

S:\P\RD-Engineering\Share\U\B\Eng\Design\PROJ\N1H SHR Proj\San Svr - LS Upgrades\LS N1H (R&R - Backup Pump)\DWG\DWG3-active-N1H Rehab & Pump.dwg, 1 COVER, 4/25/2017 10:45 AM Shao Shoun, 1:1, ANSI full bleed B (17.00 x 11.00 inches)

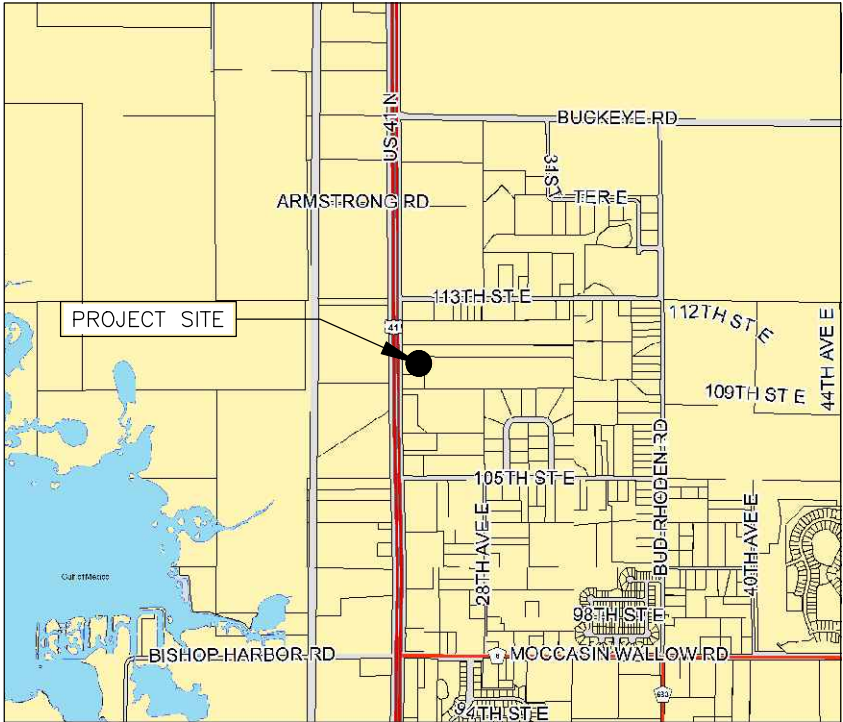


SATELLITE LIFT STATION R&R

SLS N1H REHAB & EMERGENCY BACKUP PUMP

402-5138380

APRIL 2017



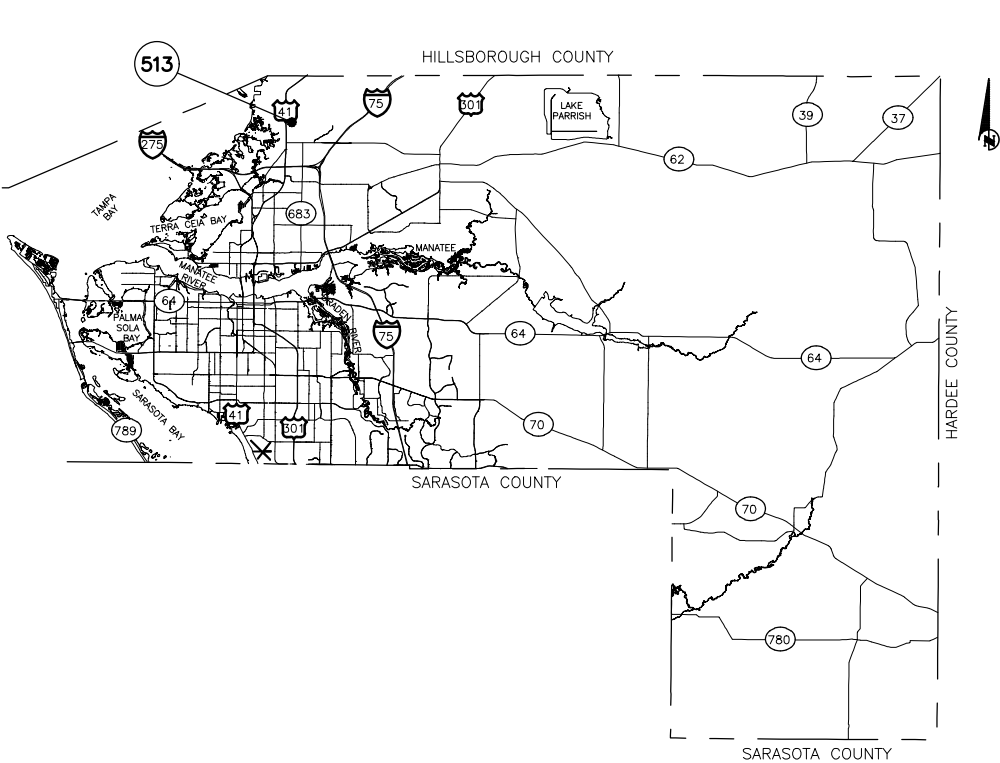
LS N1H, RTU 513, 11220 U.S. 41 NORTH, PALMETTO, FL

PER MCG LDC, 103.2.4.1: UTILITY INSTALLATIONS (EXCEPT SUBSTATIONS) ARE EXEMPT FROM THE REGULATIONS OF THE CODE.

PER FL STATUTES, 403.087.5: CONSTRUCTION PERMITS NOT REQUIRED IF INSTALLATION IS IN RESPONSE TO NPDES REQUIREMENTS.

RULE 62-604.600(2)(F) FL ADMINSTRATIVE CODE: MODIFICATIONS TO LIFT STATIONS ASSOCIATED WITH ANCILLARY AND ELECTRICAL EQUIPMENT AND STRUCTURES ARE EXEMPT FROM FDEP CONSTRUCTION PERMITS.

FL STATE STATUES, FL 62-762, ABOVE GROUND DIESEL FUEL STORAGE TANKS EXEMPT IF UNDER 550 GALLONS.



100% PLANS

NO.	INDEX OF SHEETS
1.	COVER SHEET
2.	GENERAL NOTES & LEGEND
3.	SITE PLAN – EXISTING CONDITIONS
4.	SITE PLAN – PROPOSED CONDITIONS
5.	REHABILITATION DETAILS
6.-8.	DETAILS
9.	EROSION CONTROL

L.S.NAME/NO.	RTU#	ADDRESS	PUMP TYPE	FIRE DISTRICT
N1H	513	11220 US 41 NORTH PALMETTO, FL	DIESEL	NORTH RIVER

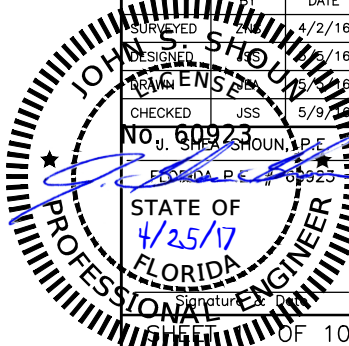
LIFT STATION SITE VISITS MAY BE COORDINATED WITH NICK WAGNER (LIFT STATION SUPERINTENDENT), 941-792-8811 x5377

ORIGINAL SHEET SIZE: 11"X17"
SATELLITE LIFT STATION R&R
SLS N1H REHAB & EMERGENCY BACKUP PUMP
COVER

NO.	DATE	BY	REVISION DESCRIPTION
1.			COVER SHEET
2.			GENERAL NOTES & LEGEND
3.			SITE PLAN – EXISTING CONDITIONS
4.			SITE PLAN – PROPOSED CONDITIONS
5.			REHABILITATION DETAILS
6.-8.			DETAILS
9.			EROSION CONTROL

PROJECT #	402-5138380
SURVEY #	00-44134
SEC./TWN./RGE	18/33/18
SCALE	SEE PLAN
BY	DATE
DESIGNED	4/2/16
CHECKED	5/9/16
APPROVED	5/9/16
STATE OF FLORIDA	4/25/17
PROFESSIONAL ENGINEER	

811
Know what's below
Call before you dig



LS Upgrade/LS NH (R&R) - Backup Pump/DWGS - NH Rehab & Pump.dwg, 2 ANI, UTL, 4/25/2017 10:45 AM Shw Shwn, 1:1, ANSI full bleed, B (17.00 x 11.00 inches)

GENERAL

- ALL CONSTRUCTION ACTIVITIES SHALL BE COORDINATED WITH THE PROJECT MANAGEMENT DIVISION. THE PROJECT MANAGER IS: SHERRI ROBINSON AND CAN BE REACHED AT (941) 708-7450 EXT. 7334
- SITE VISITS ARE MANDATORY FOR ALL BIDDERS.
- 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.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING ALL CONDITIONS AND REQUIREMENTS OF ALL PERMITS AND ALL GOVERNING FEDERAL, STATE, AND LOCAL AGENCIES. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS THAT ARE NOT PROVIDED IN THE BID DOCUMENTS, AT NO ADDITIONAL COST TO THE OWNER.
- THE INFORMATION PROVIDED IN THESE PLANS IS SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF THE CONDITIONS WHICH MAY BE ENCOUNTERED DURING THE COURSE OF WORK. ALL CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT WHATEVER INVESTIGATION THEY MAY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSIONS REGARDING THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED, AND UPON WHICH THEIR BIDS WILL BE BASED.
- THE CONTRACTOR SHALL REVIEW AND VERIFY ALL DIMENSIONS ON THE PLANS AND REVIEW ALL FIELD CONDITIONS THAT MAY AFFECT CONSTRUCTION. SHOULD DISCREPANCIES OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO OBTAIN THE ENGINEER'S CLARIFICATION BEFORE COMMENCING WITH CONSTRUCTION.
- AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT SUNSHINE STATE ONE CALL OF FLORIDA AT 1-800-432-4770 OR THE NATIONAL 811 ONE CALL NUMBER WHEN APPLICABLE FOR UTILITY LOCATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH ALL UTILITIES FOR THE POSSIBLE RELOCATION OR THE TEMPORARY MOVEMENT OF ANY EXISTING UTILITIES WITHIN THE RIGHTS-OF-WAY.
- NO WORK, EXCEPT FOR EMERGENCY TYPE, SHALL BE PERFORMED AFTER 7:00 PM AND BEFORE 7:00 AM. FOR ADDITIONAL PROJECT RESTRAINTS, REFER TO SECTION 01310 OF THE SPECIFICATIONS.

SAFETY

- 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.
- THE CONTRACTOR SHALL USE SHEET PILING, SHEETING, BRACING, ETC., AS REQUIRED IN ALL EXCAVATION AREAS AND CONFORM TO ALL OSHA REQUIREMENTS.
- THE CONTRACTOR SHALL USE ALL NECESSARY SAFETY PRECAUTIONS TO AVOID CONTACT WITH OVERHEAD AND UNDERGROUND UTILITIES, POWER LINES, ETC.
- THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. THIS EXCLUSION DOES NOT ALLEVIATE THE CONTRACTOR FOR PROVIDING A CONTINUOUS SAFE WORKSPACE.

ENVIRONMENTAL

- CONTRACTOR IS RESPONSIBLE FOR INSTALLATION ALL SEDIMENT AND EROSION CONTROL (SEC) DEVICES (E.G., BARRIERS, SEDIMENT TRAPS/BASINS, VEGETATIVE BUFFERS, ETC.) AS SPECIFIED IN THE FINAL APPROVED PLANS FOR THE PROJECT. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL SEC DEVICES UTILIZED DURING THE PROJECT, AS WELL AS INSTALLATION & MAINTENANCE OF ANY ADDITIONAL MEASURES DEEMED NECESSARY DURING PROJECT IMPLEMENTATION, TO PREVENT EROSION AND OFF-SITE SEDIMENT MIGRATION. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR REMOVAL AND PROPER DISPOSAL OF ALL SEC DEVICES UPON CONCLUSION OF THE PROJECT, AND UPON ADEQUATE STABILIZATION OF DISTURBED SOILS.
- 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.
- 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.
- STORM WATER INLETS IN THE VICINITY OF THE PROJECT SHALL BE PROTECTED BY SEDIMENT TRAPS SUCH AS SECURED HAY BALES, SOD, STONE, ETC., WHICH SHALL BE MAINTAINED AND MODIFIED AS REQUIRED BY CONSTRUCTION PROGRESS, AND WHICH MUST BE APPROVED BY THE ENGINEER BEFORE INSTALLATION. THIS WILL BE MAINTAINED TO PREVENT DEGRADATION OF THE PERIMETERS OF THE COUNTY AND STATE.
- SEDIMENT BASINS AND TRAPS, PERIMETER BERMS, SEDIMENT BARRIERS, VEGETATIVE BUFFERS, AND OTHER MEASURES INTENDED TO TRAP SEDIMENT AND/OR PREVENT THE TRANSPORT OF SEDIMENT ONTO ADJACENT PROPERTIES, OR INTO EXISTING BODIES OF WATER, MUST BE INSTALLED, CONSTRUCTED, OR IN THE CASE OF VEGETATIVE BUFFERS, PROTECTED FROM DISTURBANCE, AS A FIRST STEP IN THE LAND ALTERATION PROCESS. SUCH SYSTEMS SHALL BE FULLY OPERATIVE BEFORE ANY OTHER DISTURBANCE OF THE SITE BEGINS. EARTHEN STRUCTURES INCLUDING BUT NOT LIMITED TO BERMS, EARTH FILTERS, DAMS OR DIKES SHALL BE STABILIZED AND PROTECTED FROM DRAINAGE DAMAGE OR EROSION WITHIN ONE (1) WEEK OF INSTALLATION.
- ALL SWALES, DITCHES, AND CHANNELS LEADING FROM THE SITE SHALL BE PROTECTED FROM SILTATION AND EROSION DURING CONSTRUCTION AND BE SODDED WITHIN THREE (3) DAYS OF EXCAVATION.
- SOIL DISPLACED BY CONSTRUCTION WILL BE REMOVED. EROSION CONTROL SHALL BE IMPLEMENTED IN AREAS WHICH ARE CONSIDERED ENVIRONMENTALLY SENSITIVE. EROSION CONTROL SYSTEMS SHALL BE REQUIRED FOR ALL WORK WITHIN JURISDICTIONAL AREAS. THESE SYSTEMS MAY INCLUDE STAKED HAY BALES, SILT SCREENS, FILTER FABRIC, AND TURBIDITY SCREENS.
- ALL EROSION AND POLLUTION CONTROL DEVICES SHALL BE CHECKED REGULARLY, ESPECIALLY AFTER EACH RAINFALL AND SHALL BE CLEANED OUT AND/OR REPAIRED AS REQUIRED.
- THE CONTRACTOR SHALL NOT ENTER UPON OR IN ANY WAY ALTER WETLAND AREAS THAT MAY BE ON OR NEAR THE CONSTRUCTION SITE. ALL WORK IN THE VICINITY OF OPEN WATER AND/OR WETLANDS IS TO BE PERFORMED IN COMPLIANCE WITH THE ENVIRONMENTAL REGULATIONS AND/OR PERMITS FOR THE SITE. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY FINES RESULTING FROM HIS VIOLATION OF ANY REGULATIONS OR PERMIT CONDITIONS.
- FOR MORE INFORMATION, SEE THE EROSION CONTROL DETAIL SHEET INCLUDED IN THE PLANS.

RIGHT-OF-WAY

- ALL CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO WITHIN THE MANATEE COUNTY/FDOT RIGHT-OF-WAY AND/OR EASEMENTS SHOWN ON THE DRAWINGS.
- 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.
- THE CONTRACTOR, PRIOR TO CONSTRUCTION AND RESTRICTING ANY TRAFFIC, MUST OBTAIN A RIGHTS-OF-WAY USE PERMIT AND A TRAFFIC CONTROL PLAN. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS FROM OTHER GOVERNMENTAL AGENCIES HAVING RELEVANT JURISDICTIONAL AND MAINTENANCE AND PROTECTION OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF THE CURRENT FLORIDA DEPARTMENT OF TRANSPORTATION "MANUAL OF TRAFFIC CONTROL AND SAFE PRACTICES". A TRAFFIC CONTROL PLAN SHALL BE SUPPLIED BY THE CONTRACTOR AT THE PRE-CONSTRUCTION MEETING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL DAMAGED STORM WATER STRUCTURES, PIPING, ENTRANCE PIPE AND HEADWALLS WHETHER SHOWN ON THE PLANS OR NOT. THE HEADWALLS SHALL BE REPLACED IN ACCORDANCE WITH F.D.O.T. STANDARDS.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH IN THE FIELD THE RIGHT-OF-WAY LINES, BASE LINES, BENCH MARKS (ELEV.), CENTER LINES, AND STATIONING AS REQUIRED TO CONSTRUCT THIS PROJECT.
- THE CONTRACTOR SHALL COORDINATE THE CUTTING OF DRIVEWAYS WITH THE PROPERTY OWNER PRIOR TO CUT. ALL DRIVEWAYS WILL BE IN PASSABLE CONDITION AT THE END OF THE WORK DAY AND FULLY RESTORED PER SECTION 02575.

- A RIGHT OF ENTRY AGREEMENT SHALL BE OBTAINED BY THE PROJECT MANAGER FROM THE PROPERTY OWNER BEFORE ANY DRIVEWAY CONSTRUCTION WORK IS DONE OUTSIDE OF THE RIGHT-OF-WAY OR EASEMENT.

UTILITIES

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

RESTORATION

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

CONSTRUCTION

- 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.
- 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.
- THE CONTRACTOR IS TO CONTROL ALL FUGITIVE DUST ORIGINATING ON THIS PROJECT BY WATERING OR OTHER METHODS AS REQUIRED.
- INGRESS AND EGRESS TO ALL THE PROPERTIES IN THE CONSTRUCTION AREA SHALL BE MAINTAINED AT ALL TIMES.
- PRIOR APPROVAL WILL BE REQUIRED FOR REMOVAL OF ANY TREE WITHIN THE CONSTRUCTION AREA.
- THE CONTRACTOR SHALL PROVIDE ALL DEWATERING EQUIPMENT NECESSARY TO KEEP ALL EXCAVATIONS DRY. DEWATERING IS REQUIRED TO 18" BELOW TRENCH BOTTOM.
- ALL PIPING AND FITTINGS USED ON THIS PROJECT SHALL BE AS NOTED ON THE PLANS AND IN THE CONTRACT DOCUMENT AND SHALL BE INSTALLED TO THE LINES AND GRADES SHOWN ON THE PLANS AND PROFILES.
- ALL PIPE SHALL BE COLOR CODED TO CONFORM TO MANATEE COUNTY STANDARDS.
- ALL PIPE AND FITTINGS SHALL BE INSTALLED AS RECOMMENDED BY THE MANUFACTURER AND ALL PIPE JOINTS SHALL BE RESTRAINED WHERE REQUIRED.
- ALL FITTINGS FOR PRESSURE CLASS-RATED PIPE SHALL BE RESTRAINED DUCTILE IRON. RESTRAINED LENGTHS OF PIPE SHALL ADHERE TO THE REQUIREMENTS AS SHOWN ON THE DETAIL SHEETS.
- WHERE IT IS NECESSARY TO DEFLECT PIPE EITHER HORIZONTALLY OR VERTICALLY, PIPE DEFLECTION SHALL NOT EXCEED 75% OF THE MANUFACTURER'S MAXIMUM ALLOWABLE RECOMMENDED DEFLECTION.
- ALL PIPE LENGTHS ARE PLUS OR MINUS AND MAY BE ADJUSTED IN THE FIELD AS REQUIRED. PIPE MEASUREMENTS ARE TO CENTER OF STRUCTURES OR FITTINGS.
- ALL ROCKS OR STONES LARGER THAN SIX INCH DIAMETER SHALL BE REMOVED FROM THE BACKFILL MATERIAL. BACKFILL MATERIAL PLACED WITHIN ONE FOOT OF PIPING AND APPURTENANCES SHALL NOT CONTAIN ANY STONES LARGER THAN TWO INCH DIAMETER.
- ONLY MANATEE COUNTY UTILITY OPERATIONS STAFF ARE AUTHORIZED TO OPERATE VALVES ON COUNTY OWNED AND MAINTAINED UTILITY SYSTEMS.
- ALL PENETRATION OF EXISTING STRUCTURES SHALL BE BY THE MECHANICAL ROTARY CORE BORING METHOD.
- ALL CONCRETE PENETRATED OR DISTURBED SHALL BE COATED WITH TWO COATS OF EPOXY.
- THE CONTRACTOR, PRIOR TO ANY TEMPORARY WATER SHUT-OFFS DURING WATER MAIN TIE-IN, ETC., SHALL NOTIFY THE AFFECTED RESIDENTS BY POSTING INFORMATIONAL SIGNS IN THE NEIGHBORHOOD AT LEAST TWO DAYS (48 HRS) PRIOR TO THE WATER SHUT-OFF. REFERENCE SECTION 01580, PARAGRAPH 1.03 OF THE SPECIFICATIONS. WHEN FEASIBLE, "DOOR HANGERS" SHALL BE DELIVERED TO AFFECTED RESIDENCES AT LEAST TWO DAYS (48 HRS) PRIOR TO WATER SHUT-OFF. FOR LARGE PROJECTS WITH HUNDREDS OF HOMES AFFECTED, THE CONTRACTOR SHALL ALSO MAKE EXTENSIVE USE OF THE MEDIA AND SHALL HAVE PRIOR CONTACT WITH HOMEOWNER'S ASSOCIATIONS. WRITTEN NOTIFICATIONS SHALL ALSO BE FAXED TO THE TAMPA TRIBUNE, BRADENTON HERALD, SARASOTA HERALD TRIBUNE, WBRD RADIO, EMERGENCY COMMUNITY CENTERS, INSPECTIONS, WATER TREATMENT PLANT, WATER MANAGER, HELPLINE, CUSTOMER SERVICE, AND THE MANATEE COUNTY UTILITY OPERATIONS DEPARTMENT.
- ALL NEW PIPE LINES SHALL BE PIG CLEANED (4" AND LARGER), FLUSHED, PRESSURE TESTED, DISINFECTED AND CERTIFIED PRIOR TO TIE-INS TO EXISTING FACILITIES. THE CONTRACTOR WILL BE ALLOWED TO USE TEMPORARY PLUGS FOR PIG CLEANING AND PRESSURE TESTING.
- ALL TEST POINT PIPING SHALL BE CUT LOOSE FROM THE CORPORATION STOP AND COMPLETELY REMOVED AND DISPOSED OF BY THE CONTRACTOR PRIOR TO FINAL ACCEPTANCE. A CORPORATION STOP PLUG SHALL BE INSTALLED AND THE CORPORATION STOP SHALL REMAIN IN PLACE.

- ALL EXISTING MAINS THAT ARE BEING REPLACED SHALL BE ABANDONED IN PLACE UPON ACCEPTANCE AND ACTIVATION OF THE NEW MAINS. ABANDONED MAINS SHALL BE CUT, FILLED WITH GROUT, AND CAPPED. REFER TO SECTION 02064 OF THE SPECIFICATIONS FOR GROUTING OF ABANDONED PIPE.
- 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.
- FIELD CONDITIONS MAY NECESSITATE MINOR ALIGNMENT AND GRADE DEVIATION OF THE PROPOSED UTILITIES TO AVOID OBSTACLES, AS ORDERED BY THE ENGINEER.
- CONTRACTOR SHALL PROVIDE RECORD DRAWINGS IN ACCORDANCE WITH SECTION 14 IN THE CURRENT MANATEE COUNTY UTILITY STANDARDS AT NO COST TO THE OWNER. RECORD DRAWINGS SHALL BE SIGNED & SEALED BY A SURVEYOR CURRENTLY LICENSED BY THE STATE OF FLORIDA. ALL RECORD DRAWING INFORMATION REQUIREMENTS IN SECTION 14 SHALL BE STRICTLY ENFORCED. A COPY OF SECTION 14 WILL BE PROVIDED UPON REQUEST.

SURVEYOR'S NOTES:

- BEARINGS ARE BASED ON THE EAST RIGHT-OF-WAY LINE OF U.S. HIGHWAY 41, HAVING A FIELD BEARING OF N 00°26'25" E, AND ARE RELATED TO FLORIDA STATE PLANE COORDINATE SYSTEM, (WEST ZONE) NAD 83/2011 DERIVED FROM CONTROL MONUMENT "CONNECTICUT" (PID BBG30) AND "J13-191-2" (PID BBDH93).
- THE PROPERTY LIES WITHIN FLOOD ZONE "AE" (EL 8) AS SHOWN ON MANATEE COUNTY, FLORIDA FLOOD INSURANCE RATE MAP PANEL No. 12081C 0156 E, DATED MARCH 17, 2014.
- ELEVATIONS ARE BASED ON N.A.V.D. 1988 DATUM, MANATEE COUNTY BENCH MARK "CONNECTICUT" (PID DM6244), PUBLISHED ELEVATION OF 10.73 FEET.
- TITLE INFORMATION IS DERIVED FROM FILE No. 09-23927.5 & 09-23927.4, BY SIGNATURE TITLE COMPANY, DATED 04/21/2014.

BENCH MARKS:

BM "A" IRON ROD FOUND NO I.D. (N.E. CORNER OF PROPERTY)
EL. = 6.67' NAVD 1988 (EL. = 7.63' NGVD 1929)

BM "B" NAIL & DISK SET LB 6982 (EAST SIDE OF WET WELL TOP)
EL. = 7.87' NAVD 1988 (EL. = 8.83' NGVD 1929)

(NAVD 88 TO NGVD 29 CONVERSION EQUATION = + 0.955)

CONTACTS

MANATEE COUNTY
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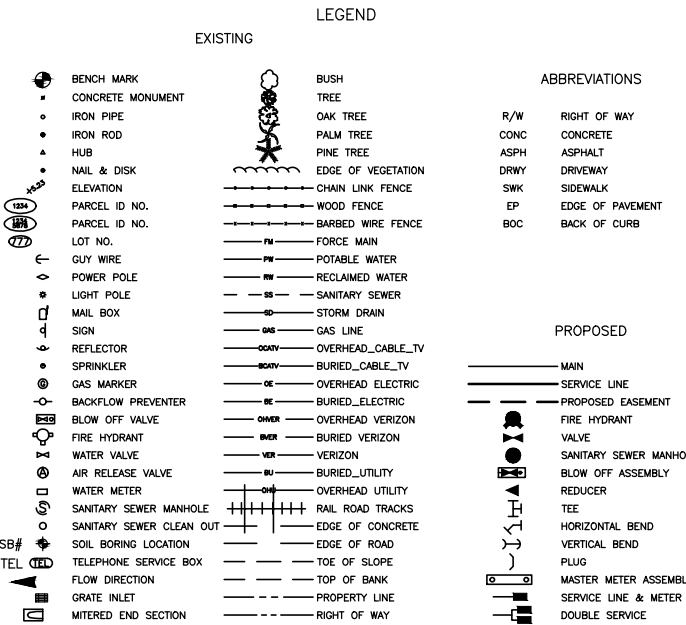
SOUTHWEST FLORIDA WATER
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christopher.lee@sug.com

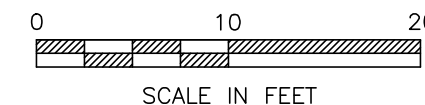
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STEPHANIE BARIOS
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WACHULA, FL. 33873
KENDELL COKER
(863) 767-4660
kendell.coker@preco.coop

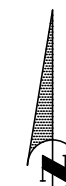


GENERAL NOTES:
1. ELEVATIONS ARE BASED ON N.A.V.D. 1988 DATUM, MANATEE COUNTY BENCH MARK "CONNECTICUT" (PID DM6244), PUBLISHED ELEVATION OF 10.73 FEET.

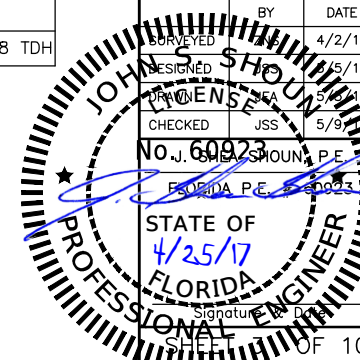


N1H	
ITEM	VALUE
RTU	513
STREET ADDRESS	12220 US 41 NORTH
CITY	PALMETTO
FIRE DISTRICT	NORTH RIVER
NUMBER OF PUMPS	3
HORSE POWER/PUMP DESIGN	20
PHASE	3
VOLTS	230
MODEL OF MAIN BREAKER	SD KAL36200
FLOOD ZONE	AE
TOP OF WET WELL EL.	7.85 NAVD
SERVICE AMPERAGE	????
PUMP OPERATING POINT	500 GPM / 65.8 TD

REVISION DESCRIPTION	BY	DATE
NO.		
PROJECT #	402-513830	
SURVEY #	00-44134	
SEC./TWN./RGE	18/33/18	
SCALE	SEE PLAN	
	BY	DATE
SURVEYED		4/2/17
DESIGNED		4/5/17
DRAWN		5/9/17
CHECKED	JSS	5/9/17
No. 60923 J. SHOUNA, P.E. FLORIDA P.E. # 20023		
STATE OF 4/25/17 FLORIDA Signature of D.		
SHEET OF 10		



Know what's **below**.
Call before you dig.



**SATELLITE LIFT STATION K&R
SLS N1H REHAB & EMERGENCY BACKUP PUMP
SITE PLAN PROPOSED CONDITIONS**

ORIGINAL SHEET SIZE: 11"X17"

[illegible]

PROJECT #	402-5138380
SURVEY #	00-44134
SEC./TWN./RGE	18/33/18
SCALE	SEE PLAN

BY	DATE
SURVEYED	4/2/16
DESIGNED	5/5/16
DRAWN	5/5/16
CHECKED	5/9/16

NO. 6092300N, P.E.
FLORIDA P.E. # 60043

STATE OF
4/25/17
FLORIDA

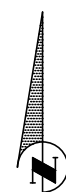
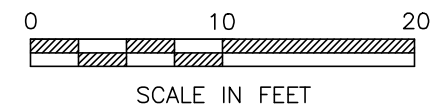
Signature _____ Date _____

SHEET _____ OF 10

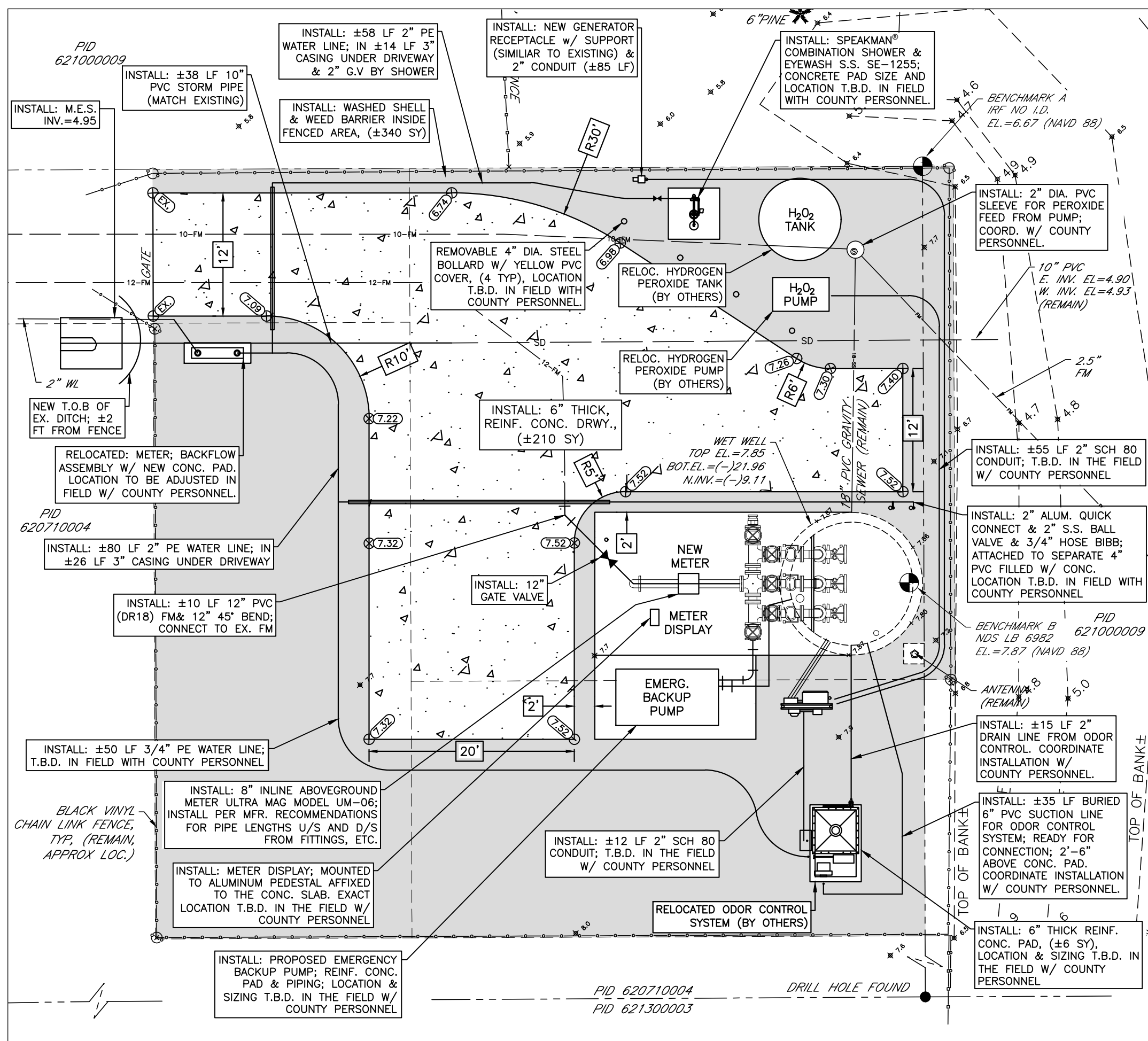
CONTRACTOR SHALL REFERENCE SECTION 11215 OF THE PROJECT SPECIFICATION FOR ADDITIONAL RECORD DRAWING REQUIREMENTS.

GENERAL NOTES:

1. A PROFESSIONAL SURVEYOR LICENSED IN THE STATE OF FLORIDA SHALL BE REQUIRED TO PREPARE RECORD DRAWINGS PER THE REQUIREMENTS OF THE PROJECT SPECIFICATION FOR ALL LIFT STATION SITE IMPROVEMENTS ABOVE & BELOW GROUND, (I.E. THE CONCRETE PADS, EMERGENCY PUMP PIPING, UNDERGROUND CONDUIT INSTALLED, ETC. FOR THE LIFT STATION SITE. OFFICIAL BENCHMARK SHALL BE RE-ESTABLISHED ON THE NEW LIFT STATION CONCRETE TOP.
2. CONTRACTOR TO REGRADE SITE TO ALLOW FOR A POSITIVE DRAINAGE SLOPE AWAY FROM THE LIFT STATION AREA TOWARDS THE SURROUNDING DITCHES. MAXIMUM OF 1% SLOPE.
3. CONTRACTOR SHALL REMOVE AND INSTALL ALL NEW ELECTRICAL STRUCTURE (RACK), CONTROL PANEL, TCU & JUNCTION BOX ENCLOSURES, METER CAN, SAFETY SWITCH (DISCONNECT), AND CONDUIT. NEW ELECTRICAL STRUCTURE SHALL BE FIELD LOCATED WITH MANATEE COUNTY PERSONNEL. REMOVAL SHALL ALSO INCLUDE THE CONCRETE SLAB AT BASE OF EX. CONTROL CABINET.
4. 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.
5. ANY ELECTRICAL WIRING THAT IS INSTALLED BETWEEN THE LIFT STATION'S WET WELL, VALVE VAULT, AND/OR METER VAULT SHALL BE INSTALLED IN A CARRIER PIPE THAT IS STRAPPED TO THE STRUCTURE.
6. CONTRACTOR 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.
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.
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.
10. CONTRACTOR SHALL COORDINATE THE PUMP VENDOR TEST AND CONFIGURE THE PUMP OPERATION AS SUBMITTED IN THE SHOP DRAWINGS.
11. METER SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS AND SHALL ADHERE TO THE UPSTREAM AND DOWNSTREAM SEPARATION DISTANCES FROM FITTINGS TO ENSURE ACCURACY OF METER.
12. CONTRACTOR SHALL INSTALL PVC SLEEVES W/ HYDRAULIC NON-SHRINK GROUT & LINK-SEALS TO ACCOMMODATE THE 6" DIA. PIPES COMING FROM THE BACK-UP PUMP & ODOR CONTROL SYSTEMS.
13. L.S. N1H IS LOCATED IN A FLOOD ZONE "AE" WITH A BASE FLOOD ELEVATION OF 8.00 NAVD. THE BASE OF THE PUMP AND TOP OF FILL TUBE/CAP SHALL BE ABOVE THE FLOOD PROTECTION ELEVATION OF 9.00 NAVD. A FLOOD REVIEW & ELEVATION CERTIFICATE PREPARED BY A LICENSED SURVEYOR IN THE STATE OF FLORIDA WILL BE REQUIRED FOR THIS LIFT STATION SITE.



Know what's **below**.
Call before you dig.



EXISTING

NOTES:

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

4. REMOVAL AND REINSTALLATION OF THE PUMPS DURING THE REHABILITATION SHALL BE DONE BY MANATEE COUNTY PERSONNEL IN COORDINATION WITH THE CONTRACTOR
5. BY-PASS PUMPING IS THE RESPONSIBILITY OF THE CONTRACTOR.
6. MANATEE COUNTY GOVERNMENT WILL PROVIDE ONE (1) LIFT STATION SHUT-DOWN AT NO COST TO THE CONTRACTOR. ADDITIONAL SHUT-DOWNS WILL COST THE CONTRACTOR \$3,500 EACH, IF NEEDED.
7. THE CONTRACTOR IS RESPONSIBLE FOR RESTORING ANY DAMAGED LANDSCAPING TO EXISTING OR DESIGN CONDITIONS.
8. THE WORK AREA IS LIMITED TO THE LIFT STATION SITE.

PLAN

The plan view shows the layout of the lift station components. A dashed circle indicates the area to be removed. Components labeled for removal include:

- METER BOX (COMPLETELY REMOVE)
- 8" DI SPOLL PIECE (2 TYP., REMOVE)
- 8" 90° BEND (REMOVE)
- 12"x8" RED. (3 TYP., REMOVE)
- 12"CROSS (REMOVE)
- 8" TEE (REMOVE)
- 8"x6" REDUCER (REMOVE)
- GATE VALVE (3 TYP., REMOVE)
- 8" CHECK VALVE (3 TYP., REMOVE)
- 8" 90° BEND (3 TYP., REMOVE)
- 8" PVC
- 8" IFVC
- 8" DISCHARGE PIPING (3 TYP., REMOVE & PATCH HOLES)
- ELEC PANEL
- ODOR CONTROL EQUIPMENT
- GREY PIPE TO BLOWER (REMOVE)
- WHITE VENT PIPE (REMOVE)
- EXIST. WET WELL (W/ DURAPLATE LINER)
- ANTENNA

ELEVATION

The elevation view shows the vertical profile of the lift station. Components labeled for removal include:

- EMERGENCY DISCHARGE ASSY. AND 6" GATE VALVE AND VALVE BOX (REMOVE)
- 36"x48" ALUMINUM HATCHES ROTATED FOR CLARITY (TO REMAIN)
- PVC WITH QUICK CONNECT (REMOVE)
- ALUMINUM HATCH (REMOVE)
- ADJUST WET WELL WALLS TO ALLOW FOR A 4" REVEAL OF NEW WELL TOP.
- EXIST. 12" FM CONNECT TO EXIST VALVE
- VALVE VAULT (COMPLETELY REMOVE)
- PIPE SUPPORTS, TYP. (REMOVE)
- DRAIN (REMOVE)
- 90° BEND (2 TYP., REMOVE)
- GUIDE RAIL SYSTEM (3 TYP., REMOVE)
- SS PIPE BRACE (3 TYP., REMOVE)
- 8" DISCHARGE PIPING (3 TYP., REMOVE)
- WET WELL HDPE LINER, ±1,236 SF (REMOVE)
- BOTT WET WELL
- PUMP BASE ELBOWS & ANCHORING HARDWARE (3 TYP., REMOVE)
- INFLUENT INVERT ELEV. (SEE PLAN VIEW FOR ORIENTATION)

LIFT STATION SCHEDULE (EXISTING)

LIFT STATION NAME	LS NTH
RADIO TELEMETRY UNIT (RTU)	513
WET WELL DIAMETER	12'
DISCHARGE PIPING DIA. (WW)	8"
DISCHARGE PIPING DIA. (VAULTS)	6"/12"
FORCE MAIN DIAMETER	12"
INFLUENT PIPE SIZE	18"
INFLUENT INVERT ELEVATION	-8.10
BOTTOM SLAB ELEVATION	-17.78
WET WELL HATCH ELEVATION	7.85
VALVE VAULT HATCH ELEVATION	7.92
WET WELL VENT PIPE	YES/8" PVC
L.S. DESIGN CAPACITY gpm/TDH	500/65.8
DISCHARGE PIPING PROFILE	STANDARD
CONCRETE RISER ON TOP OF WW	NO
MAGNETIC FLOW METER	N/A
POWER SUPPLY, VOLTAGE/PAGE	230/3
POWER SUPPLY, AMPERAGE	200

**EXISTING
3 PUMP LIFT STATION**

PROPOSED

GENERAL NOTES:

- 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.
- ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST MANATEE COUNTY PUBLIC WORKS UTILITY STANDARDS.
- ALL 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".
- 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.
- 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.
- ALL PAINTING SHALL BE INCLUDED IN THE BID ITEM, MISCELLANEOUS WORK.

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, 8"

NEW BASE ELL 4" BPIU-14

RAISE TOP OF WET WELL: NO

RAISE TOP OF VALVE VAULT: NO

INSTALL WET WELL VENT PIPE YES

INSTALL NEW WATER SERVICE ASSEMBLY, US-15 NO

RELOCATE EX. WATER SERVICE ASSEMBLY YES

INSTALL NEW ABOVEGROUND METER PER MANUFACTURER'S RECOMMENDATIONS

CONNECT 12" DIP TO PROP. GATE VALVE

INSTALL 90° 12"x 8" RED. ELBOW, DI (ABOVE)

INSTALL 8" TEE, DI

INSTALL 8" CROSS, DI

INSTALL 1/2" TAPPED HOLE W/BRASS PLUG

INSTALL SPOOL PIECE, DI, 2 TYP., (AS REQUIRED)

INSTALL 8" GATE VALVES, 5 TYP

INSTALL 8" TEE, DI

INSTALL CONC. SLAB

INSTALL PREFABRICATED HDPE FLANGE ADAPTER W/S.S. BACKING PLATE, SHOP FUSED, 2 TYP.

INSTALL 90° 12"x 8" RED. ELBOW, DI (ABOVE)

INSTALL POLYETHYLENE WRAP WHERE DUCTILE IRON PIPE IS ENCASED IN CONCRETE.

INSTALL 12" 90° ELBOW, MJ, DI (BELOW)

CONNECT TO PROP. GATE VALVE

INSTALL 6" THICK CONC. PAD, CLASS 1, 3,000 PSI @ 28 DAYS ON COMPACTED SOIL (TOP ELEVATION TO MATCH WET WELL RIM ELEVATION)

INSTALL CONCRETE REPAIR (±700 SF)

INSTALL CONCRETE REPAIR (±700 SF)

INSTALL 316 SS PIPE BRACING SYSTEM, (2 MIN.). TOP BRACE TO BE 4' FROM TOP. LOWER BRACE TO BE 4' ABOVE BASE ELLS. MAX SPACING OF 8' BETWEEN BRACES. (SEE DETAIL SHEET)

INSTALL HDPE SDR-11 PIPE, (3 TYP.)

INSTALL NEW 316 SS PUMP GUIDE RAIL SYSTEM COMPOSED OF SINGLE LENGTH (WELDED) 2" PIPES (3 TYP)

INSTALL PREFABRICATED HDPE FLANGE ADAPTER W/S.S. BACKING PLATE, SHOP FUSED (3 TYP.)

INSTALL NEW 8"x4" ECC. REDUCER, DI, (3 TYP.)

INSTALL NEW 4" BPIU PUMP BASE ELBOWS, (3 TYP.)

INSTALL NEW 4" BASE ELBOW MOUNTING PLATES AND ANCHOR BOLTS; MAY REQUIRE GRINDING OR LEVELING OF BASE GROUT (SEE BASE ELL MOUNTING PLATE DETAIL ON DETAIL SHEET) (3 TYP)

INSTALL 6" ALUM. QUICK CONNECT.

INSTALL 8" WEIGHTED SWING CHECK VALVE, (3 TYP.)

INSTALL PIPE BRACING SYSTEM SEE DETAIL SHEET

INSTALL 2" SCH. 80 PVC CONDUIT, 4 TYP. (±40 LF)

INSTALL MOLDED 90° ELBOW, SHOP FUSED (2 TYP.)

APPROX. 36"x109" MIN. CLEAR SPACE OPENING; (3)-SINGLE HEAVY DUTY ALUMINUM HATCH. BILCO OR APPROVED EQUAL

INSTALL ADJUSTABLE S.S. FLANGED VALVE SUPPORTS, (7 TYP.)

NEW ROUND WET WELL TOP

GRADE AROUND WET WELL AND VALVE ASSEMBLY PAD TO LEAVE A 4" REVEAL.

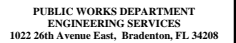
INSTALL APPROVED SPRAY LINER (±1350 SF)

INSTALL 6" STILLING WELL & LEVEL TRANSDUCER (LOCATION T.B.D. W/ COUNTY PERSONNEL, (±30 LF)

NOTES:

- CONTRACTOR SHALL REMOVE AND INSTALL ALL NEW ELECTRICAL STRUCTURE (RACK), CONTROL PANEL, METER CAN, SAFETY SWITCH (DISCONNECT), AND CONDUIT. NEW ELECTRICAL STRUCTURE SHALL BE FIELD LOCATED WITH MANATEE COUNTY PERSONNEL. REMOVAL SHALL ALSO INCLUDE THE CONCRETE SLAB AT BASE OF EX. CONTROL CABINET.
- #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.

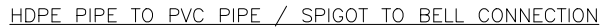
* DISTANCE IS PER METER MANUF. SPECIFICATIONS TO ENSURE ACCURACY OF METER.



**SATELLITE LIFT STATION R&R
SLS N1H REHAB & EMERGENCY BACKUP PUMP
LS N1H, RTU 513**

DATE									
BY									
REVISION DESCRIPTION									
NO.									
PROJECT #		402-5138380							
SURVEY #		00-44134							
SEC./TWN./RGE		18/33/18							
SCALE		SEE PLAN							
APPROVED		BY		DATE					
DESIGNED		JSS		4/2/16					
CHECKED		JSS		5/9/16					
No. 50923		FLORIDA P.E. # 50923		FLORIDA P.E. # 50923					
STATE OF		FLORIDA		FLORIDA					
4/25/17		4/25/17		4/25/17					
Signature & Date		Signature & Date		Signature & Date					
5 OF 10		5 OF 10		5 OF 10					

STATE OF
4/25/17
FLORIDA



HDPE PIPE TO PVC PIPE SPIGOT TO SPIGOT CONNECTION

1. ONE #10 GAUGE EXTRA HIGH STRENGTH COPPER CLAD STEEL TRACER WIRE SHALL BE SECURED TO THE PIPE FOR ALL TYPES OF PIPELINE INSTALLATIONS. THE TRACE WIRE SHALL HAVE A MINIMUM 30-MILS OF POLYETHYLENE INSULATION.

HDPE TO PVC OR
DI PIPE ADAPTER

- NOTES:

1. USE OF TYPE A-2 AND A-3 PIPE BEDDING TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. PROVIDE ADEQUATE CLEARANCE TO PLACE AND COMPACT STAGE 1 BEDDING MATERIAL IN TRENCH AREA BELOW PIPE SPRINGLINE. PIPE EMBEDMENT MUST BE COMPACTED OUT TO THE TRENCH WALL OR 2.5 TIMES THE PIPE OD, WHICHEVER IS LESS.
3. TYPICALLY 4" TO 6".
4. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
5. TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.



TRENCH WITH
UNIMPROVED SURFACE
TYPE A-1 PIPE BEDDING

NOTES:

1. RESTRAIN 11.25' BENDS 50% OF LENGTH FOR 22.5' BENDS.
2. ALL VALVES AND FITTINGS SHALL BE RESTRAINED TO THE CONNECTING SECTIONS OF PIPE.
3. ALL ISOLATION VALVES MUST BE PROPERLY ANCHORED OR RESTRAINED TO RESIST A 180 PSI TEST PRESSURE IN EITHER DIRECTION.
4. PIPE SIZES ARE GIVEN IN INCHES.
5. RESTRAINED PIPE LENGTHS ARE GIVEN IN FEET.
6. LENGTHS SHOWN ARE FOR A TEST PRESSURE OF 180 PSI.
7. THE RESTRAINED LENGTHS SHOWN IN THESE TABLES ARE BASED ON SOIL CLASSIFICATION SP WITH AWWA TYPE 3 TRENCH CONDITIONS, 180 PSI TEST PRESSURE, 3 FEET OF COVER AND 1.5 FACTOR OF SAFETY. ACTUAL BURY CONDITIONS MUST BE DETERMINED BY THE ENGINEER OF RECORD AND THE RESTRAINED LENGTHS MODIFIED ACCORDINGLY.
8. RESTRAINED LENGTHS FOR PIPE TO BE APPLIED TO PIPELINES PER DETAIL RESTRAINED LENGTHS FOR PIPE.
9. ALL RESTRAINED JOINT HARDWARE SHALL CONFORM TO 1.11.18.D OF THE PUBLIC WORKS UTILITIES STANDARDS MANUAL.

RESTRAINED LENGTHS FOR PVC PIPE



1. "SV" TO BE IMPRESSED INTO THE NEWLY-CURED CONCRETE CURB, ALONG WITH DISTANCE IN FEET TO THE VALVE. IF NO CURB, INSTALL A GREEN DISC WITH "SV" AND A 1/8" x 1" GALVANIZED STEEL SCREW IN THE EDGE OF PAVEMENT WITH THE FOOTAGE FROM THE DISC TO THE VALVE.
2. ALL EXISTING AND PROPOSED VALVE BOXES SHALL BE ADJUSTED TO FINISHED GRADES AS DETERMINED IN THE FIELD.
3. VALVES SHALL NOT BE PLACED IN HANDICAPPED RAMPS, CURBS OR GUTTERS.
4. PRECAST CONCRETE PADS AND THRUST BLOCKS SHALL NOT BE USED.
5. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1/2".
6. USE BINGHAM & TAYLOR P2000FG FOR NORMAL VARY SERVICE. WHERE VALVE WILL BE IN STREET OR PARKING UNDER VEHICLE TRAFFIC USE P2000R WHERE POSSIBLE. LOCATE TRACE WERE TESTING STATION OUTSIDE OF TRAVEL LANE OR IN MEDIAN, CENTERED IN SEPARATE CONCRETE PAD SIMILAR TO STANDARD VALVE BOX PAD.
7. TRAFFIC SIGNAL BOX SHALL BE LOCATED OUTSIDE THE ROADWAY ON THOROUGHFARES, LOCAL ARTERIAL AND STATE ROADWAYS.
8. REFER TO SECTION 1.10 FOR FURTHER DETAILS.

GATE VALVE, BOX,
COVER AND TAG

NOTE:

1. SEE RESTRAINED LENGTHS FOR PVC PIPE DETAIL FOR NOTES 1 THROUGH 9 THAT ARE ALSO APPLICABLE TO RESTRAINED LENGTHS FOR DIP.

RESTRAINED LENGTHS FOR DIP



3. BACKFLOW DEVICE MUST BE INSTALLED DOWNSTREAM OF METER, AS CLOSE TO METER AS POSSIBLE.
4. COPPER PIPE TYPE "K" OR BRASS PIPE MINIMUM SCHEDULE 40 SHALL BE USED TO A MINIMUM DEPTH OF 12" BELOW GRADE.
5. PIPES PASSING THROUGH OR ENCASED IN CONCRETE MUST BE PROPERLY PROTECTED AND SLEEVED.
6. THE SYSTEM MUST MEET ALL REQUIREMENTS OF THE FLORIDA PLUMBING CODE (LATEST EDITION) AND THE MANATEE COUNTY BACKFLOW PREVENTION ORDINANCE (LATEST EDITION).
7. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1/2".
8. BACKFLOW PREVENTER SHALL BE TESTED AT THE TIME OF INSTALLATION.
9. PRESSURE REDUCING VALVE REQUIRED UPSTREAM OF BACKFLOW IF SYSTEM PRESSURE EXCEEDS 80 PSI.
10. 3' MIN. CLEARANCE FROM LANDSCAPING PLANTS AND 10' MIN. CLEARANCE FROM TREES TO EDGE OF CONCRETE SLAB AND CLEAR OPENING FOR ACCESS FROM STREET.
11. THE METER METER AND BACKFLOW PREVENTER SHALL BE LOCATED WITHIN THE LIFT STATION FENCING FOR PUBLICLY OWNED AND MAINTAINED LIFT STATIONS, THE ASSEMBLY FOR PRIVATE LIFT STATIONS SHALL BE LOCATED ADJACENT TO THE ROW LINE OR WITHIN AN EASEMENT OUTSIDE OF THE FENCING.
12. SATELLITE PUMP STATIONS SHALL HAVE A 5/8-11/2" WATER METER, WITH A 3/4-1/2" REDUCED PRESSURE (RPZ) BACKFLOW PREVENTER. STATIONS WITH METWELL DIAMETERS 12 FEET AND LARGER TO HAVE A 2-1/2" WATER METER AND RPZ BACKFLOW PREVENTER.

WATER METER &
BACKFLOW PREVENTER
FOR PUMP STATIONS

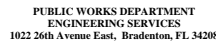


1. SEE RESTRAINED LENGTHS FOR PVC PIPE DETAIL FOR NOTES 1 THROUGH 9 THAT ARE ALSO APPLICABLE TO RESTRAINED LENGTHS FOR PIPE.

RESTRAINED
LENGTHS FOR PIPE

1. FOR 6" DIA. WET WELLS, T-HINGED SIDE OF THE HATCH OPENING SHALL BE OFFSET 12" FROM CENTERLINE.
2. FLOW METER SHALL BE INSTALLED UPSTREAM OF GATE VALVE FOR ALL LIFT STATIONS THAT RE-PUMP SEWAGE FROM OTHER LIFT STATIONS.
3. #5 REBAR (6" TP) SHALL BE EPOXY EMBEDDED INTO THE WET WELL TOP 3-4 INCHES DEEP AND CAST 3-4 FEET INTO THE VALVE ASSEMBLY. ENSURE THE TOPS OF THE WET WELL AND VALVE ASSEMBLY WILL REMAIN FLUSH.
4. INFLUENT GRAVITY SEWER SHALL BE ARMED WITH A FLOOR BEAM BETWEEN THE PUMPS AS SHOWN ABOVE.
5. QUOTE COUPLER SHALL BE PLACED ON THE SIDE CLOSEST TO THE LIFT STATION DRIVEWAY.
6. CONCRETE SHALL BE TYPE II WITH 4,000 PSI 28-DAY COMPRESSIVE STRENGTH.
7. FOR SECTION X-X SEE SEWAGE PUMP STATION, SECTION VIEW ON DETAIL US-19.

SEWAGE PUMP STATION
PLAN VIEW



SATELLITE LIFT STATION R&R SLS N1H REHAB & EMERGENCY BACKUP PUMP DETAILS

ORIGINAL SHEET SIZE: 11"X17"

[illegible]

PROJECT #	402-5138380
SURVEY #	00-44134
SEC./TWN./RGE	18/33/18
SCALE	SEE PLAN

	BY	DATE
SUN EYES	TM	4/2/11
DESIGNED	ASS	4/5/11
DR. WINE	HEA	5/2/11
CHECKED	JSS	6/9/11

No. 80923

FLORIDA P.E. # 51928

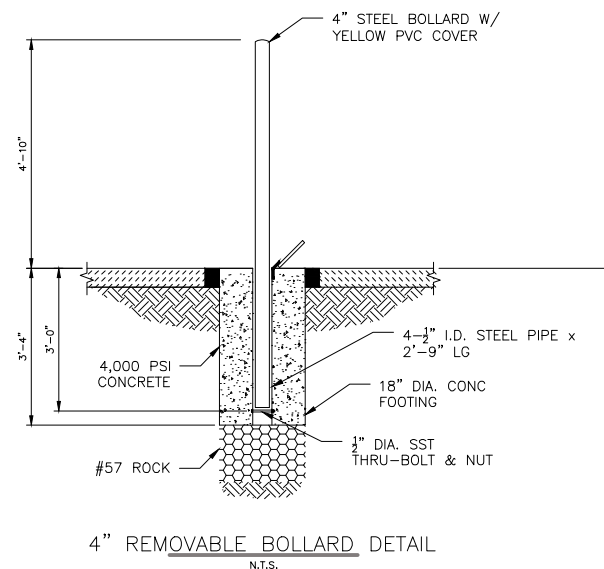
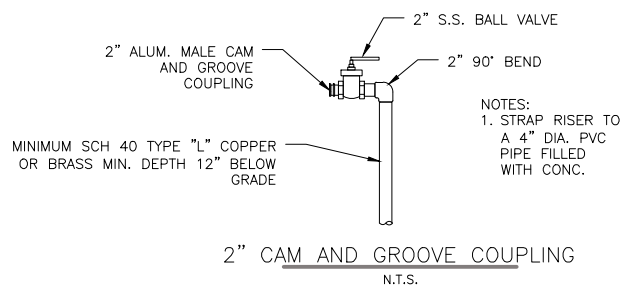
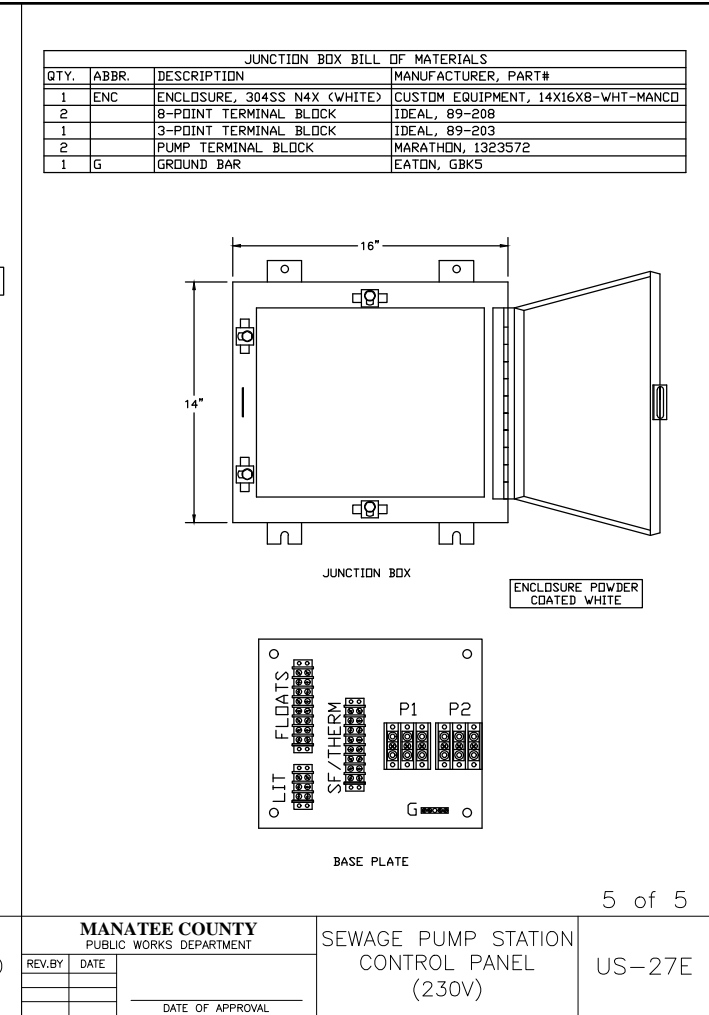
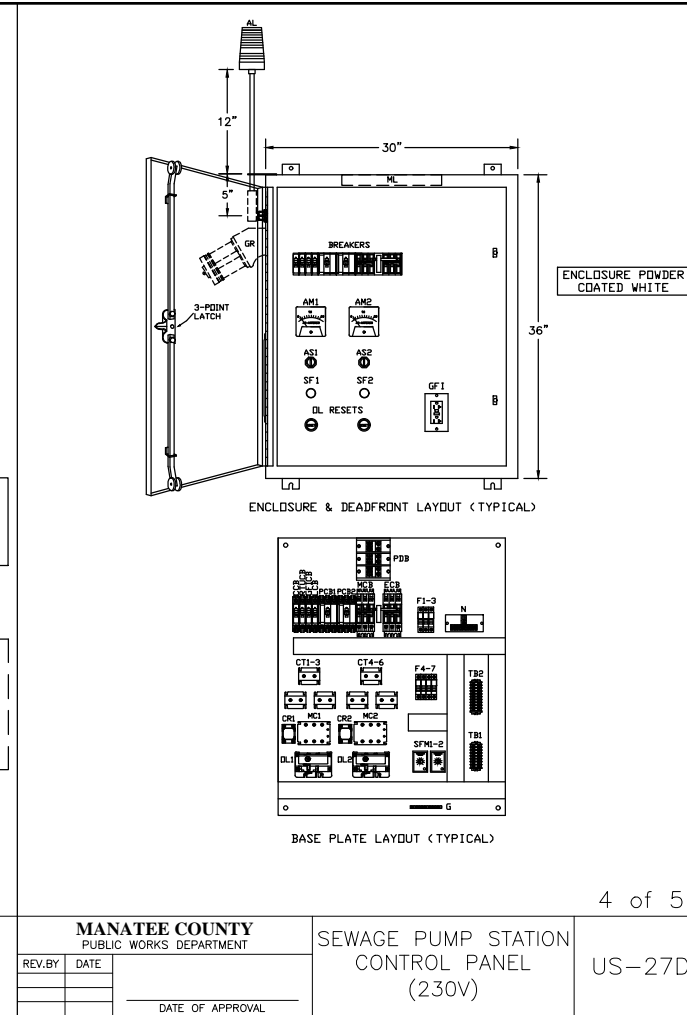
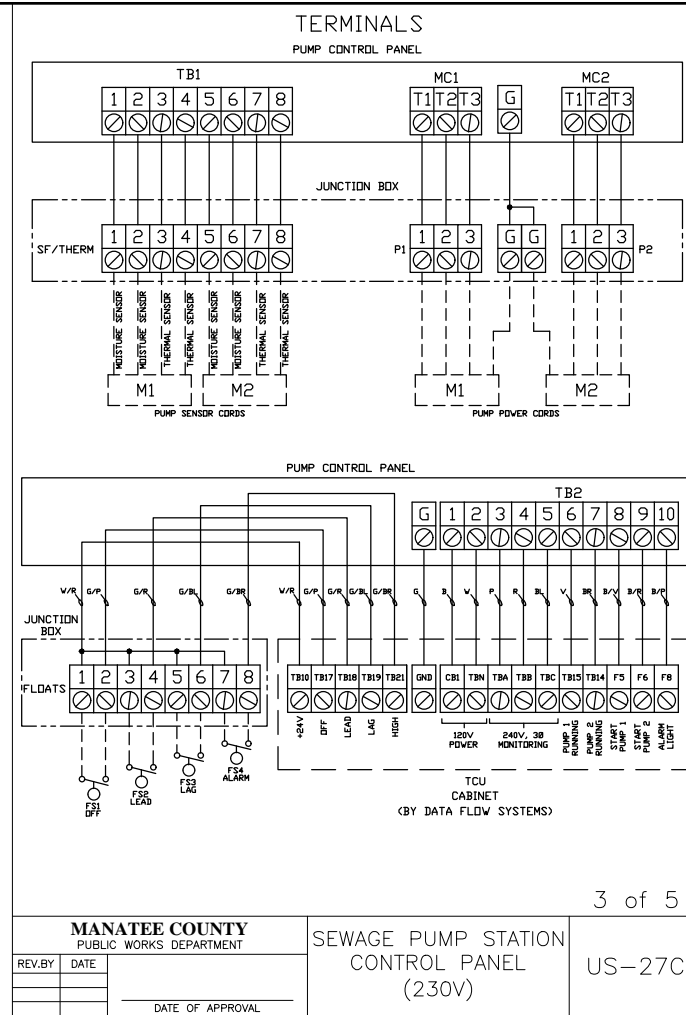
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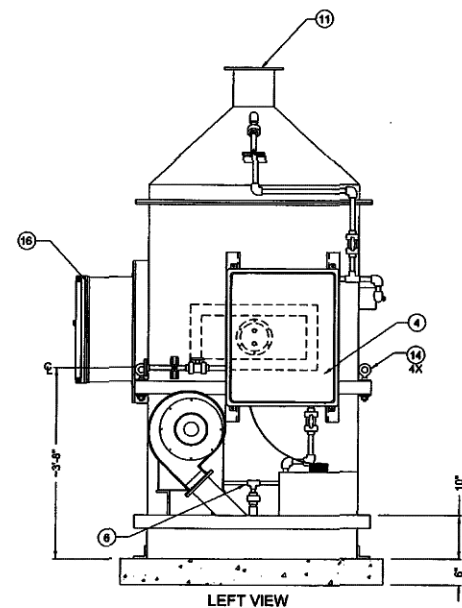
4/25/17

FLORIDA GIN

Signature & Date

SHEET 6 OF 1





- ### NOMENCLATURE
1. FAN (7.75" OD INLET)
 2. NUTRIENT TANK
 3. NUTRIENT FEED LINE
 4. WATER PANEL
 5. WATER FEED LINE
 6. HUMIDIFIER WATER FEED LINE
 7. WATER-TO-ICE CONNECTION (3/4" FLANGE)
 8. MAIN ACCESS FLANGE
 9. 6" ACCESS PORTS (TYP. OF 3)
 10. SYSTEM DRAIN
 11. AIR OUTLET FLANGE - 9" DIA.
 12. SLOPED CONCRETE EQUIPMENT PAD
 13. ID TAG
 14. POSITIONING EYES (TYP. OF 4)
 15. ANCHOR LUGS (TYP. OF 4)
 16. ELECTRICAL CONTROL PANEL
 17. UPPER BED IRRIGATION LINE
 18. OUTLET AIR SAMPLE PORT

NOTE:

1. APPROX. OPERATING WEIGHT: 6,000 LBS (INCLUDES MEDIA)
2. PLACE ON SLOPED CONCRETE, 1/16" PER FOOT FROM FAN TO DRAIN.
3. SERVICE REQUIREMENTS:
 - ELECTRICAL: 480 VAC, 3 PH, 25 AMPS, 60 HZ
 - POTABLE WATER: 3/4" LINE (30 PSI MIN.)
4. BACKFLOW PREVENTER, IF REQUIRED, PROVIDED BY OTHERS.
5. 10" BAROMETRIC P-TRAP ON DRAIN, PROVIDED BY OTHERS.

<p>COMPANY CONFIDENTIAL</p> <p>THIS DOCUMENT AND ALL INFORMATION CONTAINED HEREIN ARE UNCLASSIFIED AND ARE THE PROPERTY OF SIEMENS WATER TECHNOLOGIES. THE DESIGN CONCEPTS AND INFORMATION CONTAINED HEREIN ARE UNCLASSIFIED AND ARE SUBMITTED IN CONFIDENCE. THEY ARE NOT TRANSFERABLE AND MUST BE USED ONLY FOR THE PURPOSE FOR WHICH THE DOCUMENT IS SUBMITTED. THEY MUST NOT BE REPRODUCED, LOANED OR USED IN ANY OTHER MANNER WITHOUT THE EXPRESS WRITTEN CONSENT OF SIEMENS WATER TECHNOLOGIES. ANY REPRODUCTION IN ANY MANNER DETRIMENTAL TO THE INTERESTS OF SIEMENS OR THE INTERESTS OF SIEMENS WATER TECHNOLOGIES IS PROHIBITED. THE RELEASE OF THIS DOCUMENT, ALONG WITH ALL COPIES AND EXTRACTS, AND ALL RELATED NOTES AND ANALYSES, MUST BE RETURNED TO SIEMENS OR DESTROYED AS INSTRUCTED BY SIEMENS. THE DELIVERY OF THIS DOCUMENT CONSTITUTES AGREEMENT TO THESE TERMS AND CONDITIONS.</p>							DESIGNER	DATE	TITLE									
							TI	05/19/08	DAVIS INVENTORY (ZB-4000)									
							CHECKER	DATE	ZB-4000 BIOLOGICAL OXIDATION CONTROL SYSTEM									
							BC	05/19/08	GENERAL ARRANGEMENT DRAWING (TYP OF 3)									
							ENGINEER	DATE	CUSTOMER									
							TI	05/19/08	SIEMENS WATER TECHNOLOGIES									
							MANAGER	DATE										
							BC	05/19/08										
							SIEMENS Water Technologies											
							SAN DIEGO, CA											
							858-594-2200											
							SCALE:	4330-G11										
							FILE:	NTS	PROJECT	4330	CODE	-	DRAWING	4330-G1	1	SHEET	OF 3	REV
REV	DESCRIPTION					DATE	DWN	CHKD	APVD	ECN								

ODOR CONTROL EQUIPMENT DETAIL
(BY OTHERS; FOR REFERENCE)

N.T.S.

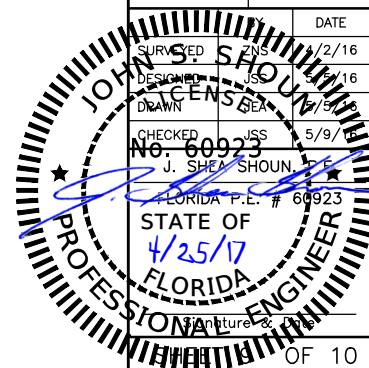
COORDINATE BOLLARD LOCATIONS WITH
LIFT STATION SUPERINTENDENT

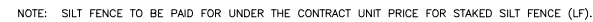


SATELLITE LIFT STATION R&R SLS N1H REHAB & EMERGENCY BACKUP PUMP DETAILS

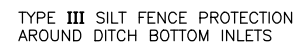
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SURVEY #		00-44134	
SEC./TWN./RGE		18/33/18	
SCALE		SEE PLAN	
		DATE	
SURVEYED		JNS 12/16	
DESIGNED		JNS 12/16	
DRAWN		SEA 7/19	
CHECKED		JSS 5/9/18	
No. 60923 J. SHEA SHOUN			
FLORIDA P.E. # 60923			
STATE OF			
4/25/17			
FLORIDA			
Professional Engineer			
Signature of _____			
DATE OF 10			

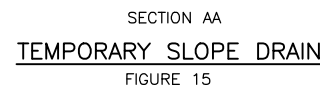
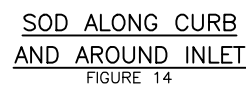
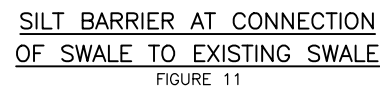
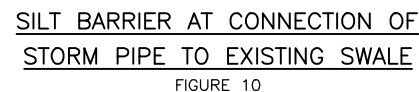
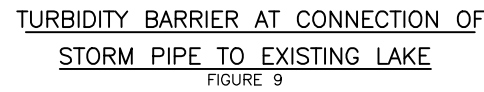
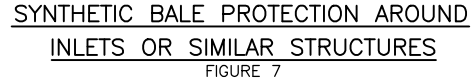




TYPICAL SILT FENCE
FIGURE 2



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



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

TAKE SILT BARRIER	SURVEYED	INS	DATE	4/2/16
DOUBLE SLOTTED BALES PLACED	DESIGNED	ISS	5/16	
	DRAWN	JE	5/16	
	CHECKED	ES	5/16	

J. SHEFF SHOUN, P.E.
 No. 60923
 FLORIDA P.E. # 60923

STATE OF
 4/25/17
 FLORIDA
 PROFESSIONAL ENGINEER