

Common Building-Code Violations: Emergency-Egress Windows Too Small

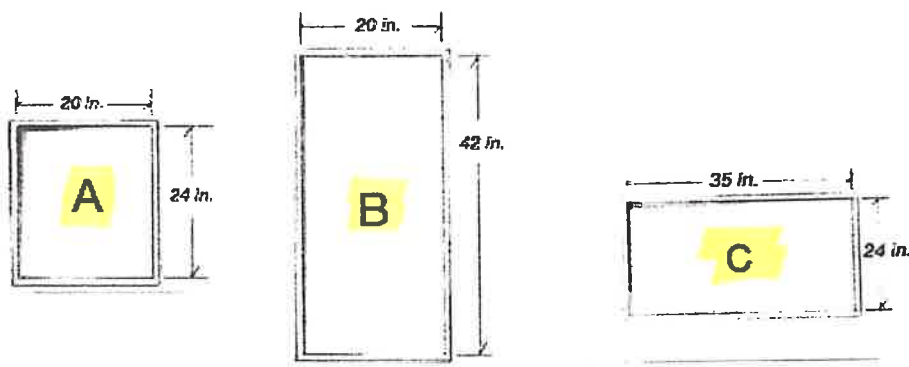
An undersized egress window in a bedroom can spell disaster in a fire

by Lynn Underwood

The one thing that inspectors never fail to check is the required emergency-egress window from a sleeping room. At least one window in each bedroom must be of sufficient size to permit the occupants to escape a fire and also to allow a fully outfitted firefighter to enter.

An egress window must satisfy all four International Residential Code (IRC) criteria:

- Minimum width of opening: 20 in.
- Minimum height of opening: 24 in.
- Minimum net clear opening: 5.7 sq. ft. (5.0 sq. ft. for ground floor).
- Maximum sill height above floor: 44 in.



Do the math

At first glance, you might assume that a 20-in. by 24-in. window (A) would be acceptable for egress. Those dimensions would yield a net clear opening of only 3.3 sq. ft.

To achieve the required net clear opening of 5.7 sq. ft., a 20-in. wide window (B) would have to be 42 in. high.

Likewise, a 24-in. high window (C) would have to be 35 in. wide.

MINIMUM OPENING AREA: SECTION: R 310.1.1

All emergency escape and rescue openings shall have a minimum net clear opening of 5.7 square feet (0.530 m²). For example, 820.8 square inches, or at the minimum, 20" wide by 41.1" high, or 34.2" tall by 24" high.

EXCEPTION: Grade floor openings shall have a minimum net clear opening of 5 square feet (0.465 m²). ✓

OPERATIONAL CONSTRAINTS: R 310.1.4

Emergency escape and rescue openings shall be operational from the inside of the room without the use of keys or tools.

WINDOW WELLS: SECTION: R310.2

Window wells required for emergency escape and rescue shall have horizontal dimensions that allow the door or window of the emergency escape and rescue opening to be fully opened. The horizontal dimensions of the window well shall provide a minimum net clear area of (9) sq. ft. (0.84 m²) with a minimum horizontal projection and width of 36 inches (914 mm).

EXCEPTION: The ladder or steps required by SECTION R 310.2.1 shall be permitted to encroach a maximum of 6 inches (152 mm) into the required dimensions of the window well.