

**Force Engineering & Testing**

19530 Ramblewood Drive  
Humble, Texas 77338  
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Website: [www.forceengineeringtesting.com](http://www.forceengineeringtesting.com)

**Product Evaluation Report**  
**TRI COUNTY METALS**

**29 Ga. Ultra-Rib Roof Panel over open framing**

**Florida Product Approval # 9903.3 R5**

Florida Building Code 2020

Per Rule 61G20-3

Method: 1 -D

Category: Structural Components

Subcategory: Roof Deck

Compliance Method: 61G20-3.005(1)(d)

NON HVHZ

Product Manufacturer:

**Tri County Metals**

301 SE 16<sup>th</sup> Street

Trenton, Florida 32693

Engineer Evaluator:

**Johnathan Green, P.E. #88223**

Florida Evaluation ANE ID: 12901

Validator:

**Brian Jaks, P.E. #70159**

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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:** Ultra-Rib Roof Panel, 29 Ga. Steel, 36" Wide, through fastened structural roof panel. Structural Application.

**Panel Material/Standards:** Material: 29 Ga. Steel, ASTM A792 or ASTM A653 G90 conforming to Florida Building Code 2020, Section 1507.4.3. Optional paint finish.  
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: 0.0160" coated thickness (0.0142"uncoated thickness)  
Width: 36" maximum coverage  
Rib Height: ¾" major rib at 9" O.C.  
Panel Rollformer: MRS Metal Rollforming Systems

**Panel Fastener:** #12-14 x ¾" HWH SD with sealing washing or approved equal at 9"-9"-9"-9" fastener pattern. Panel side laps fastened together w/ #12-14 x ¾" HWH SD with sealing washer at 24" O.C.  
Corrosion Resistance: Per Florida Building Code 2020, Section 1507.4.4.

**Substrate Description:** Min. 18 Ga. Grade 50 Steel Framing. Framing must be designed in accordance w/ Florida Building Code 2020.

**Allowable Design Pressures:**

Table "A"

Maximum Design Pressure:	-31.2 psf	+26.0 psf
Fastener Pattern:	9"-9"-9"-9"	9"-9"-9"-9"
Fastener Spacing:	5'-0" O.C.	5'-0" O.C.

\*Design Pressure includes a Safety Factor = 2.0.



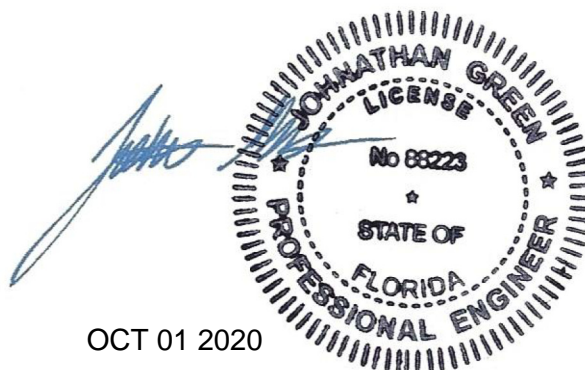
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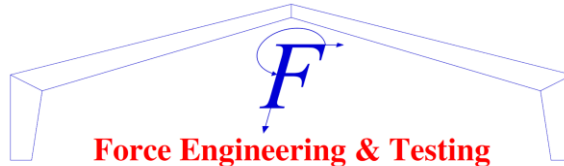


- Code Compliance:** The product described herein has demonstrated compliance with The Florida Building Code 2020, Section 1504.3.2, 1504.7.
- Evaluation Report Scope:** The product evaluation is limited to compliance with the structural wind load requirements of the Florida Building Code 2020, as relates to Rule 61G20-3.
- Performance Standards:** The product described herein has demonstrated compliance with:
- ASTM E 1592-05 (2012) Test method for structural performance of sheet metal roof and siding systems by uniform static air pressure difference
  - FM 4471-92 - Foot Traffic Resistance Test
- Reference Data:**
1. ASTM E 1592-05 Test  
Force Engineering & Testing, Inc. (FBC Organization # TST-5328)  
Report No. 136-0257T-15A, B
  2. FM 4471-10, Section 4.4 Foot Traffic Resistance Test  
Force Engineering & Testing, Inc. (FBC Organization # TST-5328)  
Report No. 136-0076T-16
  3. Certificate of Independence  
By Johnathan Green, P.E. (No. 88223) @ Force Engineering & Testing  
(FBC Organization # ANE ID: 12901)
- Test Standard Equivalency:** The ASTM E 1592-05 test standard is equivalent to the ASTM E 1592-05 (2012) test standard.
- The FM 4471-10, Foot Traffic Resistance test standard is equivalent to the FM 4471-92, Foot Traffic Resistance test standard
- 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 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.



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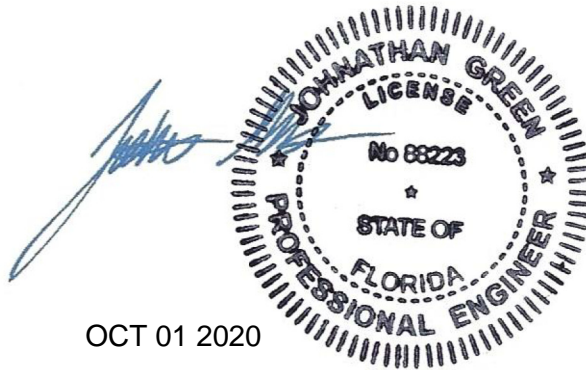


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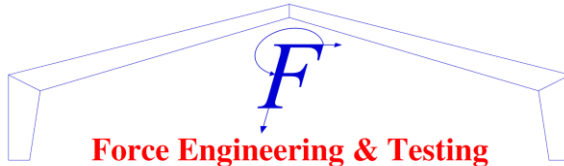
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- Insulation:** Manufacturer's approved product (Optional)
- Roof Panel Fire Classification:** Fire classification is not part of this acceptance.
- Shear Diaphragm:** Shear diaphragm values are outside the scope of this report.
- Design Procedure:** 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, and Chapter 16 for structural loading.



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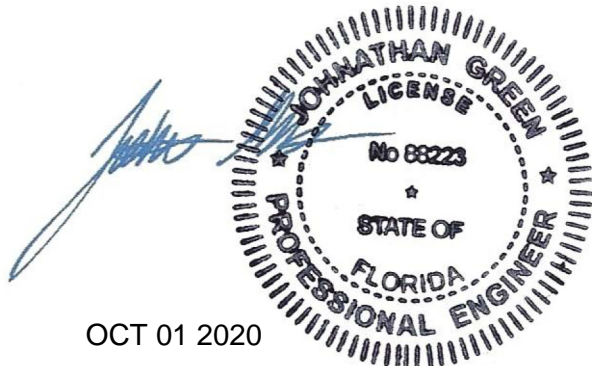
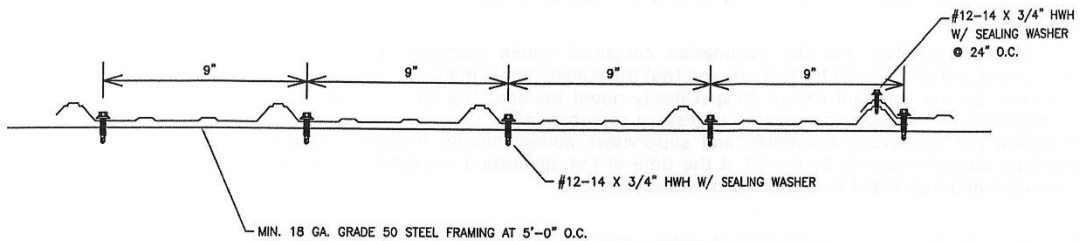


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FASTENER PATTERN



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