

08003 Construction Materials – Service Connection**Index**

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08003-1 Water Service**1.1 Pipe**

This Section applies to materials used in the construction of service connections to City water mains. Connections larger than 50 mm shall conform to Section 08001.

Pipe used for water service shall be either copper tubing, minimum size 19 mm, or polyethylene tubing, minimum size 25 mm.

1.1.1 Copper

Copper tubing shall conform to ASTM B88 for Type K soft copper.

1.1.2 Polyethylene

Polyethylene tubing shall conform to ASTM D2737-03 for materials designated PE2306, PE3306, or PE3406. The SDR for the tubing shall be 9.

1.2 Valves and Fittings

Main stops, curb stops and unions shall conform to AWWA C800-84 and shall be made of brass. Connections shall be the compression type suitable for use with either Type K copper or polyethylene tubing. Compression couplings shall be MUELLER 110, EMCO "Successor", FORD "Pack Joint" or approved equal.

1.2.1 Main Stops

Main stops shall have a standard AWWA inlet thread and a compression coupling on the outlet.

1.2.2 Curb Stops

Curb stops shall be either the ball valve type or plug type with "O"-ring seals and shall be non-draining. FORD Type B44, EMCO "Century", MUELLER "Oriseal" or approved equal shall be used.

1.2.3 Curb Boxes

All castings shall be clean and sound.

Curb boxes shall be the sliding type with steel pipe top and bottom sections. The top section shall be 32 mm diameter, schedule 40, type 304 stainless steel and the bottom section shall be 25 mm diameter, schedule 40, type 304 stainless steel. The sliding sections shall have a 3/8" stainless steel set screw. The box shall extend from 2460 to 2900 mm.

The curb box shall have a cast iron cover complete with 15mil (minimum) asphaltic varnish coating. The cover shall have a 25 mm threaded hole fitted with a five sided brass plug through which the curb box key may be inserted when the plug is removed. The connection between the cover and top section shall be threaded.

The boot shall be cast iron complete with 15mil (minimum) epoxy coating throughout. Refer to current City of Saskatoon Standard Drawing as posted on the City's Internet web site for epoxy specifications. It shall be designed to rest on a base level with the bottom of the curb stop without touching the stop and service tubing. All castings shall be clean and sound. All parts shall be coated as specified.

For all new installations, the operating rod shall be a 2134mm (7ft) long stainless steel rod conforming to ASTM 304. For rehabilitation work, the operating rod shall be 2134mm (7 ft), 2438mm (8 ft) or 2743mm (9 ft) long stainless steel rod conforming to ASTM 304. At the top of the rod the sides shall be flattened to fit the curb box key.

The rod shall be 15mm in diameter for water service diameters up to and including 50mm.

The clevis shall be stainless steel conforming to ASTM 304. The clevis shall be machined or cast with a 17mm wide by 30mm deep by 30mm long slot to accept the curb stop. A hole shall be drilled in the clevis such that a 5/32" brass cotter key can be inserted to make a mechanical connection to the curb stop. The connection between the rod and clevis shall be made by forging a 1/2" wide square by 1/2" long end on the rod and inserting it into the mating hole in the clevis. The rod shall be held in the clevis by means of a 3/8" brass rivet.

1.2.4 Inserts

Inserts are required for polyethylene tubing at all compression couplings.

The inserts shall be polyethylene with SDR of 13 and length of 38 mm. One end shall be bevelled and the other end flanged. The flange shall be 9.6 mm wide and 1.6 mm thick.

1.2.5 Service Saddles

Service saddles shall be ROBAR 2606 or approved equal for PVC pipe. ROBAR 2786 isolating saddles or approved equal shall be used for iron and steel pipe.

1.2.6 Tapping Sleeve and Valve

Tapping sleeves shall be MUELLER H-615 or approved equal. Tapping valves shall be MUELLER H-667 or approved equal.

1.2.7 Curb Box Marker

Curb box markers shall be installed on new service connections in new subdivisions. Replacement curb boxes will not require installation of the curb box marker. The curb box marker shall be 25mm polyethelene tubing with a minimum length of 0.6 meters above ground. It shall be securely fastened to the curb box spindle using tape or zip ties, as shown in the Service Connection Standard Drawing posted on the City's Internet web site. The Contractor shall supply the markers and fastening materials unless otherwise directed by the Engineer.

08003-2 Sewer Service

This Section applies to materials used in the construction of service connections to City sanitary and storm sewer mains. The minimum size of connection shall be 100 mm for sanitary and 150 mm for storm. Connections 200 mm or larger shall conform to Section 08002.

2.1 Pipe

2.1.1 Acrylonitrile Butadiene Styrene (ABS)

ABS pipe shall conform to CSA B181.1-73. The minimum SDR shall be 19. The pipe shall be supplied with rubber gaskets.

2.1.2 Asbestos Cement (AC)

This pipe material is not approved for use in new construction or reconstruction.

2.1.3 Polyvinyl Chloride (PVC)

PVC pipe shall conform to ASTM D3034-08. The SDR shall be 28 for all sizes less than 200 mm. The pipe shall be supplied with rubber gaskets.

2.1.4 Vitrified Clay Tile (VCT)

This pipe material is not approved for use in new construction or reconstruction.

2.2 Fittings

All bends shall be long radius PVC.

For connection of PVC, pipe couplings shall be PVC supplied with rubber gaskets. PVC to ABS connections shall be made with glued ABS coupling. “Fernco” couplings shall be used for connection of other sewer pipe materials.

2.3 Saddles

Saddles shall be supplied with seat and joint gaskets. When installed the saddle shall extend to the inner surface of the pipe wall but shall not protrude into the pipe.

2.3.1 PVC

Saddles shall conform to ASTM D3034-08 and the SDR shall be 28. The saddle shall be attached with two stainless steel straps tightened with a stainless steel screw assembly. Quick release mechanisms shall not be permitted.

2.4 Manholes and Catch Basins

Where required on service connections, manholes and catch basins shall conform to Section 08002 of these Specifications.

End of Specification 08003