



# Egress/Escape Windows & Door Replacement

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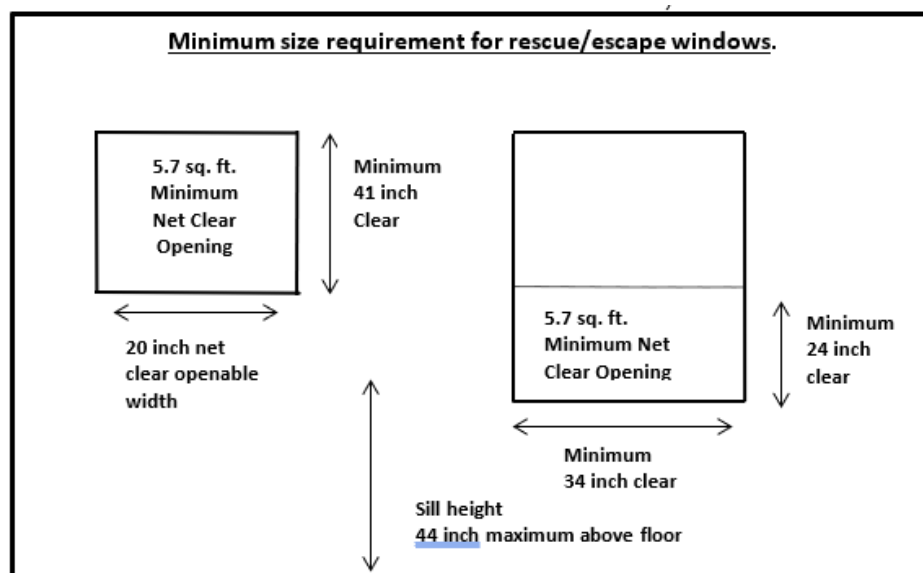
Windows are important to your home for comfort and safety. Within this document, you will find information on requirements for windows and doors, including minimum size requirements, windows that are exempt from egress requirements, window well requirements and glass and glazing requirements.

## Egress Window Requirements (MN Residential Code R310.1)

Basements, habitable attics, and every sleeping room shall have not less than one operable emergency escape and rescue opening. Where basements contain one or more sleeping rooms, an emergency egress and rescue opening shall be required in each sleeping room, but not be required in adjoining areas of the basement.

An egress window must meet the following criteria:

- The maximum sill height must be 44 inches above floor
- The minimum net clear opening must be at least 5.7 sq. ft. (820 inches)
- The height of the minimum net clear opening must be at least 24 inches
- The width of the minimum net clear opening must be at least 20 inches (Most commonly a casement window)
- A grade floor opening must have a minimum net clear opening of 5.0 sq. ft.
- Emergency escape windows shall be operational from the inside of the room without the use of keys or tools
- All windows must be installed in conformance with manufacturer's instructions and must be flashed so the opening is weather-tight
- Framing and plan flashing inspections are required for the installation of any type of windows, including egress. If the inspections are not completed, the materials may have to be removed for the proper inspections. Pan flashing shall be sealed or sloped in such a manner as to direct water to the surface of the exterior wall finish on to the water-resistance barrier for subsequent drainage



## Window Well Requirements

A properly built window well is an important safety feature in case you need to escape your home through a lower level or basement area of your home due to fire or other types of emergencies. The minimum size requirements are determined so the average person will be able to get out safely and quickly.

Escape windows below ground level, must have a window well that allows the window to be fully opened and provide a minimum net clear opening of 9 sq. ft. with a minimum dimension of 36 inches. Window wells with a vertical depth of more than 44 inches must be equipped with an approved, permanently affixed ladder or stairs that are accessible with the window in the fully open position. The ladder or stair shall not encroach into the required dimension of the window well by more than 6 inches. Ladders or rungs shall have an inside dimension of at least 12 inches and project at least 3 inches from the wall and be spaced not more than 18 inches on center for the full height of the window well.

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

Below is an illustration of a window well



## Pan Flashing Requirements

Pan flashing must be provided under all exterior windows and doors and meet the following:

- Sloped to drain water to the exterior surface of a weather resistive barrier or flat with a sealed back dam and side dams to prevent re-entry of water into the wall cavity or onto interior finishes.
- Pan flashing made from metal must be thermally isolated from interior surfaces.
- The inspectors will inspect the back dam or sloped sill along with the installation of the pan flashing material prior to the interior finishes being installed.

## Exceptions to Pan Flashing Requirements

- Windows or doors installed in accordance with the manufacturer's installation instructions, which include an alternate flashing method.
- Windows or doors in detached, accessory structures.
- Skylights, bow or bay windows.
- Doors required to meet accessibility requirements that would prevent the installation of pan flashing.
- Repairs or replacement of existing windows and doors for inserts or replacement sashes only.
- When a method is provided by a registered design professional.

## CALCULATIONS FOR MINIMUM OPEN AREA FOR EGRESS WINDOW (IN SQUARE FEET)

(Shaded areas on table below indicate window size that is **not** allowed.)

Height	Width																
	20"	21"	22"	23"	24"	25"	26"	27"	28"	29"	30"	31"	32"	33"	34"	35"	36"
24"	3.3	3.5	3.7	3.8	4.0	4.2	4.3	4.5	4.7	4.8	5.0	5.2	5.3	5.5	5.7	5.8	6.0
26"	3.6	3.8	4.0	4.2	4.3	4.5	4.7	4.9	5.1	5.2	5.4	5.6	5.8	6.0	6.1	6.3	6.5
28"	3.9	4.1	4.3	4.5	4.7	4.9	5.1	5.3	5.4	5.6	5.8	6.0	6.2	6.4	6.6	6.8	7.0
30"	4.2	4.4	4.6	4.8	5.0	5.2	5.4	5.6	5.8	6.0	6.3	6.5	6.7	6.9	7.1	7.3	7.5
32"	4.4	4.7	4.9	5.1	5.3	5.6	5.8	6.0	6.2	6.4	6.7	6.9	7.1	7.3	7.6	7.8	8.0
34"	4.7	5.0	5.2	5.4	5.7	5.9	6.1	6.4	6.6	6.8	7.1	7.3	7.6	7.8	8.0	8.3	8.5
36"	5.0	5.3	5.5	5.8	6.0	6.3	6.5	6.8	7.0	7.3	7.5	7.8	8.0	8.3	8.5	8.8	9.0
38"	5.3	5.5	5.8	6.1	6.3	6.6	6.9	7.1	7.4	7.7	7.9	8.2	8.4	8.7	9.0	9.2	9.5
40"	5.6	5.8	6.1	6.4	6.7	6.9	7.2	7.5	7.8	8.1	8.3	8.6	8.9	9.2	9.4	9.7	10.0
42"	5.8	6.1	6.4	6.7	7.0	7.3	7.6	7.9	8.2	8.5	8.8	9.0	9.3	9.6	9.9	10.2	10.5
44"	6.1	6.4	6.7	7.0	7.3	7.6	7.9	8.3	8.6	8.9	9.2	9.5	9.8	10.1	10.4	10.7	11.0
46"	6.4	6.7	7.0	7.3	7.7	8.0	8.3	8.6	8.9	9.3	9.6	10.0	10.2	10.5	10.9	11.2	11.5
48"	6.7	7.0	7.3	7.7	8.0	8.3	8.7	9.0	9.3	9.7	10.0	10.3	10.7	11.0	11.3	11.7	12.0
50"	6.9	7.3	7.6	8.0	8.3	8.7	9.0	9.4	9.7	10.1	10.4	10.8	11.1	11.5	11.8	12.2	12.5
52"	7.2	7.6	7.9	8.3	8.7	9.0	9.4	9.8	10.1	10.5	10.8	11.2	11.6	11.9	12.3	12.6	13.0
54"	7.5	7.9	8.3	8.6	9.0	9.4	9.8	10.1	10.5	10.9	11.3	11.6	12.0	12.4	12.8	13.1	13.5
56"	7.8	8.2	8.6	8.9	9.3	9.7	10.1	10.5	10.9	11.3	11.7	12.1	12.4	12.8	13.2	13.6	14.0
58"	8.0	8.5	8.9	9.3	9.7	10.1	10.5	10.9	11.3	11.7	12.1	12.5	12.9	13.3	13.7	14.1	14.5
60"	8.3	8.8	9.2	9.6	10.0	10.4	10.8	11.3	11.7	12.1	12.5	12.9	13.3	13.8	14.2	14.6	15.0

### Exceptions to Egress Requirements

Replacement windows installed in residential buildings meeting the scope of the IRC are exempt from egress requirements if the replacement window meets the following conditions:

- The replacement window is the manufacturer’s largest standard size window that will fit within the existing frame or existing rough opening.
- The replacement window must be permitted to be of the same operating style as the existing window or a style that provides for a greater window opening area than the existing window.
- The rooms or areas are not used for any Minnesota State licensed purpose requiring an egress window.
- The window is not required to be replaced pursuant to a locally adopted rental housing or rental licensing code.

### Glass and Glazing Requirements

- Any door leading from the home directly to a garage must be a minimum 1 3/8 inch solid wood door, solid or honeycomb steel door or a 20 minute fire rate door. There should be no glass in the door unless specialty fire glass.
- Any glass within 24 inches of either side of an exterior door must be safety glazed.
- All glazing within doors must be safety glass.
- Glass within 18 inches of the walking surface and greater than 9 sq. ft. for any single pane of glass must be safety glass.
- Any glazing installed within bathing areas less than 5 ft. high from the drain must be safety glazed.
- Glazing is required adjacent to stairways, landings and ramps within 36 inches of the walking surface when the glass is less than 60 inches above the walking surface.
- Any glazing within 5 ft. of the top or bottom of a stairway must be safety glazed

## Carbon Monoxide and Smoke Alarm Requirements

Carbon monoxide alarms in *dwelling units* shall be installed outside of and not more than 10 feet (3048 mm) from each separate sleeping area or bedroom. Alarms shall be installed on each level containing sleeping areas or bedrooms. Where a fuel-burning *appliance* is located within a bedroom or its attached bathroom, a carbon monoxide alarm shall be installed within the bedroom.

Smoke alarms shall be installed in the following locations:

- In each sleeping room.
- Outside each separate sleeping area in the immediate vicinity of the bedrooms.
- On each additional *story* of the *dwelling*, including *basements* and *habitable attics* and not including crawl spaces and uninhabitable *attics*. In *dwelling*s or *dwelling units* with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full *story* below the upper level.
- Smoke alarms shall be installed not less than 3 feet (914 mm) horizontally from the door or opening of a bathroom that contains a bathtub or shower unless this would prevent placement of a smoke alarm required by this section.

