

COQUITLAM FIRE/RESCUE

— INFORMATION —



SUGGESTED FIRE SAFETY GUIDELINES FOR 5 & 6 STOREY WOOD FRAME BUILDINGS

I-007

January 15, 2015

POST ON ALL BULLETIN BOARDS

TO: **Developers / Contractors**

FROM: **Fire Prevention Division**

1.0 PURPOSE

To provide developers and contractors with a set of additional fire safety guidelines for the design and construction of new 5 and 6 storey wood frame buildings to address the safety of workers, occupants and first responders during construction and after occupancy.

2.0 DISCUSSION

- 2.1 Five and six storey wood frame construction regulations were adopted into the BC Building Code in 2009.
- 2.2 Since the inherent fire resistance rating of five and six storey wood framed structures is typically less than that of a concrete building, these structures rely heavily on an operating sprinkler system and properly assembled fire resistant materials to prevent the rapid spread of fire and to provide time for occupant emergency egress. Consequently, these buildings may be more vulnerable to fire when these systems and assemblies are not in place.
- 2.3 While the concern for fire in these structures is greatest during the construction phase, that risk is partially alleviated by the BC Fire Code requirement for the development of a fire safety plan during construction and that standpipe systems be installed progressively. However, there is still a lack of immediate control by passive (fire alarm) and active (sprinkler) fire protection systems, and an uncontrolled fire during construction could rapidly produce intense convection and heat radiation to surrounding areas and structures.
- 2.4 Should a fire occur in an occupied building, a major concern during firefighting operations is that access to upper floors are inhibited by the limited reach of fire streams, ground-ladders and the benefits of an aerial ladder is limited by the access from the facing street.
- 2.5 To address fire safety concerns both during and after construction of 5 and 6 storey wood framed buildings, suggested guidelines have been developed.

3.0 SUGGESTED GUIDELINES FOR INCREASED FIRE SAFETY

- 3.1 The following suggestions are in addition to the statutory regulations of the BC Building and Fire Codes.
- 3.2 Key site personnel working on behalf of the developer shall attend a preconstruction meeting with Building and Fire/Rescue Department staff to discuss the construction fire safety plan for the project.
- 3.3 During the construction phase, sites should be enclosed by a secure fence along with the provision for security patrols during all non-working hours.
- 3.4 During the construction phase, to provide protection from fires accidentally ignited by construction personnel, a Class III standpipe system (2-½" hose connections and 1-½" hose stations) should be installed, including provisions for temporary hose cabinets located on each floor level of the building, containing enough hose of sufficient length to reach all parts of the floor or roof area.
- 3.5 During the construction phase, the required standpipe system shall be connected to a water supply capable of providing sufficient volume and pressure to the hose connections and hose stations in the building. Wet standpipe systems shall also be provided with adequate protection against freezing and unauthorized use. Certification from a professional engineer may be requested. Please refer to attached Directive D-007 for further information.
- 3.6 During the construction phase, sites should have designated fire safety personnel available at all times during working hours. At a minimum fire safety personnel should be:
 - Familiar with the construction fire safety plan;
 - Trained in the use of hose stations and other fire safety equipment; and
 - Control hazardous activities such as hot-works.
- 3.7 Aerial ladder access should be provided to all sides of the building during construction and after occupancy capable of accepting the size, weight and movement abilities of the ladder vehicle and not contain overhead restrictions that might inhibit the operation of the vehicle during exterior fire and rescue operations. Consultation with Fire/Rescue staff in this regard should be sought during the development review process.
- 3.8 Alternatives to the above suggestions will be considered through review by the Building and Fire/Rescue Departments.

4.0 CONCLUSION

- 4.1 The aforementioned guidelines are for developers and contractors seeking permits to construct 5 and 6 storey wood frame buildings.
- 4.2 Project applicants shall review the concepts of this bulletin with the proposed development. Applicants shall provide a written response of their review stating the level of commitment to the suggested guidelines for the design and subsequent construction of the building. Please note that these suggested guidelines are not statutory requirements; however, commentary on the applicant's commitment to fire safety for the project will be examined during the development permit process.



S. DAVIDSON
SD/
Attch.

COQUITLAM FIRE/RESCUE

DIRECTIVE



STANDPIPE SYSTEMS IN BUILDINGS UNDER CONSTRUCTION

D-007

October 25, 2017

POST ON ALL BULLETIN BOARDS

To: CONTRACTORS AND DEVELOPERS

From: Fire/Rescue Department

D-001 was previously issued January 15, 2015 on this subject matter. This directive supersedes the former.

1.0 PURPOSE

To provide contractors and developers fire safety information for buildings under construction requiring standpipe systems.

2.0 REQUIREMENTS

- 2.1 For buildings required to have a standpipe system, the BC Fire Code requires that the system be installed progressively during construction.
- 2.2 Standpipes systems shall be installed in accordance with Sentence 5.6.1.6. (2) of the Fire Code.
- 2.3 This directive applies to any building under construction or alteration that requires a permanent standpipe system and includes high-rises, wood framed residential, commercial buildings, etc.

3.0 PROCEDURES

- 3.1 The standpipe system shall be installed during the construction phase of the building in conformance with the BC Fire Code regulations.
- 3.2 At the start of construction on the second floor of the building, provide written documentation to our office from the registered professional of record confirming that the progressive standpipe system has been installed in conformance with the Fire Code.

A handwritten signature in black ink, appearing to read "Shawn Davidson".

Shawn Davidson
Assistant Chief - Prevention