



R O S E B U R G

**RIGIDLAM® LVL**  
Studs

## Stronger, Straighter, Stiffer Walls



- 100% Western Fir LVL Stud
- No crown, twist, warp or wane equals no waste
- Clear sealer on all 6 sides for temporary weather protection
- Code accepted alternative to solid sawn studs in conventional framing
- Excellent choice for engineered tall walls
- Approved for use in 1-hour fire-rated wall construction
- Product and performance warranty

### **SIZES**

1½" x 3½" and 1½" x 5½"  
1¾" x 3½" and 1¾" x 5½"

### **LENGTHS**

16', 18', 20', 24' and 48'

### **GRADES**

1.5E and 2.0E

*quality engineered wood products for today's builder®*

# RIGIDLAM® LVL STUDS

As the number of housing starts has risen over the past decade, so has the need for larger and more complex homes. Although conventional construction methods have allowed builders to meet the needs of homeowners, they are constantly being challenged with the need for straighter, stronger building products. Roseburg Forest Products RigidLam® LVL Studs are an answer to the needs of both homeowners and builders. RigidLam Studs are manufactured to the industry's highest standards and unlike solid-sawn lumber, RigidLam Studs are straight, strong, and stiff, resulting in a faster installation time, fewer callbacks, and straight walls that give homeowners peace of mind.

RigidLam LVL wall studs are permitted to be used in fire-resistance-rated construction and shall be considered a direct replacement for solid-sawn lumber, having the same dimensions, in any fire-resistance-rated wall assembly listed in Table 720.1(2) of the 2006 IBC, provided a minimum of 2.5 lbs. per cu. ft. mineral wool insulation is installed in the stud cavity.

## CONVENTIONAL CONSTRUCTION

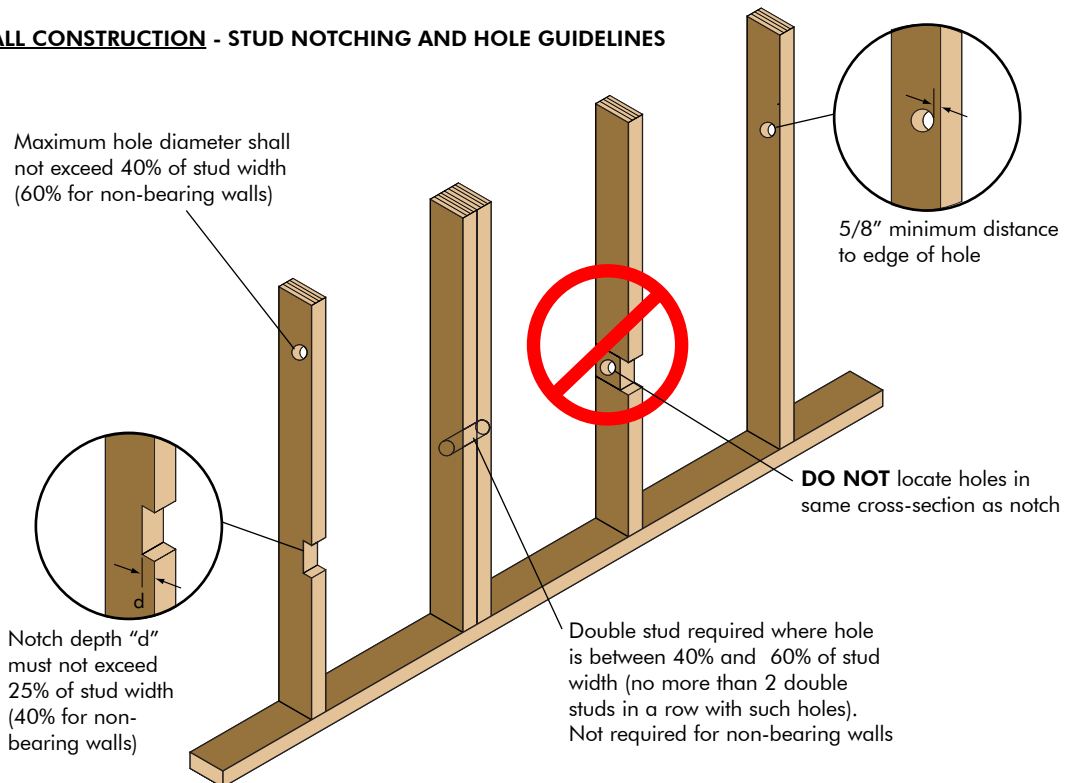
Based on testing conducted in accordance with ICC Evaluation Service Acceptance Criteria for Wood-Based Studs, AC202, RigidLam LVL Studs are considered to be alternatives to sawn lumber studs complying with Section 2308.9 of the IBC, Section R602 of the IRC, Section 2305 of the BNBC, Section 2308 of the SBC and Section 2320.11 of the UBC.

### TYPICAL CONVENTIONAL CONSTRUCTION LIMITATIONS (2006 INTERNATIONAL RESIDENTIAL CODE)

- Maximum story height of 10'-0" plus 16" for floor framing (11'-4" total) *Section R301.3*
- Maximum stud height of 10'-0" between points of lateral support *Table R602.3(5)*
- Maximum on-center stud spacing = 24 inches *Table R602.3(5)*
- Building height limited to 3 stories above grade *Section R101.2*
- Maximum wind speed less than 110 mph (100 mph in hurricane zone regions) *Section R301.2.1.1*
- Maximum tabulated rafter, ceiling joist and floor joist spacing = 24" o.c. *Tables R502.3.1(1)(2) & R802.4(1) & R802.5(1)-(8)*
- Maximum tabulated rafter, ceiling joist, and joist span = 26'-0" *Table R502.3.1(1) & Footnotes to R802.4(1)(2) & R802.5(1)-(8)*
- Maximum floor loads: 40 psf Live and 20 psf Dead *Section R502.3.2*
- Maximum roof/ceiling dead load = 20 psf *Tables R802.5(1)-(8)*
- Maximum ground snow load = 70 psf *Section R301.2(3)*
- Minimum stud thickness = 2" nominal (1½" actual) *Section R602.3(5)*
- Applicable for Seismic Design Categories A, B, C, D0, D1 and D2 (except for irregular buildings) *Section R301.2.2*

NOTE: Other limitations may apply. Please refer to your local building code.

### CONVENTIONAL WALL CONSTRUCTION - STUD NOTCHING AND HOLE GUIDELINES



## ENGINEERED CONSTRUCTION

For building applications that fall outside the scope of conventional construction, RigidLam LVL Studs may be used provided they are designed in accordance with accepted engineering practice. RigidLam LVL Studs are available in 1.5E and 2.0E grades in thicknesses of 1½" and 1¾".

### RIGIDLAM® LVL STUD ALLOWABLE DESIGN STRESSES VS. SOLID-SAWN LUMBER <sup>(1)(a)</sup>

2x4		Joist (edgewise)			Plank (flatwise)			Axial		MOE
		F <sub>b</sub>	F <sub>v</sub>	F <sub>c⊥</sub> <sup>(2)</sup>	F <sub>b</sub>	F <sub>v</sub>	F <sub>c⊥</sub> <sup>(2)</sup>	F <sub>c</sub>	F <sub>t</sub>	
Species	Grade	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
RigidLam LVL Stud	1.5E	2730 <sup>(4)</sup>	220	575	2,250	130	500	1,950	1500 <sup>(3)</sup>	1,500,000
RigidLam LVL Stud	2.0E	3518 <sup>(4)</sup>	285	750	2,900	130	500	2,750	1900 <sup>(3)</sup>	2,000,000
Douglas-fir <sup>(b)</sup>	No. 2	1,553 <sup>(c)</sup>	180	625	1,485 <sup>(d)</sup>	180	625	1,553 <sup>(e)</sup>	863 <sup>(e)</sup>	1,600,000
Spruce-Pine-Fir <sup>(b)</sup>	No. 2	1,509 <sup>(c)</sup>	135	425	1,444 <sup>(d)</sup>	135	425	1,323 <sup>(e)</sup>	675 <sup>(e)</sup>	1,400,000

2x6		Joist (edgewise)			Plank (flatwise)			Axial		MOE
		F <sub>b</sub>	F <sub>v</sub>	F <sub>c⊥</sub> <sup>(2)</sup>	F <sub>b</sub>	F <sub>v</sub>	F <sub>c⊥</sub> <sup>(2)</sup>	F <sub>c</sub>	F <sub>t</sub>	
Species	Grade	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
RigidLam LVL Stud	1.5E	2580 <sup>(4)</sup>	220	575	2,250	130	500	1,950	1500 <sup>(3)</sup>	1,500,000
RigidLam LVL Stud	2.0E	3325 <sup>(4)</sup>	285	750	2,900	130	500	2,750	1900 <sup>(3)</sup>	2,000,000
Douglas-fir <sup>(b)</sup>	No. 2	1,346 <sup>(c)</sup>	180	625	1,346 <sup>(d)</sup>	180	625	1485 <sup>(e)</sup>	748 <sup>(e)</sup>	1,600,000
Spruce-Pine-Fir <sup>(b)</sup>	No. 2	1,308 <sup>(c)</sup>	135	425	1,308 <sup>(d)</sup>	135	425	1,265 <sup>(e)</sup>	585 <sup>(e)</sup>	1,400,000

#### RigidLam LVL Notes

- (1) These allowable design stresses apply to dry service conditions
- (2) Duration of Load increases not allowed
- (3) Tabulated values are based on a 4 ft length. For lengths greater than 4 ft, multiply by  $(4/\text{Length})^{1/9}$ . For lengths less than 4 ft, use the table values.
- (4) Bending values have been multiplied by  $(12/d)^{1/8}$  and a repetitive member factor of 1.04

#### Solid-Sawn Notes

- (a) These allowable design stresses apply to dry service conditions
- (b) Solid-sawn design values taken from 2005 National Design Specification
- (c) F<sub>b</sub> has been adjusted for repetitive member use and size factor increases
- (d) F<sub>b</sub> has been adjusted for size factor increases and flat-wise increases
- (e) F<sub>c</sub> and F<sub>t</sub> have been adjusted for size factor increases

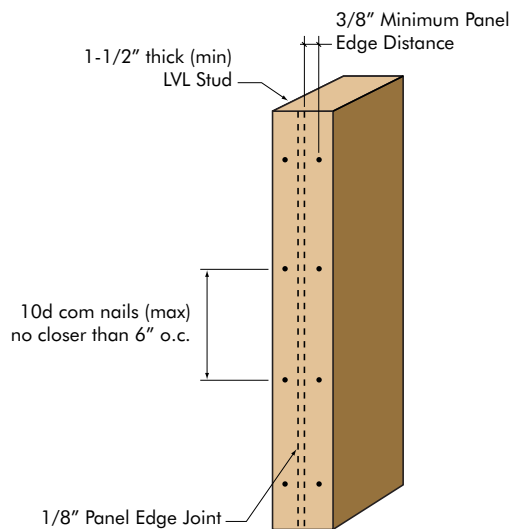
## ENGINEERED WALL CONSTRUCTION - RIGIDLAM STUD HOLE AND NOTCHING GUIDELINES

**Notches:** A notch up to 40% of the width of the stud may be placed anywhere along the stud provided the reduced section is accounted for using standard engineering analysis and the allowable bending and/or tension stress is reduced by 30% to account for the stress concentrations that occur at the corners of the notch.

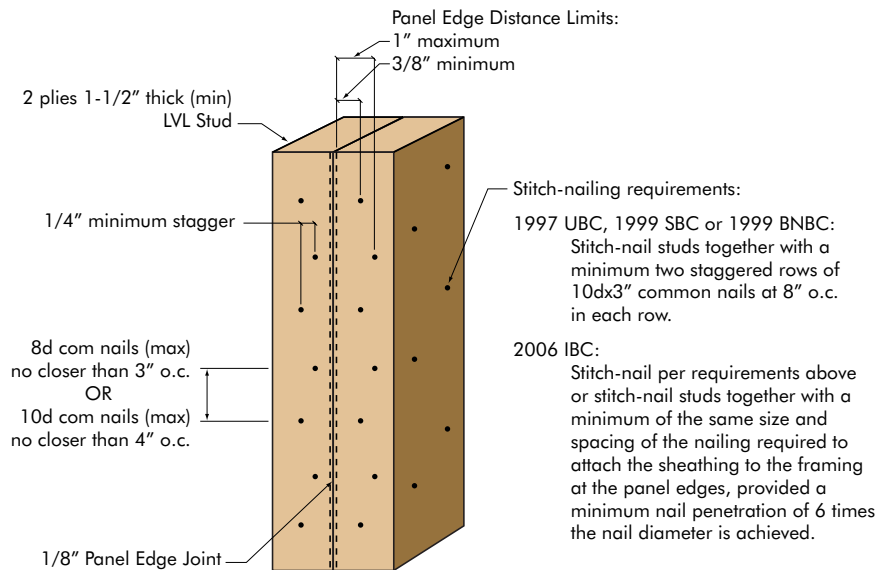
**Holes:** A hole with a maximum diameter of 30% of the width of the stud may be placed anywhere along the stud **at the centerline of the stud width** without further engineering analysis for lateral bending considerations. For other conditions, holes may be placed anywhere along the stud provided the reduced section is accounted for using standard engineering analysis.

## CONVENTIONAL AND ENGINEERED WALL CONSTRUCTION - RIGIDLAM LVL NAILING RESTRICTIONS

### NAILING RESTRICTIONS FOR SINGLE STUD AT ADJOINING PANEL EDGES



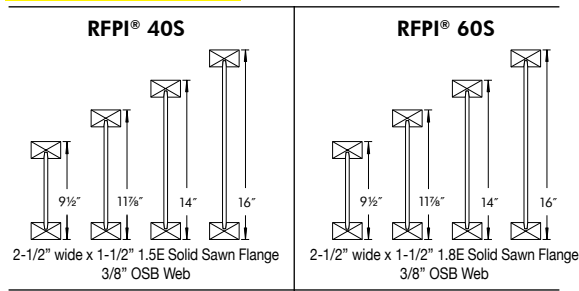
### NAILING RESTRICTIONS FOR DOUBLE STUDS AT ADJOINING PANEL EDGES



# The Roseburg Framing System®

The Roseburg Framing System® consists of: RFPI® Joists used in floor and roof construction; RigidLam® LVL which is used for headers, beams, columns, studs and stair stringers; and RigidRim® Rim Board. All of the components are engineered to the industry's highest standards to help contractors build solid, durable, and better performing framing systems compared to ordinary dimension lumber.

## SOLID SAWN FLANGE RFPI® JOISTS

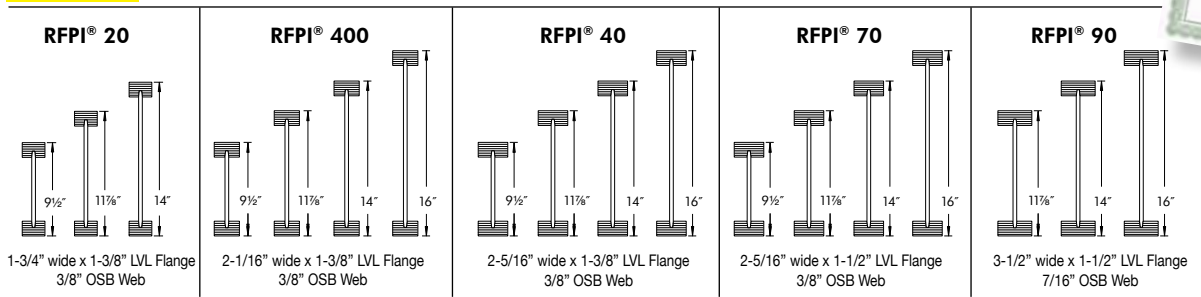


## RIGIDRIM® RIM BOARD DESIGN PROPERTIES

	Thickness	Vertical Load (PLF)	Horizontal Load (PLF)	Post Load (Pounds)	Lag Screw (1/2") (Pounds)
<b>OSB Rim Board</b>	1-1/8"	4400	180 (8d box or common)	3500	350
<b>OSB Rim Board Plus</b>	1-1/8"	4850	200 (8d box or common)	3500	350
<b>OSB Rim Board Seismic</b>	1-1/4"	5700	240 (8d common)	5900	400
<b>1.3E LVL Rim Board</b>	1-1/2"	4900	215 (8d box or common)	-	400



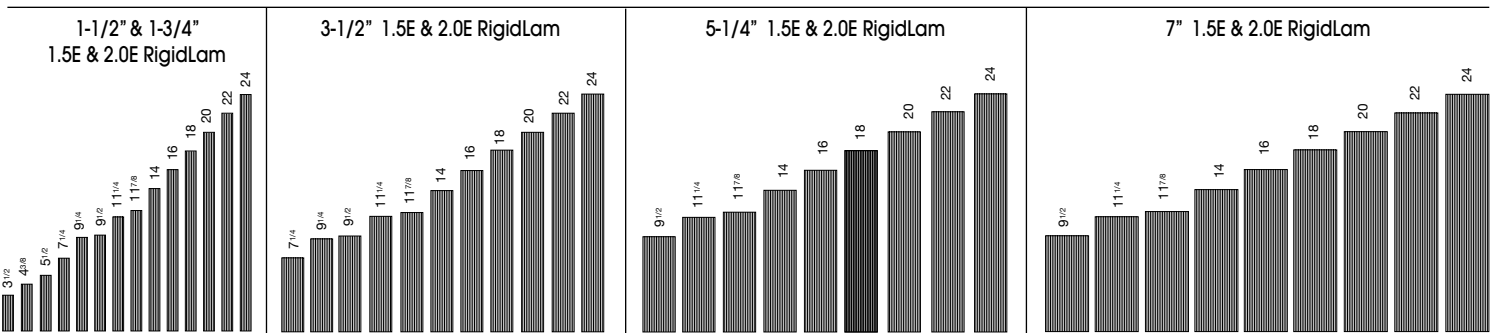
## LVL FLANGE RFPI® JOISTS



## RFPI® JOIST ALLOWABLE SPANS - 40 PSF LIVE LOAD AND 10 PSF DEAD LOAD

Joist Depth	Joist Series	40/10 SIMPLE SPAN				40/10 MULTIPLE SPAN			
		12" o.c.	16" o.c.	19.2" o.c.	24" o.c.	12" o.c.	16" o.c.	19.2" o.c.	24" o.c.
9-1/2"	RFPI® 20	17' - 2"	15' - 9"	14' - 10"	13' - 10"	18' - 9"	17' - 1"	16' - 2"	13' - 5"
	RFPI® 40S	18' - 0"	16' - 5"	15' - 6"	14' - 6"	19' - 7"	17' - 11"	16' - 4"	14' - 7"
	RFPI® 400	18' - 0"	16' - 5"	15' - 6"	14' - 6"	19' - 7"	17' - 10"	16' - 10"	15' - 9"
	RFPI® 40	18' - 7"	16' - 11"	16' - 0"	14' - 11"	20' - 2"	18' - 5"	17' - 5"	16' - 2"
	RFPI® 60S	18' - 11"	17' - 4"	16' - 4"	15' - 3"	20' - 8"	18' - 10"	17' - 9"	16' - 6"
	RFPI® 70	19' - 9"	18' - 0"	17' - 0"	15' - 10"	21' - 6"	19' - 7"	18' - 5"	17' - 2"
11-7/8"	RFPI® 20	20' - 6"	18' - 9"	17' - 9"	16' - 5"	22' - 4"	20' - 2"	16' - 9"	13' - 5"
	RFPI® 40S	21' - 5"	19' - 7"	18' - 6"	16' - 8"	23' - 5"	20' - 5"	18' - 7"	16' - 7"
	RFPI® 400	21' - 5"	19' - 7"	18' - 6"	17' - 3"	23' - 4"	21' - 4"	20' - 1"	17' - 9"
	RFPI® 40	22' - 1"	20' - 2"	19' - 0"	17' - 9"	24' - 1"	22' - 0"	20' - 8"	19' - 3"
	RFPI® 60S	22' - 7"	20' - 8"	19' - 6"	18' - 2"	24' - 8"	22' - 6"	21' - 2"	19' - 7"
	RFPI® 70	23' - 7"	21' - 6"	20' - 3"	18' - 10"	25' - 8"	23' - 5"	22' - 0"	18' - 6"
RFPI® 90	26' - 6"	24' - 1"	22' - 8"	21' - 1"	28' - 10"	26' - 3"	24' - 8"	22' - 11"	
14"	RFPI® 20	23' - 4"	21' - 4"	20' - 2"	18' - 6"	25' - 5"	22' - 7"	20' - 7"	16' - 7"
	RFPI® 40S	24' - 4"	22' - 3"	20' - 6"	18' - 4"	25' - 11"	22' - 5"	20' - 5"	18' - 3"
	RFPI® 400	24' - 4"	22' - 3"	21' - 0"	19' - 7"	26' - 7"	24' - 3"	22' - 3"	17' - 9"
	RFPI® 40	25' - 2"	22' - 11"	21' - 8"	20' - 2"	27' - 5"	25' - 0"	23' - 7"	19' - 9"
	RFPI® 60S	25' - 9"	23' - 6"	22' - 2"	20' - 8"	28' - 0"	25' - 7"	24' - 1"	19' - 9"
	RFPI® 70	26' - 10"	24' - 5"	23' - 0"	21' - 5"	29' - 3"	26' - 7"	23' - 2"	18' - 6"
RFPI® 90	30' - 1"	27' - 5"	25' - 9"	23' - 11"	32' - 10"	29' - 10"	28' - 1"	26' - 0"	
16"	RFPI® 40S	26' - 11"	24' - 3"	22' - 1"	19' - 9"	27' - 11"	24' - 2"	22' - 0"	19' - 8"
	RFPI® 400	27' - 0"	24' - 8"	23' - 4"	20' - 10"	29' - 6"	26' - 4"	22' - 3"	17' - 9"
	RFPI® 40	27' - 10"	25' - 5"	24' - 0"	22' - 4"	30' - 4"	27' - 8"	24' - 9"	19' - 9"
	RFPI® 60S	28' - 6"	26' - 0"	24' - 7"	22' - 11"	31' - 1"	28' - 4"	24' - 9"	19' - 9"
	RFPI® 70	29' - 9"	27' - 1"	25' - 6"	23' - 1"	32' - 5"	27' - 10"	23' - 2"	18' - 6"
	RFPI® 90	33' - 4"	30' - 4"	28' - 7"	26' - 7"	36' - 5"	33' - 1"	31' - 1"	26' - 7"

## AVAILABLE RIGIDLAM® LVL SIZES



Not all sizes available in all markets. Contact your Roseburg representative for availability. The location and contact information for your regional EWP representative can be found on our company website [www.roseburg.com](http://www.roseburg.com) or by calling (800) 347-7260.

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