MINNESOTA DEPARTMENT OF PUBLIC SAFETY
State Fire Marshal Division

STATEMENT OF POLICY

Policy #: INS-04 (2007)	Subject of Policy: Escape Windows		
Revised and Approved By: Jerry Rosendahl	Title: State Fire Marshal	Effective Date: 11/1/1999	Revised Date: 6/27/2012

APPLIES TO:

Inspection Personnel, Inspection Supervisors, Code/Plans Specialists.

PURPOSE:

To provide for the uniform enforcement of the escape/egress window requirements throughout the state in building code and non-building code areas. This policy provides clarification of the requirements found in 2007 Minnesota State Fire Code [Here after referred to as MSFC (07).] Section 1026.1. Requirements for escape windows from manufactured homes can be found at the end of this policy.

POLICY:

SECTION 1 — EMERGENCY ESCAPES

1.1 General

When required, emergency escape windows (second means of egress) shall be installed and maintained in Group R occupancies as specified in MSFC (07) Section 1026.1 and this policy. Emergency escape windows shall be installed in sleeping rooms and basements used for sleeping.

Any one of the following four options will substitute for an emergency escape window from a room.

1. An escape window is not required if the room has a door that leads directly to the exterior of the building.
2. An escape window is not required if the building is protected through-out by an approved, automatic sprinkler system.
3. Escape windows need not be installed from rooms of existing buildings having two separate means of escape, provided that the means of escape are independent and remote from each other and they pass through one adjacent non-lockable room or area.
4. Escape windows are not required in group R hotels or motels constructed prior to April 11, 1983.

Sliding glass doors may be accepted as qualifying exit doors provided that the doors are maintained operational at all times [MSFC (07) Section 1008.1.2 Exception 4, MSBC (07) Section 1008.1.2 Exception 4].

1.2 Approved emergency escape windows

When used as an emergency escape, only a single window in each room need meet the minimum size requirements listed below. The window sash cannot be removed to meet the size requirements and windows must be measured with the window fully opened by the normal window opening mechanism.

For escape windows installed prior to July 10, 2007*:

- A minimum of 20 inches in width
- A minimum of 20 inches in height
- A minimum of 648 square inches (4.5 square feet) of clear opening
- A maximum of 48 inches from the floor to the sill opening

Note: The above is considered the absolute minimum regardless of existing or window replacement.

For escape windows installed above or below the level of exit discharge on or after July 10, 2007:

- A minimum of 20 inches in width
- A minimum of 24 inches in height
- A minimum of 820 square inches (5.7 square feet) of clear opening
- A maximum of 44 inches from the floor to the sill opening

For grade or ground floor escape windows installed on or after July 10, 2007:

- A minimum of 20 inches in width
- A minimum of 24 inches in height
- A minimum of 720 square inches (5.0 square feet) of clear opening
- A maximum of 44 inches from the floor to the sill opening

Approved egress/escape windows may include any of the following:

- Double hung windows
- Sliding windows
- Casement windows

See the attached diagrams for additional description of acceptable escape windows and a worksheet for determining compliance with the requirements of the MSFC (07).

1.3 Escape window opening height

Escape windows with openings up to 52 inches off of the floor may meet the height requirement (for existing buildings as applicable from Section 1.2 above) by securing a step, platform or bed to the wall directly underneath the window. This step, platform or bed shall be no more than 44 inches below the opening and must be strong enough to support the weight of the person. The minimum acceptable width shall be the same as the window opening. The minimum acceptable depth away from the wall shall be 18 inches. [MSFC (07) Section 1026.1]

1.4 Coverings on escape windows

Plastic coverings are allowed to cover egress/escape windows and exterior doors if the plastic covering meets the following requirements. [MSFC (07) Section 1026.1]

- The plastic covering shall be readily transparent. The occupant shall be able to readily see rescuers on the outside and rescuers shall be able to readily see people on the inside.
- The plastic covering may only be attached on the inside and can only be attached to the window frame or structure with two sided tape, hook and loop (Velcro) or static cling.
- The plastic shall have enough material overhanging the attachment on all sides, top and bottom to facilitate grabbing it from any direction and allow easy removal.

SECTION 2 — WINDOW WELLS

Escape windows with a finished sill height below the adjacent ground elevation shall have a window well. Window wells shall comply with the following [MSFC (07) Section 1026.5]. See the attached

diagram for additional description of window wells and a worksheet for determining compliance with the requirements of the MSFC (07).

2.1 Window well size
The window well shall have a minimum horizontal area of 9 square feet with minimum dimensions of 36 inches. The area of the window well shall allow the emergency escape opening to be fully opened. [MSFC (07) Section 1026.5]

Window wells with a vertical depth of more than 44 inches shall be equipped with an approved permanently affixed ladder or stairs that is accessible with the window in the fully open position. The ladder shall not be obstructed by the window or obstruct the opening of the window. The ladder is also not allowed to encroach into the required dimensions of the window well by more then 6 inches. [MSFC (07) Section 1026.5.2]

2.2 Covers on window wells
Window wells may be covered as necessary to keep the window well clear of debris, snow, and rain water and to help prevent people from falling in if the building owner wishes. However, the cover shall comply with the following requirements:

a. The covering shall not interfere with the opening of the window in any way.
b. The covering shall be supported in such a way that it can not become frozen to the ground, window well or structure.
c. The covering shall be readily removable without the use of tools or special knowledge from the window well area by the building occupants.

SECTION 3 — EMERGENCY ESCAPES IN MANUFACTURED HOMES

The classification of manufactured homes for the purposes of determining if state or federal standards apply is based on the existence of running gear (wheels, axles, etc) and frame:

For factory built homes (i.e. a factory built home is moved on a trailer and must be moved onto a foundation. The furnace and water heaters must be added after arrival.)
Emergency escapes shall meet the requirements of the MSFC and MSBC as enforced at the time of construction. This includes both the manufactured portion of the home and any foundation upon which it is placed.

For manufactured (mobile) homes (i.e. mobile homes have heavy steel beams under them and arrive own their own wheels. They are sometimes set onto a foundation or basement. Mobile homes always come with the furnace and water heaters installed in them at the factory.)
Federal standards §3280.105, §3280.106 and §3280.404 cover emergency escapes for these homes. This section outlines the requirements, although the actual standards should be referenced for full details.

3.1 Number and location of exterior doors for manufactured homes with running gear

a. Manufactured homes shall have a minimum of two exterior doors located remote from each other.
b. Required egress doors shall not be located in rooms where a lockable interior door must be used in order to exit
c. In order for exit doors to be considered remote from each other, they must comply with all of the following (i. through iv.):
    i. Both of the required doors must not be in the same room or in a group of rooms which are not defined by fixed walls

ii. Single wide units. Doors may not be less than 12 feet center to center from each other as measured in any straight line direction regardless of the length of path of travel between doors.

iii. Double wide units. Doors may not be less than 20 feet center to center from each other as measured in any straight line direction regardless of the length of path of travel between doors.

iv. One of the required exit doors must be accessible from the doorway of each bedroom without traveling more than 35 feet.

d. All exterior swinging doors shall provide a minimum 28 inch wide by 74 inch high clear opening. All exterior sliding glass doors shall provide a minimum 28 inch by 72 inch high clear opening.

3.2 Escape windows and devices for manufactured homes with running gear
Every room designed expressly for sleeping purposes, unless it has an exit door, shall have at least one outside window or approved exit device. Construction of the egress window shall be as follows:

Homes built on or after July 1, 1972 and before July 15, 1976.
Must have a clear opening of not less than 22 inches in least dimension and 5 square feet in area. The bottom of the opening shall be not more than 4 feet above the floor [ANSI A119.1].

Homes built on or after July 15, 1976.
Clear opening width of not less than 20 inches and 24 inches in height and 5 square feet in area. The bottom of the opening shall be not more than 36 inches above the floor. Locks latches, operating handles, tabs and other devices which need to be operated in order to permit exiting shall not be located in excess of 54 inches from the finished floor [HUD Standards].

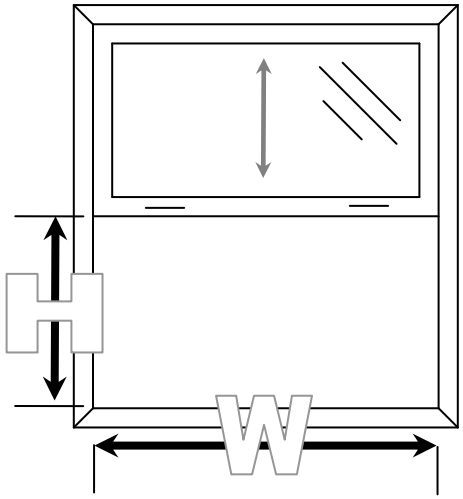
When basements are installed under these homes, the basement shall meet the applicable requirements of MSFC (07) Section 1026.1.

When manufactured (mobile) homes are set on basements (running gear removed or remaining), the manufactured (mobile) home shall have exiting (doors, windows etc.) installed according to the Federal ANSI or HUD standard under which it was built.

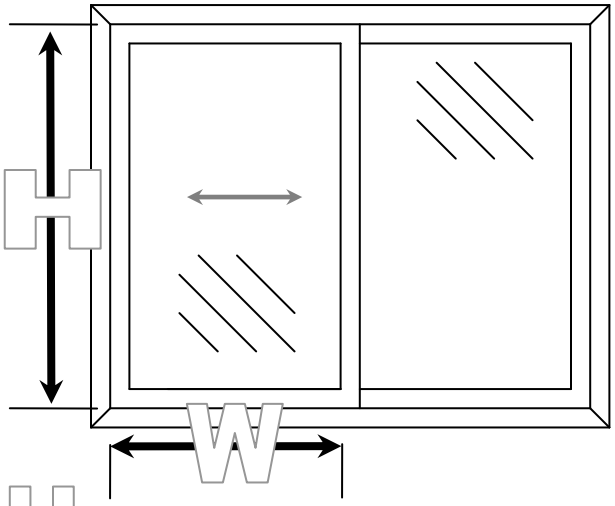
Escape Window Worksheet for Windows Installed Before July 10, 2007

1) Check Window Height and Width

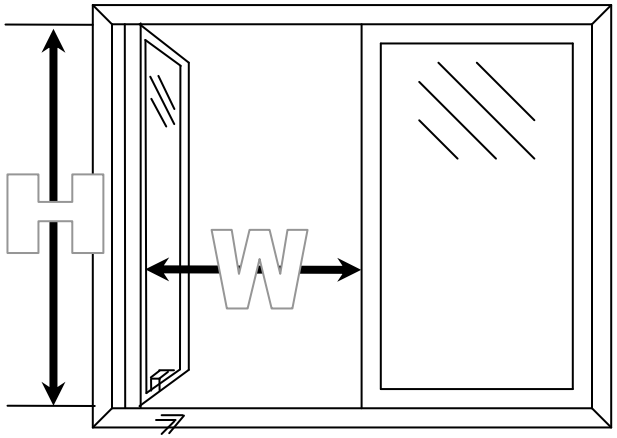
DOUBLE HUNG



SLIDING



CASEMENT



Is the clear openable height, H at least 20 inches? Yes ☐ No ☐

Is the clear openable width, W at least 20 inches? Yes ☐ No ☐

2) Check Window Opening Area (fill in the three blanks)

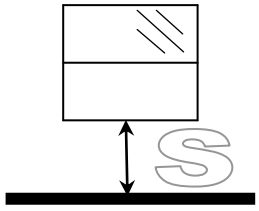
H _____ **X** W _____ **=** A _____

Openable height (inches) | Openable width (inches) | Openable area (square inches)

Is the clear openable area, A at least 648 square inches? Yes ☐ No ☐

3) Check the distance from the floor to the bottom of opening

Is the distance, S from the floor to the finished sill (bottom of opening) 48 inches or less?



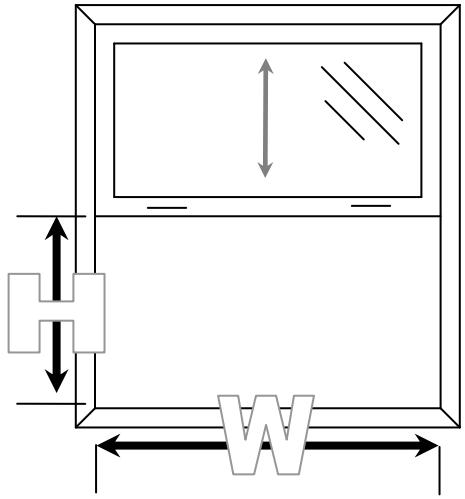
Yes ☐ No ☐

If you answered yes to all questions then the window should comply with the 2007 Minnesota State Fire Code.
For assistance: Minnesota State Fire Marshal Division (651) 201-7200; TTY: (651) 282-6555; firecode@state.mn.us

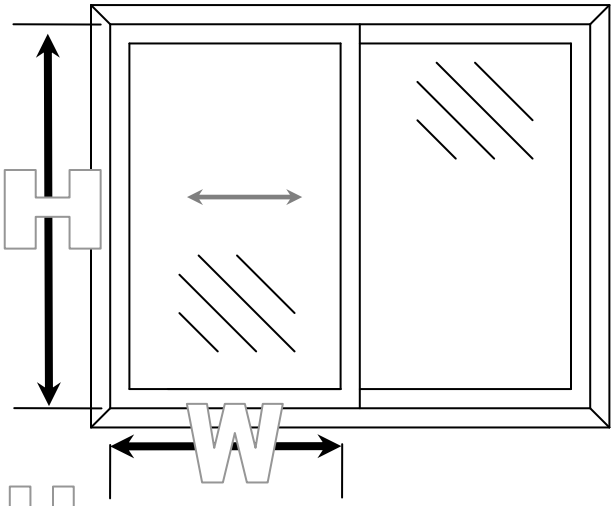
Escape Window Worksheet for Ground Floor Windows Installed On or After July 10, 2007

1) Check Window Height and Width

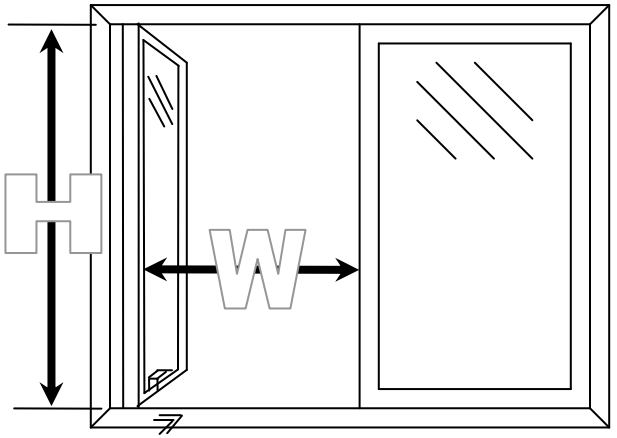
DOUBLE HUNG



SLIDING



CASEMENT



Is the clear openable height, H at least 24 inches? Yes ☐ No ☐

Is the clear openable width, W at least 20 inches? Yes ☐ No ☐

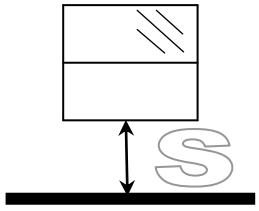
2) Check Window Opening Area (fill in the three blanks)

H _____ **X** W _____ **=** A _____

Openable height (inches) | Openable width (inches) | Openable area (square inches)

Is the clear openable area, A at least 720 square inches? Yes ☐ No ☐

3) Check the distance from the floor to the bottom of opening



Is the distance, S from the floor to the finished sill (bottom of opening) 44 inches or less? Yes ☐ No ☐

If you answered yes to all questions then the window should comply with the 2007 Minnesota State Fire Code.
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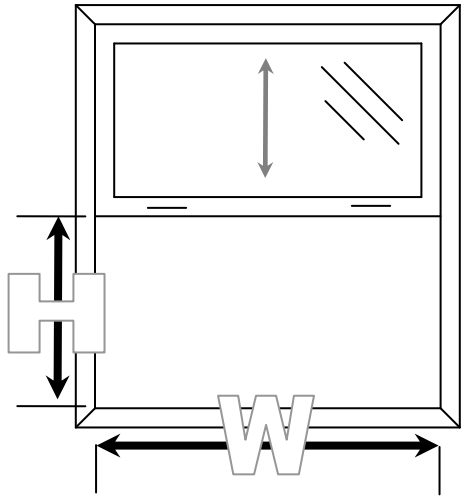
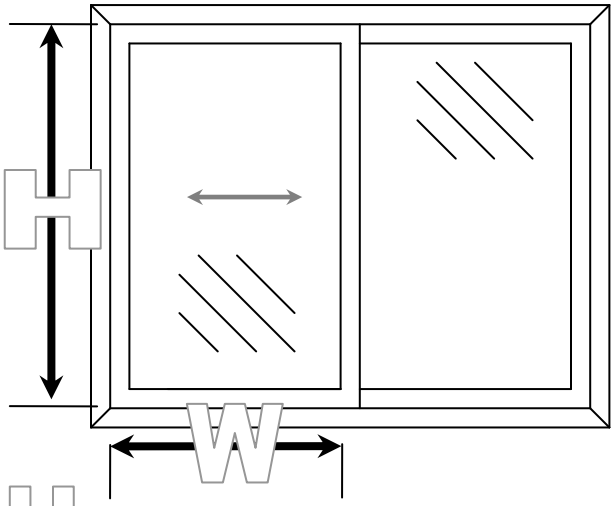
For Escape Windows Installed Above or Below the Level of Exit Discharge on or after July 10, 2007:

1) Check Window Height and Width

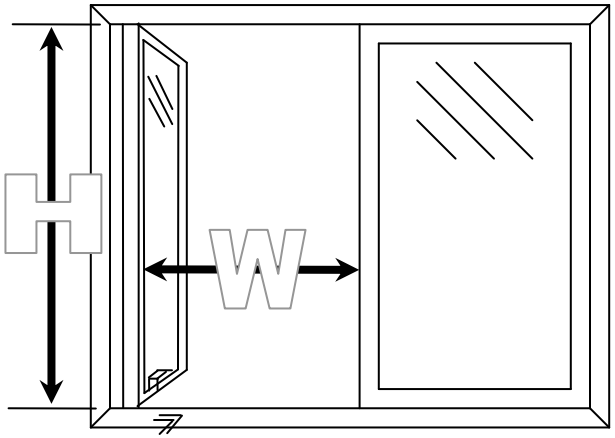
DOUBLE HUNG



SLIDING



CASEMENT



Is the clear openable height, H at least 24 inches? Yes ☐ No ☐

Is the clear openable width, W at least 20 inches? Yes ☐ No ☐

2) Check Window Opening Area (fill in the three blanks)

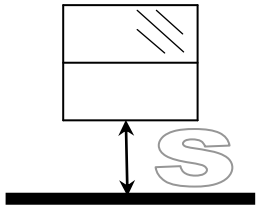
H _____ **X** W _____ **=** A _____

Openable height (inches) | Openable width (inches) | Openable area (square inches)

Is the clear openable area, A at least 820 square inches? Yes ☐ No ☐

3) Check the distance from the floor to the bottom of opening

Is the distance, S from the floor to the finished sill (bottom of opening) 44 inches or less?

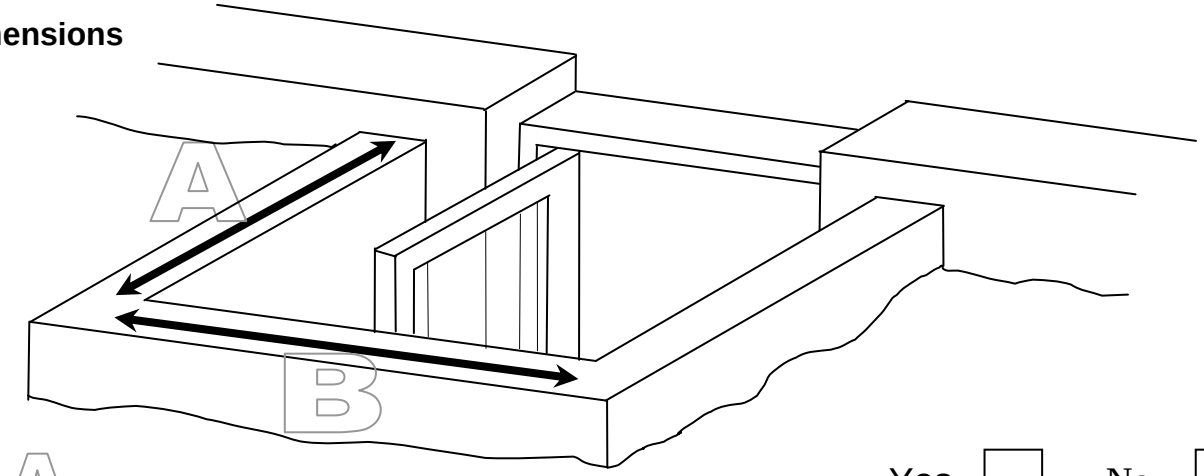


Yes ☐ No ☐

If you answered yes to all questions then the window should comply with the 2007 Minnesota State Fire Code.
For assistance: Minnesota State Fire Marshal Division (651) 201-7200; TTY: (651) 282-6555; firecode@state.mn.us

Window Well Worksheet

1) Check Window Well Dimensions



Is the clear horizontal distance, A at least 36 inches? Yes ☐ No ☐

Is the clear horizontal distance, B at least 36 inches? Yes ☐ No ☐

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2) Check Window Well Opening Area (fill in the three blanks)

A _____ **X** B _____ **=** Area _____

Horizontal distance (inches) | Horizontal distance (inches) | Net horizontal opening (square inches)

Is the Area at least 1,296 square inches? Yes ☐ No ☐

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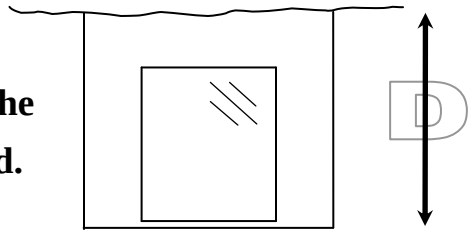
3) Check the vertical depth of the window well



If the distance, D from the bottom of the well to the top at grade is more than 44 inches, a ladder is required. If a ladder is required, is one provided? Yes ☐ No ☐

If you answered yes to all questions then the window should comply with the 2007 Minnesota State Fire Code
For assistance: Minnesota State Fire Marshal Division (651) 201-7200; TTY: (651) 282-6555; firecode@state.mn.us