

M Fire Limits Area – Sprinklers **aster Requirement SPE 103**



Purpose

To provide fire protection to homes constructed in areas of limited water supply, limited access and extended response times by Fire Services.

Background

In 1996 the District of North Vancouver adopted a bylaw establishing fire limits areas within specific portions of the District. Fire limits areas are those areas with limited water supply, limited access or extended response time by Fire Services. Fire limits areas require the installation of an automatic fire sprinkler system in a new single family residence and in an existing single family residence where renovations or additions in any consecutive 24 month period exceeds \$60,000.

If an automatic fire sprinkler system is required pursuant to the requirements of the fire limits areas such system shall be installed throughout the entire house and installed and maintained in accordance to the standards as set out in the current editions of the British Columbia Building and Fire Codes. Sprinkler systems installed in single family homes are required to comply with the National Fire Protection Association standard NFPA 13-D.

Designers should contact the area Engineering Administration Technologist to determine location of water supply as well as water supply characteristics. Homeowners and designers should be aware, however, that properties located in designated Fire Limits Areas might not be serviced by the District's waterworks system. In such cases special provisions must be made to meet the minimum design requirements as established by NFPA. Please note, drawing water from a creek or stream is not an accepted practice. Designers should contact the local Plumbing Inspector to establish acceptable alternate water supplies, such as a holding tank on the property.

The areas designated as fire limits are:

4700 and greater Blocks Prospect Road
4900 and greater Blocks Skyline
4300 and greater Blocks St. Georges Ave
4300 and greater Blocks St. Mary's Ave
1500 and greater Blocks Lillooet Road
4400 and greater Blocks Marion Road

4500 and greater Blocks Lynn Valley Road
2200 and greater Blocks Indian River Crescent
4000 and greater Blocks Indian River Drive
2800 and greater Blocks Panorama Drive
Eastridge Road - even addresses only
Any construction above the 1050 foot elevation
The areas designated as Woodlands, Sunshine and Cascades
The area designated as Indian Arm

See *Fire Limits* map.

Permits

A Sprinkler Permit is required to install a sprinkler system. To obtain a Sprinkler Permit the following is required:

- an application by a trade qualified sprinkler fitter
- 3 sets of design drawings of the proposed system***
- calculations to demonstrate compliance with design criteria as set out in Chapter 4 of the NFPA Handbook-Automatic Sprinkler Systems***
- British Columbia Building Code *Letter of Assurance* Schedule B***
- payment of permit fee

*** Design drawings, calculations and *Letters of Assurance* must be sealed by a Professional Engineer registered to practice in B.C.

The sprinkler permit, the sprinkler design drawings and the Letters of Assurance are NOT required prior to the issuance of the building permit. The Sprinkler Permit must be issued and the rough-in piping inspected by the Plumbing Inspector prior to approval of the Framing Inspection.

Requirements

Content:

Sprinkler Permit:

- Sealed British Columbia Building Code *Letter of Assurance* Schedule B for Fire Suppression Systems.
- Calculations to demonstrate compliance with design criteria as set out in Chapter 4 of the NFPA Handbook-Automatic Sprinkler Systems. Calculation sheets to include the following water supply characteristics:
 - flow rate in U.S. g.p.m.
 - flow pressures
 - residual pressure

Sealed Sprinkler design drawings to include:

- name of owner
- location including address
- north arrow
- drawn to an indicated scale - preferably 1/4" = 1'-0"
- plan of each floor
- reflected ceiling plan
- Cross section or schematic diagram including ceiling construction
- occupancy of each room
- location of concealed spaces, closets, attics and bathrooms
- size of District water service
- other sources of water supply complete with pressure or elevation
- make, type and nominal orifice size of sprinkler head
- temperature rating and location of heads
- pipe size
- schematic of water entry station

Timing:

- A Sprinkler permit is not required prior to issuance of the building permit.
- The Sprinkler Permit must be issued and the rough-in piping inspected by the Plumbing Inspector prior to approval of the Framing Inspection.
- Prior to occupancy the design engineer and the Plumbing Inspector must inspect the final installation. The design engineer must submit a sealed British Columbia Building Code *Letter of Assurance* Schedule C prior to the Plumbing Inspector 's inspection.

Owner: Retain professional engineer and trade certified sprinkler contractor.

Related Requirements/Documents/Forms

Master Requirement BLD101: *Letters of Assurance*
Fire Limits Map

Contacts

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