

DIVISION: 07 00 00 – THERMAL AND MOISTURE PROTECTION
Level 1: 07 46 33 – Plastic Siding

REPORT HOLDER:



RISE COMPOSITE TECHNOLOGIES
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Jupiter, FL 33477
(401) 490-4847 | www.risebuildingproducts.com

EVALUATION SUBJECT:

RISE Siding

1.0 EVALUATION SCOPE:

Compliance with the following codes:

- 2021, 2018, 2015, and 2012 International Building Code® (IBC)
- 2021, 2018, 2015, and 2012 International Residential Code® (IRC)

Properties Evaluated:

- Structural (wind load resistance)
- Durability
- Surface-burning characteristics

This Product Evaluation Report (PER) is being used in accordance with the IBC and IRC. The product noted on this report has been tested and/or evaluated for its intended use as an exterior wall cladding in Type V-B construction (IBC) and non-fire-resistance-rated construction under the IRC.

2.0 DESCRIPTION:

RISE siding is a polymer-based and recycled synthetic fibers and polymer waste siding composed of a blended mixture of carpet fibers, polymer, and MDI adhesive with phenolic paper facers. The siding is produced in a nominal thickness of 3/8 inch (9.53 mm) and nominal widths of 5 1/4 inches (133.35 mm) and 8 3/4 inches (209.55 mm), up to a length of 20 feet. Panel siding is produced in a nominal thickness of 3/8 inch (9.53 mm) and nominal widths of 48 inches (1,219.20 mm), and lengths of 8, 10, and 12 feet. The siding has a flame-spread index of no greater than 200 when tested in accordance with ASTM E84.



3.0 USES

RISE siding is intended for use as an exterior wall cladding in Type V-B and non-fire-resistance-rated conventional construction. RISE siding can be used in HUD manufactured home construction as exterior coverings.

4.0 PRODUCT INSTALLATION

The products listed in this report shall be installed in compliance with this PER and manufacturer's submitted product specifications. The product components shall be of the material specified in the manufacturer's submitted product specification. All fasteners must be installed in accordance with the requirements of this PER and manufacturer's technical installation instructions.

RISE siding must be installed over a substrate capable of withstanding the imposed positive and negative design loads. The siding must be fastened to the wall sheathing and/or wall framing in accordance with the applicable code taking into account the transverse wind loads it will be subjected to in use. The substrate must be covered with an approved water-resistant barrier where required by code.

RISE siding shall be fastened with nails meeting the requirements from Tables within for the wind zone desired and the corresponding nail shank diameter and minimum embedment length into the structural framing or wood structural panels and structural framing. The maximum nail spacing shall be as indicated in the installation tables listed below. All lap siding courses must be lapped a minimum of 1 inch (25.4 mm). Fasteners must be placed a minimum 3/4 inch (19.1 mm) below the top of the siding and 3/8 inch (9.53 mm) from both ends of the siding. Fasteners shall be hot dipped galvanized plain (smooth or ring) shank, carbon steel nails. Panel wall and slat wall siding shall be placed adjacent to each other as show in the details.

5.0 LIMITATIONS AND CONDITION OF USE:

The use of this product shall be in accordance with this PER. The structure shall be designed to resist all imposed loads as specified by the I-Codes. No evaluation is offered for the structure using this document other than the subject product. This evaluation does not consider large or small missile debris impact requirements or hurricane/tornado strength wind loads.

The RISE siding described in this report comply with, or are suitable alternatives to what is specified in, those code(s) 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, and applicable code. If there is a conflict between the manufacturer's published installation instructions and this report, this report shall govern.
- 5.2 All windows, doors, and other exterior openings must be flashed in accordance with the applicable code. Horizontal joints between siding must be flashed and sealed in accordance with the manufacturer's instructions.
- 5.3 RISE siding must be installed over a water-resistive barrier in accordance with the applicable code.
- 5.4 RISE siding must be installed only on exterior walls covered by wood structural panel sheathing capable of supporting imposed loads including but not limited to positive and negative transverse wind loads.
- 5.5 RISE siding must be installed on exterior walls braced in accordance with the applicable code.
- 5.6 RISE siding has not been evaluated for use in areas subject to Formosan termite attack.
- 5.7 RISE siding is manufactured in Mankato, Minnesota under a quality control program with inspections by an approved third-party inspection service.

6.0 SUPPORTING EVIDENCE SUBMITTED AND REVIEWED:

- Report of accelerated weathering tests in accordance with ASTM G155, Cycle 1.
- Report of testing of flexural strength and fastener pull-through in accordance with ASTM D1037.
- Report of salt spray resistance in accordance with ASTM B117.
- Report of water resistance in accordance with ASTM D2247.
- Report of self-ignition temperature in accordance with ASTM D1929.
- Report of surface burning testing in accordance with ASTM E84.
- Report of transverse load tests in accordance with ASTM E330.
- ICC-ES Acceptance Criteria for Polymer-Based and Polymer-Modified Exterior and Interior Wall Cladding, AC92.

7.0 WIND RESISTANCE:

RISE siding referenced in this PER are limited to the following design limitations. The allowable wind loads for the RISE siding given in the Tables and the wind load capacity of the underlying wall or substrate, must equal or exceed the design uniform transverse wind loads for the structure and siding determined in accordance with Structural design requirements of the I-Codes. Calculation summary for this PER is provided in the schedule table. Analytic and comparative analysis calculations programmed into software such as Microsoft Excel has been used to derive numeric calculations and results contained in this report.

7.1 Structural Engineering Calculations

Structural engineering calculations have been prepared which evaluates this product based on comparative and/or rational analysis to qualify the following design criteria:

ANSI/ASCE 7-16 and 7-22, "Minimum Design Loads for Building and Other Structures", was used to calculate and verify the wind load design pressures for use with this product as per the IBC-Chapter 16 and IRC. The American Wood Council National Design Specification (NDS) for Wood Construction 2018 Edition has been used to calculate the allowable resistance for mechanical connectors for nails given in the Tables.

APPROVED SOURCE:

I-Codes: Siding materials designed by a Professional Engineer.

DIGITAL SEAL OR ORIGINAL SIGNATURE & RAISED SEAL
REQUIRED TO BE ACCEPTED BY AHJ TO MEET CODE.

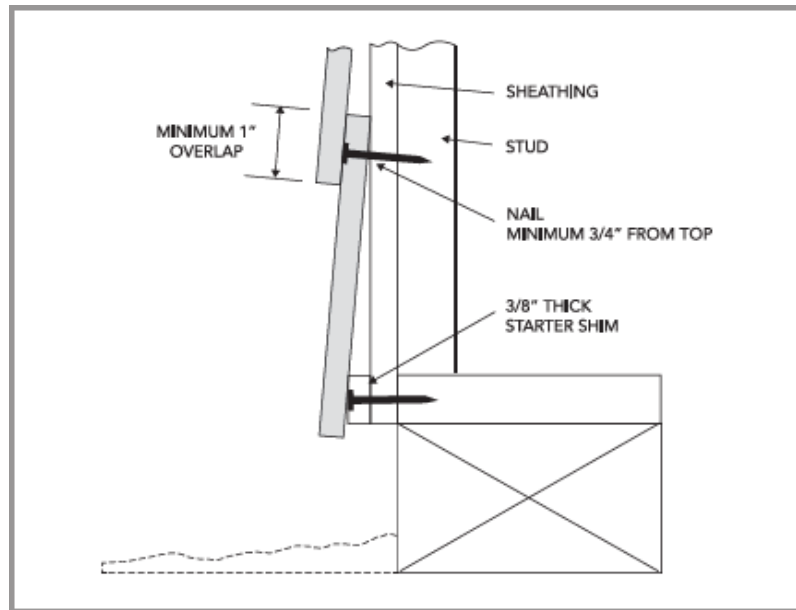
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DATE: 2023.03.22 Date: 2023.03.22
Do Y. Kim, P.E. 17:19:39 -04'00'
Do Kim & Associates, LLC
FL PE #49497 FL CA #26887



This Seal has been digitally signed and sealed by Do Y. Kim on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Siding Installation Type and Fastener Table Location:

- Install per Figure 1.
 - Table 1-Lap Siding, 1 inch nail embedment, $h \leq 15$ feet.....Page 8.
 - Table 2-Lap Siding, 1 inch nail embedment, $h \leq 30$ feet.....Page 9.
 - Table 3-Lap Siding, 1¼ inch nail embedment, $h \leq 15$ feetPage 10.
 - Table 4-Lap Siding, 1¼ inch nail embedment, $h \leq 30$ feetPage 11.
 - Table 5-Lap Siding, 1½ inch nail embedment, $h \leq 15$ feetPage 12.
 - Table 6-Lap Siding, 1½ inch nail embedment, $h \leq 30$ feetPage 13.
- Install per Figure 6.
 - Table 7-Panel Siding Installed Over Wood Structural PanelsPage 14.
- Install per Figures 2, 3, 4, and 5.
 - Table 8-Lap Siding Installed Vertically Board on Board/Batten Over Structural Panels..... Page 15.
- Install per Figure 1.
 - Table 9-Lap Siding Installed Over Wood Structural Panels w/ Ring Shank Nails.....Page 16.
 - Table 10-Lap Siding Installed Over Wood Structural Panels w/ Smooth Shank Nails Page 17.
- Install per Figures 7 & 8.
 - Table 11-Slat Wall Siding Installed Over Wood Structural Panels w/ Smooth Shank Nails, $h \leq 15$ feet..... Page 18.
 - Table 12-Slat Wall Siding Installed Over Wood Structural Panels w/ Smooth Shank Nails, $h \leq 30$ feet..... Page 19.



LAP SIDING INSTALLATION

PRODUCT INSTALLATION:

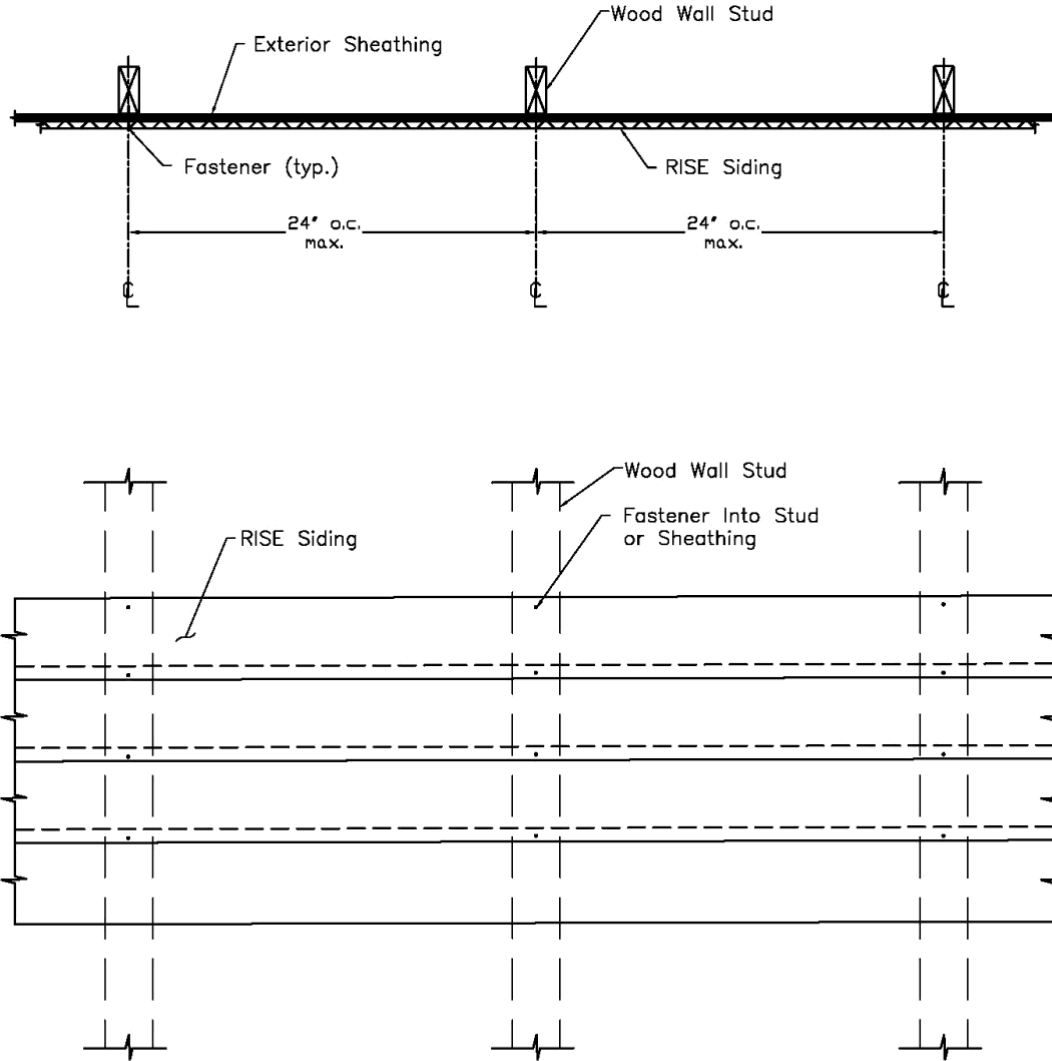


FIGURE 1- LAP SIDING INSTALLATION

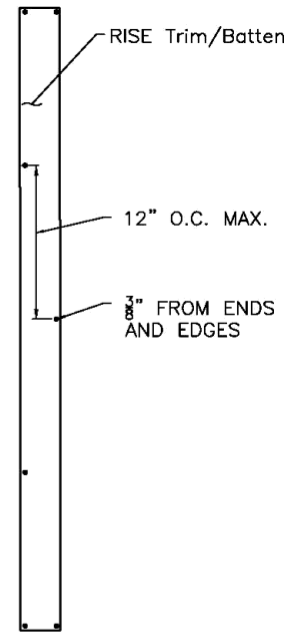
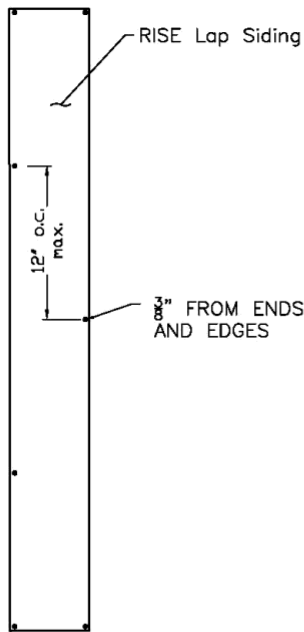
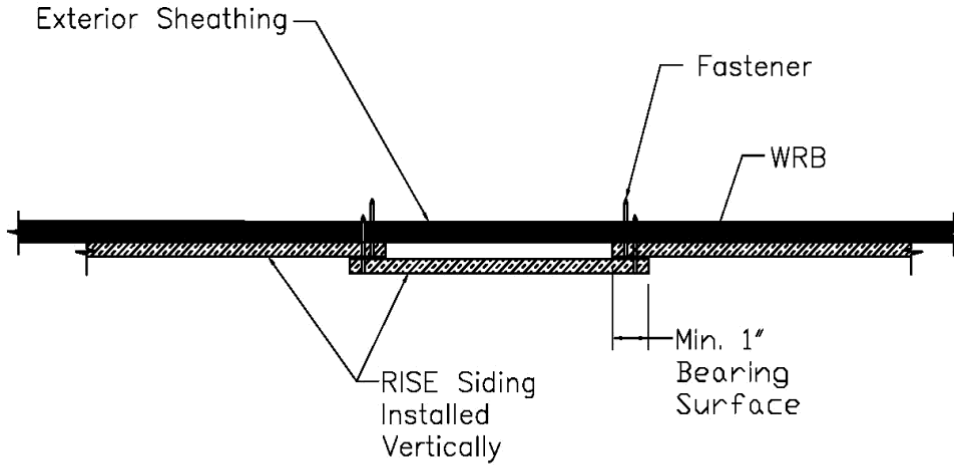
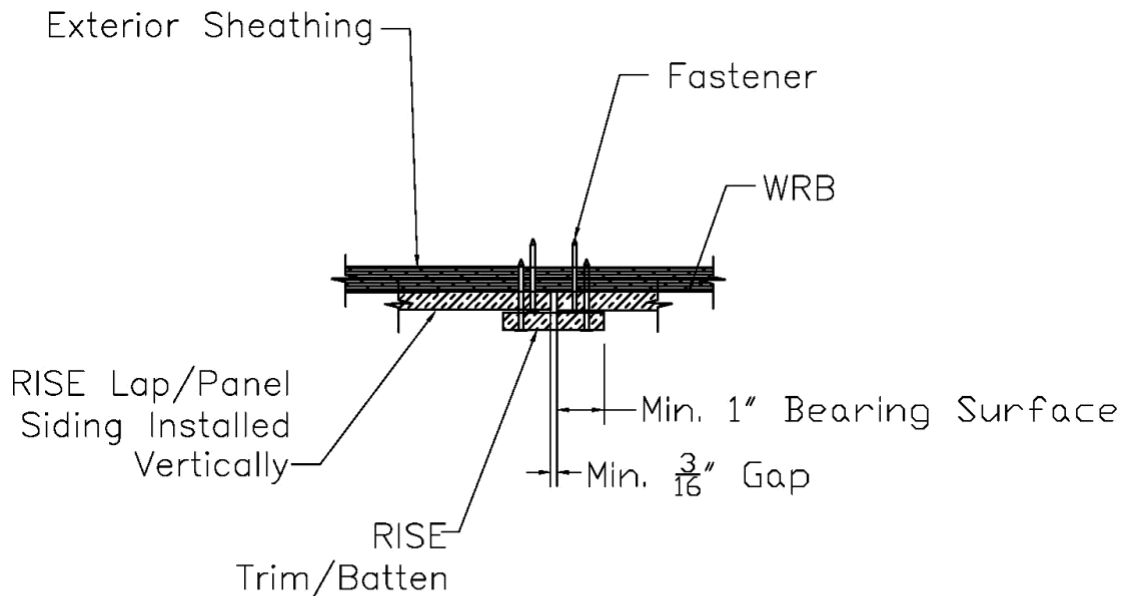


FIGURE 2-LAP SIDING INSTALLED VERTICALLY
OVER WOOD STRUCTURAL PANELS

FIGURE 3-RISE TRIM/BATTEN



**FIGURE 4-BOARD ON BOARD
INSTALLED VERTICALLY**



**FIGURE 5-SIDING TRIM/BATTEN
ATTACHMENT DETAIL**

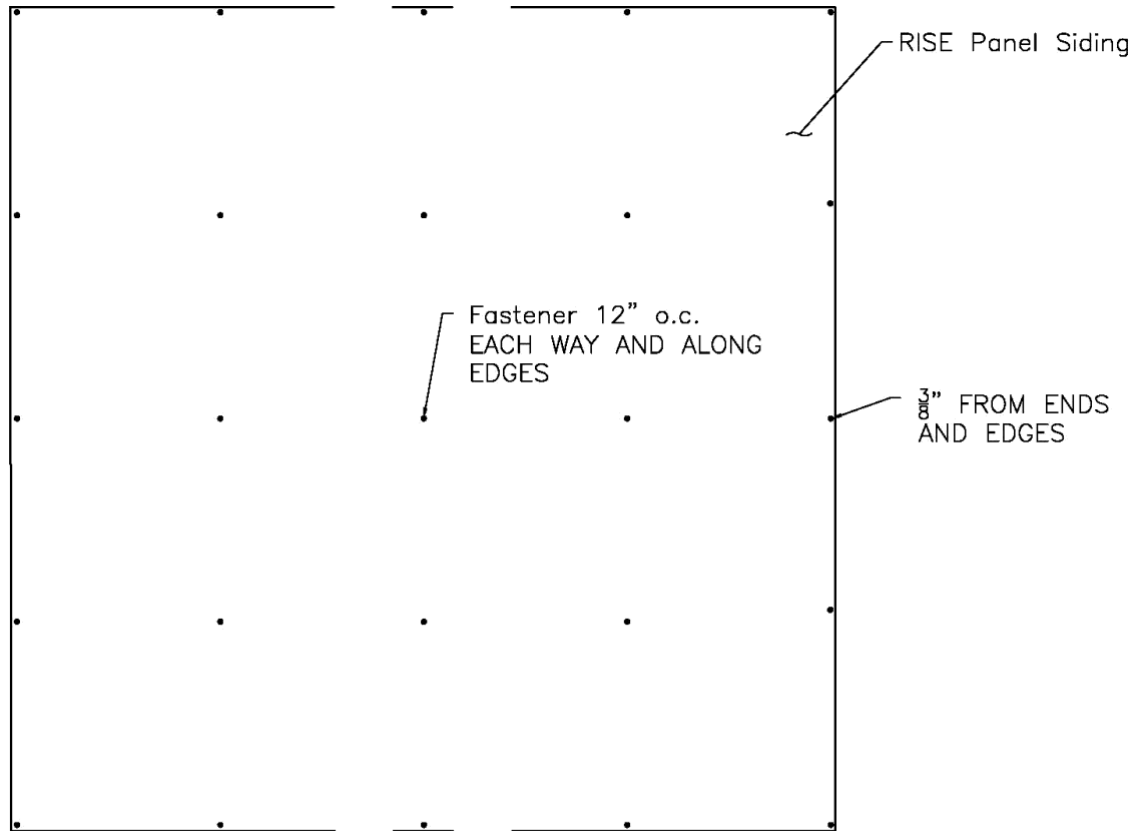
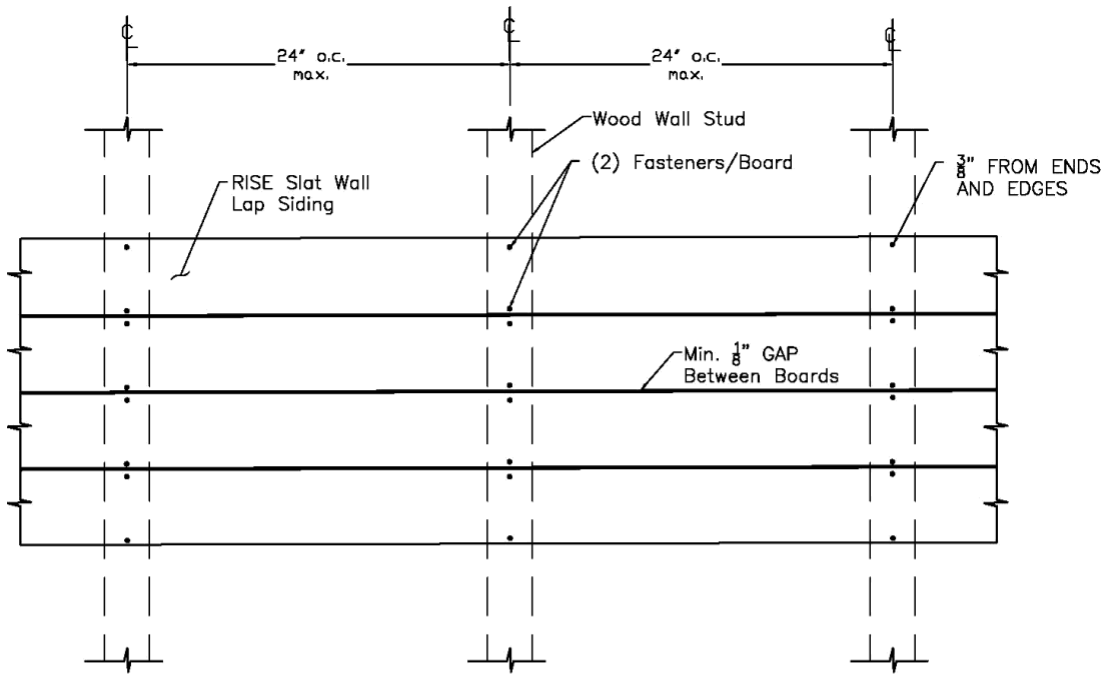
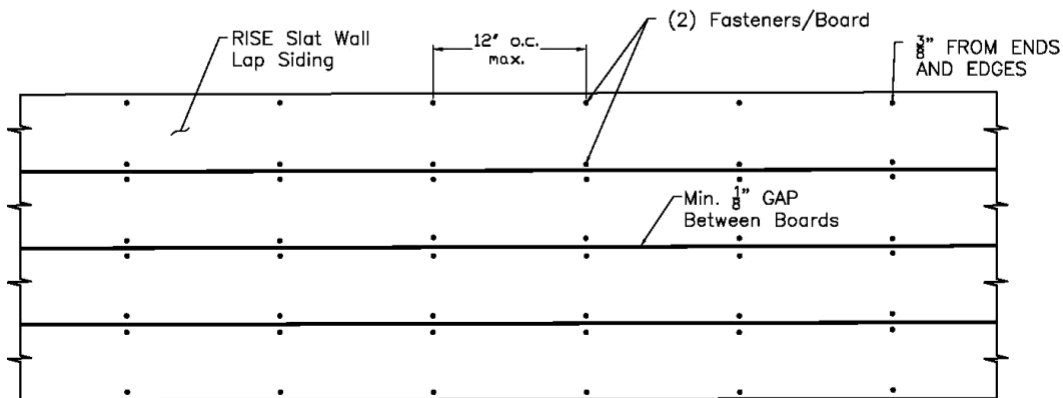


FIGURE 6-PANEL SIDING INSTALLED
OVER WOOD STRUCTURAL PANELS



**FIGURE 7- SLAT WALL LAP SIDING INSTALLATION
OVER WOOD STUDS**



**FIGURE 8- SLAT WALL LAP SIDING INSTALLATION
OVER WOOD STRUCTURAL PANELS**

Table 1.1 – Lap Siding: Maximum Basic (Ultimate, V_{ult}) Wind Speed (mph - 3 second gust) for Allowable Stress Design, $h \leq 15$ feet

Minimum Nail Size ¹ --	Minimum Nominal Siding Thickness (inches)	Support Spacing ² (inches)			Maximum Basic Wind Speed ³ (mph)		
			Siding Width (inches)	Maximum Allowable Wind Pressure (psf) ⁴	Wind Exposure Category		
					B	C	D
0.092" shank dia. x 1" embedment smooth shank	3/8	16	5-1/4	51	200	170	160
			8-1/4	30	150	130	120
		24	5-1/4	34	160	140	130
			8-1/4	20	120	NP	NP

1. Minimum nail head diameter 0.241 inches.
2. Wall studs must have a minimum specific gravity of 0.42 (SPF).
3. Table is based on wind pressure acting toward and away from building surfaces in Zone 5 with smallest effective area per Chapter 30 of ASCE 7-22, Risk Category II. Component & Cladding Height ≤ 15 feet.
4. Allowable Stress Design (ASD) was used for calculation of nail capacities.

Table 1.2 – Lap Siding: Maximum Basic (Ultimate, V_{ult}) Wind Speed (mph - 3 second gust) for Allowable Stress Design, $h \leq 15$ feet

Minimum Nail Size ¹ --	Minimum Nominal Siding Thickness (inches)	Support Spacing ² (inches)			Maximum Basic Wind Speed ³ (mph)		
			Siding Width (inches)	Maximum Allowable Wind Pressure (psf) ⁴	Wind Exposure Category		
					B	C	D
0.113" shank dia. x 1" embedment smooth shank	3/8	16	5-1/4	61	200	190	170
			8-1/4	36	170	140	130
		24	5-1/4	41	180	150	140
			8-1/4	24	140	120	110

1. Minimum nail head diameter is 0.241 inches.
2. Wall studs must have a minimum specific gravity of 0.42 (SPF).
3. Table is based on wind pressure acting toward and away from building surfaces in Zone 5 with smallest effective area per Chapter 30 of ASCE 7-22, Risk Category II. Component & Cladding Height ≤ 15 feet.
4. Allowable Stress Design (ASD) was used for calculation of nail capacities.

Table 1.3 – Lap Siding: Maximum Basic (Ultimate, V_{ult}) Wind Speed (mph - 3 second gust) for Allowable Stress Design, $h \leq 15$ feet

Minimum Nail Size ¹ --	Minimum Nominal Siding Thickness (inches)	Support Spacing ² (inches)			Maximum Basic Wind Speed ³ (mph)		
			Siding Width (inches)	Maximum Allowable Wind Pressure (psf) ⁴	Wind Exposure Category		
					B	C	D
0.120" shank dia. x 1" embedment smooth shank	3/8	16	5-1/4	64	200	190	180
			8-1/4	38	170	150	130
		24	5-1/4	43	190	160	140
			8-1/4	25	140	120	110

1. Minimum nail head diameter is 0.241 inches.
2. Wall studs must have a minimum specific gravity of 0.42 (SPF).
3. Table is based on wind pressure acting toward and away from building surfaces in Zone 5 with smallest effective area per Chapter 30 of ASCE 7-22, Risk Category II. Component & Cladding Height ≤ 15 feet.
4. Allowable Stress Design (ASD) was used for calculation of nail capacities.

Table 2.1 – Lap Siding: Maximum Basic (Ultimate, V_{ult}) Wind Speed (mph - 3 second gust) for Allowable Stress Design, $h \leq 30$ feet

Minimum Nail Size ¹ --	Minimum Nominal Siding Thickness (inches)	Support Spacing ² (inches)			Maximum Basic Wind Speed ³ (mph)		
			Siding Width (inches)	Maximum Allowable Wind Pressure (psf) ⁴	Wind Exposure Category		
					B	C	D
0.092" shank dia. x 1" embedment smooth shank	3/8	16	5-1/4	51	180	150	140
			8-1/4	30	140	120	110
		24	5-1/4	34	150	120	115
			8-1/4	20	115	NP	NP

1. Minimum nail head diameter 0.241 inches.
2. Wall studs must have a minimum specific gravity of 0.42 (SPF).
3. Table is based on wind pressure acting toward and away from building surfaces in Zone 5 with smallest effective area per Chapter 30 of ASCE 7-22, Risk Category II. Component & Cladding Height ≤ 30 feet.
4. Allowable Stress Design (ASD) was used for calculation of nail capacities.

Table 2.2 – Lap Siding: Maximum Basic (Ultimate, V_{ult}) Wind Speed (mph - 3 second gust) for Allowable Stress Design, $h \leq 30$ feet

Minimum Nail Size ¹ --	Minimum Nominal Siding Thickness (inches)	Support Spacing ² (inches)			Maximum Basic Wind Speed ³ (mph)		
			Siding Width (inches)	Maximum Allowable Wind Pressure (psf) ⁴	Wind Exposure Category		
					B	C	D
0.113" shank dia. x 1" embedment smooth shank	3/8	16	5-1/4	61	200	170	150
			8-1/4	36	150	130	120
		24	5-1/4	41	160	140	130
			8-1/4	24	120	NP	NP

1. Minimum nail head diameter is 0.241 inches.
2. Wall studs must have a minimum specific gravity of 0.42 (SPF).
3. Table is based on wind pressure acting toward and away from building surfaces in Zone 5 with smallest effective area per Chapter 30 of ASCE 7-22, Risk Category II. Component & Cladding Height ≤ 30 feet.
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Minimum Nail Size ¹ --	Minimum Nominal Siding Thickness (inches)	Support Spacing ² (inches)			Maximum Basic Wind Speed ³ (mph)		
			Siding Width (inches)	Maximum Allowable Wind Pressure (psf) ⁴	Wind Exposure Category		
					B	C	D
0.120" shank dia. x 1" embedment smooth shank	3/8	16	5-1/4	64	200	170	160
			8-1/4	38	160	130	120
		24	5-1/4	43	170	140	130
			8-1/4	25	130	110	NP

1. Minimum nail head diameter is 0.241 inches.
2. Wall studs must have a minimum specific gravity of 0.42 (SPF).
3. Table is based on wind pressure acting toward and away from building surfaces in Zone 5 with smallest effective area per Chapter 30 of ASCE 7-22, Risk Category II. Component & Cladding Height ≤ 30 feet.
4. Allowable Stress Design (ASD) was used for calculation of nail capacities.

Table 3.1 – Lap Siding: Maximum Basic (Ultimate, V_{ult}) Wind Speed (mph - 3 second gust) for Allowable Stress Design, $h \leq 15$ feet

Minimum Nail Size ¹ --	Minimum Nominal Siding Thickness (inches)	Support Spacing ² (inches)			Maximum Basic Wind Speed ³ (mph)		
			Siding Width (inches)	Maximum Allowable Wind Pressure (psf) ⁴	Wind Exposure Category		
B	C	D					
0.092" shank dia. x 1.25" embedment smooth shank	3/8	16	5-1/4	64	200	190	180
			8-1/4	37	170	150	130
		24	5-1/4	42	180	160	140
			8-1/4	25	140	120	110

1. Minimum nail head diameter 0.241 inches.
2. Wall studs must have a minimum specific gravity of 0.42 (SPF).
3. Table is based on wind pressure acting toward and away from building surfaces in Zone 5 with smallest effective area per Chapter 30 of ASCE 7-22, Risk Category II. Component & Cladding Height ≤ 15 feet.
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Table 3.2 – Lap Siding: Maximum Basic (Ultimate, V_{ult}) Wind Speed (mph - 3 second gust) for Allowable Stress Design, $h \leq 15$ feet

Minimum Nail Size ¹ --	Minimum Nominal Siding Thickness (inches)	Support Spacing ² (inches)			Maximum Basic Wind Speed ³ (mph)		
			Siding Width (inches)	Maximum Allowable Wind Pressure (psf) ⁴	Wind Exposure Category		
B	C	D					
0.113" shank dia. x 1.25" embedment smooth shank	3/8	16	5-1/4	76	200	200	190
			8-1/4	45	190	160	150
		24	5-1/4	51	200	170	160
			8-1/4	30	150	130	120

1. Minimum nail head diameter is 0.241 inches.
2. Wall studs must have a minimum specific gravity of 0.42 (SPF).
3. Table is based on wind pressure acting toward and away from building surfaces in Zone 5 with smallest effective area per Chapter 30 of ASCE 7-22, Risk Category II. Component & Cladding Height ≤ 15 feet.
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			Siding Width (inches)	Maximum Allowable Wind Pressure (psf) ⁴	Wind Exposure Category		
B	C	D					
0.120" shank dia. x 1.25" embedment smooth shank	3/8	16	5-1/4	80	200	200	200
			8-1/4	47	200	160	150
		24	5-1/4	54	200	180	160
			8-1/4	31	160	130	120

1. Minimum nail head diameter is 0.241 inches.
2. Wall studs must have a minimum specific gravity of 0.42 (SPF).
3. Table is based on wind pressure acting toward and away from building surfaces in Zone 5 with smallest effective area per Chapter 30 of ASCE 7-22, Risk Category II. Component & Cladding Height ≤ 15 feet.
4. Allowable Stress Design (ASD) was used for calculation of nail capacities.

Table 4.1 – Lap Siding: Maximum Basic (Ultimate, V_{ult}) Wind Speed (mph - 3 second gust) for Allowable Stress Design, $h \leq 30$ feet

Minimum Nail Size ¹ --	Minimum Nominal Siding Thickness (inches)	Support Spacing ² (inches)			Maximum Basic Wind Speed ³ (mph)		
			Siding Width (inches)	Maximum Allowable Wind Pressure (psf) ⁴	Wind Exposure Category		
		B			C	D	
0.092" shank dia. x 1.25" embedment smooth shank	3/8	16	5-1/4	64	200	170	160
			8-1/4	37	160	130	120
		24	5-1/4	42	170	140	130
			8-1/4	25	130	110	NP

1. Minimum nail head diameter 0.241 inches.
2. Wall studs must have a minimum specific gravity of 0.42 (SPF).
3. Table is based on wind pressure acting toward and away from building surfaces in Zone 5 with smallest effective area per Chapter 30 of ASCE 7-22, Risk Category II. Component & Cladding Height ≤ 30 feet.
4. Allowable Stress Design (ASD) was used for calculation of nail capacities.

Table 4.2 – Lap Siding: Maximum Basic (Ultimate, V_{ult}) Wind Speed (mph - 3 second gust) for Allowable Stress Design, $h \leq 30$ feet

Minimum Nail Size ¹ --	Minimum Nominal Siding Thickness (inches)	Support Spacing ² (inches)			Maximum Basic Wind Speed ³ (mph)		
			Siding Width (inches)	Maximum Allowable Wind Pressure (psf) ⁴	Wind Exposure Category		
		B			C	D	
0.113" shank dia. x 1.25" embedment smooth shank	3/8	16	5-1/4	76	200	190	170
			8-1/4	45	170	140	130
		24	5-1/4	51	180	150	140
			8-1/4	30	140	120	110

1. Minimum nail head diameter is 0.241 inches.
2. Wall studs must have a minimum specific gravity of 0.42 (SPF).
3. Table is based on wind pressure acting toward and away from building surfaces in Zone 5 with smallest effective area per Chapter 30 of ASCE 7-22, Risk Category II. Component & Cladding Height ≤ 30 feet.
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			Siding Width (inches)	Maximum Allowable Wind Pressure (psf) ⁴	Wind Exposure Category		
		B			C	D	
0.120" shank dia. x 1.25" embedment smooth shank	3/8	16	5-1/4	80	200	190	180
			8-1/4	47	180	150	140
		24	5-1/4	54	190	160	140
			8-1/4	31	140	120	110

1. Minimum nail head diameter is 0.241 inches.
2. Wall studs must have a minimum specific gravity of 0.42 (SPF).
3. Table is based on wind pressure acting toward and away from building surfaces in Zone 5 with smallest effective area per Chapter 30 of ASCE 7-22, Risk Category II. Component & Cladding Height ≤ 30 feet.
4. Allowable Stress Design (ASD) was used for calculation of nail capacities.

Table 5.1 - Lap Siding: Maximum Basic (Ultimate, V_{ult}) Wind Speed (mph - 3 second gust) for Allowable Stress Design, $h \leq 15$ feet

Minimum Nail Size ¹ --	Minimum Nominal Siding Thickness (inches)	Support Spacing ² (inches)			Maximum Basic Wind Speed ³ (mph)		
			Siding Width (inches)	Maximum Allowable Wind Pressure (psf) ⁴	Wind Exposure Category		
B	C	D					
0.092" shank dia. x 1.5" embedment smooth shank	3/8	16	5-1/4	76	200	200	190
			8-1/4	45	190	160	150
		24	5-1/4	51	200	170	160
			8-1/4	30	150	130	120

1. Minimum nail head diameter 0.241 inches.
2. Wall studs must have a minimum specific gravity of 0.42 (SPF).
3. Table is based on wind pressure acting toward and away from building surfaces in Zone 5 with smallest effective area per Chapter 30 of ASCE 7-22, Risk Category II. Component & Cladding Height ≤ 15 feet.
4. Allowable Stress Design (ASD) was used for calculation of nail capacities.

Table 5.2 - Lap Siding: Maximum Basic (Ultimate, V_{ult}) Wind Speed (mph - 3 second gust) for Allowable Stress Design, $h \leq 15$ feet

Minimum Nail Size ¹ --	Minimum Nominal Siding Thickness (inches)	Support Spacing ² (inches)			Maximum Basic Wind Speed ³ (mph)		
			Siding Width (inches)	Maximum Allowable Wind Pressure (psf) ⁴	Wind Exposure Category		
B	C	D					
0.113" shank dia. x 1.5" embedment smooth shank	3/8	16	5-1/4	91	200	200	200
			8-1/4	54	200	180	160
		24	5-1/4	61	200	190	170
			8-1/4	36	170	140	130

1. Minimum nail head diameter is 0.241 inches.
2. Wall studs must have a minimum specific gravity of 0.42 (SPF).
3. Table is based on wind pressure acting toward and away from building surfaces in Zone 5 with smallest effective area per Chapter 30 of ASCE 7-22, Risk Category II. Component & Cladding Height ≤ 15 feet.
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Minimum Nail Size ¹ --	Minimum Nominal Siding Thickness (inches)	Support Spacing ² (inches)			Maximum Basic Wind Speed ³ (mph)		
			Siding Width (inches)	Maximum Allowable Wind Pressure (psf) ⁴	Wind Exposure Category		
B	C	D					
0.120" shank dia. x 1.5" embedment smooth shank	3/8	16	5-1/4	97	200	200	200
			8-1/4	57	200	180	170
		24	5-1/4	64	200	190	180
			8-1/4	38	170	150	130

1. Minimum nail head diameter is 0.241 inches.
2. Wall studs must have a minimum specific gravity of 0.42 (SPF).
3. Table is based on wind pressure acting toward and away from building surfaces in Zone 5 with smallest effective area per Chapter 30 of ASCE 7-22, Risk Category II. Component & Cladding Height ≤ 15 feet.
4. Allowable Stress Design (ASD) was used for calculation of nail capacities.

Table 6.1 - Lap Siding: Maximum Basic (Ultimate, V_{ult}) Wind Speed (mph - 3 second gust) for Allowable Stress Design, $h \leq 30$ feet

Minimum Nail Size ¹ --	Minimum Nominal Siding Thickness (inches)	Support Spacing ² (inches)			Maximum Basic Wind Speed ³ (mph)		
			Siding Width (inches)	Maximum Allowable Wind Pressure (psf) ⁴	Wind Exposure Category		
					B	C	D
0.092" shank dia. x 1.5" embedment smooth shank	3/8	16	5-1/4	76	200	190	170
			8-1/4	45	170	140	130
		24	5-1/4	51	180	150	140
			8-1/4	30	140	120	110

1. Minimum nail head diameter 0.241 inches.
2. Wall studs must have a minimum specific gravity of 0.42 (SPF).
3. Table is based on wind pressure acting toward and away from building surfaces in Zone 5 with smallest effective area per Chapter 30 of ASCE 7-22, Risk Category II. Component & Cladding Height ≤ 30 feet.
4. Allowable Stress Design (ASD) was used for calculation of nail capacities.

Table 6.2 - Lap Siding: Maximum Basic (Ultimate, V_{ult}) Wind Speed (mph - 3 second gust) for Allowable Stress Design, $h \leq 30$ feet

Minimum Nail Size ¹ --	Minimum Nominal Siding Thickness (inches)	Support Spacing ² (inches)			Maximum Basic Wind Speed ³ (mph)		
			Siding Width (inches)	Maximum Allowable Wind Pressure (psf) ⁴	Wind Exposure Category		
					B	C	D
0.113" shank dia. x 1.5" embedment smooth shank	3/8	16	5-1/4	91	200	200	190
			8-1/4	54	190	160	140
		24	5-1/4	61	200	170	150
			8-1/4	36	150	130	120

1. Minimum nail head diameter is 0.241 inches.
2. Wall studs must have a minimum specific gravity of 0.42 (SPF).
3. Table is based on wind pressure acting toward and away from building surfaces in Zone 5 with smallest effective area per Chapter 30 of ASCE 7-22, Risk Category II. Component & Cladding Height ≤ 30 feet.
4. Allowable Stress Design (ASD) was used for calculation of nail capacities.

Table 6.3 - Lap Siding: Maximum Basic (Ultimate, V_{ult}) Wind Speed (mph - 3 second gust) for Allowable Stress Design, $h \leq 30$ feet

Minimum Nail Size ¹ --	Minimum Nominal Siding Thickness (inches)	Support Spacing ² (inches)			Maximum Basic Wind Speed ³ (mph)		
			Siding Width (inches)	Maximum Allowable Wind Pressure (psf) ⁴	Wind Exposure Category		
					B	C	D
0.120" shank dia. x 1.5" embedment smooth shank	3/8	16	5-1/4	97	200	200	200
			8-1/4	57	190	160	150
		24	5-1/4	64	200	170	160
			8-1/4	38	160	130	120

1. Minimum nail head diameter is 0.241 inches.
2. Wall studs must have a minimum specific gravity of 0.42 (SPF).
3. Table is based on wind pressure acting toward and away from building surfaces in Zone 5 with smallest effective area per Chapter 30 of ASCE 7-22, Risk Category II. Component & Cladding Height ≤ 30 feet.
4. Allowable Stress Design (ASD) was used for calculation of nail capacities.

Table 7.1 -- Panel Siding Installed Horizontally or Vertically Over Wood Structural Panels
Maximum Basic (Ultimate, V_{ult}) Wind Speed (mph - 3 second gust) for Allowable Stress Design, $h \leq 15$ feet

Minimum Nail Size ² --	Minimum Nominal Siding Thickness (inches)	Support Spacing ⁵ (inches)	Siding Width (inches)	Maximum Allowable Wind Pressure (psf) ⁴	Maximum Basic Wind Speed ³ (mph)		
					Wind Exposure Category		
					B	C	D
0.092" ring shank dia.	3/8	12	48 max.	36	170	140	130

- Siding shall be installed over 7/16 Performance Category wood structural sheathing meeting DOC PS 1 or DOC PS 2 requirements.
- Nails shall be hot dipped galvanized ring shank, carbon steel nails with a minimum shank of 0.092 inch and shall fully penetrate wood structural panel wall sheathing.
- Table is based on wind pressure acting toward and away from building surfaces in Zone 5 with smallest effective area per Chapter 30 of ASCE 7-22, Risk Category II. Component & Cladding Height ≤ 15 feet.
- Allowable Stress Design (ASD) was used for calculation of nail capacities.
- Nails shall be spaced a maximum of 12 inches o.c. along edges and in the field of each panel.

Table 7.2 -- Panel Siding Installed Horizontally or Vertically Over Wood Structural Panels
Maximum Basic (Ultimate, V_{ult}) Wind Speed (mph - 3 second gust) for Allowable Stress Design, $h \leq 30$ feet

Minimum Nail Size ² --	Minimum Nominal Siding Thickness (inches)	Support Spacing ⁵ (inches)	Siding Width (inches)	Maximum Allowable Wind Pressure (psf) ⁴	Maximum Basic Wind Speed ³ (mph)		
					Wind Exposure Category		
					B	C	D
0.092" ring shank dia.	3/8	12	48 max.	36	150	130	120

- Siding shall be installed over 7/16 Performance Category wood structural sheathing meeting DOC PS 1 or DOC PS 2 requirements.
- Nails shall be hot dipped galvanized ring shank, carbon steel nails with a minimum shank of 0.092 inch and shall fully penetrate wood structural panel wall sheathing.
- Table is based on wind pressure acting toward and away from building surfaces in Zone 5 with smallest effective area per Chapter 30 of ASCE 7-22, Risk Category II. Component & Cladding Height ≤ 30 feet.
- Allowable Stress Design (ASD) was used for calculation of nail capacities.
- Nails shall be spaced a maximum of 12 inches o.c. along edges and in the field of each panel.

Table 8.1 -- Vertical Lap Siding or Lap Siding Installed Vertically Over Wood Structural Panels
Maximum Basic (Ultimate, V_{ult}) Wind Speed (mph - 3 second gust) for Allowable Stress Design, $h \leq 15$ feet

Minimum Nail Size ² --	Minimum Nominal Siding Thickness (inches)	Support Spacing ⁵ (inches)	Siding Width (inches)	Maximum Allowable Wind Pressure (psf) ⁴	Maximum Basic Wind Speed ³ (mph)		
					Wind Exposure Category		
					B	C	D
0.092" ring shank dia.	3/8	12	5-1/4	103	200	200	200
			8-1/4	60	200	190	170

- Siding shall be installed over 7/16 Performance Category wood structural sheathing meeting DOC PS 1 or DOC PS 2 requirements.
- Nails shall be hot dipped galvanized ring shank, carbon steel nails with a minimum shank of 0.092 inch and shall fully penetrate wood structural panel wall sheathing.
- Table is based on wind pressure acting toward and away from building surfaces in Zone 5 with smallest effective area per Chapter 30 of ASCE 7-22, Risk Category II. Component & Cladding Height ≤ 15 feet.
- Allowable Stress Design (ASD) was used for calculation of nail capacities.
- Nails shall be spaced a maximum of 12 inches o.c. along alternating edges of the length of the siding and at each end of both edges.

Table 8.2 -- Vertical Lap Siding or Lap Siding Installed Vertically Over Wood Structural Panels
Maximum Basic (Ultimate, V_{ult}) Wind Speed (mph - 3 second gust) for Allowable Stress Design, $h \leq 30$ feet

Minimum Nail Size ² --	Minimum Nominal Siding Thickness (inches)	Support Spacing ⁵ (inches)	Siding Width (inches)	Maximum Allowable Wind Pressure (psf) ⁴	Maximum Basic Wind Speed ³ (mph)		
					Wind Exposure Category		
					B	C	D
0.092" ring shank dia.	3/8	12	5-1/4	103	200	200	200
			8-1/4	60	200	170	150

- Siding shall be installed over 7/16 Performance Category wood structural sheathing meeting DOC PS 1 or DOC PS 2 requirements.
- Nails shall be hot dipped galvanized ring shank, carbon steel nails with a minimum shank of 0.092 inch and shall fully penetrate wood structural panel wall sheathing.
- Table is based on wind pressure acting toward and away from building surfaces in Zone 5 with smallest effective area per Chapter 30 of ASCE 7-22, Risk Category II. Component & Cladding Height ≤ 30 feet.
- Allowable Stress Design (ASD) was used for calculation of nail capacities.
- Nails shall be spaced a maximum of 12 inches o.c. along alternating edges of the length of the siding and at each end of both edges.

Table 9.1 -- Lap Siding Installed Over Wood Structural Panels
Maximum Basic (Ultimate, V_{ult}) Wind Speed (mph - 3 second gust) for Allowable Stress Design, $h \leq 15$ feet

Minimum Nail Size ² --	Minimum Nominal Siding Thickness (inches)	Support Spacing ⁵ (inches)	Siding Width (inches)	Maximum Allowable Wind Pressure (psf) ⁴	Maximum Basic Wind Speed ³ (mph)		
					Wind Exposure Category		
					B	C	D
0.092" ring shank dia.	3/8	12	5-1/4	103	200	200	200
			8-1/4	60	200	190	170

- Siding shall be installed over 7/16 Performance Category wood structural sheathing meeting DOC PS 1 or DOC PS 2 requirements.
- Nails shall be hot dipped galvanized ring shank, carbon steel nails with a minimum shank of 0.092 inch and shall fully penetrate wood structural panel wall sheathing.
- Table is based on wind pressure acting toward and away from building surfaces in Zone 5 with smallest effective area per Chapter 30 of ASCE 7-22, Risk Category II. Component & Cladding Height ≤ 15 feet.
- Allowable Stress Design (ASD) was used for calculation of nail capacities.
- Nails shall be spaced a maximum of 12 inches o.c. along the upper edge the length of the siding.

Table 9.2 -- Lap Siding Installed Over Wood Structural Panels
Maximum Basic (Ultimate, V_{ult}) Wind Speed (mph - 3 second gust) for Allowable Stress Design, $h \leq 30$ feet

Minimum Nail Size ² --	Minimum Nominal Siding Thickness (inches)	Support Spacing ⁵ (inches)	Siding Width (inches)	Maximum Allowable Wind Pressure (psf) ⁴	Maximum Basic Wind Speed ³ (mph)		
					Wind Exposure Category		
					B	C	D
0.092" ring shank dia.	3/8	12	5-1/4	103	200	200	200
			8-1/4	60	200	170	150

- Siding shall be installed over 7/16 Performance Category wood structural sheathing meeting DOC PS 1 or DOC PS 2 requirements.
- Nails shall be hot dipped galvanized ring shank, carbon steel nails with a minimum shank of 0.092 inch and shall fully penetrate wood structural panel wall sheathing.
- Table is based on wind pressure acting toward and away from building surfaces in Zone 5 with smallest effective area per Chapter 30 of ASCE 7-22, Risk Category II. Component & Cladding Height ≤ 30 feet.
- Allowable Stress Design (ASD) was used for calculation of nail capacities.
- Nails shall be spaced a maximum of 12 inches o.c. along the upper edge the length of the siding.

Table 10.1 -- Lap Siding Installed Over Wood Structural Panels
Maximum Basic (Ultimate, V_{ult}) Wind Speed (mph - 3 second gust) for Allowable Stress Design, $h \leq 15$ feet

Minimum Nail Size ² --	Minimum Nominal Siding Thickness (inches)	Support Spacing ⁵ (inches)	Siding Width (inches)	Maximum Allowable Wind Pressure (psf) ⁴	Maximum Basic Wind Speed ³ (mph)		
					Wind Exposure Category		
					B	C	D
0.092" smooth shank dia.	3/8	12	5-1/4	26	140	120	110
			8-1/4	15	110	NP	NP

- Siding shall be installed over 7/16 Performance Category wood structural sheathing meeting DOC PS 1 or DOC PS 2 requirements.
- Nails shall be hot dipped galvanized smooth shank, carbon steel nails with a minimum shank of 0.092 inch and shall fully penetrate wood structural panel wall sheathing.
- Table is based on wind pressure acting toward and away from building surfaces in Zone 5 with smallest effective area per Chapter 30 of ASCE 7-22, Risk Category II. Component & Cladding Height ≤ 15 feet.
- Allowable Stress Design (ASD) was used for calculation of nail capacities.
- Nails shall be spaced a maximum of 12 inches o.c. along the upper edge the length of the siding.

Table 10.2 -- Lap Siding Installed Over Wood Structural Panels
Maximum Basic (Ultimate, V_{ult}) Wind Speed (mph - 3 second gust) for Allowable Stress Design, $h \leq 30$ feet

Minimum Nail Size ² --	Minimum Nominal Siding Thickness (inches)	Support Spacing ⁵ (inches)	Siding Width (inches)	Maximum Allowable Wind Pressure (psf) ⁴	Maximum Basic Wind Speed ³ (mph)		
					Wind Exposure Category		
					B	C	D
0.092" smooth shank dia.	3/8	12	5-1/4	26	130	110	NP
			8-1/4	15	NP	NP	NP

- Siding shall be installed over 7/16 Performance Category wood structural sheathing meeting DOC PS 1 or DOC PS 2 requirements.
- Nails shall be hot dipped galvanized smooth shank, carbon steel nails with a minimum shank of 0.092 inch and shall fully penetrate wood structural panel wall sheathing.
- Table is based on wind pressure acting toward and away from building surfaces in Zone 5 with smallest effective area per Chapter 30 of ASCE 7-22, Risk Category II. Component & Cladding Height ≤ 30 feet.
- Allowable Stress Design (ASD) was used for calculation of nail capacities.
- Nails shall be spaced a maximum of 12 inches o.c. along the upper edge the length of the siding.

Table 11.1 -- Slat Wall Siding Application Over Structural Wood Panels
Maximum Basic (Ultimate, V_{ult}) Wind Speed (mph - 3 second gust) for Allowable Stress Design, $h \leq 15$ feet

Minimum Nail Size ² --	Minimum Nominal Siding Thickness (inches)	Support Spacing ⁵ (inches)			Maximum Basic Wind Speed ³ (mph)		
			Siding Width (inches)	Maximum Allowable Wind Pressure (psf) ⁴	Wind Exposure Category		
		B			C	D	
0.092" smooth shank dia.	3/8	12	5-1/4	42	180	150	140
			8-1/4	26	150	120	115

- Siding shall be installed over 7/16 Performance Category wood structural sheathing meeting DOC PS 1 or DOC PS 2 requirements.
- Nails shall be hot dipped galvanized smooth shank, carbon steel nails with a minimum shank of 0.092 inch and shall fully penetrate wood structural panel wall sheathing.
- Table is based on wind pressure acting toward and away from building surfaces in Zone 5 with smallest effective area per Chapter 30 of ASCE 7-22, Risk Category II. Component & Cladding Height ≤ 15 feet.
- Allowable Stress Design (ASD) was used for calculation of nail capacities.
- Two nails (one each edge) shall be spaced a maximum of 12 inches o.c. along the length of the siding.

Table 11.2 -- Slat Wall Siding Application
Maximum Basic (Ultimate, V_{ult}) Wind Speed (mph - 3 second gust) for Allowable Stress Design, $h \leq 15$ feet

Minimum Nail Size ¹ --	Minimum Nominal Siding Thickness (inches)	Support Spacing ⁵ (inches)			Maximum Basic Wind Speed ³ (mph)		
			Siding Width (inches)	Maximum Allowable Wind Pressure (psf) ⁴	Wind Exposure Category		
		B			C	D	
0.092" shank dia. x 1" embedment smooth shank	3/8	16	5-1/4	82	200	200	200
			8-1/4	52	200	170	160
		24	5-1/4	55	200	180	160
			8-1/4	35	170	140	130

- Nails shall be hot dipped galvanized smooth shank, carbon steel nails with a minimum shank of 0.092 inch and shall have 1 inch minimum embedment into wall studs.
- Wall studs must have a minimum specific gravity of 0.42 (SPF).
- Table is based on wind pressure acting toward and away from building surfaces in Zone 5 with smallest effective area per Chapter 30 of ASCE 7-22, Risk Category II. Component & Cladding Height ≤ 15 feet.
- Allowable Stress Design (ASD) was used for calculation of siding of nail capacities.
- Two nails (one each edge) along the length of the siding.

Table 12.1 -- Slat Wall Siding Application Over Structural Wood Panels
Maximum Basic (Ultimate, V_{ult}) Wind Speed (mph - 3 second gust) for Allowable Stress Design, $h \leq 30$ feet

Minimum Nail Size ² --	Minimum Nominal Siding Thickness (inches)	Support Spacing ⁵ (inches)			Maximum Basic Wind Speed ³ (mph)		
			Siding Width (inches)	Maximum Allowable Wind Pressure (psf) ⁴	Wind Exposure Category		
		B			C	D	
0.092" smooth shank dia.	3/8	12	5-1/4	42	160	140	130
			8-1/4	26	130	110	NP

- Siding shall be installed over 7/16 Performance Category wood structural sheathing meeting DOC PS 1 or DOC PS 2 requirements.
- Nails shall be hot dipped galvanized smooth shank, carbon steel nails with a minimum shank of 0.092 inch and shall fully penetrate wood structural panel wall sheathing.
- Table is based on wind pressure acting toward and away from building surfaces in Zone 5 with smallest effective area per Chapter 30 of ASCE 7-22, Risk Category II. Component & Cladding Height ≤ 30 feet.
- Allowable Stress Design (ASD) was used for calculation of nail capacities.
- Two nails (one each edge) shall be spaced a maximum of 12 inches o.c. along the length of the siding.

Table 12.2 -- Slat Wall Siding Application
Maximum Basic (Ultimate, V_{ult}) Wind Speed (mph - 3 second gust) for Allowable Stress Design, $h \leq 30$ feet

Minimum Nail Size ¹ --	Minimum Nominal Siding Thickness (inches)	Support Spacing ⁵ (inches)			Maximum Basic Wind Speed ³ (mph)		
			Siding Width (inches)	Maximum Allowable Wind Pressure (psf) ⁴	Wind Exposure Category		
		B			C	D	
0.092" shank dia. x 1" embedment smooth shank	3/8	16	5-1/4	82	200	200	180
			8-1/4	52	190	160	140
		24	5-1/4	55	190	160	150
			8-1/4	35	150	130	120

- Nails shall be hot dipped galvanized smooth shank, carbon steel nails with a minimum shank of 0.092 inch and shall have 1 inch minimum embedment into wall studs.
- Wall studs must have a minimum specific gravity of 0.42 (SPF).
- Table is based on wind pressure acting toward and away from building surfaces in Zone 5 with smallest effective area per Chapter 30 of ASCE 7-22, Risk Category II. Component & Cladding Height ≤ 30 feet.
- Allowable Stress Design (ASD) was used for calculation of siding of nail capacities.
- Two nails (one each edge) along the length of the siding.

General Notes:

- This product or system has **NOT** been tested or approved for any missile impact resistance.
- The system and its product components shall be installed in strict compliance with this Product Evaluation Report (PER) and manufacturer's specifications and recommended installation instructions.
- Products and components shall be of specified items in this PER. Substitutions shall be only allowed if reviewed and approved by a licensed engineer or architect. Approved equivalent anchors and products shall be the responsibility of the approving entity.
