

## Product Evaluation Report GREEN SPAN PROFILES®

## RidgeLine Standing Seam Roof Panel over open framing

## Florida Product Approval # 21349.1

Florida Building Code 2014 Per Rule 61G20-3 Method: 1 –D

Category: Structural Components
Subcategory: Roof Deck
Compliance Method: 61G20-3.005(1)(d)
NON HVHZ

Product Manufacturer:
Green Span Profiles®
21200 FM 362
Waller, Texas 77484

Engineer Evaluator: Terrence E. Wolfe, P.E. # 44923 Florida Evaluation ANE ID: 1920

Validator:

Locke Bowden, P.E., FL #49704 9450 Alysbury Place Montgomery, AL 36117

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**Compliance Statement:** The product as described in this report has demonstrated compliance with the

Florida Building Code 2014, Sections 1504.3.2, 1504.7, 2603.3.

**Product Description:** Insulated roof panel system with an interior steel facing and exterior steel

> standing seam facing bonded to an insulating polyisocyanurate foam core. A concealed clip in the interlocking side joint attaches the roof panels to supports.

Structural Application.

Panel: Profiles: RidgeLine

> Panel Thickness: 2 ½", 3", 4", 5", 6" Panel Coverage: 42" maximum

Interior Side Joint: Green-Lock interlocking tongue and groove side joint Exterior Side Joint:2" Tall, Tee shaped rib with seam cap, mechanically seamed

**Panel Interior Face:** Material: Steel, ASTM A792 coated or ASTM A653 G90 Galvanized

> Yield Strength: Min. 50.0 ksi

Thickness: 26 Ga., 24 Ga., 22 Ga. **Embossed or Smooth** Texture:

Profile: MesaLine

Panel material shall comply with Florida Building Code 2014 Section 1405.2.

**Panel Exterior Face:** Material: Steel, ASTM A792 coated or ASTM A653 G90 Galvanized

> Yield Strength: Min. 50.0 ksi

26 Ga., 24 Ga., 22 Ga. Thickness:

Texture: Smooth

Profile: 2" tall standing seam Tee shaped rib with seam cap,

mechanically seamed.

Panel seam cap: 24 Ga. steel with factory applied hot melt adhesive sealant Panel material shall comply with Florida Building Code 2014 Section 1405.2

**Panel Core:** Polyisocyanurate insulating foam with a 2.5 pcf density (nominal).

Panel Clip: Material: Galvanized Steel

> 0.061", 16 Ga. Thickness:

3.375" tall x 4" long with (5) pre punched holes Dimensions:

Corrosion Resistance: Per Florida Building Code 2014

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**Panel Clip Fastener:** (3) ¼ - 14 x 2 ¼" HWH SD Shoulder Fastener per clip.

The fasteners shall be long enough to ensure a minimum penetration of 3 pitches

of thread through steel girt.

Corrosion Resistance: Per Florida Building Code 2014.

**Substrate Description:** Min. 14 Ga. Steel Framing. Framing must be designed in accordance w/ Florida

Building Code 2014.

## **Design Uplift Pressures:**

Maximum Design Pressure (PSF):	-78.1	-72.4	-66.7	-60.9	-55.2	-49.5
Clip Spacing (O.C.):	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"

<sup>\*</sup>Design Pressure includes a Safety Factor.

**Code Compliance:** The product described herein has demonstrated compliance with

The Florida Building Code 2014, Section 1504.3.2, 1504.7, 2603.3.

**Evaluation Report Scope:** The product evaluation is limited to compliance with the structural wind load

requirements of the Florida Building Code 2014, as relates to Rule 61G20-3.

**Performance Standards:** The product described herein has demonstrated compliance with:

> ASTM E 1592-05 Test method for structural performance of sheet metal roof and siding systems by uniform static air pressure difference.

FM 4471-92, Foot Traffic Resistance Test.

ASTM E84-09 Standard Test Method for Surface Burning Characteristics

of Building Materials.

October 18, 2016



**Reference Data:** 

1. ASTM E 1592-05

Force Engineering & Testing, Inc. (FBC Organization # TST-5328)

Report No. 438-0191T-16

2. FM 4471-10, Foot Traffic Resistance Test

Force Engineering & Testing, Inc. (FBC Organization # TST-5328)

Report No. 438-0189T-16

3. ASTM E 84-11a

**FM Approvals** 

Project ID: 3044381

4. Certificate of Independence

By Terrence E. Wolfe, P.E. (No. 44923) @ Force Engineering & Testing, Inc.

(FBC Organization # ANE ID: 1920)

**Test Standard Equivalency:** 

1. The FM 4471-2010, Foot Traffic Resistance test standard is equivalent to the

FM 4471-92, Foot Traffic Resistance test standard.

2. The ASTM E84-11a test standard is equivalent to ASTM E84-09.

**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 2014, including Section

1507.4.2 and in accordance with Manufacturers recommendations.

Installation:

Install per manufacturer's recommended details.

**Roof Panel Fire Classification:** 

Fire classification is not part of this evaluation.

**Shear Diaphragm:** 

Shear diaphragm values are outside the scope of this report.

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**Design Procedure:** 

Based on the dimensions of the structure, appropriate wind loads are determined using Chapter 16 of the Florida Building Code 2014 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 2014 Chapter 22 for steel, and Chapter 16 for structural loading.

