

SECTION 2210 - BUTTERFLY VALVES

PART 1 - GENERAL

1.1 SCOPE OF WORK:

Provide all labor, materials, equipment and services required to furnish and install all valves shown on the drawings and/or specified herein.

1.2 SUBMITTALS:

- A. Descriptive literature, catalog cuts, and dimensional prints clearly indicating all dimensions and materials of construction, shall be submitted on all items specified herein to the ENGINEER for review before ordering.
- B. At the time of submission, the CONTRACTOR shall, in writing, call ENGINEER's attention to any deviations that the submittals may have from the requirements of the ENGINEER's Contract drawings and specifications.

PART 2 - PRODUCTS

2.1 BUTTERFLY VALVES:

- A. All butterfly valves shall be of the tight closing, rubber seat type with Buna-N rubber seats which are recess mounted and securely fastened to the valve body or to the valve disc. Seating surfaces shall be stainless steel. Valves shall be rated for 250-psi pressure (Class 250B) and shall be satisfactory for applications involving valve operation after long periods of inactivity. Valve discs shall rotate 90 degrees from the full open position to the tight shut position. Valves shall meet the full structural requirements of the application class of AWWA C504. Valves shall be mounted with all stainless steel nuts and bolts.
- B. Valves bodies shall be constructed of cast iron ASTM A126, Class B and shall have integrally cast mechanical joint ends. Two trunnions for shaft bearings shall be integral with each valve body. Body thickness shall be strictly in accordance with AWWA C504. Valve shafts shall be constructed of 18-8 stainless steel or of approved construction.
- C. Disc shall be constructed of any material described in AWWA C504, Section 4.5.4.1. All disc seating edges shall be smooth and polished. Valve shafts shall be a one-piece unit extending full size through the valve disc and bearings or a two-piece unit (stub-shaft type). Disc mounted seats shall be mechanically retained; body mounted seats shall be bonded to the valve body. Bonded-in seats must be simultaneously molded in, vulcanized and bonded to the body and the seat. Bearings shall be corrosion resistant and self-lubricating.
- D. Operator shall be the traveling nut type, AWWA C504, Class 250.
- E. All operators shall be fully gasketed and grease packed and designed to withstand submersion in water to 10 psi. Valve shall open with a counterclockwise rotation of the operator, and operation shall closely resemble conventional distribution valve practice and shall minimize water hammer. Operator shall be equipped for buried service.
- F. Butterfly valves shall be supplied for mains 18" and larger where shown on the Plans.
- G. All surfaces of the valve shall be clean, dry and free from grease before painting. An epoxy coating conforming to AWWA C550 shall be factory applied to the interior and exterior ferrous surfaces of the valve except for finished or seating surfaces.
- H. Hydrostatic and leakage tests shall be conducted in strict accordance with AWWA C504, Section 5.

- I. Butterfly valves installed in the ground shall have the operator nut in a vertical position for use in a roadway type valve box.
- J. There shall be a maximum 48" depth to valve operator nut. The CONTRACTOR must use extension stems, if necessary, to raise operator nut within 48" of the final grade. Extensions must be securely attached to the operating nut so the shaft will not pull off of the operator.
- K. Butterfly valves shall be sized as shown on the Drawings.
- L. Acceptable valve manufacturers shall be Henry Pratt Co., Valmatic, M&H, or equal.

PART 3 - BASIS OF PAYMENT

Payment for furnishing and installing butterfly valves and boxes will be made at the Contract unit price each, complete in place, which price shall include compensation for furnishing, hauling, excavating, installing concrete blocking and backfilling.

END OF SECTION