CREEK
TECHNICAL SERVICES, LLC

Registry No. 29824
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EVALUATION REPORT

FLORIDA BUILDING CODE, 8TH EDITION (2023)

Issued April 2, 2024

Manufacturer: QUEENTILE US LLC
2614 Big Pine Drive
Holiday, FL 34691
(813) 420-6748

Manufacturing: Kharkiv, Ukraine

Quality Assurance: PRI Construction Materials Technologies (QUA9110)

SCOPE

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

REFERENCES

Entity	Report No.	Standard	Year
PRI Construction Materials Technologies (TST5878)	2213T0006	UL 1897	2015
		UL 580	2006
PRI Construction Materials Technologies (TST5878)	2213T0007	UL 1897	2015
		UL 580	2006
PRI Construction Materials Technologies (TST5878)	2213T0008	UL 1897	2015
		UL 580	2006

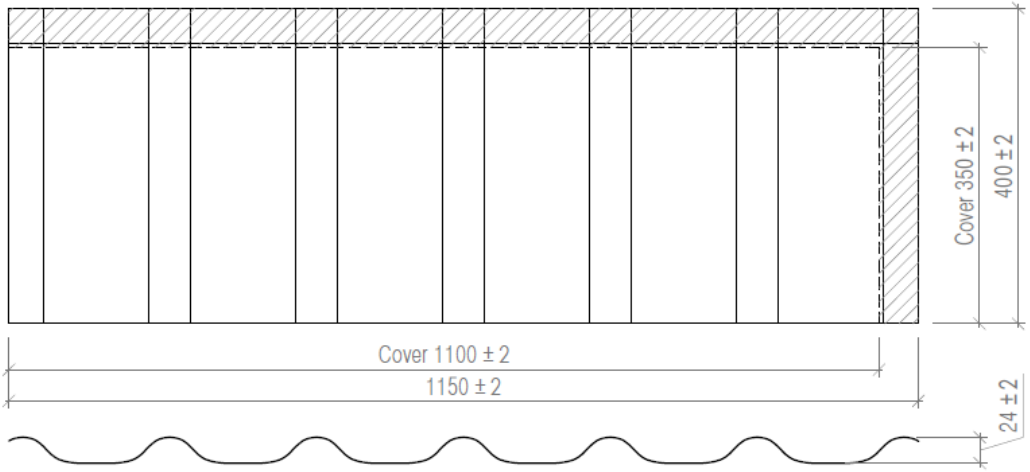
PRODUCT DESCRIPTION

QueenTile Standard

Profile: 400mm x 1150mm panel; Installed with 350mm x 1110mm exposure

Description: Preformed, fastened, stoned-coated steel panels

Material: Min. 26 ga. ASTM A792 AZ50 stone-coated steel; F_y = Min. 60 ksi
Shall conform with FBC Section 1507.4.3

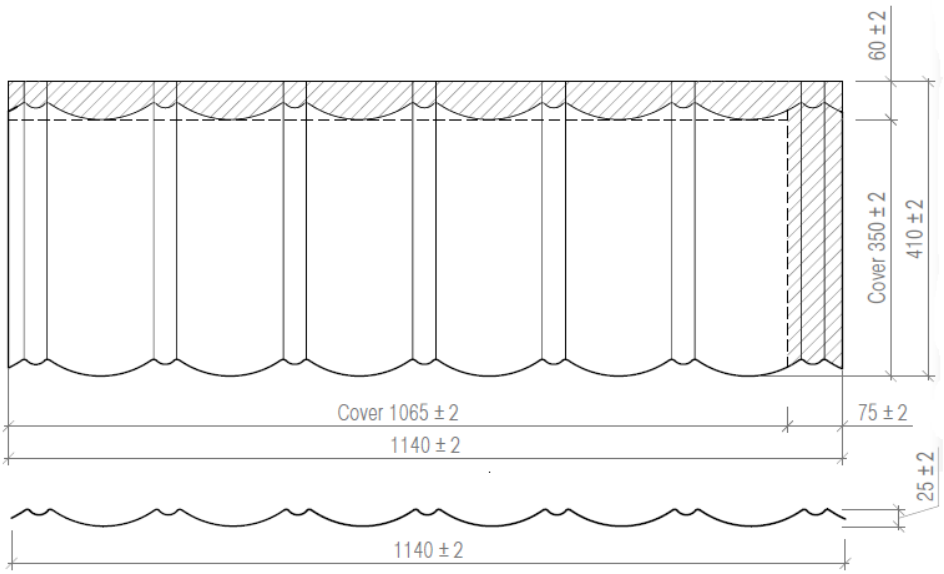


QueenTile Classic

Profile: 410mm x 1140mm panel; Installed with 350mm x 1065mm exposure

Description: Preformed, fastened, stoned-coated steel panels

Material: Min. 26 ga. ASTM A792 AZ50 stone-coated steel; F_y = Min. 60 ksi
Shall conform with FBC Section 1507.4.3

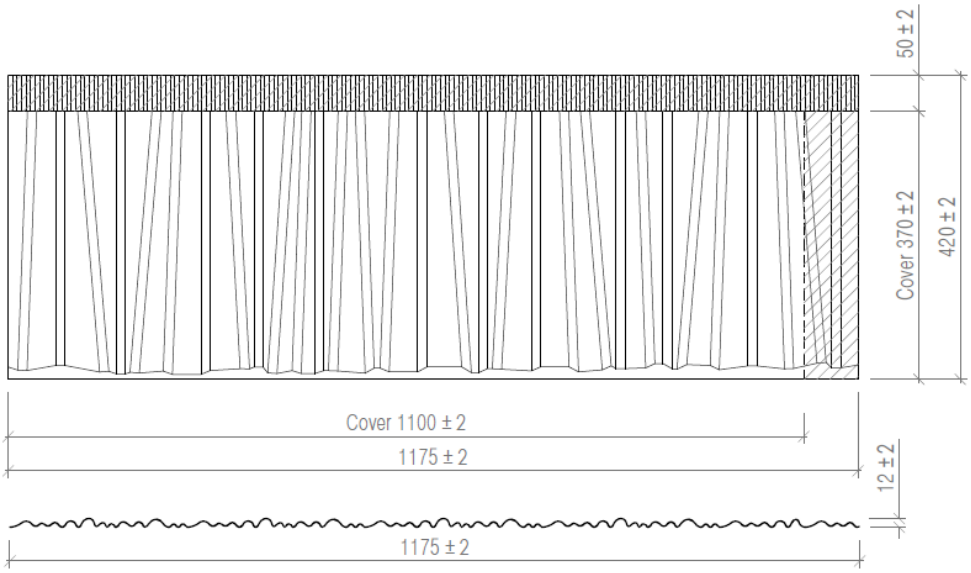


QueenTile Shake

Profile: 420mm x 1175mm panel; Installed with a 370mm x 1100mm exposure

Description: Preformed, fastened, stoned-coated steel panels

Material: Min. 26 ga. ASTM A792 AZ50 stone-coated steel; F_y = Min. 50 ksi
Shall conform with FBC Section 1507.4.3

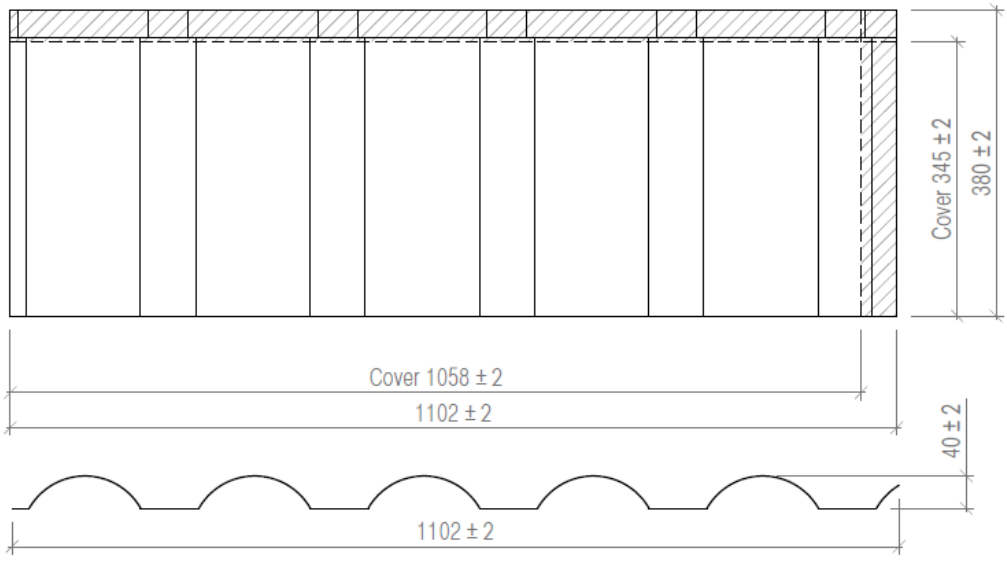


QueenTile Verona

Profile: 380mm x 1102mm panel; Installed with a 345mm x 1058mm exposure

Description: Preformed, fastened, stoned-coated steel panels

Material: Min. 26 ga. ASTM A792 AZ50 stone-coated steel; F_y = Min. 50 ksi
Shall conform with FBC Section 1507.4.3

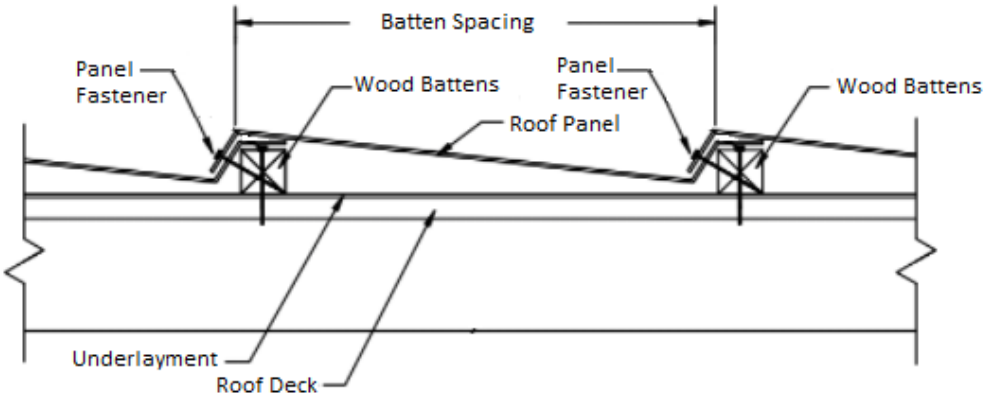


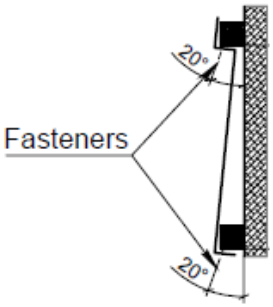
INSTALLATION

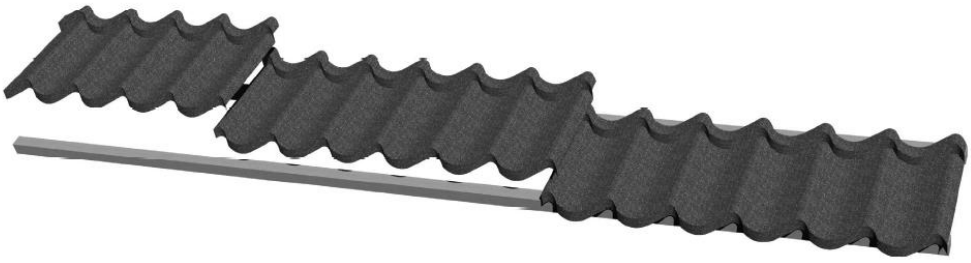
*Note - Refer to the **APPROVED ASSEMBLIES** section of this report for the maximum design pressures of the approved assemblies.*

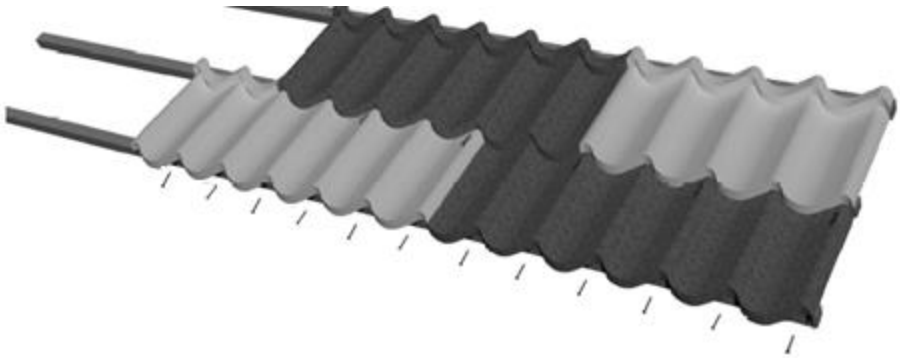
Unless otherwise specified in this report the following installation details shall be met for the named products:

Over Batten Installation

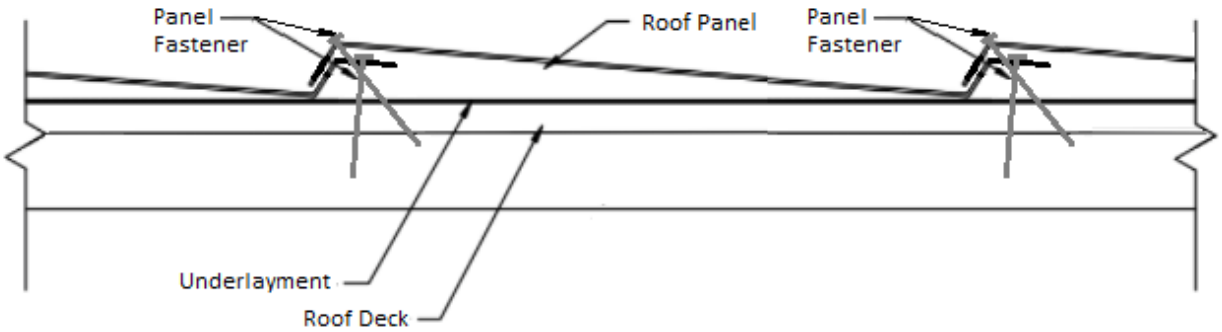








Direct-to-Deck Installation Patterns



QueenTile Shake - Direct-to-Deck Pattern

12 screws per panel

QueenTile Verona - Direct-to-Deck Pattern

10 screws per panel

APPROVED ASSEMBLIES

System 1 – Queentile Standard or QueenTile Classic (Over Battens)	
Slope:	3:12 or greater
Roof Deck:	Solid or closely fitted min. 15/32 in., 32/16 span rated, 4-ply, Grade C-D, Exposure 1 plywood sheathing for new and existing construction at max. 24 in. span; Designed by others in accordance with FBC requirements.
Underlayment:	Installed in accordance with FBC requirements.
Battens:	Nominal No. 2 2x2 SYP wood battens spaced 13-5/8 in. o.c. and oriented perpendicular to the roof trusses/rafters. Battens shall be secured maximum 24 in. o.c. with **#10 x 3.5 in. exterior wood deck screws into the roof trusses/rafters.**
Attachment:	26 ga. metal panel shall be installed as shown in ***INSTALLATION*** with **six (6) 0.113 in. x min. 2 in. ring shank nails** fastened 0.5 in. from the edge of the lap and 7-1/4 in. o.c. at **20-degree angle** through the vertical leg at the headlap of the panel and into the batten. Fasteners shall comply with section 1506.6 and 1507.4.4.
Maximum Design Pressures:	**-82.5 psf** *Pressure calculated using 2:1 margin of safety*

Maximum Mean Roof Heights
Slopes 2:12 – 12:12

Exposure	[9]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	53 ft	36 ft
C	60 ft	60 ft	60 ft	60 ft	60 ft	33 ft	19 ft	NA	NA
D	60 ft	60 ft	60 ft	52 ft	25 ft	NA	NA	NA	NA
Zone 2 for Gable Roofs and Zones 2 & 3 for Hip Roofs									
B	60 ft	60 ft	60 ft	60 ft	60 ft	43 ft	28 ft	18 ft	NA
C	60 ft	60 ft	57 ft	29 ft	15 ft	NA	NA	NA	NA
D	60 ft	55 ft	23 ft	NA	NA	NA	NA	NA	NA
Zone 3 for Gable Roofs									
B	60 ft	60 ft	60 ft	39 ft	24 ft	15 ft	NA	NA	NA
C	60 ft	31 ft	15 ft	NA	NA	NA	NA	NA	NA
D	29 ft	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 9 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 – Queentile Shake (Direct to Deck)	
Slope:	3:12 or greater
Roof Deck:	Solid or closely fitted min. 15/32 in., 32/16 span rated, 4-ply, Grade C-D, Exposure 1 plywood sheathing for new and existing construction at max. 24 in. span; Designed by others in accordance with FBC requirements.
Underlayment:	Installed in accordance with FBC requirements.
Attachment:	26 ga. metal panel shall be installed as shown in ***INSTALLATION*** with **twelve (12) #9 x min. 2.5" HWH Teks Roofing Screws** such that six (6) screws are fastened 7 in. o.c. across the back shelf of the panel beginning adjacent to the edge of the sidelap and six (6) screws are fastened 7 in. o.c. at **45-degree angle** offset 0.5 in. from the edge of the sidelap through the headlap at the apex of the vertical to horizontal transition. Fasteners shall comply with section 1506.6 and 1507.4.4.
Maximum Design Pressures:	**-153.5 psf** *Pressure calculated using 2:1 margin of safety*

Maximum Mean Roof Heights
Slopes 2:12 – 12:12

Exposure	[9]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	60 ft	60 ft
D	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft
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	60 ft	60 ft
C	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	36 ft
D	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	46 ft	25 ft	NA
Zone 3 for Gable Roofs									
B	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	47 ft
C	60 ft	60 ft	60 ft	60 ft	60 ft	47 ft	27 ft	15 ft	NA
D	60 ft	60 ft	60 ft	60 ft	37 ft	18 ft	NA	NA	NA

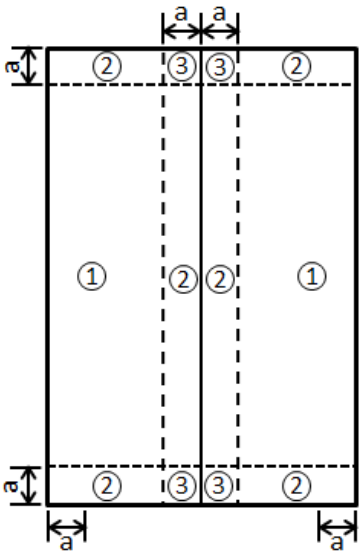
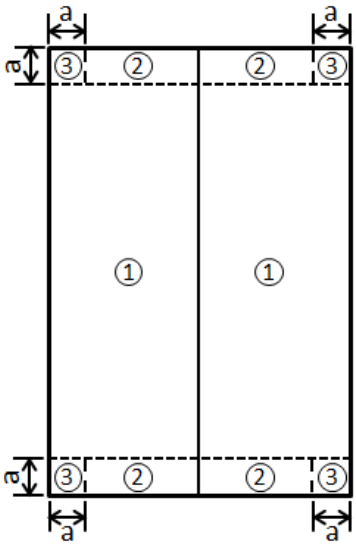
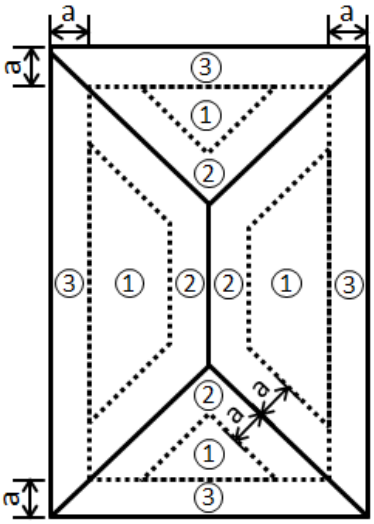
Notes: 1) Exposure category for the structure location shall be as defined in the Florida Building Code 2) Limitations are based on an effective wind area of 10ft2 or less 3) Topographic factors such as escarpments or hills are not included in the above assessment 4) Applicable for Enclosed Buildings 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 9 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 3 – Queentile Verona (Direct to Deck)	
Slope:	3:12 or greater
Roof Deck:	Solid or closely fitted min. 15/32 in., 32/16 span rated, 4-ply, Grade C-D, Exposure 1 plywood sheathing for new and existing construction at max. 24 in. span; Designed by others in accordance with FBC requirements.
Underlayment:	Installed in accordance with FBC requirements.
Attachment:	26 ga. metal panel shall be installed as shown in ***INSTALLATION*** with **ten (10) #9 x min. 2.5" HWH Teks Roofing Screws** such that five (5) screws are fastened 8 in. o.c. across the back shelf of the panel at the panel trough and five (5) screws are fastened 8 in. o.c. at **45-degree angle** at the panel trough through the headlap at the apex of the vertical to horizontal transition. Fasteners shall comply with section 1506.6 and 1507.4.4.
Maximum Design Pressures:	**-153.5 psf** *Pressure calculated using 2:1 margin of safety*

Maximum Mean Roof Heights
Slopes 2:12 – 12:12

Exposure	[9]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	60 ft	60 ft
D	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft
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	60 ft	60 ft
C	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	36 ft
D	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	46 ft	25 ft	NA
Zone 3 for Gable Roofs									
B	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	47 ft
C	60 ft	60 ft	60 ft	60 ft	60 ft	47 ft	27 ft	15 ft	NA
D	60 ft	60 ft	60 ft	60 ft	37 ft	18 ft	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 9 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.

Gable Roofs		Hip Roofs
Slopes 2:12 to 6.1:12	Slopes >6.1:12 to 12:12	Slopes 2:12 to 12:12
		

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.

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 information are provided based on testing. FBC requirements for the rational design of the roof deck, including the attachment, are not within the scope of this evaluation.
4. Roof systems are evaluated for wind resistance as non-structural roof cladding only.
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 4/2/2024.

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
2024.04.02 15:46:00 -04'00'

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