Technical Solutions for Single Exit Stair Building Designs
British Columbia Building Code 2024 Revision 3 – CONVENIENCE COPY and Discussion

The technical solutions for British Columbia Building Code 2024 (Building Code) Revision 3 shown in this document were developed based on the Single Egress Stair Building Designs: Policy and Technical Options Report prepared for the Building and Safety Standards Branch, Ministry of Housing, by Jensen Hughes.

Single exit stair residential buildings are far more than just a residential building with an exit stair removed. Single exit stair residential buildings are limited in height, area, travel distance and occupancy load, and include compensatory measures as well as rely on a high-level of operations and management oversight and a high-level of local fire department capability and capacity to achieve an acceptable level of risk comparable to other new buildings.

A commonly accepted risk control hierarchy lists controls that are most effective to least effective.

Most Effective	**Elimination**	The Building Code cannot eliminate a fire hazard completely.
	Substitution	The Building Code cannot substitute a fire hazard completely.
	Engineering Controls	The Building Code reduces the probability of a fire hazard by applying engineering controls. A second and separate exit stair provides redundancy should one exit stair be obstructed. Fire department personnel can also rely on a second and separate exit stair for intervention in a fire event.
	Administrative Controls	The British Columbia Fire Code assigns administrative controls to the owner of the building for the inspection, frequency of inspection, and correction of unsafe conditions. The Fire Services Act and pursuant regulations govern inspections and other administrative controls.
Least Effective	**Personal Protective Equipment**	It is not reasonable that all occupants of a building be protected with personal protective equipment, although it is reasonable to expect firefighters to be protected with personal protective equipment when performing their tasks.

The technical solutions in this document are premised on a complement of alternative engineering controls as acceptable solutions in the Building Code and premised on critical administrative controls and firefighting assumptions. Building owners and managers must work closely with the local fire department to ensure a high level of capability and capacity to maintain safety systems and respond in a fire event, as well as the availability of a dependable water supply for firefighting, can be maintained for the life of single exit stair buildings.

The firefighting assumptions described in the Notes to Part 3 of Division B of the Building Code describe circumstances where additional measures may be necessary for certain buildings beyond the general provisions of the Code. These technical solutions for single exit stair buildings

in this document are an example of such a circumstance and the commensurate building features and the expectations of capability and capacity of building owners and managers and local fire departments are critical to the safety of these building. As discussed in the Notes shown in this document, **single exit stair residential buildings should not be located in a jurisdiction where a high level of fire prevention activities cannot be maintained, or where a high level of response and fire suppression activities by firefighting personnel cannot be maintained**. In jurisdictions where there is risk to availability of a water supply for firefighting at any point during the life of the building, a secondary or back up water supply will be necessary.

The technical solutions shown in this document were not developed as options for existing buildings or buildings of other uses and are not to be considered as such.

British Columbia Building Code Revision 3

Technical solutions are shown in the context of, and following the conventions of, the Building Code, however only minimal existing content has been reproduced. Content in text boxes is shown for explanatory purposes only. Revision 3 changes are shown in green. Notes of the Building Code are shown with a grey background.

Division A:

1.3.3. Application of Division B

1.3.3.1. Application of Parts 1, 7, 8, and 10

1) Parts 1, 7, 8, and 10 of Division B apply to all *buildings* covered in this Code. (See Article 1.1.1.1.)

1.3.3.2. Application of Parts 3, 4, 5 and 6

1) Parts 3, 4, 5, and 6 of Division B apply to all *buildings* described in Article 1.1.1.1. and

a) classified as *post-disaster buildings*,

b) used for *major occupancies* classified as

i) Group A, *assembly occupancies*,

ii) Group B, *care*, *treatment* or *detention occupancies*, or

iii) Group F, Division 1, *high-hazard industrial occupancies*, or

c) exceeding 600 m^2 in *building area* or exceeding 3 storeys in *building height* used for *major occupancies* classified as

i) Group C, *residential occupancies*,

ii) Group D, *business and personal services occupancies*,

iii) Group E, *mercantile occupancies*, or

iv) Group F, Divisions 2 and 3, *medium*- and *low-hazard industrial occupancies*.

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.

1.3.3.3. Application of Part 9

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^2, 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 A directs which building uses and archetypes follow which acceptable solutions as well as which acceptable solutions are not appropriate. Subsection 3.2.10. of Division B establishes the scope and application for single exit stair residential buildings. It is not appropriate for those buildings to follow Part 9 of Division B.

Division B Options:

3.2.4.1. Determination of Requirement for a Fire Alarm System

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).)

3.2.5.7. Water Supply

1) Every *building* shall be provided with an adequate water supply for firefighting. (See Note A-3.2.5.7.(1).)

2) Except for *buildings* constructed of encapsulated mass timber construction in conformance with Article 3.2.2.48., 3.22.57. 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).

3.2.10. Requirements for Residential Buildings with a Single Exit

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

Note A-3.2.10. informs industry, specifically building owners, managers, designers, authorities having jurisdiction and their fire departments, of the expectations accompanying the development of these technical solutions. These solutions are not appropriate for use if any of the stated expectations cannot be met. A further expectation is that if there is an unacceptable risk or concern about capacity and capability to meet the stated expectations that these solutions would not be applied. These solutions can be used when there is a high level of confidence that the expected capacities and capabilities will exist for the lifecycle of the building.

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*.

Buildings already permitted to have a single exit are unaffected by these technical solutions.

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).)

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.

The lists of residential uses are existing uses referred to in the Building Code, but these specific uses are not defined. These technical solutions were developed for typical residential apartment buildings that provide general market housing.

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.

Sentence (5) maintains that all other applicable provisions of the Building Code apply. Subsection 3.2.10. is only an alternative for the second exit requirement in Subsection 3.4.2. Subsection 3.2.10. does not relax or waive any other requirements.

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).)

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.

The requirement for automatic fire sprinklers in accordance with NFPA 13 triggers the requirement for a fire alarm system. A fire alarm system is required and Sentence 3.2.4.1.(7) is added for clarity. This Note also alerts the designer of the requirement.

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).)

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.

It is acceptable, for example, for the exit stair facility to include a doorway that adjoins a lobby. Such a door is required to have the appropriate fire-protection rating for the fire separation of the exit facility. It is critical, as for all exit facilities, that the facility and the routes connected to it are kept clear of hazards/obstructions. Design of the lobby, for example, must consider realities, such as the delivery of packages, so that the probability of misuse of the exit facility is minimized.

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).)

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 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.

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).)

Specific smoke control performance requirements in Article 3.2.6.2. are applied to five and six storey single exit stair residential buildings. Fans will not always be required, but when they are, there are existing requirements for emergency power. Smoke vestibules are offered as an alternative to pressurization. An example of a smoke vestibule would be a portion of the public corridor adjacent the doorway to the exit facility becomes portioned-off upon release of closures should the fire alarm system be activated. This smoke vestibule acts as a sacrificial buffer should smoke compromise the remainder of the public corridor or the exit facility itself.

The minimum dimensions of the smoke vestibule align with the established minimum distance between doors in series and the minimum width for an accessible path of travel to facilitate turning and passing and the operation of doors.

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.

Electromagnetic hold-open devices limit the probability that suite entry doors would be held open with wedges or other devices that require manual removal. Upon activation of the fire alarm system, electromagnetic hold-open devices release, which provides smoke control via the suite entry door being the closure in the fire separation.

Electromagnetic hold-open devices must allow the occupant to release the door to allow it to close with minimal force. This can be done by breaking the hold of the magnet either by a force applied to the door or by a force applied to a release device such as a button.

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

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.

3.3.1.3. Means of Egress

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*.

3.4.2.1. Minimum Number of Exits

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*.

9.1.1. Application

9.1.1.1. Application

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.)

9.10.1.3. Items under Part 3 Jurisdiction

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.)

It is not appropriate for single exit stair residential buildings to follow Part 9. To minimize confusion, that message is inserted in the locations where Part 9 discusses application.

Division C Options:

2.2.7. Professional Design and Review

(See Note A-2.2.7.)

2.2.7.1. Application

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”.

The technical solutions in this document are new. As such, signposts are inserted throughout the Building Code to aid understanding and implementation. Professional design and review

are required for buildings within the scope of Part 3 and single exit stair buildings are no exception.

Analysis of Objectives and Functional Statements

The objectives and functional statements attributed to the technical solutions in this document are shown in the applicable excerpts of Table 3.10.1.1. of Division B.

Table 3.10.1.1.
Objectives and Functional Statements Attributed to the Acceptable Solutions in Part 3
Forming Part of Sentence 3.10.1.1.(1)

Provision	Functional Statements and Objectives [1]
3.2.4.1. Determination of Requirement for a Fire Alarm System	
(7)	[F11-OS1.5] [F13-OS1.2,OS1.5]
	[F13-OP1.2]
3.2.5.7. Water Supply	
(1)	[F02-OS1.2]
	[F02-OP1.2]
	[F02-OP3.1]
3.2.10.1. Application	
(1)	(e) [F10-OS3.7]
3.2.10.2. Building Construction	
(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]
3.2.10.3. Limits to Smoke Movement	

(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]
3.2.10.4. Doors in Public Corridors and Suite Entry Doors	
(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]
3.4.2.1. Minimum Number of Exits	
(1)	[F06,F12-OS1.2]
	[F05,F06,F10,F12-OS3.7]
	[F06,F12-OP1.2]

The attributions discussed in this document are:

OS1 Fire Safety
An objective of this Code is to limit the probability that, as a result of the design or construction of the building, a person in or adjacent to the building will be exposed to an unacceptable risk of injury due to fire. The risks of injury due to fire addressed in this Code are those caused by-
OS1.1 – fire or explosion occurring
OS1.2 – fire or explosion impacting areas beyond its point of origin
OS1.3 – collapse of physical elements due to a fire or explosion
OS1.4 – fire safety systems failing to function as expected
OS1.5 – persons being delayed in or impeded from moving to a safe place during an emergency

OS3 Safety in Use
An objective of this Code is to limit the probability that, as a result of the design or construction of the building, a person in or adjacent to the building will be exposed to an unacceptable risk of injury due to hazards. The risks of injury due to hazards addressed in this Code are those caused by-

OS3.7 – persons being delayed in or impeded from moving to a safe place during an emergency (see Note A-2.2.1.1.(1))

OP1 Fire Protection of the Building
An objective of this Code is to limit the probability that, as a result of its design or construction, the building will be exposed to an unacceptable risk of damage due to fire. The risks of damage due to fire addressed in this Code are those caused by-
OP1.1 – fire or explosion occurring
OP1.2 – fire pr explosion impacting areas beyond its point of origin
OP1.3 – collapse of physical elements due to a fire or explosion
OP1.4 – fire safety systems failing to function as expected

OP3 Protection of Adjacent Buildings from Fire
An objective of this Code is to limit the probability that, as a result of the design or construction of the building, adjacent buildings will be exposed to an unacceptable risk of damage due to fire. The risks of damage to adjacent buildings due to fire addressed in this Code are those caused by-
OP3.1 – fire or explosion impacting areas beyond the *building* of origin

F01 To minimize the risk of accidental ignition.
F02 To limit the severity and effects of fire or explosions.
F03 To retard the effects of fire on areas beyond its point of origin.
F04 To retard failure or collapse due to the effects of fire.
F05 To retard the effects of fire on emergency egress facilities.
F06 To retard the effects of fire on facilities for notification, suppression and emergency response.
F10 To facilitate timely movement of persons to a safe place in an emergency.
F11 To notify persons, in a timely manner, of the need to take action in an emergency.
F12 To facilitate an emergency response.
F13 To notify emergency responders, in a timely manner, of the need to take action in an emergency.
F81 To minimize the risk of malfunction, interference, damage, tampering, lack of use or misuse.
F82 To minimize the risk of inadequate performance due to improper maintenance or lack of maintenance.