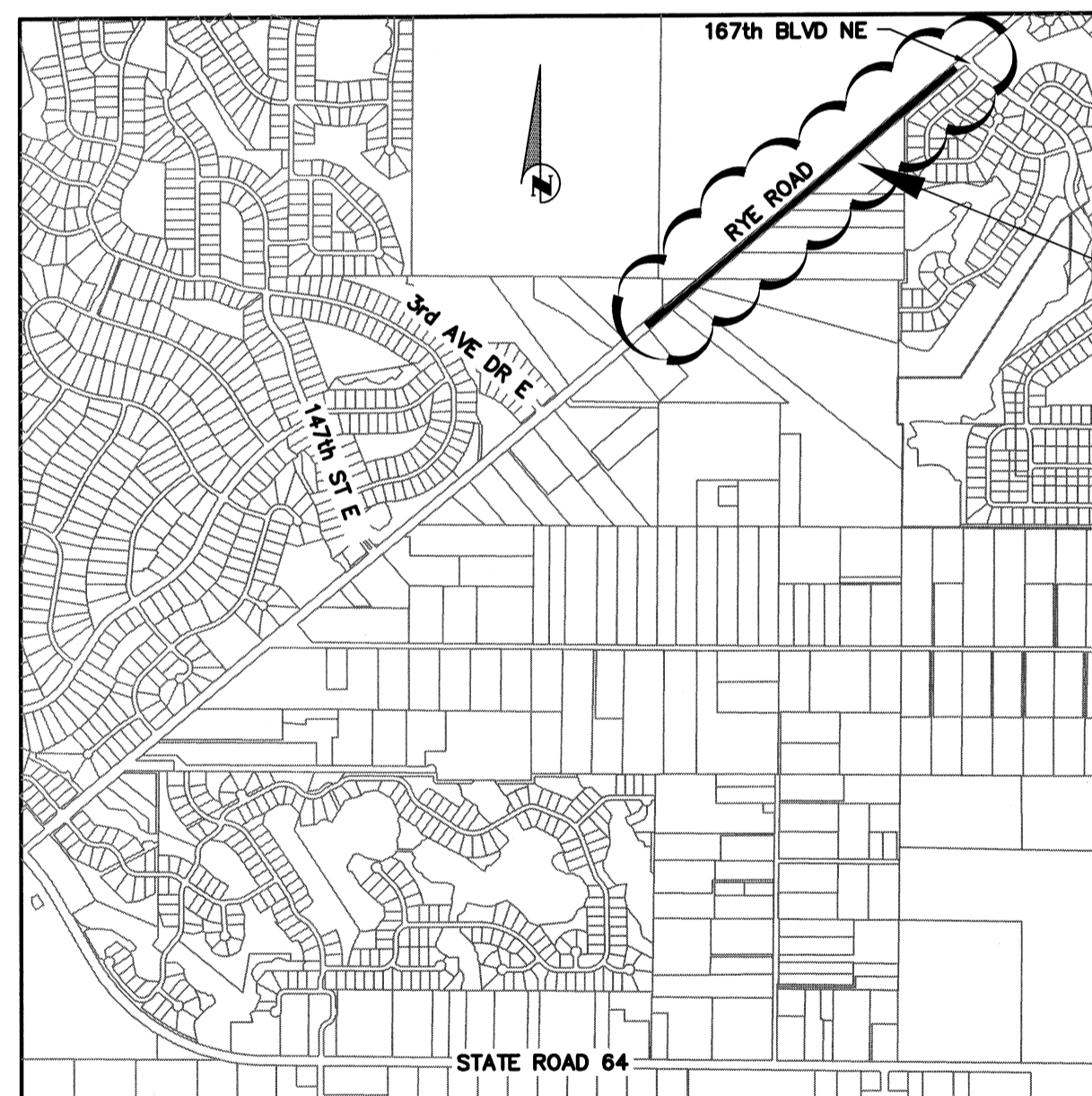
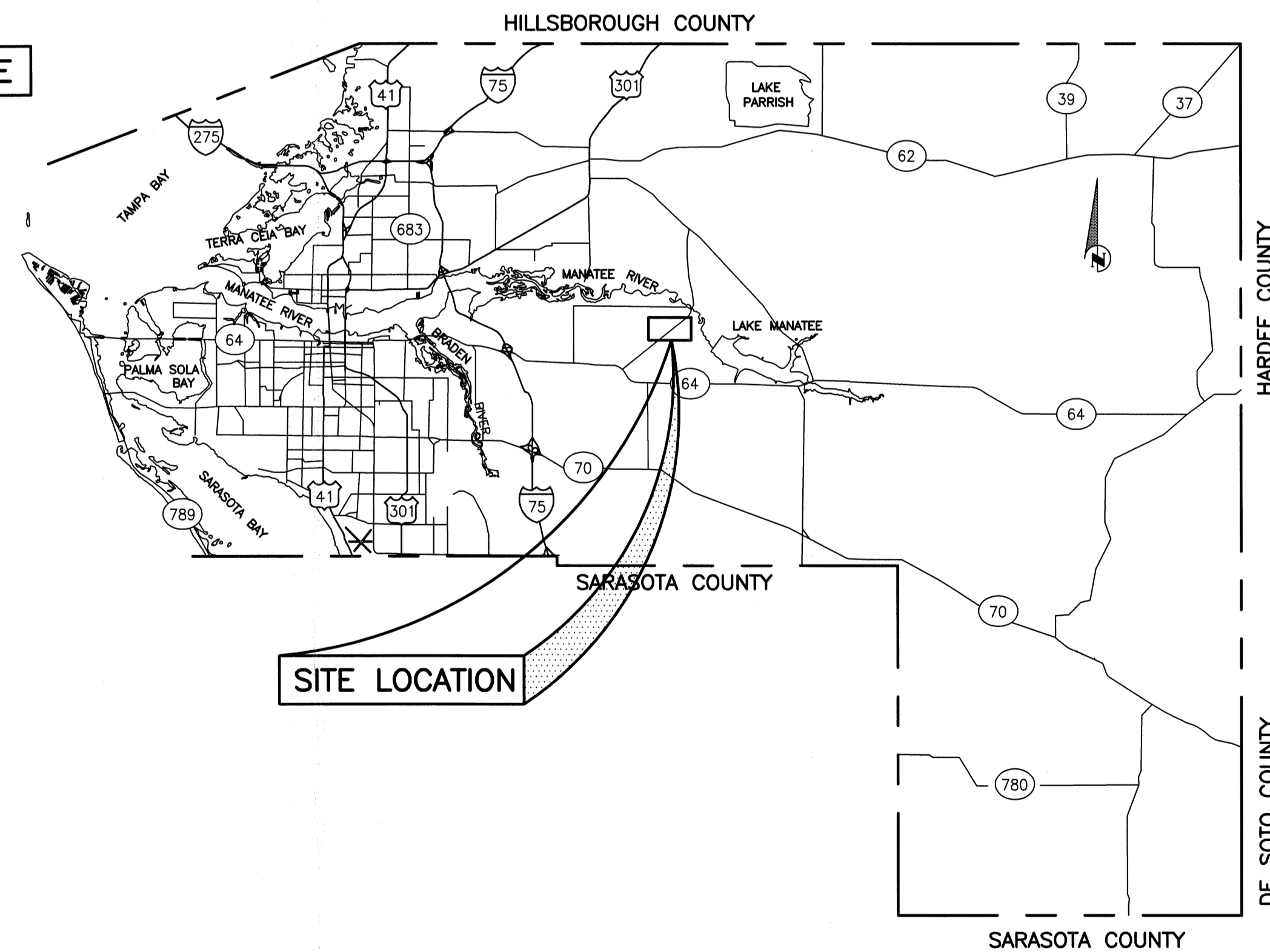


MANATEE COUNTY, FLORIDA WATER MAIN IMPROVEMENTS RYE RD 10" WM INSTALLATION 404-6076370

OCTOBER 2009



VICINITY MAP
N.T.S.



PROJECT DESCRIPTION

INSTALL APPROXIMATELY 3,888 LF OF WATER MAIN TO INTERCONNECT TWO EXISTING WATER DISTRIBUTION SYSTEMS MAINS.

100% PLANS

NO.	INDEX OF SHEETS
1.	COVER SHEET
2.	GENERAL NOTES & LEGEND
3.-9.	PLAN & PROFILE
10.-11.	DETAILS
12.	EROSION CONTROL

S:\PMD_Engineering\Share\Util_Eng_Design\Proj\WTR_LINE_Proj\WTR_Line - Rye Rd\DWG\Active - Rye Rd Waterline.dwg, 11/17/2009 8:03 AM Shea Shoun, 1:1, D-Arch (24"x36")

SEC. TWP. RGE	23&26, 34S, 19E		
SURVEY BOOK NO.	1497/61-75 & 1512/6-13		
PROJECT NUMBER	404-6076370		
	By	Checked	Date
Surveyed	FDC	JSS	JULY 2009
Drawn	JSS		
Designed	JDS		

NOTE:
THESE PLANS DO NOT REFLECT A TRUE BOUNDARY OR RIGHTS-OF-WAY SURVEY. THE LOCATION OF THE STREET RIGHTS-OF-WAY LINES SHOWN IS APPROXIMATE AND IS BASED ON INFORMATION CONTAINED IN THE SUBDIVISION PLATS, RIGHTS-OF-WAY MAPS ON RECORD IN MANATEE COUNTY AND ON TOPOGRAPHIC DATA COLLECTED ON THE ROUTE SURVEY OF THE RIGHTS-OF-WAY. CONSEQUENTLY THE RIGHTS-OF-WAY LINES SHOWN ARE NOT INTENDED TO INDICATE THE EXACT PROPERTY CORNERS.

JAMES D. STOCKWELL / 67198
Engineer / Reg. No.

Signature & Date

PUBLIC WORKS DEPT.-ENGINEERING DIVISION

1022 26th Avenue East, Bradenton, FL 34208

NO.	REVISION DESCRIPTION	BY	DATE

**WATER MAIN IMPROVEMENTS
RYE RD 10" WM INSTALLATION**

COVER SHEET

Sheet
1
12

GENERAL

- 1. ALL CONSTRUCTION ACTIVITIES SHALL BE COORDINATED WITH THE PROJECT MANAGEMENT DIVISION. THE PROJECT MANAGER IS: MICHAEL O'RILEY AND CAN BE REACHED AT (941) 708-7450; EXT. 7344
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 PUBLIC WORKS UTILITY STANDARDS AND TRANSPORTATION STANDARDS AND/OR FOOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION UNLESS OTHERWISE INDICATED ON THE PLANS.

SAFETY

- 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.

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.

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.

Table with 4 columns: SEC, TWP, RGE; SURVEY BOOK NO.; PROJECT NUMBER; and a grid for Surveyed/Drawn/Designed with By/Checked/Date.

NOTE: THESE PLANS DO NOT REFLECT A TRUE BOUNDARY OR RIGHTS-OF-WAY SURVEY. THE LOCATION OF THE STREET RIGHTS-OF-WAY LINES SHOWN IS APPROXIMATE AND IS BASED ON INFORMATION CONTAINED IN THE SUBDIVISION PLATS, RIGHTS-OF-WAY MAPS ON RECORD IN MANATEE COUNTY AND ON TOPOGRAPHIC DATA COLLECTED ON THE ROUTE SURVEY OF THE RIGHTS-OF-WAY. CONSEQUENTLY THE RIGHTS-OF-WAY LINES SHOWN ARE NOT INTENDED TO INDICATE THE EXACT PROPERTY CORNERS.

Professional Engineer/Reg. No. stamp for James D. Stockwell, dated 10/18/09, with signature and date.

MANATEE COUNTY FLORIDA seal and address: 1022 26th Avenue East, Bradenton, FL 34208

Table with 4 columns: NO., REVISION, DESCRIPTION, BY, DATE

WATER MAIN IMPROVEMENTS RYE RD 10" WM INSTALLATION GENERAL NOTES AND LEGEND. Includes 'Sheet 2 of 12' indicator.

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 AFFECT HIS WORK. ALL EXISTING UTILITIES TO BE EXTENDED, CROSSED OR CONNECTION POINTS SHALL BE EXPOSED PRIOR TO CONSTRUCTION TO VERIFY LOCATION AND ELEVATION. ANY DISCREPANCIES OR CONFLICTS FOUND SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION FOR RESOLUTION.
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 BAFFELS 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 SWEEPED 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 THE MARCH 2009 EDITION OF THE TEN STATE STANDARDS AND MANATEE COUNTY PUBLIC WORKS 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 PREPARE RECORD DRAWINGS IN ACCORDANCE WITH CURRENT MANATEE COUNTY UTILITY STANDARDS AT NO COST TO OWNER. RECORD DRAWINGS SHALL BE SEALED BY A SURVEYOR LICENSED BY THE STATE OF FLORIDA. RECORD DRAWINGS REQUIREMENTS SHALL BE STRICTLY ENFORCED.

CONTACTS

Table of contact information for Manatee County Public Works Dept, Verizon Florida Inc, South West Florida Water Management District, Department of Environmental Protection, Florida Power & Light, Florida Gas Transmission, Manatee County Health Dept, Bright House Networks, Peace River Electric Cooperative, Inc, and others.

LEGEND

Legend defining symbols for Existing and Proposed features. Includes symbols for Bench mark, Concrete Monument, Iron Pipe, Hub, Nail & Disk, Elevation, Parcel ID No., Lot No., Guy Wire, Power Pole, Light Pole, Mail Box, Sign, Reflector, Sprinkler, Gas Marker, Back Flow Preventer, Blow Off Valve, Fire Hydrant, Water Valve, Reducer, Water Meter, Air Release Valve, Sanitary Sewer Manhole, Sanitary Sewer Clean-out, Soil Boring Location, Telephone/Cable Service Box, Top of Bank, Right of Way, Guard Rail, Bush, Tree, Oak Tree, Palm Tree, Pine Tree, Edge of Vegetation, Guard Rail, Chain Link Fence, Wood Fence, Force Main, Potable Water, Reclaimed Water, Sanitary Sewer, Storm Drain, Gas Line, Overhead Utility, Underground utility, Edge of Concrete, Edge of Road, Ditch-Toe of Slope, Property Line / Lot Line, Right of Way, Headwall, Drainage Structure, Mitered End Section, Grate Inlet, Sewer Flow Direction, Concrete, ASPH, Asphalt, Driveway, Sidewalk, Edge of Pavement, Main, Service Line, Proposed Easement, Fire Hydrant Assembly, Gate, Plug, or Butterfly Valve, Sanitary Sewer Manhole, Blow-off Assembly, Reducer, Tee, Bend (Horizontal), Bend (Vertical), Plug, Master Meter Assembly, Water Service Line & Meter, Double Service.

PROPOSED PROJECT NOTES JOB SPECIFIC (EXAMPLE): WATER LINE CALL-OUT (TYPICAL)

STA. 40+60, 17' LT. 1-6" GATE VALVE 1-6" FITTING

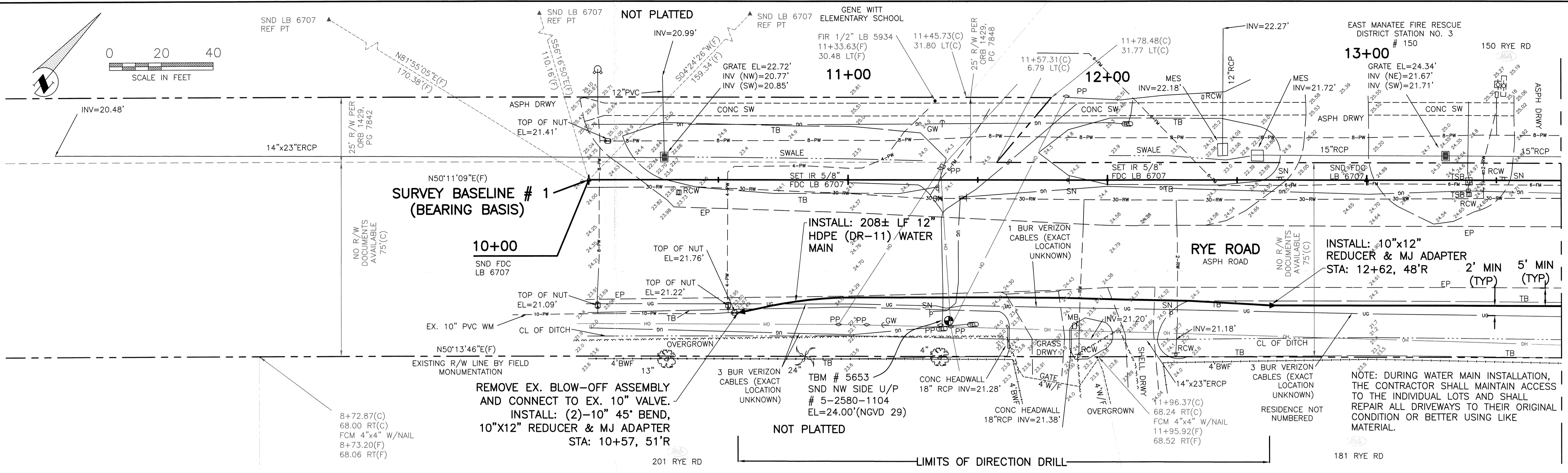
THIS IS NOT A BOUNDARY SURVEY.

A SEPARATE SURVEYOR'S REPORT TITLED "SPECIFIC PURPOSE AND TOPOGRAPHIC SURVEY - RYE ROAD 10" WATER MAIN EXTENSION - IFAS # W0900266 - FDC JOB NUMBER 0577-0009 - LAST DATE OF ORIGINAL FIELD WORK: 7-29-2009" HAS BEEN UTILIZED AS A TEXT OPTION FOR THE SURVEY MAP.

USERS OF THE SURVEY MAP ARE DIRECTED TO ACKNOWLEDGE THE CONTENT OF THE SURVEYOR'S REPORT.

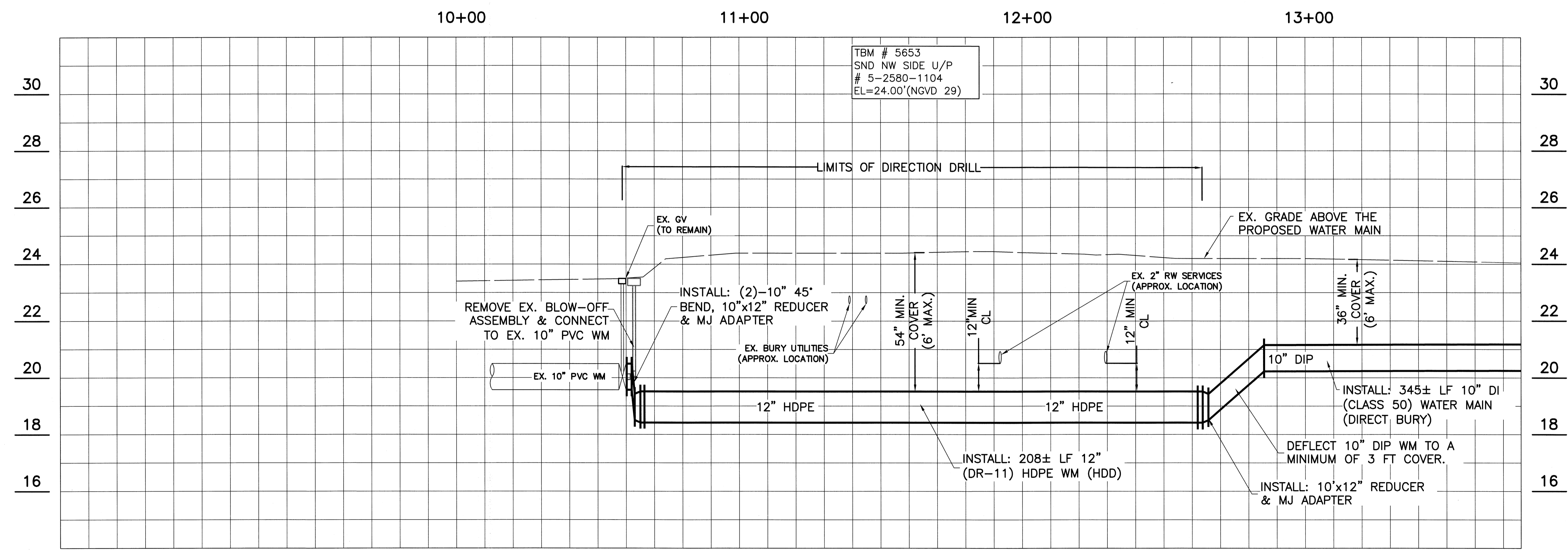
THE SURVEY MAP AND REPORT ARE NOT FULL AND COMPLETE WITHOUT THE OTHER.

S:\PMD_Engineering\Share\URI_Eng_Design\Proj\WTR_LINE_Proj\Water_Line - Rye Rd\DWG\Active - Rye Rd Waterline.dwg, 3-Plan & Profile, 11/17/2009 8:03 AM Shea Shoun, 1:1 - D-Arch (24"x36")



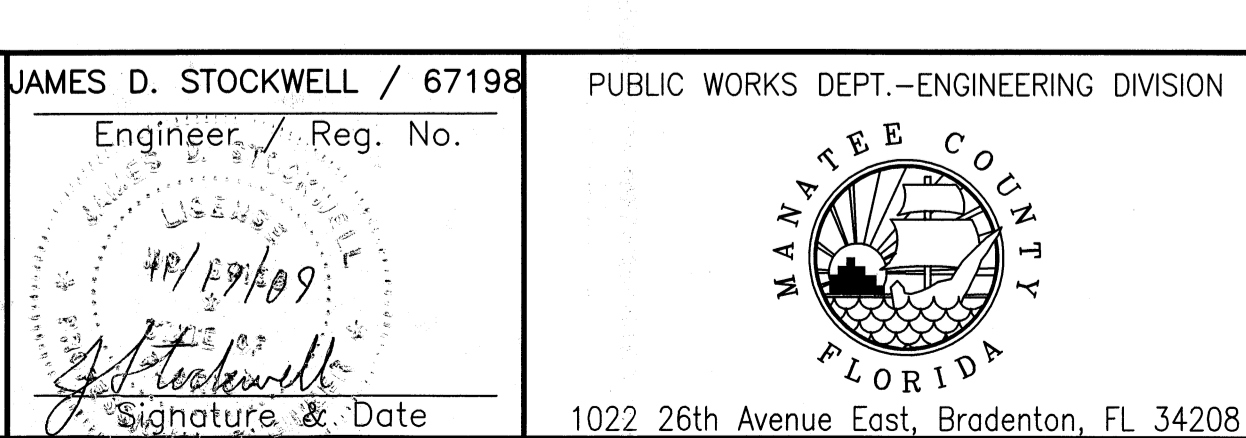
MATCH LINE STA. 13+75

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO THE RYE ROAD PAVEMENT.



Horizontal Scale: 1"=20'		Vertical Scale: 1"=2'	
SEC. TWP. RGE	23&26, 34S, 19E	NOTE:	
SURVEY BOOK NO.	1497/61-75 & 1512/6-13	THESE PLANS DO NOT REFLECT A TRUE BOUNDARY OR RIGHTS-OF-WAY SURVEY. THE LOCATION OF THE STREET RIGHTS-OF-WAY LINES SHOWN IS APPROXIMATE AND IS BASED ON INFORMATION CONTAINED IN THE SUBDIVISION PLATS, RIGHTS-OF-WAY MAPS ON RECORD IN MANATEE COUNTY AND ON TOPOGRAPHIC DATA COLLECTED ON THE ROUTE SURVEY OF THE RIGHTS-OF-WAY. CONSEQUENTLY THE RIGHTS-OF-WAY LINES SHOWN ARE NOT INTENDED TO INDICATE THE EXACT PROPERTY CORNERS.	
PROJECT NUMBER	404-6076370	JAMES D. STOCKWELL / 67198 Engineer / Reg. No.	
Surveyed	FDC	Checked	JSS
Drawn	JSS	Date	JULY 2009
Designed	JDS	Signature & Date	

1022 26th Avenue East, Bradenton, FL 34208

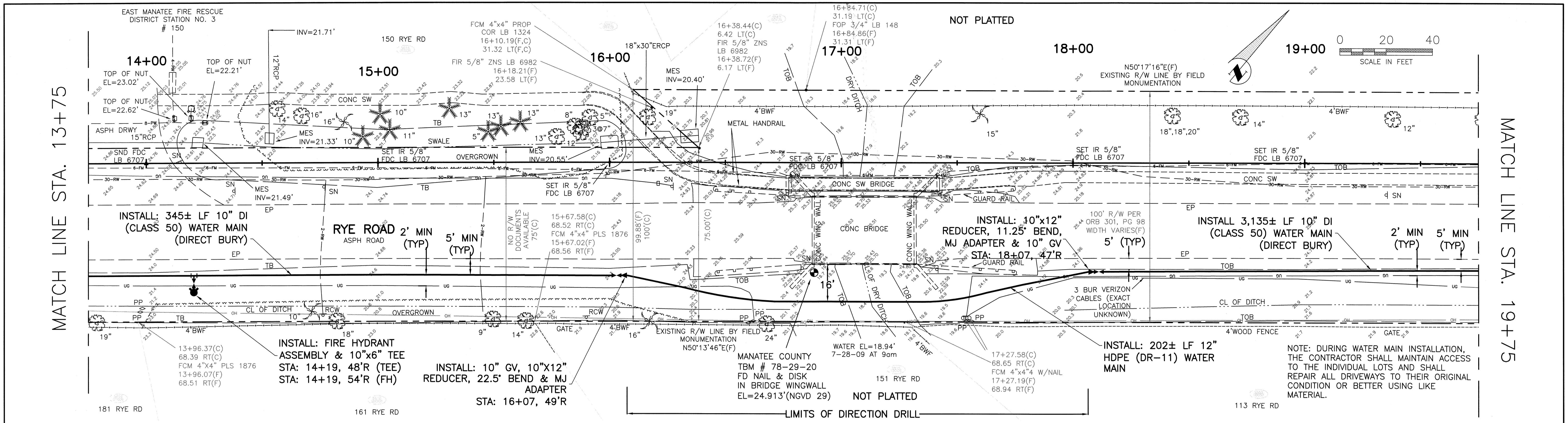


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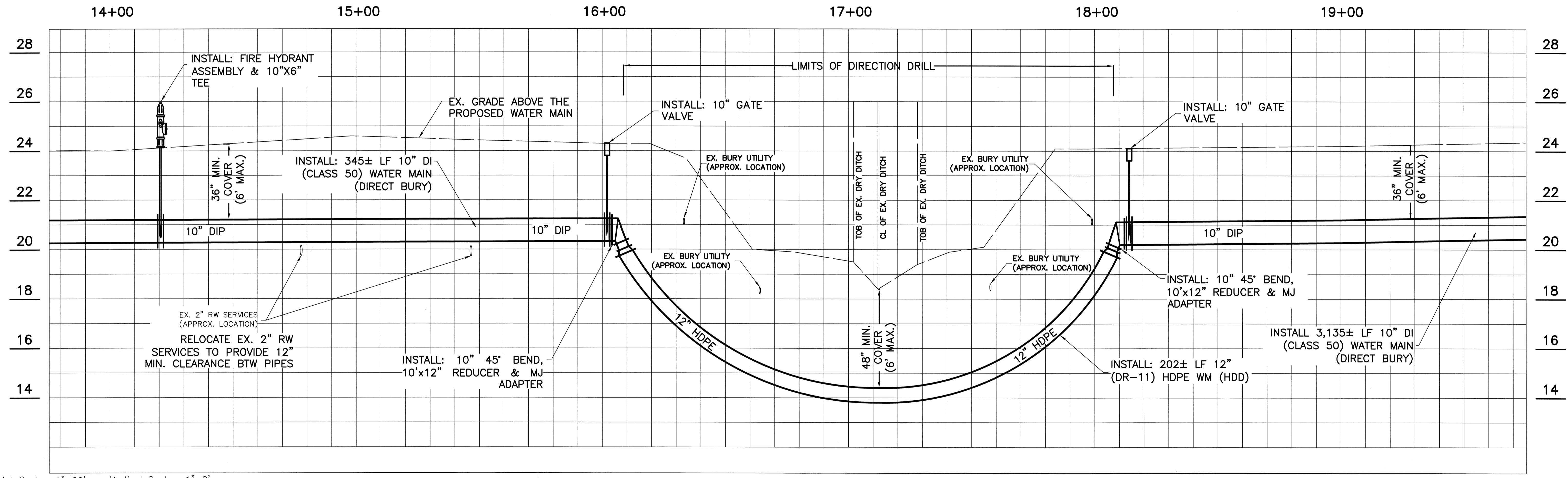
WATER MAIN IMPROVEMENTS
RYE RD 10" WM INSTALLATION

PLAN & PROFILE

Sheet
3
12



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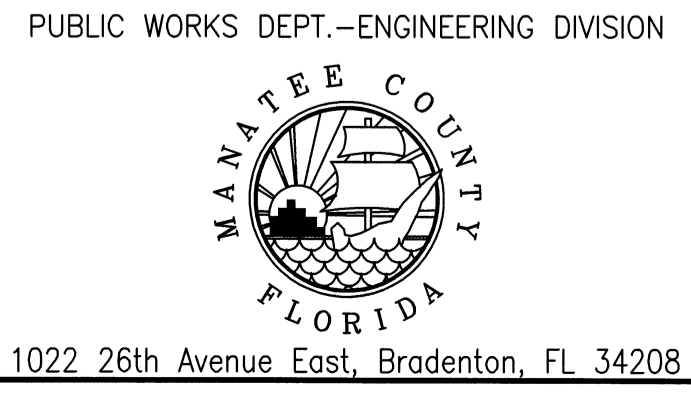


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JAMES D. STOCKWELL / 67198
Engineer / Reg. No.
[Signature]
Signature & Date



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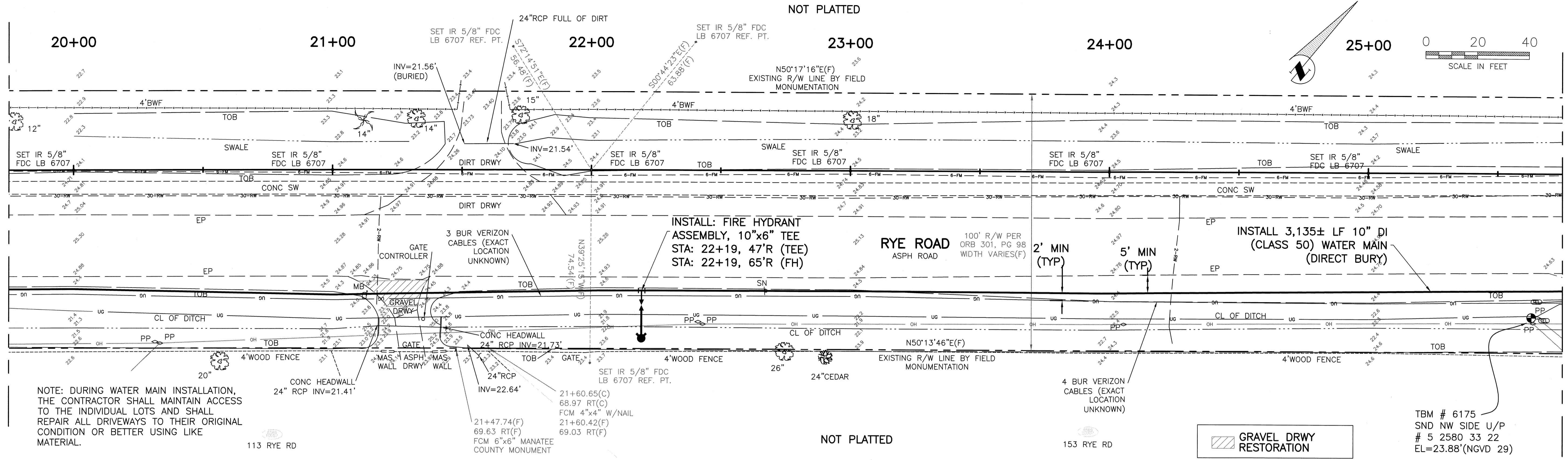
WATER MAIN IMPROVEMENTS
RYE RD 10" WM INSTALLATION

PLAN & PROFILE

Sheet
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12

MATCH LINE STA. 19+75

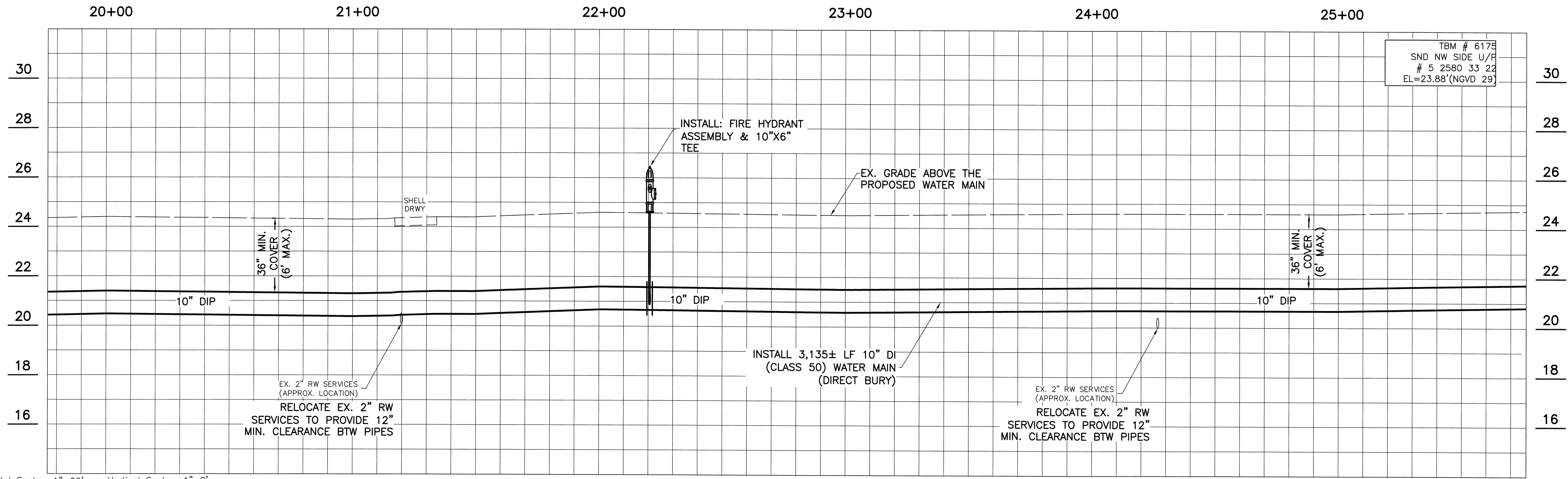
MATCH LINE STA. 25+75



NOTE: DURING WATER MAIN INSTALLATION, THE CONTRACTOR SHALL MAINTAIN ACCESS TO THE INDIVIDUAL LOTS AND SHALL REPAIR ALL DRIVEWAYS TO THEIR ORIGINAL CONDITION OR BETTER USING LIKE MATERIAL.

TBM # 6175
SND NW SIDE U/P
5 2580 33 22
EL=23.88'(NGVD 29)

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO THE RYE ROAD PAVEMENT.



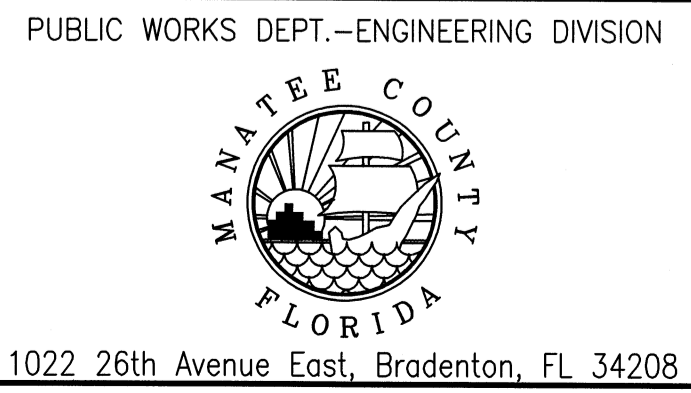
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Signature & Date

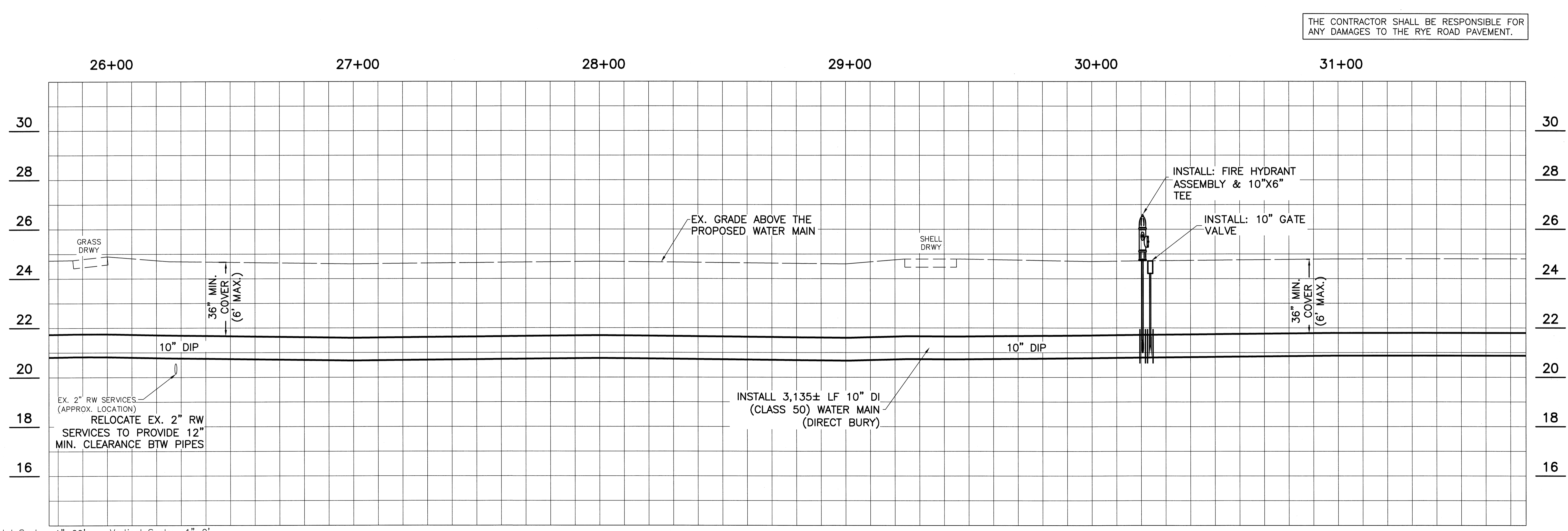
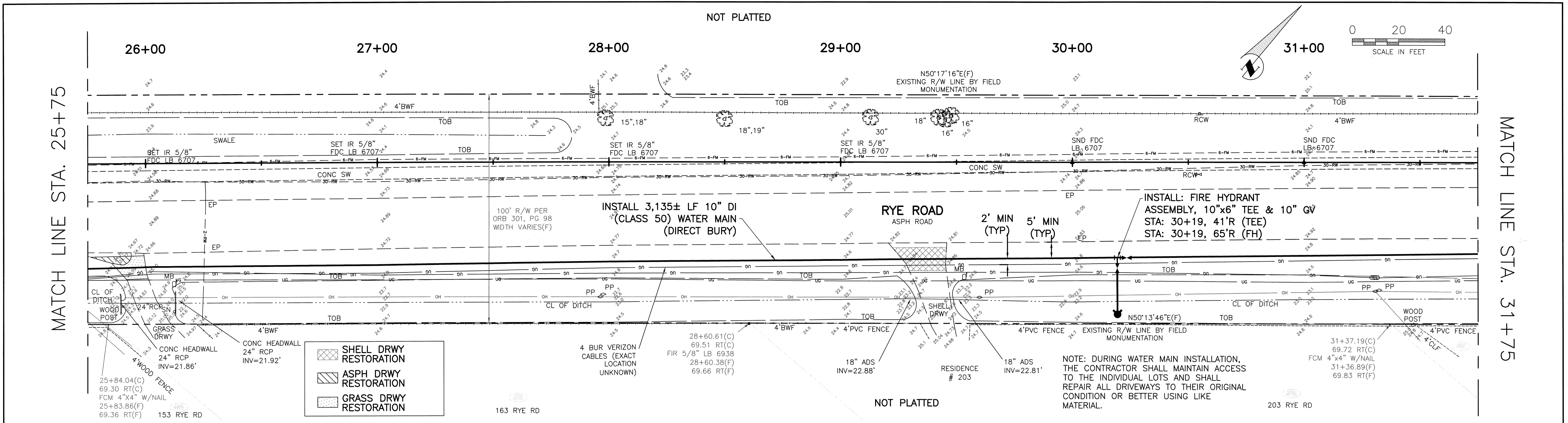


NO.	REVISION DESCRIPTION	BY	DATE

WATER MAIN IMPROVEMENTS
RYE RD 10" WM INSTALLATION
PLAN & PROFILE

Sheet 5 of 12

S:\PMD-Engineering\Share\URI Eng Design\Proj\WTR LINE Proj\Water Line - Rye Rd\DWG\Active - Rye Rd Waterline.dwg, 5-Plan & Profile, 11/19/2009 1:39 PM Sheo Shoun, 1:1, D-Arch (24"x36")

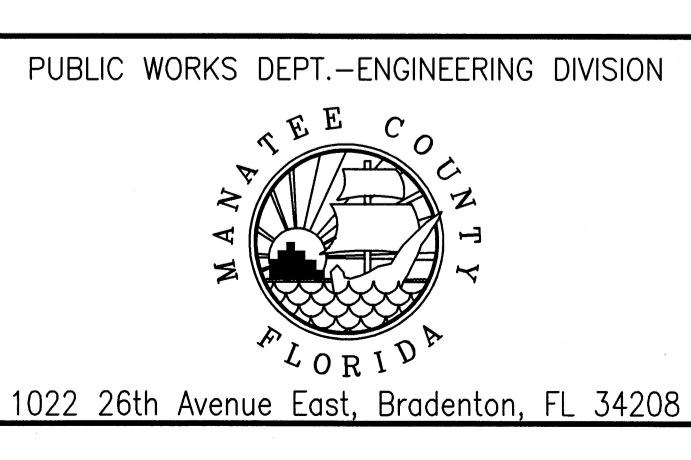


Horizontal Scale: 1"=20' Vertical Scale: 1"=2'

SEC. TWP, RGE	23&26, 34S, 19E		
SURVEY BOOK NO.	1497/61-75 & 1512/6-13		
PROJECT NUMBER	404-6076370		
By	Checked	Date	
Surveyed	FDC	JSS	JULY 2009
Drawn	JSS		
Designed	JDS		

NOTE:
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JAMES D. STOCKWELL / 67198
 Engineer / Reg. No.
 11/19/09
 Signature & Date



NO.	REVISION DESCRIPTION	BY	DATE

WATER MAIN IMPROVEMENTS
RYE RD 10" WM INSTALLATION

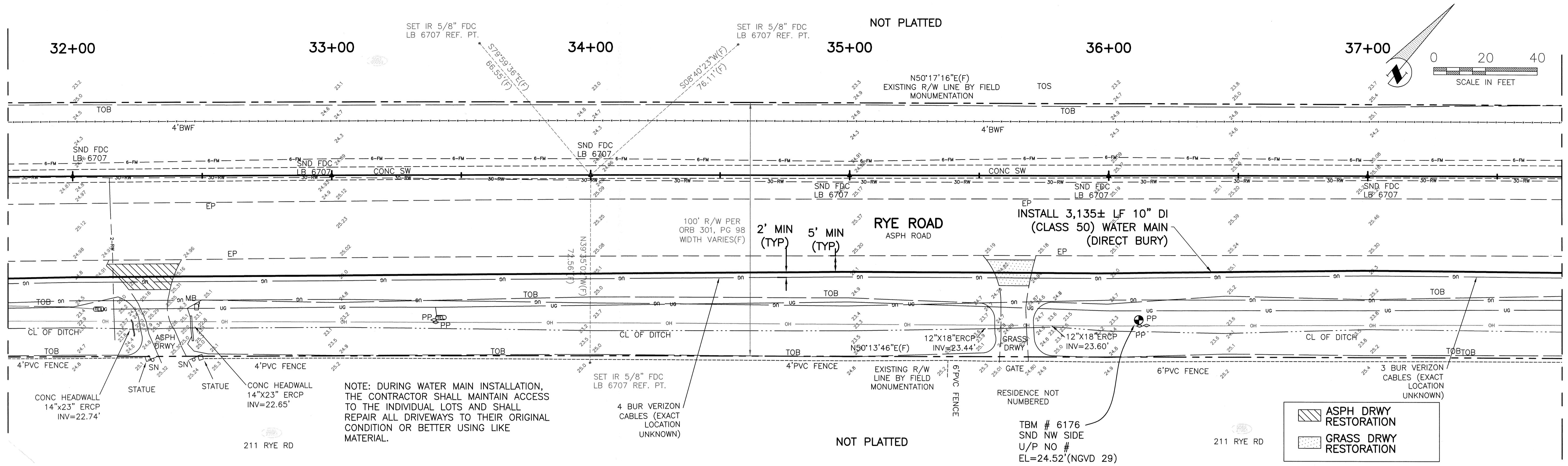
PLAN & PROFILE

Sheet
6
12

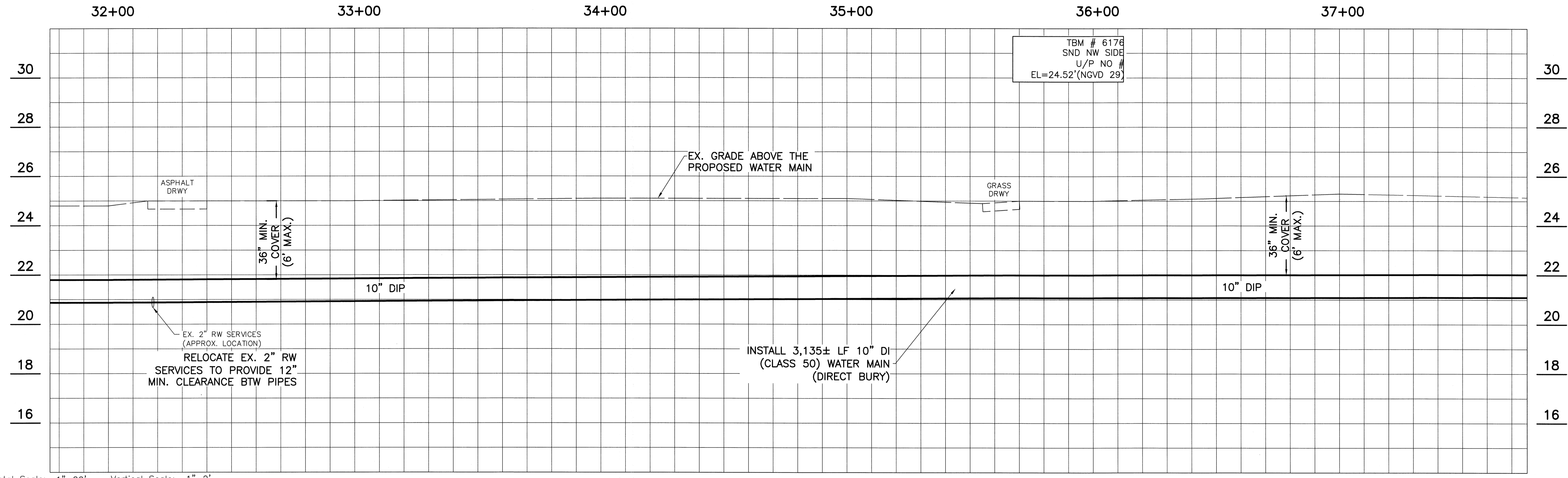
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MATCH LINE STA. 31+75

MATCH LINE STA. 37+75



THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO THE RYE ROAD PAVEMENT.

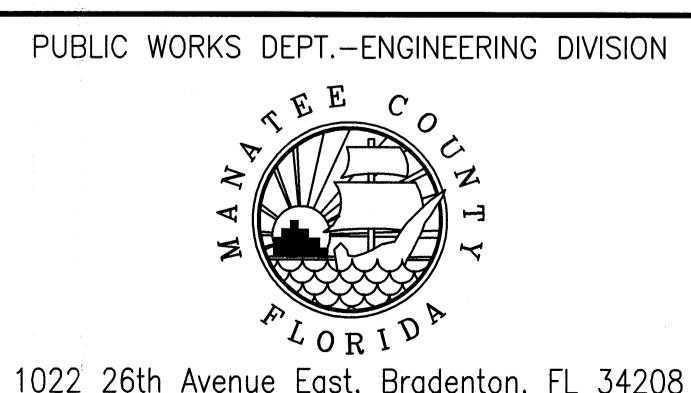


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SEC, TWP, RGE	23&26, 34S, 19E		
SURVEY BOOK NO.	1497/61-75 & 1512/6-13		
PROJECT NUMBER	404-6076370		
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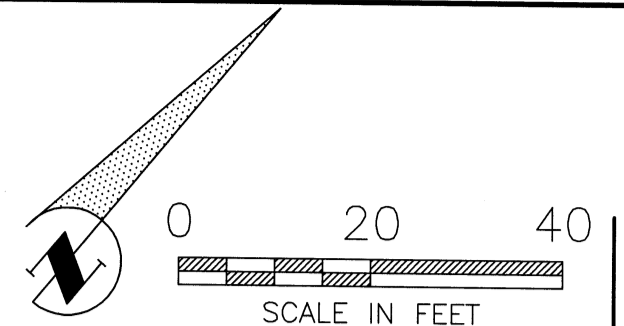
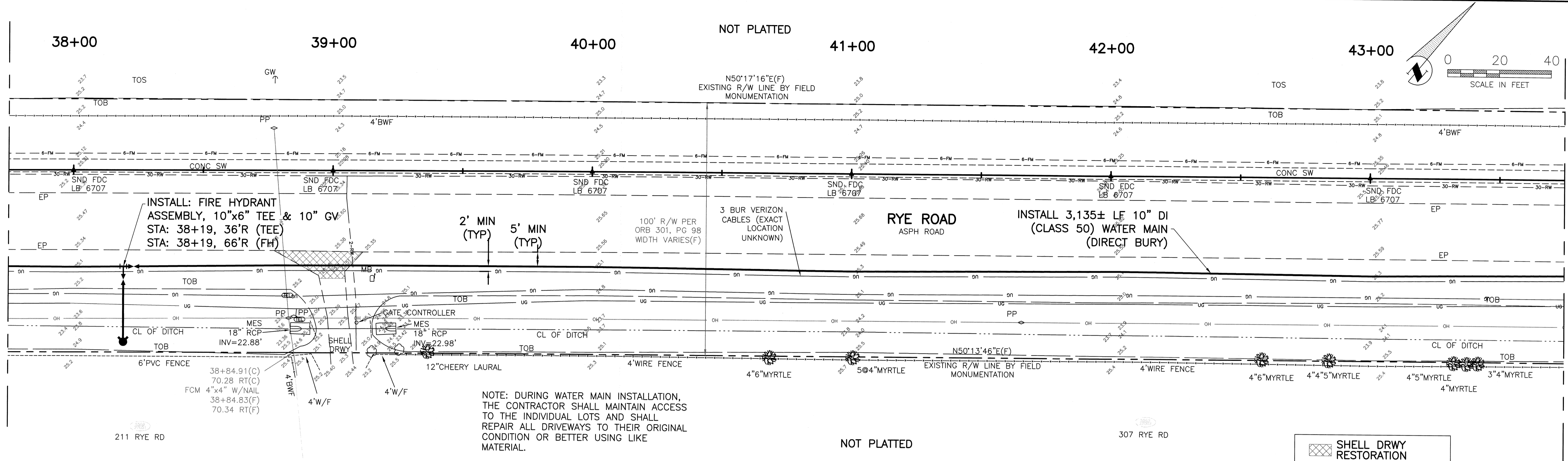
WATER MAIN IMPROVEMENTS
RYE RD 10" WM INSTALLATION

PLAN & PROFILE

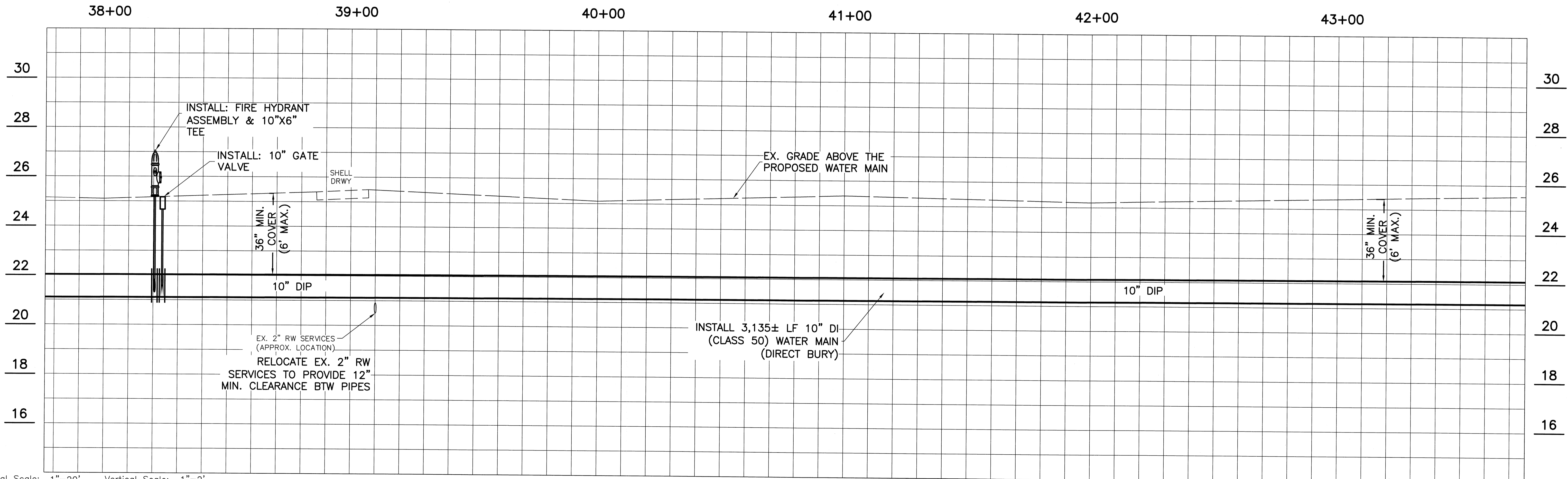
Sheet 7 of 12

MATCH LINE STA. 37+75

MATCH LINE STA. 43+75



THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO THE RYE ROAD PAVEMENT.



Horizontal Scale: 1"=20' Vertical Scale: 1"=2'

SEC, TWP, RGE	23&26, 34S, 19E		
SURVEY BOOK NO.	1497/61-75 & 1512/6-13		
PROJECT NUMBER	404-6076370		
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JAMES D. STOCKWELL / 67198
Engineer / Reg. No.

PUBLIC WORKS DEPT.-ENGINEERING DIVISION

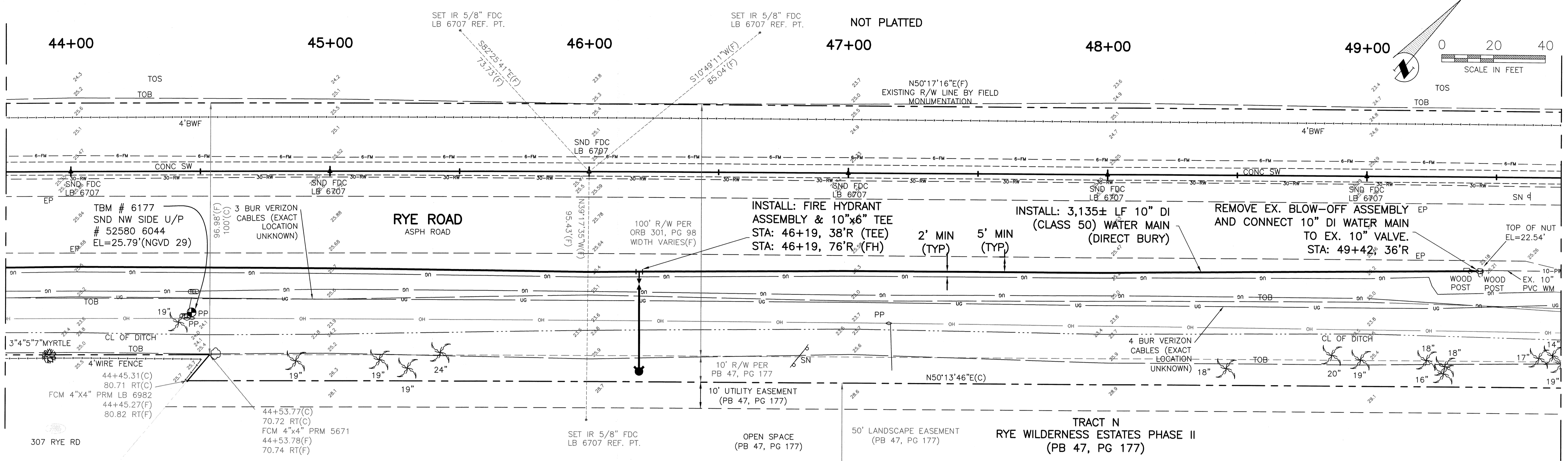
1022 26th Avenue East, Bradenton, FL 34208

NO.	REVISION DESCRIPTION	BY	DATE

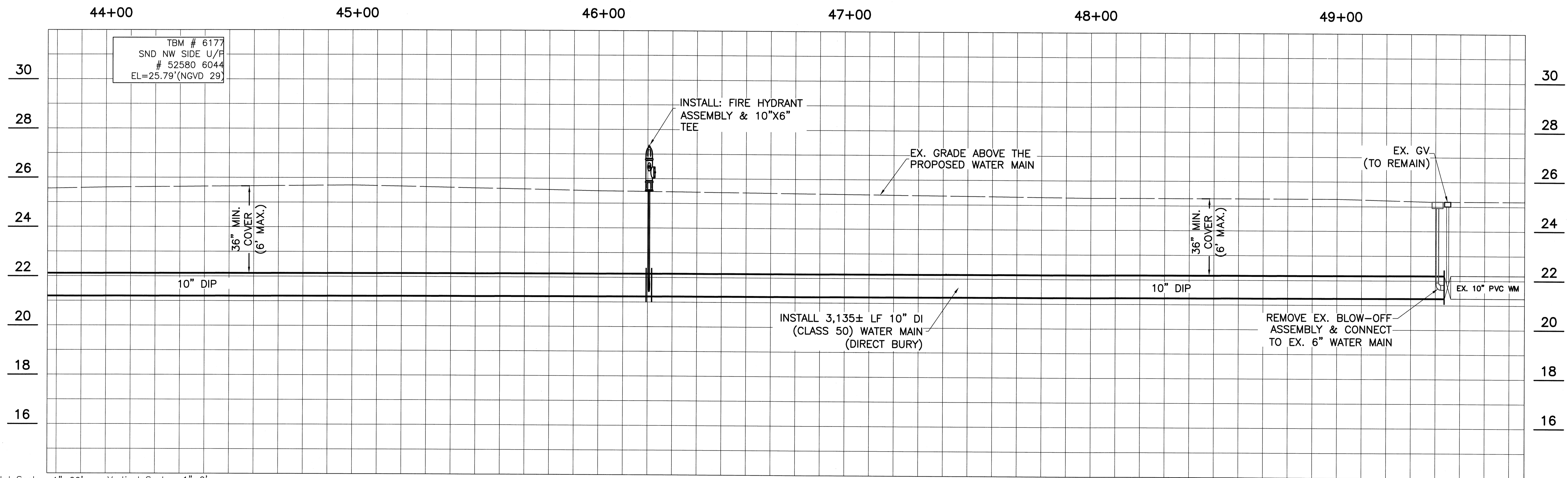
WATER MAIN IMPROVEMENTS
RYE RD 10" WM INSTALLATION
PLAN & PROFILE

MATCH LINE STA. 43+75

MATCH LINE STA. 49+75



THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO THE RYE ROAD PAVEMENT.



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SURVEY BOOK NO.	1497/61-75 & 1512/6-13		
PROJECT NUMBER	404-6076370		
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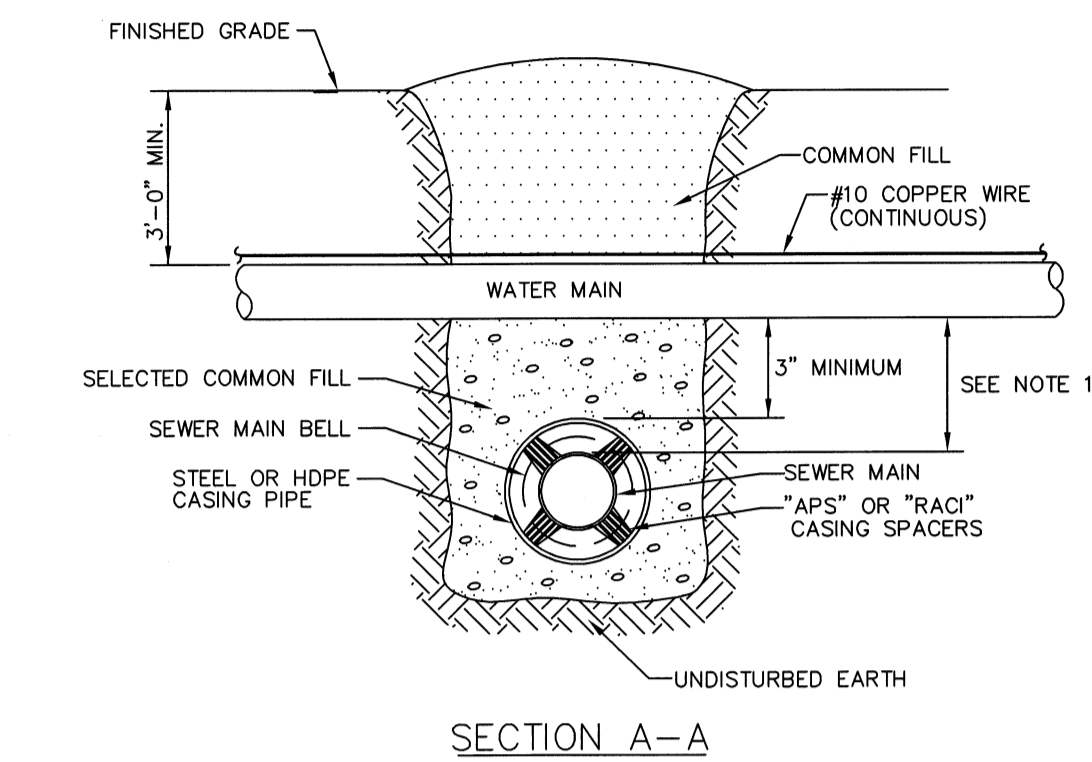
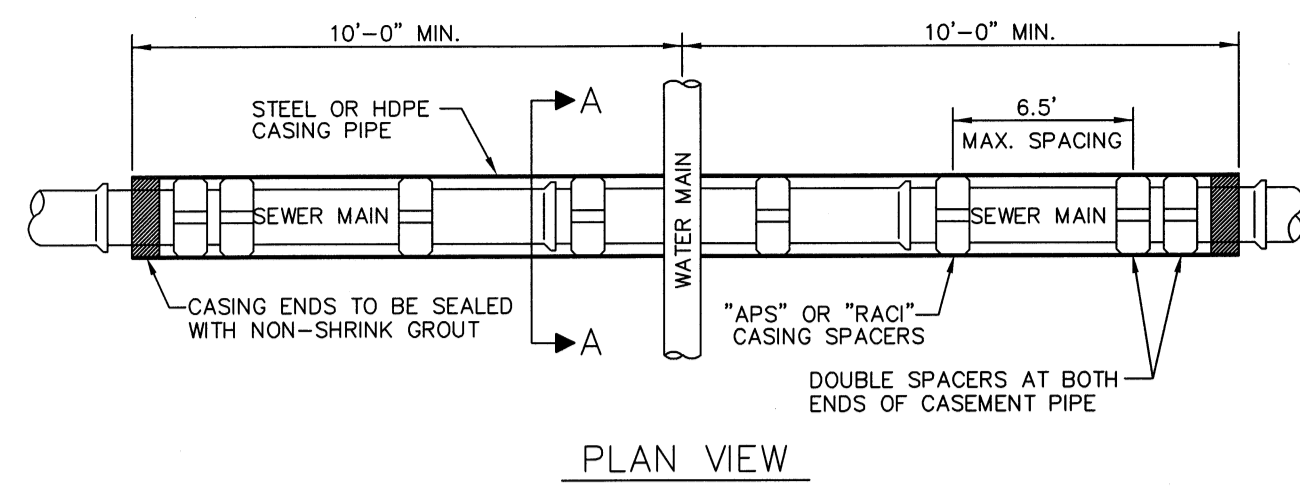
JAMES D. STOCKWELL / 67198
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[Signature]
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PUBLIC WORKS DEPT.-ENGINEERING DIVISION
MANATEE COUNTY
FLORIDA
1022 26th Avenue East, Bradenton, FL 34208

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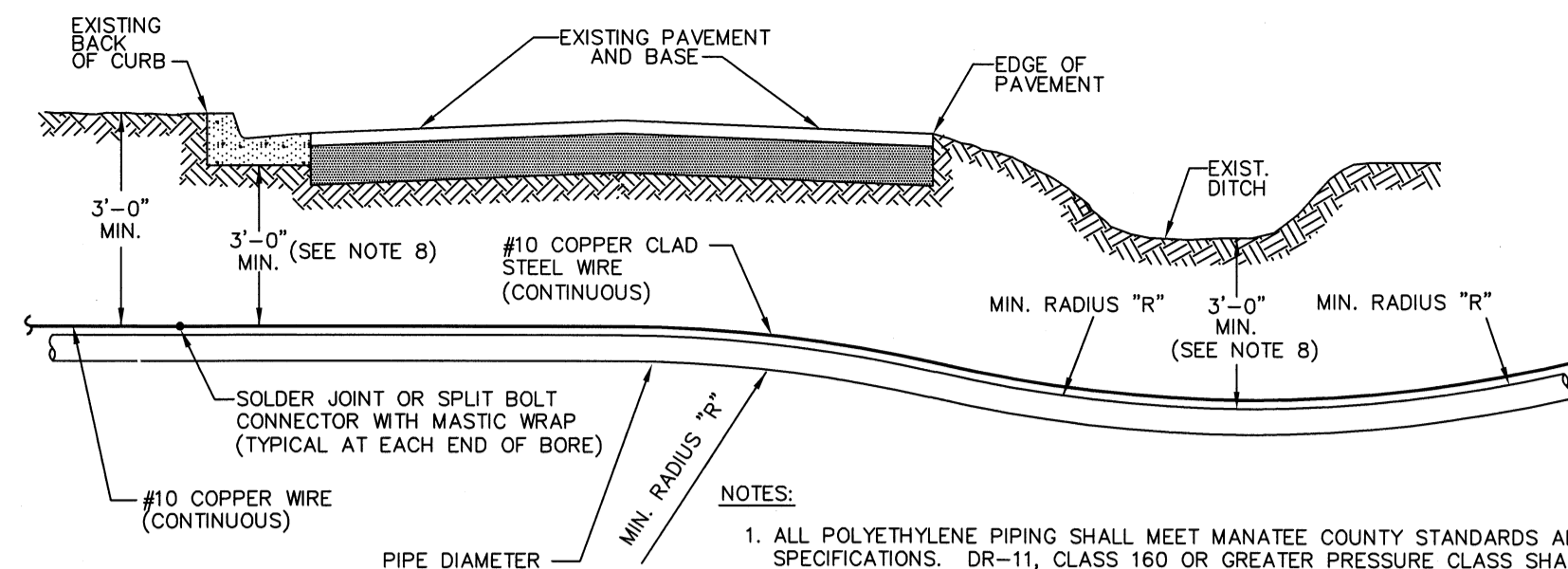
WATER MAIN IMPROVEMENTS
RYE RD 10" WM INSTALLATION
PLAN & PROFILE

Sheet 9 of 12



- NOTE:
- WHERE CLEARANCE IS LESS THAN 18", SEWER MAIN SHALL BE ENCASED AS DETAILED. FOR VERTICAL CLEARANCE OF 18" OR GREATER NO ENCASEMENT IS REQUIRED.
 - NEW WATER MAIN AND SEWER MAIN PIPE SECTIONS ARE TO BE CENTERED AT THE CROSSING POINT REGARDLESS OF THE VERTICAL CLEARANCE.
 - REFER TO STANDARD DETAIL UG-3 FOR ADDITIONAL CASING AND SPACER DETAILS.

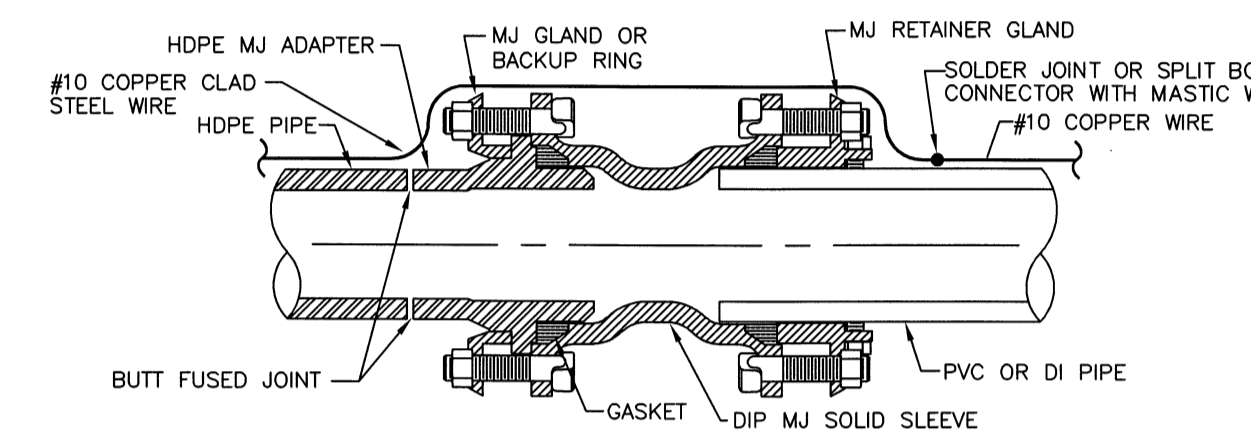
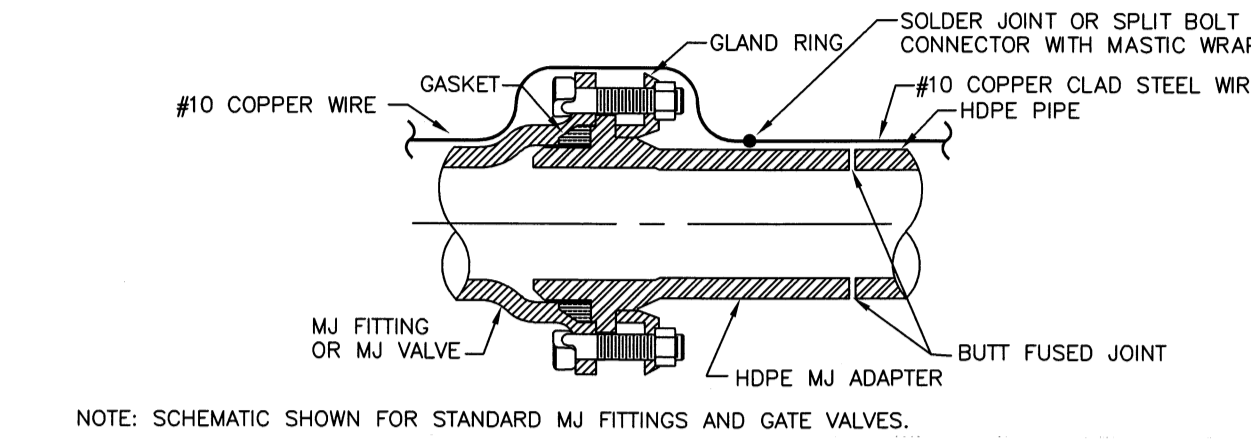
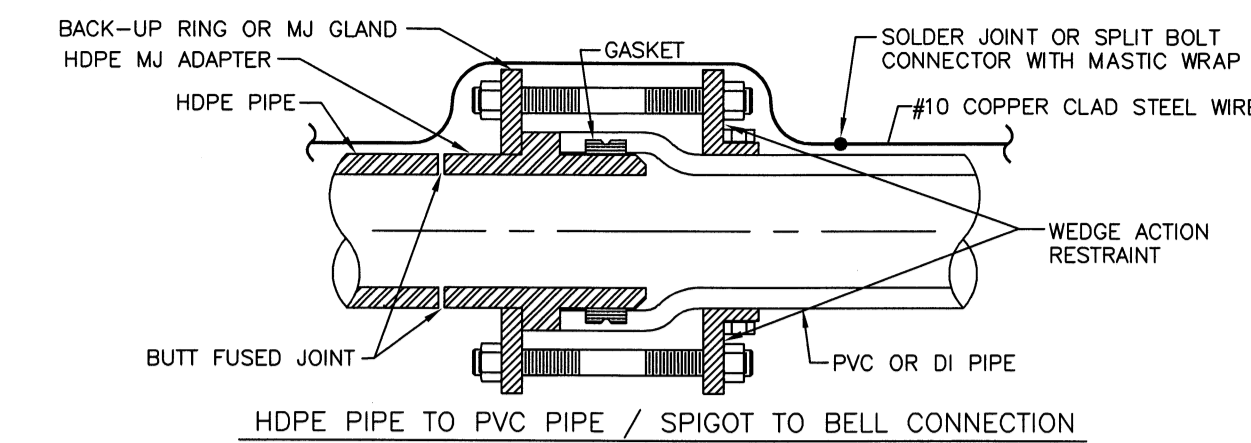
TYPICAL WATER & SEWER CROSSING DETAIL
N.T.S.



- NOTES:
- ALL POLYETHYLENE PIPING SHALL MEET MANATEE COUNTY STANDARDS AND SPECIFICATIONS. DR-11, CLASS 160 OR GREATER PRESSURE CLASS SHALL BE USED FOR POTABLE, RECLAIMED WATER OR SANITARY FORCE MAINS. DR-9 MAY BE REQUIRED BASED ON THE ENGINEERS CALCULATIONS. SEE NOTE #2.
 - THE ENGINEER SHALL SUBMIT CALCULATIONS FOR THE MAXIMUM PULLING LENGTH, TOTAL PULL FORCE AND THE ALLOWABLE TENSILE LOAD, IN ACCORDANCE WITH AWWA M55 & ASTM F1804. DESIGN SHALL ALSO BE IN ACCORDANCE WITH ASTM F1962.
 - THE PIPE STRING SHALL BE ATTACHED TO THE BACKREAMER THROUGH A "WEAK-LINK" DEVICE TO ENSURE THAT THE PULLING FORCE DOES NOT EXCEED THE PIPE'S ALLOWABLE TENSILE LOAD RATING.
 - ONE # 10 GAUGE EXTRA HIGH STRENGTH COPPER CLAD STEEL TRACER WIRE SHALL BE PULLED AND SECURED TO THE PIPE FOR PIPELINES THAT ARE INSTALLED BY TRENCHLESS HORIZONTAL DIRECTIONAL DRILLING METHOD. IN TRENCHLESS/NON-DIRECTIONAL BORE APPLICATIONS, A # 10 GAUGE SOLID INSULATED COPPER WIRE SHALL BE ATTACHED TO THE PIPE. TRACER WIRES SHALL HAVE A MINIMUM 30-MILS OF POLYETHYLENE INSULATION.
 - COLOR CODED BLUE FOR POTABLE WATER MAINS.
 - COLOR CODED GREEN FOR SANITARY FORCE MAINS.
 - PIPE DEPTHS MAY NEED TO BE DEEPER TO AVOID FRACKOILS. PIPE ALIGNMENT SHALL BE AS SHOWN ON THE CONSTRUCTION DRAWINGS.
 - FOOT CRITERIA SHALL BE MET FOR PIPES UNDER STATE ROADS.

PIPE DIAMETER "D" IN INCHES	MIN. RADIUS FOR PE PIPE IN FEET	
	MIN. RADIUS "R" FOR DR-11	MIN. RADIUS "R" FOR DR-9
4	6	3.3
6	8	5.0
8	12	7.5
10	16	10.0
12	20	12.5
14	24	15.0
16	32	20.0
18	40	25.0
20	48	30.0

DIRECTIONAL BORE ROADWAY CROSSING DETAIL
N.T.S.

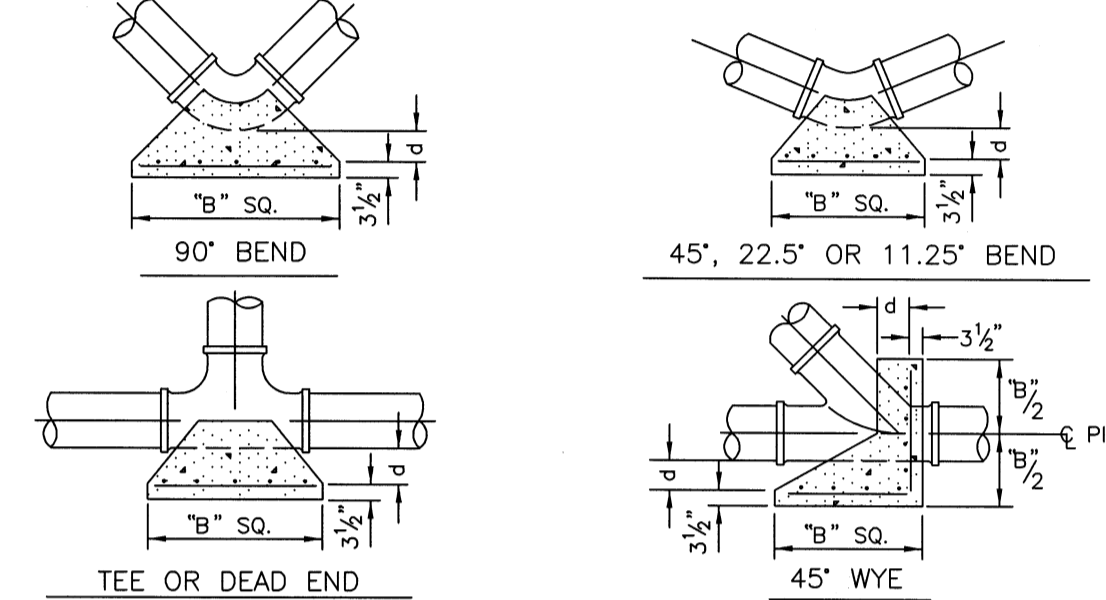


- NOTE: SCHEMATIC SHOWN FOR STANDARD MJ FITTINGS AND GATE VALVES.
1. ONE # 10 GAUGE EXTRA HIGH STRENGTH COPPER CLAD STEEL TRACER WIRE SHALL BE PULLED AND SECURED TO THE PIPE FOR PIPELINES THAT ARE INSTALLED BY TRENCHLESS HORIZONTAL DIRECTIONAL DRILLING METHOD. IN NON-DIRECTIONAL BORE (TRENCHES AND BORE & JACK) APPLICATIONS, A # 10 GAUGE SOLID INSULATED COPPER WIRE SHALL BE ATTACHED TO THE PIPE. TRACER WIRES SHALL HAVE A MINIMUM 30-MILS OF POLYETHYLENE INSULATION.

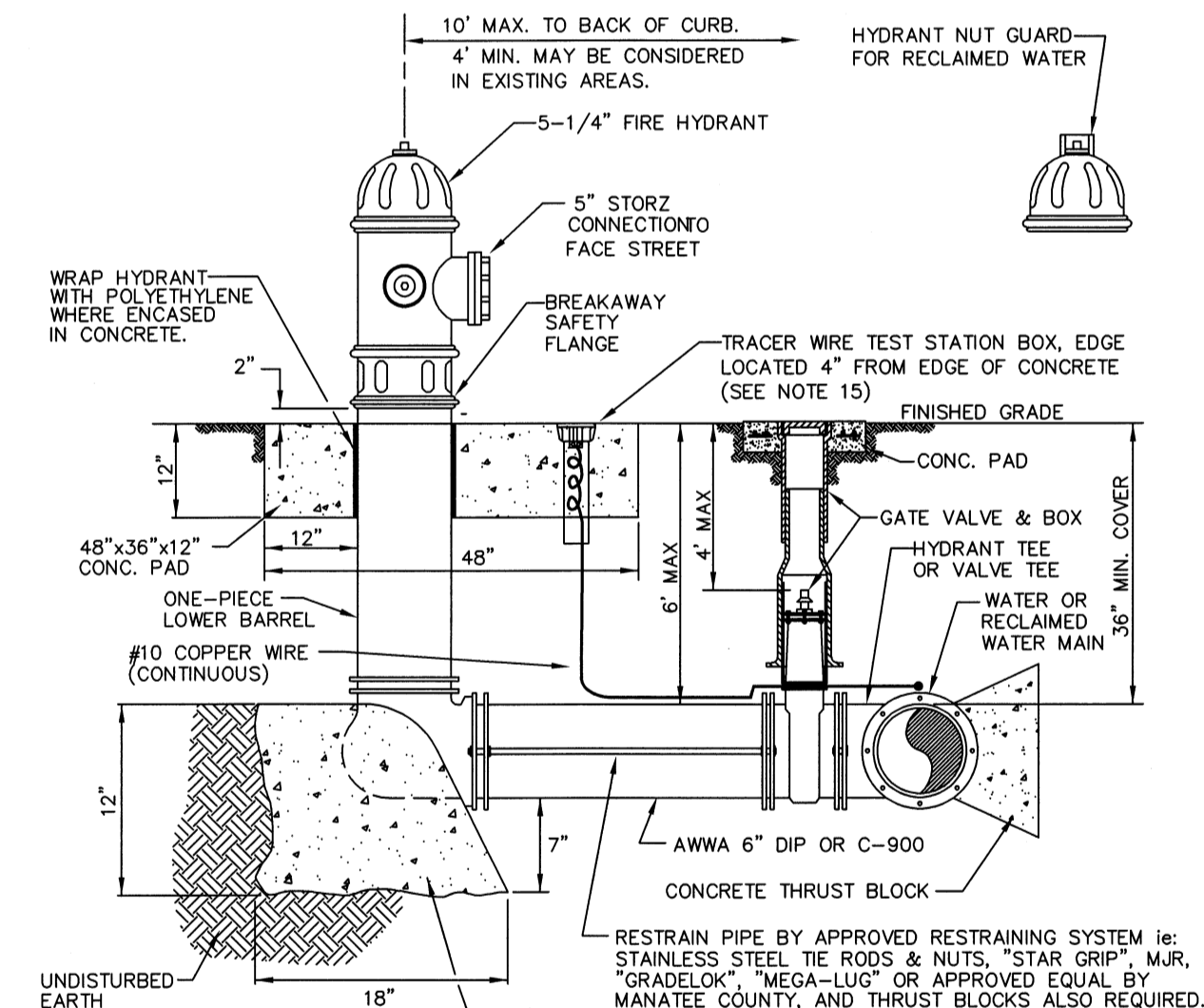
HDPE TO PVC OR DI PIPE ADAPTER DETAIL
N.T.S.

PIPE SIZE (IN.)	THRUST BLOCK DIMENSIONS B ft. x d inches											
	90° BEND		45° BEND		22.5° BEND		11.25° BEND		DEAD END & TEE		45° WYE	
B	d	B	d	B	d	B	d	B	d	B	d	
4	1.5	3/2	1.1	3/2	0.8	3/2	0.6	3/2	1.3	3/2	1.1	3/2
6	2.2	5/4	1.6	3/2	1.2	3/2	0.8	3/2	1.9	4/2	1.6	3/2
8	2.9	7	2.1	5	1.5	3/2	1.1	3/2	2.4	5/4	2.0	4/4
10	3.5	8 1/2	2.6	6 1/4	1.9	4/2	1.3	3/2	3.0	7/4	2.5	6
12	4.2	10	3.1	7 1/2	2.2	5/4	1.6	3/2	3.5	8 1/2	3.0	7/4
14	4.9	11 3/4	3.6	8 3/4	2.6	6 1/4	1.8	4/4	4.1	9 3/4	3.4	8 1/4
16	5.5	13 1/4	4.1	9 3/4	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 1/2	4.4	10 1/2
20	6.9	16 1/2	5.0	12	3.6	8 3/4	2.6	6 1/4	5.8	14	4.9	11 3/4
24	8.2	19 3/4	6.0	14 1/2	4.3	10 1/4	3.1	7 1/2	6.9	16 1/2	5.8	14
30	10.1	24 1/4	7.5	18	5.3	12 3/4	3.8	9	8.5	20 3/4	7.2	17 1/4
36	12.1	29	8.9	21 1/4	6.4	15 1/4	4.5	10 3/4	10.2	24 1/2	8.6	20 3/4

- REINFORCEMENT MAT SCHEDULE
- FOR DIM. "B" BETWEEN 5.75' & 12.5' USE #4 @ 8" EACH WAY
- FOR DIM. "B" LESS THAN 5.75' USE #3 @ 8" EACH WAY
- NOTES:
- ALL THRUST BLOCKS SHALL BE CAST IN PLACE. FITTINGS ADJACENT TO THRUST BLOCKS SHALL BE WRAPPED IN POLYETHYLENE.
 - THIS TABLE IS BASED ON WATER PRESSURE=180 PSI WITH AN ALLOWABLE SOIL BEARING PRESSURE=2000 PSF. CONCRETE STRENGTH $f_c=3000$ PSI, REINFORCEMENT $f_y=60.0$ KSI. THRUST BLOCK SHALL BE CAST AGAINST FIRM UNDISTURBED SOIL.
 - FOR LARGER "B" DIMENSIONS IT IS NECESSARY TO CHECK THAT PIPE IS SUFFICIENTLY DEEP TO ALLOW 15" MIN. SOIL COVER OVER TOP EDGE OF THRUST BLOCK.
 - RESTRAINED JOINTS SHALL BE USED IN LIEU OF THRUST BLOCKS TO SAVE SPACE. THRUST BLOCKS SHALL BE USED IN SITUATIONS WHERE THRUST BLOCKS AND RESTRAINED JOINTS ARE BOTH REQUIRED.



CONCRETE THRUST BLOCKS DETAIL
N.T.S.



- NOTES:
- WEEPHOLES SHALL BE EXCLUDED FROM THE FIRE HYDRANT.
 - FIRE HYDRANTS SHALL BE A MINIMUM OF 6" OFF EDGE OF PAVEMENT AND 10" MAX. FROM BACK OF CURB. WHERE POSSIBLE AND WHERE SIDEWALK IS TO BE INSTALLED, FIRE HYDRANT SHALL BE LOCATED BETWEEN SIDEWALK AND RIGHT-OF-WAY LINE.
 - HYDRANTS SHALL BE FUSION BONDED EPOXY COATED SAFETY YELLOW FOR WATER AND PURPLE (PANTONE 522C) FOR RECLAIMED WATER. HYDRANT SHALL BE DUCTILE IRON CONSTRUCTION.
 - FIRE HYDRANTS SHALL BE PLACED SO THAT STORM WATER FLOWS AWAY FROM THE HYDRANT.
 - FIRE HYDRANTS SHALL BE CONSTRUCTED WITH "GROUND LINE" SET TO FINISHED GRADES AS ESTABLISHED IN THE FIELD. NORMAL BURY IS 3 FEET OF COVER FOR ALL WATER LINES.
 - FIRE HYDRANTS MAY BE CONSTRUCTED WITH "GRADELOK" OFFSET FITTING.
 - RAISED REFLECTIVE PAVEMENT MARKER (BLUE) FOR POTABLE WATER/PURPLE FOR RECLAIMED WATER SHALL BE INSTALLED AT CENTERLINE OF PAVEMENT ADJACENT TO EACH HYDRANT.
 - PRECAST CONCRETE THRUST BLOCKS & PADS SHALL NOT BE USED.
 - ALL EXPOSED EDGES OF CONCRETE SHALL HAVE 1/2" CHAMFER.
 - FIRE HYDRANT VALVE SHALL BE FASTENED DIRECTLY TO TEE.
 - IN-LINE VALVES SHOULD BE LOCATED AT HYDRANT TEES.
 - HYDRANTS SHALL BE LOCATED ON SAME SIDE OF ROAD AS WATER MAIN UNLESS APPROVED BY M.C.U.I.D.
 - THERE MUST BE A CLEARANCE OF 7 1/2 FEET FROM FRONT AND BOTH SIDES, AND FOUR FEET TO THE REAR OF THE HYDRANT, TO ABOVE GRADE OBSTRUCTIONS INCLUDING POSTS, FENCES, TREES, ETC. PER THE FLORIDA FIRE PREVENTION CODE.
 - SEE GATE VALVE, BOX AND LID STANDARD DETAIL UW-2.
 - SHOULD THE FIRE HYDRANT'S CONCRETE PAD OVERLAP THE SIDEWALK; THE TRACER WIRE TEST STATION BOX SHALL NOT BE LOCATED WITHIN THE SIDEWALK.

FIRE HYDRANT ASSEMBLY DETAIL
N.T.S.

REQUIRED LENGTH OF RESTRAINED JOINT PIPE FOR DIP (POLY-WRAPPED)

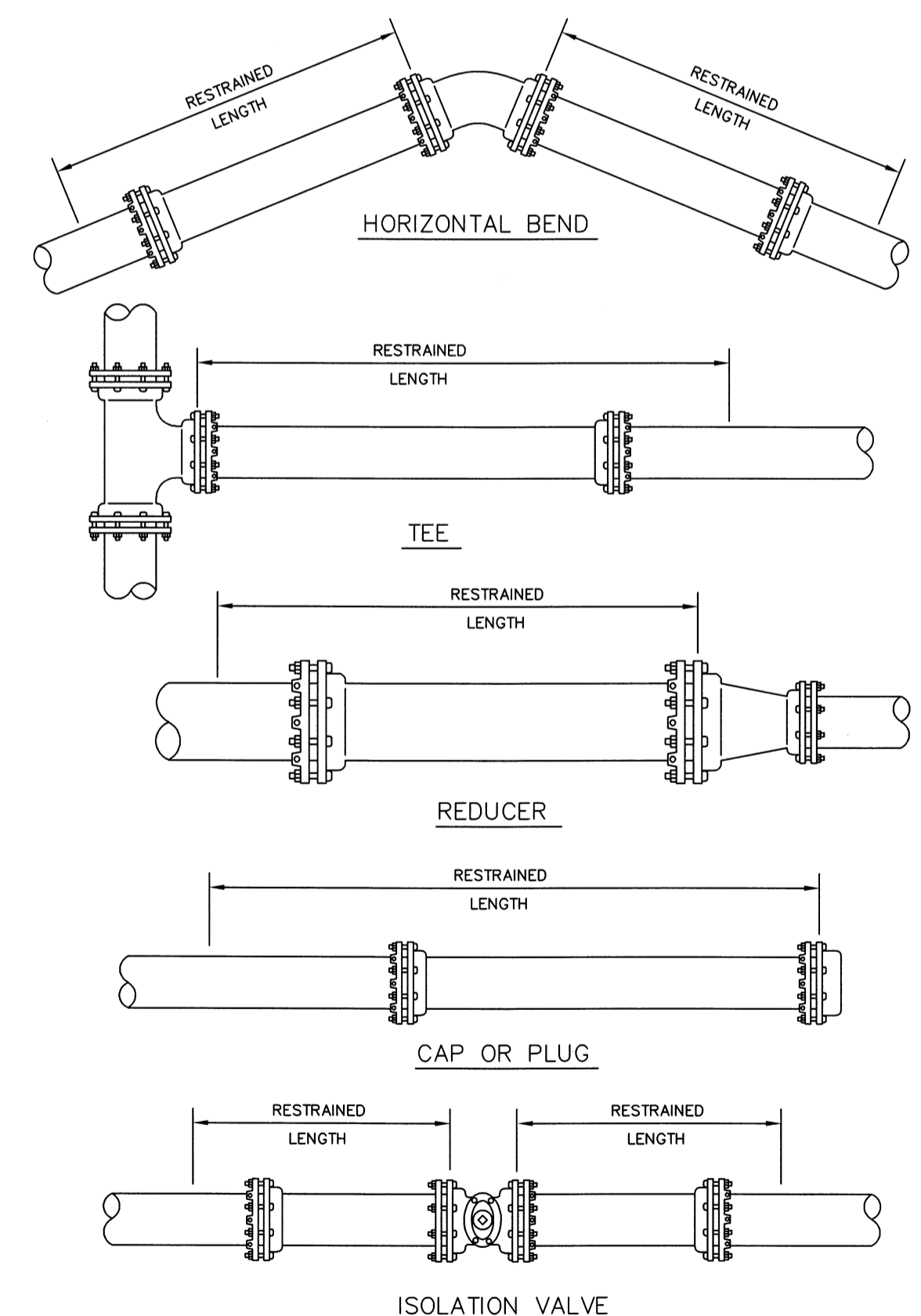
MAIN PIPE SIZE	HORIZ. BENDS	TEES				REDUCERS				PLUGS	VALVES		
		90°	45°	22.5°	SIZE	LENGTH	SIZE	LENGTH					
36	142	59	28	36	X30	X24	X20	X16	X12	X10	X8	453	227
30	124	51	25	30	X24	X20	X16	X12	X10	X8	X6	391	196
24	106	44	21	24	X20	X16	X12	X10	X8	X6	X4	327	164
20	92	38	18	20	X16	X12	X10	X8	X6	X4	X3	280	140
16	77	32	15	16	X12	X10	X8	X6	X4	X3	X2	231	116
12	61	25	12	12	X10	X8	X6	X4	X3	X2	X1	181	91
10	52	22	10	10	X8	X6	X4	X3	X2	X1	X0	153	77
8	44	18	9	8	X6	X4	X3	X2	X1	X0	X0	128	64
6	34	14	7	6	X4	X3	X2	X1	X0	X0	X0	98	49
4	24	10	5	4	X3	X2	X1	X0	X0	X0	X0	69	35

REQUIRED LENGTH OF RESTRAINED JOINT PIPE FOR DIP (NON-WRAPPED)

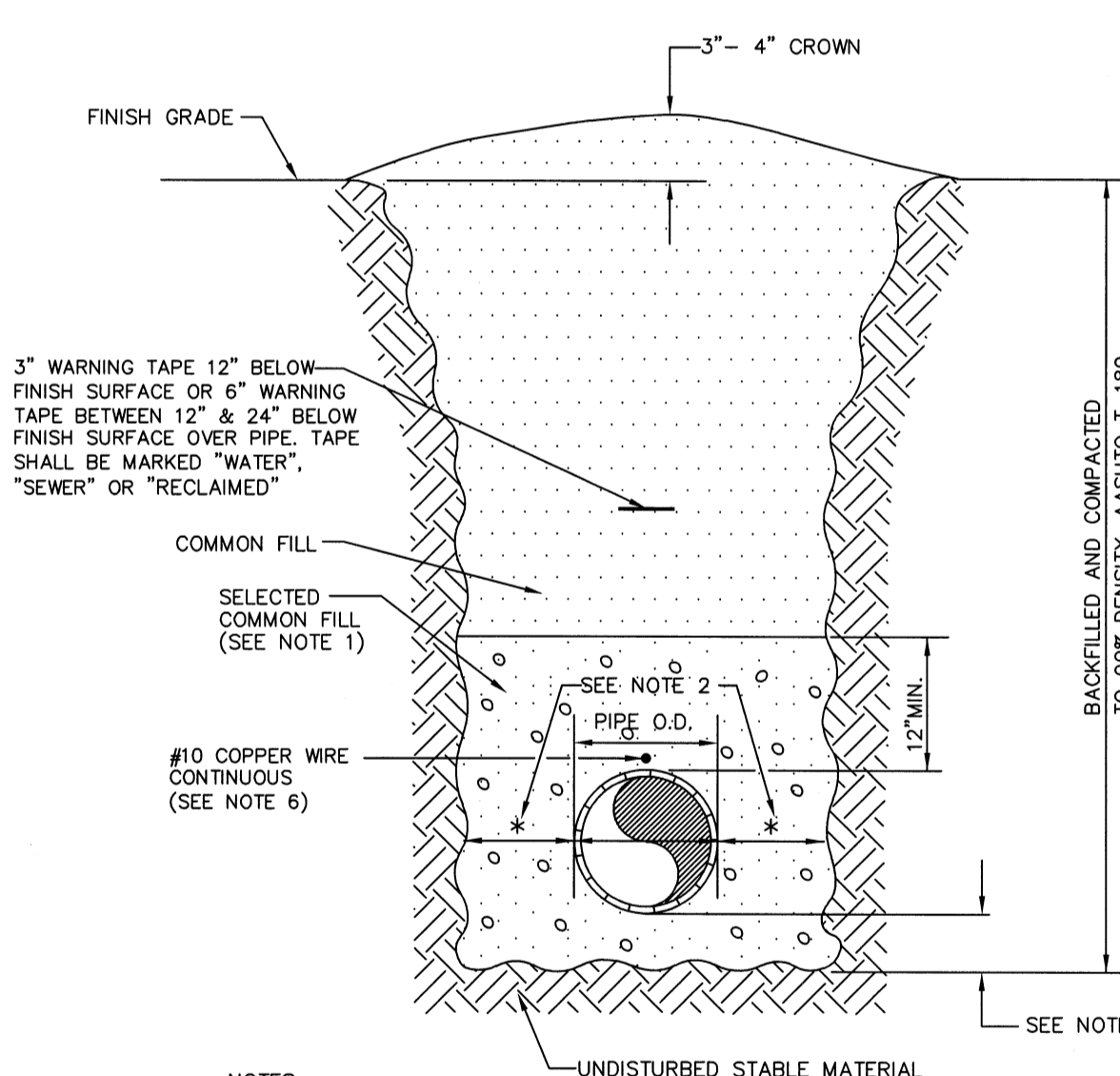
MAIN PIPE SIZE	HORIZ. BENDS	TEES				REDUCERS				PLUGS	VALVES		
		90°	45°	22.5°	SIZE	LENGTH	SIZE	LENGTH					
36	100	42	20	36	X30	X24	X20	X16	X12	X10	X8	188	94
30	88	37	18	30	X24	X20	X16	X12	X10	X8	X6	162	81
24	75	31	15	24	X20	X16	X12	X10	X8	X6	X4	135	68
20	65	27	13	20	X16	X12	X10	X8	X6	X4	X3	116	58
16	54	22	11	16	X12	X10	X8	X6	X4	X3	X2	96	48
12	43	18	8	12	X10	X8	X6	X4	X3	X2	X1	75	38
10	37	15	7	10	X8	X6	X4	X3	X2	X1	X0	63	32
8	30	13	6	8	X6	X4	X3	X2	X1	X0	X0	53	27
6	24	10	5	6	X4	X3	X2	X1	X0	X0	X0	41	21
4	17	7	3	4	X3	X2	X1	X0	X0	X0	X0	29	15

- NOTE:
- SEE "RESTRAINED LENGTHS FOR PVC PIPE" DETAIL FOR NOTES 1 THROUGH 8 THAT ARE ALSO APPLICABLE TO RESTRAINED LENGTHS FOR DIP.

RESTRAINED LENGTHS FOR DIPS DETAIL
N.T.S.



RESTRAINED LENGTHS FOR PIPE DETAIL
N.T.S.



- NOTES:
- USE OF TYPE A-2 AND A-3 PIPE BEDDING TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
 - 10" MAX. FOR PIPE DIAMETER LESS THAN 24"; 12" MAX. FOR PIPE DIAMETER 24" AND LESS THAN 42"; 24" MAX. FOR PIPE DIAMETER 42" AND OVER.
 - 4" MAX. FOR PIPE 16" DIAMETER & LESS; 6" MAX. FOR PIPE 18" TO 36" DIAMETER; AND 9" MAX. FOR PIPE 42" DIAMETER AND LARGER.
 - PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
 - BACKFILL AASHTO M-145 SHALL BE PLACED IN LAYERS NOT TO EXCEED 6 INCHES FOR SELECTED COMMON FILL AND NOT TO EXCEED 12 INCHES FOR COMMON FILL. EACH LAYER SHALL BE THOROUGHLY TAMPED AND/OR ROLLED TO 98% AASHTO T-180 DENSITY.
 - TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.

TRENCH WITH UNIMPROVED SURFACE TYPE A-1 PIPE BEDDING
N.T.S.

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SEC, TWP, RGE	23&26, 34S, 19E		
SURVEY BOOK NO.	1497/61-75 & 1512/6-13		
PROJECT NUMBER	404-6076370		
By	Checked	Date	
Surveyed	FDC	JSS	JULY 2009
Drawn	JSS		
Designed	JDS		

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Engineer / Reg. No.

MANATEE COUNTY
FLORIDA

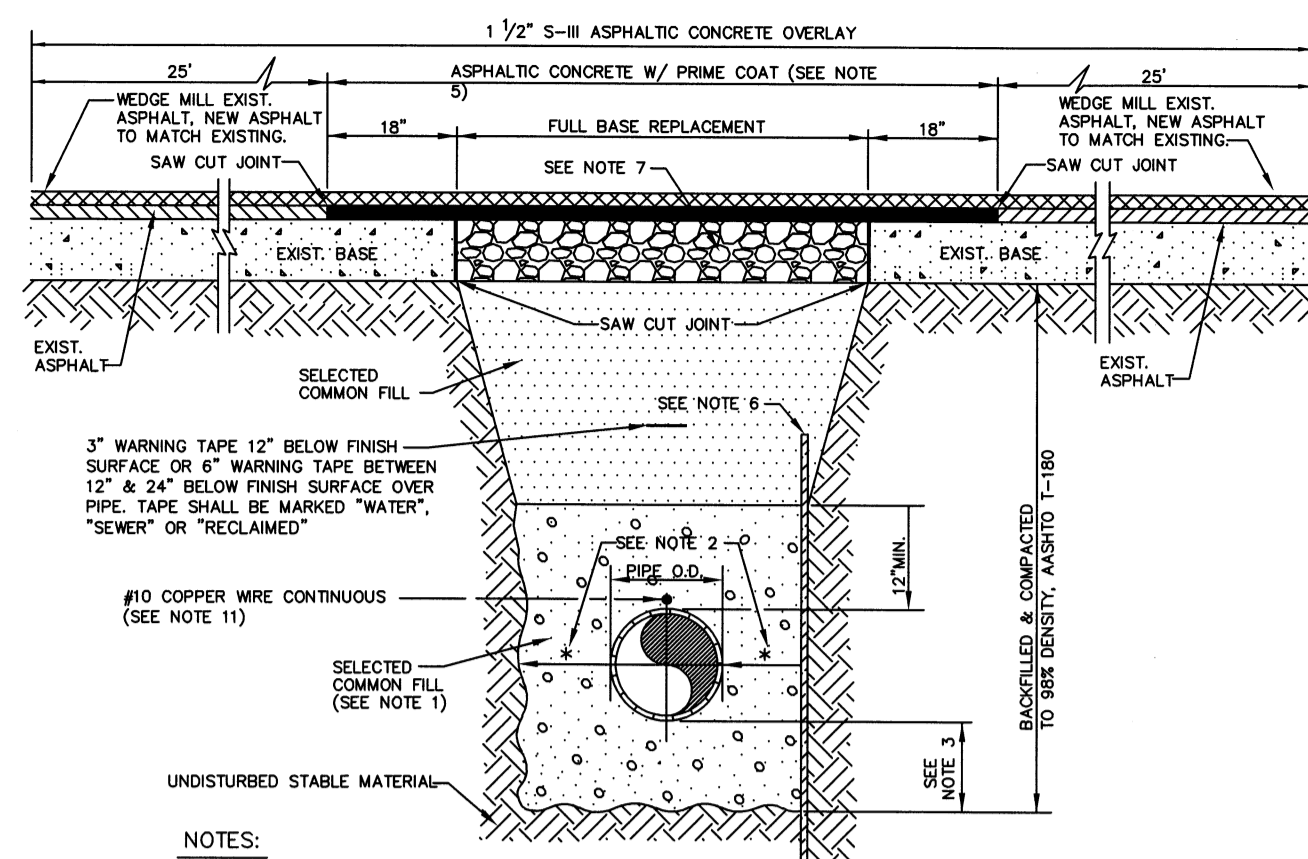
1022 26th Avenue East, Bradenton, FL 34208

NO.	REVISION DESCRIPTION	BY	DATE

WATER MAIN IMPROVEMENTS
RYE RD 10" WM INSTALLATION

DETAIL SHEET

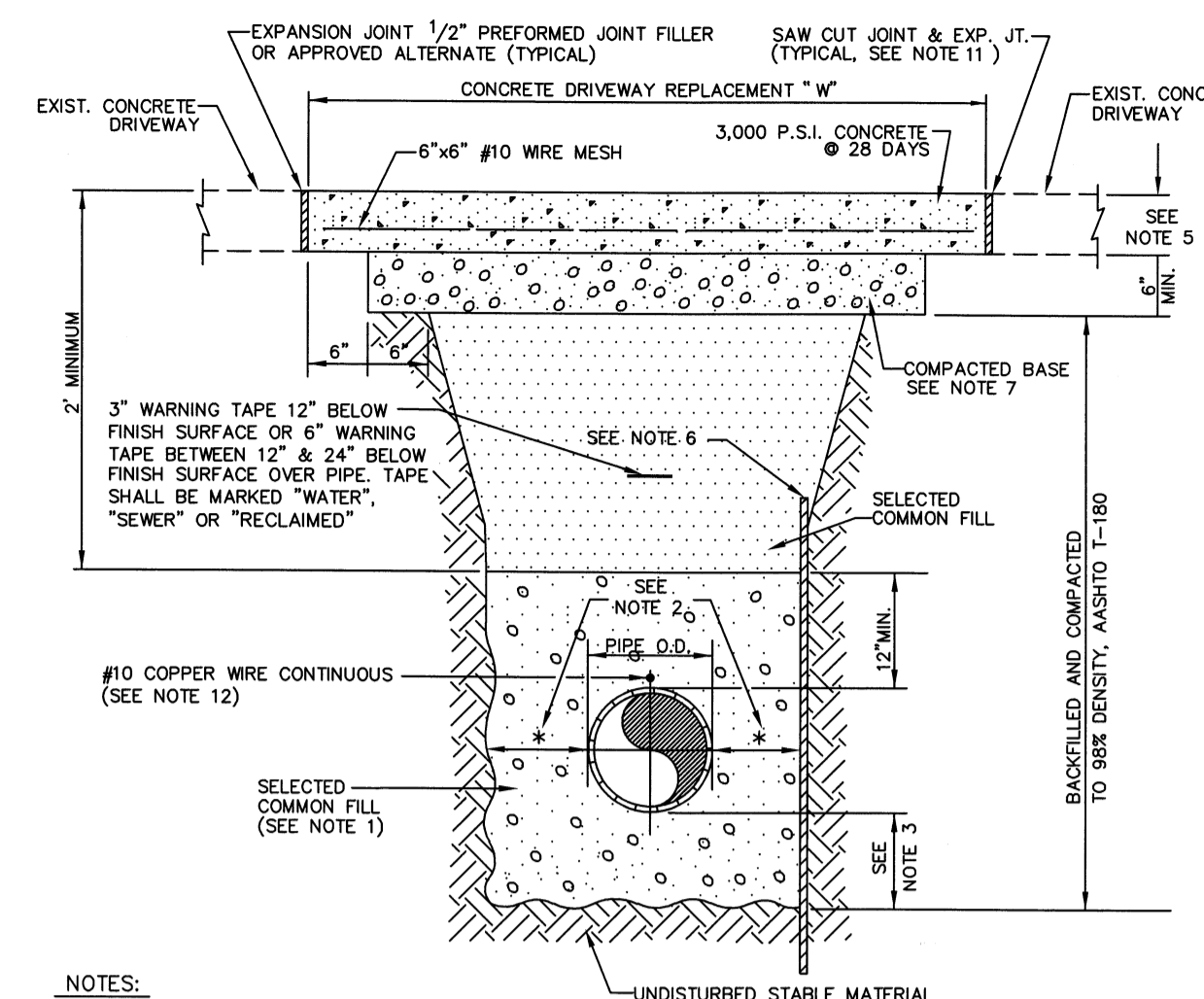
Sheet 10 of 12



NOTES:

- 1.) USE OF TYPE A-2 AND A-3 PIPE BEDDING TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
- 2.) 10" MAX. FOR PIPE DIAMETERS LESS THAN 24"; 12" MAX. FOR PIPE DIAMETER 24" AND LESS THAN 42"; 24" MAX. FOR PIPE DIAMETER 42" AND OVER.
- 3.) 4" MAX. FOR PIPE 16" DIAMETER & LESS; 6" MAX. FOR PIPE 18" TO 36" DIAMETER; AND 9" MAX. FOR PIPE 42" DIAMETER AND LARGER.
- 4.) PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
- 5.) ASPHALTIC CONCRETE FRICTION COURSE WITH PRIME COAT SHALL BE THE SAME DEPTH AND TYPE AS EXISTING OR A MINIMUM OF ONE INCH, WHICHEVER IS GREATER.
- 6.) SHEETING ORDERED LEFT IN PLACE TO BE CUT OFF 24" BELOW FINISHED GRADE OR 12" BELOW SUBGRADE.
- 7.) BASE SHALL BE 8" MINIMUM THICKNESS CRUSHED CONCRETE, SAND ASPHALT BASE WILL BE AN ACCEPTABLE ALTERNATIVE.
- 8.) BACKFILL AASHTO M-145 SHALL BE PLACED IN LAYERS NOT TO EXCEED 6 INCHES. EACH LAYER SHALL BE THOROUGHLY TAMPED AND/OR ROLLED TO 98% AASHTO T-100 DENSITY.
- 9.) TEMPORARY PATCHES WILL BE INSTALLED TO PROVIDE A SMOOTH ALL WEATHER SURFACE AT ALL TIME. 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 11.) ARE MINIMUM REQUIREMENTS. REFER TO MANATEE COUNTY HIGHWAY AND TRAFFIC STANDARDS FOR ADDITIONAL REQUIREMENTS.

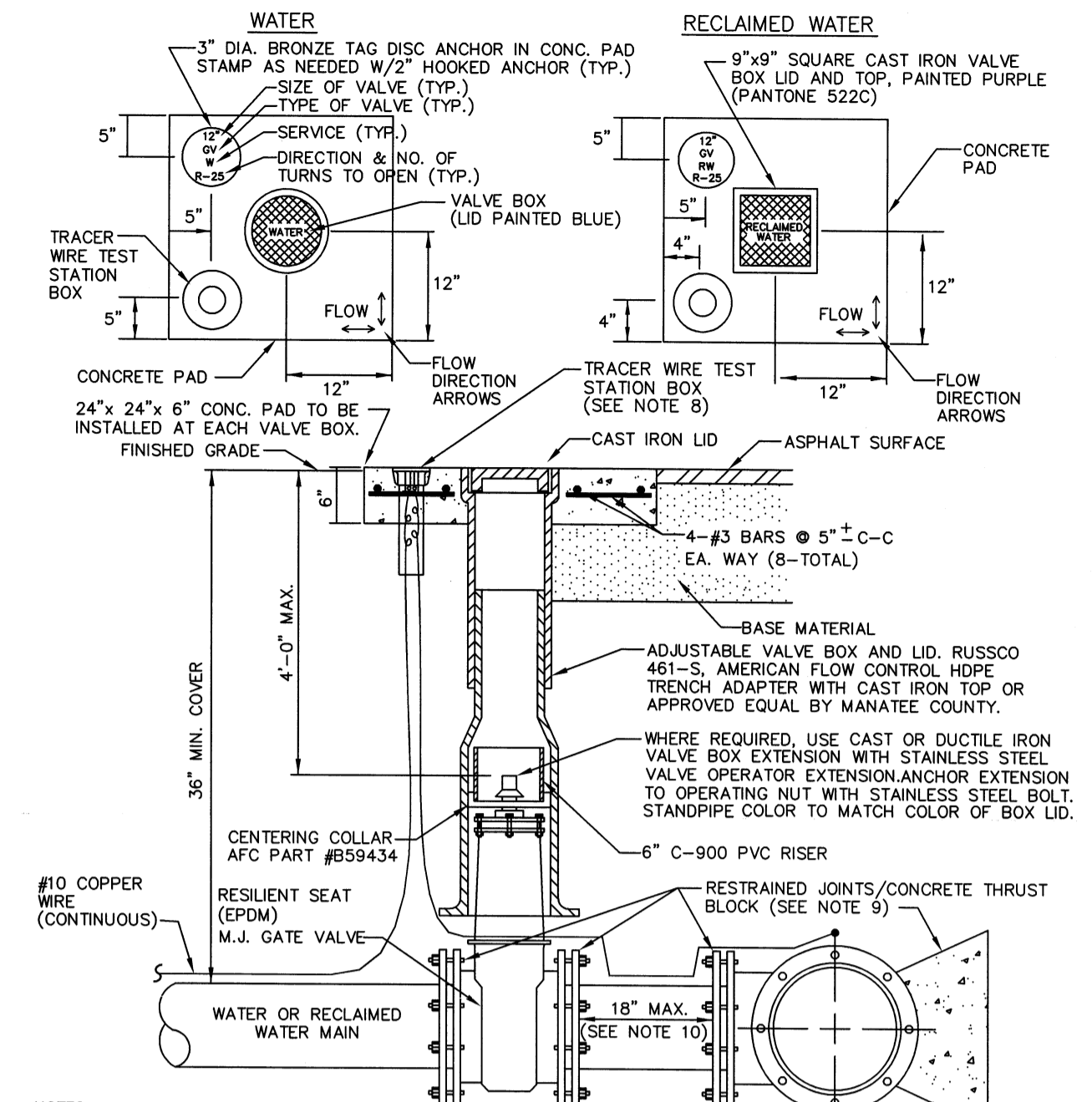
TRENCH WITH ASPHALT PAVEMENT SURFACE
TYPE A-1 PIPE BEDDING DETAIL
N.T.S.



NOTES:

- 1.) USE OF TYPE A-2 AND A-3 PIPE BEDDING TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
- 2.) 10" MAX. FOR PIPE DIAMETER LESS THAN 24"; 12" MAX. FOR PIPE DIAMETER 24" AND LESS THAN 42"; 24" MAX. FOR PIPE DIAMETER 42" AND OVER.
- 3.) 4" MAX. FOR PIPE 16" DIAMETER & LESS; 6" MAX. FOR PIPE 18" TO 36" DIAMETER; AND 9" MAX. FOR PIPE 42" DIAMETER AND LARGER.
- 4.) PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
- 5.) 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.
- 7.) BASE SHALL BE COMPACTED 6" MINIMUM THICKNESS OF APPROVED MATERIAL.
- 8.) BACKFILL AASHTO M-145 SHALL BE PLACED IN LAYERS NOT TO EXCEED 6 INCHES. EACH LAYER SHALL BE THOROUGHLY TAMPED AND/OR ROLLED TO 98% AASHTO T-100 DENSITY.
- 9.) DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST ADOPTED CONSTRUCTION STANDARDS OF THE MANATEE COUNTY TRANSPORTATION DEPARTMENT.
- 10.) IF THE DRIVEWAY IS 12" OR WIDER, SAWCUT AN EXPANSION JOINT ALONG THE CENTER OF THE DRIVEWAY (3/16" WIDE AND 1/2" DEEP) AFTER THE CONCRETE HAS SET.
- 11.) IF THERE IS AN EXISTING EXPANSION JOINT WITHIN 3' OF THE PROPOSED JOINT, EXTEND DRIVEWAY REPLACEMENT TO THE EXISTING JOINT.
- 12.) TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.

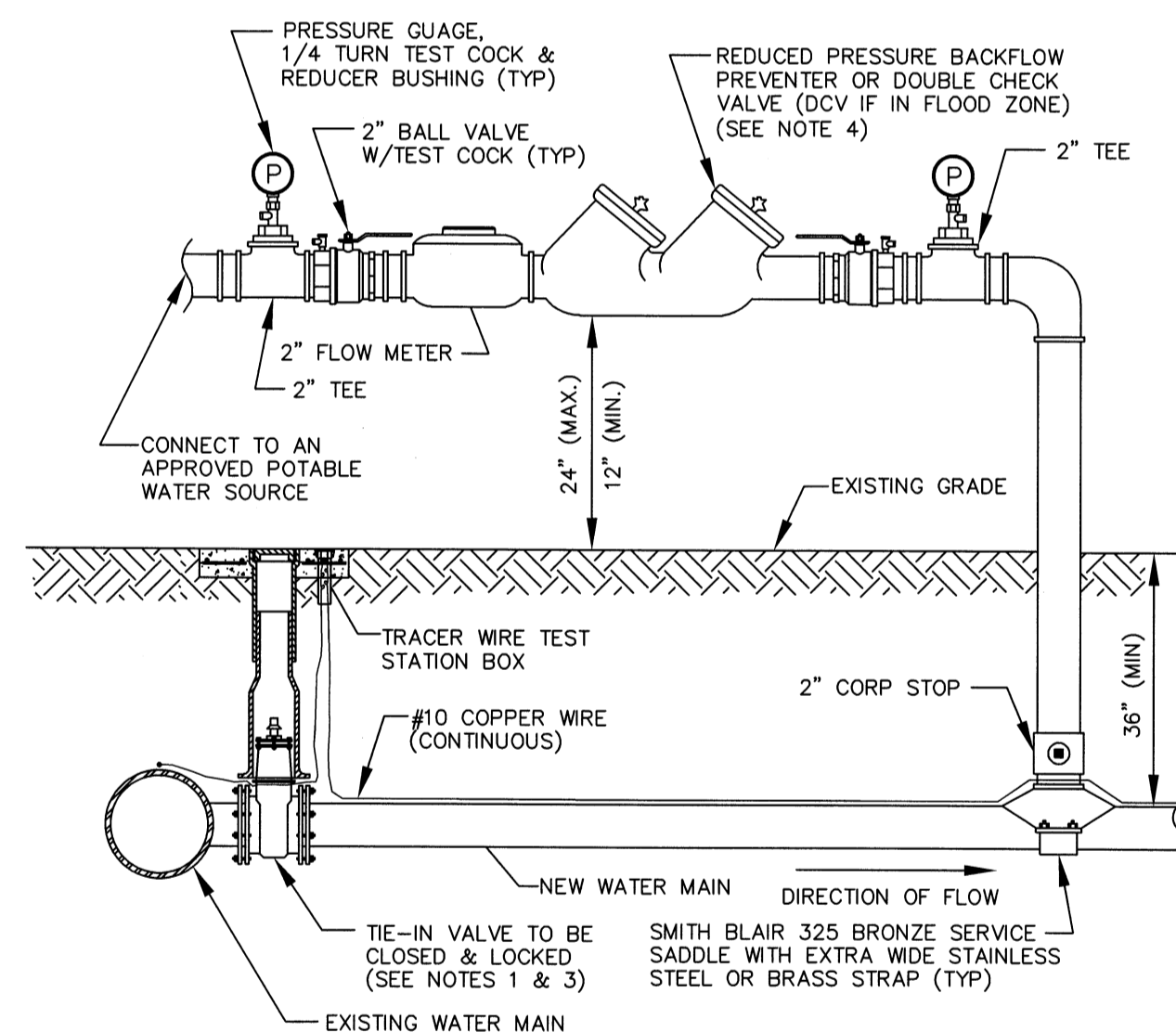
TRENCH WITH CONCRETE DRIVEWAY SURFACE
TYPE A-1 PIPE BEDDING DETAIL
N.T.S.



NOTES:

1. "WV" OR "RWV" TO BE IMPRESSED INTO THE NEWLY-POURED CONCRETE CURB, ALONG WITH DISTANCE IN FEET TO THE VALVE. IF NO CURB, INSTALL A BLUE DISC WITH "WV" OR PURPLE DISC WITH "RWV" AND A 1/8" X 1" GALVANIZED STEEL SCREW IN THE EDGE OF PAVEMENT WITH THE FOOTING FROM THE DISC TO THE VALVE.
2. ALL EXISTING AND PROPOSED VALVE BOXES SHALL BE ADJUSTED TO FINISHED GRADES AS DETERMINED IN THE FIELD.
3. WATER VALVES SHALL NOT BE PLACED ON HANDICAPPED RAMPS.
4. PRECAST CONCRETE PADS & THRUST BLOCKS SHALL NOT BE USED.
5. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1/2".
6. FOR VALVES 16" AND LARGER, USE BUTTERFLY VALVES.
7. "FLOW" AND FLOW DIRECTION ARROWS TO BE IMPRESSED INTO NEWLY POURED CONCRETE PAD.
8. TRACER WIRE TEST STATION BOX IS NOT REQUIRED IN VALVE BOX PAD IF THE GATE VALVE IS LOCATED WITHIN 200 FEET OF A WATER SERVICE, BLOW-OFF, BACKFLOW PREVENTER OR FIRE HYDRANT THAT HAS A TRACER WIRE BOX. A TRACER WIRE BOX IS REQUIRED IN THE CONCRETE PAD AT ALL GATE VALVES AT CONNECTIONS TO EXISTING MAINS.
9. CONCRETE THRUST BLOCK IS ALSO REQUIRED UNLESS RESTRAINED JOINT LENGTH IS TREATED AS A PLUG SHOWN IN STANDARD DETAIL UG-8.
10. SHOULD THERE BE AN OBSTACLE/CONFLICT IN INSTALLING THE VALVE, THE ENGINEER OF RECORD MAY PROPOSE A REVERSE TAP, ETC. AND SEPARATE APPROVAL SHALL BE OBTAINED FROM MANATEE COUNTY.

GATE VALVE, BOX, LID AND TAG DETAIL
N.T.S.



NOTES:

1. FOR TIE-IN VALVE, SEE DETAIL UW-4 FOR TAPPING SLEEVE VALVE, DETAIL UW-2 FOR GATE VALVE AND DETAIL UW-3 FOR BUTTERFLY VALVE.
2. CORPORATION STOP CONNECTIONS TO WATER MAINS SHALL BE AT A SUFFICIENT DISTANCE FROM NEW TAPPING SLEEVE & VALVE (TIE-IN VALVE). ALL CORPORATION STOP TAPS SHALL BE PLACED NO CLOSER THAN 30" OR A DISTANCE EQUAL TO (1) MAIN PIPE DIAMETER PLUS (2) TAP DIAMETERS (WHICHEVER IS LARGER) FROM THE NEW TIE-IN VALVE (TAPPING VALVE & SLEEVE). A CROSS MAY BE INSTALLED IF THE EXISTING WATER MAIN IS NOT LARGER THAN THE NEW WATER MAIN.
3. IF THE EXISTING WATER MAIN IS LOCATED UNDER PAVEMENT OR CLOSE TO THE ROADWAY, BOTH JUMPER CORPORATION STOPS MAY CONNECT TO THE NEW WATER MAIN LOCATED OUTSIDE OF THE PAVEMENT. AN ADDITIONAL GATE VALVE OR BUTTERFLY VALVE SHALL BE INSTALLED AND THE VALVE MAY BE LOCATED AT THE ROW LINE. PIPING AND APPURTENANCES BETWEEN THE EXISTING MAIN AND ISOLATION VALVE AND JUMPER SHALL BE DISINFECTED BY SPRAYING OR SWABBING.
4. BACKFLOW PREVENTER SHALL BE STRUCTURALLY SUPPORTED.
5. SEE DETAIL UW-22 FOR ADDITIONAL JUMPER CONNECTION NOTES.

TEMPORARY JUMPER CONNECTION DETAIL
N.T.S.

1. A TEMPORARY JUMPER CONNECTION IS REQUIRED AT ALL CONNECTIONS BETWEEN EXISTING ACTIVE POTABLE WATER MAINS AND PROPOSED NEW WATER MAIN IMPROVEMENTS WITH THE FOLLOWING EXCEPTIONS:
 - A. PROJECTS THAT INCLUDE A PERMANENT BACKFLOW PREVENTER AT THE RIGHT-OF-WAY WHICH IS ADJACENT TO THE EXISTING WATER MAIN;
 - B. PROJECTS THAT INCLUDE NEW WATER MAINS THAT ARE LESS THAN OR EQUAL TO 18 LINEAR FEET IN LENGTH; OR
 - C. OTHER PROPOSED CASES THAT ARE APPROVED BY MANATEE COUNTY AND THE CONSTRUCTION DRAWINGS SPECIFICALLY STATE THAT A TEMPORARY JUMPER CONNECTION IS NOT REQUIRED.
2. A TEMPORARY JUMPER SHALL BE USED AND BE CONNECTED TO AN APPROVED POTABLE WATER SOURCE (E.G., EXISTING FIRE HYDRANT, EXISTING MAIN, EXISTING SERVICE TAP OR TANK TRUCK, ETC.) AS SHOWN IN THE STANDARD TEMPORARY JUMPER DETAIL UW-21. A TEMPORARY JUMPER SHALL BE USED FOR FILLING ANY NEW WATER MAIN OF ANY SIZE, FOR FLUSHING OF NEW MAINS UP TO 6 INCHES IN DIAMETER (3.0 FPS MINIMUM VELOCITY, PREFERABLY 3.5 FPS) AND FOR DISINFECTION OF ANY NEW MAIN OF ANY SIZE. WATER MAINS WITH A PIPE DIAMETER GREATER THAN OR EQUAL TO 6 INCHES SHALL BE PIGGED IN LIEU OF PRELIMINARY FLUSHING. THE JUMPER CONNECTION SHALL BE MAINTAINED UNTIL AFTER THE FILLING, FLUSHING, TESTING AND DISINFECTION OF THE NEW MAIN HAS BEEN SUCCESSFULLY COMPLETED AND CLEARANCE FOR USE FROM THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP) OR THE FLORIDA DEPARTMENT OF HEALTH (FDOH) HAS BEEN OBTAINED.
3. LOCATIONS AND ORIENTATION OF JUMPERS ASSOCIATED WITH CONNECTIONS TO EXISTING WATER MAINS THAT ARE LOCATED UNDER THE ROADWAY PAVEMENT SHALL BE APPROVED ON A CASE-BY-CASE BASIS.
4. PIPE AND FITTINGS USED FOR CONNECTING THE NEW PIPE TO THE EXISTING PIPE SHALL BE DISINFECTED PRIOR TO INSTALLATION IN ACCORDANCE WITH ANWA C651, LATEST EDITION, UNLESS APPROVED OTHERWISE. THE TAPPING SLEEVE, AND EXTERIOR OF THE EXISTING MAIN TO BE TAPPED, PIPING WITHIN THE JUMPER, AND NEW PIPING SHOWN ON STANDARD TEMPORARY JUMPER DETAIL UW-21 SHALL BE DISINFECTED BY SPRAYING OR SWABBING PER SECTION 4.6 OF ANWA C651, UNLESS APPROVED OTHERWISE. THE REMAINDER OF THE NEW MAIN SHALL BE DISINFECTED IN ACCORDANCE WITH SECTION 4.4.3.3 OF ANWA C651. THE USE OF TABLETS IS PROHIBITED.
5. A SEPARATE AND SUCCESSFUL HYDROSTATIC TEST ON THE NEW SYSTEM SHALL OCCUR BETWEEN THE TIE-IN VALVE AND THE CLOSEST DOWNSTREAM GATE VALVE OR BUTTERFLY VALVE BEFORE PERFORMING A HYDROSTATIC TEST ON THE REMAINDER OF THE NEWLY-CONSTRUCTED WATER MAIN. THE TIE-IN VALVE AND THE CLOSEST DOWNSTREAM GATE VALVE OR BUTTERFLY VALVE SHALL BE CLOSED DURING THE HYDROSTATIC TEST OF THE REMAINDER OF THE NEWLY CONSTRUCTED WATER MAIN.
6. THE JUMPER SHALL INCLUDE A FLOW METER TO ENSURE THAT THE FLOW FROM THE SUPPLY SOURCE IS AT A CONSTANT MEASURED RATE WHILE CHLORINATING THE NEW MAIN. THE CHLORINE CONCENTRATION SHALL BE MEASURED AT REGULAR INTERVALS TO ENSURE THAT IT IS FED AT A CONSTANT RATE OF NOT LESS THAN 25 MILLIGRAMS PER LITER (MG/L) OF FREE CHLORINE.
7. AFTER PRELIMINARY FLUSHING (WATERMANS WITH DIAMETERS LESS THAN 6 INCHES) AND PIGGING (WATERMANS WITH DIAMETERS GREATER THAN OR EQUAL TO 6 INCHES) OF THE NEW WATER MAIN, A MINIMUM FEED CONCENTRATION OF 25 MG/L OF FREE CHLORINE IS REQUIRED. THE CHLORINATED WATER SHALL BE RETAINED IN THE MAIN FOR AT LEAST 24 HOURS AND ALL PORTIONS OF THE MAIN SHALL HAVE A RESIDUAL OF NOT LESS THAN 10 MG/L OF FREE CHLORINE AT THE END OF THIS 24-HOUR PERIOD. THE CONTRACTOR SHALL PROVIDE THE INSPECTOR DOCUMENTATION THAT THE AFORESAID CONCENTRATIONS HAVE BEEN ACHIEVED. FINAL FLUSHING OF THE MAINS SHALL OCCUR PRIOR TO PERFORMING BACTERIOLOGICAL EVALUATIONS AND THE TOTAL CHLORINE RESIDUAL IN THE MAINS SHALL BE NO MORE THAN 4.0 MG/L IN ANY BACTERIOLOGICAL SAMPLE. IF THE CHLORINE RESIDUAL EXCEEDS 4.0 MG/L, A SAMPLE SHALL BE OBTAINED AT THE TEST COCK LOCATED UPSTREAM OF THE BACKFLOW PREVENTER, TO ENSURE THAT THE TOTAL CHLORINE RESIDUAL OF THE NEW MAIN DOES NOT EXCEED THE RESIDUAL OF THE EXISTING SYSTEM.
8. THE JUMPER CONNECTION SHALL ALSO BE USED TO MAINTAIN A MINIMUM PRESSURE OF 20 PSI IN THE NEW MAINS CONTINUOUSLY AFTER DISINFECTION AND UNTIL FDEP/FDOH CLEARANCE LETTER IS OBTAINED.
9. ALL TEMPORARY BACKFLOW DEVICES OR "JUMPERS" UTILIZED DURING PIPELINE CONSTRUCTION MUST SHOW CERTIFICATION THAT THEY HAVE BEEN TESTED ANNUALLY ACCORDING TO THE FLORIDA BUILDING CODE, PLUMBING SECTION, CHAPTER 3, SECTION 312.9.1, 312.9.2, CHAPTER 6, SECTION 608, AND RESOLUTION R87-125. ANNUAL CERTIFICATION MUST BE VALID AT TIME OF INSTALLATION AND PROVIDED TO THE MANATEE COUNTY INSPECTOR UPON REQUEST.
10. EXCEPT AS REQUIRED TO FLUSH LINES GREATER THAN 6 INCHES IN DIAMETER, THE LOCKABLE TIE-IN VALVE SHALL REMAIN CLOSED AND SHALL BE LOCKED IN THE CLOSED POSITION BY MANATEE COUNTY. THE TIE-IN VALVE SHALL REMAIN CLOSED AND LOCKED UNTIL THE NEW SYSTEM HAS BEEN CLEARED FOR USE BY THE FDEP/FDOH AND ALL OTHER PERTINENT AGENCIES.
11. AFTER RECEIPT OF CLEARANCE FOR USE BY FDEP/FDOH, MANATEE COUNTY, AND ALL OTHER PERTINENT AGENCIES, THE CONTRACTOR SHALL REMOVE THE TEMPORARY JUMPER CONNECTION. THE CORPORATION STOPS ARE TO BE CLOSED AND PLUGGED WITH 2-INCH BRASS OR PVC STOPS.
12. ALL INSTALLATION AND MAINTENANCE OF THE TEMPORARY JUMPER CONNECTION AND ASSOCIATED BACKFLOW PREVENTION DEVICE, FLOW METER, FITTINGS, VALVES, ETC., SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
13. IF THE WATER MAIN TO RECEIVE FINAL FLUSHING IS GREATER THAN 6 INCHES IN DIAMETER OR SUCH LENGTH THAT A FULL PIPE FLUSH AT THE MINIMUM VELOCITY CANNOT BE ACCOMPLISHED, THE FOLLOWING PROCEDURE SHALL BE UTILIZED:
 - A. CHECK THE PRESSURE ON THE UPSTREAM SIDE OF THE JUMPER TO ENSURE THAT THERE IS ADEQUATE PRESSURE ON THE EXISTING SYSTEM.
 - B. OPEN DOWNSTREAM VALVES IN THE NEW SYSTEM PRIOR TO FLUSH.
 - C. PARTIALLY OPEN THE TIE-IN VALVE AND MAINTAIN A LOWER PRESSURE ON THE DOWNSTREAM SIDE OF THE JUMPER THAN THE PRESSURE ON THE UPSTREAM SIDE OF THE JUMPER WHILE FLUSHING/PIGGING THE NEW WATER MAIN.
 - D. MANATEE COUNTY PERSONNEL SHALL OPERATE THE TIE-IN VALVE TO ENSURE THAT A PRESSURE DIFFERENTIAL IS MAINTAINED.
 - E. CLOSE TIE-IN VALVE AND THEN CLOSE ALL DOWNSTREAM VALVES IN THE NEW SYSTEM.
14. THE TIE-IN VALVE SHALL REMAIN CLOSED IF THE POTABLE WATER SOURCE IS A TANK TRUCK.

TEMPORARY JUMPER CONNECTION NOTES
N.T.S.

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SEC, TWP, RGE	23&26, 34S, 19E		
SURVEY BOOK NO.	1497/61-75 & 1512/6-13		
PROJECT NUMBER	404-6076370		
	By	Checked	Date
Surveyed	FDC	JSS	JULY 2009
Drawn	JSS		
Designed	JDS		

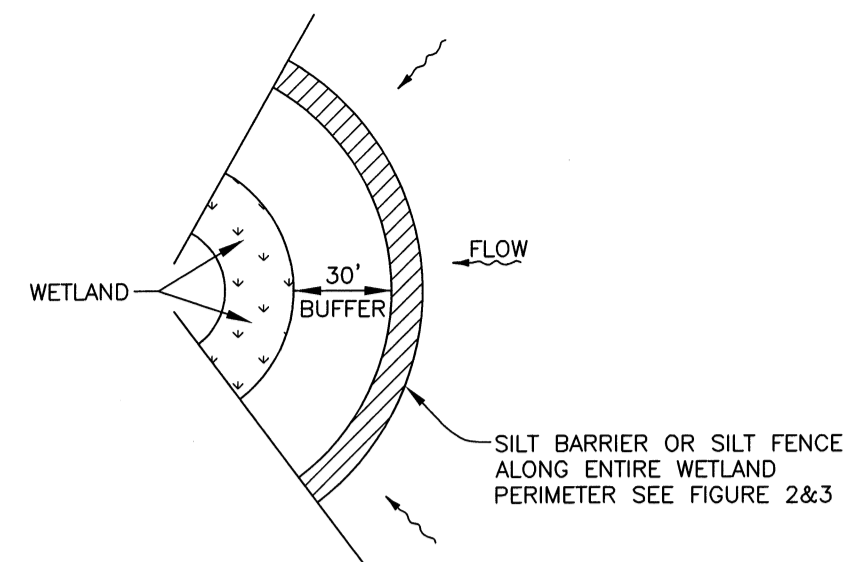
NOTE:
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JAMES D. STOCKWELL / 67198
Engineer / Reg. No.
11/19/09
Signature & Date

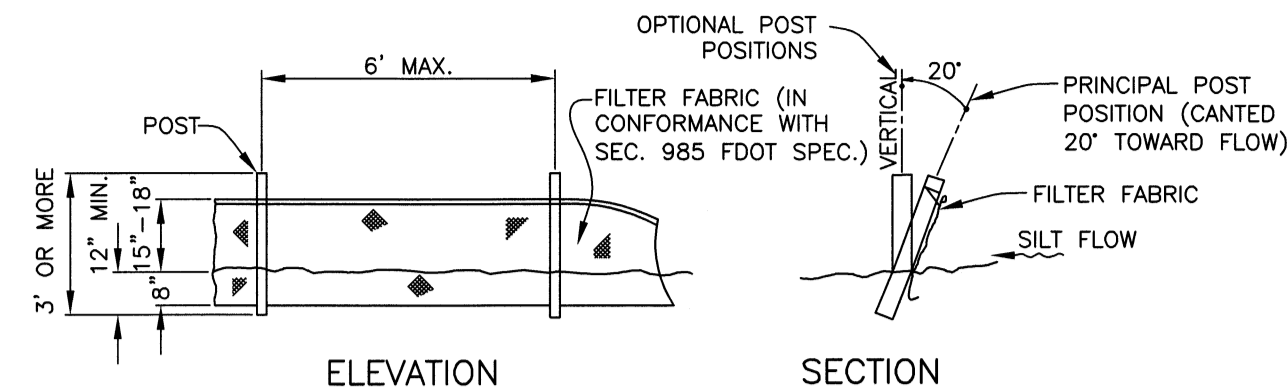
PUBLIC WORKS DEPT.-ENGINEERING DIVISION
MANATEE COUNTY FLORIDA
1022 26th Avenue East, Bradenton, FL 34208

NO.	REVISION DESCRIPTION	BY	DATE

WATER MAIN IMPROVEMENTS
RYE RD 10" WM INSTALLATION
DETAIL SHEET

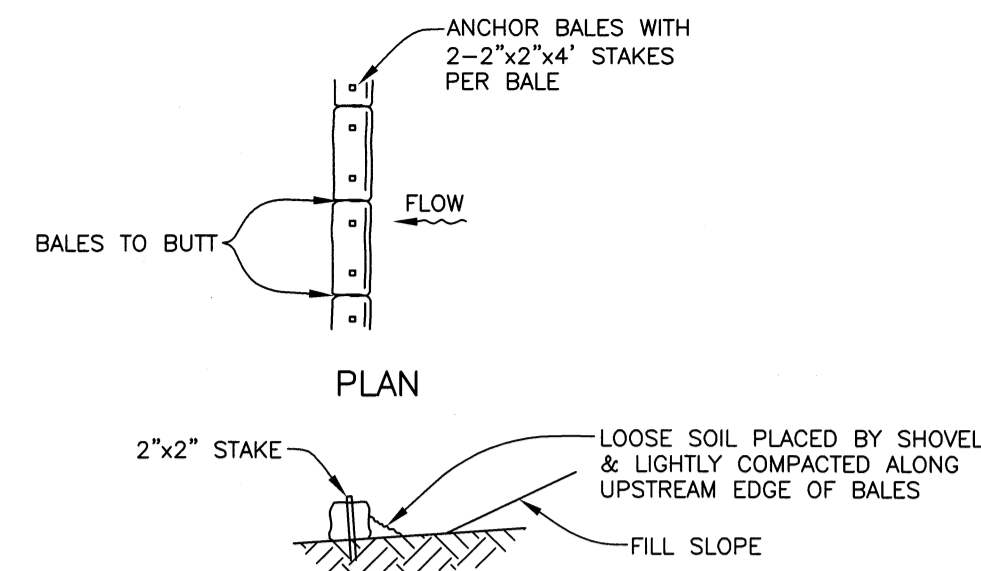


WETLAND BUFFER
FIGURE 1

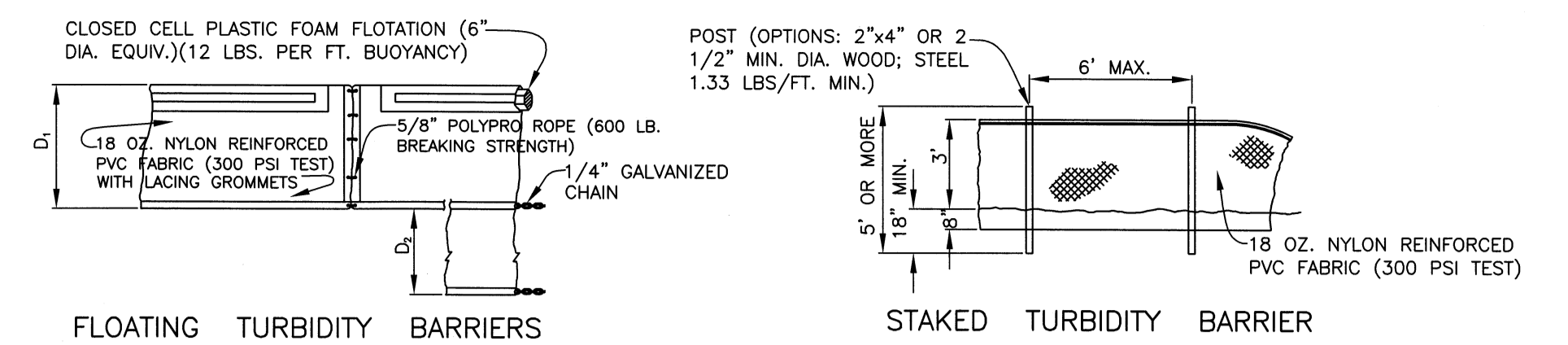


NOTE: SILT FENCE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR STAKED SILT FENCE (LF).

TYPICAL SILT FENCE
FIGURE 2



TYPICAL BALE SILT BARRIER
FIGURE 3



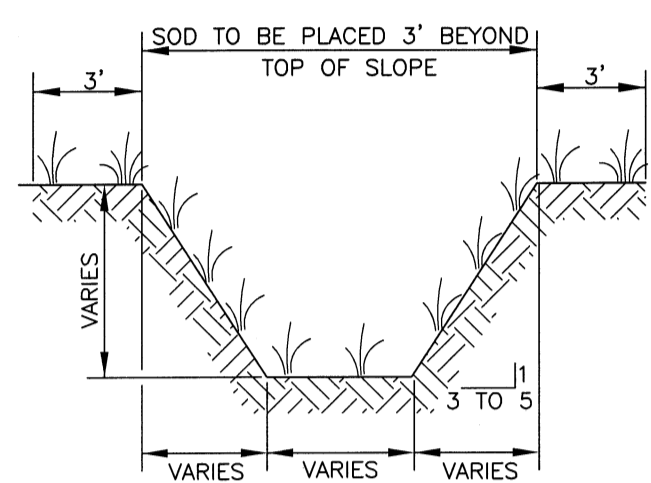
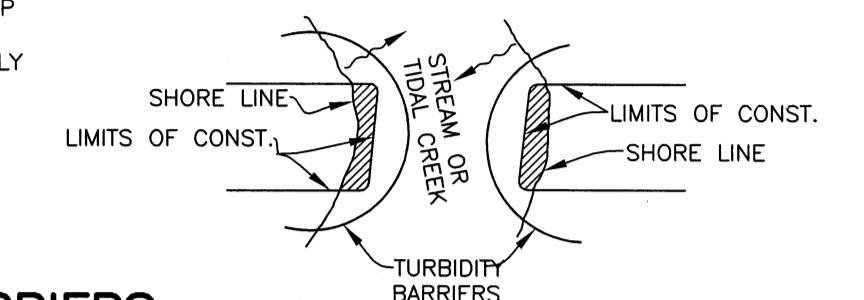
FLOATING TURBIDITY BARRIERS

STAKED TURBIDITY BARRIER

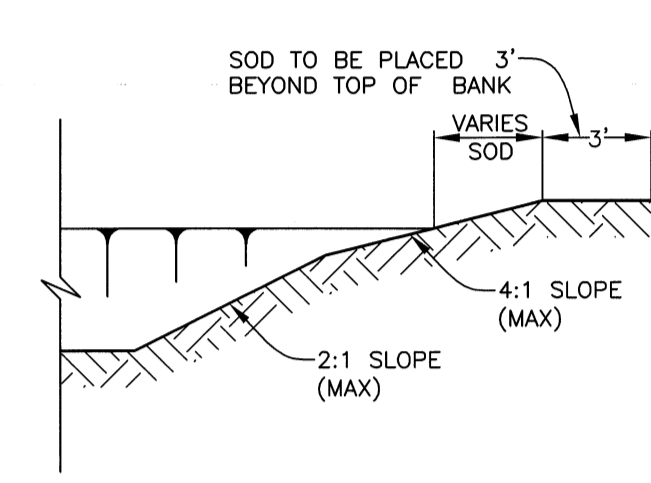
D₁ = 5' STD. (SINGLE PANEL FOR DEPTHS 5' OR LESS). D₂ = 5' STD. (ADDITIONAL PANEL FOR DEPTHS > 5'). CURTAIN TO REACH BOTTOM UP TO DEPTHS OF 10 FEET. TWO(2) PANELS TO BE USED FOR DEPTHS GREATER THAN 10 FEET UNLESS SPECIAL DEPTH CURTAINS SPECIFICALLY CALLED FOR IN THE PLANS OR AS DETERMINED BY THE ENGINEER.

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.

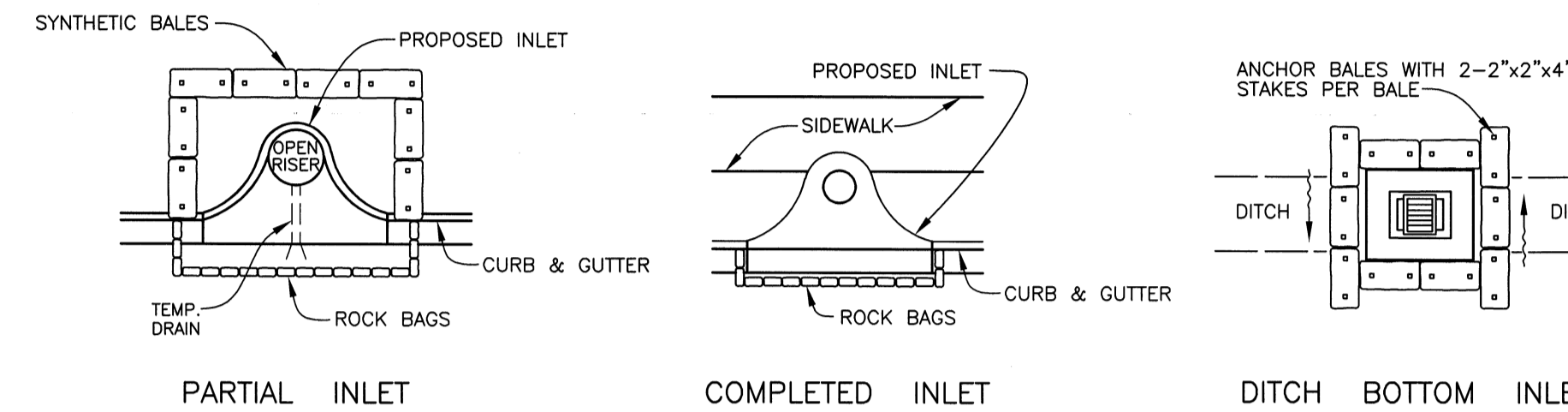
TURBIDITY BARRIERS
FIGURE 4



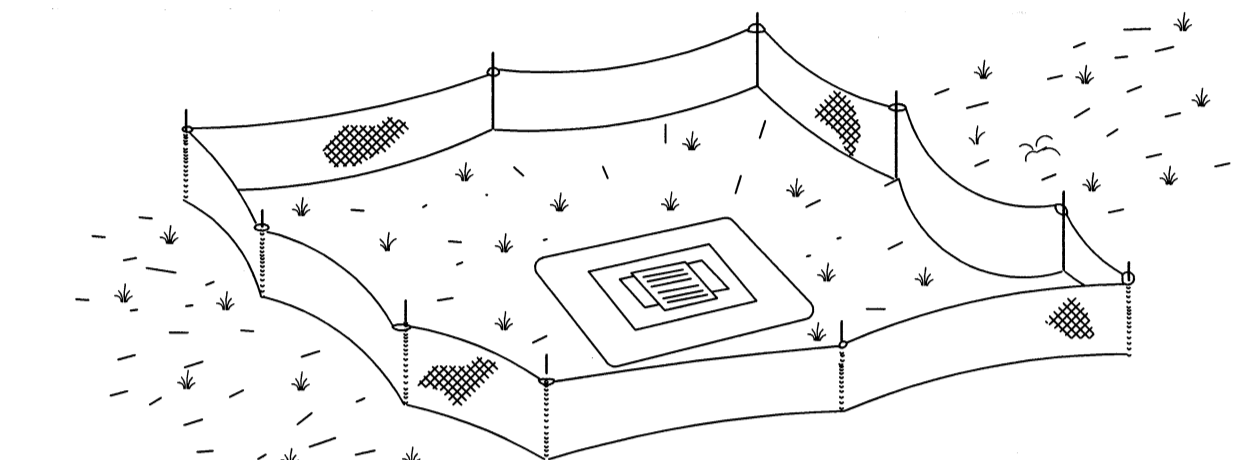
TYPICAL SWALE SECTION
FIGURE 5



TYPICAL RETENTION/DETENTION POND SECTION
FIGURE 6

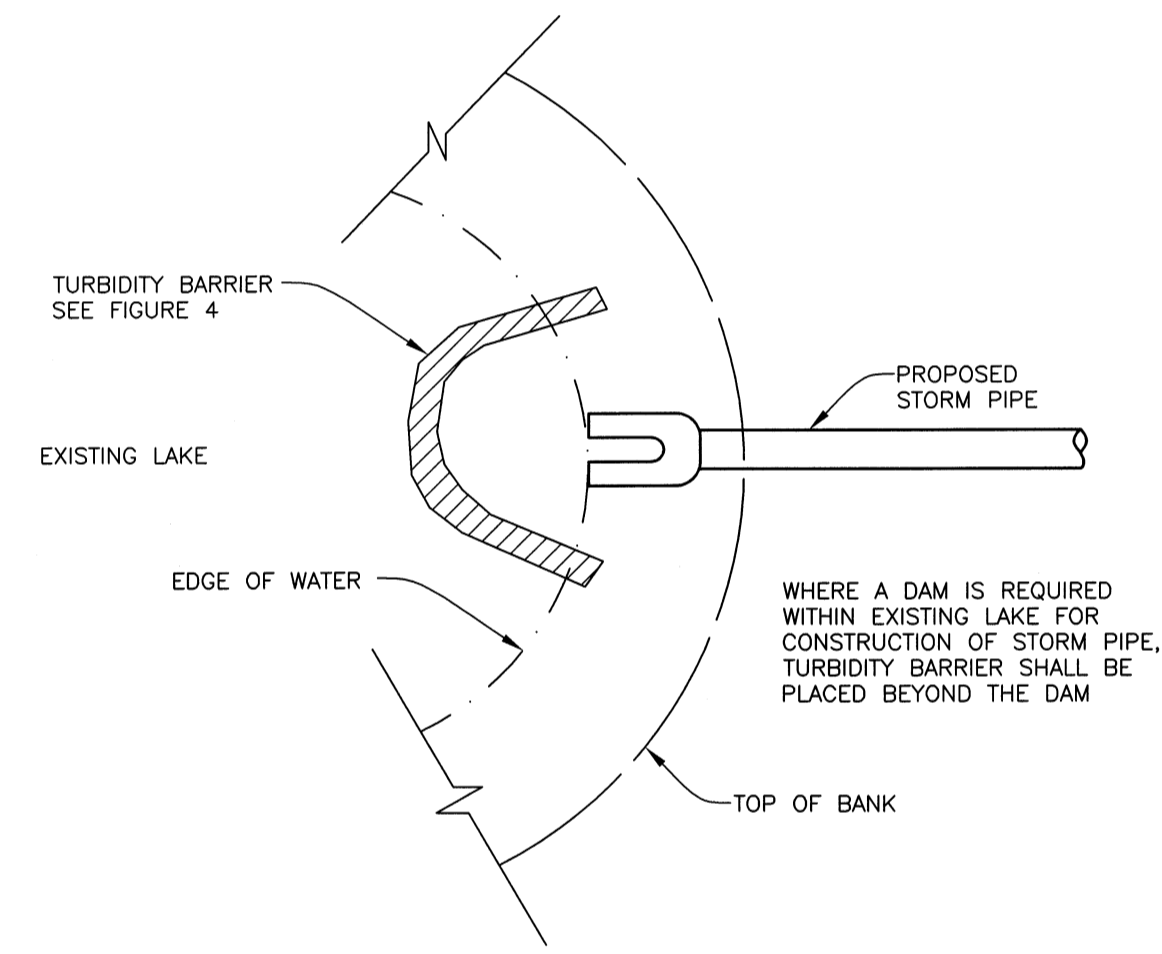


SYNTHETIC BALE PROTECTION AROUND INLETS OR SIMILAR STRUCTURES
FIGURE 7

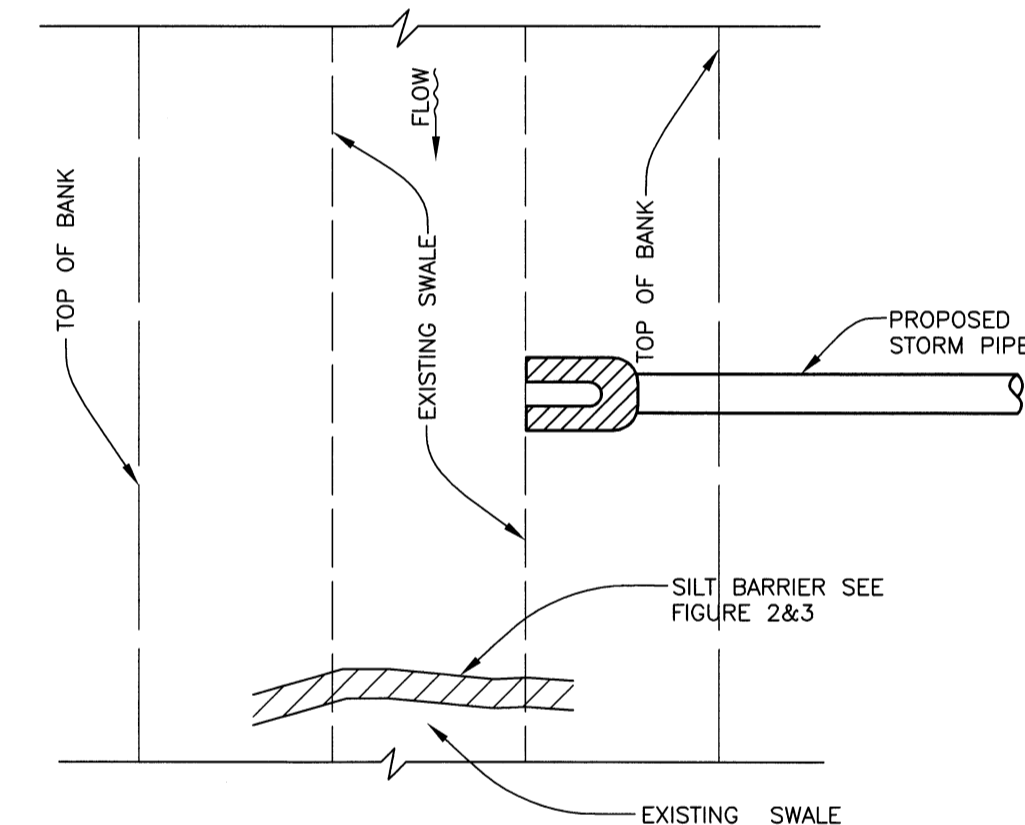


TYPE III SILT FENCE PROTECTION AROUND DITCH BOTTOM INLETS

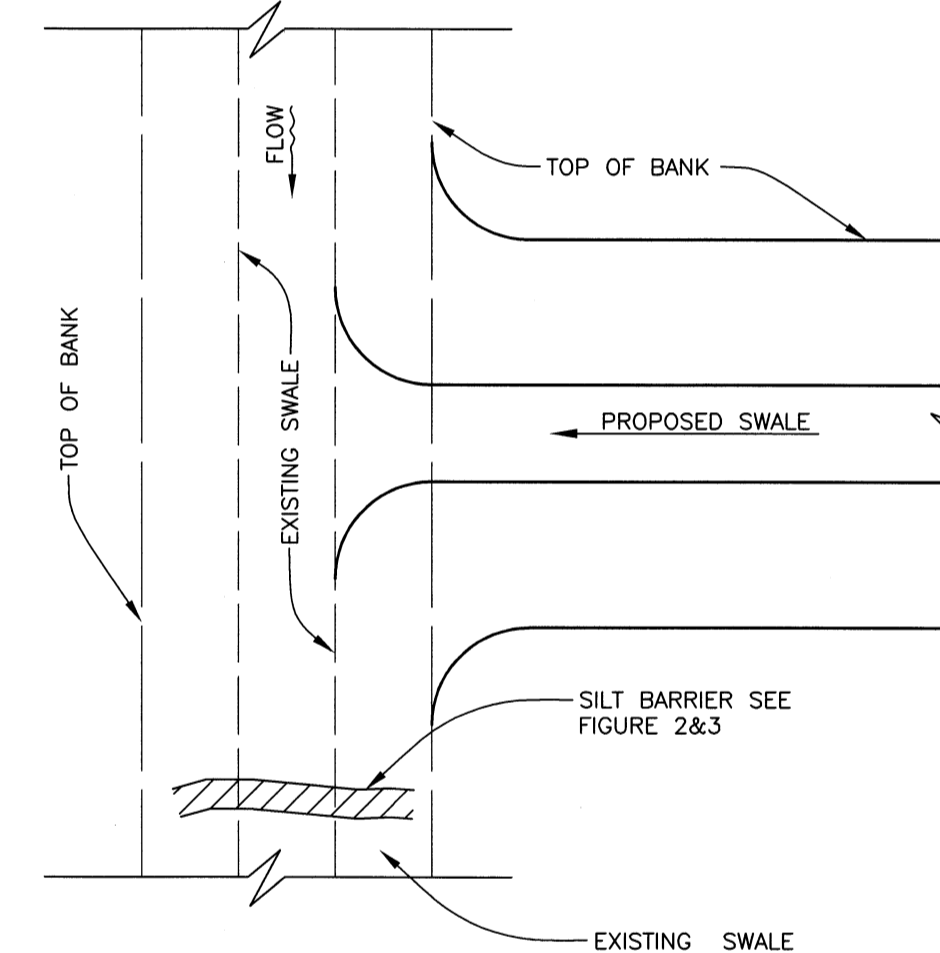
STAKED SILT BARRIER OR SILT FENCE PROTECTION AROUND DITCH BOTTOM INLETS
FIGURE 8



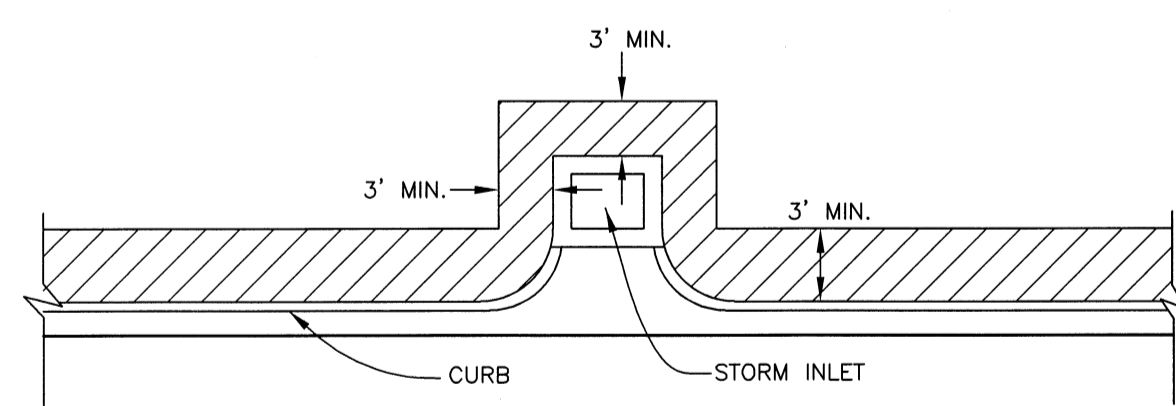
TURBIDITY BARRIER AT CONNECTION OF STORM PIPE TO EXISTING LAKE
FIGURE 9



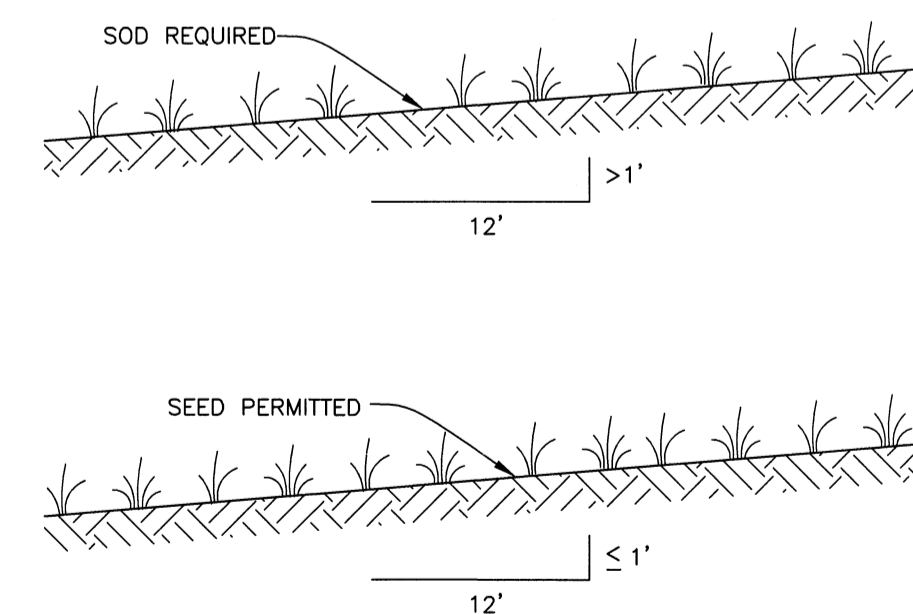
SILT BARRIER AT CONNECTION OF STORM PIPE TO EXISTING SWALE
FIGURE 10



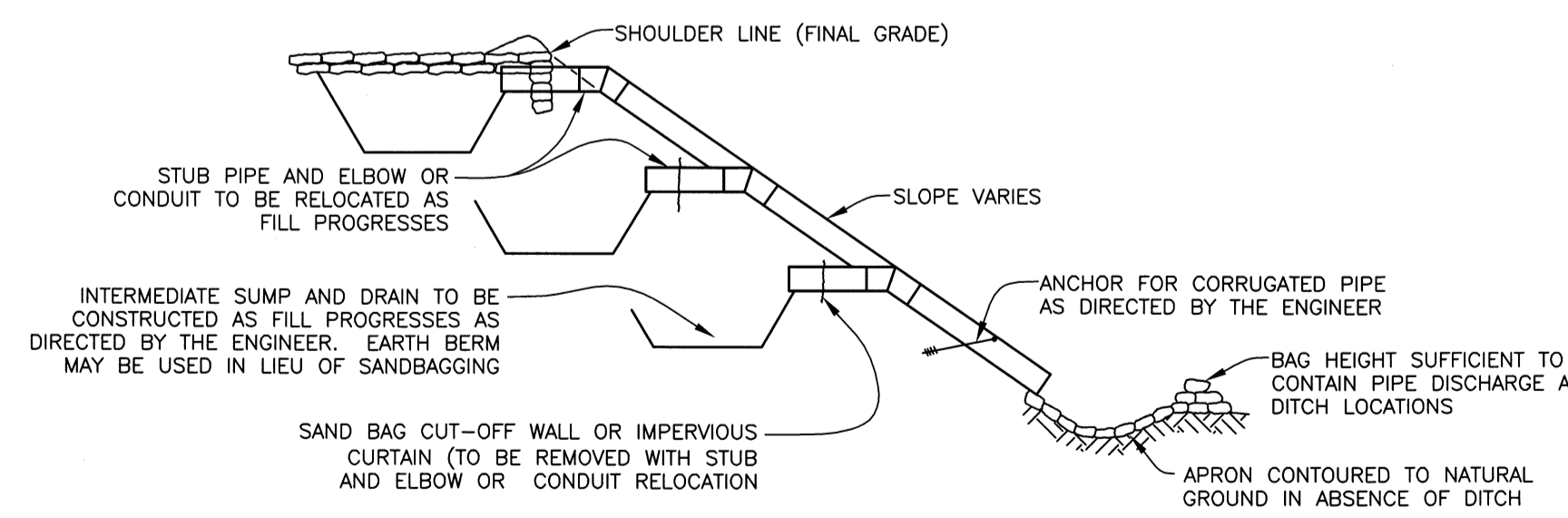
SILT BARRIER AT CONNECTION OF SWALE TO EXISTING SWALE
FIGURE 11



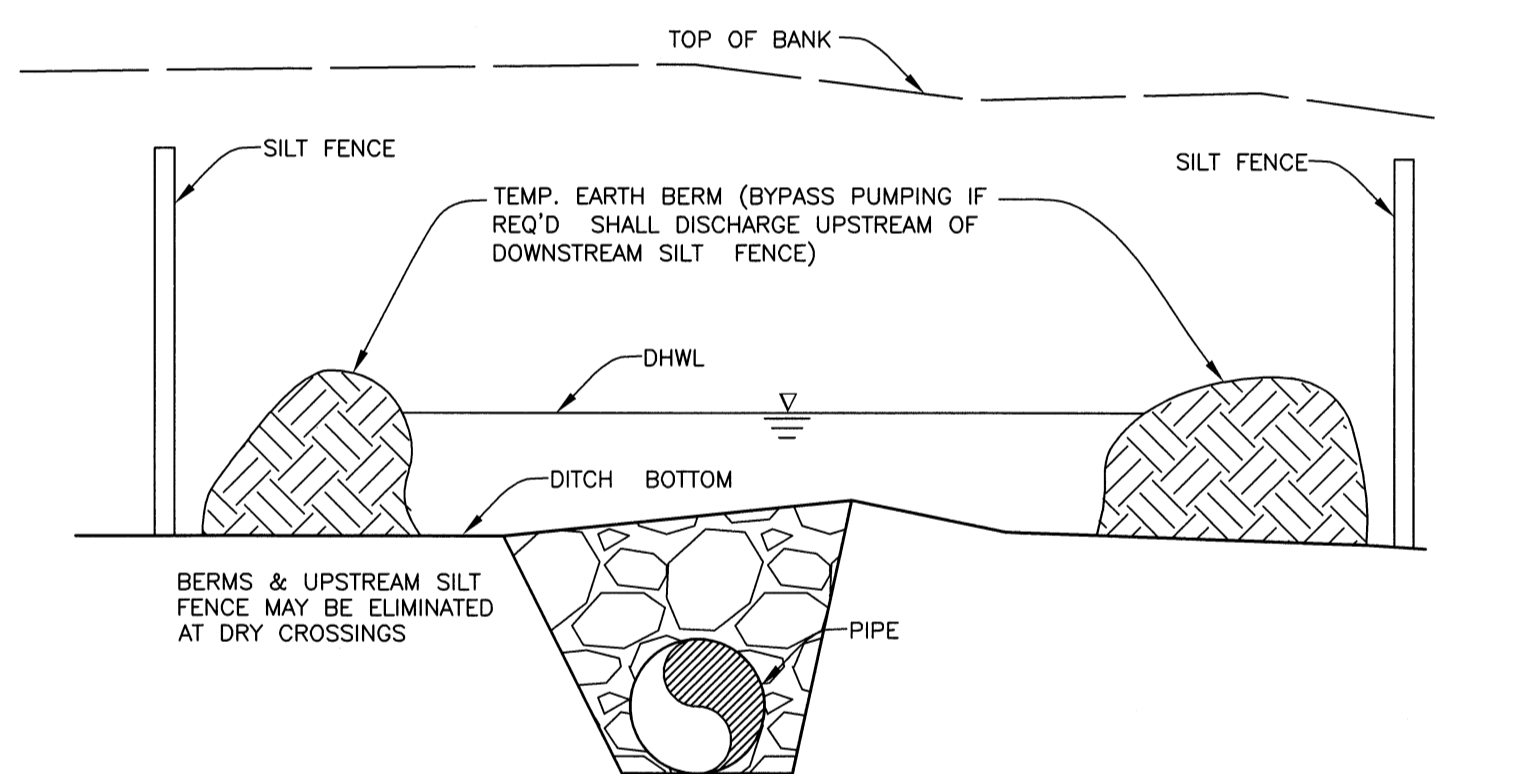
SOD ALONG CURB AND AROUND INLET
FIGURE 14



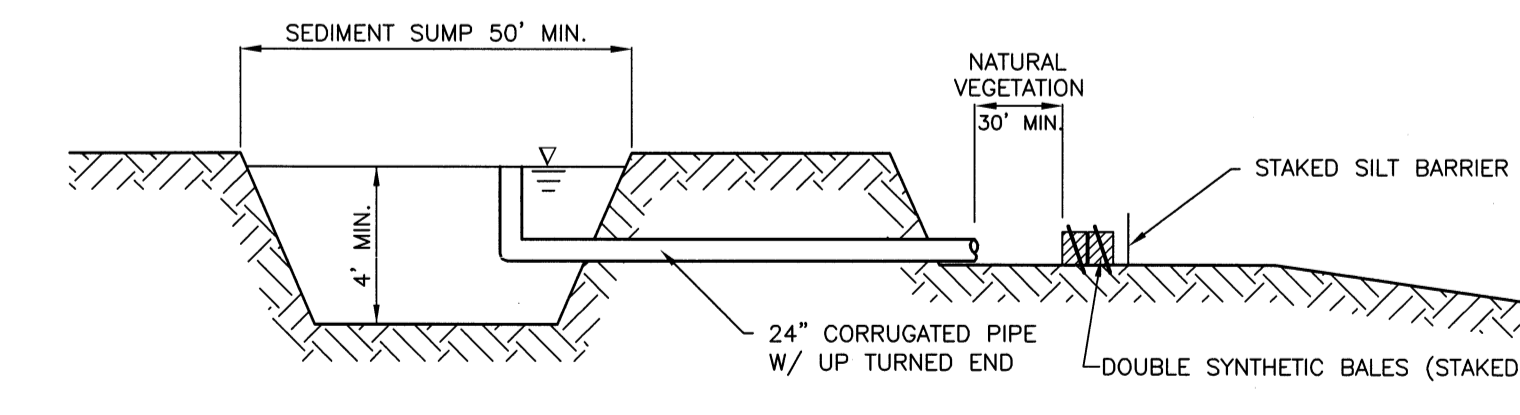
GRASS SLOPES
FIGURE 13



SECTION AA
TEMPORARY SLOPE DRAIN
FIGURE 15



UNDERGROUND PIPE CROSSING
FIGURE 12



SEDIMENT SUMP SECTION
FIGURE 16

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

SEC, TWP, RGE	23&26, 34S, 19E		
SURVEY BOOK NO.	1497/61-75 & 1512/6-13		
PROJECT NUMBER	404-6076370		
By	Checked	Date	
Surveyed	FDC	JSS	JULY 2009
Drawn	JSS		
Designed	JDS		

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MANATEE COUNTY
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1022 26th Avenue East, Bradenton, FL 34208

NO.	REVISION DESCRIPTION	BY	DATE

WATER MAIN IMPROVEMENTS
RYE RD 10" WM INSTALLATION
EROSION CONTROL