

FIGURE 8-17 Alternatives to 24-inch window-sill height

EMERGENCY ESCAPE AND RESCUE OPENINGS

One of the most important safety provisions in the IRC concerns openings for emergency escape and rescue. These openings provide alternate means to escape from a sleeping room or basement in the event that a fire or other emergency blocks the usual path of egress. They allow occupants to escape directly to the safety of the outdoors and allow rescue personnel fully equipped with breathing apparatus to enter the room from the outside. Occupants are most vulnerable to the hazards of fire when they are not fully alert or when they are occupying a basement, a space that traditionally has few windows or doors and often serves as a play or recreation area. The code addresses these life-safety issues by requiring an emergency escape and rescue opening in the basement and in every sleeping room. In addition, habitable attics require an emergency escape and rescue opening.

In order for emergency escape and rescue openings to effectively serve their intended purpose, the code prescribes a maximum sill height above the floor of 44 inches and a minimum net opening size of 5.7 square feet (5.0 square feet for grade floor or below-grade openings). Width and height may be any number of combinations to achieve the minimum required opening area, provided the net width of the opening is not less than 20 inches and the net height not less than 24 inches (Table 8-1 and Figures 8-18 and 8-19). [\[Ref. R310\]](#)

In an emergency, occupants need to move quickly and easily to an outside space. Therefore, the code requires that the prescribed opening dimensions be obtained by the normal operation of the emergency escape and rescue opening, usually a window or door, without the need for a key, tool, or any special knowledge. This precludes the removal of a window sash or mechanical fasteners to obtain the required opening dimensions. [\[Ref. R310.1.1\]](#)

TABLE 8-1 Emergency escape and rescue openings*

Inches						
Width	20	20.5	21	21.5	22	22.5
Height	41	40	39.1	38.2	37.3	36.5
Width	23	23.5	24	24.5	25	25.5
Height	35.7	34.9	34.2	33.5	32.8	32.2
Width	26	26.5	27	27.5	28	28.5
Height	31.6	31	30.4	29.8	29.3	28.8
Width	29	29.5	30	30.5	31	31.5
Height	28.3	27.8	27.4	26.9	26.5	26.1
Width	32	32.5	33	33.5	34	34.2
Height	25.7	25.3	24.9	24.5	24.1	24

*Minimum net clear width/height combinations to obtain a net opening of 5.7 square feet.

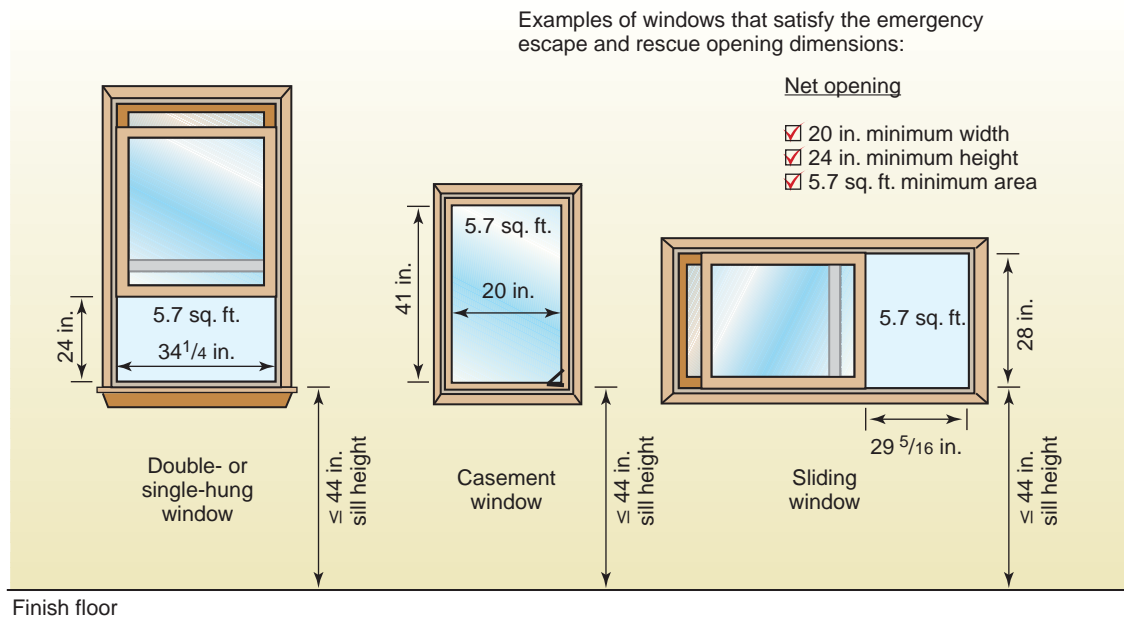


FIGURE 8-18 Emergency escape and rescue windows

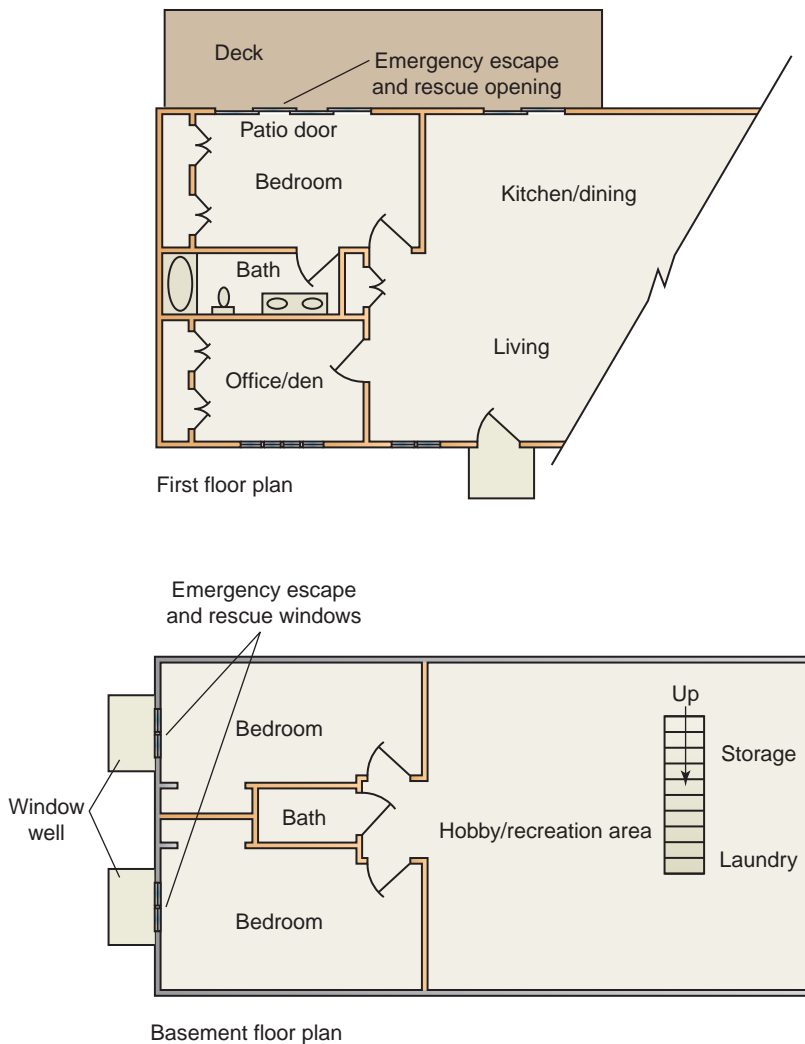


FIGURE 8-19 Required locations for emergency escape and rescue openings

Window wells

The IRC requires a window well when the sill of the emergency escape and rescue opening is below the adjacent ground elevation. The window well area must be at least 9 square feet with a minimum dimension of 36 inches. The code requires a ladder or steps when the window well is greater than 44 inches deep, a dimension consistent with the maximum window-sill height. A ladder or step is allowed to encroach into the required window well area no more than 6 inches. Except in areas with well-drained soils, window wells serving emergency escape and rescue openings must have a means to drain to the foundation drainage system (Figures 8-20 and 8-21). [\[Ref. R310.2.3\]](#)

You Should Know

Steps for window wells serving emergency escape and rescue openings:

The IRC does not specify a maximum riser height or a minimum tread depth. Recommended practice is to construct these steps within the limitations for ladders in window wells:

- Maximum riser height of 18 inches
- Minimum tread depth of 3 inches