## CBUCK Engineering

### Specialty Structural Engineering

CBUCK, Inc. Certificate of Authorization #8064

## **Evaluation Report**

"Oxford Shingle"

**Metal Roof Assembly** 

#### Manufacturer:

## **Classic Metal Roofing Systems**

(A division of Isaiah Industries) 8510 Industry Park Drive Piqua, OH 45356 (800) 543-8938

for

Florida Product Approval

# FL 10687.3 R5

Florida Building Code 7th Edition (2020)

Per Rule 61G20-3

Method: 1 - D

Roofing Category:

Sub - Category: **Metal Roofing** 

> "Oxford Shingle" Product:

Material: **Aluminum** 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. 17-130-OS-A21W-ER (Revises 17-130-OS-A21W-ER, FL10687.3 R4)

Date: 10 / 01 / 20

Contents:

**Evaluation Report** Pages 1-7 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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Manufacturer: Classic Metal Roofing Systems

(A division of Isaiah Industries)

8510 Industry Park Drive

Piqua, OH 45356 (800) 543-8938

https://www.classicmetalroofingsystems.com/

Product Name: Oxford Shingle

**Product Category:** Roofing

**Product Sub-Category** Metal Roofing

**Compliance Method:** State Product Approval Rule 61G20-3.005 (1) (d)

Product/System

"Oxford Shingle"

**Description:** 

Aluminum roof panel, mechanically attached to Wood Deck with panel clips.

Product Assembly as Evaluated:

Refer to Page 4 of this report for product assembly components/materials &

standards:

- 1. Roof Panel
- 2. Panel Clips
- 3. Fasteners
- 4. Underlayment

Support: Type:

Wood Deck

(Design of support and its attachment to support framing is outside the scope of

this evaluation.)

**Description:** 

• 15/32" or greater plywood,

or Wood plank (min. specific gravity of 0.42)

**Slope:** Minimum slope shall be 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: - **62.5 PSF** 

(Refer to Table A" attachment details herein)



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Performance Standards:

The product described herein has demonstrated compliance with:

- UL 580-06 Test for Uplift Resistance of Roof Assemblies
- UL 1897-12 Uplift test for roof covering 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 1897-12 adopted by the Florida Building Code 7th Edition (2020).

**Code Compliance:** 

The product(s) described herein have demonstrated compliance with the performance standards listed above as referenced in the Florida Building Code 7th Edition (2020).

**Evaluation Report Scope:** 

This building envelope product is evaluated for compliance with the structural wind load 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.
- This report is a building code product evaluation per FLPE rule (FAC) 61G15-36 to comply with Florida product approval rule (FAC) 61G20-3. This evaluation report is part of the Florida Building Commission approval for the listed code related criteria. This report by James Buckner, P.E. and CBUCK Engineering is not a design certification of code compliance construction submittal documentation, per FBC section 107, for any individual structure, site specific or permit design.
- All metal components and fasteners shall be corrosion resistant in accordance with applicable sections of FBC, including but limited to Sections 1504.3.2, 1506.5, 1506.6 and 1507.4.4.
- 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 **Farabaugh Testing & Engineering** (FBC Organization ID# QUA 7733).

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Components & Materials: (by Manufacturer)

Roof Panel:Oxford ShingleMaterial:AluminumThickness:0.021" (min.)

Panel Width: 12" nominal (max.) Coverage

Panel Length: 60" nominal Alloy Type: 3105-H27

Corrosion Resistance: Per FBC Section 1507.5.5

**Roof Panel Nail Clips:** 

Product Name: Classic Products "Nail Clip"

Classic Part #: 2028

Material: Aluminum

Thickness: 0.032"

Yield Strength: 3003 H14

Dimensions: 0.435" (tall) x 7.25" (long)
Corrosion Resistance: Per FBC Section 1506.7

**Fastener:** 

Type: Annular Ring Shank Roofing Nails
Size: 0.145" diameter (7/16" head diameter)

x 1-3/4" long

Corrosion Resistance: Per FBC Section 1506.5

Standard: Per ASTM F 1667

#### **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.

Installation: Installation Method:

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

- 1. **Five** aluminum nail clips per shingle.
- 2. (along the length of the shingle and along the top lock)
- 3. Aluminum nail clip spacing: 13" o.c. maximum
- 4. (and within 4" from each shingle panel end)
- 5. **Three** fasteners per aluminum nail clip.
- 6. Tuck bottom lock of succeeding layer of shingles into top lock of preceding layer of shingles to form an integral interlock.
- 7. For panel construction at the end of panels, refer to manufacturer's instructions and any site specific design.

TABLE "A" ALLOWABLE LOADS	
Design Pressure:	- 62.5 PSF
Clip Spacing:	13"
# Fasteners per Clip:	3
# Clips per Shingle:	5
Notes:  • Allowable design pressure(s) for allowable stress design (ASD).	

Install the "Oxford Shingle" roof panel assembly in compliance with the installation method listed in this report and applicable code sections of FBC 7th Edition (2020). 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:**

UL 580 & UL 1897 Uplift Test
 By Farabaugh Engineering and Testing, Inc.
 (FBC Organization #TST ID: 1654)
 Project No. T117-06, Report Date: March 2, 2006

- Equivalency of Test Standard Certification
   By James L. Buckner, P.E. @ CBUCK Engineering
   (FBC Organization # ANE 1916)
- Quality Assurance
   By Farabaugh Testing & Engineering (FBC Organization ID# QUA 7733)
- Certification of Independence
   By James L. Buckner, P.E. @ CBUCK Engineering
   (FBC Organization # ANE 1916)

#### **Installation Method**



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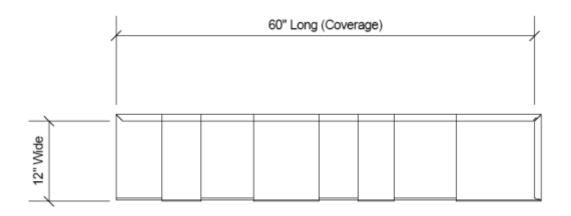
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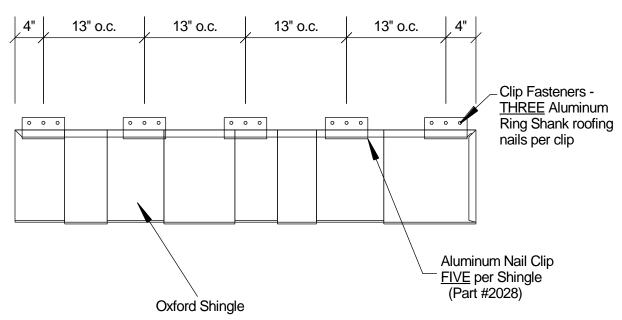
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# Classic Metal Roofing Systems "Oxford Shingle" (0.019" Aluminum) Roof Panel attached to Wood Deck

## **Drawings**



**Typical Panel Profile** 



Section Plan View Clip Assembly

**Installation Method** 



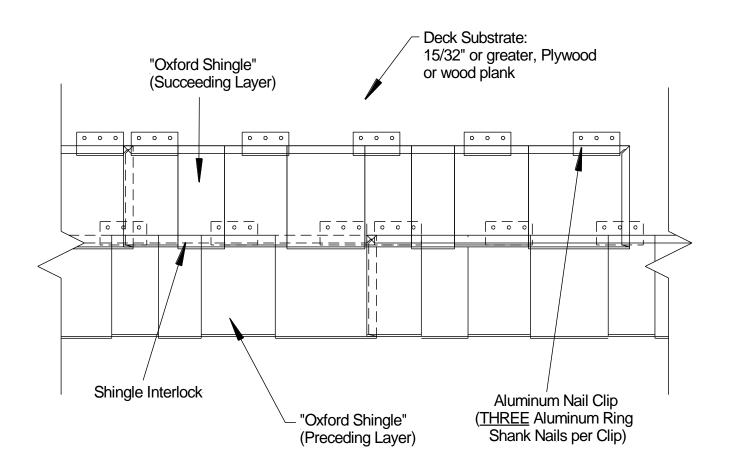
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# Classic Metal Roofing Systems "Oxford Shingle" (0.019" Aluminum) Roof Panel attached to Wood Deck



## **Typical Roof Shingle Assembly Plan View**

TABLE "A"	
Design Pressure:	- 62.5 PSF
Clip Spacing:	13"
# Fasteners per Clip:	3
# Clips per Shingle:	5