



CODE EVALUATION REPORT

CERus-1050

PUBLISHED: June 2025
REVISED: June 2025
EXPIRATION: June 2028

PRODUCT(s): Hand-Split Shake Siding

REPORT HOLDER: Westlake DaVinci Roofscapes, LLC

CONTACT DETAILS: 13890 W 101st Street
Lenexa, Kansas
66215 USA

CSI DIVISIONS: 07 00 00 – Thermal and Moisture Protection

CSI SECTION: 07 46 33 – Plastic Siding

APPLICABLE CODES: 2024/2021/2018 International Building Code (IBC)
2024/2021/2018 International Residential Code (IRC)
2022 California Building Code (CBC)
2022 California Residential Code (CRC)

EVALUATED: Physical Properties
Surface-Burning Characteristics
Weather Protection
Wind Resistance
Ignition Resistance



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1.0 APPROVED FOR FOLLOWING:

APPROVED TYPES OF CONSTRUCTION:	Types I-V
APPROVED USE:	Exterior Cladding.
APPROVED INSTALLATIONS:	Exterior cladding on bearing and non-load bearing exterior walls.

2.0 DESCRIPTION:

2.1 General:

DaVinci Hand-Split Shakes are polymeric exterior cladding products complying with the 2024 IBC Section 1403.11, 2021 / 2018 IBC Section 1403.12 and 2024 / 2021 / 2018 IRC Section R703.14 meeting performance requirements outlined in ASTM D7254. The siding when installed in accordance with this report complies with 2024 / 2021 / 2018 IBC Section 1402.2 and IRC Section 703.1.1 weather protection. DaVinci Hand-Split Shakes are available in a variety of colors intended to replicate wood shake and shingle siding.

DaVinci Hand-Split Shakes are classified combustible per the 2024 / 2021 / 2018 IBC Section 1405.1.1.1 and do not exhibit sustained flaming when evaluated to NFPA 268 and are recognized for use on constructions following the 2024 / 2021 / 2018 IBC and IRC where combustible cladding is acceptable. Where used in Types I-II, III and IV-HT construction, installation is limited to structures of maximum 40 ft (12.2 m) in height above grade, and to areas not exceeding 10% where the fire separation distance is 5 ft (1524 mm) or less. Product installation is to comply with the applicable code.

DaVinci Hand-Split Shakes have a flame spread index of less than 200 and DaVinci Hand-Split Shakes remain in position ahead of the flame front when evaluated in accordance with ASTM E84.

DaVinci Hand-Split Shakes are for installation in accordance with the applicable code over code complying wood structural panel type sheathing and a water-resistive barrier.

2.2 DaVinci Hand-Split Shake:

DaVinci Hand-Split Shake products are available in widths of 8-inches (203 mm) and 10-inches (254 mm) of 18-inches (457 mm) length and 5/8-inches (16 mm) thickness. The products include a wood grain finished look to create an appearance of 4-inches (102 mm), 6-inches (152 mm), 8-inches (203 mm) and 10-inches (254 mm) wood shakes.

3.0 DESIGN:

DaVinci Hand-Split Shakes are exterior cladding products for installation over code complying wall framing, wood structural panel sheathing and a water-resistive barrier. Use of DaVinci Hand-Split Shake does not require professional design when installed in accordance with Sections 4.1 through 4.2 of this report. Use in applications outside those described in this report requires approval by the authority having jurisdiction. The siding products are recognized for use in areas of maximum wind pressure for installations as outlined in Section 8.1 of this report. Use of DaVinci roofing products in applications of wind resistance greater than those described in the respective supplemental engineering documents cited in Section 8.1 are outside the scope of this report and require approval by the authority having jurisdiction.



4.0 INSTALLATIONS:

4.1 General:

Installation of DaVinci Hand-Split Shakes must comply with the manufacturer's published installation instructions, this report, and the applicable code(s). Where differences are found between documents, this report and the applicable building code shall be followed. The manufacturer's published installation instructions are to be available at the jobsite during installation.

Installation of DaVinci Hand-Split Shakes must comply with the prescriptive requirements of 2024 / 2021 / 2018 IBC Section 1404 and 2024 / 2021 / 2018 IRC Section R703, whichever governs. For jurisdictions governed by the 2024 / 2021 / 2018 IBC, installation of DaVinci Hand-Split Shakes is limited to areas of maximum wind speeds of 100 mph (160 kmh) and of building heights of maximum 40 ft (12.2 m) Exposure C, except where installed in accordance with Section 8.1 of this report.

4.2 Hand-Split Shake Siding

DaVinci Hand-Split Shake is intended for installation over minimum 7/16-inch (11 mm) oriented strandboard (OSB) or 1/2-inch (12 mm) plywood wood structural panel sheathing. Installation over non-structural sheathings including but not limited to: foam plastic, exterior gypsum board, and fiber boards are not approved and are outside the scope of this report. A code complying water-resistive barrier is required over the wood structural panel sheathing prior to DaVinci Hand-Split Shake installation, installed in accordance with the applicable code and the manufacturer's installation instructions. Installation over concrete or CMU walls on to pressure-treated wood strapping is permissible without a water-resistive barrier.

A starter course is first installed following a level chalk line to provide a solid backing of the first DaVinci Hand-Split Shake row. The starter course requires anchoring with two (2) corrosion resistant fasteners, located one fastener at edge starter tile edge "X" location. Each starter tile requires a 3/8-inch (10 mm) keyway gap between tiles. Following, DaVinci Hand-Split Shake is located following a level chalk-line over the underlying starter course, with installation not to extend past the starter course. Each DaVinci Hand-Split Shake is installed with two (2) full round head roofing nail of minimum 1-3/4-inches (44 mm) length, or with fasteners as outlined in Section 8.1 of this report with fasteners installed at dedicated fastener locations included on the product. Widths of shakes are mixed to create the look of wood shake and shingle cladding, with each Hand-Split Shake installed with a 1/4-inch to 3/8-inch (6 mm to 10 mm) gap between shakes. Following, the next row of DaVinci Hand-Split Shake is installed following either a straight 6-inch, 7-inch, or 8-inch (152 mm, 177 mm, 203 mm) or staggered 6-inch or 7-inch ((152 mm or 177 mm) exposure type. Keyway gaps between courses of DaVinci Hand-Split Shake are to be a minimum of 1-1/2-inches (38 mm).

Terminations, openings and trims are to be installed in accordance with the manufacturer's installation instructions and good installation practices.



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5.0 LIMITATIONS

- DaVinci Hand-Split Shake Siding are to be installed in accordance with the manufacturer's installation instructions, the applicable code and this report. Where differences exist between documents, the applicable code and this report shall be followed.
- DaVinci Hand-Split Shake Siding products used in Types I-IV construction in jurisdictions following the 2024 / 2021 / 2018 IBC are limited to structures of maximum 40 ft (12.2 m) in height above grade, and to coverage areas of less than 10% where the fire separation distance is less than 5 ft (1524 mm).
- DaVinci Hand-Split Shake products are limited to use in areas of maximum wind speed of 100 mph (160 kmh) on buildings of maximum 40 ft (12.2 m) Exposure Category C, except where installations are in accordance with Section 8.1 of this report.
- DaVinci Hand-Split Shake are required installed over light-framed walls with wood structural panel sheathing or Concrete/CMU with wood strapping complying with the applicable code. Use over non-structural sheathing is outside the scope of this report.
- DaVinci Hand-Split Shakes installed on light-framed walls over sheathing require a water-resistive barrier complying with the applicable code.
- Fasteners for use with DaVinci Hand-Split Shake require corrosion resistance complying with the applicable code.
- DaVinci Hand-Split Shakes are fabricated in Lexena, KS under an approved quality program with inspections by QAI Laboratories.

6.0 SUPPORTING INFORMATION:

The following data has been submitted for evaluation of DaVinci Hand-Split Shake products:

- Data outlining compliance with ASTM D7254.
- Data evaluating surface burning characteristics following ASTM E84.
- Data evaluating ignition resistance following NFPA 268.
- Data evaluating water penetration following ASTM E331.
- Data evaluating wind pressure following ASTM E330.
- Data evaluating direct flame impingement following ASTM E2707.

7.0 MARKING:

Finished DaVinci Hand-Split Shake include the following markings / information.

Products are marked in a permanent manner on the backside of each panel with the following:

- a) Company Name: Westlake DaVinci Roofscapes, LLC
- b) Product Name: Handsplit Shake.
- c) Date of Manufacture.
- d) Statement of conformance to ASTM D7254
- e) QAI logo shown here:



Figure 1. DaVinci Hand-split Shake Finished Product Markings



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8.0 RESULTS / RATINGS:

8.1 Allowable Load Capacities

Table 1. DaVinci Hand-split Shake Installations and Design Pressures^{1,7}

MINIMUM FRAMING ²	MINIMUM SHEATHING ³	FASTENING ⁴	ALLOWABLE STRESS DESIGN (ASD) PRESSURE (psf) ^{5,6}
2-inch x 4-inch nominal lumber at 16-inches (410 mm) on center (OC).	7/16-inch (11 mm) wood structural panels.	Two (2) minimum 5d 1.75-inch length (44 mm) diameter siding nails with minimum 1/4-inch (6 mm) diameter head.	43
2-inch x 4-inch nominal lumber at 16-inches (410 mm) on center (OC).	7/16-inch (11 mm) wood structural panels.	Two (2) minimum 11-gauge 1.75-inch (44 mm) diameter siding nails with minimum 3/8-inch (9.5 mm) diameter head.	90

Footnotes:

1. Referenced allowable pressures are determined by Boca Engineering Co. Report No. 0064-22 that contains these base installations and additional assemblies detail options, inclusive of corresponding wind pressure and wind speeds determined in accordance with ASCE 7-22 for various building types up to 60 ft (18.3 m) height, which are included as a supplement to this report and recognized as solutions in accordance with the referenced codes.
2. Unless otherwise noted, wood framing species must have a specific gravity of 0.42 or greater. Framing can be substituted with larger framing members or types of higher specific gravity.
3. Sheathing is to comply with the applicable code. Attachment of sheathing to framing is outside the scope of this report and is to comply with the applicable code for resisting service loads.
4. Fasteners are to be corrosion resistant in accordance with the applicable code.
5. Allowable stress design (ASD) pressure determined based on tested average maximum pressure resistance with a factor of safety of 2.0 applied.
6. To convert ASD to Load Resistance Factor Design (LRFD), multiply ASD psf x 1.67.
7. Installation wall height maximum of 10 ft and framing to be designed to maximum L/120 deflection limit.

9.0 PRODUCT DETAILS

9.1 DaVinci Hand-split Shake Product Details

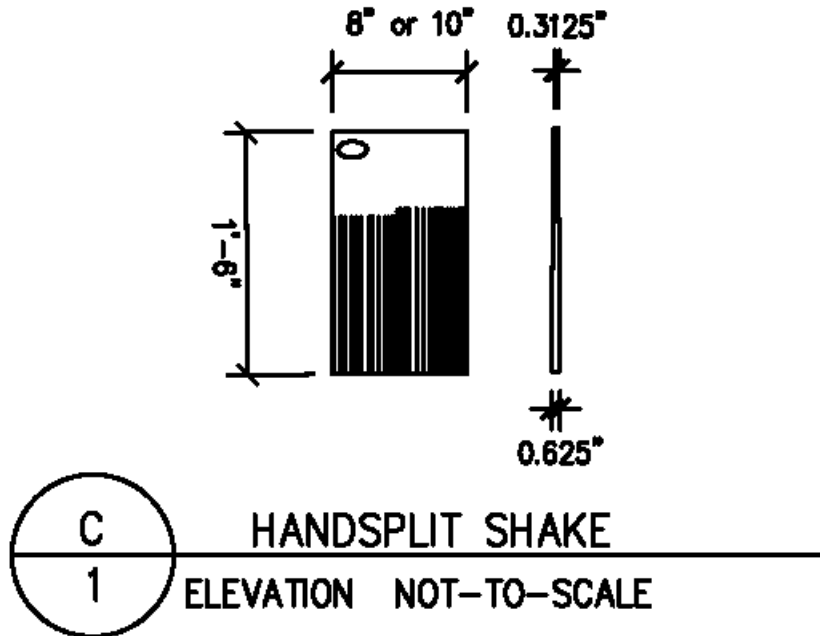


Figure 2. DaVinci Hand-split Shake Product Drawings



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10.0 SUPPLEMENTAL CODES

10.1.1 2022 California Building Code (CBC)

DaVinci Hand-split Shake as detailed in Sections 2.0 through 9.0 of CERus-1050 comply with Section 1403.12 of the 2022 California Building Code and Section R703.14 of the California Residential Code. The noted product complies as exterior cladding when installed with the applicable building codes and this report.

Where used in areas identified by the state as a *Fire Hazard Severity Zone* or any *Wildland-Urban Interface* (WUI) designed by the enforcing agency, DaVinci Hand-split Shake complies as an *exterior wall assembly* in accordance with Section 707A.4 of the 2022 CBC for resisting building ignition against the intrusion of flames resulting from small ember and short-term direct flame contact exposure, based on evaluation to ASTM E2707 for 10-minute direct flame contact exposure when the exterior walls are constructed with the following:

Table 2. DaVinci Hand-Split Shake Exterior Wall Resisting Building Ignition Evaluated per ASTM E2707

EXTERIOR WALL COVERING:	DaVinci Hand-split Shake installed in accordance with this report, fastened direct to sheathing.
WATER-RESISTIVE BARRIER:	One (1) layer of ASTM D226 Type I, installed with appropriate laps and corrosion resistant fasteners in accordance with the applicable code.
SHEATHING:	Minimum ½" (13 mm) fire-retardant treated wood (FRTW) structural panels, complying with Section 2303.2 of the 2024 IBC and / or 2303.2 of the 2022 CBC installed in accordance with the applicable code and the FRTW recommended fastening instructions.
FRAMING, INSULATION, INTERIOR FINISH:	Framing, insulation and interior finish are to comply with the applicable codes.

11.0 ELIGIBILITY OF REPORT

QAI's Code Evaluation Report complies with the 2024 Section 104.2.3 and 2021 / 2018 / 2015 IBC Section 104.11 *Alternative materials, design and methods of construction and equipment* subsection 104.11.1 *Research Reports*. QAI's Code Evaluation Report complies with the 2024 IBC Section 104.2.3.6.1 *Evaluation Reports*. Supporting data has been evaluated by QAI for compliance of the noted materials and assemblies to the applicable code by QAI, and *approved* source as detailed below.

Per section 1703 of the IBC, QAI is an independent third-party testing, inspection and certification agency accredited by the International Accreditation Service, Inc. (IAS) for this specific scope (see IAS PCA-118). QAI can confirm that based on its IAS accreditation it meets IBC Section 1703.1 on Independence, Section 1703.1.2 on Equipment and Section 1703.1 on Personnel.

This Evaluation report has been designed to meet the performance requirements of IBC Section 1703.4 and contains the required information to show the product, material or assembly meets the applicable code requirements.

The product is labeled per section IBC 1703 and subject to follow-up inspection per IBC 1703.6 using QAI IAS accredited ISO/IEC 17020 inspection program (see IAS AA-723).

For more information regarding QAI Laboratories, please visit www.qai.org.



The above is an example of the QAI registered Listing mark. The Listing mark may only be used by the Report Holder per the QAI service agreement on products defined in this report. The 'us' indicator in the 4 o'clock position indicates the product complies with the properties evaluated with limitations outlined in this report for use in the US market. A 'c' indicator in the 8 o'clock position indicates the product has been evaluated for use in the Canadian market.

12.0 REFERENCED STANDARDS

ASTM D7254 *Standard Specification for Polypropylene (PP) Siding*.

ASTM E84 *Standard Test Method for Surface Burning Characteristics of Building Materials*.