COASTAL

ENGINEERED WOOD SOLUTIONS

Quality Products & Design Assistance You Can Build On

8th Edition 4/23

TECHNICAL DATA GUIDE

NORDIC® I-JOIST | NORBORD® RIM BOARD | TRIFORCE® OPEN JOISTS | CP-LAM LVL | PWT TREATED™ LVL

ANTHONY® BEAMS & COLUMNS | PWT FRAMING LUMBER | SIMPSON® ENGINEERED CONNECTORS

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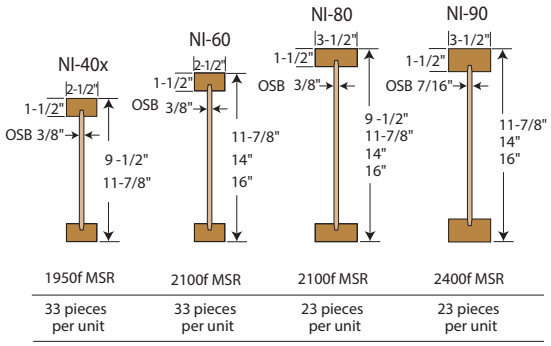
COASTAL

ENGINEERED WOOD PRODUCTS TABLE OF CONTENTS

SOLID-SAWN JOIST
DESIGN PROPERTIES

Chantiers Chibougamau Ltd. harvests its own trees, which enables Nordic products to adhere to strict quality control procedures throughout the manufacturing process. Every phase of the operation, from forest to the finished product, reflects our commitment to quality

Nordic® Engineered Wood I-joists use only finger-jointed black spruce lumber in their flanges ensuring consistent quality, superior strength, and longer span carrying capacity.



DESIGN PROPERTIES FOR NORDIC® I-JOISTS

(a) (b)

JOIST DEPTH	JOIST SERIES	EI (c) (10^6 lbf-in.^{2})	M (d) (lbf-ft)	V (e) (lbf)	IR (f) (l bf)	IR w/WS (g) (l bf)	ER (h) (lbf)	K (i) (10^6 lbf)	WEIGHT (lbf/ft)
9-1/2"	NI-40x	218	2,900	1,200	2,240	2,620	1,120	4.94	2.65
	NI-80	324	5,385	1,200	2,380	2,790	1,190	4.94	3.27
11-7/8"	NI-40x	371	3,760	1,480	2,750	2,930	1,250	6.18	2.85
	NI-60	396	4,935	1,480	2,750	2,930	1,250	6.18	2.99
	NI-80	547	6,980	1,480	2,900	3,120	1,330	6.18	3.45
	NI-90	601	8,780	1,925	3,670	3,670	1,400	6.18	3.45
14"	NI-60	584	5,945	1,730	2,750	3,240	1,250	7.28	3.15
	NI-80	802	8,405	1,730	3,310	3,840	1,330	7.28	3.75
	NI-90	877	10,570	2,125	3,820	3,820	1,690	7.28	3.75
16"	NI-60	799	6,895	1,970	2,750	3,240	1,250	8.32	3.46
	NI-80	1,092	9,745	1,970	3,310	3,840	1,330	8.32	3.95
	NI-90	1,187	12,260	2,330	3,930	3,930	1,875	8.32	3.95

Highlighted sizes indicates stocked depths.

For SI: 1 lbf = 4.448 N, 1 lbf -in2 = 0 .00287 N-m2, 1 inch = 25.4 mm.

(a) The tabulated values are design values for normal duration of load. All values, except for EI and K, are permitted to be adjusted for other load durations as permitted by the code for solid sawn lumber.

(b) The vertical (bearing) load capacity is 2,000 lb/ft without bearing stiffeners.

(c) Bending stiffness (EI) of the I-joist.

(d) Moment capacity (M) of the I-joist, which shall not be increased by any code allowed repetitive member use factor.

(e) Shear capacity (V) of the I-joist.

(f) Intermediate reaction (IR) of the I-joist with a minimum bearing length of 3-1/2 inches without bearing stiffeners.

(g) Intermediate reaction (IR w/WS) of the I-joist with a minimum bearing length of 3-1/2 inches with bearing stiffeners.

(h) End reaction (ER) of the I-joist with a minimum bearing length of 1-3/4 inches without bearing stiffeners. Higher end reactions are permitted. For a bearing length of 4 inches, the end reaction may be set equal to the tabulated shear value. Interpolation of the end reaction between 1-3/4 and 4-inch bearing is permitted. For end reaction values over 1,550 lbf, bearing stiffeners are required.

(i) Coefficient of shear deflection (K). For calculating uniform load and center-point load deflections of the I-joist in a simple-span application, use Eqs. 1 and 2.

Uniform Load: $$\delta = \frac{5\,\omega \ell^4}{384\,EI} + \frac{\omega \ell^2}{K} \quad (1)$$

Center-Point Load: $$\delta = \frac{P\ell^3}{48\,EI} + \frac{2P\ell}{K} \quad (2)$$

Where:

δ= calculated deflection (in.)
ω = uniform load (lbf/in.)
ℓ = design span (in.)

P = concentrated load (lbf)
EI = bending stiffness of the I-joist (lbf-in.2)
K = coefficient of shear deflection (lbf)

SOLID-SAWN JOIST
ALLOWABLE FLOOR SPANS

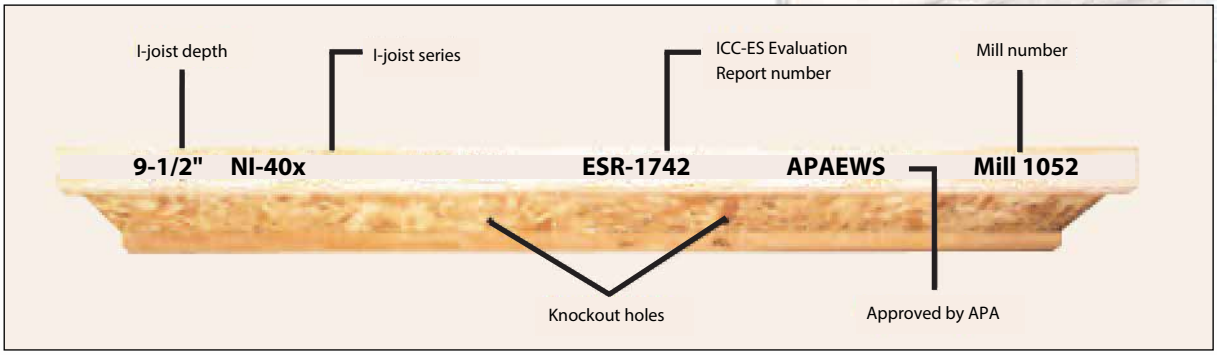
ALLOWABLE FLOOR SPANS — Live Load = 40 psf, Dead Load = 10 psf
Live Load Deflection Limit of L/480

JOIST DEPTH	JOIST SERIES	SIMPLE SPANS ON CENTER SPACING				MULTIPLE SPANS ON CENTER SPACING			
		12"	16"	19.2"	24"	12″	16″	19.2″	24″
9-1/2"	NI-40x	18'-8"	17'-0"	16'-1"	15'-0"	20'-4"	18'-5"	16'-10"	15'-0"
	NI-80	20'-11"	19'-1"	18'-0"	16'-9"	22'-9"	20'-9"	19'-6"	18'-2"
11-7/8"	NI-40x	22'-2"	20'-3"	19'-2"	17'-2"	24'-2"	21'-0"	19'-2"	17'-1"
	NI-60	22'-8"	20'-8"	19'-6"	18'-2"	24'-8"	22'-6"	21'-2"	19'-8"
	NI-80	24'-11"	22'-8"	21'-4"	19'-11"	27'-1"	24'-8"	23'-3"	21'-7"
	NI-90	25'-7"	23'-3"	21'-11"	20'-5"	27'-10"	25'-4"	23'-10"	22'-2"
14"	NI-60	25'-9"	23'-6"	22'-2"	20'-8"	28'-0"	25'-7"	24'-1"	21'-7"
	NI-80	28'-3"	25'-9"	24'-3"	22'-7"	30'-10"	28'-0"	26'-5"	24'-6"
	NI-90	29'-0"	26'-5"	24'-10"	23'-1"	31'-7"	28'-9"	27'-1"	25'-2"
16"	NI-60	28'-6"	26'-0"	24'-7"	22'-10"	31'-1"	28'-4"	26'-0"	21'-9"
	NI-80	31'-4"	28'-6"	26'-10"	25'-0"	34'-2"	31'-1"	29'-3"	26'-3"
	NI-90	32'-1"	29'-3"	27'-6″	25'-7"	35'-0"	31'-10"	29'-11"	27'-10"

Highlighted sizes indicates stocked depths.

NOTES:

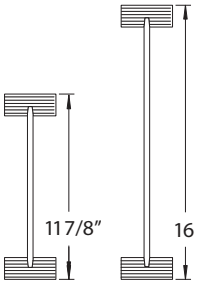
1. Allowable clear span applicable to residential floor construction with a design live load of 40 psf and dead load of 10 psf. The live load deflection is limited to L/480 as shown, and the total load deflection to L/360. For multiple-span applications, the end spans shall be 40% or more of the adjacent span.
2. Spans are based on a composite floor with glued-nailed sheathing meeting the requirements for APA Rated Sheathing or APA Rated STURD-I-FLOOR conforming to PRP-108, PS 1, or PS 2 with a minimum thickness of 19/32 inch (40/20 or 20 o.c.) for a joist spacing of 19.2 inches or less, or 23/32 inch (48/24 or 24 o.c.) for a joist spacing of 24 inches. Adhesive shall meet APA Specification AFG-01 or ASTM D3498.
3. Minimum bearing length shall be 1-3/4 inches for the end bearings, and 3-1/2 inches for the intermediate bearings.
4. Bearing stiffeners are not required when I-joists are used with the spans and spacing given in these tables, except as required for hangers.
5. These span charts are based on uniform loads. For applications with other than uniformly distributed loads, an engineering analysis may be required based on the use of the design properties.
6. For ceramic tile applications, spacings greater than 16" o.c. are typically not recommended.



CPI-90 JOIST
DIMENSIONS & SPANS

IN STOCK

CPI-PRO JOIST DIMENSIONS – LVL



7/16" OSB Web
3-1/2" x 1-1/2" Flange

	I-Joist Depth	Coastal Code	APA Code	EI [4] (X10^{6}lb-in^2)	M[5] (ft-lb)	V[6] (lb)	IR[7] (lb)	ER[8] (lb)	K[9] (X10^{6}lb)
CPI-90	11-7/8"	CPI 9012	PRI-90	661	10255	1925	3355	1400	6.92
	16"	CPI 9016	PRI-90	1306	14020	2330	3355	1400	9.35

Highlighted sizes indicates stocked depths.

1. The tabulated design properties are for normal duration of load. All properties, except EI and k , may be adjusted for other load durations as permitted by the code.
2. PRI-90 joist series designation. Design properties meet or exceed the requirements of the PRI-90 Performance Standard for APA EWS I-joist.
3. Coastal Forest Products Corporation proprietary joist series designation.
4. Bending stiffness (EI)
5. Moment capacity (M). The tabulated values shall not be increased by any code-allowed repetitive member factor.
6. Shear capacity (V).
7. Intermediate reaction capacity (iR) of the immediate I-joist without web stiffeners and a minimum bearing length of 3-1/2 inches.
8. End reaction capacity (ER) of the I-joist without web stiffeners and a minimum bearing length of 1-3/4 inches.
9. Coefficient of shear deflection (k). Use equations 1 or 2 to calculate uniform load or center point load deflections in a simple-span application.

Uniform Load:

$$(1)\ \delta = 5\frac{\omega \ell^4}{384\,EI} + \frac{\omega \ell^2}{K}$$

Center-Point Load:

$$(2)\ \delta = \frac{P\ell^3}{48\,EI} + \frac{2P\ell}{K}$$

Where: δ= calculated deflection (in.)
ω = uniform load (lbf/in.)
ℓ = design span (in.)
P = concentrated load (lbf)
EI = bending stiffness of the CPI-joist (lbf-in.2)
K = coefficient of shear deflection (lbf)

10. 2x4 web stiffeners required. Attach with 10 nails (3-1/2" long x 0.131" diameter)
11. 2x4 web stiffeners required. Attach with 8 nails (3-1/2" long x 0.131" diameter)

	Allowable Floor Spans								
		Simple Spans				Multiple Spans			
CPI Joist Series	**CPI Joist Depth**	**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.**
CPI-90	11-7/8"	26' - 4"	23' - 11"	22' - 7"	21' - 0"	28' - 8"	26' - 1"	24'- 6"	22' - 9"
	16"	33' - 0"	30' - 1"	28' - 4"	26' - 4"	36' - 0"	32' - 9"	30' - 10"	26' - 7"

Highlighted sizes indicates stocked depths.

Notes:

1. Table values apply to uniformly loaded CPI joists.
   Use sizing software to analyze conditions outside of the scope of this table such as commercial floors, cantilevers or concealed loads.
2. Span is measured from face to face of supports. Use beam sizing software to analyze multiple span CPI joists if the length of any span is less than half the length of an adjacent span.
3. Live Load deflection is limited to L/480.
4. Table values assume sheathing is glued and nailed to the CPI joists. Reduce spans by 12" if sheathing is nailed only.
5. Table values are based on 1-3/4" end and 3-1/2" intermediate bearing lengths without web stiffeners.

NORDIC® I-JOIST
UNIFORM LOADS

ALLOWABLE UNIFORM FLOOR LOADS (PLF) – 100%

Joist Depth	Joist Series	Criteria	Clear span (ft)											
			8	10	12	14	16	18	20	22	24	26	28	30
9-1/2"	NI-40x	Live load (L/480)	–	–	116	76	52	37	28	21	16	13	10	–
		Total load (L/240	233	187	155	114	88	69	56	42	33	26	21	17
	NI-80	Live load (L/480)	–	–	–	108	75	54	40	30	24	19	15	12
		Total load (L/240	233	187	157	135	118	105	81	61	48	38	30	25
11-7/8"	NI-40x	Live load (L/480)	–	–	189	125	87	62	46	35	27	22	17	14
		Total load (L/240	288	231	193	148	114	90	73	60	51	43	35	29
	NI-60	Live load (L/480)	–	–	–	132	96	66	49	37	29	23	18	15
		Total load (L/240	288	231	193	166	146	118	96	75	59	46	37	30
	NI-80	Live load (L/480)	–	–	–	–	122	88	66	51	39	31	25	21
		Total load (L/240	288	231	193	166	146	129	117	102	79	63	51	42
	NI-90	Live load (L/480)	–	–	–	187	132	96	72	55	43	34	28	23
		Total load (L/240	326	262	219	188	165	147	132	111	87	69	56	46
14"	NI-60	Live load (L/480)	–	–	–	–	132	96	71	54	42	34	27	22
		Total load (L/240	305	245	205	176	154	137	116	96	81	68	55	45
	NI-80	Live load (L/480)	–	–	–	–	–	126	95	73	57	45	37	30
		Total load (L/240	324	260	218	187	164	146	131	119	109	91	74	61
	NI-90	Live load (L/480)	–	–	–	–	–	136	102	79	62	49	40	33
		Total load (L/240	326	262	219	188	165	147	132	120	110	99	80	66
16"	NI-60	Live load (L/480)	–	–	–	–	–	128	96	74	57	46	37	30
		Total load (L/240	317	255	213	183	161	143	129	111	94	80	69	60
	NI-80	Live load (L/480)	–	–	–	–	–	–	126	97	76	61	49	41
		Total load (L/240	354	284	238	204	179	159	144	131	120	111	97	82
	NI-90	Live load (L/480)	–	–	–	–	–	–	135	105	82	66	53	44
		Total load (L/240	354	284	238	204	179	159	144	131	120	111	103	88

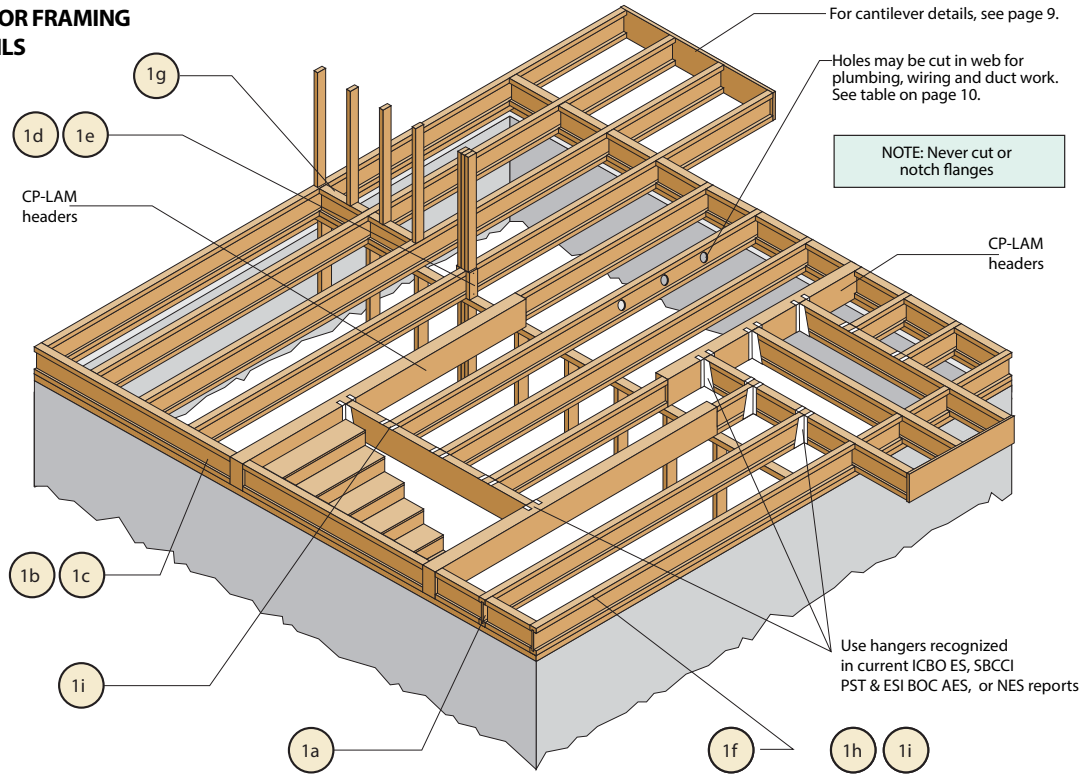
Notes:

1. The tabulated values may be used for simple or multiple spans.
2. For multiple-span applications, the end spans shall be 40% or more of the adjacent span.
3. I-joist shall satisfy both live load and total load. Where the live load is blank, the total load governs the design.
4. I-joist shall be laterally supported at points of bearing and along all compression edges.
5. Minimum bearing length shall be 1-3/4 inch for end bearings and 3-1/2 inches for intermediate bearings.
6. Bearing stiffeners are not required when I-joist are used in accordance with this table, excepts as required for hangers.
7. The tabulated values take into account a live load deflection limit of L/480 and a total load deflection limit L/240. Final design shall include a complete analysis including the verification of the bending moment and shear capacities.
8. For a live load deflection limit of L/360, multiply live load values by 1.33
9. For double joists, double the table values and nail joist together per detail 1p.

I-JOIST
FLOOR FRAMING & CONSTRUCTION DETAILS

COMMON CPI/N I JOIST FLOOR FRAMING AND CONSTRUCTION DETAILS

Some framing requirements such as erection bracing and blocking panels have been omitted for clarity.



WEB STIFFENER REQUIREMENTS

Web stiffeners are pairs of small blocks, typically cut from wood structural panels, that are nailed to the joist web to stiffen a deep web, increase reaction capacity or accommodate a special connector. Web stiffeners are not required when joists are sized by means of the tables included in this guide, with the following exceptions:

1. Web stiffeners are required at the ends of joists set in hangers that are not deep enough to laterally support the top flanges of the joists. Refer to the hanger manufacturer's installation instructions.
2. Web stiffeners are required to accommodate special connector nailing requirements. Refer to the connector manufacturer's installation instructions.
3. Web stiffeners are required at birdsmouth cuts at the low end supports of sloped joists.
4. Web stiffeners are required at all supports on 22 and 24 inch joists.

When joists are sized by means of sizing software, or otherwise engineered for an application, web stiffeners are required as follows:

1. Web stiffeners are required for high reactions at supports. Refer to ICC-ES ESR-1225.
2. Web stiffeners are required under concentrated loads applied to the tops of joists between supports, or along cantilevers beyond the support, when the concentrated load exceeds 1500 pounds.

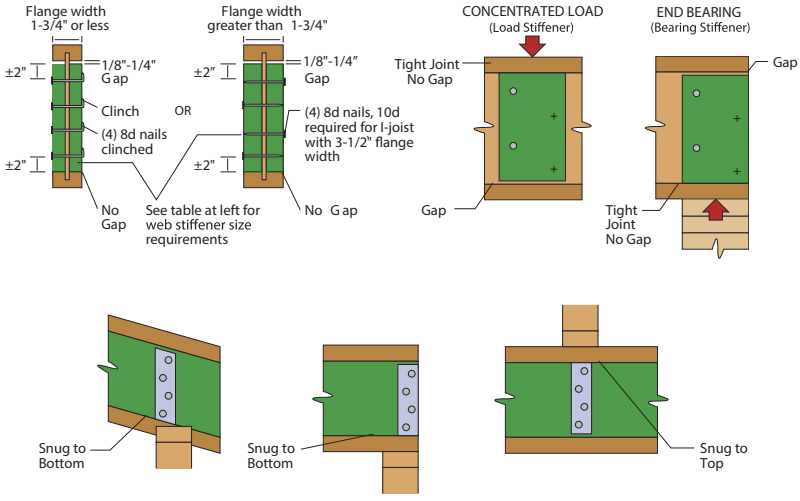
FIGURE B
WEBB STIFFENER REQUIREMENTS

NUMBER OF WEB STIFFENER NAILS REQUIRED			
Joist Depth	24" & 22"	20" & 18"	16" & less
Intermediate Support	10	8	4
All Other Conditions	8	6	4

WEB STIFFENER SIZE REQUIRED

Series	Flange Width	Minimum Dimensions		
		Web Stiffeners		Nails
		Thickness	Width	
N I-40X	2-1/2"	1"	2-5/16"	2-1/2" x 0.131"
N I-60	2-1/2"	1"	2-1/2"	2-1/2" x 0.131"
N I-80	3-1/2"	1-1/2"	3-1/2"	3-1/2" x 0.131"
NI/CPI-90	3-1/2"	1-1/2"	3-1/2"	3-1/2" x 0.131"

Web stiffener length is approximately 1/8" less than the clear distance between flanges.

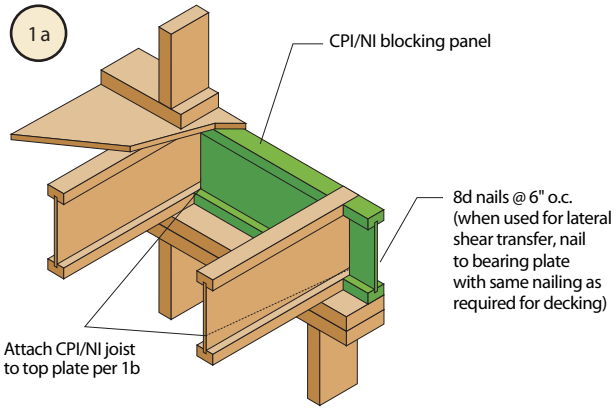


I-JOIST
FLOOR FRAMING & DETAILS

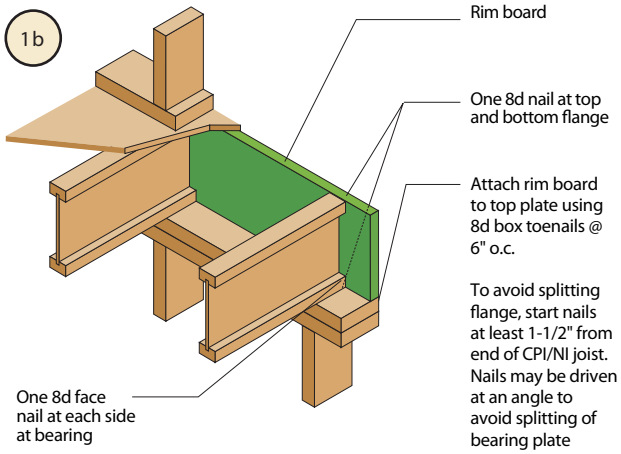
TYPICAL CPI/NI JOIST FLOOR FRAMING AND CONSTRUCTION DETAILS

All nails shown in the details below are assumed to be common nails unless otherwise noted. 10d box nails may be substituted for 8d common shown in details. Individual components not shown to scale for clarity.

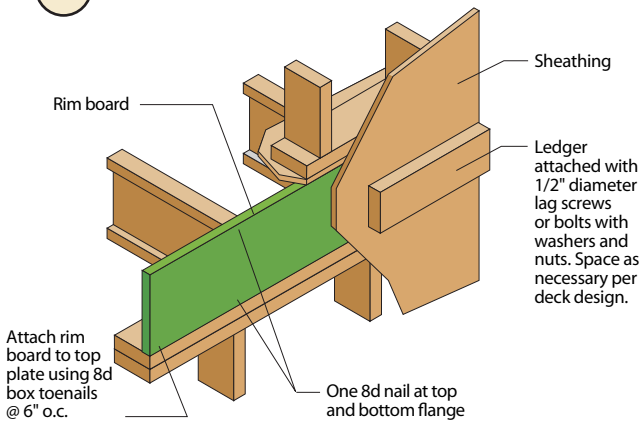
1a



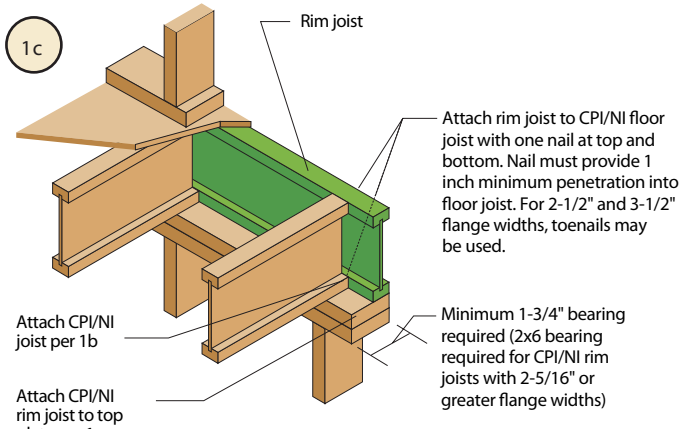
1b



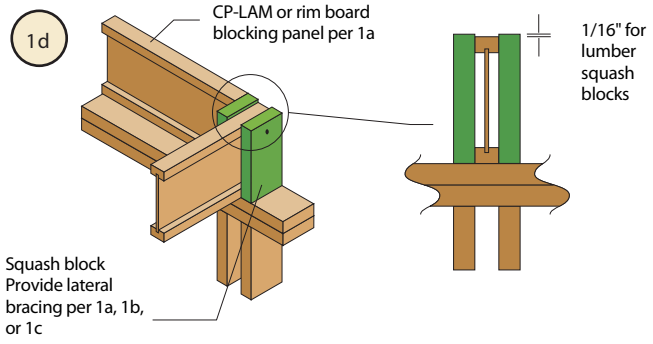
1b ALTERNATE



1c



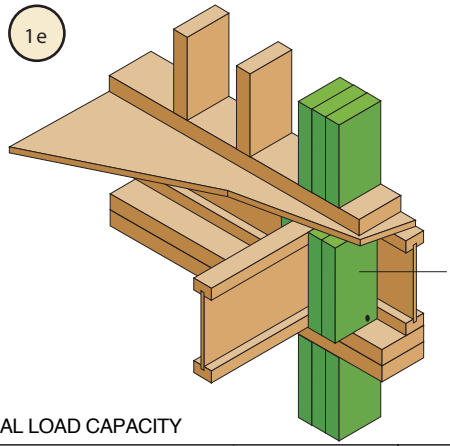
1d



Vertical load transfer per pair of squash blocks as shown:

Pair of Squash Blocks	(lb)
2 x 4	4000
1-1/8" Rim Board	3000
1" Rim Board	2700

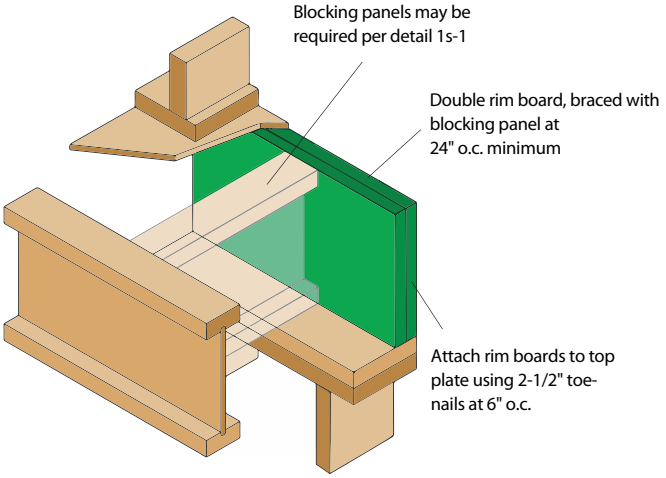
1e



VERTICAL LOAD CAPACITY

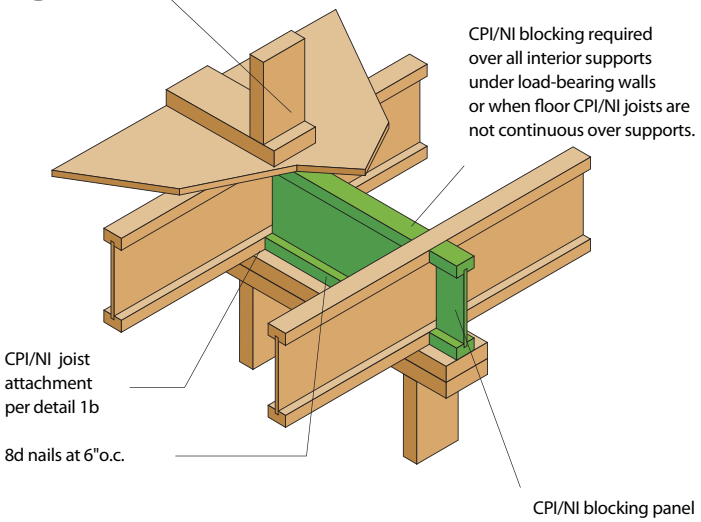
Product (depths = 16")	Thickness	Vertical Load Capacity
Rim Joist / Blocking Panel	3/8" Web	2000 plf
	7/16" Web	2850 plf
APA Rim Board	1-1/8"	4400 plf

1f-5



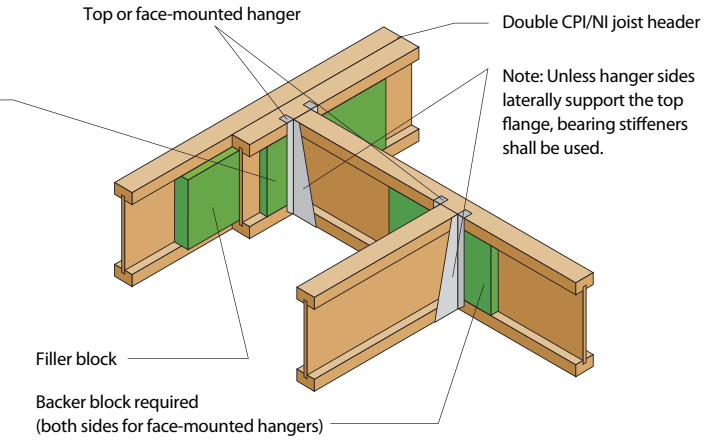
1g

Load bearing wall above shall align vertically with the wall below. Other conditions such as offset walls are not covered by this detail.



1h

Backer block (use if hanger load exceeds 250 lbs.) Before installing a backer block to a double CPI/NI joist, drive 3 additional 10d nails through the webs and filler block where the backer block will fit. Clinch. install backer tight to top flange. Use twelve 10d nails, clinched when possible. Maximum capacity for hanger for this detail = 1280 lb.



BACKER BLOCKS

(Blocks must be long enough to permit required nailing without splitting.)

Flange Width	Material Thickness Required*	Minimum Depth**
1-1/2"	19/32"	5-1/2"
1-3/4"	23/32"	5-1/2"
2-5/16"	1"	7-1/4"
2-1/2"	1"	5-1/2
3-1/2"	1-1/2"	7-1/4"

* Minimum grade for backer block material shall be Utility grade SPF (south) or better for solid sawn lumber and Rated Sheathing grade for wood structural panels.

** For face-mount hangers use net CPI/NI joist depth minus 3-1/4" for joists with 1-1/2" thick flanges. For 1-5/16" thick flanges use depth minus 2-7/8".

For hanger capacity see hanger manufacturer's recommendations. Verify double CPI/NI joist capacity to support concentrated loads.

CPI/NI BLOCKING PANELS

CPI/NI blocking panels prevent CPI/NI floor joists from overturning and transfer loads through the floor system into the structure below.

Due to difference in depth and possible shrinkage, common framing lumber set on edge is unacceptable as blocking. CPI/NI blocking panels must be cut to the proper length to between the CPI/NI joists, and their depth must match the depth of the joists.

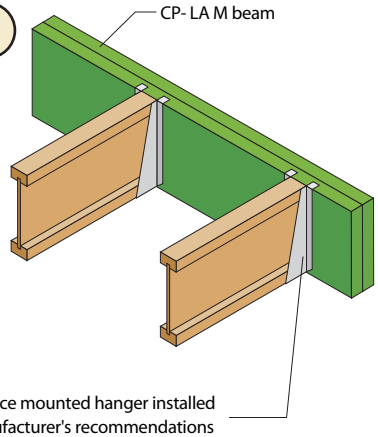
CPI/NI blocking panels may be used:

1. To stabilize CPI/NI joists laterally at supports, as shown in Figures 1a and 1g. Lateral support is required during installation and is necessary to obtain design carrying capacity.
2. To transmit vertical loads up to 2,000 plf per CPI/NI blocking panel in accordance with Figures 1a, 1c, 1f, and 1g.
3. For closures such as that shown in Figures 1a and 1e.
4. To transmit lateral forces to shear walls. Shear transfer nailing into the flanges must be specified by the building designer.
5. To provide lateral stability to walls.

Notes:

18" up to 20" available for order

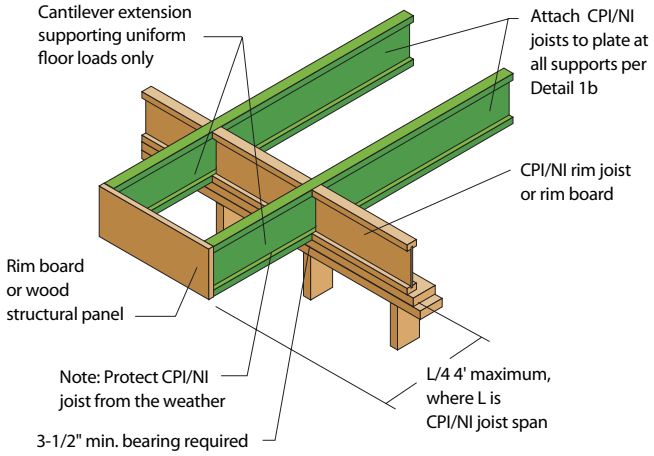
1i



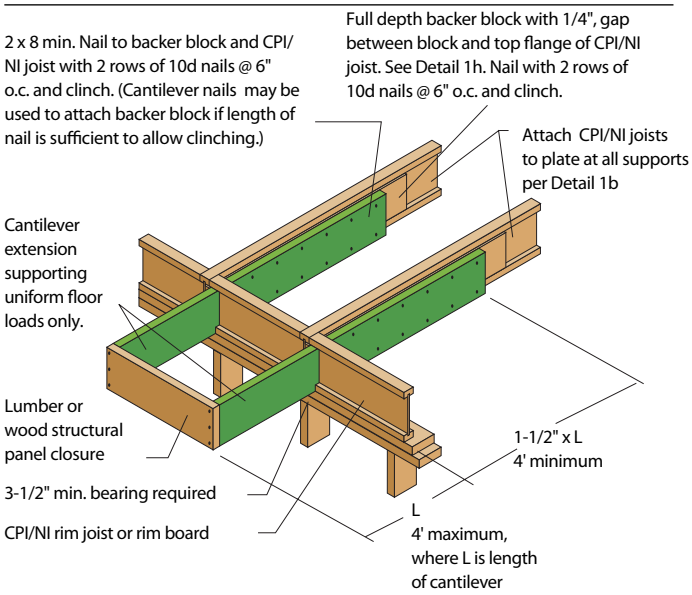
Note: Unless hanger sides laterally support the top flange, web stiffeners shall be used. (See Figure B on page 7)

I-JOIST
CANTILEVER DETAILS

CPI/NI JOIST CANTILEVER DETAIL FOR INTERIOR BALCONIES

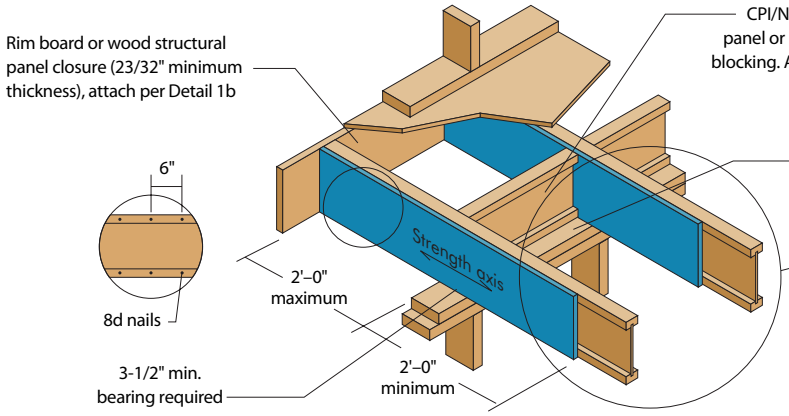


CANTILEVER DETAIL FOR EXTERIOR BALCONIES



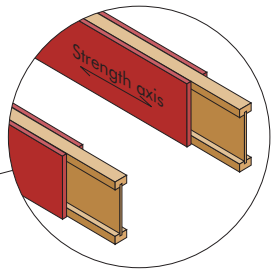
CANTILEVER DETAIL FOR VERTICAL BUILDING OFFSET

Method 1
SHEATHING REINFORCEMENT ONE SIDE



Method 2
SHEATHING REINFORCEMENT TWO SIDES

Use same installation as Method 1 but reinforce both sides of CPI/NI joist with sheathing or rim board.

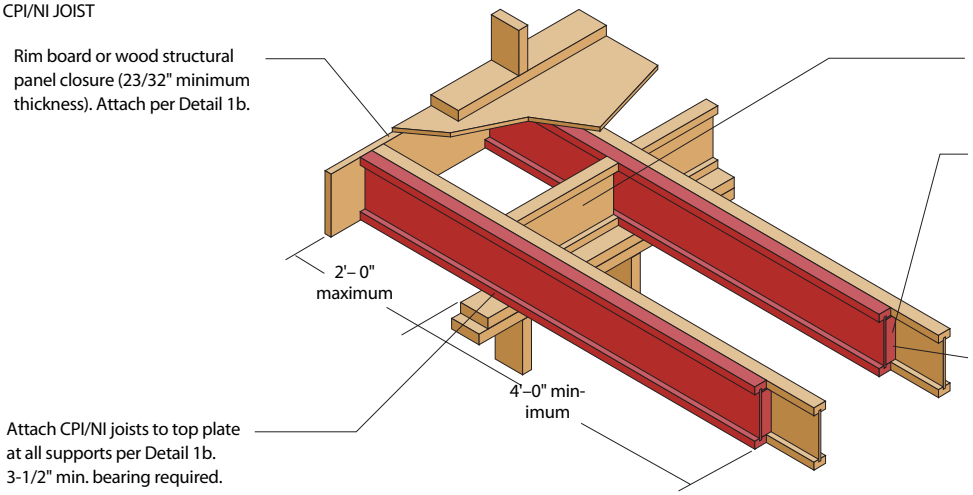


Use nailing pattern shown for Method 1 with opposite face nailing offset by 3"

Note: APA RATED SHEATHING 48/24 (minimum thickness 23/32") required on sides of I-joist. Depth shall match the full height of the joist. Nail with 8d nails at 6" o.c., top and bottom flange. Install with face grain horizontal. Attach joist to plate at all supports per Detail 1b.

CANTILEVER DETAIL FOR VERTICAL BUILDING OFFSET

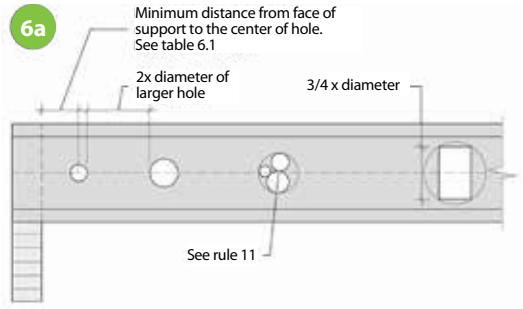
Alternate Method 2
DOUBLE CPI/NI JOIST



WEB HOLES AND OPENINGS

WEB HOLES IN I-JOISTS – Rules for Cutting Holes in I-Joists

1. The distance between the inside edge of the support and the centerline of any hole shall be in compliance with the requirements of table 6.1.
2. I-joist top and bottom flanges must never be cut, notched or otherwise modified.
3. Whenever possible, field-cut holes should be centered on the middle of the web.
4. The maximum size hole that can be cut into an I-joist web shall equal the clear distance between the flanges of the I-joist minus 1/4 inch. A minimum of 1/8 inch should always be maintained between the tip or bottom of the hole and the adjacent I-joist flange.
5. The sides of square holes or longest sides of rectangular holes should not exceed 3/4 of the diameter of the maximum round hole permitted at that location.
6. Where more than one hole is necessary, the distance between adjacent hole edges shall exceed twice the diameter of the largest round hole or twice the size of the largest square hole -or twice the length of the longest side of the longest rectangular hole-and each hole must be sized and located in compliance with the requirements of table 6.1
7. Holes measuring 1-1/2 inch or smaller shall be permitted anywhere in a cantilevered section of a joist. Holes of greater size may be permitted subject to verification.
8. A 1-1/2 inch hole or smaller can be placed anywhere in the web provided that it meets the requirements of rule number 6 above. For more than three holes per span, space holes at minimum 15 inches on center or contact Nordic Structures.
9. All holes shall be cut in accordance with the restrictions listed above and as illustrated in detail 6a
10. Limit three maximum-size holes per span
11. A group of round holes at approximately the same location shall be permitted if it meets the requirements for a single round hole circumscribed around them.



Joist Depth	Joist Series	Round Hole Diameter (in.)														
		2	3	4	5	6	6-1/4	7	8	8-5/8	9	10	10-3/4	11	12	12-3/4
9-1/2"	NI-40X	0'-7"	1'-4"	2'-8"	4'-2"	5'-8"	6'-2"									
	NI-80	2'-0"	3'-5"	4'-10"	6'-4"	8'-0"	8'-5"									
11-7/8"	NI40X	0'-7"	0'-8"	1'-0"	2'-4"	3'-8"	4'-0"	5'-2"	6'-8"	8'-0"						
	NI-60	0'-7"	1'-4"	2'-8"	4'-0"	5'-5"	5'-10"	7'-0"	8'-8"	9'-9"						
	NI-80	1'-4"	2'-8"	4'-0"	5'-4"	6'-10"	7'-3"	8'-5"	10'-2"	11'-3"						
	NI-90	0'-7"	0'-8"	1'-3"	2'-11"	4'-8"	5'-2"	6'-6"	8'-6"	9'-11"						
14"	NI-60	0'-7"	0'-8"	1'-3"	2'-6"	4'-0"	4'-3"	5'-3"	6'-9"	7'-9"	8'-3"	10'-2"	11'-10"			
	NI-80	0'-8"	1'-10"	3'-2"	4'-6"	6'-0"	6'-3"	7'-4"	8'-10"	9'-10"	10'-6"	12'-3"	13'-8"			
	NI-90	0'-7"	0'-8"	0'-9"	2'-3"	3'-10"	4'-3"	5'-6"	7'-3"	8'-5"	9'-2"	11'-2"	12'-9"			
16"	NI-60	0'-7"	0'-8"	0'-8"	1'-2"	2'-5"	2'-9"	3'-9"	5'-0"	6'-0"	6'-6"	8'-0"	9'-2"	9'-8"	11'-9"	13'-9"
	NI-80	0'-7"	1'-2"	2'-4"	3'-8"	5'-0"	5'-4"	6'-4"	7'-10"	8'-9"	9'-4"	11'-0"	12'-2"	12'-6"	14'-4"	16'-0"
	NI-90	0'-7"	0'-8"	0'-8"	1'-6"	3'-0"	3'-5"	4'-6"	6'-3"	7'-3"	7'-10"	9'-8"	11'-0"	11'-6"	13'-6"	15'-3"

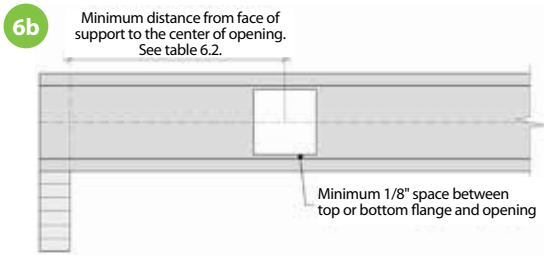
Notes:

1. Never drill, cut or notch the flange, or over-cut the web.
2. Holes in web should be cut with a sharp saw.
3. For rectangular holes, avoid over-cutting the corners, as this can cause unnecessary stress concentrations. Slightly rounding the corners is recommended. Starting the rectangular hole by drilling a 1-inch-diameter hole in each of the four corners and then making the cuts between the holes is another good method to minimize damage to the I-joist.

DUCT CHASE OPENINGS – Rules for Cutting Duct Chase Opening in I-Joists

1. The distance between the inside edge of the support and the centerline of any hole shall be in compliance with the requirements of table 6.2.
2. I-joist top and bottom flanges must never be cut, notched or otherwise modified.
3. The maximum depth of a duct chase opening that can be cut into an I-joist web shall equal the clear distance between the flanges of the I-joist minus 1/4 inch. A minimum of 1/8 inch should always be maintained between the top or bottom of the opening and the adjacent I-joist flange.
4. All openings shall be cut in accordance with the restrictions listed above and as illustrated in detail 6b.
5. Limit one maximum-size duct chase opening per span.

Joist Depth	Joist Series	Round Hole Diameter (in.)								
		8	10	12	14	16	18	20	22	24
9-1/2"	NI-40X	5'-2"	5'-7"	6'-0"	6'-4"	6'-8"	7'-2"	7'-7"		
	NI-80	5'-2"	5'-7"	6'-0"	6'-4"	6'-8"	7'-2"	7'-7"	8'-1"	8'-6"
11-7/8"	NI40X	6'-7"	7'-1"	7'-6"	8'-1"	8'-6"	9'-1"	9'-7"		
	NI-60	7'-1"	7'-7"	8'-0"	8'-4"	8'-10"	9'-3"	9'-9"		
	NI-80	7'-1"	7'-5"	8'-0"	8'-4"	8'-10"	9'-2"	9'-8"	10'-2"	10'-8"
	NI-90	4'-3"	4'-10"	5'-4"	5'-11"	6'-6"	7'-1	7'-8"	8'-3"	8'-11"
14"	NI-60	8'-8"	9'-2"	9'-6"	10'-1"	10'-6"	11'-1"	11'-7"		
	NI-80	8'-9"	9'-2	9'-8"	10'-1"	10'-6"	11'-1"	11'-6"	12'-1"	12'-8"
	NI-90	5'-10"	6'-5"	7'-0"	7'-6"	8'-2"	8'-9"	9'-4"	9'-11"	10'-8"
16"	NI-60	10'-1"	10'-7"	11'-0"	11'-6"	12'-1"	12'-7"	13'-4"		
	NI-80	10'-3"	10'-9"	11'-2"	11'-7"	12'-1"	12'-7"	13'-2"	13'-9"	14'-6"
	NI-90	7'-4"	7'-11"	8'-6"	9'-1"	9'-8"	10'-3"	13'-0"	11'-7"	12'-3"

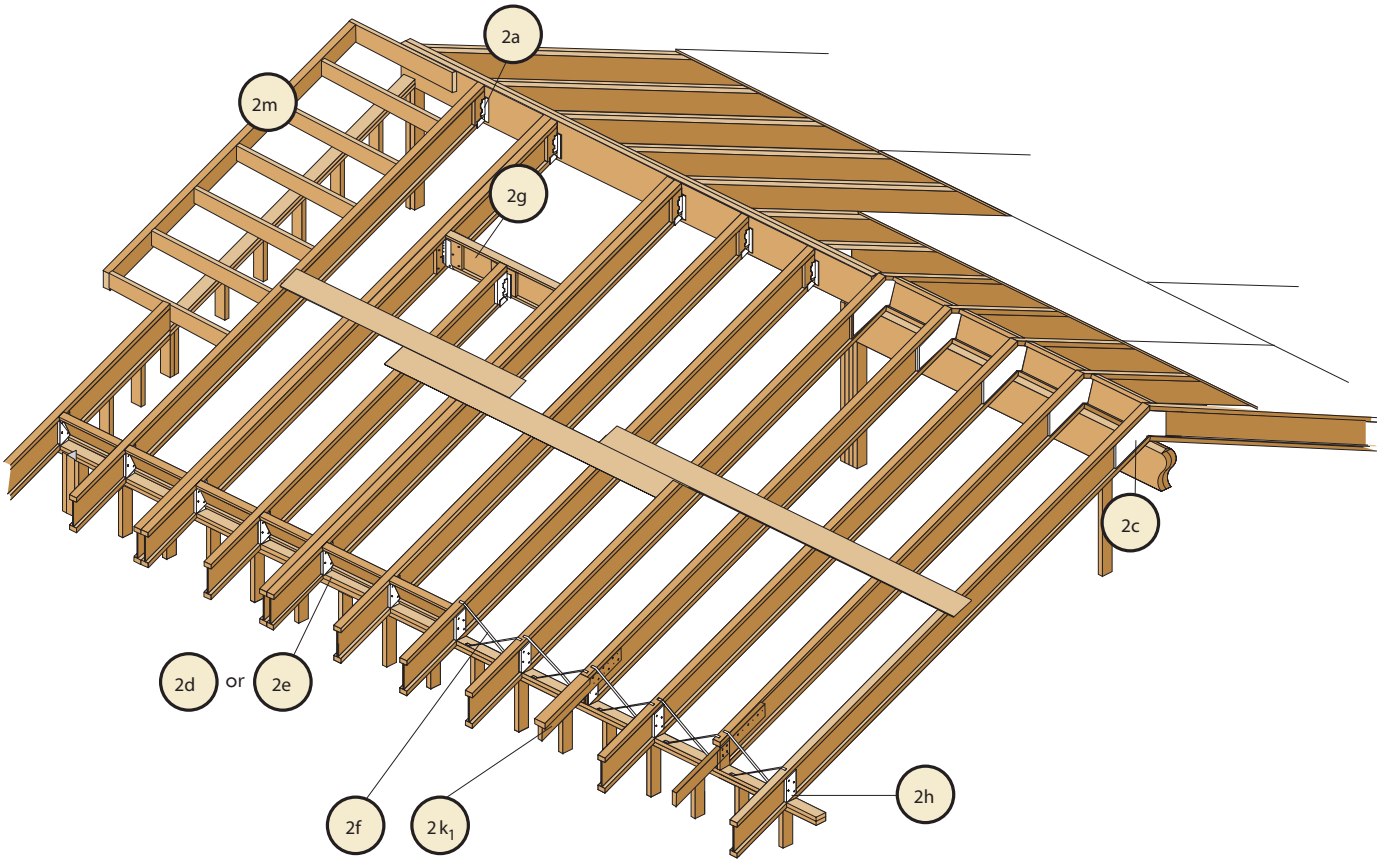


Notes:

1. Never drill, cut or notch the flange, or over-cut the web.
2. Holes in web should be cut with a sharp saw.
3. Avoid over-cutting the corners, as this can cause unnecessary stress concentrations. Slightly rounding the corners i recommended. Starting the rectangular hole by drilling a 1 inch diameter hole in each of the four corners and then making the cuts between the holes is another good method to minimize damage to the I-joist.

I-JOIST
ROOF FRAMING & CONSTRUCTION DETAILS

COMMON CPI/N I-JOIST ROOF FRAMING AND CONSTRUCTION DETAILS



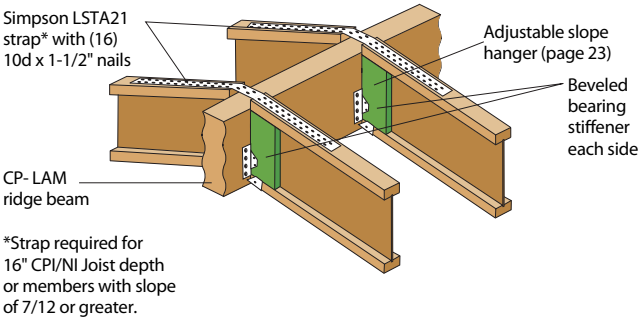
Optional overhangs

I-JOIST
ROOF DETAILS

TYPICAL CPI/N I JOIST ROOF FRAMING AND CONSTRUCTION DETAILS

Individual components not shown to scale for clarity.

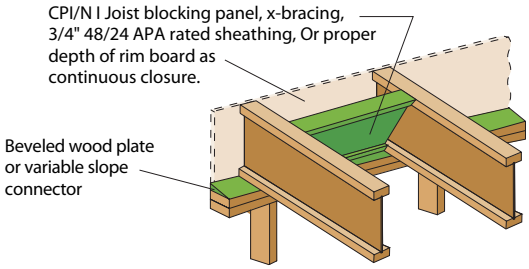
2a RIDGE CONNECTION – 12/12 MAXIMUM SLOPE



*Strap required for 16" CPI/NI Joist depth or members with slope of 7/12 or greater.

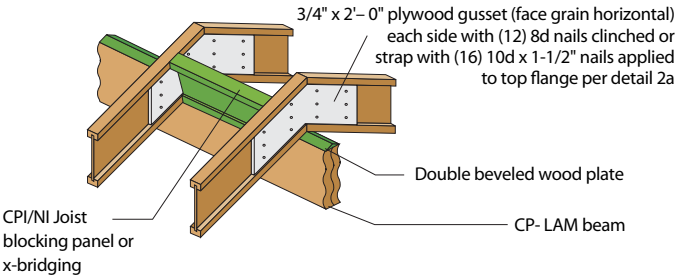
Uplift connections may be required.

2b UPPER END, BEARING ON WALL



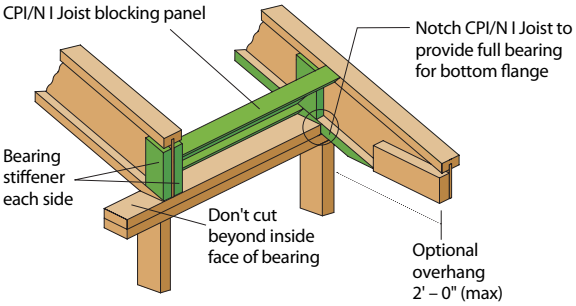
Uplift connections may be required.

2c CPI/N I JOIST ABOVE CP-LAM RIDGE BEAM



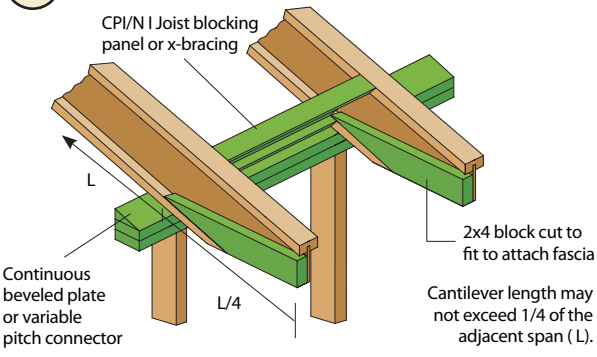
Uplift connections may be required.

2d BIRDSMOUTH CUT – LOW END OF CPI/N I JOIST ONLY



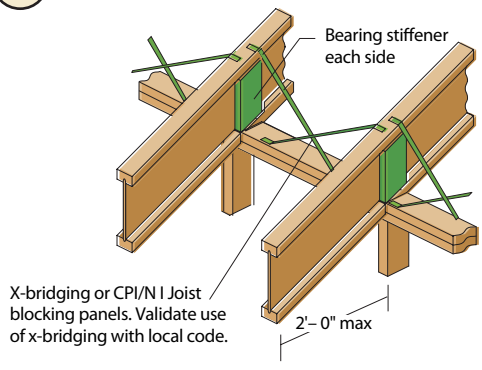
Uplift connections may be required.

2e CPI/N I JOIST ON BEVELED PLATE



Uplift connections may be required.

2f BIRDSMOUTH CUT – LOW END OF CPI/N I JOIST ONLY

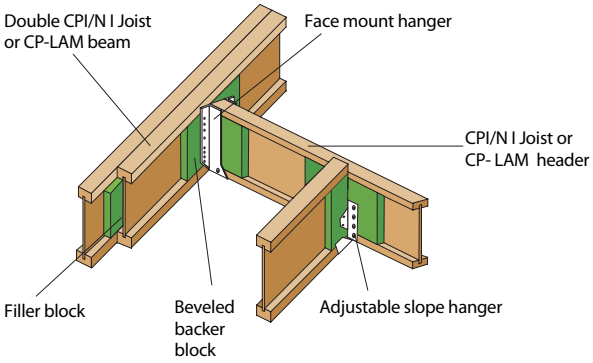


I-JOIST
ROOF DETAILS

COMMON CPI/N I-JOIST ROOF FRAMING AND CONSTRUCTION DETAILS

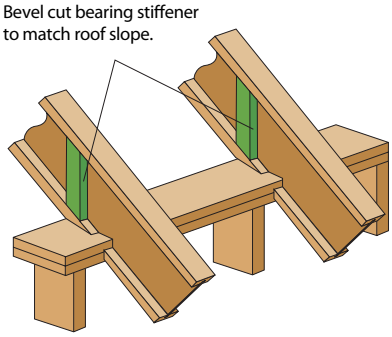
Individual components not shown to scale for clarity.

2g ROOF OPENING, FACE MOUNTED HANGER



Uplift connections may be required

2h BEVELED CUT BEARING STIFFENER

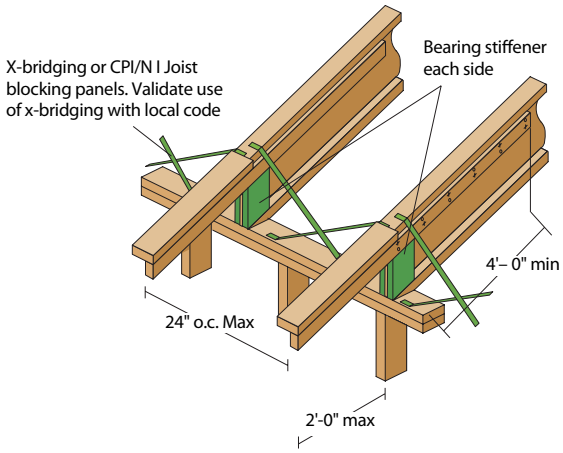


Uplift connections may be required

2k OPTIONAL OVERHANG EXTENSIONS FOR UNIFORMLY DISTRIBUTED LOADS ONLY

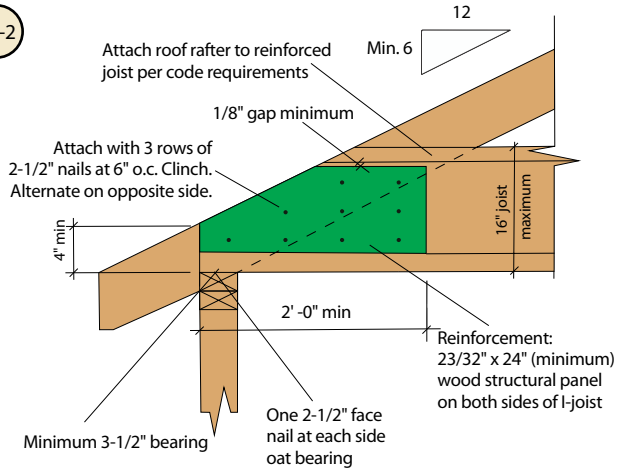
May be used with details 2d, 2e and 2f (Low end only)

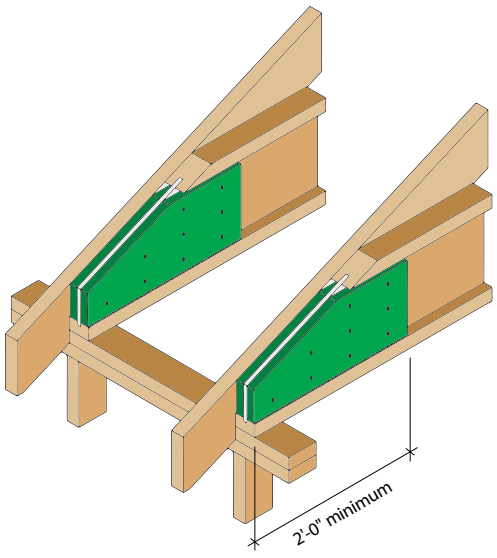
Stop CPI/N I Joist at wall line and extend top flange with 2x4. Support extension with 2x4 nailed to web of joist with (2) rows of 8d nails at 8" o.c. clinched. Extend 2x4 support at least 4' into joist span and nail to top flange with 8d nails at 8"o.c.



Uplift connections may be required

1n-2





I-JOIST
ALLOWABLE ROOF SPANS

Snow Load = 50 psf , Dead Load = 15 psf

Joist Depth	Joist Series	Slope of 1/4: 12 to 4:12 On Centerspacing			Slope >4:12 to 8:12 On Centerspacing			Slope >8:12 to 12:12 On Centerspacing		
		12"	16"	24"	12"	16"	24"	12"	16"	24"
9-1/2"	NI-40X	21'-7"	18'-8"	15'-3"	20'-6"	18'-4"	14'-11"	19'-1"	17'-3"	14'-6"
	NI-80	24'-8"	22'-4"	19'-4"	23'-5"	21'-2'	18'-4"	21'-9"	19'-9"	17'-1"
11-7/8"	NI-40X	24'-8"	21'-4"	17'-4"	24'-2"	20'-11"	17'-0"	22'-10"	20'-4"	16'-7"
	NI-60	26'-6"	24'-0"	19'-11"	25'-1"	22"-8"	19'-6"	23'-4"	21'-2"	18'-4"
	NI-80	29'-6"	26'-8"	23'-2"	27'-11"	25'-3"	21'-11"	26'-0"	23'-7"	20'-5"
	NI-90	32'-5"	27'-6"	23'-10"	28'-9"	26'-1"	22'-7"	26'-10"	24'-4"	21'-1"
14"	NI-60	30'-2"	26'-10"	21'-11"	28'-7"	25'-11"	21'-6"	26'-8"	24'-1"	20'-11"
	NI-80	33'-7"	30'-4"	26'-1"	31'-9"	28'-9"	24'-11"	29'-7"	26'-10"	23'-3"
	NI-90	34'-7"	31'-3"	27'-1"	32'-8"	29'-7"	25'-8"	30'-6"	27'-7"	24'-0"
16"	NI-60	33'-6"	28'-11"	23'-7"	31'-9"	28'-5"	23'-2"	29'-7"	26'-10"	22'-6"
	NI-80	37'-3"	33'-8"	28'-1"	35'-3"	31'-11"	27'-7"	32'-10"	29'-9"	25'-10"
	NI-90	38'-8"	34'-8"	30'-1"	36'-3"	32'-10"	28'-6"	33'-9"	30'-7"	26'-7"

NOTES:

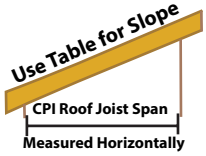
1. Allowable clear span applicable to simple-span roof construction with a design roof snow load as shown and dead load of 15 psf. The allowable span is based on the horizontal distance between inside face of supports. The snow load deflection is limited to L/240 and the total load deflection to L/180. Spans are based on a duration of load (DOL) factor of 1.15.
2. Spans include a cantilever of up to 2 feet on one end of the I-joist.
3. Minimum bearing length shall be 1-3/4" inches for the end bearings, and 3-1/2" inches on end bearing adjacent to cantilever.
4. Bearing stiffeners are not required when I-joists are used with the spans and spacings given in these tables, except as required for hangers.
5. These span charts are based on uniform loads. For applications with other than uniformly distributed loads, an engineering analysis may be required based on the use of the design properties.

SI units conversion: 1 inch = 25.4 mm, 1 foot = 0.305 m

CPI PRO JOISTS 50 PSF LIVE LOAD - 15 PSF DEAD LOAD

CPI Joist Series	CPI Joist Depth	Slope of 4/12 or Less			Slopes over 4/12 up to 8/12			Slopes over 8/12 up to 12/12		
		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.
CPI 90	11-7/8"	26'-10"	25'-2"	23'-2"	25'-7"	24'-0"	22'-2"	23'-11"	22'-5"	20'-9"
	14"	30'-5"	28'-7"	23'-2"	29'-0"	27'-3"	22'-5"	27'-2"	25'-6"	21'-5"
	16"	33'-9"	29'-1"	23'-2"	32'-2"	28'-1"	22'-5"	30'-1"	26'-10"	21'-5"

Stocked Joists



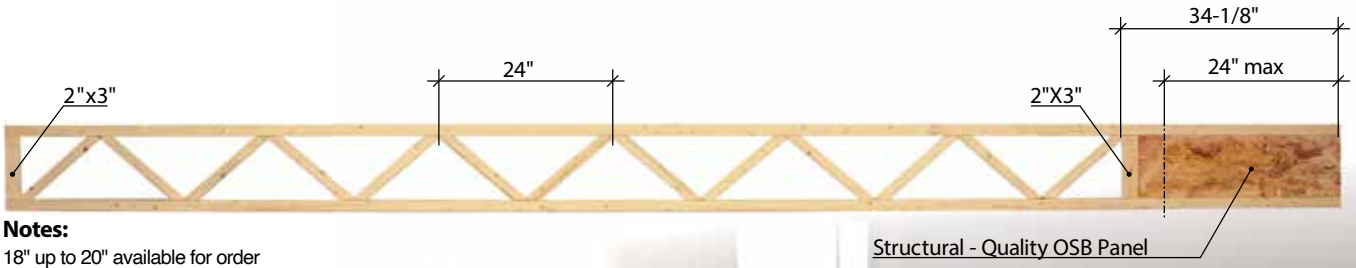
NOTES:

1. Table values apply to uniformly loaded simple or multiple span CPI joists. Span is the horizontal distance from face to face of supports. Use beam sizing software to analyze multiple span joists if the length of any span is less than half the length of an adjacent span.
2. Roofs must be sloped at least 1/4" in 12" to assure drainage.
3. Live load deflection is limited to L/240. Total load deflection is limited to L/180. Verify that the deflection criteria conform to local building code requirements.
4. Table values are based on 1-3/4" end and 3-1/2" intermediate bearing lengths without web stiffeners.

THE OPEN JOIST

The Barrette® Structural Open Concept Floor System
The strength of triangulation, accuracy of finger-jointed assembly, maximization of dimensional lumber and environmentally-friendly field adjustability makes Open Joist TRIFORCE® the only trimmable, all wood, open-webbed, finger-jointed floor joist installed without metal plate connectors.

Re-engineering wood components for your needs
For more than 25 years, our finger joint technology has demonstrated its strength and durability throughout North America. The open joist TRIFORCE® has surpassed industry standards by establishing a new level of excellence in the engineering of floor systems, while optimizing the use of lumber in its components.



Notes:
18" up to 20" available for order

OPEN JOIST
FLOOR SPANS

Maximum Allowable Spans

Glued & Nailed Subfloor

ΔL ≤ L/480

Live Load			40 psf				40 psf				100 psf			
Dead Load			15 psf				25 psf				15 psf			
Spacing			12"	16"	19.2"	24"	12"	16"	19.2"	24"	12"	16"	19.2"	24"
Subfloor[7]			19/32"			23/32"	19/32"			23/32"	19/32"			23/32"
Depth	Length	Series	Maximum Floor span o.c.											
11 7/8"	8'-0"	OJ314 3x2	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	**8'-0"**
	10'-0"		10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	**10'-0"**	**10'-0"**
	12'-0"		12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	**12'-0"**	**11'-5"**	**10'-3"**
	14'-0"		14'-0"	14'-0"	14'-0"	14'-0"	14'-0"	14'-0"	14'-0"	**13'-7"**	14'-0"	**12'-7"**	-----	-----
	16'-0"		16'-0"	16'-0"	16'-0"	14'-10"	16'-0"	16'-0"	15'-3"	-----	14'-3"	-----	-----	-----
	18'-0"	OJ315 3x2	18'-0"	18'-0"	17'-6"	**16'-4"**	18'-0"	18'-0"	16'-9"	-----	-----	-----	-----	-----
	20'-0"	OJ415 4x2	20'-0"	20'-0"	19'-5"	**18'-2"**	20'-0"	20'-0"	**19'-5"**	-----	-----	-----	-----	-----
	22'-0"	OJ418 4x2	22'-0"	21'-9"	**20'-6"**	-----	22'-0"	**21'-9"**	**20'-6"**	-----	-----	-----	-----	-----
14"	8'-0"	OJ314 3x2	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"
	10'-0"		10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	**10'-0"**
	12'-0"		12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	**12'-0"**	**11'-2"**
	14'-0"		14'-0"	14'-0"	14'-0"	14'-0"	14'-0"	14'-0"	14'-0"	14'-0"	14'-0"	**13'-9"**	**12'-6"**	-----
	16'-0"		16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	14'-11"	16'-0"	-----	-----	-----
	18'-0"	OJ315 3x2	18'-0"	18'-0"	18'-0"	18'-0"	18'-0"	18'-0"	18'-0"	**16'-5"**	16'-7"	-----	-----	-----
	20'-0"	OJ418S[9] 4x2	20'-0"	20'-0"	20'-0"	**20'-0"**	20'-0"	20'-0"	20'-0"	**20'-0"**	**19'-6"**	-----	-----	-----
	22'-0"	OJ415 4x2	22'-0"	22'-0"	22'-0"	**20'-7"**	22'-0"	22'-0"	**22'-0"**	-----	-----	-----	-----	-----
	24'-0"	OJ418 4x2	24'-0"	24'-0"	23'-3"	-----	24'-0"	24'-0"	**23'-3"**	-----	-----	-----	-----	-----
	26'-0"		26'-0"	24'-9"	-----	-----	26'-0"	**24'-9"**	-----	-----	-----	-----	-----	-----

OPEN JOIST
FLOOR SPANS

Maximum Allowable Spans

Glued & Nailed Subfloor

ΔL ≤ L/480

Live Load				40 psf				40 psf				100 psf			
Dead Load				15 psf				25 psf				15 psf			
Spacing				12"	16"	19.2"	24"	12"	16"	19.2"	24"	12"	16"	19.2"	24"
Subfloor[7]				19/32"			23/32"	19/32"			23/32"	19/32"			23/32"
Depth	Length	Series		Maximum Floor span o.c.											
16"	8'-0"	OJ314	3x2	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"
	10'-0"			10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	**10'-0"**
	12'-0"			12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	**12'-0"**	**11'-8"**
	14'-0"			14'-0"	14'-0"	14'-0"	14'-0"	14'-0"	14'-0"	14'-0"	14'-0"	14'-0"	**14'-0"**	**13'-4"**	-----
	16'-0"			16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	**14'-8"**	-----	-----
	18'-0"	OJ315	3x2	18'-0"	18'-0"	18'-0"	18'-0"	18'-0"	18'-0"	18'-0"	**17'-9"**	18'-0"	**16'-4"**	-----	-----
	20'-0"	OJ315	3x2	20'-0"	20'-0"	20'-0"	19'-3"	20'-0"	20'-0"	19'-10"	-----	18'-4"	-----	-----	-----
	22'-0"	OJ418	4x2	22'-0"	22'-0"	22'-0"	**22'-0"**	22'-0"	22'-0"	**22'-0"**	**20'-9"**	**21'-7"**	-----	-----	-----
	24'-0"			24'-0"	24'-0"	24'-0"	**24'-0"**	24'-0"	24'-0"	**24'-0"**	-----	-----	-----	-----	-----
	26'-0"			26'-0"	26'-0"	**25'-8"**	-----	26'-0"	**26'-0"**	**25'-8"**	-----	-----	-----	-----	-----
	28'-0"	OJ420	4x2	28'-0"	28'-0"	**26'-6"**	-----	28'-0"	**28'-0"**	**25'-11"**	-----	-----	-----	-----	-----
	30'-0"			30'-0"	28'-2"	-----	-----	30'-0"	**28'-2"**	-----	-----	-----	-----	-----	-----

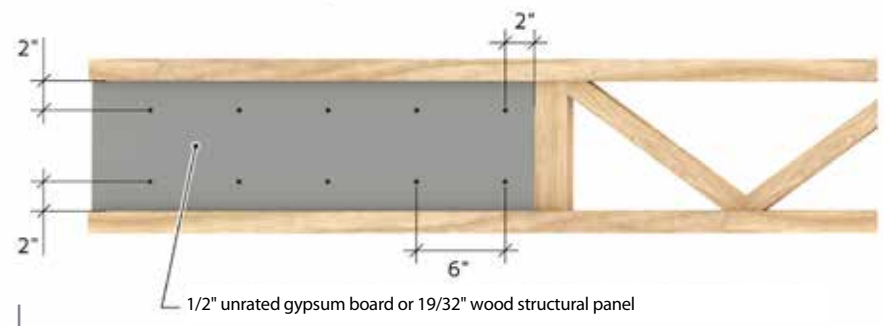
Notes:

1. The indicated spans are based on simple span joists.
2. Minimum end bearing length is 1½", spans values in bold indicate that web stiffeners are required at the OSB end panel.
3. Maximum spans are measured centerline to centerline of bearing and are based on uniformly loaded joists.
4. Total Load deflection is limited to L/240.
5. Live Load deflection is limited to L/480.
6. The indicated spans are based on the Allowable Stress Design method as per NDS, ICC IBC/IRC code.
7. The considered subfloor is a 20" o.c. APA rated panel for joist spacing of 12", 16" and 19.2" o.c. and is a 24" o.c. APA rated panel for joist spacing of 24" o.c. The subfloor must be glued as per APA Specification AFG-01 or ASTM D3498 and nailed as per NDS, ICC IBC/IRC code.
8. Refer to appropriate sections of the Specifier Guide for installation guidelines and construction details.
9. S = Limited inventory. Please contact your representative to determine quantities.

FIRE PERFORMANCE CERTIFICATIONS

TRIFORCE® open joist has been certified for equivalent fire performance to 2 x 10 nominal dimension lumber, qualifying as an exception to 2018/2021 IRC fire performance requirements for an unfinished basement ceiling (Section R302.13 - Exception 4). **See detail below.**

Moreover, TRIFORCE® open joists are rigorously tested by INTERTEK, and independent third-party offering Total Quality Assurance to industries worldwide (SpecID 35685). With certified durations of 45, 60, 90 and 120 minutes, assemblies have been engineered and are available through our fire-resistant solutions brochure.



OPEN JOIST
FLOOR DETAILS

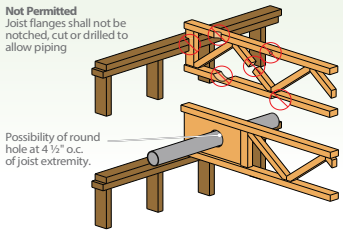
Mechanical Clearances

Mechanical Opening Dimension			
Depth	Round	Square	Rectangular
11-⅞"	7 ¼"	5 ¾" x 5 ¾"	3" x 13"
14"	8 ½"	6 ½" x 6 ½"	3" x 14", 6" X 8"
16"	9 ½"	7 ½" x 7 ½"	3" x 15"

Possibility of round hole at 4 1/2" o.c. of joist extremity.
Contact your TRIFORCE® representative for more details.

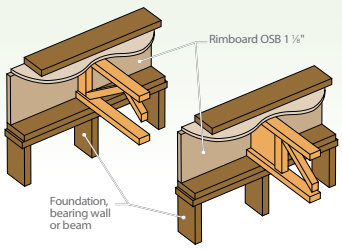
Typical Details

Detail 18

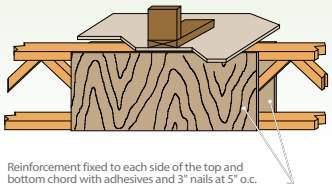


Contact your **TRIFORCE**® representative for more details.

Detail 2
Bearing Wall



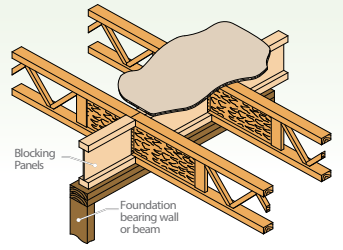
Detail 11VS
Reinforcement Under Concentrated Load



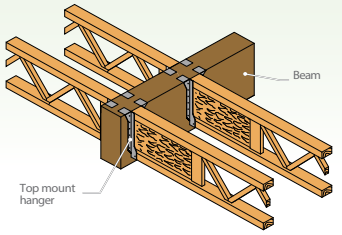
Reinforcement fixed to each side of the top and bottom chord with adhesives and 3" nails at 5" o.c.

* PL Premium Adhesive

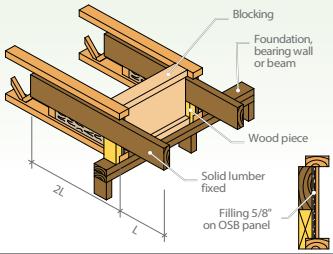
Detail 3P2B
End To End Joist



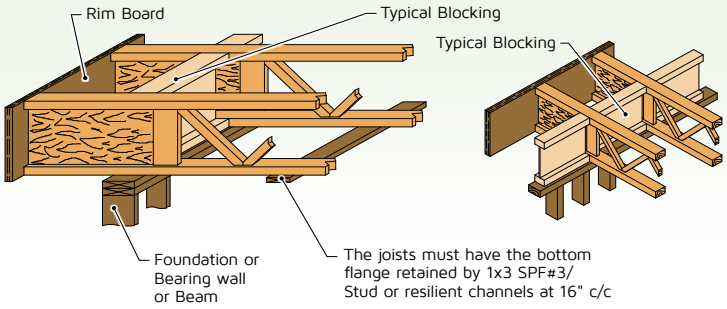
Detail 4P1
Joist To Beam With Hanger



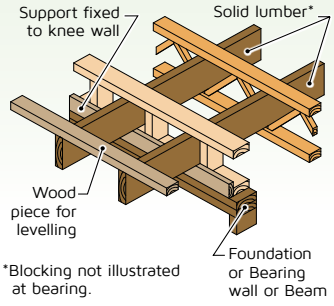
Detail 12P
Cantilevered



Detail 8P
Cantilevered Joist

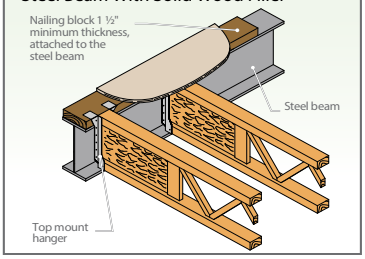


Detail 13M
Cantilever Perpendicular to Open Joist



*Blocking not illustrated at bearing.

Detail 15ETP
Steel Beam With Solid Wood Filler



STRONGBACKS
DETAILS

Strongbacks must be dry lumber and secured with 2 spiral or resined 3" nails or 2-3" screws at mid-span, to a vertical brace or diagonal web.

Strongbacks can be cut between 2 joists for ducts, pipes and wires if needed, but at least 3 consecutive joists must remain attached together.

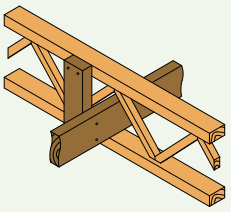
11-7/8" = 2 x 4" or 2 x 6"

14" = 2 x 6" or 2 x 8"

16" = 2 x 6", 2 x 8" or 2 x 10"

Detail 5
Strongback (at mid span)

Option #1 (recommanded)

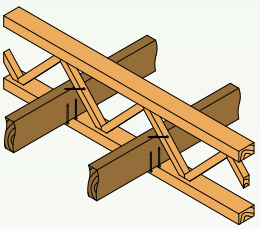


Secure vertical side block (2x4) as per detail, with 2 nails* to both chords and strongback to vertical with 2 nails*. *(gun nails 0.122" x 3¼")

Adding adhesive will provide an ultimate connection for high floor performance. Gun nails can be substituted with 3" screws.

Option #2

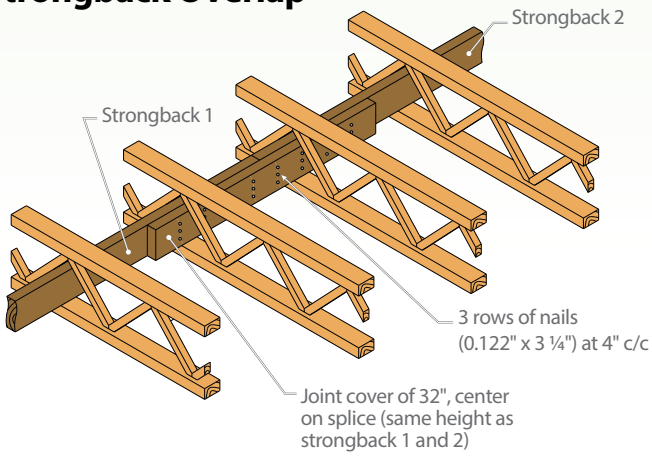
2x3 flanges: 1 - 3" (10d) through bottom flange and 1 - 3" (10d) through the diagonal, adding adhesive will insure long term performance



2x4 flanges: 2 - 3" (10d) through bottom flange and 1 - 3" (10d) through the diagonal.

Adding adhesive will ensure long term performance. Gun nails can be substituted with 3" screws.

Strongback Overlap



JOIST HANGER CHART

I-JOIST SIZE	TOP MOUNT	FACE MOUNT	TOP MOUNT DOUBLE	FACE MOUNT DOUBLE
NI-40 9-1/2"	ITS25695	IUS25695	MIT3952	MIU5129
NI-40 11-7/8"	ITS2561188	IUS2561188	MIT311882	MIU51211
NI-60 11-7/8"	ITS2561188	IUS2561188	MIT311882	MIU51211
NI-60 14"	ITS25614	IUS25614	MIT3142	MIU51211
NI-60 16"	ITS35616	IUS35616	MIT3162	MIU51216
NI-80 9-1/2"	ITS35695	IUS35695	BA712195	HU410-2
NI-80 11-7/8"	ITS3561188	IUS3561188	BA7121188	HU412-2
NI-80 14"	ITS35614	IUS35614	BA71214	HU414-2
NI-80 16"	ITS35616	IUS35616	BA71216	HU414-2
NI-90 11-7/8"	ITS3561188	IUS3561188	BA7121188	HU410-2
NI-90 14"	ITS35614	IUS35614	BA71214	HU412-2
NI-90 16"	ITS35616	IUS35616	BA71216	HU414-2
CPI-90 11-7/8"	ITS3561188	IUS3561188	BA7121188	HU410-2
CPI-90 14"	ITS35614	IUS35614	BA71214	HU412-2
CPI-90 16"	ITS35616	IUS35616	BA71216	HU414-2
OPEN JOIST TRI-FORCE	**TOP MOUNT**	**FACE MOUNT**	**TOP MOUNT DOUBLE**	**FACE MOUNT DOUBLE**
11-7/8" X 3'-18'	ITS2561188	IUS2561188	MIT311882	MI451211
11-7/8" X 20'-22	ITS3561188	IUS3561188	BA7121188	HU412-2
14" X 3'-18'	ITS25614	IUS25614	MIT3142	MI451211
14" X 19'-24'	ITS35616	IUS35614	BA71214	HU414-2
16" X 3'-16'	ITS25616	IUS25616	MIT3182	MI451214
16" X 18'-30'	ITS35616	IUS35616	BA71216	HU414-2

All items in stock
For a complete list of all stocked Simpson Connectors, email us at ewp@coastal.com

RIM BOARD

APA Rim Board Plus

Engineered Rim Board is a structural framing member designed to support wall loads and tie floor joists together.

Engineered Rim Board must be continuously supported along the bottom edge and not used to span openings. It may not be used as other structural framing elements such as joists, rafters, headers and ledgers.

ADVANTAGES

- No delamination
- Manufactured to match the depths of I-joist framing members
- Resistant to moisture
- Dimensionally stable
- 12 foot standard

PERFORMANCE CRITERIA

Norbord Rim Board is manufactured in accordance with ICBO AC-124 Acceptance Criteria for Wood-Based Rim Board Products.

STORAGE AND HANDLING

Ship Rim Board under tarp. Set bundles on supports to keep Rim Board off the ground and provide air circulation. Outdoors, keep Rim Board under a protective cover. When high moisture exists, cut banding on the stack to prevent edge damage. When using a forklift, put the stack on a pallet or supports to minimize damage from forks.

AVAILABLE SIZES AND WEIGHTS

Approximate Weight (PLF)					
Thickness (inches)		Depth (inches)			
		9-1/2	11-7/8	14	16
Norbord Rim Board Plus	1-1/8"	264	3.30	3.89	4.44

DESIGN CAPACITIES

	Rim Board (inches)	Horizontal Shear (plf)	Vertical Load Capacity (lbf/ft)	1/2" Lag Screw Lateral Resistance (lbf)
Norbord Rim Board Plus	1-1/8	200	4,850	350

Thickness: 1-1/8"
Available Depths: 9-1/2", 11-7/8", 14" & 16"
Available Length: 12'
Complies with ICC ES AC-124

INSTALLATION

A full 1-1/8" edge surface allows for quick installation with virtually no risk of splitting. Installation of Rim Boards require 8d common or ring-shank nails.

- I-JOIST – drive 1 nail into the top flange and 1 into the bottom flange
- Plate - toe-nail Rim Board at 6" on center to wall plates.
- Floor Deck - space fasteners at 6" on center.
- Ledger - use 1/2" lag screws and ensure they completely penetrate Rim Board. Please refer to building code requirements for number and placement of lag screws.
- When Rim Boards are used as starter joists to maintain the vertical loading, there are several installation options, such as blocking (maximum 24" o.c.), double up on the Rim Boards, or place an I-JOIST adjacent to the Rim Board. Please consult your designer for the appropriate option and details for your application.

Need assistance? Contact us at ewp@coastalfp.com or 800-932-9633

Norbord

2.1E CP-LAM
DESIGN PROPERTIES

DOUG FIR LVL

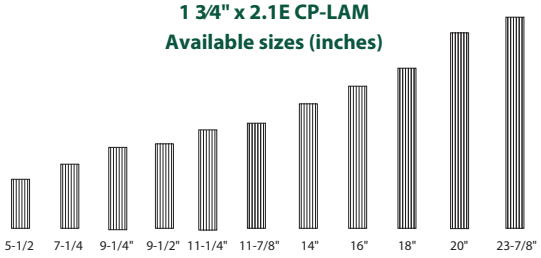
ALLOWABLE DESIGN PROPERTIES – 1 3/4" 2.1E CP-LAM

Depth	Maximum Vertical Shear (lbs)			Maximum Bending Moment (ft-lbs)			EI (x 10^6 lbs-in^2)	Weight (plf)
	100%	115%	125%	100%	115%	125%		
5-1/2"	1829	2103	2286	2664	3064	3330	49	2.50
7-1/4"	2411	2772	3013	4380	5037	5475	111	3.30
9-1/4" & 9-1/2"	3159	3633	3948	7125	8194	8907	250	4.32
11-1/4" & 11-7/8"	3948	4541	4936	10647	12245	13309	488	5.40
14"	4655	5353	5819	14320	16468	17900	800	6.36
16"	5320	6118	6650	18210	20942	22763	1195	7.27
18"	5985	6883	7481	22511	25888	28139	1701	8.18
20"	6650	7648	8313	27212	31294	34015	2333	9.1
23-7/8"	7938	9129	9923	37428	43043	46786	4032	10.85

Stocked Items

2.1E CP-LAM Allowable Design Stresses [1]			
Modulus of Elasticity	E	=	2,100,000 psi[2]
Bending	F_b	=	3,100 psi[3][4]
Horizontal Shear (joist)	F_v	=	285 psi
Compression Perpendicular to Grain (joist)	F_{c1}	=	850 psi[2]
Compression Parallel to Grain	F_c	=	2,750 psi

1 3/4" x 2.1E CP-LAM
Available sizes (inches)

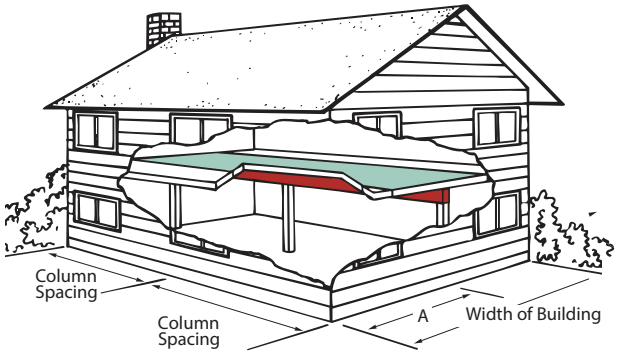


1. These allowable design stresses apply to dry service conditions.
2. No increase is allowed for load duration.
3. Multiply by $(12/d)^{1/5}$ where d = depth of member (in).
4. A factor of 1.04 may be applied for repetitive members as defined in the *National Design Specification for Wood Construction*

FOR ADDITIONAL GRADES AND SIZES PLEASE VISIT OUR WEBSITE AT WWW.COASTALFP.COM

2.1E CP - LAM FLOOR BEAMS

This table provides CP-LAM beam sizes for center support of one level of floor framing over various column spacings. Where floor joists are continuous over the beam, this table applies only when the 'A' span is between 45% and 55% of the building width.



Width of Building (ft)	Column Spacing									
	11'	12'	13'	14'	15'	16'	17'	18'	19'	20'
24'	2 – 11-7/8"	2 – 11-7/8"	2 – 11-7/8"	2 – 14"	2 – 14"	2 – 16"	2 – 16"	2 – 16"	2 – 18"	2 – 18"
	3 – 9-1/2"	3 – 9-1/2"	3 – 11-7/8"	3 – 11-7/8"	3 – 11-7/8"					
28'	2 – 11-7/8"	2 – 11-7/8"	2 – 14"	2 – 14"	2 – 14"	2 – 16"	2 – 16"	2 – 18"	2 – 18"	–
	3 – 9-1/2"	3 – 11-7/8"	3 – 11-7/8"	3 – 11-7/8"	3 – 14"	3 – 14"	3 – 14"	3 – 16"	3 – 16"	3 – 18"
32'	2 – 11-7/8"	2 – 11-7/8"	2 – 14"	2 – 14"	2 – 16"	2 – 16"	2 – 18"	2 – 18"	–	–
	3 – 9-1/2"	3 – 11-7/8"	3 – 11-7/8"	3 – 14"	3 – 14"	3 – 14"	3 – 16"	3 – 16"	3 – 18"	3 – 18"
36'	2 – 11-7/8"	2 – 14"	2 – 14"	2 – 16"	2 – 16"	2 – 18"	2 – 18"	–	–	–
	3 – 11-7/8"	3 – 11-7/8"	3 – 11-7/8"	3 – 14"	3 – 14"	3 – 16"	3 – 16"	3 – 16"	3 – 18"	3 – 18"
40'	2 – 11-7/8"	2 – 14"	2 – 14"	2 – 16"	2 – 16"	2 – 18"	–	–	–	–
	3 – 11-7/8"	3 – 11-7/8"	3 – 14"	3 – 14"	3 – 14"	3 – 16"	3 – 16"	3 – 18"	3 – 18"	–

Notes:

1. CP-LAM beam sizes are listed as the number of 1-3/4" thick pieces by the beam depth, e.g. 2–1/2 indicates two 1-3/4" pieces by 9-1/2" deep.
2. All CP-LAM beams require support across their full width.
3. The minimum required end and intermediate bearing lengths (based on 850 psi) are 3" and 7-1/2" respectively unless the + symbol is shown. In that case, 4-1/2" and 10-1/2" end and intermediate bearing lengths are required.
4. CP-LAM beam sizes are based on residential floor loading of 40 psf live load and 10 psf dead load. The roof framing must be trusses supported at the exterior walls only.
5. Defection is limited to L/360 at live load and L/240 at total load.
6. CP-LAM beam sizes are based on continuous floor joist spans and simple or continuous beam spans. If the floor joists are not continuous, it is permissible to consider a "Width of Building" dimension that is equal to 0.8 times the actual width of the building.

2.1E CP-LAM

ALLOWABLE UNIFORM LOADS FLOOR 100%

ALLOWABLE UNIFORM LOADS* - POUNDS PER LINEAR FOOT - 1-3/4" 2.1E CP-LAM

Span (ft)	Key	One 1-3/4" CP-LAM			Two 1-3/4" CP-LAM					Three 1-3/4"CP-LAM				
		9-1/2"	11-7/8"	14"	9-1/2"	11-7/8"	14"	16"	18"	9-1/2"	11-7/8"	14"	16"	18"
6	LL	-	-	-	-	-	-	-	-	-	-	-	-	-
	TL	1063	1425	1796	2127	2850	3591	4388	5304	3190	4275	5387	6582	7955
	BRG	2.2/5.4	2.9/7.2	3.6/9.1	2.2/5.4	2.9/7.2	3.6/9.1	4.4/11.1	5.4/13.4	2.2/5.4	2.9/7.2	3.6/9.1	4.4/11.1	5.4/13/4
8	LL	724	-	-	1447	-	-	-	-	2171	-	-	-	-
	TL	746	979	1208	1493	1958	2416	2887	3404	2239	2937	3624	4331	5105
	BRG	2/5	2.6/6.6	3.3/8.2	2/5	2.6/6.6	3.3/8.2	3.9/8.8	4.6/11.5	2/5	2.6/6.6	3.3/8.2	3.9/9.8	4.6/11.5
10	LL	370	724	-	741	1447	-	-	-	1111	2171	-	-	-
	TL	551	745	909	1103	1490	1819	2150	2504	1654	2236	2728	3224	3755
	BRG	1.9/4.7	2.5/6.3	3.1/7.7	1.9/4.7	2.5/6.3	3.1/7.7	3.6/9.1	4.2/10.6	1.9/4.7	2.5/6.3	3.1/7.7	3.6/9.1	4.2/10.6
11	LL	278	544	-	557	1087	-	-	-	835	1631	-	-	-
	TL	413	665	809	826	1331	1618	1905	2211	1240	1996	2427	2858	3316
	BRG	1.5/3.9	2.5/6.2	3/7.5	1.5/3.9	2.5/6.2	3/7.5	3.5/8.9	4.1/10.3	1.5/3.9	2.5/6.2	3/7.5	3.5/8.9	4.1/10.3
12	LL	214	419	686	429	837	1372	-	-	643	1256	2058	-	-
	TL	317	586	729	635	1172	1452	1711	1979	952	1758	2186	2566	2968
	BRG	1.5/3.2	2.4/6	3/7.4	1.5/3.2	2.4/6	3/7.4	3.5/8.7	4/10.1	1.5/3.2	2.4/6	3/7.4	3.5/8.7	4/10.1
13	LL	169	329	540	337	659	1079	-	-	506	988	1619	-	-
	TL	249	489	663	497	977	1325	1552	1790	746	1466	1988	2328	2686
	BRG	1.5/3	2.2/5.4	2./9/7.3	1.5/3	2.2/5.4	2.9/7.3	3.4/8.6	3.9/9.9	1.5/3	2.2/5.4	2.9/7.3	3.4/8.6	3.9/9.9
14	LL	135	264	432	270	527	864	1290	-	405	791	1296	1935	-
	TL	198	390	578	396	780	1156	1420	1635	595	1170	1734	2130	2452
	BRG	1.5/3	1.9/4.7	2.8/6.9	1.5/3	1,9/4.7	2.8/6.9	3.4/8.4	3.9/9.7	1.5/3	19/4.7	2.8/6.9	3.4/8.4	3.9/9.7
15	LL	110	214	351	220	429	703	1049	1493	329	643	1054	1573	2240
	TL	160	316	503	321	632	1006	1280	1504	481	949	1508	1921	2255
	BRG	1.5/3	1.6/4.1	2.6/6.4	1.5/3	1.6/4.1	2.6/6.4	3.3/8.2	3.8/9.6	1.5/3	1.6/4.1	2.6/6.4	3.3/8.2	3.8/9.6
16	LL	90	177	289	181	353	579	864	1230	271	530	868	1296	1846
	TL	131	260	428	263	519	856	1124	1391	394	779	1284	1685	2086
	BRG	1.5/3	1.5/3.6	2.3/5.8	1.5/3	1.5/3.6	2.3/5.8	3.1/7.7	3.8/9.5	1.5/3	1.5/3.6	2.3/5.8	3.1/7.7	3.8/9.5
17	LL	75	147	241	151	295	483	720	1026	226	442	724	1081	1539
	TL	109	216	356	218	431	711	994	1230	326	647	1067	1490	1845
	BRG	1.5/3	1.5/3.2	2.1/5.2	1.5/3	1.5/3.2	2.1/5.2	2.9/7.2	3.6/8.9	1.5/3	1.5/3.2	2.1/5.2	2.9/7.2	3.6/8.9
18	LL	64	124	203	127	248	407	607	864	191	372	610	910	1296
	TL	91	181	299	182	361	597	885	1095	273	542	896	1327	1643
	BRG	1.5/3	1.5/3	1.8/4.6	1.5/3	1.5/3	1.8/4.6	2.7/6.8	3.4/8.4	1.5/3	1.5/3	1.8/4.6	2.7/6.8	3.4/8.4
19	LL	54	105	173	108	211	346	516	735	162	316	519	774	1102
	TL	77	153	253	153	306	506	760	981	230	459	759	1139	1472
	BRG	1.5/3	1.5/3	1.7/4.1	1.5/3	1.5/3	1.7/4.1	2.5/6.2	3.2/8	1.5/3	1.5/3	1.7/4.1	2.5/6.2	3.2/8
20	LL	46	90	148	93	181	296	442	630	139	271	445	664	945
	TL	65	130	216	130	261	432	649	884	195	391	648	974	1326
	BRG	1.5/3	1.5/3	1.5/3	1.5/3	1.5/3	1.5/3.7	2.2/5.6	3/7.6	1.5/3	1.5/3	1.5/3.7	2.2/5.6	3/7.6
22	LL	35	68	111	70	136	223	332	473	104	204	334	499	710
	TL	48	97	161	96	193	321	484	694	144	290	482	726	1040
	BRG	1.5/3	1.5/3	1.5/3 .1	1.5/3	1.5/3	1.5/3.1	1.8/4.6	2.6/6.6	1.5/3	1.5/3	1.5/3.1	1.8/4.6	2.6/6.6
24	LL	27	52	86	54	105	172	256	365	80	157	257	384	547
	TL	36	73	122	72	146	245	370	530	108	219	367	554	796
	BRG	1.5/3	1.5/3	1.5/3	1.5/3	1.5/3	1.5/3	1.5/3.9	2.2/5.5	1.5/3	1.5/3	1.5/3	1.5/3.9	2.2/5.5
26	LL	21	41	67	42	82	135	201	287	63	124	202	302	430
	TL	27	56	95	55	113	190	288	414	82	169	284	431	621
	BRG	1.5/3	1.5/3	1.5/3	1.5/3	1.5/3	1.5/3	1.5/3.3	1.9/4.7	1.5/3	1.5/3	1.5/3	1.5/3.3	1.9/4.7
28	LL	17	33	54	34	66	108	161	230	51	99	162	242	344
	TL	21	44	75	42	88	149	227	328	63	132	224	341	492
	BRG	1.5/3	1.5/3	1.5/3	1.5/3	1.5/3	1.5/3	1.5/3	1.6/4.1	1.5/3	1.5/3	1.5/3	1.5/3	1.6/4.1
30	LL	14	27	44	27	54	88	131	187	41	80	132	197	280
	TL	16	35	60	33	70	119	182	264	49	104	179	273	395
	BRG	1.5/3	1.5/3	1.5/3	1.5/3	1.5/3	1.5/3	1.5/3	1.5/3.5	1.5/3	1.5/3	1.5/3	1.5/3	1.5/3.5

Can be applied to the CP-LAM beam in addition to its own weight. • Simple or multiple CP-LAM beam spans

Key to Table:

LL = Maximum live load- limits deflection to L/360

TL= Maximum total load - limits deflection to L/240

BRG= Required end/intermediate bearing length (inches), based on plate bearing stress of 850 psi.

2.1E CP-LAM

ALLOWABLE UNIFORM LOADS ROOF SNOW 115%

ALLOWABLE UNIFORM LOADS* - POUNDS PER LINEAR FOOT - 1-3/4" 2.1E CP-LAM

Span (ft)	Key	One 1-3/4" CP-LAM			Two 1-3/4" CP-LAM					Three 1-3/4" CP-LAM				
		9-1/2"	11-7/8"	14"	9-1/2"	11-7/8"	14"	16"	18"	9-1/2"	11-7/8"	14"	16"	18"
6	TL	1224	1640	2006	2447	3279	4132	5049	6102	3671	4919	6198	7573	9152
	LL	-	-	-	-	-	-	-	-	-	-	-	-	-
	BRG	2.5/6.2	3.3/8.3	4.2/10.4	2.5/6.2	3.3/8.3	4.2/10.4	5.1/12.8	6.2/15.4	2.5/6.2	3.3/8.3	4.2/10.4	5.1/12.8	6.2/15.4
8	TL	859	1127	1390	1718	2254	2780	3323	3917	2577	3380	4170	4984	5875
	LL	-	-	-	-	-	-	-	-	-	-	-	-	-
	BRG	2.3/5.8	3/7.6	3.8/9.4	2.3/5.8	3/7.6	3.8/9.4	4.5/11.2	5.3/13.2	2.3/5.8	3/7.6	3.8/9.4	4.5/11.2	5.3/13.2
10	LL	556	-	-	1111	-	-	-	-	1667	-	-	-	-
	TL	651	858	1047	1302	1716	2093	2474	2882	1954	2573	3140	3711	4322
	BRG	2.2/5.5	2.9/7.3	3.5/8.8	2.2/5.5	2.8/7.3	3.5/8.8	4.2/10.5	4.9/12.2	2.2/5.5	2.9/7.3	3.5/8.8	4.2/10.5	4.9/12.2
11	LL	418	-	-	835	-	-	-	-	1253	-	-	-	-
	TL	537	766	931	1075	1532	1863	2193	2545	1612	2298	2794	3290	3817
	BRG	2 / 5	2.9/7.1	3.5/8.7	2 / 5	2.9/7.1	3.5/8.7	4.1/10.2	4.7/11.8	2 / 5	2.9/7.1	3.5/8.7	4.1/10.2	4.7/11.8
12	LL	322	628	-	643	1256	-	-	-	965	1884	-	-	-
	TL	424	675	839	849	1350	1678	1970	2278	1273	2025	2517	2954	3417
	BRG	1.7/4.3	2.7/6.9	3.4/8.5	1.7/4.3	2.7/6.9	3.4/8.5	4 / 10	4.6/11.6	1.7/4.3	2.7/6.9	3.4/8.5	4 / 10	4.6/11.6
13	LL	253	494	-	506	988	-	-	-	759	1482	-	-	-
	TL	333	574	763	666	1148	1526	1787	2061	999	1723	2289	2681	3092
	BRG	1.5/3.7	2.5/6.3	3.4/8.4	1.5/3.7	2.5/6.3	3.4/8.4	3.9/9.8	4.5/11.3	1.5/3.7	2.5/6.3	3.4/8.4	3.9/9.8	4.5/11.3
14	LL	203	396	648	405	791	1296	-	-	608	1187	1944	-	-
	TL	266	494	666	531	989	1332	1635	1882	797	1483	1997	2453	2823
	BRG	1.5/3.2	2.4/5.9	3.2/7.9	1.5/3.2	2.4/5.9	3.2/7.9	3.9/9.7	4.5/11.2	1.5/3.2	2.4/5.9	3.2/7.9	3.9/9.7	4.5/11.2
15	LL	165	322	527	329	643	1054	-	-	494	965	1581	-	-
	TL	215	423	579	430	847	1158	1475	1732	646	1270	1737	2212	2597
	BRG	1.5/3	2.2/5.4	30/7.4	1.5/ 3	2.2/5.4	3 / 7.4	3.8/9.4	4.4/11	1.5/3	2.2/5.4	3 /7.4	3.8/9.4	4.4/ 11
16	LL	136	265	434	271	530	868	-	-	407	795	1303	-	-
	TL	177	348	508	353	696	1016	1294	1602	530	1044	1525	1941	2402
	BRG	1.5/03	1.9/4.8	2.8/6.9	1.5/ 3	1.9/4.8	2.8/6.9	3.8/8.8	4.4/10.9	1.5/ 3	1.8/4.8	2.8/6.9	3.5/8.8	4.4/10.9
17	LL	113	221	362	226	442	724	1081	-	339	663	1086	1621	-
	TL	146	289	449	293	578	899	1145	1417	439	867	1348	1717	2125
	BRG	1.5/ 3	1.7/4.2	2.6/6.5	1.5/ 3	1.7/4.2	2.6/6.5	3.3/8.3	4.1/10.2	1.5/ 3	1.7/4.2	2.6/6.5	3.3/8.3	4.1/10.2
18	LL	95	186	305	191	372	610	910	-	286	558	915	1366	-
	TL	123	243	400	245	485	800	1020	1262	368	728	1208	1529	1893
	BRG	1.5/ 3	1.5/3.8	2.5/6.2	1.5/ 3	1.5/3.8	2.5/6.2	3.1/7.8	3.9/9.7	1.5/ 3	1.5/3.8	2.5/6.2	3.1/7.8	3.9/9.7
19	LL	81	158	259	162	316	519	774	1102	243	475	778	1161	1653
	TL	104	206	339	207	411	679	914	1131	311	617	1018	1370	1696
	BRG	1.5/ 3	1.5/3.4	2.2/5.5	1.5/3	1.5/3.4	2.2/5.5	3 /7.4	3.7/9.2	1.5/ 3	1.5/3.4	2.2/5.5	3 /7.4	3.7/9.2
20	LL	69	136	222	139	271	445	664	945	208	407	667	996	1418
	TL	88	175	290	177	351	580	823	1019	265	526	870	1235	1529
	BRG	1.5/ 3	1.5/ 3	2 / 5	1.5/ 3	1.5/ 3	2 / 5	2.8/ 7	3.5/8.7	1.5/ 3	1.5/ 3	2 / 5	2.8/ 7	3.5/8.7
22	LL	52	102	167	104	204	334	499	710	157	306	501	748	1065
	TL	65	131	216	131	261	433	650	839	196	392	649	975	1259
	BRG	1.5/ 3	1.5/ 3	1.6/4.1	1.5/ 3	1.5/ 3	1.6/4.1	2.5/6.1	3.2/7.9	1.5/ 3	1.5/ 3	1.6/4.1	2.5/6.1	3.2/7.9
24	LL	40	79	129	80	157	257	384	547	121	236	386	576	820
	TL	49	99	165	99	199	330	498	703	148	298	496	746	1054
	BRG	1.5/ 3	1.5/ 3	1.5/3.5	1.5/ 3	1.5/ 3	1.5/3.5	2.1/5.2	2.9/7.3	1.5/ 3	1.5/ 3	1.5/3.5	2.1/5.2	2.9/7.3
26	LL	32	62	101	63	124	202	302	430	95	185	304	453	645
	TL	38	77	129	76	154	257	388	557	114	231	386	582	836
	BRG	1.5/ 3	1.5/ 3	1.5/ 3	1.5/ 3	1.5/ 3	1.5/ 3	1.8/4.4	2.5/6.3	1.5/ 3	1.5/ 3	1.5/ 3	1.8/4.4	2.5/6.3
28	LL	25	49	81	51	99	162	242	344	76	148	243	363	517
	TL	29	61	102	59	121	203	308	443	88	182	305	462	664
	BRG	1.5/ 3	1.5/ 3	1.5/ 3	1.5/ 3	1.5/ 3	1.5/ 3	1.5/3.8	2.2/5.4	1.5/ 3	1.5/ 3	1.5/ 3	1.5/3.8	2.2/5.4
30	LL	21	40	66	41	80	132	197	280	62	121	198	295	420
	TL	23	48	81	46	96	163	248	357	69	145	244	371	535
	BRG	1.5/ 3	1.5/ 3	1.5/ 3	1.5/ 3	1.5/ 3	1.5/ 3	1.5/ 3.3	1.9/4.7	1.5/ 3	1.5/ 3	1.5/ 3	1.5/ 3	1.9/4.7

Can be applied to the CP-LAM beam in addition to its own weight. • Simple or multiple CP-LAM beam spans

Key to Table:

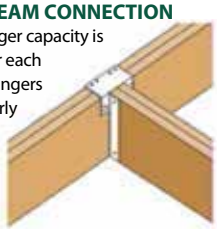
LL = Maximum live load- limits deflection to L/360

TL= Maximum total load - limits deflection to L/240

BRG= Required end/intermediate bearing length (inches), based on plate bearing stress of 850 psi.

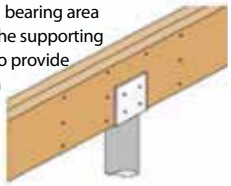
CP-LAM
BEARING DETAILS

3a **BEAM-TO-BEAM CONNECTION**
Make sure hanger capacity is appropriate for each application. Hangers must be properly installed to accommodate full capacity

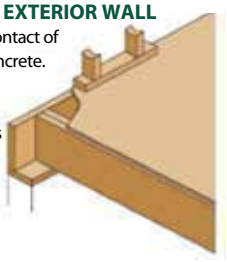


3b **BEARING ON WOOD COLUMN**
Verify the required bearing area and the ability of the supporting column member to provide adequate strength

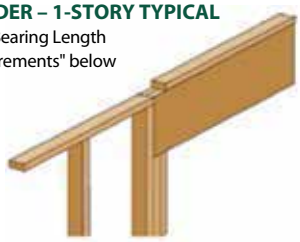
3c **BEARING ON STEEL COLUMN**
Verify the required bearing area and the ability of the supporting column member to provide adequate strength



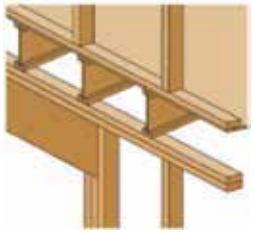
3d **BEARING ON EXTERIOR WALL**
Prevent direct contact of CP-LAM with concrete. Consult local building code for requirements



3e **BEARING FOR DOOR OR WINDOW HEADER – 1-STORY TYPICAL**
See "Bearing Length Requirements" below



3f **WINDOW/DOOR HEADER – 2-STORY TYPICAL**
See "Bearing Length Requirements" below



For multi-ply CP Lam beam assembly conditions and fastening recommendations, see page 24

BEARING LENGTH REQUIREMENTS

CP-LAM BEARING LENGTH REQUIREMENTS

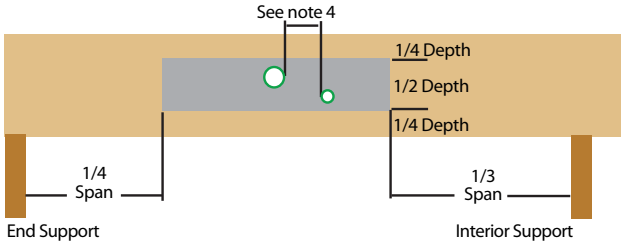
Support Material		S-P-F (South) Hem-Fir (North)[5]		Hem-Fir S-P-F[5]		Southern Pine Douglas Fir-Larch[5]		2.1E CP-LAM[6]	
F_{CL} (psi)		335		405		565		850	
CP-LAM Beam Width (in)		1-3/4"	3-1/2"	1-3/4"	3-1/2"	1-3/4"	3-1/2"	1-3/4"	3-1/2"
Reaction (x 1000 lbs)	1	3"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"
	2	3-1/2"	3"	3"	1-1/2"	3"	1-1/2"	1-1/2"	1-1/2"
	3	5-1/2"	3"	4-1/2"	3"	3-1/2"	3"	3"	1-1/2"
	4	7-1/2"	3-1/2"	6"	3"	4-1/2"	3"	3"	1-1/2"
	5	9-1/4"	4-1/2"	7-1/4"	4-1/2"	5-1/2"	3"	3-1/2"	3"
	6		5-1/2"	9-1/4"	4-1/2"	7-1/4"	3-1/2"	4-1/2"	3"
	7		6"		5-1/2"	7-1/4"	4-1/2"	5-1/2"	3"
	8		7-1/4"		6"	9-1/4"	4-1/2"	5-1/2"	3-1/2"
	9		9-1/4"		7-1/4"	9-1/4"	5-1/2"	7-1/2"	3-1/2"
	10		9-1/4"		7-1/4"		5-1/2"	7-1/2"	3-1/2"
	11				9-1/4"		6"	7-1/2"	4-1/2"
	12				9-1/4"		7-1/4"	9"	4-1/2"

Support Material		S-P-F (South)		Hem-Fir S-P-F[5]		Southern Pine Douglas Fir-Larch[5]		2.1E CP-LAM[6]	
F_{CL} (psi)		335		405		565		850	
CP-LAM Beam Width (in)		1-3/4"	3-1/2"	1-3/4"	3-1/2"	1-3/4"	3-1/2"	1-3/4"	3-1/2"
Reaction (x 1000 lbs)	13				9-1/4"		7-1/4"		4-1/2"
	14						7-1/4"	9"	5-1/2"
	15						9-1/4"		5-1/2"
	16						9-1/4"		5-1/2"
	17						9-1/4"		6"
	18						9-1/4"		7-1/2"
	19								7-1/2"
	20								7-1/2"
	21								7-1/2"
	22								7-1/2"
	23								9"

Notes:
1. The minimum required bearing length is 1-1/2"
2. Duration of load factors may not be applied to bearing length requirements.
3. All CP-Lam beams require support across their full width.
4. All CP-LAM beams require lateral support at bearing points.
5. Use these values when the CP-LAM beam is supported by a wall plate, sill plate, timber or built up girder.
6. Use these values when the CP-LAM beam is supported by the end of a column or connection hardware.
7. The support member must be sized to carry the load from the CP-LAM beam.

HOLE DETAILS

HOLES IN CP-LAM BEAMS



NOTES:
1. This technical note applies only to uniformly loaded, simple and multiple span CP-LAM beams. Beams that carry concentrated loads, or cantilevered beams, are outside the scope of this technical note.
2. Square and rectangle holes are not permitted.
3. Round holes may be drilled or cut with a hole saw anywhere within the shaded area of the CP-LAM beam.
4. The horizontal distance between adjacent holes must be at least two times the size of the larger hole. This restriction also applies to the location of access holes relative to bolt holes in multi-ply CP-LAM beams.
5. Do not drill more than three access holes in any four foot long section of CP-LAM beam.
6. The maximum round hole diameter permitted is:

CP-LAM Beam Depth	5-1/2"	7-1/2"	9-1/2" to 24"
Maximum Hole Diameter	3/4"	1"	1-1/2"

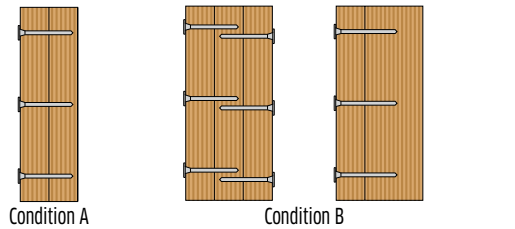
7. These limitations apply to holes drilled for plumbing or wiring access only. The size and location of holes drilled for fasteners are governed by the provisions of National Design Specifications® for wood construction.
8. CP-LAM beams deflect under load. Size holes to provide clearance where required.

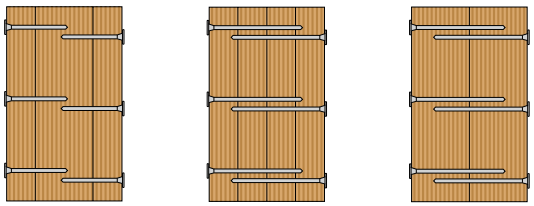
Need assistance? Contact us at ewp@coastalfp.com or 800-932-9633

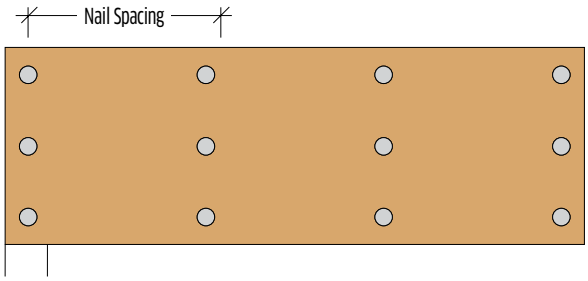
MULTI-PLY
CP-LAM BEAM ASSEMBLY

COMBINATIONS OF 1¾" AND 3½" PLIES

NAILS







1¾" AND 3½" PLIES–MAXIMUM UNIFORM SIDE LOAD (PLF)

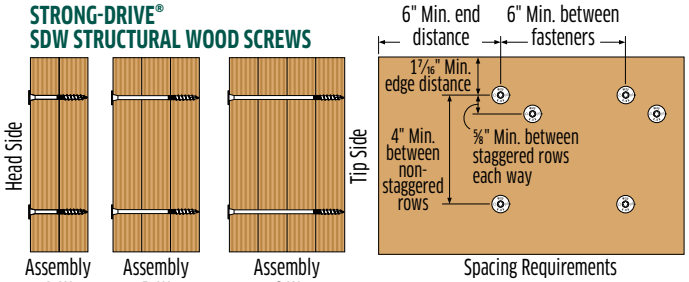
Condition	3¼" x 0.131" Nails		16d Common Nails	
	2 Rows at 12" o.c.	3 Rows at 12" o.c.	2 Rows at 12" o.c.	3 Rows at 12" o.c.
Condition A (2-1¾")	390	585	565	845
Condition B (3-1¾" OR 1-1¾" + 1-3½")	290	435	425	635
Condition C (2-1¾" + 1-3½")	260	390	375	565
Condition D (4-1¾")	Use bolts for this condition (see note 1).			
Condition E (2-3½")	Use bolts for this condition (see note 1).			

Notes:

1. Minimum fastener schedule for smaller side loads and top-loaded beams:
   Conditions A, B & C, beams 12" deep or less: 2 rows 3¼" x 0.131" at 12" o.c.
   Conditions A, B & C, beams deeper than 12": 3 rows 3¼" x 0.131" at 12" o.c.
   Conditions D & E, all beam depths: 2 rows ½" bolts at 24" o.c.
2. The table values for nails may be doubled for 6" o.c. and tripled for 4" o.c. nail spacings.
3. The nail schedules shown apply to both sides of a three-ply beam.
4. The table values apply to bolts meeting the requirements of *ANSI/ASME Standard B18.2.1.* A standard cut washer, or metal plate or strap of equal or greater dimensions, shall be provided between the wood and the bolt head and between the wood and the nut. The distance from the edge of the beam to the bolt holes must be at least 2" for ½" bolts. Bolt holes shall be the same diameter as the bolt.
5. 7" wide beams must be loaded from both sides and/or top loaded.
6. Beams wider than 7" must be designed by the engineer of record.
7. Load duration factors may be applied to the table values.
8. For proprietary fastener alternatives, consult the manufacturer's literature.

COMBINATIONS OF 1¾" PLIES

STRONG-DRIVE® SDW STRUCTURAL WOOD SCREWS



SIDELOADED 1¾ MULTI-PLY SCL ASSEMBLIES – ALLOWABLE UNIFORM LOAD APPLIED TO EITHER OUTSIDE MEMBER

Multiple Members		Nominal Screw Length (in)	Loaded Side	Structural Composite Lumber					
				SDW @ 12" o.c.		SDW @ 16" o.c.		SDW @ 24" o.c.	
Assembly	Components			2 Rows	3 Rows	2 Rows	3 Rows	2 Rows	3 Rows
A-W	2-ply SCL	3⅜	Either	1600	2400	1200	1800	800	1200
B-W	3-ply SCL	5	Head	1200	1800	900	1350	600	900
			Tip	900	1350	675	1015	450	675
C-W	4-ply SCL	6¾	Head	1065	1600	800	1200	535	800
			Tip	800	1200	600	900	400	600

1. Each ply is assumed to carry same proportion of load.
2. Loads may be applied to the head side and point side concurrently provided neither published allowable load is exceeded. (Example: a 3-ply assembly with a head side load of 1300 plf and point side load of 1000 plf may be fastened together with 3 rows of SDW @ 16" o.c.)
3. When hangers are installed on point side, hanger face fasteners must be a minimum of 3" long.
4. Tables are based on Main Member Penetration as noted in Single-Fastener Load Tables of the *Simpson Strong-Tie Fastening Systems* 2017-2018 Catalog C-F-2017 (page 358).
5. Please consult strongtie.com for the latest fastener details and data.

Installation

- SDW screws install best with a low-speed ½" drill and a T-40 6-lobe bit. The matched bit included with the screws is recommended for best results.
- Screw heads that are countersunk flush to the wood surface are acceptable if the screw has not spun out.
- Individual screw locations may be adjusted up to 3" to avoid conflicts with other hardware or to avoid lumber defects.

SCREW DIMENSIONS

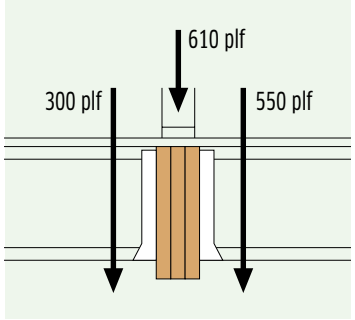
Model No.	Nominal Screw Length (L) (in)	Thread Length (TL) (in)	Head Stamp Length
SDW22338	3⅜	1 7/16	3.37
SDW22500	5	1 7/16	5.00
SDW22634	6¾	1 7/16	6.75

- Pre-drilling is typically not required.

How to Use the Maximum Uniform Side Load Table

EXAMPLE: THREE 1¾" PLIES LOADED FROM BOTH SIDES AND ABOVE (COND. B)

1. Use allowable load tables or sizing software to size the beam to carry a total load of (300 + 610 + 550) = 1460 plf.
2. Refer to the Condition B row in the table. Scan across the row from left to right for a table value greater than 550 plf, which is the greatest side load carried by the beam. The fourth value in the row indicates that 3 rows of 16d common nails at 12" o.c. will accommodate a side load of 635 plf which is greater than the 550 plf required. Use 3 rows of 16d common nails at 12" o.c., from both sides, to assemble the beam.



PWT TREATED LVL

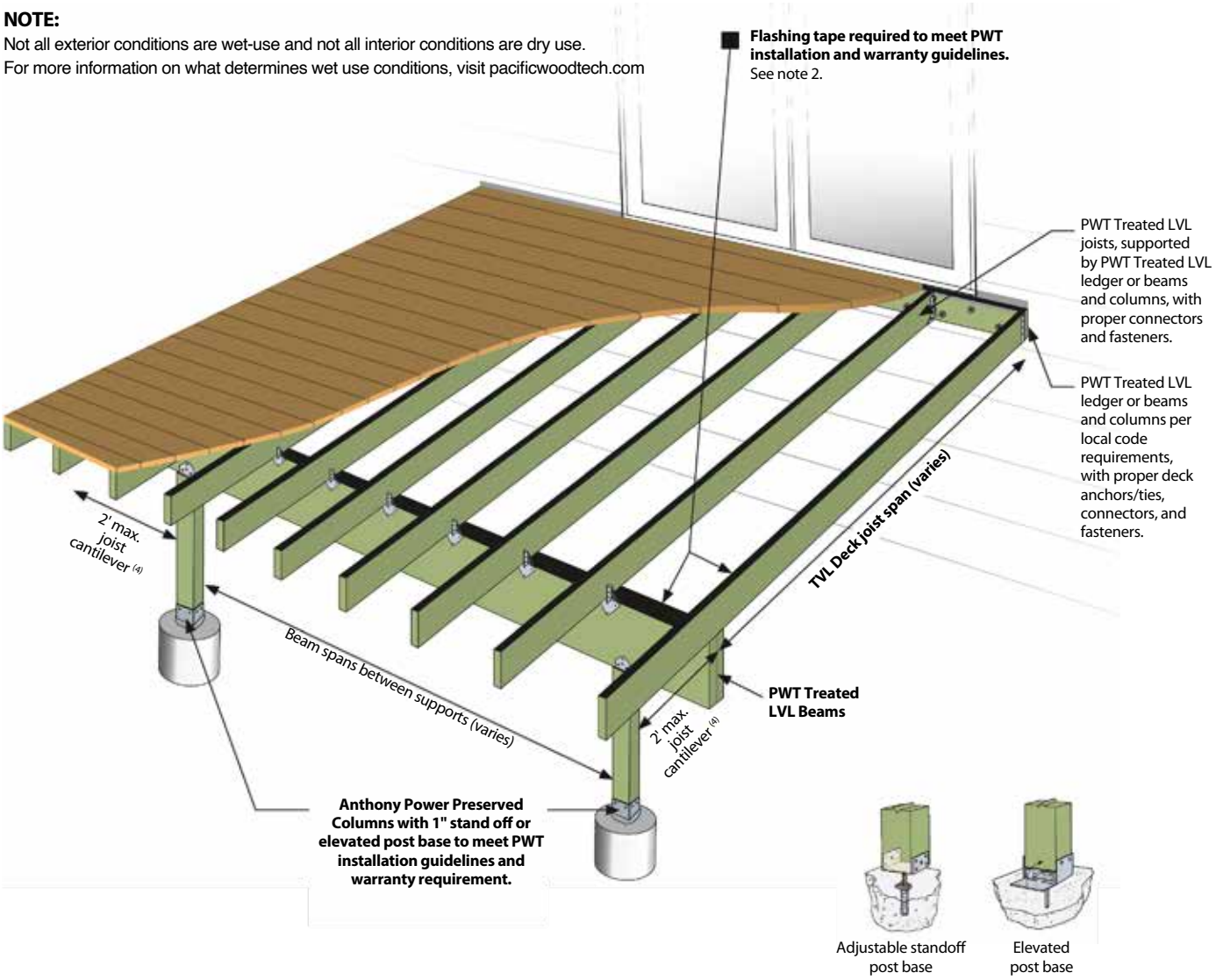
TREATED LAMINATED VENEER LUMBER

REFERENCE DESIGN VALUE
DRY USE

True (Shear-Free) Modulus of Elasticity,	E = 2,000,000[1][4]
Bending (beam),	Fb = 2,800[2][3]
Horizontal Shear (beam),	Fv = 285 psi
Compression perpendicular to grain [psi],	Fc = 850 psi

(1) Do not adjust for load duration.
(2) Adjust by $(12/d)^{0.2}$, where d is the depth of the member [inches].
(3) Adjust by 1.04 for repetitive members as defined in the NDS.
(4) True (Shear-Free) modulus of elasticity does not account for shear deformation.
(5) See APA Product Report PR-L329.

NOTE:
Not all exterior conditions are wet-use and not all interior conditions are dry use.
For more information on what determines wet use conditions, visit pacificwoodtech.com



NOTES:
1. For diagonal bracing, see AWC Deck Construction Guide, page 10, figure 10 located at pacificwoodtech.com/treated.
2. For flashing tape recommendations, visit pacificwoodtech.com/treated.
3. For fastener and hanger information, visit strongtie.com/deckcenter.
4. Design conditions outside of the scope of this guide may be designed using CSD Software.

Need assistance? Contact us at ewp@coastalfp.com or 800-932-9633

PWT TREATED LVL

TREATED LAMINATED VENEER LUMBER

PWT Treated LVL is treated throughout each layer therefore, "re-treatment" is unnecessary. **However, all end cuts should be coated with a sealer or paint to minimize swelling, as moisture will wick into end-grain fibers more quickly than edges and faces.**

Flashing or approved flashing tape is required for all upward facing horizontal surfaces. Coastal supplies Joist Guard by Henry or HydroFlash from Benjamin Obdyke. A complete list of approved tapes is available at pacificwoodtech.com

Product Highlights

- PWT Treated LVL is the only manufacturer-treated LVL, and it is covered by a 25-year limited, transferable warranty.
- PWT Treated LVL is protected against damage caused by fungal rot, decay and wood-destroying insects, including Formosan termites (interior or exterior usage.)
- We use a proprietary treatment system and process, utilizing TRU-CORE® technology.

The Product

- PWT Treated LVL may be used in exterior construction above-ground applications (UC3B) and for components that are difficult to maintain, repair, or replace and that are critical to the performance and safety of the entire system:
  - Deck substructures, exterior columns, sill plates and fascia
- Treatment is added during the LVL manufacturing process, which fully penetrates throughout each veneer layer, offering complete protection from the inside out
- No treatment gradient - and double (2X) the preservative retention required in various standards around the world
- Additionally, envelope treated for best surface properties

Product Identification

Product will have a muted olive tint

Stamp: "PWT TREATED"

Special PWT Treated LVL paper wrap

2.0 PWT Treated TVL Joist Span Table

Dry Use- Maximum Allowable Deck Joist Spans Without Overhangs L/360 50 psf 10 psf

Species	Nominal Size	Joist Spacing (oc)		
		12"	16"	24"
2.0 true PWT Treated TVL	1 3/4" x 9 1/2"	19' 01"	17' 04"	15' 02"
	1 3/4" x 11 7/8"	23' 11"	21' 09"	19' 00"
	1 3/4" x 14"	28' 02"	25' 07"	22' 04"
Pressure Treated #2 Southern Pine	2x8	13' 06"	12' 03"	10' 06"
	2x10	17' 02"	15' 08"	13' 05"
	2x12	20' 11"	19' 00"	16' 04"

COASTAL ENGINEERED FRAMING LUMBER

Stocked at Coastal Forest Products Up to 32' Lengths

2 x 4 up to 20'	2 x 10 (9-1/2") up to 32'
2 x 6 up to 24'	2 x 12 (11-7/8") up to 32'
2 x 8 up to 28'	

1.6 MOE

- Same size as SPF/Fir (1-1/2")
- Low moisture content means dimensionally stable
- Ideal for long rafters (up to 32')
- Similar spans like I-joists
- Approved as substitute in new IRC fire code
- Uses standard size joist hangers
- Douglas Fir
- Frame roof with traditional compression ridge and collar ties
- No problem notching birdmouths
- Every piece is wane free!
- Excellent product for stair stringers!
- No cracks, rot or large knots, dried to 12%
- Engineered sizing available through CSD
- I-Struct software
- MOE 1.6 (Modulas of Elasticity)
- F_b 2250 psi (Fiber Bending)
- F_v 230 psi (Shear)
- F_c 1600 psi (Compression Parallel to Grain)
- These values are based on normal load duration.
- When structural members qualify as repetitive members in accordance with applicable code, a 4% increase is permitted to Fb.
- Manufactured by Pacific Woodtech

Need assistance? Contact us at ewp@coastalfp.com or 800-932-9633

PWT FOCUSED ON EWP

ENGINEERED STUDS
LAMINATED VENEER LUMBER

LAMINATED VENEER LUMBER ENGINEERED FOR STRUCTURAL FRAMING

Extra-long PWLVL Dimension offers a stronger, stiffer, and straighter product than dimension lumber for all your structural applications. PWLVL Dimension is competitive in materials cost and is easy to handle and install, which can result in shorter construction schedules, saving you time and money. Build with confidence. Use beam-calculating software for better optimization of material selection and on-center spacing. PWLVL Dimension is available in virtually any length.

PWLVL DIMENSION DESIGN PROPERTY COMPARISON[1][2]

Product		Modulus of Elasticity E (psi)	Bending F_b (psi)[3]	Horizontal Shear F_v (psi)	Compression Parallel to Grain F_c (psi)[4]
2 x 4	1.5" x 3.5" x 1.6E PWLVL	1600000	2995	230	1950
	2x4 Douglas Fir-Larch No. 2	1600000	1555	180	1550
	2x4 Spruce-Pine-Fir No. 1 / No. 2	1400000	1510	135	1325
	2x4 Hem-Fir No. 2	1300000	1465	150	1495
	2x4 Western Woods No. 2	1000000	1165	135	1035
2 x 6	1.5" x 5.5" x 1.6E PWLVL	1600000	2735	230	1950
	2x6 Douglas Fir-Larch No. 2	1600000	1345	180	1485
	2x6 Spruce-Pine-Fir No. 1 / No. 2	1400000	1310	135	1265
	2x6 Hem-Fir No. 2	1300000	1270	150	1430
	2x6 Western Woods No. 2	1000000	1010	135	990
2 x 8	1.5" x 7.25" x 1.6E PWLVL	1600000	2590	230	1950
	2x8 Douglas Fir-Larch No. 2	1600000	1240	180	1420
	2x8 Spruce-Pine-Fir No. 1 / No. 2	1400000	1205	135	1210
	2x8 Hem-Fir No. 2	1300000	1175	150	1365
	2x8 Western Woods No. 2	1000000	930	135	945
2 x 10	1.5" x 9.25" x 1.6E PWLVL	1600000	2465	230	1950
	2x10 Douglas Fir-Larch No. 2	1600000	1140	180	1350
	2x10 Spruce-Pine-Fir No. 1 / No. 2	1400000	1105	135	1150
	2x10 Hem-Fir No. 2	1300000	1075	150	1300
	2x10 Southern Pine No. 2	1400000	920	175	1300
2 x 12	1.5" x 11.25" x 1.6E PWLVL	1600000	2370	230	1950
	2x12 Douglas Fir-Larch No. 2	1600000	1035	180	1350
	2x12 Spruce-Pine-Fir No. 1 / No. 2	1400000	1005	135	1150
	2x12 Hem-Fir No. 2	1300000	975	150	1300
	2x12 Southern Pine No. 2	1400000	860	175	1250

Notes:

1. Refer to APA PR-L233 for PWLVL adjustment factors and other design properties.
2. Refer to the 2015 NDS® for lumber adjustment factors and other design properties.
3. Load applied to the narrow face of the member. Repetitive member and size factors have been applied where applicable.
4. Size factors have been applied to lumber values where applicable.
5. MOE is a True (Shear-Free MOE) and it does not account for shear deformation.

COASTAL ENGINEERED FRAMING LUMBER SPANS

L/480 ALLOWABLE RESIDENTIAL FLOOR SPANS–40 PSF LIVE LOAD AND 15 PSF DEAD LOAD

Chart Based Upon Uniform Loads		Simple Span			Multiple Span		
Size	Strength	12" o.c.	16" o.c.	19.2" o.c.	12" o.c.	16" o.c.	19.2" o.c.
1½" x 9½"	1.6 MOE	17'-5"	16'-2"	15'-4"	19'-6"	18'-1"	17'-1"
1½" x 11⅞"	1.6 MOE	21'-7"	19'-11"	18'-11"	24'-2"	22'-3"	20'-0"

L/360 ALLOWABLE RESIDENTIAL FLOOR SPANS–40 PSF LIVE LOAD AND 15 PSF DEAD LOAD

Chart Based Upon Uniform Loads		Simple Span			Multiple Span		
Size	Strength	12" o.c.	16" o.c.	19.2" o.c.	12" o.c.	16" o.c.	19.2" o.c.
1½" x 9½"	1.6 MOE	19'-3"	17'-9"	16'-11"	21'-6"	18'-9"	17'-1"
1½" x 11⅞"	1.6 MOE	23'-9"	21'-11"	20'-10"	26-7"	23'-0"	20'-0"

Notes:

1. Table values apply to uniformly loaded, residential floor joists.
2. Span is measured from face to face of supports.
3. Deflection is limited to L/240 at total load and L/480 or L/360 at live load.
4. Table values are based on glued and nailed sheathing panels (19/32").
   Use an ASTM D3498 adhesive in accordance with the manufacturer's recommendations.
5. Provide at least 1½" of bearing length at end supports, 2" for spans in [brackets], and 3½" at intermediate supports.
6. Provide lateral restraint at supports (e.g. full-depth solid blocking, rim board) and along the compression edge of each joist (e.g. floor sheathing).
7. Use sizing software or consult a professional engineer to analyze conditions outside the scope of this table (e.g. commercial floors, different bearing conditions, concentrated loads) or for multiple span joists if the length of any span is less than half the length of an adjacent span.
8. 14" and 16" m1/3ultiple-span joists require full-depth, solid blocking at 1/3-points along each span.
9. Table values are based on design properties adjusted to account for the Allowable Holes shown to the right.

Highlighted columns indicate stocked sizes

Allowable Holes:

1. Round holes only. Holes must be drilled with a bit or cut with a hole saw.
2. Maximum diameter = 1/2 of the beam depth
3. Maximum 2 holes per span
4. Minimum clearance from edge of hole to:
   – edge of adjacent hole — 2 times the diameter of the larger hole
   – edge of beam — 1/3 of the beam depth
   – face of support — 6 inches

RAFTERS: ROOF—SNOW 115%

ALLOWABLE RAFTER SPAN – L/360

Rafter Spacing (o.c.)	Rafter Size [in.]		Roof Snow Load (PSF)								
			30 LL + 10 DL			40 LL + 10 DL			50 LL + 10 DL		
			Roof Slope			Roof Slope			Roof Slope		
			4:12	8:12	12:12	4:12	8:12	12:12	4:12	8:12	12:12
12"	1½ x 7¼	Span	14'- 11"	12'- 11"	10'- 10"	13'- 10"	12'- 0"	10'- 1"	13'- 0"	11'- 4"	9'- 6"
		Nail Qty.	9	4	3	10	5	3	12	5	3
	1½ x 9½	Span	19'- 7"	16'- 11"	14'- 2"	18'- 2"	15'- 9"	13'- 3"	17'- 1"	14'- 10"	12'- 6"
		Nail Qty.	12	6	3	14	6	4	15	7	4
	1½ x 11⅞	Span	24'- 5"	21'- 2"	17'- 8"	22'- 9"	19'- 9"	16'- 6"	21'- 5"	18'- 7"	15'- 8"
		Nail Qty.	15	7	4	*	8	5	*	9	5
16"	1½ x 7¼	Span	13'- 7"	11'- 9"	9'- 10"	12'- 7"	10'- 11"	9'- 2"	11'- 10"	10'- 4"	8'- 8"
		Nail Qty.	11	5	3	13	6	4	14	7	4
	1½ x 9½	Span	17'- 9"	15'- 5"	12'- 10"	16'- 6"	14'- 4"	12'- 0"	15'- 6"	13'- 6"	11'- 4"
		Nail Qty.	14	7	4	*	8	5	*	8	5
	1½ x 11⅞	Span	22'- 3"	19'- 3"	16'- 1"	20'- 8"	17'- 11"	15'- 0"	19'- 5"	16'- 11"	14'- 2"
		Nail Qty.	*	8	5	*	9	6	*	10	6

Where number of nails is designated as " * " or resulted to more than 15, connection shall be evaluated by a design professional.

Notes:

1. Tables are based on:
   Minimum rafter bearing length of 3½", assuming a top plate FcT of 425 psi.
   Uniform load.
   Simple Span.
2. Spans shown are the maximum horizontal distance from the outside face of the exterior wall to center of ridge.
3. Purlins may be installed (per section R802.5.1 of the IRC) to reduce rafter spans.
4. Interpolation to determine nail quantity for other slopes is permitted.
5. Spans developed using apparent E.
6. Design conditions outside the scope of this guide may be designed using CSD software.

How to Use This Table

1. Determine the roof snow load.
2. Determine the rafter on-center spacing.
3. Scan down the appropriate roof snow load column until reaching a value that meets or exceeds the span of the application.
4. Select the PWLVL rafter depth and note the number of 0.131" x 3¼" nails required at the heel and ceiling joist lap connection for the roof slope.
5. Spans developed using apparent E.

Power Beam®

DESIGN PROPERTIES 3000F

Allowable Design Stresses (psi)					
	Flexural Stress** Fb	Tension Parallel to Grain Ft	Compression P perpendicular to Grain F c1	Horizontal Shear Fv	Modulus of Elasticity E
3-1/2" & 5-1/2"	3000	1350	805	300	2,100,000
7"	3000	1300	805	300	2,100,000

Power Beam® Section Properties and Allowable Capacities					
3-1/2" BEAM WIDTH					
Depth (in)	9-1/2	11-7/8	14	16	18
Weight* (lbs/ft)	9.2	11.6	13.6	15.6	17.5
C_{db} Factor (L=21')	1.0	1.0	1.0	1.00	0.999
I (in^4)	250	489	800	1195	1701
Moment Capacity (lbs-ft)	13161	20582	28583	37333	47193
Shear Capacity (lbs)	6650	8316	9800	11200	12600
5-1/2" BEAM WIDTH					
Depth (in)	9-1/2	11-7/8	14	16	18
Weight* (lbs/ft)	14.5	18.2	21.4	24.4	27.5
C_{db} Factor (L=21')	1.00	0.989	0.989	0.982	0.976
I (in^4)	393	768	1258	1877	2673
Moment Capacity (lbs-ft)	20682	32246	44415	57625	72503
Shear Capacity (lbs)	10450	13068	15400	17600	19800
7" BEAM WIDTH					
Depth (in)	9-1/2	11-7/8	14	16	18
Weight* (lbs/ft)	18.5	23.1	27.2	31.1	35.0
C_{db} Factor (L=21')	0.996	0.985	0.977	0.970	0.965
I (in^4)	500	978	1601	2389	3402
Moment Capacity (lbs-ft)	24472	37845	52127	67631	85093
Shear Capacity (lbs)	13300	16632	19600	22400	25200
Stock Depths	9-1/2"	11-7/8"	14"	16"	18"

* Beam Weights are based on 40 pcf.

** Flexural Stress, F_b, shall be modified by Volume Factor, C_V, as outlined in ICC ESR-1940, APA Product report-L263 and APA-EWS Y117

where;

$C_V = K_L [(21/L)^{0.05} \times (12/d)^{0.05} \times (5.125/b)^{0.05}] < 1.0$

where:

K_L = loading coefficient (1.0 for uniformly distributed),

L = length of bending member between points of zero moment, ft.,

d = depth of bending member, in.

b = width of bending member, in.

Tabulated Moment Capacities are based on a span of 21 feet and modified for other spans.

Width and depth portions of Volume Factor, C_V, are incorporated in tabulated Moment Capacities using C_{db} Factor.

Note: Allowable design properties and load capacities are based on a load duration of 100 percent and dry use conditions.

Power Beam®

DESIGN PROPERTIES 3000F

VERTICAL HOLES

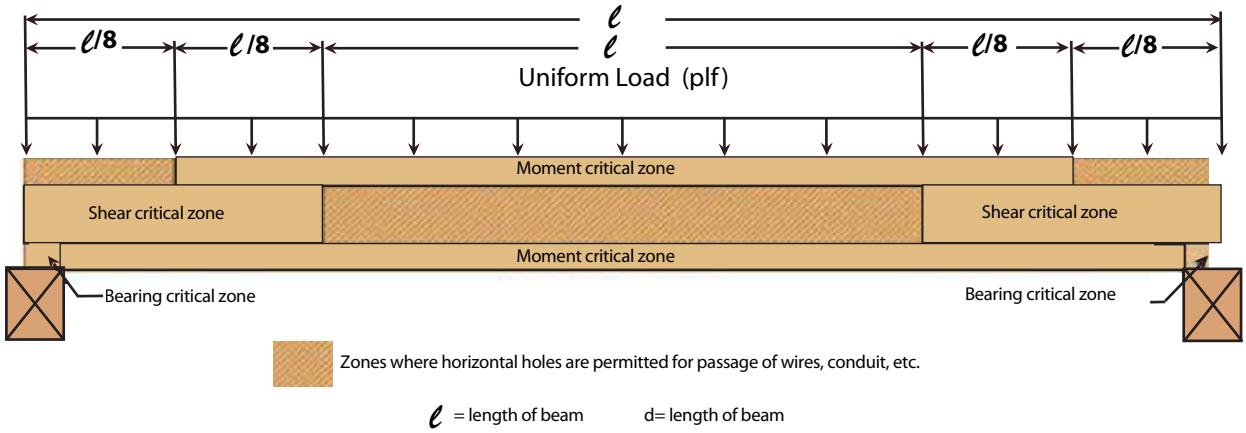
Whenever possible, avoid drilling vertical holes through glulam beams. As a rule of thumb, vertical holes drilled through the depth of a glulam beam will cause a reduction in the capacity at the location directly proportional to the ratio of 1-1/2 times the diameter of the hole to the width of the beam. For example a one inch drilled hole in a 6-inch wide beam would reduce the capacity of the beam at that section by approximately $\frac{(1 \times 1\text{-}1/2)}{6} = 25\%$

For this reason, when it is necessary to drill vertical holes through a glulam member, the holes should be positioned in areas of the member that are stressed to less than 50 percent of design in bending. In a simply supported, uniformally loaded beam, this area would be located from the end of the beam inward approximately 1/8 of the beam span. In all cases, the minimum clear edge distance, as measured from either side of the member to the nearest edge of the vertical hole, should be 2-1/2 times the hole diameter. Use a drill guide to minimize " wandering" of the bit as it passes through knots or material of varying density, and to insure a true alignment of the hole through the depth of the beam.

HORIZONTAL HOLES

Like notches, holes in a glulam beam remove wood fiber, thus reducing the net area of the beam at the hole location and introducing stress concentrations. These effects cause a reduction in the capacity of the beam in the area of the penetration. For this reason, horizontal holes in glued laminated timbers are limited in size and location to maintain the structural integrity of the beam. Figure 1 shows the zones of a uniformly loaded, simply supported beam where the field drilling of holes may be considered. These non-critical zones are located in portions of the beam stressed to less than 50 percent of design bending stress and less than 50 percent of design shear stress. For beams of more complex loading or other than simple spans, similar diagrams may be developed.

ZONES WHERE SMALL HORIZONTAL HOLES ARE PERMITTED IN A UNIFORMLY LOADED, SIMPLY SUPPORTED BEAM



Field-drilled holes should be used for access only and should not be used as attachment points for brackets or other load bearing hardware unless specifically designed as such by the engineer or designer. Examples of access holes include those used for the passage of wires, electrical conduit, small diameter sprinkler pipes, fiber optic cables, and other small, lightweight materials. These field-drilled horizontal holes should meet the following guidelines:

1. **Hole size**: the hole diameter should not exceed 1-1/2 inches or 1/10 the beam depth, whichever is smallest, with the exception of 1-inch-diameter or smaller holes as noted in Item 2 below.

2. **Hole location:** The hole should have a minimum clear distance, as measured from the edge of the hole to the nearest of the beam, of 4 hole diameters to the top or bottom face of the beam and 8 hole diameters from the end of the beam. Note that the horizontal hole should not be drilled in the moment-critical zone, as defined in the figure above, unless approved by an engineer or architect qualified in engineered timber design.

Need assistance? Contact us at ewp@coastalfp.com or 800-932-9633

Power Beam® ALLOWABLE FLOOR LOAD TABLES LDF=1.0 - 3000F

These tables can be used to size simple span beams and headers that carry uniform loads. The PLF loads must be calculated and take into account all floor and roof framing loads coming onto the beam or header.

Key: For each clear span there are three numbers:

Row 1: Maximum Total Load with LDF of 1.0, and deflection limited to L/120
Row 2: Maximum Live Load limited by deflection of L/360
Row 3: Required Bearing Length in trimmer thickness
(e.g. 1.5 = 1 trimmer, 3.0 = 2 trimmers, etc.)

ALLOWABLE FLOOR LOAD TABLES LDF=1.0-3000F

Actual Span	3-1/2" Depth (in.)					5-1/2" Depth (in.)				
	9-1/2	11-7/8	14	16	18	9-1/2	11-7/8	14	16	18
7'	2149	3311	4200	5169	6300	3377	5203	6600	8123	9900
	2149	3311	4200	5169	6300	3377	5203	6600	8123	9900
	3	4.5	6	7.5	9	3	4.5	6	7.5	9
8'	1645	2571	3459	4200	5040	2585	4040	5435	6600	7920
	1520	2571	3459	4200	5040	2388	4040	5435	6600	7920
	3	4.5	6	7.5	9	3	4.5	6	7.5	9
9'	1300	2031	2823	3537	4200	2043	3192	4436	5558	6600
	1067	2031	2833	3537	4200	1677	3192	4436	5558	6600
	3	4.5	6	6	7.5	3	4.5	6	6	7.5
10'	1053	1645	2287	2987	3600	1655	2585	3593	4693	5657
	778	1520	2287	2987	3600	1223	2388	3593	4693	5657
	3	3	4.5	6	7.5	3	3	4.5	6	7.5
11'	870	1360	1890	2468	3124	1367	2137	2970	3879	4909
	585	1142	1871	2468	3124	919	1794	2940	3879	4909
	3	3	4.5	6	7.5	3	3	4.5	6	7.5
12'	675	1142	1588	2074	2625	1061	1795	2495	3259	4125
	450	879	1441	2074	2625	707	1382	2264	3259	4125
	1.5	3	4.5	6	6	1.5	3	4.5	6	6
13'	531	973	1353	1767	2237	835	1530	2126	2777	3515
	354	692	1133	1692	2237	556	1087	1781	2658	3515
	1.5	3	4.5	4.5	6	1.5	3	4.5	4.5	6
14'	425	831	1167	1524	1929	668	1305	1833	2395	3020
	284	554	907	1354	1929	446	870	1426	2128	3020
	1.5	3	3	4.5	6	1.5	3	3	4.5	6
15'	346	675	1016	1327	1680	543	1061	1597	2084	2622
	231	450	738	1101	1568	362	707	1159	1731	2464
	1.5	3	3	4.5	6	1.5	3	3	4.5	6
16'	285	556	893	1167	1477	448	874	1404	1825	2297
	190	371	608	907	1292	298	583	955	1426	2030
	1.5	3	3	4.5	4.5	1.5	3	3	45	4.5
17'	238	464	760	1033	1308	373	729	1195	1612	2028
	158	309	507	757	1077	249	486	796	1189	1693
	1.5	1.5	3	4.5	4.5	1.5	1.5	3	4.5	4.5
18'	200	391	640	922	1167	314	614	1006	1434	1804
	133	261	427	637	907	210	409	671	1001	1426
	1.5	1.5	3	3	4.5	1.5	1.5	3	3	4.5
19'	170	332	545	813	1047	267	522	856	1277	1615
	113	222	363	542	772	178	348	570	852	1212
	1.5	1.5	3	3	4.5	1.5	1.5	3	3	4.5
20'	146	285	467	697	945	229	448	734	1095	1454
	97	190	311	465	662	153	298	489	730	1040
	1.5	1.5	3	3	4.5	1.5	1.5	3	3	4.5
21'	126	246	403	602	856	198	387	634	946	1315
	84	164	269	401	571	132	258	422	631	898
	1.5	1.5	3	3	4.5	1.5	1.5	3	3	4.5
22'	110	214	351	524	745	172	336	551	823	1171
	73	143	234	349	497	115	224	367	549	781
	1.5	1.5	1.5	3	3	1.5	1.5	1.5	3	3
23'	96	187	307	458	652	151	294	482	720	125
	64	125	205	305	435	100	196	322	480	683
	1.5	1.5	1.5	3	3	1.5	1.5	1.5	3	3
24'	84	165	270	403	574	133	259	425	634	902
	56	110	180	269	383	88	173	283	422	602
	1.5	1.5	1.5	3	3	1.5	1.5	1.5	3	3
25'	75	146	239	357	508	117	229	376	561	798
	50	97	159	238	339	78	153	250	374	532
	1.5	1.5	1.5	3	3	1.5	1.5	1.5	3	3
26'	59	116	190	283	403	93	182	298	445	634
	40	77	127	189	269	62	121	199	297	422
	1.5	1.5	1.5	1.5	3	1.5	1.5	1.5	1.5	3
27'	66	130	212	317	452	104	204	334	498	710
	44	86	142	211	301	70	136	223	332	473
	1.5	1.5	1.5	1.5	3	1.5	1.5	1.5	1.5	3
28'	53	104	170	254	362	84	163	267	399	568
	35	69	113	169	241	56	109	178	266	379
	1.5	1.5	1.5	1.5	3	1.5	1.5	1.5	1.5	3
29'	48	93	153	229	325	75	147	241	359	511
	32	62	102	152	217	50	98	160	239	341
	1.5	1.5	1.5	1.5	3	1.5	1.5	1.5	1.5	3
30'	43	84	138	206	294	68	133	217	324	462
	29	56	92	138	196	45	88	145	216	308
	1.5	1.5	1.5	1.5	3	1.5	1.5	1.5	1.5	3
32'	36	70	114	170	242	56	109	179	267	381
	24	46	76	113	161	37	73	119	178	254
	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5

Power Column®
COMBINATION #50

FEATURES:

- Combination #50 (#1 Dense SYP)
- MOE = 1.9 x 10 psi
- F_b = 2100-2300 psi
- F_c = 1700-2300 psi
- Treated Columns Available

Stocked at Coastal Forest Products
Up to 48' Lengths

3-1/2" x 3-1/2"	5-1/2" x 5-1/2"
3-1/2" x 5-1/2"	5-1/2" x 7"
3-1/2" x 7"	7" x 7"

Power Column®
COMBINATION #50

Allowable Axial Loads (Pounds) for Combination No. 50

Side loads are not permitted. End loads are limited to a maximum eccentricity of either 1/6 column width or depth, whichever is worse.

Effective Column Length (ft)	Lamination Net Width = 3-12"								
	Net Depth = 3-1/2" (3 lams)			Net Depth = 5-1/2" (4 lams)			Net Depth = 7" (6 lams)		
				Load Duration Factor			Load Duration Factor		
	1.00	1.15	1.25	1.00	1.15	1.25	1.00	1.15	1.25
4	11,750	13,130	13,990	22,740	25,110	26,560	29,700	32,950	34,950
6	9,130	9,810	10,200	16,260	17,220	17,770	21,900	23,300	24,110
8	6,600	6,910	7,090	11,220	11,660	11,920	15,350	16,000	16,370
10	4,830	5,000	5,090	8,040	8,290	8,430	11,090	11,450	11,650
12	3,650	3,750	3,810	6,010	6,160	6,250	8,330	8.540	8,670
14	2,840	2,910	2,950	4,650	4,750	4,800	6,460	6,600	6,680

Effective Column Length (ft)	Lamination Net Width = 5-1/2"						Lamination Net Width = 7"		
	Net Depth = 5-1/2" (4 lamas)			Net Depth = 7" (6 lams)			Net Depth = 7" (6 lams)		
	Load Duration Factor			Load Duration Factor			Load Duration Factor		
	1.00	1.15	1.25	1.00	1.15	1.25	1.00	1.15	1.25
6	32,920	36,550	38,810	45,610	51,260	54,840			
8	27,420	29,640	30,950	39,290	42,590	44,520	53,480	59,380	63,060
10	21,970	23,280	24,000	31,680	33,560	34,650	46,900	51,070	53,550
12	17,550	18,380	18,850	25,300	26,470	27,140	40,070	42,840	44,450
14	14,200	14,760	15,080	20,430	21,210	21,660	38,840	35,730	36,830
16	11,670	12,060	12,290	16,760	17,300	17,610	28,630	29,990	30,770
18	9,730	10,020	10,180	13,950	14,350	14,580	24,400	25,400	25,980
20	8,230	8,440	8,570	11,780	12,080	12,250	20,980	21,740	22,180
22	7,040	7,210	7,300	10,070	10,290	10,420	18,190	18,780	19,120
24	----	----	----	-----	-----	-----	15,900	16,370	16,640

NOTES and Allowable Design Properties

1. The tabulated allowable loads apply to one-piece glulam members made with all N1D14 laminations (Combination 50) without special tension laminations.
2. Applicable service conditions = dry.
3. The tabulated allowable loads are based on simply axially loaded columns subjected to a maximum eccentricity of either 1/6 column width or 1/6 column depth, whichever is worse. For side loads, other eccentric end loads, or other combined axial and flexural loads, see 2005 NDS.
4. The column is assumed to be unbraced, except at the column ends, and the effective column length is equal to the actual column length.
5. Design properties for normal load duration and dry-use service conditions:
   - Compression parallel to grain (F_c) = 2,300 psi for 4 or more lams, or 1,700 psi for 2 or 3 lams.
   - Modulus of elasticity (E) = 1.9 x 10 psi.
   - Flexural stress when loaded parallel to wide faces of lamination (F_{by}) = 2,300 psi for 4 or more lams, or 2,100 psi for 3 lams.
   - Flexural stress when loaded perpendicular to wide faces of lamination (F_{bx}) = 2,100 psi for 2 lams to 15" deep without special tension laminations.
   - Volume factor for F_{bx} is in accordance with 2005 NDS. Size factor for F_{by} is $(12/d)^{1/9}$, where d is equal to the lamination width inches.

POWER PRESERVED GLULAM®
CLEAR GUARD™ TREATED GLULAMS

POWER PRESERVED GLULAM® (PPG)

Anthony Forest Products® has been a name to trust in the glued laminated timber business for over 45 years. Anthony stock 2400F_b -2.1E - 300 F_v SYP glulam has been our mainstay in business along with the high strength Power Beam® 3000F_b - 1.8E - 300F_v IJC beam.

With the shortage of high-quality, high strength, solid southern pine treated timber, Anthony offers Power Preserved Glulam® Beams, which have been pressure treated with Hoover Cop-Guard® or Clear-Guard™ at .04 pounds per cubic foot (PCF) or .02 pounds per cubic foot retention levels suitable for above ground uses respectively. Power Preserved Glulam® products will resist fungal decay and wood-destroying insect attacks and are covered by a 25 year warranty by Hoover.

Cop-Guard® (Copper Naphthenate-CuN and Clear-Guard™ (PBC/Permethrin) wood preservatives are both dissolved in low odor mineral spirits as a carrier and are an ideal fungicide and insecticide for the long term preservation of wood products. PPG beams and columns have a green coloration when treated with Cop-Guard® and have no real color change when treated with Clear-Guard™ wood preservatives.

Clear-Guard™ wood preservative treated glulam is in a solution of IPBC (fungicide) and Permethrin (insecticide) wood preservative listed in AWPA P-58-10. Both preservatives are low in toxicity, environmentally safe, and non-corrosive to fasteners.

- Three times as strong as #2 PT SYP 4 x 12
- No strength reductions required after treatment.
- Automatic substitute for Parallam® Plus PSL.
- Stainable and Paintable (See restrictions).
- Not considered hazardous material

Stocked at Coastal Forest Products Up to 48' Lengths

3-1/2" x 9-1/2"	5-1/4" x 9-1/2"
3-1/2" x 11-7/9"	5-1/4" x 11-7/8"

CONDITIONS OF USE (DRY OR WET)

Power Preserved Glulam® products are recommended for above ground use where the equilibrium moisture content (EMC) of the laminated beam will not exceed 16% thus allowing dry-use design values (over 16% considered wet-use.) The definitions of dry and wet service vary from the many publications available on the subject.

CODE APPROVALS

Power Preserved Glulam® is manufactured in accordance with ANSIA190.1, which is the code recognized standard for glued laminated timber and is accepted nationwide under the CC-ESR 1940 and APA Product Report L282. The adhesive used in our glulam conforms to wet-use complying with ASTM D2559. The APA-EWS is our third party inspection agency.

FACT SHEET

- 2400F_b - 1.8E - 300F_v SYP glulam industrial grade.
- High strength allows for reduction in size columns or number of pilings and piers.
- Two separate warranties for your protection.
- Balanced lay-up and zero camber.
- No top or bottom.
- As environmentally safe as untreated wood.
- Above ground use for beams (AWPA use categories UC3B) and ground contact for the columns (AWPA use categories UC4A, UC4B and UC4C).
- For PPG Beams sizes not listed, please call Anthony Forest.

FASTENERS

- Non-Corrosive fasteners may be used with PPG in protected areas.
- Corrosion resistant fasteners are required if a connection is made to other water borne copper treated wood.
- Local building code requirements will always supersede above restrictions.
- Above ground use for beams (AWPA use categories UC3B) and ground contact for the columns (AWPA use categories UC4A, UC4B and UC4C).
- For PPG Beams sizes not listed, please call Anthony Forest.

Need assistance? Contact us at ewp@coastalfp.com or 800-932-9633

POWER PRESERVED GLULAM®
CLEAR GUARD™ TREATED GLULAMS

Treated Glulam Allowable Floor Loads (plf)

EWS 24F-V5M1/SP • Dry-Use • F_b=2,400 psi • F_v=300 psi • E=1.8 x 10^6 psi • $F_{c\perp}$ =740 psi • (LDF=1.00)

Width (in)	Depth (in)	Load Condition	Span (feet) 6	8	10	12	14	16	18	20	22	24	26
3-1/2"	9 1/2	Total Load	2108	1293	827	474	298	200	140	102	77	59	47
		Live Load	---	1279	655	379	239	160	112	82	62	47	37
		Min. End/Int.Bearing (in.)	2.5/6.3	2.0/5.0	1.6/4.0	1.5/3.8	1.5/3.8	1.5/3.8	1.5/3.8	1.5/3.8	1.5/3.8	1.5/3.8	1.5/3.8
	11 7/8	Total Load	2901	1918	1293	898	583	390	274	200	150	116	91
		Live Load	---	---	1279	740	466	312	219	160	120	93	73
		Min. End/Int.Bearing (in.)	3.4/8.5	3.0/7.5	2.5/6.3	2.1/5.3	1.6/4.0	1.5/3.8	1.5/3.8	1.5/3.8	1.5/3.8	1.5/3.8	1.5/3.8
	14	Total Load	3743	2401	1782	1248	917	702	449	328	246	190	149
		Live Load	---	---	1784	1213	764	512	359	262	197	152	119
		Min. End/Int.Bearing (in.)	4.4/11.0	3.8/9.5	3.5/8.8	2.9/7.3	2.8/7.0	2.2/5.5	1.6/4.0	1.5/3.8	1.5/3.8	1.5/3.8	1.5/3.8
	16	Total Load	4719	2926	2101	1615	1182	901	671	489	367	283	223
		Live Load	---	---	---	---	1140	764	537	391	294	226	178
		Min. End/Int.Bearing (in.)	5.6/14.0	4.6/11.5	4.1/10.3	3.8/9.5	3.3/8.3	2.8/7.0	2.4/6.0	1.9/4.8	1.6/4.0	1.5/3.8	1.5/3.8
	18	Total Load	5917	3522	2485	2046	1499	1143	899	725	523	403	317
		Live Load	---	---	---	---	---	1088	764	557	418	322	253
		Min. End/Int.Bearing (in.)	7.0/17.5	5.5/13.8	4.9/2.3	4.8/12.0	4.1/10.3	3.6/9.0	3.2/8.0	2.8/7.0	2.3/5.8	1.9/4.8	1.6/4.0
5-1/4"	9 1/2	Total Load	3199	1948	1264	719	453	303	214	156	117	90	71
		Live Load	---	1181	605	350	220	148	104	76	57	44	34
		Min. End/Int.Bearing (in.)	2.5/6.3	2.0/5.0	1.6/4.0	1.5/3.8	1.5/3.8	1.5/3.8	1.5/3.8	1.5/3.8	1.5/3.8	1.5/3.8	1.5/3.8
	11 7/8	Total Load	4403	2910	1944	1344	885	593	419	305	229	177	139
		Live Load	---	---	---	1131	712	477	335	244	183	141	111
		Min. End/Int.Bearing (in.)	3.4/8.5	3.0/7.5	2.5/6.3	2.1/5.3	1.6/4.0	1.5/3.8	1.5/3.8	1.5/3.8	1.5/3.8	1.5/3.8	1.5/3.8
	14	Total Load	5679	3644	2707	1874	1371	1044	682	497	373	289	228
		Live Load	---	---	---	1853	1167	782	549	400	301	232	182
		Min. End/Int.Bearing (in.)	4.4/11.0	3.8/9.5	3.5/8.8	2.8/7.0	2.8/6.3	2.2/5.5	1.6/4.0	1.5/3.8	1.5/3.8	1.5/3.8	1.5/3.8
	16	Total Load	7161	4440	3188	2425	1794	1400	1018	742	558	460	340
		Live Load	---	---	---	---	1741	1167	819	597	449	346	272
		Min. End/Int.Bearing (in.)	5.6/14.0	4.6/11.5	4.1/10.3	3.8/9.5	3.3/8.3	2.8/7.0	2.4/6.0	1.9/4.8	1.6/4.0	1.5/3.8	1.5/3.8
	18	Total Load	8979	5343	3770	3106	2274	1734	1365	1128	794	615	484
		Live Load	---	---	---	---	---	1661	1167	851	639	492	387
		Min. End/Int.Bearing (in.)	7.0/17.5	5.5/13.8	4.912.3	4.8/12.0	4.1/10.3	3.6/9.0	3.2/8.0	2.8/7.0	2.3/5.8	1.9/4.8	1.6/4.0

NOTES:

1. Values shown are the maximum uniform loads (beam weight included) in pounds per linear foot (PLF) that can be applied to the beam.
2. These tables are for preliminary design when considering load and other conditions. The final design should include complete design analysis.
3. Bearing lengths shown in the third row of each cell are for maximum PLF loads for the two end bearings and for the middle or intermediate bearings when beam is continuous. A shorter bearing may be used if proper analysis is done.
4. Live load is based on the deflection criterion of L/360 and includes the beam weight (48 pcf).
5. Total load is based on the deflection criterion with a LL/DL ration of 4 or higher.
6. For deflection limits of L/240 and L/480, multiply the live load figures by 1.5 and 0.75 respectfully.
7. The beam is assumed to be loaded on the top edge and with full lateral support at bearing points.
8. Selected beam must satisfy both live and total load.
9. Where no live load shows, live load is the same as total load.
10. Call Coastal Forest Products for sizes not listed.

Stock Sizes

3-1/2" x 9-1/2"	5-1/4" x 9-1/2"
11-7/8"	11-7/8"

WARRANTY

Power Preserved Glulam® and Power Preserved Column® products are warranted for 25 years against defects in materials and workmanship. We guarantee prompt and courteous customer service. Hoover Treated Wood Products, Inc. warrants the Power Preserved Glulam and Power Preserved Column products against fungal decay and wood-destroying insect attacks for 25 years. For a detailed copy of our limited warranty, call us at 800-221-2326 or visit our website to download a copy.

POWER PRESERVED COLUMN®

PRESSURE TREATED COLUMNS

Stocked at Coastal Forest Products Up to 28' Lengths

5-1/4" x 5 1/2" - up to 28'

POWER PRESERVED COLUMN®

Anthony Forest Products offers our popular Power Column® as a Power Preserved Column® for ground contact using Hoover Cop-Guard®. These columns are treated to the high retention level of 0.075 PCF, meeting AWPA use categories 4A, 4B and 4C (should not be used in direct contact with water).

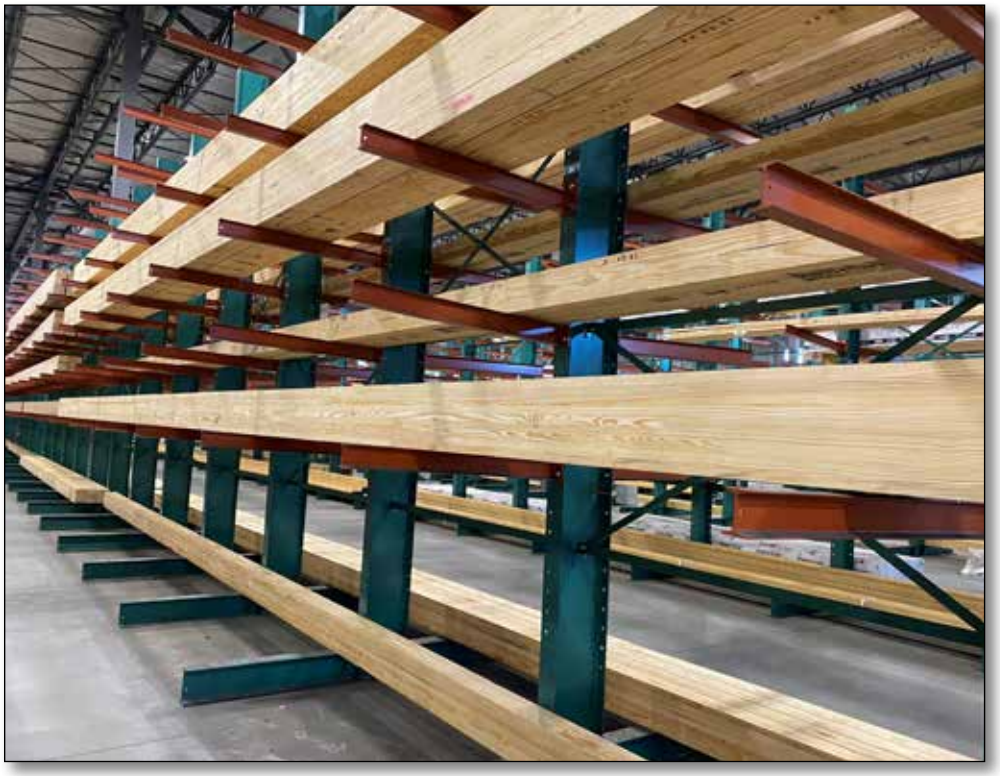
Suggested Uses: (Exterior only)

- Deck support columns and boardwalks
- Residential and commercial exposed structural columns
- Raised coastal construction supports replacing piling
- Industrial and farming applications
- Pedestrian bridges and park shelters
- Pergolas

Power Preserved Column Design Values[1]

Combination #50 #1 Dense SYP	F_b x-x axis	F_b y-y axis		MOE	Compression Parallel to Grain F_{c1} =	
	F_b	3 laminations	4 or more laminations		3 laminations	4 or more laminations
Design Value	2,100 psi	2,100	2,300	1.9×10^6	1,700	2,300
Wet-Use Factor	0.8	0.8	0.8	0.833	0.53	0.73

[1] *The tabulated values are for moisture content of less than 16%. Apply wet-use adjustment factors for columns in direct contact with the ground. Use of column bases or standoff may allow for dry-use.*



Coastal offers the widest offering of high quality, engineered wood products that are in-stock, protected from the environment, and shipped promptly when you need it.

THE MOST POWERFUL SOFTWARE TOOLS IN THE MARKET

The Most Powerful Software Tools in the Market
iStruct® software suite, featuring isPlan® and isDesign®

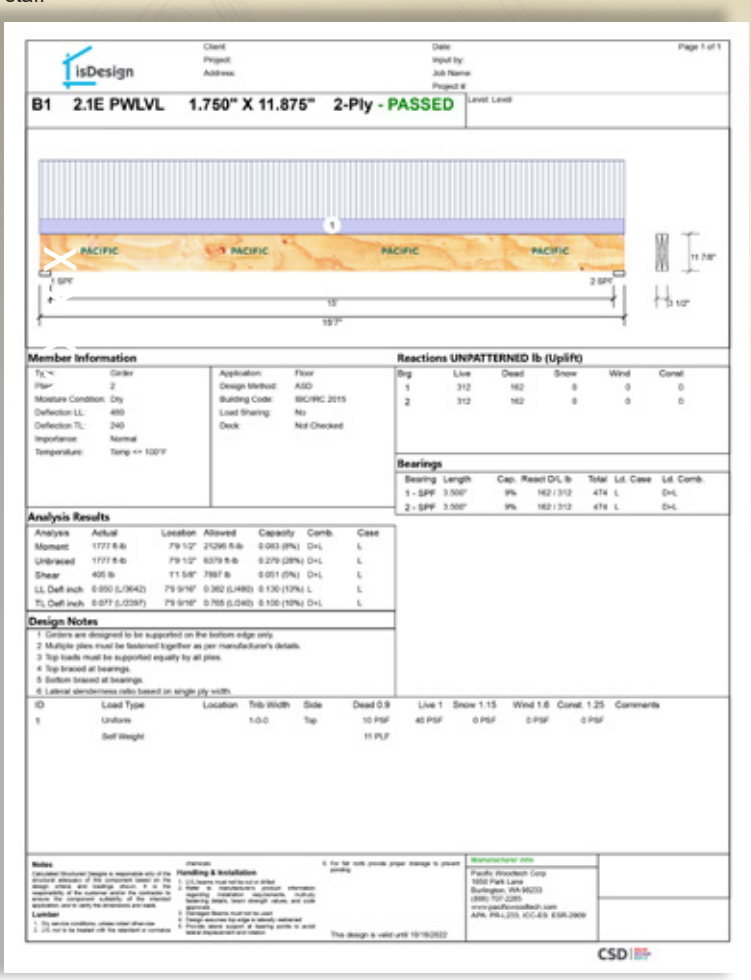
Coastal Forest Products provides customers with the best information services in the industry—and supplies its customer base with software tools to perform daily engineering and drawing functions required in today's market.

isPlan® features:

- Draw and design floor and roof framing plans with engineered wood products
- Includes structural analysis and reporting, take-offs, quotes, and cutting optimization with inventory integration
- Automatically develops loads and produces bold, color graphic layouts in 2D and 3D
- Specially engineered for companies with a dedicated design staff
- Supports the full Coastal product line
- Includes isDesign–the single member beam design

isDesign® features:

- A user-friendly, single-member sizing program with impeccable graphics that creates easy-to-read beam calcs
- Analyze loads and calculate sizes and spacing for Coastal engineered wood products
- Requires little or no training for the architect, engineer, or designer



Coastal customers receive:

- No charge for isDesign® single-member sizing software
- No charge for customers to distribute isDesign® to its customer base
- Customer product logos and nomenclature on beam calcs
- Printed calc sheets display shear, deflection, moment, and reaction
- Value-engineered framing plans
- Engineered or non-engineered placement plans
- Internet software training and support
- Internet updates for all software

The iStruct® software suite is truly a solution like no other and is designed for quick learning and application. The accelerated training time means users are up and running quickly and cost effectively!

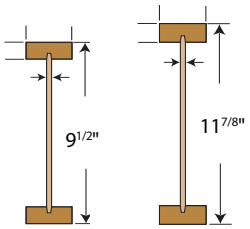
What you get from Coastal Forest Products is what your customers expect from you—the best tools and the best service possible!

STOCK REFERENCE GUIDE

NORDIC STRUCTURES

NI-40X
2" X 3"
Solid Flanges

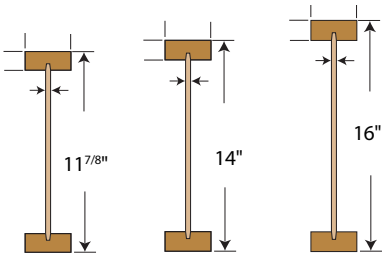
Spans Up To
9-1/2" - 17' 00"
11-7/8" - 20' 03"



3/8" OSB Web
2" x 3"

NI-60
2" X 3"
Solid Flanges

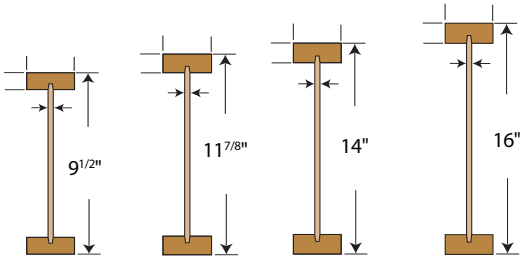
Spans Up To
11-7/8" - 20' 8"
14" - 23' 06"
16" - 26' 00"



3/8" OSB Web
2" x 3"

NI-80
2" X 4"
Solid Flanges

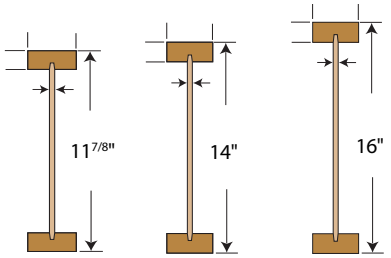
Spans Up To
9-1/2" - 19' 01"
11-7/8" - 22' 08"
14" - 25' 09"
16" - 28' 06"



3/8" OSB Web
2" x 4"

NI-90
2" X 4"
Solid Flanges

Spans Up To
11-7/8" - 23' 03"
14" - 26' 06"
16" - 29' 03"



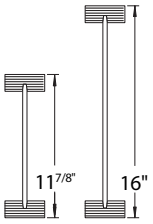
3/8" OSB Web
2" x 4"

***All spans base on typical residential 40/10 loading, l/480 16" O/C

COASTAL PRO

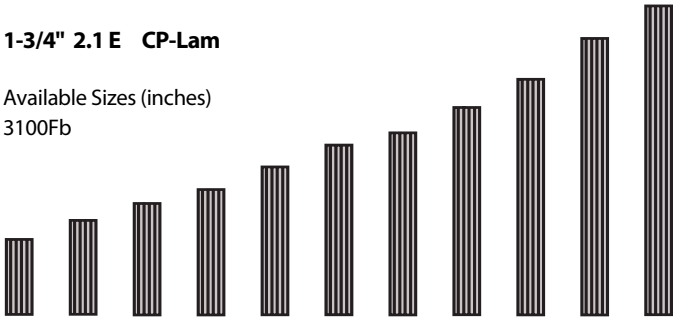
2" X 4" LVL Flanges

Spans Up To
11-7/8" - 23' 11"
16" - 30' 01"



1-3/4" 2.1 E CP-Lam

Available Sizes (inches)
3100Fb



PWT TREATED
TREATED RIGHT

Treated LVL

SIMPSON StrongTie

Matching Connectors In-Stock!!!

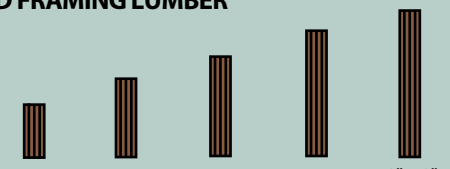
MEETS IRC FIRE CODES

COASTAL PRO

PWT
FOCUSED ON EWP

DOUG FIR LVL
ENGINEERED FRAMING LUMBER

1-1/2" wide, 1.6 MOE
2"x4" - up to 20' lengths
2"x6" - up to 24' lengths
2"x8" - up to 28' lengths
2"x10" - 2"x12" up to 32' lengths



COASTAL

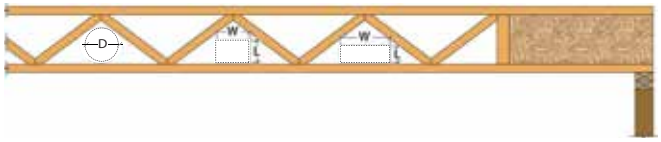
STOCK REFERENCE GUIDE

TRIFORCE

24" TRIMMABLE

Maximum Size of Pipes, Ducts and Cable Trays Through Diagonal Web Members			
Depth	Round D	Square W&H	Rectangular W&L
11"	7¼"	5¾" x 5¾"	3" x 13"
14"	8½"	6½" x 6½"	3" x 14", 6" x 8"
16"	9½"	7½" x 7½"	3" x 15"

11-7/8" – up to 22' **14"** – up to 26' **16"** – up to 30'



ADDITIONAL SERVICES

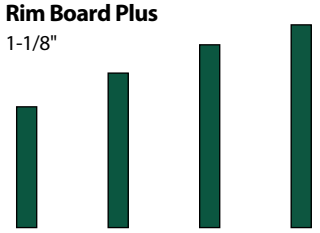
- **Full Stocking Inventory for Prompt Delivery**
- **Job-site Delivery Available***
- **In-house Design Specialists**
- **Prompt Turnaround for Drawings**
- **Commercial Joists - Architectural Glulams Available**
- **Stamped Calcs Available***
- **iStruct® Software Available***
- **In-House/On-site Training***

*See Coastal Rep for more details

Norbord

Rim Board Plus

1-1/8"



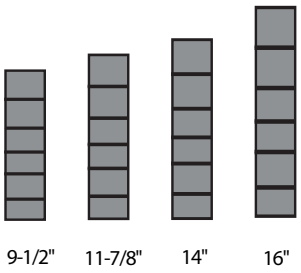
12' Lengths only

Forest Anthony Products

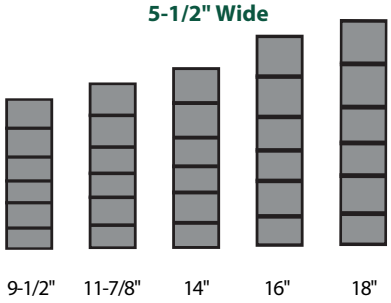
Power Beam®

2.1 MOE / 3000Fb / 25 Year Warranty

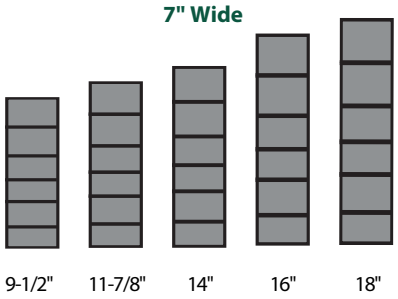
3-1/2" Wide



5-1/2" Wide

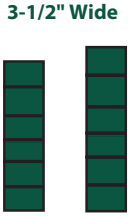


7" Wide

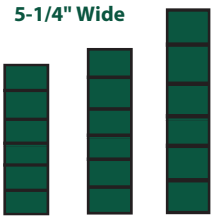


Power Preserved Glulam™ – 1.8 MOE / 2400Fb

3-1/2" Wide



5-1/4" Wide



Power Column® – 1.9 MOE / 2400Fb

3-1/2" Wide

5-1/2" Wide

7" Wide

Up to 48' Lengths

Power Preserved Column® – 1.9 MOE / 2100Fb

5-1/2" Wide

Stocked at Coastal Forest Products Up to 28' Lengths

5-1/4" x 5 1/2" - up to 28'

THE COASTAL ADVANTAGE

Quality Products & Design Assistance You Can Build On

- Job-site delivery available in most areas
- Full scanning & printing capabilities
- Covered storage of most engineered products
- Rapid turnaround of plans
- Wide range of engineered products
- Commercial joists available
- In-house and on-site training available
- Architectural Glulams

NORDIC STRUCTURES
COASTAL PRO
COASTAL PRO-I
Norbord
TRIFORCE
COASTAL PRO-LAM
ANTHONY FOREST PRODUCTS
PWT
PWT TREATED TREATED RIGHT
SIMPSON Strong-Tie

COASTAL

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