Technical Tip

Fire Walls Terminating at the Underside of ZIP System® Roof (Exposed to Fire on Interior Face Only)

DISCLAIMER: The following fire-protection options are provided to assist in the installation of ZIP System® product(s) and may not apply to every situation. As with all fire-rated assemblies, the Designer-of-Record must provide written approval for the specification and use of fire-protected assemblies or elements. Consult your local building authority for fire-rated construction deemed as acceptable in the jurisdiction having authority. Huber Engineered Woods LLC accepts no responsibility or liability for fire-rated assemblies.

OPTION 1: Fire-Resistant rated walls are permitted to terminate at the underside of ZIP System Roof if all of the following conditions are satisfied:

1. The roof-ceiling assembly within 4-feet of each side of the fire wall, including the entire length and span of supporting members including rafters, ceiling joists and trusses, has a fire-resistance rating of at least 1-hour.
2. There are no openings in the roof within 4-feet of the fire wall.
3. Roof coverings are Class B or better.

Consult UL Fire-Rated Directories for approved 1-hour fire-resistant roof-ceiling assembly construction details and information, www.ul.com.

OPTION 1 satisfies section 705.6 (2006 IBC) and 706.6 (2009 IBC) *Vertical Continuity*, Exception 2.

OPTION 2: Fire-Resistant rated walls are permitted to terminate at the underside of ZIP System Roof if all of the following conditions are satisfied:

1. There are no openings in the roof within 4-feet of the fire wall.
2. Roof coverings are Class B or better.
3. The ZIP System Roof is protected with 5/8 inch Type X gypsum board directly beneath the underside of the ZIP System sheathing, supported by a minimum of 2-inch nominal ledgers attached to the sides of the roof framing members for minimum distance of 4-feet on both sides of the fire wall.

OPTION 2 satisfies section 705.6 (2006 IBC) and 706.6 (2009 IBC) *Vertical Continuity*, Exception 4.

OPTION 3: Fire-Resistant rated walls are permitted to terminate at the underside of ZIP System Roof if all of the following conditions are satisfied:

1. There are no openings in the roof within 4-feet of the fire wall.
2. Roof coverings are Class B or better.
3. The ZIP System roof is protected with No Burn® Plus directly beneath the underside of ZIP System sheathing in accordance with ESR-1838 and the attached Memo from No-Burn Inc. dated March 15, 2012. No Burn® Plus is a field applied intumescent latex-based fire-retardant coating manufactured by No Burn® Inc that is intended to be an alternative to typical manufactured fire-retardant-treated wood panels (see 2006 and 2009 IBC sections 705.6 and

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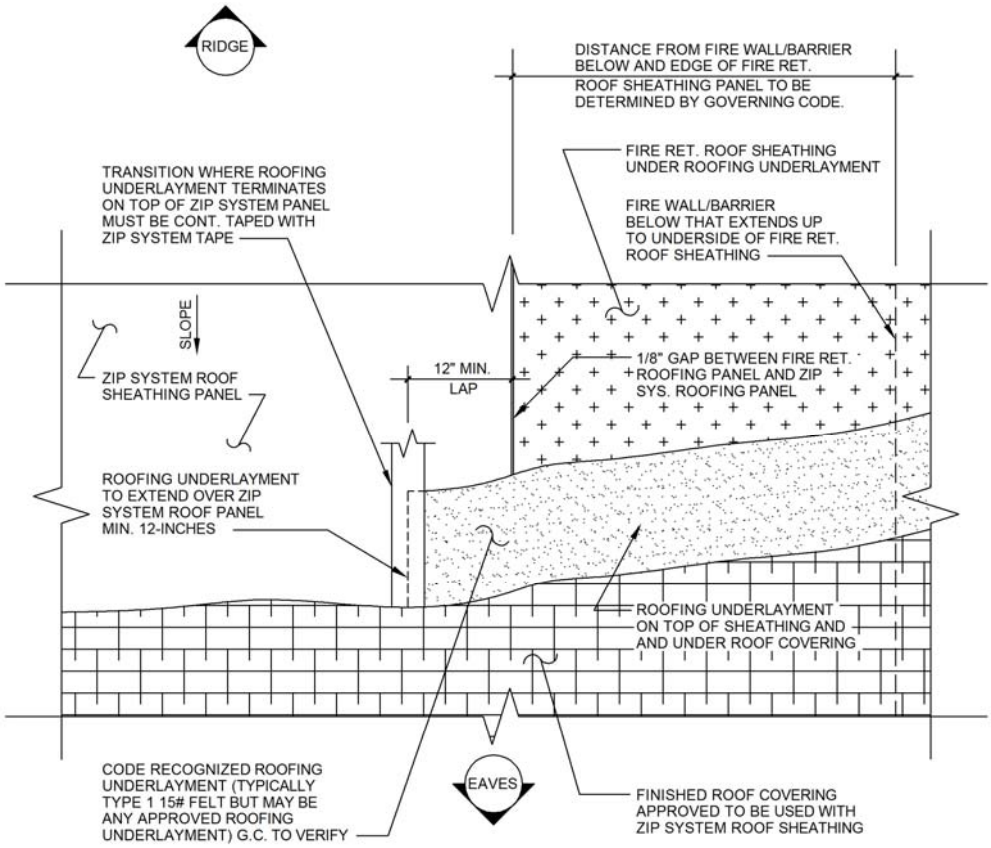
706.6, Exception 4.3) as allowed by IBC Section 104.11, *Alternative Materials, Design and Methods of Construction and Equipment.*

Based on the attached memo from No-Burn Inc. dated March 15, 2012, ICC-ES ESR-1838 and the approval of the Authority Having Jurisdiction, OPTION 3 satisfies section 705.6 (2006 IBC) and 706.6 (2009 IBC) *Vertical Continuity,* Exception 4.

OPTION 4: Fire-Resistant rated walls are permitted to terminate at the underside of ZIP System Roof if all of the following conditions are satisfied:

1. There are no openings in the roof within 4-feet of the fire wall.
2. Roof coverings are Class B or better.
3. The roof sheathing is constructed of fire-retardant-treated (FRT) plywood 4-feet minimum each side of fire wall. Transition FRT plywood to ZIP System roof sheathing using the following detail.

OPTION 4 satisfies section 705.6 (2006 IBC) and 706.6 (2009 IBC) *Vertical Continuity*, Exception 4.



PLAN VIEW

ZIP SYSTEM® ROOF SHEATHING AND FIRE RETARDANT ROOF SHEATHING JOINT DETAIL

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Memo

To: Certified No-Burn® Applicators and Authorities Having Jurisdiction

CC: Kurt Koch and Mike Pyle- Huber Engineered Woods

From: Lindsay Lenze, Director Project Marketing and Bill Kish, President- No-Burn, Inc.

Date: 3/15/2012

Re: No-Burn® Plus Sell Sheet, Third-Party Testing and ESR-1838

Economical Option for Meeting International Code Requirements

No-Burn® Plus, one of No-Burn®, Inc.'s most versatile coatings, as an intumescent latex based coating that acts as a shield protecting a variety of third-party evaluated material systems, meeting international code requirements as an alternative product[1].

The code references made on the No-Burn® Plus Sell Sheet illustrate prescriptive requirements. Based on the third-party testing and Authority Having Jurisdiction's (AHJ) approval, No-Burn® Plus when applied over oriented strand board (OSB) meets the fire performance[4&5] requirements in 706.6, Exception 4.3 (2009)[2] and 705.6, Exception 4.3 (2006)[3], respectively. Additionally, quality assurance and control are addressed in Evaluation Services Report (ESR) 1838[6]. No-Burn, Incorporated warrants that the No-Burn® formula will be manufactured to the same specifications and quality, and will perform equally to the tests performed by the independent laboratories when properly applied by a certified No-Burn® applicator.

References:

[1] International Code Council Evaluation Services. (2011). *ICC Evaluation Services Memo*. Whittier, CA: Michael O'Reardon

[2] International Code Council (2009). *706.6 Vertical continuity*. 2009 International Codes (Section 706 Fire Walls). Retrieved from http://publicecodes.citation.com/icod/ibc/2009/icod_ibc_2009_7_sec006_par008.htm?bu=IC-P-2009-000001&bu2=IC-P-2009-000019

[3] International Code Council (2006). *705.6 Vertical continuity*. 2006 International Codes (Section 705 Fire Walls). Retrieved from http://publicecodes.citation.com/icod/ibc/2006f2/icod_ibc_2006f2_7_sec005_par008.htm?bu=IC-P-2006-000001&bu2=IC-P-2006-000019

[4] Intertek Testing Services NA, Inc. (2009). *ASTM E84-08 (30 Minutes) Surface Burning Characteristics of Building Materials, No-Burn® Plus 8 mils wet over OSB*

[5] Intertek Testing Services NA, Inc. (2008). *Report of Testing No-Burn® Plus for Compliance with Applicable Requirements of the Following Criteria: NFPA 286*.

[6] International Code Council (2012). ICC-ES Evaluation Report (ESR 1838). Retrieved from http://www.icc-es.org/Evaluation_Reports/index.shtml

Respectfully submitted,

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