



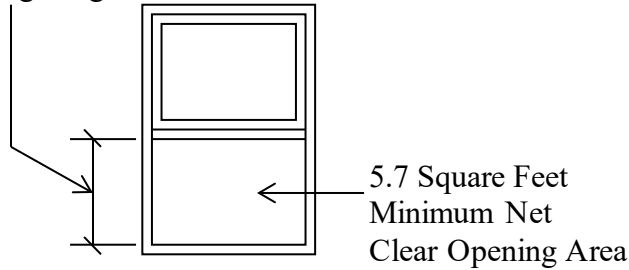
# CITY OF SAINT PAUL

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## Emergency Escape and Rescue Openings

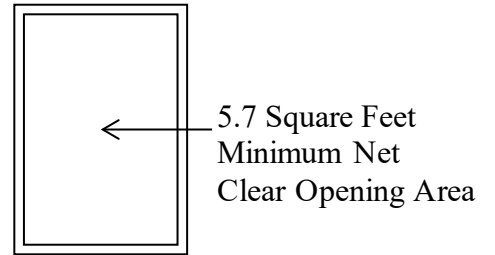
Section R310 of the 2020 Minnesota Residential Code

24" Minimum  
Net Clear  
Opening Height



Double-Hung Window

20" Minimum  
Net Clear  
Opening Width

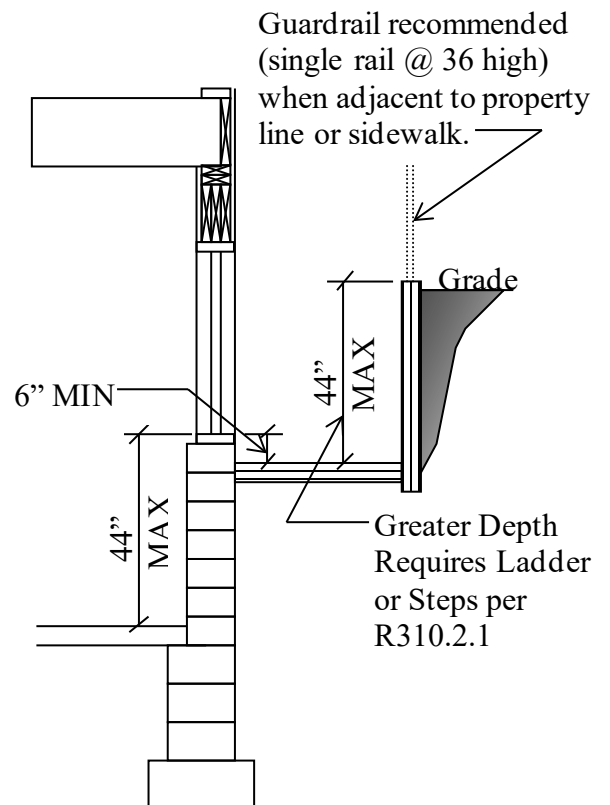
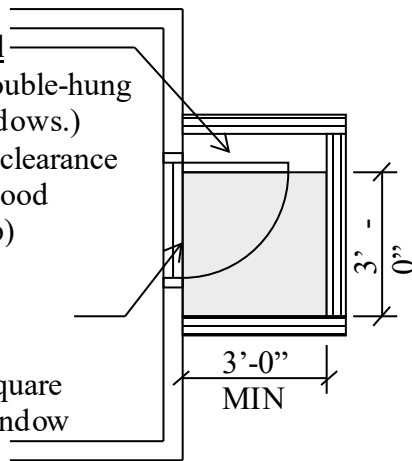


Casement Window

Note: 5.7 Square Feet = 821 Square Inches when multiplying width times height of the opening in inches.

Window Well  
(Center on double-hung  
or glider windows.)  
6" Minimum clearance  
to sides for wood  
windows.(typ)

Casement  
Window  
Maintain 9 Square  
Feet when window  
is open (note  
shaded area)



\*\* SEE REVERSE SIDE FOR GRADE FLOOR OR BELOW GRADE FLOOR OPENINGS \*\*

### **R310.1 Emergency escape and rescue opening required.**

*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. Emergency escape and rescue openings shall open directly into a public way, or to a *yard* or court that opens to a public way.

Exceptions:

1. Storm shelters and *basements* used only to house mechanical *equipment* not exceeding a total floor area of 200 square feet (18.58 m<sup>2</sup>).
2. Basements or basement bedrooms when the building is protected with an automatic sprinkler system installed in accordance with IRC Section P2904 or NFPA 13D.
3. Basements or basement bedrooms where the entire basement area, including all portions of the means of egress to the level of exit discharge, and all areas on the level of exit discharge that are open to the means of egress is protected with an automatic sprinkler system in accordance with IRC Section P2904 or NFPA 13D.

#### **R310.1.1 Operational constraints and opening control devices.**

Emergency escape and rescue openings shall be operational from the inside of the room without the use of keys, tools or special knowledge. Window opening control devices on windows serving as a required emergency escape and rescue opening shall comply with ASTM F2090.

### **R310.2 Emergency escape and rescue openings.**

Emergency escape and rescue openings shall have minimum dimensions as specified in this section.

#### **R310.2.1 Minimum opening area.**

Emergency and escape rescue openings shall have a net clear opening of not less than 5.7 square feet (0.530 m<sup>2</sup>). 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. The net clear height of the opening shall be not less than 24 inches (610 mm) and the net clear width shall be not less than 20 inches (508 mm).

Exception: *Grade floor openings or below-grade openings shall have a net clear opening area of not less than 5 square feet (0.465 m<sup>2</sup>).*

#### **R310.2.2 Window sill height.**

Where a window is provided as the emergency escape and rescue opening, it shall have a sill height of not more than 44 inches (1118 mm) above the floor; where the sill height is below *grade*, it shall be provided with a window well in accordance with Section R310.2.3.

#### **R310.2.3 Window wells.**

The horizontal area of the window well shall be not less than 9 square feet (0.9 m<sup>2</sup>), with a horizontal projection and width of not less than 36 inches (914 mm). The area of the window well shall allow the emergency escape and rescue opening to be fully opened.

Exception: The ladder or steps required by Section R310.2.3.1 shall be permitted to encroach not more than 6 inches (152 mm) into the required dimensions of the window well.

#### **R310.2.3.1 Ladder and steps.**

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 the fully open position. Ladders or steps required by this section shall not be required to comply with Section R311.7. Ladders or rungs shall have an inside width of not less than 12 inches (305 mm), shall project not less than 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.

#### **R310.2.3.2 Drainage.**

Window wells shall be designed for proper drainage by connecting to the building's foundation drainage system required by Section R405.1 or by an approved alternative method.

Exception: A drainage system for window wells is not required where the foundation is on well-drained soil or sand-gravel mixture soils in accordance with the United Soil Classification System, Group I Soils, as detailed in Table R405.1.

#### **R310.2.4 Emergency escape and rescue openings under decks and porches.**

Emergency escape and rescue openings installed under decks and porches shall be fully openable and provide a path not less than 36 inches (914 mm) in height to a *yard* or court.

#### **R310.2.5 Replacement windows.**

Replacement windows installed in buildings meeting the scope of this code shall be exempt from the maximum sill height requirements of Section R310.2.2 and the requirements of Section R310.2.1, provided that 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 frame or existing rough opening. The replacement window is of the same operating style as the existing window or a style that provides for an equal or greater window opening area than the existing window.
2. The replacement window is not part of a change of occupancy.

#### **R310.2.5.1 Licensed facilities.**

Windows in rooms used for foster care or day care licensed or registered by the state of Minnesota shall comply with the provisions of Section R310.2.5, or all of the following conditions, whichever is more restrictive:

1. Minimum of 20 inches (508 mm) in clear opening width;
2. Minimum of 20 inches (508 mm) in clear opening height;
3. Minimum of 648 square inches (4.5 square feet) clear opening; and
4. Maximum of 48 inches (1219 mm) from the floor to the sill height.