



EVALUATION REPORT

FLORIDA BUILDING CODE 8TH EDITION (2023)

Manufacturer: NEXTGEN USA INC
4601 Riverview Blvd
St. Louis, MO 63120
(618) 719-9546

Issued October 5, 2023

Manufacturing: Hong Kong SAR, China

Quality Assurance: PRI Construction Materials Technologies (QUA9110)

SCOPE

Category: Roofing
Subcategory: Metal Roofing
Code Sections: 1504.3
Properties: Wind Resistance

PRODUCT DESCRIPTION

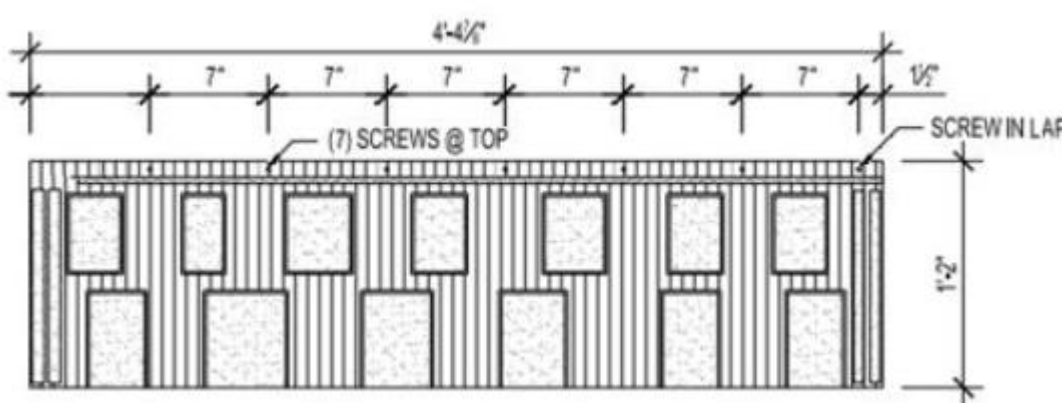
Panel: Eshal Shingle
Description: Preformed, stone-coated panel; Maximum 50.5-inch x 12.5-inch exposure
Material: 26 ga. ASTM A792 AZ55, Grade 50 steel;
Shall conform with FBC Section 1507.4.3

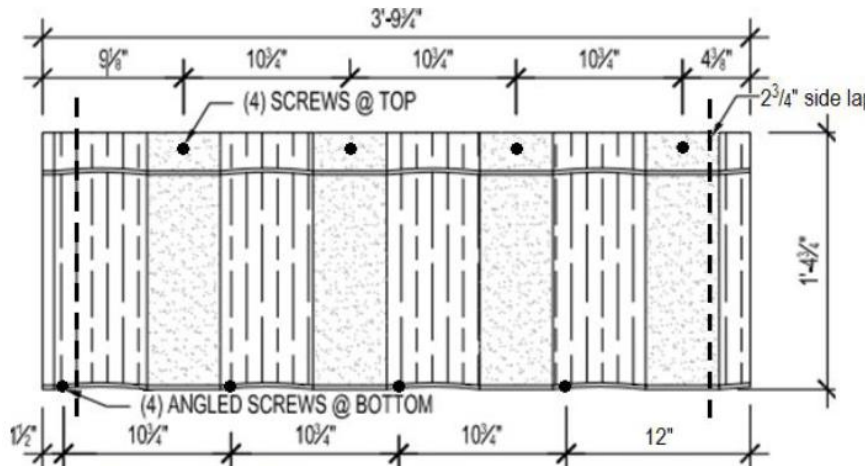


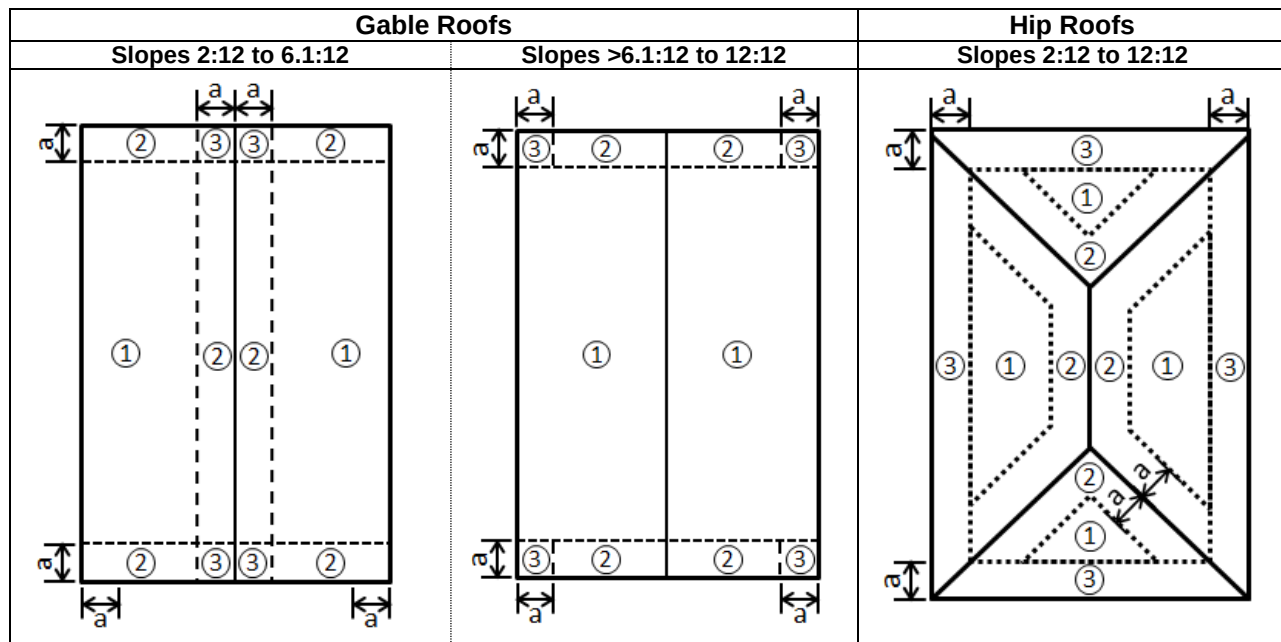
Panel: Zahra Tile
Description: Preformed, stone-coated panel; Maximum 43-inch x 14-inch exposure
Material: 26 ga. ASTM A792 AZ55, Grade 50 steel;
Shall conform with FBC Section 1507.4.3



APPROVED ASSEMBLIES

System 1: Eshal Shingle									
Slope:	Shall be in accordance with FBC Section 1507.4.2.								
Roof Deck:	Minimum 15/32-inch 32/16 span rated, 4-ply, CDX plywood sheathing or wood plank for new and existing roof deck. Deck shall be designed by others in accordance with FBC requirements.								
Underlayment:	Installed in accordance with FBC requirements.								
Attachment:	Seven (7) #10 x minimum 1.5-inch HWH screws with HiLo Threads and Type 17 point using the fastening pattern shown below with six (6) screws spaced 7-inches o.c. along the fastening flange of the panel beginning 1-inch from the panel edge and one (1) additional screw at the side lap. Fasteners shall penetrate through the deck a minimum 3/8-inch and shall conform to FBC section 1507.4.4 and 1506.6.								
Maximum Design Pressures:	-63.5 psf <i>Pressure calculated using 2:1 margin of safety per 1504.9</i>								
									
Maximum Mean Roof Heights Slopes 2:12 – 12:12									
Exposure	Basic Wind Speed (mph)								
	120	130	140	150	160	170	180	190	200
Zone 1 for Gable/Hip Roofs									
B	60 ft	60 ft	60 ft	60 ft	60 ft	46 ft	30 ft	20 ft	NA
C	60 ft	60 ft	60 ft	31 ft	16 ft	NA	NA	NA	NA
D	60 ft	60 ft	26 ft	NA	NA	NA	NA	NA	NA
Zone 2 for Gable Roofs and Zones 2 & 3 for Hip Roofs									
B	60 ft	60 ft	60 ft	41 ft	25 ft	16 ft	NA	NA	NA
C	60 ft	33 ft	16 ft	NA	NA	NA	NA	NA	NA
D	30 ft	NA	NA	NA	NA	NA	NA	NA	NA
Zone 3 for Gable Roofs									
B	60 ft	43 ft	25 ft	15 ft	NA	NA	NA	NA	NA
C	19 ft	NA	NA	NA	NA	NA	NA	NA	NA
D	NA	NA	NA	NA	NA	NA	NA	NA	NA
Notes: 1) Exposure category for the structure location shall be as defined in the Florida Building Code 2) Limitations are based on an effective wind area of 10ft2 or less 3) Topographic factors such as escarpments or hills are not included in the above assessment 4) Applicable for Enclosed Buildings without overhangs 5) NA = "Not Allowed" 6) Kd = 0.85 7) Ke = 1.0 8) Projects with mean roof heights of greater than 60 ft shall be evaluated by a licensed design professional 9) See page 4 for details for dimensions and locales of Zone 1, 2, and 3 10) Vult is shown in the tables above. Design wind loads are calculated using Vasd = Vult/0.6 per 1609.3.1									

System 2: Zahra Tile									
Slope:	Shall be in accordance with FBC Section 1507.4.2.								
Roof Deck:	Minimum 15/32-inch 32/16 span rated 4-ply, CDX plywood sheathing or wood plank for new and existing roof deck. Deck shall be designed by others in accordance with FBC requirements.								
Underlayment:	Installed in accordance with FBC requirements.								
Attachment:	Eight (8) #10 x minimum 2.5-inch HWH screws with HiLo Threads and Type 17 point using the fastening pattern shown below with four (4) screws spaced 10 3/4-inches o.c. across the back shelf of the panel beginning 9 1/8-inch from the panel edge and four (4) screws through the headlap at a 45 degree angle and spaced 10 3/4-inches o.c. beginning 1 1/2-inches from the panel edge. Fasteners shall penetrate through the deck a minimum 3/8-inch and shall conform to FBC section 1507.4.4 and 1506.6.								
Maximum Design Pressures:	-108.5 psf <i>Pressure calculated using 2:1 margin of safety per 1504.9</i>								
									
Maximum Mean Roof Heights Slopes 2:12 – 12:12									
Exposure	Basic Wind Speed (mph)								
	120	130	140	150	160	170	180	190	200
Zone 1 for Gable/Hip Roofs									
B	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft
C	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	43 ft	26 ft
D	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	31 ft	16 ft	NA
Zone 2 for Gable Roofs and Zones 2 & 3 for Hip Roofs									
B	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	52 ft	35 ft
C	60 ft	60 ft	60 ft	60 ft	59 ft	32 ft	18 ft	NA	NA
D	60 ft	60 ft	60 ft	51 ft	24 ft	NA	NA	NA	NA
Zone 3 for Gable Roofs									
B	60 ft	60 ft	60 ft	60 ft	60 ft	43 ft	28 ft	18 ft	NA
C	60 ft	60 ft	58 ft	29 ft	15 ft	NA	NA	NA	NA
D	60 ft	56 ft	23 ft	NA	NA	NA	NA	NA	NA
Notes: 1) Exposure category for the structure location shall be as defined in the Florida Building Code 2) Limitations are based on an effective wind area of 10ft2 or less 3) Topographic factors such as escarpments or hills are not included in the above assessment 4) Applicable for Enclosed Buildings without overhangs 5) NA = "Not Allowed" 6) Kd = 0.85 7) Ke = 1.0 8) Projects with mean roof heights of greater than 60 ft shall be evaluated by a licensed design professional 9) See page 4 for details for dimensions and locales of Zone 1, 2, and 3 10) Vult is shown in the tables above. Design wind loads are calculated using Vasd = Vult/0.6 per 1609.3.1.									



Dimension "a" shall be 10% of the least horizontal dimension or (0.4 x *Mean Roof Height*), whichever is smaller, but not less than either 4% of the least horizontal dimension or 3ft.

REFERENCES

Entity	Report No.	Standard	Year
PRI Construction Materials Technologies (TST5878)	2504T0001	UL 1897	2015
		UL 580	2006
PRI Construction Materials Technologies (TST5878)	2504T0003	UL 1897	2015
		UL 580	2006

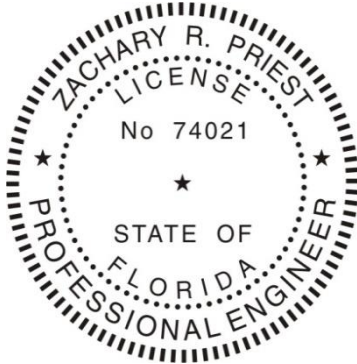
LIMITATIONS

1. This report is not for use in the HVHZ.
2. Fire classification is not within the scope of this evaluation.
3. The roof deck and the roof deck attachment shall be designed by others to meet the minimum design loads established for components and cladding and in accordance with FBC requirements.
4. Roof systems are evaluated for wind resistance as non-structural roof cladding only. Where structural applications are desired, Chapter 16 structural load evaluations shall be provided by a licensed design professional to the satisfaction of the Authority Having Jurisdiction.
5. Reroofing shall be in accordance with FBC Section 1511.
6. Installation of the evaluated products shall comply with this report, the FBC and the manufacturer's published application instructions. Where discrepancies exist between these sources, the more restrictive and FBC compliant installation detail shall prevail.
7. All products listed in this report shall be manufactured under a quality assurance program in compliance with Rule 61G20-3.



COMPLIANCE STATEMENT

The products evaluated herein by Zachary R. Priest, P.E. have demonstrated compliance with the Florida Building Code, 8th Edition (2023) as evidenced in the referenced documents submitted by the named manufacturer.



This item has been
digitally signed and
sealed by Zachary R.
Priest, PE, on 10/5/2023.

Printed copies of this
document are not
considered signed and
sealed and the signature
must be verified on any
electronic copies.


Digitally signed by Zachary R. Priest
CREEK Technical Services, LLC

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Zachary R. Priest, P.E.
Florida Registration No. 74021
Organization No. ANE9641

CERTIFICATION OF INDEPENDENCE

CREEK Technical Services, LLC does not have, nor will it acquire, a financial interest in any company manufacturing or distributing products under this evaluation.

CREEK Technical Services, LLC is not owned, operated, or controlled by any company manufacturing or distributing products under this evaluation.

Zachary R. Priest, P.E. does not have, nor will acquire, a financial interest in any company manufacturing or distributing products under this evaluation.

Zachary R. Priest, P.E. does not have, nor will acquire, a financial interest in any other entity involved in the approval process of the product.

END OF REPORT