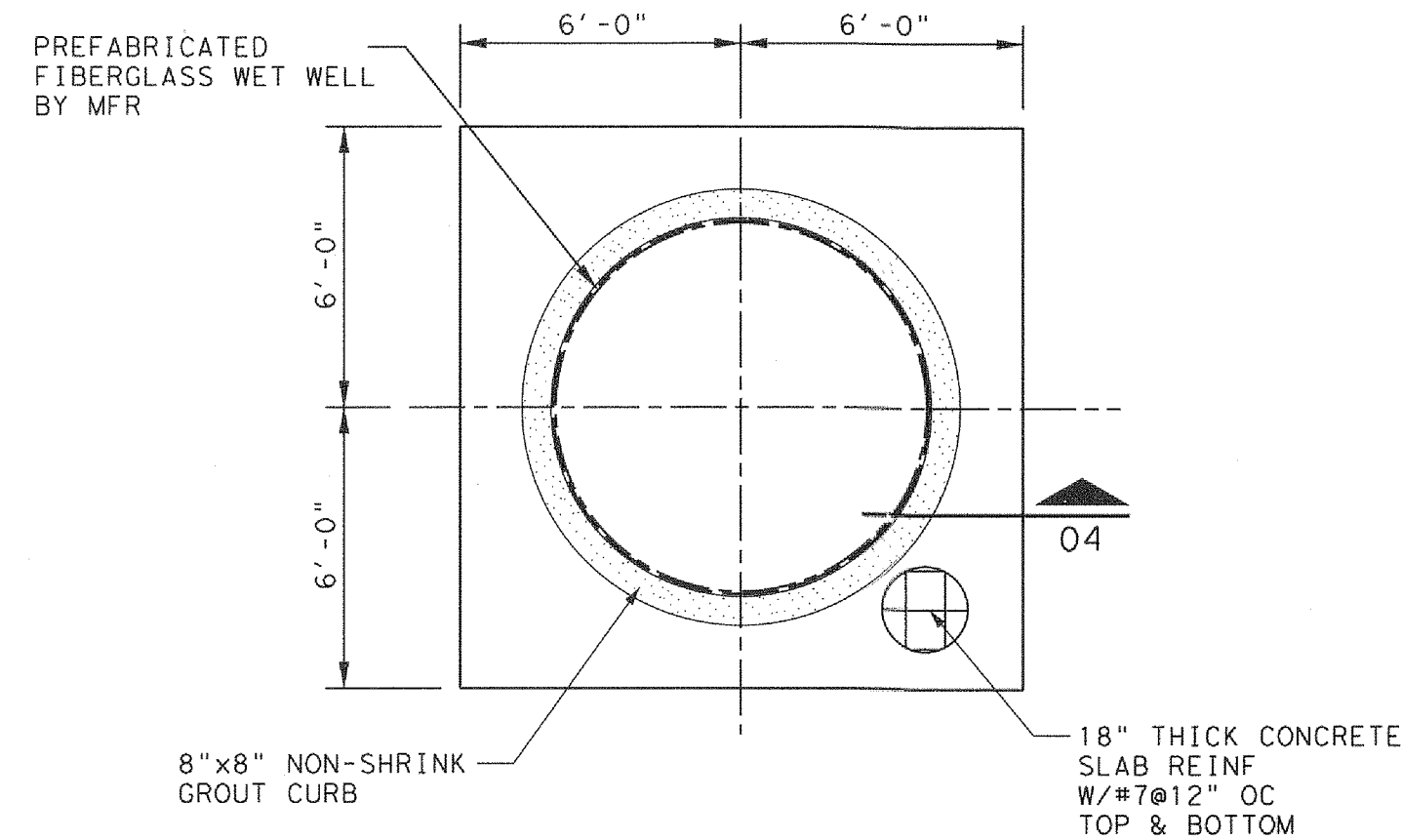
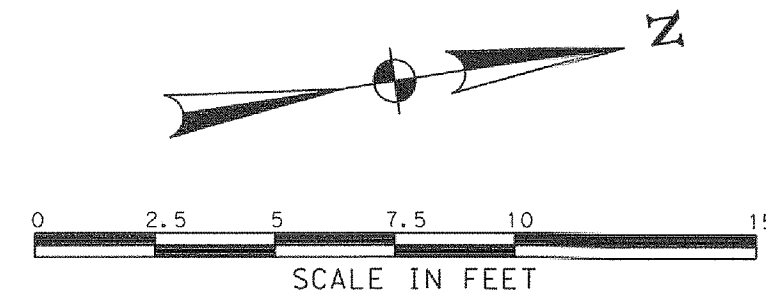
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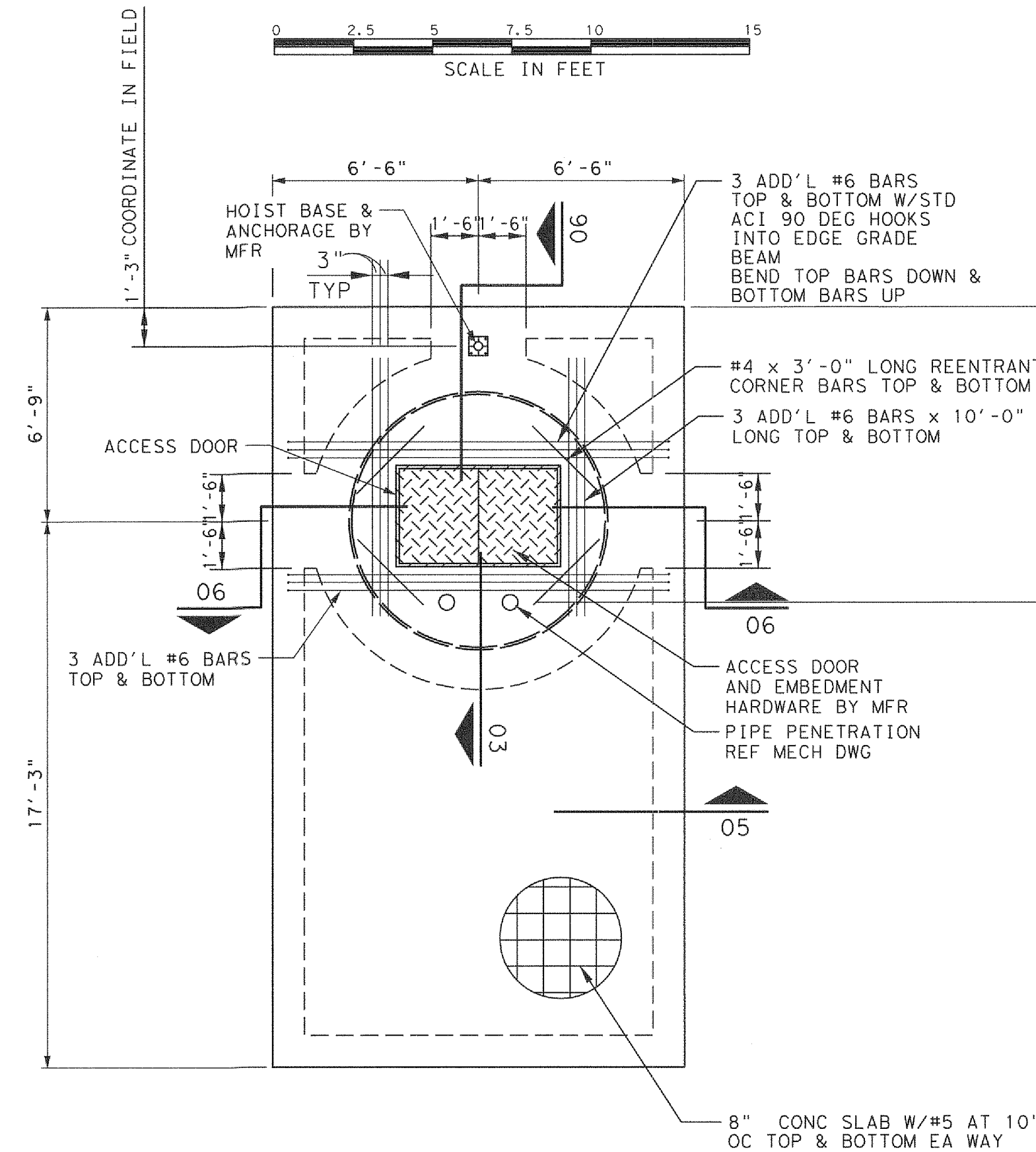
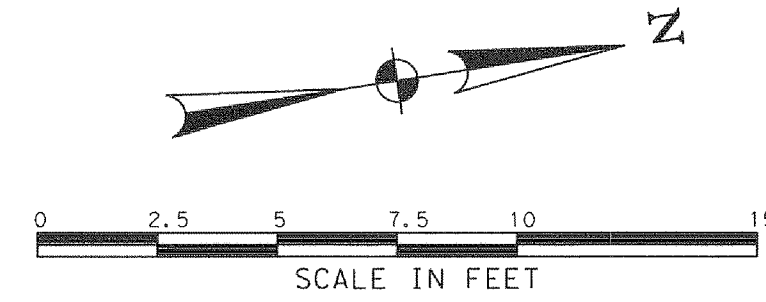
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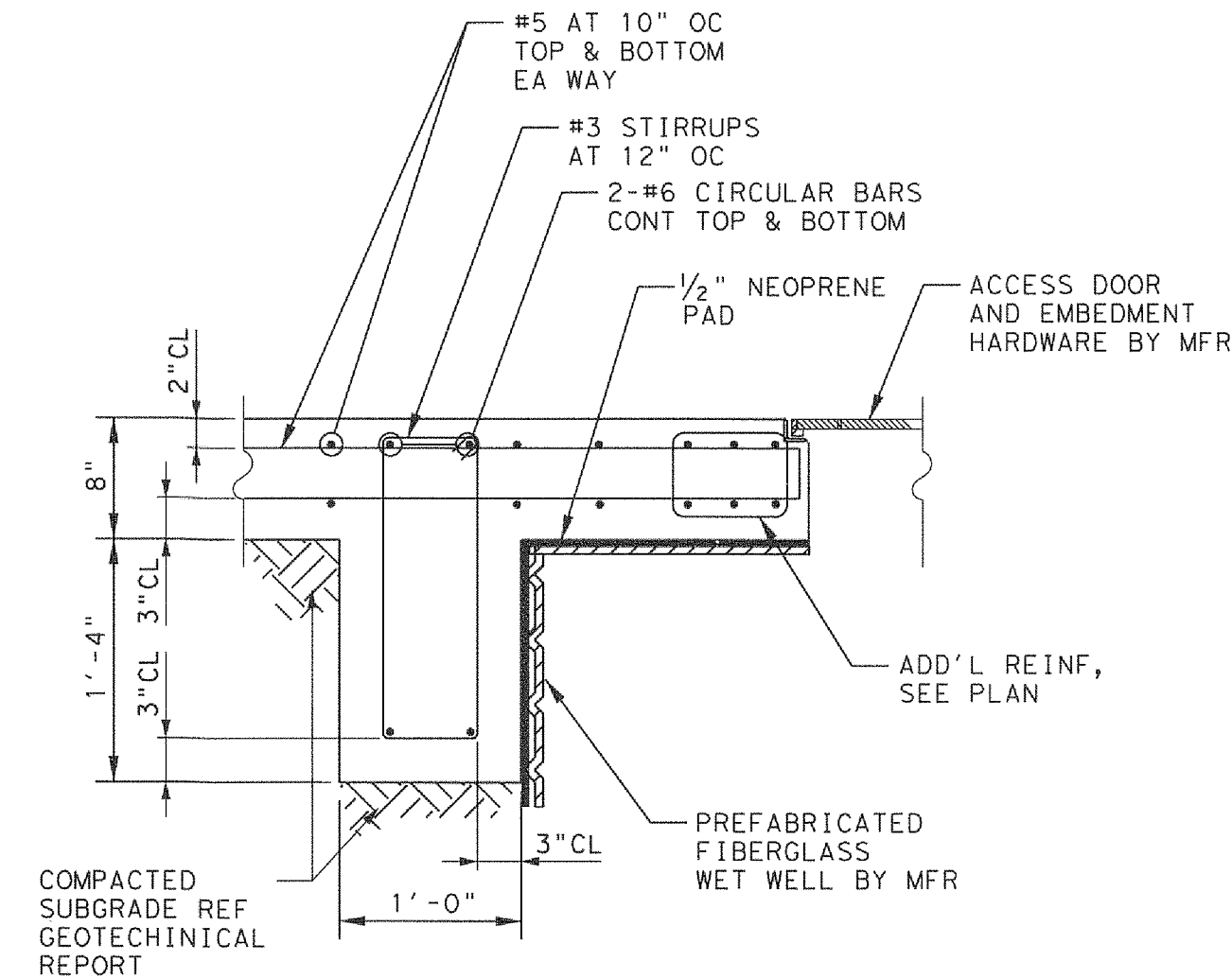
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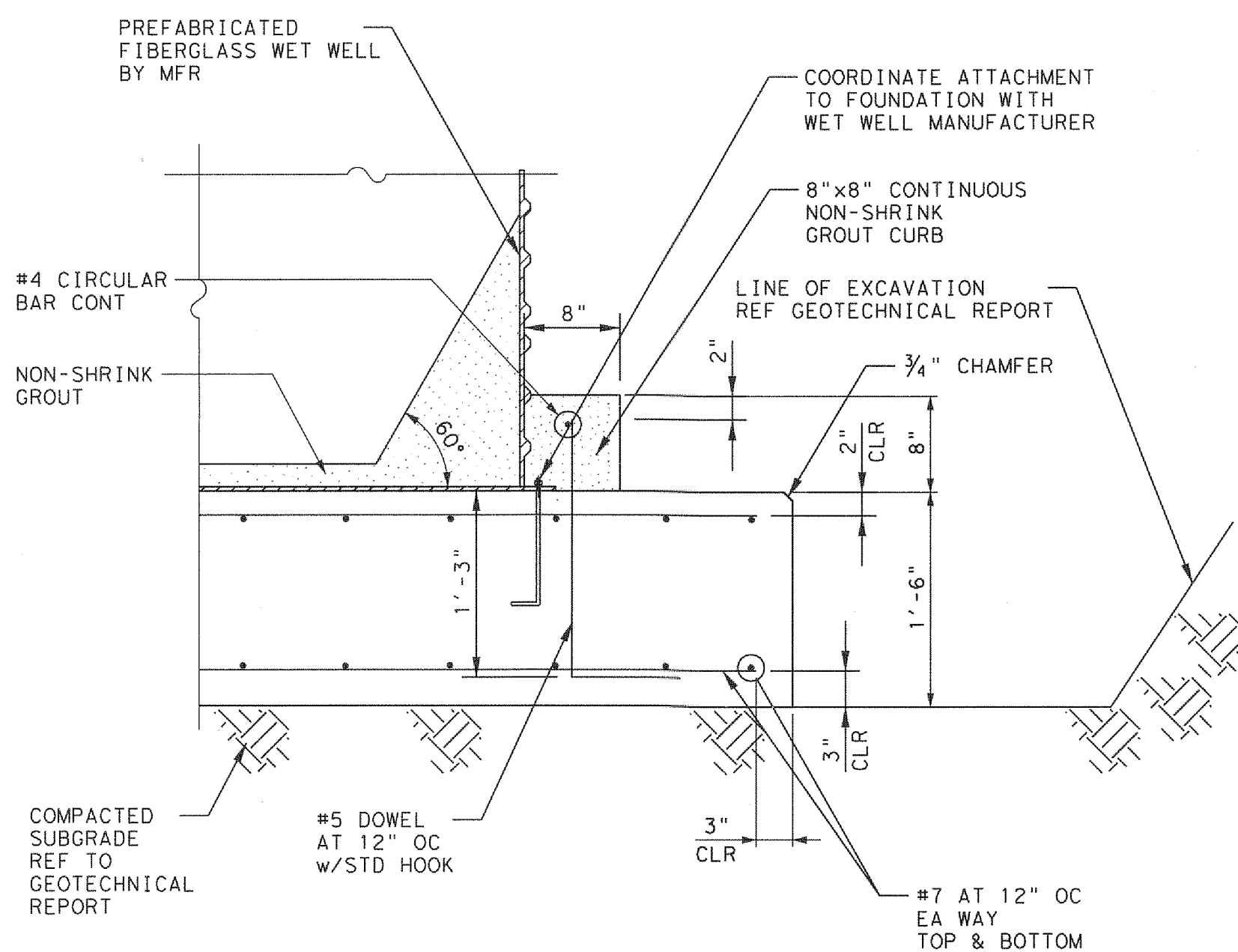
01 FOUNDATION PLAN
SCALE: 1/4"=1'-0"



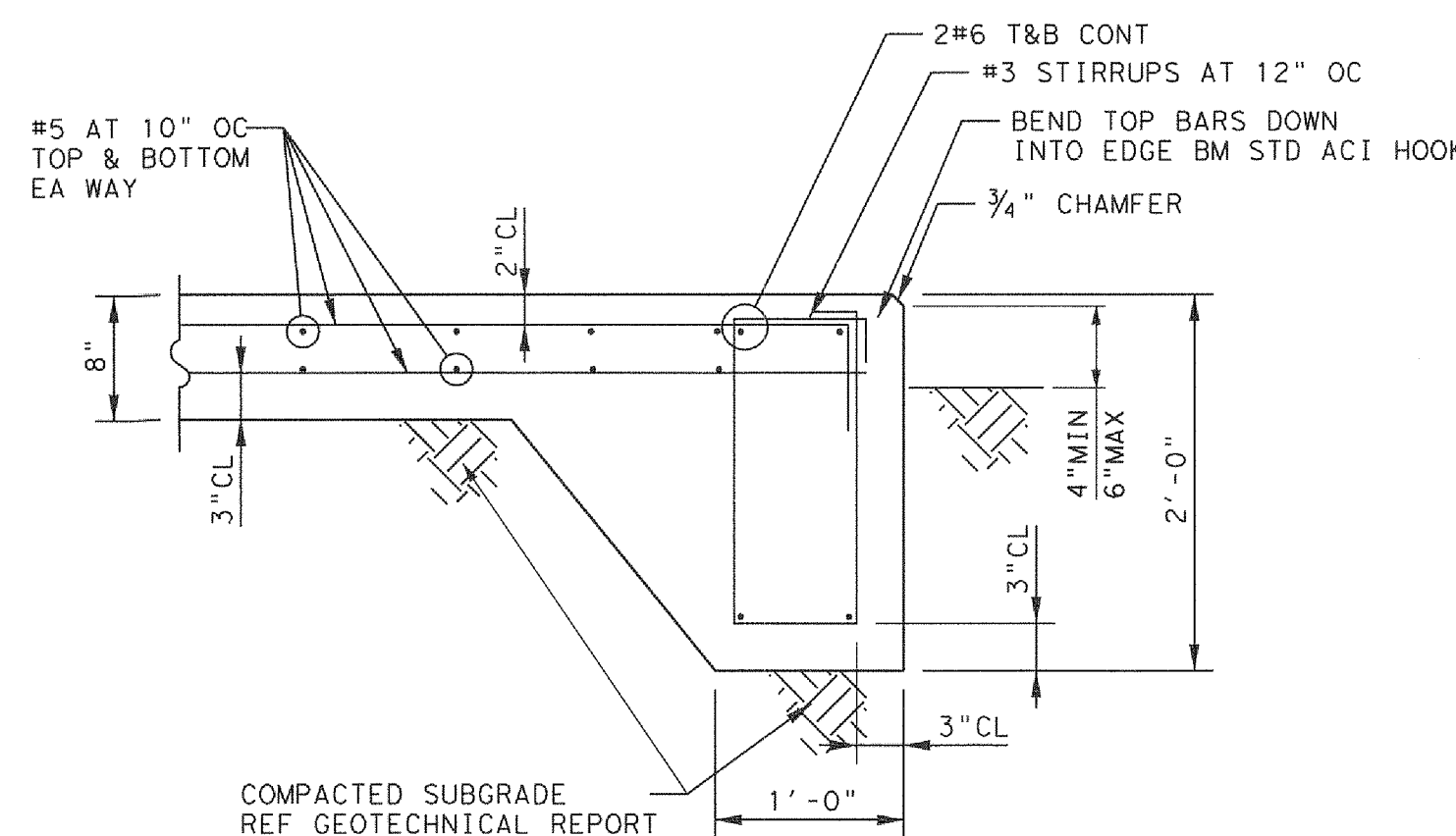
02 UPPER SLAB PLAN
SCALE: 1/4"=1'-0"
REF ELECTRICAL DRAWINGS
FOR LOCATION OF CONTROL
PANEL



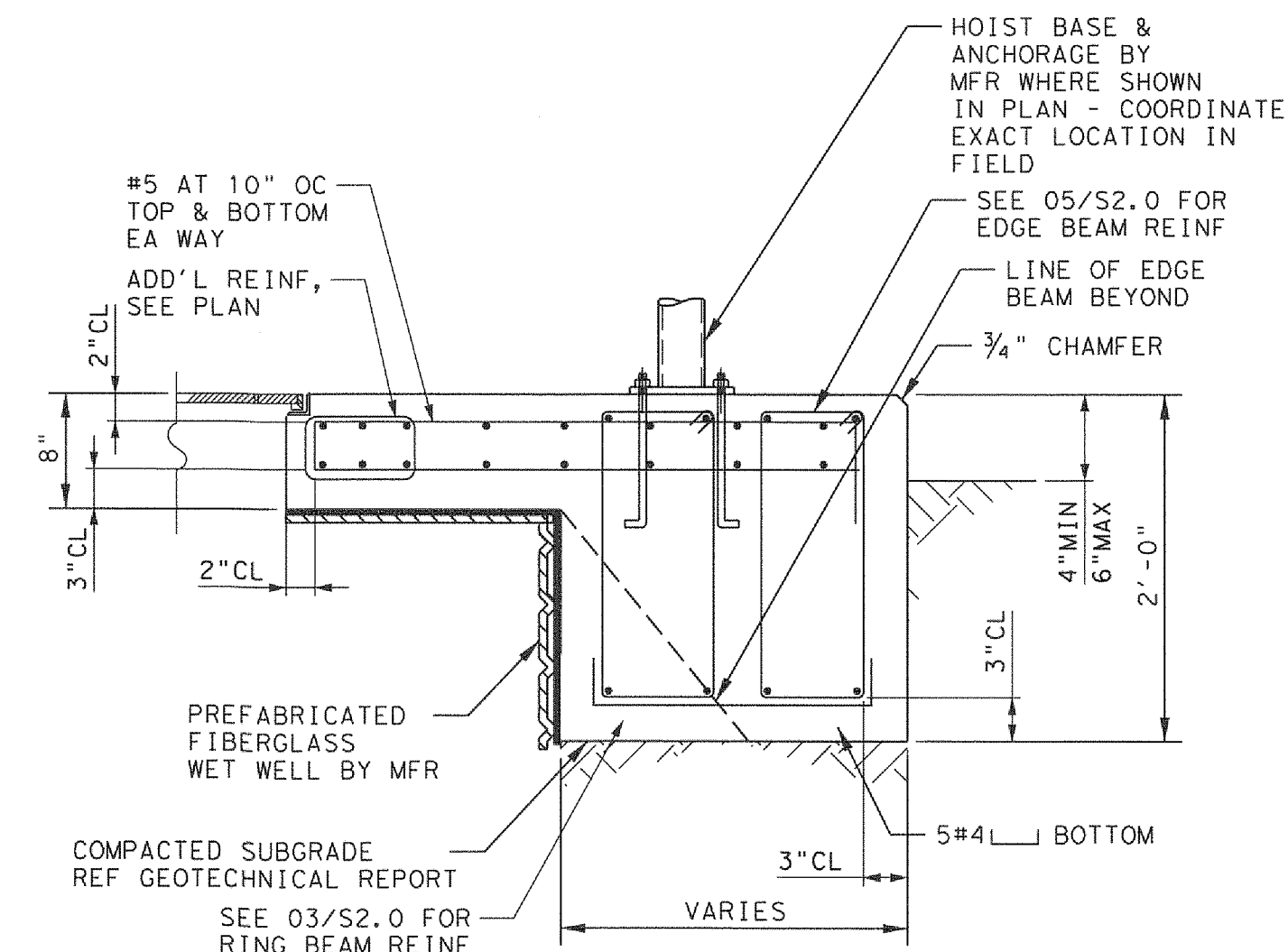
03 RING BEAM DETAIL
SCALE: 3/4"=1'-0"



04 TYPICAL FOUNDATION SLAB
SCALE: 3/4"=1'-0"



05 TYPICAL TOP SLAB SECTION
SCALE: 3/4"=1'-0"



06 EDGE BEAM DETAIL AT RING BEAM
SCALE: 3/4"=1'-0"

CITY OF DONNA
VALLEY VIEW ROAD LIFT STATION
SITE IMPROVEMENTS
DONNA, TEXAS

HALFF
5000 WEST MILITARY, SUITE 100
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TEL: (361) 664-1286
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PLANS AND DETAILS

S2.0

Sheet Number

File Name: i:\30000s\30194\WAB2\CADD\DWG\EG-1 ELECTRICAL GENERAL LEGEND.dwg
Current Tab Layout: EG-1 ELECTRICAL GENERAL LEGEND User: AHZ753
Printed Date: 10/15/2015 4:31:05 PM

ELECTRICAL GENERAL LEGEND

ALL SYMBOLS SHOWN MAY NOT APPEAR IN ALL DRAWINGS. SYMBOLS ARE SHOWN SCHEMATIC AND MAY NO BE TO SCALE.

PROCESS SWITCHES	RELAYS	MISC	POWER	LIGHTING
FLOAT SWITCH CLOSE ON RISING LEVEL	RELAY COIL a = TYPE CR - CONTROL RELAY TD - TIME DELAY RELAY M - MOTOR STARTER COIL L - MOTOR STARTER COIL - LOW SPEED H - MOTOR STARTER COIL - HIGH SPEED F - MOTOR STARTER COIL - FORWARD R - MOTOR STARTER COIL - REVERSE b = TDON - TIME DELAY ON ENERGIZATION TDOFF - TIME DELAY ON DEENERGIZATION c = TIMING RANGE/SETTING d = DESCRIPTION	SOLENOID	DUPLEX RECEPTACLE - 20A/125V/1P/3W/G NEMA 5-20R. MOUNT 15" AFF	STRIP FLUORESCENT LIGHT FIXTURE
FLOAT SWITCH OPEN ON RISING LEVEL		METER UNIT M = TYPE	220 RECEPTACLE - 20A/125V/1P/3W/G NEMA 5-20R. MOUNT 15" AFF	FLUORESCENT, HID, OR LED FIXTURE
PRESSURE SWITCH CLOSE ON RISING PRESSURE		MOTOR	DUPLEX RCPT. GFI/WATER PROOF - 20A/125V/1P/3W/G NEMA 5-20R. MOUNT 15" AFF	EXIT LIGHT, CEILING OR WALL MOUNTED - SHADING INDICATING SINGLE OR DOUBLE FACE; DIRECTIONAL ARROWS AS INDICATED.
PRESSURE SWITCH OPEN ON RISING PRESSURE		CIRCUIT BREAKER	QUADRAPLEX RECEPTACLE (TWO DUPLEX RCPTS. UNDER ONE COVER PLATE). MOUNT 15" AFF	WEATHER PROOF SINGLE POLE SWITCH. MOUNT 48" AFF AS INDICATED ON DRAWINGS
TEMPERATURE SWITCH CLOSE ON RISING TEMPERATURE		DISCONNECT	ISOLATED GROUND QUADRAPLEX RCPT. (TWO DUPLEX RCPTS. UNDER ONE COVER PLATE). MOUNT 15" AFF	THREE WAY EXPLOSION PROOF SWITCH. MOUNT 48" AFF
TEMPERATURE SWITCH OPEN ON RISING TEMPERATURE		FUSE, AF - AMP FUSED. SIZE PER NEC	SPECIAL PURPOSE RECEPTACLE (NEMA NO. OR RATING AS INDICATED). MOUNT 15" AFF	FLOW
FLOW SWITCH CLOSE ON INCREASE IN FLOW	NORMALLY OPEN CONTROL CONTACT	TRANSIENT SURGE PROTECTION	JUNCTION BOX - SIZE & MOUNTING AS REQUIRED	ULTRASONIC DOPPLER
FLOW SWITCH OPEN ON INCREASE IN FLOW	NORMALLY CLOSED CONTROL CONTACT	MOTOR WINDING HEATER * - MOTOR TAG I.D.	DISCONNECT SWITCH - 30/-/3 INDICATES 30A, 3-POLE, NONFUSED; 30/30/3 INDICATES 30A, 3-POLE, 30A FUSE. PROVIDE WITH 316 STAINLESS STEEL.	ULTRA-SONIC TRANSIT TIME
VIBRATION SWITCH OPEN ON RISING VIBRATION	TIME DELAY SWITCH NORMALLY OPEN TIMED CLOSING	SPACE HEATER	CIRCUIT BREAKER DISCONNECT SWITCH - THERMAL MAGNETIC CB IN NEMA 1 ENCL. AMPS/POLES AS INDICATED. PROVIDE WITH 316 STAINLESS STEEL.	MAGNETIC FLOW METER
VIBRATION SWITCH CLOSE ON RISING VIBRATION	TIME DELAY SWITCH NORMALLY CLOSED TIMED OPENING	VARISTOR	DISCONNECT SWITCH - 30/30/3 INDICATES 30A, 3-POLE 30A FUSE OR AS SHOWN IN SHEETS. PROVIDE WITH 316 STAINLESS STEEL. AF - AMP FUSE, SIZE PER NEC.	LEVEL
TORQUE SWITCH OPEN ON HIGH TORQUE	TIME DELAY SWITCH NORMALLY OPEN TIMED OPENING		MOTOR STARTER FVNR UNO; NUMBER INDICATES NEMA SIZE.	LEVEL ELECTRODE
TORQUE SWITCH CLOSE ON HIGH TORQUE	TIME DELAY SWITCH NORMALLY CLOSED TIMED CLOSING	CAPACITOR	COMBINATION MOTOR CONTROLLER/DISCONNECT SWITCH	LEVEL TRANSMITTER
NORMALLY CLOSED LIMIT SWITCH	TERMINAL BLOCKS	RESISTOR	PANELBOARD OR PUMP VENDOR CONTROL PANEL	LEVEL FLOAT
NORMALLY CLOSED HELD OPEN LIMIT SWITCH	TERMINAL IN PLC/PCM PANEL	BATTERY	TRANSFORMER	ULTRASONIC LEVEL METER
NORMALLY OPEN LIMIT SWITCH	TERMINAL IN MOTOR CONTROL CENTER	DIODE	SWITCHBOARD	LINE TYPES
NORMALLY OPEN HELD CLOSED LIMIT SWITCH	TERMINAL IN LOCAL STARTER CONTROL PANEL	MOTOR OVERLOAD HEATERS	CIRCUIT HOME RUN TO PANELBOARD (2 #12, 1 #12G, 3/4"C. 20A/1P CB UNO)	EXOHE EXISTING OVERHEAD PRIMARY POWER
HAND SWITCHES	TERMINAL AT FIELD DEVICE	OVERLOAD CONTACT	X,X,X THREE SINGLE POLE DEVICE CIRCUIT NUMBERS	UNDERGROUND CONDUIT FOR POWER
NORMALLY OPEN MOMENTARY PUSHBUTTON	TERMINAL IN RTU	DRAWOUT CONNECTION	X/X/X MULTI-POLE DEVICE CIRCUIT NUMBERS	UNDERGROUND CONDUIT FOR COMMUNICATIONS
NORMALLY CLOSED MOMENTARY PUSHBUTTON	TERMINAL IN FIELD PANEL	GROUND	MAG METER	ABOVE GROUND CONDUIT FOR POWER
THREE POSITION SELECTOR SWITCH x - DENOTES POSITION CONTACTS CLOSED o - DENOTES POSITION CONTACTS OPENED	TERMINAL IN (USER CHOICE)	LIGHTNING ARRESTOR	PRESSURE TRANSMITTER	ABOVE GROUND CONDUIT FOR COMMUNICATIONS
TWO POSITION SELECTOR SWITCH x - DENOTES POSITION CONTACTS CLOSED o - DENOTES POSITION CONTACTS OPENED	DIGITAL BUS CONNECTOR * = D - DEVICENET * = PA - PROFIBUS PA * = DP - PROFIBUS DP * = H1 - FOUNDATION FIELDBUS H1 * = H2 - FOUNDATION FIELDBUS H2	CONTROL POWER TRANSFORMER	MOTOR ACTUATED VALVE	LIGHTING CIRCUIT
MUSHROOM HEAD PUSHBUTTON			LOCAL CONTROL PANEL	
PUSH-PULL PUSHBUTTON MAINTAINED CONTACT			POWER BRANCH/FEEDER PULL BOX	
PADLOCK SWITCH x - DENOTES POSITION CONTACTS CLOSED o - DENOTES POSITION CONTACTS OPENED		ELAPSED TIME METER	INSTRUMENTATION/COMMUNICATION PULL BOX	
PULL CORD SWITCH		AC TO DC CONVERTER, UL LISTED	LOCAL - OFF - REMOTE CONTROL PANEL	
STOP-LOCKOUT PUSHBUTTON			PHASE MONITOR	
SPRING-RETURN x - DENOTES POSITION CONTACTS CLOSED o - DENOTES POSITION CONTACTS OPENED			SURGE PROTECTION DEVICE (TVSS)	
PILOT LIGHTS			GAS DETECTING ANALYZER	
PILOT LIGHT a = LENS COLOR R = RED G = GREEN W = WHITE A = AMBER			MANUAL TRANSFER SWITCH	

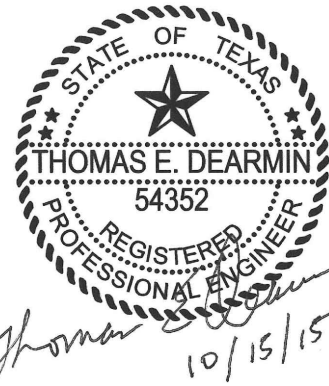
GENERAL ABBREVIATIONS

ABS	ABOVE BACK SPLASH	EP	ELECTRICAL PRIMARY	IG	ISOLATED GROUND	NF	NONFUSED	PPB	POWER/FEEDER PULL BOX	TYP	TYPICAL	XFMR	TRANSFORMER
AF	AMP FUSED	EX	EXISTING	IPB	INSTRUMENTATION PULL BOX	NIC	NOT IN CONTRACT	RCPT(S)	RECEPTACLE(S)	UAC	UTILITY AUTOMATIC CONTROL		
AFF	ABOVE FINISHED FLOOR	F	FUSE	I/O	INPUT/OUTPUT	NL	NIGHT LIGHT	RW (R.W.)	RACEWAY(S)	UF	UNDERFLOOR		
BFC	BELOW FINISHED CEILING	F.E.M.	FIBERGLASS ENCLOSURE MANUFACTURER	LCP	LIGHTNING SURGE ARRESTOR	NO (N.O.)	NORMALLY OPEN	SCADA	SUPERVISORY CONTROL AND DATA ACQUISITION	UG	UNDERGROUND		
C	CONDUIT	G	GROUND (EQUIPMENT)	MCC	MOTOR CONTROL CENTER	PFR	PHASE FAILURE RELAY	SO (S.O.)	SPACE ONLY	UNO	UNLESS NOTED OTHERWISE		
CB	CIRCUIT BREAKER	GFI	GROUND FAULT INTERRUPTER	MMF	MULTI-FUNCTIONAL METER	PL	PRIMARY LOOP	SP	SPARE	VFD	VARIABLE FREQUENCY DRIVE		
CLG	CEILING	HMI	HUMAN / MACHINE INTERFACE	MTD	MOUNT OR MOUNTED	PM	POWER MONITOR	ST (S.T.)	SHUNT TRIP	WG	WIRE GUARD		
EC	EMPTY CONDUIT	IC	INTERRUPTING CAPACITY	NC (N.C.)	NORMALLY CLOSED	PNL	PANEL BOARD	SW	SWITCH	WP	WEATHERPROOF		

CITY OF DONNA
VALLEY VIEW ROAD LIFT STATION
SITE IMPROVEMENTS
DONNA, TEXAS



Revision	No.	Date	Description



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Project No.:	30194
Issued:	OCTOBER 2015
Drawn By:	J.M.
Checked By:	G.B.
Scale:	AS NOTED
Sheet Title	
ELECTRICAL GENERAL LEGEND	

EG-1

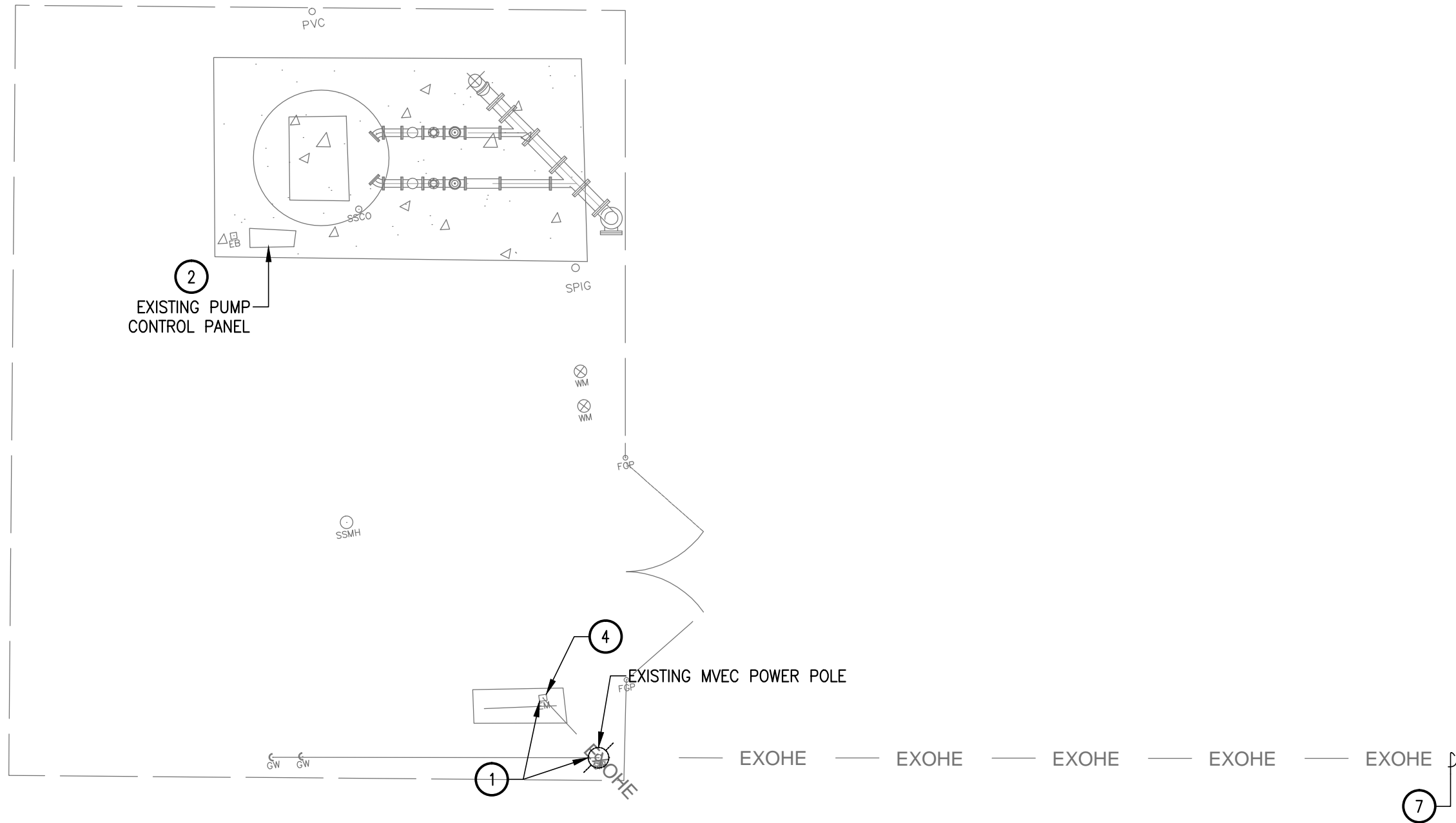
Sheet Number

SCALE: (FULL SIZE - 22" x 34")
SCALE: (HALF SIZE - 11" x 17")

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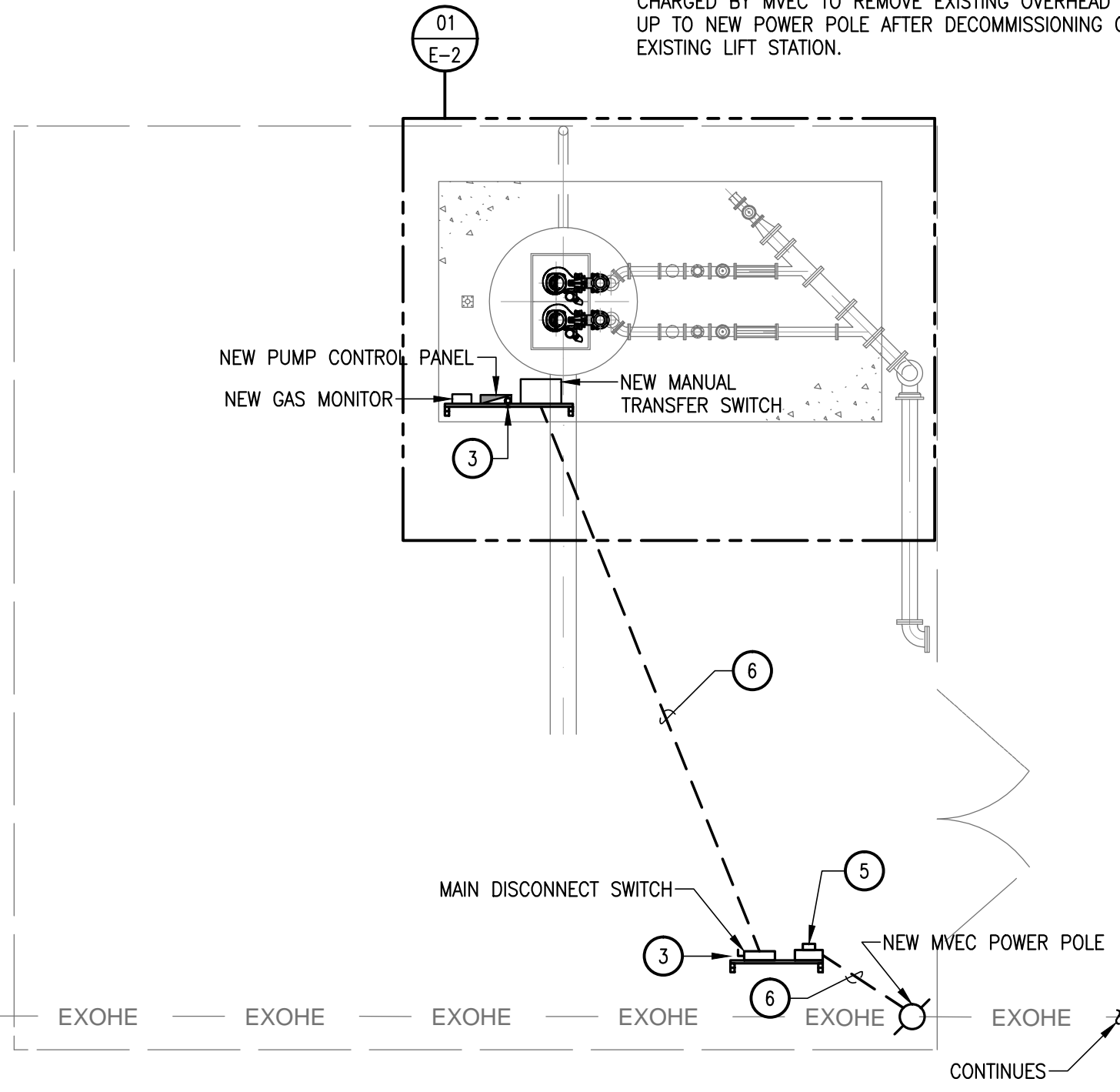
01 ELECTRICAL EXISTING SITE PLAN

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



02 ELECTRICAL NEW SITE PLAN

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



0 2 4 8 16
SCALE: 1/8"=1'-0"

SCALE: (FULL SIZE - 22" x 34")
SCALE: (HALF SIZE - 11" x 17")

GENERAL NOTES:

- ELECTRICAL CONTRACTOR SHALL CONTACT MVEC SERVICE REPRESENTATIVE AND COORDINATE NEW SERVICE INSTALLATION PRIOR TO COMMENCING WORK.
- ELECTRICAL CONTRACTOR SHALL INCLUDE IN HIS BID TO OWNER ANY CONSTRUCTION COSTS CHARGED BY POWER COMPANY FOR NEW UTILITY SERVICE EQUIPMENT AND TEMPORARY POWER FOR EXISTING LIFT STATION.
- PACKAGED PUMP CONTROLLER, FLOAT SWITCHES AND CABLE FURNISHED WITH PUMP. MOTORS. ELECTRICAL CONTRACTOR SHALL INSTALL AND MAKE FINAL CONNECTIONS TO THIS EQUIPMENT.
- PROVIDE WITH A DEDICATED TELEPHONE LINE FOR THE AUTO DIALER SYSTEM. COORDINATE WITH LOCAL TELEPHONE SERVICE PROVIDER, AND INCLUDE COSTS ASSOCIATED WITH TELEPHONE SERVICE INSTALLATIONS IN BID TO OWNER.

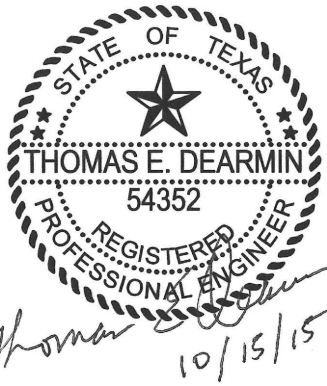
KEY NOTES: ⓘ

- CONTRACTOR SHALL INCLUDE IN BID TO OWNER COST ASSOCIATED WITH PROVIDING TEMPORARY POWER TO EXISTING LIFT STATION WHILE NEW LIFT STATION IS BEING CONSTRUCTED. COORDINATE WITH MVEC THE REMOVAL OF EXISTING UTILITY ONCE THE NEW LIFT STATION IS UP AND RUNNING, AND EXISTING LIFT STATION IS READY TO BE DEMOLISHED.
- AFTER INSTALLATION OF NEW LIFT STATION, REMOVE ALL ELECTRICAL EQUIPMENT, CABLING, AND LIGHTING, DISCARD OR RETURN TO OWNER AT OWNERS REQUEST.
- REFER TO RISER DIAGRAM IN SHEET E-4 DETAIL 01 FOR ADDITIONAL ELECTRICAL REQUIREMENTS.
- EXISTING UTILITY METER, THIS METER SHALL BE MAINTAINED IN SERVICE UNTIL NEW LIFT STATION IS ONLINE.
- CONTRACTOR SHALL PROVIDE ALL COSTS ASSOCIATED WITH PROVIDING ENERGY USAGE COSTS UNTIL THE EXISTING LIFT STATION IS DECOMMISSIONED. ONCE THE EXISTING LIFT STATION IS DECOMMISSIONED, TRANSFER MVEC UTILITY SERVICE ACCOUNT TO CITY OF DONNA FOR PERMANENT POWER.
- REFER TO SHEET E-4 DETAIL 2 FOR REQUIREMENTS.
- CONTRACTOR SHALL INCLUDE IN BID TO OWNER ALL COSTS CHARGED BY MVEC TO REMOVE EXISTING OVERHEAD LINE UP TO NEW POWER POLE AFTER DECOMMISSIONING OF EXISTING LIFT STATION.

CITY OF DONNA
VALLEY VIEW ROAD LIFT STATION
SITE IMPROVEMENTS
DONNA, TEXAS

HALFF
5000 WEST MILITARY, SUITE 100
MCALLEN, TEXAS 78503
TEL: (361) 664-0282
FAX: (361) 664-0282
TBP# FIRM #F-312

Revision No.	Date	Description



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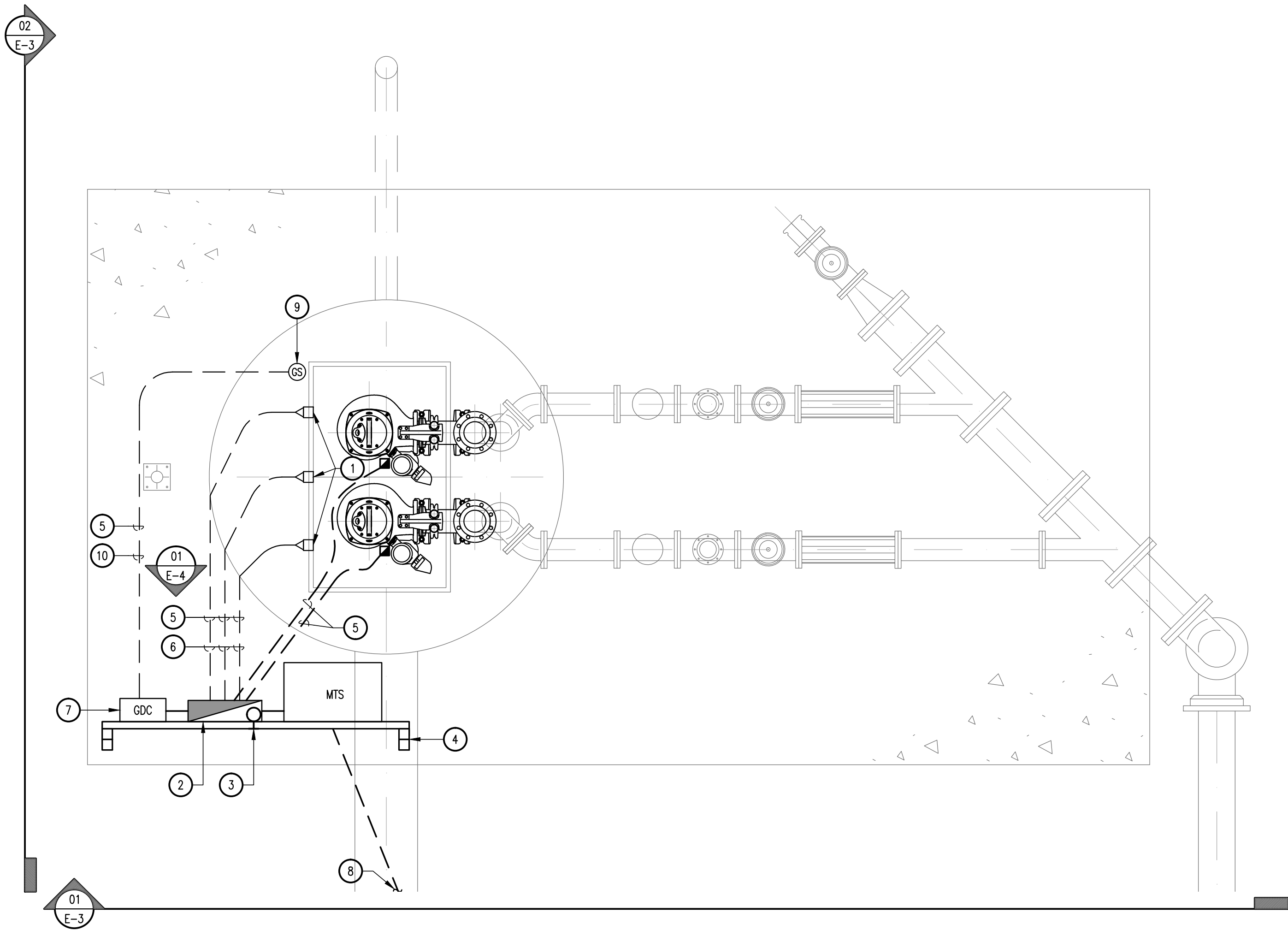
Project No.:	30194
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Drawn By:	J.M.
Checked By:	G.B.
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ELECTRICAL SITE PLAN

E-1

Sheet Number

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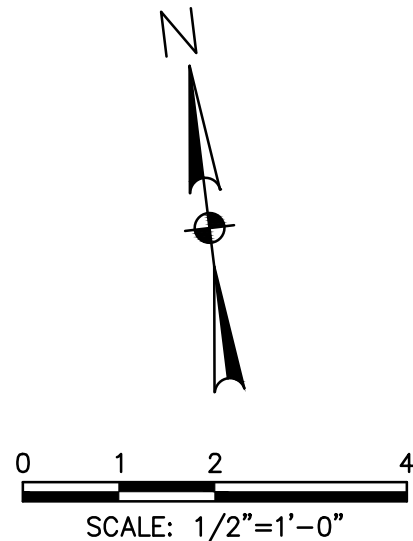
01 ELECTRICAL FLOOR PLAN
SCALE: 1/2" = 1'-0"

GENERAL NOTES:

- A. VERIFY DIAMETER OF POWER CABLE FOR SUBMERSIBLE PUMPS AND FLOATS. COORDINATE CONDUIT SIZING AND ROUTING WITH PUMP SUPPLIER PRIOR TO COMMENCING WORK. CONDUIT FILL SHALL BE MAINTAINED PER NEC 2011.
- B. CONTRACTOR SHALL REFER TO PUMP MANUFACTURER'S DRAWINGS FOR VERIFICATION OF THE LOCATIONS AND FOR PROVIDING AND INSTALLING ALL DEVICES, RACEWAYS, BOXES AND WIRING NOT SHOWN ON THESE DRAWINGS. VERIFY ALL REQUIREMENTS BEFORE ROUGH-IN. INSTALLATION OF ALL DEVICES, RACEWAYS, WALL BOXES AND CONDUCTORS SHALL BE INSTALLED TO PROVIDE A COMPLETE AND OPERATION SYSTEM.
- C. CONTRACTOR SHALL COORDINATE WITH LOCAL POWER UTILITY PROVIDER PRIOR TO INSTALLING METER BASE. UTILITY METER TO BE PLACED ON THE ELECTRICAL RACK AS REQUIRED BY MAGIC VALLEY ELECTRIC COOP. CONTRACTOR IS RESPONSIBLE FOR ARRANGING AND PAYING FOR ALL POWER COSTS.
- D. COORDINATE WITH MAGIC VALLEY ELECTRIC COOP TO FURNISH AND INSTALL NEW SERVICE TRANSFORMERS AND METER AS REQUIRED.
- E. AREA IN WET WELL SHALL BE CLASSIFIED AS CLASS 1, GROUP D, DIVISION 1. PROVIDE SEAL FITTINGS FOR ALL CONDUITS LEAVING OR PENETRATING BOUNDARY BETWEEN CLASSIFIED AND NON-CLASSIFIED AREAS. ELECTRICAL INSTALLATION SHALL COMPLY WITH NFPA 70 - 2011 AND NFPA 820 - 2012.

KEY NOTES: ①

- 1. FLOAT SWITCHES FURNISHED BY PUMP CONTROL SUPPLIER AND INSTALLED BY CONTRACTOR.
- 2. PUMP VENDOR CONTROL PANEL. REFER TO DETAIL 02 IN SHEET E-4 FOR REQUIREMENTS.
- 3. AREA LIGHT - RICALITE#SAFR-11-L-U-LF-S-SS OR EQUAL. REFER TO DETAIL 05 IN SHEET E-5, FOR MOUNTING REQUIREMENTS.
- 4. PROVIDE RACK FOR MOUNTING ELECTRICAL EQUIPMENT. ALL HARDWARE SHALL BE OF STAINLESS STEEL MATERIAL.
- 5. PROVIDE PROPER CONDUIT SUPPORT. DO NOT INSTALL CONDUIT SURFACE TO THE CONCRETE SLAB. CONDUIT SHALL BE LAID IN FLOOR SLAB.
- 6. 1" GRC/PVC COATED CONDUIT FOR FLOAT SENSORS. QUANTITY OF (1) CONDUIT PER FLOAT SENSOR CONDUCTOR.
- 7. GAS DETECTOR. REFER TO SHEET E-4 FOR REQUIREMENTS.
- 8. CONTINUES TO MAIN DISCONNECT SWITCH. REFER TO SHEET E-1 DETAIL 02.
- 9. COORDINATE WITH GAS MONITOR MANUFACTURER FOR RECOMMENDED INSTALLATION ELEVATION OF GAS SENSOR.
- 10. FURNISH AND INSTALL 2#12, #12G, 3/4"C.



SCALE: (FULL SIZE - 22' x 34')
SCALE: (HALF SIZE - 11' x 17')

CITY OF DONNA
VALLEY VIEW ROAD LIFT STATION
SITE IMPROVEMENTS
DONNA, TEXAS



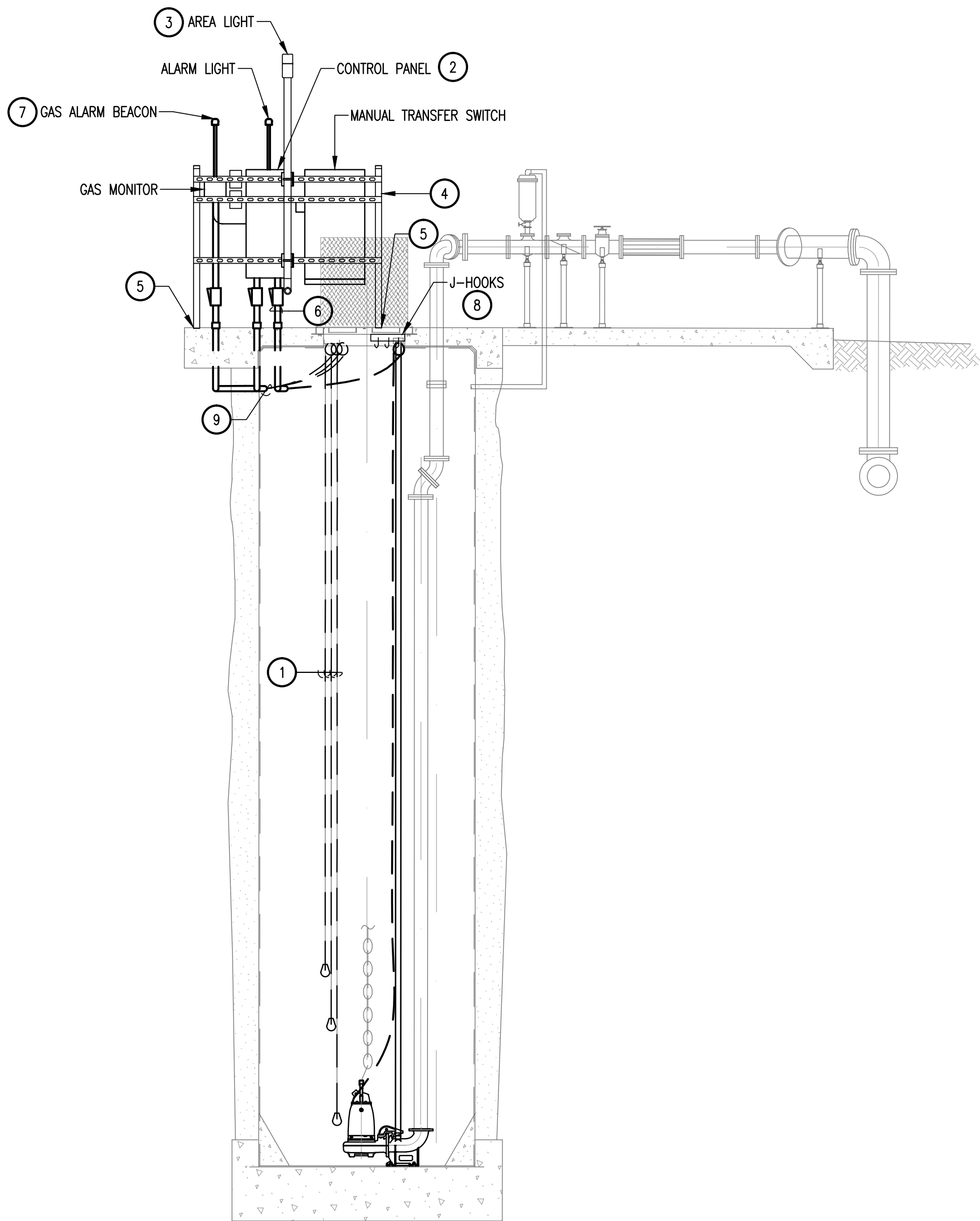
Revision No.	Date	Description



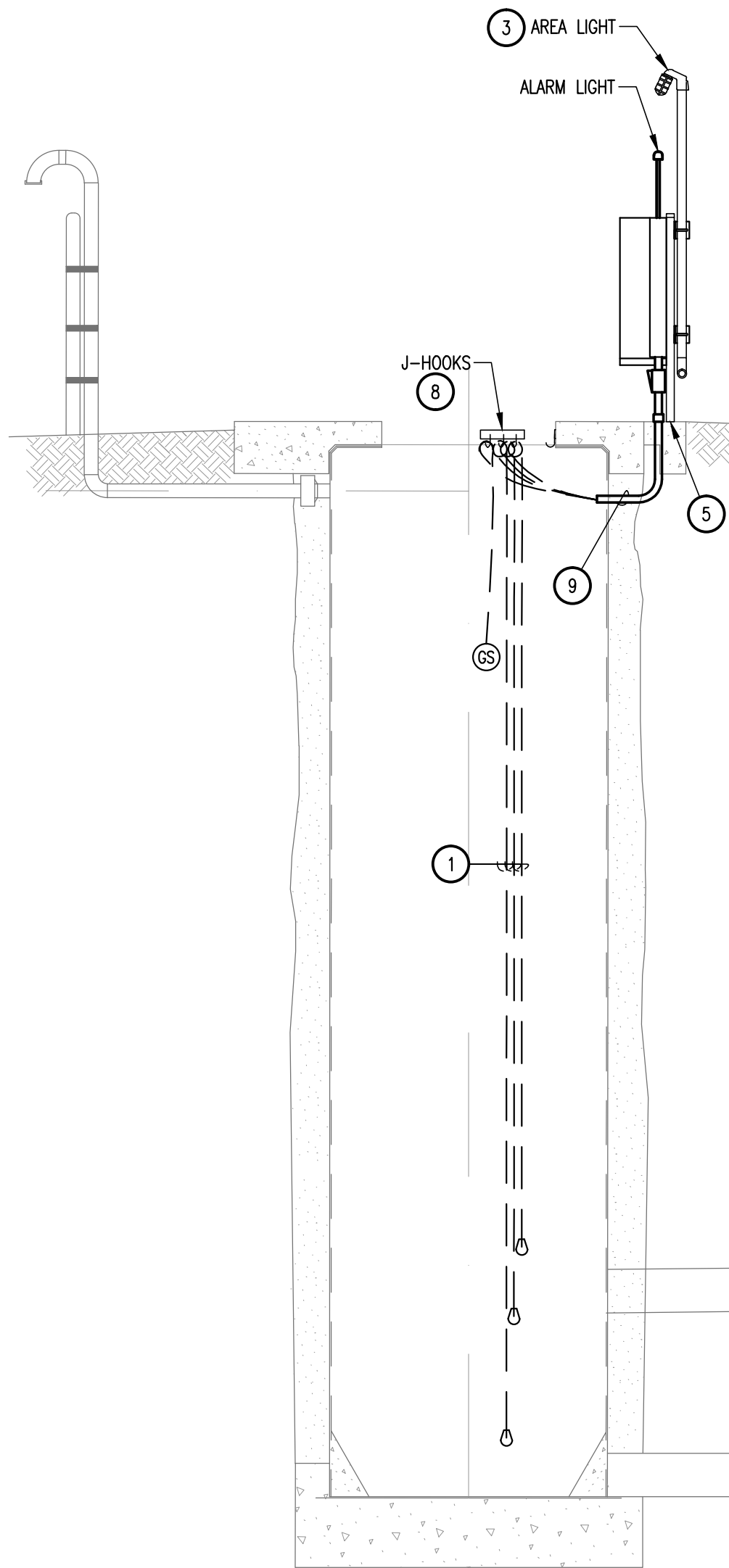
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Checked By:	G.B.
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ELECTRICAL FLOOR PLAN	
E-2	
Sheet Number	

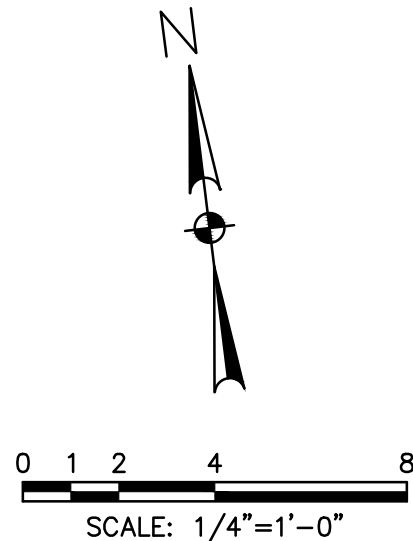
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01 ELECTRICAL SECTION VIEW - LIFT STATION
SCALE: 1/4" = 1'-0"



02 ELECTRICAL SECTION VIEW - VENT PIPE
SCALE: 1/4" = 1'-0"



SCALE: (FULL SIZE - 22" x 34")
SCALE: (HALF SIZE - 11" x 17")

GENERAL NOTES:

- VERIFY DIAMETER OF POWER CABLE FOR SUBMERSIBLE PUMPS AND FLOATS. COORDINATE CONDUIT SIZING AND ROUTING WITH PUMP SUPPLIER PRIOR TO COMMENCING. CONDUIT FILL SHALL BE MAINTAINED PER NEC 2011.
- ELECTRICAL CONTRACTOR SHALL REFER TO PUMP MANUFACTURER'S DRAWINGS FOR VERIFICATION OF THE LOCATIONS AND FOR PROVIDING AND INSTALLING ALL DEVICES, RACEWAYS, BOXES AND WIRING NOT SHOWN ON THESE DRAWINGS. VERIFY ALL REQUIREMENTS BEFORE ROUGH-IN. INSTALLATION OF ALL DEVICES, RACEWAYS, WALL BOXES AND CONDUCTORS SHALL BE INSTALLED TO PROVIDE A COMPLETE AND OPERATION SYSTEM.
- CONTRACTOR SHALL COORDINATE WITH LOCAL POWER UTILITY PROVIDER PRIOR TO INSTALLING METER BASE. UTILITY METER TO BE PLACED ON THE ELECTRICAL RACK AS REQUIRED BY MAGIC VALLEY ELECTRIC COOP. CONTRACTOR IS RESPONSIBLE FOR ARRANGING AND PAYING FOR ALL POWER COSTS.
- COORDINATE WITH MAGIC VALLEY ELECTRIC COOP TO FURNISH AND INSTALL NEW SERVICE TRANSFORMERS AND METER AS REQUIRED.
- AREA IN WET WELL SHALL BE CLASSIFIED AS CLASS 1, GROUP D, DIVISION 1. PROVIDE SEAL FITTINGS FOR ALL CONDUITS LEAVING OR PENETRATING BOUNDARY BETWEEN CLASSIFIED AND NON-CLASSIFIED AREAS. ELECTRICAL INSTALLATION SHALL COMPLY WITH NFPA 70 - 2011 AND NFPA 820 - 2012.

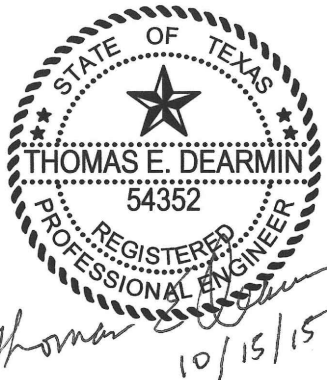
KEY NOTES:

- FLOAT SWITCHES FURNISHED BY PUMP CONTROL SUPPLIER AND INSTALLED BY ELECTRICAL CONTRACTOR.
- PUMP VENDOR CONTROL PANEL. REFER TO DETAIL 02 IN SHEET E-4 FOR REQUIREMENTS.
- AREA LIGHT - RIGALITE#SAFR-11-L-U-LF-S-SS OR EQUAL REFER TO DETAIL 05 IN SHEET E-5, FOR MOUNTING REQUIREMENTS.
- PROVIDE RACK FOR MOUNTING ELECTRICAL EQUIPMENT. ALL HARDWARE SHALL BE OF STAINLESS STEEL MATERIAL. PROVIDE POST SUPPORT CONDUIT WITH 4-INCH GALVANIZED RIGID CONDUIT.
- DEPTH OF ELECTRICAL RACK SUPPORT CONDUIT SHALL BE A MINIMUM OF 4- FEET, EMBEDDED IN CONCRETE.
- 1" GRC/PVC COATED CONDUIT FOR FLOAT SENSORS. QUANTITY OF (1) CONDUIT PER FLOAT SENSOR CONDUCTOR.
- GAS DETECTOR. REFER TO SHEET E-4 FOR REQUIREMENTS.
- PROVIDE WITH J-HOOKS OF STAINLESS STEEL AS REQUIRED.
- ALL WET WELL PENETRATIONS TO BE SEALED GAS TIGHT.

CITY OF DONNA
VALLEY VIEW ROAD LIFT STATION
SITE IMPROVEMENTS
DONNA, TEXAS

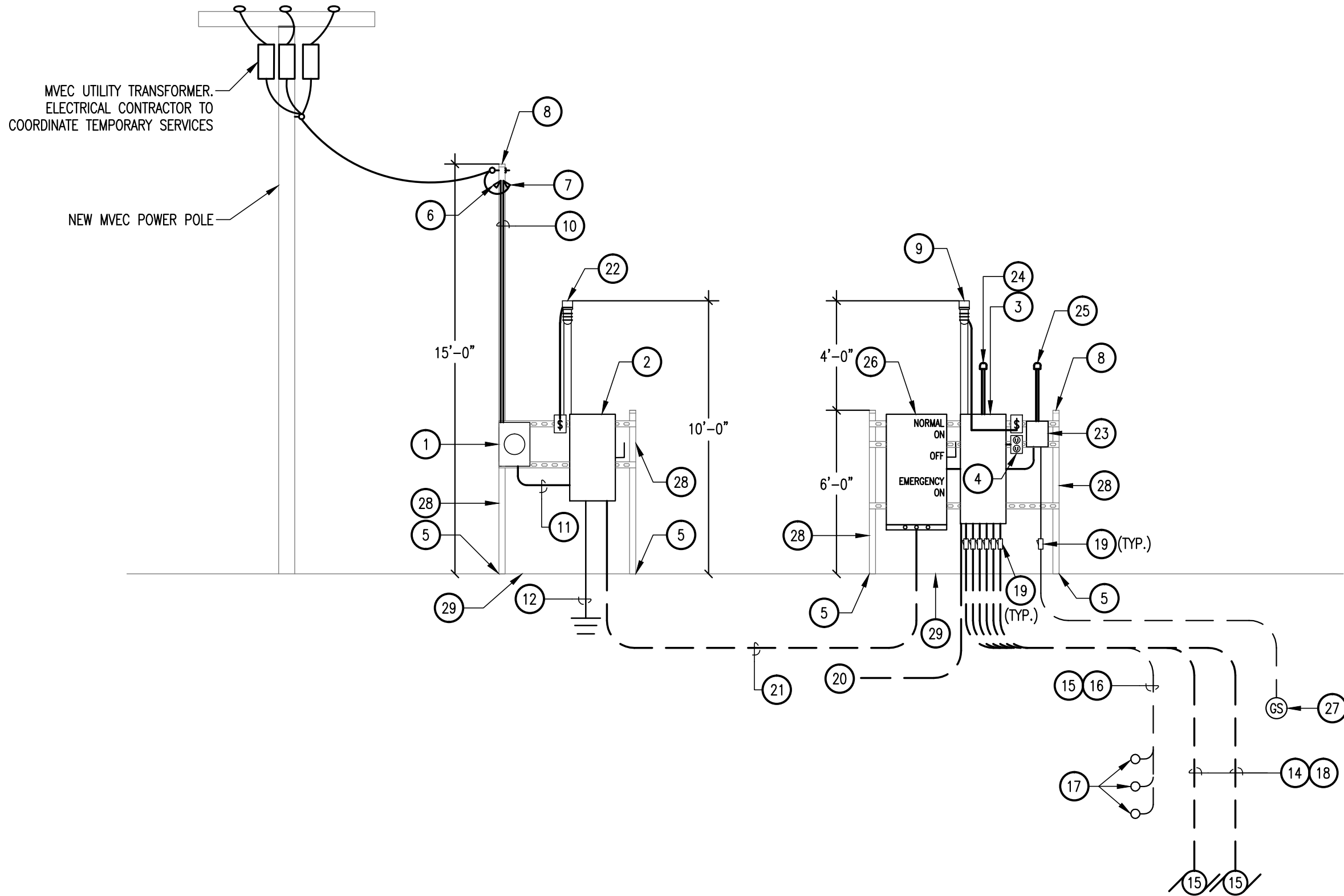


Revision No.	Date	Description

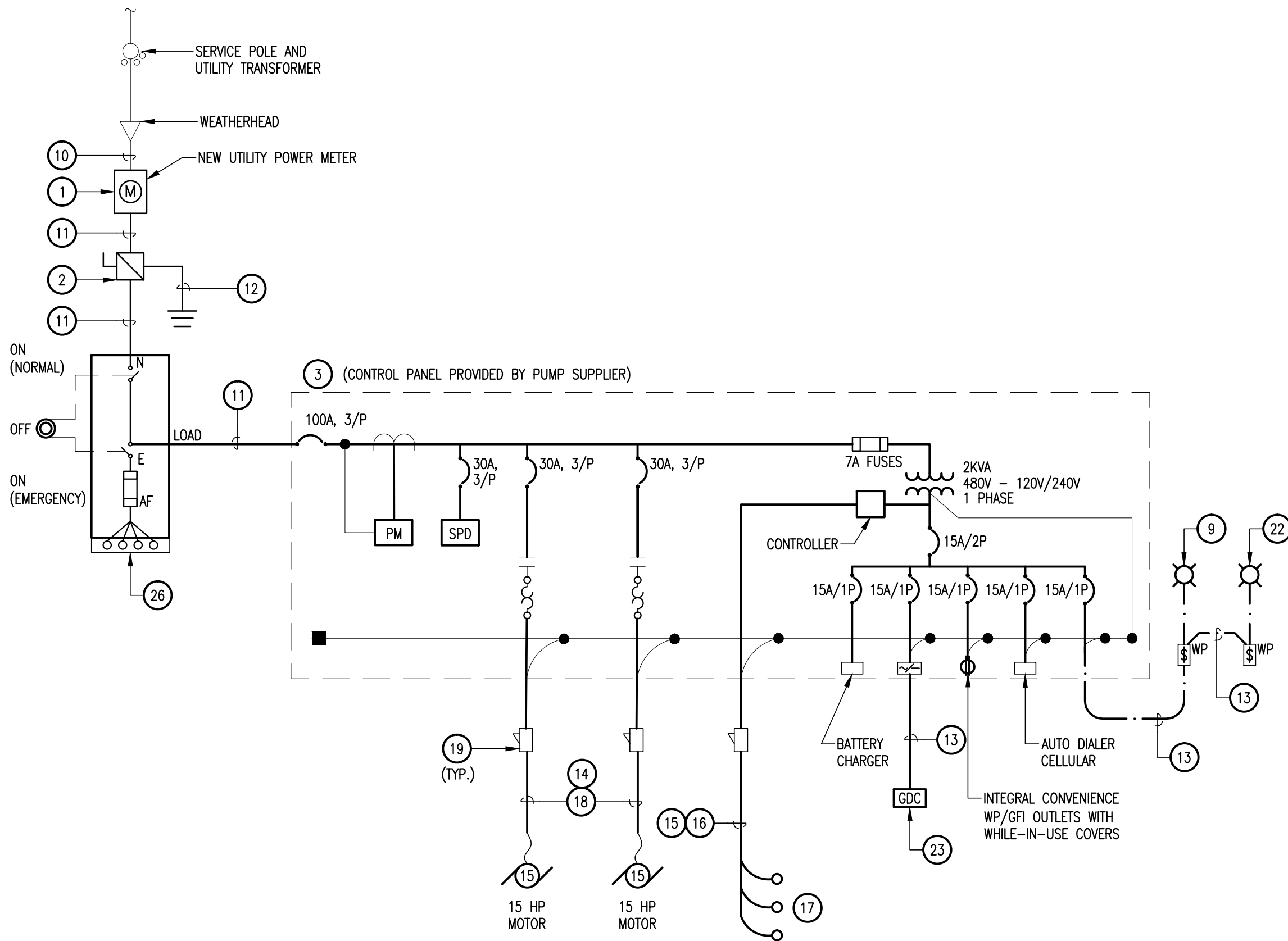


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Drawn By:	J.M.
Checked By:	G.B.
Scale:	AS NOTED
Sheet Title	ELECTRICAL SECTION VIEW - LIFT STATION
Sheet Number	E-3



01 ELECTRICAL RISER DIAGRAM
N.T.S.



02 ELECTRICAL ONE-LINE DIAGRAM
N.T.S.

GENERAL NOTES:

- COORDINATE WITH PUMP MANUFACTURER THE CONDUIT SIZE ROUTING AND FOR PUMP POWER CORD AND SWITCH SIZES.
- ELECTRICAL CONTRACTOR SHALL REFER TO MANUFACTURER'S DRAWINGS FOR LOCATIONS AND FOR PROVIDING AND INSTALLING ALL DEVICES, RACEWAYS, BOXES AND WIRING NOT SHOWN ON THE DRAWINGS VERIFY ALL REQUIREMENTS BEFORE ROUGH-IN. INSTALLATION OF ALL DEVICES, RACEWAYS, WALL BOXES AND CONDUCTORS SHALL BE INSTALLED TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.
- LIFT STATION MONITORING SYSTEM SHALL BE FURNISHED WITH PROVISIONS FOR FUTURE S.C.A.D.A. SYSTEM.

KEY NOTES: Ⓢ

- FURNISH AND INSTALL MVEC METER. ELECTRICAL CONTRACTOR TO COORDINATE WITH POWER UTILITY COMPANY, ALL REQUIREMENTS.
- 100A/100AF/3P NEMA 4X SS MAIN DISCONNECT SWITCH
- NEW PUMP CONTROL PANEL, FURNISHED BY PUMP SUPPLIER AND INSTALLED BY ELECTRICAL CONTRACTOR.
- WEATHER PROOF GROUND FAULT PROTECTED RECEPTACLE, WITH WHILE-IN-USE COVER.
- FURNISH AND INSTALL RACK WITH HOUSEKEEPING CONCRETE PAD. DEPTH OF ELECTRICAL RACK SUPPORT CONDUIT SHALL BE IN MINIMUM OF 4- FEET, EMBEDDED IN CONCRETE.
- TELECOMMUNICATIONS WEATHER HEAD ROUTE 1" FROM WEATHER HEAD TO CONTROL PANEL.
- WEATHER HEAD AND SUPPORT FOR MVEC SERVICE DROP.
- GALVANIZED POST AND CAP.
- AREA LIGHT FOR LIFT STATION ELECTRICAL RACK FURNISH AND INSTALL RIGALITE #SAFR-11-L-U-LF-S-SS OR EQUAL.
- FURNISH AND INSTALL TYPE XHHW-2 3#1, 1-1/2" PVC COATED RIGID STEEL.
- FURNISH AND INSTALL TYPE XHHW-2 3#1, #8G, 1-1/2" PVC COATED RIGID STEEL.
- FURNISH AND INSTALL 1#6 GROUNDING ELECTRODE CONDUCTOR IN 1/2" PVC-SCH 80. PROVIDE WITH 3/4" COPPER 10-FOOT ELECTRODE. PROVIDE WITH SUPPLEMENTAL ELECTRODE AS REQUIRED PER NEC.
- FURNISH AND INSTALL 2#12, #12G, 3/4".
- POWER CABLING TO PUMP, PROVIDE WITH 3 #10, 8G, 1-1/2" PVC COATED RIGID STEEL. VERIFY LENGTH OF CABLE AND CONDUIT SIZE AND COORDINATE WITH PUMP SUPPLIER.
- FURNISH AND INSTALL CONTROL CONDUITS FOR FLOAT SWITCH CABLE. VERIFY LOCATION, SIZE, AND QUANTITY WITH PUMP CONTROLS SUPPLIER. DO NOT SPLICE FLOAT SWITCH LEADS.
- FLOAT LEADS FROM WET WELL TO CONTROL PANEL. DO NOT SPLICE WITH CORDS EXTENDED TO PANEL FROM WET WELL.
- FLOAT SWITCHES BY PUMP CONTROL SUPPLIER. INSTALLED BY CONTRACTOR.
- POWER CABLES FOR PUMPS POWER, CONTROL LEADS, AND SEAL FAILURE. EXTENDED FROM WET WELL CONTROL PANEL.
- FURNISH AND INSTALL "SEAL OFF" EYS APPLETON FITTINGS BELOW CONTROL PANEL FOR CONDUITS.
- FOR FUTURE S.C.A.D.A., FURNISH AND INSTALL 3/4" CONDUIT WITH PULL STRING. FROM SERVICE DROP POST TO CONTROL PANEL.
- FURNISH AND INSTALL 3 #1, #8G, 1-1/2" PVC.
- AREA LIGHT FOR MAIN DISCONNECT ELECTRICAL RACK FURNISH AND INSTALL RIGALITE #SAFR-11-L-U-LF-S-SS OR EQUAL.
- FURNISH AND INSTALL INTRINSICALLY SAFE GAS DETECTOR WITH WET SENSORS, SENSOR CABLING (50') AND HORN AND STROBE. PROVIDE WITH NEMA 4X SS ENCLOSURE. PROVIDE WITH AC TO DC CONVERTER AS REQUIRED. REFER TO SPEC SECTION 16504 FOR ADDITIONAL REQUIREMENTS.
- MOUNT HIGH ALARM LIGHT 36" ABOVE FENCE.
- FURNISH AND INSTALL AN AMBER ALARM BEACON FOR HIGH LEVEL OF GAS ALARM, 36" ABOVE FENCE.
- FURNISH AND INSTALL A NEMA 4XSS 100A, 480V/3PHASE DOUBLE THROW QUICK CONNECT 100A FUSED SWITCH, TYPE EATON #DT363UFRKLC WITH CAM-LOCK CONNECTORS. PROVIDE WITH LISTED PRODUCT OR EQUAL. PROVIDE FUSE IN EMERGENCY SIDE.
- GAS SENSOR. INSTALL PER MANUFACTURERS RECOMMENDATIONS INSIDE WET WELL.
- PROVIDE POST SUPPORT CONDUIT WITH 4-INCH GALVANIZED RIGID CONDUIT.
- FURNISH AND INSTALL A 4" HOUSE KEEPING CONCRETE PAD FOR ELECTRICAL EQUIPMENT RACK.

ELECTRIC LOAD ANALYSIS

Pump Control Panel						
Project Name:		Donna Lift Station				
AVO No.:		30194				
Date:		10/15/2015				
Application Completed By:						

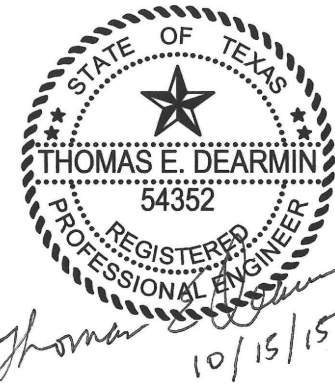
Main Disconnect Size:	100	Amps	80%	480	Volts	3				Phase
Lighting Load:		KVA								0.07
Receptacle Load:		KVA	First 10 kVA at 100% remainder over 10 kVA at 50%							0.18
Equipment Load:		KVA								
1. Pump Motor A		kVA	15 HP 6-minute duty motor							17.45
2. Pump Motor B		KVA	15 HP 6-minute duty motor							17.45
3.Continuous Control Loads		KVA	Bat. Charger, GDC, Auto Dialer							2.5
Largest Motor Load		HP	10	kVA at 125% =						21.81
Total Connected Load:	59.83	KVA								
Total Amp Load:	72.0	Amps								

SCALE: (FULL SIZE - 22" x 34")
SCALE: (HALF SIZE - 11" x 17")

CITY OF DONNA
VALLEY VIEW ROAD LIFT STATION
SITE IMPROVEMENTS
DONNA, TEXAS

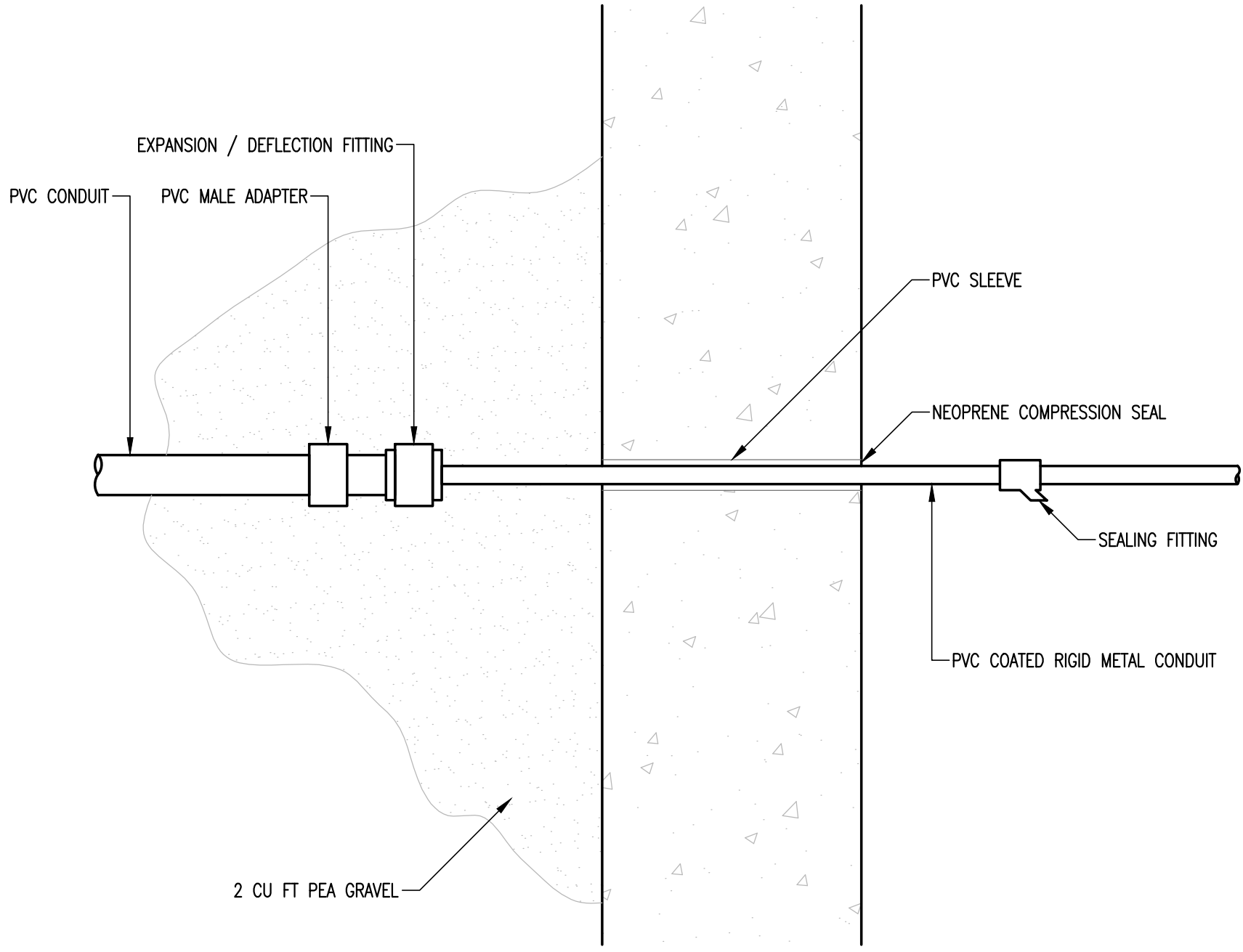


Revision		Description	
No.	Date		

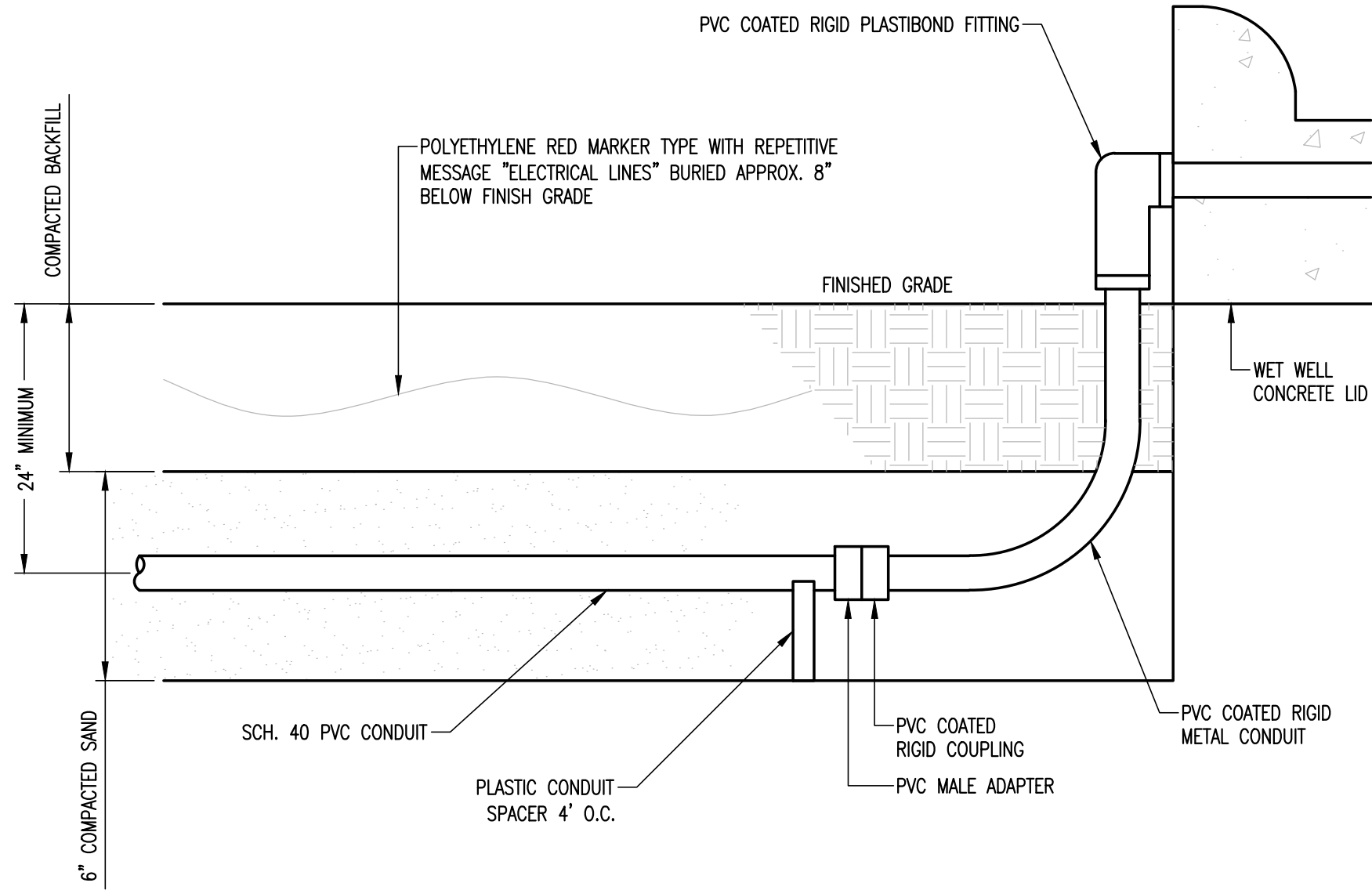


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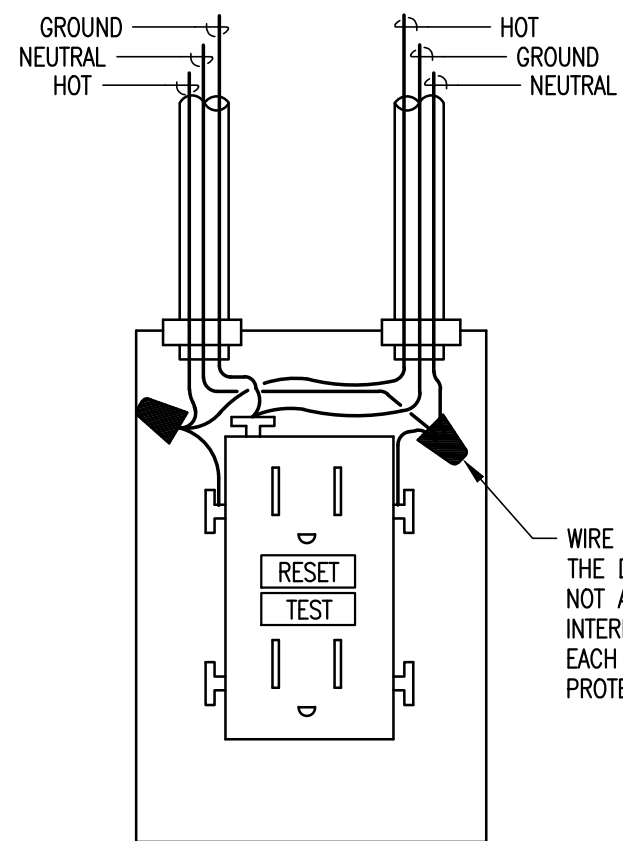
Project No.:	30194
Issued:	OCTOBER 2015
Drawn By:	J.M.
Checked By:	G.B.
Scale:	AS NOTED
Sheet Title	
ELECTRICAL RISER DIAGRAM	
E-4	
Sheet Number	



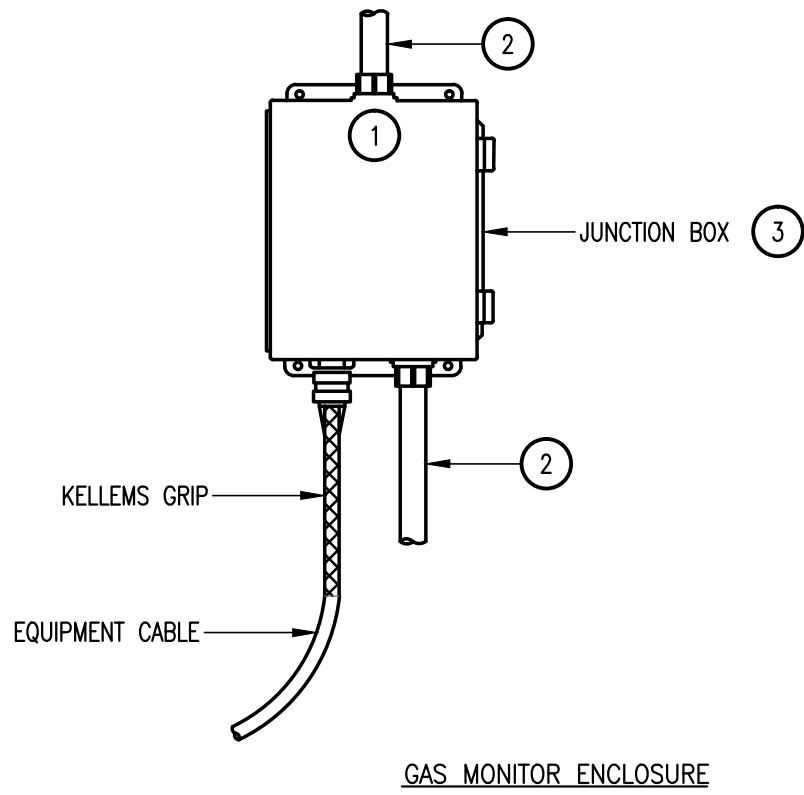
01 TYPICAL CONDUIT WALL PENETRATION
DETAIL
N.T.S.



02 TYPICAL UNDERGROUND CONDUIT RUN
N.T.S.



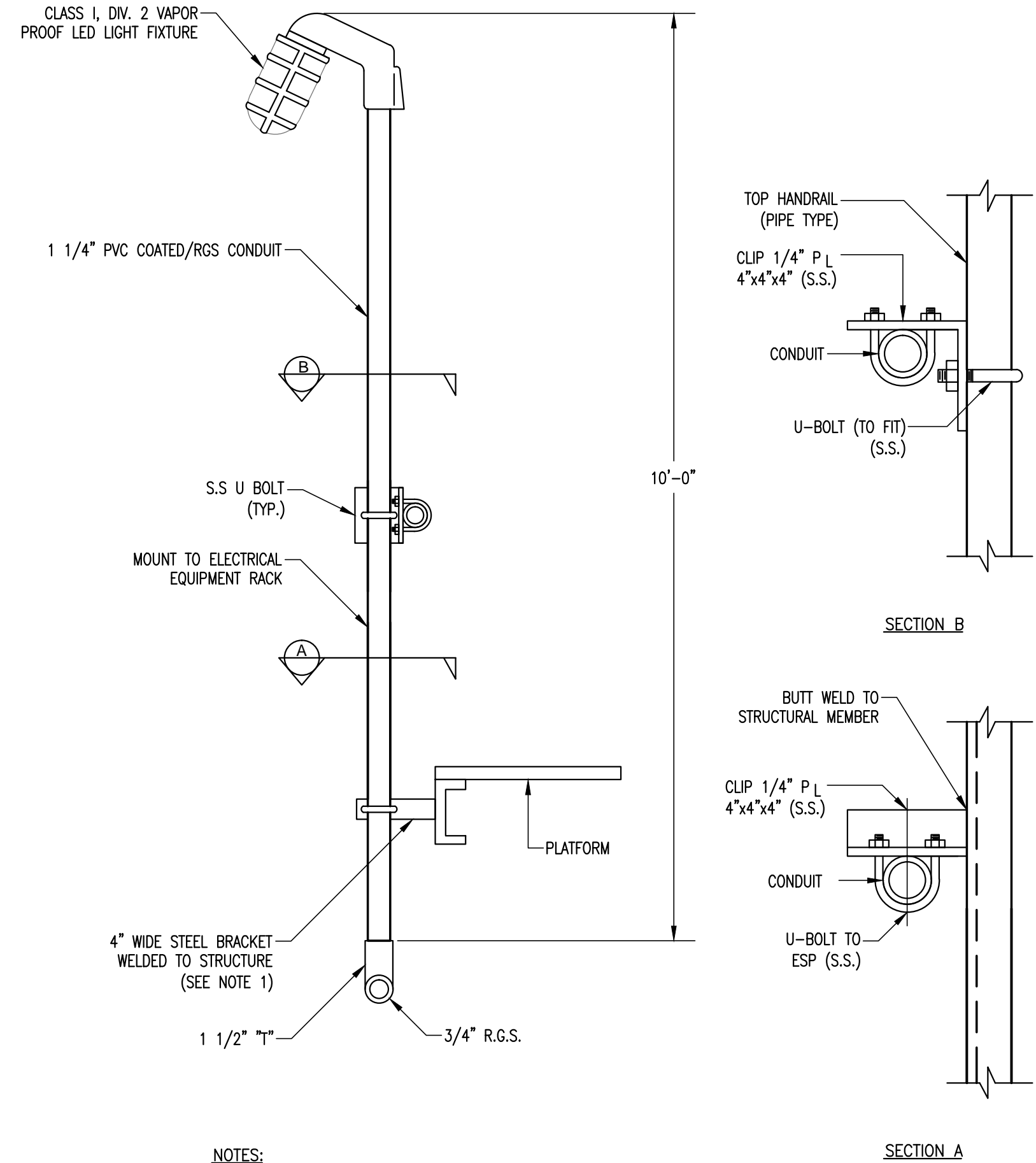
03 GFCI RECEPTACLE - WIRING DIAGRAM
N.T.S.



KEY NOTES:

1. PROVIDE WITH INTERNAL MOUNTING HARDWARE FOR GAS MONITOR UNIT.
2. POWER AND CONTROL CONDUITS. REFER TO THE ELECTRICAL DRAWINGS, CONDUIT AND CABLE SCHEDULE FOR DETAILS.
3. NEMA 4X SS JUNCTION BOX FOR GAS MONITOR. PROVIDE JUNCTION BOX LARGE ENOUGH TO INSTALL THE GAS MONITOR INSIDE.

04 SUBMERSIBLE EQUIPMENT JUNCTION BOX
DETAIL
N.T.S.



NOTES:

1. WHERE INSTALLED ON CONCRETE STRUCTURE WELD ANGLE TO FLAT BAR AND AFFIX TO STRUCTURE WITH MINIMUM OF TWO 5/8" x 4 1/4" LONG S.S. EXPANSION ANCHORS.
2. ALL HARDWARE TO BE OF STAINLESS STEEL MATERIAL.

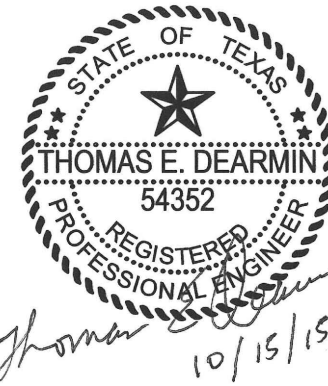
05 AREA LIGHT FIXTURE
INSTALLATION DETAIL
N.T.S.

SCALE: (FULL SIZE - 22" x 34")
SCALE: (HALF SIZE - 11" x 17")

CITY OF DONNA
VALLEY VIEW ROAD LIFT STATION
SITE IMPROVEMENTS
DONNA, TEXAS

HALFF
5000 WEST MILITARY, SUITE 100
MCALLEN, TEXAS 78503
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ELECTRICAL DETAILS

E-5

Sheet Number