

SECTION 02642

WATER SERVICE CONNECTIONS

PART 1 - GENERAL

1.01 DESCRIPTION

A. The work of this section includes, but is not limited to:

1. Tapping water mains by installation of corporation stops or other suitable fittings or couplings, up to and including 2" diameter.
2. Connection of service pipe and fittings up to curb stops and meter boxes.
3. Installation of meter setting equipment.

B. Related work specified elsewhere:

1. Trenching, Backfilling, and Compacting: Section 02221
2. Water Mains: Section 02615

C. Definitions:

NONE

D. Applicable Standard Details:

NONE

1.02 QUALITY ASSURANCE

A. Reference Standards:

1. American Society for Testing and Materials (ASTM):
B62 Specification for Composition Bronze or Ounce Metal Castings
B88 Specification for Seamless Copper Water Tube
C62 Specification for Building Brick (Solid Masonry Units Made from Clay or Shale)
2. American Water Works Association (AWWA):
C700 Cold Water Meters - Displacement Type, Bronze Main Case
C800 Underground Service Line Valves and Fittings

1.03 SUBMITTALS

A. Certificates:

1. Submit two copies each of certificate for pipe and pipe fittings from each manufacturer attesting that each of these meets or exceeds specification requirements.

B. Manufacturers' Literature:

1. Submit two copies each of manufacturers' catalog for each size and type of corporation stop, curb stop, curb box, meter setting and pipe, fitting or coupling.

1.04 JOB CONDITIONS: Section not utilized.

1.05 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Product Delivery:

1. During loading, transporting and unloading of all materials and products, exercise care to prevent any damage.

B. Storage:

1. Store all products and materials off the ground and under protective coverings and custody, and in a manner to keep products clean and in good condition until used.

PART 2 - PRODUCTS

2.01 PIPE OR TUBING AND FITTINGS

A. Copper Water Tubing:

1. ASTM B88, Type K, Seamless
2. Flared type union cast brass joints - no sweated joints permitted.
3. Min. size service = 3/4" unless otherwise determined by the Municipality.

2.02 CORPORATION STOP ASSEMBLY

A. Corporation Stops:

1. Brass or Red Brass alloy body conforming to ASTM B62.
2. Standard Mueller thread on inlet end.
3. Outlet end suitable for copper service line.

B. Service Clamps:

1. Galvanized iron or bronze body.
2. Neoprene, O-ring gasket.

3. Double straps with matching hardware.

2.03 CURB STOP ASSEMBLY

A. Curb Stops:

1. Brass or Red Brass alloy body conforming to ASTM B62.
2. Plug type valve.
3. Positive pressure sealing.
4. Quarter turn style.

B. Curb Boxes and Covers:

1. Cast iron body, extension type or Buffalo type.
2. Minneapolis or arch pattern base.
3. Lid with inscription 'Red Lion Water', with PLV's valve box pentagon plug.

2.04 METERS AND METER PITS

A. Displacement Type: AWWA C700

B. Pits: Precast or cast-in-place concrete a minimum of 3' square and 4' vertical clearance inside.

C. Access lid to meter-pit shall be hinged steel or aluminum and insulated to prevent against freezing.

2.05 BRICK

A. ASTM C62, Grade SW

PART 3 - EXECUTION

3.01 PREPARATION

A. Establish location of curb stops and box or meter pit for each service connection and review with Municipality.

B. Perform trench excavation and associated work as specified in Section 02221.

3.02 TAPPING WATER MAINS

A. Each connection for different kinds of water mains shall be tapped using suitable materials, equipment and methods in accordance with manufacturer's instructions.

B. Screw corporation stops directly into a tapped and threaded iron main at 10 or 2 o'clock positions on the main's circumference. Locate corporation stops at least 12" apart longitudinally and staggered.

- C. Use proper seals or other devices to ensure that no leaks are left in the water mains at the points of tapping. Do not backfill and cover the service connection until observed by the Municipality.

3.03 SERVICE LINE AND FITTINGS

- A. Use bends to connect the service pipe or tubing to the tapping fitting or corporation stops to provide flexibility to counteract the effects of settlement or expansion/contraction in the line. Install curb stop at curb or in the sidewalk. Curb box lid shall be flush with walkway surface.
- B. Lay each section of the service line in a manner to form a tight joint with the adjoining section. Avoid offsets, kinks or awkward bends to ensure a smooth flow line. Provide Type V bedding as specified in Section 02221.
- C. Clean and inspect each pipe and part of the fitting before installing and assemble to provide a flexible joint.
- D. Install service fittings and appurtenances on suitable brick or concrete supports. Do not use earth, rocks, wood or other organic materials as supports.
- E. Operate each corporation and curb stop before and after installation.
- F. When the work is not in progress, and at the end of each work day, securely plug the ends of pipe and fittings to prevent any dirt or foreign substances from entering the lines.
- G. Test and disinfect mains and service lines as specified in Section 02653.
- H. Backfill in accordance with Section 02221.

3.04 METER PITS

- A. Excavate and place minimum of 4" AASHTO No. 67 on undisturbed earth as base of meter pit.
- B. Construct concrete walls or set precast box (without a bottom slab) on the stone base.
- C. Location of meter pit shall be determined by the Municipality.
- D. Backfill in accordance with Section 02221 and as directed by the Municipality.

3.05 SURFACE RESTORATION

- A. Restore unpaved areas in accordance with Section 02221.
- B. Restore other areas in accordance with local regulations.