City of Robbinsdale

Building & Engineering Department

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WINDOW & DOOR INSTALLATION

Permit Application – Use Window and Glass Door Replacement Application
A permit is required for installation of windows (full frame and inserts) and the total replacement of exteriors 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. Changes to existing window opening sizes or new window installation will require submittal of plans/details of proposed framing of opening including materials proposed.

Smoke Detector (R314) and Carbon Monoxide Alarm (R315) requirements shall be met 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 (R314.5)

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.

Inspections

- **Final Inspection shall not be scheduled until all flashing, sealing, and insulation detail is verified.** Verification may be completed by field inspection prior to concealing details **or site specific digital pictures,** before detail is covered. **"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 - also a minimum of one picture of each exterior wall of the house in which windows/doors are being installed. Pictures must clearly display that manufacturer's installation requirements have been met.
- Changes in framing must also be field inspected. Bay window support details must either be field inspected or have "site specific" pictures on site at time of final inspection.
- All windows and doors shall be installed per the manufacturer's requirements. The manufacturer's installation instructions must be on site for all inspections.

R703.8 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.

R703.8.1 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.

R703.7.5 Flashing-Exterior Plaster/Masonry/Stucco Locations

Flashing shall be located beneath the first course of masonry above finished ground level above the foundation wall or slab and at other points of support, including structural floors, shelf angles and lintels when masonry veneers are designed in accordance with Section R703.7. See section 703.8 of the MN State Residential Code for additional requirements (also above).

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.

R310 Emergency Escape and Rescue Openings (windows in basements, habitable attics and sleeping rooms)

Refer to the City of Robbinsdale “Emergency Escape” handout or Section R310 of the MN State Residential Code for requirements.

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 Robbinsdale handout “Safety Glazing” or Section R308.4 of the MN State Residential Code for the complete list of window/glass requirements in hazardous locations.

R312.2 Window Fall Protection (New Windows Only)

R312.2.1 Window Sills: 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.