

# IBC - General



## **2019 GROUP B PROPOSED CHANGES TO THE I-CODES ALBUQUERQUE COMMITTEE ACTION HEARINGS**

April 28 - May 8, 2019  
Albuquerque Convention  
Center, Albuquerque, NM

2018-2019 Code Development Cycle, Group B (2019) Proposed Changes to the 2019 *International Codes*

First Printing

Publication Date: March 2019

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by

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## **IBC General Code Change Proposals**

The following code change proposals are labeled as General code change proposals because they are proposals for changes to sections in chapters of the International Building Code that are designated as the responsibility of the IBC-General Code Development Committee (see page x of the Introductory pages of this monograph). However the changes included in this Group B code development cycle are to sections of the code that have been prefaced with a [S] and [RB], meaning that they are the responsibility of a different IBC Code Development Committee—IBC-Structural Committee [S] and IRC Code Development Committee—IRC-Building.

The committees assigned for each code change proposal is indicated in a banner statement near the beginning of the proposal.

# G1-19

IBC@: [BS] 202

**Proponent:** Oren Guttman, McFarland Johnson, representing self (oguttman@mjinc.com)

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

## 2018 International Building Code

**Revise as follows:**

**[BS] ALLOWABLE STRESS DESIGN.** A method of proportioning structural members, such that elastically computed stresses produced in the members by ~~nominal~~ allowable loads do not exceed specified allowable stresses (also called "working stress design").

**Reason:** In the 2018 IBC the use of the word nominal has been updated throughout section 1609 to indicate that the unfactored  $W$ , which is  $W_{ult}$ , is also  $W_{nominal}$ . Most notably in section 1609.3.1 where the word nominal was removed. In the 2018 IBC section 1609.3.1 reads  $V_{asd} = allowable...$ , whereas in the 2015 IBC section 1609.3.1 read  $V_{asd} = nominal...$

$W_{asd}$  is no longer  $W_{nominal}$ , though it is still being used that way by many engineers. The one last place I have found to update this is in the definition of allowable stress design in chapter 2.

**Cost Impact:** The code change proposal will not increase or decrease the cost of construction  
There are no construction cost impacts to this change.

Proposal # 3725

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G1-19

# G2-19

IBC®: [BS] 202; IEBC®: [BS] 202

**Proponent:** David Bonowitz, representing Self (dbonowitz@att.net)

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

## 2018 International Building Code

**Revise as follows:**

**[BS] DANGEROUS.** Any building, structure or portion thereof that meets any of the conditions described below shall be deemed dangerous:

1. The building or structure has collapsed, has partially collapsed, has moved off its foundation or lacks the necessary support of the ground.
2. There exists a significant risk of collapse, detachment or dislodgment of any portion, member, appurtenance or ornamentation of the building or structure under ~~service loads~~ permanent, routine, or frequent loads; under actual loads already in effect; or under snow, wind, rain, flood, earthquake, or other environmental loads when such loads are imminent.

## 2018 International Existing Building Code

**[BS] DANGEROUS.** Any building, structure or portion thereof that meets any of the conditions described below shall be deemed dangerous:

1. The building or structure has collapsed, has partially collapsed, has moved off its foundation, or lacks the necessary support of the ground.
2. There exists a significant risk of collapse, detachment or dislodgement of any portion, member, appurtenance or ornamentation of the building or structure under ~~service loads~~ permanent, routine, or frequent loads; under actual loads already in effect; or under snow, wind, rain, flood, earthquake, or other environmental loads when such loads are imminent.

**Reason:** This proposal solves a problem with the definition of Dangerous going back to 2010. This proposal presents the consensus of the proponents, the IBC-S committee, and the Public Comment voters regarding proposal G4-16 in the last cycle.

The problem involves the words "service loads" in the current definition. With IBC Interpretation 23-10 (issued 12/8/2010), ICC interpreted "service loads" to be the same as "nominal" or unfactored loads, but this is incorrect and contrary to the intent of the definition when it was written.

In the last cycle, the IBC-S committee deliberated over a number of ways to clarify the intent and settled on the best solution: simply to remove the words "service loads" and replace them with the text shown here. This solution avoids any conflict with definitions or interpretations of "service loads" in other codes or standards. With this consensus, the IBC-S committee Disapproved G4 and asked the proponent to revise the proposal accordingly with a public comment.

At the PCH, G4-16 was easily approved as modified (and as shown here) by a show of hands. 58% of OGV voters supported the modified proposal, but since the PCH hand votes could not be added, the OGV vote fell short of the 2/3 requirement, and the clear consensus from the IBC-S committee, the proponent, and the PCH voters could not be approved.

For those concerned about interpretation of any of the new text, note: 1. This issue was already considered by IBC-S and by the PCH voters, who approved the text as shown. 2. The CURRENT definition already includes wording -- "necessary support," "significant risk" -- that requires some interpretation and judgment. 3. The whole purpose of this definition, as documented clearly in the reason statements when the definition was changed several cycles ago, is to give discretion to the code official and to rely on the code official's judgment, so that a designation of dangerous, and protection of the public, need not wait for the results of a quantitative test or analysis.

**Bibliography:** IBC Interpretation 23-10 is available at [https://www2.iccsafe.org/cs/committeeArea/pdf\\_file/EB\\_09\\_23\\_10.pdf](https://www2.iccsafe.org/cs/committeeArea/pdf_file/EB_09_23_10.pdf).

**Cost Impact:** The code change proposal will not increase or decrease the cost of construction. The proposal merely clarifies the current code intent.

Proposal # 4634

G2-19

## G3-19

BC: [BS] 202

**Proponent:** Jennifer Goupil, American Society of Civil Engineers (ASCE), representing American Society of Civil Engineers (ASCE) (jgoupil@asce.org)

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

### 2018 International Building Code

**Revise as follows:**

**[BS] DEAD LOAD.** The weight of materials of construction incorporated into the building, including but not limited to walls, floors, roofs, ceilings, stairways, built-in partitions, finishes, cladding and other similarly incorporated architectural and structural items, and the weight of fixed service equipment, ~~such as cranes, plumbing stacks and risers, electrical feeders, heating, ventilating and air conditioning systems and automatic sprinkler systems, including cranes and material handling systems.~~

**Reason:** This proposal coordinates the definition of Dead Load in the IBC with the definition contained in the referenced design load standard, *Minimum Design Loads and Associated Criteria for Buildings and Other Structures* (ASCE 7). Note, this change is editorial and does not change which items are considered as dead load.

This change also simplifies the text of the IBC. The detailed list of fixed service equipment items, plumbing stacks and risers, electrical feeders, etc., is removed and the general term material handling systems is added. Both changes coordinate the IBC with ASCE 7. Detailed lists unnecessarily complicate definitions and are better suited for commentary text. In fact, the IBC commentary already lists these items and more, except electrical feeders. To coordinate with this proposal, electrical feeders should be added to the text of IBC commentary by ICC staff.

**Cost Impact:** The code change proposal will not increase or decrease the cost of construction. This proposal contains editorial changes and clarifications.

Proposal # 3792

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G3-19

# G4-19 Part I

PART I — IBC®: 202 (New)

PART II — IRC®: 202 (New)

**Proponent:** Tim Earl, representing The Gypsum Association (tearl@gbhinternational.com)

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

## 2018 International Building Code

Add new definition as follows:

**GLASS MAT GYPSUM PANEL** A gypsum panel consisting of a noncombustible core primarily of gypsum, surfaced with glass mat partially or completely embedded in the core.

**GYPSUM SHEATHING** Gypsum panel products specifically manufactured with enhanced water resistance for use as a substrate for exterior surface materials.

**GYPSUM WALLBOARD** A gypsum board used primarily as an interior surfacing for building structures.

Proposal # 4906

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G4-19 Part I

# G4-19 Part II

IRC®: 202 (New)

**Proponent:** Tim Earl, representing The Gypsum Association (tearl@gbhinternational.com)

## 2018 International Residential Code

**Add new definition as follows:**

**GLASS MAT GYPSUM PANEL** A gypsum panel consisting of a noncombustible core primarily of gypsum, surfaced with glass mat partially or completely embedded in the core.

**GYPSUM SHEATHING** Gypsum panel products specifically manufactured with enhanced water resistance for use as a substrate for exterior surface materials.

**GYPSUM WALLBOARD** A gypsum board used primarily as an interior surfacing for building structures.

**Reason:** This clarifies the terms already used in the code and harmonizes the terms and definitions to what is being used by ASTM and the industry than what currently exists. These same definitions are also being proposed for the IBC.

**Cost Impact:** The code change proposal will not increase or decrease the cost of construction. This simply clarifies the terms and harmonizes to what is being used by ASTM and the industry.

Proposal # 4913

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G4-19 Part II



# G5-19

IBC®: [BS] 202; IFC®: [BS] 202

**Proponent:** Tim Earl, representing The Gypsum Association (tearl@gbhinternational.com)

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

## 2018 International Building Code

Revise as follows:

**[BS] GYPSUM BOARD.** ~~The generic name for a family of sheet products consisting of a noncombustible core primarily of gypsum with paper surfacing. Gypsum wallboard, gypsum sheathing, gypsum base for gypsum veneer plaster, exterior gypsum soffit board, predecorated gypsum board and water-resistant gypsum backing board complying with the standards listed in Tables 2506.2, 2507.2 and Chapter 35 are types of gypsum board.~~

**[BS] GYPSUM PANEL PRODUCT.** ~~The general name for a family of sheet products consisting essentially of gypsum. Gypsum board and glass mat gypsum panels are examples of gypsum panel products.~~

## 2018 International Fire Code

**[BS] GYPSUM BOARD.** ~~Gypsum wallboard, gypsum sheathing, gypsum base for gypsum veneer plaster, exterior gypsum soffit board, predecorated gypsum board or water-resistant gypsum backing board complying with the standards listed in Tables 2506.2 and 2507.2 and Chapter 35 of the International Building Code.~~ The generic name for a family of sheet products consisting of a noncombustible core primarily of gypsum with paper surfacing.

**Reason:** This proposal revises the definitions to match the definitions in industry publications and ASTM standards, making them more technically correct.

**Cost Impact:** The code change proposal will not increase or decrease the cost of construction. This is an administrative change with no impact on cost.

Proposal # 4377

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G5-19

# G6-19

IBC®: 202 (New)

**Proponent:** Gregory Robinson, representing National Council of Structural Engineers Associations (NCSEA) (grobins@lbyd.com)

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

## 2018 International Building Code

**Add new definition as follows:**

**HIGH-LOAD DIAPHRAGM.** A wood structural panel blocked diaphragm utilizing multiple rows of fasteners.

**Reason:** The phrase “high-load diaphragm” is used in Chapter 17 and Chapter 23 without ever receiving a formal definition in Chapter 2. The definition provided here is intended to align with the common usage in Table 2306.2(2). As this phrase has no “ordinarily accepted meaning” it is appropriate to define it explicitly in Chapter 2.

**Cost Impact:** The code change proposal will not increase or decrease the cost of construction  
There will be no increase in construction cost from this proposal, as the goal is purely to improve clarity of the existing code requirements.

Proposal # 4220

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G6-19

# G7-19

IBC®: 202 (New)

**Proponent:** John Woestman, Kellen Company, representing Extruded Polystyrene Foam Association (jwoestman@kellencompany.com)

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

## 2018 International Building Code

**Add new definition as follows:**

**OCCUPIABLE ROOF.** An unenclosed space on a roof designed for human occupancy in which individuals congregate for amusement, educational or similar purposes and which is equipped with means of egress meeting the requirements of this code.

**Reason:** There needs to be a clear definition of “occupiable roof” to help alleviate confusion with the definition of occupiable space. A roof is not an enclosed space, therefore the thermal barrier requirements, smoke development index, etc., used with interior finishes of an enclosed space does not apply. Rather, the occupiable roof should be constructed as a roof meeting the Occupancy Classification and Use in Section 302.1, height and area limitations in Section 503.1, the structural requirements of Chapter 16, and egress requirements as specified by the code. The existing roof fire requirements in IBC Sections 1505.1, 1508.1, 2603.3 Exception 3, 2603.4.1.5 and 2603.6 also apply to occupiable roofs.

The proposed definition was derived from the current definition of occupiable space.

**Cost Impact:** The code change proposal will not increase or decrease the cost of construction  
This proposal should not affect the cost of construction.

Proposal # 5181

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G7-19

# G8-19

IBC®: [BS] 202

**Proponent:** Wanda Edwards, Wanda Edwards Consulting, Inc., representing RCI, Inc. (wedwards@rci-online.org)

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

## 2018 International Building Code

Revise as follows:

**[BS] POSITIVE ROOF DRAINAGE.** The drainage condition in which ~~consideration has been made~~ an evaluation is required for all loading deflections of the roof deck, and additional slope ~~has been~~ shall be provided to ensure drainage of the roof within 48 hours of precipitation.

**Reason:** The first part of the change is to delete the term consideration and replace it with evaluation. The term consideration is vague and unenforceable. The change will clarify that an evaluation is required – not just a consideration. The definition of positive roof drainage refers to the drainage condition where **consideration** has been made for loading deflections. The term consideration is vague and unenforceable. This change clarifies that an evaluation is required – not consideration. The term evaluation is consistent with the provisions in Section 1608 and 1611 on ponding instability. The link between 1608, 1611 and definition of positive drainage will be described below.

The definition does not describe what drainage conditions require consideration. If you go to Section 1511.1, Exception #1 you see that the condition mentioned in the definition of positive roof drainage is where the roof does not provide the code required minimum slope of 1/4" inch per foot. So, the definition allows roofs without the minimum slope if "consideration" has been made for all loading deflections of the roof deck, and additional slope has been provided to ensure drainage of the roof within 48 hours of precipitation.

The route to determine that an evaluation is required is a long and winding road. The code defines susceptible bay as a roof or portion thereof with a slope less than 1/4" inch per foot. If you look at Section 1608 - Snow Loads and 1611 - Rain Loads, you will see that both sections require an evaluation of susceptible bays in accordance with ASCE 7. It is clear that roofs or portions of roofs that do not provide the minimum slope are considered susceptible bays and require an evaluation and must provide positive drainage.

Roofs that do not provide the minimum slope required by the code are more prone to collapse due to the accumulation of water. It should be clear in the definition that an evaluation is required. Also, the definition is in past tense; *consideration has been made, additional slope has been provided*. The language should be changed to say *shall* in lieu of has been. It is mandatory that these two requirements be met, and the definition should state that

**Cost Impact:** The code change proposal will not increase or decrease the cost of construction

This proposal is to clarify the current requirements of the code. The proposal will not change the current code requirements and will not increase or decrease the cost of construction.

Proposal # 5235

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G8-19

# G9-19

IBC®: [BF] 202

**Proponent:** Mike Fischer, Kellen Company, representing The Asphalt Roofing Manufacturers Association (mfischer@kellencompany.com)

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

## 2018 International Building Code

**Revise as follows:**

**[BF] STEEP SLOPE.** A roof slope ~~greater than~~ two units vertical in 12 units horizontal (17-percent slope) or greater.

**Reason:** Steep slope roofing requirements are triggered at a slope of 2:12. Low slope requirements in Sections 1504.6 and 1504.7 are triggered at "less than" 2:12. Asphalt shingles are defined as a steep slope roof covering; Section 1507.2.2 permits installation of asphalt shingles at 2:12 or greater. Underlayment requirements include roof slope of equal to or greater than 2:12 in Table 1507.1.1(2). The proposal corrects the definition to be consistent with the requirements in Chapter 15.

**Cost Impact:** The code change proposal will not increase or decrease the cost of construction  
The proposal is editorial.

Proposal # 5665

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G9-19

# G10-19

IBC: [BS] 202

**Proponent:** Kristen Owen, Consultant, representing Self (kowen4568@gmail.com)

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

## 2018 International Building Code

**Revise as follows:**

**[BS] TREATED WOOD.** Wood products that are ~~conditioned to enhance fire-retardant or preservative properties.~~ modified to reduce deterioration and destruction by wood destroying organisms and fire .

**Reason:** The word "conditioned" in the current definition does not relate to Treated Wood. "Conditioned" references moisture control which is not part of the definition of Treated Wood.

This Code change proposal reflects a clearer definition of Treated Wood and brings the Code up to date by the inclusion of newer standards in the referenced American Wood Protection Association Standards.

**Cost Impact:** The code change proposal will not increase or decrease the cost of construction  
This is a definition change only and therefore no cost change to construction.

Proposal # 2133

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G10-19

# G11-19

IBC®: (New)

**Proponent:** Edwin Huston, representing National Council of Structural Engineers' Associations (NCSEA (huston@smithhustoninc.com))

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

## 2018 International Building Code

**Add new definition as follows:**

**Underpinning** The alteration of an existing foundation to transfer loads to a lower elevation using new piers, piles, or other permanent structural support elements installed below the existing foundation.

**Reason:** Underpinning is referenced multiple times in the code with no clear definition as to what constitutes underpinning and separates it from the temporary bracing used to install it. This definition will bring clarity to the existing use in the code.

**Cost Impact:** The code change proposal will not increase or decrease the cost of construction. This proposal only adds a definition.

Proposal # 5463

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G11-19

# G12-19 Part I

PART I — IBC®: [BS] 202

PART II — IRC: [RB]202

**Proponent:** Don Scott, Representing National Council of Structural Engineers Association, representing Representing National Council of Structural Engineers Association (dscott@pcs-structural.com)

THIS IS A TWO PART PROPOSAL. PART I WILL BE HEARD BY THE IBC-STRUCTURAL COMMITTEE. PART II WILL BE HEARD BY THE IRC-BUILDING COMMITTEE. PLEASE CHECK THE RESPECTIVE HEARING AGENDAS.

## 2018 International Building Code

Revise as follows:

**[BS] WINDBORNE DEBRIS REGION.** Areas within hurricane-prone regions located:

1. Within 1 mile (1.61 km) of the ~~eastal~~ mean high-water line, where an Exposure D condition exists upwind at the waterline and the basic design wind speed,  $V$ , is 130 mph (58 m/s) or greater; or
2. In areas where the basic design wind speed is 140 mph (63.6 m/s) or greater.

For *Risk Category* II buildings and structures and *Risk Category* III buildings and structures, except health care facilities, the windborne debris region shall be based on Figure 1609.3.(1). For *Risk Category* IV buildings and structures and *Risk Category* III health care facilities, the windborne debris region shall be based on Figure 1609.3(2).

Proposal # 5425

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G12-19 Part I



# G12-19 Part II

IRC: [RB]202

**Proponent:** Don Scott, Representing National Council of Structural Engineers Association, representing Representing National Council of Structural Engineers Association (dscott@pcs-structural.com)

## 2018 International Residential Code

**[RB] WINDBORNE DEBRIS REGION.** Areas within *hurricane-prone regions* located in accordance with one of the following:

1. Within 1 mile (1.61 km) of the ~~coastal~~ mean high-water line where an Exposure D condition exists upwind at the waterline and the ultimate design wind speed,  $V_{ult}$  is 130 mph (58 m/s) or greater.

2. In areas where the ultimate design wind speed,  $V_{ult}$  is 140 mph (63.6 m/s) or greater; or Hawaii.

**Reason:** Significant confusion has arisen in hurricane-prone regions in trying to determine windborne debris regions because the term "coastal mean high waterline" is not a mapped or defined term. Due to this lack of definition, some jurisdictions have incorrectly interpreted areas within 1 mile of the mean high waterline along narrow inland tidal waterways to be in windborne debris regions. The primary intent behind paragraph No. 1, is that within one mile of the coast, hurricane wind speeds will be governed by the wind speed over the open water, i.e. an Exposure Category D rather than an inland Exposure Category C situation on which the basic wind speed and paragraph No. 2 are based. This CCP clarifies that the waterline has to be classified as an Exposure D in order for paragraph No. 1 to apply. It also deletes the word "coastal" since wind speed increases could occur at large inland waterways in hurricane-prone regions as well. Also, NOAA maintains a database of the "mean high waterline" values in the US, which can be used in conjunction with this definition.

**Cost Impact:** The code change proposal will not increase or decrease the cost of construction

This code change proposal is location dependent on its impact on construction costs, however by providing a definition of the windborne debris zone, it will eliminate confusion as to where to apply the windborne debris protection requirements.

Proposal # 5747

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G12-19 Part II

# G13-19

IBC: [BS] 403.2.3.1, [BS] 403.2.3.2, [BS] 403.2.3.4

**Proponent:** Michael Schmeida, Gypsum Association, representing Gypsum Association

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

## 2018 International Building Code

**[BS] 403.2.3 Structural integrity of interior exit stairways and elevator hoistway enclosures.** For *high-rise buildings of Risk Category III or IV* in accordance with Section 1604.5, and for all buildings that are more than 420 feet (128 m) in *building height*, enclosures for *interior exit stairways* and elevator hoistway enclosures shall comply with Sections 403.2.3.1 through 403.2.3.4.

**Revise as follows:**

**[BS] 403.2.3.1 Wall assembly materials - Soft Body Impact.** The ~~wall assemblies panels~~ making up the enclosures for *interior exit stairways* and elevator hoistway enclosures shall meet or exceed Soft Body Impact Classification Level 2 as measured by the test method described in ASTM C1629/C1629M.

**[BS] 403.2.3.2 Wall assembly materials - Hard Body Impact.** The ~~face of the wall assemblies panels~~ making up the enclosures for *interior exit stairways* and elevator hoistway enclosures that are not exposed to the interior of the enclosures for *interior exit stairways* or elevator hoistway enclosure shall be ~~constructed~~ in accordance with one of the following ~~methods~~:

1. The wall assembly shall incorporate ~~not no~~ fewer than two layers of impact-resistant ~~construction board panels~~, each of which meets or exceeds Hard Body Impact Classification Level 2 as measured by the test method described in ASTM C1629/C1629M.
2. The wall assembly shall incorporate ~~not no~~ fewer than one layer of impact-resistant ~~construction material panels~~ that meets or exceeds Hard Body Impact Classification Level 3 as measured by the test method described in ASTM C1629/C1629M.
3. The wall assembly incorporates multiple layers of any material, tested in tandem, that meets or exceeds Hard Body Impact Classification Level 3 as measured by the test method described in ASTM C1629/C1629M.

**[BS] 403.2.3.3 Concrete and masonry walls.** Concrete or masonry walls shall be deemed to satisfy the requirements of Sections 403.2.3.1 and 403.2.3.2.

**Revise as follows:**

**[BS] 403.2.3.4 Other wall assemblies materials.** Any other wall ~~assembly materials~~ that ~~provides provide~~ impact resistance equivalent to that required by Sections 403.2.3.1 and 403.2.3.2 for Hard Body Impact Classification Level 3, as measured by the test method described in ASTM C1629/C1629M, shall be permitted.

**Reason:** This clarifies that it is the wall panel/material that is tested per C1629/C1629M and not a full wall assembly. Full wall assembly testing is outside of the scope of C1629/C1629M. Section 1.1.1 of C1629/C1629M states, "panel product performance is not intended to classify the system for abuse resistance."

**Cost Impact:** The code change proposal will not increase or decrease the cost of construction  
This is simply a clarification of the application of C1629/C1629M

Proposal # 4493

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G13-19

# G14-19

IBC@: [BS] 403.2.3.1, [BS] 403.2.3.2, [BS] 403.2.3.4

**Proponent:** Tim Earl, representing The Gypsum Association (tearl@gbhinternational.com)

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

## 2018 International Building Code

Revise as follows:

**[BS] 403.2.3.1 Wall assembly.** The wall assemblies making up the enclosures for *interior exit stairways* and elevator hoistway enclosures shall meet or exceed Soft Body Impact Classification Level 2 as measured by the test method described in ASTM C1629/1629M when tested from the exterior side of the enclosures.

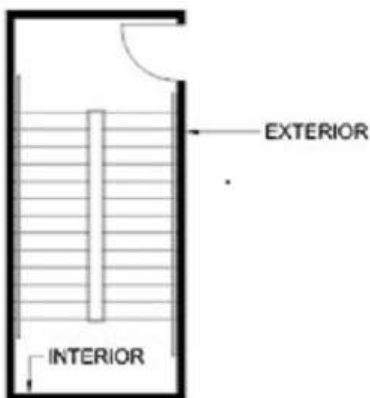
**[BS] 403.2.3.2 Wall assembly materials.** The exterior face of the wall assemblies making up the enclosures for *interior exit stairways* and elevator hoistway enclosures ~~that are not exposed to the interior of the enclosures for interior exit stairways or elevator hoistway enclosure~~ shall be constructed in accordance with one of the following methods:

1. The wall assembly shall incorporate not fewer than two layers of impact-resistant construction board each of which meets or exceeds Hard Body Impact Classification Level 2 as measured by the test method described in ASTM C1629/C1629M.
2. The wall assembly shall incorporate not fewer than one layer of impact-resistant construction material that meets or exceeds Hard Body Impact Classification Level 3 as measured by the test method described in ASTM C1629/C1629M.
3. The wall assembly incorporates multiple layers of any material, tested in tandem, that meets or exceeds Hard Body Impact Classification Level 3 as measured by the test method described in ASTM C1629/C1629M.

**[BS] 403.2.3.4 Other wall assemblies.** Any other wall assembly that provides impact resistance equivalent to that required by Sections 403.2.3.1 for Soft Body Impact Classification Level 3 and 403.2.3.2 for Hard Body Impact Classification Level 3, as measured by the test method described in ASTM C1629/C1629M, shall be permitted.

**Reason:** This proposal clarifies which side of these enclosure wall assemblies must be tested for abuse and impact resistance. 403.2.3.2 currently states that the exterior side is tested, but it does so in very confusing language. This proposal cleans that up and reiterates the point in 403.2.3.1. Also note that, due to the manner of construction of these enclosure wall assemblies, testing from the exterior side represents the worst case. This proposal also cleans up 403.2.3.4, which currently implies that 403.2.3.1 and 403.2.3.2 both apply to hard body impact testing, which is not the case. The first section is for soft body impact testing. This is simply a grammatical revision that clarifies the intent of the section.

For clarification, the exterior side is the side which does not face into the enclosure, as the figure below illustrates.



**Cost Impact:** The code change proposal will not increase or decrease the cost of construction. This proposal simply clarifies the requirements in this section, with no technical changes.

Proposal # 4412

G14-19

# G15-19

IBC: 3307.2(New), 3307.2.1(New), 3307.2.2(New), 3307.2.3(New)

**Proponent:** Dale Biggers, P.E. GeoCoalition, representing GeoCoalition (dbiggers@bohbro.com); Daniel Stevenson, P.E., representing GeoCoalition (dstevenson@berkelapg.com); Lori Simpson, P.E., G.E., representing GeoCoalition (lsimpson@langan.com)

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

## 2018 International Building Code

Add new text as follows:

**3307.2 Excavation retention systems.** Where a retaining system is used to provide support of an excavation for protection of adjacent structures, the system shall conform to the requirements in Section 3307.2.1 through 3307.2.3.

**3307.2.1 Excavation retention system design.** Excavation retention systems shall be designed by a registered design professional to provide vertical and lateral support.

**3307.2.2 Excavation retention system monitoring.** The retention system design shall include requirements for monitoring of the system and adjacent structures for horizontal and vertical movement. The earth retention system design shall be modified as determined by the monitoring.

**3307.2.3 Retention system removal.** Elements of the system shall only be removed when adequate replacement support is provided by backfill or by the new structure. Removal shall be performed in such a manner that protects the adjacent property.

**Reason:** The Code presently refers to underpinning as the major means of protecting adjacent foundations. Excavation retaining systems are more common with underpinning considered a last resort.

A properly performing excavation retention system is necessary for some new buildings with basements and even in relatively shallow excavations where adjacent structures are in close proximity.

Movements of adjacent structures are typically largest during installation, excavation, and removal of the retention system. Monitoring of the system and adjacent structure needs to be performed for the entire duration.

Monitoring may include surveying or inclinometers and are standard procedures in current construction.

We also propose minor changes (which refer to this proposal) in 1803.5.7 and 1804.1, both titled "**Excavation near foundations**".

This proposal is presented for your consideration by the GeoCoalition .

The GeoCoalition is a consortium of eight trade and professional associations and our active group includes 37 geotechnical engineers, structural engineers, and specialty contractors from across the country.

To access the GeoCoalition roster,

please see : <http://piledrivers.org/geocoalition-members/>

**Cost Impact:** The code change proposal will not increase or decrease the cost of construction

This proposal should not increase the cost of construction. Proper earth retention systems for protecting existing adjacent structures will eliminate potentially large remediation costs.

Proposal # 4969

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G15-19

# G16-19

IBC:

G101.5(New), G103.1, G103.2, G103.3, G103.4, G103.5, G103.6, G103.6.1, G103.7, G103.8, G103.9, G104.1, G104.2, G104.3, G104.4, G104.5, G11

**Proponent:** Gregory Wilson, representing Federal Emergency Management Agency (gregory.wilson2@fema.dhs.gov); Rebecca Quinn, RCQuinn Consulting, on behalf of Federal Emergency Management Agency, representing Federal Emergency Management Agency (rcquinn@earthlink.net)

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

## 2018 International Building Code

Add new text as follows:

**G101.5 Designation of floodplain administrator.** The [INSERT JURISDICTION'S SELECTED POSITION TITLE] is designated as the floodplain administrator and is authorized and directed to enforce the provisions of this appendix. The floodplain administrator is authorized to delegate performance of certain duties to other employees of the jurisdiction. Such designation shall not alter any duties and powers of the building official.

Revise as follows:

**G103.1 Permit applications.** All applications for permits ~~must~~ shall comply with the following:

1. The ~~building official~~ floodplain administrator shall review all permit applications to determine whether proposed development is located in flood hazard areas established in Section G102.2.
2. Where a proposed development site is in a flood hazard area, all development to which this appendix is applicable as specified in Section G102.1 shall be designed and constructed with methods, practices and materials that minimize flood damage and that are in accordance with this code and ASCE 24.

**G103.2 Other permits.** It shall be the responsibility of the ~~building official~~ floodplain administrator to ensure that approval of a proposed development shall not be given until proof that necessary permits have been granted by federal or state agencies having jurisdiction over such development.

**G103.3 Determination of design flood elevations.** If design flood elevations are not specified, the ~~building official~~ floodplain administrator is authorized to require the applicant to meet one of the following:

1. Obtain, review and reasonably utilize data available from a federal, state or other source.
2. Determine the design flood elevation in accordance with accepted hydrologic and hydraulic engineering techniques. Such analyses shall be performed and sealed by a registered design professional, ~~professional~~. Studies, analyses and computations shall be submitted in sufficient detail to allow review and approval by the ~~building official~~ floodplain administrator. The accuracy of data submitted for such determination shall be the responsibility of the applicant.

**G103.4 Activities in riverine flood hazard areas.** In riverine flood hazard areas where design flood elevations are specified but floodways have not been designated, the ~~building official~~ floodplain administrator shall not permit any new construction, substantial improvement or other development, including fill, unless the applicant submits an engineering analysis prepared by a registered design professional, demonstrating that the cumulative effect of the proposed development, when combined with all other existing and anticipated flood hazard area encroachment, will not increase the design flood elevation more than 1 foot (305 mm) at any point within the community.

**G103.5 Floodway encroachment.** Prior to issuing a permit for any floodway encroachment, including fill, new construction, substantial improvements and other development or land-disturbing activity, the ~~building official~~ floodplain administrator shall require submission of a certification, prepared by a registered design professional, along with supporting technical data, demonstrating that such development will not cause any increase of the base flood level.

**G103.6 Watercourse alteration.** Prior to issuing a permit for any alteration or relocation of any watercourse, the ~~building official~~ floodplain administrator shall require the applicant to provide notification of the proposal to the appropriate authorities of all adjacent government jurisdictions, as well as appropriate state agencies. A copy of the notification shall be maintained in the permit records and submitted to FEMA.

**G103.6.1 Engineering analysis.** The ~~building official~~ floodplain administrator shall require submission of an engineering analysis, prepared by a registered design professional, demonstrating that the flood-carrying capacity of the altered or relocated portion of the watercourse will not be decreased. Such watercourses shall be maintained in a manner that preserves the channel's flood-carrying capacity.

**G103.7 Alterations in coastal areas.** Prior to issuing a permit for any alteration of sand dunes and mangrove stands in coastal high-hazard areas and coastal A zones, the ~~building official~~ floodplain administrator shall require submission of an engineering analysis, prepared by a registered design professional, demonstrating that the proposed alteration will not increase the potential for flood damage.

**G103.8 Records.** The ~~building official~~ floodplain administrator shall maintain a permanent record of all permits issued in flood hazard areas, including supporting certifications and documentation required by this appendix and copies of inspection reports, design certifications and documentation of

elevations required in Section 1612 of this code and Section R322 of the International Residential Code.

**G103.9 Inspections.** Development for which a permit under this appendix is required shall be subject to inspection. The ~~building official~~floodplain administrator or the ~~building official's floodplain administrator's~~ designee shall make, or cause to be made, inspections of all development in flood hazard areas authorized by issuance of a permit under this appendix.

**G104.1 Required.** Any person, owner or owner's authorized agent who intends to conduct any development in a flood hazard area shall first make application to the ~~building official~~floodplain administrator and shall obtain the required *permit*.

**G104.2 Application for permit.** The applicant shall file an application in writing on a form furnished by the ~~building official~~floodplain administrator. Such application shall:

1. Identify and describe the development to be covered by the *permit*.
2. Describe the land on which the proposed development is to be conducted by legal description, street address or similar description that will readily identify and definitely locate the site.
3. Include a site plan showing the delineation of flood hazard areas, floodway boundaries, flood zones, design flood elevations, ground elevations, proposed fill and excavation and drainage patterns and facilities.
4. Include in subdivision proposals and other proposed developments with more than 50 lots or larger than 5 acres (20 234 m<sup>2</sup>), base flood elevation data in accordance with Section 1612.3.1 if such data are not identified for the flood hazard areas established in Section G102.2.
5. Indicate the use and occupancy for which the proposed development is intended.
6. Be accompanied by construction documents, grading and filling plans and other information deemed appropriate by the ~~building official~~floodplain administrator.
7. State the valuation of the proposed work.
8. Be signed by the applicant or the applicant's authorized agent.

**G104.3 Validity of permit.** The issuance of a permit under this appendix shall not be construed to be a permit for, or approval of, any violation of this appendix or any other ordinance of the jurisdiction. The issuance of a permit based on submitted documents and information shall not prevent the ~~building official~~floodplain administrator from requiring the correction of errors. The ~~building official~~floodplain administrator is authorized to prevent occupancy or use of a structure or site that is in violation of this appendix or other ordinances of this jurisdiction.

**G104.4 Expiration.** A permit shall become invalid if the proposed development is not commenced within 180 days after its issuance, or if the work authorized is suspended or abandoned for a period of 180 days after the work commences. Extensions shall be requested in writing and justifiable cause demonstrated. The ~~building official~~floodplain administrator is authorized to grant, in writing, one or more extensions of time, for periods not more than 180 days each.

**G104.5 Suspension or revocation.** The ~~building official~~floodplain administrator is authorized to suspend or revoke a permit issued under this appendix wherever the permit is issued in error or on the basis of incorrect, inaccurate or incomplete information, or in violation of any ordinance or code of this jurisdiction.

**G105.2 Records.** The ~~building official~~floodplain administrator shall maintain a permanent record of all variance actions, including justification for their issuance.

**G105.7 Conditions for issuance.** Variances shall only be issued by the board of appeals where all of the following criteria are met:

1. A technical showing of good and sufficient cause that the unique characteristics of the size, configuration or topography of the site renders the elevation standards inappropriate.
2. A determination that failure to grant the variance would result in exceptional hardship by rendering the lot undevelopable.
3. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, nor create nuisances, cause fraud on or victimization of the public or conflict with existing local laws or ordinances.
4. A determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
5. Notification to the applicant in writing over the signature of the ~~building official~~floodplain administrator that the issuance of a variance to construct a structure below the base flood level will result in increased premium rates for flood insurance up to amounts as high as \$25 for \$100 of insurance coverage, and that such construction below the base flood level increases risks to life and property.

**Reason:** When local jurisdictions join the National Flood Insurance Program they are required to designate the local official responsible for enforcing floodplain management regulations. Some jurisdictions identify an official other than the building official, in part because many responsibilities are not directly related to enforcement of requirements for buildings. In those jurisdictions, the building official and the official designated as the floodplain administrator work together to fulfill the communities commitments to the NFIP.

This proposal addresses a concern raised in the last cycle by stating the designation of the floodplain administrator does not alter any duties and responsibilities of the building official.

Appendix G is scoped to apply to "development," which is defined in Appendix G, and it governs activities other than buildings and structures. The

authority under which Appendix G is enforced is the jurisdiction's agreement with the NFIP and is specified in Appendix G, not the building code. When a local jurisdiction uses IBC Appendix G to regulate development other than buildings it should be able to designate the appropriate official, which may or may not be the building official. The role of the floodplain administrator is limited to the provisions of the appendix. Jurisdictions may choose to designate the building official as the floodplain administrator.

**Cost Impact:** The code change proposal will not increase or decrease the cost of construction  
There is no cost impact because this proposal is related to designation of personnel by individual jurisdictions.

Proposal # 4333

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G16-19

# G17-19

IBC: G103.10(New)

**Proponent:** Gregory Wilson, representing Federal Emergency Management Agency (gregory.wilson2@fema.dhs.gov); Rebecca Quinn, RCQuinn Consulting, on behalf of Federal Emergency Management Agency, representing Federal Emergency Management Agency (rcquinn@earthlink.net)

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

## 2018 International Building Code

**Add new text as follows:**

**G103.10 Use of changed technical data.** The building official and the applicant shall not use changed flood hazard area boundaries or base flood elevations for proposed buildings or developments unless the building official or applicant has applied for a conditional Flood Insurance Rate Map (FIRM) revision and has received the approval of the Federal Emergency Management Agency (FEMA).

**Reason:** Virtually every community with identified areas subject to flooding adopts the Federal Emergency Management Agency's Flood Insurance Study and Flood Insurance Rate Maps (FIRMs) as the official maps. If a community develops its own flood study or if an applicant provides data or studies that show a change to a FIRM is appropriate, the data must be submitted to FEMA so the official maps are maintained with the best available information.

FEMA has a formal process to amend flood data. Local officials do not have the authority to change FEMA's maps and data, which means the effective FIRMs and data must be used until and unless changed by FEMA. If a flood zone or Base Flood Elevation is changed by a study and that change is not shown on the FIRM, decisions regarding future permit requirements and NFIP flood insurance policies would not be based on the best available information. Also, the current effective FIRMs are used by mortgage lenders to determine which borrowers must have flood insurance. If new studies are not provided to FEMA, some property owners might be forced to buy flood insurance even though a new study shows their locations are "out" of the SFHA. Or if new studies show a lower BFE, policies would not be rated based on those BFEs because the FIRMs weren't revised.

**Cost Impact:** The code change proposal will not increase or decrease the cost of construction

There is no cost impact because communities that participate in the NFIP are already required to submit, or require applicants to submit, new data and studies to FEMA.

Proposal # 4427

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G17-19



# G18-19

IBC@: G105.1, G105.5, G105.6, G105.7

**Proponent:** Gregory Wilson, representing Federal Emergency Management Agency (gregory.wilson2@fema.dhs.gov); Rebecca Quinn, RCQuinn Consulting, on behalf of Federal Emergency Management Agency, representing Federal Emergency Management Agency (rcquinn@earthlink.net)

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

## 2018 International Building Code

Revise as follows:

**G105.1 General.** The ~~board of appeals established pursuant to Section 113 shall~~ jurisdiction shall establish or designate a board to hear and decide requests for variances. The board of appeals shall base its determination on technical justifications, and has the right to attach such conditions to variances as it deems necessary to further the purposes and objectives of this appendix and Section 1612.

**G105.5 Restrictions.** The board of appeals shall not issue a variance for any proposed development in a floodway if any increase in flood levels would result during the base flood discharge.

**G105.6 Considerations.** In reviewing applications for variances, the board of appeals shall consider all technical evaluations, all relevant factors, all other portions of this appendix and the following:

1. The danger that materials and debris may be swept onto other lands resulting in further injury or damage.
2. The danger to life and property due to flooding or erosion damage.
3. The susceptibility of the proposed development, including contents, to flood damage and the effect of such damage on current and future owners.
4. The importance of the services provided by the proposed development to the community.
5. The availability of alternate locations for the proposed development that are not subject to flooding or erosion.
6. The compatibility of the proposed development with existing and anticipated development.
7. The relationship of the proposed development to the comprehensive plan and flood plain management program for that area.
8. The safety of access to the property in times of flood for ordinary and emergency vehicles.
9. The expected heights, velocity, duration, rate of rise and debris and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site.
10. The costs of providing governmental services during and after flood conditions including maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, streets and bridges.

**G105.7 Conditions for issuance.** Variances shall only be issued by the board of appeals where all of the following criteria are met:

1. A technical showing of good and sufficient cause that the unique characteristics of the size, configuration or topography of the site renders the elevation standards inappropriate.
2. A determination that failure to grant the variance would result in exceptional hardship by rendering the lot undevelopable.
3. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, nor create nuisances, cause fraud on or victimization of the public or conflict with existing local laws or ordinances.
4. A determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
5. Notification to the applicant in writing over the signature of the building official that the issuance of a variance to construct a structure below the base flood level will result in increased premium rates for flood insurance up to amounts as high as \$25 for \$100 of insurance coverage, and that such construction below the base flood level increases risks to life and property.

**Reason:** This proposal allows jurisdictions to establish or designate a board to hear and decide requests for variances. The NFIP gives the community the authority to approve or disapprove variances from the strict application of the minimum floodplain management requirements. The IBC authorizes the building official, not the board of appeals, to grant variances for buildings in flood hazard areas. When a local jurisdiction uses IBC Appendix G to regulate development other than buildings it should be able to designate the appropriate board or body, which may be the board of appeals or another body, such as the planning commission, the elected governing body, or a committee of department leadership.

**Cost Impact:** The code change proposal will not increase or decrease the cost of construction  
There is no cost impact because this proposal is related to designation of a deliberative body by individual jurisdictions.

Proposal # 4336

G18-19

# G19-19

IBC@: G105.4, G201.2

**Proponent:** Gregory Wilson, representing Federal Emergency Management Agency (gregory.wilson2@fema.dhs.gov); Rebecca Quinn, RCQuinn Consulting, on behalf of Federal Emergency Management Agency, representing Federal Emergency Management Agency (rcquinn@earthlink.net)

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

## 2018 International Building Code

Revise as follows:

**G105.4 Functionally dependent facilities-uses.** A variance is authorized to be issued for the construction or substantial improvement of a ~~structure and for other development necessary for the conduct of a~~ functionally dependent ~~facility-use~~ provided that the criteria in Section 1612.1 are met and the variance is the minimum necessary to allow the construction or substantial improvement, and that all due consideration has been given to methods and materials that minimize flood damages during the design flood and do not create additional threats to public safety.

**G201.2 Definitions. DEVELOPMENT.** Any man-made change to improved or unimproved real estate, including but not limited to, buildings or other structures, temporary structures, temporary or permanent storage of materials, mining, dredging, filling, grading, paving, excavations, operations and other land-disturbing activities.

**FUNCTIONALLY DEPENDENT FACILITY USE.** A ~~facility use~~ that cannot ~~be used for perform~~ its intended purpose unless it is located or carried out in close proximity to ~~water, such as a docking or port facility~~ water. The term includes only docking facilities, port facilities necessary for the loading or unloading of cargo or passengers, and shipbuilding or and ship repair facilities. The term does not include long-term storage, manufacture, sales or service facilities.

**Reason:** This proposal makes the definition consistent with the definition in the Code of Federal Regulations (44 CFR Section 59.1) used by the National Flood Insurance Program and the NFIP provisions that allow granting of variances for functionally dependent uses (44 CFR Section 60.6(a) (7)).

The CFR definition includes a definitive list of functionally dependent uses, while the current IBC Appendix G definition only offers a list of examples by using the phrase "such as," which could allow other types of facilities to be issued a variance. Granting a functionally dependent use variance to any facility other than those listed in the CFR definition does not meet the minimum NFIP requirement. This proposal removes that inconsistency so that minimum NFIP requirements are met.

**Cost Impact:** The code change proposal will not increase or decrease the cost of construction

The proposal is substantially editorial. No additional cost. This proposal does not increase construction requirements or costs.

Proposal # 4429

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G19-19

# G20-19

IBC®: G201.2

**Proponent:** Gregory Wilson, representing Federal Emergency Management Agency (gregory.wilson2@fema.dhs.gov); Rebecca Quinn, RCQuinn Consulting, on behalf of Federal Emergency Management Agency, representing Federal Emergency Management Agency (rcquinn@earthlink.net)

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

## 2018 International Building Code

**Revise as follows:**

**G201.2 Definitions. MANUFACTURED HOME.** A structure that is transportable in one or more sections, built on a permanent chassis, designed for use with or without a permanent foundation when attached to the required utilities, and constructed to the Federal ~~Mobile~~ Manufactured Home Construction and Safety Standards and rules and regulations promulgated by the U.S. Department of Housing and Urban Development. The term also includes mobile homes, park trailers, travel trailers and similar transportable structures that are placed on a site for 180 consecutive days or longer.

**Reason:** The U.S. Department of Housing and Urban Development (HUD) modified 24 CFR Part 3280 Manufactured Home Construction and Safety Standards a number of times since 2008, most recently in 2018. G201 includes a definition for “Manufactured Home” that refers to units constructed to Federal Manufactured Home Construction and Safety Standards promulgated by HUD.

**Cost Impact:** The code change proposal will not increase or decrease the cost of construction  
There is no cost impact because this proposal updates a reference to HUD standards.

Proposal # 4430

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G20-19

# G21-19

IBC: Appendix O(New)

**Proponent:** Gregory Robinson, representing National Council of Structural Engineers Associations (NCSEA) (grobinsn@lbyd.com)

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

## 2018 International Building Code

Add new text as follows:

### Appendix O SPECIAL INSPECTIONS OF LIGHT-FRAME CONSTRUCTION

#### SECTION O101

#### GENERAL

**O101.1 Purpose** The purpose of this appendix is to provide inspection requirements when a jurisdiction does not have the resources necessary to complete structural aspects of frame inspections required by Section 110.3.3.

**O101.2 Scope.** Special inspections shall be provided for light-frame construction in accordance with Chapter 17 and the additional requirements of Sections O102 and O103.

#### Exceptions:

1. Special inspections and tests are not required for construction of a minor nature or as warranted by conditions in the jurisdiction as approved by the building official.
2. Unless otherwise required by the building official, special inspections and tests are not required for Group U occupancies that are accessory to a residential occupancy including those specified in Section 312.1.

#### SECTION O102 LIGHT-FRAME WOOD CONSTRUCTION

**O102.1 Required special inspections.** Special inspections for light-frame wood construction shall be provided in accordance with Table O102.1.

**TABLE O102.1**  
**REQUIRED SPECIAL INSPECTIONS OF LIGHT-FRAME WOOD CONSTRUCTION**

<u>TYPE</u>	<u>CONTINUOUS SPECIAL INSPECTION</u>	<u>PERIODIC SPECIAL INSPECTION</u>
1. Inspect Grading of Wood Materials:		-
a. Sawn lumber framing		X (a)
b. Structural composite lumber		X (b)
c. Wood structural panels		X (c)
2. Inspect Framing and Details:		-
a. Framing layout, member sizes and bearing lengths		X (a)
b. Blocking and bridging		X (b)
c. Holes and notches <sup>a</sup>		X (c)

<u>3. Inspect Connections</u>  <u>a. Bolted and screwed connections, including diameter, length, spacing and edge distance</u>  <u>b. Nailed connections, including diameter, length, type and spacing of nails</u>  <u>c. Proprietary hangers and framing anchors, including fastener sizes and quantities</u>  <u>d. Tie-down anchors, including anchor rod size and fastener sizes and quantities</u>		-  <u>X (a)</u>  <u>X (b)</u>  <u>X (c)</u>  <u>X (d)</u>
<u>4. Inspect Shear Walls and Diaphragms</u>  <u>a. Panel grade and thickness<sup>b</sup></u>  <u>b. Fastener size, length and spacing</u>  <u>c. Framing member sizes at panel edges</u>  <u>d. Blocking at panel edges</u>		-  <u>X (a)</u>  <u>X (b)</u>  <u>X (c)</u>  <u>X (d)</u>
<u>5. Inspect Metal-Plate Connected Wood Trusses</u>  <u>a. Multi-ply truss connections for compliance with approved truss submittal package</u>		-  <u>X (a)</u>

a. Inspections of holes and notches shall be performed after electrical, mechanical, and plumbing rough-ins have been completed.

b. Applies to wood structural panels and gypsum board panels.

## SECTION O103 COLD-FORMED STEEL LIGHT-FRAME CONSTRUCTION

**O103.1 Required special inspections.** Special inspections and qualifications of welding and mechanical fastening special inspectors for cold-formed steel light frame construction, which is designed and installed in accordance with Section 2211.1, shall be in accordance with the quality assurance inspection requirements of Chapter D of AISI S240, excluding Section D6.9 of AISI S240.

## SECTION O104.1 REFERENCED STANDARDS

### AISI S240-15

#### North American Standard for Cold-Formed Steel Structural Framing

#### O103.1

**Reason:** Requirements for special inspections of wood and cold-formed steel construction have been largely omitted from the code, primarily because many of the jurisdictions that are active in the code development process already perform framing inspections per section 110.3.4 and the need for additional, *special* inspections is either redundant or not apparent. However, in many areas of the country building departments do not have the funding, staff, time, or other resources to complete the same level of detailed framing inspections that occur in those larger and more active jurisdictions.

This appendix provides an basis for structural framing inspections when a jurisdiction chooses to adopt these provisions because it doesn't have the resources to complete those inspections. Note that the exemptions for certain seismic design categories, wind speeds, etc. are not included in this appendix, because those exemptions do not apply to Section 110.3.4, which this appendix takes the place of.

**Cost Impact:** The code change proposal will not increase or decrease the cost of construction

In accordance with the model code, the responsibility for inspection of light-frame construction lies with the building department. If a building department opts to have inspections completed by a special inspector rather than its own staff, the associated cost would presumably shift from permit fees to testing agency fees.

**Staff Analysis:** The referenced standard, AISI S240-15, is currently referenced in other 2018 I-codes.

