

GENERAL:

The scope of this document is to provide instruction for the installation and testing of chilled water valves.

DESIGN GUIDELINES:

1. Material**1.1. Valves**

- 1.1.1. Butterfly Valves: AWWA C504, Class 150B service, with cast iron body, cast iron disc with stainless steel seating edge, BUNA-N seal, 304 stainless steel valve shaft, self-lubricating valve bearings, fully grease packed actuator with stops in the open/close position. The actuator shall have a traveling nut which shall engage alignment grooves in the housing and shall have a built-in packing leak bypass to eliminate possible packing leakage into the actuator. Valve interior and exterior surfaces except for seating shall be coated with two coats of asphalt varnish. Valves shall have mechanical joint ends. Valves shall be Pratt Groundhog or approved equal.
- 1.1.2. Ball Valves: Threaded bronze, 125 lb., 2-piece design, full port. Valves shall be Nibco T-580 or approved equal.

1.2 Valve Boxes: Valve box shall be 6" PVC pipe, ASTM D3034, SDR 35, with cast iron cover. Clay and Bailey No. 2194 or approved equal. Lid shall be marked "WATER". Provide below grade concrete collar in planted areas.

1.3 Chilled Water Vent Boxes

- 1.3.1 Roadway, Parking Lots and Service Drives: Heavy duty, street rated cast iron with hot-dip galvanized finish. Removable cover shall be checkered steel with stainless steel cover screws. Removable cover shall be checkered steel with stainless steel cover screws. Junction box shall have an H-20 load rating and be suitable for installation in roadway. Minimum dimensions shall be 12" x 12" x 24" (L x W x D). Junction box shall be ER Series, as manufactured by Spring City Electrical Manufacturing Co., or approved equal.
- 1.3.2 Grass and Sidewalks: Vent box shall be 18" PVC pipe, ASTM F679, SDR 35, with cast iron water well cover. Clay and Bailey No. 2361 or approved equal. Lid shall be marked "WATER."

2. Installation

2.1. Valve Storage: Use the following precautions for valves during storage:

- 2.1.1. Do not remove end protectors unless necessary for inspection; then reinstall for storage.
- 2.1.2. Protect valves from weather. Store valves indoors. Maintain valve temperature higher than the ambient dew point temperature. If outdoor

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storage is necessary, support valves off the ground or pavement in watertight enclosures.

2.1.3. Handling: Use a sling to handle valves whose size requires handling by crane or lift. Rig valves to avoid damage to exposed valve parts. Do not use hand wheels or stems as lifting or rigging points.

2.2. Valve Installation

2.2.1. Chilled Water Service 6" and Larger: AWWA-Type Butterfly Valves: Comply with AWWA C600. Install buried valves with stem pointing up and with valve box.

2.2.2. Chilled Water Vents: Bronze Ball Valves.

2.2.3. Valve boxes shall be installed vertically with top of box even with final grade.

3. Testing

3.1. All valves shall be pressure tested in accordance with standards set forth in the Chilled Water Piping.

REFERENCES