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SPANISH TILE METAL ROOFING

CSI Section:
07 41 13 Metal Roof Panels

1.0 RECOGNITION

The ProVia Spanish Tile metal roofing recognized in this report has been evaluated for use as metal roofing panels. The weather protection, fire classification, and wind uplift resistance properties of the roofing complies with the intent of the provisions of the following codes and regulations:

- 2021, 2018, and 2015 International Building Code® (IBC)
- 2021, 2018, and 2015 International Residential Code® (IRC)
- 2020 Florida Building Code, Building (FBC, Building)– Supplement attached
- 2020 Florida Building Code, Residential (FBC, Residential) – Supplement attached

2.0 LIMITATIONS

The ProVia Spanish Tile metal roofing panels described in this report are in compliance with or are an acceptable alternative to what is specified in those codes listed in Section 1.0 of this report subject to the following limitations:

- 2.1** Use of Spanish Tile metal roofing panels shall comply with this report and the applicable code.
- 2.2** Calculations demonstrating compliance with this report shall be submitted to the building official for approval. The calculations shall be prepared by a licensed design professional where required by the statutes of the jurisdiction in which the project is to be constructed.
- 2.3** Spanish Tile metal roofing panels shall not be used on roof slopes less than 2:12 (16.67 percent).
- 2.4** The ProVia Spanish Tile metal roofing panels are manufactured in Booneville, Mississippi.

3.0 PRODUCT USE

3.1 General: The ProVia Spanish Tile profiles described in this report are used as metal roof panels in accordance with IBC Sections 1503 and 1507.4 and IRC Section R905.10. The

roof coverings are used on new roofs and over existing roofs, when installed in accordance with this report.

3.2 Design: The allowable wind uplift resistance loads for the Spanish Tile metal roofing panels, installed in accordance with the manufacturer’s installation instructions, are shown in Table 1 of this report. The panels and accessories may be used on roofs where the design uplift pressures determined in accordance with the codes and referenced standards. Tables 2A, 2B, and 2C of this report correspond to design pressures determined using ASCE 7-10. Tables 2D, 2E, and 2F of this report correspond to design pressures determined using ASCE 7-16. The tabulated allowable uplift wind loads in Table 1 of this report shall exceed the design pressures in Tables 2A through 2F of this report. The allowable positive (downward) wind loads are limited to the capacity of the roof framing and sheathing of the roof on which the Spanish Tile metal roofing panels are installed. The allowable gravity loads are limited to the capacity of the roof framing and sheathing of the roof on which the ProVia panels are installed.

3.3 Installation: The Spanish Tile metal roofing panels shall be installed in accordance with the manufacturer’s published installation instructions. The panels shall be installed on solid decking of minimum 15/32-inch-thick wood structural panels and at a minimum slope of 2 units vertical in 12 units horizontal (16.67 percent). When Spanish Tile metal roofing panels are used in reroofing, the existing roof coverings shall be removed to expose the roof sheathing, which shall be undamaged 15/32-inch-thick wood structural panels, minimum. Reroofing shall comply with Section 1512 of the 2021 IBC, Section 1511 of the 2018 or 2015 IBC, or Section R908 of the IRC, as applicable. Flashing shall comply with IBC Sections 1503.2 and 1503.3.

3.3.1 Roof Slope and Underlayment: Underlayment shall be used under the ProVia - Spanish Tile, Slate, and Shake profile panels when installed on roof slopes between 2:12 (17 percent) and 3:12 (25 percent). Underlayment shall comply with Sections 1507.1.1 and 1507.4.5 of the IBC, or Section R905.10.5 of the 2018 IRC, as applicable.

3.3.2 Fasteners: The fasteners used to fasten the ProVia panels shall be minimum No. 10 by 1¼-inch zinc-coated panhead screws (see Table 1). The Spanish Tile profile shall be installed using a fastener in each of the 5 holes along the fastening edge of the panels. The Spanish Tile, Slate, and Shake profiles shall be installed as described in Table 1 of this report to achieve the tabulated loads.

3.4 Fire Classification: ProVia - Spanish Tile, Slate, and Shake panels may be used as Class A or Class B roof coverings, depending on the assembly, when listed in accordance with IBC Section 1505.1 and installed in accordance with the assembly specifications described in

The product described in this Uniform Evaluation Service (UES) Report has been evaluated as an alternative material, design or method of construction in order to satisfy and comply with the intent of the provision of the code, as noted in this report, and for at least equivalence to that prescribed in the code in quality, strength, effectiveness, fire resistance, durability and safety, as applicable, in accordance with IBC Section 104.11. This document shall only be reproduced in its entirety.





3.5 Sections 3.4.1, 3.4.2, and 3.4.3 of this report. The panels shall be installed in accordance with the manufacturer’s installation instructions using the fasteners and spacing described in Section 3.3.2 of this report.

3.5.1 **Assembly No.1 - Class A:** The roof shall be sheathed with minimum 15/32-inch-thick wood structural panels fastened as prescribed by the code. The sheathing shall be covered with 1/4- or 1/2-inch-thick Georgia Pacific DensDeck Roof Boards fastened in accordance with the DensDeck installation instructions. Quality Edge DiamondDeck, MetaLayment, or WinterGuard HT Underlayment shall be installed in accordance with the underlayment manufacturer’s instructions over the DensDeck panels.

3.5.2 **Assembly No.2 - Class A:** The roof shall be sheathed with minimum 15/32-inch-thick wood structural panels fastened as prescribed by the code. Underlayment as described in the following table shall be installed over the sheathing and fastened in accordance with the underlayment manufacturer’s installation instructions.

ASSEMBLY No. 2 UNDERLAYMENT	
BOTTOM LAYER	GAF VersaShield
TOP LAYER (use one of the following)	Quality Edge MetaLayment™
	Quality Edge WinterGuard® HT
	Quality Edge DiamondDeck®

3.5.3 **Assembly No.3 - Class B:** The roof shall be sheathed with minimum 15/32-inch-thick wood structural panels fastened as prescribed by the code. Underlayment as described in the following table shall be installed over the sheathing and fastened in accordance with the underlayment manufacturer’s installation instructions.

ASSEMBLY No. 3 UNDERLAYMENT	
(use one of the following)	Quality Edge DiamondDeck
	Quality Edge MetaLayment™
	Quality Edge WinterGuard HT
	All Weather/Empire Base
	GAF VersaShield

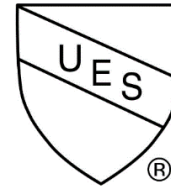
4.0 PRODUCT DESCRIPTION

The Spanish Tile metal roofing panels are pressure-formed from DDS (Type A or C) sheet steel complying with ASTM A653, with a minimum G90 galvanized coating. The panel nominal painted thickness, post production, is 0.020 ± 0.002 inch (0.508 ± 0.051 mm). The Spanish Tile profile simulates barrel tile shapes. The overall panel size of the Spanish Tile panel is 20.89 inches (531 mm) wide by 49.12 inches (1248 mm) high and has single course tile heights of 11.81 inches (300 mm). Figure 1 of this report provides illustrative details. The installed weight is approximately 0.9 lbf/ft² (43 N/m²).

5.0 IDENTIFICATION

The ProVia products are identified with a label on the carton or box identifying the company name (ProVia), the profile name and model number, the name of the inspection agency, and the Evaluation Report Number (ER-817).

The IAPMO Uniform Evaluation Service Mark of Conformity may be used as shown below:



IAPMO UES ER-817

6.0 SUBSTANTIATING DATA

Data in accordance with the Acceptance Criteria for Metal Roof Coverings (AC166), Approved February 2021, including reports of testing in accordance with ASTM E108 for roof covering classification and test reports of modified wind uplift resistance testing. Test reports are from laboratories in compliance with ISO/IEC 17025.

7.0 STATEMENT OF RECOGNITION

This evaluation report describes the results of research completed by IAPMO Uniform Evaluation Service on ProVia to assess conformance to the codes shown in Section 1.0 of this report and serves as documentation of the product certification. Products are manufactured at locations noted in Section 2.5 of this report under a quality control program with periodic inspection under the supervision of IAPMO UES.

For additional information about this evaluation report please visit www.uniform-es.org or email us at info@uniform-es.org



TABLE 1 – WIND RESISTANCE OF PROVIA PANELS¹

METAL PANEL PROFILE	FASTENING ²	MAXIMUM ALLOWABLE UPLIFT LOADS, psf
Spanish Tile	No. 10 by 1 ¼-inch zinc-coated panhead screws one in each of the 5 holes along the panel fastening edge	87 psf

For SI: 1 inch = 25.4 mm, 1 psf (lb/ft²) = 47.9 N/m²

¹ The allowable positive wind loads are limited to the capacity of the roof framing and sheathing of the roof on which the ProVia panels are installed.

² No. 10 by 1 ¼-inch zinc-coated painted hex-head screws are used where fasteners are exposed.

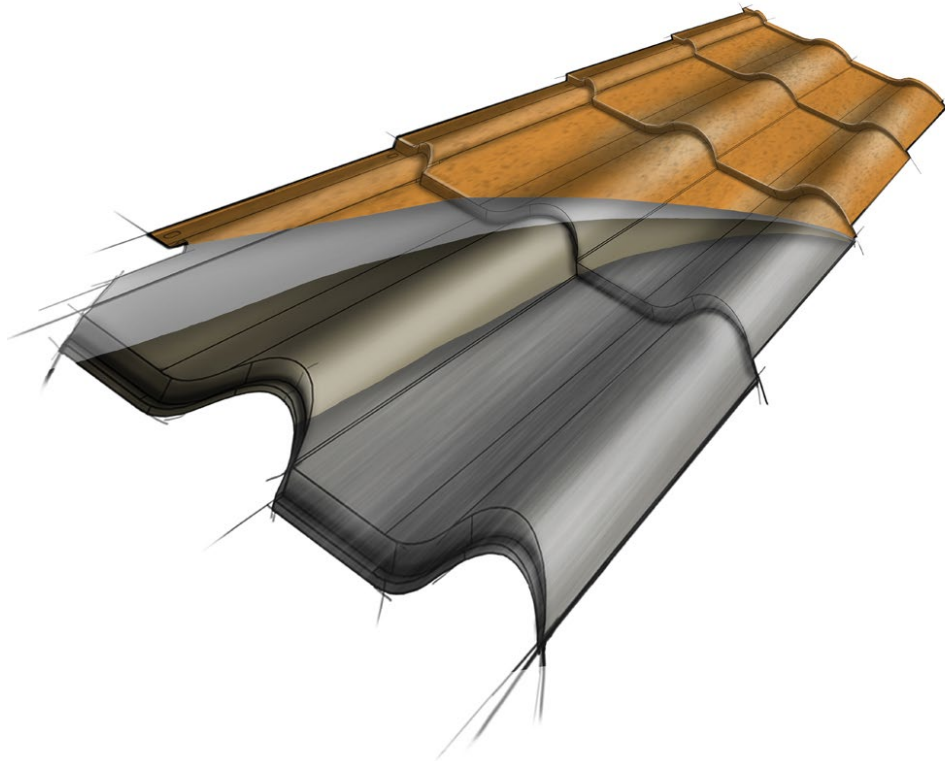


FIGURE 1 –SPANISH TILE PROFILE DETAIL



TABLE 2A - DESIGN WIND UPLIFT PRESSURES IN ACCORDANCE WITH ASCE 7-10 (EXPOSURE B)										
REQUIRED WIND UPLIFT RESISTANCE, p (psf) ¹ EXPOSURE B										
CATEGORY II BUILDINGS										
MEAN ROOF HEIGHT (ft)	Basic Wind Speed, V (mph)									
	110		115		120		130		140	
	Roof Zones									
	1	2&3	1	2&3	1	2&3	1	2&3	1	2&3
	Gable/Hip Roof 7° < θ ≤ 27° (~ 1½:12 < θ ≤ ~ 6:12)									
0-30	16.6 ³	48.0 ³	18.1 ³	52.4 ³	19.8 ³	57.1 ³	23.2 ³	67.0 ³	26.9	77.7
40	18.0 ³	52.1 ³	19.7 ³	56.9 ³	21.4 ³	62.0 ³	25.2 ³	72.7 ³	29.2	84.3
Hip Roof 7° < θ ≤ 25° (~ 1½:12 < θ ≤ ~ 6:12)										
0-30	16.6 ³	31.4 ³	18.1 ³	34.3 ³	19.8 ³	37.3 ³	23.2 ³	43.8 ³	26.9	50.8
40	18.0 ³	34.0 ³	19.7 ³	37.2 ³	21.4 ³	40.5 ³	25.2 ³	47.6 ³	29.2	55.1
Gable Roof 27° < θ ≤ 45° (6:12 < θ ≤ 12:12)										
0-30	18.4 ³	22.1 ³	20.2 ³	24.2 ³	22.0 ³	26.3 ³	25.8 ³	30.9 ³	29.9	35.9
40	20.0 ³	24.0 ³	21.9 ³	26.3 ³	23.8 ³	28.6 ³	28.0 ³	33.6 ³	32.4	38.9
Monoslope Roof 10° < θ ≤ 30° (~ 2¼:12 < θ ≤ ~ 7:12)										
0-30	24.0 ³	53.5 ³	26.2 ³	58.5 ³	28.5 ³	63.7 ³	33.5 ³	74.7 ³	38.8	86.7
40	26.0 ³	58.1 ³	28.5 ³	63.5 ³	31.0 ³	69.1 ³	36.4 ³	81.1 ³	42.2	94.1
CATEGORY III & IV BUILDINGS										
MEAN ROOF HEIGHT (ft)	BASIC WIND SPEED, V (mph)									
	115		120		130		140		145	
	Roof Zones ²									
	1	2&3	1	2&3	1	2&3	1	2&3	1	2&3
	Gable/Hip Roof 7° < θ ≤ 27° (~ 1½:12 < θ ≤ ~ 6:12)									
0-30	18.1 ³	52.4 ³	19.8 ³	57.1 ³	23.2 ³	67.0 ³	26.9	77.7	28.8	83.3
40	19.7 ³	56.9 ³	21.4 ³	62.0 ³	25.2 ³	72.7 ³	29.2	84.3	31.3	90.5
Hip Roof 7° < θ ≤ 25° (~ 1½:12 < θ ≤ ~ 6:12)										
0-30	18.1 ³	34.3 ³	19.8 ³	37.3 ³	23.2 ³	43.8 ³	26.9	50.8	28.8	54.5
40	19.7 ³	37.2 ³	21.4 ³	40.5 ³	25.2 ³	47.6 ³	29.2	55.1	31.3	59.2
Gable Roof 27° < θ ≤ 45° (6:12 < θ ≤ 12:12)										
0-30	20.2 ³	24.2 ³	22.0 ³	26.3 ³	25.8 ³	30.9 ³	29.9	35.9	32.1	38.5
40	21.9 ³	26.3 ³	23.8 ³	28.6 ³	28.0 ³	33.6 ³	32.4	38.9	34.8	41.8
Monoslope Roof 10° < θ ≤ 30° (~ 2¼:12 < θ ≤ ~ 7:12)										
0-30	26.2 ³	58.5 ³	28.5 ³	63.7 ³	33.5 ³	74.7 ³	38.8	86.7	41.7	93.0
40	28.5 ³	63.5 ³	31.0 ³	69.1 ³	36.4 ³	81.1 ³	42.2	94.1	45.2	100.9

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm, 1 mph = 1.6 km/h, 1 psf (lbf/ft²) = 47.9 N/m²

¹ For use in locations where the Topographic Factor, $K_{zt} = 1.0$. For locations where K_{zt} is greater than 1.0, the tabulated pressures shall be increased to account for topographic effects.

² See ASCE 7 describes roof zone definitions.

³ Under the 2015 IBC and 2015 IRC, ProVia Spanish Tile is prescriptively recognized for use at locations where the maximum ultimate design wind speed, V_{ULT} , as described on the ultimate design wind speed maps contained in those codes, is 130 mph (209 km/h), in Exposure B areas, on structures a maximum of 40 feet (12 192 mm) in height.



TABLE 2B - DESIGN WIND UPLIFT PRESSURES IN ACCORDANCE WITH ASCE 7-10 (EXPOSURE C)										
REQUIRED WIND UPLIFT RESISTANCE, p (psf) ¹ EXPOSURE C										
CATEGORY II BUILDINGS										
MEAN ROOF HEIGHT (ft)	Basic Wind Speed, V (mph)									
	110		115		120		130		140	
	Roof Zones									
	1	2&3	1	2&3	1	2&3	1	2&3	1	2&3
	Gable/Hip Roof 7° < θ ≤ 27° (~ 1½:12 < θ ≤ ~ 6:12)									
0-30	23.3	67.2	25.4	73.5	27.7	80.0	32.5	93.9	37.7	108.9
40	24.7	71.4	27.0	78.1	29.4	85.0	34.5	99.8	40.1	115.7
Hip Roof 7° < θ ≤ 25° (~ 1½:12 < θ ≤ ~ 6:12)										
0-30	23.3	44.0	25.4	48.1	27.7	52.3	32.5	61.4	37.7	71.2
40	24.7	46.7	27.0	51.1	29.4	55.6	34.5	65.2	40.1	75.7
Gable Roof 27° < θ ≤ 45° (6:12 < θ ≤ 12:12)										
0-30	25.9	31.0	28.3	33.9	30.8	36.9	36.1	43.3	41.9	50.3
40	27.5	33.0	30.0	36.0	32.7	39.2	38.4	46.1	44.5	53.4
Monoslope Roof 10° < θ ≤ 30° (~ 2¼:12 < θ ≤ ~ 7:12)										
0-30	33.6	75.0	36.7	82.0	40.0	89.3	47.0	104.8	54.5	121.5
40	35.7	79.7	39.0	87.1	42.5	94.8	49.9	111.3	57.9	129.1
CATEGORY III & IV BUILDINGS										
MEAN ROOF HEIGHT (ft)	BASIC WIND SPEED, V (mph)									
	115		120		130		140		145	
	Roof Zones ²									
	1	2&3	1	2&3	1	2&3	1	2&3	1	2&3
	Gable/Hip Roof 7° < θ ≤ 27° (~ 1½:12 < θ ≤ ~ 6:12)									
0-30	25.4	73.5	27.7	80.0	32.5	93.9	37.7	108.9	40.4	116.8
40	27.0	78.1	29.4	85.0	34.5	99.8	40.1	115.7	43.0	124.1
Hip Roof 7° < θ ≤ 25° (~ 1½:12 < θ ≤ ~ 6:12)										
0-30	25.4	48.1	27.7	52.3	32.5	61.4	37.7	71.2	40.4	76.4
40	27.0	51.1	29.4	55.6	34.5	65.2	40.1	75.7	43.0	81.2
Gable Roof 27° < θ ≤ 45° (6:12 < θ ≤ 12:12)										
0-30	28.3	33.9	30.8	36.9	36.1	43.3	41.9	50.3	44.9	53.9
40	30.0	36.0	32.7	39.2	38.4	46.1	44.5	53.4	47.7	57.3
Monoslope Roof 10° < θ ≤ 30° (~ 2¼:12 < θ ≤ ~ 7:12)										
0-30	36.7	82.0	40.0	89.3	47.0	104.8	54.5	121.5	58.4	130.3
40	39.0	87.1	42.5	94.8	49.9	111.3	57.9	129.1	62.1	138.5

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm, 1 mph = 1.6 km/h, 1 psf (lbf/ft²) = 47.9 N/m²

¹ For use in locations where the Topographic Factor, K_{zt} = 1.0. For locations where K_{zt} is greater than 1.0, the tabulated pressures shall be increased to account for topographic effects.

² See ASCE 7 for roof zone definitions.



TABLE 2C - DESIGN WIND UPLIFT PRESSURES IN ACCORDANCE WITH ASCE 7-10 (EXPOSURE D)										
REQUIRED WIND UPLIFT RESISTANCE, p (psf) ¹ EXPOSURE D										
CATEGORY II BUILDINGS										
MEAN ROOF HEIGHT (ft)	Basic Wind Speed, V (mph)									
	110		115		120		130		140	
	Roof Zones									
	1	2&3	1	2&3	1	2&3	1	2&3	1	2&3
	Gable/Hip Roof 7° < θ ≤ 27° (~ 1½:12 < θ ≤ ~ 6:12)									
0-30	27.5	79.6	30.1	87.0	32.8	94.7	38.5	111.1	44.6	128.9
40	29.0	83.6	31.6	91.4	34.5	99.5	40.4	116.8	46.9	135.5
Hip Roof 7° < θ ≤ 25° (~ 1½:12 < θ ≤ ~ 6:12)										
0-30	27.5	52.0	30.1	56.9	32.8	61.9	38.5	72.7	44.6	84.3
40	29.0	54.7	31.6	59.8	34.5	65.1	40.4	76.4	46.9	88.6
Gable Roof 27° < θ ≤ 45° (6:12 < θ ≤ 12:12)										
0-30	30.6	36.7	33.4	40.1	36.4	43.7	42.7	51.3	49.6	59.5
40	32.2	38.6	35.2	42.2	38.3	45.9	44.9	53.9	52.1	62.5
Monoslope Roof 10° < θ ≤ 30° (~ 2¼:12 < θ ≤ ~ 7:12)										
0-30	39.8	88.7	43.5	97.0	47.3	105.6	55.6	123.9	64.4	143.7
40	41.8	93.3	45.7	102.0	49.8	111.0	58.4	130.3	67.7	151.1
CATEGORY III & IV BUILDINGS										
MEAN ROOF HEIGHT (ft)	BASIC WIND SPEED, V (mph)									
	115		120		130		140		145	
	Roof Zones ²									
	1	2&3	1	2&3	1	2&3	1	2&3	1	2&3
	Gable/Hip Roof 7° < θ ≤ 27° (~ 1½:12 < θ ≤ ~ 6:12)									
0-30	30.1	87.0	32.8	94.7	38.5	111.1	44.6	128.9	47.9	138.2
40	31.6	91.4	34.5	99.5	40.4	116.8	46.9	135.5	50.3	145.3
Hip Roof 7° < θ ≤ 25° (~ 1½:12 < θ ≤ ~ 6:12)										
0-30	30.1	56.9	32.8	61.9	38.5	72.7	44.6	84.3	47.9	90.4
40	31.6	59.8	34.5	65.1	40.4	76.4	46.9	88.6	50.3	95.0
Gable Roof 27° < θ ≤ 45° (6:12 < θ ≤ 12:12)										
0-30	33.4	40.1	36.4	43.7	42.7	51.3	49.6	59.5	53.2	63.8
40	35.2	42.2	38.3	45.9	44.9	53.9	52.1	62.5	55.9	67.1
Monoslope Roof 10° < θ ≤ 30° (~ 2¼:12 < θ ≤ ~ 7:12)										
0-30	43.5	97.0	47.3	105.6	55.6	123.9	64.4	143.7	69.1	154.2
40	45.7	102.0	49.8	111.0	58.4	130.3	67.7	151.1	72.7	162.1

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm, 1 mph = 1.6 km/h, 1 psf (lbf/ft²) = 47.9 N/m²

¹ For use in locations where the Topographic Factor, K_{zt} = 1.0. For locations where K_{zt} is greater than 1.0, the tabulated pressures shall be increased to account for topographic effects.

² See ASCE 7 for roof zone definitions.



TABLE 2D - DESIGN WIND UPLIFT PRESSURES IN ACCORDANCE WITH ASCE 7-16 (EXPOSURE B)												
Design Wind Uplift Pressure, p (psf)												
Exposure B												
Mean Roof Height (ft)	Basic Wind Speed, V (mph)											
	110	115	120	130	140	145						
Gable 7° ≤ θ ≤ 20°												
Roof Zones												
	1	3r	1	3r	1	3r	1	3r	1	3r	1	3r
0-30	36.9	66.4	40.3	72.5	43.9	79.0	51.5	92.7	59.7	107.5	64.0	115.3
40	40.0	72.0	43.7	78.7	47.6	85.7	55.9	100.6	64.8	116.7	69.5	125.2
Gable 20° ≤ θ ≤ 27°												
Roof Zones												
	1	3r	1	3r	1	3r	1	3r	1	3r	1	3r
0-30	27.7	66.4	30.2	72.5	32.9	79.0	38.6	92.7	44.8	107.5	48.0	115.3
40	30.0	72.0	32.8	78.7	35.7	85.7	41.9	100.6	48.6	116.7	52.2	125.2
Gable 27° ≤ θ ≤ 45°												
Roof Zones												
	1	3e	1	3e	1	3e	1	3e	1	3e	1	3e
0-30	27.7	59.0	36.3	64.5	39.5	70.2	46.3	82.4	53.7	95.5	57.7	102.5
40	30.0	64.0	39.4	70.0	42.9	76.2	50.3	89.4	58.3	103.7	62.9	111.3
Hip 7° ≤ θ ≤ 20°												
Roof Zones												
	1	3	1	3	1	3	1	3	1	3	1	3
0-30	33.2	47.9	36.3	52.4	39.5	57.0	46.3	66.9	53.7	77.6	57.7	83.3
40	36.0	52.0	39.4	56.9	42.9	61.9	50.3	72.7	58.3	84.3	62.6	90.4
Hip 27° ≤ θ ≤ 45°												
Roof Zones												
	1	3	1	3	1	3	1	3	1	3	1	3
0-30	27.7	46.1	30.2	50.4	32.9	54.8	38.6	64.4	44.8	74.6	48.0	80.1
40	30.0	50.0	32.8	54.7	35.7	59.5	41.9	69.9	48.6	81.0	52.2	86.9
Hip (Overhang) 7° ≤ θ ≤ 20°												
Roof Zones												
	1	3	1	3	1	3	1	3	1	3	1	3
0-30	42.4	68.2	46.3	74.5	50.5	81.2	59.2	95.3	68.7	110.5	73.7	118.5
40	46.0	74.0	50.3	80.9	54.8	88.1	64.3	103.4	74.6	119.9	80.0	128.7
Hip (Overhang) 20° ≤ θ ≤ 27°												
Roof Zones												
	1	3	1	3	1	3	1	3	1	3	1	3
0-30	25.8	36.9	28.2	40.3	30.7	43.9	36.0	51.5	41.8	59.7	44.8	64.0
40	28.0	40.0	30.6	43.7	33.3	47.6	39.1	55.9	45.4	64.8	48.7	69.5
Hip (Overhang) 27° ≤ θ ≤ 45°												
Roof Zones												
	1	3	1	3	1	3	1	3	1	3	1	3
0-30	42.4	60.8	46.3	66.5	50.5	72.4	59.2	85.0	68.7	98.5	73.7	105.7
40	46.0	66.0	50.3	72.2	54.8	79.0	64.3	92.2	74.6	107.0	80.0	114.7
Monoslope 3° ≤ θ ≤ 10°												
Roof Zones												
	1	3	1	3	1	3	1	3	1	3	1	3
0-30	20.3	47.9	22.2	52.4	24.1	57.0	28.3	66.9	32.8	77.6	35.2	83.3
40	22.0	52.0	24.1	56.9	26.2	61.9	30.7	72.7	35.7	84.3	38.3	90.4
Monoslope 10° ≤ θ ≤ 30°												
Roof Zones												
	1	3	1	3	1	3	1	3	1	3	1	3
0-30	24.0	53.4	26.2	58.4	28.5	63.6	33.5	74.7	38.8	86.6	41.6	92.9
40	26.0	58.0	28.4	63.4	31.0	69.1	36.3	81.1	42.1	94.0	45.2	100.8

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm, 1 mph = 1.6 km/h, 1 psf (lb/ft²) = 47.9 N/m²

¹ For use in locations where the Topographic Factor, K_{zt} = 1.0. For locations where K_{zt} is greater than 1.0, the tabulated pressures shall be increased to account for topographic effects.

² See ASCE 7 for roof zone definitions.



TABLE 2E - DESIGN WIND UPLIFT PRESSURES IN ACCORDANCE WITH ASCE 7-16 (EXPOSURE C)												
Design Wind Uplift Pressure, p (psf)												
Exposure C												
Mean Roof Height (ft)	Basic Wind Speed, V (mph)											
	110	115		120		130		140		145		
Gable 7° ≤ θ ≤ 20°												
Roof Zones												
	1	3r	1	3r	1	3r	1	3r	1	3r	1	3r
0-30	51.6	92.9	56.4	101.5	61.4	110.6	72.1	129.7	83.69	150.5	89.7	161.4
40	54.8	98.6	59.9	107.7	65.2	117.3	76.5	137.7	88.7	159.7	95.2	171.3
Gable 20° ≤ θ ≤ 27°												
Roof Zones												
	1	3r	1	3r	1	3r	1	3r	1	3r	1	3r
0-30	38.7	92.9	42.3	101.5	46.1	110.6	54.1	129.7	62.7	150.5	67.3	161.4
40	41.1	98.6	44.9	107.7	48.9	117.3	57.4	137.7	66.5	159.7	71.4	171.3
Gable 27° ≤ θ ≤ 45°												
Roof Zones												
	1	3e	1	3e	1	3e	1	3e	1	3e	1	3e
0-30	38.7	82.6	50.8	90.3	55.3	98.3	64.9	115.3	75.2	133.8	80.7	143.5
40	41.1	87.6	53.9	95.8	58.7	104.3	68.8	122.4	79.8	141.9	85.6	152.3
Hip 7° ≤ θ ≤ 20°												
Roof Zones												
	1	3	1	3	1	3	1	3	1	3	1	3
0-30	46.5	67.1	50.8	73.3	55.3	79.8	64.9	93.7	75.2	108.7	80.7	116.6
40	49.3	71.2	53.9	77.8	58.7	84.7	68.8	99.4	79.8	115.3	85.6	123.7
Hip 27° ≤ θ ≤ 45°												
Roof Zones												
	1	3	1	3	1	3	1	3	1	3	1	3
0-30	38.7	64.5	42.3	70.5	46.1	76.8	54.1	90.1	62.7	104.5	67.3	112.1
40	41.1	68.5	44.9	74.8	48.9	81.5	57.4	95.6	66.5	110.9	71.4	119.0
Hip (Overhang) 7° ≤ θ ≤ 20°												
Roof Zones												
	1	3	1	3	1	3	1	3	1	3	1	3
0-30	59.4	95.5	64.9	104.4	70.6	113.6	82.9	133.3	96.1	154.7	103.1	165.9
40	63.0	101.3	68.8	110.7	75.0	120.6	88.0	141.5	102.0	164.1	109.4	176.1
Hip (Overhang) 20° ≤ θ ≤ 27°												
Roof Zones												
	1	3	1	3	1	3	1	3	1	3	1	3
0-30	36.1	51.6	39.5	56.4	43.0	61.4	50.5	72.1	58.5	83.6	62.8	89.7
40	38.3	54.8	41.9	59.9	45.6	65.2	53.5	76.5	62.1	88.7	66.6	95.2
Hip (Overhang) 27° ≤ θ ≤ 45°												
Roof Zones												
	1	3	1	3	1	3	1	3	1	3	1	3
0-30	59.4	85.2	64.9	93.1	70.6	101.3	82.9	118.9	96.1	137.9	103.1	148.0
40	63.0	90.4	68.8	98.8	75.0	107.5	88.0	126.2	102.0	146.4	109.4	157.0
Monoslope 3° ≤ θ ≤ 10°												
Roof Zones												
	1	3	1	3	1	3	1	3	1	3	1	3
0-30	28.4	67.1	31.0	73.3	33.8	79.8	39.6	93.7	46.0	108.7	49.3	116.6
40	30.1	71.2	32.9	77.8	35.9	84.7	42.1	99.4	48.8	115.3	52.3	123.7
Monoslope 10° ≤ θ ≤ 30°												
Roof Zones												
	1	3	1	3	1	3	1	3	1	3	1	3
0-30	33.5	74.8	36.7	81.8	39.9	89.0	46.9	104.5	54.3	121.2	58.3	130.0
40	35.6	79.4	38.9	86.8	42.4	94.5	49.7	110.9	57.7	128.6	61.9	138.0

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm, 1 mph = 1.6 km/h, 1 psf (lb/ft²) = 47.9 N/m²

¹ For use in locations where the Topographic Factor, $K_{zt} = 1.0$. For locations where K_{zt} is greater than 1.0, the tabulated pressures shall be increased to account for topographic effects.

² See ASCE 7 for roof zone definitions.



EVALUATION REPORT

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TABLE 2F - DESIGN WIND UPLIFT PRESSURES IN ACCORDANCE WITH ASCE 7-16 (EXPOSURE D)												
Design Wind Uplift Pressure, p (psf)												
Exposure D												
Mean Roof Height (ft)	Basic Wind Speed, V (mph)											
	110	115		120		130		140		145		
Gable 7° ≤ θ ≤ 20°												
Roof Zones												
	1	3r	1	3r	1	3r	1	3r	1	3r	1	3r
0-30	61.1	110.0	66.8	120.2	72.7	130.9	85.3	153.6	99.0	178.1	106.1	191.1
40	64.2	115.6	70.2	126.4	76.5	137.6	89.7	161.5	104.1	187.3	111.6	200.9
Gable 20° ≤ θ ≤ 27°												
Roof Zones												
	1	3r	1	3r	1	3r	1	3r	1	3r	1	3r
0-30	45.8	110.0	50.1	120.2	54.5	130.9	64.0	153.6	74.2	178.1	79.6	191.1
40	48.2	115.6	52.7	126.4	57.3	137.6	67.3	161.5	78.1	187.3	83.7	200.9
Gable 27° ≤ θ ≤ 45°												
Roof Zones												
	1	3e	1	3e	1	3e	1	3e	1	3e	1	3e
0-30	45.8	97.7	60.1	106.8	65.4	116.3	76.8	136.5	89.1	158.3	95.5	169.8
40	48.2	102.8	63.2	112.4	68.8	122.3	80.8	143.6	93.7	166.5	100.5	178.6
Hip 7° ≤ θ ≤ 20°												
Roof Zones												
	1	3	1	3	1	3	1	3	1	3	1	3
0-30	55.0	79.4	60.1	86.8	65.4	94.5	76.8	111.0	89.1	128.6	95.5	138.0
40	57.8	83.5	63.2	91.3	68.8	99.4	80.8	116.7	93.7	135.3	100.5	145.1
Hip 27° ≤ θ ≤ 45°												
Roof Zones												
	1	3	1	3	1	3	1	3	1	3	1	3
0-30	45.8	76.4	50.1	83.5	54.5	90.9	64.0	106.7	74.2	123.7	79.6	132.7
40	48.2	80.3	52.7	87.8	57.3	95.6	67.3	112.2	78.1	130.1	83.7	139.5
Hip (Overhang) 7° ≤ θ ≤ 20°												
Roof Zones												
	1	3	1	3	1	3	1	3	1	3	1	3
0-30	70.3	113.0	76.8	123.5	83.6	134.5	98.1	157.8	113.8	183.1	122.1	196.4
40	73.9	118.9	80.8	129.9	87.9	141.4	103.2	166.0	119.7	192.5	128.4	206.5
Hip (Overhang) 20° ≤ θ ≤ 27°												
Roof Zones												
	1	3	1	3	1	3	1	3	1	3	1	3
0-30	42.8	61.1	46.7	66.8	50.9	72.7	59.7	85.3	69.3	99.0	74.3	106.1
40	45.0	64.2	49.2	70.2	53.5	76.5	62.8	89.7	72.9	104.1	78.1	111.6
Hip (Overhang) 27° ≤ θ ≤ 45°												
Roof Zones												
	1	3	1	3	1	3	1	3	1	3	1	3
0-30	70.3	100.8	76.8	110.2	83.6	120.0	98.1	140.8	113.8	163.3	122.1	175.1
40	73.9	106.0	80.8	115.9	87.9	126.2	103.2	148.1	119.7	171.7	128.4	184.2
Monoslope 3° ≤ θ ≤ 10°												
Roof Zones												
	1	3	1	3	1	3	1	3	1	3	1	3
0-30	33.6	79.4	36.7	86.8	40.0	94.5	46.9	110.9	54.4	128.6	58.4	138.0
40	35.3	83.5	38.6	91.3	42.1	99.4	49.4	116.7	57.2	135.3	61.4	145.1
Monoslope 10° ≤ θ ≤ 30°												
Roof Zones												
	1	3	1	3	1	3	1	3	1	3	1	3
0-30	39.7	88.6	43.4	96.8	47.3	105.4	55.5	123.7	64.3	143.5	69.0	153.9
40	41.8	93.2	45.6	101.8	49.7	110.9	58.3	130.1	67.6	150.9	72.6	161.9

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm, 1 mph = 1.6 km/h, 1 psf (lb/ft²) = 47.9 N/m²

¹ For use in locations where the Topographic Factor, $K_{zt} = 1.0$. For locations where K_{zt} is greater than 1.0, the tabulated pressures shall be increased to account for topographic effects.

² See ASCE 7 for roof zone definitions.



FLORIDA SUPPLEMENT

PROVIA

301 Industrial Park Road
Booneville, Mississippi 38829
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SPANISH TILE METAL ROOFING

CSI Section:

07 41 13 Metal Roof Panels

1.0 RECOGNITION

The ProVia Spanish Tile metal roofing panel as evaluated and represented in IAPMO UES Evaluation Report ER-817 and with changes as noted in this supplement is a satisfactory alternative for use in buildings built under the following codes:

- 2020 Florida Building Code, Building (FBC, Building)
- 2020 Florida Building Code, Residential (FBC, Residential)

2.0 FINDINGS

The ProVia Spanish Tile metal roofing panels described in IAPMO UES Evaluation Report ER-817 comply with the 2020 Florida Building Code, Building, and the 2020 Florida Building Code, Residential.

2.1 Installation shall be in accordance with ER-817 and Section 1507.5 of the Florida Building Code, Building, or Section R905.10 of the Florida Building Code, Residential, as applicable. Flashing shall comply with Sections 1503.2 and 1507.5.7 of the Florida Building Code, Building. Underlayment shall comply with Section 1507.5.3 of the Florida Building Code, Building, or Section R905.10.5 of the Florida Building Code, Residential, as applicable.

2.2 Design requirements shall be determined in accordance with the Florida Building Code, Building or Florida Building Code, Residential, as applicable.

2.3 Use of the ProVia Spanish Tile metal roofing panels for compliance with the high-velocity hurricane zone provisions of the Florida Building Code, Building and Florida Building Code, Residential has not been evaluated and is outside the scope of this evaluation report.

2.4 Verification shall be provided that a quality assurance agency audits the manufacturer's quality assurance program and audits the production quality of products in accordance with Section (5)(d) of Florida Rule 61G20-3.008. The quality assurance agency shall be approved by the Commission (or the building official when the report holder does not possess an approval by the Commission).

2.5 This supplement expires concurrently with ER-817

For additional information about this evaluation report please visit www.uniform-es.org or email at info@uniform-es.org