

# ICC-ES Evaluation Report

**ESR-4712**

Reissued January 2024


This report also contains:

- CBC

Subject to renewal January 2026

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<p><b>DIVISION: 07 00 00— THERMAL AND MOISTURE PROTECTION</b></p> <p><b>Section: 07 46 00— Siding</b></p>	<p><b>REPORT HOLDER:</b> <b>BERRIDGE MANUFACTURING COMPANY</b></p>	<p><b>EVALUATION SUBJECT:</b> <b>BERRIDGE DEEP DECK, S-DECK, FW-12, FW- 1025, HR-16, HC-16, HS- 12, HS-8, BR-12</b></p>	
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## 1.0 EVALUATION SCOPE

**Compliance with the following codes:**

- 2021, 2018, 2015, 2012, 2009, and 2006 [International Building Code® \(IBC\)](#)

**Property evaluated:**

- Transverse wind load
- Structural

## 2.0 USES

The Berridge Deep Deck, S-Deck, FW-12, FW-1025, HR-16, HC-16, HS-12, HS-8 and BR-12 steel wall panels are used as exterior wall coverings on exterior walls on buildings of all types of construction. The Berridge Deep Deck, S-Deck, FW-12, FW-1025, HR-16, HC-16, HS-12, HS-8 and BR-12 aluminum wall panels are used as exterior coverings on exterior walls of Type V construction.

## 3.0 DESCRIPTION

### 3.1 General:

The Berridge wall panels are cold formed from steel or aluminum conforming to the product specifications noted in [Table 1](#). See [Figures 1](#) through [10](#) for panel profile dimensions.

### 3.2 Fasteners:

The fasteners used to attach the metal wall panels must be corrosion resistant screws as described in [Table 2](#).

## 4.0 DESIGN AND INSTALLATION

### 4.1 Wind Resistance:

The design wind pressures must be determined in accordance with the requirements of Chapter 16 of the IBC and must not exceed the allowable wind pressures in [Table 2](#).

### 4.2 Installation:

Installation of the Berridge wall panels must be in accordance with this report, IBC Section 1404.11 (2015, 2012 and 2009 IBC Section 1405.11 and 2006 IBC Section 1405.10) and the manufacturer's published

installation instructions. The manufacturer's installation instructions must be available at the jobsite at all times during installation.

## 5.0 CONDITIONS OF USE:

The Berridge wall panels 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 Installation must comply with the applicable code, this report and the manufacturer's published installation instructions. In the event of conflict between this report and the manufacturer's instructions, this report governs.
- 5.2 Design wind pressures must not exceed the allowable wind pressures listed in [Table 2](#).
- 5.3 The allowable wind pressures listed in [Table 2](#) are for the wall panels only. The supporting framing to which the wall panels are attached must be designed to resist the applicable components and cladding wind loads in accordance with the IBC.
- 5.4 Calculations demonstrating that the required wind resistance is less than the allowable wind resistance must be submitted to the code official.
- 5.5 The wall panels are manufactured under an approved quality control program with inspections by ICC-ES

## 6.0 EVIDENCE SUBMITTED

- 6.1 Manufacturer's descriptive literature and installation instructions.
- 6.2 Engineering calculations by a registered design professional.
- 6.3 Data in accordance with ASTM E1592.
- 6.4 Quality documentation in accordance with the [ICC-ES Acceptance Criteria for Quality Documentation \(AC10\)](#).

## 7.0 IDENTIFICATION

- 7.1 The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-4712) along with the name (Berridge Manufacturing Company), registered trademark, or registered logo of the report holder must be included in the product label.
- 7.2 In addition, the panels are identified with a label bearing the product name, the material type and gauge or thickness, and the manufacturer's address.
- 7.3 The report holder's contact information is the following:

**BERRIDGE MANUFACTURING COMPANY**  
**2610 HARRY WURZBACH ROAD**  
**SAN ANTONIO, TEXAS 78209**  
**(210) 650-3050**  
[www.berridge.com](http://www.berridge.com)  
[technical@berridge.com](mailto:technical@berridge.com)

TABLE 1—BERRIDGE MANUFACTURING COMPANY METAL WALL PANEL SPECIFICATIONS

PANEL	MATERIAL			MIN. BASE METAL THICKNESS (inch)
	Specification	Classification	Coating	
HR-16	ASTM A792	SS Grade 40	AZ50	0.023 (24 gauge) 0.029 (22 gauge)
	ASTM B209	3105-H14	N/A	0.032
S-Deck (32" coverage)	ASTM A792	SS Grade 40	AZ50	0.023 (24 gauge) 0.029 (22 gauge)
S-Deck (34 2/3" coverage)	ASTM B209	3105-H14	N/A	0.032 0.040
HC-16, HS-12, HS-8, FW-12, FW-1025, Deep Deck	ASTM A792	SS Grade 40	AZ50	0.023 (24 gauge) 0.029 (22 gauge)
	ASTM B209	3105-H14	N/A	0.032 0.040
BR-12	ASTM A792	SS Grade 40	AZ50	0.023 (24 gauge)
	ASTM B209	3105-H14	NA	0.032 0.040

For SI: 1 inch = 25.4 mm.

TABLE 2—ALLOWABLE WIND PRESSURES FOR PANELS OVER SPACED SUPPORTS

Assembly No.	PANEL	SUPPORT <sup>1,2</sup>	FASTENING PATTERN <sup>3</sup>	SPAN <sup>4</sup> (inch)	ALLOWABLE NEGATIVE PRESSURE (psf)	ALLOWABLE POSITIVE PRESSURE (psf)
1	HC-16 (24-gauge steel, 16" width)	Steel Spaced Supports	Two (2) #12-14 x 1 1/4" long HWH screws with 5/8" diameter washer at panel fastening leg at all supports.	60	47	36
				24	104	104
2	HC-16 (22-gauge steel, 16" width)	Steel Spaced Supports	Two (2) #12-14 x 1 1/4" long HWH screws with 5/8" diameter washer at panel fastening leg at all supports.	60	62	36
3	HC-16 (0.032" aluminum, 16" width)	Steel Spaced Supports	Two (2) #12-14 x 1 1/4" long HWH screws with 5/8" diameter washer at panel fastening leg at all supports.	24	62	62
4	HC-16 (0.032" aluminum, 16" width)	Steel Spaced Supports	Three (3) #12-14 x 1 1/4" long HWH screws with 5/8" diameter washer at panel fastening leg at all supports.	48	34	33
				24	67	67
5	HC-16 (0.040" aluminum, 16" width)	Steel Spaced Supports	Three (3) #12-14 x 1 1/4" long HWH screws with 5/8" diameter washer at panel fastening leg at all supports.	48	57	33
				24	93	93

TABLE 2—ALLOWABLE WIND PRESSURES FOR PANELS OVER SPACED SUPPORTS (continued)

Assembly No.	PANEL	SUPPORT <sup>1,2</sup>	FASTENING PATTERN <sup>3</sup>	SPAN <sup>4</sup> (inch)	ALLOWABLE NEGATIVE PRESSURE (psf)	ALLOWABLE POSITIVE PRESSURE (psf)
6	HS-12 (24-gauge steel, 12" width) or HS-8 (24-gauge steel, 8" width)	Steel Spaced Supports	Two (2) #10-16 x 1" long pancake head screws at panel fastening leg at all supports.	60	44	20
				24	83	80
7	HS-12 (22-gauge steel, 12" width) or HS-8 (22-gauge steel, 8" width)	Steel Spaced Supports	Two (2) #10-16 x 1" long pancake head screws at panel fastening leg at all supports.	60	72	20
8	HS-12 (0.032" aluminum, 12" width) or HS-8 (0.032" aluminum, 8" width)	Steel Spaced Supports	Two (2) #12-14 x 1 1/4" long HWH screws with 5/8" diameter washer at panel fastening leg at all supports.	24	78	45
9	HS-12 (0.040" aluminum, 12" width) or HS-8 (0.040" aluminum, 8" width)	Steel Spaced Supports	Two (2) #12-14 x 1 1/4" long HWH screws with 5/8" diameter washer at panel fastening leg at all supports.	24	98	45
10	HR-16 (24-gauge steel, 16" width)	Steel Spaced Supports	Two (2) #10-16 x 1" long pancake head screws at panel fastening leg at all supports.	60	55	90
				24	100	90
11	HR-16 (22-gauge steel, 16" width)	Steel Spaced Supports	Two (2) 1/4-14 x 1" long pancake head screws at panel fastening leg at all supports.	60	62	125
				24	110	125
12	HR-16 (0.032" aluminum, 16" width)	Steel Spaced Supports	Two (2) 1/4-14 x 1" long pancake head screws at panel fastening leg at all supports.	24	78	78
13	HR-16 (0.032" aluminum, 16" width)	Steel Spaced Supports	Two (2) #12-14 x 1 1/4" long HWH screws with 5/8" diameter washer at panel fastening leg at all supports.  Bearing plate: 1 3/8" x 4 1/2" x 24-gauge galvanized steel at every connection.	48	41	40
14	FW-12 with grooves (24-gauge steel, 12" width) or FW-1025 with grooves (24-gauge steel, 10.25" width)	Steel Spaced Supports	Two (2) #10-16 x 1" long pancake head screws at panel fastening leg at all supports.  Sidelap fasteners are 1/4-14 x 7/8" long HWH screw with EPDM washer @ 24" o.c. along panel length.	60	45	50
				24	65	50
15	FW-12 with grooves and seam lock feature (24-gauge steel, 12" width) or FW-1025 with grooves and seam lock feature (24-gauge steel, 10.25" width)	Steel Spaced Supports	Two (2) #12-14 x 1 1/4" long HWH screws with 5/8" diameter washer at panel fastening leg at all supports.	60	31	50
				24	67	50
16	FW-12 with grooves (22-gauge steel, 12" width) or FW-1025 with grooves (22-gauge steel, 10.25" width)	Steel Spaced Supports	Two (2) 1/4-14 x 1" long pancake head screws at panel fastening leg at all supports.  Sidelap fasteners are 1/4 x 7/8" long screw @ 24" o.c. along panel length.	60	70	70
				24	100	70

TABLE 2—ALLOWABLE WIND PRESSURES FOR PANELS OVER SPACED SUPPORTS (continued)

17	FW-12 with grooves and seam lock feature (0.032" aluminum, 12" width) or FW-1025 with grooves and seam lock feature (0.032" aluminum, 10.25" width)	Steel Spaced Supports	Two (2) #12-14 x 1 <sup>1</sup> / <sub>4</sub> " long HWH screws with <sup>5</sup> / <sub>8</sub> " diameter washer at panel fastening leg at all supports.	24	52	44
18	FW-12 with grooves and seam lock feature (0.040" aluminum, 12" width) or FW-1025 with grooves and seam lock feature (0.040" aluminum, 10.25" width)	Steel Spaced Supports	Two (2) #12-14 x 1 <sup>1</sup> / <sub>4</sub> " long HWH screws with <sup>5</sup> / <sub>8</sub> " diameter washer at panel fastening leg at all supports.	24	78	44
19	BR-12 (24-gauge steel, 12" width)	Steel Spaced Supports	Two (2) #12-14 x 1 <sup>1</sup> / <sub>4</sub> " long HWH screws with <sup>5</sup> / <sub>8</sub> " diameter washer at panel fastening leg at all supports.	60	47	47
				24	104	104
20	BR-12 (0.032" or 0.040" aluminum, 12" width)	Steel Spaced Supports	Two (2) #12-14 x 1 <sup>1</sup> / <sub>4</sub> " long HWH screws with <sup>5</sup> / <sub>8</sub> " diameter washer at panel fastening leg at all supports.	60	26	26
				24	88	88
21	Deep Deck (24-gauge steel, 36" coverage)	Steel Spaced Supports	One (1) <sup>1</sup> / <sub>4</sub> -14 x 1" long HWH screw with sealing washer per low (7.2" o.c.) across panel width at all supports.  Sidelap fasteners are <sup>1</sup> / <sub>4</sub> -14 x <sup>7</sup> / <sub>8</sub> " long HWH screw with sealing washer @ 18" o.c. along panel length. (See Fig. 8)	60	100	51
				30	182	100
22	Deep Deck (24-gauge steel, 36" coverage)	Steel Spaced Supports	Two (2) <sup>1</sup> / <sub>4</sub> -14 x 1" long HWH screws with sealing washer per low (7.2" o.c.) across panel width at all supports.  Sidelap fasteners are <sup>1</sup> / <sub>4</sub> -14 x <sup>7</sup> / <sub>8</sub> " long HWH screw with sealing washer @ 18" o.c. along panel length. (See Fig. 8)	60	110	51
23	Deep Deck (22-gauge steel, 36" coverage)	Steel Spaced Supports	Two (2) <sup>1</sup> / <sub>4</sub> -14 x 1" long HWH screws with sealing washer per low (7.2" o.c.) across panel width at all supports.  Sidelap fasteners are <sup>1</sup> / <sub>4</sub> -14 x <sup>7</sup> / <sub>8</sub> " long HWH screw with sealing washer @ 18" o.c. along panel length. (See Fig. 8)	60	160	51
24	Deep Deck (0.032" or 0.040" aluminum, 36" coverage)	Steel Spaced Supports	Two (2) #12-14 x 1" long HWH screws with sealing washer per low (7.2" o.c.) across panel width at all supports.  Sidelap fasteners are <sup>1</sup> / <sub>4</sub> -14 x <sup>7</sup> / <sub>8</sub> " long HWH screw with sealing washer @ 18" o.c. along panel length. (See Fig. 8)	48	83	48

TABLE 2—ALLOWABLE WIND PRESSURES FOR PANELS OVER SPACED SUPPORTS (continued)

25	S-Deck (24-gauge or 22-gauge steel, 32" coverage)	Steel Spaced Supports	One (1) #12-14 x 1" long HWH screw with sealing washer at every third low across panel width at all supports.  Sidelap fasteners are #12-14 x 1" long HWH screw with washer @ 12" o.c. along panel length. (See Fig. 9A)	60	77	40
26	S-Deck (24-gauge or 22-gauge steel, 32" coverage)	Steel Spaced Supports	One (1) #12-14 x 1" long HWH screw with sealing washer at every second low across panel width at all supports.  Sidelap fasteners are #12-14 x 1" long HWH screw with sealing washer @ 12" o.c. along panel length.  (See Fig. 9B)	30	190	114
27	S-Deck (0.032" or 0.040" aluminum, 34 2/3" coverage)	Steel Spaced Supports	Eight (8) #12-14 x 1" long HWH screws with EPDM washer across panel width at all supports per Fig. 9A.  Sidelap fasteners are 1/4-14 x 7/8" long HWH screw with EPDM washer @ 12" o.c. along panel length.  (See Fig. 10A)	48	83	40

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

<sup>1</sup>Minimum 16-gauge (0.060 in.) steel supports.

<sup>2</sup>Spaced supports must have a minimum of bearing width of 2 inches (50.8 mm).

<sup>3</sup>HWH screw designation denotes hex washer head.

<sup>4</sup>Span indicates spacing of supports.

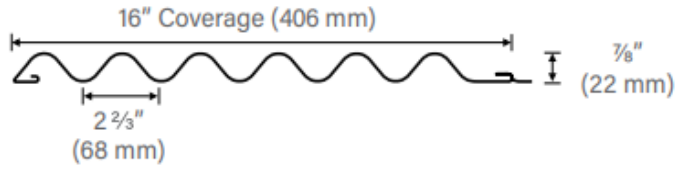


FIGURE 1—HC-16 PANEL

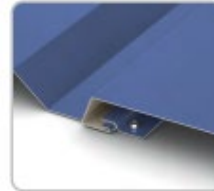
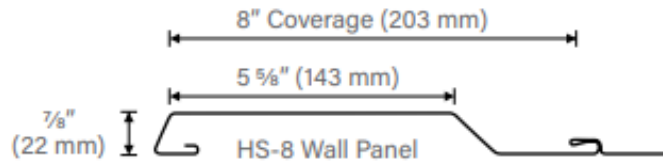


FIGURE 2—HS-8 PANEL

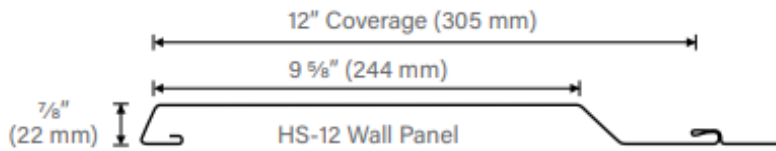


FIGURE 3—HS-12 PANEL

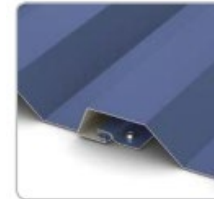
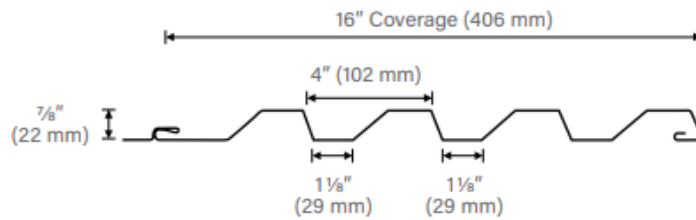


FIGURE 4—HR-16 PANEL

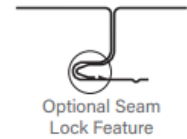
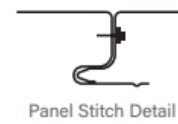
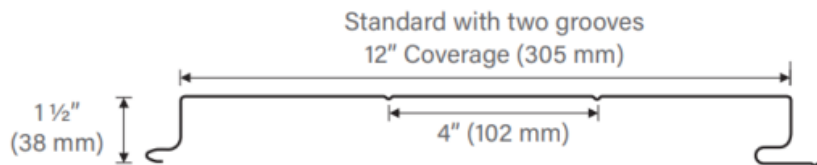


FIGURE 5—FW-12 PANEL

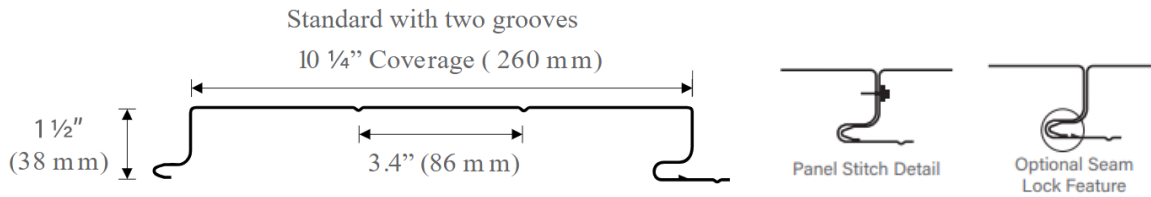


FIGURE 6—FW-1025 PANEL

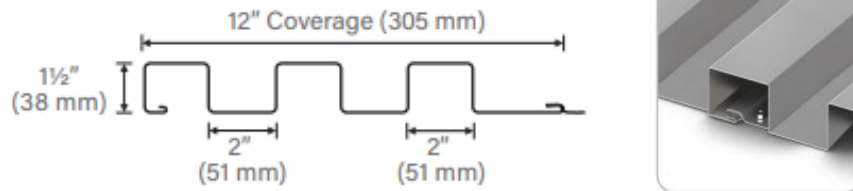


FIGURE 7—BR-12 PANEL

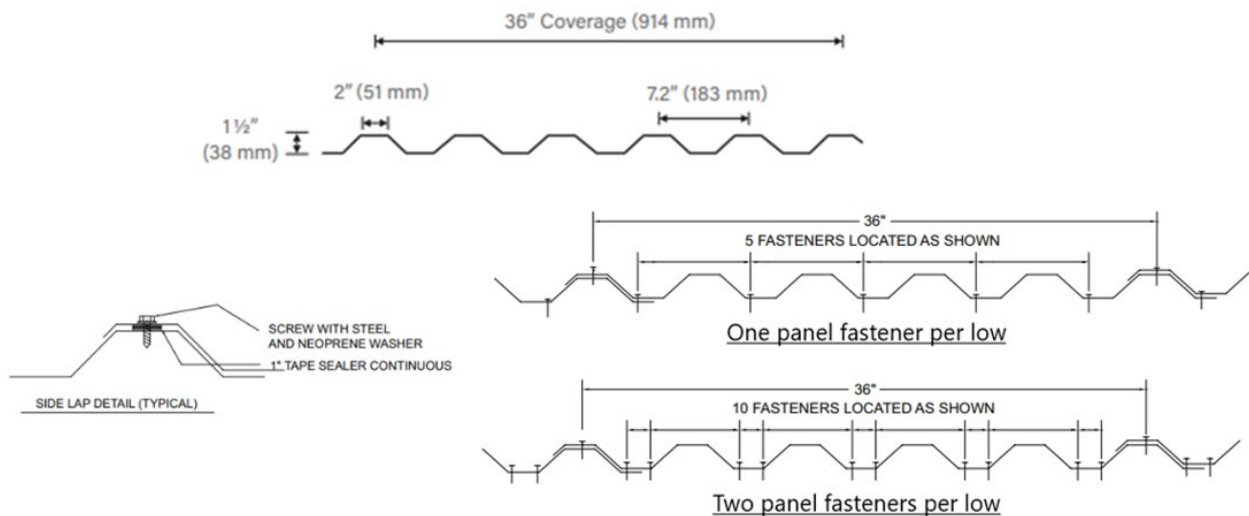


FIGURE 8—DEEP-DECK PANEL

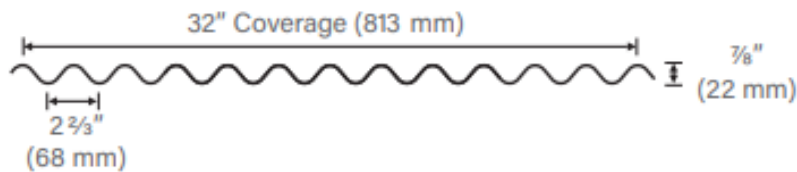


FIGURE 9—S-DECK PANEL (32" COVERAGE)



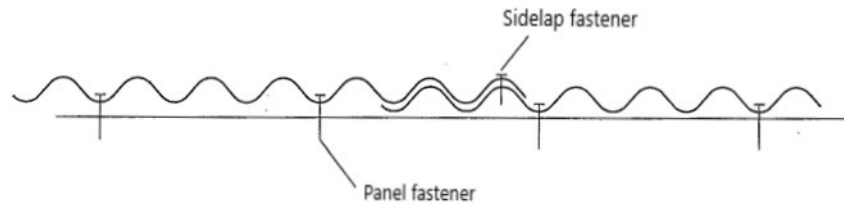


FIGURE 9A—S-DECK (32" COVERAGE) FASTENING PATTERN A

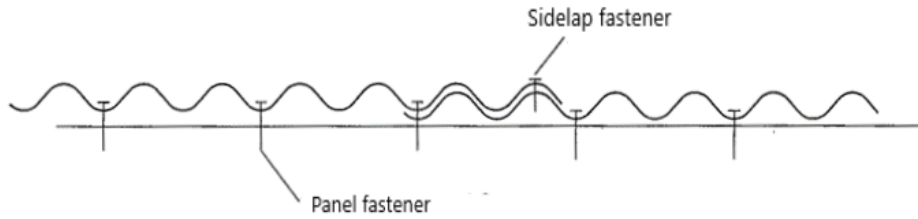


FIGURE 9B—S-DECK (32" COVERAGE) FASTENING PATTERN B

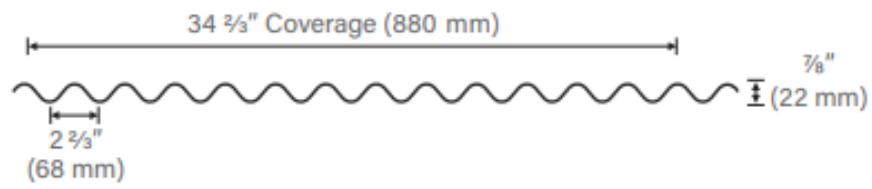


FIGURE 10—S-DECK PANEL (34 2/3" COVERAGE)

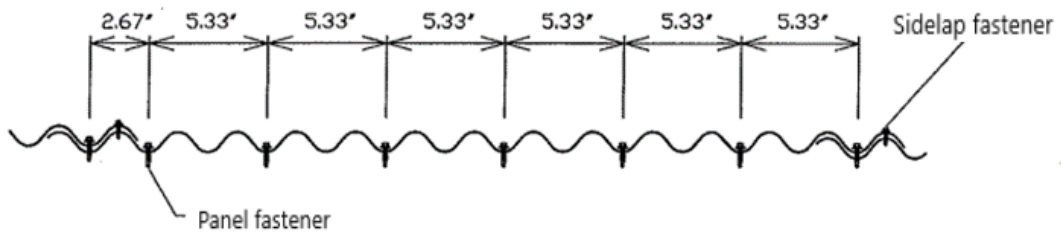


FIGURE 10A—S-DECK (34 2/3" COVERAGE) FASTENING PATTERN

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION

Section: 07 46 00—Siding

## REPORT HOLDER:

BERRIDGE MANUFACTURING COMPANY

## EVALUATION SUBJECT:

BERRIDGE DEEP DECK, S-DECK, FW-12, FW-1025, HR-16, HC-16, HS-12, HS-8, BR-12

## 1.0 REPORT PURPOSE AND SCOPE

**Purpose:**

The purpose of this evaluation report supplement is to indicate that Berridge Deep Deck, S-Deck, FW-12, FW-1025, HR-16, HC-16, HS-12, HS-8, BR-12, described in ICC-ES evaluation report ESR-4712, have also been evaluated for compliance with the code noted below.

**Applicable code edition:**

- 2022 California Building Code (CBC)

For evaluation of applicable Chapters adopted by the California Office of Statewide Health Planning and Development (OSHPD) AKA: California Department of Health Care Access and Information (HCAI) and the Division of State Architect (DSA), see Sections 2.1.1 and 2.1.2 below.

## 2.0 CONCLUSIONS

## 2.1 CBC:

The Berridge Deep Deck, S-Deck, FW-12, FW-1025, HR-16, HC-16, HS-12, HS-8, BR-12, described in Sections 2.0 through 7.0 of the evaluation report ESR-4712, comply with CBC Chapter 14, provided the design and installation are in accordance with the 2021 *International Building Code*® (IBC) provisions noted in the evaluation report and the additional requirements of CBC Chapters 14, and 16, as applicable.

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:** The applicable OSHPD Sections and Chapters of the CBC are beyond the scope of this supplement.

**2.1.2 DSA:** The applicable DSA Sections and Chapters of the CBC are beyond the scope of this supplement.

This supplement expires concurrently with the evaluation report, reissued January 2024.