

# WEYERHAEUSER FRAMER SERIES<sup>®</sup> LUMBER WITH WARPSTABLE<sup>™</sup> TECHNOLOGY

Structural Framing Lumber with  
Predictable Performance

- Computerized grading virtually eliminates warp
- Comes with crown edge clearly marked
- Eliminates field culling
- Treated with a mold inhibitor
- More stable and consistent than ordinary lumber
- Limited product warranty





### WHY MAKE THE SWITCH TO FRAMER SERIES LUMBER?

Here's why—

- Limited product warranty
- Crown edge clearly marked for fast installation
- Performs more consistently than ordinary lumber
- Helps ensure smooth, flat finished surfaces

The products in this guide are available through our nationwide network of distributors and dealers. For more information on other applications or other Weyerhaeuser products, contact your Weyerhaeuser representative.



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 SFI-00008

## STRAIGHT TALK ABOUT FRAMER SERIES™ LUMBER

Framer Series lumber is mechanically graded to virtually eliminate warping, and each board comes with the crown clearly marked to speed up installation. With lumber like this, framing goes up fast, crews won't spend valuable time culling, and there's less material waste when the job is done.

Each piece of Framer Series lumber with WarpStable™ technology predicts with 95% confidence which boards will remain stable after being dried below 7% MC. It maintains a stability that is defined by the American Lumber Standards to within the #1 grade limit for bow, twist or crook. Each board is mechanically graded and the crown is marked. Framer Series lumber is performance tested to meet specific strength and density requirements. Because it's more stable than commodity boards, Framer Series lumber is ideal for any non-exposed application—even those where vertical-use-only products aren't allowed. That gives crews more flexibility at the job site and helps reduce the potential for red tags.

### Only Weyerhaeuser Framer Series lumber offers so many benefits:

- Limited warranty against warping
- Floors, walls, and ceilings stay flat and even
- Fewer callbacks to repair drywall cracks
- Crown edge clearly marked on each board to aid typical field practice of aligning crowns in the framing (a double arrow indicates an undetectable crown edge).
- Full lateral shear wall capacities—no species reduction needed
- Meets or exceeds all building code requirements for framing lumber
- Mold inhibitor helps material stay clean and bright, reducing product loss and callbacks

### Available Sizes

Nominal Size	Lengths	Grade
2x4	8', 9', 10', 18', 20'	M-9 or MSR 1650
2x4	12' to 16', in 2' increments	M-12 or MSR 1650
2x6	8' to 20', in 2' increments	M-12
2x8, 2x10, 2x12	8' to 20', in 2' increments	M-29

### Allowable Design Stresses (100% Load Duration)

		M-9 Grade	M-12 Grade	MSR 1650 Grade	M-29
Modulus of elasticity	E =	1.4 x 10 <sup>6</sup> psi	1.6 x 10 <sup>6</sup> psi	1.5 x 10 <sup>6</sup> psi	1.7 x 10 <sup>6</sup> psi
Flexural stress	F <sub>b</sub> =	1,400 psi	1,600 psi	1,650 psi	1,550 psi
Tension stress	F <sub>t</sub> =	800 psi	850 psi	1,020 psi	850 psi
Compression perpendicular to grain	F <sub>c⊥</sub> =	565 psi	565 psi	565 psi	565 psi
Compression parallel to grain	F <sub>c  </sub> =	1,600 psi	1,675 psi	1,700 psi	1,650 psi
Horizontal shear parallel to grain	F <sub>v</sub> =	175 psi	175 psi	175 psi	175 psi

- Design values based on Table 4C, NDS® Supplement.
- Use specific gravity of 0.55 when designing connections.
- M-9, M-12, MSR 1650, and M-29 values meet or exceed those of #2 SPF and #2 Southern pine, making Weyerhaeuser Framer Series lumber acceptable for use in any code-evaluated application that allows those products.

### Maximum Wall Stud Spacing per 2018 IRC Table R602.3(5)

Stud Size	Bearing Walls				Non-Bearing Walls		
	Laterally unsupported stud height	Supporting roof and ceiling only	Supporting one floor, roof, and ceiling	Supporting two floors, roof and ceiling	Supporting one floor only	Laterally unsupported stud height	Maximum spacing
2x4	10'	24" o.c.	16" o.c.	—	24" o.c.	14'	24" o.c.
2x6	10'	24" o.c.	24" o.c.	16" o.c.	24" o.c.	20'	24" o.c.

- Listed heights are distances between points of lateral support placed perpendicular to the plane of the wall.
- See IRC for additional requirements and limitations.

# FRAMER SERIES LUMBER SPAN AND LOAD TABLES

## Maximum Floor Spans

Nominal Size	Width	Depth	40 psf Live Load, 10 psf Dead Load, L/360 <sup>(1)</sup>				40 psf Live Load, 10 psf Dead Load, L/480				30 psf Live Load <sup>(2)</sup> , 10 psf Dead Load, L/360 <sup>(1)</sup>				30 psf Live Load <sup>(2)</sup> , 10 psf Dead Load, L/480			
			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.	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.
2x8	1½"	7¼"	14'-5"	13'-1"	12'-4"	11'-5"	13'-1"	11'-11"	11'-2"	10'-5"	15'-10"	14'-5"	13'-7"	12'-7"	14'-5"	13'-1"	12'-4"	11'-5"
2x10	1½"	9¼"	18'-5"	16'-9"	15'-9"	14'-7"	16'-9"	15'-2"	14'-4"	13'-3"	20'-3"	18'-5"	17'-4"	16'-1"	18'-5"	16'-9"	15'-9"	14'-7"
2x12	1½"	11¼"	22'-5"	20'-4"	19'-2"	17'-9"	20'-4"	18'-6"	17'-5"	16'-2"	24'-8"	22'-5"	21'-1"	19'-7"	22'-5"	20'-4"	19'-2"	17'-9"

(1) Minimum live load deflection criteria per code. For stricter deflection criteria, use shorter spans or the L/480 spans.

(2) 30 psf live load is permitted in residential sleeping areas by some codes.

## Maximum Rafter Spans<sup>(1)</sup>

Nominal Size	Width	Depth	20 psf Snow Load, 10 psf Dead Load, L/240				30 psf Snow Load, 10 psf Dead Load, L/240			
			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.
2x8	1½"	7¼"	20'-10"	18'-11"	17'-9"	16'-6"	18'-2"	16'-6"	15'-6"	14'-5"
2x10	1½"	9¼"	26'-6"	24'-1"	22'-8"	21'-1"	23'-2"	21'-1"	19'-10"	18'-5"
2x12	1½"	11¼"	32'-3"	29'-4"	27'-7"	25'-7"	28'-2"	25'-7"	24'-1"	22'-5"

(1) Based on 115% duration of load (snow areas) and minimum live load deflection criteria per code.

## Maximum Ceiling Spans<sup>(1)</sup>

Nominal Size	Width	Depth	20 psf Live Load <sup>(2)</sup> , 10 psf Dead Load, L/240				10 psf Live Load <sup>(3)</sup> , 5 psf Dead Load, L/240			
			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.
2x8	1½"	7¼"	20'-10"	18'-11"	17'-9"	16'-2"	26'-2"	23'-10"	22'-5"	20'-10"
2x10	1½"	9¼"	26'-6"	24'-1"	22'-8"	20'-7"	33'-5"	30'-5"	28'-7"	26'-6"
2x12	1½"	11¼"	32'-3"	29'-4"	27'-7"	25'-0"	40'-8"	36'-11"	34'-9"	32'-3"

(1) Based on 100% duration of load and minimum live load deflection criteria per code.

(2) Uninhabitable attics with limited storage. See IRC for additional requirements and limitations.

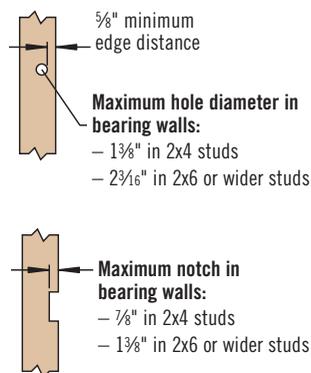
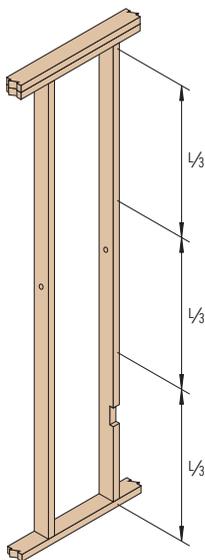
(3) Uninhabitable attics without storage. See IRC for additional requirements and limitations.

## General Notes for Floor, Rafter, and Ceiling Span Tables

- Tables are based on M-29, Southern pine design values (see page 2).
- Maximum available length is 20'.
- Joists must bear directly on beams, girders, ledgers, or load bearing walls; or be supported by hangers or framing anchors.
- Spans shown are horizontal clear distances between supports, and assume uniformly loaded joists only.
- Minimum bearing:** 1½" on wood or steel, 3" on masonry. Bearing across full joist width is required.
- Provide lateral restraint at the end of each joist by fastening to a rim, band joist, header, or other member or by using full-height blocking between floor joist ends.

# FRAMER SERIES LUMBER ALLOWABLE HOLES AND NOTCHES

## For Wall Framing

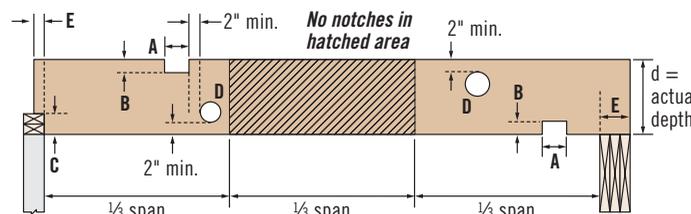


**DO NOT cut a notch and a hole in the same cross section**

## General Notes

- If wall is non-bearing, or if studs are doubled (with no more than two studs in a row bored), maximum hole sizes may be increased to:
  - 2¼" diameter for 2x4 walls
  - 3¼" diameter for 2x6 or wider walls
- Holes may be drilled anywhere along the length of the stud or column but must be at least 5/8" from the edge.
- Notches may be cut anywhere except the middle 1/3 of the length of the stud or column.

## For Joists, Beams, and Headers



**If the thickness of a built-up member is greater than 3½", no notches are allowed on the tension side, except at ends.**

