

Force Engineering & Testing

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

Product Evaluation Report
TRI COUNTY METALS

**0.032" Aluminum TCM Lok Roof Panel over 7/16" OSB or
15/32" Plywood**

Florida Product Approval # 4595.5 R5

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:

Tri County Metals
301 S. E. 16th Street
Trenton, Florida 32693

Engineer Evaluator:

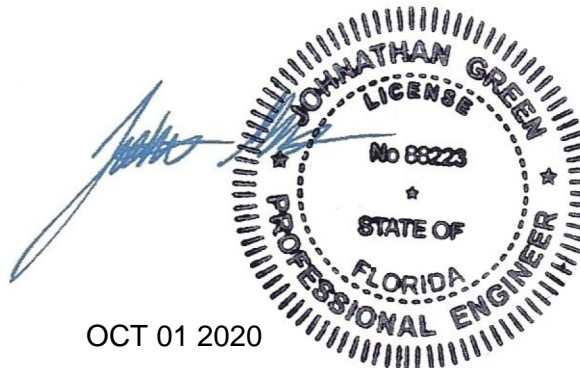
Johnathan Green, P.E. #88223
Florida Evaluation ANE ID: 12901

Validator:

Brian Jaks P.E. #70159

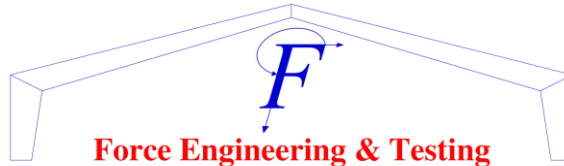
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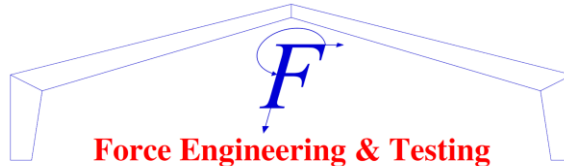
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- Compliance Statement:** The product as described in this report has demonstrated compliance with the Florida Building Code 2020, Sections 1504.3.2.
- Product Description:** 1" Nailstrip Roof Panel, 0.032" Aluminum, 15 ¾" Coverage, Roof Panel attaching to 7/16" OSB or minimum 15/32" APA Plywood decking. Non-structural Application.
- Panel Material/Standards:** Material: 0.032" 3105-H24 ASTM B209 Aluminum conforming to Florida Building Code 2020 Section 1507.4.3.
Corrosion Resistance: Panel Material shall comply with Florida Building Code 2020, Section 1507.4.3
- Panel Dimension(s):** Thickness: 0.032" Aluminum
Width: 15 ¾" max coverage
Female Rib: 1" tall
Male Rib: ¾" tall rib w/ slotted strip.
Panel Seam: Snap Lock
- Panel Fastener:** Through Panel Slot: (1) #10-12 x 1" Pancake Type A
¼" minimum penetration through plywood
Corrosion Resistance: Per Florida Building Code 2020, Section 1507.4.4.
- Panel Seam Sealant:** 3/8" wide continuous bead of Titebond WeatherMaster Metal Roof Sealant applied to the inside edge of the male rib prior to installing the next panel. See detail for location.
- Substrate Description:** Min. 7/16" OSB sheathing or 15/32" thick, APA Rated plywood over supports at maximum 24" O.C. Design of OSB and plywood and supports are outside the scope of this evaluation. Substrate must be designed in accordance w/ Florida Building Code 2020.



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Allowable Design Uplift Pressures:

Table "A"

Maximum Total Uplift Design Pressure:	75.0 psf	112.5 psf
Panel Seam Sealant:	NA	3/8" Bead
Panel Fastener Spacing:	4 ½" O.C.	4 ½" O.C.

*Design Pressure includes a Safety Factor = 2.0.

Code Compliance:

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

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

Reference Data:

1. UL 580-06 / 1897-2012 Uplift Test
PRI Construction Materials
Report No. TCM-001-02-01 Dated 01/19/2020
2. Certificate of Independence
By Johnathan Green, P.E. (No. 88223) @ Force Engineering & Testing
(FBC Organization # ANE ID: 12901)

Quality Assurance Entity:

The manufacturer has established compliance of roof panel products in accordance with the Florida Product 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 Sections 1507.4.2 and in accordance with Manufacturers recommendations.

Installation:

Install per manufacturer's recommended details.

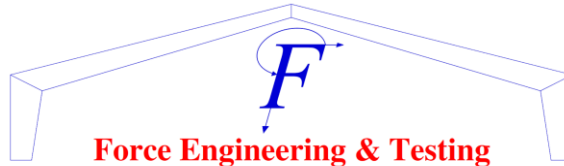
Underlayment:

Per Florida Building Code 2020, Section 1507.1.1 and manufacturer's installation guidelines.



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Roof Panel Fire Classification:

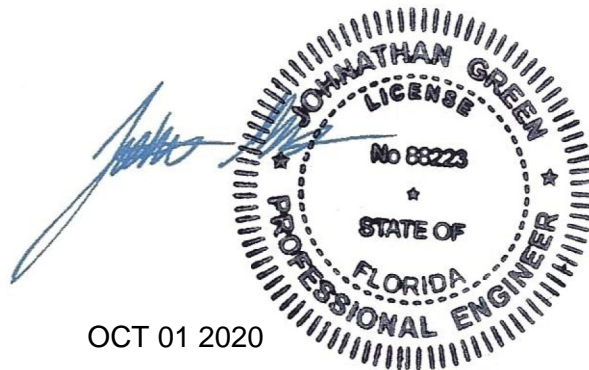
Fire classification is not part of this acceptance.

Shear Diaphragm:

Shear diaphragm values are outside the scope of this report.

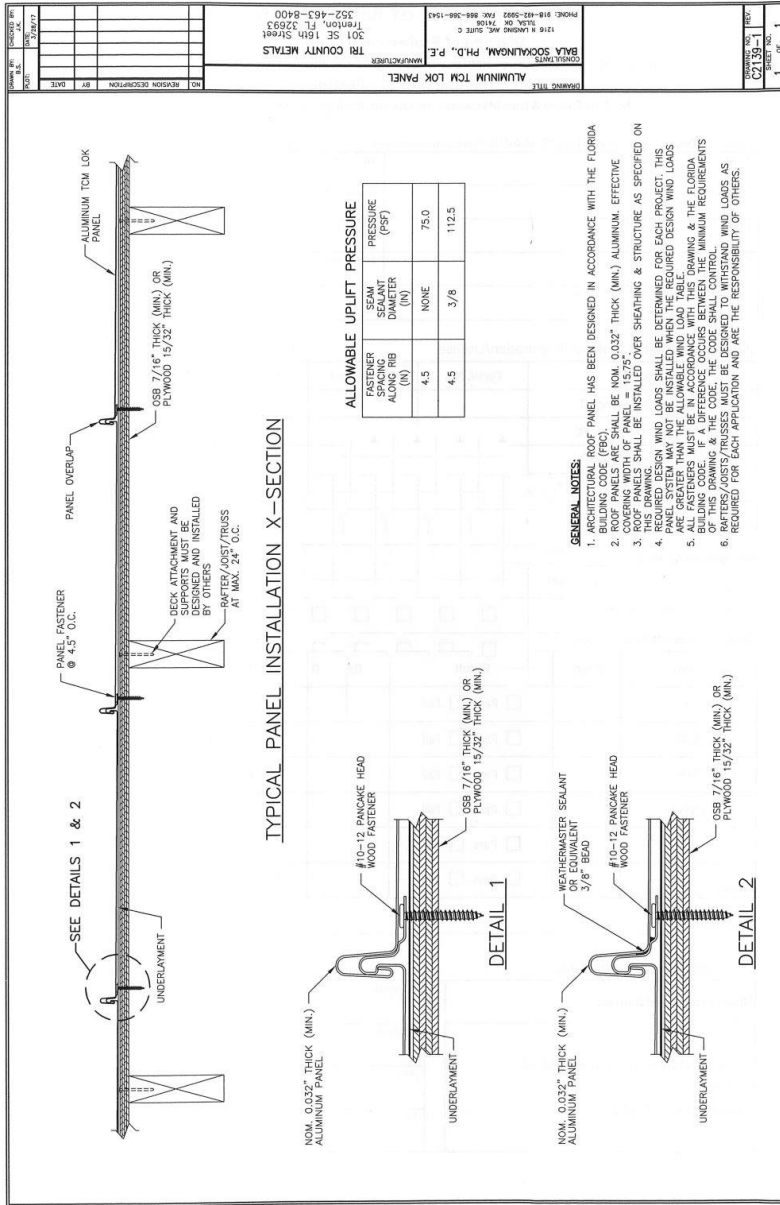
Design Procedure:

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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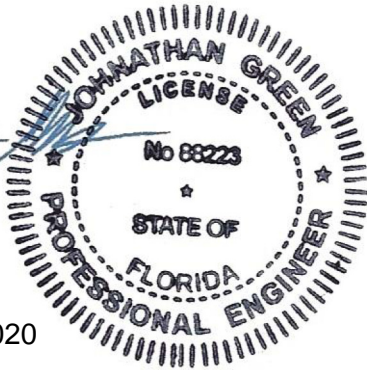


FASTENER	SEAM FASTENER ALONG RB	SEAM FASTENER DIAMETER (IN)	PRESSURE (PSF)
4.5	NONE	7/8	75.0
4.5	3/8	112.5	

- GENERAL NOTES:**
1. ALUMINUM TCM ROOF PANEL HAS BEEN DESIGNED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE (FBC).
 2. ROOF PANELS ARE TO BE NOM. 0.032" THICK (MIN.) ALUMINUM EFFECTIVE COVERING WITH A PANEL WIDTH OF 15'-7 1/2".
 3. COVERING SHALL BE INSTALLED OVER SHEATHING & STRUCTURE AS SPECIFIED ON THIS DRAWING.
 4. REQUIRED DESIGN WIND LOADS SHALL BE DETERMINED FOR EACH PROJECT. THIS DRAWING IS BASED ON THE REQUIRED DESIGN WIND LOADS.
 5. ALL FASTENERS MUST BE IN ACCORDANCE WITH THIS DRAWING & THE FLORIDA BUILDING CODE. THE CODE SHALL CONTROL.
 6. RAFTERS/JOISTS/TRUSSES MUST BE DESIGNED TO WITHSTAND WIND LOADS AS REQUIRED FOR EACH APPLICATION AND ARE THE RESPONSIBILITY OF OTHERS.

[Handwritten Signature]

OCT 01 2020



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