



WESTLAKE ROYAL BUILDING PRODUCTS (USA) INC.

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WESTLAKE ROYAL BUILDING PRODUCTS TRIM AND MOULDING

CSI DIVISION: 06 00 00 WOOD, PLASTICS, AND COMPOSITES

CSI Sections:

06 50 00 Structural Plastics

06 65 00 Plastic Trim

1.0 RECOGNITION

The Westlake Royal Building Products (USA) Inc.'s Trim and Moulding products described in this report have been evaluated for use as exterior trim, wall coverings, soffits, architectural millwork, and interior trim. The structural performance, weather resistance, durability, ignition resistance, and termite resistance properties of the trim and moulding comply with the intent of the provisions of the following codes and regulations:

- 2024, 2021, and 2018 International Building Code® (IBC)
- 2024, 2021, and 2018 International Residential Code® (IRC)
- 2023 Florida Building Code, Building (FBC, Building) – attached Supplement
- 2023 Florida Building Code, Residential (FBC, Residential) – attached Supplement

2.0 LIMITATIONS

Use of Westlake Royal Building Products (USA) Inc.'s, Trim and Moulding products recognized in this report are subject to the following limitations:

2.1 The trim and moulding shall be installed in accordance with the applicable code, the manufacturer's published installation instructions, and this report. Where there is a conflict, the most restrictive requirements shall govern.

2.2 Flashing and a water-resistive barrier shall be installed as required by the applicable code for products used as an exterior covering.

2.3 The Trim and Moulding recognized in this report are manufactured in Bristol, Tennessee; Westfield, Massachusetts; and Marion, Virginia.

3.0 PRODUCT USE

Westlake Royal Building Products (USA) Inc.'s Trim and Moulding is for use in Type V Construction and buildings constructed in accordance with the IRC. Royal Building Products brand Trim and Moulding may be installed in Type I, II, III, and IV-HT construction when installed in accordance with Section 3.1 of this report. Use in fire-resistance-rated construction is outside the scope of this report.

3.1 Exterior Use: The Royal Building Products's brand trim and moulding sheet material does not exhibit sustained flaming when tested in accordance with NFPA 268 and may be used in Construction Types I, II, III, and IV-HT in accordance with 2024 IBC Section 1405.1.1 and 2021 IBC and 2018 IBC Section 1405, as applicable.

3.1.1 Soffits: Soffits shall be installed over open framing or structural sheathing capable of resisting design wind loads as detailed in this report. Section 3.3 of this report details the allowable design loads.

3.1.2 Exterior Covering: Trim and Moulding used as exterior wall covering shall be installed over an approved solid sheathing capable of resisting the design pressures. See Section 3.3 of this report for applicable products and allowable design loads.

3.2 Interior Use: The Trim and Moulding comply with the requirements of IBC Section 803.1.1 and may be used as interior wall and ceiling finishes. The Trim and Moulding shall not cover more than 10 percent of the wall or ceiling area it is attached to.

3.3 Design:

3.3.1 General: Building design wind loads shall be determined in accordance with IBC Section 1402.3 or IRC Section 301.2.1. The Standard Wind Load Design Pressure Ratings for the Trim and Mouldings used as soffit and exterior wall coverings are shown in Tables 1 and 2 of this report, respectively. The soffit and wall covering Standard Wind Load Design Pressure ratings were determined in accordance with Annex A1 of ASTM D3679.

3.3.2 IRC: Under the IRC, the design and installations are subject to the wind limitations in IRC Section R301.2.1.1. Table R301.2.1.3 of the IRC may be used to convert ultimate wind speeds to allowable wind speeds.

The Trim and Mouldings detailed in Table 1 of this report, used in soffit applications, have been evaluated as an alternative material to those detailed in Section R704.2 of the IRC, when installed in accordance with this report.



3.4 Termite Resistance: The Trim and Moulding has been evaluated and determined to have an equivalent resistance against subterranean termites, including Formosan termites, as an approved preservative-treated wood or a wood naturally resistance to termites .

3.5 Installation: Installation of Westlake Royal Building Products' Trim and Moulding products shall be in accordance with the manufacturer's published installation instructions, the applicable code, and this report. The products shall be fastened with the approved fastener methodology.

Exterior fasteners shall be corrosion-resistant or stainless steel. When fasteners are installed in pressure-treated wood (preservative or fire-retardant), the appropriate adjustment factors based on the pressure-treated wood manufacturer's recommendations or appropriate code provisions shall be applied to reduce the capacity of the fastener.

The soffit shall be attached directly to framing or sheathing as detailed in Table 1 of this report. Soffit may be installed in a single-span condition for overhangs up to 16-inch width or multi-span conditions for overhangs over 16-inches and exterior ceilings, such as porches. Fasteners shall be a minimum of 1½-inches long, except as specifically noted in Tables 1 and 2 of this report.

4.0 PRODUCT DESCRIPTION

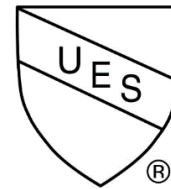
Westlake Royal Building Products' Trim and Moulding products are used as exterior trim, wall coverings, soffits, architectural millwork, and interior trim and are made of polyvinyl chloride (PVC).

Westlake Royal Building Products distributes these Trim and Moulding products under the Royal Building Products and Kleer brand names. Trim and Moulding profiles are available in multiple shapes and lengths with nominal widths between 3 inches and 12 inches and thicknesses of ¾-inch thick to 1-inch-thick. Sheet profiles are manufactured in 4-foot-wide sheets in lengths up to 20 feet with a maximum thickness of 1½-inches. Product categories include: Trimboards, SureEdge, Precision Cut, S4S, Sheet, Beadboard, Cornerboards, Skirt Boards, Column Wraps, millwork, Exterior Mouldings, and Interior Mouldings.

5.0 IDENTIFICATION

The Westlake Royal Building Products (USA) Inc.'s Trim and Moulding name and trademark, product categories, and evaluation report number (ER-951).

The IAPMO Uniform Evaluation Service Mark of Conformity may also be used as shown below:



IAPMO UES ER-951

6.0 SUBSTANTIATING DATA

6.1 Test reports are from laboratories in compliance with ISO/IEC 17025.

6.2 Data in accordance with ICC-ES Acceptance Criteria for Rigid Cellular PVC Non-load-bearing Exterior Trim (AC227), dated December 2019 (Editorially revised February 2024)

6.3 Reports of wind resistance testing in accordance with ASTM D5206.

6.4 Reports of ignitability testing in accordance with NFPA 268.

6.5 Reports of room corner fire testing in accordance with NFPA 286.

7.0 STATEMENT OF RECOGNITION

This evaluation report describes the results of research completed by IAPMO Uniform Evaluation Service on Westlake Royal Building Products (USA) Inc.'s Trim and Moulding to assess conformance to the codes shown in Section 1.0 of this report and serves as documentation of the product certification. Products are manufactured at locations noted in Section 2.3 of this report under a quality control program with periodic inspection under the supervision of IAPMO UES.

For additional information about this evaluation report please visit www.uniform-es.org or email us at info@uniform-es.org



EVALUATION REPORT

Number: **951**

Originally Issued: 01/28/2025

Valid Through: 01/31/2026

TABLE 1 – SOFFIT DESIGN PRESSURE RATINGS

Single Span Soffits and Overhangs				Multiple Span Soffits, Overhangs, and Porch Ceilings		
		Standard Wind Load Design Pressure Ratings (psf) ¹			Standard Wind Load Design Pressure Ratings (psf) ¹	
Product	Installation Method ²	Open Framing	Over Sheathing	Installation Method ²	Open Framing	Over Sheathing
³ / ₈ X 5 ¹ / ₂ engineered soffit	Trim Supported Method Detailed in Figure 1 and Note 1	100	200	N/A	N/A	N/A
¹ / ₂ x 7 ¹ / ₄ soffit	Trim Supported Method Detailed in Figure 1 and Note 1	100	200	Basic Install Method Detailed in Figure 3 and Note 2	42	83
¹ / ₂ x 5 soffit	Trim Supported Method Detailed in Figure 1 and Note 1	100	200	Basic Install Method Detailed in Figure 3 and Note 2	42	83
⁵ / ₈ x 7 soffit	Trim Supported Method Detailed in Figure 1 and Note 1	100.0	200	Basic Install Method Detailed in Figure 3 and Note 2	42	83
	Cortex ³ Attachment Method Detailed in Figure 2 and Note 3	100	200	Cortex ³ Attachment Method Detailed in Figure 4 and Note 3	100	200
⁵ / ₈ x 5 soffit	Trim Supported Method Detailed in Figure 1 and Note 1	100	200	Basic Install Method Note 2	42	83
	Cortex ³ Attachment Method Detailed in Figure 2 and Note 3	100	200	Cortex ³ Attachment Method Detailed in Figure 4 and Note 3	100	200
³ / ₄ x 7 ¹ / ₄ soffit	Trim Supported Method Detailed in Figure 1 and Note 1	100	200	Basic Install Method Note 2 at the end of Table 1	42	83
	Cortex ³ Attachment Method Detailed in Figure 2 and Note 3	100	200	Cortex ³ Attachment Method Detailed in Figure 4 and Note 3	100	200
³ / ₄ x 5 soffit	Trim Supported Method Detailed in Figure 1 and Note 1	100	200	Basic Install Method Note 2 at the end of Table 1	42	83
	Cortex ³ Attachment Method Detailed in Figure 2 and Note 3	100	200	Cortex ³ Attachment Method Detailed in Figure 4 and Note 3	100	200
¹ / ₂ -inch Beaded Sheet	Trim Supported Method Detailed in Figure 1 and Note 4	100	200	Bugle Head Screw Method Detailed in Figure 4 and Note 5	100	200
¹ / ₂ -inch sheet	Trim Supported Method Detailed in Figure 1 and Note 4	100	200	Bugle Head Screw Method Detailed in Figure 4 and Note 5	100	200
⁵ / ₈ -inch sheet	Trim Supported Method Detailed in Figure 1 and Note 4	100	200	Cortex ³ Attachment Method 12" Detailed in Note 7	100	200
	Cortex ³ Attachment Method Detailed in Figure 2 and Note 6	100	200	Cortex ³ Attachment Method 16" Detailed in Note 8	69	138
³ / ₄ -inch sheet	Trim Supported Method Detailed in Figure 1 and Note 4	100	200	Cortex ³ Attachment Method 12" Detailed in Note 7	100	200
	Cortex ³ Attachment Method Detailed in Figure 2 and Note 6	100	200	Cortex ³ Attachment Method 12" Detailed in Note 7	69	138

¹Standard Wind Load Design Pressure Ratings D_{psd} , were established using average maximum sustained static test pressures from ASTM D5206. The Design Pressure Ratings are calculated with the equation from ASTM D 3679 A1.2.2: Standard Design Pressure Rating = Avg Test value/ (1.5 (safety factor) * PEF). PEF = 1.0 for open soffits and 0.5 for backed installation.

²Supporting wood construction shall have a minimum specific gravity of 0.42.

³Fastenmaster Cortex screws #8 2 ³/₄-inch

Notes: (continued on next page)

1. Soffit attached to supporting construction with a minimum 15 gauge 1¹/₂-inch finish nail (head diameter of 0.07 to 0.09 and shank diameter of 0.07) at 1-inch from the end of each piece of soffit. PVC Trim board attached to supporting construction at the fascia end using a minimum a ³/₄-inch -thick by 1¹/₂-inches wide trim board (1x2) and at the wall end using a minimum



- $\frac{3}{4}$ -inch-thick by $\frac{3}{2}$ -inch (1x4) wide trim board. Trim Board shall be attached using #8 $\frac{2}{4}$ -inch Cortex Screws (head diameter of 0.26-inch and shank diameter of 0.19-inch) starting at $\frac{1}{2}$ -inches from the end and 12-inches on-center thereafter. Cortex screws shall be fully set using the provided driver and felt washer.
2. Soffit attached to supporting construction with a minimum 15 gauge $\frac{1}{2}$ -inch finish nail (head diameter of 0.07-inch to 0.09 inch and shank diameter of 0.07-inch) at 1-inch from the end of each course of soffit at a maximum of 12 inches on-center into each supporting member through the tongue.
 3. Soffit attached to supporting construction with two #8 $\frac{2}{4}$ -inch Cortex Screws (head diameter of 0.26-inch and shank diameter of 0.19-inch) 1 inch from the each end (4 fasteners per course of soffit). Cortex screws shall be fully set using the provided driver and felt washer
 4. Soffit attached to supporting construction with a minimum 15 gauge $\frac{1}{2}$ -inch finish nail (head diameter of 0.07 to 0.09 and shank diameter of 0.07) at 1-inch from the end of each piece of soffit and then 8-inches on-center. PVC Trim board attached to supporting construction at the fascia end using a minimum $\frac{3}{4}$ -inch-thick by $\frac{1}{2}$ -inches wide trim board (1x2) and at the wall end using a minimum $\frac{3}{4}$ -inch-thick by $\frac{3}{2}$ -inch (1x4) wide trim board. Trim Board shall be attached using #8 $\frac{2}{4}$ -inch Cortex Screws (head diameter of 0.26-inch and shank diameter of 0.19-inch) starting at $\frac{1}{2}$ -inches from the end and 12-inches on-center. Cortex screws shall be fully set using the provided driver and felt washer
 5. Soffit attached to supporting construction with #8 x 2 inch long bugle head screws at 16-inches on-center spacing at the edges and field with an edge distance of 1-inch.
 6. Soffit attached to supporting construction with #8 x $\frac{2}{4}$ -inch Cortex Screws (head diameter of 0.26-inch and shank diameter of 0.19-inch) starting at 1-inch from the end and 12-inches on-center thereafter.
 7. Soffit attached to supporting construction with #8 x $\frac{2}{4}$ -inch Cortex Screws (head diameter of 0.26-inch and shank diameter of 0.19-inch) starting at 1-inch from the end and 12-inches on-center on the perimeter and field.
 8. Soffit attached to supporting construction with #8 x $\frac{2}{4}$ -inch Cortex Screws (head diameter of 0.26-inch and shank diameter of 0.19-inch) starting at 1-inch from the end and 16-inches on-center on the perimeter and field.

TABLE 2- SHEET INSTALLED AS CLADDING

Product	Installation Method	Standard Wind Load Design Pressure Ratings (psf)
$\frac{1}{2}$ -inch sheet	#8 x 2-inch long bugle head screws installed at 16" on the perimeter and field	200
$\frac{5}{8}$ -inch sheet	#8 $\frac{2}{4}$ -inch Cortex Screws installed at 16" on the perimeter and field	138
$\frac{3}{4}$ -inch sheet	#8 $\frac{2}{4}$ -inch Cortex Screws installed at 16" on the perimeter and field	138

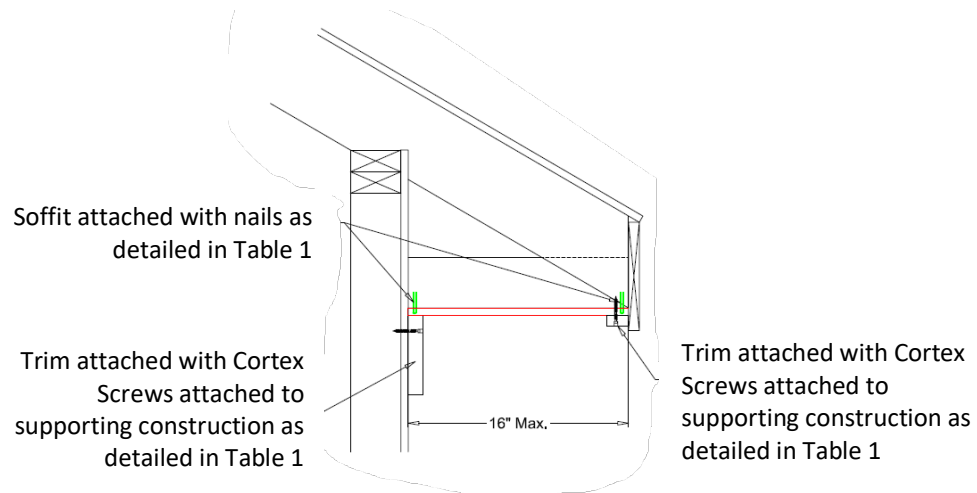


FIGURE 1- SOFFIT INSTALATION WITH TRIM BOARD AT WALL AND FASCIA ENDS- TRIM SUPPORTED METHOD

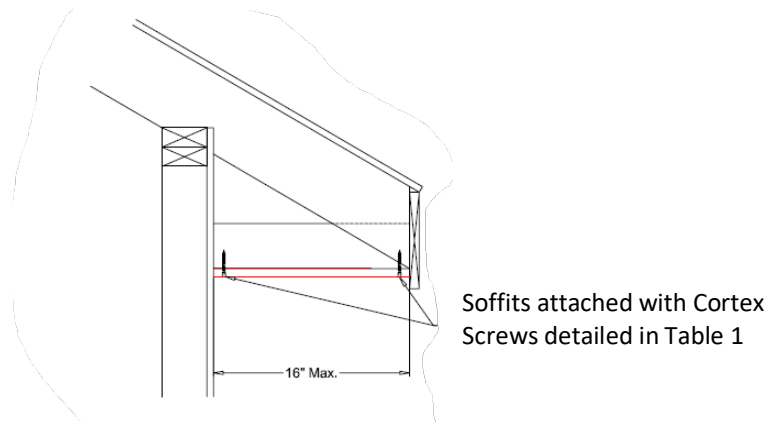


FIGURE 2- SOFFIT INSTALATION WITH CORTEX SCREWS

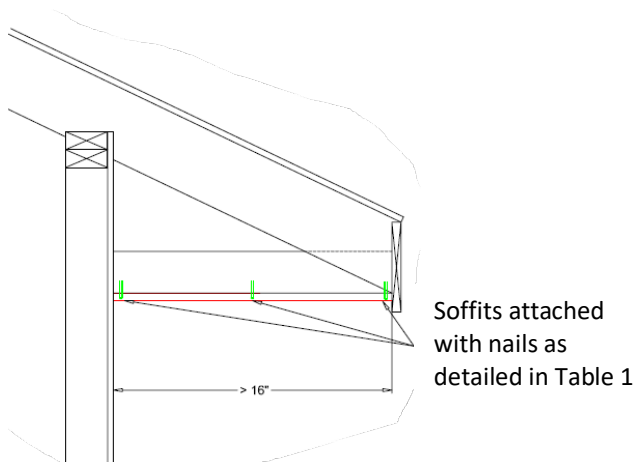


**FIGURE 3- SOFFIT INSTALATION
MULTIPLE SPANS WITH NAILS**

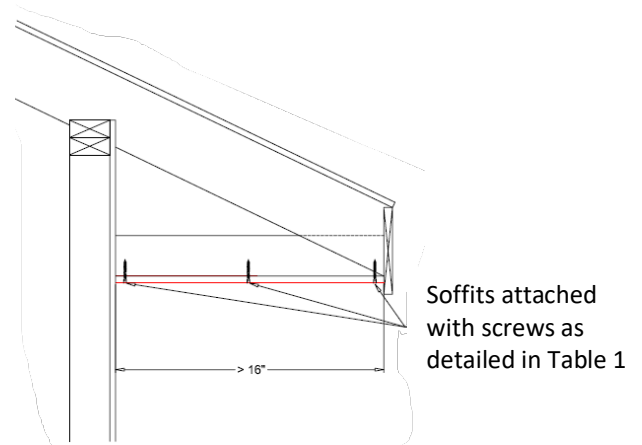


**FIGURE 4- SOFFIT INSTALATION
MULTIPLE SPANS WITH SCREWS**



FLORIDA SUPPLEMENT

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CSI DIVISION: 6 00 00 WOOD, PLASTICS, AND
COMPOSITES

CSI Sections:

06 50 00 Structural Plastics

06 65 00 Plastic Trim

1.0 RECOGNITION

Westlake Royal Building Products (USA) Inc.'s Trim and Moulding described in IAPMO UES Evaluation Report ER-951 is a satisfactory alternative to the cladding systems prescribed in the following codes:

- 2023 Florida Building Code, Building (FBC, Building)
- 2023 Florida Building Code, Residential (FBC, Residential)

2.0 LIMITATIONS

Use of the Westlake Royal Building Products (USA) Inc.'s Trim and Moulding recognized in this report supplement is subject to the following limitations:

2.1 The Trim and Moulding products shall be designed and installed in accordance with the provisions applicable to the 2021 IBC in ER-951, Chapters 8, 14, and 16 of the FBC, Building, as applicable, and Chapter 3 of the FBC, Residential. Allowable design pressures determined in accordance with the FBC, Building or FBC, Residential shall not exceed those in Tables 1 or 2 of ER-951, as applicable.

2.2 Use of the Westlake Royal Building Products (USA) Inc.'s Trim and Moulding for compliance with the high-velocity hurricane zone provisions of the FBC, Building, and FBC, Residential, is outside the scope of this evaluation report.

2.3 For products falling under Florida Rule 61G20-3.008, verification is required that the report holder's quality assurance program is audited by a quality assurance entity, approved by the Florida Building Commission (or the building official when the report holder does not possess an approval by the Commission), to provide oversight and determine that the products are being manufactured as described in this evaluation report to establish continual product performance.

2.4 This supplement expires concurrently with ER-951.

For additional information about this evaluation report please visit www.uniform-es.org or email us at info@uniform-es.org