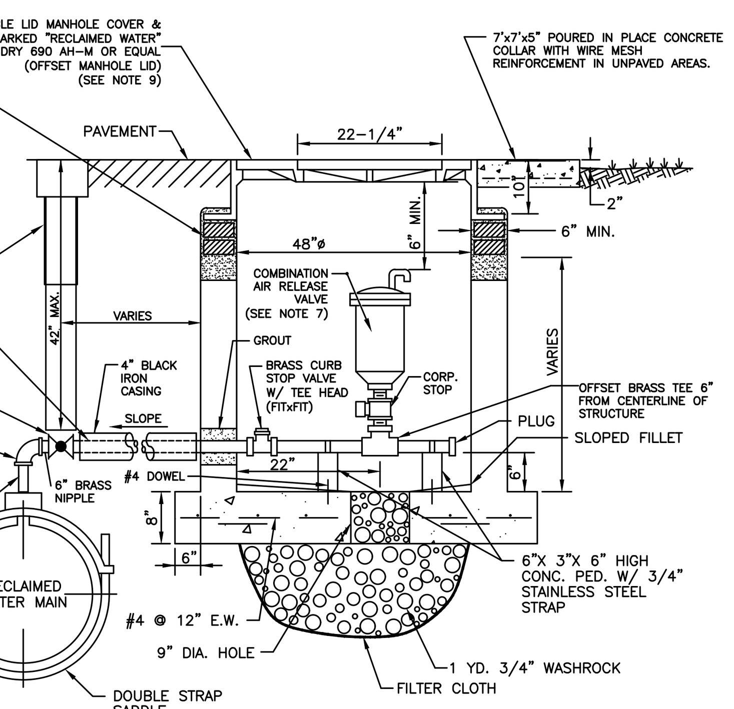


NOTES:

1. PRECAST MONOLITHIC POURED 4,000 P.S.I. TYPE II CONCRETE STRUCTURE. SHOP DRAWING IS REQUIRED TO BE APPROVED BY THE DEPARTMENT PRIOR TO VAULT CONSTRUCTION AND/OR INSTALLATION.
2. ALL OPENINGS SHALL BE SEALED WITH A WATERPROOF NON-SHRINKING GROUT.
3. ALL PIPE HOLES SHALL BE PRECAST.
4. PIPING AND STRUCTURE TO BE IDENTIFIED AS "RECLAIMED WATER SYSTEM" COMPONENTS.
5. THREADED AREAS OF CORPORATION STOP AND OTHER FITTINGS SHALL BE SPIRAL WRAPPED WITH TWO WRAPS OF TEFLON TAPE.
6. COMBINATION AIR RELEASE VALVE (ARV) SHALL BE SIZED APPROPRIATE FOR SERVICE INTENDED ALTHOUGH A 1" MINIMUM SIZED ARV IS REQUIRED ON RECLAIMED WATER MAIN INSTALLATIONS.
7. CONCRETE COLLAR REQUIRED IN UNPAVED AREAS AND WHEN PAVEMENT IS TO BE INSTALLED IN FUTURE.
8. ALTERNATE VAULT DESIGN MAY BE USED WITH AN APPROVED 32" DIAMETER HINGED MANHOLE COVER IS USED PROVIDED AN ALTERNATE VAULT SHOP DRAWING WAS SUBMITTED AND APPROVED BY THE DEPARTMENT PRIOR TO THE VAULT AND COVER BEING INSTALLED.
9. IN LIEU OF BRICK WORK APPROVED PRECAST CONCRETE ADJUSTING RINGS MAY BE USED WITH INSTALLATION PER MANUFACTURER'S RECOMMENDATION.
10. PIPE AND FITTINGS SHALL BE STANDARD BRASS.
11. MANHOLE SHALL BE INSTALLED OUTSIDE OF TRAFFIC AREA

RECLAIMED WATER MAIN OFF-SET UNDERGROUND AIR RELEASE VALVE

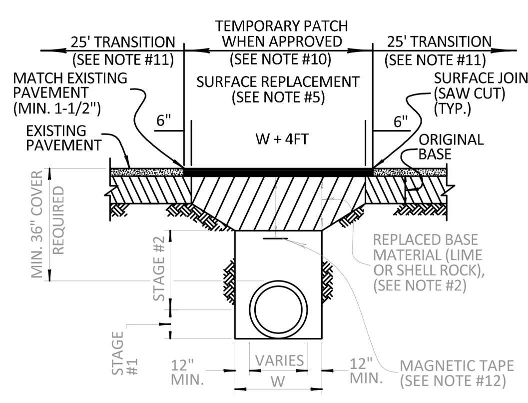
20R

CONSTRUCTION PROCEDURES

THE BACKFILL FOR THE FIRST AND SECOND STAGES SHALL BE PLACED IN 6" LAYERS (COMPACTED THICKNESS) AND SHALL BE COMPACTED TO 100% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T-99.

STAGE 1:
THE CONTRACTOR SHALL PROVIDE ADEQUATE COMPACTED FILL BENEATH THE HAUNCHES OF THE PIPE, USING MECHANICAL TAMPS SUITABLE FOR THIS PURPOSE. THIS COMPACTION APPLIES TO THE MATERIAL PLACED BENEATH THE HAUNCHES OF THE PIPE AND ABOVE ANY BEDDING REQUIRED.

STAGE 2:
THE CONTRACTOR SHALL OBTAIN A WELL-COMPACTED BED AND FILL ALONG THE SIDES OF THE PIPE AND TO A POINT INDICATING THE TOP OF SUB-GRADE MATERIAL.



REPLACEMENT OF FLEXIBLE PAVEMENT FOR PERMITTED PAVEMENT CUT

NOTES

1) BEDDING SHALL CONSIST OF IN-SITU GRANULAR MATERIAL OR WASHED AND GRADED LIMEROCK 3/8" – 7/8" SIZING WITH EQUAL OR GREATER STRUCTURAL ADEQUACY AS EXISTING. UNSUITABLE IN-SITU MATERIALS SUCH AS MUCK, DEBRIS AND LARGER ROCKS SHALL BE REMOVED.
2) REPLACED BASE MATERIAL (PER LAND DEVELOPMENT DESIGN STANDARDS) OVER DITCH SHALL BE TWICE THE THICKNESS OF THE ORIGINAL BASE AND MATCH THE TYPE OF MATERIAL OF THE ORIGINAL BASE OR 12" MINIMUM, WHICHEVER IS GREATER.
3) ASPHALT CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED AND BUTT-JOINTED.
4) BASE MATERIAL SHALL BE PLACED IN TWO OR THREE LAYERS (6" MAX. PER LAYER) AND EACH LAYER THOROUGHLY ROLLED OR TAMPED TO THE SPECIFIED DENSITY (MINIMUM 98% AASHTO – T-180)
5) SURFACE MATERIAL WILL BE CONSISTENT WITH THE EXISTING SURFACE OR 1-1/2" SP 12.5 STRUCTURAL COURSE (TRAFFIC LEVEL A) ASPHALTIC CONCRETE WITH RC-70 PRIME COAT AT 0.10 GAL/SQ. YD. FOR LIMEROCK BASE AND TACK COAT AT 0.05 GAL/S.Y FOLLOW THE LATEST FDOT SPECIFICATIONS FOR APPLICATION RATES OF PRIME AND TACK COATS, CONTRACTOR TO SUBMIT MATERIALS AND RATES TO ENGINEER FOR APPROVAL PRIOR TO BEGINNING WORK.
6) PIPE SHALL BE PLACED IN A DRY TRENCH.
7) ALL ROADWAY REPAIR WORK SHALL BE PERFORMED IN CONFORMANCE WITH APPLICABLE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND COUNTY PPM# EL-0-3606.
8) DENSITY TESTS SHALL BE TAKEN IN 1 FT. LIFTS ABOVE THE PIPE AT INTERVALS OF 400 FT MAXIMUM (1 SET MINIMUM) OR AS DIRECTED BY THE CONSTRUCTION COORDINATION DIVISION. RESULTS SHALL BE SUBMITTED TO CONSTRUCTION COORDINATION DIVISION AS PART OF THEIR FIELD REVIEW.
9) ENGINEER-OF-RECORD SHALL PROVIDE FULL-TIME INSPECTION DURING THE ENTIRETY OF THE OPEN-CUT OPERATION, BEGINNING WITH THE EXCAVATION AND CONTINUING THROUGH THE COMPLETION OF THE PAVING.
10) IF THE PAVEMENT IS NOT COMPLETELY RESTORED IMMEDIATELY FOLLOWING THE OPEN CUT, A SMOOTH TEMPORARY PATCH (MINIMUM 1.5" SP 12.5 STRUCTURAL COURSE ASPHALT) SHALL BE INSTALLED PROPERLY MATCHING THE EXISTING GRADING OF THE ROADWAY. THE TEMPORARY PATCH SHALL BE ALLOWED TO REMAIN IN PLACE AND BE MAINTAINED FOR A PERIOD NO LONGER THAN 45 DAYS. THE COUNTY RETAINS THE RIGHT TO USE POSTED SURETY TO COMPLETE ANY RESTORATION WORK THAT HAS NOT BEEN COMPLETED IN THE 45 DAY PERIOD. ALTERNATIVE TEMPORARY TRENCH PROTECTION (STEEL PLATES OR OTHERS) MAY BE APPROVED BY THE CONSTRUCTION COORDINATION DIVISION.
11) FOR THE FINAL RESTORATION (INCLUDES THE PATCHED/SURFACE REPLACEMENT AREA OVER THE TRENCH), THE ROAD SHALL BE MILLED AND RESURFACED WITH 1-1/2" (ONE AND A HALF INCH) OF SP 12.5 STRUCTURAL COURSE (TRAFFIC LEVEL A) WITH TACK COAT AT 0.05 GAL/SY AND RC-70 PRIME COAT AT 0.10 GAL./SY. FOR A FULL LANE WIDTH ENCROACHED BY THE TRENCH INCLUDING A TRANSITION AREA OF 25 FT. EACH SIDE MEASURED FROM TOP OF TRENCH.
12) APPROVED MAGNETIC TAPE IS REQUIRED FOR ALL MAIN PRESSURE PIPES AND CONDUIT IN THE COUNTY'S RIGHT-OF-WAY. INSTALL TAPE 24" BELOW FINISHED GRADE.
13) CONTINUOUS 4" WIDE PAINT STRIPING IS REQUIRED FOR DIP/PCCP WATER MAINS (BLUE), DIP SANITARY FORCE MAINS (GREEN), DIP RECLAIMED WATER MAINS (PURPLE), GAS MAINS (YELLOW), OR AS REQUIRED BY THE APWA .

WUD ONLY UTILITY NOTE:
THE CONTINUOUS PAINTED STRIPE REFERENCED IN NOTE #13 ABOVE SHALL BE PURPLE - PANATONE 522C IN COLOR PER WUD STANDARDS.

OPEN CUT PIPE INSTALLATION NON-THOROUGHFARE ROAD

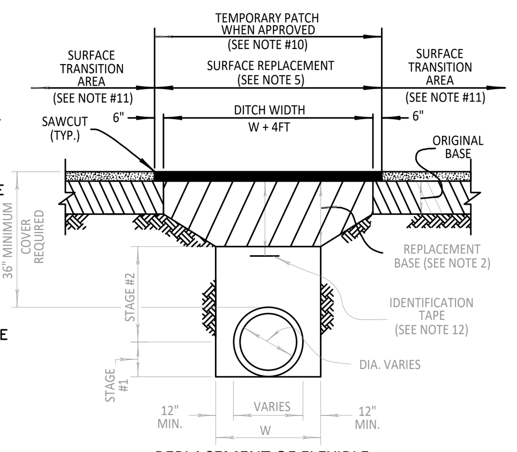
* 21R

CONSTRUCTION PROCEDURES

THE BACKFILL FOR THE FIRST AND SECOND STAGES SHALL BE PLACED IN 6" LAYERS (COMPACTED THICKNESS) AND SHALL BE COMPACTED TO 100% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T-99.

STAGE 1:
THE CONTRACTOR SHALL PROVIDE ADEQUATE COMPACTED FILL BENEATH THE HAUNCHES OF THE PIPE, USING MECHANICAL TAMPS SUITABLE FOR THIS PURPOSE. THIS COMPACTION APPLIES TO THE MATERIAL PLACED BENEATH THE HAUNCHES OF THE PIPE AND ABOVE ANY BEDDING REQUIRED.

STAGE 2:
THE CONTRACTOR SHALL OBTAIN A WELL-COMPACTED BED AND FILL ALONG THE SIDES OF THE PIPE AND TO A POINT INDICATING THE TOP OF SUB-GRADE MATERIAL.



REPLACEMENT OF FLEXIBLE PAVEMENT FOR PERMITTED PAVEMENT CUT

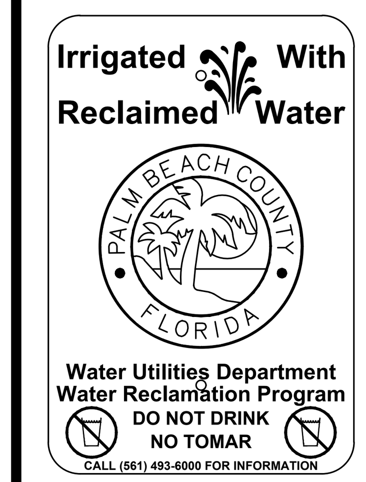
NOTES

1) BEDDING SHALL CONSIST OF IN-SITU GRANULAR MATERIAL OR WASHED AND GRADED LIMEROCK 3/8" - 7/8" SIZING WITH EQUAL OR GREATER STRUCTURAL ADEQUACY AS EXISTING. UNSUITABLE IN-SITU MATERIALS SUCH AS MUCK, DEBRIS AND LARGER ROCKS SHALL BE REMOVED.
2) REPLACED BASE MATERIAL OVER DITCH SHALL BE 16" LIMEROCK (LBR100) MINIMUM FOR THOROUGHFARE PLAN ROADS. ANY ALTERNATE BASE MATERIAL REQUESTED BY THE ENGINEER OF RECORD REQUIRES APPROVAL BY THE ROADWAY PRODUCTION DIVISION.
3) ASPHALT CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED AND BUTT-JOINTED.
4) BASE MATERIAL (PER ROADWAY PRODUCTION DESIGN STANDARDS) SHALL BE PLACED IN TWO OR THREE LAYERS (6" MAX. PER LAYER) AND EACH LAYER THOROUGHLY ROLLED OR TAMPED TO THE SPECIFIED DENSITY. (MINIMUM 98% AASHTO-T-180).
5) 1" FRICTION COURSE FC-9.5 OVER 1-1/2" TYPE SP STRUCTURAL COURSE (TRAFFIC LEVEL C) WITH TACK COAT AT 0.05 GAL/SY AND RC-70 PRIME COAT AT 0.10GAL/SY FOR LIMEROCK BASE. FOLLOW THE LATEST FDOT SPECIFICATIONS FOR APPLICATION RATES OF PRIME AND TACK COATS. CONTRACTOR TO SUBMIT MATERIALS AND RATES TO ENGINEER FOR APPROVAL PRIOR TO BEGINNING WORK.
6) PIPE SHALL BE PLACED IN A DRY TRENCH.
7) ALL ROADWAY REPAIR WORK SHALL BE PERFORMED IN CONFORMANCE WITH APPLICABLE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND COUNTY PPM# EL-0-3605.
8) DENSITY TESTS SHALL BE TAKEN IN 1 FT LIFTS ABOVE THE PIPE AT INTERVALS OF 400 FT MAXIMUM (1 SET MINIMUM) OR AS DIRECTED BY THE CONSTRUCTION COORDINATION DIVISION. RESULTS SHALL BE SUBMITTED TO CONSTRUCTION COORDINATION DIVISION AS PART OF THEIR FIELD REVIEW.
9) ENGINEER-OF-RECORD SHALL PROVIDE FULL-TIME INSPECTION DURING THE ENTIRETY OF THE OPEN-CUT OPERATION, BEGINNING WITH THE EXCAVATION AND CONTINUING THROUGH THE COMPLETION OF THE PAVING.
10) IF THE PAVEMENT IS NOT COMPLETELY RESTORED IMMEDIATELY FOLLOWING THE OPEN CUT, A SMOOTH TEMPORARY PATCH (MINIMUM 2.5" SP 12.5 STRUCTURAL COURSE ASPHALT) SHALL BE INSTALLED, PROPERLY MATCHING THE EXISTING GRADING OF THE ROADWAY. THE TEMPORARY PATCH SHALL BE ALLOWED TO REMAIN IN PLACE AND BE MAINTAINED FOR A PERIOD NO LONGER THAN 45 DAYS. THE COUNTY RETAINS THE RIGHT TO USE POSTED SURETY TO COMPLETE ANY RESTORATION WORK THAT HAS NOT BEEN COMPLETED IN THE 45 DAY PERIOD. ALTERNATIVE TEMPORARY TRENCH PROTECTION (STEEL PLATES OR OTHERS) MAY BE APPROVED BY THE CONSTRUCTION COORDINATION DIVISION.
11) FOR FINAL RESTORATION (INCLUDES THE PATCHED/SURFACE REPLACEMENT AREA OVER THE TRENCH). THE ROAD SHALL BE MILLED 1" MILLING DEPTH/ RESURFACED PER NOTE 5 ABOVE FOR A FULL LANE WIDTH OF THE TRAVEL LANES ENCROACHED BY THE TRENCH AREA, INCLUDING A TRANSITION AREA OF 50 FT. ON EACH SIDE MEASURED FROM TOP OF TRENCH.
12) APPROVED MAGNETIC TAPE IS REQUIRED FOR ALL MAIN PRESSURE PIPES AND CONDUIT IN THE COUNTY'S RIGHT-OF-WAY. INSTALL TAPE 24" BELOW FINISHED GRADE.
13) CONTINUOUS 4" WIDE PAINT STRIPING IS REQUIRED FOR DIP/PCCP WATER MAINS (BLUE), SANITARY MAINS (GREEN),DIP RECLAIMED WATER MAINS (PURPLE), GAS MAINS (YELLOW), OR AS REQUIRED BY THE APWA.

WUD ONLY UTILITY NOTE:
THE CONTINUOUS PAINTED STRIPE REFERENCED IN NOTE #13 ABOVE SHALL BE PURPLE - PANATONE 522C IN COLOR PER WUD STANDARDS.

OPEN CUT PIPE INSTALLATION THOROUGHFARE ROAD

* 22R



NOTE:

1. SIGNS SHALL BE 12"X 18", WITH PURPLE AND BLACK IMPRINTS IMPRINTS ON WHITE ALUMINUM (.063 GA.), ROUNDED CORNERS (1.25" RAD.), 2 HOLES (13/32" DIAM.) 12" O.C.
2. SIGNS AND MOUNTING HARDWARE PROVIDED BY PBCWUD AND INSTALLED BY THE PROPERTY OWNER.

RECLAIMED WATER IRRIGATION AREA IDENTIFICATION SIGN

23R

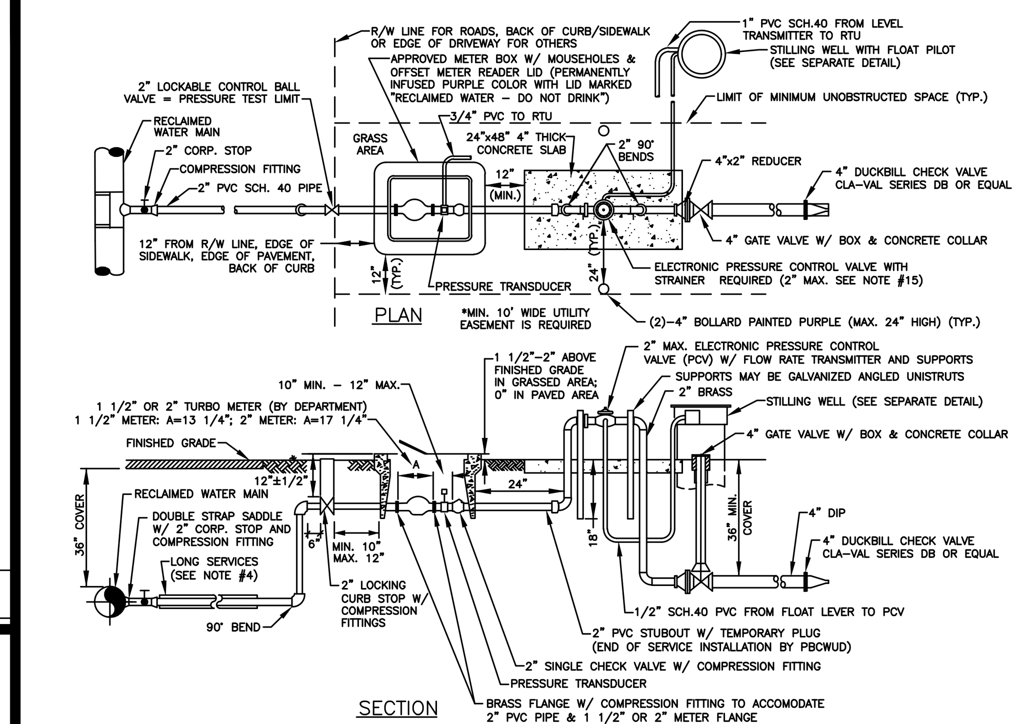
MIN. LENGTH OF PIPE (FEET) TO BE RESTRAINED
(SOURCES: EBAA IRON RESTRAINT LENGTH CALCULATION PROGRAM FOR PVC PIPE, RELEASE 3.1, AND DIPRA THRUST RESTRAINT FOR DUCTILE IRON PIPE, RELEASE 3.2)

FITTING TYPE		PIPE SIZE								200psi			
		4"	6"	8"	10"	12"	16"	20"	24"	30"	36"	42"	48"
90° HORIZ. BEND		14	20	25	30	35	45	54	62	98	112	124	135
45° HORIZ. BEND		6	8	11	13	15	19	22	26	41	46	51	56
22.5° HORIZ. BEND		3	4	5	6	7	9	11	12	19	22	25	27
11.25° HORIZ. BEND		1	2	3	3	4	4	5	6	10	11	12	13
90° VERT. OFFSET	UPPER BEND	29	41	53	64	74	95	115	134	214	246	276	304
	LOWER BEND	7	10	13	16	19	25	30	35	57	66	74	83
45° VERT. OFFSET	UPPER BEND	12	19	24	29	34	39	48	56	89	102	114	126
	LOWER BEND	3	4	6	7	8	10	12	15	23	27	31	34
22.5° VERT. OFFSET	UPPER BEND	6	9	12	14	17	19	23	27	43	49	55	60
	LOWER BEND	1	2	4	4	4	5	6	7	11	13	15	16
11.25° VERT. OFFSET	UPPER BEND	3	4	6	7	8	9	11	13	21	24	27	30
	LOWER BEND	1	1	1	2	2	2	3	3	6	6	7	8
PLUG (DEAD END)		32	45	59	70	83	107	129	151	214	246	276	304
IN-LINE VALVE		32	45	45	45	45	55	65	80	110	125	140	155
TEE (BRANCH RESTRAINT)	4"X ø	23	–	–	–	–	–	–	–	–	–	–	–
	6"X ø	21	35	–	–	–	–	–	–	–	–	–	–
	8"X ø	18	34	47	–	–	–	–	–	–	–	–	–
	10"X ø	16	32	46	58	–	–	–	–	–	–	–	–
	12"X ø	13	30	44	57	69	–	–	–	–	–	–	–
	16"X ø	7	26	41	55	67	90	–	–	–	–	–	–
	20"X ø	1	21	38	52	65	88	109	–	–	–	–	–
	24"X ø	1	16	34	49	62	86	108	129	–	–	–	–
	30"X ø	1	8	28	44	58	83	106	127	208	–	–	–
	36"X ø	1	1	22	39	54	80	103	124	206	240	–	–
	42"X ø	1	1	15	33	49	77	100	122	205	239	270	–
	48"X ø	1	1	7	27	44	73	97	120	203	238	269	298
REDUCER (LARGER PIPE RESTRAINT)	6"X ø	23	–	–	–	–	–	–	–	–	–	–	–
	8"X ø	38	25	–	–	–	–	–	–	–	–	–	–
	10"X ø	57	43	24	–	–	–	–	–	–	–	–	–
	12"X ø	72	60	44	41	–	–	–	–	–	–	–	–
	16"X ø	99	90	78	75	45	–	–	–	–	–	–	–
	20"X ø	123	116	107	105	81	45	–	–	–	–	–	–
	24"X ø	146	140	132	131	111	82	45	–	–	–	–	–
200psi	30"X ø	209	204	197	188	177	153	116	75	–	–	–	–
	36"X ø	243	236	233	226	217	196	168	135	74	–	–	–
	42"X ø	273	270	265	259	252	234	211	183	133	72	–	–
	48"X ø	301	298	294	289	283	268	249	226	183	131	71	–

NOTES:
1. THE DATA IN THE ABOVE TABLE ARE BASED UPON THE FOLLOWING INSTALLATION CONDITIONS:
   SOIL TYPE-SAND TEST PRESSURE-150 PSI/200 PSI DEPTH OF BURY-3'
   TRENCH TYPE-3 SAFETY FACTOR- 1.5 VERTICAL OFFSET-3'
   MINIMUM PIPE LENGTH ALONG TEE RUN-5'
2. THE RESTRAINED PIPE LENGTHS APPLY TO DUCTILE IRON AND PVC PIPE.
3. ALL JOINTS BETWEEN UPPER AND LOWER BENDS SHALL BE RESTRAINED.
4. RESTRAINED PIPE LENGTHS APPLY TO PIPE ON BOTH SIDES OF VALVES AND FITTINGS.
5. MULTIPLY PIPE LENGTH BY 1.4 FOR POLYETHYLENE ENCASED PIPE.
6. RESTRAINED PIPE LENGTHS EQUAL TO AN "INLINE VALVE" CONDITION ARE REQUIRED AT EACH END OF A TRANSITION FROM HDPE PIPE TO OTHER PIPE MATERIALS.
7. DESIGN ENGINEER IS RESPONSIBLE FOR PROPER RESTRAINT PIPE LENGTHS FOR THE PROJECT.

MECHANICAL THRUST RESTRAINT MINIMUM PIPE LENGTHS

24R

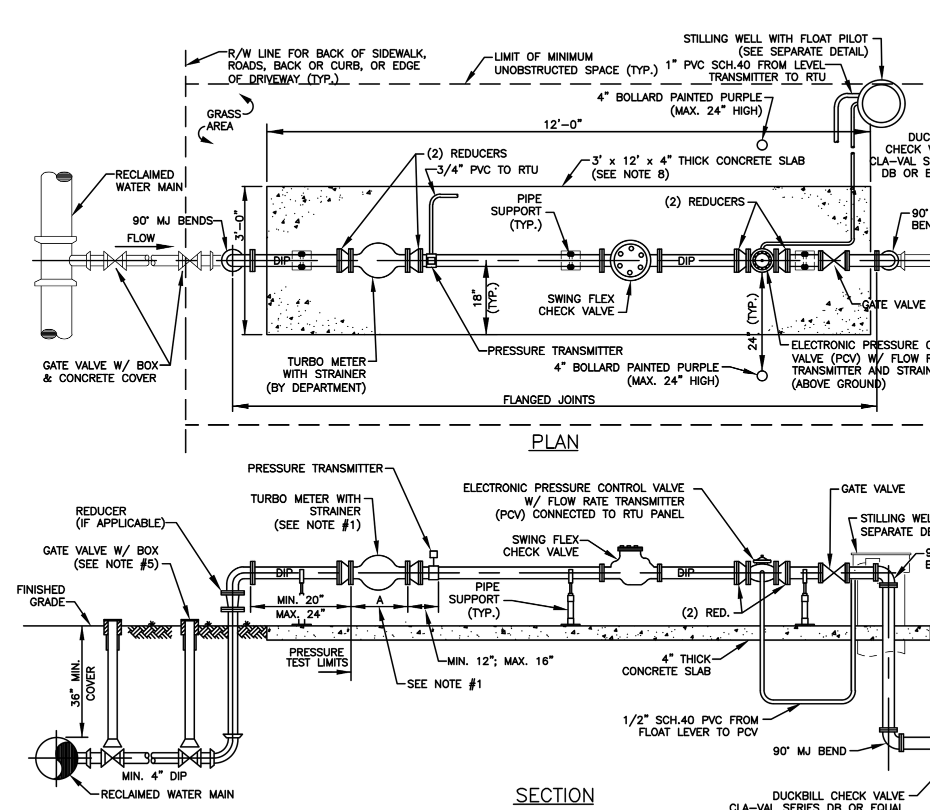


NOTES:

1. PIPING, VALVES, AND BOX LID TO BE PERMANENTLY IDENTIFIED AS "RECLAIMED WATER SYSTEM" COMPONENT. PVC FITTINGS SHALL BE SCHEDULE 80.
2. 12" MINIMUM CLEARANCE TO BE MAINTAINED BETWEEN METER BOX AND ANY OBSTRUCTION.
3. FOR INSTALLATION OF SERVICES UNDER DRIVEWAYS AND ROADWAYS, USE MINIMUM 4"ø PVC SCH. 40 OR HDPE SDR 9 PURPLE CASING. CASING TO EXTEND MINIMUM 24" BEYOND EDGE OF PAVEMENT. END OF CASING TO BE SEALED WITH CEMENT.
4. SUCCESSIVE TAPS INTO THE WATER MAIN SHALL BE SPACED A MINIMUM OF 18" APART. TAPS SPACED BETWEEN 18" AND 48" SHALL BE OFFSET TO EACH SIDE OF THE MAIN. TAPS ON THE SAME SIDE OF A PVC PIPE SECTION SHALL BE 10' APART.
5. METER SHALL NOT BE PLACED IN SIDEWALK OR DRIVEWAY AREAS. SERVICE LINES AND TAPS SHALL NOT BE PLACED UNDER DRIVEWAYS WHENEVER POSSIBLE.
6. A CHECK VALVE IS REQUIRED FOR ALL RECLAIMED WATER SERVICES.
7. THE MAXIMUM SERVICE LENGTH IS 100' TO METER.
8. BEDDING (MIN. 4") AND COVER (MIN. 4") OVER SERVICE LINE OR CASING SHALL CONSIST OF FINE GRANULAR MATERIAL. UNSUITABLE IN-SITU MATERIALS SUCH AS MUCK, DEBRIS, AND LARGER ROCKS SHALL BE REMOVED WITH 2" MAXIMUM SIZE.
9. METER SERVICE WILL NOT BE INSTALLED UNTIL:
   A) FORM BOARDS FOR DRIVEWAY AND/OR SIDEWALK ARE IN PLACE OR DRIVEWAY OR SIDEWALK IS IN PLACE.
   B) "MINIMUM UNOBSTRUCTED SPACE" (AS SHOWN) IS PROVIDED. MINIMUM 12" VERTICAL SEPARATION IS REQUIRED TO OTHER UTILITIES.
   C) APPROPRIATE BACKFLOW PREVENTER IS INSTALLED ON THE POTABLE WATER SERVICE.
10. METER SHALL BE INSTALLED BY THE DEPARTMENT. UPON REQUEST BY PROPERTY OWNER, THE DEPARTMENT MAY INSTALL THE RECLAIMED WATER SERVICE FROM THE TAP INTO THE MAIN TO THE TEMPORARY PLUG ON THE DISCHARGE SIDE OF THE METER.
11. THE DEVELOPER/PROPERTY OWNER OR ASSIGNEE SHALL BE RESPONSIBLE FOR INSTALLATION OF SERVICE ASSEMBLY (INCLUDING STILLING WELL) BEYOND THE "END OF SERVICE INSTALLATION BY PBCWUD" POINT AS SHOWN.
12. CONTRACTOR SHALL CONSTRUCT SERVICE COMPONENTS FOR THE METER "TRUE" AND "PLUMB" AND TO ALLOW METER READING THROUGH THE METER READER LID.
13. ALL HARDWARE FOR FLANGED CONNECTIONS (BOLTS, ETC.) TO BE STAINLESS STEEL.
14. THREADED AREAS OF CORPORATION STOP AND OTHER FITTINGS SHALL BE SPIRAL WRAPPED WITH TWO (2) WRAPS OF TEFLON TAPE.
15. METER BOX OR CONTROL VALVE ASSEMBLY/STILLING WELL SHALL NOT BE LOCATED IN A LAKE MAINTENANCE EASEMENT.
16. THE ENTIRE LAKE DISCHARGE SERVICE ASSEMBLY, INCLUDING THE METER, PRESSURE CONTROL VALVE (PCV), DISCHARGE PIPE, AND STILLING WELL TO BE OWNED AND MAINTAINED BY PBCWUD. ONLY MATERIALS APPROVED BY PBCWUD MAY BE USED FOR SERVICE INSTALLATION.
17. A REMOTE TELEMETRY UNIT IS REQUIRED TO ALLOW PBCWUD TO MONITOR AND CONTROL THE REUSE WATER DISCHARGE.

LAKE DISCHARGE – METER ASSEMBLY (1-1/2" AND 2" METERS)

25R

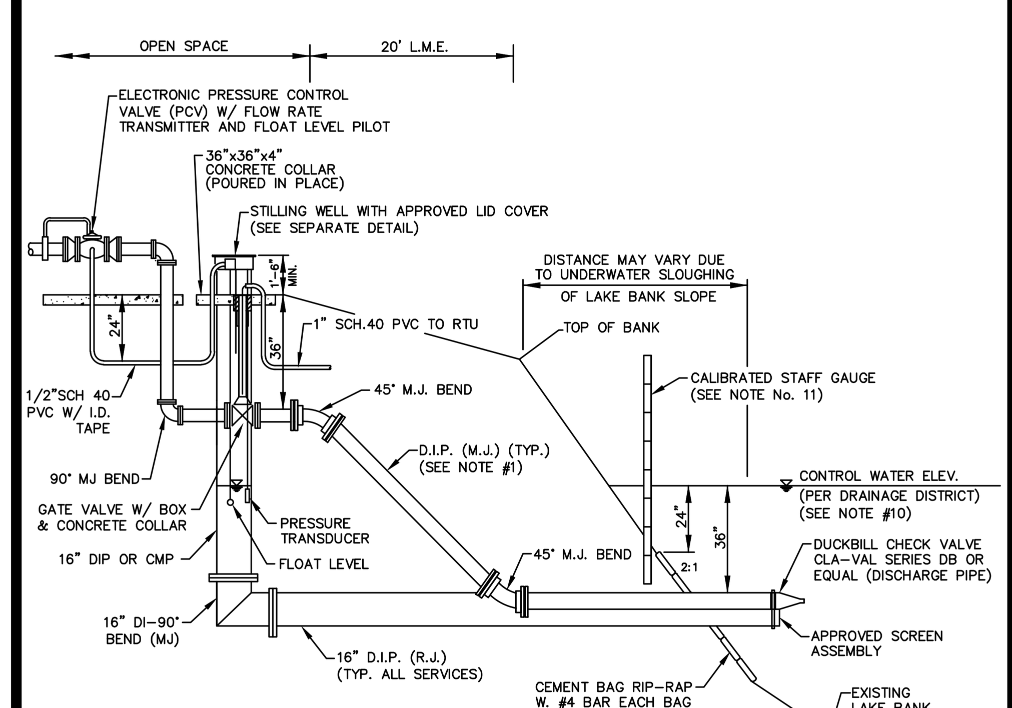


NOTES:

1. SIZING REQUIREMENTS FOR PIPE, VALVES AND APPURTENANCES:
   3" METER: "A" = 19 1/4", 4" SWING FLEX CHECK VALVE, 3" PRESSURE CONTROL VALVE, AND 4" PIPING.
   4" METER: "A" = 23 1/4", 6" SWING FLEX CHECK VALVE, 4" PRESSURE CONTROL VALVE, AND 6" PIPING.
   6" METER: "A" = 27 3/8", 8" SWING FLEX CHECK VALVE, 6" PRESSURE CONTROL VALVE, AND 8" PIPING.
   8" METER: "A" = 30 3/8", 10" SWING FLEX CHECK VALVE, 8" PRESSURE CONTROL VALVE, AND 10" PIPING.
2. ALL PIPING AND APPURTENANCES SHALL BE COLOR CODED PURPLE.
3. VALVE BOX LIDS SHALL BE SQUARE AND MARKED "REUSE WATER".
4. A TO SCALE PLAN AND PROFILE DESIGN AND LOCATION DRAWING IS REQUIRED.
5. METER SHALL NOT BE PLACED IN SIDEWALK OR DRIVEWAY AREAS. SERVICE LINES AND TAPS SHALL NOT BE PLACED UNDER DRIVEWAYS WHENEVER POSSIBLE.
6. A CHECK VALVE IS REQUIRED FOR ALL RECLAIMED WATER SERVICES.
7. UNSUITABLE IN-SITU MATERIALS SUCH AS MUCK, DEBRIS, AND LARGER ROCKS SHALL BE REMOVED WITH 2" MAXIMUM SIZE.
8. CONCRETE PAD FOR WATER METER ASSEMBLY SHALL BE 4" THICK WITH 4"x4" WIRE MESH. CONCRETE PAD IS REQUIRED TO BE BROOM FINISHED AND INSTALLED PRIOR TO THE WATER METER ASSEMBLY.
9. METER SHALL BE INSTALLED BY THE DEPARTMENT. PROPERTY OWNER SHALL BE RESPONSIBLE FOR DESIGN AND INSTALLATION OF THE SERVICE ASSEMBLY, INCLUDING THE STILLING WELL.
10. CONTRACTOR SHALL CONSTRUCT SERVICE COMPONENTS FOR THE METER "TRUE" AND "PLUMB" AND TO ALLOW METER READING THROUGH THE METER READER LID.
11. ALL HARDWARE FOR FLANGED CONNECTIONS (BOLTS, ETC.) TO BE STAINLESS STEEL.
12. METER BOX OR CONTROL VALVE ASSEMBLY/STILLING WELL SHALL NOT BE LOCATED IN A LAKE MAINTENANCE EASEMENT.
13. THE ENTIRE LAKE DISCHARGE SERVICE ASSEMBLY, INCLUDING THE METER, PRESSURE CONTROL VALVE (PCV), DISCHARGE PIPE, AND STILLING WELL TO BE OWNED AND MAINTAINED BY PBCWUD. ONLY MATERIALS APPROVED BY PBCWUD MAY BE USED FOR SERVICE INSTALLATION.
14. A REMOTE TELEMETRY UNIT IS REQUIRED TO ALLOW PBCWUD TO MONITOR AND CONTROL THE REUSE WATER DISCHARGE.

LAKE DISCHARGE – METER ASSEMBLY (3" AND LARGER)

26R

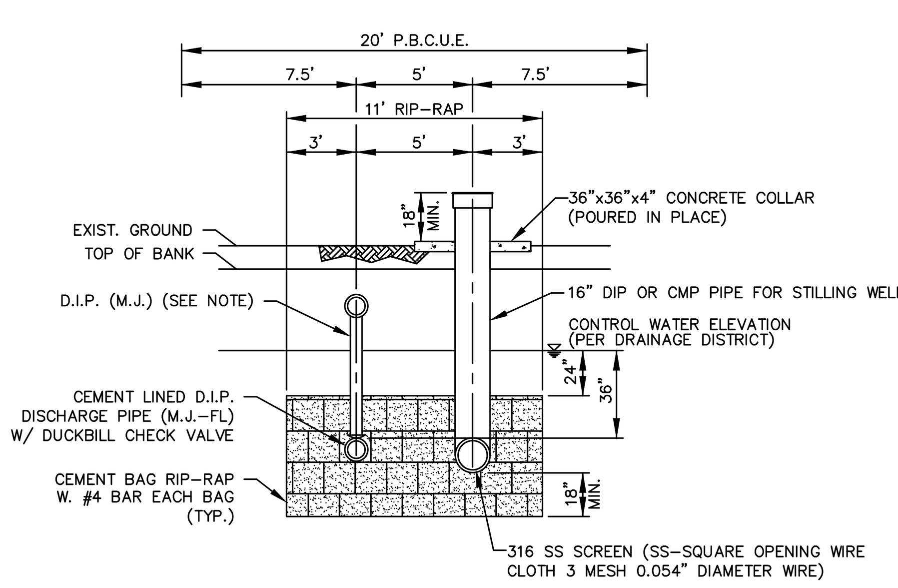


NOTES:

1. SIZING REQUIREMENTS FOR PIPING, VALVES, AND APPURTENANCES (DIP REQUIRED):
   UP TO 2" METER: 2" CHECK VALVE, 2" PRESSURE CONTROL VALVE, 4" GATE VALVE, AND 4" DISCHARGE.
   3" METER: 4" CHECK VALVE, 3" PRESSURE CONTROL VALVE, 4" GATE VALVE, AND 4" DISCHARGE.
   4" METER: 6" CHECK VALVE, 4" PRESSURE CONTROL VALVE, 6" GATE VALVE, AND 6" DISCHARGE.
   6" METER: 8" CHECK VALVE, 6" PRESSURE CONTROL VALVE, 8" GATE VALVE, AND 8" DISCHARGE.
   8" METER: 10" CHECK VALVE, 8" PRESSURE CONTROL VALVE, 10" GATE VALVE, AND 10" DISCHARGE.
2. ALL PIPING AND APPURTENANCES SHALL BE COLOR CODED AS REQUIRED.
3. METER BOX OR CONTROL VALVE ASSEMBLY/STILLING WELL SHALL NOT BE LOCATED IN A LAKE MAINTENANCE EASEMENT.
4. PROPERTY OWNER SHALL BE RESPONSIBLE FOR DESIGN AND INSTALLATION OF THE SERVICE ASSEMBLY, INCLUDING THE STILLING WELL.
5. THE ENTIRE LAKE DISCHARGE SERVICE ASSEMBLY, INCLUDING THE METER, PRESSURE CONTROL VALVE (PCV), DISCHARGE PIPE, AND STILLING WELL TO BE OWNED AND MAINTAINED BY PBCWUD. ONLY MATERIALS APPROVED BY PBCWUD MAY BE USED FOR SERVICE INSTALLATION.
6. STILLING WELL SHALL BE LOCATED AS CLOSE AS POSSIBLE TO THE PRESSURE CONTROL VALVE ASSEMBLY.
7. MINIMUM 20' WIDE PBCUE IS REQUIRED.
8. A TO SCALE PLAN AND PROFILE DESIGN AND LOCATION DRAWING IS REQUIRED.
9. FLOAT LEVEL TO BE SET AS REQUIRED BY THE DRAINAGE DISTRICT.
10. PROPERTY OWNER SHALL INSTALL A CALIBRATED LAKE WATER LEVEL STAFF GAUGE TO RECORD AND REPORT WATER LEVELS AS REQUIRED BY REGULATORY AGENCIES.
11. STAFF GAUGE TO BE UNOBSTRUCTED, WATER LEVEL SHALL BE EASY TO READ. MUST BE LOCATED OUTSIDE OF LITTORAL ZONE, MUST BE CALIBRATED BY A SURVEYOR.

LAKE DISCHARGE OUTFALL DETAIL (PROFILE)

27R

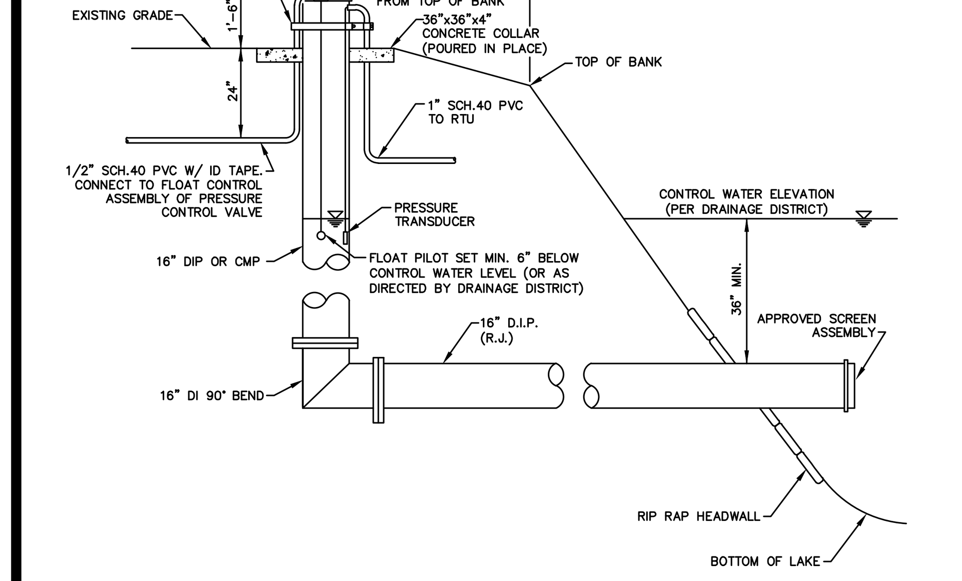


NOTES:

1. DISCHARGE PIPE SIZING REQUIREMENTS:
   UP TO 2" METER: 4" DISCHARGE DIP.
   3" METER: 4" DISCHARGE DIP.
   4" METER: 6" DISCHARGE DIP.
   6" METER: 8" DISCHARGE DIP.
   8" METER: 10" DISCHARGE DIP.
2. ALL PIPING AND APPURTENANCES SHALL BE COLOR CODED AS REQUIRED.
3. MINIMUM 36" COVER OVER BURIED PIPE IS REQUIRED.

LAKE DISCHARGE – OUTFALL (FRONT ELEVATION)

28R



NOTES:

1. STILLING WELL SHALL NOT BE INSTALLED IN A LAKE MAINTENANCE EASEMENT OR LAKE TRACT.
2. APPROPRIATELY SIZED PALM BEACH COUNTY UTILITY EASEMENTS ARE REQUIRED.
3. ALL PIPING AND APPURTENANCES SHALL BE COLOR CODED AS REQUIRED.
4. A "NO SWIMMING" AND "CATCH AND RELEASE" SIGN SHALL BE INSTALLED AT POTENTIAL PUBLIC ACCESS POINTS TO EACH LAKE BY LAKE OWNER PRIOR TO SERVICE ACTIVATION.
5. TOP RIM ELEVATION OF THE STILLING WELL SHALL BE NOTED (WITH ELEVATION DATUM) ON THE RECORD DRAWINGS.

LAKE DISCHARGE – OUTFALL DETAIL (STILLING WELL DETAIL)

29R

DEFINITIONS

GENERAL NOTES

1. DEPARTMENT – THE PALM BEACH COUNTY WATER UTILITIES DEPARTMENT.
2. CONTRACTOR – UTILITY CONTRACTOR AND ALL UTILITY SUBCONTRACTORS.
3. ENGINEER – ENGINEER RESPONSIBLE FOR INSPECTION AND CERTIFICATION.

PROCEDURE

1. A PRE-CONSTRUCTION MEETING IS TO BE HELD PRIOR TO DELIVERY OF MATERIALS AND INITIATION OF ANY POTABLE WATER, RECLAIMED WATER AND/OR WASTEWATER SYSTEM CONSTRUCTION. THE MEETING SHALL BE ATTENDED BY THE DEPARTMENT, CONTRACTOR, ENGINEER AND OTHER INTERESTED PARTIES.
2. ANY REVISIONS TO THE APPROVED PLANS SHALL BE CALLED TO THE ATTENTION OF THE DEPARTMENT PRIOR TO THE PRE-CONSTRUCTION MEETING. REVISED PLANS MUST BE APPROVED PRIOR TO THE MEETING.
3. FIVE (5) COPIES OF THE CURRENT APPROVED MATERIAL LIST AND ALL NECESSARY SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO SCHEDULING OF THE PRE-CONSTRUCTION MEETING.
4. ALL APPLICABLE PERMITS MUST BE OBTAINED PRIOR TO PRECONSTRUCTION MEETING. (DOT, HEALTH DEPARTMENT, COUNTY ENGINEER, ETC.).
5. THE CONTRACTOR SHALL MAINTAIN A CURRENT APPROVED SET OF CONSTRUCTION PLANS ON JOB SITE.
6. ALL MATERIALS SUPPLIED SHALL CONFORM TO PRODUCT LIST AND SHOP DRAWINGS AS APPROVED PRIOR TO CONSTRUCTION. SUBSTITUTE MATERIALS SHALL NOT BE APPROVED AFTER DELIVERY TO THE JOB SITE. ALL REQUESTS FOR MATERIAL SUBSTITUTION SHALL BE APPROVED PRIOR TO DELIVERY OF THESE MATERIALS TO THE JOB SITE.
7. THE LOCATIONS OF EXISTING UTILITIES SHOWN ON THE APPROVED PLANS ARE TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR. APPROVAL OF DEVELOPMENT PLANS BY THE DEPARTMENT IN NO WAY IMPLIES VERIFICATION OF THE ACCURACY OF THOSE PLANS OR FEATURES DEPICTED THEREON. ANY DISCREPANCY IN OR VARIATION FROM THE APPROVED PLANS IS TO BE BROUGHT TO THE ATTENTION OF THE DEPARTMENT BY THE ENGINEER AND CONTRACTOR. THE CONTRACTOR SHALL CONFIRM AND INSTALL (IF NECESSARY) ADEQUATE MECHANICAL PIPE / JOINT RESTRAINT ON EXISTING PIPES PRIOR TO CONNECTION.
8. THE CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES THROUGHOUT THE DURATION OF CONSTRUCTION FOR THE PROTECTION OF EXISTING AND NEWLY INSTALLED UTILITIES FROM DAMAGE OR DISRUPTION OF SERVICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING SUCH MEASURES AS NECESSARY TO PROTECT THE HEALTH, SAFETY AND WELFARE OF THOSE PERSONS HAVING ACCESS TO THE WORK SITE.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING LOCATIONS FROM ALL OTHER UTILITY FACILITIES.
10. THE CONTRACTOR OR ENGINEER SHALL SCHEDULE INSPECTIONS AND TESTS A MINIMUM OF 24-48 HOURS IN ADVANCE.
11. NO CONNECTION TO OR ANY OTHER CONSTRUCTION SHALL BE PERFORMED ON AN EXISTING DEPARTMENT OWNED OR MAINTAINED MAIN OR STRUCTURE WITHOUT THE PRESENCE OF A DEPARTMENT INSPECTOR.
12. FACILITIES PROPOSED HEREIN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS AND THE DEPARTMENT'S MINIMUM STANDARDS. CONFLICTS BETWEEN THE PRECEDING DOCUMENTS SHOULD BE CALLED TO THE ATTENTION OF THE DEPARTMENT FOR RESOLUTION. DEVIATIONS FROM THE APPROVED PLANS MUST BE APPROVED IN ADVANCE BY THE DEPARTMENT.
13. UPON COMPLETION OF CONSTRUCTION, A FINAL INSPECTION SHALL VERIFY PROPER ADHERENCE TO ALL FACETS OF THE PLANS AND SPECIFICATIONS.

PRESSURE PIPE NOTES

1. THERE SHALL BE 36" MINIMUM COVER FROM FINISHED GRADE TO TOP OF PIPE.
2. DUCTILE IRON PIPE (DIP) THICKNESS SHALL CONFORM TO THE DEPARTMENT'S APPROVED MATERIAL LIST. POTABLE WATER AND RECLAIMED WATER MAINS DIP SHALL BE CEMENT LINED. FORCE MAIN DIP SHALL BE CERAMIC EPOXY LINED.
3. PVC PRESSURE PIPE SHALL BE C-900, SDR-18, 150 PSI.
4. ALL FITTINGS SHALL BE DUCTILE IRON WITH MECHANICAL JOINTS AND CEMENT OR APPROVED EPOXY LINING.
5. POTABLE WATER, RECLAIMED WATER AND WASTEWATER FORCE MAIN VALVES 10 INCHES AND SMALLER SHALL BE RESILIENT SEAT GATE VALVES. TWELVE-INCH (12") OR LARGER FORCE MAIN VALVES SHALL BE RESILIENT SEAT GATE VALVES OR ECCENTRIC PLUG VALVES (IF APPROVED IN ADVANCE BY DEPARTMENT). POTABLE WATER AND RECLAIMED WATER MAIN VALVES LARGER THAN 10 INCHES SHALL BE BUTTERFLY VALVES.
6. ALL TRENCHING, PIPE-LAYING, BACKFILL, PRESSURE TESTING, AND DISINFECTION MUST COMPLY WITH ALL APPLICABLE FEDERAL, STATE, COUNTY AND HEALTH DEPARTMENT STANDARDS AND REGULATIONS.

RECLAIMED WATER #3 STANDARD DETAILS

CONSULTANT:

IT'S THE LAW !
CALL 48 HOURS BEFORE YOU DIG
1-800-432-4770
SUNSHINE STATE ONE CALL OF FLORIDA, INC.
UTILITIES NOTIFICATION CENTER

DESIGNED BY:	WUD
DRAWN BY:	M. BUCKNER
CHECKED BY:	J. LAMMERT
APPROVED BY:	WUD

Palm Beach County
Water Utilities Department
P.O.Box 16097
West Palm Beach, FL 33416-6097

WUD PROJECT No.
00-000

WUD PROJECT NAME

PALM BEACH COUNTY WATER UTILITIES DEPARTMENT
P.O. BOX 16097
WEST PALM BEACH, FL 33416
(561)493-6000

NO.	DATE	REVISION / REMARKS	BY
	JUNE 2019	GENERAL REVISION	J.L.
*	JAN 2023	GENERAL REVISION	J.L.

STD DETAILS

SHEET NUMBER 0 OF 0

SEAL

Feb 27, 2023