



EXTERIOR RESEARCH & DESIGN, LLC.

Certificate of Authorization #9503

353 Christian Street

Oxford, CT 06478

(203) 262-9245

EVALUATION REPORT

TAMKO Building Products, Inc.

PO Box 1404

Joplin, MO 64802

(417) 624-6644

Evaluation Report T40900.04.12-R4

FL3901-R9

Date of Issuance: 04/04/2012

Revision 4: 10/12/2017

SCOPE:

This Evaluation Report is issued under **Rule 61G20-3** and the applicable rules and regulations governing the use of construction materials in the State of Florida. The documentation submitted has been reviewed by Robert Nieminen, P.E. for use of the product under the Florida Building Code. The product described herein has been evaluated for compliance with the **6th Edition (2017) Florida Building Code** sections noted herein.

DESCRIPTION: MetalWorks[®] Steel Roofing Systems

LABELING: Labeling shall be in accordance with the requirements the Accredited Quality Assurance Agency noted herein.

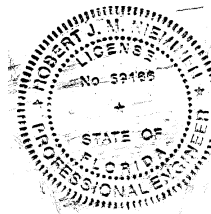
CONTINUED COMPLIANCE: This Evaluation Report is valid until such time as the named product(s) changes, the referenced Quality Assurance documentation changes, or provisions of the Code that relate to the product change. Acceptance of this Evaluation Report by the named client constitutes agreement to notify Robert Nieminen, P.E. if the product changes or the referenced Quality Assurance documentation changes. Trinity|ERD requires a complete review of this Evaluation Report relative to updated Code requirements with each Code Cycle.

ADVERTISEMENT: The Evaluation Report number preceded by the words "Trinity | ERD Evaluated" may be displayed in advertising literature. If any portion of the Evaluation Report is displayed, then it shall be done in its entirety.

INSPECTION: Upon request, a copy of this entire Evaluation Report shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This Evaluation Report consists of pages 1 through 4, plus a 15-page Appendix.

Prepared by:



Robert J.M. Nieminen, P.E.

Florida Registration No. 59188, Florida DCA ANE1983

The facsimile seal appearing was authorized by Robert Nieminen, P.E. on 10/12/2017. This does not serve as an electronically signed document.

CERTIFICATION OF INDEPENDENCE:

1. Exterior Research & Design, LLC. d/b/a Trinity | ERD does not have, nor does it intend to acquire or will it acquire, a financial interest in any company manufacturing or distributing products it evaluates.
2. Exterior Research & Design, LLC. d/b/a Trinity | ERD is not owned, operated or controlled by any company manufacturing or distributing products it evaluates.
3. Robert Nieminen, P.E. does not have nor will acquire, a financial interest in any company manufacturing or distributing products for which the evaluation reports are being issued.
4. Robert Nieminen, P.E. does not have, nor will acquire, a financial interest in any other entity involved in the approval process of the product.
5. This is a building code evaluation. Neither Trinity|ERD nor Robert Nieminen, P.E. are, in any way, the Designer of Record for any project on which this Evaluation Report, or previous versions thereof, is/was used for permitting or design guidance unless retained specifically for that purpose.

ROOFING SYSTEMS EVALUATION:

1. SCOPE:

Product Category: Roofing

Sub-Category: Non-Structural Metal Roofing

Compliance Statement: MetalWorks® Steel Roofing Systems, as produced by TAMKO Building Products, Inc., have demonstrated compliance with the following sections of the 6th Edition (2017) Florida Building Code through testing in accordance with the following Standards. Compliance is subject to the Installation Requirements and Limitations / Conditions of Use set forth herein.

2. STANDARDS:

<u>Section</u>	<u>Property</u>	<u>Standard</u>	<u>Year</u>
1504.3.1	Wind	UL 1897	2012

3. REFERENCES:

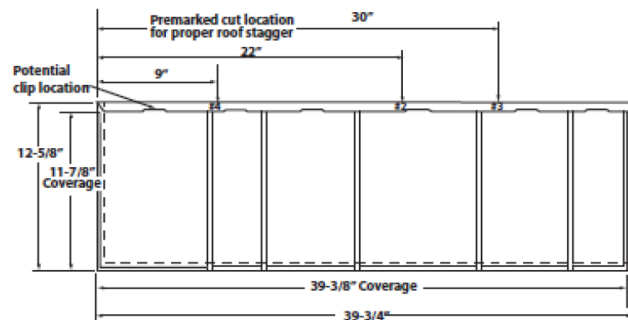
<u>Entity</u>	<u>Examination</u>	<u>Reference</u>	<u>Date</u>
UL (TST 1740)	Wind Uplift	06NK25561	02/16/2007
UL (TST 1740)	Wind Uplift	06NK25561	02/20/2007
UL (TST 1740)	Wind Uplift	05NK16847	02/28/2007
UL LLC (EVL 11342)	IBC Compliance	UL ER18590-01	07/30/2015
Metal suppliers	Material Standards	Mill Certs	current
UL (QUA 9625)	Quality Assurance	Service Confirmation	Exp. 01/07/2019

4. PRODUCT DESCRIPTION:

The following MetalWorks® Steel Roofing Shingles are mechanically attached to Approved substrate, as outlined in the Limitations / Conditions of Use herein.

- **AstonWood® Steel Shingles** are 0.0162-inch thick, 30-ksi yield, pressure-formed, coated sheet-steel panels with factory-formed interlocking edges that are mechanically attached over approved roof decks. AstonWood Steel Shingles measure nominal 12-⁵/₈ x 39-³/₄ inches with a nominal installed weight of 0.74 lbs/ft² and a textured surface to resemble wood shakes.

Shingle size: 12-5/8" x 34-3/4"
 Exposure: 12"
 Coverage per Box: 49.2 sq ft
 (approx. 1/2 sq)
 Shingles per Box: 15
 Shingles per Square: 30
 Weight per Shingle: 2.5 lbs
 Weight per Square: 74 lbs

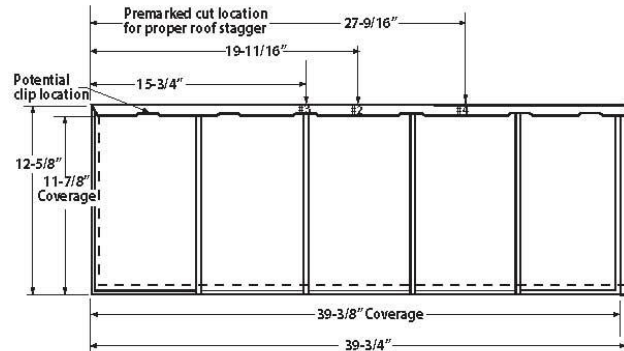


Shingle material: Nominal 0.0162" thickness, including G-90 galvanization and paint coatings
 Exterior Finish: Fluoropolymer (PVDF) with anti-corrosive primer, 1 mil dry film thickness
 Interior Finish: Wash coat with anti-corrosive primer, 0.6 mil dry film thickness
 Clip: 1-1/4" wide x 2-1/8" long x 1/5" deep
 Clip Material: 0.015" thick, G-90 galvanized steel

- **Stonecrest® Slate Steel Shingles** are 0.0162-inch thick, 30 ksi yield, pressure-formed, coated sheet-steel panels with factory-formed interlocking edges that are mechanically attached over approved roof decks. Stonecrest Slate Steel Shingles measure nominal 12-⁵/₈ x 39-³/₄ inches with a nominal installed weight of 0.74 lbs/ft² and a textured surface to resemble slate.

Shingle Size: 12-⁵/₈" x 39-³/₄"
Exposure: 12"
Coverage per Box: 49.2 sq ft
 (approx. 1/2 sq)

Shingles per Box: 15
Shingles per Square: 30
Weight per Shingle: 2.5 lbs
Weight per Square: 74 lbs

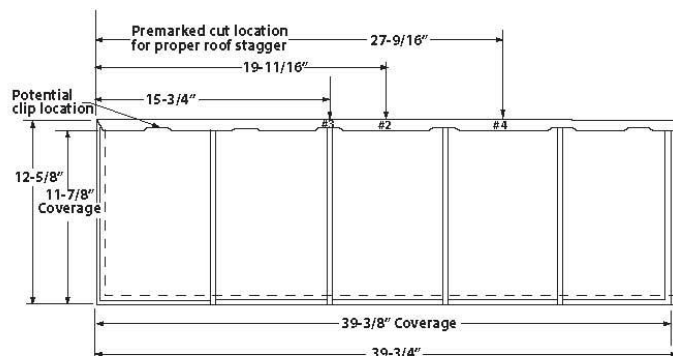


Shingle material: Nominal 0.0162" thickness, including G-90 galvanization and paint coatings.
Exterior finish: Fluoropolymer (PVDF) with anti-corrosive primer, 1 mil dry film thickness.
Interior finish: Wash coat with anti-corrosive primer, 0.6 mil dry film thickness.
Clip: 1-1/4" wide x 2-1/8" long x 1/5" deep
Clip Material: 0.015" thick, G-90 galvanized steel

- **Stonecrest® Tile Steel Shingles** are 0.0162-inch thick, 30-ksi yield, pressure-formed, coated sheet-steel panels with factory-formed interlocking edges that are mechanically attached over approved roof decks. Stonecrest Tile Steel Shingles measure nominal 12-⁵/₈ x 39-³/₄ inches with a nominal installed weight of 0.74 lbs/ft² and a textured surface to resemble tile.

Shingle Size: 12-⁵/₈" x 39-³/₄"
Exposure: 12"
Coverage per Box: 49.2 sq ft
 (approx. 1/2 sq)

Shingles per Box: 15
Shingles per Square: 30
Weight per Shingle: 2.5 lbs
Weight per Square: 74 lbs



Shingle material: Nominal 0.0162" thickness, including G-90 galvanization and paint coatings.
Exterior finish: Fluoropolymer (PVDF) with anti-corrosive primer, 1 mil dry film thickness.
Interior finish: Wash coat with anti-corrosive primer, 0.6 mil dry film thickness.
Clip: 1-1/4" wide x 2-1/8" long x 1/5" deep
Clip Material: 0.015" thick, G-90 galvanized steel

5. LIMITATIONS:

- 5.1 This is a building code evaluation. Neither Trinity|ERD nor Robert Nieminen, P.E. are, in any way, the Designer of Record for any project on which this Evaluation Report, or previous versions thereof, is/was used for permitting or design guidance unless retained specifically for that purpose.
- 5.2 This evaluation report is not for use in FBC HVHZ jurisdictions.
- 5.3 Fire Classification is not part of this Evaluation Report; refer to current Approved Roofing Materials Directory for fire ratings of this product.

- 5.4 The minimum roof slope per **TAMKO Building Products** installation instructions is 3:12. Slope shall not be less than that set forth in **FBC 1507.5.2**.
- 5.4.1 For roof slopes $3:12 \leq \theta < 4:12$, TAMKO requires use of TW Metal & Tile Underlayment or TW Underlayment over the entire roof deck.
- 5.5 Sheet materials used to produce the panels shall comply with **FBC 1507.5.5**.
- 5.6 The roof system evaluation herein pertains to above-deck roof components. Roof decks and structural members shall be in accordance with FBC requirements to the satisfaction of the Authority Having Jurisdiction. Load resistance of the roof deck shall be documented through proper codified and/or FBC Approval documentation.
- 5.7 Appendix 1 outlines attachment requirements for design wind pressure resistance. "MDP" = Maximum Design Pressure is the result of testing for wind load resistance based on allowable wind loads. Refer to **FBC 1609** for determination of design wind pressures. The MDP for the selected assembly shall meet or exceed the design wind pressure requirements for the project for each pressure zone of the roof.
- 5.7.1 Reference to "OK" indicates the system performance exceeds requirements for that pressure zone. Reference to "NO" indicates additional testing or rational analysis by a qualified design professional is required to address that particular pressure zone.
- 5.8 For existing roof decks, fasteners shall be tested in the existing deck for withdrawal resistance in accordance with **ANSI/SPRI FX-1** or **Testing Application Standard TAS 105**. A qualified design professional shall review the data for comparison to the minimum requirements for the system.
- 5.9 Perimeter and ridge details shall be designed and installed to resist the wind load requirements of **FBC Chapter 16**.
- 5.10 All products in the roof assembly shall have quality assurance audit in accordance with **F.A.C. Rule 61G20-3**.

6. INSTALLATION:

- 6.1 **MetalWorks® Steel Roofing Shingles** shall be installed in accordance with **TAMKO Building Products, Inc.** published installation instructions, subject to the Limitations / Conditions of Use noted herein.
- 6.2 System attachment requirements for wind load resistance are set forth in Appendix 1. "MDP" = Maximum Design Pressure is the result of testing for wind load resistance based on allowable wind loads, and reflects the ultimate passing pressure divided by 2 (the 2 to 1 margin of safety per **FBC 1504.9** has already been applied). Refer to **FBC 1609** for determination of design wind loads.

7. BUILDING PERMIT REQUIREMENTS:

As required by the Building Official or Authority Having Jurisdiction in order to properly evaluate the installation of this product.

8. MANUFACTURING PLANTS:

Joplin, MO

9. QUALITY ASSURANCE ENTITY:

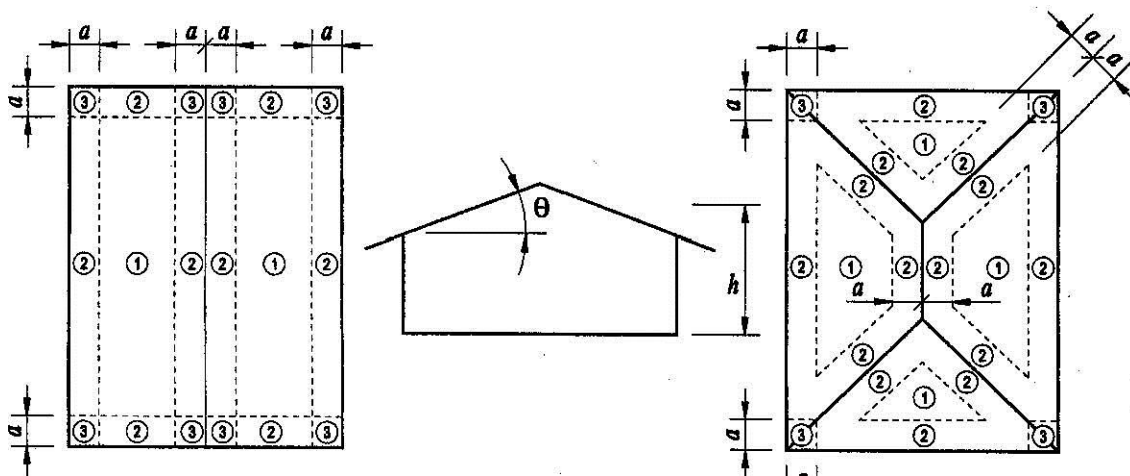
UL LLC – QUA9625; (847) 664-3623; LeAnna.Gradecki@ul.com

- THE 15-PAGES THAT FOLLOW FORM PART OF THIS EVALUATION REPORT -

APPENDIX 1: ATTACHMENT REQUIREMENTS FOR DESIGN WIND PRESSURE RESISTANCE:

Table	Application Method	System	MDP (Max Design Pressure)	Page
A-1	AstonWood, Stonecrest Slate or Stonecrest Tile	1	-22.5 psf	2-4
A-2	AstonWood, Stonecrest Slate or Stonecrest Tile	2	-52.5 psf	4-6
A-3	AstonWood, Stonecrest Slate or Stonecrest Tile	3	-60.0 psf	7-9
B-1	AstonWood, Stonecrest Slate or Stonecrest Tile	4	-60.0 psf	10-12
B-2	AstonWood, Stonecrest Slate or Stonecrest Tile	5	-99.0 psf	13-15

1. The roof system evaluation herein pertains to above-deck roof components. Roof decks and structural members shall be in accordance with FBC requirements to the satisfaction of the Authority Having Jurisdiction. Load resistance of the roof deck shall be documented through proper codified and/or FBC Approval documentation.
2. Unless otherwise noted herein, fire barrier and/or underlayment materials may be any that meets FBC Table 1507.1.1, TAMKO minimum requirements, the QA requirements of F.A.C. Rule 61G20-3 and FBC 1505 when installed with the roof cover.
3. "MDP" = Maximum Design Pressure is the result of testing for wind load resistance based on allowable wind loads, and reflects the ultimate passing pressure divided by 2 (the 2 to 1 margin of safety per FBC 1504.9 has already been applied). Refer to FBC 1609 for determination of design wind loads.
4. Tables are based on roof cladding design wind pressure requirements for gabled/hipped roofs in accordance with ASCE 7-10, multiplied by 0.6 for allowable loads (P_{asd}).
5. Tables are limited to projects having gable or hip roofs with a mean roof height between 0 and 60 feet, slopes between 7° and 45° (1.5:12 to 12:12 pitch), enclosed buildings (Internal Pressure Coefficient, $GCP_i = \pm 0.18$), no load combinations ($K_d = 1$) and site conditions and location of the structure do not meet all conditions specified in Section 26.8.1 of ASCE 7-10 ($K_{zt} = 1.0$). Analysis for buildings falling outside these constraints shall be on a project-by-project basis by a Florida Registered PE.
6. Reference to "OK" indicates the system performance exceeds project requirements for that pressure zone. Reference to "NO" indicates additional testing or rational analysis by a Florida Registered PE is required to address that particular pressure zone.
7. The dimension of Zones 2 and 3 (perimeters and corners) shall be defined as 10% of the least horizontal plan-view dimension or 40% of the mean roof height, whichever is smaller, but not less than either 4% of the least horizontal plan-view dimension or 3 feet, as outlined in Figures 30.4-2B and 30.4-2C of ASCE 7-10.



8. For existing decks, fasteners shall be tested in the existing deck for withdrawal resistance in accordance with ANSI/SPRI FX-1 or Testing Application Standard TAS 105. A qualified design professional shall review the data for comparison to the minimum requirements for the system.
9. For installation over a fire barrier and/or existing asphalt shingles, panel fasteners that engage the roof deck shall be of sufficient length to penetrate the underside of the roof deck by not less than 3/4-inch.
10. Panel fasteners shall be corrosion resistant.

**TABLE A-1: AstonWood, Stonecrest Slate or Stonecrest Tile
WOOD DECKS - NEW CONSTRUCTION, REROOF (Tear-Off)**

System No.	Deck (See Note 1)	Fire Barrier	Underlay	Panel Attachment			MDP (psf)
				Clips	Clip Placement	Fasteners	
1.	Min. 15/32" APA rated plywood	(Optional) See Note 2	Minimum ASTM D226, Type II or FBC Approved equivalent or TW Metal & Tile Underlayment or TW Underlayment	Five (5) 26 ga. x 1½" wide x 2- ¹ / ₈ " long "Standard Tamko Clip" per shingle	One (1) positioned at the middle along the width at one end. Four (4) at upslope-edge spaced 3", 16", 24" and 36" from right end.	One (1) #10-8 x min. 1-inch screw (See Note 9) per clip	-22.5

**Table A-1a: System No. 1: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -22.5 psf)
Exposure B for Slope Range 7° < slope ≤ 27° (1.5:12 < pitch ≤ 6.1:12)**

Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V _{ult} (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 30	1	OK	OK	OK	OK	NO	NO	NO	NO	NO
	2	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
30 < h ≤ 40	1	OK	OK	OK	OK	NO	NO	NO	NO	NO
	2	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
40 < h ≤ 50	1	OK	OK	OK	NO	NO	NO	NO	NO	NO
	2	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
50 < h ≤ 60	1	OK	OK	OK	NO	NO	NO	NO	NO	NO
	2	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO

**Table A-1b: System No. 1: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -22.5 psf)
Exposure B for Slope Range 27° < slope ≤ 45° (6.1:12 < pitch ≤ 12:12)**

Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V _{ult} (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 30	1	OK	OK	OK	OK	NO	NO	NO	NO	NO
	2 & 3	OK	OK	OK	NO	NO	NO	NO	NO	NO
	2 & 3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
30 < h ≤ 40	1	OK	OK	OK	NO	NO	NO	NO	NO	NO
	2 & 3	OK	OK	NO	NO	NO	NO	NO	NO	NO
	2 & 3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
40 < h ≤ 50	1	OK	OK	OK	NO	NO	NO	NO	NO	NO
	2 & 3	OK	NO	NO	NO	NO	NO	NO	NO	NO
	2 & 3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
50 < h ≤ 60	1	OK	OK	OK	NO	NO	NO	NO	NO	NO
	2 & 3	OK	NO	NO	NO	NO	NO	NO	NO	NO
	2 & 3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO

Table A-1c: System No. 1: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -22.5 psf) Exposure C for Slope Range $7^\circ \leq \text{slope} < 27^\circ$ (1.5:12 < pitch \leq 6.1:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V_{ult} (mph)								
		110	115	120	130	140	150	160	180	200
0 < h \leq 15	1	OK	OK	OK	NO	NO	NO	NO	NO	NO
	2	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
15 < h \leq 20	1	OK	OK	OK	NO	NO	NO	NO	NO	NO
	2	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
20 < h \leq 30	1	OK	OK	NO	NO	NO	NO	NO	NO	NO
	2	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
30 < h \leq 40	1	OK	NO	NO	NO	NO	NO	NO	NO	NO
	2	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
40 < h \leq 50	1	OK	NO	NO	NO	NO	NO	NO	NO	NO
	2	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO

Table A-1d: System No. 1: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -22.5 psf) Exposure C for Slope Range $27^\circ < \text{slope} \leq 45^\circ$ (6.1:12 < pitch \leq 12:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V_{ult} (mph)								
		110	115	120	130	140	150	160	180	200
0 < h \leq 15	1	OK	OK	OK	NO	NO	NO	NO	NO	NO
	2 & 3	OK	NO	NO	NO	NO	NO	NO	NO	NO
	2 & 3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
15 < h \leq 20	1	OK	OK	NO	NO	NO	NO	NO	NO	NO
	2 & 3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 & 3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
20 < h \leq 30	1	OK	NO	NO	NO	NO	NO	NO	NO	NO
	2 & 3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 & 3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO

Table A-1e: System No. 1: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -22.5 psf) Exposure D for Slope Range $7^\circ \leq \text{slope} < 27^\circ$ (1.5:12 < pitch \leq 6.1:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V_{ult} (mph)								
		110	115	120	130	140	150	160	180	200
0 < h \leq 15	1	OK	NO	NO	NO	NO	NO	NO	NO	NO
	2	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
15 < h \leq 20	1	OK	NO	NO	NO	NO	NO	NO	NO	NO
	2	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO

**TABLE A-2: AstonWood, Stonecrest Slate or Stonecrest Tile
WOOD DECKS - NEW CONSTRUCTION, REROOF (Tear-Off)**

System No.	Deck (See Note 1)	Fire Barrier	Underlay	Panel Attachment			MDP (psf)
				Clips	Clip Placement	Fasteners	
2.	Min. 15/32" APA rated plywood	(Optional) See Note 2	TW Metal & Tile Underlayment or TW Underlayment	Five (5) 26 ga. x 1¼" wide x 2- ³ / ₈ " long "Standard Tamko Clip" per shingle	One (1) positioned at the middle along the width at one end. Four (4) at upslope-edge spaced 3", 16", 24" and 36" from right end.	One (1) Min. 11 ga. x min. 1½-inch ring shank nail (See Note 9) per clip	-52.5

**Table A-2a System No. 2: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -52.5 psf)
Exposure B for Slope Range 7° < slope ≤ 27° (1.5:12 < pitch ≤ 6.1:12)**

Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V _{ult} (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 30	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	NO	NO
	3	OK	OK	OK	OK	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3 Overhang	OK	NO	NO	NO	NO	NO	NO	NO	NO
30 < h ≤ 40	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	NO	NO	NO
	3	OK	OK	OK	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3 Overhang	OK	NO	NO	NO	NO	NO	NO	NO	NO
40 < h ≤ 50	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3	OK	OK	OK	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
50 < h ≤ 60	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3	OK	OK	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO

**Table A-2b: System No. 2: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -52.5 psf)
Exposure B for Slope Range 27° < slope ≤ 45° (6.1:12 < pitch ≤ 12:12)**

Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V _{ult} (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 30	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO
30 < h ≤ 40	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
40 < h ≤ 50	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
50 < h ≤ 60	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO

Table A-2c: System No. 2: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -52.5 psf) Exposure C for Slope Range $7^\circ \leq \text{slope} < 27^\circ$ (1.5:12 < pitch \leq 6.1:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V_{ult} (mph)								
		110	115	120	130	140	150	160	180	200
$0 < h \leq 15$	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3	OK	OK	OK	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
$15 < h \leq 20$	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3	OK	OK	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
$20 < h \leq 30$	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3	OK	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
$30 < h \leq 40$	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
$40 < h \leq 50$	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
$50 < h \leq 60$	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO

Table A-2d: System No. 2: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -52.5 psf) Exposure C for Slope Range $27^\circ < \text{slope} \leq 45^\circ$ (6.1:12 < pitch \leq 12:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V_{ult} (mph)								
		110	115	120	130	140	150	160	180	200
$0 < h \leq 15$	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
$15 < h \leq 20$	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
$20 < h \leq 30$	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
$30 < h \leq 40$	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 & 3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
$40 < h \leq 50$	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 & 3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
$50 < h \leq 60$	1	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 & 3	OK	OK	OK	OK	OK	NO	NO	NO	NO
	2 & 3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO

Table A-2e: System No. 2: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -52.5 psf) Exposure D for Slope Range 7° ≤ slope < 27° (1.5:12 < pitch ≤ 6.1:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V _{ult} (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 15	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
15 < h ≤ 20	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
20 < h ≤ 30	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
30 < h ≤ 40	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	NO	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
40 < h ≤ 50	1	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2	OK	OK	NO	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	NO	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
50 < h ≤ 60	1	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2	OK	OK	NO	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO

Table A-2f: System No. 2: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -52.5 psf) Exposure D for Slope Range 27° < slope ≤ 45° (6.1:12 < pitch ≤ 12:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V _{ult} (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 15	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 & 3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
15 < h ≤ 20	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 & 3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
20 < h ≤ 30	1	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 & 3	OK	OK	OK	OK	OK	NO	NO	NO	NO
	2 & 3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
30 < h ≤ 40	1	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 & 3	OK	OK	OK	OK	OK	NO	NO	NO	NO
	2 & 3 Overhang	OK	OK	NO	NO	NO	NO	NO	NO	NO
40 < h ≤ 50	1	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 & 3	OK	OK	OK	OK	NO	NO	NO	NO	NO
	2 & 3 Overhang	OK	OK	NO	NO	NO	NO	NO	NO	NO
50 < h ≤ 60	1	OK	OK	OK	OK	OK	NO	NO	NO	NO
	2 & 3	OK	OK	OK	OK	NO	NO	NO	NO	NO
	2 & 3 Overhang	OK	NO	NO	NO	NO	NO	NO	NO	NO

**TABLE A-3: AstonWood, Stonecrest Slate or Stonecrest Tile
WOOD DECKS - NEW CONSTRUCTION, REROOF (Tear-Off)**

System No.	Deck (See Note 1)	Fire Barrier	Underlay	Panel Attachment			MDP (psf)
				Clips	Clip Placement	Fasteners	
3.	Min. 15/32" APA rated plywood	(Optional) See Note 2	TW Metal & Tile Underlayment or TW Underlayment	Five (5) 26 ga. x 1¼" wide x 2- ⁷ / ₈ " long "Standard Tamko Clip" per shingle	One (1) positioned at the middle along the width at one end. Four (4) at upslope-edge spaced 3", 16", 24" and 36" from right end.	One (1) #10-8 x min. 1-inch screw (See Note 9) per clip	-60.0

**Table A-3a: System No. 3: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -60.0 psf)
Exposure B for Slope Range 7° < slope ≤ 27° (1.5:12 < pitch ≤ 6.1:12)**

Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V _{ult} (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 30	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	NO	NO
	3	OK	OK	OK	OK	OK	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO
	3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
30 < h ≤ 40	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	NO	NO
	3	OK	OK	OK	OK	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO
	3 Overhang	OK	OK	NO	NO	NO	NO	NO	NO	NO
40 < h ≤ 50	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	NO	NO	NO
	3	OK	OK	OK	OK	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3 Overhang	OK	NO	NO	NO	NO	NO	NO	NO	NO
50 < h ≤ 60	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	NO	NO	NO
	3	OK	OK	OK	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3 Overhang	OK	NO	NO	NO	NO	NO	NO	NO	NO

**Table A-3b: System No. 3: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -60.0 psf)
Exposure B for Slope Range 27° < slope ≤ 45° (6.1:12 < pitch ≤ 12:12)**

Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V _{ult} (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 30	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	NO	NO
30 < h ≤ 40	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO
40 < h ≤ 50	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO
50 < h ≤ 60	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO

Table A-3c: System No. 3: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -60.0 psf) Exposure C for Slope Range $7^\circ \leq \text{slope} < 27^\circ$ (1.5:12 < pitch \leq 6.1:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V_{ult} (mph)								
		110	115	120	130	140	150	160	180	200
$0 < h \leq 15$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	NO	NO	NO
	3	OK	OK	OK	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3 Overhang	OK	NO	NO	NO	NO	NO	NO	NO	NO
$15 < h \leq 20$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	NO	NO	NO
	3	OK	OK	OK	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
$20 < h \leq 30$	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3	OK	OK	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
$30 < h \leq 40$	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3	OK	OK	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
$40 < h \leq 50$	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3	OK	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
$50 < h \leq 60$	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3	OK	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO

Table A-3d: System No. 3: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -60.0 psf) Exposure C for Slope Range $27^\circ < \text{slope} \leq 45^\circ$ (6.1:12 < pitch \leq 12:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V_{ult} (mph)								
		110	115	120	130	140	150	160	180	200
$0 < h \leq 15$	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO
$15 < h \leq 20$	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
$20 < h \leq 30$	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
$30 < h \leq 40$	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
$40 < h \leq 50$	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
$50 < h \leq 60$	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO

Table A-3e: System No. 3: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -60.0 psf) Exposure D for Slope Range $7^\circ \leq \text{slope} < 27^\circ$ (1.5:12 < pitch \leq 6.1:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V_{ult} (mph)								
		110	115	120	130	140	150	160	180	200
$0 < h \leq 15$	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3	OK	OK	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
$15 < h \leq 20$	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3	OK	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
$20 < h \leq 30$	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
$30 < h \leq 40$	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
$40 < h \leq 50$	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
$50 < h \leq 60$	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO

Table A-3f: System No. 3: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -60.0 psf) Exposure D for Slope Range $27^\circ < \text{slope} \leq 45^\circ$ (6.1:12 < pitch \leq 12:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V_{ult} (mph)								
		110	115	120	130	140	150	160	180	200
$0 < h \leq 15$	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
$15 < h \leq 20$	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
$20 < h \leq 30$	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 & 3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
$30 < h \leq 40$	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 & 3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
$40 < h \leq 50$	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	NO	NO	NO	NO
	2 & 3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
$50 < h \leq 60$	1	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 & 3	OK	OK	OK	OK	OK	NO	NO	NO	NO
	2 & 3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO

**TABLE B-1: AstonWood, Stonecrest Slate or Stonecrest Tile
WOOD DECKS - NEW CONSTRUCTION, REROOF (Tear-Off)**

System No.	Deck (See Note 1)	Fire Barrier	Underlay	Panel Attachment			MDP (psf)
				Clips	Clip Placement	Fasteners	
4.	Min. 15/32" APA rated plywood	(Optional) See Note 2	Minimum ASTM D226, Type II or FBC Approved equivalent or TW Metal & Tile Underlayment or TW Underlayment	Five (5) 26 ga. x 1 1/4" wide x 2-1/8" long "Standard Tamko Clip" per shingle	One (1) positioned at the middle along the width at one end. Four (4) at upslope-edge spaced 4", 11", 26" and 37" from right end.	One (1) #10-8 x min. 1 1/2-inch screw (See Note 9) per clip	-60.0

**Table B-1a: System No. 4: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -60.0 psf)
Exposure B for Slope Range 7° < slope ≤ 27° (1.5:12 < pitch ≤ 6.1:12)**

Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V _{ult} (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 30	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	NO	NO
	3	OK	OK	OK	OK	OK	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO
	3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
30 < h ≤ 40	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	NO	NO
	3	OK	OK	OK	OK	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO
	3 Overhang	OK	OK	NO	NO	NO	NO	NO	NO	NO
40 < h ≤ 50	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	NO	NO	NO
	3	OK	OK	OK	OK	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3 Overhang	OK	NO	NO	NO	NO	NO	NO	NO	NO
50 < h ≤ 60	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	NO	NO	NO
	3	OK	OK	OK	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3 Overhang	OK	NO	NO	NO	NO	NO	NO	NO	NO

**Table B-1b: System No. 4: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -60.0 psf)
Exposure B for Slope Range 27° < slope ≤ 45° (6.1:12 < pitch ≤ 12:12)**

Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V _{ult} (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 30	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	NO	NO
30 < h ≤ 40	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO
40 < h ≤ 50	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO
50 < h ≤ 60	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO

Table B-1c: System No. 4: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -60.0 psf) Exposure C for Slope Range 7° ≤ slope < 27° (1.5:12 < pitch ≤ 6.1:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V _{ult} (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 15	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	NO	NO	NO
	3	OK	OK	OK	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3 Overhang	OK	NO	NO	NO	NO	NO	NO	NO	NO
15 < h ≤ 20	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	NO	NO	NO
	3	OK	OK	OK	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
20 < h ≤ 30	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3	OK	OK	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
30 < h ≤ 40	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3	OK	OK	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
40 < h ≤ 50	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3	OK	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
50 < h ≤ 60	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3	OK	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO

Table B-1d: System No. 4: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -60.0 psf) Exposure C for Slope Range 27° < slope ≤ 45° (6.1:12 < pitch ≤ 12:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V _{ult} (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 15	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO
15 < h ≤ 20	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
20 < h ≤ 30	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
30 < h ≤ 40	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
40 < h ≤ 50	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
50 < h ≤ 60	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO

Table B-1e: System No. 4: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -60.0 psf) Exposure D for Slope Range 7° ≤ slope < 27° (1.5:12 < pitch ≤ 6.1:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V _{ult} (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 15	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3	OK	OK	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
15 < h ≤ 20	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3	OK	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
20 < h ≤ 30	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
30 < h ≤ 40	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
40 < h ≤ 50	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
50 < h ≤ 60	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO

Table B-1f: System No. 4: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -60.0 psf) Exposure D for Slope Range 27° < slope ≤ 45° (6.1:12 < pitch ≤ 12:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V _{ult} (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 15	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
15 < h ≤ 20	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
20 < h ≤ 30	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 & 3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
30 < h ≤ 40	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 & 3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
40 < h ≤ 50	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	NO	NO	NO	NO
	2 & 3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
50 < h ≤ 60	1	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 & 3	OK	OK	OK	OK	OK	NO	NO	NO	NO
	2 & 3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO

**TABLE B-2: AstonWood, Stonecrest Slate or Stonecrest Tile
WOOD DECKS - NEW CONSTRUCTION, REROOF (Tear-Off)**

System No.	Deck (See Note 1)	Fire Barrier	Underlay	Panel Attachment			MDP (psf)
				Clips	Clip Placement	Fasteners	
5.	Min. 15/32" APA rated plywood	(Optional) See Note 2	TW Metal & Tile Underlayment or TW Underlayment	Five (5) 26 ga. x 1¼" wide x 2-1/8" long "Standard Tamko Clip" per shingle	One (1) positioned at the middle along the width at one end. Four (4) at upslope-edge spaced 4", 11", 26" and 37" from right end.	One (1) #10-8 x min. 1½-inch screw (See Note 9) per clip	-99.0

**Table B-2a: System No. 5: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -99.0 psf)
Exposure B for Slope Range 7° < slope ≤ 27° (1.5:12 < pitch ≤ 6.1:12)**

Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V _{ult} (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 30	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	OK	OK
	3	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	OK
	3 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO
30 < h ≤ 40	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	OK	OK
	3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO
40 < h ≤ 50	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	OK	OK
	3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
50 < h ≤ 60	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	OK	OK
	3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO

**Table B-2b: System No. 5: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -99.0 psf)
Exposure B for Slope Range 27° < slope ≤ 45° (6.1:12 < pitch ≤ 12:12)**

Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V _{ult} (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 30	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	OK
30 < h ≤ 40	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	OK
40 < h ≤ 50	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
50 < h ≤ 60	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO

Table B-2c: System No. 5: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -99.0 psf) Exposure C for Slope Range $7^\circ \leq \text{slope} < 27^\circ$ (1.5:12 < pitch \leq 6.1:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V_{ult} (mph)								
		110	115	120	130	140	150	160	180	200
$0 < h \leq 15$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	OK	OK
	3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
$15 < h \leq 20$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
$20 < h \leq 30$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	NO	NO
	3 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
$30 < h \leq 40$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3	OK	OK	OK	OK	OK	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	NO	NO
	3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
$40 < h \leq 50$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	NO	NO
	3	OK	OK	OK	OK	OK	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	NO	NO
	3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
$50 < h \leq 60$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	NO	NO
	3	OK	OK	OK	OK	OK	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	NO	NO
	3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO

Table B-2d: System No. 5: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -99.0 psf) Exposure C for Slope Range $27^\circ < \text{slope} \leq 45^\circ$ (6.1:12 < pitch \leq 12:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V_{ult} (mph)								
		110	115	120	130	140	150	160	180	200
$0 < h \leq 15$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
$15 < h \leq 20$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
$20 < h \leq 30$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
$30 < h \leq 40$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	NO	NO
$40 < h \leq 50$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	NO	NO
$50 < h \leq 60$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	NO	NO

Table B-2e: System No. 5: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -99.0 psf) Exposure D for Slope Range $7^\circ \leq \text{slope} < 27^\circ$ ($1.5:12 < \text{pitch} \leq 6.1:12$)										
Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V_{ult} (mph)								
		110	115	120	130	140	150	160	180	200
$0 < h \leq 15$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
$15 < h \leq 20$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3	OK	OK	OK	OK	OK	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
$20 < h \leq 30$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3	OK	OK	OK	OK	OK	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
$30 < h \leq 40$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3	OK	OK	OK	OK	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3 Overhang	OK	OK	NO	NO	NO	NO	NO	NO	NO
$40 < h \leq 50$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3	OK	OK	OK	OK	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3 Overhang	OK	OK	NO	NO	NO	NO	NO	NO	NO
$50 < h \leq 60$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3	OK	OK	OK	OK	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3 Overhang	OK	OK	NO	NO	NO	NO	NO	NO	NO

Table B-2f: System No. 5: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -99.0 psf) Exposure D for Slope Range $27^\circ < \text{slope} \leq 45^\circ$ ($6.1:12 < \text{pitch} \leq 12:12$)										
Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V_{ult} (mph)								
		110	115	120	130	140	150	160	180	200
$0 < h \leq 15$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
$15 < h \leq 20$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
$20 < h \leq 30$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
$30 < h \leq 40$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
$40 < h \leq 50$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO
$50 < h \leq 60$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO