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LP® SmartSide® and LP® SmartSide® ExpertFinish® Treated-Engineered-Wood Lap, Panel, Cedar Shake Lap, Nickel Gap Lap, and Vertical Siding
Louisiana-Pacific Corporation

PR-N124
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Product: LP® SmartSide® and LP® SmartSide® ExpertFinish® Treated-Engineered-Wood Lap, Panel, Cedar Shake Lap, Nickel Gap Lap, and Vertical Siding
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1. Basis of the product report:
   - 2024 International Building Code (IBC): Sections 104.2.3 Alternative materials
   - 2021, 2018, and 2015 International Building Code (IBC): Section 104.11 Alternative materials
   - 2024 International Residential Code (IRC): Sections R104.2.2 Alternative materials
   - 2021, 2018, and 2015 International Residential Code (IRC): Section R104.11 Alternative materials
   - 2021 and 2015, and 2008 ANSI/AWC Special Design Provisions for Wind and Seismic (SDPWS) recognized in the 2024 and 2021, and 2018 and 2015 IBC, respectively.
   - ASCE 7-22, ASCE 7-16 and ASCE 7-10 Minimum Design Loads for Buildings and Other Structures recognized in the 2024 IBC and IRC, 2021 and 2018 IBC and IRC, and 2015 IBC and IRC, respectively
   - APA PRP-108 Performance Standards and Qualification Policy for Structural-Use Panels
   - NES Evaluation Protocol for Determination of Flood-Resistance Properties of Building Elements
   - APA Reports R&D 87Q-1, T87Q-45, T91Q-11, T91Q-20, T97Q-4, T97Q-10, T98Q-13, T98Q-17, T99Q-23, T2008Q-12, T2008P-73, T2008P-74, T2009Q-54, T2011Q-59, T2012P-22, T2015Q-38, T2015Q-39, T2017P-03, T2018P-05, T2022Q-25, T2023Q-30, and other qualification data.

2. Product description:
   Louisiana-Pacific Corporation (LP®) SmartSide® and LP® SmartSide® ExpertFinish® Treated-Engineered-Wood Lap, Panel, Cedar Shake Lap, Nickle Gap Lap, and Vertical Siding is overlaid with a resin-treated paper and is available with either a smooth or embossed surface texture. The siding is treated with Zinc Borate for decay and insect resistance. The efficacy of the preservative treatment of the LP SmartSide and ExpertFinish Treated-Engineered-Wood Lap, Panel, Cedar Shake Lap, Nickle Gap Lap, and Vertical Siding is outside the scope of this report and the APA certification program. All edges are factory-sealed with a primer.

   LP SmartSide and LP SmartSide ExpertFinish Lap Siding is available in 3/8 and 7/16 Performance Categories, in nominal widths of 5, 6, 7, 8, 9-1/2, and 12 inches and in lengths up to 16 feet. **The Lap Siding may be installed horizontally or vertically.**

   LP SmartSide and LP SmartSide ExpertFinish Panel Siding is available in 3/8, 7/16, and 19/32 Performance Categories, 4 feet in width, and up to 18 feet in length. The 3/8 Performance Category panels are available without grooves or with grooves spaced 8 inches on center. The 7/16 and 19/32 Performance Category panels are available without grooves or with grooves spaced either 4 or 8 inches on center. Minimum thicknesses at the groove and shiplap are documented in the plant Quality Manual.

LP SmartSide and LP SmartSide ExpertFinish Cedar Shake Lap Siding includes shiplap ends, which results in a seamless appearance when installed, and is available in 3/8 Performance Category with a nominal width of 12 inches and in lengths up to 4 feet. **The Cedar Shake Lap Siding can only be installed horizontally.**

LP SmartSide and LP SmartSide ExpertFinish Nickel Gap Lap Siding includes shiplap edges, which results in a flat siding profile when installed, and is available in 1/2 Performance Category with a nominal width of 8 inches and in lengths up to 16 feet. **The Nickle Gap Lap Siding may be installed horizontally or vertically.**

LP SmartSide and LP SmartSide ExpertFinish Vertical Siding is a narrow-width panel siding and is available in 3/8 Performance Category, nominal width of 16 inches, and in 16-foot lengths. **The Vertical Siding can only be installed vertically.**

3. Design properties:
Allowable racking shear values for LP SmartSide and LP SmartSide ExpertFinish Panel Siding are listed in Table 1. For 3/8 Performance Category panels nailed at shiplap edges, use 5/16 Performance Category shear values. For 7/16 and 19/32 Performance Category panel sidings nailed at shiplap edges, use 3/8 Performance Category shear values. Design wind loads for LP SmartSide and LP SmartSide ExpertFinish Lap and Panel Siding are listed in Tables 2 and 3, respectively. Design wind loads for LP SmartSide and LP SmartSide ExpertFinish Lap and Panel Siding when installed over the facer of structural insulated panels (SIPs) and wood structural panel (WSP) sheathing are listed in Tables 4 and 5, respectively. Design wind loads for LP SmartSide and LP SmartSide ExpertFinish Vertical Siding and Lap Siding applied vertically are listed in Table 6.

4. Product installation:
LP SmartSide and LP SmartSide ExpertFinish Treated-Engineered-Wood Lap, Panel, Cedar Shake Lap, Nickel Gap Lap, and Vertical Siding shall be installed in accordance with 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), as applicable. The maximum span shall be in accordance with the Span Rating shown in the trademark. The LP SmartSide and LP SmartSide ExpertFinish Lap, Nickel Gap Lap, and Panel Siding shall be permitted to be installed over the facer of structural insulated panels (SIPs) and WSP sheathing in accordance with Tables 4 and 5, respectively.

LP SmartSide and LP SmartSide ExpertFinish Lap and Nickel Gap Lap Siding, when installed vertically, shall be installed over a minimum 7/16 Performance Category wood structural panel sheathing meeting DOC PS 1 or DOC PS 2 requirements, and shall be covered by a batten at the siding joint or shall be overlapped with another Vertical Lap Siding in accordance with the recommendations provided by the manufacturer (see link above). Lap Siding installed vertically can only span one floor plate-to-plate. Each vertical application shall not span beyond one floor to ceiling distance, or one floor to top of gable distance.

LP SmartSide and LP SmartSide ExpertFinish Vertical Siding shall be installed over a minimum 7/16 Performance Category wood structural sheathing meeting DOC PS 1 or DOC PS 2 requirements and shall be covered by a batten at the panel joint in accordance with the recommendations provided by the manufacturer (see link above). Vertical Siding can only span one floor plate-to-plate. Each vertical application shall not span beyond one floor to ceiling distance, or one floor to top of gable distance.

5. Fire-resistant construction:
Wood structural panels that are not fire-retardant-treated have been shown to meet Class III (or C) category for flame spread. Unless otherwise specified, fire-resistant construction shall

be in accordance with the recommendations in APA *Fire-Rated Systems*, Form W305 (see link above).

6. Flood resistance evaluation:
Selected properties critical to flood resistance of 3/8 and 7/16 Performance Category panel siding, including uniform loads, concentrated static loads, concentrated hard body and soft body impact loads, fastener performance, wall racking resistance, edge thickness swell, linear expansion, hygroscopicity, exterior bond performance and large panel and small specimen bending properties were evaluated at a 16 o.c. Span Rating in accordance with *NES Evaluation Protocol for Determination of Flood-Resistance Properties of Building Elements*. Test results in the dry (as-received) condition and after moisture cycling in accordance with the NES protocol were compared to the requirements specified in ICC Evaluation Service (ICC-ES) *Acceptance Criteria for Treated-Engineered-Wood Siding* (AC321).

7. Limitations:
   a) LP SmartSide and LP SmartSide ExpertFinish Treated-Engineered-Wood Lap, Panel, Cedar Shake Lap, Nickel Gap Lap, and Vertical Siding used outdoors must be finished in accordance with recommendations provided by the manufacturer (see link above) and APA *Engineered Wood Construction Guide*, Form E30 (see link above).
   b) The efficacy of the preservative treatment of the LP SmartSide and LP SmartSide ExpertFinish Treated-Engineered-Wood Lap, Panel, Cedar Shake Lap, Nickel Gap Lap, and Vertical Siding is outside the scope of this report and the APA certification program.
   c) LP SmartSide and LP SmartSide ExpertFinish Treated-Engineered-Wood panel siding is flood resistant on the properties listed in Section 6. This evaluation applies to 3/8 and 7/16 Performance Category panel siding at a 16 o.c. Span Rating.
   d) LP SmartSide and LP SmartSide ExpertFinish Treated-Engineered-Wood Lap and Panel Siding is produced at Louisiana-Pacific Corporation facilities at Dawson Creek, BC, Hayward, WI, Houlton, ME, Newberry, MI, Sagola, MI, Swan Valley, MB, Tomahawk, WI, and Two Harbors, MN, and LP SmartSide Treated-Engineered-Wood Vertical Siding is produced at Louisiana-Pacific Corporation facility at Tomahawk, WI, under a quality assurance program audited by APA.
   e) This report is subject to re-examination in one year.

8. Identification:
LP SmartSide and LP SmartSide ExpertFinish Treated-Engineered-Wood Lap, Panel, Cedar Shake Lap, Nickel Gap Lap, and Vertical Siding 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 (402 for the Dawson Creek, BC plant, 357 for the Hayward, WI plant, 368 for the Houlton, ME plant, 416 for the Newberry, MI plant, 407 for the Sagola, MI plant, 457 for the Swan Valley, MB plant, 435 for the Tomahawk, WI plant, or 399 for the Two Harbors, MN plant), the product Performance Category, the Span Rating, the Exposure Rating, the APA logo, the report number PR-N124, and a means of identifying the date of manufacture.

Table 1. Allowable Racking Shear (plf) for LP SmartSide and LP SmartSide ExpertFinish Treated-Engineered-Wood Panel Siding Shear Walls with Framing of Douglas-Fir-Larch or Southern Pine for Wind or Seismic Loading[1,2,3]

Performance Category	Min. Nail Penetration in Framing (inches)	Panels Applied Directly to Framing					Panels Applied Over Max. 5/8-inch Gypsum Sheathing				
		Nail Size (common or galvanized box)[7,8]	Nail Spacing at Panel Edges (inches)				Nail Size (common or galvanized box)[7,8]	Nail Spacing at Panel Edges (inches)			
			6	4	3	2[4]		6	4	3	2[4]
5/16[5,6]	1-1/4	6d	180	270	350	450	8d	180	270	350	450
3/8[5,6]			200	300	390	510		200	300	390	510
3/8[5,6]	1-1/2	8d	220	320	410	530	10d	260	380	490[4]	640
7/16[5]			240	350	450	585		260	380	490[4]	640
19/32[5]	1-5/8	10d	340	510	665[4]	870	-	-	-	-	-

For **SI**: 1 inch = 25.4 mm, 1 plf = 14.6 N/m.

(1) For framing of other species: (a) find specific gravity for species of lumber in the National Design Specification for Wood Construction (NDS); (b) find shear value from table for nails size; (c) multiply value by 0.82 for species with specific gravity greater than or equal to 0.42 but less than 0.49, or 0.65 for species with specific gravity less than 0.42.

(2) All panel edges must be backed with 2-inch nominal or wider framing. Panels must be installed with the long dimension oriented in the vertical direction. Space nails 12 inches o.c. on intermediate supports.

(3) For shear loads of normal or permanent load duration, the values in the table shall be multiplied by 0.63 or 0.56, respectively. For wind load applications, the values in the table shall be permitted to be multiplied by 1.4.

(4) Framing at panel edges must be 3 inches nominal or wider and nails must be staggered where nails are spaced 2 inches o.c., and where 10d nails having penetration into framing of more than 1-5/8 inches are spaced 3 inches or less, o.c. **Exception:** Unless otherwise required, 2-inch nominal framing may be used where full nailing surface is available and nails are staggered.

(5) Except as noted in Footnote 7, panel thickness at point of nailing at panel edges determines applicable shear values, except that 3/8 Performance Category panels nailed at shiplap edges use 5/16 Performance Category shear values, and 7/16 and 19/32 Performance Category panel sidings nailed at shiplap edges use 3/8 Performance Category shear values.

(6) Shiplap edges must be double-nailed; one nail must be placed in the underlap and a second nail must be placed in the full panel thickness at the nail spacing specified for the applicable shear value. Follow manufacturer's recommendations.

(7) Fasteners must not be installed in panel siding grooves in the field of the panel siding or when the panel siding grooves occur at cut edges of the panel siding.

(8) Fastener dimensions are as specified in ASTM F1667.

Table 2a. **Maximum V_{ult} or V[(1)]** for Lap Siding Installed Horizontally with 0.113" Nails[(2)]

Performance Category	Max. Stud Spacing[(3)] (inches)	Siding Width (inches)	Max. Ultimate Wind Pressure (psf)	Maximum V_{ult} or V[(4)] (mph)		
				Wind Exposure Category		
				B	C	D
3/8 and 7/16	16	6	133	200[(5)]	180	180
		7	133	200[(5)]	180	180
		8	122	200[(5)]	180	170
		9.5	101	200[(5)]	170	150
		12	78	170	150	130
7/16	24	6	114	200[(5)]	180	160
		7	95	180	160	150
		8	81	180	150	140
		9.5	67	160	140	120
		12	52	140	120	110
1/2 Nickel Gap	16	8	107	200[(5)]	170	160
	24		71	170	140	130

For **SI**: 1 inch = 25.4 mm, 1 psf = 47.88 Pa, 1 mph = 0.447 m/s.

(1) For 3/8 and 7/16 performance category lap siding, one fastener for each stud located 3/4 inch from the top edge of the siding. Each successive course of lap siding must overlap a minimum of 1 inch. For Nickel Gap Lap, one fastener for each stud located in center of fastener groove in accordance with the manufacturer's recommendation. Fasteners shall be a hot-dip galvanized plain (smooth) shank nail, with a minimum shank diameter of 0.113 inch, and long enough to penetrate structural framing or wood structural panels and structural framing a minimum of 2 inches. **Lap siding is not a bracing material.**

(2) Fasteners shall be permitted to be substituted on a one-for-one basis if the fastener has a minimum overall allowable withdrawal capacity and allowable fastener head pull-through capacity of 57 lbf/fastener or greater based on the load duration factor of 1.6. The fastener shall meet or exceed the corrosion-resistance of hot-dip galvanized steel wire nails meeting the requirements of ASTM A153, Class D.

(3) Wall studs must have a minimum specific gravity of 0.42.

(4) Three-second-gust; based on wind pressures acting toward and away from building surfaces, at 30-ft height in Zone 5 with the smallest effective area in accordance with Chapter 26 of ASCE 7-22, ASCE 7-16, and ASCE 7-10, Section R301.2.1 of the 2024 through 2015 IRC, and Section 1609.1.1 of the 2024 through 2015 IBC.

(5) Table R301.2.1(1) of the 2024 and 2021 IRC and Table R301.2(2) of the 2018 and 2015 IRC are limited to a maximum ultimate design wind speed, V_{ult}, of 180 mph.

Table 2b. **Maximum V_{ult} or V[(1)]** for Lap Siding Installed Horizontally with 0.092" Nails[(2)]

Performance Category	Max. Stud Spacing[(3)] (inches)	Siding Width (inches)	Max. Ultimate Wind Pressure (psf)	Maximum V_{ult} or V[(4)] (mph)		
				Wind Exposure Category		
				B	C	D
3/8 and 7/16	16	5	131	200[(5)]	180	180
		6	105	200[(5)]	170	160
		7	87	180	160	140
		8	75	170	140	130
		9.5	61	150	130	120
		12	48	140	115	105
7/16	24	6	70	170	140	130
		7	58	150	130	120
		8	50	140	120	110
		9.5	41	130	110	-
		12	32	110	-	-
1/2 Nickel Gap	16	8	65	160	130	120
	24		44	130	110	-

For **SI**: 1 inch = 25.4 mm, 1 psf = 47.88 Pa, 1 mph = 0.447 m/s.

(1) For 3/8 and 7/16 performance category lap siding, one fastener for each stud located 3/4 inch from the top edge of the siding. Each successive course of lap siding must overlap a minimum of 1 inch. For Nickel Gap Lap, one fastener for each stud located in center of fastener groove in accordance with the manufacturer's recommendation. Fasteners shall be a hot-dip galvanized plain (smooth) shank nail, with a minimum shank diameter of 0.092 inch, and long enough to penetrate structural framing or wood structural panels and structural framing a minimum of 1.5 inches. **Lap siding is not a bracing material.**

(2) Fasteners shall be permitted to be substituted on a one-for-one basis if the fastener has a minimum overall allowable withdrawal capacity and allowable fastener head pull-through capacity of 35 lbf/fastener based on the load duration factor of 1.6. The fastener shall meet or exceed the corrosion-resistance of hot-dip galvanized steel wire nails meeting the requirements of ASTM A153, Class D.

(3) Wall studs must have a minimum specific gravity of 0.42.

(4) Three-second-gust; based on wind pressures acting toward and away from building surfaces, at 30-ft height in Zone 5 with the smallest effective area in accordance with Chapter 26 of ASCE 7-22, ASCE 7-16, and ASCE 7-10, Section R301.2.1 of the 2024 through 2015 IRC, and Section 1609.1.1 of the 2024 through 2015 IBC.

(5) Table R301.2.1(1) of the 2024 and 2021 IRC and Table R301.2(2) of the 2018 and 2015 IRC are limited to a maximum ultimate design wind speed, V_{ult}, of 180 mph.

Table 3a. **Maximum V_{ult} or V**[1] for Panel Siding Installed Vertically with 0.113" Nails[2]

Performance Category	Max. Stud Spacing[3] (inches)	Fastener Spacing (inches o.c.)		Max. Ultimate Wind Pressure (psf)	Maximum V_{ult} or V[4] (mph)		
					Wind Exposure Category		
		Edges	Field		B	C	D
3/8, 7/16 and 19/32	16	6	12	71	170	140	130
			6	133	200[5]	180	180
19/32	24	6	12	48	140	115	-
			6	95	180	160	150

For **SI**: 1 inch = 25.4 mm, 1 psf = 47.88 Pa, 1 mph = 0.447 m/s.

(1) Fasteners shall be a hot-dip galvanized plain (smooth) shank nail, with a minimum shank diameter of 0.113 inch, and long enough to penetrate structural framing or wood structural panels and structural framing a minimum of 2 inches

(2) Fasteners shall be permitted to be substituted on a one-for-one basis if the fastener has a minimum overall allowable withdrawal capacity and allowable fastener head pull-through capacity of 57 lbf/fastener based on the load duration factor of 1.6. The fastener shall meet or exceed the corrosion-resistance of hot-dip galvanized steel wire nails meeting the requirements of ASTM A153, Class D.

(3) Wall studs must have a minimum specific gravity of 0.42.

(4) Three-second-gust; based on wind pressures acting toward and away from building surfaces, at 30-ft height in Zone 5 with the smallest effective area in accordance with Chapter 26 of ASCE 7-22, ASCE 7-16, and ASCE 7-10, Section R301.2.1 of the 2024 through 2015 IRC, and Section 1609.1.1 of the 2024 through 2015 IBC.

(5) Table R301.2.1(1) of the 2024 and 2021 IRC and Table R301.2(2) of the 2018 and 2015 IRC are limited to a maximum ultimate design wind speed, V_{ult}, of 180 mph.

Table 3b. **Maximum V_{ult} or V[1],** for Panel Siding Installed Vertically with 0.092" Nails[2]

Performance Category	Max. Stud Spacing[3] (inches)	Fastener Spacing (inches o.c.)		Max. Ultimate Wind Pressure (psf)	Maximum V_{ult} or V[4] (mph)		
					Wind Exposure Category		
		Edges	Field		B	C	D
3/8, 7/16 and 19/32	16	6	12	44	130	110	-
			6	87	180	160	140
19/32	24	6	6	58	150	130	120

For **SI**: 1 inch = 25.4 mm, 1 psf = 47.88 Pa, 1 mph = 0.447 m/s.

(1) Fasteners shall be a hot-dip galvanized plain (smooth) shank nail, with a minimum shank diameter of 0.092 inch, and long enough to penetrate structural framing or wood structural panels and structural framing a minimum of 1.5 inches. **Configuration cannot be used for lateral bracing due to nail size.**

(2) Fasteners shall be permitted to be substituted on a one-for-one basis if the fastener has a minimum overall allowable withdrawal capacity and allowable fastener head pull-through capacity of 35 lbf/fastener based on the load duration factor of 1.6. The fastener shall meet or exceed the corrosion-resistance of hot-dip galvanized steel wire nails meeting the requirements of ASTM A153, Class D.

(2) Wall studs must have a minimum specific gravity of 0.42.

(3) Three-second-gust; based on wind pressures acting toward and away from building surfaces, at 30-ft height in Zone 5 with the smallest effective area in accordance with Chapter 26 of ASCE 7-22, ASCE 7-16, and ASCE 7-10, Section R301.2.1 of the 2024 through 2015 IRC, and Section 1609.1.1 of the 2024 through 2015 IBC.

Table 4. **Maximum V_{ult} or V[(1)]** for Lap Siding Installed Horizontally to SIPs[(2)] or WSP Sheathing[(3)]

Performance Category	Max. Ring Shank Nail Spacing[(4,5)] (inches)	Siding Width (inches)	Max. Ultimate Wind Pressure (psf)	Maximum V_{ult} or V[(6)] (mph)		
				Wind Exposure Category		
				B	C	D
3/8 and 7/16	8	5	133	200[(7)]	180	180
		6	133	200[(7)]	180	180
		7	133	200[(7)]	180	180
		8	133	200[(7)]	180	180
		9.5	128	200[(7)]	180	170
		12	99	200[(7)]	170	150
	12	5	133	200[(7)]	180	180
		6	133	200[(7)]	180	180
		7	121	200[(7)]	180	170
		8	104	200[(7)]	170	160
		9.5	86	180	150	140
		12	66	160	140	120
1/2 Nickel Gap	8	8	133	200[(7)]	180	180
	12		91	180	160	150
	16		68	160	140	130
	24		45	130	115	-

For **SI**: 1 inch = 25.4 mm, 1 psf = 47.88 Pa, 1 mph = 0.447 m/s.

(1) The tabulated values represent the capacity of the LP Lap Siding installed in accordance with the requirements of this table. **The tabulated wind speed shall not exceed the SIP capacity for wind load resistance**.

(2) The facer of the structural insulated panels (SIPs) shall be 7/16 Performance Category or thicker OSB sheathing meeting DOC PS 2 requirements.

(3) Wood structural panel (WSP) sheathing shall be minimum 7/16 Performance Category OSB or Group 1 plywood meeting DOC PS 1 or DOC PS 2 requirements.

(4) Fasteners shall be a hot-dip galvanized ring shank nail, with a minimum shank diameter of 0.092 inch. Length shall be long enough to fully penetrate wood structural facer panel. For 3/8 and 7/16 performance category lap siding, one ring shank fastener located 3/4 inch from the top edge of the siding. Each successive course of lap siding must overlap a minimum of 1 inch. For Nickel Gap Lap, ring shank fasteners spaced per Table 4b, through the top nail flange, placed in the center of faster groove in accordance with the manufacturer's recommendation.

(5) Fasteners shall be permitted to be substituted on a one-for-one basis if the fastener has a minimum overall allowable withdrawal capacity and allowable fastener head pull-through capacity of 36 lbf/fastener based on the load duration factor of 1.6. The fastener shall meet or exceed the corrosion-resistance of hot-dip galvanized steel wire nails meeting the requirements of ASTM A153, Class D.

(6) Three-second-gust; based on wind pressures acting toward and away from building surfaces, at 30-ft height in Zone 5 with the smallest effective area in accordance with Chapter 26 of ASCE 7-22, ASCE 7-16, and ASCE 7-10, Section R301.2.1 of the 2024 through 2015 IRC, and Section 1609.1.1 of the 2024 through 2015 IBC.

(7) Table R301.2.1(1) of the 2024 and 2021 IRC and Table R301.2(2) of the 2018 and 2015 IRC are limited to a maximum ultimate design wind speed, V_{ult}, of 180 mph.

Table 5. **Maximum V_{ult} or V[(1)]** for Panel Siding Installed Vertically to SIPs[(2)] or WSP Sheathing[(3)]

Performance Category	Max. Ring Shank Nail Spacing[(4,5)] (inches o.c.)		Max. Ultimate Wind Pressure (psf)	Maximum V_{ult} or V[(6)] (mph)		
				Wind Exposure Category		
	Vertical	Horizontal		B	C	D
3/8, 7/16 and 19/32	8	8	133	200[(7)]	180	180
	10	10	87	180	160	140
	12	12	61	150	130	120
	16	16	34	115	-	-

For **SI**: 1 inch = 25.4 mm, 1 psf = 47.88 Pa, 1 mph = 0.447 m/s.

(1) The tabulated values represent the capacity of the LP Panel Siding installed in accordance with the requirements of this table. **The tabulated wind speed shall not exceed the SIP capacity for wind load resistance**.

(2) The facer of the structural insulated panels (SIPs) shall be 7/16 Performance Category or thicker OSB sheathing meeting DOC PS 2 requirements.

(3) Wood structural panel (WSP) sheathing shall be minimum 7/16 Performance Category OSB or Group 1 plywood meeting DOC PS 1 or DOC PS 2 requirements.

(4) Fasteners shall be a hot-dip galvanized ring shank nail, with a minimum shank diameter of 0.092 inch. Length shall be long enough to fully penetrate wood structural facer panel. Ring shank nails fastened in a grid as specified.

(5) Fasteners shall be permitted to be substituted on a one-for-one basis if the fastener has a minimum overall allowable withdrawal capacity and allowable fastener head pull-through capacity of 36 lbf/fastener based on the load duration factor of 1.6. The fastener shall meet or exceed the corrosion-resistance of hot-dip galvanized steel wire nails meeting the requirements of ASTM A153, Class D.

(6) Three-second-gust; based on wind pressures acting toward and away from building surfaces, at 30-ft height in Zone 5 with the smallest effective area in accordance with Chapter 26 of ASCE 7-22, ASCE 7-16, and ASCE 7-10, Section R301.2.1 of the 2024 through 2015 IRC, and Section 1609.1.1 of the 2024 through 2015 IBC.

(7) Table R301.2.1(1) of the 2024 and 2021 IRC and Table R301.2(2) of the 2018 and 2015 IRC are limited to a maximum ultimate design wind speed, V_{ult}, of 180 mph.

Table 6. **Maximum V_{ult} or V**[1] for Vertical Siding or Lap Siding Installed Vertically to WSP Sheathing

Perf. Category	Siding Type	Siding Width (inches)	Max. Ring Shank Nail Edge Spacing (inches o.c.)	Max. Ultimate Wind Pressure (psf)	Maximum V_{ult} or V[8] (mph)		
					Wind Exposure Category		
					B	C	D
3/8 and 7/16	Vertical Siding	16[2]	6[4,7]	133	200[9]	180	180
			12[4,7]	91	180	160	150
			16[4,7]	68	160	140	130
	Lap Siding Installed Vertically	5[3]	12[5,7]	133	200[9]	180	180
		6[3]		121	200[9]	180	170
		7[3]		104	200[9]	170	160
		8[3]		91	180	160	150
		9.5[3]		77	170	150	130
		12[3]		61	150	130	120
1/2 Nickel Gap	Lap Siding Installed Vertically	8	8[6,7]	133	200[9]	180	180
			12[6,7]	91	180	160	150
			16[6,7]	68	160	140	130
			24[6,7]	45	130	115	-

For **SI**: 1 inch = 25.4 mm, 1 psf = 47.88 Pa, 1 mph = 0.447 m/s.

(1) Siding shall be installed over 7/16 Performance Category or thicker wood structural panel sheathing meeting DOC PS 1 or DOC PS 2 requirements.

(2) Vertical Siding installed in accordance with manufacturer's recommendations.

(3) Lap Siding installed vertically in accordance with manufacturer's recommendations.

(4) Fasteners must be ring shank nails with a minimum shank diameter of 0.092 inch. Length shall be long enough to fully penetrate wood structural panel wall sheathing. Fasteners must be spaced a maximum of tabulated value on-center spacing along the siding perimeter in accordance with manufacturer's recommendations.

(5) Fasteners must be ring shank nails with a minimum shank diameter of 0.092 inch. Length shall be long enough to fully penetrate wood structural panel wall sheathing. Fasteners must be spaced a maximum of tabulated value on-center spacing along alternating edges of the length of the batten in accordance with manufacturer's recommendations.

(6) Fasteners shall be a hot-dip galvanized ring shank nail, with a minimum shank diameter of 0.092 inch. Length shall be long enough to fully penetrate wood structural facer panel. Ring shank fastener located in center of fastener groove in accordance with the manufacturer's recommendation.

(7) Fasteners shall be permitted to be substituted on a one-for-one basis if the fastener has a minimum overall allowable withdrawal capacity and allowable fastener head pull-through capacity of 36 lbf/fastener based on the load duration factor of 1.6. The fastener shall meet or exceed the corrosion-resistance of hot-dip galvanized steel wire nails meeting the requirements of ASTM A153, Class D.

(8) Three-second-gust; based on wind pressures acting toward and away from building surfaces, at 30-ft height in Zone 5 with the smallest effective area in accordance with Chapter 26 of ASCE 7-22, ASCE 7-16, and ASCE 7-10, Section R301.2.1 of the 2024 through 2015 IRC, and Section 1609.1.1 of the 2024 through 2015 IBC.

(9) Table R301.2.1(1) of the 2024 and 2021 IRC and Table R301.2(2) of the 2018 and 2015 IRC are limited to a maximum ultimate design wind speed, V_{ult}, of 180 mph.

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