

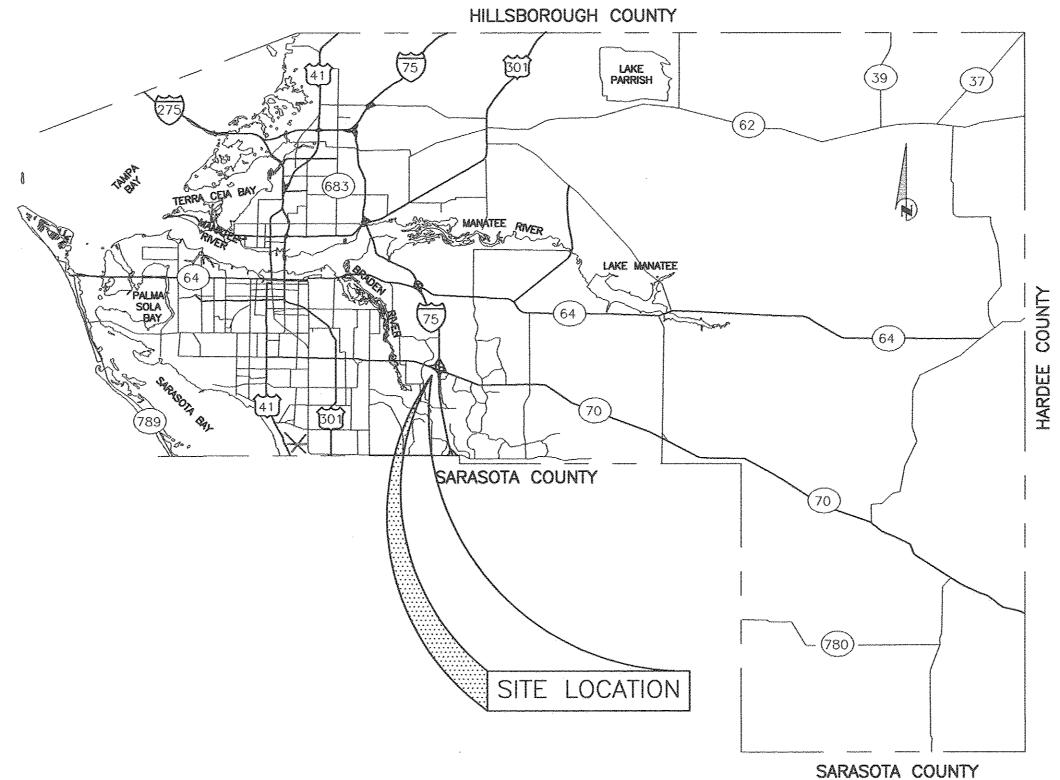
# MANATEE COUNTY, FLORIDA TARA 20 FORCE MAIN REPLACEMENT STONE RIVER ROAD TO 1-75 415-6079880

DECEMBER 2012

TARE 20 MASTER THEIL STATION

PROJECT SITE

VICINITY MAP/SHEET INDEX N.T.S.



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PROJECT DESCRIPTION

INSTALL APPROXIMATELY 3000 LF OF 24" FORCE MAIN. PROPOSED EASEMENTS SHOWN ON THE PLANS WILL BE ACQUIRED BY MANATEE COUNTY PRIOR TO START OF CONSTRUCTION.

MANATEE COUNTY GOVERNMENT PUBLIC WORKS DEPARTMENT ENGINEERING SERVICES

1022 26th Avenue East Brodenton, El. 34208

NRA 20 FORCE MAIN REPLACEME STONE RIVER ROAD TO 1-75

PROJECT # 415-6079880
SURVEY # 6079880
SEC./TWN./RGE 13&14/35S/186
SCALE 1"=20'

BY DATE

JG/ZNS | 12/1/1

CHECKED

- . ALL CONSTRUCTION ACTIVITIES SHALL BE COORDINATED WITH THE PROJECT MANAGEMENT DIVISION. THE PROJECT MANAGER IS: ANTHONY BENITEZ
- AND CAN BE REACHED AT (941) 708-7450; EXT. 7333
- 2. SITE VISITS ARE MANDATORY FOR ALL BIDDERS. THESE SITE VISITS CAN BE ARRANGED THROUGH THE PROJECT MANAGER
- 3. ALL CONSTRUCTION ON THIS PROJECT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF MANATEE COUNTY UTILITY AND TRANSPORTATION STANDARDS AND/OR FDOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" UNLESS OTHERWISE INDICATED ON THE PLANS.
- 4. VERTICAL CONTROL FOR THIS PROJECT WAS ESTABLISHED BY A MINIMUM OF TWO REFERENCE BENCHMARKS DESCRIBED ON THE "THE NATIONAL GEODETIC VERTICAL DATUM OF 1929", (NGVD '29).
- 5. 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.
- 6. 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
- 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 FNGINFFR'S CLARIFICATION BEFORE COMMENCING WITH CONSTRUCTION.
- B. 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.
- 9. 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.

- 10. 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.
- 1. THE CONTRACTOR SHALL USE SHEET PILING, SHEETING, BRACING, ETC., AS REQUIRED IN ALL EXCAVATION AREAS AND CONFORM TO ALL OSHA REQUIREMENTS.
- 12. THE CONTRACTOR SHALL USE ALL NECESSARY SAFETY PRECAUTIONS TO AVOID CONTACT WITH OVERHEAD AND UNDERGROUND UTILITIES, POWER LINES, ETC.
- 13. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. THIS EXCLUSION DOES NOT ALLEVIATE THE CONTRACTOR FOR PROVIDING A CONTINUOUS SAFE WORKSPACE.

### ENVIRONMENTAL

- 14. 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 WHEN A SPILL IS APPARENT.
- 15. 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.
- 16. 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.
- 17. 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.
- 18. 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.
- 19. 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.
- 20. 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.
- 21. 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
- 22. ALL EROSION AND POLLUTION CONTROL DEVICES SHALL BE CHECKED REGULARLY, ESPECIALLY AFTER EACH RAINFALL AND SHALL BE CLEANED OUT AND/OR REPAIRED AS REQUIRED.
- 23. 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.
- 24. FOR MORE INFORMATION, SEE THE EROSION CONTROL DETAIL SHEET INCLUDED IN THE PLANS.

# RIGHT-OF-WAY

- 25. ALL CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO WITHIN THE MANATEE COUNTY/FDOT RIGHT-OF-WAY AND/OR EASEMENTS SHOWN ON THE DRAWINGS.
- 26. 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.
- 27. 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.
- 28. 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.
- 29. 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.
- 30. 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.

31. 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.

- 32. 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.
- 33. 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
- 34. 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.
- 35. 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.
- 36. 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

- 37. ALL RESTORATION WORK PERFORMED THROUGHOUT THE PROJECT SHALL CONFORM TO EXISTING LINES AND GRADES UNLESS SHOWN OTHERWISE.
- 38. 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.
- 39. 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.
- 40, ASPHALT DRIVES THAT ARE CUT SHALL BE RESTORED PER SECTION 02513.
- 41. CONCRETE DRIVEWAYS OR SIDEWALKS THAT ARE CUT SHALL BE RESTORED TO MATCH EXISTING ACCORDING TO THE CURRENT EDITIONS OF THE F.D.O.T. SPECIFICATIONS FOR ROAD AND BRIDGE DESIGN, SECTION 522, AND SECTION 310 OF THE F.D.O.T. DESIGN STANDARDS.
- 42. 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.
- 43. RESTORATION OF CURBS, DRIVEWAYS, SIDEWALKS, AND PLACEMENT OF SOD SHALL BE COMPLETED WITHIN FORTY-FIVE CALENDAR DAYS OF INITIAL DISTURBANCE, OR TWENTY-ONE CALENDAR DAYS OF SUBSTANTIAL COMPLETION, WHICHEVER OCCURS FIRST.

## CONSTRUCTION

- 44. 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.
- 45. 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.
- 46. THE CONTRACTOR IS TO CONTROL ALL FUGITIVE DUST ORIGINATING ON THIS PROJECT BY WATERING OR OTHER METHODS AS REQUIRED.
- 47. INGRESS AND EGRESS TO ALL THE PROPERTIES IN THE CONSTRUCTION AREA SHALL BE MAINTAINED AT ALL TIMES.
- 48. PRIOR APPROVAL WILL BE REQUIRED FOR REMOVAL OF ANY TREE WITHIN THE CONSTRUCTION AREA.
- 49. THE CONTRACTOR SHALL PROVIDE ALL DEWATERING EQUIPMENT NECESSARY TO KEEP ALL EXCAVATIONS DRY. DEWATERING IS REQUIRED TO 18" BELOW TRENCH BOTTOM.
- 50. 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.
- 51. ALL PIPE SHALL BE COLOR CODED TO CONFORM TO MANATEE COUNTY STANDARDS.
- 52. ALL PIPE AND FITTINGS SHALL BE INSTALLED AS RECOMMENDED BY THE MANUFACTURER AND ALL PIPE JOINTS SHALL BE RESTRAINED WHERE REQUIRED.
- 53. 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.
- 54. 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.
- 55. 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. 56. 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.
- 57. ONLY MANATEE COUNTY UTILITY OPERATIONS STAFF ARE AUTHORIZED TO OPERATE VALVES ON COUNTY OWNED AND MAINTAINED UTILITY SYSTEMS.
- 58. ALL PENETRATION OF EXISTING STRUCTURES SHALL BE BY THE MECHANICAL ROTARY CORE BORING METHOD.
- 59. ALL CONCRETE PENETRATED OR DISTURBED SHALL BE COATED WITH TWO COATS OF EPOXY.
- 60. 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.
- 61. ALL NEW PIPE LINES SHALL BE PIG CLEANED (4" AND LARGER), FLUSHED, PRESSURE TESTED, DISINFECTED AND CERTIFIED PRIOR TO TIE-INS TO EXISTING FACILITIES. THE CONTRACTOR WILL BE ALLOWED TO USE TEMPORARY PLUGS FOR PIG CLEANING AND PRESSURE TESTING.
- 62. ALL TEST POINT PIPING SHALL BE CUT LOOSE FROM THE CORPORATION STOP AND COMPLETELY REMOVED AND DISPOSED OF BY THE CONTRACTOR PRIOR TO FINAL ACCEPTANCE. A CORPORATION STOP PLUG SHALL BE INSTALLED AND THE CORPORATION STOP SHALL REMAIN IN PLACE.

- 63. 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.
- 64. 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.
- 65. FIELD CONDITIONS MAY NECESSITATE MINOR ALIGNMENT AND GRADE DEVIATION OF THE PROPOSED UTILITIES TO AVOID OBSTACLES. AS ORDERED BY THE ENGINEER.
- 66. CONTRACTOR SHALL PROVIDE RECORD DRAWINGS IN ACCORDANCE WITH SECTION 14 IN THE CURRENT MANATEE COUNTY UTILITY STANDARDS AT NO COST TO THE OWNER. RECORD DRAWINGS SHALL BE SIGNED & SEALED BY A SURVEYOR CURRENTLY LICENSED BY THE STATE OF FLORIDA. ALL RECORD DRAWING INFORMATION REQUIREMENTS IN SECTION 14 SHALL BE STRICTLY ENFORCED. A COPY OF SECTION 14 WILL BE PROVIDED UPON REQUEST.

67. IF DEWATERING EQUIPMENT EXCEEDS 6 INCH VOLUTE OR 1,000,000 GPD CAPACITY OR 100,000 GPD PER 24 HOURS, THEN CONTRACTOR SHALL BE REQUIRED TO OBTAIN A SWFWMD PERMIT FOR DEWATERING

### EMERGENCY CONTACTS

MANATEE COUNTY PUBLIC WORKS DEPT. WAYNE TROXLER, P.E. 1022 26TH AVENUE EAST BRADENTON, FL. 34208 (941) 708-7450 EXT. 7650 FAX: (941) 708-7415

TECO/PEOPLES GAS CO. DAN SHANAHAN 8261 VICO COURT SARASOTA, FL. 34240 (941) 342-4030 FAX: (941) 342-4011

SOFT DIG LOCATION

VERIZON FLORIDA INC. JOHN PLOTT 1701 RINGLING BLVD. SARASOTA, FL. 34236 (941) 906-6707 FAX: (941) 906-6706 John.Plott@verizon.com

FLORIDA POWER & LIGHT CHAD HARRELL GREG COKER 7804 ANDERSON RD. 1253 12TH AVENUE EAST TAMPA FL 33634 PALMETTO, FL 34221 PHONE: (813) 466-3327 (941) 723-4430 E-mail: chad.harrell@sug.com FAX: (941) 723-4444 EMERGENCY: 1-800-4-OUTAGE DEPARTMENT OF Greq\_Coker@fpl.com

MANATEE COUNTY HEALTH DEPT. STEPHANIE BARIOS HARRY MESSICK 410 6th AVENUE EAST BRADENTON, FL. 34208 (941) 748-0747 EXT. 1355 EMERĜENCY: 1-877-832-6911 FAX: (941) 750-9364

> SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT SARASOTA SERVICE OFFICE DARYL R. FLATT, P.E. 6750 FRUITVILLE ROAD SARASOTA, FL. 34240 (941) 377-3722 FAX: (941) 373-7660

PEACE RIVER ELECTRIC FLORIDA GAS TRANSMISSION COOPERATIVE, INC. P.O. BOX 1310

ENVIRONMENTAL PROTECTION 13051 N. TELECOM PKWY TEMPLE TERRACE, FL 33637 PHONE: (813) 632-7600, EXT. BRADENTON, FL 34203 408 FAX: (813) 632-7662

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

WACHULA, FL 33873 KENDELL COKER (863) 767-4660 kendell.coker@preco.coop MANATEE COUNTY PUBLIC WORKS DEPT./TRAFFIC ENGINEERING / ATMS 2101 47TH TERRACE EAST

MICHAEL O'REILLY, P.E. (941) 749-3500 EXT. 7859 FAX: (941) 749-3571 michael.oreilly@mymanatee.org

LEGEND

## **EXISTING**

| ВМ        |                   | BENCH MARK               | $\Diamond$   | BUSH                     | Α                                       | BBREVIATIONS         |
|-----------|-------------------|--------------------------|--|--------------------------|---|----------------------|
| CM        | =                 | CONCRETE MONUMENT        | ***  | TREE                     |   |                      |
| IP        | 0                 | IRON PIPE                | £23  | OAK TREE                 | R/W                                     | RIGHT OF WAY         |
| IR        | 4                 | IRON ROD                 | 8  | PALM TREE                | CONC                                    | CONCRETE             |
| HUB       | ۵                 | HUB                      |  | PINE TREE                | ASPH                                    | ASPHALT              |
| N&D       | 0                 | NAIL & DISK              | min  | EDGE OF VEGETATION       | DRWY                                    | DRIVEWAY             |
| A STATE   |                   | ELEVATION                | OO   | - CHAIN LINK FENCE       | SWK                                     | SIDEWALK             |
| (28059    | >                 | PARCEL ID NO.            |  | - WOOD FENCE             | EP                                      | EDGE OF PAVEMENT     |
| (III      |                   | PARCEL ID NO.            | X X  | -BARBED WIRE FENCE       | BOC                                     | BACK OF CURB         |
| 473       | >                 | LOT NO.                  | FM   | -FORCE MAIN              |   |                      |
| GW        | <del>(</del>      | GUY WIRE                 | FW   | - POTABLE WATER          |   |                      |
| pp        | $\Leftrightarrow$ | POWER POLE               |  | - RECLAIMED WATER        |   |                      |
| LP        | ❖                 | LIGHT POLE               |  | - SANITARY SEWER         |   |                      |
| мВ        | ď                 | MAIL BOX                 |  | - STORM DRAIN            |   |                      |
| SN        | d                 | SIGN                     | GAS  | - GAS LINE               |   | PROPOSED             |
| REF       | 9                 | REFLECTOR                | WHO  | OVERHEAD TV              |   |                      |
| SPRK      | ( 0               | SPRINKLER                | UGTV   | - UNDERGROUND TV -       |   | MAIN                 |
| GM        | <b>©</b>          | GAS MARKER               | QE   | OVERHEAD ELECTRIC -      |   | - SERVICE LINE       |
| BFP       | ~O~               | BACKFLOW PREVENTER       |  | - UNDERGROUND ELECTRIC - |   | - PROPOSED EASEMENT  |
| BO        | Mo                | BLOW OFF VALVE           | OH VER   | - OVERHEAD VERIZON       |   | FIRE HYDRANT         |
| FH        | Q                 | FIRE HYDRANT             | UG VER   | - UNDERGROUND VERIZON    |   | VALVE                |
| WV        | ⋈                 | WATER VALVE              | minimum version versio | - VERIZON                |   | SANITARY SEWER MANHO |
| ARV       | (A)               | AIR RELEASE VALVE        | UG   | - UNDERGROUND UTILITY    | HE SO                                   | BLOW OFF ASSEMBLY    |
| WM        |                   | WATER METER              |  | - OVERHEAD UTILITY       |   | REDUCER              |
| SMH       | (\$)              | SANITARY SEWER MANHOLE   |  | - RAIL ROAD TRACKS       | F                                       | TEE                  |
| CO        | 0                 | SANITARY SEWER CLEAN OUT | 2 2 1 2 1 4<br>"   | - EDGE OF CONCRETE       | <b>~</b> 1                              | HORIZONTAL BEND      |
| SB#1      | 1 🔷               | SOIL BORING LOCATION     |  | - EDGE OF ROAD           | >-3                                     | VERTICAL BEND        |
| TEL       |                   | TELEPHONE SERVICE BOX    |  | TOE OF SLOPE             |   | PLUG                 |
|           |                   | FLOW DIRECTION           |  | TOP OF BANK              | 0 0                                     | MASTER METER ASSEMBI |
| Gl        |                   | GRATE INLET              | a segunda anna nanagan anna anna anna anna ann   | PROPERTY LINE            | *************************************** | SERVICE LINE & METER |
| $\subset$ | 己                 | MITERED END SECTION      |  | RIGHT OF WAY             | ——[E                                    | DOUBLE SERVICE       |
| *         |                   | COET DIO LOCATION        |  |                          |   |                      |

PROPOSED PROJECT NOTES JOB SPECIFIC (EXAMPLE): WATER LINE CALL-OUT (TYPICAL) STA. 40+60, 17' LT. 1-6" GATE VALVE 1-6" FITTING

MANATEE COUNTY GOVERNMENT PUBLIC WORKS DEPARTMENT ENGINEERING SERVICES



PROJECT # 415-6079880 SURVEY # 6079880 SEC./TWN./RGE | 13&14/35S/18E 1"=20'DATE BY

SCALE JG/ZNS | 12/1/11 SURVEYED JDS 01/12/12 **DESIGNED** BLR | 07/19/12 DRAWN CHECKED

JAMES STOCKWELL, P.E. FLORIDAIH EUR, 67198

# SURVEYOR'S REPORT

FORCE MAIN - TARA BOULEVARD MANATEE COUNTY PROJECT NO. 60798 ZNS File No. 00-42783

### I hereby certify that:

- 1. I am a Professional Surveyor and Mapper, registered in the State of Florida, holding Certificate No. PSM 4295 and that I am acting on behalf of ZNS Engineering, L.C., a corporation authorized to offer services of registered Surveyors and Mappers in the State of Florida, holding L.B. No. 6982.
- 2. This certificate is made to Topographic Survey of Tara 20 lift station (RTU 323) and proposed force main. Route of survey is easterly 1300 feet along Stone River Drive, then northerly to the vicinity of the intersection of Jenny Lane & S.R. #70, then continuing north of S.R. #70. Survey was prepared for installation of a force main and was completed November 11, 2011.
- 3. I hereby certify that the survey prepared under my direct supervision (Project No. 60798) is to the best of my knowledge, information and belief, a true and correct representation of the existing improvements shown and meets the requirements of Chapter 5J-17, Florida Administrative Code, as it pertains to Topographic Surveys.
- 4. The bearings shown are based on the survey baseline of Stone River Road from Station 12+14.52 to Station 15+60.47 having a bearing of S 59° 13′ 27" E and are related to Florida State Plane Coordinate System, (West Zone) NAD 83/90. Derived from Control Monument G. Stroop CORS APR(DL7628).
- 5. Elevations shown are based on 1929 NGVD. The Benchmarks these elevations are derived from are:
- ZNS Plat Benchmark, concrete monument @ SE corner of Lot 3,
- Creekwood West Commercial, Phase 1, Elevation= 27.46' NGS (National Geodetic Survey) Benchmark T 641, Elevation = 30.39'
- 6. Improvements such as, but not limited to, landscape features and subsurface improvements have not been located except as shown. The location of all subsurface improvements (utilities) should be verified in the field prior to any excavation.
- 7. No ownerships of record reflecting easements, rights of way, and/or ownership are known by, or were furnished to this surveyor, except as shown
- 8. Monuments at property corners depicted were nor recovered or set, unless

- 9. Parcel information shown hereon was gathered from the Manatee County Geographic Information System Property Information web site.
- 10. This survey does not warranty title, zoning easements or ownership.
- 11. Project Benchmarks are as follows:
- 10+00, 0' right Benchmark nail and disk / EL= 22.39
- 10+53.3 151.1' right Plat Benchmark #1 Tara Commercial Two, top of sanitary air release valve / EL = 20.27
- 17+48.8, 0' right Benchmark nail and disk / EL = 23.74
- 23+25.30 Back/30+00.00 Ahead, 0' right Benchmark naîl and disk / EL =
- 34+79.2, 672.6' right Plat Benchmark Tara Commercial Three, Lots 1-7, square cut in Northeast corner of catch basin / EL = 26.87
- 38+79.0, 269.6' right Benchmark square cut on headwall / EL = 31.74
- 39+56.77, 0' right Benchmark nail and disk / EL = 27.21
- 44+02.2, 55.8' right Benchmark nail and disk in outfall control structure / EL

200 - 200 cm - 00 00 000 cm

Date: December 1, 2011

James N. Gatch, Jr. PSM Professional Surveyor and Mapper Florida License No. 4295

ENGINEERING SERVICES 1022 26th Avenue East Bradenton, FL 34208

MANATEE COUNTY GOVERNMENT PUBLIC WORKS DEPARTMENT

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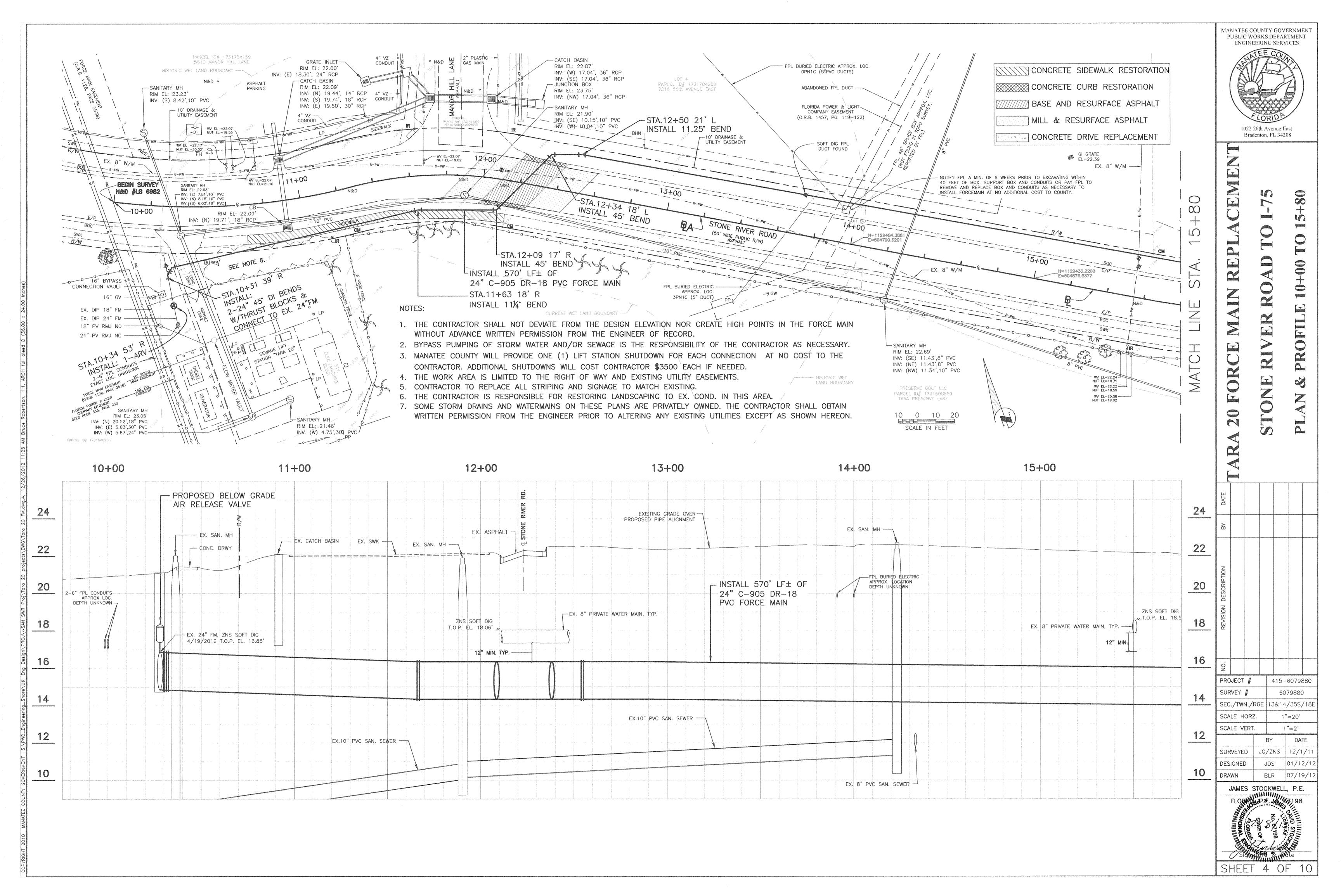
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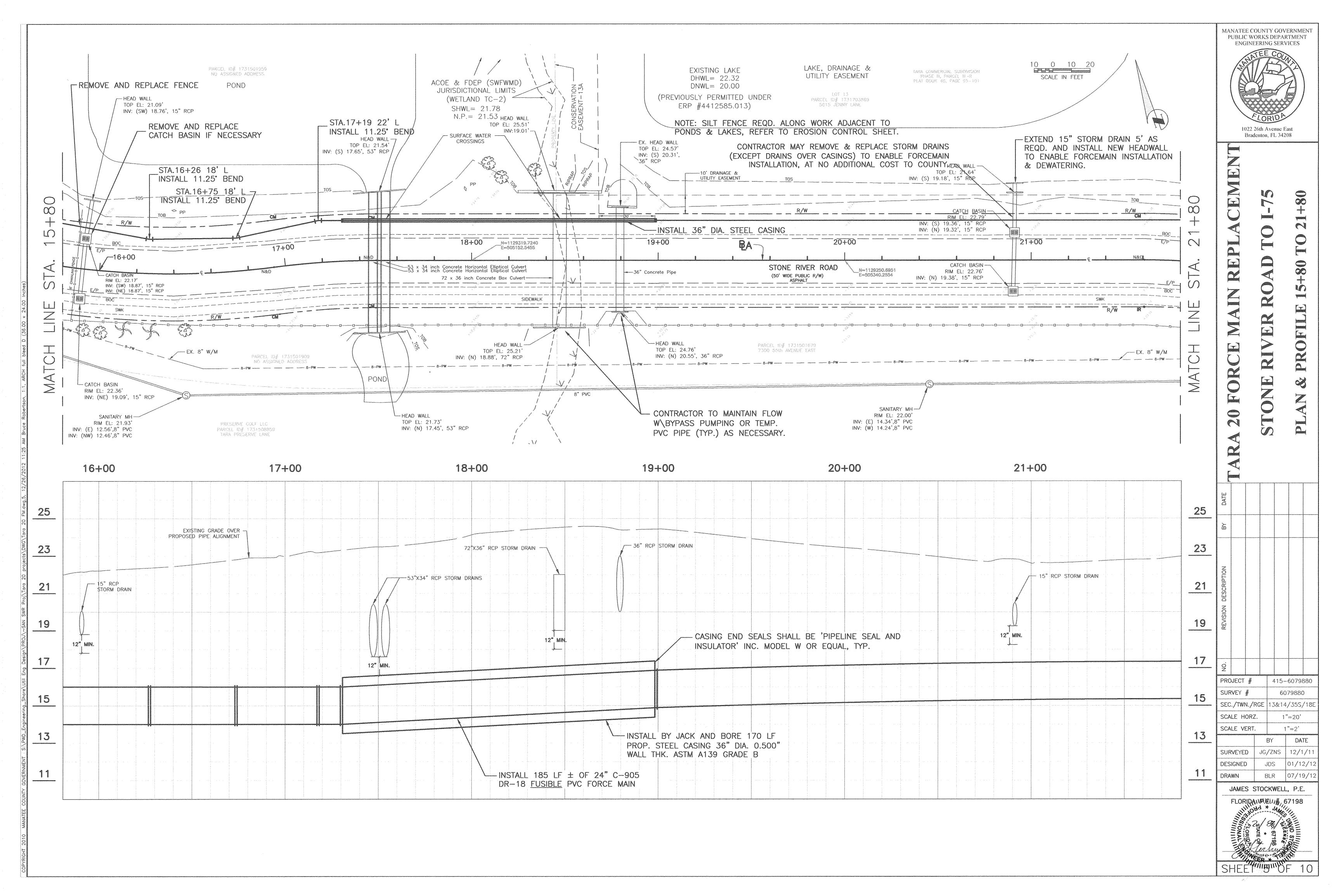
PROJECT # 415-6079880 SURVEY # 6079880

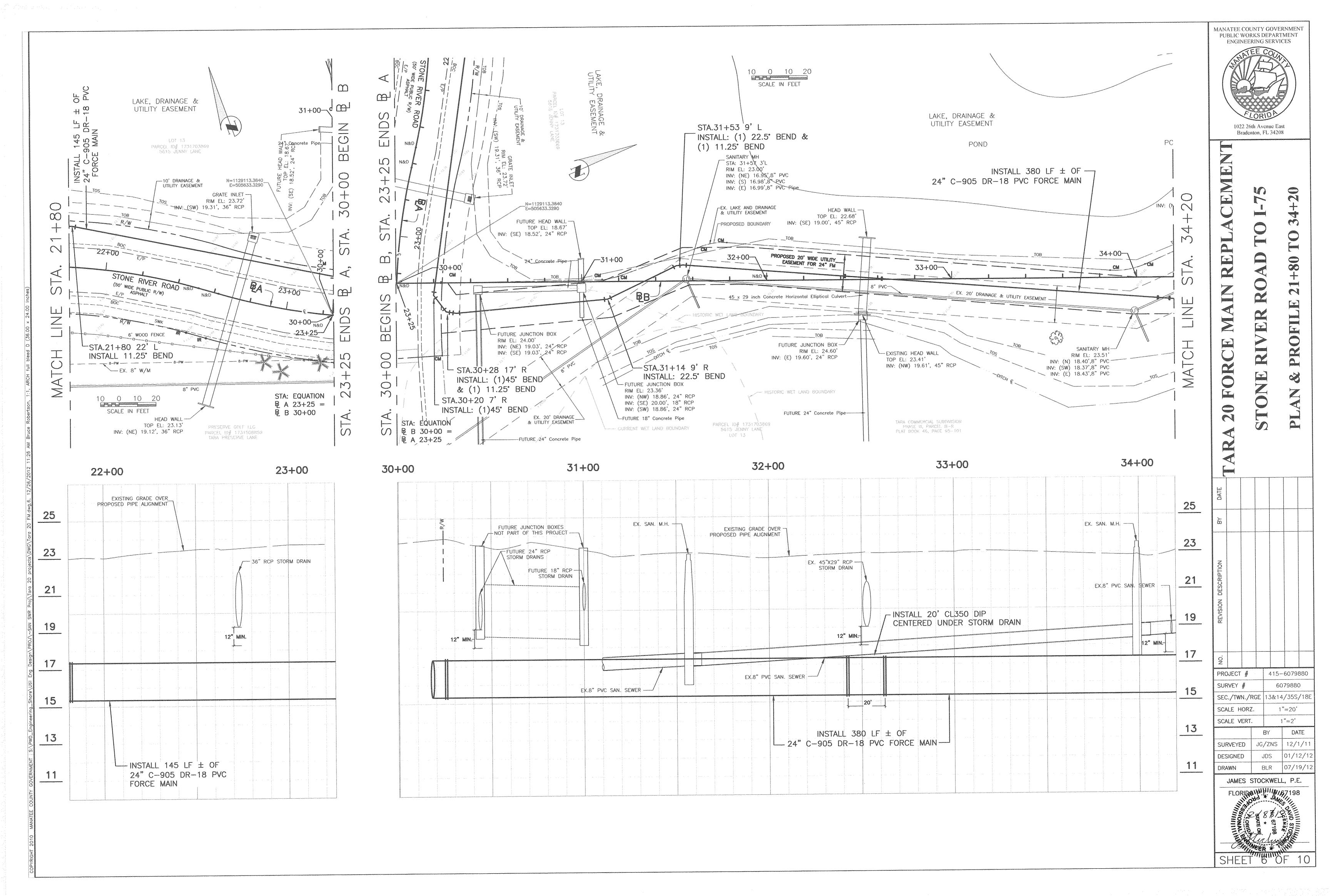
SEC./TWN./RGE | 13&14/35S/18E 1"=80' JG/ZNS | 12/1/11

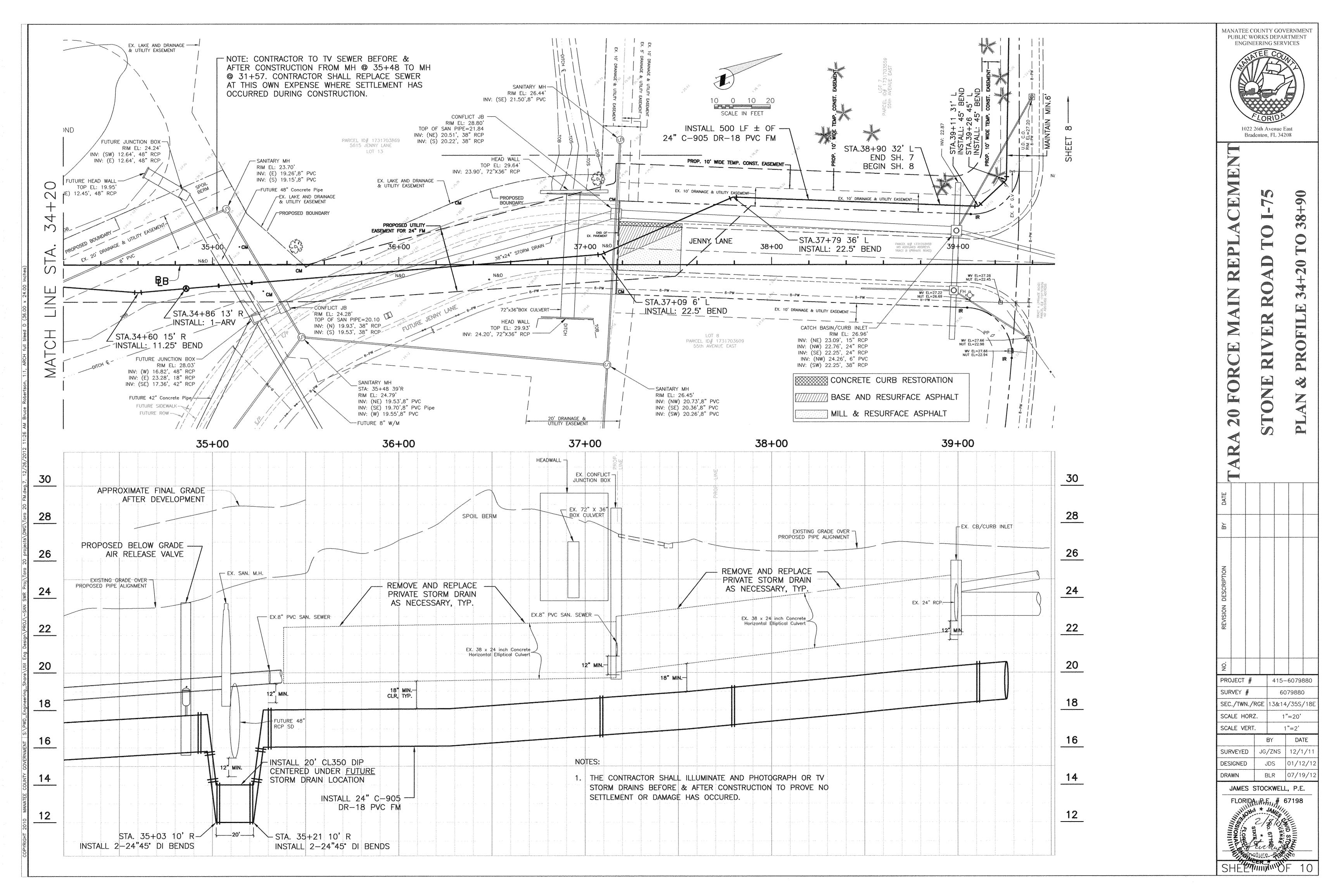
BLR 07/19/1

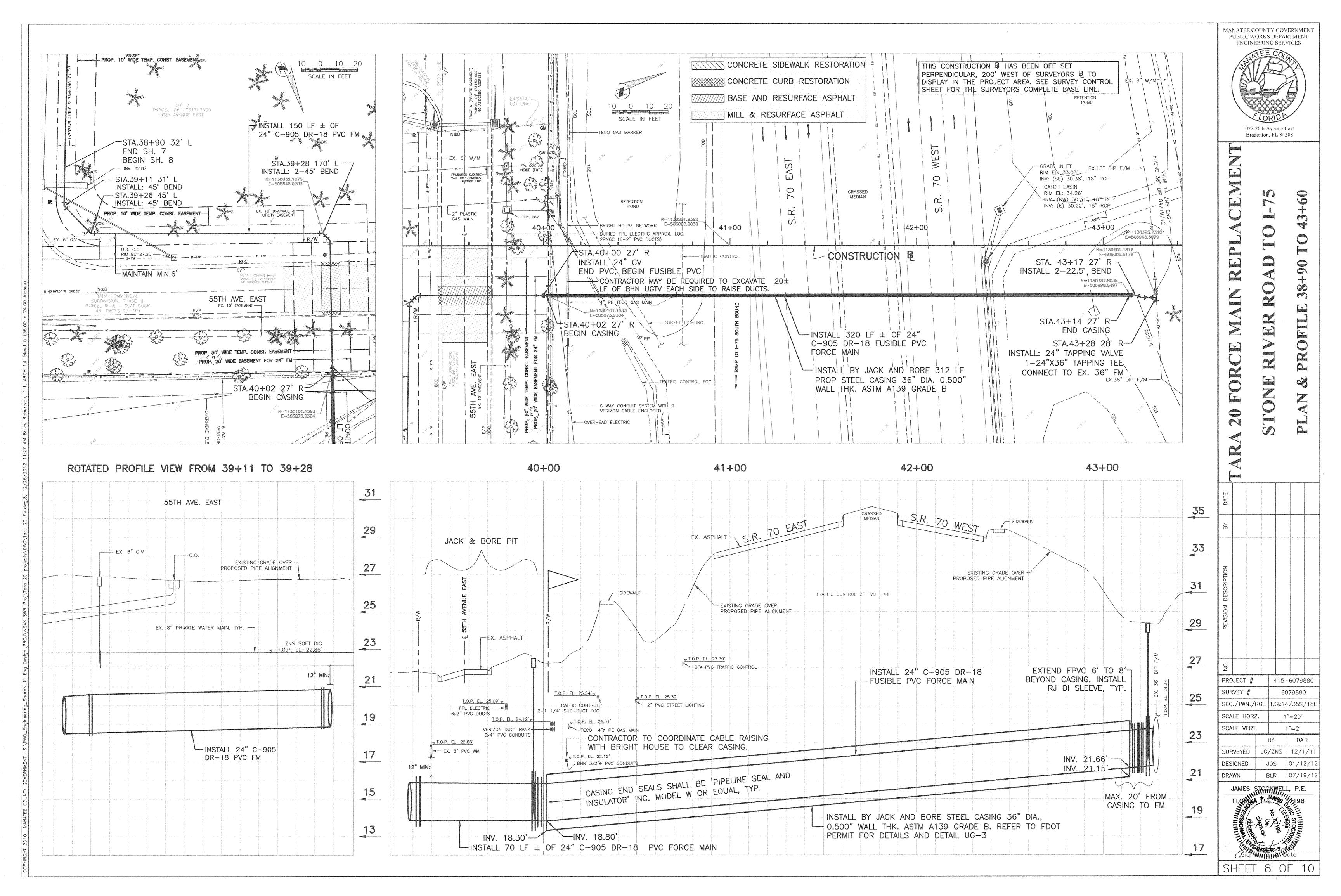
JAMES STOCKWELL, P.E.

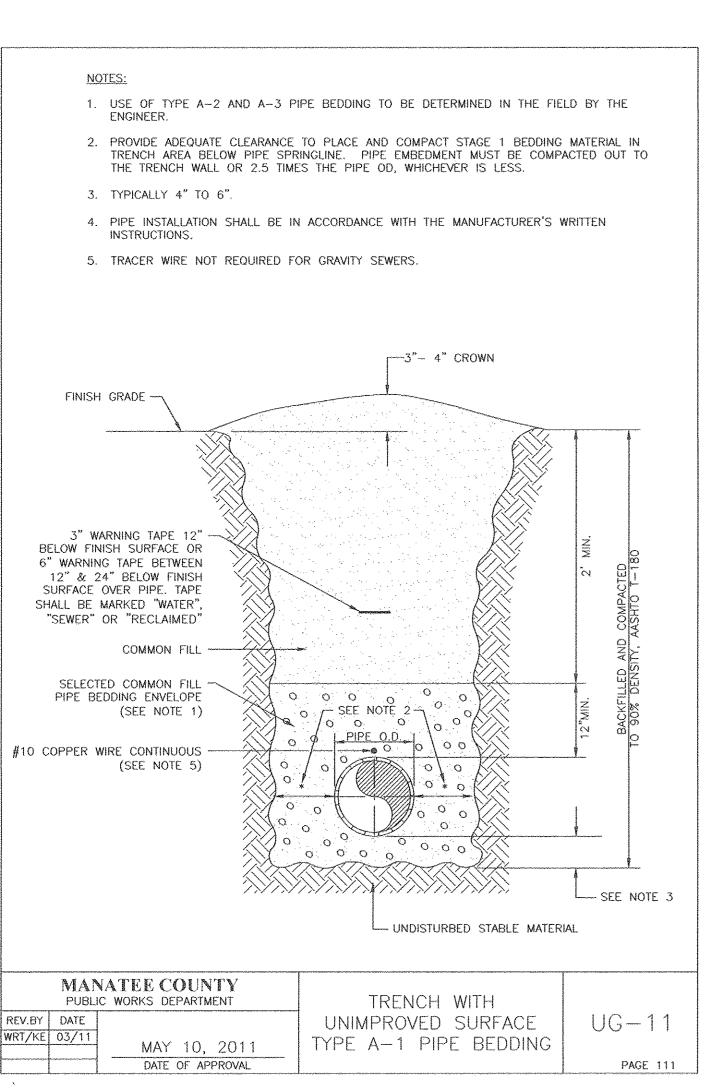


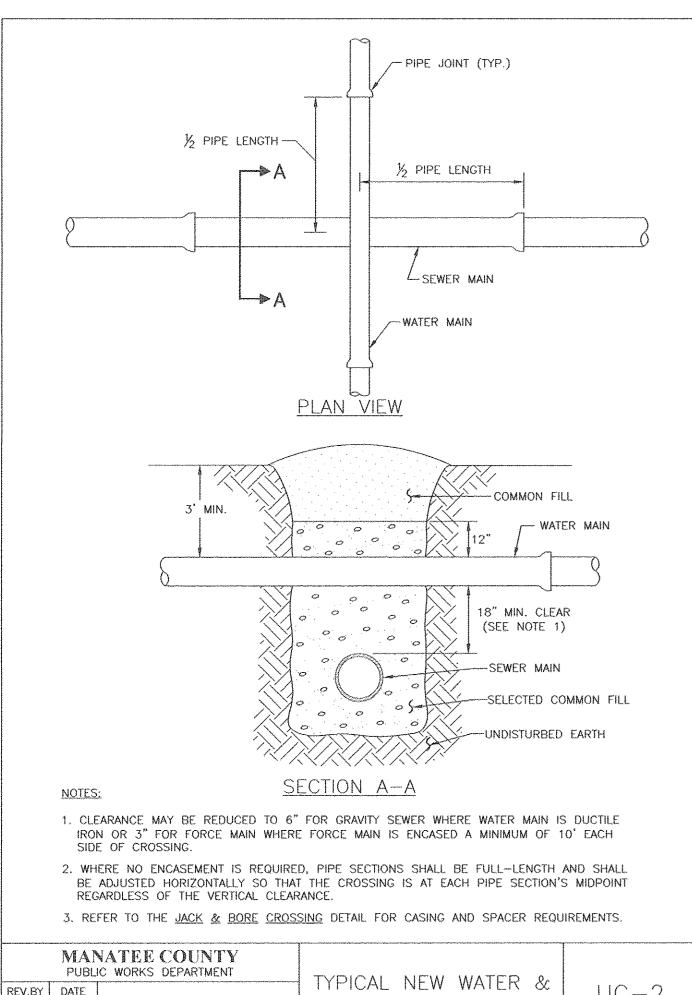












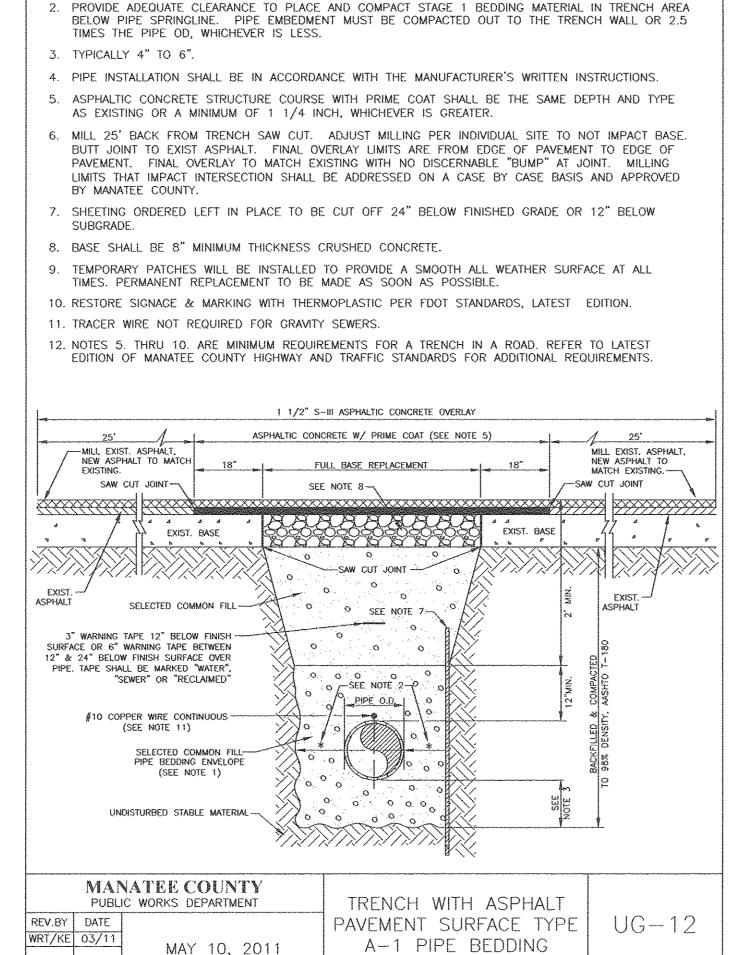
SEWER LINE CROSSING

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LB/BR 11/10

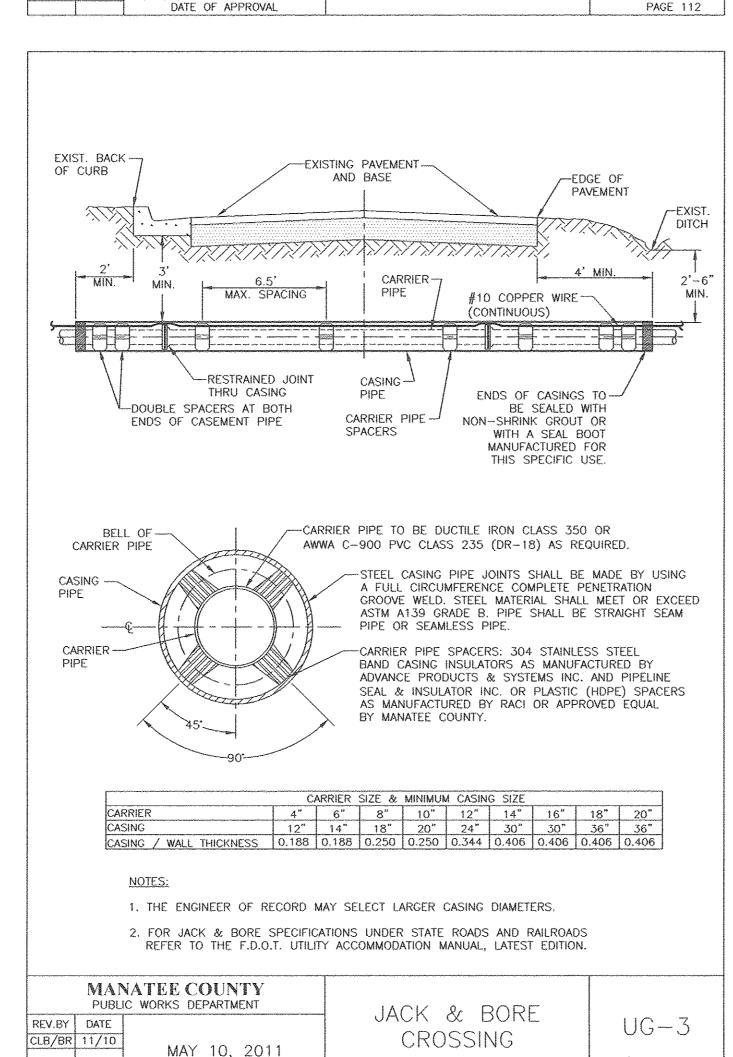
MAY 10, 2011

DATE OF APPROVAL



1. USE OF TYPE A-2 AND A-3 PIPE BEDDING TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

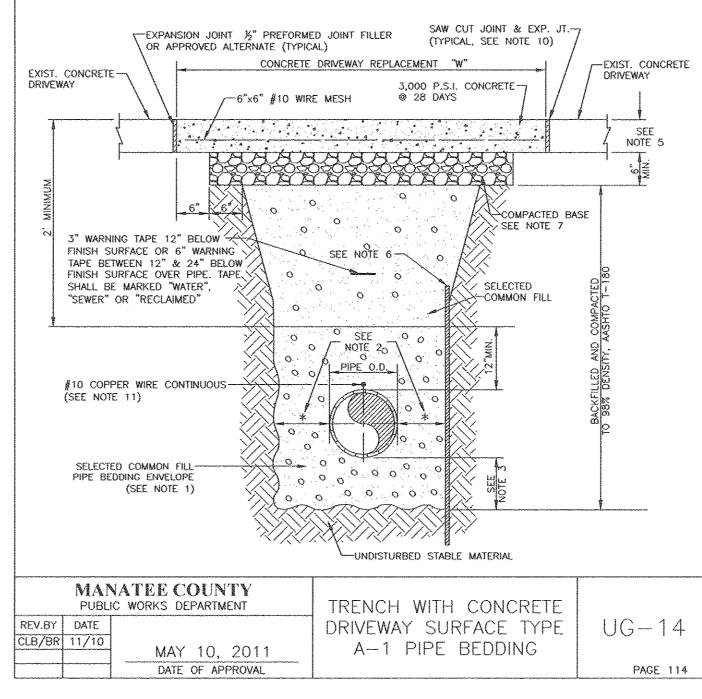
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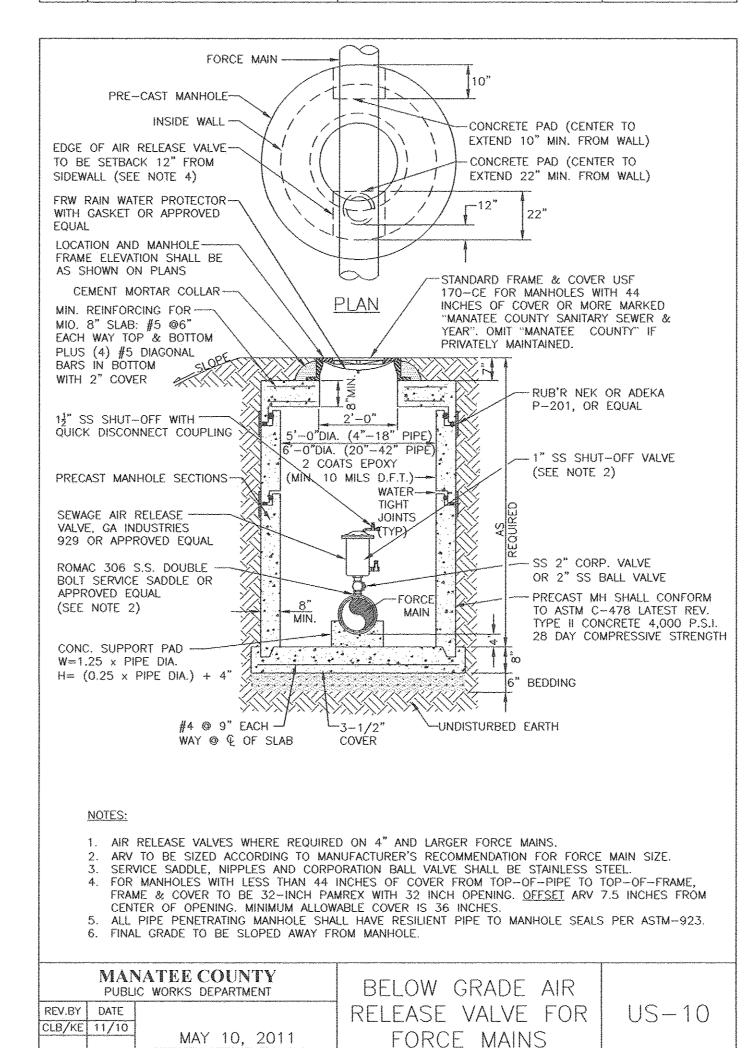


PAGE 103

DATE OF APPROVAL

### 1. 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. 3. TYPICALLY 4" TO 6". 4. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS. . THICKNESS TO MATCH EXISTING OR BE 6" MINIMUM, WHICHEVER IS GREATER. 6. SHEETING ORDERED LEFT IN PLACE TO BE CUT OFF 24" BELOW FINISH GRADE OR 12" BELOW SUBGRADE. BASE SHALL BE COMPACTED 6" MINIMUM THICKNESS OF APPROVED MATERIAL DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST ADOPTED CONSTRUCTION STANDARDS OF THE MANATEE COUNTY TRANSPORTATION DEPARTMENT. ). IF THE DRIVEWAY IS 12' OR WIDER, SAWCUT AN EXPANSION JOINT ALONG THE CENTER OF THE DRIVEWAY (3/6" WIDE AND 11/6" DEEP) AFTER THE CONCRETE HAS SET. 10. IF THERE IS AN EXISTING EXPANSION JOINT WITHIN 3' OF THE PROPOSED JOINT, EXTEND DRIVEWAY REPLACEMENT TO THE EXISTING JOINT. 11. TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS. SAW CUT JOINT & EXP. JT.-TEXPANSION JOINT 1/2" PREFORMED JOINT FILLER (TYPICAL, SEE NOTE 10) OR APPROVED ALTERNATE (TYPICAL) CONCRETE DRIVEWAY REPLACEMENT "W" EXIST. CONCRETE EXIST. CONCRETE-DRIVEWAY DRIVEWAY @ 28 DAYS -6"x6" #10 WIRE MESH



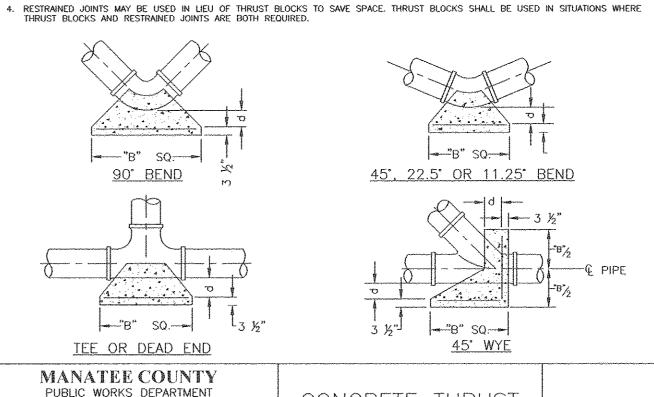


DATE OF APPROVAL

| PIPE<br>SIZE | 90°B  | END    | 45°BI | END     | 22.51  | BEND   | 11.25°1 | BEND                  | DEAD<br>& TE |        | 45*   | WYE   |
|--------------|-------|--------|-------|---------|--------|--------|---------|-----------------------|--------------|--------|-------|-------|
| (IN.)        | В     | d      | В     | d       | В      | d      | В       | d                     | В            | d      | В     | d     |
| 4            | 1.5   | 3 ½    | 1.1   | 3 1/2   | 0.8    | 3 ½    | 0.6     | 3 1/2                 | 1.3          | 3 ½    | 1,1   | 3 1/2 |
| 6            | 2.2   | 5 1/4  | 1.6   | 3 ¾     | 1.2    | 3 ½    | 0.8     | 3 ½                   | 1.9          | 4 ½    | 1.6   | 3 3/4 |
| 8            | 2.9   | 7      | 2.1   | 5       | 1.5    | 3 %    | 4,4     | 3 ½                   | 2.4          | 5 ¾    | 2.0   | 4 3/4 |
| 10           | 3.5   | 8 ½    | 2.6   | 6 1/4   | 1.9    | 4 1/2  | 1.3     | 3 1/2                 | 3.0          | 7 1/4  | 2.5   | 6     |
| 12           | 4.2   | 10     | 3.1   | 7 1/2   | 2.2    | 5 1/4  | 1.6     | 3 ¾                   | 3.5          | 8 1/4  | 3.0   | 7 1/4 |
| 14           | 4.9   | 11 ¾   | 3.6   | 8 ¾     | 2.6    | 6 1/4  | 1.8     | 4 1/4                 | 4,1          | 9 ¾    | 3.4   | 8 14  |
| 16           | 5.5   | 13 ¼   | 4.1   | 9 ¾     | 2.9    | 7      | 2.1     | 5                     | 4.7          | 11 1/4 | 3.9   | 9 1/4 |
| 18           | 6.2   | 15     | 4.6   | 11      | 3.3    | 8      | 2.3     | 5 1/2                 | 5.2          | 12 ½   | 4.4   | 10 ½  |
| 20           | 6.9   | 16 ½   | 5.0   | 12      | 3.6    | 8 3/4  | 2.6     | 6 1/4                 | 5.8          | 14     | 4.9   | 11 3  |
| 24           | 8.2   | 19 ¾   | 6.0   | 14 ½    | 4.3    | 10 1/4 | 3.1     | 7 1/2                 | 6.9          | 16 ½   | 5.8   | 14    |
| 30           | 10.1  | 24 1/4 | 7.5   | 18      | 5.3    | 12 ¾   | 3.8     | 9                     | 8.5          | 20 ½   | 7.2   | 17 ½  |
| 36           | 12.1  | 29     | 8.9   | 21 1/4  | 6.4    | 15 1/4 | 4.5     | 10 ¾                  | 10.2         | 24 ½   | 8.6   | 20 ¾  |
|              | "B" S | Q.     |       | FOR DIN | 1. "B" | BETWEE | N 5.75  | IT MAT ' & 12 75' USI | .5' USE      | E #4 @ | 8" EA | ACH W |

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 16 =3000 PSI, REINFORCEMENT  $f_y$  =60.0 KSI. THRUST BLOCK SHALL BE CAST AGAINST FIRM UNDISTURBED SOIL.
- 3. FOR LARGER "B" DIMENSIONS IT IS NECESSARY TO CHECK THAT PIPE IS SUFFICIENTLY DEEP TO ALLOW 15" MIN. SOIL COVER OVER TOP



CONCRETE THRUST

UG-7

PAGE 107

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

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

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REV.BY DATE

LB/BR 11/10

- 1. RESTRAIN 11.25' BENDS 50% OF LENGTH FOR 22.5' BENDS.
- 2. ALL VALVES AND FITTINGS SHALL BE RESTRAINED TO THE CONNECTINGSECTIONS
- 3. ALL ISOLATIONVALVES MUST BE PROPERLY ANCHORED OR RESTRAINED TO RESIST A 180 PSI TEST PRESSURE IN EITHER DIRECTION.
- 4. PIPE SIZES ARE GIVEN IN INCHES.

MAY 10, 2011

DATE OF APPROVAL

- 5. RESTRAINED PIPE LENGTHS ARE GIVEN IN FEET.
- 6. LENGTHS SHOWN ARE FOR A TEST PRESURE 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 SAFTEY. 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.

| 1 | - de l'application de la constant de l'application de la constant de l'application de l'app | MAR   | NATEE COUNTY       |                 |          |
|---|--|-------|--------------------|-----------------|----------|
| - |  |       | C WORKS DEPARTMENT | RESTRAINED      |          |
| - | REV.BY   | DATE  |                    | LENGTHS FOR PVC | UG-8     |
| - | CLB/BR   | 11/10 | MAY 10, 2011       | PIPE            | -        |
|   |  |       | DATE OF APPROVAL   |                 | PAGE 108 |



PROJECT # 415-6079880 SURVEY # 6079880 SEC./TWN./RGE | 13&14/35S/18 SCALE 1"=20' DATE BY SURVEYED JG/ZNS | 12/1/1

> JAMES STOCKWELL, P.E. FLORIDA RIFILIH, 67198

JD\$

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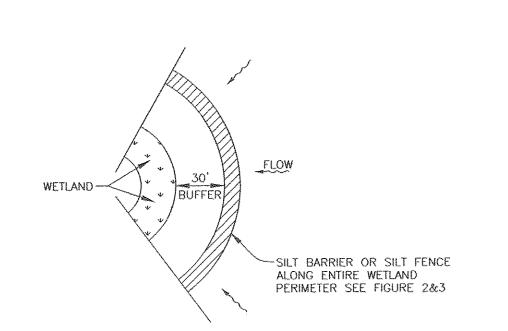
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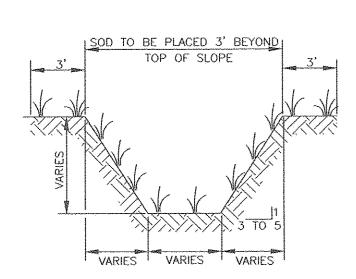
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WETLAND BUFFER FIGURE 1



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

LATEST EDITION FOR ALL TEMPORARY

EROSION CONTROL MEASURES.

REFERENCE THE FDOT DESIGN STANDARDS

STORM PIPE

WHERE A DAM IS REQUIRED

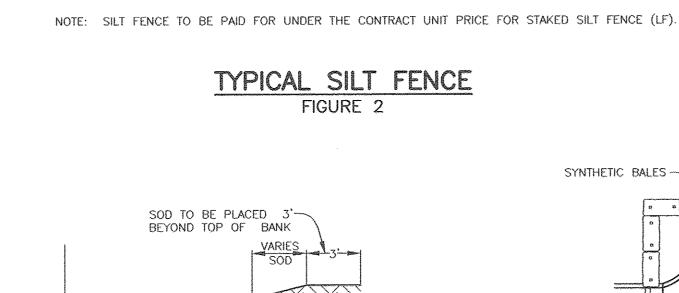
WITHIN EXISTING LAKE FOR CONSTRUCTION OF STORM PIPE, TURBIDITY BARRIER SHALL BE PLACED BEYOND THE DAM

TURBIDITY BARRIER -SEE FIGURE 4

EDGE OF WATER -

EXISTING LAKE

NOTE:



**ELEVATION** 

OPTIONAL POST -

-FILTER FABRIC (IN

CONFORMANCE WITH

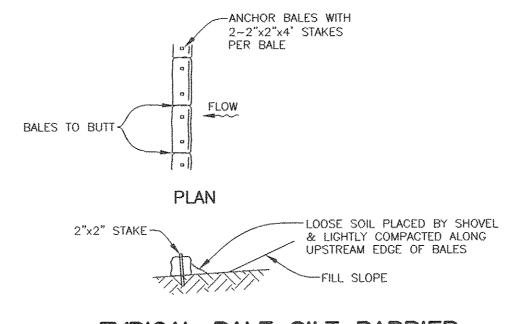
\SEC. 985 FDOT SPEC.)

POSITIONS

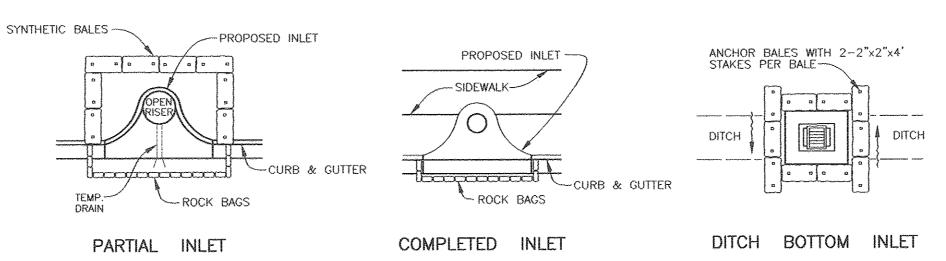
POSITION (CANTED

20" TOWARD FLOW)

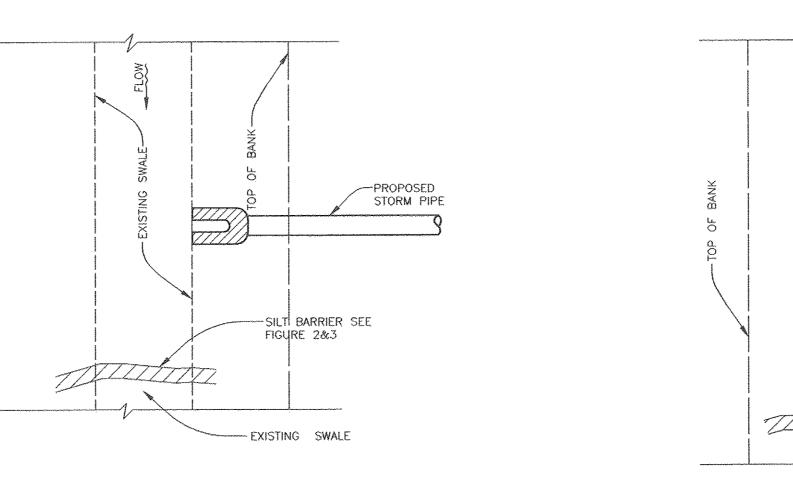
TYPICAL RETENTION/DETENTION POND SECTION FIGURE 6



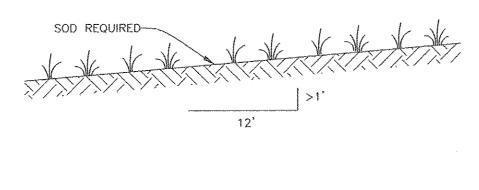
TYPICAL BALE SILT BARRIER FIGURE 3



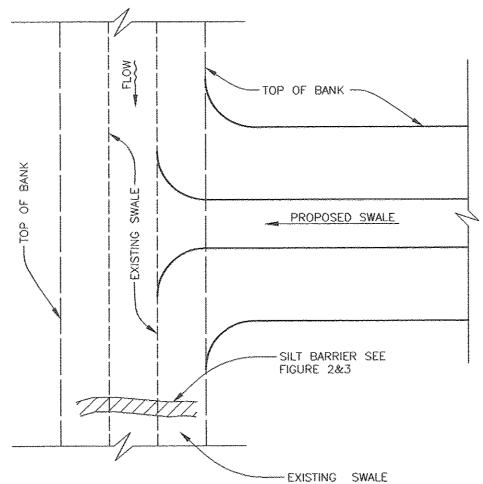
SYNTHETIC BALE PROTECTION AROUND INLETS OR SIMILAR STRUCTURES FIGURE 7



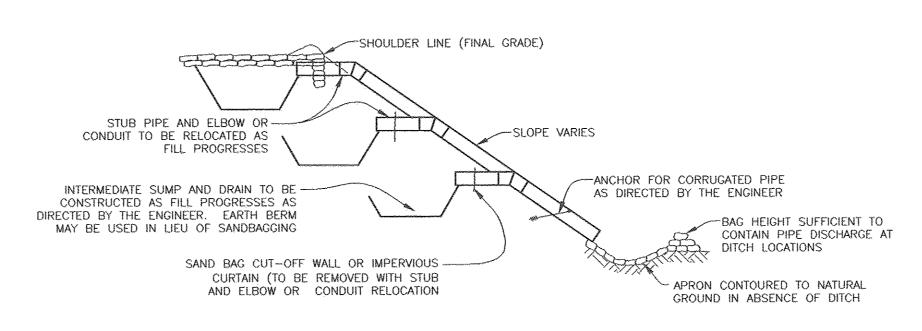
SILT BARRIER AT CONNECTION OF STORM PIPE TO EXISTING SWALE FIGURE 10



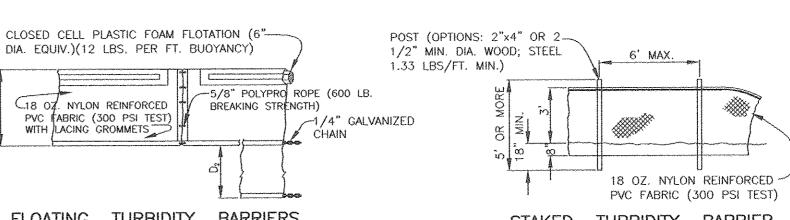
GRASS SLOPES FIGURE 13



SILT BARRIER AT CONNECTION OF SWALE TO EXISTING SWALE FIGURE 11



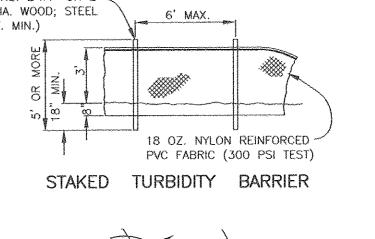
SECTION AA TEMPORARY SLOPE DRAIN FIGURE 15



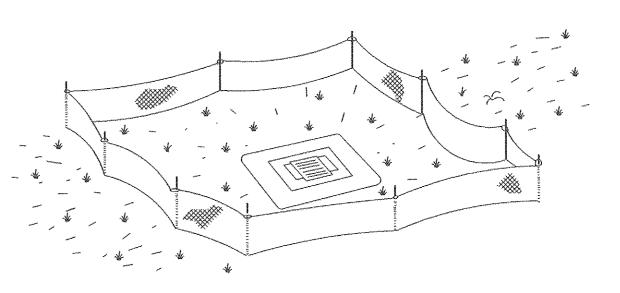
FLOATING TURBIDITY BARRIERS

 $D_1 = 5$ ' 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.

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

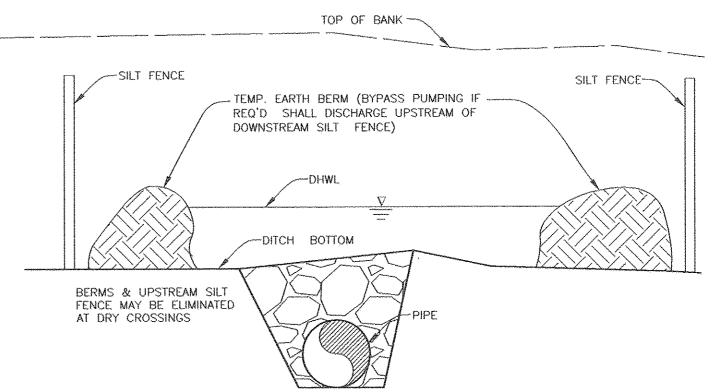


TURBIDITY BARRIERS FIGURE 4

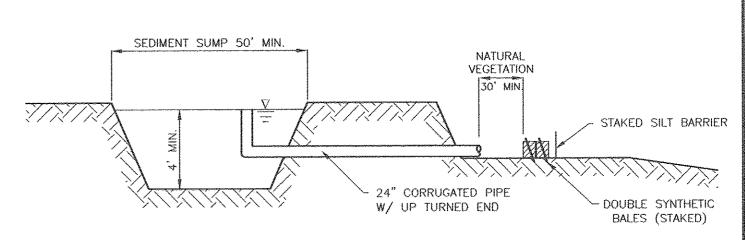


TYPE III SILT FENCE PROTECTION AROUND DITCH BOTTOM INLETS

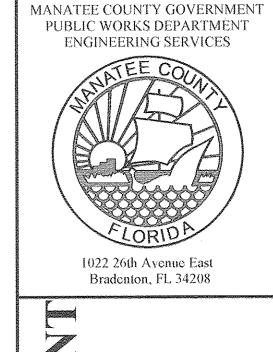
# STAKED SILT BARRIER OR SILT FENCE PROTECTION AROUND DITCH BOTTOM INLETS FIGURE 8



UNDERGROUND PIPE CROSSING FIGURE 12



SEDIMENT SUMP SECTION FIGURE 16



# N

RROSIO

| ÷ |                      | 4   |   |              |             |  | Month Change of State St |  |
|---|----------------------|---|---|--------------|-------------|--|--|--|
|   | DATE                 |   |   |              |             |  |  |  |
|   | BX                   | ang dan | again guaig ta agus agus agus agus agus agus agus agu |              |             |  |  |  |
|   | REVISION DESCRIPTION |   |   |              |             |  |  |  |
|   | Š                    |   |   |              |             |  |  |  |
|   | PRC                  | JECT  | #   | , ,          | 415-6079880 |  |  |  |
|   | SUR                  | VEY   | #   | 6079880      |             |  |  |  |
|   | SEC                  | ./TWI                                       | N./RO   | 13&14/35S/18 |             |  |  |  |

| PROJECT #   |     | 415-6079880   |          |  |  |  |
|-------------|-----|---------------|----------|--|--|--|
| SURVEY #    |     | 6079880       |          |  |  |  |
| SEC./TWN./I | RGE | 13&14/35S/18E |          |  |  |  |
| SCALE       |     | 1"=20'        |          |  |  |  |
|             |     | BY            | DATE     |  |  |  |
| SURVEYED    | JG, | /ZNS          | 12/1/11  |  |  |  |
| DESIGNED    | J   | JDS           | 01/12/12 |  |  |  |
| DRAWN       | E   | 3LR           | 07/19/12 |  |  |  |
| CHECKED     | ,   |               |          |  |  |  |

