

SECTION S931 - REMOVAL AND REPLACEMENT OR REINSTALLATION OF WATER MAIN OBSTRUCTION

S931-1 DESCRIPTION

Work consists of removing and reinstalling or replacing an additional section of the existing water main which acts as an obstruction to the passage of water main cleaning and lining equipment, that has not been identified on the Contract Documents.

An obstruction is defined as a bend, offset or other water main fitting or appurtenance which prevents the passage of water main cleaning and lining equipment.

Work is to be in conformance with the requirements of Sections S900 General Water Provisions, S901 Water Main Pipe and Fittings and S906 Insertion Sleeve.

S931-2 MATERIAL

S931-2.01 Pipe and Fittings

Pipe and fittings shall be ductile iron in conformance with requirements of Section S901 Water Main Pipe and Fittings.

S931-2.02 Sleeves and Couplings

Sleeves and couplings shall conform to the requirements of Section S906 Insertion Sleeve.

S931-2.03 Thrust Restraint

Concrete thrust blocks and restrained joints shall conform to the requirements of Section S900 General Water Provisions.

S931-3 CONSTRUCTION DETAILS

S931-3.01 General

All valves shall be operated by the Contractor as directed by the Bureau of Water, and under the supervision of the Project Manager. Coordination of the work for operation of water valves shall be in conformance with Section S900 General Water Provisions. Valve operation cards shall be properly filled out by the Contractor under the supervision of the Project Manager and submitted to the Water Bureau on a daily basis. The Bureau of Water will supply the necessary cards.

The interior of all water main pipe and fittings not receiving 24 hour chlorine disinfection contact time must be spray or swab disinfected with a 1 to 5 percent solution of chlorine no more than 30 minutes prior to installation. The interior and exterior of cut ends of existing pipe shall also be cleaned and disinfected.

Fit between the existing water main pipe and new water main pipe shall not exceed a gap of 1/8 inch. All joints shall be made watertight. Prior to backfilling, existing water main shall be filled with potable water and installation tested for leaks under line pressure in the presence of the Project Manager.

S931-3.02 Removal of Obstruction

Pavement saw cutting shall be required prior to all excavation work in streets. All street cuts shall be made by a pavement saw and shall conform to the requirements of Section R622 Saw Cutting.

Excavation shall be only to a sufficient length, width and depth needed to expose, cut and remove a section of the existing water main containing the obstruction. Excavation shall conform to the requirements of Section R206 Trench and Culvert Excavation.

The existing water main shall be cut, and the obstruction removed. Prior to cutting the existing water main, pipe cutting equipment and methods shall be as approved by the Project Manager. All cuts shall be straight, smooth, and perpendicular to the centerline of the pipe.

S931-3.03 Reinstallation of Obstruction

The existing obstruction may only be reinstalled if it is properly cleaned, its interior lined with cement mortar and reinstallation approved by the Project Manager. Pipe and fittings shall be installed according to the requirements of Section S901 Water Main Pipe and Fittings. New sleeves or couplings shall be used to connect the reinstalled obstruction to the existing pipe.

S931-3.04 Replacement of Obstruction

Pipe, fittings and sleeves or couplings used shall be new and shall be installed according to the requirements of Sections S901 Water Main Pipe and Fittings and S906 Insertion Sleeve.

S931-4 METHOD OF MEASUREMENT

The quantity measured for payment shall be the number of additional obstructions removed and replaced or reinstalled. Measurement for each additional obstruction shall include up to a maximum of 8 linear feet of water main pipe removed.

No payment will be made for obstructions already shown in the Contract Documents.

S931-5 BASIS OF PAYMENT

The unit price bid shall include the cost of: pavement saw cutting; cutting and removing the obstruction; measuring pipe; water tight plugs; cleaning and lining or disposing of existing pipe and fittings; disinfection, reinstalling or replacing the obstruction with the appropriate sleeves, couplings and ductile iron pipe; thrust blocks; thrust restraint; leak testing; excavation; backfill; bedding; pavement restoration; and furnishing all labor, material and equipment necessary to do the work.

All costs resulting from additional openings required by the Contractor for cleaning gate valves, services or laterals that have become plugged because of the cement lining, or because the Contractors apparatus cannot properly clean or cement line continuously a full section of pipe, shall be borne by the Contractor.

Payment will be made under:

ITEM NO.	ITEM	PAY UNIT
S931.01XX	Remove and Replace or Reinstall X" Water Main Obstruction	Each

REVISED: November 8, 2010