



2241 221<sup>st</sup> Ave. NE • East Bethel, MN 55011  
Phone: (763) 367-7844 • Fax: (763) 434-9578

## EGRESS WINDOWS

The 2007 Minnesota State Building Code adopts the 2006 International Residential Code (2006 IRC). All "R" code references provided in this brochure pertain to the 2006 IRC.

### **Emergency escape and rescue openings**

Basements and every sleeping room shall have at least one operable emergency and rescue opening. Such opening shall open directly into a public street, public alley, yard or court. 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.

Where emergency escape and rescue openings are provided, they shall have a sill height of not more than 44 inches (1118 mm) above the floor. When 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 R310.3. The net clear opening dimensions required by this section shall be obtained by the normal operation of the emergency escape and rescue opening from the inside.

Emergency escape and rescue openings with a finished sill height below the adjacent ground elevation shall be provided with a window well in accordance with R310.2. Emergency escape and rescue openings shall open directly into a public way, or to a yard or court that opens to a public way (R310.1). Exception: Basements used only to house mechanical equipment and not exceeding total floor area of 200 square feet (18.58 m<sup>2</sup>).

All emergency escape and rescue openings shall have a minimum net clear opening of 5.7 square feet (0.530 m<sup>2</sup>) (R310.1). Exception: Grade floor openings shall have a minimum net clear opening of 5 square feet (0.465 m<sup>2</sup>). A window with an opening that meets the minimum width and height will not necessarily meet the minimum required open area. The minimum net clear opening height shall be 24 inches (610 mm) (R310.1.2). The minimum net clear opening width shall be 20 inches (508 mm) (R310.1.3).

### **A special note regarding guards around windows**

The Minnesota State Building Code does not specify requirements for guards around window wells to keep persons from falling into them, falls can and do occur. Because of the variations in the size, location and depth of window wells and since a guard could present an impediment to escape or rescue, the code is silent. The potential for falls into a window well should be evaluated by the homeowner and suitable guards or visual barriers provided based on the location, depth and size of the well. Barriers, guards or covers installed to prevent falls must be placed in such a way that does not impede use of the window well for escape and rescue.

If covers are used, the effects of snow on the ability to open or remove them in an emergency must also be evaluated. The ever-increasing concern for security, particularly in residential buildings has created a fairly large demand for security devices such as grilles, bars and steel shutters. Unless properly designed and constructed, these security devices over emergency windows can completely defeat the purpose of the emergency escape and rescue window. The code makes provisions for use of security devices, provided the release mechanism has been approved by the building official and it is operable from the inside without the use of a key or special knowledge.

Fire deaths have been attributed to the inability of the individual to escape from the building because the security bars prevented emergency escape. Security devices should only be installed where absolutely necessary and only with a permit after an evaluation by your local building and fire official.

Replacement windows installed in buildings meeting the scope of the International Residential Code shall be exempt from the requirements of Sections R310.1, R310.1.1, R310.1.2, and R310.1.3 if the replacement window meets the following conditions:

1. The replacement window is the manufacturer's largest standard size window that will fit within the existing window frame or existing rough opening. The replacement window shall be permitted to be the same operating style as the existing window or a style that provides for a greater window opening area than the existing window.
2. The rooms or areas are not used for any Minnesota state licensed purpose requiring an egress window; and
3. The window is not required to be replaced pursuant to a locally adopted rental housing, or rental licensing code (R310.1.5). Emergency escape and rescue openings shall be operational from the inside of the room without the use of keys, tools or special knowledge (R319.1.4).

The minimum horizontal area of the window well shall be 9 square feet (0.9 m<sup>2</sup>), with a minimum horizontal projection and width of 36 inches (914 mm). The area of the window well shall allow the emergency escape and rescue opening to be fully opened (R310.2). Exception: The ladder or steps required by R310.2.1 shall be permitted to encroach a maximum of 6 inches (152 mm) into the required dimensions of the window well.

Window wells with a vertical depth greater than 44 inches (1118 mm) shall be equipped with a permanently affixed ladder or steps usable with the window in a fully open position. Ladders or steps required by this section shall not be required to comply with sections R311.5 and R311.6. Ladders or rungs shall have an inside width of at least 12 inches (305 mm) on center vertically for the full height of the window well (R310.2.1).

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 R310.1.1. Bulkhead enclosures shall also comply with R311.5.8.2 (R310.3). Bars, grilles, 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, special knowledge or force greater than that which is required for normal operation of the escape and rescue opening (R310.4).

Emergency escape windows are allowed to be installed under decks and porches provided the location of the deck allows the emergency escape window to be fully opened and provides a path not less than 36 inches (914 mm) in height to a yard or court (R310.5).



# EGRESS ESCAPE WINDOWS

## Basement bedroom/sleeping room requirements

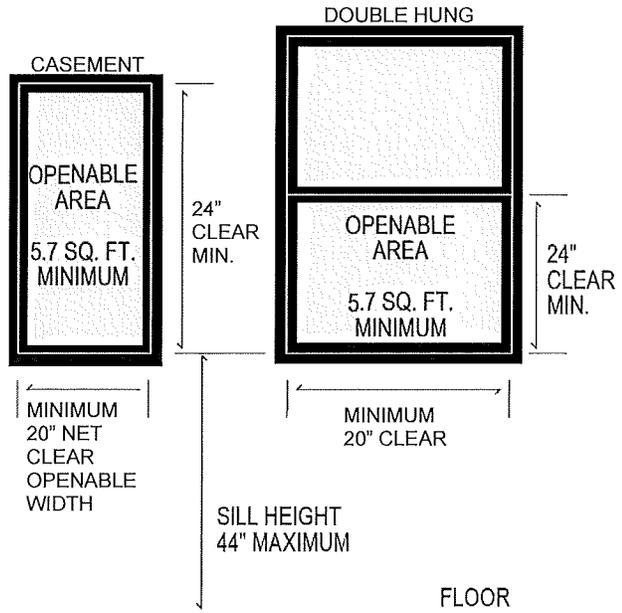
### Section R310

All sleeping rooms shall have at least one egress window (see illustration) meeting all these requirements:

- Sill height not more than 44 inches above floor.
- Openable area not less than 5.7 square feet\* (820square inches.)
- Opening height not less than 24 inches.
- Opening width not less than 20 inches.

\* *Exception:* Grade floor opening shall have a minimum net clear opening of 5.0 square feet.

### Minimum size for rescue/escape windows from sleeping rooms



\* Emergency escape windows shall be operational from the inside of the room without the use of keys or tools.

## Emergency escapes — window wells below grade

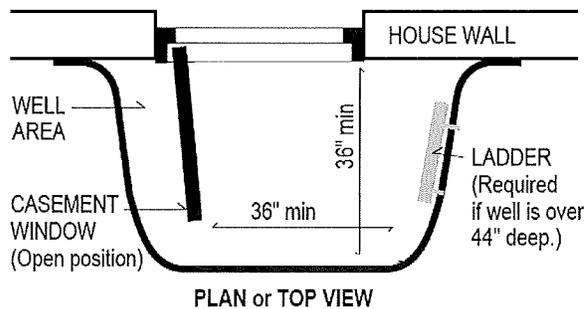
### Section R310.2

The clear horizontal dimensions shall allow the window to be fully opened and provide a minimum accessible net clear opening of 9 square feet with minimum dimensions of 36 inches.

Window wells with a vertical depth of more than 44 inches shall be equipped with an approved permanently affixed ladder or stairs that are accessible with the window in the fully open position. The ladder or stairs shall not encroach into the required dimensions of the window well by more than six inches. Ladders or rungs shall have an inside dimension of at least 12 inches. They must project at least 3 inches from the wall and be spaced not more than 18 inches o.c. vertically for the full height of the window well.

### State amendment:

\* A minimum height clearance of 36 inches shall be maintained above the exterior grade. (Example: a deck above the escape window.)



**BEFORE YOU DIG:** Call Gopher State One Call (800) 252-1166 or (651) 454-0002 to locate any utilities such as phone lines, data communication cables, invisible dog fences, underground sprinkler systems, septic systems, etc.

# EGRESS WINDOWS

## **This handout is only a guideline**

This handout is intended only as a guide and is based in part on the 2007 Minnesota State Building Code, East Bethel City ordinances, and good building practice. While every attempt has been made to insure the correctness of this handout, no guarantees are made to its accuracy or completeness. Responsibility for compliance with applicable codes and ordinances falls on the owner or contractor. For specific questions regarding code requirements, refer to the applicable codes or contact your local Building Department.

## **WHAT IS AN EMERGENCY ESCAPE AND RESCUE OPENING?**

An emergency escape and rescue opening is a window (sometimes called an egress window) or door that is required in specific locations in new or altered dwellings and is intended to provide an emergency means of exiting a dwelling or provide an access for rescue. These openings must meet specific size requirements

## **WHERE EMERGENCY ESCAPE AND RESCUE OPENINGS ARE REQUIRED**

Emergency escape and rescue openings are required in any room used for sleeping purposes (bedrooms) and in basements. If you are constructing a new home, the code requires that you put an emergency escape and rescue opening in each bedroom. It also requires one in the basement. In existing homes, you must provide an emergency escape and rescue opening if you create a new bedroom or expand an existing bedroom or your basement. If you have a bedroom in the basement, the emergency escape and rescue opening in that bedroom suffices for the basement. You do need to provide another opening just for the basement.

## **SIZE REQUIREMENTS FOR WINDOWS USED AS EMERGENCY ESCAPE AND RESCUE OPENINGS?**

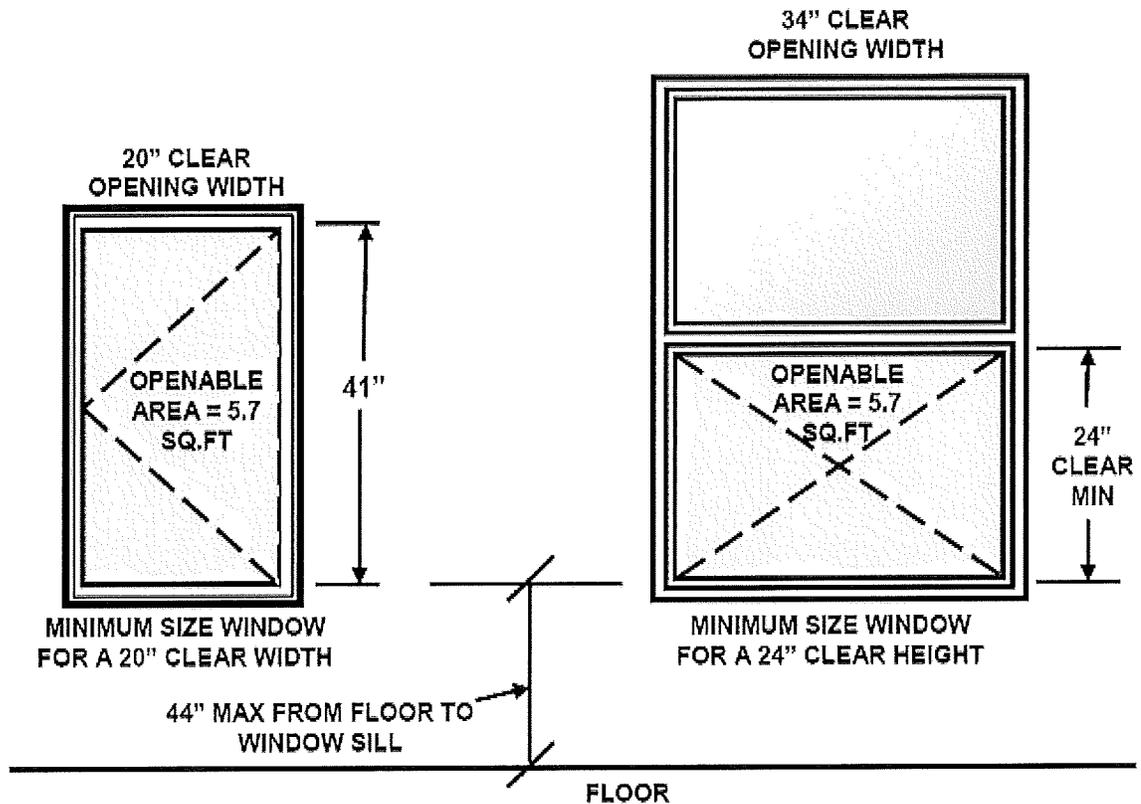
A window used as an emergency escape and rescue opening must satisfy four Minnesota Residential Code criteria:

- 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 grade floor).
- Maximum sill height above floor: 44 in.

The window must have a minimum net clear opening of 5.7 sq. ft. Net clear opening refers to the actual free and clear space that exists when the window is open. It is not the rough opening size or the glass panel size, but the actual opening a person can crawl through.

The window opening must be operational from the inside without keys or tools. Bars, grilles and grates may be installed over windows but must be operational without tools, keys or special knowledge and still allow the minimum clear opening.

## EXAMPLE MEASUREMENTS

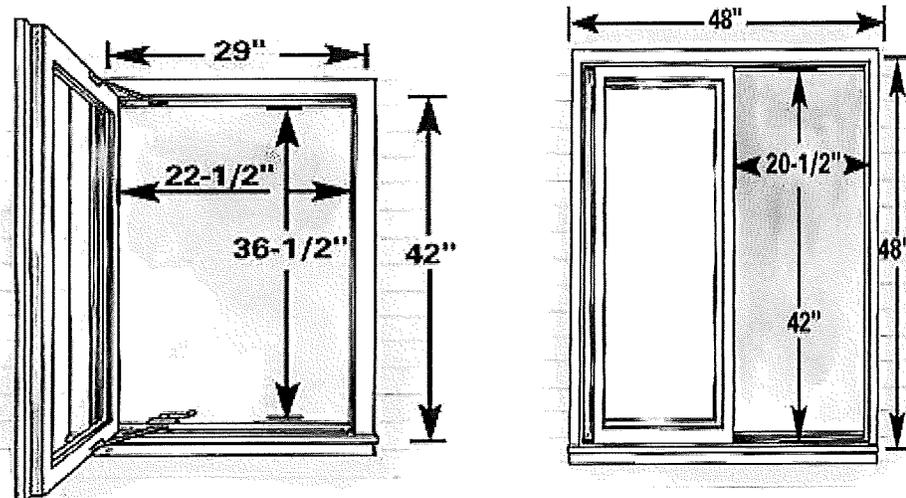


Because Minnesota uses a national model residential code, nearly all window manufacturers specify which of their windows meet these standards. This should take the guesswork out of selecting a window for your addition or remodeling project.

## MUST I USE A SPECIAL TYPE OF WINDOW?

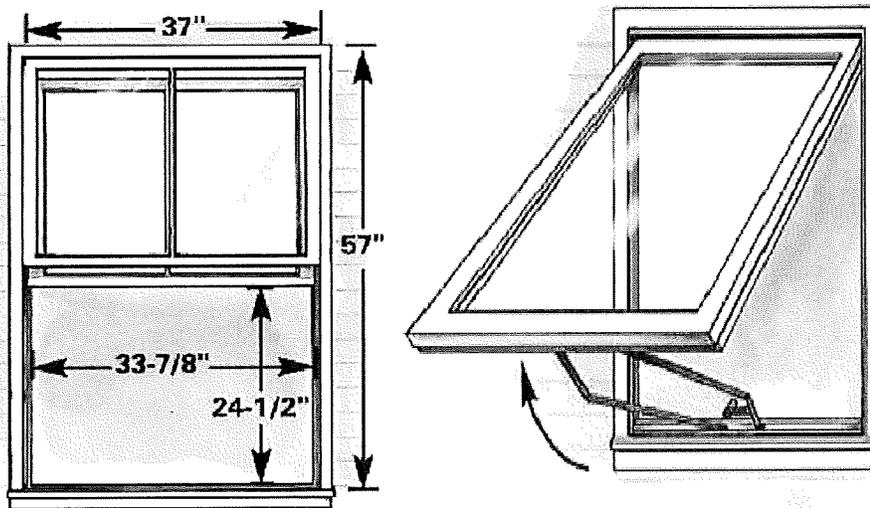
A wide variety of window designs can be used for emergency escape or rescue openings. You should select a window design that meets your architectural, aesthetic, space, and financial limitations.

**Casement windows** with hinged sashes that swing free and clear of the opening can be relatively small and still meet code requirements. This makes them ideal for basements and other areas where space is limited.



Note: Dimensions shown only for illustration purposes.

**Glider or slider windows** have sashes that fill nearly half the possible window opening when the window is opened. They require a window nearly twice the size of a casement window. Even when it's fully open, more than half of a **double-hung window's** overall area is blocked by glass. To meet height requirements, a window must be nearly 4 ft. 9 in. in overall height. This height requirement makes it undesirable for most basement situations.



**Awning windows** are problematic. Since the opened sash prevents escape from most window wells, they're unsuitable for basement use. And with most awning windows, the center opening hardware and height don't meet opening requirements.

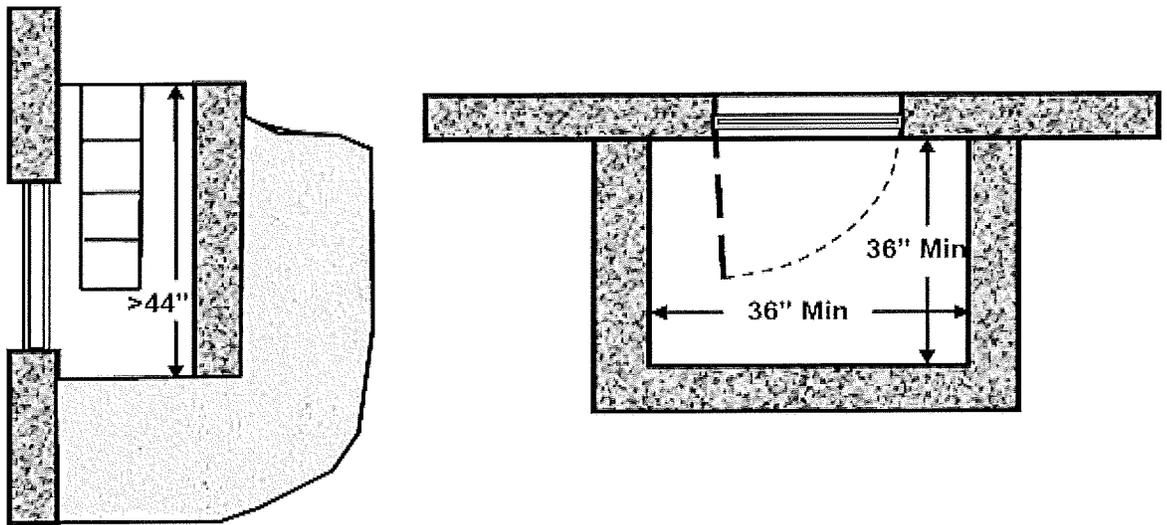
#### **Window wells designed for below grade windows**

Because of their location below grade, basement windows present an added challenge. Below grade windows must have a window well that permits the window to function as an emergency escape or rescue opening. Window wells must:

- Allow the rescue window opening to be fully opened.
- Provide 9 sq. ft. of "floor area," with a minimum dimension of 36" in width and length.
- **If the window well depth exceeds 44 inches,** the well must contain a permanently affixed ladder or steps. Ladders or rungs shall have an inside width of at least 12", shall project at least 3" from the wall and shall be spaced not more than 18" on center vertically for the full height of the window well.

Window wells must be made of rust resistant metal, treated wood, wood naturally resistant to decay, concrete, masonry, or plastic. Some window well designs have steps built or molded into them.

If an egress window is located under a deck or porch, the code requires at least 36 inches between the top of the window well and the bottom of the deck or porch joists



After obtaining a window installation permit, a final inspection is required for installations without changes made to an existing opening. Permits issued for window installations into new openings will require a framing and final inspection. Inspections may be scheduled by calling the Building/Inspections Department at 763-367-7844