



# ONTARIO FIRE DEPARTMENT FIRE PROTECTION STANDARD

**Fire Department Connection (FDC) & Control Valve Installation**  
STANDARD #D-006      EFFECTIVE 03-18-2014      PAGES 3

## **PURPOSE:**

To provide consistent guidelines regarding the installation requirements, identification and location of automatic fire sprinkler system water supply appurtenances.

## **SCOPE:**

Installation of all control valves and fire department connections for private fire main systems in the City of Ontario.

## **AUTHORITY:**

This standard is in accordance with NFPA 13, NFPA 24, and the 2016 California Fire Code.

## **REQUIREMENTS:**

1. Fire System Control Valves (PIV's, Wall PIV's, Butterfly Valves)
  - A. Each sprinkler system shall be provided with a sprinkler control valve to isolate the system from the water supply.
  - B. Valves provided for each sprinkler system shall be outside indicating. When there is more than one riser on the system, each riser shall have a separate outside indicating valve.
  - C. The installation height of the PIV shall be 36" above the adjacent grade to the PIV handle's socket.
  - D. Wall PIV's and butterfly valves shall be readily accessible.
  - E. Protection of the control valves is required in accordance with City of Ontario Engineering Standard #4303 when the control valves are subject to impact from vehicular traffic.
  - F. Working clearance for control valves shall be an unobstructed 3-foot radius around the control valve.

- G. When providing control in a multi-story building, indicating valves may be located within fire resistant stair shafts which provide access to fire department personnel from the exterior, provided: (1) the valve is monitored by the fire alarm system; (2) the valve may be recessed into the wall, equipped with a access panel 3' x 3' (or large enough to allow for service of sprinkler riser) fire rated access panel and (3) if recessed, access panel identified by a metal sign stating "sprinkler control valve 1<sup>st</sup> floor" etc. The sign's lettering shall be white, no less than 2" in height, with a 3/8-inch stroke and with a red background. Stick-on type letters are not permitted.
- H. Sectional control valves shall be aboveground indicating.

2. Fire Department Connections (FDC's):

- A. FDC's shall be located on the address side of the street, close to curb face, facing the street.
- B. FDC's shall not be installed where there is the possibility of injury by falling objects.
- C. FDC's shall be installed so that the centerlines of the inlets are located at a minimum height of 24" and a maximum height of 36" above the adjacent finish grade.
- D. FDC's shall be located within 150' of a public hydrant on the same side of the street and/or driveway.
- E. FDC's shall be installed on the system side of the double detector check.
- F. Required number of FDC inlets:

The number and size of FDC inlets shall be determined by the fire flow of the sprinkler system and/or standpipe system. Interior hose streams shall be included in the sprinkler demand for determining the number and size of inlets when standpipes and/or hose stations are a part of the sprinkler system.

- (a) Any sprinkler system with a required water flow below 750 gpm requires that the FDC be equipped with (2) 2-1/2 inch female swivel inlets. The threads shall be 2.5-7.5 American National Fire Hose connection screw threads (NH). The riser to the FDC must be a 4" diameter pipe.
- (b) Any sprinkler system with a required water flow greater than 750 gpm requires that the FDC be equipped with (4) 2-1/2 inch female swivel (2.5-7.5 NH) inlets. The riser to the FDC's must be 6" diameter pipe. A listed check valve device shall be installed at each inlet in addition to the clapper.
- (c) If the on-site water main supplies both the fire sprinkler system and the on-site fire hydrants, an FDC--as noted in "b" (above)--is required.

- G. Protection of the FDC is required in accordance with City of Ontario Engineering Standard #4303 when the FDC is subject to impact from vehicular traffic.
- H. For working clearance, an unobstructed radius of 3-feet shall be maintained around the FDC.

3. Signage:

All Fire System Control Valves and FDC's, shall be identified in accordance with this standard and D-007.

4. Color:

For the purpose of identification and where not specified otherwise elsewhere, all Fire System Control Valves and Fire Department Connections, shall be painted red. The paint shall be maintained and/or re-painted where necessary.