

**DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES**

**Section: 06 50 00—Structural Plastics**

**Section: 06 53 00—Plastic Decking**

**REPORT HOLDER:**

**SYLVANIX OUTDOOR PRODUCTS, INC.**

**EVALUATION SUBJECT:**

**SYLVANIX EMBELLISH TRADITIONAL, EMBELLISH ARCHITECTURAL, SKYLINE SERIES, ELITE COLLECTION AND ELITE ESSENTIALS SERIES COMPOSITE DECK BOARDS**

**1.0 EVALUATION SCOPE**

**1.1 Compliance with the following codes:**

- 2018, 2015, 2012 and 2009 *International Building Code*® (IBC)
- 2018, 2015, 2012 and 2009 *International Residential Code*® (IRC)
- 2013 *Abu Dhabi International Building Code* (ADIBC)†

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

For evaluation for compliance with codes adopted by the Los Angeles Department of Building and Safety (LADBS), see [ESR-3771 LABC and LARC Supplement](#).

**Properties evaluated:**

- Structural
- Durability
- Surface-burning Characteristics

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

- 2016 California Green Building Standards Code (CALGreen), Title 24, Part 11
- 2015, 2012 and 2008 ICC 700 *National Green Building Standard*™ (ICC 700-2015, ICC 700-2012 and ICC 700-2008)

**Attributes verified:**

- See Section 3.1

**2.0 USES**

The Sylvanix Embellish Traditional (Model HLSC-001A, Figure 1), Embellish Architectural (Model HLSC-010A, Figure 1), Skyline Series Grooved Edge (Model HLSC-019,

Figure 2), Skyline Series Square Edge (Model HLSC-024, Figure 3), and Elite Collection Grooved Edge (Model HLSC-020, Figure 4), Elite Essential Grooved Edge (Model HLSC-028, Figure 5) and Elite Essentials Square Edge (Model HLSC-030, Figure 6) composite deck boards, described in this evaluation report, are limited to exterior use as deck boards for balconies, porches, and decks. The deck boards can also be used as stair treads of buildings of Type V-B (IBC) construction and dwellings constructed in accordance with the IRC. Elite Collection Fascia (Model HLSC-021, Figure 7) and Elite Collection Riser (Model HLSC-022, Figure 8) composite boards are for use as nonstructural trim components for exterior balconies, porches and decks of Type V-B (IBC) construction, and in structures constructed in accordance with the IRC.

**3.0 DESCRIPTION**

**3.1 General:**

The Sylvanix Embellish Traditional, Embellish Architectural, Skyline Series Grooved Edge, Skyline Series Square Edge, Elite Collection Grooved Edge, Elite Essentials Series, Elite Collection Fascia, and Elite Collection Riser composite deck boards are manufactured composite products consisting of wooden powder, high-density polyethylene (HDPE) and other processing additives. The deck boards are manufactured by a co-extrusion process with an integrated shell heat-pressed onto the core of the deck boards in accordance with the approved quality-control manual. The Embellish Traditional, Skyline Series Square Edge, Elite Collection Fascia, and Elite Collection Riser composite deck boards are solid, while the Embellish Architectural, Skyline Series Grooved Edge and Elite Collection Grooved Edge composite deck boards are solid with grooves at board edges. The Elite Essentials Grooved Edge deck boards have a corrugated bottom surface and grooves at the board edges. The Elite Essentials Square Edge deck boards have a corrugated bottom surface and square edges. The composite deck boards have a wood grain texture finish and are available in Teak, Ipe, and Light Grey colors. See Figures 1 through 8 for typical cross-sections of deck board profiles.

The Embellish Traditional, Embellish Architectural, Skyline Series Grooved Edge, Skyline Series Square Edge, Elite Collection Grooved Edge and Elite Essentials Series composite deck boards are manufactured in nominally 1-inch-thick-by-5.25-inch-wide (25.4 by 135 mm) [actually 0.945 inch (24 mm) by 5.24 inches (133 mm)]. The Elite Collection Fascia composite boards are manufactured in nominally 3/4-inch-thick-by-11.25-inch-wide (actually 18 by 286 mm). The Elite Collection Riser composite boards are

manufactured in nominally  $\frac{3}{4}$ -inch-thick-by-7.25-inch-wide (actually 18 by 184 mm). The composite deck boards are manufactured in various lengths.

The attributes of the composite deck boards have been verified as conforming to the provisions of (i) CALGreen Section A5.406.1.2 for reduced maintenance; (ii) ICC 700-2015 and ICC 700-2012 Sections 602.1.6 and 11.602.1.6 for termite-resistant materials and Sections 601.7, 11.601.7, and 12.1(A).601.7 for site-applied finishing materials; and (iii) ICC 700-2008 Section 602.8 for termite-resistant materials and Section 601.7 for 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. These codes or standards often provide supplemental information as guidance. See Section 3.2 for limitations on termite-resistance use.

### 3.2 Durability:

When subjected to weathering, insect attack, and other decaying elements, the Sylvania composite deck boards are equivalent in durability to preservative-treated or naturally durable lumber when used in locations described in Section 2.0 of this report. The composite deck boards described in Sections 4.2 and 4.3 have been evaluated for structural capacity when exposed to temperatures from  $-20^{\circ}\text{F}$  ( $-29^{\circ}\text{C}$ ) to  $125^{\circ}\text{F}$  ( $52^{\circ}\text{C}$ ).

### 3.3 Surface-burning Characteristics:

When tested in accordance with ASTM E84, the Sylvania Embellish Traditional, Embellish Architectural, Skyline Series Grooved Edge, Skyline Series Square Edge, Elite Collection Grooved Edge, Elite Essentials Series, Elite Collection Fascia, and Elite Collection Riser composite deck boards have a flame spread index no greater than 200.

## 4.0 DESIGN AND INSTALLATION

### 4.1 General:

Installation of the Sylvania Embellish, Skyline Series, Elite Collection and Elite Essentials Series composite deck boards must comply with this report and the manufacturer's published installation instructions. The manufacturer's published installation instructions must be available at the jobsite at all times during installation. When the manufacturer's published installation instructions differ from this report, this report governs.

### 4.2 Design:

The Sylvania Embellish Traditional and Embellish Architectural, Skyline Series Grooved Edge, Skyline Series Square Edge, Elite Collection Grooved Edge, and Elite Essentials Series composite deck boards have an allowable live load capacity of 100 psf (4.79 MPa) when installed at a maximum center-to-center spacing of the supporting construction as prescribed in Table 1. The allowable fastener head pull-through load and allowable fastener withdrawal load of each No. 10-by- $2\frac{3}{4}$ -inch-long (69.8 mm) stainless steel deck screw, when installed with Sylvania solid—edged composite deck boards, are 235 lbf (1045 N) and 290 lbf (1300 N), respectively. Each Sylvania Pro Clip hidden fastener with one No. 8 by  $1\frac{5}{8}$ -inch-long (41.3 mm) stainless steel deck screw, when installed with Sylvania groove-edged deck boards has an allowable uplift rating of 150 psf (7180 Pa) for deck boards installed at a maximum span of 16 inches (406 mm).

### 4.3 Installation:

**4.3.1 Deck Boards:** The Sylvania Embellish Traditional, Skyline Series Square Edge and Elite Essentials

Square Edge composite deck boards must be installed perpendicular to each supporting joist with two No.10-by- $2\frac{3}{4}$ -inch-long (69.8 mm) stainless steel deck screws per board per support joist. The fasteners must be placed through the pre-drilled pilot holes into the supporting joists at a minimum distance of  $1\frac{1}{4}$  inch (31.8 mm) from the end of each board and  $\frac{3}{4}$  inch (19.1 mm) from edges of each board. Pilot holes are pre-drilled using No. 8 countersink drill tool for all fasteners. A minimum of  $\frac{1}{8}$ -inch (3.2 mm) gap must be left between ends of boards at butt joints and a minimum of  $\frac{1}{16}$ -inch (1.6 mm) gap must be left between the edges of boards. Multiple joists or blocking must be used to provide adequate surface for fastener embedment of board ends.

The Sylvania Embellish Architectural, Skyline Series Grooved Edge, Elite Collection Grooved Edge and Elite Essentials Grooved Edge composite deck boards must be installed perpendicular to the supporting joists with the proprietary hidden Pro Clip Fasteners (See Figure 9). A Pro Clip Fastener contains a T-shaped clip and a steel screw. One T-shaped clip must be fastened with one No. 8-by- $1\frac{3}{4}$ -inch-long (35 mm) stainless steel deck screw at each supporting joist along the length of the deck boards. Starter deck boards must be installed to the supporting joists with a minimum of two No.10-by- $2\frac{3}{4}$ -inch-long (69.8 mm) stainless steel deck screws per board per supporting joist. The fasteners must be placed through the pre-drilled pilot holes on the solid part of the starter deck boards into the supporting joists at a minimum distance of  $\frac{3}{4}$  inch (19.1 mm) from edges of the starter deck boards.

**4.3.2 Deck Boards Used as Stair Treads:** The Sylvania Embellish Traditional, Embellish Architectural, Skyline Series Grooved Edge, Skyline Series Square Edge, Elite Collection Grooved Edge, Elite Essentials Grooved Edge and Elite Essentials Square Edge composite deck boards, when used as a stair treads, are satisfactory to resist the code-prescribed concentrated load of 300 lbf (1.33 kN) when installed at a maximum center-to-center spacing of the supporting construction as shown in Table 2.

## 5.0 CONDITIONS OF USE

The Sylvania Embellish Traditional, Embellish Architectural, Skyline Series Grooved Edge, Skyline Series Square Edge, Elite Collection Grooved Edge, Elite Essentials Grooved Edge, Elite Essentials Square Edge, Elite Collection Fascia, and Elite Collection Riser composite deck boards described in this report comply with, or are a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

**5.1** The Sylvania Embellish Traditional, Embellish Architectural, Skyline Series Grooved Edge, Skyline Series Square Edge, Elite Collection Grooved Edge and Elite Essentials Series composite deck boards are limited to exterior use as deck boards for balconies, porches, decks and stair treads of Type V-B (IBC) construction and dwellings constructed in accordance with the IRC. The Sylvania Elite Collection Fascia and Elite Collection Riser composite boards are limited for use as nonstructural trim components for exterior balconies, porches and decks of Type V-B (IBC) construction, and in structures constructed in accordance with the IRC.

**5.2** Installation must comply with this report, the manufacturer's published installation instructions and the applicable code. Only those fasteners and fastener configurations described in this report have been evaluated for the installation of the Sylvania Embellish, Skyline Series, Elite Collection and Elite Essentials

Series composite deck boards. When the manufacturer’s published installation instructions differ from this report, this report governs.

- 5.3 The use of the composite deck boards as a component of a fire-resistance-rated assembly is outside the scope of this report.
- 5.4 The compatibility of the fasteners, metal post mount components and other metal hardware with the supporting structure, including chemically treated wood, is outside the scope of this report.
- 5.5 Adjustment factors outlined in the AWC or AF&PA *National Design Specification® (NDS) for Wood Construction*, as applicable, and applicable codes must not be applied to the allowable load capacity and maximum spans for the composite deck boards.
- 5.6 The Sylvanix Embellish Traditional, and Embellish Architectural, Skyline Series Grooved Edge, Skyline Series Square Edge, Elite Collection Grooved Edge and Elite Essentials Series composite deck boards must be directly fastened to supporting joists in accordance with Section 4.3.1 of this evaluation report. Where required by the code official, engineering calculations and construction documents consistent with this report must be submitted to the code official for approval. The engineering calculations must verify that the supporting structure complies with the applicable building code requirements and is adequate to resist the loads imparted upon it from the products and systems discussed in this report. The construction documents must contain details of the attachment to the supporting structure consistent with the requirements described in this report. The engineering calculations and construction documents must be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed.

5.7 The Sylvanix Embellish, Skyline Series, Elite Collection and Elite Essentials Series composite deck boards are produced in Ningbo, Zhejiang Province, China, under a quality-control program with inspections by ICC-ES.

**6.0 EVIDENCE SUBMITTED**

Data in accordance with the ICC-ES Acceptance Criteria for Deck Board Span Ratings and Guardrail Systems (Guards and Handrails) (AC174), dated January 2012 (editorially revised December 2019).

**7.0 IDENTIFICATION**

7.1 The Sylvanix Embellish, Skyline Series, Elite Collection and Elite Essentials Series composite deck boards described in this report are identified by a label on each individual piece, or on the packaging, bearing the manufacturer’s name (Sylvanix Outdoor Products, Inc.) and address, the product name (Sylvanix Embellish, Skyline Series Grooved Edge, Skyline Series Square Edge, Elite Collection Grooved Edge, Elite Essentials Grooved Edge, Elite Essentials Square Edge, Elite Collection Fascia or Elite Collection Riser deck boards), the span rating for use as a deck board and stair tread (for Embellish Traditional, Embellish Architectural, Skyline Series Grooved Edge, Skyline Series Square Edge, Elite Collection Grooved Edge, Elite Essentials Grooved Edge and Elite Essentials Square Edge composite deck boards only), as applicable, and the ICC-ES evaluation report number (ESR-3771).

7.2 The report holder’s contact information is the following:

**SYLVANIX OUTDOOR PRODUCTS, INC.**  
**195 US HIGHWAY 9, SUITE 205**  
**MANALAPAN, NEW JERSEY 07726**  
**(206) 501-4083**  
[www.sylvanixdecking.com](http://www.sylvanixdecking.com)

**TABLE 1—DECK BOARD SPAN RATINGS**

<b>PRODUCT NAME</b>	<b>MAXIMUM SPAN (inches)<sup>1</sup></b>	<b>ALLOWABLE LIVE LOAD CAPACITY (lbf/ft<sup>2</sup>)<sup>2</sup></b>
Embellish Traditional	16	100
Embellish Architectural	16	100
Skyline Series Grooved Edge	16	100
Skyline Series Square Edge	16	100
Elite Collection Grooved Edge	16	100
Elite Essentials Grooved Edge	16	100
Elite Essentials Square Edge	16	100

For SI: 1 inch = 25.4 mm; 1 lbf/ft<sup>2</sup> = 47.9 Pa.

<sup>1</sup>Maximum span is measured center-to-center of the supporting construction.

<sup>2</sup>Maximum allowable capacity has been adjusted for durability. No further increases are permitted.

TABLE 2—MAXIMUM STAIR TREAD SPANS<sup>1,2</sup>

PRODUCT NAME	MAXIMUM SPAN (inches)
Embellish Traditional	11
Embellish Architectural	11
Skyline Series Grooved Edge	11
Skyline Series Square Edge	11
Elite Collection Grooved Edge	11
Elite Essentials Grooved Edge	11
Elite Essentials Square Edge	11

For SI: 1 inch = 25.4 mm.

<sup>1</sup>Maximum span is measured center-to-center of the supporting construction.

<sup>2</sup>Based on a single-span installation.

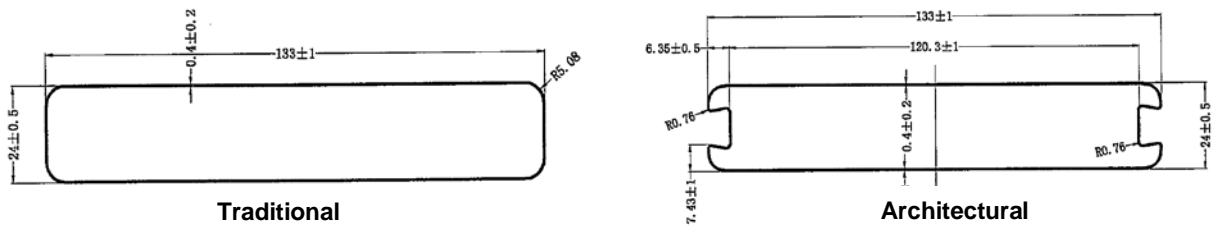


FIGURE 1—SYLVANIX EMBELLISH DECK BOARD PROFILES

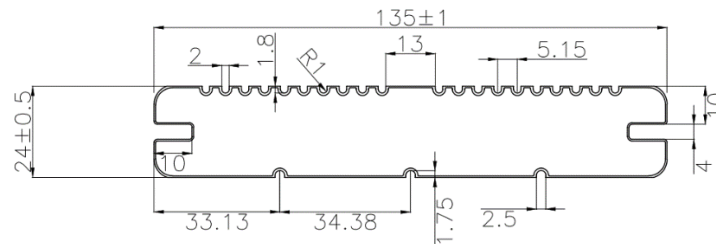


FIGURE 2—SYLVANIX SKYLINE SERIES GROOVED EDGE DECK BOARD PROFILE

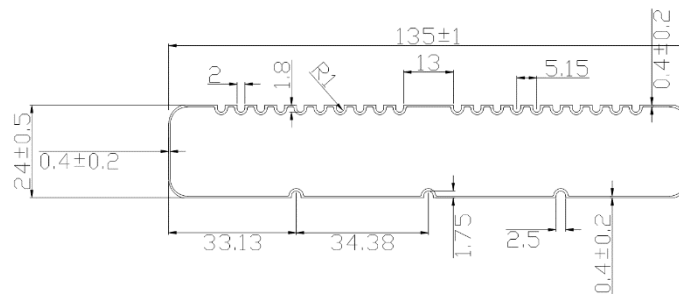


FIGURE 3—SYLVANIX SKYLINE SERIES SQUARE EDGE DECK BOARD PROFILE

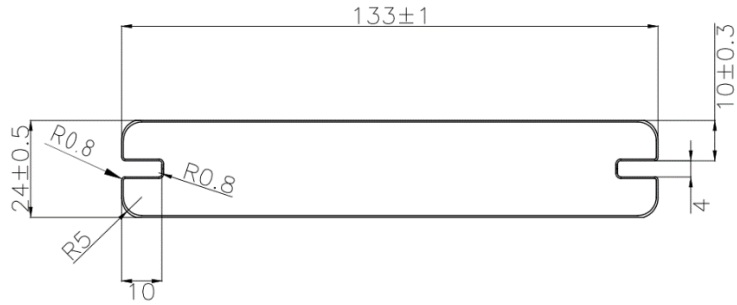


FIGURE 4—SYLVANIX ELITE COLLECTION GROOVED EDGE DECK BOARD PROFILE

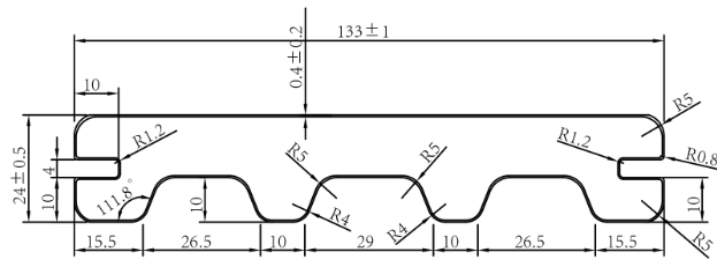


FIGURE 5—SYLVANIX ELITE ESSENTIALS GROOVED EDGE DECK BOARD PROFILE

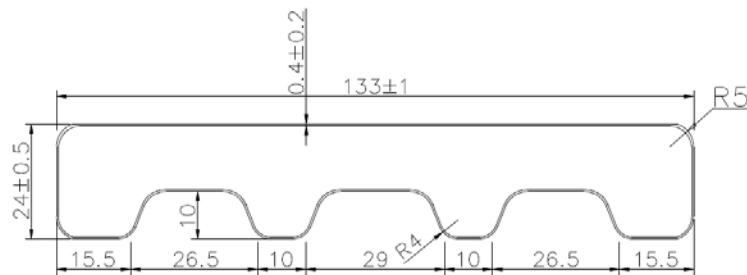


FIGURE 6—SYLVANIX ELITE ESSENTIALS SQUARE EDGE DECK BOARD PROFILE

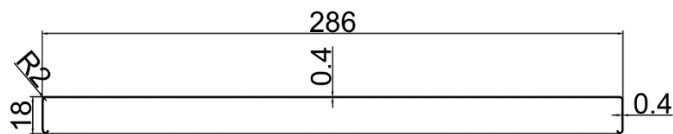


FIGURE 7—SYLVANIX ELITE COLLECTION FASCIA BOARD PROFILE

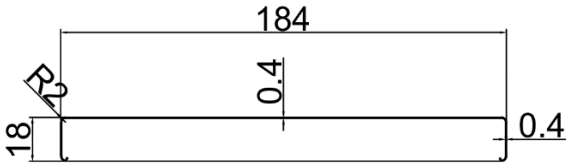


FIGURE 8—SYLVANIX ELITE COLLECTION RISER BOARD PROFILE

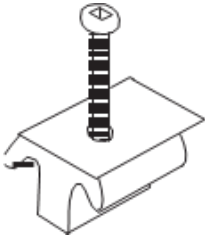


FIGURE 9— SYLVANIX PRO CLIP HIDDEN FASTENER

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**SYLVANIX EMBELLISH TRADITIONAL, EMBELLISH ARCHITECTURAL, SKYLINE SERIES, ELITE COLLECTION AND ELITE ESSENTIALS SERIES COMPOSITE DECK BOARDS**

## 1.0 REPORT PURPOSE AND SCOPE

**Purpose:**

The purpose of this evaluation report supplement is to indicate that the Sylvanix Embellish Traditional, Embellish Architectural, Skyline Series, Elite Collection and Elite Essentials Series Composite Deck Boards, described in ICC-ES evaluation report [ESR-3771](#), have also been evaluated for compliance with the codes noted below as adopted by the Los Angeles Department of Building and Safety (LADBS).

**Applicable code editions:**

- 2020 *City of Los Angeles Building Code* (LABC)
- 2020 *City of Los Angeles Residential Code* (LARC)

## 2.0 CONCLUSIONS

The Sylvanix Embellish Traditional, Embellish Architectural, Skyline Series, Elite Collection and Elite Essentials Series Composite Deck Boards, described in Sections 2.0 through 7.0 of the evaluation report [ESR-3771](#), comply with the LABC Chapter 14, and the LARC, and are subject to the conditions of use described in this supplement.

## 3.0 CONDITIONS OF USE

The Sylvanix Embellish Traditional, Embellish Architectural, Skyline Series, Elite Collection and Elite Essentials Series Composite Deck Boards described in this evaluation report supplement must comply with all of the following conditions:

- All applicable sections in the evaluation report [ESR-3771](#).
- The design, installation, conditions of use and identification of the Sylvanix Embellish Traditional, Embellish Architectural, Skyline Series, Elite Collection and Elite Essentials Series Composite Deck Boards are in accordance with the 2018 *International Building Code*® (IBC) provisions noted in the evaluation report [ESR-3771](#).
- The design and installation are in accordance with the additional requirements of LABC Chapter 14.
- Under the LARC, an engineered design in accordance with LARC Section R301.1.3 must be submitted.
- The Sylvanix Embellish Traditional, Embellish Architectural, Skyline Series, Elite Collection and Elite Essentials Series Composite Deck Boards have not been evaluated under LABC Chapter 7A or LARC Section R337 for use in the exterior design and construction of new buildings located in any Fire Hazard Severity Zone with a State Responsibility Area or any Wildland-Urban Interface Fire Area.

This supplement expires concurrently with the evaluation report, reissued November 2019 and revised April 2020.

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## 1.0 REPORT PURPOSE AND SCOPE

**Purpose:**

The purpose of this evaluation report supplement is to indicate that Sylvanix Embellish Traditional, Embellish Architectural, Skyline Series, Elite Collection and Elite Essentials Series composite deck boards, recognized in ICC-ES evaluation report ESR-3771, have also been evaluated for compliance with the codes noted below.

**Applicable code editions:**

- 2019 *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 Sections 2.1.1 and 2.1.2 below.

- 2019 *California Residential Code* (CRC)

## 2.0 CONCLUSIONS

### 2.1 CBC:

The Sylvanix Embellish Traditional, Embellish Architectural, Skyline Series, Elite Collection and Elite Essentials Series composite deck boards, described in Sections 2.0 through 7.0 of the evaluation report ESR-3771, comply with the CBC Chapter 14, provided the design and installation are in accordance with the 2018 *International Building Code*® (IBC) provisions noted in the evaluation report.

The products have not been evaluated under Chapter 7A for use in the exterior design and construction of new buildings located in a Fire Hazard Severity Zone within State Responsibility Areas or any Wildland–Urban Interface Fire Area.

#### 2.1.1 OSHPD:

OSHPD requirements as indicated in the CBC are beyond the scope of this supplement.

#### 2.1.2 DSA:

DSA requirements as indicated in the CBC are beyond the scope of this supplement.

### 2.2 CRC:

The Sylvanix Embellish Traditional, Embellish Architectural, Skyline Series, Elite Collection and Elite Essentials Series composite deck boards, described in Sections 2.0 through 7.0 of the evaluation report ESR-3771, comply with CRC Chapter 3 and Section R507, provided the design and installation are in accordance with the 2018 *International Residential Code*® (IRC) provisions noted in the evaluation report.

The products have not been evaluated under CRC Section R337 for use in the exterior design and construction of new buildings located in a Fire Hazard Severity Zone within State Responsibility Areas or any Wildland–Urban Interface Fire Area.

The products recognized in this supplement have not been evaluated for compliance with the *International Wildland–Urban Interface Code*®.

This supplement expires concurrently with the evaluation report, reissued November 2019 and revised April 2020.



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The purpose of this evaluation report supplement is to indicate that the Sylvanix Embellish Traditional, Embellish Architectural, Skyline Series, Elite Collection and Elite Essentials Series composite deck boards recognized in ICC-ES evaluation report ESR-3771 have also been evaluated for compliance with the codes noted below.

**Applicable code editions:**

- 2017 *Florida Building Code—Building*
- 2017 *Florida Building Code—Residential*

**2.0 CONCLUSIONS**

The Sylvanix Embellish Traditional, Embellish Architectural, Skyline Series, Elite Collection and Elite Essentials Series composite deck boards described in Sections 2.0 through 7.0 of ICC-ES evaluation report ESR-3771 comply with the *Florida Building Code—Building* and the *Florida Building Code—Residential*, provided the design requirements are determined in accordance with the *Florida Building Code—Building* and the *Florida Building Code—Residential*, as applicable. The installation requirements noted in the ICC-ES evaluation report ESR-3771 for the 2015 *International Building Code*® meet the requirements of the *Florida Building Code—Building* and the *Florida Building Code—Residential*, as applicable.

Use of the Sylvanix Embellish Traditional, Embellish Architectural, Skyline Series, Elite Collection and Elite Essentials Series composite deck boards for compliance with the High-Velocity Hurricane Zone provisions of the *Florida Building Code—Building* and the *Florida Building Code—Residential* has not been evaluated and is outside the scope of this evaluation report.

For products falling under Florida Rule 61G20-3, verification that the report holder's quality-assurance program is audited by a quality-assurance entity approved by the Florida Building Commission for the type of inspections being conducted is the responsibility of an approved validation entity (or the code official, when the report holder does not possess an approval by the Commission).

This supplement expires concurrently with the evaluation report, reissued November 2019 and revised April 2020.