



## 100% PLANS

A map of Hillsborough County, Florida, showing major roads, water bodies, and numbered locations. The map includes labels for Tampa Bay, Manatee River, Lake Parrish, and Lake Manatee. Numbered locations are 521, 507, 358, 374, 373, 683, 64, 70, 789, 62, 39, 37, 64, 70, and 780. The map also shows the boundaries of Hillsborough County, Hardee County, and Sarasota County.

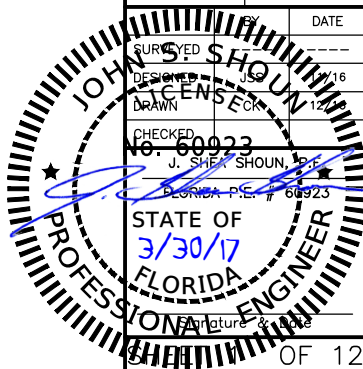
THESE PLANS HAVE BEEN DESIGNED ON 11x17 SHEETS

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**SATELLITE LIFT STATION R&R  
2016 GROUP 2  
COVER**

SURVEYED \_\_\_\_\_  
 DESIGNED \_\_\_\_\_  
 DRAWN \_\_\_\_\_  
 CHECKED \_\_\_\_\_  
 NO. **60923**  
 J. SHOOT, P.E.  
 DORRIS, P.E. # **60923**  
 STATE OF  
**3/30/17**  
 FLORIDA  
 PROFESSIONAL ENGINEER  
 Signature \_\_\_\_\_  
 OF 12

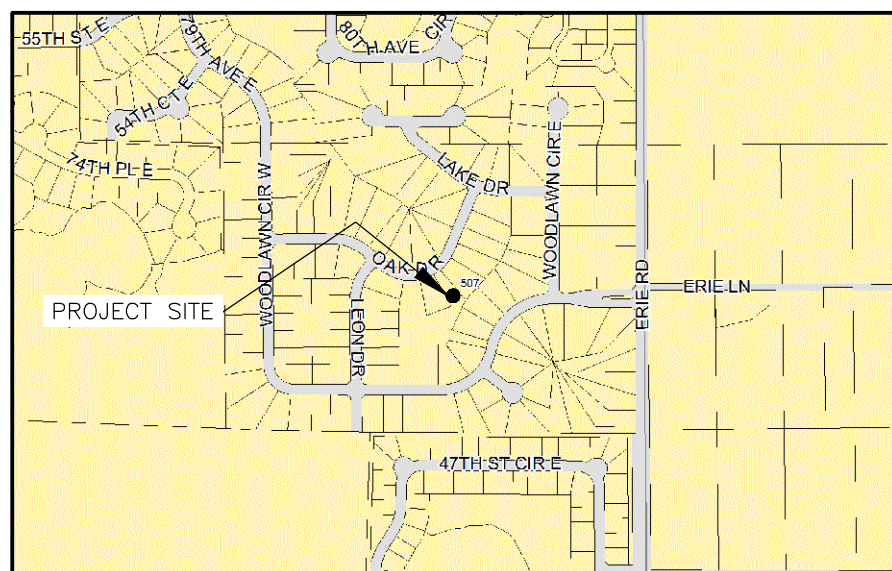
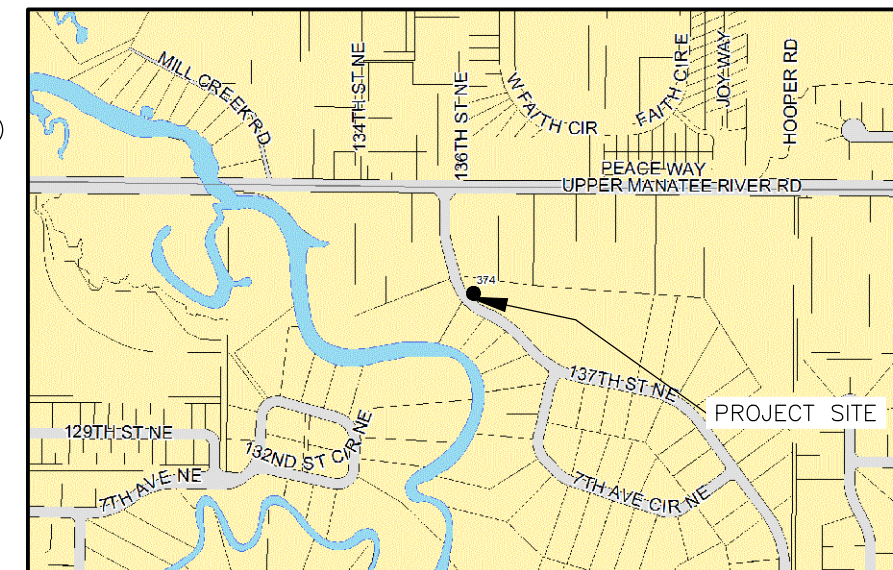
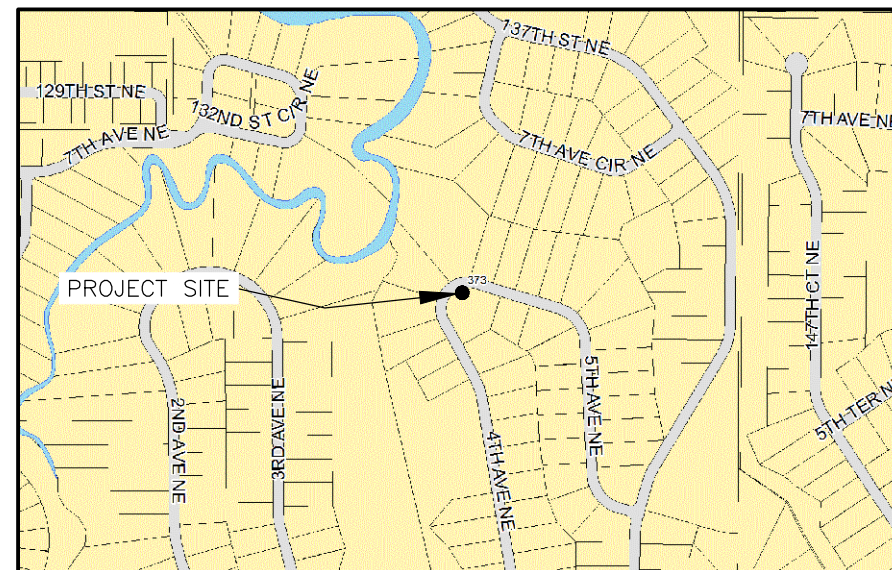
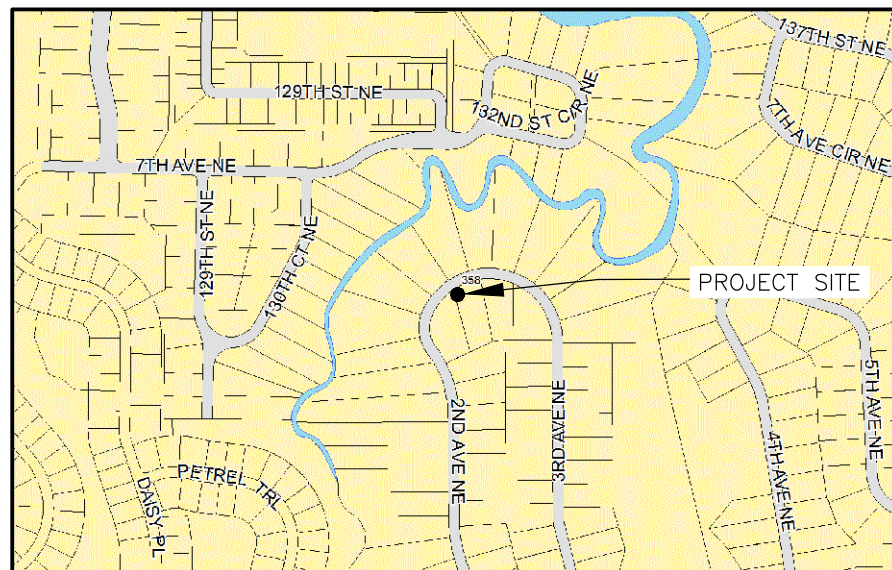
REHABILITATE SEWAGE LIFT STATIONS TO REDUCE RISK TO PUBLIC HEALTH AND ENVIRONMENTAL POLLUTION. THE WORK SHALL CONSIST OF, BUT NOT LIMITED TO, WET WELL CLEANING, THE REPLACEMENT OF DISCHARGE PIPING, FITTINGS, VALVES, SWING CHECK VALVES, GUIDE RAILS, PIPE BRACINGS, BASE ELLS, AND/OR MOUNTING PLATES. WET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











NOTE(S):

1. LIFT STATION SITE VISITS MAY BE COORDINATED WITH NICK WAGNER, 941-792-8811 x5377.

REVISION DESCRIPTION	DATE						
	BY						
NO.							

PROJECT #	----
SURVEY #	-
SEC./TWN./RGE	-
SCALE	N.T.S.
DRAWN	CK
CHECKED	12/9
No. 60923	
J. SLEA SHOUN P.E.	
FLORIDA P.E. # 60923	
STATE OF	
3/30/17	
FLORIDA	
PROFESSIONAL ENGINEER	
Signature _____ Date _____	
SHEET 3 OF 1	



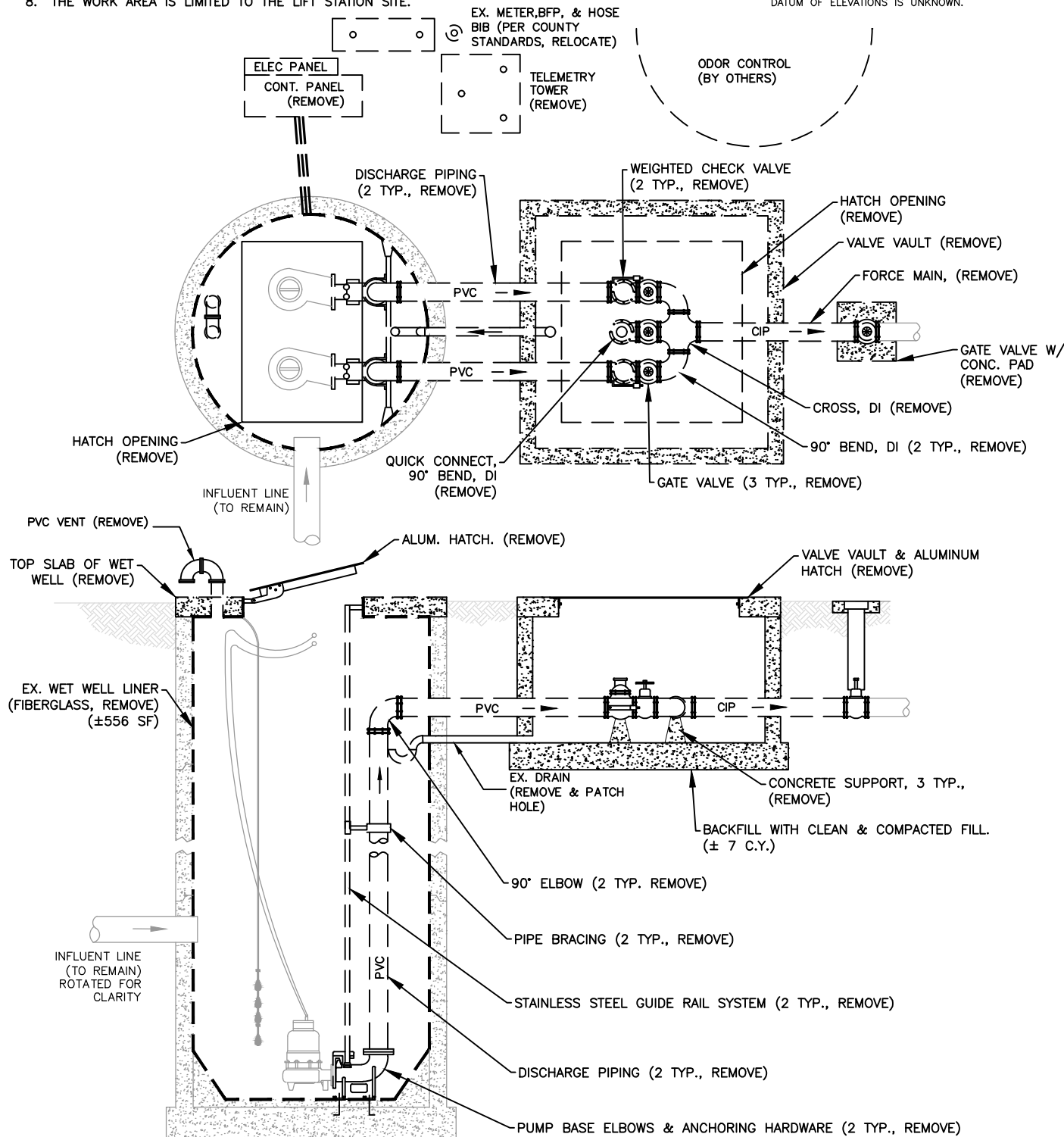
# EXISTING

## GENERAL 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.

RADIO TELEMETRY UNIT (RTU)	358
DESIGN CAPACITY GPM/TDH	95 / 38
DISCHARGE PIPING DIAMETER	4"
WET WELL DIAMETER	6'
BOTTOM SLAB ELEVATION	-12.50
TOP ELEVATION	15.00
VALVE VAULT HATCH ELEVATION	15.00
INFLUENT INVERT ELEVATION	-6.89
INFLUENT PIPE SIZE	10"
FORCE MAIN DIAMETER	6"
WET WELL VENT PIPE	PVC
ELECT. SERVICE SIZE, AMPS	100
ELECT. POWER, VOLTS/PH	230/3

\* INFORMATION TAKEN FROM LIFT STATION DATA FILE (LSINFO.XLS 2016) & RECORD DRAWINGS. DATUM OF ELEVATIONS IS UNKNOWN.

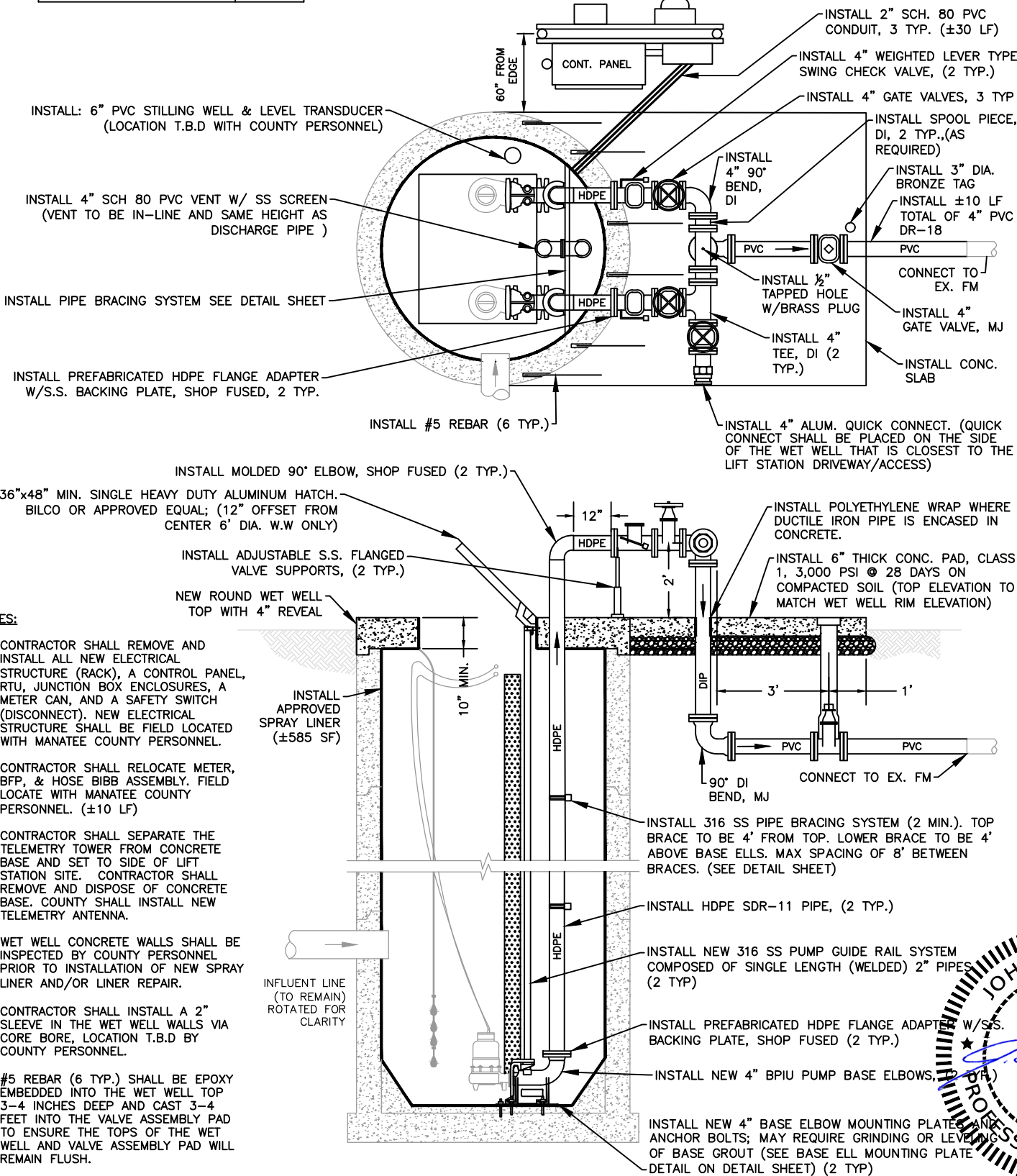


# PROPOSED

INSTALL FIBERGLASS W.W. LINER	NO
APPLY SPRAY LINER W.W. LINER	YES
INSTALL STILLING WELL	YES
INSTALL FORCE MAIN G.V.	YES
NEW HDPE PIPING IN W.W.	YES, 4"
NEW BASE ELL	4" BPIU-14
RAISE TOP OF WET WELL:	NO
RAISE TOP OF VALVE VAULT:	NO
REPLACE WET WELL VENT PIPE	YES
UPGRADE BFP TO STANDARD, US-15	NO
RELOCATE WATER SERVICE ASSEMBLY	YES

## 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 A 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, MISCELLANEOUS WORK.



## NOTES:

1. CONTRACTOR SHALL REMOVE AND INSTALL ALL NEW ELECTRICAL STRUCTURE (RACK), A CONTROL PANEL, RTU, JUNCTION BOX ENCLOSURES, A METER CAN, AND A SAFETY SWITCH (DISCONNECT). NEW ELECTRICAL STRUCTURE SHALL BE FIELD LOCATED WITH MANATEE COUNTY PERSONNEL.
2. CONTRACTOR SHALL RELOCATE METER, BFP, & HOSE BIBB ASSEMBLY. FIELD LOCATE WITH MANATEE COUNTY PERSONNEL. (±10 LF)
3. 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. COUNTY SHALL INSTALL NEW TELEMETRY ANTENNA.
4. WET WELL CONCRETE WALLS SHALL BE INSPECTED BY COUNTY PERSONNEL PRIOR TO INSTALLATION OF NEW SPRAY LINER AND/OR LINER REPAIR.
5. CONTRACTOR SHALL INSTALL A 2" SLEEVE IN THE WET WELL WALLS VIA CORE BORE, LOCATION T.B.D BY COUNTY PERSONNEL.
6. #5 REBAR (6 TYP.) SHALL BE EPOXY EMBEDDED INTO THE WET WELL TOP 3-4 INCHES DEEP AND CAST 3-4 FEET INTO THE VALVE ASSEMBLY PAD TO ENSURE THE TOPS OF THE WET WELL AND VALVE ASSEMBLY PAD WILL REMAIN FLUSH.



THESE PLANS HAVE BEEN DESIGNED ON 11x17 SHEETS

## SATELLITE LIFT STATION R&R 2016 GROUP 2 MILL CREEK 2, RTU 358

NO.	DATE	BY	REVISION DESCRIPTION
PROJECT #	402-5138280		
SURVEY #	-		
SEC./TWN./RGE	21/34/19		
SCALE	N.T.S.		
BY	DATE		
SURVEYED	-----		
DESIGNED	-----		
CHECKED	-----		
NO. 60923	3/30/17		
STATE OF FLORIDA			
PROFESSIONAL ENGINEER			
SHEET	11	OF	12



MANATEE COUNTY GOVERNMENT  
 2010  
 Copyright © 2010  
 S: PWD Engineering Share Util Eng Design PROJ - SAN SWR Proj Son Swr - US Upgrades SLS R&R 2016 Group 2 DWGS - SLS R&R 2016 Grp 2,dwg.5 MILL CREEK 3, 3/30/2017 1:20 PW Sheo Shoun, 1:1 ANSI full bleed B (17.00 x 11.00 inches

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.

\* INFORMATION TAKEN FROM LIFT STATION DATA  
FILE (LSINFO.XLS 2016) & RECORD DRAWINGS.  
DATUM OF ELEVATIONS IS UNKNOWN.



1. CONTRACTOR SHALL REMOVE AND INSTALL ALL NEW ELECTRICAL STRUCTURE (RACK), A CONTROL PANEL, RTU, JUNCTION BOX ENCLOSURES, A METER CAN, AND A SAFETY SWITCH (DISCONNECT). NEW ELECTRICAL STRUCTURE SHALL BE FIELD LOCATED WITH MANATEE COUNTY PERSONNEL.
2. CONTRACTOR SHALL RELOCATE METER, BFP, & HOSE BIBB ASSEMBLY. FIELD LOCATE WITH MANATEE COUNTY PERSONNEL. ( $\pm 10$  LF)
3. 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. COUNTY SHALL INSTALL NEW TELEMETRY ANTENNA.
4. #5 REBAR (6 TYP.) SHALL BE EPOXY EMBEDDED INTO THE WET WELL TOP 3-4 INCHES DEEP AND CAST 3-4 FEET INTO THE VALVE ASSEMBLY PAD TO ENSURE THE TOPS OF THE WET WELL AND VALVE ASSEMBLY PAD WILL REMAIN FLUSH.
5. CONTRACTOR SHALL INSTALL WASHED SHELL ( $\pm 37$  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.
6. 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.

INSTALL FIBERGLASS W.W. LINER	NO
APPLY SPRAY LINER W.W. LINER	NO
INSTALL STILLING WELL	YES
INSTALL FORCE MAIN G.V.	NO
NEW HDPE PIPING IN W.W.	YES, 4"
NEW BASE ELL	4" BPIU-14
RAISE TOP OF WET WELL:	NO
RAISE TOP OF VALVE VAULT:	NO
REPLACE WET WELL VENT PIPE	YES
UPGRADE BFP TO STANDARD, US-15	NO
RELOCATE WATER SERVICE ASSEMBLY	YES

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 A EDGING TOOL HAVING A RADIUS OF 1/2".
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5. ALL PAINTING SHALL BE INCLUDED IN THE BID ITEM, MISCELLANEOUS WORK.

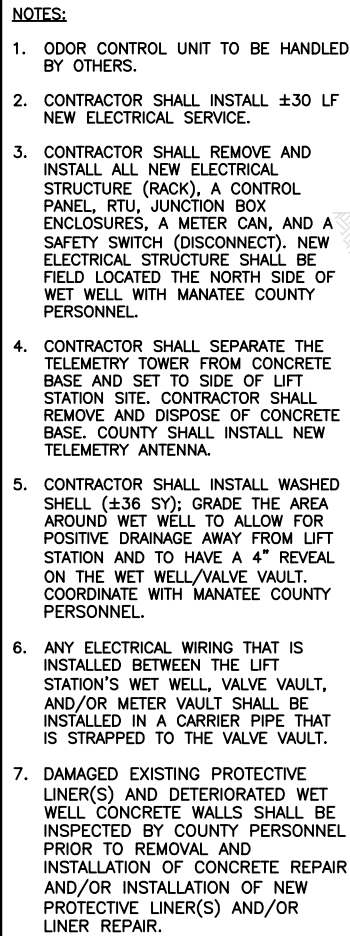




MANATEE COUNTY GOVERNMENT  
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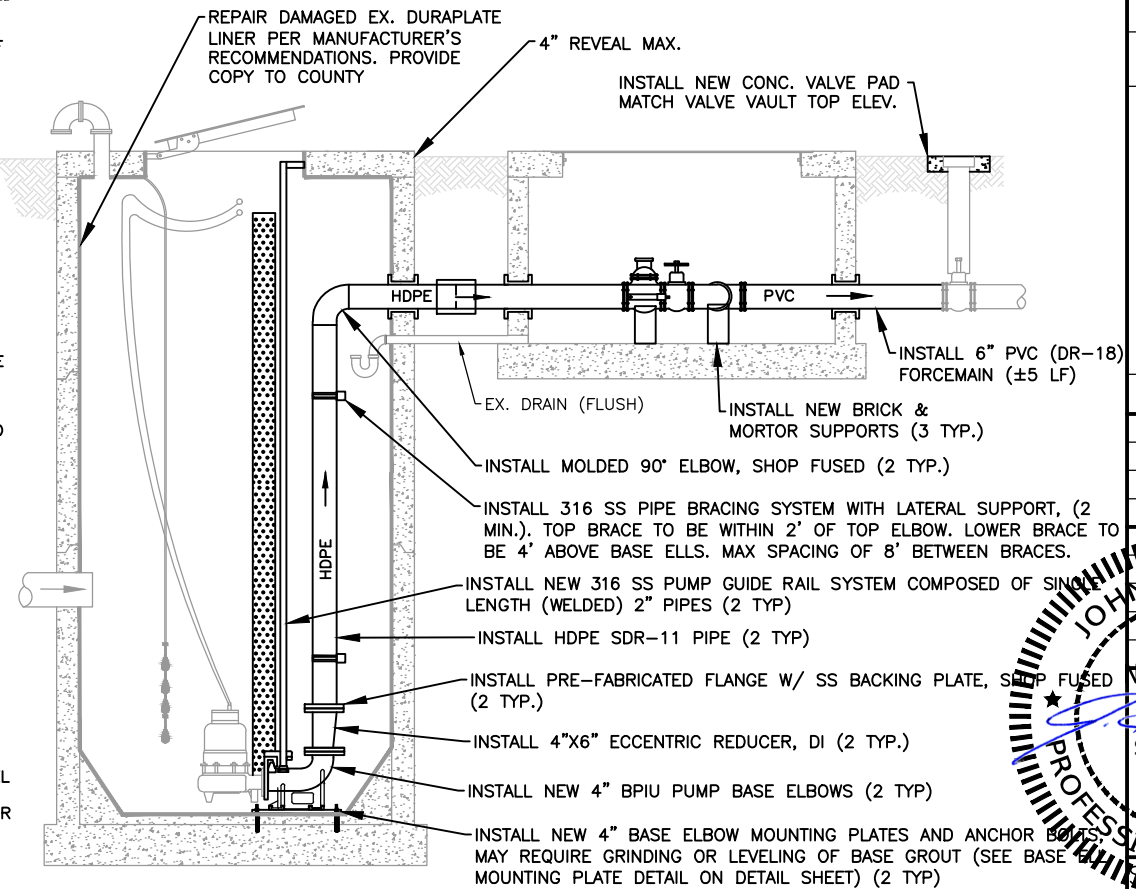
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8. THE WORK AREA IS LIMITED TO THE LIFT STATION SITE.

\* INFORMATION TAKEN FROM LIFT STATION DATA  
FILE (LSINFO.XLS 2016) & RECORD DRAWINGS.  
DATUM OF ELEVATIONS IS UNKNOWN.



INSTALL FIBERGLASS W.W. LINER	NO
APPLY SPRAY LINER W.W. LINER	NO
INSTALL STILLING WELL	YES
INSTALL FORCE MAIN G.V.	NO
NEW HDPE PIPING IN W.W.	YES, 6"
NEW BASE ELL	4" BPIU-14
RAISE TOP OF WET WELL:	NO
RAISE TOP OF VALVE VAULT:	NO
REPLACE WET WELL VENT PIPE	NO
UPGRADE BFP TO STANDARD, US-15	NO
RELOCATE WATER SERVICE ASSEMBLY	NO

1. CONTRACTOR SHALL NOT BACKFILL OVER ELECTROFUSED COUPLINGS 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.
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. CONTRACTOR SHALL 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, MISCELLANEOUS WORK.





MANATEE COUNTY GOVERNMENT  
 2010  
 S:\P\DW\Engineering\_Share\Util Eng Design\PROJ\~SAN SWR Proj\San Swr - S Upgrades\SLS R&R 2016 Group 2.dwg,7 WOODLAWN LAKES, 3/30/2017 1:20 PM Sheet Count 1:1, ANSI full bleed B (17.00 x 11.00 inches)  
 COPYRIGHT 2010

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8. THE WORK AREA IS LIMITED TO THE LIFT STATION SITE.

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FILE (LSINFO.XLS 2015) & RECORD DRAWINGS.  
DATUM OF ELEVATIONS IS UNKNOWN.



1. CONTRACTOR SHALL REMOVE AND INSTALL ALL NEW ELECTRICAL STRUCTURE (RACK), A CONTROL PANEL, RTU, JUNCTION BOX ENCLOSURES, A METER CAN, AND A SAFETY SWITCH (DISCONNECT). NEW ELECTRICAL STRUCTURE SHALL BE FIELD LOCATED WITH MANATEE COUNTY PERSONNEL.
2. CONTRACTOR SHALL RELOCATE METER, BFF, & HOSE BIBB ASSEMBLY. ( $\pm 10$  LF) FIELD LOCATE WITH MANATEE COUNTY PERSONNEL.
3. 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. COUNTY SHALL INSTALL NEW TELEMETRY ANTENNA.
4. CONTRACTOR SHALL INSTALL WASHED SHELL ( $\pm 167$  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.
5. #5 REBAR (6 TYP.) SHALL BE EPOXY EMBEDDED INTO THE WET WELL TOP 3-4 INCHES DEEP AND CAST 3-4 FEET INTO THE VALVE ASSEMBLY PAD TO ENSURE THE TOPS OF THE WET WELL AND VALVE ASSEMBLY PAD WILL REMAIN FLUSH.
6. CONTRACTOR SHALL INSTALL ( $\pm 30$  LF) NEW ELECTRICAL SERVICE.
7. CONTRACTOR TO REMOVE ASPHALT INSIDE THE FENCE ( $\pm 16$  SY). REPLACE WITH 6" THICK REINFORCED CONCRETE DRIVEWAY; MATCH WIDTH OF ENTRANCE DRIVEWAY; KEEP 2 FT FROM WET WELL.
8. 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.

OF 1



EXISTING

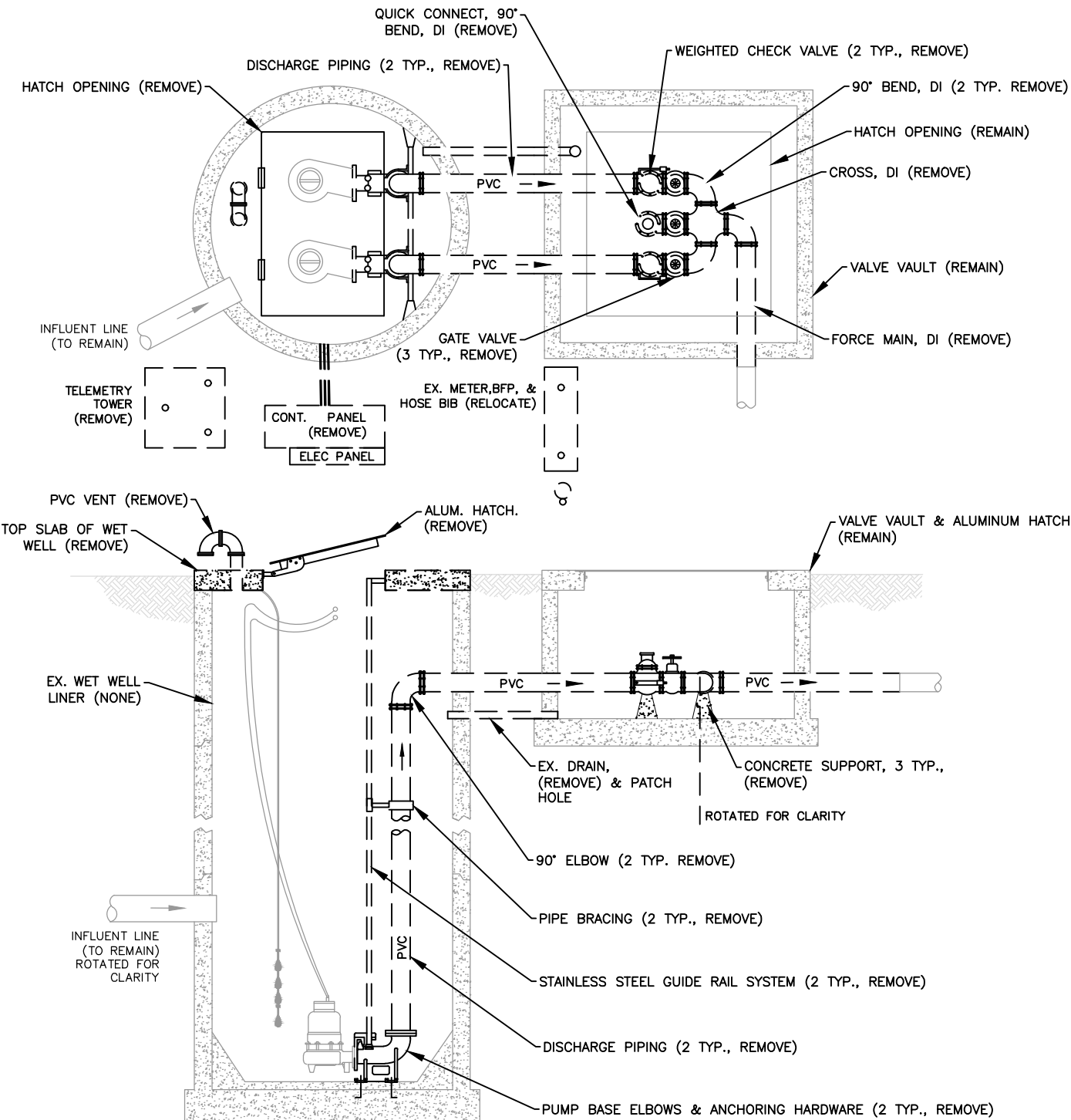
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8. THE WORK AREA IS LIMITED TO THE LIFT STATION SITE.

RADIO TELEMETRY UNIT (RTU)	521
DESIGN CAPACITY GPM/TDH	100/13.4
DISCHARGE PIPING DIAMETER	3"
WET WELL DIAMETER	6'
BOTTOM SLAB ELEVATION**	0.00
TOP ELEVATION**	10.00
VALVE VAULT HATCH ELEVATION**	10.00
INFLUENT INVERT ELEVATION	UNK.
INFLUENT PIPE SIZE	8"
FORCE MAIN DIAMETER	4"
WET WELL VENT PIPE	PVC
ELECT. SERVICE SIZE, AMPS	50
ELECT. POWER, VOLTS/PH	230/1

\*DATUM OF ELEVATIONS IS UNKNOWN.

\*\*VALVES ARE APPROXIMATED.

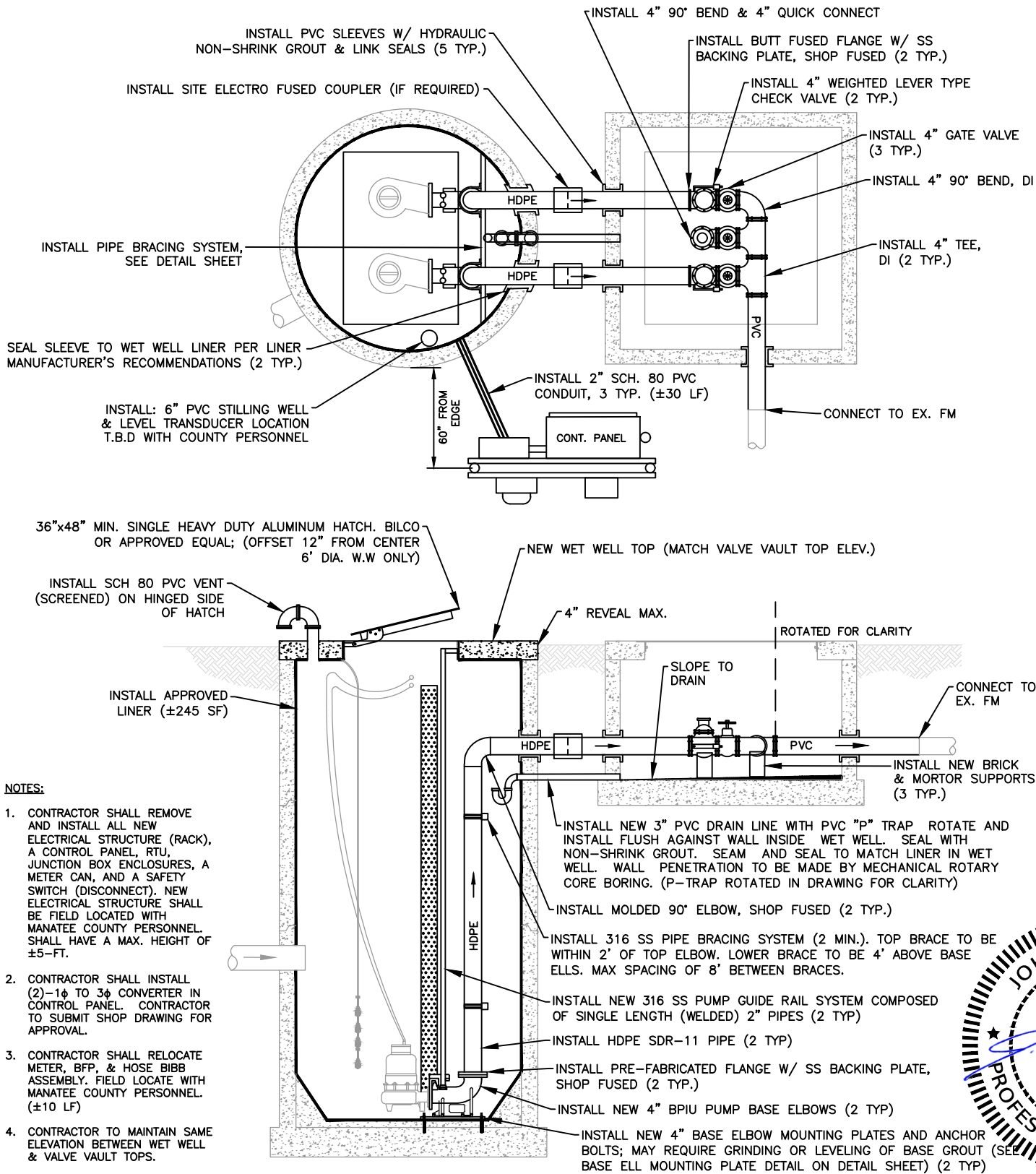


PROPOSED

INSTALL FIBERGLASS W.W. LINER	NO
APPLY SPRAY LINER W.W. LINER	YES
INSTALL STILLING WELL	YES
INSTALL FORCE MAIN G.V.	NO
NEW HDPE PIPING IN W.W.	YES, 4"
NEW BASE ELL	4" BPIU-14
RAISE TOP OF WET WELL:	NO
RAISE TOP OF VALVE VAULT:	NO
REPLACE WET WELL VENT PIPE	YES
UPGRADE BFP TO STANDARD, US-15	NO
RELOCATE WATER SERVICE ASSEMBLY	YES

GENERAL NOTES:

1. CONTRACTOR SHALL NOT BACKFILL OVER ELECTROFUSED COUPLINGS 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.
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. CONTRACTOR SHALL 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, MISCELLANEOUS WORK.



NOTES:

1. CONTRACTOR SHALL REMOVE AND INSTALL ALL NEW ELECTRICAL STRUCTURE (RACK), A CONTROL PANEL, RTU, JUNCTION BOX ENCLOSURES, A METER CAN, AND A SAFETY SWITCH (DISCONNECT). NEW ELECTRICAL STRUCTURE SHALL BE FIELD LOCATED WITH MANATEE COUNTY PERSONNEL SHALL HAVE A MAX. HEIGHT OF ±5-FT.
2. CONTRACTOR SHALL INSTALL (2)-1φ TO 3φ CONVERTER IN CONTROL PANEL. CONTRACTOR TO SUBMIT SHOP DRAWING FOR APPROVAL.
3. CONTRACTOR SHALL RELOCATE METER, BFP, & HOSE BIBB ASSEMBLY. FIELD LOCATE WITH MANATEE COUNTY PERSONNEL (±10 LF)
4. CONTRACTOR TO MAINTAIN SAME ELEVATION BETWEEN WET WELL & VALVE VAULT TOPS.



THESE PLANS HAVE BEEN DESIGNED ON 11x17 SHEETS

SATELLITE LIFT STATION R&R  
2016 GROUP 2  
COLONY COVE 5, RTU 521

DATE	
BY	
REVISION DESCRIPTION	
NO.	

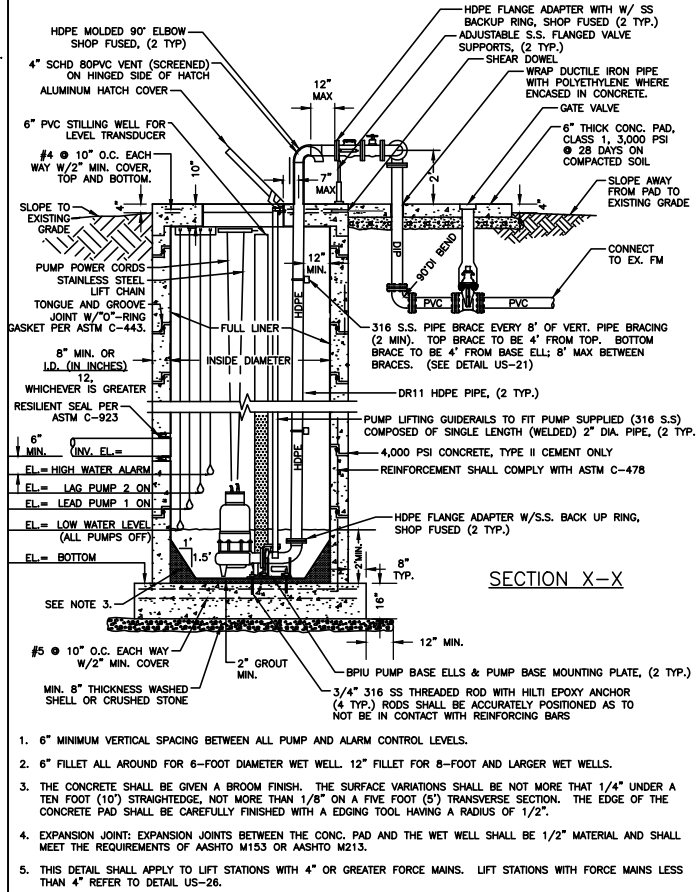
PROJECT #	402-5100283
SURVEY #	-
SEC./TWN./RGE	10/34/18
SCALE	N.T.S.

BY	DATE
SURVEYED	-----
DESIGNED	-----
DRAWN	-----
CHECKED	-----
APPROVED	-----
STATE OF	3/30/17
FLORIDA	-----
PROFESSIONAL ENGINEER	-----
SHEET	OF 12

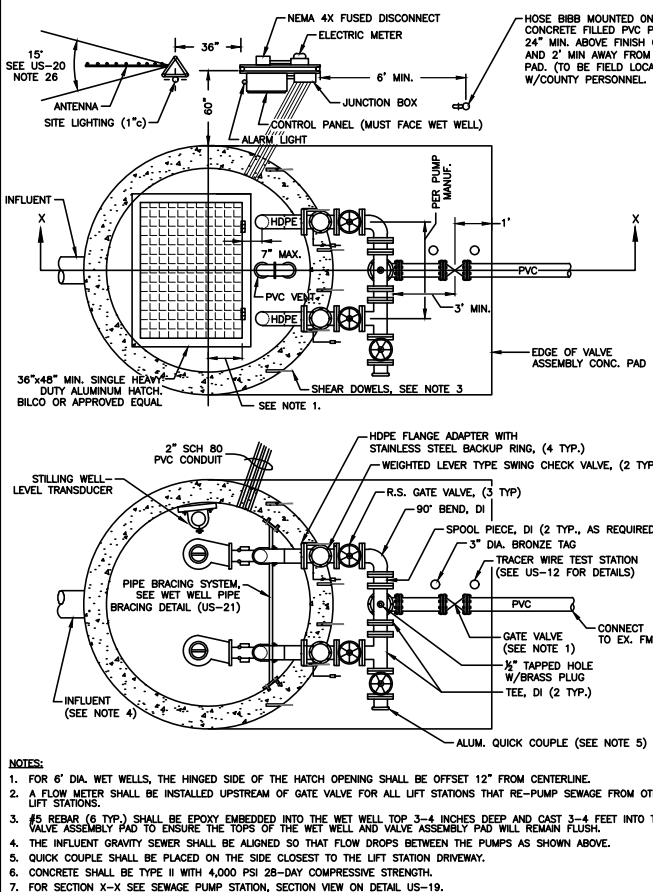


SATELLITE LIFT STATION R&R  
2016 GROUP 2  
DETAILS

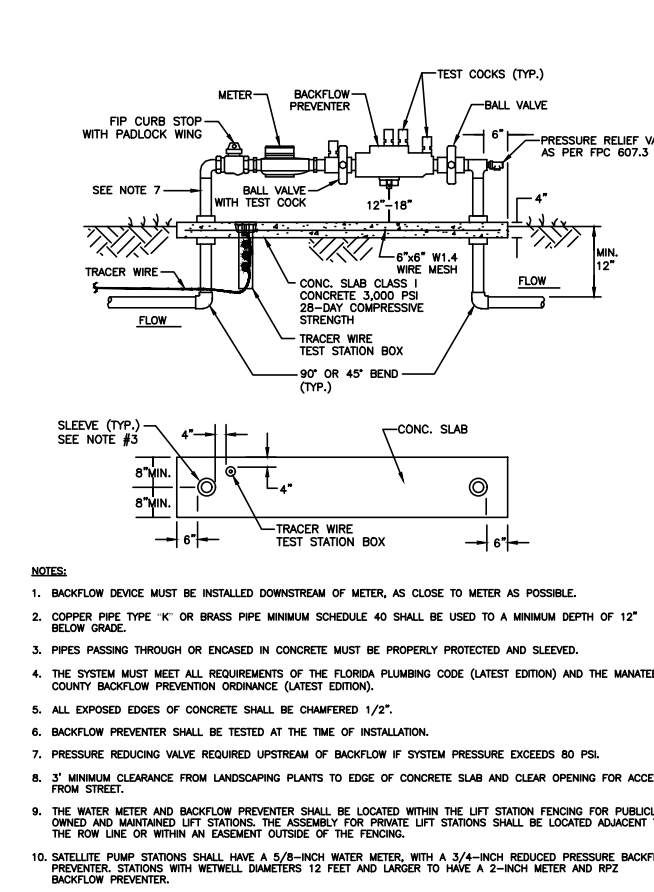
REVISION DESCRIPTION	DATE	BY
NO.		
PROJECT #	----	
SURVEY #	---	
SEC./TWN./RGE	---	
SCALE	N.T.S.	
DATE	3/30/17	
DESIGNED BY	J. SHOWN	
CHECKED BY	J. SHOWN	
STATE OF FLORIDA		
PROFESSIONAL ENGINEER		
NO. 60923		
DATE	3/30/17	
SIGNATURE		



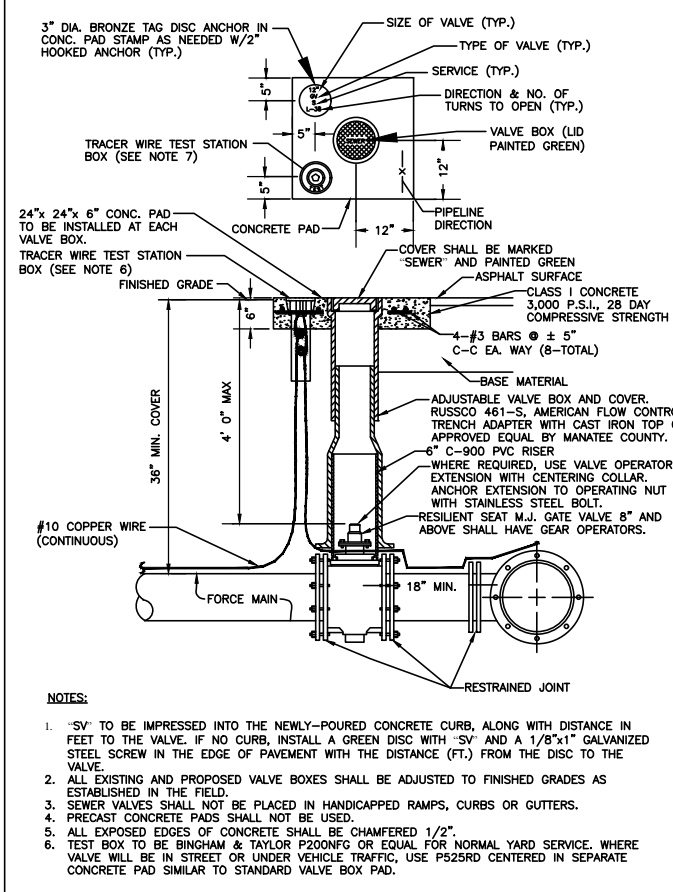
MANATEE COUNTY PUBLIC WORKS DEPARTMENT	SEWAGE PUMP STATION SECTION VIEW	US-21
REV. BY	DATE	
DATE OF APPROVAL		



MANATEE COUNTY PUBLIC WORKS DEPARTMENT	SEWAGE PUMP STATION PLAN VIEW	US-20
REV. BY	DATE	
DATE OF APPROVAL		



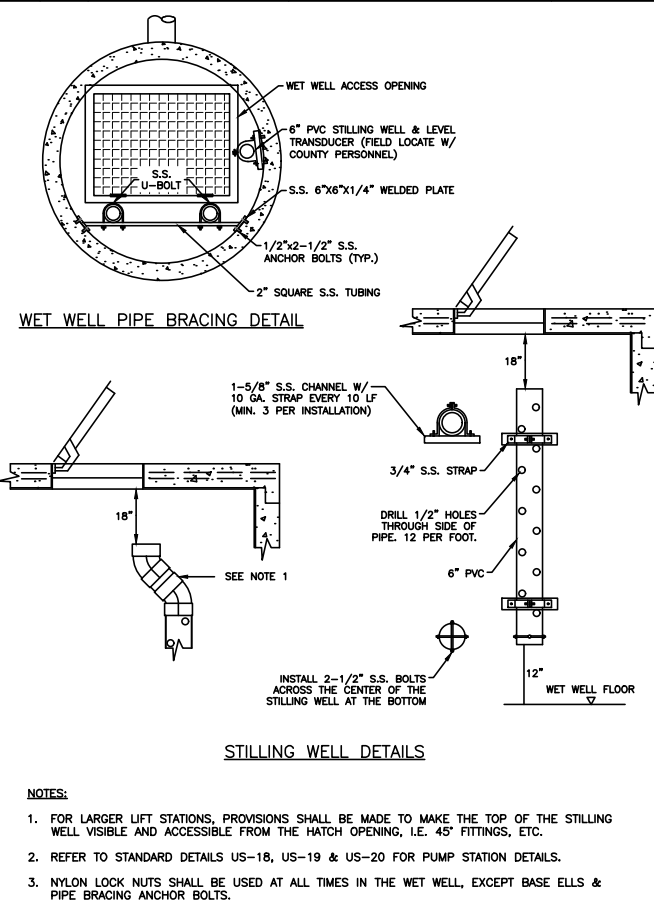
MANATEE COUNTY PUBLIC WORKS DEPARTMENT	WATER METER & BACKFLOW PREVENTER FOR PUMP STATIONS	US-17
REV. BY	DATE	
DATE OF APPROVAL		



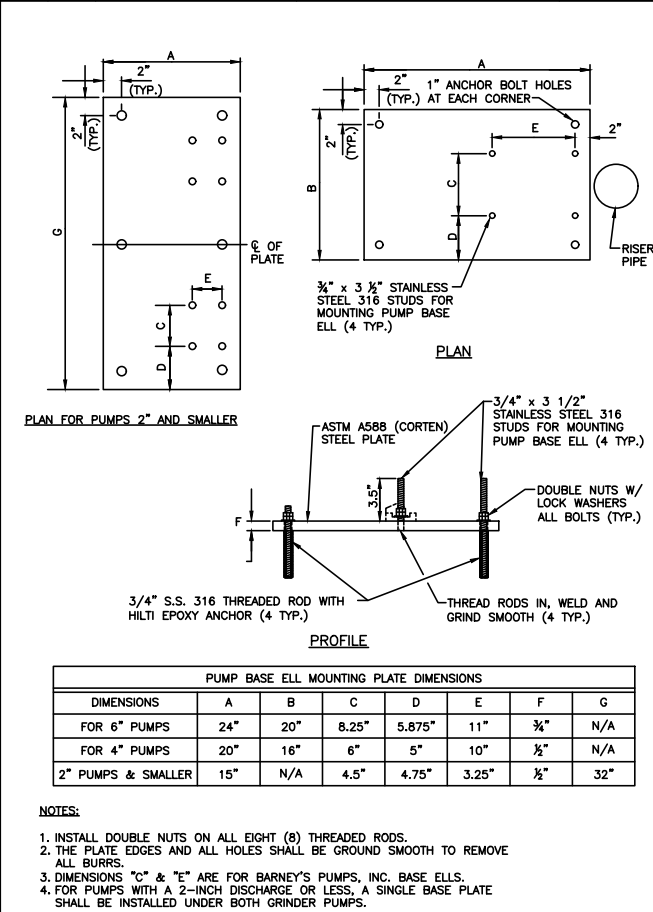
MANATEE COUNTY PUBLIC WORKS DEPARTMENT	GATE VALVE, BOX, COVER AND TAG	US-13
REV. BY	DATE	
DATE OF APPROVAL		

- GENERAL LIFT STATION NOTES:
- ALL ACCESS COVERS SHALL BE ALUMINUM, WITH 316 STAINLESS STEEL HARDWARE AND RATED FOR 300 P.S.F. LOADING. ALL ALUMINUM SURFACES IN CONTACT WITH CONCRETE SHALL HAVE 2 COATS BITUMASTIC EPOXY, TOTAL 16 MILS DFT. ALL ACCESS COVERS SHALL BE EQUIPPED WITH A LOCKING STAPLE OR BAR FOR USE WITH A PADLOCK. PADLOCKS FOR WETWELL, FENCE GATE AND CONTROL PANELS OF PUBLICLY OWNED & MAINTAINED LIFT STATIONS SHALL BE FURNISHED BY THE MANATEE COUNTY UTILITIES DEPARTMENT, UPON ACCEPTANCE.
  - INSTALL WET WELL VENT ON THE HINGED SIDE OF THE WET WELL HATCH COVER, BETWEEN DISCHARGE PIPING AND MATCH HEIGHT.
  - GROUND SHALL BE SLOPED AWAY FROM SLAB TO NATURAL GROUND ELEVATION IN ALL DIRECTIONS. A 4-INCH REVEAL SHALL BE PROVIDED AROUND THE STRUCTURES. SITE SHALL INCLUDE A WEED BARRIER FABRIC THAT IS COVERED WITH WASHED SHELL OR ROCK WITHIN LIFT STATION FENCING; SITE SHALL INCLUDE A WEED BARRIER FABRIC THAT IS COVERED WITH SHREDDED WOOD-TYPE MULCH UNDER AND UP TO OUTSIDE OF THE FENCING. WEED BARRIER FABRIC THAT IS COVERED WITH SHREDDED WOOD-TYPE MULCH SHALL BE LOCATED UNDER THE TREES FOR A MINIMUM DISTANCE OF 3 FEET FROM THE TREE. SODDING OR SHREDDED WOOD-TYPE MULCH SHALL BE INSTALLED ON THE REMAINDER OF THE SITE TO THE EDGE OF THE EASEMENT.
  - ALL FORCE MAIN PIPING AND FITTINGS FROM THE PUMP BASE ELBOW IN THE WETWELL UP TO THE CHECK VALVE IN THE ABOVE GROUND VALVE ASSEMBLY, SHALL BE DR11 HDPE. THE HDPE FITTINGS SHALL BE MOLDED FITTINGS. ALL CONNECTIONS TO IRON BODIED FLANGE FITTINGS IN THE WETWELL (PUMP BASE ELLS) AND TO THE CHECK VALVES SHALL BE MADE USING HDPE FLANGE ADAPTERS WITH 316 STAINLESS STEEL BACKUP RINGS. 316 HDPE CONNECTIONS SHALL BE THERMAL FUSED. ALL PIPING DOWNSTREAM OF THE VALVE ASSEMBLY TO THE ISOLATION VALVE SHALL BE DUCTILE IRON PIPE (CL-53).
  - ALL PIPING BELOW GROUND SHALL BE COLOR CODED IN ACCORDANCE WITH THESE STANDARDS. GREEN-RAW SEWAGE; PANTONE 522C PURPLE-RECLAIMED; BLUE-POTABLE WATER.
  - ANCHORS & LIFTING DEVICES SHALL NOT PENETRATE THE WALLS OF THE WET WELL.
  - ALL INTERIOR SURFACES OF WET WELL SHALL BE LINED. SEE STANDARD PRE-CAST SANITARY SEWER MANHOLE FOR TURBULENT FLOW DETAIL.
  - ALL METAL APPURTENANCES INCLUDING BOLTS, NUTS AND WASHERS SHALL BE 316 STAINLESS STEEL. ALL STAINLESS STEEL BOLTS SHALL BE TREATED WITH NEVER-SEIZE PRIOR TO ASSEMBLY.
  - VERTICAL HDPE PUMP DISCHARGE PIPE IN THE WET WELL SHALL BE BRACED PER DETAIL US-21. THE PIPE SHALL BE CLAMPED TO A SINGLE LENGTH OF 2" 316 SS TUBING INSTALLED HORIZONTALLY. THE TUBE SHALL HAVE 6"x6"x1/4" PLATES WELDED TO EACH END AND ATTACH TO THE WALL BY 316 SS ANCHORS. THE PIPE SHALL BE CLAMPED TO THE TUBING W/316 SS U-BOLTS.
  - CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT FLOTATION.
  - TOP OF WET WELL AND VALVE ASSEMBLY SLAB SHALL BE AT THE SAME ELEVATION.
  - THE EXTERIOR SURFACES OF THE CONCRETE WET WELL AND VALVE ASSEMBLY PAD EXPOSED ABOVE GRADE SHALL BE COATED WITH A LEAST TWO COATS OF H&C SILICONE ACRYLIC CONCRETE STAIN, PATIO GREEN, MANUFACTURED BY FLR PAINTS, INC. ABOVE GROUND VALVE ASSEMBLY & PIPING SHALL BE PAINTED, RUSTOLEUM 7538 HUNTER GREEN. CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID OVER-SPRAY ONTO THE VALVE ASSEMBLY CONCRETE PAD.
  - FOR 5/8" WATER METER, PROVIDE POTABLE WATER SERVICE CONNECTION WITH 3/4" BRASS HOSE BIB. PROVIDE WATTS 909 BACKFLOW PREVENTER (OR EQUIVALENT). ALL WATER SERVICE PIPING FROM WATER METER TO BE TYPE "K" COPPER OR BRASS; 3/4" MIN. DIAMETER FOR 5/8" METER AND 2" MIN. DIAMETER PIPING FOR 2" METER.
  - LANDSCAPING SHALL BE IRRIGATED WITH NON-POTABLE WATER. A RAIN SENSOR SHALL BE FURNISHED AND INSTALLED.
  - HOSE BIB TO BE A MINIMUM OF 6 FEET FROM THE ELECTRICAL CONTROL PANEL. 24" ABOVE THE SURROUNDING FINISH GRADE, AND ANCHORED TO A 4" PVC CONCRETE FILLED PIPE. EXACT LOCATION TO BE DETERMINED IN THE FIELD W/COUNTY PERSONNEL.
  - WATER METER ASSEMBLY TO BE INSTALLED BY CONTRACTOR AS PART OF WATER SERVICE CONNECTION WITH FEES PAID BY THE DEVELOPER.
  - BASE AND FIRST WALL SECTION OF WET WELL SHALL BE MONOLITHIC.
  - EVERY EFFORT SHALL BE MADE BY THE CONTRACTOR TO CONSTRUCT WATER TIGHT STRUCTURES WITH NO VISIBLE LEAKS. COMPLETED STRUCTURES THAT ARE NOT WATER TIGHT AND/OR DO NOT MEET THE REQUIREMENTS OF ASTM C-443 WILL BE REJECTED.
  - FLEXIBLE GASKET CONNECTORS SHALL MEET THE REQUIREMENTS OF ASTM C-923 LATEST REVISION.
  - ALL GATE VALVES SHALL BE RESILIENT SEAT IN ACCORDANCE WITH THESE STANDARDS.
  - ELECTRICAL SERVICE SHALL BE 3 PHASE MINIMUM, UNLESS THE ELECTRICAL UTILITY PROVIDES CORRESPONDENCE STATING THAT 3 PHASE SERVICE IS UNAVAILABLE.
  - ELECTRICAL CONDUIT SHALL BE RUN BY THE SHORTEST ROUTE POSSIBLE FROM THE ELECTRICAL SOURCE TO THE CONTROL PANEL AND FROM THE CONTROL PANEL TO THE LIFT STATION WET WELL.
  - A FLOW METER AND EMERGENCY BACKUP PUMP SHALL BE REQUIRED FOR ALL LIFT STATIONS THAT MEET THE CRITERIA LISTED IN SECTION 1.13.14.
  - THE CONTROL PANEL, HOSE BIB, EMERGENCY BACKUP PUMP, FUEL STORAGE TANK AND ANTENNA SHALL NOT BE LOCATED BETWEEN THE WETWELL, VALVE ASSEMBLY AND THE DRIVEWAY. THE PUMP SHALL NOT BE LOCATED WITHIN 25 FEET OF THE EDGE OF THE LIFT STATION EASEMENT AT THE ROW LINE.
  - THE ANTENNA FOR THE RADIO TELEMETRY UNIT REQUIRES DIRECT LINE-OF-SIGHT SIGNALING CAPABILITY TO THE UTILITIES DEPARTMENT'S OFFICE THAT WILL RECEIVE THE SIGNAL. THERE SHALL BE AN UNOBSTRUCTED HORIZONTAL ANGLE OF FIFTEEN (15) DEGREES FROM THE ANTENNA MAST TO BOTH SIDES OF THE DIRECT LINE-OF-SIGHT ANGLE. NO TREE SHALL BE PLANTED WITHIN THE DESIGNATED UNOBSTRUCTED ANGLE FOR A TWENTY (20) FEET HORIZONTAL DISTANCE MEASURED FROM THE MAST. LANDSCAPE BUFFER PLANTINGS ARE TO BE FIELD ADJUSTED IN COORDINATION WITH THE LOCATION OF THE CONSTRUCTED TELEMETRY ANTENNA. THE ANTENNA TOWER/MAST SHALL BE TO THE LEFT OF THE CONTROL PANEL.

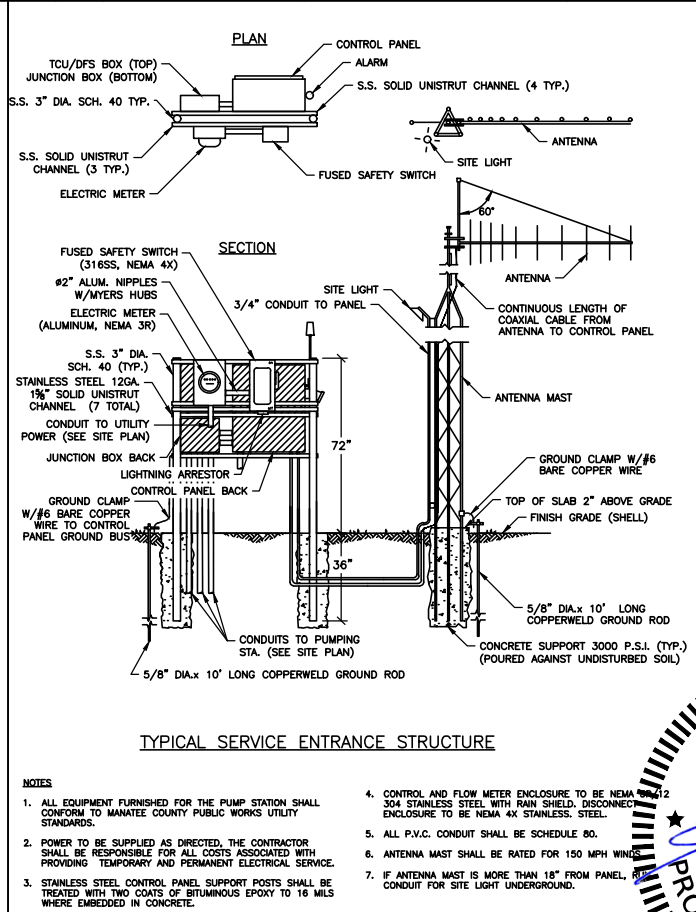
MANATEE COUNTY PUBLIC WORKS DEPARTMENT	PUMP STATION NOTES	US-22
REV. BY	DATE	
DATE OF APPROVAL		



MANATEE COUNTY PUBLIC WORKS DEPARTMENT	PUMP STATION PIPE BRACING, & STILLING WELL DETAILS	US-23
REV. BY	DATE	
DATE OF APPROVAL		



MANATEE COUNTY PUBLIC WORKS DEPARTMENT	PUMP BASE ELL MOUNTING PLATE	US-24
REV. BY	DATE	
DATE OF APPROVAL		



MANATEE COUNTY PUBLIC WORKS DEPARTMENT	SEWAGE PUMP STATION METER & ELECTRICAL DETAILS	US-25
REV. BY	DATE	
DATE OF APPROVAL		

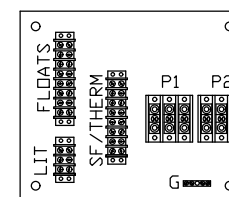


# SATELLITE LIFT STATION R&R

## 2016 GROUP 2

### DETAILS

ENCLOSURE POWDER  
COATED WHITE



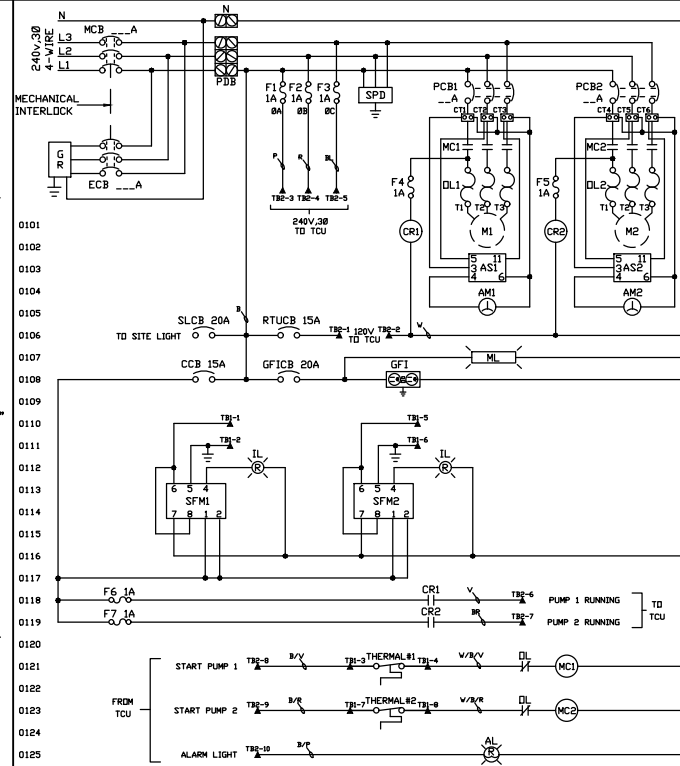
BASE PLATE

1 of 5

5 of 5

<b>MANATEE COUNTY</b> PUBLIC WORKS DEPARTMENT		SEWAGE PUMP STATION CONTROL PANEL (230V)	US-27E
REV. BY	DATE		
_____ DATE OF APPROVAL			

<b>MANATEE COUNTY</b> PUBLIC WORKS DEPARTMENT		SEWAGE PUMP STATION CONTROL PANEL	US-26
REV. BY	DATE		
_____ DATE OF APPROVAL			



1 of 5

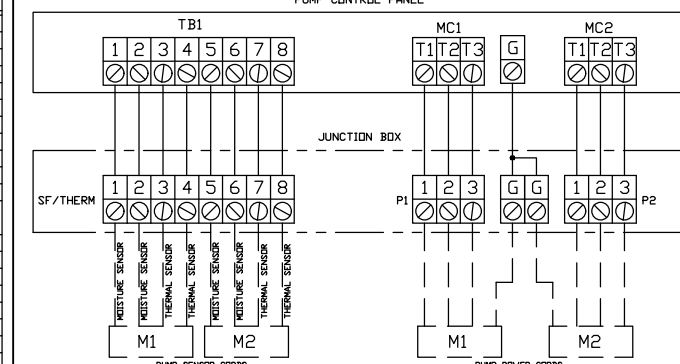
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REV. BY	DATE		
_____ DATE OF APPROVAL			

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

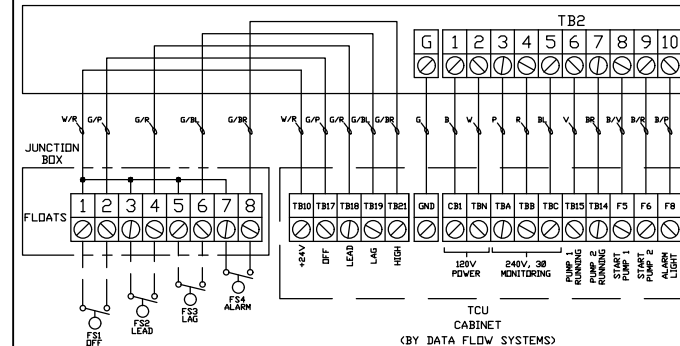
2 of 5

<b>MANATEE COUNTY</b> PUBLIC WORKS DEPARTMENT		SEWAGE PUMP STATION CONTROL PANEL (230V)	US-27B
REV. BY	DATE		

## PUMP CONTROL PANEL

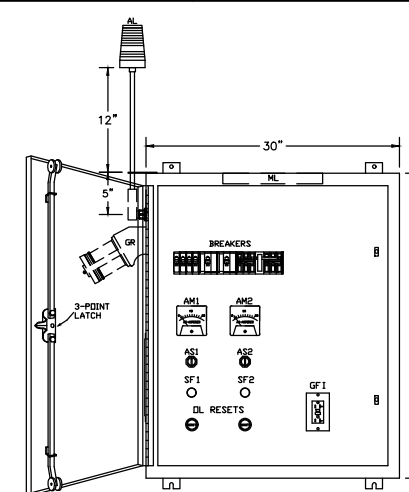


PUMP CONTROL PANEL

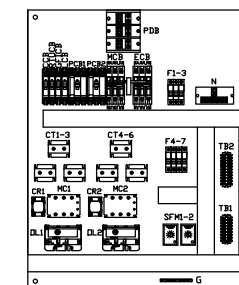


3 of 5

<b>MANATEE COUNTY</b> PUBLIC WORKS DEPARTMENT		SEWAGE PUMP STATION CONTROL PANEL (230V)	US-270
REV. BY	DATE		



ENCLOSURE &amp; DEADFRONT LAYOUT (TYPICAL)



BASE PLATE LAYOUT (TYPICAL)

4 of

<b>MANATEE COUNTY</b> PUBLIC WORKS DEPARTMENT		SEWAGE PUMP STATION CONTROL PANEL (230V)	US-27D
REV. BY	DATE		
DATE OF APPROVAL			

DATE: \_\_\_\_\_  
SURVIVED \_\_\_\_\_  
DESIGNED BY: J. SHEA SHOUN, P.E.  
DRAWN BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_  
No. 60923  
J. SHEA SHOUN, P.E.  
FLORIDA P.E. # 60923  
STATE OF  
3/30/17  
FLORIDA  
PROFESSIONAL ENGINEER  
Signature: \_\_\_\_\_  
TITLE: \_\_\_\_\_ OF 1



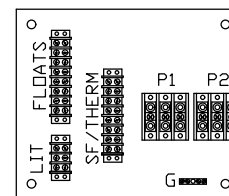
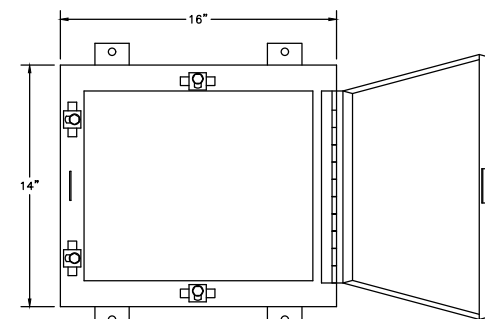
# SATELLITE LIFT STATION R&R


## 2016 GROUP 2

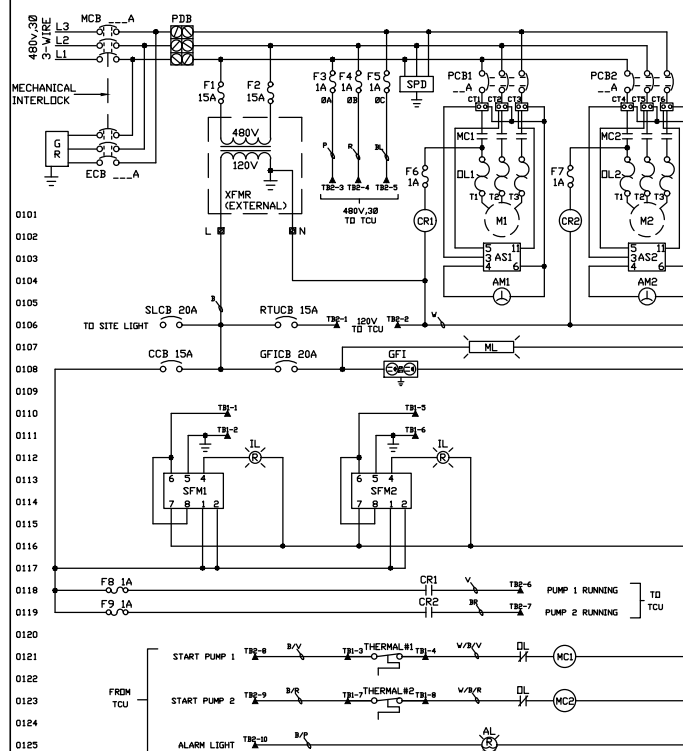
### DETAILS

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

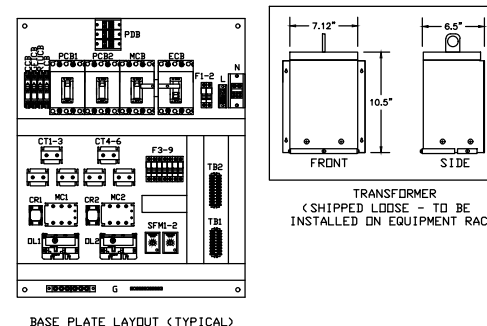
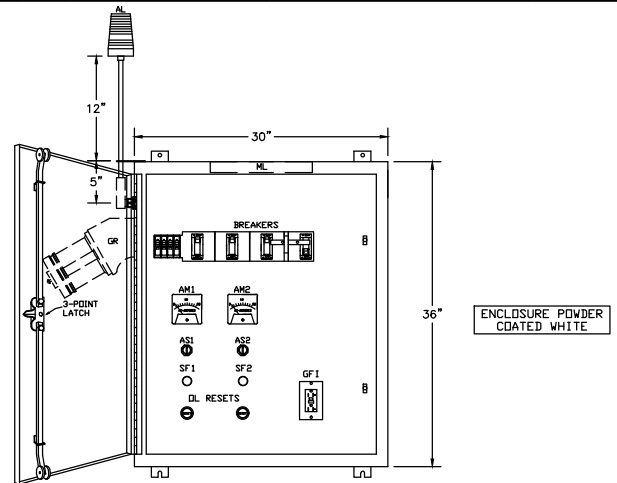
JUNCTION BOX BILL			OF MATERIALS
QTY.	ABBR.	DESCRIPTION	MANUFACTURER, PART#
1	ENC.	ENCLOSURE, 304SS N4X (WHITE)	CUSTOM EQUIPMENT, 14X16X8-WHT-MANCO
2		8-POINT TERMINAL BLOCK	IDEAL, 89-208
1		3-POINT TERMINAL BLOCK	IDEAL, 89-203
2		PUMP TERMINAL BLOCK	MARATHON, 1323572
1	G	GROUND BAR	EATON, GBK5



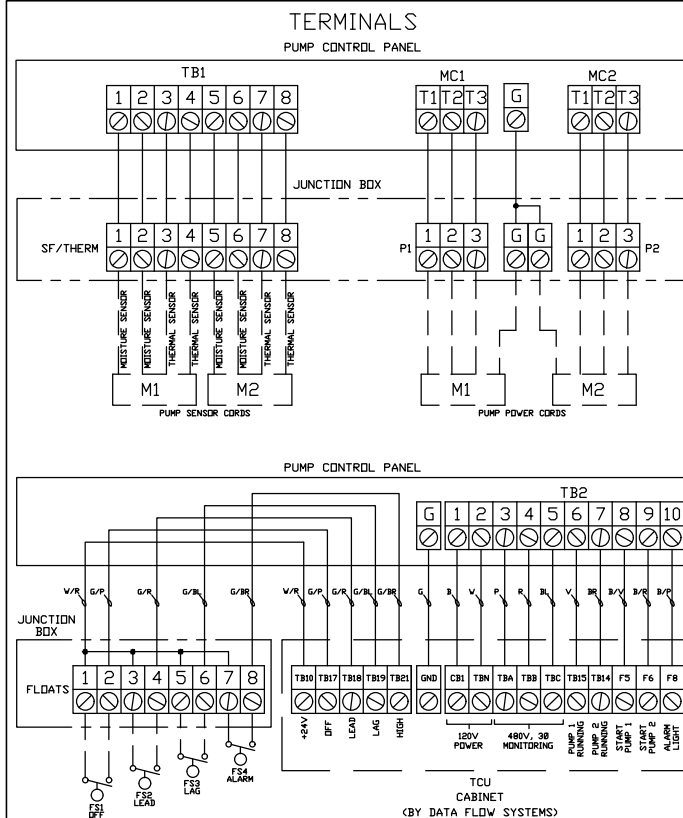
<b>MANATEE COUNTY</b> PUBLIC WORKS DEPARTMENT		SEWAGE PUMP STATION CONTROL PANEL (460V)	 US-28B
REV. BY	DATE		
_____ DATE OF APPROVAL			



MANATEE COUNTY PUBLIC WORKS DEPARTMENT		SEWAGE PUMP STATION CONTROL PANEL (460V)	US-28A
REV. BY	DATE		
DATE OF APPROVAL			



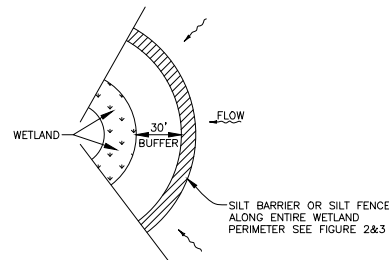
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REV. BY	DATE		
_____ DATE OF APPROVAL			



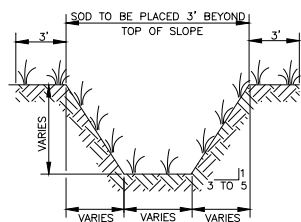
<b>MANATEE COUNTY</b> PUBLIC WORKS DEPARTMENT		SEWAGE PUMP STATION CONTROL PANEL (460V)	US-28C
REV. BY	DATE		
_____ DATE OF APPROVAL			

BY DATE  
SURVEYED  
DESIGNED 11/16  
DRAWN 11/16  
CHECKED  
NO. 069923  
N. J. SMOON, P.E.  
FLORIDA P.E. # 069923  
STATE OF  
3/30/17  
FLORIDA  
SIGNATURE OF THE  
OF 1

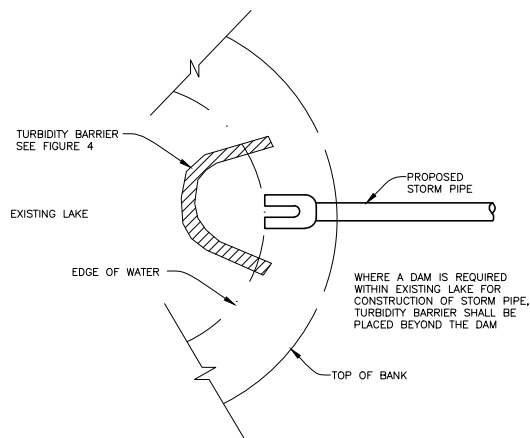




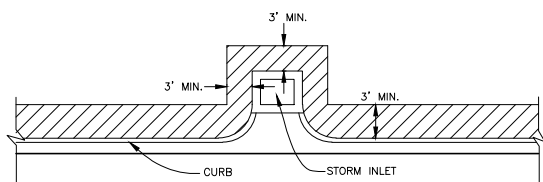
WETLAND BUFFER  
FIGURE 1



TYPICAL SWALE SECTION  
FIGURE 5

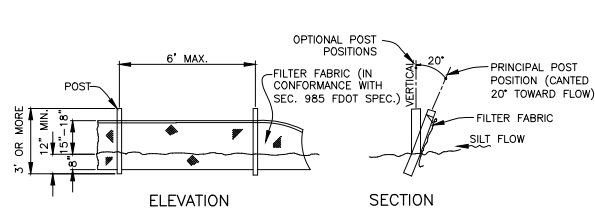


TURBIDITY BARRIER AT CONNECTION OF  
STORM PIPE TO EXISTING LAKE  
FIGURE 9



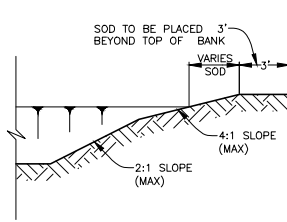
SOD ALONG CURB  
AND AROUND INLET  
FIGURE 14

NOTE:  
REFERENCE THE FDOT DESIGN STANDARDS  
LATEST EDITION FOR ALL TEMPORARY  
EROSION CONTROL MEASURES.

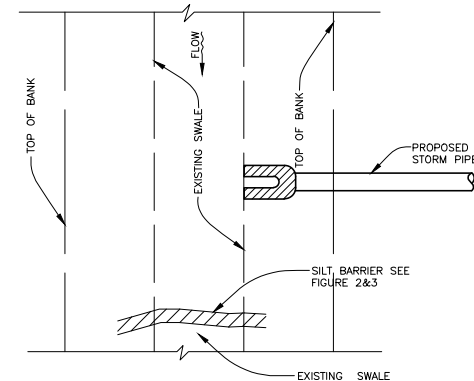


NOTE: SILT FENCE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR STAKED SILT FENCE (LF).

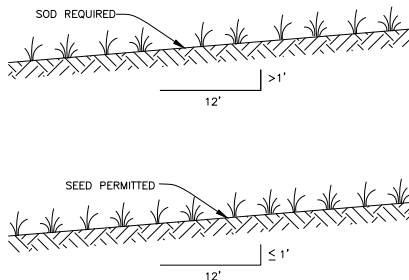
TYPICAL SILT FENCE  
FIGURE 2



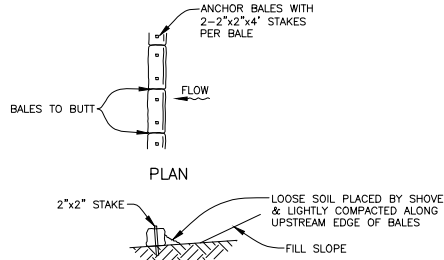
TYPICAL RETENTION/DETENTION POND SECTION  
FIGURE 6



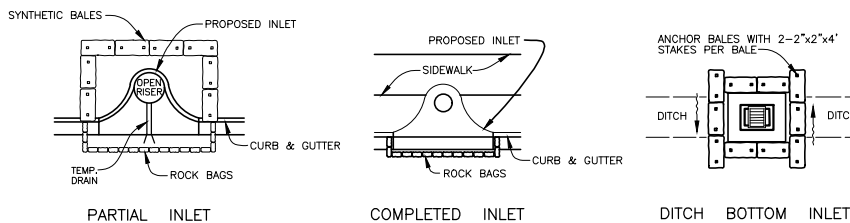
SILT BARRIER AT CONNECTION OF  
STORM PIPE TO EXISTING SWALE  
FIGURE 10



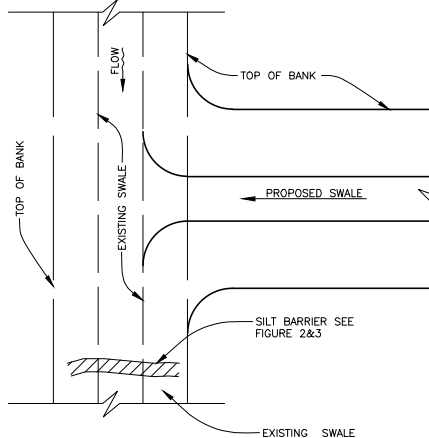
GRASS SLOPES  
FIGURE 13



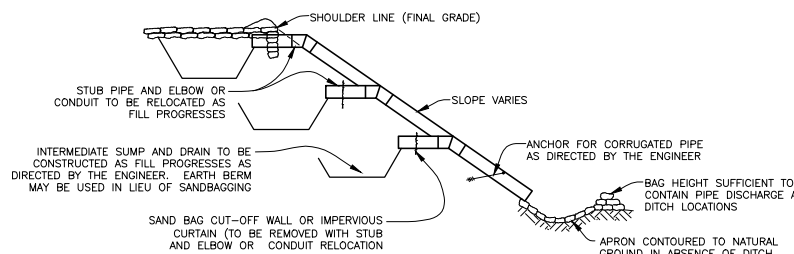
TYPICAL BALE SILT BARRIER  
FIGURE 3



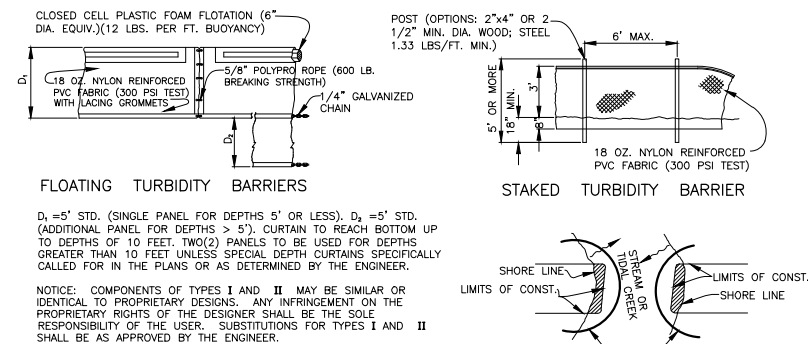
SYNTHETIC BALE PROTECTION AROUND  
INLETS OR SIMILAR STRUCTURES  
FIGURE 7



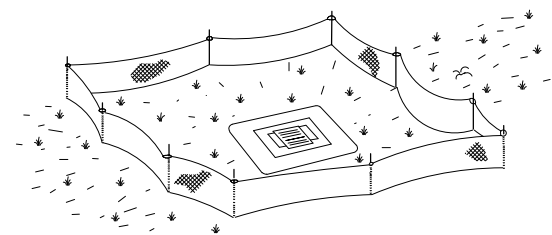
SILT BARRIER AT CONNECTION  
OF SWALE TO EXISTING SWALE  
FIGURE 11



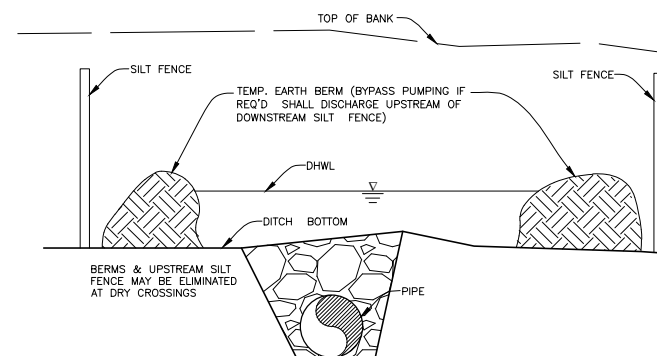
SECTION AA  
TEMPORARY SLOPE DRAIN  
FIGURE 15



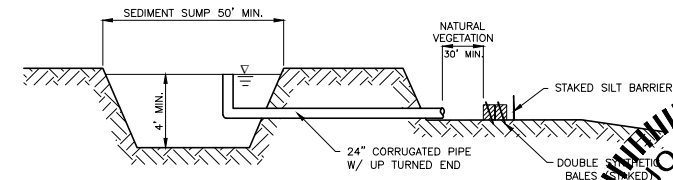
TURBIDITY BARRIERS  
FIGURE 4



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



UNDERGROUND PIPE CROSSING  
FIGURE 12



SEDIMENT SUMP SECTION  
FIGURE 16

