

## GENERAL

The scope of this document is to provide instructions for backflow prevention assemblies installed at the University of Missouri - Columbia.

All connections to the University of Missouri domestic water system shall include the installation of a backflow prevention assembly in strict accordance with the Missouri Department of Natural Resources rule 10 CSR 60-11.010 "Prevention of Backflow" as last revised.

In general, all building domestic water main connections shall be considered a Class I Backflow Hazard requiring a reduced pressure principle backflow prevention assembly. All fire water main connections shall be considered a Class II Backflow Hazard requiring a double check valve assembly.

## DESIGN GUIDELINES

### Materials

Only those models of reduced pressure principle backflow prevention assemblies and double check valves assemblies approved by the Missouri Department of Natural Resources Public Drinking Water Program are acceptable.

Backflow prevention assembly shall be constructed with lead free bronze body or FDA approved epoxy-coated cast iron and include quarter-turn, full port, resilient seated ball valve shutoffs (2" and under) or non-rising stream resilient seated gate valves (over 2"), and bronze strainer. Fire protection backflow prevention assemblies shall not include a strainer. Backflow prevention assemblies shall be Lead Free LF009, and LF909 as manufactured by Watts Water Technologies, North Andover MA, or approved equal by owner.

Backflow prevention assemblies shall be sized to match the incoming water line size consistent with the expected flows of the water service. Typically, plumbing backflow prevention assemblies shall be sized for 7.5 fps, and fire protection backflow prevention assemblies shall be sized for 15 fps. The use of parallel installations is encouraged.

### Installation

Installation shall be on the water system as close as possible to the point of service connection and prior to any other connection or branch lines. No bypass piping shall be allowed around a backflow prevention assembly

unless the bypass is equipped with the same degree of backflow prevention protection.

Installation of backflow prevention assemblies shall be in strict accordance with 10 CSR 60-11.010 and manufacturer's written instructions.

### **COMMISSIONING**

Water service, both permanent and temporary will not be turned on without the installation of a backflow prevention assembly. Within twenty-four (24) hours after installation and placing into service, all backflow prevention assemblies shall be inspected, tested and approved by a tester certified in accordance with the requirements and procedures in 10 CSR 60-11.030. A *Backflow Prevention Assembly Test Data and Maintenance Report* form (MO 780-0804) shall be completed for each backflow prevention assembly, and the white copy forwarded to Campus Facilities - Energy Management Steam and Water Distribution Engineering.

All permanent and temporary installed backflow prevention assemblies shall be tested annually as required by 10 CSR 60-11.010. This annual testing shall be the responsibility of the building maintenance operation.

### **REFERENCES**