

SECTION 02480 - POTABLE WATER VALVE MATERIALS

(Follow all instructions. If there are no instructions above a subsection, paragraph, sentence, or bullet, then include them in the project. The specifications may be modified to include project specific specifications, but all additions, deletions, or modifications must be sent to the ODOT Technical Resource and Senior Specifications Engineer for review and approval.)

Comply with Section 02480 of the Standard Specifications modified as follows:

02480.00 Scope - Replace this subsection, except for the subsection number and title, with the following:

This Section includes the requirements for gate valves, butterfly valves, valve boxes, valve stem extensions, tapping sleeve and valve assemblies, check valves, combination air release/air vacuum valves, and backflow prevention devices for potable water systems.

02480.10 General - Replace this subsection, except for the subsection number and title, with the following:

Provide valves with operating nuts or hand wheels as specified or shown. Furnish a standard 2 inch operating nut. All materials in contact with potable water shall conform to ANSI/NSF Standard 61, Drinking Water System Components - Health Effects, or equivalent. When indicated, coat all interior and exterior ferrous surfaces of valves with a protective epoxy coating meeting the requirements of AWWA C550.

(Use the following subsection .20(a) when gate valves are required.)

02480.20(a) Minimum Pressure - Replace the sentence that begins "Gate valves shall meet..." with the following sentence:

Provide gate valves that meet the requirements of AWWA C500, AWWA C509, or AWWA C515.

(Use the following lead-in and subsection .20(c) when gate valves are required.)

Add the following subsection:

02480.20(c) Valves - Provide gate valves that are resilient seat, non-rising stem type, open counterclockwise, and are equipped with an O-ring stuffing box.

(Use the following subsection .22 when butterfly valves are required.)

02480.22 Butterfly Valves - Replace this entire subsection with the following subsection:

02480.22 Butterfly Valves:

(a) Seats and Seals - Provide butterfly valves that are rubber seated and meet the requirements of AWWA C504, Class 150B. Shaft seals shall be standard O-ring seals, designed for replacement under line pressure.

(b) Valve Operators - Provide valve operators of the traveling nut or worm gear type, and that are sealed, gasketed, and permanently lubricated for buried service. Construct valve operators to the standard of the valve manufacturer to withstand all anticipated operating torques, and design to resist submergence in ground water.

(c) Valves - Provide butterfly valves that are resilient seat, open counterclockwise, and are equipped with an O-ring stuffing box.

02480.23 Ball Valves - Delete this entire subsection, including subsections .23(a) and .23(b).

02480.24 Power Actuating Devices - Delete this subsection.

(Use the following subsection .25 when valve boxes are required.)

02480.25 Valve Boxes - Replace this subsection, except for the subsection number and title, with the following:

Install valve boxes on all buried valves. Boxes shall be of cast iron, two-piece, slip type standard design, with a base corresponding to the size of the valve. The cover shall have the word "WATER" cast in it.

(Use the following subsection .26 when valve stem extensions are required.)

02480.26 Valve Stem Extensions - Replace this subsection, except for the subsection number and title, with the following:

Valve stem extensions shall have a 2 inch square operating nut and self-centering rock plate support. Valves with an operating nut more than 3 feet below grade shall have a valve stem extension to raise the operating nut to within 3 feet of the ground surface.

(Use the following subsection .30(a) when valve assemblies are required.)

02480.30(a) Valve Assemblies - Replace the sentence that begins "The outlet ends shall conform..." with the following sentence:

The outlet ends shall conform in dimensions to the AWWA Standards for mechanical joint connections or flange connections, except that the outside of the end connection shall have a large flange for attaching a drilling machine.

02480.40(c) Hydraulic Cushion Check Valves - Delete this subsection.

02480.50 Hydraulically Operated Valves - Delete this subsection.

(Use the following subsections .60 when combination air release/air vacuum valves are required.)

02480.60 Combination Air Release/Air Vacuum Valves - Replace this entire subsection, including subsections .60(a) and .60(b), with the following subsection:

02480.60 Combination Air Release/Air Vacuum Valves - Furnish combination air release/air vacuum valves that meet the requirements of AWWA C512. The valve body shall have a minimum design working pressure of 300 psi. The body and cover shall be cast iron conforming to ASTM A 48, Class 30. Floats shall be stainless steel conforming to ASTM A 240 and designed to withstand 1,000 psi. Seats shall be Buna-N rubber. Internal parts shall be stainless steel or bronze.

(Use the following subsections .70(a) when reduced pressure backflow prevention assemblies are required.)

02480.70(a) Reduced Pressure Principle Backflow Prevention Assembly - Replace this subsection with the following subsection:

02480.70(a) Reduced Pressure Backflow Prevention Assembly - Reduced pressure backflow prevention assemblies shall consist of a mechanical, independently operating, hydraulically dependent relief valve located between two independently operating, spring loaded check valves that are located between two tightly closing resilient seated shutoff valves, with four resilient seated test cocks, all meeting the requirements of AWWA C511 and the Oregon State Health Division.

(Use the following subsections .70(b) when double detector check valve backflow prevention assemblies are required.)

02480.70(b) Double Check Valve Backflow Prevention Assembly - Replace this subsection with the following subsection:

02480.70(b) Double Detector Check Valve Backflow Prevention Assembly - Double detector check valve backflow prevention assemblies shall consist of two spring loaded, independently operating check valves, located between two tightly closing resilient seated shutoff valves, with four resilient seated test cocks, all meeting the requirements of AWWA C510 and the Oregon State Health Division.