

WATER SYSTEM MATERIAL SPECIFICATION (CONTINUED):

TAPPING SLEEVE & VALVE:

1. STAINLESS STEEL - APPROVED MANUFACTURERS FORD, ROMAC, AND SMITH-BLAIR OR APPROVED EQUAL.
2. THE CITY MAY REQUIRE A BYPASS ON VALVES ON 12" OR LARGER PIPE. CONTACT THE CITY FOR APPROVAL ON A CASE-BY-CASE BASIS.

WATER SERVICE:

1. FOR TAPS, PIPE, AND FITTINGS FOR WATER SERVICES THROUGH 2". THE SIZE SHALL BE IN ACCORDANCE WITH THE CITY'S STD. DET. 342-2. REQUESTS FOR LARGER SIZES MUST BE SUBMITTED FOR REVIEW AND APPROVAL. MINIMUM WATER SERVICE LINE SIZE DIAMETER SHALL BE 1".
2. APPROVED SADDLES, ALL IRON PIPE THREAD TAP AND BRONZE STRAP: FOR PVC, JONES J-995, JONES J-996, MUELLER H-13000 SERIES FORD STYLE S90; FOR DUCTILE IRON PIPE, FORD 202B, JONES J-979, MUELLER BR2B SERIES, MUELLER BR2S SERIES.
3. ALL BRASS FITTINGS SHALL BE MANUFACTURED BY FORD, MUELLER, OR JAMES JONES. ALL ANGLE METER STOPS SHALL INCLUDE LOCKING WINGS.
4. ALL CORP STOPS AND ANGLE VALVES SHALL BE BALL STYLE. ALL FITTINGS SHALL BE "PAC-JOINT" TYPE.
5. ALL BRASS SHALL BE LEAD FREE.
6. CUSTOMER IS REQUIRED TO INSTALL AND MAINTAIN A SHUT OFF VALVE AND CHECK VALVE WITHIN 18" OF METER.
7. SERVICE LINES SHALL BE ONE (1) PIECE WITH NO SPLICES FROM MAIN TO METER.

FIRE HYDRANTS:

1. ALL HYDRANTS SHALL BE DRY BARREL AND BE MANUFACTURED BY MUELLER, OR CLOW 5 1/4" MAIN VALVE OPENING .
2. ALL HYDRANTS SHALL BE EQUIPPED WITH NATIONAL STANDARD HOSE THREADS.
3. HYDRANT COATING: "SAFETY YELLOW". COMPLETE HYDRANT PREPARATION PRIOR TO INSPECTION FOR PAINTING. INSPECTION IS ALSO REQUIRED AFTER PAINTING FOR CONTRACTOR TO RECEIVE FINAL ACCEPTANCE.
4. PUMPER NOZZLE SHALL BE ORIENTED TO PROVIDE BEST ACCESSIBILITY FOR FIRE TRUCK. ALL HYDRANT PORTS SHALL BE LUBRICATED WITH A FOOD-GRADE LUBRICANT, OR NSF 60 PRODUCT.
5. DEAD END WATER MAINS SHALL HAVE A FIRE HYDRANT OR A BLOW OFF IN ACCORDANCE WITH CITY STD. DET. 390-1, BUT NOT BOTH.
6. FIRE HYDRANTS SHALL BE IN ACCORDANCE WITH THE CITY STD. DET. 360-1.

DIP SECTIONS:

1. ALL DIP SECTIONS SHALL BE CONSTRUCTED OF RESTRAINED DUCTILE IRON PIPE (DIP) PER THE CITY'S STD. DET. 370-1. ALL DIP SECTIONS SHALL BE JOINT RESTRAINED DIP WITH POLYETHYLENE WRAP FOR THE ENTIRE LENGTH PER MAG SEC. 610.6. JOINT RESTRAINED LENGTHS WILL FOLLOW MAG STD. DET. 303-1 AND 303-2. ANCHOR BLOCKS/THRUST BLOCKS MUST BE INSTALLED FOR VERTICAL BENDS PER MAG STD. DET. 381.
2. AIR/VACUUM RELEASE VALVES ARE REQUIRED AT HIGHPOINTS AND AT VERTICAL REALIGNMENTS OF THE WATER LINE.

LOCATION MARKERS:

1. SEE THE CITY'S STD. DET. 350-1. LOCATING BALLS MANUFACTURED BY OMNI, 3M OR APPROVED EQUAL MUST BE PLACED AT WATER MAIN ABOVE WATER SERVICE LINE.
2. LOCATING BALLS SHOULD BE PLACED NO DEEPER THAN 4' BELOW GROUND SURFACE.
3. LOCATED EVERY 500' ON TRANSMISSION MAINS.
4. LOCATED ON EVERY JOINT ON CURVILINEAR ALIGNMENTS.

MARKING TAPE:

1. SEE THE CITY'S STD. DET. 350-1. DETECTABLE MARKING TAPE SHALL BE USED FOR ALL WATER LINES AND SERVICES.

MARKING POSTS:

1. CARSONITE MARKING POSTS ARE REQUIRED FOR ALL WATER VALVES LOCATED OUTSIDE OF ROW AND OUTSIDE OF PAVED AREAS.

OTHER ITEMS:

1. IN ACCORDANCE WITH MAG SPECIFICATIONS.
2. WHERE CITY STD. ARE SPECIFIED, THOSE STDS SUPERSEDE MAG STDS REGARDLESS OF PROJECT LOCATION.
3. GATE VALVES SHALL BE RESILIENT SEATED IN ACCORDANCE WITH THE CITY'S WATER SYSTEM MATERIAL SPECIFICATIONS AND MAG SEC. 630.3.
4. WATER VALVE DEBRIS CAPS: DEBRIS CAPS ARE REQUIRED WHEN WATER VALVES ARE CONSTRUCTED WITHIN 2 FEET OF THE EDGE OF GUTTER, IN AREAS THAT ARE UNPAVED, AND AREAS PRONE TO FLOODING. VALVES SHOULD BE SET 2-TENTHS ABOVE FINISH GRADE IN ALL UNPAVED AREAS. CONCRETE COLLAR WITH CARSONITE MARKER IS REQUIRED ON ALL VALVE LOCATIONS OUTSIDE OF RIGHT-OF-WAY.
5. WATER PRESSURE TESTING: ALL WATER LINES WILL BE TESTED PER MAG SEC. 610.15. MODIFICATIONS TO THESE SPECIFICATIONS INCLUDE THE TESTING TO BE AT A MINIMUM OF 200 PSI, HIGHER TEST PRESSURES MAY BE REQUIRED IN CERTAIN CIRCUMSTANCES, AND LOSS/LEAKAGE CALCULATIONS SHALL BE BASED UPON A MAXIMUM OF 1500-FEET, STARTING WITH THE SMALLEST DIAMETER PIPE.
6. WATER SERVICES 2 INCHES AND SMALLER SHALL BE IN ACCORDANCE WITH THE CITY STD. DET. 342-2.

TRANSMISSION LINES:

1. TRANSMISSIONS LINES DEFINED AS FORCE MAIN, RECLAIMED LINE, RAW OR POTABLE WATER LINES THAT DO NOT HAVE SERVICES AND RUN FOR LONG LENGTHS.
2. ISOLATION VALVES MAY BE SPACED AT FURTHER THAN STANDARD DISTRIBUTION LINE INTERVALS AND ARE REQUIRED AT WASH CROSSINGS. ALL VALVES OUTSIDE ROW AND PAVEMENT SHALL HAVE CARSONITE MARKERS.
3. ALL CHECK VALVES SHALL BE PLACED IN A VAULT AND APPROVED BY CITY ENGINEER.
4. MARKER BALLS AND DETECTABLE TAPE OF THE APPROPRIATE COLOR SHALL BE PLACED EVERY 500' AND AT ANY BEND.
 - BLUE: POTABLE / DRINKING WATER
 - PURPLE: RECLAIMED
 - GREEN: SEWER
 - YELLOW: RAW WATER

Date:
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WATER SYSTEM MATERIAL SPECIFICATION

Detail No.
100-3