

BC BUILDING CODE INTERPRETATION COMMITTEE
AIBC, APEGBC, BOABC, POABC

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INTERPRETATION

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Interpretation Date:

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Building Code Edition:

BC Building Code 2006

Subject:

Live loads for single family garages

Keywords:

Live loads, garages, light trucks

Building Code Reference(s):

9.4.1.1.(1)(c), 9.23.4.1.(1)(a), 4.1.5.1.(1),
Table 4.1.5.3., 4.1.5.10., Table 4.1.5.10.

Question:

What is the appropriate live load for the structural design of a suspended garage floor serving a single family dwelling that falls within the scope of Part 9?

Interpretation:

2.4 kPa uniformly distributed live load plus a concentrated load of 18 kN.

Clause 9.4.1.1.(1)(c) requires that structural design of Part 9 buildings be based on the loads and deflection and vibration requirements specified in either Part 9 or Part 4.

Clause 9.23.4.1.(1)(a) states that Part 9 can be used for the structural design of floors that serve residential areas as described in Table 4.1.5.3. Since a garage floor is not considered to be a residential area, the structural design of garage floors must comply with Part 4 requirements.

Sentence 4.1.5.1.(1) requires that floors be designed for uniformly distributed live loads in accordance with Table 4.1.5.3.

Table 4.1.5.3. requires that garage floors for passenger cars be designed for a uniformly distributed live load of 2.4 kPa. This Table also requires that the live load for floors supporting light trucks and unloaded buses be designed for 6.0 kPa. For single family dwellings, small unloaded light trucks such as ½ ton or 1 ton pickups can be considered as passenger cars for the purposes of Table 4.1.5.3.

Article 4.1.5.10. requires that floors also be designed for concentrated loads as described in Table 4.1.5.10.

Table 4.1.5.10. requires that floors that support light trucks with a gross vehicle weight not exceeding 3600 kg (such as a 1 ton truck) must be designed for a concentrated load of 18 kN in addition to the uniformly distributed live load per Table 4.1.5.3.

Note that there is a proposed change to the 2010 National Building Code of Canada to clarify that floors that support light trucks up to a gross vehicle weight of 4000 kg should be designed for 2.4 kPa uniformly distributed live load plus a concentrated load of 18 kN.


R. J. Light, Committee Chair

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