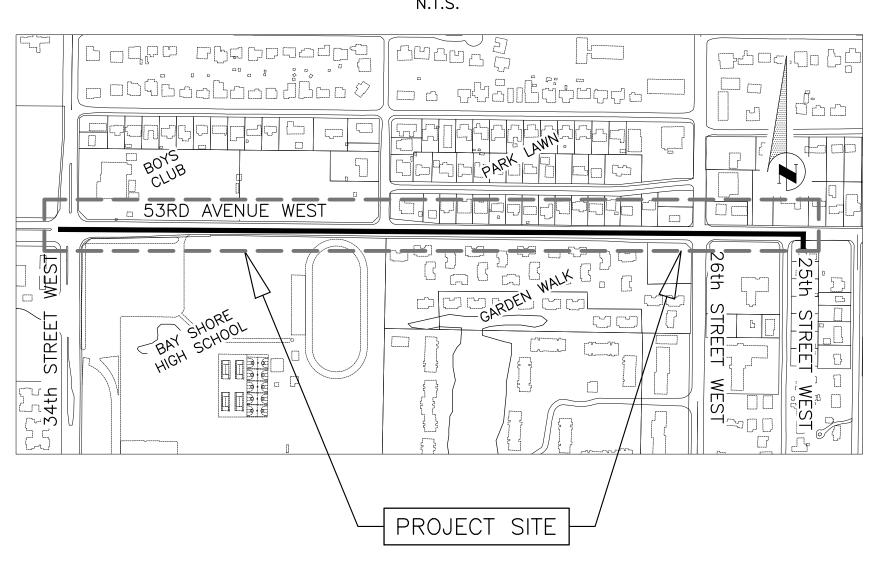


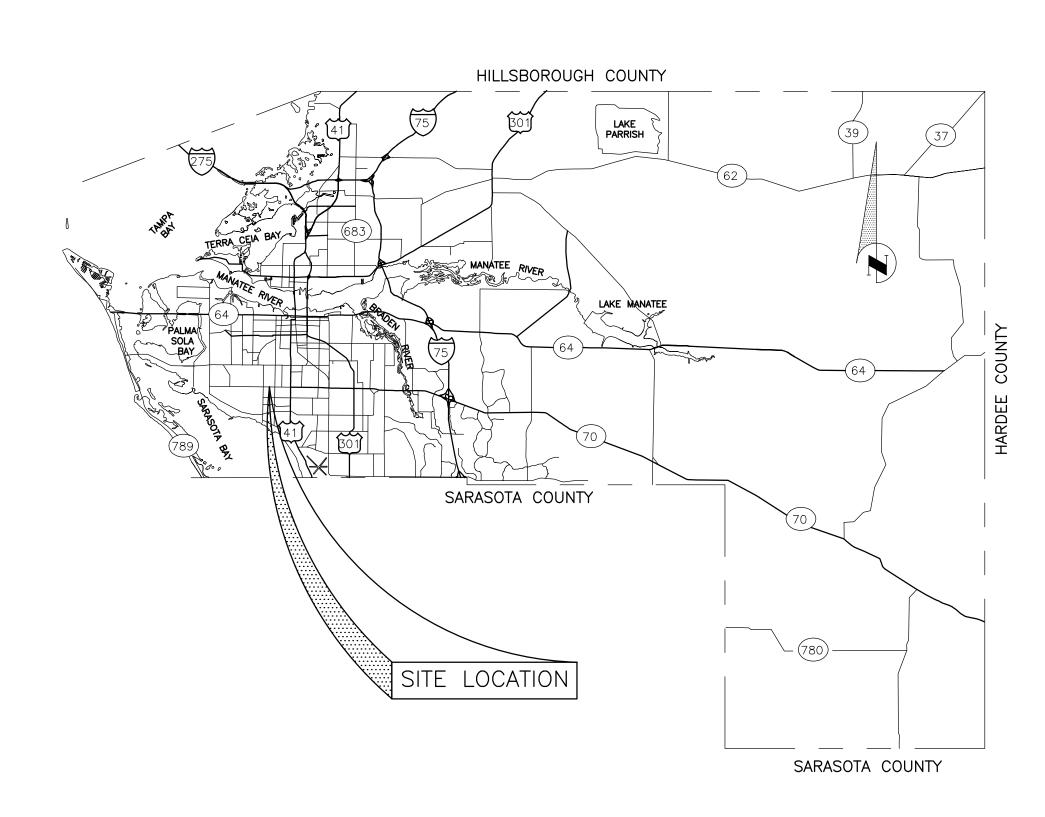
100% PLANS

FORCE MAIN 27-A REHABILATATION 53RD AVE. W. FROM 25TH TO 34TH ST. W. 404-6023180

September 2019

VICINITY MAP





NO.	INDEX OF SHEETS
01	COVER
02	NOTES
03	STA. 10+00 TO 15+20
04	STA. 15+20 TO 20+80
05	STA. 20+80 TO 26+40
06	STA. 26+40 TO 32+00
07	STA. 32+00 TO 37+60
08	STA. 37+60 TO 43+20
09	MLS 27A — SITE PIPING PLAN
10	FLOW METER (LOOKING NORTH)
11	MLS 27A - DRY WELL REHAB
12	DETAILS, QTYS, SUGGESTED SEQUENCE
13	DETAILS
14	SURVEY CONTROL
15	EROSION CONTROL

PROJECT DESCRIPTION

THIS PROJECT WILL INCLUDE THE FOLLOWING:

- REPLACE $\pm 3,400$ LF OF EX. DIP 20" FORCE MAIN WITH 20" PVC FORCE MAIN AND SMALL AMOUNTS OF 12" AND 18" DIP FORCE MAIN AT THE MLS 27A VIA JACK AND BORE AND DIRECT BURY; - INSTALL A FLOW METER AND METER VAULT;
- REPLACEMENT OF DISCHARGE PIPING IN THE MASTER LIFT STATION, AND ASSOCIATED APPURTENANCES.
- REPLACE ±200 LF OF EX. 6" PVC (CL160) WITH 6" DIP (CL350) WATER MAIN
- ALL NECESSARY PAVEMENT, CURB, AND SIDEWALK RESTORATION.





DATE								1/2019 1:19
ВУ								q,01, 9/1
REVISION DESCRIPTION								Ena Desian\PROJ\~SAN SWR Proj\FM-27A\DWGS\FM-27A Cover Notes Details.dwa.01, 9/11/2019 1:19
ON								SWR P
PRC	PROJECT #			404-6023180				~SAN
SUF	SURVEY #			00-43863			3	2007 2017
SEC	SEC./TWN./RGE			9,10,15,16/35/17			5/17	an/P
SCA	SCALE			N.T.S.				Desi
VER ⁻	VERTICAL DATUM			NAVD 88			n L	

SHEET 01 OF 15

STATE OF

DESIGNED

ZNS 04/07/

10/2015

10/2015

JDS

BLR

- ALL CONSTRUCTION ACTIVITIES SHALL BE COORDINATED WITH THE PROJECT MANAGEMENT DIVISION. THE PROJECT MANAGER IS: MIKE STURM P.E. AND CAN BE REACHED AT (941) 708-7450; EXT. 7332
- 2. SITE VISITS ARE MANDATORY FOR ALL BIDDERS.
- 5. ALL CONSTRUCTION ON THIS PROJECT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF MANATEE COUNTY UTILITY AND TRANSPORTATION STANDARDS AND/OR FDOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" UNLESS OTHERWISE INDICATED ON THE PLANS.
- . THE FOLLOWING NGS VERTICAL CONTROL MONUMENT WAS RECOVERED AND UTILIZED FOR THE ELEVATIONS SHOWN HEREIN: "RED MAPLE" NAVD 1988 ELEVATION 18.70' A VALUE OF (+0.99') SHOULD BE APPLIED TO ALL ELEVATIONS FOR A CONVERSION TO NGVD 1929.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING ALL CONDITIONS AND REQUIREMENTS OF ALL PERMITS AND ALL GOVERNING FEDERAL, STATE, AND LOCAL AGENCIES. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS THAT ARE NOT PROVIDED IN THE BID DOCUMENTS, AT NO ADDITIONAL COST TO THE OWNER.
- THE INFORMATION PROVIDED IN THESE PLANS IS SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF THE CONDITIONS WHICH MAY BE ENCOUNTERED DURING THE COURSE OF WORK. ALL CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT WHATEVER INVESTIGATION THEY MAY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSIONS REGARDING THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED, AND UPON WHICH THEIR BIDS WILL BE BASED.
- THE CONTRACTOR SHALL REVIEW AND VERIFY ALL DIMENSIONS ON THE PLANS AND REVIEW ALL FIELD CONDITIONS THAT MAY AFFECT CONSTRUCTION. SHOULD DISCREPANCIES OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO OBTAIN THE ENGINEER'S CLARIFICATION BEFORE COMMENCING WITH CONSTRUCTION.
- 3. AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT SUNSHINE STATE ONE CALL OF FLORIDA AT 1-800-432-4770 OR THE NATIONAL 811 ONE CALL NUMBER WHEN APPLICABLE FOR UTILITY LOCATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH ALL UTILITIES FOR THE POSSIBLE RELOCATION OR THE TEMPORARY MOVEMENT OF ANY EXISTING UTILITIES WITHIN THE RIGHTS-OF-WAY.
-). NO WORK, EXCEPT FOR EMERGENCY TYPE, SHALL BE PERFORMED AFTER 7:00 PM AND BEFORE 7:00 AM. FOR ADDITIONAL PROJECT RESTRAINTS, REFER TO SECTION 01310 OF THE SPECIFICATIONS.

0. <u>SAFETY</u>

- 1. 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.
- 12. THE CONTRACTOR SHALL USE SHEET PILING, SHEETING, BRACING, ETC., AS REQUIRED IN ALL EXCAVATION AREAS AND CONFORM TO ALL OSHA REQUIREMENTS.
- 13. THE CONTRACTOR SHALL USE ALL NECESSARY SAFETY PRECAUTIONS TO AVOID CONTACT WITH OVERHEAD AND UNDERGROUND UTILITIES, POWER
- 4. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. THIS EXCLUSION DOES NOT ALLEVIATE THE CONTRACTOR FOR PROVIDING A CONTINUOUS SAFE WORKSPACE.

- 5. WHEN A BENTONITE SPILL OR FRACK-OUT OCCURS OR THERE IS A LOSS OF RETURN INDICATING EXCESSIVE SEEPAGE OR LOSS OF DRILLING FLUID, DRILLING MUST BE STOPPED UNTIL THE LOCATION OF THE SPILL IS IDENTIFIED. UNDER NO CIRCUMSTANCES WILL DRILLING CONTINUE
- 6. ONCE LOCATED, THE BENTONITE SPILL MUST BE ISOLATED AND SEEPAGE INTO ANY NEARBY WATER BODIES WILL BE BLOCKED DEPENDING ON THE DEGREE OF THE SPILL, THE ISOLATED BENTONITE MUST BE REMOVED MANUALLY OR MECHANICALLY AND DISPOSED OF BY APPROPRIATE MEANS OR REUSED.
- 7. 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.
- 8. 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.
- 19. 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.
- 20. 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.
- 21. 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.
- 22. SOIL DISPLACED BY CONSTRUCTION WILL BE REMOVED. EROSION CONTROL SHALL BE IMPLEMENTED IN AREAS WHICH ARE CONSIDERED ENVIRONMENTALLY SENSITIVE. EROSION CONTROL SYSTEMS SHALL BE REQUIRED FOR ALL WORK WITHIN JURISDICTIONAL AREAS. THESE SYSTEMS MAY INCLUDE STAKED HAY BALES, SILT SCREENS, FILTER FABRIC, AND TURBIDITY SCREENS.
- 23. ALL EROSION AND POLLUTION CONTROL DEVICES SHALL BE CHECKED REGULARLY, ESPECIALLY AFTER EACH RAINFALL AND SHALL BE CLEANED OUT AND/OR REPAIRED AS REQUIRED.
- 24. 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.
- 25. FOR MORE INFORMATION, SEE THE EROSION CONTROL DETAIL SHEET INCLUDED IN THE PLANS.

RIGHT-OF-WAY

- 26. ALL CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO WITHIN THE MANATEE COUNTY/FDOT RIGHT-OF-WAY AND/OR EASEMENTS SHOWN ON THE
- 27. 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.
- 28. 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.
- 29. 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.
- 30. 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.
- 31. THE CONTRACTOR SHALL COORDINATE THE CUTTING OF DRIVEWAYS WITH THE PROPERTY OWNER PRIOR TO CUT. ALL DRIVEWAYS WILL BE IN PASSABLE CONDITION AT THE END OF THE WORK DAY AND FULLY RESTORED PER SECTION 02575.
- 32. 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.

<u>UTILITIES</u>

- 33. LOCATIONS, ELEVATIONS AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES ARE SHOWN TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. THERE MAY BE OTHER IMPROVEMENTS, UTILITIES, ETC. WHICH ARE WITHIN THE PROJECT AREA AND WHICH HAVE NOT BEEN LOCATED OR IDENTIFIED, MAY NOT BE IN THE EXACT LOCATION SHOWN OR RELOCATED SINCE THE PREPARATION OF THESE PLANS. THE CONTRACTOR SHALL VERIFY, PRIOR TO CONSTRUCTION, THE LOCATIONS, ELEVATIONS AND DIMENSIONS OF ALL EXISTING UTILITIES STRUCTURES AND OTHER FEATURES (WHETHER OR NOT SHOWN ON THE PLANS) THAT MAY EFFECT HIS WORK. ALL EXISTING UTILITIES TO BE EXTENDED, CROSSED OR CONNECTION POINTS SHALL BE EXPOSED PRIOR TO CONSTRUCTION TO VERIFY LOCATION AND ELEVATION. ANY DISCREPANCIES OR CONFLICTS FOUND SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION FOR RESOLUTION.
- 34. THE CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, WATER AND SEWER LINES, STORM DRAINS, UTILITIES, DRIVEWAYS, SIDEWALKS, SIGNS, MAIL BOXES, FENCES, TREES, LANDSCAPING, AND ANY OTHER IMPROVEMENT OR FACILITY IN THE CONSTRUCTION AREA. THE CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY DAMAGED ITEM DUE TO HIS CONSTRUCTION ACTIVITIES TO EQUAL OR BETTER THAN PRE-CONSTRUCTION CONDITIONS AT NO ADDITIONAL COST TO THE OWNER.
- 35. THE CONTRACTOR SHALL USE APPROPRIATE TECHNIQUES, AS APPROVED, RECOMMENDED OR OFFERED BY FLORIDA POWER AND LIGHT TO

- PREVENT UNDERMINING OF POWER POLES DURING CONSTRUCTION. IF HOLDING OF POWER POLES IS RECOMMENDED OR REQUIRED BY THE UTILITY, THE CONTRACTOR SHALL COORDINATE THIS ACTIVITY WITH THE UTILITY AND BEAR ALL RELATED COSTS.
- 36. 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.
- 37. FOR WORK BEING DONE ON EXISTING SANITARY SEWER LINES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE FLOW OF ALL SEWAGE DURING CONSTRUCTION, WHICH MAY REQUIRE BY-PASS PUMPING AND/OR PUMPER TRUCKS. THE CONTRACTOR SHALL SUBMIT A DETAILED BY-PASS PUMPING PLAN PER SECTION 02720.

RESTORATION

- 38. ALL RESTORATION WORK PERFORMED THROUGHOUT THE PROJECT SHALL CONFORM TO EXISTING LINES AND GRADES UNLESS SHOWN OTHERWISE.
- 39. 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.
- 40. ALL CONCRETE THRUST BLOCKS INSTALLED FOR TESTING PURPOSES AND NOT REQUIRED FOR THE OPERATION OF THE PIPELINE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR, PRIOR TO FINAL ACCEPTANCE, AT NO ADDITIONAL COST TO THE OWNER.
- 41. ASPHALT DRIVES THAT ARE CUT SHALL BE RESTORED PER SECTION 02513.
- 42. CONCRETE DRIVEWAYS OR SIDEWALKS THAT ARE CUT SHALL BE RESTORED TO MATCH EXISTING ACCORDING TO THE CURRENT EDITIONS OF THE F.D.O.T. SPECIFICATIONS FOR ROAD AND BRIDGE DESIGN AND THE F.D.O.T. DESIGN STANDARDS. CONCRETE WITH A 3,000 PSI @ 28 DAYS SHALL BE USED.
- 43. 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.
- 44. 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.

- 45. 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.
- 46. NO MATERIAL SHALL BE STOCKPILED IN ROADWAYS. ALL DIRT AND DEBRIS SHALL BE REMOVED FROM THE JOB SITE DAILY. ROADS SHALL BE SWEPT DAILY AS PART OF DAILY CLEAN UP.
- 47. THE CONTRACTOR IS TO CONTROL ALL FUGITIVE DUST ORIGINATING ON THIS PROJECT BY WATERING OR OTHER METHODS AS REQUIRED
- 48. INGRESS AND EGRESS TO ALL THE PROPERTIES IN THE CONSTRUCTION AREA SHALL BE MAINTAINED AT ALL TIMES.
- 49. PRIOR APPROVAL WILL BE REQUIRED FOR REMOVAL OF ANY TREE WITHIN THE CONSTRUCTION AREA.
- 50. THE CONTRACTOR SHALL PROVIDE ALL DEWATERING EQUIPMENT NECESSARY TO KEEP ALL EXCAVATIONS DRY. DEWATERING IS REQUIRED TO 18" BELOW TRENCH BOTTOM.
- 51. 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.
- 52. ALL PIPE SHALL BE COLOR CODED TO CONFORM TO MANATEE COUNTY STANDARDS.
- 53. ALL PIPE AND FITTINGS SHALL BE INSTALLED AS RECOMMENDED BY THE MANUFACTURER AND ALL PIPE JOINTS SHALL BE RESTRAINED WHERE REQUIRED.
- 54. 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.
- 55. 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.
- 56. 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.
- 57. 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.
- 58. ONLY MANATEE COUNTY UTILITY OPERATIONS STAFF ARE AUTHORIZED TO OPERATE VALVES ON COUNTY OWNED AND MAINTAINED UTILITY SYSTEMS.
- 59. ALL PENETRATION OF EXISTING STRUCTURES SHALL BE BY THE MECHANICAL ROTARY CORE BORING METHOD.
- 60. ALL CONCRETE PENETRATED OR DISTURBED SHALL BE COATED WITH TWO COATS OF EPOXY.
- 61. THE CONTRACTOR, PRIOR TO ANY TEMPORARY WATER SHUT-OFFS DURING WATER MAIN TIE-IN, ETC., SHALL NOTIFY THE AFFECTED RESIDENTS BY POSTING INFORMATIONAL SIGNS IN THE NEIGHBORHOOD AT LEAST TWO DAYS (48 HRS) PRIOR TO THE WATER SHUT-OFF. REFERENCE SECTION 01580, PARAGRAPH 1.03 OF THE SPECIFICATIONS. WHEN FEASIBLE, "DOOR HANGERS" SHALL BE DELIVERED TO AFFECTED RESIDENCES AT LEAST TWO DAYS (48 HRS) PRIOR TO WATER SHUT-OFF. FOR LARGE PROJECTS WITH HUNDREDS OF HOMES AFFECTED. THE CONTRACTOR SHALL ALSO MAKE EXTENSIVE USE OF THE MEDIA AND SHALL HAVE PRIOR CONTACT WITH HOMEOWNER'S ASSOCIATIONS. WRITTEN NOTIFICATIONS SHALL ALSO BE FAXED TO THE TAMPA TRIBUNE, BRADENTON HERALD, SARASOTA HERALD TRIBUNE, WBRD RADIO, EMERGENCY COMMUNITY CENTERS, INSPECTIONS, WATER TREATMENT PLANT, WATER MANAGER, HELPLINE, CUSTOMER SERVICE, AND THE MANATEE COUNTY UTILITY OPERATIONS DEPARTMENT.
- 62. ALL NEW PIPE LINES SHALL BE PIG CLEANED (4" AND LARGER), FLUSHED, PRESSURE TESTED, DISINFECTED AND CERTIFIED PRIOR TO TIE-INS TO EXISTING FACILITIES. THE CONTRACTOR WILL BE ALLOWED TO USE TEMPORARY PLUGS FOR PIG CLEANING AND PRESSURE
- 63. ALL TEST POINT PIPING SHALL BE CUT LOOSE FROM THE CORPORATION STOP AND COMPLETELY REMOVED AND DISPOSED OF BY THE CONTRACTOR PRIOR TO FINAL ACCEPTANCE. A CORPORATION STOP PLUG SHALL BE INSTALLED AND THE CORPORATION STOP SHALL REMAIN IN
- 64. ALL EXISTING MAINS THAT ARE BEING REPLACED SHALL BE ABANDONED IN PLACE UPON ACCEPTANCE AND ACTIVATION OF THE NEW MAINS. ABANDONED MAINS SHALL BE CUT, FILLED WITH GROUT, AND CAPPED. REFER TO SECTION 02064 OF THE SPECIFICATIONS FOR GROUTING OF ABANDONED PIPE.
- 65. 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.
- 66. FIELD CONDITIONS MAY NECESSITATE MINOR ALIGNMENT AND GRADE DEVIATION OF THE PROPOSED UTILITIES TO AVOID OBSTACLES, AS ORDERED BY THE ENGINEER.
- 67. CONTRACTOR SHALL PROVIDE RECORD DRAWINGS IN ACCORDANCE WITH SECTION 1.14 IN THE CURRENT MANATEE COUNTY UTILITY STANDARDS AT NO COST TO THE OWNER. RECORD DRAWINGS SHALL BE SIGNED & SEALED BY A SURVEYOR CURRENTLY LICENSED BY THE STATE OF FLORIDA. ALL RECORD DRAWING INFORMATION REQUIREMENTS IN SECTION 1.14 SHALL BE STRICTLY ENFORCED. A COPY OF SECTION 1.14 WILL BE PROVIDED UPON REQUEST.
- 68. THE CONTRACTOR SHALL MAINTAIN AS-BUILT DRAWINGS OF THE WORK AS CONSTRUCTED. AS-BUILT DRAWINGS SHALL INCLUDE THE LOCATION OF ABANDONED MAIN CUT AND PLUG POINTS. AS-BUILT DRAWINGS SHALL BE ANNOTATED EACH DAY AS THE WORK PROCEEDS AND SHALL BE AVAILABLE TO THE COUNTY PROJECT MANAGER AND/OR FIELD INSPECTOR FOR REVIEW ON AN ONGOING BASIS. AS-BUILT DRAWINGS SHALL PROVIDE THE HORIZONTAL AND VERTICAL INSTALLED LOCATION OF ALL NEW PIPELINE, FITTINGS, VALVES AND 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 PROCEEDS.

MAINTENANCE OF TRAFFIC

- 69. THE CONTRACTOR IS RESPONSIBLE FOR ANY TRAFFIC CONTROL PLAN (TCP) IMPLEMENTED. THE TRAFFIC CONTROL PLAN SHALL BE PREPARED BY AN INDIVIDUAL CERTIFIED TO PREPARE A TRAFFIC CONTROL PLAN 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. THE TCP SHALL 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.
- 70. THE CONTRACTOR PRIOR TO CONSTRUCTION AND RESTRICTING ANY TRAFFIC, MUST OBTAIN A RIGHT-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.
- 71. THE CONTRACTOR SHALL USE, BUT ARE NOT LIMITED TO, FDOT INDICES 415, 600, 615, 616, AND 621. THE RECOMMENDED FDOT DESIGN STANDARD INDICES ARE CONCEPTUAL.
- 72. 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.

73. MOTORIZED AND MECHANICAL EQUIPMENT SHALL BE EFFECTIVELY SHIELDED, PADDED, OR LOCATED TO MINIMIZE NOISE.

- 74. 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.
- 75. ACCESS TO ALL SIDE STREETS AND DRIVEWAYS MUST BE PROVIDED AND MAINTAINED DURING CONSTRUCTION
- 76. 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
- 77. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO WORKING NEAR THEIR EXISTING FACILITIES.
- 78. CONSTRUCTION SEQUENCES SHALL BE COORDINATED TO PROVIDE POSITIVE DRAINAGE OF THE TRAVELWAYS AT ALL TIMES.
- 79. ANY MOT ITEM NOT SPECIFICALLY LISTED UNDER A PARTICULAR PAY ITEM SHALL BE CONSIDERED SUBSIDIARY TO OTHER BID ITEMS. THERE SHALL BE NO SEPARATE PAYMENT.
- 80. THE MAXIMUM SPACING BETWEEN WARNING DEVICES USED FOR DELINEATION BETWEEN THE TRAVELWAY(S) AND CONSTRUCTION AREA SHALL BE AS PER FDOT STANDARD INDEX 600.
- 81. 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 SHALL 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.
- 82. A MINIMUM OF TWO LANES OF TRAFFIC MUST BE MAINTAINED FOR EAST/WEST TWO-WAY TRAFFIC FLOW. THE NORTHERN WEST-BOUND TRAFFIC LANES ON 53RD AVENUE WEST MAY BE USED FOR EAST/WEST TWO-TRAFFIC FLOW.

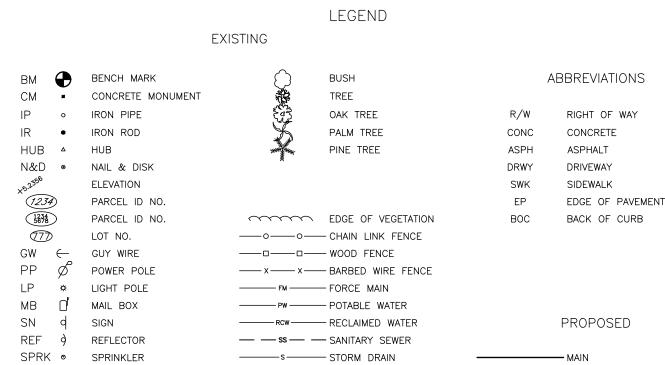
ATMS FIBER AND CONSTUCTION

83. CONFLICTS BETWEEN EXISTING FIBER OPTIC CABLE (FOC) AND THE PROPOSED CONSTRUCTION SHALL BE RESOLVED BY THE CONTRACTOR AS FOLLOWS:

- a. PROPOSED RELOCATION WORK SHALL NOT INCLUDE ANY ADDITIONAL OR NEW SPLICES.
- b. FOC SHALL BE REPLACED FROM EXISTING SPLICE POINT TO EXISTING SPLICE POINT (SPLICE POINT LOCATIONS MAY EXCEED THE LIMITS OF THE PROPOSED CONSTRUCTION).
- c. ALL FOC ROUTE MARKERS SHALL BE RELOCATED AS NEEDED. THE CONTRACTOR SHALL PROVIDE A PLAN SHEET SHOWING PROPOSED /
- NEW FOC LOCATION FOR APPROVAL BY MANATEE COUNTY TRAFFIC ENGINEERING. d. PLACE THE FOLLOWING NOTES ON THIS SHEET:
- 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).
- ALL MATERIAL REMOVED SHALL BE REPLACED WITH LIKE KIND TYPE AND SPECIFICATION. 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.
- THE DEVELOPER WILL NEED TO HIRE A CERTIFIED CONTRACTOR THAT IS LICENSED TO PERFORM THIS WORK TO RELOCATE THE ATMS INFRASTRUCTURE AT THEIR COST • 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. THE CONTRACTOR MUST PROVIDE A SPLICE DIAGRAM FOR THE PROPOSED SPLICE ENCLOSURE AT THIS TIME.

f. 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. g. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING RIGHT-OF-WAY USE PERMITS WITH MATT MERUCCI, MANATEE COUNTY PUBLIC
- WORKS INFRASTRUCTURE INSPECTION OFFICER, AT (941) 7087450, EXT. 7342. h. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING BOND REQUIREMENTS WITH JANE OLIVER, MANATEE COUNTY PUBLIC WORKS SENIOR ADMINISTRATIVE SPECIALIST, AT (941) 708-7450, EXT. 7613



——— GAS ——— GAS LINE BFP -O- BACKFLOW PREVENTER ——— онтv ——— OVERHEAD TV ■ BLOW OFF VALVE ------ UGTV ------- UNDERGROUND TV ------ OVERHEAD ELECTRIC FIRE HYDRANT WATER VALVE -----OH VER ----- OVERHEAD VERIZON AIR RELEASE VALVE ----- US VER ----- UNDERGROUND VERIZON SANITARY SEWER MANHOLE ------ VER ------ VERIZON TEL ŒD UTILITY BOX ----- EDGE OF CONCRETE UTILITY RISER — — — — EDGE OF ROAD ---- TOE OF SLOPE FLOW DIRECTION

PROPOSED SERVICE LINE FIRE HYDRANT VALVE SANITARY SEWER MANHOLE BLOW OFF ASSEMBLY REDUCER HORIZONTAL BEND VERTICAL BEND MASTER METER ASSEMBLY SERVICE LINE & METER

DOUBLE SERVICE

EMERGENCY CONTACTS

— — — — TOP OF BANK

FLORIDA POWER & LIGHT MANATEE COUNTY PUBLIC WORKS DEPT. GREG COKER SCOTT MAY, P.E. 1253 12TH AVENUE EAST 1022 26TH AVENUE EAST PALMETTO, FL 34221 BRADENTON, FL. 34208 (941) 723-4430 (941) 708-7450 EXT. 7650 FAX: (941) 723-4444 FAX: (941) 708-7415 EMERGENCY: 1-800-4-OUTAGE

GI **Ⅲ**

GRATE INLET

MITERED END SECTION

Greg_Coker@fpl.com TECO/PEOPLES GAS CO. MANATEE COUNTY HEALTH DEPT. DAN SHANAHAN HANS ROESE 8261 VICO COURT 410 6th AVENUE EAST SARASOTA, FL. 34240 BRADENTON, FL. 34208 (941) 342-4030 (941) 748-0747 EXT. 1355 FAX: (941) 342-4011 EMERGENCY: 1-877-832-6911 FAX: (941) 750-9364

VERIZON FLORIDA INC. SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT JOHN PLOTT SARASOTA SERVICE OFFICE 1701 RINGLING BLVD. SARASOTA, FL. 34236 STEVE LOPES, P.E. 6750 FRUITVILLE ROAD (941) 906-6707 SARASOTA, FL. 34240 FAX: (941) 906-6706 (941) 377-3722 John.Plott@verizon.com FAX: (941) 373-7660

FLORIDA GAS TRANSMISSION CHAD HARRELL 7804 ANDERSON RD. TAMPA FL 33634 PHONE: (813) 466-3327 E-mail: chad.harrell@sug.com

FDEP, SOUTHWEST DISTRICT ED WATSON 13051 N. TELECOM PKWY TEMPLE TERRACE, FL 33637 (813) 470-5875 FAX: (813) 470-5993

BRIGHT HOUSE NETWORKS TOM WRIGHT 5413 E. STATE ROAD 64 BRADENTON, FL. 34208-5535 (941) 748-3816 EXT. 21348 Tom.Wright@mybrighthouse.com

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

P.O. BOX 1310 WACHULA, FL 33873 KENDELL COKER (863) 767-4660 kendell.coker@preco.coop MANATEE COUNTY PUBLIC WORKS DEPT./TRAFFIC ENGINEERING/

PEACE RIVER ELECTRIC

COOPERATIVE, INC.

ATMS 2101 47TH TERRACE EAST BRADENTON, FL 34203 VISHAL KAKAAD, P.E. (941) 749-3500 EXT. 7812 FAX: (941) 749-3571

vishal.kakkad@mymanatee.org.

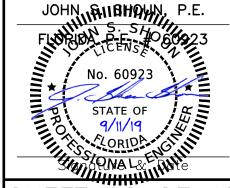


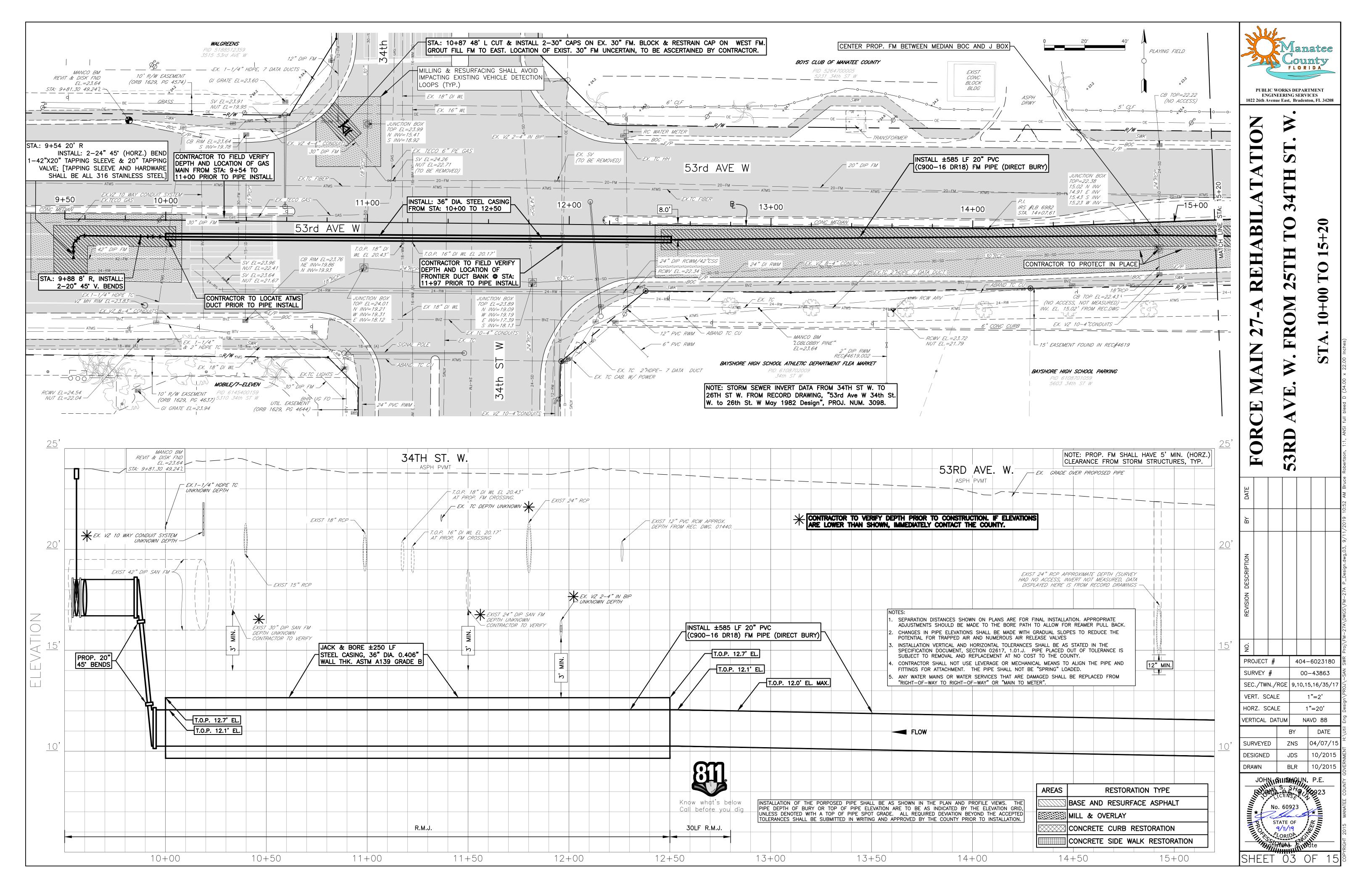
ENGINEERING SERVICES 1022 26th Avenue East, Bradenton, FL 34208

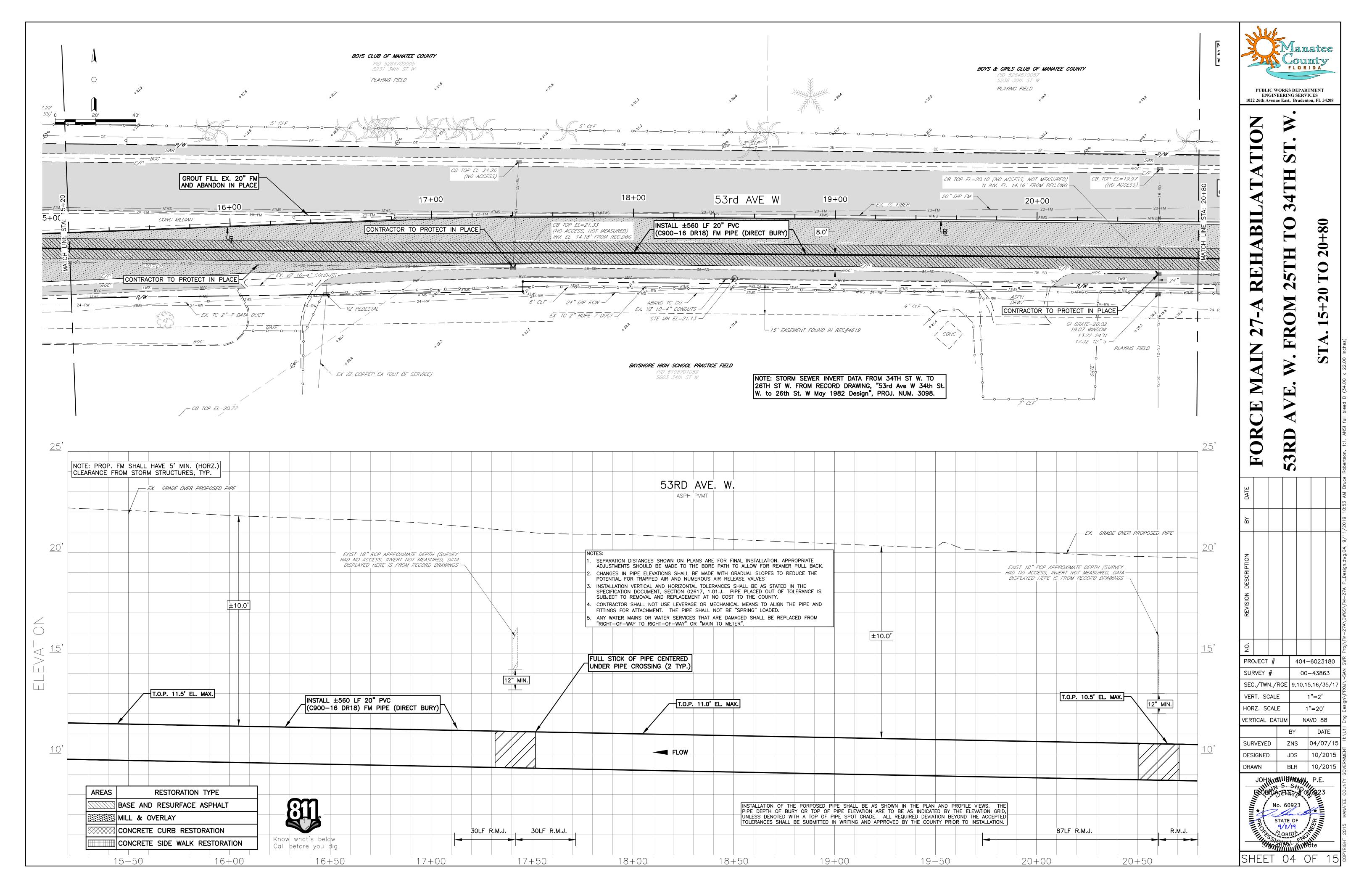
PROJECT #

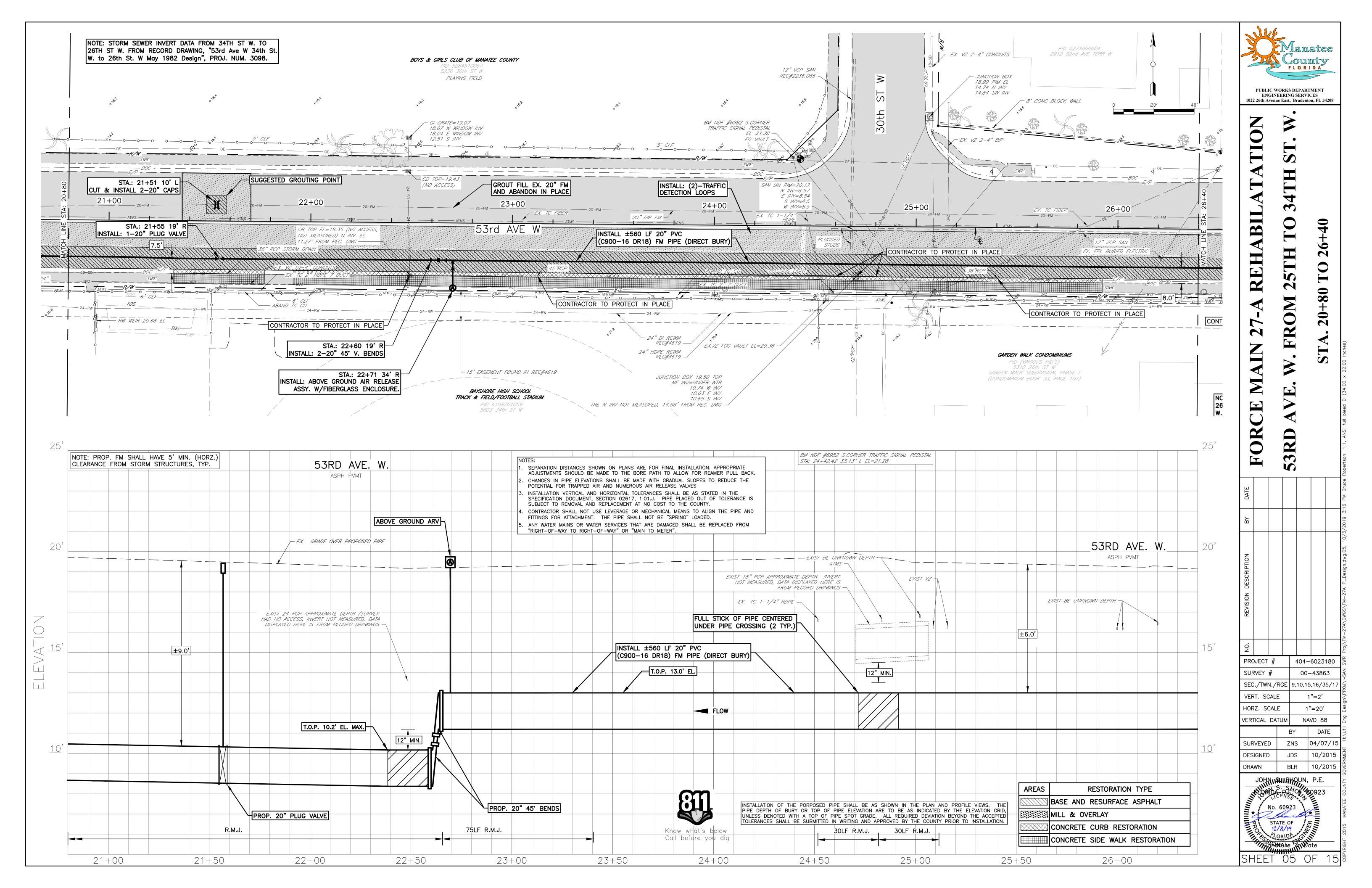
404-6023180 SURVEY # 00-43863 SEC./TWN./RGE 9,10,15,16/35/1 SCALE N.T.S. VERTICAL DATUM NAVD 88 DATE BY 04/07/ SURVEYED ZNS DESIGNED 10/2015 JDS

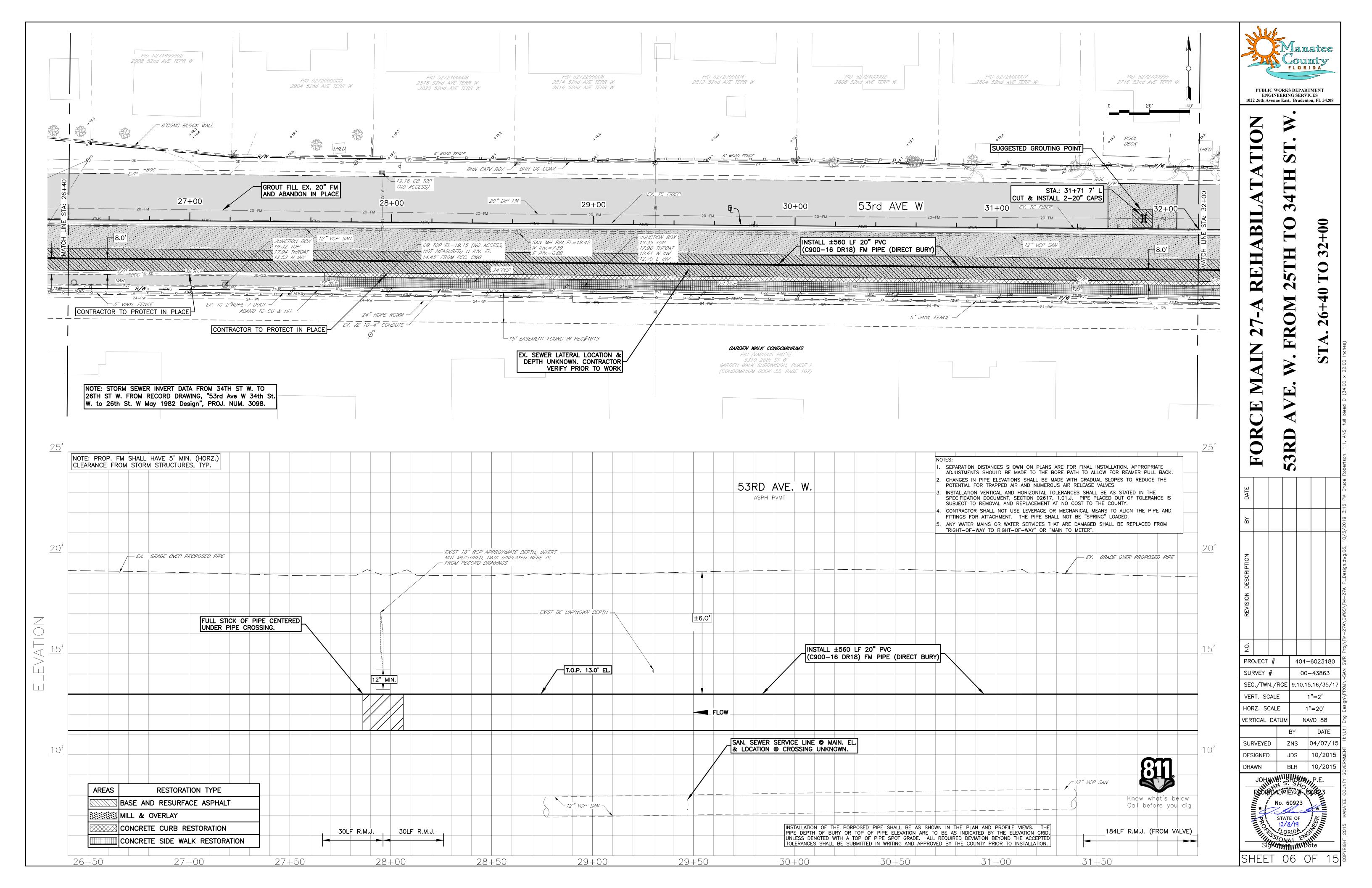
10/2015 DRAWN BLR No. 60923 STATE OF 9/11/19

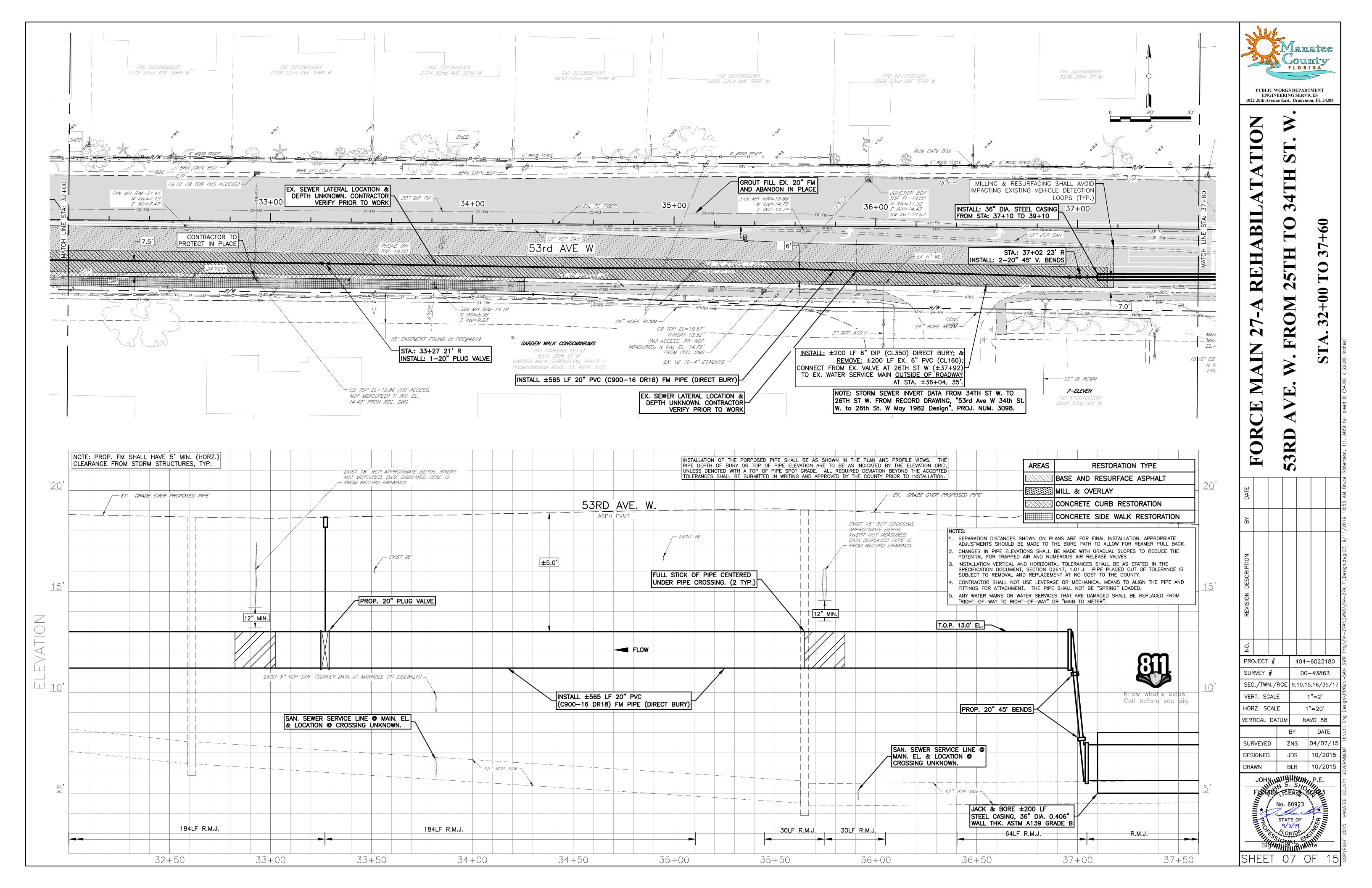


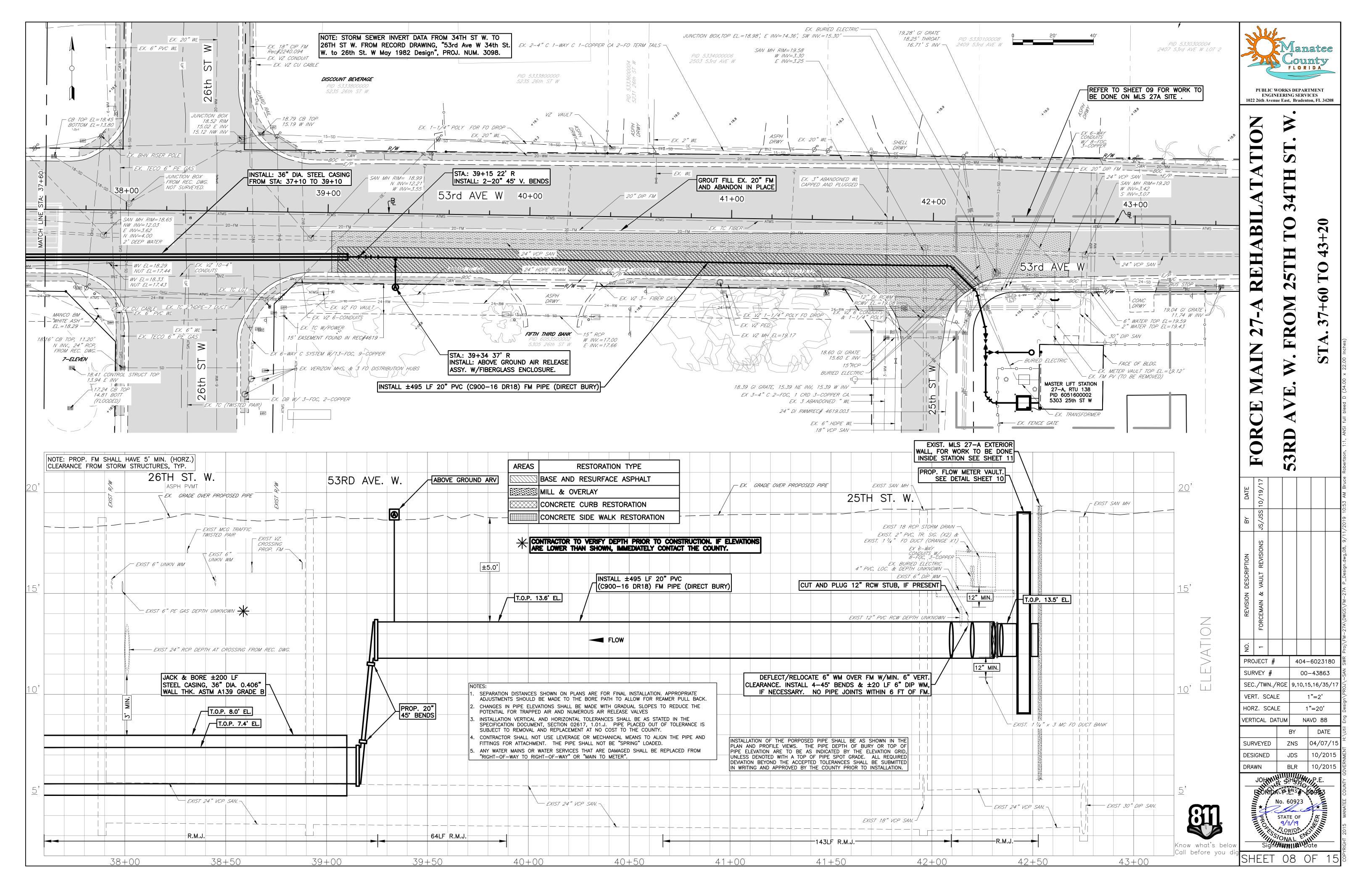


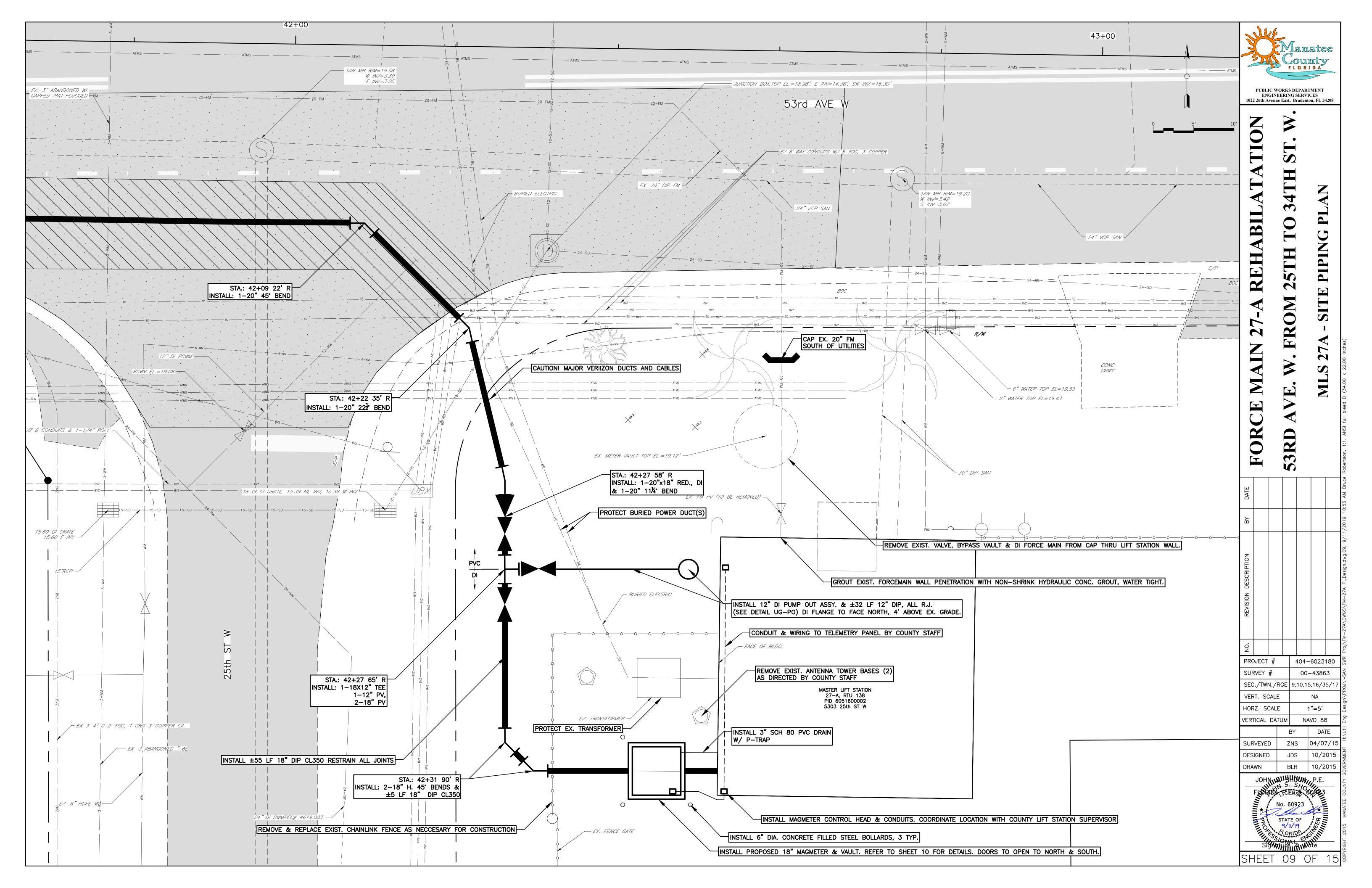










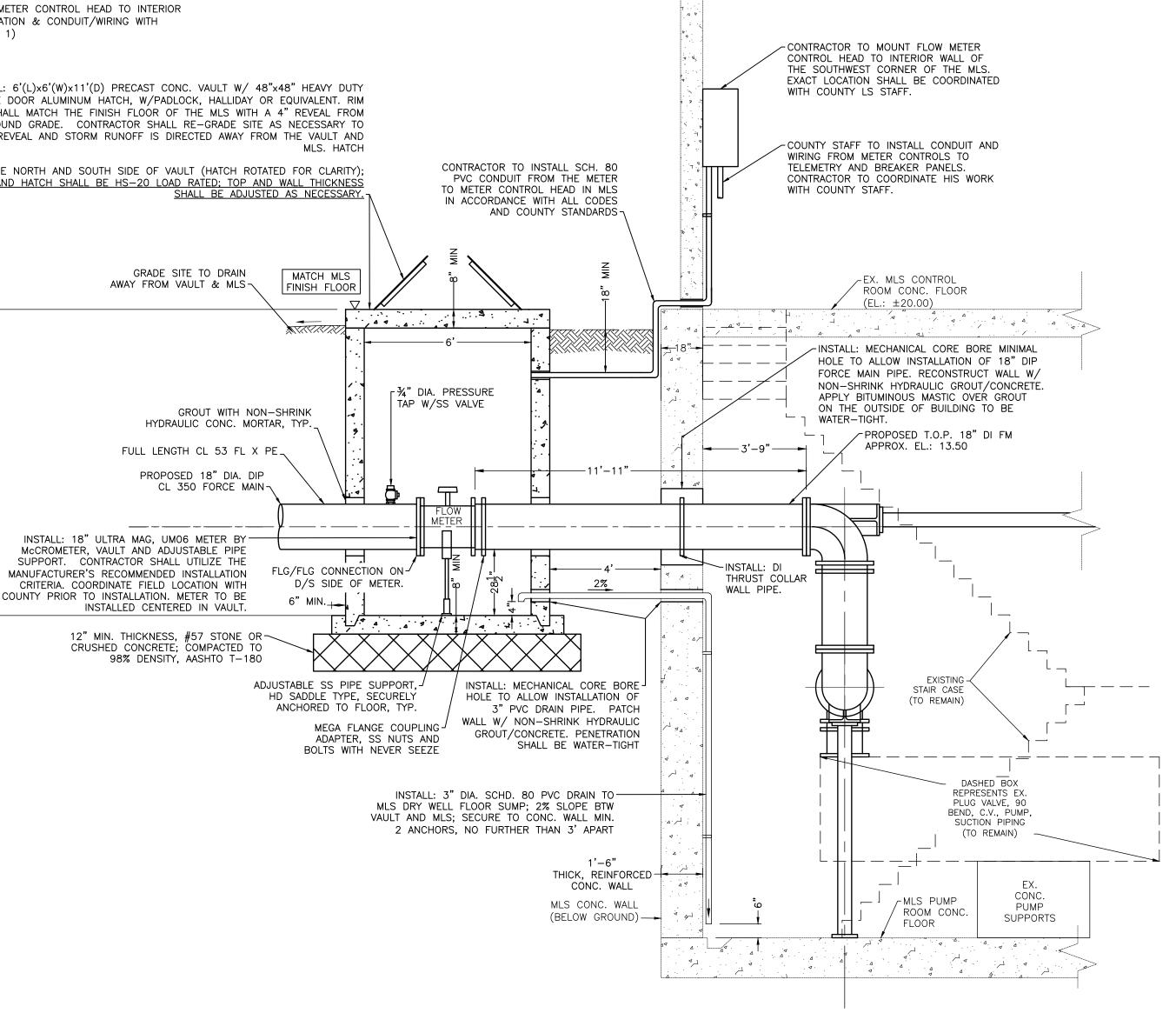




CONTRACTOR TO MOUNT FLOW METER CONTROL HEAD TO INTERIOR WALL IN MLS. COORDINATE LOCATION & CONDUIT/WIRING WITH COUNTY L.S. STAFF. (SEE NOTE 1)

CONTRACTOR TO MOUNT FLOW METER CONTROL HEAD TO INTERIOR WALL OF THE SOUTHWEST CORNER OF THE MLS. EXACT LOCATION SHALL BE COORDINATED INSTALL: 6'(L)x6'(W)x11'(D) PRECAST CONC. VAULT W/ 48"x48" HEAVY DUTY WITH COUNTY LS STAFF. DOUBLE DOOR ALUMINUM HATCH, W/PADLOCK, HALLIDAY OR EQUIVALENT. RIM ELEVATION SHALL MATCH THE FINISH FLOOR OF THE MLS WITH A 4" REVEAL FROM SURROUND GRADE. CONTRACTOR SHALL RE-GRADE SITE AS NECESSARY TO ENSURE 4" REVEAL AND STORM RUNOFF IS DIRECTED AWAY FROM THE VAULT AND COUNTY STAFF TO INSTALL CONDUIT AND WIRING FROM METER CONTROLS TO CONTRACTOR TO INSTALL SCH. 80 TELEMETRY AND BREAKER PANELS. HINGES TO BE NORTH AND SOUTH SIDE OF VAULT (HATCH ROTATED FOR CLARITY); PVC CONDUIT FROM THE METER CONTRACTOR TO COORDINATE HIS WORK THE VAULT AND HATCH SHALL BE HS-20 LOAD RATED; TOP AND WALL THICKNESS TO METER CONTROL HEAD IN MLS WITH COUNTY STAFF. IN ACCORDANCE WITH ALL CODES AND COUNTY STANDARDS -GRADE SITE TO DRAIN MATCH MLS EX. MLS CONTROL AWAY FROM VAULT & MLS~ FINISH FLOOR ROOM CONC. FLOOR -INSTALL: MECHANICAL CORE BORE MINIMAL HOLE TO ALLOW INSTALLATION OF 18" DIP FORCE MAIN PIPE. RECONSTRUCT WALL W/ NON-SHRINK HYDRAULIC GROUT/CONCRETE. Γ¾" DIA. PRESSURE APPLY BITUMINOUS MASTIC OVER GROUT TAP W/SS VALVE ON THE OUTSIDE OF BUILDING TO BE GROUT WITH NON-SHRINK HYDRAULIC CONC. MORTAR, TYP. PROPOSED T.O.P. 18" DI FM APPROX. EL.: 13.50 3'−9" → FULL LENGTH CL 53 FL X PE. PROPOSED 18" DIA. DIP CL 350 FORCE MAIN~

- . CONTRACTOR SHALL INSTALL ALL CONDUITS AND WIRING FROM MAGMETER TO CONTROL HEAD, INCLUDING CONDUIT & 110VAC AND SHIELDED TWO PAIR CABLE TO THE METER CONTROLS ON WALL (SEE PHOTO). COORDINATE EXACT LOCATION WITH COUNTY LIFT STATION STAFF.
- . COUNTY WILL LAND THE 4-20MA SIGNAL WIRE TO THE SCADA AND INSTALL CONDUIT AND WIRING FROM THE METER CONTROLS TO THE TELEMETRY AND BREAKER PANELS.
- MAGMETER SHALL BE FURNISHED, INSTALLED & CALIBRATED BY THE CONTRACTOR IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS & REQUIREMENTS. INSTALL 18" MAGMETER MCCROMETER ULTRAMAG UM06 W/ 316 SS GROUND RINGS & ELECTRODES, FLANGES & CABLE LENGTH AS REQUIRED, KIT FOR POTTED AND FITTED CABLE. METER AND ALL ELECTRICAL IN VAULT SHALL BE RATED FOR CONTINUOUS SUBMERSION. ALL ELECTRICAL WORK SHALL COMPLY WITH THE CURRENT NEC, NESC AND LOCAL CODES, INCLUDING COUNTY AND MANUFACTURER'S REQUIREMENTS. CONTRACTOR SHALL PROVIDE ALL GROUNDING REQUIREMENTS AS RECOMMENDED BY THE METER MANUFACTURER.
- H. REFER TO MANATEE COUNTY STDS. SECTION 1.13.2C FOR ADDITIONAL HATCH REQUIREMENTS.
- 5. SITE VISITS ARE MANDATORY FOR ALL BIDDERS. THESE SITE VISITS CAN BE ARRANGED THROUGH NICK WAGNER, LIFT STATION SUPERINTENDENT, 941-792-8811 X5377.
- . ALL CONSTRUCTION ON THIS PROJECT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF MANATEE COUNTY UTILITY AND TRANSPORTATION STANDARDS AND FDOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" UNLESS OTHERWISE INDICATED ON THE PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING ALL CONDITIONS AND REQUIREMENTS OF ALL PERMITS AND ALL GOVERNING FEDERAL, STATE, AND LOCAL AGENCIES. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS THAT ARE NOT PROVIDED IN THE BID DOCUMENTS, AT NO ADDITIONAL COST TO THE OWNER.
- . THE INFORMATION PROVIDED IN THESE PLANS IS SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF THE CONDITIONS WHICH MAY BE ENCOUNTERED DURING THE COURSE OF WORK. ALL CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT WHATEVER INVESTIGATION THEY MAY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSIONS REGARDING THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED, AND UPON WHICH THEIR BIDS WILL BE BASED.
- ALL DIMENSIONS ARE CONSIDERED APPROXIMATE. 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 COUNTY TO OBTAIN THE ENGINEER'S CLARIFICATION BEFORE COMMENCING WITH
- 10. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. THIS EXCLUSION DOES NOT ALLEVIATE THE CONTRACTOR FROM PROVIDING A CONTINUOUS SAFE WORKSPACE.
- 11. THE CONFIGURATION OF THE MASTER LIFT STATION SHOWN ON THESE GRAPHICS MAY VARY FROM THE ACTUAL STRUCTURE. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITION, ELEVATIONS, CONFIGURATIONS, ETC FOR ACCURACY.
- 12. CONTRACTOR IS RESPONSIBLE FOR ALL LABOR, EQUIPMENT, AND ALL MATERIALS REQUIRED TO COMPLETE THE JOB AS INTENDED.
- 13. CONTRACTOR SHALL PROVIDE, AT A MINIMUM, SHOP DRAWINGS OF THE CONDUIT AND WIRING, METER VAULT, HATCH, AND METER/METER CONTROLS FOR REVIEW AND APPROVAL BY



PROPOSED CONDITIONS

(SECTION VIEW - LOOKING NORTH)

-WALLS SHOWN FOR

ILLUSTRATIVE PURPOSES ONLY, LOCATIONS NOT TO SCALE

1022 26th Avenue East, Bradenton, FL 34208

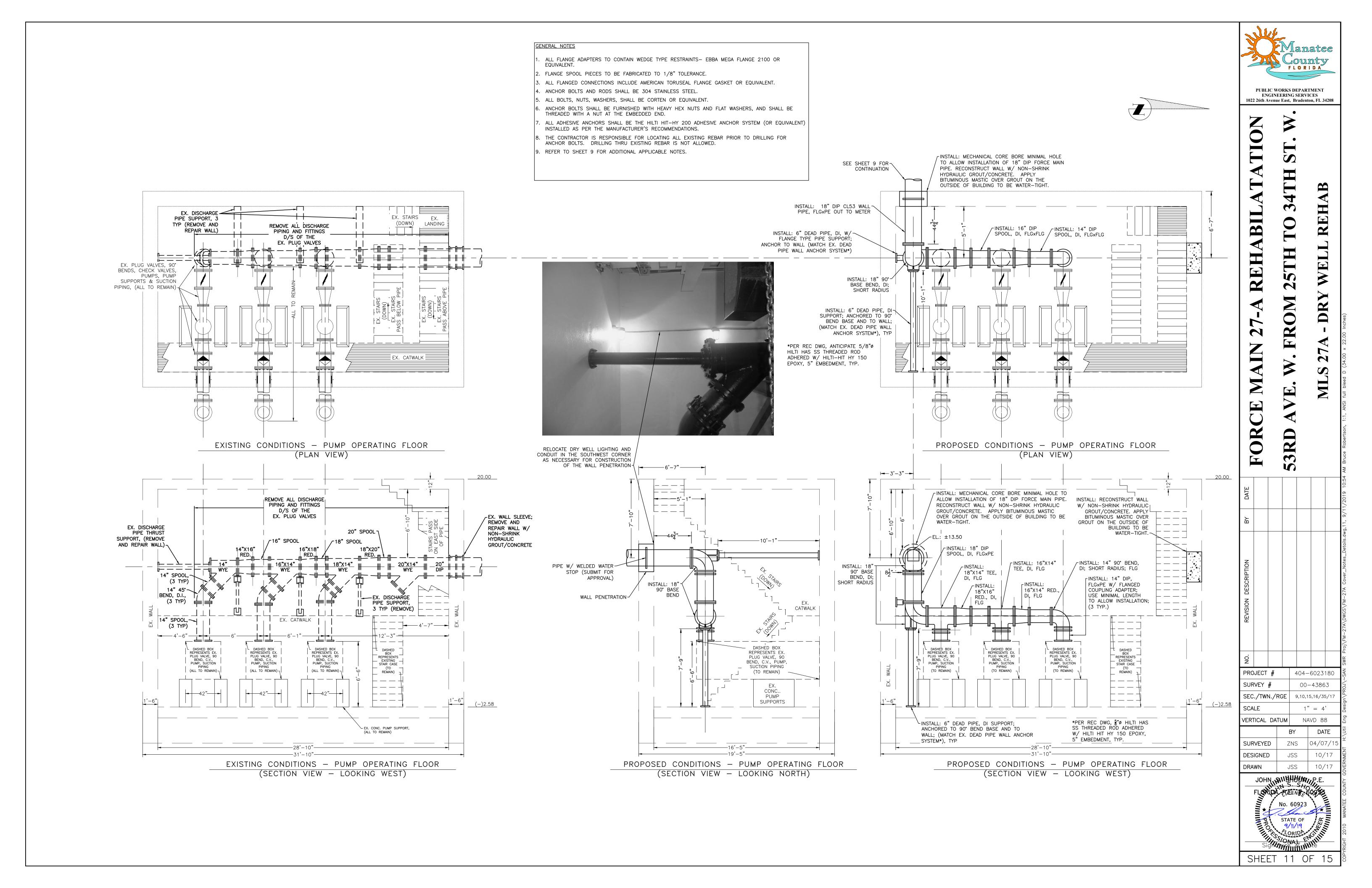
 \Box

FLORIDA

PUBLIC WORKS DEPARTMENT ENGINEERING SERVICES

PROJECT # 404-6023180 SURVEY # 00-43863 SEC./TWN./RGE 9,10,15,16/35/1 SCALE N.T.S. VERTICAL DATUM NAVD 88 DATE BY ZNS | 04/07/1 SURVEYED

DESIGNED JSS 10/2015 10/2015 DRAWN JSS STATE OF



AREA	RESTORATION	QTYS. THIS PAGE	UNITS
	BASE AND RESURFACE ASPHALT	3460	SY
	MILL & RESURFACE ASPHALT	7785	SY
	CONCRETE CURB RESTORATION	1110	LF
	CONCRETE SIDEWALK RESTORATION	610	SY

SUGGESTED CONSTRUCTION SEQUENCE:

- 1. PREPARE EROSION AND CONTROL (EC), MAINTENANCE OF TRAFFIC (MOT), AND FORCE MAIN BY-PASS PLANS AND SUBMIT TO COUNTY FOR REVIEW AND ACCEPTANCE. PERFORM SOFT DIGS TO LOCATE POTENTIAL UTILITY AND STORM DRAIN CONFLICTS. REFER TO SPECS SECTION 01030 FOR SPECIAL MOT
- 2. SETUP AND MAINTAIN EC AND MOT. ADJUST LOCATIONS ACCORDING TO PHASING.
- 3. INSTALL PROPOSED FORCE MAIN, CASINGS, AND REQUIRED TRENCH SECTIONS. PIG AND PRESSURE TEST PROPOSED FORCE MAIN, SUBMIT DRAFT RECORD DRAWINGS OF INSTALLED FORCE MAIN, ALLOW FOR FDEP CERTIFICATION, INSTALL TEMP. BY-PASS PUMPS AND PIPING, DIVERT FLOW TO PROPOSED
- 4. ALL PROPOSED A.R.V.'S SHALL BE INSTALLED AFTER THE COMPLETE INSTALLATION OF PROPOSED FORCE MAIN TO ENSURE ALL A.R.Y'S ARE LOCATED AT THE HIGH POINTS IN THE INSTALLED FORCE
- 5. MASTER LIFT STATION 27A IS RATED 2,950 GPM AT 58 FT TDH. DURING AND AFTER WET WEATHER, ACTUAL FLOW & PRESSURE MAY EXCEED THESE VALUES.
- 6. INSTALL DISCHARGE PIPING, INSTALL VAULT & METER, CONNECT TO PROPOSED FORCE MAIN AT LIFT STATION, REMOVE BY-PASS PUMPS AND PIPING.
- 7. GROUT EXISTING FORCE MAIN, COMPLETE ALL RESTORATION & PAVING, REMOVE M.O.T.
- 8. SHUT EXISTING 30" FM VALVE AT STA. 10+50, 50'L AND EXISTING 12" FM VALVE (FM 30AA) AT STA. 10+90, 50'L TO ALLOW CAPPING OF 30" FM. CONTRACTOR SHALL COORDINATE SHUTDOWN OF LIFT STATION 30AA WITH COUNTY STAFF AND PROVIDE TANKER TRUCKS TO HANDLE 30AA FLOWS DURING CAPPING OF 30" FM AS REQUIRED. LS 30AA IS LOCATED AT 4602 34TH ST. W. AND IS RATED AT 1.000 GPM AT 90 FT TDH.

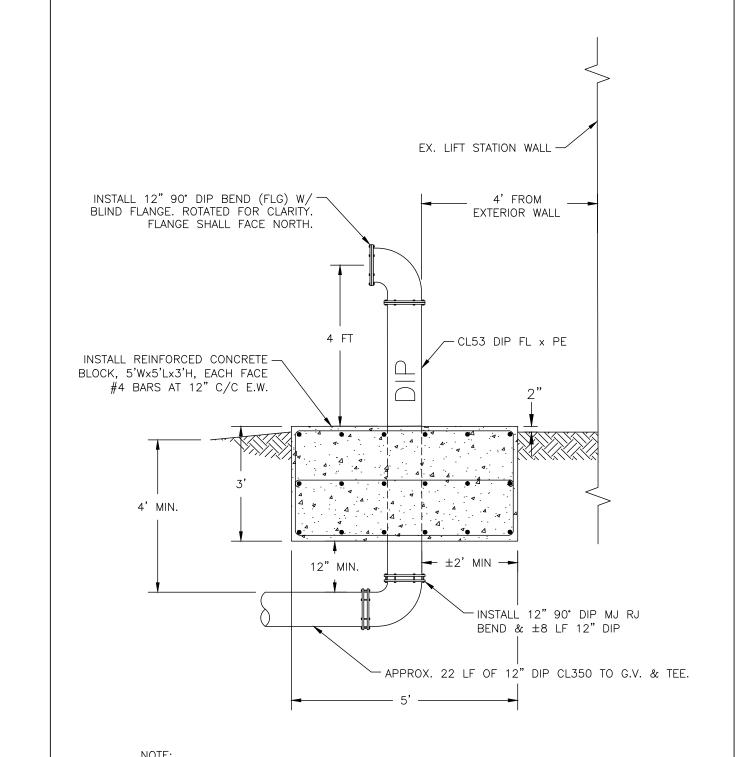
- 1. THE COUNTY WILL PROVIDE ONE LIFT STATION SHUTDOWN OF EACH LIFT STATION (27-A & 30AA) AT NO COST TO THE CONTRACTOR. THE COUNTY SHALL CHARGE THE CONTRACTOR \$3,500 FOR EACH ADDITIONAL SHUTDOWN, IF NEEDED.
- 2. CONTRACTOR SHALL COORDINATE HIS WORK AND ACCESS TO THE SITE WITH THE COUNTY UTILITY OPERATIONS STAFF AT NO ADDITIONAL COST TO THE COUNTY.

MANATEE COUNTY

PUBLIC WORKS DEPARTMENT

DATE OF APPROVAL

REV.BY DATE



1. 3" CONC. COVER FOR ALL REBAR

DATE OF APPROVAL

½ PIPE LENGTH —

MANATEE COUNTY

PUBLIC WORKS DEPARTMENT

PUBLIC WORKS DEPARTMENT

DATE OF APPROVAL

REV.BY DATE

12" PUMP OUT

DETAIL

PIPE JOINT (TYP.)

CONCRETE FILLED 6" RIGID -GALVANIZED STEEL PIPE √1" WIDE RED REFLECTOR 360° YELLOW PVC SLEEVE. SLOPE FOR DRAINAGE. CONCRETE SHALL BE -2 INCHES HIGHER THAN SURROUNDING (TYP) NATURAL GROUND: SHOULD BE SLIGHLY MOUNDED WHEN INSTALLED IN CONCRETE ~UNDISTURB SOIL CONCRETE -FONDATION

REV.BY DATE

EXIST. BACK -7

OF CURB

BE DUCTILE IRON PIPE.

REV.BY DATE

UG-2

MANATEE COUNTY PUBLIC WORKS DEPARTMENT

DATE OF APPROVAL

UG-PO

MANATEE COUNTY

PUBLIC WORKS DEPARTMENT

BOLLARDS SHALL BE LOCATED NOT LESS THAN 3 FEET FROM THE PROTECTED OBJECT. BOLLARDS SHALL BE SPACED NOT MORE THAN 4 FEET OC, UNLESS OTHERWISE DIRECTED.

BOLLARD DETAIL

SQUARE

3.000 PSI

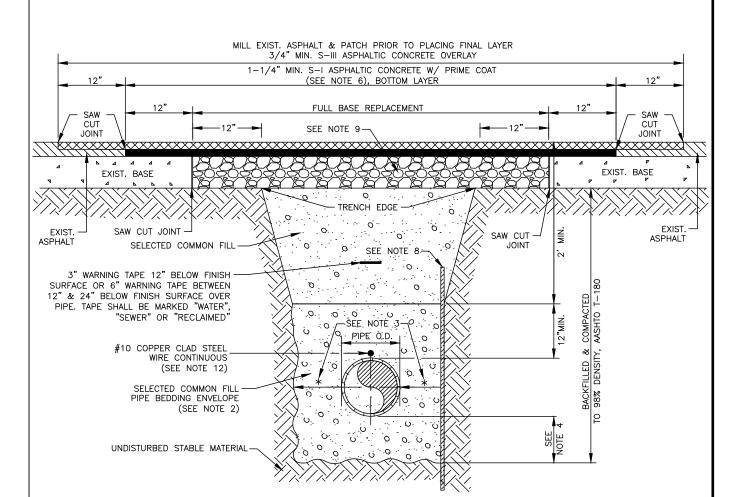
. LOCATION OF BOLLARDS SHALL NOT INTERFERE WITH ANY ACCESS DOORS, GATES, EQUIPMENTS. ALL ACCESSES SHALL BE ABLE TO FULLY OPEN.

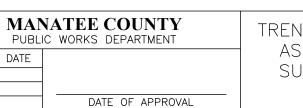
BITUMINOUS PAVEMENT SHALL BE REMOVED IN CLEAN STRAIGHT LINES BY SAW CUTTING. WHERE BITUMINOUS PAVEMENT ADJOINS A TRENCH, THE EDGES ADJACENT TO THE TRENCH SHALL BE TRIMMED TO A NEAT STRAIGHT LINES BEFORE RESURFACING TO ENSURE THAT ALL AREAS TO BE RESURFACED ARE ACCESSIBLE TO ROLLERS OR TAMPERS USED TO COMPACT THE SUB-GRADE OR PAVING MATERIALS. USE OF TYPE A-2 AND A-3 PIPE BEDDING TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

PROVIDE ADEQUATE CLEARANCE TO PLACE AND COMPACT STAGE 1 BEDDING MATERIAL IN TRENCH AREA BELOW PIPE SPRINGLINE. PIPE EMBEDMENT MUST BE COMPACTED OUT TO THE TRENCH WALL OR 2.5 TIMES THE PIPE OD, WHICHEVER IS LESS.

TYPICALLY 4" TO 6". PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.

- ASPHALTIC CONCRETE STRUCTURE COURSE WITH PRIME COAT SHALL BE THE SAME DEPTH AND TYPE AS EXISTING OR A MINIMUM OF 1-1/4 INCH S-I, WHICHEVER IS GREATER.
- MILL 36" BACK FROM EDGE OF TRENCH. ADJUST MILLING PER INDIVIDUAL SITE TO NOT IMPACT BASE. BUTT JOINT TO EXIST ASPHALT. FINAL OVERLAY TO MATCH EXISTING WITH NO DISCERNABLE "BUMP" AT JOINT. MILLING LIMITS THAT IMPACT INTERSECTION SHALL BE ADDRESSED ON A CASE BY CASE BASIS AND APPROVED BY MANATEE COUNTY.
- SHEETING ORDERED LEFT IN PLACE TO BE CUT OFF 24" BELOW FINISHED GRADE OR 12" BELOW SUBGRADE. NEW BASE SHALL MATCH EXISTING; OR BE CRUSHED CONCRETE, 8" MIN. THICKNESS, LBR ≥150, WHICHEVER IS
- D. TEMPORARY 2" THICK ASPHALT CONCRETE PATCH(ES) WILL BE INSTALLED TO PROVIDE A SMOOTH ALL WEATHER SURFACE AT ALL TIMES. PERMANENT REPLACEMENT TO BE MADE AS SOON AS POSSIBLE.
- . RESTORE SIGNAGE & MARKING WITH THERMOPLASTIC PER FDOT STANDARDS, LATEST EDITION.
- 12. TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.
- 3. NOTES 6. THRU 10. ARE MINIMUM REQUIREMENTS FOR A TRENCH IN A LOCAL ROAD. REFER TO LATEST EDITION OF MANATEE COUNTY HIGHWAY AND TRAFFIC STANDARDS FOR ADDITIONAL REQUIREMENTS.





TRENCH CROSSING WITH ASPHALT PAVEMENT SURFACE TYPE A-1 PIPE BEDDING

Manatee

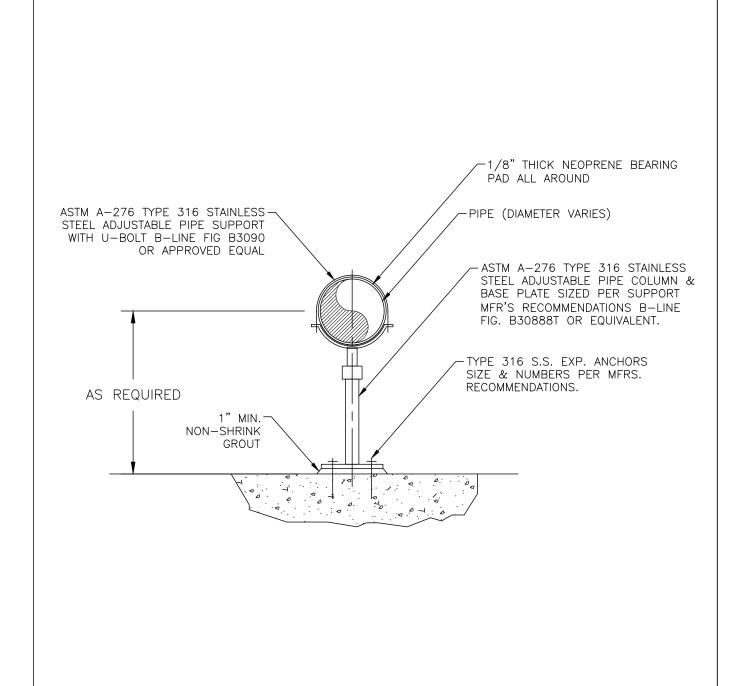
FLORIDA

Zala County

PUBLIC WORKS DEPARTMENT

ENGINEERING SERVICES

1022 26th Avenue East, Bradenton, FL 34208

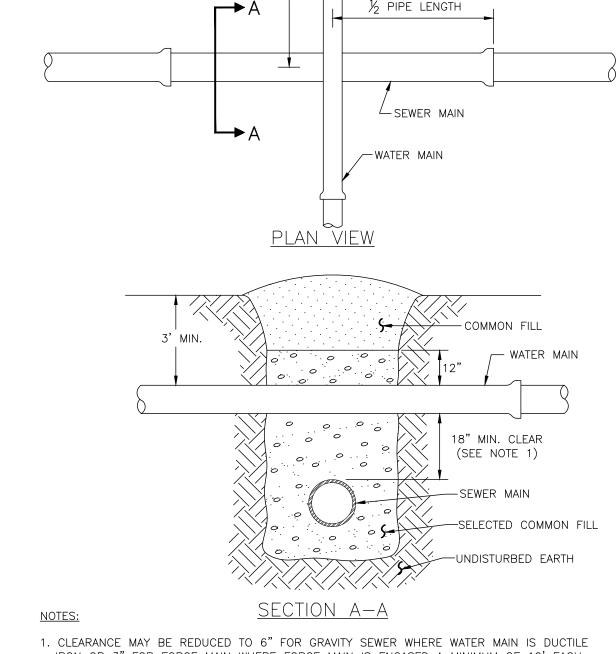


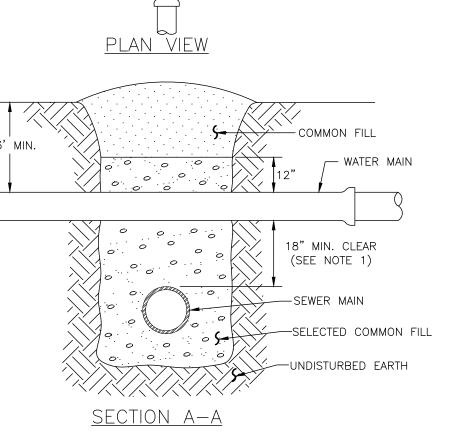
PIPE SUPPORT

DETAIL

UG-PS

REV.BY DATE

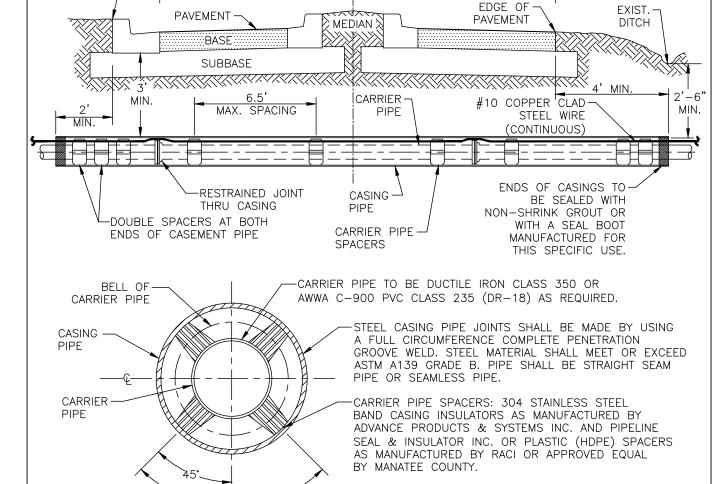




- IRON OR 3" FOR FORCE MAIN WHERE FORCE MAIN IS ENCASED A MINIMUM OF 10' EACH SIDE OF CROSSING. 2. WHERE NO ENCASEMENT IS REQUIRED, PIPE SECTIONS SHALL BE FULL-LENGTH AND SHALL BE ADJUSTED HORIZONTALLY SO THAT THE CROSSING IS AT EACH PIPE SECTION'S MIDPOINT
- REGARDLESS OF THE VERTICAL CLEARANCE. 3. REFER TO THE CASING CROSSING DETAIL FOR CASING AND SPACER REQUIREMENTS. MANATEE COUNTY

TYPICAL NEW WATER &

SEWER LINE CROSSING



OUTER MOST EDGE OF PAVEMENT

TO OUTER MOST EDGE OF PAVEMENT

CARRIER SIZE & MINIMUM CASING SIZ CARRIER 4" 6" 8" 10" 12" *14" 16" 18" 20'
 12"
 14"
 18"
 20"
 24"
 30"
 30"
 36"
 36"

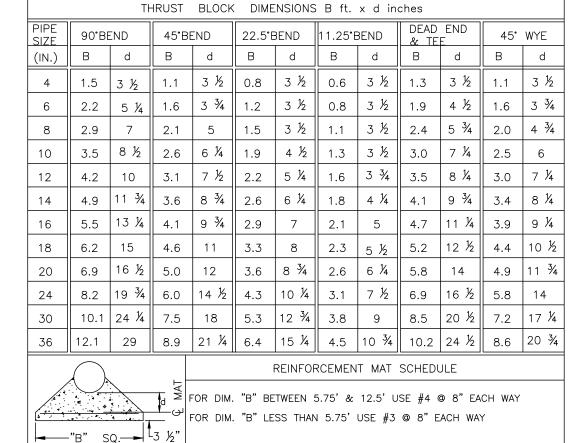
 0.188
 0.188
 0.250
 0.250
 0.344
 0.406
 0.406
 0.406
 0.406
 0.406
 CASING / WALL THICKNESS STEEL CASING SIZES CARRIER SIZE & MINIMUM CASING SIZ
 4"
 6"
 8"
 10"
 12"
 *14"
 16"
 18"
 20"

 8"
 12"
 16"
 20"
 24"
 30"
 30"
 36"
 36"
 PVC/HDPE CASING SIZES

- . THE ENGINEER OF RECORD MAY SELECT A LARGER CASING DIAMETERS, INCREASE WALL THICKNESS, AND/OR INCREASE DEPTH OF BURY DUE TO EXTERNAL LOADS. 2. ALL PIPES CROSSINGS OF FEDERAL OR STATE ROADS; OR RAILROADS SHALL BE INSTALLED IN A CASING PIPE. 5. ALL PIPES CROSSINGS OF COUNTY LOCAL ARTERIAL AND THOROUGHFARE ROADWAYS SHALL BE IN A CASING PIPE OR SHALL
- 4. SPLIT-STEEL CASINGS MAY BE USED ON EXISTING COUNTY MAINS. 5. FOR JACK & BORE SPECIFICATIONS UNDER STATE ROADS AND RAILROADS, REFER TO THE F.D.O.T. UTILITY ACCOMMODATION
- MANUAL, LATEST EDITION. HDPE CASING SHALL HAVE ALL WELD BEADS REMOVED FROM THE INSIDE SURFACE SUCH THAT THE JOINT SURFACES SHALL BE SMOOTH.
- '. *14-INCH DIAMETER MAINS ARE NOT TO BE INSTALLED IN POTABLE/RECLAIM WATER SYSTEMS.

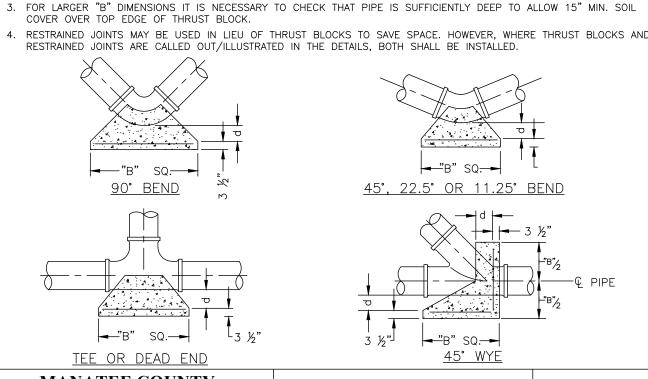
MANATEE COUNTY PUBLIC WORKS DEPARTMENT REV.BY DATE CASING CROSSING UG-3DATE OF APPROVAL

UG-BOL



NOTES: 1. ALL THRUST BLOCKS SHALL BE CAST IN PLACE, FITTINGS ADJACENT TO THRUST BLOCKS SHALL BE WRAPPED IN POLYETHYLENE.

- 2. THIS TABLE IS BASED ON WATER PRESSURE=180 PSI WITH AN ALLOWABLE SOIL BEARING PRESSURE=2000 PSF, CONCRETE STRENGTH fc =3000 PSI, REINFORCEMENT fv =60.0 KSI. THRUST BLOCK SHALL BE CAST AGAINST FIRM
- COVER OVER TOP EDGE OF THRUST BLOCK.
- RESTRAINED JOINTS ARE CALLED OUT/ILLUSTRATED IN THE DETAILS, BOTH SHALL BE INSTALLED.



BLOCKS

	DESIGNED	JDS	10/2015
3 ½"	DRAWN	BLR	10/2015
TB"/2 PIPE "B" SQ.— 45° WYE		O. 60923	P.E. 23
CONCRETE THRUST BLOCKS UG-7			ate

PROJECT #

SEC./TWN./RGE

VERTICAL DATUM

SURVEYED

SURVEY #

SCALE

404-6023180

00-43863

9,10,15,16/35/1

N.T.S.

NAVD 88

BY

ZNS

SHEET 12 OF 15

DATE

04/07/

REQUIRED LENGTH OF RESTRAINED JOINT PIPE FOR DR-18 PVC PIPE

				1								
MAIN PIPE	HOR	IZ. BE	ENDS	TEES			REDUCERS			PLUGS & VALVES		
SIZE	90.	45°	22.5°		S	IZE LEN	IGTH		SIZE LENGTH			
24	90	38	18	X24 169	X20 132	X16 90	X12 38	X10 ₆	X20 64	X16 117	X12 158	214
20	78	32	16	X20 141	X16 101	X12 53	X10 24	X8_1	X16 65	X12 115	X10 149	184
16	66	27	13	X16 111	X12 67	X10 41	X8 12		X12 64	X10 107	X8 111	151
12	52	22	10	X12 80	X10 56	X8 31	X6_1		X10 58	X8 62	X6 86	118
10	44	18	9	X10 63	X8 40	X6 7			X8 33	X6 61	X4 81	100
8	37	15	7	X8 49	X6 18	X4 1			X6 35	X4 60		83
6	29	12	6	X6 29	X4 1				X4 33			63
4	21	8	4	X4 12								45

- 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.

MANATEE COUNTY

PUBLIC WORKS DEPARTMENT

REV.BY DATE

#10 COPPER CLAD ~ STEEL WIRE

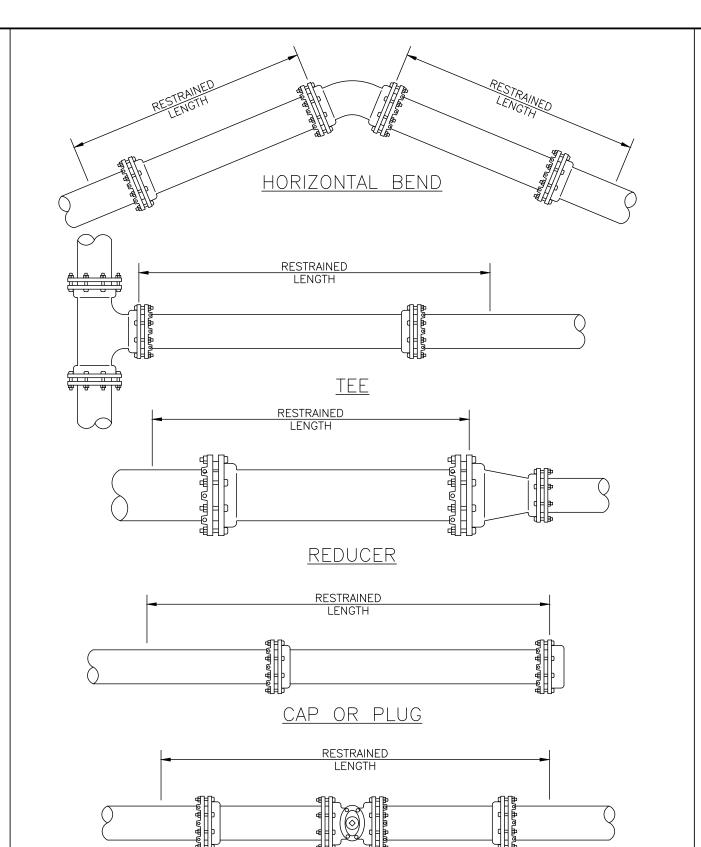
(CONTINUOUS)

- 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 RESTRAINED LENGTHS FOR PIPE.
- 9. ALL RESTRAINED JOINT HARDWARE SHALL CONFORM TO 1.11.18.E OF THE PUBLIC WORKS UTILITIES STANDARDS MANUAL.

RESTRAINED

LENGTHS FOR PVC

UG-8



ISOLATION VALVE NOTE:

FINISHED GRADE —

PROVIDE S.S. TEST PLUG ~

TRACER WIRE SPLICE ~

WRAP IN POLYETHYLENE

MANATEE COUNTY

PUBLIC WORKS DEPARTMENT

DATE OF APPROVAL

REV.BY DATE

1. SEE <u>RESTRAINED LENGTHS FOR PVC PIPE</u> DETAIL FOR NOTES 1 THROUGH 9 THAT ARE ALSO

-EXISTING MAIN

- SELECTED COMMON FILL

ELEVATION

1. PRIOR TO TAPPING, CONTRACTOR TO DEMONSTRATE 60 MINUTE HYDROSTATIC TEST OF THE TAPPING

2. ALL FITTINGS TO BE WRAPPED WITH 20 MIL POLYETHYLENE PLASTIC SHEETING AT THRUST BLOCK.

3. ALL TAPS MUST BE OF A SMALLER SIZE THAN THE MAIN BEING TAPPED & PLACED NO CLOSER THAN 30"

OR A DISTANCE EQUAL TO (1) MAIN PIPE DIAMETER PLUS (2) TAP PIPE DIAMETERS (WHICHEVER IS

4. CONTRACTOR TO SUPPLY A DRY HOLE FOR TAPPING CREW TO WORK IN AND A BACK-HOE TO LOWER

5. WHERE THRUST BLOCK NOT USED, RESTRAINED JOINTS MUST THEN EXTEND FROM TEE FULL LENGTH

6. TRACER WIRE TEST STATION BOX IS REQUIRED AT CONNECTIONS TO EXISTING MAINS.

SLEEVE AND VALVE WITH NO LOSS OF 150 PSI FOR FORCE MAIN.

RESTRAINED

LENGTHS FOR PIPE

UG - 10

1. USE OF TYPE A-2 AND A-3 PIPE BEDDING TO BE DETERMINED IN THE FIELD BY THE FNGINFFR. 2. PROVIDE ADEQUATE CLEARANCE TO PLACE AND COMPACT STAGE 1 BEDDING MATERIAL IN TRENCH AREA BELOW PIPE SPRINGLINE. PIPE EMBEDMENT MUST BE COMPACTED OUT TO THE TRENCH WALL OR 2.5 TIMES THE PIPE OD, WHICHEVER IS LESS.

3. TYPICALLY 4" TO 6".

MANATEE COUNTY

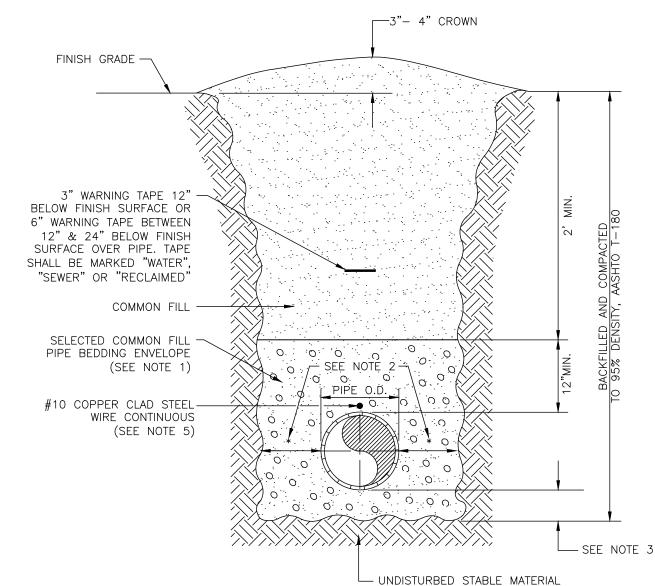
PUBLIC WORKS DEPARTMENT

DATE OF APPROVAL

REV.BY DATE

NOTES:

- 4. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
- 5. TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.

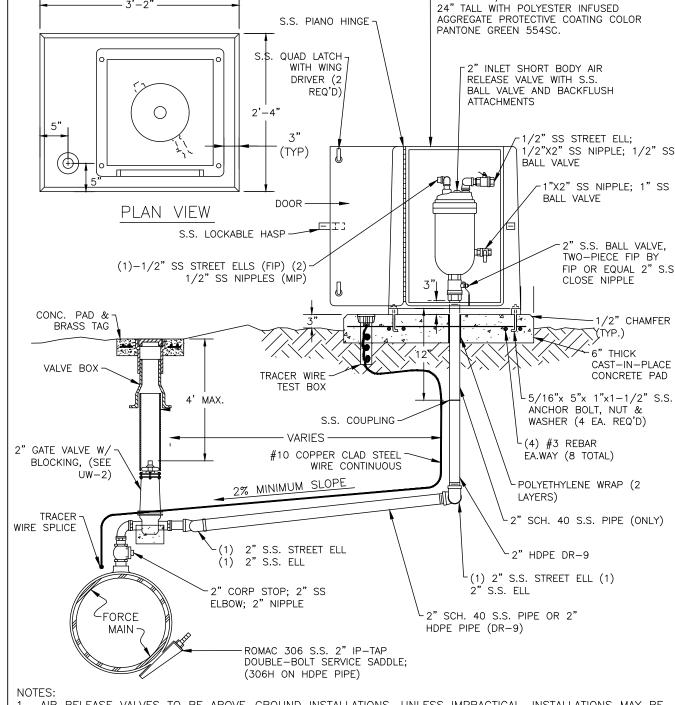


36."

TRENCH WITH

UNIMPROVED SURFACE

TYPE A-1 PIPE BEDDING



FIBERGLASS/RESIN CABINET 22" SQUARE BY

AIR RELEASE VALVES TO BE ABOVE-GROUND INSTALLATIONS, UNLESS IMPRACTICAL. INSTALLATIONS MAY BE BELOW-GROUND ONLY WHERE APPROVED AND SPECIFICALLY INDICATED ON THE PLAN. AIR RELEASE VALVES TO BE INSTALLED AT HIGH POINTS, OR WHERE AIR WOULD BE ENTRAPPED, ALONG 4" AND LARGER FORCE MAINS.

5. FORCE MAIN VERTICAL ALIGNMENT TO BE DESIGNED SUCH THAT THE MINIMUM NUMBER OF REQUIRED AIR RELEASE VALVES ARE INSTALLED.

ALL INCIDENTAL FITTINGS AND HARDWARE TO BE STAINLESS STEEL. ALL PIPE THREADS TO BE SEALED AIR TIGHT

MANATEE COUNTY

PUBLIC WORKS DEPARTMENT

DATE OF APPROVAL

F) Laboratory tests are required to substantiate structural section design.

Specifications shown on this sheet are minimum requirements.

G) No portion of pipe to be into sub-base.

H) Sidewalk to be constructed per section 300.

I) Sodding to be installed per section 400.1 (8).

* Or approved equal, meeting same structural number.

6/12/07

DATE OF B.O.C.C. APPROVAL

REV.BY DATE

VENT PIPE TO BE LAID ACCURATELY ON SLOPE, WITHOUT HIGH OR LOW POINTS.

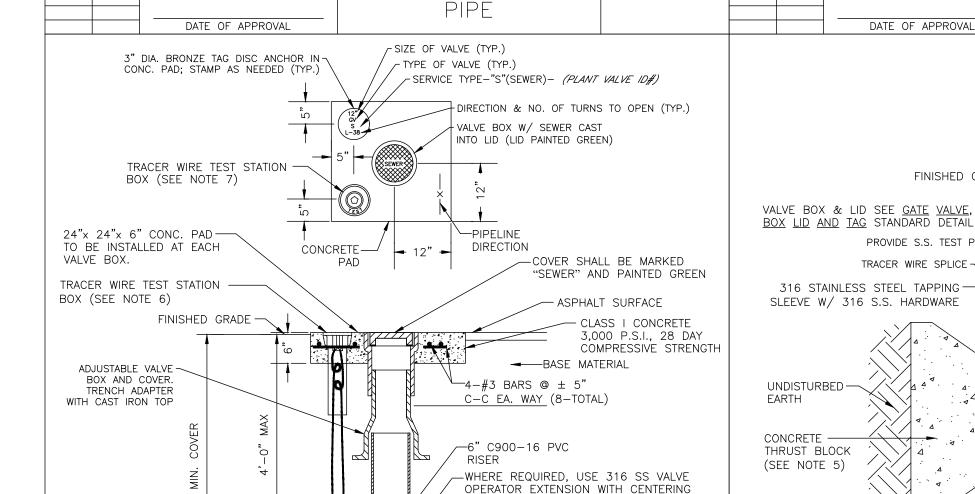
CONCRETE PAD SHALL BE TYPE I CONCRETE W/ 3,000 P.S.I., 28 DAY COMPRESSIVE STRENGTH. ARV SHALL BE INSTALLED MINIMUM 6 FT FROM EDGE OF PAVEMENT; 10 FT MAXIMUM FROM BACK OF CURB; 4 FT MIN. MAY BE APPROVED BY UTILITIES IN SOME EXISTING AREAS.

ABOVE-GROUND AIR

RELEASE VALVE ASSY.

FOR FORCE MAINS

SEE <u>GATE VALVE</u>, <u>BOX</u>, <u>LID AND TAG</u> STANDARD DETAIL. CENTERING COLLAR IS NOT REQUIRED ON 2" GATE



SPLICE FORCE MAIN BLOCKING — NOTES: "SV" TO BE IMPRESSED INTO THE NEWLY-POURED CONCRETE CURB, ALONG WITH DISTANCE IN FEET TO THE VALVE. IF NO CURB, INSTALL A GREEN DISC WITH "SV" AND A 1/8" x 1" GALVANIZED STEEL SCREW IN THE EDGE OF

ALL EXISTING AND PROPOSED VALVE BOXES SHALL BE ADJUSTED TO FINISHED GRADES AS DETERMINED IN THE

3. VALVES SHALL NOT BE PLACED IN HANDICAPPED RAMPS, CURBS OR GUTTERS.

PAVEMENT WITH THE FOOTAGE FROM THE DISC TO THE VALVE.

- 4. PRECAST CONCRETE PADS AND THRUST BLOCKS SHALL NOT BE USED.
- 5. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1/2". 6. USE NON-TRAFFIC RATED BOXES FOR NORMAL YARD SERVICE. WHERE VALVE WILL BE IN STREET OR PARKING UNDER VEHICLE TRAFFIC, USE TRAFFIC RATED BOXES. WHERE POSSIBLE, LOCATE TRACE WIRE TESTING STATION
- OUTSIDE OF TRAVEL LANE OR IN MEDIAN, CENTERED IN SEPARATE CONCRETE PAD SIMILAR TO STANDARD VALVE BOX TRACER WIRE BOX SHALL BE LOCATED OUTSIDE THE ROADWAY ON THOROUGHFARES, LOCAL ARTERIAL AND STATE
- ROADWAYS.
- 8. THE BRASS TAG SHALL HAVE A "PLANT VALVE ID# WHEN VALVES ARE INSTALLED WITHIN THE COUNTY TREATMENT PLANT LIMITS. THE PLANT VALVE ID# SHALL BE SHOWN ON THE CONSTRUCTION PLANS AND RECORD DRAWINGS. REFER TO SECTION 1.11 FOR FURTHER DETAILS.

		NATEE COUNTY IC WORKS DEPARTMENT	\/\\
REV.BY	DATE		VAL
			l COVEF
		DATE OF APPROVAL	

_VE, BOX, IR AND TAG

COLLAR. ANCHOR EXTENSION TO OPERATING

NUT WITH STAINLESS STEEL BOLT.

-PROVIDE GEAR OPERATOR, AS REQUIRED

US - 11

MANATEE COUNTY TAPPING SLEEVE PUBLIC WORKS DEPARTMENT AND VALVE REV.BY DATE (FORCE MAINS) DATE OF APPROVAL

GREATER) FROM A JOINT OR FITTING.

TAPPING MACHINE INTO THE HOLE.

SPECIFIED FOR "TEES."

7. SEE SECTION 1.11 TAPPING SLEEVES AND VALVES FOR FURTHER DETAILS. US - 12

MANATEE COUNTY PUBLIC WORKS DEPARTMENT REV.BY DATE DATE OF APPROVAL

PRESSURE PIPE DEFLECTION AT UTILITY CROSSING

UG-18

MANATEE COUNTY TRANSPORTATION DEPARTMENT REV.BY DATE

TYPICAL 4-LANE DIVIDED ROADWAY

J) When the first 2 lanes of an ultimate 4—lane need is approved, the outside 2 lanes shall be constructed first. In addition, left turn lanes must be constructed at all intersections at the time of initial construction unless exempted by the Transportation Director.

DESIGNED

F. ORDACIP. EVS# 80923 STATE OF 9/11/19

JDS

10/2015

N

US-9

Manatee

FLORIDA

All County

PUBLIC WORKS DEPARTMENT

ENGINEERING SERVICES

1022 26th Avenue East, Bradenton, FL 34208

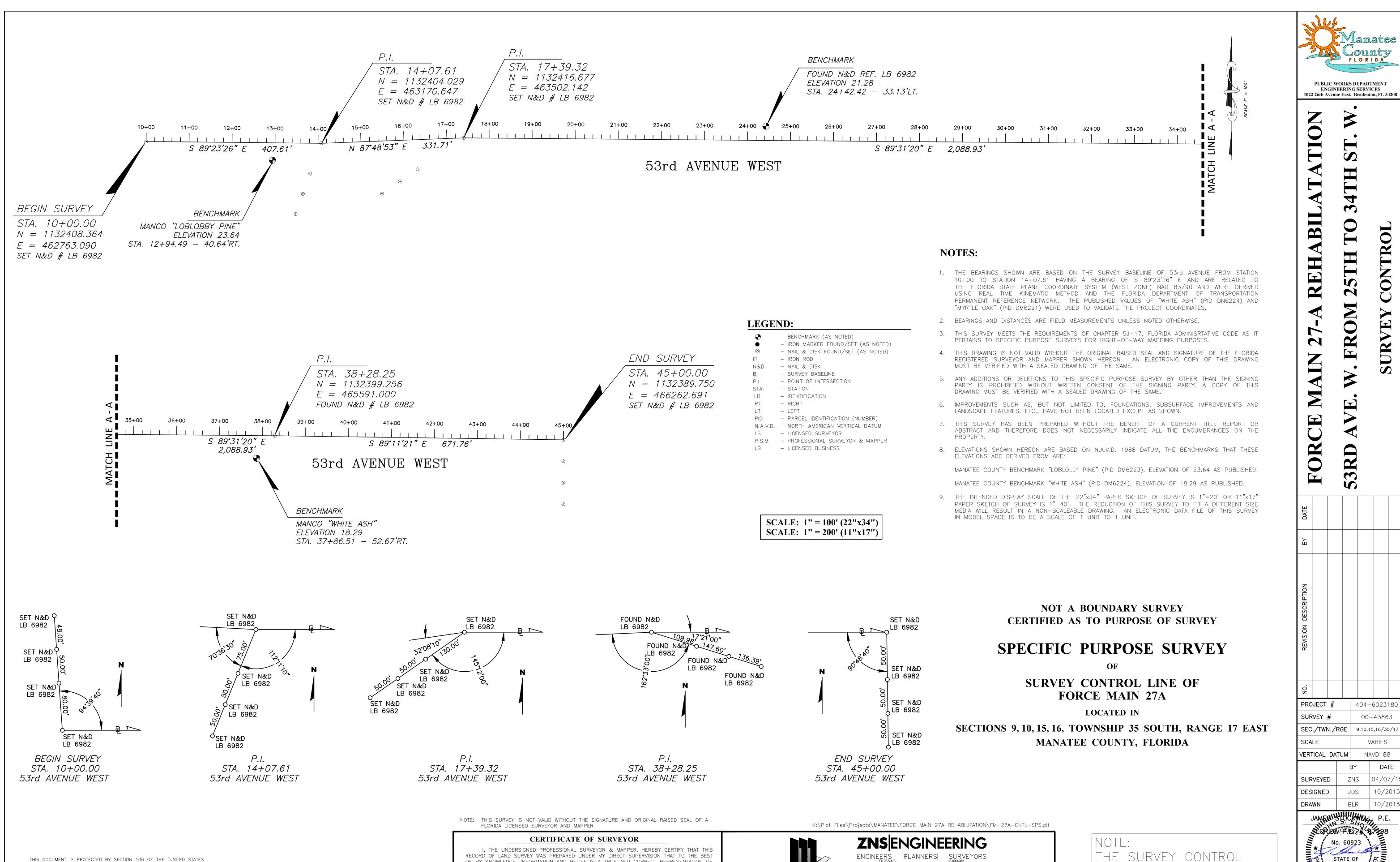
PROJECT # 404-6023180 SURVEY # 00-43863 SEC./TWN./RGE 9,10,15,16/35/1 SCALE N.T.S. VERTICAL DATUM NAVD 88 DATE BY SURVEYED ZNS 04/07/

10/2015 DRAWN BLR

401.2 13 OF

1.33'-- -TRACER WIRE TEST MEDIAN (FLAT+ STATION BOX OR RAISĖD) SURFACE COURSE -SLOPE: 1/4":1' -**→** SLOPE: 1/4":1' 20.700.003 12" STAB. SUB-BASE -TYPE "F" CURB 30" MIN. UNDER SHOULDER (SEE DETAIL "A") 36" MIN. UNDER ROAD 10" BASE-CURB & GUTTER - TAPPING VALVE -#10 COPPER CLAD SYMMETRICAL-STEEL WIRE ABOUT CENTERLINE (CONTINUOUS " TYPE S—I ASPHALT " TYPE S—III ASPHALT 1/4" OVER TOP-OF CURB WITH PRIME COAT [SEE 400.2 (14)] -RESTRAINED JOINT TYPE "F" CURB — ► -FULL FACE RED 12" STAB. SUB-BASE _______ RUBBER GASKET \1/8" THK. MIN. DETAIL "A" -CEMENT BLOCK A) Asphaltic concrete surface course shall be 2" Type S-I and 1" Type S-III. Two lifts of asphalt shall be required. A performance bond shall be required if the second lift is delayed beyond initial road B) 10" base course 850 lbs. per sq. yd. limerock* compacted to 98% T180 AASHTO, or 8" soil cement.* C) 12" stabilized sub-base shell marl blended with sandy sub-grade minimum LBR 60, 98% T180 AASHTO. D) Median is to be sodded. E) See section 201.0 for curb and gutter types.

UG - 11



SHEET 14 OF

DATE

OF MY KNOWLEDGE, INFORMATION AND BELIEF IS A TRUE AND CORRECT REPRESENTATION OF THE LAND AS SHOWN AND DESCRIBED HEREON, AND THAT IT MEETS THE "MINIMUM TECHNICAL STANDARDS FOR SURVEYING IN THE STATE OF FLORIDA", CHAPTER 5J-17.050, OF THE FLORIDA

ADMINISTRATIVE CODE. FLORIDA CERTIFICATE No. LS 4295

DATE OF CERTIFICATION 04/10/15 DATE OF FIELD SURVEY ____04/07/15 JAMES N. GATCH, JR., P.S.M

COPYRIGHT ACT". REPRODUCTION OR ALTERATION OF THIS DOCUMENT OR

STRICTLY PROHIBITED WITHOUT THE PRIOR WRITTEN CONSENT OF ZNS

GOVERNMENTAL AGENCIES TO REPRODUCE THIS DOCUMENT IN COMPLIANCE

ENGINEERING. L.C.. CONSENT IS HEREBY GRANTED SPECIFICALLY TO

E INFORMATION CONTAINED HEREON BY ANY MEANS WHATSOEVER I

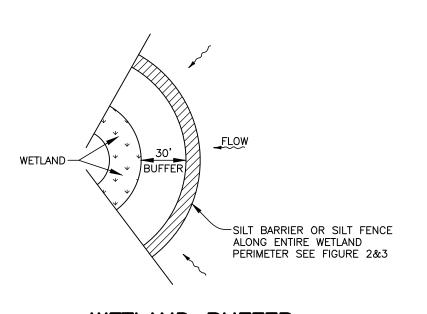
ENGINEERS PLANNERS SURVEYORS

_ANDSCAPE ARCHITECTS | ENVIRONMENTAL CONSULTANTS

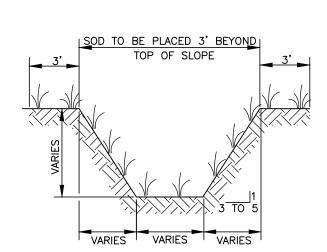
201 5th AVENUE DRIVE EAST BRADENTON, FL 34208 E-MAIL: ZNS@ZNSENG.COM TELEPHONE (941) 748-8080 FAX (941) 748-3316

RAWING: T:\MANATEE\FORCE MAIN 27A REHABILITATION\FM-27A-CNTL-SPS.dwg DATE 04/10/15 SCALE 1" = 100' JOB NO. 00-43863 FIELD BOOK 668 PAGE 18 SHEET X OF X

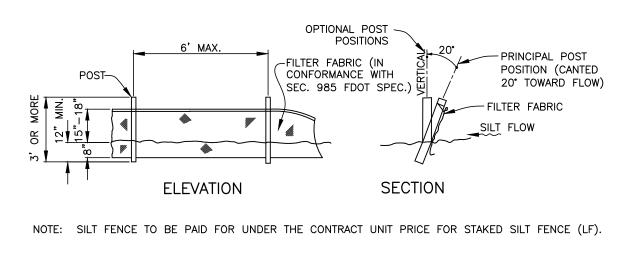
SURVEY CONTROL LINE IS ALSO THE CONSTRUCTION BASE LINE.



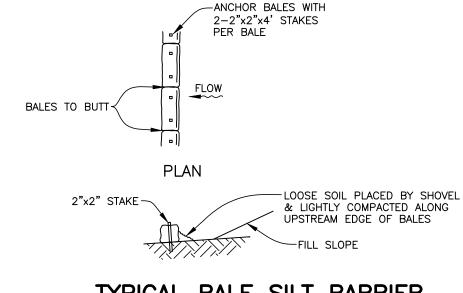
WETLAND BUFFER FIGURE 1



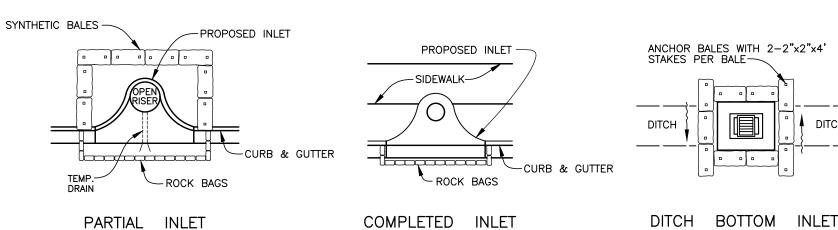
TYPICAL SWALE SECTION FIGURE 5



TYPICAL SILT FENCE FIGURE 2



TYPICAL BALE SILT BARRIER



TYPICAL RETENTION/DETENTION POND SECTION FIGURE 6

SOD TO BE PLACED 3'-

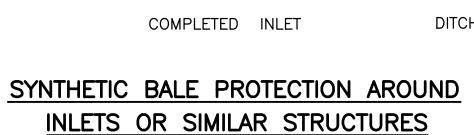
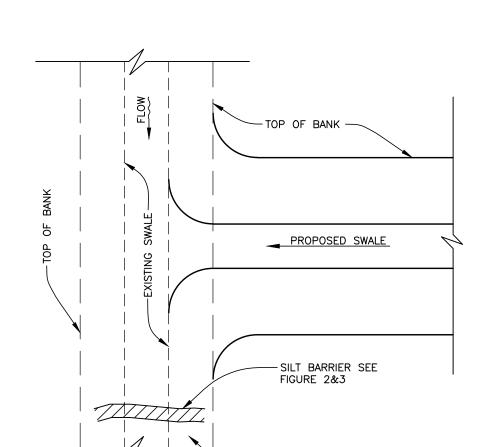
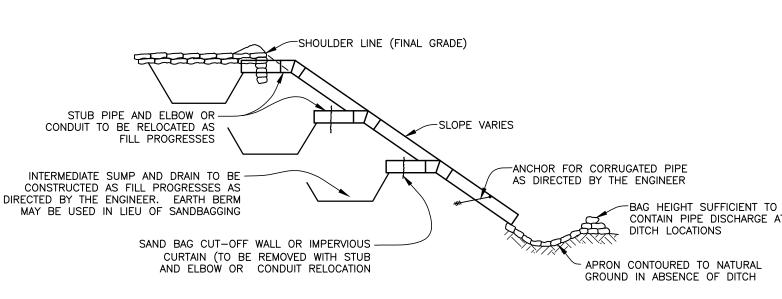


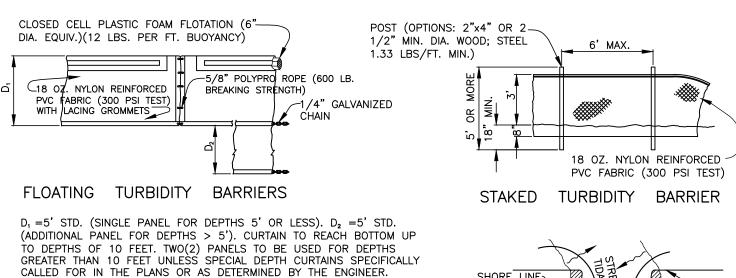
FIGURE 7



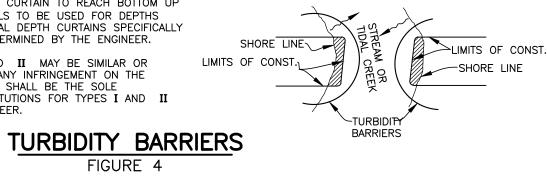
- EXISTING SWALE SILT BARRIER AT CONNECTION OF SWALE TO EXISTING SWALE FIGURE 11



SECTION AA TEMPORARY SLOPE DRAIN FIGURE 15

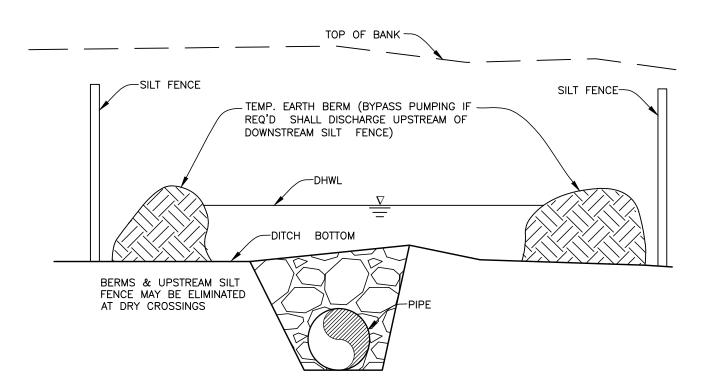


NOTICE: COMPONENTS OF TYPES ${f I}$ AND ${f II}$ MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.

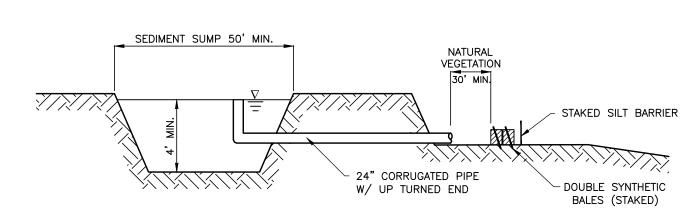


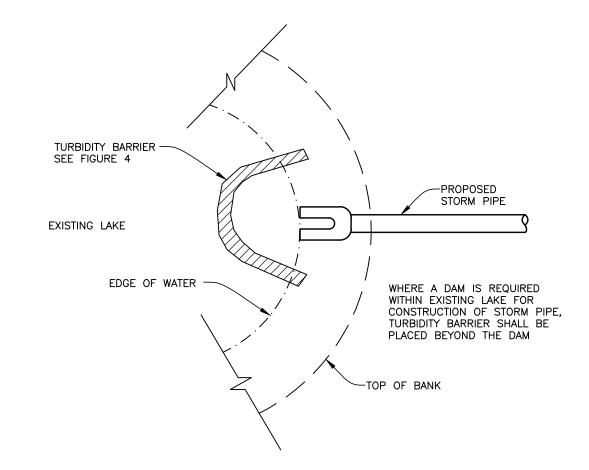
TYPE III SILT FENCE PROTECTION AROUND DITCH BOTTOM INLETS

STAKED SILT BARRIER OR SILT FENCE PROTECTION AROUND DITCH BOTTOM INLETS

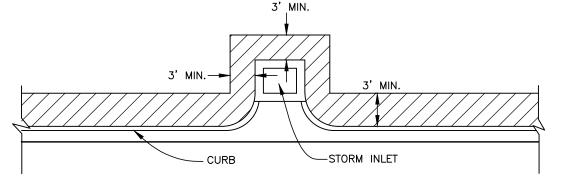


UNDERGROUND PIPE CROSSING FIGURE 12



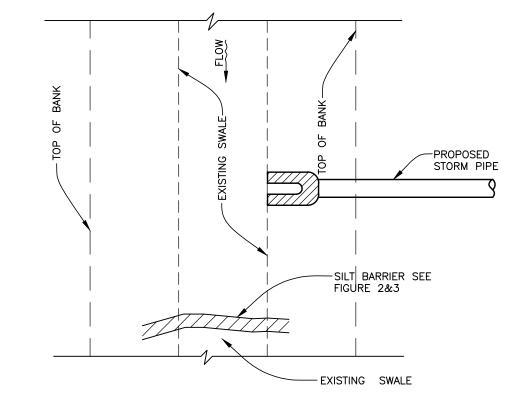


TURBIDITY BARRIER AT CONNECTION OF STORM PIPE TO EXISTING LAKE FIGURE 9



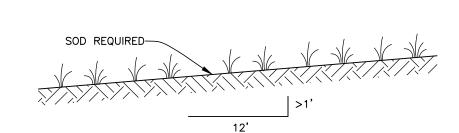
SOD ALONG CURB AND AROUND INLET FIGURE 14

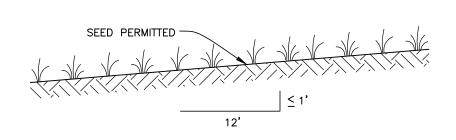
REFERENCE THE FDOT DESIGN STANDARDS LATEST EDITION FOR ALL TEMPORARY EROSION CONTROL MEASURES.



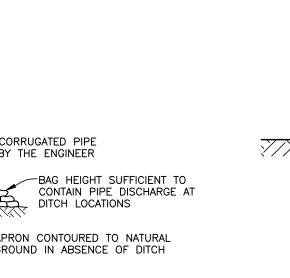
SILT BARRIER AT CONNECTION OF STORM PIPE TO EXISTING SWALE

FIGURE 10





GRASS SLOPES FIGURE 13



SEDIMENT SUMP SECTION

ONTROI **M EROSION**

A County FLORIDA

PUBLIC WORKS DEPARTMENT

1022 26th Avenue East, Bradenton, FL 34208

ENGINEERING SERVICES

_ w							
DATE							
Β							
REVISION DESCRIPTION							
No							
PROJECT #			404-6023180				
SURVEY #			00-43863				
SEC./TWN./RGE			9,10,15,16/35/17				
SCALE			N.T.S.				
VERTICAL DATUM			NAVD 88				

SURVEYED	ZNS	04/07/15
DESIGNED	JDS	10/2015
DRAWN	BLR	10/2015
JOHN FLOW FLOW SIGN SIGN	No. 60923 STATE OF 9/11/19 SONAL	THE PROPERTY OF THE PARTY OF TH
SHEET	15 (OF 15

BY

DATE