

Force Engineering & Testing

19530 Ramblewood Drive

Humble, Texas 77338

Phone: (281) 540-6603, Fax: (281) 540-9966

Website: forceengineeringtesting.com

Product Evaluation Report
PINNACLE STRUCTURES, INC.

Pinnacle Double-Lok 24 Ga. Roof Panel over open framing

Florida Product Approval # 40078.3 R1

Florida Building Code 2023

Per Rule 61G20-3

Method: 1 –D

Category: Structural Components

Subcategory: Roof Deck

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

NON HVHZ

Product Manufacturer:

Pinnacle Structures, Inc.

2665 Bill Foster Memorial Hwy

Cabot, Arkansas 72023

Engineer Evaluator:

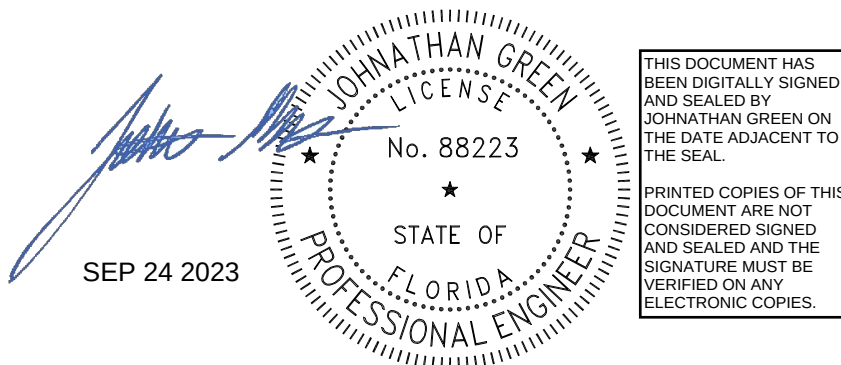
Johnathan Green, P.E. #88223

Florida Evaluation ANE ID: 12901

Contents:

Evaluation Report: Pages 1 - 4

Details: Pages 5 - 6



THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY JOHNATHAN GREEN ON THE DATE ADJACENT TO THE SEAL.

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Compliance Statement: The product as described in this report has demonstrated compliance with the Florida Building Code 2023, Sections 1504.3.2, 1504.7.

Product Description: Pinnacle Double-Lok, 3" tall trapezoidal Standing Seam Roof Panel, 24 Ga. Steel, 12", 18", 24" panel coverage. Structural Application.

Panel Material/Standards: Material: 24 Ga. Steel, ASTM A792 or ASTM A653 G90 conforming to Florida Building Code 2023 Section 1507.4.3.
 Yield Strength: Min. 50.0 ksi
 Corrosion Resistance: Panel Material shall comply with Florida Building Code 2023, Section 1507.4.3.

Panel Dimension(s): Thickness: 0.0235" min.
 Width: 12", 18", 24" coverage
 Rib Height: 3" Tall Trapezoidal Standing Seam Double Lock Rib

Roof Panel Clips: Sliding Clips HW-2122 or HW-2224, 20 Ga. steel top, 14 Ga. steel base
 S-5! DL Wind Clamp HW-569 must be installed on the panel rib at every panel clip
 Corrosion Resistance: Per Florida Building Code 2023 Section 1506.7

Clip Fastener: (2) ¼-14 x 1 ¼" HWH SD3 (or approved equal) per clip.
 Corrosion Resistance: Per Florida Building Code 2023, Section 1507.4.4

Substrate Description: Min. 16 Ga. Steel Framing. Framing must be designed in accordance w/ Florida Building Code 2023.

Allowable Design Uplift Pressures:

Double-Lok 24" Coverage

Maximum Design Pressure:	-55.8 psf	-120.0 psf
Clip Spacing:	5'-0" O.C.	1'-0" O.C.

Double-Lok 18" Coverage

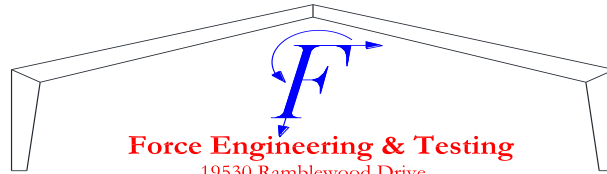
Maximum Design Pressure:	-66.7 psf	-177.5 psf
Clip Spacing:	5'-0" O.C.	1'-0" O.C.

Double-Lok 12" Coverage

Maximum Design Pressure:	-93.8 psf	-200.0 psf
Clip Spacing:	5'-0" O.C.	1'-0" O.C.

*Design Pressure includes a Safety Factor = 2.0.

*Interpolation may be used for clip spacings between 1' & 5'



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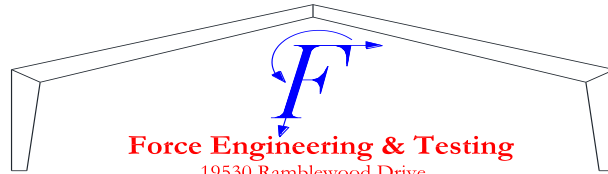
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Code Compliance:	The product described herein has demonstrated compliance with The Florida Building Code 2023, Section 1504.3.2, 1504.7.
Evaluation Report Scope:	The product evaluation is limited to compliance with the structural wind load requirements of the Florida Building Code 2023, as relates to Rule 61G20-3.
Performance Standards:	The product described herein has demonstrated compliance with: ▪ ASTM E 1592-05 (2017) Test method for structural performance of sheet metal roof and siding systems by uniform static air pressure difference. ▪ FM 4470 Section 4.6 - 2016 - Foot Traffic Resistance Test.
Reference Data:	1. ASTM E 1592-01 Force Engineering & Testing, Inc. (FBC Organization # TST-5328) Report No. 07-0129T-06 2. FM 4471-10 Section 4.4 Foot Traffic Resistance Test Force Engineering & Testing (FBC Organization # TST-5328) Report No. 759-0093T-21 3. Certificate of Independence By Johnathan Green, P.E. #88223
Test Standard Equivalency:	The ASTM E 1592-01 test standard is equivalent to the ASTM E 1592-05 (2017) test standard. The FM 4471-10 Section 4.4 test standard is equivalent to the FM 4470 Section 4.6 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 2023, including Section 1507.4.2 and in accordance with Manufacturers recommendations.
Installation:	Install per manufacturer's recommended details.



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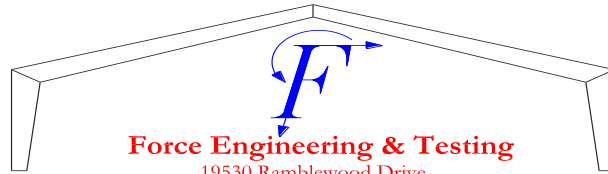
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Insulation:	Manufacturer's approved product (Optional)
Roof Panel Fire Classification:	Fire classification is not part of this evaluation.
Shear Diaphragm:	Shear diaphragm values are outside the scope of this report.
Design Procedure:	Based on the dimensions of the structure, appropriate wind loads are determined using Chapter 16 of the Florida Building Code 2023 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. Support framing must be in compliance with Florida Building Code 2023 Chapter 22 for steel, and Chapter 16 for structural loading.



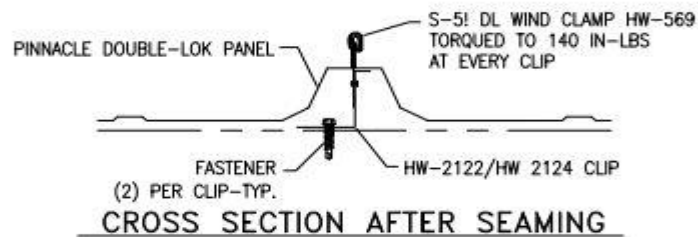
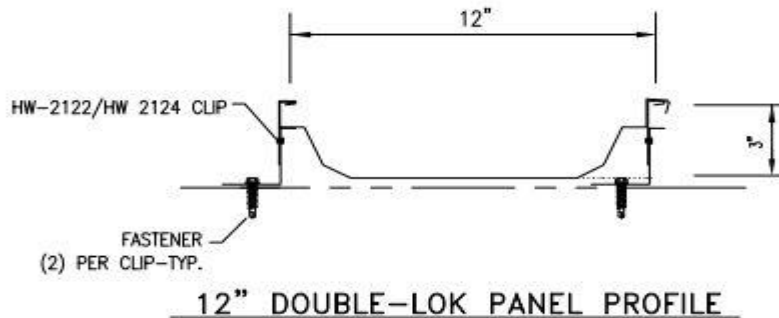
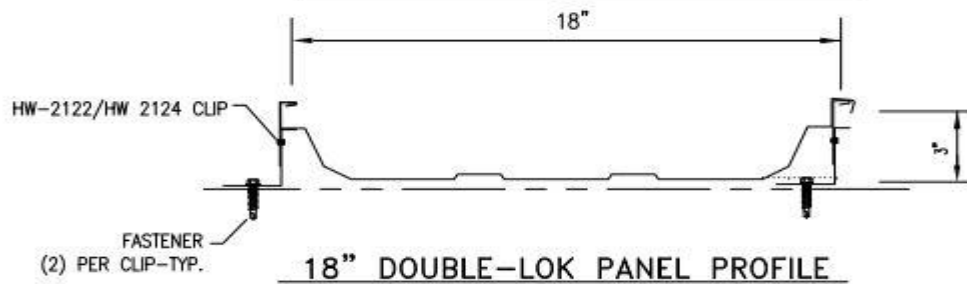
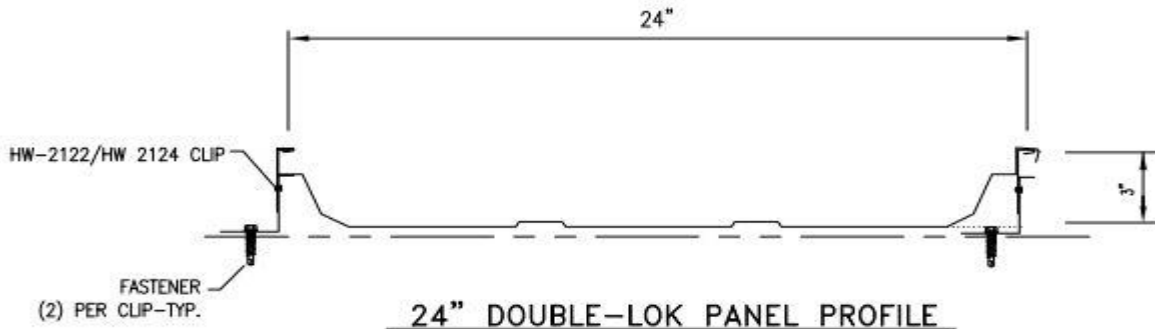
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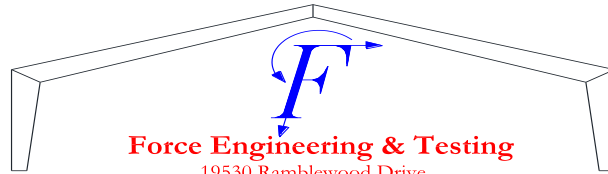
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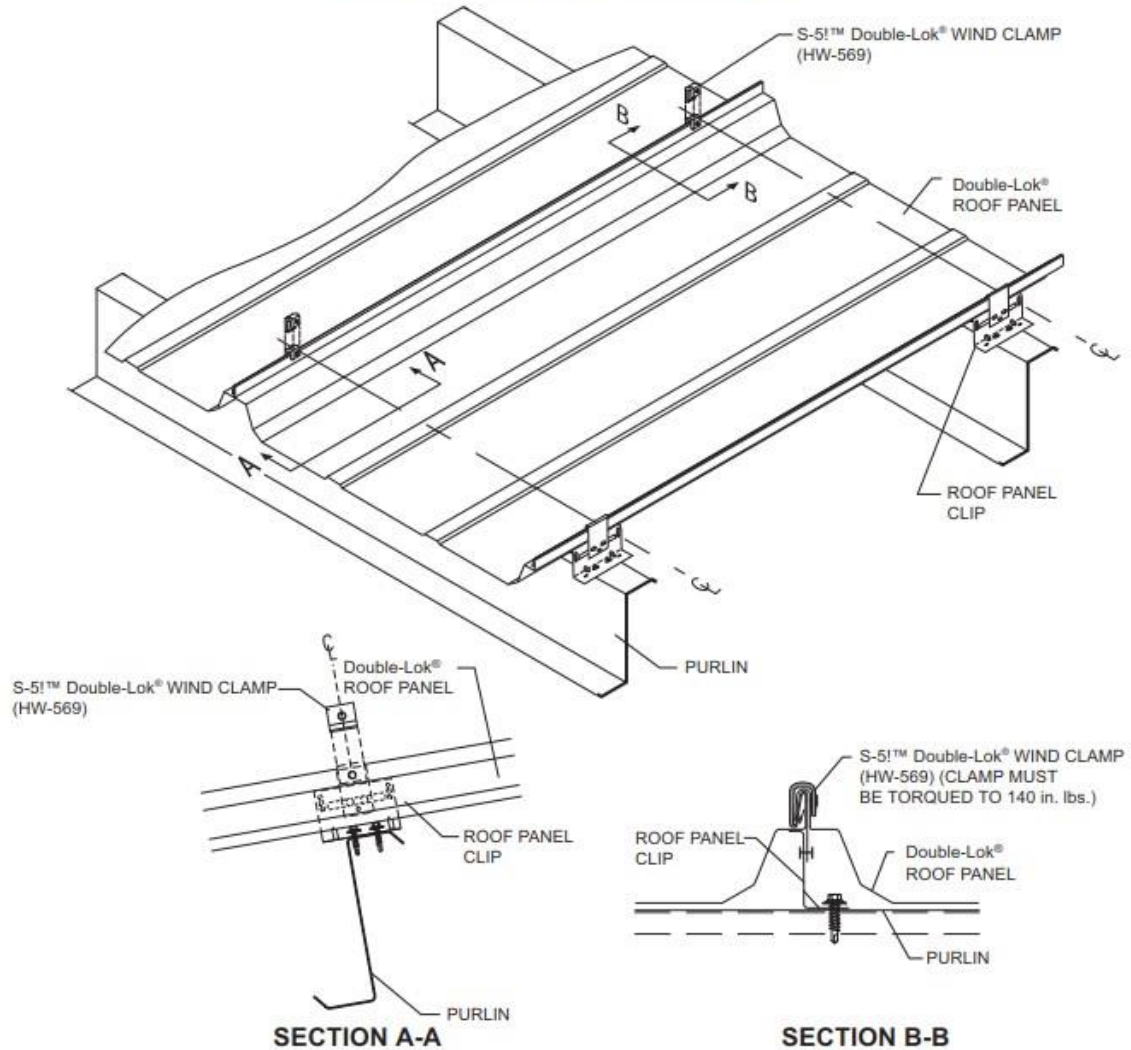
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S-5!™ Double-Lok® WIND CLAMP INSTALLATION LOCATION



NOTES:

1. Only for use with HW-2122, 2124
2. Torque set screw to 140 in-lbs.