

Asphalt Shingles

Reference: 2024 International Residential Code, Marion Code of Ordinances

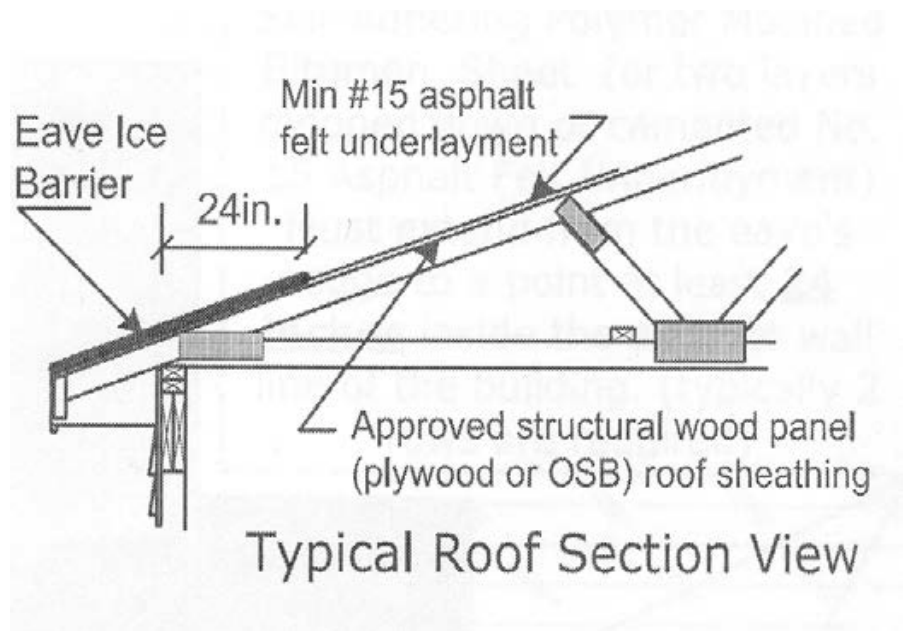
Permit Required: The cost of the permit is based on the number of squares of roofing material being installed (100sq ft = 1 square) and whether it is an overlay, a tear-off or a complete replacement of sheathing along with the roofing material.

A maximum of 2 layers of asphalt shingles on roof is allowable.

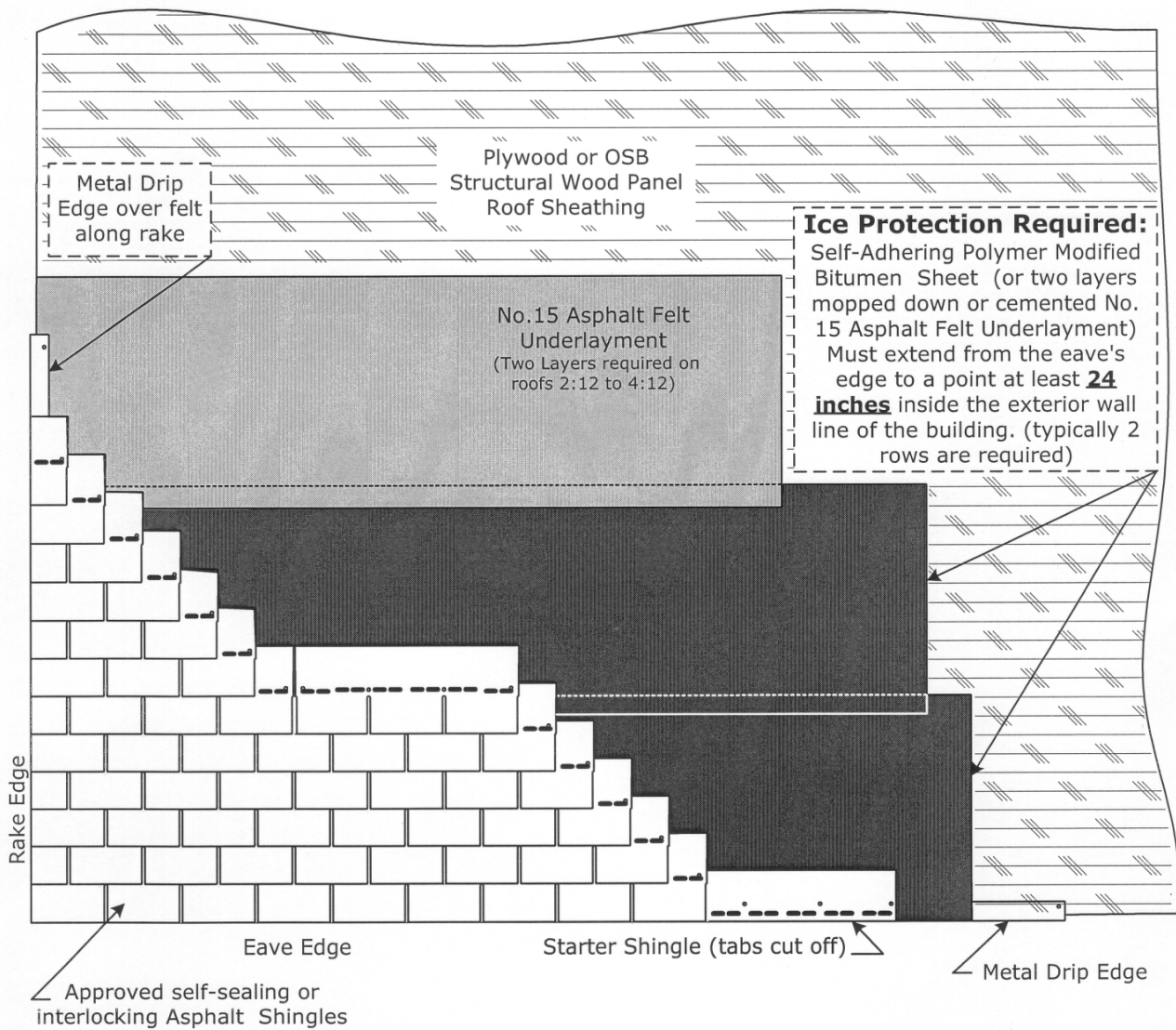
Helpful Tip: Manufacturer's installation instructions covering most roof applications are printed on the packaging of asphalt shingles. More information is also available by contacting the manufacturer's website or through building material suppliers.

Requirements:

1. **Shingle specification requirement** Asphalt shingles shall comply with ASTM D3462 and meet the wind rating of 116 mph.
2. **Sheathing** Shingles shall be fastened to solidly sheathed decks.
3. **Slope** Asphalt shingles shall only be used on roof slopes of two units vertical in 12 units horizontal (2:12) or greater (check shingle manufacturer's specifications).
4. **Ice Dam Protection** An ice barrier meeting ASTM D 1970 shall consist of a self- adhering polymer modified bitumen sheet (ice guard) or 2 layers of underlayment **cemented** together.
 - **Ice dam protection shall extend from the eave's edge to a point 24" inside the exterior wall line of the building.**



5. **Underlayment** (15# felt) Organic felt must meet ASTM D 226 Type II D48696 Type III, IV or inorganic felt must meet D6757 Type I.
- Roofs with a slope of 2:12 pitch up to 4:12, underlayment shall be 2 layers applied in the following manner.
 - a. Apply ice barrier as stated above.
 - b. Continue with a 19" strip of underlayment.
 - c. Apply a 36" wide sheet of underlayment, overlapping successive sheets 19".
 - Roofs with a slope of 4:12 or greater, underlayment shall be 1 layer applied in the following manner.
 - a. Apply ice barrier as stated above.
 - b. Install underlayment in a shingle fashion, parallel to and continuing up from the ice barrier with an overlap of 2". End laps are to be offset by 6'.
5. **Fasteners** Roofing nails are to be a minimum 11 gauge shank with a minimum 5/16" diameter head. If the roof sheathing is less than 3/4" thick, the nails should penetrate through the sheathing. If the sheathing is thicker, the nails should penetrate at least 3/4". The number of nails shall be according to the manufacturer's recommendations. Fasteners shall comply with ASTM F 1667.
6. **Attachment** Asphalt shingles shall have the minimum number of fasteners required by the manufacturer. For normal applications, not less than 4 fasteners per strip shingle would be required.
7. **Flashings** Corrosion resistant metal flashing with a minimum thickness of 0.0179 inches must be used to prevent leaks where the roof meets a wall, another roof, a chimney, or other objects that penetrate a roof (asphalt cement or sealants are not approved substitutes for flashings). The step-flashing method shall be used where shingles meet a vertical sidewall. A *cricket* or *saddle* shall be installed on the ridge side of chimneys wider than 30 inches. All flashings, including *valleys*, shall be installed per manufacturer's installation instructions.
8. **Roof Ventilation** Enclosed attics and enclosed rafter spaces shall have cross ventilation. The total net free ventilating area shall not be less than 1 to 150 of the area of the space ventilated (exception: the ratio can be reduced to 1 to 300 if the ventilation is split between roof vents and soffit vents).
9. **Reroofing** No more than two layers are allowed on a roof.
10. **Approved Products** Verify that your contractor is using shingles, felt paper, ice barrier, and fasteners that meet the ASTM numbers listed in the above article



**Typical Asphalt Shingle Application
for Roofs sloped 4:12 or steeper
(Partial Roof View)**