



Window & Door Installation

10801 Town Square Drive NE, Blaine MN 55449

Building Inspections Department

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This handout is intended only as a guide and is based in part on the 2020 Minnesota State Building Code, Blaine 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.

Permit Application -

A permit is required for installation of windows (full frame and inserts) and the total replacement of exterior doors. Provide the make/model and fenestration U-Factor rating for each style of window/door unit installed (Maximum U-Factor = .32) with the application. To apply for a permit go to Blainemn.gov/reswindowsdoors where you will be given directions on how to apply for the permit. Permits are issued on-line at the time of application unless plans are required.

Plans may be required when applying -

If the existing window opening size is altered, if there are new opening(s), or if the foundation is altered, submittal of detailed plans will be required prior to issuance. If plans are required, you will be notified when your permit is ready for payment after review.

Fee -

\$101 if required pictures are submitted (see inspections below.)

\$101 + \$50 if required pictures are not submitted.

Inspections -

- **Required pictures** Clear digital pictures must be uploaded on the "Files Tile on your permit. This may be done by logging into your account at blaine.ims16.com, go to your dashboard, select the correct permit, go to the Files Tile click the upload files symbol in the right hand corner of the tile and upload your pictures. **"Site Specific"** pictures must include front of house (include address numbers), close-up pictures of each window/door pan flashing, insulation, and (exterior) flashing/sealing, bay window support details - also a minimum of one picture of each exterior wall of the house in which windows/doors are being installed.
- If the required pictures are not submitted a **flashing/insulation inspection** is required (\$50 fee added to the permit.) This inspection will need to be scheduled during the actual time the windows are being installed and prior to concealing flashing and insulation.
- **An on-site framing and/or foundation inspection** is required only if an existing rough opening size is being altered, a new door/window opening being installed, or if a wider opening or new opening in a foundation wall is being cut/altered as part of this project. (\$50 fee will not be added to the permit)
- **An on-site final inspection** is required to be scheduled after approval of required pictures and other inspections. Access to the new windows/doors and smoke/CO alarms within the home is needed. All windows and doors shall be installed per the

manufacturer's installation requirements (instructions shall be on site for all inspections). If the required pictures were not submitted or a flashing/insulation inspection not completed prior to concealing work, the installer must meet the inspector during the final inspection. Removal of trim and siding may be necessary to spot check flashing & insulation.

Smoke Detector and Carbon Monoxide Alarm requirements -

When alterations, repairs (including installation or replacement of windows or doors) or additions requiring a permit occur, the individual dwelling unit shall be equipped with smoke and carbon monoxide alarms located as required for new dwellings. The smoke alarms shall be interconnected and hard-wired. During remodeling, where alterations or repairs do not result in the removal of interior or ceiling finishes exposing the structure, battery operated alarms may be used.

Smoke alarms shall be installed in each of the following locations:

- Within each sleeping room.
- Outside of each separate sleeping area in the immediate vicinity of the bedrooms.
- On each additional story of the dwelling, including basements but not including crawl spaces and uninhabitable attics.

Carbon Monoxide alarms shall be installed in the following locations:

- One Carbon Monoxide Alarm shall be installed outside and not more than 10 feet from each separate sleeping area or bedroom on each level.

Emergency Escape and Rescue Openings (windows in basements, habitable attics and sleeping rooms)

- Refer to the City of Blaine "Emergency Escape" handout or Section R310 of the MN State Residential Code for requirements.

R703.4 Flashing

Approved corrosion-resistant flashing shall be applied shingle-fashion in such a manner as to prevent entry of water into the wall cavity or penetration of water to the building structural framing components. The flashing shall extend to the surface of the exterior wall finish. Approved corrosion-resistant flashing shall be installed at all of the following locations:

- Exterior window and door openings. Flashing at exterior window and door openings shall extend to the surface of the exterior wall finish or to the water-resistive barrier for subsequent drainage.
- Under and at the ends of masonry, wood, or metal copings and sills.
- Continuously above all projecting trim.
- Where exterior material (trim, brick-mould, etc.) intersects the siding in other than a vertical line.

R703.4.1 Pan Flashing of Windows and Doors (New windows and Doors Only)

A pan flashing shall be provided under all exterior windows and doors. Pan flashing shall be (a) sloped to drain water to the exterior surface of a weather-resistive barrier or flat with sealed back dam and side dams to prevent re-entry of water into the wall cavity or onto interior finishes, and (b) maintain the thermal envelope of the building. Pan flashing made from metal must be thermally isolated from interior surfaces.

Table R402.4.1.1 Air Barrier and Insulation Installation Criteria

Insulation shall be installed to maintain permanent contact with the underside of subfloor decking. The minimum R-value required under floors, including cantilevered floors (such as a bay window or bump-out area) is R-30. The air barrier shall be installed at any exposed edge of insulation. All breaks or joints in the air barrier must be sealed (Air Barrier: Material(s) assembled and joined together to provide a barrier to air leakage through the building envelope. It may be a single material or a combination of materials). The space between window/door jambs and framing shall be sealed. Air-permeable insulation shall not be used as a sealing material.

R402.4.3 Fenestration Air Leakage

Windows, skylights and sliding glass doors shall have an air infiltration rate of no more than 0.3 cubic feet per minute per square foot, and swinging doors no more than 0.5 cubic feet per minute per square foot. These items must be labeled by the manufacturer to meet the standards according to NFRC 400, or AAMA/WDMA/CSA 101/I.S.2/A440.

R308.4 Windows/Glass (Glazing) in Hazardous Locations

Locations of windows and glass that are deemed to be hazardous and are required to be tempered safety glazing. Please see the City of Blaine handout "Safety Glazing" or Section R308 of the MN State Residential Code for the complete list of window/glass requirements in hazardous locations.

R308.6 Skylights and Sloped Glazing

Refer to the City of Blaine "Skylights" handout or Section R308.6 of the MN State Residential Code for requirements.

R312.2 Window Fall Protection (does not apply to replacement windows)

In dwelling units, where the lowest part of the opening of an operable window is located more than 72 inches (6 feet) above the finished grade or surface below, the lowest part of the window opening shall be a minimum of 36 inches (3 feet) above the finished floor of the room in which the window is located. Operable sections of windows shall not permit openings that allow passage of a 4-inch diameter sphere where such openings are located within 36 inches (3 feet) of the finished floor.