


BC BUILDING CODE INTERPRETATION COMMITTEE

A joint committee with members representing
AIBC, EGBC, BOABC

File No: 18-0006

INTERPRETATION

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Interpretation Date:	March 26, 2019
Building Code Edition:	BC Building Code 2018
Subject:	Crawl space ceiling height maximum
Keywords:	Crawl space, ceiling height, headroom, concealed space, basement
Building Code Reference(s):	9.5.3.1., 9.10.8.9., 9.18., 3.2.2.9.(1)
Question:	
	For Part 9 buildings, Article 9.5.3.1. does not provide maximum ceiling height criteria for crawl spaces. Is a crawl space permitted to have a ceiling height of 2.4m or more?
Interpretation:	
	No, except in unusual circumstances.
	Article 9.5.3.1 does not address ceiling height of crawl spaces, because crawl spaces are not intended to be habitable or occupied spaces. In the absence of a formal definition of crawl space in the Building Code, dictionary meanings could be reviewed. The dictionary of Architecture and Construction by Cyril M. Harris, 4 th edition, for example, indicates crawl space as:
	"1. Any interior space of limited height, but sufficient to permit workmen access to otherwise concealed ductwork, piping, or wiring. 2. In a building without a basement, an unfinished accessible space below the first floor which is usually less than a full storey in height; normally enclosed by the foundation wall. 3. A creep trench."
	Crawl spaces are therefore not intended to be spaces where normal functional headroom height is provided to accommodate normal use and occupancy. Sentence 9.10.8.9.(1) requires a crawl space to be considered a basement in applying the requirements of Article 9.10.8.1. (Fire-Resistance Ratings for Floors and Roofs), if it:
	<ul style="list-style-type: none">- exceeds 1.8m height,- is used for any occupancy,- is used as a plenum in combustible construction, or- is used for the passage of flue pipes.
	 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 <i>Authority Having Jurisdiction</i> . The views of the joint committee should not be construed as legal advice.

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Sentence 3.2.2.9.(1) similarly indicates that: "For the purposes of Articles 3.1.11.6., 3.2.1.4. and 3.2.1.5., a crawl space shall be considered as a basement if it is

- a) more than 1.8 m high between the lowest part of the floor assembly and the ground or other surface below,
- b) used for any occupancy,
- c) used for the passage of flue pipes, or
- d) used as a plenum in combustible construction."

Sentence 9.5.3.1.(1) and Table 9.5.3.1. indicates the minimum headroom for an unfinished basement including the laundry area therein must be 2m high. Sentence 9.9.3.4.(2) requires a minimum 2m headroom in storage garages.

This implies that usable spaces with a height 2m or more are typically considered spaces that can be used and occupied for purposes not permitted for crawl spaces.

Unoccupied spaces with a ceiling height in the range of 1.8m to 2m are considered concealed or void spaces but with inadequate headroom to satisfy Sentence 9.5.3.1.(1) and Table 9.5.3.1. Such concealed or inaccessible spaces are not typically considered crawl spaces, are not to be used for any use and occupancy (including storage), and must also comply with the fire resistance rating requirements of Article 9.10.8.1. for floor assemblies.

However, there may be some full height spaces exceeding 2m, that could still be considered as crawl spaces because the access or ground is difficult enough that they still are not usable as occupied basements or usable spaces. In more extreme cases involving steep sloping sites, there could be cases where a crawl space or concealed space exceeds typical maximum crawl space ceiling heights. These are special crawl space or concealed space situations not envisaged by the Building Code.

Notwithstanding being probably the most significant variable, height is not necessarily the sole determining criterion for crawl space. Ease of access, levelness of floor or terrain, ground seal, whether heated / conditioned or not, or general usability, etc, are other considerations.

Zoning and Development Bylaws may have different criteria affecting crawl spaces.



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

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