

**LP[®] SmartSide[®] Strand Substrate
Soffit and Rated Sheathing/Ceiling Deck
Louisiana-Pacific Corporation**

PR-N117(M)

Revised June 20, 2017

Product: LP[®] SmartSide[®] Strand Substrate Soffit and Rated Sheathing/Ceiling Deck
Louisiana-Pacific Corporation, 414 Union Street, Suite 2000, Nashville, TN 37219
(800) 450-6106
www.lpcorp.com

1. Basis of the product report:
 - 2015, 2012 and 2009 International Building Code: Section 104.11 Alternative materials
 - 2015, 2012 and 2009 International Residential Code: Section R104.11 Alternative materials
 - DOC PS 2-10 Performance Standard for Wood-Based Structural-Use Panels
 - APA PRP-108 Performance Standards and Qualification Policy for Structural-Use Panels
 - ANSI/AWC SDPWS-2015 - Special Design Provisions for Wind and Seismic
 - ASCE 7-10 and ASCE 7-05 Minimum Design Loads for Buildings and Other Structures
 - APA Reports T92Q-17, T92Q-22, T94Q-17, T2000Q-21, T2007P-37, T2015Q-40, and T2015Q-41, and other qualification data

2. Product description:

Louisiana-Pacific Corporation SmartSide[®] Strand Substrate Soffit and Rated Sheathing/Ceiling Deck panels are made with strands of various wood species and strand classifications in accordance with the in-plant manufacturing standard approved by APA, overlaid with a resin treated paper, and available with either a smooth or embossed surface texture. SmartSide Strand Substrate Soffit panels and Rated Sheathing/Ceiling Deck panels are available in 7/16 and 19/32 Performance Categories, corresponding to nominal 9.5-, 11- and 15-mm thicknesses. They are available as 1,220 x 2,440-mm or 1,220 x 2,745-mm panels or cut to 305-, 405- or 610-mm widths in lengths up to 4,875 mm. The panels are treated with Zinc Borate for decay and insect resistance. The efficacy of the preservative treatment is outside the scope of this report and the APA certification program. The soffit panels are intended for use as closed soffits at a 610 mm o.c. span rating with the panel strength axis perpendicular to supports. The Rated Sheathing/Ceiling Deck panels are intended for use as open soffits at a 610 mm (roof)/0 mm (subfloor) or 610 mm (roof)/405 mm (subfloor) span rating with the panel strength axis perpendicular to supports.

Vented soffit products are available in a 3/8 Performance Category (nominal 9.5 mm thickness), widths of 205-, 305-, 405- or 610-mm and lengths up to 4,875 mm. Refer to the manufacturer's literature for details on the configuration of the vented soffits products.

3. Design properties:

Design wind loads for non-vented LP SmartSide Strand Substrate Soffit products are listed in Tables 1 and 2 based on the design procedures in ASCE 7-05 and ASCE 7-10, respectively.

4. Product installation:

LP SmartSide Strand Substrate Soffit and Rated Sheathing/Ceiling Deck shall be installed in accordance with the recommendations provided by the manufacturer (www.lpcorp.com/products/siding/lp-smartside-trim-siding/) and APA *Engineered Wood Construction Guide*, Form E30 (www.apawood.org/resource-library). The maximum span for shall be in accordance with the Span Rating (shown in inches) in the trademark the intended application.

5. Fire-resistant construction:
Wood structural panels that are not fire-retardant-treated have been shown to meet a Class III (or C) category for flame spread. Unless otherwise specified, fire-resistant construction shall be in accordance with the recommendations provided in APA *Fire-Rated Systems*, Form W305 (see link above). Vented soffit products shall not be used in fire-resistant construction.
6. Limitations:
 - a) LP SmartSide Strand Substrate Soffit panels shall be used only as closed soffits at a 610 mm o.c. span rating with the panel strength axis perpendicular to supports.
 - b) LP® SmartSide Strand Substrate Rated Sheathing/Ceiling Deck panels shall be used only for open soffits or sheathing at a 610 mm (roof)/0 mm (subfloor) or 610 mm (roof)/405 mm (subfloor) span rating (refer to trademark) with the panel strength axis perpendicular to supports.
 - c) LP® SmartSide Strand Substrate Soffit used outdoors must be finished in accordance with recommendations provided by the manufacturer and APA *Engineered Wood Construction Guide*, Form E30 (see links above).
 - d) LP® SmartSide Strand Substrate Soffit and Rated Sheathing/Ceiling Deck panels are produced at Louisiana-Pacific Corporation facilities in Hayward, WI, Newberry, MI, Tomahawk, WI, Two Harbors, MN, and Swan Valley, Minitonas, MB under a quality assurance program audited by APA. The efficacy of the preservative treatment is outside the scope of this report and the APA certification program
 - e) This report is subject to re-examination in one year.
7. Identification:
LP SmartSide Strand Substrate Soffit and Rated Sheathing/Ceiling Deck panels described in this report are identified by a label bearing the manufacturer's name (Louisiana-Pacific Corporation) and/or trademark, the APA assigned plant number (357 for the Hayward plant, 416 for the Newberry plant, 435 for the Tomahawk plant, 399 for the Two Harbors plant, or 457 for the Swan Valley plant), the Performance Category, the Span Rating, the Exposure Rating, the APA logo, the report number PR-N117, and a means of identifying the date of manufacture.

Table 1. **Maximum nominal (allowable) design wind speed, V_{asd} , (m/s – 3-second gust) permitted for non-vented LP SmartSide Strand Substrate Soffit^(a)**

Minimum Nail Size	Performance Category	Minimum Nominal Panel Thickness (mm)	Support Spacing ^(b) (mm)	Panel Nail Spacing		Maximum Allowable Wind Pressure (Pa)	Maximum Nominal (Allowable) Wind Speed, V_{asd} ^(c) (m/s)		
				Edges (mm o.c.)	Field (mm o.c.)		Wind Exposure Category		
							B	C	D
6d nonstaining corrosion-resistant box (2.5 x 51 mm) Min. nail head diameter = 6.8 mm	3/8	9.5	405	150	305	1,485	49	40	38
					150	2,970	67	58	54
			610	150	305	1,005	40	NP	NP
					150	2,010	58	49	45
8d nonstaining corrosion-resistant box (2.9 x 63.5 mm) Min. nail head diameter = 7.5 mm	3/8	9.5	405	150	305	2,200	58	49	47
					150	4,405	76	67	67
			610	150	305	1,485	49	40	38
					150	2,920	67	58	54
8d nonstaining corrosion-resistant box (2.9 x 63.5 mm) Min. nail head diameter = 7.5 mm	7/16	11	405	150	305	2,155	58	49	47
					150	4,260	76	67	65
			610	150	305	1,435	49	40	38
					150	2,825	67	58	54
8d nonstaining corrosion-resistant box (2.9 x 63.5 mm) Min. nail head diameter = 7.5 mm	19/32	15	405	150	305	1,965	58	49	45
					150	3,925	76	67	63
			610	150	305	1,295	47	40	NP
					150	2,635	67	56	49
10d nonstaining corrosion-resistant box (3.3 x 76 mm) Min. nail head diameter = 7.9 mm	19/32	15	405	150	305	2,775	67	58	54
					150	5,555	76	76	67
			610	150	305	1,865	56	47	40
					150	3,685	76	67	58

For **imperial units**: 1 mm = 0.039 inch, 1 Pa = 0.021 psf, 1 m/s = 2.24 mph.

^(a) Panels shall be applied with strength axis across supports.

^(b) Supporting framing must have a minimum specific gravity of 0.42.

^(c) Table is based on wind pressures acting toward and away from building surfaces, at 9.1-m height in Zone 5 with smallest effective area per Chapter 6 of ASCE 7-05, Section R301.2.1 of the 2009 and 2012 IRC, and Section 1609.1.1 of the 2009 IBC.

Table 2. **Maximum ultimate design wind speed, V_{ult} , (m/s – 3-second gust) permitted for non-vented LP SmartSide Strand Substrate Soffit^(a)**

Minimum Nail Size	Performance Category	Minimum Nominal Panel Thickness (mm)	Support Spacing ^(b) (mm)	Panel Nail Spacing		Maximum Ultimate Wind Pressure (Pa)	Maximum Ultimate Design Wind Speed, V_{ult} ^(c) (m/s)		
				Edges (mm o.c.)	Field (mm o.c.)		Wind Exposure Category		
							B	C	D
6d nonstaining corrosion-resistant box (2.5 x 51 mm) Min. nail head diameter = 6.8 mm	3/8	9.5	405	150	305	2,490	63	54	49
					150	4,980	89 ^(d)	72	72
			610	150	305	1,675	51	NP	NP
					150	3,305	72	63	58
			405	150	305	3,685	72	67	58
					150	7,325	89 ^(d)	89 ^(d)	80
610	150	305	2,440	63	54	49			
		150	4,885	89 ^(d)	72	67			
8d nonstaining corrosion-resistant box (2.9 x 63.5 mm) Min. nail head diameter = 7.5 mm	7/16	11	405	150	305	3,545	72	63	58
					150	7,135	89 ^(d)	89	80
			610	150	305	2,395	63	54	49
					150	4,740	89 ^(d)	72	67
			405	150	305	3,305	72	63	58
					150	6,560	89 ^(d)	89 ^(d)	80
610	150	305	2,200	58	51	NP			
		150	4,405	80	72	67			
10d nonstaining corrosion-resistant box (3.3 x 76 mm) Min. nail head diameter = 7.9 mm	19/32	15	405	150	305	4,595	80	72	67
					150	9,240	89 ^(d)	89 ^(d)	89 ^(d)
			610	150	305	3,065	72	58	54
					150	6,130	89 ^(d)	80	72

For imperial units: 1 mm = 0.039 inch, 1 Pa = 0.021 psf, 1 m/s = 2.24 mph.

^(a) Panels shall be applied with strength axis across supports.

^(b) Supporting framing must have a minimum specific gravity of 0.42.

^(c) Table is based on wind pressures acting toward and away from building surfaces, at 9.1-m height in Zone 5 with smallest effective area per Chapter 26 of ASCE 7-10, Section R301.2.1 of the 2015 IRC, and Section 1609.1.1 of the 2012 and 2015 IBC.

^(d) Table R301.2(2) of the 2015 IRC is limited to a maximum ultimate design wind speed, V_{ult} , of 180 mph (80 m/s).

APA – The Engineered Wood Association is an approved national standards developer accredited by American National Standards Institute (ANSI). APA publishes ANSI standards and Voluntary Product Standards for wood structural panels and engineered wood products. APA is an accredited certification body under ISO/IEC 17065 by Standards Council of Canada (SCC), an accredited inspection agency under ISO/IEC 17020 by International Code Council (ICC) International Accreditation Service (IAS), and an accredited testing organization under ISO/IEC 17025 by IAS. APA is also an approved Product Certification Agency, Testing Laboratory, Quality Assurance Entity, and Validation Entity by the State of Florida, and an approved testing laboratory by City of Los Angeles.

**APA – THE ENGINEERED WOOD ASSOCIATION
HEADQUARTERS**

7011 So. 19th St. ▪ Tacoma, Washington 98466
Phone: (253) 565-6600 ▪ Fax: (253) 565-7265 ▪ Internet Address: www.apawood.org

PRODUCT SUPPORT HELP DESK
(253) 620-7400 ▪ *E-mail Address:* help@apawood.org

DISCLAIMER

APA Product Report® is a trademark of *APA – The Engineered Wood Association*, Tacoma, Washington. The information contained herein is based on the product evaluation in accordance with the references noted in this report. Neither APA, nor its members make any warranty, expressed or implied, or assume any legal liability or responsibility for the use, application of, and/or reference to opinions, findings, conclusions, or recommendations included in this report. Consult your local jurisdiction or design professional to assure compliance with code, construction, and performance requirements. Because APA has no control over quality of workmanship or the conditions under which engineered wood products are used, it cannot accept responsibility for product performance or designs as actually constructed.