

Product Evaluation

RC34 | 1120

Engineering Services Program

The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

For more information, contact TDI Engineering Services Program at (800) 248-6032.

Evaluation ID: RC-34

Effective Date: November 1, 2020

Re-evaluation Date: November 2024

Product Name: Meridian Steel Roof Panels Installed Over a Plywood Deck

Manufacturer: McElroy Metal, Inc.
P.O. Box 1148
Shreveport, LA 71163
(318) 747-8000

Distributed By: McElroy Metal, Inc.
Metal Mart

General Description:

The Meridian metal roof panels are snap together, concealed fastener, minimum 26-gauge galvalume steel with an optional paint finish. The panels are installed over solid decking by placing fasteners in the panels slotted flange. The panels are a maximum of 16" in width. The panels are available in lengths up to 40'. The panels conform to ASTM A792, with a 50,000 psi yield point. The panels have an AZ 55 hot-dip aluminum zinc alloy coating.

Limitations:

Roof Decking: The metal roofing panels must be installed over minimum 5/8" plywood decking.

New Roof Deck Attachment: The roof decking must meet or exceed the uplift requirements of the IRC or IBC and must be installed as required for resistance to lateral wind loads.

Design Wind Pressures: The design pressure uplift load resistance must be as specified in Table 1.

Table 1. Attachment of Minimum 26-Gauge Meridian Steel Roofing Panels to a Minimum 5/8" Plywood Deck.

Design Wind Pressure	Fastener Type	Fastener Spacing
-52.5 psf	No. 10 x 1" No. 2 Philips pancake head Type A	12" on center

Installation Over an Existing Roof Covering: Installation over an existing roof covering is limited to a maximum of one existing layer of composition shingles, wood shingles or shakes, built-up roofing, or roll roofing applied over an existing, solid roof deck of minimum 5/8" plywood. Note: Inspection of the existing roof deck must be made prior to the installation of the roof panels. The condition of the existing roof deck must be acceptable to receive the metal roofing panels before the metal roofing panel installation proceeds. NOTE: Underlayment is not required to be installed.

Roof Slope: The metal roof panels may be installed on roofs with a roof slope as low as 1/2:12 if sealant is used on the panel side laps. McElroy Metal recommends that sealant be used on the panel side laps for roof slopes less than 3:12. If sealant is not used on the panel side laps, then the minimum roof slope is 3:12.

Installation:

General: The metal roofing panels must be installed in accordance with the manufacturer's recommended installation instructions and this evaluation report.

Panels: The metal roofing panels must be secured to the roof deck as specified in Table 1 and in accordance with this section. Refer to Figure 1 for an illustration of the required fastener pattern.

Underlayment: A minimum of one layer of No. 30 (Type II) asphalt felt must be used. The underlayment used must comply with one or more of the following: ASTM D 226, ASTM D 4869, or ASTM D 1970. The underlayment must be installed with 6" side laps and 3" end laps. The underlayment must be applied with corrosion-resistant fasteners in accordance with the manufacturer's installation instructions. Fasteners must be applied along the overlaps not farther apart than 36" on center.

Attachment of Metal Roofing Panels to Roof Deck: The Meridian metal roofing panels must be secured to the roof deck as follows:

Roof Panels: The panels must be fastened to the roof deck with minimum No. 10 x 1" long, No. 2 Phillips Pancake head Type A screws. The fasteners must be long enough to ensure a minimum penetration of 1/4" below the roof deck. If the metal panels are set over an existing roof covering, then the fastener length must be increased so that the fasteners are long enough to ensure a minimum penetration of 1/4" below the existing plywood roof decking.

Fastener Spacing: The fasteners are to be spaced 12" on center through the pre-punched slots in the fastener flange of the panel.

Trims, Closures, and Accessories: Components, such as the eave trim, rake start trim, rake end, rake tie-in, ridge trim, hi-side tie-in trim, high eave trim, hip trim, and valley trim must be installed as required by the manufacturer.

Note: Keep the manufacturer's installation instructions on the job site during the installation. Use corrosion resistant fasteners as specified in the IRC and the IBC.

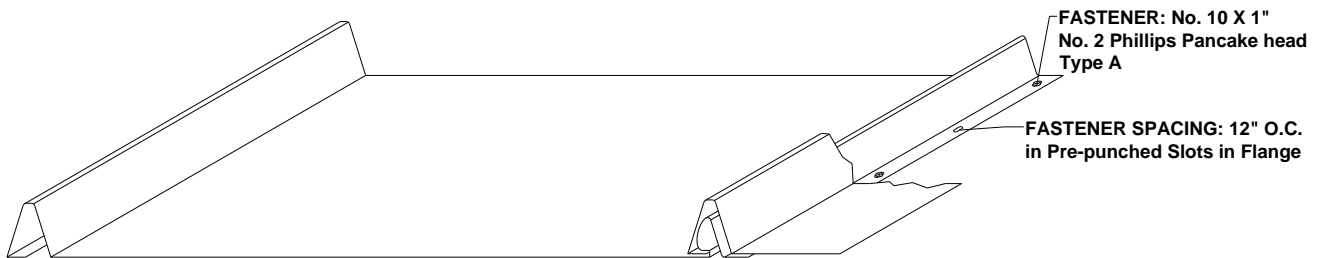


Figure 1: Meridian Panel Detail