Force Engineering & Testing
19530 Ramblewood Drive
Humble, Texas 77338
Phone: (281) 540-6603 FAX: (281) 540-9966
Website: www.forceengineeringtesting.com

Product Evaluation Report

REED'S METAL, INC.

Residential, 29 Ga. Roof Panel over 1x4 Wood Purlins over 15/32" Plywood

Florida Product Approval # 12725.5 R4

Florida Building Code 2020
Per Rule 61G20-3
Method: 1 –D

Category: Roofing
Subcategory: Metal Roofing
Compliance Method: 61G20-3.005(1)(d)
NON HVHZ

Product Manufacturer:
Reed's Metals, Inc.
19 E. Lincoln Drive NE
Brookhaven, MS 39601

Engineer Evaluator:
Johnathan Green, P.E. # 88223
Florida Evaluation ANE ID: 1920

Validator:
Brian Jaks P.E. #70159

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JOHNATHAN GREEN
LICENSE
No 88223
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

FEB 01 2021

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Compliance Statement: The product as described in this report has demonstrated compliance with the Florida Building Code 2020, Sections 1504.3.2, 1504.7.

Product Description: Residential Rib Roof Panel, Min. 29 Ga. Steel, 36" Wide, through fastened roof panel over 1x4 wood purlins over 15/32" APA Plywood decking. Non-Structural Application.

Panel Material/Standards: Material: Minimum 29 Ga. Steel, ASTM A792 or ASTM A653 G90 conforming to Florida Building Code 2017 Section 1507.4.3. Paint finish optional.
Yield Strength: Min. 80.0 ksi
Corrosion Resistance: Panel Material shall comply with Florida Building Code 2020, Section 1507.4.3.

Panel Dimension(s):

Thickness:	0.0145" min.
Width:	36" maximum coverage
Rib Height:	¾" major rib at 9" O.C.
Panel Rollformer:	MRS Metal Rollforming Systems

Panel Fastener: #9-15 x 1-1/2" HWH Woodgrip with sealing washing or approved equal
¼" minimum penetration through plywood
Corrosion Resistance: Per Florida Building Code 2020, Section 1507.4.4.

Substrate Description: Min. 1x4 No. 2 SYP wood purlins over min. 15/32" thick, APA Rated plywood over supports at maximum 24" O.C. The 1x4 wood purlins shall be fastened to the plywood with minimum 8Dx2 ½" Ring Shank Nails at 4" O.C. Design of 1x4 wood purlins, plywood and plywood supports are outside the scope of this evaluation. Substrate must be designed in accordance w/ Florida Building Code.

Allowable Design Uplift Pressures:

Table "A"

Maximum Total Uplift Design Pressure:	76.75 psf	123.5 psf
Fastener Pattern:	9"-9"-9"-9"	6.5"-2.5"-6.5"-2.5"-6.5"-2.5"-6.5"
Fastener Spacing:	24" O.C.	24" O.C.

*Design Pressure includes a Safety Factor = 2.0.

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Code Compliance: The product described herein has demonstrated compliance with The Florida Building Code 2020, Section 1504.3.2, 1504.7.

Evaluation Report Scope: The product evaluation is limited to compliance with the structural wind load requirements of the Florida Building Code 2020, as relates to Rule 61G20-3.

Performance Standards: The product described herein has demonstrated compliance with:

- UL 580-06 - Test for Uplift Resistance of Roof Assemblies
- UL 1897-2012 - Uplift Test for Roof Covering Systems
- FM 4471-1992- Foot Traffic Resistance Test

Reference Data:

1. UL 580-94 / 1897-98 Uplift Test
   Force Engineering & Testing (FBC Organization # TST-5328)
   Report No. 101-0304T-05 & 101-0508T-08, Dated 05/05/05 & 11/04/08
2. FM 4471-95, Section 5.4 Foot Traffic Resistance Test
   Force Engineering & Testing (FBC Organization # TST-5328)
   Report No. 101-0241T-09, Dated 07/06/2009
3. Certificate of Independence
   By Johnathan Green, P.E. (No. 88223) @ Force Engineering & Testing (FBC Organization # ANE ID: 1920)

Test Standard Equivalency:

1. The UL 580-94 test standard is equivalent to the UL 580-06 test standard.
2. The UL 1897-98 test standard is equivalent to the UL 1897-2012 test standard.
3. The FM 4471-95, Foot Traffic Resistance test standard is equivalent to the FM 4471-92, Foot Traffic Resistance test standard.

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Quality Assurance Entity: The manufacturer has established compliance of roof panel products in accordance with the Florida Building Code and Rule 61G20-3.005 (3) for manufacturing under a quality assurance program audited by an approved quality assurance entity.

Minimum Slope Range: Minimum Slope shall comply with Florida Building Code 2020, including Section 1507.4.2 and in accordance with Manufacturers recommendations. For slopes less than 3:12, lap sealant must be used in the panel side laps.

Installation: Install per manufacturer's recommended details.

Underlayment: Per Florida Building Code 2020, Section 1507.1 and manufacturer's installation guidelines.

Roof Panel Fire Classification: Fire classification is not part of this acceptance.

Shear Diaphragm: Shear diaphragm values are outside the scope of this report.

Design Procedure: Based on the dimensions of the structure, appropriate wind loads are determined using Chapter 16 of the Florida Building Code 2020 for roof cladding wind loads. These component wind loads for roof cladding are compared to the allowable pressure listed above. The design professional shall select the appropriate erection details to reference in his drawings for proper fastener attachment to his structure and analyze the panel fasteners for pullout and pullover. Support framing must be in compliance with Florida Building Code 2020 Chapter 22 for steel, Chapter 23 for wood and Chapter 16 for structural loading.

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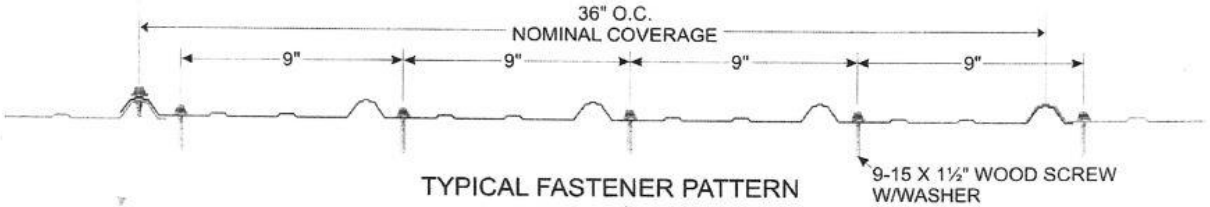
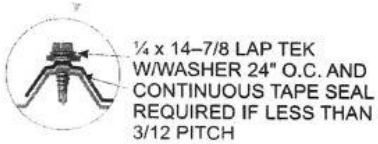
29 ga. Residential over 1x4 Wood Purlins

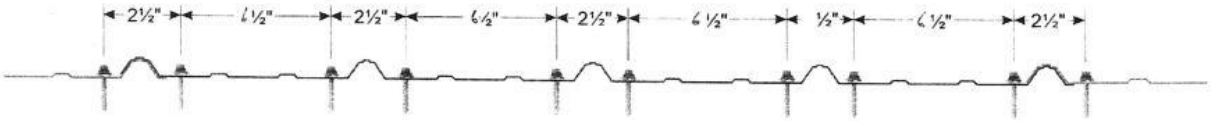
EXPOSED FASTENER SYSTEM



TYPICAL FASTENER PATTERN

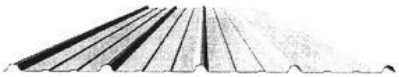
TYPE 1





FASTENER PATTERN @ PANEL END & LAPS

TYPE 2



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