

GENERAL:

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

DESIGN GUIDELINES:

1. Materials

1.1. Valves and Valves Boxes

- 1.1.1. Non-rising Stem Gate Valves: ANSI/AWWA C509, resilient seated, lead free, bronze stem, cast-iron or ductile-iron body and bonnet, epoxy coated disc, stem nut, 250 psig working pressure, mechanical joint ends. Valves shall be Model A-2360 as manufactured by Mueller Company, Decatur IL, or approved equal. Valves shall turn clockwise to close.
- 1.1.2. Ball Valves: Threaded lead free bronze, 125 lb., 2-piece design, full port. Valves shall be Model T-FP-600A-LF-LL as manufactured by NIBCO, Elkhart IL, or approved equal.
- 1.1.3. Valve Boxes: Valve box shall be 6" PVC C900 pipe with cast iron cover No. 2195 as manufactured by Clay and Bailey Manufacturing Company, Kansas City MO, or approved equal. Lid shall be marked "WATER". Provide below grade concrete collar in planted and asphalt areas.

2. Installation

2.1. Valve Storage:

- 2.1.1. Use the following precautions for valves during storage:
 - 2.1.1.1. Do not remove end protectors unless necessary for inspection; then reinstall for storage.
 - 2.1.1.2. Protect valves from weather - valves shall be stored indoors. Maintain valve temperature higher than the ambient dew point temperature. If outdoor storage is necessary, support valves off the ground or pavement in watertight enclosures.

2.2 Handling:

- 2.2.1 Use a sling to handle valves whose size requires handling by crane or lift. Valves shall be rigged to avoid damage to exposed valve parts. Do not use hand wheels or stems as lifting or rigging points.
- 2.2.2 Domestic Water Service: AWWA-Type Gate Valves: Comply with AWWA C600. Install buried valves with stem pointing up and with valve box.
- 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 Water Piping Construction Standard.

3.2. All valves shall be disinfected in accordance with standards set forth in the Water Piping Construction Standard.

4. **Commissioning**

4.1. MU only: All valves under pressure in the MU water distribution mains will be operated only by Campus Facilities - Steam & Water Distribution personnel, except in cases of extreme emergency. All valves installed as part of new construction shall remain fully closed during construction.

REFERENCES