

SECTION 1416

COPPER SERVICE LINE MATERIALS

1416.0100 GENERAL

1416.0101 Description of Work. The work under this Section shall consist of furnishing all labor, materials, and equipment required for the installation of Copper Service Materials in accordance with the details shown on the plans and the requirements of these specifications.

1416.0103 Submittals. In order to be accepted for incorporation into the work, the manufacturer's make and model of Copper Service Materials shall appear on the list of Agency-approved products found in the Approved Materials List (Appendix A).

1416.0104 Delivery, Storage, and Handling. All Copper Service Materials shall be delivered to the site and stored properly.

1416.0200 PRODUCTS

1416.0201 Materials. This technical provision covers 1- to 2-inch fittings and pipe for working pressures of 200 pounds per square inch. All brass shall be NO LEAD; quality and workmanship must be per AWWA C800-14. **All new material shall be on the Approved Materials List (Appendix A).**

(A) Fittings. Fittings and connections directly to copper pipe shall be compression. All encountered flared connections will need to have a flare to compression adaptor listed in the Approved Materials List (Appendix A).

(B) Copper pipe. Copper pipe shall be annealed and meet the requirements of ASTM B88 Type K. No copper pipe of foreign manufacture will be accepted, nor will pipe fabricated with copper of foreign manufacture.

(C) Corporation stops. Corporation stops, sizes 1 to 2 inches inclusive, shall be ball valve full opening with O-ring seal and all bronze ball. Corporation stops shall have two male ends, with AWWA inlet thread, and the outlet shall be used with a compression copper joint.

(D) Splice unions. Splice unions shall be compression, 3-part design or equal, for use with Type K copper service piping, sizes 1 to 2 inches inclusive. One 3-piece splice union may be used for each 100-foot roll of 1-inch copper tubing, or for each 40-foot length of 2-inch copper tubing. Splice unions may also be used in extending existing copper services to a new required length, and for repair sections if noted on approved plans or with the approval of the Construction Section.

(E) Angle Meter Stops. Angle meter stops for 1- to 2-inch services shall be all bronze ball type angle stops with the inlet equipped with a copper service pipe connection compression joint with copper pipe. Curb stops shall have lock wings. Reduced port will not be acceptable. Angle

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meter stops for 2-inch services shall be ball type angle meter stops with oval type water meter flange outlet and copper service pipe inlet end connection. All new material shall be on the Approved Materials List (Appendix A).

(F) Service Saddles. Service saddles shall be per AWWA C88-14, unless otherwise noted. Acceptable materials for use in clamp saddles shall be an all bronze saddle with stainless steel straps, single strap for 1-inch taps and double or extra-wide straps for 2-inch taps. Straps and nuts shall be stainless steel (type 304 or 316). Each strap shall be designed to include a flattened surface suitable for tightening against the circular pipe exterior with evenly distributed bearing area. Single-strap clamps may be used for 3/4- and 1-inch installations, as long as the furnished gasket provides a tapered O-ring or ribbed seal to surround the tap, and compresses uniformly when the strap nuts are tightened, avoiding eccentric loading problems. Double-strap clamps shall be used for all 2-inch installations. The provided gasket shall surround the tap and seal by tapered gasket, O-ring, or ribbed gasket. Compression shall be uniform as the strap nuts are tightened, avoiding eccentric loading. **All new material shall be on the Approved Materials List (Appendix A).**