WATER STANDARD PLANS

REVISIONS - MAY 2014

PREFACE

Based on comments received during the public review comment period, the following revisions to the updated Water portion of the *Park City Design Standards, Construction Specifications, and Standard Detail* have been made.

Affected standard plan numbers are:

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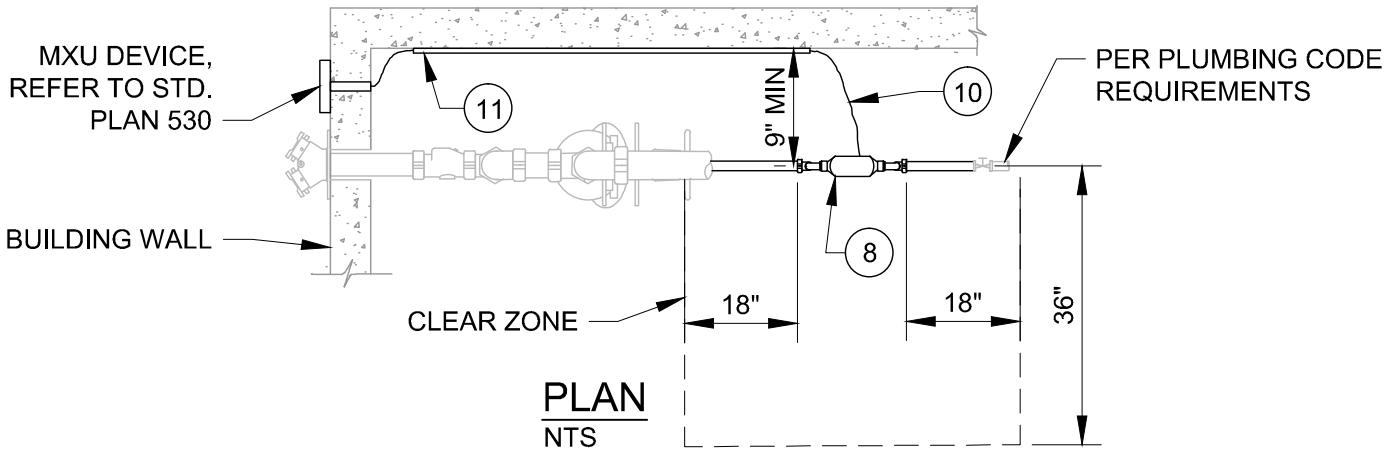
GENERAL WATER NOTES

1. THE FOLLOWING DOCUMENTS ARE INCORPORATED INTO THESE CONTRACT DOCUMENTS BY REFERENCE:
   a. *PARK CITY DESIGN STANDARDS, CONSTRUCTION SPECIFICATIONS, AND STANDARD DETAILS*
   b. AMERICAN WATER WORKS ASSOCIATION STANDARDS (AWWA)
   c. UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY, DIVISION OF DRINKING WATER (DDW), R309-550 FACILITY DESIGN AND OPERATION: TRANSMISSION AND DISTRIBUTION PIPELINES
   d. INTERNATIONAL PLUMBING CODE
2. ALL PIPE, JOINTS, FITTINGS, VALVES, AND FIRE HYDRANTS SHALL CONFORM TO ANSI/NSF STANDARD 61 AND APPLICABLE SECTIONS OF AWWA STANDARDS C104-08 THROUGH C550-05 AND C900-07 THROUGH C950-07. ALL BRASS AND BRONZE PIPE, FITTINGS, AND VALVES SHALL MEET LOW LEAD COMPLIANCE REQUIREMENTS IN ACCORDANCE WITH ANSI/ASTM 371.
3. UTAH DIVISION OF DRINKING WATER (DDW) APPROVALS:
   a. FOR PROJECTS EXCEEDING 300 FEET OF NEW PIPE AND/OR INCLUDING A WATER BOOSTER STATION OR PRESSURE REDUCING STATION, A DDW *PROJECT NOTIFICATION FORM* (PNF) SHALL BE SUBMITTED TO THE DDW BY THE DESIGN ENGINEER IN CONJUNCTION WITH SUBMITTAL OF A WATER MASTER PLAN TO THE CITY. FOLLOWING DESIGN REVIEW BY THE CITY AND INCORPORATION OF CITY COMMENTS, THE DESIGN ENGINEER SHALL SUBMIT WATER CONSTRUCTION PLANS TO THE DDW TO OBTAIN A CONSTRUCTION PERMIT. NO WATER CONSTRUCTION SHALL COMMENCE UNTIL A DDW CONSTRUCTION PERMIT IS ISSUED.
   b. A DDW FINAL OPERATING PERMIT IS REQUIRED PRIOR TO THE CITY OPERATING AND ACCEPTING THE WATER IMPROVEMENTS. FOLLOWING THE CITY'S WATER SYSTEM WALK-THROUGH AND THE CONTRACTOR'S SUBSEQUENT COMPLETION OF PUNCH-LIST ITEMS, THE CITY'S WATER DEPARTMENT WILL SUBMIT AN OPERATING PERMIT REQUEST TO THE DDW. THE FOLLOWING ITEMS ARE REQUIRED FROM THE DEVELOPER FOR THE CITY'S SUBMITTAL:
      i. FINAL RECORD DRAWINGS AND O&M MANUALS
      ii. HYDROSTATIC TESTING AND FLUSHING RECORDS (COMPLETED BY THE CITY'S INSPECTOR)
      iii. ACCEPTABLE BACTERIOLOGICAL TESTING RESULTS
      iv. CERTIFICATION BY THE (DEVELOPER'S) ENGINEER OF RECORD
4. THE CITY UTILIZES AN AUTOMATIC METER READING (AMR) SYSTEM. THE DEVELOPER MAY BE REQUIRED TO CONDUCT A PROPOGATION STUDY AND INSTALL RESULTING RECOMMENDED IMPROVEMENTS TO FACILITATE A CLEAR SIGNAL TO THE PROJECT. REFER TO STANDARD PLAN 520 FOR SPECIFIC METER TRANSMITTER UNIT (MXU) REQUIREMENTS.
5. REFER TO APPLICABLE STANDARD PLANS FOR WATER SYSTEM DETAILS AND REQUIREMENTS
6. EXTERNAL CORROSION PROTECTION SHALL BE INCLUDED ON ALL WATER SYSTEM IMPROVEMENTS, REFERENCE STANDARD PLAN 534 FOR REQUIREMENTS. A SOILS ANALYSIS MAY BE REQUIRED IN CONJUNCTION WITH THE DESIGN OF THE WATER SYSTEM TO DETERMINE THE EXTENT OF CORROSION PROTECTION REQUIRED.
7. REFER TO STANDARD PLAN 520 FOR GENERAL REQUIREMENTS FOR WATER METERS, METER VAULTS, AND WATER SERVICE LINES
8. CITY INSPECTION OF WATER SYSTEM IMPROVEMENTS WILL FOLLOW THE "*PUBLIC WATER SYSTEM FIELD OBSERVATION GUIDELINES*" AND ESTABLISHED CITY POLICIES. CONTRACTOR SHALL PROVIDE NECESSARY ASSISTANCE TO MEET THE GUIDELINE REQUIREMENTS.
9. NOTIFY CITY ENGINEER'S OFFICE AT LEAST 48 HOURS BEFORE PERFORMING ANDY WATER RELATED WORK. ARRANGE A PRECONSTRUCTION CONFERENCE SPECIFIC TO WATER CONSTRUCTION WITH THE CITY ENGINEER AND WATER DEPARTMENT AT LEAST 48 HOURS BEFORE START OF WORK. FOR PROJECTS INVOLVING ONLY SERVICE LINE AND/OR METER VAULT INSTALLATION, AN ON-SITE MEETING WITH THE CITY ENGINEER 48 HOURS PRIOR TO CONSTRUCTION IS ACCEPTABLE.
10. FOR TEMPORARY USE OF EXISTING WATER SYSTEM AND FIRE HYDRANTS TO OBTAIN CONSTRUCTION WATER, REFER TO STANDARD PLAN 531.
11. ALL CONSTRUCTION OF WATER SYSTEM SHALL BE CLEARLY STAKING BY THE DEVELOPER'S OR CONTRACTOR'S SURVEYOR. STAKING SHALL INCLUDE ALL BENDS, VALVES, HYDRANTS, SERVICES, METER VAULTS, AND SPECIALS. A MINIMUM OF 50-FOOT STATIONING IS REQUIRED FOR PIPELINE.
12. CHANGES TO THE APPROVED WATER PLANS, INCLUDING PIPE ALIGNMENT, SIZE, AND DEPTH AS WELL AS FITTINGS, VALVES, SERVICES, AND METER VAULT LOCATIONS SHALL BE AUTHORIZED BY THE CITY ENGINEER PRIOR TO INSTALLATION.

13. WATER SERVICE INTERRUPTION. THE FOLLOWING SHALL BE MET WITH RESPECT TO THE INTERRUPTION OF SERVICE TO CUSTOMERS INCLUDING THE SHUTDOWN OF THE EXISTING WATER SYSTEM:
    a. CONTRACTOR SHALL NOT OPERATE EXISTING WATER VALVES
    b. SCHEDULE SERVICE WORK REQUIRING WATER SERVICE INTERRUPTIONS OR SHUTDOWN OF THE EXSTING WATER SYSTEM A MINIMUM OF 72 HOURS IN ADVANCE WITH THE WATER DEPARTMENT
    c. LIMIT INTERRUPTIONS TO OCCUR AND BE COMPLETED ON MONDAY THRU THURSDAY, 9:00 AM TO 4:00 PM. NO INTERRUPTIONS SHALL OCCUR ON FRIDAYS, WEEKENDS, OR HOLIDAYS.
    d. CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFICATION TO AFFECTED CUSTOMERS. CONTACT THE WATER DEPARTMENT FOR NOTIFICATION REQUIREMENTS. BE ADVISED THAT ON OCCASION VALVES IN THE EXISTING WATER SYSTEM MAY BE INOPERABLE AND MAY REQUIRE NOTIFICATION OF A LARGER AREA. IF VALVE MAINTENANCE IS REQUIRED, A SHUTDOWN DELAY OF SEVERAL DAYS SHOULD BE EXPECTED.
    e. FOR WATER SHUTDOWNS LONGER THAN 4 HOURS, CONTRACTOR SHALL SUBMIT A TEMPORARY WATER PLAN TO KEEP ALL CUSTOMERS IN SERVICE. ALL COSTS ASSOCIATED WITH MAINTAINING SERVICE TO AFFECTED CUSTOMERS SHALL BE BORNE BY THE CONTRACTOR
    f. CONTRACTOR SHALL HAVE ALL PERTINENT PARTS AND MATERIALS ON SITE PRIOR TO SHUTDOWN OF THE WATER SYSTEM BY THE WATER DEPARTMENT
    g. CONSTRUCTION EXCAVATION MUST BE PREPARED AND THE WATER MAIN EXPOSED PRIOR TO SHUTDOWN OF THE WATER SYSTEM
14. EXPOSE EXISTING WATER PIPES AND VERIFY HORIZONTAL AND VERTICAL LOCATION PRIOR TO INSTALLING NEW IMPROVEMENTS
15. COVER OPEN ENDS OF WATER LINE DURING PIPE LAYING OPERATIONS. COVER AND EFFECTIVELY SEAL THE OPEN ENDS OF PIPELINES AT THE END OF EACH DAY'S WORK.
16. PROVIDE ACCESS TO EXISTING MAIN LINE VALVES THROUGHOUT CONSTRUCTION
17. WHERE JOINING EXISTING ASBESTOS CEMENT PIPE, CUT IN ACCORDANCE WITH OSHA REQUIREMENTS AND DISPOSE OF IN ACCORDANCE WITH APPLICABLE ENVIRONMENTAL REGULATIONS.
18. PROVIDE EXTENSIONS ON VALVE STEM TOPS HAVING OVER 5 FEET BURY. REFER TO STANDARD PLAN 570.
19. INSTALL AIR AND VACUUM VALVES PER STANDARD PLANS 574 AND 575 AT HIGH POINTS (8" DIAMETER PIPE OR LARGER) AS DEEMED NECESSARY BY THE DESIGN ENGINEER AND CITY.
20. THRUST BLOCKING IS REQUIRED ON ALL WATER MAIN AND FIRE LINES. REFER TO STANDARD PLANS 561 AND 562
21. REMOVE AND CORRECT DEFECTIVE WORK WITHIN 24 HOURS FOLLOWING WRITTEN NOTIFICATION BY THE CITY ENGINEER.
22. CONSTRUCT TEMPORARY FLUSHING VALVES/BLOW-OFF PIPING ON THE END OF NEW WATER MAINS AS REQUIRED TO MEET FLUSHING REQUIREMENTS. CONSULT WITH CITY INSPECTOR TO DETERMINE ACCEPTABLE LOCATIONS AND SIZING REQUIREMENTS. MINIMUM ACCEPTABLE FLUSHING VELOCITY FOR INITIAL FLUSH IS 6 FEET PER SECOND. DO NOT PERFORM INITIAL FLUSH THROUGH FIRE HYDRANTS.
23. DISINFECT ALL NEW WATER MAINS AND APPURTENANCES IN ACCORDANCE WITH AWWA STANDARD C651-05, THE SPECIAL REQUIREMENTS OF THE *PARK CITY DESIGN STANDARDS, CONSTRUCTION SPECIFICATIONS, AND STANDARD DETAILS,* AND THE *PARK CITY WATER SYSTEM FIELD OBSERVATION GUIDELINES*. DISINFECTING, FLUSHING, AND HYDROSTATIC PLANS SHALL BE SUBMITTED TO THE CITY INSPECTOR A MINIMUM OF 5 WORKING DAYS PRIOR TO COMMENCEMENT OF ACTIVITY. CONTRACTOR SHALL NOT OPERATE EXISTING WATER VALVES.
24. BACKFLOW PREVENTION DEVICES MAY BE REQUIRED. IF REQUIRED, THE CITY MAY NOT SET A WATER METER UNTIL AN APPROVED AND TESTED BACKFLOW DEVICE IS INSTALLED AND INSPECTED
25. ALL BACKFLOW PREVENTERS HAVE TO BE TESTED PERIODICALLY TO ENSURE THAT THEY ARE FUNCTIONING PROPERLY. A VISUAL CHECK OF AIR GAPS IS SUFFICIENT, BUT MECHANICAL BACKFLOW PREVENTERS HAVE TO BE TESTED BY A STATE CERTIFIED BACKFLOW SPECIALIST, WITH PROPERLY CALIBRATED GAUGE EQUIPMENT. TO OBTAIN A LIST OF STATE CERTIFIED TESTERS EITHER CALL US OR REFER TO THE STATE OF UTAH WEBSITE PAGE OF BACKFLOW TESTERS. HTTP://WWW.DRINKINGWATER.UTAH.GOV/DOCUMENTS/COMPLIANCE/BACKFLOW_TECHNICIANS_COMMER_AVAIL.PDF
26. FIRE SPRINKLER SYSTEM BOOSTER PUMPS: FIRE SPRINKLER SYSTEM PUMPS, INTEGRAL TO THE FIRE SPRINKLER PIPING, REQUIRED TO MEET FIRE SPRINKLER PRESSURE DESIGN REQUIREMENTS, ARE CONSIDERED OUTSIDE THE INTENT OF UTAH DDW REGULATION R309-550-11(3) AND DO NOT REQUIRE APPROVAL OF THE DDW IF THEIR INSTALLATION CONFORMS TO UTAH ADOPTED PLUMBING CODE AND NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 13 D. FIRE BOOSTER PUMPS SHALL BE INSTALLED ON THE BUILDING SIDE OF THE WATER METER VAULT, OUTSIDE THE VAULT, AND SHALL BE APPROVED BY THE CITY ENGINEER, FIRE MARSHAL, AND BUILDING DEPARTMENT.

PARK CITY 1884 PARK CITY MUNICIPAL CORPORATION **WATER**	**DATE** 5/2014 **REV.**	**GENERAL WATER NOTES**	**STD. PLAN** **500.2**



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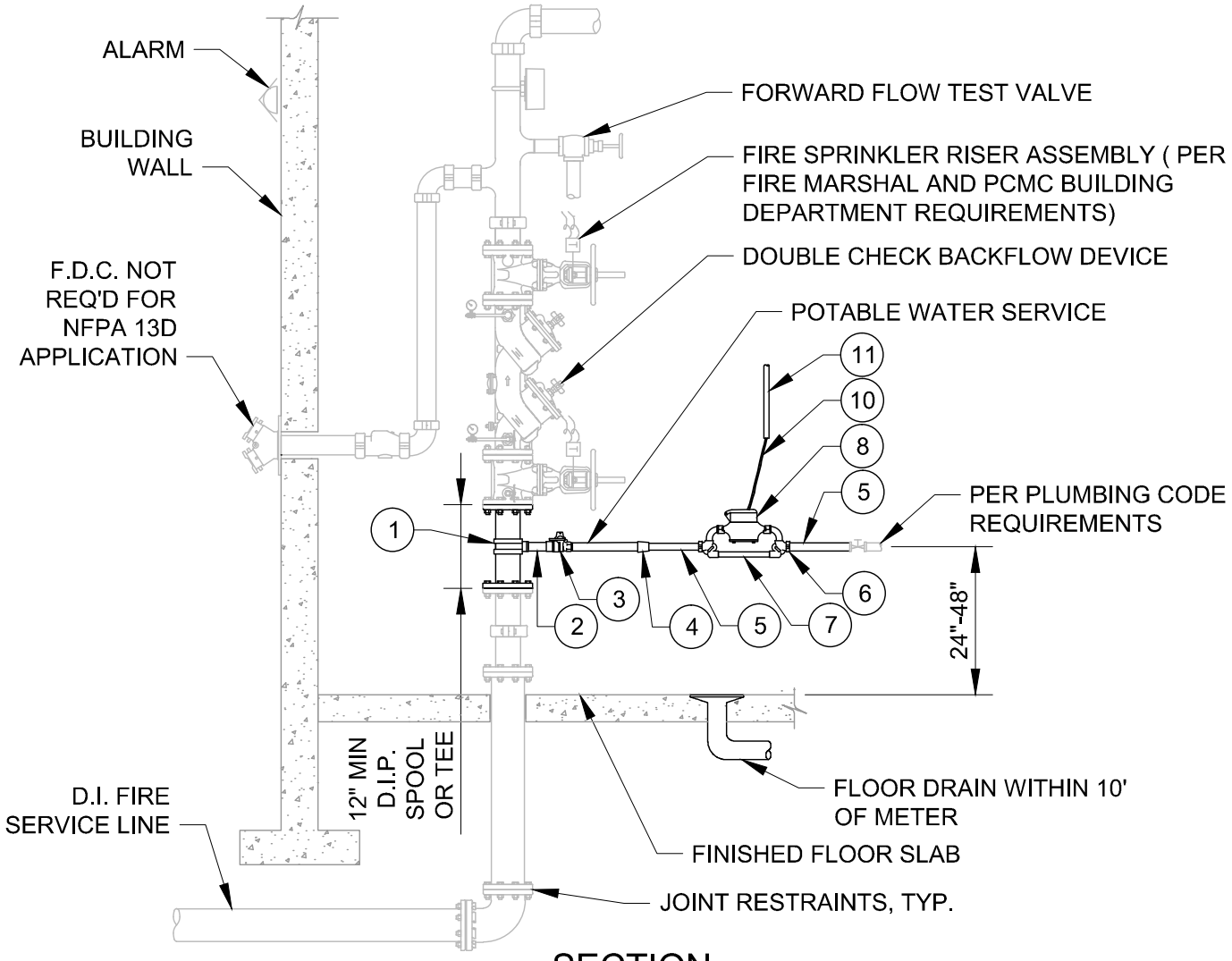

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NOTES:
1. REFER TO STD. PLAN 520 FOR GENERAL REQUIREMENTS - METER, METER VAULT, AND SERVICE LINE.
2. REFER TO STD. PLAN 523 S FOR LEGEND ITEMS, APPROVED PARTS LIST, AND DETAIL NOTES.

PARK CITY 1884 PARK CITY MUNICIPAL CORPORATION **WATER**	DATE 05/2014 REV. 0	**3/4" AND 1" METER INSIDE SETTING**	STD. PLAN **523**

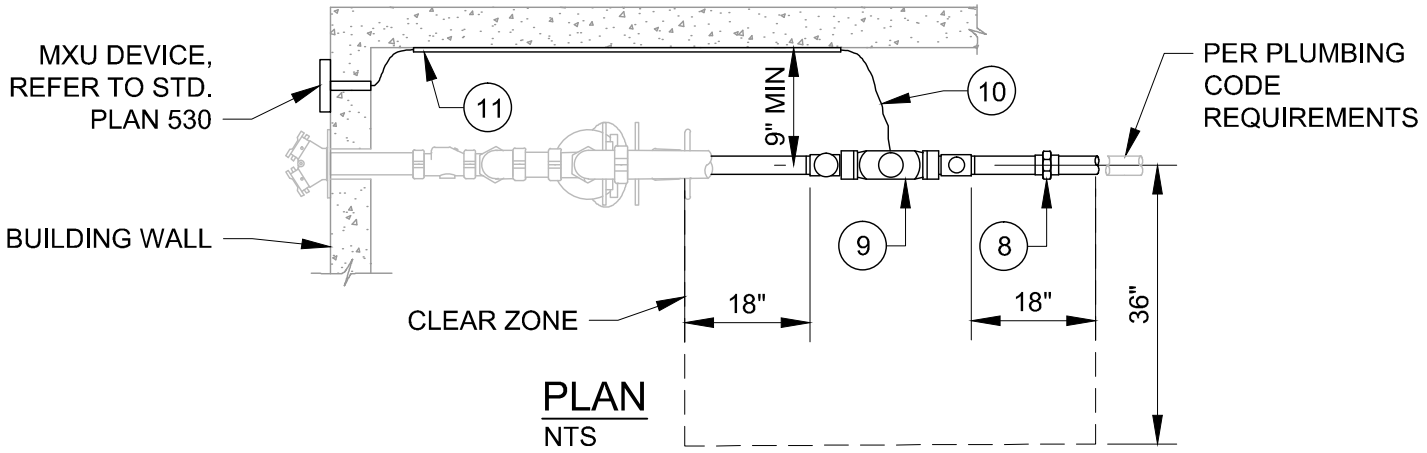
LEGEND AND APPROVED PARTS LIST

ITEM	DESCRIPTION	ACCEPTABLE MANUFACTURER	MODELS
①	1" BRONZE SERVICE SADDLE, DOUBLE STRAP	MUELLER	BR2B SERIES, CC THREADS
		FORD	STYLE 202B, CC THREADS
②	1" DIA. BRASS NIPPLE x 2" LENGTH, M.I.P.		
③	1" CURB VALVE, F.I.P. X F.I.P.	MUELLER	B-20283N
④	1" DIA. BRASS NIPPLE x 2" LENGTH, M.I.P. AND BRONZE BELL REDUCER, 1" X 3/4" DIA. (REQ'D FOR 3/4" METER YOKE ONLY)		
⑤	3/4" OR 1" DIA. COPPER PIPING AND FITTINGS, AS REQ'D PER SITE SPECIFIC LAYOUT		
⑥	3/4" OR 1" METER YOKE END CONNECTIONS	MUELLER	MULTI X F.I.P, H-14222N
⑦	3/4" METER YOKE (STRAIGHT LINE INLET AND OUTLET)	MUELLER	5/8"x3/4"x7" B-2418-6AN
		FORD	5/8"x3/4" LSVH11-233W-NL
	3/4" METER YOKE (VERTICAL INLET AND OUTLET)	MUELLER	5/8"x3/4"x10" B-2448-6AN
		FORD	5/8"x3/4" LSVH11-233W-NL
	1" METER YOKE (STRAIGHT LINE INLET AND OUTLET)	MUELLER	1" VBHC84-12W-11-44-NL
		FORD	1" LSVH11-444W-NL
	1" METER YOKE (VERTICAL INLET AND OUTLET)	MUELLER	1"x12" B-2448-6AN
		FORD	1" KHVBHC-4-FP-NL
⑧	METER, SUPPLIED AND INSTALLED BY PCMC		
⑨	PIPE SIZE BRASS NIPPLE AND CURB VALVE, F.I.P. X F.I.P.	MUELLER	B-20283N
⑩	MXU AND WIRING, SUPPLIED AND INSTALLED BY PCMC		
⑪	EMT CONDUIT FOR MXU WIRING, AS REQUIRED		

DETAIL NOTES

1. USE OF AN INSIDE WATER METER REQUIRES CITY ENGINEER APPROVAL. REFERENCE WATER STANDARD PLAN 520 FOR APPLICABLE CONDITIONS.
2. FIRE SPRINKLER RISER WITH POTABLE WATER SERVICE: A SITE SPECIFIC DESIGN IS REQUIRED. THE FIRE PROTECTION SPRINKLER SYSTEM AND POTABLE WATER SYSTEM DESIGN SHALL BE APPROVED BY THE FIRE MARSHAL AND THE PARK CITY BUILDING DEPARTMENT. THE POTABLE WATER SERVICE CONNECTION AND METER ASSEMBLY DESIGN SHALL BE APPROVED BY THE PARK CITY BUILDING DEPARTMENT AND THE CITY ENGINEER. DESIGN AND CONSTRUCTION SHALL COMPLY WITH APPLICABLE BUILDING AND PLUMBING CODES.
3. BACKFLOW PREVENTION: PROVIDE A DOUBLE CHECK BACKFLOW ASSEMBLY (DCBA) OR REDUCED PRESSURE PRINCIPLE BACKFLOW ASSEMBLY (RPBA) ON THE FIRE SPRINKLER RISER ASSEMBLY. STYLE TO BE DETERMINED BY THE BUILDING AND WATER DEPARTMENT BASED ON DEGREE OF HAZARD POSED BY FIRE SPRINKLER PROTECTION SYSTEM. BEFORE A CERTIFICATE OF OCCUPANCY CAN BE ISSUED BY THE BUILDING DEPARTMENT, BACKFLOW ASSEMBLY TESTING FOR PROPER OPERATION (PER CITY REQUIREMENTS BY A CERTIFIED TESTER RECOGNIZED BY THE CITY) IS REQUIRED AND A REPORT SUBMITTED.
4. CONNECTIONS TO THE WATER SYSTEM ARE NOT PERMITTED PRIOR TO THE POTABLE WATER METER ASSEMBLY OR THE FIRE SPRINKLER RISER BACKFLOW ASSEMBLY. THIS INCLUDES OUTSIDE IRRIGATION SUPPLY.
5. CLEARANCES: PROVIDE ADEQUATE CLEARANCES FROM FIRE RISER AND AROUND WATER METER ASSEMBLY. MAINTAIN: 9" MINIMUM FROM WALL TO FACE OF POTABLE WATER PIPING
   18" CLEAR ON EACH SIDE OF METER ASSEBLY
   36" CLEAR IN FRONT OF METER ASSEMBLY
6. LOCATE METER ASSEMBLY TWO (2) TO FOUR (4) FEET ABOVE THE FLOOR. POSITION METER HORIZONTAL WITH DIAL POINTING UP.
7. PROVIDE ISOLATION (CURB) VALVES AT METER INLET AND OUTLET
8. FOR MULTIPLE METERS PROVIDE A MANIFOLD WITH A MAIN CURB VALVE PRIOR TO THE MANIFOLD AND INDIVIDUAL CURB VALVES LOCATED PRIOR TO AND AFTER METERS.
9. PROVIDE A FLOOR DRAIN IN THE FIRE RISER ROOM WITHIN 10 FEET OF THE WATER METER LOCATION.
10. PROVIDE PIPE LABELS ON THE POTABLE WATER LINE BETWEEN THE FIRE RISER AND THE WATER METER DESIGNATING PIPE AS "POTABLE WATER".
11. PROVIDE PIPE ANCHORAGE TO SUPPORT METER YOKE AND ASSEMBLY INDEPENDENT OF THE POTABLE WATER SUPPLY PIPING AND BUILDING PLUMBING. PROVIDE PIPE STANDS OR UNISTRUT WALL STANDOFFS. DO NOT SUPPORT METER ASSEMBLY FROM OTHER PIPING.
12. PROVIDE A WALL PENETRATION AND CONDUIT FOR REMOTE RADIOREAD METER TRANSEIVER UNIT (MXU) DEVICE(S). COORDINATE ROUTING AND WALL PENETRATION LOCATION WITH THE WATER DEPARTMENT. REFERENCE WATER STANDARD PLANS 520 AND 530.
13. PROVIDE 1/2" EMT CONDUIT AND SUPPORTS FOR MXU SIGNAL WIRE IF DISTANCE TO WALL PENETRATION EXCEEDS 10 FEET
14. INSPECTION: CONTACT THE CITY ENGINEER FOR INSPECTION OF THE POTABLE WATER SYSTEM METER ASSEMBLY INSTALLATION
15. REFER TO STD. PLAN 500 AND THE SPECIFICATIONS FOR FLUSHING, HYDROSTATIC TESTING, AND DISINFECTING REQUIREMENTS

PARK CITY 1884 PARK CITY MUNICIPAL CORPORATION **WATER**	**DATE** 5/2014 **REV.** 0	**3/4" and 1" METER INSIDE SETTING**	**STD. PLAN** **523 S.2**



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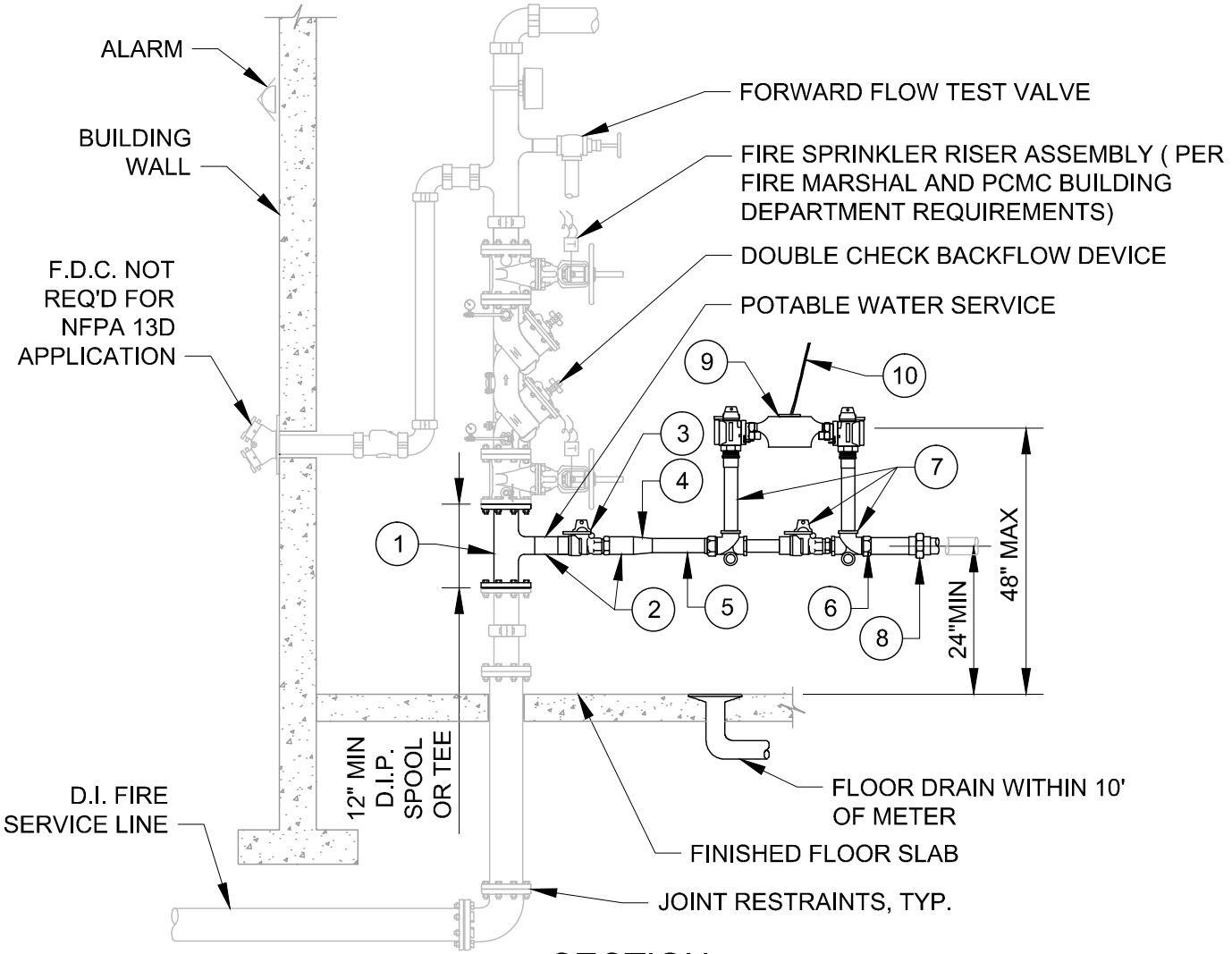

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NOTES:
1. REFER TO STD. PLAN 520 FOR GENERAL REQUIREMENTS - METER, METER VAULT, AND SERVICE LINE.
2. REFER TO STD. PLAN 526 S FOR LEGEND ITEMS, APPROVED PARTS LIST, AND DETAIL NOTES.

PARK CITY 1884 PARK CITY MUNICIPAL CORPORATION **WATER**	DATE 05/2014 REV. 0	1-1/2" AND 2" METER INSIDE SETTING	STD. PLAN **526**

LEGEND AND APPROVED PARTS LIST

ITEM	DESCRIPTION	ACCEPTABLE MANUFACTURER	MODELS
①	DUCTILE IRON TEE OR 2" BRONZE SERVICE SADDLE, DOUBLE STRAP	MUELLER	BR2B SERIES, FIP THDS
		FORD	STYLE 202B, FIP THDS
②	2" DIA. BRASS NIPPLE x 2" LENGTH, M.I.P.		
③	2" CURB VALVE, F.I.P. X F.I.P.	MUELLER	B-20283N
④	2" DIA. BRASS NIPPLE x 2" LENGTH, M.I.P. AND BRONZE BELL REDUCER, 2" X 1-1/2" DIA. (REQ'D FOR 1-1/2" YOKE ONLY)		
⑤	1-1/2" OR 2" DIA. BRASS NIPPLES AND BRASS FITTINGS OR COPPER PIPING AND FITTINGS, AS REQ'D PER SITE SPECIFIC LAYOUT		
⑥	1-1/2" OR 2" METER YOKE END CONNECTIONS	MUELLER	MULTI X F.I.P, H-14222N
⑦	1-1/2" METER YOKE COMMERCIAL SERVICE: WITH BYPASS RESIDENTIAL SERVICE: WITHOUT BYPASS	MUELLER	1-1/2"x12" B2423-2-01N (WITH BYPASS) 1-1/2"x12" B2422-2N (WITHOUT BYPASS)
		FORD	1-1/2" VBHH76-12B-11-66-NL (WITH BYPASS) 1-1/2" VBHH76-12-11-66-NL (WITHOUT BYPASS)
	2" METER YOKE COMMERCIAL SERVICE: WITH BYPASS RESIDENTIAL SERVICE: WITHOUT BYPASS	MUELLER	2"x12" B2423-2-01N (WITH BYPASS) 2"x12" B2422-2N (WITHOUT BYPASS)
		FORD	2" VBHH77-12B-11-77-NL (WITH BYPASS) 2" VBHH77-12-11-77-NL (WITHOUT BYPASS)
⑧	PIPE SIZE BRASS NIPPLE AND BRONZE UNION, F.I.P., THREADED		
⑨	METER, SUPPLIED AND INSTALLED BY PCMC		
⑩	MXU AND WIRING, SUPPLIED AND INSTALLED BY PCMC		
⑪	EMT CONDUIT FOR MXU WIRING, AS REQUIRED		

PARK CITY 1884

PARK CITY MUNICIPAL CORPORATION
WATER

DATE	1.5" and 2" METER INSIDE SETTING	STD. PLAN
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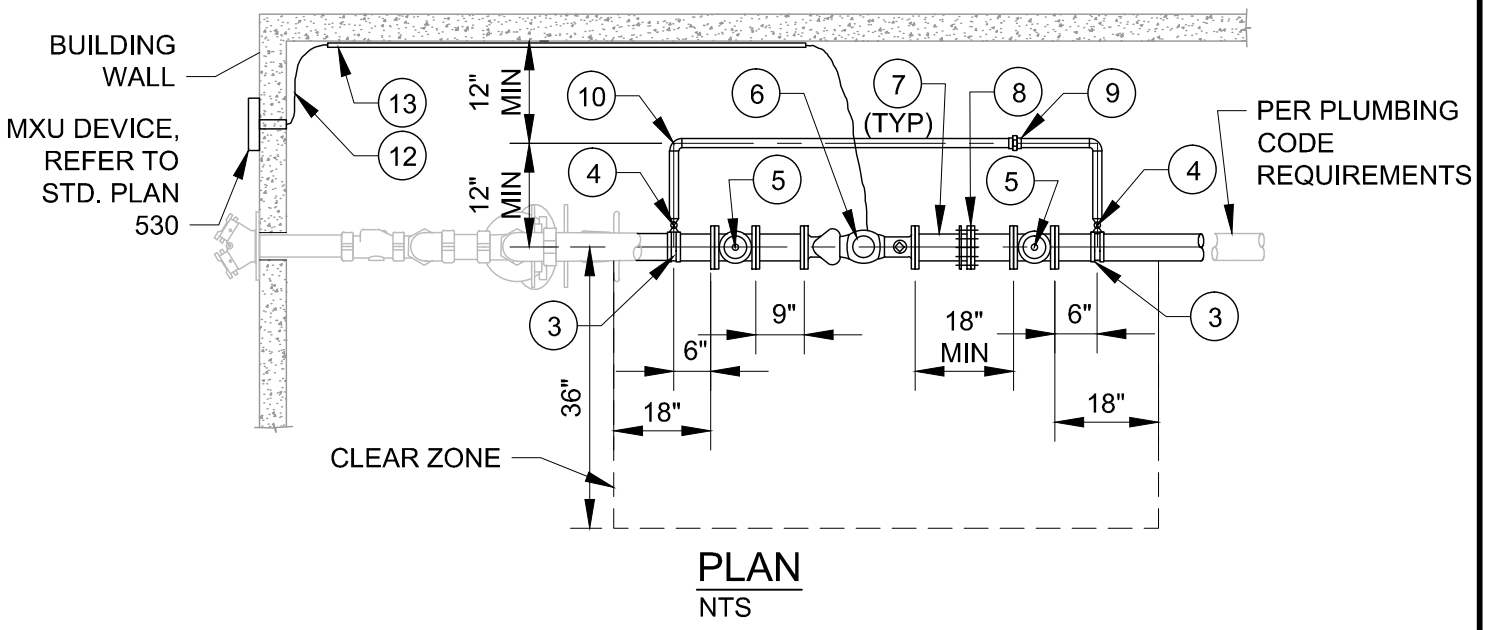
DETAIL NOTES

1. USE OF AN INSIDE WATER METER REQUIRES CITY ENGINEER APPROVAL. REFERENCE WATER STANDARD PLAN 520 FOR APPLICABLE CONDITIONS.
2. FIRE SPRINKLER RISER WITH POTABLE WATER SERVICE: A SITE SPECIFIC DESIGN IS REQUIRED. THE FIRE PROTECTION SPRINKLER SYSTEM AND POTABLE WATER SYSTEM DESIGN SHALL BE APPROVED BY THE FIRE MARSHAL AND THE PARK CITY BUILDING DEPARTMENT. THE POTABLE WATER SERVICE CONNECTION AND METER ASSEMBLY DESIGN SHALL BE APPROVED BY THE PARK CITY BUILDING DEPARTMENT AND THE CITY ENGINEER. DESIGN AND CONSTRUCTION SHALL COMPLY WITH APPLICABLE BUILDING AND PLUMBING CODES.
3. BACKFLOW PREVENTION: PROVIDE A DOUBLE CHECK BACKFLOW ASSEMBLY (DCBA) OR REDUCED PRESSURE PRINCIPLE BACKFLOW ASSEMBLY (RPBA) ON THE FIRE SPRINKLER RISER ASSEMBLY. STYLE TO BE DETERMINED BY THE BUILDING AND WATER DEPARTMENT BASED ON DEGREE OF HAZARD POSED BY FIRE SPRINKLER PROTECTION SYSTEM. BEFORE A CERTIFICATE OF OCCUPANCY CAN BE ISSUED BY THE BUILDING DEPARTMENT, BACKFLOW ASSEMBLY TESTING FOR PROPER OPERATION (PER CITY REQUIREMENTS BY A CERTIFIED TESTER RECOGNIZED BY THE CITY) IS REQUIRED AND A REPORT SUBMITTED.
4. CONNECTIONS TO THE WATER SYSTEM ARE NOT PERMITTED PRIOR TO THE POTABLE WATER METER ASSEMBLY OR THE FIRE SPRINKLER RISER BACKFLOW ASSEMBLY. THIS INCLUDES OUTSIDE IRRIGATION SUPPLY.
5. CLEARANCES: PROVIDE ADEQUATE CLEARANCES FROM FIRE RISER AND AROUND WATER METER ASSEMBLY. MAINTAIN: 9” MINIMUM FROM WALL TO FACE OF POTABLE WATER PIPING
   18” CLEAR ON EACH SIDE OF METER ASSEBLY
   36” CLEAR IN FRONT OF METER ASSEMBLY
6. LOCATE METER ASSEMBLY TWO (2) TO FOUR (4) FEET ABOVE THE FLOOR. POSITION METER HORIZONTAL WITH DIAL POINTING UP.
7. PROVIDE ISOLATION (CURB) VALVES AT METER INLET AND OUTLET
8. FOR MULTIPLE METERS PROVIDE A MANIFOLD WITH A MAIN CURB VALVE PRIOR TO THE MANIFOLD AND INDIVIDUAL CURB VALVES LOCATED PRIOR TO AND AFTER METERS.
9. PROVIDE A FLOOR DRAIN IN THE FIRE RISER ROOM WITHIN 10 FEET OF THE WATER METER LOCATION.
10. PROVIDE PIPE LABELS ON THE POTABLE WATER LINE BETWEEN THE FIRE RISER AND THE WATER METER DESIGNATING PIPE AS “POTABLE WATER”.
11. PROVIDE PIPE ANCHORAGE TO SUPPORT METER YOKE AND ASSEMBLY INDEPENDENT OF THE POTABLE WATER SUPPLY PIPING AND BUILDING PLUMBING. PROVIDE PIPE STANDS OR UNISTRUT WALL STANDOFFS. DO NOT SUPPORT METER ASSEMBLY FROM OTHER PIPING.
12. PROVIDE A WALL PENETRATION AND CONDUIT FOR REMOTE RADIOREAD METER TRANSEIVER UNIT (MXU) DEVICE(S). COORDINATE ROUTING AND WALL PENETRATION LOCATION WITH THE WATER DEPARTMENT. REFER TO WATER STANDARD PLANS 520 AND 530.
13. PROVIDE 1/2” EMT CONDUIT AND SUPPORTS FOR MXU SIGNAL WIRE IF DISTANCE TO WALL PENETRATION EXCEEDS 10 FEET.
14. INSPECTION: CONTACT THE CITY ENGINEER FOR INSPECTION OF THE POTABLE WATER SYSTEM METER ASSEMBLY INSTALLATION
15. REFER TO STD. PLAN 500 AND THE SPECIFICATIONS FOR FLUSHING, HYDROSTATIC TESTING, AND DISINFECTING REQUIREMENTS

PARK CITY 1884 PARK CITY MUNICIPAL CORPORATION **WATER**	**DATE** 5/2014 **REV.** 0	**1.5” and 2” METER INSIDE SETTING**	**STD. PLAN** **526 S.2**



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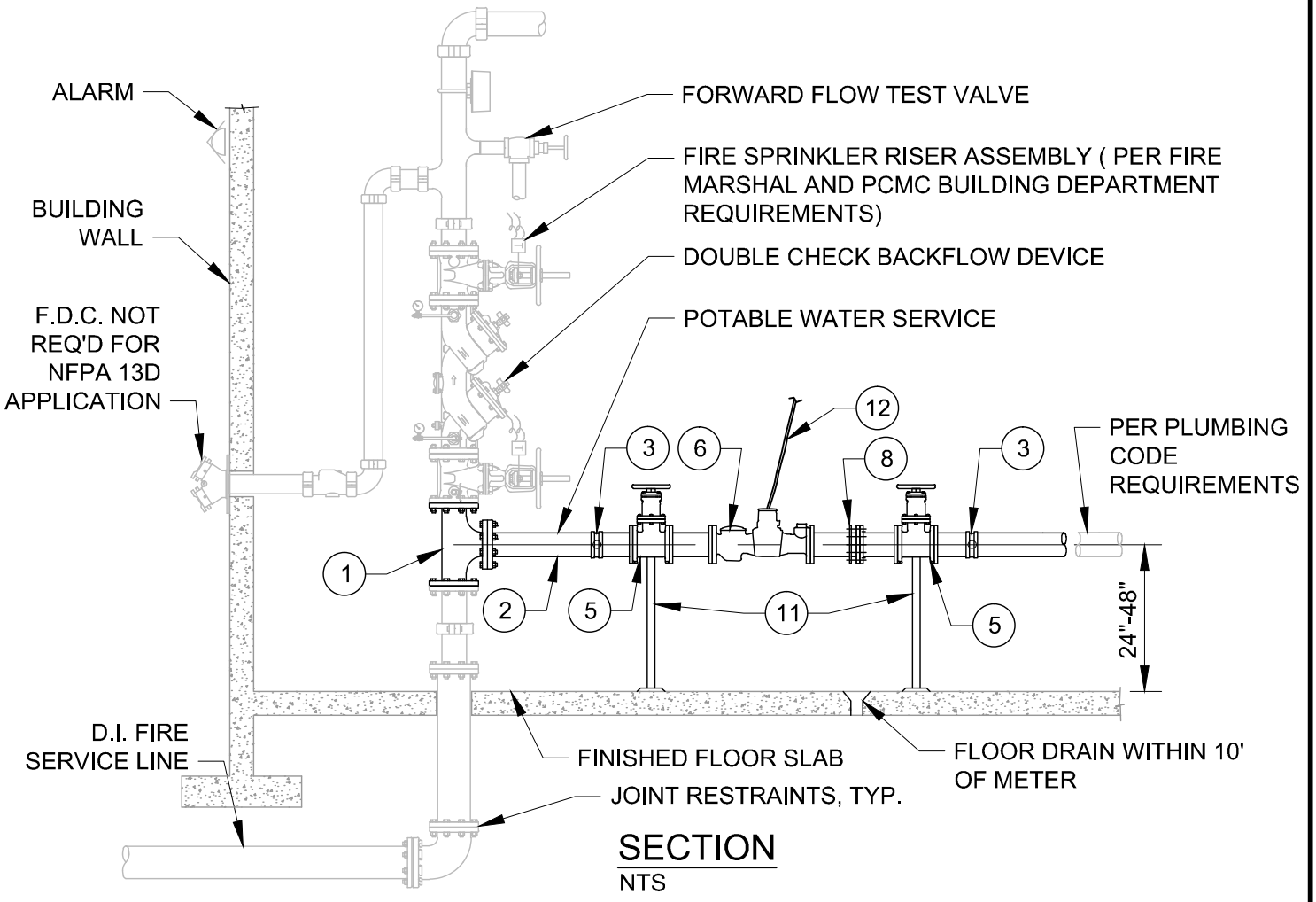

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NOTES:
1. REFER TO STD. PLAN 520 FOR GENERAL REQUIREMENTS - METER, METER VAULT, AND SERVICE LINE.
2. REFER TO STD. PLAN 528 S FOR LEGEND ITEMS, APPROVED PARTS LIST, AND DETAIL NOTES.

PARK CITY 1884 PARK CITY MUNICIPAL CORPORATION **WATER**	DATE 05/2014 REV. 0	**3" AND LARGER METER INSIDE SETTING**	STD. PLAN **528**

LEGEND AND APPROVED PARTS LIST

ITEM	DESCRIPTION	ACCEPTABLE MANUFACTURER	MODELS
①	DUCTILE IRON TEE, FLG., PRESSURE CLASS 350, CEMENT-MORTAR LINED, ASPHALTIC INTERIOR COATING, AWWA C150 / C151 / C104	U.S. PIPE PACIFIC STATES	
		U.S. PIPE PACIFIC STATES	
②	DUCTILE IRON PIPE SPOOL, FLG. X FLG., 3" TO 12" DIAMETER, FULL BODY, PRESSURE CLASS 350, CEMENT-MORTAR LINED, ASPHALTIC INTERIOR COATING, AWWA C150 / C151 / C104	U.S. PIPE PACIFIC STATES	
③	2" BRONZE SERVICE SADDLE, DOUBLE STRAP	MUELLER	BR2B SERIES, FIP THDS
		FORD	STYLE 202B, FIP THDS
④	2" BRONZE BALL VALVE WITH LOCKING HANDLE, F.I.P., THREADED, 300 PSI RATED, LEAD FREE		
⑤	GATE VALVE, PIPE SIZE, NRS WITH HANDWHEEL, FLANGED, 2" SQ. OPERATING NUT, AWWA C509	MUELLER	SERIES A-2360
		CLOW	MODEL 2639
⑥	METER, SUPPLIED AND INSTALLED BY PCMC		
⑦	DUCTILE IRON PIPE SPOOL (2), FLG X PE	MUELLER	MULTI X F.I.P, H-14222N
⑧	DISMANTLING JOINT, WITH RESTRAINING BOLTS	ROMAC	DJ400 OR APPV'D EQUAL
⑨	2" BRONZE UNION, F.I.P., THREADED, LEAD FREE		
⑩	2" COPPER PIPE, TYPE K, WITH COPPER 90^0 ELBOW, SOLDERED, OR BRASS NIPPLE BRONZE, F.I.P., WITH THREADED 90^0 ELBOW (NO GALVANIZED MATERIALS)		
⑪	PIPE SUPPORTS, 2 REQ'D ON MAIN SERVICE LINE AND 2 REQ'D ON BYPASS SERVICE		
⑫	MXU AND WIRING, SUPPLIED AND INSTALLED BY PCMC		
⑬	1/2" EMT CONDUIT FOR MXU WIRING, AS REQUIRED		

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0		

DETAIL NOTES

1. USE OF AN INSIDE WATER METER REQUIRES CITY ENGINEER APPROVAL. REFERENCE WATER STANDARD PLAN 520 FOR APPLICABLE CONDITIONS.
2. FIRE SPRINKLER RISER WITH POTABLE WATER SERVICE: A SITE SPECIFIC DESIGN IS REQUIRED. THE FIRE PROTECTION SPRINKLER SYSTEM AND POTABLE WATER SYSTEM DESIGN SHALL BE APPROVED BY THE FIRE MARSHAL AND THE PARK CITY BUILDING DEPARTMENT. THE POTABLE WATER SERVICE CONNECTION AND METER ASSEMBLY DESIGN SHALL BE APPROVED BY THE PARK CITY BUILDING DEPARTMENT AND THE CITY ENGINEER. DESIGN AND CONSTRUCTION SHALL COMPLY WITH APPLICABLE BUILDING AND PLUMBING CODES.
3. BACKFLOW PREVENTION: PROVIDE A DOUBLE CHECK BACKFLOW ASSEMBLY (DCBA) OR REDUCED PRESSURE PRINCIPLE BACKFLOW ASSEMBLY (RPBA) ON THE FIRE SPRINKLER RISER ASSEMBLY. STYLE TO BE DETERMINED BY THE BUILDING AND WATER DEPARTMENT BASED ON DEGREE OF HAZARD POSED BY FIRE SPRINKLER PROTECTION SYSTEM. BEFORE A CERTIFICATE OF OCCUPANCY CAN BE ISSUED BY THE BUILDING DEPARTMENT, BACKFLOW ASSEMBLY TESTING FOR PROPER OPERATION (PER CITY REQUIREMENTS BY A CERTIFIED TESTER RECOGNIZED BY THE CITY) IS REQUIRED AND A REPORT SUBMITTED.
4. CONNECTIONS TO THE WATER SYSTEM ARE NOT PERMITTED PRIOR TO THE POTABLE WATER METER ASSEMBLY OR THE FIRE SPRINKLER RISER BACKFLOW ASSEMBLY. THIS INCLUDES OUTSIDE IRRIGATION SUPPLY.
5. CLEARANCES: PROVIDE ADEQUATE CLEARANCES FROM FIRE RISER AND AROUND WATER METER ASSEMBLY. MAINTAIN: 9” MINIMUM FROM WALL TO FACE OF POTABLE WATER PIPING
   18” CLEAR ON EACH SIDE OF METER ASSEBLY
   36” CLEAR IN FRONT OF METER ASSEMBLY
6. LOCATE METER ASSEMBLY TWO (2) TO FOUR (4) FEET ABOVE THE FLOOR. POSITION METER HORIZONTAL WITH DIAL POINTING UP.
7. VERIFY METER LAY LENGTH WITH WATER DEPARTMENT PRIOR TO INSTALLING PIPING
8. PROVIDE ISOLATION VALVES AT METER INLET AND OUTLET
9. FOR MULTIPLE METERS PROVIDE A MANIFOLD WITH A MAIN VALVE PRIOR TO THE MANIFOLD AND INDIVIDUAL VALVES LOCATED PRIOR TO AND AFTER METERS.
10. PROVIDE A FLOOR DRAIN IN THE FIRE RISER ROOM WITHIN 10 FEET OF THE WATER METER LOCATION.
11. PROVIDE PIPE LABELS ON THE POTABLE WATER LINE BETWEEN THE FIRE RISER AND THE WATER METER DESIGNATING PIPE AS “POTABLE WATER”.
12. PROVIDE PIPE ANCHORAGE TO SUPPORT METER ASSEMBLY INDEPENDENT OF THE POTABLE WATER SUPPLY PIPING AND BUILDING PLUMBING. PROVIDE PIPE STANDS OR UNISTRUT WALL STANDOFFS. DO NOT SUPPORT METER ASSEMBLY FROM OTHER PIPING.
13. PROVIDE A WALL PENETRATION AND CONDUIT FOR REMOTE RADIOREAD METER TRANSEIVER UNIT (MXU) DEVICE(S). COORDINATE ROUTING AND WALL PENETRATION LOCATION WITH THE WATER DEPARTMENT. REFERENCE WATER STANDARD PLANS 520 AND 530.
14. PROVIDE 1/2” EMT CONDUIT AND SUPPORTS FOR MXU SIGNAL WIRE IF DISTANCE TO WALL PENETRATION EXCEEDS 10 FEET.
15. INSPECTION: CONTACT THE CITY ENGINEER FOR INSPECTION OF THE POTABLE WATER SYSTEM METER ASSEMBLY INSTALLATION.
16. REFER TO STD. PLAN 500 AND THE SPECIFICATIONS FOR FLUSHING, HYDROSTATIC TESTING, AND DISINFECTING REQUIREMENTS
17. BUILDING OWNER IS RESPONSIBLE TO HAVE THE BACKFLOW PREVENTER FLOW TESTED AND INSPECTED INTERNALLY AT LEAST ONCE PER YEAR, OR MORE AS CONDITIONS WARRANT, IN ACCORDANCE WITH NFPA 13 AND NFPA 25 AND A REPORT SUBMITTED TO THE PARK CITY BUILDING DEPARTMENT

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PCMC WATER SYSTEM – CORROSION PROTECTION REQUIREMENTS:

PCMC HAS EXPERIENCED EXTERNAL CORROSION OF WATER DISTRIBUTION MATERIALS IN VARYING DEGREES THROUGHOUT THE CITY. TO MAXIMIZE THE LIFE CYCLE OF WATER SYSTEM IMPROVEMENTS, AS IMPACTED BY THE IMMEDIATE SITE CONDITIONS AND THE SELECTION OF MATERIALS, THE CITY HAS IDENTIFIED KEY DESIGN AND CONSTRUCTION REQUIREMENTS.

1. **FOR PROJECTS WITH LESS THAN 300 FEET OF NEW WATER PIPE** AND APPURTENANCES, CORROSION PROTECTION SHALL BE ADDRESSED IN THE FOLLOWING MANNER:
   a. IN ADDITION TO THE REQUIRED POLYETHYLENE WRAP, APPLY A WAX TAPE COATING SYSTEM TO VALVE BONNET BOLTS AND ALL OTHER BURIED BOLTS, NUTS, CONNECTORS, RESTAINER GLAND BOLTS, AND COUPLING HARDWARE, AWWA C217. COATING SYSTEM TO INCLUDE A 4-MIL MINIMUM WAX TAPE PRIMER, FILLER MATERIAL, 45-MIL MINIMUM WAX TAPE AND PROTECTIVE OUTER WRAP
   b. WAX TAPE COATING MATERIALS:
      i. DENSO NORTH AMERICA DENSO PRIMER, DENSYL TAPE AND/OR MASTIC, DENSO FIBER-WRAP
      ii. TRENTON PRIMER, #1 WAX-TAPE, AND GUARD-WRAP
      iii. OR APPROVED EQUAL (SUBMITTAL TO CITY AND WRITTEN APPROVAL REQUIRED PRIOR TO INSTALLATION)

2. **FOR PROJECTS EXCEEDING 300 FEET OF NEW WATER PIPE** AND APPURTENANCES, CORROSION PROTECTION SHALL BE ADDRESSED IN THE FOLLOWING MANNER:

   a. THE DEVELOPER AND ITS' DESIGN ENGINEER, GEOTECHNICAL ENGINEER, AND CORROSION CONSULTANT SHALL PROVIDE A SITE SPECIFIC "CORROSION STUDY REPORT". THE REPORT SHALL INCORPORATE PROJECT SPECIFIC FINDINGS INTO CORROSION PROTECTION RECOMMENDATIONS FOR THE PROPOSED WATER SYSTEM IMPROVEMENTS. THE REPORT SHALL INCLUDE AT A MINIMUM THE FOLLOWING ITEMS:

      i. DETAILED INFORMATION ON EXISTING CONDITIONS, SOIL TYPES, CLASSIFICATION, ETC.
      ii. IDENTIFICATION OF STRAY CURRENT SOURCES AND ANY EXISTING CORROSION PROTECTION SYSTEMS IN THE IMMEDIATE AREA
      iii. IDENTIFICATION OF ANY POTENTIAL FOR HOT SPOTS OR VARYING SOIL CONDITIONS THAT MAY WARRANT CHANGES TO THE CORROSION PROTECTION PLAN DURING CONSTRUCTION.
      iv. FIELD SAMPLING AND TESTING RESULTS WITHIN THE PROPOSED PIPE ZONE BASED ON REPRESENTATIVE SAMPLING OF THE DEVELOPMENT AREA CONDITIONS
      v. SOIL RESISTIVITY TESTING RESULTS IDENTIFYING CORROSIVE SOIL CONDITIONS AND LOCATIONS (WENNER 4-PIN SOIL RESISTIVITY TESTS AND SOIL BOX RESISTIVITY TESTS) AT REPRESENTATIVE PIPE INSTALL DEPTHS
      vi. LABORATORY ANALYSIS OF SOIL SAMPLES FOR PH, CHLORIDES, SULFATES, TOTAL SALTS, AND CONDUCTIVITY
      vii. DETERMINATION OF THE NEED FOR CORROSION PROTECTION BASED ON SOIL CORROSIVITY CLASSIFICATION/SOIL RESISTIVITY AND RECOMMENDATION OF SUITABLE PIPE, CONSTRUCTION MATERIALS, PIPE PROTECTION METHOD, PIPE EXTERIOR COATINGS, ETC., BASED ON SITE CORROSIVITY. SEE TABLE BELOW.
      viii. SPECIFY IF THE INVESTIGATION INCLUDES ONLY THE INITIAL PHASE OR ALL FUTURE PHASES

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b. FOLLOWING PCMC'S RECEIPT AND REVIEW OF THE CORROSION STUDY REPORT, THE DEVELOPER WILL BE NOTIFIED OF THE CITY'S DETERMINATION AS TO REQUIRED PROTECTION OR THE DESIGN TEAM WILL BE REQUESTED TO MEET AND REVIEW THE FINDINGS AND ESTABLISH THE FINAL WATER SYSTEM DESIGN CRITERIA. THE CITY'S REVIEW WILL BE BASED ON THE FOLLOWING TABLE 1:

TABLE 1 - SOIL CORROSIVITY CLASSIFICATION VERSUS SOIL RESISTIVITY

CORROSIVITY	RESISTIVITY, OHM-CM	TREATMENT
EXTREMELY CORROSIVE	LESS THAN 1,000	SITE SPECIFIC DESIGN REQUIRED
VERY CORROSIVE	1,000 TO 3,000	SITE SPECIFIC DESIGN REQUIRED
CORROSIVE	3,000 TO 6,000	NON-METALLIC PIPE – WAX TAPE COATING SYSTEM ON BOLTS & NUTS, ANODE PROTECTED FITTINGS AND VALVES
MODERATELY CORROSIVE	6,000 TO 10,000	NON-METALLIC PIPE - WAX TAPE COATING SYSTEM ON BOLTS AND NUTS ON PIPE, FITTINGS, AND VALVES
MILDLY CORROSIVE	MORE THAN 10,000	WAX TAPE COATING SYSTEM ON BOLTS AND NUTS ON PIPE, FITTINGS, AND VALVES

c. REFER TO PERTINENT PCMC WATER STANDARD PLANS OR PROVIDE CONSTRUCTION DRAWING DETAILS ASSOCIATED WITH CORROSION STUDY RECOMMENDATIONS AND THE PCMC FINAL APPROVED WATER SYSTEM

LEGEND AND APPROVED PARTS LIST

ITEM	DESCRIPTION	ACCEPTABLE MANUFACTURER	MODELS
①	BRONZE SERVICE SADDLE: DI & AC PIPE; DOUBLE STRAP PVC PIPE; TWO-PIECE BOLTED	MUELLER	DI & AC PIPE: BR2B SERIES, 1-1/2" SERVICE, CC THDS; 2" SERVICE FIP THDS PVC PIPE: H-13000 SERIES, 1-1/2" SERVICE, CC THDS; 2" SERVICE FIP THDS
		FORD	DI & AC PIPE: STYLE 202B 1-1/2" SERVICE, CC THDS; 2" SERVICE, FIP THDS PVC PIPE: 1-1/2" SERVICE, STYLE S902, CC THDS; 2" SERVICE, STYLE S912, FIP THDS
②	BRASS CORPORATION STOP, INLET CC THREAD, OUTLET CTS COMPRESSION	MUELLER	B-25008N
		FORD	FB1100-(SERVICE SIZE)-G-NL
③	POLYETHYLENE ENCASEMENT, HIGH DENSITY CROSS LAMINATED (HDCL) POLYETHYLENE FILM, AWWA C105 & AWWA C703E METHOD C	CHRISTY'S OR APPROVED EQUAL	AWWA C703E METHOD C (4 MIL)
④	DETECTABLE UNDERGROUND WARNING TAPE, 5-MIL MINIMUM, ALUMINUM BACKING BLUE BACKGROUND, 6" WIDE	SETON OR APPV'D EQUAL	85525
⑤	WATER SERVICE LINE: HIGH-DENSITY POLYETHYLENE TUBING (CTS), BLUE, SDR 9, AWWA C901 1-1/2" DIA. SERVICE: 3/4" AND 1" SINGLE METER 1-1/2" DIA. SERVICE: 3/4" AND 1" DUAL METERS 2" DIA. SERVICE: 1-1/2" AND 2" SINGLE METER 2" DIA. SERVICE: 1-1/2" DUAL METERS	ADS OR APPV'D EQUAL	
⑥	WATER SERVICE LINE: HIGH-DENSITY POLYETHYLENE TUBING (CTS), BLUE, SDR 9, AWWA C901; OR, TYPE K COPPER, SOFT, AWWA C800	ADS OR APPV'D EQUAL	
⑦	TRACER WIRE: 12 GA. SOLID, BLUE PVC INSULATION; WIRE-WIRE CONNECTORS SILICONE-FILLED WIRE NUTS	IDEAL INDUSTRIES	TWISTER DB PLUS OR APP'D EQUAL

DETAIL NOTES

1. COORDINATE SERVICE SIZE WITH CITY PRIOR TO ORDERING MATERIALS
2. LOCATE SERVICE PER APPROVED PLANS
3. NO SERVICE LINE FITTINGS ALLOWED BETWEEN CORPORATION STOP AND METER VAULT CURB STOP VALVE
4. APPLY WAX TAPE COATING SYSTEM TO SERVICE SADDLE BOLTS AND NUTS, AWWA C217. SYSTEM TO INCLUDE FILLER MATERIAL, TAPE COATING, AND PROTECTIVE OUTERWRAP. DENSO NORTH AMERICA, TRENTON, OR APPROVED EQUAL (STD. PLAN 534)

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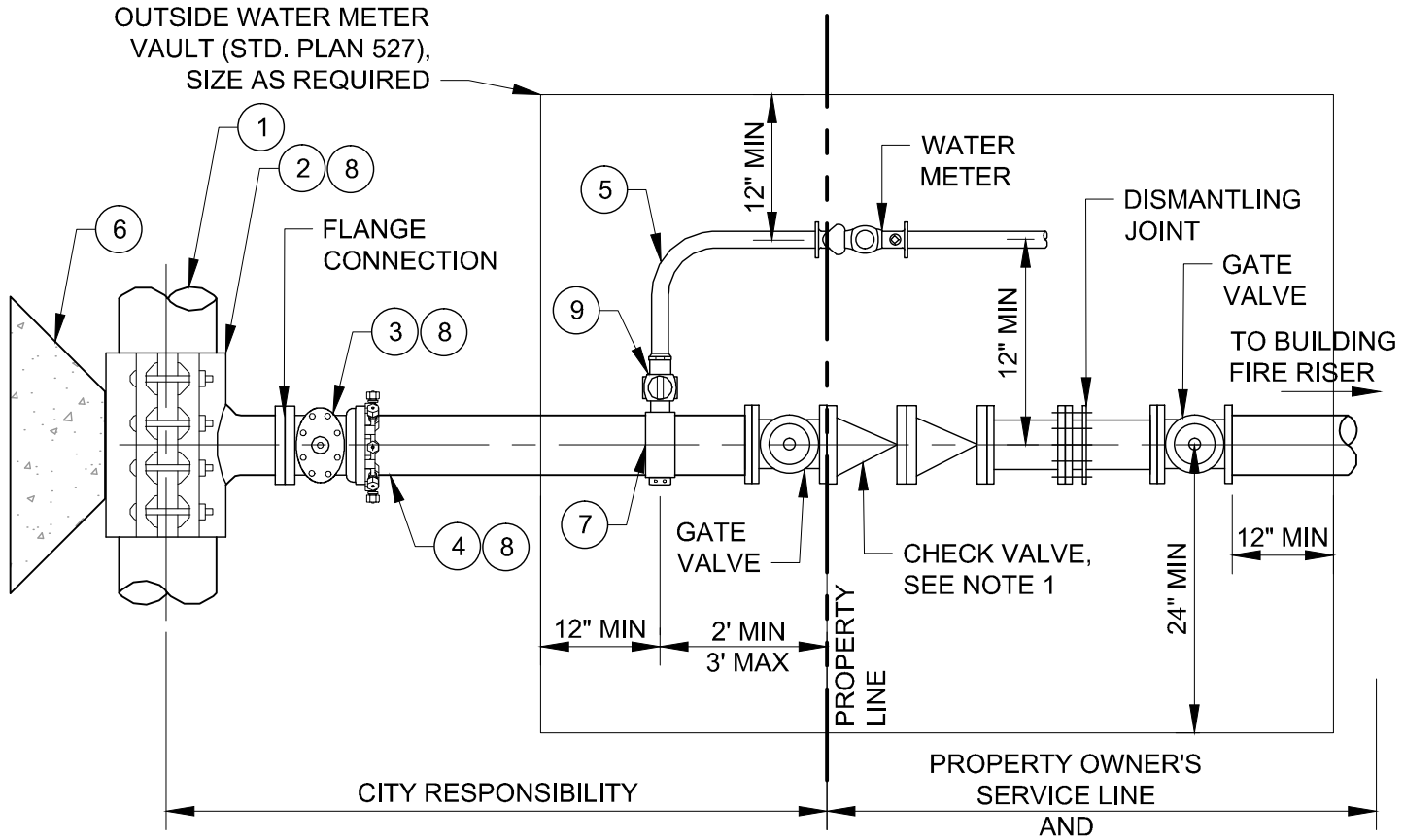
WATER SERVICE LINE
3/4" TO 2" METERS



3" AND LARGER

LEGEND	
ITEM	DESCRIPTION
1	EXISTING MAIN
2	DUCTILE IRON TAPPING SLEEVE OR DUCTILE IRON TEE
3	TAPPING VALVE OR FLG X MJ GATE VALVE (STD PLAN 570 AND 572)
4	DUCTILE IRON PIPE FULLY RESTRAINED (STD. PLAN 541)
5	WATER SERVICE LINE (STD. PLAN 541)
6	THRUST BLOCK (STD. PLAN 561)
7	BRONZE DOUBLE STRAP SERVICE SADDLE (STD. PLAN 541)
8	POLYETHYLENE WRAPPED (STD. PLAN 540-A)
9	CORPORATION STOP (STD. PLAN 541)

NOTES:

1. DOUBLE CHECK VALVE OR REDUCED PRESSURE PRINCIPLE BACKFLOW ASSEMBLY TO BE DETERMINE BY BUILDING AND WATER DEPARTMENTS BASED ON DEGREE OF HAZARD POSED BY FIRE SPRINKLER PROTECTION SYSTEM USE.
2. WATER METER 3-INCH AND LARGER WILL REQUIRE A DUCTILE IRON TEE, VALVING, AND DISMANTLING JOINT. A SITE SPECIFIC DESIGN IS REQUIRED.
3. A METER BYPASS LINE IS REQUIRED FOR COMMERCIAL APPLICATIONS.

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FIRE SERVICE LINE

542

HORIZONTAL SEPARATION NOTES:

1. ZONE 1: WATER LINE AND SEWER LINE SEPARATED 10 FEET OR GREATER – NO SPECIAL REQUIREMENTS
   ZONE 2: WHERE LOCAL CONDITIONS AND SITE SPECIFIC CONDITIONS PRECLUDE ZONE 1 SEPARATION – SPECIAL REQUIREMENTS APPLY:
   A) APPROVAL BY DIVISION OF ENVIRONMENTAL QUALITY, DIVISION OF DRINKING WATER
   AND,
   B) SEWER PIPES IN GOOD CONDITION
   AND,
   C) NO HIGH GROUNDWATER
   AND,
   D) WATER LINE SEPARATED BY AT LEAST 6 FEET AT OUTSIDE PIPE WALLS
   AND,
   E) BOTTOM OF WATER LINE IS AT LEAST 18 INCHES ABOVE TOP OF SEWER LINE
   AND,
   F) WATER LINE CONSTRUCTED WITH MECHANICAL, RESTRAINED JOINT PIPE
   ZONE 3: WATER LINE AND SEWER LINE SEPARATED LESS THAN 6 FEET – NOT ALLOWED WITHOUT APPLICATION TO AND APPROVAL BY UTAH DIVISION OF ENVIRONMENTAL QUALITY, DIVISION OF DRINKING WATER FOR EXCEPTION TO THE RULE. ADDITIONAL MITIGATION MEASURES TO PROTECT PUBLIC HEALTH REQUIRED
2. ADDITIONAL WATER-SEWER SEPARATION AND/OR SPECIAL PIPE MATERIALS MAY BE REQUIRED IN AREAS OF HIGH GROUNDWATER, SOILS CONDITIONS, OR SPECIAL SEWER LINE CONTENTS
3. SERVICE LINE TAPS NOT ALLOWED IN ZONE 2
4. SERVICE LINE TAPS WITHIN ZONE 3 ALLOWED ONLY BY SITE SPECIFIC APPROVAL BY DIVISION OF ENVIRONMENTAL QUALITY, DIVISION OF DRINKING WATER
5. SANITARY SEWER FORCE MAINS:
   a. WATER LINE TO MAINTAIN 10 FEET HORIZONTAL SEPARATION AND 18 INCHES VERTICAL SEPARATION ABOVE SEWER FORCE MAIN
   b. NEW SEWER FORCE MAIN CROSSING UNDER AN EXISTING WATER MAIN TO BE ENCLOSED IN A CONTINUOUS SLEEVE
   c. NEW WATER MAIN CROSSING OVER AN EXISTING SEWER FORCE MAIN, 200 PSI MINIMUM WORKING PRESSURE RATED PIPE MATERIALS REQUIRED
6. CONSULT SNYDERVILLE BASIN WATER RECLAMATION DISTRICT FOR ADDITIONAL SANITARY SEWER RELATED REQUIREMENTS AND SEWER LINE MODIFICATIONS

VERTICAL SEPARATION NOTES:

1. ZONE 1: WATER LINE ABOVE SEWER LINE AND SEPARATED 18 INCHES OR GREATER – NO SPECIAL REQUIREMENTS
   ZONE 2: WATER LINE ABOVE SEWER LINE SEPARATED LESS THAT 18 INCHES – LOOP WATER LINE, REFER TO STD. PLANS 543 AND 544. INSTALL CONTROLLED LOW-STRENGTH MATERIAL (CLSM), “FLOWABLE FILL”, 100 PSI MINIMUM TO 150 PSI MAXIMUM MIX DESIGN, FOR FULL TRENCH WIDTH WITHIN WATER PIPE ZONE AND TO TOP OF SEWER LINE
   ZONE 3: WATER LINE BELOW SEWER LINE SEPARATED LESS THAN 18 INCHES – LOOP WATER LINE, REFER TO STD. PLANS 543 AND 544. INSTALL CONTROLLED LOW-STRENGTH MATERIAL (CLSM), “FLOWABLE FILL”, 100 PSI MINIMUM TO 150 PSI MAXIMUM MIX DESIGN, FOR FULL TRENCH WIDTH WITHIN WATER PIPE ZONE AND TO 18 INCHES ABOVE SEWER LINE
   ZONE 4: WATER LINE BELOW SEWER LINE SEPARATED GREATER THAN 18 INCHES - CENTER ONE FULL UNCUT LENGTH OF WATER PIPE OVER THE CROSSING AND PROVIDE MECHANICAL RESTRAINED PIPE JOINTS UNTIL THE WATER PIPE EXTENDS TO A DISTANCE OF 10 FEET PERPENDICULAR TO EACH SIDE OF THE SEWER LINE. INSTALL CONTROLLED LOW-STRENGTH MATERIAL (CLSM), “FLOWABLE FILL”, 100 PSI MINIMUM TO150 PSI MAXIMUM MIX DESIGN, FOR FULL TRENCH WIDTH WITHIN WATER PIPE ZONE AND TO 18 INCHES ABOVE SEWER LINE
2. SERVICE LINE TAPS NOT ALLOWED IN ZONES 2 AND 3.
3. SANITARY SEWER FORCE MAINS: SEE HORIZONTAL SEPARATION REQUIREMENTS, NOTE 5,
4. CONSULT SNYDERVILLE BASIN WATER RECLAMATION DISTRICT FOR ADDITIONAL SANITARY SEWER RELATED REQUIREMENTS AND SEWER LINE MODIFICATIONS

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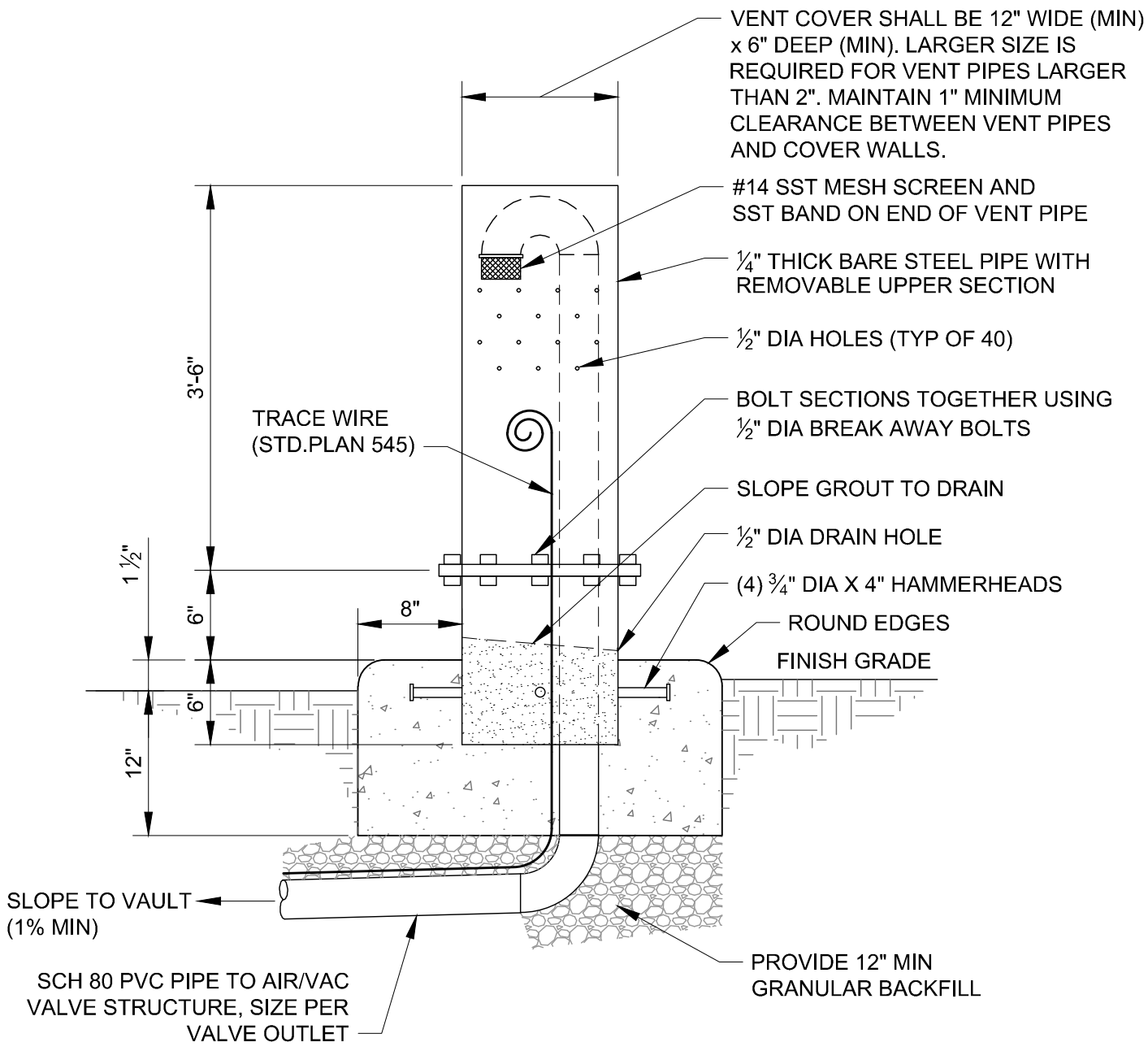

NOTES:

1. LOCATE VENT AS SHOWN ON APPROVED PLANS, 1'-6" MINIMUM BEHIND TOP BACK OF CURB / GUTTER OR SIDEWALK.

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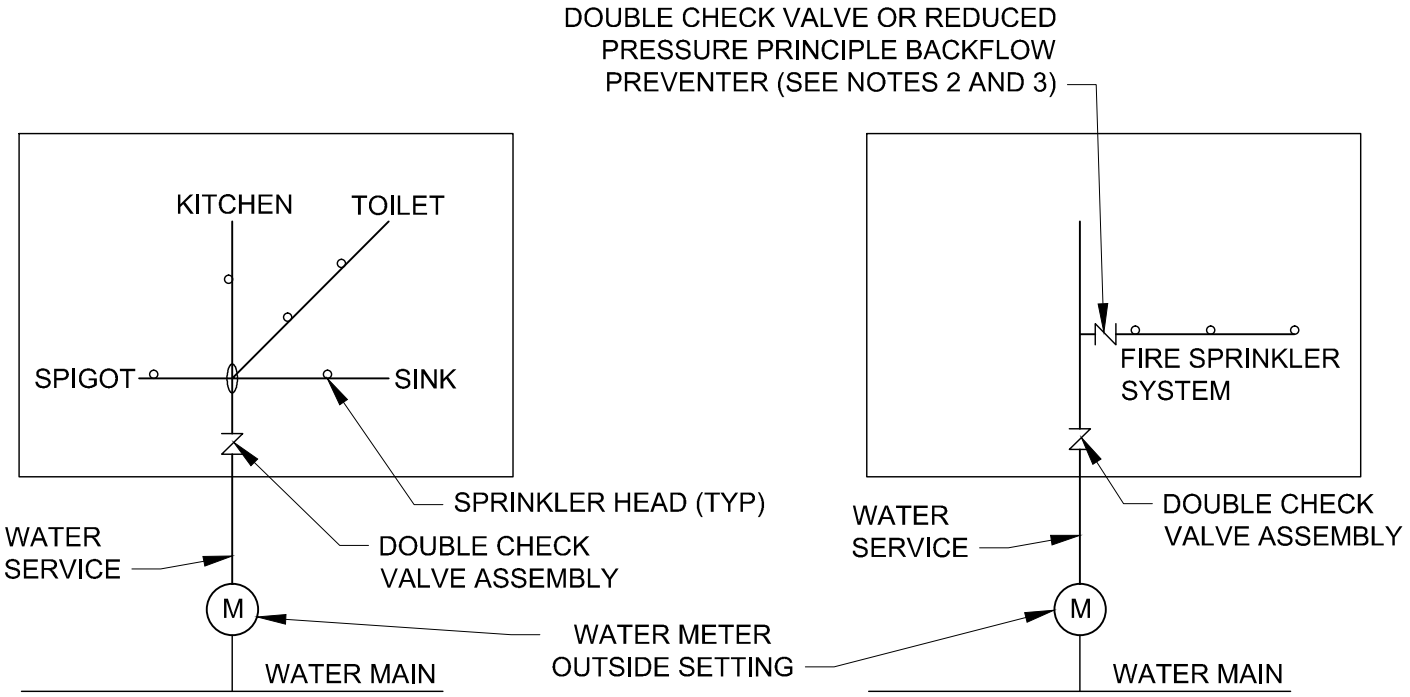

OPTION 1
MULTI-PURPOSE PIPING SYSTEM

OPTION 2
BRANCHED

NOTES:

1. MULTI-PURPOSE RESIDENTIAL FIRE SPRINKLER PROTECTION PLUMBING SYSTEM SHALL MEET NFPA 13D REQUIREMENTS AND PARK CITY BUILDING DEPARTMENT AND FIRE MARSHAL APPROVAL. OPTION SHALL BE APPROVED BY THE PARK CITY BUILDING DEPARTMENT, CITY ENGINEER, AND FIRE MARSHAL PRIOR TO SYSTEM DESIGN.

2. DESIGN AND CONSTRUCTION SHALL COMPLY WITH APPLICABLE BUILDING AND PLUMBING CODES.

3. BACKFLOW PREVENTION: BACKFLOW PREVENTION IS REQUIRED FOR BOTH OPTIONS. PROVIDE A DOUBLE CHECK BACKFLOW ASSEMBLY (DCBA) OR REDUCED PRESSURE PRINCIPLE BACKFLOW ASSEMBLY (RPBA) ON THE FIRE SPRINKLER RISER ASSEMBLY. BACKFLOW PREVENTER STYLE TO BE DETERMINED BY THE BUILDING AND WATER DEPARTMENT BASED ON DEGREE OF HAZARD POSED BY FIRE SPRINKLER PROTECTION SYSTEM. A FIRE SPRINKLER PROTECTION SYSTEM WHICH CONTAINS CHEMICAL ADDITIVES OR A FIRE PUMP SYSTEM REQUIRES A REDUCED PRESSURE PRINCIPAL BACKFLOW PREVENTER (RPBA) STYLE.

4. BEFORE A CERTIFICATE OF OCCUPANCY CAN BE ISSUED BY THE BUILDING DEPARTMENT, BACKFLOW ASSEMBLY TESTING FOR PROPER OPERATION (PER CITY REQUIREMENTS BY A CERTIFIED TESTER RECOGNIZED BY THE CITY) IS REQUIRED AND A REPORT SUBMITTED.

5. FIRE SPRINKLER PROTECTION SYSTEMS CONTAINING FIRE PUMPS REQUIRES SITE SPECIFIC DESIGN AND APPROVAL BY THE CITY ENGINEER, PARK CITY BUILDING DEPARTMENT, WATER DEPARTMENT, AND FIRE MARSHAL PRIOR TO BUILDING APPROVAL. FIRE PUMP SYSTEM SHALL BE LOCATED ON THE BUILDING SIDE OF THE WATER OUTSIDE OF THE WATER METER VAULT. REFER TO STD. PLAN 520 FOR REQUIREMENTS.

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