

PROVINCE OF BRITISH COLUMBIA

ORDER OF THE MINISTER OF HOUSING

*Building Act*

Ministerial Order No. BA 2024 03

I, Ravi Kahlon, Minister of Housing, order that Book I (General) of the British Columbia Building Code established by Ministerial Order No. BA 2023 10 dated November 24, 2023, is amended as set out in the attached Schedule.

August 27, 2024

Date



Minister of Housing

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*(This part is for administrative purposes only and is not part of the Order.)*

**Authority under which Order is made:**

Act and section: *Building Act*, S.B.C. 2015, c. 2, s. 3

Other:

# SCHEDULE

1 *Book 1 (General) of the British Columbia Building Code established by the British Columbia Building Code Regulation, Ministerial Order No. BA 2023 10, is amended as set out in this Schedule.*

## Division 1 – Changes to Division A

2 *The following Sentence is added to Article 1.3.3.2.:*

**2)** Parts 3, 4, 5 and 6 of Division B apply to *buildings* designed and constructed in accordance with Subsection 3.2.10. of Division B.

3 *Article 1.3.3.3. is repealed and the following substituted:*

**1)** Except as provided in Sentence (2), Part 9 of Division B applies to all *buildings* described in Article 1.1.1.1. of 3 storeys or less in *building height*, having a *building area* not exceeding 600 m<sup>2</sup>, and used for *major occupancies* classified as

- a) reserved
- b) Group C, *residential occupancies* (see Note A-9.1.1.1.(1) of Division B),
- c) Group D, *business and personal services occupancies*,
- d) Group E, *mercantile occupancies*, or
- e) Group F, Divisions 2 and 3, *medium- and low-hazard industrial occupancies*.

**2)** Part 9 of Division B does not apply to *buildings* designed and constructed in accordance with Subsection 3.2.10. of Division B.

## Division 2 – Changes to Division B

4 *The following Sentence is added to Article 3.2.4.1.:*

**7)** A fire alarm system shall be installed in *buildings* designed and constructed in accordance with Subsection 3.2.10. (See Note A-3.2.10.2.(1) and (2).)

5 *Sentence 3.2.5.7.(2) is repealed and the following substituted:*

**2)** Except for *buildings* constructed of encapsulated mass timber construction in conformance with Article 3.2.2.48., 3.2.2.57. or 3.2.2.93., and except for *buildings* designed and constructed in accordance with Subsection 3.2.10., *buildings* that are *sprinklered* throughout with a sprinkler system conforming to Article 3.2.5.12. or have a standpipe system conforming to Article 3.2.5.8. to 3.2.5.10. are deemed to comply with Sentence (1).

6 The following Subsection is added:

**3.2.10. Requirements for Residential Buildings with a Single Exit**

(See Note A-3.2.10.) (See also Note A-3.)

**3.2.10.1. Application**

1) Except as provided in Sentences (2) to (4), this Subsection applies to *buildings* of only *residential occupancy* that

- a) are not more than six *storeys* in *building height*,
- b) have a height not more than 18 m measured between the floor of the *first storey* and the uppermost floor level, excluding any floor level within a rooftop *enclosure* that is not considered as a *storey* in calculating *building height* in accordance with Sentence 3.2.1.1.(1),
- c) contain not more than four *dwelling units* on each floor,
- d) does not exceed an *occupant load* of 24 persons per floor, and
- e) have a *travel distance* from
  - i) any part of the *floor area* to an *exit* not more than 25 m, and
  - ii) each *dwelling unit* to an *exit* of not more than 6 m.

2) This Subsection does not apply to *floor areas* permitted by Article 3.4.2.1. to be served by one *exit*.

3) This Subsection does not apply to detached houses, semi-detached houses, houses with a *secondary suite*, duplexes, triplexes, townhouses or row houses.

4) *Residential buildings* with a single *exit* are not permitted for

- a) hotels, motels, dormitories or lodging houses,
- b) *residential* clubs, colleges or schools,
- c) monasteries,
- d) seniors' residences, or
- e) care facilities accepted for residential use pursuant to provincial legislation.

(See Note A-3.2.10.1.(4).)

5) This Subsection, in accordance with the application of this Article and in conformance with the provisions of this Subsection and all other applicable provisions of this Code, may be used as an alternate to the requirements for a second *exit* in Subsection 3.4.2.

**3.2.10.2. Building Construction**

1) Notwithstanding the permissions in Sentences 3.2.5.12.(2) to (4), a *building* to which this Subsection applies shall be *sprinklered* throughout with an automatic sprinkler system designed, constructed, installed and tested in conformance with NFPA 13, "Standard for the Installation of Sprinkler Systems." (See Note A-3.2.10.2.(1) and (2).) (See Sentence 3.2.4.1.(7).)

2) All balconies and decks shall be *sprinklered* in accordance with Sentence (1). (See Note A-3.2.10.2.(1) and (2).)

3) The *exit* facility shall be constructed either of *noncombustible* construction or, notwithstanding the application of Article 3.1.13.7., with finishes that do not exceed the maximum *flame-spread rating* and maximum smoke developed classification for *exit* stairways in Table 3.1.13.7., and shall

- a) be separated from all other spaces in the *building* by a *fire separation* having a *fire-resistance rating* not less than 2 h,
- b) be not less than 1 500 mm wide,
- c) discharge directly to the exterior of the *building* without passing through a lobby,
- d) be designed to limit the probability of storage or the accumulation of material, and
- e) have signs posted in conspicuous locations near each landing to indicate that storage is not permitted.

(See Note A-3.2.10.1.(3).)

4) The discharge from the *exit* stair described in Clause (3)(c) shall be located not less than 3 m and not more than 15 m from the closest portion of the access route required for fire department use, measured horizontally from the face of the *building*. (See Note A-3.2.10.2.(4).)

### 3.2.10.3. Limits to Smoke Movement

1) Except as permitted by Sentence (3) and notwithstanding the scope of Subsection 3.2.6., a *building* to which this Subsection applies that is greater than four *storeys* in *building height* shall be designed in accordance with Article 3.2.6.2.

2) Fans required to limit smoke movement by Sentence (1) shall be provided with an emergency power supply capable of operating under full load for not less than 2 h provided by an emergency generator. (See also Article 3.2.7.9.)

3) Pressurization of the stair shaft described in Sentence (1) is not required if each doorway from the *public corridor* serving the *exit* facility is protected with a vestibule on the *public corridor* side of the doorway

- a) consisting of a *closure* in the *public corridor*
  - i) equipped with electromagnetic hold-open devices that release upon activation of the fire alarm system, and
  - ii) that has a *fire-protection rating* not less than a 45 min, and
- b) that forms a space that is separated from the remainder of the *building* by a *fire separation* with a *fire-resistance rating* not less than 45 min
  - i) that contains no *suite* entry doors, and
  - ii) with the distance from doorway to the *exit* facility and the *closure* not less than 1 800 mm long and a width of the path between doorways not less than 1 500 mm.

4) Elevator hoistways shall not be designed as a means of venting.

5) The systems for control of smoke movement required by Sentence (1) shall be tested to ensure satisfactory operation. (See Sentence 3.2.6.9.(1) and Note A-3.2.6.9.(1).)

**3.2.10.4. Doors in Public Corridors and Suite Entry Doors**

1) All doors along *public corridors* and all *suite* entry doors shall be equipped with electromagnetic hold-open devices designed to release upon activation of the fire alarm system in accordance with Article 3.1.8.14.

2) Hold-open devices on *suite* entry doors shall not require a force applied to the door or release device of more than 22 N to allow the occupant to manually release the door from the hold-open position to allow it to close.

3) *Suite* entry doors shall have a *fire-protection rating* of not less than 45 min. (See Note A-3.2.10.4.(3).)

7 *Sentence 3.3.1.3.(12) is repealed and the following substituted:*

12) Except for *buildings* designed and constructed in accordance with Subsection 3.2.10. and except as permitted by this Section and by Sentence 3.4.2.1.(2), at the point where a doorway referred to in Sentence (11) opens onto a *public corridor* or exterior passageway, it shall be possible to go in opposite directions to each of 2 separate *exits*.

8 *Sentence 3.4.2.1.(1) is repealed and the following substituted:*

1) Except for *buildings* designed and constructed in accordance with Subsection 3.2.10. and except as permitted by Sentences (2) to (4), every *floor area* intended for *occupancy* shall be served by at least 2 *exits*.

9 *Table 3.10.1.1. is amended by adding the following:*

<b>3.2.4.1. Determination of Requirement for a Fire Alarm System</b>	
(7)	[F11-OS1.5] [F13-OS1.2,OS1.5]
	[F13-OP1.2]
<b>3.2.10.1. Application</b>	
(1)	(e) [F10-OS3.7]
<b>3.2.10.2. Building Construction</b>	
(1)	[F02,F04-OS1.2,OS1.3]
	[F02,F04-OP1.2,OP1.3]
(2)	[F03-OS1.2]
	[F03-OP1.2]
	[F03-OP3.1]
(3)	[F02-OS1.2]
	[F02-OP1.2]
	(a) [F05-OS1.5] [F06-OS1.2,OS1.5] [F03-OS1.2]
	(a) [F03,F06-OP1.2]
	(b) [F10-OS3.7]
	(c) [F05,F06,F10,F12-OS1.5]
	(d) [F01,F02-OS1.1,OS1.2]
	(d) [F01,F02-OP1.1,OP1.2]
(4)	[F06-OS1.1] [F12-OS1.2,OS1.5]
	[F12-OP1.2]

<b>3.2.10.3. Limits to Smoke Movement</b>	
(1)	[F02,F03,F06,F12-OS1.2,OS1.5] [F05-OS1.5]
	[F02,F03,F06,F12-OP1.2]
(2)	[F02,F03,F12-OS1.2,OS1.5]
	[F02,F03,F12-OP1.2]
(3)	[F02,F03,F06,F12-OS1.2,OS1.5] [F05-OS1.5]
	[F02,F03,F06,F12-OP1.2]
(4)	[F03-OS1.2] [F12-OS1.2,OS1.5]
(5)	[F82-OS1.2,OS1.5]
	[F82-OP1.2]
<b>3.2.10.4. Doors in Public Corridors and Suite Entry Doors</b>	
(1)	[F02,F03,F05,F06-OS1.2,OS1.5]
	[F02,F03,F05,F06-OP1.2]
	[F81-OS1.4]
	[F81-OP1.4]
(2)	[F81-OS1.4]
	[F81-OP1.4]
(3)	[F03-OS1.2]
	[F03-OP1.2]

10 *The following Notes are added to the Notes to Part 3:*

**A-3.2.10. Fire Protection and Firefighting Assumptions for Residential Buildings with a Single Exit.** The firefighting assumptions discussed in Note A-3 raise circumstances where additional firefighting capabilities and additional building protection measures may be required. The provisions in Subsection 3.2.10. for residential buildings with a single exit were developed with the expectation of a high level of capacity of the local fire department for fire prevention activities, fire suppression activities, the ability of the fire department to assist in egress of occupants in the event of an emergency, as well as a secure water supply for the function of the automatic sprinkler system and the manual fire suppression activities of a responding fire department.

#### **Fire Prevention**

Maintenance of fire safety systems is essential for all buildings but becomes increasingly important when redundancies, such as a second and separate exit, are reduced or eliminated. The provisions for residential buildings with single exit stairs were developed with the expectation that fire officials routinely enforce the British Columbia Fire Code to ensure that the inspection intervals specified within are carried out, and that follow up inspections resulting from observed non-compliances occur at expedited intervals. Building owners and managers are required to be actively involved in carrying out the maintenance and upkeep of the building's fire safety systems. Residential buildings with a single exit should not be located in jurisdictions where a high level of fire prevention oversight cannot be maintained.

#### **Fire Suppression**

The provisions for residential buildings with single exit stairs were developed with the expectation that a permanent, paid fire department is available to respond to a fire event twenty-four hours a day, every day. Firefighting personnel are expected to have a high

level of training and the fire department is expected to be suitably equipped to provide fire suppression activities appropriate to the buildings and developments in their jurisdiction within tight response times. Residential buildings with a single exit should not be located in jurisdictions where a high level of fire suppression activities cannot be maintained.

### **Egress and Safety of Occupants**

The premise of egress in the British Columbia Building Code is that occupants of residential buildings receive early notification of a fire event, and occupants are able to respond unassisted in such an event. Early notification however does not guarantee occupant self-evacuation and when redundancies, such as a second and separate exit, are reduced or eliminated, occupant response options are likewise reduced. The provisions for residential buildings with single exit stairs were developed with the expectation that the local fire department has a service level that can coordinate and assist occupants with moving to a safe place in a fire event. Building owners and managers must be actively involved in fire safety planning in conjunction with the local fire department. Residential buildings with a single exit should not be located in jurisdictions where a service level that includes search and rescue by firefighting personnel cannot be maintained.

### **Water Supply**

The British Columbia Building Code requires an adequate water supply for firefighting be readily available and of sufficient volume and pressure to enable emergency response personnel to control fire growth so as to enable the safe evacuation of occupants and the conduct of search and rescue operations, prevent the fire from spreading to adjacent buildings, and provide a limited measure of property protection. As for any water-based fire protection systems or suppression activities, the water supply serving the building needs to be dependable over the life of the building through seasonal droughts and other eventualities. The provisions for residential buildings with single exit stairs were developed with the expectation of a highly dependable water supply would be available during construction and throughout the lifecycle of the building. Redundancies such as secondary or back up water supplies should to be considered to limit the probability that the water supply may become insufficient for an extended or even temporary period.

**A-3.2.10.1.(4) Residential Buildings Not Permitted.** The residential uses described in Sentence 3.2.10.1.(4) include short term as well as long term accommodations where Subsection 3.2.10. is not permitted to apply. For example, longer-term hotels and rooming houses sometimes referred to as single room occupancy hotels or single room accommodations with or without private bathrooms or kitchens are not permitted to apply Subsection 3.2.10.

**A-3.2.10.2.(1) and (2) Automatic Sprinkler Systems.** Automatic sprinkler systems serving a building to which Subsection 3.2.10. applies must be sprinklered in accordance with NFPA 13, “Standard for the Installation of Sprinkler Systems,” regardless of the permissions for other buildings to follow the NFPA 13R, “Standard for the Installation of Sprinkler Systems in Low-Rise Residential Occupancies,” or the NFPA 13D, “Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes,” standards. All balconies and decks regardless of depth must be sprinklered.

The requirement for sprinklers conforming to NFPA 13, “Standard for the Installation of Sprinkler Systems,” means that a fire alarm system described in Subsection 3.2.4. is also required.

**A-3.2.10.2.(3) Exit Facility.** The single exit facility serving a building to which Subsection 3.2.10. applies shall either be of noncombustible construction or shall be finished as an exit stair serving an unsprinklered high building described in Subsection 3.2.6. Should a fire event occur, protection of the exit stairs must not solely rely on the automatic sprinkler system.

A 1 500 mm wide exit facility facilitates the movement and passing of people for regular use as well as in an emergency. The design of intermediate handrails, such as for widths exceeding 1 700 mm, should consider the movement of emergency personnel including their equipment on each side. The design of the exit facility must also consider misuse and proactively deter the storage or collection of materials so as not to obstruct passage and to minimize fuel load. For example, excess landing areas and alcoves in all exits (not limited to residential buildings with single exit stairs) must be carefully designed to deter any activities other than exiting and accessing floor areas as per Sentence 3.4.4.4.(6). Void spaces underneath stairs should be avoided. Landings must have signage to remind occupants that storage is not permitted in exit facilities.

**A-3.2.10.2.(4) Exit Facility Discharge.** Fire department access to buildings to which Subsection 3.2.10. applies must be provided to the principal entrance as well as to the access point most directly connected to the exit facility. As such, the exit facility discharge must be located to coordinate with the fire department access route described in Subsection 3.2.5.

Designers should consider locating the exit facility discharge in close proximity to the principal entrance for the benefit of coordinating multiple access points with the fire department access route but also to avoid unintended use of the exit facility for package delivery or other material drop-off. There should be clear distinction between the principal building entrance (likely connecting to a lobby and elevator) and the exit facility discharge so that activities such as deliveries can be intuitively completed in the safe and intended manner. Locating the exit facility discharge in close proximity to the principal building entrance also reduces the potential that an access point is located in an isolated location of the building which could increase building and occupant security concerns.

**A-3.2.10.4.(3) Suite Entry Doors.** Sentence 3.2.10.4.(3) supersedes the permission in Article 3.1.8.12. to reduce the fire-protection rating of closures. Suite entry doors with less than a 45 min fire-protection rating are not permitted in buildings to which Subsection 3.2.10. applies, nor would these doors be permitted any undercuts such as described in Article 9.32.3.10.

11 *The following Sentence is added to Article 9.1.1.1.:*

**3)** Part 9 does not apply to *buildings* designed and constructed in accordance with Subsection 3.2.10. (See Sentence 1.3.3.3.(2) of Division A.)

12 *The following Sentence is added to Article 9.10.1.3.:*

**12)** Part 9 does not apply to *buildings* designed and constructed in accordance with Subsection 3.2.10. (See Sentence 1.3.3.3.(2) of Division A and Sentence 9.1.1.1.(3) of Division B.)



Division 3 – Changes to Division C

13 Sentence 2.2.7.1.(1) is repealed and the following substituted:

- 1) The requirements of this Subsection apply to
  - a) *buildings* within the scope of Part 3 of Division B which include *buildings* designed and constructed in accordance with Subsection 3.2.10. of Division B,
  - b) *buildings* within the scope of Part 9 of Division B that are designed with common egress systems for the occupants and require the use of *firewalls* according to Article 1.3.3.4. of Division A, and
  - c) the following, in respect of *buildings* within the scope of Part 9 of Division B other than *buildings* described in Clause (b),
    - i) structural components that are not within the scope of Part 9 of Division B (See Note A-2.2.7.1.(1)(c)(i).),
    - ii) geotechnical conditions at *building* sites that are not within the scope of Part 9 of Division B,
    - iii) sprinkler systems designed to NFPA 13, “Installation of Sprinkler Systems”, and
    - iv) standpipe and hose systems designed to NFPA 14, “Installation of Standpipe and Hose Systems”.