



THE CITY OF SAN DIEGO

City of San Diego
Planning & Development Review
Building Development Review
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Building Newsletter 24-1

Safety Glazing Requirements

Interpretations of State and Local Building Codes
1998 California Building Code: Chapter 24
Revision Date: July 1999

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Safety glazing for doors intended for human passage, including wardrobe doors, storm doors, patio doors, bathtub doors and enclosures, and shower doors and enclosures, is regulated by the federal government. A copy of the regulations, designated 42FR1428, 16CFR, Part 1201, may be obtained from the U.S. Consumer Products Safety Commission, Washington, D.C. 20207. Their Internet address is www.cpsc.gov. This Department will *not* enforce these federal regulations for safety glazing in *doors*.

This Department must, however, enforce safety glazing requirements pursuant to California Health and Safety Code, Section 25997, et. seq., California Code of Regulations, Title 24, Part 2, Chapter 24 and the Building Code for glass panels adjacent to doors, glazing adjacent to any walking surface, glazing in walls and fences used as the barrier for pools or spas, glazing in walls enclosing stairs and landings and glazing in railings. See Section 2408 of the CBC for special requirements for glass panels in racquetball and squash courts.

These requirements may be summarized as follows:

I. Glass Panels Adjacent to Doors

Fixed or operable glass panels adjacent to doors shall be glazed with labeled safety glazing materials as illustrated in Figures 1 and 2 and summarized in Table 1.

- A. This is applicable to panels where the nearest exposed edge of the glazing is within a 24-inch arc of either vertical edge of the door in a closed position and the bottom exposed edge of the glazing is less than 60 inches above a walking surface.
- B. "Safety glazing material" is defined as fully tempered glass, laminated glass, wired glass, rigid plastic or any other safety glazing material which meets test requirements of UBC Standard 24-2.
- C. Labeling requirements are as follows:
 1. Each light of a glass panel shall bear the manufacturer's label designating the type and thickness of glass.
 2. Each light of safety glazing material installed in a hazardous location shall have attached a permanent label identifying the labeler and stating that safety glazing material has been utilized in such installation.
 3. Each unit of tempered glass shall be etched or ceramic-fired by the manufacturer and be visible when the unit is glazed. Tempered spandrel glass is exempted from permanent labeling but must be identified by a removable paper label.

Figure 1 - Glass panels adjacent to doors

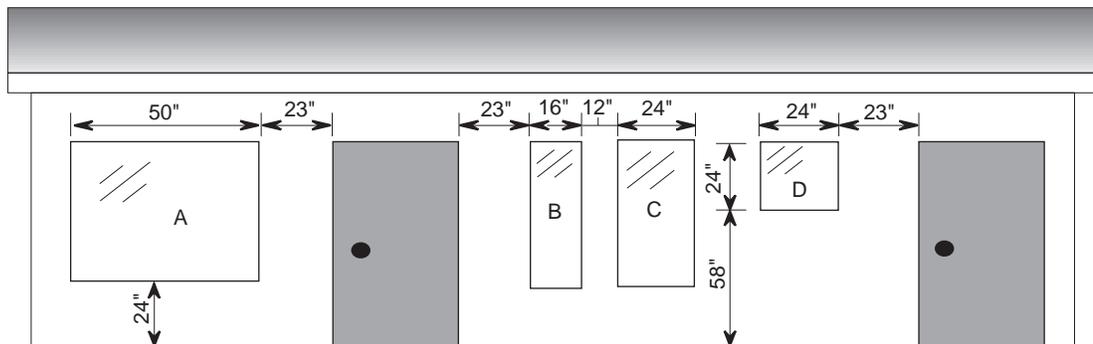


Figure 2 - Glass panels adjacent to doors

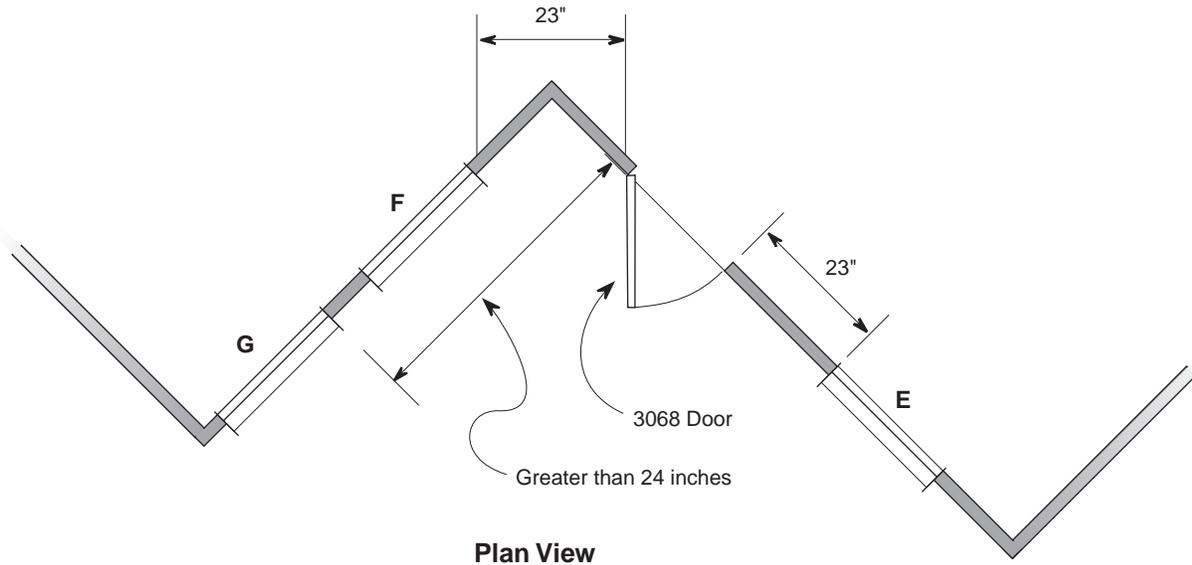
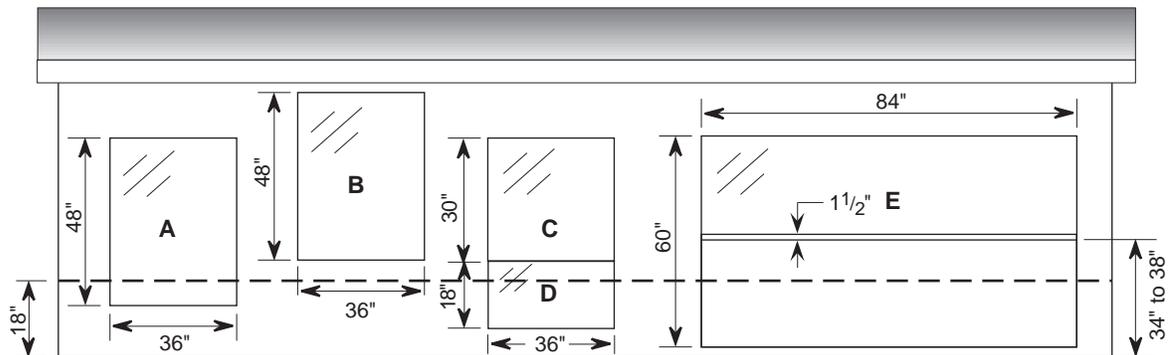


Table 1 - Glass panels adjacent to doors

Glass Panel(s)	Safety Glazing Required?	Remarks
A & D Figure 1	Yes	The nearest vertical edge of panels A & D is within 24" of the door and the bottom edge of the panel is within 60" of the floor.
B Figure 1	Yes	The nearest vertical edge of panel B is within 24" of the door and the bottom edge of the panel is within 60" of the floor.
C Figure 1	No	The nearest vertical edge of panel C is more than 24" from the floor.
E Figure 2	Yes	The nearest edge of panel E is within 24" of the strike side of the door when closed.
F Figure 2	Yes	The nearest edge of panel F is within 24" of the hinge side of the door.
G Figure 2	No	The nearest edge of panel G is more than 24" from the strike side of the door when closed.

Table 2 - Glass panels adjacent to a walking surface

Glass Panel(s)	Safety Glazing Required?	Remarks
A Figure 3	Yes	Panel A is more than 9 square feet in area and its lowest edge extends to within 18" of the walking surface.
B & C Figure 3	No	The lowest edge of the panel is more than 18" above the walking surface.
D Figure 3	No	Panel D is less than 9 square feet in area.
E Figure 3	See remarks	Panel E, being one piece of glass more than 9 square feet in area and within 18" of the walking surface, is required to be of safety glazing materials unless a horizontal member not less than 1 1/2 inches in width is located between 34 and 38 inches above the walking surface.

Figure 3 - Glass panels adjacent to a walking surface

II. Glass Panels Adjacent to a Walking Surface

Fixed or operable glass panels adjacent to any walking surface shall be glazed with labeled safety glazing materials as illustrated in Figure 3 and summarized in Table 2. Note that panels A, B and E consist of one piece of glass. Panels C and D are two separate pieces of glass.

A. This is applicable to panels meeting all of the following requirements:

1. The exposed area of an individual pane is greater than 9 square feet.
2. The exposed bottom edge is less than 18 inches above the floor.
3. The exposed top edge is greater than 36 inches above the floor.
4. One or more walking surfaces is within 36 inches horizontally of the plane of glazing.

B. See Section I, Items B and C above for the definition of safety glazing material and for labeling requirements.

III. Exceptions

The following products and applications are exempt from the above requirements:

- A. Glazing in Section I above when there is an intervening wall or other permanent barrier between the door and the glazing.
- B. Glazing in Section II above when a protective bar is installed on the accessible sides of the glazing 34 inches to 38 inches above the floor. The bar shall be capable of withstanding a horizontal load of 50 pounds per linear foot without contacting the glass and be a minimum of 1½ inches in height.
- C. Outboard pane in insulating glass units and in other multiple glazed panels in Section II above when the bottom exposed edge of the glass is 25 feet or more above any grade, roof, walking surfaces or other

horizontal or sloped (within 45 degrees of horizontal) surface adjacent to the glass exterior.

D. Assemblies of leaded, faceted or carved glass in Sections I or II above when used for decorative purposes.

E. Glass block panels complying with Section 2110.

IV. Swimming Pool Barriers

Glazing in walls and fences used as the barrier for indoor or outdoor swimming pools and spas shall be safety glazing when all of the following conditions are present:

- A. The bottom edge of the glazing is less than 60 inches above grade on the pool side.
- B. The glazing is within 5 feet of a swimming pool or spa water's edge.

V. Glazing at Stairs and Landings

Glazing in walls enclosing stairway landings or within 5 feet of the bottom and top of stairways where the bottom edge of the glass is less than 60 inches above a walking surface.

VI. Railings

Glass panels in railings shall be glazed with safety glazing materials. Included are structural baluster panels and nonstructural infill panels.

- A. Panels must be glazed regardless of height above a walking surface.
- B. See Section I, Items B and C above for definition of safety glazing materials and for labeling requirements

VII. Racquetball and Squash Courts

Glass panels in racquetball and squash courts must be safety glazed and must comply with certain requirements as outlined in Section 2408 of the UBC.