

SECTION 15151
GATE VALVES
(Contractor furnished)

PART 1: GENERAL

1.01 SCOPE

Furnish and install all gate valves shown on the Drawings and as described in Section 01000 Summary of Work and Section 01011 Specifications Special Conditions.

1.02 SUBMITTALS

Submit shop drawings and manufacturer's literature to the Engineer for approval in accordance with Specification Section 1300.

1.03 RELATED WORK

Specification Section 15000 - Piping - General Provisions.

PART 2: PRODUCTS

2.01 SMALL GATE VALVES

- A. All gate valves, 2 inches through 12 inches NPS, shall be iron body, resilient-sealed, nut-operated, non-rising stem gate valves suitable for buried service. The valve interior and exterior shall be epoxy coated at the factory by the valve manufacturer in accordance with AWWA Standard C550 (6-8 mil average, 4 mil minimum). The valves shall be designed for a minimum differential pressure of 250 psi and a minimum internal test pressure of 500 psi unless otherwise noted on the plans. Valves shall be designed to operate in the vertical position.
- B. Valves shall comply fully with AWWA Standard C509 or C515. Valve stems shall be made of a low zinc alloy in accordance with AWWA C509 or C515. Gate valves submittals shall include the ASTM designation for the low zinc stem material standard. Stem seals shall be double O-ring stem seals. Square operating nuts conforming to AWWA Standard C509 or C515 shall be used. All valve materials shall meet the requirements of NSF 61.
- C. All valves shall open left except valves that are specified open right in the Contract Drawings or as required by the Owner in Section 01011 Specifications Special Conditions.
- D. Test valves (Operation Test and Hydrostatic Tests) at the manufacturer's plant in accordance with AWWA Standard C509 or C515. Provide the Engineer with certified copies of all tests prior to shipment. The Engineer reserves the right to observe all tests.
- E. Acceptable manufacturers: Mueller Company, Decatur Illinois; Clow Canada, Hamilton, Ontario; M&H Valve, Anniston Alabama; United State Pipe and Foundry Burlington, New Jersey; American Flow Control, Birmingham, Alabama.

2.02 LARGE GATE VALVES

- A. Gate valves larger than 12-inches NPS shall be iron body, double disc (metal to metal seat), parallel seats, bronze mounted, rubber O-ring packing seals, epoxy coated interior and exterior meeting the requirements of AWWA Standard C550, and conforming to AWWA Standard C500. Stems shall be made of a low zinc alloy in accordance with AWWA C500 4.2.2.4.3. Gate valves submittals shall include the ASTM designation for the low zinc stem material standard. All valves shall have openings through the body of the same circular area as that of the pipe to which they are attached. All valve materials shall meet the requirements of NSF 61.
- B. All valves shall open left except valves that are specified open right in the Contract Drawings or as required by the Owner in Section 01011 Specifications Special Conditions.
- C. Test valves (Operation Test and Hydrostatic Tests) at the manufacturer's plant in accordance with AWWA Standard C515. Provide the Engineer with certified copies of all tests prior to shipment. The Engineer reserves the right to observe all tests.
- D. Valves shall have mechanical joint ends unless otherwise designated on the plans or approved by the Engineer. All gate valves larger than 12-inch shall be restrained.
- E. The valves shall be designed for a minimum differential pressure of 150 psi and a minimum internal test pressure of 300 psi, unless otherwise noted on the plans. Make all valves tight under their working pressures after they have been placed and before the main is placed in operation. Any defective parts shall be replaced at the Contractor's expense.
- F. Acceptable manufacturers: Mueller Company, ACIPCO (American Flow Control division, Waterous only), McWane, Inc. (Clow and M&H Divisions only), U.S. Pipe, and Crane Co. (Stockham Division only).

PART 3: EXECUTION

3.01 INSTALLATION

Install the valves in strict accordance with the requirements contained in Specification Section 15000 and detail drawings.

3.02 PROTECTION

After field installation of the valve all external bolts except the operating nut shall receive a layer of tape coating or approved rubberized-bitumen based spray-on undercoating applied before backfill. If polyethylene is applied to the pipe, the entire valve shall be encased in polyethylene encasement prior to backfill. The polyethylene encasement shall be installed up to the operating nut leaving the operating nut exposed and free to be operated.

END OF SECTION