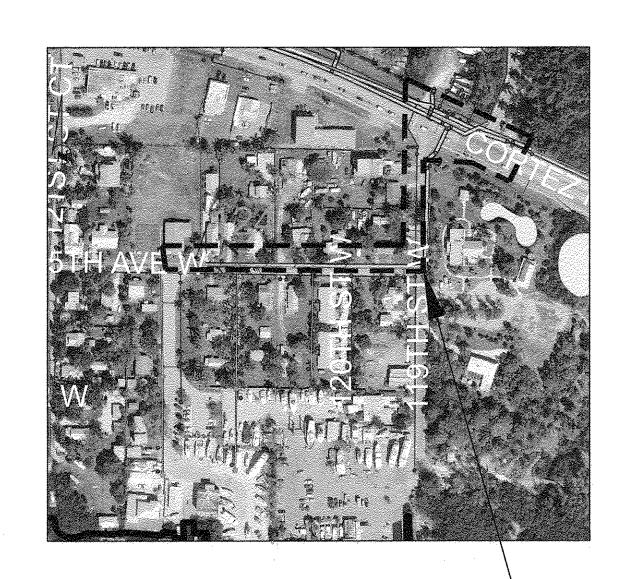


# FORCE MAIN 1MA REPLACEMENT BRADENTON, FL 404-6085980

JULY 2014

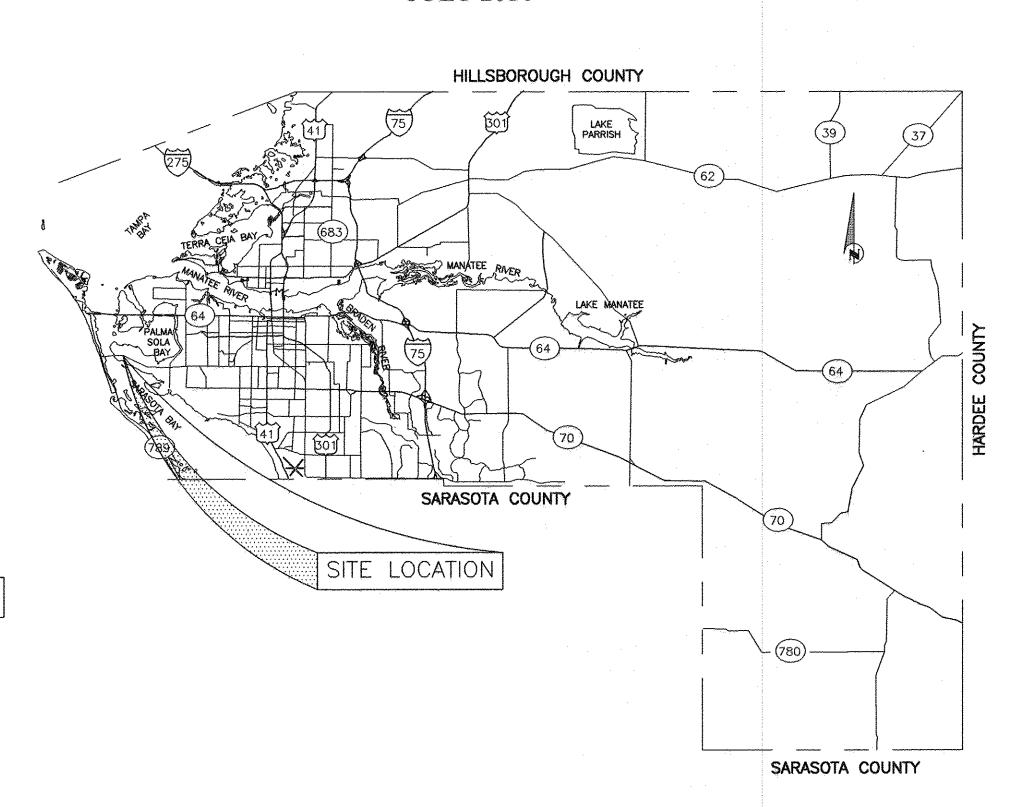


PROJECT SITE

# VICINITY MAP

# PROJECT DESCRIPTION

REPLACE APPROXIMATELY 800 LF OF 6" DUCTILE IRON PIPE FORCE MAIN WITH 8" DIAMETER FORCE MAIN. THE LOCATION OF THE PROJECT IS FROM 1211 45TH AVENUE WEST SANITARY LIFT STATION (1MA), EAST ON 45TH AVENUE WEST, AND THEN NORTH ON 119TH STREET WEST TO CONNECT TO EXISTING FORCE MAIN.



# BID DOCUMENTS

NO.	INDEX OF SHEETS
1.	COVER SHEET
2.	GENERAL NOTES & LEGEND
34.	PLAN & PROFILE
56.	DETAILS
7.	EROSION CONTROL



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# **GENERAL**

- 1. ALL CONSTRUCTION ACTIVITIES SHALL BE COORDINATED WITH THE PROJECT MANAGEMENT DIVISION. THE PROJECT MANAGER IS: SHERRI ROBINSON
- AND CAN BE REACHED AT (941) 708-7450; EXT. 7334

"THE NATIONAL GEODETIC VERTICAL DATUM OF 1929", (NGVD '29).

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

2. SITE VISITS ARE MANDATORY FOR ALL BIDDERS. THESE SITE VISITS CAN BE ARRANGED THROUGH THE PROJECT MANAGER

- OTHERWISE INDICATED ON THE PLANS. 4. VERTICAL CONTROL FOR THIS PROJECT WAS ESTABLISHED BY A MINIMUM OF TWO REFERENCE BENCHMARKS DESCRIBED ON THE
- 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 BASED.
- 7. 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.
- 8. 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.
- 11. 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. ERÒSION 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.

# UTILITIES

- 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 OWNER.
- 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
- 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.



ENGINEERING SERVICES 1022 26th Avenue East, Bradenton, FL 34205

# EMERGENCY CONTACTS

FLORIDA POWER & LIGHT

1253 12TH AVENUE EAST

EMERGENCY: 1-800-4-OUTAGE

PALMETTO, FL 34221

FAX: (941) 723-4444

MANAGEMENT DISTRICT

6750 FRUITVILLE ROAD

SARASOTA, FL. 34240

FAX: (941) 373-7660

STEVE LOPES, P.E.

(941) 377-3722

(941) 723-4430

GREG COKER

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

Greg\_Coker@fpl.com TECO/PEOPLES GAS CO. DAN SHANAHAN HARRY MESSICK 8261 VICO COURT 410 6th AVENUE EAST SARASOTA, FL. 34240 BRADENTON, FL. 34208 (941) 342-4030 FAX: (941) 342-4011 EMERGENCY: 1-877-832-6911 FAX: (941) 750-9364

VERIZON FLORIDA INC. JOHN PLOTT 1701 RINGLING BLVD. SARASOTA, FL. 34236 (941) 906-6707 FAX: (941) 906-6706 John.Plott@verizon.com 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 MANATEE COUNTY HEALTH DEPT. TEMPLE TERRACE, FL 33637 (813) 470-5875 FAX: (813) 470-5993 (941) 748-0747 EXT. 1355 BRIGHT HOUSE NETWORKS

TOM WRIGHT 5413 E. STATE ROAD 64 SOUTHWEST FLORIDA WATER BRADENTON, FL. 34208-5535 SARASOTA SERVICE OFFICE (941) 748-3816 EXT. 21348 Tom.Wright@mybrighthouse.com SUNSHINE STATE ONE CALL OF FLORIDA 1-(800) 432-4770

PEACE RIVER ELECTRIC COOPERATIVE, INC. P.O. BOX 1310 WACHULA, FL 33873 KENDELL COKER (863) 767-4660 kendell.coker@preco.coop

MANATEE COUNTY PUBLIC WORKS DEPT./TRAFFIC ENGINEERING/ 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.

# LEGEND

XIS	T	N	G	

ВМ		BENCH MARK		BUSH
CM	a	CONCRETE MONUMENT		TREE
IP	ε).	IRON PIPE	<u> </u>	OAK TREE
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GW	$\leftarrow$	GUY WIRE		POTABLE WATER
PP	$\Diamond$	POWER POLE	RCM	- RECLAIMED WATER
LP	❖	LIGHT POLE	\$\$	-SANITARY SEWER
MB	ď	MAIL BOX	<u> </u>	STORM DRAIN
SN	d	SIGN	GAS	- GAS LINE
REF	9	REFLECTOR	ОНЈУ	-OVERHEAD TV
SPRK	O	SPRINKLER		-UNDERGROUND TV
GM	<b>©</b>	GAS MARKER		OVERHEAD ELECTRIC
BFP	-0-	BACKFLOW PREVENTER		-UNDERGROUND ELECTRIC
BO	D<10	BLOW OFF VALVE	OH VER	OVERHEAD VERIZON
FH	Q	FIRE HYDRANT		-UNDERGROUND VERIZON
WV	⋈	WATER VALVE	VER anaparation	- VERIZON
ARV	$\bigcirc$	AIR RELEASE VALVE	NC	-UNDERGROUND UTILITY
WM		WATER METER		OVERHEAD UTILITY
SMH	S	SANITARY SEWER MANHOLE	+++++++	-RAIL ROAD TRACKS
CO	0	SANITARY SEWER CLEAN OUT		- EDGE OF CONCRETE
SB#1	<b>\$</b>	SOIL BORING LOCATION	and the second s	-EDGE OF ROAD

TEL (TED) TELEPHONE SERVICE BOX — TOE OF SLOPE

GI GRATE INLET

MITERED END SECTION

----- TOP OF BANK

PROPERTY LINE

EDGE OF PAVEMENT BACK OF CURB

**ABBREVIATIONS** 

RIGHT OF WAY

CONCRET

DRIVEWA'

SIDEWALK

PROPOSED

--- SERVICE LINE ----- PROPOSED EASEMENT FIRE HYDRANI VALVE

SANITARY SEWER MANHOLE BLOW OFF ASSEMBLY REDUCER HORIZONTAL BEND VERTICAL BEND PLUG MASTER METER ASSEMBLY 0 0

SERVICE LINE & METER

DOUBLE SERVICE

404-6085980 PROJECT # SURVEY # SEC./TWN./RGE | 03/35S/16E SCALE 1"=20' DATE BY 4/9/201 SURVEYED GFY

> |00/00/00 CHECKED JDS JAMES, STOOKWELL, P.E. JA TYNO! 30 STATE ( 86179 ON

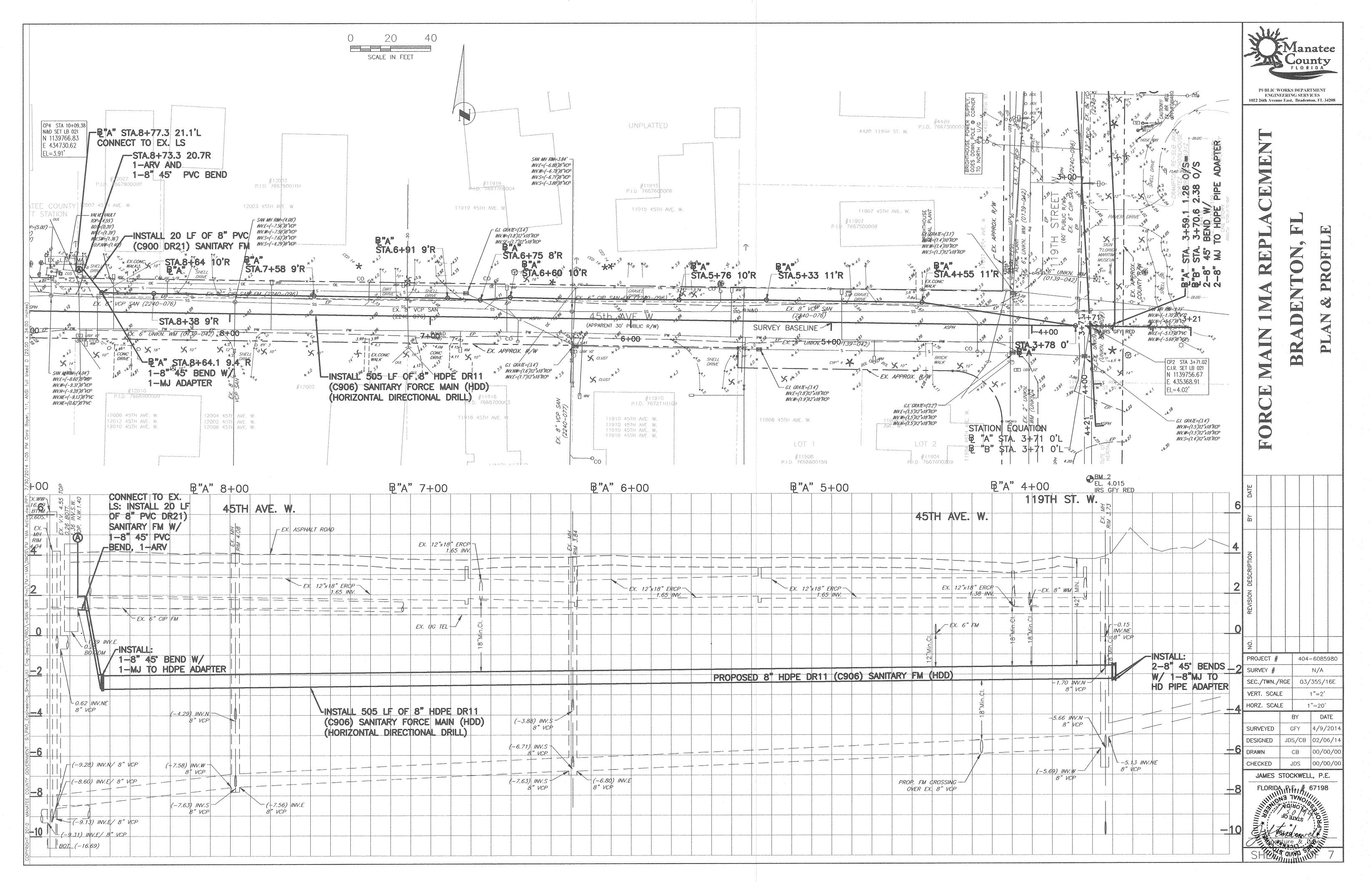
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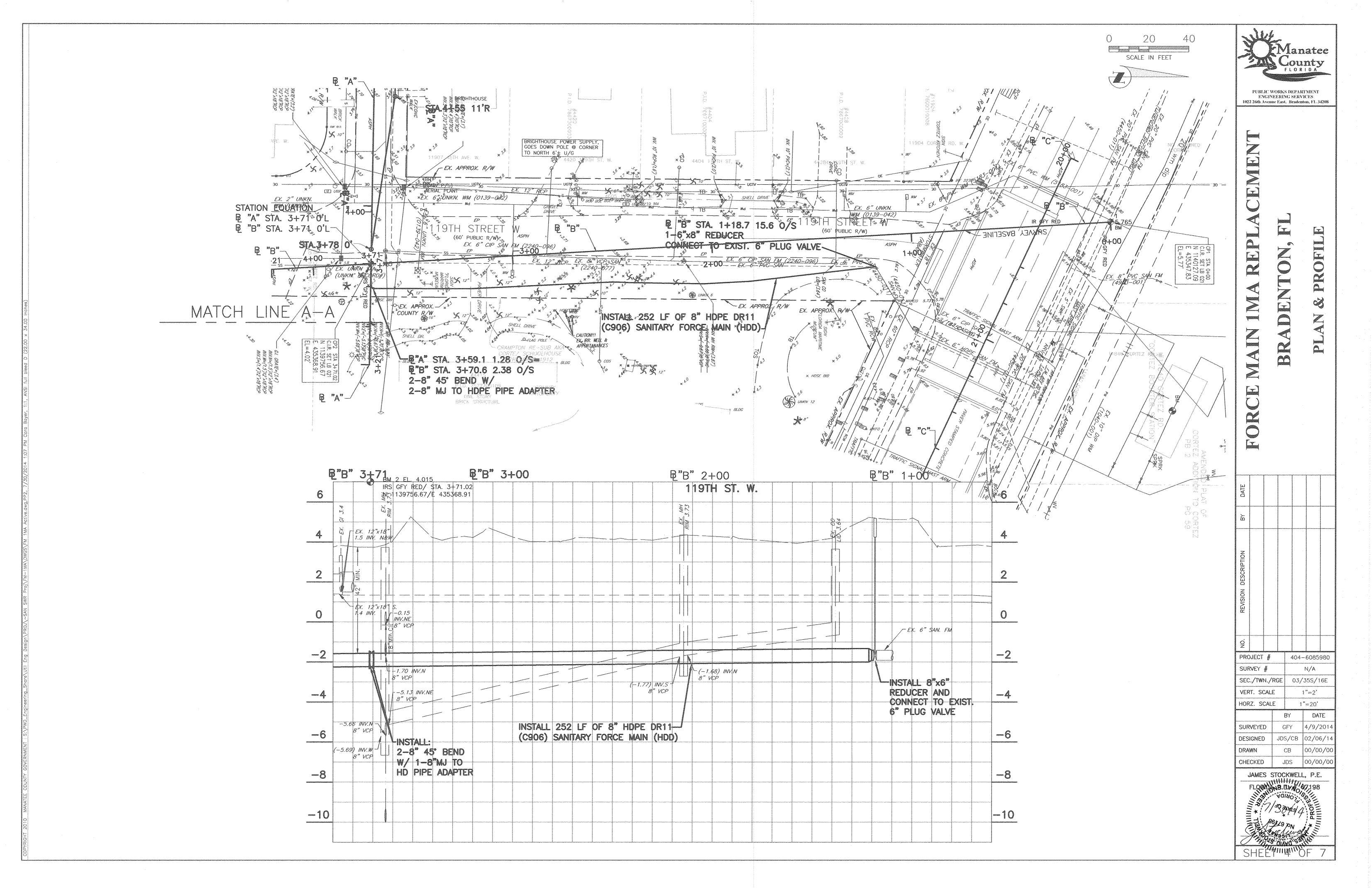
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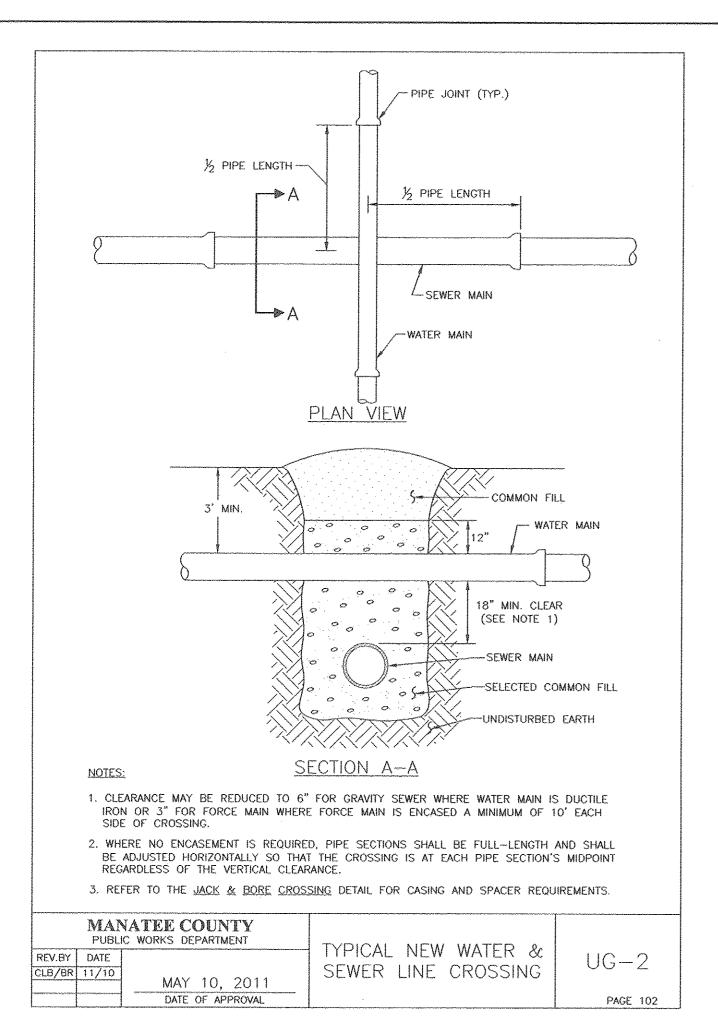
JDS/CB | 02/06/1

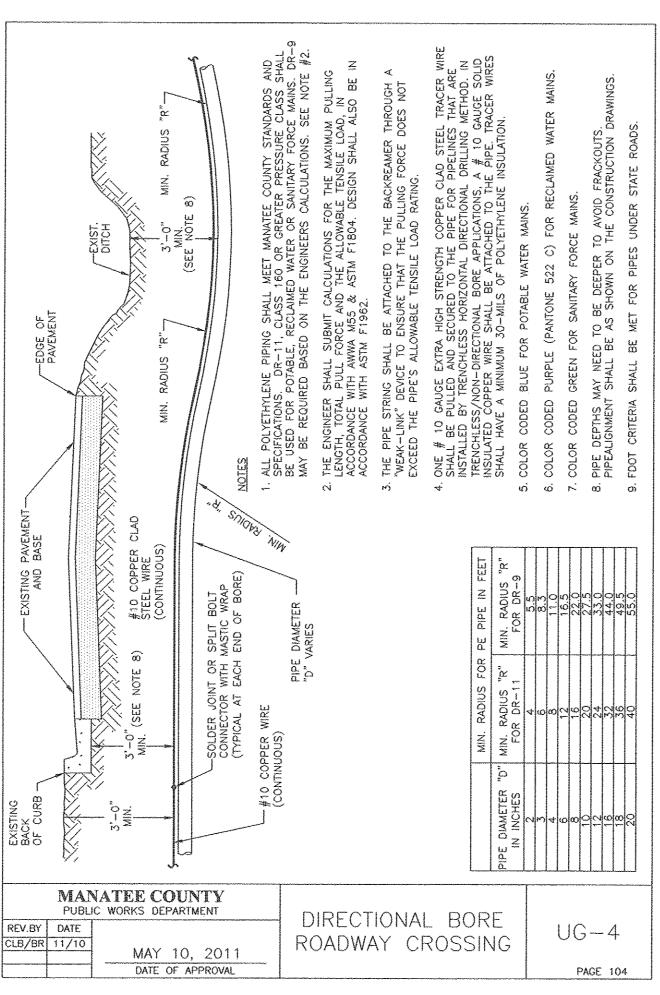
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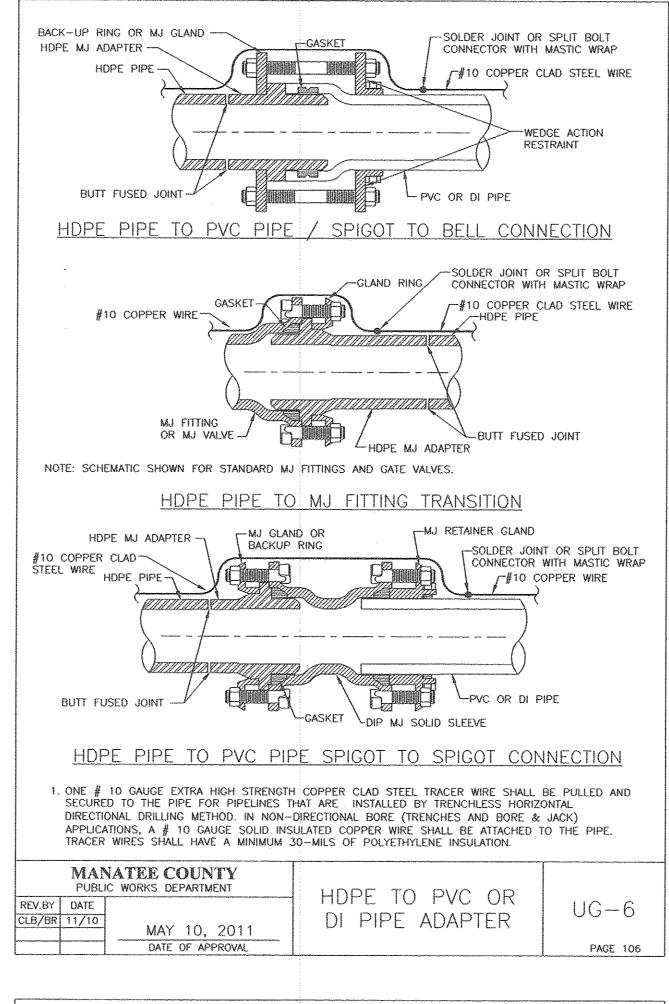
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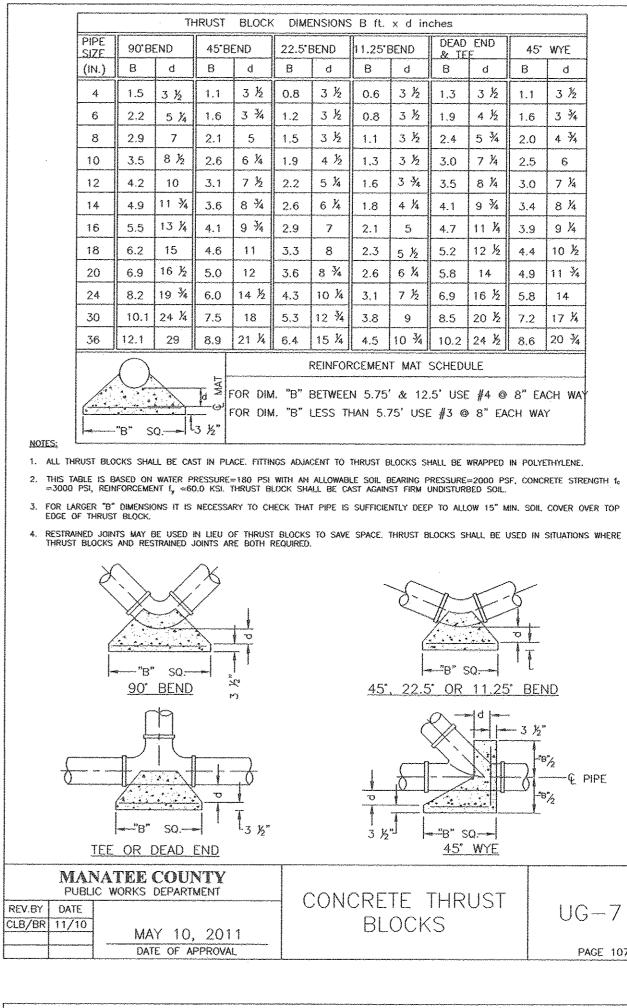












PUBLIC WORKS DEPARTMENT - ENGINEERING SERVICES

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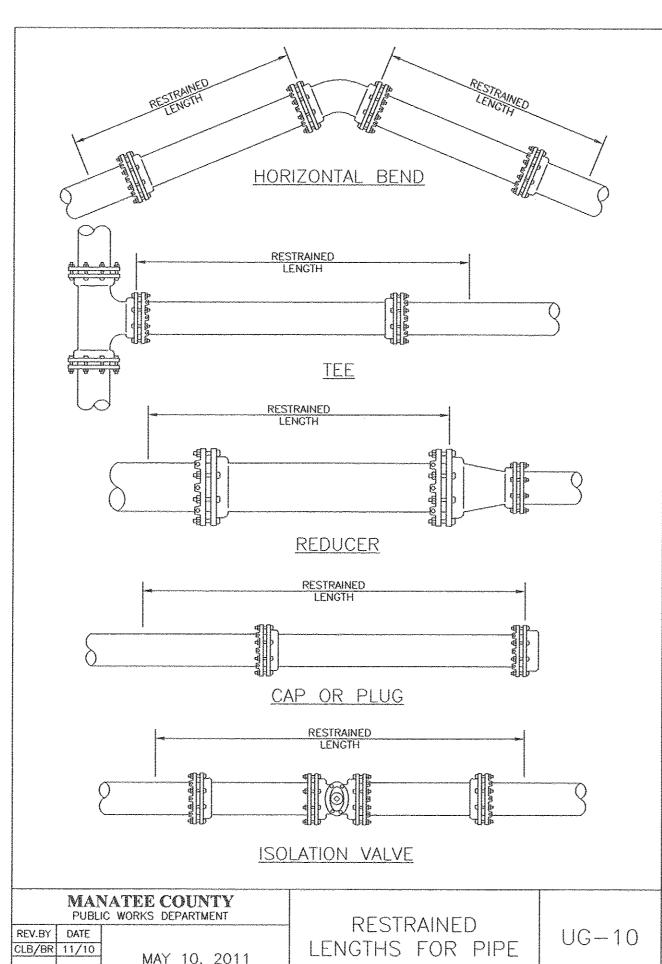
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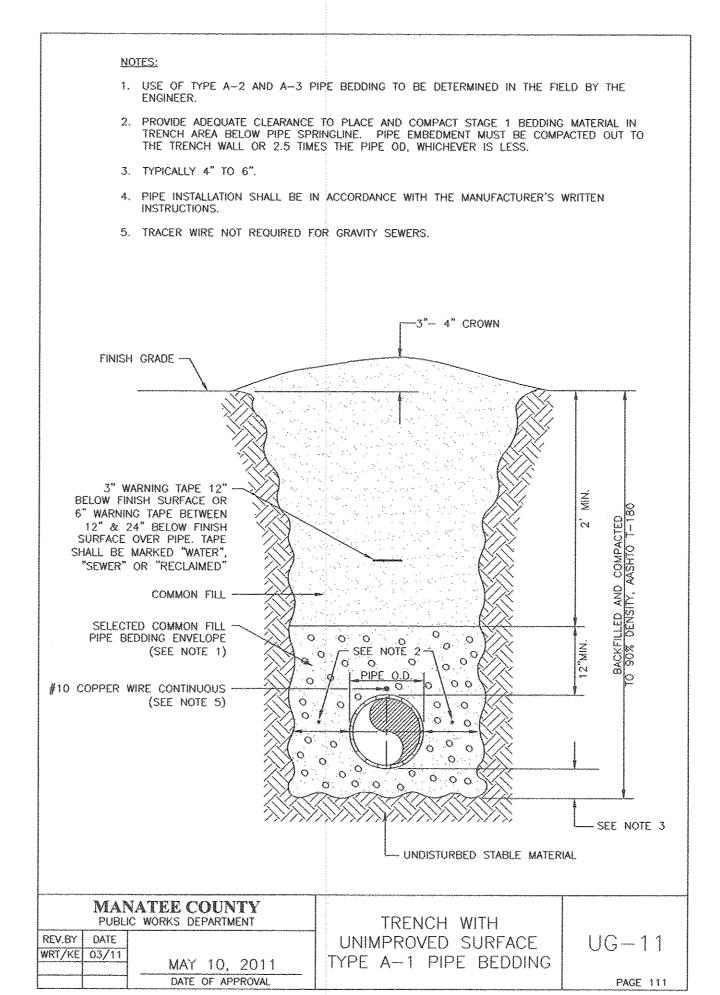
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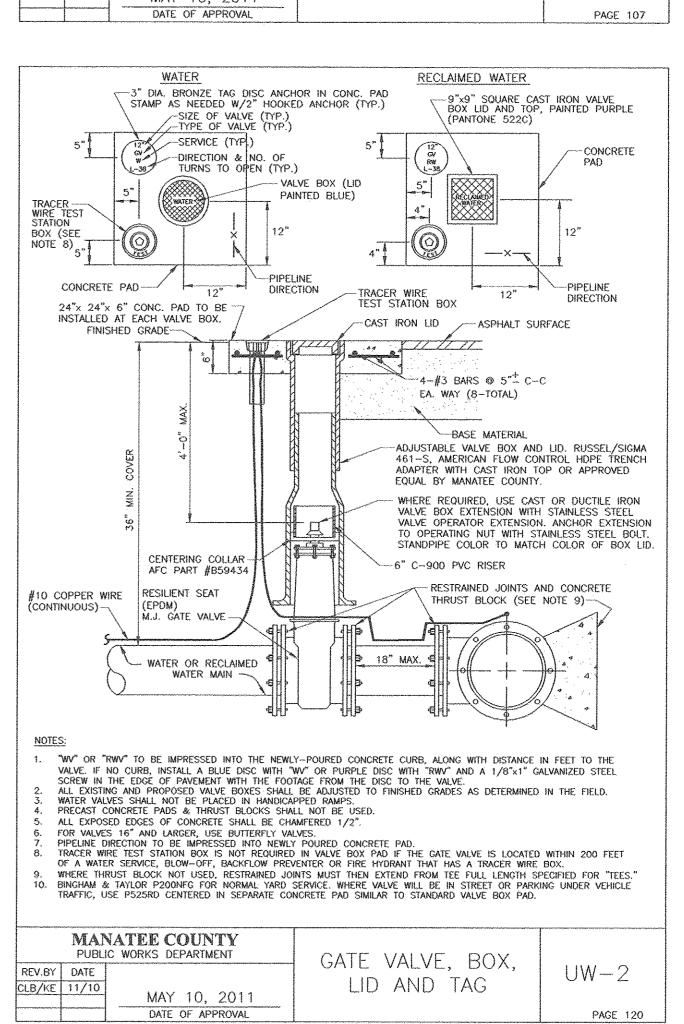
1"=20"

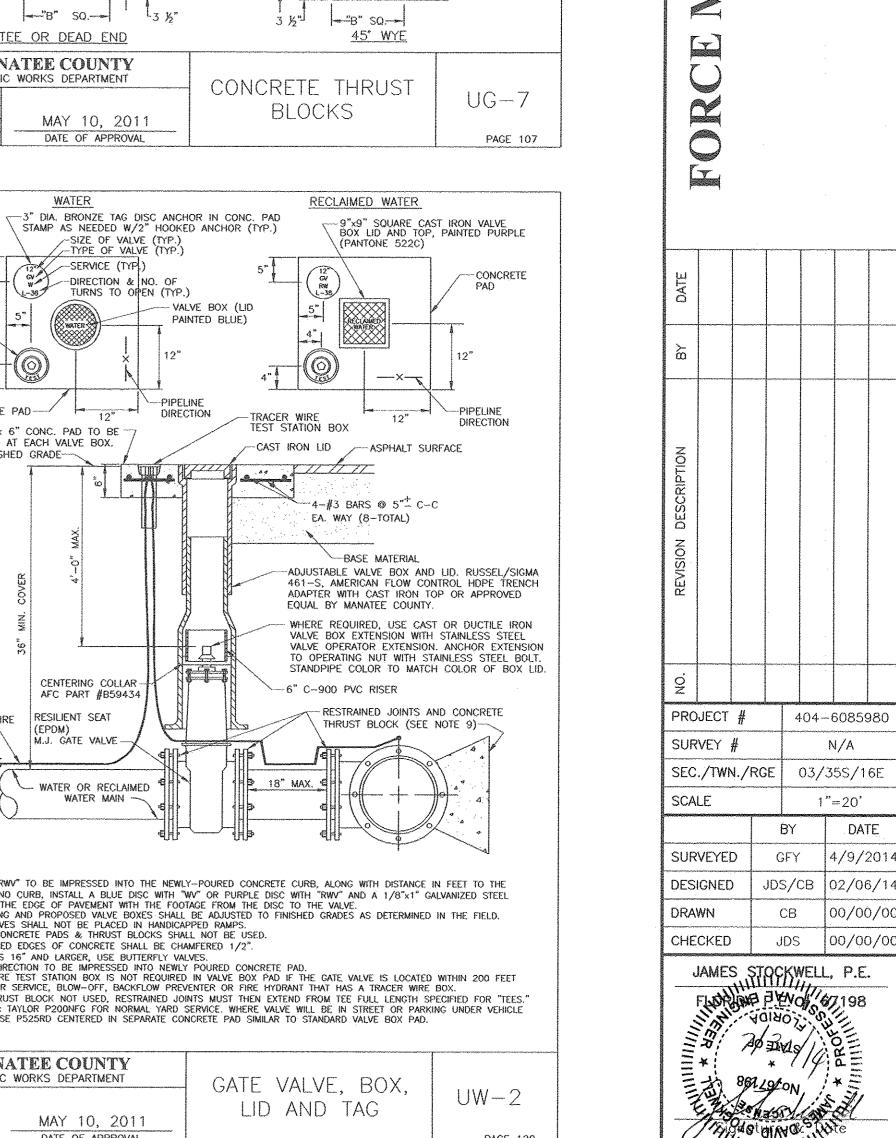
DATE



DATE OF APPROVAL







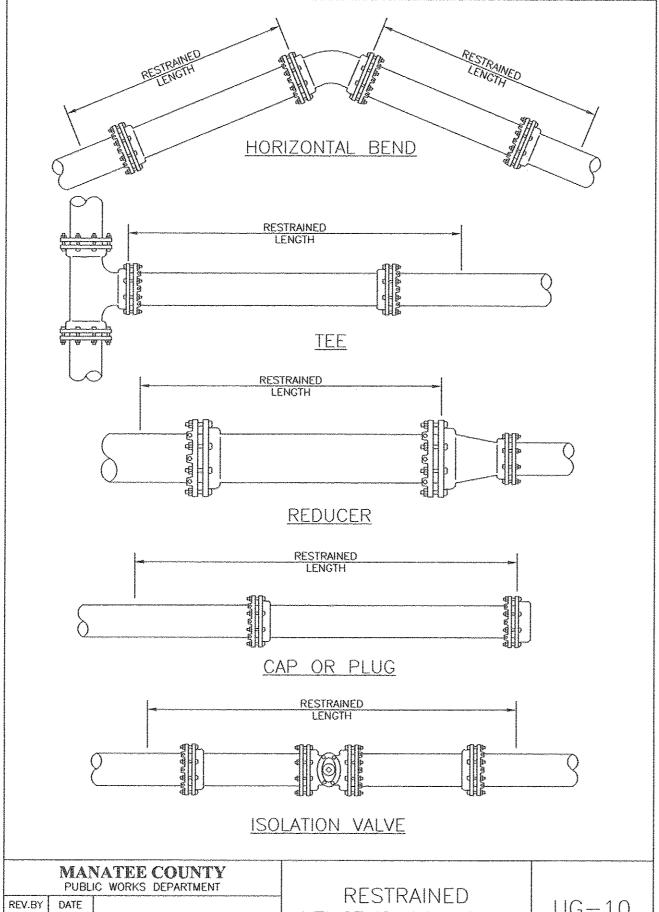
# REQUIRED LENGTH OF RESTRAINED JOINT PIPE FOR DR-18 PVC PIPE

MAIN PIPE	HOR	IZ. BI	ENDS		TEES					EDUCER	PLUGS & VALVES	
SIZE	90,	45	22.5		SIZE LENGTH				SIZE LENGTH			oldeble-frankrike de skiller fan y ferske y fan skiller fan de skiller fan de skiller fan de skiller fan de sk
24	90	38	18	X24 169		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 <sub>1</sub>	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 <sub>7</sub>			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				X4 33			63
4	21	8	4	X4 12						***************************************		45

# NOTES:

- 1. RESTRAIN 11.25' BENDS 50% OF LENGTH FOR 22.5' BENDS.
- 2. ALL VALVES AND FITTINGS SHALL BE RESTRAINED TO THE CONNECTINGSECTIONS OF PIPE.
- 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.
- 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,

	ATEE COUNTY WORKS DEPARTMENT	RESTRAINED	
REV.BY DATE CLB/BR 11/10		LENGTHS FOR PVC	UG-8
	MAY 10, 2011	PIPE	-
	DATE OF APPROVAL		PAGE 108



PAGE 110

## NOTES:

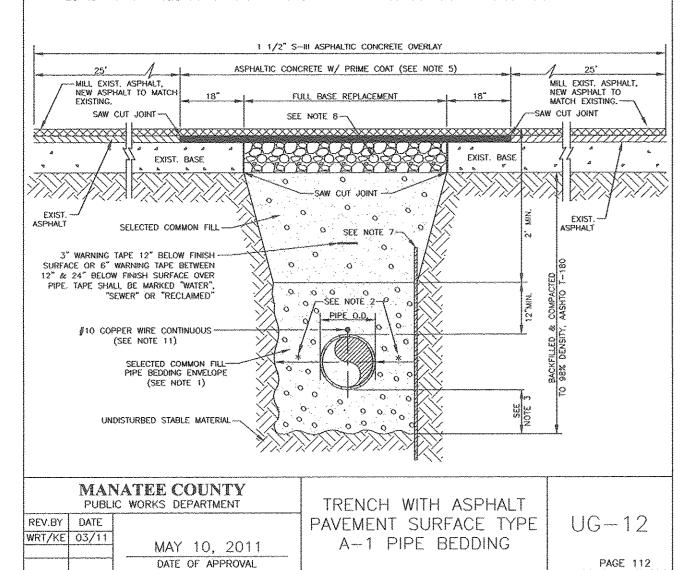
- 1. USE OF TYPE A-2 AND A-3 PIPE BEDDING TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
- 2. PROVIDE ADEQUATE CLEARANCE TO PLACE AND COMPACT STAGE 1 BEDDING MATERIAL IN TRENCH AREA BELOW PIPE SPRINGLINE. PIPE EMBEDMENT MUST BE COMPACTED OUT TO THE TRENCH WALL OR 2.5 TIMES THE PIPE OD, WHICHEVER IS LESS.
- 3. TYPICALLY 4" TO 6".

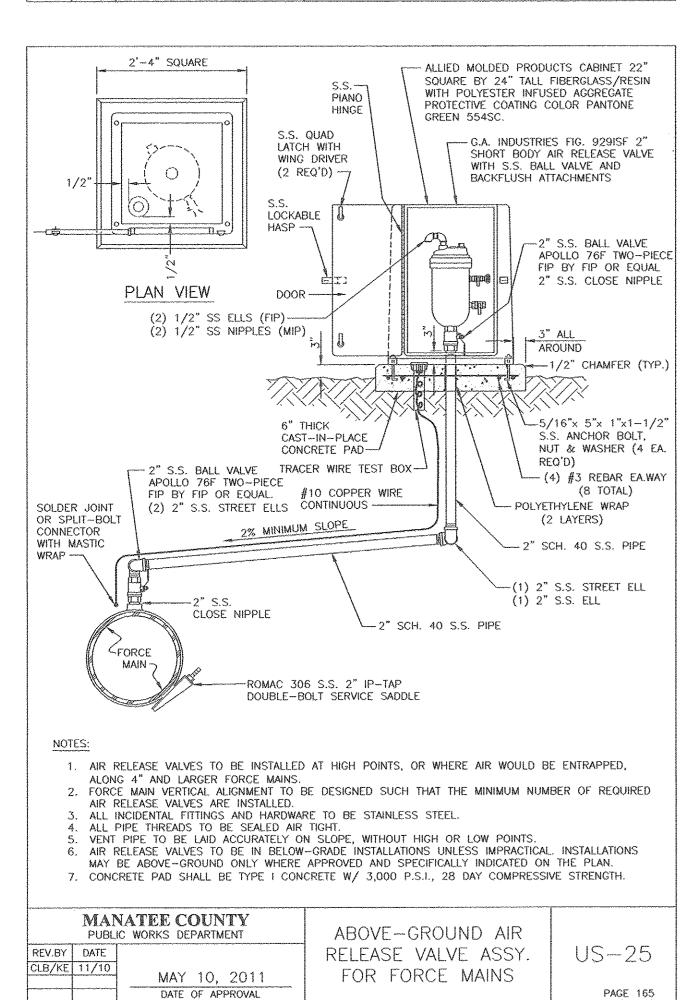
BY MANATEE COUNTY.

- 4. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
- 5. ASPHALTIC CONCRETE STRUCTURE COURSE WITH PRIME COAT SHALL BE THE SAME DEPTH AND TYPE AS EXISTING OR A MINIMUM OF 1 1/4 INCH, WHICHEVER IS GREATER.
- 6. MILL 25' BACK FROM TRENCH SAW CUT. ADJUST MILLING PER INDIVIDUAL SITE TO NOT IMPACT BASE. BUTT JOINT TO EXIST ASPHALT. FINAL OVERLAY LIMITS ARE FROM EDGE OF PAVEMENT TO EDGE OF PAVEMENT. 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

- 7. SHEETING ORDERED LEFT IN PLACE TO BE CUT OFF 24" BELOW FINISHED GRADE OR 12" BELOW SUBGRADE
- 8. BASE SHALL BE 8" MINIMUM THICKNESS CRUSHED CONCRETE.
- 9. TEMPORARY PATCHES WILL BE INSTALLED TO PROVIDE A SMOOTH ALL WEATHER SURFACE AT ALL TIMES. PERMANENT REPLACEMENT TO BE MADE AS SOON AS POSSIBLE.
- 10. RESTORE SIGNAGE & MARKING WITH THERMOPLASTIC PER FDOT STANDARDS, LATEST EDITION.
- 11. TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.
- 12. NOTES 5. THRU 10. ARE MINIMUM REQUIREMENTS FOR A TRENCH IN A ROAD. REFER TO LATEST EDITION OF MANATEE COUNTY HIGHWAY AND TRAFFIC STANDARDS FOR ADDITIONAL REQUIREMENTS.

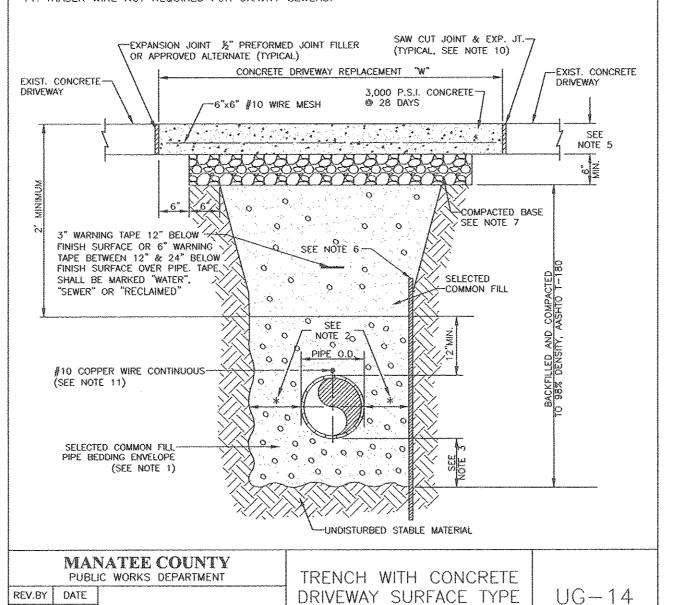


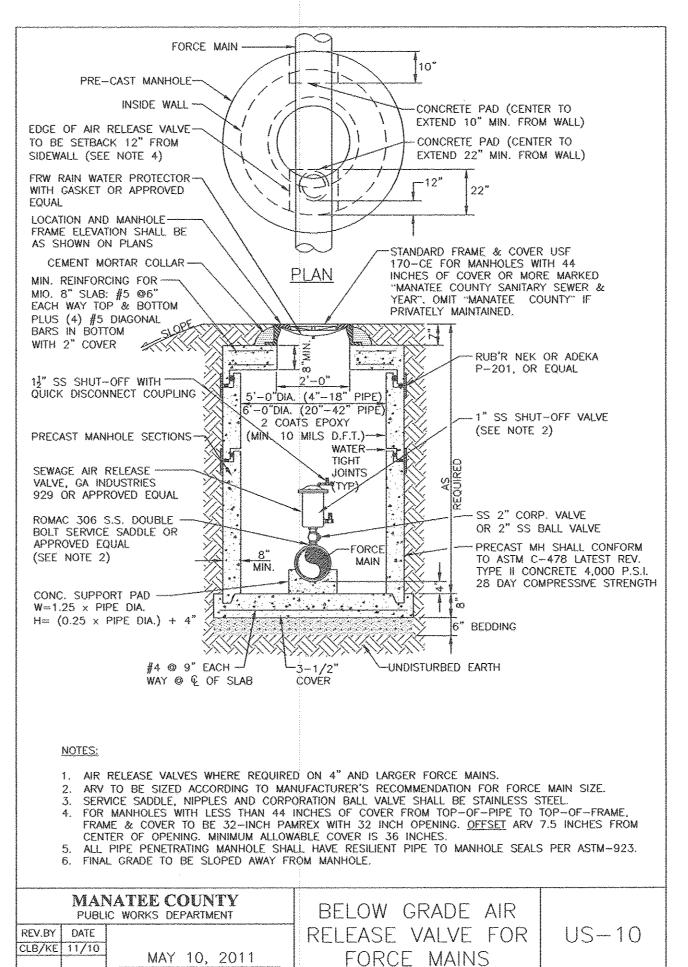


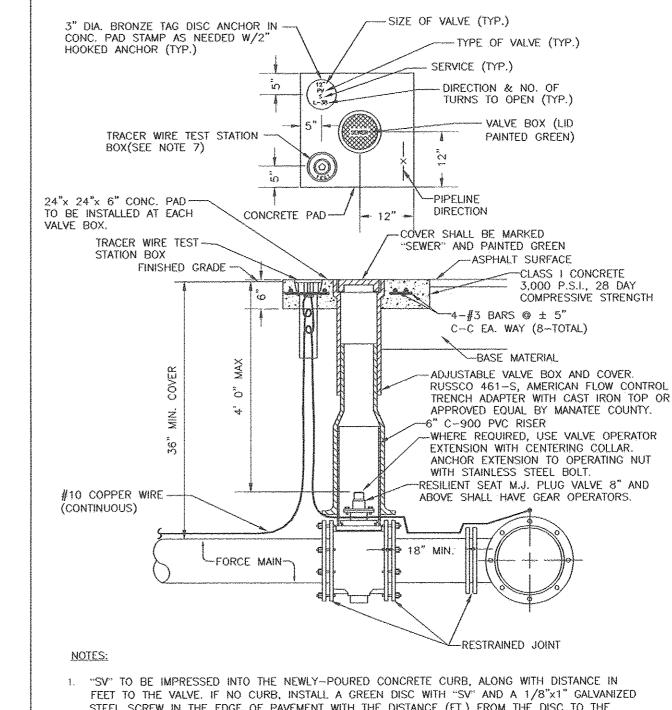
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- TYPICALLY 4" TO 6".
- . PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
- THICKNESS TO MATCH EXISTING OR BE 6" MINIMUM, WHICHEVER IS GREATER.
- 5. Sheeting ordered left in place to be cut off 24" below finish 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 11/2" 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

MAY 10, 2011

DATE OF APPROVAL







# STEEL SCREW IN THE EDGE OF PAVEMENT WITH THE DISTANCE (FT.) FROM THE DISC TO THE 2. ALL EXISTING AND PROPOSED VALVE BOXES SHALL BE ADJUSTED TO FINISHED GRADES AS

- ESTABLISHED IN THE FIELD. SEWER VALVES SHALL NOT BE PLACED IN HANDICAPPED RAMPS.
- PRECAST CONCRETE PADS SHALL NOT BE USED.

PAGE 150

- ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1/2 6. PLUG VALVES SHALL NOT BE USED AS A TAPPING VALVE. WHERE AN EXISTING FORCE MAIN IS
- TO BE TAPPED, USE A TAPPING GATE VALVE PER THE TAPPING SLEEVE AND VALVE DETAIL.

	the man that I may be a second to the second
7.	TEST BOX TO BE BINGHAM & TAYLOR P200NFG OR EQUAL FOR NORMAL YARD SERVICE. WHERE
	VALVE WILL BE IN STREET OR UNDER VEHICLE TRAFFIC, USE P525RD CENTERED IN SEPARATE
	CONCRETE PAD SIMILAR TO STANDARD VALVE BOX PAD.
	And the second s

BY DATE COVER AND TAG	40
$\frac{\text{DOM}}{11/10}$ MAY 10, 2011 COVER AND TAG	- / _
Million Contraction of the Contr	AGE 152

# SURVEYOR'S REPORT

1. THIS SURVEY WAS PREPARED IN CONJUNCTION WITH TITLE DOCUMENTS PROVIDED BY MANATEE

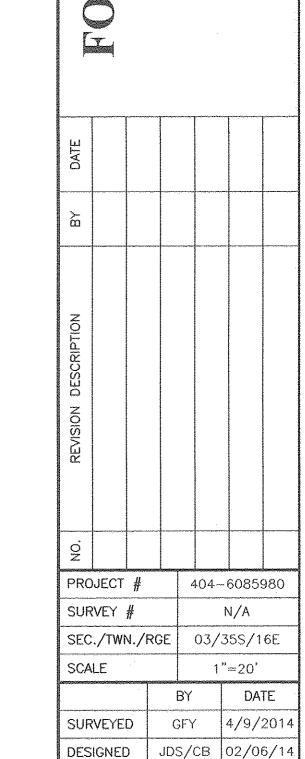
A-1 PIPE BEDDING

PAGE 114

- THERE ARE NO VISIBLE ENCROACHMENTS EXCEPT AS SHOWN. FOUNDATIONS BENEATH THE SURFACE OF THE GROUND THAT MAY ENCROACH HAVE NOT BEEN LOCATED.
- 3. THE LOCATION AND EXISTENCE OF UNDERGROUND UTILITIES AND UNDERGROUND FOUNDATIONS OR ANY OTHER PERTINENT ATTRIBUTES TO SUBJECT PROPERTY (IF ANY) NOT ABSTRACTED AS PART OF THIS SURVEY, EXCEPT AS SHOWN.

4. BEARINGS SHOWN WERE BASED ON STATE PLANE COORDINATES, FLORIDA WEST ZONE-NAD '83,

- AND WERE BASED ON GPS OBSERVATIONS OF MANATEE COUNTY SURVEY MONUMENT GIS 087, (NGS PID #AG9192) WITH PUBLISHED COORDINATES OF (N)1.137,113.95, (E)445,933.21 AND CITY OF BRADENTON SURVEY SURVEY MONUMENT COB 1034 (MANATEE COUNTY PID #BBCL41) WITH PUBLISHED COORDINATES OF (N)1,138,065.01, (E)462,298.22.
- 5. ELEVATIONS SHOWN WERE BASED ON MANATEE COUNTY SURVEY SECTION BENCH MARK, RIVET AND MANATEE COUNTY DISK IN TOP OF CURB SOUTHSIDE CORTEZ ROAD APPROX. 195' EAST OF THE CENTERLINE OF 115TH ST, W. AND APPROX. 33' SOUTH OF THE CENTERLINE OF CORTEX ROAD. PUBLISHED ELEVATION OF 5.774', NATIONAL GEODETIC VERTICAL DATUM OF 1929.
- 6. SUBJECT TO ALL RESTRICTIONS, RIGHTS OF WAY AND EASEMENTS OF RECORD, IF ANY.
- 7. REUSE OF DOCUMENTS: THIS DOCUMENT IS AN INSTRUMENT OF SERVICE IN RESPECT OF THE PROJECT TO WHICH IT APPLIES AND ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY GEORGE F. YOUNG, INC. (GFY) FOR THE SPECIFIC PURPOSES INTENDED WILL BE AT THE USER'S SOLE RISK AND WITHOUT HABILITY OR LEGAL EXPOSURE TO GEY AND USER SHALL INDEMNIFY AND HOLD HARMLESS GFY FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES INCLUDING ATTORNEYS FEES ARISING OUT OF OR RESULTING THEREFROM. ANY SUCH VERIFICATION OR ADAPTATION WILL. ENTITLE GFY TO FURTHER COMPENSATION AT RATES TO BE AGREED UPON BY USER AND GFY.
- 8. THE EXPECTED USE OF THE LAND, AS CLASSIFIED IN THE FLORIDA MINIMUM TECHNICAL STANDARDS (5J-17-F.A.C.), IS SUBURBAN.
- 9. THE PURPOSE OF THIS TOPOGRAPHIC SURVEY WAS TO OBTAIN EXISTING CONDITIONS FOR THE DESIGN OF FORCE MAIN 18M REPLACEMENT. SUBSTANTIAL VISIBLE IMPROVEMENTS WERE LOCATED AND SHOWN HEREON ONLY IN THE PROXIMITY OF THE DESIGN AREA.
- 10. THIS TOPOGRAPHIC SURVEY IS NOT INTENDED TO BE A RIGHT-OF-WAY SURVEY.
- 11. THE DATES OF FIELD SURVEY WERE 02/07/14 THROUGH 03/28/14



DESIGNED

CHECKED

ORAWN

00/00/00

00/00/00

CB

JDS

JAMES STOCKWELL, P.E.

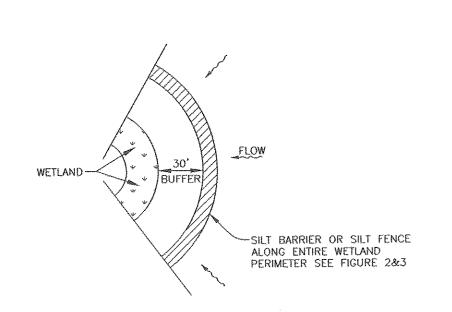
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FLORIDA

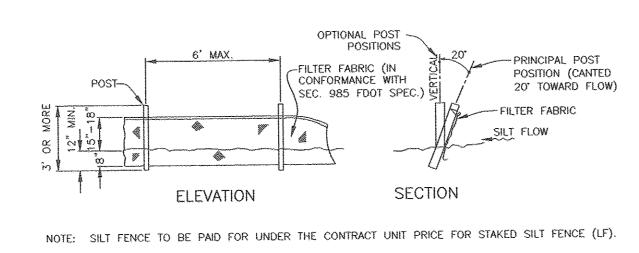
PUBLIC WORKS DEPARTMENT

ENGINEERING SERVICES

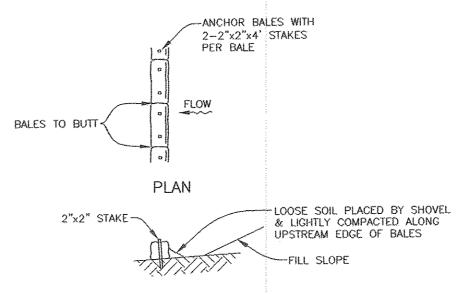
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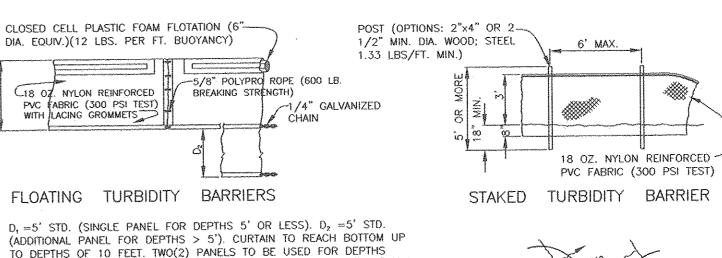
WETLAND BUFFER FIGURE 1



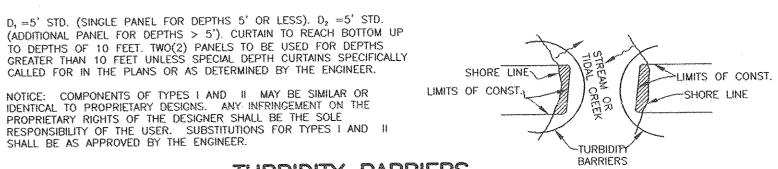
TYPICAL SILT FENCE FIGURE 2



TYPICAL BALE SILT BARRIER FIGURE 3



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.



PUBLIC WORKS DEPARTMENT

ENGINEERING SERVICES

1022 26th Avenue East, Bradenton, FL 34208

404-6085980

1"=20'

JDS/CB | 02/06/1

DATE

4/9/201

00/00/0

00/00/0

SEC./TWN./RGE 03/35S/16E

BY

GFY

CB

JDS

JAMES STOCKWELL, P.E.

PROJECT #

SURVEY #

SURVEYED

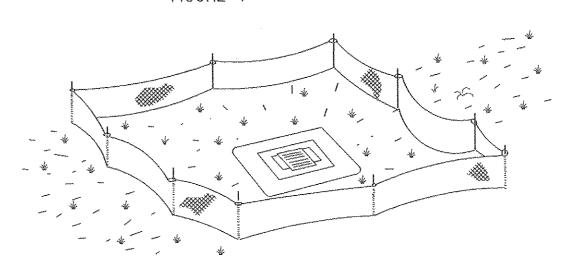
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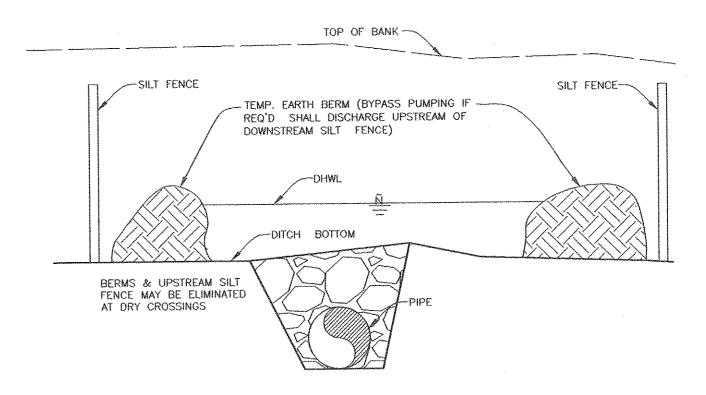
SCALE

TURBIDITY BARRIERS

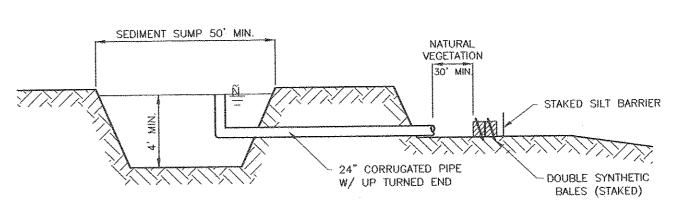


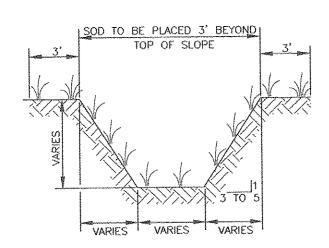
TYPE III SILT FENCE PROTECTION AROUND DITCH BOTTOM INLETS

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



UNDERGROUND PIPE CROSSING FIGURE 12



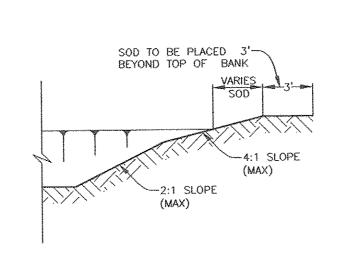


TYPICAL SWALE SECTION

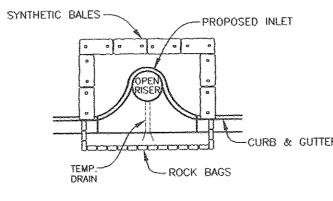
TURBIDITY BARRIER -SEE FIGURE 4

EDGE OF WATER

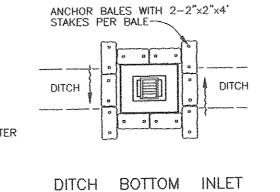
EXISTING LAKE



TYPICAL RETENTION/DETENTION POND SECTION FIGURE 6



COMPLETED INLET PARTIAL INLET



SYNTHETIC BALE PROTECTION AROUND

INLETS OR SIMILAR STRUCTURES

FIGURE 7

ROCK BAGS

PROPOSED INLET

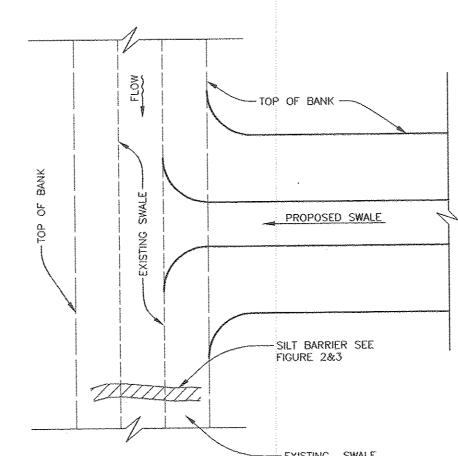
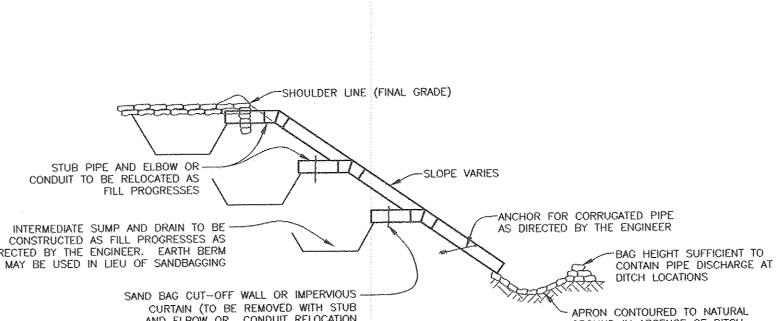
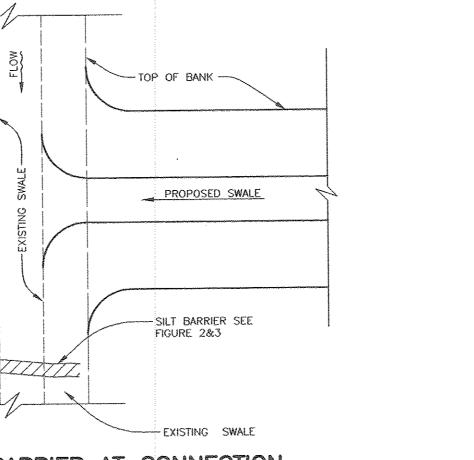


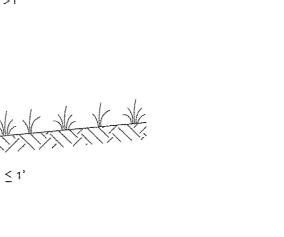
FIGURE 11



SECTION AA



SILT BARRIER AT CONNECTION OF SWALE TO EXISTING SWALE



STORM PIPE

-SILT BARRIER SEE FIGURE 2&3

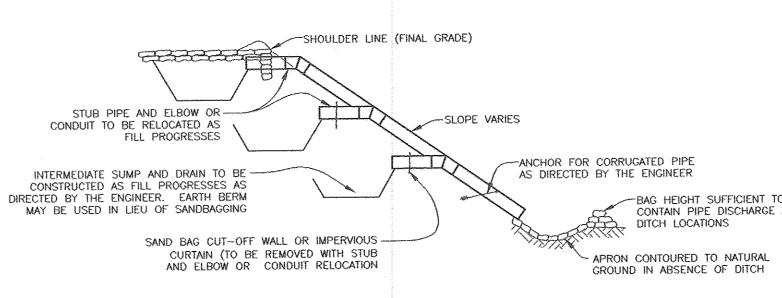
- EXISTING SWALE

GRASS SLOPES FIGURE 13

SILT BARRIER AT CONNECTION OF

STORM PIPE TO EXISTING SWALE

FIGURE 10



TEMPORARY SLOPE DRAIN FIGURE 15

# FIGURE 9

TURBIDITY BARRIER AT CONNECTION OF

STORM PIPE TO EXISTING LAKE

STORM PIPE

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

SOD ALONG CURB AND AROUND INLET

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



SEDIMENT SUMP SECTION