

**BC BUILDING CODE INTERPRETATION COMMITTEE
AIBC, APEGBC, BOABC, POABC**

INTERPRETATION		
Interpretation Date:	December 20, 2000	File No.:
Building Code Edition:	B.C. Building Code 1998	98 - 0009
Subject:	Continuity of fire separations in pre-engineered steel buildings	
Keywords:	Fire separations, continuity, pre-engineered buildings	
Building Code Reference(s):	3.1.8.1.(1)(a), 3.1.8.3.(2), 5.3.1.3.(1), 5.4.1.2.(7)	Page 1 of 2

Question:

In a pre-engineered steel building, what is an acceptable method for maintaining the continuity of a steel stud & drywall vertical *fire separation* where the wall intersects the underside of a metal cladding roof assembly c/w vinyl backed fibreglass batt insulation?

Interpretation:

Clause 3.1.8.1.(1)(a) requires that a vertical *fire separation* be constructed as a continuous element.

Sentence 3.1.8.3.(2) requires that the *fire separation* be continuous and terminate at a smoke tight-joint where it abuts a roof deck.

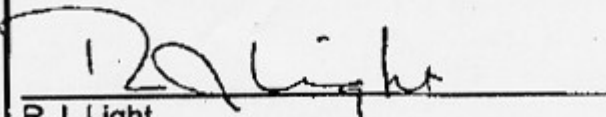
Sentence 5.3.1.3.(1) requires continuity of thermal insulation to minimize condensation.

Sentence 5.4.1.2.(7) requires that the air barrier be continuous.

Roof structures for long span pre-engineered buildings are subject to significant vertical deflections. Detailing at roof interfaces must take this into consideration.

The interface between various building elements can be extremely complex when attempting to maintain all of the above continuities while also allowing for vertical deflections. In practical terms, it is extremely challenging to comply with all of the above referenced requirements while maintaining an allowance for vertical deflection.

With respect to the continuity of the vertical fire separation, in order to comply with Sentence 3.1.8.3.(2), the drywall must extend up to the underside of the metal roof cladding. One possible method is to provide a deflection channel and an overlapping drywall slip joint at the top of the stud wall that will maintain the smoke tight joint while accommodating the vertical deflection. Careful detailing of this joint is required to maintain compliance with Part 5 for continuity of thermal insulation and air barrier [refer to figure on page 2].

 R.J. Light Committee Chair	December 20, 2000 Date
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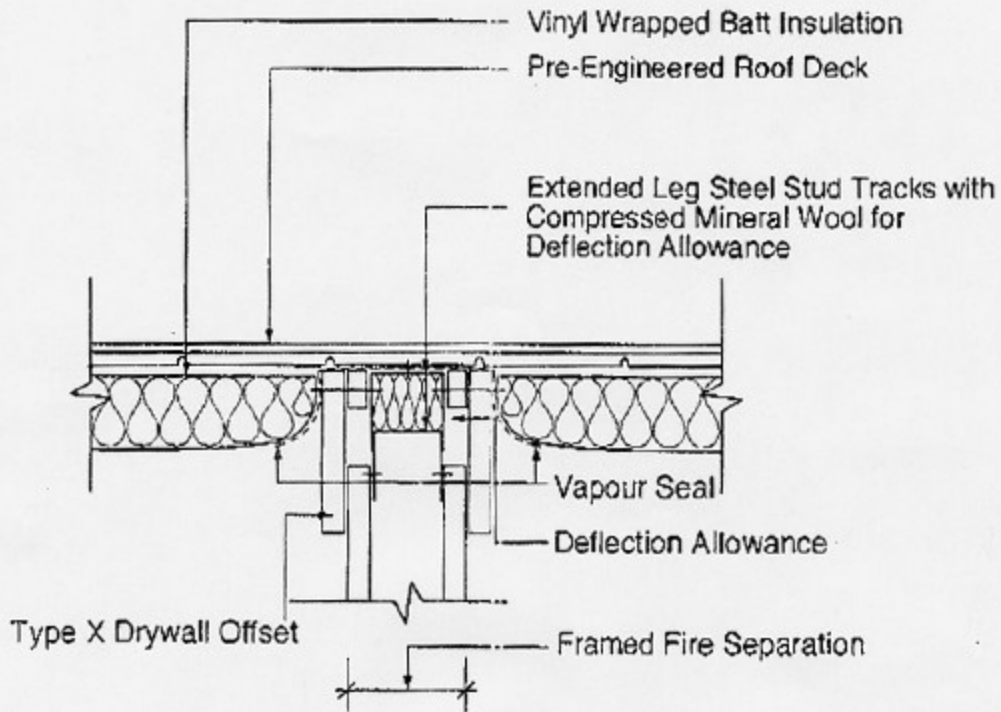


Figure 98-0009

Generic Illustration of Wall/Roof Intersection.
Deflection allowances to be co-ordinated with structural design.