

BC BUILDING CODE INTERPRETATION COMMITTEE

A joint committee with members representing
AIBC, EGBC, BOABC

File No: 18-0009

INTERPRETATION

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Interpretation Date:	November 26, 2019
Building Code Edition:	BC Building Code 2018
Subject:	Construction Type in a 3.2.1.2. Storage Garage
Keywords:	Storage garage, separate building, combustible, noncombustible
Building Code Reference(s):	3.1.4., 3.1.5., 3.2.1.2., 3.2.1.4., 3.2.2.15.

Question:

1. If a basement storage garage is considered as a separate building per Article 3.2.1.2., and all the buildings above the storage garage are permitted to be combustible construction, must the entire storage garage be constructed as a noncombustible building per Subsection 3.1.5.?
2. Is exposed combustible piping permitted within such an underground storage garage?

Interpretation:

1. No (with qualifications)

Article 3.2.1.2. only requires the basement storage garage to have noncombustible construction for the following components:

- a. Floor assemblies above the basement storage garage (i.e. the Level 1 floor slab)
- b. Roof assemblies above the basement storage garage (i.e. the Level 1 roof deck slab)
- c. The perimeter exterior walls of the basement storage garage that are located above the adjoining finished ground level.
- d. Loadbearing walls, columns and arches supporting the Level 1 noncombustible floor and roof assemblies as described in (a) & (b), or a noncombustible wall assembly as described in (c).

All other components that form part of this basement storage garage could be designed to Subsection 3.1.4. using combustible construction.



Patrick Shek, P.Eng., CP, FEC, Committee Chair

The views expressed are the consensus of the joint committee with members representing AIBC, EGBC and BOABC, which form the BC Building Code Interpretation Committee. The Building and Safety Standards Branch, Province of BC and the City of Vancouver participate in the committee's proceedings with respect to interpretations of the BC Building Code. The purpose of the committee is to encourage uniform province wide interpretation of the BC Building Code. These views should not be considered as the official interpretation of legislated requirements based on the BC Building Code, as final responsibility for an interpretation rests with the local *Authority Having Jurisdiction*. The views of the joint committee should not be construed as legal advice.

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Note that Article 3.2.1.4. only applies to the floor assembly immediately above a basement (i.e. the Level 1 floor assembly). It does not regulate floor assemblies in multi-level basements below the Level 1 floor assembly.

Since Article 3.2.1.2. is a more restrictive requirement than Article 3.2.1.4., Article 3.2.1.2. would govern the design of the floor assembly immediately above a basement using noncombustible construction constructed as a fire separation with a 2 hour fire resistance rating for the Level 1 floor assembly.

Note that Article 3.2.2.15. does not have any requirements for the use of noncombustible construction for storeys below ground, but if there is more than 1 storey below the adjoining finished ground level, the floor assemblies would require a 2 hour FRR for basement storage garages.

Sentence 3.2.2.15.(1) only applies to a building that is constructed entirely below adjoining finished ground level and is only one 1 storey below that ground level. For this condition, the construction requirements are determined by Articles 3.2.2.20. to 3.2.2.90. for a basement below a 1 storey building having the same occupancy and building area. Sentence 3.2.2.15.(1) would not apply to buildings designed to Article 3.2.1.2. because there would be no buildings above the building that is entirely below adjoining finished ground level.

Sentence 3.2.2.15.(2) applies to any portion of a building that is constructed entirely below adjoining finished ground level and is more than 1 storey below that ground level. Sentence 3.2.2.15.(2) is silent with respect to the use of noncombustible construction and there is no cross reference to apply the construction requirements of Articles 3.2.2.20. to 3.2.2.90.

2. Yes

Since only certain components of the storage garage are "required" to be noncombustible as described in Answer #1, the other components are permitted to be combustible. The restrictions for the use of combustible piping materials in Article 3.1.5.19. would not apply to this particular storage garage.

Note that there are restrictions on transitioning from combustible piping in the below grade storage garage to noncombustible plumbing risers in the above grade storeys. Refer to previous BCIC Interpretations #98-0139 (revised June 21, 2011), #06-0070 and #12-0004.

The BC Building Code Interpretation Committee will send a code change request to NRC to amend Sentence 3.2.2.15.(2) to require noncombustible construction and minimum construction requirements for below grade floor assemblies, bearing walls and columns.



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