BC BUILDING CODE INTERPRETATION COMMITTEE

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

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Interpretation Date:	January 18, 2011
Building Code Edition:	BC Building Code 2006
Subject:	Structural integrity of firewalls, exposing building faces and fire separation walls
Keywords:	structural integrity, firewall collapse, exterior walls at property lines, fire separation walls
Building Code Reference(s):	3.1.10.1.(1) & (2), 3.1.7.5.

Question:

Are any of the following walls required to remain in place during a fire, without collapse, for the full duration of their fire resistance rating?

- 1. A firewall with a single wall assembly
- 2. A firewall with two separate wall assemblies that are not tied to one another
- 3. An exterior wall located on a property line
- 4. An interior wall that is required to be a fire separation with a fire resistance rating

Interpretation:

1. Yes

Sentence 3.1.10.1.(1) requires that a firewall maintain its structural integrity for the full duration of the fire resistance rating of such firewall.

2. No

Sentence 3.1.10.1.(2) waives the requirement for structural integrity of components of a fire wall during a fire provided that each separate wall assembly meets the following criteria:

- a. The two separate wall assemblies are attached to their respective building frame,
- b. The two separate wall assemblies are not attached to one another,
- c. Each of the wall assemblies provides a fire separation with at least one half of the fire resistance rating required for the firewall, and
- d. The structure is designed so that collapse of one wall assembly will not cause collapse of the other.

3. No

Although an exterior wall that is located on a property line is not considered to be a "firewall", the concept for structural integrity of this exterior wall during a fire is similar to that described in Item 2 above.

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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Article 3.1.7.5. requires that loadbearing walls must have a fire resistance rating and type of construction that is not less than the floor or roof assembly that they support. This Article is referring to the vertical load carrying capacity of the wall, and not to any lateral supporting systems for the wall. For example, it is acceptable for a combustible floor assembly with a ¾ hour fire resistance rating to provide lateral stability for an exterior wall on a property line, where such a wall is required to be noncombustible construction with a 2 hour fire resistance rating.

4. No

The requirement for structural integrity to prevent collapse during a fire is unique to firewalls as described in Sentence 3.1.10.1.(1). If the interior fire separation wall is not a firewall, then it is not required to be designed to remain in place during a fire, without collapse, for the full duration of its fire resistance rating.

R. J. Light, Committee Chair

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