

2009 IRC Section R308.4 Hazardous Locations

(Requirements and Exceptions for Safety Glazing)

R308.4 Hazardous Locations. The following shall be considered specific hazardous locations for the purposes of glazing:

1. Glazing in all fixed and operable panels of swinging, sliding, and bifold doors.

Exceptions:

1. Glazed openings of a size through which a 3-inch diameter sphere is unable to pass.
2. Decorative glazing.

2. Glazing in an individual fixed or operable panel adjacent to a door where the nearest vertical edge is within a 24-inch arc of the door in a closed position and whose bottom edge is less than 60 inches above the floor or walking surface.

Exceptions:

1. Decorative glazing
2. When there is an intervening wall or other permanent barrier between the door and the glazing.
3. Glazing in walls on the latch side of and perpendicular to the plane of the door in a closed position.
4. Glazing adjacent to a door where access through the door is to a closet or storage area 3 feet or less in depth.
5. Glazing that is adjacent to the fixed panel of patio doors.

3. Glazing in an individual fixed or operable panel that meets all of the following conditions:

- I The exposed area of an individual pane is larger than 9 square feet; and
- II The bottom edge of the glazing is less than 18 inches above the floor; and
- III The top edge of the glazing is more than 36 inches above the floor; and
- IV One or more walking surfaces are within 36 inches, measured horizontally and in a straight line, of the glazing.

Exceptions:

1. Decorative glazing.
2. When a horizontal rail is installed on the accessible side of the glazing 34 to 38 inches above the walking surface. The rail shall be capable of withstanding a horizontal load of 50 pounds per linear foot without contacting the glass and be a minimum of 1 ½ inches in cross sectional height.
3. Outboard panes in insulating glass units and other multiple glazed panels when the bottom edge of the glass is 25 feet or more above *grade*, a roof, walking surfaces, or other horizontal surface adjacent to the glass exterior.

4. All glazing in railings regardless of area or height above a walking surface. Included are structural baluster panels and nonstructural infill panels.

5. Glazing in enclosures for or walls facing hot tubs, whirlpools, saunas, stream rooms, bathtubs and showers where the bottom exposed edge of the glazing is less than 60 inches measured vertically above any standing or walking surface.

Exception: Glazing that is more than 60 inches, measured horizontally and in a straight line, from the water's edge of a hot tub, whirlpool or bathtub.

6. Glazing in walls and fences adjacent to indoor and outdoor swimming pools, hot tubs, and spas where the bottom edge of the glazing is less than 60 inches above a walking surface and within 60 inches, measured horizontally and in a straight line, of the water's edge. This shall apply to single glazing and all panes in multiple glazing.

7. Glazing adjacent to stairways, landings and ramps within 36 inches horizontally of a walking surface when the exposed surface of the glazing is less than 60 inches above the plane of the adjacent walking surface.

Exceptions:

1. When a rail is installed on the accessible sides(s) of the glazing 34 to 38 inches above the walking surface. The rail shall be capable of withstanding a horizontal load of 50 pounds per linear foot without contacting the glass and be a minimum of 1 ½ inches in cross sectional height.
2. The side of the stairway has a guardrail or handrail, including balusters or in-fill panels, complying with Sections R311.7.6 and R312 and the plane of the glazing is more than 18 inches from the railing; or
3. When a solid wall or panel extends from the plane of the adjacent walking surface to 34 inches to 36 inches above the walking surface and the construction at the top of that wall or panel is capable of withstanding the same horizontal load as a *guard*.

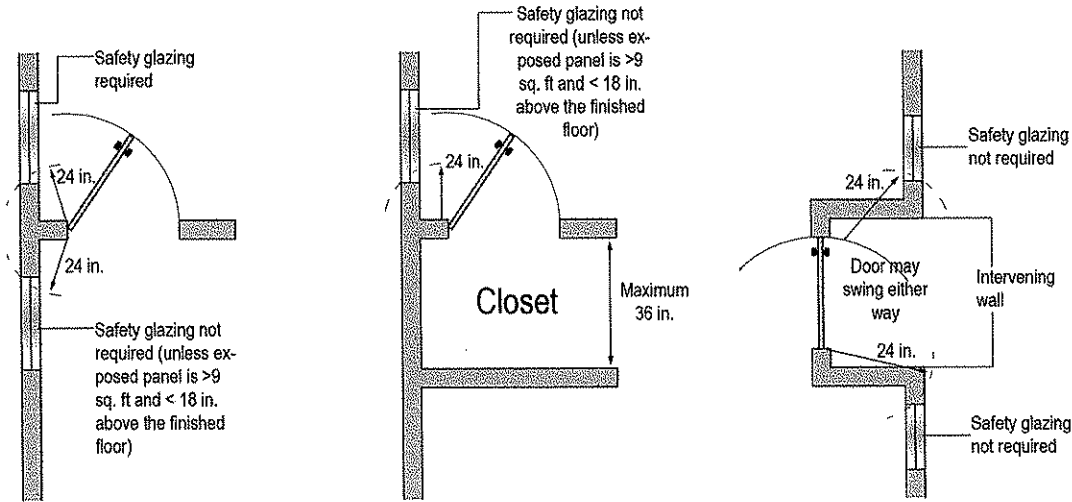
8. Glazing adjacent to stairways within 60 inches horizontally of the bottom tread of a stairway in any direction when the exposed surface of the glazing is less than 60 inches above the nose of the tread.

Exceptions:

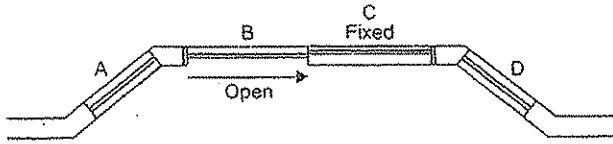
1. The side of the stairway has a guardrail or handrail, including balusters or in-fill panels, complying with Sections R311.7.6 and R312 and the plane of the glazing is more than 18 inches from the railing; or
2. When a solid wall or panel extends from the plane of the adjacent walking surface to 34 inches to 36 inches above the walking surface and the construction at the top of that wall or panel is capable of withstanding the same horizontal load as a *guard*.

The When and Where of Safety Glazing Per Section R308.4 of 2009 IRC

Safety glazing requirements around doors

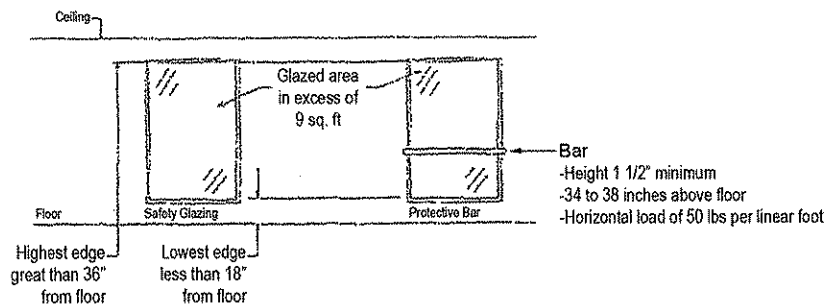
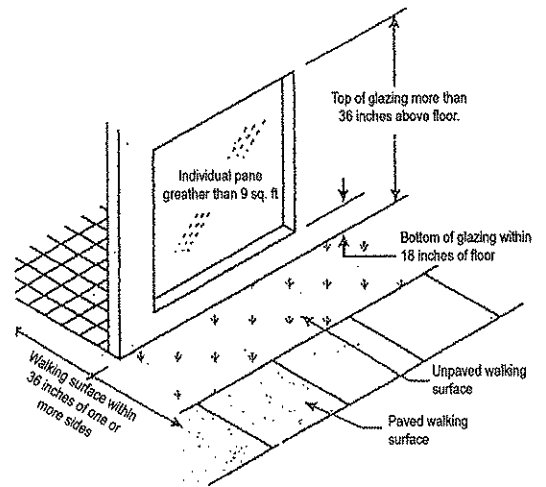
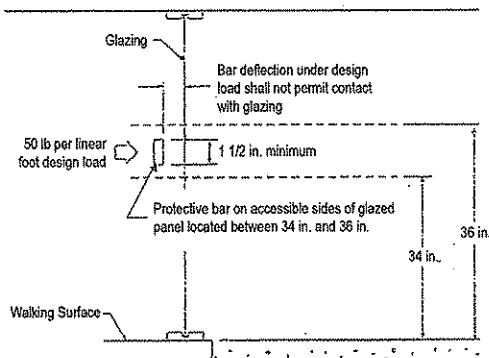


Safety glazing at walk out bay

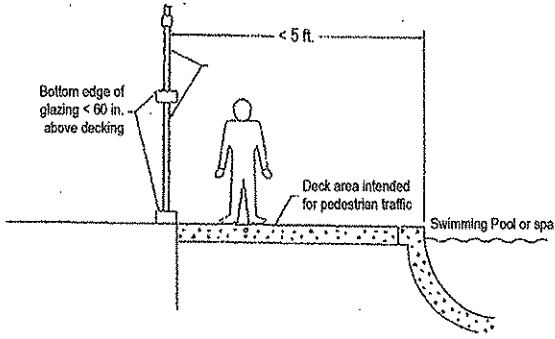


- Window A - safety glazing required
- Door panels B & C - safety glazing required
- Window D - safety glazing not required (unless exposed panel is >9 sq. ft and <18 in. above the finished floor)

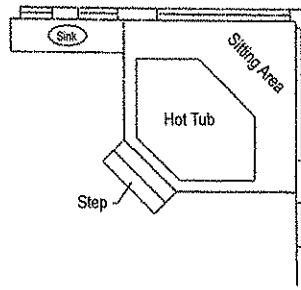
Safety glazing in close proximity to a walking surface



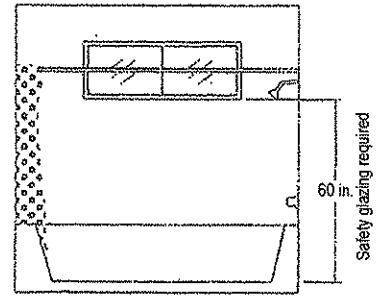
Safety glazing around fixtures that contain water



Required for any glazing less than 60" from edge of water and less than 60" above walking surface.

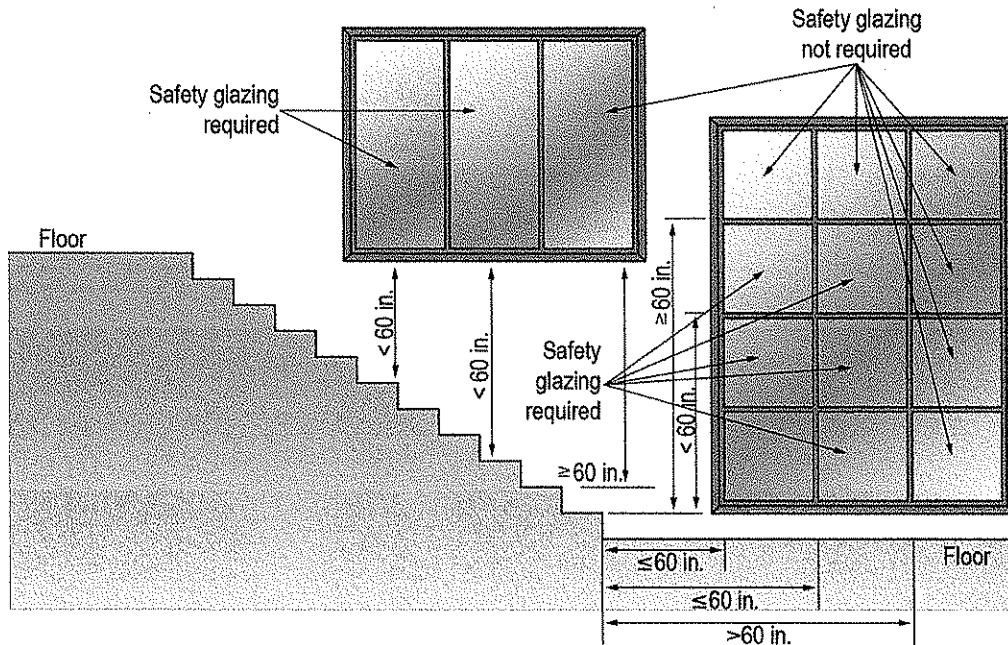


Required if sill is less than 60" above standing surface of tub (not sitting area)

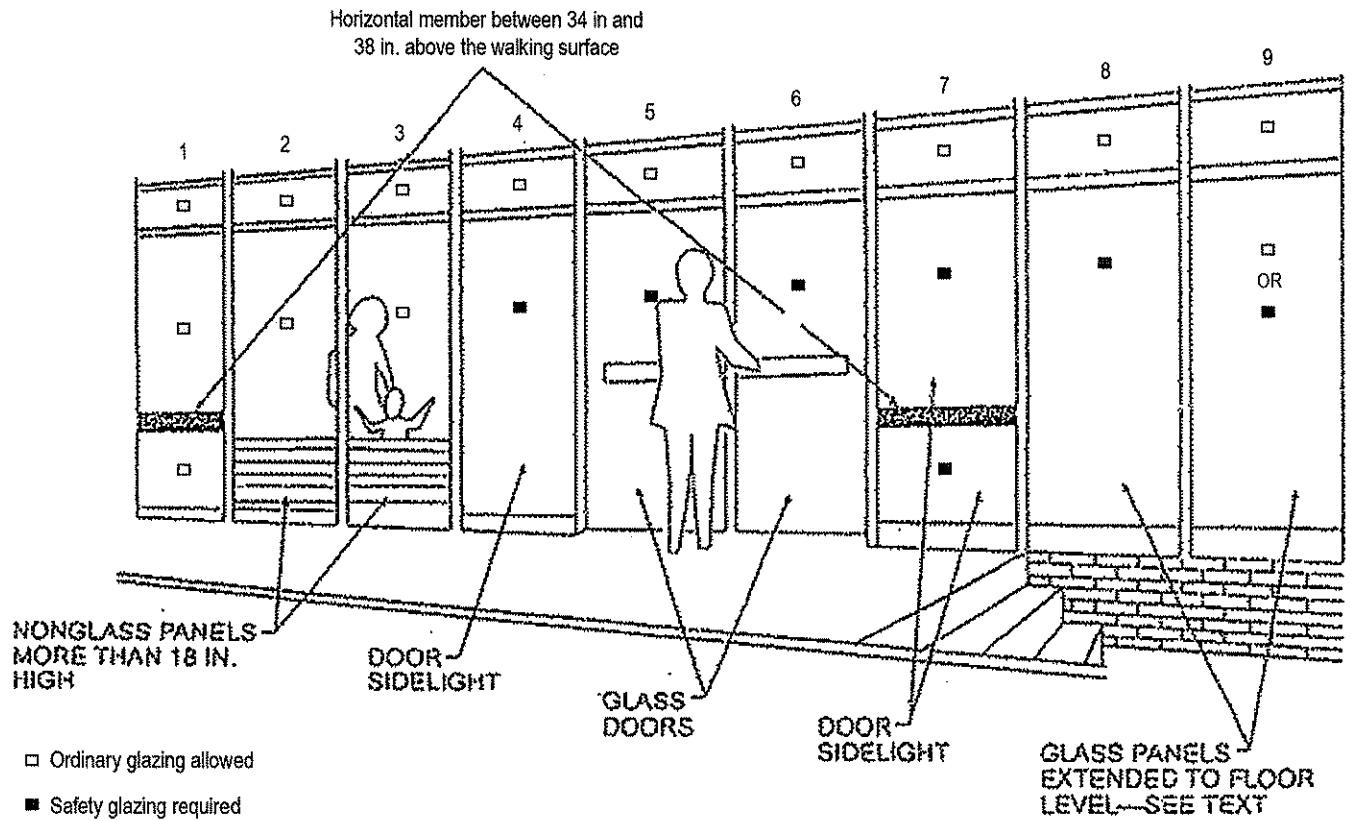


(Note the plumbing code will require the glazing to be a min. 6' above tub/shower drain);

Safety glazing adjacent to stairways and landings



A brief summary to reinforce when and where safety glazing is required.



Each vertical bay of glazing is designated 1-9 and is keyed with a black or white box to designate if safety glazing is required. Not that all transom glazing for all bays does not require safety glazing and will not be discussed further.

Panel 1 - Safety glazing is not required due to protective bar.

Panels 2 & 3 - Safety glazing is not required because bottom edge of glazing is more than 18" above surface.

Panel 4 - Required because it is within 24" of a door.

Panels 5 & 6 - Is required because they are doors.

Panel 7 - Required because it is within 24" of a door.

Panel 8 - Required because within 60" horizontally of the bottom tread and less than 60" above the walking surface. Note: If a guardrail with panels or pickets was between the glazing and stairs no safety glazing would be required or if an open handrail along the side of the stairs was at least 18" away from the glazing.

Panel 9 - Safety glazing might be required.

From exterior side - not required if greater than 60" from stairs and more than 18" above the walking surface.

From interior side - Required if less than 18" above the walking surface. The more restrictive case always applies.

General Note: Glass block is not considered hazardous and can be freely used anywhere. Refer to manufacturer's requirements and guidelines for structural and installation information.