

BC BUILDING CODE INTERPRETATION COMMITTEE

A joint committee with members representing
AIBC, EGBC, BOABC

File No: 18-0059

INTERPRETATION

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Interpretation Date: July 21, 2020 (Revised October 19, 2021)

Building Code Edition: BC Building Code 2018

Subject: Occupant Load

Keywords: Occupant load, overcrowding

Building Code Reference(s): 3.1.17.1(1)(c), 3.1.17.1.(2), BCFC 2.7.1.3.(1)

Question:

Article 3.1.17.1. of the BCBC states that the occupant load is to be calculated based on the floor area of the building. This seems to contradict with the Article 2.7.1.3. of the BCFC, which indicates that the occupant load is calculated on a per room basis. Is it possible to clarify this discrepancy?

Interpretation:

The occupant load in the BCBC is used for designing the capacity and the necessity of required provisions such as washrooms, egress, exit, structural floor loading, and the requirements for a fire alarm system etc. for the floor area or part of the floor area.

Clause 3.1.17.1.(c) requires the number of persons for the area to be not less than that determined from Table 3.1.17.1 unless it can be shown that the area will be occupied by fewer persons. It can be designed with more occupants but the design of washrooms, egress, exit, floor loading and fire alarm system, etc. must be designed to the higher occupant load. Sentence 3.1.17.1.(2) states that if a floor area or part thereof has been designed for an occupant load other than that determined from Table 3.1.17.1., a permanent sign indicating that occupant load shall be posted in a conspicuous location.

Article 2.7.1.3. of the BCFC regulates the maximum permissible occupant load for each room based on **the lesser of** the exit capacity provided or the 0.4 sq.m. of net floor space available per person to prevent overcrowding. The Appendix Note A-2.7.1.3.(1) explains that the net floor space excludes structural features and fixtures, such as tables, furnishings or equipment. In certain buildings, such as assembly occupancies, where the number and type of furnishings may change according to the nature of the function taking place, the building owner or owner's authorized agent may be required to calculate maximum permissible occupant loads for each of the different functions anticipated.



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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The occupant load calculated in Article 3.1.17.1. of the BCBC establishes the minimum occupant load of the floor area or part of the floor area to be used by the designer for designing the capacity and the necessity of required provisions such as washrooms, egress, exit, structural floor loading, the requirements for a fire alarm system, etc. However, after construction, a higher number of occupants may be permitted to enter the room as long as the floor area can accommodate the higher occupant load not exceeding 0.4 sq.m. per person and the means of egress provided for the room will accommodate that number of persons, as specified in the Article 2.7.1.3. of the BCFC to prevent overcrowding.



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