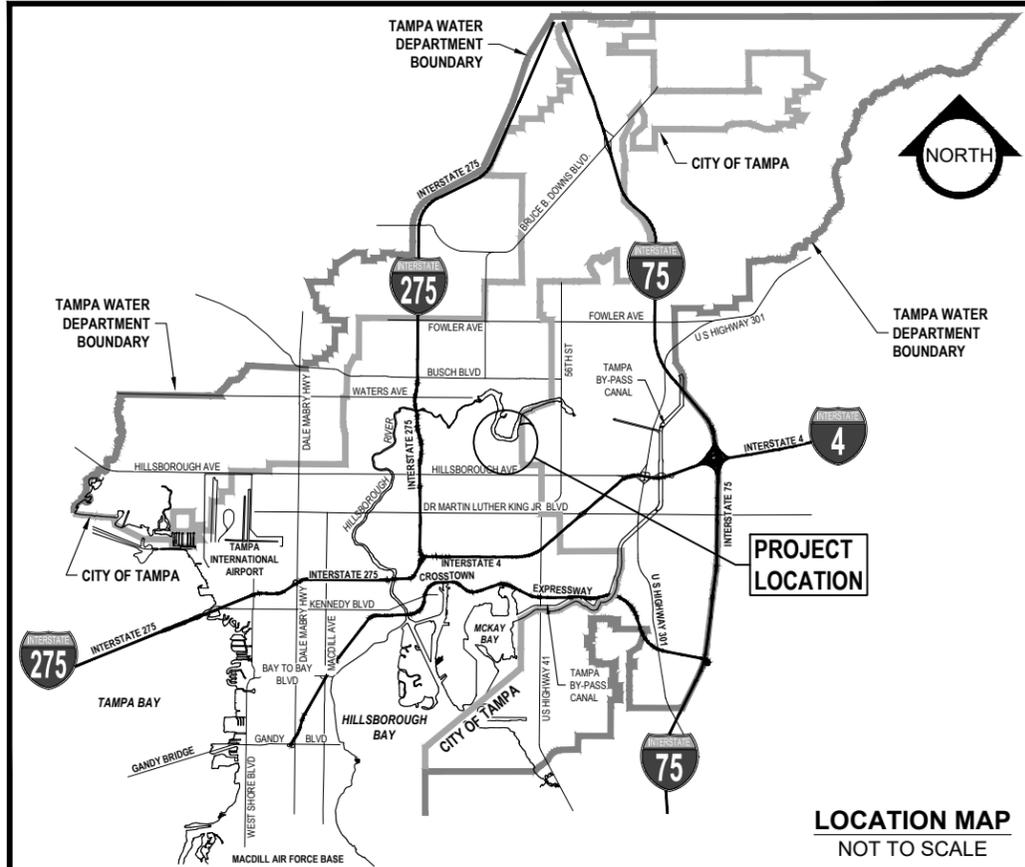


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Please Email ALL Questions:
[MailTo:ContractAdministration@TampaGov.net](mailto:ContractAdministration@TampaGov.net)

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

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Water Department

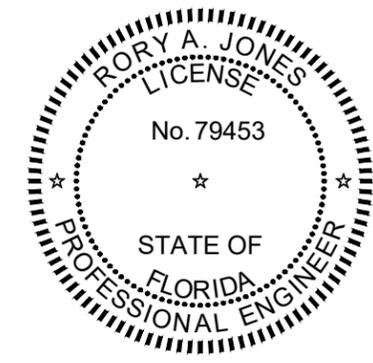
PLANS FOR:
RIVER GROVE WATER MAIN IMPROVEMENTS
 TAMPA WATER DEPARTMENT
 WORK ORDER NO. :
WTR-18-0006

INDEX	
	DESCRIPTION
01	COVER SHEET
02	GENERAL NOTES, KEY PLAN & LEGEND
03	PLAN AND PROFILE - RIVER GROVE COURT
04-07	DETAIL SHEETS

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CONTRACTOR: DALLAS 1			

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

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

RIVER GROVE WATER MAIN IMPROVEMENTS
 COVER SHEET



100% PLANS	
WORK ORDER NO.	WTR-18-0006
RECORD DRAWING NO.	
ATLAS PAGE E14-1	SHEET 01 OF 07

CITY OF TAMPA NOTES

GENERAL

- 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.
- 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.
- NORMAL WORKING HOURS SHALL BE WEEKDAYS FROM 7:30 AM TO 4:00 PM UNLESS OTHERWISE APPROVED BY THE ENGINEER/INSPECTOR.
- ELEVATION INFORMATION SHOWN ON THESE PLANS IS REFERENCED TO N.A.V.D. 1988 UNLESS OTHERWISE STATED.
- 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.
- 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.
- VALVES ON EXISTING PUBLIC WATER MAINS TO BE OPERATED BY CITY PERSONNEL ONLY.
- 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.
- 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.
- 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.
- 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

- CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY RIGHT-OF-WAY PERMITS AND ROADWAY CLOSURES ASSOCIATED WITH THE WORK SHOWN IN THE PLANS.
- 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

- 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.
- WATER MAIN SHALL CROSS ABOVE OTHER PIPES. WHEN WATER MUST BE BELOW, PROVIDE 12" MINIMUM VERTICAL SEPARATION UNLESS OTHERWISE NOTED.
- CENTER ONE FULL JOINT OF PIPE UNDER/OVER ALL SANITARY, STORM, OR RECLAIMED PIPE CROSSINGS.

MATERIAL

- ALL VALVES SHALL BE RIGHT HAND OPEN.
- POLYWRAP ALL DUCTILE IRON PIPE (D.I.P) FITTINGS AND APPURTENANCES.
- ALL HARDWARE SHALL BE 304 STAINLESS STEEL, UNLESS OTHERWISE NOTED.
- ALL BELOW GROUND BENDS SHALL BE MECHANICAL JOINT (MJ).
- RESTRAIN ALL JOINTS AND FITTINGS PER CONSTRUCTION PLANS AND DETAILS.
- 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.
- 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

- 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.
- 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.
- 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

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

PROJECT SPECIFIC NOTES

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

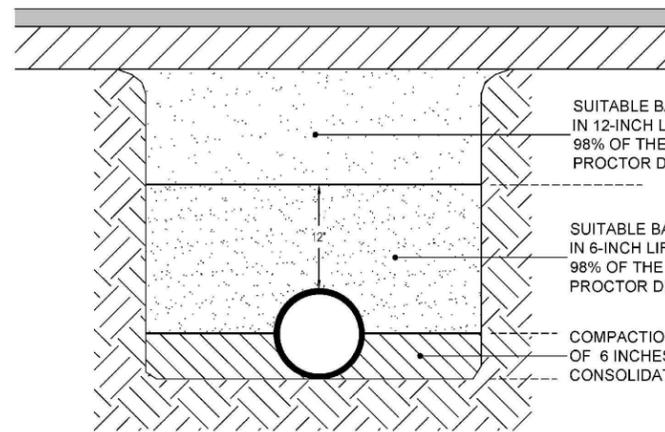
LEGEND

EXISTING		PROPOSED
	ASPHALT PAVEMENT	
	CONCRETE PAVEMENT	
	PAVERS	
10	BASE LINE (SURVEY LINE)	10
	CENTER LINE	
	R/W LINE	
	PROPERTY LINE	
	ADJACENT PROPERTY LINE	
	BENCHMARK & NUMBER	
	TEMPORARY BENCHMARK & NUMBER	
	EASEMENT LINE	
	GAS MAIN	
	STORM SEWER	
	SANITARY SEWER	
	SANITARY FORCE MAIN	
	ELECTRIC CABLE	
	TELEPHONE CABLE	
	TELEVISION CABLE	
	WATER MAIN	
	RECLAIMED WATER MAIN	
	FIRE HYDRANT ASSEMBLY (INCL. VALVE & TEE)	
	WATER VALVE	
	DETECTOR CHECK VALVE	
	DOUBLE DETECTOR CHECK VALVE - IN VAULT	
	DOUBLE DETECTOR CHECK VALVE - ABOVE GROUND	
	VAULT	
	CASING PIPE (JACK & BORE)	
	WATER METER	
	RECLAIMED WATER METER	
	METER TO BE TRANSFERRED	
	BACK FLOW PREVENTER	
	WET TAP	
	SLEEVE, BEND, TEE, CROSS, PLUG, REDUCER, BLOW-OFF	
	SAMPLE TAP LOCATION	
	CHLORINE INJECTION POINT	
	ELECTRIC MANHOLE OR PULL BOX, POLE	
	TELEPHONE MANHOLE OR UTILITY BOX, POLE	
	MANHOLE - SANITARY, STORM	
	VALVE	
	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	
	PINE, TREE, PALM, OAK	
	ROOT PRUNE	
	SHRUB, HEDGE	
	WOODS/HEAVY BRUSH	
	SPOT ELEVATIONS	

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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	DESIGNED IAC	RIVER GROVE WATER MAIN IMPROVEMENTS GENERAL NOTES, KEY & LEGEND		100% PLANS	
	DRAWN JCA			WORK ORDER NO. WTR-18-0006	
	CHECKED RAJ			RECORD DRAWING NO.	
	DATE 10/01/2017			ATLAS PAGE E14-1 SHEET 02 OF 07	

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SUITABLE BACKFILL COMPACTED IN 12-INCH LIFTS TO A MINIMUM 98% OF THE MAXIMUM MODIFIED PROCTOR DENSITY

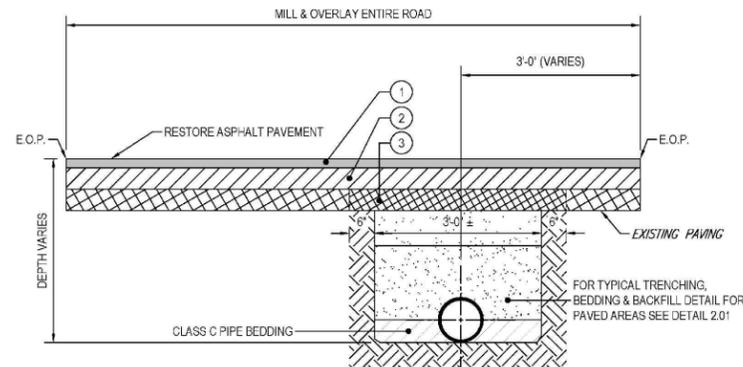
SUITABLE BACKFILL COMPACTED IN 6-INCH LIFTS TO A MINIMUM 98% OF THE MAXIMUM MODIFIED PROCTOR DENSITY

COMPACTION BY HAND IN LAYERS OF 6 INCHES, LIGHTLY CONSOLIDATED TO CENTERLINE

NOTES:

- TYPE 2 TRENCH IS DEFINED AS A FLAT-BOTTOM TRENCH. LIGHTLY CONSOLIDATE BACKFILL TO CENTERLINE OF PIPE.
- 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.
- 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.
- NON-PERVIOUS AREAS SHALL MEAN ANY CONCRETE OR ASPHALT CURB, SIDEWALK, TRAIL, DRIVEWAY, OR ROADWAY.

	LAST REVISION		
	JAN 2018	TRENCHING, BEDDING AND BACKFILL DETAIL FOR NON-PERVIOUS (PAVED) AREAS	2.01A



PAVEMENT LAYERS (SEE SPECIFICATIONS)

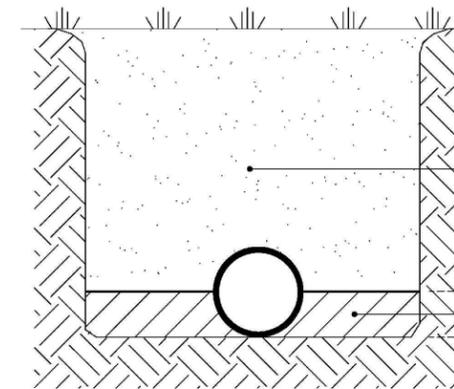
- TYPE SP 9.5 ASPHALT (1") MILL & OVERLAY
- TYPE SP 9.5 OR SP 12.5 ASPHALT (2")
- CRUSHED CONCRETE BASE (8")

(ASPHALT)

NOTES:

- PAVEMENT SHALL BE MECHANICALLY SAWED.
- 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.
- 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 3/4" MIN. AND 1 1/2" MAX. FOR SP 9.5 AND 1 1/2" MIN. TO 3" MAX. FOR SP 12.5.
- 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 3/4" MIN. AND 1 1/2" MAX.

	LAST REVISION		
	JAN 2018	TRENCHING, BEDDING AND BACKFILL DETAIL FOR NON-PERVIOUS (PAVED) AREAS	2.01B



SUITABLE BACKFILL COMPACTED IN 12-INCH LIFTS TO A MINIMUM 95% OF THE MAXIMUM MODIFIED PROCTOR DENSITY

COMPACTION BY HAND IN LAYERS OF 6 INCHES, LIGHTLY CONSOLIDATED TO CENTERLINE

NOTES:

- TYPE 2 TRENCH IS DEFINED AS A FLAT-BOTTOM TRENCH. LIGHTLY CONSOLIDATE BACKFILL TO CENTERLINE OF PIPE.
- 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.
- 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.
- 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.

	LAST REVISION		
	JUL 2018	TRENCHING, BEDDING, AND BACKFILL DETAIL FOR PERVIOUS (NON-PAVED) AREAS	2.02

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

DETAIL SHEET - 1



100% PLANS

WORK ORDER NO.	WTR-18-0006
RECORD DRAWING NO.	
ATLAS PAGE	E14-1
SHEET	04 OF 07

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PLAN VIEW

SECTION

DIMENSIONS OF THRUST BLOCKS FOR GOOD SOIL							
SIZE (D)	4"	6"	8"	12"	16"	20"	24"
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.
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.
THRUST (LBS.)	2,632	5,437	9,365	19,901	34,579	53,288	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.
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	0.469	1.360	2.561	4.260	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:

- CONCRETE SHALL BE KEPT AT SUFFICIENT DISTANCE FROM JOINT FOR REMOVAL OF ALL JOINT ACCESSORIES INCLUDING BOLTS.
- ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED SOIL.
- 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.
- 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.

	LAST REVISION JUL 2018	THRUST BLOCKS FOR BENDS	2.07
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PLUG OR CAP

MINIMUM TOTAL LENGTH OF RESTRAINT FOR PLUG/CAP

MINIMUM TOTAL LENGTH OF RESTRAINT FOR VALVE

MINIMUM TOTAL LENGTH OF RESTRAINT FOR BEND

RESTRAIN "A" (LF)								
FITTING / PIPE	4"	6"	8"	12"	16"	20"	24"	30"
11-1/4"	4	5	8	10	11	13	15	19
22-1/2"	8	11	15	20	21	26	31	44
45°/OFFSET	16	23	30	43	45	55	65	91
90°	39	55	73	103	109	133	156	220
PLUG/CAP/VALVE*	69	98	128	179	179	218	255	366

A = MINIMUM FOOTAGE OF PIPE TO BE RESTRAINED
* = FOR IN-LINE VALVE, RESTRAINT LENGTH "A" REQUIRED BOTH WAYS FROM VALVE

NOTES:

- THIS TABLE IS BASED ON:
 - MAXIMUM TEST PRESSURE OF 190 PSI
 - LAYING CONDITION TYPE 2 (SEE DETAILS 2.01 AND 2.02)
 - POOR SOIL CONDITIONS
 - USING D.I.P.
 - 3 FEET OF COVER FOR 12" AND SMALLER MAINS; 4 FEET OF COVER FOR 16" AND LARGER MAINS
 - HORIZONTAL BENDS ONLY - ENGINEER TO SUBMIT CALCULATIONS FOR VERTICAL RESTRAINTS
- "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).
- ANY ADDITIONAL FITTINGS WITHIN THE RESTRAINED SECTION SHALL BE RESTRAINED ACCORDINGLY.

	LAST REVISION JUL 2018	RESTRAINED JOINT STANDARD FOR BENDS, PLUGS, CAPS, AND VALVES	2.11
--	---------------------------	--	------

GROUND LINE

SUPPORT

30" MIN.

1" MIN. HDPE TUBING

1" MIN. CORPORATION STOP

1" MIN CURB STOP W/ WELBOW & NIPPLES OR HOSE BIBB

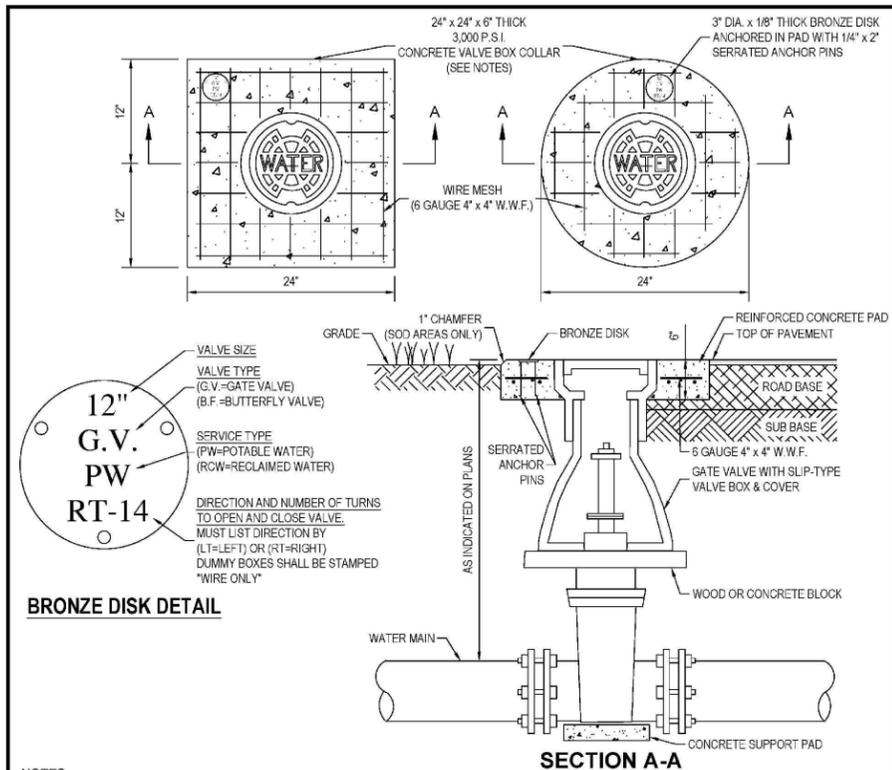
NOTES:

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

	LAST REVISION JUL 2018	TEMPORARY SAMPLE TAP INSTALLATION W/DI, CI, OR PVC PIPE	2.18A
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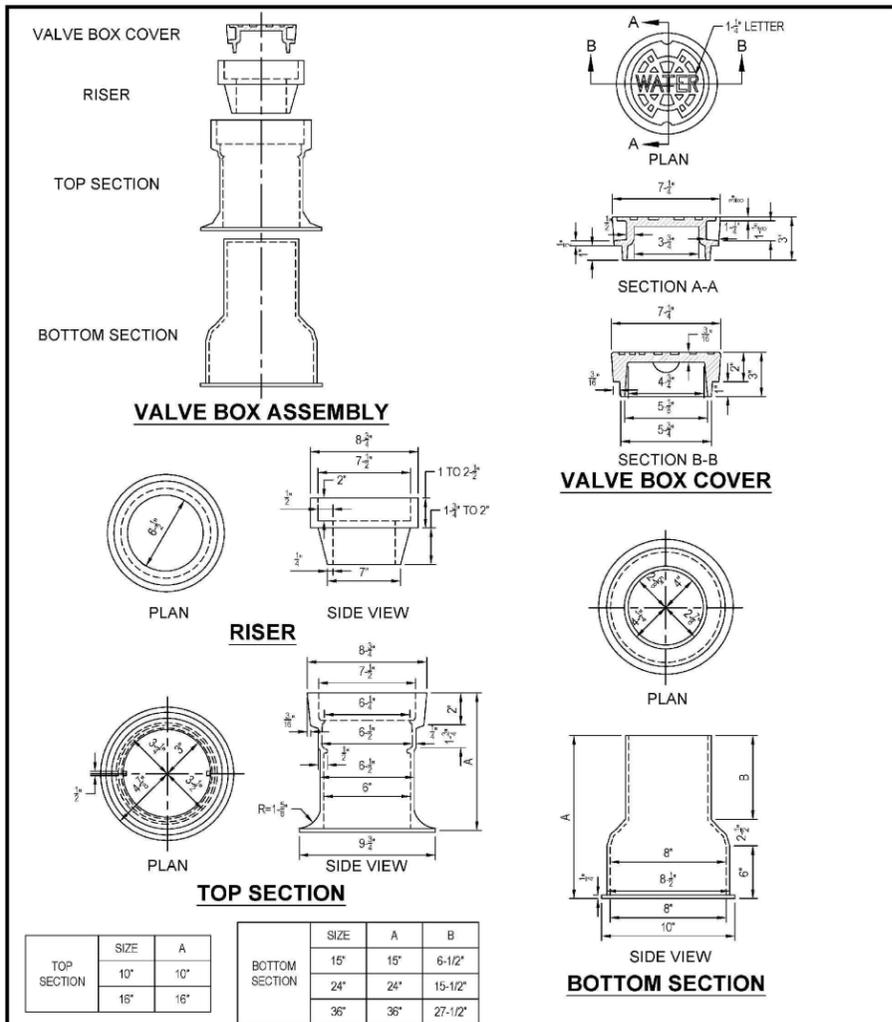
RORY A. JONES, P.E. CITY OF TAMPA WATER DEPT. 306 E. JACKSON ST., 5E TAMPA, FLA. 33602 P.E. #79453	REV NO.	DATE	DESCRIPTION	BY	DESIGNED IAC	RIVER GROVE WATER MAIN IMPROVEMENTS DETAIL SHEET - 2		100% PLANS	
			WORK ORDER NO. WTR-18-0006	
			RECORD DRAWING NO.	
			ATLAS PAGE E14-1	
			SHEET 05 OF 07	

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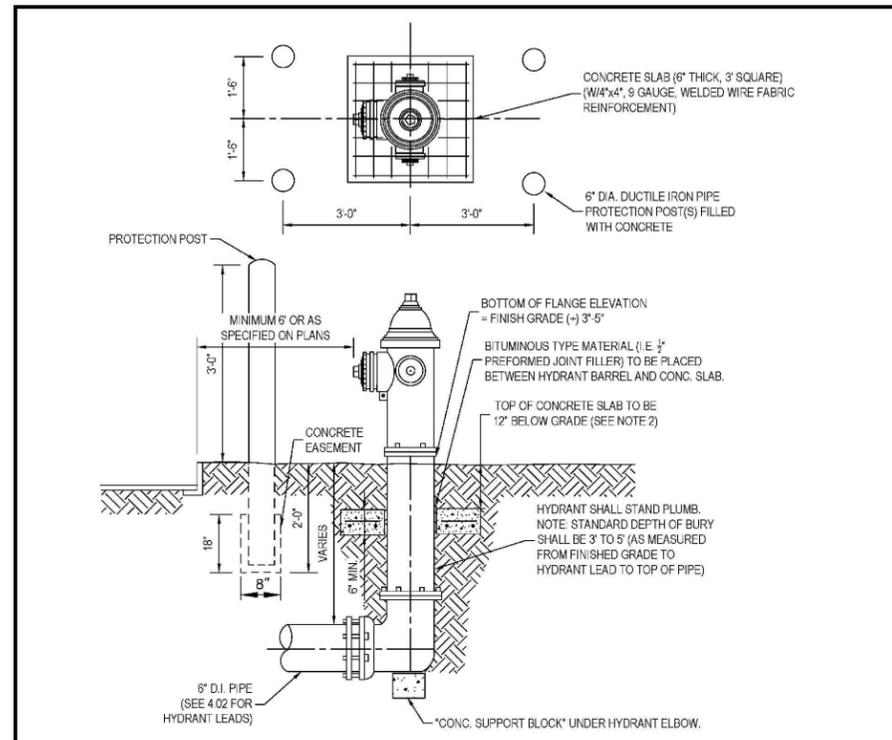


- NOTES:**
- CIRCULAR OR SQUARE CONCRETE PAD REQUIRED FOR ALL VALVE BOX INSTALLATIONS.
 - CAST IRON VALVE BOXES SHALL BE FIRMLY SUPPORTED AND CENTERED AND PLUMB OVER THE OPERATING NUT OF THE VALVE. VALVE BOX COVER SHALL BE FLUSH WITH THE SURFACE OF THE FINISHED PAVEMENT, OR GRADE OR AT SUCH OTHER LEVEL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

	LAST REVISION	VALVE INSTALLATION W/VALVE BOX & PAD FOR DI OR CI PIPE	3.01
	JUL 2018		



	LAST REVISION	VALVE BOX, SLIP TYPE	3.04
	JUL 2018		



- NOTES:**
- 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.
 - 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.
 - THRUST RESTRAINT FOR HYDRANT:
 - HYDRANT SHALL BE FIRMLY SUPPORTED UNDER ELBOW IN ALL METHODS BY SUPPORT BLOCK
 - ALL BACKFILL SHALL BE THOROUGHLY COMPACTED UNDER SUPPORT BLOCK AND UNDER THRUST COLLAR
 - ALL HYDRANT LEADS SHALL BE RESTRAINED BY MEGALUGS OR EQUIVALENT MECHANICAL RESTRAINTS
 - PROTECTION POSTS ARE REQUIRED WHEN HYDRANT IS LESS THAN 6 FEET FROM EDGE OF PAVEMENT, OR AS DIRECTED BY THE ENGINEER.
 - FOR PVC MAINS, INSTALL CONCRETE SUPPORT BLOCK UNDER ALL HYDRANT TEES.

	LAST REVISION	FIRE HYDRANT INSTALLATION	4.01
	JUL 2018		

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

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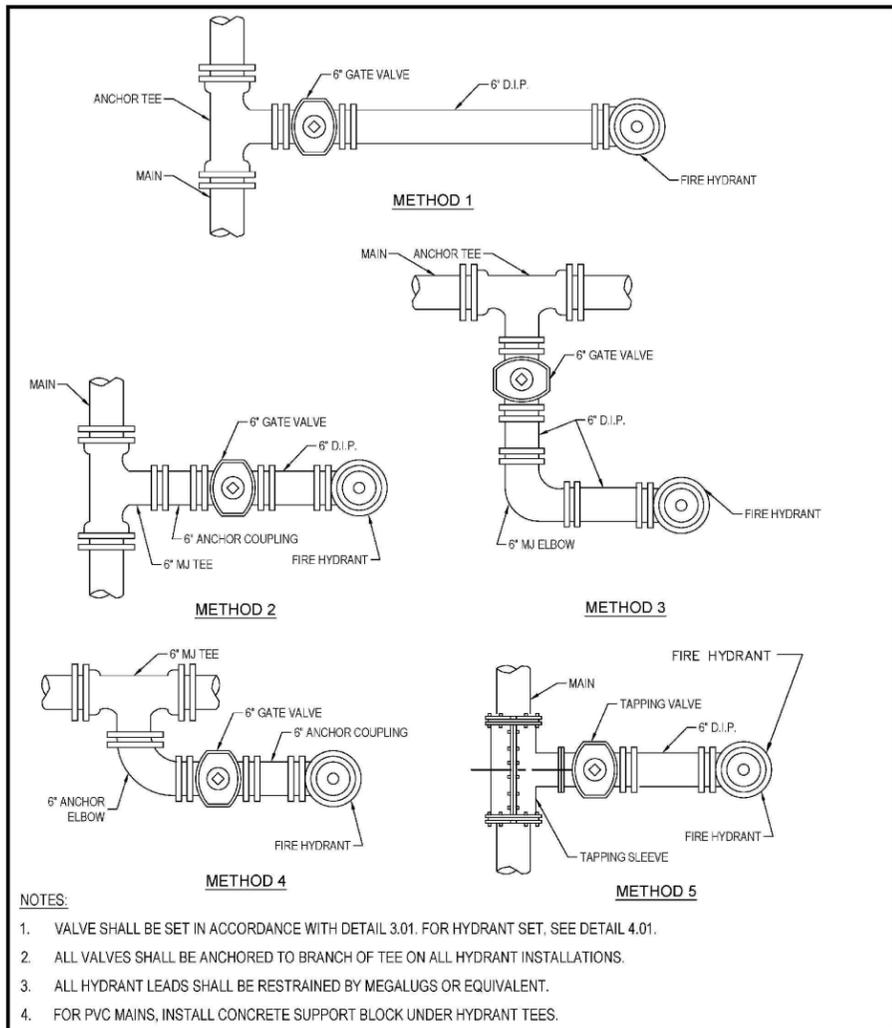
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CHECKED RAJ
DATE 10/01/2017

RIVER GROVE WATER MAIN
IMPROVEMENTS

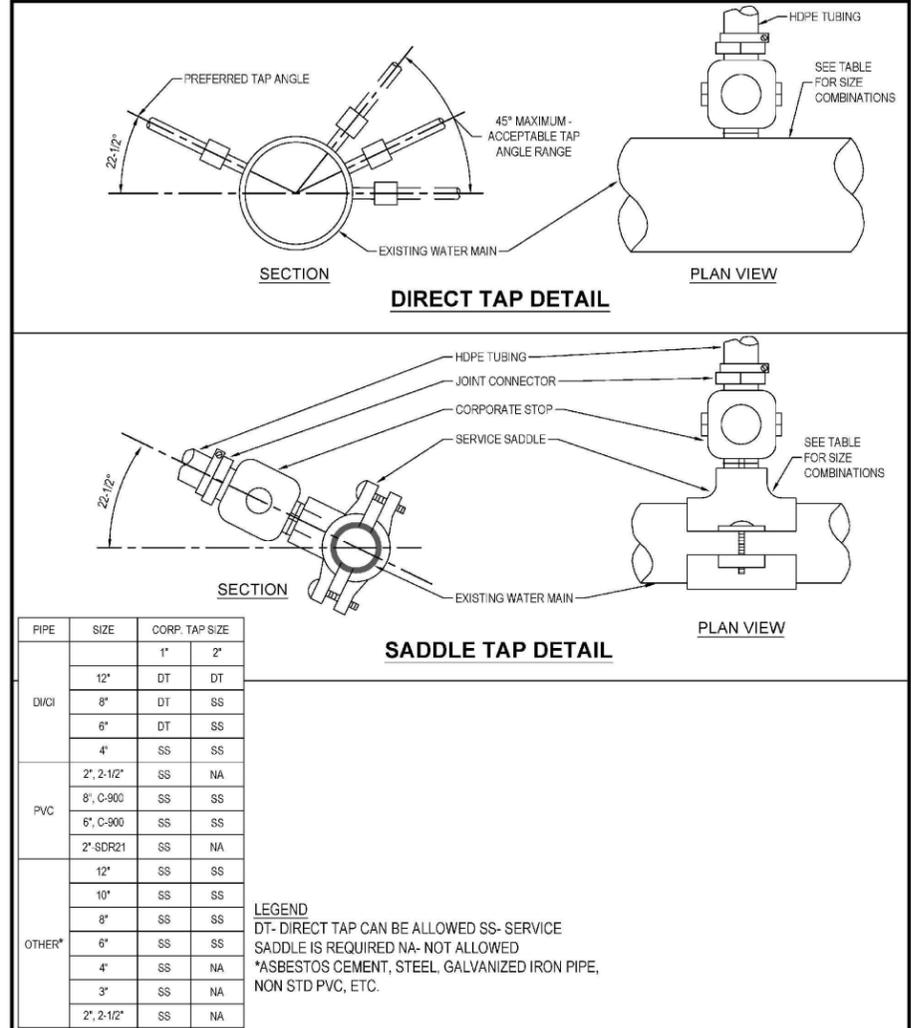
DETAIL SHEET - 3

100% PLANS	
WORK ORDER NO.	WTR-18-0006
RECORD DRAWING NO.	
ATLAS PAGE	E14-1 SHEET 06 OF 07

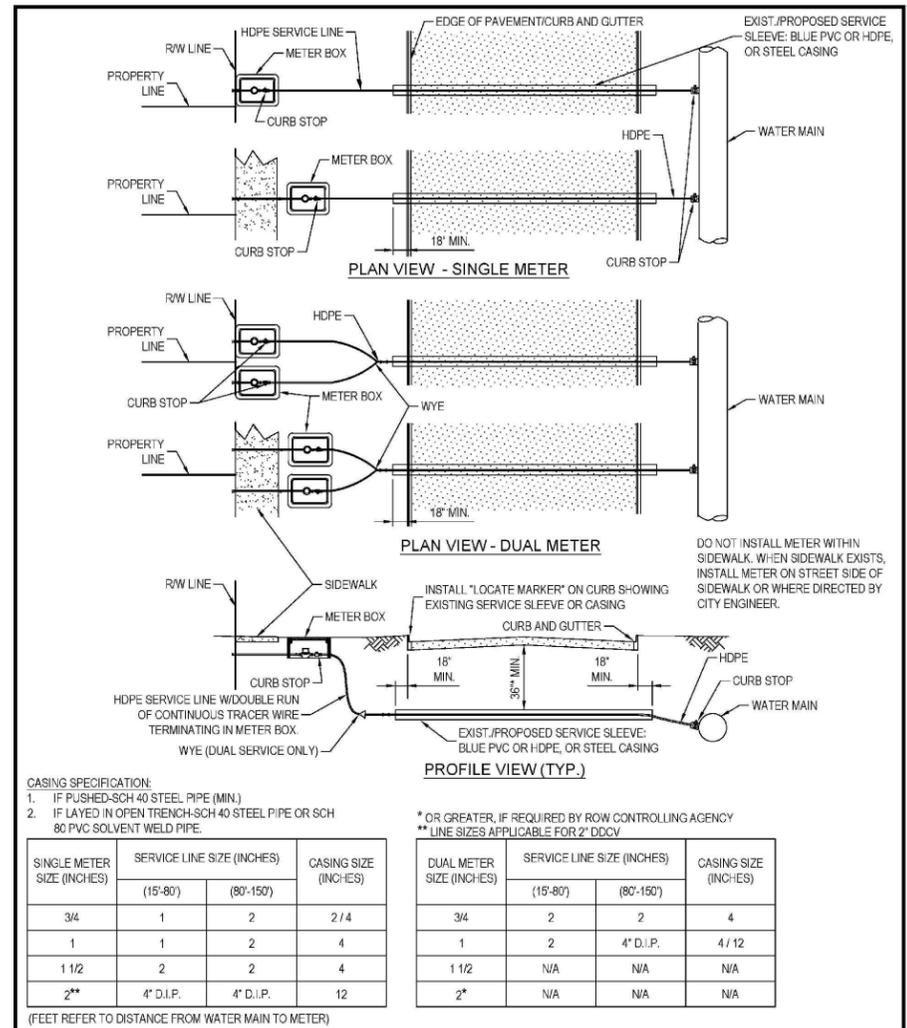
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	LAST REVISION		
	JUL 2018	FIRE HYDRANT METHODS OF INSTALLATION	4.02



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



	LAST REVISION		
	JUL 2018	SINGLE & DUAL METERED SERVICE - LONG SIDE 3/4", 1", 1-1/2" & 2"	5.05A

RORY A. JONES, P.E.
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 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 - 4

100% PLANS
 WORK ORDER NO. WTR-18-0006
 RECORD DRAWING NO.
 ATLAS PAGE E14-1 SHEET 07 OF 07