

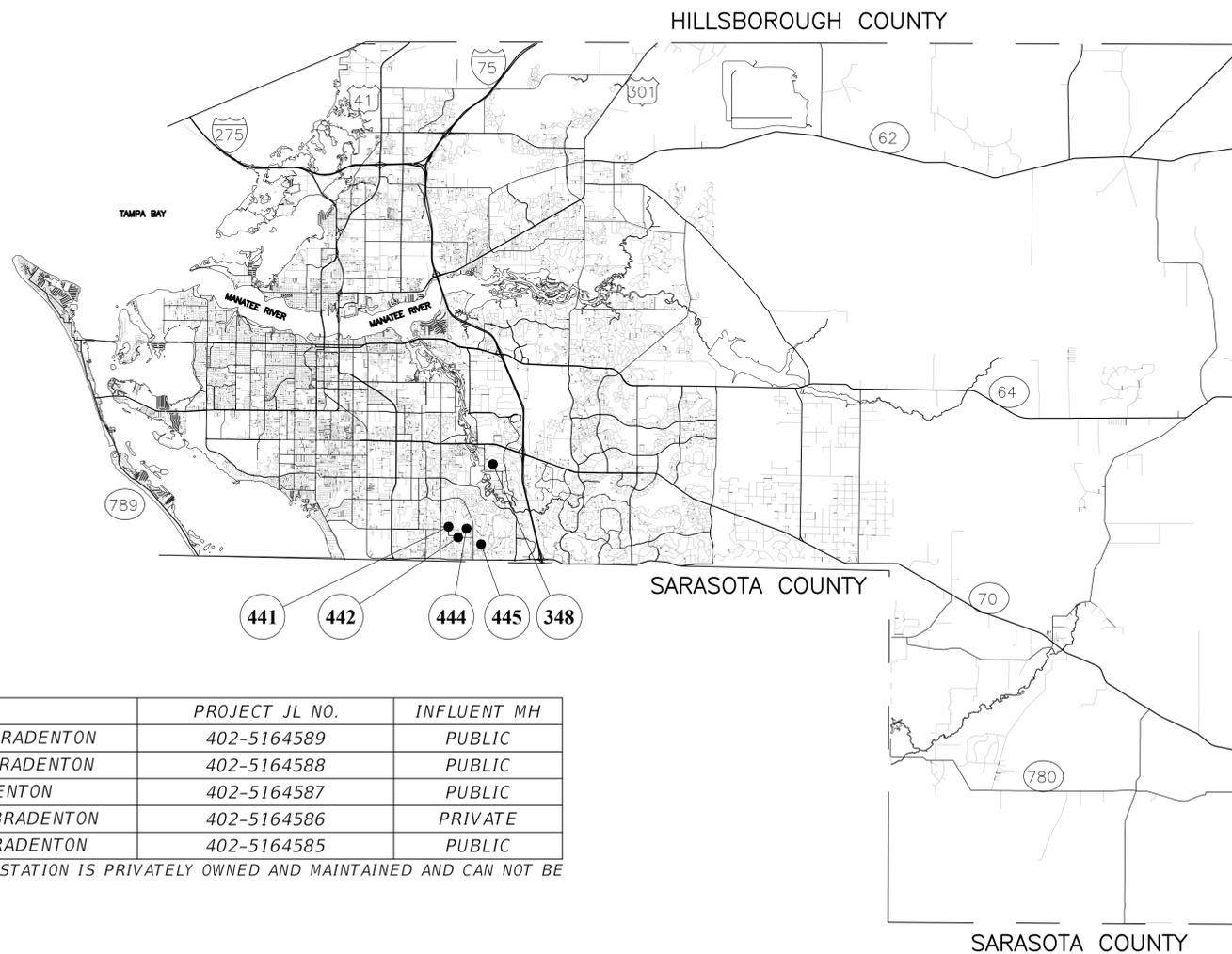
# MANATEE COUNTY UTILITY ENGINEERING SECTION

## SATELLITE LIFT STATION R&R 2025 GROUP 2

402-0019707

JANUARY 2025

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*BID PLANS*



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UTILITY PLANS  
ENGINEER OF RECORD:  
J. SHEA SHOUN, P.E.,  
FL LICENSE No: 60923

MANATEE COUNTY PUBLIC WORKS  
1022 26th AVENUE EAST  
BRADENTON, FL 34208

L.S. NAME	RTU	ADDRESS	PROJECT JL NO.	INFLUENT MH
TARA 3	348	6718 PLEASANT HILL RD, BRADENTON	402-5164589	PUBLIC
PALM AIRE 1	441	4722 TOURNAMENT BLVD, BRADENTON	402-5164588	PUBLIC
PALM AIRE 2	442	5215 PALM AIRE DR, BRADENTON	402-5164587	PUBLIC
PALM AIRE 4 *	444	5500 COUNTRY CLUB WAY, BRADENTON	402-5164586	PRIVATE
TIMBERLAKE	445	8167 MISTY OAKS BLVD, BRADENTON	402-5164585	PUBLIC

(\* ) THE GRAVITY SEWER MAIN(S) AND MANHOLE(S) ADJACENT TO THE LIFT STATION IS PRIVATELY OWNED AND MAINTAINED AND CAN NOT BE UTILIZED FOR BYPASS PUMPING.

**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, UPGRADE OR FULL REPLACEMENT OF THE ELECTRICAL CONTROL EQUIPMENT, 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.

ATTENTION IS DIRECTED TO THE FACT THAT  
THESE PLANS MAY HAVE BEEN REDUCED IN SIZE  
BY REPRODUCTION. THIS MUST BE CONSIDERED  
WHEN OBTAINING SCALED DATA.



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FISCAL YEAR	SHEET NO.
2024	01 of 17

GENERAL

- 1. ALL CONSTRUCTION ACTIVITIES SHALL BE COORDINATED WITH THE PROJECT MANAGEMENT DIVISION. THE PROJECT MANAGER IS: PAUL HAAS, P.E. AND CAN BE REACHED AT 941.708.7450 x4966.
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, FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND/OR THE FLORIDA BUILDING CODE. ALL WORK ON PRIVATE PROPERTY SHALL BE PERFORMED BY A LICENSED PLUMBER REGISTERED IN MANATEE COUNTY, UNLESS OTHERWISE INDICATED ON THE PLANS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING ALL CONDITIONS AND REQUIREMENTS OF ALL PERMITS AND ALL GOVERNING FEDERAL, STATE, AND LOCAL AGENCIES. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS THAT ARE NOT PROVIDED IN THE BID DOCUMENTS, AT NO ADDITIONAL COST TO THE OWNER.
5. THE INFORMATION PROVIDED IN THESE PLANS IS SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING THE MATURE AND EXTENT OF THE CONDITIONS WHICH MAY BE ENCOUNTERED DURING THE COURSE OF WORK. ALL CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT WHATEVER INVESTIGATION THEY MAY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSIONS REGARDING THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED, AND UPON WHICH THEIR BIDS WILL BE BASED.
6. THE CONTRACTOR SHALL REVIEW AND VERIFY ALL DIMENSIONS ON THE PLANS AND REVIEW ALL FIELD CONDITIONS THAT MAY AFFECT CONSTRUCTION. SHOULD DISCREPANCIES OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO OBTAIN THE ENGINEER'S CLARIFICATION BEFORE COMMENCING WITH CONSTRUCTION.
7. AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT SUNSHINE STATE ONE CALL OF FLORIDA AT 1-800-432-4770 OR THE NATIONAL 811 ONE CALL NUMBER WHEN APPLICABLE FOR UTILITY LOCATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH ALL UTILITIES FOR THE POSSIBLE RELOCATION OR THE TEMPORARY MOVEMENT OF ANY EXISTING UTILITIES WITHIN THE RIGHTS-OF-WAY.
8. NO WORK, EXCEPT FOR EMERGENCY TYPE, SHALL BE PERFORMED AFTER 7:00 PM AND BEFORE 7:00 AM. FOR ADDITIONAL PROJECT RESTRAINTS, REFER TO SECTION 01310 OF THE SPECIFICATIONS.

SAFETY

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

ENVIRONMENTAL

- 13. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY STORM WATER, EROSION, AND SEDIMENTATION CONTROL MEASURES IN ACCORDANCE WITH THE FDEP "FLORIDA STORM WATER, EROSION AND SEDIMENTATION CONTROL INSPECTOR'S MANUAL". IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTROL AND PREVENT EROSION AND TRANSPORT OF SEDIMENT TO SURFACE DRAINS AND TO DITCHES DURING CONSTRUCTION.
14. STOCKPILES SHALL BE PROTECTED AT ALL TIMES BY ON-SITE DRAINAGE CONTROLS WHICH PREVENT EROSION OF THE STOCKPILED MATERIAL. CONTROL OF DUST FROM SUCH STOCKPILES IS REQUIRED, DEPENDING UPON THEIR LOCATION AND THE EXPECTED LENGTH OF TIME THE STOCKPILES WILL BE PRESENT. IN NO CASE SHALL ANY STOCKPILED MATERIAL REMAIN AFTER THIRTY (30) CALENDAR DAYS.
15. STORM WATER INLETS IN THE VICINITY OF THE PROJECT SHALL BE PROTECTED BY SEDIMENT TRAPS SUCH AS SECURED HAY BALES, SOD, STONE, ETC., WHICH SHALL BE MAINTAINED AND MODIFIED AS REQUIRED BY CONSTRUCTION PROGRESS, AND WHICH MUST BE APPROVED BY THE ENGINEER BEFORE INSTALLATION. THIS WILL BE MAINTAINED TO PREVENT DEGRADATION OF THE WATERS OF THE COUNTY AND STATE.
16. SEDIMENT BASINS AND TRAPS, PERIMETER BERMS, SEDIMENT BARRIERS, VEGETATIVE BUFFERS, AND OTHER MEASURES INTENDED TO TRAP SEDIMENT AND/OR PREVENT THE TRANSPORT OF SEDIMENT ONTO ADJACENT PROPERTIES, OR INTO EXISTING BODIES OF WATER, MUST BE INSTALLED, CONSTRUCTED, OR IN THE CASE OF VEGETATIVE BUFFERS, PROTECTED FROM DISTURBANCE, AS A FIRST STEP IN THE LAND ALTERATION PROCESS. SUCH SYSTEMS SHALL BE FULLY OPERATIVE BEFORE ANY OTHER DISTURBANCE OF THE SITE BEGINS. EARTHEN STRUCTURES INCLUDING BUT NOT LIMITED TO BERMS, EARTH FILTERS, DAMS OR DIKES SHALL BE STABILIZED AND PROTECTED FROM DRAINAGE DAMAGE OR EROSION WITHIN ONE (1) WEEK OF INSTALLATION.
17. ALL SWALES, DITCHES, AND CHANNELS LEADING FROM THE SITE SHALL BE PROTECTED FROM SILTATION AND EROSION DURING CONSTRUCTION AND BE SODDED WITHIN THREE (3) DAYS OF EXCAVATION.
18. SOIL DISPLACED BY CONSTRUCTION WILL BE REMOVED. EROSION CONTROL SHALL BE IMPLEMENTED IN AREAS WHICH ARE CONSIDERED ENVIRONMENTALLY SENSITIVE. EROSION CONTROL SYSTEMS SHALL BE REQUIRED FOR ALL WORK WITHIN JURISDICTIONAL AREAS. THESE SYSTEMS MAY INCLUDE STACKED HAY BALES, SILT SCREENS, FILTER FABRIC, AND TURBIDITY SCREENS.
19. ALL EROSION AND POLLUTION CONTROL DEVICES SHALL BE CHECKED REGULARLY, ESPECIALLY AFTER EACH RAINFALL AND SHALL BE CLEANED OUT AND/OR REPAIRED AS REQUIRED.
20. THE CONTRACTOR SHALL NOT ENTER UPON OR IN ANY WAY ALTER WETLAND AREAS THAT MAY BE ON OR NEAR THE CONSTRUCTION SITE. ALL WORK IN THE VICINITY OF OPEN WATER AND/OR WETLANDS IS TO BE PERFORMED IN COMPLIANCE WITH THE ENVIRONMENTAL REGULATIONS AND/OR PERMITS FOR THE SITE. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY FINES RESULTING FROM HIS VIOLATION OF ANY REGULATIONS OR PERMIT CONDITIONS.
21. FOR MORE INFORMATION, SEE THE EROSION CONTROL DETAIL SHEET INCLUDED IN THE PLANS.

RIGHT-OF-WAY

- 22. ALL CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO WITHIN THE MANATEE COUNTY/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.
24. THE CONTRACTOR, PRIOR TO CONSTRUCTION AND RESTRICTING ANY TRAFFIC, MUST OBTAIN A RIGHTS-OF-WAY USE PERMIT AND A TRAFFIC CONTROL PLAN. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS FROM OTHER GOVERNMENTAL AGENCIES HAVING RELEVANT JURISDICTION. ALL MAINTENANCE AND PROTECTION OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF THE CURRENT FLORIDA DEPARTMENT OF TRANSPORTATION "MANUAL OF TRAFFIC CONTROL AND SAFE PRACTICES". A TRAFFIC CONTROL PLAN SHALL BE SUPPLIED BY THE CONTRACTOR AT THE PRE-CONSTRUCTION MEETING.
25. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL DAMAGED STORM WATER STRUCTURES, PIPING, ENTRANCE PIPE AND HEADWALLS WHETHER SHOWN ON THE PLANS OR NOT. THE HEADWALLS SHALL BE REPLACED IN ACCORDANCE WITH F.D.O.T. STANDARDS.
26. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH IN THE FIELD THE RIGHT-OF-WAY LINES, BASE LINES, BENCH MARKS (ELEV.), CENTER LINES, AND STATIONING AS REQUIRED TO CONSTRUCT THIS PROJECT.
27. THE CONTRACTOR SHALL COORDINATE THE CUTTING OF DRIVEWAYS WITH THE PROPERTY OWNER PRIOR TO CUT. ALL DRIVEWAYS WILL BE IN PASSABLE CONDITION AT THE END OF THE WORK DAY AND FULLY RESTORED PER SECTION 02755.
28. A RIGHT OF ENTRY AGREEMENT SHALL BE OBTAINED BY THE PROJECT MANAGER FROM THE PROPERTY OWNER BEFORE ANY DRIVEWAY CONSTRUCTION WORK IS DONE OUTSIDE OF THE RIGHT-OF-WAY OR EASEMENT.

UTILITIES

- 29. ALL EXISTING FACILITIES IN THE PROJECT AREA SHALL REMAIN OPERATIONAL AND ACCESSIBLE BY COUNTY PERSONNEL AT ALL TIMES, I.E. VALVES, MANHOLE COVERS, SEWER CLEAN-OUTS, ETC.
30. 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.
31. THE CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, WATER/RECLAIM/SEWER LINES, STORM DRAINS, OTHER 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 COUNTY. ALL EXISTING AND PROPOSED VALVE COVERS, RIMS, ETC, SHALL BE BROUGHT TO FINAL GRADE OF THE PROJECT AREA.
32. THE CONTRACTOR SHALL USE APPROPRIATE TECHNIQUES, AS APPROVED, RECOMMENDED, OR OFFERED BY AN EXISTING UTILITY, (I.E. 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 ANY RELATED COSTS.
33. 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.
34. 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.
35. 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:
\* SWIMMING POOL,
\* IN-GROUND IRRIGATION SYSTEM OR UNDERGROUND SPRINKLERS,
\* SECONDARY SOURCE OF WATER (I.E. RECLAIMED WATER OR WELL),
\* PROPERTY THAT ABUTS A BODY OF WATER, INCLUDING RIVER, BAY, LAKE OR POND ON THE PROPERTY OR BORDERING THE PROPERTY,
\* FLOOD ZONE DESIGNATION. (IF ONLY FLOOD ZONE, INSTALL A DOUBLE CHECK BPA),
\* SOLAR WATER HEATING SYSTEM,
\* COMMERCIAL, INDUSTRIAL, MULTIFAMILY OR MULTIFAMILY RESIDENTIAL FACILITY,
\* CROSS CONNECTION IS FOUND,
\* FOUNTAIN WITH A DEDICATED FILL PIPE,
\* FIRE SPRINKLER SYSTEM.

- B. A LICENSED PLUMBER SHALL INSTALL THE BPA'S IN ACCORDANCE WITH THE CURRENT FLORIDA PLUMBING CODE AND MANATEE COUNTY CODE OF ORDINANCES, AND SHALL SELECT A PRESSURE RELIEF VALVE WITH AN APPROPRIATE PRESSURE SET POINT TO PROTECT THE CUSTOMERS' PLUMBING AND NOT ALLOW EXCESSIVE LEAKAGE DUE TO SYSTEM SUPPLY PRESSURE. A PRESSURE REDUCING VALVE MAY BE NECESSARY UPSTREAM OF THE PRESSURE RELIEF VALVE, WHERE NORMAL SUPPLY PRESSURE EXCEEDS 80 PSI. CONTRACTOR SHALL COORDINATE WITH COUNTY CROSS CONNECTION CONTROL STAFF AS REQUIRED.
C. IF IN-GROUND IRRIGATION SYSTEM IS CONNECTED TO THE POTABLE WATER LINE, AN ADDITIONAL REDUCED PRESSURE (RP) BPA SHALL BE INSTALLED AT THE POINT OF CONNECTION.
D. ALL BPA SHALL BE INSTALLED 4-5 FEET FROM THE EDGE OF DRIVEWAYS OR ANY OTHER ITEMS/FEATURES THE BPA MAY CREATE AN OBSTRUCTION.
E. VACUUM BREAKERS SHALL BE INSTALLED ON ALL EXTERNAL HOSE BIBBS.
F. CONTRACTOR SHALL COORDINATE WITH COUNTY CROSS CONNECTION STAFF & PRIVATE PROPERTY OWNER AS REQUIRED. CROSS CONNECTION STAFF SHALL DETERMINE WHICH PROPERTIES REQUIRE A BPA AND TYPE OF BPA TO BE INSTALLED.

RESTORATION

- 34. ALL RESTORATION WORK PERFORMED THROUGHOUT THE PROJECT SHALL CONFORM TO EXISTING LINES AND GRADES UNLESS SHOWN OTHERWISE. ALL RESTORATION LIMITS ARE APPROXIMATE AND SUBJECT TO THE DIRECTION OF THE COUNTY FIELD REPRESENTATIVE.
35. ALL DISTURBED GRASSED AREAS SHALL BE SODDED OR SEEDED UNLESS OTHERWISE INDICATED. THE TYPE OF SOD USED TO REPLACE OWNER MAINTAINED AREAS IN RIGHT-OF-WAY SHALL BE COORDINATED WITH THE PROPERTY OWNER.
36. ALL CONCRETE THURST BLOCKS INSTALLED FOR TESTING PURPOSES AND NOT REQUIRED FOR THE OPERATION OF THE PIPELINE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR, PRIOR TO FINAL ACCEPTANCE, AT NO ADDITIONAL COST TO THE OWNER.
37. ASPHALT DRIVES THAT ARE CUT SHALL BE RESTORED PER SECTION 02513 OF THE INFRASTRUCTURE ENGINEERING STANDARD SPECIFICATION.
38. CONCRETE DRIVEWAYS OR SIDEWALKS THAT ARE CUT SHALL BE RESTORED TO MATCH EXISTING ACCORDING TO THE CURRENT EDITIONS OF THE MANATEE COUNTY PUBLIC WORKS STANDARDS PART 3, HIGHWAY & TRAFFIC STANDARDS MANUAL DATED JUNE 2015, SECTION 3.7 DRIVEWAYS AND SECTION 3.8 SIDEWALKS AND/OR THE F.D.O.T. SPECIFICATIONS FOR ROAD AND BRIDGE DESIGN AND THE F.D.O.T. DESIGN STANDARDS. CONCRETE WITH A 3,000 PSI @ 28 DAYS SHALL BE USED.
39. WHENEVER A PERMANENT ROADWAY SURFACE IS NOT PLACED IMMEDIATELY AFTER BACKFILLING AND COMPACTION OF THE NEWLY INSTALLED PIPE LINE IN AREAS WHERE TRAFFIC MUST PASS, THE CONTRACTOR SHALL INSTALL A TEMPORARY SURFACE CONSISTING OF NINE INCHES OF COMPACTED LIME ROCK BASE AND A COAT OF ASPHALT EMULSION. PERMANENT ROADWAY REPAIR SHALL BE PERFORMED A MAXIMUM OF TWENTY-ONE CALENDAR DAYS AFTER THE INITIAL OPEN CUTTING. LIME ROCK BASE SHALL COME FROM AN APPROVED FDOT PIT.
40. ALL EXISTING SIGNING, THERMOPLASTIC PAVEMENT MARKINGS, ETC... SHALL BE RESTORED/PROVIDED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE MUTCD, FDOT DESIGN STANDARDS AND THE MANATEE COUNTY PUBLIC WORKS DEPARTMENT HIGHWAY, TRAFFIC AND STORMWATER STANDARDS, AND/OR AS DIRECTED BY THE COUNTY.
41. 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. RESTORATION EFFORTS SHALL BE INCLUDED IN THE PROJECT SCHEDULING AND PHASING PLAN TO DEMONSTRATE HOW THE RESTORATION WILL BE ACHIEVED.

CONSTRUCTION

- 42. 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.
43. NO MATERIAL SHALL BE STOCKPILED IN ROADWAYS. ALL DIRT AND DEBRIS SHALL BE REMOVED FROM THE JOB SITE DAILY. ROADS SHALL BE SWEEP DAILY AS PART OF DAILY CLEAN UP.
44. THE CONTRACTOR IS TO CONTROL ALL FUGITIVE DUST ORIGINATING ON THIS PROJECT BY WATERING OR OTHER METHODS AS REQUIRED.
45. INGRESS AND EGRESS TO ALL THE PROPERTIES IN THE CONSTRUCTION AREA SHALL BE MAINTAINED AT ALL TIMES. CONTRACTOR SHALL COORDINATE WITH THE PROPERTY OWNER PRIOR TO CONSTRUCTION ACTIVITIES.
46. PRIOR APPROVAL WILL BE REQUIRED FOR REMOVAL OF ANY TREE WITHIN THE CONSTRUCTION AREA.
47. THE CONTRACTOR SHALL PROVIDE ALL DEWATERING EQUIPMENT NECESSARY TO KEEP ALL EXCAVATIONS DRY. DEWATERING IS REQUIRED TO 18" BELOW TRENCH BOTTOM.
48. ALL PIPING AND FITTINGS USED ON THIS PROJECT SHALL BE AS NOTED ON THE PLANS AND IN THE CONTRACT DOCUMENT AND SHALL BE INSTALLED TO THE LINES AND GRADES SHOWN ON THE PLANS AND PROFILES. MODIFICATIONS MUST BE APPROVED BY THE ENGINEER OF RECORD.
49. ALL PIPE SHALL BE COLOR CODED TO CONFORM TO MANATEE COUNTY STANDARDS.
50. ALL PIPE AND FITTINGS SHALL BE INSTALLED AS RECOMMENDED BY THE MANUFACTURER AND ALL PIPE JOINTS SHALL BE RESTRAINED WHERE REQUIRED.
51. 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.
52. 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.
53. 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.
54. 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.
55. ONLY MANATEE COUNTY UTILITY OPERATIONS STAFF ARE AUTHORIZED TO OPERATE VALVES ON COUNTY OWNED AND MAINTAINED UTILITY SYSTEMS.
56. ALL PENETRATIONS OF EXISTING STRUCTURES SHALL BE BY MECHANICAL ROTARY CORE DRILLING METHOD. ALL CONCRETE PENETRATED OR DISTURBED SHALL BE COATED WITH TWO COATS OF EPOXY.
57. 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, WBRO RADIO, EMERGENCY COMMUNITY CENTERS, INSPECTIONS, WATER TREATMENT PLANT, WATER MANAGER, HELPLINE, CUSTOMER SERVICE, AND THE MANATEE COUNTY UTILITY OPERATIONS DEPARTMENT.
58. 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 PUGS FOR PIG CLEANING AND PRESSURE TESTING.
59. 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 BRASS PLUG SHALL BE INSTALLED AND THE CORPORATION STOP SHALL REMAIN IN PLACE.
60. 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.
61. FIELD CONDITIONS MAY NECESSITATE MINOR ALIGNMENT AND GRADE DEVIATION OF THE PROPOSED UTILITIES TO AVOID OBSTACLES, AS ORDERED BY THE ENGINEER.
62. CONTRACTOR SHALL PROVIDE RECORD DRAWINGS IN ACCORDANCE WITH SECTION 1.15 AND/OR 1.16 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 1.15 AND/OR 1.16 SHALL BE STRICTLY ENFORCED. A COPY OF SECTION 1.15 AND 1.16 CAN BE PROVIDED UPON REQUEST.
63. THE CONTRACTOR SHALL MAINTAIN AS-BUILT DRAWINGS OF THE WORK AS CONSTRUCTED. AS-BUILT DRAWINGS SHALL INCLUDE THE LOCATION OF ABANDONED MAINS CUT AND PLUG POINTS. AS-BUILT DRAWINGS SHALL BE ANNOTATED EACH DAY AS THE WORK PROCEEDS AND SHALL BE AVAILABLE TO THE COUNTY PROJECT MANAGER AND/OR FIELD INSPECTOR FOR REVIEW ON AN ONGOING BASIS. AS-BUILT DRAWINGS SHALL PROVIDE THE HORIZONTAL AND VERTICAL INSTALLED LOCATION OF ALL NEW PIPELINE, FITTINGS, VALVES AND APPURTENANCES REFERENCED TO FIXED SURFACE FEATURES THAT ARE SHOWN ON THE CONSTRUCTION DRAWINGS AND/OR RIGHT-OF-WAY LINES, PROPERTY CORNERS OR OTHER SURVEYED POINTS. THE CONTRACTOR SHALL BE ABLE TO PRESENT THE RECORD DRAWINGS TO THE COUNTY PROJECT MANAGER AND/OR INSPECTOR ON DEMAND AS THE WORK PROGRESSES. SEE SECTION 01720 FOR FURTHER DETAILED REQUIREMENTS OF THE DAILY RECORD DRAWING DOCUMENTATION.

EXISTING UTILITY LOCATIONS

64. THE FOLLOWING IDENTIFIES THE QUALITY LEVEL OF EXISTING UTILITY LINENWORK 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)

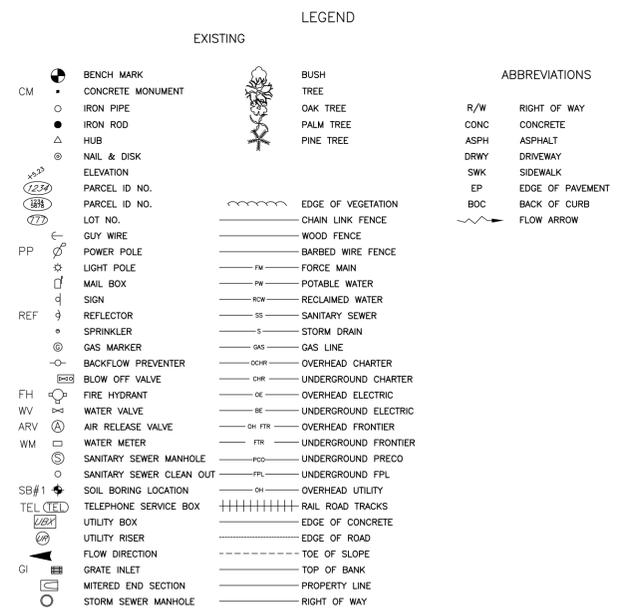
MAINTENANCE OF TRAFFIC

- 65. 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.
66. THE CONTRACTOR PRIOR TO CONSTRUCTION AND RESTRICTING ANY TRAFFIC, MUST OBTAIN A RIGHT-OF-WAY USE PERMIT AND A TRAFFIC CONTROL PLAN (TCP). THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS FROM OTHER GOVERNMENTAL AGENCIES HAVING RELEVANT JURISDICTION. ALL MAINTENANCE AND PROTECTION OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF THE CURRENT FLORIDA DEPARTMENT OF TRANSPORTATION "MANUAL OF TRAFFIC CONTROL AND SAFE PRACTICES". A TCP SHALL BE SUPPLIED BY THE CONTRACTOR AT THE PRE-CONSTRUCTION MEETING.
67. MAINTENANCE OF TRAFFIC MUST MEET THE FDOT 102-600 SERIES STANDARDS AT ALL TIMES. FULL CLOSURES SHALL BE AVOIDED. FULL CLOSURES WILL BE CONSIDERED (AND ARE NOT GUARANTEED) WITH THREE-WEEK ADVANCE NOTICE AND MUST HAVE PRIOR COUNTY APPROVAL BEFORE IMPLEMENTATION.
68. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE TEMPORARY DRAINAGE. THERE WILL BE NO DIRECT PAY FOR THIS WORK. COSTS SHALL BE INCLUDED IN THE COST OF PIPE.

- 69. MOTORIZED AND MECHANICAL EQUIPMENT SHALL BE EFFECTIVELY SHIELDED, PADDED, OR LOCATED TO MINIMIZE NOISE.
70. THE CONTRACTOR WILL NOTIFY ALL EMERGENCY AND RESCUE AGENCIES LOCATED IN THE PROJECT VICINITY 24 HOURS IN ADVANCE OF ANY PROPOSED LANE CLOSURES OR DETOURS.
71. ACCESS TO ALL SIDE STREETS AND DRIVEWAYS MUST BE PROVIDED AND MAINTAINED DURING CONSTRUCTION.
72. USE FDOT INDEX NO. 619 FOR TRAFFIC CONTROL MEASURES WHEN CONSTRUCTION EQUIPMENT IS DRIVEN ON OPEN TRAVEL LANES. THE REGULATORY SPEED IN WORK ZONES SHOULD BE AS CLOSE TO NORMAL CONDITIONS AS POSSIBLE, UNLESS NOTED ON THE TRAFFIC CONTROL PLANS.
73. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO WORKING NEAR THEIR EXISTING FACILITIES.
74. CONSTRUCTION SEQUENCES SHALL BE COORDINATED TO PROVIDE POSITIVE DRAINAGE OF THE TRAVELWAYS AT ALL TIMES.
75. ANY MAT ITEM NOT SPECIFICALLY LISTED UNDER A PARTICULAR PAY ITEM SHALL BE CONSIDERED SUBSIDIARY TO OTHER BID ITEMS. THERE SHALL BE NO SEPARATE PAYMENT.
76. THE MAXIMUM SPACING BETWEEN WARNING DEVICES USED FOR DELINEATION BETWEEN THE TRAVELWAY(S) AND CONSTRUCTION AREA SHALL BE AS PER FDOT STANDARD INDEX 600.
77. ALL DETOURS, IF APPROVED BY THE COUNTY, SHALL ADHERE TO THE REQUIREMENTS SET FORTH IN THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D. LATEST EDITION) AND THE FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS, LATEST EDITION (600 SERIES). ANY DETOUR RECOMMENDED BY THE CONTRACTOR MUST BE SUBMITTED TO THE COUNTY (AND FDOT) FOR APPROVAL AT LEAST FOURTEEN (14) DAYS PRIOR TO THE START OF CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN COUNTY (AND FDOT) APPROVAL PRIOR TO IMPLEMENTATION AND FAILURE TO OBTAIN APPROVAL SHALL NOT BE GROUNDS FOR ANY DELAY CLAIM FOR TIME OR ADDITIONAL COMPENSATION.

FIBER

- 78. INSTALL A FIBER OPTIC ROUTE MARKER AT THE PROPOSED PULL BOX AND RESTORE THE FIBER OPTIC LOCATION SYSTEM (I.E., ROUTE MARKERS AND TRACER WIRE).
79. ALL MATERIAL REMOVED SHALL BE REPLACED WITH LIKE KIND TYPE AND SPECIFICATION.
80. NEW ADVANCED TRAFFIC MANAGEMENT SYSTEM (ATMS) INFRASTRUCTURE SHOULD BE PLACED WHILE LEAVING EXISTING ATMS INFRASTRUCTURE IN PLACE AND INTACT AS LONG AS FEASIBLE TO LIMIT THE DURATION OF SYSTEM DOWN TIME.
81. THE DEVELOPER WILL NEED TO HIRE A CERTIFIED CONTRACTOR THAT IS LICENSED TO PERFORM THIS WORK TO RELOCATE THE ATMS INFRASTRUCTURE AT THEIR COST.
82. AT LEAST FIVE (5) WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL CONTACT MUKUNDA GOPALAKRISHNA, P.E., PTOE OF THE MANATEE COUNTY TRAFFIC ENGINEERING DIVISION AT (941) 749-3500, EXT. 7813 TO INFORM HIM OF CONSTRUCTION OPERATIONS.
83. THE CONTRACTOR MUST PROVIDE A SPLICE DIAGRAM FOR THE PROPOSED SPLICE ENCLOSURE AT THIS TIME.
84. THE CONTRACTOR SHALL NOTIFY UTILITY OWNERS OF ANY EXCAVATION OR DEMOLITION ACTIVITY THROUGH SUNSHINE ONE CALL OF FLORIDA INC. (811) AND SHALL ALSO NOTIFY THOSE UTILITY OWNERS/AGENCIES LISTED WITHIN OR IMPACTED BY THESE PLANS, NOT LESS THAN TWO (2) FULL BUSINESS DAYS IN ADVANCE OF BEGINNING CONSTRUCTION ON THE JOB SITE.
85. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING RIGHT-OF-WAY USE PERMITS WITH MATT MERUCCI, MANATEE COUNTY PUBLIC WORKS INFRASTRUCTURE INSPECTION OFFICER, AT (941) 708-7450, EXT. 7342.
86. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING BOND REQUIREMENTS WITH BRANDY WILKINS, MANATEE COUNTY PUBLIC WORKS SENIOR ADMINISTRATIVE SPECIALIST, AT (941) 708-7450, EXT. 7215.
87. DELIVER THREE HARD-COPY SETS OF AS-BUILT RECORDS DRAWINGS THAT ARE SIGNED AND SEALED BY THE ENGINEER OF RECORD, AND ONE COMPACT DISC OF RECORD DRAWINGS IN ADOBE ACROBAT (.PDF) AND AUTOCAD (.DWG) FORMAT TO THE MANATEE COUNTY TRAFFIC ENGINEERING DIVISION (ATTN: MR. MUKUNDA GOPALAKRISHNA, P.E., PTOE) AT 2101 47TH TERRACE EAST BRADENTON, FL 34203. RECORD DRAWINGS MUST BE DELIVERED TO THE COUNTY AT LEAST TWO (2) BUSINESS DAYS PRIOR TO SCHEDULING THE FINAL INSPECTION.
88. UPON PASSING THE FINAL INSPECTION, THE CONTRACTOR SHALL SEND A WRITTEN REQUEST TO THE MANATEE COUNTY TRAFFIC OPERATIONS DIVISION, 2904 12TH STREET COURT EAST, BRADENTON, FLORIDA 34208 (ATTN: MR. AARON BURKETT) REQUESTING TO TRANSFER MAINTENANCE FROM THE CONTRACTOR TO MANATEE COUNTY. MANATEE COUNTY WILL RESPOND WITHIN 5 WORKING DAYS TO ESTABLISH A TIMETABLE FOR THE TRANSFER OF MAINTENANCE RESPONSIBILITY.



EMERGENCY CONTACTS

- MANATEE COUNTY PUBLIC WORKS DEPT. UTILITY ENGINEERING ERIC SHROYER, P.E. 1022 26TH AVENUE EAST BRADENTON, FL 34208 (941) 708-7450 EXT. 7344
TECO/PEOPLES GAS CO. ALEX MCFARLANE 8261 VICO COURT SARASOTA, FL 34240 (813) 275-3762 EMERGENCY: 1-877-832-6911
FRONTIER JOHN PLOTT 1701 RINGLING BLVD. SARASOTA, FL 34236 (941) 906-6707 JOHN.PLOTT@FTR.COM
FLORIDA POWER & LIGHT TODD BOLKEMA 1253 12TH AVENUE EAST PALMETTO, FL 34221 (941) 927-4262 EMERGENCY: 1-800-4-OUTAGE TODD.BOLKEMA@FPL.COM
MANATEE COUNTY HEALTH DEPT. HANS ROESE 410 5TH AVENUE EAST BRADENTON, FL 34208 (813) 748-0747 EXT. 1355
SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT SARASOTA SERVICE OFFICE STEVE LOPES, P.E. 6750 FRUITVILLE ROAD SARASOTA, FL 34240 (941) 377-3722
FLORIDA GAS TRANSMISSION COOPERATIVE, INC. P.O. BOX 1310 WACHULA, FL 33873 PHONE: (813) 466-3327 E-MAIL: CHAD.HARRELL@SUG.COM KENDELL.COKER@PRECO.COOP
FDEP, SOUTHWEST DISTRICT ED WATSON 13051 N. TELECOM PKWY 2101 47TH TERRACE EAST BRADENTON, FL 34203 (813) 470-5875
CHARTER COMMUNICATIONS TOM WRIGHT 5413 E. STATE ROAD 64 BRADENTON, FL 34208-5535 (941) 748-3816 EXT. 21348 TOM.WRIGHT@CHARTER.COM
CITY OF BRADENTON PUBLIC WORKS 1411 9TH ST. W. BRADENTON, FL 34205 JIM MCLELLAN JIM.MCLELLAN@CITYOFBRADENTON.COM PHONE: (941) 708-6300

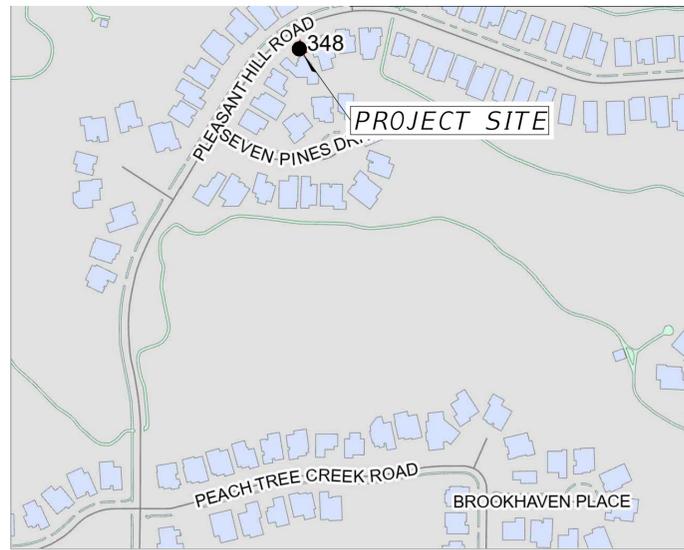
MANATEE COUNTY PUBLIC WORKS DEPARTMENT
PROJECT # 402-0019707 SURVEYED GFY 7/2024
SEC./TWN./RGE VARIES DESIGNED JSS 4/2024
SCALE SEE PLANS DRAWN JSS 4/2024
SATELLITE LIFT STATION R&R 2025 GROUP 2 GENERAL NOTES & LEGEND SHEET NO. 02 of 17

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C. SATELLITE LIFT STATION R&R 2025 GROUP 2



J. SHEA SHOUN, P.E., STATE OF FLORIDA, PROFESSIONAL ENGINEER, LICENSE NO. 60923. THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY J. SHEA SHOUN, P.E. ON THE DATE INDICATED HERE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

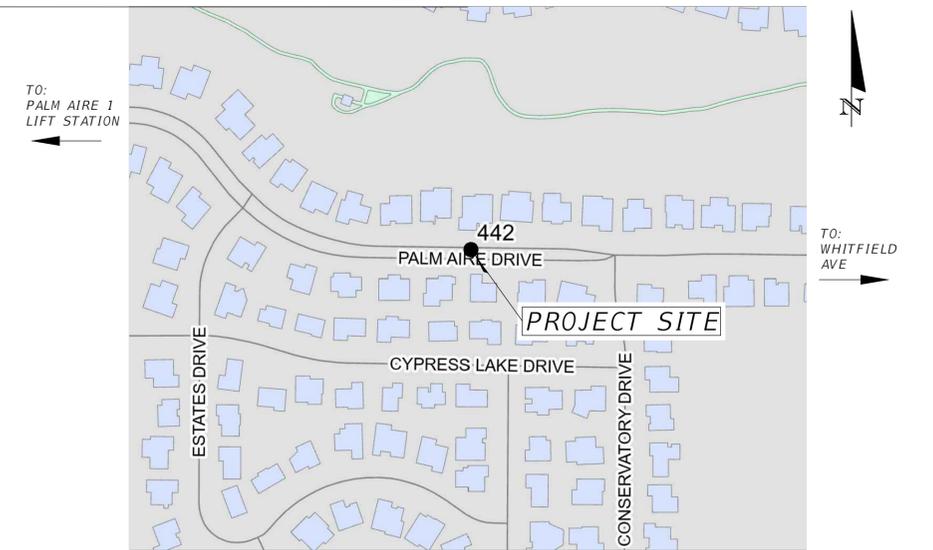
1022 26th Avenue East, Bradenton, FL 34208



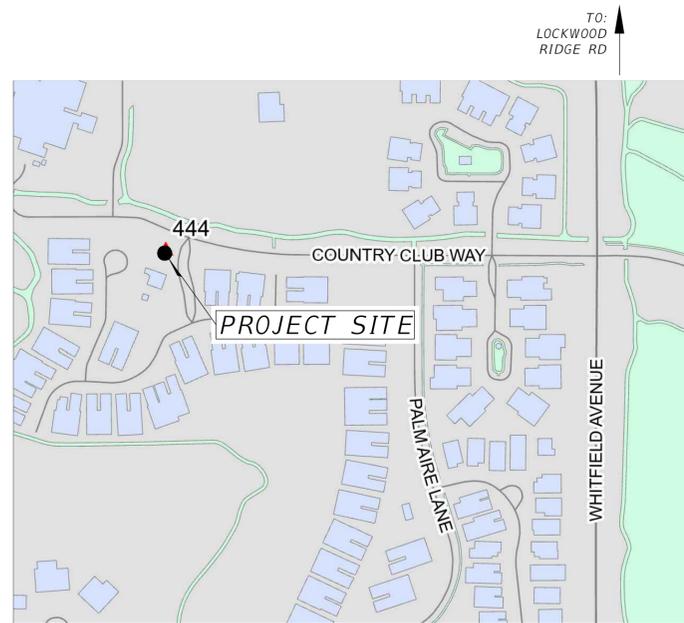
**TARA 3, RTU 348**  
 6718 PLEASANT HILL RD, BRADENTON  
 LAT N: 27.436786°  
 LONG W: -82.475686°



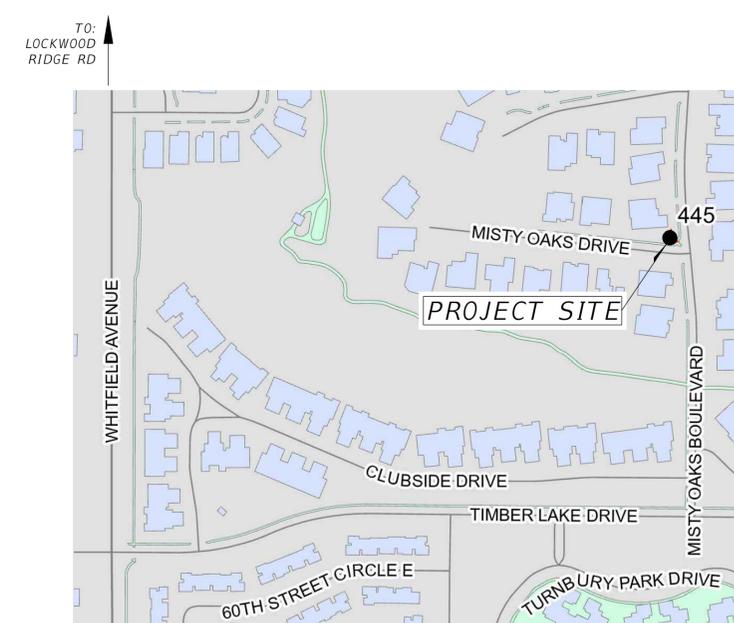
**PALM AIRE 1, RTU 441,**  
 4722 TOURNAMENT BLVD, BRADENTON  
 LAT N: 27.404765°  
 LONG W: -82.500992°



**PALM AIRE 2, RTU 442,**  
 5215 PALM AIRE DR, BRADENTON  
 LAT N: 27.399466°  
 LONG W: -82.494852°



**PALM AIRE 4, RTU 444,**  
 5500 COUNTRY CLUB WAY, BRADENTON  
 LAT N: 27.404404°  
 LONG W: -82.490407°



**TIMBERLAKE, RTU 445,**  
 8167 MISTY OAKS BLVD, BRADENTON  
 LAT N: 27.394986°  
 LONG W: -82.482970°

NOTE(S):

- LIFT STATION SITE VISITS MAY BE COORDINATED WITH ERIK GIBSON, 941-792-8811 x5377.
- DATA ON THE COUNTY'S UTILITY INFRASTRUCTURE MAY BE RESEARCHED AND VIEWED BY UTILIZING THE PUBLIC ACCESS TO THE COUNTY'S GIS SYSTEM. USE AN INTERNET BROWSER AND ENTER THE FOLLOWING URL, "https://www.myanatee.org/gisapps/mobile/index.html?type=utilities-public".

REVISIONS	
DATE	DESCRIPTION



1022 26th Avenue East, Bradenton, FL 34208

J. SHEA SHOUN, P.E., STATE OF FLORIDA,  
 PROFESSIONAL ENGINEER, LICENSE NO. 60923.  
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MANATEE COUNTY PUBLIC WORKS DEPARTMENT				
PROJECT #	402-0019707	SURVEYED	GFY	7/2024
SEC./TWN./RGE	VARIES	DESIGNED	JSS	4/2024
SCALE	SEE PLANS	DRAWN	JSS	4/2024

**SATELLITE LIFT STATION R&R  
 2025 GROUP 2  
 VICINITY MAPS**

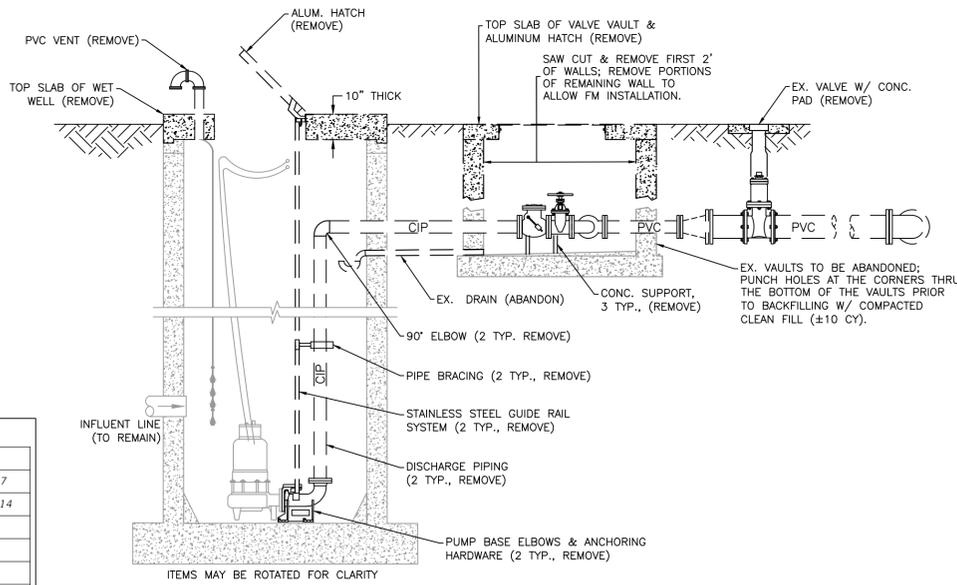
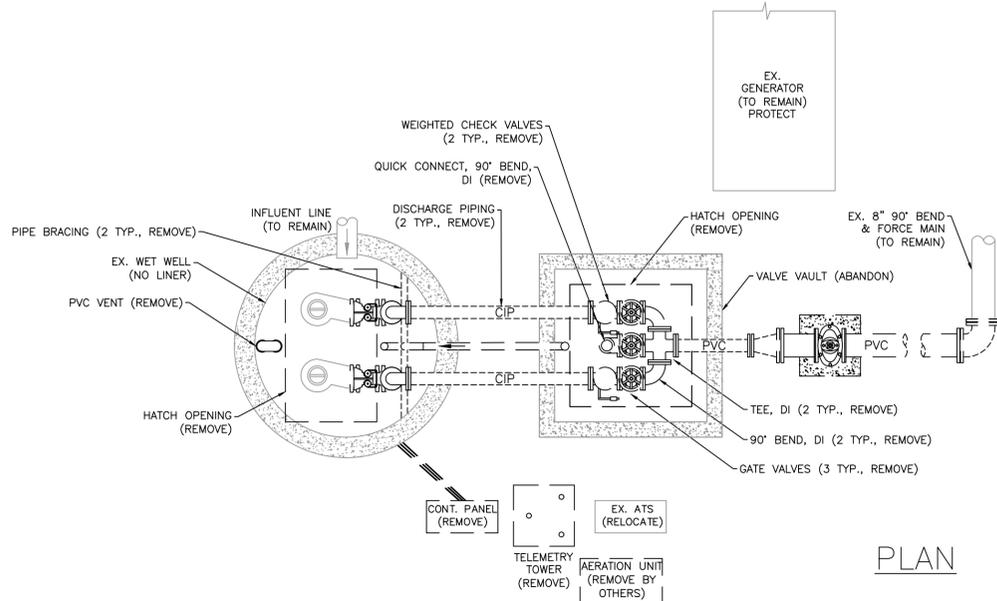
SHEET  
 NO.  
 03 of 17

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

**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. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS.
3. THE CONTRACTOR 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.



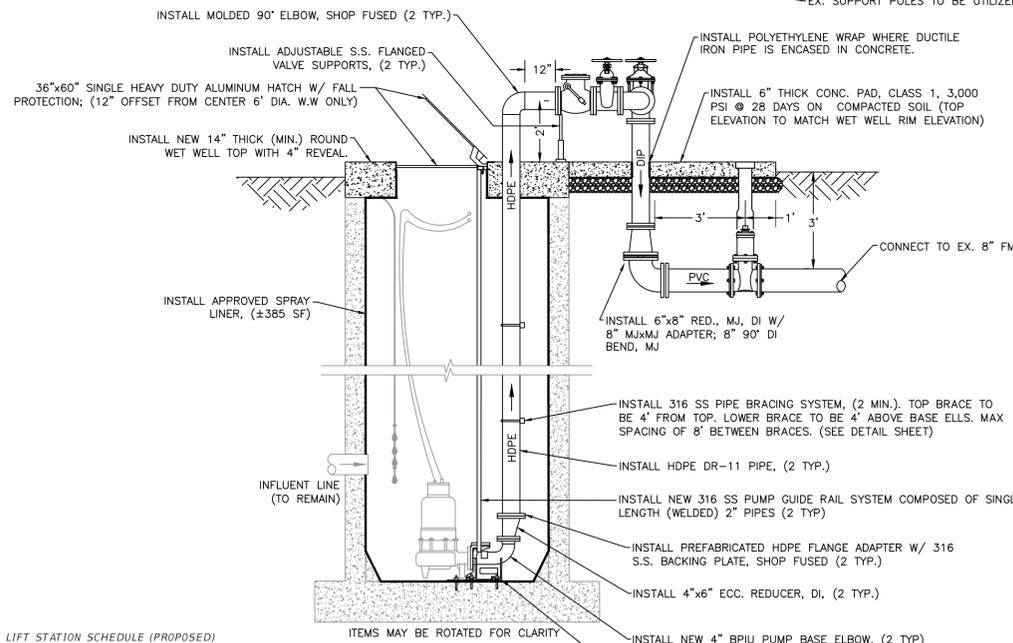
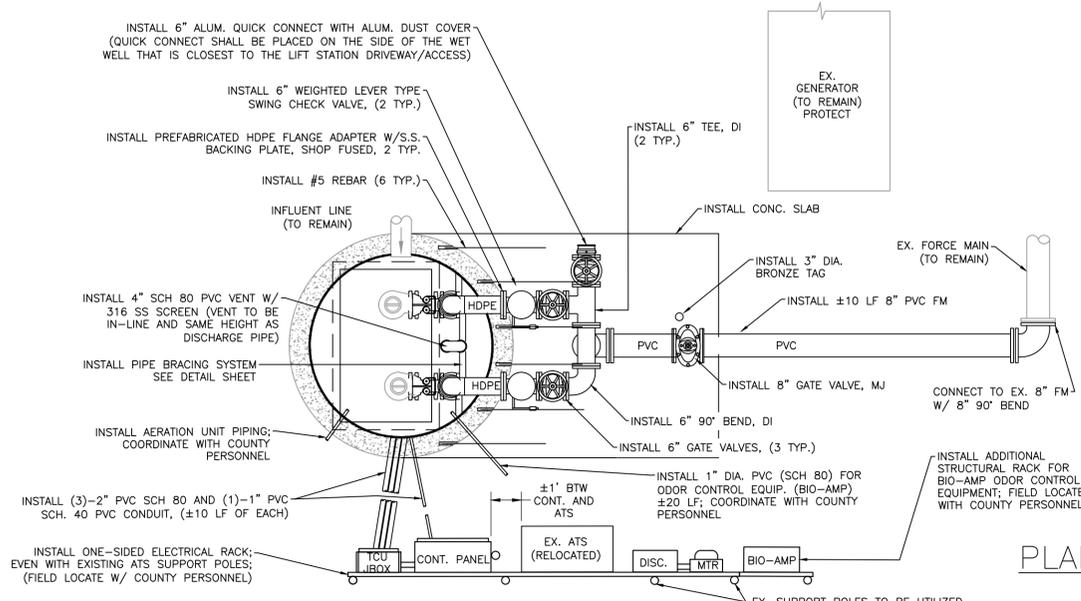
EX. 2 PUMP LIFT STATION

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.



EX. 2 PUMP LIFT STATION

NTS

**CONSTRUCTION NOTES:**

1. INSTALL ALL NEW ELECTRICAL SERVICE WITH CONDUIT. IF EXISTING ELEC. CONDUIT IS 2-INCH DIAMETER, THEN EXISTING ELEC. CONDUIT CAN BE LEFT IN PLACE AND USED. (±220 LF).
2. REMOVE AND INSTALL ALL NEW ONE-SIDED ELECTRICAL STRUCTURE (RACK), A CONTROL PANEL, TCU ENCLOSURE, JUNCTION BOX ENCLOSURE, METER CAN, AND A SAFETY SWITCH (DISCONNECT). ALL REMAINING EXISTING ELECTRICAL EQUIPMENT CONNECTED TO THE EXISTING CONTROL PANEL SHALL BE RE-ESTABLISHED TO THE NEW PANEL. THE NEW ELECTRICAL STRUCTURE SHALL BE FIELD LOCATED WITH MANATEE COUNTY PERSONNEL. CONTRACTOR RESPONSIBLE FOR VERIFYING SIZE OF RACK TO HOLD ALL PROPOSED ELECTRICAL ENCLOSURES/COMPONENTS.  
A TCU BUBBLER UNIT (RPT-001) SYSTEM PROVIDED AND INSTALLED BY DATA FLOW SYSTEMS (DFS) FOR WET WELL LEVEL CONTROL AND SHALL BE INCLUDED WITH THE CONTROL PANEL.
3. THE LIFT STATION SITE HAS AUXILIARY EQUIPMENT. INSTALL THE FOLLOWING ADDITIONAL BREAKER(S) IN THE CONTROL PANEL:  
A. EMERGENCY BACK-UP GEN/PUMP: (3)-20A 120V (BATTERY CHARGER, WATER JACKET HEATER, SPACER HEATER).  
B. ODOR CONTROL EQUIPMENT: (1)-3 POLE 20A (AERATION BLOWER), (1)-20A 120V (BIO-AMP).
4. 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.
5. SEPARATE THE TELEMETRY TOWER FROM CONTROL BASE AND SET TO SIDE OF LIFT STATION SITE. CONTRACTOR SHALL REMOVE AND DISPOSE OF CONCRETE BASE AND ALL GROUNDING ROD(S). CONTRACTOR SHALL INSTALL NEW CONCRETE BASE, TELEMETRY TOWER BASE, ALL CONDUIT, ETC. CONTRACTOR SHALL COORDINATE WITH COUNTY PERSONNEL. TOWER LOCATION SHALL BE DETERMINED IN THE FIELD WITH COUNTY PERSONNEL. THE TOWER BASE SHALL BE SUPPLIED BY THE COUNTY TO THE CONTRACTOR.
6. INSTALL #5 REBAR (6 TYP.) EPOXY EMBEDDED INTO THE WET WELL TOP 3-4 INCHES DEEP AND CAST 3-4 FEET INTO THE VALVE ASSEMBLY CONCRETE PAD TO ENSURE THE TOPS OF THE WET WELL AND VALVE ASSEMBLY PAD WILL REMAIN FLUSH.
7. WET WELL CONCRETE WALLS SHALL BE INSPECTED BY COUNTY PERSONNEL PRIOR TO INSTALLATION OF NEW SPRAY LINER AND/OR LINER REPAIR.
8. INSTALL A NEW 2-INCH WATER SERVICE LINE AND 6"x2" TAPPING SADDLE; A STANDARD METER/BPA ASSEMBLY; AND A 3/4-INCH HOSE BIBB ASSEMBLY PER COUNTY STANDARDS VIA HORIZONTAL DIRECTIONAL DRILL. THE EXISTING WATER MAIN IS LOCATED IN THE ROW ON THE OTHER SIDE OF THE ROADWAY. THE METER/BPA SHALL BE LOCATED AS CLOSE AS POSSIBLE TO THE FENCE / EASEMENT / RIGHT-OF-WAY LINE IN CLOSEST PROXIMITY TO THE WATER DISTRIBUTION MAIN. ALL ITEMS SHALL BE FIELD LOCATED WITH MANATEE COUNTY PERSONNEL. (±60 LF).
9. ABANDON EXISTING WATER SERVICE SADDLE AND CORPORATION AT MAIN; INSTALL A BRASS PLUG IN CORPORATION STOP.
10. INSTALL WASHED SHELL & WEED BARRIER (±10 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.
11. INSTALL A 10'-FT WIDE 6-INCH THICK REINFORCE CONCRETE STANDARD DRIVEWAY. EXACT LOCATION AND LAYOUT SHALL BE DETERMINED IN THE FIELD WITH COUNTY PERSONNEL.
12. ALL ODOR CONTROL EQUIPMENT SHALL BE REMOVED AND REINSTALLED BY OTHERS. CONTRACTOR SHALL COORDINATE WITH OTHERS.
13. INSTALL 2-INCH AERATION PIPING (ALL 316 STAINLESS STEEL) FOR THIS STATION ONLY. THE AERATION PIPING SHALL RUN FROM THE AERATION UNIT TO THE INSIDE OF THE WET WELL. SEE SHEET 15 FOR A CONCEPTUAL LAYOUT AND DESIGN. ALL SHALL BE FIELD LOCATED AND COORDINATED WITH COUNTY PERSONNEL.
14. ALL EXISTING PERIMETER LANDSCAPING SHALL REMAIN AND BE PROTECTED. TRIMMING MAY BE CONSIDERED WITH PRIOR APPROVAL FROM COUNTY INSPECTOR.
15. SEE SHEET 5 FOR FURTHER REHABILITATION/CONSTRUCTION INFORMATION.

LIFT STATION SCHEDULE (EXISTING)	
RADIO TELEMETRY UNIT (RTU)	348
DESIGN CAPACITY GPM/TDH	290 / 17
PUMP TYPE / HP	HOMA / 14
DISCHARGE PIPE DIAMETER	4"
WET WELL DIAMETER	6"
BOTTOM SLAB ELEVATION	-0.42
TOP ELEVATION	17.01
VALVE VAULT ELEVATION	17.01
INFLUENT INVERT ELEVATION	3.48
INFLUENT PIPE SIZE	8" PVC
FORCE MAIN DIAMETER	8" PVC
WET WELL VENT PIPE	DI
ELECT. POWER, VOLTS / PH	240 / 3
ELECT. SERVICE SIZE, AMPS	40
EX. FORCE MAIN TIE-IN	MH
FLOODPLAIN INFORMATION	X

\* INFORMATION TAKEN FROM LIFT STATION DATA FILE (LSINFO.XLS 2023) & RECORD DRAWINGS. DATUM OF ELEVATIONS IS UNKNOWN.

LIFT STATION SCHEDULE (PROPOSED)	
INSTALL FIBERGLASS W.W. LINER	NO
APPLY WET WELL SPRAY LINER	YES
INSTALL BUBBLER UNIT	YES
INSTALL FORCE MAIN ISOLATION VALVE	YES
NEW HDPE DISCHARGE PIPING	6"
NEW BASE ELBOW	4", BPIU-14
MODIFY TOP ELEVATION OF WET WELL (LOWER/RAISE)	RAISE, ±4"
MODIFY TOP ELEVATION OF VALVE VAULT (LOWER/RAISE)	NO
INSTALL WET WELL VENT PIPE	YES
INSTALL NEW WATER SERVICE ASSEMBLY	YES
RELOCATE EX. WATER SERVICE ASSEMBLY	NO

REVISIONS	
DATE	DESCRIPTION

1022 26th Avenue East, Bradenton, FL 34208

J. SHEA SHOUN, P.E., STATE OF FLORIDA, PROFESSIONAL ENGINEER, LICENSE NO. 60923.  
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MANATEE COUNTY PUBLIC WORKS DEPARTMENT				
PROJECT #	DATE	DESIGNED	DRAWN	DATE
402-5164589	14/35/18	JSS	JSS	7/2024
SCALE	NTS	DRAWN	JSS	4/2024

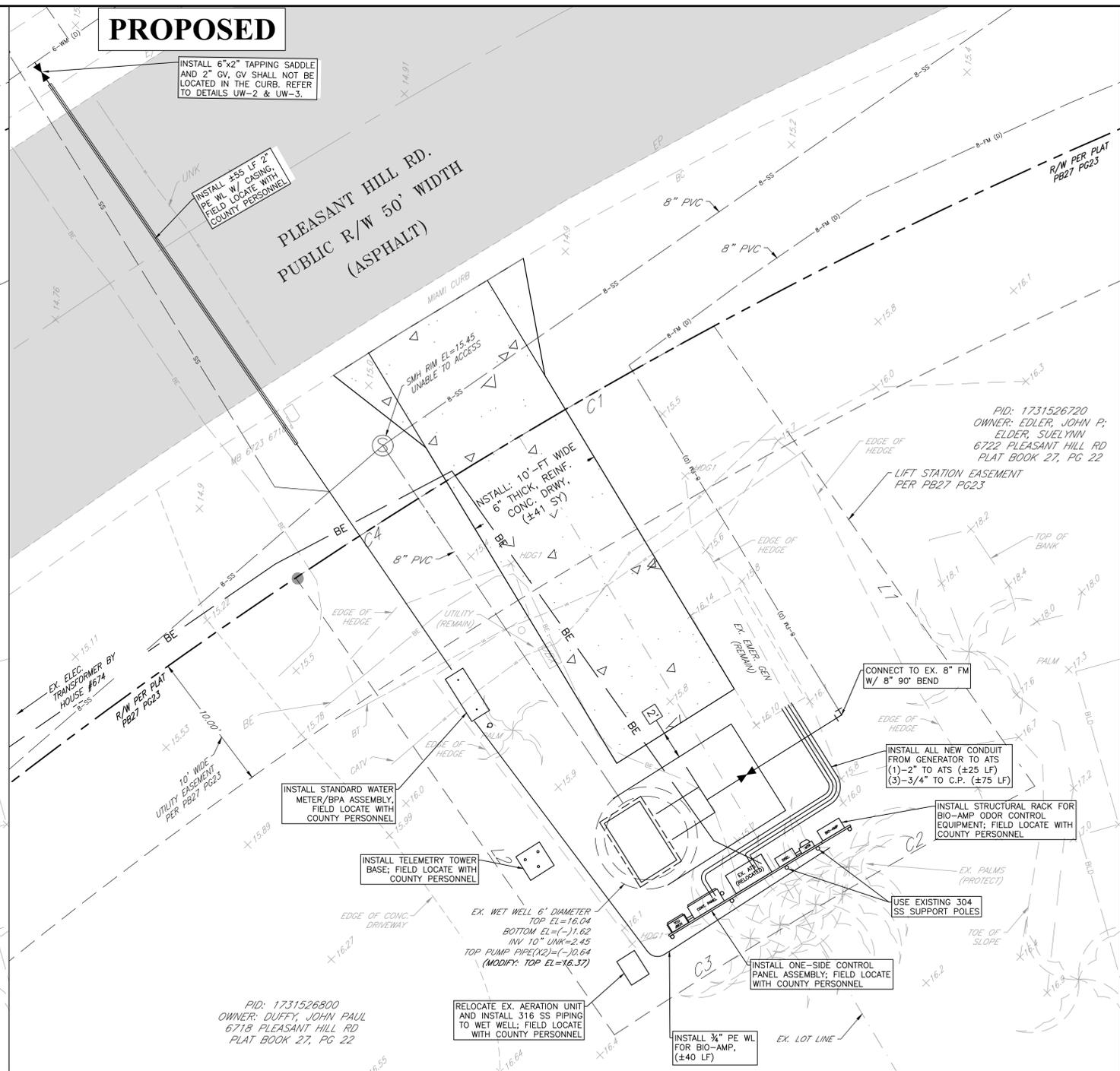
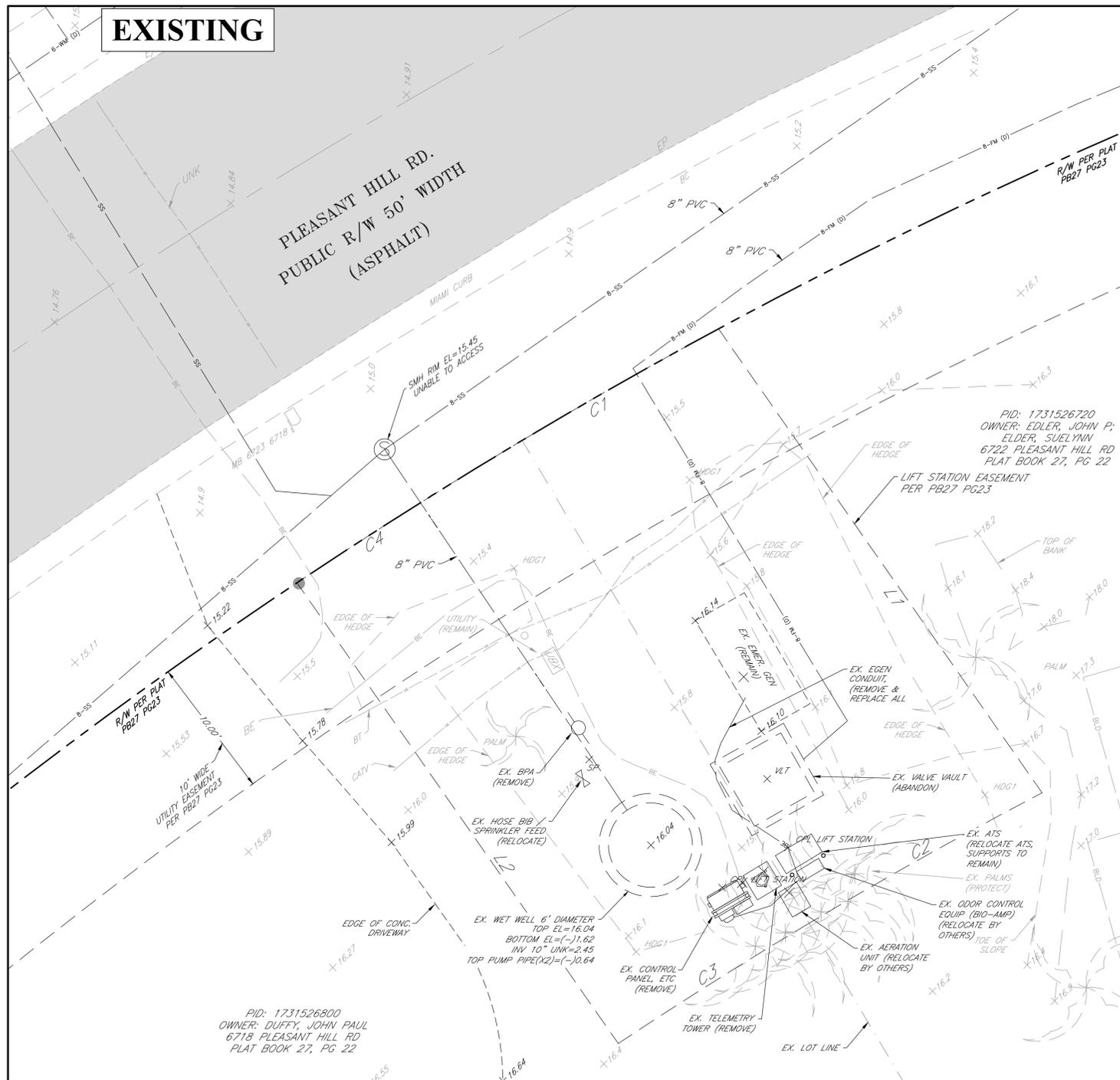
**SATELLITE LIFT STATION R&R**  
**2025 GROUP 2**  
**TARA 3, RTU 348 (REHAB)**

SHEET NO. 04 of 17

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**EXISTING**

**PROPOSED**



**SURVEYOR'S NOTES** (PERTINENT NOTES EXTRACTED FROM SURVEYOR'S REPORT)

- THIS SURVEY WAS PREPARED WITH THE BENEFIT OF THE RECORD DOCUMENTS AS SHOWN AND STATED HEREON, ALL OF THE PUBLIC RECORDS OF MANATEE COUNTY, FLORIDA.
- THE OWNERS AND RECORDING INFORMATION FOR ADJACENT PROPERTIES ARE PER THE MANATEE COUNTY PROPERTY APPRAISER'S WEBSITE ON 6/12/2024.
- BEARINGS AND COORDINATES (IN U.S. SURVEY FEET) ARE BASED ON NATIONAL GEODETIC SURVEY (NGS), FLORIDA STATE PLANE COORDINATE SYSTEM, WEST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83) 2011 ADJUSTMENT.
- BEARINGS AND COORDINATES SHOWN ON THIS MAP ARE BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, WEST ZONE, AS REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (2011) ADJUSTMENT AND ARE SHOWN IN U.S. SURVEY FEET. CONTROL FOR THIS SURVEY WAS ESTABLISHED USING REAL TIME KINEMATIC- GLOBAL POSITIONING SYSTEM (RTK GPS) OBSERVATIONS WITH CORRECTION SIGNALS PROVIDED BY FPRN BASE FLSN, WITH SUBSEQUENT CHECKS TO PUBLISHED HORIZONTAL CONTROL STATIONS AS STATED ON EACH SITE SHEET.
- GEORGE F. YOUNG, INC. AND THE UNDERSIGNED MAKE NO REPRESENTATIONS OR GUARANTEES PERTAINING TO EASEMENTS, RIGHTS-OF-WAY, SET BACK LINES, RESERVATIONS AND/OR AGREEMENTS.
- THE PRINTED DIMENSIONS SHOWN ON THIS SURVEY SUPERSEDE ANY SCALED DIMENSIONS; THERE MAY BE ITEMS DRAWN OUT OF SCALE TO GRAPHICALLY SHOW THEIR LOCATION.
- THERE MAY BE ADDITIONAL EASEMENTS, RESERVATIONS, RESTRICTIONS AND/OR OTHER MATTERS OF RECORD AFFECTING THIS PROPERTY THAT ARE NOT SHOWN HEREON THAT MAY (OR MAY NOT) BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY. THE UNDERSIGNED HAS NOT PERFORMED AN INDEPENDENT SEARCH FOR ADDITIONAL RECORDS.

**ADDITIONAL SURVEYOR'S NOTES**

- AS PER THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) NUMBER 12081C0336F, COMMUNITY NUMBER 120153, PANEL 0336, SUFFIX F, EFFECTIVE DATE OF AUGUST 10, 2021, THE ABOVE-DESCRIBED PROPERTY APPEARS TO BE IN ZONE X WITH NO BASE FLOOD ELEVATION DETERMINED.
- ELEVATIONS SHOWN ON THIS SURVEY ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), BENCHMARK USED: LECANTO, LOCATED IN MANATEE COUNTY, FL, HAVING A PUBLISHED, ADJUSTED ELEVATION OF 9.93 FEET (NAVD 88). INFORMATION OBTAINED FROM THE NGS DATA SHEET, PID D07283. RELATIONSHIP TO NGVD 29 IS 1.654 US SURVEY FEET (+/- 0.138 US SURVEY FEET) WAS FOUND USING NGS COORDINATE CONVERSION AND TRANSFORMATION TOOL (NCAT).

**SITE PLAN NOTES**

- SEE SHEET 4 FOR FURTHER REHABILITATION/CONSTRUCTION INFORMATION.
- ALL EXISTING UNDERGROUND FACILITIES ARE CONSIDERED APPROXIMATE. CONTRACTOR SHALL VERIFY LOCATION AND DEPTHS.
- VEGETATION WITHIN THE EASEMENT AND FACING INTO THE LIFT STATION SITE MAY BE TRIMMED TO HELP FACILITATE WORK. ALL TRIMMING SHALL BE COORDINATED WITH COUNTY PERSONNEL ON SITE PRIOR TO PERFORMING WORK.
- CONTRACTOR TO INVESTIGATE IF PRIVATE SPRINKLER LINES ARE PRESENT WHERE THE PROPOSED CONCRETE DRIVEWAY WILL BE LOCATED. IF SPRINKLER LINES ARE PRESENT, THEN THE CONTRACTOR SHALL RETRO-FIT SPRINKLER SYSTEM WITH PVC CASINGS UNDER THE DRIVEWAY. CASING SHALL EXTEND 4 FT PAST THE DRIVEWAY EDGES.

EASEMENT LINE/CURVE TABLE

Line #	Direction	Length
L1	S34°57'01"E	40.30
L2	S34°57'01"E	40.01

Curve #	Length	Radius	Delta
C1	16.11	375.00	2°27'40"
C2	19.03	335.00	3°15'19"
C3	16.09	335.00	2°45'05"
C4	18.99	375.00	2°54'04"

**REVISIONS**

DATE	DESCRIPTION



J. SHEA SHOUN, P.E., STATE OF FLORIDA, PROFESSIONAL ENGINEER, LICENSE NO. 60923.  
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**MANATEE COUNTY PUBLIC WORKS DEPARTMENT**

PROJECT #	402-5164589	SURVEYED	GFY	7/2024
SEC./TWN./RGE	14/35/18	DESIGNED	JSS	4/2024
SCALE	1" = 5'	DRAWN	JSS	4/2024

**SATELLITE LIFT STATION R&R 2025 GROUP 2 TARA 3, RTU 348 (SITE PLAN)**

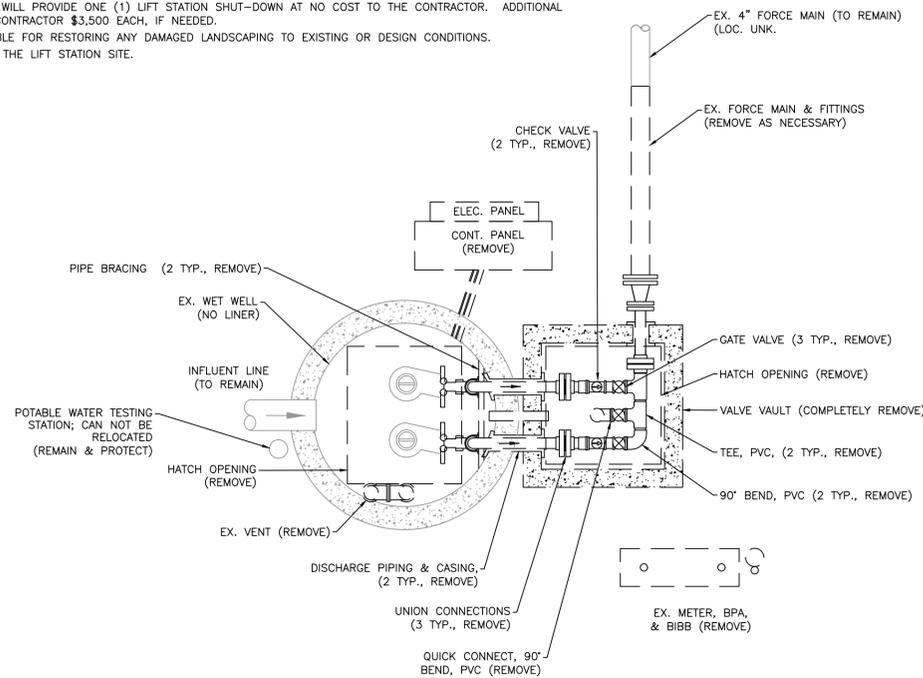
SHEET NO. 05 of 17

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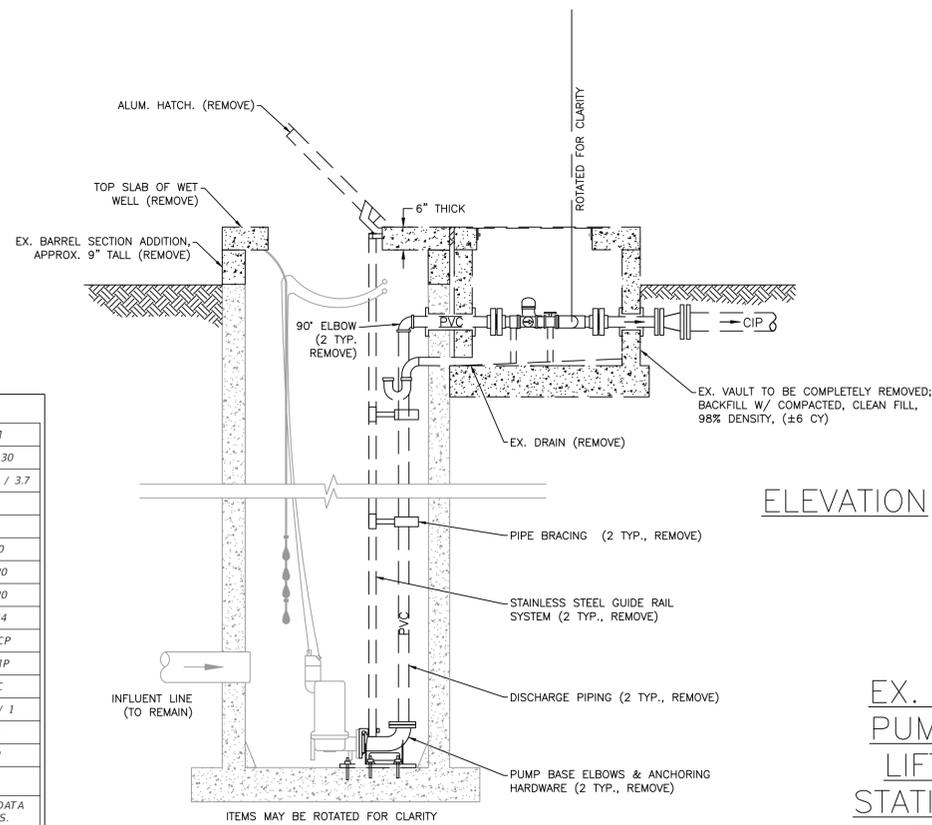
**EXISTING**

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



PLAN



ELEVATION

EX. 2  
PUMP  
LIFT  
STATION  
NTS

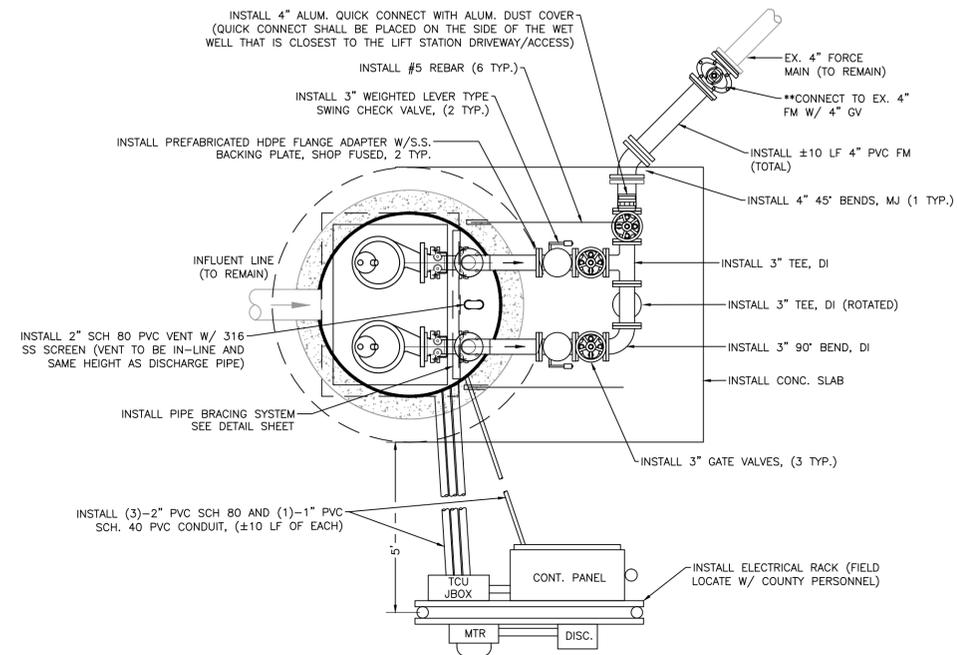
LIFT STATION SCHEDULE (EXISTING)	
RADIO TELEMETRY UNIT (RTU)	441
DESIGN CAPACITY GPM/TH	47 / 30
PUMP TYPE / HP	BARNES / 3.7
DISCHARGE PIPE DIAMETER	3"
WET WELL DIAMETER	4"
BOTTOM SLAB ELEVATION	8.20
TOP ELEVATION	23.20
VALVE VAULT ELEVATION	23.20
INFLUENT INVERT ELEVATION	10.54
INFLUENT PIPE SIZE	8" VCP
FORCE MAIN DIAMETER	4" CIP
WET WELL VENT PIPE	PVC
ELECT. POWER, VOLTS / PH	240 / 1
ELECT. SERVICE SIZE, AMPS	40
EX. FORCE MAIN TIE-IN	MH
FLOODPLAIN INFORMATION	X

\* INFORMATION TAKEN FROM LIFT STATION DATA FILE (LSINFO.XLS 2023) & RECORD DRAWINGS. DATUM OF ELEVATIONS IS UNKNOWN.

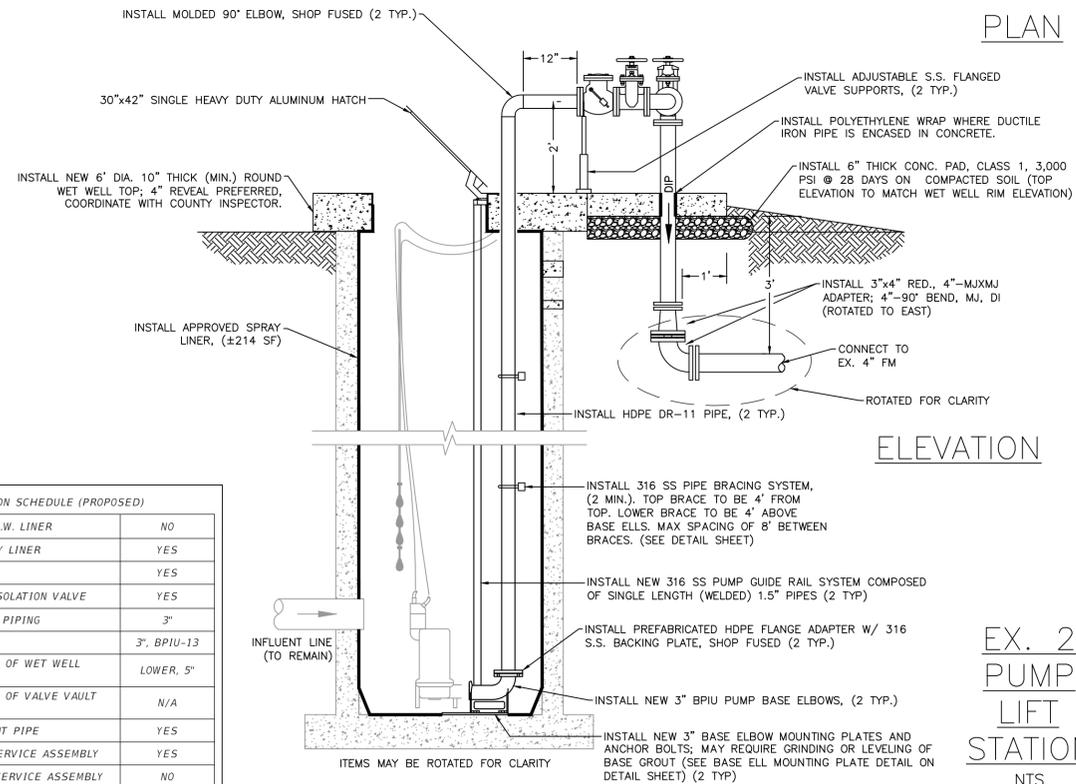
**PROPOSED**

**GENERAL NOTES:**

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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.



PLAN



ELEVATION

EX. 2  
PUMP  
LIFT  
STATION  
NTS

LIFT STATION SCHEDULE (PROPOSED)	
INSTALL FIBERGLASS W.W. LINER	NO
APPLY WET WELL SPRAY LINER	YES
INSTALL BUBBLER UNIT	YES
INSTALL FORCE MAIN ISOLATION VALVE	YES
NEW HDPE DISCHARGE PIPING	3"
NEW BASE ELBOW	3", BPIU-13
MODIFY TOP ELEVATION OF WET WELL (LOWER/RAISE)	LOWER, 5"
MODIFY TOP ELEVATION OF VALVE VAULT (LOWER/RAISE)	N/A
INSTALL WET WELL VENT PIPE	YES
INSTALL NEW WATER SERVICE ASSEMBLY	YES
RELOCATE EX. WATER SERVICE ASSEMBLY	NO

**NOTES:**

1. WATER DISTRIBUTION IS PUBLIC.
2. SEWER COLLECTION IS PUBLIC.
3. LIFT STATION WITHIN COUNTY ROW.

**REVISIONS**

DATE	DESCRIPTION



1022 26th Avenue East, Bradenton, FL 34208

J. SHEA SHOUN, P.E., STATE OF FLORIDA,  
PROFESSIONAL ENGINEER, LICENSE NO. 60923.

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**MANATEE COUNTY  
PUBLIC WORKS DEPARTMENT**

PROJECT #	402-5164588	SURVEYED	GFY	7/2024
SEC./TWN./RGE	28/35/18	DESIGNED	JSS	4/2024
SCALE	NTS	DRAWN	JSS	4/2024

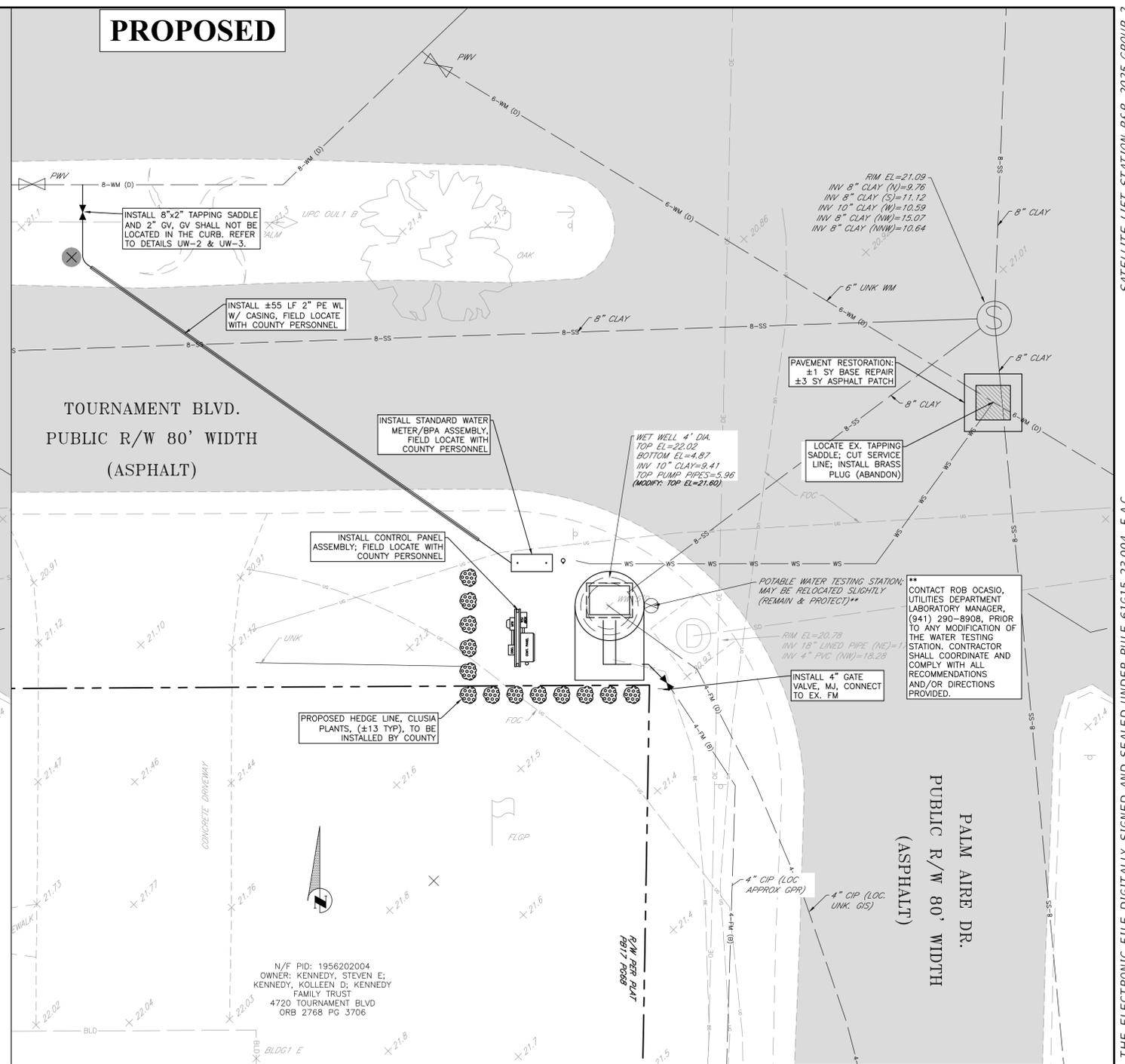
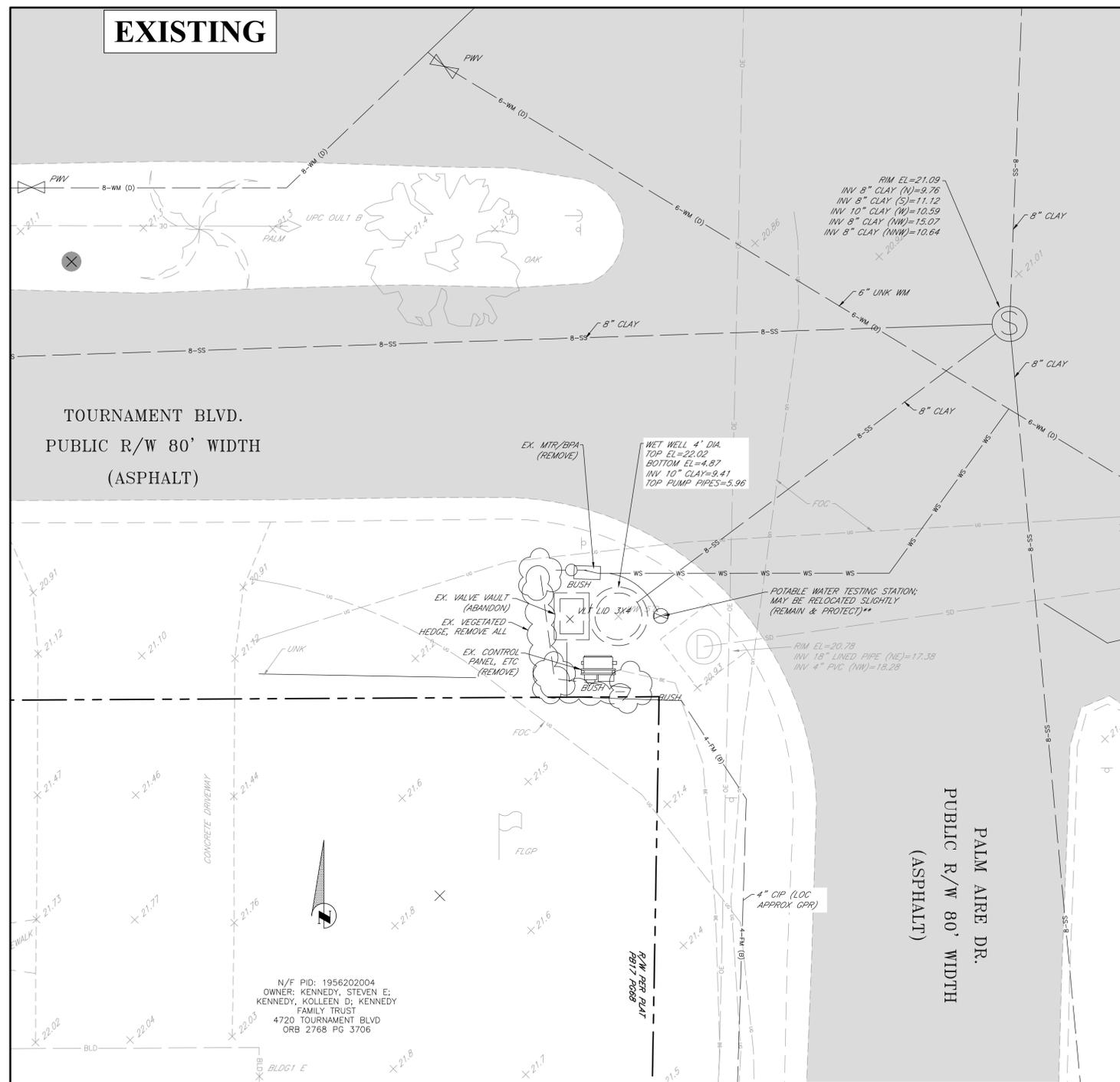
**SATELLITE LIFT STATION R&R  
2025 GROUP 2  
PALM-AIRE 1, RTU 441 (REHAB)**

SHEET  
NO.  
06 of 17

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C. SATELLITE LIFT STATION R&R 2025 GROUP 2

**EXISTING**

**PROPOSED**



**SURVEYOR'S NOTES** (PERTINENT NOTES EXTRACTED FROM SURVEYOR'S REPORT)

- THIS SURVEY WAS PREPARED WITH THE BENEFIT OF THE RECORD DOCUMENTS AS SHOWN AND STATED HEREON, ALL OF THE PUBLIC RECORDS OF MANATEE COUNTY, FLORIDA.
- THE OWNERS AND RECORDING INFORMATION FOR ADJACENT PROPERTIES ARE PER THE MANATEE COUNTY PROPERTY APPRAISER'S WEBSITE ON 6/12/2024.
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- GEORGE F. YOUNG, INC. AND THE UNDERSIGNED MAKE NO REPRESENTATIONS OR GUARANTEES PERTAINING TO EASEMENTS, RIGHTS-OF-WAY, SET BACK LINES, RESERVATIONS AND/OR AGREEMENTS.
- THE PRINTED DIMENSIONS SHOWN ON THIS SURVEY SUPERSEDE ANY SCALED DIMENSIONS; THERE MAY BE ITEMS DRAWN OUT OF SCALE TO GRAPHICALLY SHOW THEIR LOCATION.
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**SITE PLAN NOTES**

- SEE SHEET 6 FOR FURTHER REHABILITATION/CONSTRUCTION INFORMATION.
- ALL EXISTING UNDERGROUND FACILITIES ARE CONSIDERED APPROXIMATE. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH PRIOR TO DIGGING.

REVISIONS	
DATE	DESCRIPTION



J. SHEA SHOUN, P.E., STATE OF FLORIDA, PROFESSIONAL ENGINEER, LICENSE NO. 60923.  
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MANATEE COUNTY PUBLIC WORKS DEPARTMENT				
PROJECT #	402-5164588	SURVEYED	GFY	7/2024
SEC./TWN./RGE	14/35/18	DESIGNED	JSS	4/2024
SCALE	1" = 5'	DRAWN	JSS	4/2024

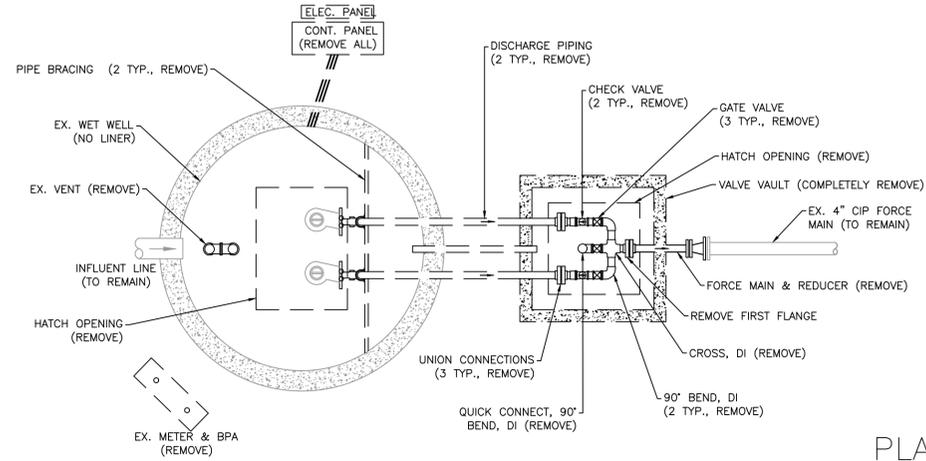
**SATELLITE LIFT STATION R&R**  
**2025 GROUP 2**  
**PALM-AIRE 1, RTU 441 (SITE PLAN)**

SHEET NO.  
07 of 17

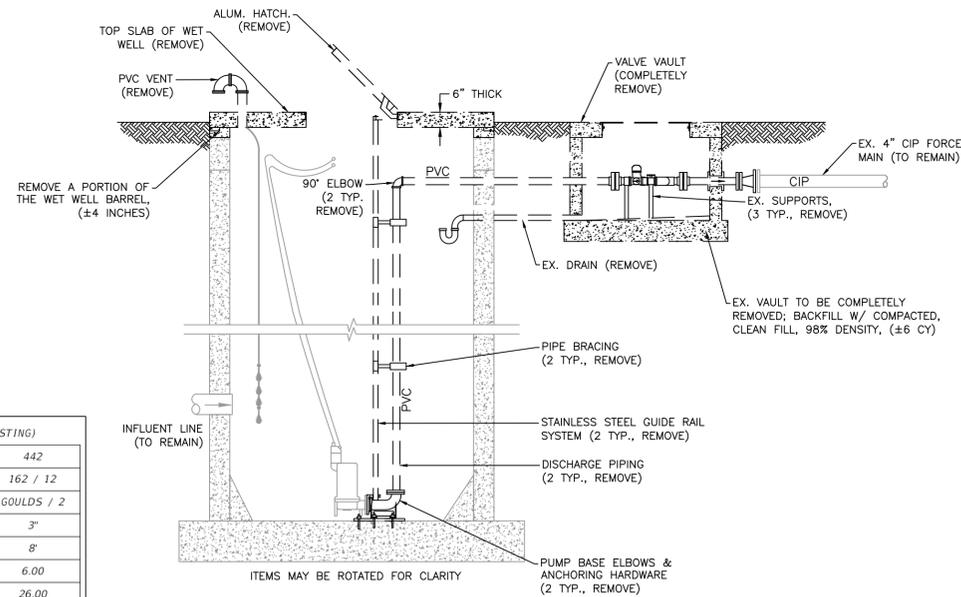
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**EXISTING**

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



PLAN



ELEVATION

EX. 2 PUMP LIFT STATION

NTS

LIFT STATION SCHEDULE (EXISTING)	
RADIO TELEMETRY UNIT (RTU)	442
DESIGN CAPACITY GPM/12H	162 / 12
PUMP TYPE / HP	GOULDS / 2
DISCHARGE PIPE DIAMETER	3"
WET WELL DIAMETER	8"
BOTTOM SLAB ELEVATION	6.00
TOP ELEVATION	26.00
VALVE VAULT ELEVATION	26.00
INFLUENT INVERT ELEVATION	13.14
INFLUENT PIPE SIZE	10" PVC
FORCE MAIN DIAMETER	4", CIP
WET WELL VENT PIPE	PVC
ELECT. POWER, VOLTS / PH	240 / 1
ELECT. SERVICE SIZE, AMPS	20
EX. FORCE MAIN TIE-IN	MH
FLOODPLAIN INFORMATION	X

\* INFORMATION TAKEN FROM LIFT STATION DATA FILE (LSINFO.XLS 2023) & RECORD DRAWINGS. DATUM OF ELEVATIONS IS UNKNOWN.

**REVISIONS**

DATE	DESCRIPTION



1022 26th Avenue East, Bradenton, FL 34208

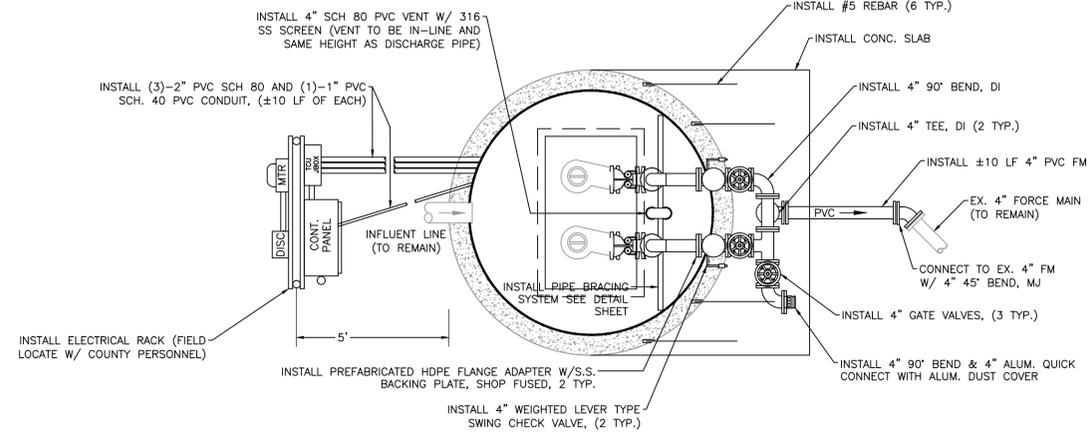
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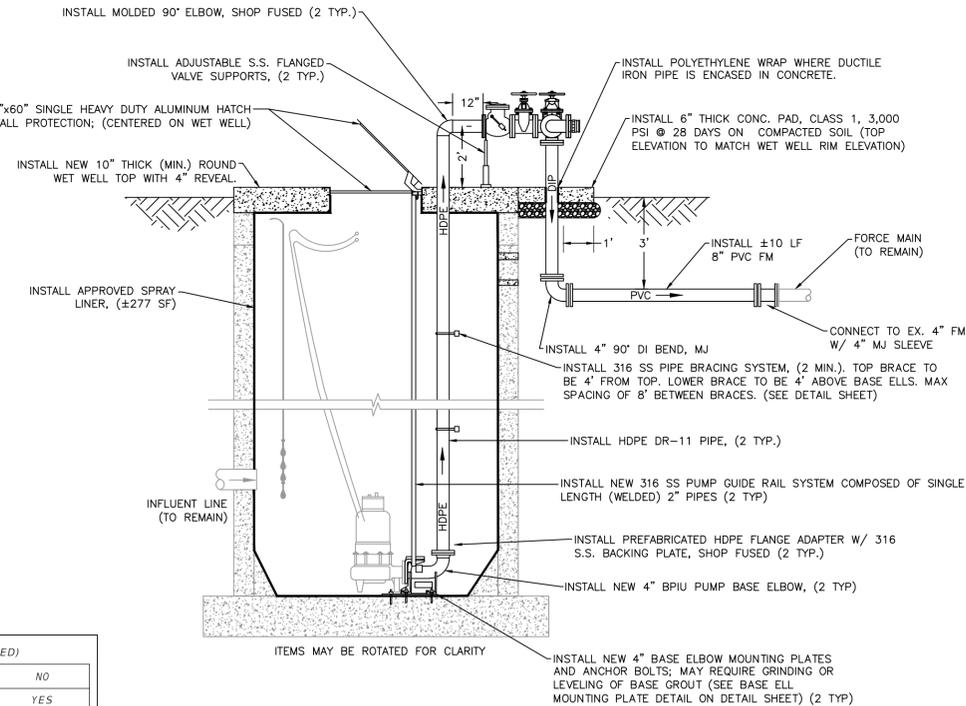
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**PROPOSED**

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  3. EXPANSION JOINT: EXPANSION JOINTS BETWEEN THE CONC. PAD AND THE WET WELL SHALL BE 1/2" MATERIAL AND SHALL MEET THE REQUIREMENTS OF ASHTO M153 OR ASHTO 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



PLAN



ELEVATION

EX. 2 PUMP LIFT STATION

NTS

LIFT STATION SCHEDULE (PROPOSED)	
INSTALL FIBERGLASS W.W. LINER	NO
APPLY WET WELL SPRAY LINER	YES
INSTALL BUBBLER UNIT	YES
INSTALL FORCE MAIN ISOLATION VALVE	NO
NEW HDPE DISCHARGE PIPING	4"
NEW BASE ELBOW	4", BPIU-14
MODIFY TOP ELEVATION OF WET WELL (LOWER/RAISE)	N/A
MODIFY TOP ELEVATION OF VALVE VAULT (LOWER/RAISE)	N/A
INSTALL WET WELL VENT PIPE	YES
INSTALL NEW WATER SERVICE ASSEMBLY	YES, STD
RELOCATE EX. WATER SERVICE ASSEMBLY	NO

**MANATEE COUNTY  
PUBLIC WORKS DEPARTMENT**

PROJECT #	402-5164587	SURVEYED	GFY	7/2024
SEC./TWN./RGE	34/35/18	DESIGNED	JSS	4/2024
SCALE	NTS	DRAWN	JSS	4/2024

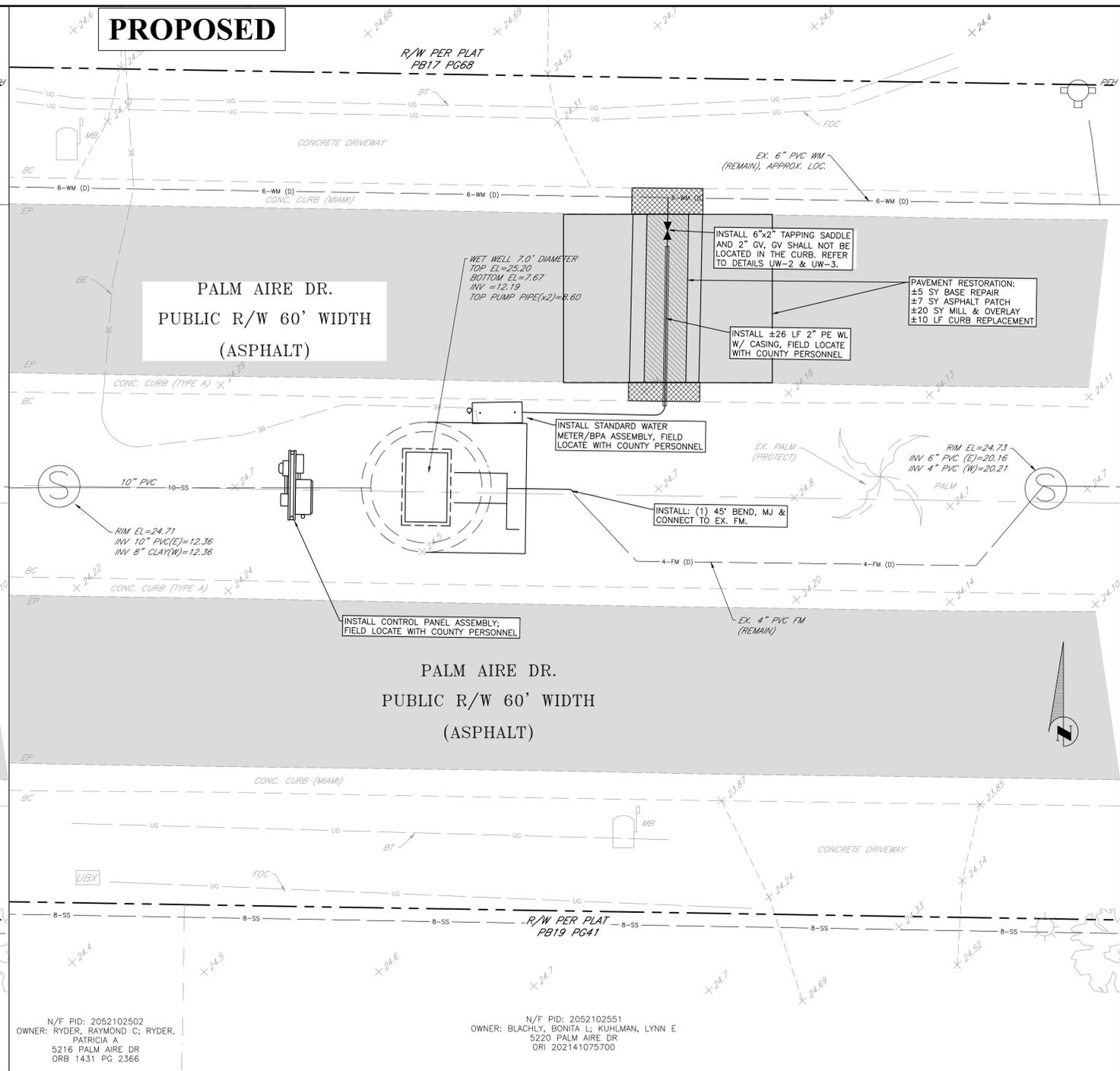
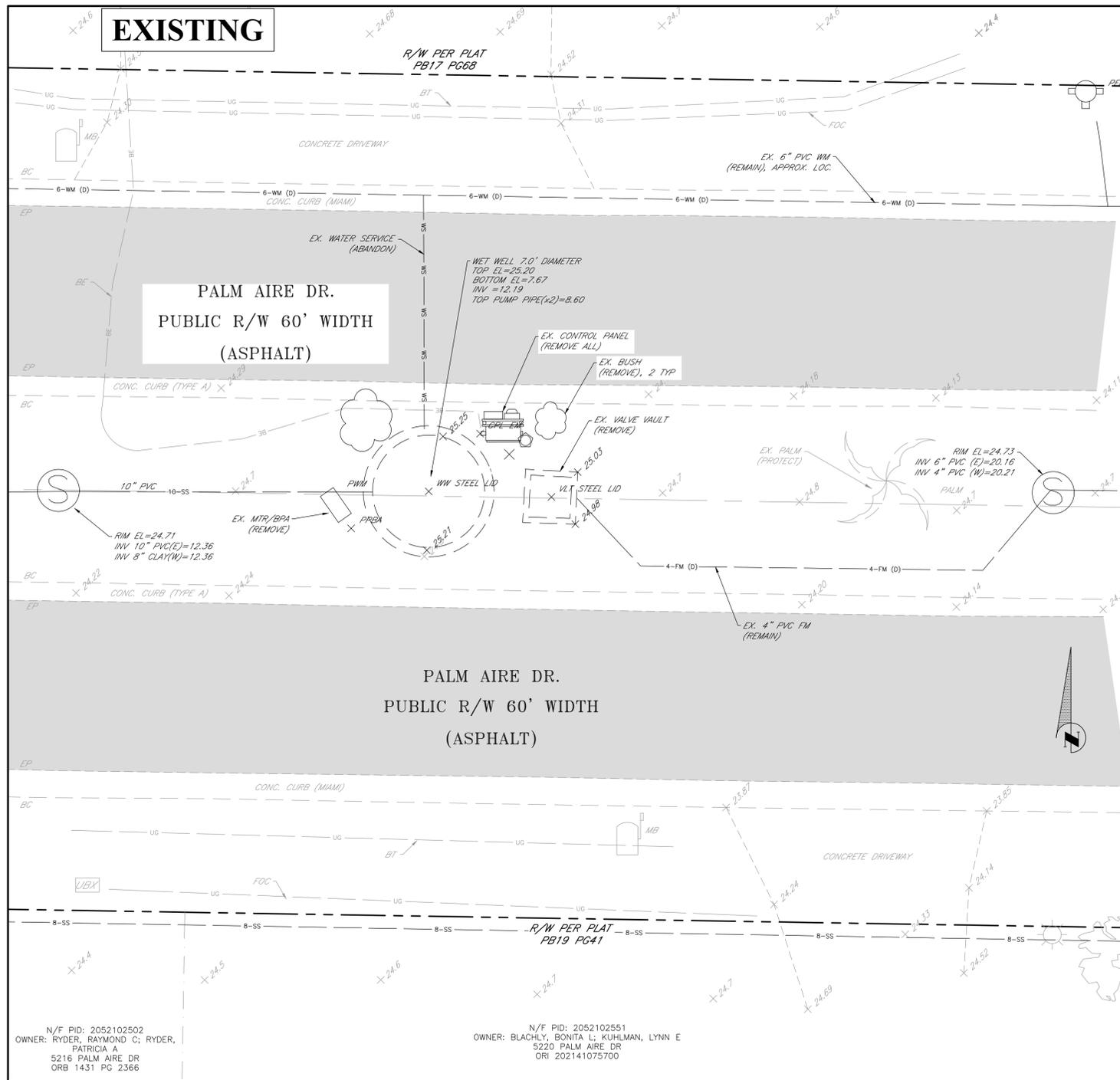
**SATELLITE LIFT STATION R&R  
2025 GROUP 2  
PALM-AIRE 2, RTU 442 (REHAB)**

SHEET  
NO.  
08 of 17

- NOTES:**
1. WATER DISTRIBUTION IS PUBLIC.
  2. SEWER COLLECTION IS PUBLIC.
  3. LIFT STATION WITHIN COUNTY ROW.

- CONSTRUCTION NOTES:**
1. INSTALL ALL NEW ELECTRICAL SERVICE WITH CONDUIT. IF EXISTING ELEC. CONDUIT IS 2-INCH DIAMETER, THEN EXISTING ELEC. CONDUIT CAN BE LEFT IN PLACE AND USED. (±200 LF).
  2. REMOVE AND INSTALL ALL NEW ELECTRICAL STRUCTURE (RACK), A CONTROL PANEL, TCU ENCLOSURE, JUNCTION BOX ENCLOSURE, A METER CAN, AND A SAFETY SWITCH (DISCONNECT). ALL REMAINING EXISTING ELECTRICAL EQUIPMENT CONNECTED TO THE EXISTING CONTROL PANEL SHALL BE RE-ESTABLISHED TO THE NEW PANEL. THE NEW ELECTRICAL STRUCTURE SHALL BE FIELD LOCATED WITH MANATEE COUNTY PERSONNEL. CONTRACTOR RESPONSIBLE FOR VERIFYING SIZE OF RACK TO HOLD ALL PROPOSED ELECTRICAL ENCLOSURES/COMPONENTS.  
A TCU BUBBLER UNIT (RPT-001) SYSTEM PROVIDED AND INSTALLED BY DATA FLOW SYSTEMS (DFS) FOR WET WELL LEVEL CONTROL AND SHALL BE INCLUDED WITH THE CONTROL PANEL.
  3. INSTALL (2)-1φ TO 3φ CONVERTER IN CONTROL PANEL.
  4. 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.
  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 ASSEMBLY CONCRETE PAD TO ENSURE THE TOPS OF THE WET WELL AND VALVE ASSEMBLY PAD WILL REMAIN FLUSH.
  6. WET WELL CONCRETE WALLS SHALL BE INSPECTED BY COUNTY PERSONNEL PRIOR TO INSTALLATION OF NEW SPRAY LINER AND/OR LINER REPAIR.
  7. INSTALL A NEW 2-INCH WATER SERVICE LINE AND 6"x2" TAPPING SADDLE; A STANDARD METER/BPA ASSEMBLY; AND A 3/4-INCH HOSE BIBB ASSEMBLY PER COUNTY STANDARDS VIA HORIZONTAL DIRECTIONAL DRILL. THE EXISTING WATER MAIN IS LOCATED IN THE ROW ON THE OTHER SIDE OF THE ROADWAY. ALL ITEMS SHALL BE FIELD LOCATED WITH MANATEE COUNTY PERSONNEL. (±25 LF).
  8. ABANDON EXISTING WATER SERVICE SADDLE AND CORPORATION AT MAIN; INSTALL A BRASS PLUG IN CORPORATION STOP.
  9. SEE SHEET 9 FOR FURTHER REHABILITATION/CONSTRUCTION INFORMATION.

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**ADDITIONAL SURVEYOR'S NOTES**

- AS PER THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) NUMBER 12081C0336F, COMMUNITY NUMBER 120153, PANEL 0336, SUFFIX F, EFFECTIVE DATE OF AUGUST 10, 2021, THE ABOVE-DESCRIBED PROPERTY APPEARS TO BE IN ZONE X WITH NO BASE FLOOD ELEVATION DETERMINED.
- ELEVATIONS SHOWN ON THIS SURVEY ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). BENCHMARK USED: LECANTO, LOCATED IN MANATEE COUNTY, FL, HAVING A PUBLISHED, ADJUSTED ELEVATION OF 9.93 FEET (NAVD 88). INFORMATION OBTAINED FROM THE NGS DATA SHEET, PID D07283. RELATIONSHIP TO NGVD 29 IS 1.654 US SURVEY FEET (+/- 0.138 US SURVEY FEET) WAS FOUND USING NGS COORDINATE CONVERSION AND TRANSFORMATION TOOL (NCAT).

**SITE PLAN NOTES**

- SEE SHEET 8 FOR FURTHER REHABILITATION/CONSTRUCTION INFORMATION.
- ALL EXISTING UNDERGROUND FACILITIES ARE CONSIDERED APPROXIMATE. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH PRIOR TO DIGGING.
- REMOVE ALL VEGETATION IN THE VICINITY OF THE SITE STATION SITE AS INDICATED. COORDINATE WITH COUNTY PERSONNEL PRIOR TO REMOVAL.

**NOTES:**

- WATER DISTRIBUTION IS PUBLIC.
- SEWER COLLECTION IS PUBLIC.
- LIFT STATION WITHIN COUNTY ROW.

REVISIONS	
DATE	DESCRIPTION



J. SHEA SHOUN, P.E., STATE OF FLORIDA,  
PROFESSIONAL ENGINEER, LICENSE NO. 60923.

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY  
J. SHEA SHOUN, P.E. ON THE DATE INDICATED HERE.

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MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT				
PROJECT #	402-5164587	SURVEYED	GFY	7/2024
SEC./TWN./RGE	14/35/18	DESIGNED	JSS	4/2024
SCALE	1" = 5'	DRAWN	JSS	4/2024

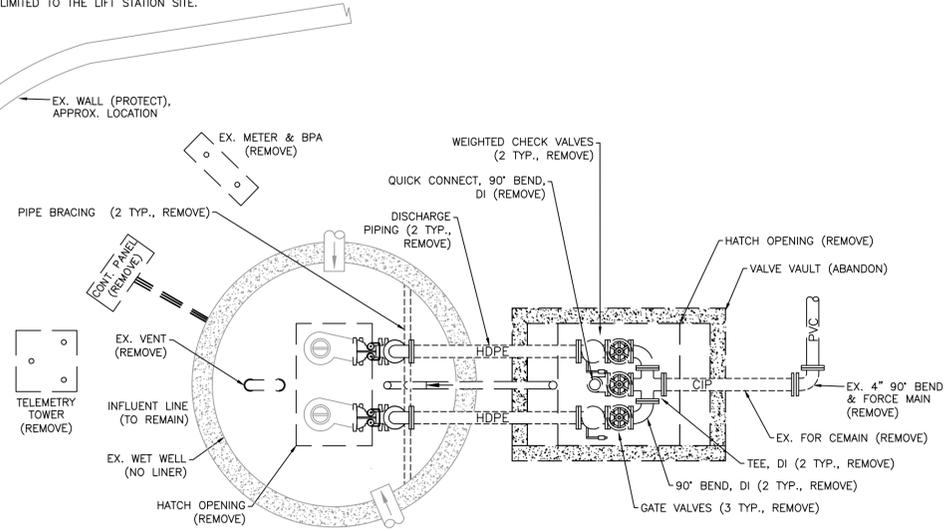
**SATELLITE LIFT STATION R&R  
2025 GROUP 2  
PALM-AIRE 2, RTU 442 (SITE  
PLAN)**

SHEET NO.  
09 of 17

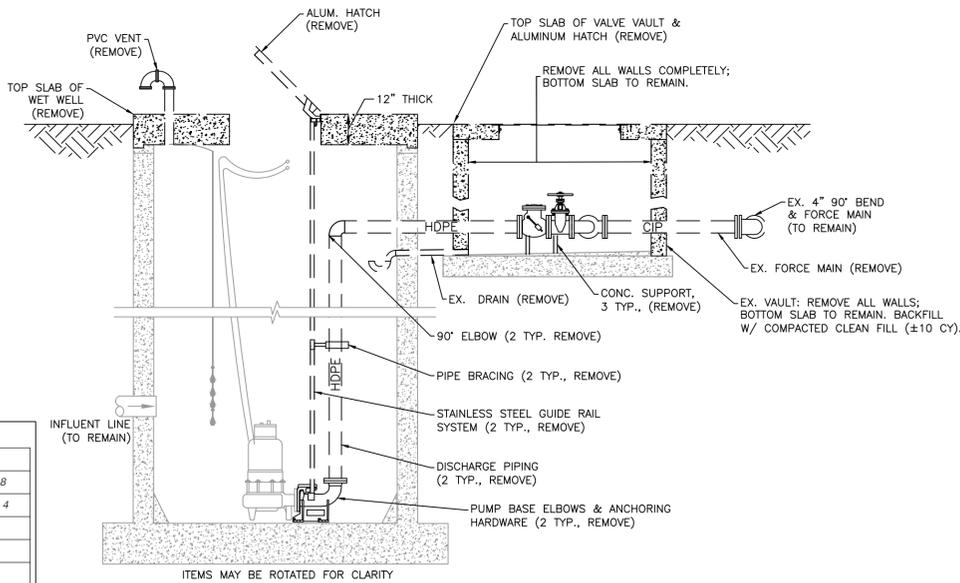
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

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



PLAN



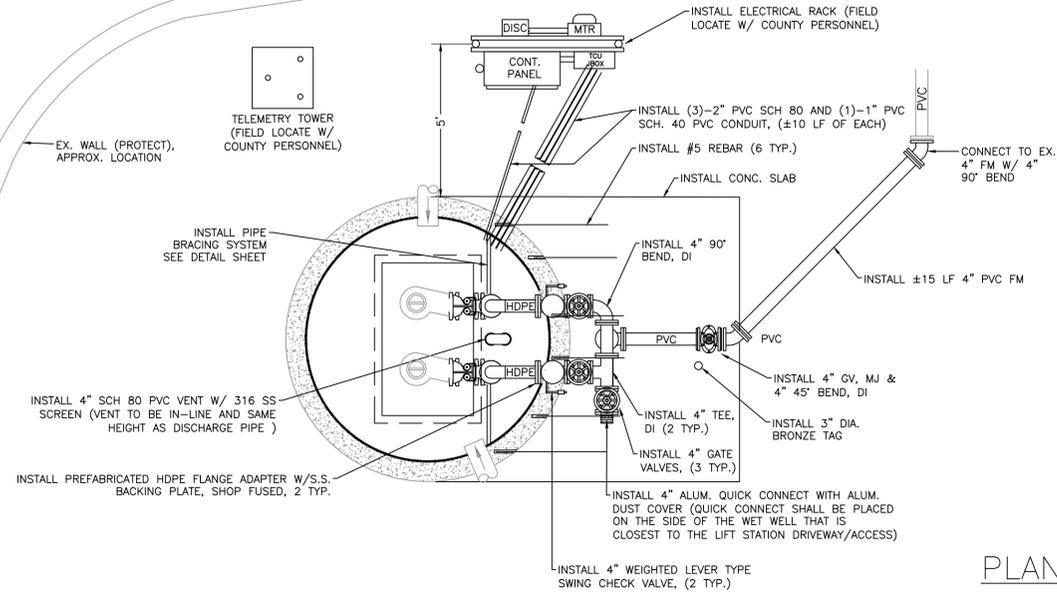
ELEVATION

EX. 2 PUMP LIFT STATION

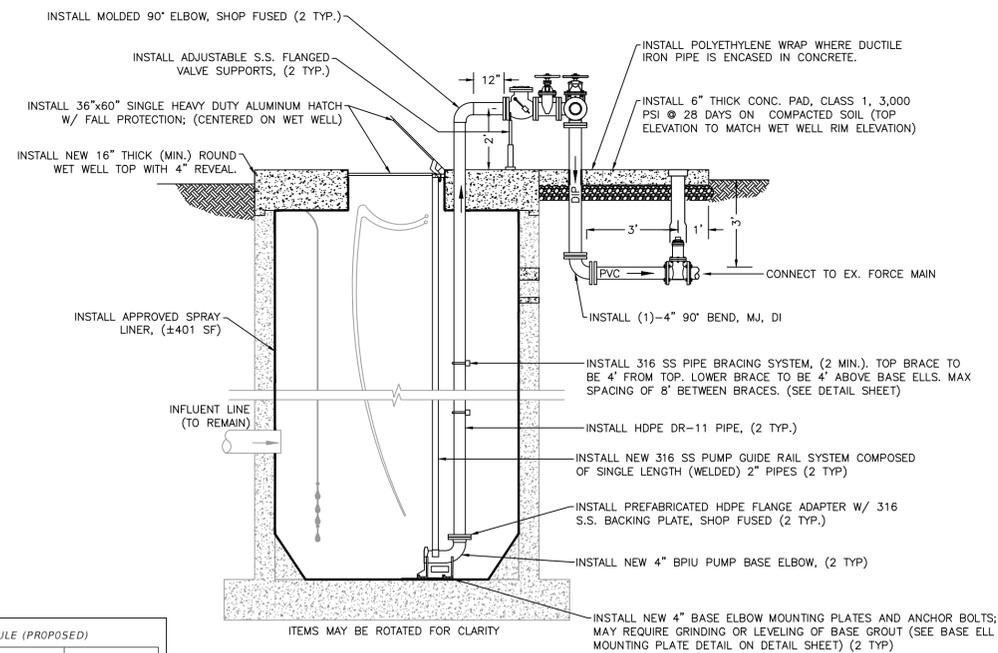
NTS

**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 THAT 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.



PLAN



ELEVATION

EX. 2 PUMP LIFT STATION

NTS

**CONSTRUCTION NOTES:**

1. INSTALL ALL NEW ELECTRICAL SERVICE WITH CONDUIT. IF EXISTING ELEC. CONDUIT IS 2-INCH DIAMETER, THEN EXISTING ELEC. CONDUIT CAN BE LEFT IN PLACE AND USED. (±200 LF).
2. REMOVE AND INSTALL ALL NEW ELECTRICAL STRUCTURE (RACK), A CONTROL PANEL, TCU ENCLOSURE, JUNCTION BOX ENCLOSURE, A METER CAN, AND A SAFETY SWITCH (DISCONNECT). ALL REMAINING EXISTING ELECTRICAL EQUIPMENT CONNECTED TO THE EXISTING CONTROL PANEL SHALL BE RE-ESTABLISHED TO THE NEW PANEL. THE NEW ELECTRICAL STRUCTURE SHALL BE FIELD LOCATED WITH MANATEE COUNTY PERSONNEL. CONTRACTOR RESPONSIBLE FOR VERIFYING SIZE OF RACK TO HOLD ALL PROPOSED ELECTRICAL ENCLOSURES/COMPONENTS.  
  
A TCU BUBBLER UNIT (RPT-001) SYSTEM PROVIDED AND INSTALLED BY DATA FLOW SYSTEMS (DFS) FOR WET WELL LEVEL CONTROL AND SHALL BE INCLUDED WITH THE CONTROL PANEL.
3. 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.
5. SEPARATE THE TELEMETRY TOWER FROM CONCRETE BASE AND SET TO SIDE OF LIFT STATION SITE. CONTRACTOR SHALL REMOVE AND DISPOSE OF CONCRETE BASE AND ALL GROUNDING ROD(S). CONTRACTOR SHALL INSTALL NEW CONCRETE BASE. TELEMETRY TOWER BASE, ALL CONDUIT, ETC. CONTRACTOR SHALL COORDINATE WITH COUNTY PERSONNEL. TOWER LOCATION SHALL BE DETERMINED IN THE FIELD WITH COUNTY PERSONNEL. THE TOWER BASE SHALL BE SUPPLIED BY THE COUNTY TO THE CONTRACTOR.
6. INSTALL #5 REBAR (6 TYP.) EPOXY EMBEDDED INTO THE WET WELL TOP 3-4 INCHES DEEP AND CAST 3-4 FEET INTO THE VALVE ASSEMBLY CONCRETE PAD TO ENSURE THE TOPS OF THE WET WELL AND VALVE ASSEMBLY PAD WILL REMAIN FLUSH.
7. WET WELL CONCRETE WALLS SHALL BE INSPECTED BY COUNTY PERSONNEL PRIOR TO INSTALLATION OF NEW SPRAY LINER AND/OR LINER REPAIR.
8. INSTALL A NEW 2-INCH WATER SERVICE LINE AND 6"x2" TAPPING SADDLE; A STANDARD METER/BPA ASSEMBLY; AND A 3/4-INCH HOSE BIBB ASSEMBLY PER COUNTY STANDARDS VIA HORIZONTAL DIRECTIONAL DRILL. THE EXISTING WATER MAIN IS LOCATED IN THE ROW ON THE SAME SIDE AS THE LIFT STATION SITE. THE METER/BPA SHALL BE LOCATED AS CLOSE AS POSSIBLE TO THE FENCE EASEMENT / RIGHT-OF-WAY LINE IN CLOSEST PROXIMITY TO THE WATER DISTRIBUTION MAIN. ALL ITEMS SHALL BE FIELD LOCATE WITH MANATEE COUNTY PERSONNEL. (±25 LF).
9. ABANDON EXISTING WATER SERVICE SADDLE AND CORPORATION AT MAIN; INSTALL A BRASS PLUG IN CORPORATION STOP.
10. SEE SHEET 11 FOR FURTHER REHABILITATION/CONSTRUCTION INFORMATION.

- NOTES:**
1. WATER DISTRIBUTION IS PUBLIC.
  2. SEWER COLLECTION IS PUBLIC.
  3. LIFT STATION WITHIN COUNTY ROW.

LIFT STATION SCHEDULE (EXISTING)	
RADIO TELEMETRY UNIT (RTU)	444
DESIGN CAPACITY GPM/TDH	100 / 28
PUMP TYPE / HP	HOMA / 4
DISCHARGE PIPE DIAMETER	4"
WET WELL DIAMETER	8"
BOTTOM SLAB ELEVATION	11.90
TOP ELEVATION	23.50
VALVE VAULT ELEVATION	23.50
INFLUENT INVERT ELEVATION	15.86
INFLUENT PIPE SIZE	(2) 8" PVC
FORCE MAIN DIAMETER	6" DI
WET WELL VENT PIPE	DI
ELECT. POWER, VOLTS / PH	240 / 3
ELECT. SERVICE SIZE, AMPS	60
EX. FORCE MAIN TIE-IN	MH
FLOODPLAIN INFORMATION	X

\* INFORMATION TAKEN FROM LIFT STATION DATA FILE (LSINFO.XLS 2023) & RECORD DRAWINGS. DATUM OF ELEVATIONS IS UNKNOWN.

LIFT STATION SCHEDULE (PROPOSED)	
INSTALL FIBERGLASS W.W. LINER	NO
APPLY WET WELL SPRAY LINER	YES
INSTALL BUBBLER UNIT	YES
INSTALL FORCE MAIN ISOLATION VALVE	YES
NEW HDPE DISCHARGE PIPING	4"
NEW BASE ELBOW	4", BPIU-14
MODIFY TOP ELEVATION OF WET WELL (LOWER/RAISE)	RAISE, ±4"
MODIFY TOP ELEVATION OF VALVE VAULT (LOWER/RAISE)	N/A
INSTALL WET WELL VENT PIPE	YES
INSTALL NEW WATER SERVICE ASSEMBLY	YES, STD
RELOCATE EX. WATER SERVICE ASSEMBLY	NO

REVISIONS	
DATE	DESCRIPTION

1022 26th Avenue East, Bradenton, FL 34208

J. SHEA SHOUN, P.E., STATE OF FLORIDA, PROFESSIONAL ENGINEER, LICENSE NO. 60923.  
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MANATEE COUNTY PUBLIC WORKS DEPARTMENT				
PROJECT #	402-5164586	SURVEYED	GFY	7/2024
SEC./TWN./RGE	27/35/18	DESIGNED	JSS	4/2024
SCALE	NTS	DRAWN	JSS	4/2024

**SATELLITE LIFT STATION R&R**  
**2025 GROUP 2**  
**PALM-AIRE 4, RTU 444 (REHAB)**

SHEET NO. 10 of 17

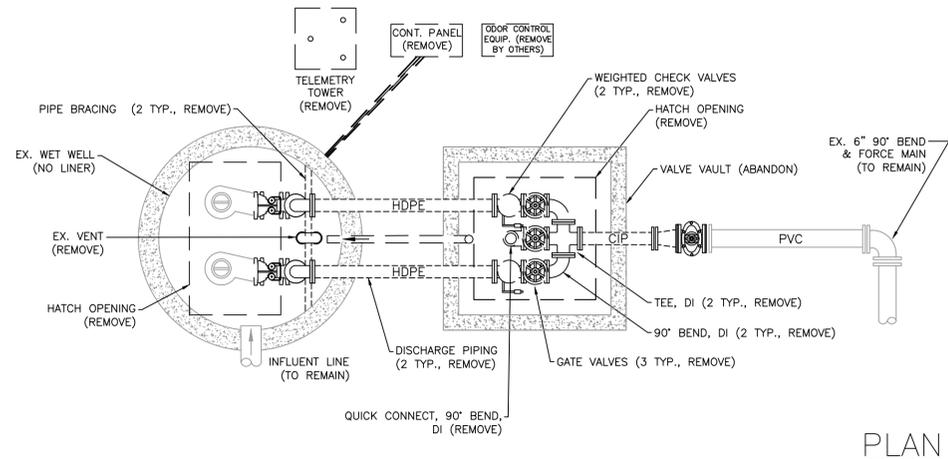
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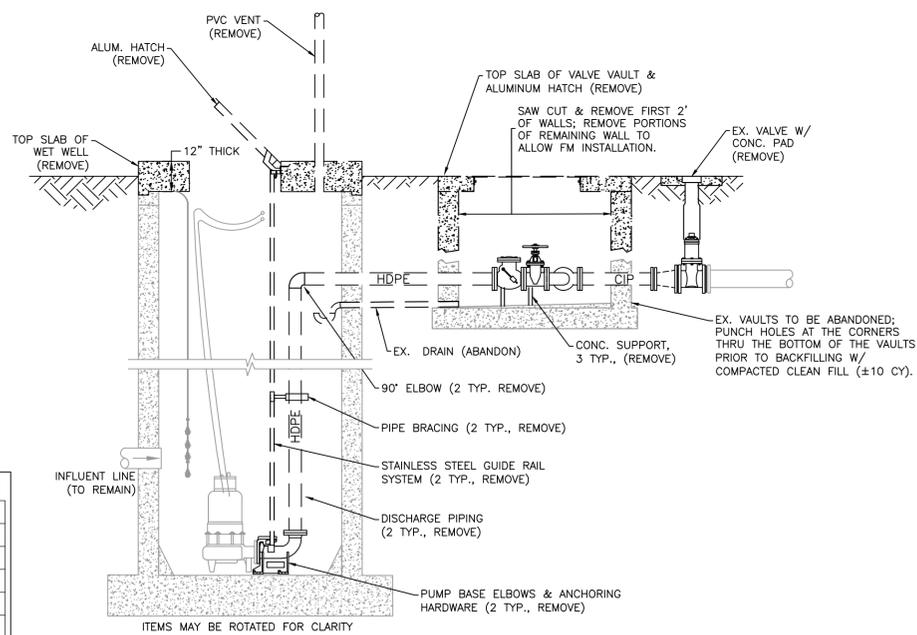
**EXISTING**

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



PLAN



ELEVATION

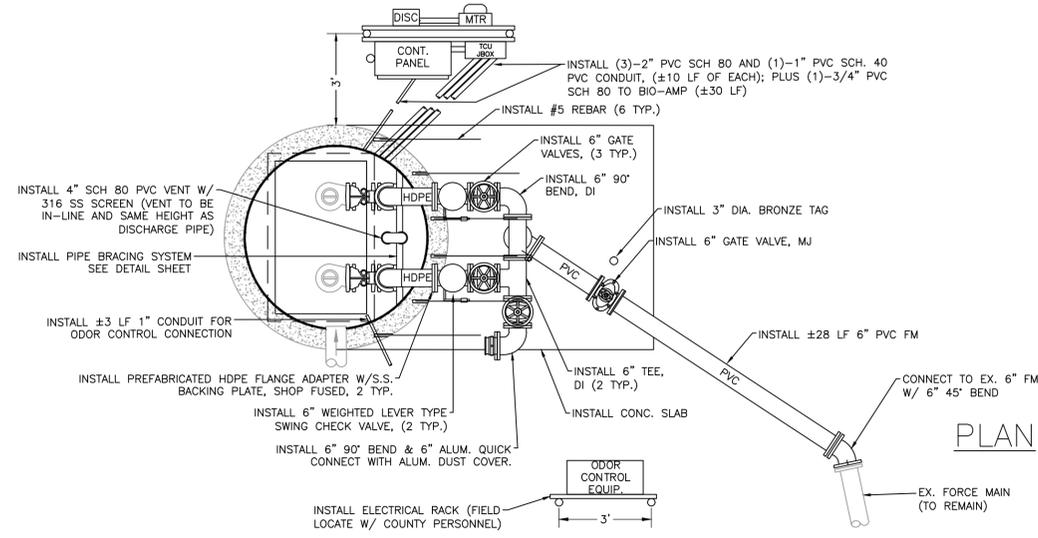
EX. 2 PUMP LIFT STATION

NTS

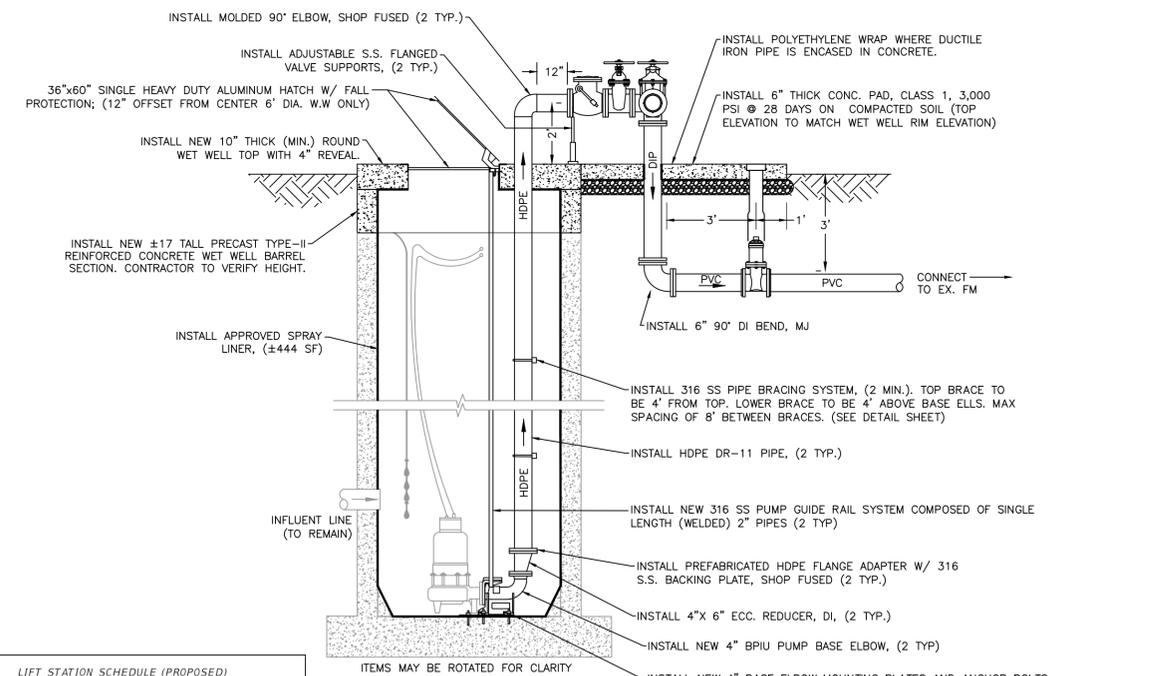
**PROPOSED**

**GENERAL NOTES:**

1. ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST MANATEE COUNTY PUBLIC WORKS UTILITY STANDARDS. 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 THAT 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.
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PLAN



ELEVATION

EX. 2 PUMP LIFT STATION

NTS

**CONSTRUCTION NOTES:**

1. INSTALL ALL NEW ELECTRICAL SERVICE WITH CONDUIT. IF EXISTING ELEC. CONDUIT IS 2-INCH DIAMETER, THEN EXISTING ELEC. CONDUIT CAN BE LEFT IN PLACE AND USED. (±200 LF).
2. REMOVE AND INSTALL ALL NEW ELECTRICAL STRUCTURE (RACK), A CONTROL PANEL, TCU ENCLOSURE, JUNCTION BOX ENCLOSURE, A METER CAN, AND A SAFETY SWITCH (DISCONNECT). ALL REMAINING EXISTING ELECTRICAL EQUIPMENT CONNECTED TO THE EXISTING CONTROL PANEL SHALL BE RE-ESTABLISHED TO THE NEW PANEL. THE NEW ELECTRICAL STRUCTURE SHALL BE FIELD LOCATED WITH MANATEE COUNTY PERSONNEL. CONTRACTOR RESPONSIBLE FOR VERIFYING SIZE OF RACK TO HOLD ALL PROPOSED ELECTRICAL ENCLOSURES/COMPONENTS.  
A TCU BUBBLER UNIT (RPT-001) SYSTEM PROVIDED AND INSTALLED BY DATA FLOW SYSTEMS (DFS) FOR WET WELL LEVEL CONTROL AND SHALL BE INCLUDED WITH THE CONTROL PANEL.
3. THE LIFT STATION SITE HAS AUXILIARY EQUIPMENT. INSTALL THE FOLLOWING ADDITIONAL BREAKER(S) IN THE CONTROL PANEL:  
A ODOR CONTROL EQUIPMENT: (1)-20A 120V (BIO-AMP).
4. 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.
5. SEPARATE THE TELEMTRY TOWER FROM CONCRETE BASE AND SET TO SIDE OF LIFT STATION SITE. CONTRACTOR SHALL REMOVE AND DISPOSE OF CONCRETE BASE AND ALL GROUNDING ROD(S). CONTRACTOR SHALL INSTALL NEW CONCRETE BASE, TELEMTRY TOWER BASE, ALL CONDUIT, ETC. CONTRACTOR SHALL COORDINATE WITH COUNTY PERSONNEL. TOWER LOCATION SHALL BE DETERMINED IN THE FIELD WITH COUNTY PERSONNEL. THE TOWER BASE SHALL BE SUPPLIED BY THE COUNTY TO THE CONTRACTOR.
6. INSTALL #5 REBAR (6 TYP.) EPOXY EMBEDDED INTO THE WET WELL TOP 3-4 INCHES DEEP AND CAST 3-4 FEET INTO THE VALVE ASSEMBLY CONCRETE PAD TO ENSURE THE TOPS OF THE WET WELL AND VALVE ASSEMBLY PAD WILL REMAIN FLUSH.
7. WET WELL CONCRETE WALLS SHALL BE INSPECTED BY COUNTY PERSONNEL PRIOR TO INSTALLATION OF NEW SPRAY LINER AND/OR LINER REPAIR.
8. INSTALL NEW 17-INCH TALL PRECAST TYPE-II REINFORCED CONCRETE WET WELL BARREL SECTION; OR FORM POUR CONCRETE AND REINFORCE WITH REBAR, EPOXY DOWELS INTO EXISTING STRUCTURE. CONTRACTOR TO VERIFY HEIGHT PRIOR TO ORDERING TO ENSURE 4 INCH REVEAL.
9. INSTALL A NEW 2-INCH WATER SERVICE LINE AND 6"x2" TAPPING SADDLE; A STANDARD METER/BPA ASSEMBLY; AND A 3/4-INCH HOSE BIBB ASSEMBLY PER COUNTY STANDARDS VIA DIRECT BURY. THE EXISTING WATER MAIN IS LOCATED IN THE ROW ON THE SAME SIDE AS THE LIFT STATION SITE. THE METER/BPA SHALL BE LOCATED AS CLOSE AS POSSIBLE TO THE FENCE / EASEMENT / RIGHT-OF-WAY LINE IN CLOSEST PROXIMITY TO THE WATER DISTRIBUTION MAIN. ALL ITEMS SHALL BE FIELD LOCATE WITH MANATEE COUNTY PERSONNEL, (±30 LF).
10. ABANDON EXISTING WATER SERVICE SADDLE AND CORPORATION AT MAIN; INSTALL A BRASS PLUG IN CORPORATION STOP.
11. INSTALL WASHED SHELL & WEED BARRIER (±50 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.
12. INSTALL A GEOBLOCK VEGETATED REINFORCED GRASS DRIVEWAY PER THE MANUFACTURER RECOMMENDATIONS, (±280 SF) AS ILLUSTRATED ON THE SITE PLAN. EXACT LOCATION AND LAYOUT SHALL BE DETERMINED IN THE FIELD WITH COUNTY PERSONNEL.
13. ALL ODOR CONTROL EQUIPMENT SHALL BE REMOVED AND REINSTALLED BY OTHERS. CONTRACTOR SHALL COORDINATE WITH OTHERS.
14. PRIOR TO COMMENCING BY-PASS, REMOVE AND DISPOSE OF EXISTING VEGETATION (EXCLUDING OAK TREES) LOCATED AROUND THE PERIMETER OF THE LIFT STATION, TRIM/REMOVE ADJACENT TREE LIMBS AND BUSHES. ALL WORK SHALL BE COORDINATED WITH MANATEE COUNTY PERSONNEL PRIOR TO REMOVAL.
15. INSTALL ONE CAPPED STUB-OUT; 3 LF OF 1 INCH DIAMETER PVC PIPE BY CORE BORING THROUGH THE WET WELL WALL. USE HYDRAULIC NON-SHRINK GROUT TO REPAIR THE HOLES FOR THE ODOR CONTROL EQUIPMENT CONNECTIONS. FIELD VERIFY LOCATE WITH COUNTY PERSONNEL.
16. BRING IN CLEAN COMPACTED FILL DIRT, (±30 CY); REGRADE SITE TO ALLOW FOR A POSITIVE DRAINAGE SLOPE AWAY FROM THE HOME AND LIFT STATION AREA TOWARDS THE SURROUNDING ROADWAYS. MAXIMUM OF 1% SLOPE. SOD ALL AFFECTED AREAS.
17. SEE SHEET 13 FOR FURTHER REHABILITATION/CONSTRUCTION INFORMATION.

**NOTES:**

1. WATER DISTRIBUTION IS PUBLIC.
2. SEWER COLLECTION IS PUBLIC.
3. LIFT STATION WITHIN COUNTY ROW.

LIFT STATION SCHEDULE (EXISTING)	
RADIO TELEMTRY UNIT (RTU)	445
DESIGN CAPACITY GPM/TDH	300 / 15
PUMP TYPE / HP	HOMA / 4
DISCHARGE PIPE DIAMETER	4"
WET WELL DIAMETER	6'
BOTTOM SLAB ELEVATION	5.85
TOP ELEVATION	25.00
VALVE VAULT ELEVATION	25.00
INFLUENT INVERT ELEVATION	10.55
INFLUENT PIPE SIZE	8" PVC
FORCE MAIN DIAMETER	6" DI
WET WELL VENT PIPE	DI
ELECT. POWER, VOLTS / PH	240 / 3
ELECT. SERVICE SIZE, AMPS	60
EX. FORCE MAIN TIE-IN	MH
FLOODPLAIN INFORMATION	X
* INFORMATION TAKEN FROM LIFT STATION DATA FILE (LSINFO.XLS 2023) & RECORD DRAWINGS. DATUM OF ELEVATIONS IS UNKNOWN.	

LIFT STATION SCHEDULE (PROPOSED)	
INSTALL FIBERGLASS W.W. LINER	NO
APPLY WET WELL SPRAY LINER	YES
INSTALL BUBBLER UNIT	YES
INSTALL FORCE MAIN ISOLATION VALVE	YES
NEW HDPE DISCHARGE PIPING	6"
NEW BASE ELBOW	4", BPIU-14
MODIFY TOP ELEVATION OF WET WELL (LOWER/RAISE)	RAISE, ±1.25'
MODIFY TOP ELEVATION OF VALVE VAULT (LOWER/RAISE)	N/A
INSTALL WET WELL VENT PIPE	YES
INSTALL NEW WATER SERVICE ASSEMBLY	YES, STD
RELOCATE EX. WATER SERVICE ASSEMBLY	NO

REVISIONS	
DATE	DESCRIPTION



1022 26th Avenue East, Bradenton, FL 34208

J. SHEA SHOUN, P.E., STATE OF FLORIDA, PROFESSIONAL ENGINEER, LICENSE NO. 60923.  
THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY J. SHEA SHOUN, P.E. ON THE DATE INDICATED HERE.  
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MANATEE COUNTY PUBLIC WORKS DEPARTMENT				
PROJECT #	402-5164585	SURVEYED	GFY	7/2024
SEC./TWN./RGE	34/35/18	DESIGNED	JSS	4/2024
SCALE	NTS	DRAWN	JSS	4/2024

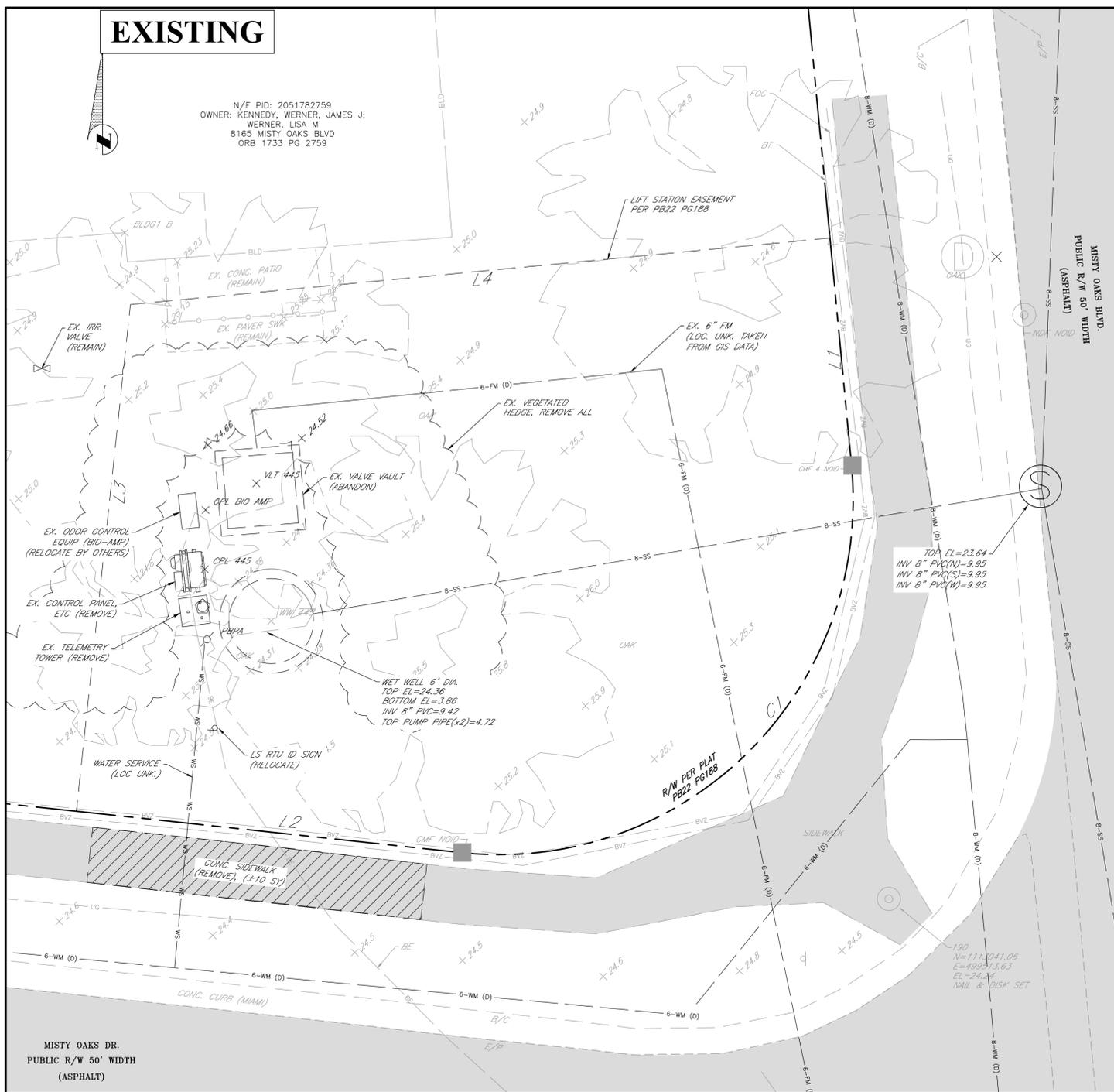
**SATELLITE LIFT STATION R&R 2025 GROUP 2**  
**TIMBERLAKE, RTU 445 (REHAB)**

SHEET NO.  
12 of 17

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

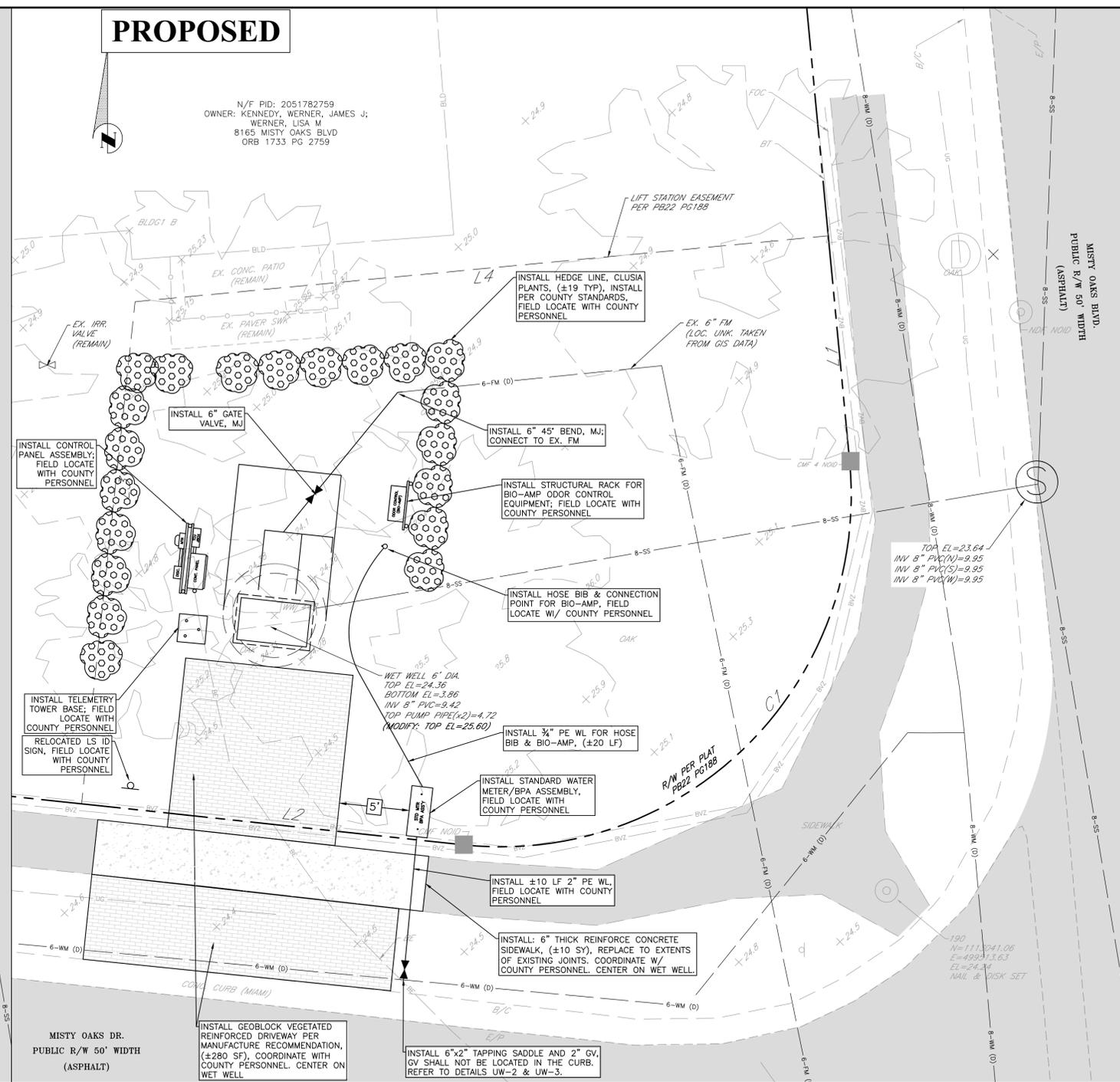
# EXISTING

N/F PID: 2051782759  
 OWNER: KENNEDY, WERNER, JAMES J;  
 WERNER, USA M  
 8165 MISTY OAKS BLVD  
 ORB 1733 PG 2759



# PROPOSED

N/F PID: 2051782759  
 OWNER: KENNEDY, WERNER, JAMES J;  
 WERNER, USA M  
 8165 MISTY OAKS BLVD  
 ORB 1733 PG 2759



**SURVEYOR'S NOTES** (PERTINENT NOTES EXTRACTED FROM SURVEYOR'S REPORT)

- THIS SURVEY WAS PREPARED WITH THE BENEFIT OF THE RECORD DOCUMENTS AS SHOWN AND STATED HEREON, ALL OF THE PUBLIC RECORDS OF MANATEE COUNTY, FLORIDA.
- THE OWNERS AND RECORDING INFORMATION FOR ADJACENT PROPERTIES ARE PER THE MANATEE COUNTY PROPERTY APPRAISER'S WEBSITE ON 6/12/2024.
- BEARINGS AND COORDINATES (IN U.S. SURVEY FEET) ARE BASED ON NATIONAL GEODETIC SURVEY (NGS), FLORIDA STATE PLANE COORDINATE SYSTEM, WEST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83) 2011 ADJUSTMENT.
- BEARINGS AND COORDINATES SHOWN ON THIS MAP ARE BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, WEST ZONE, AS REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (2011) ADJUSTMENT AND ARE SHOWN IN U.S. SURVEY FEET. CONTROL FOR THIS SURVEY WAS ESTABLISHED USING REAL TIME KINEMATIC- GLOBAL POSITIONING SYSTEM (RTK GPS) OBSERVATIONS WITH CORRECTION SIGNALS PROVIDED BY FPRN BASE FLN, WITH SUBSEQUENT CHECKS TO PUBLISHED HORIZONTAL CONTROL STATIONS AS STATED ON EACH SITE SHEET.
- GEORGE F. YOUNG, INC. AND THE UNDERSIGNED MAKE NO REPRESENTATIONS OR GUARANTEES PERTAINING TO EASEMENTS, RIGHTS-OF-WAY, SET BACK LINES, RESERVATIONS AND/OR AGREEMENTS.
- THE PRINTED DIMENSIONS SHOWN ON THIS SURVEY SUPERSEDE ANY SCALED DIMENSIONS; THERE MAY BE ITEMS DRAWN OUT OF SCALE TO GRAPHICALLY SHOW THEIR LOCATION.
- THERE MAY BE ADDITIONAL EASEMENTS, RESERVATIONS, RESTRICTIONS AND/OR OTHER MATTERS OF RECORD AFFECTING THIS PROPERTY THAT ARE NOT SHOWN HEREON THAT MAY (OR MAY NOT) BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY. THE UNDERSIGNED HAS NOT PERFORMED AN INDEPENDENT SEARCH FOR ADDITIONAL RECORDS.

**ADDITIONAL SURVEYOR'S NOTES**

- AS PER THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) NUMBER 12081C0336F, COMMUNITY NUMBER 120153, PANEL 0336, SUFFIX F, EFFECTIVE DATE OF AUGUST 10, 2021, THE ABOVE-DESCRIBED PROPERTY APPEARS TO BE IN ZONE X WITH NO BASE FLOOD ELEVATION DETERMINED.
- ELEVATIONS SHOWN ON THIS SURVEY ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). BENCHMARK USED: LECANTO, LOCATED IN MANATEE COUNTY, FL, HAVING A PUBLISHED, ADJUSTED ELEVATION OF 9.93 FEET (NAVD 88). INFORMATION OBTAINED FROM THE NGS DATA SHEET, PID D07283. RELATIONSHIP TO NGVD 29 IS 1.654 US SURVEY FEET (+/- 0.138 US SURVEY FEET) WAS FOUND USING NGS COORDINATE CONVERSION AND TRANSFORMATION TOOL (NCAT).

**SITE PLAN NOTES**

- SEE SHEET 12 FOR FURTHER REHABILITATION/CONSTRUCTION INFORMATION.
- ALL EXISTING UNDERGROUND FACILITIES ARE CONSIDERED APPROXIMATE. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH PRIOR TO DIGGING.
- EXISTING OAK TREES SHALL BE PROTECTED. ALL NECESSARY ROOT TRIMMING SHALL BE DONE BY HAND WITH CLEAN CUTS.
- PRIOR TO COMMENCING BY-PASS, REMOVE AND DISPOSE OF EXISTING VEGETATION (EXCLUDING OAK TREES) LOCATED AROUND THE PERIMETER OF THE LIFT STATION. TRIM/REMOVE ADJACENT TREE LIMBS AND BUSHES. ALL WORK SHALL BE COORDINATED WITH MANATEE COUNTY PERSONNEL PRIOR TO REMOVAL.
- BRING IN CLEAN COMPACTED FILL DIRT, (±30 CY); REGRADE SITE TO ALLOW FOR A POSITIVE DRAINAGE SLOPE AWAY FROM THE HOME AND LIFT STATION AREA TOWARDS THE SURROUNDING ROADWAYS. MAXIMUM OF 1% SLOPE. SOD ALL AFFECTED AREAS.

**EASEMENT LINE/CURVE TABLE**

Line #	Direction	Length
L1	S06°23'48"E	16.18
L2	N84°52'33"W	27.41
L3	N05°07'27"E	35.93
L4	N83°36'12"E	49.67

**Curve Table**

Curve #	Radius	Delta	Length	Chord Length	Chord Bearing	Tangent
C1	25.00	101°31'15"	44.30	38.73	N44°21'50"E	30.61

REVISIONS	
DATE	DESCRIPTION



J. SHEA SHOUN, P.E., STATE OF FLORIDA,  
 PROFESSIONAL ENGINEER, LICENSE NO. 60923.

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 J. SHEA SHOUN, P.E. ON THE DATE INDICATED HERE.

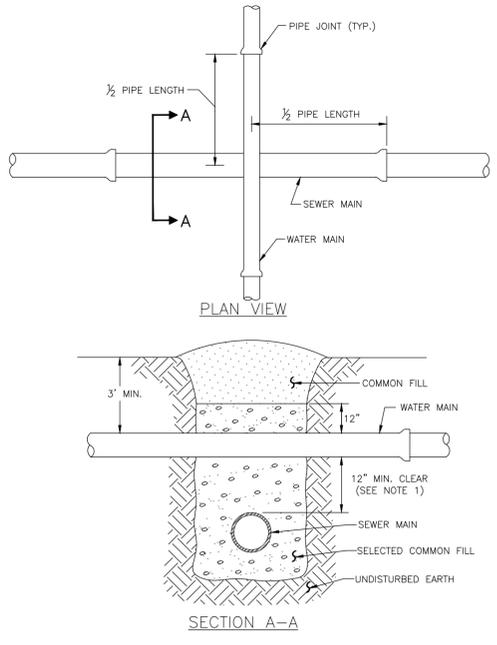
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MANATEE COUNTY PUBLIC WORKS DEPARTMENT					
PROJECT #	402-5164585	SURVEYED	GFY	7/2024	
SEC./TWN./RGE	14/35/18	DESIGNED	JSS	4/2024	
SCALE	1" = 5'	DRAWN	JSS	4/2024	

**SATELLITE LIFT STATION R&R  
 2025 GROUP 2  
 TIMBERLAKE, RTU 445 (SITE  
 PLAN)**

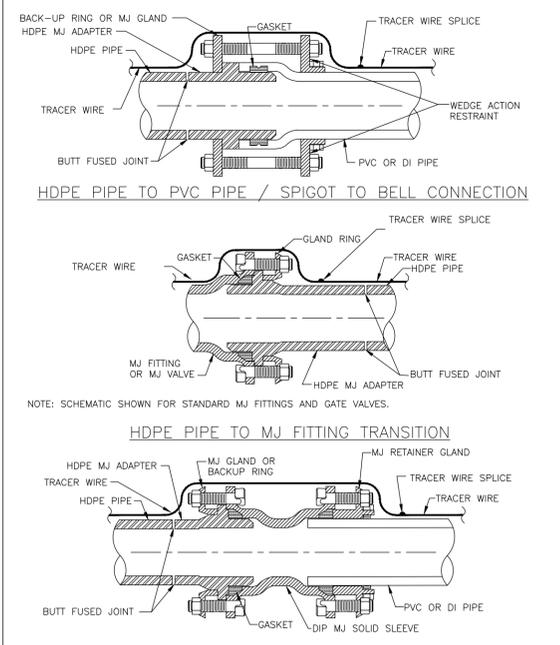
SHEET  
 NO.  
 13 of 17

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



NOTES:  
1. CLEARANCE MAY BE REDUCED TO 6" FOR GRAVITY SEWER WHERE WATER MAIN IS DUCTILE IRON.  
2. PIPE SECTIONS SHALL BE FULL-LENGTH AND SHALL BE ADJUSTED HORIZONTALLY, SO THAT THE CROSSING IS AT EACH PIPE SECTION'S MIDPOINT REGARDLESS OF THE VERTICAL CLEARANCE.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		TYPICAL NEW WATER & SEWER LINE CROSSING	UG-2
REV. BY	DATE	DATE OF APPROVAL	
		SEPT 12, 2023	



NOTES:  
1. ONE TRACER WIRE SHALL BE SECURED TO THE PIPE FOR ALL TYPES OF PIPELINE INSTALLATIONS.  
2. CONTRACTOR SHALL NOT USE MECHANICAL MEANS TO ALIGN PIPE AND FITTINGS FOR ATTACHMENT. THE PIPE SHALL NOT BE "SPRING" LOADED.

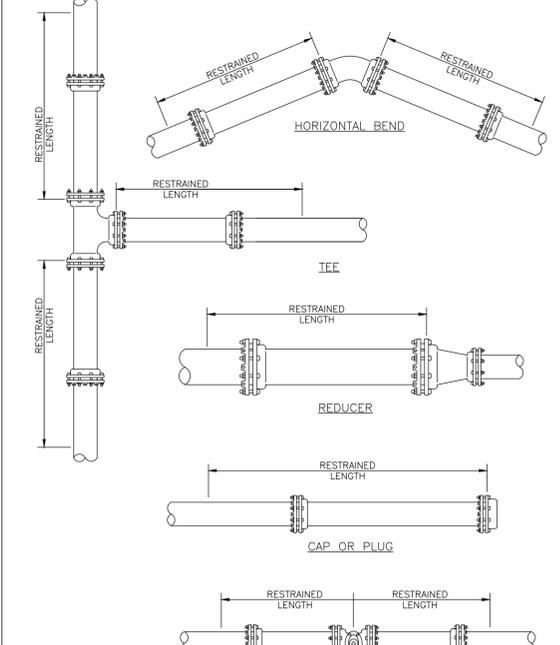
MANATEE COUNTY PUBLIC WORKS DEPARTMENT		HDPE TO PVC OR DI PIPE ADAPTER	UG-6
REV. BY	DATE	DATE OF APPROVAL	
		SEPT 12, 2023	

REQUIRED LENGTH OF RESTRAINED JOINT PIPE FOR C900-16 PVC PIPE (DR-18)

MAIN PIPE SIZE	TEES			REDUCERS			PLUGS & VALVES		
	90°	45°	22.5°	SIZE	LENGTH	SIZE		LENGTH	
24	90	38	18	X24 X20	132	X20 X16	117	158	214
20	78	32	16	X20 X16	101	X16 X12	83	119	184
16	66	27	13	X16 X12	67	X12 X8	53	82	151
12	52	22	10	X12 X8	53	X8 X6	41	61	118
10	44	18	9	X10 X8	41	X8 X6	31	51	100
8	37	15	7	X8 X6	31	X6 X4	21	41	83
6	29	12	6	X6 X4	21	X4 X3	15	31	63
4	21	8	4	X4 X3	15				45

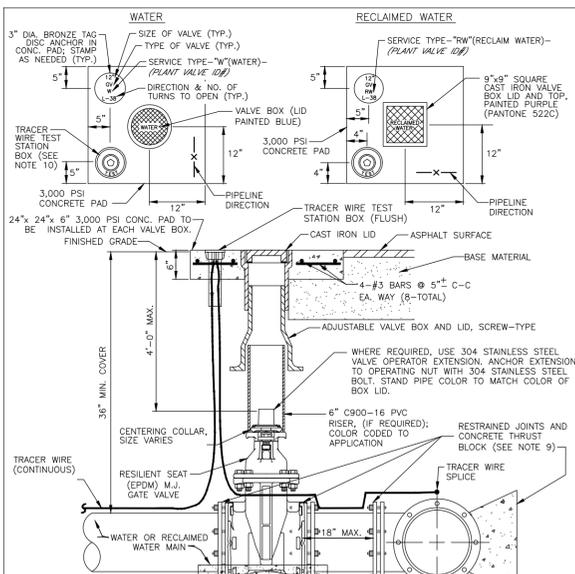
NOTES:  
1. RESTRAIN 11.25" BENDS 50% OF LENGTH FOR 22.5° BENDS.  
2. ALL VALVES AND FITTINGS SHALL BE RESTRAINED TO THE CONNECTING SECTIONS OF PIPE.  
3. ALL ISOLATION VALVES MUST BE PROPERLY ANCHORED OR RESTRAINED TO RESIST A 180 PSI TEST PRESSURE IN EITHER DIRECTION.  
4. PIPE SIZES ARE GIVEN IN INCHES.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

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		RESTRAINED LENGTHS FOR PVC PIPE	UG-8
REV. BY	DATE	DATE OF APPROVAL	
		SEPT 12, 2023	

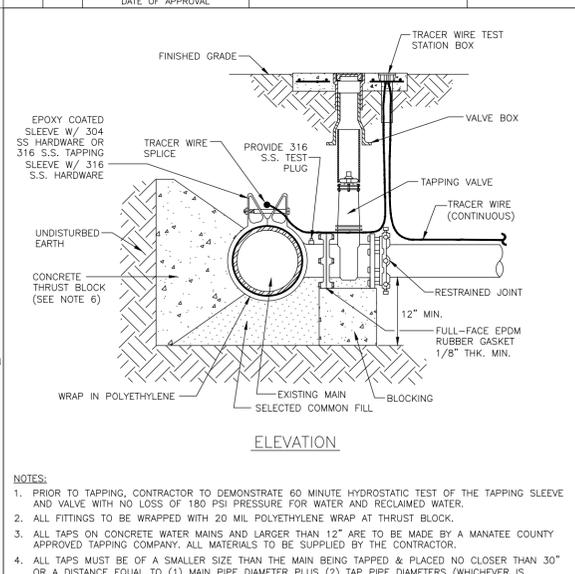


NOTES:  
1. SEE DETAIL UG-8 RESTRAINED LENGTHS FOR PVC PIPE FOR NOTES 1 THROUGH 10 THAT ARE ALSO APPLICABLE TO RESTRAINED LENGTHS FOR PIPE.

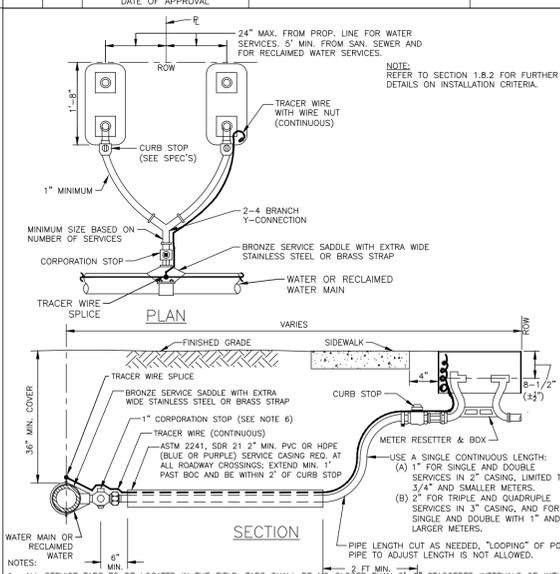
MANATEE COUNTY PUBLIC WORKS DEPARTMENT		RESTRAINED LENGTHS FOR PIPE	UG-10
REV. BY	DATE	DATE OF APPROVAL	
		SEPT 12, 2023	



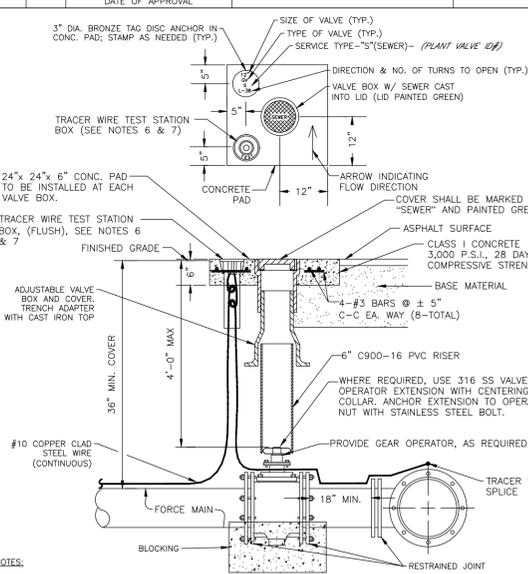
MANATEE COUNTY PUBLIC WORKS DEPARTMENT		GATE VALVE, BOX, LID AND TAG	UW-2
REV. BY	DATE	DATE OF APPROVAL	
		SEPT 12, 2023	



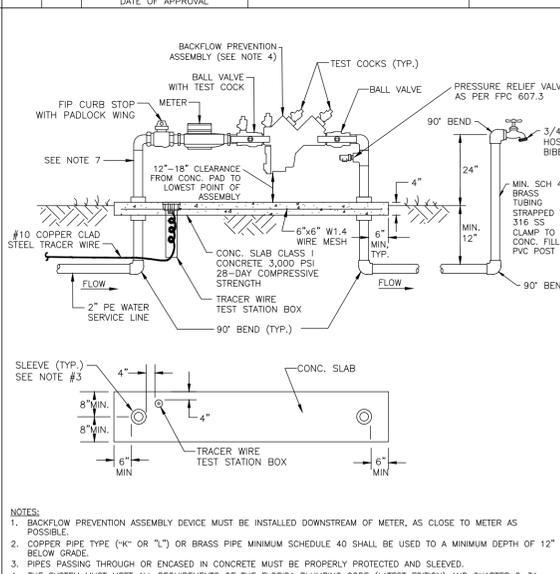
MANATEE COUNTY PUBLIC WORKS DEPARTMENT		TAPPING SLEEVE AND VALVE (WATER/RECLAIM)	UW-3
REV. BY	DATE	DATE OF APPROVAL	
		SEPT 12, 2023	



MANATEE COUNTY PUBLIC WORKS DEPARTMENT		TYPICAL SERVICE CONNECTION	UW-23
REV. BY	DATE	DATE OF APPROVAL	
		SEPT 12, 2023	



MANATEE COUNTY PUBLIC WORKS DEPARTMENT		VALVE, BOX, COVER AND TAG	US-14
REV. BY	DATE	DATE OF APPROVAL	
		SEPT 12, 2023	



MANATEE COUNTY PUBLIC WORKS DEPARTMENT		5/8" WATER METER & BACKFLOW PREVENTION ASSEMBLY FOR LIFT STATIONS	US-21
REV. BY	DATE	DATE OF APPROVAL	
		SEPT 12, 2023	

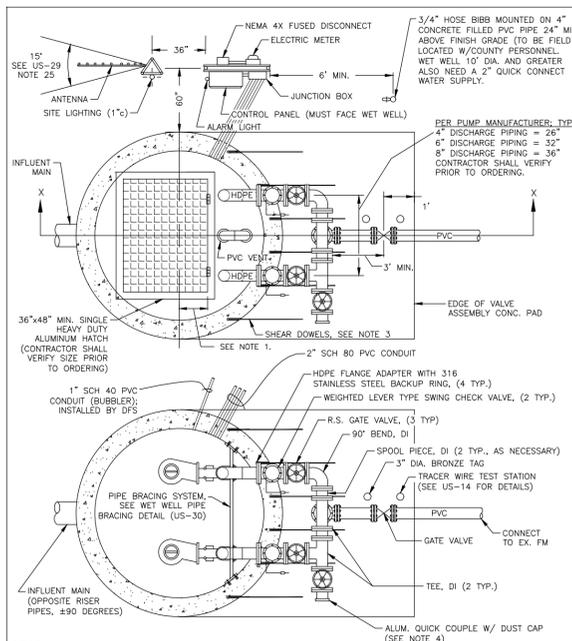
REVISIONS	
DATE	DESCRIPTION



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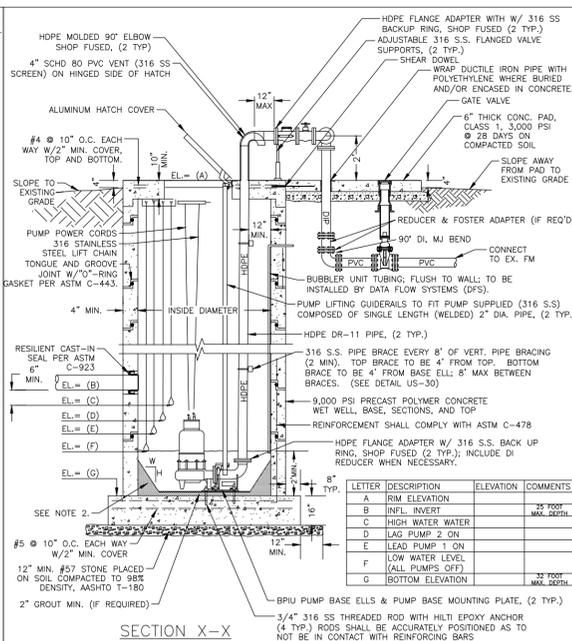
MANATEE COUNTY PUBLIC WORKS DEPARTMENT					
PROJECT #	402-0019707	SURVEYED	GFY	7/2024	
SEC./TWN./RGE	N/A	DESIGNED	JSS	4/2024	
SCALE	SEE PLANS	DRAWN	JSS	4/2024	

SATELLITE LIFT STATION R&R  
2025 GROUP 2  
DETAILS 1  
SHEET NO. 14 of 17



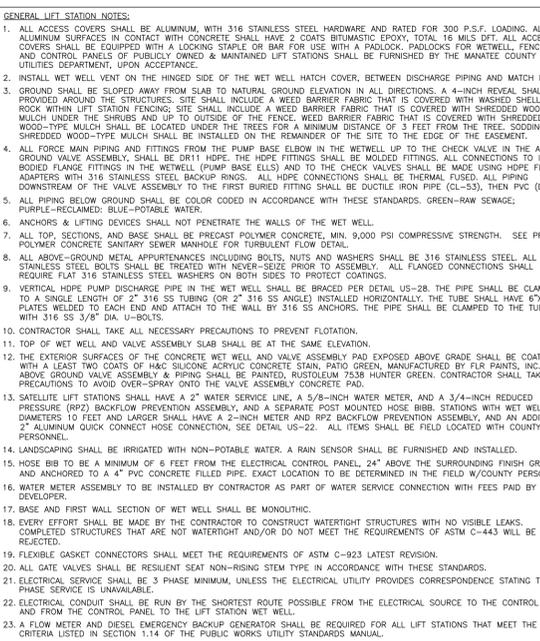
- NOTES:**
- FOR 6" DIA. WET WELLS, THE HINGED SIDE OF THE HATCH OPENING SHALL BE OFFSET 12" FROM CENTERLINE.
  - A FLOW METER SHALL BE INSTALLED UPSTREAM OF ISOLATION GATE VALVE FOR ALL LIFT STATIONS THAT RE-PUMP SEWAGE FROM OTHER LIFT STATIONS.
  - #5 REBAR (6 TYP.) SHALL BE EPOXY EMBEDDED INTO THE WET WELL TOP 3-4 INCHES DEEP AND CAST 3-4 FEET INTO THE VALVE ASSEMBLY PAD TO ENSURE THE TIPS OF THE WET WELL AND VALVE ASSEMBLY PAD WILL REMAIN FLUSH.
  - QUICK COUPLE SHALL BE PLACED ON THE SIDE CLOSEST TO THE LIFT STATION DRIVEWAY.
  - POLYMER CONCRETE W/ 9,000 PSI COMPRESSIVE STRENGTH SHALL BE USED IN THE WET WELL CONSTRUCTION. STANDARD PORTLAND CONCRETE MAY BE USED FOR THE VALVE ASSEMBLY PAD, 3,000 PSI 28-DAY COMPRESSIVE STRENGTH.
  - FOR SECTION X-X SEE SEWAGE LIFT STATION, SECTION VIEW ON DETAIL US-28.

<b>MANATEE COUNTY</b> PUBLIC WORKS DEPARTMENT		SEWAGE LIFT STATION PLAN VIEW	US-26
REV. BY	DATE		
	SEPT 12, 2023		
	DATE OF APPROVAL		

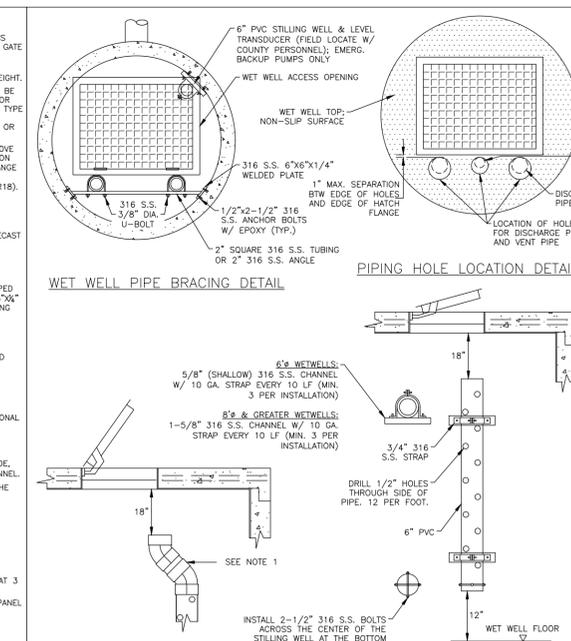


- NOTES:**
- MINIMUM VERTICAL SPACING BETWEEN ALL PUMP AND ALARM CONTROL LEVELS.
  - POLYMER CONCRETE SHALL BE USED FOR ALL CONCRETE WORK.
  - THE VALVE CONCRETE PAD SHALL BE GIVEN A BROOM FINISH. THE SURFACE VARIATIONS SHALL NOT BE MORE THAN 1/4" UNDER A TEN FOOT (10') STRAIGHT EDGE, NOT MORE THAN 1/8" 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".
  - EXPANSION JOINT EXPANSION JOINTS BETWEEN THE CONC. PAD AND THE WET WELL SHALL BE 1/2" MATERIAL AND SHALL MEET THE REQUIREMENTS OF ASHTO M153 OR ASHTO M213.
  - THIS DETAIL SHALL APPLY TO LIFT STATIONS WITH 4" OR GREATER FORCE MAINS. LIFT STATIONS WITH FORCE MAINS LESS THAN 4" REFER TO DETAIL US-34.

<b>MANATEE COUNTY</b> PUBLIC WORKS DEPARTMENT		SEWAGE LIFT STATION SECTION VIEW	US-28
REV. BY	DATE		
	SEPT 12, 2023		
	DATE OF APPROVAL		

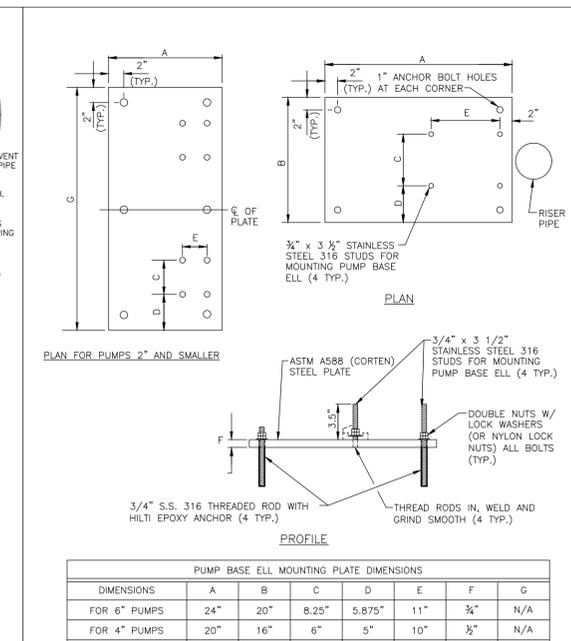


<b>MANATEE COUNTY</b> PUBLIC WORKS DEPARTMENT		LIFT STATION NOTES	US-29
REV. BY	DATE		
	SEPT 12, 2023		
	DATE OF APPROVAL		



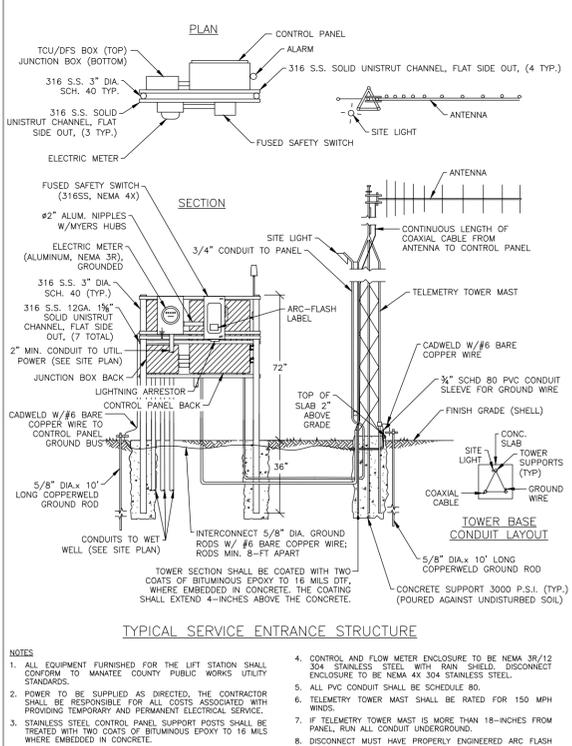
- NOTES:**
- FOR LARGER LIFT STATIONS, PROVISIONS SHALL BE MADE TO MAKE THE TOP OF THE STILLING WELL VISIBLE AND ACCESSIBLE FROM THE HATCH OPENING, I.E. 45° FITTINGS, ETC.
  - NYLON LOCK NUTS SHALL NOT BE USED ON WEDGE ANCHORS.

<b>MANATEE COUNTY</b> PUBLIC WORKS DEPARTMENT		LIFT STATION PIPE BRACING, & STILLING WELL DETAILS	US-30
REV. BY	DATE		
	SEPT 12, 2023		
	DATE OF APPROVAL		



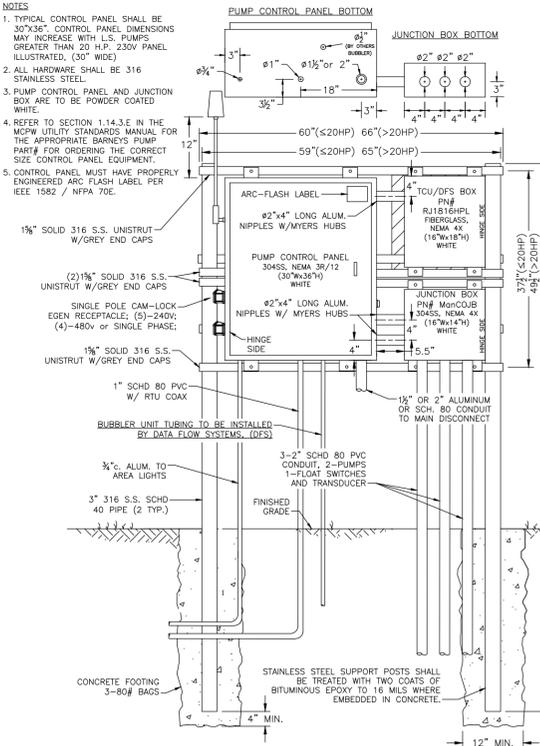
- NOTES:**
- INSTALL DOUBLE NUTS (OR NYLON LOCK NUTS) ON ALL EIGHT (8) THREADED RODS.
  - THE PLATE EDGES AND ALL HOLES SHALL BE GROUND SMOOTH TO REMOVE ALL BURRS.
  - DIMENSIONS "10" & "12" ARE FOR BARNES'S PUMPS, INC. BASE ELLS.
  - FOR PUMPS WITH A 2-INCH DISCHARGE OR LESS, A SINGLE BASE PLATE SHALL BE INSTALLED UNDER BOTH GRINDER PUMPS.

<b>MANATEE COUNTY</b> PUBLIC WORKS DEPARTMENT		PUMP BASE ELL MOUNTING PLATE	US-31
REV. BY	DATE		
	SEPT 12, 2023		
	DATE OF APPROVAL		



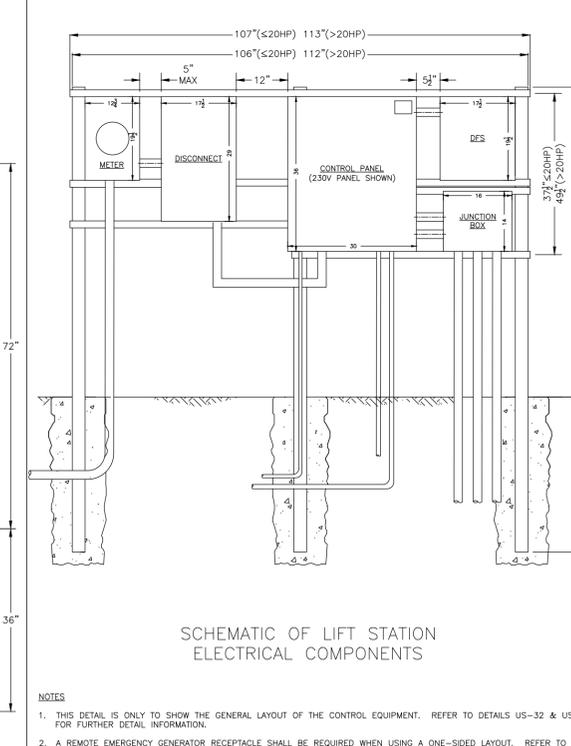
- NOTES:**
- ALL EQUIPMENT FURNISHED FOR THE LIFT STATION SHALL CONFORM TO MANATEE COUNTY PUBLIC WORKS UTILITY STANDARDS.
  - POWER TO BE SUPPLIED AS DIRECTED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH PROVIDING TEMPORARY AND PERMANENT ELECTRICAL SERVICE.
  - STAINLESS STEEL CONTROL PANEL SUPPORT POSTS SHALL BE TREATED WITH TWO COATS OF BITUMINOUS EPOXY TO 16 MILS WHERE EMBEDDED IN CONCRETE.
  - CONTROL AND FLOW METER ENCLOSURE TO BE NEMA 3R/12 304 STAINLESS STEEL WITH RAIN SHIELD. DISCONNECT ENCLOSURE TO BE NEMA 4X 304 STAINLESS STEEL.
  - ALL PVC CONDUIT SHALL BE RATED FOR 150 MPH WINDS.
  - TELEMETRY TOWER MAST SHALL BE RATED FOR 150 MPH WINDS.
  - TELEMETRY TOWER MAST IS MORE THAN 18-INCHES FROM PANEL, RUN ALL CONDUIT UNDERGROUND.
  - DISCONNECT MUST HAVE PROPERLY ENGINEERED ARC FLASH LABEL PER IEEE 1582 / NFPA 70C.

<b>MANATEE COUNTY</b> PUBLIC WORKS DEPARTMENT		SEWAGE LIFT STATION METER & ELECTRICAL DETAILS	US-32
REV. BY	DATE		
JSS	8/24		
	SEPT 12, 2023		
	DATE OF APPROVAL		



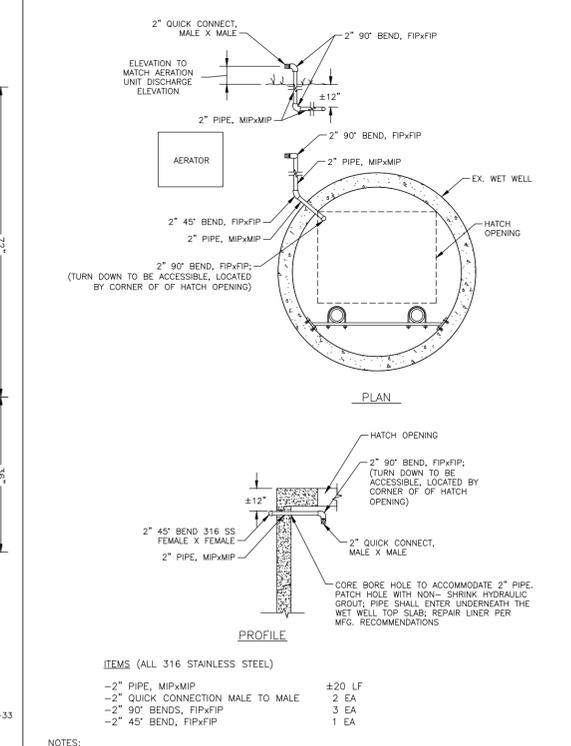
- NOTES:**
- THIS DETAIL IS ONLY TO SHOW THE GENERAL LAYOUT OF THE CONTROL EQUIPMENT. REFER TO DETAILS US-32 & US-33 FOR FURTHER INFORMATION.
  - A REMOTE EMERGENCY GENERATOR RECEPTACLE SHALL BE REQUIRED WHEN USING A ONE-SIDED LAYOUT. REFER TO DETAIL US-RGR.

<b>MANATEE COUNTY</b> PUBLIC WORKS DEPARTMENT		SEWAGE LIFT STATION CONTROL PANEL	US-33
REV. BY	DATE		
JSS	7/24		
	SEPT 12, 2023		
	DATE OF APPROVAL		



- NOTES:**
- THE INSTALLATION OF THE 2" AERATION PIPING SHALL BE FIELD LOCATED W/ COUNTY PERSONNEL.
  - THIS DETAIL REPRESENTS THE CONCEPTUAL DESIGN AND INSTALLATION OF AERATION PIPING. ALL LENGTHS & FITTINGS SHALL BE FIELD ADJUSTED, BASED ON SITE SPECIFIC CONSTRAINTS.

<b>MANATEE COUNTY</b> PUBLIC WORKS DEPARTMENT		SEWAGE PUMP STATION CONTROL PANEL (ONE-SIDED LAYOUT)	US-OSL
REV. BY	DATE		
	SEPT 12, 2023		
	DATE OF APPROVAL		



- NOTES:**
- THE INSTALLATION OF THE 2" AERATION PIPING SHALL BE FIELD LOCATED W/ COUNTY PERSONNEL.
  - THIS DETAIL REPRESENTS THE CONCEPTUAL DESIGN AND INSTALLATION OF AERATION PIPING. ALL LENGTHS & FITTINGS SHALL BE FIELD ADJUSTED, BASED ON SITE SPECIFIC CONSTRAINTS.

<b>MANATEE COUNTY</b> PUBLIC WORKS DEPARTMENT		AERATION PIPING DETAIL	N.T.S.
REV. BY	DATE		
	SEPT 12, 2023		
	DATE OF APPROVAL		

REVISIONS	
DATE	DESCRIPTION



J. SHEA SHOUN, P.E., STATE OF FLORIDA,  
PROFESSIONAL ENGINEER, LICENSE NO. 60923.

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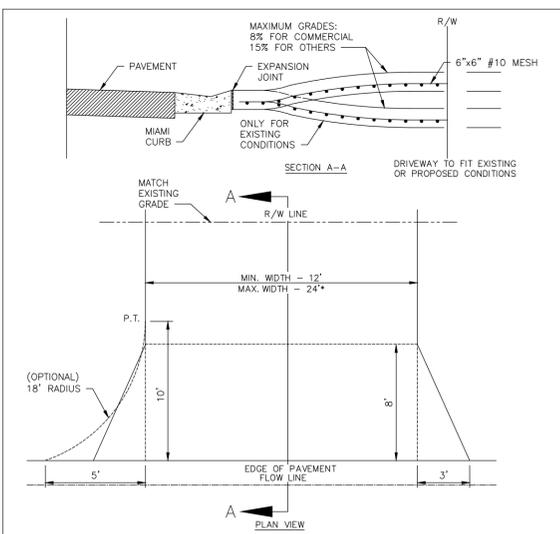
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<b>MANATEE COUNTY</b> PUBLIC WORKS DEPARTMENT					
PROJECT #	402-0019707	SURVEYED	GFY	7/2024	
SEC./TWN./RGE	N/A	DESIGNED	JSS	4/2024	
SCALE	SEE PLANS	DRAWN	JSS	4/2024	

**SATELLITE LIFT STATION R&R**  
**2025 GROUP 2**  
**DETAILS 2**

SHEET  
NO.  
15 of 17

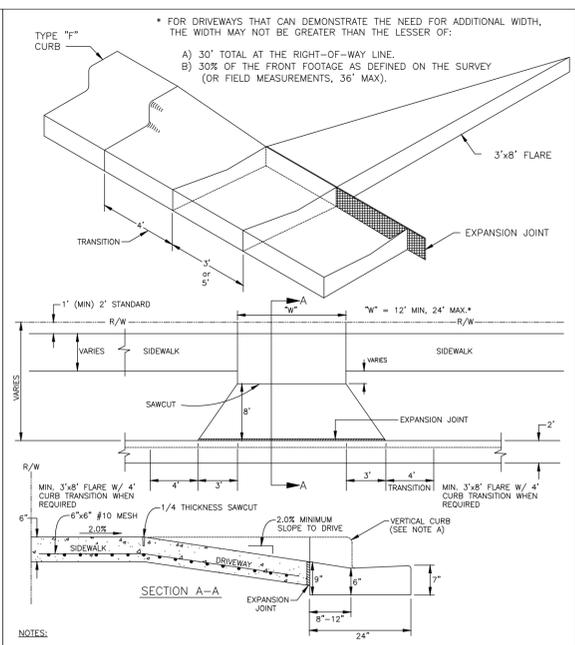
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\* FOR DRIVEWAYS THAT CAN DEMONSTRATE THE NEED FOR ADDITIONAL WIDTH, THE WIDTH MAY NOT BE GREATER THAN THE LESSER OF:  
 A) 30' TOTAL AT THE RIGHT-OF-WAY LINE.  
 B) 30% OF THE FRONT FOOTAGE AS DEFINED ON THE SURVEY (OR FIELD MEASUREMENTS, 36' MAX).

NOTES:  
 A. DRIVEWAYS ADJACENT TO A PAVED ROADWAY MUST HAVE THE APRON CONSTRUCTED.  
 B. DRIVEWAY SHALL BE 6" REINFORCED CONCRETE (3000 PSI AT 28 DAYS) WITH 6"x6" #10 WIRE MESH FROM BACK OF CURB TO RIGHT-OF-WAY LINE.  
 C. MAINTAIN EXISTING DRAINAGE FLOWLINE.  
 D. USE 3"x8" FLARE OR 18" RADIUS WITH CURB TRANSITION (TRANSITION FROM TYPE F CURB TO MIAMI CURB). SEE DETAIL 101.4. NO CHANGE WITH 3" VALLEY CROSSINGS.  
 E. EXPANSION JOINT SHALL BE 1/2" PREFORMED JOINT FILLER OR APPROVED ALTERNATE.  
 F. SAWCUT (1/4" THICKNESS MINIMUM) ON 10' CENTERS. IF DRIVE IS WIDER THAN 12', ADD JOINTS AT 10' CENTERS.  
 G. LATERAL ALIGNMENT 45 DEGREES FOR DOUBLE DRIVE PER LOT, 90 DEGREES FOR SINGLE DRIVE, OFF CENTER LINE.

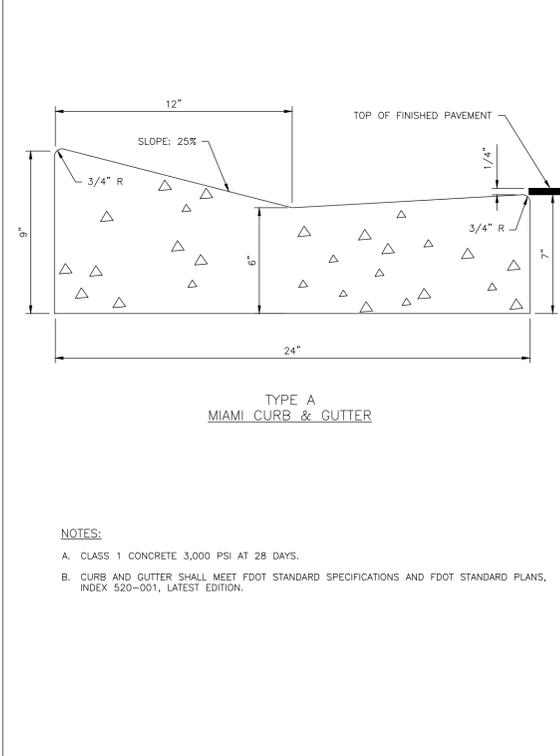
<b>MANATEE COUNTY</b> PUBLIC WORKS DEPARTMENT		URBAN DRIVES	101.3
REV. BY	DATE		
	4/26/22		
DATE OF B.O.C.C. APPROVAL			



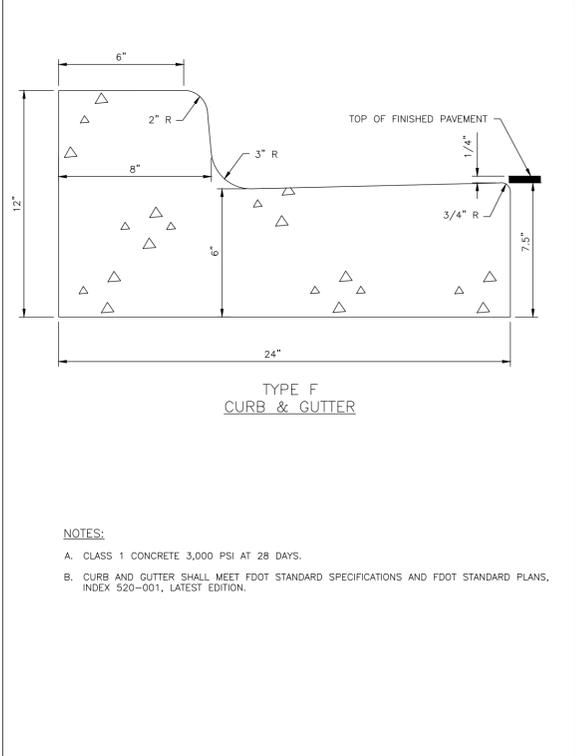
\* FOR DRIVEWAYS THAT CAN DEMONSTRATE THE NEED FOR ADDITIONAL WIDTH, THE WIDTH MAY NOT BE GREATER THAN THE LESSER OF:  
 A) 30' TOTAL AT THE RIGHT-OF-WAY LINE.  
 B) 30% OF THE FRONT FOOTAGE AS DEFINED ON THE SURVEY (OR FIELD MEASUREMENTS, 36' MAX).

NOTES:  
 A. IF EXISTING CURB, REMOVE AND REPLACE WITH MIAMI CURB AND GUTTER. NO CHANGE WITH 3" VALLEY CROSSING.  
 B. IF EXISTING SIDEWALK, REMOVE AND REPLACE WITH 6" CONCRETE (3000 PSI AT 28 DAYS), WITH 6"x6" #10 MESH.  
 C. DRIVEWAY SHALL BE 6" CONCRETE (3000 PSI AT 28 DAYS) WITH 6"x6" #10 MESH.  
 D. EXPANSION JOINT SHALL BE 1/2" PREFORMED JOINT FILLER OR APPROVED ALTERNATE.  
 E. A MINIMUM 5' WIDE SIDEWALK IS REQUIRED ON LOCAL STREETS AND THROUGHFARES. MIXED USE PATHS MAY REQUIRE 8'-12' WIDE SIDEWALKS PER LAND DEVELOPMENT CODE.  
 F. SAWCUT (1/4" THICKNESS MINIMUM) ON 10' CENTERS. IF DRIVE IS WIDER THAN 12', ADD JOINTS AT 10' CENTERS.

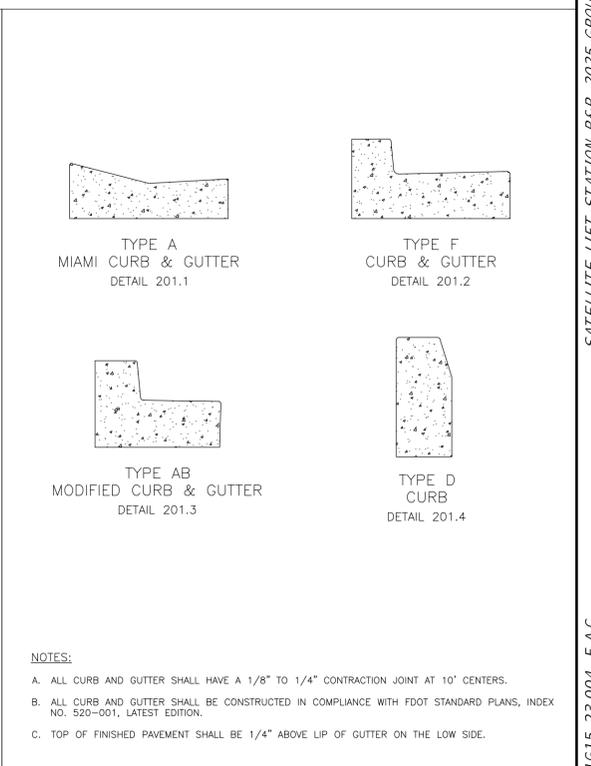
<b>MANATEE COUNTY</b> PUBLIC WORKS DEPARTMENT		CURB CUT & TRANSITION W/ T-FLARE FOR RESIDENTIAL DRIVES	101.4
REV. BY	DATE		
	4/26/22		
DATE OF B.O.C.C. APPROVAL			



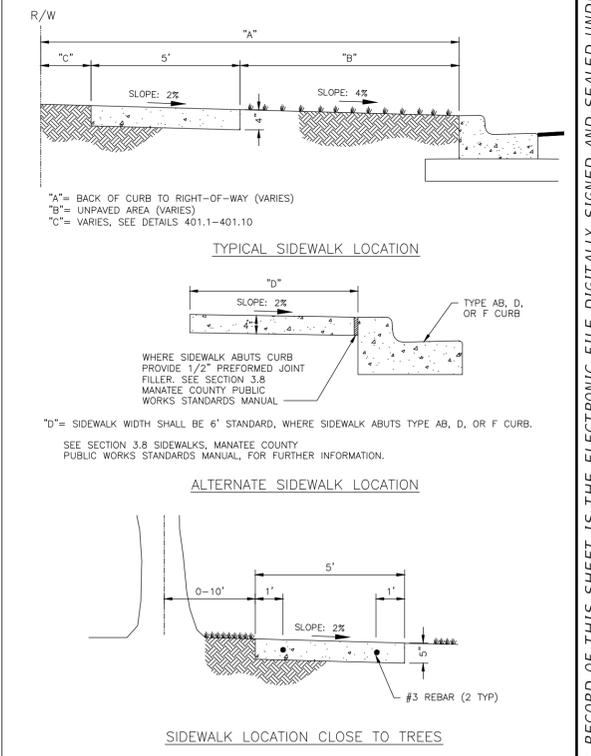
<b>MANATEE COUNTY</b> PUBLIC WORKS DEPARTMENT		TYPE A MIAMI CURB & GUTTER	201.1
REV. BY	DATE		
	4/26/22		
DATE OF B.O.C.C. APPROVAL			



<b>MANATEE COUNTY</b> PUBLIC WORKS DEPARTMENT		TYPE F CURB & GUTTER	201.2
REV. BY	DATE		
	4/26/22		
DATE OF B.O.C.C. APPROVAL			



<b>MANATEE COUNTY</b> PUBLIC WORKS DEPARTMENT		CURB & GUTTER CONTROL SHEET	201.0
REV. BY	DATE		
	4/26/22		
DATE OF APPROVAL			



<b>MANATEE COUNTY</b> PUBLIC WORKS DEPARTMENT		SIDEWALK REQUIREMENTS	301.0
REV. BY	DATE		
	4/26/22		
DATE OF B.O.C.C. APPROVAL			

REVISIONS	
DATE	DESCRIPTION

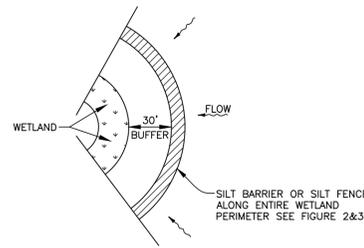


J. SHEA SHOUN, P.E., STATE OF FLORIDA, PROFESSIONAL ENGINEER, LICENSE NO. 60923.  
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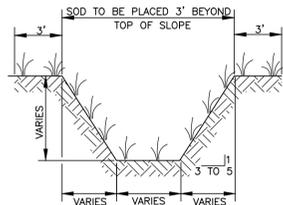
MANATEE COUNTY PUBLIC WORKS DEPARTMENT					
PROJECT #	402-0019707	SURVEYED	GFY	7/2024	
SEC./TWN./RGE	N/A	DESIGNED	JSS	4/2024	
SCALE	SEE PLANS	DRAWN	JSS	4/2024	

**SATELLITE LIFT STATION R&R**  
**2025 GROUP 2**  
**DETAILS 3**

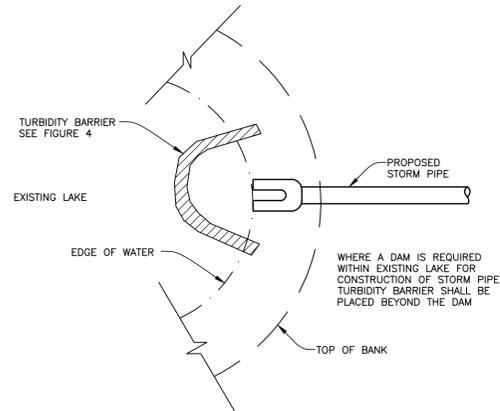
SHEET NO.  
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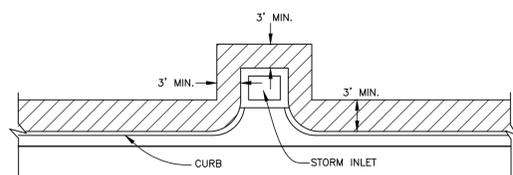
WETLAND BUFFER  
FIGURE 1



TYPICAL SWALE SECTION  
FIGURE 5

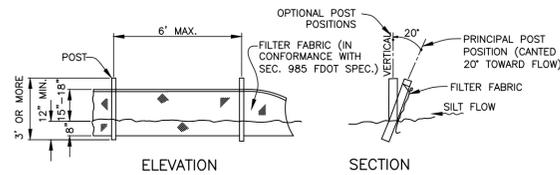


TURBIDITY BARRIER AT CONNECTION OF  
STORM PIPE TO EXISTING LAKE  
FIGURE 9



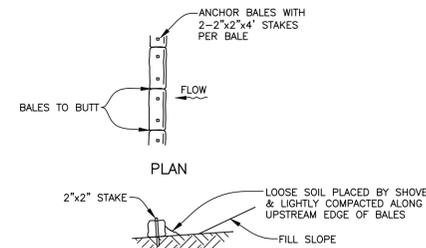
SOD ALONG CURB  
AND AROUND INLET  
FIGURE 14

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

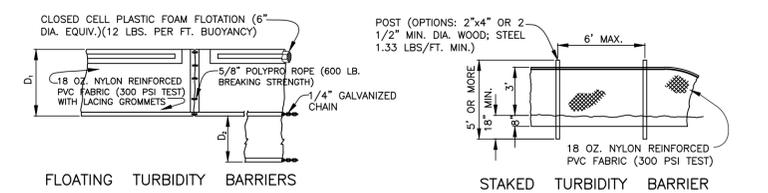


TYPICAL SILT FENCE  
FIGURE 2

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



TYPICAL BALE SILT BARRIER  
FIGURE 3

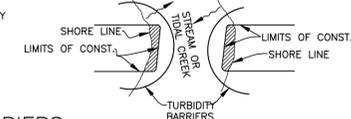


FLOATING TURBIDITY BARRIERS

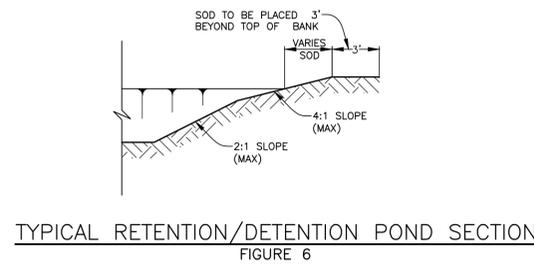
STAKED TURBIDITY BARRIER

$D_1$  = 5' STD. (SINGLE PANEL FOR DEPTHS 5' OR LESS),  $D_2$  = 5' STD. (ADDITIONAL PANEL FOR DEPTHS > 5'). CURTAIN TO REACH BOTTOM UP TO DEPTHS OF 10 FEET. TWO(2) PANELS TO BE USED FOR DEPTHS GREATER THAN 10 FEET UNLESS SPECIAL DEPTH CURTAINS SPECIFICALLY CALLED FOR IN THE PLANS OR AS DETERMINED BY THE ENGINEER.

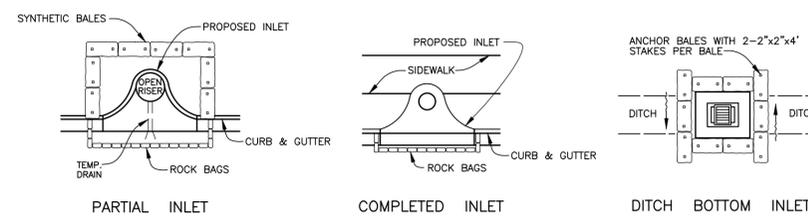
NOTE: COMPONENTS OF TYPES I AND II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.



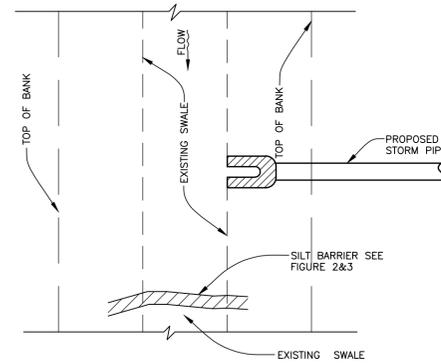
TURBIDITY BARRIERS  
FIGURE 4



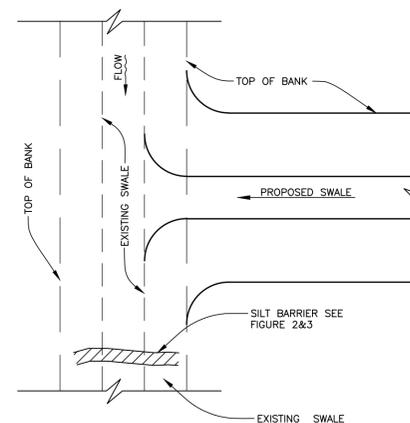
TYPICAL RETENTION/DETENTION POND SECTION  
FIGURE 6



SYNTHETIC BALE PROTECTION AROUND  
INLETS OR SIMILAR STRUCTURES  
FIGURE 7

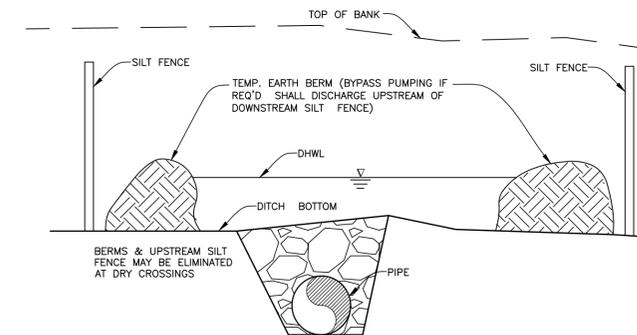


SILT BARRIER AT CONNECTION OF  
STORM PIPE TO EXISTING SWALE  
FIGURE 10

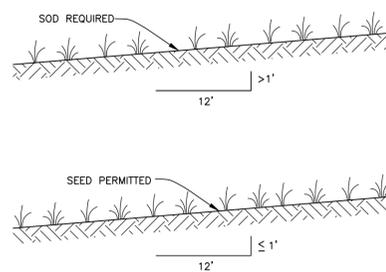


SILT BARRIER AT CONNECTION  
OF SWALE TO EXISTING SWALE  
FIGURE 11

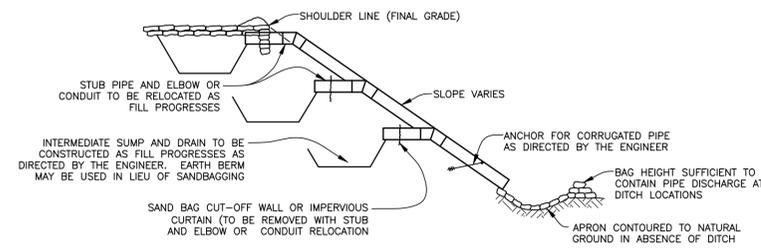
TYPE III SILT FENCE PROTECTION  
AROUND DITCH BOTTOM INLETS  
STAKED SILT BARRIER OR SILT FENCE  
PROTECTION AROUND DITCH BOTTOM INLETS  
FIGURE 8



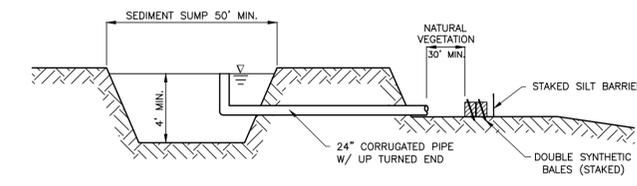
UNDERGROUND PIPE CROSSING  
FIGURE 12



GRASS SLOPES  
FIGURE 13



SECTION AA  
TEMPORARY SLOPE DRAIN  
FIGURE 15



SEDIMENT SUMP SECTION  
FIGURE 16

REVISIONS

DATE	DESCRIPTION



1022 26th Avenue East, Bradenton, FL 34208

J. SHEA SHOUN, P.E., STATE OF FLORIDA,  
PROFESSIONAL ENGINEER, LICENSE NO. 60923.

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PUBLIC WORKS DEPARTMENT

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2025 GROUP 2  
EROSION CONTROL DETAILS

SHEET  
NO.

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