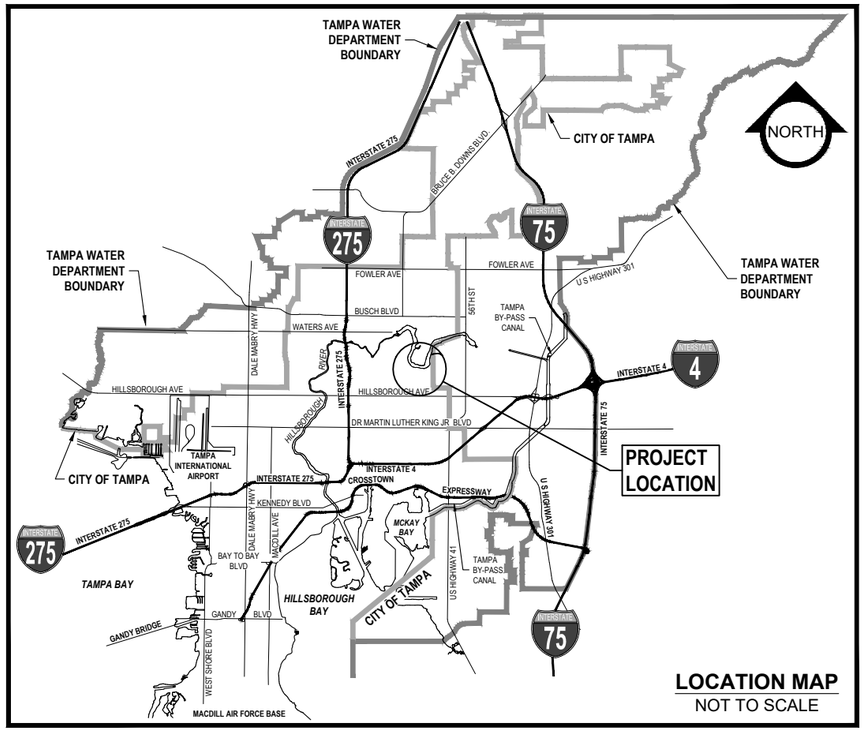
The Enclosed Document Is Provided For Your Convenience.

Please Email ALL Questions:

MailTo:ContractAdministration@TampaGov.net

City of Tampa
Contract Administration Department
306 E. Jackson St. #280A4N
Tampa, FL 33602
(813)274-8456



LOCATION MAP
NOT TO SCALE

VICINITY MAP
1" = 200'

City of Tampa Florida
Water Department

PLANS FOR:

RIVER GROVE WATER MAIN IMPROVEMENTS

TAMPA WATER DEPARTMENT
WORK ORDER NO. :
WTR-18-0006

INDEX

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PERMITS			
■ CITY	☐ COUNTY	☐ STATE	☐ DEP
CONTRACTOR: DALLAS 1			

RORY A. JONES LICENSE No. 79453 STATE OF FLORIDA PROFESSIONAL ENGINEER

RORY A. JONES, P.E.
CITY OF TAMPA WATER DEPT.
306 E. JACKSON ST., 5E
TAMPA, FLA. 33602
P.E. #79453

REV NO.	DATE	DESCRIPTION	BY
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DESIGNED IAC
DRAWN JCA
CHECKED RAJ
DATE 10/01/2017

RIVER GROVE WATER MAIN IMPROVEMENTS

COVER SHEET

City of Tampa Florida Water Department

100% PLANS

WORK ORDER NO. WTR-18-0006
RECORD DRAWING NO.
ATLAS PAGE E14-1 | SHEET 01 OF 07

CITY OF TAMPA NOTES

GENERAL

1. ALL WATER WORK FOR THE CITY OF TAMPA (CITY) SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT'S SPECIFICATIONS, CONSTRUCTION DETAILS, AND THE TAMPA WATER DEPARTMENT TECHNICAL MANUAL (LATEST EDITION). IN THE EVENT OF A DISCREPANCY, THE MOST STRINGENT CRITERIA SHALL APPLY.
2. WATER MAIN TAPS SHALL BE PERFORMED BY THE CITY WATER DEPARTMENT ONLY. CONTRACTOR SHALL EXCAVATE, INSTALL TAPPING SLEEVE AND VALVE, CONDUCT PRESSURE TEST (WITNESSED BY INSPECTOR) AND COORDINATE PERFORMANCE OF TAP WITH THE CITY INSPECTOR. CONTRACTOR SHALL PROVIDE NOTICE TO THE CITY INSPECTOR AT A MINIMUM OF 5 WORKING DAYS NOTICE PRIOR TO NECESSARY WORK.
3. NORMAL WORKING HOURS SHALL BE WEEKDAYS FROM 7:30 AM TO 4:00 PM UNLESS OTHERWISE APPROVED BY THE ENGINEER/INSPECTOR.
4. ELEVATION INFORMATION SHOWN ON THESE PLANS IS REFERENCED TO N.A.V.D. 1988 UNLESS OTHERWISE STATED.
5. CONSTRUCTION OF WATER FACILITIES SHALL BE COORDINATED WITH THE WATER DEPARTMENT PRIOR TO THE START OF THE CONSTRUCTION. CONTRACTOR TO CONTACT CITY OF TAMPA CONTRACT ADMINISTRATION DEPARTMENT @ 813-635-3432 TO COORDINATE/SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE CITY FOR REVIEW OF INSTALLATION TECHNIQUES AND PROCEDURES A MINIMUM OF 10 WORKING DAYS PRIOR TO THE PLANNED CONSTRUCTION.
6. EXISTING UTILITIES, BUILDINGS, GROUND ELEVATIONS, AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE. ALL CONDITIONS, DIMENSIONS, AND QUANTITIES AFFECTING REQUIRED WORK SHALL BE VERIFIED BY CONTRACTOR BEFORE BEGINNING WORK OR ORDERING MATERIALS.
7. VALVES ON EXISTING PUBLIC WATER MAINS TO BE OPERATED BY CITY PERSONNEL ONLY.
8. ALL PROPOSED WATER LINES SHALL BE MANUFACTURED, INSTALLED, AND TESTED PER THE STANDARDS OF THE AMERICAN WATER WORKS ASSOCIATION (AWWA) AND BY F.A.C.-62-555.
9. SHOP DRAWINGS SHALL BE SUBMITTED AND APPROVED BY THE CITY FOR ALL PROPOSED ITEMS. ALL SUBMITTALS AND SHOP DRAWINGS SHALL BE HIGH QUALITY PDF DOCUMENTS.
10. THE CONTRACTOR IS RESPONSIBLE FOR RESTRAINING ALL EXISTING PIPE NECESSARY TO MAINTAIN A SAFE CONSTRUCTION AREA AND PERFORM THE WORK SHOWN IN THE PLANS. EXISTING PIPE REQUIRING RESTRAINTS SHALL UTILIZE EXTERIOR BELL RESTRAINTS.
11. THE CONTRACTOR SHALL DEWATER ANY EXCAVATION OR TRENCH TO MAINTAIN A SAFE WORK ENVIRONMENT AND TO ABIDE BY AWWA INSTALLATION STANDARDS. DEWATERING IS AT THE EXPENSE OF THE CONTRACTOR.

PERMITS

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY RIGHT-OF-WAY PERMITS AND ROADWAY CLOSURES ASSOCIATED WITH THE WORK SHOWN IN THE PLANS.
2. IN ORDER TO OBTAIN ROADWAY CLOSURES OR RIGHT-OF-WAY PERMITS, AT MINIMUM, THE CONTRACTOR MUST SUBMIT DETAILED MAINTENANCE OF TRAFFIC (MOT) PLANS ALONG WITH APPLICATIONS TO THE APPROPRIATE AGENCY. THE MOT(S) SHALL CONFORM TO APPLICABLE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) DRAWINGS (MOST CURRENT EDITION). THE GOVERNING AGENCIES MAY REQUIRE ADDITIONAL INFORMATION AND DICTATE SPECIFIC WORK TIME DURING NON-PEAK TRAFFIC HOURS.

PIPE CLEARANCES

1. ALL WATER MAINS SHALL HAVE A MINIMUM COVER OF 36 INCHES AND SHALL MAINTAIN A MINIMUM OF THREE (3) FEET HORIZONTAL SEPARATION FROM OTHER UTILITIES, EXCEPT STORM, SANITARY, AND GAS, WHICH SHALL MAINTAIN TEN (10) FEET HORIZONTAL SEPARATION, UNLESS OTHERWISE NOTED.
2. WATER MAIN SHALL CROSS ABOVE OTHER PIPES. WHEN WATER MUST BE BELOW, PROVIDE 12" MINIMUM VERTICAL SEPARATION UNLESS OTHERWISE NOTED.
3. CENTER ONE FULL JOINT OF PIPE UNDER/OVER ALL SANITARY, STORM, OR RECLAIMED PIPE CROSSINGS.

MATERIAL

1. ALL VALVES SHALL BE RIGHT HAND OPEN.
2. POLYWRAP ALL DUCTILE IRON PIPE (D.I.P) FITTINGS AND APPURTENANCES.
3. ALL HARDWARE SHALL BE 304 STAINLESS STEEL, UNLESS OTHERWISE NOTED.
4. ALL BELOW GROUND BENDS SHALL BE MECHANICAL JOINT (MJ).
5. RESTRAIN ALL JOINTS AND FITTINGS PER CONSTRUCTION PLANS AND DETAILS.
6. CONCRETE THRUST BLOCKS SHALL NOT BE USED TO PROVIDE THRUST RESTRAINT. RESTRAINT OF PUSH-ON DIP (OTHER THAN FOR FITTINGS & VALVES) SHALL BE WITH APPROVED PUSH-ON "GRIPPER-TYPE" RESTRAINTS. FITTINGS AND VALVES SHALL BE CONNECTED TO PIPE WITH MEGALUGS, OR APPROVED EQUAL.
7. ALL POTABLE WATER SERVICE LATERAL, AIR RELEASE VALVES, AND TEMPORARY SAMPLE POINTS SHALL BE CONSTRUCTED OF BLUE SDR-9 HIGH DENSITY POLYETHYLENE (HDPE) TUBING. ALL HDPE TUBING SHALL BE INSTALLED WITHIN A CASING AS DEFINED IN THE SPECIFICATIONS AND DETAILS.

TESTING

1. ALL COMPONENTS OF THE WATER SYSTEM, INCLUDING FITTINGS, HYDRANTS, CONNECTIONS, AND VALVES SHALL BE PROPERLY PRESSURE TESTED, WITNESSED AND ACCEPTED BY THE CITY. PRESSURE TESTS TO BE PERFORMED IN ACCORDANCE WITH WATER DEPARTMENT SPECIFICATIONS. CONTRACTOR TO NOTIFY THE ASSIGNED CITY INSPECTOR A MINIMUM OF THREE (3) WORKING DAYS IN ADVANCE OF PERFORMING TESTS. CONTRACTOR SHALL PRESSURE TEST WATER MAINS AT A MINIMUM OF 150 PSI FOR A PERIOD OF 2 HOURS IN ACCORDANCE WITH AWWA C600-87 STANDARDS. THE CONTRACTOR SHALL MAKE ALL NECESSARY APPLICATIONS AND ARRANGEMENTS.
2. ALL SAMPLE, PRESSURE TEST, AND CHLORINATION POINT PIPING SHALL BE COMPLETELY REMOVED PRIOR TO FINAL ACCEPTANCE. THE CORPORATION STOP SHALL BE CLOSED AND PLUGGED AT THE MAIN.
3. CONTRACTOR SHALL PERFORM CHLORINATION AND HIRE INDEPENDENT FIRMS TO CONDUCT BACTERIOLOGICAL TESTING AS DEFINED IN F.A.C. 62-555.340. CONTRACTOR TO SUPPLY THE CITY WITH AS-BUILTS AND SAMPLE RESULTS NECESSARY TO OBTAIN DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) CLEARANCES BEFORE PLACING METERS OR PIPELINES IN SERVICE.

RESTORATION

1. ROADWAY RESTORATION SHALL BE IN CONFORMANCE WITH CORRESPONDING JURISDICTION'S LATEST STANDARDS.
2. DISTURBANCE TO ANY PROPERTY, PUBLIC OR PRIVATE, SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION.

PROJECT SPECIFIC NOTES

1. TAP NEW WATER MAIN WITH NEW SERVICE LINES AND TRANSFER THE EXISTING METERS.
2. JET/GRUNDOMAT® THE SERVICE LINE CASINGS UNDER THE ROAD. DO NOT OPEN CUT THE ROAD FOR SERVICE LINE CASING INSTALLATION.

LEGEND

EXISTING		PROPOSED
	ASPHALT PAVEMENT	
	CONCRETE PAVEMENT	
	PAVERS	
10	BASE LINE (SURVEY LINE)	10
	CENTER LINE	
	R/W LINE	
	PROPERTY LINE	
	ADJACENT PROPERTY LINE	
B.M. -25	BENCHMARK & NUMBER	
T.B.M. -15	TEMPORARY BENCHMARK & NUMBER	
	EASEMENT LINE	
G G	GAS MAIN	G G
	STORM SEWER	
S S	SANITARY SEWER	S S
FM FM	SANITARY FORCE MAIN	FM FM
E E	ELECTRIC CABLE	E E
T T	TELEPHONE CABLE	T T
C C	TELEVISION CABLE	C C
W W	WATER MAIN	W W
RWL RWL	RECLAIMED WATER MAIN	RWL RWL
F F	FIRE HYDRANT ASSEMBLY (INCL. VALVE & TEE)	F F
W W	WATER VALVE	W W
W W	DETECTOR CHECK VALVE	W W
W W	DOUBLE DETECTOR CHECK VALVE - IN VAULT	W W
W W	DOUBLE DETECTOR CHECK VALVE - ABOVE GROUND	W W
W W	VAULT	W W
W W SINGLE DUAL	CASING PIPE (JACK & BORE)	W W SINGLE DUAL
	WATER METER	RWL SINGLE RWL DUAL
	RECLAIMED WATER METER	
M	METER TO BE TRANSFERRED	
	BACK FLOW PREVENTER	
	WET TAP	
	SLEEVE, BEND, TEE, CROSS, PLUG, REDUCER, BLOW-OFF	
	SAMPLE TAP LOCATION	S
	CHLORINE INJECTION POINT	C
E	ELECTRIC MANHOLE OR PULL BOX, POLE	E
T	TELEPHONE MANHOLE OR UTILITY BOX, POLE	T
SS ST	MANHOLE - SANITARY, STORM	SS ST
	VALVE	
-XX 1/2"	SANITARY LATERAL WITH DEPTH AT R/W LINE	
	STORM GRATE, CURB INLET	
	STORM PIPE CULVERT WITH HEADWALL, MITERED END SECTION	
	GUY POLE, GUY POLE AND WIRE	
	COMBINATION POLE, LIGHT POLE	
	MAILBOX	
	SIGN	
10" 10" 10" 10" 10"	PINE, TREE, PALM, OAK	
	ROOT PRUNE	
	SHRUB, HEDGE	
	WOODS/HEAVY BRUSH	
4.3	SPOT ELEVATIONS	4.30

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DESIGNED IAC
DRAWN JCA
CHECKED RAJ
DATE 10/01/2017

RIVER GROVE WATER MAIN IMPROVEMENTS

GENERAL NOTES, KEY & LEGEND

City of Tampa Florida Water Department

100% PLANS

WORK ORDER NO. WTR-18-0006

RECORD DRAWING NO.

ATLAS PAGE E14-1 | SHEET 02 OF 07

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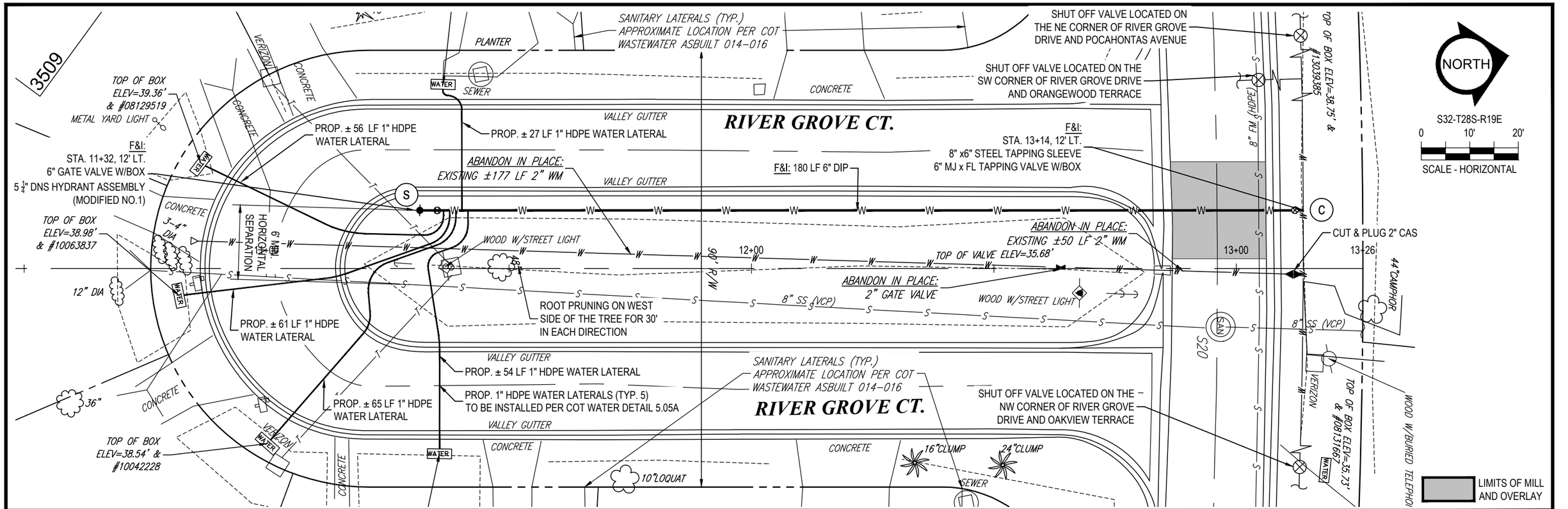

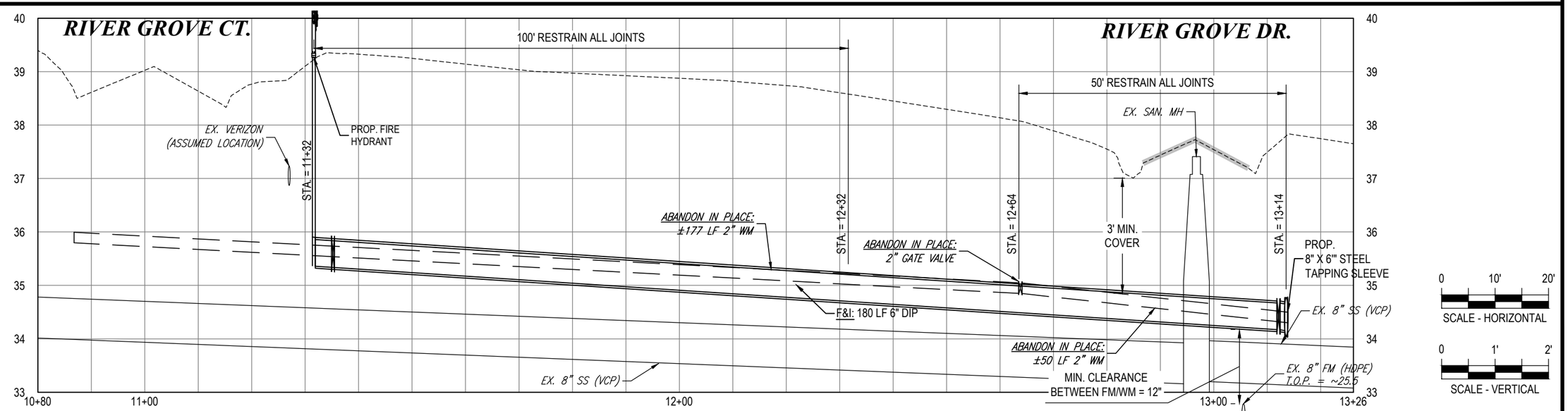

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DESIGNED IAC
DRAWN JCA
CHECKED RAJ
DATE 10/01/2017

RIVER GROVE WATER MAIN IMPROVEMENTS

PLAN & PROFILE SHEET - RIVER GROVE COURT

City of Tampa Florida
Water Department

100% PLANS

WORK ORDER NO. WTR-18-0006
RECORD DRAWING NO.
ATLAS PAGE E14-1 | SHEET 03 OF 07

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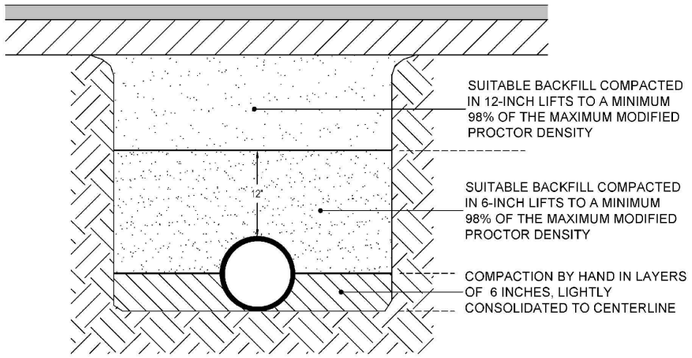
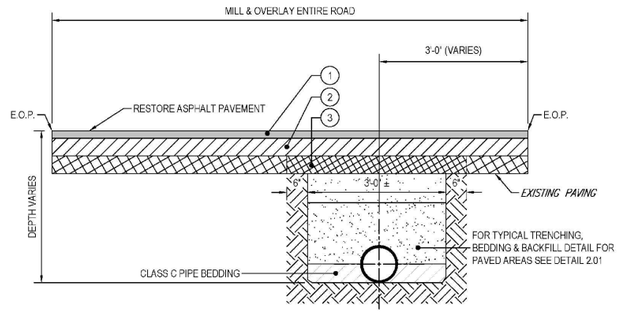


NOTES:

1. TYPE 2 TRENCH IS DEFINED AS A FLAT-BOTTOM TRENCH. LIGHTLY CONSOLIDATE BACKFILL TO CENTERLINE OF PIPE.
2. THIS STANDARD SHALL BE UTILIZED IN THE ABSENCE OF SPECIFIC STANDARDS. THE STANDARD OF THE AGENCY CONTROLLING THE RIGHT-OF-WAY SHALL GOVERN UNLESS OTHERWISE DIRECTED BY CITY ENGINEER.
3. SUITABLE BACKFILL SHALL BE DEFINED AS MATERIAL FREE FROM CINDERS, ASHES, REFUSE, CLAY, ORGANIC MATTER, BOULDERS, ROCKS OR STONES, OR OTHER MATERIAL THAT IN THE OPINION OF THE CITY ENGINEER IS UNSUITABLE.
4. NON-PERVIOUS AREAS SHALL MEAN ANY CONCRETE OR ASPHALT CURB, SIDEWALK, TRAIL, DRIVEWAY, OR ROADWAY.

City of Tampa Florida Water Department	LAST REVISION	TRENCHING, BEDDING AND BACKFILL DETAIL FOR NON-PERVIOUS (PAVED) AREAS	2.01A
	JAN 2018		



PAVEMENT LAYERS (SEE SPECIFICATIONS)

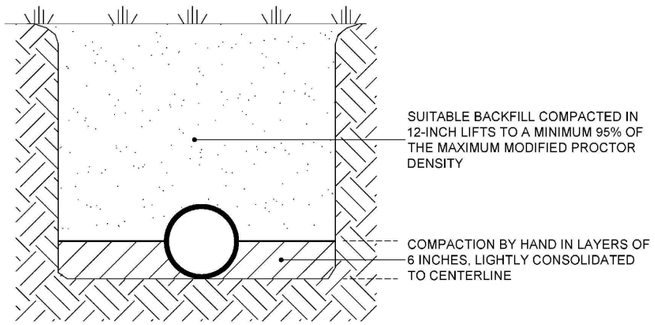
1. TYPE SP 9.5 ASPHALT (1") MILL & OVERLAY
2. TYPE SP 9.5 OR SP 12.5 ASPHALT (2")
3. CRUSHED CONCRETE BASE (8")

(ASPHALT)

NOTES:

1. PAVEMENT SHALL BE MECHANICALLY SAWED.
2. THE NEW BASE MATERIALS SHALL BE EITHER OF THE SAME TYPE AND COMPOSITION AS THE MATERIALS REMOVED OR OF EQUAL OR GREATER STRUCTURAL ADEQUACY. BASE, INSTALLED TO A THICKNESS OF THE EXISTING BASE OR 8" WHICHEVER IS GREATER. CRUSHED CONCRETE BASE SHALL FOLLOW FDOT STANDARD SPECIFICATIONS FOR RECYCLED CONCRETE AGGREGATES, LATEST EDITION. LAYER COEFFICIENT (SN) SHALL BE 0.18 WITH LIMEROCK BEARING RATIO (LBR) 150 OR GREATER. GRADATION AND SIZE REQUIREMENTS SHALL CONFORM TO FDOT LATEST SPECIFICATIONS.
3. THE SURFACE COURSE WITHIN THE TRENCH LIMITS SHALL BE FDOT TYPE SP 9.5 OR SP 12.5 WITH A THICKNESS EQUAL TO THE EXISTING OR 2", WHICHEVER IS GREATER. LIFT TO BE $\frac{3}{4}$" MIN. AND 1 $\frac{1}{2}$" MAX. FOR SP 9.5 AND 1 $\frac{1}{4}$" MIN. TO 3" MAX. FOR SP 12.5.
4. FOR COLLECTOR/ARTERIALS ROADS, 1" MILL AND OVERLAY 10' IN EACH DIRECTION OF THE TRENCH AND FULL WIDTH OF THE LANE. FOR RESIDENTIAL ROADS, 1" MILL AND OVERLAY 10' IN EACH DIRECTION OF THE TRENCH AND FULL WIDTH OF THE ROAD (CURB TO CURB). FDOT TYPE SP 9.5 ASPHALT SHALL BE USED. LIFT TO BE $\frac{3}{4}$" MIN. AND 1 $\frac{1}{2}$" MAX.

City of Tampa Florida Water Department	LAST REVISION	TRENCHING, BEDDING AND BACKFILL DETAIL FOR NON-PERVIOUS (PAVED) AREAS	2.01B
	JAN 2018		



NOTES:

1. TYPE 2 TRENCH IS DEFINED AS A FLAT-BOTTOM TRENCH. LIGHTLY CONSOLIDATE BACKFILL TO CENTERLINE OF PIPE.
2. THIS STANDARD SHALL BE UTILIZED IN THE ABSENCE OF SPECIFIC STANDARDS. THE STANDARD OF THE AGENCY CONTROLLING THE RIGHT-OF-WAY SHALL GOVERN UNLESS OTHERWISE DIRECTED BY CITY ENGINEER.
3. SUITABLE BACKFILL SHALL BE DEFINED AS MATERIAL FREE FROM CINDERS, ASHES, REFUSE, CLAY, ORGANIC MATTER, BOULDERS, ROCKS OR STONES, OR OTHER MATERIAL THAT IN THE OPINION OF THE CITY ENGINEER IS UNSUITABLE.
4. NON-PAVED AREA IS A PERVIOUS AREA. IF ANY PART OF THE TRENCH IS WITHIN A CONCRETE OR ASPHALT CURB, SIDEWALK, DRIVEWAY, OR ROADWAY, THEN STANDARD DETAIL 2.01 APPLIES.

City of Tampa Florida Water Department	LAST REVISION	TRENCHING, BEDDING, AND BACKFILL DETAIL FOR PERVIOUS (NON-PAVED) AREAS	2.02
	JUL 2018		

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306 E. JACKSON ST., 5E
TAMPA, FLA. 33602
P.E. #79453

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DESIGNED IAC
DRAWN JCA
CHECKED RAJ
DATE 10/01/2017

RIVER GROVE WATER MAIN IMPROVEMENTS

DETAIL SHEET - 1

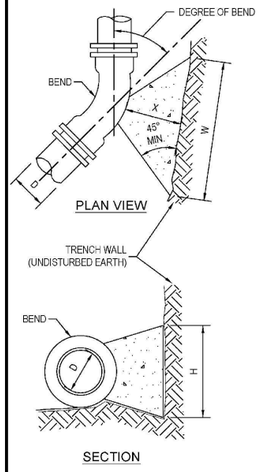
City of Tampa Florida Water Department

100% PLANS

WORK ORDER NO. WTR-18-0006

RECORD DRAWING NO.

ATLAS PAGE E14-1 | SHEET 04 OF 07



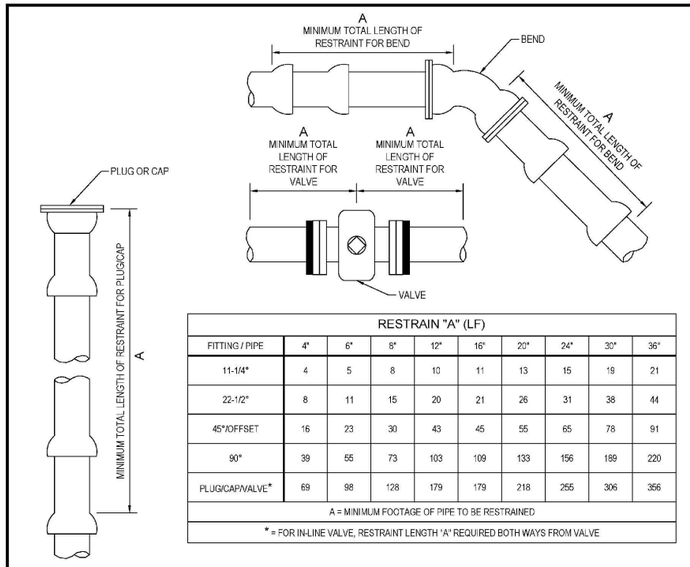
DIMENSIONS OF THRUST BLOCKS FOR GOOD SOIL								
	SIZE (D)	4"	6"	8"	12"	16"	20"	24"
11-1/4° BEND	THRUST (LBS.)	674	1,393	2,396	5,097	8,857	13,649	19,472
	BEARING AREA (FT.^{2})	0.51	1.05	1.80	3.83	6.65	10.25	14.63
	CONCRETE (YDS.^{3})	0.005	0.015	0.033	0.104	0.239	0.459	0.783
	H (FT.)	0.6	0.8	1.1	1.6	2.1	2.6	3.1
	W (FT.)	0.9	1.3	1.6	2.4	3.2	3.9	4.7
	X (FT.)	0.4 MIN.	0.6 MIN.	0.8 MIN.	1.2 MIN.	1.6 MIN.	2.0 MIN.	2.3 MIN.
22-1/2° BEND	THRUST (LBS.)	1,342	2,772	4,769	10,145	17,628	27,166	38,757
	BEARING AREA (FT.^{2})	1.01	2.08	3.58	7.61	13.22	20.37	29.07
	CONCRETE (YDS.^{3})	0.012	0.035	0.080	0.252	0.580	1.113	1.792
	H (FT.)	0.8	1.2	1.5	2.3	3.0	3.7	4.4
	W (FT.)	1.2	1.8	2.3	3.4	4.5	5.5	6.6
	X (FT.)	0.6 MIN.	0.9 MIN.	1.2 MIN.	1.7 MIN.	2.2 MIN.	2.8 MIN.	3.0 MIN.
45° BEND	THRUST (LBS.)	2,632	5,437	9,355	19,901	34,579	53,286	76,024
	BEARING AREA (FT.^{2})	1.97	4.08	7.02	14.93	25.94	39.98	57.04
	CONCRETE (YDS.^{3})	0.029	0.087	0.198	0.620	1.387	2.301	3.517
	H (FT.)	1.2	1.7	2.2	3.2	4.2	5.2	6.2
	W (FT.)	1.7	2.5	3.2	4.7	6.2	7.7	9.3
	X (FT.)	0.9 MIN.	1.2 MIN.	1.6 MIN.	2.4 MIN.	3.0 MIN.	3.0 MIN.	3.0 MIN.
90° BEND	THRUST (LBS.)	4,853	10,047	17,286	36,772	63,894	98,463	140,474
	BEARING AREA (FT.^{2})	3.65	7.53	12.96	27.58	47.91	73.84	105.34
	CONCRETE (YDS.^{3})	0.068	0.203	0.459	1.360	2.561	4.250	6.496
	H (FT.)	1.6	2.2	3.0	4.3	5.7	7.0	8.4
	W (FT.)	2.3	3.4	4.4	6.4	8.5	10.5	12.6
	X (FT.)	1.2 MIN.	1.7 MIN.	2.2 MIN.	3.0 MIN.	3.0 MIN.	3.0 MIN.	3.0 MIN.

NOTES:

1. CONCRETE SHALL BE KEPT AT SUFFICIENT DISTANCE FROM JOINT FOR REMOVAL OF ALL JOINT ACCESSORIES INCLUDING BOLTS.
2. ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED SOIL.
3. THIS TABLE SHOWS THE MINIMUM SIZE THRUST BLOCKS FOR SOIL BEARING PRESSURE OF 2000 PSF AND AN INTERNAL PRESSURE OF 190 PSI. COVER TO T.O.P. IS 3 FEET FOR 12" AND SMALLER MAINS; 4 FEET FOR 16" AND LARGER MAINS.
4. FITTINGS SHALL BE COMPLETELY POLYWRAPPED PRIOR TO POURING THRUST BLOCKS.

WARNING - POOR AND WET SOIL (SILTY SOILS, CLAY, MUCK AND PEAT) WILL REQUIRE LARGER THRUST BLOCKS.

City of Tampa Florida Water Department	LAST REVISION		
	JUL 2018	THRUST BLOCKS FOR BENDS	2.07

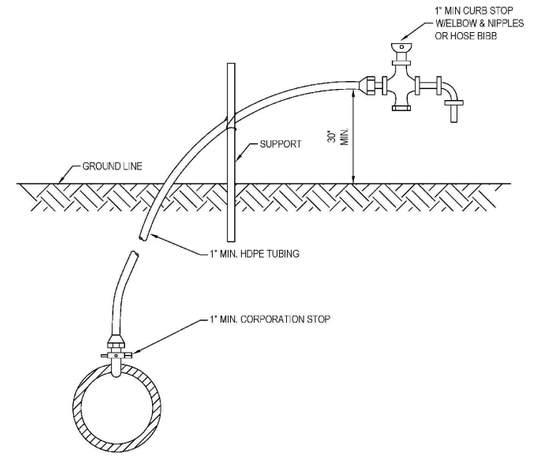


RESTRAIN "A" (LF)									
FITTING / PIPE	4"	6"	8"	12"	16"	20"	24"	30"	36"
11-1/4°	4	5	8	10	11	13	15	19	21
22-1/2°	8	11	15	20	21	26	31	38	44
45°/OFFSET	16	23	30	43	45	55	65	78	91
90°	39	55	73	103	109	133	156	189	220
PLUG/CAP/VALVE*	69	98	128	179	179	218	255	306	356
A = MINIMUM FOOTAGE OF PIPE TO BE RESTRAINED									
* = FOR IN-LINE VALVE, RESTRAINT LENGTH 'A' REQUIRED BOTH WAYS FROM VALVE									

NOTES:

1. THIS TABLE IS BASED ON:
   a. MAXIMUM TEST PRESSURE OF 190 PSI
   b. LAYING CONDITION TYPE 2 (SEE DETAILS 2.01 AND 2.02)
   c. POOR SOIL CONDITIONS
   d. USING D.I.P.
   e. 3 FEET OF COVER FOR 12" AND SMALLER MAINS; 4 FEET OF COVER FOR 16" AND LARGER MAINS
   f. HORIZONTAL BENDS ONLY - ENGINEER TO SUBMIT CALCULATIONS FOR VERTICAL RESTRAINTS
2. "RESTRAINED" PIPE SHALL BE MANUFACTURED RESTRAINED JOINT PIPE, PUSH-ON JOINT PIPE RESTRAINED W/GASKET-TYPE "GRIPPER RESTRAINTS", OR MECHANICAL JOINT PIPE RESTRAINED BY MEGALUG (OR APPROVED EQUIVALENT).
3. ANY ADDITIONAL FITTINGS WITHIN THE RESTRAINED SECTION SHALL BE RESTRAINED ACCORDINGLY.

City of Tampa Florida Water Department	LAST REVISION		
	JUL 2018	RESTRAINED JOINT STANDARD FOR BENDS, PLUGS, CAPS, AND VALVES	2.11



NOTES:

1. WATER OUTLET SHALL BE HELD UP OFF THE GROUND SO AS NOT TO INTERFERE WITH THE SAMPLING PROCESS.
2. CORPORATION STOP TO BE REMOVED AND BRASS PLUG INSTALLED IN TAPPED MAIN AFTER OPERATION.

City of Tampa Florida Water Department	LAST REVISION		
	JUL 2018	TEMPORARY SAMPLE TAP INSTALLATION W/DI, CI, OR PVC PIPE	2.18A

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CITY OF TAMPA WATER DEPT.
306 E. JACKSON ST., 5E
TAMPA, FLA. 33602
P.E. #79453

REV NO.	DATE	DESCRIPTION	BY
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DESIGNED IAC
DRAWN JCA
CHECKED RAJ
DATE 10/01/2017

RIVER GROVE WATER MAIN IMPROVEMENTS

DETAIL SHEET - 2

City of Tampa Florida Water Department

100% PLANS

WORK ORDER NO. WTR-18-0006

RECORD DRAWING NO.

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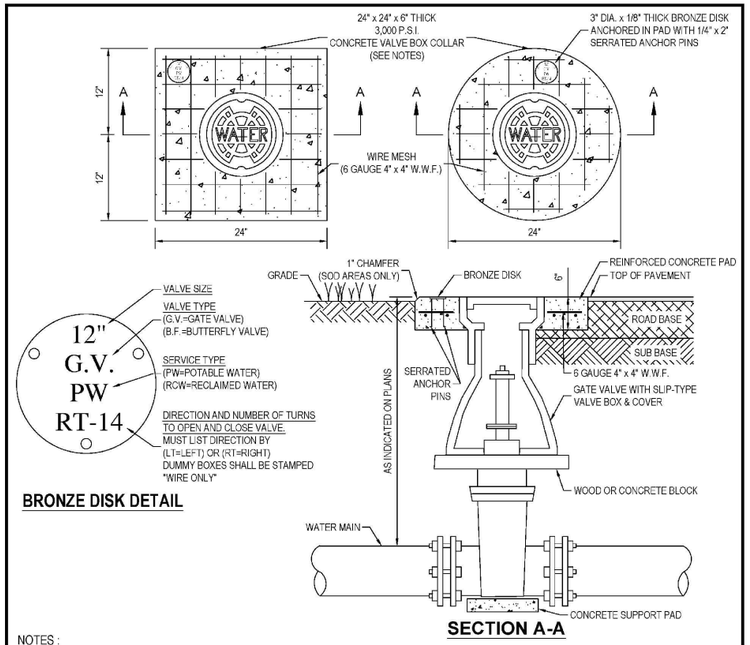


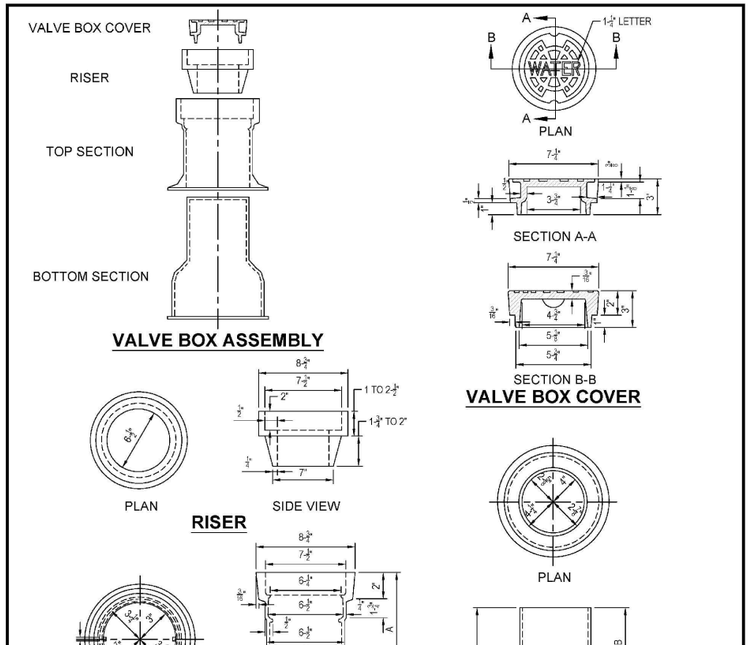
BRONZE DISK DETAIL

SECTION A-A

NOTES :

1. CIRCULAR OR SQUARE CONCRETE PAD REQUIRED FOR ALL VALVE BOX INSTALLATIONS.
2. CAST IRON VALVE BOXES SHALL BE FIRMLY SUPPORTED AND CENTERED AND PLUMB OVER THE OPERATING NUT OF THE VALVE. VALVE BOX COVER SHALL BE FLUSH WITH THE SURFACE OF THE FINISHED PAVEMENT, OR GRADE OR AT SUCH OTHER LEVEL AS MAY BE DIRECTED BY THE DEPARTMENT.
3. "BLUE" WATER VALVE LOCATE MARKERS REQUIRED FOR ALL VALVE INSTALLATIONS.
4. EMBED BRONZE VALVE INFO DISK INTO CONCRETE VALVE BOX COLLAR.
5. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST T.W.D. APPROVED MATERIAL SPECIFICATIONS.
6. IF VALVE IS LOCATED WITHIN A SIDEWALK CONCRETE COLLAR MAY BE ELIMINATED AND DISK SET FLUSH DIRECTLY IN SIDEWALK.
7. BRONZE DISK REQUIRED FOR ALL VALVES AND DUMMY BOXES.

City of Tampa Florida Water Department	LAST REVISION		
	JUL 2018	VALVE INSTALLATION W/VALVE BOX & PAD FOR DI OR CI PIPE	3.01



VALVE BOX ASSEMBLY

RISER

TOP SECTION

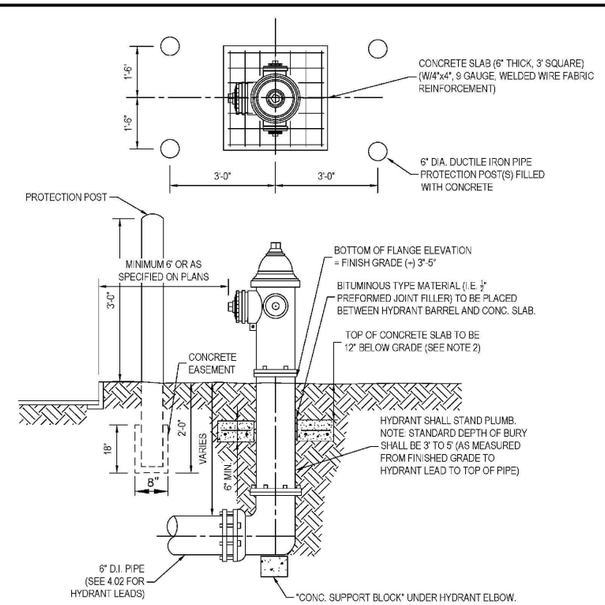
TOP SECTION	SIZE	A
	10"	10"
	16"	16"

BOTTOM SECTION	SIZE	A	B
	15"	15"	6-1/2"
	24"	24"	15-1/2"
	36"	36"	27-1/2"

VALVE BOX COVER

BOTTOM SECTION

City of Tampa Florida Water Department	LAST REVISION		
	JUL 2018	VALVE BOX, SLIP TYPE	3.04



NOTES:

1. FIRE HYDRANT BARREL ABOVE THE GROUND LINE SHALL BE PAINTED WITH A HIGH-GRADE ENAMEL PAINT, FEDERAL SAFETY YELLOW (OSHA APPROVED), AND THE HYDRANT BONNET SHALL BE PAINTED OSHA GREEN.
2. CONCRETE SLAB MAY BE ELIMINATED IN AREAS WHERE HYDRANT IS SET IN SIDEWALK AND SIDEWALK HAS BEEN INSTALLED PRIOR TO FINAL ACCEPTANCE OF THE HYDRANT.
3. THRUST RESTRAINT FOR HYDRANT:
   a) HYDRANT SHALL BE FIRMLY SUPPORTED UNDER ELBOW IN ALL METHODS BY SUPPORT BLOCK
   b) ALL BACKFILL SHALL BE THOROUGHLY COMPACTED UNDER SUPPORT BLOCK AND UNDER THRUST COLLAR
   c) ALL HYDRANT LEADS SHALL BE RESTRAINED BY MEGALUGS OR EQUIVALENT MECHANICAL RESTRAINTS
4. PROTECTION POSTS ARE REQUIRED WHEN HYDRANT IS LESS THAN 6 FEET FROM EDGE OF PAVEMENT, OR AS DIRECTED BY THE ENGINEER.
5. FOR PVC MAINS, INSTALL CONCRETE SUPPORT BLOCK UNDER ALL HYDRANT TEES.

City of Tampa Florida Water Department	LAST REVISION		
	JUL 2018	FIRE HYDRANT INSTALLATION	4.01

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DESIGNED IAC
DRAWN JCA
CHECKED RAJ
DATE 10/01/2017

RIVER GROVE WATER MAIN IMPROVEMENTS

DETAIL SHEET - 3

City of Tampa Florida Water Department

100% PLANS

WORK ORDER NO. WTR-18-0006

RECORD DRAWING NO.

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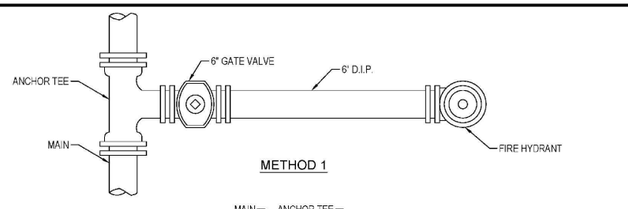
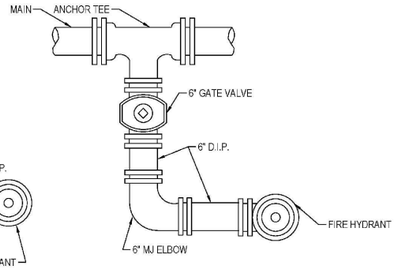
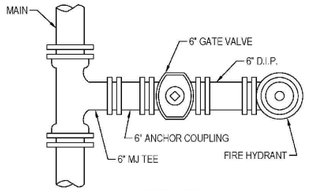


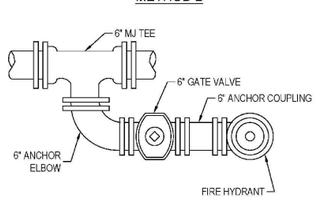
METHOD 1



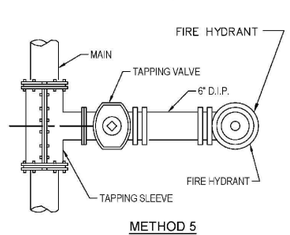
METHOD 3



METHOD 2



METHOD 4

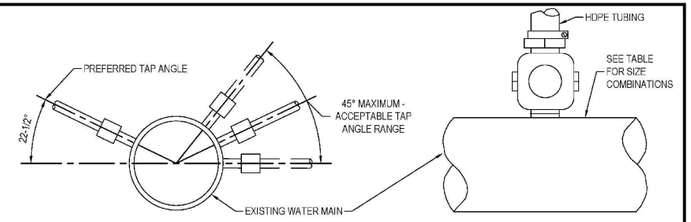


METHOD 5

NOTES:

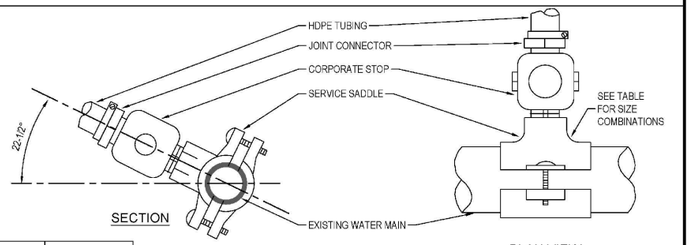
1. VALVE SHALL BE SET IN ACCORDANCE WITH DETAIL 3.01. FOR HYDRANT SET, SEE DETAIL 4.01.
2. ALL VALVES SHALL BE ANCHORED TO BRANCH OF TEE ON ALL HYDRANT INSTALLATIONS.
3. ALL HYDRANT LEADS SHALL BE RESTRAINED BY MEGALUGS OR EQUIVALENT.
4. FOR PVC MAINS, INSTALL CONCRETE SUPPORT BLOCK UNDER HYDRANT TEES.

City of Tampa Florida Water Department	LAST REVISION		
	JUL 2018	FIRE HYDRANT METHODS OF INSTALLATION	4.02



SECTION PLAN VIEW

DIRECT TAP DETAIL



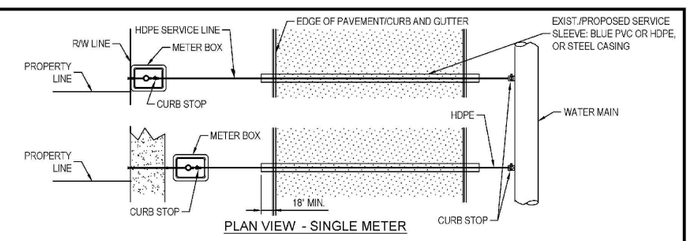
SECTION PLAN VIEW

SADDLE TAP DETAIL

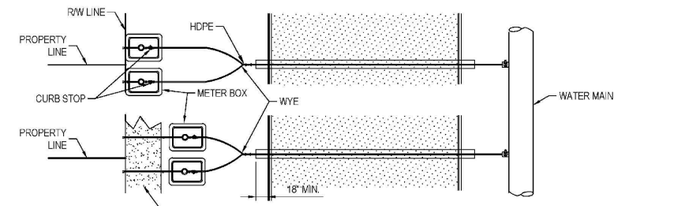
PIPE	SIZE	CORP. TAP SIZE	
		1"	2"
DI/CI	12"	DT	DT
	8"	DT	SS
	6"	DT	SS
	4"	SS	SS
PVC	2", 2-1/2"	SS	NA
	8", C-900	SS	SS
	6", C-900	SS	SS
	2" SDR21	SS	NA
OTHER*	12"	SS	SS
	10"	SS	SS
	8"	SS	SS
	6"	SS	SS
	4"	SS	NA
	3"	SS	NA
	2", 2-1/2"	SS	NA

LEGEND
DT- DIRECT TAP CAN BE ALLOWED SS- SERVICE SADDLE IS REQUIRED NA- NOT ALLOWED
*ASBESTOS CEMENT, STEEL, GALVANIZED IRON PIPE, NON STD PVC, ETC.

City of Tampa Florida Water Department	LAST REVISION		
	JUL 2018	TAPPING DETAIL FOR 3/4", 1", 1-1/2" & 2" W/DI, CI, OR PVC PIPE	5.01A

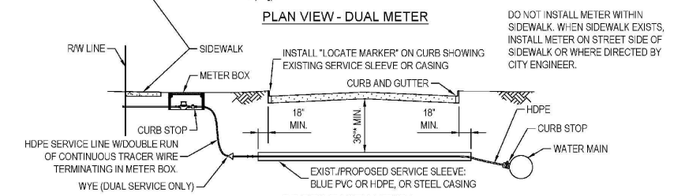


PLAN VIEW - SINGLE METER



PLAN VIEW - DUAL METER

DO NOT INSTALL METER WITHIN SIDEWALK. WHEN SIDEWALK EXISTS, INSTALL METER ON STREET SIDE OF SIDEWALK OR WHERE DIRECTED BY CITY ENGINEER.



PROFILE VIEW (TYP.)

CASING SPECIFICATION:
1. IF PUSHED-SCH 40 STEEL PIPE (MIN.)
2. IF LAYED IN OPEN TRENCH-SCH 40 STEEL PIPE OR SCH 80 PVC SOLVENT WELD PIPE.

* OR GREATER, IF REQUIRED BY ROW CONTROLLING AGENCY
** LINE SIZES APPLICABLE FOR 2" DDCV

SINGLE METER SIZE (INCHES)	SERVICE LINE SIZE (INCHES)		CASING SIZE (INCHES)
	(15'-80')	(80'-150')	
3/4	1	2	2 / 4
1	1	2	4
1 1/2	2	2	4
2**	4" D.I.P.	4" D.I.P.	12

DUAL METER SIZE (INCHES)	SERVICE LINE SIZE (INCHES)		CASING SIZE (INCHES)
	(15'-80')	(80'-150')	
3/4	2	2	4
1	2	4" D.I.P.	4 / 12
1 1/2	N/A	N/A	N/A
2*	N/A	N/A	N/A

(FEET REFER TO DISTANCE FROM WATER MAIN TO METER)

City of Tampa Florida Water Department	LAST REVISION		
	JUL 2018	SINGLE & DUAL METERED SERVICE - LONG SIDE 3/4", 1", 1-1/2" & 2"	5.05A

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DESIGNED IAC
DRAWN JCA
CHECKED RAJ
DATE 10/01/2017

RIVER GROVE WATER MAIN IMPROVEMENTS

DETAIL SHEET - 4

City of Tampa Florida Water Department

100% PLANS

WORK ORDER NO. WTR-18-0006

RECORD DRAWING NO.

ATLAS PAGE E14-1 SHEET 07 OF 07