

SECTION 33 12 13

INSTALLATION OF SCREW TAPS, SADDLES, SERVICE PIPE AND FITTINGS

PART 1 – GENERAL

1.01 WORK INCLUDED

- A. Work under this Section includes the removal of pavement; excavation of service trench and sidewalk as necessary for SFPUC CDD to make connections with service meters or existing service pipe; drilling, tapping and installing screw taps; and trenchless installation of 1-inch service pipe, where necessary.

1.02 RELATED SECTIONS

- A. Section 31 23 36 - Excavation and Backfill
- B. Section 33 10 00 – Water Utility Piping materials
- C. Section 33 11 00 – Installation of 16-Inch and Smaller Water Mains and Appurtenances
- D. Section 33 11 41 – V-Bio® Polyethylene Encasement of Ductile Iron Pipe

1.03 REFERENCES

- A. SFPUC-CDD Standard Plans CDD-LP-201 through CDD-LP-216

PART 2 – PRODUCTS

2.01 MATERIALS

- A. Service Fittings
 - 1. Service fittings shall be made of bronze or brass, in conformance with AWWA C-800.
- B. Service Pipes
 - 1. The allowable diameters for service pipes are 1, 2, 4, 6, 8, 12 inches. Service pipes 2-inch and smaller shall be copper tubing type K, soft or hard. Service pipe larger than two inches shall be ductile iron pipe.

PART 3 – EXECUTION

3.01 INSTALLATION OF SERVICE PIPES AND METER

- A. SFPUC-CDD shall install service pipe connections to existing mains at cost to the project sponsor. If directed by SFPUC-CDD, the Contractor may install service pipe connections to new but not active water mains. The service pipe, valves, and fittings shall be installed from the new main to a point inside the meter box. SFPUC-CDD personnel will furnish and install the water meter at cost to the project sponsor.
- B. Meter boxes, meter vaults and covers shall be installed by the SFPUC-CDD at cost to the project sponsor or if directed by SFPUC-CDD, installed by the Contractor. Pipes installed by the Contractor upstream of the meter shall be pressure tested before the installation of the meter by SFPUC-CDD. Meters and meter boxes shall be installed on the sidewalk per SFPUC “Rules and Regulations Governing Water Service to Customers,” Section A, Rule 2.
- C. Each type of service (irrigation, domestic, fire) shall have a separate line and a meter.
- D. The location of the service meter, except for fire services, shall be at the principal frontage of the premises, in area between the curb line and the customer’s premises. The Contractor shall not locate the meter in the traveled way of City streets, private roads or driveways, and curb ramps.
- E. For fire services, a 5/8” meter shall be installed on the bypass of the backflow preventer by SFPUC-CDD personnel.
- F. All backflow preventers shall be installed inside private properties, not more than twenty five (25) feet from the back of the domestic, irrigation, or reclaimed water meter or not more than twenty (25) feet of the back of the curb for fire services.

3.02 INSTALLATION OF SCREW TAPS AND SERVICE SADDLES

- A. Drill, tap and install screw taps as shown on the drawings or as required by the City Representative. Any screw tap not satisfactorily installed in the opinion of the City Representative shall be removed and replaced at the expense of the Contractor. Where the screw tap installation is unsatisfactory, it shall be removed and replaced with a solid cast iron plug at no cost to the City. The City Representative shall determine the location of the relocated screw taps.
- B. The Contractor shall not leave any “coin” cut out from the main for the installation of screw taps. The Contractor shall provide all “coin for 2” screw taps to the City Representative. It is the Contractor’s responsibility to remove any object left inside the newly installed pipe.

- C. Install brass saddles for 2 inch services on mains 8-inch or smaller per the manufacturer's recommendations and per Standard Plans CDD-LP-201B and CDD-LP-202B.

3.03 SERVICE TRENCH EXCAVATION AND BACKFILL

- A. Service trench excavation and backfill shall be in accordance with Section 31 23 36 - Excavation and Backfill.
- B. The service trench shall be of sufficient width to properly install the service pipe and have a flat bottom two feet below the final gutter grade. The gutter grade shall be defined as the existing gutter grade or six inches below the official grade (grade at top of curb as established by the San Francisco Board of Supervisors) whichever is lower.
- C. The bottom of the trench shall slope uniformly to the main from a point approximately ten feet from the main.
- D. Service trench pavement restoration shall be performed in accordance with the provisions of Section 32 10 00 - Pavement Restoration of the Specifications

3.04 SERVICE FITTINGS

- A. Contractor shall make cold flares by use of flaring tools approved by the Water Department whenever a flare type fitting is furnished. Heat shall not be applied to flare tubing. Joints for other type of fittings shall be in accordance with the method recommended by the manufacturer and approved by the Water Department.

3.05 INSTALLING SERVICE PIPE AND FITTINGS

- A. The Contractor shall use trenchless methods to install 1-inch service pipe across existing traffic lanes wherever possible. Approval of the City Representative shall be obtained before any open cut excavation for 1-inch service line is permitted in the existing traffic lanes. The service meter will be installed and connected to the service line by the Water Department.
 - 1. When instructed by the City Representative. The Contractor shall renew 1-inch long plastic service pipes (when service pipes are connected to the main on the opposite side of the street) by disconnecting the plastic pipe from the water main and the service meter (at the 1-inch plastic adapters) and pulling the new 1-inch copper through the 1-inch plastic service pipes at the same location instead of trench excavation. These renewals shall be scheduled and coordinated with the City Representative in advance of installation so as to minimize water service disruption to existing customers.

- B. For two inch and larger service pipe installations or where trenchless methods for 1-inch services are not possible, the Contractor shall dig trench under the curb, gutter, sidewalk and parking strip (where present) to the meter box as shown in CDD Standard Plans.
- C. When the installation of the pipe through the basement wall is part of the service change over and is done by SFPUC-CDD personnel, SFPUC-CDD personnel will temporarily plug the annular gap between the pipe and the wall opening if they complete the work within 3 hours of the end of the Contractor's work shift. The City Representative will inform the contractor of the temporary plug as soon as possible so that the Contractor can replace with a permanent plug. Contractor shall plug the gap if SFPUC-CDD personnel complete the plumbing work earlier than 3 hours of the end of the Contractor's work shift. The Contractor is responsible for all leaks resulting from his/her work.
- D. All service trench pavement restoration shall be performed in accordance with the provisions of Specifications Section 32 10 00 - Pavement Restoration of these Specifications.
- E. All installation of 2-inch service pipe and installation of 1-inch service pipe in open trench excavations will be performed by SFPUC-CDD.

END OF SECTION