7550 Sunwood Drive NW | Ramsey, MN 55303
Building 763-433-9850
Planning 763-433-9824
www.cityoframseymn.gov/permits
permits@cityoframseymn.gov

Asphalt Shingles

This handout is a compilation of some of the standard requirements of the 2020 Minnesota Residential Code and City Zoning Code for projects of this type. It does not contain all of the specific code requirements for construction and should only be used as a guide. The permit holder is responsible to meet all code requirements applicable to each project.

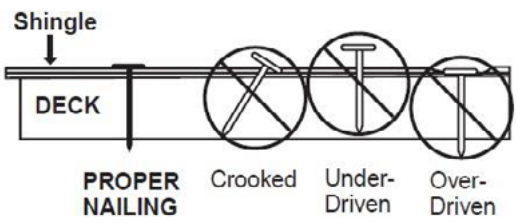
Permit Requirements

A building permit is required for all roofing projects beyond simple repairs. Contact a member of the Inspections staff with questions about what constitutes a repair.

Required Inspections

A final inspection is required when the roof is complete. Pictures verifying Ice Barrier installation shall be on site for the final inspection. Pictures shall show all areas where Ice Barrier is required, as well as visuals to identify the property.

Fasteners



Asphalt shingles shall be fastened with not less than four nails. Nails shall be not less than 12-gauge with 3/8-inch minimum diameter heads. Nails shall be of sufficient length to penetrate through roofing material and at least ¾ inch into roof sheathing or through the thickness of the sheathing, whichever is less.

Nail heads shall be driven so they bear tightly against the shingle but do not cut the shingle surface. Nails must be installed in the location on each shingle per the manufacturer's instructions. Remove and replace any crooked nails. (See illustration.)

Sheathing

Roof sheathing shall be checked prior to re-roofing and repaired or replaced if rotten or unsound. Replacement sheathing shall conform to the requirements of the Building Code and the sheathing manufacturer.

Roof Pitch

Asphalt shingles shall not be used on roofs with less than a 2:12 pitch and require special application procedures for pitches less than 4:12. Manufacturer's instructions on package must be followed.

Underlayment

A. For roof pitches of 2:12 to less than 4:12

Two layers of 15# felt applied shingle fashion. Start with a 19-inch strip, then a 36-inch-wide sheet over it at the eaves; each subsequent sheet shall be lapped 19 inches horizontally.

Note: For ice protection materials, the manufacturer's installation instructions must be followed.

B. For roof pitches of 4:12 and over

One layer of 15# felt lapped two inches horizontally and 4 inches vertically. End laps shall be offset by six feet in all applications.

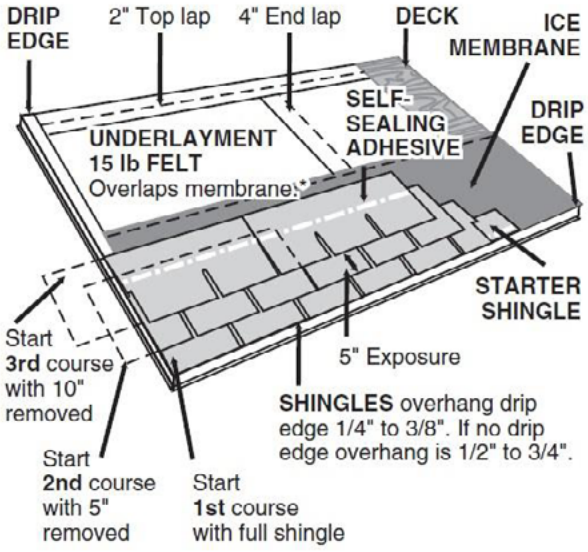
Valley Underlayment

Valley linings shall be installed per the manufacturer's requirements and Chapter 9 of the Minnesota State Residential Code.

Valley Flashing

When existing flashing is no longer serviceable, it shall be replaced. Valley flashing shall consist of not less than No. 26-gauge corrosion-resistant, galvanized sheet metal or other code-approved, valley lining material. The metal shall extend at least 12 inches from the center line each way. Sections of flashing shall have an end lap of not less than four inches. Alternately, the valley may consist of woven asphalt shingles or closed-cut style applied in accordance with the manufacturer's instructions.

Shingle application using 5-inch method

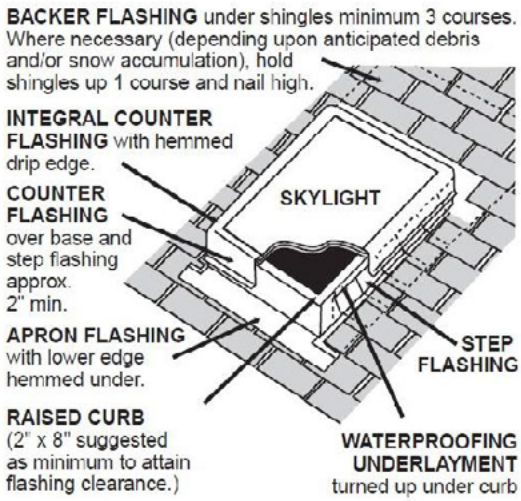


**Felt underlayment must overlap the ice membrane a minimum of 2 inches.*

Other Flashing

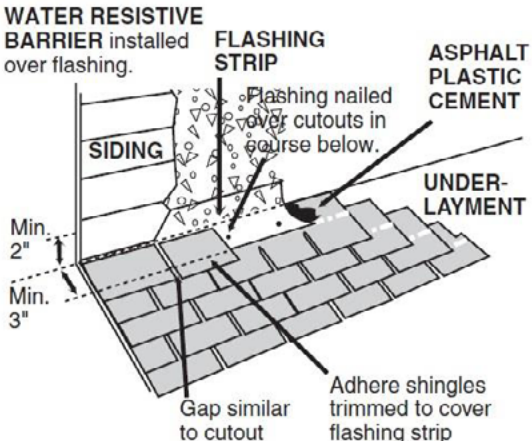
All other flashing and roof vents shall be checked and if rusted or in bad condition shall be replaced, When replacing flashing or metal, it shall be of not less than No. 26-Gauge corrosion-resistant metal. Roof vents and other flashings must be installed according to manufacturer's instructions. Generally, all require the bottom part of the vent to be placed above the shingles so that about half of the vent is above the lower shingles and half is below the uppermost shingles. Any replacement of flashing at masonry chimneys must be properly cut in and retuckpointed or caulked with an approved product.

Skylight:
Basic sheet metal components
All dimensions approximate.



Vertical Wall Flashing (26-gauge)

1. Apply shingles up the roof until a course must be trimmed to fit at the base of the vertical wall. Plan to adjust the exposure slightly (and evenly) in the previous courses, so that the last shingle is at least 8 inches wide (vertically). This allows at least a 5-inch exposure on the top course and a 3-inch headlap.
2. The flashing strip should be bent, using a metal brake, to extend at least 2 inches up the vertical wall and at least 3 inches onto the last shingle course; that is, to the top of the cutout.
3. Apply the flashing, 8 feet to 10 feet over the last course of shingles. Embed the flashing in asphalt plastic cement, or another approved adhesive, and nail it to the roof every 12 inches. Do not nail the strip to the wall.
4. If side laps are necessary, overlap the pieces at least 6 inches. Do not fasten in this joint area.



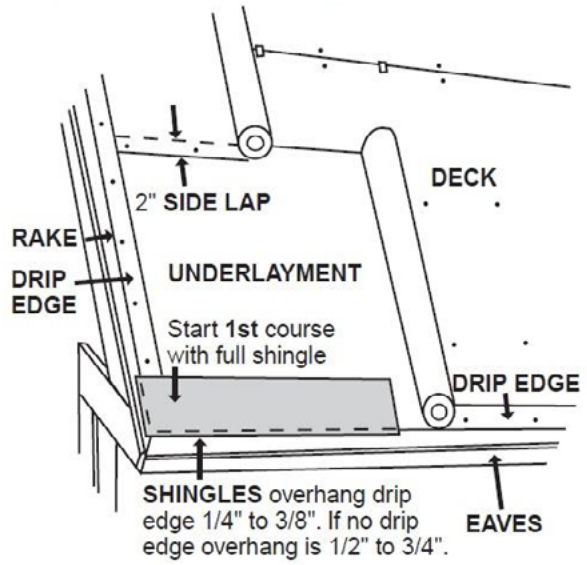
Ice Dam Protection Membranes

Required for ALL heated/conditioned building structures.

A. For roof pitches of 2:12 to less than 4:12

Same as for underlayment, and, additionally, an approved waterproofing underlayment shall be installed to a point no less than 24 inches inside the exterior wall line. When the manufacturer's specifications are more restrictive than the Building Code, the manufacturer's specifications shall be followed.

Ice protection underlayment



Installation: When applying underlayment, keep the product as wrinkle-free as possible. Unroll the underlayment parallel with the eaves. The underlayment should go over eaves' drip edge flashing, but go under the rake's drip edge flashing.

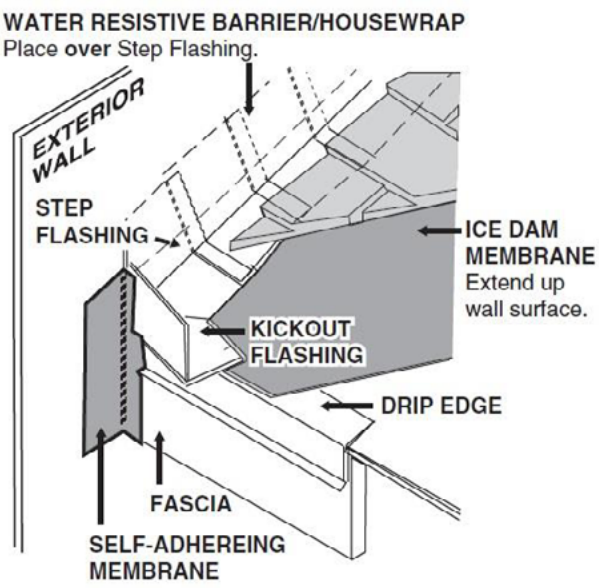
B. For roof pitches of 4:12 and over

Same as for underlayment and, additionally, a manufactured ice protection membrane or its code-approved equivalent assembly must be installed per the manufacturer's instructions including, but not limited to, the following: The membrane shall extend from over the metal or wood drip edge to a point not less than 24 inches measured horizontally inside the exterior wall line. Depending on the soffit depth and product width, more than one layer may be required. The underlayments must extend to the outer edge at all fascia boards.

Roof and Soffit Vents

If necessary, additional roof and soffit vents must be installed so that for every 300 square feet of attic area there is at least 1 square foot of ventilation. At least 50 percent, but not more than 80 percent, shall be in the upper portion of the roof and the balance to be provided by eave or soffit vents.

Kick-out flashing



Exhaust Vents

Care should be taken to ensure that kitchen and bathroom exhaust fan pipes are connected to the appropriate dampered exhaust roof vent with no openings into the attic that would allow exhaust air back into the attic space. The exhaust vents shall be installed the same as other attic vents and vent pipe flashings.

When re-roofing around furnace flues, take care to not dislodge the joints of the flue pipe within the attic or within interior chases this pipe might pass through. If in doubt, consult a licensed heating contractor.

Where to use ice protection

