

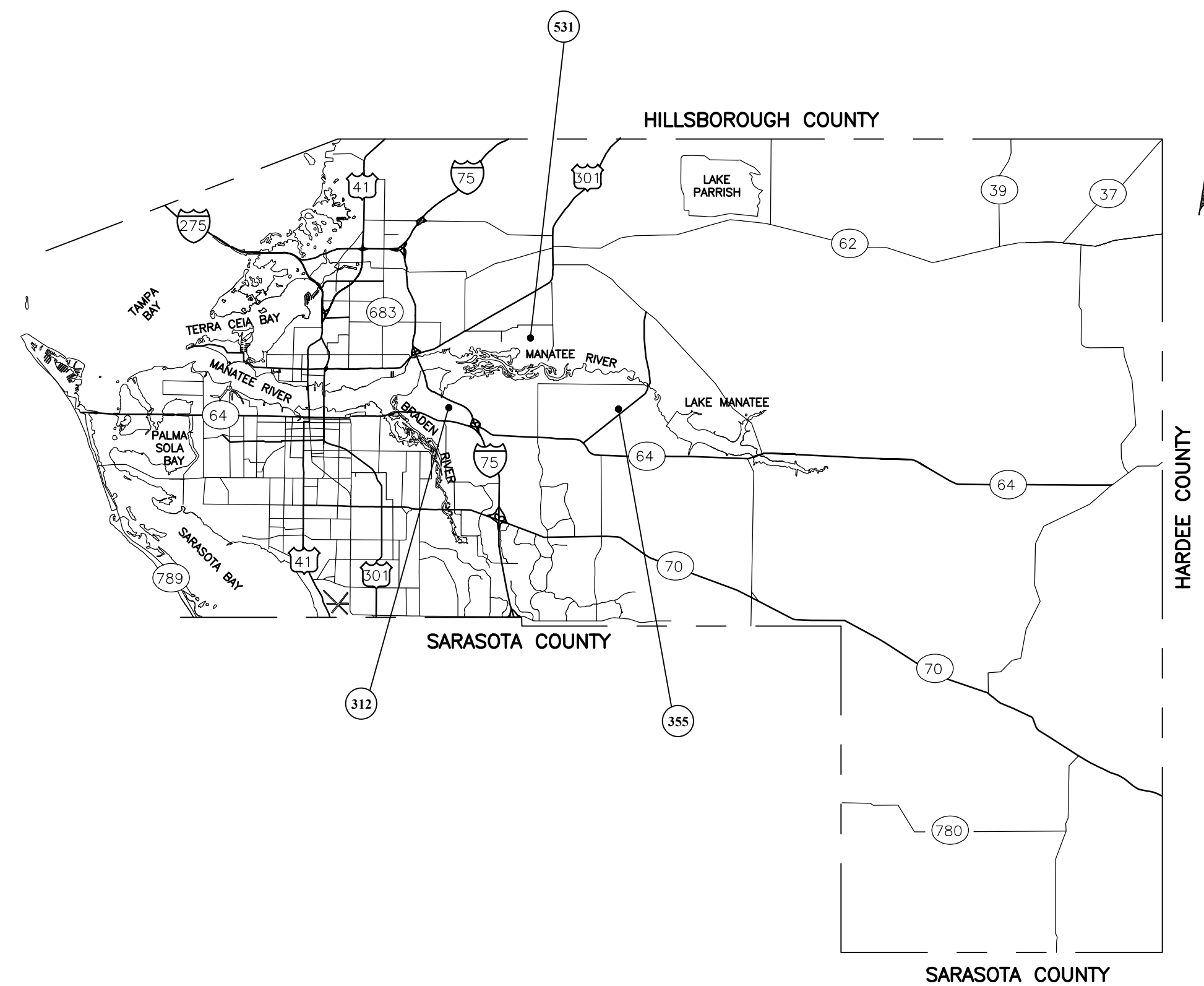


# SATELLITE LIFT STATION R&R 2020 GROUP 1 402-0019707

June 2020

**BID DOCUMENTS**

L.S. NAME	RTU	ADDRESS	PROJECT NO.	JL	INFLUENT MH
MANATEE PALMS 2	312	303 64TH ST NE, BRADENTON FL	5155880		PUBLIC
RYE RD SCHOOL	355	206 RYE ROAD E, BRADENTON FL	5155881		PUBLIC
RIVER WILDERNESS 3	531	2395 WILDERNESS BLVD. E, PARRISH FL	5155883		PUBLIC



**PROJECT DESCRIPTION**

REHABILITATE SEWAGE LIFT STATIONS AND/OR MANHOLES TO REDUCE RISK TO PUBLIC HEALTH AND ENVIRONMENTAL POLLUTION. THE WORK SHALL CONSIST OF, BUT NOT LIMITED TO, WET WELL CLEANING, THE REPLACEMENT OF DISCHARGE PIPING, FITTINGS, VALVES, SWING CHECK VALVES, GUIDE RAILS, PIPE BRACINGS, BASE ELLS, AND/OR MOUNTING PLATES. WET WELL LINER MAY NEED TO BE INSTALLED, REPAIRED OR REPLACED. SEE INDIVIDUAL PLAN SHEETS FOR SPECIFIC REHABILITATION AND INSTALLATIONS REQUIREMENTS FOR EACH LIFT STATION.

RYE RD SCHOOL LIFT STATION SITE SHALL HAVE THE EXISTING EMERGENCY GENERATOR & ATS REMOVED AND REPLACED WITH AN EMERGENCY BACKUP PUMP.

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 FOR EACH LIFT STATION SITE.

NO.	SHEET
01	COVER
02	NOTES
03	MANATEE PALMS 2 (REHAB)
04	MANATEE PALMS 2 (SITE)
05	RYE RD SCHOOL (REHAB)
06	RYE RD SCHOOL (SITE)
07	RIVER WILDERNESS 3 (REHAB)
08	DETAILS
09	DETAILS
10	EROSION CONTROL



Know what's below  
Call before you dig

**SATELLITE LIFT STATION R&R  
2020 GROUP 1  
COVER**

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	402-0019707
SURVEY #	-
SEC./TWN./RGE	VARIES
SCALE	N.T.S.

	BY	DATE
SURVEYED	----	----
DESIGNED	JSS	02/2020
DRAWN	CAK	02/2020
CHECKED	JSS	02/2020

JOHN S. SHALUN, P.E.  
Professional Engineer  
License No. 60923  
STATE OF FLORIDA  
06/25/2020

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 X 7333.
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.

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.

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.

RIGHT-OF-WAY

- 22. ALL CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO WITHIN THE MANATEE COUNTY/FDOT 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.

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 AFFECT 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.

- 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.

RESTORATION

- 34. ALL RESTORATION WORK PERFORMED THROUGHOUT THE PROJECT SHALL CONFORM TO EXISTING LINES AND GRADES UNLESS SHOWN OTHERWISE.
35. ALL DISTURBED GRADED AREAS SHALL BE SODDED OR SEEDD UNLESS OTHERWISE INDICATED. THE TYPE OF SOD USED TO REPLACE OWNER MAINTAINED AREAS IN RIGHT-OF-WAY SHALL BE COORDINATED WITH THE PROPERTY OWNER.

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 SWEEPED DAILY AS PART OF DAILY CLEAN UP.

- 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.

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.

LEGEND

Legend table listing symbols for existing and proposed features including bench marks, iron pipe, power poles, storm drains, and various types of fences and vegetation edges.

MANATEE COUNTY PUBLIC WORKS DEPT.
FRONTIER 1701 RINGLING BLVD. SARASOTA, FL 34236
TECO/PEOPLES GAS CO. 8261 VICO COURT SARASOTA, FL 34240
FLORIDA POWER & LIGHT 1253 12TH AVENUE EAST PALMETTO, FL 34221
ATMS 2101 4TH TERRACE EAST BRADENTON, FL 34203
PEACE RIVER ELECTRIC COOPERATIVE, INC. 410 6TH AVENUE EAST BRADENTON, FL 34208

Table with 4 columns: NO., REVISION DESCRIPTION, BY, DATE. The table is mostly empty, indicating no revisions have been recorded.

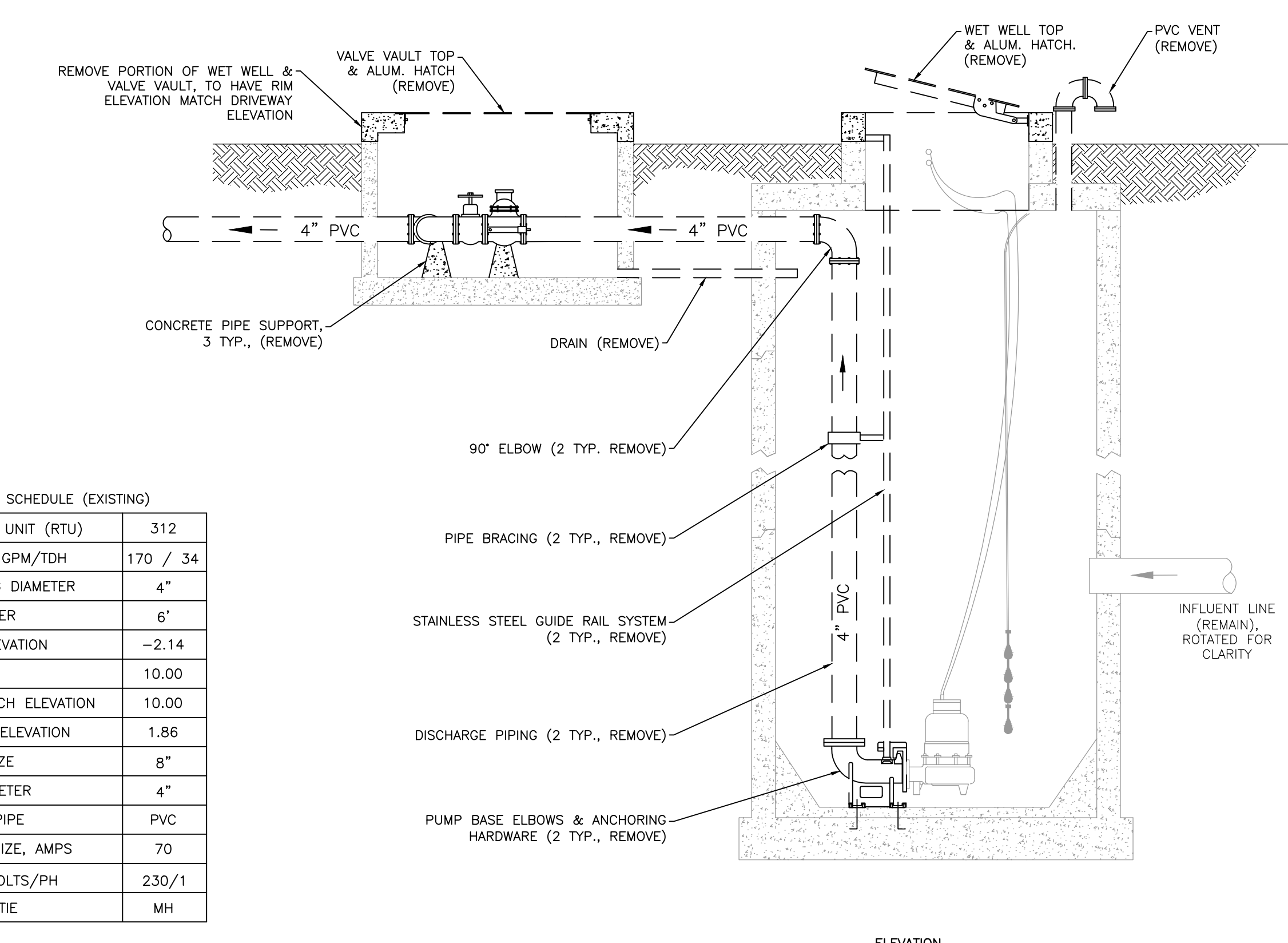
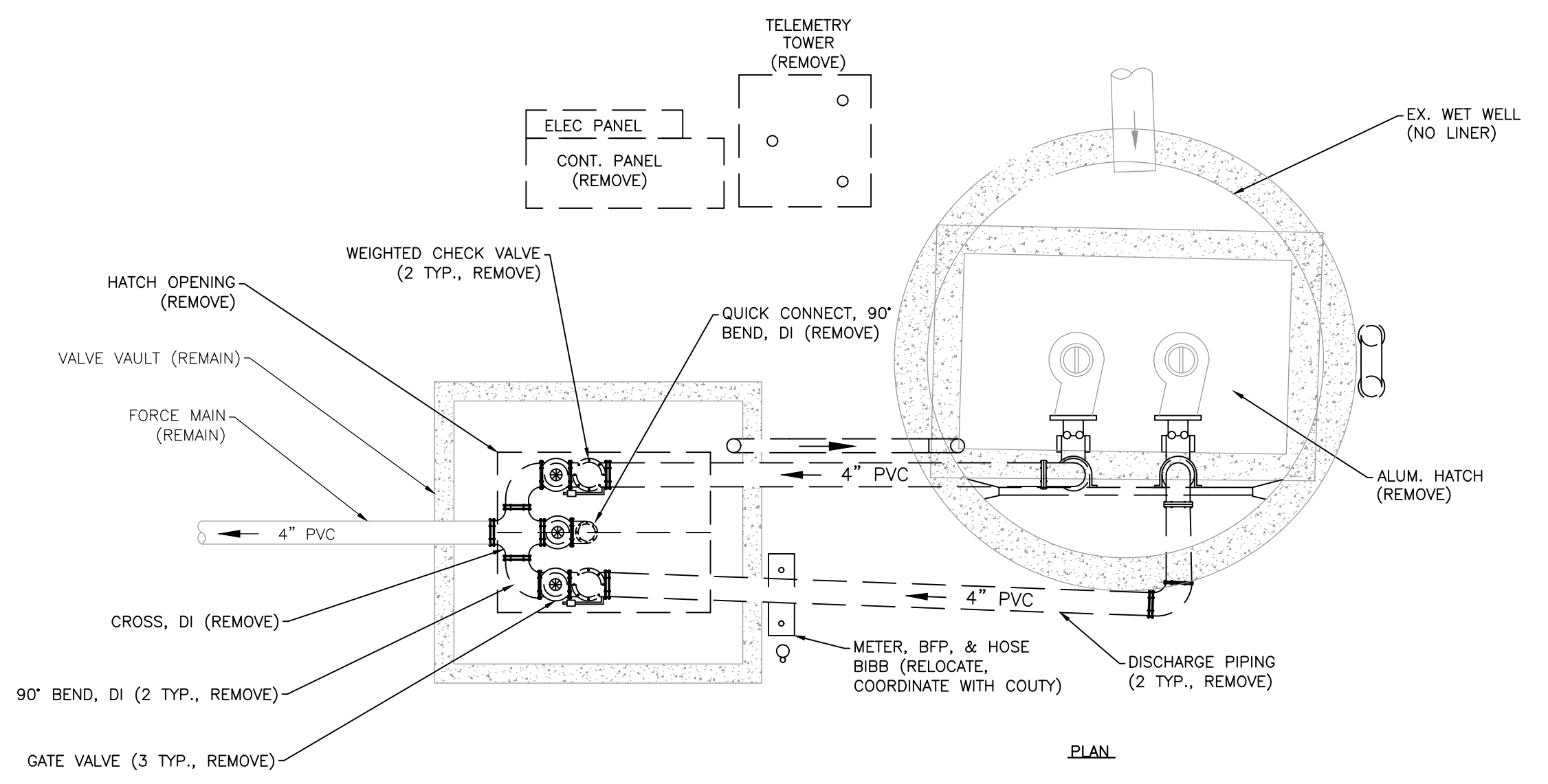
SATELLITE LIFT STATION R&R 2020 GROUP 1 NOTES

Project information including Project # 402-0019707, Survey # -, SEC./TWN./RGE VARIES, SCALE N.T.S., and SHEET 02 OF 11. Includes the Manatee County Public Works Department logo and the professional engineer seal for John S. Shoun, P.E., No. 60923, dated 06/25/2020.

**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.



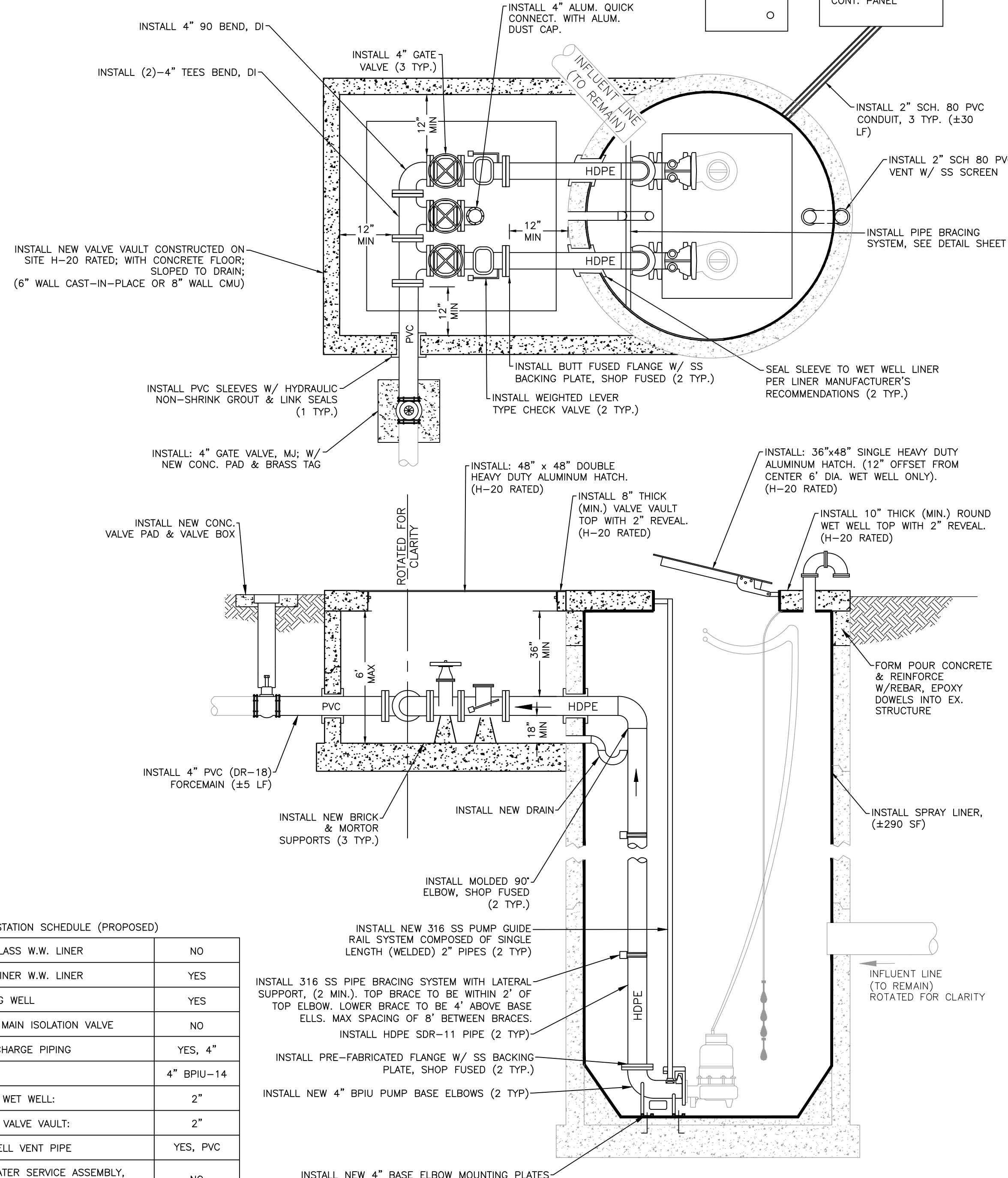
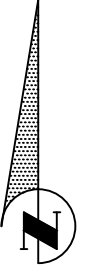
LIFT STATION SCHEDULE (EXISTING)

RADIO TELEMETRY UNIT (RTU)	312
DESIGN CAPACITY GPM/TDH	170 / 34
DISCHARGE PIPING DIAMETER	4"
WET WELL DIAMETER	6'
BOTTOM SLAB ELEVATION	-2.14
TOP ELEVATION	10.00
VALVE VAULT HATCH ELEVATION	10.00
INFLUENT INVERT ELEVATION	1.86
INFLUENT PIPE SIZE	8"
FORCE MAIN DIAMETER	4"
WET WELL VENT PIPE	PVC
ELECT. SERVICE SIZE, AMPS	70
ELECT. POWER, VOLTS/PH	230/1
EX. FORCE MAIN TIE	MH

**PROPOSED**

**GENERAL NOTES:**

1. 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.
2. 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.
3. 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.
4. ALL EXISTING DUCTILE IRON PIPE AND/OR FITTINGS LABELED TO REMAIN IN THE VALVE VAULT SHALL BE COATED WITH A BITUMINOUS COATING.
5. COAT THE EXTERIOR AND INTERIOR OF THE VALVE VAULT WALLS WITH TWO (2) COATS OF COAL TAR EPOXY.
6. ALL PAINTING SHALL BE INCLUDED IN THE BID ITEM TO BE PAINTED.



LIFT STATION SCHEDULE (PROPOSED)

INSTALL FIBERGLASS W.W. LINER	NO
APPLY SPRAY LINER W.W. LINER	YES
INSTALL STILLING WELL	YES
INSTALL FORCE MAIN ISOLATION VALVE	NO
NEW HDPE DISCHARGE PIPING	YES, 4"
NEW BASE ELL	4" BPIU-14
LOWER TOP OF WET WELL:	2"
LOWER TOP OF VALVE VAULT:	2"
INSTALL WET WELL VENT PIPE	YES, PVC
INSTALL NEW WATER SERVICE ASSEMBLY, US-15	NO
UPGRADE / RELOCATE EXISTING WATER SERVICE ASSEMBLY	YES

**CONSTRUCTION NOTES:**

1. INSTALL ±30 LF NEW ELECTRICAL SERVICE W/ CONDUIT.
2. INSTALL NEW 3" PVC DRAIN LINE WITH PVC "P" TRAP ROTATE AND INSTALL FLUSH AGAINST WALL INSIDE WET WELL. SEAL WITH NON-SHRINK GROUT. SEAM AND SEAL TO MATCH LINER IN WET WELL. WALL PENETRATION TO BE MADE BY MECHANICAL ROTARY CORE BORING. (P-TRAP ROTATED IN DRAWING FOR CLARITY).
3. REMOVE AND INSTALL ALL NEW ELECTRICAL STRUCTURE (RACK), NEW CONTROL PANEL FOLLOWING THE 2015 CONTROL PANEL LAYOUT, A METER CAN, AND SAFETY SWITCH (DISCONNECT). ALL INTERNAL ELECTRONIC AND EQUIPMENT SHALL BE PER THE CURRENT COUNTY REQUIREMENTS. NEW ELECTRICAL STRUCTURE SHALL BE FIELD LOCATED WITH MANATEE COUNTY PERSONNEL.  
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 NEW PRECAST TYPE-II REINFORCED CONCRETE WET WELL BARRIER SECTION; OR FORM POUR CONCRETE AND REINFORCE WITH REBAR, EPOXY DOWELS INTO EXISTING STRUCTURE TO RAISE TOP ELEVATION OF NEW TOP SLAB.
5. INSTALL (2)-1½ to 3½ CONVERTER IN CONTROL PANEL. CONTRACTOR TO SUBMIT SHOP DRAWING FOR APPROVAL.
6. REPAIR CONCRETE WALLS, AS NEEDED, IN WET WELL, 2" MIN. THICK OVER EXISTING REBAR. (±145 SF). ALL REPAIRS TO BE VERIFIED W/ COUNTY PERSONNEL PRIOR TO WORK.
7. WET WELL CONCRETE WALLS SHALL BE INSPECTED BY COUNTY PERSONNEL PRIOR TO INSTALLATION OF NEW SPRAY LINER AND/OR LINER REPAIR.
8. 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.

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

NO.	REVISION DESCRIPTION	BY	DATE

**SATELLITE LIFT STATION R&R  
2020 GROUP 1  
MANATEE PALMS 2 (REHAB)**

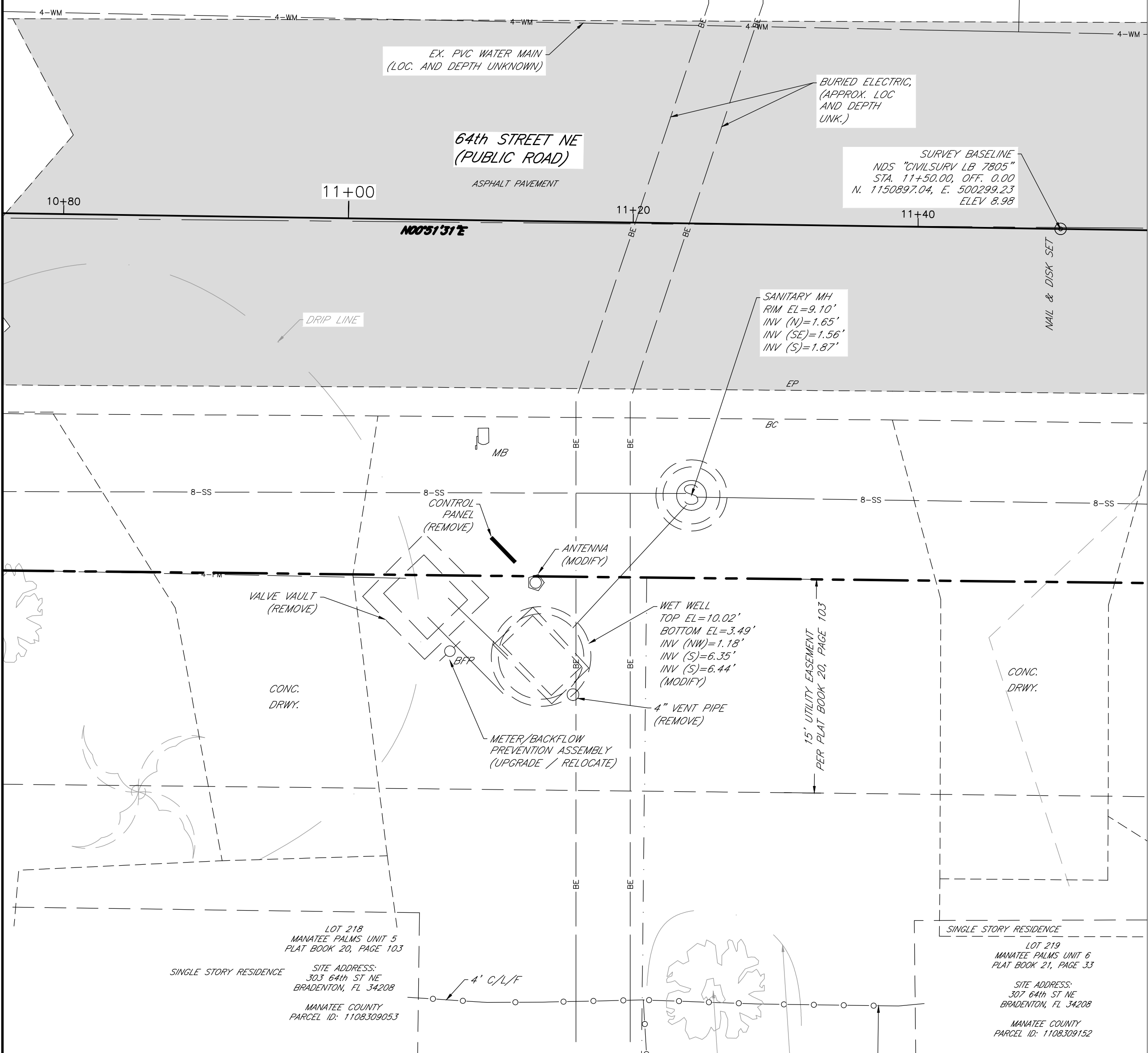


PROJECT #	402-0019707
SURVEY #	-
SEC./TWN./RGE	26/34/18
SCALE	N.T.S.
BY	DATE
SURVEYED	----
DESIGNED	JSS 02/2020
DRAWN	CAK 02/2020
CHECKED	JSS 02/2020

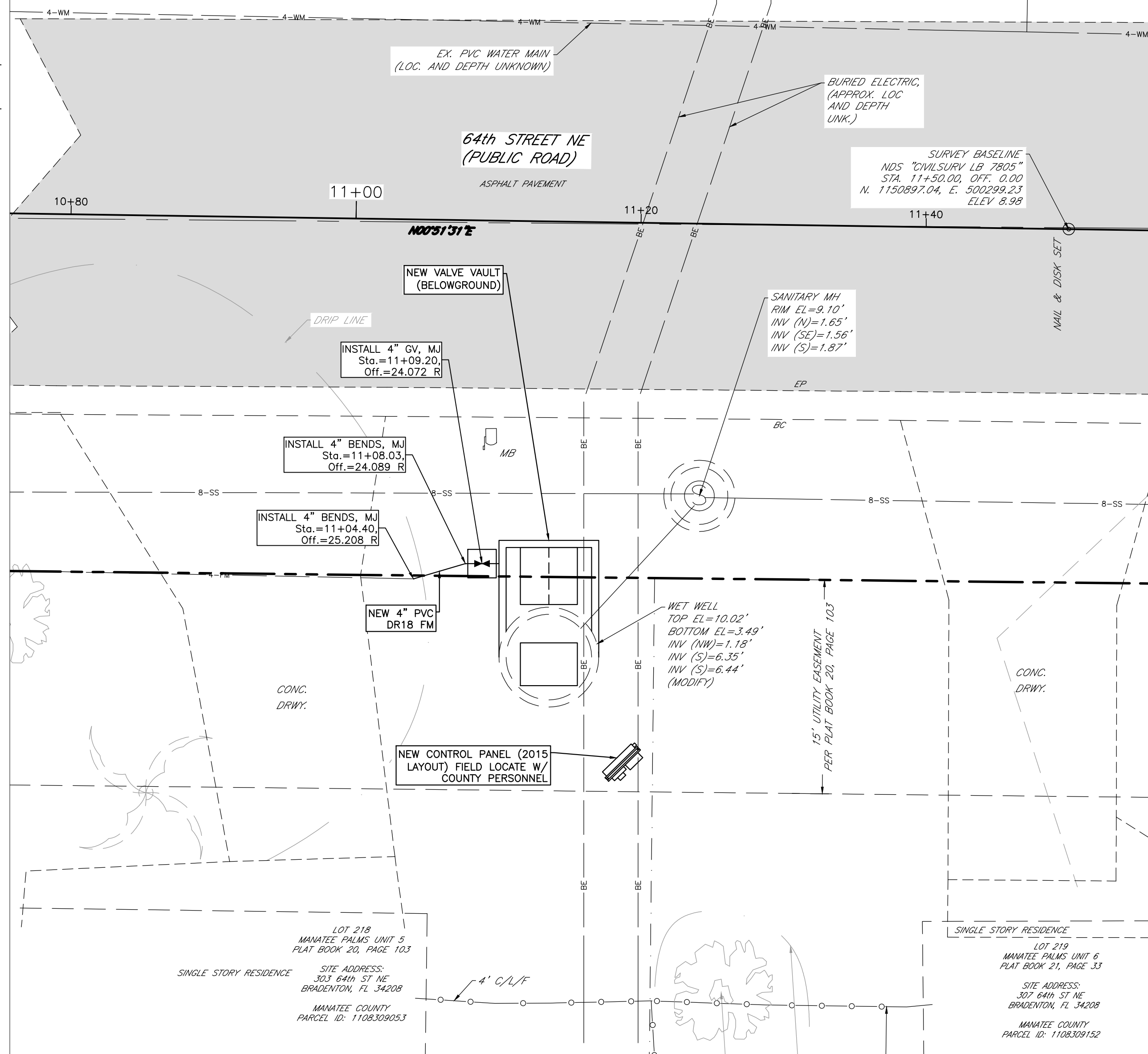
JOHN S. SHOUN, P.E.  
FLORIDA PROFESSIONAL ENGINEER  
No. 60923  
DATE: 06/25/2020  
SHEET 03 OF 11

C:\Users\ashoun\OneDrive - Manatee County Government\CADD\SWP Proj\2020 Group 1\Manatee Palms 2 (REHAB)\_6/25/2020 9:15 AM Sheet Status: P1, ANSI (1) Size: D (34.00 x 22.00 inches), W6-2018.rvt

# EXISTING

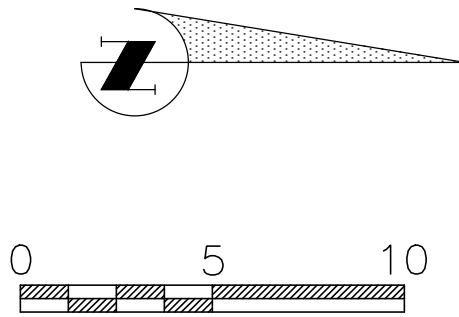


# PROPOSED



**CONSTRUCTION NOTES:**

- EXISTING CONCRETE DRIVEWAY AND/OR EXISTING STRUCTURE SHALL BE PROTECTED.
- COORDINATION WITH THE ADJACENT HOMEOWNER AND/OR RESIDENCES SHALL TAKE PLACE PRIOR TO PLACING EQUIPMENT AND/OR MATERIALS ON THE PROJECT AREA.
- BY-PASS PUMPING SHALL UTILIZE HEAVY-DUTY SOUND ATTENUATION ENCLOSURES (QUIET PACKS).
- REPLACE EXISTING WATER SERVICE SADDLE AND CORPORATION AND INSTALL A BRASS PLUG IN NEW CORPORATION. REUSE EXISTING HOLE IN MAIN, IF ADEQUATE VALVING EXISTS.(±50 LF).
- REPLACE EXISTING WATER SERVICE SADDLE AND CORPORATION AND INSTALL A BRASS PLUG IN NEW CORPORATION. REUSE EXISTING HOLE IN MAIN, IF ADEQUATE VALVING EXISTS.
- CONTRACTOR TO REGRADE SITE TO ALLOW FOR A POSITIVE DRAINAGE SLOPE AWAY FROM THE LIFT STATION AREA. MAXIMUM OF 1% SLOPE.



**CIVLSURV DESIGN GROUP, INC. (TIMOTHY A MORRIS, PSM #7261)**  
 Surveyor's Notes:

- 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 "COB 1062" (PID: D06946) and "LAKE" (PID: DM6802) were utilized as control for this survey.
- Elevations shown are relative to North American Vertical Datum of 1988 (NAVD 88) and are based on National Geodetic Survey benchmarks "330415 A" (PID: DP6501) (published elevation 10.41') and "330415 B" (PID: DP6602) (published elevation 8.72'). Add 0.96' to the published NAVD 1988 elevations to convert to NGVD 1929. This conversion was determined by using the National Geodetic Survey program VERTCON.
- 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.
- Regarding Lot 219, located in the plot of Manatee Palms Unit Six, recorded in Plat Book 21, Page 33 of the public records of Manatee County, Florida: I have reviewed the Title Search Report by American Government Services Corporation (AGSC Search Number 29774-1), effective from 1935 through January 10, 2020 at 8:00 a.m. Items 1 and 2 listed under the Encumbrances of said Title Search Report are not survey related. Item 3 listed under Encumbrances of said Title Search Report has been shown and noted hereon.
- Regarding Lot 218, located in the plot of Manatee Palms Unit Five, recorded in Plat Book 20, Page 103 of the public records of Manatee County, Florida: I have reviewed the Title Search Report by American Government Services Corporation (AGSC Search Number 29774-2), effective from 1935 through January 10, 2020 at 8:00 a.m. Items 1 and 2 listed under the Encumbrances of said Title Search Report are not survey related. Item 3 listed under Encumbrances of said Title Search Report has been shown and noted hereon.
- The adjoining owner information shown hereon were taken from the Manatee County Tax Rolls.
- This electronic drawing file is not complete without the accompanying Surveyor's Report.
- The intended display scale of this drawing is 1"=20'.
- Abbreviations shown hereon are from Manatee County.
- 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 12081C0326E, 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.

NO.	REVISION DESCRIPTION	BY	DATE

## SATELLITE LIFT STATION R&R 2020 GROUP 1 MANATEE PALMS 2 (SITE)



PROJECT #	402-0019707
SURVEY #	-
SEC./TWN./RGE	26/34/19
SCALE	SEE PLAN
SURVEYED	CIVLSURV 2/2020
DESIGNED	JSS 02/2020
DRAWN	CAK 02/2020
CHECKED	JSS 02/2020

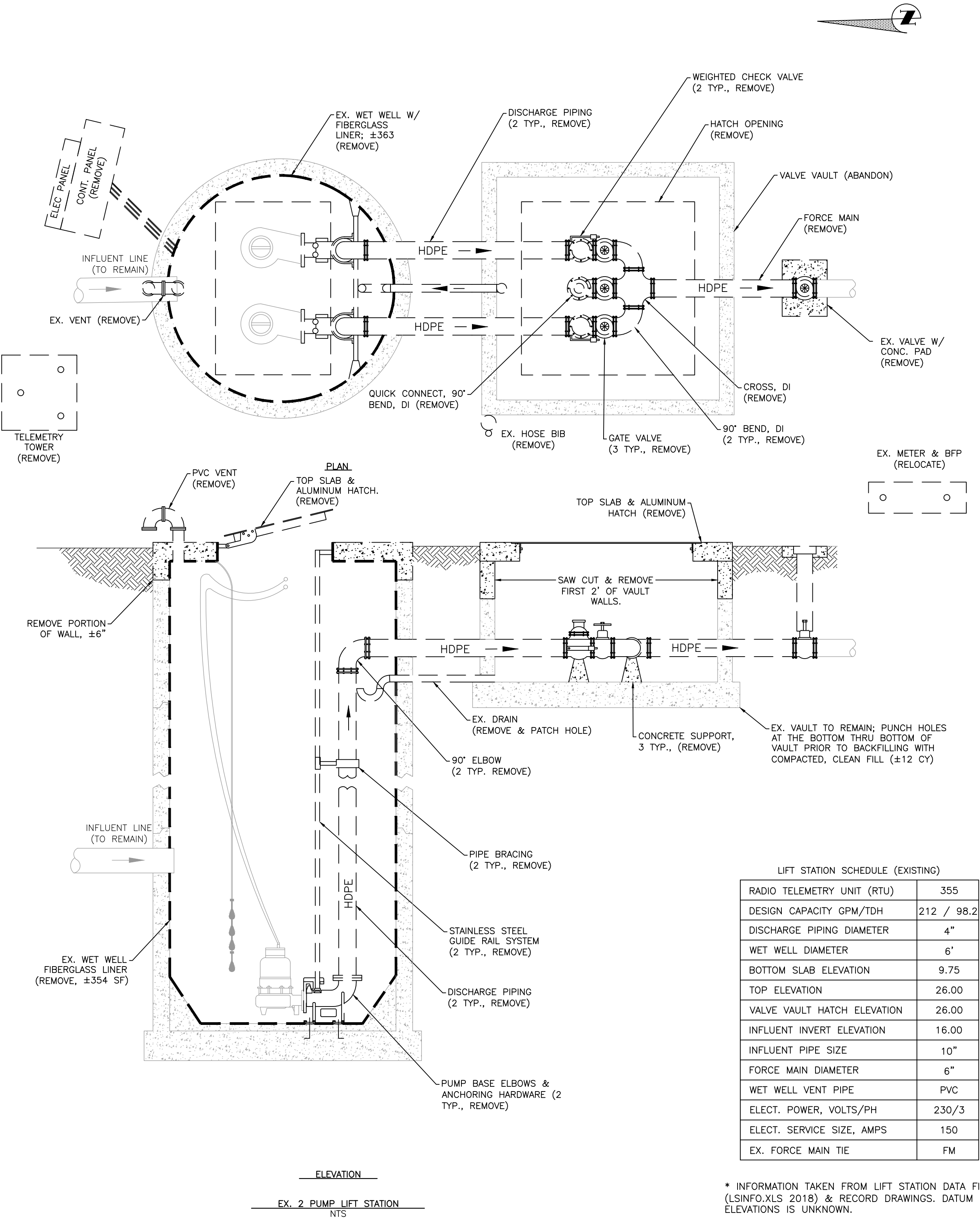
JOHN S. SHOUN, P.E.  
 LICENSE NO. 60923  
 STATE OF FLORIDA  
 PROFESSIONAL ENGINEER  
 Date: \_\_\_\_\_

C:\Users\ashoun\OneDrive - Manatee County Government\CS\SWP Proj\2020 Group 1\Upgrades\PLMS 2\Site\1\06/25/2020 8:19 AM Shou\_Swp\_11.dwg\MANATEE PALMS 2 (SITE).dwg (Scale: 1"=20.00 feet), MC-2016.05.05

# EXISTING

**NOTES:**

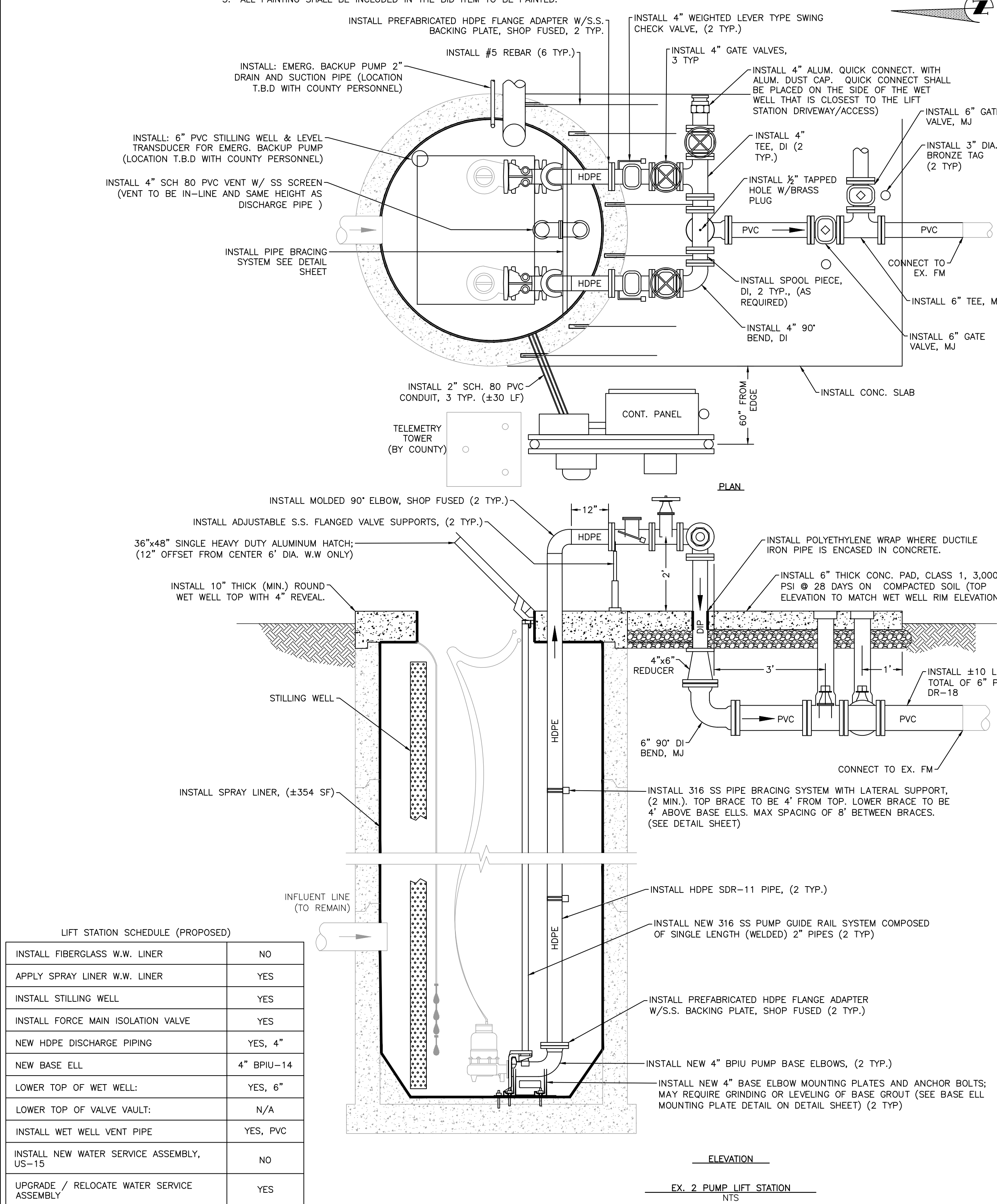
1. THE WET WELL AND VALVE VAULT CONFIGURATION SHOWN ON THESE GRAPHICS IS FOR IDENTIFICATION OF COMPONENTS TO BE REMOVED. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, ELEVATIONS, CONFIGURATION, ETC. FOR ACCURACY.
2. THE CONTRACTOR/BIDDER SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS.
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.



# PROPOSED

**GENERAL NOTES:**

1. 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.
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 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 & PIPING SHALL BE PAINTED, RUSTOLEUM 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.



**CONSTRUCTION NOTES:**

1. FPL TO INSTALL NEW ELECTRICAL DROP AND NEW HANDHOLE AT BASE OF EXISTING POWER POLE.
2. INSTALL #35 LF NEW ELECTRICAL SERVICE.
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). NEW ELECTRICAL STRUCTURE SHALL BE FIELD LOCATED 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 #5 REBAR (6 TYP.) EPOXY EMBEDDED INTO THE WET WELL TOP 3-4 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 BARRIER (±150 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.
7. CONTRACTOR SHALL SEPARATE THE TELEMETRY TOWER FROM CONCRETE BASE AND SET TO SIDE OF LIFT STATION SITE. CONTRACTOR SHALL REMOVE AND DISPOSE OF CONCRETE BASE. CONTRACTOR SHALL INSTALL NEW TELEMETRY ANTENNA.
8. REPAIR CONCRETE WALLS, AS NEEDED, IN WETWELL, 2" MIN. THICK OVER EXISTING REBAR, (±177 SF). ALL REPAIRS TO BE VERIFIED W/ COUNTY PERSONNEL PRIOR TO WORK.
9. WET WELL CONCRETE WALLS SHALL BE INSPECTED BY COUNTY PERSONNEL PRIOR TO INSTALLATION OF NEW SPRAY LINER AND/OR LINER REPAIR.
10. 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.

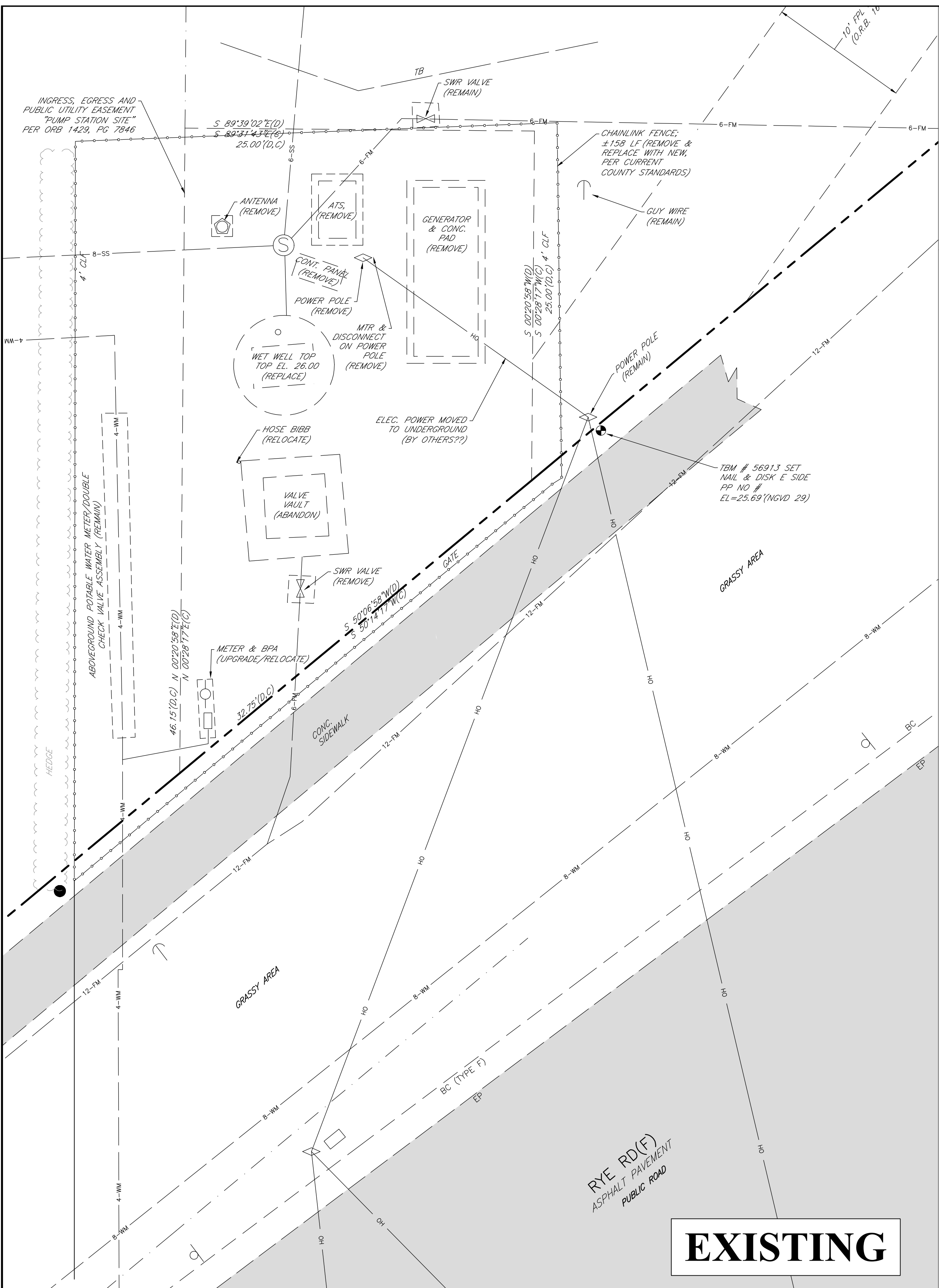
## SATELLITE LIFT STATION R&R 2020 GROUP 1 RYE RD SCHOOL (REHAB)



PROJECT #	402-0019707
SURVEY #	-
SEC./TWN./RGE	26/34/19
SCALE	N.T.S.
BY	DATE
SURVEYED	----
DESIGNED	JSS 02/2020
DRAWN	CAK 02/2020
CHECKED	JSS 02/2020

JOHN S. SHOUN, P.E.  
FLORIDA LICENSE No. 60923  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER  
Signature & Date

NO.	REVISION DESCRIPTION	BY	DATE



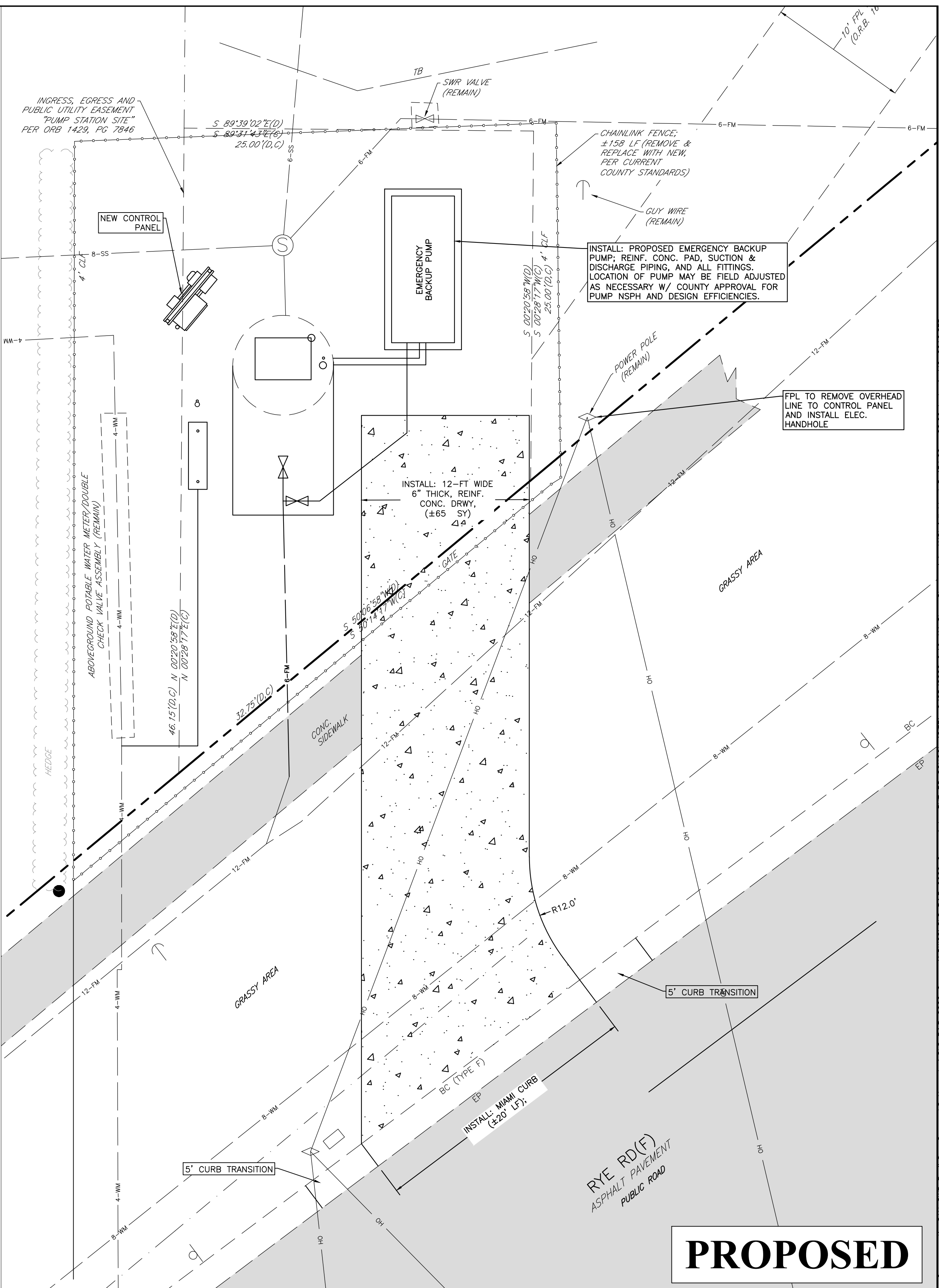
**EXISTING**

**CONSTRUCTION NOTES:**

1. THIS IS NOT A SURVEY. THE ILLUSTRATED PROJECT SITE WAS TAKEN FROM AN EXISTING DRAWING, ALL ITEMS ARE CONSIDERED APPROXIMATE.
2. 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.
3. REPLACE EXISTING WATER SERVICE SADDLE AND CORPORATION AND INSTALL A BRASS PLUG IN NEW CORPORATION. REUSE EXISTING HOLE IN MAIN, IF ADEQUATE VALVING EXISTS. (±23 LF).
4. REPLACE EXISTING WATER SERVICE SADDLE AND CORPORATION AND INSTALL A BRASS PLUG IN NEW CORPORATION. REUSE EXISTING HOLE IN MAIN, IF ADEQUATE VALVING EXISTS.
5. INSTALL NEW 6'-FT HIGH BLACK VINYL CHAIN-LINK FENCE (±146 LF) W/ MATCHING DECORATIVE SLATS WITH A 18'-FT WIDE CANTILEVER GATE (OPEN SOUTH). CONTRACTOR TO VERIFY REQUIRED GATE WIDTH.

**EMERGENCY BACKUP PUMP NOTES:**

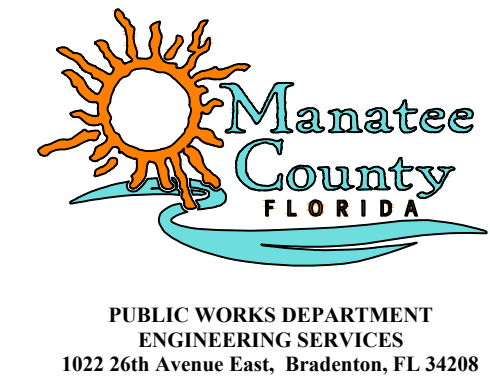
1. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE SIZING, FURNISHING, AND INSTALLING AN EMERGENCY BACKUP PUMP; THIS SHALL INCLUDE ALL PIPING AND FITTINGS OF THE SUCTION AND DISCHARGE SIDE OF THE PUMP FROM THE WET WELL AND TO THE ISOLATION GATE VALVE (CONNECTION POINT) TO ENSURE THE MOST EFFICIENT DESIGN. THE COUNTY SHALL SUPPLY ALL 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 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.



**PROPOSED**

NO.	REVISION DESCRIPTION	BY	DATE

**SATELLITE LIFT STATION R&R  
2020 GROUP 1  
RYE RD SCHOOL (SITE)**



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

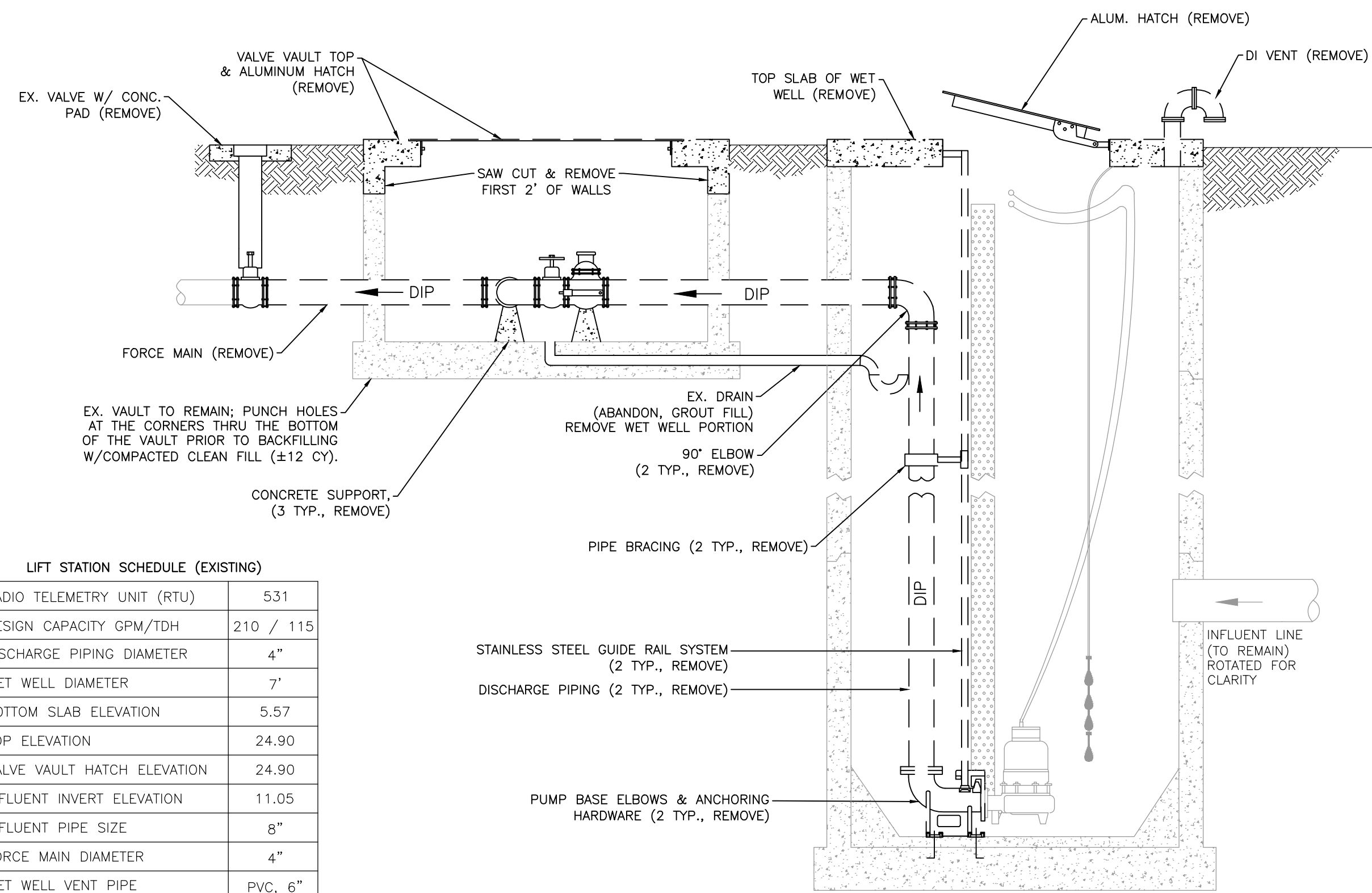
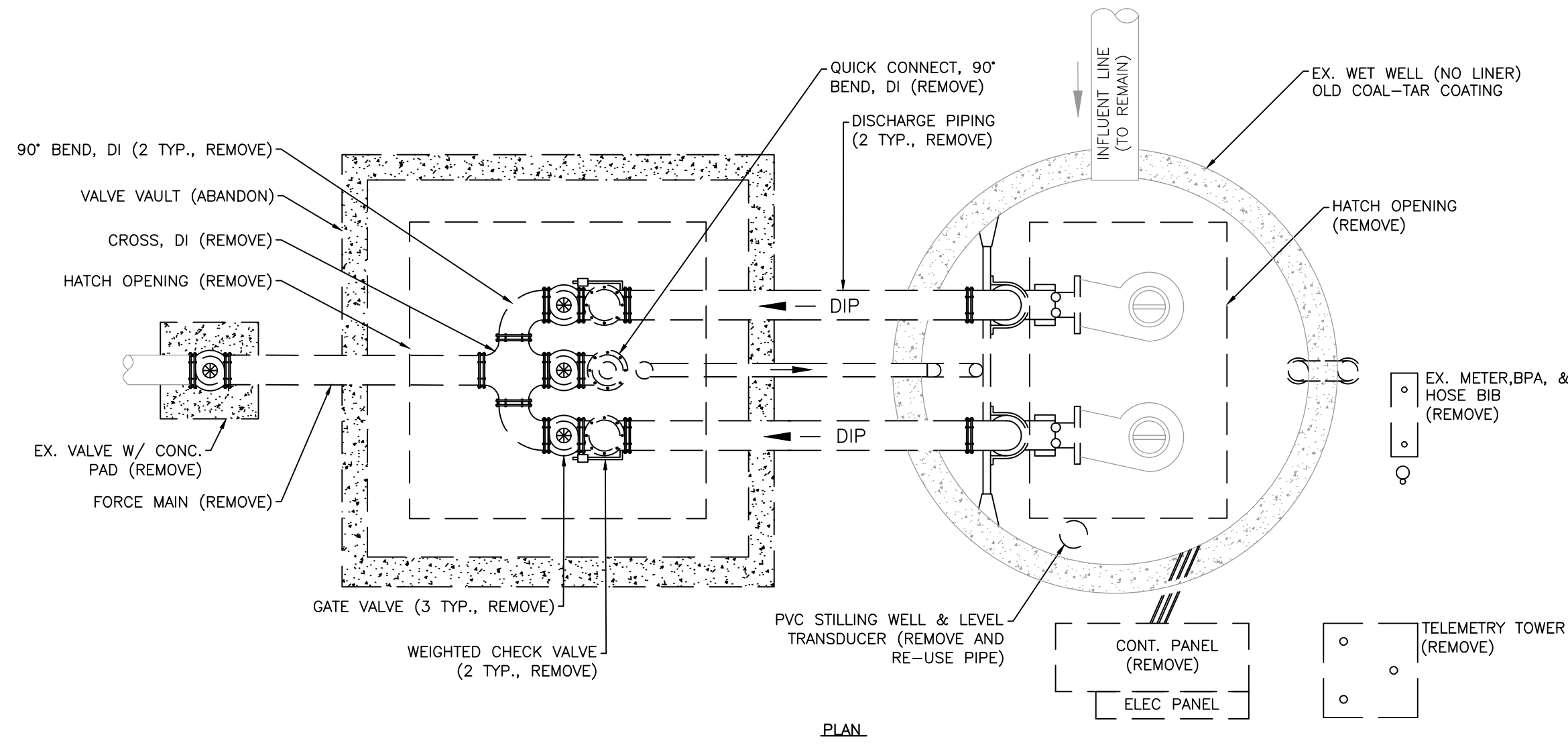
PROJECT #	402-0019707
SURVEY #	-
SEC./TWN./RGE	26/34/19
SCALE	SEE PLAN
SURVEYED	---
DESIGNED	JSS 02/2020
DRAWN	CAK 02/2020
CHECKED	JSS 02/2020

JOHN S. SHOUN, P.E.  
No. 60923  
FLORIDA PROFESSIONAL ENGINEER  
STATE OF FLORIDA  
06/25/2020  
Date

**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.



**LIFT STATION SCHEDULE (EXISTING)**

RADIO TELEMETRY UNIT (RTU)	531
DESIGN CAPACITY GPM/TDH	210 / 115
DISCHARGE PIPING DIAMETER	4"
WET WELL DIAMETER	7'
BOTTOM SLAB ELEVATION	5.57
TOP ELEVATION	24.90
VALVE VAULT HATCH ELEVATION	24.90
INFLUENT INVERT ELEVATION	11.05
INFLUENT PIPE SIZE	8"
FORCE MAIN DIAMETER	4"
WET WELL VENT PIPE	PVC, 6"
ELECT. POWER, VOLTS/PH	230/3
ELECT. SERVICE SIZE, AMPS	200
EX. FORCE MAIN TIE	MH

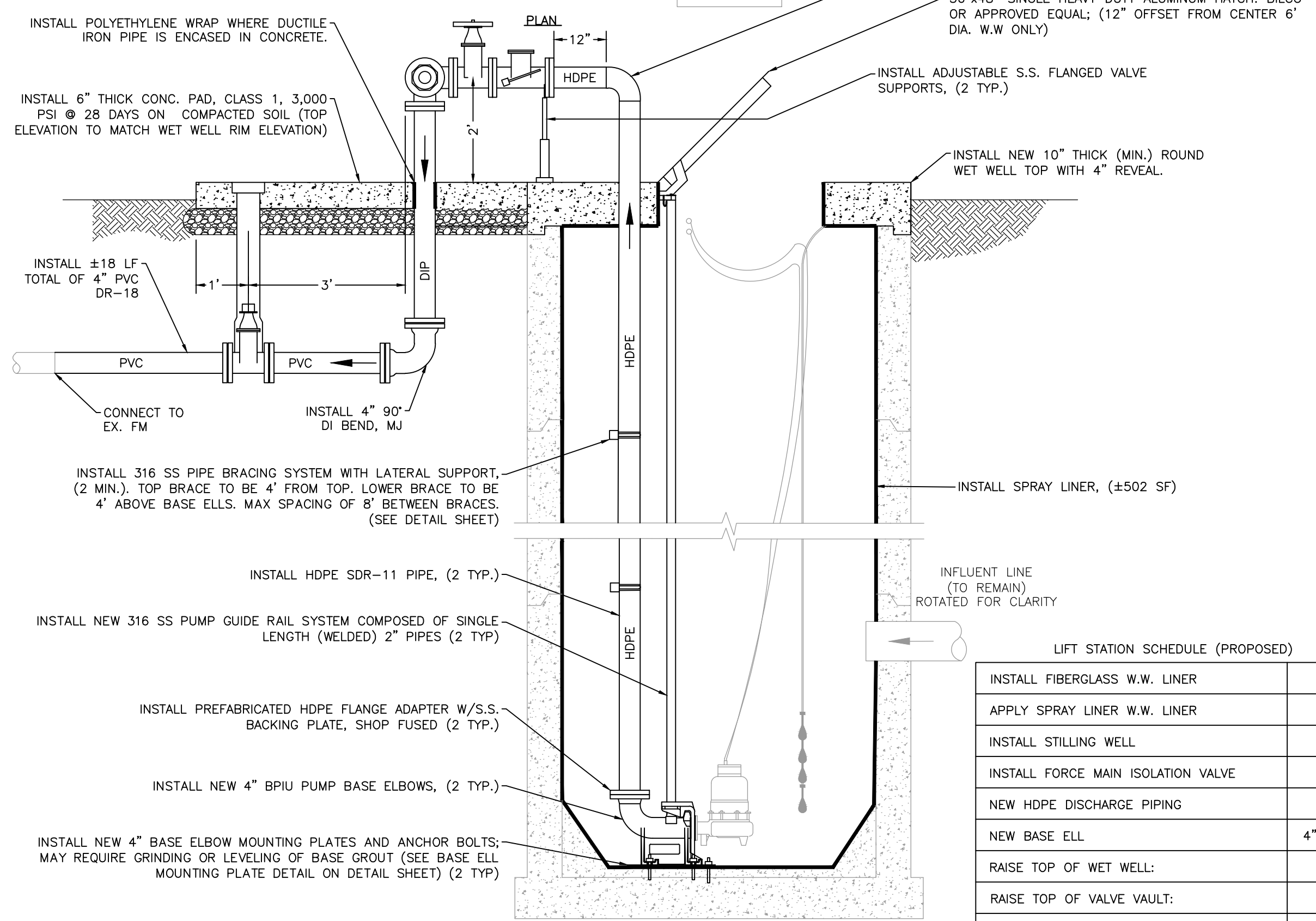
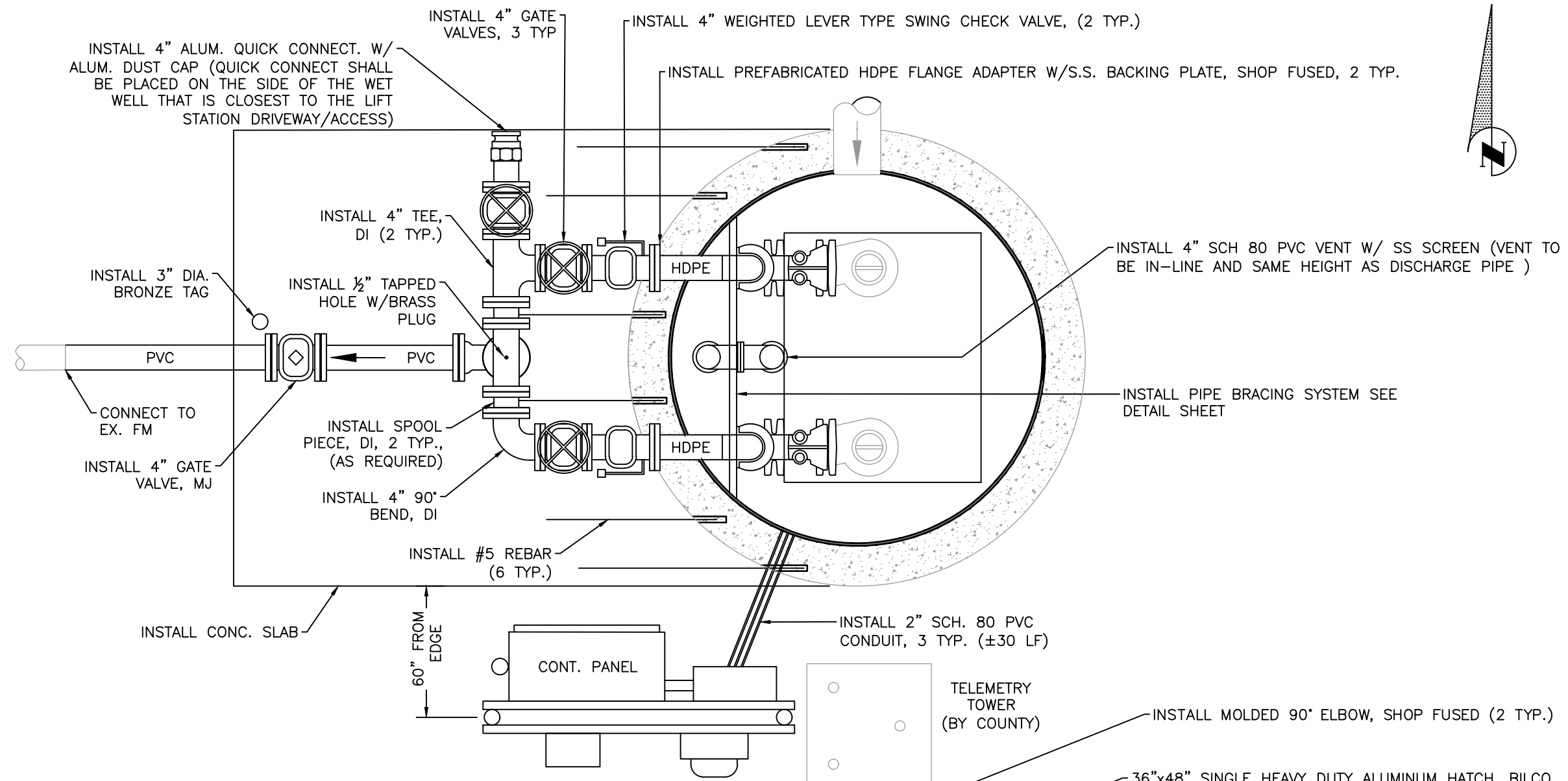
\* INFORMATION TAKEN FROM LIFT STATION DATA FILE (LSINFO.XLS 2018) & RECORD DRAWINGS. DATUM OF ELEVATIONS IS UNKNOWN.

**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. 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.
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 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 & PIPING SHALL BE PAINTED, RUSTOLEUM 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.



**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	YES, 4"
NEW BASE ELL	4" BPIU-14
RAISE TOP OF WET WELL:	NO
RAISE TOP OF VALVE VAULT:	N/A
INSTALL WET WELL VENT PIPE	YES
INSTALL NEW WATER SERVICE ASSEMBLY, US-15	YES
UPGRADE / RELOCATE WATER SERVICE ASSEMBLY	YES

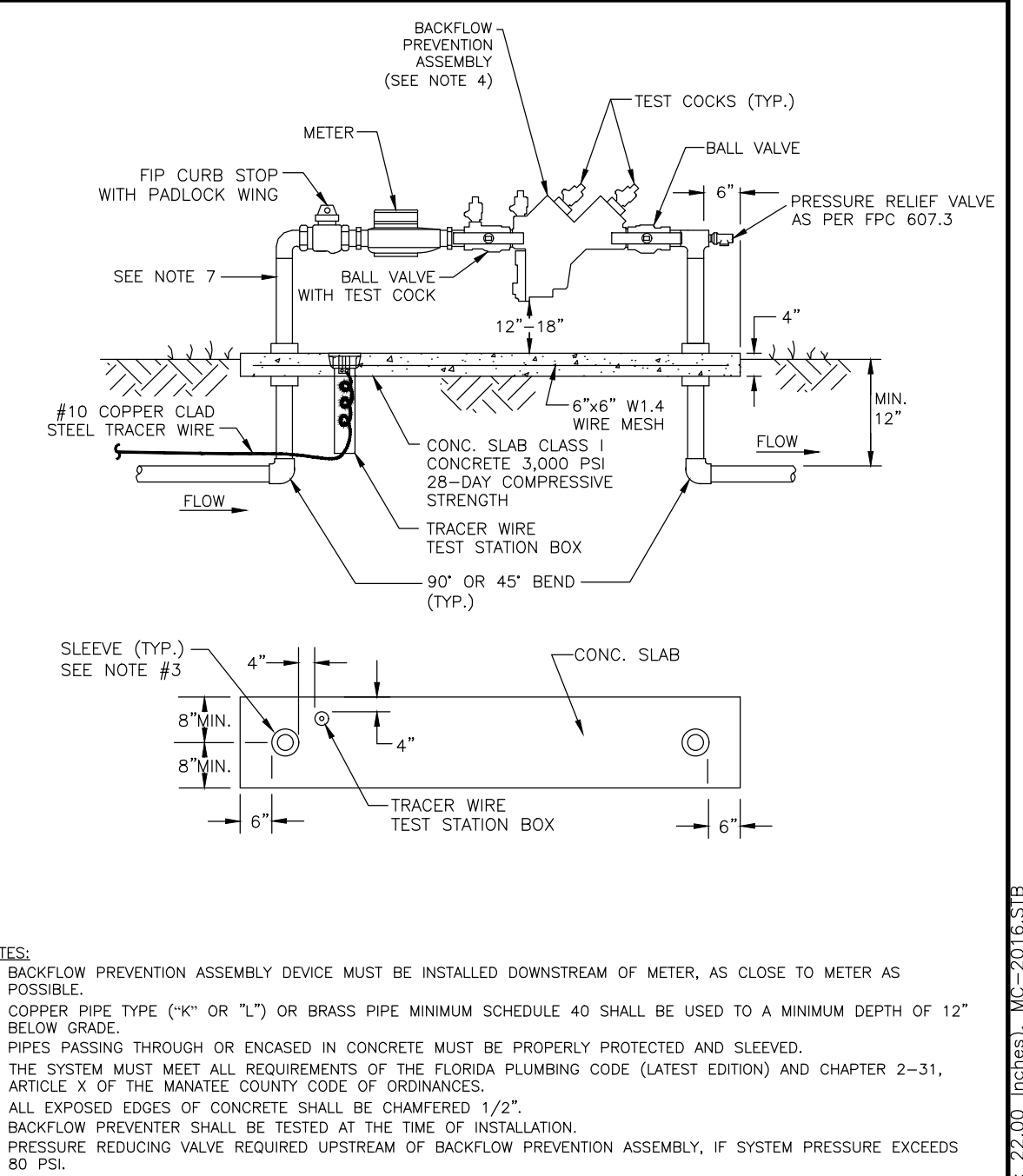
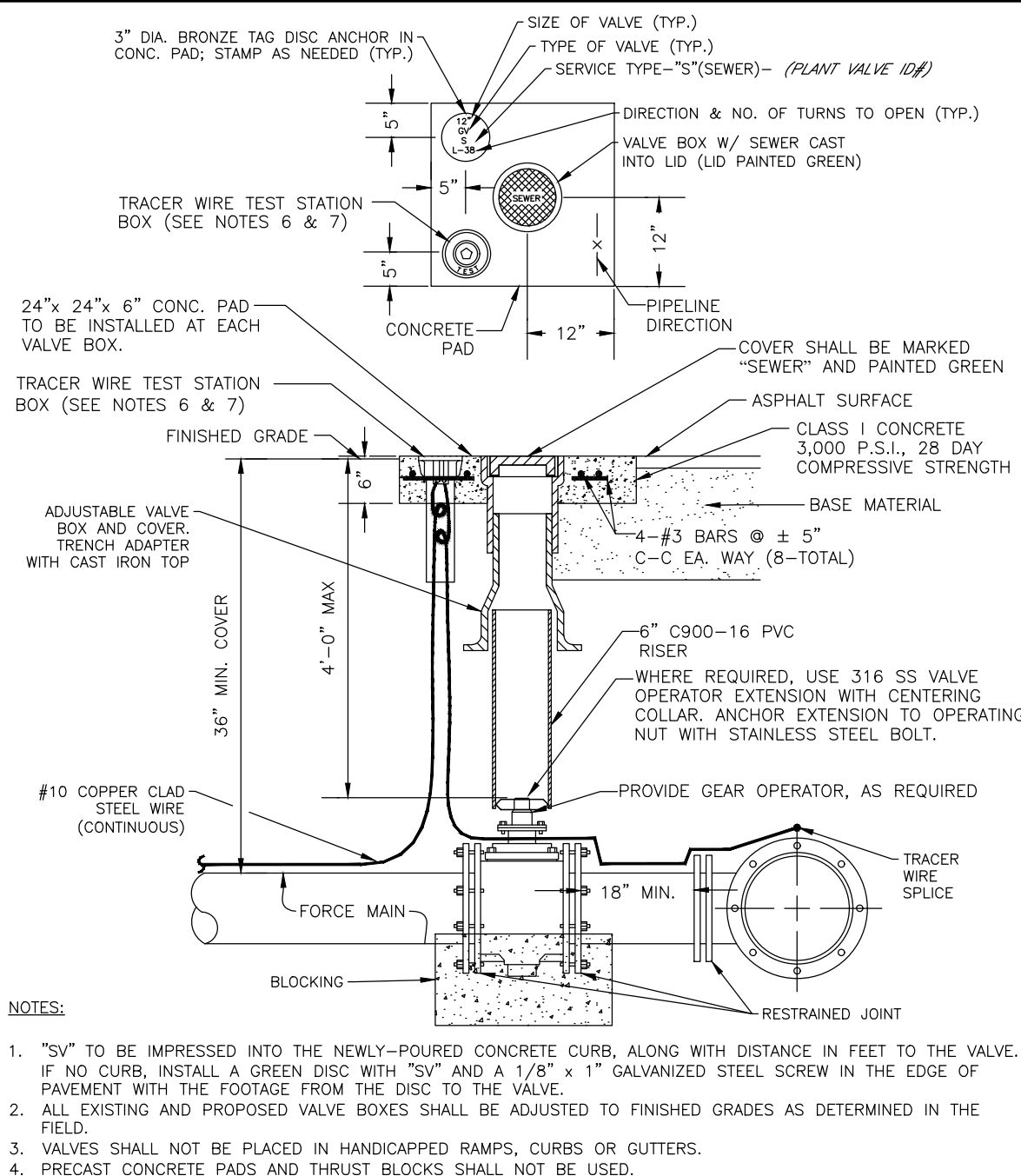
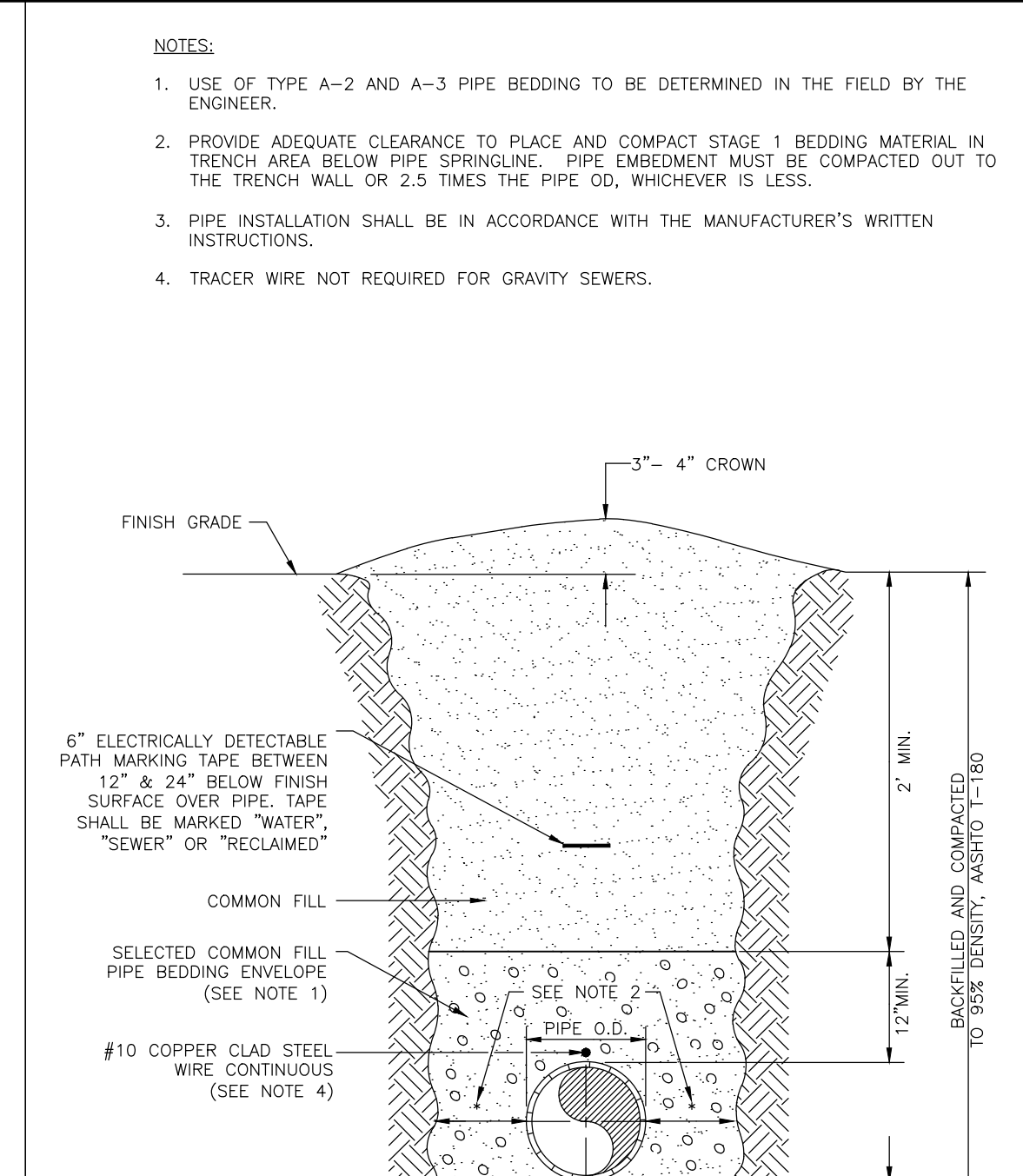
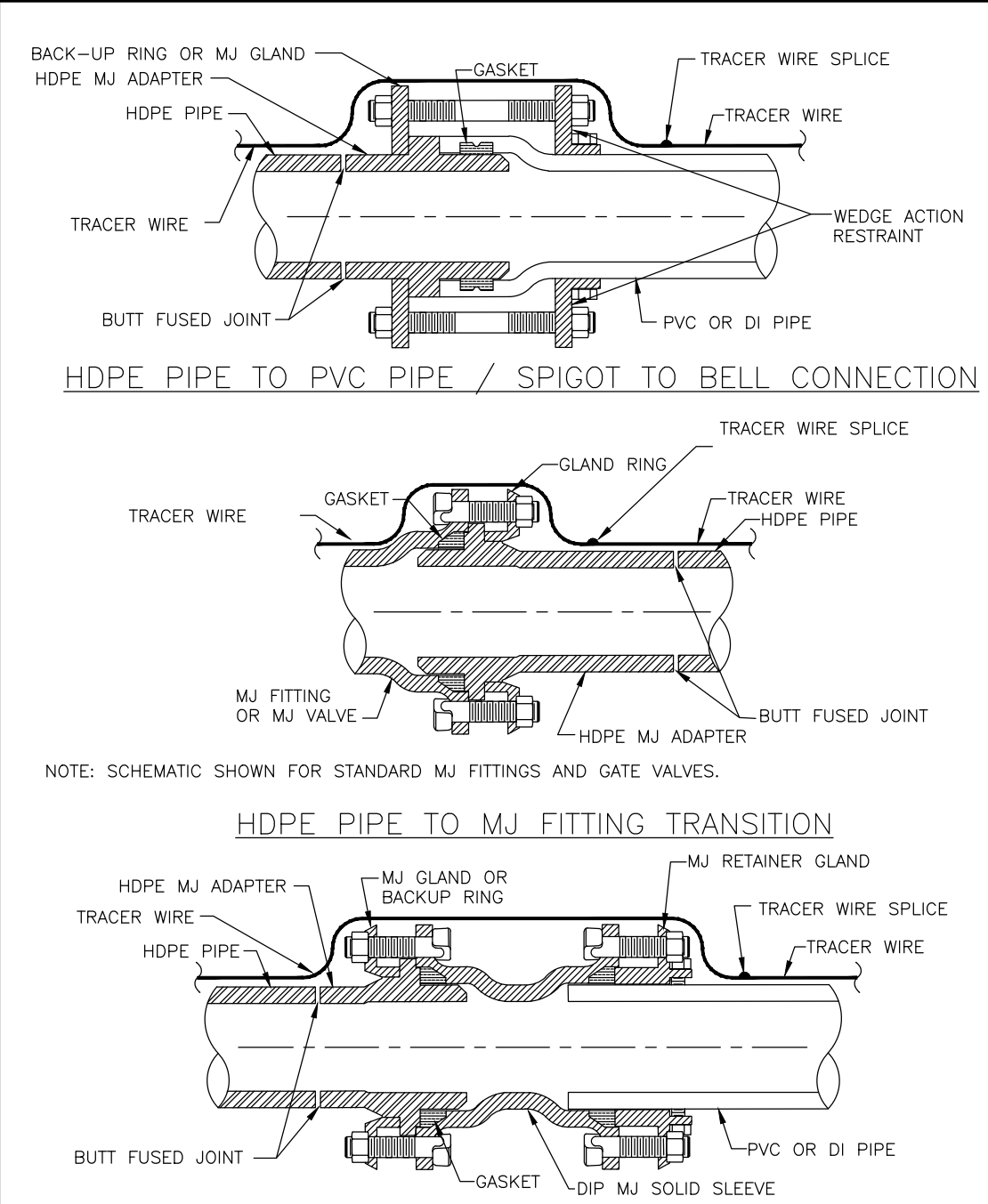
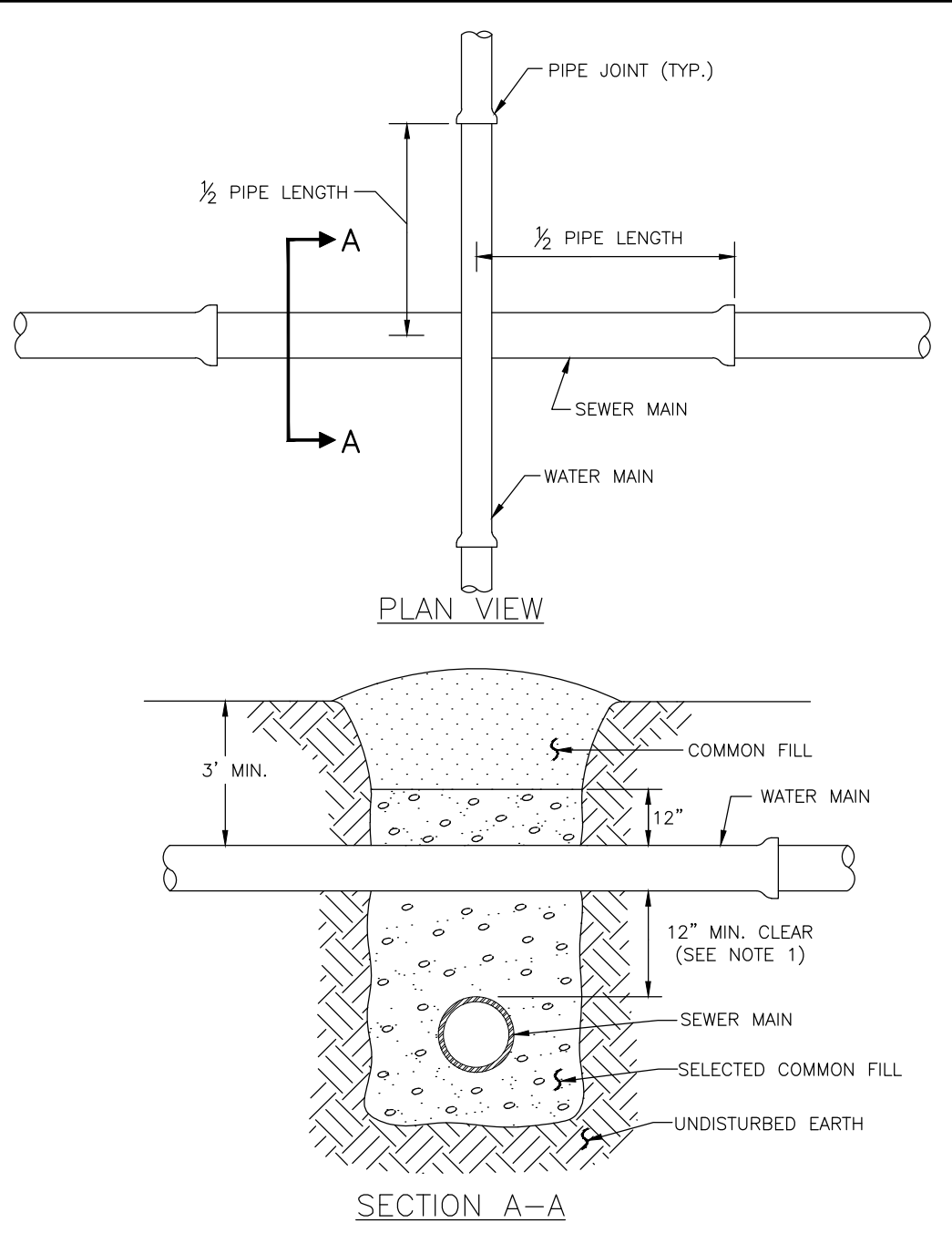
**EX. 2 PUMP LIFT STATION**  
NTS

**SATELLITE LIFT STATION R&R  
2020 GROUP 1  
RIVER WILDERNESS 3 (REHAB)**



PROJECT #	402-0019707
SURVEY #	-
SEC./TWN./RGE	7/34/19
SCALE	N.T.S.
BY	DATE
SURVEYED	----
DESIGNED	JSS 02/2020
DRAWN	CAK 02/2020
CHECKED	JSS 02/2020

JOHN S. SHOUN, P.E.  
FLORIDA PROFESSIONAL ENGINEER  
No. 60923  
DATE: 06/25/2020  
SIGNED: [Signature]



**MANATEE COUNTY**  
PUBLIC WORKS DEPARTMENT

REVISIONS:

REV.	DATE	DESCRIPTION

DATE OF APPROVAL: \_\_\_\_\_

**MANATEE COUNTY**  
PUBLIC WORKS DEPARTMENT

REVISIONS:

REV.	DATE	DESCRIPTION

DATE OF APPROVAL: \_\_\_\_\_

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PUBLIC WORKS DEPARTMENT

REVISIONS:

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PUBLIC WORKS DEPARTMENT

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PUBLIC WORKS DEPARTMENT

REVISIONS:

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PUBLIC WORKS DEPARTMENT

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PUBLIC WORKS DEPARTMENT

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**MANATEE COUNTY**  
PUBLIC WORKS DEPARTMENT

REVISIONS:

REV.	DATE	DESCRIPTION

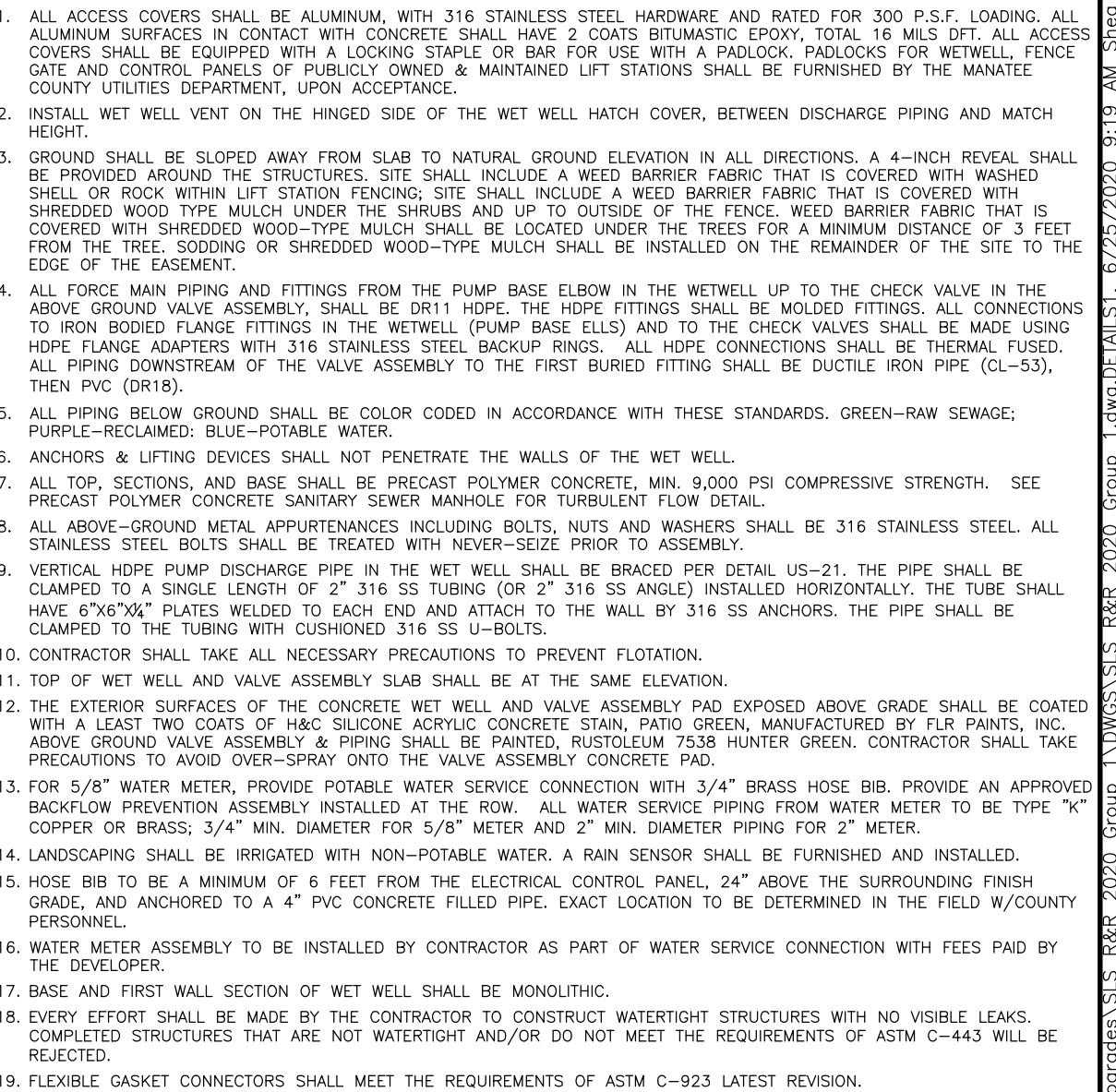
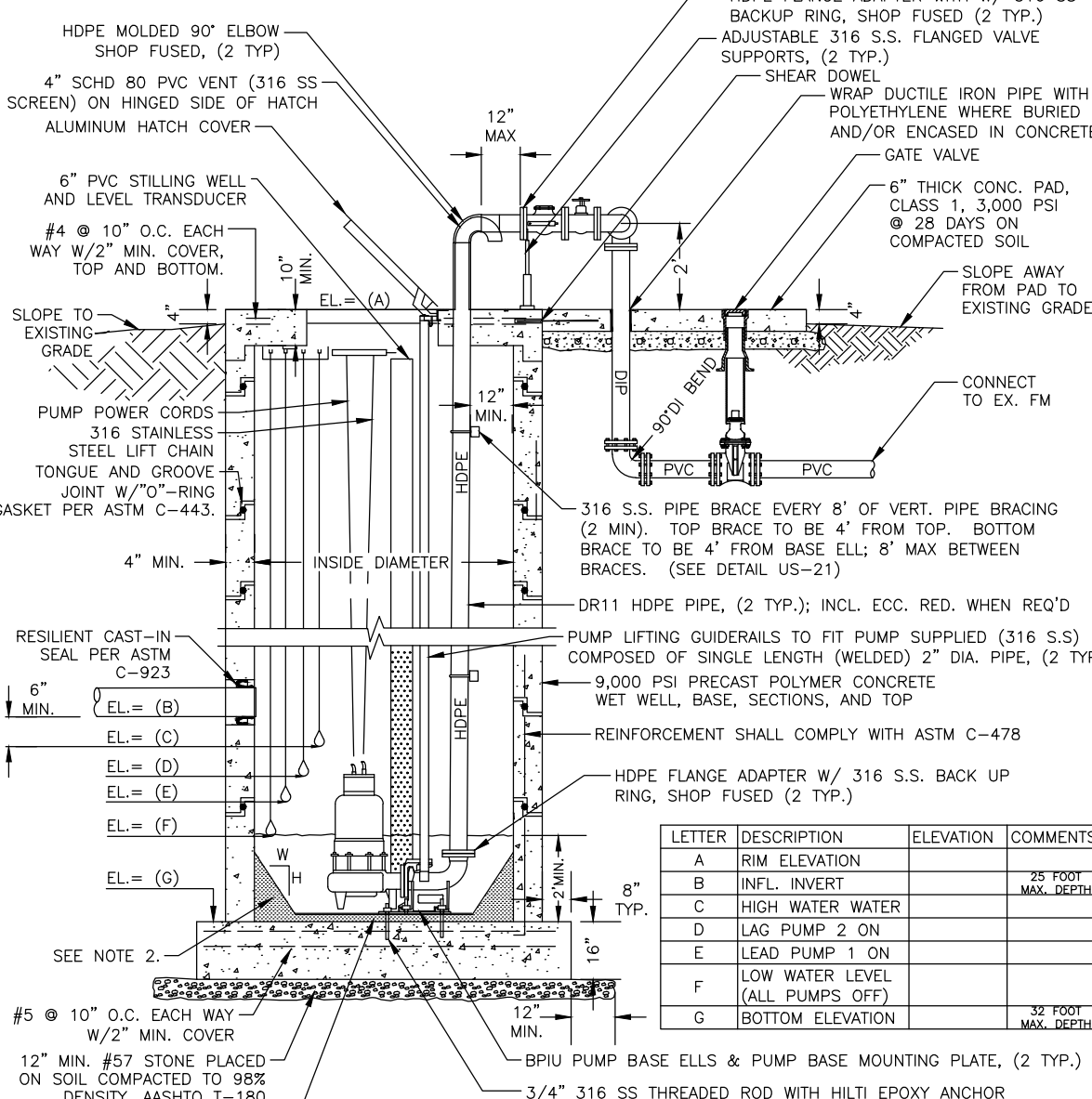
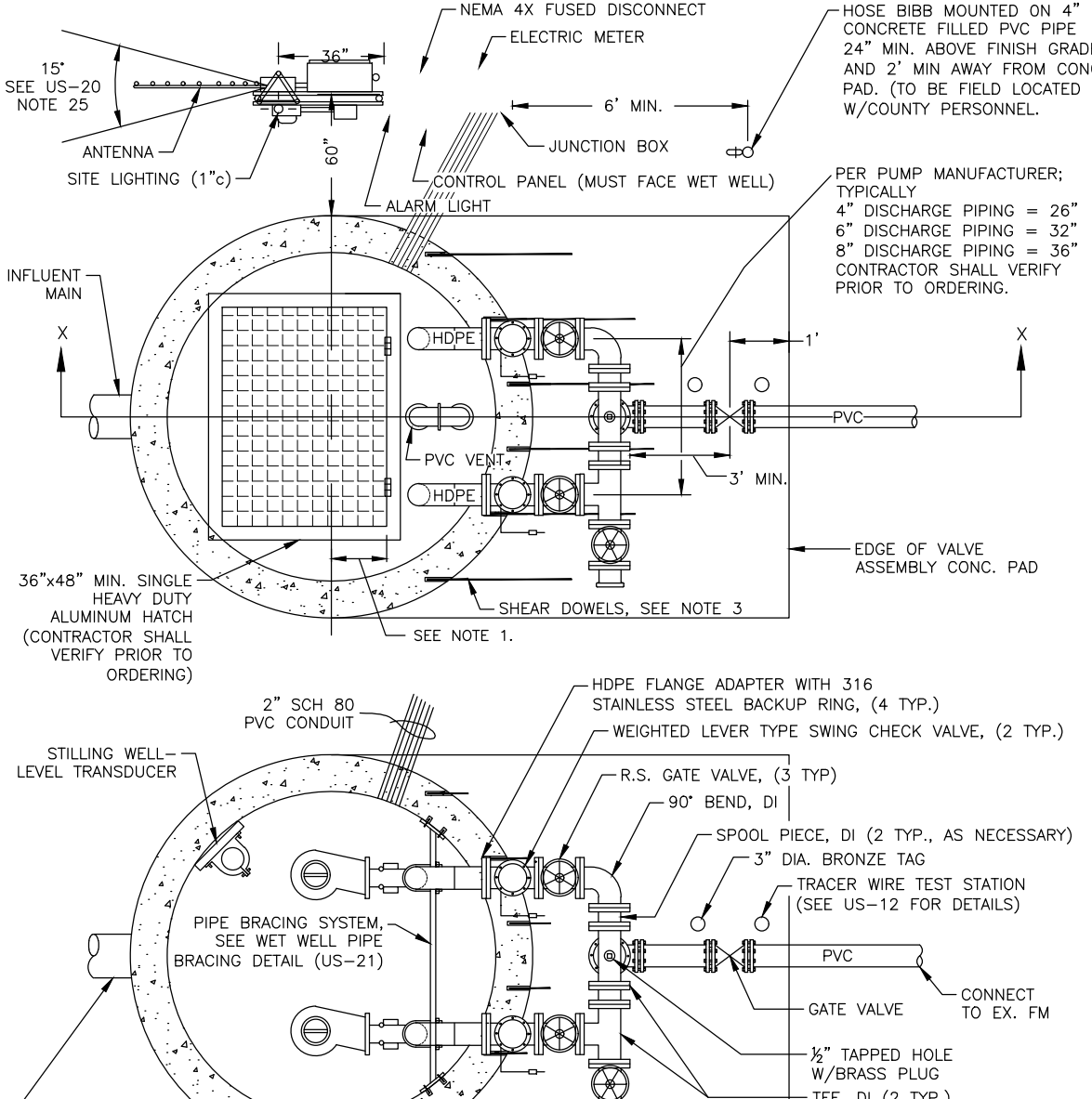
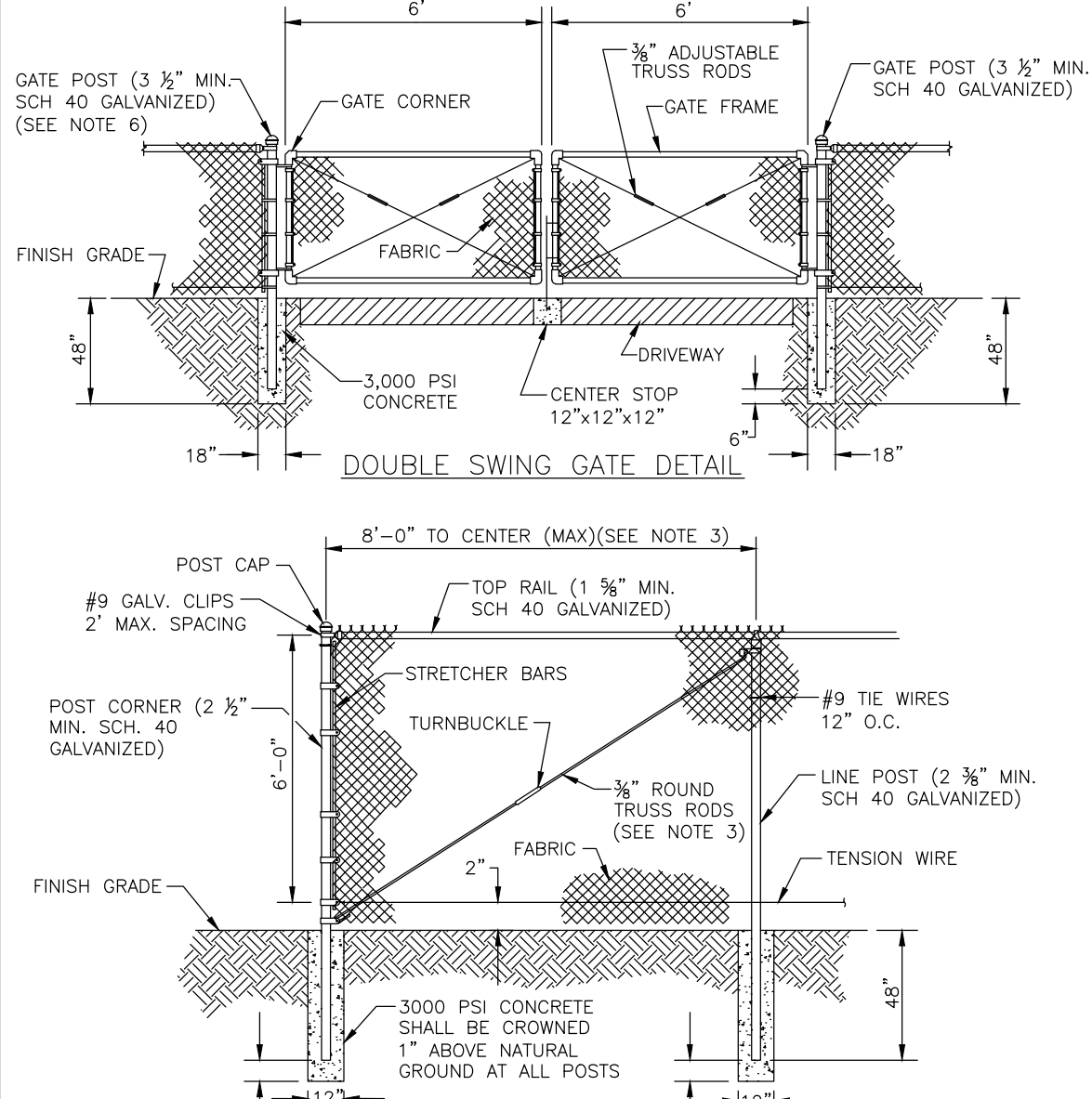
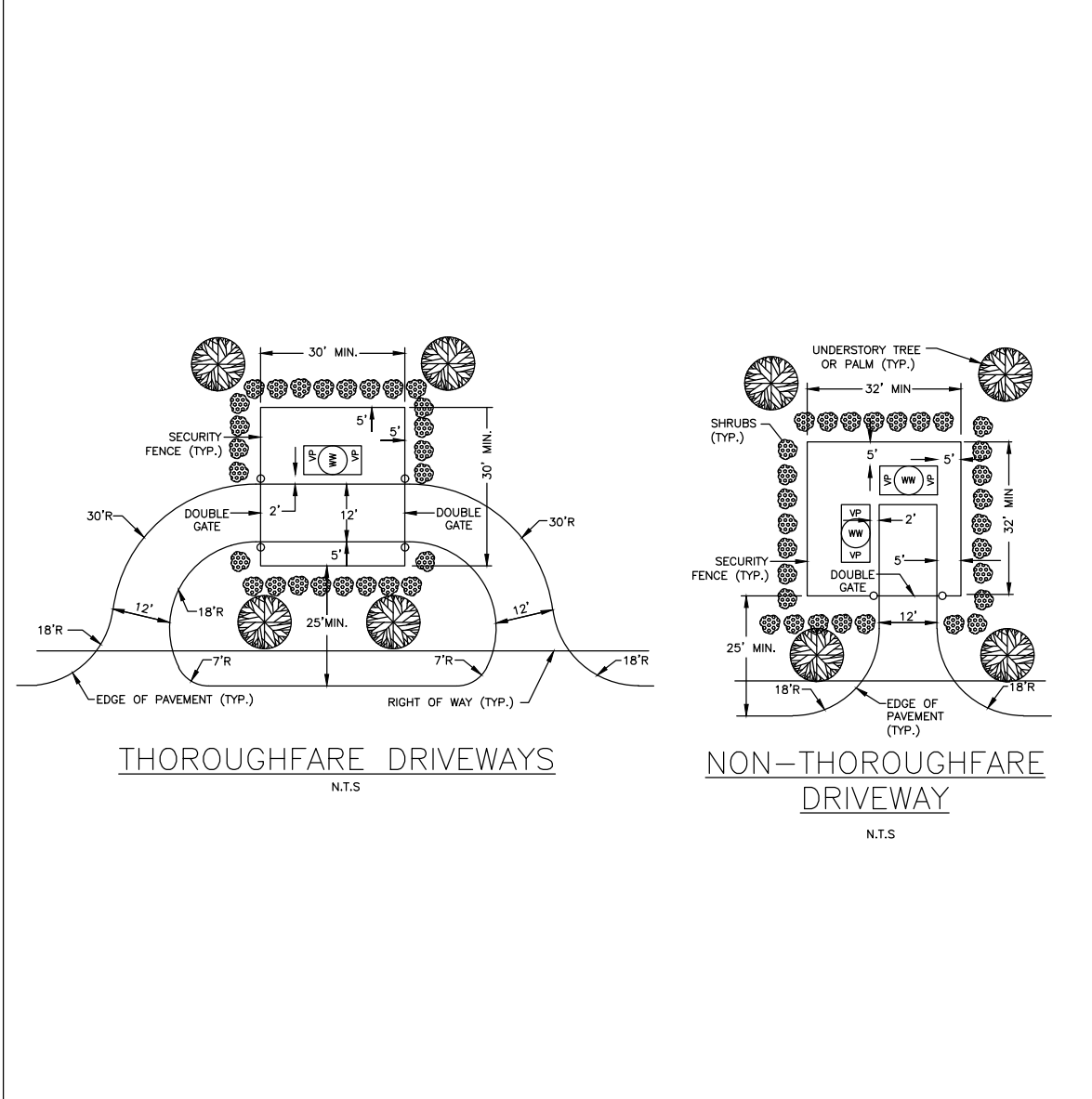
DATE OF APPROVAL: \_\_\_\_\_

**MANATEE COUNTY**  
PUBLIC WORKS DEPARTMENT

REVISIONS:

REV.	DATE	DESCRIPTION

DATE OF APPROVAL: \_\_\_\_\_



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PUBLIC WORKS DEPARTMENT

REVISIONS:

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DATE OF APPROVAL: \_\_\_\_\_

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PUBLIC WORKS DEPARTMENT

REVISIONS:

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PUBLIC WORKS DEPARTMENT

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PUBLIC WORKS DEPARTMENT

REVISIONS:

REV.	DATE	DESCRIPTION

DATE OF APPROVAL: \_\_\_\_\_

**MANATEE COUNTY**  
PUBLIC WORKS DEPARTMENT

REVISIONS:

REV.	DATE	DESCRIPTION

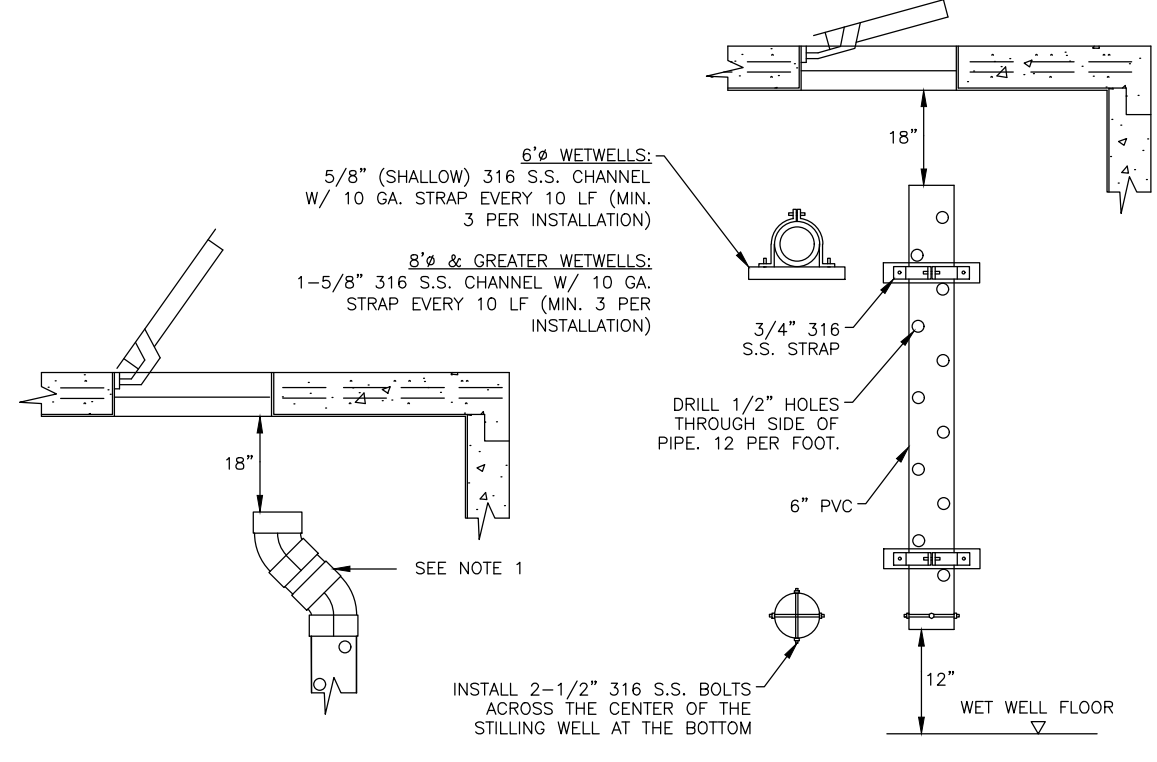
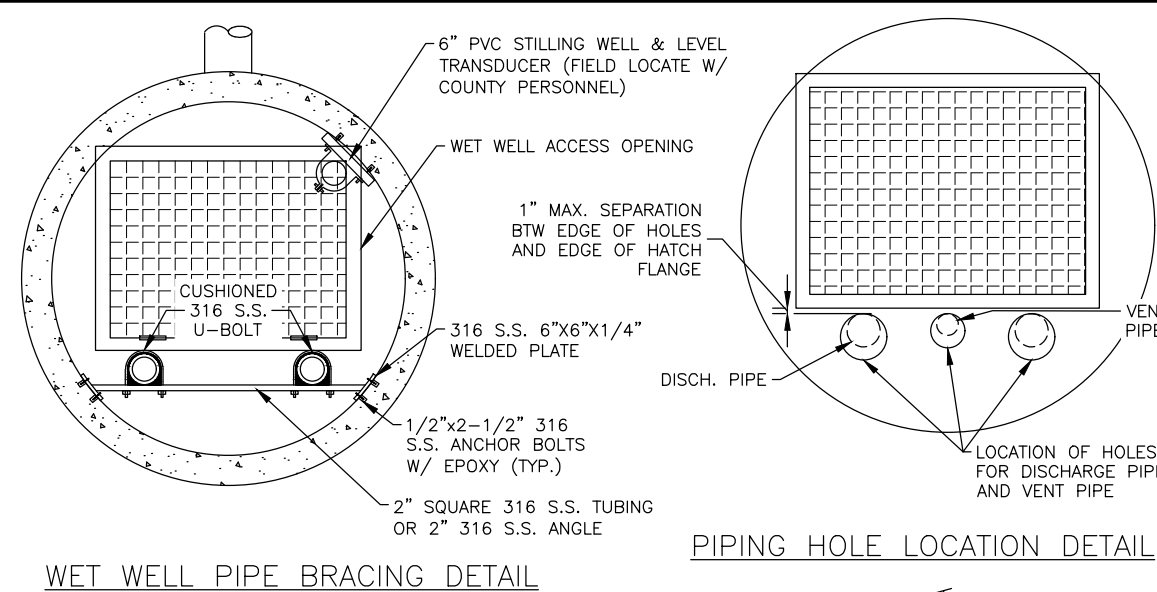
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# SATELLITE LIFT STATION R&R 2020 GROUP 1 DETAILS

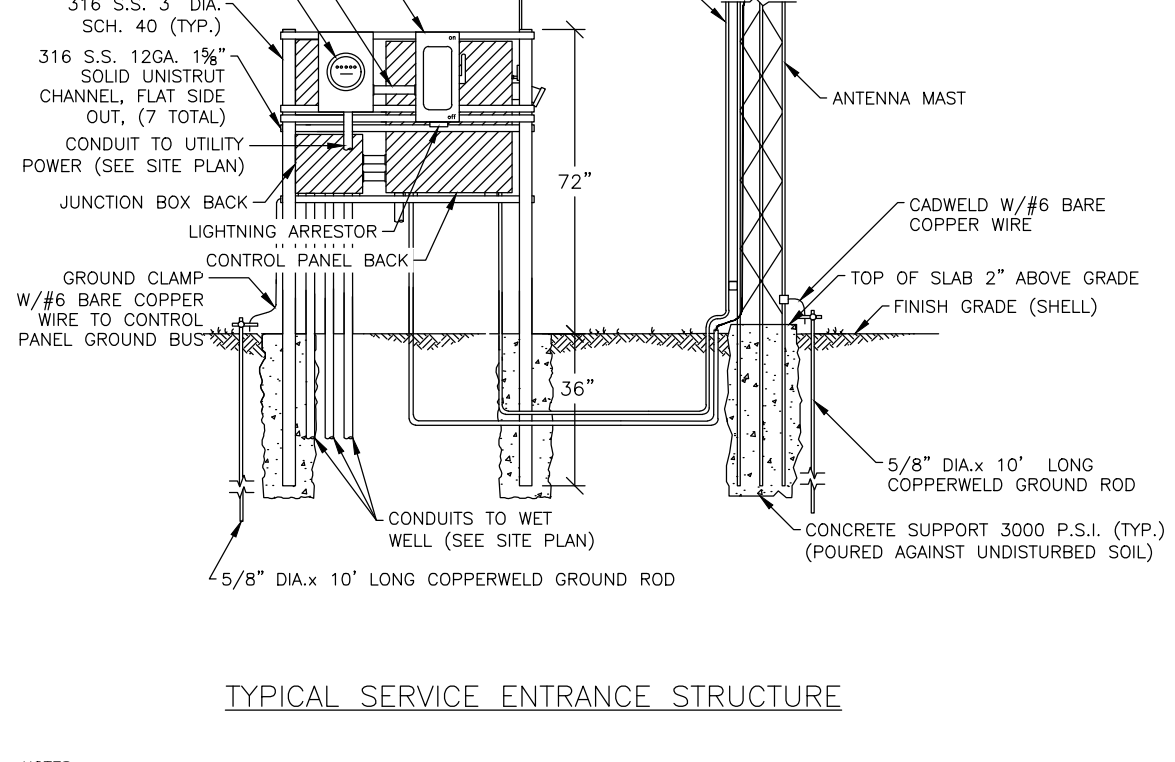
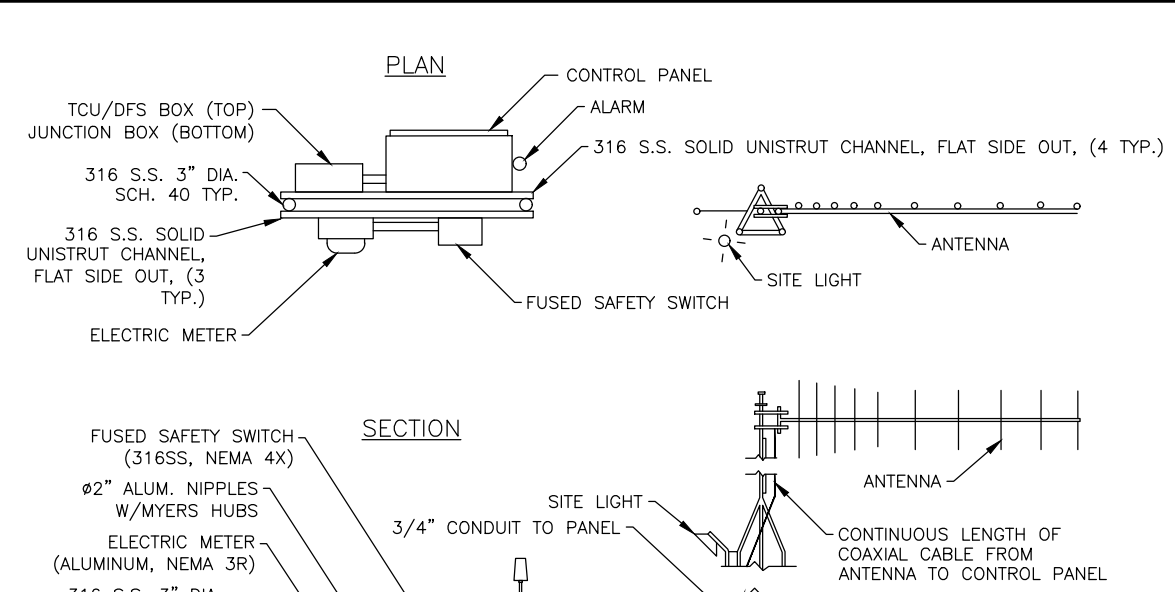
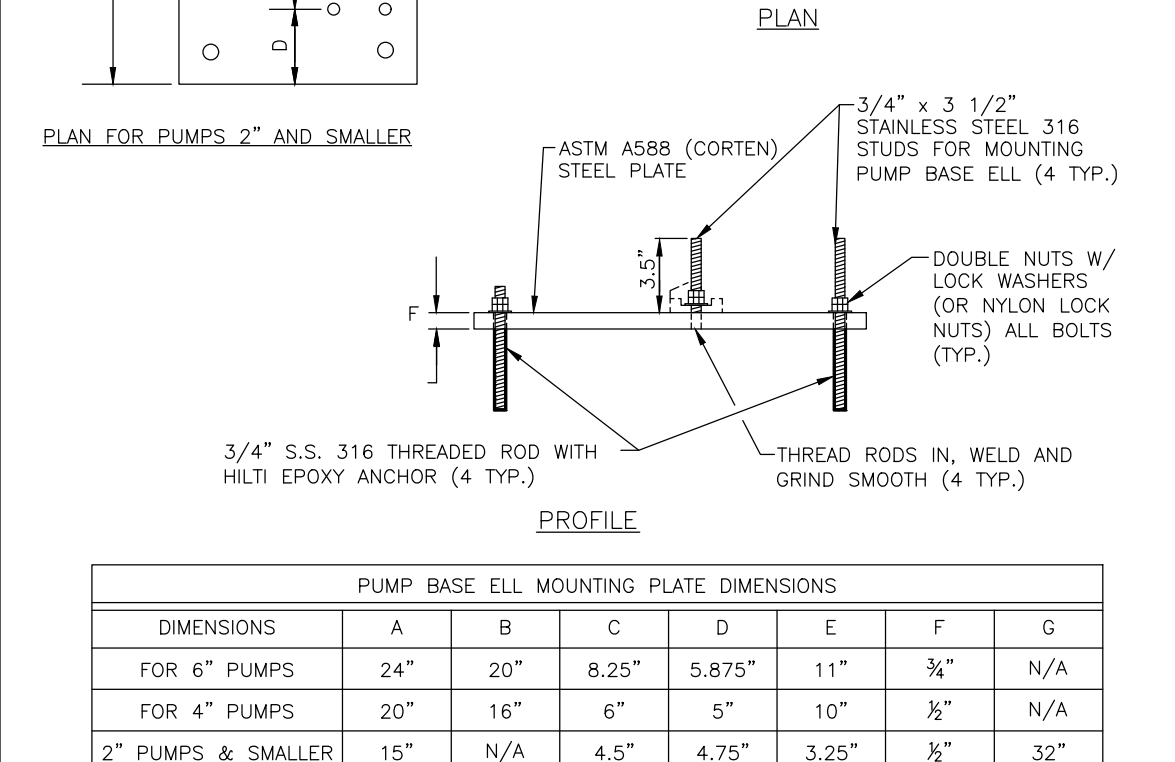
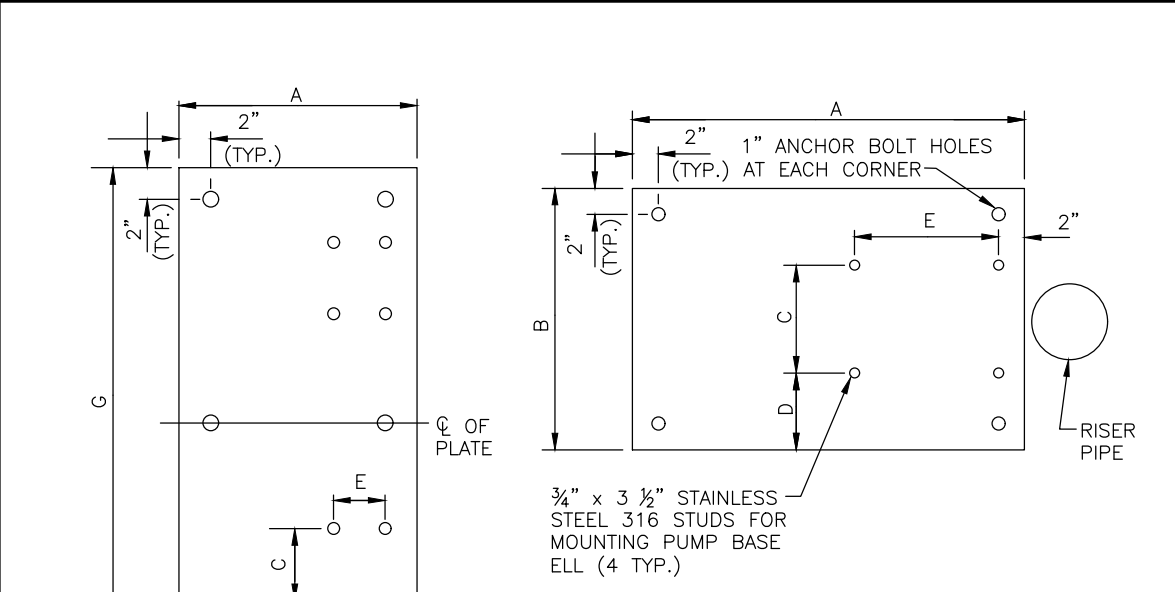


PROJECT #	402-0019707	JOHN S. SHOUN, P.E.
SURVEY #	-	FLORIDA PROFESSIONAL ENGINEERING LICENSE No. 60923
SEC./TWN./RGE	VARIABLES	STATE OF FLORIDA PROFESSIONAL ENGINEER
SCALE	N.T.S.	DATE: 06/25/2020
SURVEYED	---	DESIGNED: JSS 02/2020
DESIGNED	JSS 02/2020	DRAWN: CAK 02/2020
DRAWN	CAK 02/2020	CHECKED: JSS 02/2020
CHECKED	JSS 02/2020	SHEET 08 OF 11

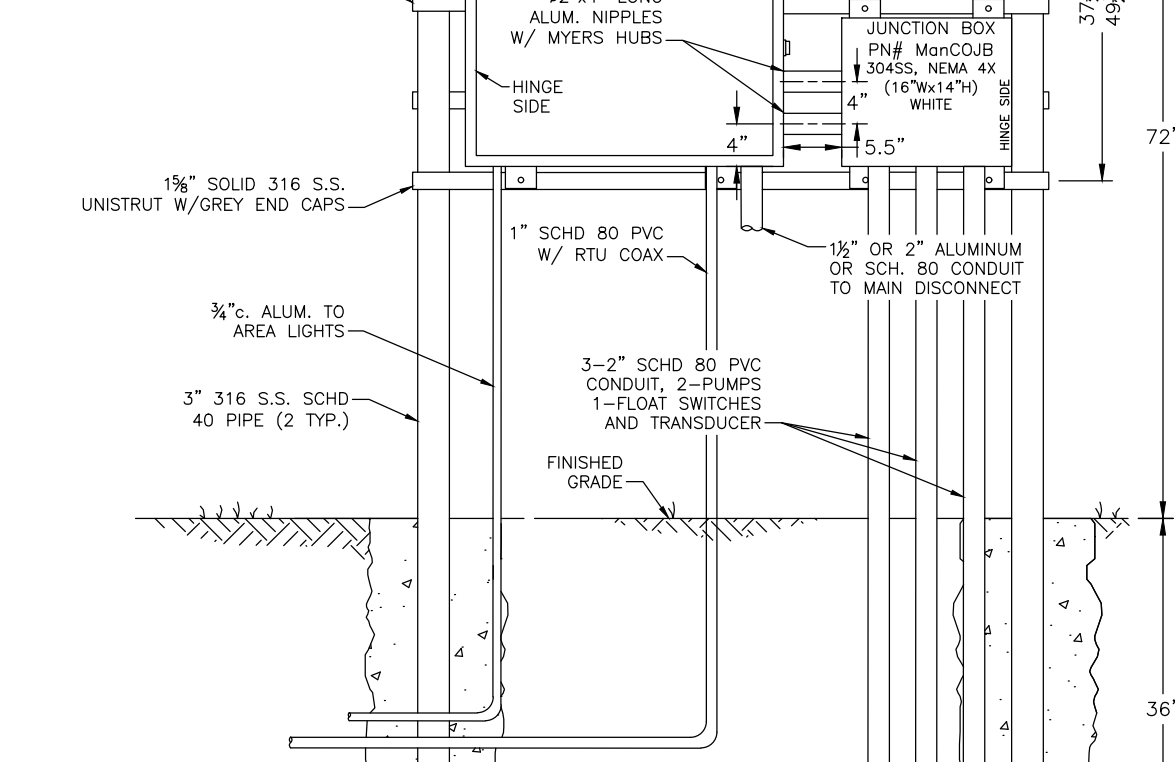
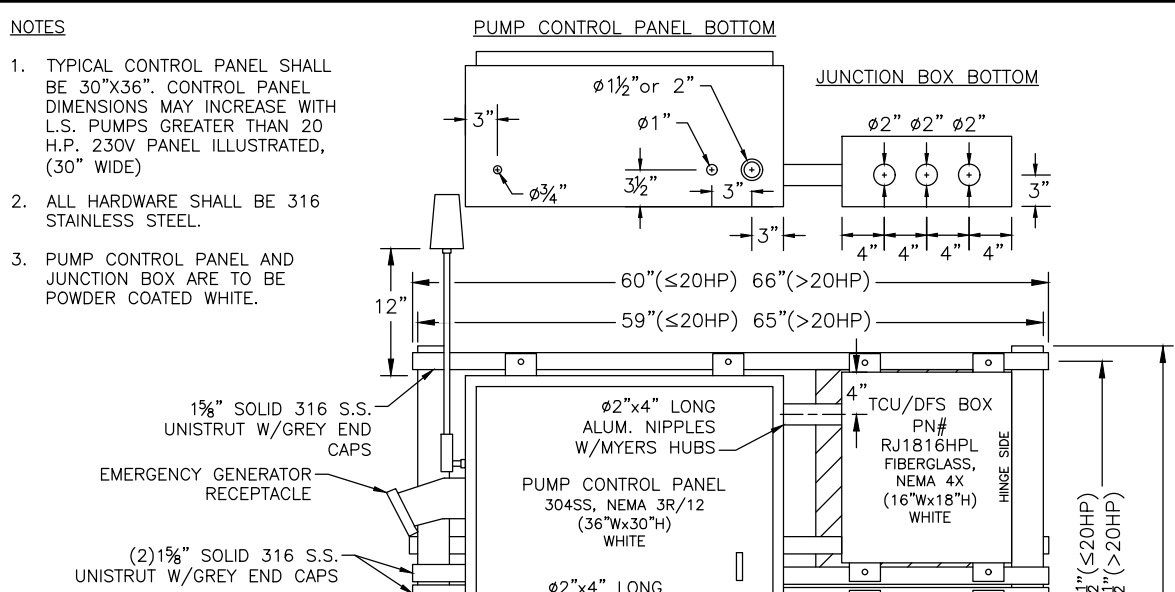




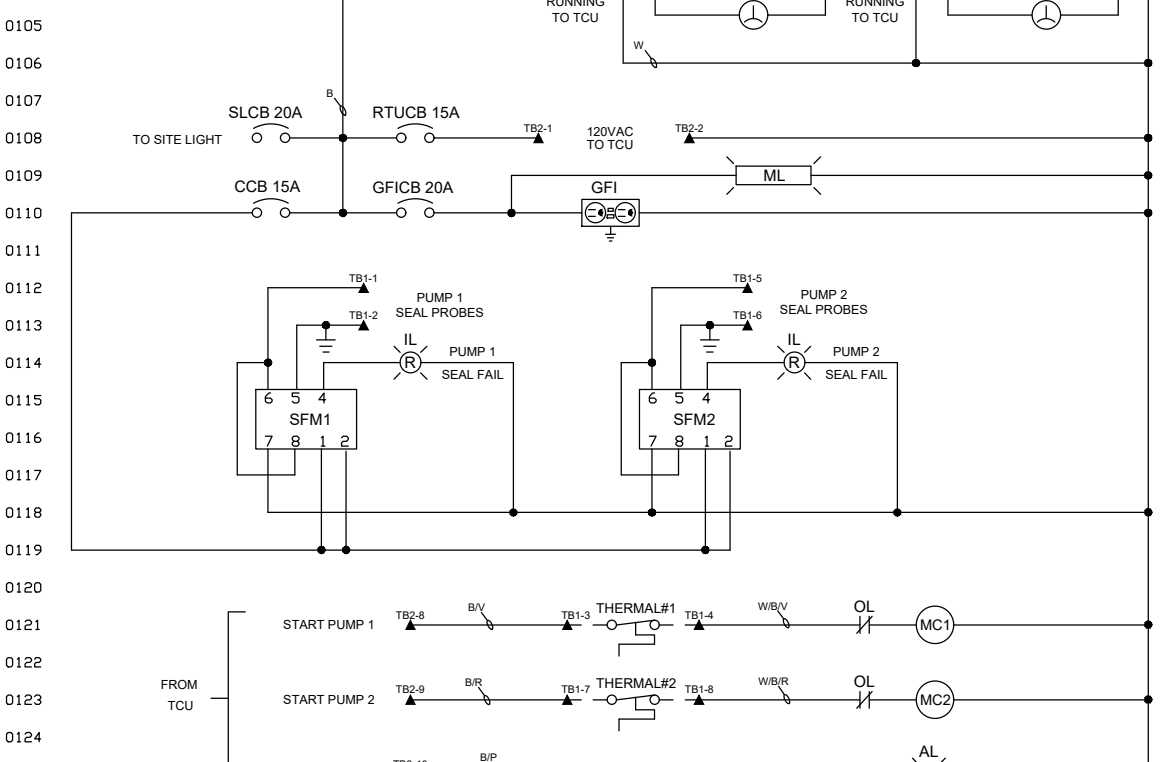
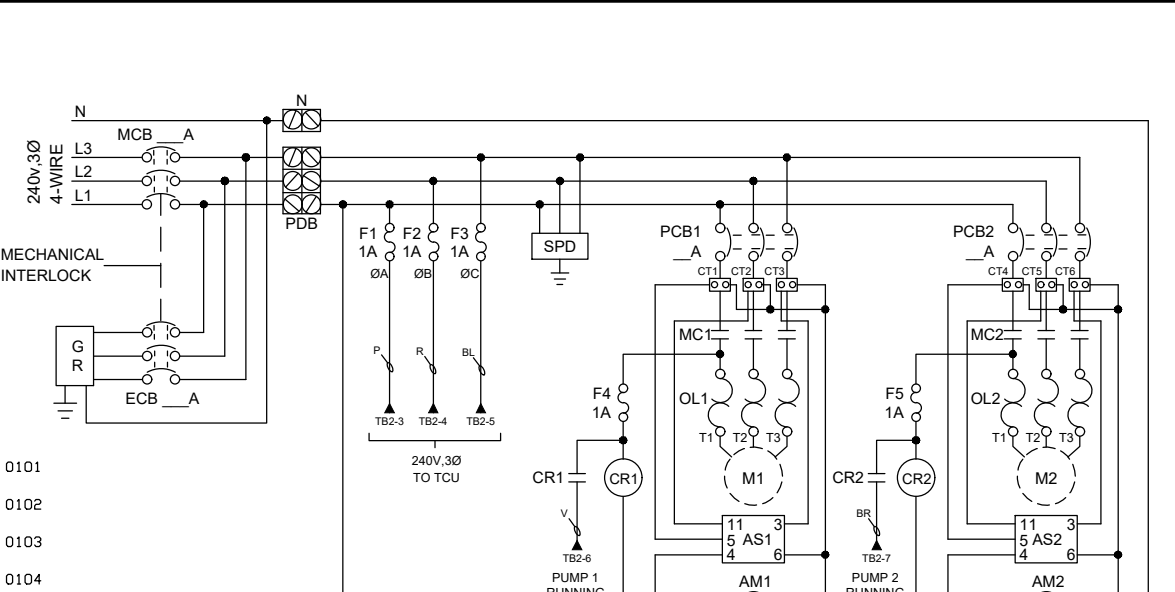
NOTES:  
 1. FOR LARGER LIFT STATIONS, PROVISIONS SHALL BE MADE TO MAKE THE TOP OF THE STILLING WELL VISIBLE AND ACCESSIBLE FROM THE HATCH OPENING, I.E. 45° FITTINGS, ETC.  
 2. REFER TO STANDARD DETAILS US-18, US-19 & US-20 FOR LIFT STATION DETAILS.  
 3. NYLON LOCK NUTS SHALL NOT BE USED ON WEDGE ANCHORS.



NOTES:  
 1. TYPICAL CONTROL PANEL SHALL BE 30"x36". CONTROL PANEL DIMENSIONS MAY INCREASE WITH L.S. PUMPS GREATER THAN 20 H.P. 230V PANEL ILLUSTRATED, (30" WIDE)  
 2. ALL HARDWARE SHALL BE 316 STAINLESS STEEL.  
 3. PUMP CONTROL PANEL AND JUNCTION BOX ARE TO BE POWDER COATED WHITE.



NOTES:  
 1. TYPICAL CONTROL PANEL SHALL BE 30"x36". CONTROL PANEL DIMENSIONS MAY INCREASE WITH L.S. PUMPS GREATER THAN 20 H.P. 230V PANEL ILLUSTRATED, (30" WIDE)  
 2. ALL HARDWARE SHALL BE 316 STAINLESS STEEL.  
 3. PUMP CONTROL PANEL AND JUNCTION BOX ARE TO BE POWDER COATED WHITE.



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 CALCULATION" SHALL BE PROVIDED FOR EACH LIFT STATION SITE.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT	LIFT STATION PIPE BRACING, & STILLING WELL DETAILS	US-21
REV. BY	DATE	DATE OF APPROVAL

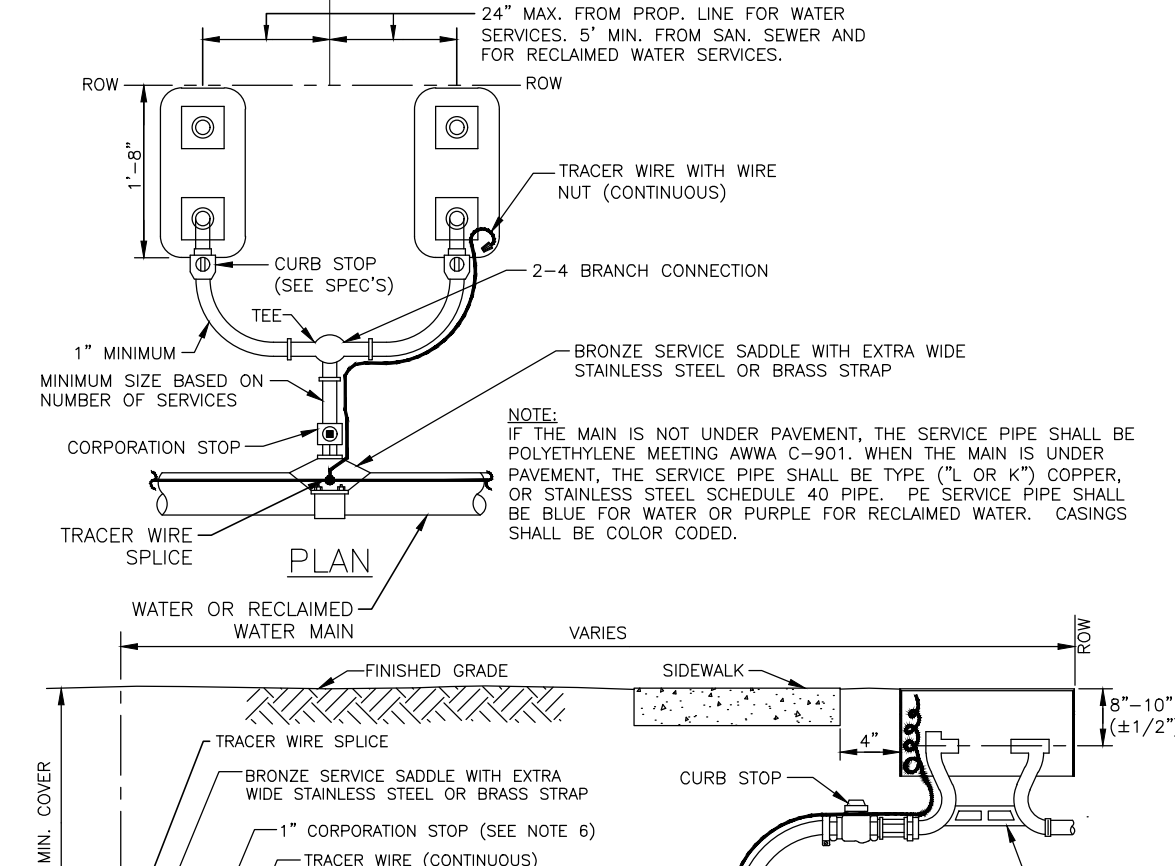
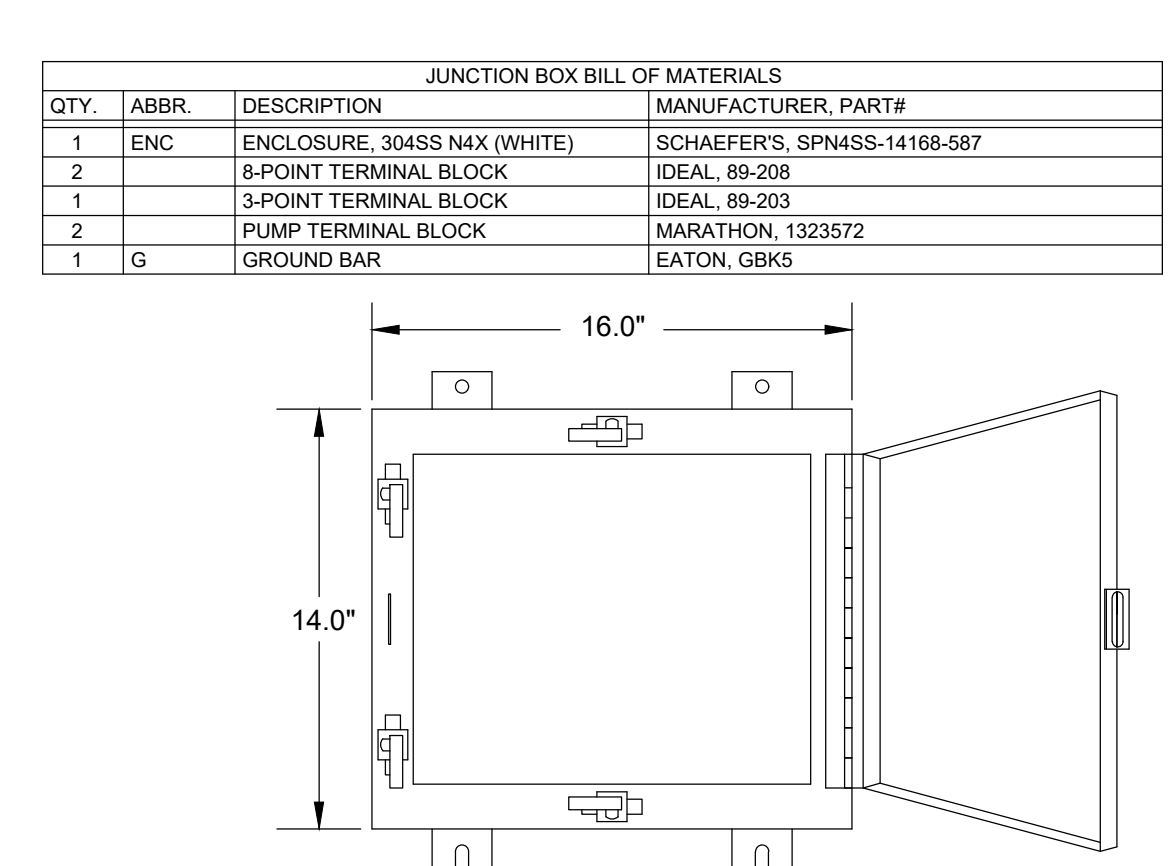
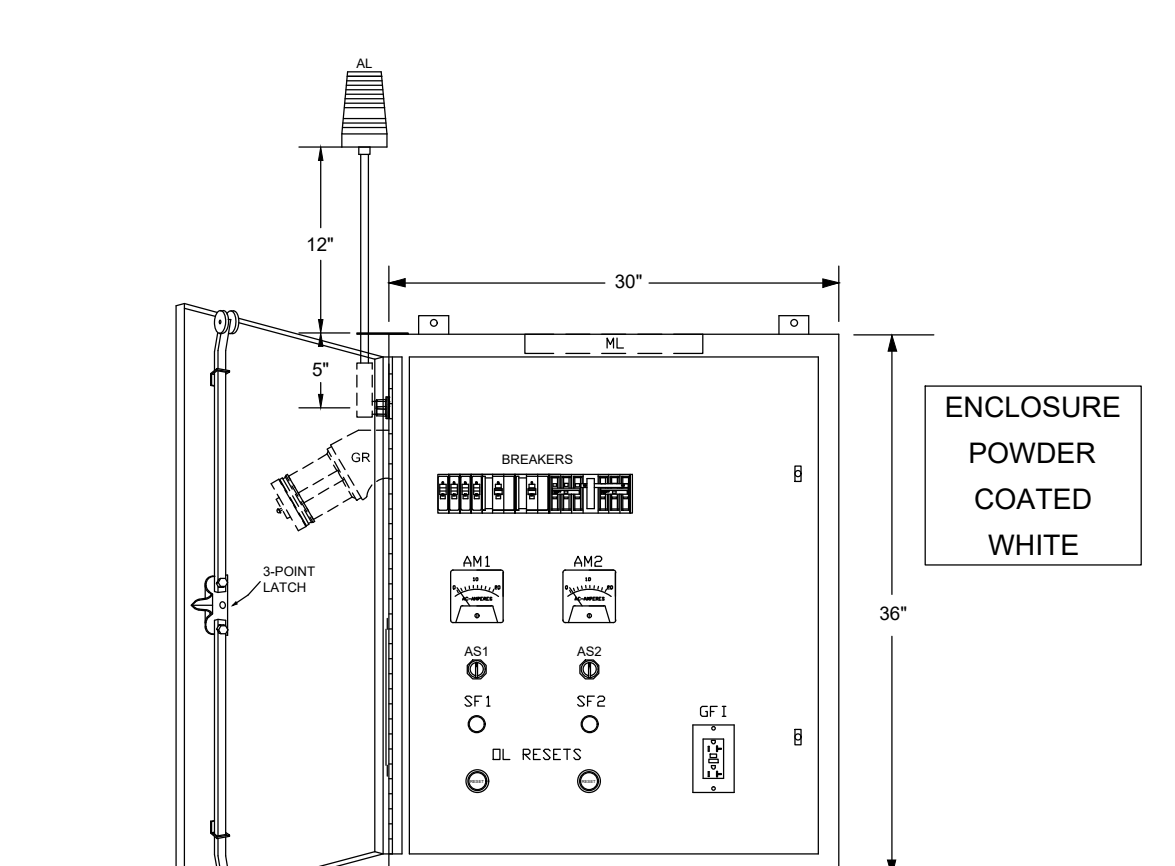
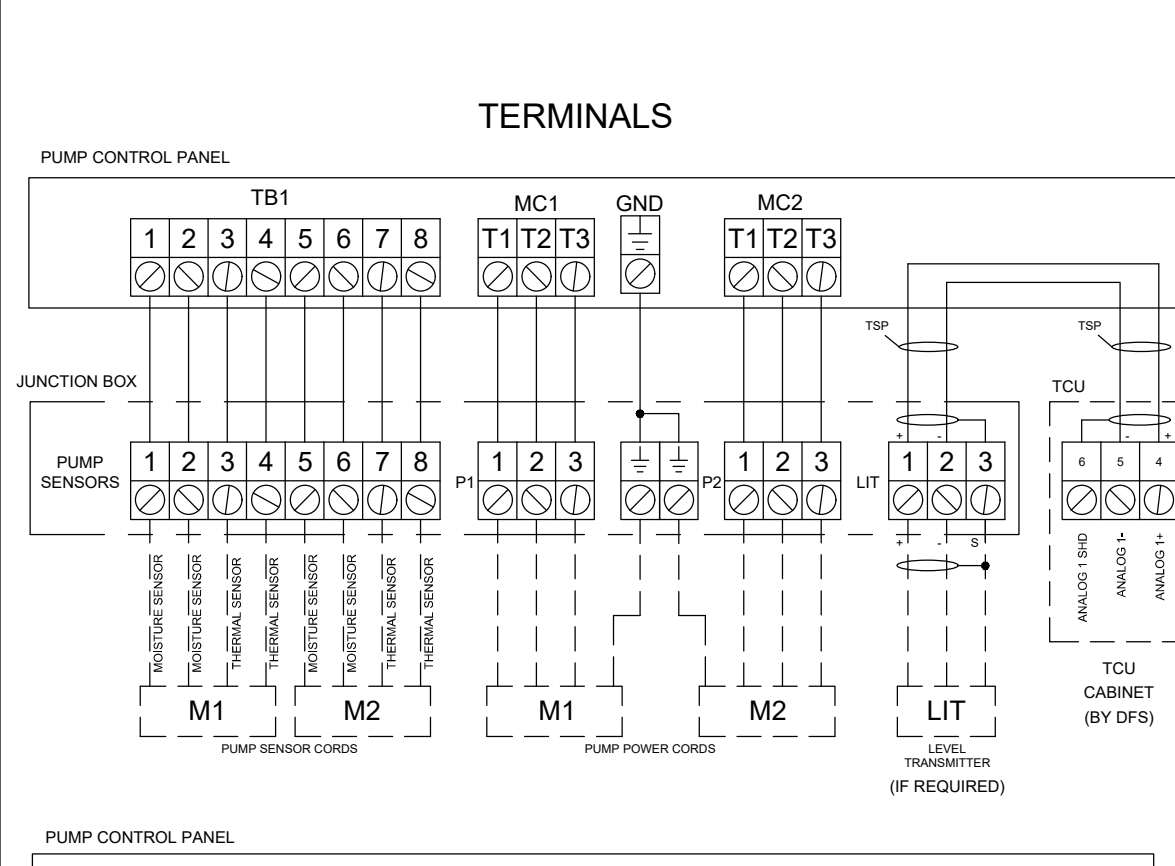
MANATEE COUNTY PUBLIC WORKS DEPARTMENT	PUMP BASE ELL MOUNTING PLATE	US-22
REV. BY	DATE	DATE OF APPROVAL

MANATEE COUNTY PUBLIC WORKS DEPARTMENT	SEWAGE LIFT STATION METER & ELECTRICAL DETAILS	US-23
REV. BY	DATE	DATE OF APPROVAL

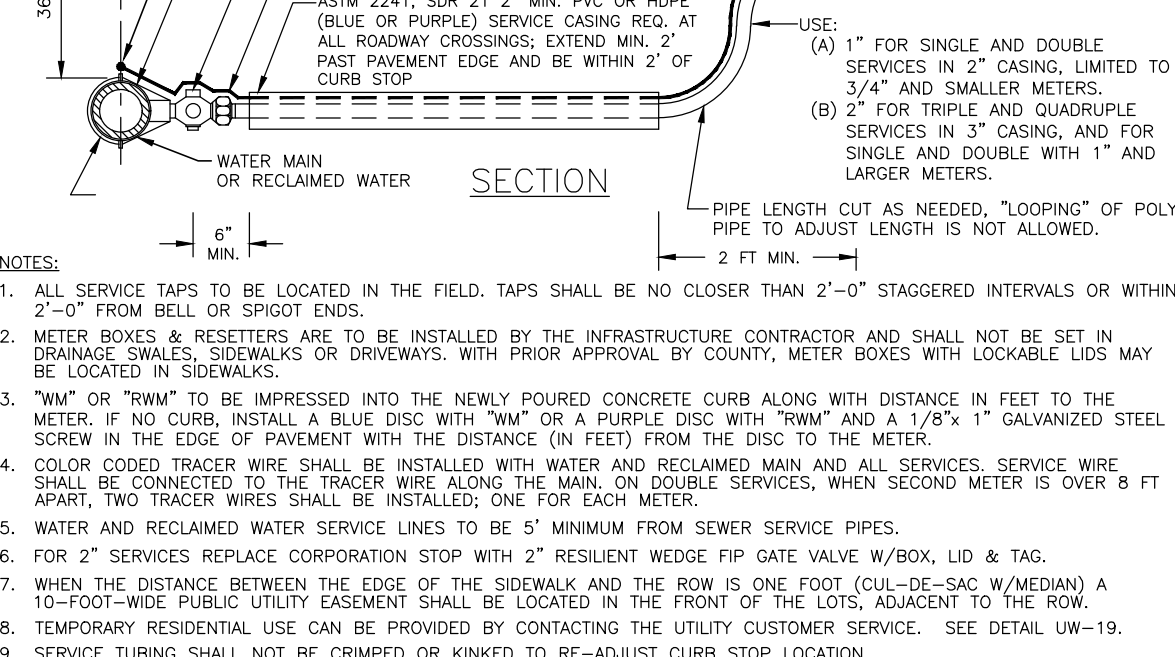
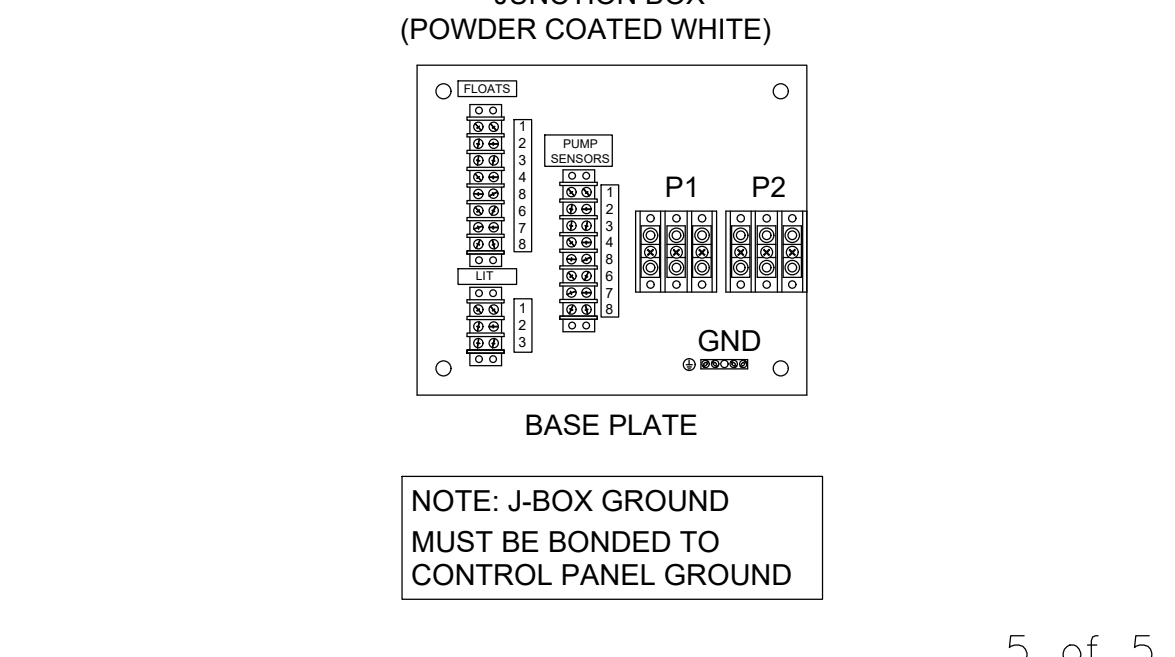
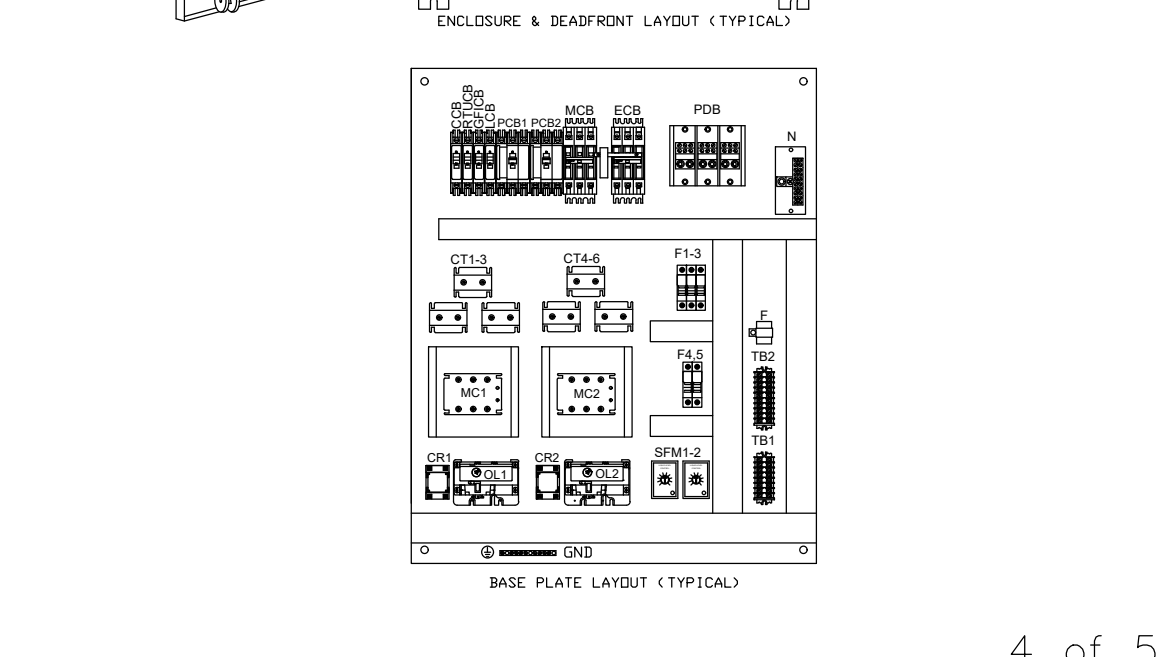
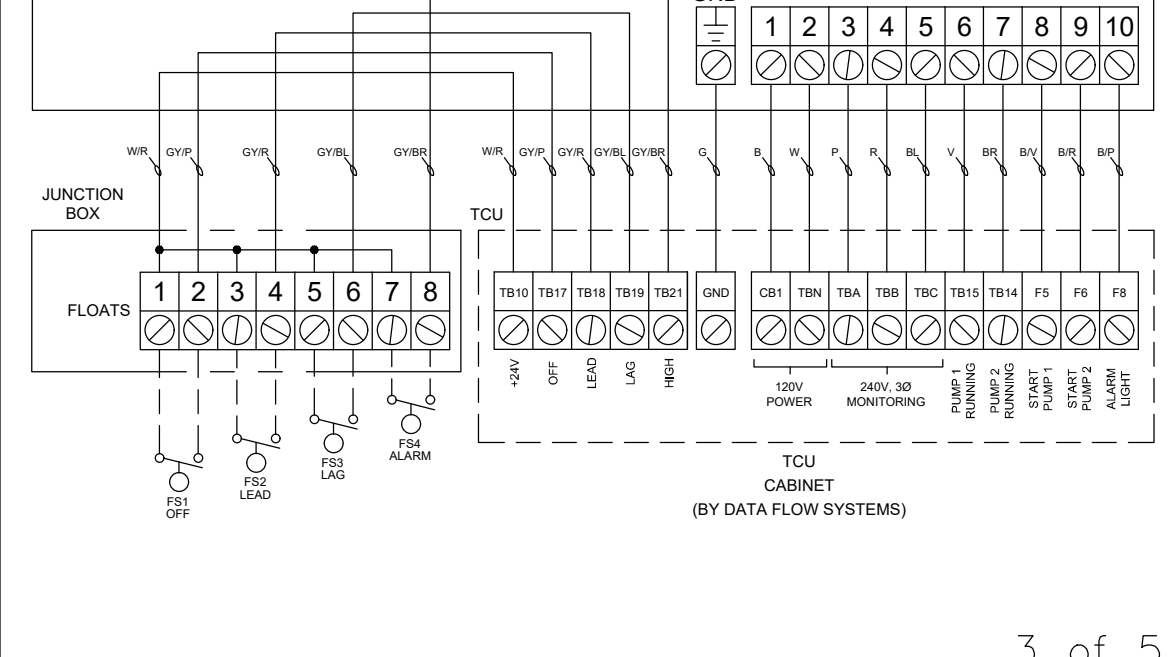
MANATEE COUNTY PUBLIC WORKS DEPARTMENT	SEWAGE LIFT STATION CONTROL PANEL	US-24
REV. BY	DATE	DATE OF APPROVAL

MANATEE COUNTY PUBLIC WORKS DEPARTMENT	SEWAGE LIFT STATION CONTROL PANEL (230V)	US-25A
REV. BY	DATE	DATE OF APPROVAL

QTY.	ABBR.	DESCRIPTION	MANUFACTURER, PART#
1	ENC	ENCLOSURE, 304SS N3R12 (WHITE)	HOFFMAN, A38H3012SSLP-P8743 (MINIMUM SIZE)
1	MCB	MAIN CIRCUIT BREAKER	SQ.D. (SIZE AS REQUIRED - 100A MIN.)
1	ECB	EMERGENCY CIRCUIT BREAKER	SQ.D. (SIZE AS REQUIRED - 100A MIN.)
2	PCB1,2	PUMP CIRCUIT BREAKER	SQ.D. (SIZE AS REQUIRED)
1	CCB	CONTROL CIRCUIT BREAKER	SQ.D. QOU115
1	RTUCB	RTU CIRCUIT BREAKER	SQ.D. QOU115
1	GFICB	GFI CIRCUIT BREAKER	SQ.D. QOU120
1	SLCB	SITE LIGHT CIRCUIT BREAKER	SQ.D. QOU120
2	MC1,2	SOLID STATE CONTACTOR + HEAT SINK	CRYDOM, CWA2410 + HS510DR + HSP-2 (SIZE AS REQUIRED)
2	CR1,2	CURRENT RELAY + HEAT SINK	SIEMENS, ESP200 (SIZE AS REQUIRED)
2	OL1,2	OVERLOAD RELAY	CROMPTON, 013-75AA-LS -C6-B3 (SIZE AS REQD)
1	GR	GENERATOR RECEPTACLE	RUSSELL STOLL, JRSB204FR (230V, 200A)
1	SPD	SURGE PROTECTOR	DITEK, DTK-2403CMX+
6	CT1-6	CURRENT TRANSFORMER - 5	ELECTRO, IND. 25FT. (SIZE AS REQUIRED)
2	AS1-2	AMMETER SELECTOR SWITCH	SPECHER & SCHUH, LE2-12-8751
2	AM1-2	AMMETER - A	CROMPTON, 013-75AA-LS -C6-B3 (SIZE AS REQD)
5	F1-5	FUSE, 1A	FERRAZ, ATM-1
1	GFI	120V RECEPTACLE	PASS & SEYMOUR, 1597-I
1	ML	MAINTENANCE LIGHT, LED	HOFFMAN, LEDA13SS
2	SFM1,2	SEAL FAIL MODULE	SYRELEC, PNRL-110A
2	IL	INDICATING LIGHT, RED LED	EATON, C22L-XR-120
1	ASB	ALARM SILENCE BUTTON	SQ.D. 9001-SKR1BHS
1	F	FLASHER	INGRAM, SSF-150W
1	AL	ALARM LIGHT, 120V LED	FEDERAL, LP3PL-120R



SYMBOL	COLOR
W	BLACK
V	WHITE
G	GREEN
B	BLUE
R	RED
P	PINK
Y	YELLOW
BR	BROWN
B/R	BLACK/RED
B/P	BLACK/PINK
G/P	GREEN/PINK
G/R	GREEN/RED
G/BL	GREEN/BLUE
G/BR	GREEN/BROWN
W/R	WHITE/RED
W/BL	WHITE/BLUE
W/BR	WHITE/BROWN



MANATEE COUNTY PUBLIC WORKS DEPARTMENT	SEWAGE LIFT STATION CONTROL PANEL (230V)	US-25B
REV. BY	DATE	DATE OF APPROVAL

MANATEE COUNTY PUBLIC WORKS DEPARTMENT	SEWAGE LIFT STATION CONTROL PANEL (230V)	US-25C
REV. BY	DATE	DATE OF APPROVAL

MANATEE COUNTY PUBLIC WORKS DEPARTMENT	SEWAGE LIFT STATION CONTROL PANEL (230V)	US-25D
REV. BY	DATE	DATE OF APPROVAL

MANATEE COUNTY PUBLIC WORKS DEPARTMENT	SEWAGE LIFT STATION CONTROL PANEL (230V)	US-25E
REV. BY	DATE	DATE OF APPROVAL

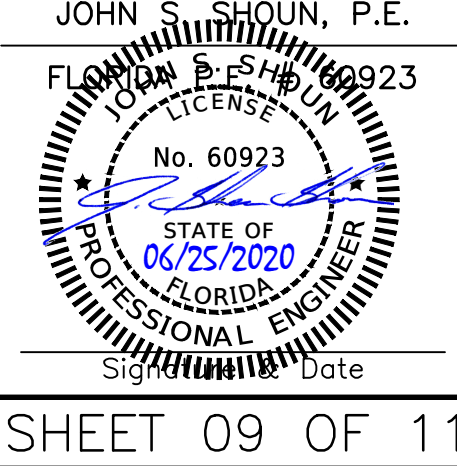
MANATEE COUNTY PUBLIC WORKS DEPARTMENT	TYPICAL SERVICE CONNECTION	UW-21
REV. BY	DATE	DATE OF APPROVAL

NO.	REVISION DESCRIPTION	BY	DATE

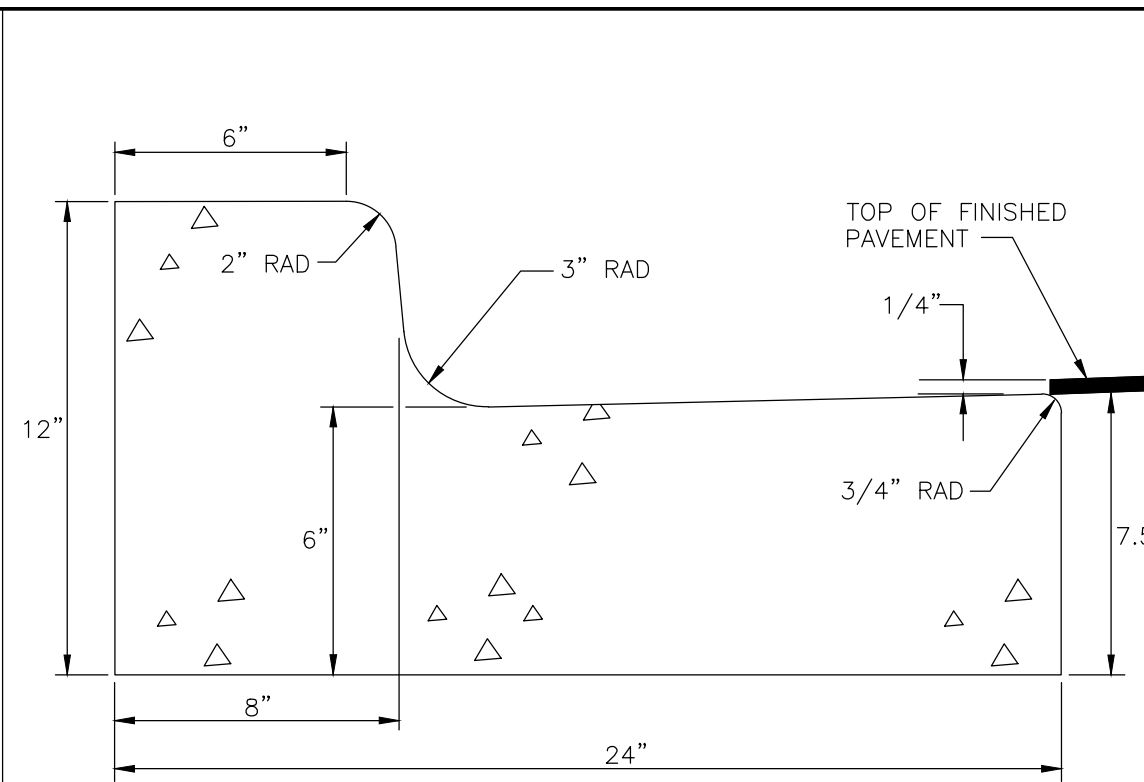
# SATELLITE LIFT STATION R&R 2020 GROUP 1 DETAILS



PROJECT #	402-0019707	JOHN S. SHOUN, P.E.
SURVEY #	-	FLORIDA PROFESSIONAL ENGINEER LICENSE No. 60923
SEC./TWN./RGE	VARIES	STATE OF FLORIDA
SCALE	N.T.S.	DATE 06/25/2020
SURVEYED	---	DATE
DESIGNED	JSS	02/2020
DRAWN	CAK	02/2020
CHECKED	JSS	02/2020

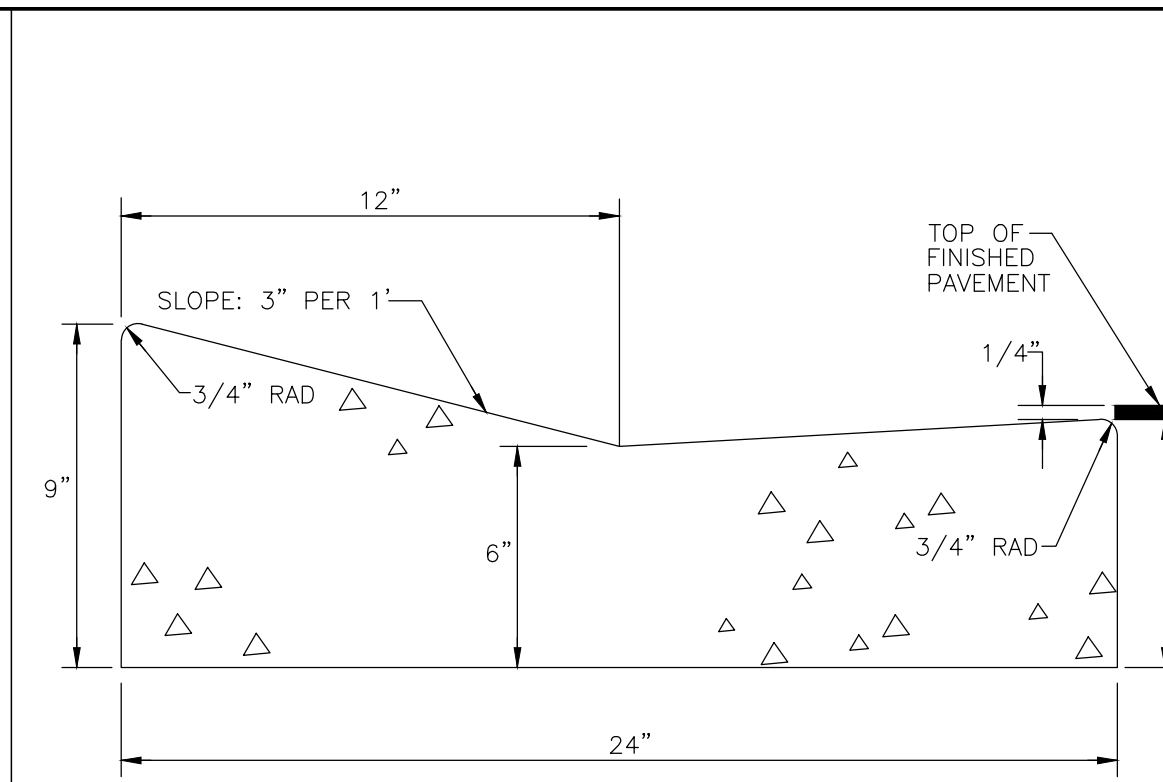


C:\Users\ashoun\OneDrive - Manatee County Government\CSAN\_SMP Proj\2020 Group 1\Details\US-21.dwg (11, 11/25/2020 9:18 AM) Sheet Stream: 11, ANS full sheet (14.000 x 22.000 inches), MW-20 (6.5)B



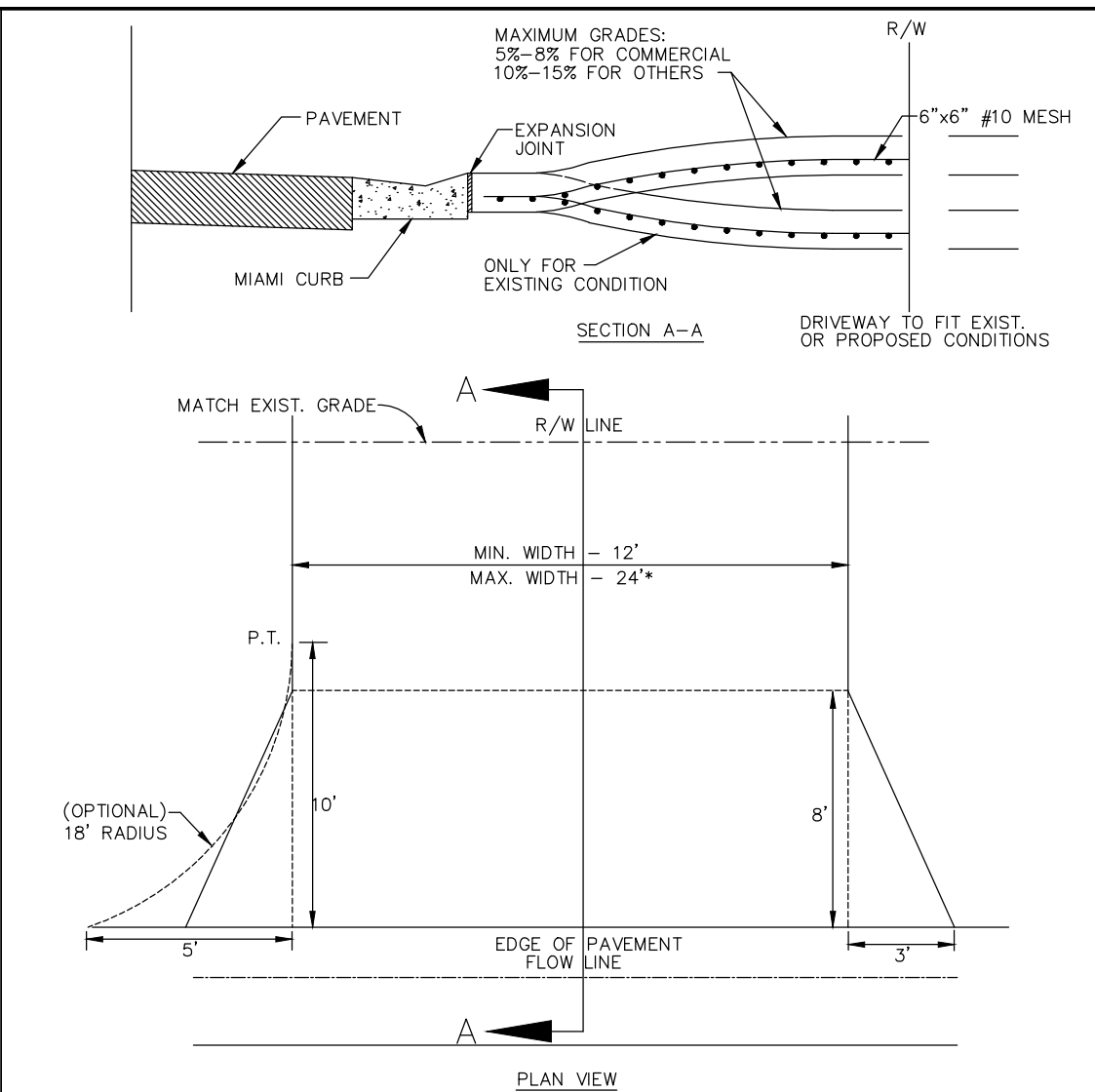
TYPE "F" BARRIER CURB & GUTTER

- 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.



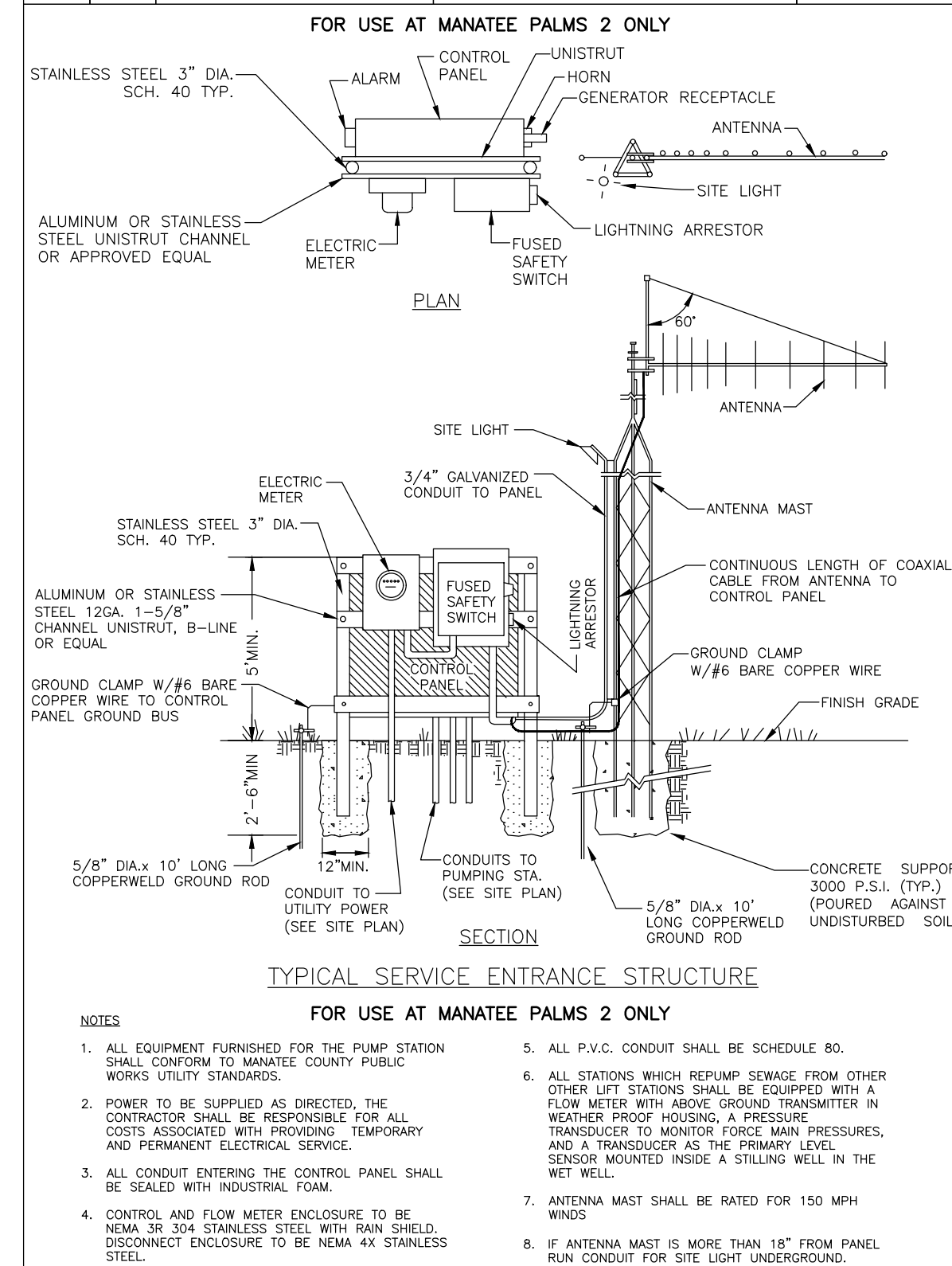
PLAN VIEW

- \* 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"x8" 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		TYPE F CURB & GUTTER	201.2
REV. BY	DATE		
	6/12/07		
DATE OF B.O.C.C. APPROVAL			

MANATEE COUNTY TRANSPORTATION DEPARTMENT		TYPE A MIAMI CURB & GUTTER	201.1
REV. BY	DATE		
	6/12/07		
DATE OF B.O.C.C. APPROVAL			

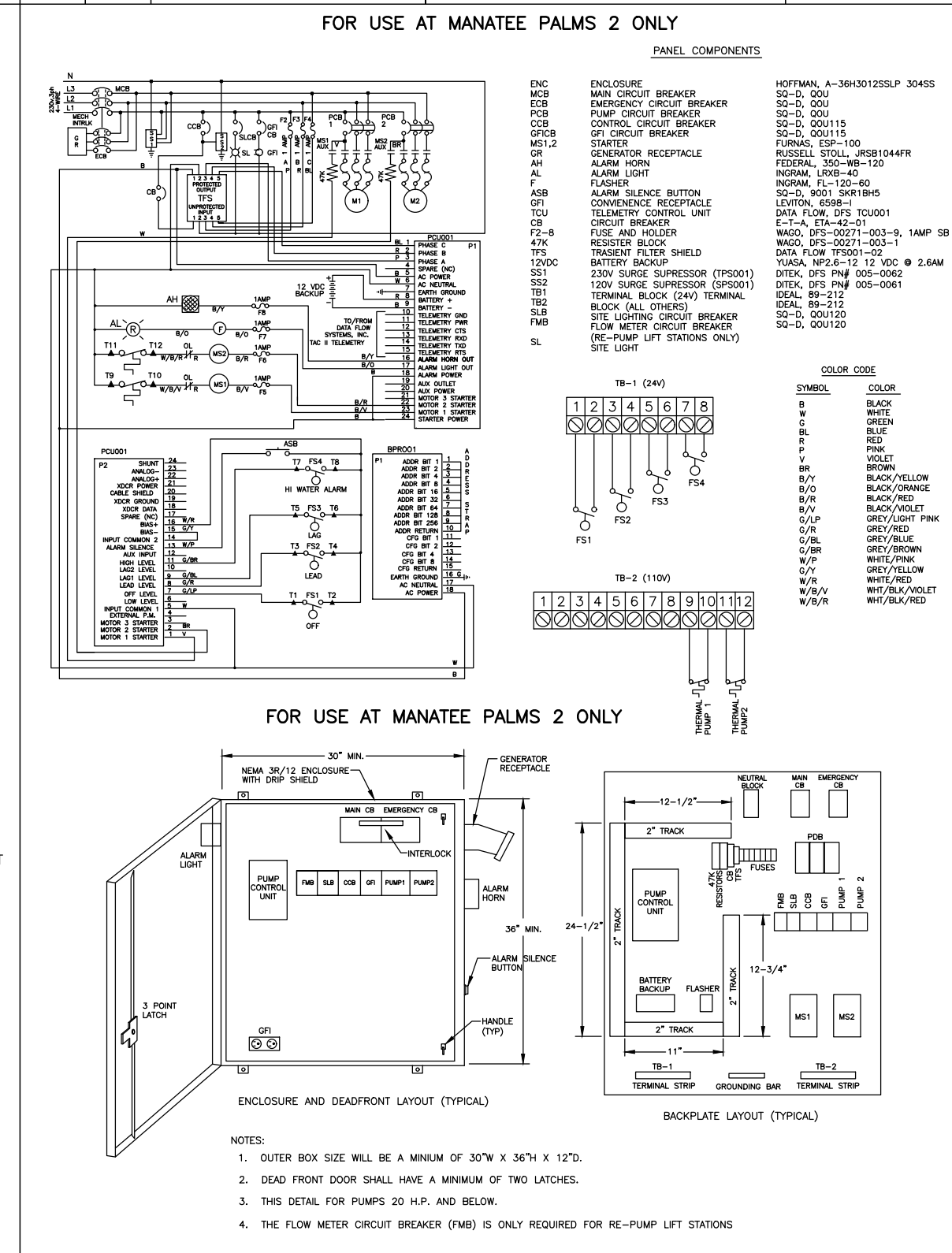
MANATEE COUNTY TRANSPORTATION DEPARTMENT		URBAN DRIVES	101.1
REV. BY	DATE		
	6/12/07		
DATE OF B.O.C.C. APPROVAL			



TYPICAL SERVICE ENTRANCE STRUCTURE

- NOTES:
- ALL EQUIPMENT FURNISHED FOR THE PUMP STATION SHALL CONFORM TO MANATEE COUNTY PUBLIC WORKS UTILITY STANDARDS.
  - POWER TO BE SUPPLIED AS DIRECTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH PROVIDING TEMPORARY AND PERMANENT ELECTRICAL SERVICE.
  - ALL CONDUIT ENTERING THE CONTROL PANEL SHALL BE SEALED WITH INDUSTRIAL FOAM.
  - CONTROL AND FLOW METER ENCLOSURE TO BE NEMA 3R 304 STAINLESS STEEL WITH RAIN SHIELD. DISCONNECT ENCLOSURE TO BE NEMA 4X STAINLESS STEEL.
  - ALL P.V.C. CONDUIT SHALL BE SCHEDULE 80.
  - ALL STATIONS WHICH REPLUMP SEWAGE FROM OTHER LIFT STATIONS SHALL BE EQUIPPED WITH A FLOW METER WITH ABOVE GROUND TRANSMITTER IN WEATHER PROOF HOUSING, A PRESSURE TRANSDUCER TO MONITOR FORCE MAIN PRESSURES, AND A TRANSDUCER AS THE PRIMARY LEVEL SENSOR MOUNTED INSIDE A STILLING WELL IN THE WET WELL.
  - ANTENNA MAST SHALL BE RATED FOR 150 MPH WINDS.
  - IF ANTENNA MAST IS MORE THAN 18' FROM PANEL RUN CONDUIT FOR SITE LIGHT UNDERGROUND.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		SEWAGE PUMP STATION METER & ELECTRICAL DETAILS	FOR USE AT MANATEE PALMS 2 ONLY
REV. BY	DATE		
CLB/DOH	11/10		
MAY 10, 2011			
DATE OF APPROVAL			



ENCLOSURE AND DEADFRONT LAYOUT (TYPICAL)

- NOTES:
- OUTER BOX SIZE WILL BE A MINIMUM OF 30" W X 36" H X 12" D.
  - DEAD FRONT DOOR SHALL HAVE A MINIMUM OF TWO LATCHES.
  - THIS DETAIL FOR PUMPS 20 H.P. AND BELOW.
  - THE FLOW METER CIRCUIT BREAKER (FMB) IS ONLY REQUIRED FOR RE-PUMP LIFT STATIONS.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		SEWAGE PUMP STATION CONTROL PANEL (230V)	FOR USE AT MANATEE PALMS 2 ONLY
REV. BY	DATE		
CLB/KE	11/10		
MAY 10, 2011			
DATE OF APPROVAL			

THESE DETAILS ARE FOR REFERENCE ONLY AS TO HOW TO CONFIGURE THE LIFT STATION CONTROL PANEL FOR MANATEE PALMS 2. ALL MATERIALS AND COMPONENTS SHALL BE IN ACCORDANCE WITH THE 2020 APPROVED STANDARDS. ALL DEVIATION SHALL BE APPROVED BY LIFT STATION STAFF PRIOR TO INSTALLATION.

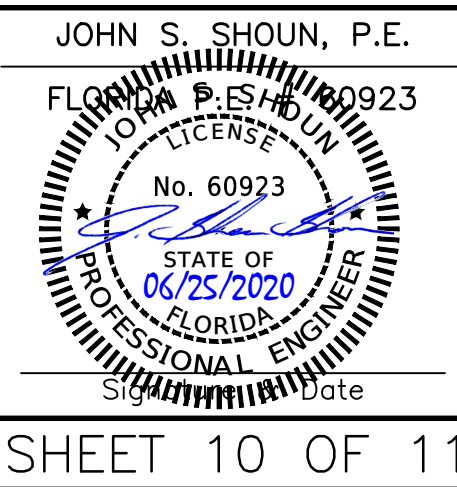
THESE DETAILS ARE FOR REFERENCE ONLY AS TO HOW TO CONFIGURE THE LIFT STATION CONTROL PANEL FOR MANATEE PALMS 2. ALL MATERIALS AND COMPONENTS SHALL BE IN ACCORDANCE WITH THE 2020 APPROVED STANDARDS. ALL DEVIATION SHALL BE APPROVED BY LIFT STATION STAFF PRIOR TO INSTALLATION.

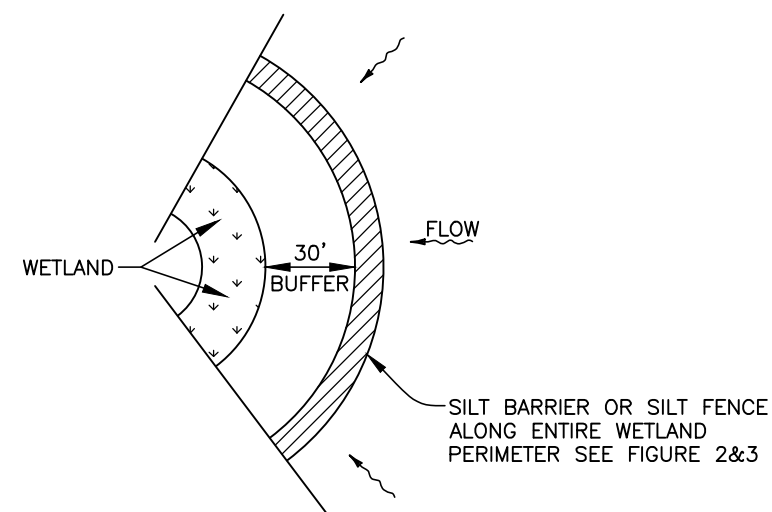
NO.	REVISION DESCRIPTION	BY	DATE

# SATELLITE LIFT STATION R&R 2020 GROUP 1 DETAILS

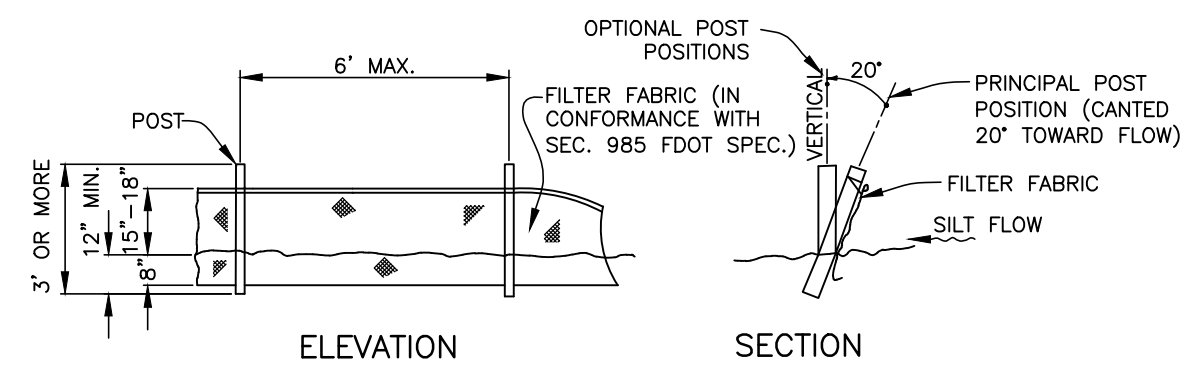


PROJECT #	402-0019707
SURVEY #	-
SEC./TWN./RGE	VARIES
SCALE	N.T.S.
SURVEYED	BY DATE
DESIGNED	JSS 02/2020
DRAWN	CAK 02/2020
CHECKED	JSS 02/2020



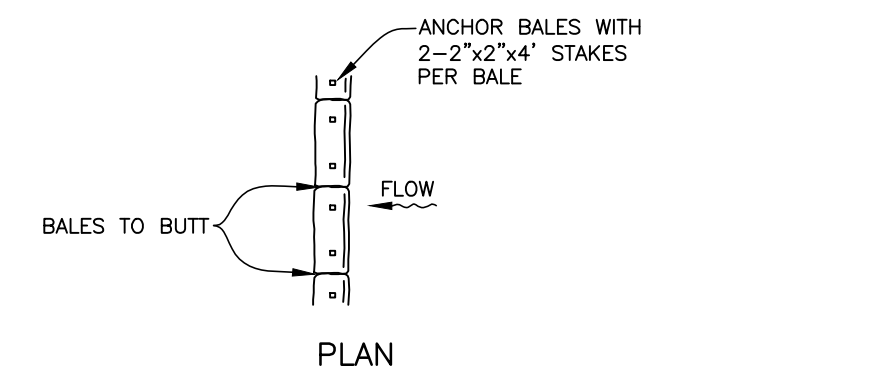


WETLAND BUFFER  
FIGURE 1

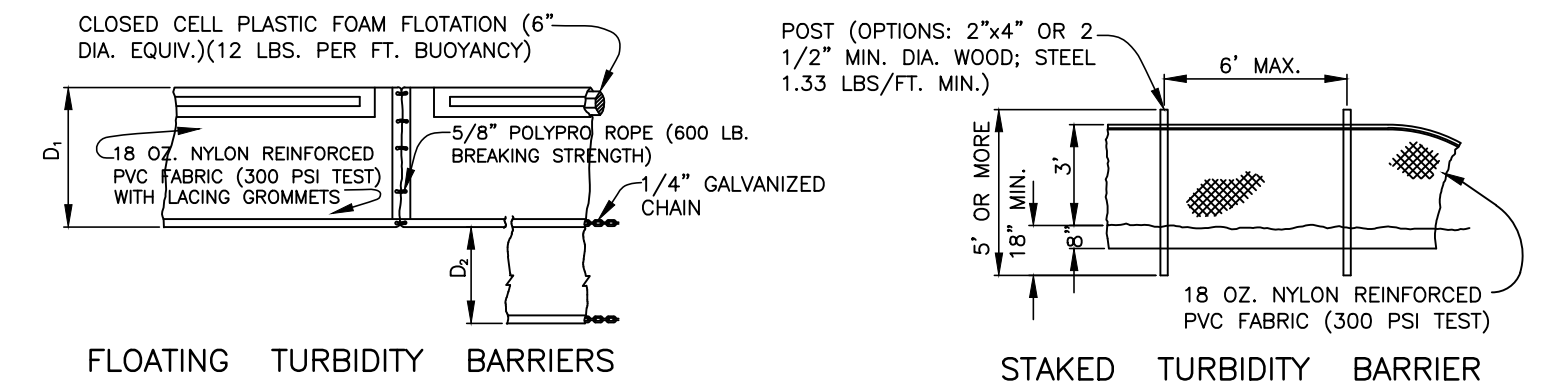


TYPICAL SILT FENCE  
FIGURE 2

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

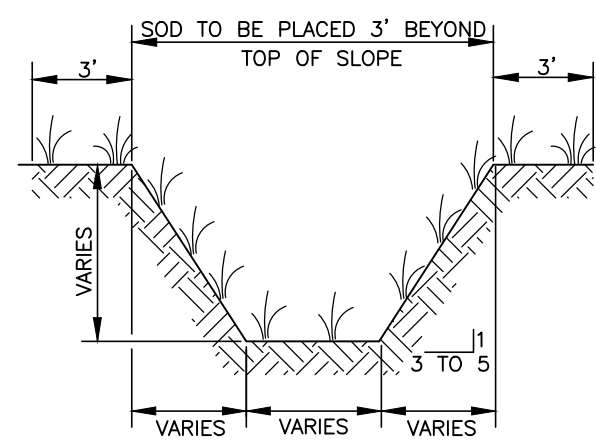


TYPICAL BALE SILT BARRIER  
FIGURE 3

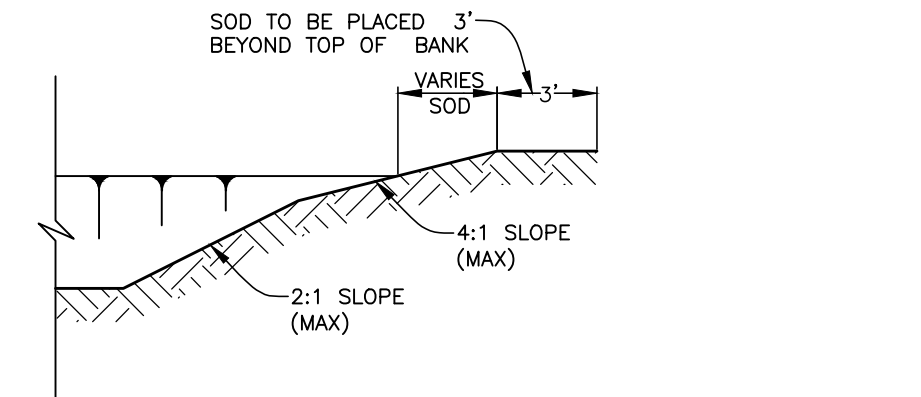


TURBIDITY BARRIERS  
FIGURE 4

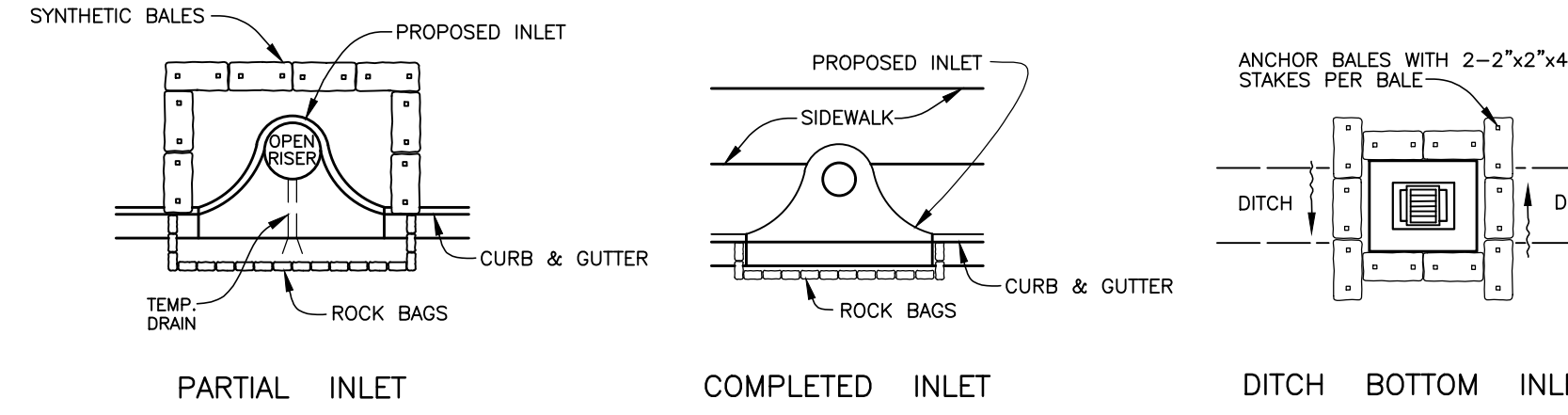
NOTICE: COMPONENTS OF TYPES I AND II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.



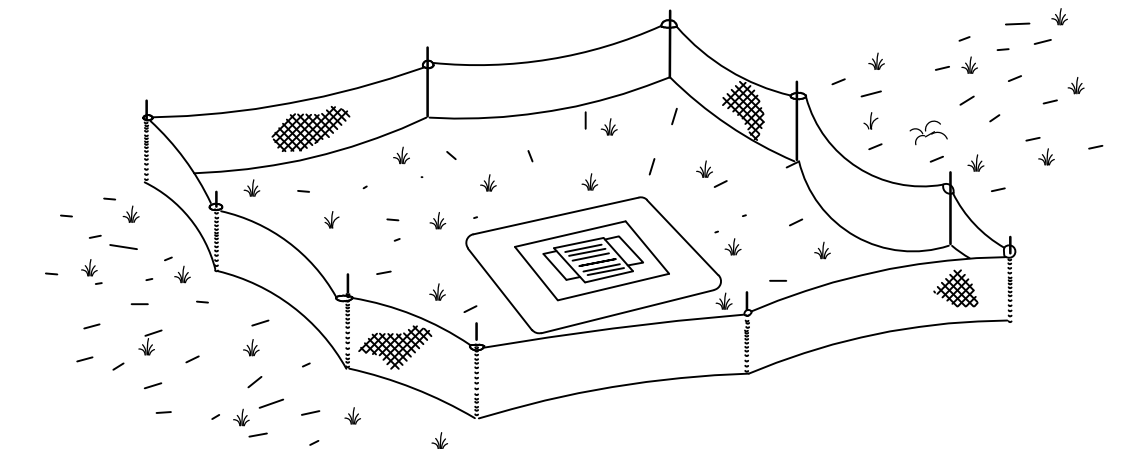
TYPICAL SWALE SECTION  
FIGURE 5



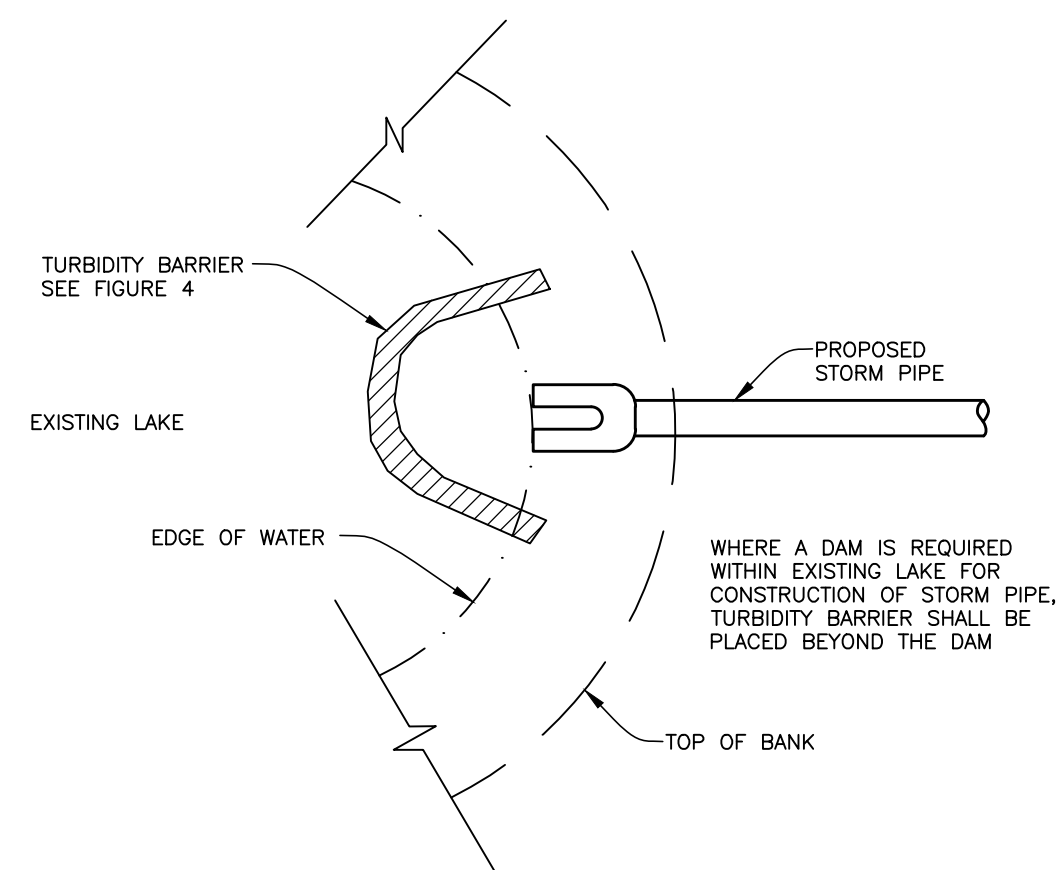
TYPICAL RETENTION/DETENTION POND SECTION  
FIGURE 6



SYNTHETIC BALE PROTECTION AROUND  
INLETS OR SIMILAR STRUCTURES  
FIGURE 7

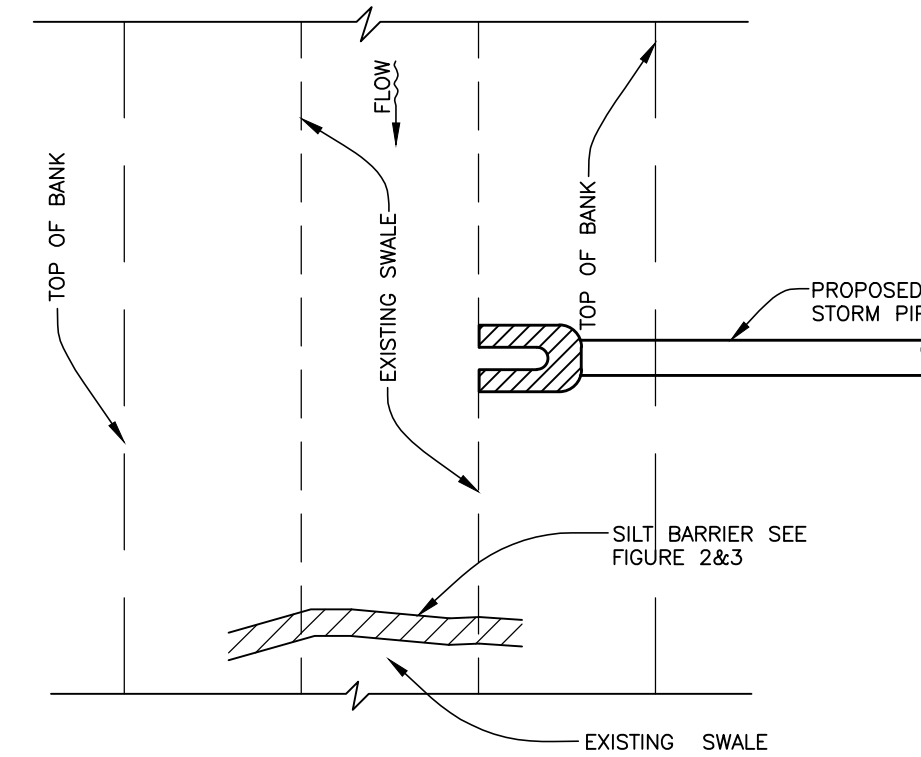


TYPE III SILT FENCE PROTECTION  
AROUND DITCH BOTTOM INLETS  
STAKED SILT BARRIER OR SILT FENCE  
PROTECTION AROUND DITCH BOTTOM INLETS  
FIGURE 8

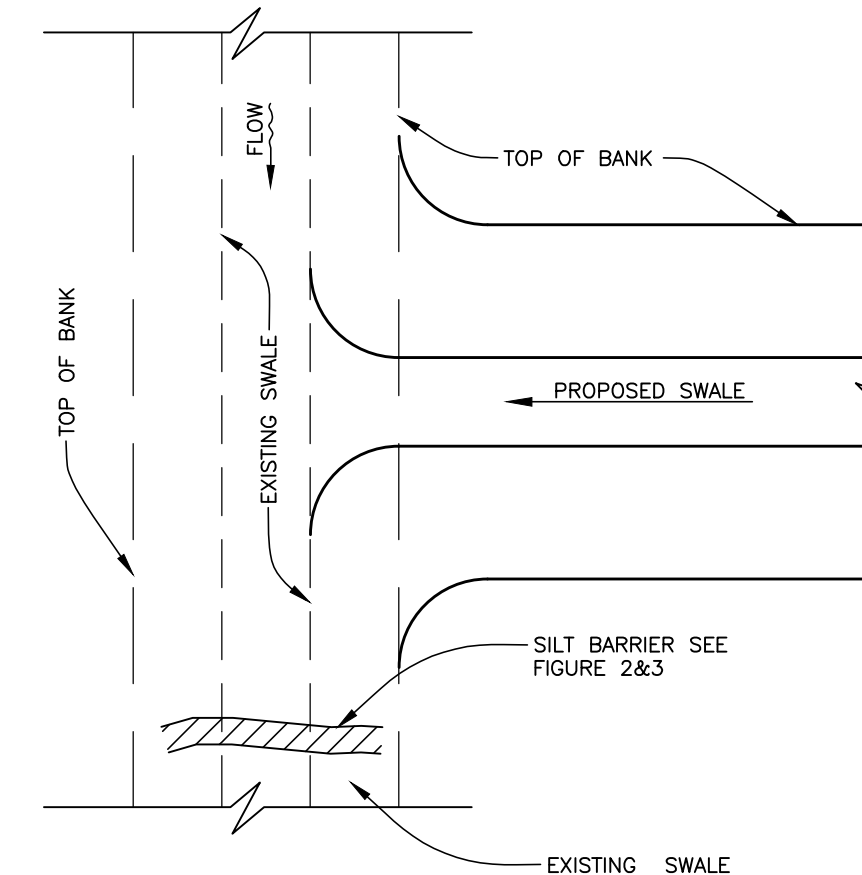


TURBIDITY BARRIER AT CONNECTION OF  
STORM PIPE TO EXISTING LAKE  
FIGURE 9

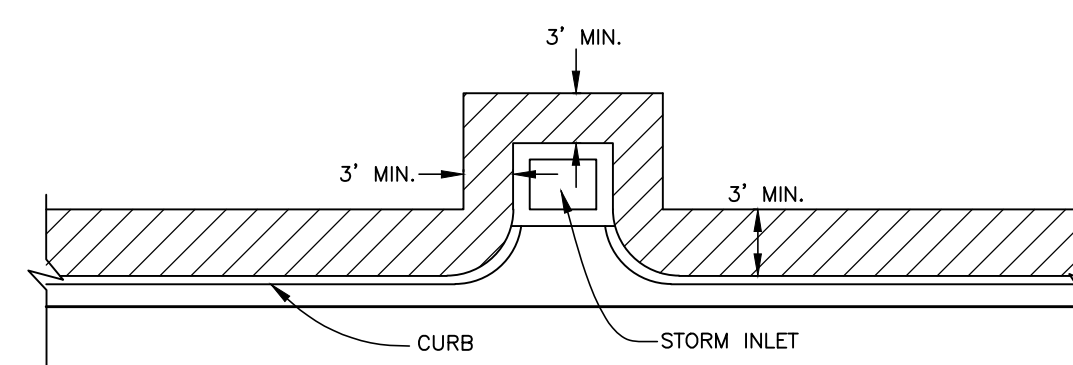
WHERE A DAM IS REQUIRED WITHIN EXISTING LAKE FOR CONSTRUCTION OF STORM PIPE, TURBIDITY BARRIER SHALL BE PLACED BEYOND THE DAM



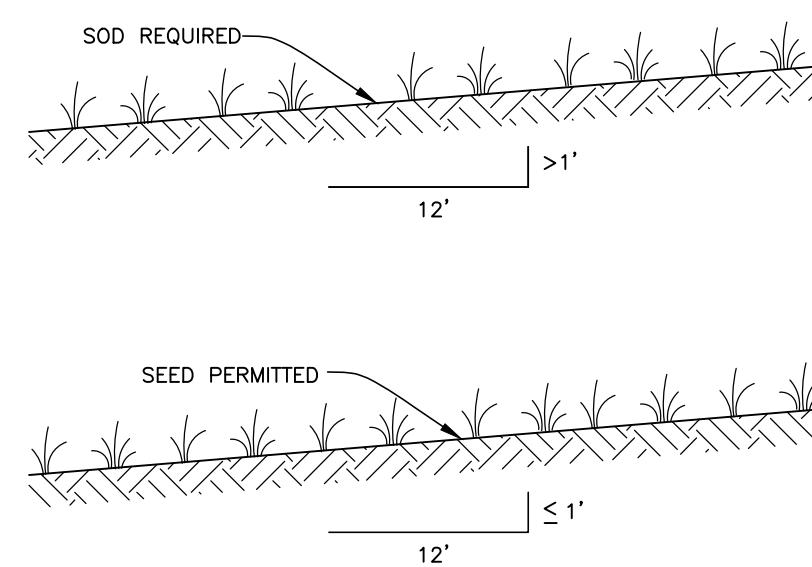
SILT BARRIER AT CONNECTION OF  
STORM PIPE TO EXISTING SWALE  
FIGURE 10



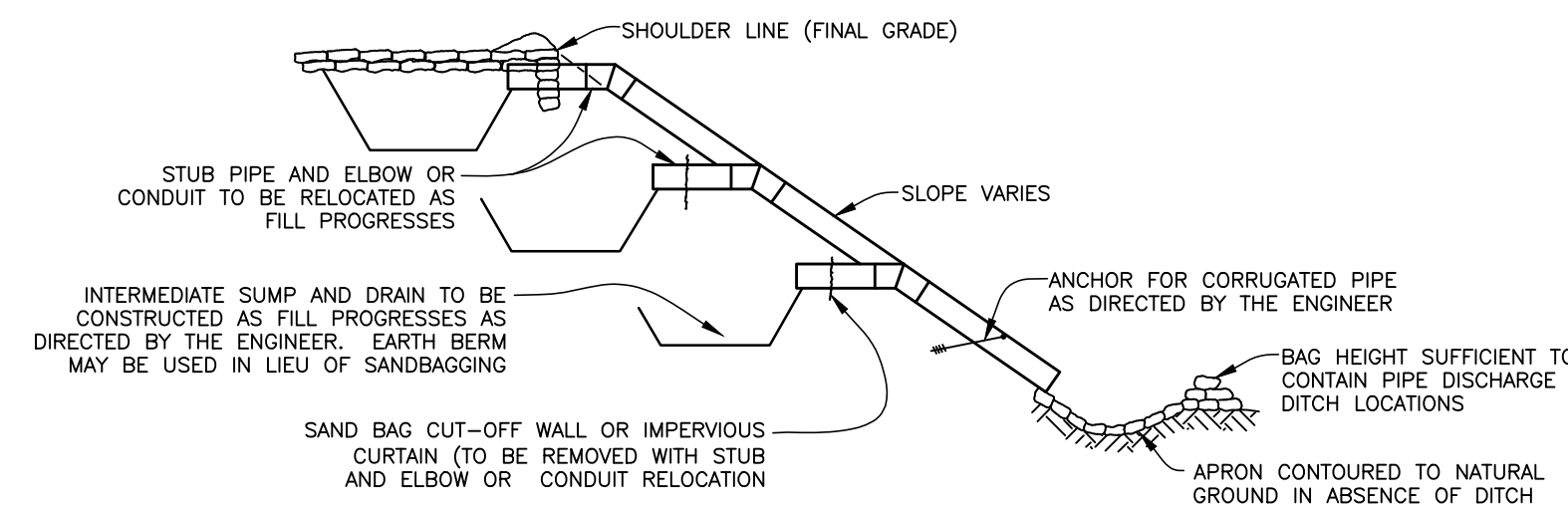
SILT BARRIER AT CONNECTION  
OF SWALE TO EXISTING SWALE  
FIGURE 11



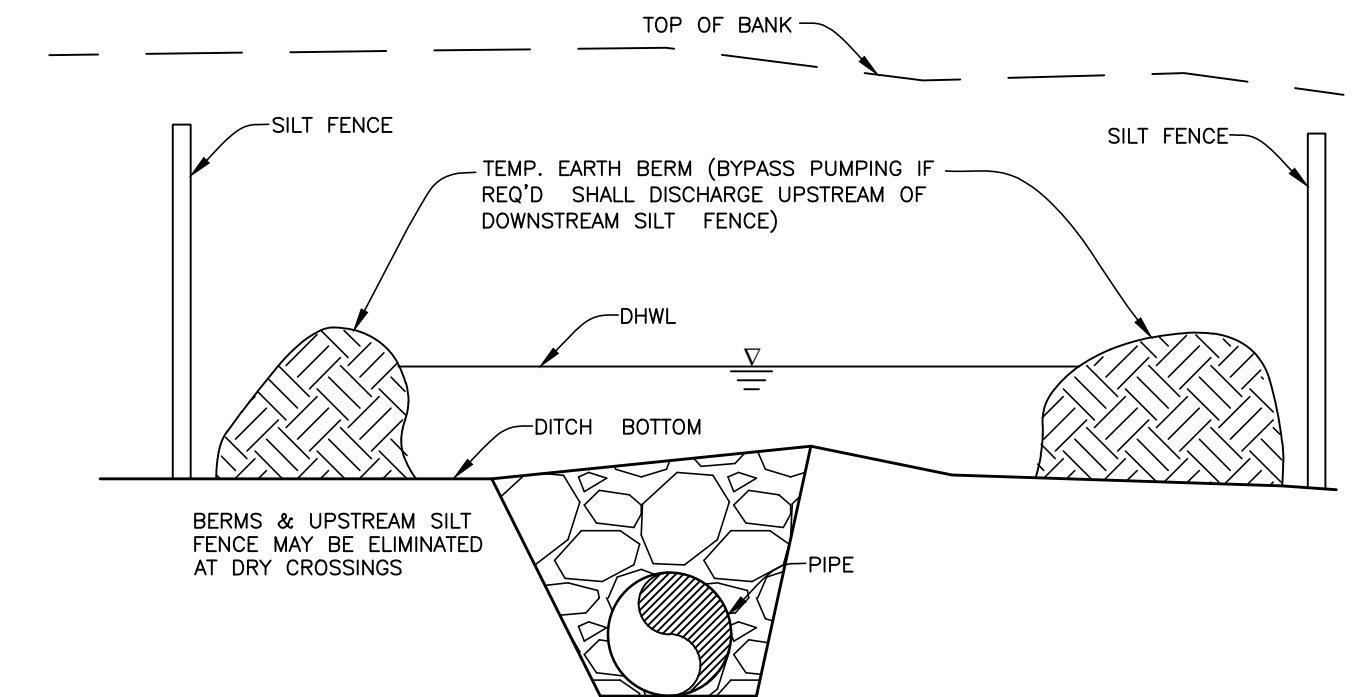
SOD ALONG CURB  
AND AROUND INLET  
FIGURE 14



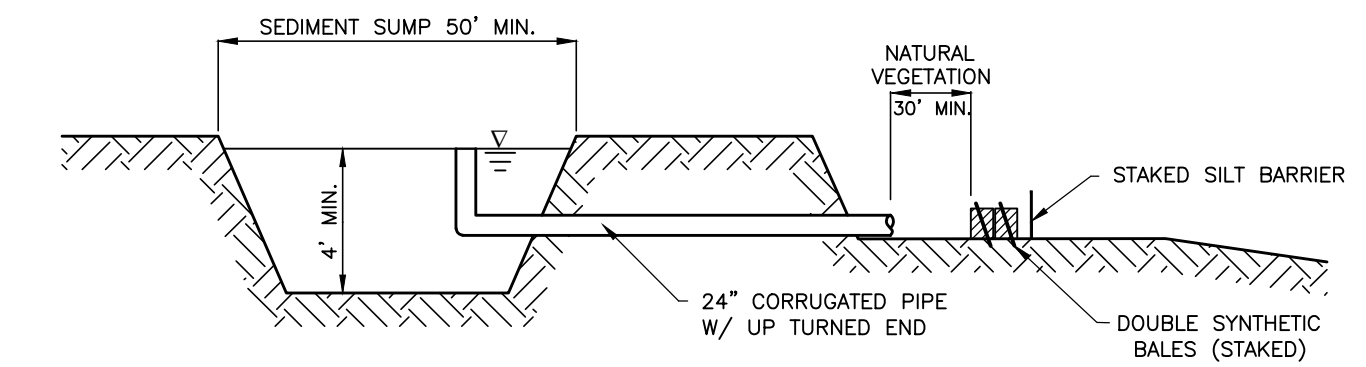
GRASS SLOPES  
FIGURE 13



SECTION AA  
TEMPORARY SLOPE DRAIN  
FIGURE 15



UNDERGROUND PIPE CROSSING  
FIGURE 12



SEDIMENT SUMP SECTION  
FIGURE 16

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

NO.	REVISION DESCRIPTION	BY	DATE

SATELLITE LIFT STATION R&R  
2020 GROUP 1  
EROSION CONTROL



PROJECT #	402-0019707
SURVEY #	-
SEC./TWN./RGE	VARIES
SCALE	N.T.S.
SURVEYED	---
DESIGNED	JSS 02/2020
DRAWN	CAK 02/2020
CHECKED	JSS 02/2020

JOHN S. SHOUN, P.E.  
FLORIDA PROFESSIONAL ENGINEER  
No. 60923  
STATE OF FLORIDA  
06/25/2020