

Product Evaluation

RC596 | 0723

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-596

Effective Date: August 1, 2023

Re-evaluation Date: July 2027

Product Name: 1.5" Steel and Aluminum Standing Seam Roofing Panel Installed over a Plywood Deck

Manufacturer: Anguiano Roofing, Inc.
dba J.R. & Sons Construction
1733 Kentucky Derby Drive
Corpus Christi, TX 78417
(361) 851-0138

General Description:

The 1.5" standing seam roofing panel is either minimum 24-gauge galvalume steel panels or 0.032" aluminum panels, both with an optional paint finish. The metal roofing panels have a maximum coverage of 16" for the steel panels and 17-1/8" for the aluminum panels. The panel has a 1-1/2" tall mechanical double lock standing seam rib. The 24-gauge steel panel material is ASTM A 792 AZ55, Grade 50, with a 50 ksi yield point. The 0.032" aluminum panel material is ASTM B 557 H24-3105 with an optional paint finish.

This product evaluation report is for residential roofing panels that are secured to a nominal 15/32" plywood deck. A thicker plywood deck may be used; however, the design pressure rating for the metal panels will be as specified in this evaluation report.

Limitations:

Roof Deck: The metal roofing panels must be installed over a minimum 15/32" plywood deck.

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

Roof Slope: The standing seam metal roofing panels may be installed on roofs with a roof slope as low as 1/4:12.

Design Pressure: The design pressure uplift load resistance must be as specified in Tables 1 and 2.

Table 1. Attachment of 1.5" Standing Seam 24-gauge Steel Roofing Panels to Minimum 15/32" Plywood Deck

Design wind pressure (psf)	Panel Seam	Panel Clip	Clip Spacing	Clip Fastener
-78.5	Double Lock	Fixed Clip	24" o.c.	Two No. 10-12
-108.5	Double Lock	Fixed Clip	18" o.c.	Two No. 10-12
-138.5	Double Lock	Fixed Clip	12" o.c.	Two No. 10-12
-168.5	Double Lock	Fixed Clip	6" o.c.	Two No. 10-12

Table 2. Attachment of 1.5" Standing Seam 0.032" Aluminum Roofing Panels to Minimum 15/32" Plywood Deck

Design wind pressure (psf)	Panel Seam	Panel Clip	Clip Spacing	Clip Fastener
-78.5	Double Lock	Fixed Clip	24" o.c.	Two No. 10-8
-101.0	Double Lock	Fixed Clip	18" o.c.	Two No. 10-8
-123.5	Double Lock	Fixed Clip	12" o.c.	Two No. 10-8
-146.0	Double Lock	Fixed Clip	6" o.c.	Two No. 10-8

Installation over 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 existing roof deck must be made prior to the installation of the roofing panels. The condition of the existing roof deck must be acceptable to receive the metal roofing panels before roof panel installation can begin.

Installation:

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

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 minimum 2" side laps and 2"

end laps. The underlayment must be applied with corrosion-resistant fasteners in accordance with the manufacturer's installation instruction. Fasteners must be applied along the overlaps not farther apart than 36" on center.

Attachment of Steel Roof Panels to Plywood Deck: The panels must be installed using a fixed clip (one-piece; 26-gauge (0.0195") galvanized steel; 2" long x 1.53" tall) with two No. 10-12 x 1" long Pancake Type A screws. The fasteners must be long enough to ensure a minimum penetration of 1/4" below the roof deck. The maximum allowable spacing of the clips is specified in Table 1.

Attachment of Aluminum Roof Panels to Plywood Deck: The panels must be installed using a fixed clip (one-piece; 26-gauge (0.0185") stainless steel; 2" long x 1.6" tall) with two No. 10-8 x 1" long Pancake Stainless Steel Type A screws. The fasteners must be long enough to ensure a minimum penetration of 1/4" below the roof deck. The maximum allowable spacing of the clips is specified in Table 2.

Panel Seam: The panel is seamed to a 180-degree (double lock) with a mechanical seamer.

Panel Ends: As required by the manufacturer.

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Trims, Closures and Accessories: Components such as eave, rake rim, rake trim, hip trim, and valley trim shall be as required by the manufacturer.

Alternative Fasteners: Alternative fasteners of equal or greater strength may be substituted.

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.