



ROOFING

City of Lawrence

Department of Public Works
317-545-8787
www.cityoflawrence.org

This handout is intended only as a guide to the subject matter covered herein and is based in part on the 2020 Indiana Residential Code. While every attempt has been made to insure the correctness of this handout, no guarantees are made to its accuracy or completeness. Responsibility for compliance with applicable codes and ordinances falls on the owner or contractor. For specific questions regarding code requirements, refer to the Indiana Building Code or contact your local Building Department.

SCOPE

The scope of this handout will be limited the installation of two types of roofing materials.

- Asphalt Shingles • Mineral-surfaced Roll Roofing

PERMITS, INSPECTIONS, AND LICENSES

Building permits are NOT required except under the following conditions:

- 25% or more of the decking is being replace OR
- There is a change in roof configuration or total or partial reconstruction of the roof including rafters, decking, shingles OR
- After a natural disaster OR
- There is a change in the type of roof covering (e.g., tile roofing replacing asphalt shingles) that would increase the dead load on the structure OR
- There is installation of heat-applied roofing material

Permit application should be emailed to permits@cityoflawrence.org

The Building Department goal is to conduct one inspection during the course of the work and a final inspection.

All contractors engaged in roofing work must be registered in the City of Lawrence.

DEBRIS

The removal of existing roofing materials often results in this debris moving about the neighborhood on windy days. Shingle wrappers and other construction debris are nuisances to other neighbors when they find this material in their yards. As you install a new roof on your dwelling, we ask that you exercise courtesy towards your neighbors by regularly policing your yard and adjoining areas for debris that may blow around.

GENERAL

All roof covering materials must be delivered in packages bearing the manufacturers identifying marks and approved testing agency labels when required. All asphalt shingles must be either self-sealing or interlocking. Roof decks must be solidly sheathed for asphalt shingles or mineral-surfaced roll roofing. Solid sheathing may be plywood, OSB, or 1-inch nominal boards. Wood shingles and shakes may be applied over solid or spaced sheathing. Roof decks that are rotted or unsound must be repaired prior to reroofing.

REROOFING

New roofing may be installed over an existing roof but shall be limited to a total of two layers. Existing flashing in good condition may be reinstalled. Any sheathing that is replaced must be installed and fastened according to the code.

SHEATHING

Roof sheathing shall be repaired or replaced if rotted or unsound. Replacement sheathing shall conform to the requirements of the Building Code and the manufacturer of the product.

UNDERLAYMENT

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

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

Note: For ice barrier 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 before applying shingles.

VENTILATION

Ventilation of enclosed attics and enclosed rafter spaces is required. Ventilating openings must be provided with corrosion-resistant mesh with openings of $\frac{1}{8}$ " to $\frac{1}{4}$ " inch.

For attics without ceiling vapor barriers, 1 square foot of net free ventilating area should be provided for each 150 square feet of attic area.

For attics with vapor barriers or without ceiling vapor barriers and having at least 50% but not more than 80% of the ventilating area provided by ventilators located in the upper portion of the space to be ventilated and at least 3 feet above the eave vents and the balance of the ventilation provided in the eave vents, ventilation may be 1 square foot of net free ventilating area for each 300 square feet of attic area.

DRIP EDGE/ GUTTERS

A drip edge shall be provided at eaves and rake edges of shingle roofs. Adjacent segments of drip edge shall be overlapped not less than 2 inches (51mm). Drip edges shall extend not less than $\frac{1}{4}$ inch (6.4mm) below the roof sheathing and extend up back onto the roof deck not less than 2 inches (51mm). Drip edges shall be mechanically fastened to the roof deck at not more than 12 inches (305mm) o.c. with fasteners as specified in Section R905.2.5. Underlayment shall be installed over the drip edge along eaves and under the drip edge along rake edges.

FLASHING

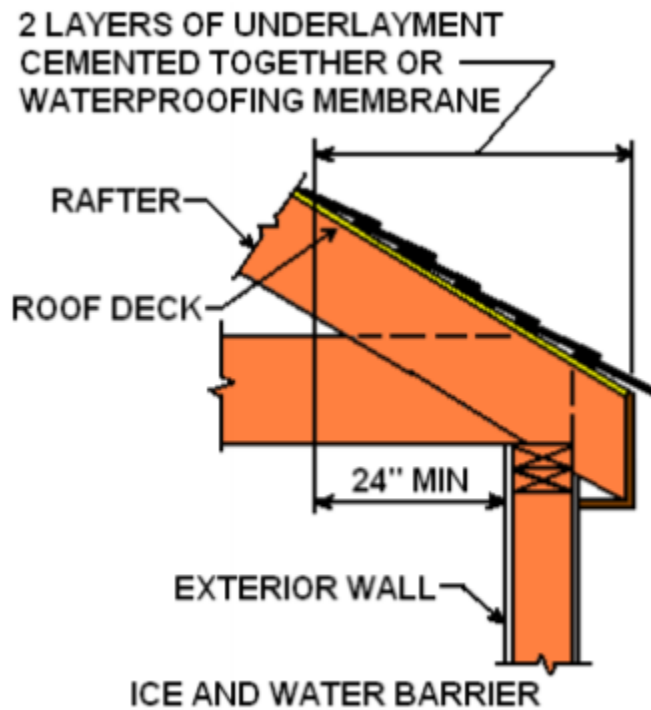
Flashing is required at all wall and roof intersections, wherever there is a change in roof slope or direction, and around roof openings. When flashing is metal, it must be corrosion resistant metal with a thickness of not less than 0.019 inch (No. 26 galvanized sheet) (R903.2.1).

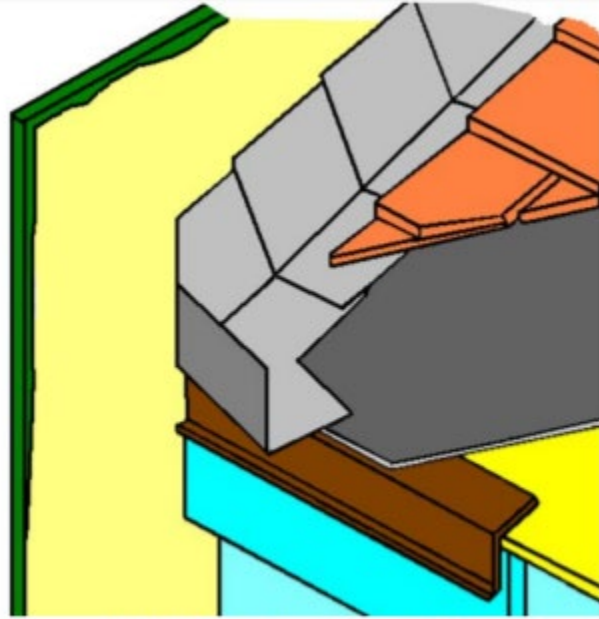
Flashing against vertical front walls, soil stacks, vent pipes, and chimney flashing must be in accordance with the asphalt shingle manufacturer's instructions. Sidewall flashing may be either step flashing or continuous flashing and is required whenever wall and roof intersections occur.

Crickets or saddles are required on the ridge side of any chimney greater than 30 inches wide. Cricket or saddle coverings must be of sheet metal or of the same material as the roof covering.

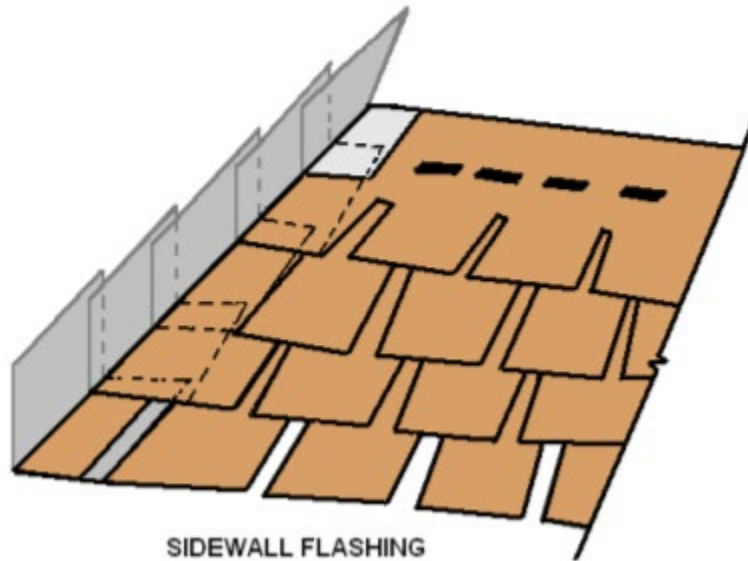
KICK-OUT FLASHING

R903.2.1 Locations. Flashings shall be installed at wall and roof intersections, wherever there is a change in roof slope or direction and around roof openings. A kick-out flashing shall be installed to divert the water away from where the eave of a sloped roof intersects a vertical sidewall. The kick-out flashing on the roof shall be a minimum of 2 1/2" long. Where flashing is of metal, the metal shall be corrosion resistant with a thickness of not less than 0.019 inch (No. 26 galvanized sheet).



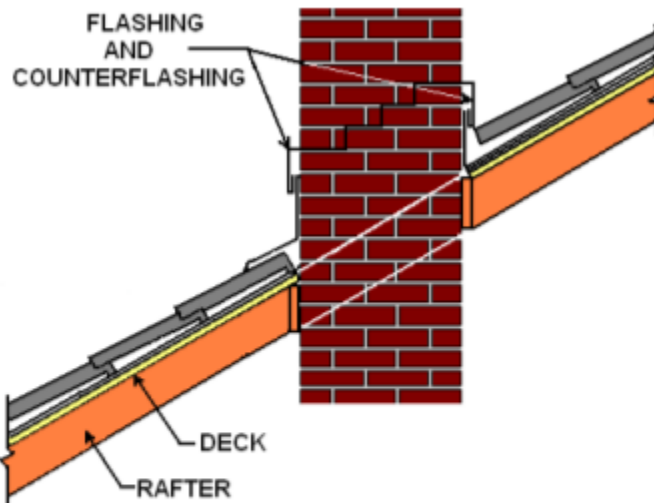
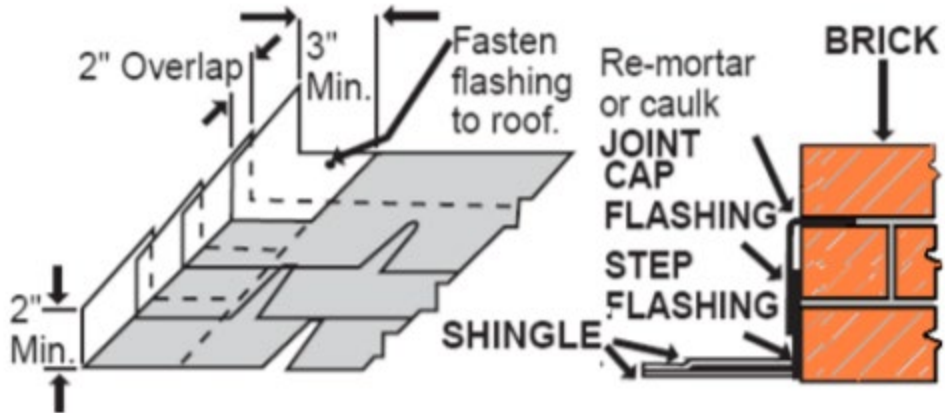


KICK-OUT FLASHING

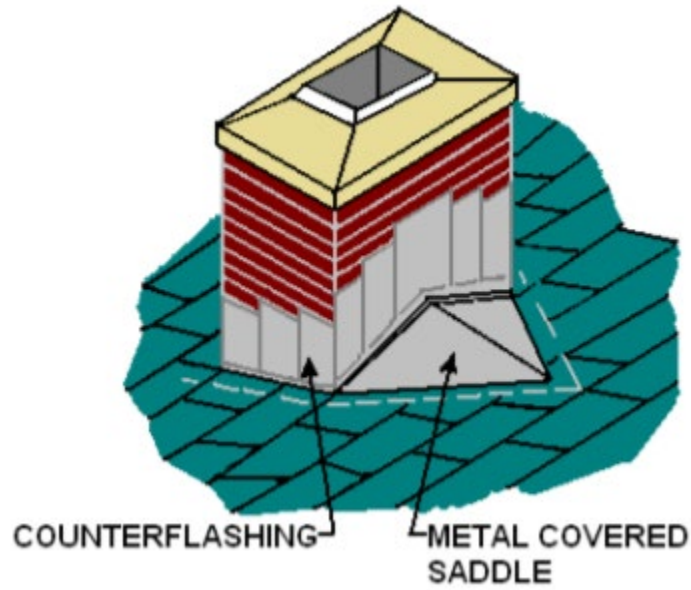


SIDEWALL FLASHING

Sidewall flashing (26-Gauge)



Cricket or Saddle required if chimney is more than 30 inches wide



Skylight: Basic sheet metal components

All dimensions approximate.

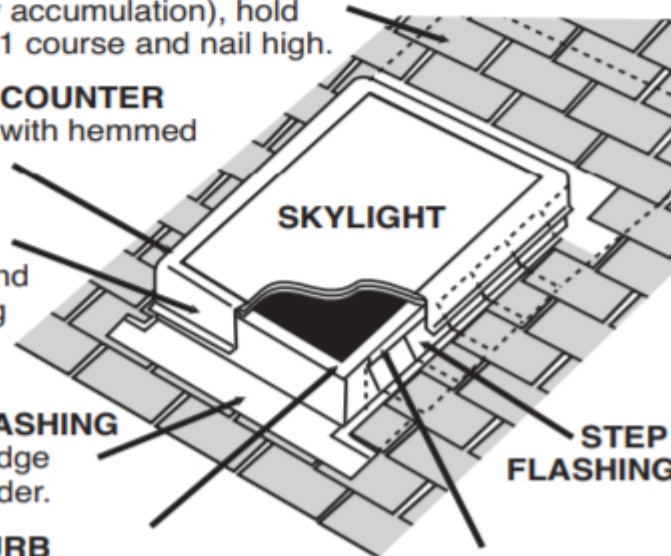
BACKER FLASHING under shingles minimum 3 courses. Where necessary (depending upon anticipated debris and/or snow accumulation), hold shingles up 1 course and nail high.

INTEGRAL COUNTER FLASHING with hemmed drip edge.

COUNTER FLASHING over base and step flashing approx. 2" min.

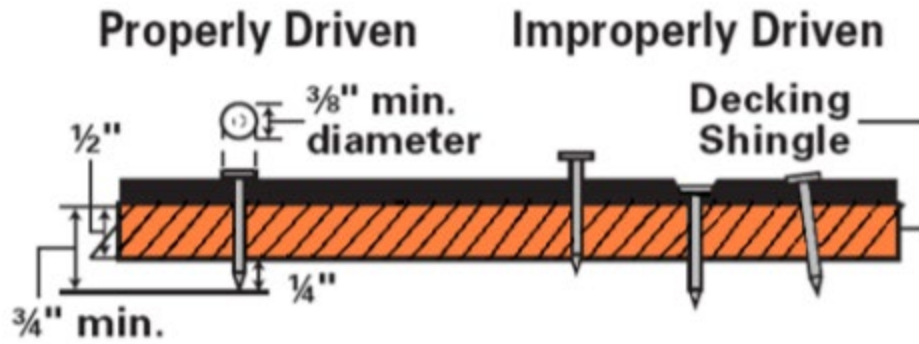
APRON FLASHING with lower edge hemmed under.

RAISED CURB (2" x 8" suggested as minimum to attain flashing clearance.)



STEP FLASHING

WATERPROOFING UNDERLAYMENT turned up under curb



FASTENER SCHEDULE FOR ROOFING

Asphalt Shingles	Mineral-surfaced Roll Roofing
Fasteners for asphalt shingles must be galvanized steel, stainless steel, aluminum, or copper roofing nails, minimum 12 gauge shank with a minimum $\frac{3}{8}$ " diameter head and of a length to penetrate through the roofing materials and a minimum of $\frac{3}{4}$ " inch into roof sheathing or when roof sheathing is less than $\frac{3}{4}$ " thick, the fastener shall penetrate through the sheathing.	Roll roofing must be installed in accordance with the manufacturer's installation instructions.

ASPHALT SHINGLES - R905.2

Asphalt shingles may only be used on roof slopes of two units vertical in 12 units horizontal (2:12) or greater. For roof slopes from 2:12 to 4:12, double underlayment is required. Underlayment must conform to ASTM D 226, Type I; ASTM D 4869, Type I; or ASTM D 6757. For slopes of 4:12 and greater, underlayment must be applied shingle fashion. Laps must be a minimum of 2-inches. End laps must be offset by at least 6 feet.

For normal application, strip shingles must be fastened with a minimum of four nails. For interlocking shingles, two nails are required. See the manufacturer's installation instructions.

Valleys must be lined in accordance with the shingle manufacturers written instructions. In addition, valleys may be of any of the following:

- For open valleys lined with metal, the valley lining must be at least 24 inches wide and of galvanized steel of at least 26 gage or other approved materials.
- For open valleys, two plies of roll roofing may be permitted. The bottom layer must be at least 18 inches wide and the top layer at least 36 inches wide.
- For closed valleys (valleys covered with shingles), valley lining of one ply of smooth roll roofing complying with ASTM D 224 Type II or Type III and at least 36 inches wide or one of the two methods previously listed may be used.

MINERAL SURFACED ROLL ROOFING - R905.5

Mineral surfaced roll roofing may only be applied on roofs with a slope of 1:12 or greater. Mineral surface roll roofing must conform to ASTM D 3909 or ASTM D 6380, Class M. Mineral surface roll roofing must be installed in accordance with the manufacturer’s installation instructions.

