

PRODUCT EVALUATION REPORT
Horizon Structural Systems, Inc.
7.2 Through Fastened Wall Panel over Open Framing

Florida Product Approval Number FL 46813.5

Category: Panel Wall

Sub-Category: Siding

Compliance Method: 61G20-3.005 (1)(D)
NON-HVHZ

Product Manufacturer

Horizon Structural Systems, Inc.
1659 W. State Highway 46
New Braunfels, Texas 78132

Manufacturing Location

Horizon Structural Systems, Inc.
1659 W. State Highway 46
New Braunfels, Texas 78132

Engineer Evaluator

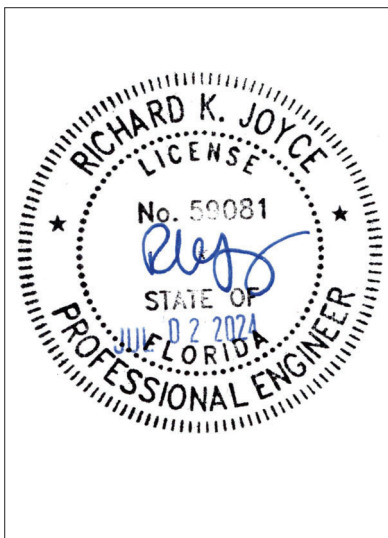
R. Keith Joyce, P.E. Florida 59081

Validator

Dennis L. Johnson, P.E., Florida 54340
Florida C.O.A. 30308

Contents

Evaluation Report Pages 1-5 Dated 07-02-24



Compliance Statement

The product described in this report has demonstrated compliance with the 2023 (8th Edition) Florida Building Code Sections 1404.5

Product Description

Horizon 7.2 Through Fastened structural panels applied over open framing:

1. 7.2 Panel 26 Gauge
(0.0170 Sheet Thickness) with a minimum Fy = 80 ksi and Fu = 82 ksi 14.4" Fastener Spacing
2. 7.2 Panel 26 Gauge
(0.0170 Sheet Thickness) with a minimum Fy = 80 ksi and Fu = 82 ksi 7.2" Fastener Spacing
3. 7.2 Panel 24 Gauge
(0.0228 Sheet Thickness) with a minimum Fy = 50 ksi and Fu = 65 ksi 14.4" Fastener Spacing
4. 7.2 Panel 24 Gauge
(0.0228 Sheet Thickness) with a minimum Fy = 50 ksi and Fu = 65 ksi 7.2" Fastener Spacing
5. 7.2 Panel 22 Gauge
(0.0272 Sheet Thickness) with a minimum Fy = 50 ksi and Fu = 65 ksi 14.4" Fastener Spacing
6. 7.2 Panel 22 Gauge
(0.0272 Sheet Thickness) with a minimum Fy = 50 ksi and Fu = 65 ksi 7.2" Fastener Spacing

Panel Material Standard

Formed steel in compliance with the 2023 (8th Edition) Florida Building Code Section 1405.2 with optional painted finish.

Panel Fastener

Corrosion Resistant #12 – 14 HWH SD as indicated in the **Load Tables** of this Evaluation Report

Substrate Description

Minimum 16 gauge (0.0596 steel thickness) open framing.

Framing must be designed in accordance with the 2023 (8th Edition) Florida Building Code

Quality Assurance Entity

The manufacturer has established compliance of products in accordance with the 2023 (8th Edition) Florida Building Code as relates to Rule 61G20-3.005(3) for manufacturing under a quality assurance program audited by an approved quality assurance entity.

Insulation

Manufacturer's approved products (optional)

Fire Classification

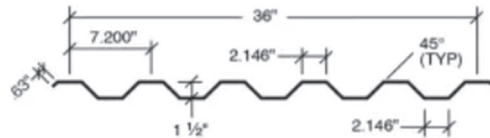
Fire Classification is outside the scope of this evaluation

Shear Diaphragm

Shear Diaphragm is outside the scope of this evaluation

Based on dimensions of the structure, appropriate wind loads are determined using chapter 16 of the 2023 (8th Edition) Florida Building Code for component loading of roof cladding. These component wind loads are compared to the allowable load listed in the **Load Tables** of this evaluation report. The design professional shall select appropriate fastener pattern and panel gauge to reference in the construction documents for proper installation. Design of support framing must be in compliance with the 2023 (8th Edition) Florida Building Code.

7.2 Panel Diagram



Notes:

1. Fastener Pattern 14.4" is to be used at the ends of all panels
2. Fastener Pattern 14.4" and 7.2" are to be used at the intermediate supports as indicated in the span load tables to achieve the required uplift load capacity.

Horizon (7.2 Panel)

Horizon (7.2) Panel				Section Properties					
Panel Gauge	Fy	Fu	Weight	Negative Bending			Positive Bending		
				Ixe	Sxe	Maxo	Ixe	Sxe	Maxo
	ksi	Ksi	Psf	In ⁴	In ³	Kip-in	In ⁴	In ³	Kip-in
26	60*	61.5*	0.88	0.0623	0.0319	2.195	0.0673	0.0337	2.250
24	50	60	1.17	0.1030	0.0503	3.346	0.1040	0.0529	3.140
22	50	60	1.40	0.1300	0.0638	4.243	0.1300	0.0648	4.786

*= Fy is 80 ksi, Fu is 82 ksi reduced to Fy = 60 ksi and Fy = 61.5 ksi in accordance with the 2016 North American Specification for Cold-Formed Steel Structural Members with Supplement 2 (2020) Section A2.3.2.

Notes:

1. All calculations for section properties are calculated in accordance with the 2016 edition of the North American Specification for Cold-Formed Members with Supplement 2 (2020).
2. I_{xe} is for deflection calculations.
3. S_{xe} is for bending calculations.
4. M_{axo} is for allowable bending moment calculations.
5. All values are for one foot of panel from major rib to major rib.

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7.2 PANEL

26 gauge (Fy = 60 ksi) #12-14 Fasteners on 14.4" centers for attachment to all supporting members (16 gauge supporting members minimum)**										
SPAN TYPE	LOAD TYPE	SPAN IN FEET								
		1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
Single	Negative Wind Load	426.7	213.3	142.2	91.2	58.4	40.5	29.8	22.8	18.0
	Live Load/Deflection	365.2	182.6	121.7	91.3	60.0	41.7	30.6	23.4	18.5
2-Span	Negative Wind Load	170.7	85.3	56.9	42.7	34.1	28.4	24.4	21.3	18.1
	Live Load/Deflection	486.9	243.5	139.2	83.3	55.0	38.8	28.9	22.3	17.7
3-Span	Negative Wind Load	193.9	97.0	64.6	48.5	38.8	32.3	27.7	24.2	21.5
	Live Load/Deflection	456.5	228.2	152.2	100.4	67.0	47.7	35.6	27.5	21.9

26 gauge (Fy = 60 ksi) #12-14 Fasteners on 7.2" centers for attachment to all supporting members (16 gauge supporting members minimum)**										
SPAN TYPE	LOAD TYPE	SPAN IN FEET								
		1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
Single	Negative Wind Load	853.4	365.9	162.6	91.5	58.5	40.7	29.9	22.9	18.1
	Live Load/Deflection	365.2	182.6	121.7	91.3	60.0	41.7	30.6	23.4	18.5
2-Span	Negative Wind Load	341.3	170.7	113.8	85.2	56.3	39.8	29.6	22.8	18.1
	Live Load/Deflection	486.9	243.4	139.5	83.4	55.1	38.9	28.9	22.3	17.7
3-Span	Negative Wind Load	387.9	193.9	129.3	97.0	68.6	48.9	36.5	28.2	22.5
	Live Load/Deflection	456.5	228.2	152.2	100.7	67.2	47.8	35.7	27.6	22.0

** = Fastener Diameter shall be 1/2" Minimum

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7.2 PANEL

24 gauge (Fy = 50 ksi) #12-14 Fasteners on 14.4" centers for attachment to all supporting members (16 gauge supporting members minimum)**										
SPAN TYPE	LOAD TYPE	SPAN IN FEET								
		1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
Single	Negative Wind Load	426.7	213.3	142.2	106.7	85.3	62.0	45.5	34.9	27.5
	Positive Load Wind/Deflection	532.5	266.3	177.5	130.8	83.7	58.1	42.7	32.7	25.8
2-Span	Negative Wind Load	170.7	85.3	56.9	42.7	34.1	28.4	24.4	21.3	19.0
	Positive Load Wind/Deflection	710.0	355.0	231.9	134.2	87.0	60.9	44.9	34.5	27.3
3-Span	Negative Wind Load	193.9	97.0	64.6	48.5	38.8	32.3	27.7	24.2	21.5
	Positive Load Wind/Deflection	665.7	332.8	221.9	165.0	107.6	75.6	55.9	43.0	34.0

24 gauge (Fy = 50 ksi) #12-14 Fasteners on 7.2" centers for attachment to all supporting members (16 gauge supporting members minimum)**										
SPAN TYPE	LOAD TYPE	SPAN IN FEET								
		1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
Single	Negative Wind Load	853.4	426.7	247.9	139.4	89.2	62.0	45.5	34.9	27.5
	Live Load/Deflection	532.5	266.3	177.5	130.8	83.7	58.1	42.7	32.7	25.8
2-Span	Negative Wind Load	341.3	170.7	113.8	85.3	68.3	56.9	42.2	32.4	25.7
	Live Load/Deflection	710.0	355.0	231.1	133.9	86.9	60.8	44.9	34.5	27.3
3-Span	Negative Wind Load	387.9	193.9	129.3	97.0	77.6	64.6	52.5	40.3	32.0
	Live Load/Deflection	665.7	332.8	221.9	164.5	107.4	75.4	55.8	42.9	34.0

** = Fastener Washer Diameter shall be 1/2" Minimum

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7.2 PANEL

22 gauge (Fy = 50 ksi) #12-14 Fasteners on 14.4" centers for attachment to all supporting members (16 gauge supporting members minimum)*										
SPAN TYPE	LOAD TYPE	SPAN IN FEET								
		1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
Single	Negative Wind Load	426.7	213.3	142.2	106.7	85.3	71.1	57.7	44.2	34.9
	Live Load/Deflection	743.1	371.6	247.7	185.8	127.6	88.6	65.1	49.9	39.4
2-Span	Negative Wind Load	170.7	85.3	56.9	42.7	34.1	28.4	24.4	21.3	19.0
	Live Load/Deflection	990.8	495.4	299.2	171.9	111.1	77.6	57.2	43.9	34.7
3-Span	Negative Wind Load	193.9	97.0	64.6	48.5	38.8	32.3	27.7	24.2	21.5
	Live Load/Deflection	928.9	464.5	309.6	212.3	137.8	96.4	71.2	54.7	43.3

22 gauge (Fy = 50 ksi) #12-14 Fasteners on 7.2" centers for attachment to all supporting members (16 gauge supporting members minimum)**										
SPAN TYPE	LOAD TYPE	SPAN IN FEET								
		1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
Single	Negative Wind Load	853.4	426.7	284.5	176.8	113.2	78.6	57.7	44.2	34.9
	Live Load/Deflection	743.1	371.6	247.7	185.8	127.6	88.6	65.1	49.9	39.4
2-Span	Negative Wind Load	341.3	170.7	113.8	85.3	68.3	56.9	48.8	42.7	37.9
	Live Load/Deflection	990.8	495.4	299.2	171.9	111.1	77.6	57.2	43.9	34.7
3-Span	Negative Wind Load	387.9	193.9	129.3	97.0	77.6	64.6	55.4	48.5	43.1
	Live Load/Deflection	928.9	464.5	309.6	212.3	137.8	96.4	71.2	54.7	43.3

** = Fastener Washer Diameter shall be 1/2" Minimum

Notes:

1. Allowable loads are based on uniform span length and uniformly distributed load.
2. Allowable gravity load is limited by bending, shear or deflection.
3. Allowable gravity loads are computed for a maximum total load deflection of L/60.
4. Weight of the panel must be included with gravity load combinations as appropriate.
5. This material is subject to change without notice.
6. This material has been developed in accordance with the 2016 North American Specification for Cold-Formed Structural Steel Members with Supplement 2 (2020).

The engineering data contained herein is for the express use of the customers of Horizon Structural Systems Inc. and qualified design professionals.