

Evaluation Report “Englert® Series 1101” Metal Roof Assembly

Manufacturer:

Englert, Inc.

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

for

Florida Product Approval

FL 11698.6 R2

Florida Building Code 5th Edition (2014)

Method: 1 - D

Category: Roofing

Sub - Category: Metal Roofing

Product: “Series 1101” Roof Panel

Material: Steel

Panel Thickness: 24 gauge

Panel Width: 16”

Panel Seam: Snap-Lock

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. 15-126-S1101-S4W-ER
(Revises 11-188-S1101-S4W-ER)
Date: 4 / 2 / 15

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Secure Electronic Seal for Electronic Submittal



A handwritten signature in black ink that reads "James L. Buckner".

Digitally Signed by: James L. Buckner, P.E.

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CBUCK, Inc.

1399 N. Killian Drive, Suite 4, West Palm Beach, Florida 33403
Phone: (561)491-9927 Fax: (561)491-9928 Website: www.cbuckinc.net

Manufacturer:	Englert, Inc.
Product Name:	“Series 1101”
Product Category:	Roofing
Product Sub-Category	Metal Roofing
Compliance Method:	State Product Approval Rule 61G20-3.005 (1) (d)
Product/System Description:	“Series 1101” Roof Panel 24 gauge steel Nailstrip 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: <ol style="list-style-type: none">1. Roof Panel2. Fasteners3. Adhesive (select systems)4. Underlayment5. Insulation (Optional)
Support:	Type: Wood Deck (Design of support system is outside the scope of this evaluation.) Description: <ul style="list-style-type: none">• 15/32” 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: <ul style="list-style-type: none">• Design Uplift Pressure: (Refer to “Table A” attachment details herein) METHOD 1: - 150 PSF METHOD 2: - 165 PSF

- Performance Standards:** The product described herein has demonstrated compliance with:
- **UL580-06** – *Test for Uplift Resistance of Roof Assemblies*
 - **UL 1897-04** – *Uplift test for roof covering systems*
 - **TAS 125-03** – *Standard Requirements for Metal Roofing Systems*
- 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 1897-04 adopted by the Florida Building Code 5th Edition (2014) .
- Code Compliance:** The product described herein has demonstrated compliance with Florida Building Code 5th Edition (2014), Section 1504.3.2.
- 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:**
- Scope of “Limitations and Conditions of Use” for this evaluation:
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”.
 - Option for application outside “Limitations and Conditions of Use”
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: Englert Series 1101
Material: Steel
Thickness: 24 gauge (min.)
Panel Widths: 16" (max.) Coverage
Rib Height: 1"
Yield Strength: 40 ksi min.
Corrosion Resistance: Per FBC Section 1507.4.3

Fastener:

Type: Pancake-Head Wood Screw
Size : #10 x 1"
Corrosion Resistance: Per FBC Section 1506.6 and 1507.4.4
Standard: Per ANSI/ASME B18.6.1

Seam Adhesive/Sealant:

Product Name: Bostik Chem-Chaulk 915
Type: One component, polyurethane adhesive
Application Size: 3/8" bead
Application Location: along male flange the full length of panel
(Refer to Table "A" and drawing Pg 6-7)

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

Underlayment:

Material and application shall be in compliance with FBC Chapter 15 based on the type of roof covering, applicable codes and in accordance with 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 3/16".

Installation:

Installation Method:

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

- Fastener Spacing: **Refer to "TABLE A" Below**
(along the length of the panel)
- Rib Interlock: Snap-Lock
(Panel ribs shall be fully engaged to form an integral snap-lock.)
- Seam Adhesive: Refer to Table "A" & Drawing Page6.
(Apply along male flange the full 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		
	METHOD 1	METHOD 2
Design Pressure:	- 150 PSF	- 165 PSF
Fastener Spacing:	6" o.c.	3" o.c.
Seam Adhesive:	Not required	3/8" bead (Refer to pg . 6-7)
Notes:		
<ul style="list-style-type: none"> • Allowable design pressure(s) for allowable stress design (ASD). 		

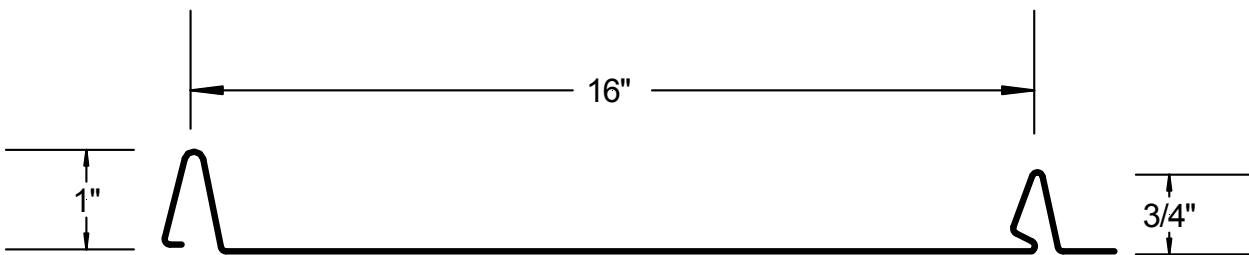
Install the "Series 1101" roof panel assembly in compliance with the installation method listed in this report and applicable code sections of FBC 5th Edition (2014). The installation method described herein is in accordance with the scope of this evaluation report. Refer to manufacturer's installation instructions as a supplemental guide for attachment.

Referenced Data:

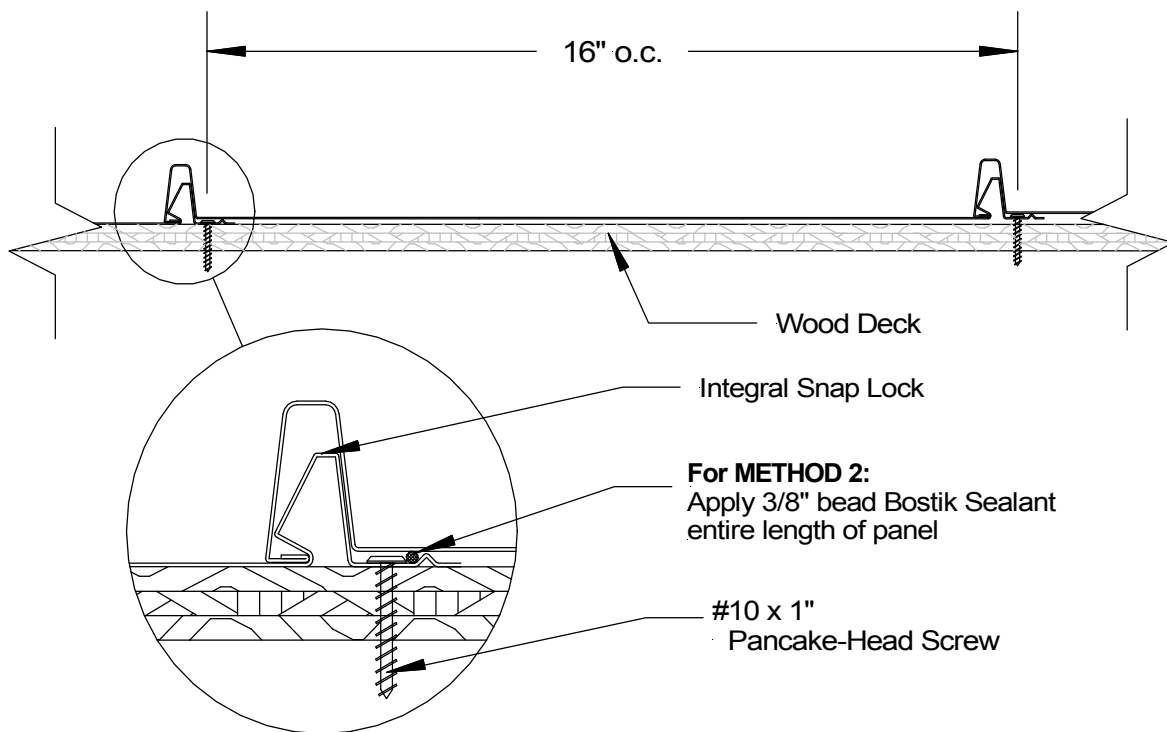
1. TAS 125 Uplift Test
By Architectural Testing, Inc. (FBC Organization ID# TST 1558)
Report No. 93745.01-109-18, Date: 11/16/09
Specimens #1-3
2. Quality Assurance
Keystone Certifications, Inc. (FBC Organization ID# QUA 1824)
Englert, Inc. Licensee #420
3. Equivalency of Test Standard Certification
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 1101" (24 gauge Steel) Roof Panel attached to Wood Deck**

Drawings

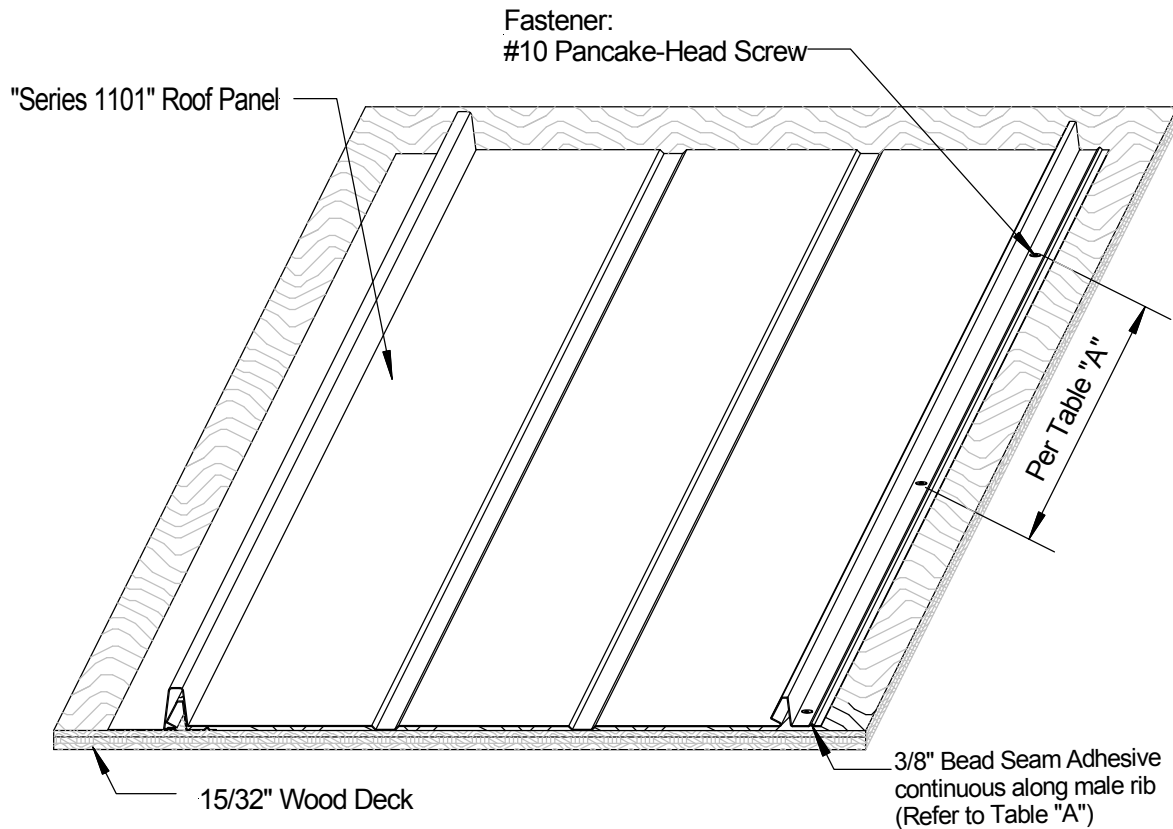


Panel Profile



**Typical Assembly Profile View
(Typical Fastening Pattern Across Width)**

Installation Method Englert, Inc. "Series 1101" (24 gauge Steel) Roof Panel attached to Wood Deck



Typical Roof Assembly Isometric View

(Optional) Rigid Insulation Board per Page 4 of this report

TABLE "A"		
	METHOD 1	METHOD 2
Design Pressure:	- 150 PSF	- 165 PSF
Fastener Spacing:	6" o.c.	3" o.c.
Seam Adhesive:	Not required	3/8" bead (Refer to pg 6-7)



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Specialty Structural Engineering

CBUCK, Inc. Certificate of Authorization #8064