



## Window and Door Replacement Handout

This handout is intended only as a guide and is based in part on the 2021 Washington State Residential & Energy Code, City of Richland ordinances, and good building practice. While every attempt has been made to ensure 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.

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 = .30) at time of application. To apply for a permit go to [City of Richland-Permits](#) and follow the online steps to apply for the permit.

## Your project may require a Building Permit

If the existing window opening size is being altered, if there are new opening(s) or if the foundation is altered, a Building Permit will be required vs an over-the-counter Window or Door replacement permit. Please submit a building permit application, plan set and window/door specs for review.

## Inspections

All window installations require a mid-inspection and final inspection. The mid-inspection needs to be scheduled during the actual time the windows/doors are being installed and prior to concealing flashing and insulation. It is the applicant's responsibility to call and schedule the required inspections. Inspections can be scheduled by calling the inspection line at 509 942-7794 or through the portal at [City of Richland-Inspections](#).

**An on-site framing and (or) foundation inspection** is required **only** if an existing rough opening size is being altered, a new window/door opening is being installed, or if a wider opening or new opening in a foundation wall is being cut/altered as part of this project.

**An on-site final inspection** needs to be scheduled within 10 days of job completion. Access to the home for new windows/doors is required at both inspections. All windows and doors shall be installed per the window and doors manufacturer's installation requirements (Instructions shall be on site for all inspections). If the required flashing/insulation mid-inspection was not completed prior to concealing work, the installer must meet the inspector during the final inspection. Removal of trim and(or) siding may be necessary to verify proper installation and flashing/insulation details.

## **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-molding, etc.) intersects the siding in other than a vertical line

## **Pan Flashing (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.

## **Air-Barrier and Insulation**

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). The space between window/door jambs and framing shall be sealed. Air-permeable insulation shall not be used as a sealing material.

## **Safety Glazing - Windows/Glass in Hazardous Locations**

Locations of windows and glass that are deemed to be hazardous and are required to meet safety glazing standards. Please refer to MN IRC Section R308 "Glazing" for a complete list of window/glass requirements as it relates to "hazardous locations".

### ***Code References:***

#### **[R4502.5 Replacement Windows](#)**

Where an existing window, including the sash and glazed portion, or safety glazing is replaced, the replacement window or safety glazing shall comply with the requirements of Sections 4502.5.1 through 4502.5.5 as applicable.

#### **[R4502.5.1 Energy Efficiency](#)**

Replacement windows shall comply with the requirements of the Washington State Energy Code-Residential.

#### **R4502.5.2 Safety Glazing**

Replacement glazing in [hazardous locations](#) shall comply with the safety glazing requirements of [Section R308](#).

#### **R4502.5.3 Window Fall Protection**

Window fall protection shall be installed in accordance with [Section R312.2](#).

EXCEPTION: Where only the window glazing is being replaced.

#### **R4502.5.4 Replacement Windows for Emergency Escape and Rescue Openings**

Replacement windows shall be exempt from Sections [R310.2](#) and [R310.4.4](#), 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 use.

#### **R4502.5.5 Window Opening Control Device and Fall Protection Device Height**

Window opening [control](#) devices or fall protection device shall be located at a height in accordance with [Section R310.1.1](#) or at as low a height as can be installed within the existing clear opening.

#### **R703.4.1 Flashing Installation at Exterior Window and Door Openings**

Flashing at exterior window and door openings shall extend to the surface of the exterior wall finish or to a [water-resistive barrier](#) complying with Section 703.2 for subsequent drainage. Air sealing shall be installed around all window and door openings on the interior side of the rough opening gap. Mechanically attached flexible flashings shall comply with AAMA 712. Flashing at exterior window and door openings shall be installed in accordance with one or more of the following:

1. The [fenestration](#) manufacturer's installation and flashing instructions, or for applications not addressed in the [fenestration](#) manufacturer's instructions, in accordance with the flashing manufacturer's 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. Openings using [pan flashing](#) shall incorporate flashing or protection at the head and sides.

2. In accordance with the flashing design or method of a [registered design professional](#).
3. In accordance with other *approved* methods.

See [Window and Door Flashing: Code Requirements and Best Practices](#) handout attached for additional guidance.