

Evaluation Report "Englert® Series 2500" Metal Roof Assembly

Manufacturer:

Englert, Inc.

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

for

Florida Product Approval

FL 39748.2 R4

Florida Building Code 8th Edition (2023)

Method: 1 - D

Category: Roofing

Sub - Category: Metal Roofing

Product: "Series 2500" Roof Panel

Material: Aluminum

Panel Thickness: 0.040"

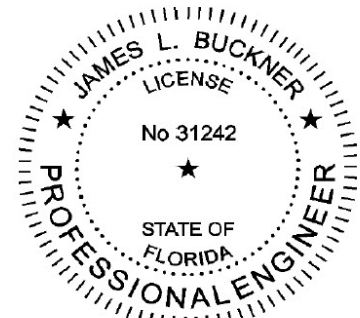
Panel Width: 16"

Support: Insulated Steel Deck

Prepared by:

James L. Buckner, P.E., SECB
Florida Professional Engineer # 31242
Florida Evaluation ANE ID: 1916
Project Manager: Diana Galloway
Report No. 25-770-S2500-A4S-hz-ER
(Revises No. 25-716-S2500-A4S-hz-ER, FL39748.2 R3)
Date: 9/18/2025

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



James L. Buckner, P.E.
FL31242

A handwritten signature in black ink, appearing to read "James L. Buckner".

Contents:

Evaluation Report

Pages 1 – 9

Manufacturer:	Englert, Inc. 1200 Amboy Avenue Perth Amboy, NJ 08862 (732) 826-8614 http://www.englertinc.com/
Product Name:	"Series 2500"
Product Category:	Roofing
Product Sub-Category	Metal Roofing
Compliance Method:	State Product Approval Rule 61G20-3.005 (1) (d)
Product/System Description:	"Series 2500" Roof Panel 0.040" Aluminum standing seam roof panel mechanically attached to Insulated Steel Deck with panel clips & screws.
Product Assembly as Evaluated:	Refer to Page 4 of this report for product assembly components/materials & standards: 1. Roof Panel 2. Panel Clip 3. Fasteners 4. Adhesive 5. Underlayment 6. Barrier Board 7. Insulation
Support:	Type: Steel Deck (Design of support system is outside the scope of this evaluation.) Description: • Thickness: 22 gauge minimum • Yield strength: 33 ksi minimum
Slope:	Minimum slope: 1/2:12 (Non-HVHZ) Per FBC 1507.4.2 1:12 (HVHZ) Per FBC 1515.2 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: (Refer to "Table A" attachment details herein)
Performance Standards:	The product described herein has demonstrated compliance with: • TAS 125-03 – <i>Standard Requirements for Metal Roofing Systems</i> • ASTM E2140-01 - <i>Standard Test Method for Water Penetration of Metal Roof Panels Systems by Static Water Pressure Head</i>
Code Compliance:	The product(s) described herein have demonstrated compliance with the performance standards listed above as referenced in the Florida Building Code 8 th 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". • All metal components and fasteners shall be corrosion resistant in accordance with applicable sections of FBC, including but not limited to Sections 1504.3.2, 1506.6 and 1507.4.4. For HVHZ areas, all roofing accessories shall comply with FBC Sections 1517.5 and 1517.6. • All insulation fasteners, membrane fasteners and stress plates shall comply with FBC Section 1520.4 as applicable. • The design pressures listed herein is applicable to all roof pressure zones. Rational analysis or extrapolation to enhance pressure is not permitted in HVHZ zones. • Maximum panel lengths, valleys & panel accessories shall comply with Roofing Application Standard RAS 133 as applicable in HVHZ areas. • Deck shall be in compliance with applicable building code. • Fire Classification is outside the scope of Rule 61G20-3 and is therefore not included in this evaluation. • All panels shall be permanently labeled with the manufacturer's name and/or logo. • This evaluation report approves the product assembly as described in this report for use in the High Velocity Hurricane Zone (HVHZ) code section. (Dade & Broward Counties) <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.

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:	Englert Series 2500
	Material:	Aluminum
	Thickness:	0.040" (min.)
	Panel Widths:	16" (max.) Coverage
	Rib Height:	2"
	Alloy Type:	3105-H14
	Material Standards:	Per FBC 1507.4.3 (Non-HVHZ), 1518.9 (HVHZ)
	Corrosion Resistance:	Per FBC 1507.4.3(2) (Non-HVHZ), 1518.9 (HVHZ)

Roof Panel Clips:

Option 1:

Product Name:	Englert "Series 2500 Floating Clip"
Englert Part #:	Clip Top: 05082H Clip Base: 05082I
Type:	Two-piece, floating clip
Material:	Galvanized Steel
Thickness:	Clip Top: 24 Gauge Stainless Steel Clip Base: 18 Gauge Galvanized Steel
Yield Strength:	40 ksi min.
Dimensions:	Clip Top: 2-1/8" x 6-1/4" x 3/4" Clip Base: 1-1/8" x 3-5/8" x 9/16"
Corrosion Resistance:	Per FBC Section 1506.7

Option 2:

Product Name:	Englert "Series 2500 Floating Clip"
Englert Part #:	Clip Top: 05082J Clip Base: 05082I
Type:	Two-piece, floating clip
Material:	Galvanized Steel
Thickness:	Clip Top: 24 Gauge Galvanized Steel Clip Base: 18 Gauge Galvanized Steel
Yield Strength:	40 ksi min.
Dimensions:	Clip Top: 2-1/8" x 6-1/4" x 3/4" Clip Base: 1-1/8" x 3-5/8" x 9/16"
Corrosion Resistance:	Per FBC Section 1506.7

Fastener:

Type:	Pancake-Head Self-Drilling Screw
Size :	#14-13 x length to accommodate insulation
Corrosion Resistance:	Per FBC Section 1506.6 and 1507.4.4
Standard:	Per SAE J78-1979

Seam Adhesive/Sealant:

Product Name: Bostik 915
Type: One component, polyurethane adhesive
Application Size: 3/8" continuous bead
Application Location: along male flange the full length of panel
(Design of adhesive is outside the scope of this evaluation.)

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

Underlayment:

Non-HVHZ:

One of the following per FBC 8th Edition (2023), Section 1507.1.1.
ASTM D226, D1970, D4869, D6757, D8257
Installation shall comply with FBC including Sections 1507.1.1.1, 1507.1.1.2 where applicable and in accordance with roof manufacturer's recommendations.

HVHZ:

One of the following per FBC 8th Edition (2023), Section 1518.2.
ASTM D226, D1970, D4869, D6757, D8257
Installation shall comply with FBC including Sections 1518.2, 1518.2.1, Table, 1518.2.1, 1518.2.2, 1518.2.3, 1518.2.4 where applicable and in accordance with roof manufacturer's recommendations.

Fire Barrier Board:

Any approved fire barrier with current approval.
(Fire classification is outside the scope of this evaluation. Refer to current fire listings for installation of fire barrier & fire rating of this system.)

Insulation:

Option 1:

Type: Rigid Insulation Board
Thickness: 4" – 6"
Properties:
Compressive Strength: 20 psi min.

Option 2:

Type: Rigid Insulation Board
Thickness: 3"
Properties:
Compressive Strength: 20 psi min.

Insulation Notes:

- Insulation shall be installed over steel deck with approved fastener and plates.
- Fastener length shall conform to penetrate through bottom of support a minimum of 1/2".
- Fastening density shall comply with RAS 117.

Installation:

Installation Method:

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

- Clip Spacing: **Refer to “TABLE A” Below**
(along the length of the panel)
- Two (2) fasteners per Clip
- Rib Interlock: Mechanically seamed 90° (SINGLE-LOCK) per Table A below.
- Seam Adhesive: Apply along male flange the full length of the panel.
- Minimum fastener penetration thru bottom of support, 1/2”.
- For panel construction at the end of panels, refer to manufacturer’s instructions and any site specific design.

TABLE “A” ALLOWABLE LOADS “Series 2500” 0.040” Aluminum attached to Insulated Steel Deck						
	METHOD 1	METHOD 2	METHOD 3	METHOD 4	METHOD 5	METHOD 6
Design Pressure (PSF):	-71	-101	-116	-153.5	-101	-131
Clip Type:	Option 1 SS Top	Option 1 SS Top	Option 1 SS Top	Option 1 SS Top	Option 2 GS Top	Option 2 GS Top
Clip Spacing:	48”	24”	6”	8”	24”	8”
# Fasteners per Clip:	2	2	2	2	2	2
Panel Seam:	90°	90°	90°	180°	180°	180°
Insulation Thickness:	4”-6”	4”-6”	4”-6”	4”-6”	3”	3”
Adhesive:	No	Yes	Yes	Yes	No	No
Notes: 1. Allowable design pressure(s) for allowable stress design (ASD). 2. The design pressures listed herein is applicable to all roof pressure zones. 3. Rational analysis or extrapolation to enhance pressure is not permitted in HVHZ zones.						

Install the “Series 2500” 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.

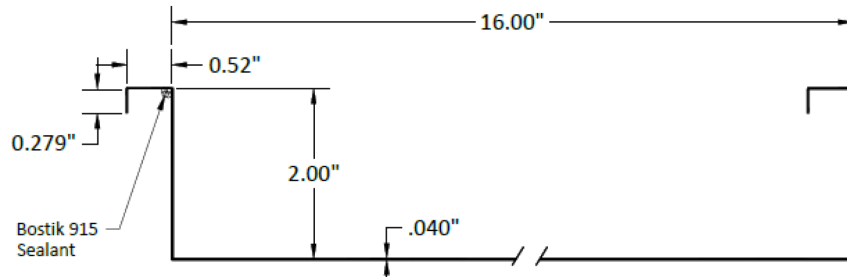
Referenced Data:

1. TAS 125 Uplift Test
By Intertek Building & Construction
Report # I3152.01-450-18-r0, Sp #1, #2, Date: 6/16/21
2. TAS 125 Uplift Test
By Intertek Building & Construction
Report # M4634.01-109-18-r0, Sp #1, Date: 8/20/21
3. TAS 125 Uplift Test
By Intertek Building & Construction
Report #Q8139.01-109-18 R1, Date: 03/05/2024
4. TAS 125 Uplift Test
By Intertek Building & Construction
Report #Q8142.01-109-18, Date: 03/04/2024
5. ASTM E2140-01 Water Penetration Test
By ENCON Technology, Inc.
Report # Project C1693-1, Report Date: 4/16/10
6. Quality Assurance
Keystone Certifications, Inc. (FBC Organization ID# QUA 1824)
Englert, Inc. Licensee #420
7. Certification of Independence
By James L. Buckner, P.E. @ CBUCK Engineering
(FBC Organization # ANE 1916)

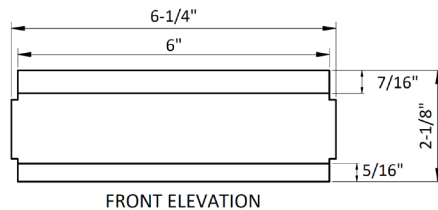
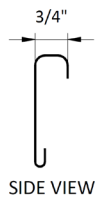
**Tests Performed But
Not Evaluated In This
Report:**

1. TAS 100 Test
By PRI Test Lab
Report #HTL-009-02-01 Date: 3/15/16
2. ASTM G23 & B117 Certifications
By BASF, Date: 1/18/06

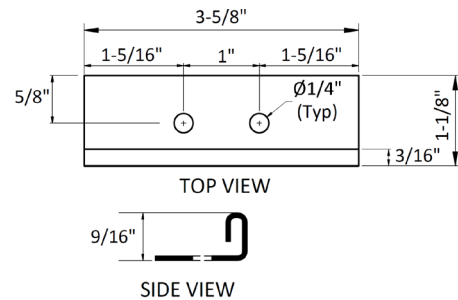
Englert, Inc. "Series 2500" (0.040" Aluminum) Roof Panel Profile Drawings



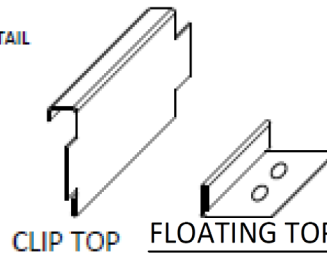
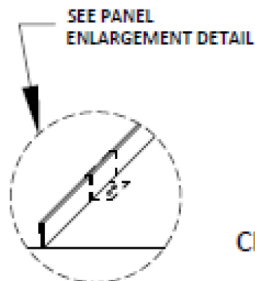
Typical Panel Profile



FLOATING TOP (PART No. 05082H & 05082J)

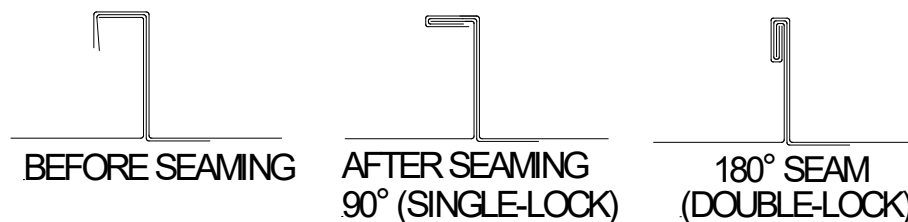


FLOATING BASE (PART No. 05082I)



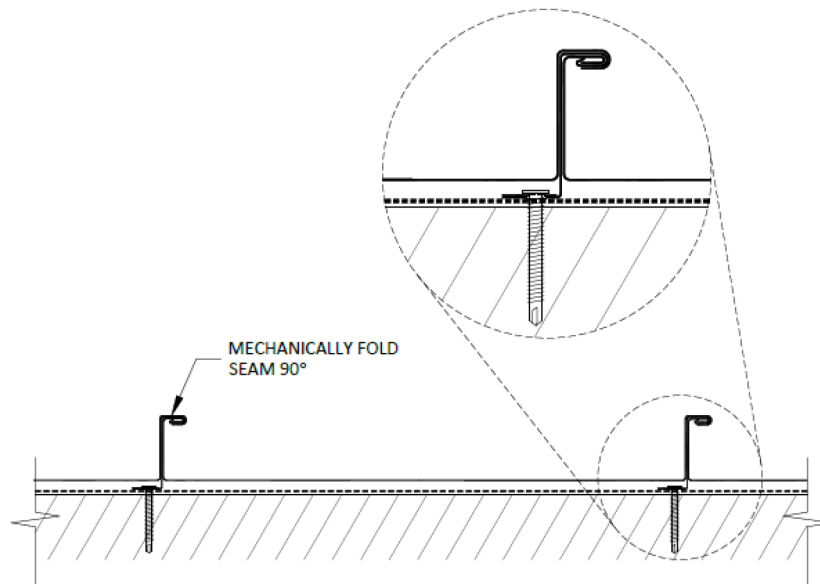
PANEL / CLIP ISOMETRIC

Panel Clip Profile Englert "Series 2500 Floating Clip" (Top & Base)

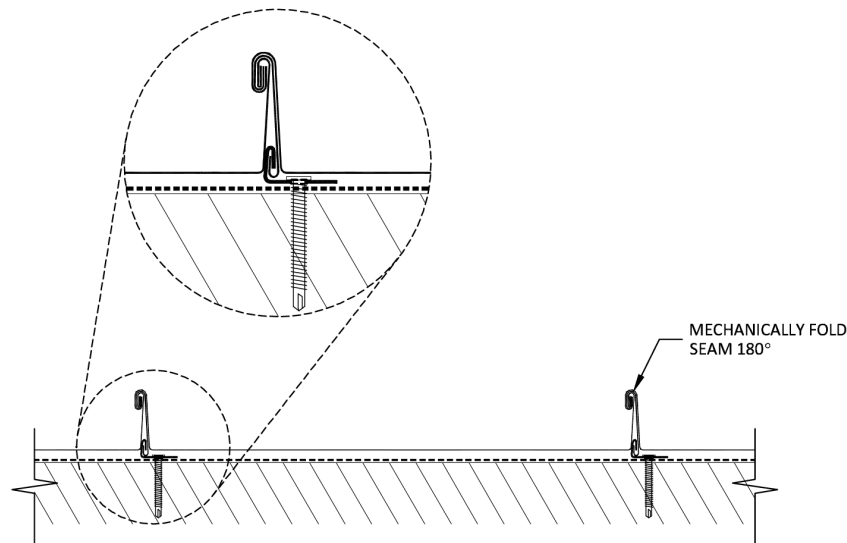


Panel Seaming Profiles

Englert, Inc.
"Series 2500" (0.040" Aluminum) Roof Panel
Installation Drawings



Typical Assembly Profile View
Series 2500 attached to Steel Deck with Single-Lock Panel Seam



Typical Assembly Profile View
Series 2500 attached to Steel Deck with Double-Lock Panel Seam