



CITY OF NORTH MANKATO

## RESIDENTIAL WINDOW/DOOR REPLACEMENT

- **Replacement Windows**-shall be 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.
- If replacing a window in a sleeping room, refer to the egress window handout.
- Pan flashing shall be installed in accordance with the fenestration manufacturer's installation and flashing instructions. Where flashing instructions or details are not provided, pan flashing shall be installed at the sill of exterior window and door openings. Pan flashing shall be sealed or sloped in such a manner as to direct water to the surface of the exterior wall finish or to the water-resistive barrier for subsequent drainage.
- Flashing shall be installed at the head and sides of exterior window and door openings and shall extend to the surface of the exterior wall finish or to the water-resistive barrier for subsequent drainage.
- Energy efficiency requirements:
  - U-Factor for windows must not be greater than .32.
  - U-Factor for skylights must not be greater .55.
- **Egress Door Replacement**-shall be side hinged, shall provide a minimum clear width of 32" measured between the face of the door and the stop with the door open 90 degrees, minimum clear height not less than 78" from top of threshold to bottom of stop. Egress doors shall be readily openable from inside the dwelling without the use of a key or special knowledge of effort. Egress doors shall not provide egress travel through a garage.
- **Entrance Door from Garage into Dwelling Replacement**-shall be replaced with a solid wood door not less than 1 3/8 inches in thickness, a solid or honeycomb-core steel door not less than 1 3/8 inches thick, OR a 20-minute fire-rated door.
- **THE REQUIRED SMOKE AND CARBON MONOXIDE ALARMS WILL BE INSPECTED AT THE FINAL WINDOW/DOOR INSPECTION FOR PROPER INSTALLATION AND OPERATION. (REFER TO "NOTICE" ON FOURTH PAGE OF THIS HANDOUT**

REQUIRED SAFETY GLAZING LOCATIONS		
R308.4	Location	Exceptions
.1	Glazing in fixed or operable panels of swinging, sliding, or bi-fold doors	1. Openings that would prevent passage of a 3" sphere. 2. Decorative glass
.2	Glazing where any part of glass is within a 24" arc of either vertical edge of the operable door in the closed position & <60" above the floor or standing surface ( <b>Fig. 1</b> )	1. Decorative glass 2. When protected by intervening wall or barrier 3. Glass perpendicular to door on latch side 4. When door only serves closet ≤ 3ft. deep (reach-in closet) 5. Glass adjacent to fixed side of patio doors
.3	Walk-through hazard >9 sq. ft. & lowest edge <18" from walking surface & upper edge >36" above walking surface & ≤36" horizontal from walking surface. ( <b>Fig. 1</b> )	1. Decorative glass 2. When protected by minimum 1½" high horizontal rail, 34"-38" above the walking surface. Rail must resist 50 lb. force per linear foot without contacting glass 3. Outboard panes ≥25 ft. above grade, roof, or other horizontal surface
.4	Guards, Railings, and guard infill components	None
.5	Walls, enclosures, or fences containing or facing hot tubs, spas, whirlpools, saunas, steam rooms, bathtubs, showers, swimming pools where the bottom exposed edge of the glazing is <60" measured vertically above any standing or walking surface	1. Glazing >60", measured horizontally, in a straight line, from the water's edge of a bathtub, hot tub, spa, whirlpool, or swimming pool
.6	Glass adjacent to stairways, landings, & ramps where bottom exposed edge is <36" above plane of adjacent walking surface. ( <b>Fig. 2</b> )	1. When protected by minimum 1½" high horizontal rail, 34"-38" above the walking surface. Rail must resist 50 lb. force per linear foot without contacting glass 2. Glass ≥36" measured horizontally from the walking surface
.7	Glass adjacent to the bottom stair landing where glazing is <36" above landing and within 60" horizontally of the bottom tread.	1. Where glass is >18" horizontally from a guard meeting the requirements of an open stair/landing guard as described in the 2015 MN Residential Code R312. ( <b>Fig. 3</b> )

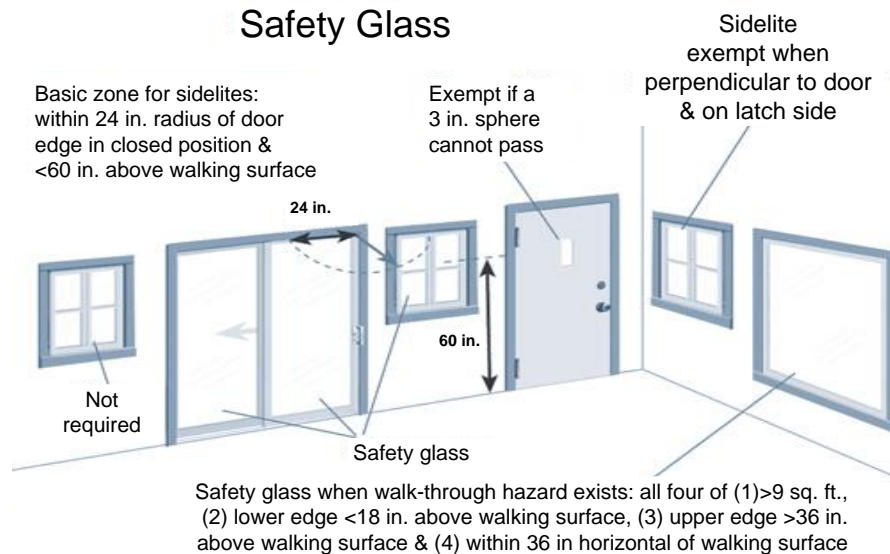
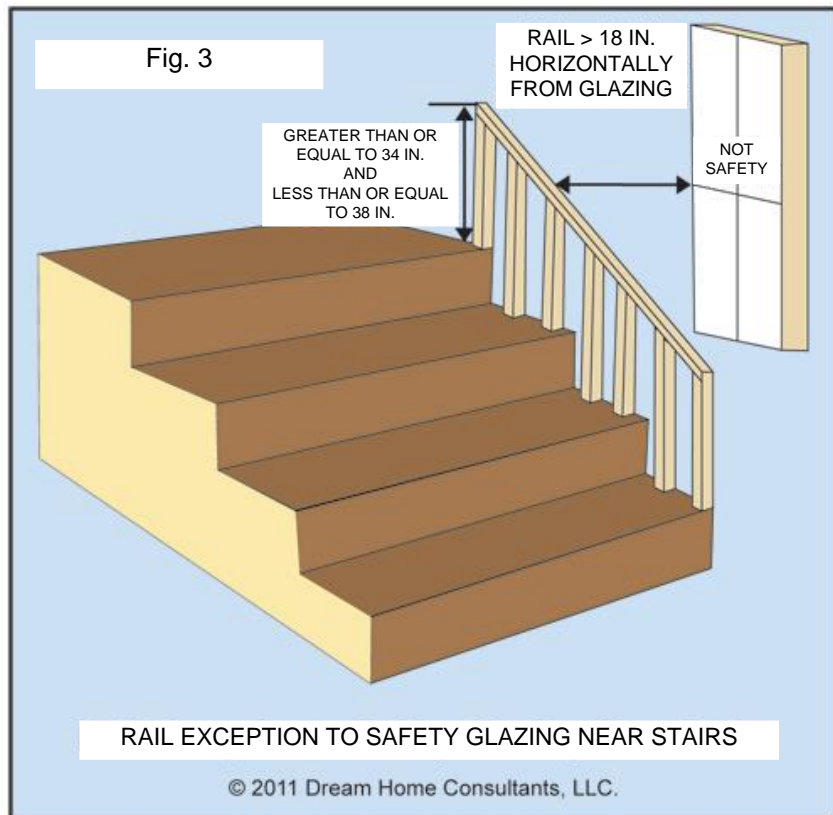
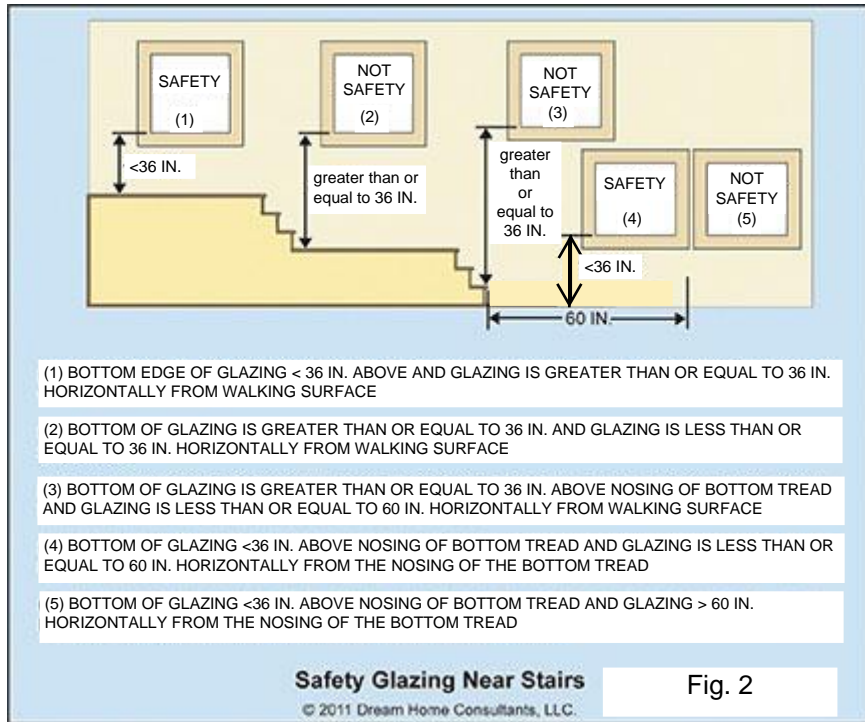


Fig. 1



# NOTICE

At the time of final inspection of any window installation, the City of North Mankato is required to inspect the permitted property for the proper installation of smoke alarms as required MN Statute 299F.362 and MN State Building Code chapter 1309.0314.3.1, and carbon monoxide detectors as required by MN Statute 299F.51 and MN State Building Code chapter 1309.0315. If the safety devices are not present, properly installed, and functional in the home, we will not be able to close the permit.

Thank you in advance for your cooperation!

Dave Knudson  
Building Official

## **Requirements for Smoke Alarms & Carbon Monoxide Detectors**

Smoke alarms are required in each sleeping room, outside each separate sleeping area in the immediate vicinity of the bedrooms, and on each additional story of the dwelling.

Carbon monoxide detectors are to be located outside and within 10'-0" of each separate sleeping area or bedroom. Alarms shall be installed on each level containing sleeping areas or bedrooms.

## **SMOKE ALARMS**

**Flat Ceilings**-When mounted on a flat ceiling, alarms shall be located NO closer than 4" from adjoining wall surface.

**Peaked Ceilings**-When mounted on a peak ceiling, alarms shall be located within 36" horizontally of the peak, but NOT closer than 4" vertically to the peak.

**Sloped Ceilings**-When mounted on sloped ceilings having a rise greater than 1'-8" horizontally shall be located within 36" of high side of the ceiling, but NOT closer than 4" from adjoining wall surface.

**Wall Mounting**-When mounted on wall, alarms shall be located NOT closer than 4" from adjoining ceiling surface & NOT further than 12" from adjoining ceiling surface.

Alarms shall NOT be installed within 36" of a door to a kitchen or a bathroom containing a shower or tub.

Alarms shall NOT be installed within 36" of supply registers of forced air heating or cooling systems and outside of the direct airflow from those registers.

Alarms shall NOT be installed within 36" from the tip of the blade of a ceiling fan.

If basement does NOT have any sleeping areas or bedrooms, alarms shall be located on the basement ceiling near the entry to the stairs leading up from the basement.

Alarms shall be mounted on an inside wall or well insulated ceiling below an attic space.

## **CARBON MONOXIDE DETECTORS**

Detectors shall be installed outside and NOT more than 10'-0" from each separate sleeping area or bedroom and on each level containing sleeping areas or bedrooms.

Detectors can be mounted high or low on a wall or on a ceiling, refer to the manufacturer's installation requirements.