



DNVFRS - FIRE DEPARTMENT CONNECTION SIGNAGE REQUIREMENTS

Design Standards: Signage shall be made from weatherproof metal or rigid plastic and have white letters on a red plate or fitting. Title text must be at least *2.5 in. (63.5 mm)* in height, and all other text at least *1 in. (25mm)* in height. Drawings of signage must be submitted to the Fire Department for approval prior to production and placement.

FDC Signage Wording: Required terminology to appear in this order.

- **Title:** FDC (2.5 in.)
- **Building Address:** (example) 760 16th STREET
- **Fire Pump:** FIRE PUMP (*if present*)
- **System Types:**
 - AUTOMATIC WET STANDPIPE
 - AUTOMATIC DRY STANDPIPE
 - MANUAL WET STANDPIPE
 - MANUAL DRY STANDPIPE
 - STANDPIPE AND AUTOSPRK.
 - AUTOSPRK.
- **System Demand @ FDC:** SYSTEM DEMAND @ FDC XXX PSI
- **Maximum Pressure:** MAX PRESSURE XXX PSI
- **Service Area Coverage:** (*examples*) BUILDING C – SOUTH ZONE, ENTIRE COMPLEX, BUILDING A ONLY, BUILDING A & B, SERVES 970 & 950 22ND

Important Notice Regarding System Demand @ FDC

The AHJ (Authority Having Jurisdiction) acknowledges that NFPA 14 allows for the omitting of ***standpipe system demand pressures*** if the required pressure at the FDC inlet is calculated to be 150 PSI or less, and the AHJ also acknowledges that NFPA 13 allows for the omitting of ***sprinkler system demand pressures*** if the pressure required at the FDC inlet is calculated to be 175 PSI or less.

However, the AHJ is exercising its authority and requires all signage to include the **System Demand @ FDC** pressure.

The **System Demand @ FDC** is the specific pressure (*measured in PSI*) required at the FDC inlet to satisfy the building's *most* demanding hydraulic design point. This value is the sum of the design pressure at the *most remote outlet*, plus friction loss through the piping, plus elevation (*head*) loss due to the height of the building.

DNVFRS – Fire Department Connection Signage Requirements

Reason for Requirement: The "@ FDC" suffix is required to provide an actionable target for the pumper operator. It translates the internal engineering requirements of the building into a street-level instruction that accounts for all vertical and frictional losses. By providing this specific value, on the signage. Displaying this specific value on the signage achieves the following:

1. *Eliminates Math:* Firefighters do not have to calculate "head pressure" for the building's height during an emergency.
2. *Prevents Under-Pressurization:* It ensures the "minimum" code requirements are met at the highest floor.
3. *Ensures Safety:* When used in conjunction with the MAX PRESSURE label, it defines a safe operating window that prevents the accidental bursting of pipes from over-pressurization.

Important Note: *All requirements in this guideline must be met in full and must also comply with the District of North Vancouver Fire Bylaw.*

See Following Pages for Signage Examples

Standpipe Systems

FDC

BUILDING ADDRESS

**AUTOMATIC WET STANDPIPE
SYSTEM DEMAND @ FDC XXX PSI
MAX PRESSURE XXX PSI
SUPPLIES (AREA SERVED HERE)**

FDC

BUILDING ADDRESS

FIRE PUMP

**AUTOMATIC WET STANDPIPE
SYSTEM DEMAND @ FDC XXX PSI
MAX PRESSURE XXX PSI
SUPPLIES (AREA SERVED HERE)**

FDC

BUILDING ADDRESS

**AUTOMATIC DRY STANDPIPE
SYSTEM DEMAND @ FDC XXX PSI
MAX PRESSURE XXX PSI
SUPPLIES (AREA SERVED HERE)**

Fire Pump – Automatic Dry Standpipe Sign *Exclusion* Rationale

The most critical information for the pumper operator is the *SYSTEM DEMAND @ FDC* pressure. If a high-pressure building pump is present, its action is accounted for by the high required PSI listed; therefore, the system type *Fire Pump Automatic Dry Standpipe* is excluded.



Combined Standpipe Systems

A Combined Standpipe System is one where the piping supplies both the standpipe hose connections, which are used for manual firefighting (*meaning the water stream is physically controlled by a firefighter or trained person*), and the automatic sprinkler system heads.

FDC
BUILDING ADDRESS
STANDPIPE AND AUTOSPRK.
SYSTEM DEMAND @ FDC XXX PSI
MAX PRESSURE XXX PSI
SUPPLIES (AREA SERVED HERE)

FDC
BUILDING ADDRESS
FIRE PUMP
STANDPIPE AND AUTOSPRK.
SYSTEM DEMAND @ FDC XXX PSI
MAX PRESSURE XXX PSI
SUPPLIES (AREA SERVED HERE)

FDC
BUILDING ADDRESS
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SYSTEM DEMAND @ FDC XXX PSI
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