

IBC 10-4/IRC 3-1

Revised 8-24-2017

Proposal 1:

IBC

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.

IRC

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

IFC

[BE] 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.

IEBC

[BE] 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.

IPMC

[BE] 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: Coordinate the definitions for emergency escape and rescue openings between IBC, IRC, IEBC, IPMC, IFC.

Proposal 2:

IBC

GRADE FLOOR EMERGENCY ESCAPE AND RESCUE OPENING. ~~A window or other~~ An emergency 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.

IRC

GRADE FLOOR EMERGENCY ESCAPE AND RESCUE OPENING. ~~A window or other~~ An emergency 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.

Reason: Revise defined term to that used in technical criteria (this term is only used for emergency escape and rescue openings). What is a 'sill' is not clear. Need to indicate that this is to the bottom of the opening (otherwise a below grade window could be very deep). See also revisions to IBC 1030.2 and IRC R310.2.1.

Proposal 3:

IFC

403.10.3.6 Resident participation in drills. Emergency evacuation drills shall involve the actual evacuation of residents to a selected assembly point and shall provide residents with experience in exiting through all required exits. All required exits shall be used during emergency evacuation drills.

Exception: Actual exiting from windows serving as emergency escape and rescue ~~windows openings~~ shall not be required. Opening the windows serving as emergency escape and rescue ~~windows openings~~ and signaling for help shall be an acceptable alternative.

Reason: IFC 403.10.3.6 says "window" instead of opening. This should be revised to use the defined term. If the emergency opening is a door, this exception is not needed.

Proposal 4:

IBC

~~(High-rise) 403.5.6 Emergency escape and rescue.~~ Emergency escape and rescue openings specified in Section 1030 are not required.

Reason: EERO not required for highrises in 1030.1, so exception not needed in 403.

Proposal 5:

IBC

SECTION 1030 EMERGENCY ESCAPE AND RESCUE OPENINGS

1030.1 General Where required. In addition to the *means of egress* required by this chapter *emergency escape and rescue openings* shall be provided in the following occupancies:

1. Group R-2 occupancies located in stories with only one exit or access to only one exit as permitted by Tables 1006.3.3(1) and 1006.3.3(2)
2. Group R-3 and R-4 occupancies.

Basements and sleeping rooms below the fourth story above *grade plane* shall have no fewer than one ~~exterior~~ *emergency escape and rescue opening* in accordance with this section. Where *basements* contain one or more sleeping rooms, an emergency escape and rescue openings 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 exit balcony that opens to a public way.*~~
3. *Basements* ~~without habitable spaces~~ and having not more than 200 square feet (18.6 m²) in floor area shall not be required to have *emergency escape and rescue openings*.
4. *Storm shelters* having not more than 200 square feet (18.6 m²) in floor area shall not be required to have *emergency escape and rescue openings*.
4. Within individual dwelling and sleeping units in Groups R-2 and R-3, where the building is equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1, 903.3.1.2 or

903.3.1.3, sleeping rooms in basements shall not be required to have *emergency escape and rescue openings* provided that the basement has one of the following:

- 4.1. One means of egress and one *emergency escape and rescue opening*
- 4.2. Two means of egress.

IRC

SECTION R310
EMERGENCY ESCAPE AND RESCUE OPENINGS

R310.1 ~~Emergency escape and rescue opening~~ Where required.

Basements, habitable attics and every sleeping room shall have ~~not less~~ **no fewer** than one **operable** 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**. ~~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. ~~Storm shelters and basements used only to house mechanical equipment~~ not exceeding a total floor area of 200 square feet (18.58 m²) *shall not be required to have emergency escape and rescue openings.*
 3. ~~Storm shelters not exceeding a total floor area of 200 square feet (18.58 m²)~~ *shall not be required to have emergency escape and rescue openings.*
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:
- 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 is a series of changes to coordinate the provisions for emergency escape and rescue openings.

- The definition includes ‘exterior’ and ‘operable’, so it does not need to be repeated.
- Only the IRC define ‘habitable attic’. If added to the IBC, would the IBC also have to pick up the definition and the number of stories below the habitable attic space? (the IRC definition says this is not a story).
- IRC coordination for basement areas outside of bedrooms.
- IRC new exception 1 – coordination with IBC. Provide exemption for basements that have low ceilings.
- IBC Exception 2 not needed since doors are an emergency escape and rescue opening.
- IBC Exception 3 – coordination with IRC, limit is just size without additional criteria for habitable.
- Split out storm shelters in IRC and add to IBC.
- Make all exceptions in IRC clear on what is exempted.

Proposal 6:

IBC

1030.1.1 Operational constraints and opening control devices. Emergency escape and rescue openings shall be operational from inside the room without the use of keys or tools. Window opening control devices ~~complying with ASTM F 2090 shall be permitted for use on windows serving as a required emergency escape and rescue opening~~ shall comply with ASTM F2090.

IRC

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.

IRC

Reason: This is a series of changes to coordinate the provisions for emergency escape and rescue openings.

IBC - Last sentence reworded as a requirement to be consistent with IRC

IRC – This tem was removed from IBC because the phrase “special knowledge” is too open for interpretations.

Proposal 7:

IBC

1030.2 Minimum size. *Emergency escape and rescue openings* shall have a minimum net clear opening of 5.7 square feet (0.53 m²).

Exception: The minimum net clear opening for *grade-floor emergency escape and rescue openings* shall be 5 square feet (0.46 m²).

1030.2.1 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.

1030.32.2 Maximum height from floor. Where a window is provided as the *Emergency escape and rescue openings*, such window shall have the bottom of the clear opening not greater than 44 inches (1118 mm) measured from the floor.

IRC

R310.2 Emergency escape and rescue openings. Emergency escape and rescue openings shall have minimum dimensions as specified in this section.

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 m²). ~~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 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 m²).

R310.2.1 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.

R310.2.2 Window sill Maximum height from floor. Where a window is provided as the emergency escape and rescue openings, it such window shall have a sill height of not more 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.

Reason: This is a series of changes to coordinate the provisions for emergency escape and rescue openings. This proposal deals with Minimum size, dimensions and height.

IBC: 310.3 – revise to coordinate language and organization with the IRC.

IRC:

R310.2 - Not needed when sections below revised.

R310.2.1 - IRC text relocated to subsection (new 310.2.1). IRC 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). Note: If the intent is to allow for a 5 sq.ft. opening in basement levels that do not meet the definition, the definition and exception needs to be revised.

R310.2.2 - The IRC should clarify that the 44" is to the bottom of the opening. The sill can be interpreted a lot of different ways. Move window well requirement into next section.

Proposal 8:

IBC

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

IRC

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 sliding door. ~~Where the opening is below the adjacent grade, it shall be provided with an area well.~~

~~**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.~~

IRC

~~**R310.3.2 Area Wells.** Area wells shall have a width of not less than 36 inches (914 mm). The area of the area well shall 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 Sections 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 a series of changes to coordinate the provisions for emergency escape and rescue openings. This proposal deals with doors used as emergency escape and rescue openings. IBC and IRC have different phrases for types of doors. Rather than totally separate requirements for doors and windows, use the same criteria as much as possible. That is literally what the current text does, but with a lot of duplication.

IRC Section R310.3.1 - You already have the size applicable for all emergency escape and rescue openings, so not needed. Plus, the reference would literally allow for a 24 inch high door. IRC 311.2 does allow for doors that are of any size unless it is the one egress door for the dwelling.

The requirements for areas wells at doors are a repeat of window wells – Proposal to IBC1030.4 and R310.2.3 changes the name to area wells, and then requirements don't need to be repeated.

Proposal 9:

IBC

1030.4 Window Area wells. An *emergency escape and rescue opening* with a finished sill height the bottom of the clear opening below the adjacent ground level grade shall be provided with a window area well in accordance with Sections 1030.4.1 and through 1030.4.24.4.

1030.4.1-Minimum size. The minimum horizontal area of the window area well shall be 9 square feet (0.84 m²), with a minimum dimension of horizontal projection and width of not less than 36 inches (914 mm). The area 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 1030.4.2.1 shall be permitted to encroach not more than 6 inches (152 mm) into the required dimensions of the area well.

1030.4.2 Ladders or steps. Window Area wells with a vertical depth of more than 44 inches (1118 mm) shall be equipped with an *approved* permanently affixed ladder or steps. 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 window well. The ladder or steps shall not encroach into the required dimensions of the window well by more than 6 inches (152 mm). 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 are exempt from the *stairway* requirements of shall not be required to comply with Section 1011.

1030.4.2.1 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.

1030.4.3 Drainage. Area wells shall be designed for proper drainage by connecting to the building's foundation drainage system required by Section 1805.

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, in accordance with Section 1803.5.1.

1030.54.4 Bars, grilles, covers and screens. Where Bars, grilles, covers, screens or similar devices are permitted to be placed over *emergency escape and rescue openings*, bulkhead enclosures, or window area wells that serve such openings, provided that the minimum net clear opening size complies with Section 1030.1.1 through 1030.4 1030.2.2 and 1030.4. and 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 *emergency escape and rescue opening*. Where such bars, grilles, covers, screens or similar devices are installed in existing buildings, they shall not reduce the net clear opening of the *emergency escape and rescue openings* and smoke alarms shall be installed in accordance with Section 907.2.10 regardless of the valuation of the alteration.

IRC

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

R310.2.34.1 Window wells Minimum size. The horizontal area of the window area well shall be not less than 9 square feet (0.9 m²), with a horizontal projection and width of not less than 36 inches (914 mm). The area 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 R310.4.2.1 shall be permitted to encroach not more than 6 inches (152 mm) into the required dimensions of the window area well.

R310.2.3.1-4.2 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 open position. 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. ~~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.~~~~

R310.4.2.1 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.

~~R310.2.3.2-4.3 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.~~

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.

R310.4.4 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 walls, or window wells that serve such openings. ~~The~~ the minimum net clear opening size shall comply with Sections R310.2.4 through R310.2.32 and R310.4.1. ~~and~~ 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.

Reason: This is a series of changes to coordinate the provisions for emergency escape and rescue openings. This deals with area wells.

IBC 1030.4 and IRC R310.4 - The same point of measurement should be used for both the maximum height above floor (section above) and the window well. Should not mix 'grade' and 'ground level'.

IBC 1030.4.1 and IRC R310.4.1 - "horizontal projection and width" is more specific. IBC exception for ladder encroachment moved up from 1030.4.2.

IBC 1030.4.2 and IRC 1030.4.2 - IBC encroachment of ladder into well moved up to 1030.4.1. IRC. The sentence about the window not obstructing the ladder has been clarified. Added 'doors'.. Requirements for ladders moved into separate section.

IBC 1030.4.3 and IRC R1030.4.3 - No change to requirements. Just pulled out to separate section.

IBC 1030.4.4 and IRC R310.4.4 - Revisions for coordination. Reference to emergency and escape opening size and minimum window well size. IBC existing building sentence should be in IEBC. "Special knowledge is revised to be consistent with IBC and IRC R310.1.1 – the term allows for too broad of an interpretation.

IRC Section R310.3.2, R310.3.2.1 and R310.3.2.2 – delete the separate window well requirements for doors. Since we are delaying

Proposal 10:

IBC

1030.4.2.2 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.

IRC

R310.4.2.2 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.

Reason: 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.

Proposal 11:

IBC

1030.5 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 80 inches (2290 mm) in height to a *yard* or court.

IRC

R310.2.45 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)~~ 80 inches (2290 mm) in height to a *yard* or court.

Reason: This is a series of changes to coordinate the provisions for emergency escape and rescue openings. This deals with allowing window wells under decks.

The committee felt that the 36" height was too restrictive for access to the window wells under decks. This proposal suggests to raise the requirement to minimum means of egress height – 80".
