FRAMER SERIES™ LUMBER

Structural Framing Lumber with Predictable Performance

- **Computerized Grading Virtually Eliminates Warp**
- **Comes with Crown Edge Clearly Marked**
- **Eliminates Field Culling**
- **Protected with a Mold Inhibitor**
- **More Stable and Consistent than Ordinary Lumber**
- **Limited Product Warranty**

STRAIGHT TALK ABOUT FRAMER SERIES™ LUMBER

Weyerhaeuser's 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 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 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 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
- 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

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 readily available through our nationwide network of distributors and dealers. For more information on other applications or other Weyerhaeuser products, contact your Weyerhaeuser representative.

SUSTAINABLE FORESTRY INITIATIVE
Certified Sourcing
www.sfiprogram.org
SFI-00008

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, 2x8, 2x10, 2x12	8' to 20', in 2' increments	M-12

Allowable Design Stresses (100% Load Duration)

			M-9 Grade	M-12 Grade	MSR 1650 Grade
Modulus of elasticity	E	=	1.4 x 10^6 psi	1.6 x 10^6 psi	1.5 x 10^6 psi
Flexural stress	F_b	=	1,400 psi	1,600 psi	1,650 psi
Tension stress	F_t	=	800 psi	850 psi	1,020 psi
Compression perpendicular to grain	$F_{c\perp}$	=	565 psi	565 psi	565 psi
Compression parallel to grain	$F_{c\parallel}$	=	1,600 psi	1,675 psi	1,700 psi
Horizontal shear parallel to grain	F_v	=	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, and MSR 1650 values meet or exceed those of #2 SPF and #2 Southern pine, making Framer Series™ Lumber acceptable for use in any code-evaluated application that allows those products.

Maximum Wall Stud Spacing per 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.

FRAMER SERIES™ LUMBER SPAN AND LOAD TABLES

Maximum Floor Spans[1]

Nominal Size	Width	Depth	40 psf Live Load, 10 psf Dead Load, L/360[2]				40 psf Live Load, 10 psf Dead Load, L/480				30 psf Live Load[3], 10 psf Dead Load, L/360[2]				30 psf Live Load[3], 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'-2"	12'-10"	12'-1"	11'-3"	12'-10"	11'-8"	11'-0"	10'-2"	15'-7"	14'-2"	13'-4"	12'-4"	14'-2"	12'-10"	12'-1"	11'-3"
2x10	1½"	9¼"	18'-0"	16'-5"	15'-5"	14'-4"	16'-5"	14'-11"	14'-0"	13'-0"	19'-10"	18'-0"	17'-0"	15'-9"	18'-0"	16'-5"	15'-5"	14'-4"
2x12	1½"	11¼"	21'-11"	19'-11"	18'-9"	17'-5"	19'-11"	18'-1"	17'-0"	15'-10"	24'-2"	21'-11"	20'-8"	19'-2"	21'-11"	19'-11"	18'-9"	17'-5"

(1) Maximum available length is 20'.

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

(3) 30 psf live load is permitted in residential sleeping areas by some codes.

Maximum Rafter Spans[1]

Nominal Size	Width	Depth	20 psf Live Load, 10 psf Dead Load, L/240[2]				30 psf Live Load, 10 psf Dead Load, L/240[2]			
			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'-5"	18'-6"	17'-5"	16'-2"	17'-10"	16'-2"	15'-3"	14'-2"
2x10	1½"	9¼"	26'-0"	23'-8"	22'-3"	20'-8"	22'-9"	20'-8"	19'-5"	18'-0"
2x12	1½"	11¼"	31'-8"	28'-9"	27'-1"	25'-1"	27'-8"	25'-1"	23'-7"	21'-11"

(1) Maximum available length is 20'.

(2) Based on 115% duration of load (snow areas).

Maximum Ceiling Spans[1]

Nominal Size	Width	Depth	20 psf Live Load, 10 psf Dead Load, L/240[2]				10 psf Live Load, 5 psf Dead Load, L/240[2]			
			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'-5"	18'-6"	17'-5"	16'-2"	25'-8"	23'-4"	21'-11"	20'-5"
2x10	1½"	9¼"	26'-0"	23'-8"	22'-3"	20'-8"	32'-9"	29'-9"	28'-0"	26'-0"
2x12	1½"	11¼"	31'-8"	28'-9"	27'-1"	25'-1"	39'-10"	36'-2"	34'-1"	31'-8"

(1) Maximum available length is 20'.

(2) Based on 100% duration of load.

General Notes for Floor, Rafter, and Ceiling Span Tables

- Table is based on M-12, 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.

Joist, Beam, or Header Allowable Loads (PLF)

Clear Span	Condition	1½" Width			3" Width (2-ply)			4½" Width (3-ply)			6" Width (4-ply)		
		2x8	2x10	2x12	2x8	2x10	2x12	2x8	2x10	2x12	2x8	2x10	2x12
4'	Total Load	799	1,180	1,556	1,599	2,361	3,113	2,548	3,542	4,670	3,397	4,723	6,227
	Live Load	799	1,180	1,556	1,599	2,361	3,113	2,548	3,542	4,670	3,397	4,723	6,227
	Min. End Bearing (in.)	3.0	3.0	4.5	3.0	3.0	4.5	3.0	3.0	4.5	3.0	3.0	4.5
6'	Total Load	372	591	849	744	1,183	1,698	1,277	2,023	2,660	1,702	2,698	3,547
	Live Load	372	591	849	744	1,183	1,698	1,277	2,023	2,660	1,702	2,698	3,547
	Min. End Bearing (in.)	1.5	3.0	4.5	1.5	3.0	4.5	3.0	3.0	4.5	3.0	3.0	4.5
8'	Total Load	211	340	496	423	681	992	729	1,170	1,700	972	1,561	2,267
	Live Load	211	340	496	423	681	992	637	1,170	1,700	849	1,561	2,267
	Min. End Bearing (in.)	1.5	3.0	3.0	1.5	3.0	3.0	1.5	3.0	3.0	1.5	3.0	3.0
10'	Total Load	135	219	322	271	439	644	468	757	1,108	624	1,009	1,477
	Live Load	110	219	322	221	439	644	330	676	1,108	440	902	1,477
	Min. End Bearing (in.)	1.5	1.5	3.0	1.5	1.5	3.0	1.5	3.0	3.0	1.5	3.0	3.0
12'	Total Load	93	152	224	187	305	449	282	526	775	376	702	1,033
	Live Load	64	132	224	128	265	449	193	396	703	257	528	938
	Min. End Bearing (in.)	1.5	1.5	3.0	1.5	1.5	3.0	1.5	1.5	3.0	1.5	1.5	3.0
14'	Total Load	58	111	165	117	223	330	175	367	570	234	489	760
	Live Load	40	84	149	81	168	299	122	251	447	163	335	597
	Min. End Bearing (in.)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	3.0	1.5	1.5	3.0
16'	Total Load	38	81	126	77	162	252	115	244	436	154	325	581
	Live Load	27	56	101	54	113	202	82	169	302	109	226	402
	Min. End Bearing (in.)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
18'	Total Load	26	56	99	52	112	198	78	169	308	105	225	411
	Live Load	19	39	71	38	79	142	57	119	213	77	159	284
	Min. End Bearing (in.)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
20'	Total Load	18	40	74	37	80	148	55	121	222	74	161	296
	Live Load	14	29	52	28	58	104	42	87	156	56	116	208
	Min. End Bearing (in.)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5

General Notes for Joist, Beam, or Header Load Table

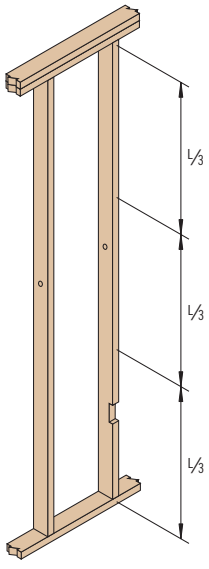
- Table is based on:
  - M-12, Southern pine design values (see page 2)
  - Deflection criteria of L/240 total load, L/360 live load, and 100% duration of load
- Allowable loads shown are the maximum uniform loads (plf) that can be applied to the beam in addition to its own weight, provided that the minimum end-bearing requirements are met.
- Beams and girders must bear on load-bearing walls, piles, or concrete or masonry foundations.

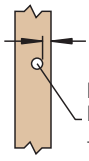
For framing instructions, including recommended fastening schedules, please refer to the AWC Wood Frame Construction Manual or your applicable building code.

Framer Series™ lumber is intended for dry-use applications

FRAMER SERIES™ LUMBER ALLOWABLE HOLES AND NOTCHES

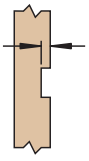
For Wall Framing



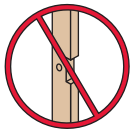


⅝" minimum edge distance

Maximum hole diameter in bearing walls:
– 1⅜" in 2x4 studs
– 2³⁄₁₆" in 2x6 or wider studs



Maximum notch in bearing walls:
– ⅞" in 2x4 studs
– 1⅜" in 2x6 or wider studs

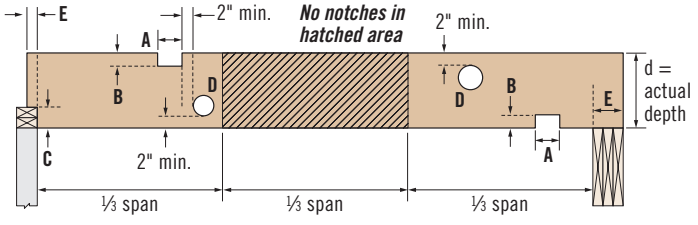


DO NOT cut a notch and a hole in the same cross section

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:
  – 2¹⁄₁₆" 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 ⅝" from the edge.
- Notches may be cut anywhere except the middle ⅓ 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.

Maximum Notch and Hole Sizes

Joist, Beam, or Header Nominal Size	A	B	C	D	E	
	Maximum Notch Length not to exceed d/3	Maximum Notch Depth not to exceed d/6	Maximum End Notch Depth not to exceed d/4	Maximum Hole Diameter not to exceed d/3	Minimum Bearing Length	
					Wood or Steel	Masonry
2x8	2⅜"	1³⁄₁₆"	1¹³⁄₁₆"	2⅜"	1½"	3"
2x10	3¹⁄₁₆"	1½"	2⁵⁄₁₆"	3¹⁄₁₆"	1½"	3"
2x12	3¾"	1⅞"	2¹³⁄₁₆"	3¾"	1½"	3"

Safety

- Use care when handling lumber to prevent injuries. Always wear gloves and eye protection when handling building materials.
- Do not use lumber as ramps, planks, etc. Use only as directed in this guide.
- After sheathing, do not overload joists with construction material in excess of design loads.

Storage and Handling

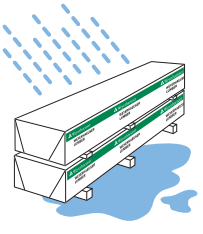
In Warehouse

- Store bundles on a hard and level surface in a covered shed and protect from weather. Avoid contact with water or extended exposure to direct sunlight.
- Do not store lumber in direct contact with the ground. All bundles come with corner protection under the strap, and with 2x3 dunnage to keep product off the ground when breaking bundles.
- To avoid physical damage to lumber, use care when handling bundles or individual components, especially when handling with forklifts or cranes.

At Job Site

- Keep lumber wrapped and covered during transit from lumberyard to the job site.
- Do not open bundles until ready to install.
- To ensure that materials retain a low moisture content after the bundle is broken, rewrap the unused portion and make sure all four sides and the top are covered.
- Keep lumber off of the ground and covered at the job site.

Protect lumber from sun and water



CAUTION: Wrap is slippery when wet or icy

Align stickers directly over support blocks

Use support blocks to keep bundles out of mud and water

Contact your local representative or dealer at:

CONTACT US

1.888.453.8358 • woodbywy.com/contact

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