

# **ICC-ES Evaluation Report**

#### **ESR-1133**

Reissued November 2023

This report also contains:

- CBC Supplement

Subject to renewal November 2024

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DIVISION: 07 00 00 — THERMAL AND MOISTURE PROTECTION

Section: 07 46 33 — Plastic Siding

REPORT HOLDER: GENTEK BUILDING PRODUCTS, INC. EVALUATION SUBJECT: GENTEK AND REVERE VINYL SIDINGS AND SOFFITS



# 1.0 EVALUATION SCOPE

## 1.1 Compliance with the following codes:

- 2015, 2012, 2009 and 2006 *International Building Code®* (IBC)
- 2015, 2012, 2009 and 2006 International Residential Code® (IRC)
- 2013 Abu Dhabi International Building Code (ADIBC)†

<sup>†</sup>The ADIBC is based on the 2009 IBC. 2009 IBC code sections referenced in this report are the same sections in the ADIBC.

## Properties evaluated:

- Durability
- Exterior veneer
- Wind resistance
- Fire-resistance-rated construction

## 1.2 Evaluation to the following green code(s) and/or standards:

- 2022 and 2019 California Green Building Standards Code (CALGreen), Title 24, Part 11
- 2020, 2015, 2012 and 2008 ICC 700 *National Green Building Standard*<sup>™</sup> (ICC 700-2020, ICC 700-2015, ICC 700-2012, and ICC 700-2008)

## Attributes verified:

See Section 3.0

## **2.0 USES**

The Gentek and Revere Vinyl Sidings are used as exterior wall coverings over an approved sheathing capable of supporting the imposed loads, including but not limited to positive transverse wind load; and as closure materials on the underside of exterior roof eaves (soffits).

# 3.0 DESCRIPTION

The Gentek and Revere Vinyl Sidings are extruded from polyvinyl chloride (PVC) resins and conform to the requirements of ASTM D 3679. The panels are available in various colors, and with a smooth finish or embossed with a matte or wood grain texture. The soffit panels are produced in solid and vented versions. The

sidings are produced with a minimum nominal thickness of 0.040 inch (1.0 mm), and the soffits are produced with a minimum nominal thickness of 0.040 inch (1.0 mm). Refer to <u>Tables 1</u> and <u>2</u> of this report for the siding profiles and related descriptive information. Accessory materials such as corners, starter strips, J-channels and trim are manufactured of the same materials as the sidings.

The attributes of the siding panels have been verified as conforming to the provisions of (i) CALGreen Sections A4.405.1.3 (prefinished materials) and A5.406.1.2 (reduced maintenance); (ii) ICC 700-2020 Sections 601.7 and 11.601.7; (iii)ICC 700-2015 and ICC 700-2012 Sections 601.7, 11.601.7, and 12.1(A).601.7 (site-applied finishing materials); and (iv) ICC 700-2008 Section 601.7 (site-applied finishing materials). Note that decisions on compliance for those areas rest with the user of this report. The user is advised of the project-specific provisions that may be contingent upon meeting specific conditions, and the verification of those conditions is outside the scope of this report. The code may provide supplemental information as guidance.

## 4.0 DESIGN AND INSTALLATION

### 4.1 General:

Installation of Gentek and Revere vinyl sidings, including accessory items, must be in accordance with ASTM D4756, Section 1405.14.1 of the 2015, 2012 and 2009 IBC, Section 1405.13.1 of the 2006 IBC, Section R703.3.3 of the 2015 IRC, Section R703.4 of the 2012, 2009 and 2006 IRC, the manufacturer's installation instructions, and this report.

The siding shall be installed over solid sheathing with an approved water-resistive barrier. To maintain the weather tightness of the assembly, flashing in accordance with the applicable code shall be installed at all openings and through-penetrations, abutment with dissimilar materials, and terminations of the siding and soffits.

The siding shall be installed over minimum  $^{7}/_{16}$ -inch-thick (11.1 mm) oriented strand board complying with Product Standard PS2, or minimum  $^{1}/_{2}$ -inch-thick (12.7 mm) plywood sheathing complying with Product Standard PS1, attached to the framing a maximum of 16 inches (406 mm) on center and covered with a water-resistive barrier as required by code. Fasteners shall be spaced a maximum of 16 inches (406 mm) on center for horizontal siding, a maximum of 12 inches (305 mm) on center for vertical siding panels and a maximum of 10 inches (254 mm) on center for the accessories. The fasteners shall be long enough to penetrate through the sheathing and into the wood studs a minimum of 1 inch (25.4 mm). Allowance shall be made for expansion and contraction by leaving a  $^{1}/_{4}$ -inch (6.4 mm) gap between the siding and all vertical accessory members at wall ends and around openings.

Accessory materials shall be installed in accordance with the manufacturer's published installation instructions.

#### 4.2 Fasteners:

Aluminum, galvanized steel, or other corrosion-resistant nails shall be used. Nail heads shall be a minimum of  $^{5}/_{16}$  inch in diameter (7.9 mm) with a  $^{1}/_{8}$ -inch-diameter (3.2 mm) shank. Minimum nail lengths are  $1^{1}/_{2}$  inches (38 mm), except that there shall be a minimum length of 1 inch (25.4 mm) for trim.

### 4.3 One-hour Nonload-bearing Fire-resistance-rated Assembly:

The following assembly shall be used with a fire separation distance of greater than 5 feet (1.5 m) in jurisdictions adopting the IBC and 3 feet (914 mm) in jurisdictions adopting the IRC.

- **4.3.1 Vinyl Siding:** 0.040-inch-thick (1.02 mm), 5-inch (127 mm) shiplap pattern.
- **4.3.2 Wood Framing:** Nominal 2-by-4-inch (51 mm by 102 mm) Douglas fir–larch, select structural.
- **4.3.3 Exterior Sheathing:** <sup>5</sup>/<sub>8</sub>-inch-thick (15.9 mm), Type X, water-resistant core gypsum sheathing complying with ASTM C 79.
- **4.3.4 Water-resistant Barrier:** Type 15 asphalt felt complying with ASTM D 226.
- **4.3.5** Interior Finish: <sup>5</sup>/<sub>8</sub>-inch-thick (15.9 mm), Type X gypsum board complying with ASTM C 36.

#### 4.3.6 Fasteners:

- 16d common nails for wood framing.
- 1<sup>7</sup>/<sub>8</sub>-inch-long (48 mm), 0.092-inch-diameter-shank (2.34 mm), <sup>9</sup>/<sub>32</sub>-inch-diameter-head (7.1 mm), etched, drywall nails for attachment of gypsum board to framing.

- 0.060-inch-thick (15.2 mm), 1-inch-leg-by-5/8-inch-crown (25.4 by 15.9 mm) staples for the water-resistive barrier
- 1<sup>3</sup>/<sub>4</sub>-inch-long (44 mm) aluminum siding nails with rubber grommet for attachment of the vinyl siding.
- **4.3.7 Joints:** Ready-mixed joint compound and paper reinforcing tape.
- **4.3.8 Installation:** Wood studs shall be spaced at 16 inches (406 mm) on center. One layer of gypsum board, 48 inches (1219 mm) wide, shall be applied vertically to both faces of the studs and secured with 6d nails at 7 inches (178 mm) on center along all studs. The gypsum board joints require treatment consisting of drywall compound and drywall tape. The nail heads require treatment with drywall compound. A water-resistive barrier shall be attached horizontally to the gypsum sheathing, with staples 18 inches (457 mm) on center and a minimum of 4 inches (102 mm) of overlap at the joints. The vinyl siding shall be installed over the water-resistive barrier and secured with aluminum siding nails with rubber grommets at each stud location. The assembly as described achieves a fire-resistance rating of one hour when exposed to fire from the exterior side.

#### 4.4 Wind Resistance:

- **4.4.1 General**: The design wind pressures for the Gentek and Revere Vinyl Sidings products determined in accordance with Chapter 16 of the IBC or Section R301.2.1.1 of the IRC, as applicable, must not exceed the allowable wind pressures described in Section 4.4.2 or 4.4.3, as applicable.
- **4.4.2 IBC**: For buildings constructed under the requirements of the IBC, vinyl siding must be installed as described in 2015, 2012, and 2009 IBC Section 1405.14 (2006 IBC Section 1405.13) and Section 4.1 of this report, over sheathings or materials addressed in IBC Section 2304.6 that are capable of independently resisting both positive and negative wind pressures occurring under design conditions at the building location. The allowable negative wind loads for the vinyl siding are as shown in <u>Table 3</u>; the sheathing must be capable of withstanding the indicated negative load, or greater. Positive wind pressures are not considered for the siding, since the sheathing must be capable of supporting the imposed loads, including but not limited to positive and negative transverse wind pressures.
- **4.4.3 IRC**: The siding must be installed as described in Section 4.1, and either Section 4.4.3.1 or 4.4.3.2.

## 4.4.3.1 Installation over Sheathings Other Than Foam Plastics:

- **4.4.3.1.1** For the 2015 IRC, when installed over sheathing other than foam plastics sheathing, in applications where the building's mean roof height and ultimate wind speed [Figure R301.2(4)A] are in accordance with Table R703.3.1, sheathing must be as required by Table R703.3(1) of the IRC. Should any of these conditions not be met, installation must be in accordance with Section 4.4.3.1.3 of this report.
- **4.4.3.1.2** For the 2012, 2009 and 2006 IRC, when installed over sheathings other than foam plastic sheathing, where the building height is 30 feet (9.1 m) or less and the basic wind speed [Figure R301.2(4)A] is less than 110 mph (49 m/s) in Exposure B, 90 mph (40 m/s) or less in Exposure C or 85 mph (37 m/s) or less in Exposure D, sheathing (other than foam plastic) must comply with Table R703.4. Should any of these conditions not be met, installation must be in accordance Section 4.4.3.1.3 of this report.
- **4.4.3.1.3** Vinyl siding must be installed over sheathing as required by Table R703.3(1) of the 2015 IRC, or Table R703.4 of the 2012, 2009 and 2006 IRC that is capable of independently resisting both positive and negative wind pressures occurring under design conditions at the building location. The allowable negative wind loads for the vinyl siding are as shown in <u>Table 1</u>; the sheathing must be capable of withstanding the indicated negative load, or greater. Positive wind pressures are not considered for the siding, since the sheathing must be capable of supporting the imposed loads, including but not limited to, positive and negative transverse wind pressures.
- **4.4.3.2 Installation over Foam Plastic Sheathing:** When installed over foam plastic sheathing, siding profiles must be installed in accordance with Section R704.11.2 of the 2015, 2012, and 2009 IRC.

# **5.0 CONDITIONS OF USE:**

The Gentek and Revere Vinyl Sidings described in this report comply with those codes listed in Section 1.0 of this report, subject to the following conditions:

5.1 Installation must comply with this report, the manufacturer's published installation instructions, the applicable code, and this report. Where the published instructions conflict with this report, this report shall govern.

- **5.2** For installation on buildings of other than Type V (IBC) construction, Gentek and Revere Vinyl Sidings shall have a minimum fire separation distance of 15 feet (4.6 m).
- **5.3** The exterior walls shall be braced or sheathed to resist racking loads with approved materials in accordance with the requirements of the applicable code.
- 5.4 The siding must be installed only on exterior walls over solid sheathing capable of resisting design wind pressures both positive and negative. The sheathing must be covered with a water-resistive barrier, as required by the applicable code.
- **5.5** The siding is manufactured in Burlington, Ontario, Canada, under a quality control program with inspections by ICC-ES.

## **6.0 EVIDENCE SUBMITTED**

- **6.1** Manufacturer's published installation instructions.
- **6.2** Data in accordance with the ICC-ES Acceptance Criteria for Vinyl Sidings (AC37), dated February 2014, (editorially revised July 2015).
- 6.3 Report of tests in accordance with ASTM E119.
- **6.4** A quality control manual.

## 7.0 IDENTIFICATION

- **7.1** Each carton of the Gentek and Revere Vinyl Siding and Soffit products described in this report is identified by a stamp bearing the Gentek Building Products, Inc., name and/or trademark, the product type, the statements "Conforms to ASTM Specification D3679" and the evaluation report number (ESR-1133).
- **7.2** The report holder's contact information is the following:

GENTEK BUILDING PRODUCTS, INC. 3773 STATE ROAD CUYAHOGA FALLS, OHIO 44223 (330) 922-2389 www.gentek.ca

# TABLE 1—GENTEK AND REVERE VINYL SIDING AND SOFFIT

PRODUCT NAME	PRODUCT DESIGNATION	NOMINAL THICKNESS (in.)	LENGTH (in.)	EXPOSURE (in.)
Gentek – Advantage III Revere – Sommerville	Triple 3 inch	0.042	145	9
	Double 4 inch	0.042	150	8
Gentek – Concord	Double 4 inch Dutch lap	0.042	150	8
Revere – Amherst	Double 5 inch	0.042	144	10
	Double 5 inch Dutch lap	0.042	144	10
	Double 4 inch	0.044	150	8
	Double 4 inch Dutch lap	0.044	150	8
Gentek – Signature Supreme Revere – Fair Oaks	Double 5 inch	0.044	144	10
Revere – Fair Oaks	Double 5 inch Dutch lap	0.044	144	10
	Single 8 inch	0.044	150	8
	Double 4 inch	0.046	150	8
	Double 4.5 inch Dutch lap	0.046	145	9
Gentek – Sequoia Select	Double 5 inch	0.046	144	10
Revere – Sovereign Select	Double 5 inch Dutch lap	0.046	144	10
	7" Board and Batten	0.048	120	7
Gentek – America's Dream	Double 4.5 inch Dutch lap	0.046	145	9
	Double 4 inch	0.040	150	8
Revere – Driftwood	Double 4.5 inch Dutch lap	0.040	145	9
	Double 4 inch	0.040	150	8
Gentek – Aurora	Double 4 Dutch lap	0.040	150	8
	Double 4.5 inch Dutch lap	0.040	145	9
Gentek – Centennial	6.5 inch Beaded	0.044	148	6.5
Gentek – Berkshire	6.5 inch Beaded	0.042	148	6.5
Oxford	10 inch vertical	0.042,0.048	120	10
Fairweather	12 inch vertical	0.040	144	12
	Double 4 inch	0.044	150	8
Berkshire Classic	Double 4 inch Dutch lap	0.044	150	8
Berkshire Classic	Double 5 inch	0.044	144	10
		0.044	144	10
	Double 4 inch	0.046	150	8
Northern Forest Elite	Double 5 inch	0.046	144	10
	Double 5 inch Dutch lap7" Board and Batten	0.046 0.048	144 120	10 7
Gentek – Sequoia Revere – Sovereign	Vertical	0.044	144	12
Gentek – Driftwood II	Double 4 inch	0.040	150	8
Gentek – Aurora II	Double 4.5 inch Dutch lap	0.040	145	9

For **SI**: 1 inch = 25.4 mm.

## TABLE 2—GENTEK VINYL SOFFIT

PRODUCT NAME	PRODUCT DESIGNATION	NOMINAL THICKNESS (in.)	LENGTH (in.)	PANEL VENTING TYPE AND VENT AREA (SQ. IN./ LINEAR FOOT)		
PRODUCT NAME				EXPOSURE (in.)	CENTER VENT	FULL VENT
Fairweather	Triple 4 inch	0.040	144	12	1.9	5.8
Oxford	Double 5 inch	0.042, 0.048	120	10	_	5.3
Gentek – Sequoia Revere – Sovereign	Hidden Vent Soffit	0.044	144	12	_	2

For **SI**: 1 inch = 25.4 mm.

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# TABLE 3—ALLOWABLE DESIGN PRESSURES

SIDING <sup>1</sup>	NOMINAL THICKNESS (in.)	ALLOWABLE NEGATIVE WIND LOAD (psf)
Revere Driftwood Gentek Advantage III Revere – Sommerville	0.040	39.0
Gentek – Signature Supreme Revere – Fair Oaks	0.044	55.2
Fairweather	0.040	36.3
Gentek – Concord Revere – Amherst (rolled nail hem)	0.042	73.7
Gentek – Sequoia Select Revere – Sovereign Select (Double 4) (1 <sup>1</sup> / <sub>2</sub> " roofing nails)	0.046	105.0
Gentek – Sequoia Select Revere – Sovereign Select (Double 5, Double 5 Dutchlap, Double 4.5 Dutchlap) America's Dream (Double 4.5 Dutchlap) (11/2" roofing nails)	0.046	111.2
Gentek – Sequoia Select Revere – Sovereign Select (Double 4) (1 <sup>3</sup> / <sub>4</sub> " ring shank nails)	0.046	163.0
Gentek – Sequoia Select Revere – Sovereign Select (Double 5, Double 5 Dutchlap, Double 4.5 Dutchlap) (1 <sup>3</sup> / <sub>4</sub> " ring shank nails)	0.046	162.0
Berkshire Classic 8"	0.044	92.5
Berkshire Classic 10"	0.044	68
Gentek – Centennial (6.5" Beaded)	0.044	41.3
Gentek – Berkshire (6.5" Beaded)	0.042	41.7
Gentek – Sequoia Select Revere – Sovereign Select (7" Board and Batten)	0.048	50.0
Gentek – Sequoia Revere – Sovereign (Vertical)	0.044	49.4
Gentek – Driftwood II Gentek – Aurora II (Double 4 inch)	0.040	80.2
Gentek – Driftwood II Gentek – Aurora II (Double 4.5 inch Dutch lap)	0.040	68.0

For **SI**: 1 inch = 25.4 mm, 1 psf = 0.0479 kPa.

<sup>1</sup>Nail and fastener spacing for the siding attachment shall be in accordance with Section 4.1 of this report.



# **ICC-ES Evaluation Report**

# **ESR-1133 CBC and CRC Supplement**

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**DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION** 

Section: 07 46 33—Plastic Siding

**REPORT HOLDER:** 

**GENTEK BUILDING PRODUCTS, INC.** 

**EVALUATION SUBJECT:** 

**GENTEK AND REVERE VINYL SIDINGS AND SOFFITS** 

#### 1.0 REPORT PURPOSE AND SCOPE

#### **Purpose:**

The purpose of this evaluation report supplement is to indicate that Gentek and Revere vinyl sidings and soffits, described in ICC-ES evaluation report ESR-1133, have also been evaluated for compliance with the codes noted below.

#### Applicable code edition(s):

■ 2016 California Building Code (CBC)

For evaluation of applicable chapters adopted by the California Office of Statewide Health Planning and Development (OSHPD) and Division of State Architect (DSA), see section 2.1.1 and 2.1.2 below.

■ 2016 California Residential Code (CRC)

### 2.0 CONCLUSIONS

## 2.1 CBC:

Gentek and Revere vinyl sidings and soffits, described in Sections 2.0 through 7.0 of the evaluation report ESR-1133 comply with CBC Chapter 14, provided the design and installation are in accordance with the 2015 *International Building Code*® provisions noted in the evaluation report and the applicable provisions of the CBC.

#### 2.1.1 OSHPD:

The applicable OSHPD Sections of the CBC are beyond the scope of this supplement.

#### 2.1.2 DSA:

The applicable DSA Sections of the CBC are beyond the scope of this supplement.

#### 2.2 CRC:

Gentek and Revere vinyl sidings and soffits, described in Sections 2.0 through 7.0 of the evaluation report ESR-1133, comply with CRC Chapter 7, provided the design and installation are in accordance with the 2015 *International Residential Code*® provisions noted in the evaluation report and the applicable provisions of the CRC.

This supplement expires concurrently with the evaluation report, reissued November 2023.

