Residential Re-Roof

A permit is required for roof replacement before any of the work begins. Only homeowners and licensed building contractors can apply for roofing permits. Online permitting is available at https://brooklyncenter.ims16.com/ims . Only one roof layer is allowed on a residential structure. All re-roof projects require that the existing layer of shingles be removed. Proper roof installation allows you to have a clean, dry home interior for years to come.

General Information

Fasteners

Asphalt shingles shall be fastened with at least four nails, which are at least 12-gauge with 3/8 in. minimum diameter heads. Nails shall be long enough to penetrate through roofing materials and at least ¾ in. into roof sheathing or through the thickness of the sheathing, whichever is less. Nails shall be installed in the location on each shingle per the manufacturer's instructions. Staples are not allowed.

Sheathing

Rotted or unsound sheathing must be repaired or replaced in accordance with the Building Code. An inspection is required prior to replacement of sheathing.

Roof Pitch

Asphalt shingles shall not be used on roofs with less than 1 2:12 pitch and require special application procedures for pitches less than 4:12. Follow manufacturer's instructions.

Roof and Soffit Vents

Additional roof and soffit vents may need to be installed so that for every 300 sq. ft. of attic area, there is at least 1 sq. ft. of ventilation. At least 50%, but not more than 80%, shall be in the upper portion of the roof and the balance to be eave or soffit vents.

Underlayment Requirements

For roof pitches of 2:12 to less than 4:12: Two layers of 15 # felt applied shingle fashion. Starting with a 19 inch wide sheet and a 36 inch wide sheet over it at the eaves, each subsequent sheet shall be lapped 19 inches horizontally.

For roof pitches of 4:12 and over: One layer of 15# felt lapped 2 in. horizontally and 4 in. vertically. End laps shall be offset by 6 ft. in all applications.

Valley Underlayment

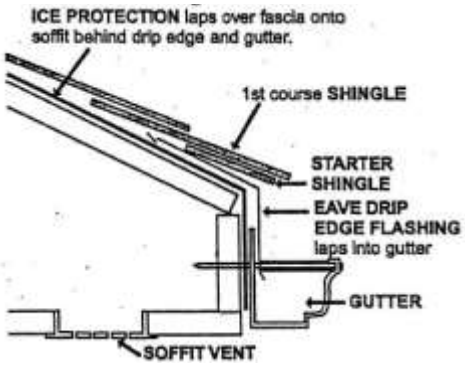
Valley linings shall be installed per the manufacturer's requirements before applying shingles.

Ice Protection Requirements

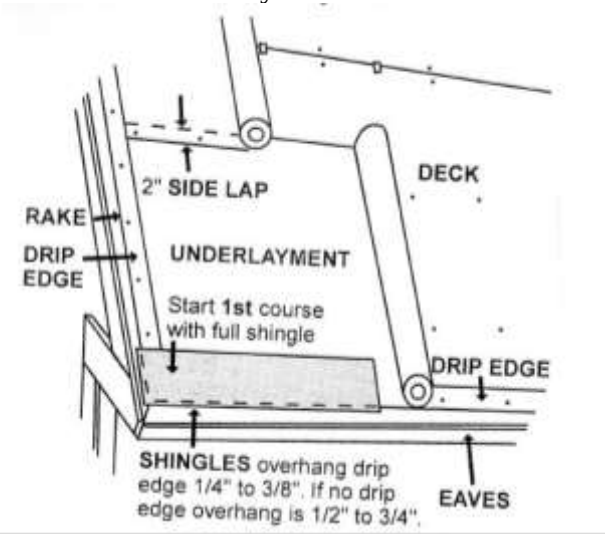
Ice Dam Protection Membranes

For roof pitches of 2:12 to less than 4:12
Same as for underlayment plus an approved waterproofing underlayment must be installed to point no less than 24 in. inside the interior heated wall line. When the manufacturer's specifications are more restrictive than the Building Code, the manufacturer's specifications must be followed.

For roof pitches of 4:12 and over
Same as for underlayment plus a manufactured ice protection membrane or its code-approved equivalent assembly must be installed per manufacturer's instructions including (but not limited to): The membrane shall extend from over the drip edge to a point at least 24 in. measured horizontally inside the heated wall line. Typically, two rows (6 ft.) are required but more than two rows may be required depending on the size of the soffit overhang. The underlayment must extend to the outer edge at all fascia boards.

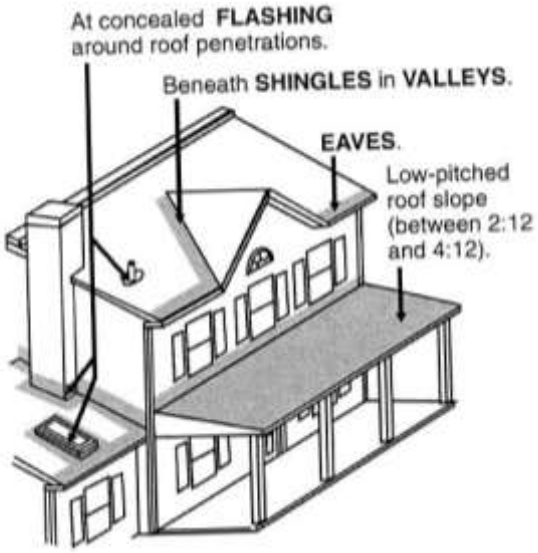


Ice Protection Underlayment



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

Where to Use Ice Protection



Roof & Soffit Vents – if necessary, additional roof and soffit vents must be installed so that for every 300 sq. ft. of attic area, there is at least 1 sw. ft. of ventilation. At least 50%, but not more than 80%, shall be in the upper portion of the roof and the balance to be in the eave of soffit vents.

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 in to 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.

Flashing Requirements

Valley Flashing

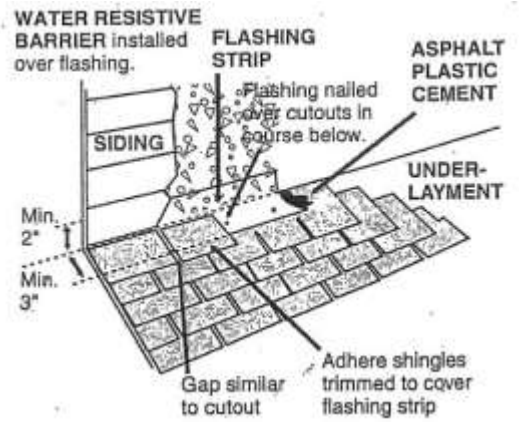
When existing flashing is no longer serviceable, it shall be replaced and consist of not less than No. 26-gauge corrosion-resistant, galvanized sheet metal. The metal shall extend at least 12 in. from the center line each way. Sections of flashing shall have an end lap of not less than 4 in. Alternately, the valley may consist of woven asphalt shingles or closed-cut style applied in accordance with manufacturer's instructions.

Other Flashing

All other flashing and roof vent shall be checked and if rusted or in bad condition, be replaced. Replacement flashing shall be at least 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 retuck pointed or caulked.

Vertical Wall Flashing (26 Gauge)

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 in. wide (vertically). This allows a minimum 5 in. exposure of the top course and a 3 in. headlap.

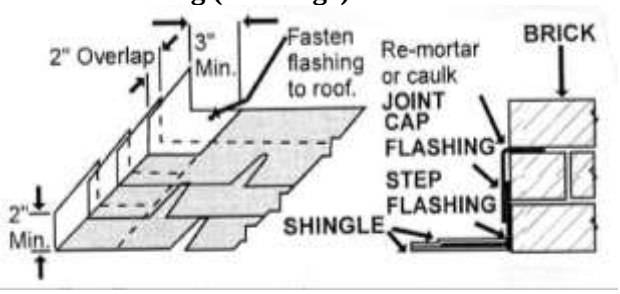


The flashing strip should be bent, using a metal brake, to extend at least 2 in. up the vertical wall and at least 3 in. onto the last shingle course (to the top of the cutout).

Apply the flashing 8 ft. to 10 ft. over the last course of shingles. Embed the flashing in asphalt plastic cement (or another appropriate adhesive) and nail it to the roof every 12 in. Do not nail the strip to the wall.

If side laps are necessary, overlap the pieces at least 6 in. Do not fasten in this joint area.

Sidewall Flashing (26 Gauge)

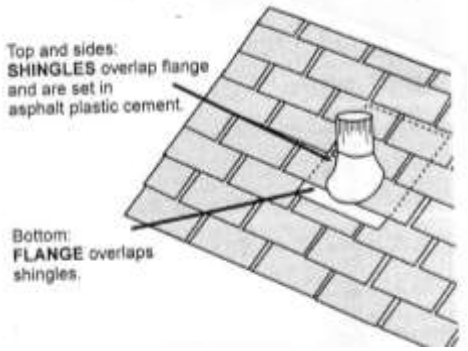


Kick-Out Flashing

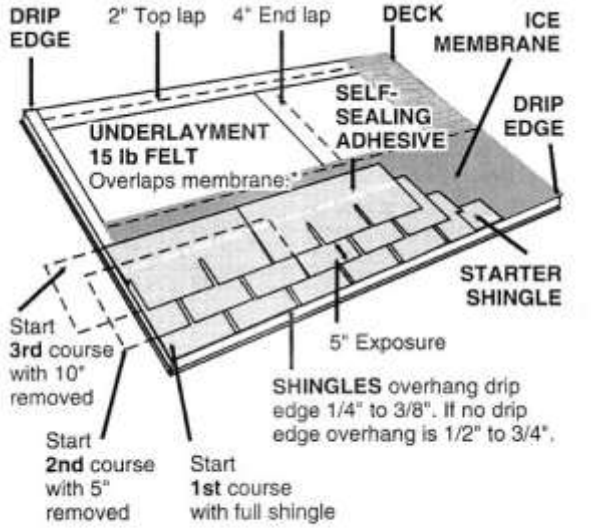
Used to divert water where the lower portion of a sloped roof stops within the plane of an intersecting wall cladding.

Shingle Applications

Shingle Application Around Flashing



Shingle Application Using 5-inch Method

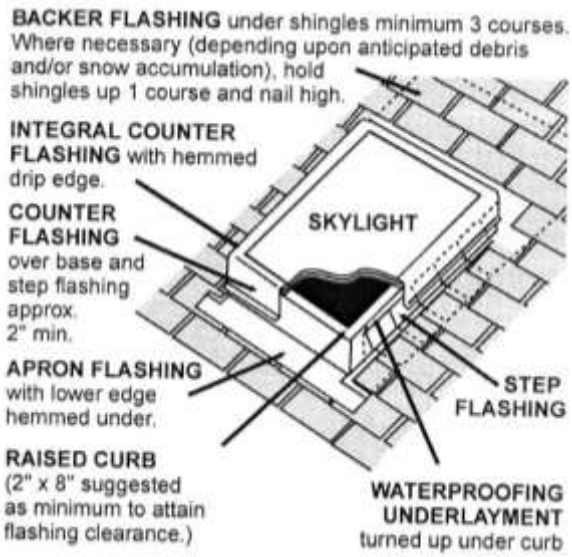


**Felt underlayment must overlap the ice membrane a minimum of 2 inches.*

Skylights

Basic Sheet Metal Components

All dimensions are approximate.



This brochure contains general information and is intended as a guide. Other regulations and requirements may apply. City codes, handouts and additional information are available on the City website or by contacting City staff. To schedule an inspection or for further information, please call 763-569-3330.