IBC-General

2022 GROUP B
PROPOSED CHANGES TO THE I-CODES ROCHESTER COMMITTEE ACTION HEARINGS

March 27 - April 6, 2022
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ICC
INTERNATIONAL CODE COUNCIL®

2021-2022 Code Development Cycle, Group B (2022) Proposed Changes to the 2021 *International Codes*

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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 xii 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.

G1-22 Part I

PART I - IBC: SECTION 202; IFC: SECTION 202; IEBC: SECTION 202 (New)

PART 2: IRC: SECTION 202

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

THIS IS A TWO PART CODE CHANGE. PART 1 WILL BE HEARD BY THE INTERNATIONAL BUILDING CODE-STRUCTURAL COMMITTEE, PART 2 WILL BE HEARD BY THE INTERNATIONAL RESIDENTIAL CODE BUILDING COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THESE COMMITTEES.

2021 International Building Code

Revise as follows:

[BS] GYPSUM BOARD.
A type of gypsum panel product consisting of a noncombustible core primarily of gypsum with paper surfacing. ~~The generic name for a family of sheet products consisting of a noncombustible core primarily of gypsum with paper surfacing.~~

[BS] GYPSUM PANEL PRODUCT. The general name for a family of sheet products consisting essentially of gypsum complying with the standards specified in Table 2506.2 and Table 2507.2, and Chapter 35. ~~*Gypsum board* and *glass mat gypsum panels* are examples of *gypsum panel products*.~~

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

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

2021 International Fire Code

Revise as follows:

[BS] GYPSUM BOARD. A type of gypsum panel product 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 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.~~

Add new definition as follows:

GYPSUM PANEL PRODUCT. The general name for a family of sheet products consisting essentially of gypsum complying with the standards specified in Table 2506.2 and Table 2507.2, and Chapter 35 of the International Building Code.

2021 International Existing Building Code

Add new definition as follows:

GYPSUM BOARD. A type of gypsum panel product consisting of a noncombustible core primarily of gypsum with paper surfacing.

GYPSUM PANEL PRODUCT. The general name for a family of sheet products consisting essentially of gypsum complying with the standards specified in Table 2506.2 and Table 2507.2, and Chapter 35 of the International Building Code.

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.

G1-22 Part II

PART I - IBC: SECTION 202; IFC: SECTION 202; IEBC: SECTION 202 (New)

PART 2: IRC: SECTION 202

Proponents: Tim Earl, representing The Gypsum Association (tearl@gbhint.com)

THIS IS A TWO PART CODE CHANGE. PART 1 WILL BE HEARD BY THE INTERNATIONAL BUILDING CODE-STRUCTURAL COMMITTEE, PART 2 WILL BE HEARD BY THE INTERNATIONAL RESIDENTIAL CODE BUILDING COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THESE COMMITTEES.

2021 International Residential Code

Revise as follows:

[RB] GYPSUM BOARD. ~~The generic name for a family of sheet products~~ A type of gypsum panel product 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 Section R702.3 and Part IX of this code are types of gypsum board.~~

[RB] GYPSUM PANEL PRODUCT. The general name for a family of sheet products consisting essentially of gypsum complying with the standards specified in Section R702.3 and Part IX of this code.

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

[RB] GYPSUM WALLBOARD. A gypsum board used primarily as interior surfacing for building structures.

Reason Statement: This clarifies the term already used in the code and more closely harmonizes the terms and definitions to what is being used by ASTM and the industry than what currently exists.

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.

G2-22

IBC: SECTION 202 (New)

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

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

2021 International Building Code

Add new definition as follows:

LIFE SAFETY COMPONENTS (for risk category). Components of *life safety systems*, *designated seismic systems*, *emergency power systems*, and emergency and egress lighting systems. This definition of *life safety components* is limited in application to the provisions of Section 1604.5.

Reason Statement:
This proposal defines a term already used in Section 1604.5.1. (If approved, the words "life safety components," currently used only in Sec 1604.5.1, would be italicized by staff.)

The term "life safety components" is similar to the term *life safety systems*, which was defined only in the 2021 IBC. But "life safety components" is also understood to include certain nonstructural components commonly considered "life safety systems" for purposes of seismic design, as cited in Section 1613 and as used without definition in ASCE 7. Those are identified by the IBC-defined term *designated seismic systems*.

Thus, a reasonable definition of *life safety components*, as already used in Section 1604.5.1 can be derived by combining these two groups of components. By adding *emergency power systems* (also already defined) and lighting, the proposed definition also draws from (and coordinates with) the scope of ASCE 41 (see below).

For reference:

ASCE 7 does not define "life safety systems," but for the design of protection for nonstructural components, Chapter 13 sets the component importance factor equal to 1.5 for any component "required to function for life-safety purposes after an earthquake, including fire protection sprinkler systems and egress stairways." The IBC term *designated seismic systems* covers these.

Similarly, ASCE 41 does not define "life safety systems," but its Tier 1 procedure includes a checklist section titled "Life Safety System," which includes the following items:

- Fire suppression piping: anchorage
- Flexible couplings (for fire suppression piping)
- Emergency power: anchorage of "equipment used to power or control Life Safety systems"
- Stair and smoke ducts
- Sprinkler ceiling clearance
- Emergency lighting (includes egress lighting)

Cost Impact: The code change proposal will not increase or decrease the cost of construction
The proposal merely codifies the current understanding of a previously undefined term, using other terms already defined in the IBC.

G3-22

IBC: SECTION 202

Proponents: Mark Graham, representing National Roofing Contractors Assoc. (mgraham@nrca.net)

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

2021 International Building Code

Revise as follows:

[BS] ROOF COVERING. A system designed to cover ~~The covering applied to~~ the *roof deck* and provide ~~for~~ weather resistance, fire classification or appearance. The system consists of a membrane or water-shedding layer and can include an *underlayment*, a thermal barrier, insulation or a *vapor retarder*.

Reason Statement: This code change proposal is intended to clarify the current definition of the term "roof covering" and better coordinate it with the defined term "roof assembly."

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This proposal re-words the definition for the term roof covering to use similar wording from the broader term roof assembly, which is also included in Section 202. There is no change to the technical content or intent of the definition. Approving this proposal will result in no change in construction or construction cost.

G4-22 Part I

PART I - IBC: SECTION 202; IEBC: SECTION 202;
PART II - IRC: SECTION 202

Proponents: Marcin Pazera, representing Polyisocyanurate Insulation Manufacturers Association (mpazera@pima.org); Justin Koscher, Polyisocyanurate Insulation Manufacturers Association, representing Polyisocyanurate Insulation Manufacturers Association (jkoscher@pima.org)

THIS IS A TWO PART CODE CHANGE. PART 1 WILL BE HEARD BY THE INTERNATIONAL BUILDING CODE-STRUCTURAL COMMITTEE, PART 2 WILL BE HEARD BY THE INTERNATIONAL RESIDENTIAL CODE BUILDING COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THESE COMMITTEES.

2021 International Building Code

Revise as follows:

[BS] ROOF REPLACEMENT. ~~The process of removing the existing *roof covering*, repairing any damaged substrate and installing a new *roof covering*.~~ An alteration that includes the removal of all existing layers of *roof assembly* materials down to the roof deck and installing replacement materials above the existing roof deck.

2021 International Existing Building Code

Revise as follows:

[BS] ROOF REPLACEMENT. ~~The process of removing the existing roof covering, repairing any damaged substrate and installing a new roof covering~~. An alteration that includes the removal of all existing layers of *roof assembly* materials down to the roof deck and installing replacement materials above the existing roof deck.

G4-22 Part II

PART I - IBC: SECTION 202; IEBC: SECTION 202;

PART II - IRC: SECTION 202

Proponents: Marcin Pazera, representing Polyisocyanurate Insulation Manufacturers Association (mpazera@pima.org); Justin Koscher, Polyisocyanurate Insulation Manufacturers Association, representing Polyisocyanurate Insulation Manufacturers Association (jkoscher@pima.org)

THIS IS A TWO PART CODE CHANGE. PART 1 WILL BE HEARD BY THE INTERNATIONAL BUILDING CODE-STRUCTURAL COMMITTEE, PART 2 WILL BE HEARD BY THE INTERNATIONAL RESIDENTIAL CODE BUILDING COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THESE COMMITTEES.

2021 International Residential Code

Revise as follows:

[RB] ROOF REPLACEMENT. ~~The process of removing the existing *roof covering*, repairing any damaged substrate and installing a new *roof covering*.~~ An alteration that includes the removal of all existing layers of *roof assembly* materials down to the roof deck and installing replacement materials above the existing roof deck. For the definition applicable in Chapter 11, see Section N1101.6.

Reason Statement: This proposal revises the definition for roof replacement to reflect the intent and the scope of the roof replacement activity that takes place, which includes removal of all existing materials installed above the roof deck, removing those materials down to the roof deck, and installing a new roof assembly above the roof deck. The definition more explicitly states that roof replacement is an alteration as indicated in Section C503 of the IECC. The revised language in the definition more appropriately aligns with the requirements in Chapter 15 (Section 1512) of the IBC. The term “roof assembly” is already defined in the IECC and in the IBC (for use in Chapter 15). Furthermore, PIMA submitted a code change proposal for the Group B development cycle to explicitly reflect that existing roof insulation that is in good repair may be reused as part of a roof replacement (Section 1512.4). Therefore, this proposal should not be interpreted as requiring the disposal of existing roof insulation that is in good repair. This proposal simply aligns the definition with the existing requirements for roof replacements, which are intended in part to ensure that the building and roof deck are in proper condition prior to the installation of new roofing materials.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This code change proposal will have no impact on the cost of construction. The proposal does not impose new requirements.

G5-22 Part I

PART 1 - IBC: SECTION 202 (New); IFC: SECTION 202 (New)

PART 2 - IRC: SECTION 202 (New)

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

THIS IS A TWO PART CODE CHANGE. PART 1 WILL BE HEARD BY THE INTERNATIONAL BUILDING CODE-STRUCTURAL COMMITTEE, PART 2 WILL BE HEARD BY THE INTERNATIONAL RESIDENTIAL CODE BUILDING COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THESE COMMITTEES.

2021 International Building Code

Add new definition as follows:

TYPE X. A type of gypsum panel product with special core additives to increase the fire resistance as specified by the applicable standards listed in Table 2506.2. (see the definition of 'Gypsum panel product')

2021 International Fire Code

Add new definition as follows:

TYPE X. A type of gypsum panel product with special core additives to increase the fire resistance as specified by the applicable standards listed in Table 2506.2. (see the definition of 'Gypsum panel product')

G5-22 Part II

PART 1 - IBC: SECTION 202 (New); IFC: SECTION 202 (New)

PART 2 - IRC: SECTION 202 (New)

Proponents: Tim Earl, representing The Gypsum Association (tearl@gbhint.com)

THIS IS A TWO PART CODE CHANGE. PART 1 WILL BE HEARD BY THE INTERNATIONAL BUILDING CODE-STRUCTURAL COMMITTEE, PART 2 WILL BE HEARD BY THE INTERNATIONAL RESIDENTIAL CODE BUILDING COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THESE COMMITTEES.

2021 International Residential Code

Add new definition as follows:

TYPE X. A type of gypsum panel product with special core additives to increase the fire resistance as specified by the applicable standards specified in Section R702.3 and Part IX. (see the definition of 'Gypsum panel product')

Reason Statement: This clarifies the term already used in the code and harmonizes the terms and definitions to what is being used by ASTM and the industry.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
Simply adding a definition for a term already used in the code.

G6-22

IBC: SECTION 202

Proponents: Dennis Richardson, representing self (dennisrichardsonpe@yahoo.com)

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

2021 International Building Code

Revise as follows:

[BS] WALL, LOAD-BEARING. Any wall meeting either of the following classifications:

1. Any metal or wood stud wall that is required to support ~~supports~~ more than 100 pounds per linear foot (1459 N/m) of vertical load in addition to its own weight.
2. Any *masonry,* concrete or *mass timber* wall that is required to support ~~supports~~ more than 200 pounds per linear foot (2919 N/m) of vertical *load* in addition to its own weight.

Reason Statement: The current code language has resulted in vastly different interpretations by some designers and code officials, costing thousands of dollars and creating substantial project delays depending when the issue is raised and how long it takes to resolve.

When light frame walls are balloon framed as in Detail A and roof and floor joists are parallel and close to the wall, the definition is clear and there is little disagreement. If the weight of the load imposed by the floor and roof sheathing (spanning perpendicular to the wall) is more than 100 pounds per lineal foot, neglecting the weight of the balloon framed wall, then the wall is considered load-bearing. If equal to or less than 100 pounds per lineal foot the wall is considered non-load bearing according to the definition. In Type III construction, Group R occupancy, where this configuration is common, load bearing or not is the difference between the wall being required to be 2 hour fire resistance rated in Table 601 for load bearing walls and not rated at all if the Fire Separation Distance, FSD, of the wall is 30 feet or more in Table 602.

When light frame walls are platform framed as in Details B or C there is disagreement between some. The same height of wall from foundation to top of parapet with the same 100 pound per linear foot or less imposed load from the roof and wall sheathing is now considered by some to be load bearing because the segment of platform framed wall above is considered to impose additional load on the segment of platform framed wall below. Since the wall segments are framed separately some choose to ignore the part of the definition that says to neglect the weight of the wall.

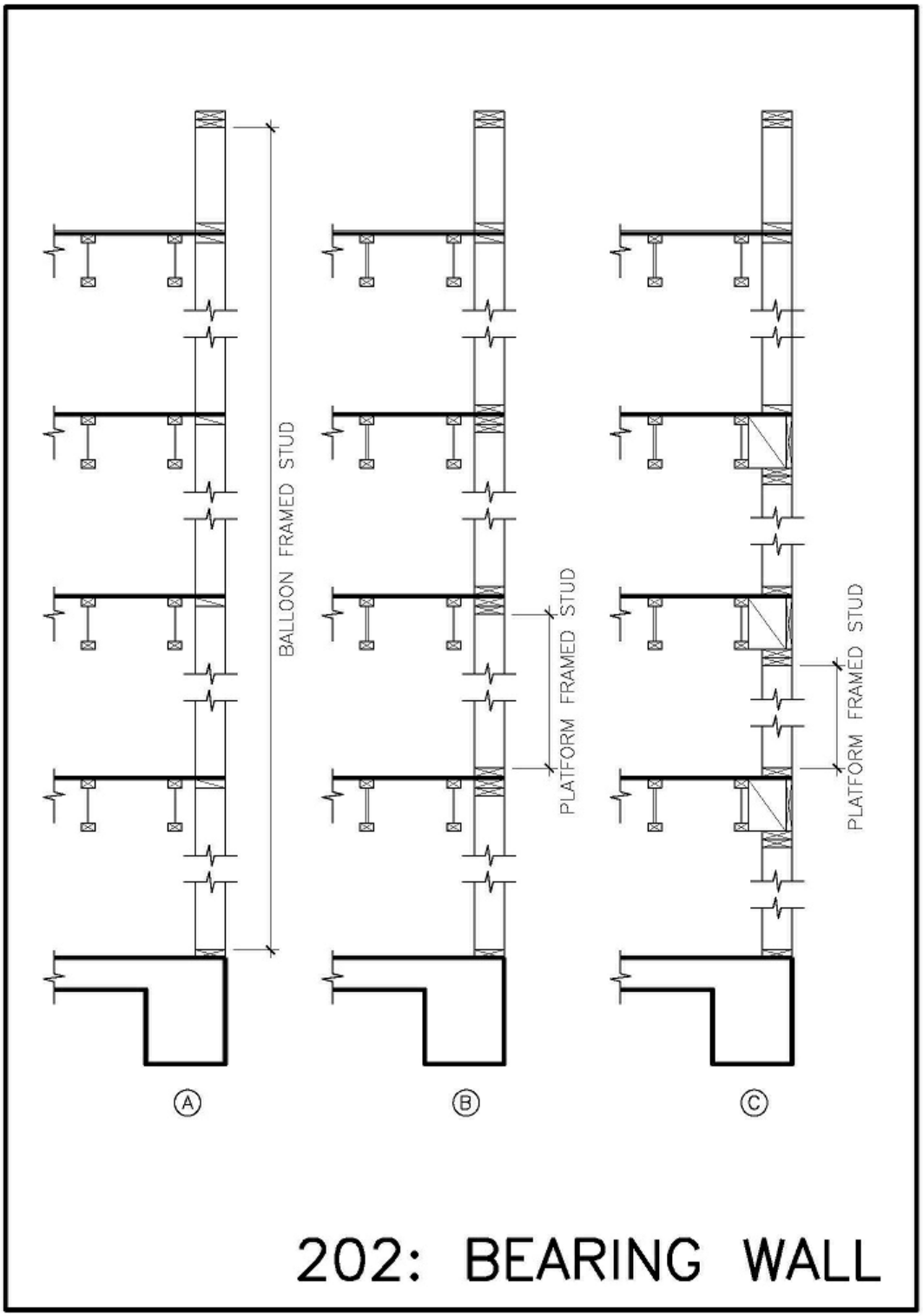
The key issue from an intent standpoint in the code is exterior and interior bearing walls that could result in a collapse of the structure if compromised by fire deserve greater protection depending on the height and number of stories of the building. Those who feel the platform framed walls in Details B or C are bearing walls state the wall segments above could fall if the segment below carrying their weight is compromised by fire or hit by a car.

In reality for the walls to have less than 100 pounds per linear foot of load applied from multiple floors of roof and wall sheathing spanning perpendicular to the wall line then the wall must be parallel and very close to the roof and floor framing. Light frame walls with finish materials tend to act as deep beams and will span a long distance under their own weight. The exterior walls are attached to the perpendicular walls and floor sheathing as required by the code. The concern that a compromised section of platform framed wall will somehow collapse under its own weight is not valid in this configuration and it is clear the light walls also will not cause the multiple floors that are designed to span parallel to the wall to fall either.

There is an alternate load path of the wall acting as a deep beam and/or floor joist spanning to the perpendicular bearing walls with their protection as required by table 601. Even though a segment of platform framed wall may carry the weight of the platform framed walls above when constructed, they are not required to carry the weight of segments above due to this alternate load path. Removing a segment of platform framed wall will not cause the other segments of wall, the floor or roof to collapse.

This code change proposes to insert the words “is required to” support more than 100 pounds per lineal foot into the definition in order to make the distinction clearer for light frame construction. Input on this code change has suggested the same language should also be added for item 2, masonry, concrete or mass timber walls to be consistent as the same confusion could occur with platform framed mass timber wall construction.

Other solutions to this interpretation problem result in a longer and more complex definition and may result in unintended consequences so three words “is required to” were chosen to try and keep this code change proposal as simple as possible.
See sketch A, B and C indicated below.



Cost Impact: The code change proposal will not increase or decrease the cost of construction
This change clarifies language that is confusing but does not change the code.

G7-22

IBC: [BS] 403.2.2, [BS] 403.2.2.1, [BS] 403.2.2.2, [BS] 403.2.2.3, [BS] 403.2.2.4

Proponents: Gabriel Quintana, Northwest Wall and Ceiling Bureau (NWCB), representing Northwest Wall and Ceiling Bureau (NWCB) (gabe@nwcb.org)

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

2021 International Building Code

SECTION 403
HIGH-RISE BUILDINGS

Revise as follows:

[BS] 403.2.2 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 403.2.2.1 through ~~403.2.2.4~~ 403.2.2.3.

Delete without substitution:

~~**[BS] 403.2.2.1 Wall assembly materials—soft body impact.** The 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.~~

Revise as follows:

[BS] ~~403.2.2.2~~ 403.2.2.1 Wall assembly materials~~—hard body impact~~. ~~The 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~~ Where an interior exit stairway enclosure or an elevator hoistway enclosure is constructed as an interior wall of the building, the panels applied to the exterior of the enclosure shall be in accordance with one of the following:

1. The wall assembly shall incorporate not fewer than two layers of impact-resistant panels, each of which meets or exceeds Soft Body Impact Classification Level 2 and 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 panels that meet or exceed Soft Body Impact Classification Level 2 and 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 Soft Body Impact Classification Level 2 and Hard Body Impact Classification Level 3 as measured by the test method described in ASTM C1629/C1629M.

[BS] ~~403.2.2.3~~ 403.2.2.2 Concrete and masonry walls. Concrete or masonry walls shall be deemed to satisfy the requirements of ~~Sections~~ Section 403.2.2.1 ~~and 403.2.2.2~~.

[BS] ~~403.2.2.4~~ 403.2.2.3 Other wall assemblies. Any other wall assembly that provides impact resistance equivalent to that required by Section~~s~~ 403.2.2.1 for Soft Body Impact Classification Level 2 and ~~403.2.2.2~~ for Hard Body Impact Classification Level 3, as measured by the test method described in ASTM C1629/C1629M, shall be permitted.

Reason Statement: The code proposal reorganizes and clarifies the sections. It makes it much clearer that both soft and hard body criteria must be met in all cases. It also clarifies which walls/side of the enclosure are to have these materials.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This is a simple reorganization and clarification of language.

G8-22

IBC: [BS] 403.2.2.3

Proponents: Thom Zaremba, Roetzel & Andress, representing National Glass Association (tzaremba@ralaw.com); Nicholas Resetar, representing Glazing Industry Code Committee (GICC) (nresetar@ralaw.com)

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

2021 International Building Code

SECTION 403
HIGH-RISE BUILDINGS

Revise as follows:

[BS] 403.2.2.3 Concrete , ~~and~~ masonry and glass walls. Concrete or masonry walls shall be deemed to satisfy the requirements of Sections 403.2.2.1 and 403.2.2.2. Glass walls complying with the safety glazing impact requirements of CPSC 16 CFR 1201, Cat. II or ANSI Z97.1, Class A shall be deemed to satisfy the requirements of Sections 403.2.2.1 and 403.2.2.2.

Reason Statement: The proposed change is needed to avoid costly, time consuming and unnecessary testing of glass walls that are already tested and marked as meeting the impact safety glazing standards set out in CPSC 16 CFR 1201, Cat II, or ANSI Z97.1, Class A. Testing glass walls to either safety glazing standard will subject them to impact testing at 400 ft. lbs. of force. The tests specified in Sections 403.2.2.1 and 403.2.2.2 only subject test specimens to 200 ft. lbs. of force. Obviously, glass walls that pass the 400 ft.lb. tests of either CPSC 16 CFR 1201 Cat. II or ANSI Z97.1 Class A, will also pass the tests specified in Sections 403.2.2.1 or 403.2.2.2. Accordingly, just as concrete and masonry walls are deemed to comply with Sections 403.2.2.1 and 403.2.2.2, so should glass walls that meet the "safety glazing" test standards set out in the proposal.

Cost Impact: The code change proposal will decrease the cost of construction
When glass walls complying with Cat. II or Class A safety glazing standards are "deemed" to comply with the less stringent test requirements of Sections 403.2.2.1 and/or 403.2.2.2, the costs of testing glass walls to Sections 403.2.2.1 or 403.2.2.2 will be unnecessary, thus, decreasing the cost of construction.

G9-22

IBC: 3301.2, 3302.2, 3303.5, SECTION 3307, [BS] 3307.1; IEBC: [BG] 1501.2, [BG] 1501.4, SECTION 1502, [BS] 1502.1

Proponents: Justin Spivey, representing Self (jspivey@wje.com)

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

2021 International Building Code

Revise as follows:

3301.2 Storage and placement. Construction equipment and materials shall be stored and placed so as not to endanger the public, the workers or ~~adjoining~~ adjacent property for the duration of the construction project.

3302.2 Manner of removal. Waste materials shall be removed in a manner that prevents injury or damage to persons, ~~adjoining~~ adjacent properties and public rights-of-way.

3303.5 Water accumulation. Provision shall be made to prevent the accumulation of water or damage to any foundations on the premises or ~~the adjoining~~ on adjacent property.

SECTION 3307
PROTECTION OF ~~ADJOINING~~ ADJACENT PROPERTY

[BS] 3307.1 Protection required. ~~Adjoining~~ Adjacent public and private property shall be protected from damage during construction, remodeling and demolition work. Protection shall be provided for footings, foundations, party walls, chimneys, skylights and roofs. Provisions shall be made to control water runoff and erosion during construction or demolition activities. The person making or causing an excavation to be made shall provide written notice to the *owners* of ~~adjoining~~ adjacent buildings advising them that the excavation is to be made and that the ~~adjoining~~ adjacent buildings should be protected. Said notification shall be delivered not less than 10 days prior to the scheduled starting date of the excavation.

2021 International Existing Building Code

Revise as follows:

[BG] 1501.2 Storage and placement. Construction equipment and materials shall be stored and placed so as not to endanger the public, the workers or ~~adjoining~~ adjacent property for the duration of the construction project.

[BG] 1501.4 Manner of removal. Waste materials shall be removed in a manner that prevents injury or damage to persons, ~~adjoining~~ adjacent properties and public rights-of-way.

SECTION 1502
PROTECTION OF ~~ADJOINING~~ ADJACENT PROPERTY

[BS] 1502.1 Protection required. ~~Adjoining~~ Adjacent public and private property shall be protected from damage during construction and demolition work. Protection must be provided for footings, foundations, party walls, chimneys, skylights and roofs. Provisions shall be made to control water runoff and erosion during construction or demolition activities. The person making or causing an excavation to be made shall provide written notice to the owners of ~~adjoining~~ adjacent buildings advising them that the excavation is to be made and that the ~~adjoining~~ adjacent buildings should be protected. Said notification shall be delivered not less than 10 days prior to the scheduled starting date of the excavation.

Reason Statement: A distinction is needed between adjacent (Webster: close or near) and adjoining (Webster: touching or bounding at a point or line); adjoining is the more restrictive term as it requires contact. Especially in urban environments, *buildings* or non-building *structures* may separated by a public alley or otherwise close enough that demolition, excavation, or construction activities for one *building* or non-building *structure* may affect another without direct contact, i.e., adjacent but not adjoining. This and other related proposals being submitted in this cycle do not seek to address the numerous instances where adjacent and adjoining appear to be used interchangeably—most frequently in IBC Chapters 4, 7, 9, 10, and 23; instead, they seek to resolve inconsistent usage of adjacent and adjoining as a modifier of the words property, *structure*, *building*, and footing in IBC Chapters 18 and 33 and Appendix J and in IEBC Chapter 15.

Cost Impact: The code change proposal will increase the cost of construction
This proposal does not change the spirit of the provision, but changes the letter slightly. There is a chance the revised wording will curtail questionable or creative interpretations and thus increase initial cost, but to the extent it encourages proper protection of adjacent property, it will lower the risk of damage, reduce or eliminate the cost of repairs and/or litigation, and thereby decrease total cost.

G10-22

IBC: 3302.1, 3302.2 (New); IEBC: [BG] 1501.3, 1501.4 (New)

Proponents: Michael Fillion, representing National Council of Structural Engineers Associations (mrf.structure@verizon.net)

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

2021 International Building Code

Revise as follows:

3302.1 Alterations, repairs and additions. Required *exits*, ~~existing structural elements,~~ fire protection devices and sanitary safeguards shall be maintained at all times during *alterations*, *repairs* or *additions* to any building or structure.

Exceptions:

1. Where such required elements or devices are being altered or repaired, adequate substitute provisions shall be made.
2. Maintenance of such elements and devices is not required where the existing building is not occupied.

Add new text as follows:

3302.2 Structural stability during construction. The structure and its components shall be capable of supporting the imposed construction and environmental loads that will be encountered during construction. Where alteration of structural elements will temporarily reduce capacity during construction, the altered load path shall be evaluated to maintain structural stability. Where *approved* by the *building official* the duration of construction shall be permitted to be considered in evaluating element lateral forces.

2021 International Existing Building Code

Revise as follows:

[BG] 1501.3 Alterations, repairs and additions. Required exits, ~~existing structural elements,~~ fire protection devices and sanitary safeguards shall be maintained at all times during *alterations*, *repairs* or *additions* to any building or structure.

Exceptions:

1. Where such required elements or devices are being altered or repaired, adequate substitute provisions shall be made.
2. Maintenance of such elements and devices is not required where the *existing building* is not occupied.

Add new text as follows:

1501.4 Structural stability during construction. The structure and its components shall be capable of supporting the imposed construction and environmental loads that will be encountered during construction. Where alteration of structural elements will temporarily reduce capacity during construction, the altered load path shall be evaluated to maintain structural stability. Where *approved* by the *code official* the duration of construction shall be permitted to be considered in evaluating element lateral forces.

Reason Statement: Clarifies requirements for structural alterations based on 2018 SEAOC survey. Reference Survey Question 18, associated results, and discussion in the attached conference paper (Zepeda et al, 2019). Questions were raised as to whether alteration requirements apply to temporary conditions. Proposal intends to clarify how to evaluate temporary conditions during construction, when altering existing structural elements.
Revisions made by this proposal intend to clarify that structural stability during all stages of construction should be considered, but that reduced transient loads may be used where it can be demonstrated to the satisfaction of the building official that building code reliability objectives are met taking into account the limited duration of construction.

https://www.cdpaccess.com/proposal/8703/25651/files/download/3153/

Bibliography: Zepeda, D., Hagen, G., O'Connell, K., McLellan, R., Buckalew, J., and Sumer, A., "Existing Buildings and the "10% Rule": Survey Results, Opinions, and Recommendations." 2019 SEAOC Convention Proceedings (pp. 116-147), Sacramento, CA: Structural Engineers Association of California.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
The intent of this code change proposal is for clarification. As it does not change the intent of the code, it will not increase of decrease the cost of construction.

G11-22

IBC: [BS] 3307.1, [BS] 3307.2, [BS] 3307.2.2; IEBC: [BS] 1502.1, [BS] 1502.2, [BS] 1502.2.2

Proponents: Justin Spivey, representing Self (jspivey@wje.com)

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

2021 International Building Code

Revise as follows:

[BS] 3307.1 Protection required. Adjoining public and private property shall be protected from damage during construction, remodeling and demolition work. Protection shall be provided for footings, foundations, party walls, chimneys, skylights and roofs. Provisions shall be made to control water runoff and erosion during construction or demolition activities. The person making or causing an excavation to be made shall provide written notice to the *owners* of adjoining ~~buildings~~ property advising them that the excavation is to be made and that the adjoining ~~buildings~~ property should be protected. Said notification shall be delivered not less than 10 days prior to the scheduled starting date of the excavation.

[BS] 3307.2 Excavation retention systems. Where a retention system is used to provide support of an excavation for protection of adjacent property or *structures*, the system shall conform to the requirements in Sections 3307.2.1 through 3307.2.3.

[BS] 3307.2.2 Excavation retention system monitoring. The retention system design shall include requirements for monitoring of the system and adjacent property or *structures* for horizontal and vertical movement.

2021 International Existing Building Code

Revise as follows:

[BS] 1502.1 Protection required. Adjoining public and private property shall be protected from damage during construction and demolition work. Protection must be provided for footings, foundations, party walls, chimneys, skylights and roofs. Provisions shall be made to control water runoff and erosion during construction or demolition activities. The person making or causing an excavation to be made shall provide written notice to the owners of adjoining ~~buildings~~ property advising them that the excavation is to be made and that the adjoining ~~buildings~~ property should be protected. Said notification shall be delivered not less than 10 days prior to the scheduled starting date of the excavation.

[BS] 1502.2 Excavation retention systems. Where a retention system is used to provide support of an excavation for protection of adjacent property or structures, the system shall conform to the requirements in Section 1502.2.1 through 1502.2.3.

[BS] 1502.2.2 Excavation retention system monitoring. The retention system design shall include requirements for monitoring of the system and adjacent property or structures for horizontal and vertical movement.

Reason Statement: This proposal seeks to resolve inconsistent use of property, *structure*, and *building* in IBC Section 3307 and similar IEBC Section 1502. Property is not defined in Chapter 2 but assumed to indicate a parcel of real property (land) on which one or more *structures* might be located, and some or all of those *structures* might be *buildings* (per IBC and IEBC Chapter 2, *buildings* are *structures* "utilized or intended for supporting or sheltering any occupancy"). Given that property is the least restrictive term, and encompasses both *buildings* and non-building *structures* along with the parcel of land they occupy, the term property should be used throughout to improve consistency among subsections. IBC Section 3307 and IEBC Section 1502 already cover adjacent property; this proposal just makes all of these provisions consistent.

Cost Impact: The code change proposal will increase the cost of construction
This proposal resolves inconsistent use of terminology and is editorial only. Although there is a small chance that the revised wording would cause additional protective measures to be implemented and thus increase initial cost, the protective measures would presumably be designed to substantially limit or preclude damage to adjacent property, reducing or eliminating the cost of repairs and/or litigation, and thereby decreasing total cost.

G12-22

IBC: G109.1

Proponents: Gregory Wilson, representing FEMA (gregory.wilson2@fema.dhs.gov); Rebecca Quinn, representing DHS Federal Emergency Management Agency (rcquinn@earthlink.net)

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

2021 International Building Code

APPENDIX G
FLOOD-RESISTANT CONSTRUCTION

SECTION G109
MANUFACTURED HOMES

Revise as follows:

G109.1 Elevation. All new and replacement manufactured homes to be placed or substantially improved in a *flood hazard area* shall be elevated such that the top of the foundation for ~~lowest floor of~~ the manufactured home is ~~elevated to~~ at or above the *design flood elevation*.

Reason Statement: As defined by the US Department of Housing and Urban Development, and IBC Appendix G, manufactured homes are built on permanent chassis and designed for use with or without a permanent foundation. Manufactured homes may be replaced from time to time. This code change applies the elevation requirement to the top of the foundation, rather than the floor of the home. This ensures that any future replacement home, regardless of the depth of the chassis and floor system, will be properly elevated. Note that when communities use the FEMA Flood Insurance Rate Maps to regulate flood hazard areas, the “design flood elevation” is equal to the “base flood elevation.”
The I-Codes require all other residential structures in flood hazard areas other than coastal high hazard areas (Zone V) and Coastal A Zones to have the lowest floors at or above the base flood elevation plus one foot, or the design flood elevation, whichever is higher (R322 or ASCE 24 Flood Design Class 2). In those flood hazard areas, this code change will achieve approximately the same result, depending on the depth of the chassis and floor system of individual homes. This is a reasonable way to equitably protect owners and occupants of manufactured homes. Also, Sec. R322.1.9 specifies the reference point for determining elevation is the bottom of the frame, which is essentially the same as the top of the foundation.

In coastal high hazard areas (Zone V) and Coastal A Zones, the I-Codes already require the “bottom of the lowest horizontal structural member of the lowest floor” to be at or above the base flood elevation plus one foot. In these flood hazard areas, this code change does not change that requirement because the top of the foundation is the same as the bottom of the chassis frame.

Ease of enforcement is an added benefit of this proposal because inspection of the foundation can determine compliance in advance of installation of a unit. Another benefit is when replacement units are installed on the same foundation there will be no need to factor in the depth of the chassis frame and floor system. For example, if the first installation has the walking surface of the floor at the required elevation but a replacement unit has a shallower frame/floor system, the foundation would have to be extended to make up the difference to ensure the walking surface of the replacement unit is at the required elevation.

Data on the relationship of elevation and damage by flooding that were compiled by FEMA and the US Army Corps of Engineers indicate that manufactured homes, on average, sustain considerably more damage as a percent of structure value than do conventional construction.

Cost Impact: The code change proposal will increase the cost of construction
The code change will increase the cost of foundations for manufactured homes installed in flood hazard areas other than Zone V and Coastal A Zone because the foundations will be approximately 12 to 18 inches taller, which adds approximately $1500 to the foundation cost. Most published information on the cost of adding additional height to foundations are developed based on total costs of conventional construction, not just the cost of the foundation. In 2018, Pinellas County, FL, collected cost estimates for the foundation and setting for a 28’ x 70’ unit. The County noted that in its jurisdiction, foundation piers that are 4 ft or taller must be designed by a registered professional engineer. The data indicate the cost of installation on a foundation that is 3 ft above grade was $8,500 and the cost for 4 ft above grade was $10,000. Assuming the installation or placement of the unit costs are the same, the cost to add one foot to the foundation is $1,500. It is reasonable to assume that the cost for an additional foot of foundation height is approximately the same, regardless of how tall the piers must be to meet the current requirement.

Analyses of flood damage as a function of elevation have been prepared by FEMA and the U.S. Army Corps of Engineers. The analyses show that adding just one additional foot of elevation results in significant damage avoided if floodwater rises higher than the floor. Having the top of the foundation at the base flood elevation means the floor will be at least one foot higher, which can avoid damage estimated to be between 10-40% of the unit value. Avoiding damage saves the unit owner in the long run. Also, flood insurance policies written by the National Flood Insurance Program may be reduced because the rating is based, in part, on the elevation of the top of the lowest floor.

G13-22

IBC: G112.1

Proponents: Gregory Wilson, representing FEMA (gregory.wilson2@fema.dhs.gov); Rebecca Quinn, representing DHS Federal Emergency Management Agency (rcquinn@earthlink.net)

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

2021 International Building Code

APPENDIX G
FLOOD-RESISTANT CONSTRUCTION

SECTION G112
OTHER BUILDING WORK

Revise as follows:

G112.1 Garages and accessory structures. Garages and accessory structures shall be designed and constructed in accordance with ASCE 24~~.~~, subject to the limitations of this section:

1. In flood hazard areas other than coastal high hazard areas and Coastal A Zones, the floors of detached garages and detached accessory storage structures are permitted below the elevations specified in ASCE 24 provided such structures are used solely for parking or storage, are one story and not larger than 600 square feet (55.75 m^2).
2. In coastal high hazard areas and Coastal A Zones, the floors of detached garages and detached accessory storage structures are permitted below the elevations specified in ASCE 24 provided such structures are used solely for parking or storage, are one story and are not larger than 100 square feet (9.29 m^2). Such structures shall not be required to have breakaway walls or flood openings.

Reason Statement: The regulations of the National Flood Insurance Program require all structures to be elevated or dry floodproofed (nonresidential only). FEMA guidance issued in 1993 (NFIP Technical Bulletin 7) states that communities must use variances to authorize non-elevated detached accessory structures that are wet floodproofed. Wet floodproofing measures minimize flood damage by allowing certain areas to flood, relieving hydrostatic loads and using materials resistant to flood damage. FEMA expects to reissue Technical Bulletin 7 in early 2022.
In 2020, FEMA issued a policy and bulletin specifying requirements for communities to issue permits for non-elevated, wet floodproofed accessory structures rather than variances. Notably, the policy and bulletin establish size limits as a function of flood zone. In flood hazard areas identified as Zone A (all zones that start with “A”), the size limit is one-story two car garage (600 sq ft) and in areas identified as Zone V (start with “V”), the size limit is 100 sq ft. Detached accessory structures that are larger than these sizes must fully comply with the elevation or dry floodproofing requirements for buildings in flood hazard areas. Alternatively, communities may consider individual variances for those larger accessory structures (local floodplain management regulations have criteria for considering variances).

The proposal amends Section G112.1 in IBC Appendix G, Flood-Resistant Construction, to specify size limits applicable when the provisions of ASCE 24 are used to allow wet floodproofed accessory storage structures and detached garages in flood hazard areas. Note that enclosures under elevated buildings used solely for parking, storage and building access are enclosures, not garages.

The size limits specified by FEMA are:

· In flood hazard areas other than coastal high hazard areas, one-story and not larger than 600 sq ft (approximately a two-car garage). FEMA expects communities to require elevation or dry floodproofing if the structures are larger, or approve them by variance.

· In coastal high hazard areas (Zone V), not larger than 100 sq ft. Note that breakaway walls and flood openings, which are required by ASCE 24, are not required (not required by the FEMA policy). FEMA expects communities to require elevation if the structures are larger, or approve them by variance.

Bibliography: The Floodplain Management Agricultural Structures Policy and FEMA P-2140*, Floodplain Management Bulletin: Requirements for Agricultural Structures and Accessory Structures*, are available here: https://www.fema.gov/media-collection/floodplain-management-requirements-agricultural-and-accessory-structures

Cost Impact: The code change proposal will decrease the cost of construction
The code change proposal limits the size of detached accessory structures and detached garages that can be wet floodproofed. There will be a reduction in costs for accessory structures in Zone V because ASCE 24 requires breakaway walls and flood openings, but the FEMA policy does not specify breakaway walls or flood openings. For 100 sq ft structures (10 x 10) there will be a cost decrease by avoiding the installation of at least two flood openings. Engineered flood opening devices cost approximately $100-$150 each, not including the cost of installation (nonengineered

openings, such as typical air vent device disabled in the open position, cost less). Cost data for fabrication of breakaway walls is not available. FEMA Technical Bulletin 9 contains prescriptive solutions for breakaway walls that do not require certification of design. A 10 x 10 structure has 100 linear feet of wall, thus cost savings are attributable to not having to fabricate approximately 100 feet of breakaway wall.An increase in costs occurs only when property owners want accessory structures or detached garages in flood hazard areas that are larger than the specified limits because those larger structures must be installed on elevated foundations (or dry floodproofed in Zone A/AE), unless approved by individually considered variances to be wet floodproofed. However, it is reasonable to assume that the large the size, the more costly would be the losses resulting from flooding. Therefore, there are avoided damage costs due to elevating or dry floodproofing (Zone A) and limiting size (Zone V). Additional costs for those larger structures to be elevated depend on the type of foundation chosen. In the report "Natural Hazard Mitigation Saves," the National Institute of Building Sciences estimates a cost of $33 per foot of elevation per pile and $325 per foot of elevation for stairs. Therefore, for a 1152 square foot accessory structure (24 ft by 48 ft) with 15 piles spaced 12 feet on center, the added cost of elevation would be $820 per foot of elevation. It is reasonable to assume the cost would be less when more typical pier foundation elements and anchoring are used.

Bibliography: Natural Hazard Mitigation Saves (2019), National Institute of Building Sciences. https://www.nibs.org/projects/natural-hazard-mitigation-saves-2019-report.

G13-22

G14-22

IBC: H106.3 (New), TABLE H116.1

Proponents: Jonathan Roberts, representing UL (jonathan.roberts@ul.com)

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

2021 International Building Code

APPENDIX H
SIGNS

SECTION H106
ELECTRICAL

Add new text as follows:

H106.3 Listing. Electric signs shall be listed and labeled in accordance with UL 48, and shall be installed in accordance with the manufacturer's installation instructions.

Revise as follows:

TABLE H116.1 REFERENCED STANDARDS

STANDARD ACRONYM	STANDARD NAME	SECTIONS HEREIN REFERENCED
ASTM D635—14	*Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position*	H107.1.1
NFPA 70—20	*National Electrical Code*	H106.1, H106.2
NFPA 701—19	*Methods of Fire Test for Flame Propagation of Textiles and Films*	H106.1.1
UL 48-11	*Electric Signs, with revisions through March 2021*	H106.1

Staff Analysis: A review of the standard proposed for inclusion in the code, UL 48-11 Electric Signs with revisions through March 2021, with regard to some of the key ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before March 16, 2022.

Reason Statement: NFPA 70 Section 600.3 requires electric signs to be listed and labeled. This proposal clarifies that electric signs as an assembly are to be listed and labeled to UL 48, and to be installed in accordance with the manufacturers installation instructions. Electric signs covered by UL 48 include all signs (regardless of voltage) that are electrically operated and/or electrically illuminated.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
Electric signs are required by NFPA 70 to be listed and labeled. This clarifies the requirements for signs and therefore there is no additional cost.

G14-22

G15-22

IBC: J103.2, J104.2

Proponents: Justin Spivey, representing Self (jspivey@wje.com)

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

2021 International Building Code

APPENDIX J
GRADING

SECTION J103
PERMITS REQUIRED

Revise as follows:

J103.2 Exemptions. A grading *permit* shall not be required for the following:

1. Grading in an isolated, self-contained area, provided that the public is not endangered and that such grading will not adversely affect ~~adjoining~~ adjacent properties.
2. Excavation for construction of a *structure* permitted under this code.
3. Cemetery graves.
4. Refuse disposal sites controlled by other regulations.
5. Excavations for wells, or trenches for utilities.
6. Mining, quarrying, excavating, processing or stockpiling rock, sand, gravel, aggregate or clay controlled by other regulations, provided that such operations do not affect the lateral support of, or significantly increase stresses in, soil on ~~adjoining~~ adjacent properties.
7. Exploratory excavations performed under the direction of a registered design professional.

Exemption from the *permit* requirements of this appendix shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction.

SECTION J104
PERMIT APPLICATION AND SUBMITTALS

Revise as follows:

J104.2 Site plan requirements. In addition to the provisions of Section 107, a grading plan shall show the existing grade and finished grade in contour intervals of sufficient clarity to indicate the nature and extent of the work and show in detail that it complies with the requirements of this code. The plans shall show the existing grade on ~~adjoining~~ adjacent properties in sufficient detail to identify how grade changes will conform to the requirements of this code.

Reason Statement: A distinction is needed between adjacent (Webster: close or near) and adjoining (Webster: touching or bounding at a point or line); adjoining is the more restrictive term as it requires contact. Especially in urban environments, *buildings* or non-building *structures* may separated by a public alley or otherwise close enough that demolition, excavation, or construction activities for one *building* or non-building *structure* may affect another without direct contact, i.e., adjacent but not adjoining. This and other related proposals being submitted in this cycle do not seek to address the numerous instances where adjacent and adjoining appear to be used interchangeably—most frequently in IBC Chapters 4, 7, 9, 10, and 23; instead, they seek to resolve inconsistent usage of adjacent and adjoining as a modifier of the words property, *structure*, *building*, and footing in IBC Chapters 18 and 33 and Appendix J and in IEBC Chapter 15.

Cost Impact: The code change proposal will increase the cost of construction
This proposal does not change the spirit of the provision, but changes the letter slightly. There is a chance the revised wording will curtail questionable or creative interpretations and thus increase initial cost, but to the extent it encourages proper protection of adjacent property, it will lower the risk of damage, reduce or eliminate the cost of repairs and/or litigation, and thereby decrease total cost.