

# ROOFING /REROOFING

## GENERAL REQUIREMENTS

Roofing materials are to be installed in accordance with the manufacturer's written installation instructions and Uniform Building Code chapter 15 and appendix chapter 15. All roofing contractors must be state licensed.

## UNDERLAYMENT

For the purpose of determining underlayment requirements, the entire state of Minnesota is subject to wind- driven snow and roof ice buildup. (See attached table 15-b-1).

Roof slopes 2 in 12 to less than 4 in 12; ice and water protection is to be installed from the eaves to a point 24 inches inside the face of the exterior wall line. The balance of the roof is to be 2 layers of 15# felt paper minimum.

Asphalt shingles are not permitted on slopes less than 2 in 12.

Roof slopes of 4 in 12 and steeper; ice and water protection is to be installed from the eaves to a point 12 inches inside the face of the exterior wall line. The balance of the roof is to be 1 layer of 15# felt minimum.

In both cases ice and water protection is to be installed the full length of all valleys. See attached U.B.C. code section 1508.2.

## FASTENERS

Fasteners shall be long enough to penetrate into the sheathing 3/4 of an inch or through the thickness of the sheathing, whichever is less. Fasteners shall comply with the following; corrosion resistant nails, minimum 12 gauge 3/8 inch head, or corrosion resistant staples, minimum 16 gauge 15/16 inch crown width.

## FLASHING

At the juncture of the roof and vertical surfaces, flashing and counter flashing shall be provided per the roofing manufacturer's instructions and, when of metal, shall not be of less than 0.019 inch (no. 26 Galvanized sheet gage) corrosion-resistant metal.

When re-roofing, missing, rusted or damaged flashing and counter flashing, vent caps, etc., shall be installed or replaced with new materials.

## REROOFING

When installing shingles over existing shingles the permit holder is responsible to verify that the roof structure is sufficient to sustain the weight of the additional dead load of the new roofing, the roof deck is structurally sound and the existing roofing is securely attached to the deck.

Staples are not permitted on over-lays.

## PERMITS/INSPECTIONS

Permits are required and a **final inspection** needs to be called for when completed. **Note:** Always check with the Building Department in your jurisdiction for any other required inspections or special requirements.

**U.B.C. SECTION 1508.2 ASPHALT SHINGLES:** The roof valley flashing shall not be provided of less than 0.016-inch (0.41 mm) (No. 28 galvanized sheet gage) corrosion-resistant metal, and shall extend at least 8 inches (203 mm) from the center line each way. Sections of flashing shall have an end lap of not less than 4 inches (102 mm). Alternatively, the valley shall consist of woven asphalt shingles applied in accordance with the manufacturer's printed instructions.

In each case, the roof valley flashing shall have a 36-inch-wide (914 mm) underlayment directly under it consisting of one layer of Type 15 felt running the full length of the valley, in addition to the underlayment specified in Table 15-B-1. In severe climates, the metal valley flashing underlayment shall be solid cemented to the roof underlayment for slopes under 7 units vertical in 12 units horizontal (58.3% slope).

**TABLE 15-B-1—ASPHALT SHINGLE APPLICATION**

ASPHALT SHINGLES	
Roof Slope	Not Permitted below 2 Units Vertical in 12 Units Horizontal (16.7% Slope)
	2 Units Vertical in 12 Units Horizontal (16.7% Slope) to Less than 4 Units Vertical in 12 Units Horizontal (33.3% Slope)      4 Units Vertical in 12 Units Horizontal (33.3% Slope) and Over
1. Deck requirement	Asphalt shingles shall be fastened to solidly sheathed roofs. Sheathing shall conform to Sections 2312.2 and 2320.12.9.
2. Underlayment Temperate climate	Asphalt strip shingles may be installed on slopes as low as 2 units vertical in 12 units horizontal (16.7% slope), provided the shingles are approved self-sealing or are hand sealed and are installed with an underlayment consisting of two layers of nonperforated Type 15 felt applied shingle fashion. Starting with an 18-inch-wide (457 mm) sheet and a 36-inch-wide (914 mm) sheet over it at the eaves, each subsequent sheet shall be lapped 19 inches (483 mm) horizontally.
Severe climate: In areas subject to wind-driven snow or roof ice buildup	Same as for temperate climate, and the two layers shall be solid cemented together with approved cementing material between the plies extending from the eave up the roof to a line 24 inches (610 mm) inside the exterior wall line of the building. As an alternative to the two layers of cemented Type 15 felt, an approved self-adhering, polymer modified, bituminous sheet may be used.
3. Attachment Combined systems. type of fasteners	Corrosion-resistant nails, minimum 12-gage 3/8-inch (9.5 mm) head, or approved corrosion-resistant staples, minimum 16-gage 13/16-inch (23.8 mm) crown width. Fasteners shall comply with the requirements of Chapter 23, Division III, Part III. Fasteners shall be long enough to penetrate into the sheathing 3/4 inch (19 mm) or through the thickness of the sheathing, whichever is less.
No. of fasteners <sup>1</sup>	4 per 36-inch to 40-inch (914 mm to 1016 mm) strip 2 per 9-inch to 18-inch (229 mm to 457 mm) shingle
Exposure Field of roof Hips and ridges	Per manufacturer's instructions included with packages of shingles. Hip and ridge weather exposures shall not exceed those permitted for the field of the roof.
Method	Per manufacturer's instructions included with packages of shingles.
4. Flashing Valleys Other flashing	Per Section 1508.2 Per Section 1509

<sup>1</sup>Figures shown are for normal application. For special conditions, such as mansard application and where roofs are in special wind regions, shingles shall be attached per the manufacturer's instructions.

# ROOF VENTS

## 1997 UNIFORM BUILDING CODE

**SECTION 1505.3: Ventilation.** Where determined necessary by the building official due to atmospheric or climatic conditions, 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 and snow. The net free ventilating area shall not be less than 1/150 of the area of the space ventilated.

**EXCEPTIONS:** 1. The opening area may be 1/300 of the area of the space ventilated provided 50 percent of the required opening area is provided by ventilators located in the upper portion of the space to be ventilated at least 3 feet (914mm) above eave or cornice vents with the balance of the required ventilation provided by eave or cornice vents.

2. The opening area may be 1/300 of the area of the space ventilated provided a vapor barrier not exceeding 1 perm is installed on the warm side of the attic insulation.

Where eave or cornice vents are installed, insulation shall not block the free flow of air. A minimum of 1-inch (25mm) of air space shall be provided between the insulation and roof sheathing.

Openings for ventilation shall be covered with corrosion resistant metal mesh with mesh openings of 1/4 inch (6.4 mm) in dimension.