

- GENERAL**
1. ALL CONSTRUCTION ACTIVITIES SHALL BE COORDINATED WITH THE PROJECT MANAGEMENT DIVISION. THE PROJECT MANAGER IS: ANTHONY BENITEZ, P.E. AND CAN BE REACHED AT 941-708-7450 x7333.
 2. SITE VISITS ARE MANDATORY FOR ALL BIDDERS.
 3. ALL CONSTRUCTION ON THIS PROJECT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF MANATEE COUNTY UTILITY AND TRANSPORTATION STANDARDS AND/OR FDOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" UNLESS OTHERWISE INDICATED ON THE PLANS.
 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING ALL CONDITIONS AND REQUIREMENTS OF ALL PERMITS AND ALL GOVERNING FEDERAL, STATE, AND LOCAL AGENCIES. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS THAT ARE NOT PROVIDED IN THE BID DOCUMENTS, AT NO ADDITIONAL COST TO THE OWNER.
 5. THE INFORMATION PROVIDED IN THESE PLANS IS SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF THE CONDITIONS WHICH MAY BE ENCOUNTERED DURING THE COURSE OF WORK. ALL CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT WHATEVER INVESTIGATION THEY MAY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSIONS REGARDING THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED, AND UPON WHICH THEIR BIDS WILL BE BASED.
 6. THE CONTRACTOR SHALL REVIEW AND VERIFY ALL DIMENSIONS ON THE PLANS AND REVIEW ALL FIELD CONDITIONS THAT MAY AFFECT CONSTRUCTION. SHOULD DISCREPANCIES OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO OBTAIN THE ENGINEER'S CLARIFICATION BEFORE COMMENCING WITH CONSTRUCTION.
 7. AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT SUNSHINE STATE ONE CALL OF FLORIDA AT 1-800-432-4770 OR THE NATIONAL 811 ONE CALL NUMBER WHEN APPLICABLE FOR UTILITY LOCATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH ALL UTILITIES FOR THE POSSIBLE RELOCATION OR THE TEMPORARY MOVEMENT OF ANY EXISTING UTILITIES WITHIN THE RIGHTS-OF-WAY.
 8. NO WORK, EXCEPT FOR EMERGENCY TYPE, SHALL BE PERFORMED AFTER 7:00 PM AND BEFORE 7:00 AM. FOR ADDITIONAL PROJECT RESTRAINTS, REFER TO SECTION 01310 OF THE SPECIFICATIONS.

- SAFETY**
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE FLORIDA TRENCH SAFETY ACT, 90-96, LAWS OF FLORIDA EFFECTIVE OCTOBER 1, 1990 AND THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION EXCAVATION SAFETY STANDARDS, 29 CFR 1926.650, SUBPART P, AS AMENDED. THE CONTRACTOR SHALL INCLUDE IN THE TOTAL BID PRICE ALL COSTS FOR COMPLIANCE WITH THESE REGULATIONS.
 10. THE CONTRACTOR SHALL USE SHEET PILING, SHEETING, BRACING, ETC., AS REQUIRED IN ALL EXCAVATION AREAS AND CONFORM TO ALL OSHA REQUIREMENTS.
 11. THE CONTRACTOR SHALL USE ALL NECESSARY SAFETY PRECAUTIONS TO AVOID CONTACT WITH OVERHEAD AND UNDERGROUND UTILITIES, POWER LINES, ETC.
 12. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. THIS EXCLUSION DOES NOT ALLEVIATE THE CONTRACTOR FOR PROVIDING A CONTINUOUS SAFE WORKSPACE.

- ENVIRONMENTAL**
13. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY STORM WATER, EROSION, AND SEDIMENTATION CONTROL MEASURES IN ACCORDANCE WITH THE FDEP "FLORIDA STORM WATER, EROSION AND SEDIMENTATION CONTROL INSPECTOR'S MANUAL". IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTROL AND PREVENT EROSION AND TRANSPORT OF SEDIMENT TO SURFACE DRAINS AND TO DITCHES DURING CONSTRUCTION.
 14. STOCKPILES SHALL BE PROTECTED AT ALL TIMES BY ON-SITE DRAINAGE CONTROLS WHICH PREVENT EROSION OF THE STOCKPILED MATERIAL. CONTROL OF DUST FROM SUCH STOCKPILES IS REQUIRED, DEPENDING UPON THEIR LOCATION AND THE EXPECTED LENGTH OF TIME THE STOCKPILES WILL BE PRESENT. IN NO CASE SHALL ANY STOCKPILED MATERIAL REMAIN AFTER THIRTY (30) CALENDAR DAYS.
 15. STORM WATER INLETS IN THE VICINITY OF THE PROJECT SHALL BE PROTECTED BY SEDIMENT TRAPS SUCH AS SECURED HAY BALES, SOD, STONE, ETC., WHICH SHALL BE MAINTAINED AND MODIFIED AS REQUIRED BY CONSTRUCTION PROGRESS, AND WHICH MUST BE APPROVED BY THE ENGINEER BEFORE INSTALLATION. THIS WILL BE MAINTAINED TO PREVENT DEGRADATION OF THE WATERS OF THE COUNTY AND STATE.
 16. SEDIMENT BASINS AND TRAPS, PERIMETER BERMS, SEDIMENT BARRIERS, VEGETATIVE BUFFERS, AND OTHER MEASURES INTENDED TO TRAP SEDIMENT AND/OR PREVENT THE TRANSPORT OF SEDIMENT ONTO ADJACENT PROPERTIES, OR INTO EXISTING BODIES OF WATER, MUST BE INSTALLED, CONSTRUCTED, OR IN THE CASE OF VEGETATIVE BUFFERS, PROTECTED FROM DISTURBANCE, AS A FIRST STEP IN THE LAND ALTERATION PROCESS. SUCH SYSTEMS SHALL BE FULLY OPERATIVE BEFORE ANY OTHER DISTURBANCE OF THE SITE BEGINS. EARTHEN STRUCTURES INCLUDING BUT NOT LIMITED TO BERMS, EARTH FILTERS, DAMS OR DIKES SHALL BE STABILIZED AND PROTECTED FROM DRAINAGE DAMAGE OR EROSION WITHIN ONE (1) WEEK OF INSTALLATION.
 17. ALL SWALES, DITCHES, AND CHANNELS LEADING FROM THE SITE SHALL BE PROTECTED FROM SILTATION AND EROSION DURING CONSTRUCTION AND BE SODDED WITHIN THREE (3) DAYS OF EXCAVATION.
 18. SOIL DISPLACED BY CONSTRUCTION WILL BE REMOVED. EROSION CONTROL SHALL BE IMPLEMENTED IN AREAS WHICH ARE CONSIDERED ENVIRONMENTALLY SENSITIVE. EROSION CONTROL SYSTEMS SHALL BE REQUIRED FOR ALL WORK WITHIN JURISDICTIONAL AREAS. THESE SYSTEMS MAY INCLUDE STAKED HAY BALES, SILT SCREENS, FILTER FABRIC, AND TURBIDITY SCREENS.
 19. ALL EROSION AND POLLUTION CONTROL DEVICES SHALL BE CHECKED REGULARLY, ESPECIALLY AFTER EACH RAINFALL AND SHALL BE CLEANED OUT AND/OR REPAIRED AS REQUIRED.
 20. THE CONTRACTOR SHALL NOT ENTER UPON OR IN ANY WAY ALTER WETLAND AREAS THAT MAY BE ON OR NEAR THE CONSTRUCTION SITE. ALL WORK IN THE VICINITY OF OPEN WATER AND/OR WETLANDS IS TO BE PERFORMED IN COMPLIANCE WITH THE ENVIRONMENTAL REGULATIONS AND/OR PERMITS FOR THE SITE. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY FINES RESULTING FROM HIS VIOLATION OF ANY REGULATIONS OR PERMIT CONDITIONS.
 21. FOR MORE INFORMATION, SEE THE EROSION CONTROL DETAIL SHEET INCLUDED IN THE PLANS.
- RIGHT-OF-WAY**
22. ALL CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO WITHIN THE MANATEE COUNTY/SDOT RIGHT-OF-WAY AND/OR EASEMENTS SHOWN ON THE DRAWINGS.
 23. THE CONTRACTOR SHALL EMPLOY A LAND SURVEYOR REGISTERED IN THE STATE OF FLORIDA TO REFERENCE AND RESTORE PROPERTY CORNER MONUMENTS, PINS, AND LANDMARKS THAT MAY BE DISTURBED BY CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
 24. THE CONTRACTOR, PRIOR TO CONSTRUCTION AND RESTRICTING ANY TRAFFIC, MUST OBTAIN A RIGHTS-OF-WAY USE PERMIT AND A TRAFFIC CONTROL PLAN. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS FROM OTHER GOVERNMENTAL AGENCIES HAVING RELEVANT JURISDICTION. ALL MAINTENANCE AND PROTECTION OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF THE CURRENT FLORIDA DEPARTMENT OF TRANSPORTATION "MANUAL OF TRAFFIC CONTROL AND SAFE PRACTICES". A TRAFFIC CONTROL PLAN SHALL BE SUPPLIED BY THE CONTRACTOR AT THE PRE-CONSTRUCTION MEETING.
 25. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL DAMAGED STORM WATER STRUCTURES, PIPING, ENTRANCE PIPE AND HEADWALLS WHETHER SHOWN ON THE PLANS OR NOT. THE HEADWALLS SHALL BE REPLACED IN ACCORDANCE WITH F.D.O.T. STANDARDS.
 26. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH IN THE FIELD THE RIGHT-OF-WAY LINES, BASE LINES, BENCH MARKS (ELEV.), CENTER LINES, AND STATIONING AS REQUIRED TO CONSTRUCT THIS PROJECT.
 27. THE CONTRACTOR SHALL COORDINATE THE CUTTING OF DRIVEWAYS WITH THE PROPERTY OWNER PRIOR TO CUT. ALL DRIVEWAYS WILL BE IN PASSABLE CONDITION AT THE END OF THE WORK DAY AND FULLY RESTORED PER SECTION 02575.
 28. A RIGHT OF ENTRY AGREEMENT SHALL BE OBTAINED BY THE PROJECT MANAGER FROM THE PROPERTY OWNER BEFORE ANY DRIVEWAY CONSTRUCTION WORK IS DONE OUTSIDE OF THE RIGHT-OF-WAY OR EASEMENT.

- UTILITIES**
29. LOCATIONS, ELEVATIONS AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES ARE SHOWN TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. THERE MAY BE OTHER IMPROVEMENTS, UTILITIES, ETC. WHICH ARE WITHIN THE PROJECT AREA AND WHICH HAVE NOT BEEN LOCATED OR IDENTIFIED, MAY NOT BE IN THE EXACT LOCATION SHOWN OR RELOCATED SINCE THE PREPARATION OF THESE PLANS. THE CONTRACTOR SHALL VERIFY, PRIOR TO CONSTRUCTION, THE LOCATIONS, ELEVATIONS AND DIMENSIONS OF ALL EXISTING UTILITIES STRUCTURES AND OTHER FEATURES (WHETHER OR NOT SHOWN ON THE PLANS) THAT MAY EFFECT HIS WORK. ALL EXISTING UTILITIES TO BE EXTENDED, CROSSED OR CONNECTION POINTS SHALL BE EXPOSED PRIOR TO CONSTRUCTION TO VERIFY LOCATION AND ELEVATION. ANY DISCREPANCIES OR CONFLICTS FOUND SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION FOR RESOLUTION.
 30. THE CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, WATER AND SEWER LINES, STORM DRAINS, UTILITIES, DRIVEWAYS, SIDEWALKS, SIGNS, MAIL BOXES, FENCES, TREES, LANDSCAPING, AND ANY OTHER IMPROVEMENT OR FACILITY IN THE CONSTRUCTION AREA. THE CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY DAMAGED ITEM DUE TO HIS CONSTRUCTION ACTIVITIES TO EQUAL OR BETTER THAN PRE-CONSTRUCTION CONDITIONS AT NO ADDITIONAL COST TO THE OWNER.
 31. ANY TEMPORARY SHUTDOWNS FOR MODIFICATIONS OF EXISTING UTILITY SYSTEMS THAT MUST REMAIN IN SERVICE DURING CONSTRUCTIONS SHALL BE KEPT TO A MINIMUM AND SHALL BE COORDINATED WITH AND APPROVED BY THE MANATEE COUNTY UTILITY OPERATIONS DEPARTMENT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. IT IS NOTED THAT TEMPORARY SHUTDOWNS MAY BE RESTRICTED TO CERTAIN HOURS AT ANY TIME OF THE DAY OR NIGHT AND WILL BE COMPLETED AT NO ADDITIONAL COST TO THE OWNER.
 32. FOR WORK BEING DONE ON EXISTING SANITARY SEWER LINES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE FLOW OF ALL SEWAGE DURING CONSTRUCTION, WHICH MAY REQUIRE BY-PASS PUMPING AND/OR PUMPER TRUCKS. THE CONTRACTOR SHALL SUBMIT A DETAILED BY-PASS PUMPING PLAN PER SECTION 02720.
 33. ALL WATER SERVICES TO BE INSTALLED OR MODIFIED ON PRIVATE PROPERTY SHALL REQUIRE A PLUMBING PERMIT;

- A. THE CONTRACTOR'S PLUMBER SHALL INSTALL A REDUCED PRESSURE (RP) TYPE BACKFLOW PREVENTION ASSEMBLIES (BPA'S) EQUIPPED WITH A PRESSURE RELIEF VALVE AT THE POTABLE WATER METER WHENEVER ANY OF THE FOLLOWING CONDITIONS EXIST AT A PROPERTY:
 - IN-GROUND IRRIGATION SYSTEM,
 - SECONDARY SOURCE OF WATER (I.E. RECLAIMED WATER OR WELL),
 - SWIMMING POOL,
 - FIRE SPRINKLER SYSTEM,
 - FLOOD ZONE DESIGNATION, (IF ONLY FLOOD ZONE; INSTALL DOUBLE CHECK BPA)
 - PROPERTY THAT ABUTS OR INCLUDES A BODY OF WATER (INCLUDING RIVER, BAY, LAKE OR POND),
 - SOLAR WATER HEATING SYSTEM,
 - MULTISTORY OR MULTIFAMILY RESIDENTIAL FACILITY.
- B. A LICENSED PLUMBER SHALL INSTALL THE BPA'S IN ACCORDANCE WITH THE CURRENT FLORIDA PLUMBING CODE AND MANATEE COUNTY CODE OF ORDINANCES, AND SHALL SELECT A PRESSURE RELIEF VALVE WITH AN APPROPRIATE PRESSURE SET POINT TO PROTECT THE CUSTOMERS' PLUMBING AND NOT ALLOW EXCESSIVE LEAKAGE DUE TO SYSTEM SUPPLY PRESSURE. A PRESSURE REDUCING VALVE MAY BE NECESSARY UPSTREAM OF THE PRESSURE RELIEF VALVE, WHERE NORMAL SUPPLY PRESSURE EXCEEDS 80 PSI. CONTRACTOR SHALL COORDINATE WITH COUNTY CROSS CONNECTION CONTROL STAFF AS REQUIRED.
- C. IF IN-GROUND IRRIGATION SYSTEM IS CONNECTED TO THE POTABLE WATER LINE, AN ADDITIONAL RP BPA SHALL BE INSTALLED AT THE POINT OF CONNECTION.
- D. VACUUM BREAKERS SHALL BE INSTALLED ON ALL HOSE BIBBS.
- E. CONTRACTOR SHALL COORDINATE WITH COUNTY CROSS CONNECTION STAFF & PRIVATE PROPERTY OWNER AS REQUIRED. CROSS CONNECTION STAFF SHALL DETERMINE WHICH PROPERTIES REQUIRE A BPA & TYPE TO BE INSTALLED.

- RESTORATION**
34. ALL RESTORATION WORK PERFORMED THROUGHOUT THE PROJECT SHALL CONFORM TO EXISTING LINES AND GRADES UNLESS SHOWN OTHERWISE.
 35. ALL DISTURBED GRASSED AREAS SHALL BE SODDED OR SEEDED UNLESS OTHERWISE INDICATED. THE TYPE OF SOD USED TO REPLACE OWNER MAINTAINED AREAS IN RIGHT-OF-WAY SHALL BE COORDINATED WITH THE PROPERTY OWNER.
 36. ALL CONCRETE THRUST BLOCKS INSTALLED FOR TESTING PURPOSES AND NOT REQUIRED FOR THE OPERATION OF THE PIPELINE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR, PRIOR TO FINAL ACCEPTANCE, AT NO ADDITIONAL COST TO THE OWNER.
 37. ASPHALT DRIVES THAT ARE CUT SHALL BE RESTORED PER SECTION 02513.
 38. CONCRETE DRIVEWAYS OR SIDEWALKS THAT ARE CUT SHALL BE RESTORED TO MATCH EXISTING ACCORDING TO THE CURRENT EDITIONS OF THE F.D.O.T. SPECIFICATIONS FOR ROAD AND BRIDGE DESIGN, SECTION 522, AND SECTION 310 OF THE F.D.O.T. DESIGN STANDARDS.
 39. WHENEVER A PERMANENT ROADWAY SURFACE IS NOT PLACED IMMEDIATELY AFTER BACKFILLING AND COMPACTION OF THE NEWLY INSTALLED PIPE LINE IN AREAS WHERE TRAFFIC MUST PASS, THE CONTRACTOR SHALL INSTALL A TEMPORARY SURFACE CONSISTING OF NINE INCHES OF COMPACTED LIME ROCK BASE AND A COAT OF ASPHALT EMULSION. PERMANENT ROADWAY REPAIR SHALL BE PERFORMED A MAXIMUM OF TWENTY-ONE CALENDAR DAYS AFTER THE INITIAL OPEN CUTTING.
 40. RESTORATION OF CURBS, DRIVEWAYS, SIDEWALKS, AND PLACEMENT OF SOD SHALL BE COMPLETED WITHIN FORTY-FIVE CALENDAR DAYS OF INITIAL DISTURBANCE, OR TWENTY-ONE CALENDAR DAYS OF SUBSTANTIAL COMPLETION, WHICHEVER OCCURS FIRST.

- CONSTRUCTION**
41. THE EXHAUST SYSTEM OF ALL GASOLINE AND DIESEL ENGINES SHALL BE EQUIPPED WITH MUFFLERS THAT MEET THE EQUIPMENT MANUFACTURER'S REQUIREMENTS FOR NOISE SUPPRESSION. THE CONTRACTOR SHALL INSTALL NOISE ABATEMENT BAFFLES POSITIONED TO BREAK LINE-OF-SITE FROM THE NOISE SOURCE TO AFFECTED RESIDENCES, AS APPROVED BY THE ENGINEER.
 42. NO MATERIAL SHALL BE STOCKPILED IN ROADWAYS. ALL DIRT AND DEBRIS SHALL BE REMOVED FROM THE JOB SITE DAILY. ROADS SHALL BE SWEEP DAILY AS PART OF DAILY CLEAN UP.
 43. THE CONTRACTOR IS TO CONTROL ALL FUGITIVE DUST ORIGINATING ON THIS PROJECT BY WATERING OR OTHER METHODS AS REQUIRED.
 44. INGRESS AND EGRESS TO ALL THE PROPERTIES IN THE CONSTRUCTION AREA SHALL BE MAINTAINED AT ALL TIMES.
 45. PRIOR APPROVAL WILL BE REQUIRED FOR REMOVAL OF ANY TREE WITHIN THE CONSTRUCTION AREA.
 46. THE CONTRACTOR SHALL PROVIDE ALL DEWATERING EQUIPMENT NECESSARY TO KEEP ALL EXCAVATIONS DRY. DEWATERING IS REQUIRED TO 18" BELOW TRENCH BOTTOM.
 47. ALL PIPING AND FITTINGS USED ON THIS PROJECT SHALL BE AS NOTED ON THE PLANS AND IN THE CONTRACT DOCUMENT AND SHALL BE INSTALLED TO THE LINES AND GRADES SHOWN ON THE PLANS AND PROFILES. MODIFICATIONS MUST BE APPROVED BY THE ENGINEER OF RECORD.
 48. ALL PIPE SHALL BE COLOR CODED TO CONFORM TO MANATEE COUNTY STANDARDS.
 49. ALL PIPE AND FITTINGS SHALL BE INSTALLED AS RECOMMENDED BY THE MANUFACTURER AND ALL PIPE JOINTS SHALL BE RESTRAINED WHERE REQUIRED.
 50. ALL FITTINGS FOR PRESSURE CLASS-RATED PIPE SHALL BE RESTRAINED DUCTILE IRON. RESTRAINED LENGTHS OF PIPE SHALL ADHERE TO THE REQUIREMENTS AS SHOWN ON THE DETAIL SHEETS.
 51. WHERE IT IS NECESSARY TO DEFLECT PIPE EITHER HORIZONTALLY OR VERTICALLY, PIPE DEFLECTION SHALL NOT EXCEED 75% OF THE MANUFACTURER'S MAXIMUM ALLOWABLE RECOMMENDED DEFLECTION.
 52. ALL PIPE LENGTHS ARE PLUS OR MINUS AND MAY BE ADJUSTED IN THE FIELD AS REQUIRED. PIPE MEASUREMENTS ARE TO CENTER OF STRUCTURES OR FITTINGS.
 53. ALL ROCKS OR STONES LARGER THAN SIX INCH DIAMETER SHALL BE REMOVED FROM THE BACKFILL MATERIAL. BACKFILL MATERIAL PLACED WITHIN ONE FOOT OF PIPING AND APPURTENANCES SHALL NOT CONTAIN ANY STONES LARGER THAN TWO INCH DIAMETER.
 54. ONLY MANATEE COUNTY UTILITY OPERATIONS STAFF ARE AUTHORIZED TO OPERATE VALVES ON COUNTY OWNED AND MAINTAINED UTILITY SYSTEMS.
 55. ALL PENETRATIONS OF EXISTING STRUCTURES SHALL BE BY MECHANICAL ROTARY CORE DRILLING METHOD. ALL CONCRETE PENETRATED OR DISTURBED SHALL BE COATED WITH TWO COATS OF EPOXY.
 56. THE CONTRACTOR, PRIOR TO ANY TEMPORARY WATER SHUT-OFFS DURING WATER MAIN TIE-IN, ETC., SHALL NOTIFY THE AFFECTED RESIDENTS BY POSTING INFORMATIONAL SIGNS IN THE NEIGHBORHOOD AT LEAST TWO DAYS (48 HRS) PRIOR TO THE WATER SHUT-OFF. REFERENCE SECTION 01580, PARAGRAPH 1.03 OF THE SPECIFICATIONS. WHEN FEASIBLE, "DOOR HANGERS" SHALL BE DELIVERED TO AFFECTED RESIDENCES AT LEAST TWO DAYS (48 HRS) PRIOR TO WATER SHUT-OFF. FOR LARGE PROJECTS WITH HUNDREDS OF HOMES AFFECTED, THE CONTRACTOR SHALL ALSO MAKE EXTENSIVE USE OF THE MEDIA AND SHALL HAVE PRIOR CONTACT WITH HOMEOWNER'S ASSOCIATIONS. WRITTEN NOTIFICATIONS SHALL ALSO BE FAXED TO THE TAMPA TRIBUNE, BRADENTON HERALD, SARASOTA HERALD TRIBUNE, WBFD RADIO, EMERGENCY COMMUNITY CENTERS, INSPECTIONS, WATER TREATMENT PLANT, WATER MANAGER, HELPLINE, CUSTOMER SERVICE, AND THE MANATEE COUNTY UTILITY OPERATIONS DEPARTMENT.
 57. ALL NEW PIPE LINES SHALL BE PIG CLEANED (4" AND LARGER), FLUSHED, PRESSURE TESTED, DISINFECTED AND CERTIFIED PRIOR TO TIE-INS TO EXISTING FACILITIES. THE CONTRACTOR WILL BE ALLOWED TO USE TEMPORARY PLUGS FOR PIG CLEANING AND PRESSURE TESTING.
 58. ALL TEST POINT PIPING SHALL BE CUT LOOSE FROM THE CORPORATION STOP AND COMPLETELY REMOVED AND DISPOSED OF BY THE CONTRACTOR PRIOR TO FINAL ACCEPTANCE. A CORPORATION STOP PLUG SHALL BE INSTALLED AND THE CORPORATION STOP SHALL REMAIN IN PLACE.
 59. WATER MAINS CROSSING OVER OR UNDER SANITARY SEWERS, FORCE MAINS, AND RECLAIMED WATER LINES SHALL BE LAID PER CURRENT EDITION OF "10 STATE STANDARDS" AND MANATEE COUNTY UTILITY STANDARDS UNLESS NOTED OTHERWISE ON THE PLANS.
 60. FIELD CONDITIONS MAY NECESSITATE MINOR ALIGNMENT AND GRADE DEVIATION OF THE PROPOSED UTILITIES TO AVOID OBSTACLES, AS ORDERED BY THE ENGINEER.
 61. CONTRACTOR SHALL PROVIDE RECORD DRAWINGS IN ACCORDANCE WITH SECTION 15 IN THE CURRENT MANATEE COUNTY UTILITY STANDARDS AT NO COST TO THE OWNER. RECORD DRAWINGS SHALL BE SIGNED & SEALED BY A SURVEYOR CURRENTLY LICENSED BY THE STATE OF FLORIDA. ALL RECORD DRAWING INFORMATION REQUIREMENTS IN SECTION 15 SHALL BE STRICTLY ENFORCED. A COPY OF SECTION 15 WILL BE PROVIDED UPON REQUEST.
 62. THE CONTRACTOR SHALL MAINTAIN AS-BUILT DRAWINGS OF THE WORK AS CONSTRUCTED. AS-BUILT DRAWINGS SHALL INCLUDE THE LOCATION OF ABANDONED FORCE MAIN CUT AND PLUG POINTS. AS-BUILT DRAWINGS SHALL BE ANNOTATED EACH DAY AS THE WORK PROCEEDS AND SHALL BE AVAILABLE TO THE COUNTY PROJECT MANAGER AND/OR FIELD INSPECTOR FOR REVIEW ON AN ONGOING BASIS. AS-BUILT DRAWINGS SHALL PROVIDE THE HORIZONTAL AND VERTICAL INSTALLED LOCATION OF ALL NEW PIPELINE, FITTINGS, VALVES AND FORCE MAIN APPURTENANCES REFERENCED TO FIXED SURFACE FEATURES THAT ARE SHOWN ON THE CONSTRUCTION DRAWINGS AND/OR RIGHT-OF-WAY LINES, PROPERTY CORNERS OR OTHER SURVEYED POINTS. THE CONTRACTOR SHALL BE ABLE TO PRESENT THE RECORD DRAWINGS TO THE COUNTY PROJECT MANAGER AND/OR INSPECTOR ON DEMAND AS THE WORK PROGRESSES.

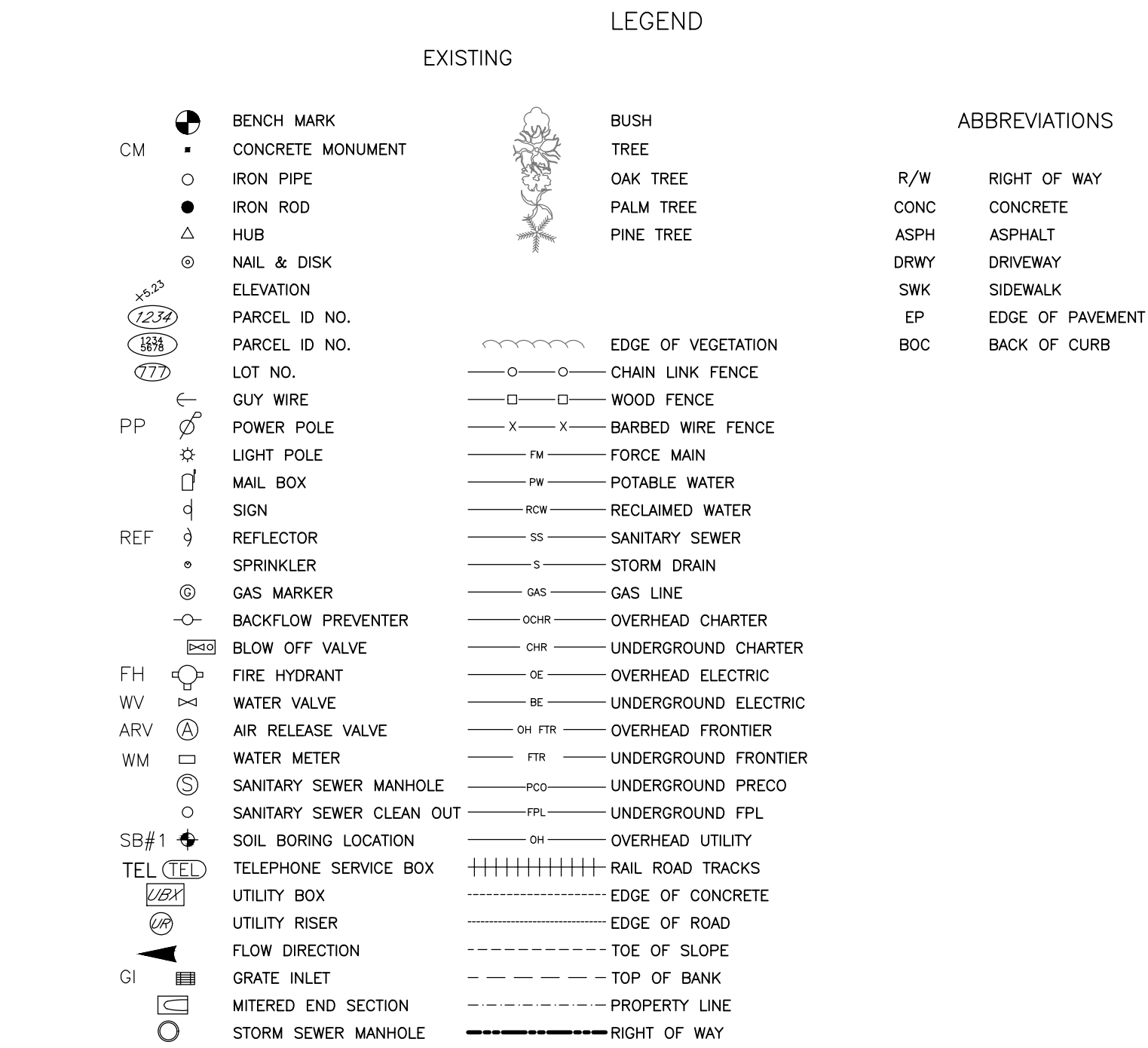
EXISTING UTILITY LOCATIONS

63. THE FOLLOWING IDENTIFIES THE QUALITY LEVEL OF EXISTING UTILITY LINEWORK ON PLANS.
 - LEVEL "A" -VISUALLY LOCATED OR SOFT DIGS (HORIZONTAL AND VERTICAL)
 - LEVEL "B" -DESIGNATED BY GPR OR FLAGGING (HORIZONTAL)
 - LEVEL "C" -SURFACE VISIBLE FEATURES SURVEY

LEVEL "D" -EXISTING RECORDS OR GIS
REFERENCE 2010 EDITION OF FDOT UTILITY ACCOMMODATION MANUAL (UAM)

MAINTENANCE OF TRAFFIC

64. THE CONTRACTOR IS RESPONSIBLE FOR ANY TRAFFIC CONTROL PLAN (TCP) IMPLEMENTED. THE TCP SHALL BE PREPARED BY AN INDIVIDUAL CERTIFIED TO PREPARE A TCP IN THE STATE OF FLORIDA THAT MEETS OR EXCEEDS THE REQUIREMENTS OF THE FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS LATEST EDITION (SERIES 600). ANY DEVIATIONS MUST BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA AND SUBMITTED TO COUNTY (AND FDOT) FOR APPROVAL AT LEAST FOURTEEN (14) DAYS PRIOR TO THE START OF CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN COUNTY (AND FDOT) APPROVAL PRIOR TO IMPLEMENTATION AND FAILURE TO OBTAIN APPROVAL SHALL NOT BE GROUNDS FOR ANY DELAY CLAIM FOR TIME OR ADDITIONAL COMPENSATION.
65. THE CONTRACTOR PRIOR TO CONSTRUCTION AND RESTRICTING ANY TRAFFIC, MUST OBTAIN A RIGHT-OF-WAY USE PERMIT AND A TRAFFIC CONTROL PLAN (TCP). THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS FROM OTHER GOVERNMENTAL AGENCIES HAVING RELEVANT JURISDICTION. ALL MAINTENANCE AND PROTECTION OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF THE CURRENT FLORIDA DEPARTMENT OF TRANSPORTATION "MANUAL OF TRAFFIC CONTROL AND SAFE PRACTICES". A TCP SHALL BE SUPPLIED BY THE CONTRACTOR AT THE PRE-CONSTRUCTION MEETING.
66. THE CONTRACTOR SHALL USE, BUT ARE NOT LIMITED TO, FDOT INDICES 415, 600, 615, 616, AND 621. THE RECOMMENDED FDOT DESIGN STANDARD INDICES ARE CONCEPTUAL.
67. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE TEMPORARY DRAINAGE. THERE WILL BE NO DIRECT PAY FOR THIS WORK. COSTS SHALL BE INCLUDED IN THE COST OF PIPE.
68. MOTORIZED AND MECHANICAL EQUIPMENT SHALL BE EFFECTIVELY SHIELDED, PADDED, OR LOCATED TO MINIMIZE NOISE.
69. THE CONTRACTOR WILL NOTIFY ALL EMERGENCY AND RESCUE AGENCIES LOCATED IN THE PROJECT VICINITY 24 HOURS IN ADVANCE OF ANY PROPOSED LANE CLOSURES OR DETOURS.
70. ACCESS TO ALL SIDE STREETS AND DRIVEWAYS MUST BE PROVIDED AND MAINTAINED DURING CONSTRUCTION.
71. USE FDOT INDEX NO. 619 FOR TRAFFIC CONTROL MEASURES WHEN CONSTRUCTION EQUIPMENT IS DRIVEN ON OPEN TRAVEL LANES. THE REGULATORY SPEED IN WORK ZONES SHOULD BE AS CLOSE TO NORMAL CONDITIONS AS POSSIBLE, UNLESS NOTED ON THE TRAFFIC CONTROL PLANS.
72. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO WORKING NEAR THEIR EXISTING FACILITIES.
73. CONSTRUCTION SEQUENCES SHALL BE COORDINATED TO PROVIDE POSITIVE DRAINAGE OF THE TRAVELWAYS AT ALL TIMES.
74. ANY MOT ITEM NOT SPECIFICALLY LISTED UNDER A PARTICULAR PAY ITEM SHALL BE CONSIDERED SUBSIDIARY TO OTHER BID ITEMS. THERE SHALL BE NO SEPARATE PAYMENT.
75. THE MAXIMUM SPACING BETWEEN WARNING DEVICES USED FOR DELINEATION BETWEEN THE TRAVELWAY(S) AND CONSTRUCTION AREA SHALL BE AS PER FDOT STANDARD INDEX 600.
76. ALL DETOURS, IF APPROVED BY THE COUNTY, SHALL ADHERE TO THE REQUIREMENTS SET FORTH IN THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D. LATEST EDITION) AND THE FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS, LATEST EDITION (600 SERIES). ANY DETOUR RECOMMENDED BY THE CONTRACTOR MUST BE SUBMITTED TO THE COUNTY (AND FDOT) FOR APPROVAL AT LEAST FOURTEEN (14) DAYS PRIOR TO THE START OF CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN COUNTY (AND FDOT) APPROVAL PRIOR TO IMPLEMENTATION AND FAILURE TO OBTAIN APPROVAL SHALL NOT BE GROUNDS FOR ANY DELAY CLAIM FOR TIME OR ADDITIONAL COMPENSATION.



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kendell.coker@preco.coop

DEPARTMENT OF ENVIRONMENTAL PROTECTION
13051 N. TELECOM PKWY
TEMPLE TERRACE, FL 33637
TOM WRIGHT
PHONE: (813) 470-5875
FAX: (813) 470-5993

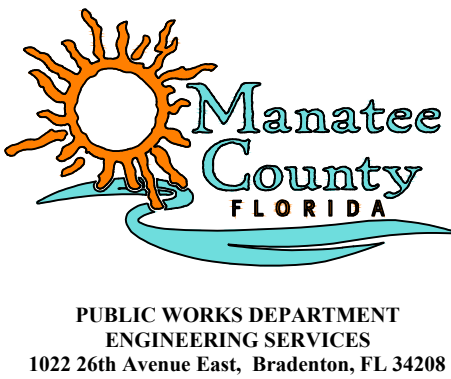
SUNSHINE STATE ONE CALL OF FLORIDA
1-(800) 432-4770

NO.	REVISION DESCRIPTION	BY	DATE

SATELLITE LIFT STATION R&R

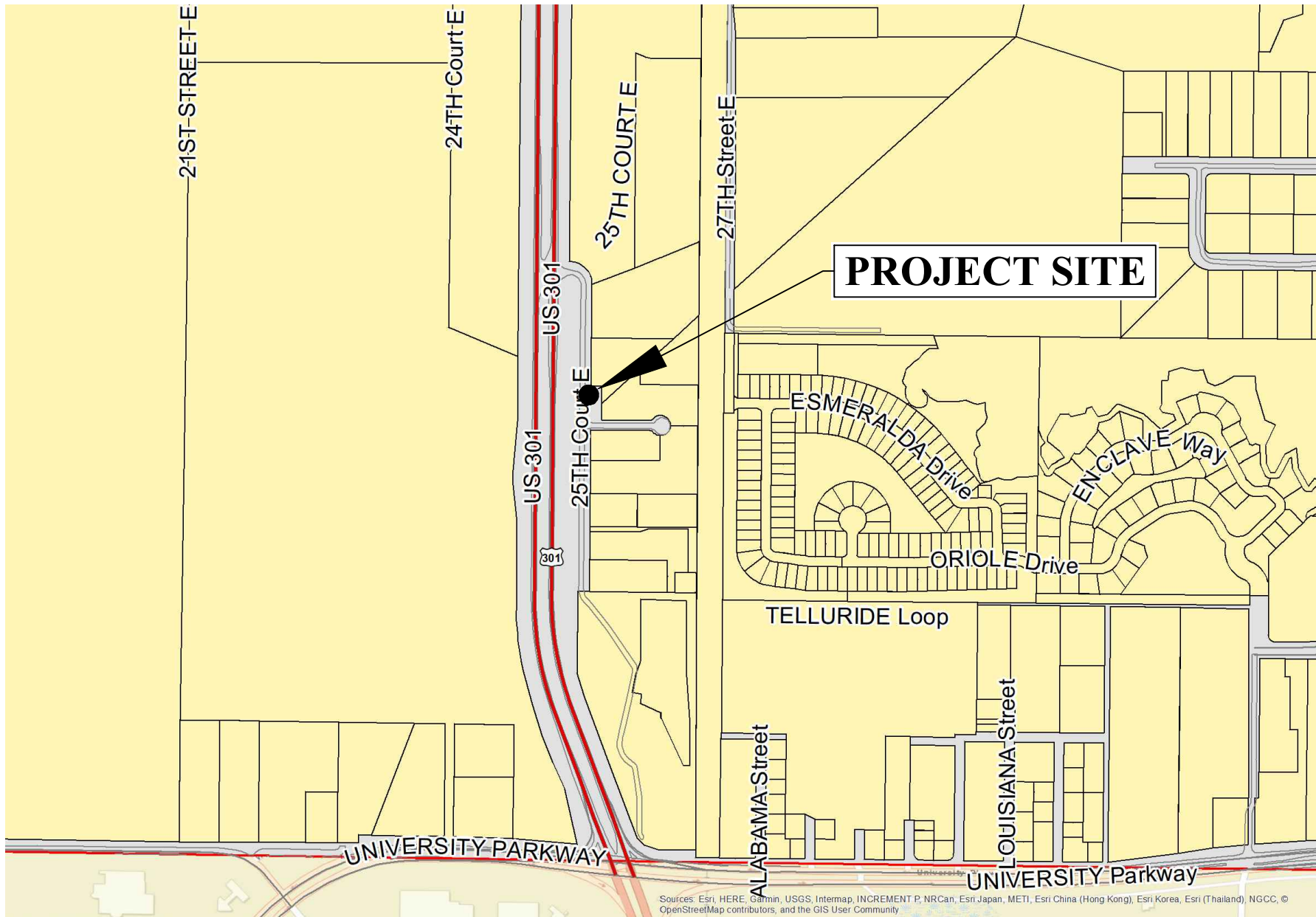
2020 GROUP 3

NOTES

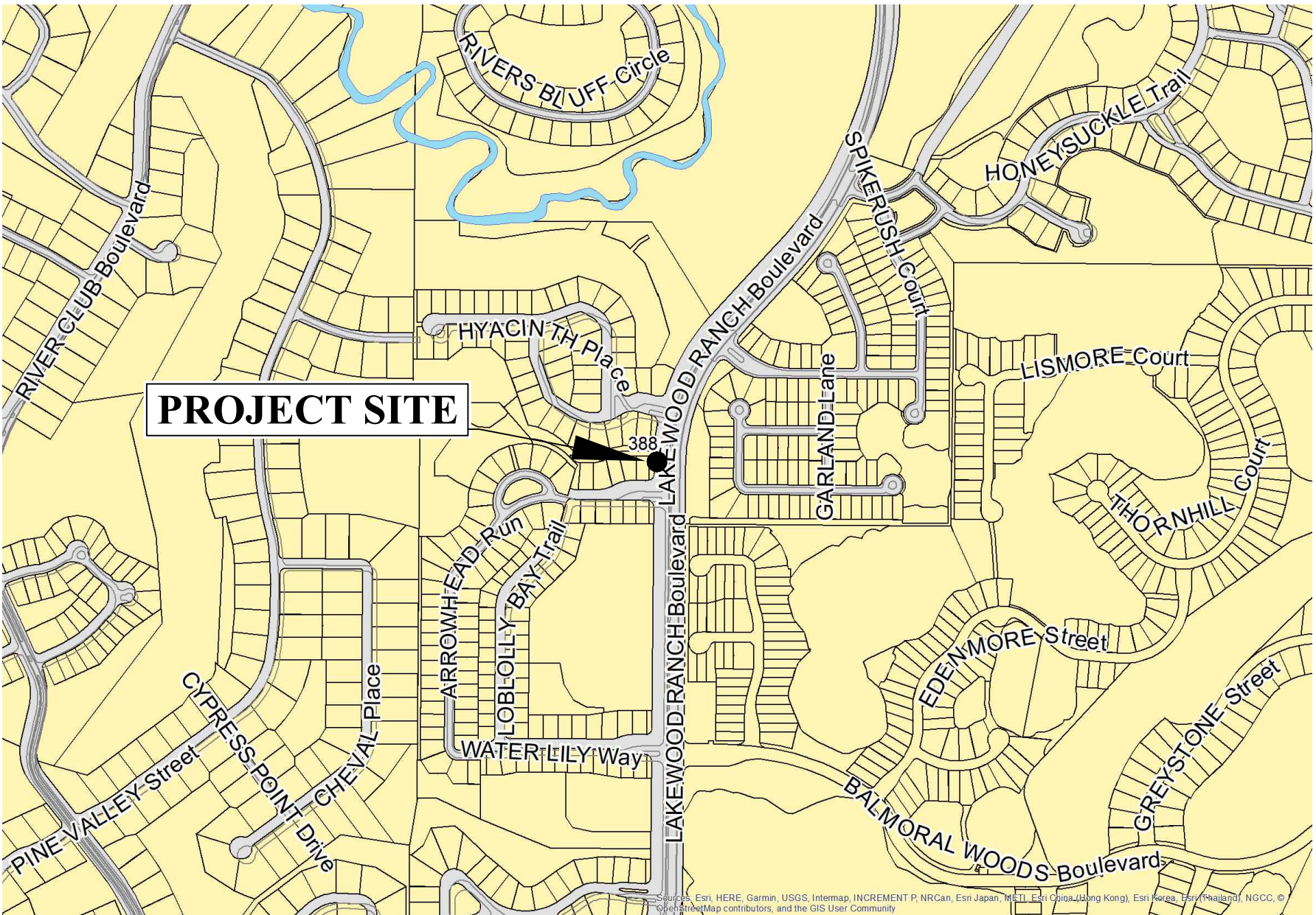


PROJECT #	402-0019707
SURVEY #	00-44787
SEC./TWN./RGE	VARIES
SCALE	N.T.S.
	BY DATE
SURVEYED	--- 4/12/19
DESIGNED	JSS 09/2019
DRAWN	JSS 08/2019
CHECKED	JSS 08/2019

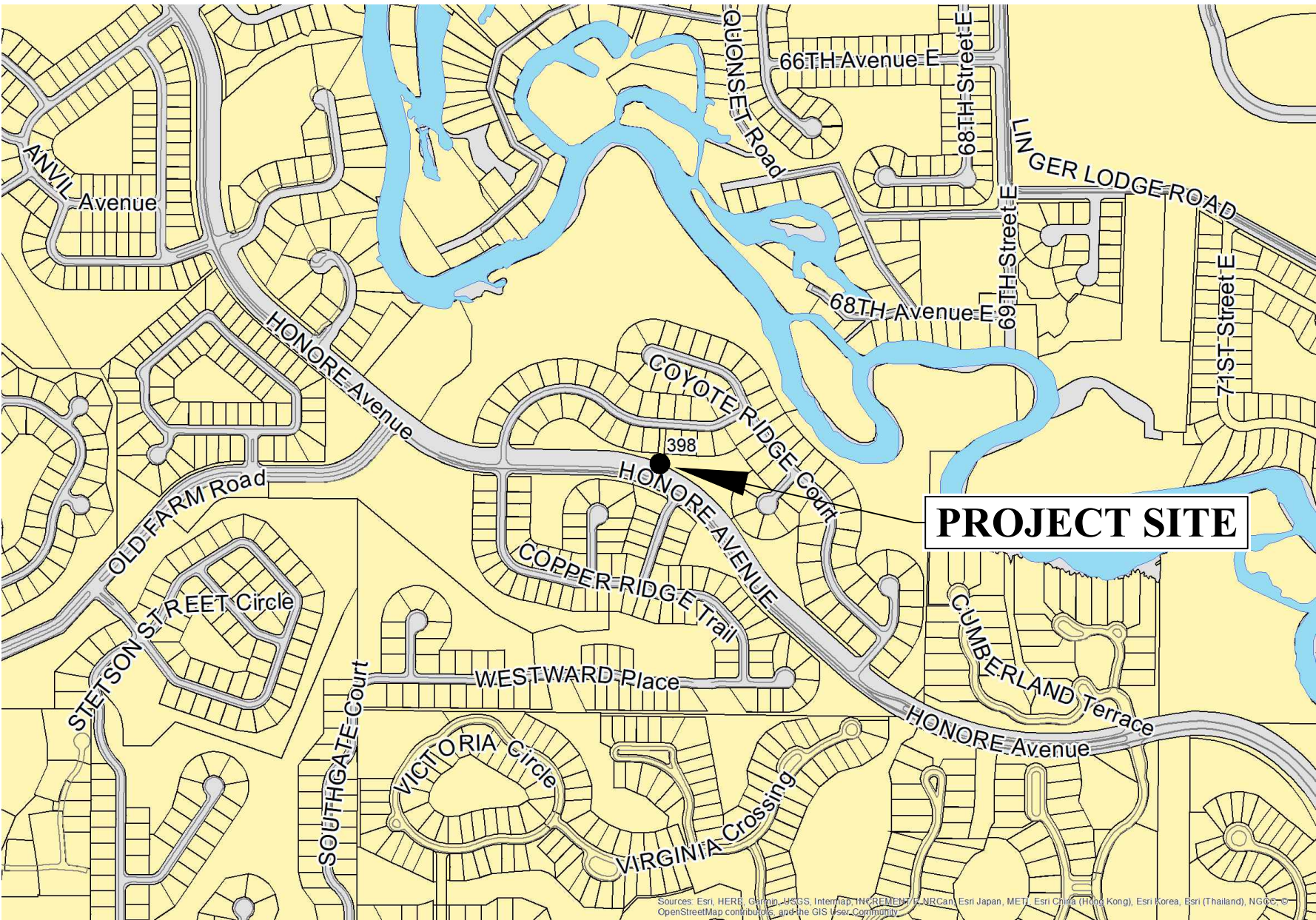
JOHN S. SHANNON, P.E.
Professional Engineer
No. 60923
STATE OF FLORIDA
12/01/2020
Signature & Date



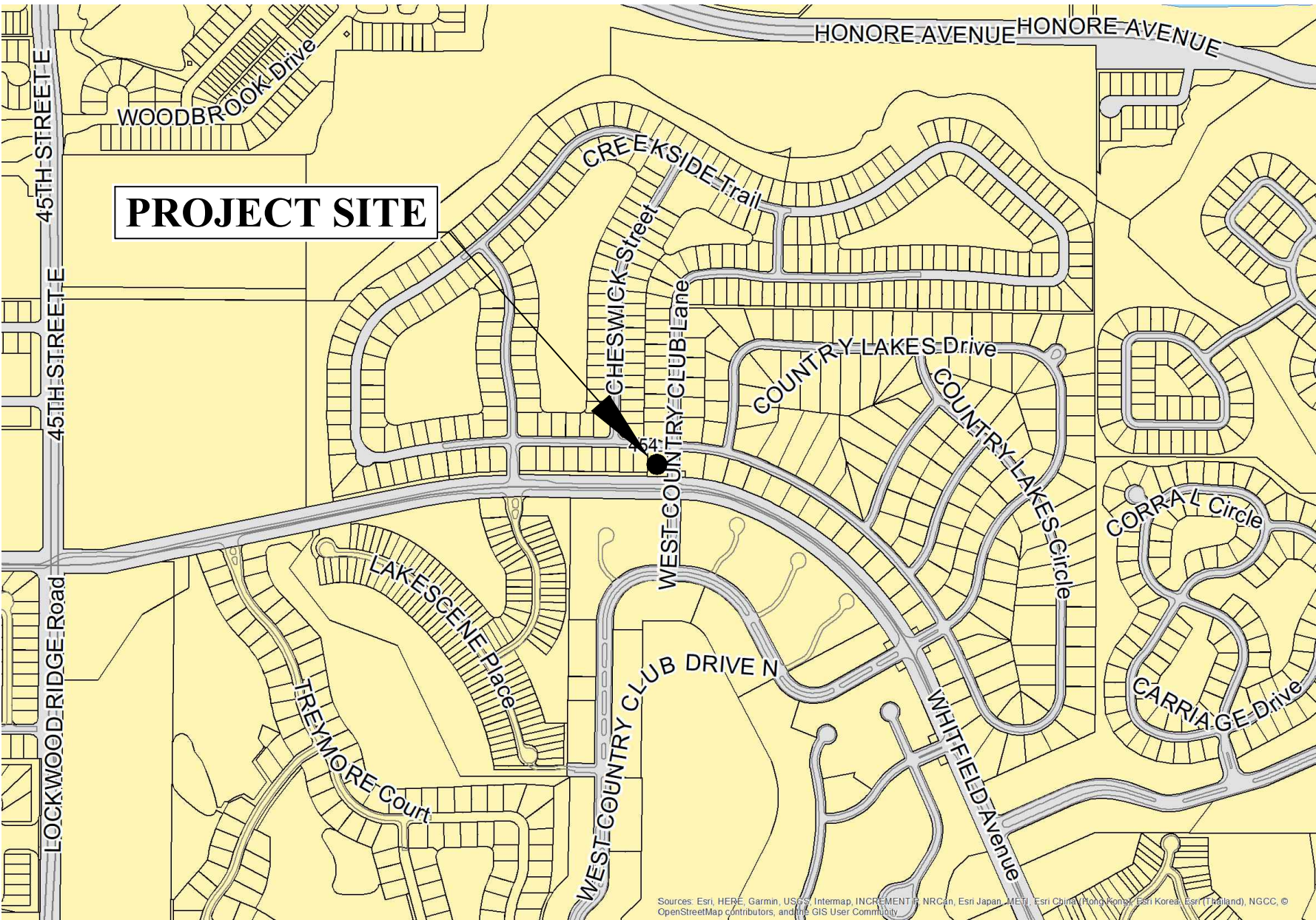
NEW 301 INDUSTRIAL PARK, RTU 344,
8136 25TH CT E (US 301), SARASOTA



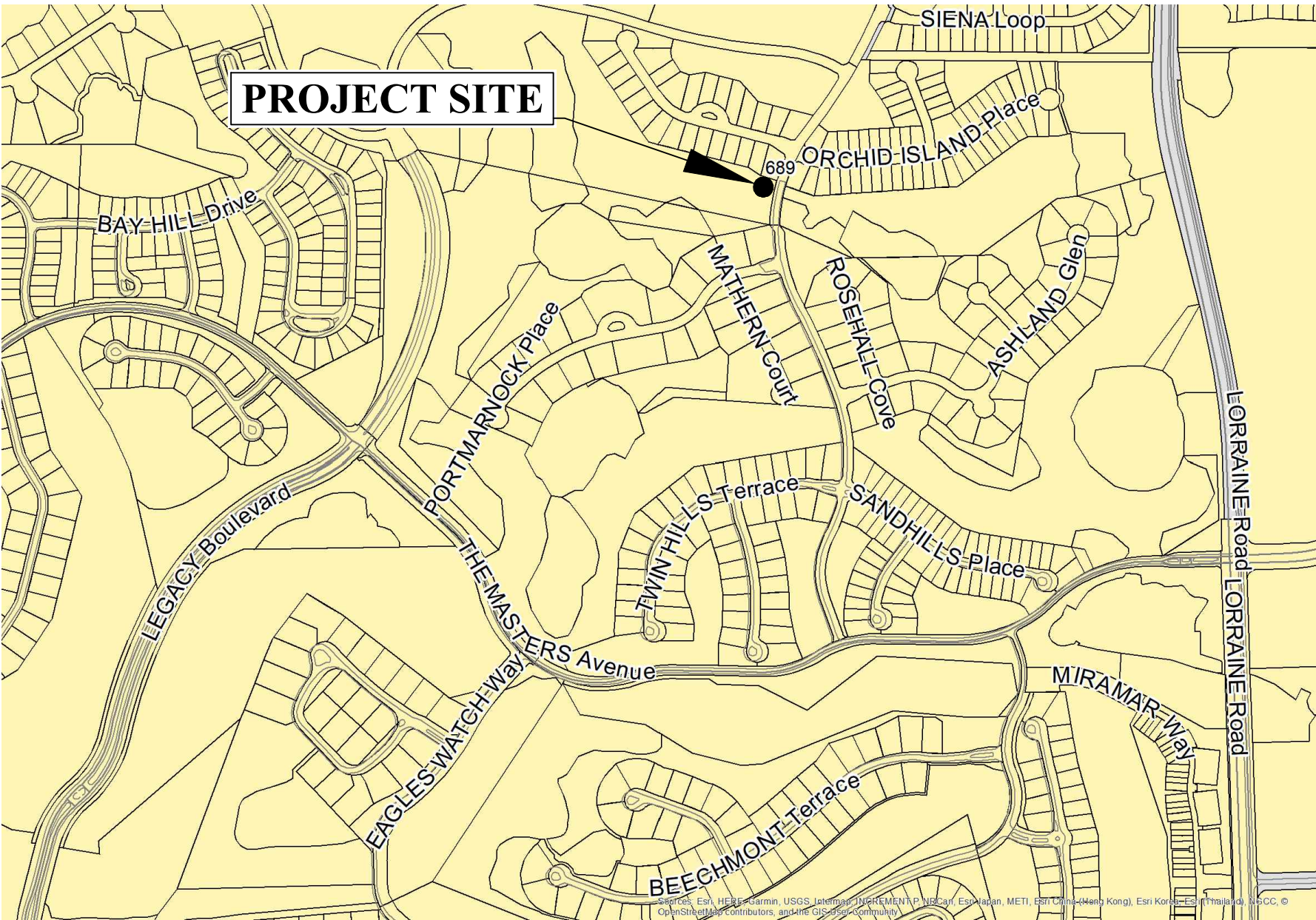
LAKEWOOD MEADOWS, RTU 388,
11119 STAR RUSH PL, BRADENTON



MOTE RANCH 3, RTU 398,
6611 HONORE AVE, BRADENTON



41-A, RTU 454,
5195 WHITFIELD AVE, BRADENTON



ARNOLD PALMER GREEN 1, RTU 689,
7699 ARNOLD PALMER GREEN, BRADENTON

NO.	REVISION DESCRIPTION	BY	DATE

SATELLITE LIFT STATION R&R
2020 GROUP 3
VICINITY MAPS



PROJECT #	402-0019707		
SURVEY #	00-44787		
SEC./TWN./RGE	VARIES		
SCALE	N.T.S.		
	BY	DATE	
SURVEYED	---	4/12/19	
DESIGNED	JSS	09/2019	
DRAWN	JSS	08/2019	
CHECKED	JSS	08/2019	

JOHN S. SHOUN, P.E.
FLORIDA LICENSE No. 60923
STATE OF FLORIDA
PROFESSIONAL ENGINEER
SHEET 03 OF 14

EXISTING

NOTES:

1. THE WET WELL AND VALVE VAULT CONFIGURATION SHOWN ON THESE GRAPHICS IS FOR IDENTIFICATION OF COMPONENTS TO BE REMOVED. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, ELEVATIONS, CONFIGURATION, ETC. FOR ACCURACY.
2. THE CONTRACTOR/BIDDER SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS.
3. THE CONTRACTOR/BIDDER SHALL DETERMINE THE DISCHARGE PIPING ELEVATIONS DURING THE SITE VISITS.
4. REMOVAL AND REINSTALLATION OF THE PUMPS DURING THE REHABILITATION SHALL BE DONE BY MANATEE COUNTY PERSONNEL IN COORDINATION WITH THE CONTRACTOR
5. BY-PASS PUMPING IS THE RESPONSIBILITY OF THE CONTRACTOR.
6. MANATEE COUNTY GOVERNMENT WILL PROVIDE ONE (1) LIFT STATION SHUT-DOWN AT NO COST TO THE CONTRACTOR. ADDITIONAL SHUT-DOWNS WILL COST THE CONTRACTOR \$3,500 EACH, IF NEEDED.
7. THE CONTRACTOR IS RESPONSIBLE FOR RESTORING ANY DAMAGED LANDSCAPING TO EXISTING OR DESIGN CONDITIONS.
8. THE WORK AREA IS LIMITED TO THE LIFT STATION SITE.

PLAN

ELEVATION

ITEMS ROTATED FOR CLARITY

EX. 2 PUMP LIFT STATION

NTS

LIFT STATION SCHEDULE (EXISTING)	
RADIO TELEMETRY UNIT (RTU)	344
DESIGN CAPACITY GPM/TDH	32 / 132
DISCHARGE PIPING DIAMETER	2"
WET WELL DIAMETER	4'
BOTTOM SLAB ELEVATION	0.09
TOP ELEVATION	17.79
VALVE VAULT HATCH ELEVATION	17.79
INFLUENT INVERT ELEVATION	4.72
INFLUENT PIPE SIZE	(2)-8"
FORCE MAIN DIAMETER	2"
WET WELL VENT PIPE	PVC, 6"
ELECT. POWER, VOLTS/PH	230/3
ELECT. SERVICE SIZE, AMPS	30
EX. FORCEMAIN TIE-IN	FM

* INFORMATION TAKEN FROM LIFT STATION DATA FILE (LSINFO.XLS 2018) & RECORD DRAWINGS. DATUM OF ELEVATIONS IS UNKNOWN.

PROPOSED

GENERAL NOTES:

- CONTRACTOR SHALL NOT BACKFILL OVER DISCHARGE PIPING UNTIL INSPECTOR HAS VISUALLY CHECKED IT FOR LEAKS DURING PUMP STARTUP OR PRESSURE TEST AS DIRECTED BY THE COUNTY.
- ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST MANATEE COUNTY PUBLIC WORKS UTILITY STANDARDS. ALL HORIZONTAL AND VERTICAL DISTANCES AND MEASUREMENTS SHALL BE FIELD VERIFIED PRIOR TO ORDERING MATERIALS AND COMMENCING WORK. ALL MEASUREMENTS AND CALCULATIONS SHALL BE THE RESPONSIBILITY OF THE AWARDED CONTRACTOR.
- THE EXTERIOR SURFACES OF THE CONCRETE WET WELL AND VALVE VAULT EXPOSED ABOVE GRADE SHALL BE COATED WITH AT LEAST TWO COATS OF H & C SILICONE ACRYLIC CONCRETE STAIN, PATIO GREEN, MANUFACTURED BY FLR PAINTS, INC.
- ALL EXISTING DUCTILE IRON PIPE AND/OR FITTINGS LABELED TO REMAIN IN THE VALVE VAULT SHALL BE COATED WITH A BITUMINOUS COATING.
- COAT THE EXTERIOR AND INTERIOR OF THE VALVE VAULT WALLS WITH TWO (2) COATS OF COAL TAR EPOXY.
- ALL PAINTING SHALL BE INCLUDED IN THE BID ITEM TO BE PAINTED.

NEW TELEMETRY
TOWER
(BY COUNTY)

PLAN

- INSTALL PVC SLEEVES W/ HYDRAULIC NON-SHRINK GROUT & LINK SEALS (5 TYP.)
- INSTALL 2" WEIGHTED LEVER TYPE CHECK VALVE (2 TYP.)
- INSTALL 2" GATE VALVE (3 TYP.)
- INSTALL 2" CROSS, PVC
- INSTALL 2" SCH 80 PVC VENT W/ 316 SS SCREEN
- SEAL SLEEVE TO WET WELL LINER PER LINER MANUFACTURER'S RECOMMENDATIONS (2 TYP.)
- INFLUENT LINE (TO REMAIN)
- 60" FROM EDGE
- CONT. PANEL
- INSTALL 6" 90° BEND & 6" QUICK CONNECT
- INSTALL 2" UNION CONNECTIONS, (3 TYP.)
- INSTALL 2" 90° BEND, PVC (2 TYP.)
- INSTALL 2" SPOOL PIECES (AS NECESSARY)
- INSTALL 2" SCH. 80 PVC CONDUIT, 3 TYP. (±30 LF)
- 30"x42" SINGLE HEAVY DUTY ALUMINUM HATCH; (12" OFFSET FROM CENTER 6' DIA. W.W ONLY)
- INSTALL NEW 10" THICK (MIN.) ROUND WET WELL TOP; MATCH VALVE VAULT RIM ELEVATION.
- 4" REVEAL MAX.
- INSTALL NEW VALVE VAULT TOP & 48"x48" DOUBLE HEAVY DUTY ALUMINUM HATCH.
- INSTALL 2" GATE VALVE, MJ. W/ CONC PAD; BRASS DISC, MJ
- RAISE PIPING IN VALVE VAULT UP TO ±2" FROM THE TOP OF THE VALVE VAULT.
- 18" MIN.
- 3" MIN.
- INSTALL 90° ELBOW, PVC (2 TYP.)
- INSTALL SPRAY LINER, (±248 SF)
- INSTALL PVC DRAIN
- INSTALL ADJUSTABLE S.S. FLANGED VALVE SUPPORTS, (3 TYP.)
- FILL WITH CONCRETE BOTTOM. FLOOR SHALL BE SLOPED TO DRAIN (±3 CY)
- INSTALL 316 SS PIPE BRACING SYSTEM WITH LATERAL SUPPORT, (2 MIN.). TOP BRACE TO BE WITHIN 2' OF TOP ELBOW. LOWER BRACE TO BE 4' ABOVE BASE ELLS. MAX SPACING OF 8' BETWEEN BRACES.
- INSTALL NEW 316 SS PUMP GUIDE RAIL SYSTEM COMPOSED OF SINGLE LENGTH (WELDED) 2" PIPES (2 TYP)
- INSTALL PVC SCH 80 PIPE (2 TYP)
- INSTALL PVC FLANGE W/ 316 SS HARDWARE, (2 TYP.)
- INSTALL NEW 2" BPUI PUMP BASE ELBOWS (2 TYP)
- INSTALL NEW 2" BASE ELBOW MOUNTING PLATES AND ANCHOR BOLTS; MAY REQUIRE GRINDING OR LEVELING OF BASE GROUT (SEE BASE ELL MOUNTING PLATE DETAIL ON DETAIL SHEET) (2 TYP)

ELEVATION

ITEMS ROTATED FOR CLARITY

EX. 2 PUMP LIFT STATION NIS

LIFT STATION SCHEDULE (PROPOSED)	
INSTALL FIBERGLASS W.W. LINER	NO
APPLY SPRAY LINER W.W. LINER	YES
INSTALL STILLING WELL	NO
INSTALL FORCE MAIN ISOLATION VALVE	YES
NEW HDPE DISCHARGE PIPING	2" PVC SCH 80
NEW BASE ELL	2" BPUI-12
RAISE TOP OF WET WELL:	±2' *
RAISE TOP OF VALVE VAULT:	±2' *
INSTALL WET WELL VENT PIPE	YES
INSTALL NEW WATER SERVICE ASSEMBLY, US-15	NO
UPGRADE / RELOCATE EX. WATER SERVICE ASSEMBLY	YES

1. INSTALL ± 10 LF NEW ELECTRICAL SERVICE W/ COND. C.
2. INSTALL NEW 3-INCH PVP DRAIN LINE WITH PVP "P" TRAP ROTATE AND INSTALL FLUSH AGAINST WALL INSIDE WET WELL. SEAL WITH NON-SHRINK GROUT. SEAM AND SEAL TO MATCH LINE. WET WELL WALL DEMOLITION TO BE MADE BY MECHANICAL ROTARY CORE BORING. (P-TRAP TO ROTATED IN DRAWING FOR CLARITY).
3. REMOVE AND INSTALL ALL NEW ELECTRICAL STRUCTURE (RACK), A CONTROL PANEL, TCU ENCLOSURE, JUNCTION BOX (DISCONNECT), A METER CAN, AND A SAFETY SWITCH (DISCONNECT). NEW ELECTRICAL STRUCTURE SHALL BE FIELD MATCHED WITH MANATEE COUNTY PERSONNEL.
4. A TCU BUBBLER UNIT (TBU360) SYSTEM PROVIDED AND INSTALLED BY DATA FLOW SYSTEMS (DFS) FOR WET WELL LEVEL CONTROL SHALL BE INCLUDED WITH THE CONTROL PANEL.
5. INSTALL WASHED SHELL & WEED BARRIER (± 66 SY); GRADE THE AREA AROUND WET WELL TO ALLOW FOR POSITIVE DRAINAGE AWAY FROM LIFT STATION AND TO HAVE A 4% REVEAL ON THE WET WELL VALVE VAULT. COORDINATE WITH MANATEE COUNTY PERSONNEL.
6. SEPARATE THE TELEMETRY TOWER FROM CONCRETE BASE AND SET TO SIDE OF LIFT STATION SITE. CONTRACTOR SHALL REMOVE AND DISPOSE OF CONCRETE BASE. COUNTY SHALL INSTALL TELEMETRY TOWER.
7. REPAIR CONCRETE WALLS, AS NEEDED, IN WET WELL, 2-INCH MIN. THICK OVER EXISTING REBAR, (± 42 SF). ALL REPAIRS TO BE VERIFIED W/ COUNTY PERSONNEL PRIOR TO WORK.
8. WET WELL CONCRETE WALLS SHALL BE INSPECTED BY COUNTY PERSONNEL PRIOR TO INSTALLATION OF NEW SPRAY LINER AND/OR LINER REPAIR.
9. GRADE AREA AROUND THE WET WELL TO ALLOW FOR A POSITIVE DRAINAGE SLOPE (1% MAX.) AWAY FROM THE LIFT STATION AREA. ADEQUATE DRAINAGE SHALL BE PROVIDED TO PREVENT GROUNDWATER BUILD UP BEHIND THE RETAINING WALL.
10. ANY ELECTRICAL WIRING THAT IS INSTALLED BETWEEN THE LIFT STATION'S WET WELL, VALVE VAULT, AND/OR METER VAULT SHALL BE INSTALLED IN A CARRIER PIPE THAT IS STRAPPED TO THE STRUCTURE.
11. UPGRADE AND RELOCATE THE EXISTING METER, BPA, & HOSE BIBB ASSEMBLY WITH A NEW 2" WATER SERVICE AND TAPPING SADDLE. FIELD LOCATE WITH MANATEE COUNTY PERSONNEL. (± 25 LF).
12. REPLACE EXISTING WATER SERVICE SADDLE AND CORPORATION AND ADD A BRASS PLUG IN NEW CORPORATION. REUSE EXISTING HOLE IF ADEQUATE VALVING EXISTS.
13. A CONCRETE RETAINING WALL SHALL BE DESIGNED, FURNISHED, AND INSTALLED TO ELEVATE THE LIFT STATION SITE EQUAL TO THE HEIGHT OF THE CROWN OF THE ADJACENT ROADWAY. THE AREA SHALL BE FILLED WITH 20" FILL. THE TOP OF THE WALL SHALL BE A WOOD BARRIER AND WASHED SHELL. THE RETAINING WALL LAYOUT AND CONFIGURATION SHALL BE DESIGNED AND SIGNED/SEALED BY A STRUCTURAL PROFESSIONAL ENGINEER LICENSED IN FLORIDA. THE CONCRETE RETAINING WALL SHALL MEET ALL OSHA AND OTHER REGULATING AGENCIES CRITERIA. SEE SHEET 10 AND 51 FOR ADDITIONAL INFORMATION.
14. AN ELECTRICAL SYSTEM STUDY, ELECTRICAL STUDY ANALYSIS, AND WIRING LABELING IN COMPLIANCE WITH NFPA 70E "STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE" AND IEEA 1584 2018 "GUIDE FOR PERFORMING ARC FLASH HAZARDS CALCULATIONS" SHALL BE PROVIDED.

LIFT STATION SCHEDULE (PROPOSED)	
INSTALL FIBERGLASS W.W. LINER	NO
APPLY SPRAY LINER W.W. LINER	YES
INSTALL STILLING WELL	NO
INSTALL FORCE MAIN ISOLATION VALVE	YES
NEW HDPE DISCHARGE PIPING	2" PVC SCH 80
NEW BASE ELL	2" BPIU-12
RAISE TOP OF WET WELL:	±2' *
RAISE TOP OF VALVE VAULT:	±2' *
INSTALL WET WELL VENT PIPE	YES
INSTALL NEW WATER SERVICE ASSEMBLY, US-15	NO
UPGRADE / RELOCATE EX. WATER SERVICE ASSEMBLY	YES

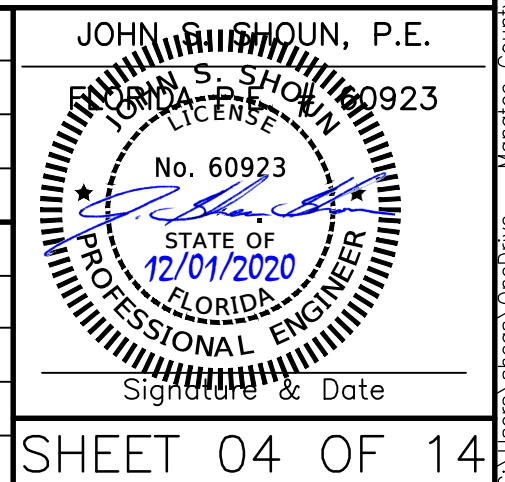
* TOP OF WET WELL AND VALVE
VAULT SHALL MATCH THE CROWN
OF THE ADJACENT ROAD.

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**Manatee
County
FLORIDA**

**PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES**
1022 26th Avenue East, Bradenton, FL 34208

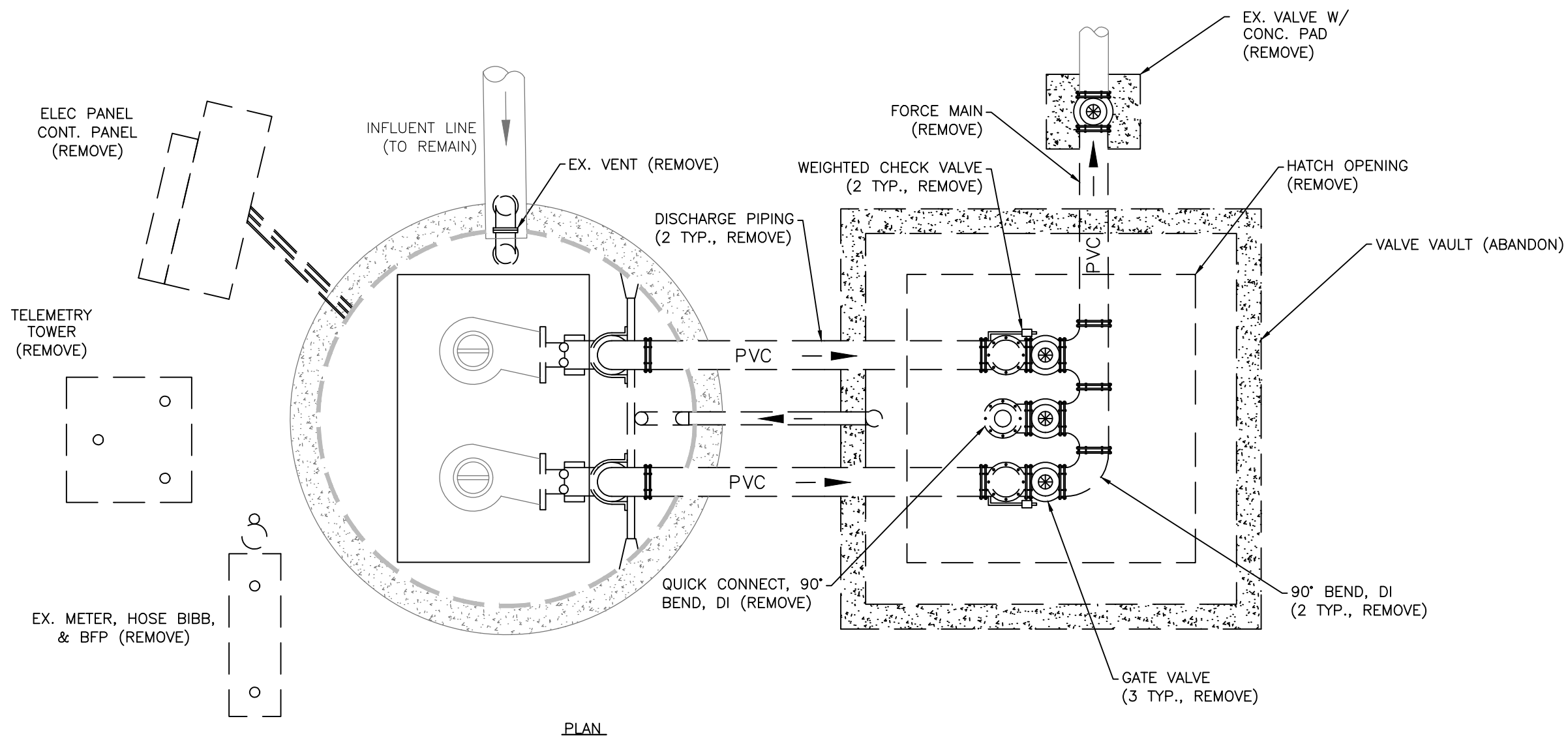
PROJECT #	402-0019707	
SURVEY #	00-44787	
SEC./TWN./RGE	31/35/18	
SCALE	N.T.S.	
	BY	DATE
SURVEYED	---	4/12/19
DESIGNED	JSS	09/2019
DRAWN	JSS	08/2019
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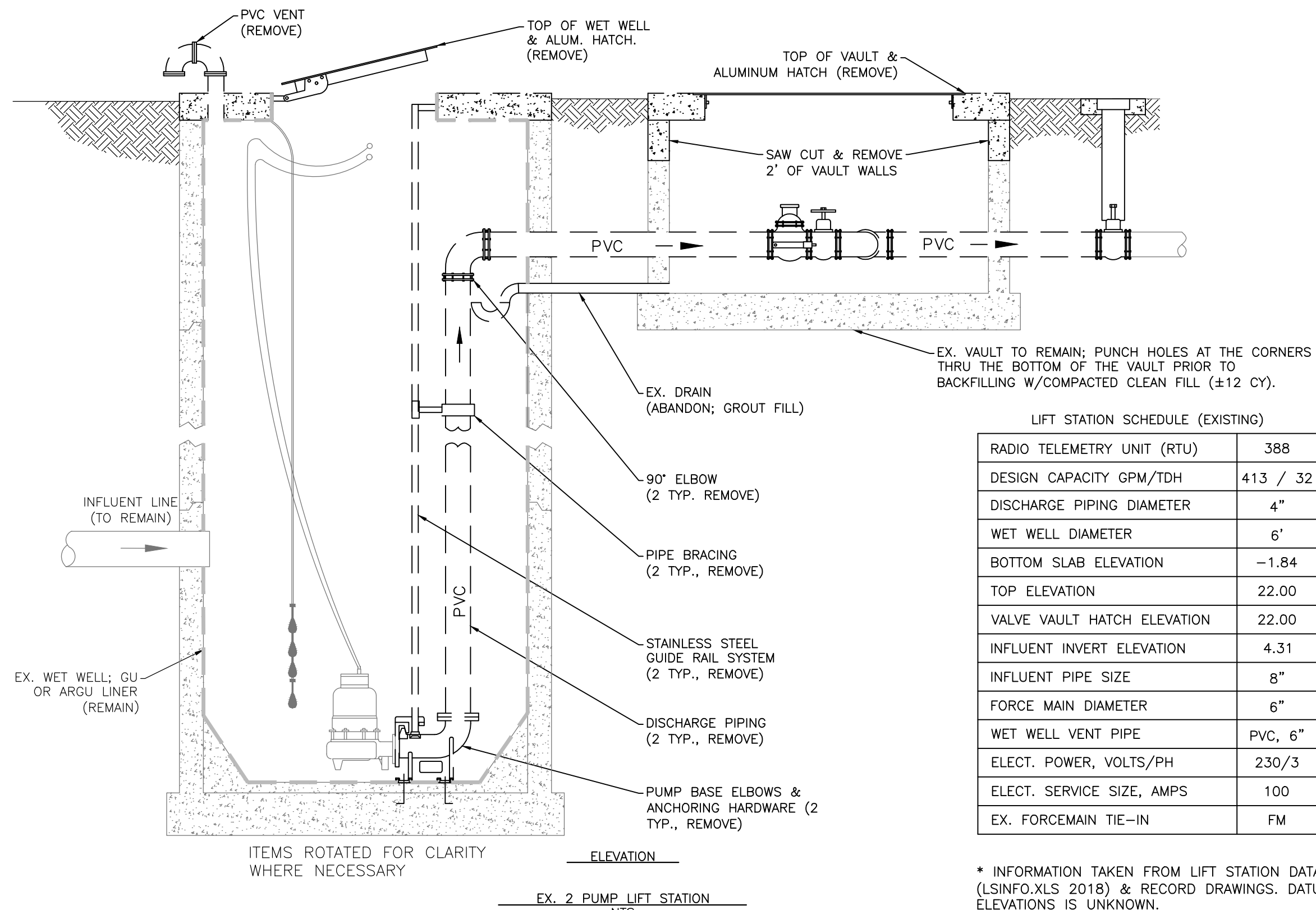
EXISTING

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6. MANATEE COUNTY GOVERNMENT WILL PROVIDE ONE (1) LIFT STATION SHUT-DOWN AT NO COST TO THE CONTRACTOR. ADDITIONAL SHUT-DOWNS WILL COST THE CONTRACTOR \$3,500 EACH, IF NEEDED.
7. THE CONTRACTOR IS RESPONSIBLE FOR RESTORING ANY DAMAGED LANDSCAPING TO EXISTING OR DESIGN CONDITIONS.
8. THE WORK AREA IS LIMITED TO THE LIFT STATION SITE.



PLAN



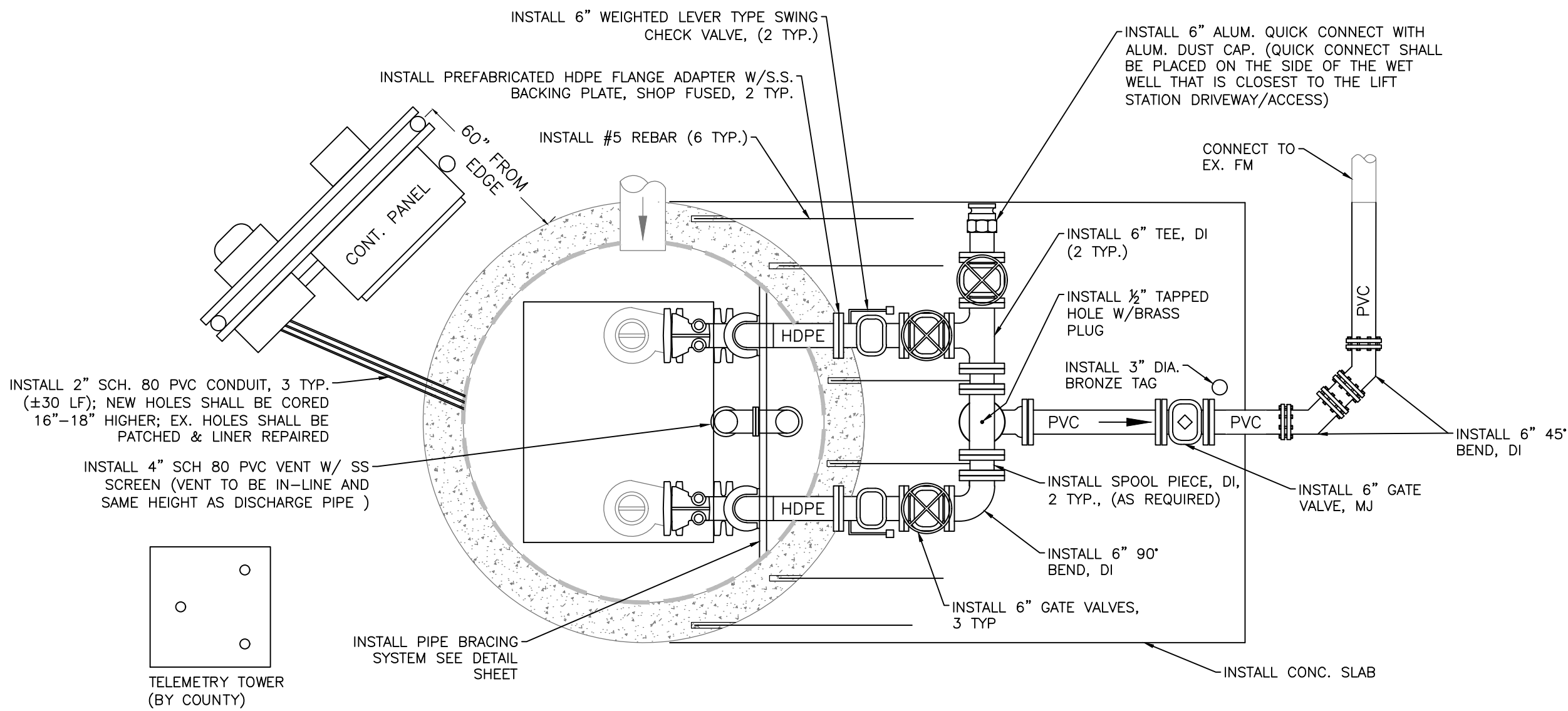
LIFT STATION SCHEDULE (EXISTING)		
RADIO TELEMETRY UNIT (RTU)		388
DESIGN CAPACITY GPM/TDH	413 /	32
DISCHARGE PIPING DIAMETER		4"
WET WELL DIAMETER		6'
BOTTOM SLAB ELEVATION		-1.84
TOP ELEVATION		22.00
VALVE VAULT HATCH ELEVATION		22.00
INFLUENT INVERT ELEVATION		4.31
INFLUENT PIPE SIZE		8"
FORCE MAIN DIAMETER		6"
WET WELL VENT PIPE		PVC, 6"
ELECT. POWER, VOLTS/PH		230/3
ELECT. SERVICE SIZE, AMPS		100
EX. FORCEMAIN TIE-IN		FM

* INFORMATION TAKEN FROM LIFT STATION DATA FILE (LSINFO.XLS 2018) & RECORD DRAWINGS. DATUM OF ELEVATIONS IS UNKNOWN.

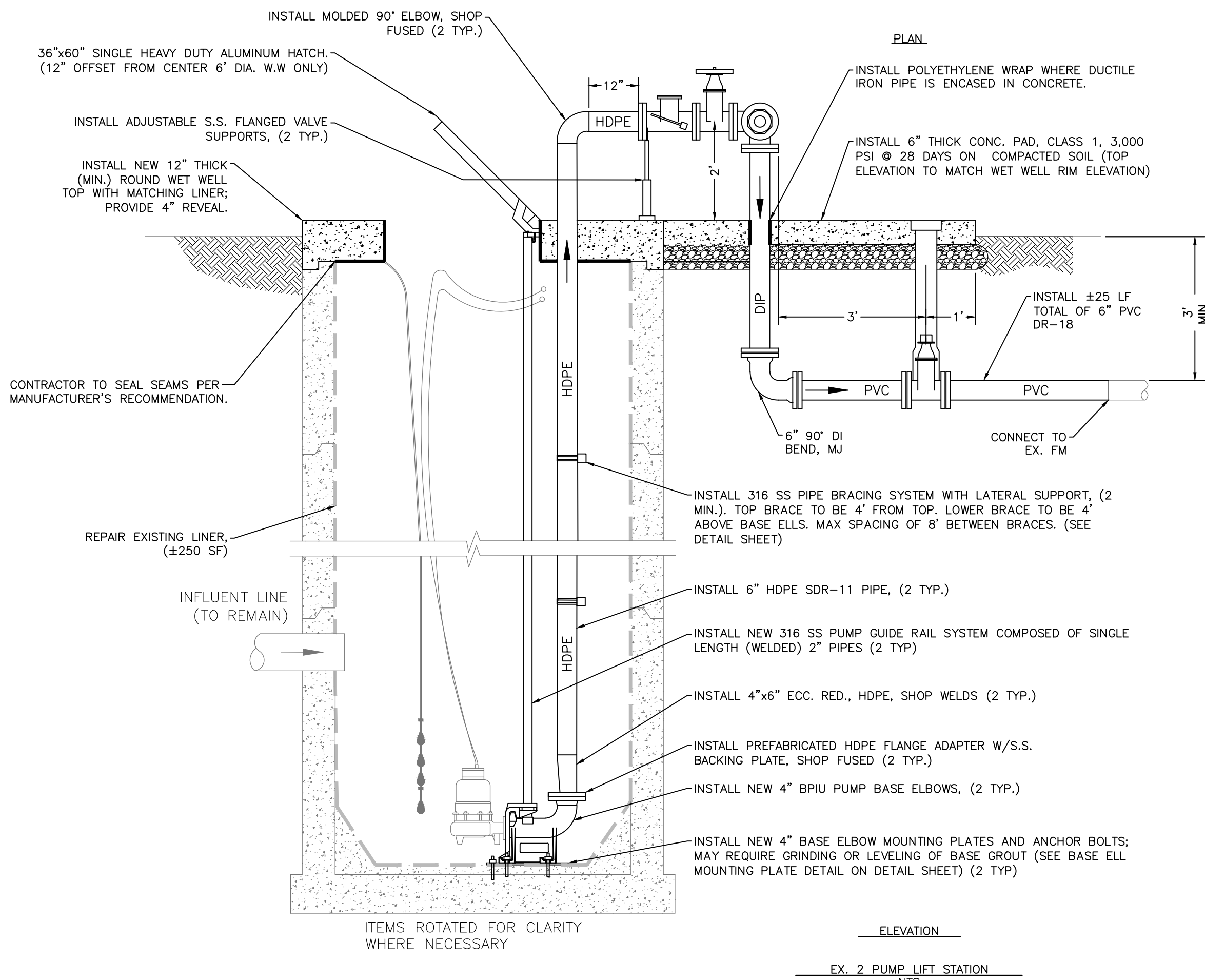
PROPOSED

GENERAL NOTES:

1. ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST MANATEE COUNTY PUBLIC WORKS UTILITY STANDARDS.
2. THE CONCRETE SHALL BE GIVEN A BROOM FINISH. THE SURFACE VARIATIONS SHALL BE NOT MORE THAN 1/4" UNDER A TEN FOOT (10') STRIKE. THE PAINT MORE THAN 1/8" ON A FIVE FOOT (5') TRANSVERSE SECTION. THE EDGE OF THE CONCRETE PAD SHALL BE CAREFULLY FINISHED WITH AN EDGING TOOL HAVING A RADIUS OF 1/2".
3. EXPANSION JOINT: EXPANSION JOINTS BETWEEN THE CONC. PAD AND THE WET WELL SHALL BE 1/2" MATERIAL AND SHALL MEET THE REQUIREMENTS OF AASHTO M153 OR AASHTO M213.
4. THE EXTERIOR SURFACES OF THE CONCRETE WET WELL AND VALVE PAD EXPOSED ABOVE GRADE SHALL BE COATED WITH AT LEAST TWO COATS OF H & C SILICONE ACRYLIC CONCRETE STAIN, PATIO GREEN, MANUFACTURED BY FLR PAINTS. THE ABOVE GROUND VALVE ASSEMBLY SHALL BE PAINTED WITH AASHTO M280 7538 HUNTER GREEN. CONTRACTOR SHALL TAKE PRECAUTIONS TO PREVENT OVER-SPRAY OF PAINT ONTO THE CONCRETE SLAB.
5. ALL PAINTING SHALL BE INCLUDED IN THE BID ITEM TO BE PAINTED.



Y COUNTY)



PLAN

ELEVATION

CONSTRUCTION NOTES:

2. INSTALL $\pm 10'$ F NEW ELECTRICAL SERVICE W/ CONDUIT.
3. REMOVE AND INSTALL ALL NEW ELECTRICAL STRUCTURE (RACK), A CONTROL PANEL, TCU ENCLOSURE, JUNCTION BOX ENCLOSURE, A METER CAN, AND A SAFETY SWITCH (DISCONNECT). THE NEW ELECTRICAL STRUCTURE SHALL BE FIELD INSTALLED BY COUNTY PERSONNEL.
4. A TCU BUBBLER UNIT (TBU360) SYSTEM PROVIDED AND INSTALLED BY DATA FLOW SYSTEMS (DFS) FOR WET WELL LEVEL CONTROL SHALL BE INCLUDED WITH THE CONTROL PANEL.
5. INSTALL #5 REBAR (6 TYP) EPOXY EMBEDDED INTO THE WET WELL TOP 4-INCHES DEEP AND CAST 3-4 FEET INTO THE VALVE VAULT ASSEMBLY CONCRETE PAD TO ENSURE THE TOPS OF THE WET WELL AND VALVE ASSEMBLY PAD WILL REMAIN FLUSH.
6. INSTALL WASHED SHELL & WEED REBAR (± 100 SY); GRADE TO TOP OF AREA AROUND WET WELL ALLOW FOR POSITIVE DRAINAGE AWAY FROM LIFT STATION AND TO HAVE A 4" REVEAL ON THE WET WELL/VALVE ASSEMBLY PAD. COORDINATE WITH MANATEE COUNTY PERSONNEL.
7. SEPARATE THE TELEMETRY TOWER FROM CONCRETE BASE AND SET TO SIDE OF LIFT STATION SITE. CONTRACTOR SHALL REMOVE AND DISPOSE OF CONCRETE BASE. COUNTY SHALL INSTALL NEW TELEMETRY ANTENNA.
8. REPAIR CONCRETE WALLS, AS NEEDED, IN WET WELL, 2-INCH MIN. THICK OVER EXISTING REBAR, (± 250 SF). ALL REPAIRS TO BE VERIFIED W/ COUNTY PERSONNEL PRIOR TO WORK.
9. DAMAGED EXISTING PROTECTIVE LINER(S) AND DETERIORATED WET WELL CONCRETE WALLS SHALL BE INSPECTED BY COUNTY PERSONNEL PRIOR TO REMOVAL AND INSTALLATION OF CONCRETE REPAIR AND/OR INSTALLATION OF NEW PROTECTIVE LINER(S) AND/OR LINER REPAIR.
10. WET WELL CONCRETE WALLS SHALL BE INSPECTED BY COUNTY PERSONNEL PRIOR TO INSTALLATION OF NEW SPRAY LINER AND/OR LINER REPAIR.
11. REMOVE AND INSTALL A METER, BPA, & HOSE BIBB ASSEMBLY. FIELD LOCATE WITH MANATEE COUNTY PERSONNEL.
12. INSTALL A 12-FT WIDE 6-INCH THICK REINFORCE CONCRETE DRIVEWAY. EXACT LOCATION AND LAYOUT SHALL BE DETERMINED IN THE FIELD WITH COUNTY PERSONNEL, (± 45 SY).
13. CONTRACTOR TO REGRADE SITE TO ALLOW FOR A POSITIVE DRAINAGE SLOPE AWAY FROM THE LIFT STATION AREA TOWARDS THE SURROUNDING DITCHES. MAXIMUM OF 1% SLOPE.
14. AN ELECTRICAL SYSTEM STUDY, ELECTRICAL STUDY ANALYSIS, AND ELECTRICAL LAYOUT SHALL BE PROVIDED BY THE CONTRACTOR "STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE" AND IEEE 1584 2018 "GUIDE FOR PERFORMING ARC FLASH HAZARDS CALCULATIONS" SHALL BE PROVIDED.

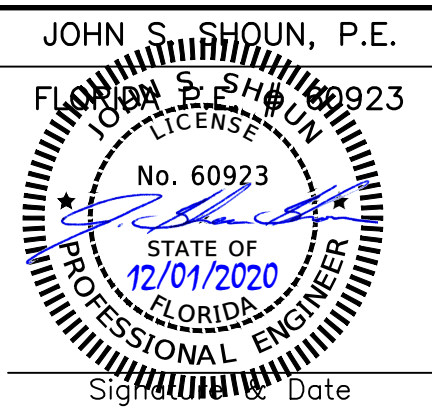
LIFT STATION SCHEDULE (PROPOSED)	
INSTALL FIBERGLASS W.W. LINER	NO
APPLY SPRAY LINER W.W. LINER	NO
INSTALL STILLING WELL	YES
INSTALL FORCE MAIN ISOLATION VALVE	YES
NEW HDPE DISCHARGE PIPING	YES, 6"
NEW BASE ELL	4" BPIU-14
RAISE TOP OF WET WELL:	YES
RAISE TOP OF VALVE VAULT:	NO
INSTALL WET WELL VENT PIPE	YES
INSTALL NEW WATER SERVICE ASSEMBLY, US-15	YES
UPGRADE / RELOCATE EX. WATER SERVICE ASSEMBLY	YES

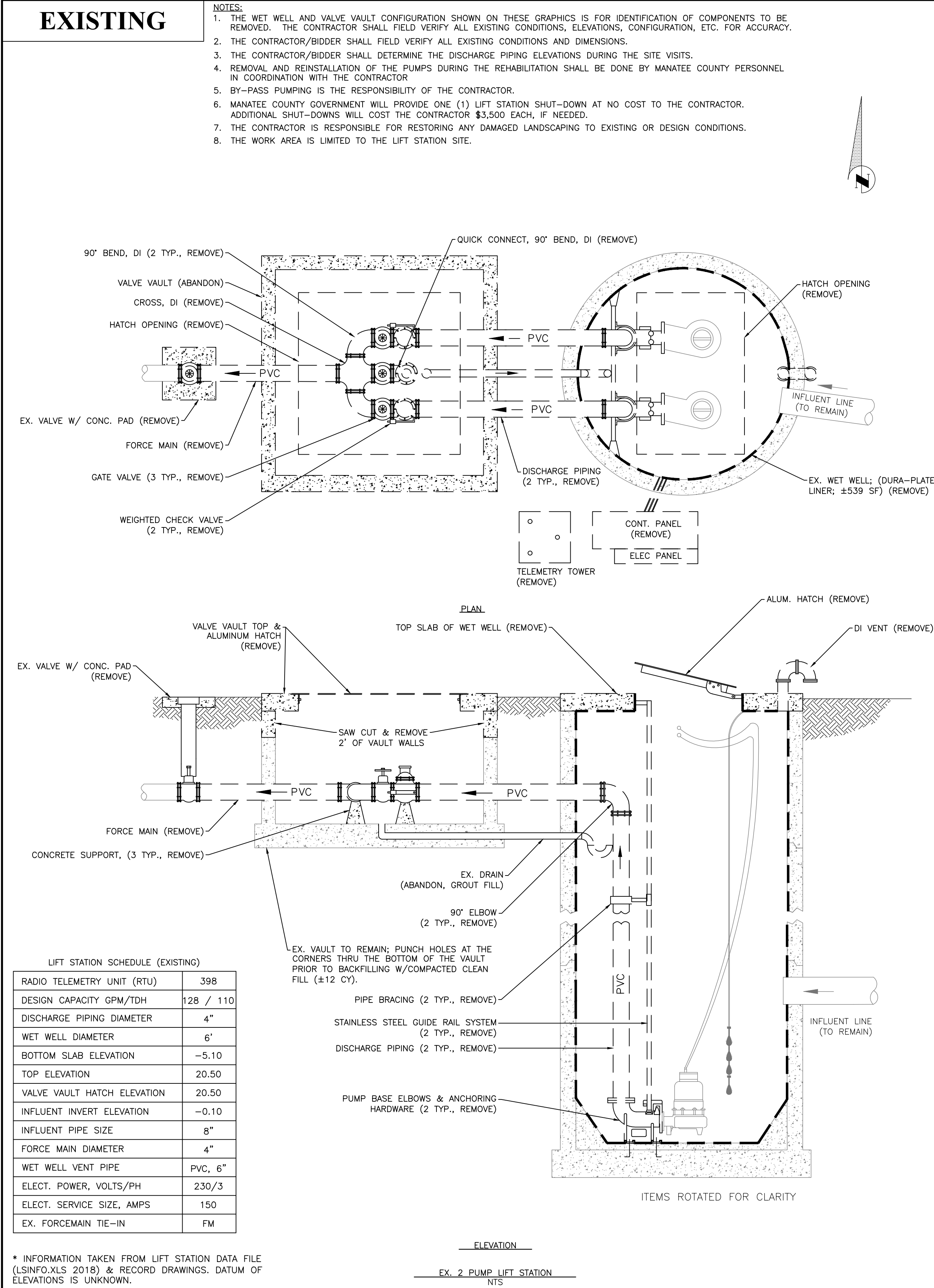
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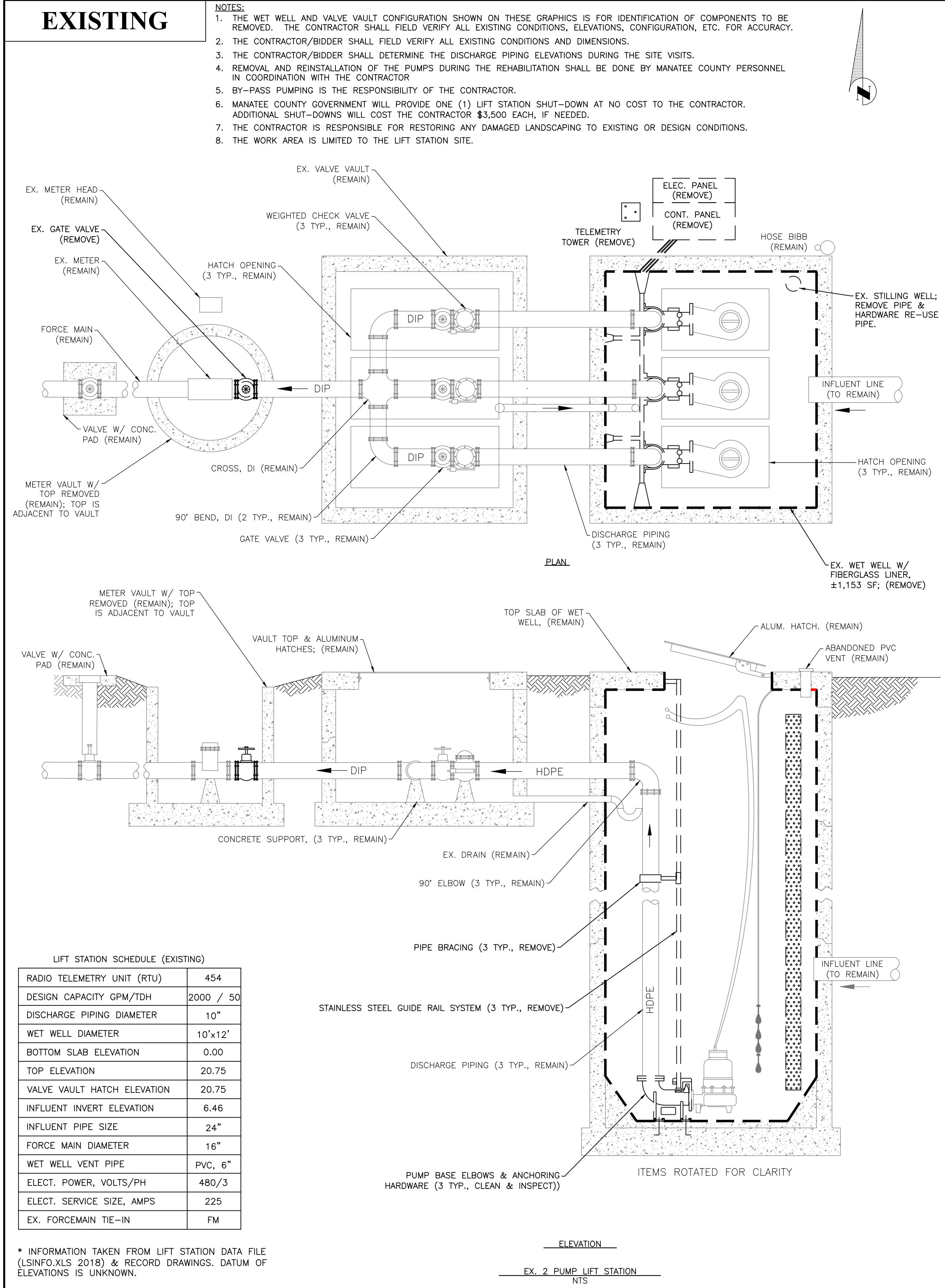
**SATELLITE LIFT STATION R&R
2020 GROUP 3
LAKEWOOD MEADOWS, RTU 388 (REHAB)**



PROJECT #	402-0019707	
SURVEY #	00-44787	
SEC./TWN./RGE	31/35/18	
SCALE	N.T.S.	
	BY	DATE
SURVEYED	---	4/12/19
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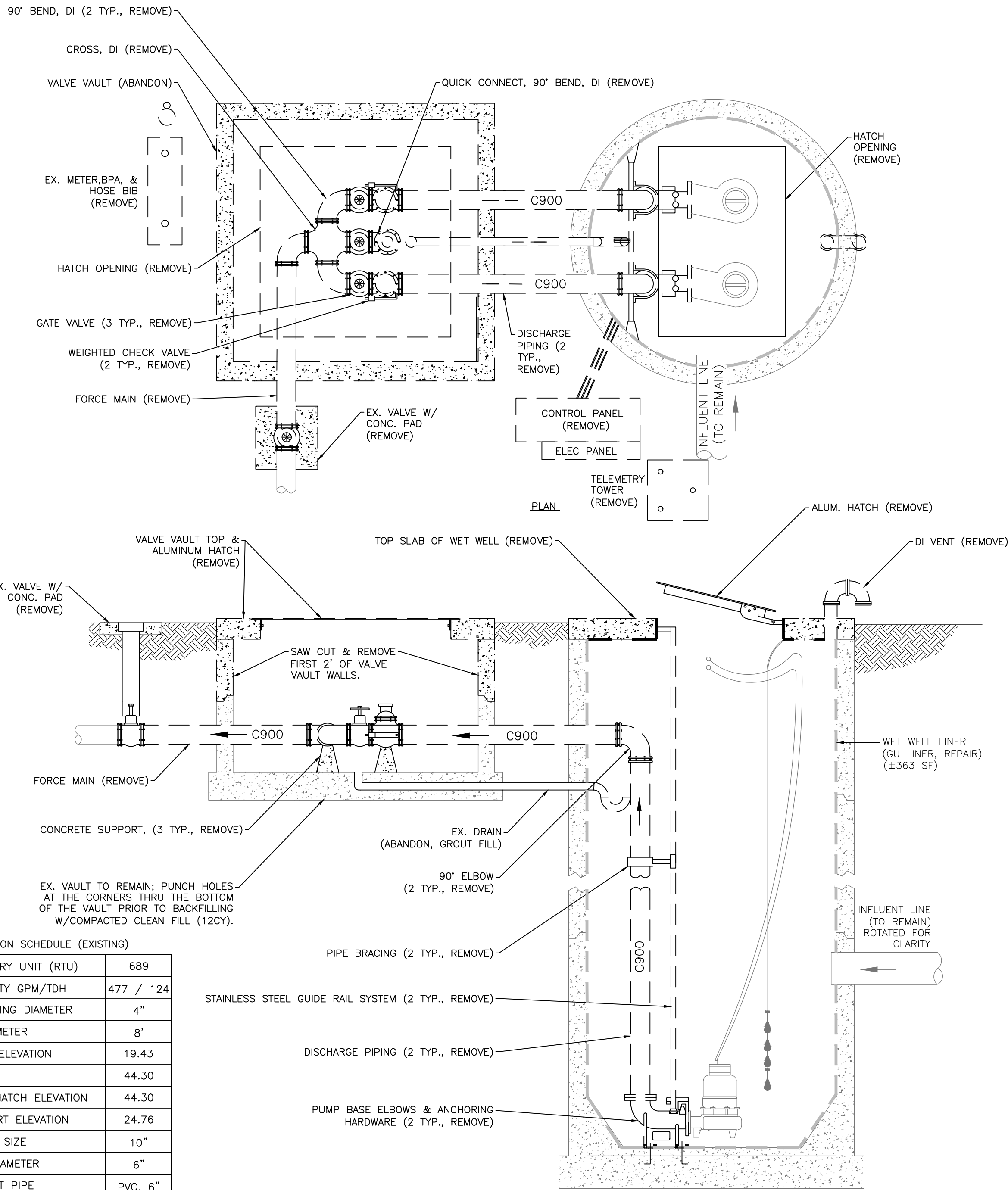




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7. THE CONTRACTOR IS RESPONSIBLE FOR RESTORING ANY DAMAGED LANDSCAPING TO EXISTING OR DESIGN CONDITIONS.
8. THE WORK AREA IS LIMITED TO THE LIFT STATION SITE.



LIFT STATION SCHEDULE (EXISTING)		
RADIO TELEMETRY UNIT (RTU)	689	
DESIGN CAPACITY GPM/TDH	477 / 124	
DISCHARGE PIPING DIAMETER	4"	
WET WELL DIAMETER	8'	
BOTTOM SLAB ELEVATION	19.43	
TOP ELEVATION	44.30	
VALVE VAULT HATCH ELEVATION	44.30	
INFLUENT INVERT ELEVATION	24.76	
INFLUENT PIPE SIZE	10"	
FORCE MAIN DIAMETER	6"	
WET WELL VENT PIPE	PVC, 6"	
ELECT. POWER, VOLTS/PH	460/3	
ELECT. SERVICE SIZE, AMPS	125	
EX. FORCEMAIN TIE-IN	FM	

* INFORMATION TAKEN FROM LIFT STATION DATA FILE (LSINFO.XLS 2018) & RECORD DRAWINGS. DATUM OF ELEVATIONS IS UNKNOWN.

ELEVATION

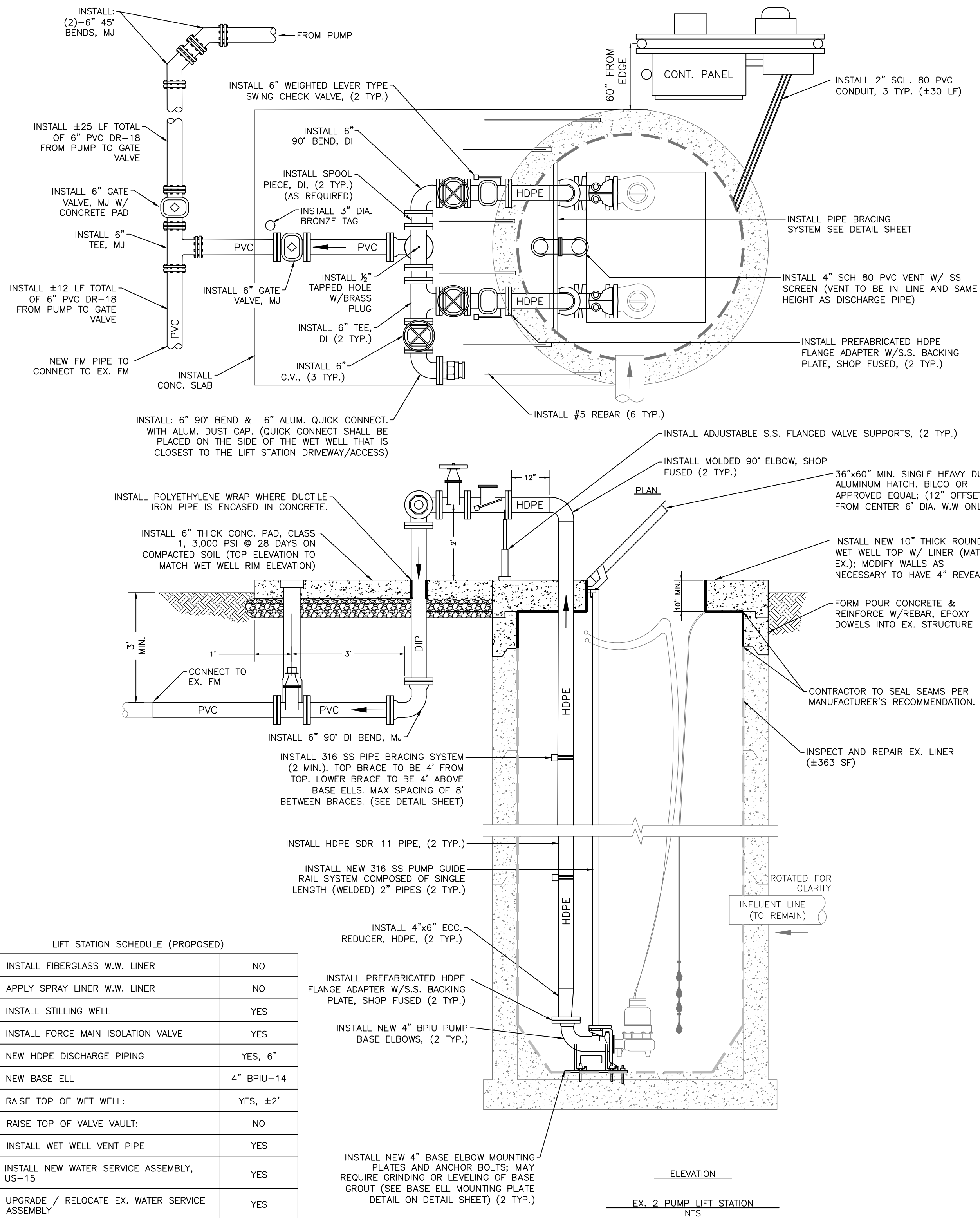
EX. 2 PUMP LIFT STATION

NTS

PROPOSED

GENERAL NOTES:

1. ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST MANATEE COUNTY PUBLIC WORKS UTILITY STANDARDS.
2. THE CONCRETE SHALL BE GIVEN A BROOM FINISH. THE SURFACE VARIATIONS SHALL BE NOT MORE THAN 1/4" UNDER A TEN FOOT (10') STRAIGHTEDGE, NOT MORE THAN 1/8" ON A FIVE FOOT (5') TRANSVERSE SECTION. THE EDGE OF THE CONCRETE PAD SHALL BE CAREFULLY FINISHED WITH AN EDGING TOOL HAVING A RADIUS OF 1/2".
3. EXPANSION JOINT: EXPANSION JOINTS BETWEEN THE CONC. PAD AND THE WET WELL SHALL BE 1/2" MATERIAL AND SHALL MEET THE REQUIREMENTS OF AASHTO M153 OR AASHTO M213.
4. THE EXTERIOR SURFACES OF THE CONCRETE WET WELL AND VALVE PAD EXPOSED ABOVE GROUND SHALL BE COATED WITH AT LEAST TWO COATS OF H & C SILICONES ACRYLIC CONCRETE SEAL, PATIO GREEN, MANUFACTURED BY FLR PAINTS. THE ABOVE GROUND VALVE ASSEMBLY & PIPING SHALL BE PAINTED, RUSTOLEUM 7539 HUNTER GREEN. CONTRACTOR SHALL TAKE PRECAUTIONS TO PREVENT OVER-SPRAY OF PAINT ONTO THE CONCRETE SLAB.
5. ALL PAINTING SHALL BE INCLUDED IN THE BID ITEM TO BE PAINTED.

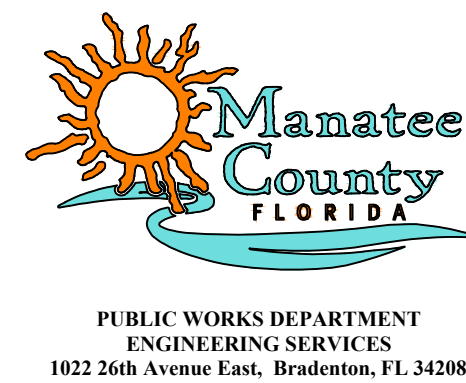


CONSTRUCTION NOTES:

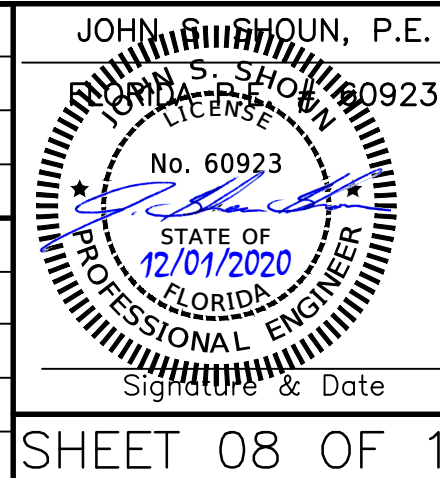
1. INSTALL ± 30 LF NEW ELECTRICAL SERVICE W/ CONDUIT.
2. REMOVE AND INSTALL ALL NEW ELECTRICAL STRUCTURE (RACK), A CONTROL PANEL, TCU ENCLOSURE, JUNCTION BOX ENCLOSURE, A RER CONTROL PANEL, AND SAFETY SWITCH (DISCONNECT). NEW ELECTRICAL STRUCTURE SHALL BE FIELD LOCATED WITH MANATEE COUNTY PERSONNEL.
3. A TCU BUBBLER UNIT (TBU360) SYSTEM PROVIDED AND INSTALLED BY DATA FLOW SYSTEMS (DFS) FOR WET WELL LEVEL CONTROL SHALL BE INCLUDED WITH THE CONTROL PANEL.
4. INSTALL #5 REBAR (6 TYP.) EPOXY EMBEDDED INTO THE WET WELL TO 3'-6" DEEP AND CAST 4" FILL INTO THE WET WELL VALVE ASSEMBLY CONCRETE PAD TO ENSURE THE TOPS OF THE WET WELL AND VALVE ASSEMBLY PAD WILL REMAIN FLUSH.
5. INSTALL NEW PRECAST TYPE-III REINFORCED CONCRETE WET WELL BARRIER STRUCTURE; OR FORM FOUR CONCRETE AND REINFORCE WITH REBAR. EPOXY DO NOT INSTALL EXISTING STRUCTURE TO RAISE RIM TO REQUIRED HEIGHT.
6. INSTALL WASHED SHELL & WEED BARRIER (± 40 SY); GRADE THE AREA AROUND WET WELL TO ALLOW FOR POSITIVE DRAINAGE AWAY FROM LIFT STATION AND TO HAVE A 4" REVEAL ON THE WET WELL/VALVE ASSEMBLY PAD. COORDINATE WITH MANATEE COUNTY PERSONNEL.
7. SEPARATE THE TELEMETRY TOWER FROM CONCRETE BASE AND SET TO SIDE OF THE WET WELL. CONTRACTOR SHALL REMOVE AND DISPOSE OF CONCRETE BASE. COUNTY SHALL INSTALL NEW TELEMETRY ANTENNA.
8. REPAIR CONCRETE WALLS, AS NEEDED, IN WET WELL, 2-INCH MIN. THICK OVER EXISTING REBAR, (± 363 SF). ALL REPAIRS TO BE VERIFIED W/ COUNTY PERSONNEL PRIOR TO WORK.
9. DAMAGED EXISTING PROTECTIVE LINER(S) AND DETERIORATED WET WELL CONCRETE WALLS SHALL BE INSPECTED BY COUNTY PERSONNEL. CONTRACTOR TO PROVIDE INSTALLATION OF CONCRETE REPAIR AND/OR INSTALLATION OF NEW PROTECTIVE LINER(S) AND/OR LINER REPAIR.
10. WET WELL CONCRETE WALLS SHALL BE INSPECTED BY COUNTY PERSONNEL PRIOR TO INSTALLATION OF NEW SPRAY LINER AND/OR LINER REPAIR.
11. UPGRADE AND RELOCATE THE EXISTING METAL, BPA, & HOSE BIBB ASSEMBLY WITH A NEW 2" WATER SERVICE AND TAPPING SADDLE. FIELD LOCATE WITH MANATEE COUNTY PERSONNEL. (± 70 Y).
12. REPLACE EXISTING WATER SERVICE SADDLE AND CORPORATION AND INSTALL A BRASS PLUG IN NEW CORPORATION. REUSE EXISTING HOLE IN MAIN, IF ADEQUATE VALFING EXISTS..
13. INSTALL A 12'-FT WIDE 6-INCH THICK REINFORCE CONCRETE DRIVEWAY. EXACT LOCATION AND LAYOUT SHALL BE DETERMINED IN THE FIELD WITH COUNTY PERSONNEL, (± 40 SY).
14. RAISE LIFT STATION SITE ± 2 FT TO PROMOTE POSITIVE DRAINAGE SLOPE AWAY FROM THE LIFT STATION AREA TOWARDS THE SURROUNDING AREA/DITCHES. MAXIMUM OF 1% SLOPE.
15. ELEVATIONS AND MEASUREMENTS SHALL BE VERIFIED AFTER THE SITE HAS BEEN RAISED PRIOR TO ORDERING OR INSTALLING MATERIALS TO ENSURE PROPER FIT AND FUNCTION.
16. REMOVE AND DISPOSE OF EXISTING RAILROAD TIES ALONG THE PERIMETER OF THE LIFT STATION EQUIPMENT, (6 TYP.).
17. AN ELECTRICAL SYSTEM STUDY, ELECTRICAL STUDY ANALYSIS, AND PROPER LABELING IN COMPLIANCE WITH NFPA 70E "STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE" AND IEEE 1584 2018 "GUIDE FOR PERFORMING ARC FLASH HAZARDS CALCULATIONS" SHALL BE PROVIDED.

[illegible]

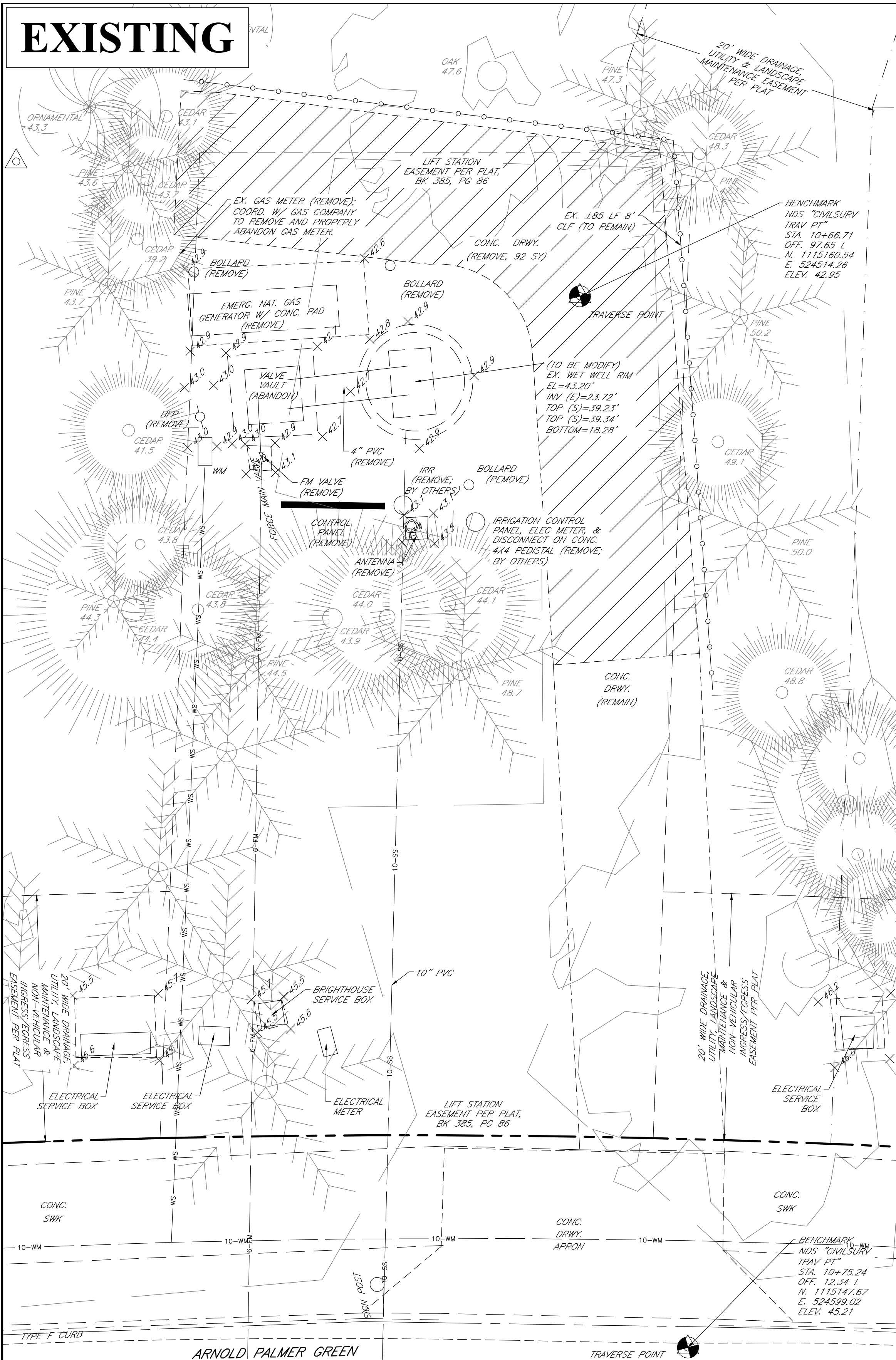
**SATELLITE LIFT STATION R&R
2020 GROUP 3
ARNOLD PALMER GREEN 1, RTU 689 (REHAB)**



PROJECT #	402-0019707	
SURVEY #	00-44787	
SEC./TWN./RGE	33/35/19	
SCALE	N.T.S.	
	BY	DATE
SURVEYED	---	4/12/19
DESIGNED	JSS	09/2019
DRAWN	JSS	08/2019
CHECKED	JSS	08/2019



EXISTING



CONSTRUCTION NOTES:

1. A PROFESSIONAL SURVEYOR LICENSED IN THE STATE OF FLORIDA SHALL BE REQUIRED TO PREPARE RECORD DRAWINGS PER THE REQUIREMENTS OF THE PROJECT SPECIFICATION FOR ALL LIFT STATION SITE IMPROVEMENTS ABOVE & BELOW GROUND, (I.E. THE CONCRETE PADS, EMERGENCY PUMP PIPING, UNDERGROUND CONDUIT INSTALLED, ETC. FOR THE LIFT STATION SITE.
2. THE COUNTY SHALL RETAIN OWNERSHIP OF THE AUTOMATIC TRANSFER SWITCH (ATS), ENCLOSURE, AND PARTS.
3. ALL ITEMS IN THE LIFT STATION LIMITS SHALL BE REMOVED IN PREPARATION FOR THE SITE TO BE RAISED. ALL PROPOSED ITEMS AND/OR EQUIPMENT ARE TO BE INSTALLED AFTER THE SITE HAS BEEN RAISED AND COMPACTED.
4. THE LIFT STATION SITE WET WELL SHALL BE RAISE APPROXIMATELY 2'-FEET AND THE SURROUNDING AREA BROUGHT UP TO GRADE, ALLOWING FOR A 4-INCH REVEAL ON THE WET WELL. THE SITE SHALL BE GRADED AT APPROXIMATELY 6:1 SLOPE (CAN BE FIELD ADJUSTED) AWAY FROM THE WET WELL TO ALLOW FOR POSITIVE DRAINAGE AWAY FROM THE LIFT STATION. THE EXISTING TREES AND FENCE LINE SHALL BE USED A VISUAL BOUNDARY AND THE PROPOSED DAYLIGHT LIMITS OF THE FILL.
5. REPLACE EXISTING POTABLE WATER SERVICE LINE FROM THE EXISTING WATER MAIN TO THE LIFT STATION METER. INSPECT THE EXISTING SADDLE AND CORPORATION AT THE MAIN WITH A COUNTY REPRESENTATIVE; IF THEY DO NOT MEET CURRENT COUNTY STANDARDS, THEY SHALL BE REPLACED.

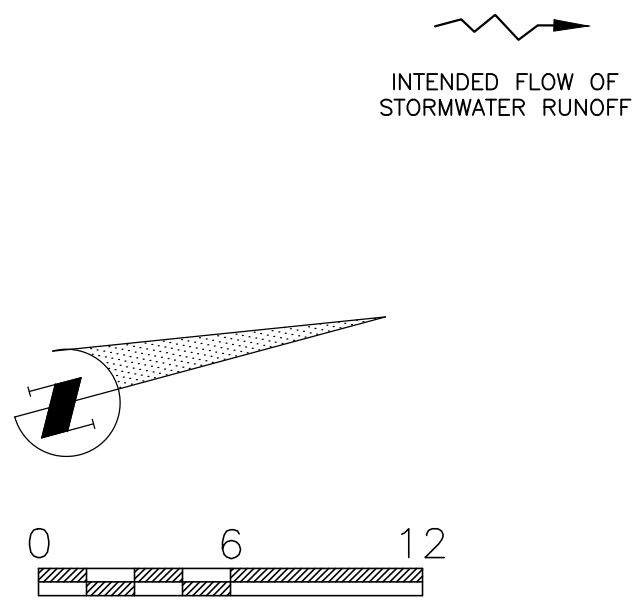
EMERGENCY BACKUP PUMP NOTES:

1. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE SIZING, FURNISHING, AND INSTALLING A FULLY OPERATIONAL, PROPERLY FUNCTIONING, EMERGENCY BACKUP PUMP SUPPLIED BY GODWIN PUMPS; THIS SHALL INCLUDE ALL PIPING AND FITTINGS OF THE SUCTION AND DISCHARGE SIDE OF THE PUMP FROM THE WET WELL AND TO THE ISOLATION GATE VALVE (CONNECTION POINT) TO ENSURE THE MOST EFFICIENT DESIGN. THE COUNTY SHALL SUPPLY ALL REQUESTED AVAILABLE DATA TO ASSIST IN THE CONTRACTOR ENDEAVORS.
2. CONTRACTOR IS RESPONSIBLE FOR ALL FITTINGS REQUIRED TO CONNECT THE PUMP TO THE SUCTION/DISCHARGE PIPING. FITTING SHALL BE INCLUDED IN PUMP COST.
3. CONTRACTOR RESPONSIBLE TO PULL AND TERMINATE REMOTE SENSOR WIRING AT CONTROL PANEL. MANATEE COUNTY PERSONNEL TO MOUNT AND CONNECT TO PANEL. CONTRACTOR TO COORDINATE WITH MANATEE COUNTY PERSONNEL PRIOR TO AND DURING INSTALLATION OF REMOTE SENSOR.
4. CONTRACTOR SHALL COORDINATE WITH PUMP VENDOR TO TEST AND CONFIGURE THE PUMP OPERATION AS SUBMITTED IN THE SHOP DRAWING.
5. CONTRACTOR SHALL HIRE A LICENSED SURVEYOR TO STAKE OUT EXISTING EASEMENTS BOUNDARIES PRIOR TO COMMENCING WORK. ALL EQUIPMENT, PIPING, ETC. SHALL BE WITHIN THE EASEMENTS. NO WORK SHALL BE PERFORMED ON PRIVATE PROPERTY WITHOUT WRITTEN AUTHORIZATION FROM THE OWNER & MANATEE COUNTY.
6. THE SUCTION AND DISCHARGE PIPING SHOWN IS ONE POSSIBILITY FOR INSTALLATION. CONTRACTOR SHALL COORDINATE WITH COUNTY PERSONNEL PRIOR TO INSTALLATION. ALL PIPING AND CONDUIT INSTALLED SHALL BE SHOWN ON THE RECORD DRAWINGS.
7. THE CAPACITY OF THE DIESEL FUEL TANK SHALL BE SIZED TO THE MINIMAL FOOTPRINT & HEIGHT TO RUN THE BACKUP PUMP CONTINUOUSLY AT MAXIMUM RATED CAPACITY FOR A MINIMUM 48 HOURS, BUT NOT TO EXCEED A MAXIMUM OF 540 GALLONS.
8. CONTRACTOR SHALL SUPPORT ALL SUSPENDED PIPING WITH 316 S.S. ADJUSTABLE STANDS FASTENED TO A CONCRETE PAD, AS NECESSARY.
9. THE OVERALL FUEL SYSTEM IS TO COMPLY WITH ALL APPLICABLE NFPA REGULATIONS AS WELL AS THOSE REQUIRED BY THE FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION. THIS INCLUDES NFPA COMPLIANT LABELS FOR THE FUEL SHUT-OFF LOCATION AND APPLICATIONS OF DIESEL HAZMAT SYMBOL STICKERS.

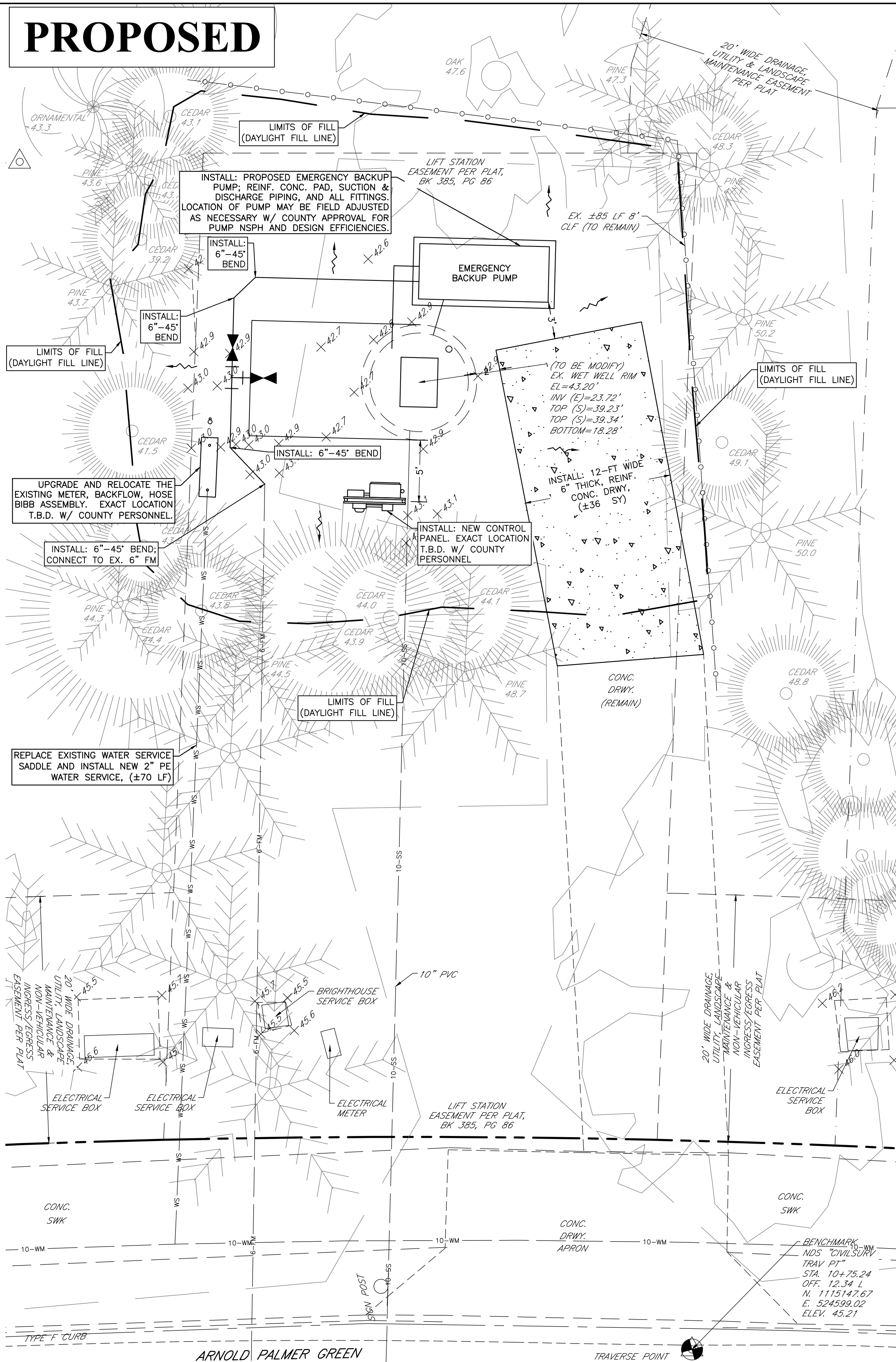
SURVEYOR'S NOTES:

1. SURVEYOR: CIVLSURV DESIGN GROUP, INC., FIELD DATES: 12/11/2019 THRU 12/16/2019.
2. NORTH AND THE COORDINATES SHOWN HEREON ARE REFERENCED TO GRID NORTH, WEST ZONE OF THE FLORIDA STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM OF 1983, ADJUSTMENT OF 2011 UTILIZING CHAMPION TKO GNSS RTK RECEIVERS AND A NETWORK SOLUTION PROVIDED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION FLORIDA PERMANENT REFERENCE NETWORK (FPRN). THE COORDINATES LISTED HEREON ARE GRID VALUES AND ARE LISTED IN FEET. MANATEE COUNTY SURVEY CONTROL STATIONS "MARCO" (PID: DP2149) AND "LELY" (PID: DP2148) WERE UTILIZED AS CONTROL FOR THIS SURVEY.
3. ELEVATIONS SHOWN ARE RELATIVE TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND ARE BASED ON MANATEE COUNTY SURVEY BENCHMARKS "132-88-04" (PUBLISHED ELEVATION 35.20') AND "132-88-10" (PUBLISHED ELEVATION 43.85'). ADD 0.96' TO THE PUBLISHED NAVD 1988 ELEVATIONS TO CONVERT TO NGVD 1929. THIS CONVERSION WAS DETERMINED BY USING NATIONAL GEODETIC SURVEY PROGRAM VERICON.
4. PARCEL LINES AND RIGHT OF WAYS LINES SHOWN HEREON ARE BASED ON FOUND MONUMENTATION, PLATS AND DEEDS OF RECORD CONTAINED IN THE OFFICIAL RECORDS OF MANATEE COUNTY, FLORIDA. THE PARCEL LINES AND RIGHT OF WAY LINE SHOWN HEREON ARE APPROXIMATE AND ARE SHOWN GRAPHICALLY AS AN AID FOR VISUAL REFERENCE.
5. AN ABSTRACT OF TITLE WAS NOT PERFORMED BY OR NOR FURNISHED TO CIVLSURV DESIGN GROUP, INC. ANY EASEMENTS OR ENCUMBRANCES THAT MAY APPEAR AS A RESULT OF SAID ABSTRACT IS NOT CERTIFIED HEREON.
6. THE ADJOINING OWNER INFORMATION SHOWN HEREON WERE TAKEN FROM THE MANATEE COUNTY TAX ROLLS.
7. THIS ELECTRONIC DRAWING FILE IS NOT COMPLETE WITHOUT THE ACCOMPANYING SURVEYOR'S REPORT
8. ABBREVIATIONS SHOWN HEREON ARE FROM MANATEE COUNTY.
9. BASED UPON A GRAPHIC DETERMINATION THIS PROPERTY IS LOCATED IN FLOOD ZONE "X" ACCORDING TO FEDERAL EMERGENCY MANAGEMENT AGENCY'S (FEMA) FLOOD INSURANCE RATE MAP (FIRM) FOR MANATEE COUNTY FLORIDA; MAP NUMBER 12081C0345E, WITH AN EFFECTIVE DATE OF 03/17/2014.

THE ABOVE STATEMENT AND THE GRAPHICAL REPRESENTATION OF THE ZONE(S) (IF SHOWN) ARE FOR INFORMATION PURPOSES ONLY, AND THE UNDERSIGNED ASSUMES NO LIABILITY FOR THE CORRECTNESS OF THE CITED MAP. ADDITIONALLY THE ABOVE STATEMENT DOES NOT REPRESENT THE OPINION OF THE UNDERSIGNED AS TO THE PROBABILITY OF FLOODING.



PROPOSED

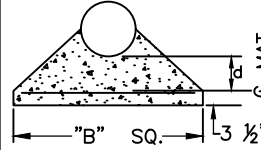


SATELLITE LIFT STATION R&R
2020 GROUP 3
ARNOLD PALMER GREEN 1, RTU 689 (SITE)



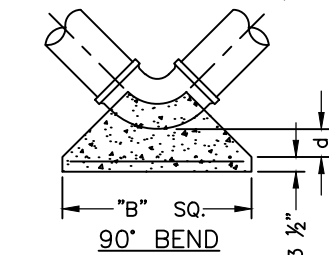
PROJECT #	402-0019707	JOHN S. SHOUN, P.E.
SURVEY #	00-44787	FLORIDA PROFESSIONAL ENGINEER
SEC./TWN./RGE	33/35/19	No. 60923
SCALE	SEE PLAN	STATE OF FLORIDA
SURVEYED	CIVLSURV 12/2019	12/01/2020
DESIGNED	JSS 09/2019	PROFESSIONAL ENGINEER
DRAWN	JSS 08/2019	Signature
CHECKED	JSS 08/2019	

THRUST BLOCK DIMENSIONS 8 ft. x d inches												
PIPE SIZE (IN.)	90° BEND		45° BEND		22.5° BEND		11.25° BEND		DEAD END & TEE		45° WYE	
	B	d	B	d	B	d	B	d	B	d		
4	1.5	3 1/2	1.1	3 1/2	0.8	3 1/2	0.6	3 1/2	1.3	3 1/2	1.1	3 1/2
6	2.2	5 1/4	1.6	3 3/4	1.2	3 3/4	0.8	3 3/4	1.9	4 1/2	1.6	3 3/4
8	2.9	7	2.1	5	1.5	3 1/2	1.1	3 1/2	2.4	5 1/4	2.0	4 3/4
10	3.5	8 1/2	2.6	6 1/4	1.9	4 1/2	1.3	3 1/2	3.0	7 1/4	2.5	6
12	4.2	10	3.1	7 1/2	2.2	5 1/4	1.6	3 3/4	3.5	8 1/4	3.0	7 1/4
14	4.9	11 3/4	3.6	8 3/4	2.6	6 1/4	1.8	4 1/4	4.1	9 3/4	3.4	8 1/4
16	5.5	13 1/4	4.1	9 3/4	2.9	7	2.1	5	4.7	11 1/4	3.9	9 1/4
18	6.2	15	4.6	11	3.3	8	2.3	5 1/2	5.2	12 1/2	4.4	10 1/2
20	6.9	16 1/2	5.0	12	3.6	8 3/4	2.6	6 1/4	5.8	14	4.9	11 3/4
24	8.2	19 3/4	6.0	14 1/2	4.3	10 1/4	3.1	7 1/2	6.9	16 1/2	5.8	14
30	10.1	24 1/4	7.5	18	5.3	12 3/4	3.8	9	8.5	20 1/2	7.2	17 1/4
36	12.1	29	8.9	21 1/4	6.4	15 1/4	4.5	10 3/4	10.2	24 1/2	8.6	20 3/4

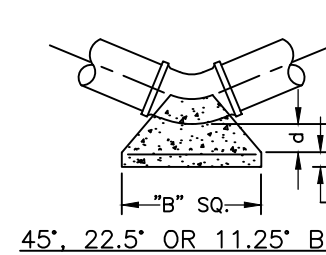


FOR DIM. "B" BETWEEN 5.75' & 12.5' USE #4 @ 8" EACH WAY
FOR DIM. "B" LESS THAN 5.75' USE #3 @ 8" EACH WAY

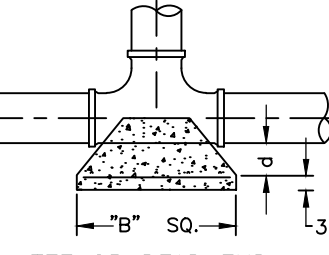
NOTES:
1. ALL THRUST BLOCKS SHALL BE CAST IN PLACE. FITTINGS ADJACENT TO THRUST BLOCKS SHALL BE WRAPPED IN POLYETHYLENE.
2. THIS TABLE IS BASED ON WATER PRESSURE=180 PSI WITH AN ALLOWABLE SOIL BEARING PRESSURE=2000 PSF. CONCRETE STRENGTH f_c =3000 PSI, REINFORCEMENT f_y =60.0 KSI. THRUST BLOCK SHALL BE CAST AGAINST FIRM UNDISTURBED SOIL.
3. FOR LARGER "B" DIMENSIONS IT IS NECESSARY TO CHECK THAT PIPE IS SUFFICIENTLY DEEP TO ALLOW 15" MIN. SOIL COVER OVER TOP EDGE OF THRUST BLOCK.
4. RESTRAINED JOINTS MAY BE USED IN LIEU OF THRUST BLOCKS TO SAVE SPACE. HOWEVER, WHERE THRUST BLOCKS AND RESTRAINED JOINTS ARE CALLED OUT/ILLUSTRATED IN THE DETAILS, BOTH SHALL BE INSTALLED.



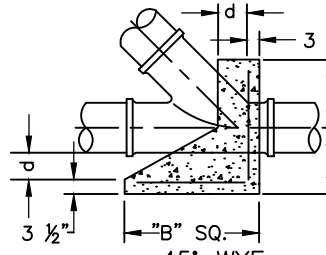
90° BEND



45°, 22.5° OR 11.25° BEND



TEE OR DEAD END



45° WYE

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		CONCRETE THRUST BLOCKS	UG-7
REV. BY	DATE		
	DATE OF APPROVAL		

REQUIRED LENGTH OF RESTRAINED JOINT PIPE FOR C900-16 PVC PIPE (DR-18)												
MAIN PIPE SIZE	HORIZ. BENDS			TEES				REDUCERS				PLUGS & VALVES
	90°	45°	22.5°	SIZE		LENGTH		SIZE		LENGTH		
24	90	38	18	K24-169	K20-32	K16-90	K12-38	K10-6	K20-64	K16-117	K12-158	214
20	78	32	16	K20-141	K16-101	K12-53	K10-24	X8-1	K16-65	K12-115	K10-149	184
16	66	27	13	K16-111	K12-57	X10-41	X8-12	X6-7	K12-44	K10-107	X8-111	151
12	52	22	10	K12-55	X10-35	X8-31	X6-1	X4-1	X10-28	X8-52	X6-86	118
10	44	18	9	X10-63	X8-40	X6-40	X4-7	X4-1	X8-33	X6-61	X4-81	100
8	37	15	7	X8-49	X6-18	X4-1	X4-1	X4-1	X6-25	X4-60	X4-60	83
6	29	12	6	X6-29	X4-1	X4-1	X4-1	X4-1	X4-23	X4-33	X4-33	63
4	21	8	4	X4-12	X4-1	X4-1	X4-1	X4-1	X4-1	X4-1	X4-1	45

NOTES:
1. RESTRAIN 11.25° BENDS 50% OF LENGTH FOR 22.5° BENDS.
2. ALL VALVES AND FITTINGS SHALL BE RESTRAINED TO THE CONNECTING SECTIONS OF PIPE.
3. ALL ISOLATION VALVES MUST BE PROPERLY ANCHORED OR RESTRAINED TO RESIST A 180 PSI TEST PRESSURE IN EITHER DIRECTION.
4. PIPE SIZES ARE GIVEN IN INCHES.
5. RESTRAINED PIPE LENGTHS ARE GIVEN IN FEET.
6. LENGTHS SHOWN ARE FOR A TEST PRESSURE OF 180 PSI.
7. THE RESTRAINED LENGTHS SHOWN IN THESE TABLES ARE BASED ON SOIL CLASSIFICATION SP WITH AWWA TYPE 3 TRENCH CONDITIONS, 180 PSI TEST PRESSURE, 3 FEET OF COVER AND 1.5 FACTOR OF SAFETY. ACTUAL BURY CONDITIONS MUST BE DETERMINED BY THE ENGINEER OF RECORD AND THE RESTRAINED LENGTHS MODIFIED ACCORDINGLY.
8. RESTRAINED LENGTHS TO BE APPLIED TO PIPELINES PER DETAIL UG-10 RESTRAINED LENGTHS FOR PIPE.
9. ALL RESTRAINED JOINT HARDWARE SHALL CONFORM TO 1.11.17 OF THE PUBLIC WORKS UTILITIES STANDARDS MANUAL.
10. ALL THREE "LEGS" OF TEES SHALL BE RESTRAINED PER THE STATED LENGTH IN THE TABLE.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		RESTRAINED LENGTHS FOR PVC PIPE	UG-8
REV. BY	DATE		
	DATE OF APPROVAL		

REQUIRED LENGTH OF RESTRAINED JOINT PIPE FOR DIP (POLY-WRAPPED)												
MAIN PIPE SIZE	HORIZ. BENDS			TEES				REDUCERS				PLUGS & VALVES
	90°	45°	22.5°	SIZE		LENGTH		SIZE		LENGTH		
36	142	59	28	X36-384	X30-218	X24-134	X20-85	X18-84	X30-137	X24-241	X20-308	453
30	124	51	25	X30-333	X24-252	X20-189	X16-115	X12-23	X30-137	X24-213	X20-276	391
24	106	44	21	X24-270	X20-211	X16-143	X12-10	X8-1	X24-137	X20-213	X16-241	327
20	92	38	18	X20-225	X16-161	X12-107	X8-39	X6-1	X20-98	X16-176	X12-227	280
16	77	32	15	X16-177	X12-107	X8-50	X6-1	X4-1	X16-98	X12-163	X8-189	231
12	61	25	12	X12-127	X10-89	X8-50	X6-1	X4-1	X12-88	X8-96	X6-131	181
10	52	22	10	X10-101	X8-64	X6-44	X4-11	X4-1	X10-51	X8-94	X6-125	153
8	44	18	9	X8-78	X6-50	X4-30	X4-1	X4-1	X8-54	X6-92	X4-125	128
6	34	14	7	X6-46	X4-30	X4-1	X4-1	X4-1	X6-50	X4-80	X4-80	98
4	24	10	5	X4-19	X4-1	X4-1	X4-1	X4-1	X4-1	X4-1	X4-1	69

NOTE:
1. SEE UG-8, RESTRAINED LENGTHS FOR PVC PIPE DETAIL FOR NOTES 1 THROUGH 9 THAT ARE ALSO APPLICABLE TO RESTRAINED LENGTHS FOR DIP.

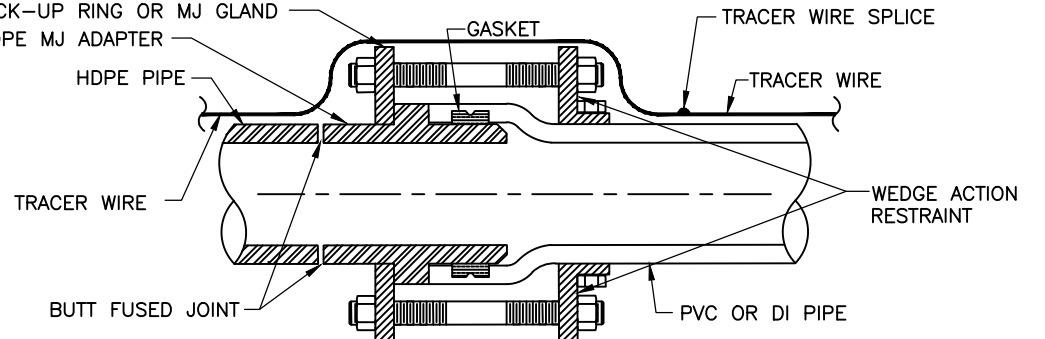
MANATEE COUNTY PUBLIC WORKS DEPARTMENT		RESTRAINED LENGTHS FOR DIP	UG-9
REV. BY	DATE		
	DATE OF APPROVAL		

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		CONCRETE THRUST BLOCKS	UG-7
REV. BY	DATE		
	DATE OF APPROVAL		

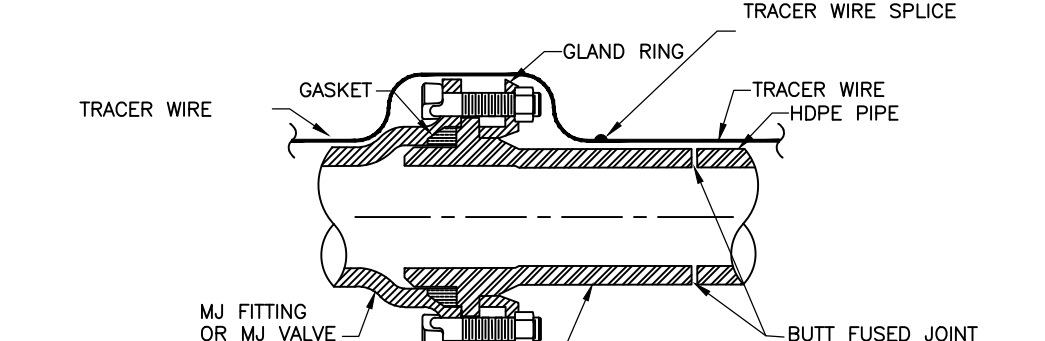
MANATEE COUNTY PUBLIC WORKS DEPARTMENT		HDPE TO PVC OR DI PIPE ADAPTER	UG-6
REV. BY	DATE		
	DATE OF APPROVAL		

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		TRENCH WITH UNIMPROVED SURFACE TYPE A-1 PIPE BEDDING	UG-11
REV. BY	DATE		
	DATE OF APPROVAL		

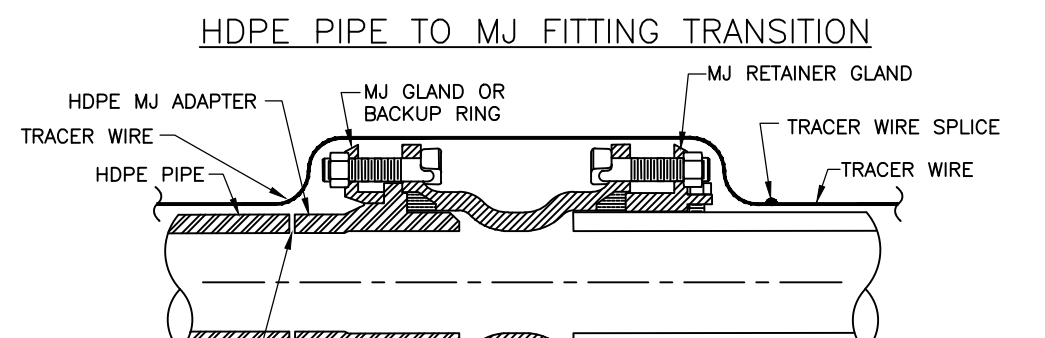
MANATEE COUNTY PUBLIC WORKS DEPARTMENT		VALVE, BOX, COVER AND TAG	US-11
REV. BY	DATE		
	DATE OF APPROVAL		



HDPE PIPE TO PVC PIPE / SPIGOT TO BELL CONNECTION

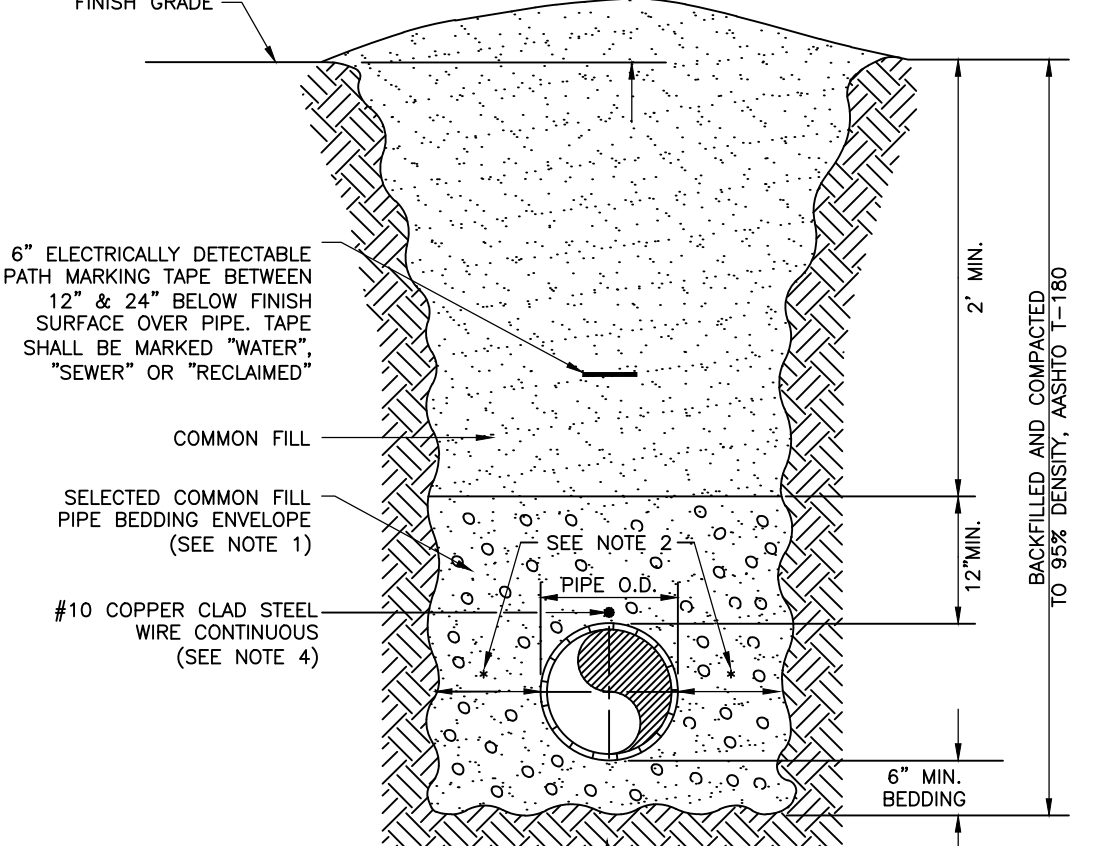


HDPE PIPE TO MJ FITTING TRANSITION

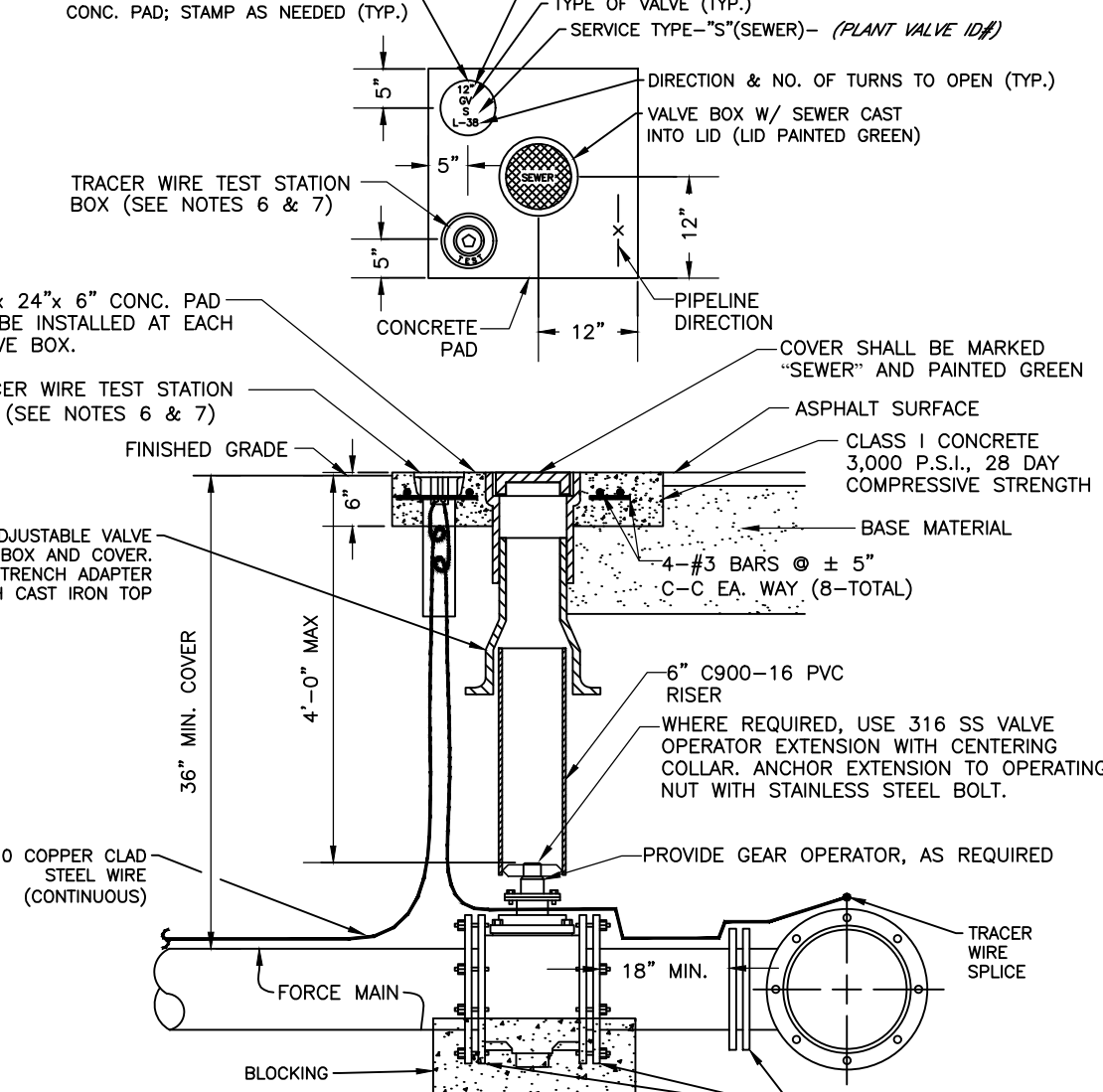


HDPE PIPE TO PVC PIPE SPIGOT TO SPIGOT CONNECTION

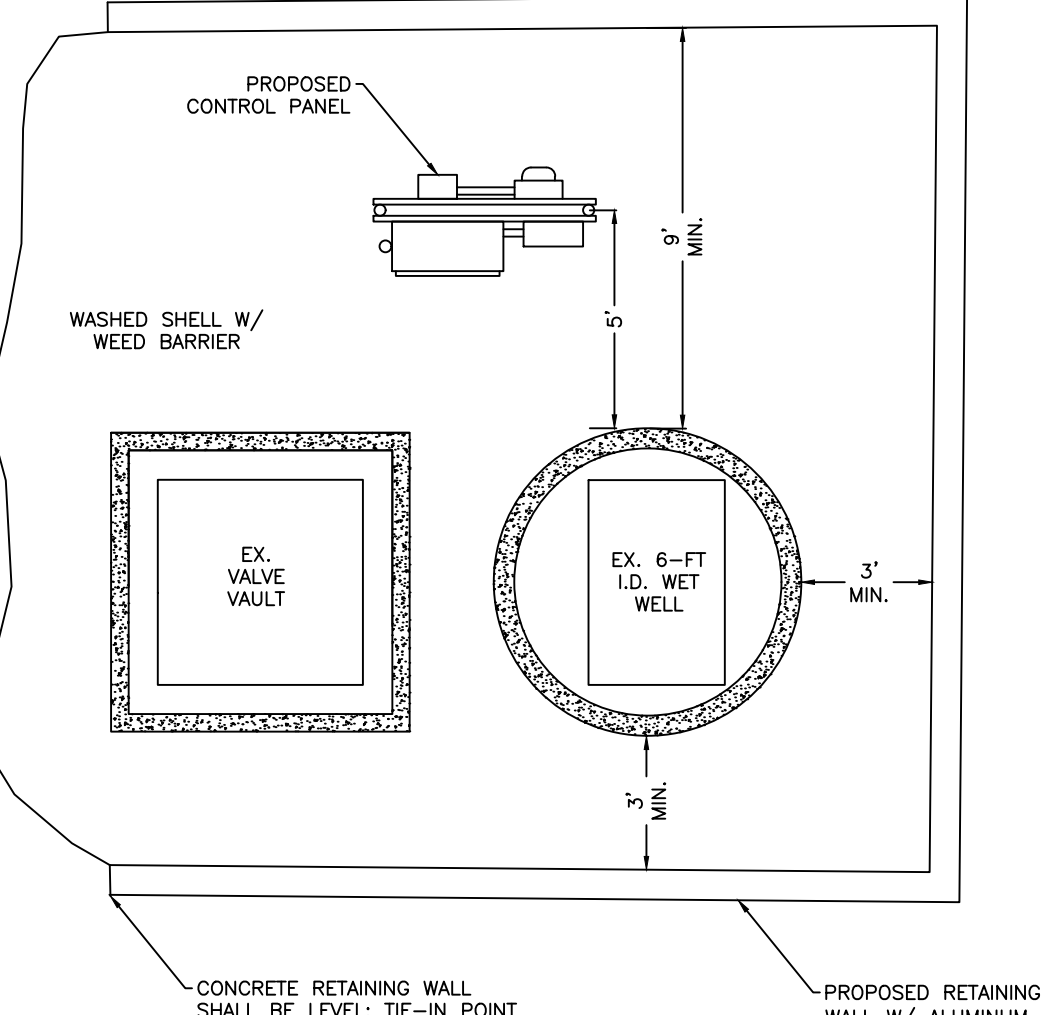
1. ONE TRACER WIRE SHALL BE SECURED TO THE PIPE FOR ALL TYPES OF PIPELINE INSTALLATIONS.



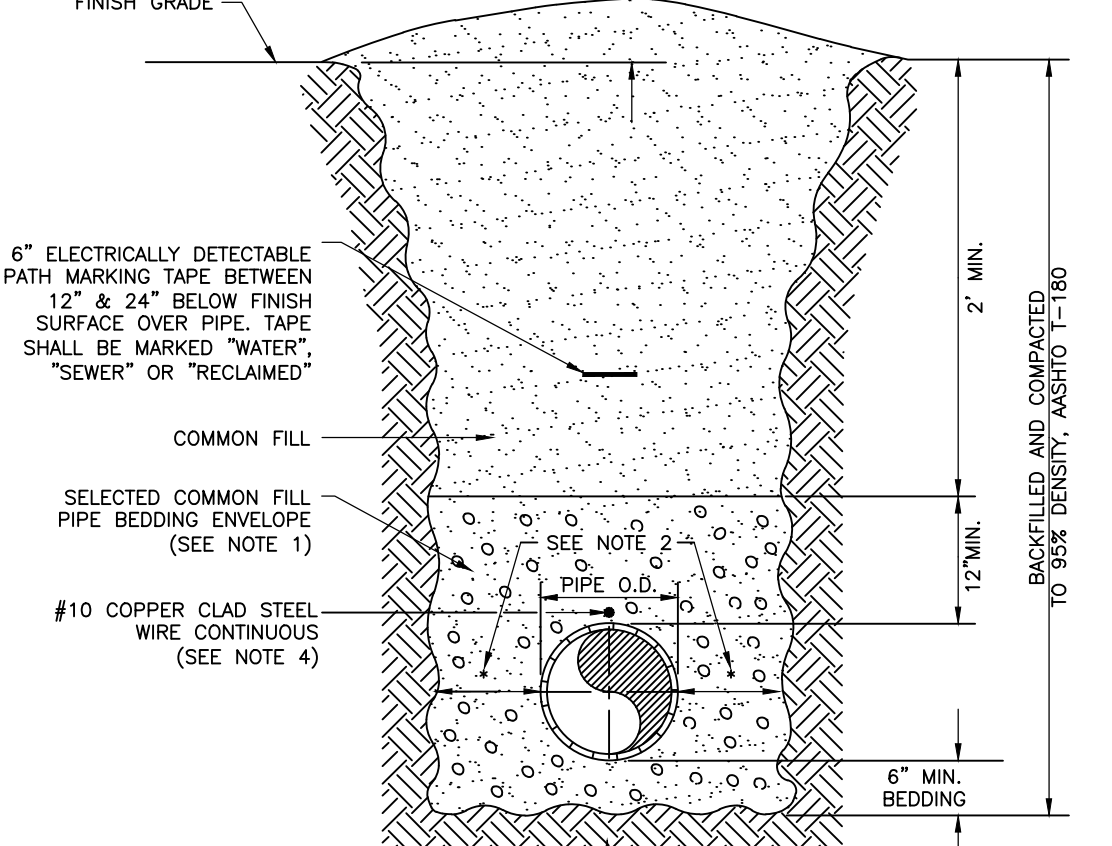
6" ELECTRICALLY DETECTABLE PATH MARKING TAPE BETWEEN 12" & 24" BELOW FINISH SURFACE OVER PIPE. TAPE SHALL BE MARKED "WATER", "SEWER" OR "RECLAIMED".



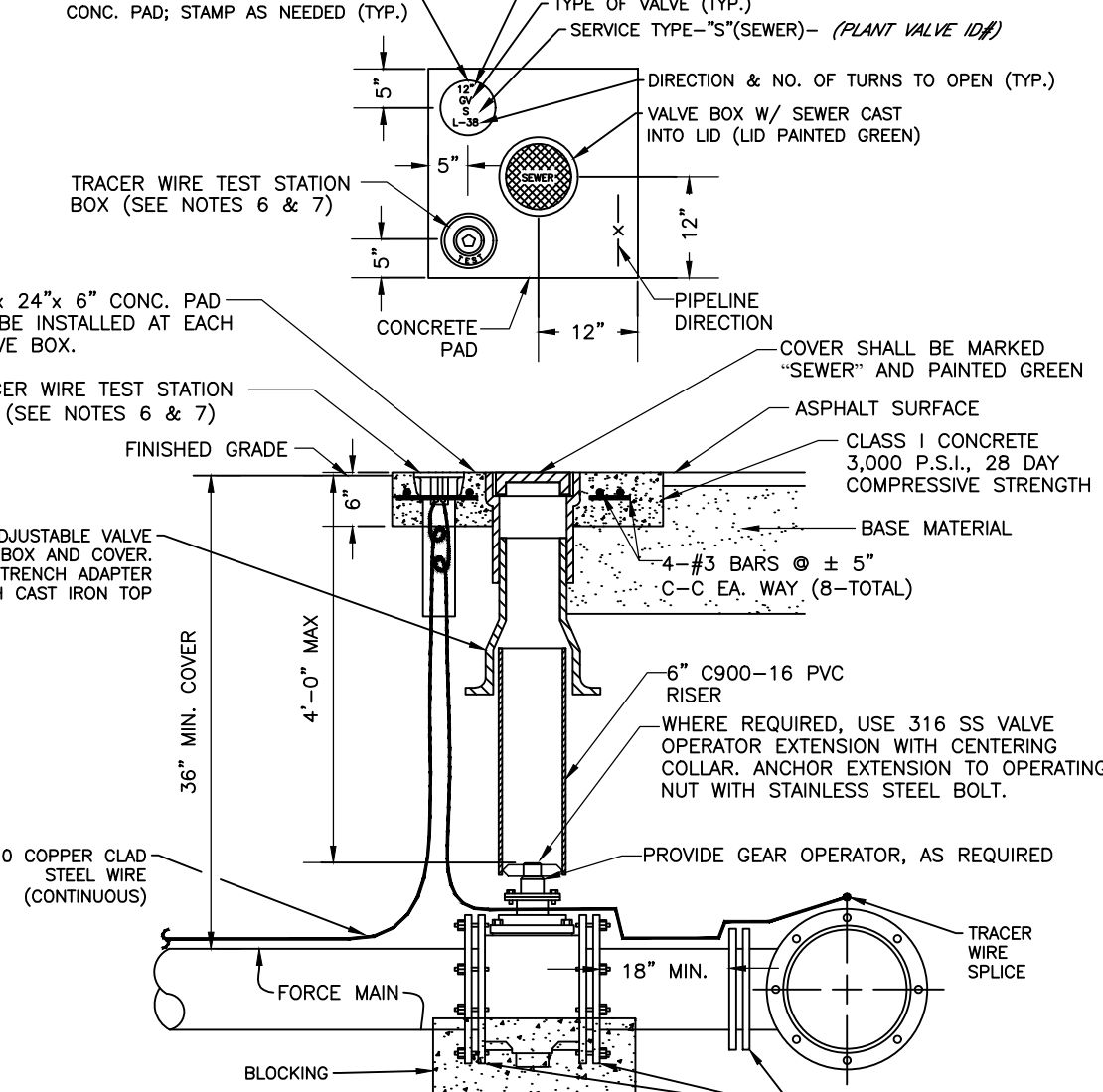
3" DIA. BRONZE TAG DISC ANCHOR IN CONC. PAD; STAMP AS NEEDED (TYP.)



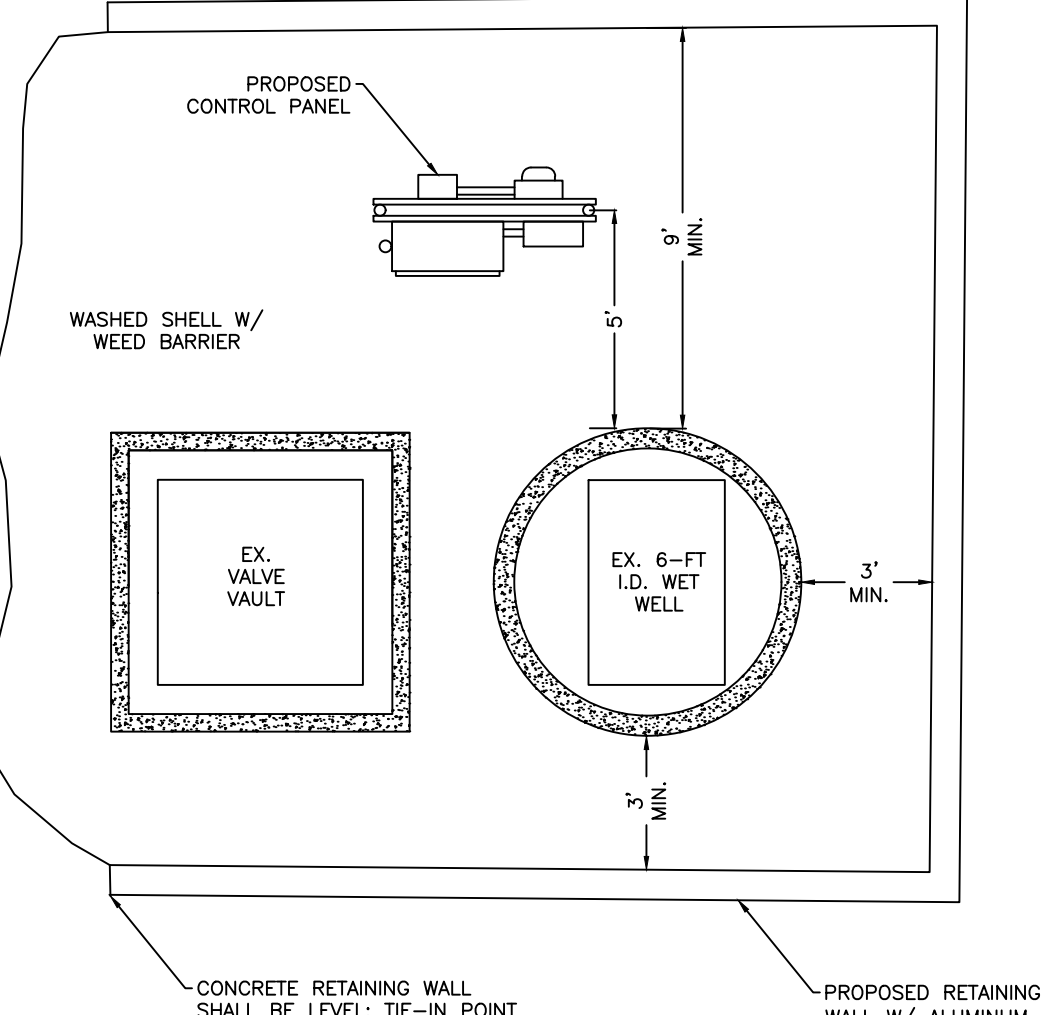
PROPOSED CONTROL PANEL



6" ELECTRICALLY DETECTABLE PATH MARKING TAPE BETWEEN 12" & 24" BELOW FINISH SURFACE OVER PIPE. TAPE SHALL BE MARKED "WATER", "SEWER" OR "RECLAIMED".



3" DIA. BRONZE TAG DISC ANCHOR IN CONC. PAD; STAMP AS NEEDED (TYP.)



PROPOSED CONTROL PANEL

NO.	REVISION DESCRIPTION	BY	DATE

SATELLITE LIFT STATION R&R

2020 GROUP 3

DETAILS1

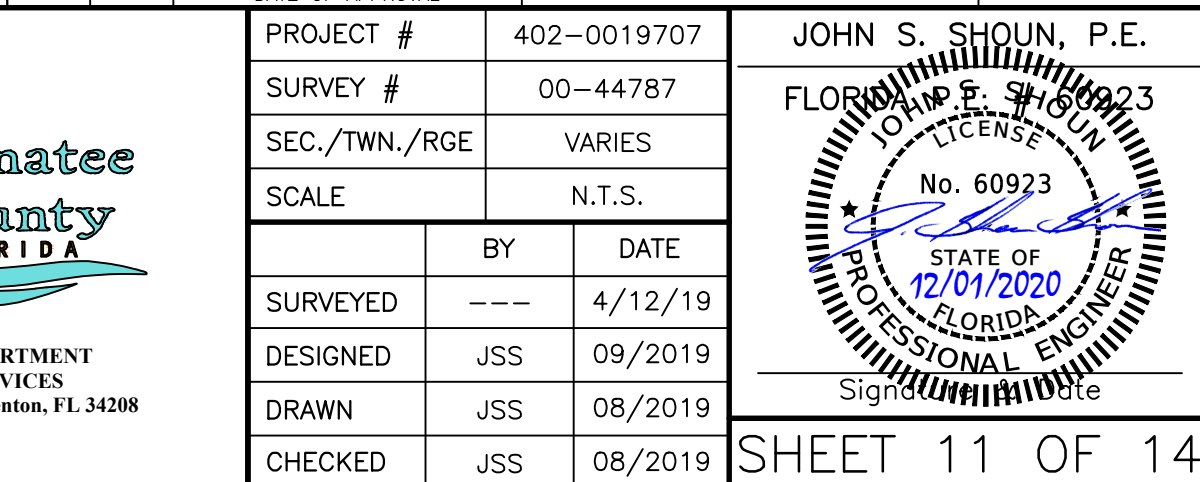
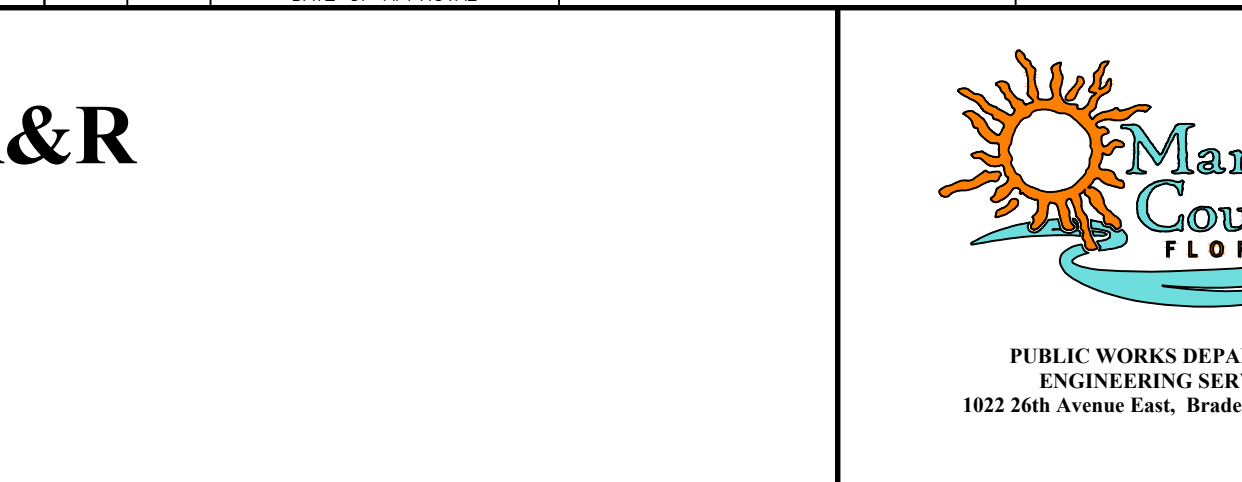
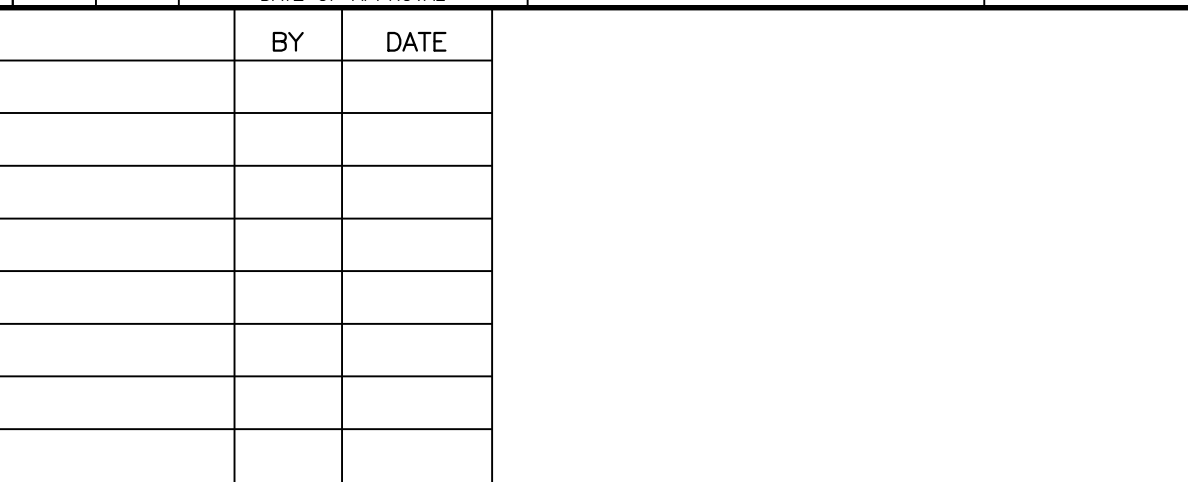
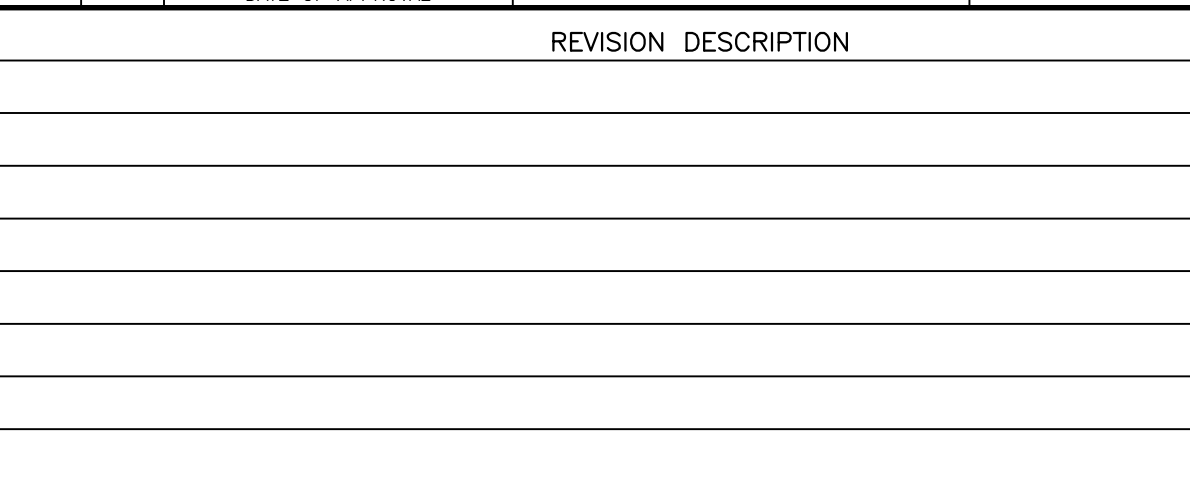
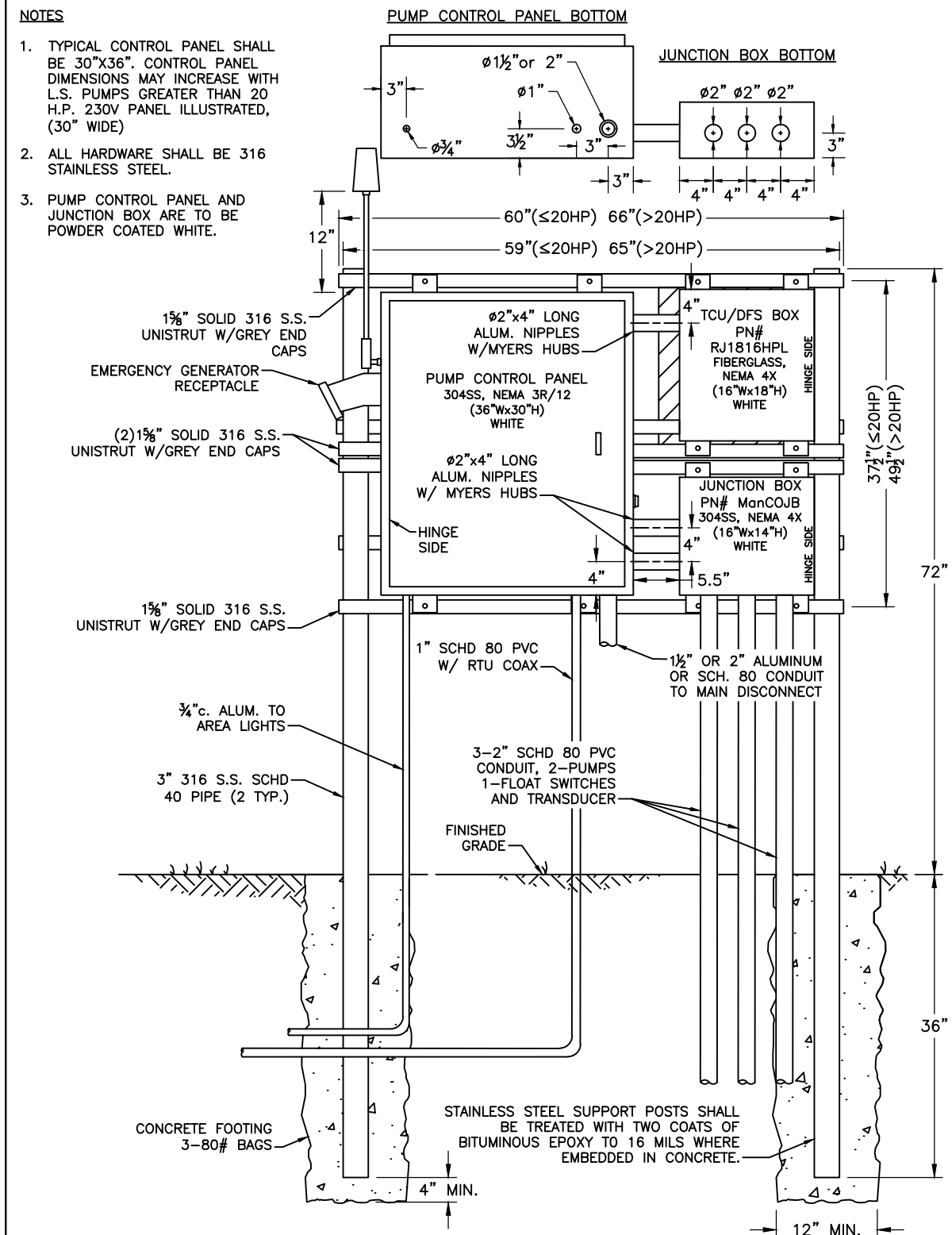
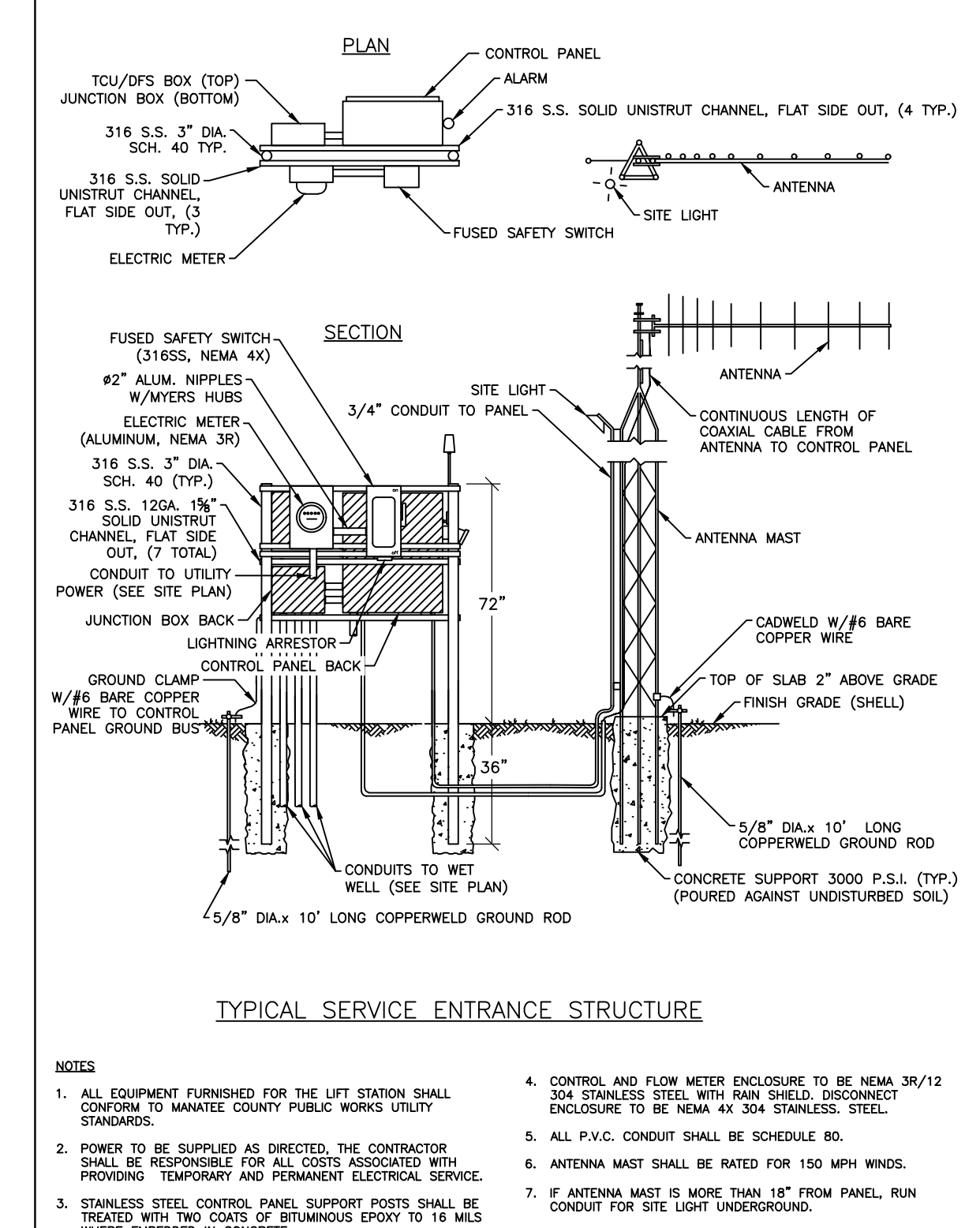
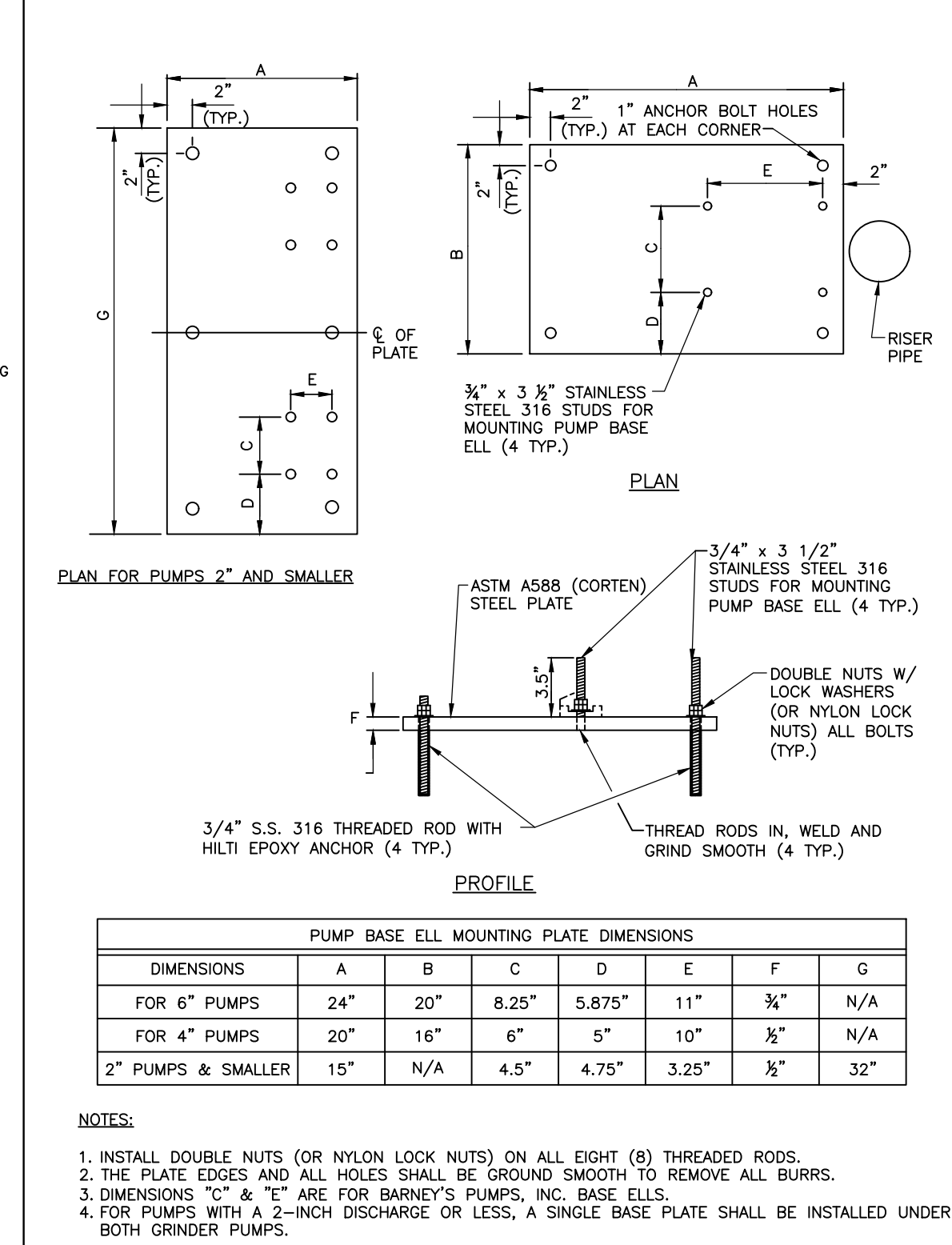
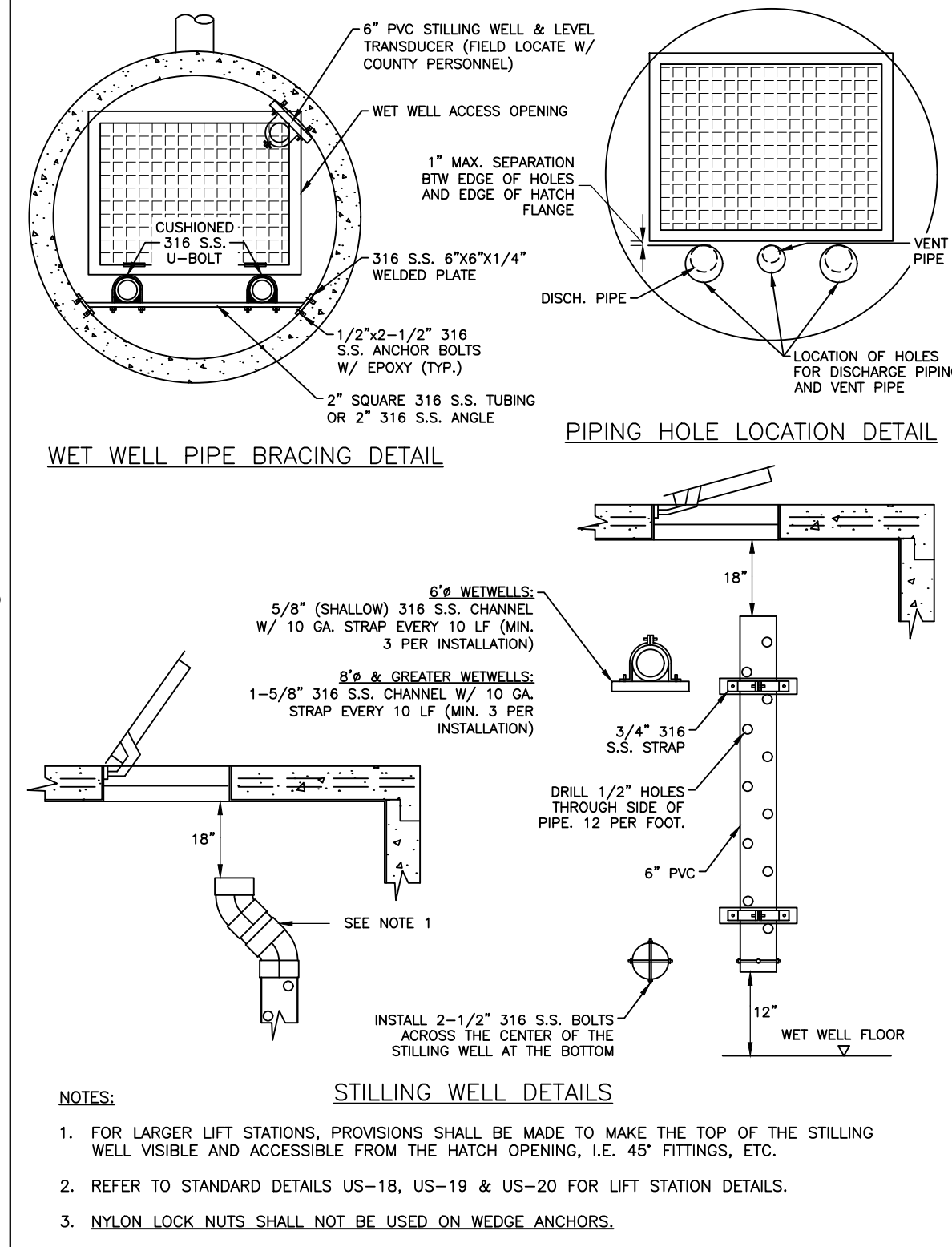
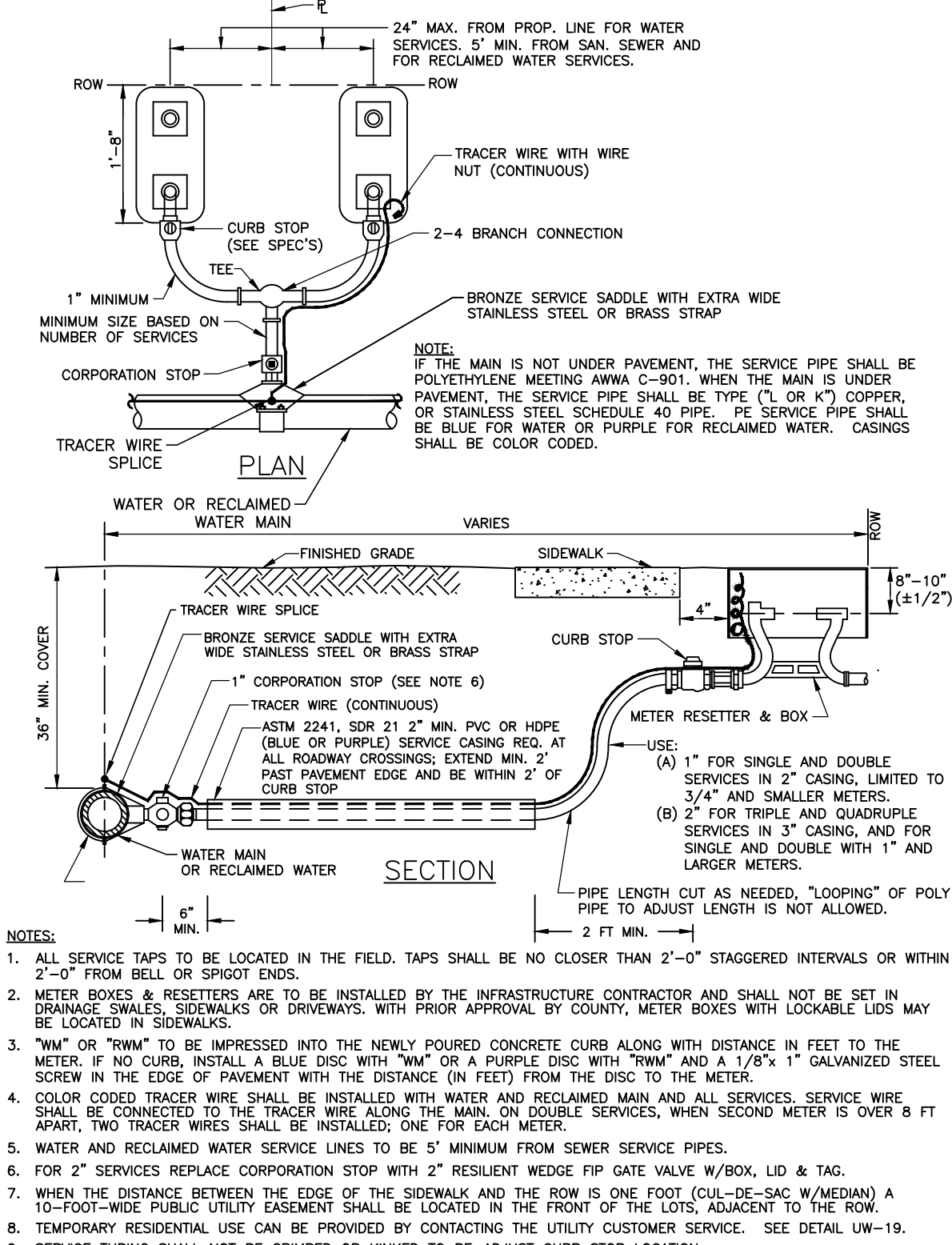
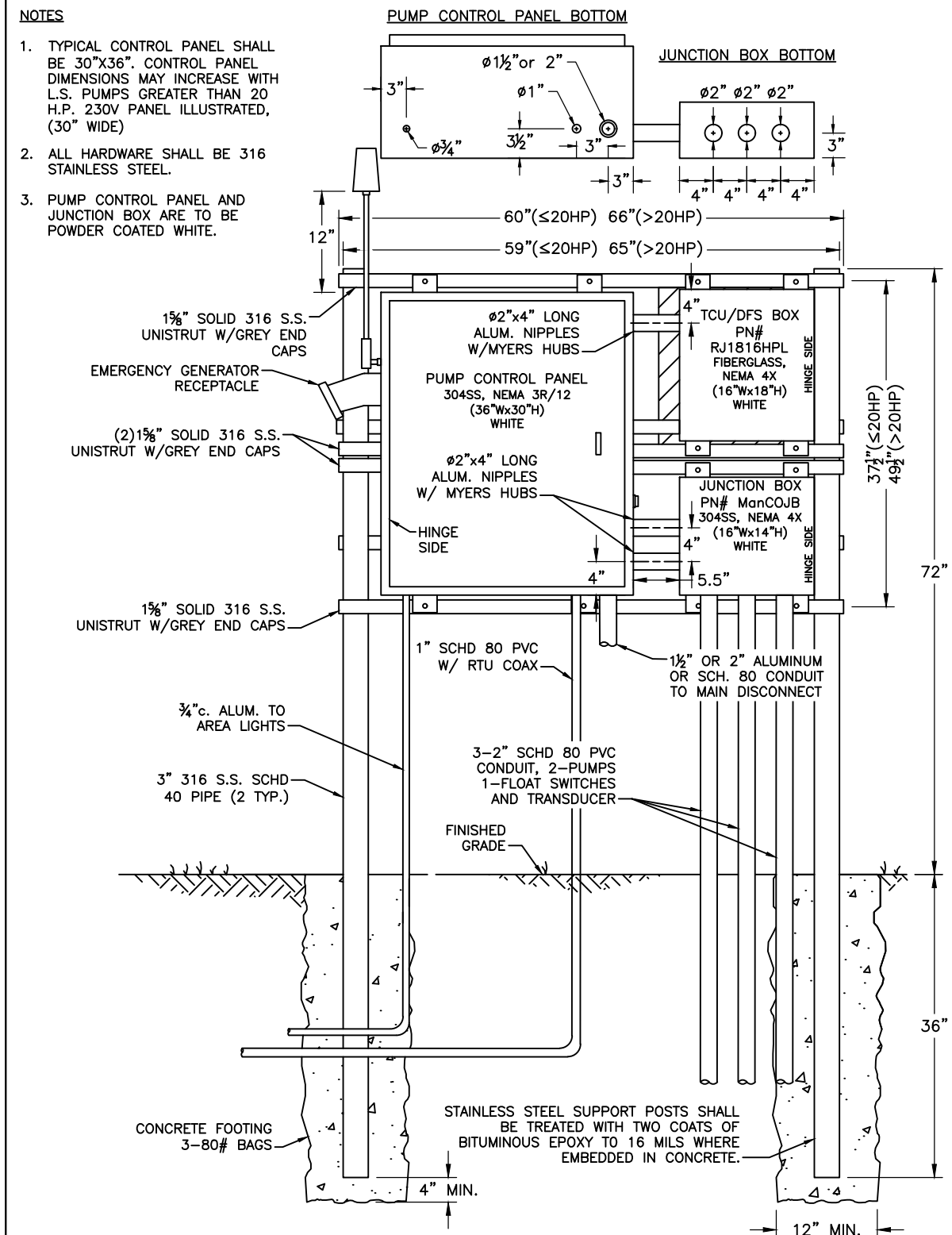
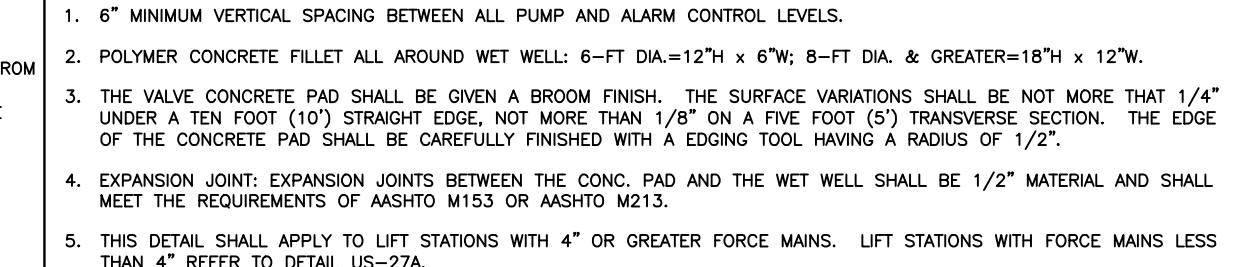
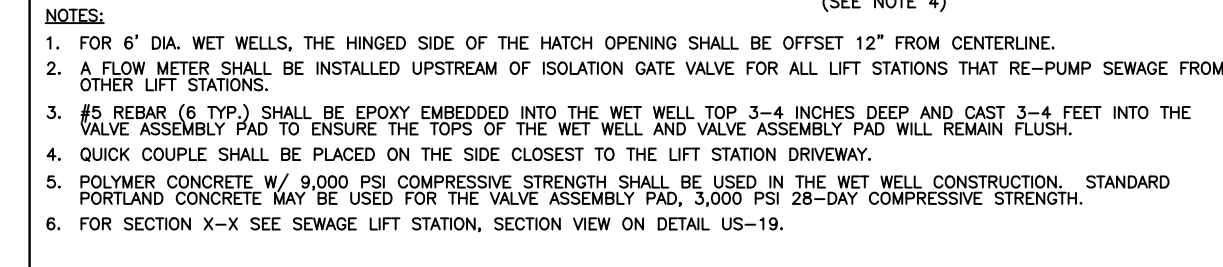
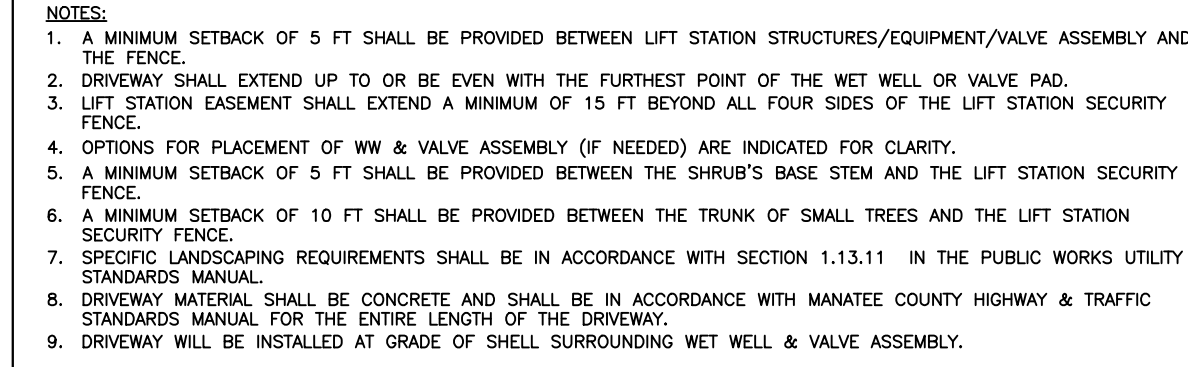
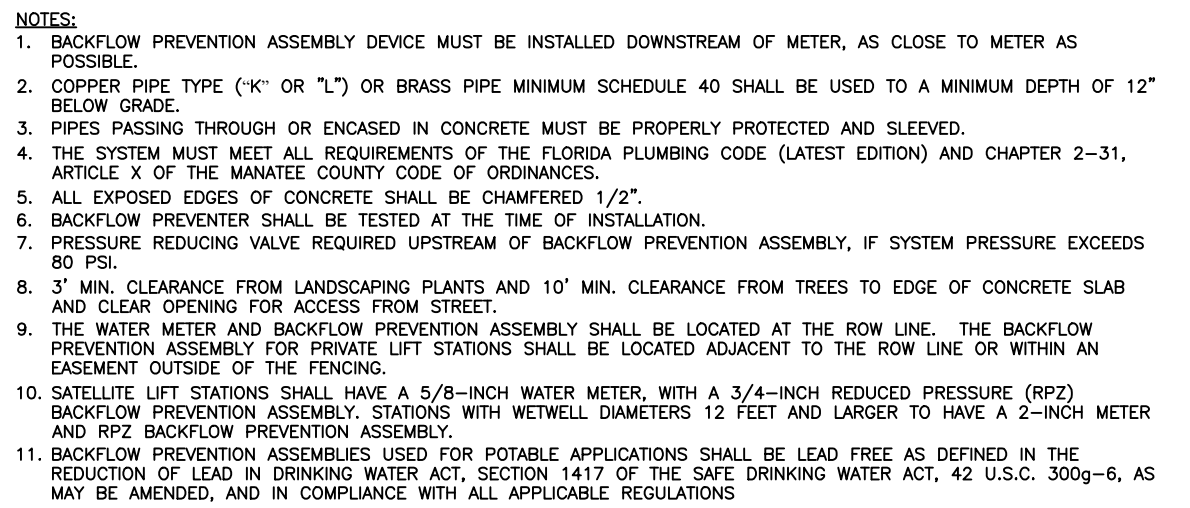


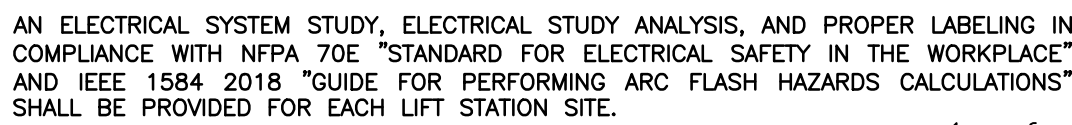
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

PROJECT #	402-0019707	JOHN S. SHOUN, P.E.
SURVEY #	00-44787	FLORIDA PROFESSIONAL ENGINEER
SEC./TWN./RGE	VARIES	No. 60923
SCALE	N.T.S.	STATE OF FLORIDA
SURVEYED	---	DATE 4/12/19
DESIGNED	JSS	09/2019
DRAWN	JSS	08/2019
CHECKED	JSS	08/2019

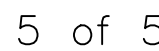
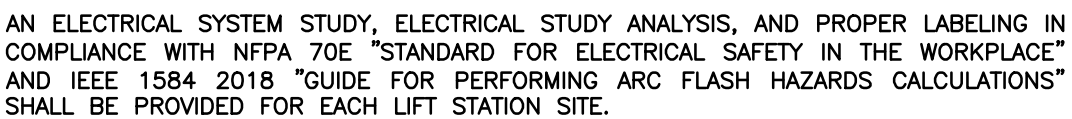
SHEET 10 OF 14

C:\Users\larsa\OneDrive - Manatee County Government\CSAN SWP Proj\0200 Group 3\UGs\SLS R&R 2020 Group 3.dwg(JSS:JSS1, 11/20/2020 1:40 PM Sheet: 11, ANSI) Call Sheet D (34.00 x 22.00 inches), UC-2016(S1B)





WIRE COLOR CODE	
SYMBOL	COLOR
B	BLACK
V	WHITE
G	GREEN
BL	BLUE
R	RED
P	PINK
BR	VIOLET
B/R	BROWN
B/V	BLACK/RED
B/V	BLACK/VIOLET
B/P	BLACK/PINK
GY/P	GREY/PINK
GY/R	GREY/RED
GY/BL	GREY/BLUE
GY/BR	GREY/BROWN
W/R	WHITE/RED
W/B/V	WHT/BLK/VIOLET
W/B/R	WHT/BLK/RED

1 of 52 of 53 of 54 of 55 of 5

WIRE COLOR CODE	
<u>SYMBOL</u>	<u>COLOR</u>
B	BLACK
W	WHITE
G	GREEN
BL	BLUE
R	RED
P	PINK
V	VIOLET
BR	BROWN
B/R	BLACK/RED
B/V	BLACK/VIOLET
B/P	BLACK/PINK
GY/P	GREY/PINK
GY/R	GREY/RED
GY/BL	GREY/BLUE
GY/BR	GREY/BROWN
W/R	WHITE/RED
W/B/V	WHT/BLK/VIOLET
W/B/R	WHT/BLK/RED

1 of 52 of 53 of 54 of 55 of 5


SATELLITE LIFT STATION R&R

2020 GROUP 3

DETAILS3

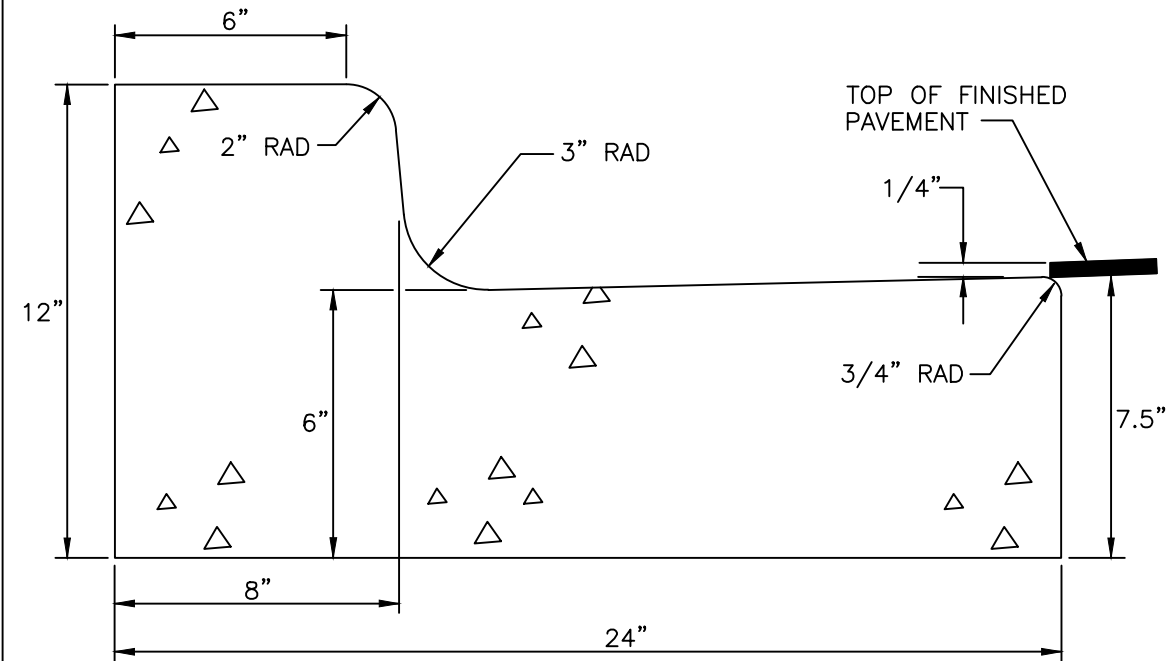


PROJECT #		402-0019707	
SURVEY #		00-44787	
SEC./TWN./RGE		VARIES	
SCALE		N.T.S.	
	BY	DATE	
SURVEYED	---	4/12/19	
DESIGNED	JSS	09/2019	
DRAWN	JSS	08/2019	
CHECKED	JSS	08/2019	



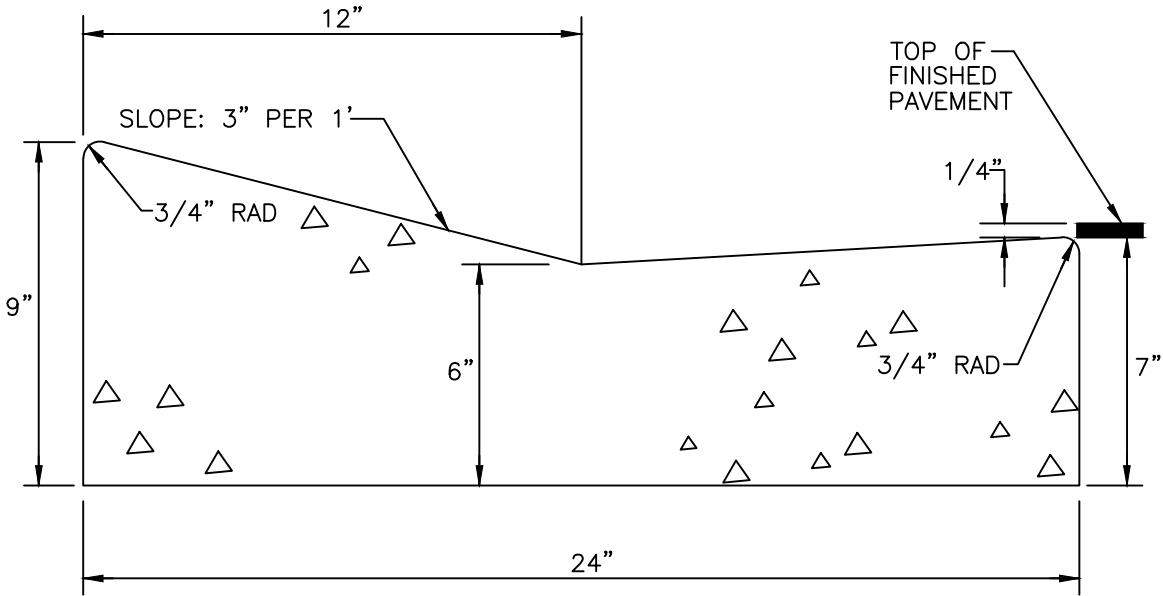
JOHN S. SHOUN, P.E.
FLORIDA
LICENSE
No. 60923
STATE OF
12/04/2020
FLORIDA
PROFESSIONAL ENGINEER
Signature Date

SHEET 12 OF 1



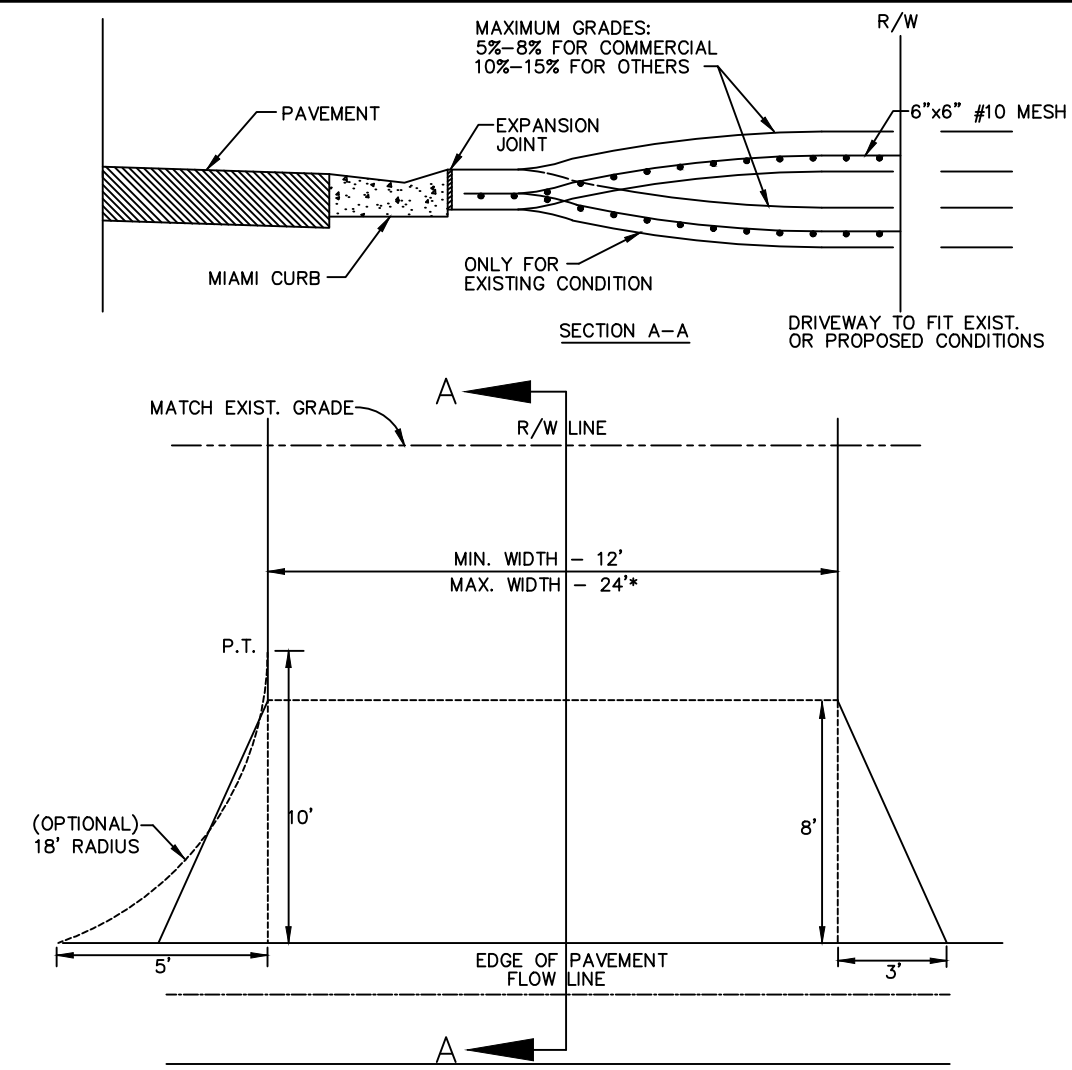
TYPE "F" BARRIER CURB & GUTTER

- A) CLASS 1 CONCRETE 3,000 P.S.I. AT 28 DAYS.
- B) CURB AND GUTTER SHALL MEET THE SPECIFICATIONS ESTABLISHED BY FLORIDA D.O.T. STANDARD SPECIFICATIONS PER F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS INDEX NO. 300, LATEST REVISION.



TYPE "A"
MIAMI CURB & GUTTER

- A) CLASS 1 CONCRETE 3,000 P.S.I. AT 28 DAYS.
- B) CURB AND GUTTER SHALL MEET THE SPECIFICATIONS ESTABLISHED BY FLORIDA D.O.T. STANDARD SPECIFICATIONS PER F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS INDEX NO. 300, LATEST REVISION.



PLAN VIEW

- * For driveways that can demonstrate the need for additional width, the width may not be greater than the LESSER of:
- a.) 30' total at the R/W line
 - b.) 30% of the front footage as defined on the survey (or field measurement, 36' max.)
- (A) CONSTRUCT WITH 6" REINFORCED CONCRETE 3000 PSI @ 28 DAYS, 6"x6" #10 WIRE MESH FROM BACK OF CURB- TO R/W LINE.
- (B) DRIVEWAYS ADJACENT TO A PAVED ROADWAY MUST HAVE THE APRON CONSTRUCTED IN COMPLIANCE WITH THE NOTE (A) ON PREVIOUS PAGE (STD. 101.0)
- (C) MAINTAIN EXISTING DRAINAGE FLOWLINE. FOR PIPING SPECIFICATIONS REFER TO F.D.O.T. STANDARD SPECIFICATIONS SECTION 430. SEE NOTE 4, PAGE 100.1. SEE SECTION 200- DRAINAGE (STD. 200.0, 202.5).
- (D) 3/8" FLARE OR 18" RADIUS WITH CURB TRANSITION (TRANSITION FROM TYPE "F" CURB TO MIAMI CURB) SEE STD. 102.2. NO CHANGE WITH 3' VALLEY CROSSINGS - SEE STDS. 201.0, 201.1, 201.2, 201.4, 201.5, 201.6.
- (E) EXPANSION JOINT 0.50" PREFORMED JOINT FILLER OR APPROVED ALTERNATE, DRIVES WIDER THAN 12" (BEYOND FLARE) PLACE JOINT ON 10' CENTER.
- (F) LATERAL ALIGNMENT 45 DEGREES FOR DOUBLE DRIVE PER LOT, 90 DEGREES FOR SINGLE DRIVE, OFF CENTER LINE.

MANATEE COUNTY TRANSPORTATION DEPARTMENT	
REV. BY	DATE
	6/12/07
	DATE OF B.O.C.C. APPROVAL

TYPE F
CURB & GUTTER

201.2

MANATEE COUNTY TRANSPORTATION DEPARTMENT	
REV. BY	DATE
	6/12/07
	DATE OF B.O.C.C. APPROVAL

TYPE A
MIAMI
CURB & GUTTER

201.1

MANATEE COUNTY TRANSPORTATION DEPARTMENT	
REV. BY	DATE
	6/12/07
	DATE OF B.O.C.C. APPROVAL

URBAN DRIVES

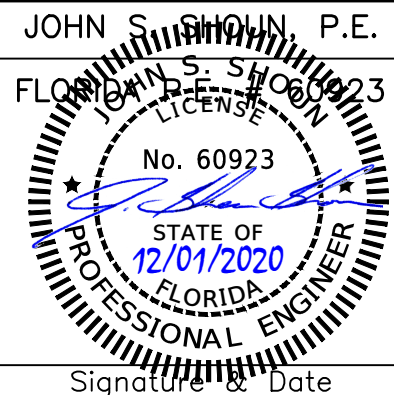
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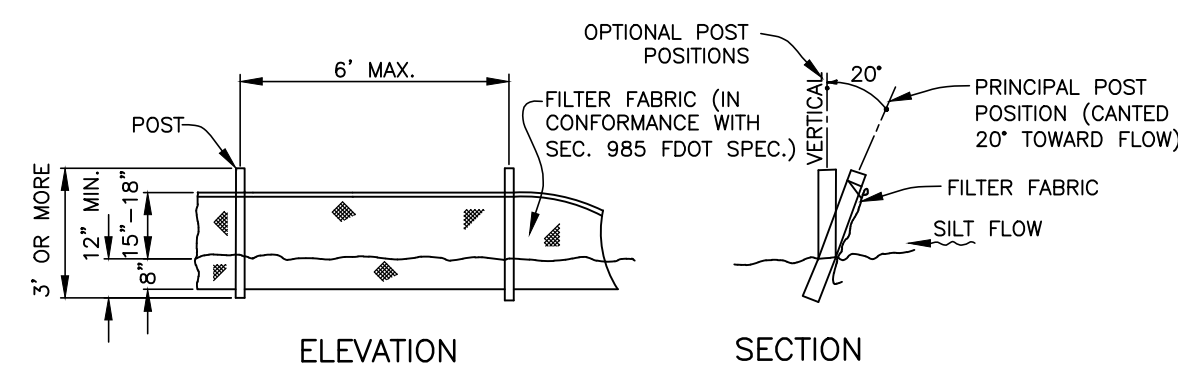
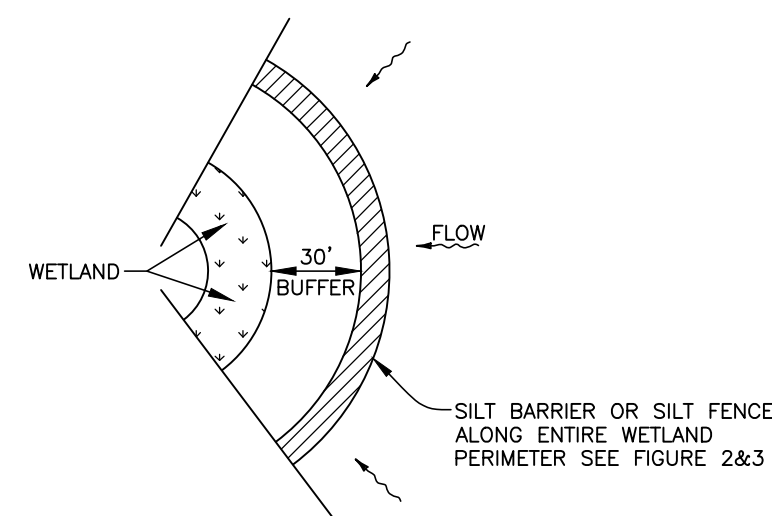
NO.	REVISION DESCRIPTION	BY	DATE

SATELLITE LIFT STATION R&R 2020 GROUP 3 DETAILS4

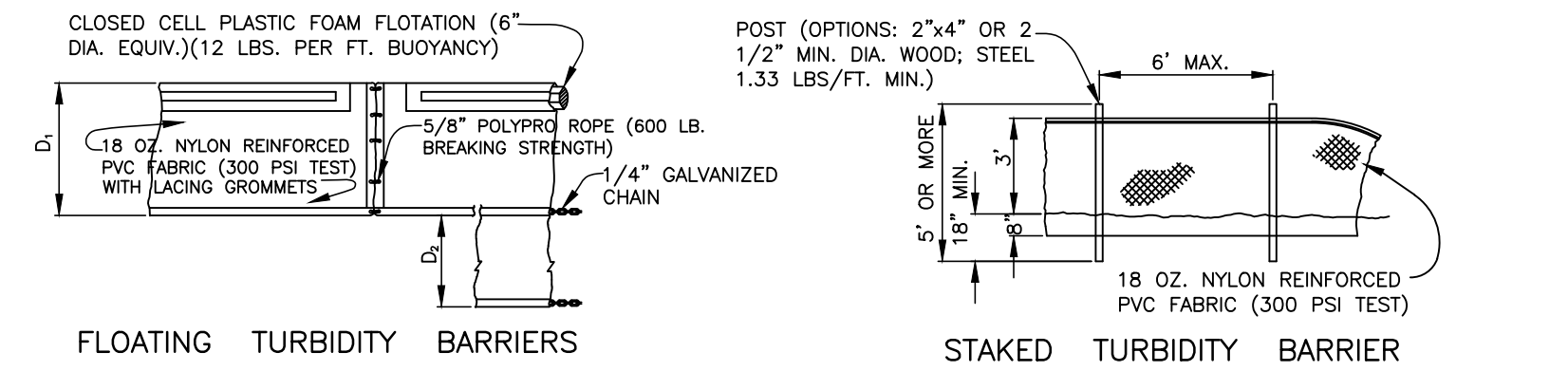
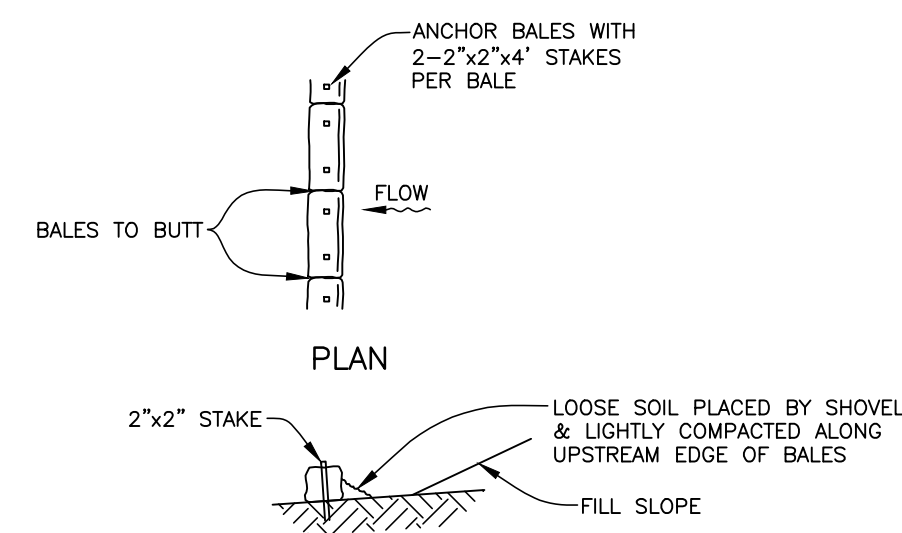


PROJECT #	402-0019707		
SURVEY #	00-44787		
SEC./TWN./RGE	VARIES		
SCALE	N.T.S.		
	BY	DATE	
SURVEYED	---	4/12/19	
DESIGNED	JSS	09/2019	
DRAWN	JSS	08/2019	
CHECKED	JSS	08/2019	



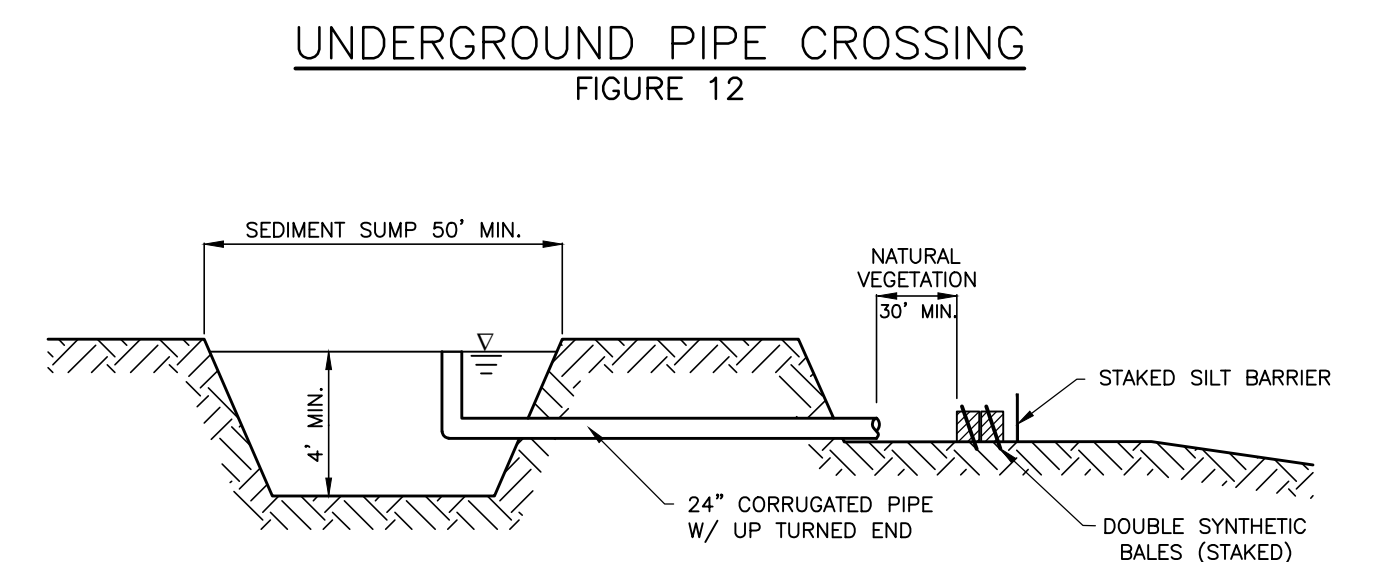
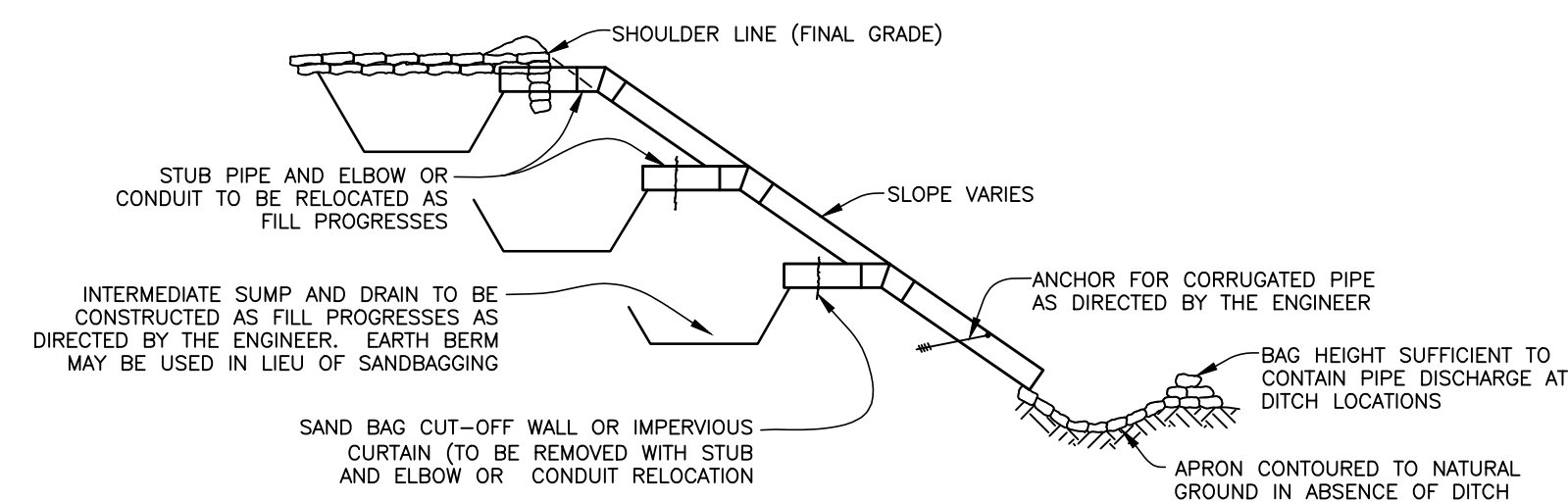
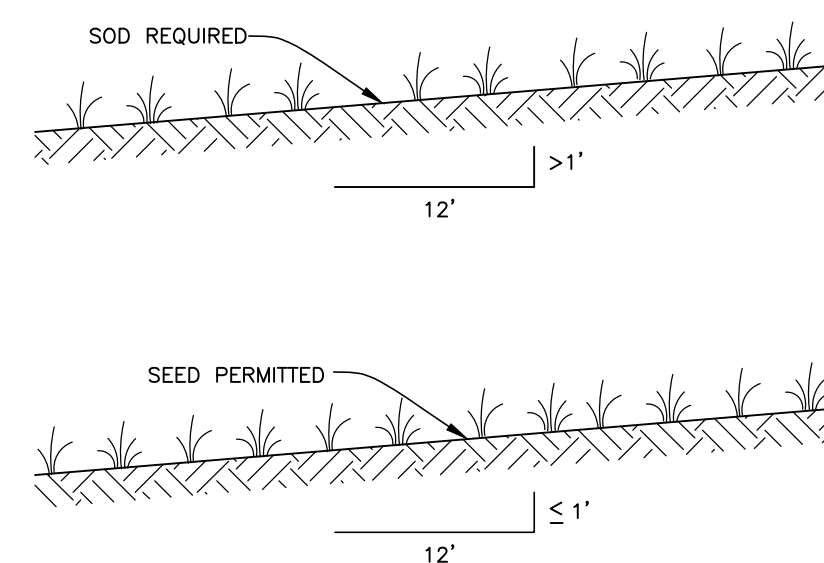
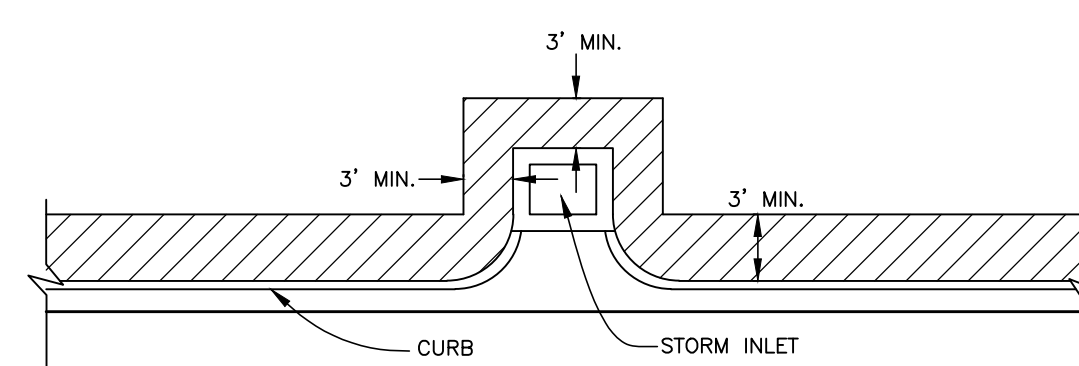
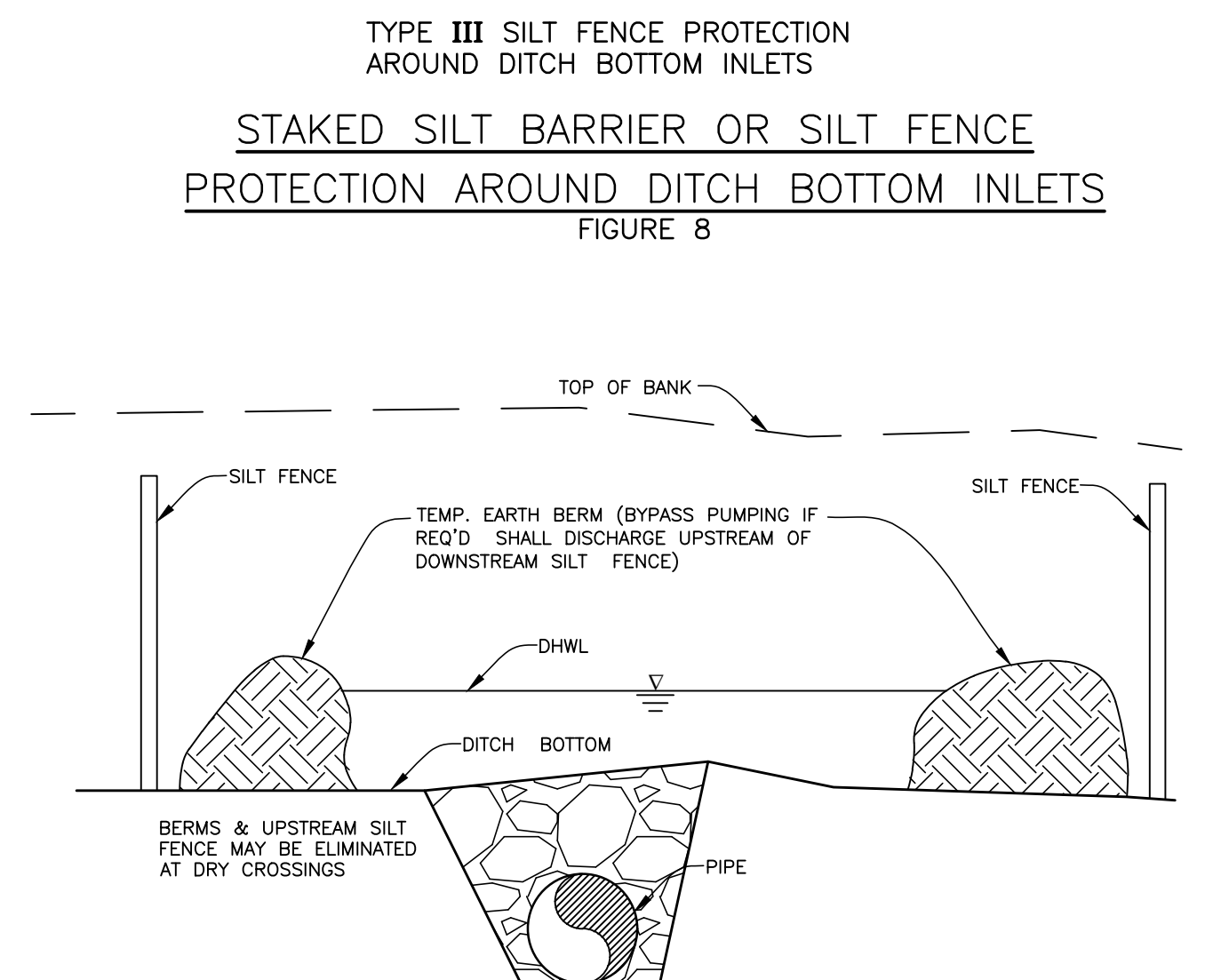
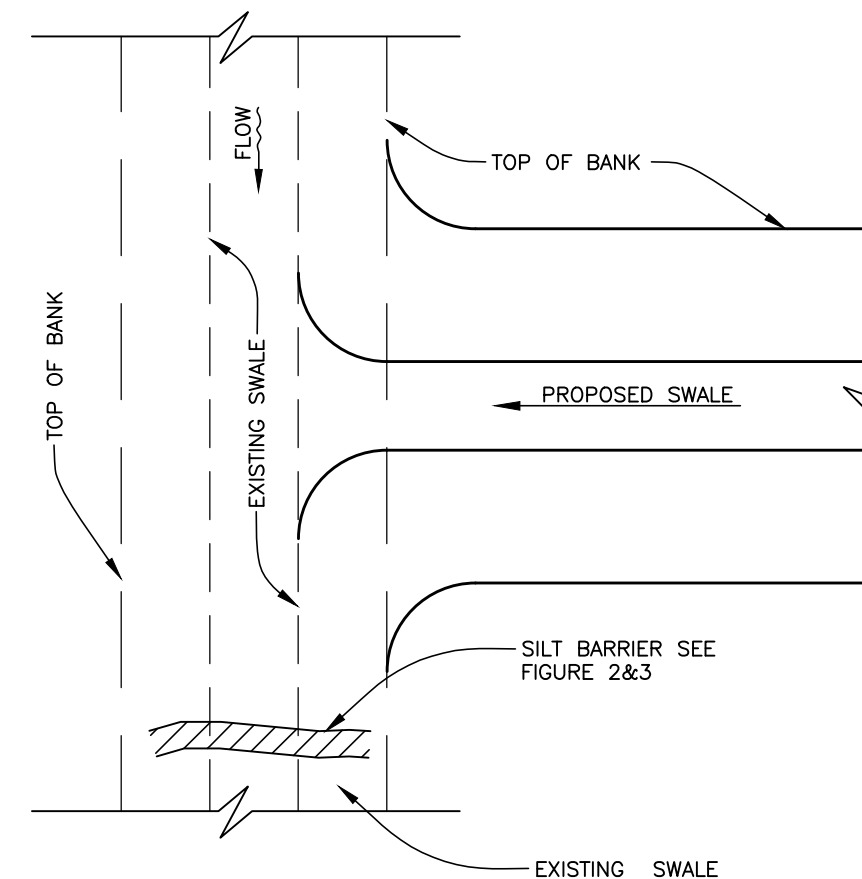
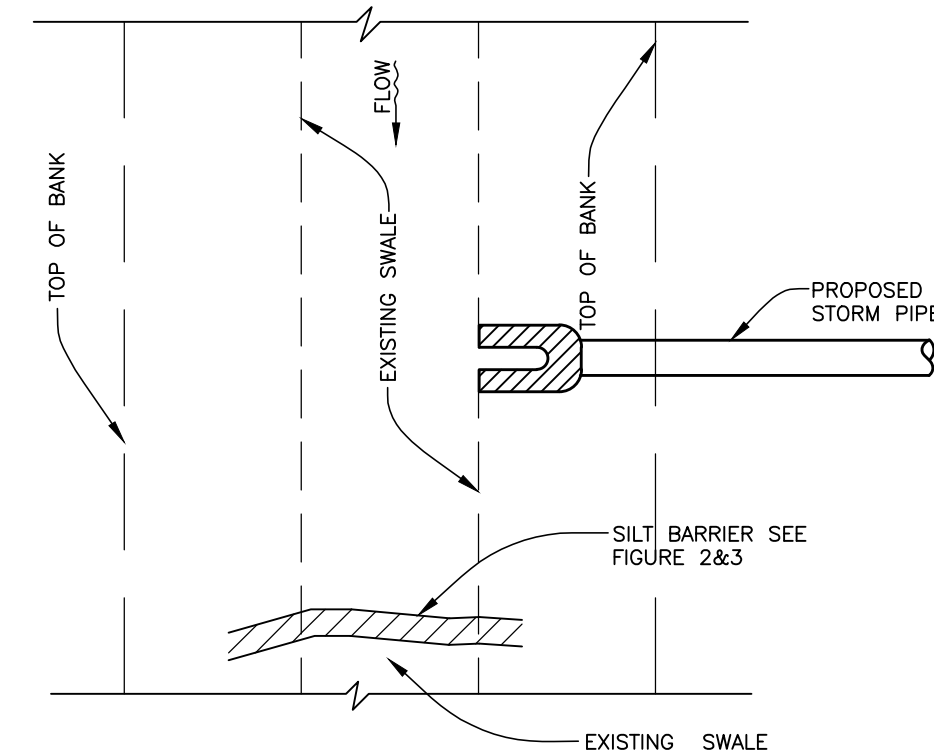
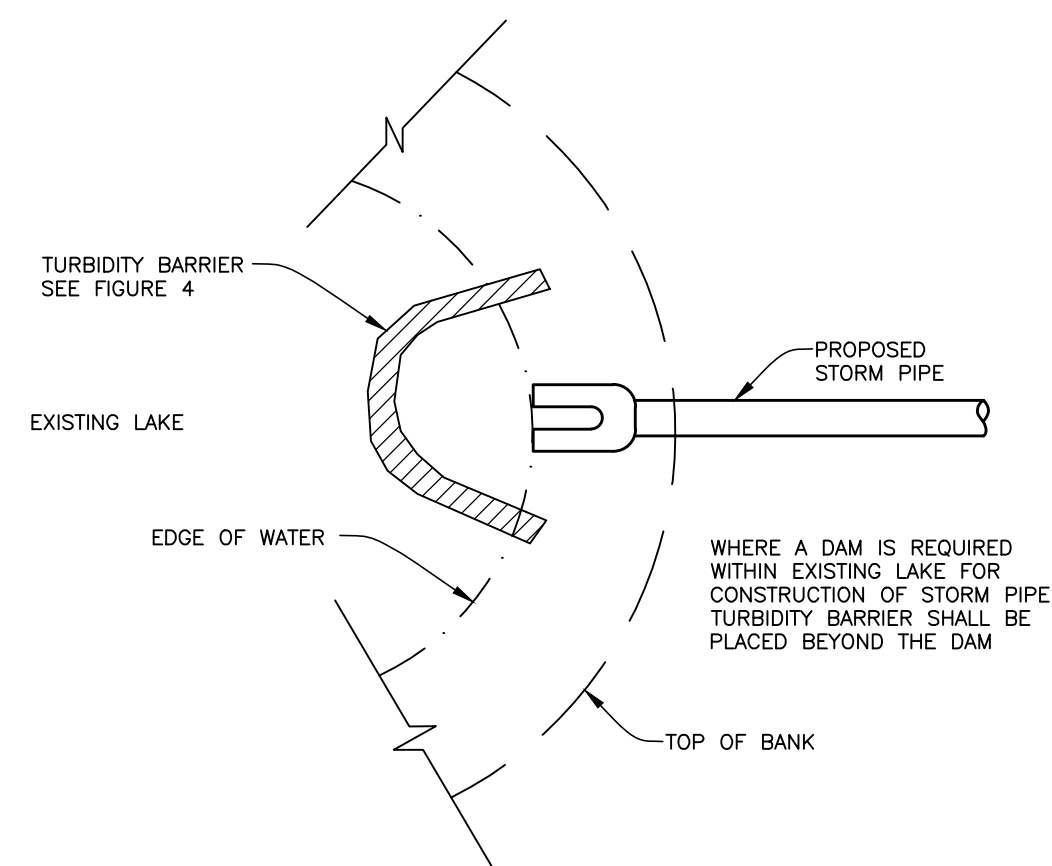
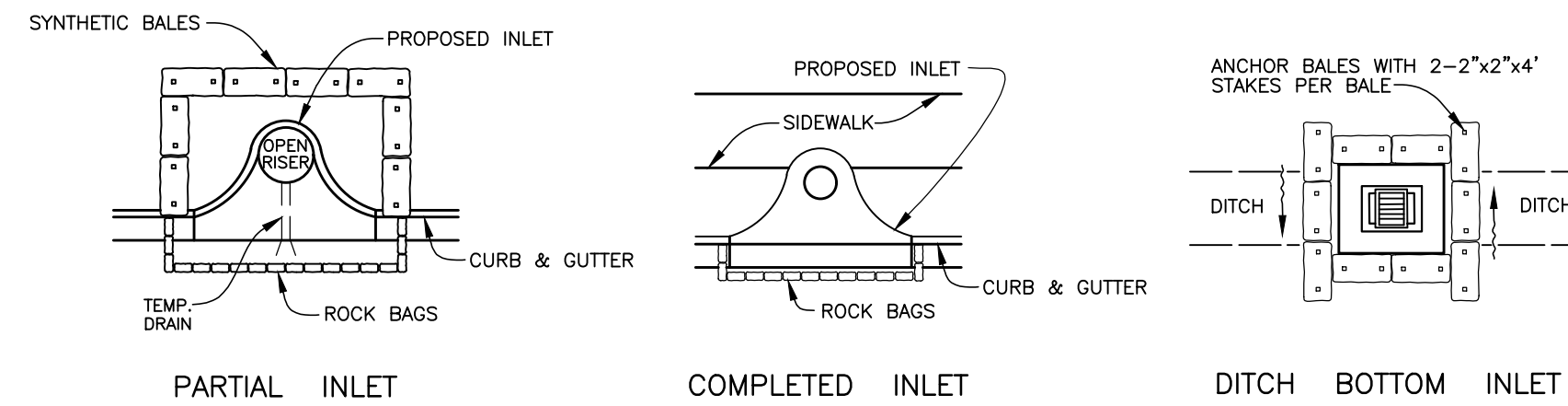
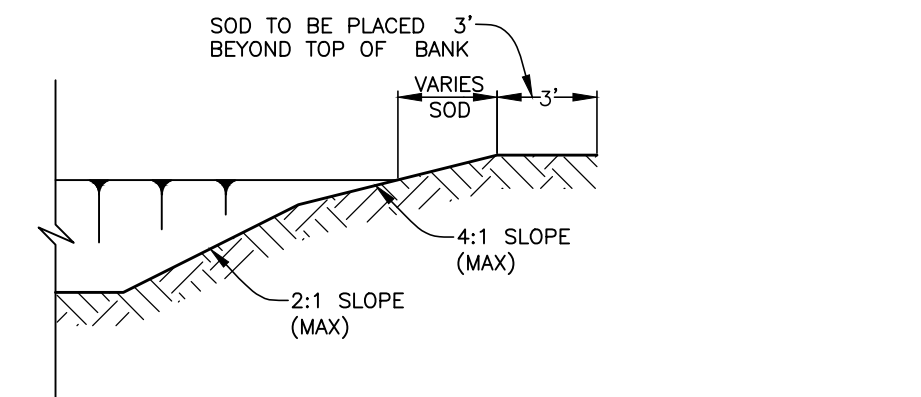
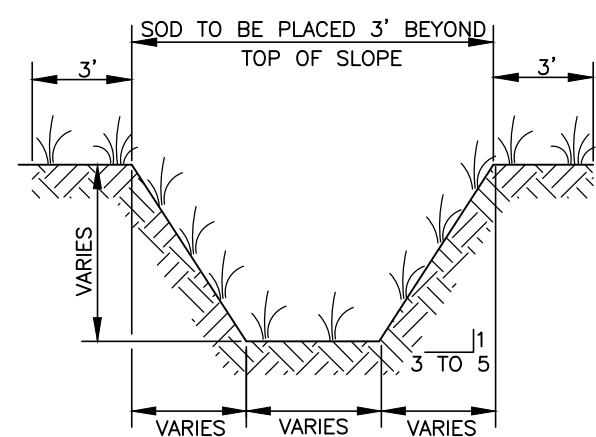
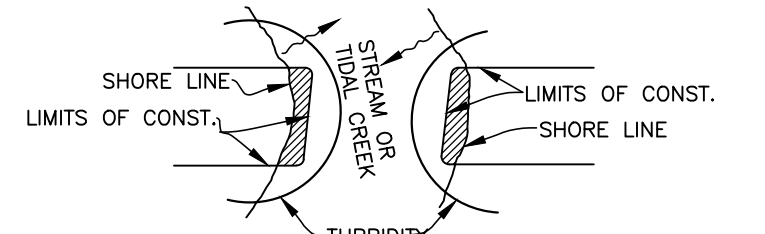


NOTE: SILT FENCE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR STAKED SILT FENCE (LF)



D₁ = 5' STD. (SINGLE PANEL FOR DEPTHS 5' OR LESS). D₂ = 5' STD. (ADDITIONAL PANEL FOR DEPTHS > 5'). CURTAIN TO REACH BOTTOM UP TO DEPTHS OF 10 FEET. TWO(2) PANELS TO BE USED FOR DEPTHS GREATER THAN 10 FEET UNLESS SPECIAL DEPTH CURTAINS SPECIFICALLY CALLED FOR IN THE PLANS OR AS DETERMINED BY THE ENGINEER.

NOTICE: COMPONENTS OF TYPES I AND II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.



NOTE:
REFERENCE THE STATE OF FLORIDA EROSION
AND SEDIMENT CONTROL DESIGNER AND
REVIEWER MANUAL, LATEST EDITION, FOR ALL
TEMPORARY EROSION CONTROL MEASURES

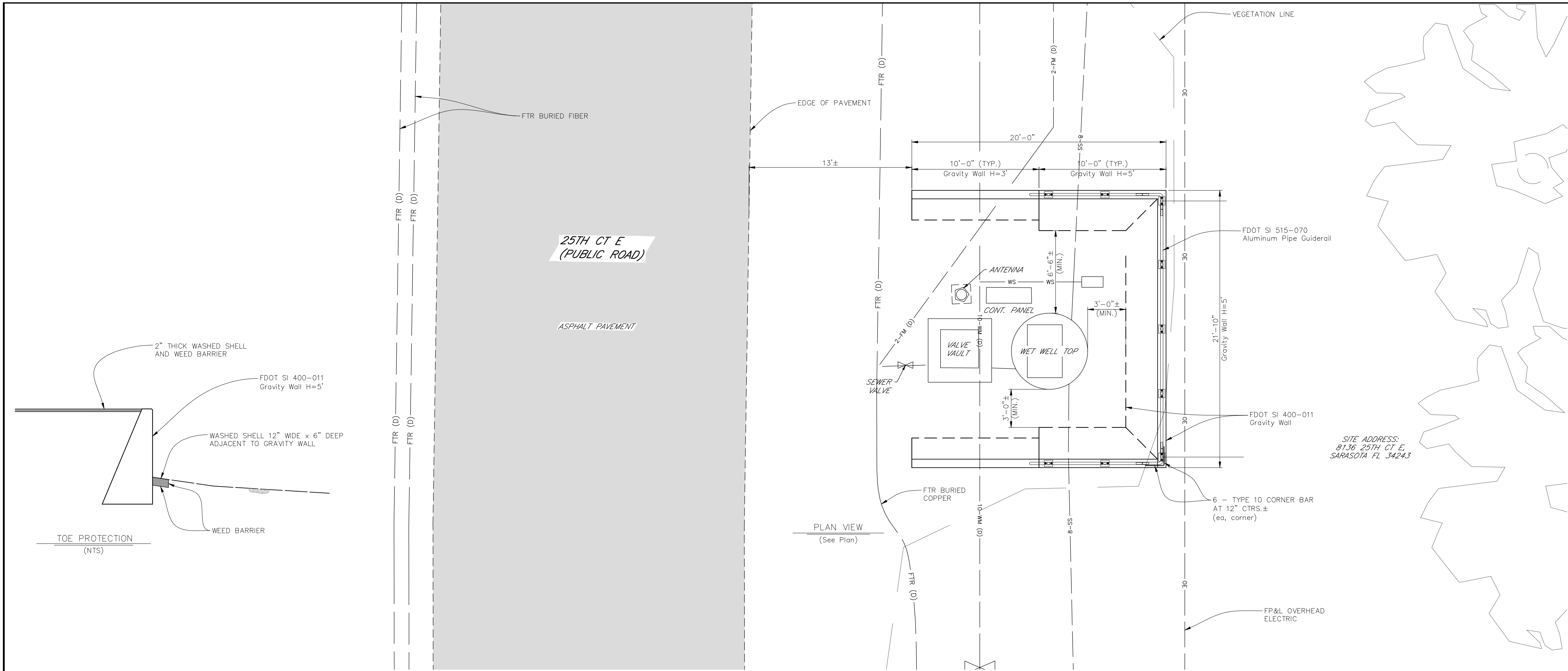
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**SATELLITE LIFT STATION R&R
2020 GROUP 3
EROSION CONTROL**



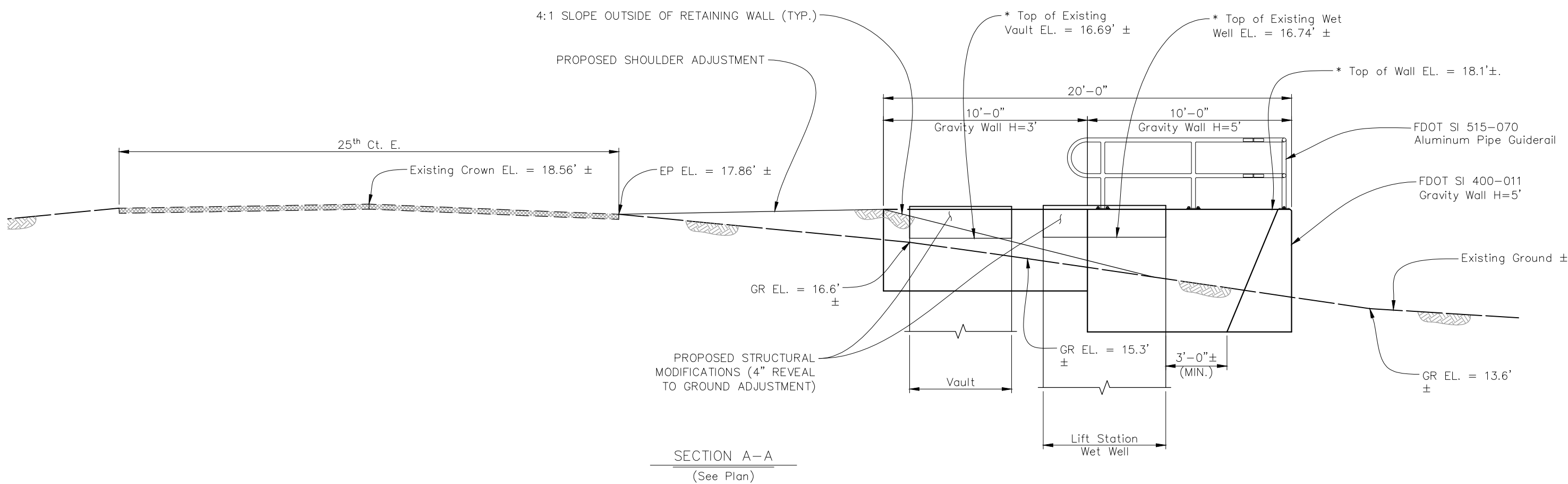
PROJECT #	402-0019707	
SURVEY #	00-44787	
SEC./TWN./RGE	VARIES	
SCALE	N.T.S.	
	BY	DATE
SURVEYED	---	4/12/19
DESIGNED	JSS	09/2019
DRAWN	JSS	08/2019
CHECKED	JSS	08/2019

JOHN S. SHOUN, P.E.
FLORIDA PROFESSIONAL ENGINEER
No. 60923
12/01/2020
Signature Date



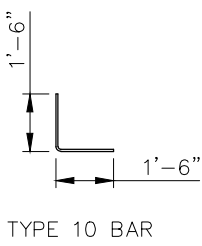
- CONSTRUCTION NOTES:
1. ALL EXISTING UTILITY LOCATIONS SHOWN ARE CONSIDERED APPROXIMATE AND SHALL BE LOCATED BY THE CONTRACTOR PRIOR TO CONSTRUCTION TO ENSURE NO CONFLICTS WITH THE PROPOSED GRAVITY WALL.
 2. INSTALL 41'-10" CONCRETE CAST-IN-PLACE (CIP) GRAVITY WALL WITH H= 5'-0" AND 20'-0" CONCRETE CIP GRAVITY WALL WITH H=3'-0" AROUND LIFT STATION WET WELL AND VAULT AS SHOWN.
 3. FOR GRAVITY WALL DETAILS, SEE FDOT STANDARD PLAN 400-011. USE SCHEME 1 WALL CONFIGURATION.
 4. REFER TO FDOT STANDARD PLAN 400-011 FOR JOINT DETAIL BETWEEN THE 5'-0" WALL SECTION AND THE 3'-0" WALL SECTION.
 5. INSTALL WEEP HOLES AS SHOWN IN THE STANDARD PLAN 400-011.
 6. THE GRAVITY WALL IS BASED ON THE FOLLOWING GEOTECHNICAL PROPERTIES:
 - a. SOIL CLASSIFICATION = COHESIONLESS FINE SAND
 - b. FRICTION ANGLE = 30°
 - c. BACKFILL UNIT WEIGHT = 120 PCF
 - d. PRESUMPTIVE ALLOWABLE BEARING PRESSURE = 2500 PSF
 - e. CORRECTED SPT BLOW COUNT = 10 BLOWS/FT.
 7. NOTIFY THE ENGINEER IF THE SOIL CONDITIONS ENCOUNTERED ARE SIGNIFICANTLY DIFFERENT THAN AS PROVIDED ABOVE.
 8. TOP OF GRAVITY WALL TO BE INSTALLED TO ELEVATION 18.10± (NAVD88). THE ELEVATION IS BASED ON RAISING THE GRADE AT THE WET WELL AND VAULT AND THE TOP OF STRUCTURES TO THE ROADWAY CROWN ELEVATION AT 18.60' ± (NAVD88). THE CONTRACTOR IS TO VERIFY THE TOP OF WET WELL AND VAULT ELEVATIONS. THE TOP OF WALL ELEVATION IS TO BE SET AT 0.5' BELOW TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE WET WELL AND VAULT. REFER TO SHEET 7 FOR ADDITIONAL DETAILS ON RAISING THE WET WELL AND VAULT STRUCTURES.
 10. CONCRETE TO BE CLASS NS PER SECTION 347 OF THE FDOT STANDARD SPECIFICATIONS. USE A CLASS 2 SURFACE FINISH PER SECTION 400 OF THE FDOT STANDARD SPECIFICATIONS.
 11. INSTALL 40'-0" ALUMINUM PIPE RAIL ON THE GRAVITY WALL AS SHOWN. REFER TO FDOT STANDARD PLAN 500-070 FOR DETAILS. INSTALL 90° CORNERS TO TRANSITION FROM THE NORTH-SOUTH WALL SECTION TO THE EAST-WEST WALL SECTIONS.
 12. AT THE TOE OF THE GRAVITY WALL, INSTALL WASHED SHELL AND WEED BARRIER 12" WIDE X 6" DEEP.
 13. ALL DISTURBED AREAS SHALL BE GIVEN A SMOOTH GRADE AND SODDED. SOD SHALL BE PINNED TO THE GROUND.

* WET WELL AND VALVE VAULT TO BE RAISED WITH TOP OF STRUCTURES APPROXIMATELY TO ROADWAY CROWN EL. 18.6'. TOP OF GRAVITY WALL TO BE SET AT EL. 18.1' TO PROVIDE POSITIVE DRAINAGE FROM STRUCTURES. CONTRACTOR TO VERIFY ELEVATIONS.



GRAVITY WALL CONCRETE - CLASS NS QUANTITY	
H = 5'-0" SECTION	18.0 CY
H = 3'-0" SECTION	4.4 CY
TOTAL	22.0 CY

COST OF REINFORCING STEEL, WEEP HOLE SYSTEMS, JOINT SEAL SYSTEM, AND WASHED SHELL TOE PROTECTION TO BE INCLUDED IN THE COST OF THE GRAVITY WALL CONCRETE.



REINFORCING STEEL BENDING DIAGRAM

1. All bar dimensions are out-to-out.
2. Type 10 # 5 Bar to be installed at 12 ctrs. outside face of gravity wall each corner with 3" clearance to bar. 12 bars total.



NO.	REVISION DESCRIPTION	BY	DATE

SATELLITE LIFT STATION R&R 2020 GROUP 3 GRAVITY WALL - NEW 301 INDUST. PARK



PROJECT #	402-0019707
SURVEY #	-
SEC./TWN./RGE	31/35/18
SCALE	SEE PLAN
SURVEYED	---
DESIGNED	SML 11/2020
DRAWN	SML 11/2020
CHECKED	JSS 11/2020

STEVEN M. LANEY, P.E.
FLORIDA LICENSE # 46449
No. 46449
STATE OF FLORIDA
PROFESSIONAL ENGINEER
SHEET S1