

Sprinkler Relaxations

Buildings are sprinklered when required by the building classification [Subsection 3.2.2.] or a local building bylaw. Sprinklering a building (even when not required by the Building Code or a bylaw) will provide some relaxations which may allow for flexibility in the design. References to the Building Code and its Sections, Subsections, etc. are to the 2015 National Building Code of Canada (NBC) and Division B, unless noted otherwise.

Travel distances

Both egress and exit travel distances are increased when a building is sprinklered. [Articles 3.3.1.5. and 3.4.2.5.]

Windows (unprotected openings)

When a building is sprinklered, it is typically allowed double the amount of windows than a non-sprinklered building. [Tables 3.2.3.1.-B to E]

Combustible construction

When a building is sprinklered, the area and height limits are often increased for building classifications [3.2.2.]. Exterior walls of combustible construction can also be closer to a property line, or other buildings on the same site if the building is sprinklered (relative to the same building not being sprinklered). [Table 3.2.3.7.]

Interconnected floors

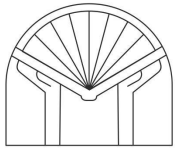
When a building is sprinklered, there is a relaxation to allow two-storey interconnected floor spaces without additional protective measures (vestibules, protected floor space, draft stops, mechanical exhaust system and combustible content limits) if certain criteria are met. [Sentence 3.2.8.2.(6)]

Protection of accessible floor areas

When a building is not sprinklered, floors above and below the ground level are typically divided into at least 2 zones by fire separations so that persons with disabilities can be accommodated in each zone. This is waived for sprinklered buildings. [Article 3.3.1.7.]

Public corridor separations

If a building is sprinklered, the fire separations between suites and a public corridor are often waived. [Sentences 3.3.1.4.(3)/(4)]



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Access routes

Sprinklered buildings typically only require fire department access to the principal entrance of the building, as opposed to multiple building faces which can be required in an unsprinklered building. Mid-rise combustible construction has additional access route requirements as noted in Sentence 3.2.2.10.(3). [Subsection 3.2.2. and Articles 3.2.5.1. and 3.2.5.2.]

Roof ratings

Roof ratings are typically not required if a building is sprinklered. This does not include occupied roofs [Article 3.2.2.13.] or mid-rise combustible construction. [Articles 3.2.2.50. and 3.2.2.58.]

Exterior wall exposure protection

When buildings are sprinklered, fire compartments in the same building do not need to be protected from each other on the exterior of the building. [Sentence 3.2.3.14.(3)]

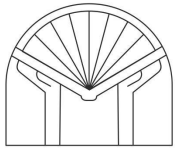
Canopy protection

In certain mixed use buildings, the second storey is required to be set back 1 m if a rated canopy is not provided. This is waived if the building is sprinklered. [Article 3.2.3.17.]

Wood framing in noncombustible buildings

Even when a building is required to be of noncombustible construction, wood can be used for many of the non-structural walls. [Sentence 3.1.5.16.(3)]

Please note, this is not an exhaustive list of Building Code requirements, and is provided for educational purposes only and must not be construed as advice. The relaxations noted are summarized and the Building Code should always be referenced when determining if any of them are applicable to your project. We encourage everyone requiring code advice to consult with a building or fire code expert, or their local AHJ.



Sprinkler Requirements - Combustible Construction

The table below provides a general overview of Articles 3.2.2.20. to 3.2.2.90. of the Building Code. Further reference to the Building Code should be made for specifics around construction type, occupancy classification, building size, number of storeys and streets. References to the Building Code and its Sections, Subsections, etc. are to the 2015 National Building Code of Canada (NBC) and Division B, unless noted otherwise.

Major Occupancy	Streets Faced	Storeys						
		1	2	3	4	5	6	>6
		Requirement for Sprinklers ⁽¹⁾						
A-1	1	S	N/A ⁽²⁾					
A-2	1	1 600	800	N/A ⁽²⁾⁽⁵⁾				
	2	2 000	1 000	N/A ⁽²⁾⁽⁵⁾				
	3	2 400	1 200	N/A ⁽²⁾⁽⁵⁾				
A-3	1	2 400	N/A ⁽²⁾					
	2	3 000	N/A ⁽²⁾					
	3	3 600	N/A ⁽²⁾					
A-4	1	N/A ⁽²⁾						
B-1	1	N/A ⁽²⁾						
B-2	1	S	S	N/A ⁽²⁾				
B-3	1	S	S	S	N/A ⁽²⁾			
C ⁽³⁾	1	2 400	1 200	800	S	S	S	N/A ⁽²⁾⁽⁴⁾
	2	3 000	1 500	1 000	S	S	S	
	3	3 600	1 800	1 200	S	S	S	

Notes to Table

(1) The requirement for sprinklers are indicated as follows:

S = Sprinklers required by Subsection 3.2.2.

= *Building area* limit (m²) above which sprinklers and/or noncombustible construction may be required

NL = No limit on *building area* without sprinklers

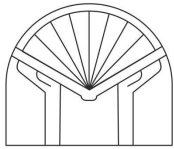
N/A = Height limit exceeded for this classification

(2) See Freebie - Sprinkler Requirements - Noncombustible Construction

(3) A building conforming to Article 3.2.2.50. or 3.2.2.58. is considered to face one street when not less than 25% (NBC) or 10% (BCBC or VBBL) of the perimeter is located within 15 m of a street or streets.

(4) See EMTC allowances if permitted in the applicable Building Code

(5) See Articles 3.2.2.50. and 3.2.2.58., and EMTC allowances if permitted in the applicable Building Code



Sprinkler Requirements - Combustible Construction

Major Occupancy	Streets Faced	Storeys						
		1	2	3	4	5	6	>6
		Requirement for Sprinklers ⁽¹⁾						
D ⁽³⁾	1	4 800	2 400	1 600	S	S	S	N/A ⁽²⁾⁽⁴⁾
	2	6 000	3 000	2 000	S	S	S	
	3	7 200	3 600	2 400	S	S	S	
E	1	1 500	1 200	800	S	N/A ⁽²⁾⁽⁵⁾		
	2	1 500	1 500	1 000	S	N/A ⁽²⁾⁽⁵⁾		
	3	1 500	1 500	1 500	S	N/A ⁽²⁾⁽⁵⁾		
F-1	1	800	S	N/A ⁽²⁾				
F-2	1	1 500	1 500	1 070	S	N/A ⁽²⁾⁽⁵⁾		
	2	1 500	1 500	1 340	S	N/A ⁽²⁾⁽⁵⁾		
	3	1 500	1 500	1 500	S	N/A ⁽²⁾⁽⁵⁾		
F-3	1	4 800	2 400	1 600	1 200	N/A ⁽²⁾⁽⁵⁾		
	2	6 000	3 000	2 000	1 500	N/A ⁽²⁾⁽⁵⁾		
	3	7 200	3 600	2 400	1 800	N/A ⁽²⁾⁽⁵⁾		

Notes to Table

(1) The requirement for sprinklers are indicated as follows:

S = Sprinklers required by Subsection 3.2.2.

= *Building area* limit (m²) above which sprinklers are required or noncombustible construction may be required

NL = No limit on *building area* without sprinklers

N/A = Height limit exceeded for this classification

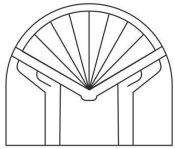
(2) See Kilo Lima Code Library - Building Code - Part 3 - Sprinkler Requirements - Noncombustible Construction

(3) A building conforming to Article 3.2.2.50. or 3.2.2.58. is considered to face one *street* when not less than 25% (NBC) or 10% (BCBC or VBBL) of the perimeter is located within 15 m of a street or streets.

(4) See EMTC allowances if permitted in the applicable Building Code

(5) See 3.2.2.50., 3.2.2.58., and EMTC allowances if permitted in the applicable Building Code

Please note, this is not an exhaustive list of Building Code requirements, and is provided for educational purposes only and must not be construed as advice. We encourage everyone requiring code advice to consult with a building or fire code expert, or their local AHJ.



Sprinkler Requirements - Noncombustible Construction⁽¹⁾

The table below provides a general overview of Articles 3.2.2.20. to 3.2.2.90. of the Building Code. Further reference to the Building Code should be made for specifics around construction type, occupancy classification, building size, number of storeys and streets. References to the Building Code and its Sections, Subsections, etc. are to the 2015 National Building Code of Canada (NBC) and Division B, unless noted otherwise.

Major Occupancy	Streets Faced	Storeys						
		1	2	3	4	5	6	>6
		Requirement for Sprinklers ⁽²⁾						
A-1	1	S						
A-2	1	1 600	800	S				
	2	2 000	1 000	S				
	3	2 400	1 200	S				
A-3	1	4 000	2 000	S				
	2	5 000	2 500	S				
	3	6 000	3 000	S				
A-4	1	S in occupied spaces below seating areas						
B-1	1	S						
B-2	1	S						
B-3	1	S						
C	1	NL	6 000	4 000	S			
	2	NL	NL	5 000	S			
	3	NL	NL	6 000	S			

Notes to Table

(1) See definitions of noncombustible and noncombustible construction in Article 1.4.1.2. of Division A.

(2) The requirement for sprinklers are indicated as follows:

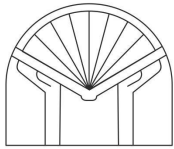
S = Sprinklers required by Subsection 3.2.2.

= *Building area* limit (m²) above which sprinklers are required

NL = No limit on *building area* without sprinklers

N/A = Height limit exceeded for this classification

N/R = Not required



Sprinkler Requirements - Noncombustible Construction⁽¹⁾

Major Occupancy	Streets Faced	Storeys						
		1	2	3	4	5	6	>6
		Requirement for Sprinklers ⁽²⁾						
D	1	NL	7 200	4 800	3 600	2 880	2 400	S
	2	NL	NL	6 000	4 500	3 600	3 000	
	3	NL	NL	7 200	5 400	4 320	3 600	
E	1	1 500	1 200	800	S			
	2	1 500	1 500	1 000	S			
	3	1 500	1 500	1 500	S			
F-1	1	800	S	S	S	N/A		
F-2	1	1 500	1 500	1 070	S			
	2	1 500	1 500	1 340	S			
	3	1 500	1 500	1 500	S			
F-3	1	NL	7 200	4 800	3 600	2 880	2 400	S
	2	NL	9 000	6 000	4 500	3 600	3 000	S
	3	NL	10 800	7 200	5 400	4 320	3 600	S

Notes to Table

(1) See definitions of noncombustible and noncombustible construction in Article 1.4.1.2. of Division A.

(2) The requirement for sprinklers are indicated as follows:

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