

Fasteners

Fasteners for asphalt shingles shall be galvanized steel, stainless steel, aluminum or copper roofing nails, 12 gage shank with a minimum 3/8-inch diameter head. Fasteners to be of sufficient length to penetrate through the roofing materials and an minimum of 3/4-inch into the roof sheathing. Where the roof sheathing is less than 3/4-inch thick, the fasteners shall penetrate through the sheathing.

Metal Roof Panels

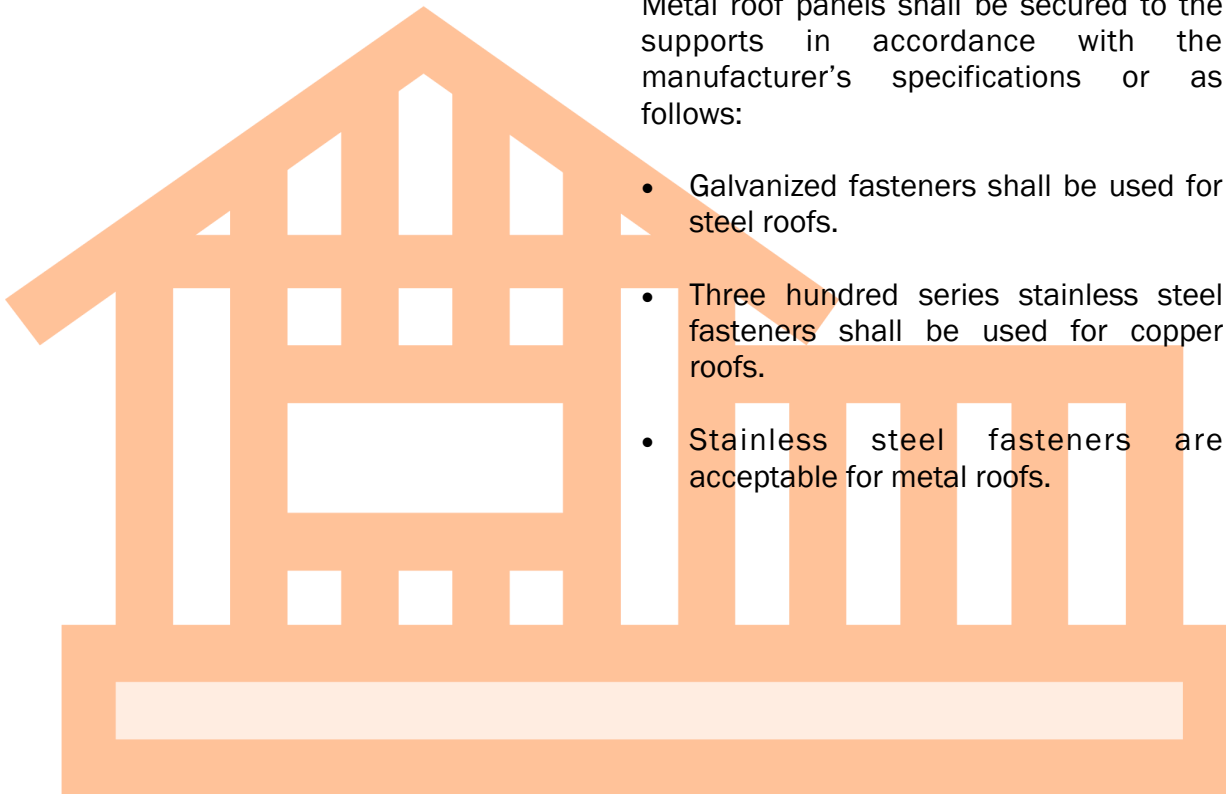
Metal roof panel roof covering shall be applied to solid or spaced sheathing, except where the covering is specifically designed to be applied to spaced supports.

The minimum slope for lapped, non-soldered-seam metal roofs without applied lap sealant shall be 3:12.

The minimum slope for lapped, non-soldered-seam metal roofs with applied lap sealant shall be 1/2:12 slope.

Metal roof panels shall be secured to the supports in accordance with the manufacturer's specifications or as follows:

- Galvanized fasteners shall be used for steel roofs.
- Three hundred series stainless steel fasteners shall be used for copper roofs.
- Stainless steel fasteners are acceptable for metal roofs.



REQUIREMENTS

ROOFING



Building Department

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Requirements

General: Roof coverings shall be applied in accordance with the Minnesota State Building Code and the manufacturer's specifications. A permit fee of \$40.00 is required for residential roofing projects.

Re-covering versus Replacement

The re-roofing of a structure having asphalt shingles may be accomplished in one of two ways:

- **OVERLAY** Installing a layer of asphalt shingles over the existing; or
- **TEAR-OFF** Remove the existing shingles, underlayment, flashing, etc. and install the roofing as if it were new construction.

New roof coverings shall not be installed without first removing existing roof coverings where any of the following conditions occur:

- Where the existing roof or roof covering is water-soaked or has deteriorated to the point that the existing roof or roof covering is not adequate as a base for additional roofing.
- Where the existing roof covering is wood shake slate, clay, cement or asbestos-cement tile.
- Where the existing roof has **two or more** applications of any type of roof covering.

Flashings shall be reconstructed in accord with approved manufacturer's installation instructions.

ASPHALT SHINGLE INSTALLATION

The installation of asphalt shingles shall comply with the following requirements:

SLOPE:

Asphalt shingles shall be used only on roof slopes of two units vertical in 12 units horizontal (2:12) or greater.

SHEATHING:

Asphalt shingles shall be fastened to solidly sheathed decks or 1-inch thick nominal wood boards.

UNDERLAYMENT:

For roof slopes from **2:12 to 4:12**, underlayment shall be two layers applied in the following manner. Apply a 19-inch strip of underlayment felt parallel to and starting at the eaves, fastened sufficiently to hold it in place. Starting at the eave, apply 36-inch wide sheets of underlayment, overlapping successive sheets 19-inches and fastened sufficiently to hold in place. For roof slopes of 4:12 or greater, underlayment shall be one layer applied in the following manner. Underlayment shall be applied shingle fashion, parallel to and starting from the eave and lapped 2-inches, fastened sufficiently to hold in place. End laps shall be offset by 6 feet.

ICE BARRIER:

An ice barrier shall be used in lieu of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24-inches inside the exterior wall line of the building. *EXCEPTION:* Unheated, detached accessory structures.

FLASHINGS:

Flashings shall be installed at wall and roof intersections, wherever there is a change in roof slope or direction and around roof openings. Where flashing is metal, it shall be corrosion resistant with a thickness of not less than 0.019 inch (No. 26 galvanized sheet).

KICK-OUT FLASHING/DIVERTER:

A kick-out flashing shall be installed where the lower portion of a sloped roof stops within the plane of an intersecting wall cladding, in such a manner as to divert or kick out water away from the assembly.

SIDEWALL FLASHING:

Flashing against a vertical sidewall shall be by the step-flashing method.

OTHER FLASHING:

Flashing against a vertical front wall, as well as soil stack, vent pipe and chimney flashing, shall be applied according to the asphalt shingle manufacturer's printed instructions.

VALLEYS:

For open valley (valley lining exposed) lined with metal, the valley lining shall be at least 24-inches wide and of corrosion resistant metal.

For closed valleys (valleys covered with shingles) a single ply of smooth roll roofing, or ice barrier, at least 36-inches wide may be used. Metal valley or mineral surfaced roll roofing are also acceptable.