

CHANGE TYPE: Modification

CHANGE SUMMARY: Unless laminated glass is used, structural glass baluster panels in guards now require an attached top rail or handrail.

2018 CODE: R308.4.4 Glazing in guards and railings. Glazing in guards and railings, including structural baluster panels and nonstructural in-fill panels, regardless of area or height above a walking surface shall be considered to be a hazardous location.

R308.4.4.1 Structural glass baluster panels. Guards with structural glass baluster panels shall be installed with an attached top rail or handrail. The top rail or handrail shall be supported by not less than three glass baluster panels, or shall be otherwise supported to remain in place should one glass baluster panel fail.

Exception: An attached top rail or handrail is not required where the glass baluster panels are laminated glass with two or more glass plies of equal thickness and of the same glass type.



Structural glass baluster panels

CHANGE SIGNIFICANCE: Because of the increased probability of impact, glazing used in guards always requires safety glazing. In addition, a safety factor of 4 applies to glazing used in handrail assemblies and guards in accordance with Table R301.5. Glazing in guards may consist of structural balusters or non-structural in-fill panels. In-fill panels are typically attached to a structural framework of metal posts and rails. Structural glass baluster panels are attached to the structure at the base but typically have no posts for support. This provides a clean, modern look and improves the ability to view through the guard. With this change, structural glass baluster panels require an attached top rail or handrail as an additional safety feature in case the glass should fail. The intent is that the top

R308.4.4 continues

R308.4.4

Glazing in Guards and Railings

R308.4.4 continued rail would remain in place to prevent a fall should the glass give way. To ensure that the rail remains in place, the code requires it to be supported by at least three structural baluster panels or otherwise held in place to resist the prescribed loads in case of failure of the glazing. The exception permits laminated glass for the balusters without the installation of a top rail. The new language is similar to the requirements in the IBC.



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Non-structural glass in-fill panels

CHANGE TYPE: Clarification

CHANGE SUMMARY: Figure R308.4.7 has been replaced with a new figure and the caption modified to more accurately reflect the related code provision.

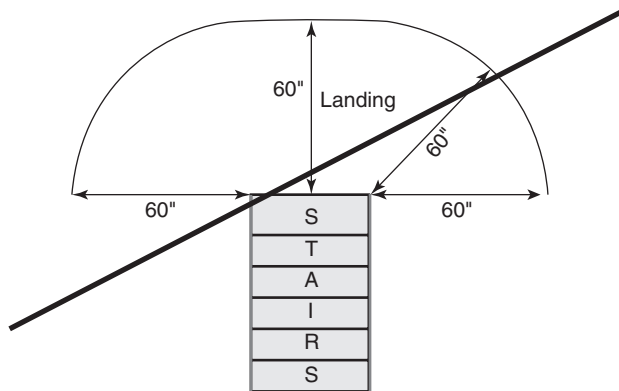
2018 CODE: R308.4.7 Glazing adjacent to the bottom stair landing. Glazing adjacent to the landing at the bottom of a stairway where the glazing is less than 36 inches (914 mm) above the landing and within a 60-inch (1524 mm) horizontal arc less than 180 degrees from the bottom tread nosing shall be considered to be a hazardous location.

Exception: Where the glazing is protected by a guard complying with Section R312 and the plane of the glass is more than 18 inches (457 mm) from the guard.

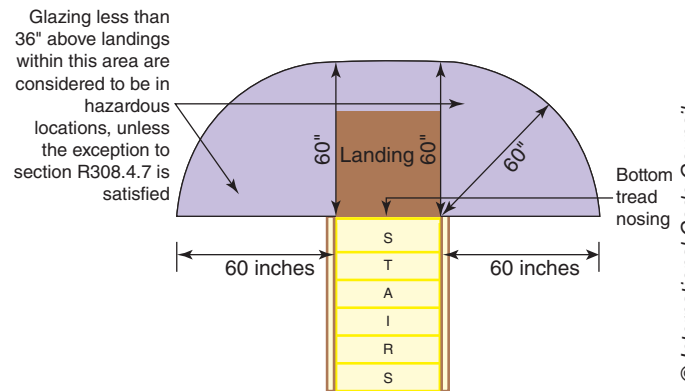
CHANGE SIGNIFICANCE: In defining the hazardous location for glazing at the bottom stair landing, the 2015 IRC added a figure and clarified that the area of concern was beyond the plane of the bottom stair nosing. The hazard of falling into glazing occurs in the bottom landing area in front of and to either side of the direction of travel, and that was reflected in the previous change. The revised text in the 2015 edition was accompanied by a new figure that was helpful to code users in visualizing the requirement. However, the caption to the figure was misleading in that it described the area shown in the figure as prohibited glazing locations. The change to the figure caption in the 2018 IRC correctly identifies the illustrated area as a location considered hazardous related to the installation of glazing. Where glazing is installed in a hazardous location, safety glazing is required. The figure has also been updated for the 2018 edition by adding labels to better identify the area under consideration and to duplicate the corresponding requirements of the code text.

R308.4.7

Glazing Adjacent to the Bottom Stair Landing



Prohibited Hazardous Glazing Locations at Bottom Stair Landings



Hazardous Glazing Locations at Bottom Stair Landings

R324.6.2.2

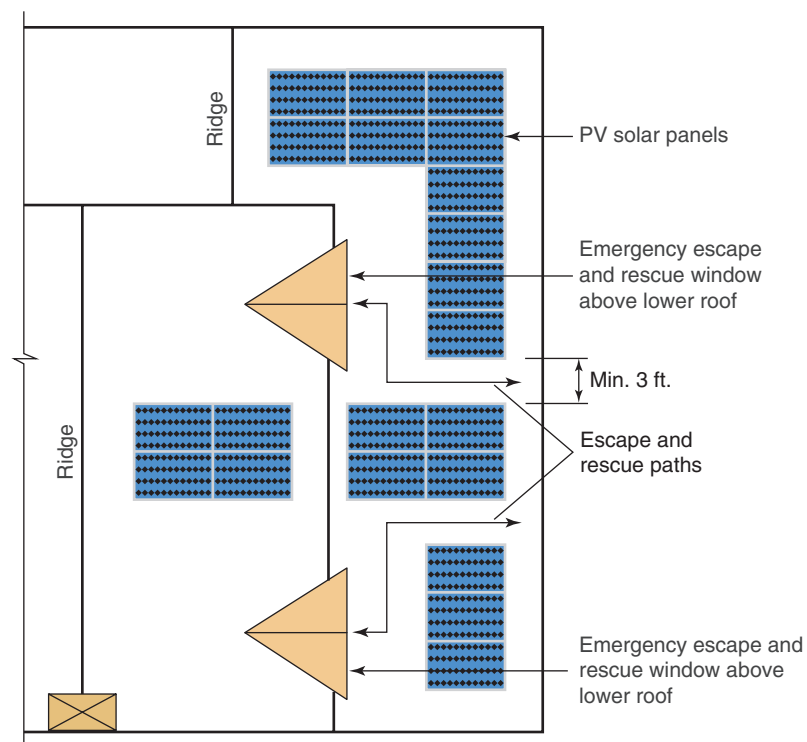
Solar Panels near Emergency Escape and Rescue Openings

CHANGE TYPE: Addition

CHANGE SUMMARY: Rooftop-mounted photovoltaic solar energy panels and modules are not permitted to be installed directly below emergency escape and rescue openings.

2018 CODE: R324.6.2.2 Emergency escape and rescue opening. Panels and modules installed on dwellings shall not be placed on the portion of a roof that is below an emergency escape and rescue opening. A pathway not less than 36-inches (914 mm) wide shall be provided to the emergency escape and rescue opening.

CHANGE SIGNIFICANCE: As covered in Section R310, an emergency escape and rescue opening is required in every bedroom, basement and habitable attic to provide occupants a way out of the dwelling in case fire, smoke or other emergency blocks the means of egress path. The code also provides minimum net dimensions for the escape opening as well as operational criteria for windows and coverings. To ensure a path from the escape opening to a public way or yard that opens to a public way, the IRC spells out window well and area well requirements and requires a path not less than 36 inches high when the opening is under a deck or porch. Similarly, new language in the photovoltaic (PV) solar energy provisions is concerned with providing a safe path for the occupant climbing



A 36-inch-wide pathway is required for emergency escape and rescue openings above roof-mounted PV solar panels.

out of an emergency escape and rescue opening that is above a roof. Installing a PV solar panel below the escape opening would cause an unsafe condition in an emergency situation. The required clear path must be at least 36 inches wide to provide emergency escape from the roof as well as emergency access to the roof as stated in Section R324.6.

Table R703.8.4(1)

Airspace Requirements

CHANGE TYPE: Modification

CHANGE SUMMARY: The new footnote “c” in Table R703.8.4(1) allows drainage airspace to contain some mortar spills.

2018 CODE:

TABLE R703.8.4(1) Tie Attachment and Airspace Requirements

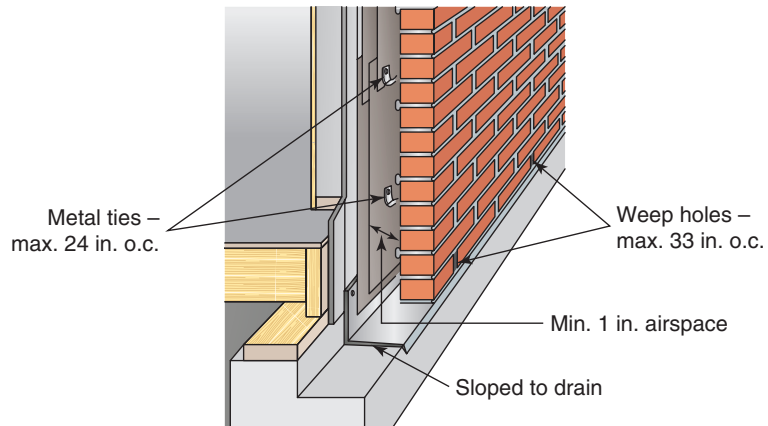
Backing and Tie	Minimum Tie	Minimum Tie Fastener ^a	Airspace ^c
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For SI: 1 inch = 25.4 mm.

c. An airspace that provides drainage shall be permitted to contain mortar from construction.

(Portions of table and footnotes without changes not shown for brevity and clarity.)

CHANGE SIGNIFICANCE: The new footnote “c” in Table R703.8.4(1) acknowledges that the required airspace behind brick veneer will never be completely devoid of mortar. Some spillage of mortar occurs as part of the installation. The air space, along with the water-resistant barrier, flashing and weep holes, provides a drainage system to keep the backing and stud walls dry and direct water to the exterior surface. Historically, architects, engineers, code officials and building owners have recognized the difference between brick veneer with a code-compliant airspace with limited amounts of mortar spillage and one that is blocked by mortar. However, veneer airspace previously deemed acceptable has been incorrectly called into question during litigation after the building has been occupied and is experiencing water damage or drainage issues not associated with the brick veneer system. This clarification explicitly acknowledges that the airspace may contain some mortar from construction as long as the airspace provides drainage.



Drainage airspace behind veneer