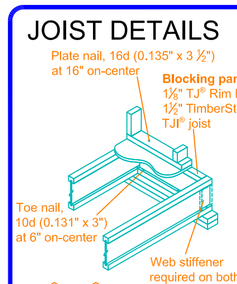
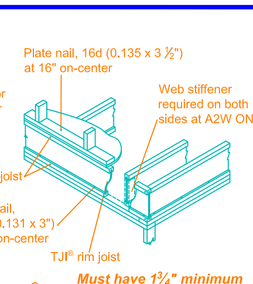
JOIST DETAILS



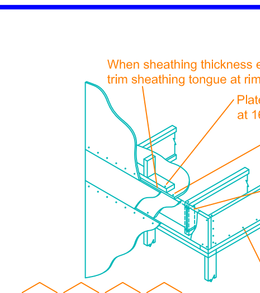
A1 A1W*



A2 A2W*

Must have 1¾" minimum joist bearing at ends. Attach rim joist per A3 detail.

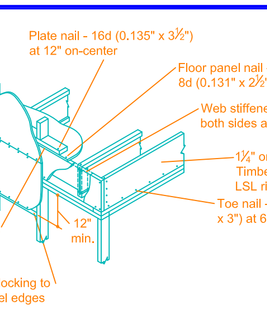
* For additional Installation specifications see Rim Board Details and Installation in *Weyerhaeuser Installation Guide for Floor and Roof Framing*, TJ-9001.



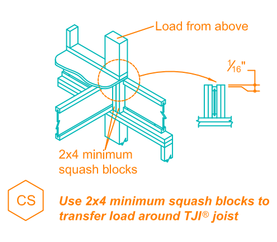
A3 A3.1 A3.2 A3.3*

A3W A3.1_W A3.2_W A3.3_W

* For additional installation specifications see Rim Board Details and Installation in *Weyerhaeuser Installation Guide for Floor and Roof Framing*, TJ-9001.

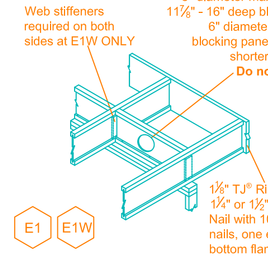


A3.4 A3.4_W*

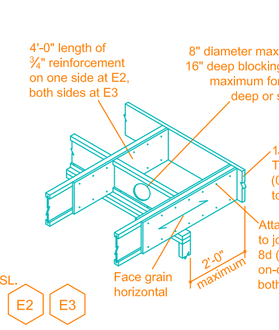


CS

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

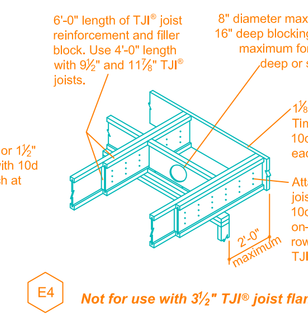


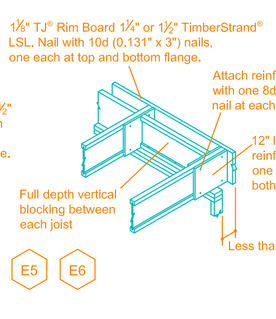
E1 E1W E2 E3



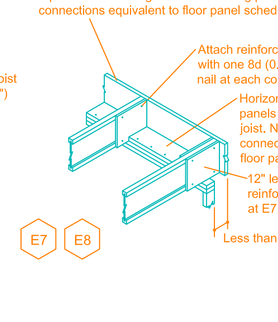
E4

Not for use with 3½" TJI® joist flange widths

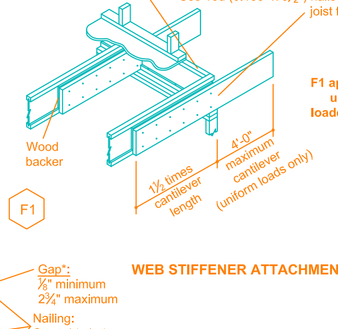




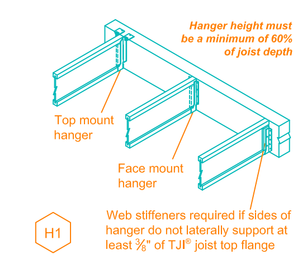
E5 E6



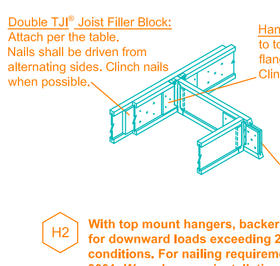
E7 E8



F1

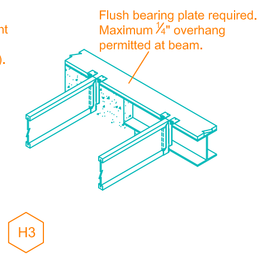


H1



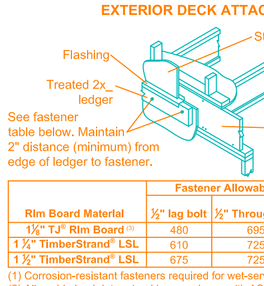
H2

With top mount hangers, backer block required only for downward loads exceeding 250 lbs or for uplift conditions. For nailing requirements see page 5, TJ - 9001, *Weyerhaeuser installation Guide for Floor and Roof Framing, TJ-9001.*



H3

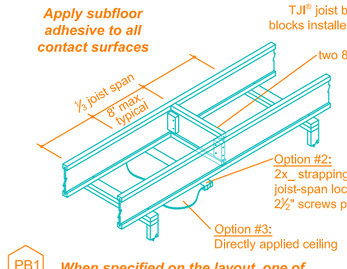
EXTERIOR DECK ATTACHMENT



Rim Board Material	Fastener Allowable Load[2] (lbs/bolt)		
	½" lag bolt	½" Through bolt	½" Through bolt with Air Space
1⅛" TJI® Rim Board [1]	480	695	615[3]
1 ¼" TimberStrand® LSL	610	725	
1 ½" TimberStrand® LSL	675	725	

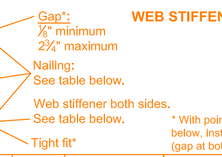
(1) Corrosion-resistant fasteners required for wet-service applications.
(2) Allowable load determined in accordance with ASTM D7672.
(3) ⅛" TJI® Rim Board is allowed with joist depths ≤ 16" only.
(4) Maximum ½" shimmed air space.

LA



PB1

When specified on the layout, one of the bracing options above is required



W

WEB STIFFENER ATTACHMENT

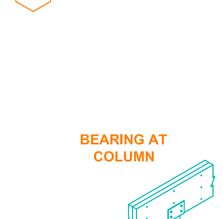
* With point load from above, and no support below, install web stiffener tight to top flange (gap at bottom flange)

TJI® Joist Series	Depth (in.)	Minimum Web Stiffener Size	Nailing Requirements		
			Type	Number Nails	
				End	Intermediate
110 210 230 & 360	All All All	⅞" x 2⅝"[4] ⅞" x 2⅝"[4] ⅞" x 2⅞"[4]	8d (0.113" x 2½")	3	3
560	All	2x4 [2]	16d (0.135" x 3½")	4	4
560D	18" 20" 22"[4] 24"[4]	2x4 [2]	16d (0.135" x 3½")	4 5 6 6	5 6 11 13

(1) PS1 or PS2 sheathing, face grain vertical
(2) Construction grade or better
(3) Web stiffeners are always required for 22" and 24" TJI® 560D Joists

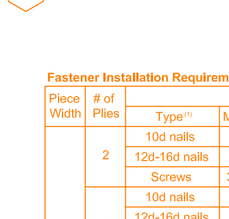
BEAM DETAILS

BEARING AT WALL



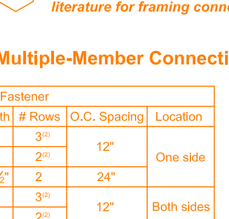
L1

BEARING FOR DOOR OR WINDOW HEADER



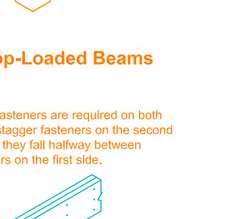
L2

BEAM TO BEAM CONNECTION



L3 ***See current Weyerhaeuser literature for framing connectors***

BEARING AT CONCRETE WALL



L4

BEARING AT COLUMN

L5 **Verify column capacity and beam bearing length. See current Weyerhaeuser literature.**

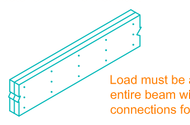
Multiple-Member Connections for Top-Loaded Beams

Fastener Installation Requirements

Piece Width	# of Plies	Fastener Type[1]	Min. Length	# Rows	O.C. Spacing	Location
1¼"	2	10d nails	3"	3[3]	12"	One side
		12d-16d nails	3 ¼"	2[3]		
		Screws	3½" or 3½"	2	24"	
	3	10d nails	3"	3[3]	12"	Both sides
		12d-16d nails	3 ¼"	2[3]		
		Screws	3½" or 3½"	2	24"	Both sides
			5"			One side
	4	10d nails[3]	3"	3[3]	12"	One side (per ply)
		12d-16d nails[3]	3 ¼"	2[3]		
		Screws	5" or 6"	2	24"	Both sides
			6 ¾"			One side
3½"	2	Screws	5" or 6"	2	24"	Both sides
			6 ¾"			One side
		½" bolts	8"	2	24"	-

(1) 10d nails are 0.128" diameter; 12d-16d nails are 0.148" - 0.162" diameter; screws are SDS, SDW, USP WS, or TrussLOK ®
(2) An additional row of nails is required with depths of 14" or greater.
(3) When connecting 4-ply members, nail each ply to the other and offset nail rows by 2" from the rows in the ply below.

When fasteners are required on both sides, stagger fasteners on the second side so they fall halfway between fasteners on the first side.

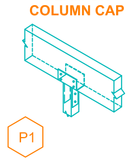


Load must be applied evenly across entire beam width. Otherwise, use connections for side-loaded beams.

L6 Multiple pieces can be nailed or bolted together to form a header or beam of the required size, up to a maximum width of 7"

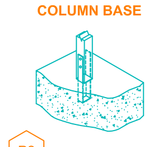
COLUMN DETAILS

BEAM ON COLUMN CAP



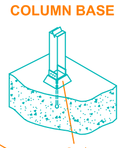
P1

COLUMN BASE



P2

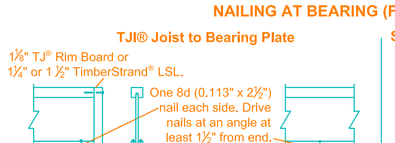
ELEVATED COLUMN BASE



P3

NAILING AT BEARING (FLOOR)

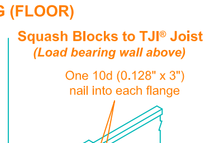
TJI® Joist to Bearing Plate



Shear transfer: Connections equivalent to floor panel nailing schedule

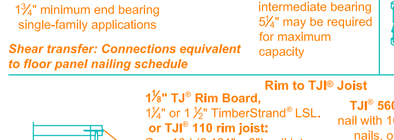
Squash Blocks to TJI® Joist

(Load bearing wall above)



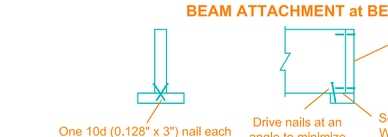
Also see detail B2

Rim to TJI® Joist



Locate rim board joint between joists.

BEAM ATTACHMENT at BEARING



INSTALLATION TIPS

- Subfloor adhesive will improve floor performance, but may not be required.
- Squash blocks and blocking panels carry stacked vertical loads (details B1 and B2). Packing out the web of a TJI® joist (with web stiffeners) is not a substitute for squash blocks or blocking panels.
- When joists are doubled at non-load bearing parallel partitions, space joists apart the width of the wall for plumbing or HVAC.
- Additional joist at plumbing drop (see detail).

FASTENING of FLOOR PANELS

Guidelines for Closest On-Center Spacing per Row

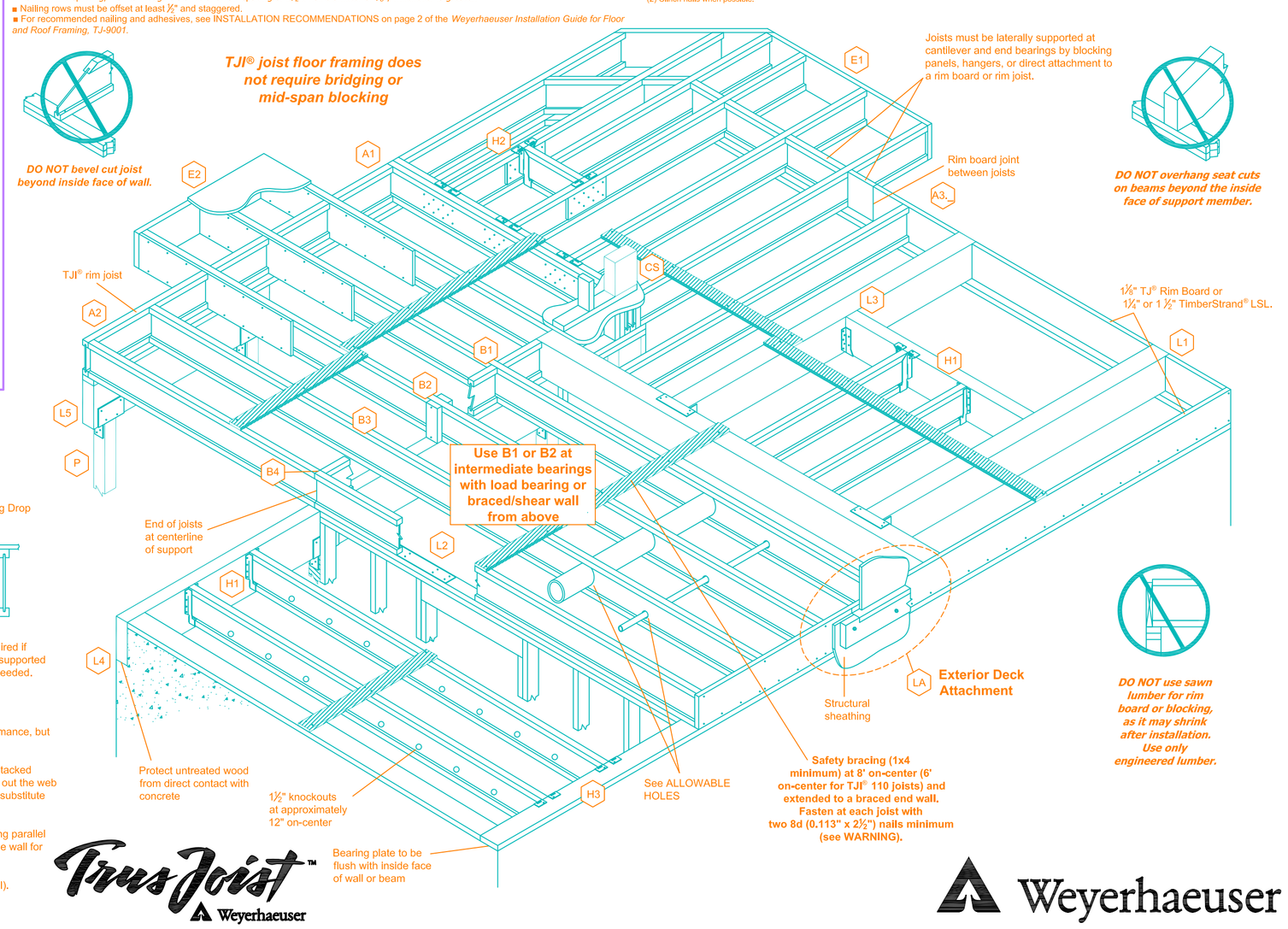
Nail Size	TJI®(1)(2)		Rim Board			1½" TimberStrand® LSL or wider	Microllam® LVL	Parallam® PSL
	110, 210, and 230	360 and 560	1⅛" TJI® Rim Board	1¼" TimberStrand® LSL	1½" TimberStrand® LSL			
8d (0.113" x 2½"), 8d (0.131" x 2½")	4"	3"	6"	4"	3"	3"	4"	4"
10d (0.148" x 3"), 12d (0.148"x 3¼")	4"(3)	4"(3)	6"	4"	3"	3"	5"	4"
16d (0.162"x 3½")	6"	6"	16"(4)	6"(3)	6"(3)	6"(4)	8"(4)	6"

(1) Stagger nails when using 4" on-center spacing and maintain ¾" joist and panel edge distance. One row of fasteners is permitted (two at abutting panel edges) for diaphragms. Fastener spacing for TJI® joists in diaphragm applications cannot be less than shown in table. When fastener spacing for blocking is less than spacing shown above, rectangular blocking must be used in lieu of TJI® joists.
(2) For non-diaphragm applications, multiple rows of fasteners are permitted if the rows are offset at least ½" and staggered.
(3) With 10d (0.148" x 1½") nails, spacing can be reduced to 3" on-center for light gauge steel straps.
(4) Can be reduced to 5" on-center if nail penetration into the narrow edge is no more than 1½" (to minimize splitting).
(5) Can be reduced to 4" on-center if nail penetration into the narrow edge is no more than 1½" (to minimize splitting).
(6) Can be reduced to 3½" on-center if nail penetration into the narrow edge is no more than 1½" (to minimize splitting).
■ Recommended nailing is 12" on-center in field and 6" on-center along panel edge. Fastening requirements on engineered drawings supersede recommendations listed above.
■ Maximum nail spacing for TJI® joists is 18" on-center.
■ 14 ga. staples may be substituted for 8d (0.113" x 2½") nails if minimum penetration of 1" into the TJI® joist or rim board is achieved.
■ To minimize splitting, maintain edge distance and row spacing of 2½ x nail diameter or ⅜", whichever is greater.
■ Nailing rows must be offset at least ½" and staggered.
■ For recommended nailing and adhesives, see INSTALLATION RECOMMENDATIONS on page 2 of the *Weyerhaeuser Installation Guide for Floor and Roof Framing, TJ-9001.*

FILLER and BACKER BLOCK SIZES

TJI® Joists		110	210	230 or 360	360	560		560D
Depth		9½"-11¼"	14"-16"	9½"-11¼"	14"-16"	18"-20"	11⅞"	14"-16"	18"-20"	22"-24"
Filler Block (1) (Detail H2)		2x6	2x8	2x6 + ½" sheathing	2x8 + ½" sheathing	2x8 + ½" sheathing	2x12 + ½" sheathing	Two 2x6	Two 2x8	Four ½" x 15" sheathing
Cantilever Filler (Detail E4)		2x6 4'-0" long	2x10 6'-0" long	2x6 + ½" sheathing 4'-0" long	2x10 + ½" 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)		⅜" or ½"		½" or ⅝"		⅝" or 1" Net		2x6	2x8	2x12	Two ½" x 15" sheathing
Nail Size	Filler	(0.131" x 3")						(0.131" x 3 ½")			
	Backer							(0.131" x 3")			
Nail Quantity(2)	Filler	15						32		50	
	Backer							15		15	

(1) If necessary, increase filler and backer block height for face mount hangers and maintain ¼" gap at top of joist; see detail W. Filler and backer block dimensions should accomodate required nailing without splitting (12" minimum for backer blocks and 24" minimum for filler blocks).
(2) Clinch nails when possible.



A1 A2 A3 B1 B2 CS E1 E2 H1 H2 L1 L2 L3 L4 L5 P

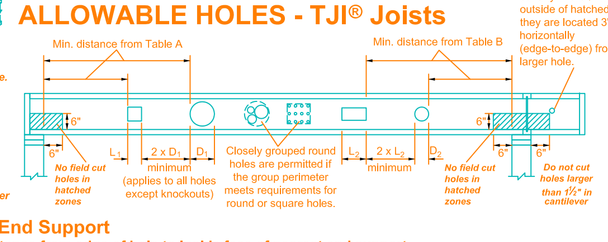
TrusJoist™ Weyerhaeuser

Weyerhaeuser

ALLOWABLE HOLES - TJI® Joists

DO NOT cut or notch flange.

DO NOT cut holes in cantilever reinforcement.



½" round holes may be cut anywhere in web outside of hatched zone if they are located 3" away horizontally (edge-to-edge) from a larger hole.

Table A - End Support

Minimum distance from edge of hole to inside face of nearest end support

JOIST DEPTH	TJI®	ROUND HOLE SIZE							SQUARE OR RECTANGULAR HOLE SIZE						
		2"	3"	4"	5"	6½"	7"	8½"	11"	13"	2"	3"	4"	5"	6½"	7"	8½"	11"	13"
9½"	110	1'-0"	1'-0"	2'-0"	3'-0"	5'-0"					1'-0"	1'-0"	2'-0"	3'-0"	4'-6"				
	210	1'-0"	1'-0"	2'-0"	3'-0"	5'-0"					1'-0"	1'-0"	2'-0"	3'-0"	5'-0"				
	230	1'-0"	1'-0"	2'-0"	3'-0"	5'-0"					1'-0"	1'-0"	2'-0"	3'-0"	5'-0"				
	360	1'-0"	2'-0"	3'-0"	4'-0"	6'-0"					1'-0"	2'-0"	3'-0"	5'-0"	6'-0"				
	560	1'-0"	2'-0"	3'-0"	4'-0"	6'-0"					1'-0"	2'-0"	3'-0"	4'-0"	6'-0"				
11⅞"	110	1'-0"	1'-0"	1'-0"	2'-0"	3'-0"	5'-0"				1'-0"	1'-0"	2'-0"	3'-0"	5'-0"	6'-0"			
	210	1'-0"	1'-0"	1'-0"	2'-0"	3'-0"	5'-0"				1'-0"	1'-0"	2'-0"	3'-0"	5'-0"	6'-6"			
	230	1'-0"	1'-0"	1'-0"	2'-0"	3'-0"	5'-0"				1'-0"	1'-0"	2'-0"	3'-0"	5'-0"	6'-6"			
	360	1'-0"	1'-0"	2'-0"	2'-0"	3'-6"	6'-0"				1'-0"	1'-0"	2'-0"	3'-6"	5'-0"	7'-0"			
	560	1'-0"	2'-0"	3'-0"	4'-0"	5'-6"	8'-0"				2'-0"	3'-6"	4'-6"	5'-6"	7'-0"	7'-6"	8'-6"		
14"	110	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	3'-0"	5'-6"			1'-0"	1'-0"	1'-0"	2'-0"	3'-0"	5'-0"	6'-0"	8'-6"	
	210	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	2'-6"	3'-6"	6'-0"		1'-0"	1'-0"	2'-0"	2'-0"	3'-0"	4'-0"	6'-6"	8'-6"	
	230	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	2'-6"	3'-6"	6'-0"		1'-0"	1'-0"	2'-0"	2'-0"	3'-0"	4'-0"	6'-6"	8'-6"	
	360	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	3'-0"	4'-0"	7'-0"		1'-0"	1'-0"	2'-0"	3'-0"	4'-0"	5'-0"	6'-6"	8'-6"	9'-0"
	560	1'-0"	1'-0"	2'-0"	3'-0"	4'-0"	5'-6"	8'-0"			1'-0"	1'-0"	2'-0"	3'-0"	4'-0"	5'-0"	7'-0"	9'-0"	10'-0"
16"	110	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	3'-0"	5'-0"		1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	2'-0"	3'-0"	5'-0"	
	210	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	2'-6"	4'-0"	6'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	2'-0"	3'-0"	4'-0"	6'-0"
	230	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	2'-6"	4'-0"	6'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	2'-0"	3'-0"	4'-0"	6'-0"
	360	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	3'-0"	5'-0"	7'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	2'-0"	3'-0"	5'-0"	7'-0"
	560	1'-0"	1'-0"	1'-0"	2'-0"	3'-0"	4'-0"	6'-0"	7'-0"	10'-0"	1'-0"	1'-0"	2'-0"	3'-0"	4'-0"	4'-0"	6'-0"	7'-0"	9'-0"

		4"	6"	7"	8"	10"	12"	14½"	16½"		4"	6"	7"	8"	10"	12"	14½"	16½"
18"	360	1'-0"	1'-0"	1'-0"	2'-0"	4'-0"	5'-6"	9'-6"			1'-0"	3'-0"	4'-6"	6'-0"	10'-0"	11'-0"	13'-6"	
	560	1'-0"	1'-0"	1'-0"	2'-0"	4'-0"	5'-6"	10'-0"			2'-0"	5'-0"	6'-6"	8'-0"	11'-0"	12'-0"	14'-6"	
20"	360	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	4'-0"	7'-0"	10'-0"		1'-0"	1'-6"	3'-0"	4'-6"	8'-0"	11'-0"	13'-6"	15'-6"
	560	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	4'-0"	8'-0"	11'-0"		1'-0"	3'-6"	5'-0"	7'-0"	10'-0"	13'-0"	14'-6"	16'-6"

Table B - Intermediate or Cantilever Support

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

JOIST DEPTH	TJI®	ROUND HOLE SIZE									SQUARE OR RECTANGULAR HOLE SIZE								
		2"	3"	4"	5"	6½"	7"	8½"	11"	13"	2"	3"	4"	5"	6½"	7"	8½"	11"	13"
9½"	110	2'-0"	2'-0"	3'-6"	5'-6"	7'-6"					1'-6"	2'-0"	3'-6"	5'-6"	6'-6"				
	210	2'-0"	2'-0"	3'-6"	5'-0"	8'-0"					2'-0"	3'-0"	4'-0"	4'-0"	6'-0"	7'-6"			
	230	2'-0"	2'-0"	3'-6"	5'-0"	8'-0"					2'-0"	3'-0"	4'-0"	4'-0"	6'-0"	7'-6"			
	360	3'-0"	4'-0"	5'-6"	6'-6"	9'-0"					3'-0"	4'-6"	5'-6"	7'-0"	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'-0"	2'-6"	4'-6"	6'-6"				1'-0"	1'-0"	2'-6"	4'-6"	7'-0"	7'-6"	9'-6"		
	210	1'-0"	1'-0"	2'-6"	3'-0"	4'-6"	9'-0"				1'-0"	2'-0"	3'-0"	4'-6"	8'-0"	8'-0"	10'-0"		
	230	1'-0"	1'-0"	2'-6"	3'-0"	4'-6"	9'-0"				1'-0"	2'-0"	3'-0"	4'-6"	8'-0"	10'-0"	12'-0"		
	360	1'-0"	2'-0"	3'-0"	4'-6"	7'-6"	11'-0"				2'-0"	3'-6"	4'-6"	6'-0"	9'-6"	9'-6"	11'-0"		
	560	1'-6"	3'-0"	4'-6"	6'-6"	8'-0"	12'-0"				3'-0"	4'-6"	6'-0"	8'-0"	10'-0"	11'-0"	12'-0"		
14"	110	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	4'-6"	8'-6"			1'-0"	1'-0"	1'-0"	2'-0"	4'-0"	6'-0"	8'-0"	10'-0"	
	210	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	3'-0"	5'-0"	9'-6"		1'-0"	1'-0"	2'-0"	3'-0"	4'-0"	5'-0"	6'-0"	9'-6"	10'-0"
	230	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	3'-0"	5'-0"	9'-6"		1'-0"	1'-0"	2'-0"	3'-0"	4'-0"	5'-0"	6'-0"	9'-6"	10'-0"
	360	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	3'-0"	5'-0"	8'-6"	12'-6"	1'-0"	1'-0"	2'-0"	3'-0"	4'-0"	5'-0"	6'-0"	10'-0"	12'-6"
	560	1'-0"	1'-0"	1'-0"	2'-0"	3'-0"	5'-0"	8'-6"	12'-6"	15'-6"	1'-0"	1'-0"	2'-0"	3'-0"	5'-0"	6'-0"	7'-0"	10'-0"	12'-6"
16"	110	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'-0"	2'-0"	3'-0"	6'-0"	10'-0"	13'-0"
	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'-0"	2'-0"	3'-0"	6'-0"	10'-0"	13'-0"
	230	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'-0"	2'-0"	3'-0"	6'-0"	10'-0"	13'-0"
	360	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'-0"	2'-0"	3'-0"	6'-0"	10'-0"	13'-0"
	560	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	3'-6"	6'-0"	10'-0"	13'-6"	1'-0"	1'-0"	1'-0"	2'-0"	3'-0"	4'-0"	6'-0"	10'-0"	13'-6"

		4"	6"	7"	8"	10"	12"	14½"	16½"		4"	6"	7"	8"	10"	12"	14½"	16½"
18"	360	1'-0"	1'-0"	1'-0"	3'-0"	6'-0"	9'-0"	14'-6"			1'-0"	4'-0"	6'-6"	9'-0"	14'-6"	16'-6"	19'-0"	
	560	1'-0"	1'-0"	1'-0"	3'-0"	6'-0"	9'-0"	15'-0"			1'-0"	6'-0"	8'-6"	11'-6"	16'-0"	18'-0"	19'-6"	
20"	360	1'-0"	1'-0"	1'-0"	1'-0"	3'-0"	6'-0"	11'-0"	15'-0"		1'-0"	1'-6"	4'-0"	7'-0"	12'-6"	16'-0"	19'-