

BC BUILDING CODE INTERPRETATION COMMITTEE

A joint committee with members representing

AIBC, EGBC, BOABC

File No: 18-0213

INTERPRETATION

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Interpretation Date: November 22, 2022

Building Code Edition: BC Building Code 2018

Subject: Membrane ceiling used as a fire separation

Keywords: Membrane ceiling, shaft ceiling

Building Code Reference(s): D-2.3.12.; 3.1.7.1.; 3.1.7.3.(1)

Question:

1. Is a horizontal floor construction using the membrane that provides the entire fire-resistance rating as per Appendix D-2.3.12. allowed to be a fire separation?
2. Can the membrane that provides the entire fire-resistance rating of the floor construction be supported from the structure that it protects above?

Interpretation:

1. Yes

As per Sentence 3.1.7.3.(1) the horizontal assemblies shall be rated for exposure from fire from the underside. It is commonly understood that the buildup of the structure above will provide the assembly above protected from the rising temperature providing that this assembly is continuous and with no unprotected penetrations. On the same note, the membrane ceiling will protect the structure above for adequate time as a fire-resistance rating and fire separation. Note, that the membrane ceiling is limited to a maximum fire-resistance rating of 60 min. For fire separations that require higher fire-resistance rating the properly tested assembly must be used as entire horizontal assembly or horizontally tested shaft ceiling.

2. Yes

The membrane ceiling may be installed directly suspended from the structure above with membrane fasteners per D-2.3.9.



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

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