

## What Is Egress Compliance?

The International Code Council (ICC) established in 1994, is a nonprofit organization dedicated to developing a single set of comprehensive and coordinated national model construction codes. It is the leading authority on building codes. The ICC is dedicated to protecting the health, safety, and welfare of people by creating better buildings and safer communities. Its mission is to provide the highest quality codes, standards, products, and services for all concerned with the safety and performance of all buildings.

Complied from guidelines formulated by the ICC in the form of International Residential Codes (IRC), the following explains egress and what it means to be egress compliant in the building industry. It should also be noted that local municipalities, agencies and building authorities adhere to specific construction codes as well. These codes require proper emergency exit from the basement and proper emergency entry for firemen and rescue workers in the event of a basement fire. These local codes should always be consulted when considering egress compliance for any building structure.

### A Definition of Egress

*egress* \EE-gress/, noun: 1. The act of going out or leaving, or the right or freedom to leave; departure. 2. A means of going out or leaving; an exit; an outlet.

### IRC Criteria for Egress

An egress window must satisfy all four IRC criteria:

- Minimum width of opening: 20 inches.
- Minimum height of opening: 24 inches.
- Minimum net clear opening: 5.7 square feet (5.0 square feet for ground floor).
- Maximum sill height above floor: 44 inches.

### A Practical Application - Do the Math!

In reviewing the above figures, you might assume that a 20-inch by 24-inch window would be acceptable for egress. Those dimensions would yield a net clear opening of only 3.3 square feet. To achieve the required net clear opening of 5.7 square feet, a 20-inch wide window would have to be 42 inches high. Likewise, a 24-inch high window would have to be 35 inches wide.

### Basement Emergency Escape Windows, per the IRC - A Summary

- Basements with habitable space and every sleeping room shall have at least one openable emergency escape and rescue opening.
- Where basements contain one or more sleeping rooms, emergency egress and rescue openings shall be required in each sleeping room, but shall not be required in adjoining areas of the basement.
- When an emergency escape and rescue opening is provided in the unfinished part of a basement it shall be sufficient for the opening required for non-sleeping finished areas.
- A "bulkhead enclosure" does meet the requirements for an emergency escape and rescue opening when it provides direct access to the basement, and with the door panels in the fully open position it provides the minimum net clear opening.

### International Residential Code - Section R310

The following is the literal International Residential Code for *egress compliance*:

**R310.1 Emergency escape and rescue required.** Basements with habitable space and every sleeping room shall have at least one openable emergency escape and rescue window or exterior door opening for emergency escape and rescue.

Where openings are provided as a means of escape and rescue they shall have a sill height of not more than 44 inches (1118 mm) above the floor. Where a door opening having a threshold below the adjacent ground elevation serves as an emergency escape and rescue opening and is provided with a bulkhead enclosure, the bulkhead enclosure shall comply with Section R310.3. The net clear opening dimensions required by this section shall be obtained by the normal operation of the window or door opening from the inside. Escape and rescue window openings with a finished sill height below the adjacent ground elevation shall be provided with a window well in accordance with Section R310.2.

**R310.1.1 Minimum opening area.** All emergency escape and rescue openings shall have a minimum net clear opening of 5.7 square feet (0.530 m<sup>2</sup>) Exception: Grade floor openings shall have a minimum net clear opening of 5 square feet (0.465 m<sup>2</sup>).

**R310.1.2 Minimum opening height.** The minimum net clear opening height shall be 24 inches (610 mm).

**R310.1.3 Minimum opening width.** The minimum net clear opening width shall be 20 inches (508 mm).

**R310.1.4 Operational constraints.** Emergency escape and rescue openings shall be operational for the inside of the

room without the use of keys or tools.

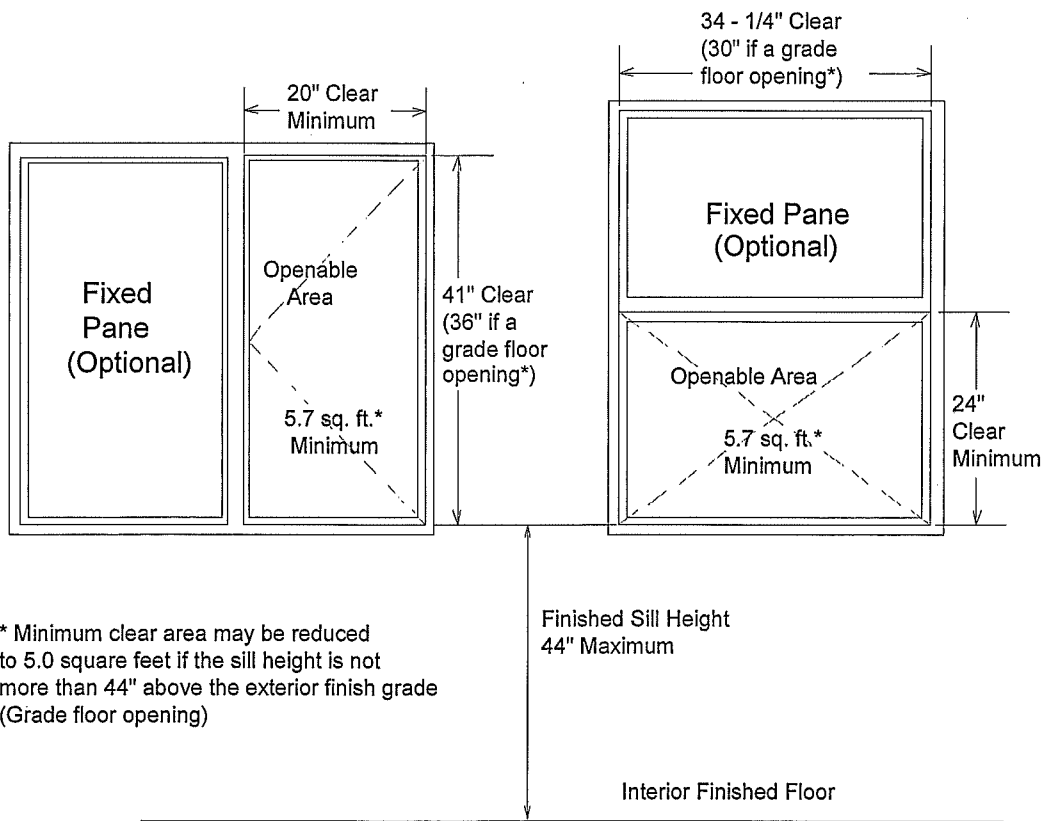
**R310.2 Window wells.**

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 square feet (0.84 m<sup>2</sup>) with a minimum horizontal projection and width of 36 inches (914 mm). Exception. The ladder or steps required by Section R310.2.1 shall be permitted to encroach a maximum of 6 inches (152 mm) into the required dimensions of the window well.

**R310.2.1 Ladder and steps.** Window wells with a vertical depth greater than 44 inches (1118 mm) below the adjacent ground level shall be equipped with a permanently affixed ladder or steps usable with the window in the fully open position. Ladders or steps required by this section shall not be required to comply with R314 and R315. Ladders or rungs shall have an inside width of at least 12 inches (305 mm), shall project at least 3 inches (76 mm) from the wall and shall be spaced not more than 18 inches (457 mm) on center vertically for the full height of the window well.

**R310.3 Bulkhead enclosures.** Bulkhead enclosures shall provide direct access to the basement. The bulkhead enclosure with the door panels in the fully open position shall provide the minimum net clear opening required by Section R310.1.1. Bulkhead enclosures shall also comply with Section R314.9.

**R310.4 Bars, grills, covers and screens.** Bars, grills, covers, screens or similar devices are permitted to be placed over emergency escape and rescue openings, bulkhead enclosures, or window wells that serve such openings, provided the minimum net clear opening size complies with Sections R310.1.1 to R310.1.3, and such devices shall be releasable or removable from the inside without the use of a key, tool or force greater than that which is required for normal operation of the escape and rescue opening.



\* Minimum clear area may be reduced to 5.0 square feet if the sill height is not more than 44" above the exterior finish grade (Grade floor opening)