

Roofing Information

City of Belvidere Building Department

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Overlay or Tear-Off

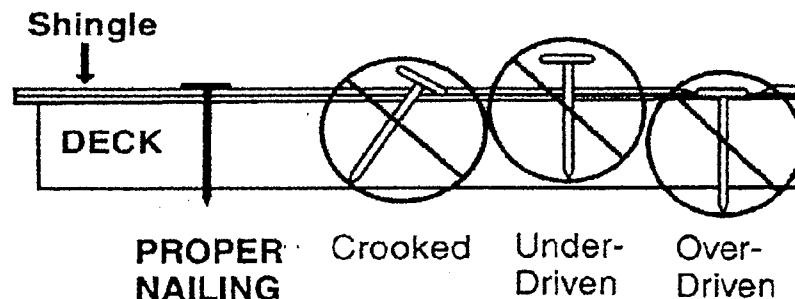
The re-roofing of a structure having **asphalt shingles** may be accomplished by either adding an additional layer of asphalt shingles or completely removing the existing shingles, underlayment, flashing, etc. (tear-off) and installing the roofing as if it were new construction. To assist in the decision whether to overlay or tear-off, consider the following:

1. Check the framing beneath. It must be adequate to carry the additional weight of new materials plus the weight of roofers and their equipment.
2. Check the condition of the existing deck sheathing. It must be adequate for both support and anchorage for new roofing fasteners.
3. Check the condition of the roofing surface. If it is warped, curled, or so badly weathered that providing a level surface for the new material will be difficult, it should be removed.
4. The 2003 International Residential Code, adopted by the City of Belvidere, only allows up to 2 (two) layers of shingles. If there are 2 or more layers of shingles, all layers must be torn off.
5. Shingle Manufacturer's warranty is exempt if you lay new shingles over an existing layer of shingles.
6. Old layer **MUST** be removed if the existing roof covering is wood shake, slate, clay, cement or asbestos-cement tile.

Fasteners

Asphalt shingles shall be fastened with not less than four nails. Nails shall not be 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 3/4 inch into roof sheathing or through the thickness of the sheathing, whichever is less. Nail head shall be driven so that it tightly bears against the shingle but does not cut the surface of the shingle. Nails must be installed in the location on each shingle per the manufacturer's instructions. **Any crooked nails should be removed and replaced.** (see illustration)

Note: Use of other types of fasteners must be approved by the Building Department.



Sheathing

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

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 New or Tear-offs Only

A. For roof pitches of 2:12 and Greater

Ice & Water Shield over first row or rows. Ice & water shield shall extend from the eaves' edge to a point at least 24 inches inside the exterior wall line of the building.

Note: For ice protection, manufacture's instructions must be followed.

Valley Underlayment New Tear-Offs Only

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

Valley Flashing

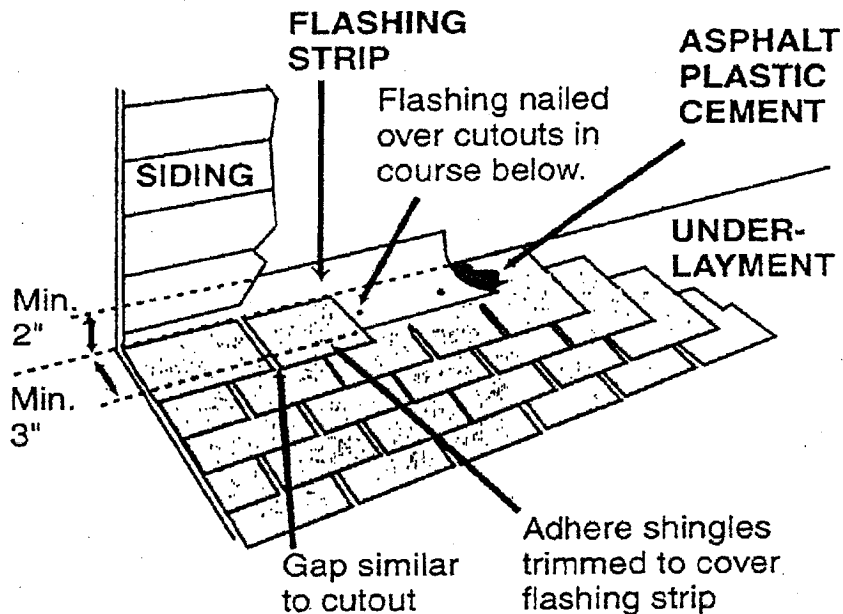
When existing flashing is no longer serviceable, it shall be replaced. Valley flashing shall consist of not less than No. 26-Guage corrosion-resistant, galvanized sheet metal. The metal shall extend at least 12 inches from the center line each way. Sections of flashing shall have an end lap of not less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

Other Flashing

All other flashing and roof vents shall be checked and if rusted or in bad condition shall be replaced. When replacing flashing of metal, it shall be of not less than No. 26-Guage 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 upper most shingles. Any replacement of flashing at masonry chimneys must be properly cut in and tuckpointed or caulked with an approved product.

Vertical Wall Flashing 26-gauge

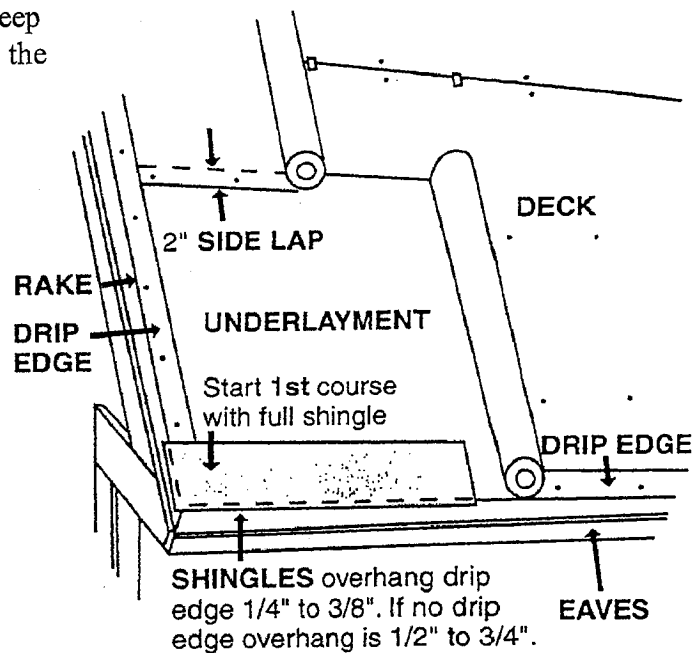
1. Apply shingles up the roof until a course must be trimmed to fit at the base of the vertical wall. Plan to adjust the exposure slightly (and evenly) in the previous courses, so that the last shingle is at least 8 inches wide (vertically). This allows a minimum 5 inch exposure of the top course and a 3 inch headlap.



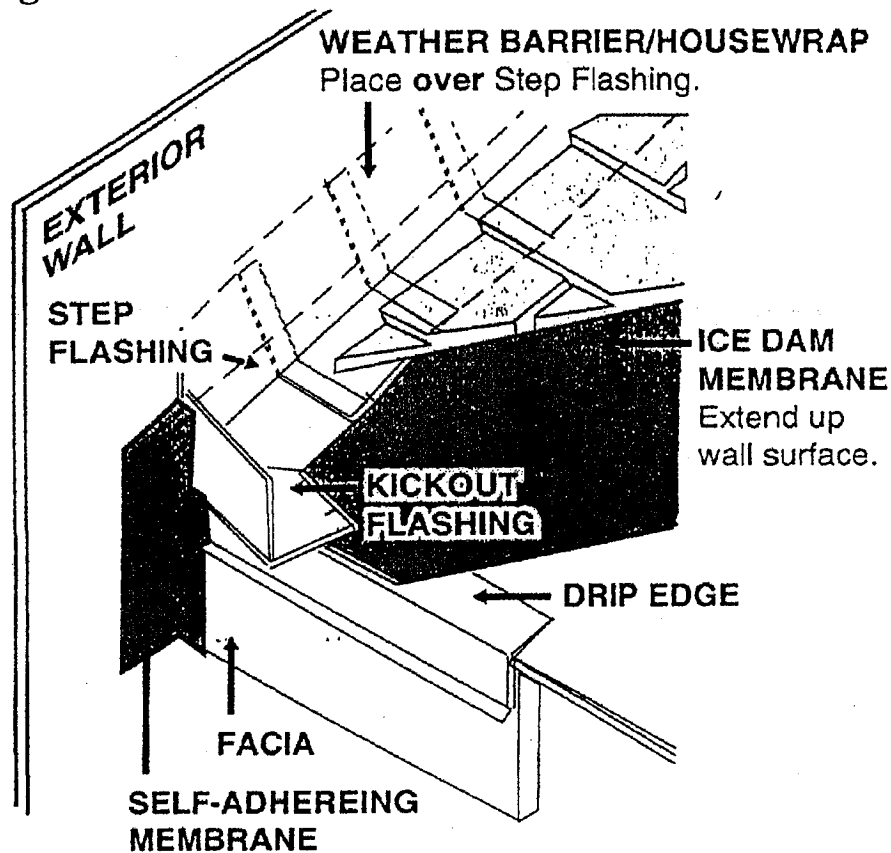
2. The flashing strip should be bent, using a metal brake, to extend at least 2 inches up the vertical wall and at least 3 inches onto the last shingle course; that is, to the top of the cut out.
3. Apply the flashing, 8 ft to 10 ft over the last course of shingles. Embed the flashing in asphalt plastic cement, or another appropriate adhesive, and nail it to the roof every 12 inches. Do not nail the strip to the wall.
4. If the side laps are necessary, overlap the pieces at least 6 inches. Do not fasten in this joint area.

Ice Protection Underlayment

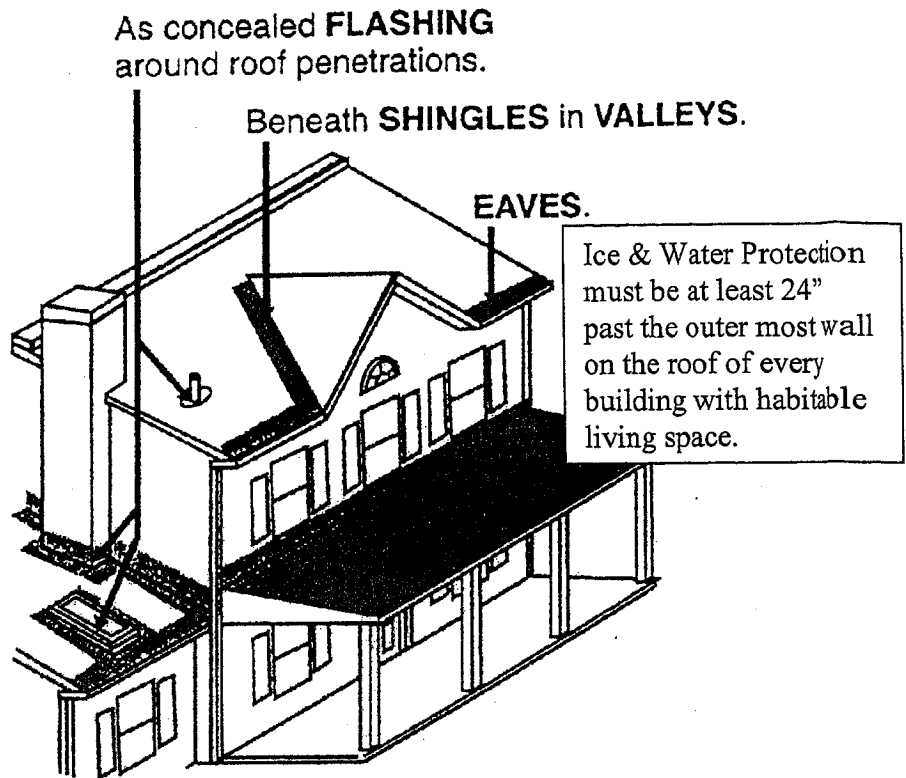
Installation: When applying underlayment, keep the product as wrinkle free as possible. Unroll the underlayment parallel with the eaves. The underlayment should go over the eaves' drip edge flashing, but go under the rake's drip edge flashing.



Kick-Out Flashing



Where to use Ice Protection



Roof and Soffit Vents

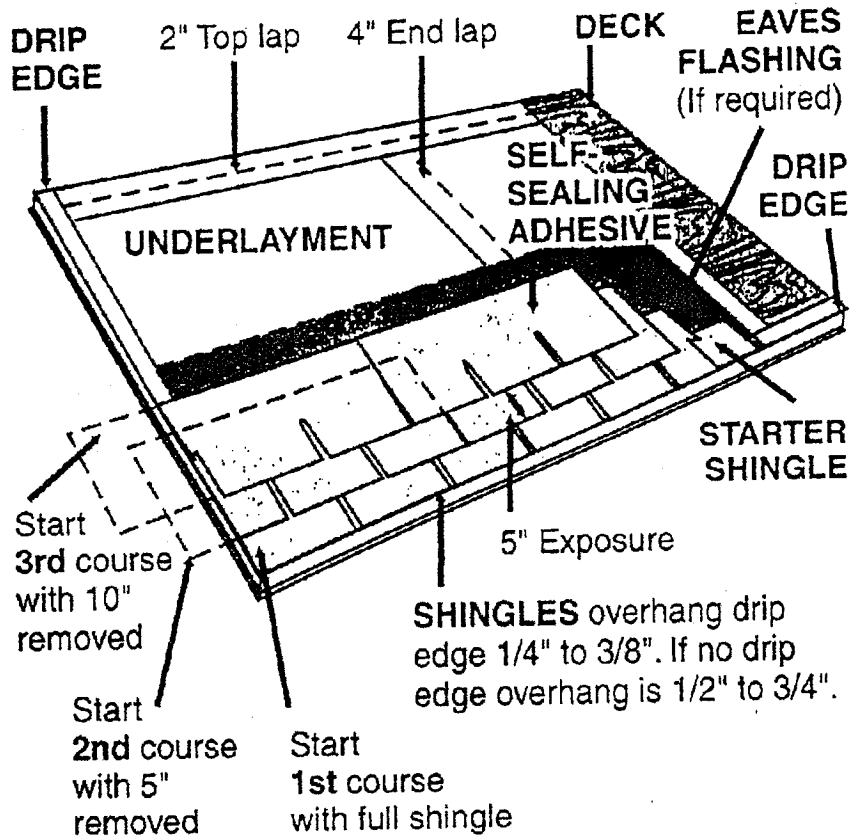
If necessary, additional roof and Soffit vents must be installed so that for every 300 square feet of attic area there is at least 1 square foot of ventilation. At least 50%, but not more than 80%, shall be the upper portion of the roof and the balance to be provided by the eave or Soffit vents.

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 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.

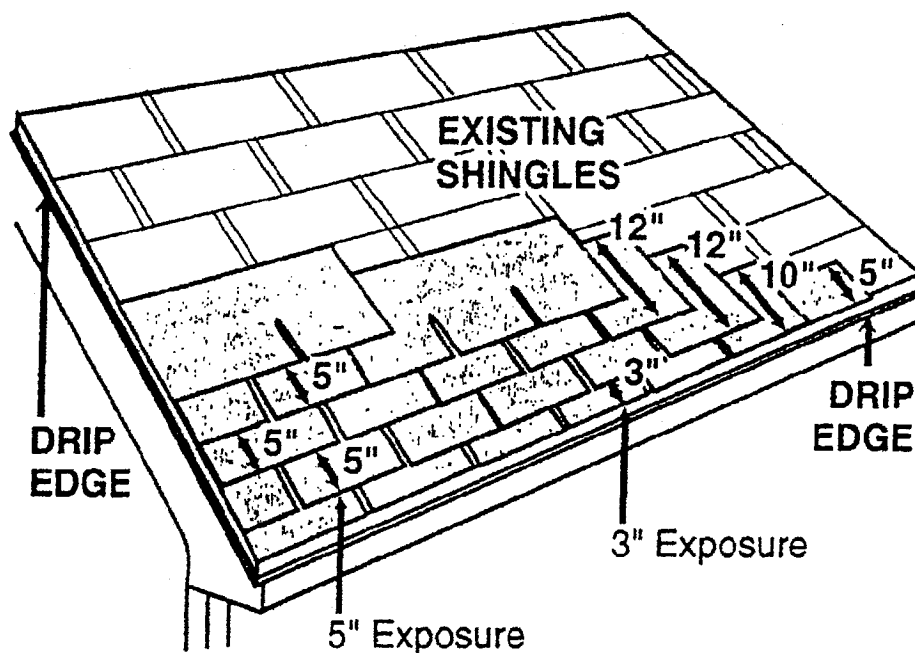
When re-roofing around furnace flues, take care to not dislodge the joints of the flue pipe within the attic or within interior chases this pipe might pass through. If in doubt, consult a licensed heating contractor.

Shingle Application using 5-inch Method



Nesting Procedure:

New Asphalt Shingle application over Existing Asphalt Shingles



Information in this handout is not complete. If you have any questions please feel free to call the City of Belvidere Building Department at 815-547-7177. Thank you. 6