### SECTION 3 – BACKFLOW PREVENTION ASSEMBLIES AND FIRELINES

#### 3-01 PUBLIC WATER SYSTEM PROTECTION

All water services, other than residential, connected to the public water system shall be required to include an approved backflow prevention assembly of the type designated by the Engineer. Certain type residential services may be required to have an approved backflow prevention assembly. The type of protection approved shall be based on the existing or potential degree or hazard that exists on the user's premises, in the opinion of the Engineer. All assemblies shall be approved by the State of California, Department of Health Services (DOHS), Division of Drinking Water and Environmental Management.

## 3-02 APPROVED BACKFLOW PREVENTION ASSEMBLIES

Approved manufacturers/models of backflow prevention assemblies, including firelines as mentioned elsewhere in this Section, are those approved by the State of California DOHS, Division of Drinking Water and Environmental, as shown in its latest edition of "Approved Backflow Prevention Assemblies For Service Isolation." Contact the Water System Management Division for DOHS's list of approved assemblies.

Four inch and larger approved backflow prevention assemblies, including firelines, have two gate valves and four test cocks. As the gate valves are part of the unit (assembly) approved by DOHS, the gate valves do not have to meet the requirements, including manufacturer, of Section 4-02.01 of these Specifications. Gate valves for firelines <u>must</u> be of the OS&Y type.

Four-inch and smaller backflow assemblies, other than firelines, shall be installed in conformance with Section 8 of these Specifications, Standard Drawings W-603 and W-604.

The horizontal run of all backflow assemblies shall be installed in a level position.

#### 3-03 TESTING

The Owner/Developer or Contractor shall be responsible for the installation, initial test and certification of all new backflow prevention assemblies. Thereafter, backflow prevention assemblies will be maintained and tested annually by the owner or water user. All testing shall be done by a certified backflow device tester as approved by the Orange County Health Care Agency. Contact the Water System Management Division for a list of certified testers.

## 3-04 LOCATION OF ASSEMBLIES

Backflow prevention assemblies shall be located as close as practical to the meter, a minimum 12 inches behind the street right-of-way and subject to approval by the Engineer. The assemblies shall be at least 12 inches from walls, buildings, obstructions, or other devices, readily accessible for testing, maintenance, and repairs. The lowest part of any

reduced pressure principle backflow assembly shall be installed between 12 and 18 inches above finished grade. The above ground horizontal run segment of a backflow assembly shall be installed in a level position.

Backflow prevention devices shall be installed at locations other than immediately behind the water meter when required by law, or when determined by the Utility and health agency that such additional devices are necessary to adequately protect the water supply.

There shall be no connections between the meter and the backflow assembly.

### 3-05 FIRELINES

All firelines shall require a detector meter (by-pass meter) and backflow protection as determined by the Utility. The standard fireline shall have a double check detector backflow assembly. When a higher degree of hazard exists, a reduced pressure principle detector backflow assembly is required. All firelines shall be installed in conformance with City of Fullerton Standard Drawings 701 and 721.

The detector (by-pass) meter shall be  $^5/_8$  or  $^3/_4$  inch nominal size with bronze main case and bottom plate, and shall have a straight read magnetic drive register capable of detecting consumptive use in US gallon increments. For approved by-pass meter manufacturers see City of Fullerton Standard Drawing 721.

The above ground horizontal run segment of a fireline assembly shall be installed in a level position.

For approved fireline backflow assembly manufacturers, see Section 3-02 of these Specifications.

#### 3-06 PAINTING

See Section 5-10 of these Specifications for painting requirements for all backflow prevention assemblies, firelines, and fire department connections.

# 3-07 <u>AESTHETICS</u>

The owner/developer is encouraged to locate all above ground large services, backflow prevention assemblies, and firelines in a manner that is aesthetically pleasing. If a method of concealment is used, it shall not obscure the Fire Department's pumper connection, hinder access to the connection, or obscure the testing of the device.