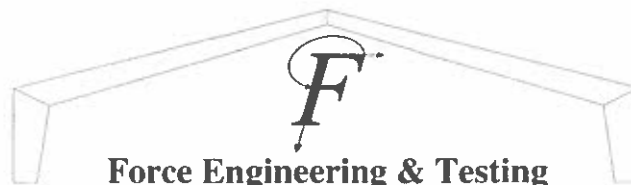


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Force Engineering & Testing

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

Product Evaluation Report **FREEDOM METALS, LLC.**

26 Ga. Freedom Tuff Roof Panel over 1x4 Wood Purlins

Florida Product Approval # 33548.1

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:

Freedom Metals, LLC
18504 SE Highway 19
Cross City, Florida 32628

Engineer Evaluator:

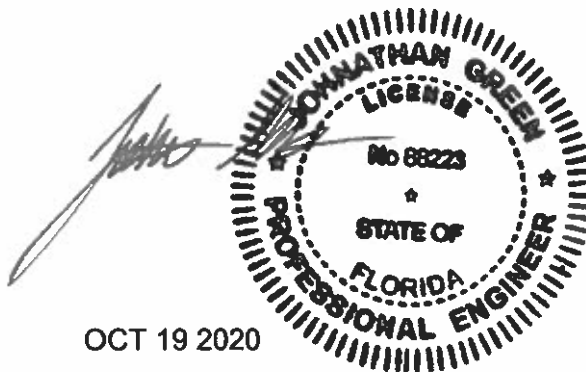
Johnathan Green, P.E. #88223
Florida Evaluation ANE ID: 12901

Validator:

Brian Jaks, P.E. #70159

Contents:

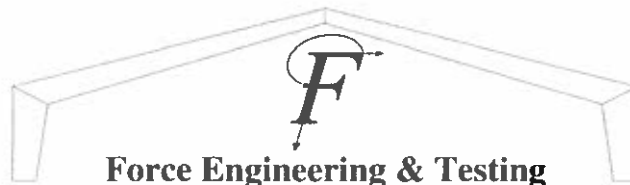
Evaluation Report Pages 1 - 5



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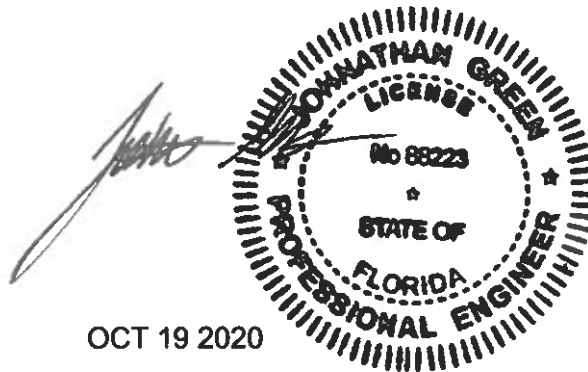
- Compliance Statement:** The product as described in this report has demonstrated compliance with the Florida Building Code 2020, Sections 1504.3.2, 1504.7.
- Product Description:** Freedom Tuff, 26 Ga. Steel, 36" coverage, through fastened roof panel over 1x4 wood purlins over one layer of asphalt shingles (optional) over min. 7/16" OSB decking. Non-Structural Application.
- Panel Material/Standards:** Material: Minimum 26 Ga. Steel conforming to Florida Building Code 2020 Section 1507.4.3.
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: 0.018" min.
Width: 36" maximum coverage
Rib Height: 3/4" major rib at 9" O.C.
- Panel Fastener:** #10-16 x 1 1/2" WoodZip HiLo TP-17 with sealing washing or approved equal.
Corrosion Resistance: Per Florida Building Code 2020, Section 1507.4.4.
- Substrate Description:** Min. 1x4 No. 2 wood purlins over maximum one layer of asphalt shingles/felt paper (optional) over min. 7/16" OSB decking over supports at maximum 24" O.C. The 1x4 wood purlins attached through decking into rafters with (2) #9 x 3" deck screws (Min. 1 1/2" screw penetration into rafters) at 24" O.C. maximum. Substrate must be designed in accordance w/ Florida Building Code.

Allowable Design Uplift Pressures:

Table "A"

Maximum Allowable Uplift Design Pressure:	101.0 psf	142.3 psf	183.5 psf
Fastener Pattern:	9"-9"-9"-6"-3"	9"-9"-9"-6"-3"	9"-9"-9"-6"-3"
Fastener Pattern / 1x4 Purlin Spacing:	24" O.C.	18" O.C.	12" O.C.

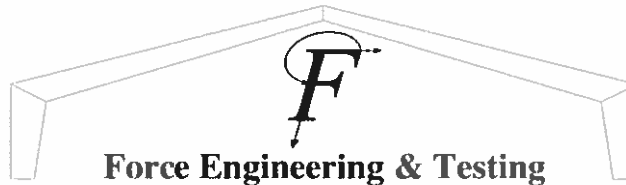
*Design Pressure includes a Safety Factor = 2.0.



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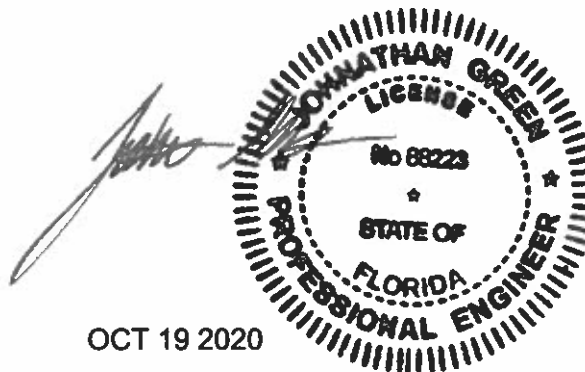
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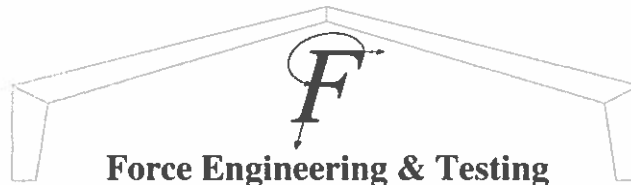
Website: www.forceengineeringtesting.com

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:	<p>The product described herein has demonstrated compliance with:</p> <ul style="list-style-type: none">▪ UL 580-06 - Test for Uplift Resistance of Roof Assemblies▪ UL 1897-2012 - Uplift Test for Roof Covering Systems▪ FM 4471-92 - Foot Traffic Resistance Test
Reference Data:	<ol style="list-style-type: none">1. UL 580-06 / 1897-2012 Uplift Test Force Engineering & Testing (FBC Organization # TST-5328) Report No. 731-0140T-20.2. FM 4471-10, Section 4.4 Foot Traffic Resistance Test Force Engineering & Testing (FBC Organization # TST-5328) Report No. 731-0140T-20.3. Certificate of Independence By Johnathan Green, P.E. #88223
Test Standard Equivalency:	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, 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.



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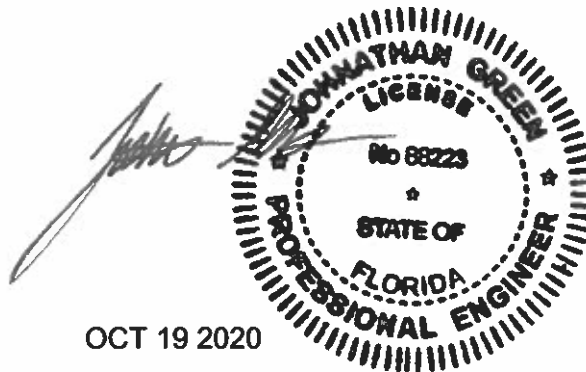
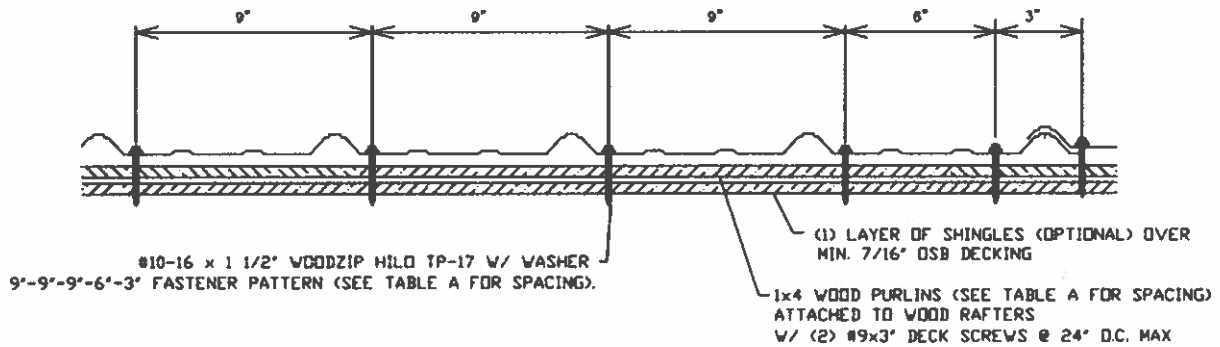


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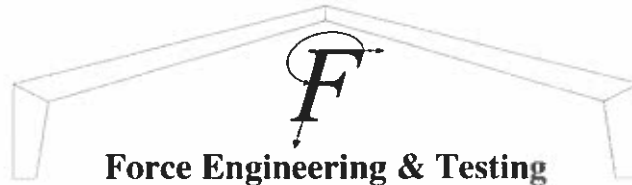
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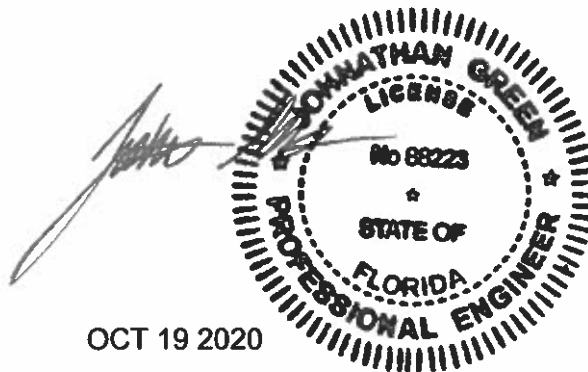
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Website: www.forceengineeringtesting.com

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 evaluation.
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.



OCT 19 2020

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SUBCONTRACTOR VERIFICATION

APPLICATION/PERMIT # _____ JOB NAME _____

THIS FORM MUST BE SUBMITTED BEFORE A PERMIT WILL BE ISSUED


Columbia County issues combination permits. One permit will cover all trades doing work at the permitted site. It is **REQUIRED** that we have records of the subcontractors who actually did the trade specific work under the general contractors permit.

NOTE: It shall be the responsibility of the general contractor to make sure that all of the subcontractors are licensed with the Columbia County Building Department.

Use website to confirm licenses: <http://www.columbiacountyfla.com/PermitSearch/ContractorSearch.aspx>

NOTE: If this should change prior to completion of the project, it is your responsibility to have a corrected form submitted to our office, before that work has begun.

Violations will result in stop work orders and/or fines.

ELECTRICAL <input checked="" type="checkbox"/>	Print Name <u>CHAD AMARA</u> Signature <u></u> Company Name: _____ License #: _____ Phone #: <u>904-237-3246</u>	Need <input type="checkbox"/> Lic <input type="checkbox"/> Liab <input type="checkbox"/> W/C <input type="checkbox"/> EX <input type="checkbox"/> DE
MECHANICAL/A/C <input type="checkbox"/>	Print Name _____ Signature _____ Company Name: _____ License #: _____ Phone #: _____	Need <input type="checkbox"/> Lic <input type="checkbox"/> Liab <input type="checkbox"/> W/C <input type="checkbox"/> EX <input type="checkbox"/> DE
PLUMBING/GAS <input type="checkbox"/>	Print Name _____ Signature _____ Company Name: _____ License #: _____ Phone #: _____	Need <input type="checkbox"/> Lic <input type="checkbox"/> Liab <input type="checkbox"/> W/C <input type="checkbox"/> EX <input type="checkbox"/> DE
ROOFING <input type="checkbox"/>	Print Name _____ Signature _____ Company Name: _____ License #: _____ Phone #: _____	Need <input type="checkbox"/> Lic <input type="checkbox"/> Liab <input type="checkbox"/> W/C <input type="checkbox"/> EX <input type="checkbox"/> DE
SHEET METAL <input type="checkbox"/>	Print Name _____ Signature _____ Company Name: _____ License #: _____ Phone #: _____	Need <input type="checkbox"/> Lic <input type="checkbox"/> Liab <input type="checkbox"/> W/C <input type="checkbox"/> EX <input type="checkbox"/> DE
FIRE SYSTEM/SPRINKLER <input type="checkbox"/>	Print Name _____ Signature _____ Company Name: _____ License #: _____ Phone #: _____	Need <input type="checkbox"/> Lic <input type="checkbox"/> Liab <input type="checkbox"/> W/C <input type="checkbox"/> EX <input type="checkbox"/> DE
SOLAR <input type="checkbox"/>	Print Name _____ Signature _____ Company Name: _____ License #: _____ Phone #: _____	Need <input type="checkbox"/> Lic <input type="checkbox"/> Liab <input type="checkbox"/> W/C <input type="checkbox"/> EX <input type="checkbox"/> DE
STATE SPECIALTY <input type="checkbox"/>	Print Name _____ Signature _____ Company Name: _____ License #: _____ Phone #: _____	Need <input type="checkbox"/> Lic <input type="checkbox"/> Liab <input type="checkbox"/> W/C <input type="checkbox"/> EX <input type="checkbox"/> DE