

Product Evaluation

RC165 | 0820

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-165

Effective Date: August 1, 2020

Re-evaluation Date: August 2024

Product Name: 1.5" Nailstrip Steel Roof Panels Installed Over a Plywood Deck

Manufacturer: Northwest Roof Tile & Metal LLC
6846 Theall Road
Suite 400
Houston, TX 77066
(281) 893-8382

General Description:

The 1.5" Nailstrip metal roof panels are minimum 24-gauge galvalume steel panels with an optional paint finish. The metal roof panels have a coverage of 15-1/2". The ribs are 1-1/2" deep. The metal roof panels conform to ASTM A792, Grade 50, with a 50 ksi yield point. The metal roof panels have an AZ 55 hot-dip aluminum zinc alloy coating or a hot dip coating conforming to ASTM A525. The metal roof panels must be formed within the panel rollformer specifications and tolerances.

Panel Rollformer: Schleich Quadro-Plus Rollformer
Metalforming, Inc.
100 International Drive
Peachtree City, Georgia 30269

Limitations:

Roof Deck: The 1.5" nailstrip metal roof panels must be installed over a minimum 15/32" thick plywood roof deck.

New Roof Deck Attachment: The roof deck must meet or exceed the uplift requirements of the IRC or IBC and must be installed in a manner to resist wind loads as required.

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

Table 1 Attachment of Minimum 24-gauge 1.5" Nailstrip Steel Roof Panels to Minimum 15/32" Plywood Deck

Design Wind Pressure (psf)	Fastener Pattern	Fastener into Roof Deck Through Nail Strip	Fastener into Roof Deck Through Pan
-78.5	Type 1	One (1) #12-11 x 1" Type A @ 11" o.c. Along Panel Length	N/A
-116.0	Type 2	One (1) #12-11 x 1" Type A @ 6-1/2" o.c. Along Panel Length	Two (2) #10-11 x 1" Eclipse Head @ 12" o.c. Along Panel Length

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 15/32" 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 roof panels before the roof 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 3:12.

Installation:

General: The 1.5" nailstrip metal roof panels must be installed in accordance with the manufacturer's recommended installation instructions and this evaluation report.

Panels: The 1.5" nailstrip metal roof 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 or equivalent 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 Roof Panels to Roof Deck: The 1.5" nailstrip metal roof panels must be secured to the roof deck as follows:

Roof Panels: Minimum No. 12-11 x 1" long, Pancake Type A screws, manufactured by ITW Buildex and No. 10-11 x 1" Eclipse screws by Sealtite. The fasteners must be long enough to ensure a minimum penetration of 1/4" below the roof deck. (Note: If the metal roof panels are installed 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.) The placement of the fasteners across the width of the panel must be as shown in Figure 1 of this evaluation report. The spacing of the fasteners along the length of the panels must be as specified in Table 1 and as shown in Figure 1 of this evaluation report.

Alternative Fasteners: Substitution of equivalent fasteners must meet the following requirements:

#12-11 x 1" Type A Pancake head, manufactured by ITW Buildex
Ultimate withdrawal (pullout) \geq 377 lbs in 15/32" plywood.

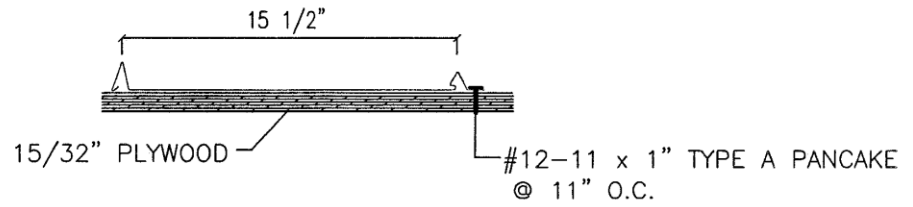
#10-11 x 1" Eclipse Type A, manufactured by Sealtite
Ultimate withdrawal (pullout) \geq 398 lbs in 15/32" plywood.

Panel Ends: The panel ends must be secured to the roof deck as required by the manufacturer.

Trims, Closures, and Accessories: Components, such as the valley trim, eave trim, fixed ridge/hip trim, alternative rake/gable flashing, fixed endwall/parapet high side eave trim, box rake/gable flashing, and sidewall/parapet fixed rake flashing must be installed as required by the manufacturer in their installation details and trim instructions.

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

FASTENER PATTERN TYPE 1



FASTENER PATTERN TYPE 2

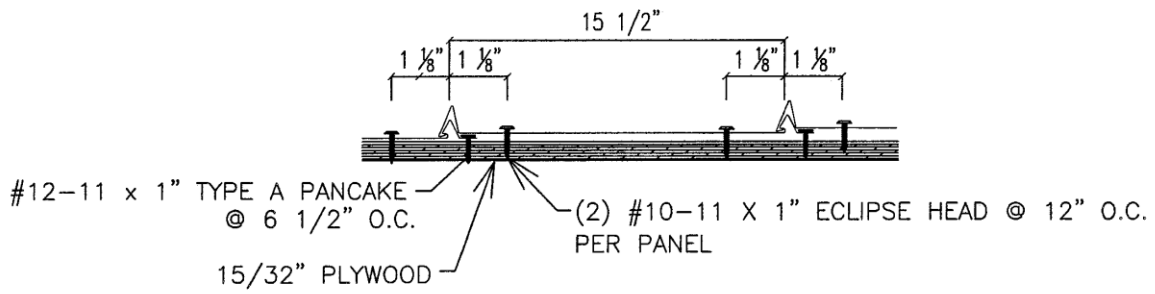


Figure 1. 1.5" Nailstrip Panel Detail (Minimum 24-Gauge)