

E130-21

Proposed Change as Submitted

Proponents: Mike Nugent, Chair, representing ICC Building Code Action Committee (bcac@iccsafe.org)

2021 International Building Code

1108.6.1 Group R-1. *Accessible units* and *Type B units* shall be provided in Group R-1 occupancies in accordance with Sections 1108.6.1.1 and 1108.6.1.2.

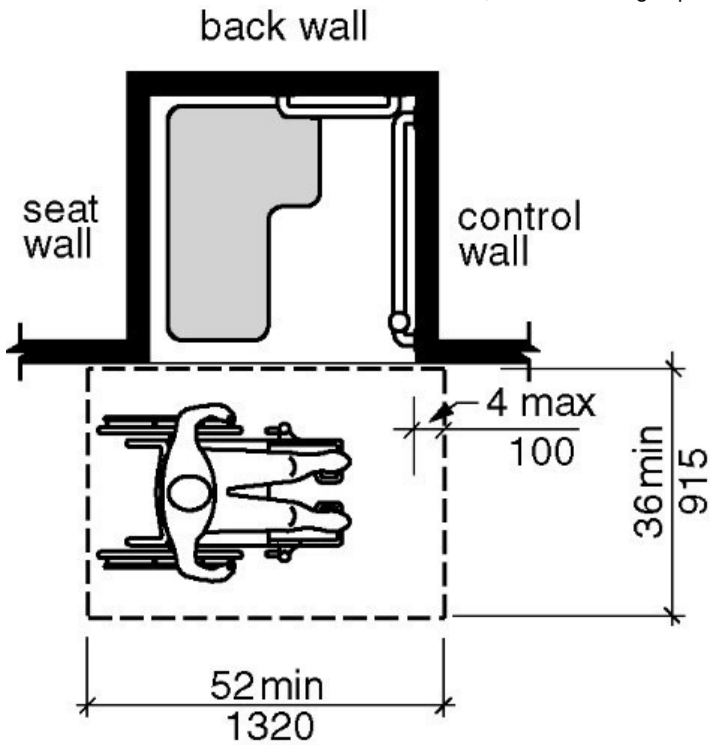
1108.6.1.1 Accessible units. *Accessible dwelling units* and *sleeping units* shall be provided in accordance with Table 1108.6.1.1. On a multiple-building site, where structures contain more than 50 *dwelling units* or *sleeping units*, the number of *Accessible units* shall be determined per structure. On a multiple-building site, where structures contain 50 or fewer *dwelling units* or *sleeping units*, all *dwelling units* and *sleeping units* on a site shall be considered to determine the total number of *Accessible units*. *Accessible units* shall be dispersed among the various classes of units.

Revise as follows:

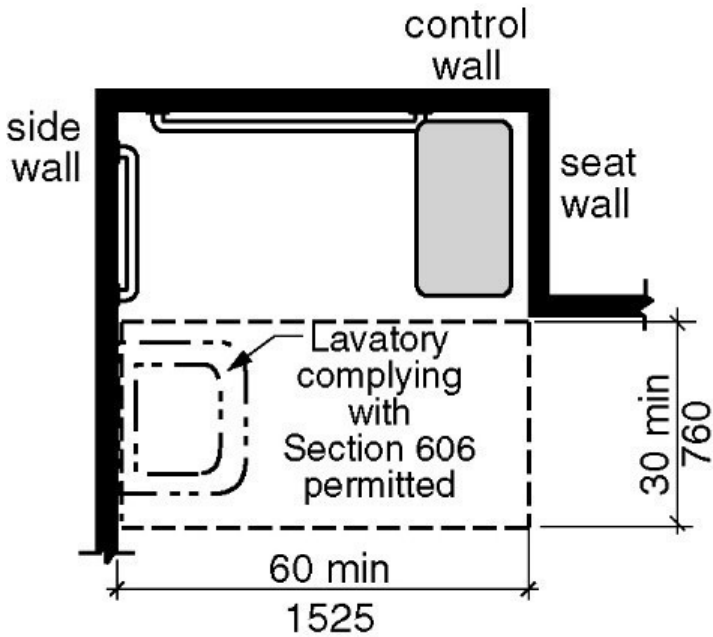
TABLE 1108.6.1.1 ACCESSIBLE DWELLING UNITS AND SLEEPING UNITS

TOTAL NUMBER OF UNITS PROVIDED	MINIMUM REQUIRED NUMBER OF ACCESSIBLE UNITS WITHOUT ROLL-IN SHOWERS	MINIMUM REQUIRED NUMBER OF ACCESSIBLE UNITS WITH ROLL-IN SHOWERS	TOTAL NUMBER OF REQUIRED ACCESSIBLE UNITS
1 to 25	1	0	1
26 to 50	2	0	2
51 to 75	3	1	4
76 to 100	4	1	5
101 to 150	5	2	7
151 to 200	6	2	8
201 to 300	7	3	10
301 to 400	8	4	12
401 to 500	9	4	13
501 to 1,000	2% of total	1% of total	3% of total
Over 1,000	20, plus 1 for each 100, or fraction thereof, over 1,000	10 plus 1 for each 100, or fraction thereof, over 1,000	30 plus 2 for each 100, or fraction thereof, over 1,000

Reason: If a hotel has all showers, Table 1107.6.1.1 could be read to force bathtubs in Accessible rooms. What is the reasoning/justification for this? A roll-in shower with a seat is doing double duty as transfer and roll-in. The table was written originally with the intent to require at least some roll-in showers when hotels typically provided all bathtubs. Designs for bathrooms have changed. Providing showers instead of tubs has been shown to reduce accidental falls in the bathrooms; while continuing to provide accessible options.

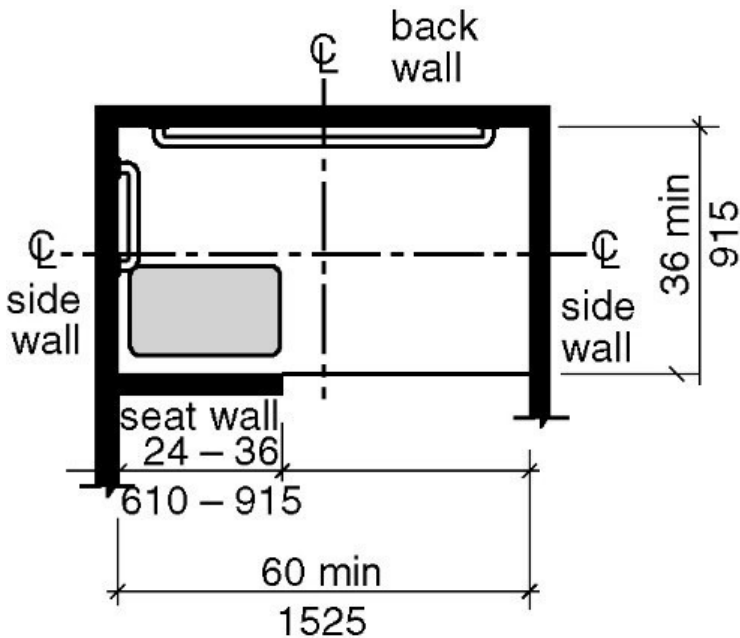


Transfer shower



Note: inside finished dimensions measured at the center points of opposing sides

Roll-in shower (also serves as transfer shower)



Note: inside finished dimensions measured at the center points of opposing sides

Alternate roll-in shower (also serves as transfer shower)

This proposal is submitted by the ICC Building Code Action Committee (BCAC). BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2020 the BCAC has held several virtual meetings open to any interested party. In addition, there were numerous virtual Working Group meetings for the current code development cycle, which included members of the committee as well as interested parties. Related documents and reports are posted on the BCAC website at BCAC.

Cost Impact: The code change proposal will not increase or decrease the cost of construction. This would increase design options for hotels.

Staff Note: E130-21 and E131-21 addresses requirements in a different or contradicting manner. The committee is urged to make their intentions clear with their actions on these proposals.

Public Hearing Results

Committee Action:

As Submitted

Committee Reason: The proposal was approved as this will remove the misinterpretation that a hotel has to put in accessible tubs and could not choose to provide a higher level of accessibility and safety by providing all transfer and roll-in showers in the Accessible units. (Vote: 14-0)

Staff Analysis: E130-21 and E131-21 addresses requirements in a different or contradicting manner. The committee is urged to make their intentions clear with their actions on these proposals.

Individual Consideration Agenda

Public Comment 1:

Proponents: Gene Boecker, representing Code Consultants, Inc. (geneb@codeconsultants.com) requests Disapprove

Commenter's Reason: The building code action committee got this one wrong as did the hearing committee. This is a provision that is already in the federal ADA Standards. The table looks very much like the one in the IBC:

Table 224.2 Guest Rooms with Mobility Features

Total Number of Guest Rooms Provided	Minimum Number of Required Rooms Without Roll-in Showers	Minimum Number of Required Rooms With Roll-in Showers	Total Number of Required Rooms
1 to 25	1	0	1
26 to 50	2	0	2
51 to 75	3	1	4
76 to 100	4	1	5
101 to 150	5	2	7
151 to 200	6	2	8
201 to 300	7	3	10
301 to 400	8	4	12
401 to 500	9	4	13
501 to 1000	2 percent of total	1 percent of total	3 percent of total
1001 and over	20, plus 1 for each 100, or fraction thereof, over 1000	10, plus 1 for each 100, or fraction thereof, over 1000	30, plus 2 for each 100, or fraction thereof, over 1000

The proposal asked a rhetorical question regarding what the reasoning/justification was for requiring bathtubs. It also made an incorrect statement and equating a roll-in shower with a transfer shower. It is clear that neither the BCPC nor the hearing committee investigated this or contacted the US Access Board for direction. Bathtubs are better when an adult is assisting in bathing a disabled child. Additionally, some adults prefer a bathtub if they can accomplish the transfer because they can use the shower wand and adjust the distance to it by placing the seat where desired.

By trying to eliminate non-roll-in showers (standards roll-in and alternate roll-in) the IBC would be out of step with federal law and once again allow construction that is in violation of the Americans with Disabilities Act. A non-roll-in bathing fixture can be either a bathtub or a transfer shower. This was another misleading statement in the proposal. They are not similar. A roll-in shower is used by individuals who cannot likely stand. A non-roll-in fixture can be used by either transfer or by standing. Some people with disabilities can stand but use a mobility device because standing is difficult.

I urge the membership to vote to overturn the committee. Do not place out code in conflict with federal law.

Bibliography: 2010 ADA Standards for Accessible Design

Cost Impact: The net effect of the public comment and code change proposal will not increase or decrease the cost of construction
No change to code.

Public Comment# 2734

Public Comment 2:

Proponents: Marsha Mazz, representing United Spinal Association (mmazz@accessibility-services.com) requests Disapprove

Commenter's Reason: The committee erred in approving this proposal. They stated that the change would "remove the misinterpretation that a hotel has to put in accessible tubs and could not choose to exceed requirements and provide all roll-in showers".

The current code does not "misinterpret" Section 224.2 of the 2010 ADA Standards. The ADA Standards do require that either a bathtub or transfer shower be provided in the number of rooms not required to provide a roll-in shower. This proposal allows hotels to elect to provide roll-in showers in all accessible guest rooms, and no bathtubs or transfer showers regardless of what type of bathing facilities are provided in inaccessible guest rooms. It removes the choice of type of accessible bathing fixtures for people with disabilities in any hotel where the designer elects to exercise the (now permitted) option to increase the number of roll-in showers provided and decrease, even to the point where there are none, the number of bathtubs or transfer showers.

In their rationale, the proponents make several statements to which we wish to respond:

- *A roll-in shower with a seat is doing double duty as transfer and roll-in.* Response: A roll-in shower differs significantly from a transfer shower. One of the main differences is that a person using a shower wheelchair cannot remain in the wheelchair while showering because it will not fit into the shower. The ability to remain in the wheelchair allows people whose disabilities affect their balance greater safety by avoiding a transfer and avoiding a seat that is not tailored to their disability needs. The additional space in a roll-in shower with a seat can present challenges to people who need to brace themselves against the opposite wall for stability.
- *The table was written originally with the intent to require at least some roll-in showers when hotels typically provided all bathtubs.* Response: The Table comes directly from the 2004 ADAAG which only editorially revised the original 1991 ADA requirements. While originally written to ensure that some roll-in showers would be available, this was because bathtubs were the primary option offered in hotels constructed at that time. Even in 1991, however, the Access Board recognized the value of providing bathing options for people with disabilities. In the history of the IBC, proposals to conform to the requirements of the ADA have unambiguously made clear why both the ADAAG and the IBC contain requirements for roll-in showers as well as bathtubs or transfer showers. The reason statement for Proposal E 176-06/07 states in part: *"This change also meets the intent of the Americans with Disabilities Act Accessibility Guidelines (ADAAG) Section 9.1.4 (1) which requires these facilities to offer persons with disabilities a range of options equivalent to those available to other persons served by the facility. Finally, the modified table is identical to the ADA Draft, "Table 224.2 Guest Rooms with Mobility Features". This draft, published July 23, 2004 awaits final approval from the Department of Justice. The current IBC Table 1107.6.1.1 uses the term "MINIMUM" when referring to the number of rooms associated with roll-in showers. Minimums can always be surpassed, thus allowing roll-in showers to be incorporated in all the accessible units. Some design professionals and hotel chains have done just that, in the belief that roll-in showers were favored by the disabled population. Nothing could be further from the truth. CHOICE and options equivalent to those available without disabilities is the basic premise found in the ADA. Roll-in showers were never intended to replace transfer showers or tubs in accessible rooms. Once again, this is made clear under 9.1.4 (1) of ADA Title III."* This issue was not misconstrued then in 2006/2007 and it should be a simple matter of checking the record. (Please see our bibliography for the cod action referenced here.)
- *Designs for bathrooms have changed. Providing showers instead of tubs has been shown to reduce accidental falls in the bathrooms; while continuing to provide accessible options.* Response: Generally, we agree with this statement although we are unaware of any supporting data using subjects with a variety of disabilities. We believe it should be possible for a hotel to only offer showers, not shower/tubs, in the interest of greater safety. Proposal E-131 would do this.

Proposal E131-21 would have allowed the option to provide all roll-in showers *only* when all guest rooms in the hotel only have showers. While still in conflict with the 2010 ADA Standards, E 131-21 is much narrower in scope than E130-21 and is more consistent with the intent of the 2010 ADA Standards, which is to afford people with disabilities choices of bathing options when others in the same hotel have options.

Please review the reason statement for our public comment supporting approval as submitted for E131-21 and consider disapproving this proposal in favor of E131-21.

Bibliography: See Proposal E176-06/07 Table 1107.6.1.1 at https://www.iccsafe.org/cs/codes/Documents/2006-07cycle/ProposedChanges/volume_1/17-E87-E191.pdf. This proposal was approved as modified. The modification was primarily editorial striking the word "associated" in the column heading reading "MINIMUM REQUIRED NUMBER OF ACCESSIBLE UNITS ASSOCIATED WITH ROLL-IN SHOWERS". The public hearing results can be found at <https://www.iccsafe.org/cs/codes/Documents/2006-07cycle/ROH/IBC-MOE.pdf> and the

final action results are at <https://www.iccsafe.org/cs/codes/Documents/2006-07cycle/ROH/ROH-final.pdf>.

Cost Impact: The net effect of the public comment and code change proposal will not increase or decrease the cost of construction. We believe that the proponent's cost statement in Proposal E-130 that "[t]he code change proposal will not increase or decrease the cost of construction" is inaccurate. If approved as submitted, this code change could have profound cost impacts as it fails to match ADA requirements by allowing only roll-in showers to be provided in *all* hotels, including those that provide other bathing options for people who do not require accessible features. If the Federal 2010 ADA Standards are enforced as written, this section would potentially result in costly retrofits.

Public Comment# 2598

E131-21

Proposed Change as Submitted

Proponents: Marsha Mazz, Director Accessibility Codes and Standards, United Spinal Association, Accessibility Services, representing United Spinal Association (mmazz@accessibility-services.com); Doug Anderson, representing American Hotel and Lodging Association (danderson@lcmarchitects.com); Gene Boecker, representing Code Consultants, Inc. (geneb@codeconsultants.com)

2021 International Building Code

Revise as follows:

1108.6.1.1 Accessible units. *Accessible dwelling units and sleeping units* shall be provided in accordance with Table 1108.6.1.1. On a multiple-building site, where structures contain more than 50 *dwelling units or sleeping units*, the number of *Accessible units* shall be determined per structure. On a multiple-building site, where structures contain 50 or fewer *dwelling units or sleeping units*, all *dwelling units and sleeping units* on a site shall be considered to determine the total number of *Accessible units*. *Accessible units* shall be dispersed among the various classes of units.

Exception. Where all dwelling units and sleeping units contain showers and none contain bath tubs, the total number of required Accessible units specified by Table 1108.6.1.1 shall be permitted to provide standard or alternate roll-in type showers with seats.

Reason: A trend in hotel design is to provide showers and not bathtubs. Although the 2010 ADA Standards require some of the dwelling or sleeping units to have either tubs or transfer showers, the requirement was written in 2004 when this practice was not evident and, in some locations, tubs were required in all units. For most people with disabilities, a roll-in shower with a seat is more accessible than an accessible bathtub or transfer shower. The justification for requiring accessible bathtubs was that some people prefer them and, since other guests have a tub option, people with disabilities should also have that option. However, where the option of a tub instead of a shower is not available to anyone, parity is not at issue and does not make sense.

Cost Impact: The code change proposal will not increase or decrease the cost of construction. The exception provides a choice. Depending on the design, applying the exception could result in a decrease in cost because it will minimize the need to design and construct different types of accessible bathrooms.

Staff Note: E130-21 and E131-21 addresses requirements in a different or contradicting manner. The committee is urged to make their intentions clear with their actions on these proposals.

E131-21

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The proposal was disapproved as the committee preferred E130-21. This option would only be available if there were no tubs in the entire hotel - including rooms with both a tub and shower. The language does not allow the option for transfer showers. (Vote: 14-0)

Staff Analysis: E130-21 and E131-21 addresses requirements in a different or contradicting manner. The committee is urged to make their intentions clear with their actions on these proposals.

E131-21

Individual Consideration Agenda

Public Comment 1:

IBC: 1108.6.1.1

Proponents: Marsha Mazz, representing United Spinal Association (mmazz@accessibility-services.com); Gene Boecker, representing Code Consultants, Inc. (geneb@codeconsultants.com) requests As Modified by Public Comment

Modify as follows:

2021 International Building Code

1108.6.1.1 Accessible units . *Accessible dwelling units and sleeping units* shall be provided in accordance with Table 1108.6.1.1. On a multiple-building site, where structures contain more than 50 *dwelling units* or *sleeping units*, the number of *Accessible units* shall be determined per structure. On a multiple-building site, where structures contain 50 or fewer *dwelling units* or *sleeping units*, all *dwelling units* and *sleeping units* on a site shall be considered to determine the total number of *Accessible units*. *Accessible units* shall be dispersed among the various classes of units.

Exception Exceptions:

1. Where all dwelling units and sleeping units contain showers and none contain bath tubs, the total number of required Accessible units specified by Table 1108.6.1.1 shall be permitted to provide standard or alternate roll-in type showers with seats.
2. Where Exception 1 to Section 1108.6.1.1 is applicable, transfer showers shall be permitted to be substituted for all but the minimum required number of roll-in showers.

Commenter's Reason: We believe that the Committee erred by disapproving this proposal in favor of E130-21. The Committee's own reason for disapproval is why this proposal should be approved as it more closely follows the 2010 ADA Standards. Committee reasons and responses follow:

- *This option would only be available if there were no tubs in the entire hotel - including rooms with both a tub and shower.* Response: That is correct. This proposal respects the principle of parity reflected in the 1991 and 2010 ADA Standards i.e., where people without disabilities do not have a range of choices in bathing fixtures, people with disabilities are not guaranteed a choice.
- *The language does not allow the option for transfer showers.* Response: Our modification adds an option for transfer showers in hotels without bathtubs. However, it does not replace the requirement for a minimum number of roll-in showers, therefore maintaining consistency with the requirement for some roll-in showers in the 2010 ADA Standards.

Cost Impact: The net effect of the public comment and code change proposal will increase the cost of construction

Like E130-21, this proposal is not in full and strict compliance with the 2010 ADA Standards. However, unlike E 130-21, this proposal limits exposure to ADA law suits by maintaining consistency with the principle of equal treatment which is at the heart of the ADA. Nonetheless, there is a potential that the change could result in a requirement to retrofit some of the dwelling unit bathrooms.

F15-21 Part I

Proposed Change as Submitted

Proponents: Michael O'Brian, representing FCAC (fcac@iccsafe.org); Mike Nugent, Chair, representing ICC Building Code Action Committee (bcac@iccsafe.org)

THIS IS A TWO PART CODE CHANGE. PART 1 WILL BE HEARD BY THE FIRE CODE COMMITTEE AND PART 2 WILL BE HEARD BY THE INTERNATIONAL BUILDING CODE FIRE SAFETY COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THESE COMMITTEES

2021 International Fire Code

Add new definition as follows:

LANDSCAPED ROOF. An area on a roof incorporating planters, vegetation, hardscaping, or other similar decorative appurtenances that are not part of a roof assembly.

VEGETATIVE ROOF. A roof assembly of interacting components designed to waterproof a building's top surface that includes, by design, vegetation and related landscape elements.

Revise as follows:

SECTION 317

VEGETATIVE LANDSCAPED ROOFS

317.1 General. Vegetative Landscaped roofs shall comply with be installed and maintained in accordance with Sections 317.2 through 317.5 and Sections 1505 and 1507.15 of the International Building Code and be installed and maintained in accordance with Sections 317.2 through 317.5.

317.2 Vegetative Landscaped roof size. Vegetative Landscaped roof areas shall not exceed 15,625 square feet (1450 m²) in size for any single area with a maximum dimension of 125 feet (39 m) in length or width. A minimum 6-foot-wide (1.8 m) clearance consisting of a *listed* Class A roof assembly tested in accordance with ASTM E108 or UL 790 shall be provided between adjacent vegetative landscaped roof areas.

317.4.3 Maintenance plan. The fire code official is authorized to require a maintenance plan for vegetation placed on roofs due to the size of a vegetative landscaped roof, materials used or where a fire hazard exists to the building or exposures due to the lack of maintenance.

905.3.8 Landscaped or vegetative roofs. Buildings or structures that have landscaped or vegetative roofs and that are equipped with a standpipe system shall have the standpipe system extended to the roof level on which the landscaped or vegetative roof is located.

504.3 Stairway access to roof. New buildings four or more stories above grade plane, except those with a roof slope greater than four units vertical in 12 units horizontal (33.3-percent slope), shall be provided with a *stairway* to the roof. *Stairway* access to the roof shall be in accordance with Section 1011.12. Such *stairway* shall be marked at street and floor levels with a sign indicating that the *stairway* continues to the roof. Where roofs are used for landscaped roofs, vegetative roofs or for other purposes, stairways shall be provided as required for such occupancy classification.

Reason: This is an editorial proposal covering both the IFC and the IBC to consistently use the term "vegetative roof".

The term "landscaped roofs" has been used by the public interchangeably with "vegetative roofs". This has created confusion in the building code and conflicts with industry standards that have coalesced around the term "vegetative roof". . Moreover, some of the sections presently identified as "landscaped roofs" should refer to "vegetative roofs" as they really addresses roofs that are part of the building envelope and, thus, are associated with the existing definition of "vegetative roofs". In these locations, the code is revised to properly use "vegetative roof". In other places, both terms are retained as the language could apply either to a vegetative roof where the membrane, growth medium and vegetation are incorporated as part of the roof assembly, or a landscaped roof where planters, hardscapes, or other features are provided above the roof assembly and not integrated into it. A definition for "landscaped roof" is proposed to capture such features and better distinguish between a true "vegetative roof" as defined in the IBC and industry standards.

Neither the IFC nor the IBC define the term "landscaped roof", but the IBC does contain a definition for the term "vegetative roofs" that reads as follows.

[BS] VEGETATIVE ROOF. An assembly of interacting components designed to waterproof a building's top surface that includes, by design, vegetation and related landscape elements.

This proposal also copies the existing definition from the IBC to the IFC.

This proposal is submitted by the ICC Fire Code Action Committee (FCAC) and the ICC Building Code Action Committee (BCAC).

BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2020 the BCAC has held several virtual meetings open to any interested party. In addition, there were numerous virtual Working Group meetings for the current code development cycle, which included members of the committee as well as interested parties. Related documents and reports are posted on the BCAC website at BCAC.

The FCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance assigned International Codes with regard to fire and life safety in new and existing buildings and facilities as well as the protection of life and property in wildland urban interface areas. In 2020 and 2021 the Fire-CAC held multiple virtual meetings that were open to any interested party. In addition, there were numerous virtual specific working group meetings that were also open to any interested parties, to develop, discuss and debate the proposed changes. Related documentation and reports are posted on the FCAC website at: FCAC.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
The proposal is editorial and will not impact how vegetative and landscaped roofs are designed and constructed.

F15-21 Part I

Public Hearing Results

Committee Action:

As Submitted

Committee Reason: The committee stated that the reasons for approval were that it cleans up the language and makes it consistent and the previous action on Part II by the IBC FS committee. (Vote 14-0)

F15-21 Part I

Individual Consideration Agenda

Public Comment 1:

IFC: SECTION 202, SECTION 317, 317.1, 317.2, 317.4.3, 905.3.8, 504.3

Proponents: Chadwick Collins, representing Protected Membrane Roofing Institute (ccollins@kellencompany.com); John Woestman, representing Extruded Polystyrene Foam Association (XPSA) (jwoestman@kellencompany.com) requests As Modified by Public Comment

Modify as follows:

2021 International Fire Code

LANDSCAPED ROOF . An area ~~on~~over a roof assembly incorporating planters, vegetation, hardscaping, or other similar decorative appurtenances that are not part of ~~a~~the roof assembly.

VEGETATIVE ROOF . A roof assembly of interacting components designed to waterproof a building's top surface that includes, by design, ~~vegetation and related landscape elements;~~ a vegetative surface.

SECTION 317 **VEGETATIVE AND LANDSCAPED ROOFS**

317.1 General . Vegetative roofs and landscaped roofs shall comply with Sections 1505 and 1507.15 of the International Building Code and be installed and maintained in accordance with Sections 317.2 through 317.5.

317.2 Vegetative roof and Landscaped roof size . Vegetative roof or landscaped roof areas shall not exceed 15,625 square feet (1450 m²) in size for any single area with a maximum dimension of 125 feet (39 m) in length or width. A minimum 6-foot-wide (1.8 m) clearance consisting of a *listed* Class A roof assembly tested in accordance with ASTM E108 or UL 790 shall be provided between adjacent vegetative roof and landscaped roof areas.

317.4.3 Maintenance plan . The *fire code official* is authorized to require a maintenance plan for vegetation placed on roofs due to the size of a vegetative roof or landscaped roof area, materials used or where a fire hazard exists to the building or exposures due to the lack of maintenance.

905.3.8 ~~Landscaped or vegetative roofs~~ Vegetative roof and Landscaped roof standpipe systems . Buildings or structures that have

landscaped roofs or vegetative roofs and that are equipped with a standpipe system shall have the standpipe system extended to the roof level on which the landscaped roof or vegetative roof is located.

504.3 Stairway access to roof . New buildings four or more stories above grade plane, except those with a roof slope greater than four units vertical in 12 units horizontal (33.3-percent slope), shall be provided with a *stairway* to the roof. *Stairway* access to the roof shall be in accordance with Section 1011.12. Such *stairway* shall be marked at street and floor levels with a sign indicating that the *stairway* continues to the roof. Where ~~roofs are used for landscaped roofs, vegetative roofs or the roof is a vegetative roof, includes a landscaped roof area, or is used for other purposes~~, stairways shall be provided as required for such occupancy classification.

Commenter's Reason: This public comment adds clarity to the definitions in the original proposal. The original definitions contradicted themselves by saying that a Landscape Roof was not part of a roof assembly only to have the Vegetative Roof definition included it as part of its assembly. This clarifies the intent of the proposal and will prevent interpretation issues in the field. Coordinating terminology changes were made to the subsequent sections to appropriately include Vegetative Roofs and Landscaped Roofs and avoid any further misinterpretations.

This proposal coordinates with F15 part 2.

Cost Impact: The net effect of the public comment and code change proposal will increase the cost of construction. The changes made in the original proposal and public comment do not affect the cost of construction. The modifications only clarify the intent of the language.

F15-21 Part II

Proposed Change as Submitted

Proponents: Michael O'Brian, representing FCAC (fcac@iccsafe.org); Mike Nugent, Chair, representing ICC Building Code Action Committee (bcac@iccsafe.org)

2021 International Building Code

Add new definition as follows:

LANDSCAPED ROOF. An area on a roof incorporating planters, vegetation, hardscaping, or other similar decorative appurtenances that are not part of a roof assembly.

Revise as follows:

[BS] VEGETATIVE ROOF. A roof ~~An~~ assembly of interacting components designed to waterproof a building's top surface that includes, by design, vegetation and related landscape elements.

[BF] 1505.10 ~~Vegetative Landscaped~~ roofs. Vegetative Landscaped roofs shall comply with Sections 1505.1 and 1507.15 and shall be installed in accordance with ANSI/SPRI VF-1.

[BF] 1507.15.1 Structural fire resistance. The structural frame and roof construction supporting the load imposed on the roof by the *vegetative roof* or landscaped roofs shall comply with the fire resistance rating requirements of Table 601.

Reason: This is an editorial proposal covering both the IFC and the IBC to consistently use the term "vegetative roof".

The term "landscaped roofs" has been used by the public interchangeably with "vegetative roofs". This has created confusion in the building code and conflicts with industry standards that have coalesced around the term "vegetative roof". Moreover, some of the sections presently identified as "landscaped roofs" should refer to "vegetative roofs" as they really addresses roofs that are part of the building envelope and, thus, are associated with the existing definition of "vegetative roofs". In these locations, the code is revised to properly use "vegetative roof". In other places, both terms are retained as the language could apply either to a vegetative roof where the membrane, growth medium and vegetation are incorporated as part of the roof assembly, or a landscaped roof where planters, hardscapes, or other features are provided above the roof assembly and not integrated into it. A definition for "landscaped roof" is proposed to capture such features and better distinguish between a true "vegetative roof" as defined in the IBC and industry standards.

Neither the IFC nor the IBC define the term "landscaped roof", but the IBC does contain a definition for the term "vegetative roofs" that reads as follows.

[BS] VEGETATIVE ROOF. *An assembly of interacting components designed to waterproof a building's top surface that includes, by design, vegetation and related landscape elements.*

This proposal also copies the existing definition from the IBC to the IFC.

This proposal is submitted by the ICC Fire Code Action Committee (FCAC) and the ICC Building Code Action Committee (BCAC).

BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2020 the BCAC has held several virtual meetings open to any interested party. In addition, there were numerous virtual Working Group meetings for the current code development cycle, which included members of the committee as well as interested parties. Related documents and reports are posted on the BCAC website at BCAC.

The FCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance assigned International Codes with regard to fire and life safety in new and existing buildings and facilities as well as the protection of life and property in wildland urban interface areas. In 2020 and 2021 the Fire-CAC held multiple virtual meetings that were open to any interested party. In addition, there were numerous virtual specific working group meetings that were also open to any interested parties, to develop, discuss and debate the proposed changes. Related documentation and reports are posted on the FCAC website at: FCAC.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
The proposal is editorial and will not impact how vegetative and landscaped roofs are designed and constructed.

Public Hearing Results

Committee Action:

As Submitted

Committee Reason: The committee concluded the proposal coordinates the proper terminology. The proposal covers both the IFC and the IBC to use the term "vegetative roof" consistently". (Vote: 13-0)

F15-21 Part II

Individual Consideration Agenda

Public Comment 1:

IBC: SECTION 202

Proponents: Chadwick Collins, representing Protected Membrane Roofing Institute (ccollins@kellenccompany.com); John Woestman, representing Extruded Polystyrene Foam Association (jwoestman@kellenccompany.com) requests As Modified by Public Comment

Modify as follows:

2021 International Building Code

LANDSCAPED ROOF . An area ~~on~~over a roof assembly incorporating planters, vegetation, hardscaping, or other similar decorative appurtenances that are not part of ~~a~~the roof assembly.

[BS] VEGETATIVE ROOF . A roof assembly of interacting components designed to waterproof a building's top surface that includes, by design, ~~vegetation and related landscape elements~~a vegetative surface.

Commenter's Reason: This public comment adds clarity to the definitions in the original proposal. The original definitions contradicted themselves by saying that a Landscape Roof was not part of a roof assembly only to have the Vegetative Roof definition included it as part of its assembly. This clarifies the intent of the proposal and will prevent interpretation issues in the field.
This proposal coordinates with F15 part 1.

Cost Impact: The net effect of the public comment and code change proposal will increase the cost of construction
The changes made in the original proposal and public comment do not affect the cost of construction. The modifications only clarify the intent of the language.

Public Comment# 2763

Public Comment 2:

IBC: [BF] 1505.10

Proponents: Marcelo Hirschler, representing self (mmh@gbhint.com); Michael O'Brian, representing FCAC (fcac@iccsafe.org); Mike Nugent, representing ICC Building Code Action Committee (bcac@iccsafe.org) requests As Modified by Public Comment

Modify as follows:

2021 International Building Code

[BF] 1505.10 ~~Vegetative Landscaped and vegetative roofs~~ . Vegetative Landscaped and vegetative roofs shall comply with Sections 1505.1 and 1507.15 . Vegetative roofs ~~and~~ shall be installed in accordance with ANSI/SPRI VF-1.

Commenter's Reason: Proposal F16 Part II was approved as submitted and contains the language proposed in this public comment for section 1505.10. The language in F16 part II is the correct one because the fire test needs to apply to all types of roofs (and that is covered by 1505.1 and 1507.16) while the SPRI standard covers installation but only for vegetative roofs.

Cost Impact: The net effect of the public comment and code change proposal will not increase or decrease the cost of construction
This is still editorial and corrects an error in the original proposal.

G12-21

Proposed Change as Submitted

Proponents: Mike Nugent, Chair, representing ICC Building Code Action Committee (bcac@iccsafe.org)

2021 International Building Code

Revise as follows:

[BG] HIGH-RISE BUILDING. A building with the floor of an occupied ~~floor~~ story located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access.

Reason: The intent of this proposal is to clarify that an occupied roof that is over 75' where the floor is below 75' does not make this building a high-rise. Also thinking into the future, changing an unoccupied roof to an occupied roof should not change the building requirements to this extent. An open to the air occupied roof does not increase the hazard the same as a story.

If you make this a high-rise what could be added is additional alarm systems requirements, additional requirements for sprinklers, additional special inspections, luminous egress markings in the stairways, a fire command center, standpipes, secondary water supply, smoke detection systems, separation between stairway enclosures, smokeproof enclosures, etc. A justification or need for these systems for just an occupied roof has not been demonstrated.

This would be consistent with the change to Section 503.1.4 –

503.1.4 Occupied roofs. A roof level or portion thereof shall be permitted to be used as an occupied roof provided the occupancy of the roof is an occupancy that is permitted by Table 504.4 for the story immediately below the roof. The area of the occupied roofs shall not be included in the building area as regulated by Section 506. An occupied roof shall not be included in the building height or number of stories as regulated by Section 504, provided the penthouses and other enclosed roof structures comply with Section 1511.

Exceptions:

1. The occupancy located on an occupied roof shall not be limited to the occupancies allowed on the story immediately below the roof where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 and occupant notification in accordance with Section 907.5 Sections 907.5.2.1 and 907.5.2.3 is provided in the area of the occupied roof. Emergency voice/alarm communication system notification per Section 907.5.2.2 shall also be provided in the area of the occupied roof where such system is required elsewhere in the building.

2. (no change to this exception)

A floor is a floor & a roof is a roof. Just because a roof is an “occupied” roof, does not make it a floor. The code has had provisions related to adequate egress from “occupied” roofs for years without classifying the roof as an occupancy for purposes of other code issues including height/area limitations, mixed uses, sprinklers, or type of construction.

The IBC currently requires a minimum of one standpipe hose connection needs to be extended to the roof (Section 905.4 – 2021 IBC).

It should be noted that there are new provisions in the 2015 IBC (Section 903.2.1.6) which addresses sprinkler protection due to an occupied roof and in the 2018 IBC (Section 503.1.4) which address occupied roofs based on the floor immediately below the roof. In both cases, if sprinkler protection is provided throughout the building, whether the roof is an occupied roof has no bearing on height/area limitations, occupancy separation requirements or the classification of the building as a high-rise.

This proposal is submitted by the ICC Building Code Action Committee (BCAC). BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2020 the BCAC has held several virtual meetings open to any interested party. In addition, there were numerous virtual Working Group meetings for the current code development cycle, which included members of the committee as well as interested parties. Related documents and reports are posted on the BCAC website at BCAC.

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

The technical criteria for high-rises would not change. This is a clarification. The opposite interpretation could have a significant increase in building costs because of the additional system indicated in the reason.

Staff note: G12-21, G14-21, G15-21, G16-21 addresses requirements in a different or contradicting manner. G14-21, G15-21 and G16-21 addresses similar requirements in a different manner to those found in current IBC Section 503.1.4. The committee is urged to make their intentions clear with their actions on these proposals.

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: This proposal was disapproved because some committee members felt that not including the occupied roof in the definition of high rise ignored the issue of the potential occupant load on the occupied roof. Some of the committee members felt that the safety for persons on the roof was addressed through other sections in the codes. See also the committee reason for G14, G15 and G16. (Vote: 10-4)

Staff Analysis: G12-21, G14-21, G15-21, G16-21 addresses requirements in a different or contradicting manner. G14-21, G15-21 and G16-21 addresses similar requirements in a different manner to those found in current IBC Section 503.1.4. The committee is urged to make their intentions clear with their actions on these proposals.

Individual Consideration Agenda

Public Comment 1:

Proponents: Mike Nugent, representing ICC Building Code Action Committee (bcac@iccsafe.org); Marcin Pazera, representing PIMA (mpazera@pima.org); David Tyree, representing AWC (dtyree@awc.org) requests As Submitted

Commenter's Reason: NUGENT REASON:

This code change, along with G15-21 and G16-21, seeked to clarify an issue that remains unclear even with an ICC interpretation. That is that when using the definition of "HIG-RISE BUILDING," just WHERE is the 75 foot dimension to be measured to? The current definition of a high-rise building is:

HIGH-RISE BUILDING - A building with an occupied floor located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access.

There is no dissention on where the 75 foot measurement is to start – the lowest level of fire department access, e.g., the lowest point where the fire service can part a vehicle. But where TO STOP measuring the 75 feet appears to be the big question? The definition states that the distance is measured to an "occupiable floor." It seems to come down to - just what is a "floor?" While the term "floor" appears 1,062 time and the term "floors" appears 209 times, there is no definition of "floor" in the IBC.. That is what this code change is attempting to do. To revise the language within the definition to clearly state where the 75 foot dimension is measured to – replacing the ambiguous term "floor" to "story," which is a defined term in the IBC.

In the committee's reason statement for disapproval it states "... some committee members felt that not including the occupied roof in the definition of high rise ignored the issue of the potential occupant load on the occupied roof." We disagree with that statement, as was presented during the testimony for not only this code change but also for G15-21 and G16-21, over the past couple of code development cycles there has been a concerted effort to put in place numerous revisions to the IBC and IFC to address the whole "occupied roof" topic, with the majority geared to life safety, fire protection features and construction materials/methods.

In regard to the issue of building construction the IBC now in Section 503.1.4 states:

503.1.4 Occupied roofs. A roof level or portion thereof shall be permitted to be used as an occupied roof provided the occupancy of the roof is an occupancy that is permitted by Table 504.4 for the story immediately below the roof. The area of the occupied roofs shall not be included in the building area as regulated by Section 506. An occupied roof shall not be included in the building height or number of stories as regulated by Section 504, provided that the penthouses and other enclosed rooftop structures comply with Section 1511.

The definition of "high-rise buildings" first appeared in each of the early 1980's and was based on the work done at the 1971 *International Symposium on Fire Safety in High-Rise Buildings* which was sponsored by the General Services Administration (GSA) with participants from not only the US but England, France, Canada and Sweden. They had to arrive at a term that all recognized, thus they used "floor." It was and is a term that is defined around the country in very similar terms.

In the IBC Section 201.4 specifically address terms that are not defined in an I-Code, it states “Where terms are not defined through the methods authorized by this section, such terms shall have ordinarily accepted meanings such as the context implies.” In looking at the Merriam-Webster website (<https://www.merriam-webster.com/dictionary/floor>), the word “floor” is defined as:

Definition of *floor* (Entry 1 of 2)

- 1 : the level base of a room
- 2
 - a : the lower inside surface of a hollow structure (such as a cave or bodily part)
 - b : a ground surface
// the ocean *floor*
- 3
 - a : a structure dividing a building into stories
also : STORY
 - b : the occupants of such a floor
- 4 : the surface of a structure on which one travels
// the *floor* of a bridge
- 5
 - a : a main level space (as in a stock exchange or legislative chamber) distinguished from a platform or gallery
 - b : the specially prepared or marked area on which indoor sports events take place
 - c : the members of an assembly
// took questions from the *floor*
 - d : the right to address an assembly
// the senator from Utah has the *floor*
- 6 : a lower limit : BASE

from the floor

: in field goals as opposed to free throws
// made 16 of 18 shots *from the floor*

— see also TAKE THE FLOOR

This code change just seeks to clarify that the term “floor” as used in the definition of high-rise building and in a multitude of other places in the IBC is referring to a horizontal plane that is located WITHIN the walls of a story of a building – not to a structure that is on the roof of a building. We are proposing to replace an undefined term with one that has an IBC definition – Story. Section 202 defines it as: **STORY**. *That portion of a building included between the upper surface of a floor and the upper surface of the floor or roof next above (see “Basement,” “Building height,” “Grade plane” and “Mezzanine”). A story is measured as the vertical distance from top to top of two successive tiers of beams or finished floor surfaces and, for the topmost story, from the top of the floor finish to the top of the ceiling joists or, where there is not a ceiling, to the top of the roof rafters.* We wish to point out that the committee in its acceptance of G15-21 actually confirms that “story” would be the appropriate term for the definition. It is our opinion that through the committee’s action for Approved as Modified, to have there be 2 separate thresholds that in fact they answered the question - the term “floor” is really a horizontal surface located WITHIN an interior space. The term by itself doesn’t include an occupied roof. We do not believe that it was ever the intent that an occupied roof be used as the threshold for the determination of a high-rise building. The hazards associated with occupants within the exterior walls of a building are significantly different than those in spaces that outside of the exterior walls where hot gasses will not be confined.

PAZERA REASON:

Polyisocyanurate Insulation Manufacturers Association (PIMA) is generally supportive of improved fire safety provisions and requirements in the building code. This proposal provides an important clarification to the definition of “high-rise building” in Section 202 of the International Building Code (IBC). This change to “floor of an occupied story” provides a clear distinction between occupied floor and occupied roof. In the current definition (2021 IBC) it could be inferred that occupied roofs (located above an occupied space) could trigger reclassification of a building to a high-rise building, and thus trigger unnecessary or unwarranted upgrades. In our opinion, occupied roofs (open to the outdoor environment) do not carry the same fire safety risks as occupied spaces. This proposal aims to clarify this concept while maintaining current building code requirements. The opponents of this proposal argued that increased fire safety is necessary, however, they have failed to provide substantiating evidence to support such a request. PIMA requests approval as submitted of proposal number G12-21.

TYREE REASON:

This proposal by the BCAC is the correct way to best clarify the definition of HIGH-RISE BUILDING without creating such a distinctly different and contrary intent created by the definition change as was approved by G15. Disapproval of G15-21 is also recommended.

The modification spelled out in this proposal aligns with the language provided for in IBC Section 503.1.4 which states:**503.1.4 Occupied roofs.** A roof level or portion thereof shall be permitted to be used as an occupied roof provided the occupancy of the roof is an occupancy that is permitted by Table 504.4 for the story immediately below the roof. The area of the occupied roofs shall not be included in the building area as regulated by Section 506. An occupied roof shall not be included in the building height or number of stories as regulated by Section 504, provided that the penthouses and other enclosed rooftop structures comply with Section 1511. By changing the definition of HIGH-RISE BUILDING as approved by G15-21 the intent that occupying roofs should not trigger code provisions attributed to building height or number of stories has been circumvented. The change to the definition will now put into place requirements for sprinkler protection that were already covered by exception 1 from Section 503.1.4, as well as triggering the 8 Emergency Systems (Smoke detection, Fire alarm system, Standpipe system, Emergency voice/alarm communication system, Emergency communication coverage, Fire command center, Smoke removal, and Standby and emergency power) required by Section 403.4 without providing any justification that those systems are needed simply because one is adding as few as a couple of occupants to an area of the roof.

Cost Impact: The net effect of the public comment and code change proposal will not increase or decrease the cost of construction. The technical criteria for high-rises would not change. This is a clarification. The opposite interpretation could have a significant increase in building costs because of the additional system indicated in the reason.

G15-21

Proposed Change as Submitted

Proponents: Stephen Thomas, Colorado Code Consulting, a Shums Coda Assoc Company, representing Colorado Chapter ICC (stthomas@coloradocode.net); Timothy Pate, representing Colorado Chapter Code Change Committee (tpate@broomfield.org)

2021 International Building Code

Revise as follows:

[BG] HIGH-RISE BUILDING. A building with an occupied floor or occupied roof located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access.

Reason: The existing language refers to a floor that is more than 75 feet above the lowest level of fire department vehicle access. It is our opinion that an occupied roof is also a floor. A floor is something you walk on and people walk on an occupied floor. Therefore, we are proposing to provide clarifying language to include occupied roofs above 75 feet to classify the building as a high-rise building. The presence of occupants and combustible furnishings add to the difficulty of performing ground-based fire fighting. It also limits the ability of the firefighters to perform rescue operations from the ground. By classifying an occupied roof over 57 feet, additional safety provisions are required in the building.

This proposal will have an impact on the application of the Existing Building Code. If someone wants to convert an existing roof to an occupied roof and the roof is more than 75 feet above the lowest level of fire department vehicle access, the building will need to be upgraded to comply with the high rise building provisions in IBC Section 403. The addition of floor area would make the building less code complying that it was prior to constructing the occupied roof.

Cost Impact: The code change proposal will increase the cost of construction

If a jurisdiction did not previously classify an occupied roof as a floor, the increased safety requirements for high-rise buildings will increase the cost of construction. However, if they are already looking at the occupied roof as an occupied floor, the cost of construction would not increase.

Staff note: G12-21, G14-21, G15-21, G16-21 addresses requirements in a different or contradicting manner. G14-21, G15-21 and G16-21 addresses similar requirements in a different manner to those found in current IBC Section 503.1.4. The committee is urged to make their intentions clear with their actions on these proposals.

G15-21

Public Hearing Results

Committee Action:

As Submitted

Committee Reason: The proposal to add 'occupied roofs' to the definition of 'highrise' was approved due to the concern that occupants on the occupied roof need to be protected with elements other than just being open to the outside air. Fire department access to the roof is important for life safety. Concerns were raised that protection for occupied roofs were already addressed in other portions of the code, so having an occupied roof above the 75 foot height should not add the entire 'highrise' package of requirements - especially if the occupied roof was only a small portion of the overall roof. The proposal did not address the issue if a 'floor' is the floor of the story below the roof, a mezzanine in the top story, or what would be required for an occupied roof with elevated platforms on portions of the occupied roof. There was also a concern about the impact on existing building that wanted to add amenities on the roof. See also the Committee Action to G12, G14 and G16. (Vote: 10-4)

Staff Analysis: G12-21, G14-21, G15-21, G16-21 addresses requirements in a different or contradicting manner. G14-21, G15-21 and G16-21 addresses similar requirements in a different manner to those found in current IBC Section 503.1.4. The committee is urged to make their intentions clear with their actions on these proposals.

G15-21

Individual Consideration Agenda

Public Comment 1:

IBC: SECTION 202

Proponents: Lee Kranz, representing Washington Association of Building Officials Technical Code Development Committee

(lkranz@bellevuewa.gov); Micah Chappell, representing Washington Association of Building Officials (micah.chappell@seattle.gov) requests As Modified by Public Comment

Modify as follows:

2021 International Building Code

[BG] HIGH-RISE BUILDING . A building ~~with an occupied floor or occupied roof where either of the following are~~ located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access: 1. An occupied floor. 2. An occupied roof with an occupant load of 50 or more.

Commenter's Reason: G15-21 is intended to clarify whether an occupied roof can be considered an occupied floor for the purposes of triggering high rise provisions in Section 403. However, as written, **any** occupied roof located above the 75-foot threshold, regardless of size or occupant load, will trigger those requirements.

This public comment would provide the option to have smaller occupied roofs on tall buildings without the need to comply with high-rise regulations in Section 403 by establishing an occupant load of 50 or more people on the occupied roof before a building would become a high rise.

At the Committee Action Hearings, several testifiers spoke in favor of G16-21, which would have established an occupant load trigger of 50. There was also testimony at the hearings that suggested an occupant load of 100 should be allowed. In our judgment, 50 occupants (which equates to a 750 square foot roof deck) is a good compromise between 1 occupant (too few) and 100 occupants (too many). A trigger of 50 occupants also corresponds to the threshold for determining assembly occupancies (Section 303.1.2, Item 1). We feel that once an assembly occupancy is on the occupied roof, that is a large enough number of people to justify treating the occupied roof the same as an occupied floor.

Occupants on smaller occupied roofs are at lower risk than those on the floor below because smoke will not accumulate on an occupied roof as it does inside of the building. Mid-rise buildings that are close to meeting the definition of a high rise building, will have the same level of notification and sprinkler protection (see Section 503.1.4, exception 1) as those inside the building and will only have 1 additional level of stairs to traverse than those on the floor below.

An example of where smaller occupied roofs could trigger high rise compliance is on a 7 story multi-family building with 6 units per floor. The elevation of the occupied roof slightly exceeds 75 feet to the lowest fire truck access. In this case, the occupants on the highest level of the building have access to 400 Sq. Ft. occupied roofs accessible only by the tenants of each dwelling unit. Each occupied roof will have an occupant load of 2 (400 Sq. Ft. divided by a 200 Sq. Ft. OLF) X 6 = 12 people. As approved, this building would have to comply with the high-rise provisions. If this public comment is approved, it would not be considered to be a high rise, because the total occupant load is less than 50. The building would still be protected by approved sprinkler and a fire alarm systems.

This public comment does not compromise the safety of building occupants and establishes a reasonable threshold for when to apply high rise provisions for occupied roofs.

Cost Impact: The net effect of the public comment and code change proposal will increase the cost of construction

The current definition of High-Rise Building is measured from the lowest level of fire department vehicle access to the highest occupied floor. If approved, this code change will define some buildings with an occupied roof as High-Rise which under the current definition, would be considered to be mid-rise. High-Rise buildings are more expensive to build because of the added life safety systems required in Section 403.

If this is approved as modified, it will cause more buildings to have to comply with high-rise provisions which will in fact increase the cost of construction.

Public Comment# 2377

Public Comment 2:

Proponents: Mike Nugent, representing ICC Building Code Action Committee (bcac@iccsafe.org); Marcin Pazera, representing PIMA (mpazera@pima.org); David Tyree, representing AWC (dtyree@awc.org) requests Disapprove

Commenter's Reason: NUGENT:

This proposal seeks to dramatically change the threshold for when a building would become classified as a "high-rise." The current definition of a high-rise building has a single threshold - A building with an occupied floor located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access.

This proposal seeks to change the definition to have 2 thresholds – buildings with:

- an occupied floor located more than 75 feet above the lowest level of fire department vehicle access.

an occupied roof located more than 75 feet above the lowest level of fire department vehicle access.

We do wish to address the comments made by the proponents made during the public testimony. As reflected in the testimony and in the 2021 REPORT OF THE COMMITTEE ACTION HEARINGS, they stated this change was needed for the following reasons:

1. *There are mixed interpretations on how to apply the definition as currently written – the biggest question is what constitutes an “occupied floor?”*

It is our opinion that through the committee’s action for Approved as Modified (10-4), the committee in fact answered that question by an overwhelming margin by expanding the definition of “high-rise building” to have 2 separate thresholds. To retain the term “occupied floor” and add “occupied roof” the committee made it clear that an “occupied floor” is going to be a horizontal element that is WITHIN the exterior walls of a building (aka – floor surface within a story), and that an “occupied roof” is going to be a horizontal element that is on top of the roof of a building.

Through their action, the committee essentially supports what is being proposed in Code Change G12-21 being put forth by the BCAC in which “floor” is proposed to be replaced by “story.”

2. *Concern that occupants on the occupied roof need to be protected with elements other than just being open to the outside air.*

The logic appears to be that IF a building with an occupied roof is put into the high-rise category that the building will be provided with some heighten level of “protection” (aka – fire rated construction). But without a lot of other changes to the code – that is not true.

Take a fully sprinklered building with an occupied roof where the “height” of the building is 75 feet (measured from grade plane to the ROOF) – but where the distance from the lowest level of fire department access to the occupied roof is 78 ft. Yes the building would be a high-rise BUT given the building complies with the area limits, for many occupancies IBC Table 504.3 would allow the building to be of an unprotected construction - Type IIIB or IIB construction – which means there would no fire ratings on the structural elements per Table 601. And note that this allowable height even applies to buildings with Group A occupancies.

**TABLE 504.3
ALLOWABLE BUILDING HEIGHT IN FEET ABOVE GRADE PLANE^a**

OCCUPANCY CLASSIFICATION	TYPE OF CONSTRUCTION										
	See Footnotes	Type I		Type II		Type III		Type IV			
		A	B	A	B	A	B	A	B	C	HT
A, B, E, F, M, S, U	NS ^b	UL	160	65	55	65	55	65	65	65	65
	S	UL	180	85	75	85	75	270	180	85	85
H-1, H-2, H-3, H-5	NS ^{c, d}	UL	160	65	55	65	55	120	90	65	65
	S										
H-4	NS ^{c, d}	UL	160	65	55	65	55	65	65	65	65
	S	UL	180	85	75	85	75	140	100	85	85
I-1 Condition 1, I-3	NS ^{d, e}	UL	160	65	55	65	55	65	65	65	65
	S	UL	180	85	75	85	75	180	120	85	85
I-1 Condition 2, I-2	NS ^{d, e, f}	UL	160	65	55	65	55	65	65	65	65
	S	UL	180	85							
I-4	NS ^{d, g}	UL	160	65	55	65	55	65	65	65	65
	S	UL	180	85	75	85	75	180	120	85	85
R ^b	NS ^d	UL	160	65	55	65	55	65	65	65	65
	S13D	60	60	60	60	60	60	60	60	60	60
	S13R	60	60	60	60	60	60	60	60	60	60
	S	UL	180	85	75	85	75	270	180	85	85

IS THIS BUILDING REALLY MORE PROTECTED???

No one will take the reduction for Type of Construction fire ratings allowed in 403.2.1 because there are no fire ratings to reduce. Because of this, sprinkler control valves won’t be equipped with supervisory initiating devices or water-flow initiating devices.

The threshold for an occupied floor being 75’ above fire department access fundamentally put in place a back-stop for buildings that had a “height” of more than 75 feet, which typically saw a high-rise building being of a “protected” type of construction. But if this code change is successful that will not be the case.

1.

Fire department access to the roof is important for life safety.

The logic associated with this comment appears to be that IF a building with an occupied roof is put into the high-rise category, there will then be improved fire department access that is not provided in a non-high-rise building. But that is not true. Just by putting a building with an occupied roof into the high-rise category, increased fire department access to the roof will not automatically improve. Other provisions of the code currently dictate that there must be exits from the roof, the number of exits, and the size/capacity of exits – all of which are used by the fire service for access. There is a general thinking that IF you have a high-rise building there will be fire service access elevators - but that is not true. Fire service access elevators are ONLY required when "... the occupied floor is more than 120 feet above the occupied floor more than 120 feet (36 576 mm) above the lowest level of fire department vehicle access." So, a building having an occupied roof located 76 feet above the lowest level of fire department vehicle access will be a high-rise building but will not be required to have fire service access elevators.

In addition, we want to emphasize the comments that were made/raised by opponents to this code change during the code action hearing – these included:

- The fact that over the past couple of code development there has been a concerted effort to put in place numerous revisions made to the IBC and IFC to address the whole "occupied roof" topic, including many geared to life safety, fire protection features and construction materials/methods. And in fact, this proposal is contrary to the intent of the language provided for in the current IBC in Section 503.1.4 (to which there were no code changes) which states:

503.1.4 Occupied roofs. *A roof level or portion thereof shall be permitted to be used as an occupied roof provided the occupancy of the roof is an occupancy that is permitted by Table 504.4 for the story immediately below the roof. The area of the occupied roofs shall not be included in the building area as regulated by Section 506. An occupied roof shall not be included in the building height or number of stories as regulated by Section 504, provided that the penthouses and other enclosed rooftop structures comply with Section 1511.*

- NO statistics or technical data was provided to show that the current regulations do not already adequately address the hazards that an occupied roof presents when placed on a building that is not a high-rise building.

- NO WHERE in the proponent's reason statement nor in testimony was there a real discussion of the cost impact this will have if successful – new or/and existing construction. Just how much more will it cost to build a building that has an occupied roof (@75ft Above Fire Department Vehicle Access) as a high-rise than one that is not a high-rise? I think we all know that it would be significant. When asked specifically about the impact on existing building the commentators indicated that the issue can be addressed through revisions to the IEBC in Group B. BUT no one has presented the beginnings of what this would look like. Without fully understanding how this change will affect both new and existing building and the costs involved, moving forward with a stand-alone change for only new buildings totally ignores the full impact this change could have.

- The proposed code change treats a very small area of occupied roof the same as a very large, occupied roof, nor does it provide any differentiation based on how that occupied roof is being used. What if a 1,000sf occupied roof were constructed on a building that has roof with an area of 30,000 sf? Does the placement of a space that is 10% of the roof area warrant the pushing the whole building into a high-rise category? This logic totally flies in the face of the mixed occupancy philosophy in IBC Section 508 where a space that is 10% or less of the floor area is NOT considered a separate occupancy for applying the code provisions.

- And how about the question – just exactly WHERE do you measure the 75 foot dimension to? Is this now to the top of the "roof" or the top of the floor system that sits on top of the roof? What if there are multiple occupied roofs on a single roof – all at different elevations?

- And please note that in this code development cycle there is a code change (S10-21) - which was Approved as Modified (12-1) – that introduced some much-needed regulations on the constructability of occupied roof. It included restrictions on the types of materials that can be used for the construction of occupied roofs, and restrictions on the voids that are created between the roof and the occupied roof.

The committee erred by recommending As Submitted when the proponent provided no justification for triggering so many additional systems when only a single person may be occupying a roof. There are real costs that should have been more closely scrutinized considering the proponent did not speak to the significant costs associated with providing the additional emergency systems.

In summary, by changing the definition of HIGH-RISE BUILDING, as approved in this proposal, the intent that occupying roofs should not trigger code provisions attributed to building height or number of stories has been circumvented. The change to the definition by G15-21 will now put into place requirements for sprinkler protection that were already covered by exception 1 from Section 503.1.4, as well as triggering the following emergency systems: smoke detection, fire alarm system, standpipe system, emergency voice/alarm communication system, emergency communication coverage, fire command center, smoke removal, and standby and emergency power required by Section 403.4. These additional features will be triggered by providing an occupied roof that is designed for an occupant load as low as a single person. Instead of changing the definition, the proponent should have identified and substantiated the specific provisions that were lacking and then proposed those specific changes within IBC Section 503.1.4.

PAZERA:

This proposal adds "occupied roofs" to the definition for "high-rise building", and thus unnecessarily expands the code requirements applicable to occupied roofs of all types and uses. Polyisocyanurate Insulation Manufacturers Association (PIMA) has number of concerns regarding the impacts this proposal will have on new but more importantly on existing buildings since this proposal significantly increases fire safety requirements for occupied roofs. The proposal impacts existing buildings and will likely require upgrades to comply with high-rise building provisions when the existing building is reclassified as a high-rise. This provision will be highly disruptive to building owners who will be burdened with extensive renovations in order to comply with high-rise building provisions. Fire safety concerns and fire safety risks for occupied roofs (open to the outdoor environment) are not equivalent to those in the occupied space (enclosed space). Enclosed spaces pose a more significant fire risk. Fire safety concerns for occupied roofs should be addressed through specific proposals that established requirements that are proportional to the fire safety risk. Treating any occupied roof as an occupied space ignores important differences in interior and exterior building locations and conditions. PIMA requests disapproval of proposal number G15-21.

TYREE:

This proposal is contrary to the intent of the language provided for in IBC Section 503.1.4 which states:

503.1.4 Occupied roofs. A roof level or portion thereof shall be permitted to be used as an occupied roof provided the occupancy of the roof is an occupancy that is permitted by Table 504.4 for the story immediately below the roof. The area of the occupied roofs shall not be included in the building area as regulated by Section 506. An occupied roof shall not be included in the building height or number of stories as regulated by Section 504, provided that the penthouses and other enclosed rooftop structures comply with Section 1511.

By changing the definition of HIGH-RISE BUILDING as approved in this proposal, the intent that occupying roofs should not trigger code provisions attributed to building height or number of stories has been circumvented. The change to the definition by G15-21 will now put into place requirements for sprinkler protection that were already covered by exception 1 from Section 503.1.4, as well as triggering the following emergency systems: smoke detection, fire alarm system, standpipe system, emergency voice/alarm communication system, emergency communication coverage, fire command center, smoke removal, and standby and emergency power) required by Section 403.4. These additional features will be triggered for a building designed to provide an occupied roof area to be used by just a single person. This interpretation will also throw many other questions into the mix. How do you classify the occupancy of occupied roof decks? Does the roof deck contribute to the building area? Does the height and area table (IBC Table 503) apply to the outdoor area? This is just the beginning.

If ever a evacuation of a high-rise roof built to modern codes has been hampered by the occupants or other fixtures on the roof, please identify those cases. The committee erred by recommending As Submitted when the proponent provided no justification for triggering so many additional systems when only a single person may be occupying a roof. There are real costs that should have been more closely scrutinized considering the proponent did not identify the significant costs associated with providing the additional systems.

Cost Impact: The net effect of the public comment and code change proposal will not increase or decrease the cost of construction. The original proposal AS could have a significant increase in building costs because of the additional system indicated in the reason.

The disapproval of the original proposal as requested in this public comment will result in that the technical criteria for high-rises would not change.

G16-21

Proposed Change as Submitted

Proponents: Lee Kranz, City of Bellevue, WA, representing Washington Association of Building Officials Technical Code Development Committee (lkranz@bellevuewa.gov)

2021 International Building Code

Revise as follows:

[BG] HIGH-RISE BUILDING. A building with an occupied roof having an occupant load of 50 or more, or an occupied floor, located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access.

Reason: In an October, 2019 article titled 'Through the roof: Occupied roofs in the 2018 IBC', Kim Paarlberg writes that "What has not been clarified is if an occupied roof is considered an occupied floor when determining does or does not have to meet the high-rise provisions in the code (definition of "high-rise building" and Section 403)". This code change is intended to address this lack of clarity.

High-rise buildings utilizing the new regulations in the 2021 IBC for occupied roofs are gaining in popularity with building owners and designers. In the current definition of *High-rise building*, we measure from the lowest level of fire department vehicle access to the highest 'occupied floor' and if located more than 75 feet above this point then it is considered a *high-rise building*. What is not clear is if an occupied roof is considered the same as an occupied floor. This code change corrects this ambiguity by adding an occupied roof with an occupant load of 50 or more to the definition. The proposal includes a threshold of 50 people before the occupied roof is applicable to the definition because it was felt that less than 50 is not considered to be assembly and with less than 50 people, it would be manageable in terms of meeting a timed egress analysis to get the occupants to a safe location.

The standard for determining if a building should be provided with all the additional safety measures required for a high-rise building has historically been based on the location of the highest occupied floor. This is due to the limitations of most fire department ladder trucks to reach occupants on the upper portions of the building. Occupied roofs are not considered to be a 'Story' for determining the maximum height of a building but regardless, these areas are occupied and would not be within the reach limitations of a fire department ladder truck if located more than 75 feet above the lowest level of fire department vehicle access. Based on this concept, occupied roofs should be considered the same as any other occupied floor of a building.

Cost Impact: The code change proposal will increase the cost of construction

The current definition of High-Rise Building is measured from the lowest level of fire department vehicle access to the highest occupied floor. If approved, this code change will define some buildings with an occupied roof as High-Rise which under the current definition, would be considered to be mid-rise. High-Rise buildings are more expensive to build because of the added life safety systems required in Section 403.

Staff note: G12-21, G14-21, G15-21, G16-21 addresses requirements in a different or contradicting manner. G14-21, G15-21 and G16-21 addresses similar requirements in a different manner to those found in current IBC Section 503.1.4. The committee is urged to make their intentions clear with their actions on these proposals.

G16-21

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: This proposal was disapproved as it could be read to apply to occupied roofs on any height building. There was also the question if someone could post an occupant load to limit the occupant load on the roof or if this needed to be the calculated occupant load. Concerns were raised that protection for occupied roofs were already addressed in other portions of the code, so having an occupied roof above the 75 foot height should not add the entire 'highrise' package of requirements - especially if the occupied roof was only a small portion of the overall roof. The proposal did not address the issue if a 'floor' is the floor of the story below the roof, a mezzanine in the top story, or what would be required for an occupied roof with elevated platforms on portions of the occupied roof. There was also a concern about the impact on existing building that wanted to add amenities on the roof. See also the Committee Action to G12, G14 and G15. (Vote: 9-4)

Staff Analysis: G12-21, G14-21, G15-21, G16-21 addresses requirements in a different or contradicting manner. G14-21, G15-21 and G16-21 addresses similar requirements in a different manner to those found in current IBC Section 503.1.4. The committee is urged to make their intentions clear with their actions on these proposals.

G16-21

Individual Consideration Agenda

Public Comment 1:

Proponents: David Tyree, representing AWC (dtyree@awc.org) requests As Submitted

Commenter's Reason: We are urging approval as submitted as proposed by WABO. G16-21 represents a common sense approach to handling issues related to occupants using the roof for other purposes and is the stated intent in Section 503.1.4. This proposal only goes further to clarify the intent of the language specified in IBC Section 503.1.4 which states:

503.1.4 Occupied roofs. A roof level or portion thereof shall be permitted to be used as an occupied roof provided the occupancy of the roof is an occupancy that is permitted by Table 504.4 for the story immediately below the roof. The area of the occupied roofs shall not be included in the building area as regulated by Section 506. An occupied roof shall not be included in the building height or number of stories as regulated by Section 504, provided that the penthouses and other enclosed rooftop structures comply with Section 1511.

By establishing an occupant load threshold of 50 occupants as specified in this proposal, it will clarify any misconceptions that this section would allow unsafe conditions to occur and specify a very limited number of occupants on the roof and providing the necessary fire safety requirements to safely protect those occupants.

Cost Impact: The net effect of the public comment and code change proposal will not increase or decrease the cost of construction. Establishing a low threshold of occupants on the roof does not increase or decrease any costs associated with this clarification.

Public Comment# 2317

G125-21

Proposed Change as Submitted

Proponents: Mike Nugent, Chair, representing ICC Building Code Action Committee (bcac@iccsafe.org)

2021 International Building Code

Revise as follows:

508.5 Live/work units. A *live/work unit* shall comply with Sections ~~508.5~~ 508.5.1 through 508.5.11. Live/work units complying with the requirements of Section 508.5.1 through 508.5.11 for the non-residential portion of the unit and that are within the scope of the *International Residential Code*, shall be permitted to be constructed in accordance with this code or the *International Residential Code*.

Exception: *Dwelling or sleeping units* that include an office that is less than 10 percent of the area of the *dwelling unit* ~~are~~ shall be permitted to be classified as *dwelling units* with accessory occupancies in accordance with Section 508.2.

508.5.1 Limitations. The following shall apply to live/work areas:

1. The *live/work unit* is permitted to be not greater than 3,000 square feet (279 m²) in area.
2. The nonresidential area is permitted to be not more than 50 percent of the area of each *live/work unit*.
3. The nonresidential area function shall be limited to the first or main floor only of the *live/work unit*.
4. Not more than five nonresidential workers or employees are allowed to occupy the nonresidential area at any one time.

508.5.2 Occupancies. *Live/work units* shall be classified as a Group R-2 occupancy. Separation requirements found in Sections 420 and 508 shall not apply within the *live/work unit* where the *live/work unit* is in compliance with Section 508.5. Nonresidential uses that would otherwise be classified as either a Group H or S occupancy shall not be permitted in a *live/work unit*.

Exception: Storage shall be permitted in the *live/work unit* provided that the aggregate area of storage in the nonresidential portion of the *live/work unit* shall be limited to 10 percent of the space dedicated to nonresidential activities.

508.5.3 Means of egress. Except as modified by this section, the *means of egress* components for a *live/work unit* shall be designed in accordance with Chapter 10 for the function served.

508.5.4 Egress capacity. The egress capacity for each element of the *live/work unit* shall be based on the *occupant load* for the function served in accordance with Table 1004.5.

508.5.5 Spiral stairways. *Spiral stairways* that conform to the requirements of Section 1011.10 shall be permitted.

Revise as follows:

508.5.6 Vertical openings. Floor openings between floor levels of a *live/work unit* ~~are~~ shall be permitted without enclosure.

[F] 508.5.7 Fire protection. The *live/work unit* shall be provided with a monitored *fire alarm* system where required by Section 907.2.9 and an *automatic sprinkler system* in accordance with Section 903.2.8.

508.5.8 Structural. Floors within a *live/work unit* shall be designed for the *live loads* in Table 1607.1, based on the function within the space.

508.5.9 Accessibility. *Accessibility* shall be designed in accordance with Chapter 11 for the function served.

508.5.10 Ventilation. The applicable *ventilation* requirements of the *International Mechanical Code* shall apply to each area within the *live/work unit* for the function within that space.

508.5.11 Plumbing facilities. The nonresidential area of the *live/work unit* shall be provided with minimum plumbing facilities as specified by Chapter 29, based on the function of the nonresidential area. Where the nonresidential area of the *live/work unit* is required to be accessible by Section 1108.6.2.1, the plumbing fixtures specified by Chapter 29 shall be accessible.

Reason: The intent of the proposal is to coordinate the IRC and IBC scoping. IRC Section 101.2 Exception 1 allows for live/work units to be constructed under the IRC. However, the IBC does not state this option in IBC Section 101.2 or this section.

During the discussions, there were concerns that the current requirements for complying with the IRC and the IBC could be a conflict for several of the items listed, such as means of egress, fire protection, structural and accessibility. The addition of 'for the non-residential portion of the unit' should help clarify that the means of egress, fire protection, structural loading and plumbing facilities for the business/mercantile portion of the unit needs to look at the IBC for requirements.

This is one of a group of proposals intended to coordinate the scoping items in IBC Section 101.2 and IRC 101.2. While the proposals work

together, then also work separately. The proposal for coordination will be in Group B.
This proposal is submitted by the ICC Building Code Action Committee (BCAC).

BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2020 the BCAC has held several virtual meetings open to any interested party. In addition, there were numerous virtual Working Group meetings for the current code development cycle, which included members of the committee as well as interested parties. Related documents and reports are posted on the BCAC website at BCAC.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This is a coordination of scoping requirements and references in the IBC and IRC, not a change to construction requirements.

Staff Note: G125-21 and G126-21 addresses requirements in a different or contradicting manner. The committee is urged to make their intentions clear with their actions on these proposals.

G125-21

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The proposal was disapproved as it still needs work since the wording is unclear. (Vote: 14-0)

Staff Analysis: G125-21 and G126-21 addresses requirements in a different or contradicting manner. The committee is urged to make their intentions clear with their actions on these proposals.

G125-21

Individual Consideration Agenda

Public Comment 1:

IBC: 508.5

Proponents: Mike Nugent, representing ICC Building Code Action Committee (bcac@iccsafe.org) requests As Modified by Public Comment

Modify as follows:

2021 International Building Code

508.5 Live/work units . A *live/work unit* shall comply with Sections 508.5.1 through 508.5.11. Live/work units complying with the requirements of Section 508.5.1 through 508.5.11 for the non-residential portion of the unit and that are townhouses within the scope of the *International Residential Code*, shall be permitted to ~~be have the residential portion~~ be constructed in accordance with this code or the *International Residential Code* and Section 508.5.7 .

Exception: *Dwelling or sleeping units* that include an office that is less than 10 percent of the area of the *dwelling unit* shall be permitted to be classified as *dwelling units* with accessory occupancies in accordance with Section 508.2.

Commenter's Reason: The primary intent of this proposal is to match the scoping allowances in the IRC. This public comment proposal addresses concerns raised during the testimony. Adding 'townhouses' and 'residential portion' in addition to 'within the scope of the IRC' emphasized the limitations for what can be constructed under the IRC and clarifies that this is not permitted for apartment buildings. (G126 Part 2 AM expanded on the fire protection requirements for live/work units in Section 508.5.7 and added the sprinkler requirements specific to live/work units constructed under the IRC.) The non-residential portion staying with the scope of the IBC will address the concerns raised for structural loads. The modification to the exception is strictly correlation – the main text is about dwelling units, so the exception should not include sleeping units.

Cost Impact: The net effect of the public comment and code change proposal will not increase or decrease the cost of construction
This is a coordination of scoping requirements and references in the IBC and IRC, not a change to construction requirements.

Public Comment# 2684

Public Comment 2:

IBC: 508.5

Proponents: Jeffrey Shapiro, representing Self (jeff.shapiro@intlcodeconsultants.com) requests As Modified by Public Comment

Replace as follows:

2021 International Building Code

508.5 Live/work units . ~~All~~ Live/work units shall comply with one of the following:

1. For a live/work unit located in a building constructed in accordance with this code, both the residential and non-residential portions of the live/work unit shall comply with Sections 508.5 through 508.5.11.
2. For a live/work unit located in a building constructed in accordance with the International Residential Code, the non-residential portion of the live/work unit shall comply with Sections 508.5.1 through 508.5.11, and the residential portion of the live/work unit shall be constructed in accordance with the International Residential Code and Section 508.5.7.

Exception: *Dwelling or sleeping units* that include an office that is less than 10 percent of the area of the *dwelling unit* are permitted to be classified as *dwelling units* with accessory occupancies in accordance with Section 508.2.

Commenter's Reason: This public comment represents an effort to coordinate and collaborate proposals G125 and G126, Part 1. I withdrew proposal G126, Part 1 in an effort to consolidate discussion of these items, but the online hearing format and the pressure to speed discussion prevented thorough consideration of this topic, including consideration of a floor modification that included this text. G126, Part 2 was approved, and it is important that the companion effort to clean up the remainder of the live/work provisions be completed.

Cost Impact: The net effect of the public comment and code change proposal will not increase or decrease the cost of construction. Intent of this public comment is to clarify existing code requirements.

G126-21 Part II

Proposed Change as Submitted

Proponents: Jeffrey Shapiro, representing Self (jeff.shapiro@intlcodeconsultants.com)

2021 International Building Code

Revise as follows:

[F] 508.5.7 Fire protection. ~~The~~

~~live- Live/work unit units constructed in accordance with this code shall comply with be provided with a monitored fire alarm system where required by Section 907.2.9 and be provided with all of the following:~~

1. An automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 903.2.8.
2. Smoke alarms in accordance with Section 907.2.11.
3. Where required by Section 907.2.9.1, a manual fire alarm system.

Live/work units constructed in accordance with the International Residential Code shall be provided with an automatic sprinkler system and smoke alarms. The automatic sprinkler system shall comply with International Residential Code Section P2904, and smoke alarms shall comply with International Residential Code Section 314.

Reason: Currently, some live/work units are permitted to be constructed under the IRC, per the IRC scope, but the IRC scope references back to IBC Section 508.5 for additional specific requirements. So presumably, IRC live/work units are constructed to the IRC, except as modified by IBC Section 508.5. On the other hand, IBC live/work units are constructed to the IBC, including Section 508.5. This proposal more clearly states that approach.

In addition, the fire protection requirements have been edited to clarify the allowance to use fire protection requirements in the IRC for IRC live/work units. It does not appear that the intent of membership in establishing live/work provisions was requiring IRC live/work units to comply with IBC Group R2 fire protection requirements. Plus, the IBC fire protection requirements have been clarified/improved by directly referencing the two applicable sprinkler standards for Group R2 vs. sending the user to another code section to receive the references, and the requirement for smoke alarms has been added for completeness.

Regarding fire alarms for live/work units under the IBC, there are not and never have been any special live/work requirements. Instead, the requirements are based on the general Group R2 occupancy triggers and exceptions found in Section 907.2.9.1, which often won't require a fire alarm system for live/work units based on the exceptions. The reference to "monitored" systems has been dropped, as monitoring requirements will be determined by Section 907.

Cost Impact: The code change proposal will decrease the cost of construction

By clearly conveying that IRC live/work units do not have to meet IBC fire protection requirements, the cost of construction for live/work units may be reduced.

Staff Note: G125-21 and G126-21 addresses requirements in a different or contradicting manner. The committee is urged to make their intentions clear with their actions on these proposals.

G126-21 Part II

Public Hearing Results

Committee Action:

As Modified

Committee Modification:

[F] 508.5.7 Fire protection. Live/work units in buildings constructed in accordance with this code shall be provided with all of the following:

1. An automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 .
2. Smoke alarms in accordance with Section 907.2.11.
3. Where required by Section 907.2.9.1, a manual fire alarm system.

Live/work units in buildings constructed in accordance with the International Residential Code shall be provided with an automatic sprinkler

system and *smoke alarms*. The *automatic sprinkler system* shall comply with *International Residential Code* Section P2904, and *smoke alarms* shall comply with *International Residential Code* Section 314.

Committee Reason: The committee stated that the reason for the approval of the modification was that it clarifies the requirement by specifying that the live work units are in buildings. The reason for the approval of the proposal is that it improves the intent of the requirements and gives the correct code citations for the various items in the list. (Vote: 14-0)

Staff Analysis: G125-21 and G126-21 addresses requirements in a different or contradicting manner. The committee is urged to make their intentions clear with their actions on these proposals.

G126-21 Part II

Individual Consideration Agenda

Public Comment 1:

IBC: [F] 508.5.7

Proponents: Mike Nugent, representing ICC Building Code Action Committee (bcac@iccsafe.org) requests As Modified by Public Comment

Further modify as follows:

2021 International Building Code

[F] 508.5.7 Fire protection . ~~Live/work units in buildings~~ constructed in accordance with this code shall be provided with all of the following:

1. An *automatic sprinkler system* in accordance with Section 903.3.1.1 ~~, or~~ 903.3.1.2 ~~or~~ 903.3.1.3.
2. *Smoke alarms* in accordance with Section 907.2.11.
3. Where required by Section 907.2.9.1, a manual *fire alarm system*.

~~Live/work units in buildings~~ constructed in accordance with the *International Residential Code* shall be provided with an *automatic sprinkler system* and *smoke alarms*. The *automatic sprinkler system* shall comply with *International Residential Code* Section P2904, and *smoke alarms* shall comply with *International Residential Code* Section 314.

Commenter's Reason: The modification to add 'in buildings' is not consistent with the remainder of the requirements for Live/work units. This brings up unnecessary questions about fire wall and separation requirements that do not affect this requirement. Townhouse are within the scope of an NFPA13D system, so this should not have been removed as an option simply because these townhouses are classified as Group R-2. Live/work units that are constructed with the IRC can use the system comparable to NFPA 13D. To have a higher level for IBC is not consistent application and would force many more live work units to the IRC.

This public comment is submitted by the ICC Building Code Action Committee (BCAC).

BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2020 and 2021 the BCAC has held several virtual meetings open to any interested party. In addition, there were numerous virtual Working Group meetings for the current code development cycle, which included members of the committee as well as interested parties. Related documents and reports are posted on the BCAC website at BCAC.

Cost Impact: The net effect of the public comment and code change proposal will decrease the cost of construction

By clearly conveying that IRC live/work units do not have to meet IBC fire protection requirements, the cost of construction for live/work units may be reduced.

Public Comment# 2685

NOTE: G126-21 PART I DID NOT RECEIVE A PUBLIC COMMENT AND IS REPRODUCED FOR INFORMATIONAL PURPOSES ONLY

G126-21 Part I

Proposed Change as Submitted

Proponents: Jeffrey Shapiro, representing Self (jeff.shapiro@intlcodeconsultants.com)

THIS IS A 2 PART CODE CHANGE. PART I WILL BE HEARD BY THE GENERAL CODE COMMITTEE. PART II WILL BE HEARD BY THE FIRE CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THESE COMMITTEES.

2021 International Building Code

Revise as follows:

508.5 Live/work units. In addition to other requirements of this code ~~A live/work unit~~ units shall comply with Sections 508.5 through 508.5.11.

Exception Exceptions:

1. Dwelling or sleeping units that include an office that is less than 10 percent of the area of the dwelling unit are permitted to be classified as dwelling units with accessory occupancies in accordance with Section 508.2.
2. Live/work units complying with the *International Residential Code* shall not be required to comply with requirements of this code, other than requirements in Section 508.5.

Reason: Currently, some live/work units are permitted to be constructed under the IRC, per the IRC scope, but the IRC scope references back to IBC Section 508.5 for additional specific requirements. So presumably, IRC live/work units are constructed to the IRC, except as modified by IBC Section 508.5. On the other hand, IBC live/work units are constructed to the IBC, including Section 508.5. This proposal more clearly states that approach.

In addition, the fire protection requirements have been edited to clarify the allowance to use fire protection requirements in the IRC for IRC live/work units. It does not appear that the intent of membership in establishing live/work provisions was requiring IRC live/work units to comply with IBC Group R2 fire protection requirements. Plus, the IBC fire protection requirements have been clarified/improved by directly referencing the two applicable sprinkler standards for Group R2 vs. sending the user to another code section to receive the references, and the requirement for smoke alarms has been added for completeness.

Regarding fire alarms for live/work units under the IBC, there are not and never have been any special live/work requirements. Instead, the requirements are based on the general Group R2 occupancy triggers and exceptions found in Section 907.2.9.1, which often won't require a fire alarm system for live/work units based on the exceptions. The reference to "monitored" systems has been dropped, as monitoring requirements will be determined by Section 907.

Cost Impact: The code change proposal will decrease the cost of construction

By clearly conveying that IRC live/work units do not have to meet IBC fire protection requirements, the cost of construction for live/work units may be reduced.

Staff Note: G125-21 and G126-21 addresses requirements in a different or contradicting manner. The committee is urged to make their intentions clear with their actions on these proposals.

G126-21 Part I

Public Hearing Results

Committee Action:

Withdrawn

Staff Analysis: G125-21 and G126-21 addresses requirements in a different or contradicting manner. The committee is urged to make their intentions clear with their actions on these proposals.

G126-21 Part I

Proposed Change as Submitted

Proponents: Curtis Gonzales, Smoke Guard, Inc., representing Smoke Guard, Inc. (curtis.gonzales@smokeguard.com); Amanda Hickman, representing SmokeGuard, Inc. (amanda@thehickmangroup.com)

2021 International Building Code

Add new definition as follows:

SMOKE PROTECTIVE CURTAIN ASSEMBLY FOR HOISTWAY. An automatic closing smoke and draft control curtain assembly.

Revise as follows:

3006.3 Hoistway opening protection. Where Section 3006.2 requires protection of the elevator hoistway door opening, the protection shall be provided by one of the following:

1. An enclosed elevator lobby shall be provided at each floor to separate the elevator hoistway *shaft enclosure* doors from each floor by *fire partitions* in accordance with Section 708. In addition, doors protecting openings in the elevator lobby enclosure walls shall comply with Section 716.2.2.1 as required for *corridor* walls. Penetrations of the enclosed elevator lobby by ducts and air transfer openings shall be protected as required for *corridors* in accordance with Section 717.5.4.1.
2. An enclosed elevator lobby shall be provided at each floor to separate the elevator hoistway *shaft enclosure* doors from each floor by *smoke partitions* in accordance with Section 710 where the building is equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2. In addition, doors protecting openings in the *smoke partitions* shall comply with Sections 710.5.2.2, 710.5.2.3 and 716.2.6.1. Penetrations of the enclosed elevator lobby by ducts and air transfer openings shall be protected as required for *corridors* in accordance with Section 717.5.4.1.
3. Additional doors shall be provided at each elevator hoistway door opening in accordance with Section 3002.6. Such ~~door doors~~ shall comply with the smoke and draft control door assembly requirements in Section 716.2.2.1.1 when tested in accordance with UL 1784 without an artificial bottom seal.
4. The elevator hoistway shall be pressurized in accordance with Section 909.21.
5. A smoke protective curtain assembly for hoistways shall be provided at each elevator hoistway door opening in accordance with Section 3002.6. Such curtain assemblies shall comply with the smoke and draft control requirements in Section 716.2.2.1.1 when tested in accordance with UL 1784 without an artificial bottom seal. Such curtain assemblies shall be equipped with a control unit listed to UL 864. Such curtain assemblies shall comply with section 2.11.6.3 of ASME A17.1/CSA B44. Installation and maintenance shall be in accordance with NFPA 105

Reason: *Smoke protective curtain assemblies for hoistways* are recognized and regulated in NFPA 105 Chapter 9 (2019). There are multiple manufactures of these assemblies in the market. These products have been in the market for 25 years with tens of thousands of successful installations. Smoke protective curtain assemblies provide a proven means for smoke and draft control at the hoistway door that enables design freedom and innovation. Smoke protective curtain assemblies for hoistways should be allowed to provide smoke and draft protection where enclosed elevator lobbies are not required.

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

The cost of this option for hoistway opening protection is offset by the cost of other forms of protection. As such, the cost of construction for adding option five does not raise or lower the cost of construction.

G185-21

Public Hearing Results

Committee Action:

As Submitted

Committee Reason: The proposal was approved as this modification allows for smoke protective curtain assemblies to be used at elevator doors to meet the smoke protection requirements for rated corridors. The UL 864 listing for the controller is appropriate. Some committee members felt this option was already permitted as an alternative to Section 3006.3 Item 3. (Vote: 8-7)

G185-21

Individual Consideration Agenda

Public Comment 1:

IBC: SECTION 202, 3006.3

Proponents: Amanda Hickman, representing SmokeGuard, Inc. (amanda@thehickmangroup.com) requests As Modified by Public Comment

Modify as follows:

2021 International Building Code

SMOKE PROTECTIVE CURTAIN ASSEMBLY FOR HOISTWAY. ~~An automatic closing~~ A listed smoke and draft control curtain assembly consisting of a curtain coil, control unit, and parameter sealing system.

3006.3 Hoistway opening protection. Where Section 3006.2 requires protection of the elevator hoistway door opening, the protection shall be provided by one of the following:

1. An enclosed elevator lobby shall be provided at each floor to separate the elevator hoistway *shaft enclosure* doors from each floor by *fire partitions* in accordance with Section 708. In addition, doors protecting openings in the elevator lobby enclosure walls shall comply with Section 716.2.2.1 as required for *corridor* walls. Penetrations of the enclosed elevator lobby by ducts and air transfer openings shall be protected as required for *corridors* in accordance with Section 717.5.4.1.
2. An enclosed elevator lobby shall be provided at each floor to separate the elevator hoistway *shaft enclosure* doors from each floor by *smoke partitions* in accordance with Section 710 where the building is equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2. In addition, doors protecting openings in the *smoke partitions* shall comply with Sections 710.5.2.2, 710.5.2.3 and 716.2.6.1. Penetrations of the enclosed elevator lobby by ducts and air transfer openings shall be protected as required for *corridors* in accordance with Section 717.5.4.1.
3. Additional doors shall be provided at each elevator hoistway door opening in accordance with Section 3002.6. Such doors shall comply with the smoke and draft control door assembly requirements in Section 716.2.2.1.1 when tested in accordance with UL 1784 without an artificial bottom seal.
4. The elevator hoistway shall be pressurized in accordance with Section 909.21.
5. ~~A~~ An automatic closing smoke protective curtain assembly for hoistways shall be provided at each elevator hoistway door opening in accordance with Section 3002.6. Such smoke protective curtain assemblies shall comply with the smoke and draft control requirements in Section 716.2.2.1.1 when tested in accordance with UL 1784 without an artificial bottom seal. Such smoke protective curtain assemblies shall be equipped with a control unit listed to UL 864. Such smoke protective curtain assemblies shall comply with section 2.11.6.3 of ASME A17.1/CSA B44. Installation and maintenance shall be in accordance with NFPA 105

Commenter's Reason: The committee approved this proposal. However, there were comments made regarding the definition and so we offer this public comment to satisfy the feedback that was received during the hearing. Smoke protective curtain assemblies for hoistways are recognized and regulated in NFPA 105 Chapter 9 (2019). There are multiple manufactures of these assemblies in the market. These products have been in the market for 25 years with tens of thousands of successful installations. Smoke protective curtain assemblies provide a proven means for smoke and draft control at the hoistway door that enables design freedom and innovation. Smoke protective curtain assemblies for hoistways working in conjunction with fire resistive rated hoistway doors should be allowed to provide smoke and draft protection where enclosed elevator lobbies are required.

Cost Impact: The net effect of the public comment and code change proposal will not increase or decrease the cost of construction. This comment is editorial and will not affect the cost of construction.