

Evaluation Report "Englert® Series 500" Metal Roof Assembly

Manufacturer:

Englert, Inc.

1200 Amboy Avenue
Perth Amboy, NJ 08862
(732) 826-8614

for

Florida Product Approval

FL 11698.1 R7

Florida Building Code 8th Edition (2023)

Method: 1 - D

Category: Roofing

Sub - Category: Metal Roofing

Product: "Series 500" Roof Panel

Material: Steel

Panel Thickness: 26 gauge

Panel Width: 21-5/8"

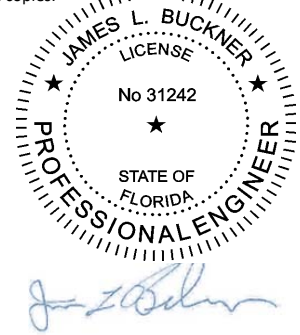
Panel Seam: Lapped

Support: Wood Deck

Prepared by:

James L. Buckner, P.E., SECB
Florida Professional Engineer # 31242
Florida Evaluation ANE ID: 1916
Project Manager: Diana Galloway
Report No. 23-555-S500-S6W-ER
(Revises 20-234-S500-S6W-ER, FL11698.1 R6)
Date: 08/16/2023

This item has been electronically signed and sealed by James L. Buckner, P.E., on this date using a Digital Signature. Printed copies of this document are not considered signed and sealed, and the signature must be verified on any electronic copies.



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Evaluation Report

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Date: 2023.08.16
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Manufacturer:	Englert, Inc. 1200 Amboy Avenue Perth Amboy, NJ 08862 (732) 826-8614 http://www.englertinc.com/
Product Name:	"Series 500"
Product Category:	Roofing
Product Sub-Category	Metal Roofing
Compliance Method:	State Product Approval Rule 61G20-3.005 (1) (d)
Product/System Description:	"Series 500" Standing Seam Roof Panel 26 gauge steel 5V roof panel mechanically attached to Wood Deck with screws.
Product Assembly as Evaluated:	Refer to Page 4 of this report for product assembly components/materials & standards: 1. Roof Panel 2. Fasteners 3. Underlayment 4. Insulation (Optional)
Support:	Type: Wood Deck (Design of support and its attachment to support framing is outside the scope of this evaluation.) Description: • 19/32" or greater plywood, • or Wood plank (min. specific gravity of 0.42)
Slope:	Minimum slope shall be: 3 : 12 or greater In compliance with FBC Chapter 15 based on the type of roof covering, applicable code sections and in accordance with manufacturer's recommendations.
Performance:	Wind Uplift Resistance: • Design Uplift Pressure: - 79 PSF (Refer to "Table A" attachment details herein)

Performance Standards:	The product described herein has demonstrated compliance with: • UL 580-06 – <i>Test for Uplift Resistance of Roof Assemblies</i> • UL 1897-15 – <i>Uplift test for roof covering systems</i>
Standards Equivalency:	The UL 580-94 & UL 1897-98 standard version used to test the evaluated product assembly is equivalent with the prescribed standards in UL 580-06 & UL 1897-15 adopted by the Florida Building Code 8th Edition (2023) .
Code Compliance:	The product(s) described herein have demonstrated compliance with the performance standards listed above as referenced in the Florida Building Code 8th Edition (2023).
Evaluation Report Scope:	This product evaluation is limited to compliance with the structural requirements of the Florida Building Code, as related to the scope section to Florida Product Approval Rule 61G20-3.001.
Limitations and Conditions of Use:	• <u>Scope of “Limitations and Conditions of Use” for this evaluation:</u> This evaluation report for “Optional Statewide Approval” contains technical documentation, specifications and installation method(s) which include “Limitations and Conditions of Use” throughout the report in accordance with Rule 61G20-3.005. Per Rule 61G20-3.004, the Florida Building Commission is the authority to approve products under “Optional Statewide Approval”. • <u>Option for application outside “Limitations and Conditions of Use”</u> Rule 61G20-3.005(1)(e) allows engineering analysis for “project specific approval by the local authorities having jurisdiction in accordance with the alternate methods and materials authorized in the Code”. Any modification of the product as evaluated in this report and approved by the Florida Building Commission is outside the scope of this evaluation and will be the responsibility of others. • Design of support system is outside the scope of this report. • Fire Classification is outside the scope of Rule 61G20-3, and is therefore not included in this evaluation. • This evaluation report does not evaluate the use of this product for use in the High Velocity Hurricane Zone code section. (Dade & Broward Counties)
Quality Assurance:	The manufacturer has demonstrated compliance of roof panel products in accordance with the Florida Building Code and Rule 61G20-3.0005 (3) for manufacturing under a quality assurance program audited by an approved quality assurance entity through Keystone Certifications, Inc. (FBC Organization ID# QUA 1824).

**Components/Materials
(by Manufacturer):**

Roof Panel:

Material: Englert Series 500
Steel
Thickness: 26 gauge (min.)
Panel Widths: 21-5/8" (max.) Coverage
Rib Height: 7/8"
Yield Strength: 40 ksi min.
Corrosion Resistance: Per FBC Section 1507.4.3

Fastener:

Type: Hex-Head Wood Screw
with weather-sealing washer
Size : #10 x 1-1/2"
Corrosion Resistance: Per FBC Section 1506.6 and 1507.4.4
Standard: Per ANSI/ASME B18.6.1

**Components&
Materials:
(by Others)**

Underlayment:

Material and application shall be in compliance with FBC Section 1507.1.1 and in accordance with applicable code sections and manufacturer's recommendations.

Insulation (Optional):

Type: Rigid Insulation Board
Thickness: 3" (max.)
Properties:
Density: 2.25 pcf (lbs/ft³) min.
Or Compressive Strength: 20 psi min.

Insulation Notes:

- Rigid Insulation shall meet minimum density OR compressive strength.
- Insulation shall comply with FBC Section 1508. When insulation is incorporated, fastener length shall conform to penetrate thru bottom of support a minimum of 3/4".

Installation:

Installation Method:

(Refer to "TABLE A" below and drawings at the end of this report.)

- Fastener Spacing: **Refer to "TABLE A" Below**
(Attached to the tops of the V's for a total of 3 screws across the width of the panel.)
- Row Spacing: **Refer to "TABLE A" Below**
(along the length of the panel)
- Minimum fastener penetration thru bottom of support, 3/16".
- For panel construction at the end of panels, refer to manufacturer's instructions and any site specific design.

TABLE "A" ALLOWABLE LOADS	
Design Pressure:	- 79 PSF
Fastener Spacing:	10.5" o.c.
Row Spacing:	24"
Notes: • Allowable design pressure(s) for allowable stress design (ASD)..	

Install the "Series 500" roof panel assembly in compliance with the installation method listed in this report and applicable code sections of FBC 8th Edition (2023). The installation method described herein is in accordance with the scope of this evaluation report. Refer to manufacturer's installation instructions as a supplemental guide for attachment.

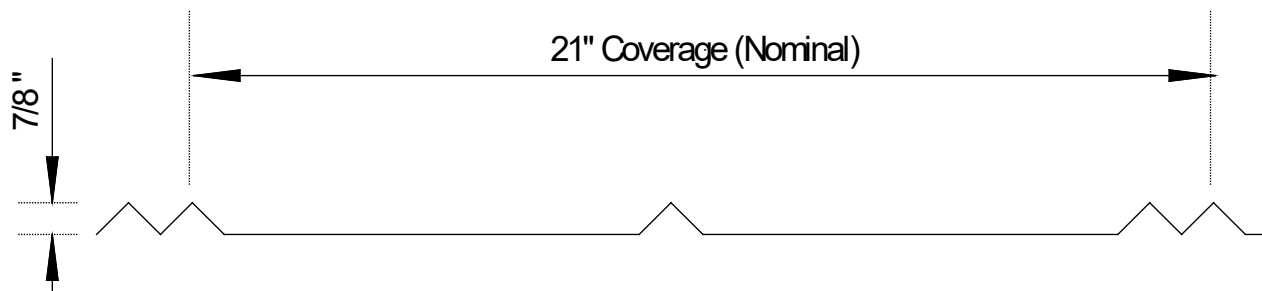
Referenced Data:

1. UL580-94 (with 1998 Revisions) & UL 1897
By Hurricane Test Laboratories, Inc. (FBC Organization #TST ID: 1527)
Report #0155-1207-04, Specimen #1 Date: 2/18/05
2. Quality Assurance
Keystone Certifications, Inc. (FBC Organization ID# QUA 1824)
Englert, Inc. Licensee #420
3. Equivalency of Test Standard Certification
By James L. Buckner, P.E. @ CBUCK Engineering
(FBC Organization # ANE 1916)
4. Certification of Independence
By James L. Buckner, P.E. @ CBUCK Engineering
(FBC Organization # ANE 1916)

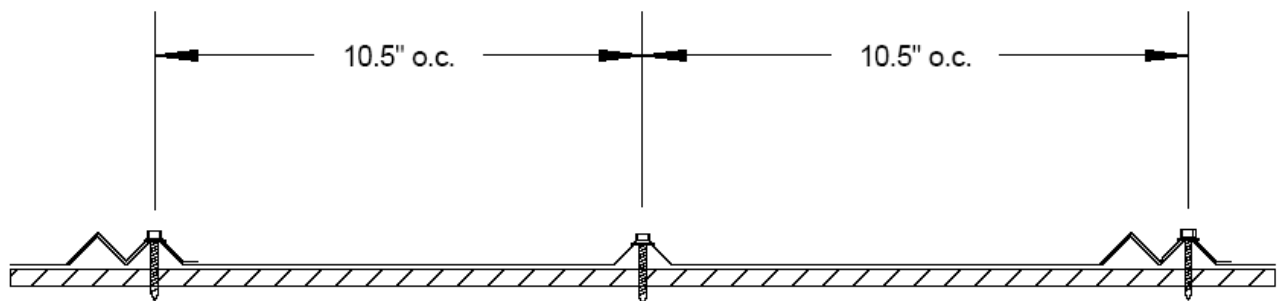
Installation Method

Englert, Inc.
"Series 500" (26 gauge Steel) Roof Panel attached to Wood Deck

Drawings



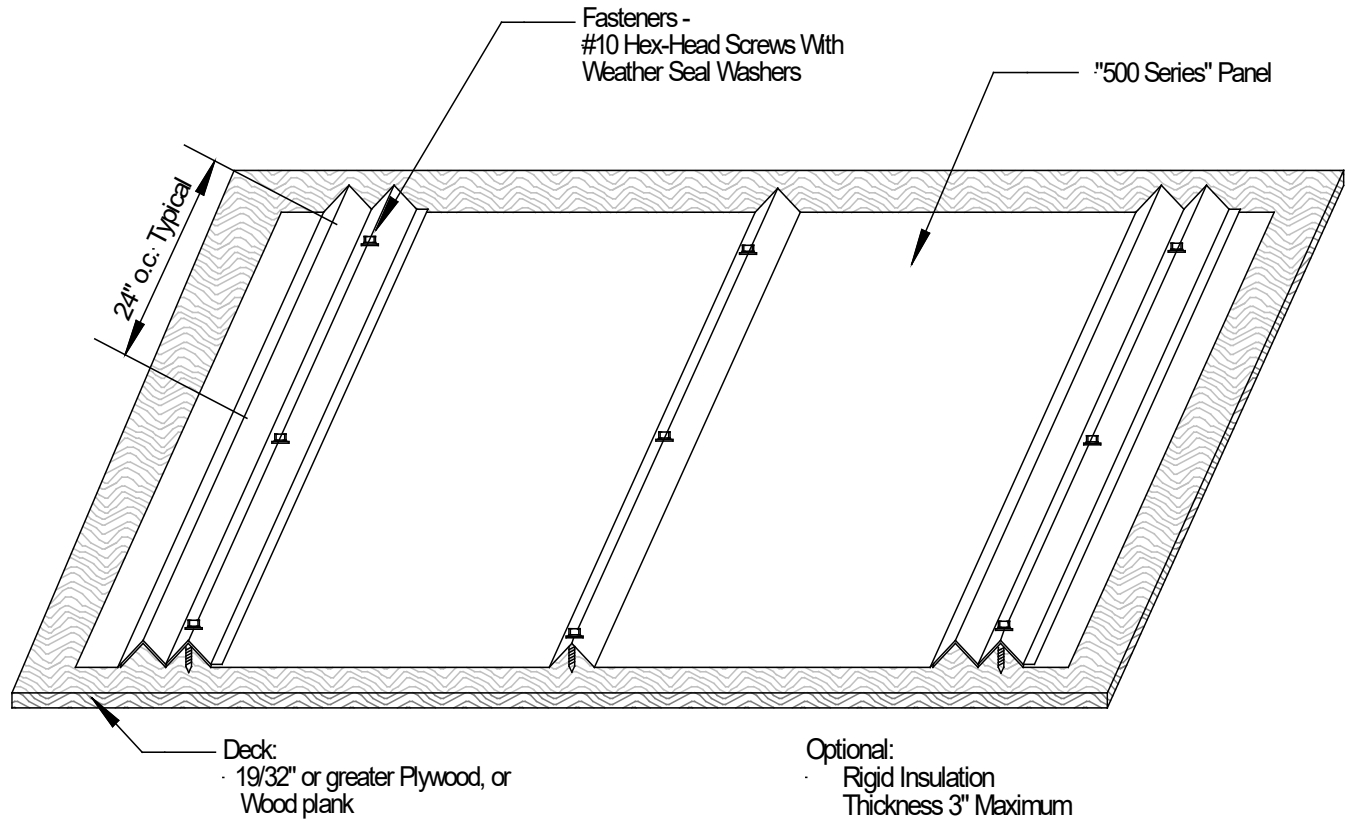
Panel Profile



Typical Assembly Profile View
(Typical Fastening Pattern Across Width - Interior)

Installation Method

Englert, Inc.
"Series 500" (26 gauge Steel) Roof Panel attached to Wood Deck



**Typical Roof Assembly
Isometric View**

TABLE "A"	
Design Pressure:	- 79 PSF
Fastener Spacing:	10.5" o.c.
Row Spacing:	24"