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Mid-Rise Combustible Construction in the 2018 British Columbia Building Code

This bulletin provides an overview of changes made to mid-rise combustible construction provisions in the 2018 British Columbia Building Code (BC Building Code) from the previous 2012 edition.

In 2009, the Province of British Columbia (B.C.) was the first jurisdiction in Canada to adopt provisions for mid-rise combustible residential construction into a building code, and the 2012 edition of the BC Building Code carried over those provisions. The 2015 edition of the National Building Code (NBC) introduced additional provisions for similar buildings, allowing for greater design permissions with additional compensatory measures.

The 2018 BC Building Code adopts the 2015 NBC provisions for mid-rise combustible construction with an amendment reducing the required street frontage from 25% in the NBC, to 10%, with additional safety measures, in the BC Building Code. This amendment will increase the number of building sites where combustible construction may be used.

Code users are advised that there are provisions in the 2018 British Columbia Fire Code related to Fire Safety Plans that apply specifically to mid-rise combustible construction. More information on Fire Safety Plans is available in the [Fire Safety Planning for Construction and Demolition Sites](#) bulletin produced by the Office of the Fire Commissioner.

New Provisions

The 2018 BC Building Code permits mid-rise residential buildings, as well as mid-rise business and personal service buildings, to be constructed of combustible construction. Some permissions are broader than those permitted in the 2012 BC Building Code, such as allowing for increased building area and the inclusion of additional major occupancies. There are also some new provisions that were not required by the 2012 BC Building Code.

The 2018 BC Building Code adopts the 2015 NBC criteria for building types in Section 3.2. of Division B. Meaning, new articles for **Group C, up to 6 Storeys, Sprinklered** buildings and **Group D, up to 6 Storey, Sprinklered** buildings have been added as building types in Subsection 3.2.2. The existing NBC articles for both residential and business and personal service buildings that are up to 6 storeys, sprinklered, and of noncombustible construction are also adopted. This is different than B.C.'s 2009 approach where the article for combustible Group C buildings up to 4 storeys and sprinklered was amended to include buildings of 5 and 6 storeys.

Table 1. provides a summary of changes from the 2012 BC Building Code to the 2018 BC Building Code in order of reference. (Article references are to Division B of the 2018 BC Building Code.)

Table 1. Changes for Mid-Rise Combustible Construction	
Article Reference	Summary of Changes in 2018 BC Building Code from the 2012 BC Building Code
3.1.3.1.	A fire separation with a 2 h fire-resistance rating is required between Group C and Group A, Division 2 and between Group D and Group A, Division 2 major occupancies
3.1.4.8.	Cladding made of fire-retardant-treated wood shall be tested for fire exposure in accordance with CAN/ULC-S134, "Fire Test of Exterior Wall Assemblies"
3.1.11.5.	Horizontal concealed spaces are limited in compartment size by fire blocks
3.1.15.2.	Roof heights above 25 m shall have a Class A roof covering
3.2.2.6.	Permission to include multiple major occupancies , with conditions, within buildings of combustible construction
3.2.2.7.	Permission to allow superimposed major occupancies to be of combustible construction, with conditions, in mid-rise buildings of combustible construction
3.2.2.10.	Not less than 10% of the building perimeter shall be located within 15 m of a street or streets
3.2.2.50.	New article permitting mid-rise combustible residential construction
	Building height is limited to 18 m when measured between the floor of the first storey and the uppermost floor level
	Permission for 25% more allowable building area for residential buildings (1 500 m ² if 6 storeys in building height from 1 200 m ²)
	Roof assemblies higher than 25 m shall be constructed of noncombustible construction or fire-retardant-treated wood
	Limits to which stories Group A, Division 2 and Group E major occupancies and storage garages can be located
3.2.2.58.	New article permitting mid-rise business and personal service buildings to be constructed of combustible construction
	Building height is limited to 18 m when measured between the floor of the first storey and the uppermost floor level
	Permission for twice the building area than permitted for residential buildings (3 000 m ² if 6 storeys in building height)
	Roof assemblies higher than 25 m shall be constructed of noncombustible construction or fire-retardant-treated wood
	Limits to which storeys Group A, Division 2, Group E, Group F, Divisions 2 and 3 major occupancies and storage garages can be located
3.2.5.6.	Uppermost floor cannot be more than 20 m above the access route
3.2.5.12.	Sprinklers shall be provided for balconies and decks exceeding 610 mm in

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	depth
3.2.7.4.	1 h of emergency power is required for emergency lighting
3.2.7.8.	1 h of emergency power is required for fire alarm systems
4.1.8.11.	Allowable limits when determining the lateral earthquake force (V)
4.1.8.12.	Direction on determining the design base shear (V_d)

Contact the Building and Safety Standards Branch

- **General** inquiries can be sent to building.safety@gov.bc.ca
- **Technical** Code inquiries can be sent to codequestion@gov.bc.ca

The Building and Safety Standards Branch does not enforce compliance with the BC Building Code. Local governments are authorized to enforce the BC Building Code through the Local Government Act and the Community Charter.