



# Product Evaluation

RC356| 1115

Engineering Services Program

*The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).*

*This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.*

*This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.*

*For more information, contact TDI Engineering Services Program at (800) 248-6032.*

**Evaluation ID:** RC-356

**Effective Date:** November 1, 2015

**Re-evaluation Date:** November 2019

**Product Name:** Terrabella Classic®, Terrabella Verona®, Terrabella Shingle® and Terrabella Shake® Stone Coated Steel Panels

**Manufacturer:** Alucom, LLC  
2145 NW 115<sup>th</sup> Street  
Miami, Florida 33172  
Telephone: (305) 414-2705

## General Description:

**Terrabella Verona®:** Preformed, stone coated steel panels with minimum thickness of 0.017", conforming to ASTM A 792, with a minimum yield strength of  $F_y = 40$  ksi. The panel measures 44 -11/16" wide by 17-29/32" high.

**Terrabella Classic®:** Preformed, stone coated steel panels with minimum thickness of 0.017", conforming to ASTM A 792, with a minimum yield strength of  $F_y = 40$  ksi. The panel measures 53-5/32" wide by 16-5/32" high.

**Terrabella Shingle®:** Preformed, stone coated steel panels with minimum thickness of 0.017", conforming to ASTM A 792, with a minimum yield strength of  $F_y = 40$  ksi. The panel measures 53" wide by 16" high.

**Terrabella Shake®:** Preformed, stone coated steel panels with minimum thickness of 0.017", conforming to ASTM A 792, with a minimum yield strength of  $F_y = 40$  ksi. The panel measures 53-1/2" wide by 16-1/2" high.

**Limitations:**

**Roof Framing:** The metal roofing panels must be installed over a solidly sheathed minimum 15/32" plywood roof deck. The roof framing members (rafters or trusses) must be spaced a maximum of 24" o.c.

**New Roof Framing Attachment:** The roof framing must meet or exceed the uplift requirements of the IRC or IBC and must be installed as required for resistance to wind loads.

**Design Wind Pressures:** The design pressure uplift load resistance must be as specified in each assembly.

**Roof Slope:** The metal roofing panels must not be installed on roof slopes less than 3:12.

**Installation:**

**General Installation Requirements:** Manufacturer's installation instructions must be followed, unless otherwise specified by this product evaluation. All edge, corner, and penetration flashing must be installed according to the manufacturer's installation instructions. All fasteners must be corrosion resistance as specified in the IRC, the IBC, and the Texas Revisions.

**Assembly No. 1 – Terrabella Verona® and Terrabella Classic® Over Wood Battens**

**Design Wind Pressure:** -67.5 psf

**Deck:** The roof deck must be solidly sheathed with minimum 15/32" plywood.

**Underlayment:** Minimum of one layer of underlayment conforming to ASTM D 226, ASTM D 4869, or ASTM D 1970. The underlayment must be installed in accordance with the IRC or IBC.

**Battens:** Minimum 2x2 No. 2 Southern Pine or Douglas Fir-Larch battens installed perpendicular to roof framing members and secured with one No. 10 x 4" long corrosion resistant wood screw at each rafter. The battens are spaced a maximum of 15-3/4" o.c. for the Premium panels and 14-31/32" o.c. for the Classic panel.

**Terrabella Verona Panel Attachment:** The panels are secured to the battens with four No. 9-15 x 2" long HWH self-drilling screws per panel. The screws are installed 7-1/4" from each edge of the panel and spaced 8-7/8" between the edge screws at the vertical section of the head lap securing the panel to the wood batten. Refer to Figure 1 for attachment details.

**Terrabella Classic Panel Attachment:** The panels are secured to the battens with four No. 9-15 x 2" long HWH self-drilling screws per panel. The first screw is located 1-1/2" from the panel edge and the remaining screws spaced 14-5/8" o.c. The screws are installed at the vertical section of the head lap securing the panel to the wood batten. Refer to Figure 2 for attachment details.

### Assembly No. 2 – Terrabella Verona® to Wood Deck

**Design Wind Pressure:** -67.5 psf

**Deck:** The roof deck must be solidly sheathed with minimum 15/32" plywood.

**Underlayment:** Minimum of one layer of underlayment conforming to ASTM D 226, ASTM D 4869, or ASTM D 1970. The underlayment must be installed in accordance with the IRC or IBC.

**Panel Attachment:** The panels are secured to the roof deck with four No. 10-14 x 3" HWH self-drilling, dual thread corrosion resistant wood screws with 1/2" sealing washers per panel. The screws are installed 7-1/4" from each edge of the panel and spaced 8-7/8" between the edge screws through the preformed fastening tabs securing the panel to the deck. One No. 9-15 x 1" HWH wood screw installed at the vertical section of the head/side lap. Refer to Figure 3 for attachment details.

### Assembly No. 3 – Terrabella Classic® to Wood Deck

**Design Wind Pressure:** -60 psf

**Deck:** The roof deck must be solidly sheathed with minimum 15/32" plywood.

**Underlayment:** Minimum of one layer of underlayment conforming to ASTM D 226, ASTM D 4869, or ASTM D 1970. The underlayment shall be installed in accordance with the IRC or IBC.

**Panel Attachment:** The panels are secured to the roof deck with four No. 10-14 x 3" HWH self-drilling, dual thread corrosion resistant wood screws with 1/2" sealing washers per panel. The first screw is located 1" from the panel edge and the remaining screws spaced 14-5/8" o.c. The screws are installed through the top of the head lap securing the panel to the wood deck. Refer to Figure 4 for attachment details.

### Assembly No. 4 – Terrabella Shingle® to Wood Deck

**Design Wind Pressure:** See Panel Fastening Options Below

**Deck:** The roof deck must be solidly sheathed with minimum 15/32" plywood.

**Underlayment:** Minimum of one layer of underlayment conforming to ASTM D 226, ASTM D 4869, or ASTM D 1970. The underlayment shall be installed in accordance with the IRC or IBC.

**Panel Attachment:** The panels are secured to the roof deck with eight #9-15 x 2-1/2" HWH wood screws secured through the nose of the panel at the panel overlap and eight #9-15 x 2-1/2" HWH wood screws secured through the back flange. One screw is placed at each panel side lap approximately 1-1/2" from the panel edge. An additional screw is placed approximately 5.5" from each of the screws in the panel side lap. The remaining four screws are placed approximately 7.75" o.c. Refer to Figure 5 for attachment details.

**Design Wind Pressure:** -97.5 psf

**Panel Attachment:** The panels are secured to the roof deck with six (6) #9-15 x 2-1/2" HWH wood screws secured through the nose of the panel at the panel overlap and six (6) #9-15 x 2-1/2" HWH wood screws secured through the back flange. One screw is placed at each panel side lap approximately 1.5" from the panel edge. An additional screw is placed approximately 6.5" from the screw in the panel side lap. The remaining three screws are placed approximately 10.875" o.c. Refer to Figure 6 for attachment details.

**Design Wind Pressure:** -67.5 psf

#### **Assembly No. 5 – Terrabella Shake® to Wood Deck**

**Design Wind Pressure:** -67.5 psf

**Deck:** The roof deck must be solidly sheathed with minimum 15/32" plywood.

**Underlayment:** Minimum of one layer of underlayment conforming to ASTM D 226, ASTM D 4869, or ASTM D 1970. The underlayment shall be installed in accordance with the IRC or IBC.

**Panel Attachment:** The panels are secured to the roof deck with nine 0.131" x 2-3/8" ring shank nails secured along the back flange and nine 0.131" x 2-3/8" ring shank nails through the nose of the panel at the panel overlap. One fastener is placed at each panel side lap approximately 1.5" from the panel edge. The remaining seven fasteners are placed approximately 6.3" o.c. Refer to Figure 7 for attachment details.

#### **Assembly No. 6 – Terrabella Shake® to Wood Battens**

**Design Wind Pressure:** -82.5 psf

**Deck:** The roof deck must be solidly sheathed with minimum 15/32" plywood.

**Underlayment:** Minimum of one layer of underlayment conforming to ASTM D 226, ASTM D 4869, or ASTM D 1970. The underlayment shall be installed in accordance with the IRC or IBC.

**Battens:** Minimum 1x4 No. 2 Southern Pine or Douglas Fir-Larch battens installed perpendicular to roof framing members spaced 14-1/2" o.c. and secured to wood deck 12" o.c. with two 0.131" x 2-1/4" ring shank nails, ensuring penetration in each wood rafter (truss) at the intersections.

**Panel Attachment:** The panels are secured with nine 0.131" x 2-3/8" ring shank nails secured along the back flange and nine 0.131" x 2-3/8" ring shank nails through the nose of the panel at the panel overlap. One nail is placed at each panel side lap approximately 1.5" from the panel edge. The remaining seven nails are placed approximately 6.3" o.c. Refer to Figure 8 for attachment details.

**Assembly No. 7 – Terrabella Shake® to Wood Deck**

**Design Wind Pressure:** -112.5 psf

**Deck:** The roof deck must be solidly sheathed with minimum 15/32" plywood.

**Underlayment:** Minimum of one layer of underlayment conforming to ASTM D 226, ASTM D 4869, or ASTM D 1970. The underlayment shall be installed in accordance with the IRC or IBC.

**Panel Attachment:** The panels are secured to the roof deck with eight #9-15 x 2-1/2" HWH wood screws secured along the back flange and eight #9-15 x 2-1/2" HWH wood screws secured through the nose of the panel at the panel overlap. One screw is placed at each panel side lap approximately 1.5" from the panel edge. An additional screw is placed approximately 6" from each of the screws in the panel side lap. The remaining four screws are placed approximately 7.75" o.c. Refer to Figure 9 for attachment details.

**Assembly No. 8 – Terrabella Shake® to Wood Deck**

**Design Wind Pressure:** -71.25 psf

**Deck:** The roof deck must be solidly sheathed with minimum 15/32" plywood.

**Underlayment:** Minimum of one layer of underlayment conforming to ASTM D 226, ASTM D 4869, or ASTM D 1970. The underlayment shall be installed in accordance with the IRC or IBC.

**Panel Attachment:** The panels are secured to the roof deck with six #9-15 x 2-1/2" HWH wood screws secured along the back flange and six #9-15 x 2-1/2" HWH wood screws secured through the nose of the panel at the panel overlap. One screw is placed in each panel side lap approximately 1.5" from the panel edge. An additional screw is placed approximately 7" from the screw in the panel side lap. The remaining three screws are placed approximately 10.875" o.c. Refer to Figure 10 for attachment details.

**Note:** Keep the manufacturer's installation instructions on the job site during the installation. All fasteners must be corrosion resistant as specified in the IRC, the IBC, and the Texas Revisions.

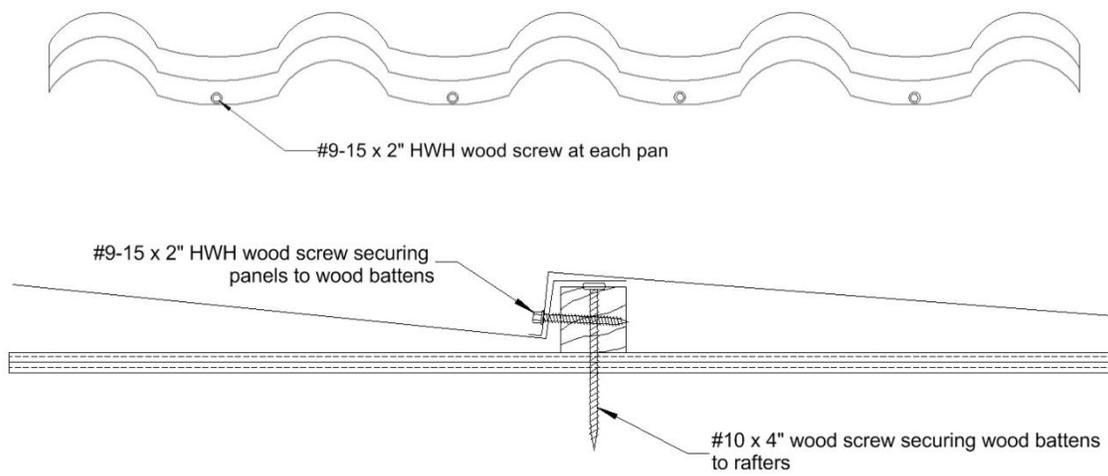


Figure 1: Terrabella Verona® Panels Fastened to Wood Battens

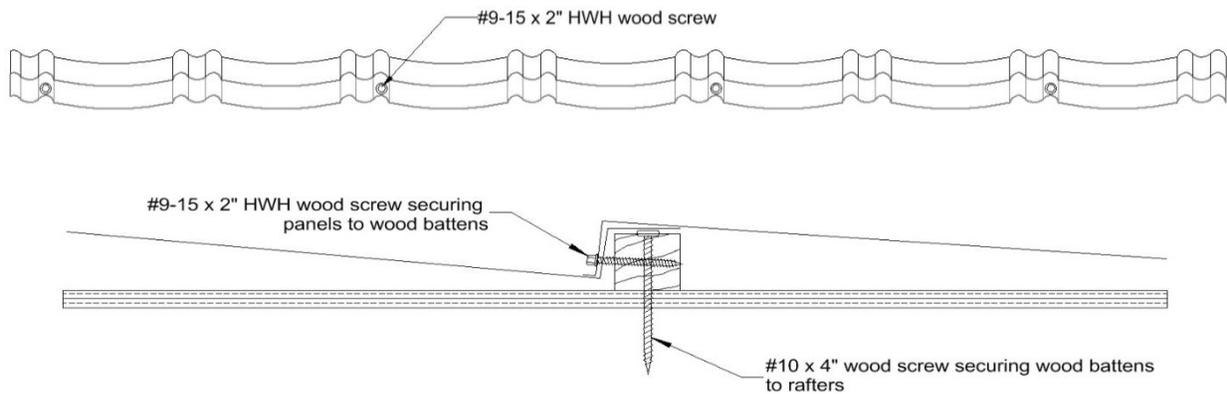


Figure 2: Terrabella Classic® Panels Fastened to Wood Battens

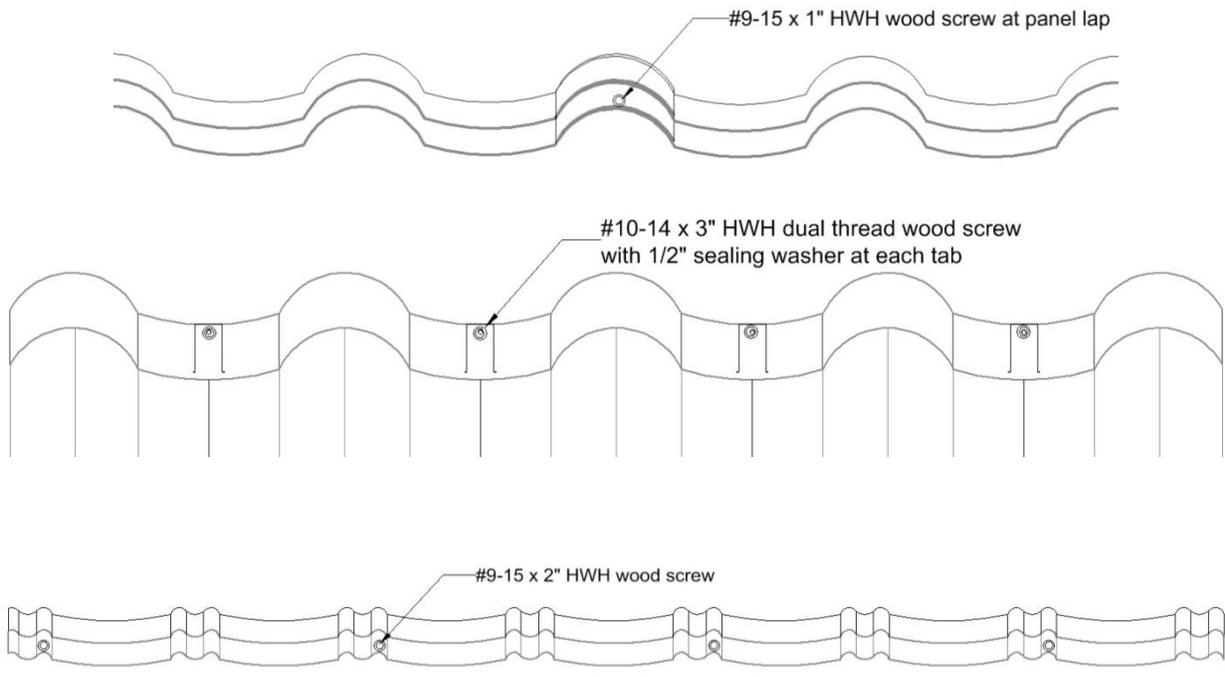


Figure 3: Terrabella Verona® Panels Fastened to Wood Deck



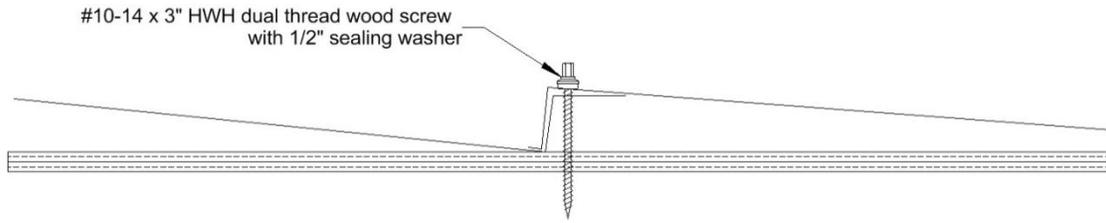


Figure 4: Terrabella Classic® Panels Fastened to Deck

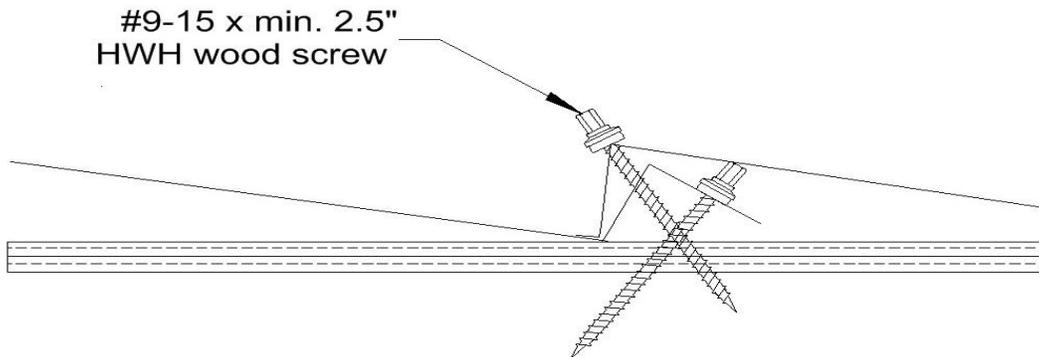
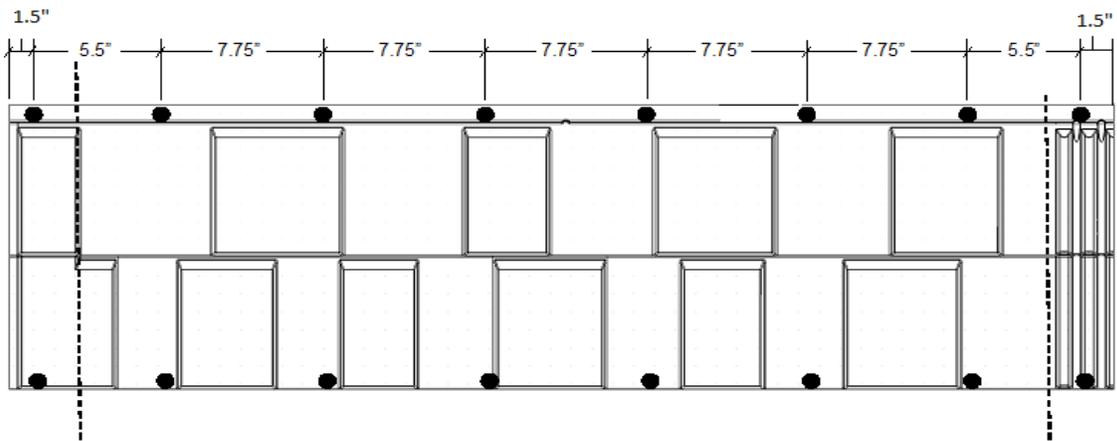


Figure 5: Terrabella Shingle® Panels Fastened To Wood Deck

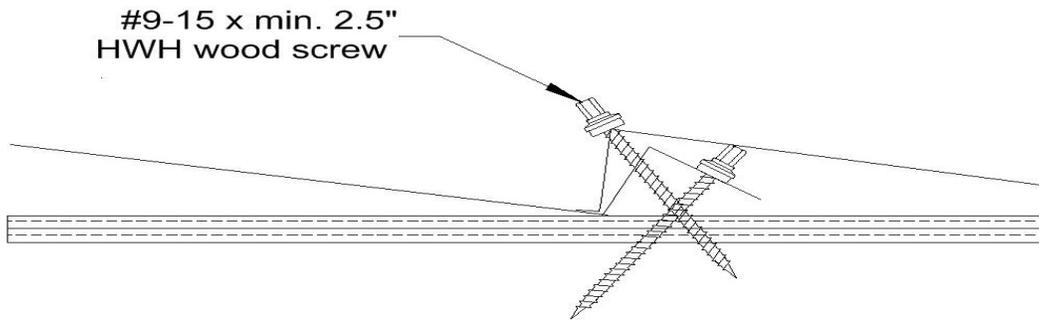
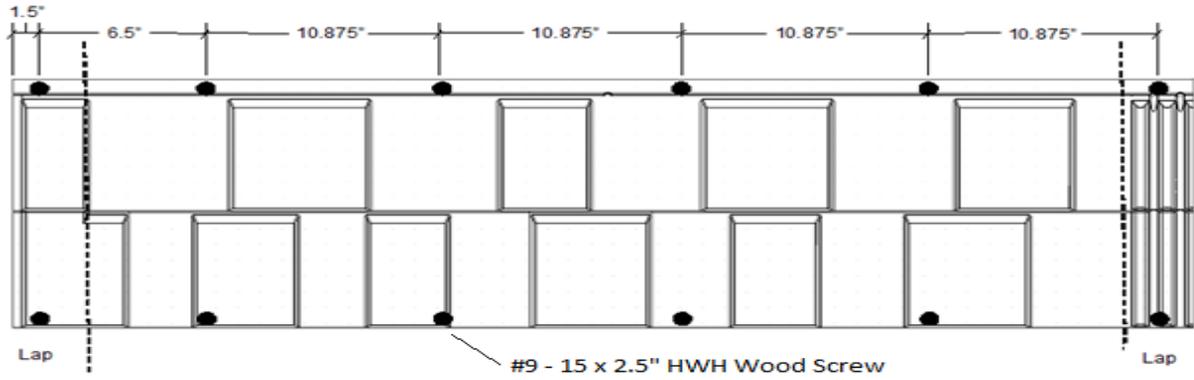


Figure 6: Terrabella Shingle® Panels Fastened To Wood Deck

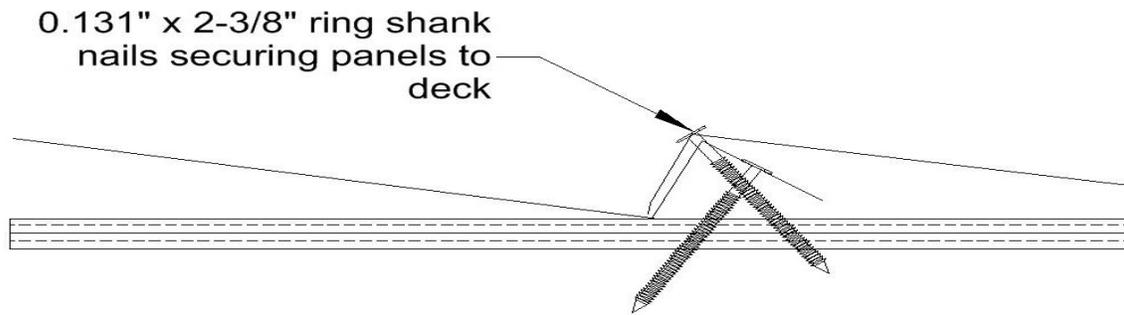
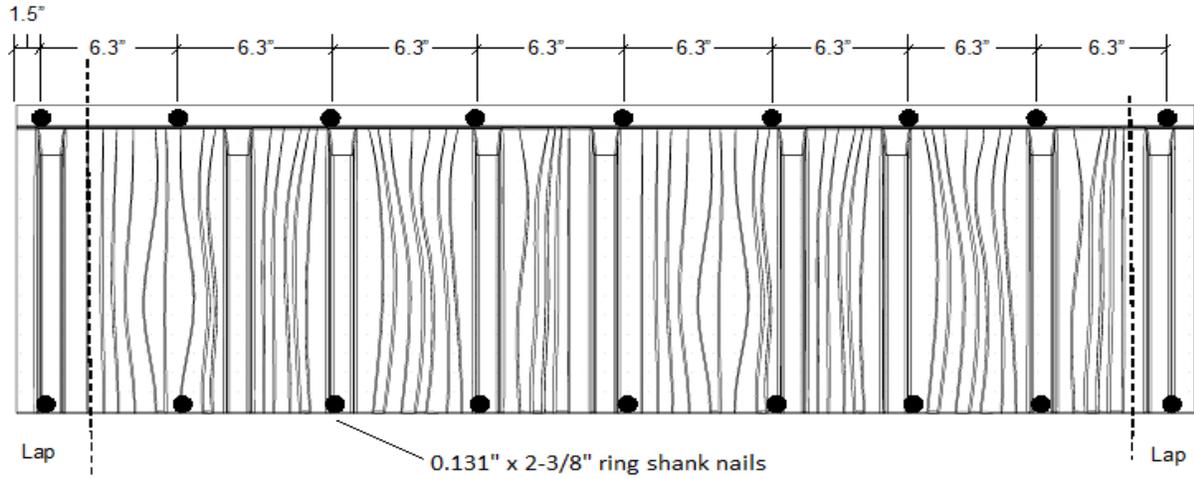


Figure 7: Terrabella Shake® To Wood Deck

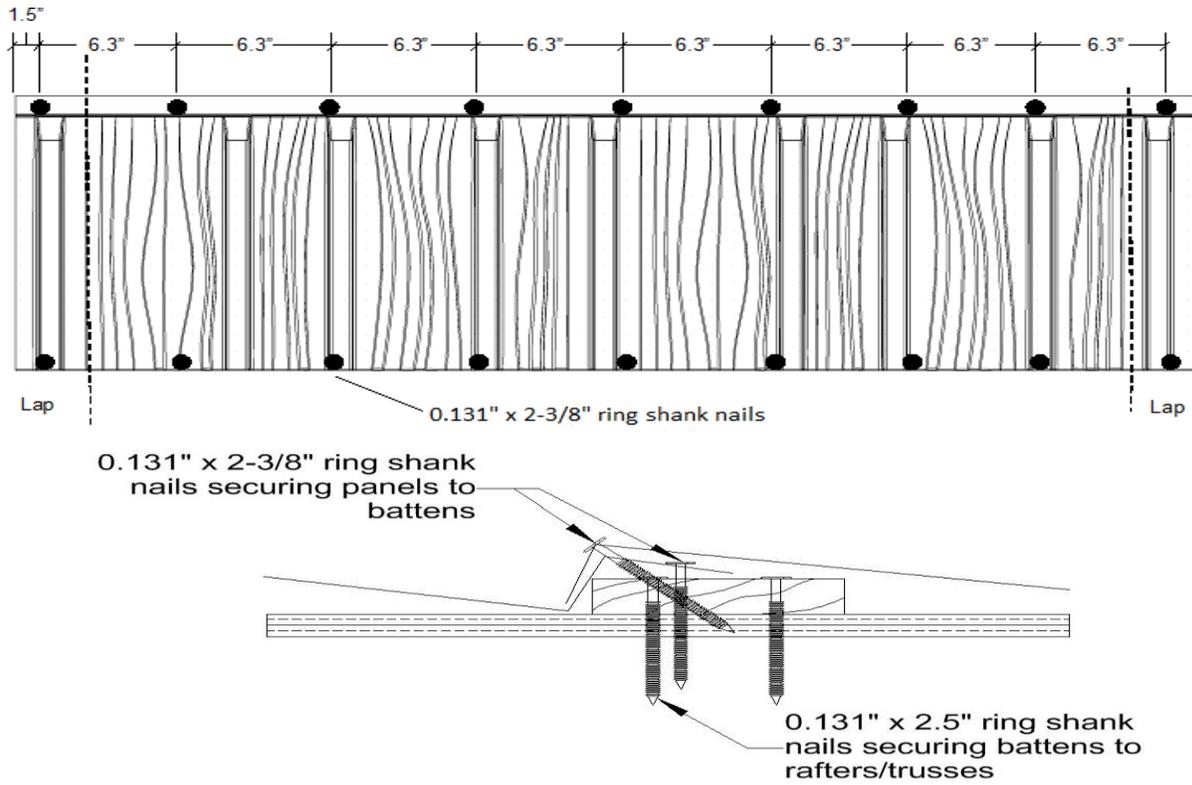


Figure 8: Terrabella Shake® To Battens

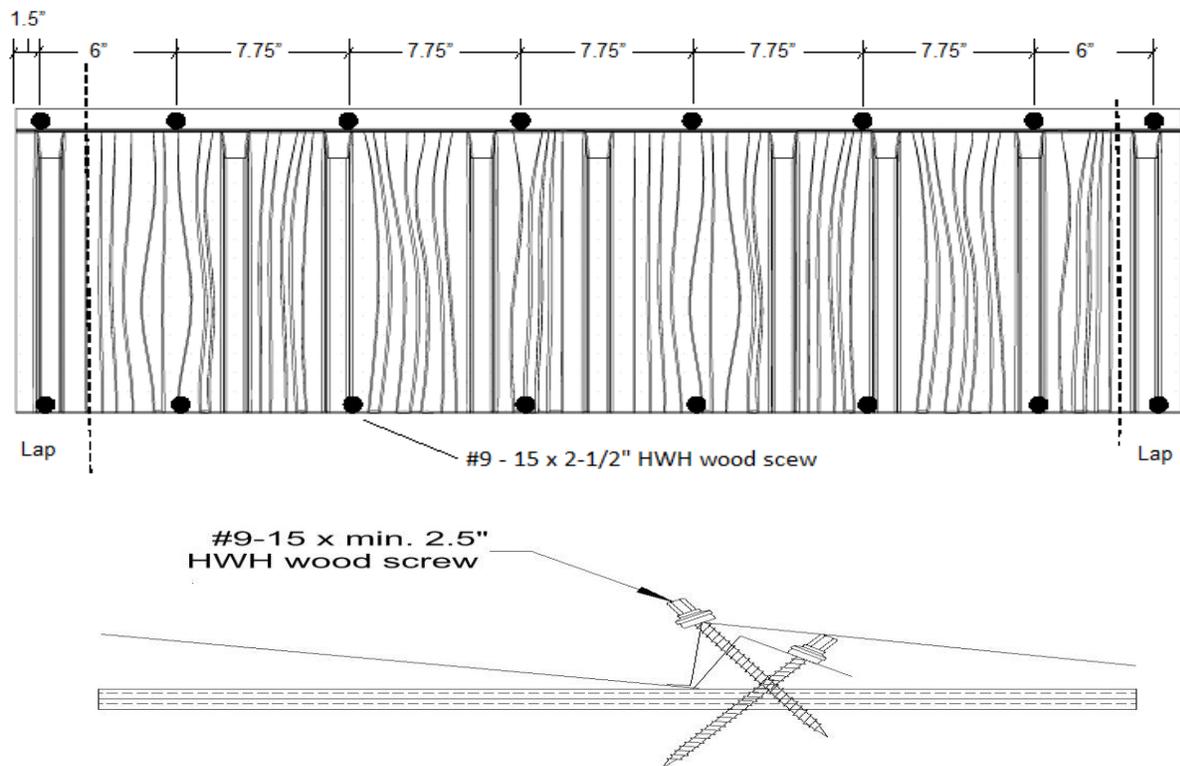


Figure 9: Terrabella Shake® To Wood Deck

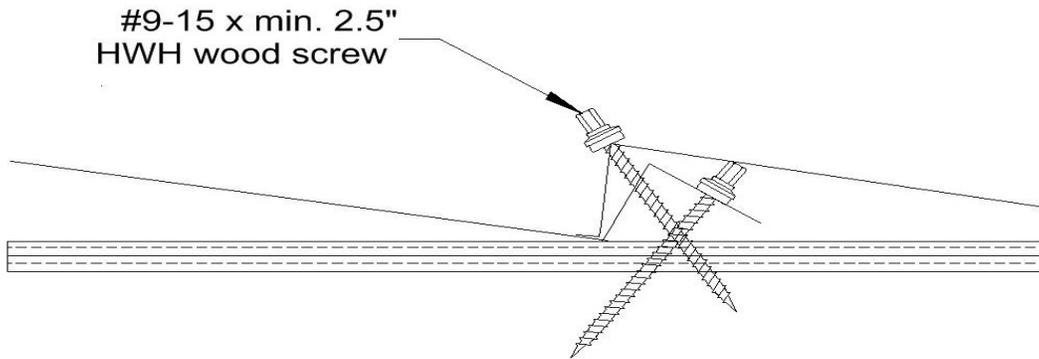
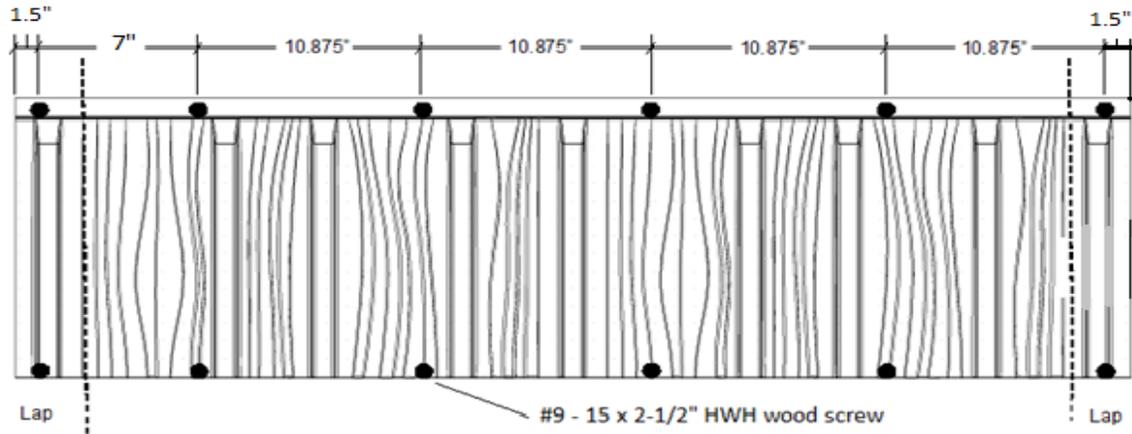


Figure 10: Terrabella Shake® To Wood Deck