

BC BUILDING CODE INTERPRETATION COMMITTEE

A joint committee with members representing
AIBC, APEGBC, BOABC, POABC

File No: 06-0115

INTERPRETATION

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Interpretation Date:	September 18, 2012
Building Code Edition:	BC Building Code 2006
Subject:	Fire-resistance Rating of an Occupied Roof Assembly
Keywords:	Roof Assembly, Roof Top Parking, Occupancy on Roof
Building Code Reference(s):	3.1.3.1., 3.2.2.7., 3.2.2.13, 3.3.5.6.

Question:

A proposed building will have the following features:

- 1 storey in building height
- First storey major occupancy – assume it will not be an F-3 (for the purpose of this question)
- Occupied roof major occupancy F-3 – Low Hazard Industrial Occupancy consisting of roof top parking.

Question 1: Based on these building characteristics what building code requirements determine the fire separation and fire-resistance rating of the occupied roof assembly?

Question 2: Are the requirements of Section 3.3. Safety Within Floor Areas applicable to occupied roof areas?

Interpretation:

Answer 1: It is interpreted that the portion of a roof that is occupied requires a fire separation with a fire-resistance rating (FRR) based on the most restrictive of the following:

Article 3.1.3.1. Separation of Major Occupancies; and

Article 3.2.2.7. Superimposed Multiple Major Occupancies; and

Article 3.2.2.13. Occupancy on Roof; and

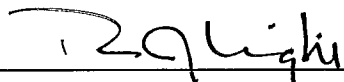
Article 3.2.2.20. to 3.2.2.83. for floor assemblies of the major occupancy on the first

storey

It is interpreted that Article 3.3.5.6. Storage Garage Separation is not applicable to a rooftop parking area because the open air roof top parking does not pose a fire hazard to the storey below.

Articles 3.2.2.7. and 3.2.2.13. clarify that the portion of the roof that is occupied must be constructed as a fire separation with a FRR which is based on the requirement for floor assemblies using Article 3.2.2.20. to 3.2.2.83. for the major occupancy that is located on the first storey.

Since the portion of roof that is occupied must be designed as a fire separation, all building service penetrations through the occupied portion of the roof will require a ULC listed firestop system.



R. J. Light, Committee Chair

The views expressed are the consensus of the joint committee with members representing AIBC, APEGBC, BOABC, and POABC, which form the BC Building Code Interpretation Committee. 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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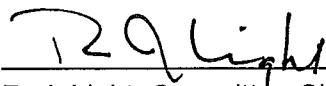
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Refer to NRC-CNRC User's Guide – NBC 1995 Fire Protection, Occupant Safety and Accessibility (Part 3) (pages 29-32) for a sample case study of how these requirements are applied to determine the fire-resistance ratings applicable to a building containing multiple major occupancies.

Answer 2: Generally, Section 3.3. applies to “floor areas” and open rooftop parking is not considered to be a “floor area”. Where appropriate, Section 3.3. provides additional requirements to supplement “floor area” requirements when applied to roof top occupancies. For example, Article 3.3.1.3. distinguishes the means of egress requirements applicable to occupied roof areas from those applicable to interior spaces.



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