


# BC BUILDING CODE INTERPRETATION COMMITTEE

A joint committee with members representing  
**AIBC, EGBC, BOABC**

**File No: 18-0067**

**INTERPRETATION**

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Interpretation Date:	October 20, 2020
Building Code Edition:	BC Building Code 2018
Subject:	Fire separation or fire rating of roof over elevator hoistway
Keywords:	Roof fire separation, roof fire resistance rating, elevator hoistway
Building Code Reference(s):	3.5.2.1.(1), 3.5.3.1.(1), 3.2.2.14., 3.1.8.3, 3.6.3.1.(2)
<b>Question:</b>	<p>Sentence 3.5.3.1.(1) requires that a vertical service space used as an elevator hoistway, be separated from all other portions of each adjacent storey by a fire separation having a fire rating in accordance with Table 3.5.3.1.</p> <p>In a building in which a roof is not required to have a fire resistance rating:</p> <ol style="list-style-type: none"><li>1. Is the roof immediately over an elevator hoistway required to be designed as a fire separation?</li><li>2. Is the roof immediately over an elevator hoistway required to have a fire resistance rating?</li></ol>
<b>Interpretation:</b>	<ol style="list-style-type: none"><li>1. This will depend on the elevator hoistway enclosure wall to roof junction details.</li></ol> <p>If the elevator hoistway vertical enclosure provides a continuous fire separation from the remainder of the building, such that the roof immediately over the elevator hoistway is also separated from the roof over the remainder of the building; then there is no requirement to design the roof over the elevator hoistway as a fire separation. Refer to cross section Diagram A below.</p> <p>If the building roof deck spans over and across an elevator hoistway vertical enclosure such that the elevator hoistway enclosure is carried up tightly fitted to the underside of the roof deck, or any gaps firestopped; then there is no requirement to design the roof over the elevator hoistway as a fire separation. Refer to cross section Diagram B below.</p> <p>If an unrated building roof assembly or attic space spans over and across an elevator hoistway vertical enclosure such that the roof assembly or attic space is common to both the remainder of the building and the elevator hoistway, it will be necessary at the roof assembly or attic space to maintain the required fire separation between the elevator hoistway and the adjacent storey. In other words, the portion of the roof immediately over the elevator hoistway must be designed as a fire separation to satisfy Sentence 3.5.3.1.(1), and in accordance with Sentence 3.6.3.1.(2), the roof</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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immediately over the elevator hoistway must have a fire resistance rating not less than that of the hoistway enclosure. Refer to cross section Diagram C below.

If the elevator hoistway does not extend to the roof assembly, it will be necessary at the top of the elevator hoistway, to maintain the required fire separation between the elevator hoistway and the adjacent storey. In other words, an enclosing assembly immediately over the elevator hoistway must be designed as a fire separation to satisfy Sentence 3.5.3.1.(1), and in accordance with Sentence 3.6.3.1.(2), this must have a fire resistance rating not less than that of the hoistway enclosure. Refer to cross section Diagram D below.

The intent statements for Sentence 3.5.3.1.(1) indicates that a fire in an elevator hoistway or storey is not to spread to another storey by means of the hoistway, or fire is not to spread from a storey into an elevator hoistway.

The intent statements for Sentence 3.6.3.1.(2) indicates that fire is not to spread from the vertical service space into the storey that is located at the top of the vertical service space.

2. This will depend on the elevator hoistway enclosure wall to roof junction details. In accordance with Sentence 3.6.3.1.(2), the roof immediately over the elevator hoistway must have a fire resistance rating not less than that of the hoistway enclosure, if the hoistway roof is a required fire separation as previously described in 1. above. Refer to cross section Diagrams C and D below.

Note that Sentence 3.2.2.14.(1) requires a roof-top enclosure for elevator machinery to be of the appropriate construction type required under Subsection 3.2.2.

The elevator design and installation standard ASME A17.1-2016/CSA B44-16 "Safety Code for Elevators and Escalators", regulates construction at the top of the hoistway, in reference 2.1.2.1 which indicates: "The top of the hoistway shall be enclosed as required by the building code"



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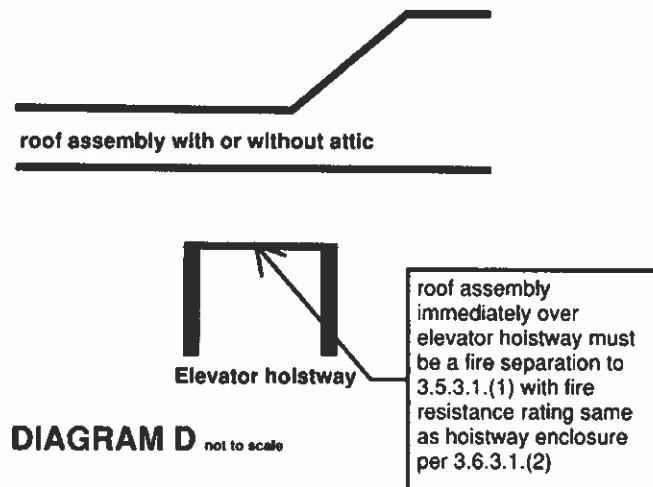
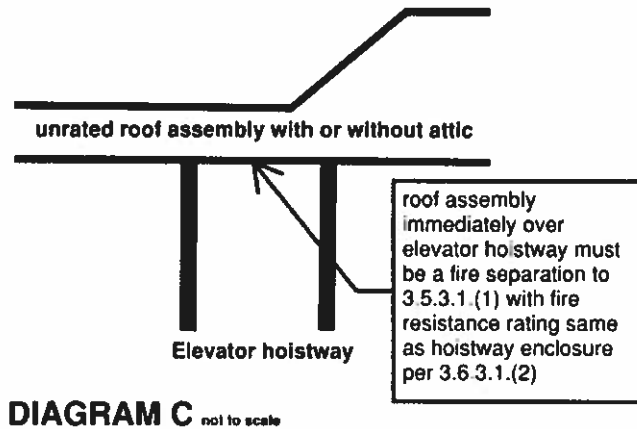
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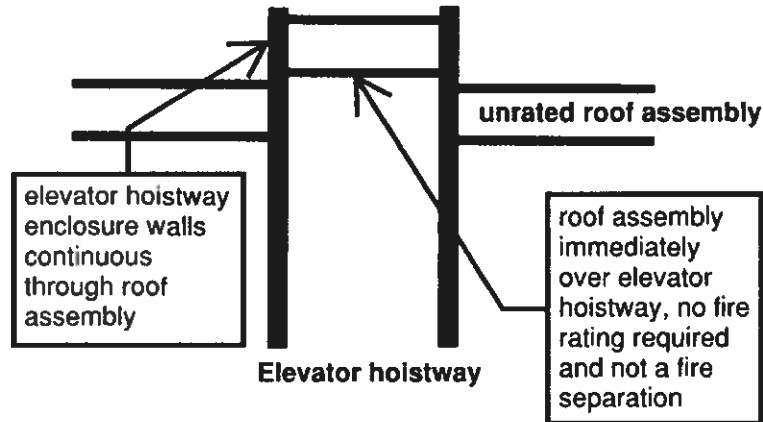
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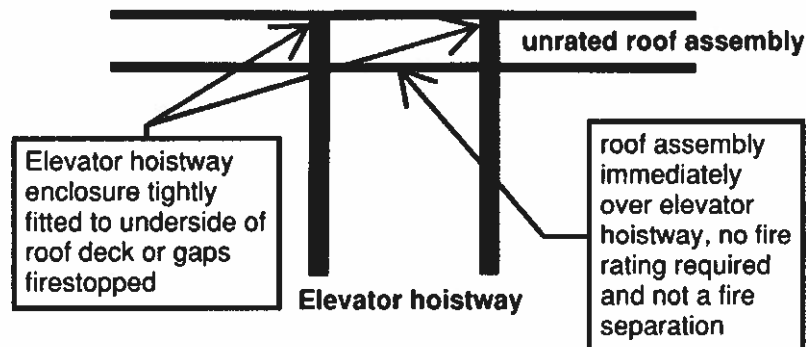
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**DIAGRAM A** not to scale



**DIAGRAM B** not to scale

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