


BC BUILDING CODE INTERPRETATION COMMITTEE

A joint committee with members representing
AIBC, EGBC, BOABC

File No: 18-0021

INTERPRETATION

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Interpretation Date:	June 26, 2019
Building Code Edition:	BC Building Code 2018
Subject:	Firestopping at Noncombustible Outlet Boxes
Keywords:	Firestopping
Building Code Reference(s):	3.1.9.4.(1) and (2)
Question:	<ol style="list-style-type: none">1. Is the reference in Sentence 3.1.9.4.(2) to "a membrane forming part of an assembly required to have a fire-resistance rating" intended to apply only to membranes of vertical fire separations?2. Does the statement in Sentence 3.1.9.4.(2) that "noncombustible outlet boxes.....are permitted to be waived" mean that the requirement for firestopping is waived if the outlet box installation meets the specified criteria.
Interpretation:	<p>1. No.</p> <p>Sentence 3.1.9.4.(1) requires FT firestopping at outlet boxes that penetrate the membrane of an assembly required to have a fire-resistance rating. Sentence 3.1.9.4.(2) states that "...noncombustible outlet boxes that penetrate a vertical fire separation or a membrane forming part of an assembly required to have a fire-resistance rating are permitted to be waived..." provided the installation meets the criteria stated in that Sentence.</p> <p>The waiver for noncombustible outlet boxes in fire separations is limited to vertical fire separations. However, the reference to membranes is not clear whether the waiver applies to membranes in any fire separations or only in vertical fire separations.</p> <p>Sentences 3.1.9.4.(1) and (2) contain new requirements that were adopted from the National Building Code 2015. Prior to adoption, these changes were circulated for public review and comment in fall 2013. In those proposed changes, the rationale for the new Sentence 3.1.9.4.(2) includes the statement "A new Sentence for noncombustible electrical outlet boxes as per International Building Code is introduced." This is assumed to refer to the edition of the IBC that was current at the time, which was the 2012 edition.</p> <p></p> <p>Patrick Shek, P.Eng., CP, FEC, Committee Chair</p>
<p>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.</p>	

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Sections 714.3.2 and 714.4.1.2 of the 2012 IBC specify protection of membrane penetrations of walls or horizontal assemblies, respectively, that are required to have a fire-resistance rating. The requirements to allow membrane penetrations by steel electrical outlet boxes are the same for membranes of both walls and horizontal assemblies, and are the same as adopted in Sentence 3.1.9.4.(2) of the NBC 2015 except that the NBC allows a larger area for an individual outlet box.

Since the NBC code change proposal references the IBC, and the IBC regulates penetrations of vertical and horizontal membranes in the same manner, it is interpreted that the waiver stated in Sentence 3.1.9.4.(2) applies to membranes in both vertical and horizontal fire separations.

2. Yes.

Sentence 3.1.9.4.(2) states that noncombustible outlet boxes are permitted to be waived. However, it is not clear whether this waiver refers to the firestopping, or only to the FT rating of the firestopping.

The NBC code change proposal referenced in the response to question 1 contains the following additional statement referring to Sentence 3.1.9.4.(2): "It establishes boundaries for the size of the openings permitted in a fire separation without the need for a fire stop".

Also, there has been a revision to the NBC 2015 which is proposed to be adopted as a revision in the BCBC 2018. This revision clarifies the intent of Sentence 3.1.9.4.(2) by deleting the phrase "are permitted to be waived" and replacing it with "need not conform to Sentence (1)". Based on the code change rationale and on the NBC revision, a noncombustible outlet box that complies with the criteria of Sentence 3.1.9.4.(2) does not require firestopping of any kind.

Note that the requirement of Sentence 3.1.9.4.(3) for the protection between outlet boxes on opposite sides of a vertical fire separation, or the minimum distance between these outlet boxes, must also be satisfied.



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

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