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June 22, 2018

Mr. Edward Goldhammer
Director Codes and Standards
Hilti

RE: Table 601 of the 2018 International Building Code

Dear Mr. Goldhammer:

This letter is in response to your e-mail, dated May 30, 2018, regarding the above referenced table of the 2018 International Building Code.

The issue in question involves Footnote 'b' to Table 601. You wish to know if the language in the footnote permits the omission of fire protection for columns supporting the roof construction if every part of the roof construction is greater than 20 feet above the floor below.

Due to various interpretations of previous editions of the International Building Code in regards to this issue, Footnote 'b' to Table 601 was modified in the 2018 International Building Code (a copy of the code change is included) to state that fire protection of structural members in roof construction shall not be required including protection of primary structural frame members, roof framing and decking where every part of the roof construction is 20 feet or more above the floor immediately below. The footnote is applicable to all occupancies except Group F-1, H, M and S-1. By expanding the scope of the footnote to primary structural frame elements, as well as specifically mentioning in the footnote its application to primary structural frame members, it is now clear that all portions of the roof construction are exempt from fire-resistance requirements based on Table 601. Therefore, if a primary structural frame member (e.g., beam, girder) was part of the roof construction, the rating could be exempt; however, a rating would still be required for any columns.

Code opinions issued by ICC staff are based on ICC published codes and do not include local, state or federal codes, policies or amendments. This opinion is based on the information which you have provided. We have made no independent effort to verify the accuracy of this information nor have we conducted a review beyond the scope of your question. This opinion does not imply approval of an equivalency, specific product, specific design or specific installation and cannot be published in any form implying such approval by the International Code Council. As this opinion is only advisory, the final decision is the responsibility of the designated authority charged with the administration and enforcement of this code.

Sincerely,

Michael W. Giachetti, P.E.
Senior Staff Engineer

MWG/rt

cc: Chris Reeves, ICC

Code Change No: G167-15

Original Proposal

Section: Table 601

Proponent: Jonathan Humble, American Iron and Steel Institute, representing American Iron and Steel Institute (jhumble@steel.org)

Revise as follows:

TABLE 601 (601)
FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (HOURS)

BUILDING ELEMENT	TYPE I		TYPE II		TYPE III		TYPE IV	TYPE V	
	A	B	A	B	A	B		A	B
Primary structural frame ^f (see Section 202)	3 ^{a, b}	2 ^{a, b}	1 ^b	0	1 ^b	0	HT	1 ^b	0
Bearing walls							HT		
Exterior ^{a, f}	3	2	1	0	2	2	2	1	0
Interior	3 ^a	2 ^a	1	0	1	0	1/HT	1	0
Nonbearing walls and partitions Exterior	See Table 602								
Nonbearing walls and partitions Interior ^d	0	0	0	0	0	0	See Section 602.4.6	0	0
Floor construction and associated secondary members (see Section 202)	2	2	1	0	1	0	HT	1	0

For SI: 1 foot = 304.8 mm.

- Roof supports: Fire-resistance ratings of primary structural frame and bearing walls are permitted to be reduced by 1 hour where supporting a roof only.
- Except in Group F-1, H, M and S-1 occupancies, fire protection of structural members in roof construction shall not be required, including protection of primary structural frame members, roof framing and decking where every part of the roof construction is 20 feet or more above any floor immediately below. Fire-retardant-treated wood members shall be allowed to be used for such unprotected members.
- In all occupancies, heavy timber shall be allowed where a 1-hour or less fire-resistance rating is required.
- Not less than the fire-resistance rating required by other sections of this code.
- Not less than the fire-resistance rating based on fire separation distance (see Table 602).
- Not less than the fire-resistance rating as referenced in Section 704.10.

Reason: This proposal has been submitted to address multiple interpretations of Table 601 Footnote "b." We have found that although the code membership has supported the exemption for fire protection of structural members 20 feet or more above any floor immediately below that framing, we have found that other entities are interpreting that the primary structural frame is not included in this exemption.

This proposal is designed to address that impact by modifying two aspects of Table 601. The first; to add the reference to footnote "b" to the primary structural frame row of fire resistance requirements, and two; to modify Footnote "b" by adding the phases "in roof construction" and "primary structural frame members" to the current list of items now shown.

Multiple attempts have been made in the past to restrict the original intent, however they have all been disapproved. The most recent was code change G139-12. The code development committee's response stated: "The proposal was disapproved as it is the intent of the footnote to allow all structural members to be unprotected. This proposal would only exempt the secondary members." The committee's disapproval of G139-12 was further upheld by the ICC membership during the Final Action Hearings in Portland, OR, October 2012. The public comment to G139-12 challenging the committee's decision was also disapproved by ICC membership.

Further, the reference of structural members applying to all structural members is further reinforced by the definition of "Primary Structural Frame" in Section 202, where it states in the charging sentence the following: "Primary structural frame. The primary structural frame shall include all of the following structural members...."

These responses to the proposals, along with reasons by the code development committees, and upheld by the ICC membership, are part of the ICC formal public record and constitute the formal position of the ICC on the issue.

Cost Impact: Will not increase the cost of construction
This proposal clarifies the intent of footnote "b" of the Table.

Report of Committee Action

Hearings

Committee Action:

Approved as Submitted

Committee Reason: There has been confusion and controversy through the years whether the primary frame was included in the exemption from fire protection as specified in footnote b to Table 601. Interpretations have varied. the committee approved this change because they concluded that it reflects the very original intent of the table and this footnote.

Assembly Action

None

Final Hearing Results

G167-15

AS
