



LOCATION OF PUBLIC WATER SYSTEM MAINS IN ACCORDANCE WITH F.A.C. RULE 62-555.314

OTHER PIPE	HORIZONTAL SEPARATION	CROSSINGS (1)	JOINT SPACING ● CROSSINGS (FULL JOINT CENTERED)
STORM SEWER, STORMWATER FORCE MAIN, RECLAIMED WATER (2)	<p>3 FT. MINIMUM</p>	<p>12 INCHES IS THE MINIMUM, EXCEPT FOR STORM SEWER, 6 INCHES IS THE MINIMUM AND 12 INCHES IS PREFERRED</p>	<p>ALTERNATE 3 FT. MINIMUM</p>
VACUUM SANITARY SEWER	<p>10 FT. PREFERRED 3 FT. MINIMUM</p>	<p>12 INCHES PREFERRED 6 INCHES MINIMUM</p>	<p>ALTERNATE 3 FT. MINIMUM</p>
GRAVITY OR PRESSURE SANITARY SEWER, SANITARY SEWER FORCE MAIN, RECLAIMED WATER (4)	<p>10 FT. PREFERRED 6 FT. MINIMUM (3)</p>	<p>12 INCHES IS THE MINIMUM, EXCEPT FOR GRAVITY SEWER, 6 INCHES IS THE MINIMUM AND 12 INCHES IS PREFERRED</p>	<p>ALTERNATE 6 FT. MINIMUM</p>
ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM	<p>10 FT. MINIMUM</p>	<p>12 INCHES IS THE MINIMUM, EXCEPT FOR GRAVITY SEWER, 6 INCHES IS THE MINIMUM AND 12 INCHES IS PREFERRED</p>	<p>ALTERNATE 6 FT. MINIMUM</p>

- (1) WATER MAIN SHOULD CROSS ABOVE OTHER PIPE. WHEN WATER MAIN MUST BE BELOW OTHER PIPE, THE MINIMUM SEPARATION IS 12 INCHES.
(2) RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
(3) 3 FT. FOR GRAVITY SANITARY SEWER WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST 6 INCHES ABOVE THE TOP OF THE GRAVITY SANITARY SEWER.
(4) RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.

WATER SYSTEM NOTES:

- ALL WATER MAINS SHALL BE DESIGNED FOR A MINIMUM WORKING PRESSURE OF 150 PSI AND HAVE COMPRESSION TYPE JOINTS UNLESS OTHERWISE SPECIFIED. THE PIPE MATERIAL SHALL BE AS NOTED ON THE PLAN CONFORMING TO THE FOLLOWING SPECIFICATIONS:
 - DUCTILE IRON PIPE (D.I.P.) – MANUFACTURED IN ACCORDANCE WITH AWWA/ANSI C153/A-21.51-02, JOINTS AWWA/ANSI C111/A21.11-00, CEMENT – MORTAR LINING AWWA/ANSI C104/A21.4-95. MINIMUM COVER FOR D.I.P. IS 30", 4" PIPE AND 6" PIPE SHALL BE MINIMUM CLASS 52, 8" AND LARGER MINIMUM CLASS 50.
 - P.V.C. PIPE – MANUFACTURED IN ACCORDANCE WITH AWWA C900-97, SDR 18 WITH MINIMUM COVER OF 36". DETECTOR TAPE WITH A METALLIZED FOL CORE SHALL BE LAID 18" ABOVE P.V.C. WATER MAINS. ALL PIPE LARGER THAN 12 INCHES SHALL BE D.I.P. WITH RESTRAINED JOINTS.
- ALL WATER MAIN FITTINGS SHALL BE MECHANICAL JOINT DUCTILE IRON MANUFACTURED IN ACCORDANCE WITH AWWA/ANSI C110/A21.10-98 AND SHALL BE CEMENT LINED AND SEAL COATED AS SPECIFIED FOR D.I.P. PIPE. FITTINGS SHALL BE DESIGNED FOR A MINIMUM WORKING PRESSURE OF 150 PSI AND BE CLASS 350 THROUGH 12" AND CLASS 250 FOR 16" AND LARGER. ALL FITTINGS (4"-12") SHALL BE RESTRAINED THROUGH THE USE OF CONCRETE THRUST BLOCKS OR APPROVED RESTRAINED JOINT (MEQ-A-LUG, O/D).
- ALL GATE VALVES (GV) 4" THROUGH 10" SHALL BE RESILIENT – SEATED IN ACCORDANCE WITH AWWA/ANSI C509-01 WITH MECHANICAL JOINTS. OPERATING SYSTEMS TO BE EXTENDED WITHIN 12" OF FINISHED GRADE. ALL VALVES TO BE PROVIDED WITH EXTENSION TYPE CAST IRON BOXES WITH COVERS MARKED "WATER", USF 7500 O/E. VALVES LARGE THAN 10" SHALL BE BUTTERFLY VALVE IN ACCORDANCE WITH AWWA/ANSI C504-00.
- ALL FIRE HYDRANTS (FH) SHALL HAVE A 5 1/4" VALVE AND BE IN ACCORDANCE WITH AWWA/ANSI C502-94 WITH TRAFFIC BREAKAWAY TYPE FEATURE, MUELLER A-423 O/E. HYDRANTS TO BE PAINTED IN ACCORDANCE WITH APPLICABLE CITY/FIRE DEPARTMENT ORDINANCES. A RAISED BLUE REFLECTIVE PAVEMENT MARKER SHALL BE PLACED IN THE CENTER OF ADJACENT PAVEMENT LANE TO IDENTIFY LOCATION.
- ALL SERVICE LINES SHALL BE POLYETHYLENE (PE) TUBING CONFORMING TO AWWA C301-02, 200 PSI (DR9), PE 3408. ALL SERVICE LINES SHALL BE MARKED WITH A 2" X 2" STAKE PAINTED BLUE, EXTENDING A MINIMUM OF 18" ABOVE GRADE.
- THE WATER SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH AWWA/ANSI C900-99, FLUSHED CLEAN (COORDINATE WITH UTILITY AND/OR CITY) AND HYDROSTATICALLY PRESSURE TESTED FOR A PERIOD OF NOT LESS THAN 2 HOURS AT 150 PSI. THE ALLOWABLE LEAKAGE SHALL NOT EXCEED THE FORMULA OF $L = 50 \times V / (48,000)$; L=ALLOWABLE LEAKAGE IN GAL./HR.; S=LENGTH OF PIPE TESTED IN FEET, D=Nominal DIAMETER OF PIPE IN INCHES; P=AVERAGE TEST PRESSURE DURING TEST IN LBS./SQ. IN. DISSECTION OF WATER SYSTEM SHALL BE IN ACCORDANCE WITH ANSI/AWWA C651-02.
- CONTRACTOR SHALL SUBMIT A MINIMUM OF SIX (6) SETS OF SHOP DRAWINGS FOR THE WATER SYSTEM MATERIALS TO BE USED ON THE PROJECT TO THE ENGINEER FOR APPROVAL UNLESS OTHERWISE NOTIFIED.

GENERAL NOTES:

- THE CONTRACTOR SHALL PROVIDE NOTIFICATION AND ARRANGE A PRE-CONSTRUCTION MEETING PRIOR TO THE START OF THE PROJECT AND INCLUDE A REPRESENTATIVE OF THE FOLLOWING:
 - THE DESIGN ENGINEER
 - BROWARD COUNTY WATER AND WASTEWATER
 - APPLICABLE REGULATORY AGENCIES
- LOCATION OF EXISTING UTILITIES SHOWN ARE BASED ON BEST AVAILABLE INFORMATION. CONTRACTOR TO VERIFY ALL EXISTING UTILITIES AND NOTIFY THE ENGINEER IN WRITING OF ANY CONFLICTS. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THE PROJECT.
- ALL MATERIALS, INSTALLATION AND TESTING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE BOWMS MINIMUM TECHNICAL STANDARDS AND THE ATTACHED SPECIFICATIONS, WHERE APPLICABLE. WHERE DISCREPANCIES, OMISSIONS OR MODIFICATIONS EXIST BETWEEN THE PLANS AND BOWMS STANDARD SPECIFICATIONS, BOWMS TECHNICAL STANDARDS SHALL GOVERN.
- ALL RESTORATIONS SHALL BE IN ACCORDANCE WITH CITY, COUNTY OR F.O.D.T. SPECIFICATIONS, WHERE APPLICABLE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING (MINIMUM 48 HRS. NOTICE) THE ENGINEER AND UTILITY FOR REQUIRED INSPECTIONS AND TESTING INCLUDING BUT NOT LIMITED TO: TIE-INS, PRESSURE TEST, LAMPING, PRELIMINARY AND FINAL INSPECTIONS.
- CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE ENGINEER WITH COMPLETE "AS-BUILT" INFORMATION RELATIVE TO LOCATION OF MANHOLES, VALVES, SERVICES, FITTINGS, LENGTH OF PIPE, ETC. TO THE ENGINEER ALONG WITH ELEVATIONS TAKEN BY AN INDEPENDENT REGISTERED FLORIDA SURVEYOR FOR THE FOLLOWING BUT NOT LIMITED TO: MANHOLE RIM AND INVERT, INVERT OF SEWER STUBS AND LATERAL ENDS, TOP OF PIPE ELEVATIONS FOR WATER AND FORCE MAINS AT FITTINGS AND PIPE AT INTERVALS NOT TO EXCEED 200 FEET IN LENGTH.

ROBERT C SMITH

Digitally signed by
ROBERT C SMITH
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cn=ROBERT C SMITH
Date: 2021.06.15
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BROWARD COUNTY WATER & WASTEWATER			
STANDARD DETAILS			
ARCHITECTUAL ALLIANCE FORT LAUDERDALE, FLORIDA			
RIVA WAREHOUSE II			
JOHN B. SMITH ENGINEERS, INC.			
1457 N.E. 4th AVENUE FORT LAUDERDALE, FLORIDA 33304			
FOR SCALE: 1"=4'-1177			
CERTIFICATE OF AUTHORIZATION NO. 168			
DESIGN R.C.S.	DRAWN RCS	DATE APRIL 2021	FILE -109
Robert C. Smith		SHEET 3	
Approved By: Robert C. Smith, P.E. Registered Engineer No. 31177			

8/4/2021