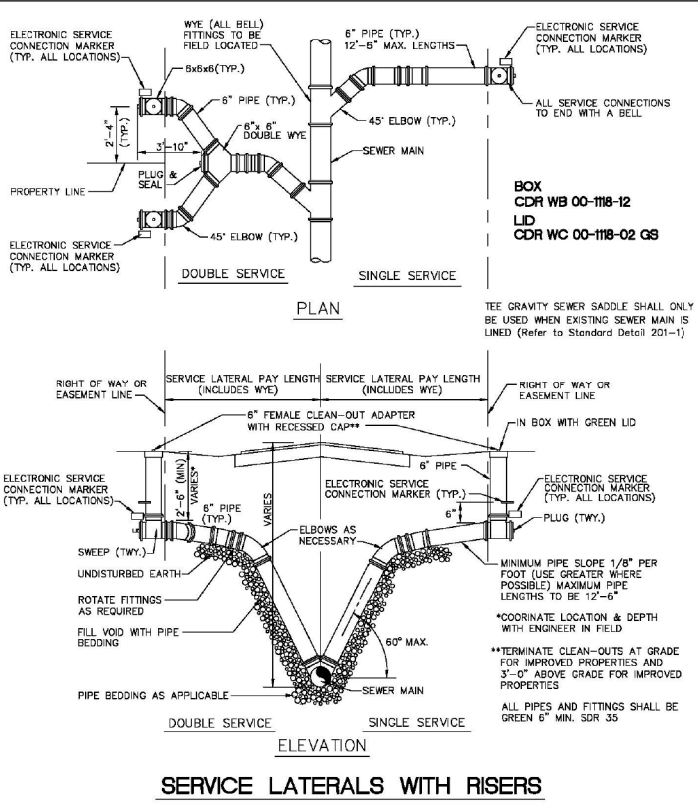
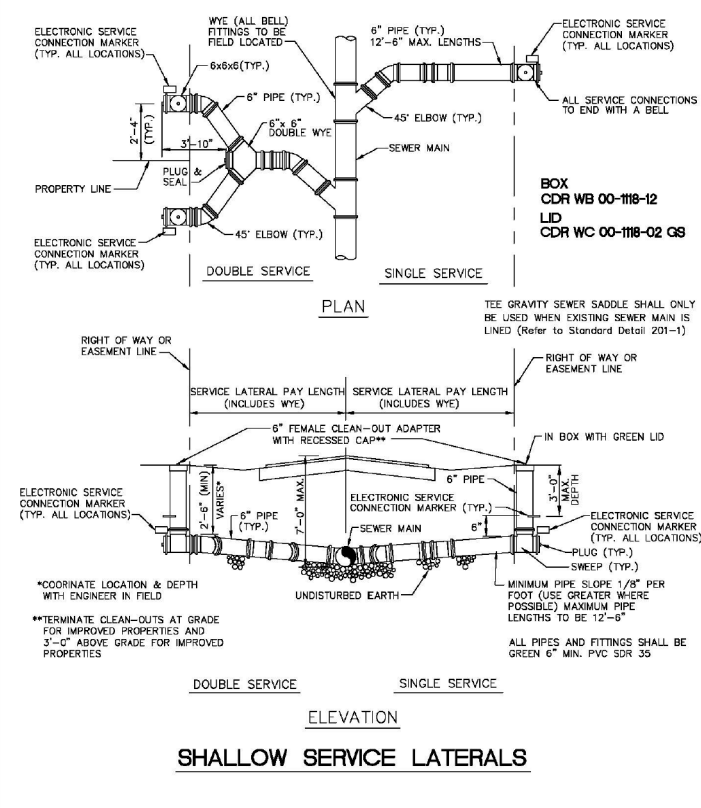
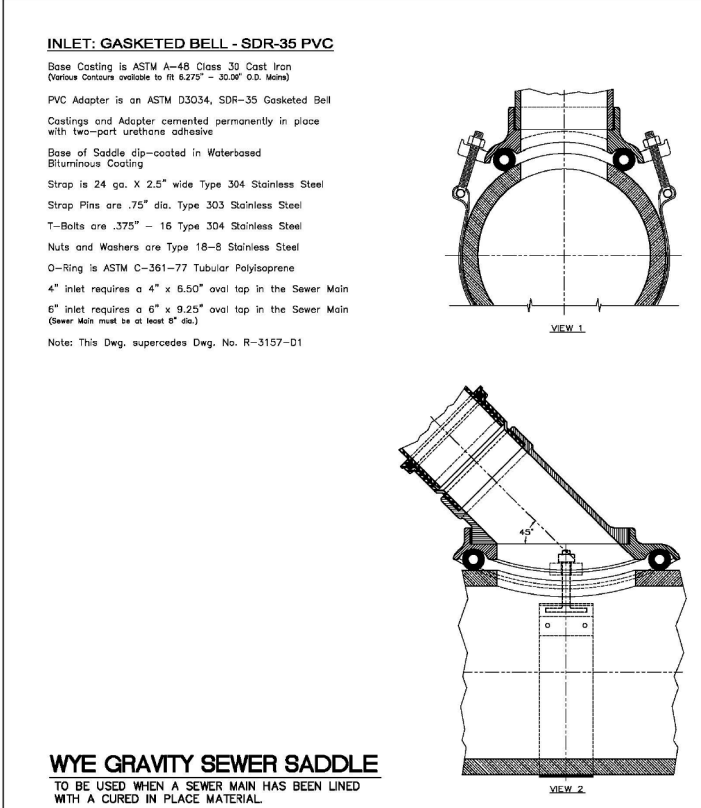
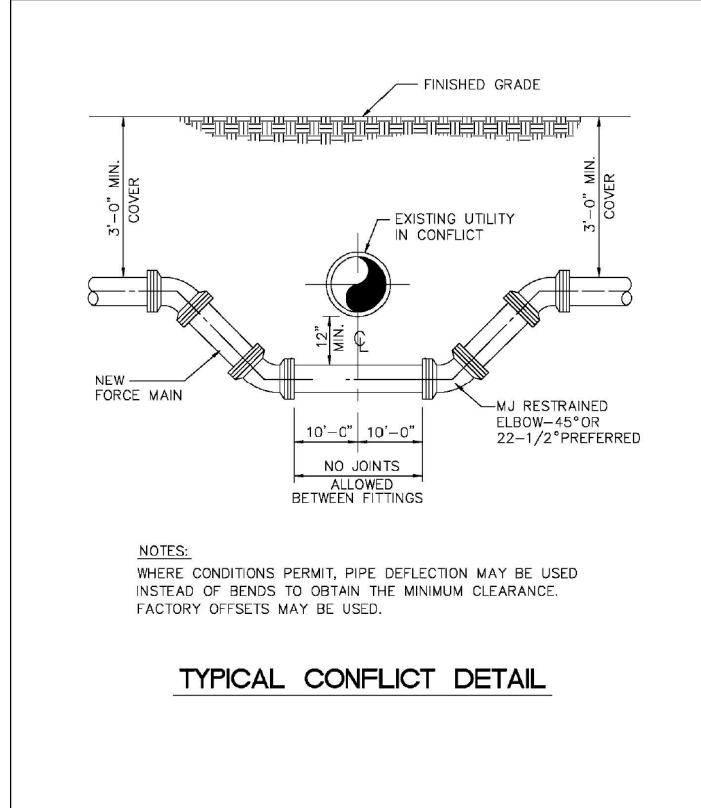
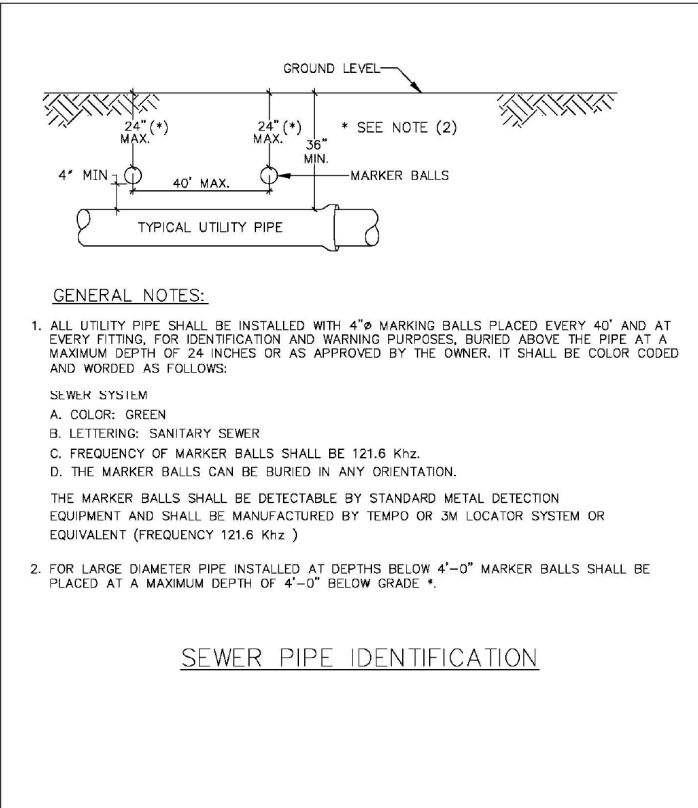
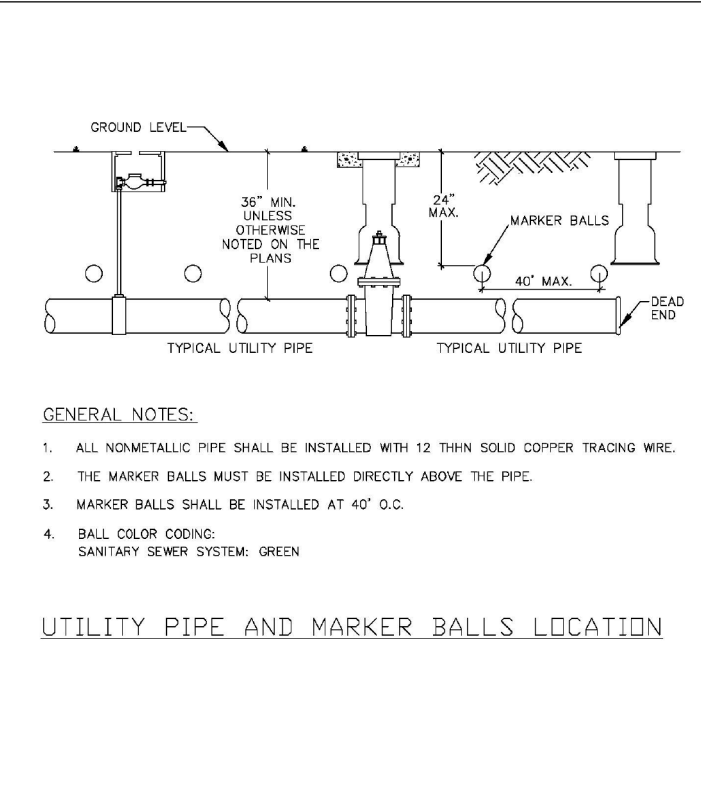
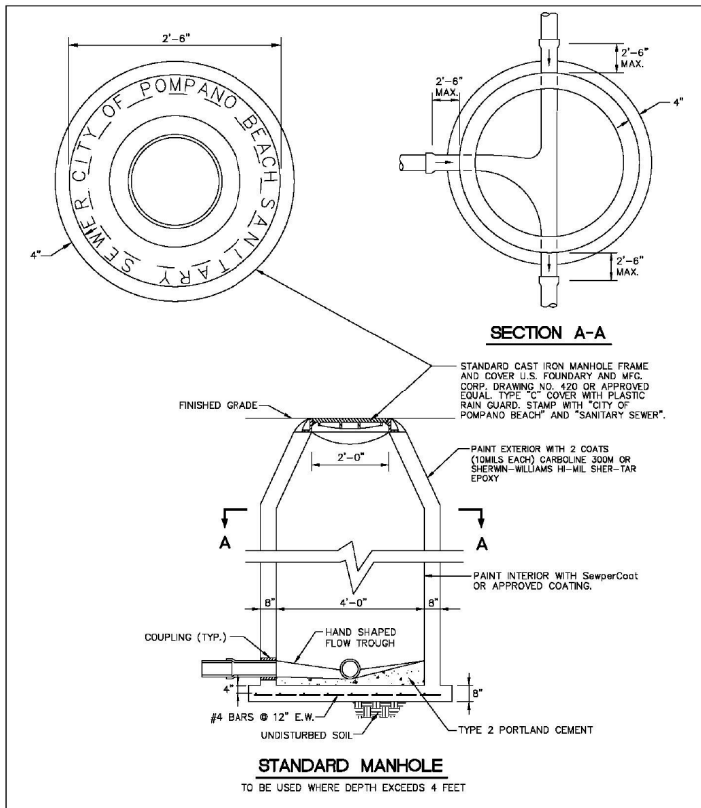
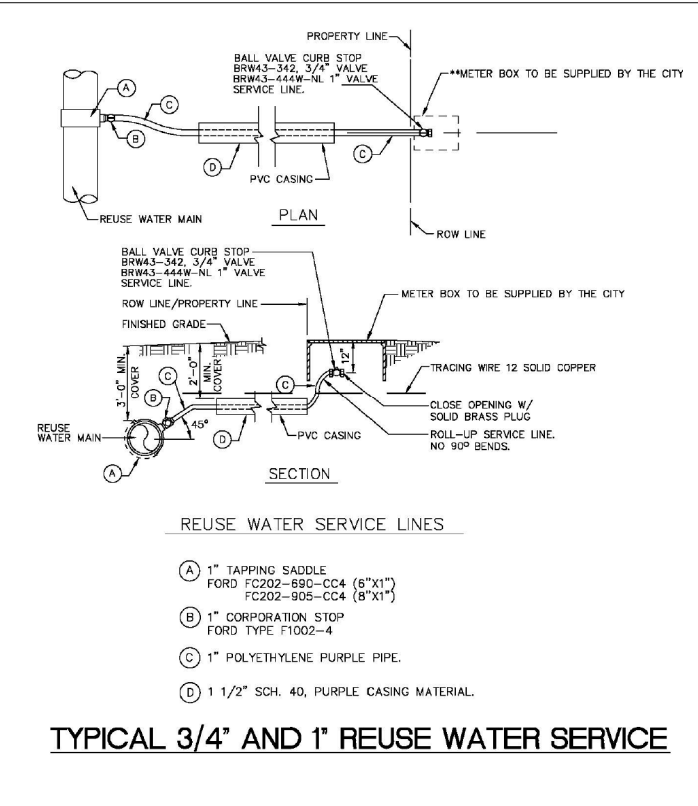
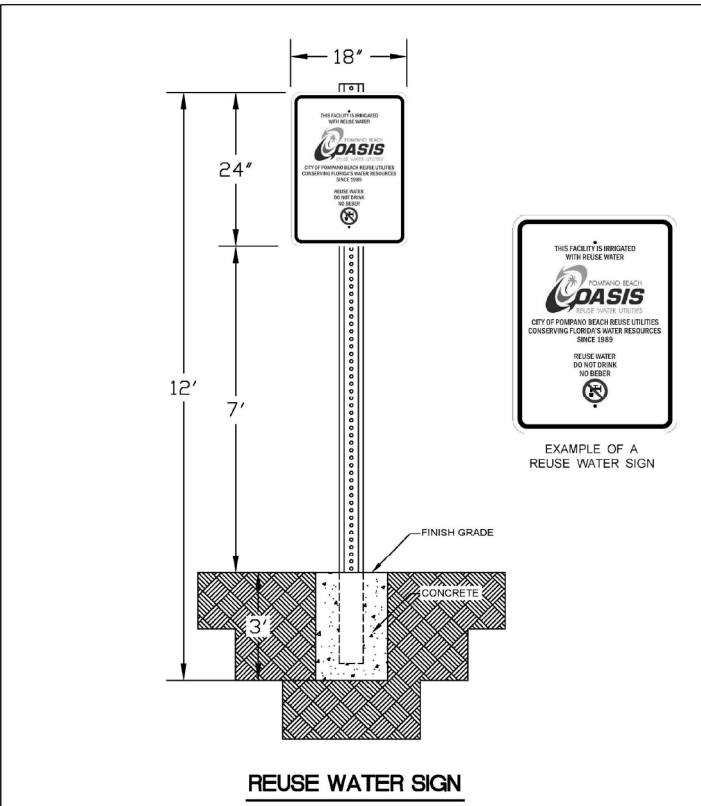


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<p>200-1-Service Laterals-with-Risers.jpg (PDF) Image, 1700 x 2200 pixels... https://cds.pompanobeachfl.gov/city/pages/engineering/sanitary-standards...</p>  <p>ENGINEERING STANDARDS 2025 SERVICE LATERALS DATE: JUNE 2022 DRC NO: 200-1</p>	<p>200-2-Shallow-Service Laterals.jpg (PDF) Image, 1700 x 2200 pixels... https://cds.pompanobeachfl.gov/city/pages/engineering/sanitary-standards...</p>  <p>ENGINEERING STANDARDS 2025 SERVICE LATERALS DATE: JUNE 2022 DRC NO: 200-2</p>	<p>201-2-WYE-Gravity-Sewer-Saddle.jpg (PDF) Image, 1021 x 2486 pixels... https://cds.pompanobeachfl.gov/city/pages/engineering/sanitary-standards...</p>  <p>ENGINEERING STANDARDS 2025 WYE GRAVITY SEWER SADDLE DATE: MAY 2022 DRC NO: 201-2</p>	<p>206-1-Typical-Conflict-Sewer.jpg (PDF) Image, 1700 x 2200 pixels... https://cds.pompanobeachfl.gov/city/pages/engineering/sanitary-standards...</p>  <p>ENGINEERING STANDARDS 2025 TYPICAL CONFLICT (SEWER) DATE: JUNE 2022 DRC NO: 206-1</p>	<p>207-1-Sewer-Pipe-Identification.jpg (PDF) Image, 1700 x 2200 pixels... https://cds.pompanobeachfl.gov/city/pages/engineering/sanitary-standards...</p>  <p>ENGINEERING STANDARDS 2025 SEWER PIPE IDENTIFICATION DATE: JUNE 2022 DRC NO: 207-1</p>	<p>208-1-Pipe-and-Marker-Balls-Location.jpg (PDF) Image, 1700 x 2200 pixels... https://cds.pompanobeachfl.gov/city/pages/engineering/sanitary-standards...</p>  <p>ENGINEERING STANDARDS 2025 UTILITY PIPE AND MARKER BALLS LOCATION DATE: JUNE 2022 DRC NO: 208-1</p>	<p>215-1-Standard-Manhole.jpg (PDF) Image, 1700 x 2200 pixels... https://cds.pompanobeachfl.gov/city/pages/engineering/sanitary-standards...</p>  <p>ENGINEERING STANDARDS 2025 STANDARD MANHOLE DATE: JUNE 2022 DRC NO: 215-1</p>	<p>2506-1-Typical-1-inch-Reuse-Water-Service.jpg (PDF) Image, 1700 x 2200 pixels... https://cds.pompanobeachfl.gov/city/pages/engineering/reuse-standards...</p>  <p>ENGINEERING STANDARDS 2025 1" REUSE WATER SERVICE DATE: MAY 2022 DRC NO: 506-1</p>	<p>521-1-Reuse-Water-Sign.jpg (PDF) Image, 3400 x 4400 pixels... https://cds.pompanobeachfl.gov/city/pages/engineering/reuse-standards...</p>  <p>ENGINEERING STANDARDS 2022 REUSE WATER SIGN DATE: MAY 2022 DRC NO: 521-1</p>	<p>SCALE: NA DRAWN BY: HE.J CHECKED BY: L.J APPROVED BY: HE.J</p> <table><thead><tr><th colspan="2">REVISIONS</th><th colspan="2">REVISIONS</th></tr><tr><th>DATE</th><th>COMMENTS</th><th>DATE</th><th>COMMENTS</th></tr></thead><tbody><tr><td>08/25/25</td><td>ADD DETAILS PER CITY SP RA1 #1</td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></tbody></table> <p>AJ HYDRO ENGINEERING, INC. 5932 NW 73RD COURT PARKLAND, FL 33067 TEL (954) 347-3397 AJHYDRO@BELLSOUTH.NET</p> <p>PROJECT:</p>	REVISIONS		REVISIONS		DATE	COMMENTS	DATE	COMMENTS	08/25/25	ADD DETAILS PER CITY SP RA1 #1																																							<p>TITLE: SANITARY SEWER COLLECTION SYSTEM & WATER REUSE DETAILS</p>	<p>SEAL: HOWARD E JABLON, PE #47514</p> <p>DATE: 05/04/25 DRAWING NO. 25-0110 SHEET NO. WS5 OF 5</p>
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SANITARY SEWER NOTES

- PRECAST CONCRETE MANHOLES SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-478-TO-LATEST REVISIONS. ALL PRE-CAST MANHOLES SHALL BEAR THE STAMP OF A CERTIFIED ENGINEERING TESTING LABORATORY, SIGNED AND DATED, CERTIFYING THAT THEY MEET THE REQUIREMENTS OF ASTM C-478 FOR CONCRETE STRENGTH, STEEL REINFORCEMENT AREA AND PLACEMENT, AND APPEARANCE WHEN MANUFACTURED. MANHOLES MUST BE INSPECTED BY THE UTILITY INSPECTOR & RECORD ENGINEER BEFORE UNLOADING.
- CONCRETE FOR PRECAST MANHOLES OR CAST IN PLACE MANHOLES SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 4000 P.S.I. AT 28 DAYS.
- MINIMUM WALL AND BASE THICKNESS FOR PRECAST MANHOLES SHALL BE 8 INCHES.
- REINFORCING STEEL FOR MANHOLES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-615 AND A-305. LATEST REVISIONS. SPLICES SHALL HAVE A MINIMUM LAP OF 24 BAR DIAMETERS. MINIMUM COVER OVER REINFORCING STEEL SHALL BE 3 INCHES.
- ALL OPENINGS IN PRECAST MANHOLES SHALL BE CAST AT TIME OF MANUFACTURE.
- PRECAST MANHOLE SHOP DRAWINGS SHALL BE SUBMITTED TO THE RECORD ENGINEER & BCWS FOR APPROVAL PRIOR TO FABRICATION.
- ALL MANHOLES SHALL BE SET PLUMB TO LINE AND GRADE, AND SHALL REST ON A FIRM CAREFULLY GRADED SUBGRADE, WHICH SHALL PROVIDE UNIFORM BEARING UNDER BASE.
- MANHOLE SECTIONS SHALL BE JOINTED WITH A MASTIC COMPOUND PRODUCING A WATERTIGHT BOND. THE REMAINING SPACE SHALL BE FILLED WITH CEMENT MORTAR AND FINISHED SO AS TO PRODUCE A SMOOTH CONTINUOUS SURFACE INSIDE AND OUTSIDE THE WALL SECTIONS.
- ALL CONCRETE AND MORTAR USED IN MANHOLE CONSTRUCTION SHALL HAVE TYPE II CEMENT.
- ALL SPACES AROUND PIPES ENTERING OR LEAVING MANHOLES SHALL BE COMPLETELY FILLED WITH EMBECC MORTAR (NON-METALLIC) OR BONSAL (NON-SHRINKING).
- TWO COATS OF KOPPERS 300-M SHALL BE APPLIED TO THE INTERIOR AND EXTERIOR SURFACE OF ALL MANHOLES. ONE COAT SHALL BE BLACK AND THE OTHER RED. A MINIMUM OF 24 HOURS BETWEEN COATS.
- SANITARY MANHOLES AND LIDS SHALL BE CAPABLE OF WITHSTANDING AASHTO H-20 LOADING. CASTINGS SHALL BE OF CLOSE-GRAINED GREY CAST IRON CONFORMING TO ASTM A-48 CLASS 30 IRON.
- ALL GRAVITY SEWER PIPE SHALL BE P.V.C. EXCEPT AS NOTED ON THE SANITARY SEWER PROFILES. DUCTILE IRON, IF NECESSARY, SHALL BE POLYLINE AND MINIMUM CLASS 51.
- PVC PIPE SHALL BE UNPLASTICIZED POLYVINYL CHLORIDE PLASTIC PIPE WITH INTEGRAL BELL CONTAINING A LOCKED IN RING AND SPIGOT JOINTS FOR GRAVITY SEWER CONSTRUCTION.
- PVC PIPE SHALL MEET THE REQUIREMENTS OF ASTM DESIGNATION D 3034 - SDR 26 AND SHALL MEET THE REQUIREMENTS OF DR18. PVC COMPOUND FOR PIPE AND FITTINGS SHALL MEET THE REQUIREMENTS OF ASTM D1784.
- ALL TRENCHING, PIPE LAYING, BACKFILL, TESTING, LAMPING, ETC. MUST COMPLY WITH THE BCWS MINIMUM STANDARDS. ADDITIONALLY, ALL PIPE MUST BE BACKFILLED IN NO GREATER THAN 12" LIFTS AND EACH LIFT TAMPED & DENSITY TESTED, UNLESS OTHERWISE APPROVED BY THE RECORD ENGINEER AND THE AGENCY HAVING JURISDICTION.
- THE MINIMUM DESIGN SLOPES FOR GRAVITY SEWERS ARE AS FOLLOWS:
FOR P.V.C.: 8" - 0.30% 10" - 0.30% 12" - 0.20%
FOR D.I.P.: 8" - 0.30% 10" - 0.30% 12" - 0.20%
- P.V.C. LINES ENTERING OR LEAVING MANHOLES SHALL HAVE ASBESTOS MANHOLE COUPLINGS BY JOHN MANVILLE OR APPROVED EQUAL.
- ALL CONNECTIONS TO EXISTING MAINS SHALL BE MADE UNDER THE DIRECTION OF THE BCWS UTILITY INSPECTOR & THE RECORD ENGINEER.
- THE CONTRACTOR SHALL TEST THE COMPLETED SEWER LINE TO DETERMINE ALIGNMENT AND TIGHTNESS OF THE JOINTS. TESTING SHALL BE LAMPED AND MUST SHOW A FULL CIRCLE OF LIGHT. IF INFILTRATION AND EXFILTRATION TESTING IS TO BE REQUIRED, LEAKAGE SHALL NOT EXCEED 0.16 GALLONS PER HOUR PER INCH DIAMETER PER 100 FEET WHEN FIELD TESTED.
- FINAL LAMPING TEST SHALL BE PERFORMED AFTER THE LIMEROCK BASE IS PLACED AND COMPACTED TO THE REQUIRED DENSITY. ALL DENSITY TESTS SHALL PASS DENSITY REQUIREMENT PRIOR TO LAMPING TEST.
- INSTALL ELECTRONIC MARKER AT THE END OF EACH TERMINAL SEWER LATERAL.
- CONSTRUCTION OF THE SANITARY SEWER IS TO BEGIN AT THE SYSTEM OUTFALL (LOW POINT), AND CONTINUE IN AN UPWARD FASHION TO THE SYSTEM HIGH POINT. THERE SHALL BE NO EXCEPTIONS UNLESS A WRITTEN REQUEST TO THE RECORD ENGINEER IS APPROVED BY THE RECORD ENGINEER.
- ALL DIP FORCE MAIN OR GRAVITY MAIN SHALL BE POLYLINE FOR RAW SEWAGE AND BE DIP CLASS 51 OR BETTER.
- IN ACCORDANCE WITH FLORIDA STATUTE 90-096 FS, KNOWN AS "THE FLORIDA TRENCH SAFETY ACT", CONTRACT BID DOCUMENTS MUST IDENTIFY ALL COSTS AND METHODS OF TRENCH EXCAVATIONS EXCEEDING (5) FIVE FEET IN DEPTH.

THE CONTRACTOR IS RESPONSIBLE THAT ALL SHEETING AND SHORING INSTALLED COMPLY WITH OSHA EXCAVATION STANDARDS 29 C.F.R. 51926/650 SUBPART P. THE CONTRACTOR MUST EVALUATE GEOTECHNICAL DATA AND DESIGN THE TRENCH SAFETY SYSTEM ACCORDINGLY.

THE CONTRACTOR MUST SUBMIT A LETTER, TO THE ENGINEER, ACKNOWLEDGING THAT HE HAS COMPLIED WITH THE FORGOING PRIOR TO CONSTRUCTION.

Sunshine811

Call 811 or www.sunshine811.com two full business days before digging to have utilities located and marked.

Check positive response codes before you dig!



THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY HOWARD E JABLON ON THE DATE ADJACENT TO THE SEAL.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.