

IBC - Fire Safety



2016 GROUP B COMMITTEE ACTION HEARINGS

APRIL 17, 2016 – APRIL 27, 2016
KENTUCKY INTERNATIONAL
CONVENTION CENTER
LOUISVILLE, KY

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By

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TENTATIVE ORDER OF DISCUSSION 2016 PROPOSED CHANGES TO THE INTERNATIONAL BUILDING CODE - STRUCTURAL

The following is the tentative order in which the proposed changes to the code will be discussed at the public hearings. Proposed changes which impact the same subject have been grouped to permit consideration in consecutive changes.

Proposed change numbers that are indented are those which are being heard out of numerical order. Indentation does not necessarily indicate that one change is related to another. Proposed changes may be grouped for purposes of discussion at the hearing at the discretion of the chair. Note that some S code change proposals may not be included on this list, as they are being heard by another committee.

NUMBERS NOT USED

G8-16

S35-16

G3-16	S19-16	S53-16	S82-16
G9-16	S20-16	S54-16	S83-16
G11-16	S21-16	S55-16	S84-16
G12-16	S22-16	S56-16	S85-16
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S13-16	S46-16	S76-16	S107-16
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S15-16	S48-16	S78-16	S109-16
S16-16	S49-16	S79-16	S110-16
S17-16	G17-16 Part I	S80-16	S111-16
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S122-16	S174-16	S230-16	S283-16
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S128-16	S180-16	S236-16	S289-16
S129-16	S181-16	S237-16	S290-16
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S136-16	S189-16	S245-16 Part I	S297-16
S137-16	S190-16	S246-16	S298-16
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TENTATIVE ORDER OF DISCUSSION 2016 PROPOSED CHANGES TO THE INTERNATIONAL FIRE CODE

The following is the tentative order in which the proposed changes to the code will be discussed at the public hearings. Proposed changes which impact the same subject have been grouped to permit consideration in consecutive changes.

Proposed change numbers that are indented are those which are being heard out of numerical order. Indentation does not necessarily indicate that one change is related to another. Proposed changes may be grouped for purposes of discussion at the hearing at the discretion of the chair. Note that some F code change proposals may not be included on this list, as they are being heard by another committee.

NUMBER NOT USED

F129-16

WUIC1-16	F21-16	F51-16	F81-16
WUIC2-16	F23-16	F52-16	F82-16
WUIC3-16	F24-16	F53-16	F83-16
WUIC4-16	F25-16	F54-16	F84-16 Part I
WUIC5-16	F22-16	F55-16	F85-16 Part I
WUIC6-16	F186-16	F56-16	F86-16 Part I
WUIC7-16	S25-16 Part II	F57-16	F87-16 Part I
WUIC8-16	F26-16	F58-16	F88-16 Part I
WUIC9-16	F27-16	F59-16	F89-16 Part I
PM1-16	F28-16	F60-16	F90-16
PM2-16	F29-16	F61-16	F91-16
PM3-16	F30-16	F62-16	F92-16
PM4-16	F31-16	F63-16	F93-16
PM5-16	F32-16	F64-16	F94-16
PM6-16	F33-16	F65-16	G38-16
PM7-16	F4-16	F66-16	F95-16
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F1-16	F35-16	F68-16	F97-16
F12-16	F351-16	F69-16	F98-16
F5-16	F404-16	F70-16	M1-16
F6-16	F36-16	F71-16	F99-16
F7-16	F37-16	F72-16	F100-16
F8-16	F38-16	F73-16	F101-16
F9-16	F39-16	F74-16	F102-16
F10-16	F40-16	G36-16	F103-16
F11-16	F41-16	G37-16	F104-16
F13-16	F42-16	F76-16	F111-16
F14-16	F43-16	F77-16	F112-16
F15-16	F44-16	G35-16	F256-16
F16-16	F45-16	F78-16	F105-16
F17-16	F46-16	F79-16	F106-16
F18-16	F47-16	G27-16	F107-16
F19-16	F49-16	G28-16	F108-16
F20-16	F50-16	F80-16	F109-16

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F114-16	F168-16	F222-16	F276-16
F115-16	F169-16	F223-16	F277-16
F116-16	F170-16	F224-16	F278-16
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F118-16	F172-16	F227-16	F280-16
F119-16	F173-16	F228-16	F281-16
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F128-16	F182-16	F236-16	F290-16
F129-16	F184-16	F237-16	F291-16
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F156-16	F212-16	F264-16	F318-16
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F159-16	F215-16	F267-16	F321-16
F160-16	G16-16	F268-16	F322-16
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F162-16	F217-16 Part I	F270-16	F324-16
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F329-16	F382-16
F330-16	F383-16
F331-16	F384-16
F332-16	F385-16
F333-16	F386-16
F334-16	F412-16
F335-16	F387-16
F336-16	F388-16
F337-16	F389-16
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F339-16	F391-16
F340-16	F392-16
F341-16	F393-16
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F342-16	F396-16
F343-16	F397-16
F344-16	F398-16
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FS1-16

IBC: 806.3 (New), [F] 806.1, [F] 806.2, [F] 806.3, [F] 806.4.

Proponent : Carl Baldassarra, P.E., FSFPE, representing the Code Technology Committee (CTC@iccsafe.org); Michael O'Brian representing the Fire Code Action Committee (FCAC@iccsafe.org)

THIS CODE CHANGE WILL BE HEARD BY THE FIRE CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THAT COMMITTEE.

2015 International Building Code

Revise as follows:

[F] 806.1 General. Combustible decorative materials, other than decorative vegetation, shall comply with Sections 806.2 through 806.8.

[F] ~~806.3~~ 806.2 Combustible decorative materials. In other than Group I-3, curtains, draperies, fabric hangings and similar combustible decorative materials suspended from walls or ceilings shall comply with Section 806.4 and shall not exceed 10 percent of the specific wall or ceiling area to which such materials are attached.

Fixed or movable walls and partitions, paneling, wall pads and crash pads applied structurally or for decoration, acoustical correction, surface insulation or other purposes shall be considered *interior finish* shall comply with Section 803 and shall not be considered *decorative materials* or furnishings.

Exceptions:

1. In auditoriums in Group A, the permissible amount of curtains, draperies, fabric hangings and similar combustible decorative materials suspended from walls or ceilings shall not exceed 75 percent of the aggregate wall area where the building is equipped throughout with an *approved automatic sprinkler system* in accordance with Section 903.3.1.1, and where the material is installed in accordance with Section 803.13 of this code.
2. In Group R-2 dormitories, within sleeping units and dwelling units, the permissible amount of curtains, draperies, fabric hangings and similar decorative materials suspended from walls or ceiling shall not exceed 50 percent of the aggregate wall areas where the building is equipped throughout with an *approved automatic sprinkler system* installed in accordance with Section 903.3.1.
3. In Group B and M occupancies, the amount of combustible fabric partitions suspended from the ceiling and not supported by the floor shall comply with Section 806.4 and shall not be limited.

Delete without substitution:

~~**[F] 806.2 Noncombustible materials.** The permissible amount of noncombustible materials shall not be limited.~~

Add new text as follows:

806.3 Occupancy-based requirements. Occupancy-based requirements for combustible decorative materials not complying with Section 806.4 shall comply with Sections 807.5.1 through 807.5.6 of the *International Fire Code*.

[F] 806.4 Acceptance criteria and reports. Where required to exhibit improved fire performance, curtains, draperies, fabric hangings and similar combustible decorative materials suspended from walls or ceilings shall be tested by an *approved agency* and meet the flame propagation performance criteria of Test 1 or 2, as appropriate, of NFPA 701, or exhibit a maximum heat release rate of 100 kW when tested in accordance with NFPA 289, using the 20 kW ignition source. Reports of test results shall be prepared in accordance with the test method used and furnished to the *building official* upon request.

Reason: F109-13 deleted what is currently shown in IBC 806.2. Basically an exception for noncombustible materials is not needed in a section on combustible materials. The IBC and IFC should be consistent. It is not proposed to copy IFC 807.2 Limitations, because it includes maintenance issues, not construction requirements.

The reference for occupancy specific decorative materials in 806.4 is to make the code official aware of the provisions for Group A, E, I, and R-2 in the IFC. Another alternative would be to repeat the sections here and scope administration to the IFC.

It should be noted that the current text in IBC Section 806.1, 806.3 and 806.4 are copies of the text in IFC 807.1, 807.3 and 807.4. IBC Section 806.5 through 806.8 are also direct copies of sections in the IFC.

IBC section	IFC Section
806.1	807.1
806.2	Text deleted from 2015 IFC by F109-13
806.3	807.3
806.4	807.4
806.5	804.2
806.6	807.5.1.4
806.7	804.1.1
806.8	804.4

This proposal is submitted by the ICC Code Technology Committee (CTC) and the ICC Fire Code Action Committee (FCAC). The ICC Board has decided to sunset the CTC. The sunset plan includes re-assigning many of the CTC Areas of Study to the applicable Code Action Committee (CAC). The two remaining CTC Areas of Study are Care Facilities and Elevator Lobbies/WTC Elevator issues. This proposal falls under the Care Facilities Area of Study. In 2014 and 2015 ICC CTC Committee has held 4 open meetings and numerous Work Group meetings and conference calls for the current code development cycle which included members of the committees as well as any interested party to discuss and debate the proposed changes. Information on the CTC, including: the sunset plan; meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the CTC website [CTC](#).

The FCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance assigned International Codes with regard to fire safety and hazardous materials in new and existing buildings and facilities and the protection of life and property in wildland urban interface areas. In 2014 and 2015 the Fire-CAC has held 5 open meetings. In addition, there were numerous conference calls, Regional Work Group and Task Group meetings for the current code development cycle, which included members of the committees as well as any interested parties, to discuss and debate the proposed changes. Related documentation and reports are posted on the FCAC website at: [FCAC](#)

Cost Impact: Will not increase the cost of construction

This is a coordination with the requirement in the IFC. There are not changes to construction requirements

FS1-16 : 806-BALDASSARRA12042

FS2-16

IBC: 901.9 (New).

Proponent : Jeff Hugo, National Fire Sprinkler Association, representing National Fire Sprinkler Association (hugo@nfsa.org)

THIS CODE CHANGE WILL BE HEARD BY THE FIRE CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THAT COMMITTEE.

2015 International Building Code

Add new text as follows:

901.9 Freeze Protection All areas and spaces of the building containing fire protection system piping with water or other agents susceptible to freezing, shall be designed to be maintained at or above 40 degrees Fahrenheit, or protected from freezing by other approved methods in accordance with Section 901.2.

Reason: Several fire protection installation standards, including but not limited to; NFPA 13, NFPA 13R, NFPA 14 require the water filled piping to be at, or above 40 degrees Fahrenheit. The other approved methods can be limited use of frost-proof casings, insulation and listed heat trace tape. A professional engineer is also permitted to prove through heat loss calculations that the piping will not freeze when the area or space is maintained below 40 degrees.

This is not a new technical requirement but it is a good measure to bring this out into the body of the code for users and code officials to be aware of the temperature of the spaces that the fire protection piping is installed.

Cost Impact: Will not increase the cost of construction
Not a new technical requirement.

FS2-16 : 901.9 (NEW)-HUGO4963

FS3-16

IBC: 1405.14.1.1 (New), 1405.14.1.2 (New), 1405.14.2 (New), 202 (New), [BS] 1405.14, [BS] 1405.14.1.

Proponent : Matthew Dobson, representing Vinyl Siding Institute

THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THAT COMMITTEE.

2015 International Building Code

Add new definition as follows:

SECTION 202- DEFINITIONS

~~Nailable Substrate.~~ A product or material such as framing, sheathing or furring, composed of wood or wood-based materials, or other materials and fasteners providing equivalent fastener withdrawal resistance.

Revise as follows:

~~[BS] 1405.14 Vinyl siding.~~ Vinyl siding conforming to the requirements of this section and Insulated Vinyl Siding complying with ASTM D 3679 sections 1404.9 or 1404.13 shall be permitted on exterior walls of buildings located in areas where V_{asd} as the design wind pressure determined in accordance with Section 1609.3.1 ~~1609.6.3~~ does not exceed 100 miles per hour (45 m/s) and the *building height* is less than or equal to 40 feet (12 192 mm) in Exposure C ~~30 psf~~. Where construction is located in areas where V_{asd} as determined in accordance with Section 1609.3.1 the design wind pressure exceeds 100 miles per hour (45 m/s), or building heights are in excess of 40 feet (12 192 mm) ~~30 psf~~, tests or calculations indicating compliance with Chapter 16 shall be submitted. Vinyl siding Siding shall be secured to the building so as to provide weather protection for the exterior walls of the building.

~~[BS] 1405.14.1 Application.~~ The siding shall be applied over sheathing or materials listed in Section 2304.6. Siding shall be applied to conform to the *water-resistive barrier* requirements in Section 1403. ~~Siding and accessories shall be installed in accordance with approved manufacturer's instructions. Unless otherwise specified in the approved manufacturer's instructions, nails used to fasten the siding and accessories shall have a minimum 0.313-inch (7.9 mm) head diameter and $\frac{3}{8}$ -inch (3.18 mm) shank diameter. The nails shall be corrosion resistant and shall be long enough to penetrate the studs or nailing strip at least $\frac{3}{4}$ -inch (19 mm). For cold formed steel light frame construction, corrosion resistant fasteners shall be used. Screw fasteners shall penetrate the cold formed steel framing at least three exposed threads. Other fasteners shall be installed in accordance with the approved construction documents and manufacturer's instructions. Where the siding is installed horizontally, the fastener spacing shall not exceed 16 inches (406 mm) horizontally and 12 inches (305 mm) vertically. Where the siding is installed vertically, the fastener spacing shall not exceed 12 inches (305 mm) horizontally and 12 inches (305 mm) vertically.~~

Add new text as follows:

1405.14.1.1 Fasteners and fastener penetration. Unless otherwise specified in the approved manufacturer's instructions, nails used to fasten the siding and accessories shall be corrosion resistant and have a minimum 0.313-inch (7.9 mm) head diameter and 1/8-inch (3.18 mm) shank diameter. The total penetration into nailable substrate shall be not less than 1 1/4 inches (32 mm).

1405.14.1.2 Fastener spacing. Unless specified otherwise by the manufacturer's instructions, fasteners shall be installed in the center of the slots of the nail hem. The maximum spacing between fasteners shall be 16 inches (406 mm) for horizontal siding and 12 inches (305mm) for vertical siding.

1405.14.2 Application with cold-formed steel. For cold-formed steel light-frame construction, corrosion-resistant fasteners shall be used. Screw fasteners shall penetrate the cold-formed steel framing at least three exposed threads. Other fasteners shall be installed in accordance with the approved construction documents and manufacturer's instructions.

Reason: This change is part editorial and part substantive.

The editorial change breaks apart a large paragraph on installation which is tangled. It breaks down the installation provisions performance minimums, fastener size and penetration, fastener spacing, and places the steel framing application by itself.

It changes how to measure siding wind performance from height and exposure to design wind pressure which is in line with how the products are tested and uses the straight performance measure from section 1609.6.3 of the IBC and the IRC.

Additionally, it brings in the horizontal and vertical fastener spacing provisions which were adopted into the IRC.

In addition Insulated Vinyl Siding is added to this section as its installation and testing is the same as that for vinyl siding.

Finally, the nailable substrate approach for fastener hold is added to this section. Nailable substrate offers a performance method to determine if a material is suitable to hold fasteners with the application of cladding. This approach was accepted as part of the International Residential Code and is an accepted way to determine fastener performance with cladding.

Cost Impact: Will not increase the cost of construction
This change clarifies installation and will not have an impact on cost.

FS3-16 : [BS] 1405.14-DOBSON5351

FS4-16

IBC: [BS] 1405.14.

Proponent : Matthew Dobson, representing Vinyl Siding Institute (mdobson@vinylsiding.org)

THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THAT COMMITTEE.

2015 International Building Code

Revise as follows:

[BS] 1405.14 Vinyl siding. Vinyl siding conforming to the requirements of this section and complying with ASTM D 3679 shall be permitted on exterior walls of Type I, II, III, IV, and V construction buildings located in areas where V_{asd} as determined in accordance with Section 1609.3.1 does not exceed 100 miles per hour (45 m/s) and the *building height* is less than or equal to 40 feet (12 192 mm) in Exposure C. Where construction is located in areas where V_{asd} as determined in accordance with Section 1609.3.1 exceeds 100 miles per hour (45 m/s), or building heights are in excess of 40 feet (12 192 mm), tests or calculations indicating compliance with Chapter 16 shall be submitted. Vinyl siding shall be secured to the building so as to provide weather protection for the exterior walls of the building.

Reason: This change clarifies that vinyl siding can be used in Type I, II, III, and IV as long as it meets the requirements of section 1406 of the International Building Code. During the 2006 revisions to the International Building Code cycle this change was made to remove the Type V limitation. This change will make it more consistent with how the code treats other claddings.

Cost Impact: Will not increase the cost of construction
This is simply a clarification.

FS4-16 : [BS] 1405.14-DOBSON5365

FS5-16

IBC: [BS] 1405.18.

Proponent : Matthew Dobson, representing Vinyl Siding Insitute (mdobson@vinylsiding.org)

THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THAT COMMITTEE.

2015 International Building Code

Revise as follows:

[BS] 1405.18 Polypropylene siding. Polypropylene siding conforming to the requirements of this section and complying with Section 1404.12 shall be limited to exterior walls of Type ~~VB~~ V construction located in areas where the wind speed specified in Chapter 16 does not exceed 100 miles per hour (45 m/s) and the building height is less than or equal to 40 feet (12 192 mm) in Exposure C. Where construction is located in areas where the basic wind speed exceeds 100 miles per hour (45 m/s), or building heights are in excess of 40 feet (12 192 mm), tests or calculations indicating compliance with Chapter 16 shall be submitted. Polypropylene siding shall be installed in accordance with the manufacturer's instructions. Polypropylene siding shall be secured to the building so as to provide weather protection for the exterior walls of the building.

Reason: During the adopting of this provision during the 2009 cycle the provision to allow polypropylene siding on only Type VB construction was made without clear substantiation during the final action hearings. Because there are performance measures in place for the use of claddings with Type V construction, we believe polypropylene siding should be allowed in all types of Type V construction. Polypropylene siding has been tested and passed a number of fire performance measures including the NFPA 268 test that is required for combustible cladding used in non-combustible construction as well as the California Urban Interface test CA SFM 12-7a-1. Sample test results have been included with this change. These test provide evidence that the product and should be allowed with Type VA construction as their presence will have no impact on the fire rating of the assembly.

Cost Impact: Will not increase the cost of construction

This change simply expands where the product category can be used and offers options.

FS5-16 : [BS] 1405.18-DOBSON5338

FS6-16

IBC: [BS] 1405.18.

Proponent : John Kozal, Universal Forest Products, representing Universal Forest Products (jkozal@ufpi.com)

THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THAT COMMITTEE.

2015 International Building Code

Revise as follows:

[BS] 1405.18 Polypropylene siding. Polypropylene siding conforming to the requirements of this section and complying with Section 1404.12 shall be limited to exterior walls ~~of Type VB construction~~ located in areas where the wind speed specified in Chapter 16 does not exceed 100 miles per hour (45 m/s) and the building height is less than or equal to 40 feet (12 192 mm) in Exposure C. Where construction is located in areas where the basic wind speed exceeds 100 miles per hour (45 m/s), or building heights are in excess of 40 feet (12 192 mm), tests or calculations indicating compliance with Chapter 16 shall be submitted. Polypropylene siding shall be installed in accordance with the manufacturer's instructions. Polypropylene siding shall be secured to the building so as to provide weather protection for the exterior walls of the building.

Reason: Restricting Polypropylene Siding to Type VB construction is not appropriate when 2015 IBC Section 1406.2.1 allows combustible materials to be used as wall coverings for any type of construction if they pass NFPA 268 and meet fire separation distances as noted in Table 1406.2.1.1.2.

Bibliography: Our Company hired an independent third party testing firm by the name of SwRI to conduct an NFPA 268 test on our Polypropylene Siding that has a unique proprietary recipe. The siding passed the test requirement of NOT exhibiting any sustained flaming while being subjected to an incident heat energy of 12.5 kW/m². Please note that this test was only 2.75 feet away from the heat source.

Cost Impact: Will not increase the cost of construction
It would allow the building owner to have another exterior wall covering option to choose from that meets existing Code test requirements.

FS6-16 : [BS] 1405.18-KOZAL 12591

FS7-16

IBC: 2603.12, 2603.12.1, 2603.12.2.

Proponent : Bonnie Manley, AISI, representing American Iron and Steel Institute (bmanley@steel.org)

THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THAT COMMITTEE.

2015 International Building Code

Revise as follows:

2603.12 Cladding attachment over foam sheathing to cold-formed steel framing. Cladding shall be specified and installed in accordance with Chapter 14 and the cladding manufacturer's approved installation instructions, including any limitations for use over foam plastic sheathing, or an approved design. Where used, furring and furring attachments shall be designed to resist design loads determined in accordance with Chapter 16. In addition, the cladding or furring attachments through foam sheathing to cold-formed steel framing shall meet or exceed the minimum fastening requirements of Sections 2603.12.1 and 2603.12.2, or an approved design for support of cladding weight.

Exceptions:

1. Where the cladding manufacturer has provided approved installation instructions for application over foam sheathing, those requirements shall apply.
2. For exterior insulation and finish systems, refer to Section 1408.
3. For anchored masonry or stone veneer installed over foam sheathing, refer to Section 1405.

2603.12.1 Direct attachment. Where cladding is installed directly over foam sheathing without the use of furring, cladding minimum fastening requirements to support the cladding weight shall be as specified in Table 2603.12.1.

**TABLE 2603.12.1
CLADDING MINIMUM FASTENING REQUIREMENTS FOR DIRECT ATTACHMENT OVER FOAM PLASTIC SHEATHING TO SUPPORT CLADDING WEIGHT^a**

CLADDING FASTENER THROUGH FOAM SHEATHING INTO:	CLADDING FASTENER TYPE AND MINIMUM SIZE ^b	CLADDING FASTENER VERTICAL SPACING (inches)	MAXIMUM THICKNESS OF FOAM SHEATHING ^c (inches)					
			16"o.c. fastener horizontal spacing			24"o.c. fastener horizontal spacing		
			Cladding weight			Cladding weight		
			3 psf	11 psf	25 psf	3 psf	11 psf	25 psf
Cold-formed s Steel framing (minimum penetration of steel thickness plus 3 threads)	#8 screw into 33 mil steel or thicker	6	3	3	1.5	3	2	DR
		8	3	2	0.5	3	1.5	DR
		12	3	1.5	DR	3	0.75	DR
	#10 screw into 33 mil steel	6	4	3	2	4	3	0.5
		8	4	3	1	4	2	DR
		12	4	2	DR	3	1	DR
	#10 screw into 43 mil steel or thicker	6	4	4	3	4	4	2
		8	4	4	2	4	3	1.5
		12	4	3	1.5	4	3	DR

For SI: 1 inch = 25.4 mm; 1 pound per square foot (psf) = 0.0479 kPa, 1 pound per square inch = 0.00689 MPa.

DR = design required ; o.c. = on center.

a. ~~Steel~~ Cold-formed steel framing shall be minimum 33 ksi steel for 33 mil and 43 mil steel and 50 ksi steel for 54 mil steel or thicker.

- b. Screws shall comply with the requirements of AISI ~~S290~~ S240.
- c. Foam sheathing shall have a minimum compressive strength of 15 pounds per square inch in accordance with ASTM C 578 or ASTM C 1289.

2603.12.2 Furred cladding attachment. Where steel or wood furring is used to attach cladding over foam sheathing, furring minimum fastening requirements to support the cladding weight shall be as specified in Table 2603.12.2. Where placed horizontally, wood furring shall be preservative-treated wood in accordance with Section 2303.1.9 or naturally durable wood and fasteners shall be corrosion resistant in accordance Section 2304.10.5. Steel furring shall have a minimum G60 galvanized coating.

**TABLE 2603.12.2
FURRING MINIMUM FASTENING REQUIREMENTS FOR APPLICATION OVER FOAM PLASTIC SHEATHING TO SUPPORT
CLADDING WEIGHT^a**

FURRING MATERIAL	FRAMING MEMBER	FASTENER TYPE AND MINIMUM SIZE ^b	MINIMUM PENETRATION INTO WALL FRAMING (inches)	FASTENER SPACING IN FURRING (inches)	MAXIMUM THICKNESS OF FOAM SHEATHING ⁴ (inches)					
					16" o.c. furring ^e			24" o.c. furring ^e		
					Cladding weight			Cladding weight		
					3 psf	11 psf	25 psf	3 psf	11 psf	25 psf
Minimum 33 mil steel furring or minimum 1x wood furring ^c	33 mil <u>cold-formed</u> steel stud	#8 screw	Steel thickness plus 3 threads	12	3	1.5	DR	3	0.5	DR
				16	3	1	DR	2	DR	DR
				24	2	DR	DR	2	DR	DR
		#10 screw	Steel thickness plus 3 threads	12	4	2	DR	4	1	DR
				16	4	1.5	DR	3	DR	DR
				24	3	DR	DR	2	DR	DR
	43 mil or thicker <u>cold-formed</u> steel stud	#8 Screw	Steel thickness plus 3 threads	12	3	1.5	DR	3	0.5	DR
				16	3	1	DR	2	DR	DR
				24	2	DR	DR	2	DR	DR
		#10 screw	Steel thickness plus 3 threads	12	4	3	1.5	4	3	DR
				16	4	3	0.5	4	2	DR
				24	4	2	DR	4	0.5	DR

For SI: 1 inch = 25.4 mm; 1 pound per square foot (psf) = 0.0479 kPa, 1 pound per square inch = 0.00689 MPa.

DR = design required ; o.c. = on center.

a. Wood furring shall be Spruce-Pine fir or any softwood species with a specific gravity of 0.42 or greater. Steel furring shall be minimum 33 ksi steel. ~~Steel Cold-formed steel~~ studs shall be minimum 33 ksi steel for 33 mil and 43 mil thickness and 50 ksi steel for 54 mil steel or thicker.

b. Screws shall comply with the requirements of AISI ~~S290~~ S240.

c. Where the required cladding fastener penetration into wood material exceeds $\frac{3}{4}$ inch and is not more than $1\frac{1}{2}$ inches, a minimum 2-inch nominal wood furring shall be used or an approved design.

d. Foam sheathing shall have a minimum compressive strength of 15 pounds per square inch in accordance with ASTM C 578 or ASTM C 1289.

e. Furring shall be spaced not more than 24 inches on center, in a vertical or horizontal orientation. In a vertical orientation, furring shall be located over wall studs and attached with the required fastener spacing. In a horizontal orientation, the indicated 8-inch and 12-inch fastener spacing in furring shall be achieved by use of two fasteners into studs at 16 inches and 24 inches on center, respectively.

Reference standards type: This contains both new and updated standards
Add new standard(s) as follows:

Delete the following existing reference:

~~AISI S200—12, North American Standard for Cold-Formed Steel Framing General Provisions, 2012, 2203.1, 2203.2, 2211.1, Table 2603.12.1, Table 2603.12.2~~

Add the following new reference:

AISI S240, North American Standard for Cold-Formed Steel Structural Framing, 2015

Reason: This proposal is one in a series adopting the latest generation of AISI standards for cold-formed steel. This particular proposal focuses on Chapter 26 by incorporating a reference to the new cold-formed steel structural framing standard – AISI S240. The standard is published and available for a free download at: www.aisistandards.org.

The new standard, **AISI S240**, *North American Standard for Cold-Formed Steel Structural Framing*, addresses requirements for construction with cold-formed steel structural framing that are common to prescriptive and engineered light frame construction. This comprehensive standard was formed by merging the following AISI standards:

- AISI S200, *North American Standard for Cold-Formed Steel Framing-General Provisions*
- AISI S210, *North American Standard for Cold-Formed Steel Framing–Floor and Roof System Design*
- AISI S211, *North American Standard for Cold-Formed Steel Framing–Wall Stud Design*
- AISI S212, *North American Standard for Cold-Formed Steel Framing–Header Design*
- AISI S213, *North American Standard for Cold-Formed Steel Framing– Lateral Design*
- AISI S214, *North American Standard for Cold-Formed Steel Framing–Truss Design*

Consequently, AISI S240 supersedes all previous editions of the above mentioned individual AISI standards.

Both Table 2603.12.1 and Table 2603.12.2 previously referenced AISI S200 for cold-formed steel screw requirements. This reference is updated to AISI S240. Additionally, the term "cold-formed steel" is editorially corrected to reflect industry terminology in several locations.

Cost Impact: Will increase the cost of construction

This code change proposal adopts the latest industry standard for cold-formed steel. At this time, it is difficult to anticipate how cost of construction will be fully impacted, other than to note that some of the additional costs will be offset by new efficiencies in the design and installation of cold-formed steel.

Analysis: A review of the standard(s) proposed for inclusion in the code, ANSI S240-2015, with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 1, 2016.

FS7-16 : 2603.12-MANLEY12125

FS8-16

IBC: 2603.12.1, 2603.12.2.

Proponent : Jay Crandell, P.E., ARES Consulting, representing Foam Sheathing Committee of the American Chemistry Council

THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THAT COMMITTEE.

2015 International Building Code

Revise as follows:

**TABLE 2603.12.1
CLADDING MINIMUM FASTENING REQUIREMENTS FOR DIRECT ATTACHMENT OVER FOAM PLASTIC SHEATHING TO SUPPORT CLADDING WEIGHT^a**

CLADDING FASTENER THROUGH FOAM SHEATHING INTO:	CLADDING FASTENER TYPE AND MINIMUM SIZE ^b	CLADDING FASTENER VERTICAL SPACING (inches)	MAXIMUM THICKNESS OF FOAM SHEATHING ^c (inches)							
			16"o.c. fastener horizontal spacing				24"o.c. fastener horizontal spacing			
			Cladding weight				Cladding weight			
			3 psf	11 psf	<u>18 psf</u>	25 psf	3 psf	11 psf	<u>18 psf</u>	25 psf
Steel framing (minimum penetration of steel thickness plus 3 threads)	#8 screw into 33 mil steel or thicker	6	<u>3.00</u>	<u>2.95</u> 3	<u>2.20</u>	1.45	<u>3.00</u>	<u>2.35</u>	<u>1.25</u>	DR
		8	<u>3.00</u>	<u>2.55</u>	<u>1.60</u>	<u>0.60</u> 5	<u>3.00</u>	<u>1.80</u> 5	<u>DR</u>	DR
		12	<u>3.00</u>	<u>1.80</u> 5	<u>DR</u>	DR	<u>3.00</u>	<u>0.65</u> 75	<u>DR</u>	DR
	#10 screw into 33 mil steel	6	<u>4.00</u>	<u>3.50</u>	<u>2.70</u>	<u>1.95</u> 2	<u>4.00</u>	<u>2.90</u> 3	<u>1.70</u>	<u>0.55</u>
		8	<u>4.00</u>	<u>3.10</u>	<u>2.05</u>	<u>1.00</u>	<u>4.00</u>	<u>2.25</u>	<u>0.70</u>	DR
		12	<u>4.00</u>	<u>2.25</u>	<u>0.70</u>	DR	<u>3.70</u>	<u>1.05</u>	<u>DR</u>	DR
	#10 screw into 43 mil steel or thicker	6	<u>4.00</u>	<u>4.00</u>	<u>4.00</u>	<u>3.60</u>	<u>4.00</u>	<u>4.00</u>	<u>3.45</u>	<u>2.70</u>
		8	<u>4.00</u>	<u>4.00</u>	<u>3.70</u>	<u>3.00</u> 2	<u>4.00</u>	<u>3.85</u>	<u>2.80</u>	<u>1.80</u> 5
		12	<u>4.00</u>	<u>3.85</u>	<u>2.80</u>	<u>1.80</u> 5	<u>4.00</u>	<u>3.05</u>	<u>1.50</u>	DR

For SI: 1 inch = 25.4 mm; 1 pound per square foot (psf) = 0.0479 kPa, 1 pound per square inch = 0.00689 MPa.

DR = design required ; o.c. = on center.

- Steel framing shall be minimum 33 ksi steel for 33 mil and 43 mil steel and 50 ksi steel for 54 mil steel or thicker.
- Screws shall comply with the requirements of AISI S200.
- Foam sheathing shall have a minimum compressive strength of 15 pounds per square inch in accordance with ASTM C 578 or ASTM C 1289.

**TABLE 2603.12.2
FURRING MINIMUM FASTENING REQUIREMENTS FOR APPLICATION OVER FOAM PLASTIC SHEATHING TO SUPPORT CLADDING WEIGHT^a**

FURRING MATERIAL	FRAMING MEMBER	FASTENER TYPE AND MINIMUM SIZE ^b	MINIMUM PENETRATION INTO WALL FRAMING (inches)	FASTENER SPACING IN FURRING (inches)	MAXIMUM THICKNESS OF FOAM SHEATHING ^d (inches)							
					16" o.c. furring ^e				24" o.c. furring ^e			
					Cladding weight				Cladding weight			
					3 psf	11 psf	<u>18 psf</u>	25 psf	3 psf	11 psf	<u>18 psf</u>	25 psf
				12	<u>3.00</u>	<u>1.80</u> 5	<u>DR</u>	DR	<u>3.00</u>	<u>0.65</u>	<u>DR</u>	DR

Minimum 33 mil steel furring or minimum 1x wood furring ^C	33 mil steel stud	#8 screw	Steel thickness plus 3 threads	16	<u>3.00</u>	<u>1.00</u>	<u>DR</u>	DR	<u>2.85</u>	DR	<u>DR</u>	DR
				24	<u>2.85</u>	DR	<u>DR</u>	DR	<u>2.20</u>	DR	<u>DR</u>	DR
		#10 screw	Steel thickness plus 3 threads	12	<u>4.00</u>	<u>2.25</u>	<u>0.70</u>	DR	<u>3.704</u>	<u>1.05</u>	<u>DR</u>	DR
				16	<u>3.854</u>	<u>1.45</u>	<u>DR</u>	DR	<u>3.40</u>	DR	<u>DR</u>	DR
	43 mil or thicker steel stud	#8 Screw	Steel thickness plus 3 threads	24	<u>3.40</u>	DR	<u>DR</u>	DR	<u>2.70</u>	DR	<u>DR</u>	DR
				12	<u>3.00</u>	<u>1.805</u>	<u>DR</u>	DR	<u>3.00</u>	<u>0.65</u>	<u>DR</u>	DR
				16	<u>3.00</u>	<u>1.00</u>	<u>DR</u>	DR	<u>2.85</u>	DR	<u>DR</u>	DR
				24	<u>2.85</u>	DR	<u>DR</u>	DR	<u>2.20</u>	DR	<u>DR</u>	DR
		#10 screw	Steel thickness plus 3 threads	12	<u>4.00</u>	<u>3.85</u>	<u>2.80</u>	<u>1.805</u>	<u>4.00</u>	<u>3.05</u>	<u>1.50</u>	DR
				16	<u>4.00</u>	<u>3.30</u>	<u>1.95</u>	<u>0.605</u>	<u>4.00</u>	<u>2.25</u>	<u>DR</u>	DR
				24	<u>4.00</u>	<u>2.25</u>	<u>DR</u>	DR	<u>4.00</u>	<u>0.65</u>	<u>DR</u>	DR
				16	<u>4.00</u>	<u>2.25</u>	<u>DR</u>	DR	<u>4.00</u>	<u>0.65</u>	<u>DR</u>	DR

For SI: 1 inch = 25.4 mm; 1 pound per square foot (psf) = 0.0479 kPa, 1 pound per square inch = 0.00689 MPa.

DR = design required : o.c. = on center.

- Wood furring shall be Spruce-Pine fir or any softwood species with a specific gravity of 0.42 or greater. Steel furring shall be minimum 33 ksi steel. Steel studs shall be minimum 33 ksi steel for 33 mil and 43 mil thickness and 50 ksi steel for 54 mil steel or thicker.
- Screws shall comply with the requirements of AISI S200.
- Where the required cladding fastener penetration into wood material exceeds $\frac{3}{4}$ inch and is not more than $1\frac{1}{2}$ inches, a minimum 2-inch nominal wood furring shall be used or an approved design.
- Foam sheathing shall have a minimum compressive strength of 15 pounds per square inch in accordance with ASTM C 578 or ASTM C 1289.
- Furring shall be spaced not more than 24 inches on center, in a vertical or horizontal orientation. In a vertical orientation, furring shall be located over wall studs and attached with the required fastener spacing. In a horizontal orientation, the indicated 8-inch and 12-inch fastener spacing in furring shall be achieved by use of two fasteners into studs at 16 inches and 24 inches on center, respectively.

Reason: This proposal updates the table values to a consistent rounding approach by rounding the values down to the nearest 0.05" to address thicknesses of foam sheathing materials that often vary from nominal dimensions such as 0.5", 1", 1.5", 2", 3", and 4" as used in the existing table. In addition, an 18 psf cladding weight category was added to accommodate common application of adhered veneers as requested by the brick industry. All of the values were evaluated using the same analysis approach used to derive the existing table values. In addition, the foam sheathing thicknesses remained capped at 4 inches in all cases and at 3 inches for #8 screws as was done in the existing table for practical reasons.

Cost Impact: Will not increase the cost of construction
This proposal adds an additional option (18 psf cladding weight) and does not increase cost.

FS8-16 : TABLE 2603.12.1-
CRANDELL12827

FS9-16

IBC: , 2603.13 (New), 2603.13.1 (New), 2603.13.2 (New).

Proponent : Jay Crandell, ARES Consulting, representing Foam Sheathing Committee of the American Chemistry Council

THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THAT COMMITTEE.

2015 International Building Code

Add new text as follows:

2603.13 Cladding attachment over foam sheathing to wood framing. Cladding shall be specified and installed in accordance with Chapter 14 and the cladding manufacturer's installation instructions. Where used, furring and furring attachments shall be designed to resist design loads determined in accordance with Chapter 16. In addition, the cladding or furring attachments through foam sheathing to framing shall meet or exceed the minimum fastening requirements of Section 2603.13.1, Section 2603.13.2, or an approved design for support of cladding weight.

Exceptions:

1. Where the cladding manufacturer has provided approved installation instructions for application over foam sheathing, those requirements shall apply.
2. For exterior insulation and finish systems, refer to Section 1408.
3. For anchored masonry or stone veneer installed over foam sheathing, refer to Section 1405.

2603.13.1 Direct attachment. Where cladding is installed directly over foam sheathing without the use of furring, cladding minimum fastening requirements to support the cladding weight shall be as specified in Table 2603.13.1.

2603.13.2 Furred cladding attachment. Where wood furring is used to attach cladding over foam sheathing, furring minimum fastening requirements to support the cladding weight shall be as specified in Table 2603.13.2. Where placed horizontally, wood furring shall be preservative treated wood in accordance with Section 2303.1.9 or naturally durable wood and fasteners shall be corrosion resistant in accordance with Section 2304.10.5.

**TABLE 2603.13.1 (2603.13.1)
CLADDING MINIMUM FASTENING REQUIREMENTS FOR DIRECT ATTACHMENT OVER FOAM PLASTIC SHEATHING TO SUPPORT CLADDING WEIGHT^a**

Cladding Fastener Through Foam Sheathing into: _____	Cladding Fastener - Type and Minimum Size ^b _____	Cladding Fastener Vertical Spacing (inches) _____	Maximum Thickness of Foam Sheathing ^c (inches)							
			16" o.c. Fastener Horizontal Spacing				24" o.c. Fastener Horizontal Spacing			
			Cladding Weight:				Cladding Weight:			
			<u>3</u> <u>psf</u>	<u>11</u> <u>psf</u>	<u>18</u> <u>psf</u>	<u>25</u> <u>psf</u>	<u>3</u> <u>psf</u>	<u>11</u> <u>psf</u>	<u>18</u> <u>psf</u>	<u>25</u> <u>psf</u>
Wood Framing (minimum 1- ¹ / ₄ inch penetration)	0.113" diameter nail	<u>6</u>	<u>2.00</u>	<u>1.45</u>	<u>0.75</u>	<u>DR</u>	<u>2.00</u>	<u>0.85</u>	<u>DR</u>	<u>DR</u>
		<u>8</u>	<u>2.00</u>	<u>1.00</u>	<u>DR</u>	<u>DR</u>	<u>2.00</u>	<u>0.55</u>	<u>DR</u>	<u>DR</u>
		<u>12</u>	<u>2.00</u>	<u>0.55</u>	<u>DR</u>	<u>DR</u>	<u>1.85</u>	<u>DR</u>	<u>DR</u>	<u>DR</u>
	0.120" diameter nail	<u>6</u>	<u>3.00</u>	<u>1.70</u>	<u>0.90</u>	<u>0.55</u>	<u>3.00</u>	<u>1.05</u>	<u>0.50</u>	<u>DR</u>
		<u>8</u>	<u>3.00</u>	<u>1.20</u>	<u>0.60</u>	<u>DR</u>	<u>3.00</u>	<u>0.70</u>	<u>DR</u>	<u>DR</u>
		<u>12</u>	<u>3.00</u>	<u>0.70</u>	<u>DR</u>	<u>DR</u>	<u>2.15</u>	<u>DR</u>	<u>DR</u>	<u>DR</u>
	0.131" diameter nail	<u>6</u>	<u>4.00</u>	<u>2.15</u>	<u>1.20</u>	<u>0.75</u>	<u>4.00</u>	<u>1.35</u>	<u>0.70</u>	<u>DR</u>
		<u>8</u>	<u>4.00</u>	<u>1.55</u>	<u>0.80</u>	<u>DR</u>	<u>4.00</u>	<u>0.90</u>	<u>DR</u>	<u>DR</u>

		<u>12</u>	<u>4.00</u>	<u>0.90</u>	<u>DR</u>	<u>DR</u>	<u>2.70</u>	<u>0.50</u>	<u>DR</u>	<u>DR</u>
	0.162" diameter nail	<u>6</u>	<u>4.00</u>	<u>3.55</u>	<u>2.05</u>	<u>1.40</u>	<u>4.00</u>	<u>2.25</u>	<u>1.25</u>	<u>0.80</u>
		<u>8</u>	<u>4.00</u>	<u>2.55</u>	<u>1.45</u>	<u>0.95</u>	<u>4.00</u>	<u>1.60</u>	<u>0.85</u>	<u>0.50</u>
		<u>12</u>	<u>4.00</u>	<u>1.60</u>	<u>0.85</u>	<u>0.50</u>	<u>4.00</u>	<u>0.95</u>	<u>DR</u>	<u>DR</u>

For SI: 1 inch = 25.4 mm; 1 pound per square foot (psf) = 0.0479 kPa

DR = design required

o.c. = on center

a. Wood framing shall be Spruce-Pine-Fir or any wood species with a specific gravity of 0.42 or greater in accordance with AFPANDS.

b. Nail fasteners shall comply with ASTM F 1667, except nail length shall be permitted to exceed ASTM F 1667 standard lengths.

c. Foam sheathing shall have a minimum compressive strength of 15 psi in accordance with ASTM C 578 or ASTM C 1289.

**TABLE 2603.13.2 (2603.13.2)
FURRING MINIMUM FASTENING REQUIREMENTS FOR APPLICATION OVER FOAM PLASTIC SHEATHING TO SUPPORT
CLADDING WEIGHT^{a,b}**

Furring Material	Framing Member	Fastener Type and Minimum Size	Minimum Penetration into Wall Framing (inches)	Fastener Spacing in Furring (inches)	Maximum Thickness of Foam Sheathing ^d (inches)							
					16"oc Furring ^e				24"oc Furring ^e			
					Siding Weight:				Siding Weight:			
					3 psf	11 psf	18 psf	25 psf	3 psf	11 psf	18 psf	25 psf
Minimum 1x Wood Furring ^c	Minimum 2x Wood Stud	0.131" diameter nail	1-1/4	8	4.00	2.45	1.45	0.95	4.00	1.60	0.85	DR
				12	4.00	1.60	0.85	DR	4.00	0.95	DR	DR
				16	4.00	1.10	DR	DR	3.05	0.60	DR	DR
		0.162" diameter nail	1-1/4	8	4.00	4.00	2.45	1.60	4.00	2.75	1.45	0.85
				12	4.00	2.75	1.45	0.85	4.00	1.65	0.75	DR
				16	4.00	1.90	0.95	DR	4.00	1.05	DR	DR
	No. 10 wood screw	1	12	4.00	2.30	1.20	0.70	4.00	1.40	0.60	DR	
			16	4.00	1.65	0.75	DR	4.00	0.90	DR	DR	
			24	4.00	0.90	DR	DR	2.85	DR	DR	DR	
	1/4" lag screw	1-1/2	12	4.00	2.65	1.50	0.90	4.00	1.65	0.80	DR	
			16	4.00	1.95	0.95	0.50	4.00	1.10	DR	DR	
			24	4.00	1.10	DR	DR	3.25	0.50	DR	DR	

For SI: 1 inch = 25.4 mm; 1 pound per square foot (psf) = 0.0479 kPa

DR = design required

o.c. = on center

a. Wood framing and furring shall be Spruce-Pine-Fir or any wood species with a specific gravity of 0.42 or greater in accordance with AFPANDS.

b. Nail fasteners shall comply with ASTM F 1667, except nail length shall be permitted to exceed ASTM F 1667 standard lengths.

c. Where the required cladding fastener penetration into wood material exceeds 3/4 inch (19 mm) and is not more than 1-1/2 inches (38 mm), a minimum 2x wood furring shall be used or an approved design.

d. Foam sheathing shall have a minimum compressive strength of 15 psi in accordance with ASTM C 578 or ASTM C 1289.

e. Furring shall be spaced a maximum of 24 inches (610 mm) on center in a vertical or horizontal orientation. In a vertical

orientation, furring shall be located over wall studs and attached with the required fastener spacing. In a horizontal orientation, the indicated 8 inch (203 mm) and 12 inch (305 mm) fastener spacing in furring shall be achieved by use of two fasteners into studs at 16 inches (406 mm) and 24 inches (610 mm) on center, respectively.

Reason: These same requirements for cladding attachment over foam sheathing to wood framing were approved in the 2015 IRC and similar requirements for steel framing were approved in the 2015 IBC and IRC. Similar requirements have also existed in the New York State Energy Code for several years. These requirements fill the only remaining information gap in the IBC provisions for exterior wall covering assemblies on wood frame walls that include foam plastic sheathing. This proposal includes the addition of an 18 psf cladding weight category at the request of the brick industry. In addition, the foam thickness values have been made more precise and rounded down to the nearest 0.05" thickness to more efficiently align with actual thicknesses of foam sheathing products which vary from nominal thicknesses. A similar coordinating proposal is provided for the IRC and also the connection table for steel framing in the IBC. The proposed requirements are based on a project sponsored by the New York State Energy Research and Development Agency (NYSERDA) (Bowles, 2010). The project report explains the technical basis for the proposed requirements. The purpose of the NYSEDA project was to develop prescriptive fastening requirements for cladding materials installed over foam sheathing to ensure adequate performance. The project included testing of cladding attachments through various thicknesses of foam sheathing using various fastener types on steel frame wall assemblies, including supplemental test data to address attachments to wood framing sponsored by the FSC. The proposed cladding attachment requirements and foam sheathing thickness limits are based on rational analysis (based on the NDS yield equations) verified by extensive test data to control cladding connection movement to no more than 0.015" slip under cladding weight or dead load. This deflection controlled approach resulted in safety factors commonly in the range of 5 to 8 relative to the average shear capacity and demonstrates adequate long-term deflection control. Similar tests by other independent parties, such as Wiss, Janey, & Elstner and also Building Science Corporation for DOE's Building America program (Baker, 2014) have provided further confirmation.

Bibliography: Bowles, L. (2010). "Fastening Systems for Continuous Insulation", prepared by Newport Partners, LLC, Davidsonville, MD, prepared for New York State Energy Research and Development Authority, Albany, NY. www.nyseda.ny.gov
Baker, P. (2014). Initial and Long Term Movement of Cladding Installed Over Exterior Rigid Insulation. Building America Report - 1404, prepared for DOE Building America Program by Building Science Corporation, Somerville, MA.
<http://www.buildingscience.com/documents/bareports/ba-1404-initial-long-term-movement-cladding-installed-over-exterior-rigid-insulation>

Cost Impact: Will not increase the cost of construction

This proposal simply provides additional code-compliant options for attachment of cladding over foam sheathing and thus creates no cost impact.

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