



TJI[®] 110 • TJI[®] 210 TJI[®] 230 • TJI[®] 360 TJI[®] 560 JOISTS



Featuring Trus Joist[®] TJI[®] Joists for Floor
and Roof Applications

- Uniform and Predictable
- Lightweight for Fast Installation
- Resource Efficient
- Resists Bowing, Twisting, and Shrinking
- Significantly Reduces Callbacks
- Available in Long Lengths
- Limited Product Warranty

NEW!

Now featuring
18" and 20"
TJI[®] joists





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

Code Evaluations:

CCMC 13261-R, CCMC 12627-R, updated CCMC 13132-R pending

TABLE OF CONTENTS

SECTION 1: 9½"–16" TJI® Joists

Design Properties	3
Floor Span Tables	4–6
Roof Span Table	7
Roof Load Table	8
Allowable Holes	9
Cantilevers	10–11
Framing Connectors	12–13

SECTION 2: 18"–20" TJI® Joists

Design Properties	14
Floor Span Tables	14–15
Roof Span Table	16
Roof Load Table	16
Allowable Holes	17
Cantilevers	18–19
Framing Connectors	20–21

SECTION 3: Design Information for All Joists

TJI® Joist Floor Framing	22
Floor Details	23
Rim Board Selection and Installation	24
Roof Framing	25
Roof Details	26–27
Cut Length Calculation	28
Material Weights and Conversion Tables	28
Fire-Safe Construction	29
Floor Performance	30
Understanding and Preventing Floor Noise	31

Why Choose Trus Joist® TJI® Joists?

- Engineered for strength and consistency
- Efficient installation saves time and labor
- Longer lengths allow more versatile floor plans
- Less jobsite waste
- Fewer red tags and callbacks



Now more than ever builders need solutions that really deliver. That's why Trus Joist® TJI® joists are designed to give you more—longer lengths, easier installation, higher span values, better strength-to-weight ratios, and faster cycle times.

TJI® joists are also available in deeper depths that are suitable for heavier-duty loads, such as those in multi-family structures and light commercial buildings.

This guide features TJI® joists in the following sizes:

Depths: 9½", 11⅞", 14", 16", 18", and 20"

Flange Widths: 1¾", 2¼", 2⅝", and 3½"

Flange height and thickness vary by series; see the appropriate sections of this guide for specific sizes and relevant technical information:

9½"–16" JOISTS

Section 1:

Design information for 9½"–16" TJI® joists

18"–20" JOISTS

Section 2:

Design information for 18" and 20" TJI® joists

ALL JOIST DEPTHS

Section 3:

Framing details and design information for all joist depths in this guide

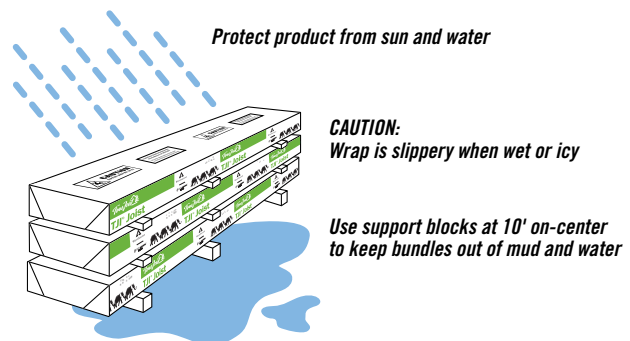
Not all sizes are available in all regions. 22" and 24" deep TJI® joists may also be available in some areas. Contact your Weyerhaeuser representative for joist availability.



Certified Sourcing

www.sfipprogram.org
SFI-00008

PRODUCT STORAGE



This section contains design information for 9½"-16" deep Trus Joist® TJI® joists.

These standard-size TJI® joists are readily available through your local Weyerhaeuser dealer or distributor. Offered with the flange sizes shown below, they come in lengths up to 60' (in 1' increments).

Design Properties

Depth	TJI®	Joist Weight (lbs/ft)	Joist Only EI x 10 ⁶ (lbs-in. ²)	Factored Resistances—Standard Term							
				Maximum Resistive Moment ⁽¹⁾ (ft-lbs)	Maximum Vertical Shear (lbs)	1½" End Reaction (lbs)		3½" Intermediate Reaction (lbs)		5½" Intermediate Reaction (lbs)	
						No Web Stiffeners	With Web Stiffeners ⁽²⁾	No Web Stiffeners	With Web Stiffeners ⁽²⁾	No Web Stiffeners	With Web Stiffeners ⁽²⁾
9½"	110	2.3	157	4,160	1,925	1,435	NA	3,055	N.A.	3,705	NA
	210	2.6	186	4,990	2,100	1,585	NA	3,385	N.A.	4,050	NA
	230	2.7	206	5,540	2,100	1,675	NA	3,800	N.A.	4,405	NA
	360	2.7	249	7,965	2,250	1,705	NA	3,885	N.A.	4,740	NA
	560	3.6	378	12,235	2,635	1,995	NA	4,735	NA	5,455	NA
11⅞"	110	2.5	267	5,255	2,460	1,435	1,885	3,055	3,575	3,705	4,225
	210	2.8	315	6,310	2,610	1,585	2,105	3,385	3,905	4,050	4,570
	230	3.0	347	7,010	2,610	1,675	2,190	3,800	4,320	4,405	4,925
	360	3.0	419	10,280	2,690	1,705	2,225	3,885	4,400	4,740	5,255
	560	4.0	636	15,795	3,235	1,995	2,680	4,735	5,425	5,455	6,140
14"	110	2.8	392	6,220	2,935	1,435	1,885	3,055	3,575	3,705	4,225
	210	3.1	462	7,470	3,070	1,585	2,105	3,385	3,905	4,050	4,570
	230	3.3	509	8,300	3,070	1,675	2,190	3,800	4,320	4,405	4,925
	360	3.3	612	12,200	3,085	1,705	2,225	3,885	4,400	4,740	5,255
	560	4.2	926	18,755	3,770	1,995	2,680	4,735	5,425	5,455	6,140
16"	210	3.3	629	8,550	3,455	1,585	2,105	3,385	3,905	4,050	4,570
	230	3.5	691	9,495	3,455	1,675	2,190	3,800	4,320	4,405	4,925
	360	3.5	830	13,980	3,455	1,705	2,225	3,885	4,400	4,740	5,255
	560	4.5	1,252	21,495	4,280	1,995	2,680	4,735	5,425	5,455	6,140

(1) **Caution:** Do not increase joist moment design properties by a repetitive-member-use factor.

(2) See detail W on page 22 for web stiffener requirements and nailing information.

General Notes

- Factored resistances are based on Limit States Design per CSA 086-01.
- Factored reaction includes all loads on the joist.
- Factored shear is computed at the inside face of supports and includes all loads on the span(s). Factored shear resistance may sometimes be increased at interior supports. For more information contact your Weyerhaeuser representative.
- The following formulas approximate the simple span uniform load deflection of Δ (inches):

For TJI® 110, 210, 230, and 360 Joists

$$\Delta = \frac{22.5 wL^4}{EI} + \frac{2.67 wL^2}{d \times 10^5}$$

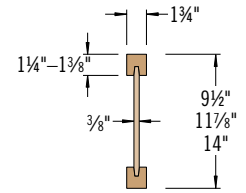
For TJI® 560 Joists

$$\Delta = \frac{22.5 wL^4}{EI} + \frac{2.29 wL^2}{d \times 10^5}$$

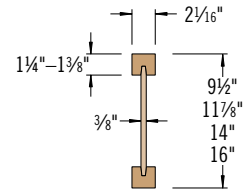
w = uniform load in pounds per linear foot
L = span in feet
d = out-to-out depth of the joist in inches
EI = value from table above

TJI® joists are intended for dry-use applications

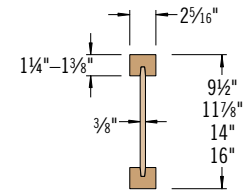
Some TJI® joist series may not be available in your region. Contact your Weyerhaeuser representative for information.



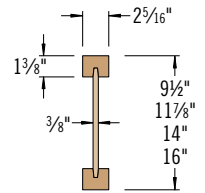
TJI® 110 joists



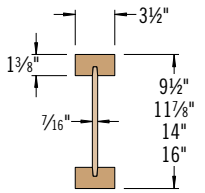
TJI® 210 joists



TJI® 230 joists



TJI® 360 joists



TJI® 560 joists



DO NOT walk on joists until braced. INJURY MAY RESULT.



DO NOT stack building materials on unsheathed joists. Stack only over beams or walls.



DO NOT walk on joists that are lying flat.

WARNING

Joists are unstable until braced laterally

Bracing Includes:

- Blocking
- Hangers
- Rim Board
- Sheathing
- Rim Joist
- Strut Lines

WARNING NOTES: Lack of proper bracing during construction can result in serious accidents. Observe the following guidelines:

- All blocking, hangers, rim boards, and rim joists at the end supports of the TJI® joists must be completely installed and properly nailed.
- Lateral strength, like a braced end wall or an existing deck, must be established at the ends of the bay. This can also be accomplished by a temporary or permanent deck (sheathing) fastened to the first 4 feet of joists at the end of the bay.
- Safety bracing of 1x4 (minimum) must be nailed to a braced end wall or sheathed area (as in note 2) and to each joist. Without this bracing, buckling sideways or rollover is highly probable under light construction loads—such as a worker or one layer of unnailed sheathing.
- Sheathing must be completely attached to each TJI® joist before additional loads can be placed on the system.
- Ends of cantilevers require safety bracing on both the top and bottom flanges.
- The flanges must remain straight within a tolerance of ½" from true alignment.

5/8" OSB Subfloor (Glue-nailed)—Vibration-Controlled, Standard Term

Depth	TJI®	Directly Applied Ceiling						No Directly Applied Ceiling					
		Simple or Continuous Span			Continuous Span Only			Simple or Continuous Span			Continuous Span Only		
		12" o.c.	16" o.c.	19.2" o.c.	12" o.c.	16" o.c.	19.2" o.c.	12" o.c.	16" o.c.	19.2" o.c.	12" o.c.	16" o.c.	19.2" o.c.
40 PSF Live Load / 10 PSF Dead Load													
9½"	110	15'-9"	14'-10"	14'-4"	17'-0"	16'-1"	15'-7"	15'-3"	14'-5"	13'-11"	16'-6"	15'-7"	15'-1"
	210	16'-1"	15'-3"	14'-8"	17'-6"	16'-6"	15'-11"	15'-8"	14'-9"	14'-3"	17'-0"	16'-0"	15'-6"
	230	16'-4"	15'-5"	14'-11"	17'-9"	16'-9"	16'-2"	15'-11"	15'-0"	14'-6"	17'-3"	16'-3"	15'-9"
	360	16'-10"	15'-11"	15'-4"	18'-5"	17'-3"	16'-8"	16'-5"	15'-6"	14'-11"	17'-10"	16'-9"	16'-3"
	560	18'-2"	17'-0"	16'-5"	20'-2"	18'-8"	17'-10"	17'-9"	16'-8"	16'-1"	19'-7"	18'-2"	17'-5"
11½"	110	17'-7"	16'-8"	16'-1"	19'-5"	18'-1"	17'-6"	17'-1"	16'-1"	15'-7"	18'-8"	17'-5"	16'-10"
	210	18'-1"	17'-1"	16'-6"	20'-1"	18'-8"	17'-11"	17'-7"	16'-6"	16'-0"	19'-4"	17'-11"	17'-4"
	230	18'-5"	17'-4"	16'-2"	20'-5"	19'-0"	18'-2"	17'-10"	16'-10"	16'-3"	19'-8"	18'-3"	17'-7"
	360	19'-2"	17'-10"	17'-2"	21'-3"	19'-9"	18'-10"	18'-6"	17'-4"	16'-9"	20'-6"	19'-0"	18'-2"
	560	21'-0"	19'-5"	18'-6"	23'-3"	21'-7"	20'-7"	20'-5"	18'-10"	18'-0"	22'-8"	20'-11"	20'-0"
14"	110	19'-6"	18'-2"	17'-6"	21'-7"	20'-2"	19'-4"	18'-9"	17'-6"	16'-11"	20'-8"	19'-3"	18'-5"
	210	20'-2"	18'-9"	17'-11"	22'-4"	20'-9"	19'-11"	19'-5"	18'-0"	17'-4"	21'-5"	19'-11"	19'-1"
	230	20'-6"	19'-1"	18'-3"	22'-9"	21'-2"	20'-3"	19'-9"	18'-4"	17'-8"	21'-11"	20'-4"	19'-5"
	360	21'-3"	19'-9"	18'-10"	23'-7"	21'-11"	20'-11"	20'-7"	19'-1"	18'-3"	22'-10"	21'-1"	20'-2"
	560	23'-4"	21'-7"	20'-7"	25'-10"	23'-11"	22'-10"	22'-8"	20'-11"	20'-0"	25'-2"	23'-3"	22'-2"
16"	210	21'-11"	20'-5"	19'-6"	24'-4"	22'-8"	21'-8"	21'-1"	19'-7"	18'-9"	23'-4"	21'-8"	20'-9"
	230	22'-4"	20'-9"	19'-10"	24'-9"	23'-0"	22'-1"	21'-6"	19'-11"	19'-1"	23'-10"	22'-1"	21'-2"
	360	23'-2"	21'-6"	20'-7"	25'-8"	23'-10"	22'-10"	22'-5"	20'-9"	19'-10"	24'-10"	23'-0"	21'-11"
	560	25'-5"	23'-6"	22'-5"	28'-2"	26'-1"	24'-10"	24'-8"	22'-9"	21'-9"	27'-5"	25'-3"	24'-1"
40 PSF Live Load / 30 PSF Dead Load													
9½"	110	15'-9"	14'-10"	14'-4"	17'-0"	15'-10"	14'-6"	15'-3"	14'-5"	13'-11"	16'-6"	15'-7"	14'-6"
	210	16'-1"	15'-3"	14'-8"	17'-6"	16'-6"	15'-10"	15'-8"	14'-9"	14'-3"	17'-0"	16'-0"	15'-6"
	230	16'-4"	15'-5"	14'-11"	17'-9"	16'-9"	16'-2"	15'-11"	15'-0"	14'-6"	17'-3"	16'-3"	15'-9"
	360	16'-10"	15'-11"	15'-4"	18'-5"	17'-3"	16'-8"	16'-5"	15'-6"	14'-11"	17'-10"	16'-9"	16'-3"
	560	18'-2"	17'-0"	16'-5"	20'-2"	18'-8"	17'-10"	17'-9"	16'-8"	16'-1"	19'-7"	18'-2"	17'-5"
11½"	110	17'-7"	16'-8"	16'-1 ⁽¹⁾	19'-5"	17'-10"	16'-3 ⁽¹⁾	17'-1"	16'-1"	15'-7 ⁽¹⁾	18'-8"	17'-5"	16'-3 ⁽¹⁾
	210	18'-1"	17'-1"	16'-6"	20'-1"	18'-8"	17'-10 ⁽¹⁾	17'-7"	16'-6"	16'-0"	19'-4"	17'-11"	17'-4 ⁽¹⁾
	230	18'-5"	17'-4"	16'-9"	20'-5"	19'-0"	18'-2"	17'-10"	16'-10"	16'-3"	19'-8"	18'-3"	17'-7"
	360	19'-2"	17'-10"	17'-2"	21'-3"	19'-9"	18'-10"	18'-6"	17'-4"	16'-9"	20'-6"	19'-0"	18'-2"
	560	21'-0"	19'-5"	18'-6"	23'-3"	21'-7"	20'-7"	20'-5"	18'-10"	18'-0"	22'-8"	20'-11"	20'-0"
14"	110	19'-6"	18'-2"	17'-6 ⁽¹⁾	21'-7"	19'-5 ⁽¹⁾	17'-9 ⁽¹⁾	18'-9"	17'-6"	16'-11 ⁽¹⁾	20'-8"	19'-3 ⁽¹⁾	17'-9 ⁽¹⁾
	210	20'-2"	18'-9"	17'-11 ⁽¹⁾	22'-4"	20'-9 ⁽¹⁾	19'-5 ⁽¹⁾	19'-5"	18'-0"	17'-4 ⁽¹⁾	21'-5"	19'-11"	19'-1 ⁽¹⁾
	230	20'-6"	19'-1"	18'-3"	22'-9"	21'-2"	20'-3 ⁽¹⁾	19'-9"	18'-4"	17'-8"	21'-11"	20'-4"	19'-5 ⁽¹⁾
	360	21'-3"	19'-9"	18'-10"	23'-7"	21'-11"	20'-11 ⁽¹⁾	20'-7"	19'-1"	18'-3"	22'-10"	21'-1"	20'-2 ⁽¹⁾
	560	23'-4"	21'-7"	20'-7"	25'-10"	23'-11"	22'-10"	22'-8"	20'-11"	20'-0"	25'-2"	23'-3"	22'-2"
16"	210	21'-11"	20'-5"	19'-6 ⁽¹⁾	24'-4"	22'-8 ⁽¹⁾	19'-11 ⁽¹⁾	21'-1"	19'-7"	18'-9 ⁽¹⁾	23'-4"	21'-8 ⁽¹⁾	19'-11 ⁽¹⁾
	230	22'-4"	20'-9"	19'-10 ⁽¹⁾	24'-9"	23'-0"	21'-11 ⁽¹⁾	21'-6"	19'-11"	19'-1"	23'-10"	22'-1"	21'-2 ⁽¹⁾
	360	23'-2"	21'-6"	20'-7 ⁽¹⁾	25'-8"	23'-10 ⁽¹⁾	22'-5 ⁽¹⁾	22'-5"	20'-9"	19'-10 ⁽¹⁾	24'-10"	23'-0"	21'-11 ⁽¹⁾
	560	25'-5"	23'-6"	22'-5"	28'-2"	26'-1"	24'-10 ⁽¹⁾	24'-8"	22'-9"	21'-9"	27'-5"	25'-3"	24'-1"

(1) Web stiffeners are required at intermediate supports of continuous-span joists when the intermediate bearing length is less than 5¼" and the span on either side of the intermediate bearing is greater than the following spans:

40 PSF Live Load / 30 PSF Dead Load			
TJI®	12" o.c.	16" o.c.	19.2" o.c.
110	Not Required	18'-8"	15'-6"
210		20'-8"	17'-3"
230		23'-3"	19'-4"
360		23'-9"	19'-9"
560	Not Required		24'-2"

• **Bold italic** spans indicate floors that would meet National Building Code of Canada (NBCC 2005) vibration criteria but would be considered by 35% of the population to have marginal or unacceptable performance.

To more accurately
predict floor performance,
use our TJI-Pro™ Ratings

How to Use These Tables

1. Determine the subflooring thickness and applicable live and dead loads.
2. Determine whether the ceiling will be directly applied and what the span condition is (simple or continuous).
3. Select on-centre spacing.
4. Scan down the column until you meet or exceed the span of your application.
5. Select TJI® joist and depth.

See page 5 for General Notes.

¾" OSB Subfloor (Glue-nailed)—Vibration-Controlled, Standard Term

Depth	TJI®	Directly Applied Ceiling								No Directly Applied Ceiling							
		Simple or Continuous Span				Continuous Span Only				Simple or Continuous Span				Continuous Span Only			
		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.
40 PSF Live Load / 10 PSF Dead Load																	
9½"	110	16'-6"	15'-7"	14'-10"	13'-8"	17'-11"	16'-11"	16'-4"	15'-0"	16'-1"	15'-2"	14'-7"	13'-8"	17'-5"	16'-5"	15'-10"	15'-0"
	210	16'-11"	16'-0"	15'-5"	14'-5"	18'-6"	17'-4"	16'-9"	15'-11"	16'-6"	15'-7"	15'-0"	14'-5"	17'-10"	16'-10"	16'-3"	15'-7"
	230	17'-2"	16'-3"	15'-8"	14'-11"	18'-10"	17'-7"	17'-0"	16'-3"	16'-9"	15'-10"	15'-3"	14'-7"	18'-3"	17'-2"	16'-6"	15'-10"
	360	17'-8"	16'-8"	16'-1"	15'-5"	19'-7"	18'-2"	17'-5"	16'-9"	17'-4"	16'-4"	15'-8"	15'-1"	19'-0"	17'-8"	17'-0"	16'-4"
	560	19'-3"	17'-10"	17'-2"	16'-5"	21'-4"	19'-10"	18'-10"	17'-10"	18'-10"	17'-6"	16'-10"	16'-2"	20'-11"	19'-4"	18'-5"	17'-6"
11⅝"	110	18'-8"	17'-6"	16'-10"	16'-2"	20'-8"	19'-3"	18'-5"	16'-11" ⁽¹⁾	18'-0"	16'-11"	16'-4"	15'-8"	19'-11"	18'-6"	17'-8"	16'-11" ⁽¹⁾
	210	19'-3"	17'-11"	17'-3"	16'-7"	21'-4"	19'-10"	19'-0"	18'-0"	18'-8"	17'-5"	16'-9"	16'-1"	20'-7"	19'-1"	18'-3"	17'-5"
	230	19'-7"	18'-3"	17'-6"	16'-9"	21'-9"	20'-3"	19'-4"	18'-4"	19'-0"	17'-8"	17'-0"	16'-4"	21'-0"	19'-6"	18'-7"	17'-8"
	360	20'-4"	18'-11"	18'-0"	17'-3"	22'-7"	21'-0"	20'-0"	18'-11"	19'-9"	18'-4"	17'-7"	16'-10"	21'-11"	20'-3"	19'-4"	18'-4"
	560	22'-3"	20'-7"	19'-7"	18'-7"	24'-8"	22'-10"	21'-9"	20'-7"	21'-9"	20'-1"	19'-2"	18'-1"	24'-1"	22'-3"	21'-2"	20'-1"
14"	110	20'-9"	19'-4"	18'-6"	17'-7" ⁽¹⁾	23'-0"	21'-5"	20'-6"	18'-5" ⁽¹⁾	20'-0"	18'-7"	17'-9"	17'-0" ⁽¹⁾	22'-1"	20'-6"	19'-7"	18'-5" ⁽¹⁾
	210	21'-5"	19'-11"	19'-0"	18'-0"	23'-8"	22'-1"	21'-1"	20'-0" ⁽¹⁾	20'-8"	19'-2"	18'-3"	17'-6"	22'-10"	21'-3"	20'-3"	19'-2" ⁽¹⁾
	230	21'-10"	20'-3"	19'-4"	18'-4"	24'-2"	22'-6"	21'-6"	20'-4"	21'-1"	19'-7"	18'-8"	17'-9"	23'-4"	21'-8"	20'-8"	19'-7"
	360	22'-7"	21'-0"	20'-0"	18'-11"	25'-1"	23'-3"	22'-3"	21'-1"	22'-0"	20'-4"	19'-4"	18'-4"	24'-4"	22'-6"	21'-5"	20'-4"
	560	24'-9"	22'-11"	21'-9"	20'-7"	27'-5"	25'-5"	24'-2"	22'-10"	24'-2"	22'-4"	21'-3"	20'-1"	26'-9"	24'-9"	23'-6"	22'-3"
16"	210	23'-4"	21'-8"	20'-9"	19'-8" ⁽¹⁾	25'-10"	24'-1"	23'-0"	21'-5" ⁽¹⁾	22'-6"	20'-10"	19'-11"	18'-10" ⁽¹⁾	24'-11"	23'-1"	22'-0"	20'-10" ⁽¹⁾
	230	23'-9"	22'-1"	21'-1"	20'-0"	26'-3"	24'-6"	23'-4"	22'-2" ⁽¹⁾	23'-0"	21'-3"	20'-3"	19'-3"	25'-5"	23'-7"	22'-5"	21'-3" ⁽¹⁾
	360	24'-7"	22'-10"	21'-9"	20'-8"	27'-3"	25'-4"	24'-2"	22'-11" ⁽¹⁾	23'-11"	22'-1"	21'-1"	19'-11"	26'-5"	24'-6"	23'-4"	22'-1" ⁽¹⁾
	560	26'-11"	24'-11"	23'-9"	22'-5"	29'-10"	27'-8"	26'-4"	24'-11"	26'-4"	24'-3"	23'-1"	21'-9"	29'-2"	26'-11"	25'-7"	24'-2"
40 PSF Live Load / 30 PSF Dead Load																	
9½"	110	16'-6	15'-7"	14'-6"	12'-11" ⁽¹⁾	17'-11"	15'-10"	14'-6"	12'-11" ⁽¹⁾	16'-1"	15'-2"	14'-6"	12'-11" ⁽¹⁾	17'-5"	15'-10"	14'-6"	12'-11" ⁽¹⁾
	210	16'-11"	16'-0"	15'-5"	14'-2" ⁽¹⁾	18'-6"	17'-4"	15'-10"	14'-2" ⁽¹⁾	16'-6"	15'-7"	15'-0"	14'-2" ⁽¹⁾	17'-10"	16'-10"	15'-10"	14'-2" ⁽¹⁾
	230	17'-2"	16'-3"	15'-8"	14'-11"	18'-10"	17'-7"	16'-9"	14'-11"	16'-9"	15'-10"	15'-3"	14'-7"	18'-3"	17'-2"	16'-6"	14'-11"
	360	17'-8"	16'-8"	16'-1"	15'-5"	19'-7"	18'-2"	17'-5"	16'-9" ⁽¹⁾	17'-4"	16'-4"	15'-8"	15'-1"	19'-0"	17'-8"	17'-0"	16'-4" ⁽¹⁾
	560	19'-3"	17'-10"	17'-2"	16'-5"	21'-4"	19'-10"	18'-10"	17'-10"	18'-10"	17'-6"	16'-10"	16'-2"	20'-11"	19'-4"	18'-5"	17'-6"
11⅝"	110	18'-8"	17'-6"	16'-3" ⁽¹⁾	14'-6" ⁽¹⁾	20'-7"	17'-10"	16'-3" ⁽¹⁾	14'-6" ⁽¹⁾	18'-0"	16'-11"	16'-3" ⁽¹⁾	14'-6" ⁽¹⁾	19'-11"	17'-10"	16'-3" ⁽¹⁾	14'-6" ⁽¹⁾
	210	19'-3"	17'-11"	17'-3" ⁽¹⁾	15'-10" ⁽¹⁾	21'-4"	19'-7"	17'-10" ⁽¹⁾	15'-10" ⁽¹⁾	18'-8"	17'-5"	16'-9"	15'-10" ⁽¹⁾	20'-7"	19'-1"	17'-10" ⁽¹⁾	15'-10" ⁽¹⁾
	230	19'-7"	18'-3"	17'-6"	16'-9" ⁽¹⁾	21'-9"	20'-3"	18'-10"	16'-10" ⁽¹⁾	19'-0"	17'-8"	17'-0"	16'-4" ⁽¹⁾	21'-0"	19'-6"	18'-7"	16'-10" ⁽¹⁾
	360	20'-4"	18'-11"	18'-0"	17'-3" ⁽¹⁾	22'-7"	21'-0"	20'-0" ⁽¹⁾	17'-11" ⁽¹⁾	19'-9"	18'-4"	17'-7"	16'-10" ⁽¹⁾	21'-11"	20'-3"	19'-4"	17'-11" ⁽¹⁾
	560	22'-3"	20'-7"	19'-7"	18'-7"	24'-8"	22'-10"	21'-9"	20'-7" ⁽¹⁾	21'-9"	20'-1"	19'-2"	18'-1"	24'-1"	22'-3"	21'-2"	20'-1" ⁽¹⁾
14"	110	20'-9"	19'-4" ⁽¹⁾	17'-9" ⁽¹⁾	14'-6" ⁽¹⁾	22'-5"	19'-5" ⁽¹⁾	17'-9" ⁽¹⁾	14'-6" ⁽¹⁾	20'-0"	18'-7"	17'-9" ⁽¹⁾	14'-6" ⁽¹⁾	22'-1"	19'-5" ⁽¹⁾	17'-9" ⁽¹⁾	14'-6" ⁽¹⁾
	210	21'-5"	19'-11"	19'-0" ⁽¹⁾	15'-10" ⁽¹⁾	23'-8"	21'-4" ⁽¹⁾	19'-5" ⁽¹⁾	15'-10" ⁽¹⁾	20'-8"	19'-2"	18'-3" ⁽¹⁾	15'-10" ⁽¹⁾	22'-10"	21'-3" ⁽¹⁾	19'-5" ⁽¹⁾	15'-10" ⁽¹⁾
	230	21'-10"	20'-3"	19'-4" ⁽¹⁾	17'-0" ⁽¹⁾	24'-2"	22'-5"	20'-6" ⁽¹⁾	17'-7" ⁽¹⁾	21'-1"	19'-7"	18'-8"	17'-0" ⁽¹⁾	23'-4"	21'-8"	20'-6" ⁽¹⁾	17'-7" ⁽¹⁾
	360	22'-7"	21'-0"	20'-0" ⁽¹⁾	17'-4" ⁽¹⁾	25'-1"	23'-3"	22'-3" ⁽¹⁾	17'-11" ⁽¹⁾	22'-0"	20'-4"	19'-4"	17'-4" ⁽¹⁾	24'-4"	22'-6"	21'-5" ⁽¹⁾	17'-11" ⁽¹⁾
	560	24'-9"	22'-11"	21'-9"	20'-4" ⁽¹⁾	27'-5"	25'-5"	24'-2" ⁽¹⁾	22'-1" ⁽¹⁾	24'-2"	22'-4"	21'-3"	20'-1" ⁽¹⁾	26'-9"	24'-9"	23'-6"	22'-1" ⁽¹⁾
16"	210	23'-4"	21'-8" ⁽¹⁾	19'-11" ⁽¹⁾	15'-10" ⁽¹⁾	25'-10"	22'-10" ⁽¹⁾	19'-11" ⁽¹⁾	15'-10" ⁽¹⁾	22'-6"	20'-10" ⁽¹⁾	19'-11" ⁽¹⁾	15'-10" ⁽¹⁾	24'-11"	22'-10" ⁽¹⁾	19'-11" ⁽¹⁾	15'-10" ⁽¹⁾
	230	23'-9"	22'-1"	21'-1" ⁽¹⁾	17'-0" ⁽¹⁾	26'-3"	24'-0" ⁽¹⁾	21'-11" ⁽¹⁾	17'-7" ⁽¹⁾	23'-0"	21'-3"	20'-3" ⁽¹⁾	17'-0" ⁽¹⁾	25'-5"	23'-7" ⁽¹⁾	21'-11" ⁽¹⁾	17'-7" ⁽¹⁾
	360	24'-7"	22'-10"	21'-9" ⁽¹⁾	17'-4" ⁽¹⁾	27'-3"	25'-4" ⁽¹⁾	22'-5" ⁽¹⁾	17'-11" ⁽¹⁾	23'-11"	22'-1"	21'-1" ⁽¹⁾	17'-4" ⁽¹⁾	26'-5"	24'-6" ⁽¹⁾	22'-5" ⁽¹⁾	17'-11" ⁽¹⁾
	560	26'-11"	24'-11"	23'-9"	20'-4" ⁽¹⁾	29'-10"	27'-8"	26'-4" ⁽¹⁾	22'-1" ⁽¹⁾	26'-4"	24'-3"	23'-1"	20'-4" ⁽¹⁾	29'-2"	26'-11"	25'-7" ⁽¹⁾	22'-1" ⁽¹⁾

(1) Web stiffeners are required at intermediate supports of continuous-span joists when the intermediate bearing length is less than 5¼" and the span on either side of the intermediate bearing is greater than the following spans:

40 PSF Live Load / 10 PSF Dead Load					40 PSF Live Load / 30 PSF Dead Load			
TJI®	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.
110	Not Required				Not Required	18'-8"	15'-6"	12'-5"
210						20'-8"	17'-3"	13'-9"
230						23'-3"	19'-4"	15'-5"
360						23'-9"	19'-9"	15'-10"
560	Not Required				Not Required		24'-2"	19'-3"

To more accurately
predict floor performance,
use our TJI-Pro™ Ratings

■ **Bold italic** spans indicate floors that would meet National Building Code of Canada (NBCC 2005) vibration criteria but would be considered by 35% of the population to have marginal or unacceptable performance.

General Notes

- Tables are based on:
 - Clear distance between supports.
 - Minimum bearing length of 1¾" end (no web stiffeners) and 3½" intermediate.
 - Limit States Design per CSA 086-01.
 - Uniform loads.
 - Single layer of appropriate span-rated OSB.
 - For continuous spans, ratio of short span to long span should be 0.4 or greater to prevent uplift.
 - NBCC 2005 vibration criteria as ratified by Canadian Construction Materials Centre (CCMC).
- Long term deflection under dead load, which includes the effect of creep, has not been considered.
- Spans generated from Weyerhaeuser software may exceed the spans shown in these tables because software reflects actual design conditions.
- For multi-family applications and other loading conditions not shown, refer to Weyerhaeuser software.

See page 4 for how to use these tables.

7/8" OSB Subfloor (Glue-nailed)—Vibration-Controlled, Standard Term

Depth	TJI®	Directly Applied Ceiling								No Directly Applied Ceiling							
		Simple or Continuous Span				Continuous Span Only				Simple or Continuous Span				Continuous Span Only			
		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.
40 PSF Live Load / 10 PSF Dead Load																	
9½"	110	17'-3"	15'-10"	14'-10"	13'-8"	18'-11"	17'-5"	16'-4"	15'-0"	16'-9"	15'-10"	14'-10"	13'-8"	18'-3"	17'-2"	16'-4"	15'-0"
	210	17'-8"	16'-8"	15'-8"	14'-5"	19'-6"	18'-2"	17'-3"	15'-11"	17'-3"	16'-3"	15'-8"	14'-5"	18'-10"	17'-7"	17'-0"	15'-11"
	230	17'-11"	16'-11"	16'-2"	14'-11"	19'-10"	18'-6"	17'-9"	16'-5"	17'-6"	16'-7"	15'-11"	14'-11"	19'-3"	17'-11"	17'-3"	16'-5"
	360	18'-7"	17'-5"	16'-9"	15'-11"	20'-7"	19'-2"	18'-3"	17'-5"	18'-2"	17'-1"	16'-5"	15'-8"	20'-1"	18'-7"	17'-9"	17'-0"
	560	20'-4"	18'-10"	17'-11"	17'-1"	22'-6"	20'-11"	19'-11"	18'-9"	19'-11"	18'-5"	17'-7"	16'-10"	22'-0"	20'-5"	19'-5"	18'-4"
11½"	110	19'-8"	18'-4"	17'-7"	16'-4"	21'-10"	20'-4"	18'-11"	16'-11" ⁽¹⁾	19'-0"	17'-9"	17'-1"	16'-4"	21'-0"	19'-6"	18'-7"	16'-11" ⁽¹⁾
	210	20'-4"	18'-11"	18'-1"	17'-3"	22'-6"	21'-0"	20'-0"	18'-6"	19'-8"	18'-3"	17'-6"	16'-9"	21'-9"	20'-2"	19'-3"	18'-2"
	230	20'-8"	19'-3"	18'-4"	17'-6"	22'-11"	21'-4"	20'-4"	19'-3"	20'-1"	18'-8"	17'-9"	17'-0"	22'-2"	20'-7"	19'-8"	18'-6"
	360	21'-5"	19'-11"	19'-0"	17'-11"	23'-9"	22'-1"	21'-1"	19'-11"	20'-11"	19'-4"	18'-5"	17'-6"	23'-1"	21'-5"	20'-5"	19'-3"
	560	23'-5"	21'-9"	20'-8"	19'-6"	25'-11"	24'-1"	22'-11"	21'-7"	22'-11"	21'-3"	20'-2"	19'-0"	25'-5"	23'-6"	22'-4"	21'-1"
14"	110	21'-11"	20'-5"	19'-6"	18'-5" ⁽¹⁾	24'-3"	22'-7"	20'-7"	18'-5" ⁽¹⁾	21'-1"	19'-7"	18'-8"	17'-8" ⁽¹⁾	23'-4"	21'-8"	20'-7"	18'-5" ⁽¹⁾
	210	22'-7"	21'-0"	20'-1"	18'-11" ⁽¹⁾	25'-0"	23'-4"	22'-3"	20'-2" ⁽¹⁾	21'-10"	20'-3"	19'-4"	18'-3"	24'-1"	22'-5"	21'-4"	20'-2" ⁽¹⁾
	230	23'-0"	21'-5"	20'-5"	19'-3"	25'-5"	23'-9"	22'-8"	21'-3" ⁽¹⁾	22'-3"	20'-8"	19'-8"	18'-7"	24'-7"	22'-10"	21'-9"	20'-7"
	360	23'-10"	22'-2"	21'-1"	19'-11"	26'-4"	24'-7"	23'-5"	22'-1" ⁽¹⁾	23'-2"	21'-6"	20'-5"	19'-3"	25'-7"	23'-9"	22'-7"	21'-4" ⁽¹⁾
	560	26'-0"	24'-2"	22'-11"	21'-7"	28'-9"	26'-9"	25'-6"	24'-0"	25'-6"	23'-7"	22'-5"	21'-1"	28'-2"	26'-1"	24'-10"	23'-4"
16"	210	24'-7"	22'-11"	21'-10"	20'-8" ⁽¹⁾	27'-2"	25'-4"	24'-2" ⁽¹⁾	21'-5" ⁽¹⁾	23'-9"	22'-1"	21'-0"	19'-10" ⁽¹⁾	26'-3"	24'-5"	23'-3" ⁽¹⁾	21'-5" ⁽¹⁾
	230	25'-0"	23'-4"	22'-3"	21'-0" ⁽¹⁾	27'-8"	25'-10"	24'-8"	22'-9" ⁽¹⁾	24'-3"	22'-6"	21'-5"	20'-2"	26'-9"	24'-10"	23'-8"	22'-4" ⁽¹⁾
	360	25'-11"	24'-1"	23'-0"	21'-8" ⁽¹⁾	28'-8"	26'-9"	25'-6"	24'-1" ⁽¹⁾	25'-2"	23'-4"	22'-3"	20'-11"	27'-10"	25'-10"	24'-7"	23'-2" ⁽¹⁾
	560	28'-3"	26'-3"	25'-0"	23'-6"	31'-4"	29'-1"	27'-8"	26'-1" ⁽¹⁾	27'-8"	25'-7"	24'-4"	22'-11"	30'-8"	28'-4"	27'-0"	25'-4"
40 PSF Live Load / 30 PSF Dead Load																	
9½"	110	17'-3"	15'-10"	14'-6"	12'-5"	18'-4"	15'-10"	14'-6"	12'-5"	16'-9"	15'-10"	14'-6"	12'-5"	18'-3"	15'-10"	14'-6"	12'-5"
	210	17'-8"	16'-8"	15'-8"	13'-9"	19'-6"	17'-5"	15'-10"	13'-9"	17'-3"	16'-3"	15'-8"	13'-9"	18'-10"	17'-5"	15'-10"	13'-9"
	230	17'-11"	16'-11"	16'-2"	14'-11"	19'-10"	18'-4"	16'-9"	14'-11"	17'-6"	16'-7"	15'-11"	14'-11"	19'-3"	17'-11"	16'-9"	14'-11"
	360	18'-7"	17'-5"	16'-9"	15'-10"	20'-7"	19'-2"	18'-3"	15'-10"	18'-2"	17'-1"	16'-5"	15'-8"	20'-1"	18'-7"	17'-9"	15'-10"
	560	20'-4"	18'-10"	17'-11"	17'-1"	22'-6"	20'-11"	19'-11"	18'-9"	19'-11"	18'-5"	17'-7"	16'-10"	22'-0"	20'-5"	19'-5"	18'-4"
11½"	110	19'-8"	17'-10"	16'-3" ⁽¹⁾	14'-6" ⁽¹⁾	20'-7"	17'-10"	16'-3" ⁽¹⁾	14'-6" ⁽¹⁾	19'-0"	17'-9"	16'-3" ⁽¹⁾	14'-6" ⁽¹⁾	20'-7"	17'-10"	16'-3" ⁽¹⁾	14'-6" ⁽¹⁾
	210	20'-4"	18'-11"	17'-10" ⁽¹⁾	15'-10" ⁽¹⁾	22'-6"	19'-7"	17'-10" ⁽¹⁾	15'-10" ⁽¹⁾	19'-8"	18'-3"	17'-6" ⁽¹⁾	15'-10" ⁽¹⁾	21'-9"	19'-7"	17'-10" ⁽¹⁾	15'-10" ⁽¹⁾
	230	20'-8"	19'-3"	18'-4"	16'-10" ⁽¹⁾	22'-11"	20'-7"	18'-10"	16'-10" ⁽¹⁾	20'-1"	18'-8"	17'-9"	16'-10" ⁽¹⁾	22'-2"	20'-7"	18'-10"	16'-10" ⁽¹⁾
	360	21'-5"	19'-11"	19'-0"	17'-4" ⁽¹⁾	23'-9"	22'-1"	21'-1" ⁽¹⁾	17'-11" ⁽¹⁾	20'-11"	19'-4"	18'-5"	17'-4" ⁽¹⁾	23'-1"	21'-5"	20'-5" ⁽¹⁾	17'-11" ⁽¹⁾
	560	23'-5"	21'-9"	20'-8"	19'-6" ⁽¹⁾	25'-11"	24'-1"	22'-11"	21'-7" ⁽¹⁾	22'-11"	21'-3"	20'-2"	19'-0"	25'-5"	23'-6"	22'-4"	21'-1" ⁽¹⁾
14"	110	21'-11"	19'-5" ⁽¹⁾	17'-9" ⁽¹⁾	14'-6" ⁽¹⁾	22'-5"	19'-5" ⁽¹⁾	17'-9" ⁽¹⁾	14'-6" ⁽¹⁾	21'-1"	19'-5" ⁽¹⁾	17'-9" ⁽¹⁾	14'-6" ⁽¹⁾	22'-5"	19'-5" ⁽¹⁾	17'-9" ⁽¹⁾	14'-6" ⁽¹⁾
	210	22'-7"	21'-0" ⁽¹⁾	19'-5" ⁽¹⁾	15'-10" ⁽¹⁾	24'-7"	21'-4" ⁽¹⁾	19'-5" ⁽¹⁾	15'-10" ⁽¹⁾	21'-10"	20'-3"	19'-4" ⁽¹⁾	15'-10" ⁽¹⁾	24'-1"	21'-4" ⁽¹⁾	19'-5" ⁽¹⁾	15'-10" ⁽¹⁾
	230	23'-0"	21'-5"	20'-5" ⁽¹⁾	17'-0" ⁽¹⁾	25'-5"	22'-5"	20'-6" ⁽¹⁾	17'-7" ⁽¹⁾	22'-3"	20'-8"	19'-8" ⁽¹⁾	17'-0" ⁽¹⁾	24'-7"	22'-5"	20'-6" ⁽¹⁾	17'-7" ⁽¹⁾
	360	23'-10"	22'-2"	21'-1" ⁽¹⁾	17'-4" ⁽¹⁾	26'-4"	24'-7" ⁽¹⁾	22'-5" ⁽¹⁾	17'-11" ⁽¹⁾	23'-2"	21'-6"	20'-5" ⁽¹⁾	17'-4" ⁽¹⁾	25'-7"	23'-9" ⁽¹⁾	22'-5" ⁽¹⁾	17'-11" ⁽¹⁾
	560	26'-0"	24'-2"	22'-11"	20'-4" ⁽¹⁾	28'-9"	26'-9"	25'-6" ⁽¹⁾	22'-1" ⁽¹⁾	25'-6"	23'-7"	22'-5"	20'-4" ⁽¹⁾	28'-2"	26'-1"	24'-10" ⁽¹⁾	22'-1" ⁽¹⁾
16"	210	24'-7"	22'-10" ⁽¹⁾	19'-11" ⁽¹⁾	15'-10" ⁽¹⁾	26'-4"	22'-10" ⁽¹⁾	19'-11" ⁽¹⁾	15'-10" ⁽¹⁾	23'-9"	22'-1" ⁽¹⁾	19'-11" ⁽¹⁾	15'-10" ⁽¹⁾	26'-3"	22'-10" ⁽¹⁾	19'-11" ⁽¹⁾	15'-10" ⁽¹⁾
	230	25'-0"	23'-4" ⁽¹⁾	21'-4" ⁽¹⁾	17'-0" ⁽¹⁾	27'-8"	24'-0" ⁽¹⁾	21'-11" ⁽¹⁾	17'-7" ⁽¹⁾	24'-3"	22'-6"	21'-4" ⁽¹⁾	17'-0" ⁽¹⁾	26'-9"	24'-0" ⁽¹⁾	21'-11" ⁽¹⁾	17'-7" ⁽¹⁾
	360	25'-11"	24'-1" ⁽¹⁾	21'-9" ⁽¹⁾	17'-4" ⁽¹⁾	28'-8"	26'-9" ⁽¹⁾	22'-5" ⁽¹⁾	17'-11" ⁽¹⁾	25'-2"	23'-4"	21'-9" ⁽¹⁾	17'-4" ⁽¹⁾	27'-10"	25'-10" ⁽¹⁾	22'-5" ⁽¹⁾	17'-11" ⁽¹⁾
	560	28'-3"	26'-3"	25'-0" ⁽¹⁾	20'-4" ⁽¹⁾	31'-4"	29'-1" ⁽¹⁾	27'-8" ⁽¹⁾	22'-1" ⁽¹⁾	27'-8"	25'-7"	24'-4" ⁽¹⁾	20'-4" ⁽¹⁾	30'-8"	28'-4"	27'-0" ⁽¹⁾	22'-1" ⁽¹⁾

(1) Web stiffeners are required at intermediate supports of continuous-span joists when the intermediate bearing length is **less** than 5¼" and the span on either side of the intermediate bearing is greater than the following spans:

40 PSF Live Load / 10 PSF Dead Load					40 PSF Live Load / 30 PSF Dead Load			
TJI®	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.
110	Not Required		Not Required	16'-9"	Not Required	18'-8"	15'-6"	12'-5"
210			23'-2"	18'-6"		20'-8"	17'-3"	13'-9"
230			Not Required	20'-10"		23'-3"	19'-4"	15'-5"
360				21'-3"		23'-9"	19'-9"	15'-10"
560				26'-0"		29'-0"	24'-2"	19'-3"

• **Bold italic** spans indicate floors that would meet National Building Code of Canada (NBCC 2005) vibration criteria but would be considered by 35% of the population to have marginal or unacceptable performance.

To more accurately
predict floor performance,
use our TJI-Pro™ Ratings

See pages 4 and 5 for General Notes and information on how to use these tables

Roof—Maximum Horizontal Clear Spans, Standard Term

O.C. Spacing	Depth	TJI®	Unfactored Snow Load (LL) and Dead Load (DL) in PSF							
			25LL + 15DL		30LL + 15DL		40LL + 15DL		50LL + 15DL	
			Low	High	Low	High	Low	High	Low	High
16"	9½"	110	18'-0"	16'-8"	16'-11"	15'-8"	15'-3"	14'-2"	14'-1"	13'-1"
		210	19'-0"	17'-8"	17'-10"	16'-7"	16'-2"	15'-0"	14'-11"	13'-11"
		230	19'-8"	18'-3"	18'-6"	17'-2"	16'-8"	15'-6"	15'-5"	14'-4"
		360	20'-11"	19'-5"	19'-8"	18'-3"	17'-9"	16'-6"	16'-5"	15'-3"
		560	24'-1"	22'-5"	22'-7"	21'-0"	20'-5"	19'-0"	18'-11"	17'-7"
	11⅞"	110	21'-6"	19'-11"	20'-2"	18'-9"	18'-3"	17'-0"	16'-11"	15'-8"
		210	22'-9"	21'-1"	21'-4"	19'-10"	19'-3"	17'-11"	17'-10"	16'-7"
		230	23'-5"	21'-9"	22'-0"	20'-5"	19'-11"	18'-6"	18'-5"	17'-2"
		360	24'-11"	23'-2"	23'-5"	21'-9"	21'-2"	19'-8"	19'-7"	18'-3"
		560	28'-9"	26'-8"	26'-11"	25'-0"	24'-4"	22'-8"	22'-6"	21'-0"
	14"	110	24'-6"	22'-9"	23'-0"	21'-4"	20'-10"	19'-4"	19'-3"	17'-11"
		210	25'-10"	24'-0"	24'-3"	22'-6"	21'-11"	20'-5"	20'-4"	18'-11"
		230	26'-8"	24'-9"	25'-1"	23'-3"	22'-8"	21'-1"	20'-11"	19'-6"
		360	28'-4"	26'-4"	26'-7"	24'-9"	24'-1"	22'-5"	22'-3"	20'-9"
		560	32'-7"	30'-3"	30'-7"	28'-5"	27'-8"	25'-9"	25'-7"	23'-10"
	16"	210	28'-8"	26'-7"	26'-11"	25'-0"	24'-4"	22'-8"	21'-6"	20'-11"
		230	29'-7"	27'-5"	27'-9"	25'-9"	25'-1"	23'-4"	23'-3"	21'-7"
		360	31'-5"	29'-2"	29'-6"	27'-5"	26'-8"	24'-10"	24'-8"	22'-11"
		560	36'-1"	33'-6"	33'-10"	31'-5"	30'-8"	28'-6"	28'-4"	26'-4"
19.2"	9½"	110	16'-11"	15'-8"	15'-10"	14'-9"	14'-4"	13'-4"	13'-3"	12'-4"
		210	17'-10"	16'-7"	16'-9"	15'-7"	15'-2"	14'-1"	14'-0"	13'-0"
		230	18'-6"	17'-2"	17'-4"	16'-1"	15'-8"	14'-7"	14'-5"	13'-6"
		360	19'-8"	18'-3"	18'-5"	17'-2"	16'-8"	15'-6"	15'-4"	14'-4"
		560	22'-7"	21'-0"	21'-3"	19'-9"	19'-2"	17'-10"	17'-8"	16'-6"
	11⅞"	110	20'-2"	18'-9"	18'-11"	17'-7"	17'-2"	15'-11"	15'-10"	14'-9"
		210	21'-4"	19'-10"	20'-0"	18'-7"	18'-1"	16'-10"	16'-9"	15'-7"
		230	22'-0"	20'-5"	20'-8"	19'-2"	18'-8"	17'-4"	17'-3"	16'-1"
		360	23'-5"	21'-9"	22'-0"	20'-5"	19'-10"	18'-6"	18'-4"	17'-1"
		560	26'-11"	25'-0"	25'-3"	23'-6"	22'-10"	21'-3"	21'-1"	19'-8"
	14"	110	22'-11"	21'-4"	21'-7"	20'-0"	19'-3"	18'-2"	16'-2"	16'-9"
		210	24'-3"	22'-6"	22'-9"	21'-2"	20'-7"	19'-2"	17'-11"	17'-9"
		230	25'-1"	23'-3"	23'-6"	21'-10"	21'-3"	19'-9"	19'-8"	18'-4"
		360	26'-7"	24'-9"	25'-0"	23'-3"	22'-7"	21'-0"	20'-7"	19'-5"
		560	30'-7"	28'-5"	28'-8"	26'-8"	25'-11"	24'-2"	24'-0"	22'-4"
	16"	210	26'-11"	25'-0"	25'-3"	23'-6"	21'-4"	21'-3"	17'-11"	19'-4"
		230	27'-9"	25'-9"	26'-1"	24'-3"	23'-7"	21'-11"	20'-1"	20'-3"
		360	29'-6"	27'-5"	27'-8"	25'-9"	24'-6"	23'-3"	20'-7"	20'-10"
		560	33'-10"	31'-5"	31'-9"	29'-6"	28'-9"	26'-9"	25'-1"	24'-5"
24"	9½"	110	15'-7"	14'-6"	14'-8"	13'-7"	13'-3"	12'-4"	12'-3"	11'-5"
		210	16'-6"	15'-4"	15'-6"	14'-5"	14'-0"	13'-0"	12'-11"	12'-0"
		230	17'-1"	15'-10"	16'-0"	14'-11"	14'-5"	13'-6"	13'-4"	12'-5"
		360	18'-2"	16'-11"	17'-0"	15'-10"	15'-4"	14'-4"	14'-2"	13'-3"
		560	20'-11"	19'-5"	19'-7"	18'-3"	17'-8"	16'-6"	16'-4"	15'-3"
	11⅞"	110	18'-8"	17'-4"	17'-6"	16'-4"	15'-4"	14'-9"	12'-11"	13'-8"
		210	19'-9"	18'-4"	18'-6"	17'-3"	16'-9"	15'-7"	14'-4"	14'-5"
		230	20'-4"	18'-11"	19'-1"	17'-9"	17'-3"	16'-1"	15'-11"	14'-10"
		360	21'-8"	20'-2"	20'-4"	18'-11"	18'-4"	17'-1"	16'-5"	15'-10"
		560	24'-11"	23'-2"	23'-5"	21'-9"	21'-1"	19'-8"	19'-6"	18'-2"
	14"	110	20'-6"	19'-7"	19'-0"	18'-6"	15'-4"	16'-5"	12'-11"	14'-0"
		210	22'-5"	20'-10"	21'-1"	19'-7"	17'-1"	17'-9"	14'-4"	15'-6"
		230	23'-2"	21'-6"	21'-9"	20'-3"	19'-2"	18'-4"	16'-1"	16'-4"
		360	24'-7"	22'-11"	23'-1"	21'-6"	19'-7"	19'-5"	16'-5"	16'-8"
		560	28'-4"	26'-4"	26'-7"	24'-8"	23'-11"	22'-4"	20'-1"	19'-6"
	16"	210	23'-11"	23'-0"	21'-1"	21'-9"	17'-1"	18'-2"	14'-4"	15'-6"
		230	25'-4"	23'-11"	23'-8"	22'-5"	19'-2"	19'-3"	16'-1"	16'-4"
		360	27'-3"	25'-4"	24'-3"	23'-8"	19'-7"	19'-7"	16'-5"	16'-8"
		560	31'-4"	29'-1"	29'-5"	27'-4"	23'-11"	22'-11"	20'-1"	19'-6"

How to Use This Table

1. Determine appropriate unfactored snow and dead load.
2. If your slope is 6:12 or less, use the **Low** slope column. If it is between 6:12 and 12:12, use the **High** column.
3. Scan down the column until you find a span that meets or exceeds the span of your application.
4. Select TJI® joist and on-centre spacing.

General Notes

- Table is based on:
 - Minimum bearing length of 1¼" end and 3½" intermediate, without web stiffeners.
 - Uniform loads.
 - More restrictive of simple or continuous span.
 - Minimum roof slope of ¼:12.
- Unfactored total load joist deflection limited to L/180.
- Unfactored live load joist deflection limited to L/360.
- A support beam or wall at the high end is required. Ridge board applications do not provide adequate support.
- Spans shown assume no web stiffeners at intermediate bearings.

Roof—Factored Resistance, Standard Term (PLF)

Depth	TJI®	Unfactored Deflection Resistance		Factored Strength Resistance	Unfactored Deflection Resistance		Factored Strength Resistance	Unfactored Deflection Resistance		Factored Strength Resistance	Unfactored Deflection Resistance		Factored Strength Resistance	Unfactored Deflection Resistance		Factored Strength Resistance
		Live Load L/360	Total Load L/180	Total Load	Live Load L/360	Total Load L/180	Total Load	Live Load L/360	Total Load L/180	Total Load	Live Load L/360	Total Load L/180	Total Load	Live Load L/360	Total Load L/180	Total Load
		Roof Joist Horizontal Clear Span														
		8'			10'			12'			14'			16'		
9½"	110	*	*	300	*	*	240	114	*	201	74	*	166	51	*	127
	210	*	*	332	*	*	266	132	*	222	87	*	191	60	*	153
	230	*	*	373	*	*	299	145	*	250	95	*	214	66	*	170
	360	*	*	381	*	*	306	170	*	255	112	*	219	78	*	192
	560	*	*	465	*	*	373	*	*	311	164	*	267	115	*	234
11½"	110	*	*	300	*	*	240	*	*	201	*	*	172	85	*	151
	210	*	*	332	*	*	266	*	*	222	*	*	191	98	*	167
	230	*	*	373	*	*	299	*	*	250	*	*	214	107	*	188
	360	*	*	381	*	*	306	*	*	255	*	*	219	127	*	192
	560	*	*	465	*	*	373	*	*	311	*	*	267	*	*	234
14"	110	*	*	300	*	*	240	*	*	201	*	*	172	*	*	151
	210	*	*	332	*	*	266	*	*	222	*	*	191	*	*	167
	230	*	*	373	*	*	299	*	*	250	*	*	214	*	*	188
	360	*	*	381	*	*	306	*	*	255	*	*	219	*	*	192
	560	*	*	465	*	*	373	*	*	311	*	*	267	*	*	234
16"	210	*	*	332	*	*	266	*	*	222	*	*	191	*	*	167
	230	*	*	373	*	*	299	*	*	250	*	*	214	*	*	188
	360	*	*	381	*	*	306	*	*	255	*	*	219	*	*	192
	560	*	*	465	*	*	373	*	*	311	*	*	267	*	*	234
		18'			20'			22'			24'			26'		
9½"	110	36	*	101	27	54	81									
	210	43	*	121	31	63	98	24	48	81						
	230	47	*	134	35	70	109	26	53	90	20	41	76			
	360	56	112	171	41	83	154	31	63	129	24	49	109	19	39	93
	560	83	*	208	62	124	188	47	95	171	37	74	156	29	59	143
11½"	110	61	*	127	45	*	103	34	*	85						
	210	71	*	149	52	*	124	40	*	102	31	*	86			
	230	77	*	167	57	*	138	44	*	114	34	*	96	27	54	82
	360	92	*	171	68	*	154	52	*	140	41	82	128	32	65	118
	560	135	*	208	101	*	188	78	*	171	61	*	156	48	97	144
14"	110	88	*	134	65	*	121	50	*	101	39	*	85			
	210	102	*	149	76	*	134	58	*	121	45	*	102	36	*	87
	230	111	*	167	83	*	150	63	*	135	49	*	113	39	*	97
	360	*	*	171	98	*	154	75	*	140	59	*	128	47	*	118
	560	*	*	208	*	*	188	111	*	171	87	*	156	69	*	144
16"	210	*	*	149	*	*	134	78	*	122	61	*	112	48	*	100
	230	*	*	167	*	*	150	85	*	137	66	*	125	53	*	111
	360	*	*	171	*	*	154	*	*	140	79	*	128	63	*	118
	560	*	*	208	*	*	188	*	*	171	*	*	156	92	*	144

* Indicates value does not control.

How to Use These Tables

1. Calculate actual factored total load and unfactored snow and total load on the joist in pounds per linear foot (plf).
2. Select appropriate **Roof Joist Horizontal Clear Span**. For slopes greater than 2:12, approximate the increased dead load by multiplying the joist horizontal clear span by the **Slope Factor shown on page 28**.
3. Scan down the columns to find a TJI® joist that meets or exceeds the actual unfactored snow and total loads, and the factored total load. All three columns must be checked.

General Notes

- Tables are based on:
 - Minimum bearing length of 1¾" end and 3½" intermediate, without web stiffeners
 - Uniform loads.
 - More restrictive of simple or continuous span.
 - Minimum roof slope of ¼:12.
 - No composite action provided by sheathing.

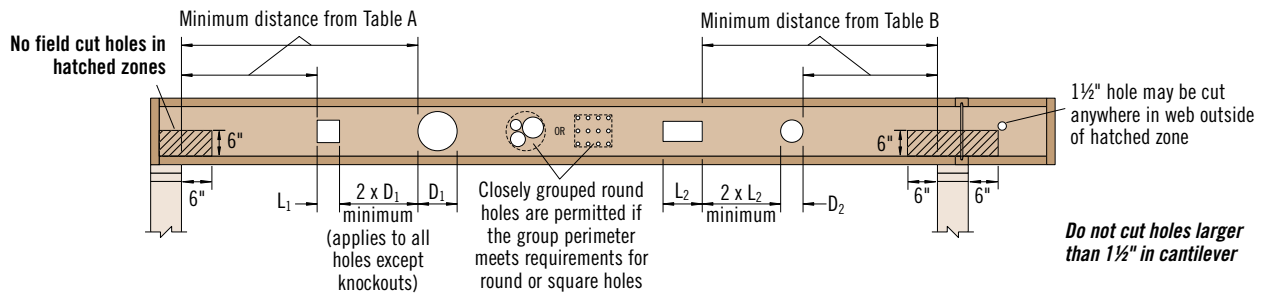


Table A—End Support (Minimum distance from edge of hole to inside face of nearest end support)

Depth	TJI®	● Round Hole Size									■ Square or Rectangular Hole Size								
		2"	3"	4"	5"	6½"	7"	8⅞"	11"	13"	2"	3"	4"	5"	6½"	7"	8⅞"	11"	13"
9½"	110	1'-0"	1'-6"	2'-0"	3'-0"	5'-0"					1'-0"	1'-6"	2'-6"	3'-6"	4'-6"				
	210	1'-0"	1'-6"	2'-6"	3'-0"	5'-6"					1'-0"	2'-0"	2'-6"	4'-0"	5'-0"				
	230	1'-6"	2'-0"	2'-6"	3'-6"	5'-6"					1'-0"	2'-0"	3'-0"	4'-6"	5'-0"				
	360	1'-6"	2'-0"	3'-0"	4'-0"	6'-0"					1'-6"	2'-6"	3'-6"	5'-0"	5'-6"				
	560	1'-6"	2'-6"	3'-6"	5'-0"	7'-0"					2'-0"	3'-0"	4'-0"	5'-6"	6'-0"				
11⅞"	110	1'-0"	1'-0"	1'-6"	2'-0"	2'-6"	3'-0"	5'-6"			1'-0"	1'-6"	2'-0"	2'-6"	4'-6"	5'-0"	6'-0"		
	210	1'-0"	1'-6"	2'-0"	2'-0"	3'-0"	3'-6"	6'-0"			1'-0"	1'-6"	2'-6"	3'-0"	5'-0"	5'-6"	6'-6"		
	230	1'-0"	1'-6"	2'-0"	2'-6"	3'-0"	3'-6"	6'-6"			1'-0"	2'-0"	2'-6"	3'-6"	5'-6"	5'-6"	7'-0"		
	360	1'-6"	2'-0"	3'-0"	3'-6"	4'-6"	5'-0"	7'-0"			1'-6"	2'-6"	3'-6"	4'-6"	6'-6"	6'-6"	7'-6"		
	560	1'-6"	2'-6"	3'-0"	4'-0"	5'-6"	6'-0"	8'-0"			2'-6"	3'-6"	4'-6"	5'-6"	7'-0"	7'-6"	8'-0"		
14"	110	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	2'-0"	3'-0"	5'-6"		1'-0"	1'-0"	1'-6"	2'-0"	3'-6"	4'-0"	6'-0"	8'-0"	
	210	1'-0"	1'-0"	1'-0"	1'-6"	2'-0"	2'-6"	3'-6"	6'-0"		1'-0"	1'-0"	2'-0"	2'-6"	4'-0"	4'-6"	6'-6"	8'-6"	
	230	1'-0"	1'-0"	1'-0"	1'-6"	2'-6"	2'-6"	4'-0"	7'-0"		1'-0"	1'-0"	2'-0"	3'-0"	4'-0"	5'-0"	7'-0"	9'-0"	
	360	1'-0"	1'-0"	1'-6"	2'-6"	3'-6"	4'-0"	5'-6"	8'-0"		1'-0"	1'-6"	2'-6"	4'-0"	6'-0"	6'-6"	8'-0"	9'-6"	
	560	1'-0"	1'-0"	2'-0"	3'-0"	4'-6"	5'-0"	6'-6"	9'-0"		1'-6"	3'-0"	4'-0"	5'-0"	7'-0"	7'-6"	9'-0"	10'-0"	
16"	210	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	2'-6"	3'-6"	6'-0"	1'-0"	1'-0"	1'-0"	2'-0"	3'-0"	3'-6"	6'-6"	8'-0"	11'-0"
	230	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	1'-6"	3'-0"	4'-0"	7'-0"	1'-0"	1'-0"	1'-0"	2'-0"	3'-6"	4'-0"	7'-0"	9'-0"	11'-0"
	360	1'-0"	1'-0"	1'-0"	1'-0"	2'-6"	2'-6"	4'-6"	6'-6"	9'-0"	1'-0"	1'-0"	1'-6"	3'-0"	5'-0"	5'-6"	9'-0"	10'-0"	11'-6"
	560	1'-0"	1'-0"	1'-0"	1'-0"	2'-6"	3'-0"	5'-0"	7'-6"	10'-0"	1'-0"	2'-0"	3'-0"	4'-6"	6'-6"	7'-0"	10'-0"	11'-0"	12'-0"

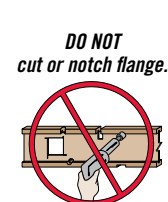
Table B—Intermediate or Cantilever Support
(Minimum distance from edge of hole to inside face of nearest intermediate or cantilever support)

Depth	TJI®	● Round Hole Size									■ Square or Rectangular Hole Size								
		2"	3"	4"	5"	6½"	7"	8⅞"	11"	13"	2"	3"	4"	5"	6½"	7"	8⅞"	11"	13"
9½"	110	2'-0"	2'-6"	3'-6"	4'-6"	7'-6"					1'-6"	2'-6"	3'-6"	5'-6"	6'-6"				
	210	2'-0"	2'-6"	3'-6"	5'-0"	8'-0"					2'-0"	3'-0"	4'-0"	6'-6"	7'-6"				
	230	2'-6"	3'-0"	4'-0"	5'-6"	8'-6"					2'-0"	3'-6"	4'-6"	6'-6"	7'-6"				
	360	3'-0"	4'-0"	5'-6"	6'-6"	9'-0"					3'-0"	4'-6"	5'-6"	7'-6"	8'-0"				
	560	3'-6"	5'-0"	6'-0"	7'-6"	10'-0"					4'-0"	5'-6"	6'-6"	8'-0"	9'-0"				
11⅞"	110	1'-0"	1'-0"	1'-6"	2'-6"	4'-0"	4'-6"	8'-6"			1'-0"	1'-6"	2'-6"	4'-0"	7'-0"	7'-0"	9'-6"		
	210	1'-0"	1'-0"	2'-0"	3'-0"	4'-6"	5'-0"	9'-0"			1'-0"	2'-0"	3'-0"	4'-6"	8'-0"	8'-0"	10'-0"		
	230	1'-0"	2'-0"	2'-6"	3'-6"	5'-0"	5'-6"	10'-0"			1'-0"	2'-6"	3'-6"	5'-0"	8'-6"	9'-0"	10'-6"		
	360	2'-0"	3'-0"	4'-0"	5'-6"	7'-0"	7'-6"	11'-0"			2'-0"	3'-6"	5'-0"	7'-0"	9'-6"	9'-6"	11'-0"		
	560	1'-6"	3'-0"	4'-6"	5'-6"	8'-0"	8'-6"	12'-0"			3'-0"	4'-6"	6'-0"	8'-0"	10'-6"	11'-0"	12'-0"		
14"	110	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	2'-6"	4'-6"	8'-6"		1'-0"	1'-0"	1'-0"	2'-6"	5'-0"	6'-0"	9'-0"	12'-0"	
	210	1'-0"	1'-0"	1'-0"	1'-0"	2'-6"	3'-0"	5'-6"	9'-6"		1'-0"	1'-0"	2'-0"	3'-6"	6'-0"	7'-0"	10'-0"	13'-0"	
	230	1'-0"	1'-0"	1'-0"	2'-0"	3'-6"	4'-0"	6'-0"	10'-6"		1'-0"	1'-0"	2'-6"	4'-0"	6'-6"	7'-6"	11'-0"	13'-6"	
	360	1'-0"	1'-0"	2'-0"	3'-6"	5'-6"	6'-0"	8'-6"	12'-6"		1'-0"	2'-0"	4'-0"	5'-6"	9'-0"	10'-0"	12'-0"	14'-0"	
	560	1'-0"	1'-0"	1'-6"	3'-6"	5'-6"	6'-6"	9'-6"	13'-6"		1'-0"	3'-0"	5'-0"	7'-0"	10'-0"	11'-0"	13'-6"	15'-0"	
16"	210	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-6"	6'-0"	10'-0"	1'-0"	1'-0"	1'-0"	1'-6"	4'-6"	5'-6"	10'-0"	12'-6"	16'-0"
	230	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	2'-0"	4'-0"	6'-6"	11'-0"	1'-0"	1'-0"	1'-0"	2'-6"	5'-0"	6'-0"	10'-6"	13'-6"	16'-6"
	360	1'-0"	1'-0"	1'-0"	1'-0"	3'-0"	4'-0"	6'-6"	10'-0"	13'-6"	1'-0"	1'-0"	2'-0"	4'-0"	7'-6"	8'-6"	13'-0"	14'-6"	17'-0"
	560	1'-0"	1'-0"	1'-0"	1'-0"	2'-6"	3'-6"	7'-0"	11'-0"	15'-0"	1'-0"	1'-0"	3'-6"	5'-6"	9'-0"	10'-0"	14'-6"	16'-0"	18'-0"

■ Rectangular holes based on measurement of longest side.

General Notes

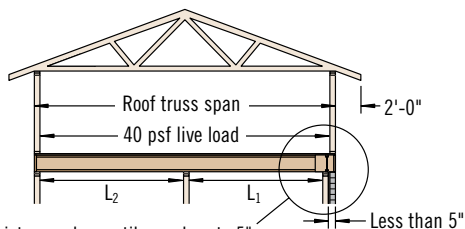
- Holes may be located vertically anywhere within the web. Leave ¼" of web (minimum) at top and bottom of hole.
- Knockouts are located in web at approximately 12" on-centre; they do not affect hole placement.
- For simple span (5' minimum) uniformly loaded joists meeting the requirements of this guide, one maximum size round hole may be located at the centre of the joist span **provided that no other holes occur in the joist**.
- Distances are based on the maximum uniform loads shown in this guide. For other load conditions or hole configurations use Forte® software or contact your Weyerhaeuser representative.



For how to use these tables, see page 17

Cantilevers Less than 5" (Brick Ledge)

See Section A of cantilever table on page 11

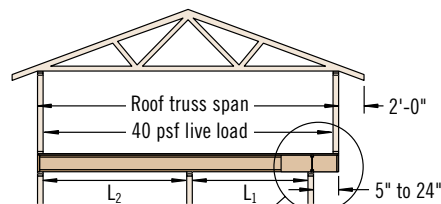


TJI® joists may be cantilevered up to 5" when supporting roof load, assuming:

- simple or continuous span
- $L_1 \leq L_2$
- minimum backspan = 2x cantilever length

Cantilevers 5" to 24"

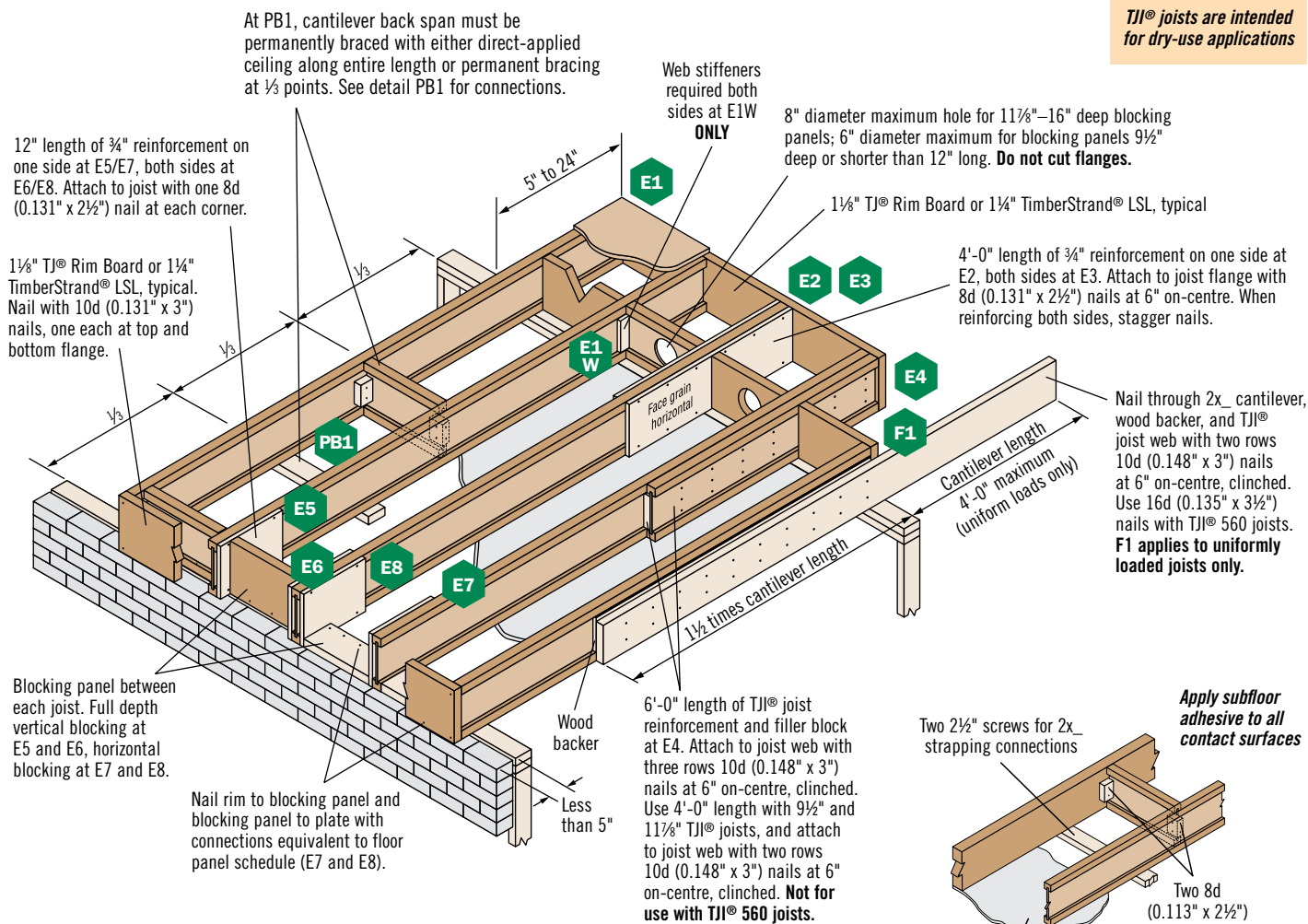
See Section B of cantilever table on page 11



TJI® joists may be cantilevered 5" to 24" when supporting roof load, assuming:

- simple or continuous span
- $L_1 \leq L_2$
- minimum backspan = 2x cantilever length

TJI® joists are intended for dry-use applications

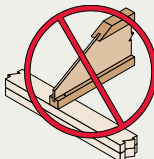


Details E2-E8 are not for use with joist depths > 16". See page 18 for cantilevers using deeper joists.

These Conditions Are NOT Permitted:



DO NOT use sawn lumber for rim board or blocking as it may shrink after installation. Use only engineered lumber



DO NOT bevel cut joist beyond inside face of wall.



DO NOT install hanger overhanging face of plate or beam. Flush bearing plate with inside face of wall or beam.

Cantilever Reinforcement

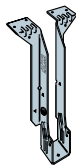
Depth	TJI®	Roof Truss Span	Section A: Cantilevers less than 5" (Brick Ledge)									Section B: Cantilevers 5" to 24"								
			Unfactored Roof Total Load									Unfactored Roof Total Load								
			35 PSF			45 PSF			55 PSF			35 PSF			45 PSF			55 PSF		
			On-Centre Joist Spacing									On-Centre Joist Spacing								
16"	19.2"	24"	16"	19.2"	24"	16"	19.2"	24"	16"	19.2"	24"	16"	19.2"	24"	16"	19.2"	24"			
9½" 11⅞" 14"	110	18'						E5			E5								X	
		20'						E5		E5	E5					E2		E2	X	
		22'						E5		E5	E5					E3		E3	X	
		24'			E5		E5	E5	E5	E5	E5			E2		E2	X	E2	X	X
		26'			E5		E5	E5	E5	E5	E6			E3	E2	E3	X	E3	X	X
		28'			X		E5	X	E5	E5	X		E2	X	E2	X	X	X	X	X
30'		E5	X	E5	E5	X	E5	E5	X	E2	E3	X	E3	X	X	X	X	X		
9½" 11⅞" 14" 16"	210	18'								E5										
		20'						E5			E5								E2	
		22'						E5		E5	E5					E2		E2	E3	
		24'						E5		E5	E5					E3		E3	X	
		26'			E5		E5	E5		E5	E5			E2		E2	X	E2	X	X
		28'			E5		E5	E5	E5	E5	E6			E3	E2	E3	X	E3	X	X
30'			X		E5	X	E5	E5	X		E2	X	E2	X	X	X	X	X		
32'		X	X		X	X	E5	X	X		E3	X	E3	X	X	X	X	X		
9½" 11⅞" 14" 16"	230	20'		X				E5			E5								E2	
		22'						E5		E5	E5					E2			E3	
		24'						E5		E5	E5					E2		E2	X	
		26'			E5		E5	E5		E5	E5				E2	E3	E2	E3	X	
		28'			E5		E5	E5	E5	E5	E5			E2		E2	X	E3	X	X
		30'			E5		E5	E5	E5	E5	E6			E3	E2	E3	X	E3	X	X
32'			X		E5	X	E5	E5	X		E2	X	E3	X	X	X	X	X		
9½" 11⅞" 14" 16"	360	22'						E5			E5								E2	
		24'						E5		E5	E5								E3	
		26'						E5		E5	E5					E2		E2	X	
		28'			E5			E5		E5	E5					E3	E2	E3	X	
		30'			E5		E5	E5	E5	E5	E5			E2		E2	X	E2	X	X
		32'			E5		E5	E5	E5	E5	E6			E3	E2	E3	X	E3	X	X
34'			X		E5	X	E5	E5	X		E2	X	E2	X	X	X	X	X		
36'		X	X	E5	X	X	E5	X	X		E2	X	E3	X	X	X	X	X		
9½" 11⅞" 14" 16"	560	26'									E5								E2	
		28'						E5			E5								E2	
		30'						E5		E5	E5								E3	
		32'						E5		E5	E6					E2		E2	X	
		34'			E5			E5		E5	E6					E3		E3	X	
		36'			E5		E5	E5	E5	E5	E6			E2		E2	E3	E2	E3	X
38'			X		E5	X	E5	E5	X			E2		E2	X	E2	X	X		
40'			X		E5	X	E5	E5	X			X	E2	E3	X	E3	X	X		

How to Use This Table

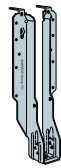
- Identify TJI® joist and depth.
- Locate the **Roof Truss Span** (horizontal) that meets or exceeds your condition.
- Identify the cantilever condition (less than 5" or 5" to 24") and locate the **Unfactored Roof Total Load** and **On-Centre Joist Spacing** for your application.
- Scan down to find the appropriate cantilever detail and refer to drawing on page 10:
 - Blank cells indicate no reinforcement is required.
 - E4 may be used in place of E2 or E3 except when using TJI® 560 joists.
 - X indicates cantilever will not work. Use Forte® or Javelin® software, or reduce spacing of joists and recheck table.

General Notes

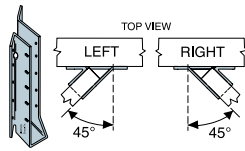
- Table is based on:
 - 15 psf unfactored roof dead load on a horizontal projection.
 - 80 plf unfactored exterior wall load with 3'-0" maximum width window or door openings. For larger openings, or multiple 3'-0" width openings spaced less than 6'-0" on-centre, additional joists beneath the opening's trimmers may be required.
 - 40/10 psf floor load.
 - More restrictive of simple or continuous span.
 - Roof truss with 24" soffits.
- ¾" reinforcement refers to ¾" standard sheathing grade of Douglas fir or Canadian softwood plywood or other ¾" exterior grade 48/24-rated sheathing that is cut to match the full depth of the TJI® joist. Install with face grain horizontal. Reinforcing member must bear fully on the wall plate.
- Designed for 2x4 and 2x6 plate widths.
- For conditions beyond the scope of this table, including cantilevers longer than 24", use our Forte® or Javelin® software.



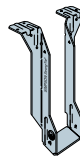
Single Joist,
Top Mount



Single Joist,
Face Mount



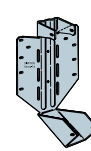
Face Mount Skewed 45°
Joist Hanger



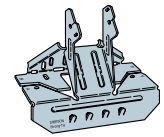
Double Joist,
Top Mount



Double Joist,
Face Mount



Variable Slope Seat
Joist Hanger



Variable Slope
Seat Connector

Depth	TJI®	Single Joist—Top Mount				Single Joist—Face Mount				Face Mount Skewed 45° Joist Hanger			
		Hanger	Fac. Res. (lbs)	Nailing		Hanger	Fac. Res. (lbs)	Nailing		Hanger	Fac. Res. (lbs)	Nailing	
				Header	Joist			Header	Joist			Header	Joist
9 1/2"	110	ITS1.81/9.5	1,540	10d	N.A.	IUS1.81/9.5	1,540	10d	N.A.	<i>SUR/L1.81/9</i>	1,925	16d	10d x 1 1/2"
	210	ITS2.06/9.5	1,690	10d	N.A.	IUS2.06/9.5	1,690	10d	N.A.	<i>SUR/L2.1/9</i>	2,100	16d	10d x 1 1/2"
	230	ITS2.37/9.5	1,690	10d	N.A.	IUS2.37/9.5	1,690	10d	N.A.	<i>SUR/L2.37/9</i>	2,100	16d	10d x 1 1/2"
	360	ITS2.37/9.5	1,690	10d	N.A.	IUS2.37/9.5	1,690	10d	N.A.	<i>SUR/L2.37/9</i>	2,250	16d	10d x 1 1/2"
	560	ITS3.56/9.5	1,690	10d	N.A.	IUS3.56/9.5	1,685	10d	N.A.	<i>SUR/L410</i>	2,360	16d	16d
11 1/8"	110	ITS1.81/11.88	1,540	10d	N.A.	IUS1.81/11.88	1,540	10d	N.A.	<i>SUR/L1.81/11</i>	1,960	16d	10d x 1 1/2"
	210	ITS2.06/11.88	1,690	10d	N.A.	IUS2.06/11.88	1,690	10d	N.A.	<i>SUR/L2.1/11</i>	2,175	16d	10d x 1 1/2"
	230	ITS2.37/11.88	1,690	10d	N.A.	IUS2.37/11.88	1,770	10d	N.A.	<i>SUR/L2.37/11</i>	2,225	16d	10d x 1 1/2"
	360	ITS2.37/11.88	1,690	10d	N.A.	IUS2.37/11.88	1,805	10d	N.A.	<i>SUR/L2.37/11</i>	2,260	16d	10d x 1 1/2"
	560	ITS3.56/11.88	1,690	10d	N.A.	IUS3.56/11.88	1,685	10d	N.A.	<i>SUR/L410</i>	2,360	16d	16d
14"	110	ITS1.81/14	1,540	10d	N.A.	IUS1.81/14	1,540	10d	N.A.	<i>SUR/L1.81/14</i>	1,960	16d	10d x 1 1/2"
	210	ITS2.06/14	1,690	10d	N.A.	IUS2.06/14	1,690	10d	N.A.	<i>SUR/L2.1/14</i>	2,175	16d	10d x 1 1/2"
	230	ITS2.37/14	1,690	10d	N.A.	IUS2.37/14	1,770	10d	N.A.	<i>SUR/L2.37/14</i>	2,225	16d	10d x 1 1/2"
	360	ITS2.37/14	1,690	10d	N.A.	IUS2.37/14	1,805	10d	N.A.	<i>SUR/L2.37/14</i>	2,260	16d	10d x 1 1/2"
	560	ITS3.56/14	1,690	10d	N.A.	IUS3.56/14	1,685	10d	N.A.	<i>SUR/L414</i>	2,305	16d	16d
16"	210	ITS2.06/16	1,690	10d	N.A.	IUS2.06/16	1,690	10d	N.A.	<i>SUR/L2.1/16</i>	2,175	16d	10d x 1 1/2"
	230	ITS2.37/16	1,690	10d	N.A.	IUS2.37/16	1,770	10d	N.A.	<i>SUR/L2.37/16</i>	2,225	16d	10d x 1 1/2"
	360	ITS2.37/16	1,690	10d	N.A.	IUS2.37/16	1,805	10d	N.A.	<i>SUR/L2.37/16</i>	2,260	16d	10d x 1 1/2"
	560	ITS3.56/16	1,690	10d	N.A.	IUS3.56/16	1,685	10d	N.A.	<i>SUR/L414</i>	2,305	16d	16d

Depth	TJI®	Double Joist—Top Mount				Double Joist—Face Mount			
		Hanger	Fac. Res. (lbs)	Nailing		Hanger	Fac. Res. (lbs)	Nailing	
				Header	Joist			Header	Joist
9 1/2"	110	<i>MIT49.5</i>	2,420	16d	10d x 1 1/2"	<i>MIU3.56/9</i>	3,230	16d	10d x 1 1/2"
	210	<i>MIT4.28/9.5</i>	2,420	16d	10d x 1 1/2"	<i>MIU4.28/9</i>	3,230	16d	10d x 1 1/2"
	230	<i>MIT359.5-2</i>	2,420	16d	10d x 1 1/2"	<i>MIU4.75/9</i>	3,230	16d	10d x 1 1/2"
	360	<i>MIT359.5-2</i>	2,420	16d	10d x 1 1/2"	<i>MIU4.75/9</i>	3,230	16d	10d x 1 1/2"
	560	<i>B7.12/9.5</i>	3,910	16d	16d	<i>HU410-2</i>	4,225	16d	16d
11 1/8"	110	<i>MIT411.88</i>	2,420	16d	10d x 1 1/2"	<i>MIU3.56/11</i>	3,230	16d	10d x 1 1/2"
	210	<i>MIT4.28/11.88</i>	2,420	16d	10d x 1 1/2"	<i>MIU4.28/11</i>	3,230	16d	10d x 1 1/2"
	230	<i>MIT3511.88-2</i>	2,420	16d	10d x 1 1/2"	<i>MIU4.75/11</i>	3,230	16d	10d x 1 1/2"
	360	<i>MIT3511.88-2</i>	2,420	16d	10d x 1 1/2"	<i>MIU4.75/11</i>	3,230	16d	10d x 1 1/2"
	560	<i>B7.12/11.88</i>	3,910	16d	16d	<i>HU412-2</i>	4,225	16d	16d
14"	110	<i>MIT414</i>	2,420	16d	10d x 1 1/2"	<i>MIU3.56/14</i>	3,485	16d	10d x 1 1/2"
	210	<i>MIT4.28/14</i>	2,420	16d	10d x 1 1/2"	<i>MIU4.28/14</i>	3,485	16d	10d x 1 1/2"
	230	<i>MIT3514-2</i>	2,420	16d	10d x 1 1/2"	<i>MIU4.75/14</i>	3,485	16d	10d x 1 1/2"
	360	<i>MIT3514-2</i>	2,420	16d	10d x 1 1/2"	<i>MIU4.75/14</i>	3,485	16d	10d x 1 1/2"
	560	<i>B7.12/14</i>	3,910	16d	16d	<i>HU414-2</i>	4,615	16d	16d
16"	210	<i>LBV4.28/16</i>	3,125	16d	10d x 1 1/2"	<i>MIU4.28/16</i>	3,485	16d	10d x 1 1/2"
	230	<i>LBV4.75/16</i>	3,125	16d	10d x 1 1/2"	<i>MIU4.75/16</i>	3,485	16d	10d x 1 1/2"
	360	<i>LBV4.75/16</i>	3,125	16d	10d x 1 1/2"	<i>MIU4.75/16</i>	3,485	16d	10d x 1 1/2"
	560	<i>B7.12/16</i>	3,910	16d	16d	<i>HU414-2</i>	4,615	16d	16d

TJI®	Variable Slope Seat Joist Hanger ⁽¹⁾				
	Hanger	Fac. Res. (lbs)		Nailing	
		Sloped Only	Sloped and Skewed	Header	Joist
110	<i>LSSUI25</i>	1,925	1,485	10d	10d x 1 1/2"
210	<i>LSSU2.1</i>	2,100	1,485	10d	10d x 1 1/2"
230	<i>LSSUI35</i>	2,100	1,485	10d	10d x 1 1/2"
360	<i>LSSUI35</i>	2,250	1,485	10d	10d x 1 1/2"
560	<i>LSSU410</i>	2,635	2,170	16d	10d x 1 1/2"

TJI®	Variable Slope Seat Connector ⁽²⁾			
	Hanger	Fac. Res. (lbs)	Nailing	
			Header	Joist
110	VPA25	1,540	10d	10d x 1 1/2"
210	VPA2.1	1,690	10d	10d x 1 1/2"
230	VPA35	1,770	10d	10d x 1 1/2"
360	VPA35	1,805	10d	10d x 1 1/2"
560	VPA45	1,855	10d	10d x 1 1/2"

General Notes

Bold italic hangers require web stiffeners.

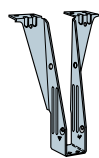
Factored resistances will vary with different nailing criteria or other support conditions; contact your Weyerhaeuser representative for assistance.

- Hanger factored resistances shown are either joist bearing or hanger factored resistance—whichever is less. Joist end reaction must be checked to ensure it does not exceed the factored resistance shown in the tables.
- All factored resistances are for downward loads, standard term.
- Fill all round, dimple, and positive angle nail holes.
- Use sloped seat hangers and beveled web stiffeners when TJI® joist slope exceeds 1/4:12.
- Leave 1/16" clearance (1/8" maximum) between the end of the supported joist and the header or hanger.
- Nails: 16d = 0.162" x 3 1/2", 10d = 0.148" x 3", and 10d x 1 1/2" = 0.148" x 1 1/2".

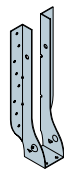
Support Requirements

- Support material assumed to be Trus Joist® engineered lumber or sawn lumber (Douglas fir, southern pine, or spruce-pine-fir species).
- Minimum support width for single- and double-joist top mount hangers is 3" (1 1/2" for ITS hangers).
- Minimum support width for face mount hangers with 10d and 16d nails is 1 1/2" and 1 3/4", respectively, clinched.

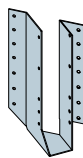
Also see table footnotes on page 13.



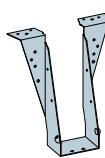
Single Joist,
Top Mount



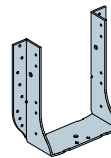
Single Joist,
Face Mount



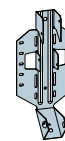
Face Mount Skewed 45°
Joist Hanger



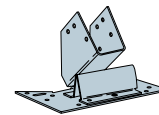
Double Joist,
Top Mount



Double Joist,
Face Mount



Variable Slope Seat
Joist Hanger



Variable Slope
Seat Connector

Depth	TJI®	Single Joist—Top Mount				Single Joist—Face Mount				Face Mount Skewed 45° Joist Hanger			
		Hanger	Fac. Res. (lbs)	Nailing		Hanger	Fac. Res. (lbs)	Nailing		Hanger	Fac. Res. (lbs)	Nailing	
				Header	Joist			Header	Joist			Header	Joist
9½"	110	TH017950	1,540	10d	10d x 1½"	THF17925	1,540	10d	10d x 1½"	SKH1720L/R	1,485	10d	10d x 1½"
	210	TFL2095	1,690	10d	10d x 1½"	THF20925	1,690	10d	10d x 1½"	SKH2020L/R	1,545	10d	10d x 1½"
	230	TFL2395	1,770	10d	10d x 1½"	THF23925	1,960	10d	10d x 1½"	SKH2320L/R	1,545	10d	10d x 1½"
	360	TFL2395	1,770	10d	10d x 1½"	THF23925	1,995	10d	10d x 1½"	SKH2320L/R	1,545	10d	10d x 1½"
	560	TH035950	2,115	10d	10d x 1½"	THF35925	2,305	10d	10d x 1½"	SKH410L/R ⁽³⁾	2,305	16d	16d
11⅞"	110	TH017118	1,540	10d	10d x 1½"	THF17112	1,540	10d	10d x 1½"	SKH1720L/R	1,485	10d	10d x 1½"
	210	TFL20118	1,690	10d	10d x 1½"	THF20112	1,690	10d	10d x 1½"	SKH2020L/R	1,545	10d	10d x 1½"
	230	TFL23118	1,770	10d	10d x 1½"	THF23118	1,960	10d	10d x 1½"	SKH2320L/R	1,545	10d	10d x 1½"
	360	TFL23118	1,770	10d	10d x 1½"	THF23118	1,995	10d	10d x 1½"	SKH2320L/R	1,545	10d	10d x 1½"
	560	TH035118	2,115	10d	10d x 1½"	THF35112	2,305	10d	10d x 1½"	SKH410L/R ⁽³⁾	2,305	16d	16d
14"	110	TFL1714	1,540	10d	10d x 1½"	THF17140	1,540	10d	10d x 1½"	SKH1720L/R	1,485	10d	10d x 1½"
	210	TFL2014	1,690	10d	10d x 1½"	THF20140	1,690	10d	10d x 1½"	SKH2020L/R	1,545	10d	10d x 1½"
	230	TFL2314	1,770	10d	10d x 1½"	THF23140	1,960	10d	10d x 1½"	SKH2324L/R	1,720	10d	10d x 1½"
	360	TFL2314	1,770	10d	10d x 1½"	THF23140	1,995	10d	10d x 1½"	SKH2324L/R	1,755	10d	10d x 1½"
	560	TH035140	2,255	10d	10d x 1½"	THF35140	2,305	10d	10d x 1½"	SKH414L/R ⁽³⁾	2,305	16d	16d
16"	210	TFL2016	1,690	10d	10d x 1½"	THF20157	2,250	10d	10d x 1½"	SKH2024L/R	1,640	10d	10d x 1½"
	230	TFL2316	1,770	10d	10d x 1½"	THF23160	1,960	10d	10d x 1½"	SKH2324L/R	1,720	10d	10d x 1½"
	360	TFL2316	1,770	10d	10d x 1½"	THF23160	1,995	10d	10d x 1½"	SKH2324L/R	1,755	10d	10d x 1½"
	560	TH035160	2,255	10d	10d x 1½"	THF35157	2,305	10d	10d x 1½"	SKH414L/R ⁽³⁾	2,305	16d	16d

Depth	TJI®	Double Joist—Top Mount				Double Joist—Face Mount			
		Hanger	Fac. Res. (lbs)	Nailing		Hanger	Fac. Res. (lbs)	Nailing	
				Header	Joist			Header	Joist
9½"	110	TH035950	2,115	10d	10d x 1½"	THF35925	3,500	10d	10d x 1½"
	210	TH020950-2	3,100	16d	10d	THF20925-2	3,730	10d	10d
	230	TH023950-2	4,200	16d	10d	THF23925-2	3,720	10d	10d
	360	TH023950-2	4,265	16d	10d	THF23925-2	3,720	16d	10d
	560	BPH7195	4,725	16d	10d	HD7100	4,615	10d	10d
11⅞"	110	TH035118	2,115	10d	10d x 1½"	THF35112	3,500	10d	10d x 1½"
	210	TH020118-2	3,425	16d	10d	THF20112-2	3,790	10d	10d
	230	TH023118-2	4,265	16d	10d	THF23118-2	3,920	10d	10d
	360	TH023118-2	4,265	16d	10d	THF23118-2	3,990	10d	10d
	560	BPH71118	4,725	16d	10d	HD7120	4,615	16d	10d
14"	110	TH035140	3,160	10d	10d x 1½"	THF35140	3,500	10d	10d x 1½"
	210	TH020140-2	4,195	16d	10d	THF20140-2	3,790	10d	10d
	230	TH023140-2	4,305	16d	10d	THF23140-2	3,920	10d	10d
	360	TH023140-2	4,375	16d	10d	THF23140-2	3,990	10d	10d
	560	BPH7114	4,725	16d	10d	HD7140	4,615	16d	10d
16"	210	TH020160-2	4,195	16d	10d	THF20140-2	3,790	10d	10d
	230	TH023160-2	4,305	16d	10d	THF23140-2	3,920	10d	10d
	360	TH023160-2	4,375	16d	10d	THF23140-2	3,990	10d	10d
	560	BPH7116	4,725	16d	10d	HD7160	4,615	16d	10d

Hanger information on pages 12 and 13 was provided by either Simpson Strong-Tie® or USP Structural Connectors®. For additional information, please refer to their literature.

TJI®	Variable Slope Seat Joist Hanger ⁽¹⁾				
	Hanger	Fac. Res. (lbs)		Nailing	
		Sloped Only	Sloped and Skewed	Header	Joist
110	LSSH179	1,925	1,925	10d	10d x 1½"
210	LSSH20	1,860	1,860	10d	10d x 1½"
230	LSSH23	1,860	1,860	10d	10d x 1½"
360	LSSH23	1,860	1,860	10d	10d x 1½"
560	LSSH35	2,515	2,235	16d	10d x 1½"

TJI®	Variable Slope Seat Connector ⁽⁴⁾				
	Hanger	Fac. Res. (lbs)	Nailing		
			Header	Joist	
110	TMP175	1,425	10d	10d x 1½"	
	TMPPH175	1,925	10d	10d x 1½"	
210	TMP21	1,600	10d	10d x 1½"	
	TMPPH21	2,100	10d	10d x 1½"	
230	TMP23	2,100	10d	10d x 1½"	
	TMPPH23	2,100	10d	10d x 1½"	
360	TMP23	2,250	10d	10d x 1½"	
	TMPPH23	2,250	10d	10d x 1½"	
560	TMP4	2,440	10d	10d x 1½"	
	TMPPH4	2,635	10d	10d x 1½"	

Table footnotes for pages 12 and 13:

- (1) LSSU, LSSUI, and LSSH hangers can be field adjusted for slopes and skews of up to 45 degrees. Additional lateral restraints are required for 16" deep TJI® joists.
- (2) VPA connectors are allowed on slopes of 3:12 through 12:12 only.
- (3) Miter cut is required at end of joist.
- (4) TMP connectors are allowed on slopes of 1:12 through 6:12 only, and TMPPH connectors are allowed on slopes of 6:12 through 12:12 only.

Also see General Notes on page 12.

This section contains design information for 18" and 20" deep Trus Joist® TJI® joists used in residential, multi-family, or light-commercial applications.

18" and 20" deep TJI® joists are readily available through your local Weyerhaeuser dealer or distributor. Offered with the flange sizes shown below, they come in lengths up to 60' (in 1' increments). 22" and 24" deep TJI® joists are also available in some regions; for more information, contact your Weyerhaeuser representative.

Design Properties

Depth	TJI®	Joist Weight (lbs/ft)	Joist Only EI x 10 ⁶ (lbs-in. ²)	Factored Resistances—Standard Term							
				Maximum Resistive Moment ⁽¹⁾ (ft-lbs)	Maximum Vertical Shear (lbs)	1¾" End Reaction (lbs)		3½" Intermediate Reaction (lbs)		5¼" Intermediate Reaction (lbs)	
						No Web Stiffeners	With Web Stiffeners ⁽²⁾	No Web Stiffeners	With Web Stiffeners ⁽²⁾	No Web Stiffeners	With Web Stiffeners ⁽²⁾
18"	360	3.7	1,085	15,745	3,830	1,705	2,225	3,885	4,400	4,740	5,255
	560	4.8	1,631	24,205	4,785	1,995	2,680	4,735	5,425	5,455	6,140
20"	360	4.0	1,376	17,485	4,200	1,705	2,225	3,885	4,400	4,740	5,255
	560	5.1	2,064	26,890	5,280	1,995	2,680	4,735	5,425	5,455	6,140

(1) **Caution:** Do not increase joist moment design properties by a repetitive-member-use factor.

(2) See detail W on page 22 for web stiffener requirements and nailing information.

General Notes

- Factored resistances are based on Limit States Design per CSA 086-01.
- Factored reaction includes all loads on the joist.
- Factored shear is computed at the inside face of supports and includes all loads on the span(s). Factored shear resistance may sometimes be increased at interior supports. For more information contact your Weyerhaeuser representative.
- The following formulas approximate the simple span uniform load deflection of Δ (inches):

For TJI® 360 Joists

$$\Delta = \frac{22.5 wL^4}{EI} + \frac{2.67 wL^2}{d \times 10^5}$$

For TJI® 560 Joists

$$\Delta = \frac{22.5 wL^4}{EI} + \frac{2.29 wL^2}{d \times 10^5}$$

w = uniform load in pounds per linear foot

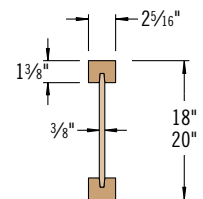
L = span in feet

d = out-to-out depth of the joist in inches

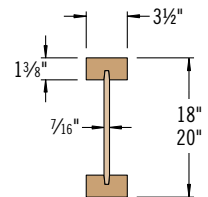
EI = value from table above

TJI® joists are intended for dry-use applications

Some TJI® joist series may not be available in your region. Contact your Weyerhaeuser representative for information.



TJI® 360 joists



TJI® 560 joists

FLOOR SPAN TABLES

5/8" OSB Subfloor (Glue-nailed)—Vibration-Controlled, Standard Term

Depth	TJI®	Directly Applied Ceiling				No Directly Applied Ceiling			
		Simple or Continuous Span		Continuous Span Only		Simple or Continuous Span		Continuous Span Only	
		16" o.c.	19.2" o.c.	16" o.c.	19.2" o.c.	16" o.c.	19.2" o.c.	16" o.c.	19.2" o.c.
40 PSF Live / 10 PSF Dead Load									
18"	360	23'-2"	22'-2"	25'-9"	24'-7"	22'-4"	21'-4"	24'-9"	23'-8"
	560	25'-4"	24'-1"	28'-1"	26'-9"	24'-6"	23'-5"	27'-3"	25'-11"
20"	360	24'-9"	23'-8"	27'-6"	26'-4"	23'-10"	22'-9"	26'-5"	25'-3"
	560	27'-0"	25'-9"	30'-0"	28'-7"	26'-3"	25'-0"	29'-1"	27'-9"
40 PSF Live Load / 30 PSF Dead Load									
18"	360	23'-2"	21'-9" ⁽¹⁾	25'-9" ⁽¹⁾	22'-5" ⁽¹⁾	22'-4"	21'-4" ⁽¹⁾	24'-9" ⁽¹⁾	22'-5" ⁽¹⁾
	560	25'-4"	24'-1"	28'-1"	26'-9" ⁽¹⁾	24'-6"	23'-5"	27'-3"	25'-11" ⁽¹⁾
20"	360	24'-9" ⁽¹⁾	21'-9" ⁽¹⁾	26'-11" ⁽¹⁾	22'-5" ⁽¹⁾	23'-10" ⁽¹⁾	21'-9" ⁽¹⁾	26'-5" ⁽¹⁾	22'-5" ⁽¹⁾
	560	27'-0"	25'-5" ⁽¹⁾	30'-0" ⁽¹⁾	27'-8" ⁽¹⁾	26'-3"	25'-0" ⁽¹⁾	29'-1" ⁽¹⁾	27'-8" ⁽¹⁾

(1) Web stiffeners are required at intermediate supports of continuous-span joists when the intermediate bearing length is less than 5¼" and the span on either side of the intermediate bearing is greater than the following spans:

40 PSF Live Load / 30 PSF Dead Load		
TJI®	16" o.c.	19.2" o.c.
360	23'-9"	19'-9"
560	29'-0"	24'-2"

- Bold italic** spans indicate floors that would meet National Building Code of Canada (NBCC 2005) vibration criteria but would be considered by 35% of the population to have marginal or unacceptable performance.

To more accurately predict floor performance, use our TJ-Pro™ Ratings

See page 15 for General Notes and how to use this table.

3/4" OSB Subfloor (Glue-nailed)—Vibration-Controlled, Standard Term

Depth	TJI®	Directly Applied Ceiling						No Directly Applied Ceiling					
		Simple or Continuous Span			Continuous Span Only			Simple or Continuous Span			Continuous Span Only		
		16" o.c.	19.2" o.c.	24" o.c.	16" o.c.	19.2" o.c.	24" o.c.	16" o.c.	19.2" o.c.	24" o.c.	16" o.c.	19.2" o.c.	24" o.c.
40 PSF Live / 10 PSF Dead Load													
18"	360	24'-8"	23'-6"	22'-3" ⁽¹⁾	27'-4"	26'-1"	24'-2"⁽¹⁾	23'-10"	22'-8"	21'-5" ⁽¹⁾	26'-4"	25'-1"	23'-9"⁽¹⁾
	560	26'-10"	25'-7"	24'-2"	29'-9"	28'-4"	26'-10"⁽¹⁾	26'-2"	24'-10"	23'-5"	29'-0"	27'-6"	26'-0"⁽¹⁾
20"	360	26'-4"	25'-1"	23'-4" ⁽¹⁾	29'-2"	27'-10" ⁽¹⁾	24'-2" ⁽¹⁾	25'-5"	24'-3"	22'-11" ⁽¹⁾	28'-2"	26'-10"⁽¹⁾	24'-2" ⁽¹⁾
	560	28'-8"	27'-4"	25'-9"	31'-10"	30'-3"	28'-8"⁽¹⁾	27'-11"	26'-6"	25'-0"	30'-11"	29'-5"	27'-9"⁽¹⁾
40 PSF Live Load / 30 PSF Dead Load													
18"	360	24'-8" ⁽¹⁾	21'-9" ⁽¹⁾	17'-4" ⁽¹⁾	26'-11"⁽¹⁾	22'-5" ⁽¹⁾	17'-11" ⁽¹⁾	23'-10" ⁽¹⁾	21'-9" ⁽¹⁾	17'-4" ⁽¹⁾	26'-4"⁽¹⁾	22'-5" ⁽¹⁾	17'-11" ⁽¹⁾
	560	26'-10"	25'-5" ⁽¹⁾	20'-4" ⁽¹⁾	29'-9"⁽¹⁾	27'-8"⁽¹⁾	22'-1" ⁽¹⁾	26'-2"	24'-10" ⁽¹⁾	20'-4" ⁽¹⁾	29'-0"	27'-6"⁽¹⁾	22'-1" ⁽¹⁾
20"	360	26'-1" ⁽¹⁾	21'-9" ⁽¹⁾	17'-4" ⁽¹⁾	26'-11" ⁽¹⁾	22'-5" ⁽¹⁾	17'-11" ⁽¹⁾	25'-5" ⁽¹⁾	21'-9" ⁽¹⁾	17'-4" ⁽¹⁾	26'-11"⁽¹⁾	22'-5" ⁽¹⁾	17'-11" ⁽¹⁾
	560	28'-8"	25'-5" ⁽¹⁾	20'-4" ⁽¹⁾	31'-10"⁽¹⁾	27'-8" ⁽¹⁾	22'-1" ⁽¹⁾	27'-11"	25'-5" ⁽¹⁾	20'-4" ⁽¹⁾	30'-11"⁽¹⁾	27'-8"⁽¹⁾	22'-1" ⁽¹⁾

(1) Web stiffeners are required at intermediate supports of continuous-span joists when the intermediate bearing length is less than 5¼" and the span on either side of the intermediate bearing is greater than the following spans:

TJI®	40 PSF Live / 10 PSF Dead Load			40 PSF Live Load / 30 PSF Dead Load		
	16" o.c.	19.2" o.c.	24" o.c.	16" o.c.	19.2" o.c.	24" o.c.
360	Not Required	26'-8"	21'-3"	23'-9"	19'-9"	15'-10"
560	Not Required		26'-0"	29'-0"	24'-2"	19'-3"

▪ **Bold italic** spans indicate floors that would meet National Building Code of Canada (NBCC 2005) vibration criteria but would be considered by 35% of the population to have marginal or unacceptable performance.

7/8" OSB Subfloor (Glue-nailed)—Vibration-Controlled, Standard Term

Depth	TJI®	Directly Applied Ceiling						No Directly Applied Ceiling					
		Simple or Continuous Span			Continuous Span Only			Simple or Continuous Span			Continuous Span Only		
		16" o.c.	19.2" o.c.	24" o.c.	16" o.c.	19.2" o.c.	24" o.c.	16" o.c.	19.2" o.c.	24" o.c.	16" o.c.	19.2" o.c.	24" o.c.
40 PSF Live / 10 PSF Dead Load													
18"	360	26'-0"	24'-9"	23'-4" ⁽¹⁾	28'-9"	27'-5" ⁽¹⁾	24'-2" ⁽¹⁾	25'-2"	23'-11"	22'-6" ⁽¹⁾	27'-10"	26'-6"	24'-2" ⁽¹⁾
	560	28'-3"	26'-11"	25'-4"	31'-4"	29'-10"	28'-1" ⁽¹⁾	27'-7"	26'-2"	24'-8"	30'-7"	29'-0"	27'-4" ⁽¹⁾
20"	360	27'-9"	26'-6"	23'-4" ⁽¹⁾	30'-9"	29'-4" ⁽¹⁾	24'-2" ⁽¹⁾	26'-10"	25'-7"	23'-4" ⁽¹⁾	29'-9"	28'-3" ⁽¹⁾	24'-2" ⁽¹⁾
	560	30'-2"	28'-9"	27'-1" ⁽¹⁾	33'-9"	31'-10"	29'-9" ⁽¹⁾	29'-5"	28'-0"	26'-3" ⁽¹⁾	32'-8"	31'-0"	29'-2" ⁽¹⁾
40 PSF Live Load / 30 PSF Dead Load													
18"	360	26'-0" ⁽¹⁾	21'-9" ⁽¹⁾	17'-4" ⁽¹⁾	26'-11" ⁽¹⁾	22'-5" ⁽¹⁾	17'-11" ⁽¹⁾	25'-2" ⁽¹⁾	21'-9" ⁽¹⁾	17'-4" ⁽¹⁾	26'-11" ⁽¹⁾	22'-5" ⁽¹⁾	17'-11" ⁽¹⁾
	560	28'-3"	25'-5" ⁽¹⁾	20'-4" ⁽¹⁾	31'-4" ⁽¹⁾	27'-8" ⁽¹⁾	22'-1" ⁽¹⁾	27'-7"	25'-5" ⁽¹⁾	20'-4" ⁽¹⁾	30'-7" ⁽¹⁾	27'-8" ⁽¹⁾	22'-1" ⁽¹⁾
20"	360	26'-1" ⁽¹⁾	21'-9" ⁽¹⁾	17'-4" ⁽¹⁾	26'-11" ⁽¹⁾	22'-5" ⁽¹⁾	17'-11" ⁽¹⁾	26'-1" ⁽¹⁾	21'-9" ⁽¹⁾	17'-4" ⁽¹⁾	26'-11" ⁽¹⁾	22'-5" ⁽¹⁾	17'-11" ⁽¹⁾
	560	30'-2" ⁽¹⁾	25'-5" ⁽¹⁾	20'-4" ⁽¹⁾	33'-3" ⁽¹⁾	27'-8" ⁽¹⁾	22'-1" ⁽¹⁾	29'-5" ⁽¹⁾	25'-5" ⁽¹⁾	20'-4" ⁽¹⁾	32'-8" ⁽¹⁾	27'-8" ⁽¹⁾	22'-1" ⁽¹⁾

(1) Web stiffeners are required at intermediate supports of continuous-span joists when the intermediate bearing length is less than 5¼" and the span on either side of the intermediate bearing is greater than the following spans:

TJI®	40 PSF Live / 10 PSF Dead Load			40 PSF Live Load / 30 PSF Dead Load ⁽³⁾		
	16" o.c.	19.2" o.c.	24" o.c.	16" o.c.	19.2" o.c.	24" o.c.
360	Not Required	26'-8"	21'-3"	23'-9"	19'-9"	15'-10"
560	Not Required		26'-0"	29'-0"	24'-2"	19'-3"

▪ **Bold italic** spans indicate floors that would meet National Building Code of Canada (NBCC 2005) vibration criteria but would be considered by 35% of the population to have marginal or unacceptable performance.

How to Use These Tables

- Determine the the subflooring thickness and applicable live and dead loads.
- Determine whether the ceiling will be directly applied and what the span condition is (simple or continuous).
- Select on-centre spacing.
- Scan down the column until you meet or exceed the span of your application.
- Select TJI® joist and depth.

General Notes

- Tables are based on:
 - Clear distance between supports.
 - Minimum bearing length of 1¾" end (no web stiffeners) and 3½" intermediate.
 - Limit States Design per CSA 086-01.
 - Uniform loads.
 - Single layer of appropriate span-rated OSB.
 - For continuous spans, ratio of short span to long span should be 0.4 or greater to prevent uplift.
 - NBCC 2005 vibration criteria as ratified by Canadian Construction Materials Centre (CCMC).
- Long term deflection under dead load, which includes the effect of creep, has not been considered.
- Spans generated from Weyerhaeuser software may exceed the spans shown in these tables because software reflects actual design conditions.
- For multi-family applications and other loading conditions not shown, refer to Weyerhaeuser software.

To more accurately predict floor performance, use our TJI-Pro™ Ratings

Roof—Maximum Horizontal Clear Spans, Standard Term (slopes of 3:12 or less)

O.C. Spacing	Depth	TJI®	Unfactored Snow Load (LL) and Dead Load (DL) in PSF			
			25LL + 15DL	30LL + 15DL	40LL + 15DL	50LL + 15DL
16"	18"	360	35'-3"	33'-1"	29'-6"	24'-9"
		560	40'-5"	37'-11"	34'-4"	30'-2"
	20"	360	38'-2"	35'-10"	29'-6"	24'-9"
		560	43'-9"	41'-1"	35'-11"	30'-2"
19.2"	18"	360	33'-1"	30'-4"	24'-6"	20'-7"
		560	37'-11"	35'-7"	29'-11"	25'-1"
	20"	360	34'-5"	30'-4"	24'-6"	20'-7"
		560	41'-1"	37'-0"	29'-11"	25'-1"
24"	18"	360	27'-6"	24'-3"	19'-7"	16'-5"
		560	33'-6"	29'-7"	23'-11"	20'-1"
	20"	360	27'-6"	24'-3"	19'-7"	16'-5"
		560	33'-6"	29'-7"	23'-11"	20'-1"

How to Use This Table

1. Determine appropriate unfactored snow and dead load.
2. Scan down the column until you find a span that meets or exceeds the span of your application.
3. Select TJI® joist and on-centre spacing.

General Notes

- Table is based on:
 - Minimum bearing length of 1¾" end and 3½" intermediate, without web stiffeners.
 - Uniform loads.
 - More restrictive of simple or continuous span.
 - Roof slopes of ¼:12 minimum, 3:12 maximum.
- Unfactored total load joist deflection limited to L/180.
- Unfactored live load joist deflection limited to L/360.
- A support beam or wall at the high end is required. Ridge board applications do not provide adequate support.
- Spans shown assume no web stiffeners at intermediate bearings.

ROOF LOAD TABLE

Roof—Factored Resistance, Standard Term (PLF)

Depth	TJI®	Unfactored Deflection Resistance		Factored Strength Resistance	Unfactored Deflection Resistance		Factored Strength Resistance	Unfactored Deflection Resistance		Factored Strength Resistance	Unfactored Deflection Resistance		Factored Strength Resistance	Unfactored Deflection Resistance		Factored Strength Resistance
		Live Load L/360	Total Load L/180	Total Load	Live Load L/360	Total Load L/180	Total Load	Live Load L/360	Total Load L/180	Total Load	Live Load L/360	Total Load L/180	Total Load	Live Load L/360	Total Load L/180	Total Load
		Roof Joist Horizontal Clear Span														
		12'			14'			16'			18'			20'		
18"	360	*	*	255	*	*	219	*	*	192	*	*	171	*	*	154
	560	*	*	311	*	*	267	*	*	234	*	*	208	*	*	188
20"	360	*	*	255	*	*	219	*	*	192	*	*	171	*	*	154
	560	*	*	311	*	*	267	*	*	234	*	*	208	*	*	188
18"	22'		24'		26'		28'		30'							
	360	*	*	140	*	*	128	81	*	118	66	*	110	54	*	103
	560	*	*	171	*	*	156	*	*	144	*	*	134	80	*	125
	360	*	*	140	*	*	128	*	*	118	*	*	110	68	*	103
20"	560	*	*	171	*	*	156	*	*	144	*	*	134	*	*	125

* Indicates value does not control.

How to Use This Table

1. Calculate actual factored total load and unfactored snow and total load on the joist in pounds per linear foot (plf).
2. Select appropriate **Roof Joist Horizontal Clear Span**. For slopes greater than 2:12 (up to a maximum of 3:12), approximate the increased dead load by multiplying the joist horizontal clear span by the **Slope Factor** on page 28.
3. Scan down the columns to find a TJI® joist that meets or exceeds the actual unfactored snow and total loads, and the factored total load. All three columns must be checked.

General Notes

- Table is based on:
 - Minimum bearing length of 1¾" end and 3½" intermediate, without web stiffeners
 - Uniform loads.
 - More restrictive of simple or continuous span.
 - Roof slopes of ¼:12 minimum, 3:12 maximum.
 - No composite action provided by sheathing.

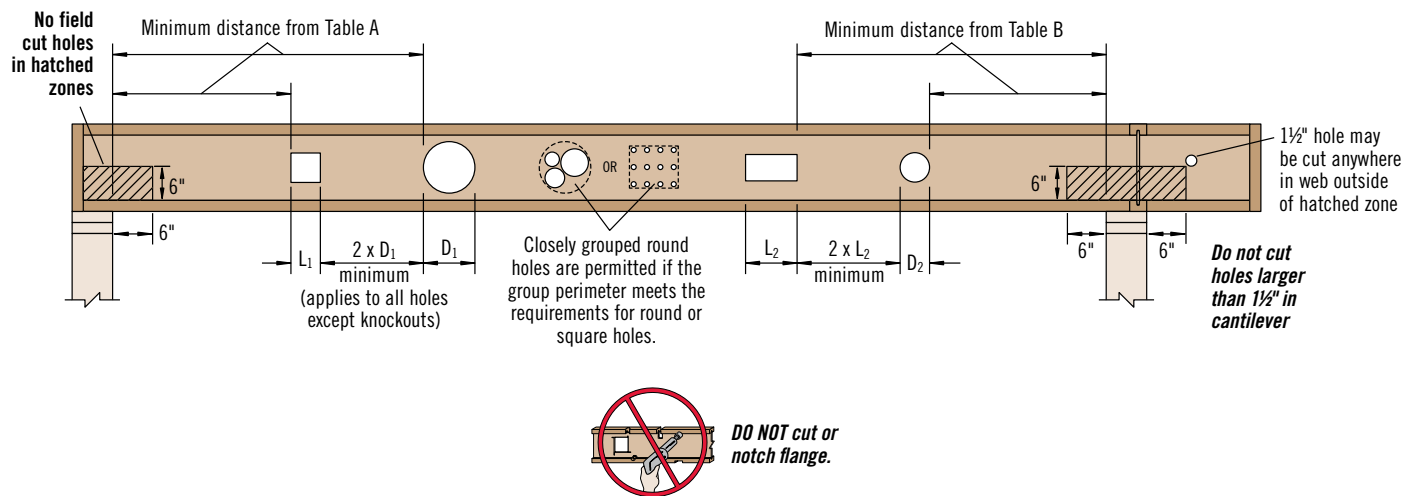


Table A—End Support (Minimum distance from edge of hole to inside face of nearest end support)

Depth	TJI®	● Round Hole Size										■ Square or Rectangular Hole Size									
		4"	5"	6"	6½"	7"	8"	10"	12"	14¼"	16¾"	4"	5"	6"	6½"	7"	8"	10"	12"	14¼"	16¾"
18"	360	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	4'-0"	5'-6"	9'-6"		1'-0"	1'-6"	3'-0"	4'-0"	4'-6"	6'-0"	10'-0"	11'-0"	13'-6"	
	560	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	4'-6"	7'-0"	10'-6"		2'-0"	3'-6"	5'-0"	5'-6"	6'-6"	8'-0"	11'-0"	12'-0"	14'-0"	
20"	360	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	4'-0"	7'-0"	10'-0"	1'-0"	1'-0"	1'-6"	2'-0"	3'-0"	4'-6"	8'-0"	11'-6"	13'-6"	15'-6"
	560	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	4'-6"	8'-6"	11'-0"	1'-0"	1'-6"	3'-6"	4'-6"	5'-0"	7'-0"	10'-6"	13'-0"	14'-6"	15'-6"

Table B—Intermediate or Cantilever Support

(Minimum distance from edge of hole to inside face of nearest intermediate or cantilever support)

Depth	TJI®	● Round Hole Size										■ Square or Rectangular Hole Size									
		4"	5"	6"	6½"	7"	8"	10"	12"	14¼"	16¾"	4"	5"	6"	6½"	7"	8"	10"	12"	14¼"	16¾"
18"	360	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	3'-0"	6'-0"	9'-0"	14'-6"		4'-0"	1'-6"	4'-0"	5'-6"	6'-6"	9'-0"	14'-6"	16'-6"	19'-0"	
	560	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	6'-0"	10'-0"	15'-6"		1'-0"	3'-6"	6'-0"	7'-6"	8'-6"	11'-6"	16'-6"	18'-0"	19'-6"	
20"	360	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-0"	6'-0"	11'-0"	15'-0"	1'-0"	1'-0"	1'-6"	2'-6"	4'-0"	7'-0"	12'-6"	16'-6"	19'-0"	20'-6"
	560	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	5'-6"	11'-6"	15'-6"	1'-0"	1'-0"	3'-0"	4'-6"	6'-0"	8'-6"	14'-0"	17'-6"	19'-0"	20'-6"

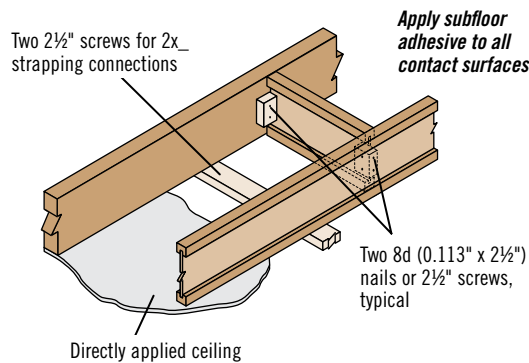
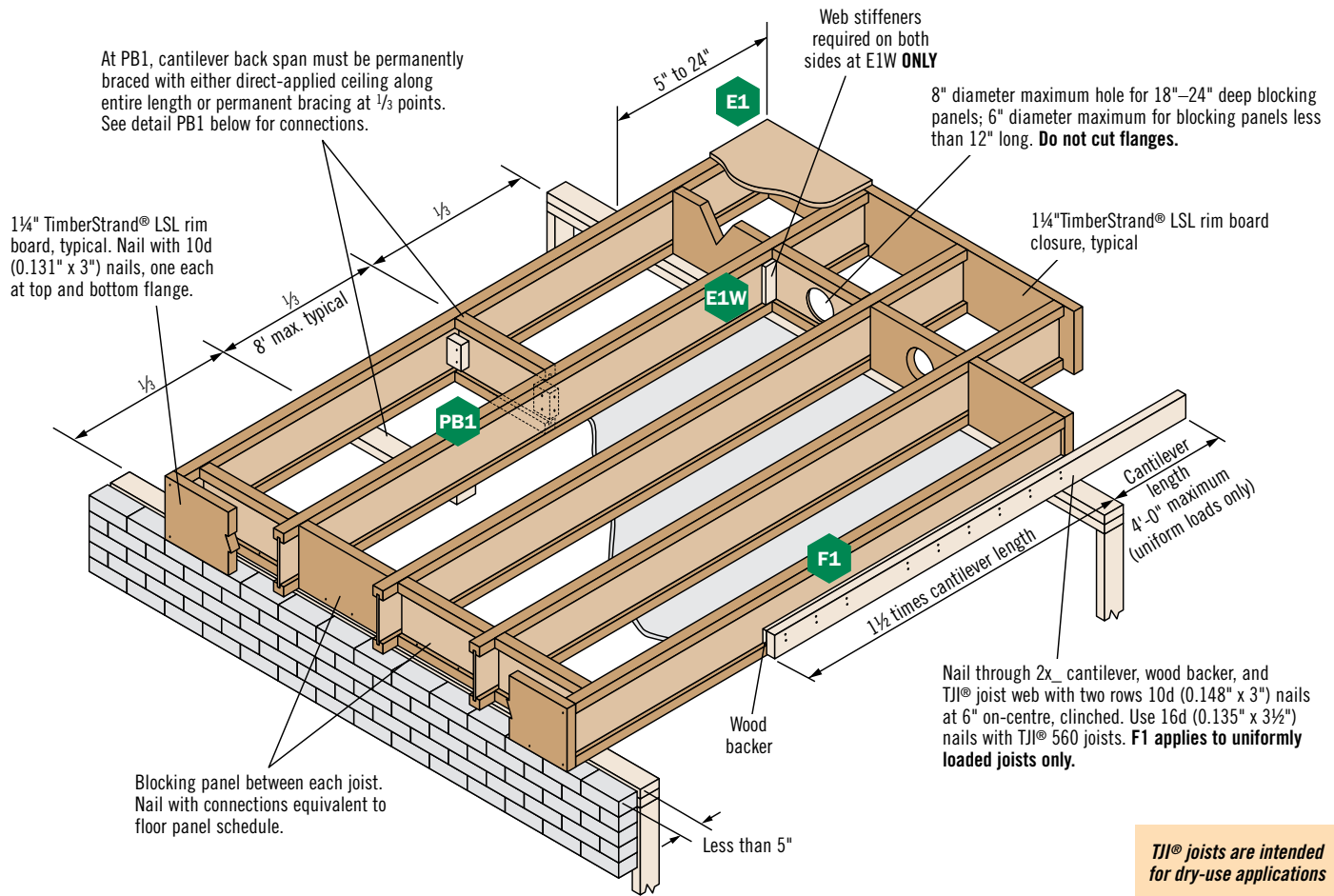
■ Rectangular holes based on measurement of longest side.

How to Use These Tables

- Using **Table A**, **Table B**, or both if required, determine the hole shape/size and select the TJI® joist and depth.
- Scan horizontally until you intersect the correct hole size column.
- Measurement shown is minimum distance from edge of hole to support.
- Maintain the required minimum distance from the end **and** the intermediate or cantilever support.

General Notes

- Holes may be located vertically anywhere within the web. Leave 1/8" of web (minimum) at top and bottom of hole.
- Knockouts are located in web at approximately 12" on-centre; they do not affect hole placement.
- For simple span (5' minimum) uniformly loaded joists meeting the requirements of this guide, one maximum size round hole may be located at the centre of the joist span **provided that no other holes occur in the joist**.
- Distances are based on the maximum uniform loads shown in this guide. For other load conditions or hole configurations, use Forte® software or contact your Weyerhaeuser representative.

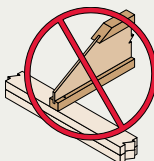


PB1 When specified in design software or layouts, one of the above bracing options is required

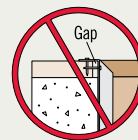
These Conditions Are **NOT** Permitted:



DO NOT use sawn lumber for rim board or blocking as it may shrink after installation. Use only engineered lumber



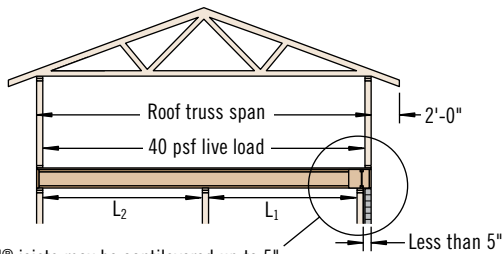
DO NOT bevel cut joist beyond inside face of wall.



DO NOT install hanger overhanging face of plate or beam. Flush bearing plate with inside face of wall or beam.

Cantilevers Less than 5" (Brick Ledge)

See Section A of cantilever table

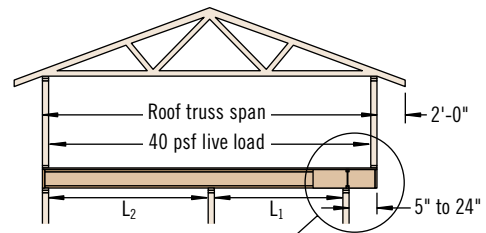


TJI® joists may be cantilevered up to 5" when supporting roof load, assuming:

- simple or continuous span
- $L_1 \leq L_2$
- minimum backspan = 2x cantilever length

Cantilevers 5" to 24"

See Section B of cantilever table



TJI® joists may be cantilevered 5" to 24" when supporting roof load, assuming:

- simple or continuous span
- $L_1 \leq L_2$
- minimum backspan = 2x cantilever length

Cantilever Reinforcement

Depth	TJI®	Roof Truss Span	Section A: Cantilevers less than 5" (Brick Ledge)									Section B: Cantilevers 5" to 24"								
			Unfactored Roof Total Load									Unfactored Roof Total Load								
			35 PSF			45 PSF			55 PSF			35 PSF			45 PSF			55 PSF		
			On-Centre Joist Spacing									On-Centre Joist Spacing								
16"	19.2"	24"	16"	19.2"	24"	16"	19.2"	24"	16"	19.2"	24"	16"	19.2"	24"	16"	19.2"	24"			
18" or 20"	360	22'								X										
		24'						X			X									
		26'						X		X	X									
		28'						X		X	X									
		30'			X			X		X	X							E1W		
		32'			X		X	X	X	X	X							E1W		
		34'			X		X	X	X	X	X							E1W		
		36'			X		X	X	X	X	X							X		
		38'			X	X	X	X	X	X	X					E1W		X		
40'		X	X	X	X	X	X	X	X					E1W		X				
18" or 20"	560	22'																		
		24'									X									
		26'									X									
		28'						X			X									
		30'						X		X	X									
		32'						X		X	X									
		34'						X		X	X									
		36'			X		X	X		X	X									
		38'			X		X	X	X	X	X									
40'			X		X	X	X	X	X							E1W				

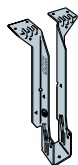
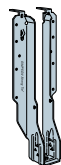
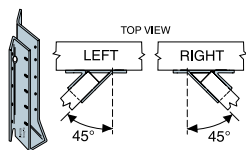
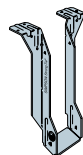
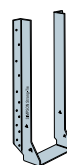
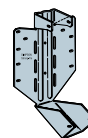
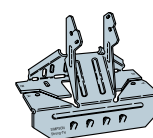
How to Use This Table

1. Identify TJI® joist and depth.
2. Locate the **Roof Truss Span** (horizontal) that meets or exceeds your condition.
3. Identify the cantilever condition (less than 5" or 5" to 24") and locate the **Unfactored Roof Total Load** and **On-Centre Joist Spacing** for your application.
4. Scan down to find the appropriate cantilever detail and refer to drawing on page 18:
 - Blank cells indicate no reinforcement is required.
 - X indicates cantilever will not work. Use Forte® or Javelin® software, or reduce spacing of joists and recheck table.

General Notes

- Table is based on:
 - 15 psf unfactored roof dead load on a horizontal projection.
 - 80 plf unfactored exterior wall load with 3'-0" maximum width window or door openings. For larger openings, or multiple 3'-0" width openings spaced less than 6'-0" on-centre, additional joists beneath the opening's trimmers may be required.
 - 40/10 psf floor load.
 - More restrictive of simple or continuous span.
 - Roof truss with 24" soffits.
- Designed for 2x4 and 2x6 plate widths.
- For conditions beyond the scope of this table, including cantilevers longer than 24", use Forte® or Javelin® software.

See page 18 for cantilever details.

Single Joist,
Top MountSingle Joist,
Face MountFace Mount Skewed 45°
Joist HangerDouble Joist,
Top MountDouble Joist,
Face MountVariable Slope Seat
Joist HangerVariable Slope
Seat Connector

Depth	TJI®	Single Joist—Top Mount				Single Joist—Face Mount				Face Mount Skewed 45° Joist Hanger			
		Hanger	Fac. Res. (lbs)	Nailing		Hanger	Fac. Res. (lbs)	Nailing		Hanger	Fac. Res. (lbs)	Nailing	
				Header	Joist			Header	Joist			Header	Joist
18"	360	MIT3518	1,995	16d	10d x 1½"	MIU2.37/18	1,995	10d	N.A.	<i>SUR/L2.37/14</i>	2,260	16d	10d x 1½"
	560	MIT418	2,305	16d	10d x 1½"	MIU3.56/18	2,305	10d	N.A.	<i>SUR/L414</i>	2,305	16d	16d
20"	360	MIT3520	1,995	16d	10d x 1½"	MIU2.37/20	1,995	10d	N.A.	<i>SUR/L2.37/14</i>	2,260	16d	10d x 1½"
	560	MIT420	2,305	16d	10d x 1½"	MIU3.56/20	2,305	10d	N.A.	<i>SUR/L414</i>	2,305	16d	16d

Depth	TJI®	Double Joist—Top Mount				Double Joist—Face Mount			
		Hanger	Fac. Res. (lbs)	Nailing		Hanger	Fac. Res. (lbs)	Nailing	
				Header	Joist			Header	Joist
18"	360	<i>LBV4.75/18</i>	3,125	16d	10d x 1½"	<i>MIU4.75/18</i>	3,485	16d	10d x 1½"
	560	<i>B7.12/18</i>	3,910	16d	16d	<i>HU414-2</i>	4,615	16d	16d
20"	360	<i>LBV4.75/20</i>	3,125	16d	10d x 1½"	<i>MIU4.75/20</i>	3,485	16d	10d x 1½"
	560	<i>B7.12/20</i>	3,910	16d	16d	<i>HU414-2</i>	4,615	16d	16d

Hanger information in this section was provided by Simpson Strong-Tie®. For additional information, please refer to their literature.

Depth	TJI®	Variable Slope Seat Joist Hanger ⁽²⁾				
		Hanger	Fac. Res. (lbs)		Nailing	
			Sloped Only	Sloped and Skewed	Header	Joist
18"-20"	360	<i>LSSU135</i>	2,250	1,485	10d	10d x 1½"
	560	<i>LSSU410</i>	2,635	2,170	16d	10d x 1½"

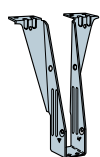
Depth	TJI®	Variable Slope Seat Connector ⁽¹⁾			
		Hanger	Fac. Res. (lbs)	Nailing	
				Header	Joist
18"-20"	360	VPA35	1,805	10d	10d x 1½"
	560	VPA4	1,855	10d	10d x 1½"

General Notes

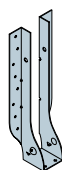
Bold italic hangers require web stiffeners.

Factored resistances will vary with different nailing criteria or other support conditions; contact your Weyerhaeuser representative for assistance.

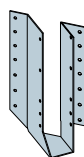
- Hanger factored resistances shown are either joist bearing or hanger factored resistance—whichever is less. Joist end reaction must be checked to ensure it does not exceed the factored resistance shown in the tables.
- All factored resistances are for downward loads, standard term.
- Fill all round, dimple, and positive-angle nail holes.
- Use sloped seat hangers and beveled web stiffeners when TJI® joist slope exceeds ¼:12. **Maximum slope for 18" and 20" TJI® joists is 3:12.**
- Leave ⅛" clearance (⅛" maximum) between the end of the supported joist and the header or hanger.
- Nails: 16d = 0.162" x 3½", 10d = 0.148" x 3", and 10d x 1½" = 0.148" x 1½".



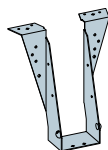
Single Joist,
Top Mount



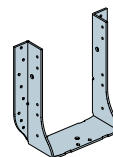
Single Joist,
Face Mount



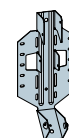
Face Mount Skewed
45° Joist Hanger



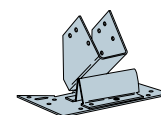
Double Joist,
Top Mount



Double Joist,
Face Mount



Variable Slope Seat
Joist Hanger



Variable Slope
Seat Connector

Joist Depth	TJI®	Single Joist—Top Mount				Single Joist—Face Mount				Face Mount Skewed 45° Joist Hanger			
		Hanger	Fac. Res. (lbs)	Nailing		Hanger	Fac. Res. (lbs)	Nailing		Hanger	Fac. Res. (lbs)	Nailing	
				Header	Joist			Header	Joist			Header	Joist
18"	360	TFI3518	1,995	16d	10d x 1½"	THF23180	1,995	10d	10d x 1½"	SKH2324L/R	1,755	10d	10d x 1½"
	560	TFI418	2,305	16d	10d x 1½"	THF35157	2,305	10d	10d x 1½"	SKH414L/R ⁽³⁾	2,305	16d	16d
20"	360	TFI3520	1,995	16d	10d x 1½"	THF23180	1,995	10d	10d x 1½"	SKH2324L/R ⁽⁴⁾	1,755	10d	10d x 1½"
	560	TFI420	2,305	16d	10d x 1½"	THF35157	2,305	10d	10d x 1½"	SKH414L/R ⁽³⁾	2,305	16d	16d

(1) Miter cut is required at end of joists.

Joist Depth	TJI®	Double Joist—Top Mount				Double Joist—Face Mount			
		Hanger	Fac. Res. (lbs)	Nailing		Hanger	Fac. Res. (lbs)	Nailing	
				Header	Joist			Header	Joist
18"	360	TH023180-2	4,375	16d	10d	THF23160-2	3,990	10d	10d
	560	BPH7118	4,725	16d	10d	HD7140	4,615	16d	10d
20"	360	TH023200-2	4,375	16d	10d	THF23160-2	3,990	10d	10d
	560	BPH7116	4,725	16d	10d	HD7160	4,615	16d	10d

Hanger information in this section was provided by USP Structural Connectors®. For additional information, please refer to their literature.

Depth	TJI®	Variable Slope Seat Joist Hanger ⁽²⁾				
		Hanger	Fac. Res. (lbs)		Nailing	
			Sloped Only	Sloped and Skewed	Header	Joist
18"-20"	360	LSSH23	1,860	1,860	10d	10d x 1½"
	560	LSSH35	2,515	2,235	16d	10d x 1½"

Depth	TJI®	Variable Slope Seat Connector ⁽⁵⁾			
		Hanger	Fac. Res. (lbs)	Nailing	
				Header	Joist
18"-20"	360	TMP23	2,250	10d	10d x 1½"
	560	TMP4	2,440	10d	10d x 1½"

Support Requirements

- Support material assumed to be Trus Joist® engineered lumber or sawn lumber (Douglas fir, southern pine, or spruce-pine-fir species).
- Minimum support width for single- and double-joist top mount hangers is 3".
- Minimum support width for face mount hangers with 10d and 16d nails is 1½" and 1¾", respectively; clinched.

Also see General Notes on page 20.

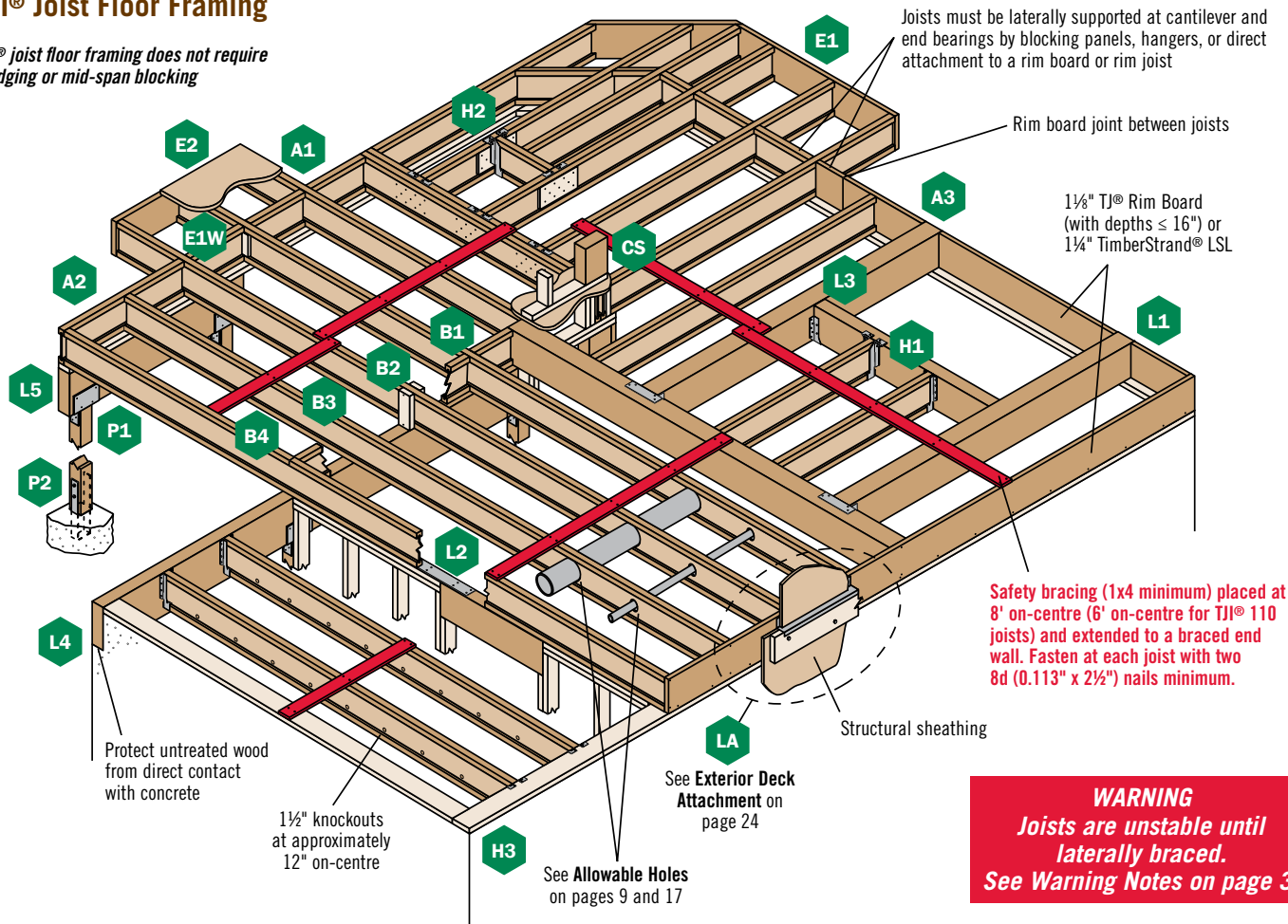
Table footnotes for pages 20 and 21:

- For joists 18" and deeper, use VPA for 3:12 slopes only.
- For joists 18" and deeper, use only with slopes up to 3:12 and skews up to 45°. Additional lateral restraint required for 18" and 20" joists.
- Miter cut required at end of joist.
- Additional lateral restraint required.
- For joist depths 18" and deeper, use only on slopes of 1:12 to 3:12.

This section contains framing details and design information applicable to all joist depths shown in this guide.

TJI® Joist Floor Framing

TJI® joist floor framing does not require bridging or mid-span blocking



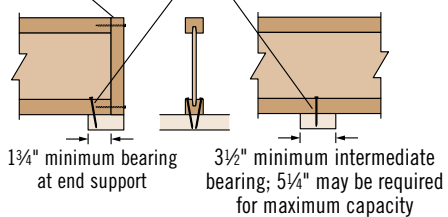
WARNING
Joists are unstable until laterally braced.
See Warning Notes on page 3.

TJI® Joist Nailing Requirements at Bearing

TJI® Joist to Bearing Plate

1½" TJ® Rim Board (with depths ≤ 16") or 1¼" TimberStrand® LSL

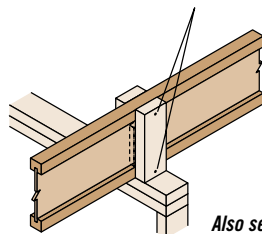
One 8d (0.113" x 2½") nail each side. Drive nails at an angle of at least 1½" from end.



Shear transfer nailing: Use connections equivalent to floor panel nailing schedule

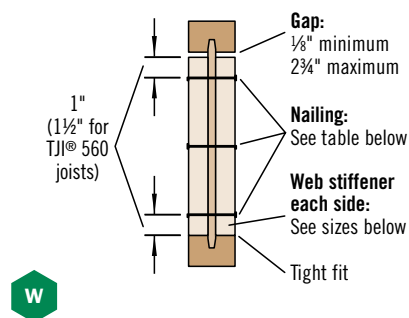
Squash Blocks to TJI® Joist (Load bearing wall above)

One 10d (0.128" x 3") nail into each flange



Also see detail B2 on page 23

Web Stiffener Attachment

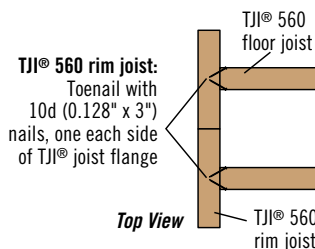
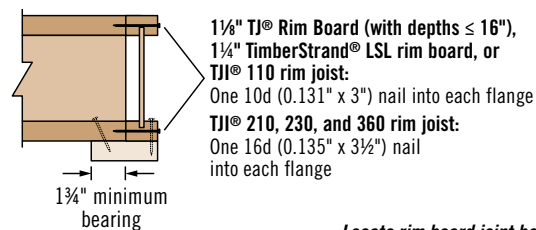


Web Stiffener Requirements

TJI®	Min. Web Stiffener Size	Nailing Requirements	
		Type	Quantity
110	5/8" x 2 5/16" (1)	8d (0.113" x 2½")	3
210	3/4" x 2 5/16" (1)		
230, 360	7/8" x 2 5/16" (1)		
560	2x4 (2)	16d (0.135" x 3½")	3

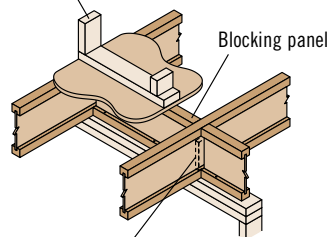
(1) CSA standards 0151, 0325, or 0437 with face grain vertical
(2) Construction grade or better

Rim to TJI® Joist



Locate rim board joint between joists

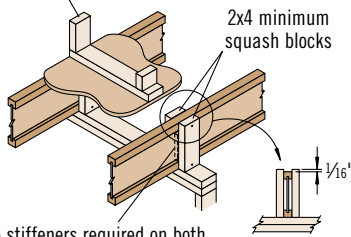
Load bearing or shear wall above
(must stack over wall below)



Web stiffeners required on both sides at B1W **ONLY**. See footnote (1) under span tables.

B1 **B1W**

Load bearing wall above
(must stack over wall below)

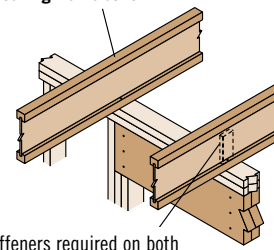


Web stiffeners required on both sides at B2W **ONLY**. See footnote (1) under span tables.

B2 **B2W**

Blocking panels may be required with shear walls above or below—see detail B1

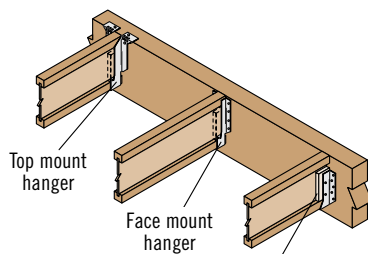
No load bearing wall above



Web stiffeners required on both sides at B3W **ONLY**. See footnote (1) under span tables.

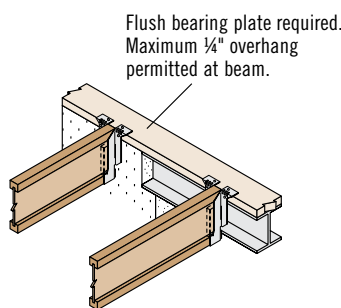
B3 **B3W**

Blocking panels may be required with shear walls above or below—see detail B1

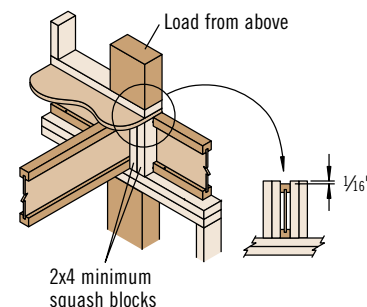


Web stiffeners required if sides of hanger do not laterally support at least 3/8" of TJI® joist top flange

H1



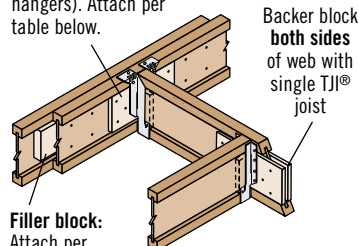
H3



CS

Use 2x4 minimum squash blocks to transfer load around TJI® joist

Backer block: Install tight to top flange (tight to bottom flange with face mount hangers). Attach per table below.



Filler block: Attach per table below.

H2 With top mount hangers, backer block required only for factored downward loads exceeding 395 lbs or for uplift conditions

Fastener Spacing for TJI® Joists

TJI®	Closest On-Centre Spacing per Row ⁽¹⁾		
	8d (0.113" x 2 1/2"), 8d (0.131" x 2 1/2"), 10d (0.128" x 3"), 12d (0.128" x 3 1/4")	10d (0.148" x 3"), 12d (0.148" x 3 1/4"), 16d (0.135" x 3 1/2")	16d (0.162" x 3 1/2")
110 and 210	4"	4" ⁽²⁾	6"
230	4"	4" ⁽²⁾	6"
360 and 560	3"	4" ⁽²⁾	6"

(1) Stagger nails when using 4" on-centre spacing and maintain 3/8" joist and panel edge distance. One row of fasteners is permitted (two at abutting panel edges) for diaphragms. For other applications, multiple rows of fasteners are permitted if the rows are offset at least 1/2" and staggered.

(2) Can be reduced to 3" on-centre for light gauge steel straps with 10d (0.148" x 1 1/2") nails.

- Maximum spacing of nails is 18" on-centre for joists ≤ 16" deep; 24" on-centre for joists > 16" deep.
- 14 gauge staples may be substituted for 8d (0.113" x 2 1/2") nails if minimum penetration of 1" is achieved.
- Table also applies to the attachment of TJI® rim joists and blocking panels to the wall plate.

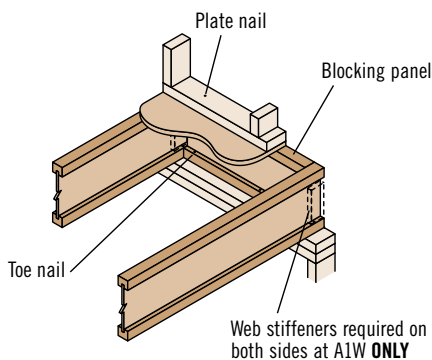
Filler and Backer Block Sizes

TJI®	110		210		230 or 360		360	560		
Depth	9½" or 11⅝"	14"	9½" or 11⅝"	14" or 16"	9½" or 11⅝"	14" or 16"	18" or 20"	9½" or 11⅝"	14" or 16"	18" or 20"
Filler Block ⁽¹⁾ (Detail H2)	2x6	2x8	2x6 + ⅜" sheathing	2x8 + ⅜" sheathing	2x6 + ½" sheathing	2x8 + ½" sheathing	2x12 + ½" sheathing	Two 2x6	Two 2x8	Two 2x12
Cantilever Filler (Detail E4)	2x6 4'-0" long	2x10 6'-0" long	2x6 + ⅜" sheathing, 4'-0" long	2x10 + ⅜" sheathing, 6'-0" long	2x6 + ½" sheathing, 4'-0" long	2x10 + ½" sheathing, 6'-0" long	Not applicable	Not applicable		
Backer Block ⁽¹⁾ (Detail F1 or H2)	⅝" or ¾"		¾" or ⅞"		⅞" or 1" net			2x6	2x8	2x12
Nail Size	Filler	10d (0.128" x 3")						16d (0.135" x 3½")		16d (0.135" x 3½")
	Backer							10d (0.128" x 3")		10d (0.128" x 3")
Nail Quantity ⁽²⁾	Filler	10 (15 for multi-family applications)					15 one side	10 (15 for multi-family) each side		15 each side
	Backer						15	10 (15 for multi-family)		15

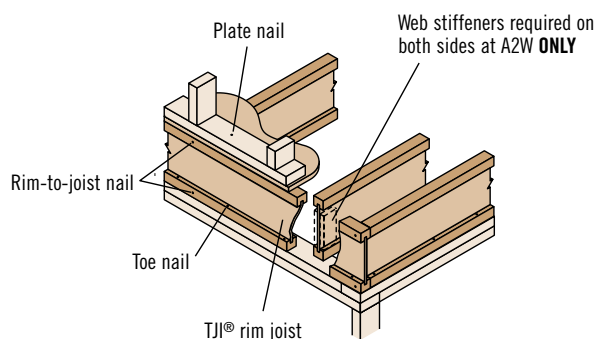
(1) If necessary, increase filler and backer block height for face mount hangers and maintain 1/8" gap at top of joist. See detail W. Filler and backer block dimensions should accommodate required nailing without splitting. The suggested minimum length is 24" for filler and 12" for backer blocks.

(2) Clinch nails when possible.

Also see nailing requirements on page 22

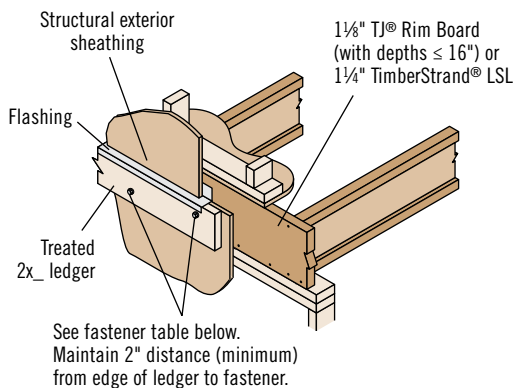
A1
A1W

Attach blocking per fastening instructions in Detail A3.

A2
A2W

Must have 1¼" minimum joist bearing at ends. Attach rim joist per fastening instructions in Detail A3.

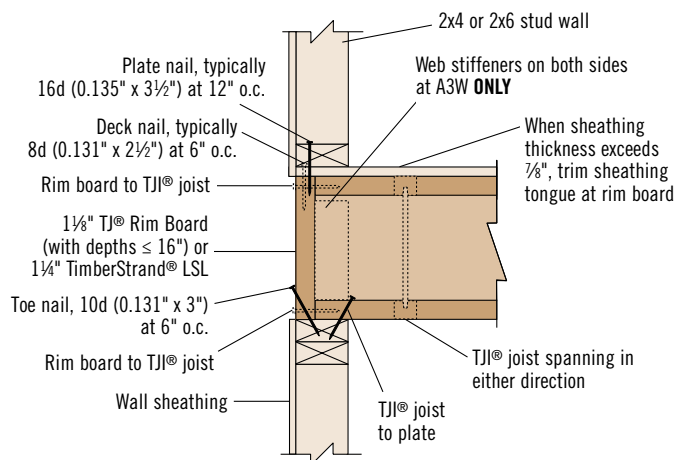
Exterior Deck Attachment



LA

Fastener	Factored Resistance Load ⁽¹⁾ (lbs)	
	1¼" TimberStrand® LSL rim board	1½" TJI® Rim Board ⁽²⁾
¾" lag bolt	630	N.A.
½" lag bolt	750	575 ⁽³⁾

- (1) Allowable load determined in accordance with AC 124.
 (2) 1½" TJI® Rim Board is allowed with joist depths ≤ 16" only.
 (3) Factored resistance is with a ¾" gap between the rim board and deck ledger.
 ▪ Corrosion-resistant fasteners are required for wet-service applications.

A3
A3WFastening of Floor Panels to 1½" TJI® Rim Board⁽¹⁾ or 1¼" TimberStrand® LSL

Nail Size	Closest On-Centre Spacing per Row	
	Rim Board Thickness	
	1½" ⁽¹⁾	1¼"
8d (0.113" or 0.131" x 2½"), 10d (0.128" or 0.148" x 3"), 12d (0.128" or 0.148" x 3¼")	6"	4"
16d (0.162" x 3½")	16"	6" ⁽²⁾

- (1) 1½" TJI® Rim Board is allowed with joist depths ≤ 16" only.
 (2) Can be reduced to 4" on-centre if nail penetration into the narrow edge is no more than 1¾" (to avoid splitting).
 ▪ If more than one row of nails is used, the rows must be offset at least ½" and staggered.
 ▪ 14 gauge staples may be substituted for 8d (0.113" x 2½") nails if minimum penetration of 1" is achieved.

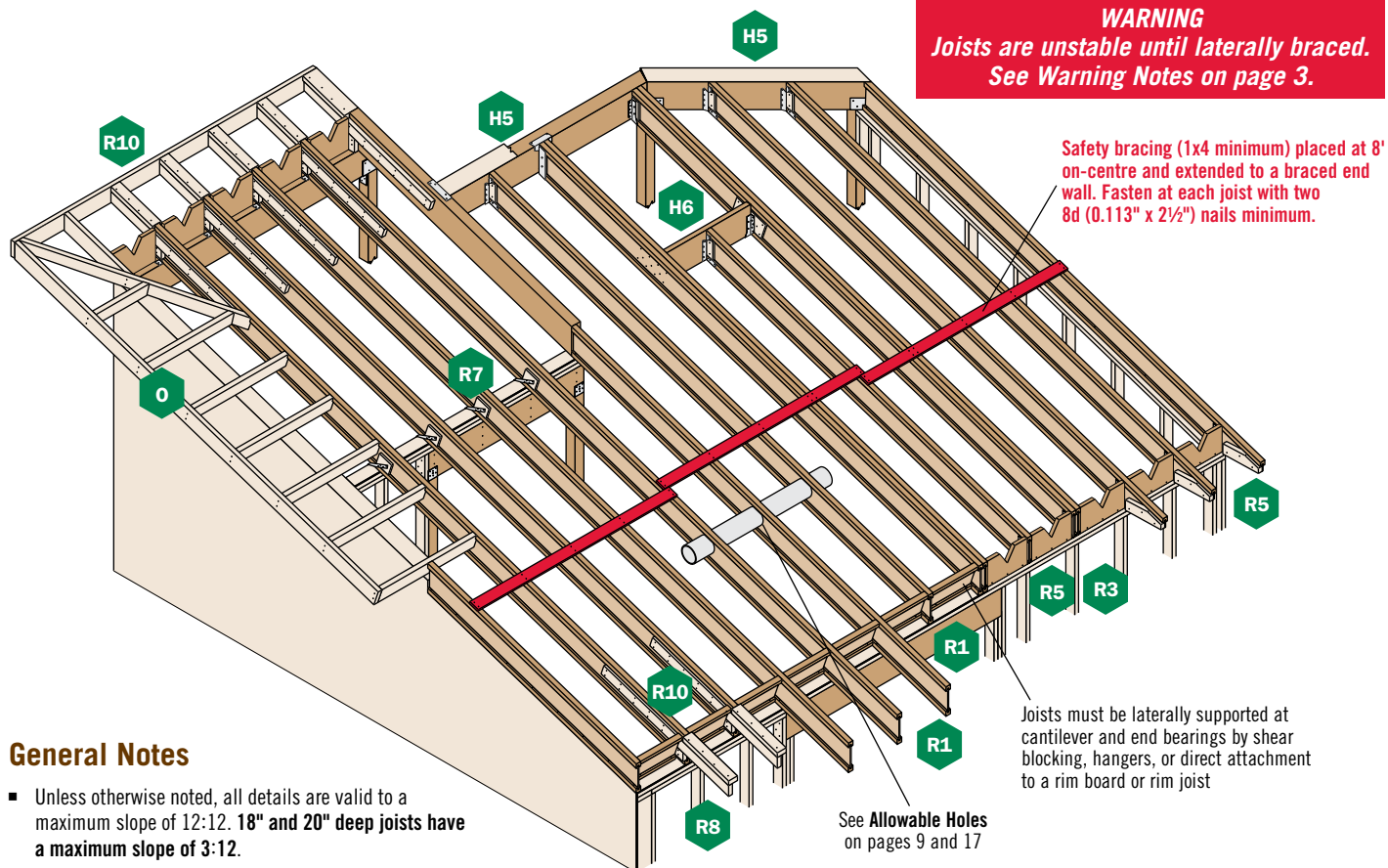
Vertical Load Transfer at Bearing

Depth	Factored Vertical Load Resistances (PLF)	
9½"–16"	TJI® rim joist or blocking	3,060
	1¼" TimberStrand® LSL rim board or blocking	6,730
	1½" TJI® Rim Board or blocking ⁽¹⁾	6,560
18" and 20"	TJI® rim joist or blocking	2,250
	1¼" TimberStrand® LSL rim board or blocking	5,460

- (1) 1½" TJI® Rim Board is allowed with joist depths ≤ 16" only.
 ▪ Loads may not be increased for duration of load.

Also see nailing requirements on page 22

WARNING
Joists are unstable until laterally braced.
See Warning Notes on page 3.



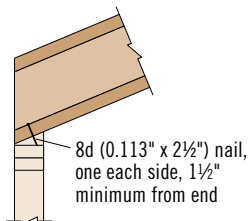
General Notes

- Unless otherwise noted, all details are valid to a maximum slope of 12:12. 18" and 20" deep joists have a maximum slope of 3:12.
- Web stiffeners are required if the sides of the hanger do not laterally support at least ⅓" of the TJI® joist top flange.

TJI® Joist Nailing Requirements at Bearing (Maximum slope for 18" and 20" joists is 3:12)

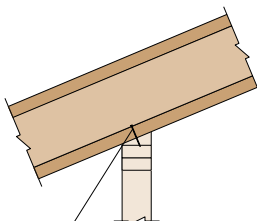
TJI® Joist to Bearing Plate

End Bearing (1¼" minimum bearing required)



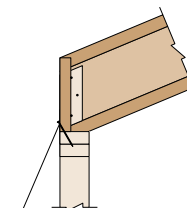
When slope exceeds ¼:12, a beveled bearing plate, variable slope seat connector, or birdsmouth cut (at low end of joist only) is required

Intermediate Bearing (3½" minimum bearing required)



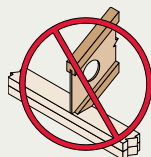
Slopes 3:12 or less:
One 8d (0.113" x 2½") nail each side. See detail R7.
Slopes greater than 3:12 (for depths ≤ 16" only):
Two 8d (0.113" x 2½") nails each side, plus a twist strap and backer block. See detail R7S.
When slope exceeds ¼:12 for a 2x4 wall or ⅛:12 for a 2x6 wall, a beveled bearing plate or variable slope seat connector is required.

Blocking to Bearing Plate

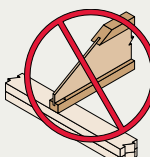


1½" TJ® Rim Board (with depths ≤ 16") or 1¼" TimberStrand® LSL:
Toenail with 10d (0.131" x 3") nails at 6" on-centre or 16d (0.135" x 3½") nails at 12" on-centre
TJI® joist blocking:
10d (0.128" x 3") nails at 6" on-centre
Shear transfer nailing:
Minimum, use connections equivalent to sheathing nail schedule

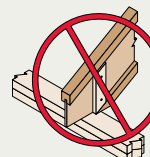
These Conditions Are NOT Permitted:



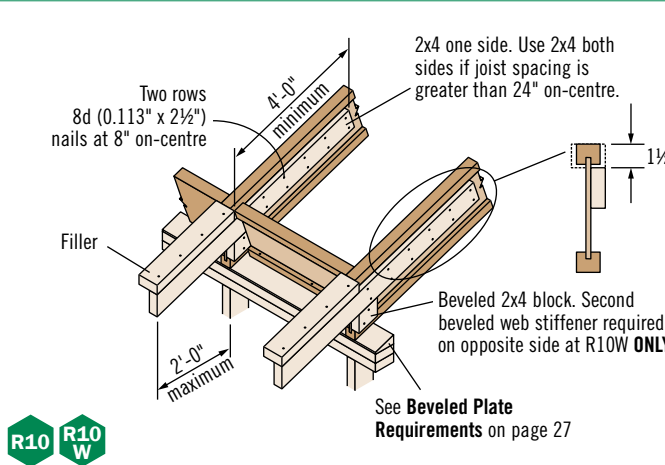
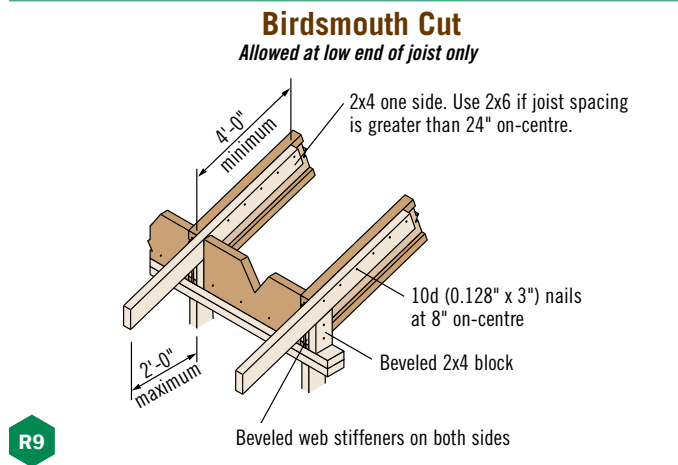
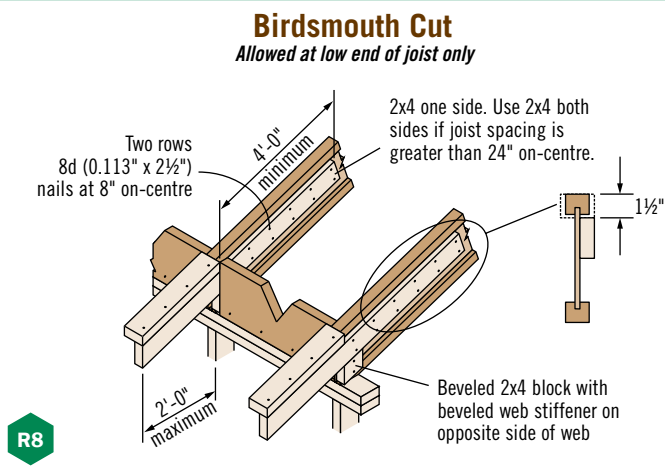
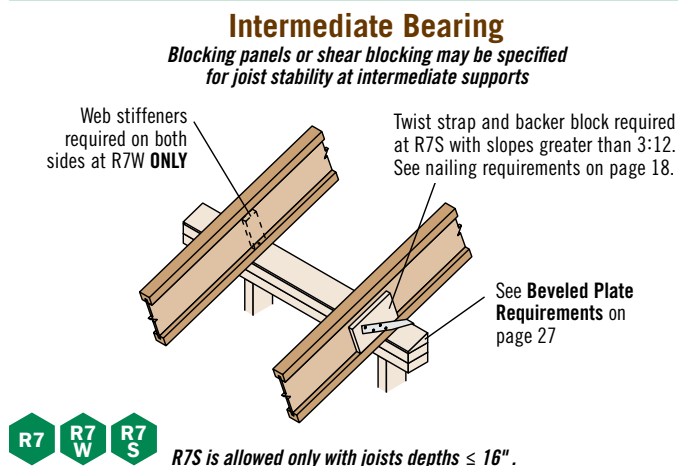
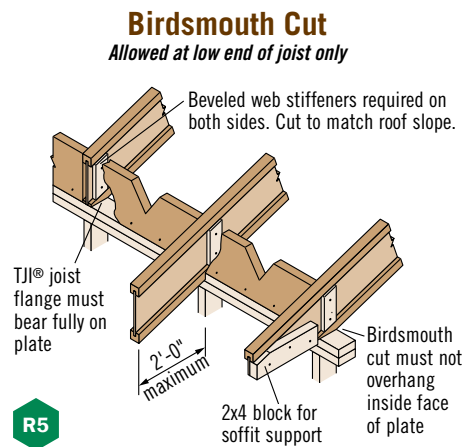
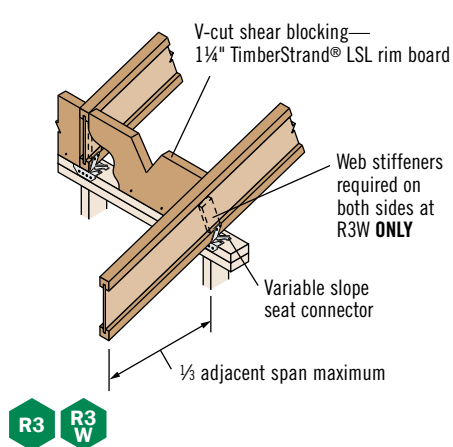
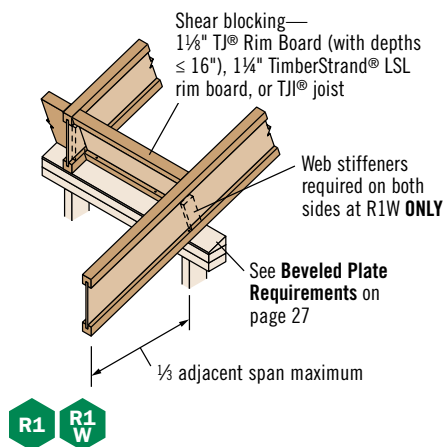
DO NOT cut holes too close to support.
Refer to Allowable Holes on pages 9 and 17 for minimum distance from support.



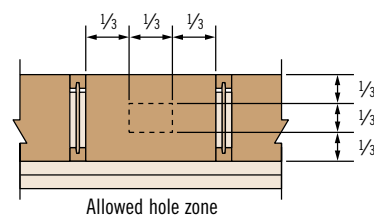
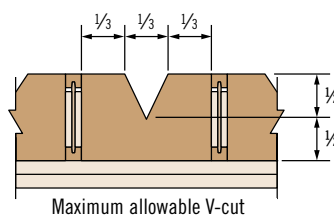
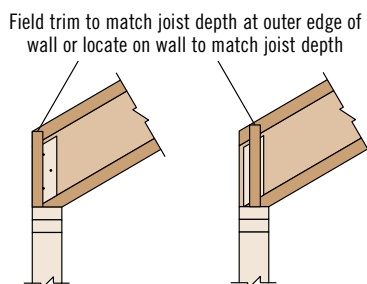
DO NOT bevel cut joist beyond inside face of wall.



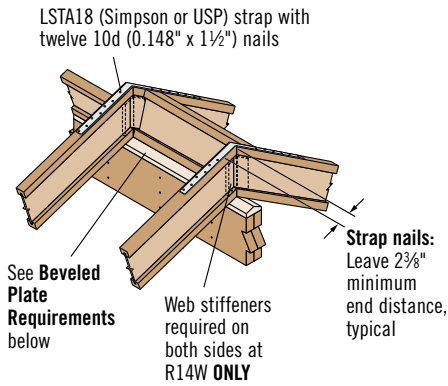
DO NOT overhang birdsmouth cut from inside face of plate.
TJI® joist flange must bear fully on the plate. See detail BC on page 27.



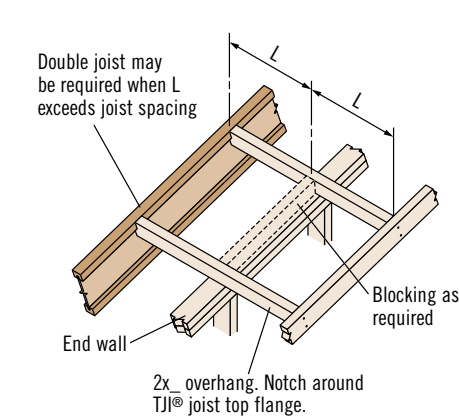
Shear Blocking and Ventilation Holes (Roof Only)



SB For TJL® joists with slopes of 10:12 to 12:12, the vertical depth of the shear blocking at bearing will require 1½" TJ® Rim Board or 1¼" TimberStrand® LSL that is one size deeper than the TJL® joist. DO NOT use 1½" TJ® Rim Board with 18"-20" TJL® joists.



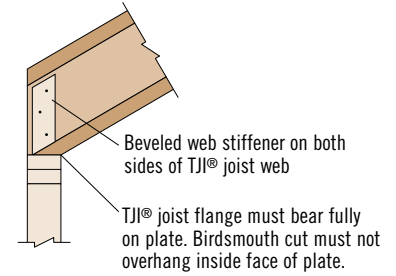
R14 W Additional blocking may be required for shear transfer



O

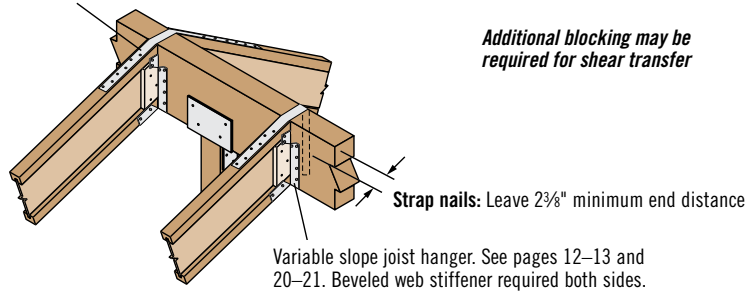
Birdsmouth Cut

Allowed at low end of joist only



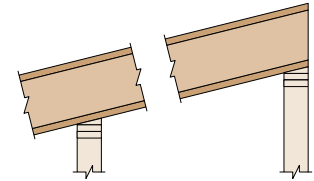
BC

LSTA24 (Simpson or USP) strap with twelve 10d (0.148" x 1½") nails required at H5S with slopes greater than 3:12

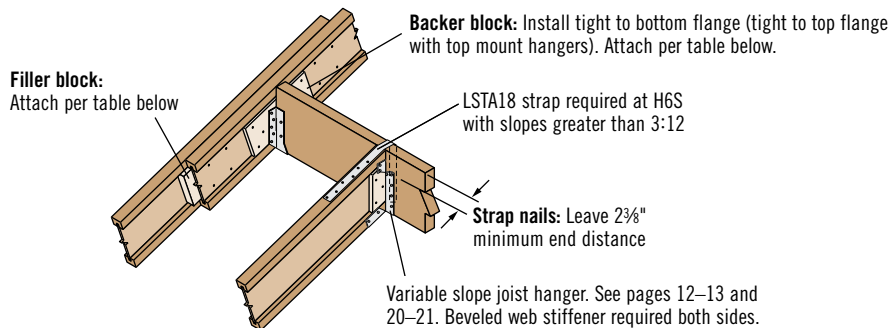


H5 H5S Detail H5S is allowed only with joists depths ≤ 16".

Beveled Plate Requirements



Required Bearing Length	Maximum Slope Without Beveled Plate
1¾"	½:12
3½"	¼:12
5½"	⅛:12



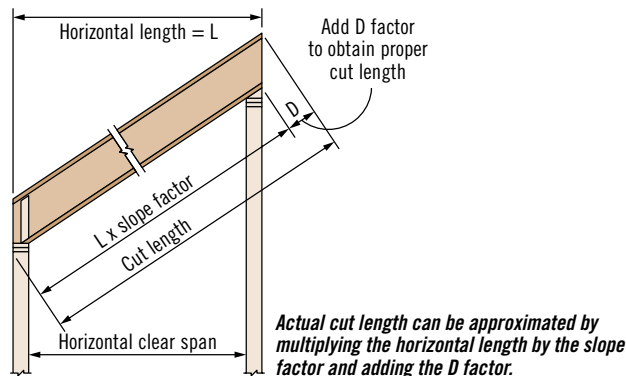
H6 H6S Detail H6S is allowed only with joists depths ≤ 16".

Filler and Backer Block Sizes

TJI®		110		210		230 or 360		360	560		
Depth		9½" or 11⅞"	14"	9½" or 11⅞"	14" or 16"	9½" or 11⅞"	14" or 16"	18" or 20"	9½" or 11⅞"	14" or 16"	18" or 20"
Filler Block ⁽¹⁾ (Detail H6)		2x6	2x8	2x6 + ⅜" sheathing	2x8 + ⅜" sheathing	2x6 + ½" sheathing	2x8 + ½" sheathing	2x12 + ½" sheathing	Two 2x6	Two 2x8	Two 2x12
Backer Block ⁽¹⁾ (Detail H6)		⅝" or ¾"		¾" or ⅞"		⅞" or 1" net			2x6	2x8	2x12
Nail Size	Filler	10d (0.128" x 3")							16d (0.135" x 3½")		16d (0.135" x 3½")
	Backer								10d (0.128" x 3")		10d (0.128" x 3")
Nail Quantity ⁽²⁾	Filler	10							15 one side	10 each side	15 each side
	Backer								15	10	15

- (1) If necessary, increase filler and backer block height for face mount hangers and maintain ⅛" gap at top of joist. See detail W. Filler and backer block dimensions should accommodate required nailing without splitting. The suggested minimum length is 24" for filler and 12" for backer blocks.
- (2) Clinch nails when possible.

Also see General Notes and nailing requirements on page 25.



D Factors

Depth	Slope															
	1:12	1½:12	2:12	2½:12	3:12	3½:12	4:12	4½:12	5:12	6:12	7:12	8:12	9:12	10:12	11:12	12:12
9½"	7/8"	1¼"	1½"	2"	2¾"	2⅞"	3¼"	3⅝"	4"	4¾"	5⅝"	6¾"	7⅞"	8"	8¾"	9½"
11⅞"	1"	1½"	2"	2½"	3"	3½"	4"	4½"	5"	6"	7"	8"	9"	10"	11"	11⅞"
14"	1¼"	1¾"	2⅝"	3"	3½"	4⅞"	4¾"	5¼"	5⅝"	6"	6¾"	8"	9¾"	10½"	11¾"	14"
16"	1⅝"	2"	2¾"	3⅝"	4"	4¾"	5⅝"	6"	6¾"	8"	9¾"	10¾"	12"	13¾"	14¾"	16"
18"	1½"	2¼"	3"	3¾"	4½"						N.A.					
20"	1⅝"	2½"	3⅝"	4⅞"	5"						N.A.					

Slope Factors

Slope	2½:12	3:12	3½:12	4:12	4½:12	5:12	6:12	7:12	8:12	9:12	10:12	11:12	12:12
Factor	1.021	1.031	1.042	1.054	1.068	1.083	1.118	1.158	1.202	1.250	1.302	1.357	1.414

MATERIAL WEIGHTS AND CONVERSION TABLES

Material Weights

(Include TJI® weights in dead load calculations—see **Design Properties** tables on pages 3 and 14 for joist weights)

Floor Panels

Southern Pine

½" plywood	1.7 psf
⅝" plywood	2.0 psf
¾" plywood	2.5 psf
1⅞" plywood	3.8 psf
½" OSB	1.8 psf
⅝" OSB	2.2 psf
¾" OSB	2.7 psf
⅞" OSB	3.1 psf
1⅞" OSB	4.1 psf

Based on: Southern pine — 40 pcf for plywood, 44 pcf for OSB

Roofing

Asphalt shingles	2.5 psf
Wood shingles	2.0 psf
Clay tile	9.0 to 14.0 psf
Slate (¾" thick)	15.0 psf

Roll or Batt Insulation (1" thick):

Rock wool	0.2 psf
Glass wool	0.1 psf

Floor Finishes

Hardwood (nominal 1")	4.0 psf
Sheet vinyl	0.5 psf
Carpet and pad	1.0 psf
¾" ceramic or quarry tile	10.0 psf

Concrete:

Regular (1")	12.0 psf
Lightweight (1")	8.0 to 10.0 psf
Gypsum concrete (¾")	6.5 psf

Ceilings

Acoustical fibre tile	1.0 psf
½" gypsum board	2.2 psf
⅝" gypsum board	2.8 psf
Plaster (1" thick)	8.0 psf

PSF to PLF

O.C. Spacing	Load in Pounds Per Square Foot (PSF)								
	20	25	30	35	40	45	50	55	60
Load in Pounds Per Linear Foot (PLF)									
12"	20	25	30	35	40	45	50	55	60
16"	27	34	40	47	54	60	67	74	80
19.2"	32	40	48	56	64	72	80	88	96
24"	40	50	60	70	80	90	100	110	120

Metric to Imperial

Metric Unit	Imperial Conversion
1 kN	0.2248 kip
1 N	0.2248 lb
1 m	3.281 ft
1 mm	0.0394 in.
1 kg	2.205 lb mass
1 N • m	0.7376 lb • ft
1 N • m	8.851 lb • in.
1 mm ⁴	2.402 x 10 ⁻⁶ in. ⁴
1 Pa	0.0209 lb/ft ²
1 kPa	0.1450 lb/in. ²

Imperial to Metric

Imperial Unit	Metric Conversion
1 kip	4.448 kN
1 lb	4.448 N
1 ft	0.3048 m
1 in.	25.40 mm
1 lb mass	0.4536 kg
1 lb • ft	1.356 N • m
1 lb • in.	0.1130 N • m
1 in. ⁴	0.4162 x 10 ⁶ mm ⁴
1 lb/ft ²	47.88 Pa
1 lb/in. ²	6.895 kPa

Fire-safe construction and life safety are major concerns for everyone in the building materials and construction industry. Statistics from the Council of Canadian Fire Marshals and Fire Commissioners (ccfmfc.ca/stats.html) show that in 2002, a total of 53,589 fires were reported, including 304 fire deaths, 2,547 fire injuries, and a total of nearly \$1.6 billion in property losses. These numbers underscore the seriousness of the issue and the need for fire-safe construction.

For over 40 years, prefabricated wood I-joists and other Weyerhaeuser building products have established a record of safe and reliable performance in millions of structures. Many of these structures, such as one- or two-family residential dwellings, do not require specific fire-resistance ratings per the building codes but may require unrated membrane protection. The information below is intended to help you specify and install Trus Joist® products with fire safety in mind.

Active Fire Suppression

Automatic fire sprinkler systems are commonly required by building codes in schools, office buildings, factories, and other commercial buildings. Buildings designed with sprinkler systems are allowed larger areas and greater heights than buildings designed without sprinkler systems.

Fire service agencies, such as the U.S. Fire Administration, promote the use of residential sprinkler systems, citing benefits such as lower overall cost of construction for the homebuilder, plus a safer environment and lower insurance rates for the homeowner. Using automatic fire sprinkler systems provides the following benefits:

- Early and unsupervised suppression
- Reduced fire and smoke development
- Potentially enhanced life safety for the occupant(s)

Passive Fire Protection

Independent tests show that when compared to protected systems, unprotected framing systems (whether combustible or non-combustible) suffer increased structural degradation when exposed to fire. All floor framing materials—sawn lumber, wood I-joists, trusses, and light-gauge steel—succumb quickly to fire if not protected. Applying a protective membrane, such as gypsum ceiling board, to all types of floor framing within the structure will provide uniform protection to the structural framing members. Passive fire-protection can do the following:

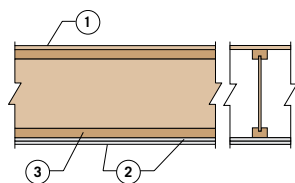
- Delay fire growth involving structural elements
- Reduce the potential for significant property damage to structural elements

Smoke Detectors

Smoke detectors are universally recognized as the most cost-effective life-saving devices. Although smoke detectors do not provide protection to the structure or to the contents in a home, they do alert occupants to potential fire hazards and allow them time to escape. Similarly, carbon monoxide detectors can also alert occupants to faulty heating appliances or air contamination in the early stages of a fire.

One-Hour Assembly for Rated Construction

Double Layer



1. 48/24 tongue-and-groove, span-rated sheathing (Exposure 1)
2. Two layers of 5/8" Type X gypsum board
3. TJI® joist

Optional when used with resilient channels (not shown): Minimum 3½"-thick glass fibre insulation or non-combustible insulation, rated R-30 or less.

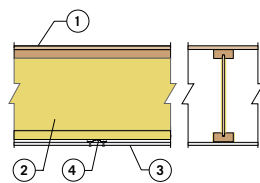
Note: Resilient channels (with optional insulation may be installed between the joists and gypsum board if improved STC and IIC sound ratings are desired.

Intertek listings:

WNR FCA 60-01 (no channels)

WNR FCA 60-03 (with channels)

Single Layer



1. 48/24 tongue-and-groove, span-rated sheathing (Exposure 1)
2. TJI® 210, 230, 360, or 560 joist with Flak Jacket™ protection and joist o.c. spacing of 16" or less. For wider spacing (up to 24" o.c.) use a minimum of 14" deep TJI® 230, 360, or 560 joists.
3. One layer of 5/8" Type C gypsum board
4. Resilient channels at 16" on-centre

Optional: Glass fibre insulation, 3½" thick in TJI® joist cavity, between TJI® joists above the bottom flange.

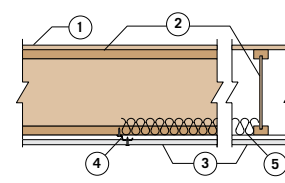
Note: Use 90% of the published TJI® joist bending moment capacity.

Weyerhaeuser Assembly FJ-1 (listed by PSF)

**FLAK
JACKET™
PROTECTION**

Suggested Minimum Membrane Protection for Unrated Construction

Single Layer



1. 48/24 tongue-and-groove, span-rated sheathing (Exposure 1)
2. TJI® joist
3. Single-layer of 1/2" unrated gypsum board
4. Resilient channels at 16" on-centre (optional)
5. **Optional when used with resilient channels:** Minimum 3½"-thick glass fibre insulation or non-combustible insulation that is rated R-30 or less

Where floor construction without membrane protection is permitted, TJI® joists with Flak Jacket™ protection can help provide enhanced fire resistance.

TJI® joists with Flak Jacket™ protection give you an effective one-hour-rated assembly suitable for multi-family construction — with only a single layer of gypsum ceiling and no need for mineral wool. This new solution can save you time, maximize labour, reduce costs and complexity, and enable faster, more efficient construction. TJI® joists with Flak Jacket™ protection are available in limited markets; contact your Weyerhaeuser representative for more information.

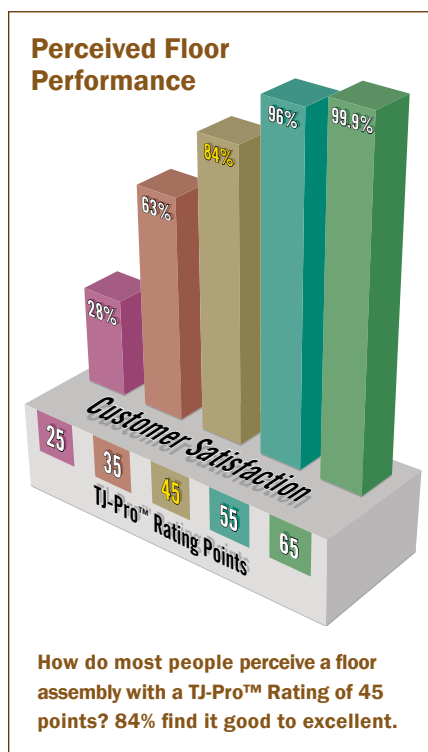
For more information on fire assemblies and fire-safe construction, please refer to the Weyerhaeuser Fire-Rated Assemblies and Sprinkler Systems Guide (Reorder #1500) or visit woodbywy.com.

It's About Choice

Trus Joist® TJ-Pro™ Ratings are generated by a sophisticated computer model designed to predict floor performance and evaluate the relationship between the cost and the “feel” of any given floor system. The methodology is based on extensive laboratory research, more than one million installations, and the combined expertise of some of the best engineers in the field. TJ-Pro™ Ratings go beyond deflection criteria to consider job-specific needs and expectations. In many cases, using TJ-Pro™ Ratings will offer a system that improves performance while actually reducing costs!

TJ-Pro™ Rating Advantages

- Works as part of Forte® and Javelin® software
- Provides a method for predicting floor performance
- Takes perceptions of the homeowner into account
- Provides cost comparison



Design Smarter—Don't Over-Specify

The traditional way to specify a floor system is to use live load deflection criteria, but deflection explains only part of how a floor performs. Depending upon factors unique to the structure and its use, the code minimum of L/360 (or even the more restrictive limits of L/480) may disappoint many customers.

TJ-Pro™ Ratings are a much better predictor of floor performance because they consider the many factors that affect floor performance, even taking into account the perceptions of the homeowner. With so many variables, you can deliver an economical solution tailored to your customer's expectations.

Factors That Affect Floor Performance

- TJI® joist series, depth, and spacing
- Deck thickness and quality
- Directly applied ceilings
- Location of partitions on floor
- Blocking
- Bearing conditions for the TJI® joists



TJ-Pro™ Ratings works as part of Forte® and Javelin® software

Get the Support You Need

We're here to help you make the most of TJ-Pro™ Ratings, whether it's help with setup, tips and tricks, or selecting the best rating for your project. Call your Weyerhaeuser representative today.



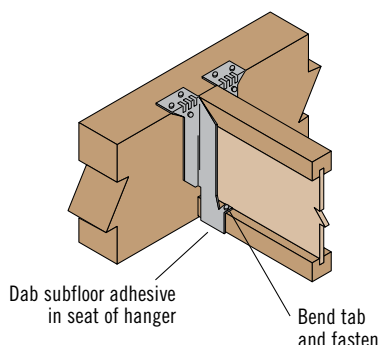
TJI® joists are structurally uniform and dimensionally stable, and they resist shrinking and twisting. This helps prevent gaps from forming around the nails between the joist and the floor panels—gaps that can potentially cause squeaks or other floor noise.

Using TJI® joists can help you build a quieter floor, but only if the entire floor system is installed properly. This is because other components of the floor system, such as hangers, connectors, and nails can be a source of floor noise.

To get the best possible performance out of your TJI® joists and minimize potential squeaks in your floor, we recommend the installation tips shown below.

NOTE: Weyerhaeuser recommends using solvent-based subfloor adhesives that meet ASTM D3498 (AFG-01) performance standards. When latex subfloor adhesive is required, careful selection is necessary due to a wide range of performance between brands.

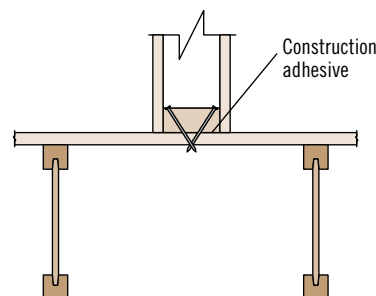
Properly Seat Each Joist in Hanger



Seat the joist tight to the bottom of the hanger. When using hangers with tabs, bend the flange tabs over and nail to the TJI® joist bottom flange.

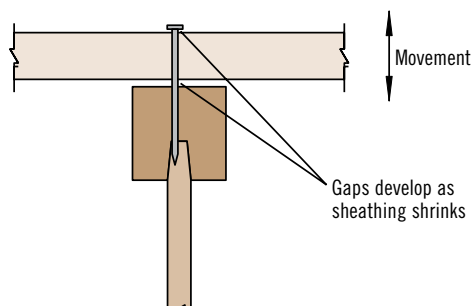
Placing a dab of subfloor adhesive in the seat of the hanger prior to installing the joist can reduce squeaks.

Use Adhesive and Special Nailing When Needed



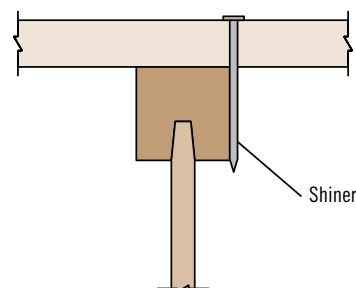
Nail interior partitions to the joists when possible. If the wall can be nailed only to the floor panel, run a bead of adhesive under the wall and either cross nail, nail through and clinch tight, or screw into the wall from below.

Prevent Shrinkage



Keep building materials dry, and properly glue floor panels to the joists. Panels that become excessively wet during construction shrink as they dry. This shrinkage may leave gaps that allow the panel to move when stepped on.

Avoid Shiners



Exercise care when nailing. Nails that barely hit the joists (shiners) do not hold the panel tight to the joist and should be removed. If left in, the nails will rub against the side of the joist when the panel deflects.

For more information and tips on how to prevent floor noise, refer to the Weyerhaeuser Prevention and Repair of Floor System Squeaks Technical Resource Sheet (Reorder #9009) or contact your Weyerhaeuser representative.

WE CAN HELP YOU BUILD SMARTER

You want to build solid and durable structures—we want to help. Weyerhaeuser provides high-quality building products and unparalleled technical and field assistance to support you and your project from start to finish.

Floors and Roofs: Start with the best framing components in the industry: our Trus Joist® TJI® joists; TimberStrand® LSL rim board; and TimberStrand® LSL, Microllam® LVL, and Parallam® PSL headers and beams. Pull them all together with our self-gapping and self-draining Weyerhaeuser Edge Gold™ floor panels and durable Weyerhaeuser roof sheathing.

Walls: Get the best value out of your framing package—use TimberStrand® LSL studs for tall walls, kitchens, and bathrooms, and our traditional, solid-sawn lumber everywhere else. Cut down installation time by using TimberStrand® LSL headers for doors and windows, and Weyerhaeuser wall sheathing with its handy two-way nail lines. Use our TJ® Shear Brace for extra support in walls with large openings or in high wind or seismic areas.

Software Solutions: Whether you are a design professional or lumber dealer, Weyerhaeuser offers an array of software packages to help you specify individual framing members, create cut lists, manage inventories—even help you design a complete structural frame. Contact your Weyerhaeuser representative to find out how to get the software you need.

Technical Support: Need technical help? Weyerhaeuser has one of the largest networks of engineers and sales representatives in the business. Call us for help, and a skilled member from our team of experts will answer your questions and work with you to develop solutions that meet all your structural framing needs.



Visit woodbywy.com/warranty for copies of this and other Trus Joist® Engineered Wood Product warranties.

CONTACT US

1.888.453.8358 • woodbywy.com/contact

Contact your local representative or dealer at: