SP02490 (Special Provisions for the 2024 Book) (Bidding on or after: 027-01-276
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SECTION 02490 - PORTABLE WATER SERVICE CONNECTION MATERIALS, 2 INCH AND SMALLER

(Follow all instructions and make all edits with "Track Changes" turned on. If there are no instructions [purple text] above a subsection, paragraph, sentence, or bullet, then include it in the Project. Delete all purple text before preparing the final document. All other modifications to this Section will require ODOT Technical Resource and State Specifications Engineer approval.)

Replace Section 02490 of the Standard Specifications except for the Section number and title with the following:

Description

02490.00 Scope - This Section includes the requirements for potable water service connections 2 inches in diameter and smaller, and sampling stations.

Materials

02490.10 General - Furnish service line materials meeting the requirements of AWWA C800 and these Specifications. Furnish service line materials that are designed for a working pressure of 100 psi. Where high pressure service materials are specified or shown, furnish materials that are designed for a working pressure of 150 psi. Use high pressure service materials when service line is hydrostatically tested concurrent with the water main. Furnish all Materials in contact with potable water according to ANSI/NSF Standard 61, Drinking Water System Components - Health Effects, or equivalent.

02490.20 Saddles - Furnish ductile iron, bronze or stainless steel saddles. For 3/4-inch and 1-inch services, use single strap saddles that have either AWWA tapered thread or female iron pipe thread outlet. For 1-1/2 inch and 2-inch services, use double strap saddles with female iron pipe thread outlet. Ensure saddles used on asbestos cement or on PVC pipe are formed for the pipe and have flat, stainless steel straps.

02490.30 Service Connection Valves:

(a) Corporation Stops - Furnish corporation stops constructed of bronze alloy. Furnish corporation stops for direct tapping having AWWA tapered thread inlet and outlet connections compatible with either copper or polyethylene tubing.

(1) Less Than or Equal to 1 Inch - Furnish corporation stops used with 3/4-inch and 1-inch outlet saddles having either AWWA tapered thread or male iron pipe thread inlets and outlet connections compatible with either copper or polyethylene tubing. Ensure the thread patterns for the saddle outlet and corporation stop inlet are the same.

(2) Greater Than 1 Inch - Furnish corporation stops used with 1-1/2 inch and 2-inch outlet saddles having male iron pipe thread inlets and outlet connections compatible with connecting service pipes, or have male iron pipe thread outlets.

(b) Angle Meter Valves - Furnish angle meter valves meeting the requirements of ASTM B62 and having a lock wing.

(c) Customer Service Valves - Furnish customer service valves that are bronze straight gate valves or angled gate valves on all services smaller than 2-inch and have non-rising stem, solid disc type with screwed or union bonnet, threaded ends, and a have brass handle. Furnish ASTM B62 bronze body, bonnet, operating handle, and disc. Furnish stems that are copper silicon alloy, nickel plated steel, or other approved corrosion resistant materials with equal characteristics of strength and durability. Ensure the disc clears the port area completely in the fully opened position. Furnish threaded ends meeting the requirements of ANSI B2.1.

02490.40 Service Pipe and Fittings:

(a) Copper Tubing Service Pipe - Furnish copper tubing service pipe that is annealed, seamless tubing according to the requirements of ASTM B88, Type K.

(b) Polyethylene Tubing Service Pipe - Furnish polyethylene tubing service pipe meeting the requirements of AWWA C901. Furnish high molecular mass tubing with a 200-psi rating. For 3/4-inch and 1-inch tubing, use either SDR 7 (iron pipe size) or SDR 9 (copper tube size). For 1 1/2 inch and 2-inch tubing, use SDR 9 (copper tube size).

(c) Service Fittings - Make fittings used for service connections of bronze alloy. Use fittings for copper tubing that are either compression or flare type, insulated or noninsulated.

Use fittings for polyethylene tubing that are either compression or stab type. Use stab type fittings with an internal grip ring and O-ring seal. Use stainless steel liners when utilizing compression fittings on polyethylene tubing.

02490.50 Meter Setters - Furnish meter setters manufactured and tested according to all applicable parts of AWWA C800. Furnish meter setters 12 inches in height and having an angle meter stop with drilled padlock wing, an angle check valve, and inlet and outlet threads compatible with fittings connecting to service pipes.
For 5/8-inch by 3/4-inch, 3/4-inch, and 1-inch services, furnish meter setters having meter saddle nuts for installation and removal of the meter. Furnish meter setters for 1-1/2 inch and 2-inch services equipped with a locking bypass.

02490.60 Bronze Nipples and Fittings - Furnish bronze threaded nipples and fittings meeting the requirements of ANSI B16.15, ASA 125-pound class.

02490.70 Meter Boxes:

(a) Nontraffic Areas - Construct meter boxes and covers located in the nontraffic areas of either reinforced concrete or high density polyethylene. Furnish high density polyethylene meter boxes and covers having a tensile strength according to ASTM D638. Include a reading lid on meter box covers.

(b) Traffic Areas - Construct meter boxes located in traffic areas of either reinforced concrete, cast iron or ductile iron. Construct traffic covers of aluminum, steel, cast iron or ductile iron. Furnish meter boxes and covers designed for continuous H-20 traffic loading.

02490.80 Sampling Stations - Furnish sampling stations having a 3/4-inch inlet with the depth of bury indicated, and a 3/4-inch unthreaded nozzle. Enclose the sampling station in a lockable, non-removable, cast aluminum housing. When opened, ensure the station does not require a key for operation, and the water flows in an all-brass waterway. Furnish all working

parts of brass and be removable from above ground with no digging. Furnish brass exterior piping. Include at each station a copper vent tube with a ball valve to enable the station to be pumped free of standing water to prevent freezing.

02490.90 Acceptance - Materials for potable water service connections are accepted according to 00165.35 and this Section.