

SECTION 35

PRESSURE CONNECTION

35.1 GENERAL

Installations of pressure connections four (4) inches and larger shall be made in accordance with this section.

35.2 TAPPING SLEEVES

35.2.1 GENERAL

Tapping sleeves shall be mechanical joint sleeves or fabricated steel sleeves as specified below. All pressure connections to asbestos cement pipe and all "size on size" taps shall utilize mechanical joint sleeves.

35.2.2 MECHANICAL JOINT SLEEVES

Sleeves shall be cast of gray-iron or ductile iron and have an outlet flange with the dimensions of the Class 125 flanges shown in ANSI B16.1 properly recessed for tapping valve. Flanges shall be gray-iron or ductile iron. Gaskets shall be vulcanized natural or synthetic rubber. Bolts and nuts shall comply with ANSI/AWWA A21.11/C111. Sleeves shall be capable of withstanding a 200 psi working pressure.

35.2.3 STEEL TAPPING SLEEVES

Sleeves shall be fabricated of minimum three-eighths (¾) inch carbon steel meeting ASTM A285 Grade C. Outlet flange shall meet AWWA C-207, Class "D" ANSI 150 lb. drilling and be properly recessed for the tapping valve. Bolts and nuts shall be high strength low alloy steel to AWWA C111 (ANSI A21.11). Gasket shall be vulcanized natural or synthetic rubber. Sleeve shall have manufacturer applied fusion bonded epoxy coating, minimum 12 mil thickness.

35.2.4 TAPPING VALVES

Tapping valves shall meet the requirements of Section 52.2 except that units shall be flange by mechanical joint ends. Valves shall be compatible with tapping sleeves as specified above and specifically designed for pressure connection operations.

35.3 NOTIFICATION AND CONNECTION TO EXISTING MAINS

All connections to existing mains shall be made by the CONTRACTOR only after the connection procedure and his work scheduling has been reviewed and approved by the CITY. The CONTRACTOR shall submit a written request to the CITY a minimum of

five (5) working days prior to scheduling said connections. In his request he shall outline the following:

1. Points of Connection, fittings to be used, and method of flushing and disinfection if applicable.
2. Estimated construction time for said connections.

The CITY shall review the submittal within three (3) working days after receiving it and inform the CONTRACTOR regarding approval or denial of his request. If his request is rejected by the CITY, the CONTRACTOR shall resubmit his request modifying it in a manner acceptable to the CITY.

All connections shall only be made on the agreed upon date and time. If the CONTRACTOR does not initiate and complete the connection work in the agreed upon manner, he shall be required to reschedule the said connection by following the procedure outlined above.

The CONTRACTOR shall not operate any valves in the system.

35. 4 INSTALLATION

35. 4. 1 EXCAVATION, BACKFILL, COMPACTION AND GRADING

The applicable provisions of Section 32 shall apply.

35. 4. 2 CONSTRUCTION DETAILS

Sufficient length of main shall be exposed to allow for installation of the tapping sleeve and valve and the operation of the tapping machinery. The main shall be supported on concrete pedestals or bedding rock at sufficient intervals to properly carry its own weight, plus the weight of the tapping sleeve valve and machinery. Any damage to the main due to improper or insufficient supports shall be repaired at the CONTRACTOR'S expense.

The inside of the tapping sleeve and valve, the outside of the main, and the tapping machine shall be cleaned and swabbed or sprayed with ten (10) percent liquid chlorine prior to beginning installation for water system pressure connections. After the tapping sleeve has been mounted on the main, the tapping valve shall be bolted to the outlet flange, making a pressure tight connection. Prior to beginning the tapping operation, the sleeve and valve shall be pressure tested at 150 psi to ensure that no leakage will occur.

For pressure connections through twelve (12) inch diameter or less the minimum diameter cut shall be one-half (½) inch less than the nominal diameter of the pipe to be attached. For fourteen (14) through twenty (20) installations the minimum diameter shall be one and one-half (1½) inches less; for larger taps the allowable

minimum diameter shall be two (2) inches to three (3) inches less than the nominal diameter of the pipe being attached. After the tapping procedure is complete the CONTRACTOR shall submit the coupon to the CITY.

For pressure connections to wastewater force mains, the tapping valve shall be placed horizontally. After the tapping procedure is complete a plug valve shall be attached to the tapping valve. The tapping valve shall be left in the open position prior to backfilling.

Adequate poured concrete thrust blocks or restrained joint fittings shall be provided to prevent movement of the installation when test pressure is applied. Provisions of Section 34 shall apply.