City of Foster City

ESTERO MUNICIPAL IMPROVEMENT DISTRICT

610 FOSTER CITY BOULEVARD
FOSTER CITY, CA 94404-2222

PROTOTYPE

CITY OF FOSTER CITY
COMMUNITY DEVELOPMENT DIRECTOR'S ACTION
NOTICE OF DECISION

APPLICATION RECEIVED:	October 12, 2016
APPLICATION COMPLETE:	November 8, 2016
ACTION DATE:	November 15, 2016
CASE NO:	UP-76-007X
OWNER:	Plum Island Homeowners' Association, Attn: David Cunningham, HOA Treasurer
ADDRESS:	825 Grenada Lane, Foster City, CA 94404
APPLICATION FOR:	Amend exterior siding replacement prototype to add two color options
LOCATION:	Plum Island Homeowners Association
ZONING:	R-1/PD (Single Family Residence / Planned Development District)
CEQA DETERMINATION:	Existing Facilities (Class 1, Section 15301)
ACTION TAKEN:	Approved with Conditions

FOSTER CITY
RECEIVED
NOV 16 2016
PLANNING/
CODE ENFORCEMENT

On the date listed above, the Community Development Director of the City of Foster City took the action described above on the subject Use Permit Modification application based on the following findings:

1. The proposal to amend an established prototype for the replacement of exterior siding for homes in the Plum Island Planned Development, as conditioned in Exhibit A, would be consistent with the Foster City General Plan, Chapter 17.12 (R-1 Single-Family Residence District) of Title 17 (Zoning), and Chapter 2.28 (Planning) of Title 2 (Administration and Personnel) of the Foster City Municipal Code, because allowing homes to use LP SmartSide Deep Grain Collection horizontal siding in the Cedar and Yellowstone colors: 1) will be sympathetic to the character and style of the existing homes in the Plum Island Planned Development and will be designed to be harmonious with the existing neighborhood in that the proposed siding will be compatible in appearance including but not limited to color, grain and material with the existing exterior siding and therefore, will promote "proper site planning, architectural design and property maintenance" and will preserve "the quality of the City's residential neighborhoods" as stated in the Land Use and Circulation Goals (LUC-A and LUC-B) and Land Use Policies (LUC-38 and LUC-39) contained in the Land Use and Circulation Element of the Foster City General Plan; 2) will be integrated into the existing buildings such that

the architectural character of the houses and development is maintained and such that solar and privacy impacts will not be created on adjacent properties, consistent with Section 2.28.010 of the Foster City Municipal Code; and 3) will improve a typical residential use consistent with the Land Use Plan designation of Single-Family Residential.

2. That the proposed siding colors would be consistent with and appropriate to the City, the neighborhood, and the Plum Island Planned Development because the "Cedar" and "Yellowstone" colors will be compatible with the existing houses in the Plum Island Planned Development in which it is located and will allow flexibility for homeowners to choose from a variety of siding materials and colors.

3. That the design of the proposal would be compatible with the site's environment with respect to use, forms, materials, colors, location, height, design or similar qualities as specified in Section 17.58.010 of Chapter 17.58 (Architectural Control and Supervision) because amending the exterior siding prototype to allow "Cedar" and "Yellowstone" colored LP SmartSide Deep Grain Collection horizontal lap siding: 1) will be compatible with the existing houses in the Plum Island Planned Development, and therefore, will preserve the architectural scale and character of the planned development and community consistent with Section 17.58.010.B.1; 2) will be well designed in relation to surrounding properties, and therefore, will be compatible with the architectural style and details of buildings in the immediate vicinity consistent with Section 17.58.010.B.2; and 3) will be sympathetic to the character of the existing houses and neighborhood, and therefore, will enhance their sites and will be harmonious with the highest standards of improvement in the surrounding area consistent with Section 17.58.010.B.4.

4. That the proposal would not, under the circumstances of the particular case, be detrimental to the health, safety, morals, comfort and general welfare of the persons residing or working in the neighborhood of such proposed use, and will not be injurious or detrimental to property and improvements in the neighborhood, property values in the area, or the general welfare of the City because all new siding will require issuance of a building permit to ensure that the products are installed safely and in compliance with applicable regulatory standards.

This action is subject to any conditions contained in Exhibit A, attached.

Expiration

Any Use Permit Modification approval shall, without further action, become null and void if not used within two (2) years from the date of approval thereof, or within any shorter or longer period of time if so approved by the Community Development Director.

Appeal

Pursuant to Section 17.06.150 of the Foster City Municipal Code, an action of the Community Development Director on an application may be appealed within ten (10) calendar days after the date of the Community Development Director's decision, in writing, to the Planning Commission. Appeals may be filed using the appeal form available in the Community Development Department or by letter. There is a fee for filing an appeal. All appeals must be filed in accordance with Section 17.06.150.

Acknowledgment by Applicant

Pursuant to Section 17.58.040.E of the Foster City Municipal Code, any Architectural Review decision shall not be effective until the permittee acknowledges acceptance of any conditions of

approval and any appeal period has lapsed, or if there is an appeal, until a final decision has been made on the appeal.

In order to demonstrate that you are aware of and understand the Architectural Review conditions of approval (attached hereto as Exhibit A), please sign the original of this letter and return it to the Planning/Code Enforcement Division. Please keep the duplicate for your records. *Please be advised that a Building Permit **will not** be issued until the Planning/Code Enforcement Division has received the signed Notice of Decision.*

Sincerely,

for Curtis Banks
Community Development Director

David K. Cunningham
(Owner's Name) (Please Print)

Planners Initials: CJH

David K. C
(Owner's Signature)

EXHIBIT A

PLUM ISLAND HOMEOWNERS' ASSOCIATION
Prototypical Design Guidelines for Exterior Siding Replacement
UP-76-007X

The following guidelines shall govern the replacement of exterior siding in the Plum Island Planned Development:

CONDITIONS OF APPROVAL

1. **Prior to construction, all necessary building permits shall be obtained from the Foster City Building Division.**

2. **All construction shall be located, designed, constructed, installed, and maintained in a professional manner and appearance.**

3. **All materials and colors shall be as approved. Once constructed or installed, all improvements shall be maintained in accordance with the approved plans. Any changes which affect the exterior character of the work shall be resubmitted for approval.**

4. **All vents, gutters, downspouts, flashings, etc. shall be painted to match the color of the adjacent surfaces. No electrical conduits or similar piping shall be allowed on the exterior of the building unless approved prior to installation by the Community Development Director.**

5. **Standard residential security requirements as established by Chapter 15.28 of the Foster City Municipal Code shall be provided.**

6. **Prior to any final inspection approval, these conditions and all improvements shall be completed in accordance with the approved plans and to the satisfaction of the City.**

7. **The following siding materials are approved for installation as replacement siding on homes and other structures constructed in the Plum Island Planned Development pursuant to the samples on file with the Community Development Department along with manufacture brochures Exhibit B (James Hardie) and C (LP SmartSide):**

    a. **Hardie siding (horizontal lap siding in the Select Cedarmill finish or Straight Edge Panel shingles). The primed product may be finished with one of the currently approved colors pursuant to prototype UP-76-007P. If using the pre-painted product, homeowners may use one of the following colors: Countrylane Red or Traditional Red. All trim/soffit shall match siding.**

    b. **LP SmartSide Deep Grain Collection horizontal lap siding in the "Country Red", "Cedar" or "Yellowstone" colors (pre-painted) or finished in currently approved colors under prototype UP-76-007P.**

    c. **Cedar wood (shingled, horizontal, or vertical) finished in currently approved colors pursuant to prototype UP-76-007P.**

8. **The LP SmartSide Deep Grain Collection siding product shall be installed per the**

specifications attached as Exhibit D. Waterproofing measures on all equivalent materials shall be installed similar to the LP SmartSide manufacturer.

9. **The siding on all sides of the house and garage (entire house) shall be the same type of material and color.**

10. **The products must be installed in the same pattern and style as the existing siding (for example, horizontal, shingled, and/or vertical) unless a modification to the installation pattern and style is approved by the Plum Island Homeowners Association.**

11. **If there is no change in siding material or style (horizontal, vertical, shingle), "Like for Like" replacement of the existing siding, a letter from the Plum Island Homeowners Association is not required.**

12. **Siding exposure and/or width shall be as follows:**

    a. **Hardie horizontal lap siding (Select Cedarmill) minimum exposure 5" and maximum exposure 7"**
    b. **Hardie shingle Straight Edge Panel exposure 7"**
    c. **LP SmartSide lap horizontal siding cedar actual width minimum 5.84" and maximum 7.84"**
    d. **Cedar wood horizontal, vertical and shingle exposure shall be 7".**

Bold: Indicates Site Specific Conditions

APPROVAL PROCESS (If there is NO change in exterior siding material and style (horizontal, vertical, shingle)– like for like)

If the homeowner is painting or staining only (pursuant to approved colors under UP-76-007P) without replacing siding, then a building permit is not required. If siding is replaced, the homeowner or contractor shall apply for a building permit and submit the following;

1. The homeowner or contractor shall apply for a Building Permit from the Building Inspection Division and shall submit any required drawings and fees.
    - Provide a photograph that clearly shows the siding of the existing house.
2. The Planning/Code Enforcement Division staff will review the Building Permit application to confirm that the proposal is consistent with the prototypical design approved for siding replacement in the Plum Island Prototypical Design Guidelines.

APPROVAL PROCESS (If there is a change in the exterior siding material and style)

1. The homeowner/applicant shall obtain an approval letter from the Plum Island Homeowners' Association for the proposed siding change. The letter shall indicate that the proposed changes conform with the established design criteria of the prototype and state what was specifically approved.
2. The homeowner or contractor shall apply for a Building Permit from the Building Inspection Division and shall submit any required drawings and fees. The following shall be submitted:
    a. Manufacturer's brochure of the proposed material, style, and exposure.
    b. A signed copy of the HOA approval letter.
3. The Planning/Code Enforcement Division staff will review the Building Permit application to confirm that the proposal is consistent with the prototypical design approved for siding change.

David K. Cunningham

11/16/16

David Cunningham, Treasurer
Plum Island Homeowners Association

Date

11/16/16

Curtis Banks, Community Development Director
City of Foster City

Date

JamesHardie

EXHIBIT B

Achieve authentic character and

UNCOMPROMISING PERFORMANCE.

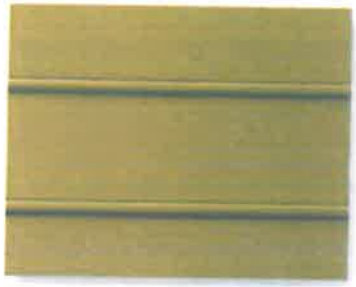
SELECT CEDARMILL®
Woodstock Brown

SMOOTH
Countrylane Red

Thickness	5/16 in.					
Length	12 ft. planks					
Width	5.25 in.	6.25 in.	7.25 in.	8.25 in.	9.25 in.*	12 in.*
Exposure	4 in.	5 in.	6 in.	7 in.	8 in.	10.75 in.
ColorPlus Pcs./Pallet	324	280	252	210		
Prime Pcs./Pallet	360	308	252	230	190	152
Pcs./Sq.	25.0	20.0	16.7	14.3	12.5	9.3

BEADED CEDARMILL®
Khaki Brown

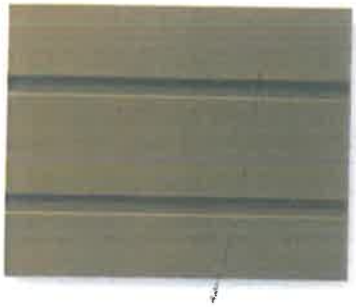
BEADED SMOOTH
Heathered Moss



Thickness	5/16 in.
Length	12 ft. planks
Width	8.25 in.
Exposure	7 in.
ColorPlus Pcs./Pallet	210
Prime Pcs./Pallet	240
Pcs./Sq.	14.3

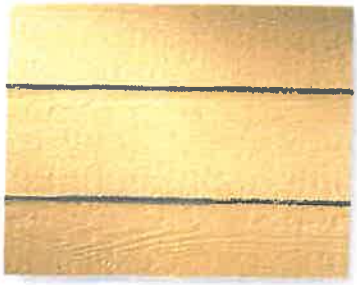
CUSTOM COLONIAL™ ROUGHSAWN
Mountain Sage

CUSTOM COLONIAL™ SMOOTH
Timber Bark



Thickness	5/16 in.
Length	12 ft. planks
Width	8 in.
Exposure	6.75 in.
ColorPlus Pcs./Pallet	216
Prime Pcs./Pallet	240
Pcs./Sq.	14.9

RUSTIC CEDAR**
Not available with ColorPlus Technology



Thickness	5/16 in.	
Length	12 ft. planks	
Width	6.25 in.	8.25 in.
Exposure	5 in.	7 in.
Pcs./Pallet	308	230
Pcs./Sq.	20	14.3

*
**

For more details, visit jameshardie.com

STAGGERED EDGE PANEL (7 in. Exposure)

Sandstone Beige

Thickness	1/4 in.
Length	48 in.
Height	15.9 in.
Exp.	7 in.
Pcs./Pallet	100
Sq./Pallet	2
Pcs./Sq.	50

STRAIGHT EDGE PANEL (7 in. Exposure)

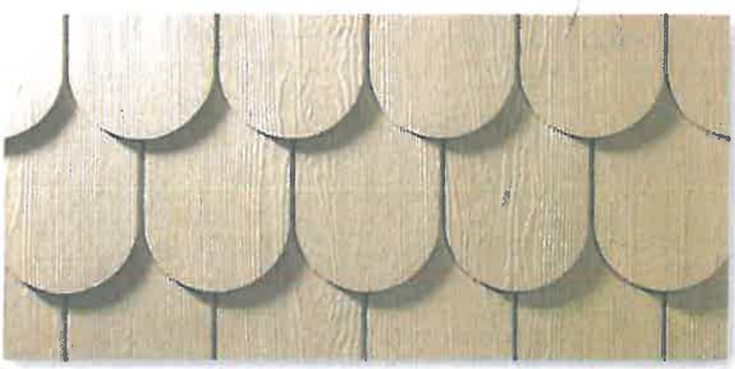
Iron Gray

Thickness	1/4 in.
Length	48 in.
Height	15.25 in.
Exp.	7 in.
Pcs./Pallet	86
Sq./Pallet	2
Pcs./Sq.	43

INDIVIDUAL SHINGLES* (7 in. Exposure)

Monterey Taupe

Thickness	1/4 in.				
Length	4.2 in.	5.5 in.	6.75 in.	7.25 in.	10 in.
Height	15.25 in.				
Exp.	7 in.				
Pcs./Pallet	630				
Sq./Pallet	2				
Pcs./Sq.	315				



HALF ROUNDS (7 in. Exposure)

Not available with ColorPlus Technology

Thickness	1/4 in.
Length	48 in.
Height	15.25 in.
Exp.	7 in.
Pcs./Pallet	86
Sq./Pallet	2
Pcs./Sq.	43

*Individual Shingles not available in Canada.

Express the true nature of a home's character with **ColorPlus® Technology**

PLANK, PANEL, BATTEN AND SHINGLE COLORS

ARCTIC WHITE


NAVAJO BEIGE


COBBLE STONE


HEATHERED MOSS


BOOTHBAY BLUE

SAIL CLOTH


SANDSTONE BEIGE


MONTEREY TAUPE


MOUNTAIN SAGE


EVENING BLUE


HARRIS CREAM


AUTUMN TAN


WOODSTOCK BROWN


PARKSIDE PINE


IRON GRAY


KHAKI BROWN


TIMBER BARK


TUSCAN GOLD


CHESTNUT BROWN


TRADITIONAL RED


COUNTRYLANE RED

Engineered to Perform Beautifully

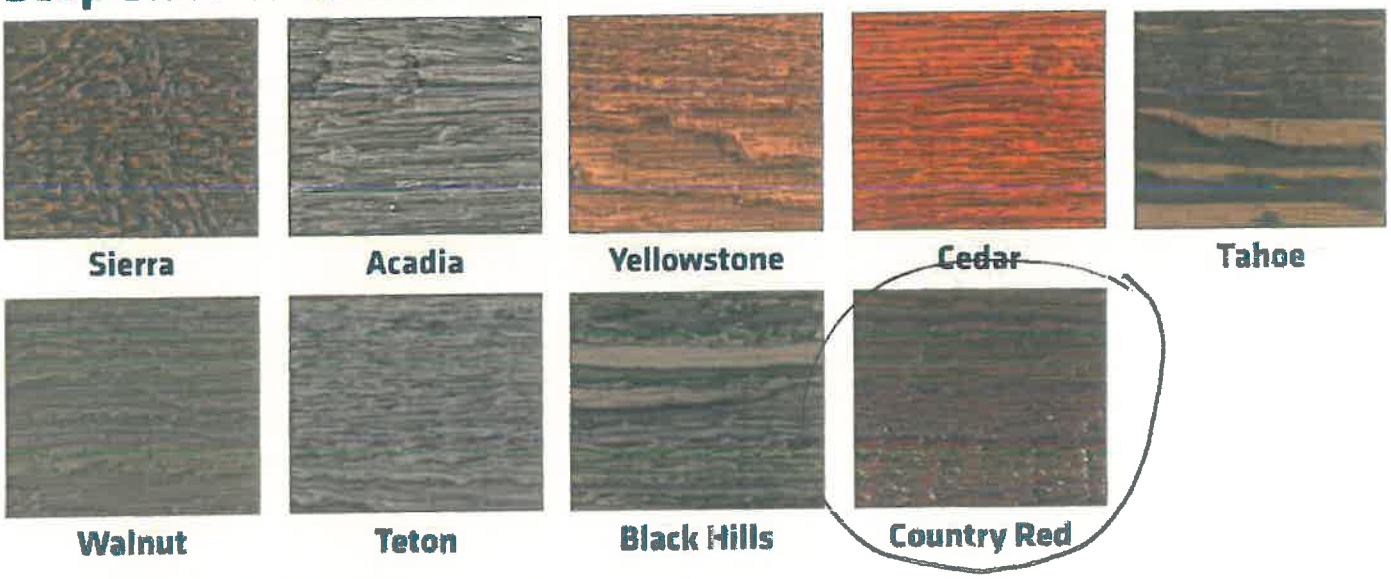
LP SMARTSIDE
TRIM & SIDING

EXHIBIT C

ColorStrand™ Technology by Northwest Factory Finishes

- ColorStrand technology combines Northwest Factory Finishes' proprietary processes with innovative equipment and specially-formulated PPG DURACOLOR® machine applied paint
- Results in a beautiful and extremely durable finish with exceptional consistency
- Deep Grain process enhances the authentic cedar texture of LP SmartSide
- Finish is backed by a 15-Year Warranty*

Deep Grain Collection Available in LP SmartSide lap and shake products



Sierra | Acadia | Yellowstone | Cedar | Tahoe

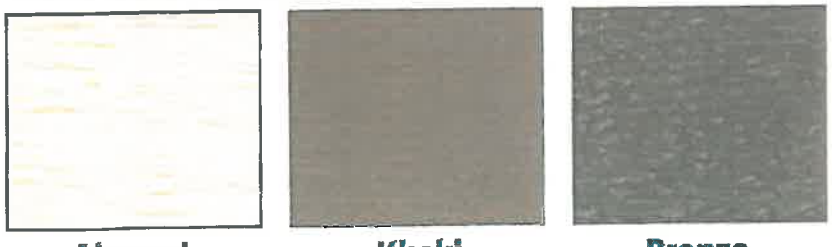
Walnut | Teton | Black Hills | Country Red

Solid Color Collection Available in LP SmartSide lap products

Granite | Scotia Blue | Khaki | River Rock

Bridgeport | Pinehurst

Trim Collection Available in LP SmartSide trim products



Almond | Khaki | Bronze

Note: The colors shown on this page are as exact as printing techniques will allow. Please request an actual color sample.

* See www.northwestfactoryfinishes.com for complete finish warranty details.

LP SMARTSIDE® TRIM & SIDING

PRECISION SERIES 38 AND 76 SERIES PRIMED LAP SIDING

EXHIBIT D

General

- At the time of manufacture, siding meets or exceeds the performance standards set forth in ICC-ES-AC321 and has achieved code recognition under ESR-1301, CCNC 11826, APA recognition under PR-N124, and HUD recognition under HUD-MR-1318. For copies of ESR-1301, call LP Customer Support at 1-800-648-6893 or go online at http://www.icc-es.org/reports/pdf_files/ICC-ES/ESR-1301.pdf or http://www.apawood.org.
- Minimum 6 in. clearance must be maintained between siding and finish grade.
- Siding applied adjacent to porches, patios, walks, etc. must have a clearance of at least 1 in. above any surface.
- Minimum 1 in. clearance at intersection with roof line
- Apply siding in a manner that prevents moisture intrusion and water buildup.
- All exposed wood substrate must be sealed in a manner that prevents moisture intrusion and water buildup.
- See alternate fastening options for fastening lap siding to SIP, ICF and Steel Frame assemblies.
- DO NOT USE STAPLES
- SIDING MUST NOT BE IN DIRECT CONTACT WITH MASONRY, CONCRETE, BRICK, STONE, STUCCO OR MORTAR.

Storage

- Store off the ground well supported, on a flat surface, under a roof or separate waterproof covering
- Keep siding clean and dry. Inspect prior to application.

Stud Spacing

- Precision 38 Series lap may be installed on studs spaced a maximum of 16 in. O.C. See alternate fastening option for fastening 38 series 6 in. and 8 in. lap on studs spaced a maximum of 24 in. O.C.
- Precision 76 Series lap may be installed on studs spaced a maximum of 24 in. O.C.
- In all installations over masonry or concrete walls, the wall shall be furred out and open at the top and bottom of the wall to allow for convective ventilation between framing spaced 16 in. O.C. The framing shall be of adequate thickness to accept 1-1/2 inches of nail penetration. A properly installed breathable water-resistant barrier is required between the siding and masonry or concrete walls.

Moisture

- Moisture control and moisture vapor control are critical elements of proper housing design. Check your local building codes for application procedures for handling moisture and water vapor in your area.
- When using wet blown cellulose insulation, the insulation must not be in direct contact with the siding and it must be allowed to dry a minimum of 24 hours or longer if specified by the insulation manufacturer.
- As with all wood products, do not apply engineered wood siding to a structure having excessive moisture conditions such as drying concrete, plaster or wet blown cellulose insulation. If such conditions exist, the building should be well ventilated to allow it to dry prior to the application of the siding.
- Siding must not be applied to green or crooked structural framing members. Do not apply siding over rain-soaked or buckled sheathing materials.
- Gutters are recommended for control of roof water run off.

Secondary Water-Resistant Barrier

- A properly installed breathable water-resistive barrier is required behind the siding. Consult your local building code for details.
- LP will assume no responsibility for water penetration.

Gaps & Sealants

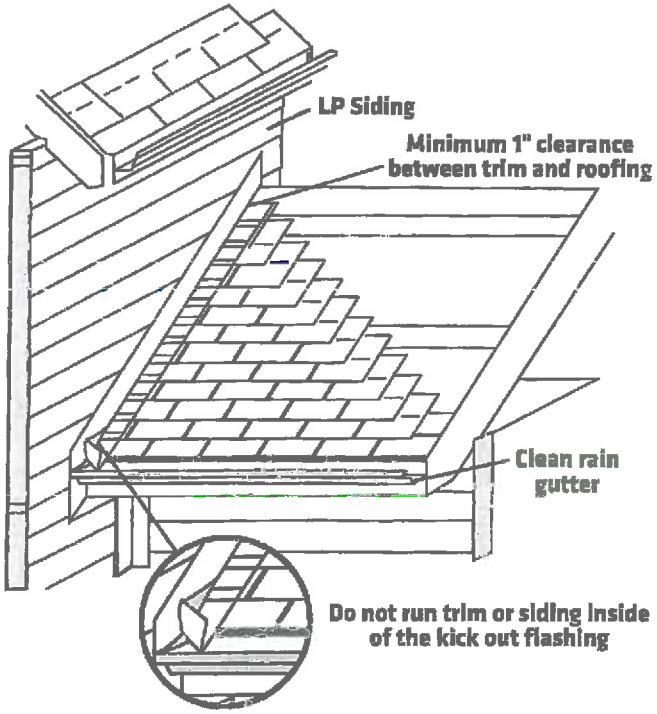
- Seal all gaps with a high-quality, non-hardening, paintable sealant. Follow the sealant manufacturer's instructions for application.
- Use a high-quality exterior sealant meeting the ASTM C920, minimum Class 25 sealant.

Flashing, Windows, Doors & Openings

- All openings must be properly sealed or flashed in a manner that prevents moisture intrusion or buildup. Several examples that accomplish this are shown on the following pages.

KICK-OUT FLASHING

- Install kick-out flashing to direct the water into the gutter
- Install step flashing with minimum 4 in. upper leg
- Properly integrate flashing with the secondary water-resistive barrier. Use housewrap, flashing tape, z-flashing, or other items as needed to maintain the counterflashing principle.
- DO NOT extend the siding or trim into the kick-out flashing or gutter
- Maintain a clearance between the end of the gutter and the adjoining wall to allow for proper maintenance of the siding
- Prime and paint ALL exposed cut edges



TRIM

Trim should be thick enough so the siding does not extend beyond the face of the trim.

- Trim and fascia must be applied in a manner that will not allow moisture intrusion or water buildup.
- LP® SmartSide® siding is not designed and/or manufactured to be used as trim or fascia. LP SmartSide trim and fascia are available in a variety of dimensions.
- LP SmartSide lap siding is not designed and/or manufactured to be installed vertically.

FINISHING INSTRUCTIONS

DO

- **Prime and paint all exposed surfaces including all drip edges or where water will hang.**
- Apply finish coat as soon as possible or within 180 days of application.
- High-quality acrylic latex paint, specially formulated for use on wood and engineered wood substrates, is highly recommended. Semi-gloss or satin finish oil or alkyd paints are acceptable. For flat alkyd paint, please check with the coating manufacturer for their recommendations for use on composite wood siding.
- Follow the coating manufacturer's application and maintenance instructions.

DO NOT USE

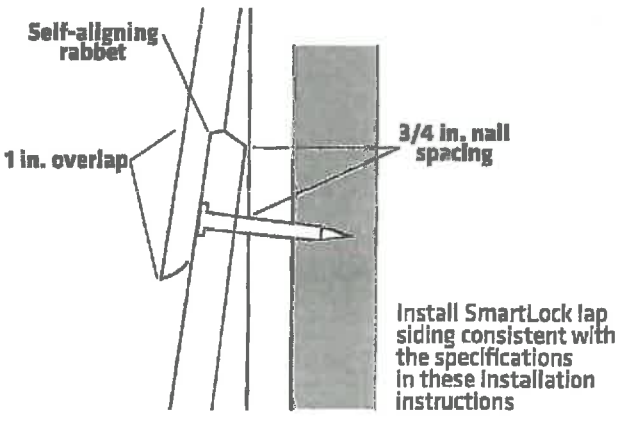
- Semi-transparent and transparent stains.
- Shake and shingle paints.
- Vinyl-based resin formulas such as vinyl acetate, PVA, vinyl acetate/acrylic copolymer paints.

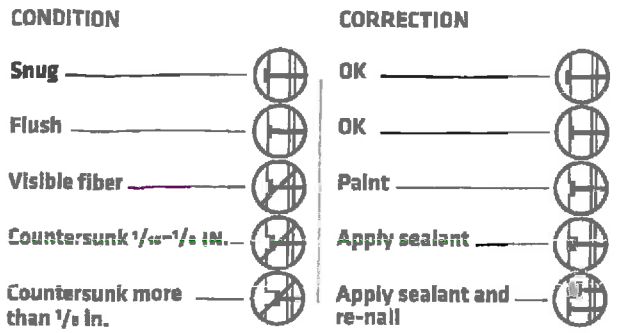
HANDLE PREFINISHED LP SMARTSIDE PRODUCTS WITH EXTREME CARE DURING STORAGE AND APPLICATION. TOUCH UP ANY DAMAGE TO THE FINISH THAT MAY OCCUR DURING APPLICATION PER PREFINISHERS SPECIFICATIONS.

NAILING INSTRUCTIONS

- LP SmartSide 76 Series lap siding may be attached directly to framing members spaced up to a maximum of 24 in. O.C.
- LP SmartSide 38 Series lap siding may be attached directly to framing members that are spaced up to a maximum of 16 in. O.C.
- Check your local building code before starting to install the siding to confirm if wall sheathing is required.
- Siding joints should be staggered over successive courses. For installation with or without wood structural panels, joints must occur over stud locations.
- Siding shall be installed with top (blind) nailing, with the nails placed 3/8 in. from either end and a minimum of 3/4 in. from the top edge of the board. Fasteners will be exposed on siding located immediately below window sills, fascia boards, and horizontal trim. Fasteners below window sill shall be spaced a maximum of 8 in. O.C.
- Overlap successive courses of siding a minimum of 1 in.

SmartLock Overlap & Blind Fastening





- Use minimum 8d (0.113 in. shank diameter), hot-dipped galvanized nail with a 0.297 in. diameter head.
- All exposed face nails must be caulked and sealed in a manner that prevents moisture intrusion and water buildup.
- Penetrate structural framing or wood structural panels and structural framing a minimum of 1-1/2 in.
- Nail from the center of the siding toward the ends, or from one end to the other end. NEVER nail from the ends of the siding toward the middle.
- Shim siding at studs as needed, to avoid drawing siding against uneven walls. Do not overdrive nails. Nail head should seat firmly to face of siding but not be overdriven to distort the siding surface.
- For information on fastening LP SmartSide products in high wind speed areas, refer to ICC-ES Report ESR-1301 or APA PR-N124.

Alternative Fastening Option for (strand) over Wood Structural Panels and 24 in. O.C. Stud Spacing

- Limited to 6 in. and 8 in. wide lap siding.
- Wood structural panels must be a minimum 7/16 Category with an APA Trademark that contains the consensus Standard DOC PS 2.
- 38 Series Precision lap must be fastened with:
  - Minimum #8 hot dip galvanized tapered head wood screw with a 0.270 in. diameter head, spaced a maximum of 12 in. O.C. with 1-1/2 in. screw penetration into each stud or...
  - Minimum 6d (0.091 in. shank diameter) hot dip galvanized ring shank nail with a 0.200 in. diameter head, spaced a maximum of 8 in. O.C. with 1-1/2 in. nail penetration into each stud.

Alternative Fastening Options over SIP Assemblies

- Wood structural panels must be a minimum 7/16 Category with an APA Trademark that contains the consensus standard DOC PS 2.
- 38 Series Precision lap must be fastened with:
  - Minimum #8 hot dip galvanized tapered head wood screw with a 0.270 in. diameter head, spaced a maximum of 12 in. O.C. or...
  - Minimum 6d (0.091 in. shank diameter) hot dip galvanized ring shank nail with a 0.200 in. diameter head, spaced a maximum of 8 in. O.C.
- 76 Series Precision lap must be fastened with:
  - Minimum #8 hot dip galvanized tapered head wood screw with a 0.270 in. diameter head, spaced a maximum of 16 in. O.C. or...

Application Instructions (cont.)

  - Minimum 6d (0.091 in. shank diameter) hot dip galvanized ring shank nail with a 0.200 in. diameter head, spaced a maximum of 12 in. O.C.

Alternative Fastening Option over ICF Assemblies

- 38 and 76 Series Precision lap must be fastened with:
  - Minimum #8 hot dip galvanized tapered head self-drilling screw with a 0.270 in. diameter head.
  - Minimum penetration of 3/8 in. beyond the thickness of the nailing flange.
  - Larger screws may be required by the ICF Manufacturer based on the following minimum withdrawal requirements.
- Minimum withdrawal value of the ICF nailing flange must be 50 lbs. with a maximum 12 in. O.C. screw spacing.
- Minimum withdrawal value of the ICF nailing flange must be 31 lbs. with a maximum 6 in. O.C. screw spacing.

Alternative Fastening Options over Corrosion Resistant Steel Stud Framing

- Minimum withdrawal value of the steel framing must be 50 lbs. Refer to the framing manufacturer's evaluation report.
- 38 Series Precision lap must be fastened with:
  - Steel stud spacing a maximum spacing of 16 in. O.C.
  - Minimum #8 hot dip galvanized tapered head self-drilling screw with 0.270 in. diameter head.
  - Minimum of 5 threads beyond the combined thickness of the siding and framing
  - Minimum steel framing thickness 0.032 in. or 20 gauge.
- 76 Series Precision lap must be fastened with:
  - Steel stud spacing a maximum spacing of 24 in. O.C.
  - Minimum #8 hot dip galvanized tapered head self-drilling screw with a 0.270 in. diameter head.
  - Minimum of 5 threads beyond the combined thickness of the siding and framing.
  - Minimum steel framing thickness 0.032 in. or 20 gauge.

CAUTION

- Do not force siding into place.
- DO NOT USE STAPLES.
- Climb cut the surface of the siding such that the rotation of the blade cuts downward on the primed or prefinished surface.
- Where siding butts window trim, door casings and masonry, etc. leave a 3/16 in. gap and seal.

Insulated Sheathings

LP SmartSide Sidings may be installed over low-compression rigid foam or exterior gypsum. The following precautions must be followed:

- Adequate bracing of the wall in accordance with the International Codes or other ruling building code is required.
- For rigid foam sheathing up to 1 in. (25.4 mm) thick, siding may be nailed directly to the foam sheathing unless a drainage

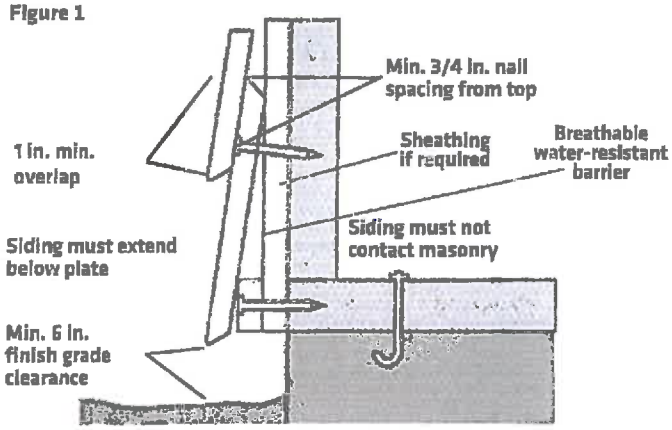
plane is required by the local building code. Nail length must be increased to ensure a minimum 1-1/2 in. (38.1 mm) fastener penetration into the structural framing.

- For rigid foam sheathing greater than 1 in. (25.4 mm), a minimum 1-1/2 in. (38.1 mm) thick by 3-1/2 in. (88.9 mm) wide vertical strapping or furring strip must be installed over the sheathing to provide a solid, level nailing base for the siding. The strapping must be securely fastened to structural framing spaced no greater than 16 in. O.C. (406 mm) with a minimum nail penetration of 1-1/2 in. (38.1 mm) and a maximum nail spacing no greater than the width of the siding.

Louisiana-Pacific will assume no responsibility for any damage or condition arising from the use of rigid foam or exterior gypsum.

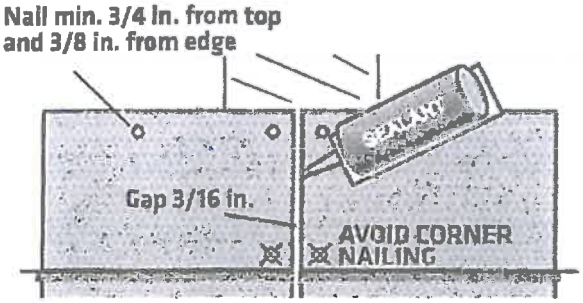
Overlap, Clearance & Nailing Space

Figure 1



Butt Joints

Figure 2

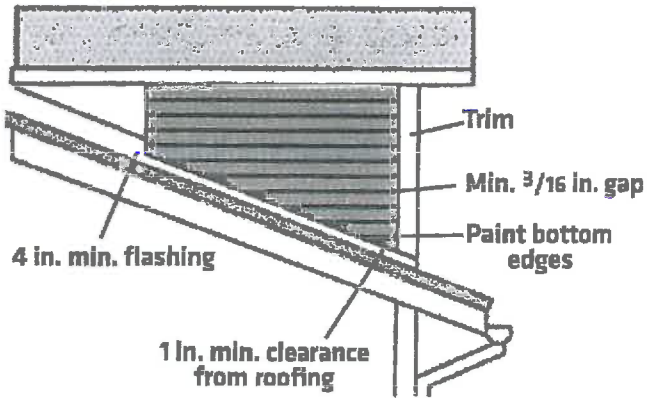


- Joints must occur over studs.
- A minimum 3/16 in. gap is required at ALL butt joints.
- If joint caulking option is selected, seal all gaps at butt joints with a high-quality exterior sealant meeting the ASTM C920, minimum Class 25 sealant.
- If joint moulding option is selected, add the thickness of the web to the gap allowing a net 3/16 in. space for expansion.
- If siding is prefinished by an approved or preferred prefinisher it does not require sealant or joint moulding when backed with minimum 4 in. wide flashing and the ends of the siding are factory finished.

Application Instructions (cont.)

1 in. Roof & Chimney Clearance

Figure 4



LP Precision Lap siding may also be installed in compliance with category 8140- Exterior wall siding and sheathing for Wildland Unban Interface (WUI) applications atop LP FlameBlock sheathing. Refer to FlameBlock installation instructions and product data sheets. All LP lap sidings (both Foundations and Precision) may be installed as exterior siding in Wildland Urban Interface (WUI) applications installed over one layer 5/8" Type X gypsum sheathing applied behind the exterior covering or cladding on the exterior side of the framing. They may also be installed over the exterior portion of a 1-hour fire-resistive exterior wall assembly designed for exterior fire exposure including assemblies using the gypsum panel and sheathing products listed in the Gypsum Association Fire Resistance Design Manual.

The Louisiana-Pacific Corporation ("LP") LP SmartSide Siding (the "Products") limited warranty (the "Warranty") applies only to structures on which the Products have been applied, finished and maintained in accordance with the published application, finishing and maintenance instructions in effect at the time of application. The failure to follow such application, finishing or maintenance instructions will void the Warranty as to the portion of the Products affected by the variance (the "Affected Products").

LP assumes no liability for any loss or damage sustained by the Affected Products and is expressly released by the purchaser or owner from any such loss or liability.

Any modification of the Warranty's application, finishing or maintenance requirements is void and unenforceable unless approved in writing prior to application by the siding general manager or his designee and a member of the LP Legal Department.

For a copy of the warranty or for installation and technical support, visit the LP SmartSide product support Web site at:

www.lpsmartside.com

or for additional support call 800-450-6106.

WARRANTY REMEDIES ARE NOT AVAILABLE IF REQUIREMENTS ARE NOT FOLLOWED.

Cal. Prop 65 Warning: Use of this product may result in exposure to wood dust, known to the State of California to cause cancer.

LP BUILDING PRODUCTS

SMARTSIDE®
TRIM & SIDING

NOTE: Louisiana-Pacific Corporation periodically updates and revises its product information. To verify that this version is current, call 800-450-6106.

LPZ80515 1/14

Figure 3

Over Openings

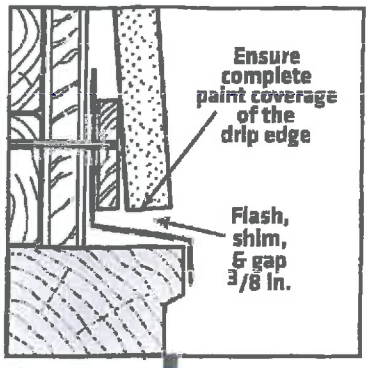


Figure 3A

Alternate Butt Joint Treatments

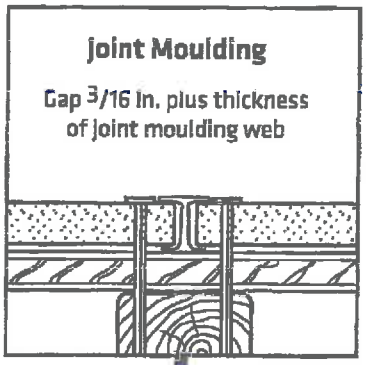


Figure 3B

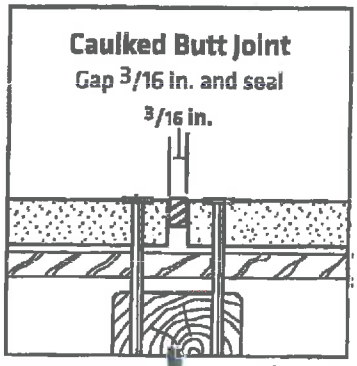


Figure 3C

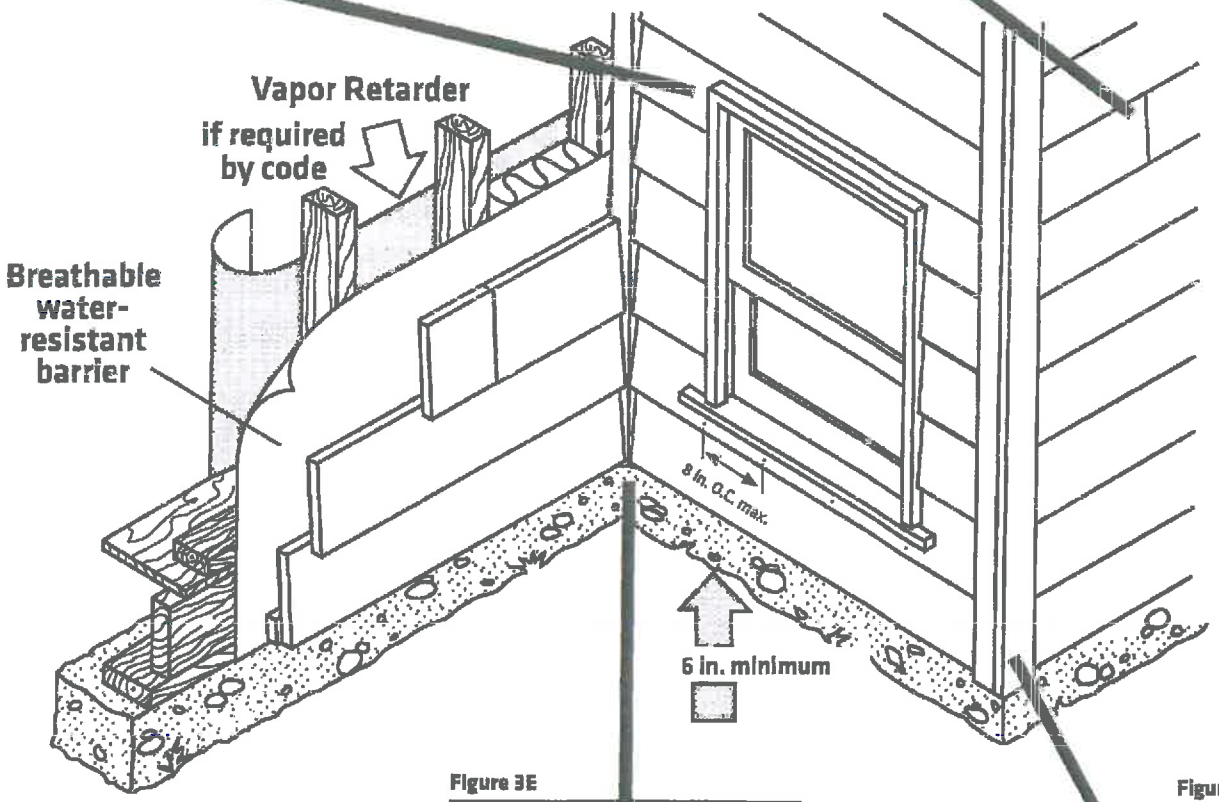
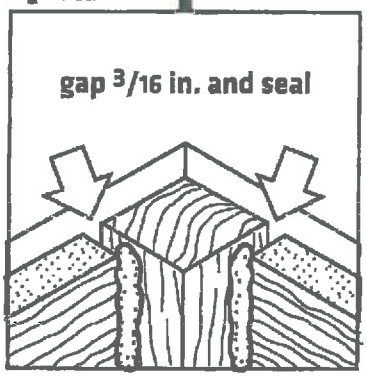
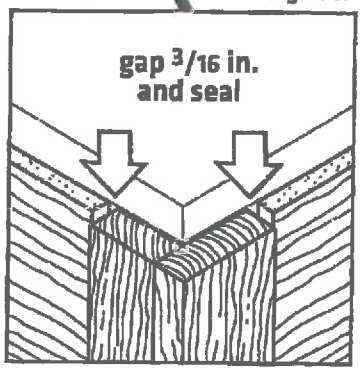


Figure 3E



Inside Corner Detail

Figure 3D



Outside Corner Detail

LP SmartSide TRIM & SIDING

PRECISION SERIES PRODUCTS AND ARCHITECTURAL COLLECTION VENTED SOFFIT

1. Product and Company Information

Product Code: Not applicable
Product Name: Treated Engineered Wood Siding and Exterior Products
Brand Names: LP SmartSide

LP Corporation, 414 Union Street, Suite 2000, Nashville, TN 37219
Telephone: 800.450.6106

2. Composition and Ingredient Information

Component(1)	CAS #	Exposure Limits	Cancer Designation
Wood Dust	NA	TLV-TWA = 1 mg/m³	MAK-1, NIOSH-Ca, TLV-A1, NTP-K
Polymeric Diphenylmethane Diisocyanate	9016-87-9	PNOS(2)	MAK-3B
Phenolic Resin Saturated Paper	NA	PNOS2)	
Zinc Borate	138265-88-0	PNOS(2)	
Wax Emulsion	NA	None Established	

(1) Small amounts of waterbase paint and oilbase black stamp ink may be used to identify the product and to inhibit moisture ingress along board edges.

(2) PNOS: PEL-TWA = 15 mg/m³, total dust; PEL-TWA = 5 mg/m³, respirable fraction; TLV-TWA = 10 mg/m³ inhalable particulate, 3 mg/m³ respirable particulate.

3. Hazards Identification

Emergency Overview

- Contact with strong oxidizers or exposure to temperatures greater than 400° F may cause a fire.
- Smoke may contain carbon monoxide, aldehydes, and other toxic materials.
- Airborne wood and resin dust may explode when combined with an ignition source.

Potential Health Effects (based on expected use of product)

- EYES: Dust may irritate the eyes.
- SKIN: Dust may cause skin irritation.
- INGESTION: Not known.
- INHALATION: Dust can cause irritation to mucous membranes and the upper respiratory tract. Wood dust is considered a carcinogen.

4. First Aid Measures

- EYES: For dust exposure, immediately flush eyes with plenty of water for at least 15 minutes.
- SKIN: Wash with soap and water. Get medical attention if irritation develops or persists.
- INGESTION: Consult a physician.
- INHALATION: Remove to fresh air, consult a physician.

Note to Physicians: Exposure to dust may aggravate symptoms of persons with pre-existing respiratory tract conditions and may cause skin and gastrointestinal symptoms.

5. Fire Fighting Measures

FLAMMABLE PROPERTIES:

- **Flash point: Not applicable.**
- **Combustible: Material may burn on contact with oxidizers or ignition sources.**

FLAMMABLE LIMITS:

- **Lower flammable limit: Not applicable.**
- **Upper flammable limit: Not applicable.**

AUTOIGNITION TEMPERATURE: Typically 400-500° F.

EXPLOSION HAZARD: Airborne concentrations of combustible dust, when combined with an ignition source, can create an explosion hazard if the dust concentration exceeds 30 - 60 g/m³.

HAZARDOUS COMBUSTION PRODUCTS: Carbon dioxide, carbon monoxide, nitrogen oxides, aldehydes, cyanides, and other hazardous gases, vapors, and particles.

EXTINGUISHING MEDIA: Water, dry chemical and other agents rated for a wood fire (Type A fire). Use an extinguisher rated for a Type A fire.

FIRE FIGHTING INSTRUCTIONS: Evacuate the area and notify the fire department. If possible isolate the fire by moving other combustible materials. If the fire is small, use a hose-line or extinguisher rated for a Type A fire. Fire fighters should wear normal protective equipment (full bunker gear) and positive-pressure self-contained breathing apparatus.

6. Accidental Release Measures

Does not apply.

7. Handling and Storage

HANDLING: Provide ventilation or other measures so that dust levels are below the exposure limits listed in Section 2.

STORAGE: Keep dust away from ignition sources and store in a closed container. Consult NFPA 68 and 70 for additional information.

8. Exposure Control/Personal Protection

ENGINEERING CONTROLS: Control airborne dust concentrations below the exposure limits. Use only with adequate ventilation.

RESPIRATORY PROTECTION: When respiratory protection is required, or dust concentrations are unknown, use a NIOSH/MSHA approved air-purifying respirator for dusts.

SKIN PROTECTION: Wear work gloves to prevent skin irritation.

EYE PROTECTION: Wear ANSI approved eye protection.

9. Physical and Chemical Properties

BOILING POINT:	**NA**	**DENSITY:**	**28 - 70 LB/FT³**
MELTING POINT:	**NA**	**pH:**	**NA**
VAPOR PRESSURE:	**NA**	**ODOR:**	**Slight to none**
VAPOR DENSITY:	**NA**	**APPEARANCE:**	**Light brown wood panels**
SOLUBILITY IN WATER:	**NA**		

10. Stability and Reactivity

CHEMICAL STABILITY: (CONDITIONS TO AVOID) Stable.

INCOMPATIBILITY: Keep away from high temperatures and strong oxidizers, such as concentrated nitric acid, oxygen, hydrogen peroxide, and chlorine.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, hydrogen cyanide, and other products of wood combustion.

HAZARDOUS POLYMERIZATION: Will not occur.

11. Toxicological Information for Wood Dust and MDI

WOOD DUST

Wood dust is known to be a human carcinogen. An increased incidence of adenocarcinoma of the nasal cavities and paranasal sinuses was observed in studies of people whose occupations are associated with wood dust exposure. (10th Edition of the National Toxicology Program's Report on Carcinogens) Wood dust from some tree species may induce sensitization.

MDI RESIN

CHRONIC (CANCER) INFORMATION: For typical products tested, MDI off-gassing is below the detection limit of 20 ppt. See Section 2 for carcinogenicity categories.

TERATOLOGY (BIRTH DEFECT) INFORMATION: NA

REPRODUCTION INFORMATION: NA

SENSITIZER: NA

12. Ecological Information

These wood products are not expected to pose an ecological hazard as a result of their intended uses.

13. Disposal Considerations

Dispose of waste according to local, state/provincial, and federal requirements.

14. Transportation Information

Hazardous Materials Table 172.101

Shipping Name	NA	Packing Group	NA
Hazard Class	NA	Placards/Labels	NA
Identification No.	NA	Special Provisions	NA

15. Regulatory Information

OSHA: Hazard Communication	CFR 1910.1200 (b)(6)(iv)	CERCLA RQ:	NA
EPCRA EHS RQ Section 302:	NA	EPA CAA Section 112(r):	NA
EPCRA Section 313:	NA	Uniform Fire Code:	NA

16. Other Information

This MSDS is intended solely for safety education and not for use as specifications or warranties. The information in this MSDS was obtained from usually reliable sources and is provided without any representation for warranties regarding the accuracy or correctness. Since the handling, use, and storage is beyond our control, LP assumes no responsibility and disclaims liability for any loss, damage, or expense arising therefrom.

Abbreviations

ANSI	American National Standards Institute
ASTM	American Society for Testing and Materials
C	Ceiling
CAA	Clean Air Act
CAS	Chemical Abstract Services (identifies specific chemical)
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFR	Code of Federal Regulations
Dust	A finely divided solid 0.017 in. or less in diameter that is capable of passing through a U.S. No. 40 standard sieve
EHS	Extremely Hazardous Substance
EPA-B1	Environmental Protection Agency-Limited evidence of carcinogenicity from epidemiological studies
EPCRA	Emergency Planning and Community Right-To-Know Act
IARC-2A	International Agency for Research on Cancer-Probably Carcinogenic to Humans
G/m³	Grams per cubic meter
mg/m³	Milligrams per cubic meter
lb/ft³	Pounds per cubic foot
MAK-1	Substances that cause cancer in man
MAK-3	Substances which cause concern that they could be carcinogenic for man
MAK-3B	Substances for which in vitro tests or animal studies have yielded evidence of carcinogenic effects
MSHA	Mine Safety Health Act
NA	Not applicable
NFPA	National Fire Protection Association
NIOSH-Ca	National Institute of Occupational Safety and Health-Potential occupational carcinogen, with no further categorization
NTP-K	National Toxicology Program-Known to be a carcinogen
NTP-R	National Toxicology Program-Reasonably anticipated to be a carcinogen
OSHA-Ca	Occupational Safety and Health Administration-Carcinogen defined with no further categorization
PNOS	Particle not otherwise specified
PEL	OSHA Permissible Exposure Limit
ppm	Parts per million
ppt	Parts per trillion
RTECS	Registry of Toxic Effects of Chemical Substances
RQ	Reportable Quantity
STEL	Short-Term Exposure Limit
TLV-A1	Threshold Limit Value-Confirmed Human Carcinogen
TLV-A2	Threshold Limit Value-Suspected Human Carcinogen
TWA	8-hour time-weighted average exposure

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6. EPA Title III List of Lists.
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9. Documentation of the TLVs®, American Conference of Governmental Industrial Hygienists, 2002.
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11. TLVs® and BEIs®, American Conference of Governmental Industrial Hygienists, 2003.

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APA

Joint Evaluation Report

ESR-1301

Reissued 02/2014

This report is subject to renewal 02/2016.

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DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES

SECTION: 06 16 00—SHEATHING

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION

SECTION: 07 46 23—WOOD SIDING

REPORT HOLDER:

LOUISIANA-PACIFIC CORPORATION

414 UNION STREET, SUITE 2000
NASHVILLE, TENNESSEE 37219

EVALUATION SUBJECT:

LP SMARTSIDE® PRECISION LAP SIDING AND LP SMARTSIDE® PRECISION PANEL SIDING

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Joint Evaluation Report

ESR-1301*

Reissued February 2014

This report is subject to renewal February 2016.

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DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES
Section: 06 16 00—Sheathing

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION
Section: 07 46 23—Wood Siding

REPORT HOLDER:

LOUISIANA-PACIFIC CORPORATION
414 UNION STREET, SUITE 2000
NASHVILLE, TENNESSEE 37219
(888) 820-0325
www.LPcorp.com
marketing.center@lpcorp.com

EVALUATION SUBJECT:

LP SMARTSIDE® PRECISION LAP SIDING AND LP SMARTSIDE® PRECISION PANEL SIDING

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2012, 2009, 2006, and 2003 *International Building Code®* (IBC)
- 2012, 2009, 2006, and 2003 *International Residential Code®* (IRC)

Properties evaluated:

- Exterior siding
- Structural

2.0 USES

LP SmartSide® Precision Lap Siding and LP SmartSide® Precision Panel Siding are used as exterior wall covering materials on buildings where combustible materials are permitted.

LP SmartSide® Precision Panel Siding may be used as bracing method 3 for conventional wood-framed walls as specified in IBC Section 2308.9.3 and IRC Section R602.10.

LP SmartSide® Precision Panel Siding may be used as sheathing for wood structural panel shear walls having allowable shear loads specified for PS2-compliant wood-based sheathing in accordance with 2003/2006 IBC Section 2306.4.1, and 2009/2012 IBC Section 2306.3.

3.0 DESCRIPTION

3.1 General:

LP SmartSide® Precision Lap Siding and LP SmartSide® Precision Panel Siding are engineered-wood exterior wall covering materials that are suitable for long-term exposure to weather or conditions of similar severity, when fastened to vertical supports or approved nailable wood substrates in accordance with their span ratings and this evaluation report. The lap siding and panel siding products consist of a mat-formed wood substrate preservatively treated with zinc borate in accordance with AWPA Standard T1, and a resin-impregnated overlay material bonded to the face of the lap and panel siding products intended to be exposed to the weather. Additionally, all panel and lap siding edges are factory-sealed with a sealer in accordance with the approved quality control manual.

3.2 LP SmartSide® Precision Lap Siding:

LP SmartSide® Precision Lap Siding is available in widths of 6, 8 and 12 inches (152, 203 and 305 mm); categories $^{3}/_{8}$ and $^{7}/_{16}$; and lengths of 12 to 16 feet (3658 to 4877 mm). The 8-inch-wide (203 mm), $^{7}/_{16}$ category lap siding is also available with an optional self-alignment edge.

3.3 LP SmartSide® Precision Panel Siding:

LP SmartSide® Precision Panel Siding is 4 feet (1219 mm) wide and 4, 6, 7, 8, 9 or 10 feet (1219, 1829, 2134, 2438, 2743 or 3048 mm) in length. LP SmartSide® Precision Panel Siding is available in $^{3}/_{8}$, $^{7}/_{16}$, and $^{19}/_{32}$ - categories. The $^{3}/_{8}$ category panel has grooves spaced at 8 inches (203 mm), with a minimum thickness at the grooves of 0.164 inch (4 mm) and a minimum thickness at the shiplap of 0.136 inch (4 mm). The $^{7}/_{16}$ category panel has grooves spaced at 4 or 8 inches (102 or 203 mm), with a minimum thickness at the grooves of 0.235 inch (6 mm) and a minimum thickness at the shiplap of 0.150 inch (4 mm). The $^{19}/_{32}$ category panel has grooves spaced at 4 or 8 inches (102 or 203 mm), with a minimum thickness at the grooves of 0.311 inch (8 mm) and a minimum shiplap thickness of 0.194 inch (5 mm).

LP SmartSide® Precision Panel Siding is classified as Exterior Rated Siding or Exterior Rated Siding—Sheathing. The classification is noted in the label on the panel. Exterior Rated Siding is intended to be installed in applications in accordance with IBC Section 2308.9.3 and IRC Section R602.10 as an exterior siding suitable for long-term exposure to weather or conditions of similar severity. In addition to the intended application for Exterior

Rated Siding, Exterior Rated Siding—Sheathing is intended to be installed in applications in accordance with 2003/2006 IBC Section 2306.4.1, and 2009/2012 IBC Section 2306.3.

4.0 INSTALLATION

4.1 General:

LP SmartSide® Precision Lap Siding and LP SmartSide® Precision Panel Siding must be installed in accordance with the manufacturer's published installation instructions (titled *Application Instructions LP SmartSide® Precision Lap LP SmartSide® Precision Panel Siding*) and this report. In the event of conflicts, this report governs. A copy of the manufacturer's installation instructions must be on the jobsite at all times during installation.

LP SmartSide® Precision Lap Siding and LP SmartSide® Precision Panel Siding must be installed with an approved water-resistive barrier as required by the applicable code. Openings in, penetrations through, and terminations of the LP SmartSide® Precision Lap Siding and LP SmartSide® Precision Panel Siding are outside the scope of this report and must be specifically approved by the code official in accordance with the applicable code.

Unless otherwise noted in this report, fasteners and fastener spacing must be as noted in the applicable code.

4.2 LP SmartSide® Precision Lap Siding:

LP SmartSide® Precision Lap Siding must be attached to framing members spaced a maximum of 16 inches (406 mm) on center for $^{3}/_{8}$ category siding and a maximum of 24 inches (610 mm) on center for $^{7}/_{16}$ category siding.

Self-aligning LP SmartSide® Precision Lap Siding is installed with nails placed at the top of the LP SmartSide® Precision Lap Siding, $^{1}/_{2}$ inch (13 mm) down from the upper edge. Each successive course of lap siding must rest on the back rabbet and must self-align at an overlap of $^{13}/_{16}$ inch (21 mm).

Nails must be of sufficient length to penetrate a minimum of $1^{1}/_{2}$ inches (38 mm) through the sheathing and into framing at each stud location.

4.3 LP SmartSide® Precision Panel Siding:

LP SmartSide® Precision Panel Siding must be installed with its long dimension oriented vertically.

When LP SmartSide® Precision Panel Siding is applied directly to the framing, the maximum spacing of the framing must be consistent with the span rating of the LP SmartSide® Precision Panel Siding, which is identified on the panel's label.

Allowable loads for shearwalls sheathed with LP SmartSide® Precision Panel Siding—Sheathing are noted in Table 1.

Four-foot-by-8-foot (1219 mm by 2438 mm) LP SmartSide® Precision Panel Siding—Sheathing installed vertically, directly to framing, with a single row of nails penetrating both laps, spaced 6 inches on center at panel edges and 12 inches (305 mm) on center at intermediate supports may be used to satisfy the wall bracing requirements for conventional light frame construction specified in the code for prescriptive construction. Install per code requirements for method 3 bracing with wood structural panels.

All LP SmartSide® Precision Panel Siding joints must occur at framing members and must be protected with a continuous wood batt, approved caulking, flashing, or vertical or horizontal shiplap, or otherwise made waterproof.

4.4 Component and Cladding Wind Pressure Capacity:

Maximum allowable component and cladding wind loads (wall, zone 5) for LP SmartSide® Precision Lap Siding and LP SmartSide® Precision Panel Siding based on a minimum fastener schedule, are provided in Tables 2 through 5. Tables 2 and 3, for lap and panel siding, respectively, are based on full fastener penetration into the wall studs, i.e., fastener penetration = fastener length - siding thickness. Tables 4 and 5, for lap and panel siding, respectively, are based on a minimum fastener penetration into the wall studs of $1^{1}/_{2}$ inches.

5.0 CONDITIONS OF USE

The LP SmartSide® Precision Lap Siding and LP SmartSide® Precision Panel Siding described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

5.1 LP SmartSide® Precision Lap Siding must not be used to satisfy the bracing requirements specified in the code.

5.2 LP SmartSide® Precision Panel Siding—Sheathing, when installed as set forth in this report, may be used as method 3 bracing specified in Section 2308.9 of the IBC and Section R602.10 of the IRC.

5.3 In areas where seismic analysis is required by the applicable code, the applicable code requirements for wood structural panel shear walls must be consulted for additional detailing requirements, restrictions concerning certain usages, required modifications to the allowable shear loads tabulated in this report, and additional inspection requirements.

5.4 LP SmartSide® Precision Lap Siding and LP SmartSide® Precision Panel Siding must not be installed in contact with concrete or masonry.

5.5 LP SmartSide® Lap Siding and LP SmartSide® Precision Panel Siding must be installed with a minimum 6 inches (152 mm) of clearance from finished grade.

5.6 When field cuts are made to LP SmartSide® Precision Lap Siding and LP SmartSide® Precision Panel Siding, all exposed surfaces must be finished according to the paint or caulk/sealant manufacturers' specifications.

5.7 LP SmartSide® Precision Lap Siding and LP SmartSide® Precision Panel Siding are manufactured by Louisiana-Pacific Corporation in Hayward, Wisconsin (Mill No. 357); Newberry, Michigan (Mill No. 416); Tomahawk, Wisconsin (Mill No. 435); and Two Harbors, Minnesota (Mill No. 399); under a quality control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Treated-engineered-wood Siding (AC321), dated October 2005.

7.0 IDENTIFICATION

LP SmartSide® Precision Lap Siding and LP SmartSide® Precision Panel Siding must be labeled with the product designation and the name of Louisiana-Pacific Corp. The stamp shall provide the following information:

1. Mill number.
2. The evaluation report number (ESR-1301).
3. Grade/exposure.
4. Span rating.
5. Performance category (based on customary inch fractions).

TABLE 1—ALLOWABLE RACKING SHEAR (plf) FOR LP SmartSide® Precision PANEL SIDING—SHEATHING SHEAR WALLS WITH FRAMING OF DOUGLAS FIR–LARCH OR SOUTHERN PINE FOR WIND OR SEISMIC LOADING[1,2,3]

PERFORMANCE CATEGORY	MINIMUM NAIL PENETRATION IN FRAMING (Inches)	PANELS APPLIED DIRECTLY TO FRAMING				
		Nail Size (Common or Galvanized Box)	Nail Spacing at Panel Edges (Inches)			
			6	4	3	2[4]
5/16[5,6]	1 1/4	6d	180	270	350	450
3/8[5,6]			200	300	390	510
3/8[5,6]	1 1/2	8d	220	320	410	530
7/16[5]			240	350	450	585
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 AF & PA National Design Specification; (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 6 inches o.c. along intermediate framing members for 3/8 category and 7/16 category panels installed on studs spaced 24 inches o.c. For other conditions and panel thicknesses, space nails 12 inches o.c. on intermediate supports.
[3]The values are for short-term loads due to wind or earthquake (133% increase) and must be reduced by 25 percent for normal duration of loading.
[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 category panels nailed at shiplap edges use shear values for 5/16 category panels, and 7/16 and 19/32 category panel sidings nailed at shiplap edges use shear values for 3/8 category panels.
[6]Shiplap edges must be double-nailed; one nail must be placed in the underlap and a second nail must be placed in the overlap at the nail spacing specified for the applicable shear value.
[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.

TABLE 2a—LAP SIDING - MAXIMUM NOMINAL (ALLOWABLE) COMPONENT AND CLADDING DESIGN WIND SPEED, V_{asd}[1,2]

PERFORMANCE CATEGORY	MAXIMUM WALL STUD SPACING[3] (inches)	SIDING WIDTH (inches)	MAXIMUM ALLOWABLE WIND PRESSURE (psf)	MAXIMUM NOMINAL (ALLOWABLE) WIND SPEED, V_{asd}[4] (mph)		
				Wind Exposure Category		
				B	C	D
3/8	16	6	80	170	150	140
		8	79	170	150	140
		12	50	140	120	110
7/16	16	6	80	170	150	140
		8	76	170	150	130
		12	49	140	120	110
	24	6	71	170	145	130
		8	51	155	120	110
		12	32	110	90	90

For SI: 1 inch = 25.4 mm, 1 psf = 47.88 Pa, 1 mph = 1.6 kph.

[1]One fastener per stud located ¾ inch from the top edge of the siding. Each successive course of lap siding must overlap a minimum of 1 inch. Fastener must have a minimum head diameter of 0.297 inch, a minimum shaft diameter of 0.113 inch and a minimum length of 2.5 inches (8d box nail).
[2]Tabulated values assume full penetration of the fastener into the wall studs, i.e., fastener penetration = fastener length – siding thickness.
[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-feet height in Zone 5 with smallest effective area per Chapter 6 of ASCE 7-05, Section R301.2 of the 2009/2012 IRC, and Section 1609.1.1 of the 2009 IBC.

TABLE 2b—LAP SIDING - MAXIMUM ULTIMATE COMPONENT AND CLADDING DESIGN WIND SPEED, V_{ult}[1,2]

PERFORMANCE CATEGORY	MAXIMUM WALL STUD SPACING[3] (Inches)	SIDING WIDTH (Inches)	MAXIMUM ULTIMATE WIND PRESSURE (psf)	MAXIMUM ULTIMATE DESIGN WIND SPEED, V_{ult}[4] (mph)		
				Wind Exposure Category		
				B	C	D
3/8	16	6	133	200	180	180
		8	131	200	180	180
		12	83	180	150	140
7/16	16	6	133	200	180	180
		8	127	200	180	160
		12	81	180	150	140
	24	6	119	200	180	160
		8	85	180	150	140
		12	54	140	120	115

For SI: 1 inch = 25.4 mm, 1 psf = 47.88 Pa, 1 mph = 1.6 kph.

[1]One fastener per stud located ¾ inch from the top edge of the siding. Each successive course of lap siding must overlap a minimum of 1 inch. Fastener must have a minimum head diameter of 0.297 inch, a minimum shaft diameter of 0.113 inch and a minimum length of 2.5 inches (8d box nail).
[2]Tabulated values assume full penetration of the fastener into the wall studs, i.e., fastener penetration = fastener length – siding thickness.
[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-feet height in Zone 5 with smallest effective area per Chapter 26 of ASCE 7-10 and Section 1609.1.1 of the 2012 IBC.

TABLE 3a—PANEL SIDING - MAXIMUM NOMINAL (ALLOWABLE) COMPONENT AND CLADDING DESIGN WIND SPEED, V_{asd}[1]

PERFORMANCE CATEGORY	MAXIMUM WALL STUD SPACING[2] (inches)	FASTENER SPACING[3] (inches o.c.)		MAXIMUM ALLOWABLE WIND PRESSURE (psf)	MAXIMUM NOMINAL (ALLOWABLE) WIND SPEED, V_{asd}[4] (mph)		
		Edges	Field		Wind Exposure Category		
					B	C	D
5/8	16	6	12	46	130	110	105
			6	80	170	150	140
	24	6	12	31	110	90	85
			6	61	150	130	120
7/16	16	6	12	45	130	110	105
			6	80	170	150	140
	24	6	12	30	110	90	85
			6	59	150	130	120
19/32	16	6	12	41	130	110	100
			6	80	170	150	140
	24	6	12	27	105	90	-
			6	55	150	125	110

For SI: 1 inch = 25.4 mm, 1 psf = 47.88 Pa, 1 mph = 1.6 kph.

[1]Tabulated values assume full penetration of the fastener into the wall studs, i.e., fastener penetration = fastener length – siding thickness.
[2]Wall studs must have a minimum specific gravity of 0.42.
[3]Fastener must have a minimum head diameter of 0.297 inch, a minimum shaft diameter of 0.113 inch and a minimum length of 2.5 inches (8d box nail).
[4]Three-second-gust; based on wind pressures acting toward and away from building surfaces, at 30-feet in Zone 5 with smallest effective area per Chapter 6 of ASCE 7-05, Section R301.2 of the 2009/2012 IRC, and Section 1609.1.1 of the 2009 IBC.

TABLE 3b—PANEL SIDING - MAXIMUM ULTIMATE COMPONENT AND CLADDING DESIGN WIND SPEED, V_{ult}[1]

PERFORMANCE CATEGORY	MAXIMUM WALL STUD SPACING[2] (inches)	FASTENER SPACING[3] (inches o.c.)		MAXIMUM ULTIMATE WIND PRESSURE (psf)	MAXIMUM ULTIMATE DESIGN WIND SPEED, V_{ult}[4] (mph)		
		Edges	Field		Wind Exposure Category		
					B	C	D
3/8	16	6	12	77	160	150	130
			6	133	200	180	180
	24	6	12	51	140	120	110
			6	102	200	160	150
7/16	16	6	12	74	160	140	130
			6	133	200	180	180
	24	6	12	50	140	120	110
			6	99	200	160	150
19/32	16	6	12	69	160	140	130
			6	133	200	180	180
	24	6	12	46	130	115	-
			6	92	180	160	150

For SI: 1 inch = 25.4 mm, 1 psf = 47.88 Pa, 1 mph = 1.6 kph.

[1]Tabulated values assume full penetration of the fastener into the wall studs, i.e., fastener penetration = fastener length – siding thickness.
[2]Wall studs must have a minimum specific gravity of 0.42.
[3]Fastener must have a minimum head diameter of 0.297 inch, a minimum shaft diameter of 0.113 inch and a minimum length of 2.5 inches (8d box nail).
[4]Three-second-gust; based on wind pressures acting toward and away from building surfaces, at 30-feet height in Zone 5 with smallest effective area per Chapter 26 of ASCE 7-10 and Section 1609.1.1 of the 2012 IBC.

TABLE 4a—LAP SIDING - MAXIMUM NOMINAL (ALLOWABLE) COMPONENT AND CLADDING DESIGN WIND SPEED, V_{asd}[1,2]

PERFORMANCE CATEGORY	MAXIMUM WALL STUD SPACING[3] (inches)	SIDING WIDTH (inches)	MAXIMUM ALLOWABLE WIND PRESSURE (psf)	MAXIMUM NOMINAL (ALLOWABLE) WIND SPEED, V_{asd}[4] (mph)		
				Wind Exposure Category		
				B	C	D
3/8	16	6	78	170	150	130
		8	56	150	125	110
		12	35	120	100	90
7/16	16	6	78	170	150	130
		8	56	150	125	110
		12	35	120	100	90
	24	6	52	145	120	110
		8	37	120	100	90
		12	24	90	-	-

For SI: 1 inch = 25.4 mm, 1 psf = 47.88 Pa, 1 mph = 1.6 kph.

[1]One fastener per stud located ¾ inch from the top edge of the siding. Each successive course of lap siding must overlap a minimum of 1 inch. Fastener must have a minimum head diameter of 0.297 inch, a minimum shaft diameter of 0.113 inch and a minimum length of 2.5 inches (8d box nail).
[2]Tabulated values assume a fastener penetration of 1½ inches into the wall studs.
[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-feet height in Zone 5 with smallest effective area per Chapter 6 of ASCE 7-05, Section R301.2 of the 2009/2012 IRC, and Section 1609.1.1 of the 2009 IBC.

TABLE 4b—LAP SIDING - MAXIMUM ULTIMATE COMPONENT AND CLADDING DESIGN WIND SPEED, V_{ult}[1,2]

PERFORMANCE CATEGORY	MAXIMUM WALL STUD SPACING[3] (Inches)	SIDING WIDTH (Inches)	MAXIMUM ULTIMATE WIND PRESSURE (psf)	MAXIMUM ULTIMATE DESIGN WIND SPEED, V_{ult}[4] (mph)		
				Wind Exposure Category		
				B	C	D
3/8	16	6	130	200	180	180
		8	93	180	160	150
		12	59	150	130	120
7/16	16	6	130	200	180	180
		8	93	180	160	150
		12	59	150	130	120
	24	6	86	180	160	140
		8	62	160	130	120
		12	39	120	-	-

For SI: 1 inch = 25.4 mm, 1 psf = 47.88 Pa, 1 mph = 1.6 kph.

[1]One fastener per stud located ¾ inch from the top edge of the siding. Each successive course of lap siding must overlap a minimum of 1 inch. Fastener must have a minimum head diameter of 0.297 inch, a minimum shaft diameter of 0.113 inch and a minimum length of 2.5 inches (8d box nail).
[2]Tabulated values assume a fastener penetration of 1 1/2 inches into the wall studs.
[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-feet height in Zone 5 with smallest effective area per Chapter 26 of ASCE 7-10 and Section 1609.1.1 of the 2012 IBC.

TABLE 5a—PANEL SIDING - MAXIMUM NOMINAL (ALLOWABLE) COMPONENT AND CLADDING DESIGN WIND SPEED, V_{asd}[1]

PERFORMANCE CATEGORY	MAXIMUM WALL STUD SPACING[2] (Inches)	FASTENER SPACING[3] (Inches o.c.)		MAXIMUM ALLOWABLE WIND PRESSURE (psf)	MAXIMUM NOMINAL (ALLOWABLE) WIND SPEED, V_{asd}[4] (mph)		
		Edges	Field		Wind Exposure Category		
					B	C	D
3/8	16	6	12	32	110	90	90
			6	65	150	130	125
	24	6	12	22	90	-	-
			6	43	130	110	100
7/16	16	6	12	32	110	90	90
			6	65	150	130	125
	24	6	12	22	90	-	-
			6	43	130	110	100
19/32	16	6	12	32	110	90	90
			6	65	150	130	125
	24	6	12	22	90	-	-
			6	43	130	110	100

For SI: 1 inch = 25.4 mm, 1 psf = 47.88 Pa, 1 mph = 1.6 kph.

[1]Tabulated values assume a fastener penetration of 1 1/2 inches into the wall studs.
[2]Wall studs must have a minimum specific gravity of 0.42.
[3]Fastener must have a minimum head diameter of 0.297 inch, a minimum shaft diameter of 0.113 inch and a minimum length of 2.5 inches (8d box nail).
[4]Three-second-gust; based on wind pressures acting toward and away from building surfaces, at 30-feet in Zone 5 with smallest effective area per Chapter 6 of ASCE 7-05, Section R301.2 of the 2009/2012 IRC, and Section 1609.1.1 of the 2009 IBC.

TABLE 5b—PANEL SIDING - MAXIMUM ULTIMATE COMPONENT AND CLADDING DESIGN WIND SPEED, V_{ult}[1]

PERFORMANCE CATEGORY	MAXIMUM WALL STUD SPACING[2] (inches)	FASTENER SPACING[3] (inches o.c.)		MAXIMUM ULTIMATE WIND PRESSURE (psf)	MAXIMUM ULTIMATE DESIGN WIND SPEED, V_{ult}[4] (mph)		
		Edges	Field		Wind Exposure Category		
					B	C	D
3/8	16	6	12	54	140	120	115
			6	108	200	160	160
	24	6	12	36	120	-	-
			6	72	160	140	130
7/16	16	6	12	54	140	120	115
			6	108	200	160	160
	24	6	12	36	120	-	-
			6	72	160	140	130
19/32	16	6	12	54	140	120	115
			6	108	200	160	160
	24	6	12	36	120	-	-
			6	72	160	140	130

For SI: 1 inch = 25.4 mm, 1 psf = 47.88 Pa, 1 mph = 1.6 kph.

[1]Tabulated values assume a fastener penetration of 1 1/2 inches into the wall studs.
[2]Wall studs must have a minimum specific gravity of 0.42.
[3]Fastener must have a minimum head diameter of 0.297 inch, a minimum shaft diameter of 0.113 inch and a minimum length of 2.5 inches (8d box nail).
[4]Three-second-gust; based on wind pressures acting toward and away from building surfaces, at 30-feet height in Zone 5 with smallest effective area per Chapter 26 of ASCE 7-10 and Section 1609.1.1 of the 2012 IBC.