

## 2018 British Columbia Fire Code Public Review of Proposed Changes



**PROPOSED CHANGE:** Application to Fire Alarm, Standpipe, and Sprinkler Systems

**CHANGE NUMBER:** 2018-BCFC-01-Application – Fire Systems

**CODE REFERENCE:** 2015 National Fire Code - Division B - Article 2.1.3.1., Appendix Note A-2.1.3.1.

### **DESCRIPTION OF THE PROPOSED AMENDMENT:**

It is proposed to further clarify that the British Columbia Fire Code (BCFC) is not intended to retroactively apply current requirements for the provision of fire alarm, standpipe, and sprinkler systems to existing buildings. Though this concept is addressed in the appendix, the associated code language has caused some confusion.

### **PROBLEM/BACKGROUND:**

The BCFC is based substantially on the model National Fire Code of Canada (NFC). The NFC is updated about every five years and British Columbia adopts most of the NFC requirements into the next edition of the BCFC. The 2018 BCFC will be based on the 2015 NFC with some changes specific to British Columbia, as noted.

The language of this BCFC requirement has caused some confusion on the application of the BCFC to existing buildings. For this reason, it is proposed not to adopt the wording of the 2015 NFC, and to provide clarification on the intended application in the wording of the requirement, as well as in the appendix.

The code language shown below is the proposed final code language that will appear in the 2018 BCFC. Comments submitted should focus on the changes noted. The wording of the 2015 NBC is not shown.

### **2018 PROPOSED BRITISH COLUMBIA CODE LANGUAGE** (Deleted text / Added text):

#### **2.1.3.1. Fire Alarm, Standpipe and Sprinkler Systems**

- 1) **Except as otherwise provided in this Code**, Fire alarm, standpipe and sprinkler systems shall be provided in **all** buildings when ~~where~~ required by ~~and in conformance with~~ Article 1.1.1.1. of Division A the British Columbia Building Code.

#### **A-2.1.3.1.(1)**

The British Columbia Building Code is most often applied to existing buildings when an owner wishes to rehabilitate a building, change its use, or build an addition; or when an enforcement authority decrees that a building, ~~or a class of buildings~~, be altered for reasons of public safety. It is not intended that either the British Columbia Building Code or the British Columbia Fire Code be used to enforce the retrospective application of new requirements in the British Columbia Building Code to existing buildings.

Although the British Columbia Fire Code could be interpreted to require the installation of fire alarm, standpipe and hose and automatic sprinkler systems in an existing building for which there were no requirements at the time of construction, before the British Columbia Building Code was issued, it is the intent of the Canadian Commission on Building and Fire Codes that the British Columbia Fire Code not intended that the code be applied in this manner to these buildings.

~~It is usually difficult to change structural features of an existing building when undertaking alterations or additions, but the installation of “active” fire protection systems, such as alarms, sprinklers and standpipes, in existing buildings may be possible. These systems may be considered as contributing to an adequate degree of life safety in cases where the structural features of a building do not conform to the British Columbia Building Code.~~

~~Sentence 2.1.3.1.(1) is intended to address the installation of fire alarm, sprinkler and standpipe systems in existing buildings presently not so equipped, and in existing buildings that do not provide an acceptable level of safety to meet the current installation standards specified in the British Columbia Building Code. Further, it is not intended that existing fire protection systems that provide an acceptable level of life safety be upgraded with each new edition of the British Columbia Building Code or in conjunction with the inclusion of new requirements not in force at the time that a building was constructed. The authority having jurisdiction is expected to use discretion in enforcing this requirement. The authority having jurisdiction may accept alternatives to strict compliance with the NBC as provided for in Clause 1.2.1.1.(1)(b) of Division A.~~

For buildings in which a sprinkler system is installed, this provision is also intended to direct Code users to Part 1 of Division A for the application of the British Columbia Building Code and primarily to Subsection 3.2.5. of Division B of the British Columbia Building Code, which specifies NFPA 13, “Installation of Sprinkler Systems,” as the appropriate standard for the design and installation of automatic sprinkler systems and provides several exceptions and supplementary requirements (where, in certain cases, other provisions in the British Columbia Building Code may also apply). However, where a specific hazard, such as highly piled storage or the storage of flammable and combustible liquids or rubber tires, is not addressed in the British Columbia Building Code, the applicable NFPA standards that contain design criteria for the sprinkler system required can be found in the British Columbia Fire Code.

#### **RATIONALE FOR CHANGE:**

To clarify the application of the BCFC’s requirements for fire alarm, standpipe, and sprinkler systems.

#### **JUSTIFICATION/EXPLANATION:**

The BCFC points to the British Columbia Building Code (BCBC) (Division A, Part 1) to determine when requirements for the provision of fire alarm, standpipe, and sprinkler systems apply. It is not intended that these requirements be applied retroactively to existing buildings that do not conform to the current edition of the BCBC, unless the BCBC applies per Article 1.1.1.1. of Division A. Typically, this is when the building is renovated or is subject to an addition, or when building systems and components are voluntarily replaced.

However, Sentence 2.1.3.1.(1) as written, has been misinterpreted to apply to, and require the upgrading of existing buildings. The proposed wording of this sentence is intended to clarify that where fire alarm, standpipe, and sprinkler systems are NOT provided, it is not the purview of the BCFC to require them. The authority to require such systems resides in Article 1.1.1.1. of Division A of the BCBC. However, where such systems are provided in a building, they must conform to the BCBC and BCFC.

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It is also intended to clarify that, as noted in the appendix, it is not intended that systems are required to be upgraded if they are already installed in a building and conforming to an older edition of the BCBC, unless Article 1.1.1.1. of Division A of the BCBC applies.

The exception noted, as is conveyed in the appendix note, is to address specific hazards, such as highly piled storage or the storage of flammable and combustible liquids or rubber tires that are not addressed in the BCBC.

The word “where” is change to “when” to reinforce that existing buildings or systems must only be upgraded when the BCBC applies. The phrase “in conformance with” is considered redundant as this is already a requirement of the BCBC.

The additional changes proposed in the Appendix further clarify:

- the BCFC provisions do not require upgrading of existing buildings or systems where the BCBC does not apply, but they are to apply to voluntarily provided systems, as well as systems that are required by the BCBC at the time of construction or at the time of further application of the BCBC, and
- that Article 1.1.1.1. of Division A of the BCBC determines when requirements apply to existing buildings.