CREEK
TECHNICAL SERVICES, LLC

Registry No. 29824
17520 Edinburgh Dr
Tampa, FL 33647
(813) 480-3421

EVALUATION REPORT

FLORIDA BUILDING CODE, 8TH EDITION (2023)

Issued October 18, 2023

Manufacturer: ROSS ROOF GROUP USA, INC.
dba TILCOR NORTH AMERICA
915 S Great Southwest Parkway
Grand Prairie, TX 75051
916-838-1940
www.tilcorroofingusa.com

Manufacturing: Auckland, New Zealand

Quality Assurance: UL LLC (QUA9625)

SCOPE

Category: Roofing
Subcategory: Metal Roofing
Code Edition: Florida Building Code, 8th Edition (2023)
Code Sections: 1504.3.2
Properties: Wind Resistance, Physical Properties

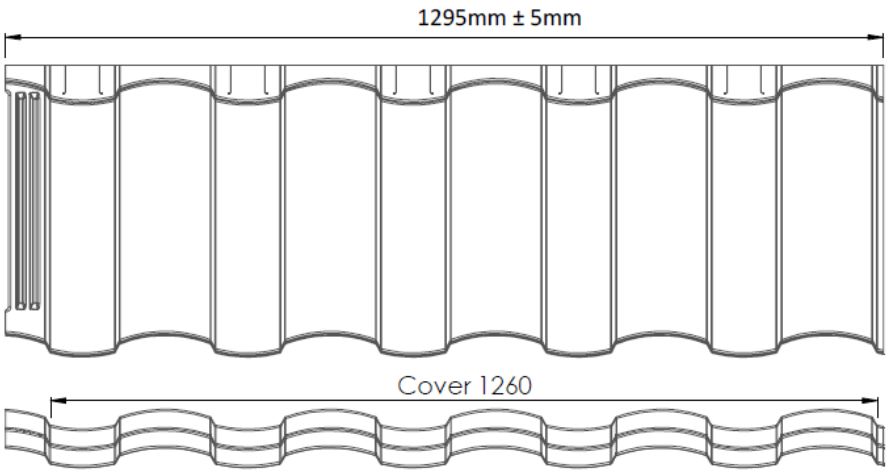
REFERENCES

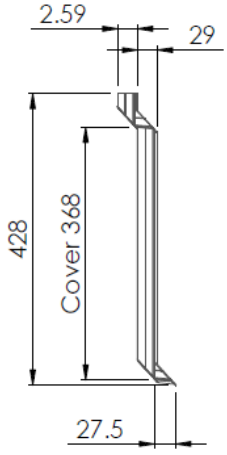
Entity	Report No.	Standard	Year
PRI Construction Materials Technologies (TST5878)	TLRC-007-02-01	ASTM G 155	2013
PRI Construction Materials Technologies (TST5878)	TLRC-008-02-01	ASTM B 117	2016
PRI Construction Materials Technologies (TST5878)	2042T0003	TAS 125	2003

PRODUCT DESCRIPTION

Antica

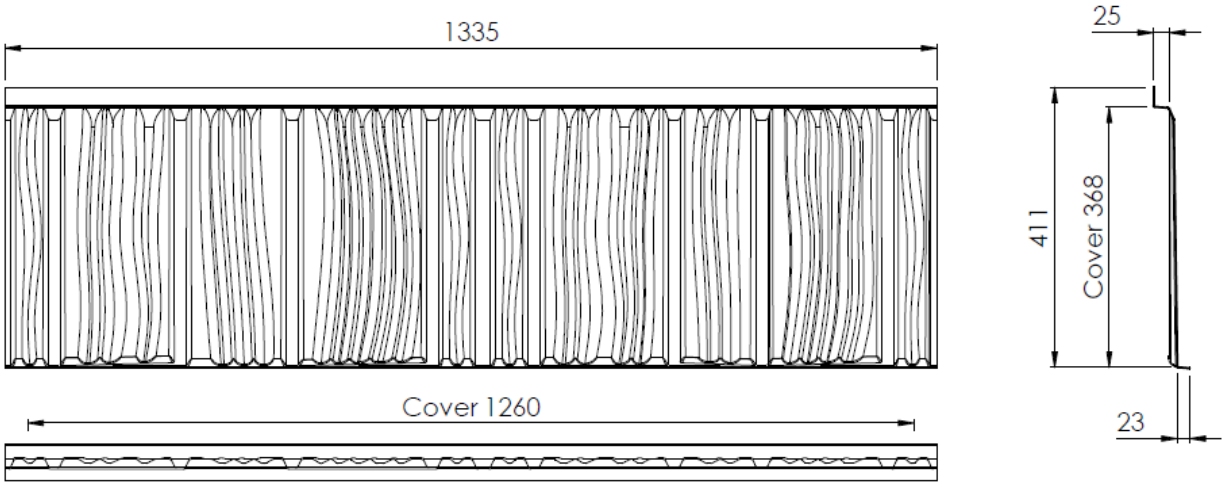
Description: Preformed, fastened, stoned-coated steel panels; Coverage of 368mm x 1260mm.
Material: Min. 0.39mm ASTM A792 AZ50; F_y = min. 67 ksi; Shall conform with FBC Section 1507.4.3





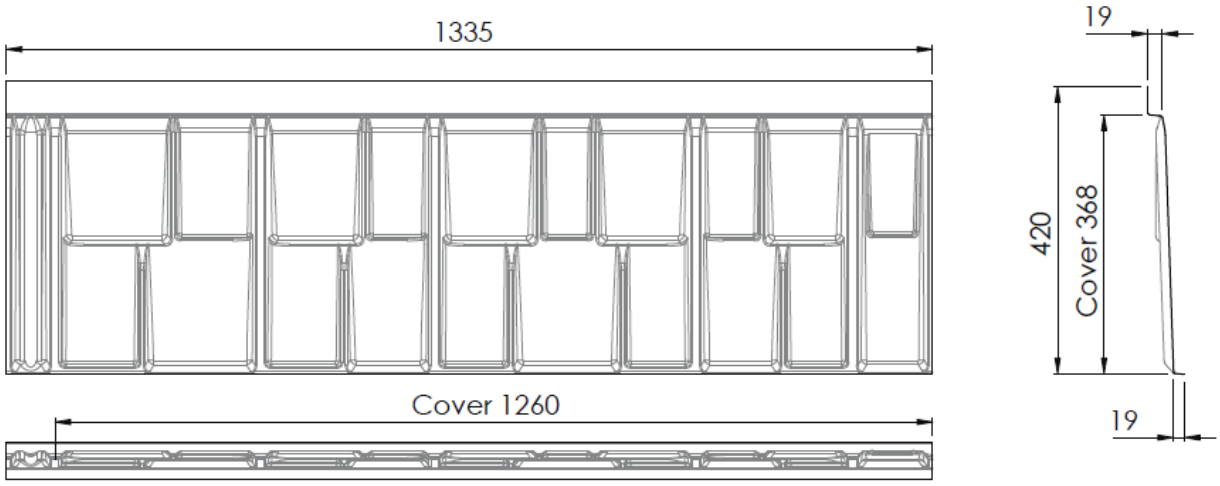
Craftsman Shake

Description: Preformed, fastened, stoned-coated steel panels; Coverage of 368mm x 1260mm.
Material: Min. 0.39mm ASTM A792 AZ50; F_y = min. 67 ksi; Shall conform with FBC Section 1507.4.3



Royal Tile

Description: Preformed, fastened, stoned-coated steel panels; Coverage of 368mm x 1260mm.
Material: Min. 0.39mm ASTM A792 AZ50; F_y = min. 67 ksi; Shall conform with FBC Section 1507.4.3



APPROVED ASSEMBLIES

System 1 – Antica (over battens)	
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.
Batten:	Nominal 2x2, No. 2 SYP fastened over underlayment perpendicular to the roof slope, under each headlap with **one (1) #10 x 3.5 in. wood screw** spaced max. 24 in. o.c. into each rafter/truss. Maximum batten spacing is 14.5 in. o.c. Fasteners shall be corrosion resistant in accordance with sections 1507.4.4 and 1506.6.
Attachment:	**Four (4) #10-14 x min. 2.5 in. HWH Wood-X screws with HiLo threads** per panel secured into the panel nose through the headlap of the preceding course and into the batten; beginning 1 in. from panel end and continuing in a 9.5 in. – 14 in. – 14 in. pattern thereafter. Fasteners shall be of sufficient length to penetrate through the deck a min. 3/8 in. and shall be corrosion resistant in accordance with sections 1507.4.4 and 1506.6. See Appendix A for fastening detail.
Maximum Design Pressures:	**-89.75 psf** *Pressure calculated using 2:1 margin of safety per 1504.9.*

Maximum Mean Roof Heights
Slopes 3:12 – 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	49 ft
C	60 ft	60 ft	60 ft	60 ft	60 ft	50 ft	28 ft	16 ft	NA
D	60 ft	60 ft	60 ft	60 ft	40 ft	20 ft	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	58 ft	38 ft	25 ft	17 ft
C	60 ft	60 ft	60 ft	43 ft	23 ft	NA	NA	NA	NA
D	60 ft	60 ft	37 ft	17 ft	NA	NA	NA	NA	NA
Zone 3 for Gable Roofs									
B	60 ft	60 ft	60 ft	54 ft	33 ft	21 ft	NA	NA	NA
C	60 ft	46 ft	22 ft	NA	NA	NA	NA	NA	NA
D	46 ft	18 ft	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 $10ft^2$ 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) K_d = 0.85 7) K_e = 1.0 8) Projects with mean roof heights of greater than 60 ft shall be evaluated by a licensed design professional 9) See page 7 for details for dimensions and locales of Zone 1, 2, and 3 10) V_{ult} is shown in the tables above. Design wind loads are calculated using $V_{asd} = V_{ult}\sqrt{0.6}$ per 1609.3.1.

System 2 – Antica (over battens)	
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.
Batten:	Nominal 2x2, No. 2 SYP fastened over underlayment perpendicular to the roof slope, under each headlap with two **(2) #10 x 3.5 in. wood screws** spaced max. 24 in. o.c. into each rafter/truss. Maximum batten spacing is 14.5 in. o.c. Fasteners shall be corrosion resistant in accordance with sections 1507.4.4 and 1506.6.
Attachment:	**Ten (10) #10-14 x min. 2.5 in. HWH Wood-X screws with HiLo threads** per panel secured into the panel nose through the headlap of the preceding course and into the batten; beginning 1 in. from panel end and continuing in a 4.5 in. – 5in. repeating pattern thereafter. Fasteners shall be of sufficient length to penetrate through the deck a min. 3/8 in. and shall be corrosion resistant in accordance with sections 1507.4.4 and 1506.6. See Appendix A for fastening detail.
Maximum Design Pressures:	**-168.5 psf** *Pressure calculated using 2:1 margin of safety per 1504.9.*

Maximum Mean Roof Heights
Slopes 3:12 – 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	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	57 ft
D	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	42 ft	23 ft
Zone 3 for Gable 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	42 ft	25 ft	15 ft
D	60 ft	60 ft	60 ft	60 ft	60 ft	32 ft	16 ft	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 10ft^2 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) K_d = 0.85 7) K_e = 1.0 8) Projects with mean roof heights of greater than 60 ft shall be evaluated by a licensed design professional 9) See page 7 for details for dimensions and locales of Zone 1, 2, and 3 10) V_{ult} is shown in the tables above. Design wind loads are calculated using $V_{asd} = V_{ult}\sqrt{0.6}$ per 1609.3.1.

System 3 – Craftsman Shake or Royal Tile (over battens)	
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.
Batten:	Nominal 2x2, No. 2 SYP fastened over underlayment perpendicular to the roof slope, under each headlap with **one (1) #10 x 3.5 in. wood screw** spaced max. 24 in. o.c. into each rafter/truss. Maximum batten spacing is 14.5 in. o.c. Fasteners shall be corrosion resistant in accordance with sections 1507.4.4 and 1506.6.
Attachment:	**Four (4) #10-14 x min. 2 in. HWH Wood-X screws with HiLo threads** per panel secured into the panel nose through the headlap of the preceding course and into the batten; beginning 1 in. from panel end and continuing in a 12 in. o.c. pattern thereafter. Fasteners shall be of sufficient length to penetrate through the deck a min. 3/8 in. and shall be corrosion resistant in accordance with sections 1507.4.4 and 1506.6. See Appendix A for fastening detail.
Maximum Design Pressures:	**-89.75 psf** *Pressure calculated using 2:1 margin of safety per 1504.9.*

Maximum Mean Roof Heights
Slopes 3:12 – 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	49 ft
C	60 ft	60 ft	60 ft	60 ft	60 ft	50 ft	28 ft	16 ft	NA
D	60 ft	60 ft	60 ft	60 ft	40 ft	20 ft	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	58 ft	38 ft	25 ft	17 ft
C	60 ft	60 ft	60 ft	43 ft	23 ft	NA	NA	NA	NA
D	60 ft	60 ft	37 ft	17 ft	NA	NA	NA	NA	NA
Zone 3 for Gable Roofs									
B	60 ft	60 ft	60 ft	54 ft	33 ft	21 ft	NA	NA	NA
C	60 ft	46 ft	22 ft	NA	NA	NA	NA	NA	NA
D	46 ft	18 ft	NA	NA	NA	NA	NA	NA	NA

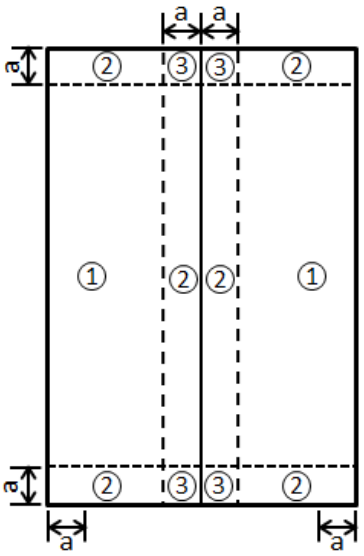
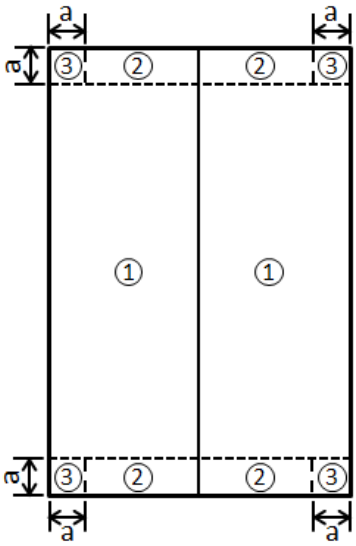
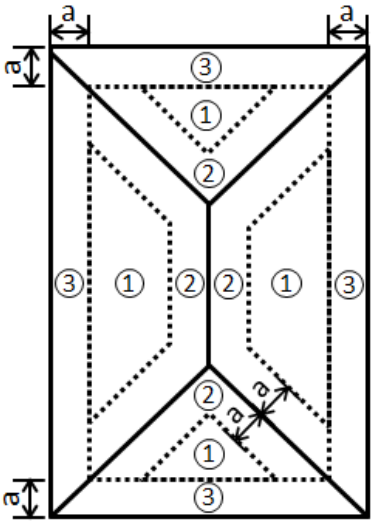
Notes: 1) Exposure category for the structure location shall be as defined in the Florida Building Code 2) Limitations are based on an effective wind area of $10ft^2$ or less 3) Topographic factors such as escarpments or hills are not included in the above assessment 4) Applicable for Enclosed Buildings without overhangs 5) NA = "Not Allowed" 6) K_d = 0.85 7) K_e = 1.0 8) Projects with mean roof heights of greater than 60 ft shall be evaluated by a licensed design professional 9) See page 7 for details for dimensions and locales of Zone 1, 2, and 3 10) V_{ult} is shown in the tables above. Design wind loads are calculated using $V_{asd} = V_{ult}\sqrt{0.6}$ per 1609.3.1.

System 4 – Craftsman Shake or Royal Tile (over battens)	
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.
Batten:	Nominal 2x2, No. 2 SYP fastened over underlayment perpendicular to the roof slope, under each headlap with **two (2) #10 x 3.5 in. wood screws** spaced max. 24 in. o.c. into each rafter/truss. Maximum batten spacing is 14.5 in. o.c. Fasteners shall be corrosion resistant in accordance with sections 1507.4.4 and 1506.6.
Attachment:	**Eight (8) #10-14 x min. 2 in. HWH Wood-X screws with HiLo threads** per panel secured into the panel nose through the headlap of the preceding course and into the batten; beginning 1 in. from panel end and continuing in a 6 in. o.c. pattern thereafter. Fasteners shall be of sufficient length to penetrate through the deck a min. 3/8 in. and shall be corrosion resistant in accordance with sections 1507.4.4 and 1506.6. See Appendix A for fastening detail.
Maximum Design Pressures:	**-168.5 psf** *Pressure calculated using 2:1 margin of safety per 1504.9.*

Maximum Mean Roof Heights
Slopes 3:12 – 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	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	57 ft
D	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	42 ft	23 ft
Zone 3 for Gable 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	42 ft	25 ft	15 ft
D	60 ft	60 ft	60 ft	60 ft	60 ft	32 ft	16 ft	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 $10ft^2$ 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) K_d = 0.85 7) K_e = 1.0 8) Projects with mean roof heights of greater than 60 ft shall be evaluated by a licensed design professional 9) See page 7 for details for dimensions and locales of Zone 1, 2, and 3 10) V_{ult} is shown in the tables above. Design wind loads are calculated using $V_{asd} = V_{ult}\sqrt{0.6}$ 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. The minimum roof slope shall be 3:12 or greater.
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 10/18/2023.

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
2023.10.18 12:55:26 -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

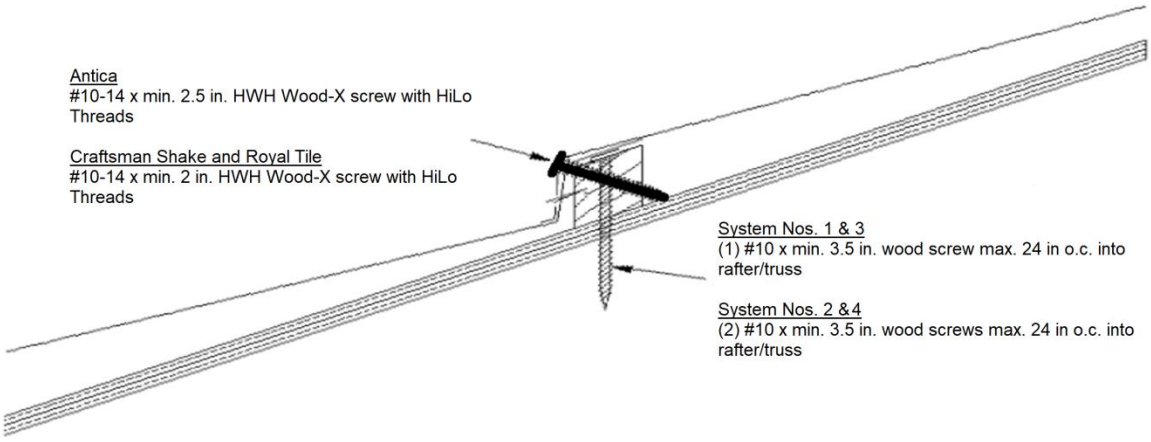


Figure 1. Installation Detail