BUILDING CODE ACTION COMMITTEE MEETING
IRC GENERAL WORK GROUP

APRIL 11-12, 2019 MEETING

GROUP B 2019

EB63-19 Part I

IEBC: 505.2, 505.3, 505.3.1 (New), 505.4, 702.4, 702.5 , 702.5.1 (New), 701.4;

IRC: R310.2.5, AJ102.4.3, AJ102.4.3.1 (New), AJ102.4.4

Proponent: Ed Kulik, representing ICC Building Code Action Committee (bcac@iccsafe.org)

THIS IS A 2 PART CODE CHANGE PROPOSAL. PART I WILL BE HEARD THE IEBC COMMITTEE, PART II WILL BE HEARD BY THE IRC-BUILDING COMMITTEE. PLEASE SEE THE TENTATIVE HEARING ORDERS FOR THE RESPECTIVE COMMITTEES.

2018 International Existing Building Code

Revise as follows:

5 PRESCRIPTIVE COMPLIANCE METHOD

SECTION 505
WINDOWS AND EMERGENCY ESCAPE OPENINGS

505.1 Replacement glass. The installation or replacement of glass shall be as required for new installations.

505.2 ~~Replacement window~~ Window opening control devices on replacement windows. In Group R-2 or R-3 buildings containing dwelling units, and one- and two-family dwellings and townhouses regulated by the International Residential Code , window opening control devices or fall prevention devices complying with ASTM F2090 shall be installed where an existing window is replaced and where all of the following apply to the replacement window:

1. The window is operable.
2. The window replacement includes replacement of the sash and the frame.
3. One of the following applies:
   3.1. In Group R-2 or R-3 buildings containing dwelling units, the ~~top~~ bottom of the ~~sill~~ clear opening of the window opening is at a height less than 36 inches (915 mm) above the finished floor.
   3.2. In one- and two-family dwellings and townhouses regulated by the International Residential Code , the ~~top~~ bottom of the ~~sill~~ clear opening of the window opening is at a height less than 24 inches (610 mm) above the finished floor.
4. The window will permit openings that will allow passage of a 4-inch-diameter (102 mm) sphere when the window is in its largest opened position.
5. The vertical distance from the ~~top~~ bottom of the ~~sill~~ clear opening of the window opening to the finished grade or other surface below, on the exterior of the building, is greater than 72 inches (1829 mm).

~~The window opening control device, after operation to release the control device allowing the window to fully open, shall not reduce the minimum net clear opening area of the window unit to less than the area required by Section 1030.2 of the International Building Code.~~

~~Exceptions:~~ Exception:

~~1.~~ Operable windows where the ~~top~~ bottom of the ~~sill~~ clear opening of the window opening is located more than 75 feet (22 860 mm) above the finished grade or other surface below, on the exterior of the room, space or building, and that are provided with window fall prevention devices that comply with ASTM F2006.

~~2. Operable windows with openings that are provided with window fall prevention devices that comply with ASTM F2090.~~

505.3 Replacement window for emergency escape and rescue openings. Where windows are required to provide *emergency escape* and *rescue openings* in Group R-2 and R-3 occupancies and one- and two-family dwellings and townhouses regulated by the International Residential Code, replacement windows shall be exempt from the requirements of Sections 1030.2~~, 1030.3~~ and 1030.4 of the International Building Code and Sections ~~R310.2.1, R310.2.2 and R310.2.3~~ R310.2 and R310.4 of the International Residential Code, provided that the replacement window meets the following conditions:

1. The replacement window is the manufacturer's largest standard size window that will fit within the existing frame or existing rough opening. The replacement window shall be permitted to be of the same operating style as the existing window or a style that provides for an equal or greater window opening area than the existing window.
2. ~~The~~ Where the replacement of the window is ~~not~~ part of a *change of occupancy* it shall comply with Section 1011.4.6. ~~Window opening control devices complying with ASTM F2090 shall be permitted for use on windows required to provide emergency escape and rescue openings.~~

Add new text as follows:

505.3.1 Control devices. Emergency escape and rescue openings with window opening control devices or fall prevention devices complying with ASTM F2090, after operation to release the control device allowing the window to fully open, shall not reduce the net clear opening area of the window unit. Emergency escape and rescue openings shall be operational from the inside of the room without the use of keys or tools.

Revise as follows:

505.4 ~~Emergency escape and rescue openings.~~ Bars, grilles, covers or screens. ~~Emergency escape and rescue openings shall be operational from the inside of the room without the use of keys or tools.~~ Bars, grilles , covers, ~~grates~~ screens or similar devices are permitted to be placed over emergency escape and rescue openings ~~provided that the~~ , bulkhead enclosure or window wells that serve such openings, provided all of the following conditions are met::

1. The minimum net clear opening size complies with the code that was in effect at the time of construction ~~and such~~
2. Such devices shall be releasable or removable from the inside without the use of a key, tool or force greater than that which is required for normal operation of the escape and rescue opening.
3. Where such ~~bars, grilles, grates or similar~~ devices are installed, they shall not reduce the net clear opening of the emergency escape and rescue openings.
4. Smoke alarms shall be installed in accordance with Section 907.2.10 of the International Building Code ~~regardless of the valuation of the *alteration*.~~

SECTION 702
BUILDING ELEMENTS AND MATERIALS

702.4 Window opening control devices on replacement windows. In Group R-2 or R-3 buildings containing dwelling units and one- and two-family dwellings and townhouses regulated by the International Residential Code, window opening control devices or fall prevention devices complying with ASTM F2090 shall be installed where an existing window is replaced and where all of the following apply to the replacement window:

1. The window is operable.
2. The window replacement includes replacement of the sash and the frame.
3. One of the following applies:
   3.1. In Group R-2 or R-3 buildings containing dwelling units, the ~~top~~ bottom of the ~~sill of~~ clear opening of the window opening is at a height less than 36 inches (915 mm) above the finished floor.
   3.2. In one- and two-family dwellings and townhouses regulated by the International Residential Code , ~~the top sill~~ the bottom of the clear opening of the window opening is at a height less than 24 inches (610 mm) above the finished floor.
4. The window will permit openings that will allow passage of a 4-inch-diameter (102 mm) sphere when the window is in its largest opened position.
5. The vertical distance from the ~~top~~ bottom of the ~~sill~~ clear opening of the window opening to the finished grade or other surface below, on the exterior of the building, is greater than 72 inches (1829 mm)~~.~~

~~The window opening control device, after operation to release the control device allowing the window to fully open, shall not reduce the minimum net clear opening area of the window unit to less than the area required by Section 1030.2 of the International Building Code.~~

~~Exceptions:~~ Exception:

~~1.~~ Operable windows where the ~~top~~ bottom of the ~~sill~~ clear opening of the window opening is located more than 75 feet (22 860 mm) above the finished grade or other surface below, on the exterior of the room, space or building, and that are provided with window fall prevention devices that comply with ASTM F2006.

~~2. Operable windows with openings that are provided with window fall prevention devices that comply with ASTM F2090~~

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702.5 Replacement window for emergency escape and rescue openings. Where windows are required to provide emergency escape and rescue openings in Group R-2 and R-3 occupancies and one- and two-family dwellings and townhouses regulated by the International Residential Code , replacement windows shall be exempt from the requirements of Sections ~~1030.2,~~ ~~1030.3~~ 1030.2 and 1030.4 of the International Building Code and Sections ~~R310.2.1,~~ ~~R310.2.2~~ ~~and~~ ~~R310.2.3~~ ~~of~~ R310.2and R310.4 of the International Residential Code, provided that the replacement window meets the following conditions:

1. The replacement window is the manufacturer's largest standard size window that will fit within the existing frame or existing rough opening.
2. ~~The~~ Where the replacement window is ~~not~~ part of a *change of occupancy* it shall comply with Section 1011.4.6.

~~Window opening control devices complying with ASTM F2090 shall be permitted for use on windows required to provide *emergency escape* and *rescue openings*~~

Add new text as follows:

702.5.1 Control devices. Emergency escape and rescue openings with Window opening control devices or fall prevention devices complying with ASTM F2090, after operation to release the control device allowing the window to fully open, shall not reduce the net clear opening area of the window unit. Emergency escape and rescue openings shall be operational from the inside of the room without the use of keys or tools.

Revise as follows:

~~**701.4**~~ **702.6** ~~**Emergency escape and rescue openings.**~~ **Bars, grilles, covers or screens.** ~~Emergency escape and rescue openings shall be operational from the inside of the room without the use of keys or tools.~~ Bars, grilles, ~~grates~~ covers, screens or similar devices are permitted to be placed over emergency escape and rescue openings ~~,~~ ~~shall comply with the~~ bulkhead enclosure or window wells that serve such openings, provided all of the following conditions are met::

1. The minimum net clear opening size ~~required by~~ complies with the code that was in effect at the time of construction.
2. Such devices shall be releasable or removable from the inside without the use of a key, tool or force greater than that which is required for normal operation of the escape and rescue opening.
3. Where such ~~bars, grilles, grates or similar~~ devices are installed, they shall not reduce the net clear opening of the emergency escape and rescue openings.
4. Smoke alarms shall be installed in accordance with Section 907.2.10 of the International Building Code ~~regardless of the valuation of the *alteration*~~.

Reason: The intent of this proposal is coordination with the requirements in existing buildings for the following:

Replacement windows with opening control devices or fall prevention devices
Replacement window emergency escape and rescue openings (EEROs)
Replacement windows that have to comply with both
Bars and grills over area wells

The main intent of this proposal is to coordinate criteria in the IEBC and IRC. Part of this will be to separate the requirements into distinct sections. They are now mixed. It is not the intent to add items where they are not currently required. IRC appendix J does not address Item 4 and IRC Section 319 does not address Item 1, 3 or 4.

Item 1

IEBC Section 404.2 and 702.4, IRC AJ102.3.3 - F2020 includes provisions for opening control devices and fall prevention devices. By putting this in the main text, Exception 2 is not needed. (Since the IRC only deals with buildings 3 stories or less, it does not need the exception for devices permitted in taller buildings.) The term "bottom of the clear opening" is easier to determine and measure than "top of sill". This term is consistent with the proposals for new windows. The information under Item 5 has been relocated to the section dealing with Item 3.

Item 2

IEBC Section 505.3, 702.5, and IRC AJ102.4.3 and R310.7 - The changes in the references have to technical change. They match the package for IBC and IRC EERO requirements. The language dealing with control devices has been relocated to the section dealing with Item 3.

Item 3

IEBC Section 505.3.1, 702.5.1 and IRC Section AJ102.4.3.1 - This section includes the criteria for opening control devices and fall prevention devices on EEROs.

Item 4

IEBC 505.4 and 702.6. - The revisions are consistent in what was approved for IBC Section 1030.5 and IRC Section 310.4 in the 2018 codes. Section 701.4 should be relocated to the window provisions. That would be consistent with the organization for EEROs in IBC and IRC and the IEBC prescriptive method.
This is one of a series of proposal to coordinate the requirements for emergency escape and rescue openings in the IBC and IRC. While independent issues, if all the proposals are approved, the IRC section would appear as indicated in the reason for the proposal to revise the definition – emergency escape and rescue openings.

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. Since 2017 the BCAC has held 6 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as w ell as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-actioncommittee-bcac.

Cost Impact: This is a correllation item between codes.

EB63-19 Part II

IRC®: R310.6 (New), R310.2.5 (New), SECTION AJ102 (New), AJ102.4 (New), AJ102.4.3 (New), AJ102.4.3.1 (New), AJ102.4.4 (New)

Proponent: Ed Kulik, representing ICC Building Code Action Committee (bcac@iccsafe.org)

2018 International Residential Code

Revise as follows:

R310.6 Alterations or repairs of existing basements. An emergency escape and rescue opening is not required where existing *basements* undergo alterations or repairs.

Exception: New sleeping rooms created in an existing *basement* shall be provided with emergency escape and rescue openings in accordance with Section R310.1.

~~**R310.2.5**~~ **R310.7 Replacement ~~windows.~~ windows for emergency escape and rescue openings.** Replacement windows installed in buildings meeting the scope of this code shall be exempt from ~~the maximum sill height requirements of Section R310.2.2 and the requirements of Section R310.2.1~~ Section R310.2 and R310.4, provided that the replacement window meets the following conditions:

1. The replacement window is the manufacturer's largest standard size window that will fit within the existing frame or existing rough opening. The replacement window is of the same operating style as the existing window or a style that provides for an equal or greater window opening area than the existing window.
2. ~~The~~ Where the replacement window is not part of a change of occupancy.

SECTION AJ102
COMPLIANCE

AJ102.4 Replacement windows. Regardless of the category of work, where an existing window, including the sash and glazed portion, or safety glazing is replaced, the replacement window or safety glazing shall comply with the requirements of Sections AJ102.4.1 through AJ102.4.4, as applicable.

AJ102.4.3 ~~Emergency~~ Replacement windows for emergency escape and rescue openings. Where windows are required to provide emergency escape and rescue openings, replacement windows shall be exempt from ~~the maximum sill height requirements of Section R310.2.2 and the requirements of Sections R310.2.1 and R310.2.3 provided~~ Sections R310.2 and R310.4 provided that the replacement window meets the following conditions:

1. The replacement window is the manufacturer's largest standard size window that will fit within the existing frame or existing rough opening. The replacement window shall be permitted to be of the same operating style as the existing window or a style that provides for an equal or greater window opening area than the existing window.
2. ~~The~~ Where the replacement window is not part of a change of occupancy.
3. ~~Window opening control devices complying with ASTM F2090 shall be permitted for use on windows required to provide emergency escape and rescue openings.~~

Add new text as follows:

AJ102.4.3.1 Control devices. Emergency escape and rescue openings with window opening control devices or fall prevention devices complying with ASTM F2090, after operation to release the control device allowing the window to fully open, shall not reduce the net clear opening area of the window unit. Emergency escape and rescue openings shall be operational from the inside of the room without the use of keys or tools.

Revise as follows:

AJ102.4.4 Window control devices. ~~Where window~~ Window opening control devices or fall prevention devices complying with ASTM F2090 ~~are not provided, window opening control devices complying with ASTM F2090~~shall be installed where an existing window is replaced and where all of the following apply to the replacement window:

1. The window is operable.
2. The window replacement includes replacement of the sash and the frame.
3. The ~~top~~ bottom of the ~~sill of~~ clear opening of the window opening is at a height less than 24 inches (610 mm) above the finished floor.
4. The window will permit openings that will allow passage of a 4-inch-diameter (102 mm) sphere where the window is in its largest opened position.
5. The vertical distance from the ~~top~~ bottom of the ~~sill~~ clear opening of the window opening to the finished grade or other surface

below, on the exterior of the building, is greater than 72 inches (1829 mm).

~~The window opening control device, after operation to release the control device allowing the window to fully open, shall not reduce the minimum net clear opening area of the window unit.~~

Reason: The intent of this proposal is coordination with the requirements in existing buildings for the following:

Replacement windows with opening control devices or fall prevention devices
Replacement window emergency escape and rescue openings (EEROs)
Replacement windows that have to comply with both
Bars and grills over area wells

The main intent of this proposal is to coordinate criteria in the IEBC and IRC. Part of this will be to separate the requirements into distinct sections. They are now mixed. It is not the intent to add items where they are not currently required. IRC appendix J does not address Item 4 and IRC Section 319 does not address Item 1, 3 or 4.

Item 1

IEBC Section 404.2 and 702.4, IRC AJ102.3.3 - F2020 includes provisions for opening control devices and fall prevention devices. By putting this in the main text, Exception 2 is not needed. (Since the IRC only deals with buildings 3 stories or less, it does not need the exception for devices permitted in taller buildings.) The term "bottom of the clear opening" is easier to determine and measure than "top of sill". This term is consistent with the proposals for new windows. The information under Item 5 has been relocated to the section dealing with Item 3.

Item 2

IEBC Section 505.3, 702.5, and IRC AJ102.4.3 and R310.7 - The changes in the references have to technical change. They match the package for IBC and IRC EERO requirements. The language dealing with control devices has been relocated to the section dealing with Item 3.

Item 3

IEBC Section 505.3.1, 702.5.1 and IRC Section AJ102.4.3.1 - This section includes the criteria for opening control devices and fall prevention devices on EEROs.

Item 4

IEBC 505.4 and 702.6. - The revisions are consistent in what was approved for IBC Section 1030.5 and IRC Section 310.4 in the 2018 codes. Section 701.4 should be relocated to the window provisions. That would be consistent with the organization for EEROs in IBC and IRC and the IEBC prescriptive method.
This is one of a series of proposal to coordinate the requirements for emergency escape and rescue openings in the IBC and IRC. While independent issues, if all the proposals are approved, the IRC section would appear as indicated in the reason for the proposal to revise the definition – emergency escape and rescue openings.

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. Since 2017 the BCAC has held 6 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as w ell as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-actioncommittee-bcac.

Cost Impact: This is a correllation item between codes.

EB101-19 Part I

IEBC: 1011.4.1, 1011.4.6 (New), 506.4 (New); IRC: R310.5, R310.6, 310.9.1 (New)

Proponent: Ed Kulik, representing ICC Building Code Action Committee (bcac@iccsafe.org)

THIS IS A 2 PART CODE CHANGE PROPOSAL. PART I WILL BE HEARD THE IEBC COMMITTEE, PART II WILL BE HEARD BY THE IRC-BUILDING COMMITTEE. PLEASE SEE THE TENTATIVE HEARING ORDERS FOR THE RESPECTIVE COMMITTEES.

2018 International Existing Building Code

Revise as follows:

SECTION 1011
CHANGE OF OCCUPANCY CLASSIFICATION

1011.4 Means of egress, general. Hazard categories in regard to life safety and means of egress shall be in accordance with Table 1011.4.

TABLE 1011.4
MEANS OF EGRESS HAZARD CATEGORIES

RELATIVE HAZARD	OCCUPANCY CLASSIFICATIONS
1 (Highest Hazard)	H
2	I-2; I-3; I-4
3	A; E; I-1; M; R-1; R-2; R-4, Condition 2
4	B; F-1; R-3; R-4, Condition 1; S-1
5 (Lowest Hazard)	F-2; S-2; U

1011.4.1 Means of egress for change to a higher-hazard category. Where a change of occupancy classification is made to a higher-hazard category (lower number) as shown in Table 1011.4, the means of egress shall comply with the requirements of Chapter 10 of the International Building Code.

Exceptions:

1. Stairways shall be enclosed in compliance with the applicable provisions of Section 903.1.
2. Existing stairways including handrails and guards complying with the requirements of Chapter 9 shall be permitted for continued use subject to approval of the *code official*. 3.Any stairway replacing an existing stairway within a space where the pitch or slope cannot be reduced because of existing construction shall not be required to comply with the maximum riser height and minimum tread depth requirements.
4. Existing corridor walls constructed on both sides of wood lath and plaster in good condition or 1/2 inch-thick (12.7 mm) gypsum wallboard shall be permitted. Such walls shall either terminate at the underside of a ceiling of equivalent construction or extend to the underside of the floor or roof next above.
5. Existing corridor doorways, transoms and other corridor openings shall comply with the requirements in Sections 805.5.1, 805.5.2 and 805.5.3.
6. Existing dead-end corridors shall comply with the requirements in Section 805.6.
7. An ~~existing operable window with clear opening area not less than 4 square feet (0.38 m^2) and minimum opening height and width of 22 inches (559 mm) and 20 inches (508 mm), respectively~~ operable window complying wtih Section 1011.4.6, shall be accepted as an emergency escape and rescue opening.

1011.4.2 Means of egress for change of use to an equal or lower-hazard category. Where a change of occupancy classification is made to an equal or lesser-hazard category (higher number) as shown in Table 1011.4, existing elements of the means of egress shall comply with the requirements of Section 905 for the new occupancy classification. Newly constructed or configured means of egress shall comply with the requirements of Chapter 10 of the International Building Code.

Exception: Any stairway replacing an existing stairway within a space where the pitch or slope cannot be reduced because of existing construction shall not be required to comply with the maximum riser height and minimum tread depth requirements.

1011.4.3 Egress capacity. Egress capacity shall meet or exceed the occupant load as specified in the International Building Code for the new occupancy.

1011.4.4 Handrails. Existing stairways shall comply with the handrail requirements of Section 805.9 in the area of the *change of occupancy* classification.

1011.4.5 Guards. Existing guards shall comply with the requirements in Section 805.11 in the area of the *change of occupancy* classification.

Add new text as follows:

1011.4.6 Existing emergency escape and rescue openings. Where a change of occupancy would require emergency escape and rescue opening in accordance with Section 1030.1 of the International Building Code, operable windows serving as the emergency escape and rescue opening shall comply with the following:

1. An existing operable window shall provide a minimum net clear opening of 4 square feet (0.38 m^2) with a minimum net clear opening height of 22 inches (559 mm) and a minimum net clear opening width of 20 inches (508 mm).
2. A replacement window where such window complies with both of the following:

    2.1. The replacement window meets the size requirements in Item 1.
    2.2. The replacement window is the manufacturer's largest standard size window that will fit within the existing frame or existing rough opening. The replacement window shall be permitted to be of the same operating style as the existing window or a style that provides for an equal or greater window opening area than the existing window.

Revise as follows:

SECTION 506
CHANGE OF OCCUPANCY

506.3 Stairways. An existing stairway shall not be required to comply with the requirements of Section 1011 of the International Building Code where the existing space and construction does not allow a reduction in pitch or slope.

Add new text as follows:

506.4 Existing Emergency escape and rescue openings. Where a change of occupancy would require emergency escape and rescue opening in accordance with Section 1030.1 of the International Building Code, operable windows serving as the emergency escape and rescue opening shall comply with the following:

1. An existing operable window shall provide a minimum net clear opening of 4 square feet (0.38 m^2) with a minimum net clear opening height of 22 inches (559 mm) and a minimum net clear opening width of 20 inches (508 mm).
2. A replacement window where such window complies with both of the following:

    2.1. The replacement window meets the size requirements in Item 1.
    2.2. The replacement window is the manufacturer's largest standard size window that will fit within the existing frame or existing rough opening. The replacement window shall be permitted to be of the same operating style as the existing window or a style that provides for an equal or greater window opening area than the existing window.

Reason: The intent of this proposal is to allow for some existing or replacement windows to be used for emergency escape and rescue openings (EEROs) while still maintaining the level of safety for occupants and emergency responders.
EEROs are required in IBC Section 1030 only in R-3 and R-4 dwellings and for R-2 apartments in single exit buildings (4 units per floor, 3 stories maximum). So looking at something converting to a single family home per Table 1011.1, Section 1104.1 would only apply if a house was made out of an F-2, S-2 or U – such as a barn to a house. Any other use being converted to a house would be under Section 1011.4.2 – which has no language for EEROs. There does not appear to be any justification for a moving to the same or lesser hazard to be more restrictive than what is allowed for an increased hazard.

The provisions in Section 505 and 702 say they are not applicable to COO, so it should be addressed here for any occupancy that converts to R-3, R-4 and single exit R-2. The size currently permitted under Section 1104.1 Exception 7 for existing window is maintained. The requirements for replacement windows is from current language in 505 and 702.

The same language is proposed for COO under the prescriptive method – which currently does not address EEROs at all.

The IRC requires EEROs in Section R310.1. Current Section R310.5 and R310.6 state when a EERO needs to be added. The exceptions say an existing EERO can be used instead of one added, but it does not have the same allowances for existing windows currently found in the IEBC. It is proposed to allow for this by the new exceptions in R310.5 and 310.6 and a new R301.9.1 which mirrors the current language in the IEBC.

The order of R310.6 of the current allowances has been revised because the exception was more restrictive than the main text.

This is one of a series of proposal to coordinate the requirements for emergency escape and rescue openings in the IBC and IRC. While independent issues, if all the proposals are approved, the IRC section would appear as indicated in the reason for the proposal to revise the definition – emergency escape and rescue openings.

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. Since 2017 the BCAC has held 6 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as w ell as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-actioncommittee-bcac.

Cost Impact: The proposed allowance would allow for existing or replacement windows to be used instead of having to install new in some cases.

EB101-19 Part II

IRC®: SECTION R310 (New), R310.5 (New), R310.6 (New), R310.9.1 (New)

Proponent: Ed Kulik, representing ICC Building Code Action Committee (bcac@iccsafe.org)

2018 International Residential Code

Revise as follows:

SECTION R310
EMERGENCY ESCAPE AND RESCUE OPENINGS

~~**R310.5**~~ **R310.8 Dwelling additions.** Where *dwelling additions* contain sleeping rooms, an emergency escape and rescue opening shall be provided in each new sleeping room. Where *dwelling additions* have *basements*, an emergency escape and rescue opening shall be provided in the new *basement*.

Exceptions:

1. An emergency escape and rescue opening is not required in a new *basement* that contains a sleeping room with an emergency escape and rescue opening.
2. An emergency escape and rescue opening is not required in a new *basement* where there is an emergency escape and rescue opening in an existing *basement* that is *accessed* from the new *basement*.
3. An operable window complying with Section 310.9.1 shall be acceptable as an emergency escape and rescue opening.

~~**R310.6**~~ **R310.9 Alterations or repairs of existing basements.** ~~An emergency escape and rescue opening is not required where existing *basements* undergo alterations or repairs.~~

~~**Exception:**~~ New sleeping rooms created in an existing basement shall be provided with emergency escape and rescue openings in accordance with Section R310.1. Other than new sleeping rooms, where existing basements undergo alterations or repairs an emergency escape and rescue opening is not required.

Exception: An operable window complying with Section 310.9.1 shall be acceptable as an emergency escape and rescue opening.

Add new text as follows:

R310.9.1 Existing Emergency escape and rescue openings. Where a change of occupancy would require emergency escape and rescue opening in accordance with Section 310.1, operable windows serving as the emergency escape and rescue opening shall comply with the following:

1. An existing operable window shall provide a minimum net clear opening of 4 square feet (0.38 m^2) with a minimum net clear opening height of 22 inches (559 mm) and a minimum net clear opening width of 20 inches (508 mm).
2. A replacement window where such window complies with both of the following:

    2.1. The replacement window meets the size requirements in Item 1.
    2.2. The replacement window is the manufacturer's largest standard size window that will fit within the existing frame or existing rough opening. The replacement window shall be permitted to be of the same operating style as the existing window or a style that provides for an equal or greater window opening area than the existing window.

Reason: The intent of this proposal is to allow for some existing or replacement windows to be used for emergency escape and rescue openings (EEROs) while still maintaining the level of safety for occupants and emergency responders.
EEROs are required in IBC Section 1030 only in R-3 and R-4 dwellings and for R-2 apartments in single exit buildings (4 units per floor, 3 stories maximum). So looking at something converting to a single family home per Table 1011.1, Section 1104.1 would only apply if a house was made out of an F-2, S-2 or U – such as a barn to a house. Any other use being converted to a house would be under Section 1011.4.2 – which has no language for EEROs. There does not appear to be any justification for a moving to the same or lesser hazard to be more restrictive than what is allowed for an increased hazard.

The provisions in Section 505 and 702 say they are not applicable to COO, so it should be addressed here for any occupancy that converts to R-3, R-4 and single exit R-2. The size currently permitted under Section 1104.1 Exception 7 for existing window is maintained. The requirements for replacement windows is from current language in 505 and 702.

The same language is proposed for COO under the prescriptive method – which currently does not address EEROs at all.

The IRC requires EEROs in Section R310.1. Current Section R310.5 and R310.6 state when a EERO needs to be added. The exceptions say an existing EERO can be used instead of one added, but it does not have the same allowances for existing windows currently found in the IEBC. It is proposed to allow for this by the new exceptions in R310.5 and 310.6 and a new R301.9.1 which mirrors the current language in the IEBC.

The order of R310.6 of the current allowances has been revised because the exception was more restrictive than the main text.

This is one of a series of proposal to coordinate the requirements for emergency escape and rescue openings in the IBC and IRC. While independent issues, if all the proposals are approved, the IRC section would appear as indicated in the reason for the proposal to revise the definition – emergency escape and rescue openings.

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. Since 2017 the BCAC has held 6 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as w ell as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-actioncommittee-bcac.

Cost Impact: The proposed allowance would allow for existing or replacement windows to be used instead of having to install new in some cases.

EB42-19

IEBC®: 402.1, 404.1, 702.4, 702.7.1 (New), 702.7.2 (New), 702.7.3 (New), 802.5.1, 802.5.2, 805.11, 805.11.1, 805.11.2, 1011.4.1

Proponent: William Warlick, representing Self (william.warlick@slcgov.com)

2018 International Existing Building Code

Add new text as follows:

402.2 Guards An existing *guard* that is unable to resist a concentrated load of 200 pounds (0.89 kN) shall be repaired with like materials.

Work on an existing *guard* shall include augmenting the guard in accordance with the *International Building Code* where the height of the guard is one of the following:

1. Less than 36" above walking surfaces.
2. Less than 30" above the leading edges of stair treads.

404.2 Guards. Existing *guards* shall comply with the strength and height requirements of 402.2.

702.7 Guards Guards shall comply with Sections 702.7.1 through 702.7.3, as applicable.

702.7.1 Minimum requirements. Existing guards shall be altered, augmented or replaced in accordance with the International Building Code where such guards are unable to resist a concentrated load of 200 pounds (0.89 kN), or the height of the guard is one of the following:

1. Less than 36" above walking surfaces, or
2. Less than 30" above the leading edges of stair treads

702.7.2 Elements of an existing guard. The alteration of elements of an existing guard with new elements of the same design shall maintain the guard's strength and height.

702.7.3 New and reconfigured guards. New guards and existing guards that are augmented or otherwise reconfigured, shall comply with the International Building Code.

Revise as follows:

802.5.1 ~~Minimum requirement.~~ Where required

~~Every portion of a floor, such as a balcony or a loading dock, that is more than 30 inches (762 mm) above the floor or grade below and is not provided with guards, or those in which the existing guards are judged to be in danger of collapsing, shall be provided with guards.~~

Guards shall be located along open-sided walking surfaces where required in accordance with the *International Building Code* . Where a required guard does not exist, a new guard shall be provided.

802.5.2 ~~Design.~~ Construction

~~Where there are no guards or where existing guards must be replaced, the guards shall be designed and installed in accordance with the International Building Code.~~

Guards shall comply with Section 702.7.

805.11 Guards. The requirements of ~~Sections 805.11.1 and 805.11.2~~ Section 802.5 shall apply to guards from the *work area* floor to, and including, the level of exit discharge but shall be confined to the egress path of any *work area*.

Delete without substitution:

~~**805.11.1 Minimum requirement.** Every open portion of a stairway, landing, or balcony that is more than 30 inches (762 mm) above the floor or grade below and is not provided with guards, or those portions in which existing guards are judged to be in danger of collapsing, shall be provided with guards.~~

~~**805.11.2 Design.** Guards required in accordance with Section 805.11.1 shall be designed and installed in accordance with the International Building Code.~~

Revise as follows:

1011.4.1 Means of egress for change to a higher-hazard category. Where a change of occupancy classification is made to a higher-hazard category (lower number) as shown in Table 1011.4, the means of egress shall comply with the requirements of Chapter 10 of the International Building Code.

Exceptions:

1. Stairways shall be enclosed in compliance with the applicable provisions of Section 903.1.

2. ~~Existing~~ In hazard categories 4 or 5, existing stairways including handrails and guards complying with the requirements of Chapter 9 shall be permitted for continued use subject to approval of the *code official*.
3.Any stairway replacing an existing stairway within a space where the pitch or slope cannot be reduced because of existing construction shall not be required to comply with the maximum riser height and minimum tread depth requirements.
4.Existing corridor walls constructed on both sides of wood lath and plaster in good condition or 1/2 inch-thick (12.7 mm) gypsum wallboard shall be permitted. Such walls shall either terminate at the underside of a ceiling of equivalent construction or extend to the underside of the floor or roof next above.
5.Existing corridor doorways, transoms and other corridor openings shall comply with the require ments in Sections 805.5.1, 805.5.2 and 805.5.3.
6.Existing dead-end corridors shall comply with the requirements in Section 805.6.
7.An existing operable window with clear opening area not less than 4 square feet (0.38 m^2) and minimum opening height and width of 22 inches (559 mm) and 20 inches (508 mm), respectively, shall be accepted as an emergency escape and rescue opening.

Reason: This code change reduces reliance on determinations by the code official of unsafe conditions by providing baseline measurements. The code is currently vague about *guard* requirements, stating, for example, that, in a change of occupancy, a guard "shall be permitted for continued use subject to approval of the *code official*." In 1203.10.1 Height, the code states: "Existing guards shall comply with the requirements of Section 704," but 704 contains no mention of guard height.
Fall safety is considered an area of the I-Codes that is central to life safety. See IBC Section 1015, IRC Section R312, and IMC Sections 304.11 and 306.5.1. Notably, the IEBC also considers fall safety, but from windows only (IEBC 702.4).

While the IEBC generally adheres to the principle that existing construction may remain, there are some areas of the code that depart from this principle for good reasons. One of these reasons is that standards of safety have changed.

The average height of humans has been increasing in recent history,[i] requiring a higher guard to protect against falling. Because this standard of safety has changed, it would make sense for the IEBC to address this area of the code for existing buildings.

The baseline guard heights we propose are 42" in high hazard category occupancies, 36" above walking surfaces, and 30" above the leading edges of stair treads. While the 42" guard height is provided in the IBC generally, there are situations where a lower guard height is allowed:

A 36" guard height is allowed for guards at the end of aisles in assembly seating areas (1029.16.4), and in individual dwelling units in Group R-2 and R-3 occupancies not more than three stories (1015.3).
A 34" guard height is allowed on the open side of stairs in in individual dwelling units in Group R-2 and R-3 occupancies.

Legacy codes provided a 30" guard height at stairs as late as 1985.[ii] This dimension was later changed to 34".[iii]

Legacy codes also provided reduced minimum guard heights for existing buildings. For example: "Existing guardrails … which are at least 36 inches shall be permitted to remain." Also: "Guardrails for stairways, exclusive of their landings, may have a height that is not less than 30 inches measured above the nosing of treads."[iv]

Existing sections 802.5 and 805.11 are also proposed to be amended in order to incorporate the proposed minimum guard height requirements, to simplify the language, and to remove an incorrect reference to loading docks.[v]

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[i] "… over the last 150 years the average height of people in industrialized nations has increased approximately 10 centimeters (about four inches)." *Scientific American* "Why are we getting taller as a species?" June 29, 1998.
[ii] 1985 Uniform Building Code, Sections 3306(j) and 1711.
[iii] 1988 Uniform Building Code, Sections 3306(j) and 1711.
[iv] 1997 Uniform Code for Building Conservation, Section 405.2
[v] IBC 1015.2 Exception 1.

Cost Impact: No cost increase. The proposed changes only clarify the intent of the code, enumerating baseline dimensions that have generally been enforced as determined by code officials.

EB64-19

IEBC®: 505.1

Proponent: Timothy Pate, Colorado Chapter Code Change Committee, representing City and County of Broomfield (tpate@broomfield.org)

2018 International Existing Building Code

Revise as follows:

505.1 Replacement ~~glass.~~ windows The installation or replacement of ~~glass~~ windows shall be as required for new installations.

Reason: This proposoal is to change this section to deal with replacement windows and not glass. First of all replacing glass should be considered a repair and not an alteration so this requirement is not even in the correct chapter. Also it does not make sense to have a requirement in this code since that would appear to require a permit for anytime someone needs to replace a broken window. Consider the amount of new permits a jusidsiction would need to do on a daily basis. It does make sense to change the language to deal with replacement of windows which would be the entire assembly. Most jurisdictions to require permits for these window changeouts in order to make sure both energy code and life safety code are met. Finally I would point out that the 2018 IECC sections C504.2 and R504.2 have an exception to not require glass only replacements in existing sash and frames to meet current energy code and by default not require permits.

Cost Impact: This will not increase or decrease cost of construction but will decrease cost of getting permits which will save money for the jurisdictions

EB65-19

IEBC®: 505.2

Proponent: Jeff Inks, representing Window and Door Manufacturers Association (jinks@wdma.com); Jennifer Hatfield, representing American Architectural Manufacturers Association (jen@jhatfieldandassociates.com)

2018 International Existing Building Code

Revise as follows:

505.2 Replacement window opening control devices. In Group R-2 or R-3 buildings containing dwelling units, and one- and two-family dwellings and townhouses regulated by the International Residential Code, window opening control devices complying with ASTM F2090 shall be installed where an existing window, including the sash and glazed portion, is replaced and where all of the following apply to the replacement window:

1. The window is operable.
2. ~~The window replacement includes replacement of the sash and the frame.~~
2.3. One of the following applies:

    2.1.3.1. In Group R-2 or R-3 buildings containing dwelling units, the top of the sill of the window opening is at a height less than 36 inches (915 mm) above the finished floor.

    2.2.3.2. In one- and two-family dwellings and townhouses regulated by the International Residential Code, the top of the sill of the window opening is at a height less than 24 inches (610 mm) above the finished floor.

3.4. The window will permit openings that will allow passage of a 4-inch-diameter (102 mm) sphere when the window is in its largest opened position.

4.5.. The vertical distance from the top of the sill of the window opening to the finished grade or other surface below, on the exterior of the building, is greater than 72 inches (1829 mm).

The window opening control device, after operation to release the control device allowing the window to fully open, shall not reduce the minimum net clear opening area of the window unit to less than the area required by Section 1030.2 of the International Building Code.

Exceptions:

1. Operable windows where the top of the sill of the window opening is located more than 75 feet (22 860 mm) above the finished grade or other surface below, on the exterior of the room, space or building, and that are provided with window fall prevention devices that comply with ASTM F2006. .
2. Operable windows with openings that are provided with window fall prevention devices that comply with ASTM F2090.

Reason: This revision makes it clear that regardless of whether replacing the entire existing window (sash and frame), or the sash and glazed portion with an insert window where the existing frame remains, the window fall prevention requirements apply in both applications which is consistent with how the code treats these replacements for energy efficiency.

Cost Impact: The intent of this proposal is to ensure window fall prevention requirements are met as intended by the code. It does not have a direct impact on cost.

EB73-19

IEBC®: 702.4

Proponent: Jeff Inks, representing Window and Door Manufacturers Association (jinks@wdma.com); Jennifer Hatfield, representing American Architectural Manufacturers Association (jen@jhatfieldandassociates.com)

2018 International Existing Building Code

Revise as follows:

702.4 Window opening control devices on replacement windows. In Group R-2 or R-3 buildings containing dwelling units and one- and two-family dwellings and townhouses regulated by the International Residential Code, window opening control devices complying with ASTM F2090 shall be installed where an existing window, including the sash and glazed portion, is replaced and where all of the following apply to the replacement window:

1. The window is operable.
2. ~~The window replacement includes replacement of the sash and the frame.~~
3. One of the following applies:

    3.1. In Group R-2 or R-3 buildings containing dwelling units, the top of the sill of the window opening is at a height less than 36 inches (915 mm) above the finished floor.
    3.2. In one- and two-family dwellings and townhouses regulated by the International Residential Code, the top sill of the window opening is at a height less than 24 inches (610 mm) above the finished floor.<
4. The window will permit openings that will allow passage of a 4-inch-diameter (102 mm) sphere when the window is in its largest opened position.
5. The vertical distance from the top of the sill of the window opening to the finished grade or other surface below, on the exterior of the building, is greater than 72 inches (1829 mm).

The window opening control device, after operation to release the control device allowing the window to fully open, shall not reduce the minimum net clear opening area of the window unit to less than the area required by Section 1030.2 of the International Building Code.

Exceptions:

1. Operable windows where the top of the sill of the window opening is located more than 75 feet (22 860 mm) above the finished grade or other surface below, on the exterior of the room, space or building, and that are provided with window fall prevention devices that comply with ASTM F2006.
2. Operable windows with openings that are provided with window fall prevention devices that comply with ASTM F2090.

Reason: This revision makes it clear that regardless of whether replacing the entire existing window (sash and frame), or the sash and glazed portion with an insert window where the existing frame remains, the window fall prevention requirements apply in both applications which is consistent with how the code treats these replacements for energy efficiency.

Cost Impact: The intent of this proposal is to ensure window fall prevention requirements are met as intended by the code. It does not have a direct impact on cost.

RB8-19

IRC®: [RB] 202 (New); IEBC®: 202

Proponent: Ed Kulik, representing ICC Building Code Action Committee (bcac@iccsafe.org)

2018 International Residential Code

Revise as follows:

[RB] EMERGENCY ESCAPE AND RESCUE OPENING. An operable exterior window, door or other similar device that provides for a means of escape and access for rescue in the event of an emergency. (See also "Grade floor ~~opening.~~ opening.")

2018 International Existing Building Code

Add new definition as follows:

EMERGENCY ESCAPE AND RESCUE OPENING. An operable exterior window, door or other similar device that provides for a means of escape and access for rescue in the event of an emergency.

Reason: The intent of this proposal is to coordinate the definitions for emergency escape and rescue openings between IBC, IRC, IEBC, IPMC, IFC. This change was approved as part of Group A for IBC, IFC, IPMC as G5-18 Part 1 and 2(AS/AM).

This is a series of proposal to coordinate the requirements for emergency escape and rescue openings in the IBC and IRC. While independent issues, if all the proposals are approved, the IRC section would appear as indicated below. Other related changes will refer back to the definition for this information.

This is what the EERO requirements would look like if all of the proposals are approved.

SECTION R310

EMERGENCY ESCAPE AND RESCUE OPENINGS

R310.1 General. Emergency escape and rescue openings shall comply with the requirements of this section.

R310.2 Where required. *Basements, habitable attics* and ~~every~~ sleeping rooms shall have no fewer than one emergency escape and rescue opening in accordance with this section. Where *basements* contain one or more sleeping rooms, an emergency escape and rescue opening shall be required in each sleeping room, but shall not be required in adjoining areas of the *basement*. Such openings shall open directly into a public way, or to a *yard* or court that opens to a public way.

Exceptions:

1. *Basements* with a ceiling height of less than 80 inches (2032 mm) shall not be required to have *emergency escape and rescue openings*.

2. Emergency escape and rescue openings are not required from basements or sleeping rooms that have an exit door or exit access door that opens directly into a public way or to a yard, court or exterior egress balcony that opens to a public way.

3. Basements used only to house mechanical equipment and not exceeding a total floor area of 200 square feet (18.58 m2) shall not be required to have emergency escape and rescue openings.

4. Storm shelters are not required to comply with this section where the shelter is constructed in accordance with ICC 500.

5. Where the *dwelling* or *townhouse* is equipped with an automatic sprinkler system installed in accordance with Section P2904, sleeping rooms in *basements* shall not be required to have emergency escape and rescue openings provided that the *basement* has one of the following:

5.1. One means of egress complying with Section R311 and one emergency escape and rescue opening.

5.2. Two means of egress complying with Section R311.

R310.2.1 Operational constraints and opening control devices. Emergency escape and rescue openings shall be operational from the inside of the room without the use of keys or tools. Window opening control devices and fall prevention devices complying with ASTM F2090 shall be

permitted for use on windows serving as a required emergency escape and rescue opening.

R310.3 Emergency escape and rescue openings. Emergency escape and rescue openings shall have minimum dimensions in accordance with Section R310.3.1 through R310.3.3.

R310.3.1 Minimum size. Emergency and escape rescue openings shall have a net clear opening of not less than 5.7 square feet (0.530 m).

Exception: The minimum net clear opening for grade-floor emergency escape and rescue openings shall be 5 square feet (0.465 m).

R310.3.2 Minimum dimensions. The minimum net clear opening height dimension shall be 24 inches (610 mm). The minimum net clear opening width dimension shall be 20 inches (508 mm). The net clear opening dimensions shall be the result of normal operation of the opening.

R310.3.3 Maximum height from floor. Emergency escape and rescue openings~~, it~~ shall have the bottom of the clear opening not greater than 44 inches (1118 mm) above the floor.

R310.4 Emergency escape and rescue doors. Where a door is provided as the required emergency escape and rescue opening, it shall be a swinging door or a sliding door.

R310.5 Area wells. An emergency escape and rescue opening with the bottom of the clear opening below the adjacent grade shall be provided with an area well in accordance with Sections R310.5.1 through R310.5.4.

R310.5.1 Minimum size. The horizontal area of the area well shall be not less than 9 square feet (0.9 m), with a horizontal projection and width of not less than 36 inches (914 mm). The area well shall allow the emergency escape and rescue opening to be fully opened.

Exception: The ladder or steps required by Section R310.5.2.1 shall be permitted to encroach not more than 6 inches (152 mm) into the required dimensions of the area well.

R310.5.2 Ladder and steps. Area wells with a vertical depth greater than 44 inches (1118 mm) shall be equipped with a an approved permanently affixed ladder or steps. The ladder or steps shall not be obstructed by the emergency escape and rescue opening when the window or door is in the open position. Ladders or steps required by this section shall not be required to comply with Section R311.7.

R310.5.2.1 Ladders. Ladders or rungs shall have an inside width of at least 12 inches (305 mm), shall project at least 3 inches (76 mm) from the wall and shall be spaced not more than 18 inches (457 mm) on center (o.c.) vertically for the full height of the area well.

R310.5.2.2 Steps. Steps shall have an inside width of at least 12 inches (305 mm), shall have minimum treads depth of 5 inches (127 mm) and a maximum riser height of 18 inches (457 mm) for the full height of the area well.

R310.5.3 Drainage. Area wells shall be designed for proper drainage by connecting to the building's foundation drainage system required by Section R405.1.

Exception: A drainage system for area wells is not required where the foundation is on well-drained soil or sand gravel mixture soils in accordance with the United Soil Classification System, Group I Soils, as detailed in Table R405.1.

R310.5.4 Bars, grilles, covers and screens. Where bars, grilles, covers, screens or similar devices are placed over emergency escape and rescue openings, bulkhead enclosures, or area wells that serve such openings, the minimum net clear opening size shall comply with Sections R310.2 through R310.2.2 and R310.4.1. Such devices shall be releasable or removable from the inside without the use of a key or tool or force greater than that required for the normal operation of the escape and rescue opening.

R310.6 Emergency escape and rescue openings under decks and porches. Emergency escape and rescue openings installed under decks and porches shall be fully operable and provide a path not less than 36 inches (914 mm) in height to a yard or court.

R310.7 Replacement windows for emergency escape and rescue openings. Replacement windows installed in buildings meeting the scope of this code shall be exempt from Section R310.2 and R310.4, provided that the replacement window meets the following conditions:

1. The replacement window is the manufacturer's largest standard size window that will fit within the existing frame or existing rough opening. The replacement window is of the same operating style as the existing window or a style that provides for an equal or greater window opening area than the existing window.

2. Where the replacement window is not part of a change of occupancy.

R310.8 Dwelling additions. Where *dwelling additions* contain sleeping rooms, an emergency escape and rescue opening shall be provided in each new sleeping room. Where *dwelling additions* have *basements*, an emergency escape and rescue opening shall be provided in the new *basement*.

Exceptions:

1. An emergency escape and rescue opening is not required in a new *basement* that contains a sleeping room with an emergency escape and rescue opening.

2. An emergency escape and rescue opening is not required in a new *basement* where there is an emergency escape and rescue opening in an existing *basement* that is *accessed* from the new *basement*.

3. An operable window complying with Section 310.9.1 shall be acceptable as an emergency escape and rescue opening.

R310.9 Alterations or repairs of existing basements. New sleeping rooms created in an existing *basement* shall be provided with emergency escape and rescue openings in accordance with Section R310.1. Other than new sleeping rooms, where existing *basements* undergo alterations or repairs an emergency escape and rescue opening is not required.

Exception: An operable window complying with Section 310.9.1 shall be acceptable as an emergency escape and rescue opening.

R310.9.1 Existing Emergency escape and rescue openings. Where a change of occupancy would require emergency escape and rescue opening in accordance with Section R310.1, operable windows serving as the emergency escape and rescue opening shall comply with the following:

1. An existing operable window shall provide a minimum net clear opening of 4 square feet (0.38 m2) with a minimum net clear opening height of 22 inches (559 mm) and a minimum net clear opening width of 20 inches (508 mm).

2. A replacement window where such window complies with both of the following:

2.1 The replacement window meets the size requirements in Item 1.

2.2 The replacement window is the manufacturer's largest standard size window that will fit within the existing frame or existing rough opening. The replacement window shall be permitted to be of the same operating style as the existing window or a style that provides for an equal or greater window opening area than the existing window.

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. Since 2017 the BCAC has held 6 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as w ell as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-actioncommittee-bcac.

Cost Impact: This proposal is editorial.

RB14-19

IRC®: [RB] 202 (New)

Proponent: Ed Kulik, representing ICC Building Code Action Committee (bcac@iccsafe.org)

2018 International Residential Code

Revise as follows:

[RB] GRADE FLOOR EMERGENCY ESCAPE AND RESCUE OPENING. ~~A window or other~~ An emergency and escape and rescue opening located such that the ~~sill~~ height of the bottom of the clear opening is not more than 44 inches (1118 mm) above or below the finished ground level adjacent to the opening. (See also "Emergency escape and rescue opening.")

Reason: This definition is used only in Section IRC R310.2.1. The change to the definition is so is matches how it will be used in the technical criteria. What is a 'sill' is not clear – the modification is for consistency with technical criteria. It is important to indicate that this is to the bottom of the opening (otherwise a below grade window could be very deep). See also revisions to IRC R310.2.1. There was a similar proposal approved for Group A for IBC - G4-18(AS).
This is one of a series of proposal to coordinate the requirements for emergency escape and rescue openings in the IBC and IRC. While independent issues, if all the proposals are approved, the IRC section would appear as indicated in the reason for the proposal to revise the definition – emergency escape and rescue openings.

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. Since 2017 the BCAC has held 6 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as w ell as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-actioncommittee-bcac.

Cost Impact: This is a coordination item for requirements for EEROs already permitted between the codes.

RB89-19

IRC: R301.1 (New), R310.1

Proponent: Ed Kulik, representing ICC Building Code Action Committee (bcac@iccsafe.org)

2018 International Residential Code

Revise as follows:

SECTION R310
EMERGENCY ESCAPE AND RESCUE OPENINGS

Add new text as follows:

R310.1 General. Emergency escape and rescue openings shall comply with the requirements of this section.

Revise as follows:

~~**R310.1**~~ **R310.2** ~~**Emergency escape and rescue opening**~~ **Where required.** Basements, habitable attics and every sleeping room shall have ~~not less~~ not fewer than one ~~operable~~ emergency escape and rescue ~~opening. Where *basements* contain~~ opening in accordance with this section. Where basements contain one or more sleeping rooms, an emergency escape and rescue opening shall be required in each sleeping room , but shall not be required in adjoining areas of the basement. ~~Emergency escape and rescue~~ Such openings shall open directly into a public way, or to a *yard* or court that opens to a public way.

Exceptions:

1. Basements with a ceiling height of less than 80 inches (2032 mm) shall not be required to have emergency escape and rescue openings.
2. Emergency escape and rescue openings are not required from basements or sleeping rooms that have an exit door or exit access door that opens directly into a public way or to a yard, court or exterior egress balcony that opens to a public way.
3. ~~1.~~ ~~Storm shelters and *basements*~~ Basements used only to house mechanical equipment and not exceeding a total floor area of 200 square feet (18.58 m^2) shall not be required to have emergency escape and rescue openings.
4. Storm shelters are not required to comply with this section where the shelter is constructed in accordance with ICC 500.
5. ~~2.~~ Where the dwelling or townhouse is equipped with an automatic sprinkler system installed in accordance with Section P2904, sleeping rooms in basements shall not be required to have emergency escape and rescue openings provided that the basement has one of the following:

    5.1. ~~2.1.~~ One means of egress complying with Section R311 and one emergency escape and rescue opening.
    5.2. ~~2.2.~~ Two means of egress complying with Section R311.

Reason: The intent of this proposal is to coordinate with the approved changes to INC (E107-18 AMPC1) and clarify the exceptions. Adding Section R310.1 is to coordinate with the format modification made by the public comment to E107-18.

There are revisions to the exceptions for where emergency escape and rescue openings are required. Exceptions 1 and 2 are current exceptions for EEROs in the IBC. New exception 1 is for basements with ceiling so low that they would not typically include normally occupied spaces. New exception 2 is to allow for the option of a door. The current exception 1 has been divided into new exceptions 3 and 4. New exception 3 clarifies that the 200 sq.ft. limit was for basements that only house mechanical equipment. The new exception 4 separates out storm shelters and adds a specific reference for ICC 500 (currently referenced in ICC R323). The current exception 2 is renumbered only.

This is one of a series of proposal to coordinate the requirements for emergency escape and rescue openings in the IBC and IRC. While independent issues, if all the proposals are approved, the IRC section would appear as indicated in the reason for the proposal to revise the definition – emergency escape and rescue openings.

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. Since 2017 the BCAC has held 6 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as w ell as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-actioncommittee-bcac.

Cost Impact: This is a coordination item for exceptions for EEROs already permitted between the codes.

RB93-19

IRC: R310.1.1

Proponent: Ed Kulik, representing ICC Building Code Action Committee (bcac@iccsafe.org)

2018 International Residential Code

Revise as follows:

~~**R310.1.1**~~ **R310.2.1 Operational constraints and opening control devices.** Emergency escape and rescue openings shall be operational from the inside of the room without the use of keys or , tools ~~or special knowledge~~. Window opening control devices and fall prevention devices complying with ASTM F2090 shall be permitted for use on windows serving as a required emergency escape and rescue opening ~~shall comply with ASTM F2090~~.

Reason: The term "special knowledge" was removed from IBC because the phrase “special knowledge’ is too open for interpretations.

The revision to the last sentence could not require opening control devices or fall prevention devices. This section would just allow for them to be on windows that were also serving as emergency escape and rescue openings. ASTM F2090, *Specification for Window Fall Prevention Devices with Emergency Escape (Egress Release Mechanisms),* includes criteria for window fall prevention devices and window opening control devices (see Section R312.2). This standard is specifically written for window openings within 75 feet (22 860 mm) of grade and specifically allows for windows to be used for emergency escape and rescue. This standard was updated in 2008 to address window opening control devices. This control device can be released from the inside to allow the window to be fully opened in order to comply with the emergency escape provisions in IRC.

This is one of a series of proposal to coordinate the requirements for emergency escape and rescue openings in the IBC and IRC. While independent issues, if all the proposals are approved, the IRC section would appear as indicated in the reason for the proposal to revise the definition – emergency escape and rescue openings.

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. Since 2017 the BCAC has held 6 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as w ell as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-actioncommittee-bcac.

Cost Impact: This is a coordination item for emergency escape and rescue openings.

RB85-19

IRC®: R310.1

Proponent: Jeffrey Shapiro, P.E., representing Self (jeff.shapiro@intlcodeconsultants.com)

2018 International Residential Code

Revise as follows:

R310.1 Emergency escape and rescue opening required. *Basements, habitable attics* and every sleeping room shall have not less than one operable emergency escape and rescue opening. Where *basements* contain one or more sleeping rooms, an emergency escape and rescue opening shall be required in each sleeping room. Emergency escape and rescue openings shall open directly into a public way, or to a *yard* or court that opens to a public way.

Exceptions:

1.Storm shelters and *basements* used only to house mechanical *equipment* not exceeding a total floor area of 200 square feet (18.58 m^2).

2.Where the *dwelling* or *townhouse* is equipped with an automatic sprinkler system installed in accordance with Section P2904, sleeping rooms ~~in basements~~ shall not be required to have emergency escape and rescue openings provided that the *basement*, *story* , *habitable attic* or *mezzanine* in which the sleeping room is located has one of the following:

2.1.One means of egress complying with Section R311 and one emergency escape and rescue opening.

2.2.Two means of egress complying with Section R311.

Reason: This proposal suggests an extension of the means of escape window allowance, added last cycle by RB89-16 (which duplicates an IBC exception added by E145-15). The current application, which is limited to basements of sprinklered dwelling units, would be applicable to all levels, provided that each level using the exception has at least one escape window or door in addition to a code-compliant means of egress, such as an interior stair or a door to the outside. It is important to remember that means of escape openings are in the code due to fire concerns and are sized based on a firefighter in full turnout gear going through the opening. Where sprinklers and hard-wired interconnected smoke alarms are present there is minimal prospect of a firefighter having to make entry through or an occupant having to escape via a window opening.

Precedent for extending this exception is well established by the NFPA 101 - Life Safety Code, which allows eliminating ALL required means of escape openings from sprinklered one- and two-family dwellings [24.2.2.1.2(2)], hotels, motels, apartments and similar uses. In addition, the states of New Hampshire and Virginia have both amended R310.1 of their statewide code adoptions by eliminating ALL requirement for means of escape openings when sprinklers are provided. This proposal is more conservative by retaining a requirement for at least one means of escape plus the means of egress from each level.

This proposal offers significant value to builders, architects, homeowners and firefighters. For builders, architects and homeowners, the proposal offers significant design flexibility and choice of where and how to locate windows when a dwelling unit is equipped with a fire sprinkler system. There is particularly beneficial for cases where it is difficult, or perhaps impossible, to provide a complete path from a sleeping room means of escape to a public way due to pathway obstructions created by fences isolating townhouse yards, rooftop solar arrays or other obstacles. For firefighters, it is far safer to respond to a sprinklers home than a non-sprinklered home, and reasonable and appropriate incentives, such as this one, encourage and recognize the value of residential sprinkler installations.
Disclosure: although I am a consultant to the National Fire Sprinkler Association, this proposal is submitted on my own behalf and was not reviewed or endorsed by NFSA prior to submittal.

Cost Impact: The proposal adds an option to the code. There is no requirement to utilize this option; however, if it is used, the cost of construction may decrease.

RB90-19

IRC®: R310.1.1

Proponent: Samuel Steele, representing Seattle Department of Construction and Inspection (SDCI) (samuel.steele@seattle.gov)

2018 International Residential Code

Revise as follows:

R310.1.1 Operational constraints and opening control devices. Emergency escape and rescue openings shall be operational from the inside of the room without the use of keys, tools or special knowledge. Window opening control devices on windows serving as a required emergency escape and rescue opening shall be not more than 70" (177.8 cm) above the finished floor and shall comply with ASTM F2090.

Reason: The 70” (177.8 cm) is the sum of the dimensions in the attached example of a single hung egress window having a maximum 44” sill height with a 24” operable leaf. Added to this is 2” to reach the latch to unlock the window which is set at 70". Similarly on a casement window, the lock should also be no higher than 70” (177.8 cm) .
Unlike the dimensions for clear area, sill height, and minimum openings, a height has never been determined for the location of window contols for emergency and escape openings. This would make it very clear for all users of the code.

Cost Impact: This merely indicates the height of where the control should be. It would not add any cost to to the manufacturing and installation.

RB91-19

IRC®: R310.1.1

Proponent: Jeff Inks, representing Window and Door Manufacturers Association (jinks@wdma.com); Jennifer Hatfield, representing American Architectural Manufacturers Association (jen@jhatfieldandassociates.com)

2018 International Residential Code

Revise as follows:

R310.1.1 Operational constraints and opening control devices. Emergency escape and rescue openings shall be operational from the inside of the room without the use of keys, tools or special knowledge. Window opening control devices complying with ASTM F2090 shall be permitted for use on windows serving as a required emergency escape and rescue opening ~~shall comply with ASTM F2090.~~ .

Reason: This revision makes the operational and opening control devices provisions in the IRC consistent with the same provisions in the IBC. The proposed language above was approved for the IBC during the last cycle because further clarity regarding the permitted installation of window opening control devices (wocd's) compliant with ASTM F2090 on EERO windows was determined to be helpful. While allowing the use of F2090 WOCD's on EERO windows is implied and intended by this section and Section R312.2, and in addition, the purpose of F2090 is specifically for WOCD's with emergency release mechanisms for use on EERO windows, providing more express language under Section 310.1 will provide further clarification that the installation of F2090 compliant devices is permitted on EERO windows, and again will make this provision consistent with the same in the IBC.

Cost Impact: However, it will avoid potential misinterpretation in the field that could be problematic.

RB92-19

IRC®: R310.1.1

Proponent: Jeff Inks, representing Window and Door Manufacturers Association (jinks@wdma.com); Jennifer Hatfield, representing American Architectural Manufacturers Association (jen@jhatfieldandassociates.com)

2018 International Residential Code

Revise as follows:

R310.1.1 Operational constraints and opening control devices. Emergency escape and rescue openings shall be operational from the inside of the room without the use of keys ~~,~~ or tools ~~or special knowledge.~~ . Window opening control devices on windows serving as a required emergency escape and rescue opening shall comply with ASTM F2090.

Reason: This proposal removes the term “special knowledge” to be consistent with the same operational constraint provision in the IBC. The term is undefined and ambiguous and is not necessary.

Cost Impact: The proposal is intended to make the IRC consistent with the IBC.

RB94-19

IRC: R310.2, R310.2.1, R310.2.2 (New), R310.2.2, R312.2.2

Proponent: Ed Kulik, representing ICC Building Code Action Committee (bcac@iccsafe.org)

2018 International Residential Code

Revise as follows:

R310.2 Emergency escape and rescue openings. Emergency escape and rescue openings shall have minimum dimensions ~~as specified in this section.~~ in accordance with Sections 310.2.1 through 310.2.3.

R310.2.1 Minimum ~~opening area.~~ size. Emergency and escape rescue openings shall have a net clear opening of not less than 5.7 square feet (0.530 m^2) . ~~*The net clear opening* dimensions required by this section shall be obtained by the normal operation of the *emergency escape and rescue* opening from the inside. The net clear height of the opening shall be not less than 24 inches (610 mm) and the net clear width shall be not less than 20 inches (508 mm).~~

> **~~Exception:~~** ~~*Grade floor openings* or *below-grade openings* shall have a net clear opening area of not less than~~ The minimum net clear opening for *grade-floor emergency escape and rescue openings shall be* 5 square feet (0.465 m^2).

Add new text as follows:

R310.2.2 Minimum dimensions. The minimum net clear opening height dimension shall be 24 inches (610 mm). The minimum net clear opening width dimension shall be 20 inches (508 mm). The net clear opening dimensions shall be the result of normal operation of the opening.

Revise as follows:

~~R310.2.2~~ R310.2.3 ~~Window sill height.~~ Maximum height from floor. ~~Where a window is provided as the emergency~~ Emergency escape and rescue ~~opening~~ openings, ~~it~~ shall have ~~a sill height of not more than~~ the bottom of the clear opening not greater than 44 inches (1118 mm) above the floor~~; where the sill height is below *grade*, it shall be provided with a window well in accordance with Section R310.2.3~~.

R312.2.2 Window opening control devices. Window opening control devices shall comply with ASTM F2090. The window opening control device, after operation to release the control device allowing the window to fully open, shall not reduce the net clear opening area of the window unit to less than the area required by Section R310.2.1 and R310.2.2.

Reason: The intent of this proposal is to clarify minimum size, dimensions and height for emergency escape and rescue openings.
R310.2.1 and R310.2.2 - The requirements for size and dimensions have been split into two sections. The exception does not need to say 'below grade' as this could be considered a conflict with the definition (i.e., 44" above or below finished grade).

R310.2.3 - The revision clarifies that the 44" is to the bottom of the opening. The sill can be interpreted a lot of different ways. Window well requirements are in a new section - a reference from here is redundant and not needed.

The change to R312.2.2 is correlation only.

This is one of a series of proposal to coordinate the requirements for emergency escape and rescue openings in the IBC and IRC. While independent issues, if all the proposals are approved, the IRC section would appear as indicated in the reason for the proposal to revise the definition – emergency escape and rescue openings.

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. Since 2017 the BCAC has held 6 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as w ell as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-actioncommittee-bcac.

Cost Impact:
This is a coordination item for requirements for EEROs already permitted between the codes.

RB95-19

IRC®: R310.2.2

Proponent: donald sivigny, State of MN, representing State of MN and Association of Minnesota Building Officials (don.sivigny@state.mn.us)

2018 International Residential Code

Revise as follows:

R310.2.2 Window ~~sill~~ clear opening height. Where a window is provided as the emergency escape and rescue opening, ~~it~~ the bottom of the clear opening shall have a ~~sill~~height of not more than 44 inches (1118 mm) above the floor; where the ~~sill height~~ bottom of the clear opening is below grade, it shall be provided with a window well in accordance with Section R310.2.3.

Reason: Remove the word “sill” with respect to windows and rather use the terminology “clear opening” as this is the critical portion of the window from which to measure, to ensure access to, or when requiring fall protection. This change will provide greater consistency within the text since R310 and R312 reference “clear opening” to describe the requirements of the allowable size of a window.

Cost Impact: This Code Change will not affect the cost of construction

RB96-19

IRC®: R310.2.2

Proponent: Timothy Pate, Colorado Chapter Code Change Committee, representing City and County of Broomfield (tpate@broomfield.org)

2018 International Residential Code

Revise as follows:

R310.2.2 Window ~~sill~~ opening height. Where a window is provided as the emergency escape and rescue opening, ~~it shall have a sill height of~~ the bottom of the clear opening shall be not more than 44 inches (1118 mm) above the floor; where the ~~sill height~~ bottom of the clear opening is below *grade*, it shall be provided with a window well in accordance with Section R310.2.3.

Reason: This proposal is to change the existing language back to what was changed in 2012. It was changed to the current language in 2015 (and stayed the same in 2018) with no apparent reason since it was a part of a larger change. This same language was changed for the 2012 (RB41-09/10) to measure to bottom of opening since it is confusing to what a sill is (no definition) and sills can be much lower than the bottom of opening especially with the heights of the window tracks on a lot of current vinyl windows. I am proposing to change this language back to what was in the 2012. This would also match the current language in IBC section 1030.3.

Cost Impact: This proposal will not increase or decrease the cost of construction. It will only clarify what the intent of the code is.

RB100-19

IRC®: R310.4 (New), R310.2.3 (New), R310.2.3.1 (New), R310.4.2.1 (New), R310.2.3.2 (New), R310.4 (New), R310.3 (New), R310.3.1 (New), R310.3.2 (New), R310.3.2.1 (New), R310.3.2.2 (New)

Proponent: Ed Kulik, representing ICC Building Code Action Committee (bcac@iccsafe.org)

2018 International Residential Code

Add new text as follows:

R310.4 Area wells. An emergency escape and rescue opening where the bottom of the clear opening is below the adjacent grade shall be provided with an area well in accordance with Sections R310.4.1 through R310.4.4.

Revise as follows:

~~**R310.2.3**~~ **R310.4.1** ~~**Window wells.**~~ **Minimum size.** The horizontal area of the ~~window~~ area well shall be not less than 9 square feet (0.9 m^2), with a horizontal projection and width of not less than 36 inches (914 mm). The ~~area~~ size of the ~~window~~ area well shall allow the emergency escape and rescue opening to be fully opened.

> **Exception:** The ladder or steps required by Section R310.2.3.1 shall be permitted to encroach not more than 6 inches (152 mm) into the required dimensions of the ~~window~~ area well.

~~**R310.2.3.1**~~ **R310.2.4.2 Ladder and steps.** ~~Window~~ Area wells with a vertical depth greater than 44 inches (1118 mm) shall be equipped with ~~a~~ an approved permanently affixed ladder or ~~steps usable with the window in the fully~~ steps. The ladder or steps shall not be obstructed by the emergency escape and rescue opening where the window or door is in the open position. Ladders or steps required by this section shall not be required to comply with Section R311.7.
~~Ladders or rungs shall have an inside width of not less than 12 inches (305 mm), shall project not less than 3 inches (76 mm) from the wall and shall be spaced not more than 18 inches (457 mm) on center vertically for the full height of the window well.~~

Add new text as follows:

R310.4.2.1 Ladders. Ladders and rungs shall have an inside width of not less than 12 inches (305 mm), shall project not less than 3 inches (76 mm) from the wall and shall be spaced not more than 18 inches (457 mm) on center vertically for the full height of the area well.

Revise as follows:

~~**R310.2.3.2**~~ **R310.2.4.3 Drainage.** ~~Window~~ Area wells shall be designed for proper drainage by connecting to the building's foundation drainage system required by Section ~~R405.1 or by an approved alternative method.~~ R405.1.

> **Exception:** A drainage system for ~~window~~ area wells is not required where the foundation is on well-drained soil or sand-gravel mixture soils in accordance with the United Soil Classification System, Group I Soils, as detailed in Table R405.1~~R405.1.~~ .

~~**R310.4**~~ **R310.4.4 Bars, grilles, covers and screens.** Where bars, grilles, covers, screens or similar devices are placed over emergency escape and rescue openings, ~~area wells~~ bulkhead enclosures, or ~~window~~ area wells that serve such openings, the minimum net clear opening size shall comply with Sections ~~R310.2.1~~ R310.2 through ~~R310.2.3,~~ R310.2.2 and ~~such~~ R310.4.1. Such devices shall be releasable or removable from the inside without the use of a key ~~,~~ or tool ~~, special knowledge~~ or force greater than that required for the normal operation of the escape and rescue opening.

R310.3 Emergency escape and rescue doors. Where a door is provided as the required emergency escape and rescue opening, it shall be a side-hinged door or a ~~slider. Where the opening is below the adjacent grade, it shall be provided with an area well.~~ sliding door.

Delete without substitution:

~~**R310.3.1 Minimum door opening size.** The minimum net clear height opening for any door that serves as an emergency and escape rescue opening shall be in accordance with Section R310.2.1.~~

~~**R310.3.2 Area wells.** Area wells shall have a width of not less than 36 inches (914 mm). The area well shall be sized to allow the emergency escape and rescue door to be fully opened.~~

~~**R310.3.2.1 Ladder and steps.** Area wells with a vertical depth greater than 44 inches (1118 mm) shall be equipped with a permanently affixed ladder or steps usable with the door in the fully open position. Ladders or steps required by this section shall not be required to comply with Section R311.7. Ladders or rungs shall have an inside width of not less than 12 inches (305 mm), shall project not less than 3 inches (76 mm) from the wall and shall be spaced not more than 18 inches (457 mm) on center vertically for the full height of the exterior stairwell.~~

~~**R310.3.2.2 Drainage.** Area wells shall be designed for proper drainage by connecting to the building's foundation drainage system required by Section R405.1 or by an *approved* alternative method.~~

~~Exception: A drainage system for area wells is not required where the foundation is on well-drained soil or sand-gravel mixture soils in accordance with the United Soil Classification System, Group I Soils, as detailed in Table R405.1.~~

Reason: This is one of a series of proposal to coordinate the requirements for emergency escape and rescue openings in the IBC and IRC. While independent issues, if all the proposals are approved, the IRC section would appear as indicated in the reason for the proposal to revise the definition – emergency escape and rescue openings.
The intent of this proposal to clarify and coordinate the requirements for area wells at emergency escape and rescue openings (EERO) that are below grade (current R310.2.3 and R310.3.2). This does NOT delete doors as an option. This recognizes that windows and doors are both types of emergency escape and rescue openings. The term 'area well' will apply for both windows or doors. The IBC correlating change was E111-18(AS)

- IRC R310.4 - This general paragraph clarifies that the bottom of the EERO sets the requirements for the area well.
- **I**RC R310.4.1 - Revisions for consistent terminology.
- IRC 1030.4.2 - The sentence about the window not obstruction the steps or ladder is a safety feature. The requirements for ladders has moved into a separate section-R310.4.2.1. Requirements for steps are addressed in another proposal since they are new.
- IRC R1030.4.3 - Since the code always allows alternative means, the last phrase is not needed.
- IRC R310.4.4 - Revisions for coordination. The reference to emergency and escape opening size and minimum area well size. The term “special knowledge is removed to be consistent with IBC and IRC R310.1.1 – the term allows for too broad of an interpretation.
- IRC R310.3 - The last sentence in R310.3 is deleted as redundant since the criteria for area wells is specifically addressed later in Section 310.4.
- IRC Section R310.3.2, R310.3.2.1 and R310.3.2.2 – delete the separate area well requirements for doors.

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. Since 2017 the BCAC has held 6 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as w ell as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-actioncommittee-bcac.

Cost Impact:
This is a coordination item for requirements for EEROs already permitted between the codes.

RB97-19

IRC®: R310.2.3, R310.2.3.1, R310.2.3.2 (New)

Proponent: Donald Masters, Master Home and Building Inspections, LLC, representing Self (mhbinspections@gmail.com)

2018 International Residential Code

Revise as follows:

R310.2.3 Window wells. The horizontal area of the window well shall be not less than 9 square feet (0.9 m^2), with a horizontal projection and width of not less than 36 inches (914 mm). The area of the window well shall allow the emergency escape and rescue opening to be fully ~~opened.~~ opened, and installed safety grates or covers to be fully opened, and remain open without physical assistance to keep them open. The height of the well shall not exceed one (1) foot above the surrounding soil level except as *approved* .

> **Exception:** The ladder or steps required by Section R310.2.3.1 shall be permitted to encroach not more than 6 inches (152 mm) into the required dimensions of the window well.

R310.2.3.1 Ladder and steps. Window wells with a vertical depth greater than 44 inches (1118 mm) shall be equipped with a permanently affixed ladder or steps usable with the window in the fully open position. Ladders or steps required by this section shall not be required to comply with Section R311.7. Ladders or rungs shall have an inside width of not less than 12 inches (305 mm), shall project not less than 3 inches (76 mm) from the wall and shall be spaced not more than 18 inches (457 mm) on center vertically for the full height of the window well.

Add new text as follows:

R310.2.3.2 Window Well Coverings. Window well covers, grates, and similar structures shall meet the following requirements:

1. Safety or security grates or structures and protective covers shall not exceed 25 lbs in total;
2. Grates or structures shall be hinged or otherwise attached such that they will remain open without human support while exiting the well;
3. Locks or other deterrent mechanisms shall not be installed without the ability to release them from inside the well.

Reason: Purpose for Requested Change:
As a home inspector, I see many creative design installations for items required by locally approved ICC new construction building codes. Tying the reason for a code to the design and implementation of the requirement, and then to the effective design functionality of the product created, in this instance leaves me with much concern for the safety of children or adults of limited physical means needing to use the installed escape route through a below grade window or below grade door and up through a well and grate covering.

Assumptions:

1) The minimum age for which the egress opening shall be intuitively functional is age four (4). In other words individuals of age four or greater shall be able to exit the window or door, structure, and well without any training or prior experience;
2) Any occupant in the structure who meets three components of physical capability (agility, balance, and muscular strength) shall be able to exit the window or door, and climb the well, open any grate and cover and escape to safety.
3) Occupants with physical limitations that limit the following abilities - agility, balance, and muscular strength - may not be able to exit these emergency egress windows and wells, and are cause for further discussion.

Changes Requested to current installations:

1) Limit the height of the well above the surrounding grade
2) Limit the combined weight of any installed safety grate and other covering components (i.e. rain protective coverings)
3) Require that if a safety grate is installed, the grate shall be mounted such that it cannot be removed without tools (hinges or other mechanical balance system)
4) Require that any grate or covering material shall not be locked or secured such that it cannot be opened from the interior of the well by an average person
5) Require that any grate or covering shall be able to be pushed to and remain in a safe open position
6) Require that stairs be secured such that they remain secure while initially grabbing and while climbing, and cannot be removed from the well (already in the code but not being implemented)
7) Safety railings can be used in place of a horizontal grate to protect against injury from falling into a well.

Reasons and Examples for the Changes:

1) Weight - Current typical weight of the steel grates are upwards of 40 lbs.
2) Height - Some installed wells are built such that reachiing the top of the well would requires steps on the exterior of the well to fully escape for some people.
3) Windows & locks - Can the windows be successfully unlocked and opened by a child? Many installed sash or slider windows are installed tight,

bind, and are difficult for a fully functional adult to open and climb the 44 inches over the interior ledge.
4) Grates - In areas that are prevalent to break-ins, the grates may have a locking mechanism installed, which would require a key or other way to unlock or unlatch the grate cover.
5) Stairs - Although in the current code, many stairs are found to be hanging loose, are removable, or are dangerously unstable when climbing.

Cost Impact: The requested code changes may impact construction costs for companies that are not following the current code or are minimally designing and constructing egress wells, but may be negligible for companies currently dedicated to constructing safe egress wells. So costs would vary based on design implementations.

RB98-19

IRC®: R310.2.4

Proponent: Timothy Swanson, representing Colorado Chapter of the ICC (tim.swanson@greeleygov.com)

2018 International Residential Code

Revise as follows:

R310.2.4 Emergency escape and rescue openings under decks, porches and ~~porches.~~ cantilevers. Emergency escape and rescue openings installed under decks, porches and ~~porches~~ cantilevers shall be fully openable and provide a path not less than 36 inches (914 mm) in height to a *yard* or court.

Reason: As with decks and porches, the potential also exists for cantilevers to be located directly over EERO's.

Bibliography: None

Cost Impact: When openings for potential EERO's are detailed for a basement in the planning/design stage, they can be located anywhere at that time. There would be no additional cost at that stage to properly locate the opening away from a cantilever.

RB99-19

IRC®: R310.2.4

Proponent: Matt Archer, City of Lone Tree, representing City of Lone Tree (matt.archer@cityoflonetree.com)

2018 International Residential Code

Revise as follows:

R310.2.4 ~~Emergency escape and rescue openings under decks and porches.~~ Access to a yard or court. Emergency escape and rescue openings ~~installed under decks and porches~~shall be fully openable and provide ~~a~~ an unobstructed path not less than 36 inches (914 mm) in height and 36 inches (914 mm) in width to a *yard* or court.

Reason: This proposal simplifies the existing code language by eliminating a potential list of items and provides a performance parameter for a clear path to a court or yard to meet egress and ingress requirements. I maintained the minimum height requirement of 36 in and added a minimum width requirement of 36 inches. The code was previously silent on width. I have no technical justification for a 36" minimum width. It just made sense to have a consistent width if you had to crawl any distance with full fire gear and hose or while trying to extract someone who may not be conscious. I know Titles are not code but felt necessary to change the title to give the reader a brief detail of what this section is about

Cost Impact: This code chage will not increase or decrease the cost of construction.

RB101-19

IRC®: R310.4.2.2 (New)

Proponent: Ed Kulik, representing ICC Building Code Action Committee (bcac@iccsafe.org)

2018 International Residential Code

Add new text as follows:

R310.4.2.2 Steps. Steps shall have an inside width of at least 12 inches (305 mm),a minimum tread depth of 5 inches (127 mm) and a maximum riser height of 18 inches (457 mm) for the full height of the area well.

Reason:
The overall plan is to have area wells address in a comprehensive manner. Following the graphics for this proposal is how this option of steps will fit in with this group of changes. Area wells less than less than a 44" depth will NOT have to comply with the step provisions. Area wells with a depth of 44" or greater will continue to have the option of a ladder. If a designer chooses to use steps, it is important safety feature to make sure that the occupants would be able to use those steps to evacuate from the window well.

The current provisions says ladders and steps don't have to comply with the standard stairway provisions, however, while specific provisions are provided for ladders, no limits are provided for steps. The option here it the same width and distance between steps are permitted for ladders. The tread depth is the minimum width from alternating tread devices and ships ladders.

Following are examples of stepped configurations that are used today.

The Figure 1 and 2 are examples of stepped area wells that would comply with the proposed language.

Figure 1

Figure 2

Figure 3 and 4 are examples of stepped area wells that would **NOT** comply with the proposed language. The large changes in elevation would be difficult for a child or elderly person to negotiate on their own.

Figure 3

Figure 4

The following is the proposed language for areas wells associated with emergency escape and rescue openings.

R310.5 Area wells. An emergency escape and rescue opening with the bottom of the clear opening below the adjacent grade shall be provided with an area well in accordance with Sections R310.5.1 through R310.5.4.

R310.5.1 Minimum size. The horizontal area of the area well shall be not less than 9 square feet (0.9 m), with a horizontal projection and width of not less than 36 inches (914 mm). The area well shall allow the emergency escape and rescue opening to be fully opened.

Exception: The ladder or steps required by Section R310.5.2.1 shall be permitted to encroach not more than 6 inches (152 mm) into the required dimensions of the area well.

R310.5.2 Ladder and steps. Area wells with a vertical depth greater than 44 inches (1118 mm) shall be equipped with a an approved permanently affixed ladder or steps. The ladder or steps shall not be obstructed by the emergency escape and rescue opening when the window or door is in the open position. Ladders or steps required by this section shall not be required to comply with Section R311.7.

R310.5.2.1 Ladders. Ladders or rungs shall have an inside width of at least 12 inches (305 mm), shall project at least 3 inches (76 mm) from the wall and shall be spaced not more than 18 inches (457 mm) on center (o.c.) vertically for the full height of the area well.

R310.5.2.2 Steps. Steps shall have an inside width of at least 12 inches (305 mm), shall have minimum treads depth of 5 inches (127 mm) and a maximum riser height of 18 inches (457 mm) for the full height of the area well.

R310.5.3 Drainage. Area wells shall be designed for proper drainage by connecting to the building's foundation drainage system required by Section R405.1.

Exception: A drainage system for area wells is not required where the foundation is on well-drained soil or sand gravel mixture soils in accordance with the United Soil Classification System, Group I Soils, as detailed in Table R405.1.

R310.5.4 Bars, grilles, covers and screens. Where bars, grilles, covers, screens or similar devices are placed over emergency escape and

rescue openings, bulkhead enclosures, or area wells that serve such openings, the minimum net clear opening size shall comply with Sections R310.2 through R310.2.2 and R310.4.1. Such devices shall be releasable or removable from the inside without the use of a key or tool or force greater than that required for the normal operation of the escape and rescue opening.

This is one of a series of proposal to coordinate the requirements for emergency escape and rescue openings in the IBC and IRC. While independent issues, if all the proposals are approved, the IRC section would appear as indicated in the reason for the proposal to revise the definition – emergency escape and rescue openings. The IBC portion was E112-18(AS).

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. Since 2017 the BCAC has held 6 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as w ell as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-actioncommittee-bcac.

Cost Impact: This is a design option for window wells that want to use steps instead of ladders.

RB102-19

IRC®: R310.6

Proponent: Jeffrey Hinderliter, New York State Department of State, representing New York State Department of State (Jeffrey.Hinderliter@dos.ny.gov); Gerard Hathaway, New York State Department of State, representing New York State Department of State (gerard.hathaway@dos.ny.gov)

2018 International Residential Code

Revise as follows:

R310.6 Alterations or repairs of existing basements. An emergency escape and rescue opening is not required where existing *basements* undergo alterations or repairs.

Exception: New ~~sleeping rooms~~ habitable spaces created in an existing *basement* shall be provided with emergency escape and rescue openings in accordance with Section R310.1.

Reason: This exception emphasizes the importance of providing an emergency escape and rescue opening (EERO) when sleeping rooms are added to existing basements. However, when a basement is altered to create habitable space, such as a living room or recreational room, many of the same risks will be encountered in an emergency. In addition, when a basement is reconfigured to create multiple rooms, those rooms may not remain for non-sleeping purposes. For example, if a basement office is later converted to a bedroom, owners will rarely seek a permit.
The intention of this code change is to increase the safety of basements when they are converted to habitable space and not just sleeping rooms. This code change would cause an owner to install an EERO when the alteration of a basement causes a basement to become habitable, which would include spaces used for living, sleeping, eating or cooking.

Cost Impact: This code change could increase the cost of construction due to EEROs being installed in habitable spaces rather than just sleeping rooms. If a basement was undergoing an alteration to create a habitable space other than a sleeping room, an EERO would now be required.

RB123-19

IRC®: SECTION R312 (New), R312.2 (New), R312.2.1 (New), R312.2.2 (New)

Proponent: Ed Kulik, representing ICC Building Code Action Committee (bcac@iccsafe.org)

2018 International Residential Code

Revise as follows:

SECTION R312
GUARDS AND WINDOW FALL PROTECTION

R312.2 Window fall protection. Window fall protection shall be provided in accordance with Sections R312.2.1 and R312.2.2.

R312.2.1 Window sills. In dwelling units, where the ~~top~~ bottom of the ~~sill~~ clear opening of an operable window opening is located less than 24 inches (610 mm) above the finished floor and greater than 72 inches (1829 mm) above the finished *grade* or other surface below on the exterior of the building, the operable window shall comply with one of the following:

1. Operable window openings will not allow a 4-inch-diameter (102 mm) sphere to pass through where the openings are in their largest opened position.
2. Operable windows are provided with window opening control devices or fall prevention devices that comply with ASTM F2090.
3. ~~Operable windows are provided with window opening control devices that comply with Section R312.2.2.~~

R312.2.2 ~~Window opening control devices.~~ Emergency escape and rescue openings.
~~Window opening control devices shall comply with ASTM F2090. The~~ Where an operable window serves as an emergency escape and rescue opening, the window opening control device or fall prevention devices, after operation to release the control device allowing the window to fully open, shall not reduce the net clear opening area of the window unit to less than the area required by Section R310.2.1.

Reason: ASTM F2090, *Specification for Window Fall Prevention Devices with Emergency Escape (Egress Release Mechanisms)*, includes criteria for window fall prevention devices and window opening control devices (see Section R312.2). This standard is specifically written for window openings within 75 feet (22 860 mm) of grade and specifically allows for windows to be used for emergency escape and rescue. This standard was updated in 2008 to address window opening control devices. This control device can be released from the inside to allow the window to be fully opened in order to comply with the emergency escape provisions in IRC.
Section 312.2.2.1 - The change to the first sentence is to clarify where the measurement for the bottom of the window should be taken. Exception 2 and 3 are combined since ASTM F2090 includes information on both opening control devices and fall prevention devices.

Section 312.2.2 - The revision does not require opening control devices or fall prevention devices. This section would just allow for them to be on windows that were also serving as emergency escape and rescue openings. This is coordinated with the proposals for emergency escape and rescue openings.

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. Since 2017 the BCAC has held 6 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as w ell as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-actioncommittee-bcac.

Cost Impact: This is a clarification with no technical changes.

RB118-19

IRC®: R312.1.1

Proponent: donald sivigny, State of MN, representing State of MN and Association of Minnesota Building Officials (don.sivigny@state.mn.us)

2018 International Residential Code

Revise as follows:

R312.1.1 Where required. *Guards* shall be provided for those portions of open-sided walking surfaces, including floors, stairs, ramps and landings ~~,~~ that are located more than 30 inches (762 mm) measured vertically to the floor or *grade* below at any point within 36 inches (914 mm) horizontally to the edge of the open side. Insect screening shall not be considered as a *guard*.

Reason: The first sentence of the IRC, section R312.1.1, is revised by deleting the phrase “walking surfaces, including” and replacing it with the word “floors.” As amended, guards are required along open- sided floors, stairs, ramps, and landings when they are located more than 30 inches vertically to the floor or grade below. This change is necessary because the term “walking surfaces” is too broad and can be misinterpreted to apply to almost any surface on or in a building or a lot. This requirement could be interpreted to mean that guards are required to be installed around window wells, on the top of retaining walls, along driveways and sidewalks, on landings near window wells, at the edge of swimming pools, and even at the edge of flat roofs. It is reasonable to use terms that are currently defined and that will best convey the intent of the requirement.

Cost Impact: Depending on interpretatioon this code clarification may even save costs

RB119-19

IRC®: R312.1.2, R312.1.3

Proponent: Kevin Duerr-Clark, representing NYS Department of State (kevin.duerr-clark@dos.ny.gov); Gary Traver, representing NYS Department of State (gary.traver@dos.ny.gov)

2018 International Residential Code

Revise as follows:

R312.1.2 Height. ~~Required~~ Where installed, *guards* at open-sided walking surfaces, including stairs, porches, balconies or landings, shall be not less than 36 inches (914 mm) in height as measured vertically above the adjacent walking surface or the line connecting the *nosings*.

Exceptions:

1. *Guards* on the open sides of stairs shall have a height of not less than 34 inches (864 mm) measured vertically from a line connecting the *nosings*.
2. Where the top of the *guard* serves as a handrail on the open sides of stairs, the top of the *guard* shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm) as measured vertically from a line connecting the *nosings*.

R312.1.3 Opening limitations. ~~Required~~ Where installed, *guards* shall not have openings from the walking surface to the required *guard* height that allow passage of a sphere 4 inches (102 mm) in diameter.

Exceptions:

1. The triangular openings at the open side of stair, formed by the riser, tread and bottom rail of a *guard*, shall not allow passage of a sphere 6 inches (153 mm) in diameter.
2. *Guards* on the open side of stairs shall not have openings that allow passage of a sphere $4^{3}/_{8}$ inches (111 mm) in diameter.

Reason: The way the language is currently written, only required guards need to meet the height and opening limitations. Meaning guards on a low (30 inches or less above grade) deck, installed voluntarily as a design choice, are permitted to be lower than 36-inches and with openings which would allow small children to get caught in. Just like many other code provisions, if a component is installed, whether it is required or not, it should meet the safety requirements of the code instead of providing a false sense of security.

Cost Impact: This change will likely marginally increase the cost of construction for those elevated walking surfaces that are 30 inches or less that voluntarily choose to install guards.

RB120-19

IRC®: R312.2.1

Proponent: donald sivigny, State of MN, representing State of MN and Association of Minnesota Building Officials (don.sivigny@state.mn.us)

2018 International Residential Code

Revise as follows:

R312.2.1 ~~Window sills.~~ Lowest part of window openings. In dwelling units, where the ~~top~~ lowest part of the ~~sill~~ opening of an operable window ~~opening~~ is located ~~less than 24 inches (610 mm) above the finished floor and greater than~~ more than 72 inches (1829 mm) above the finished grade or other walking surface ~~below~~ on the exterior ~~of the building, the operable window shall comply with one of the following~~ below, the lowest part of the window opening shall be not less than 36 inches (914 mm) above the finished floor of the room in which the window is located.

Exceptions:

1. Operable ~~window openings~~ windows that will not allow a 4-inch- diameter (102 mm) sphere to pass through where the openings are in their largest opened position.
2. Operable windows with openings that are provided with window fall prevention devices that comply with ASTM F2090.
3. Operable windows with openings that are provided with window opening control devices that comply with Section R312.2.
4. Replacement windows where the lowest part of the opening is not lower than that of the existing window and the maximum width of the opening of the replacement window does not exceed that of the existing window.

Reason: The first sentence of IRC, section R312.2.1, deletes the IRC language “the lowest part of the clear opening of the window” and replaces it with the phrase “the lowest part of the window opening.” The IRC Technical Advisory Group (TAG) determined that “the lowest part of the window opening” meant the same thing as “lowest part of the clear opening.” The proposed text “lowest part of the window opening” is also consistent with the proposed definition for “sill height” in Code Section 202 (definitions), which clarifies the meaning of sill height pertaining to emergency escape and rescue openings. The first sentence also replaces the phrase “24 inch above finished floor” with “36 inches above the floor.” The 24- and 36-inch dimensions are heights that establish a threshold at which the window fall protection requirements are required. The threshold dimension in the current code is set at 24 inches. The IRC sets this dimension at 24 inches, while the IBC sets this dimension at 36 inches. This threshold dimension must be coordinated between the two codes to provide consistent application and enforcement in residential construction. Windows installed having the lowest part of the window opening below this threshold will require window fall protection compliance. The TAG determined that the 36-inch dimension is reasonable because it will provide increased life safety for occupants since raising the threshold dimension from 24 to 36 inches will require more windows to be fall protection compliant. Requiring more windows to have fall protection devices installed will provide increased life safety to more occupants, especially children. Additionally, these more restrictive requirements are consistent with the intent of codes which require compliance with the standards for window fall protection devices established in the Codes.
The proposed exception #4 is added to exempt replacement windows from the window fall protection requirements. The TAG determined that requiring window fall protection devices in replacement windows would mandate retroactive code compliance for existing structures. Typically, the code is not retroactive for existing structures, with the exception of smoke alarms and safety glazing. If homeowners of existing homes are required to add safety devices that must comply with ASTM F 2090, they may not be as likely to replace windows that trigger this requirement. It is not reasonable to require window fall protection safety devices that may discourage homeowners from replacing old windows that are broken or painted shut.

There will be an increase to the overall cost of windows in a comparable residential unit. Double-hung windows are currently dominant in the market in sizes that would be most likely be affected by adding a window fall protection device would cost about $30.00 per window. On casement windows, which currently have a smaller share of the market, adding a window fall protection device would increase the cost by approximately $100.00 per window.

Cost Impact: Yes there will be a cost increase for some windows depending on the locations where they are installed, however, these more restrictive requirements are being incorporated into the proposed code to provide for increased life safety for the occupants, to coordinate the provisions of the IBC and IRC, and to provide a more consistent application and enforcement between the Codes in Residential construction in both the IBC and the IRC.

RB121-19

IRC®: R312.2.1

Proponent: Timothy Pate, Colorado Chapter Code Change Committee, representing City and County of Broomfield (tpate@broomfield.org)

2018 International Residential Code

Revise as follows:

R312.2.1 Window ~~sills.~~ opening height. In dwelling units, where the ~~top~~ bottom of the ~~sill~~ clear opening of an operable window opening is located less than 24 inches (610 mm) above the finished floor and greater than 72 inches (1829 mm) above the finished *grade* or other surface below on the exterior of the building, the operable window shall comply with one of the following:

1. Operable window openings will not allow a 4-inch-diameter (102 mm) sphere to pass through where the openings are in their largest opened position.
2. Operable windows are provided with window fall prevention devices that comply with ASTM F2090.
3. Operable windows are provided with window opening control devices that comply with Section R312.2.2.

Reason: This proposal is to change the language on how to measure when you need to protect for child fall protection. Since there is not a definition of sill and typically a window sill is lower than the actual bottom of window opening the language should reflect measuring to the bottom of the actual window opening. This language was changed in the 2015 as a part of a larger change with no apparent reason for this language. I have written a companion change to IRC Section R310.2.2 for egress window heights. This language will now match the revised language that was approved by membership for section IBC 1015.8 as per code change E80-2021

Cost Impact: This proposal is to help clarify the intent of the code

RB122-19

IRC®: R312.2.1

Proponent: Norman Clark, representing Self

2018 International Residential Code

Revise as follows:

R312.2.1 Window sills. In dwelling units, where the top of the sill of an operable window opening is located less than 24 inches (610 mm) above the finished floor or any other horizontal surface below that is within the framed opening of the window, and greater than 72 inches (1829 mm) above the finished *grade* or other surface below on the exterior of the building, the operable window shall comply with one of the following:

1. Operable window openings will not allow a 4-inch-diameter (102 mm) sphere to pass through where the openings are in their largest opened position.
2. Operable windows are provided with window fall prevention devices that comply with ASTM F2090.
3. Operable windows are provided with window opening control devices that comply with Section R312.2.2.

Reason: The National SAFE KIDS campaign indicate that 4,700 children annually in the United States require treatment following a fall from a window. About 18 of these children die from such falls. ASTM F2090 is referenced as a required step in the prevention side with fall protection devices and their installation requirements, but now we need to go a step further. The U.S. Consumer Product Safety Commission studies reported that the majority of child falls occurred from the first and second floors. When the requirement for fall protection came in with the 72 inch above grade or exterior surface below requirement, and the 24 inch interior height above finish floor, there was one thing missing.....Built in Furnishings, such as window seats. We have seen many plans submitted for permits with window seats that are 18 inches maximum above the finished floor. This is a height that a child can climb up onto, and now we have a walking surface with the window sill height only inches above. It is understood that anyone can move a piece of furniture such as a hope chest or table under the window sill, but we are not here to monitor what people will do after the fact, we are hear to educate, along with establishing codes that help protect and save lives. We are here to make places where we live, work, educate, assemble, etc. safer. Having this requirement in the body of the code is a step closer to bringing that 4,700 statistic down.
This entire issue hit close to home when an employees child fell from the second floor of a dwelling. My Plumbing Inspectors child had pushed the screen of an opened window toppling out the window and landing in an empty hot tub that was up against the house. This was due to a bed being pushed up against the window. This child was hospitalized for approximately a month with severe head and liver injuries. If the hot tub hadn't been there, a concrete patio is where he would have landed. The outcome could have been much more grim than it was. Children are curious and they do not recognize danger. They like to climb and explore, and they are top heavy with their center of gravity up near their chest. By inserting this text into section R312.2.1, we are establishing fall protection when window seats or furnishings are constructed below the window. If a window sill happens to be 27 inches above the finish floor and a window seat is constructed at 18 inches above the finish floor, we now have a walking surface with the window sill 9 inches above (see Exhibit A), well below their center of gravity. This is a prime opportunity for a child to get in trouble.
By inserting this text in to R312.2.1 for any horizontal surface constructed beneath the window, we are reducing the opportunity for a child to fall. To keep the a child's center of gravity below the windows edge, we have to require the 24 inch requirement from ANY horizontal surface that they can climb upon. I personally know toddlers who can climb up on a 24 inch window seat with no effort at all.

It is very important that we educate the occupants of these dwellings on moving furniture in front of a window. But in addition to that, we can reduce the statistics by not permitting built in raised walking surfaces within 24 inches of the bottom of the window. Every study from the National Safety Council to Consumer Reports lists one of the main problems is furniture in front of a window. A report from WebMD and the American Academy of Pediatrics in 2011 (attached) mentions several times that a major preventer is keeping furniture away from windows. If this is the case, why would we allow these homes to be built with permanent furniture in front of a window without protection? If permanent furniture is to be built in front of a window, then the windows bottom edge needs to be 24 inches or greater above the permanent furnishings, or fall under the requirements of R312.2.1. We have a hard time enforcing R312.2.1 when window seats are constructed because code states only above the finish floor. Some will say that beings how a toddler can climb up on the seat and walk on it that is a walking surface. This doesn't work because there is no definition for a walking surface in the code. This is easily remedied by adding the text to R312.2.1.

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN®

Falls from Windows Injure Nearly 100,000 U.S. Children in 19-Year Period

10/22/2011

During a 19-year period, an estimated 98,145 children were treated in U.S. emergency departments for injuries sustained in falls from windows.

The study, "Pediatric Injuries Attributable to Falls from Windows in the United States in 1990-2008" is the first study to use a nationally representative sample to identify risk factors and trends for pediatric window fall-related injuries treated in US hospital emergency departments. The authors found that windows falls occur more frequently during spring and summer months. The rate of injury is higher for children younger than 5 years of age, and those children were more likely to sustain serious injuries. In addition to young age, a fall height of three stories or higher and a hard landing surface (such as concrete) increased the risk for serious injuries.

Window fall prevention measures for young children should include the use of window guards or window locks and moving furniture away from windows to decrease a young child's access. Another way to reduce injuries is to consider the surface below windows. Simply planting bushes or plant beds under windows can soften the landing surface, reducing impact and the resulting injuries.

August 22nd, 2011
12:01 AM ET

5,000 kids a year hurt in falls from windows

The number of children treated in U.S. emergency departments for falls from windows approached 100,000 between 1990 and 2008, says a study in the journal Pediatrics. The research shows that the number of injuries declined during the first decade of the study period, but has since plateaued.

"We still are seeing over 5,000 children a year treated in hospital emergency departments across the country for injuries related to window falls, said Dr. Gary A. Smith, study author and director of the Center for Injury Research and Policy at Nationwide Children's Hospital in Columbus, Ohio. "That's 14 children a day. This continues to be a very common, important problem."

Researchers studied data from the National Electronic Injury Surveillance System, maintained by the U.S. Consumer Product Safety Commission. The group monitors injuries involving consumer products, treated in emergency departments nationwide. Researchers divided data from almost 4,000 patients into two groups: 0-4 years and 5-17 years.

Boys were involved in more falls from windows than girls were. In addition, the younger children made up two-thirds of the injuries. The injury rate was highest at age 2.

"These are kids who don't recognize danger - they're curious, they want to explore and when they see an open window, they are going to investigate," Smith said. "Kids at that age tend to be top heavy. Their center of gravity is up near their chest and so as they lean out of the window to see what's going on, they'll topple."

Many of the young children experienced injuries to their head or face, and, often times, these led to hospitalization or death. On the other hand, children in the older group were more likely to have fractures to their arms or legs.

While a few children did fall from a third story or higher, many more fell from a first- or second-story window.

"What we're finding is that most of these aren't these really high-rise buildings," Smith added. "These are just often homes or apartments that aren't high-rise, where children live. This is a problem that extends to small towns and even rural areas across the country."

He reinforces the message that a screen does not offer protection and should give parents no feeling of comfort.

Smith, who is a pediatric emergency medicine physician, offers the following advice for parents.

Parents of children younger than 5:
-Use window guards or locks
-Do not allow any window to be open more than four inches
-Move furniture away from windows so children cannot climb on it

Parents of children older than 5:
-Educate children and teens of the risk of climbing out of a window or jumping from it

The authors also note that the landing surface made a difference. The patients who ended up on a cushioned surface often fared better than those who ended up on a hard surface.

"Our focus should be on preventing the child from falling in the first place, but cushioning the fall can help," Smith noted.

"If a child falls from a window and they land on bushes or a planted flower bed, that often is enough to cushion the fall so that they'll end up with bruises or scrapes instead of a severe injury," he said.

The study points out that great reductions were seen in New York and Boston after programs were implemented there to combat the problem. The programs involved education in the community and among parents. Window guards were also made available. In New York City, window guards became mandatory in apartments where young children lived.

"We know what works," Smith said. "We need to now go out and implement that."

Smith said there were limitations with the set of data, especially with fatality numbers, and therefore these numbers under represent the problem.

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Post by: Georgiann Caruso -- CNN Medical Producer
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standardization NEWS

PreventingWindow Falls

Laela's Law, the first statewide window fall prevention legislation, references two ASTM standards

by Richard Wilhelm

On June 16, 2006, Laela Shaugobay, then not quite 2 years old, climbed on a piece of furniture, pushed on an insect screen and fell from a fourth-floor apartment window in Franklin, Minn.

Laela was critically injured but survived the fall and has since fully recovered. However, statistics compiled by the National SAFE KIDS campaign indicate that Laela is one of approximately 4,700 children annually in the United States who require treatment following a fall from a window. According to these same statistics, about 18 children per year die from such falls.

Laela's case inspired action, which resulted in the 2007 passage of a Minnesota state law setting standards for stronger child fall prevention screens and other window fall prevention devices. Laela's Law, as it is now known, took effect in Minnesota on July 1 of this year.

Laela's Law is the first statewide window fall prevention law in the United States, and it could become a model for other state and municipal legislation. The Minnesota law references two ASTM International standards, F2006, Safety Specification for Window Fall Prevention Devices for Non-Emergency Escape (Egress) and Rescue (Ingress) Windows, and F2090, Specification for Window Fall Prevention Devices With Emergency Escape (Egress) Release Mechanisms.

Both standards were developed by Subcommittee F15.38 on Window Fall Prevention, part of ASTM International Committee F15 on Consumer Products.

Kathryn Coen, product safety engineer, product safety and liability prevention group, Andersen Corp., and current chair of Subcommittee F15.38, says that F2006 and F2090 can be used in legislation and in building codes, as well as by individual parents who can purchase devices that comply to the standards for their own homes. "F15.38 wants to educate adults on the importance of window safety, and our standards play an important role in this," says Coen.

History of Subcommittee F15.38

Subcommittee F15.38 was formed in 1995 following a roundtable meeting and a report issued by the U.S. Consumer Product Safety Commission that found that children age 5 and younger account for a high percentage of window fall fatalities and injuries.

The first standard approved by the subcommittee, F2006, applies strictly to fall prevention devices that protect against potential falls by children age 5 and under through open windows not designated for emergency escape or rescue in installations more than 75 ft. (23 m) above ground level in multiple family dwellings. Windows at these heights are beyond the reach of rescue ladders currently in use.

With its second approved standard, F2090, Subcommittee F15.38 covers window fall prevention devices for windows situated up to 75 ft. (23 m) above ground. At this height level, windows do have emergency escape release mechanisms, which needed to be taken into account in the standard.

According to its introduction, F2090 addresses window fall prevention devices that protect against potential falls by children age 5 years and under through open windows. The standard covers a variety of currently available window fall prevention devices, including window opening control devices, window fall prevention screens and some types of window guards, all of which use different strategies to prevent children from falling through open windows.

ASTM F2090 covers the general requirements, installation instructions and performance tests for window fall prevention devices, which are defined in the standard as "any device intended to prevent a young child from passing or falling through an open window." The definition goes on to note that such devices may be an integral part of a window or may be attached to the window, its frame or the area around the window after the window has been installed. F2090 also includes examples of safety information panels to be used within assembly/installation instructions.

Window Fall Prevention Devices

Three types of window fall prevention devices described in the F15.38 standards are:

- Fall prevention window guard — Device designed to fit into or onto a window to prevent a child from passing or falling through an open window. Typically mounted on the interior frame of the window and includes side frames fastened to the sides of a window frame and a plurality of

spaced-apart, transverse, tubular, width-adjustable crosspiece elements to form a grid pattern between the side supports to prevent passage of a child.

- Window fall prevention screen — Screen device designed to fit into or onto a window to prevent a child from passing or falling through an open window. Typically mounted on the exterior surface/frame of a sliding style window and on the interior of a cranking style window and includes screening mesh or material and attachment mechanism(s) of sufficient strength to meet the performance requirements of this standard while preventing passage of a child.
- Window opening control device — Device that limits a window sash to be opened with normal operation of the sash such as to prohibit the free passage of a 4-in. (102-mm) diameter rigid sphere at the lowest opening portion of the window opening, with a release mechanism that shall allow the sash to be opened to a large opening area such as that required for emergency escape and rescue, and that automatically resets when a window is fully closed.

According to Coen, the subcommittee is currently in the process of updating F2090 and invites all interested parties to contribute to future revisions. "We are having ongoing virtual meetings to get everyone on the same page regarding potential updates to the standard," says Coen.

"There is a wide range of subcommittee members, including parents whose children have been in window fall accidents, injury prevention and fire safety experts, building code officials, homebuilders, window manufacturers, makers of fall prevention devices and CPSC representatives," says Coen, who notes that the subcommittee is particularly interested in having input from fire safety experts at this time.

Coen is hopeful that the use of F15.38 standards in building codes and in legislation such as Laela's Law, along with continuing education and information dissemination, will help to lower the incidence of window falls in the future.

WebMD

About 5,000 Kids Fall From Windows Each Year

Simple Prevention Measures Include Installing Locks, Keeping Furniture Away From Windows

By Jennifer Warner

Aug. 22, 2011 -- Falls from windows injure about 5,100 children on average each year in the U.S., and most could be prevented with simple window safety measures.

A new study shows an estimated 98,415 children were treated in hospital emergency rooms from 1990 to 2008 for injuries caused by falls from windows. Injuries ranged from cuts and bruises to fatal head injuries, and young children were most at risk for serious injuries.

Researchers say it's the first study to look at the risk factors and injuries associated with children's falls from windows. The results suggest that many of these injuries could be prevented with simple steps, such as moving furniture away from windows, installing locks, and placing plant beds or bushes under windows.

Window Fall Risks

In the study, researchers analyzed information from a nationwide database of children treated in hospital emergency rooms over a 19-year period from 1990 to 2008.

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The results showed that an estimated 98,415 children were treated for injuries caused by a fall from a window during this period, an average of 5,180 per year.

Researchers found the following factors were associated with window falls:

- Boys were more likely than girls to fall out of windows and accounted for 58% of window fall injuries.
- Falls from windows were more common in spring and summer months.
- One-fourth of the window fall-related injuries required hospitalization.
- Children under 5 years were more likely to suffer serious injuries from a window fall and three times more likely to suffer a head injury.

The study also showed that the type of landing surface plays a major role in the severity of head injuries caused by window falls. Children who landed on a hard surface, such as concrete, were twice as likely to suffer head injuries, be hospitalized, or die from their injuries compared with those who landed on cushioned surfaces.

How to Improve Window Safety

Researchers say placing bushes or plant beds underneath windows can create a cushioned landing surface and reduce the impact of falls from windows for children of all ages.

WebMD Health News Reviewed by Laura J. Martin, MD on August 22, 2011

Sources

SOURCES:

Harris, V. *Pediatrics,* Aug. 22, 2011.

News release, American Academy of Pediatrics.

Other steps to increase window safety include reducing access to windows by moving furniture away from windows and installing window guards or locks that prevent the window from opening more than 4 inches.

Although information about whether furniture was placed near the window was not available for 95% of the falls, researchers found 4% of window falls involved children rolling off beds or climbing on furniture before falling out a window.

Similarly, there was little information about whether a screen was in place at the time of the fall. But when this information was available, 83% reported that a screen was in place.

"Findings from other studies demonstrate that screens often are in place (up to 76% of the time) but do not provide adequate protection against window falls involving children," researcher Vaughn A. Harris, of the Center For Injury Research and Policy, The Research Institute at Nationwide Children's Hospital, in Columbus, Ohio, and colleagues write in *Pediatrics*. "Parents and other child caregivers should be counseled not to depend on screens to prevent children from falling out windows."

WebMD Health News Reviewed by Laura J. Martin, MD on August 22, 2011

Sources

SOURCES:

Harris, V. *Pediatrics,* Aug. 22, 2011.

News release, American Academy of Pediatrics.

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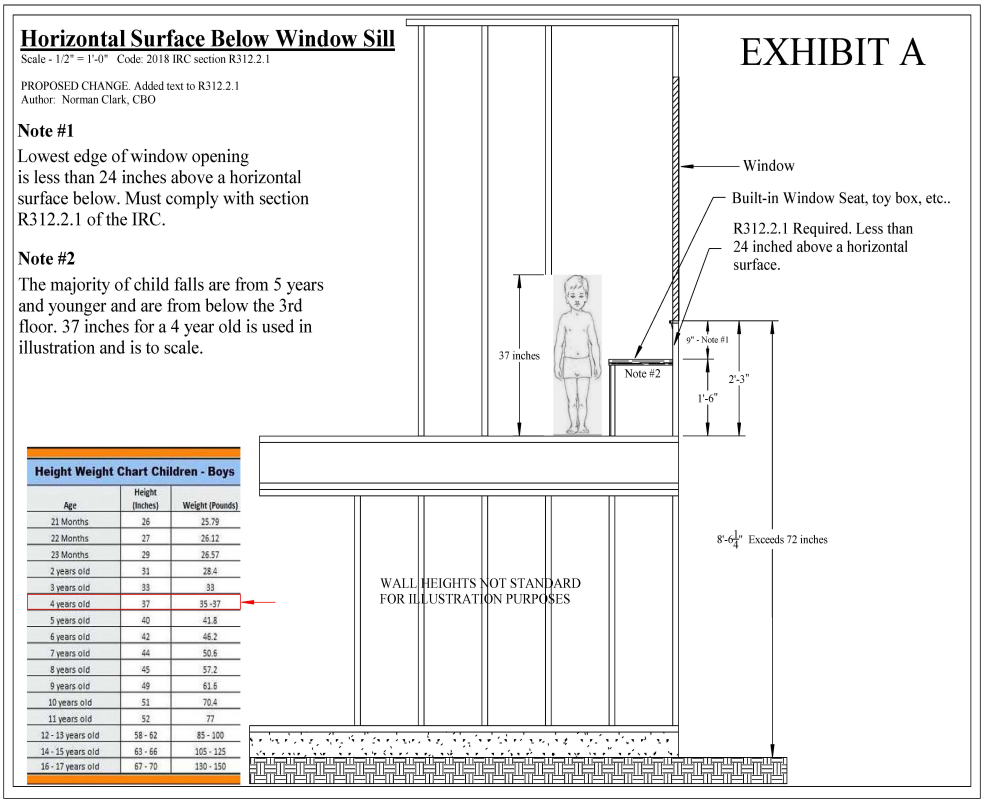


Bibliography: American Academy of Pediatrics, WebMD, National Safe Kids, U.S. Consumer Product Safety Commission, National Safety Council NSC, Consumer Reports

Cost Impact: There would be minimal to no cost impact on this change.

RB58-19

IRC®: TABLE R302.1(1), TABLE R302.1(2)

Proponent: Ed Kulik, representing ICC Building Code Action Committee (bcac@iccsafe.org)

2018 International Residential Code

Revise as follows:

TABLE R302.1(1)
EXTERIOR WALLS

EXTERIOR WALL ELEMENT		MINIMUMFIRE-RESISTANCE RATING	MINIMUM FIRESEPARATION DISTANCE
Walls	Fire-resistance rated	1 hour—tested in accordance with ASTM E119, UL 263 or Section 703.3 of the International Building Code with exposure from both sides	0 feet
	Not fire-resistance rated	0 hours	≥ 5 feet
Projections	Not allowed	NA	< 2 feet
	Fire-resistance rated	1 hour on the underside, or heavy timber, or fire-retardant-treated wood[a, b]	≥ 2 feet to < 5 feet
	Not fire-resistance rated	0 hours	≥ 5 feet
Openings in walls	Not allowed	NA	< 3 feet
	25% maximum of wall area	0 hours	3 feet
	Unlimited	0 hours	5 feet
Penetrations	All	Comply with Section R302.4	< 3 feet
		None required	3 feet

For SI: 1 foot = 304.8 mm.
NA = Not Applicable.

a. The fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave overhang if fireblocking is provided from the wall top plate to the underside of the roof sheathing.

b. The fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the rake overhang where ~~gable~~ vent openings are not installed in the overhang or in any gable end walls that are common to attic areas.

TABLE R302.1(2)
EXTERIOR WALLS—DWELLINGS WITH FIRE SPRINKLERS

EXTERIOR WALL ELEMENT		MINIMUMFIRE-RESISTANCE RATING	MINIMUM FIRESEPARATION DISTANCE
Walls	Fire-resistance rated	1 hour—tested in accordance with ASTM E119, UL 263 or Section 703.3 of the International Building Code with exposure from the outside	0 feet
	Not fire-resistance rated	0 hours	3 feet[a]
Projections	Not allowed	NA	< 2 feet
	Fire-resistance rated	1 hour on the underside, or heavy timber, or fire-retardant-treated wood[b, c]	2 feet[a]
	Not fire-resistance rated	0 hours	3 feet

Openings in walls	Not allowed	NA	< 3 feet
	Unlimited	0 hours	3 feet[a]
Penetrations	All	Comply with Section R302.4	< 3 feet
		None required	3 feet[a]

For SI: 1 foot = 304.8 mm.

NA = Not Applicable.

a. For residential subdivisions where all dwellings are equipped throughout with an automatic sprinkler system installed in accordance with Section P2904, the fire separation distance for exterior walls not fire-resistance rated and for fire-resistance-rated projections shall be permitted to be reduced to 0 feet, and unlimited unprotected openings and penetrations shall be permitted, where the adjoining lot provides an open setback yard that is 6 feet or more in width on the opposite side of the property line.

b. The fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave overhang if fireblocking is provided from the wall top plate to the underside of the roof sheathing.

c. The fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the rake overhang where ~~gable vent openings are not~~ installed in the overhang or in any gable end walls that are common to attic areas.

Reason: Staff continues to get questions regarding these footnotes. The existing language remains unclear, despite recent attempts to fix it. Ray Allshouse, the proponent of the code change that brought this language into the code, was contacted. He indicated that the intent was that if there were no vents at the underside of the overhang, or in any gable end walls (both of which would allow fire to freely move into attic areas), then there should be no requirement to rate the underside of the overhang. Mr. Allshouse also indicated that this concept could be applied gable, hip and any other roof style with overhangs. Where additional attic ventilation is required to make up for the loss of vents at overhangs where fire-separation distance is an issue in accordance these tables and footnotes, additional vents could be added at the underside of eaves in other areas of the dwelling where the fire-separation distance is not an issue, or at roof ridges.
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. Since 2017 the BCAC has held 6 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as well as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on theBCAC website at: https://www.iccsafe.org/codes-tech-support/codes/code-development-process/building-code-action-committee-bcac/.

Cost Impact: This code change is a clarifiction of current code requirements.

RB30-19

IRC®: SECTION R202, 202, R301.1.4 (New)

Proponent: Ed Kulik, representing ICC Building Code Action Committee (bcac@iccsafe.org)

2018 International Residential Code

Revise as follows:

SECTION R202
DEFINITIONS

Add new text as follows:

INTERMODAL SHIPPING CONTAINER. A six-sided steel unit originally constructed as a general cargo container used for the transport of goods and materials.

R301.1.4 Intermodal shipping containers. Intermodal shipping containers shall be designed in accordance with the structural provisions in Section 3114 of the International Building Code.

Reason: This code change purpose is to introduce intermodal shipping containers into the International Residential Code based on requests by code officials in the U.S. Prior to this proposal, several jurisdictions had created their own individual regulations or ordinances, or had administered additional requirements beyond the code (e.g. Section R104.11 “Alternative Materials, design and methods of construction and equipment”) so at to be comfortable to ensure a safe structure. This code change proposal is in response to those requests to develop a provision in order to establish a consistent set of provisions which cover the minimum safety requirements, but which do not duplicate existing code provisions.
The proposed definition is consistent with the successful code change proposal to the International Building Code, new Section 3114. For consistency, we are introducing that same definition here.

The reference to the International Building Code has been modeled after Sections R301.1.1 through R301.1.3. The BCAC Shipping Container Working Group chose not to duplicate the newly accepted shipping container structural design language in the International Building Code. This proposal is making a simple reference the new section in the IBC where the provisions for shipping container structural safety are contained. As Section R301.1 applies to structural design only, the other non-structural provisions of the International Residential Code would apply as required (e.g. energy, plumbing, mechanical, electrical, etc.). Also, because Section R301.1.1 deals with primarily alternative sources of structural design (e.g. independent reference standard structural design resources outside the codes), the BCAC shipping container Working Group determined it to be more appropriate to separate this reference to the IBC for clarity.

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. Since 2017 the BCAC has held 6 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as well as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on theBCAC website at: https://www.iccsafe.org/codes-tech-support/codes/code-development-process/building-code-action-committee-bcac/.

Cost Impact: The code change proposal will decrease the cost of construction. This new code section will provide clarity on how to consistently design with, permit, and field inspect shipping containers that are repurposed for residential building construction. Current use of repurposed intermodal shipping containers requires the owner or builder to submit through the alternative means and methods administrative provisions.

RB129-19

IRC®: R314.3.1 (New)

Proponent: Ed Kulik, representing ICC Building Code Action Committee (bcac@iccsafe.org)

2018 International Residential Code

Revise as follows:

R314.3.1 Installation near cooking appliances. Smoke alarms shall not be installed in the following locations unless this would prevent placement of a smoke alarm in a location required by Section R314.3.

1. Ionization smoke alarms shall not be installed less than 20 feet (6096 mm) horizontally from a permanently installed cooking *appliance*.
2. Ionization smoke alarms with an alarm-silencing switch shall not be installed less than 10 feet (3048 mm) horizontally from a permanently installed cooking *appliance*.
3. Photoelectric smoke alarms shall not be installed less than 6 feet (1828 mm) horizontally from a permanently installed cooking *appliance*.
4. Smoke alarms listed and marked “helps reduce cooking nuisance alarms” shall not be installed less than 6 feet (1828 mm) horizontally from a permanently installed cooking appliance.

Reason: This proposal recognizes that smoke alarms listed to the new edition of UL 217 (with an effective date of May 29, 2020) are required to pass tests designed to reduce nuisance alarms caused by residential cooking. The proposal provides an additional option for the types of smoke alarms that can be used near cooking appliances, without changing additional options.
The wording is based on the following 2019 NFPA 72 language:

29.11.3.4 (6) Effective January 1, 2022, smoke alarms and smoke detectors installed between 6 ft (1.8 m) and 20 ft (6.1 m) along a horizontal flow path from a stationary or fixed cooking appliance shall be listed for resistance to common nuisance sources from cooking.

There is no need to reference the 2022 effective date in NFPA 72 because if smoke alarms are listed to the new requirements prior to that date they should be allowed to be used as an option to the other technologies provided in Items 1 to 3.

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. Since 2017 the BCAC has held 6 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as w ell as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-actioncommittee-bcac.

Cost Impact: The increased cost will be for providing carbon monoxide detection when classrooms in Group E occupancies are covered by these code sections.

RB140-19

IRC: R202, R320.1, R320.1.1, R320.2 (New)

Proponent: Ed Kulik, representing ICC Building Code Action Committee (bcac@iccsafe.org)

2018 International Residential Code

Add new text as follows:

LIVE/WORK UNIT. A dwelling unit or sleeping unit in which a significant portion of the space includes a nonresidential use that is operated by the tenant.

Add new definition as follows:

SLEEPING UNIT. A single unit that provides rooms or spaces for one or more persons, includes permanent provisions for sleeping and can include provisions for living, eating and either sanitation or kitchen facilities but not both. Such rooms and spaces that are also part of a dwelling unit are not sleeping units.

Revise as follows:

SECTION R320
ACCESSIBILITY

R320.1 Scope. Where there are four or more *dwelling units* or sleeping units in a single structure, the provisions of Chapter 11 of the International Building Code for Group R-3 shall apply.

Exception: Owner-occupied lodging houses with five or fewer guestrooms are not required to be accessible.

Delete without substitution:

~~**R320.1.1 Guestrooms.** A *dwelling* with guestrooms shall comply with the provisions of Chapter 11 of the International Building Code for Group R-3. For the purpose of applying the requirements of Chapter 11 of the International Building Code, guestrooms shall be considered to be sleeping units.~~

~~**Exception:** Owner-occupied lodging houses with five or fewer guestrooms constructed in accordance with the International Residential Code are not required to be accessible.~~

Add new text as follows:

R320.2 Live/work units. In live/work units, the nonresidential portion shall be accessible in accordance with Sections 419.7 and 419.9 of the International Building Code. In a structure where there are four or more live/work units, the dwelling portion of the live/work unit shall comply with Section 1107.6.2.1 of the International Building Code.

Reason: The accessibility provisions have not kept up with the revised scope of the IRC. This is the scope -
R101.2 Scope. The provisions of this code shall apply to the construction, *alteration*, movement, enlargement, replacement, repair, *equipment*, use and occupancy, location, removal and demolition of detached one- and two-family dwellings and *townhouses* not more than three stories above *grade plane* in height with a separate means of egress and their *accessory structures* not more than three stories above *grade plane* in height.

Exception: The following shall be permitted to be constructed in accordance with this code where provided with a residential fire sprinkler system complying with Section P2904:

1. Live/work units located in *townhouses* and complying with the requirements of Section 419 of the *International Building Code*.

2. Owner-occupied lodging houses with five or fewer guestrooms.

3. A care facility with five or fewer persons receiving custodial care within a dwelling unit.

4. A care facility with five or fewer persons receiving medical care within a dwelling unit.

5. A care facility for five or fewer persons receiving care that are within a single-family dwelling.

The scope in the IRC of the transient lodging is limited to owner occupied with 5 or fewer guestrooms, so there will be no larger facilities. Guestrooms are sleeping units which is covered in R320.1, so a separate section that start by applying to something that is not permitted just to get the exception is not needed. You can just apply the exception to R310.1. This does coordinate with IBC Section 1103.2.11.

1103.2.11 Residential Group R-1. Buildings of Group R-1 containing not more than five sleeping units for rent or hire that are also occupied as the

residence of the proprietor are not required to comply with this chapter.

For Live work units, the IBC has

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

419.9 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 1107.6.2.1, the plumbing fixtures specified by Chapter 29 shall be *accessible*.

1107.6.2.1 Live/work units. In *live/work units* constructed in accordance with Section 419, the nonresidential portion is required to be *accessible*. In a structure where there are four or more *live/work units intended to be occupied as a residence*, the residential portion of the *live/work unit* shall be a *Type B unit*.

Exception: The number of *Type B units* is permitted to be reduced in accordance with Section 1107.7.

It is proposed to add a reference to this language to the IRC for consistency for accessibility requirements for Live/work units.

Since the terms ‘sleeping units’ and ‘live/work units’ are used in the IRC, in this section and others. It is proposed to add the definitions currently found in the IBC.

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. Since 2017 the BCAC has held 6 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as w ell as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-actioncommittee-bcac.

Cost Impact: This will make the IRC requirements consistent with the IBC for owner-occupied lodging houses and live/work units.

RB139-19

IRC: 202 (New), R320.1, R320.1.1

Proponent: Steven Mickley, representing American Institute of Building Design (steve.mickley@aibd.org)

2018 International Residential Code

SECTION R320
ACCESSIBILITY

Revise as follows:

R320.1 Scope. Where there are four or more *dwelling units* or sleeping units in a single structure, the provisions of Chapter 11 of the *International Building Code* for Group R-3 shall apply. For the purpose of applying the requirements of Chapter 11 of the *International Building Code* , guestrooms shall be considered to be sleeping units.

Exceptions:

1. A *multistory dwelling unit* that is not provided with elevator service is not required to comply with this section.
2. Owner-occupied lodging houses with five or fewer guestrooms constructed in accordance with the *International Residential Code* are not required to comply with this section.

Delete without substitution:

~~**R320.1.1 Guestrooms.** A *dwelling* with guestrooms shall comply with the provisions of Chapter 11 of the International Building Code for Group R-3. For the purpose of applying the requirements of Chapter 11 of the International Building Code, guestrooms shall be considered to be sleeping units.~~

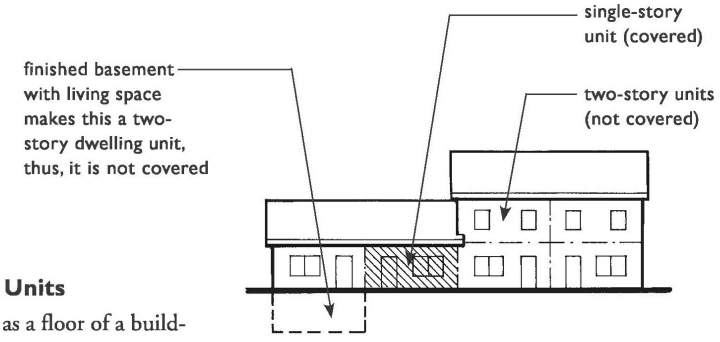
~~**Exception:** Owner-occupied lodging houses with five or fewer guestrooms constructed in accordance with the International Residential Code are not required to be accessible.~~

Add new definition as follows:

MULTISTORY UNIT. A *dwelling unit* or *sleeping unit* with *habitable space* located on more than one *story*.

Reason: Chapter 11 of the IBC exempts owner-occupied lodging houses with no more than five sleeping units and multistory dwelling units not provided with elevator service. IRC, Section 320 currently only mentions lodging houses being exempt. Therefore, this proposed amendment is intended to clarify, without the designer having to refer to both Section 320 of the IRC and Chapter 11 of the IBC, multistory dwelling units not provided with elevator service are not required to comply.

The following illustration from the Fair Housing Act Design Manual visually depicts which units are "covered" by the act, and which are "not covered." It also depicts the scope of Chapter 11 of the IBC and the intent of this amendment.



Ground Floor Dwelling Units

The **ground floor** is defined as a floor of a building with a building entrance on an accessible route. The ground floor may or may not be at grade.

Ground Floor Units in Buildings of 4 or More Units Are Covered

= covered unit

Bibliography: International Building Code, International Code Council, published in September 2018
Fair Housing Act Design Manual, U.S. Department of Housing and Urban Development, published in August 1996, revised in April 1998.

Cost Impact: This proposal will decrease the cost of design and construction by eliminating potential misinterpretation and unnecessary regulation.