



Community Development Department

**Building Division**

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## **Roofing and Re-Roofing Code Requirements**

### **2021 International Residential Code (IRC) – One-and Two-Family Dwellings**

Similar provisions are found in the 2021 International Building Code (IBC) for tri-plex or more residential and commercial buildings. Review IBC for specific requirements.

The Building Division of the City of Helena, pursuant to the adoption of the 2021 IRC is the *authority having jurisdiction* and according to Chapter 8 and 9, will enforce the provisions required for the installation of new roofing materials and the replacement of roofing materials (re-roof) on One- and Two-Family Dwellings. Structures of three dwelling units or more and all commercial structures are regulated by the 2021 International Building Code (IBC), Chapter 15.

#### **R806.1 - Ventilation required.**

Enclosed attics and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters shall have cross ventilation for each separate space by ventilating openings protected against the entrance of rain or snow. Ventilation openings shall have a least dimension of 1/16 inch minimum and 1/4 inch maximum. Ventilation openings having a least dimension larger than 1/4 inch shall be provided with corrosion-resistant wire cloth screening, hardware cloth, perforated vinyl or similar material with openings having a least dimension of 1/16 inch minimum and 1/4 inch maximum. Openings in roof framing members shall conform to the requirements of Section R802.7. Required ventilation openings shall open directly to the outside air and shall be protected to prevent entry of birds, rodents, and other similar creatures.

#### **R806.2 - Minimum vent area.**

The minimum net free ventilating area shall be 1/150 of the area of the vented attic space.

Exception: The minimum net free ventilation area shall be 1/300 of the vented space provided both of the following conditions are met:

1. In Climate Zones 6, 7 and 8, a Class I or II vapor retarder is installed on the warm-in-winter side of the ceiling.
2. At least 40 percent and not more than 50 percent of the required ventilating area is provided by ventilators located in the upper portion of the attic or rafter space. Upper ventilators shall be located no more than 3 feet below the ridge or highest point of the space, measured vertically, with the balance of the required ventilation provided shall be located in the bottom one-third of the attic space. Where the location of wall or roof framing members conflicts with the installation of upper ventilators, installation more than 3 feet below the ridge or highest point of the space shall be permitted.

#### **R806.3 – Vent and Insulation Clearance.**

Where eave or cornice vents are installed, blocking, bridging and insulation shall not block the free flow of air. Not less than 1 inch space shall be provided between insulation and roof sheathing at the location of the vent.

### R908.3 - Roof replacements.

Roof replacement shall include the removal of all existing layers of roof coverings and underlayment down to the roof deck. Exception: Where the existing roof assembly includes an ice barrier membrane that is adhered to the roof deck, the existing ice barrier membrane shall be permitted to remain in place and covered with an additional layer of ice barrier membrane in accordance with Section R905.

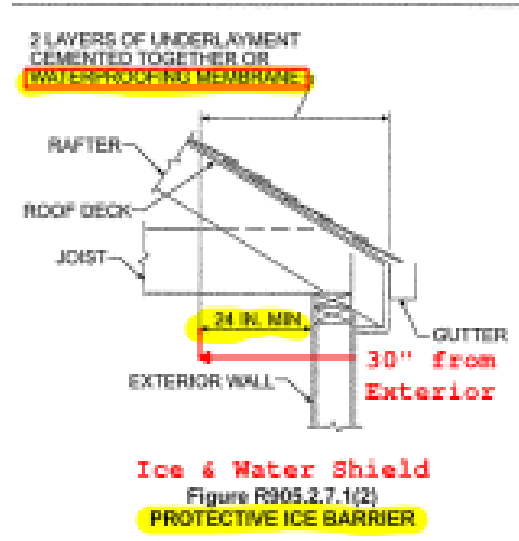
The installation of a new roof covering over an existing roof covering shall be permitted where compliance with Section R908.3.1 is followed. Contact Building Division for requirements.

### R905.1.2 - Ice barrier.

*See the attached Montana Department of Labor and Industry Technical Advisory T1-16. Ice Barrier is required to be installed.*

In areas where there has been a history of ice forming along the eaves causing a backup of water as designated in Table R301.2(1), an ice barrier that consists of a least two layers of underlayment cemented together or of a self-adhering polymer modified bitumen sheet, shall be used in lieu of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.

Exception: Detached accessory structures that contain no conditioned floor area.



### R905.2.8.5 - Drip edge.

A drip edge shall be provided at eaves and gables of shingle roofs. Adjacent pieces of drip edge shall be overlapped a minimum of 2 inches (51 mm). Drip edges shall extend a minimum of 0.25 inch (6.4 mm) below the roof sheathing and extend up the roof deck a minimum of 2 inches (51 mm). Drip edges shall be mechanically fastened to the roof deck at a maximum of 12 inches (305 mm) o.c. with fasteners as specified in Section R905.2.5. Underlayment shall be installed over the drip edge along eaves and under the underlayment on gables. Unless specified differently by the shingle manufacturer, shingles are permitted to be flush with the drip edge. *See attached diagrams.*

### R903.2 and 908.6 - Flashing.

Flashings shall be installed in a manner that prevents moisture from entering the wall and roof through joints in copings, through moisture permeable materials and at intersections with parapet walls and other penetrations through the roof plane.

Flashings shall be reconstructed in accordance with approved manufacturer's installation instructions. Metal flashing to which bituminous materials are to be adhered shall be primed prior to installation.

Additional requirements are found in the full text of the 2021 IRC and IBC.

### ATTACHMENTS:

Montana Department of Labor and Industry Technical Advisory T1-16  
Drip Edge, Underlayment and Ice & Water Barrier Installation

Should you have any questions about these requirements, please contact the City of Helena Building Division at 406-447-8438 or 406-447-8437.