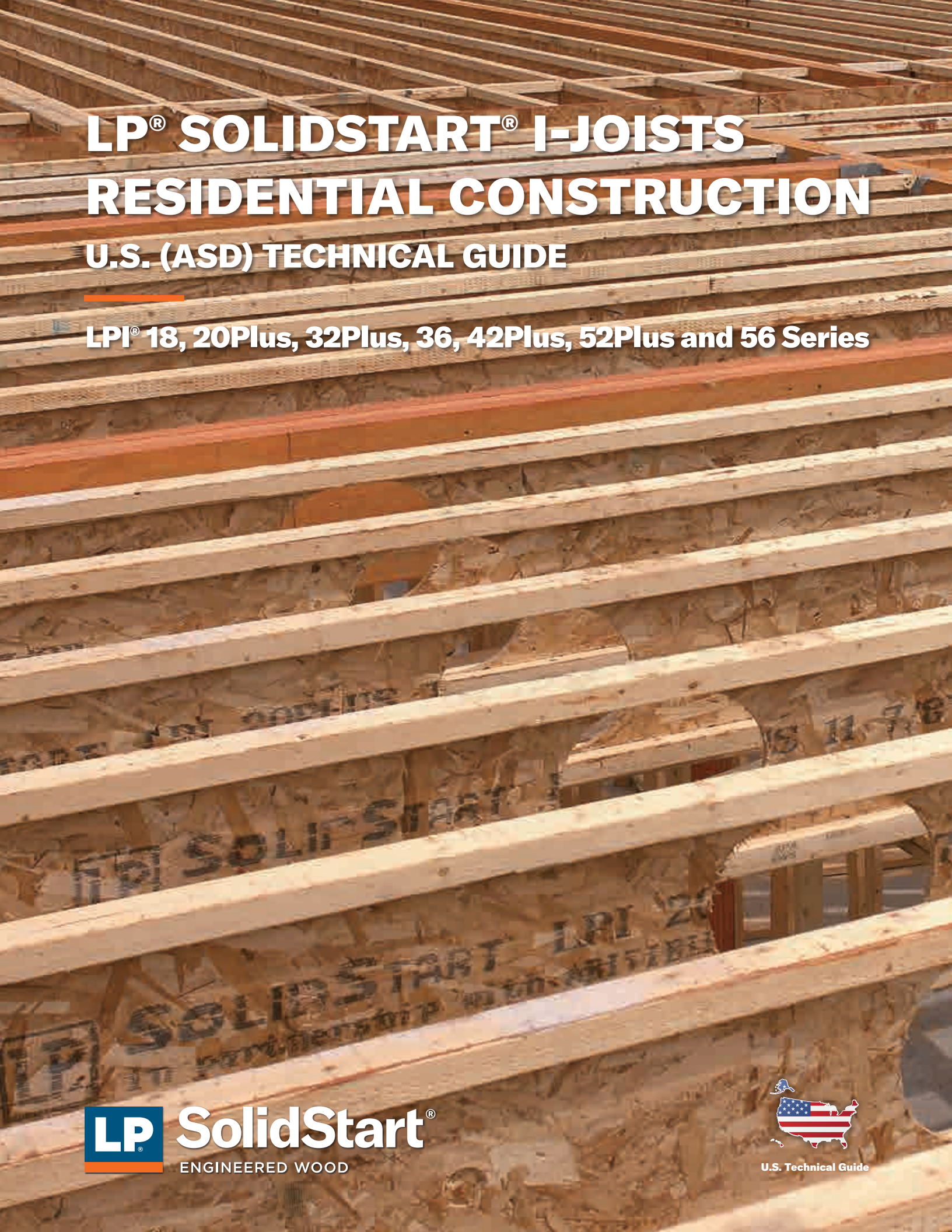
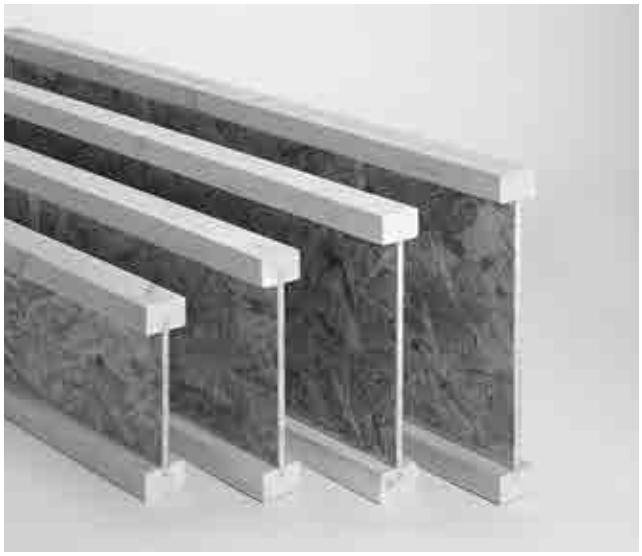
LP® SOLIDSTART® I-JOISTS RESIDENTIAL CONSTRUCTION

U.S. (ASD) TECHNICAL GUIDE

LPI® 18, 20Plus, 32Plus, 36, 42Plus, 52Plus and 56 Series



Introduction



LP® SolidStart® I-Joists are straighter and more uniform in strength, stiffness and size than traditional lumber, providing a strong, sturdy floor. We offer longer lengths so that ceilings and floors can be designed with fewer pieces, saving time on installation. Other advantages over lumber include lower moisture content, which makes our I-Joists less likely to split, shrink, twist, warp or bow. This means reduced callbacks due to fewer pops and squeaks.

STRENGTH IN NUMBERS

LP's full range of SolidStart products are designed and manufactured to install easily and work together to provide a strong, sound structure.

For I-Joists, we combine laminated veneer lumber (LVL) or finger-jointed sawn lumber flanges with a web of oriented strand board (OSB) to produce an I-shaped structural member. The webs allow plumbing and wiring to pass through without extra framing, while the flanges resist bending — ideal for long spans in floors, ceilings and roofs.

LP SolidStart I-JOISTS ARE A BUILDING MATERIAL WITH BUILT-IN ENVIRONMENTAL BENEFITS

- Made of wood, a renewable resource
- Raw material procurement targets small, fast growing trees
- LP Building Solutions uses logs from SFIR certified forest management and fiber sourcing systems to help ensure that our entire wood supply comes from well managed forests and non-controversial sources
- Only low-emitting, safe resins are used as a binder
- Available in longer lengths, reducing the number of pieces needed; this results in more efficient utilization of resources
- Can help you qualify for certification points in a number of leading green building programs

PEACE-OF-MIND FOR A LIFETIME

If your LP SolidStart I-Joists ever develop problems due to a defect, LP will cover all reasonable repair and/or replacement costs per the conditions of our Lifetime Limited Warranty. Visit LPCorp.com to view our complete warranty, or contact your local LP SolidStart Engineered Wood Products distributor or sales office for an original copy.

COMPLIANT WITH MAJOR BUILDING CODES

LP SolidStart I-Joists have been evaluated for compliance with major US building codes. Refer to APA product report PR-L238 or ICC-ES evaluation report ESR-1305 for complete product information for LP SolidStart I-Joist. Contact your local LP SolidStart Engineered Wood Products distributor or visit LPCorp.com for the most current code reports.

LIFETIME LIMITED WARRANTY

LP SolidStart Engineered Wood Products are backed by a lifetime limited warranty. Visit LPCorp.com or call 1.888.820.0325 for a copy of the warranty.

Table of Contents

Product Specifications & Design Values. 4

Floor Span Tables 5–7

Roof Span Tables: Low Pitch (6:12 or less). 8–9

Roof Span Tables: High Pitch (6:12 to 12:12) 10–11

Cantilever Details 12

Brick-Ledge Cantilevers 13

Web Hole Specifications: Circular Holes 14

Web Hole Specifications: Rectangular Holes 15

Floor Details 16–17

Roof Details 18

Framing Connectors 19

Web Stiffeners, Rim & Blocking, Nailing 20

LP® SolidStart® Rim Board 21

Warnings 22

Handling and Storage Guidelines 24

Product Specifications & Design Values

DESIGN VALUES

Series	Depth	Weight (plf)	Moment (lb-ft)	EI (x 10^6) ($lb\text{-}in^2$)	K (x 10^6) (lb-ft/in)	Shear (lbs)
LPI 18	9-1/2"	2.6	2365	142	0.355	1130
	11-7/8"	2.9	3100	248	0.435	1335
LPI 20Plus	9-1/2"	2.6	2810	185	0.358	1260
	11-7/8"	2.9	3755	318	0.438	1485
	14"	3.1	4400	474	0.512	1680
	16"	3.3	5050	652	0.582	1870
LPI 32Plus	9-1/2"	2.6	3620	243	0.213	1260
	11-7/8"	2.9	4690	406	0.267	1485
	14"	3.1	5645	589	0.313	1680
	16"	3.3	6545	791	0.358	1870
LPI 36	11-7/8"	3.1	6445	429	0.468	1615
	14"	3.4	7755	622	0.550	1830
	16"	3.6	8995	836	0.625	2020
LPI 42Plus	9-1/2"	3.4	5375	321	0.412	1340
	11-7/8"	3.5	6965	547	0.515	1625
	14"	3.8	8390	802	0.607	1875
	16"	4.0	9725	1092	0.693	2115
LPI 52Plus	11-7/8"	4.5	8475	600	0.633	2055
	14"	4.8	10205	874	0.747	2330
	16"	5.0	11835	1183	0.853	2585
LPI 56	11-7/8"	4.5	10170	668	0.549	2055
	14"	4.8	12250	968	0.641	2330
	16"	5.0	14205	1301	0.729	2585

NOTES:

1. LP® SolidStart® I-Joists shall be designed for dry-use conditions only. Dry-use applies to products installed in dry, covered and well ventilated interior conditions in which the equivalent moisture content in lumber will not exceed 16%.
2. Moment and Shear are for normal load duration and shall be adjusted according to code.
3. Moment shall not be increased for repetitive member use.
4. Deflection calculations shall include both bending and shear deformations. Deflection for a simple span, uniform load:

$$\Delta = \frac{22.5wL^4}{EI} + \frac{wL^2}{K}$$

Where: Δ = deflection (in), EI = bending stiffness (from table), w = uniform load (plf), K = shear stiffness (from table), L = design span (ft)

Equations for other conditions can be found in engineering references.

REACTION AND BEARING CAPACITY

Series	Depth	End Reaction Capacity[1] (lbs)				Interior Reaction Capacity[1] (lbs)				Flange Bearing Capacity[2] (lb/in)
		Minimum Bearing (1-1/2")		Maximum Bearing (4")		Minimum Bearing (3-1/2")		Maximum Bearing (5-1/2")		
		W/out Stiffeners	With Stiffeners	W/out Stiffeners	With Stiffeners	W/out Stiffeners	With Stiffeners	W/out Stiffeners	With Stiffeners	
LPI 18	9-1/2"	870	1025	995	1130	1975	2135	2205	2370	955
	11-7/8"	870	1145	1040	1335	2095	2270	2335	2545	
LPI 20Plus	9-1/2"	970	1140	1110	1260	2195	2375	2450	2635	955
	11-7/8"	970	1275	1160	1485	2330	2525	2595	2830	
	14"	970	1395	1200	1680	2455	2665	2725	3005	
	16"	970	1510	1240	1870	2570	2795	2850	3175	
LPI 32Plus	9-1/2"	970	1140	1110	1260	2195	2375	2450	2635	1180
	11-7/8"	970	1275	1160	1485	2330	2525	2595	2830	
	14"	970	1395	1200	1680	2455	2665	2725	3005	
	16"	970	1510	1240	1870	2570	2795	2850	3175	
LPI 36	11-7/8"	1025	1500	1290	1615	2500	3105	2835	3470	1180
	14"	1025	1515	1325	1830	2500	3205	2835	3565	
	16"	1025	1525	1360	2020	2500	3305	2835	3655	
LPI 42Plus	9-1/2"	1185	1340	1305	1340	2900	3095	2940	3195	1705
	11-7/8"	1245	1510	1595	1625	3025	3340	3120	3515	
	14"	1300	1660	1595	1875	3140	3565	3280	3805	
	16"	1350	1800	1595	2115	3245	3775	3435	4080	
LPI 52Plus	11-7/8"	1370	1820	1690	2055	3420	4000	3635	4210	1995
	14"	1385	1970	1845	2330	3435	4260	3745	4540	
	16"	1400	2110	1985	2585	3450	4505	3850	4855	
LPI 56	11-7/8"	1145	1660	1515	2055	3130	3860	3670	4060	1870
	14"	1145	1755	1535	2330	3130	4055	3670	4300	
	16"	1145	1845	1555	2585	3130	4245	3670	4525	

NOTES

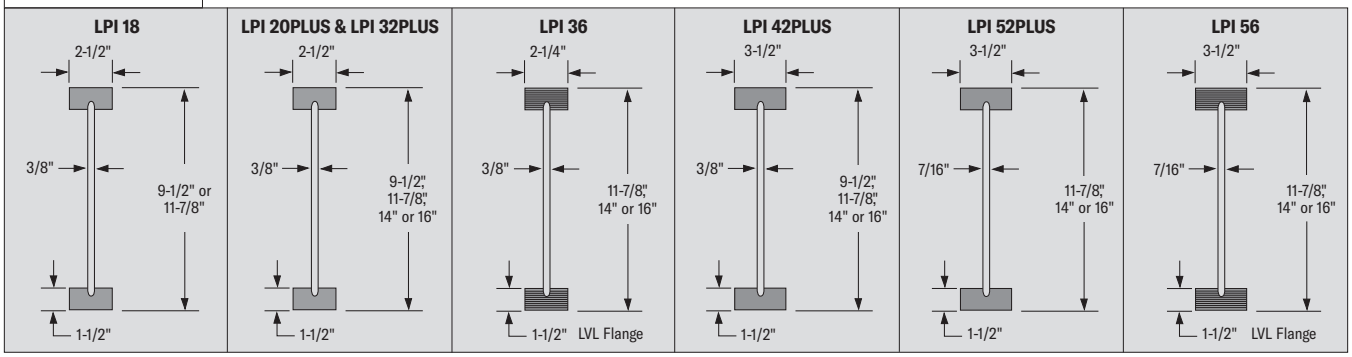
1. End and Interior Reaction Capacity shall be limited by the Flange Bearing Capacity or the bearing capacity of the support material, whichever is less.
2. The Flange Bearing Capacity, per inch of bearing length, is based on the allowable compression perpendicular-to-grain of the I-Joist flange, accounting for eased edges.
3. To account for edge easing when determining the bearing capacity of the support material, subtract 0.25" from the flange width for the LPI 18, LPI 20Plus, LPI 32Plus, LPI 42Plus & LPI 52Plus, and subtract 0.10" from the flange width for the LPI 36 & LPI 56.
4. Reaction Capacity is for normal load duration and shall be adjusted according to code. Flange Bearing Capacity and the bearing capacity of any wood support shall not be adjusted for load duration.
5. Reaction Capacity and Flange Bearing Capacity may be increased over that tabulated for the minimum bearing length. Linear interpolation of the Reaction Capacity between the minimum and maximum bearing length is permitted. Bearing lengths longer than the maximum do not further increase Reaction Capacity. Flange Bearing Capacity and that of a wood support will increase with additional bearing length.
6. See page 28 for information on web stiffener sizes and nailing.

EXAMPLE:

Determine the stiffened end reaction capacity for a 14" LPI 32Plus with 2" of bearing for a non-snow roof load and supported on an SPF wall plate (425 psi).

1. Determine End Reaction (ER) w/Stiffeners:
   ER = 1395 + (1680 - 1395)*(2" - 1.5")/(4" - 1.5") = 1448 lbs
2. Adjust for load duration:
   Adjusted ER = 1448 * 1.25 = 1810 lbs
3. Determine Flange Bearing Capacity (FBC):
   FBC = 1180 lb/in * 2" = 2360 lbs
4. Determine wall Plate Bearing Capacity (PBC):
   PBC = 425 psi * (2.5" - 0.25") * 2" = 1912 lbs
5. Final End Reaction Capacity w/Stiffeners = 1810 lbs

PROFILE DETAILS

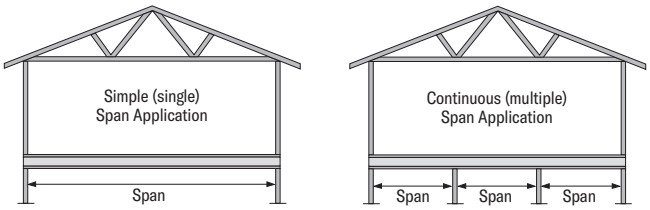


Floor Span Tables: 40 psf Live Load and 10 psf Dead Load

TO USE:

1. Select the Simple Span or Continuous Span table, as required.
2. Find a span that meets or exceeds the required clear span.
3. Read the corresponding joist series, depth and spacing.

CAUTION: For floor systems that require both simple span and continuous span joists, it is a good idea to check both before selecting a joist. Some conditions are controlled by continuous span rather than simple span.



SIMPLE SPAN

Series	Depth	L/480				L/360			
		12" oc	16" oc	19.2" oc	24" oc	12" oc	16" oc	19.2" oc	24" oc
LPI 18	9-1/2"	16'-6"	15'-1"	14'-3"	13'-4"	18'-3"	16'-8"	15'-3"	13'-7"
	11-7/8"	19'-9"	18'-1"	17'-1"	15'-7"	21'-10"	19'-1"	17'-5"	15'-7"
LPI 20Plus	9-1/2"	17'-9"	16'-2"	15'-3"	14'-3"	19'-7"	17'-11"	16'-7"	14'-10"
	11-7/8"	21'-2"	19'-4"	18'-3"	17'-0"	23'-5"	21'-1"	19'-3"	17'-2"
	14"	24'-1"	22'-0"	20'-9"	18'-7"	26'-4"	22'-10"	20'-10"	18'-7"
	16"	26'-9"	24'-5"	22'-4"	19'-7"	28'-3"	24'-5"	22'-4"	19'-7"
LPI 32Plus	9-1/2"	18'-9"	17'-0"	16'-0"	14'-9"	20'-10"	18'-11"	17'-10"	16'-6"
	11-7/8"	22'-3"	20'-2"	19'-0"	17'-7"	24'-9"	22'-6"	21'-2"	19'-2"
	14"	25'-2"	22'-10"	21'-6"	19'-6"	28'-0"	25'-5"	23'-7"	19'-6"
	16"	27'-10"	25'-3"	23'-9"	19'-7"	30'-11"	27'-10"	24'-7"	19'-7"
LPI 36	11-7/8"	23'-1"	21'-1"	19'-11"	18'-6"	25'-5"	23'-4"	22'-1"	20'-6"
	14"	26'-2"	23'-10"	22'-6"	20'-9"	28'-11"	26'-5"	24'-11"	20'-9"
	16"	28'-10"	26'-4"	24'-10"	20'-10"	31'-11"	29'-2"	26'-2"	20'-10"
LPI 42Plus	9-1/2"	20'-10"	19'-0"	17'-11"	16'-8"	23'-1"	21'-1"	19'-11"	18'-6"
	11-7/8"	24'-11"	22'-8"	21'-4"	19'-10"	27'-6"	25'-1"	23'-8"	22'-0"
	14"	28'-3"	25'-9"	24'-3"	22'-6"	31'-3"	28'-6"	26'-10"	25'-0"
	16"	31'-4"	28'-6"	26'-10"	25'-0"	34'-7"	31'-7"	29'-9"	27'-2"
LPI 52Plus	11-7/8"	25'-9"	23'-5"	22'-1"	20'-7"	28'-5"	25'-11"	24'-6"	22'-10"
	14"	29'-2"	26'-7"	25'-0"	23'-4"	32'-3"	29'-5"	27'-9"	25'-10"
	16"	32'-3"	29'-4"	27'-8"	25'-9"	35'-7"	32'-6"	30'-8"	28'-7"
LPI 56	11-7/8"	26'-6"	24'-1"	22'-8"	21'-1"	29'-3"	26'-8"	25'-2"	23'-4"
	14"	29'-11"	27'-3"	25'-8"	23'-4"	33'-1"	30'-2"	28'-5"	23'-4"
	16"	33'-1"	30'-1"	28'-4"	23'-5"	36'-7"	33'-4"	29'-4"	23'-5"

CONTINUOUS SPAN

Series	Depth	L/480; No Web Stiffeners				L/480; With Web Stiffeners			
		12" oc	16" oc	19.2" oc	24" oc	12" oc	16" oc	19.2" oc	24" oc
LPI 18	9-1/2"	17'-11"	16'-5"	15'-2"	13'-6"	-	-	-	-
	11-7/8"	21'-6"	19'-0"	17'-4"	15'-6"	-	-	-	-
LPI 20Plus	9-1/2"	19'-4"	17'-7"	16'-6"	14'-9"	-	-	-	-
	11-7/8"	23'-1"	21'-0"	19'-2"	17'-1"	-	-	-	-
	14"	26'-3"	22'-9"	20'-9"	18'-6"	-	-	-	-
	16"	28'-2"	24'-4"	22'-3"	19'-10"	-	-	-	-
LPI 32Plus	9-1/2"	20'-4"	18'-5"	17'-4"	16'-0"	-	-	-	-
	11-7/8"	24'-2"	21'-11"	20'-7"	18'-4"	-	-	-	19'-0"
	14"	27'-5"	24'-10"	23'-4"	19'-4"	-	-	-	21'-0"
	16"	30'-3"	27'-5"	25'-4"	20'-3"	-	-	-	22'-0"
LPI 36	11-7/8"	25'-2"	22'-11"	21'-8"	19'-8"	-	-	-	20'-1"
	14"	28'-6"	26'-0"	24'-6"	19'-8"	-	-	-	22'-9"
	16"	31'-6"	28'-8"	24'-8"	19'-8"	-	-	27'-0"	23'-9"
LPI 42Plus	9-1/2"	22'-9"	20'-8"	19'-6"	18'-1"	-	-	-	-
	11-7/8"	27'-1"	24'-8"	23'-3"	21'-7"	-	-	-	-
	14"	30'-10"	28'-0"	26'-5"	24'-6"	-	-	-	24'-6"
	16"	34'-2"	31'-1"	29'-3"	25'-8"	-	-	-	27'-2"
LPI 52Plus	11-7/8"	28'-1"	25'-7"	24'-1"	22'-5"	-	-	-	-
	14"	31'-10"	28'-11"	27'-3"	25'-5"	-	-	-	-
	16"	35'-2"	32'-0"	30'-2"	27'-3"	-	-	-	28'-1"
LPI 56	11-7/8"	28'-10"	26'-3"	24'-8"	22'-11"	-	-	-	-
	14"	32'-8"	29'-8"	27'-11"	24'-8"	-	-	-	25'-11"
	16"	36'-1"	32'-9"	30'-10"	24'-8"	-	-	-	26'-7"

DESIGN ASSUMPTIONS:

1. The spans listed are the clear distance between supports. Continuous spans are based on the longest span. The shortest span shall not be less than 50% of the longest span.
2. The spans are based on uniform floor loads only as listed at the top of the page. The dead load is increased to 12 psf for the LPI 42Plus, LPI 52Plus and LPI 56.
3. These tables reflect the additional stiffness provided by 48/24 APA RATED SHEATHING or 24 oc APA RATED STURD-I-FLOOR, or equal, glued and nailed to the top flange.
4. Live Load deflection is limited to L/480 or L/360 for simple spans as listed, and L/480 only for continuous spans.
5. Total Load deflection is limited to L/240.
6. The spans are based on an end bearing length of at least 1-3/4" and an interior bearing length of at least 3-1/2", and are limited to the bearing capacity for an SPF wall plate ($F_{c\perp}$ = 425 psi).

ADDITIONAL NOTES:

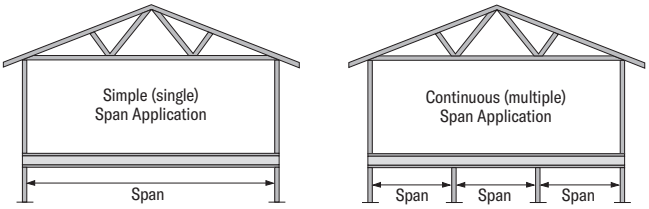
1. Web stiffeners are not required for the Simple Span tables. Web stiffeners are not required at the end bearings for the Continuous Span tables. Web stiffeners at interior supports are only required where listed in the "With Web Stiffeners" section of each table. A "-" indicates no increase in span with web stiffeners.
2. Web fillers are required for I-Joists seated in hangers that do not laterally support the top flange.
3. L/360 represents the maximum deflection allowed per code and may not provide suitable floor performance. L/480 or better is recommended for most applications.
4. These spans are not evaluated for vibration.
5. Though not required for the spans above, bridging, blocking, bottom-flange bracing or a direct-applied gypsum ceiling can improve the feel of a floor.
6. For conditions not shown, use the Uniform Floor Load (PLF) tables, LP's design software or contact your LP® SolidStart® Engineered Wood Products distributor for assistance.

Floor Span Tables: 40 psf Live Load and 15 psf Dead Load

TO USE:

1. Select the Simple Span or Continuous Span table, as required.
2. Find a span that meets or exceeds the required clear span.
3. Read the corresponding joist series, depth and spacing.

CAUTION: For floor systems that require both simple span and continuous span joists, it is a good idea to check both before selecting a joist. Some conditions are controlled by continuous span rather than simple span.



SIMPLE SPAN

Series	Depth	L/480				L/360			
		12" oc	16" oc	19.2" oc	24" oc	12" oc	16" oc	19.2" oc	24" oc
LPI 18	9-1/2"	16'-6"	15'-1"	14'-3"	12'-11"	18'-3"	15'-11"	14'-6"	12'-11"
	11-7/8"	19'-9"	18'-1"	16'-7"	14'-10"	21'-1"	18'-3"	16'-7"	14'-10"
LPI 20Plus	9-1/2"	17'-9"	16'-2"	15'-3"	14'-2"	19'-7"	17'-4"	15'-10"	14'-2"
	11-7/8"	21'-2"	19'-4"	18'-3"	16'-4"	23'-2"	20'-1"	18'-4"	16'-4"
	14"	24'-1"	21'-9"	19'-10"	17'-9"	25'-2"	21'-9"	19'-10"	17'-9"
	16"	26'-9"	23'-4"	21'-3"	17'-10"	26'-11"	23'-4"	21'-3"	17'-10"
LPI 32Plus	9-1/2"	18'-9"	17'-0"	16'-0"	14'-9"	20'-10"	18'-11"	17'-10"	16'-1"
	11-7/8"	22'-3"	20'-2"	19'-0"	17'-7"	24'-9"	22'-5"	20'-6"	17'-8"
	14"	25'-2"	22'-10"	21'-6"	17'-9"	28'-0"	24'-8"	22'-3"	17'-9"
	16"	27'-10"	25'-3"	22'-4"	17'-10"	30'-8"	26'-7"	22'-4"	17'-10"
LPI 36	11-7/8"	23'-1"	21'-1"	19'-11"	18'-6"	25'-5"	23'-4"	22'-1"	18'-10"
	14"	26'-2"	23'-10"	22'-6"	18'-10"	28'-11"	26'-5"	23'-8"	18'-10"
	16"	28'-10"	26'-4"	23'-9"	18'-11"	31'-11"	28'-7"	23'-9"	18'-11"
LPI 42Plus	9-1/2"	20'-10"	19'-0"	17'-11"	16'-8"	23'-1"	21'-1"	19'-11"	18'-6"
	11-7/8"	24'-11"	22'-8"	21'-4"	19'-10"	27'-6"	25'-1"	23'-8"	22'-0"
	14"	28'-3"	25'-9"	24'-3"	22'-6"	31'-3"	28'-6"	26'-10"	23'-10"
	16"	31'-4"	28'-6"	26'-10"	24'-8"	34'-7"	31'-7"	29'-7"	24'-8"
LPI 52Plus	11-7/8"	25'-9"	23'-5"	22'-1"	20'-7"	28'-5"	25'-11"	24'-6"	22'-10"
	14"	29'-2"	26'-7"	25'-0"	23'-4"	32'-3"	29'-5"	27'-9"	25'-8"
	16"	32'-3"	29'-4"	27'-8"	25'-9"	35'-7"	32'-6"	30'-8"	26'-2"
LPI 56	11-7/8"	26'-6"	24'-1"	22'-8"	21'-1"	29'-3"	26'-8"	25'-2"	21'-2"
	14"	29'-11"	27'-3"	25'-8"	21'-2"	33'-1"	30'-2"	26'-7"	21'-2"
	16"	33'-1"	30'-1"	26'-7"	21'-3"	36'-7"	32'-0"	26'-7"	21'-3"

CONTINUOUS SPAN

Series	Depth	L/480; No Web Stiffeners				L/480; With Web Stiffeners			
		12" oc	16" oc	19.2" oc	24" oc	12" oc	16" oc	19.2" oc	24" oc
LPI 18	9-1/2"	17'-11"	15'-10"	14'-5"	12'-10"	-	-	-	-
	11-7/8"	21'-0"	18'-2"	16'-6"	14'-9"	-	-	-	-
LPI 20Plus	9-1/2"	19'-4"	17'-3"	15'-9"	14'-1"	-	-	-	-
	11-7/8"	23'-1"	20'-0"	18'-3"	16'-3"	-	-	-	-
	14"	25'-1"	21'-8"	19'-9"	17'-6"	-	-	-	17'-8"
	16"	26'-10"	23'-3"	21'-2"	18'-4"	-	-	-	18'-11"
LPI 32Plus	9-1/2"	20'-4"	18'-5"	17'-4"	15'-8"	-	-	-	16'-0"
	11-7/8"	24'-2"	21'-11"	20'-5"	16'-7"	-	-	-	18'-0"
	14"	27'-5"	24'-7"	22'-0"	17'-6"	-	-	22'-5"	19'-1"
	16"	30'-3"	26'-6"	23'-0"	18'-4"	-	-	24'-2"	20'-0"
LPI 36	11-7/8"	25'-2"	22'-11"	21'-8"	17'-10"	-	-	-	20'-1"
	14"	28'-6"	26'-0"	22'-5"	17'-10"	-	-	24'-6"	21'-8"
	16"	31'-6"	26'-11"	22'-5"	17'-10"	-	28'-8"	27'-0"	21'-9"
LPI 42Plus	9-1/2"	22'-9"	20'-8"	19'-6"	18'-1"	-	-	-	-
	11-7/8"	27'-1"	24'-8"	23'-3"	21'-7"	-	-	-	-
	14"	30'-10"	28'-0"	26'-5"	22'-6"	-	-	-	24'-5"
	16"	34'-2"	31'-1"	29'-2"	23'-3"	-	-	29'-3"	26'-4"
LPI 52Plus	11-7/8"	28'-1"	25'-7"	24'-1"	22'-5"	-	-	-	-
	14"	31'-10"	28'-11"	27'-3"	24'-8"	-	-	-	25'-5"
	16"	35'-2"	32'-0"	30'-2"	24'-9"	-	-	-	28'-1"
LPI 56	11-7/8"	28'-10"	26'-3"	24'-8"	22'-5"	-	-	-	22'-11"
	14"	32'-8"	29'-8"	27'-11"	22'-5"	-	-	-	24'-4"
	16"	36'-1"	32'-9"	28'-1"	22'-5"	-	-	30'-7"	24'-5"

DESIGN ASSUMPTIONS:

1. The spans listed are the clear distance between supports. Continuous spans are based on the longest span. The shortest span shall not be less than 50% of the longest span.
2. The spans are based on uniform floor loads only as listed at the top of the page.
3. These tables reflect the additional stiffness provided by 48/24 APA RATED SHEATHING or 24 oc APA RATED STURD-I-FLOOR, or equal, glued and nailed to the top flange.
4. Live Load deflection is limited to L/480 or L/360 for simple spans as listed, and L/480 only for continuous spans.
5. Total Load deflection is limited to L/240.
6. The spans are based on an end bearing length of at least 1-3/4" and an interior bearing length of at least 3-1/2", and are limited to the bearing capacity for an SPF wall plate ($F_{c\perp}$ = 425 psi).

ADDITIONAL NOTES:

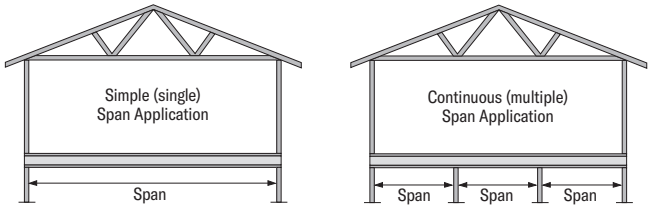
1. Web stiffeners are not required for the Simple Span tables. Web stiffeners are not required at the end bearings for the Continuous Span tables. Web stiffeners at interior supports are only required where listed in the "With Web Stiffeners" section of each table. A "-" indicates no increase in span with web stiffeners.
2. Web fillers are required for I-Joists seated in hangers that do not laterally support the top flange.
3. L/360 represents the maximum deflection allowed per code and may not provide suitable floor performance. L/480 or better is recommended for most applications.
4. These spans are not evaluated for vibration.
5. Though not required for the spans above, bridging, blocking, bottom-flange bracing or a direct-applied gypsum ceiling can improve the feel of a floor.
6. For conditions not shown, use the Uniform Floor Load (PLF) tables, LP's design software or contact your LP® SolidStart® Engineered Wood Products distributor for assistance.

Floor Span Tables: 40 psf Live Load and 25 psf Dead Load

TO USE:

1. Select the Simple Span or Continuous Span table, as required.
2. Find a span that meets or exceeds the required clear span.
3. Read the corresponding joist series, depth and spacing.

CAUTION: For floor systems that require both simple span and continuous span joists, it is a good idea to check both before selecting a joist. Some conditions are controlled by continuous span rather than simple span.



SIMPLE SPAN

Series	Depth	L/480				L/360			
		12" oc	16" oc	19.2" oc	24" oc	12" oc	16" oc	19.2" oc	24" oc
LPI 18	9-1/2"	16'-6"	14'-7"	13'-4"	11'-11"	16'-11"	14'-7"	13'-4"	11'-11"
	11-7/8"	19'-4"	16'-9"	15'-3"	13'-4"	19'-4"	16'-9"	15'-3"	13'-4"
LPI 20Plus	9-1/2"	17'-9"	15'-11"	14'-6"	13'-0"	18'-5"	15'-11"	14'-6"	13'-0"
	11-7/8"	21'-2"	18'-5"	16'-10"	14'-11"	21'-4"	18'-5"	16'-10"	14'-11"
	14"	23'-1"	20'-0"	18'-3"	14'-11"	23'-1"	20'-0"	18'-3"	14'-11"
	16"	24'-9"	21'-5"	18'-10"	15'-0"	24'-9"	21'-5"	18'-10"	15'-0"
LPI 32Plus	9-1/2"	18'-9"	17'-0"	16'-0"	14'-9"	20'-3"	18'-1"	16'-6"	14'-9"
	11-7/8"	22'-3"	20'-2"	18'-8"	14'-11"	23'-10"	20'-8"	18'-8"	14'-11"
	14"	25'-2"	22'-7"	18'-9"	14'-11"	26'-2"	22'-7"	18'-9"	14'-11"
	16"	27'-10"	22'-8"	18'-10"	15'-0"	28'-3"	22'-8"	18'-10"	15'-0"
LPI 36	11-7/8"	23'-1"	21'-1"	19'-11"	15'-10"	24'-10"	22'-8"	19'-11"	15'-10"
	14"	26'-2"	23'-10"	19'-11"	15'-11"	28'-2"	24'-0"	19'-11"	15'-11"
	16"	28'-10"	24'-1"	20'-0"	16'-0"	31'-0"	24'-1"	20'-0"	16'-0"
LPI 42Plus	9-1/2"	20'-10"	19'-0"	17'-11"	16'-8"	22'-5"	20'-6"	19'-4"	18'-0"
	11-7/8"	24'-11"	22'-8"	21'-4"	19'-4"	26'-9"	24'-5"	23'-0"	19'-4"
	14"	28'-3"	25'-9"	24'-3"	20'-2"	30'-5"	27'-8"	25'-3"	20'-2"
	16"	31'-4"	28'-6"	26'-1"	20'-10"	33'-8"	29'-10"	26'-1"	20'-10"
LPI 52Plus	11-7/8"	25'-9"	23'-5"	22'-1"	20'-7"	27'-8"	25'-3"	23'-10"	21'-3"
	14"	29'-2"	26'-7"	25'-0"	21'-8"	31'-4"	28'-7"	26'-11"	21'-8"
	16"	32'-3"	29'-4"	27'-8"	22'-1"	34'-8"	31'-7"	27'-9"	22'-1"
LPI 56	11-7/8"	26'-6"	24'-1"	22'-5"	17'-10"	28'-6"	25'-11"	22'-5"	17'-10"
	14"	29'-11"	27'-0"	22'-5"	17'-11"	32'-2"	27'-0"	22'-5"	17'-11"
	16"	33'-1"	27'-0"	22'-6"	17'-11"	35'-7"	27'-0"	22'-6"	17'-11"

CONTINUOUS SPAN

Series	Depth	L/480; No Web Stiffeners				L/480; With Web Stiffeners			
		12" oc	16" oc	19.2" oc	24" oc	12" oc	16" oc	19.2" oc	24" oc
LPI 18	9-1/2"	16'-10"	14'-6"	13'-3"	11'-10"	-	-	-	-
	11-7/8"	19'-3"	16'-8"	15'-2"	12'-7"	-	-	-	13'-7"
LPI 20Plus	9-1/2"	18'-4"	15'-10"	14'-5"	12'-11"	-	-	-	-
	11-7/8"	21'-3"	18'-4"	16'-9"	14'-0"	-	-	-	14'-11"
	14"	23'-0"	19'-11"	18'-2"	14'-9"	-	-	-	16'-1"
	16"	24'-8"	21'-4"	19'-5"	15'-6"	-	-	-	16'-10"
LPI 32Plus	9-1/2"	20'-4"	18'-0"	16'-5"	13'-2"	-	-	-	14'-3"
	11-7/8"	23'-9"	20'-7"	17'-7"	14'-0"	-	-	18'-9"	15'-2"
	14"	26'-1"	22'-4"	18'-7"	14'-9"	-	22'-7"	20'-2"	16'-1"
	16"	28'-2"	23'-5"	19'-5"	15'-6"	-	24'-4"	21'-2"	16'-10"
LPI 36	11-7/8"	25'-2"	22'-9"	18'-11"	15'-1"	-	22'-11"	21'-7"	18'-5"
	14"	28'-6"	22'-9"	18'-11"	15'-1"	-	26'-0"	23'-3"	18'-6"
	16"	30'-5"	22'-9"	18'-11"	15'-1"	31'-6"	28'-0"	23'-4"	18'-7"
LPI 42Plus	9-1/2"	22'-9"	20'-8"	19'-6"	16'-3"	-	-	-	-
	11-7/8"	27'-1"	24'-8"	22'-11"	18'-3"	-	-	-	19'-9"
	14"	30'-10"	27'-7"	23'-10"	19'-0"	-	-	25'-2"	21'-7"
	16"	34'-2"	29'-7"	24'-8"	19'-8"	-	29'-9"	27'-1"	22'-11"
LPI 52Plus	11-7/8"	28'-1"	25'-7"	24'-1"	20'-9"	-	-	-	22'-5"
	14"	31'-10"	28'-11"	26'-1"	20'-10"	-	-	27'-3"	24'-10"
	16"	35'-2"	31'-6"	26'-2"	20'-11"	-	32'-0"	29'-11"	25'-9"
LPI 56	11-7/8"	28'-10"	26'-3"	23'-9"	18'-11"	-	-	24'-8"	20'-9"
	14"	32'-8"	28'-7"	23'-9"	18'-11"	-	29'-8"	26'-1"	20'-10"
	16"	36'-1"	28'-7"	23'-9"	18'-11"	-	31'-5"	26'-2"	20'-10"

DESIGN ASSUMPTIONS:

1. The spans listed are the clear distance between supports. Continuous spans are based on the longest span. The shortest span shall not be less than 50% of the longest span.
2. The spans are based on uniform floor loads only as listed at the top of the page.
3. These tables reflect the additional stiffness provided by 48/24 APA RATED SHEATHING or 24 oc APA RATED STURD-I-FLOOR, or equal, glued and nailed to the top flange.
4. Live Load deflection is limited to L/480 or L/360 for simple spans as listed, and L/480 only for continuous spans.
5. Total Load deflection is limited to L/240.
6. The spans are based on an end bearing length of at least 1-3/4" and an interior bearing length of at least 3-1/2", and are limited to the bearing capacity for an SPF wall plate ($F_{c\perp}$ = 425 psi).

ADDITIONAL NOTES:

1. Web stiffeners are not required for the Simple Span tables. Web stiffeners are not required at the end bearings for the Continuous Span tables. Web stiffeners at interior supports are only required where listed in the "With Web Stiffeners" section of each table. A "-" indicates no increase in span with web stiffeners.
2. Web fillers are required for I-Joists seated in hangers that do not laterally support the top flange.
3. L/360 represents the maximum deflection allowed per code and may not provide suitable floor performance. L/480 or better is recommended for most applications.
4. These spans are not evaluated for vibration.
5. Though not required for the spans above, bridging, blocking, bottom-flange bracing or a direct-applied gypsum ceiling can improve the feel of a floor.
6. For conditions not shown, use the Uniform Floor Load (PLF) tables, LP's design software or contact your LP® SolidStart® Engineered Wood Products distributor for assistance.

Roof Span Tables: Low Pitch (6:12 or less) for 20, 25 and 30 psf Load

TO USE:

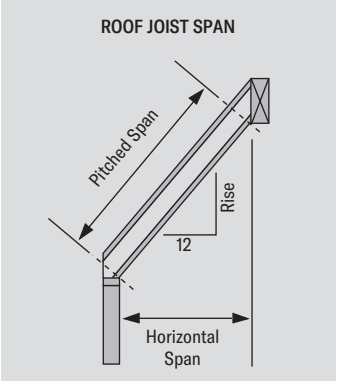
1. Select the appropriate set of tables based on roof pitch.
2. Select the section of that table that corresponds to the design roof live load (snow or non-snow).
3. Find a span that meets or exceeds the design span for the appropriate roof dead load (15 psf or 20 psf).
4. Read the corresponding series, depth and spacing.

DESIGN ASSUMPTIONS:

1. The spans listed are the horizontal clear distance between supports and are valid for simple or continuous span applications. Continuous spans are based on the longest span. The shortest span shall not be less than 50% of the longest span.
2. The spans are based on uniform gravity loads only as listed for each table, including the effects of a 300 lb concentrated load. These spans have not been evaluated for wind.
3. These tables do not reflect any additional stiffness provided by the roof sheathing.
4. Live load deflection is limited to L/240.
5. Total load deflection is limited to L/180.
6. The spans are based on an end bearing length of at least 1-3/4" and an interior bearing length of at least 3-1/2", and are limited to the bearing capacity for an SPF wall plate ($F_{c\perp}$ = 425 psi).

ADDITIONAL NOTES:

1. Web stiffeners are not required for the Roof Span tables except when using a "bird's mouth" detail for the low-end bearing. Web fillers are required for I-Joists seated in hangers that do not laterally support the top flange or for hangers that require nailing into the web.
2. L/240 represents the maximum deflection allowed per code for roof joists supporting non-plaster ceilings. Verify deflection limits with local code requirements.
3. Roof joists shall have a minimum pitch of 1/4" per foot (1/4:12) for positive drainage.
4. Roof applications in high wind areas require special analysis which may reduce spans and may require bracing of the bottom flange and special connectors to resist uplift.
5. For conditions not shown, use the Uniform Roof Load (PLF) tables, LP's design software or contact your LP® SolidStart® Engineered Wood Products distributor for assistance.



ACTUAL DEFLECTION BASED ON SPAN AND LIMIT			
Span (ft)	L/360	L/240	L/180
10'	5/16"	1/2"	11/16"
12'	3/8"	5/8"	13/16"
14'	7/16"	11/16"	15/16"
16'	9/16"	13/16"	1-1/16"
18'	5/8"	7/8"	1-3/16"
20'	11/16"	1"	1-5/16"
22'	3/4"	1-1/8"	1-7/16"
24'	13/16"	1-3/16"	1-5/8"
26'	7/8"	1-5/16"	1-3/4"
28'	15/16"	1-3/8"	1-7/8"
30'	1"	1-1/2"	2"

* Deflections rounded to the nearest 1/16".

ROOF LIVE LOAD		Series	Depth	16" oc		19.2" oc		24" oc	
		Roof Dead Load →		15 psf	20 psf	15 psf	20 psf	15 psf	20 psf
20 psf 115% Snow or 125% Non-Snow		LPI 18	9-1/2"	19'-4"	18'-5"	18'-2"	17'-3"	16'-9"	15'-9"
			11-7/8"	23'-4"	22'-2"	21'-9"	20'-3"	19'-5"	18'-1"
		LPI 20Plus	9-1/2"	21'-1"	20'-1"	19'-10"	18'-10"	18'-4"	17'-3"
			11-7/8"	25'-4"	24'-1"	23'-9"	22'-4"	21'-5"	19'-11"
			14"	28'-6"	26'-6"	26'-0"	24'-2"	23'-3"	21'-7"
			16"	30'-7"	28'-5"	27'-10"	25'-11"	24'-11"	23'-2"
		LPI 32Plus	9-1/2"	22'-10"	21'-9"	21'-5"	20'-4"	19'-9"	18'-10"
			11-7/8"	27'-2"	25'-10"	25'-6"	24'-3"	23'-7"	22'-4"
			14"	30'-10"	29'-4"	28'-11"	27'-5"	26'-4"	24'-6"
			16"	34'-1"	32'-5"	31'-9"	29'-7"	28'-5"	26'-5"
		LPI 36	11-7/8"	28'-0"	26'-8"	26'-3"	25'-0"	24'-4"	23'-2"
			14"	31'-8"	30'-2"	29'-9"	28'-4"	27'-7"	26'-3"
			16"	35'-0"	33'-4"	32'-10"	31'-4"	30'-5"	28'-5"
		LPI 42Plus	9-1/2"	25'-4"	24'-2"	23'-10"	22'-8"	22'-0"	21'-0"
			11-7/8"	30'-4"	28'-11"	28'-6"	27'-2"	26'-5"	25'-1"
			14"	34'-6"	32'-10"	32'-5"	30'-10"	30'-0"	28'-7"
			16"	38'-3"	36'-6"	36'-0"	34'-3"	33'-4"	31'-8"
		LPI 52Plus	11-7/8"	31'-4"	29'-11"	29'-6"	28'-1"	27'-3"	26'-0"
			14"	35'-7"	33'-11"	33'-5"	31'-10"	31'-0"	29'-6"
			16"	39'-5"	37'-7"	37'-0"	35'-3"	34'-3"	32'-8"
		LPI 56	11-7/8"	32'-5"	30'-11"	30'-6"	29'-0"	28'-2"	26'-10"
			14"	36'-9"	35'-0"	34'-6"	32'-10"	31'-11"	30'-5"
			16"	40'-7"	38'-8"	38'-2"	36'-4"	35'-4"	31'-11"
25 psf 115% Snow		LPI 18	9-1/2"	18'-6"	17'-8"	17'-4"	16'-7"	15'-11"	14'-11"
			11-7/8"	22'-4"	21'-0"	20'-5"	19'-2"	18'-3"	17'-1"
		LPI 20Plus	9-1/2"	20'-2"	19'-4"	18'-11"	18'-2"	17'-4"	16'-3"
			11-7/8"	24'-3"	23'-2"	22'-6"	21'-1"	20'-1"	18'-10"
			14"	26'-9"	25'-1"	24'-4"	22'-11"	21'-9"	20'-5"
			16"	28'-8"	26'-11"	26'-2"	24'-6"	23'-4"	21'-11"
		LPI 32Plus	9-1/2"	21'-10"	20'-11"	20'-6"	19'-7"	18'-11"	18'-1"
			11-7/8"	26'-0"	24'-10"	24'-4"	23'-4"	22'-6"	21'-1"
			14"	29'-6"	28'-2"	27'-8"	25'-11"	24'-8"	23'-2"
			16"	32'-7"	30'-8"	29'-9"	27'-11"	26'-7"	23'-11"
		LPI 36	11-7/8"	26'-9"	25'-7"	25'-1"	24'-1"	23'-3"	22'-3"
			14"	30'-4"	29'-0"	28'-6"	27'-3"	26'-4"	25'-3"
			16"	33'-6"	32'-1"	31'-6"	30'-1"	28'-5"	25'-3"
		LPI 42Plus	9-1/2"	24'-3"	23'-3"	22'-9"	21'-10"	21'-1"	20'-2"
			11-7/8"	29'-0"	27'-10"	27'-3"	26'-1"	25'-3"	24'-2"
			14"	33'-0"	31'-8"	31'-0"	29'-8"	28'-8"	27'-6"
			16"	36'-8"	35'-1"	34'-5"	32'-11"	31'-10"	30'-6"
		LPI 52Plus	11-7/8"	30'-0"	28'-9"	28'-2"	27'-0"	26'-1"	25'-0"
			14"	34'-1"	32'-8"	32'-0"	30'-8"	29'-8"	28'-5"
			16"	37'-9"	36'-2"	35'-5"	33'-11"	32'-10"	31'-5"
		LPI 56	11-7/8"	31'-1"	29'-9"	29'-2"	27'-11"	27'-0"	25'-10"
			14"	35'-2"	33'-8"	33'-0"	31'-7"	30'-7"	28'-5"
			16"	38'-10"	37'-2"	36'-6"	34'-11"	32'-4"	28'-6"
30 psf 115% Snow		LPI 18	9-1/2"	17'-9"	17'-1"	16'-8"	15'-11"	15'-0"	14'-2"
			11-7/8"	21'-2"	20'-0"	19'-3"	18'-3"	17'-3"	16'-3"
		LPI 20Plus	9-1/2"	19'-5"	18'-8"	18'-3"	17'-4"	16'-5"	15'-6"
			11-7/8"	23'-3"	22'-0"	21'-3"	20'-1"	19'-0"	17'-11"
			14"	25'-3"	23'-10"	23'-0"	21'-9"	20'-7"	19'-5"
			16"	27'-1"	25'-7"	24'-8"	23'-4"	22'-1"	20'-10"
		LPI 32Plus	9-1/2"	21'-0"	20'-2"	19'-8"	18'-11"	18'-2"	17'-5"
			11-7/8"	25'-0"	24'-0"	23'-5"	22'-5"	21'-3"	20'-1"
			14"	28'-4"	27'-0"	26'-1"	24'-8"	23'-4"	21'-6"
			16"	30'-10"	29'-2"	28'-2"	26'-7"	24'-3"	21'-7"
		LPI 36	11-7/8"	25'-9"	24'-9"	24'-2"	23'-3"	22'-4"	21'-6"
			14"	29'-2"	28'-1"	27'-5"	26'-4"	25'-3"	22'-8"
			16"	32'-3"	31'-0"	30'-3"	28'-5"	25'-3"	22'-8"
		LPI 42Plus	9-1/2"	23'-4"	22'-5"	21'-11"	21'-1"	20'-3"	19'-6"
			11-7/8"	27'-11"	26'-10"	26'-3"	25'-2"	24'-3"	23'-4"
			14"	31'-9"	30'-7"	29'-10"	28'-8"	27'-7"	26'-6"
			16"	35'-3"	33'-11"	33'-1"	31'-10"	30'-8"	29'-0"
		LPI 52Plus	11-7/8"	28'-11"	27'-9"	27'-1"	26'-1"	25'-1"	24'-2"
			14"	32'-9"	31'-6"	30'-9"	29'-7"	28'-6"	27'-5"
			16"	36'-3"	34'-11"	34'-1"	32'-9"	31'-7"	30'-4"
		LPI 56	11-7/8"	29'-10"	28'-9"	28'-0"	26'-11"	25'-11"	24'-11"
			14"	33'-10"	32'-6"	31'-9"	30'-6"	28'-10"	25'-8"
			16"	37'-4"	35'-11"	35'-1"	32'-3"	28'-10"	25'-9"

Roof Span Tables: Low Pitch (6:12 or less) for 40, 50 and 60 psf Load

TO USE:

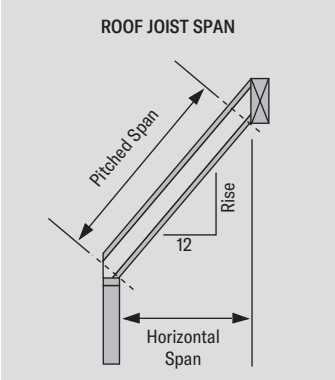
1. Select the appropriate set of tables based on roof pitch.
2. Select the section of that table that corresponds to the design roof live load (snow or non-snow).
3. Find a span that meets or exceeds the design span for the appropriate roof dead load (15 psf or 20 psf).
4. Read the corresponding series, depth and spacing.

DESIGN ASSUMPTIONS:

1. The spans listed are the horizontal clear distance between supports and are valid for simple or continuous span applications. Continuous spans are based on the longest span. The shortest span shall not be less than 50% of the longest span.
2. The spans are based on uniform gravity loads only as listed for each table, including the effects of a 300 lb concentrated load. These spans have not been evaluated for wind.
3. These tables do not reflect any additional stiffness provided by the roof sheathing.
4. Live load deflection is limited to L/240.
5. Total load deflection is limited to L/180.
6. The spans are based on an end bearing length of at least 1-3/4" and an interior bearing length of at least 3-1/2", and are limited to the bearing capacity for an SPF wall plate ($F_{c\perp}$ = 425 psi).

ADDITIONAL NOTES:

1. Web stiffeners are not required for the Roof Span tables except when using a "bird's mouth" detail for the low-end bearing. Web fillers are required for I-Joists seated in hangers that do not laterally support the top flange or for hangers that require nailing into the web.
2. L/240 represents the maximum deflection allowed per code for roof joists supporting non-plaster ceilings. Verify deflection limits with local code requirements.
3. Roof joists shall have a minimum pitch of 1/4" per foot (1/4:12) for positive drainage.
4. Roof applications in high wind areas require special analysis which may reduce spans and may require bracing of the bottom flange and special connectors to resist uplift.
5. For conditions not shown, use the Uniform Roof Load (PLF) tables, LP's design software or contact your LP® SolidStart® Engineered Wood Products distributor for assistance.



ACTUAL DEFLECTION BASED ON SPAN AND LIMIT

Span (ft)	L/360	L/240	L/180
10'	5/16"	1/2"	11/16"
12'	3/8"	5/8"	13/16"
14'	7/16"	11/16"	15/16"
16'	9/16"	13/16"	1-1/16"
18'	5/8"	7/8"	1-3/16"
20'	11/16"	1"	1-5/16"
22'	3/4"	1-1/8"	1-7/16"
24'	13/16"	1-3/16"	1-5/8"
26'	7/8"	1-5/16"	1-3/4"
28'	15/16"	1-3/8"	1-7/8"
30'	1"	1-1/2"	2"

* Deflections rounded to the nearest 1/16".

ROOF LIVE LOAD		Series	Depth	16" oc		19.2" oc		24" oc	
		Roof Dead Load →		15 psf	20 psf	15 psf	20 psf	15 psf	20 psf
	40 psf 115% Snow	LPI 18	9-1/2"	16'-7"	15'-11"	15'-3"	14'-6"	13'-7"	13'-0"
			11-7/8"	19'-2"	18'-3"	17'-6"	16'-8"	15'-7"	14'-11"
		LPI 20Plus	9-1/2"	18'-2"	17'-5"	16'-8"	15'-10"	14'-10"	14'-2"
			11-7/8"	21'-2"	20'-2"	19'-3"	18'-4"	17'-2"	16'-5"
			14"	22'-11"	21'-10"	20'-10"	19'-11"	18'-8"	17'-9"
			16"	24'-6"	23'-5"	22'-5"	21'-4"	19'-11"	18'-1"
		LPI 32Plus	9-1/2"	19'-7"	18'-11"	18'-4"	17'-9"	16'-11"	16'-1"
			11-7/8"	23'-4"	22'-6"	21'-7"	20'-7"	19'-2"	17'-6"
			14"	25'-11"	24'-9"	23'-8"	22'-7"	19'-10"	18'-0"
			16"	28'-0"	26'-8"	24'-11"	22'-8"	19'-11"	18'-1"
		LPI 36	11-7/8"	24'-1"	23'-3"	22'-7"	21'-10"	20'-7"	18'-10"
			14"	27'-3"	26'-5"	25'-7"	23'-8"	20'-7"	18'-10"
			16"	30'-2"	28'-5"	25'-10"	23'-8"	20'-7"	18'-10"
		LPI 42Plus	9-1/2"	21'-10"	21'-1"	20'-6"	19'-10"	18'-11"	18'-4"
			11-7/8"	26'-1"	25'-3"	24'-6"	23'-9"	22'-8"	21'-11"
			14"	29'-8"	28'-9"	27'-11"	27'-0"	25'-9"	23'-9"
			16"	33'-0"	31'-11"	30'-11"	29'-8"	26'-10"	24'-7"
		LPI 52Plus	11-7/8"	27'-0"	26'-2"	25'-4"	24'-7"	23'-6"	22'-8"
			14"	30'-8"	29'-8"	28'-9"	27'-10"	26'-8"	25'-9"
			16"	33'-11"	32'-10"	31'-11"	30'-10"	28'-6"	26'-1"
		LPI 56	11-7/8"	27'-11"	27'-0"	26'-2"	25'-4"	23'-8"	21'-6"
			14"	31'-8"	30'-7"	29'-8"	27'-0"	23'-8"	21'-6"
			16"	34'-11"	32'-6"	29'-9"	27'-0"	23'-9"	21'-7"
	50 psf 115% Snow	LPI 18	9-1/2"	15'-5"	14'-9"	14'-0"	13'-6"	12'-6"	12'-0"
			11-7/8"	17'-8"	16'-11"	16'-1"	15'-5"	14'-5"	13'-5"
		LPI 20Plus	9-1/2"	16'-10"	16'-2"	15'-4"	14'-8"	13'-8"	13'-2"
			11-7/8"	19'-6"	18'-8"	17'-9"	17'-0"	15'-10"	15'-0"
			14"	21'-1"	20'-3"	19'-3"	18'-6"	16'-10"	15'-6"
			16"	22'-7"	21'-8"	20'-7"	19'-6"	16'-10"	15'-7"
		LPI 32Plus	9-1/2"	18'-6"	17'-11"	17'-3"	16'-9"	15'-2"	14'-1"
			11-7/8"	21'-9"	20'-11"	19'-10"	18'-10"	16'-2"	15'-0"
			14"	23'-11"	23'-0"	21'-1"	19'-5"	16'-10"	15'-6"
			16"	25'-5"	23'-6"	21'-2"	19'-6"	16'-10"	15'-7"
		LPI 36	11-7/8"	22'-9"	22'-1"	21'-4"	20'-2"	17'-4"	16'-1"
			14"	25'-9"	24'-4"	21'-9"	20'-2"	17'-4"	16'-1"
			16"	26'-2"	24'-4"	21'-9"	20'-2"	17'-4"	16'-1"
		LPI 42Plus	9-1/2"	20'-7"	20'-0"	19'-4"	18'-10"	17'-10"	17'-4"
			11-7/8"	24'-8"	24'-0"	23'-2"	22'-6"	21'-1"	19'-7"
			14"	28'-1"	27'-4"	26'-4"	25'-6"	21'-11"	20'-4"
			16"	31'-2"	30'-3"	28'-4"	26'-4"	22'-8"	21'-0"
		LPI 52Plus	11-7/8"	25'-6"	24'-10"	24'-0"	23'-4"	22'-2"	21'-7"
			14"	29'-0"	28'-2"	27'-3"	26'-6"	24'-0"	22'-3"
			16"	32'-1"	31'-3"	30'-2"	28'-0"	24'-1"	22'-4"
		LPI 56	11-7/8"	26'-5"	25'-8"	24'-9"	23'-2"	20'-1"	18'-6"
			14"	29'-11"	27'-11"	25'-2"	23'-3"	20'-1"	18'-6"
			16"	30'-4"	28'-0"	25'-3"	23'-3"	20'-1"	18'-7"
	60 psf 115% Snow	LPI 18	9-1/2"	14'-4"	13'-10"	13'-1"	12'-7"	11'-8"	11'-0"
			11-7/8"	16'-5"	15'-11"	15'-0"	14'-6"	12'-6"	11'-9"
		LPI 20Plus	9-1/2"	15'-8"	15'-1"	14'-3"	13'-9"	12'-9"	12'-3"
			11-7/8"	18'-2"	17'-6"	16'-6"	15'-11"	13'-11"	13'-1"
			14"	19'-8"	19'-0"	17'-11"	17'-0"	14'-7"	13'-7"
			16"	21'-1"	20'-4"	18'-4"	17'-1"	14'-8"	13'-7"
		LPI 32Plus	9-1/2"	17'-4"	17'-1"	16'-2"	15'-5"	13'-2"	12'-3"
			11-7/8"	20'-4"	19'-7"	17'-6"	16'-5"	13'-11"	13'-1"
			14"	22'-0"	20'-6"	18'-3"	17'-0"	14'-7"	13'-7"
			16"	22'-1"	20'-7"	18'-4"	17'-1"	14'-8"	13'-7"
		LPI 36	11-7/8"	21'-4"	21'-1"	18'-10"	17'-8"	15'-0"	14'-1"
			14"	22'-8"	21'-3"	18'-10"	17'-8"	15'-0"	14'-1"
			16"	22'-8"	21'-3"	18'-10"	17'-8"	15'-0"	14'-1"
		LPI 42Plus	9-1/2"	19'-4"	19'-2"	18'-2"	17'-11"	16'-2"	15'-2"
			11-7/8"	23'-2"	22'-11"	21'-9"	21'-5"	18'-3"	17'-1"
			14"	26'-4"	26'-1"	23'-9"	22'-3"	18'-11"	17'-9"
			16"	29'-3"	27'-8"	24'-7"	23'-0"	19'-7"	18'-4"
		LPI 52Plus	11-7/8"	24'-0"	23'-9"	22'-6"	22'-3"	20'-8"	19'-3"
			14"	27'-3"	26'-11"	25'-7"	24'-4"	20'-9"	19'-5"
			16"	30'-2"	29'-5"	26'-1"	24'-6"	20'-10"	19'-6"
		LPI 56	11-7/8"	24'-9"	24'-5"	21'-10"	20'-4"	17'-5"	16'-2"
			14"	26'-4"	24'-6"	21'-10"	20'-4"	17'-5"	16'-3"
			16"	26'-4"	24'-6"	21'-11"	20'-5"	17'-6"	16'-3"

Roof Span Tables: High Pitch (6:12 to 12:12) for 20, 25 and 30 psf Load

TO USE:

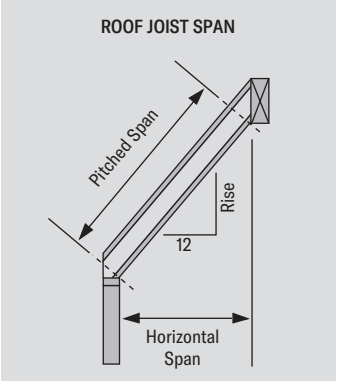
1. Select the appropriate set of tables based on roof pitch.
2. Select the section of that table that corresponds to the design roof live load (snow or non-snow).
3. Find a span that meets or exceeds the design span for the appropriate roof dead load (15 psf or 20 psf).
4. Read the corresponding series, depth and spacing.

DESIGN ASSUMPTIONS:

1. The spans listed are the horizontal clear distance between supports and are valid for simple or continuous span applications. Continuous spans are based on the longest span. The shortest span shall not be less than 50% of the longest span.
2. The spans are based on uniform gravity loads only as listed for each table, including the effects of a 300 lb concentrated load. These spans have not been evaluated for wind.
3. These tables do not reflect any additional stiffness provided by the roof sheathing.
4. Live load deflection is limited to L/240.
5. Total load deflection is limited to L/180.
6. The spans are based on an end bearing length of at least 1-3/4" and an interior bearing length of at least 3-1/2", and are limited to the bearing capacity for an SPF wall plate ($F_{c\perp}$ = 425 psi).

ADDITIONAL NOTES:

1. Web stiffeners are not required for the Roof Span tables except when using a "bird's mouth" detail for the low-end bearing. Web fillers are required for I-Joists seated in hangers that do not laterally support the top flange or for hangers that require nailing into the web.
2. L/240 represents the maximum deflection allowed per code for roof joists supporting non-plaster ceilings. Verify deflection limits with local code requirements.
3. Roof joists shall have a minimum pitch of 1/4" per foot (1/4:12) for positive drainage.
4. Roof applications in high wind areas require special analysis which may reduce spans and may require bracing of the bottom flange and special connectors to resist uplift.
5. For conditions not shown, use the Uniform Roof Load (PLF) tables, LP's design software or contact your LP® SolidStart® Engineered Wood Products distributor for assistance.



ACTUAL DEFLECTION BASED ON SPAN AND LIMIT			
Span (ft)	L/360	L/240	L/180
10'	5/16"	1/2"	11/16"
12'	3/8"	5/8"	13/16"
14'	7/16"	11/16"	15/16"
16'	9/16"	13/16"	1-1/16"
18'	5/8"	7/8"	1-3/16"
20'	11/16"	1"	1-5/16"
22'	3/4"	1-1/8"	1-7/16"
24'	13/16"	1-3/16"	1-5/8"
26'	7/8"	1-5/16"	1-3/4"
28'	15/16"	1-3/8"	1-7/8"
30'	1"	1-1/2"	2"

* Deflections rounded to the nearest 1/16".

ROOF LIVE LOAD		Series	Depth	16" oc		19.2" oc		24" oc	
		Roof Dead Load →		15 psf	20 psf	15 psf	20 psf	15 psf	20 psf
20 psf 115% Snow or 125% Non-Snow		LPI 18	9-1/2"	17'-3"	16'-4"	16'-2"	15'-4"	15'-0"	14'-2"
			11-7/8"	20'-10"	19'-8"	19'-7"	18'-6"	18'-1"	17'-0"
		LPI 20Plus	9-1/2"	18'-10"	17'-10"	17'-8"	16'-9"	16'-5"	15'-6"
			11-7/8"	22'-7"	21'-5"	21'-3"	20'-1"	19'-8"	18'-7"
			14"	25'-10"	24'-6"	24'-3"	22'-8"	22'-0"	20'-3"
			16"	28'-9"	26'-8"	26'-4"	24'-4"	23'-7"	21'-9"
		LPI 32Plus	9-1/2"	20'-5"	19'-4"	19'-2"	18'-2"	17'-9"	16'-9"
			11-7/8"	24'-4"	23'-0"	22'-10"	21'-7"	21'-1"	20'-0"
			14"	27'-7"	26'-1"	25'-11"	24'-6"	23'-11"	22'-8"
			16"	30'-5"	28'-10"	28'-7"	27'-1"	26'-5"	23'-6"
		LPI 36	11-7/8"	25'-0"	23'-8"	23'-6"	22'-3"	21'-9"	20'-7"
			14"	28'-4"	26'-10"	26'-7"	25'-2"	24'-7"	23'-4"
			16"	31'-3"	29'-7"	29'-4"	27'-10"	27'-2"	25'-0"
		LPI 42Plus	9-1/2"	22'-8"	21'-5"	21'-3"	20'-2"	19'-8"	18'-8"
			11-7/8"	27'-1"	25'-8"	25'-5"	24'-1"	23'-7"	22'-4"
			14"	30'-10"	29'-2"	28'-11"	27'-5"	26'-10"	25'-5"
			16"	34'-2"	32'-5"	32'-1"	30'-5"	29'-9"	28'-2"
		LPI 52Plus	11-7/8"	28'-0"	26'-6"	26'-4"	24'-11"	24'-4"	23'-1"
			14"	31'-9"	30'-1"	29'-10"	28'-3"	27'-8"	26'-2"
			16"	35'-2"	33'-4"	33'-1"	31'-4"	30'-7"	29'-0"
		LPI 56	11-7/8"	29'-0"	27'-5"	27'-3"	25'-9"	25'-2"	23'-10"
			14"	32'-10"	31'-1"	30'-10"	29'-2"	28'-7"	27'-0"
			16"	36'-3"	34'-4"	34'-1"	32'-3"	31'-6"	28'-0"
	25 psf 115% Snow	LPI 18	9-1/2"	16'-7"	15'-9"	15'-7"	14'-10"	14'-5"	13'-9"
			11-7/8"	20'-0"	19'-1"	18'-9"	17'-11"	17'-4"	16'-2"
		LPI 20Plus	9-1/2"	18'-1"	17'-3"	17'-0"	16'-2"	15'-9"	15'-0"
			11-7/8"	21'-9"	20'-8"	20'-5"	19'-5"	18'-11"	17'-10"
			14"	24'-10"	23'-8"	23'-2"	21'-7"	20'-9"	19'-4"
			16"	27'-3"	25'-5"	24'-10"	23'-2"	22'-3"	20'-8"
		LPI 32Plus	9-1/2"	19'-8"	18'-8"	18'-5"	17'-6"	17'-0"	16'-2"
			11-7/8"	23'-4"	22'-3"	21'-11"	20'-10"	20'-3"	19'-3"
			14"	26'-6"	25'-3"	24'-10"	23'-8"	23'-0"	21'-2"
			16"	29'-3"	27'-10"	27'-6"	26'-2"	24'-7"	21'-3"
		LPI 36	11-7/8"	24'-0"	22'-10"	22'-7"	21'-6"	20'-11"	19'-11"
			14"	27'-2"	25'-11"	25'-7"	24'-4"	23'-8"	22'-6"
			16"	30'-1"	28'-7"	28'-3"	26'-11"	26'-1"	22'-7"
		LPI 42Plus	9-1/2"	21'-9"	20'-9"	20'-5"	19'-6"	18'-11"	18'-0"
			11-7/8"	26'-1"	24'-10"	24'-6"	23'-4"	22'-8"	21'-7"
			14"	29'-8"	28'-3"	27'-10"	26'-6"	25'-9"	24'-6"
			16"	32'-10"	31'-4"	30'-11"	29'-5"	28'-7"	27'-3"
		LPI 52Plus	11-7/8"	26'-11"	25'-8"	25'-4"	24'-1"	23'-5"	22'-4"
			14"	30'-7"	29'-1"	28'-8"	27'-4"	26'-7"	25'-4"
			16"	33'-10"	32'-3"	31'-9"	30'-3"	29'-5"	28'-0"
		LPI 56	11-7/8"	27'-10"	26'-6"	26'-2"	24'-11"	24'-3"	23'-1"
			14"	31'-7"	30'-1"	29'-8"	28'-3"	27'-5"	25'-4"
			16"	34'-10"	33'-2"	32'-9"	31'-2"	29'-3"	25'-4"
	30 psf 115% Snow	LPI 18	9-1/2"	16'-0"	15'-4"	15'-0"	14'-5"	13'-11"	13'-4"
			11-7/8"	19'-4"	18'-6"	18'-2"	17'-3"	16'-6"	15'-5"
		LPI 20Plus	9-1/2"	17'-6"	16'-9"	16'-5"	15'-8"	15'-2"	14'-6"
			11-7/8"	21'-0"	20'-1"	19'-8"	18'-10"	18'-2"	17'-0"
			14"	24'-0"	22'-8"	22'-0"	20'-8"	19'-8"	18'-5"
			16"	25'-11"	24'-3"	23'-7"	22'-1"	21'-1"	19'-5"
		LPI 32Plus	9-1/2"	19'-0"	18'-1"	17'-9"	17'-0"	16'-5"	15'-8"
			11-7/8"	22'-7"	21'-7"	21'-2"	20'-3"	19'-7"	18'-8"
			14"	25'-7"	24'-5"	24'-0"	22'-11"	22'-1"	19'-4"
			16"	28'-3"	27'-0"	26'-6"	24'-4"	22'-2"	19'-5"
		LPI 36	11-7/8"	23'-2"	22'-2"	21'-9"	20'-10"	20'-2"	19'-3"
			14"	26'-3"	25'-1"	24'-8"	23'-7"	22'-10"	20'-7"
			16"	29'-0"	27'-9"	27'-3"	25'-10"	23'-6"	20'-8"
		LPI 42Plus	9-1/2"	21'-0"	20'-1"	19'-9"	18'-11"	18'-3"	17'-6"
			11-7/8"	25'-2"	24'-1"	23'-7"	22'-7"	21'-10"	20'-11"
			14"	28'-7"	27'-4"	26'-10"	25'-8"	24'-11"	23'-9"
			16"	31'-9"	30'-4"	29'-10"	28'-6"	27'-7"	26'-5"
		LPI 52Plus	11-7/8"	26'-0"	24'-10"	24'-5"	23'-4"	22'-7"	21'-8"
			14"	29'-6"	28'-3"	27'-9"	26'-6"	25'-8"	24'-7"
			16"	32'-8"	31'-3"	30'-8"	29'-4"	28'-5"	27'-2"
		LPI 56	11-7/8"	26'-11"	25'-9"	25'-3"	24'-2"	23'-5"	22'-4"
			14"	30'-6"	29'-2"	28'-7"	27'-4"	26'-4"	23'-1"
			16"	33'-8"	32'-2"	31'-7"	29'-0"	26'-5"	23'-2"

Roof Span Tables: High Pitch (6:12 to 12:12) for 40, 50 and 60 psf Load

TO USE:

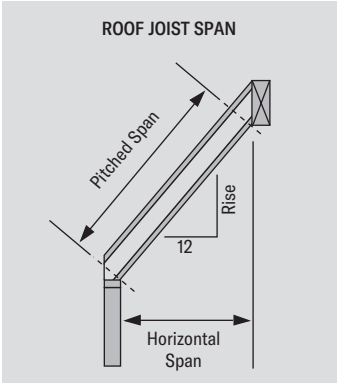
1. Select the appropriate set of tables based on roof pitch.
2. Select the section of that table that corresponds to the design roof live load (snow or non-snow).
3. Find a span that meets or exceeds the design span for the appropriate roof dead load (15 psf or 20 psf).
4. Read the corresponding series, depth and spacing.

DESIGN ASSUMPTIONS:

1. The spans listed are the horizontal clear distance between supports and are valid for simple or continuous span applications. Continuous spans are based on the longest span. The shortest span shall not be less than 50% of the longest span.
2. The spans are based on uniform gravity loads only as listed for each table, including the effects of a 300 lb concentrated load. These spans have not been evaluated for wind.
3. These tables do not reflect any additional stiffness provided by the roof sheathing.
4. Live load deflection is limited to L/240.
5. Total load deflection is limited to L/180.
6. The spans are based on an end bearing length of at least 1-3/4" and an interior bearing length of at least 3-1/2", and are limited to the bearing capacity for an SPF wall plate ($F_{c\perp}$ = 425 psi).

ADDITIONAL NOTES:

1. Web stiffeners are not required for the Roof Span tables except when using a "bird's mouth" detail for the low-end bearing. Web fillers are required for I-Joists seated in hangers that do not laterally support the top flange or for hangers that require nailing into the web.
2. L/240 represents the maximum deflection allowed per code for roof joists supporting non-plaster ceilings. Verify deflection limits with local code requirements.
3. Roof joists shall have a minimum pitch of 1/4" per foot (1/4:12) for positive drainage.
4. Roof applications in high wind areas require special analysis which may reduce spans and may require bracing of the bottom flange and special connectors to resist uplift.
5. For conditions not shown, use the Uniform Roof Load (PLF) tables, LP's design software or contact your LP® SolidStart® Engineered Wood Products distributor for assistance.



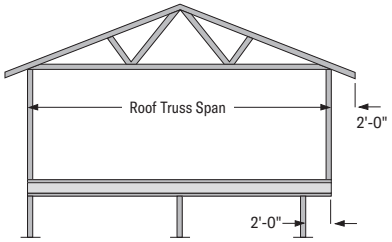
ACTUAL DEFLECTION BASED ON SPAN AND LIMIT

Span (ft)	L/360	L/240	L/180
10'	5/16"	1/2"	11/16"
12'	3/8"	5/8"	13/16"
14'	7/16"	11/16"	15/16"
16'	9/16"	13/16"	1-1/16"
18'	5/8"	7/8"	1-3/16"
20'	11/16"	1"	1-5/16"
22'	3/4"	1-1/8"	1-7/16"
24'	13/16"	1-3/16"	1-5/8"
26'	7/8"	1-5/16"	1-3/4"
28'	15/16"	1-3/8"	1-7/8"
30'	1"	1-1/2"	2"

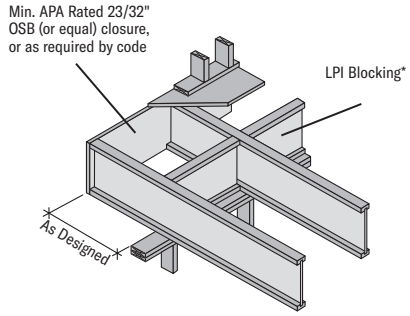
* Deflections rounded to the nearest 1/16".

ROOF LIVE LOAD		Series	Depth	16" oc		19.2" oc		24" oc	
		Roof Dead Load →		15 psf	20 psf	15 psf	20 psf	15 psf	20 psf
	40 psf 115% Snow	LPI 18	9-1/2"	15'-1"	14'-6"	14'-2"	13'-7"	13'-1"	12'-5"
			11-7/8"	18'-2"	17'-6"	16'-10"	16'-0"	15'-1"	14'-3"
		LPI 20Plus	9-1/2"	16'-5"	15'-10"	15'-5"	14'-10"	14'-3"	13'-7"
			11-7/8"	19'-9"	19'-0"	18'-6"	17'-7"	16'-7"	15'-8"
			14"	22'-1"	20'-11"	20'-2"	19'-1"	18'-0"	16'-6"
			16"	23'-8"	22'-5"	21'-7"	20'-5"	18'-6"	16'-7"
		LPI 32Plus	9-1/2"	17'-10"	17'-2"	16'-8"	16'-1"	15'-5"	14'-10"
			11-7/8"	21'-2"	20'-5"	19'-10"	19'-1"	18'-4"	16'-5"
			14"	24'-0"	23'-1"	22'-6"	20'-8"	18'-5"	16'-6"
			16"	26'-6"	24'-11"	23'-2"	20'-9"	18'-6"	16'-7"
		LPI 36	11-7/8"	21'-10"	21'-0"	20'-6"	19'-8"	18'-11"	17'-6"
			14"	24'-8"	23'-9"	23'-2"	22'-0"	19'-7"	17'-6"
			16"	27'-3"	26'-3"	24'-7"	22'-1"	19'-8"	17'-7"
		LPI 42Plus	9-1/2"	19'-9"	19'-0"	18'-7"	17'-10"	17'-2"	16'-6"
			11-7/8"	23'-8"	22'-9"	22'-3"	21'-5"	20'-7"	19'-9"
			14"	26'-11"	25'-11"	25'-3"	24'-4"	23'-5"	22'-2"
			16"	29'-10"	28'-9"	28'-0"	27'-0"	25'-7"	22'-11"
		LPI 52Plus	11-7/8"	24'-5"	23'-7"	23'-0"	22'-1"	21'-3"	20'-6"
			14"	27'-9"	26'-9"	26'-1"	25'-1"	24'-2"	23'-3"
			16"	30'-9"	29'-7"	28'-10"	27'-10"	26'-9"	24'-4"
		LPI 56	11-7/8"	25'-4"	24'-4"	23'-9"	22'-10"	21'-11"	19'-8"
			14"	28'-8"	27'-7"	26'-11"	24'-8"	22'-0"	19'-8"
			16"	31'-8"	29'-9"	27'-7"	24'-9"	22'-0"	19'-9"
	50 psf 115% Snow	LPI 18	9-1/2"	14'-3"	13'-10"	13'-5"	13'-0"	12'-2"	11'-7"
			11-7/8"	17'-2"	16'-4"	15'-7"	14'-11"	13'-11"	12'-9"
		LPI 20Plus	9-1/2"	15'-7"	15'-1"	14'-8"	14'-2"	13'-3"	12'-8"
			11-7/8"	18'-9"	18'-0"	17'-3"	16'-5"	15'-5"	14'-3"
			14"	20'-5"	19'-6"	18'-8"	17'-9"	15'-9"	14'-4"
			16"	21'-11"	20'-11"	19'-11"	18'-1"	15'-10"	14'-5"
		LPI 32Plus	9-1/2"	16'-11"	16'-4"	15'-10"	15'-3"	14'-7"	14'-1"
			11-7/8"	20'-1"	19'-5"	18'-10"	17'-11"	15'-9"	14'-3"
			14"	22'-9"	21'-8"	19'-10"	18'-0"	15'-9"	14'-4"
			16"	23'-11"	21'-9"	19'-11"	18'-1"	15'-10"	14'-5"
		LPI 36	11-7/8"	20'-8"	20'-0"	19'-5"	18'-9"	16'-9"	15'-2"
			14"	23'-5"	22'-8"	21'-1"	19'-1"	16'-9"	15'-3"
			16"	25'-5"	23'-1"	21'-2"	19'-2"	16'-10"	15'-4"
		LPI 42Plus	9-1/2"	18'-9"	18'-2"	17'-7"	17'-0"	16'-3"	15'-9"
			11-7/8"	22'-5"	21'-9"	21'-1"	20'-5"	19'-6"	18'-7"
			14"	25'-6"	24'-9"	24'-0"	23'-2"	21'-3"	19'-3"
			16"	28'-4"	27'-5"	26'-7"	25'-0"	21'-11"	19'-11"
		LPI 52Plus	11-7/8"	23'-3"	22'-6"	21'-10"	21'-1"	20'-2"	19'-6"
			14"	26'-4"	25'-6"	24'-9"	23'-11"	22'-10"	20'-9"
			16"	29'-2"	28'-3"	27'-5"	26'-6"	23'-4"	21'-2"
		LPI 56	11-7/8"	24'-0"	23'-3"	22'-6"	21'-5"	18'-10"	17'-1"
			14"	27'-2"	25'-10"	23'-8"	21'-6"	18'-10"	17'-2"
			16"	28'-6"	25'-11"	23'-8"	21'-6"	18'-11"	17'-2"
	60 psf 115% Snow	LPI 18	9-1/2"	13'-8"	13'-3"	12'-9"	12'-3"	11'-5"	10'-11"
			11-7/8"	16'-0"	15'-4"	14'-7"	14'-0"	12'-4"	11'-4"
		LPI 20Plus	9-1/2"	14'-11"	14'-6"	13'-11"	13'-4"	12'-5"	11'-11"
			11-7/8"	17'-8"	16'-11"	16'-1"	15'-5"	13'-9"	12'-8"
			14"	19'-2"	18'-4"	17'-4"	15'-11"	13'-10"	12'-8"
			16"	20'-6"	19'-3"	17'-5"	16'-0"	13'-10"	12'-9"
		LPI 32Plus	9-1/2"	16'-1"	15'-8"	15'-1"	14'-8"	13'-8"	12'-7"
			11-7/8"	19'-2"	18'-7"	17'-3"	15'-10"	13'-9"	12'-8"
			14"	20'-10"	19'-2"	17'-4"	15'-11"	13'-10"	12'-8"
			16"	20'-11"	19'-3"	17'-5"	16'-0"	13'-10"	12'-9"
		LPI 36	11-7/8"	19'-9"	19'-2"	18'-4"	16'-11"	14'-8"	13'-5"
			14"	22'-2"	20'-4"	18'-5"	16'-11"	14'-8"	13'-6"
			16"	22'-3"	20'-5"	18'-6"	17'-0"	14'-9"	13'-7"
		LPI 42Plus	9-1/2"	17'-11"	17'-5"	16'-10"	16'-4"	15'-7"	15'-1"
			11-7/8"	21'-5"	20'-10"	20'-2"	19'-7"	17'-11"	16'-5"
			14"	24'-5"	23'-9"	22'-11"	21'-5"	18'-7"	17'-1"
			16"	27'-1"	26'-4"	24'-1"	22'-2"	19'-3"	17'-8"
		LPI 52Plus	11-7/8"	22'-2"	21'-7"	20'-10"	20'-3"	19'-3"	18'-0"
			14"	25'-2"	24'-6"	23'-8"	23'-0"	20'-0"	18'-5"
			16"	27'-11"	27'-1"	25'-7"	23'-6"	20'-5"	18'-9"
		LPI 56	11-7/8"	22'-11"	22'-3"	20'-8"	19'-0"	16'-6"	15'-2"
			14"	24'-11"	22'-11"	20'-9"	19'-0"	16'-6"	15'-2"
			16"	24'-11"	22'-11"	20'-9"	19'-1"	16'-7"	15'-2"

Cantilever Details

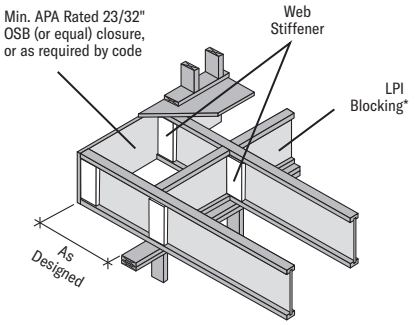


C1 **NO REINFORCEMENT REQUIRED**



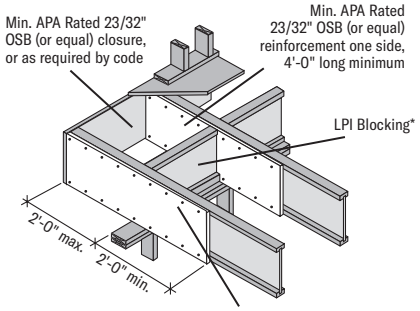
* LP® SolidStart® Rim Board, LVL or LSL may be substituted for the LPI Blocking

C1W **WEB STIFFENER REQUIRED**



* LP SolidStart Rim Board, LVL or LSL may be substituted for the LPI Blocking

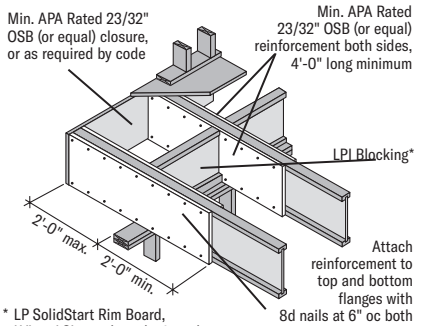
C2 **23/32" OSB (OR EQUAL) REINFORCEMENT ONE SIDE ONLY**



* LP SolidStart Rim Board, LVL or LSL may be substituted for the LPI Blocking

Attach reinforcement to top and bottom flanges with 8d nails at 6" oc

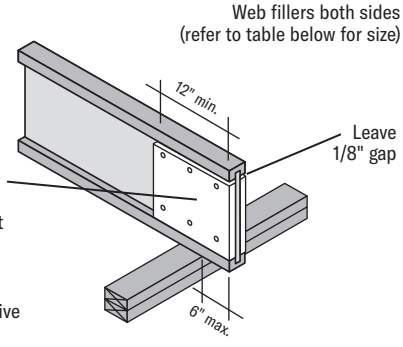
C3 **23/32" OSB (OR EQUAL) REINFORCEMENT BOTH SIDES**



* LP SolidStart Rim Board, LVL or LSL may be substituted for the LPI Blocking

Attach reinforcement to top and bottom flanges with 8d nails at 6" oc both sides with nails staggered to avoid splitting

C7 **BRICK LEDGE CANTILEVER WEB FILLER REINFORCING**



Blocking panels are required at the bearing, but are not shown for clarity

Series	Minimum Web Filler	Reaction Capacity (lbs)
LPI 18	23/32" APA Rated OSB (or equal)	2300
LPI 20Plus LPI 32Plus LPI 36	23/32" APA Rated OSB (or equal)	2600
LPI 42Plus LPI 52Plus LPI 56	1-1/8" APA Rated OSB (or equal)	4000

C8 **BRICK LEDGE CANTILEVER FULL-DEPTH REINFORCING**

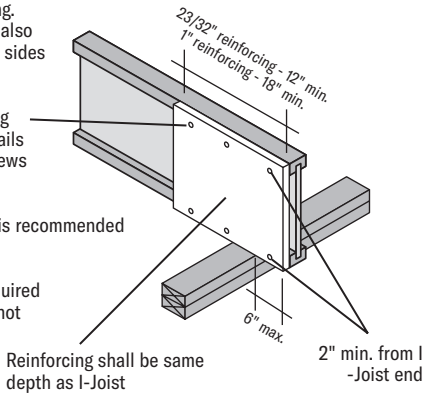
One Side

23/32" APA Rated OSB or 1" (min.) LP Rim Board reinforcing. 14" and deeper I-Joists also require web fillers both sides (see C7).

Nail or screw reinforcing with (3) 6d or 8d box nails or #6 x 1-1/2" wood screws into both flanges*

Construction adhesive is recommended between surfaces

Blocking panels are required at the bearing, but are not shown for clarity



*** NOTE:** Pilot holes required when using screws

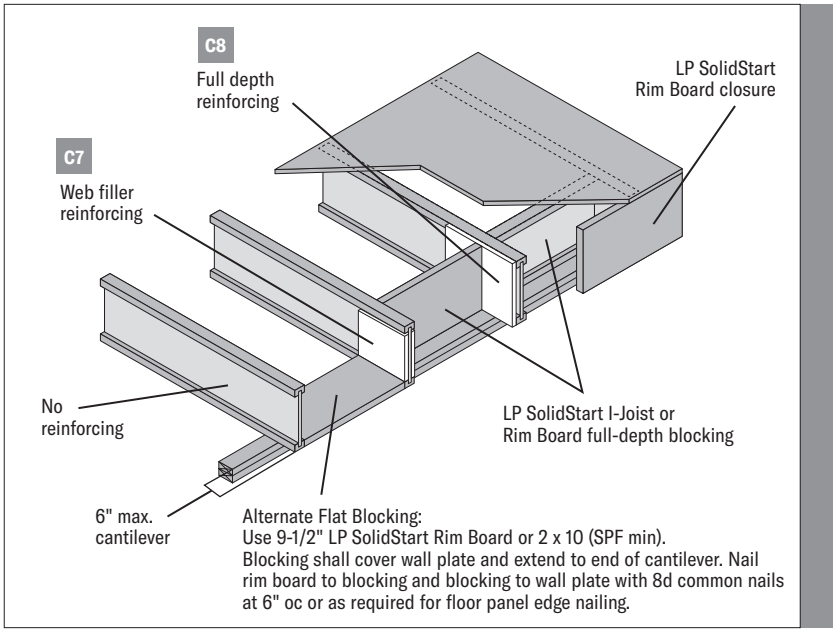
Series	Reaction Capacity (lbs)	
	23/32" APA Rated OSB (or equal)	1" Min. LP SolidStart Rim Board
LPI 18	3100	3400
LPI 20Plus LPI 32Plus LPI 36	3500	3800
LPI 42Plus LPI 52Plus LPI 56	4800	5200

TOTAL JOIST REACTION CALCULATION

LP® SolidStart® I-Joists can cantilever up to 6" to support a load-bearing wall over a brick finish. Depending on the Total Joist Reaction (TJR), the joists may require reinforcement. If the TJR is less than the End Reaction Capacity W/out Stiffeners (page 4), then no reinforcement is required. If the TJR is greater than the End Reaction Capacity W/out Stiffeners, but less than the End Reaction Capacity With Stiffeners, then web stiffeners shall be installed at the bearing. Otherwise, one of the reinforcing details from below shall be used.

TOTAL JOIST REACTION, TJR = FLR + WLR + RLR

Where: **FLR** = Floor Load Reaction
WLR = Wall Load Reaction
RLR = Roof Load Reaction, including any other floor, ceiling or attic loads imposed on wall



EXAMPLE

I-Joist: 9-1/2" LPI 20Plus **Wall under Cantilever: 3-1/2" wide**

Design Loads: Floor: 40/10 psf
Roof: 20/10 psf
Wall: 80 plf

Floor System: Joist Span = 16'
Joist Cantilever = 5"
Joist Spacing = 16" oc

Roof System: Roof Span = 22'
Roof Overhang = 1'

FLR = (Joist Span / 2 + Joist Cantilever / 12) * (Design Floor Load) * (Joist Spacing / 12)
= (16' / 2 + 5" / 12) * (40 psf + 10 psf) * (16" / 12)
= 561 lbs.

WLR = (Design Wall Load) * (Joist Spacing / 12)
= (80 plf) * (16" / 12)
= 107 lbs.

RLR = (Roof Span / 2 + Roof Overhang) * (Design Roof Load) * (Joist Spacing / 12)
= (22' / 2 + 1') * (20 psf + 10 psf) * (16" / 12)
= 480 lbs.

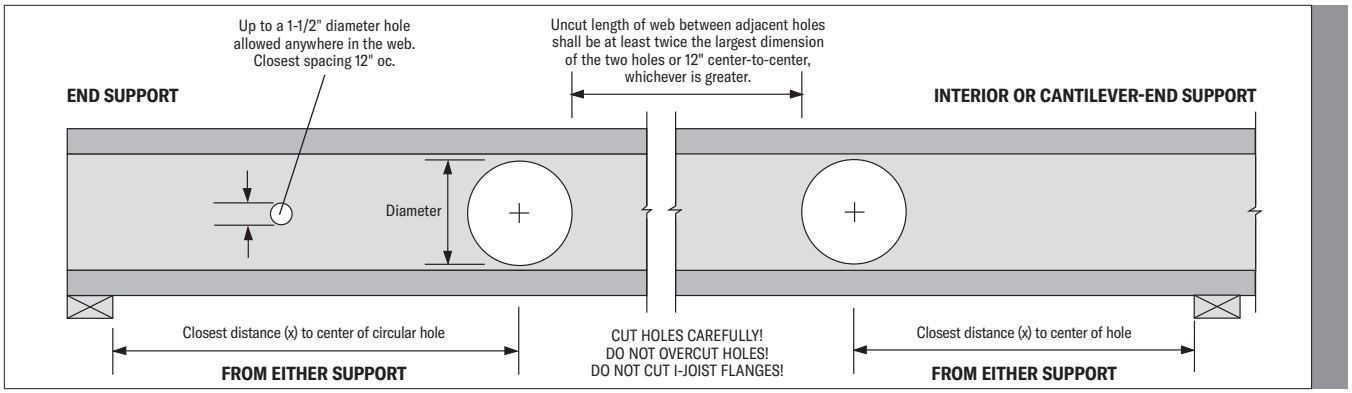
TJR = 561 + 107 + 480
= 1148 lbs.

ALLOWABLE END REACTION CAPACITY

9-1/2" LPI 20Plus on a 3-1/2" wall	@ 1-1/2" Bearing	@ 4" Bearing	@ 3-1/2" Bearing
w/o Web Stiffeners	970	1110	**1082**
w/Web Stiffeners	1140	1260	**1236**
w/Web Filler Reinforcing	—	—	**2600**
w/ 23/32" APA Rated Sheathing Full-Depth Reinforcing (One Side)	—	—	**3500**
w/ 1" LP Rim Board Full-Depth Reinforcing (One Side)	—	—	**3800**

Since the Total Joist Reaction, 1148 lbs., is greater than the End Reaction Capacity w/out Stiffeners, 1082 lbs., but less than End Reaction Capacity with Stiffeners, 1236 lbs., this joist only requires the installation of web stiffeners at the bearing.

Web Hole Specifications: Circular Holes



TO USE:

1. Select the required series and depth.
2. Determine the support condition for the nearest bearing: end support or interior support (including cantilever-end supports).
3. Select the row corresponding to the required Clear Span. For spans between those listed, use the next largest value.
4 Select the column corresponding to the required hole diameter. For diameters between those listed, use the next largest value.
5. The intersection of the Clear Span row and Hole Diameter column gives the minimum distance from the inside face of bearing to the center of a circular hole.
6. Double check the distance to the other support, using the appropriate support condition.

Series	Depth	Clear Span (ft)	Distance from End Support – Hole Diameter						Distance from Interior or Cantilever-End Support – Hole Diameter					
			2"	4"	6"	8"	10"	12"	2"	4"	6"	8"	10"	12"
LPI 18	9-1/2"	6'	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	-	-	-
		10'	1'-0"	1'-0"	2'-1"	-	-	-	1'-0"	1'-3"	3'-1"	-	-	-
		14'	1'-0"	2'-2"	4'-6"	-	-	-	1'-11"	3'-9"	5'-7"	-	-	-
		18'	2'-4"	4'-7"	7'-2"	-	-	-	4'-5"	6'-3"	8'-4"	-	-	-
	11-7/8"	10'	1'-0"	1'-0"	1'-0"	1'-10"	-	-	1'-0"	1'-0"	1'-3"	3'-0"	-	-
		14'	1'-0"	1'-0"	2'-1"	4'-4"	-	-	1'-0"	2'-0"	3'-9"	5'-6"	-	-
		18'	1'-0"	2'-5"	4'-6"	6'-11"	-	-	2'-9"	4'-6"	6'-3"	8'-1"	-	-
		22'	2'-8"	4'-9"	7'-0"	9'-8"	-	-	5'-3"	7'-0"	8'-9"	11'-0"	-	-
LPI 20Plus & LPI 32Plus	9-1/2"	6'	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	-	-	-
		10'	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	-	-	-
		14'	1'-0"	1'-0"	1'-5"	-	-	-	1'-0"	1'-5"	3'-1"	-	-	-
		18'	1'-0"	1'-9"	3'-8"	-	-	-	2'-3"	3'-11"	5'-7"	-	-	-
	11-7/8"	10'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	-	-
		14'	1'-0"	1'-0"	1'-0"	1'-9"	-	-	1'-0"	1'-0"	2'-1"	3'-5"	-	-
		18'	1'-0"	1'-0"	2'-6"	4'-1"	-	-	1'-10"	3'-3"	4'-7"	5'-11"	-	-
		22'	1'-8"	3'-2"	4'-10"	6'-7"	-	-	4'-4"	5'-9"	7'-1"	8'-5"	-	-
	14"	14'	1'-0"	1'-0"	1'-0"	1'-0"	2'-2"	-	1'-0"	1'-0"	1'-5"	2'-7"	3'-9"	-
		18'	1'-0"	1'-0"	1'-9"	3'-1"	4'-6"	-	1'-8"	2'-10"	3'-11"	5'-1"	6'-3"	-
		22'	1'-5"	2'-9"	4'-1"	5'-6"	7'-0"	-	4'-2"	5'-4"	6'-5"	7'-7"	8'-9"	-
		26'	3'-8"	5'-0"	6'-5"	8'-0"	9'-8"	-	6'-8"	7'-10"	8'-11"	10'-1"	11'-4"	-
	16"	18'	1'-0"	1'-0"	1'-4"	2'-5"	3'-7"	4'-11"	1'-6"	2'-6"	3'-6"	4'-6"	5'-6"	6'-6"
		22'	1'-4"	2'-5"	3'-6"	4'-9"	6'-1"	7'-5"	4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"
		26'	3'-6"	4'-8"	5'-11"	7'-2"	8'-7"	10'-1"	6'-6"	7'-6"	8'-6"	9'-6"	10'-6"	11'-9"
		30'	5'-9"	7'-0"	8'-4"	9'-9"	11'-3"	12'-10"	9'-0"	10'-0"	11'-0"	12'-0"	13'-2"	14'-8"
LPI 36 & LPI 56	11-7/8"	10'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"	1'-0"	1'-0"	1'-3"	-	-
		14'	1'-0"	1'-0"	1'-0"	2'-2"	-	-	1'-0"	1'-0"	1'-8"	3'-9"	-	-
		18'	1'-0"	1'-0"	2'-0"	4'-7"	-	-	1'-0"	2'-1"	4'-2"	6'-3"	-	-
		22'	1'-0"	1'-11"	4'-4"	7'-1"	-	-	2'-6"	4'-7"	6'-8"	8'-9"	-	-
	14"	14'	1'-0"	1'-0"	1'-0"	1'-0"	2'-10"	-	1'-0"	1'-0"	1'-0"	2'-6"	4'-4"	-
		18'	1'-0"	1'-0"	1'-0"	3'-0"	5'-3"	-	1'-0"	1'-5"	3'-3"	5'-0"	6'-10"	-
		22'	1'-0"	1'-3"	3'-2"	5'-4"	7'-10"	-	2'-2"	3'-11"	5'-9"	7'-6"	9'-4"	-
		26'	1'-5"	3'-5"	5'-6"	7'-10"	10'-6"	-	4'-8"	6'-5"	8'-3"	10'-0"	12'-2"	-
	16"	18'	1'-0"	1'-0"	1'-0"	2'-0"	3'-10"	5'-11"	1'-0"	1'-0"	2'-7"	4'-1"	5'-8"	7'-3"
		22'	1'-0"	1'-0"	2'-5"	4'-3"	6'-3"	8'-6"	1'-11"	3'-6"	5'-1"	6'-7"	8'-2"	9'-11"
		26'	1'-3"	2'-11"	4'-8"	6'-8"	8'-10"	11'-3"	4'-5"	6'-0"	7'-7"	9'-1"	10'-8"	12'-10"
		30'	3'-4"	5'-2"	7'-1"	9'-2"	11'-5"	14'-0"	6'-11"	8'-6"	10'-1"	11'-7"	13'-5"	-
LPI 42Plus	9-1/2"	6'	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	-	-	-
		10'	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	-	-	-
		14'	1'-0"	1'-0"	1'-5"	-	-	-	1'-0"	1'-5"	3'-1"	-	-	-
		18'	1'-0"	1'-9"	3'-8"	-	-	-	2'-3"	3'-11"	5'-7"	-	-	-
LPI 42Plus & LPI 52Plus	11-7/8"	10'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	-	-
		14'	1'-0"	1'-0"	1'-0"	1'-9"	-	-	1'-0"	1'-0"	2'-1"	3'-5"	-	-
		18'	1'-0"	1'-0"	2'-6"	4'-1"	-	-	1'-10"	3'-3"	4'-7"	5'-11"	-	-
		22'	1'-8"	3'-2"	4'-10"	6'-7"	-	-	4'-4"	5'-9"	7'-1"	8'-5"	-	-
	14"	14'	1'-0"	1'-0"	1'-0"	1'-0"	2'-2"	-	1'-0"	1'-0"	1'-5"	2'-7"	3'-9"	-
		18'	1'-0"	1'-0"	1'-9"	3'-1"	4'-6"	-	1'-8"	2'-10"	3'-11"	5'-1"	6'-3"	-
		22'	1'-5"	2'-9"	4'-1"	5'-6"	7'-0"	-	4'-2"	5'-4"	6'-5"	7'-7"	8'-9"	-
		26'	3'-8"	5'-0"	6'-5"	8'-0"	9'-8"	-	6'-8"	7'-10"	8'-11"	10'-1"	11'-4"	-
	16"	18'	1'-0"	1'-0"	1'-4"	2'-5"	3'-7"	4'-11"	1'-6"	2'-6"	3'-6"	4'-6"	5'-6"	6'-6"
		22'	1'-4"	2'-5"	3'-6"	4'-9"	6'-1"	7'-5"	4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"
		26'	3'-6"	4'-8"	5'-11"	7'-2"	8'-7"	10'-1"	6'-6"	7'-6"	8'-6"	9'-6"	10'-6"	11'-9"
		30'	5'-9"	7'-0"	8'-4"	9'-9"	11'-3"	12'-10"	9'-0"	10'-0"	11'-0"	12'-0"	13'-2"	14'-8"

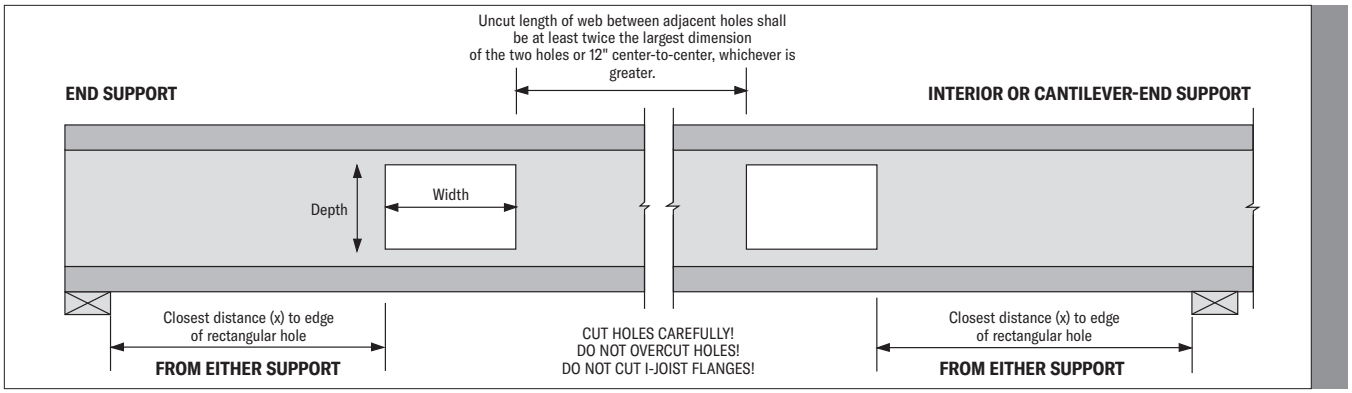
DESIGN ASSUMPTIONS:

1. The hole locations listed above are valid for floor joists supporting only uniform loads. The total uniform load shall not exceed 130 plf (e.g., 40 psf Live Load and 25 psf Dead Load spaced 24" oc).
2. Hole location is measured from the inside face of bearing to the center of a circular hole, from the closest support.
3. Clear Span has not been verified for these joists and is shown for informational purposes only! Verify that the joist selected will work for the span and loading conditions needed before checking hole location.
4. The maximum hole depth for circular holes is the I-joist Depth less 4", except the maximum hole depth is 6" for 9-1/2" LPI joists, and 8" for 11-7/8" LPI joists.
5. Holes cannot be located in the span where designated "-", without further analysis by a design professional.

NOTES:

1. Holes may be placed anywhere within the depth of the web. A minimum 1/4" clear distance from the flanges is recommended so as not to cut a flange.
2. Round holes up to 1-1/2" diameter may be placed anywhere in the web.
3. Perforated "knockouts" may be neglected when locating web holes.
4. Holes larger than 1-1/2" are not permitted in cantilevers without special engineering.
5. Multiple holes shall have a clear separation along the length of the joist of at least twice the larger dimension of the larger adjacent hole, or a minimum of 12" center-to-center, whichever is greater..
6. Multiple holes may be spaced closer provided they fit within the boundary of an acceptable larger hole. Example: two 3" round holes aligned parallel to the joist length may be spaced 2" apart (clear distance) provided that a 3" high by 8" long rectangle or an 8" diameter round hole are acceptable for the joist depth at that location and completely encompass the holes.
7. For conditions not covered in this table, use LP's design software or contact your local LP® SolidStart® Engineered Wood Products distributor for more information.

Web Hole Specifications: Rectangular Holes



TO USE:

1 Select the required series and depth.
2. Determine the support condition for the nearest bearing: end support or interior support (including cantilever-end supports).
3. Select the row corresponding to the required Clear Span. For spans between those listed, use the next largest value.
4 Select the column corresponding to the required hole dimension. For dimensions between those listed, use the next largest value.
5. The intersection of the Clear Span row and Hole Dimension column gives the minimum distance from the inside face of bearing to the nearest edge of a square or rectangular hole.
6. Double check the distance to the other support, using the appropriate support condition.

Series	Depth	Clear Span (ft)	Distance from End Support – Maximum Hole Dimension: Depth or Width						Distance from Interior or Cantilever-End Support – Maximum Hole Dimension: Depth or Width					
			2"	4"	6"	8"	10"	12"	2"	4"	6"	8"	10"	12"
LPI 18	9-1/2"	6'	1'-0"	1'-0"	1'-0"	1'-0"	1'-2"	1'-7"	1'-0"	1'-0"	1'-3"	1'-6"	1'-10"	2'-2"
		10'	1'-0"	1'-4"	2'-10"	3'-3"	3'-9"	4'-3"	1'-3"	2'-6"	3'-9"	4'-0"	4'-5"	-
		14'	2'-2"	3'-8"	5'-5"	5'-11"	6'-6"	-	3'-9"	5'-0"	6'-4"	-	-	-
		18'	4'-7"	6'-3"	8'-2"	-	-	-	6'-3"	7'-6"	-	-	-	-
	11-7/8"	10'	1'-0"	1'-0"	2'-2"	3'-6"	4'-0"	-	1'-1"	2'-2"	3'-2"	4'-2"	-	-
		14'	2'-0"	3'-3"	4'-8"	6'-3"	-	-	3'-7"	4'-8"	5'-8"	-	-	-
		18'	4'-4"	5'-9"	7'-3"	-	-	-	6'-1"	7'-2"	8'-5"	-	-	-
		22'	6'-10"	8'-4"	10'-1"	-	-	-	8'-7"	9'-9"	-	-	-	-
LPI 20Plus & LPI 32Plus	9-1/2"	6'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-5"	1'-0"	1'-0"	1'-0"	1'-3"	1'-8"	2'-0"
		10'	1'-0"	1'-0"	2'-6"	2'-11"	3'-5"	3'-11"	1'-0"	2'-1"	3'-5"	3'-9"	4'-2"	-
		14'	1'-7"	3'-2"	5'-0"	5'-7"	6'-1"	-	3'-3"	4'-7"	5'-11"	6'-5"	-	-
		18'	3'-11"	5'-8"	7'-9"	8'-4"	-	-	5'-9"	7'-1"	-	-	-	-
	11-7/8"	10'	1'-0"	1'-0"	1'-9"	3'-3"	3'-9"	4'-3"	1'-0"	1'-9"	2'-10"	4'-0"	4'-5"	-
		14'	1'-5"	2'-9"	4'-2"	5'-11"	6'-6"	-	3'-1"	4'-3"	5'-4"	-	-	-
		18'	3'-8"	5'-2"	6'-9"	8'-8"	-	-	5'-7"	6'-9"	7'-11"	-	-	-
		22'	6'-1"	7'-9"	9'-6"	-	-	-	8'-1"	9'-3"	-	-	-	-
	14"	14'	1'-0"	1'-0"	1'-0"	2'-8"	4'-11"	5'-9"	1'-0"	1'-0"	2'-6"	4'-2"	5'-10"	-
		18'	1'-0"	1'-0"	2'-11"	5'-1"	7'-7"	8'-6"	1'-7"	3'-3"	5'-0"	6'-8"	-	-
		22'	1'-4"	3'-3"	5'-4"	7'-8"	10'-5"	-	4'-1"	5'-9"	7'-6"	9'-2"	-	-
		26'	3'-6"	5'-7"	7'-10"	10'-4"	-	-	6'-7"	8'-3"	10'-0"	12'-0"	-	-
	16"	18'	1'-0"	1'-0"	2'-5"	4'-4"	6'-5"	-	1'-5"	3'-0"	4'-6"	6'-1"	7'-8"	-
		22'	1'-2"	2'-11"	4'-9"	6'-10"	9'-2"	-	3'-11"	5'-6"	7'-0"	8'-7"	10'-6"	-
		26'	3'-4"	5'-2"	7'-2"	9'-5"	11'-11"	-	6'-5"	8'-0"	9'-6"	11'-1"	-	-
		30'	5'-8"	7'-7"	9'-9"	12'-1"	-	-	8'-11"	10'-6"	12'-0"	14'-0"	-	-
LPI 36 & LPI 56	11-7/8"	10'	1'-0"	1'-0"	1'-9"	3'-3"	3'-9"	4'-3"	1'-0"	1'-9"	2'-10"	4'-0"	4'-5"	-
		14'	1'-5"	2'-9"	4'-2"	5'-11"	6'-6"	-	3'-1"	4'-3"	5'-4"	-	-	-
		18'	3'-8"	5'-2"	6'-9"	8'-8"	-	-	5'-7"	6'-9"	7'-11"	-	-	-
		22'	6'-1"	7'-9"	9'-6"	-	-	-	8'-1"	9'-3"	-	-	-	-
	14"	14'	1'-0"	1'-0"	1'-0"	2'-8"	4'-11"	5'-9"	1'-0"	1'-0"	2'-6"	4'-2"	5'-10"	-
		18'	1'-0"	1'-0"	2'-11"	5'-1"	7'-7"	8'-6"	1'-7"	3'-3"	5'-0"	6'-8"	-	-
		22'	1'-4"	3'-3"	5'-4"	7'-8"	10'-5"	-	4'-1"	5'-9"	7'-6"	9'-2"	-	-
		26'	3'-6"	5'-7"	7'-10"	10'-4"	-	-	6'-7"	8'-3"	10'-0"	12'-0"	-	-
	16"	18'	1'-0"	1'-0"	2'-5"	4'-4"	6'-5"	-	1'-5"	3'-0"	4'-6"	6'-1"	7'-8"	-
		22'	1'-2"	2'-11"	4'-9"	6'-10"	9'-2"	-	3'-11"	5'-6"	7'-0"	8'-7"	10'-6"	-
		26'	3'-4"	5'-2"	7'-2"	9'-5"	11'-11"	-	6'-5"	8'-0"	9'-6"	11'-1"	-	-
		30'	5'-8"	7'-7"	9'-9"	12'-1"	-	-	8'-11"	10'-6"	12'-0"	14'-0"	-	-
LPI 42Plu	9-1/2"	6'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-5"	1'-0"	1'-0"	1'-0"	1'-3"	1'-8"	2'-0"
		10'	1'-0"	1'-0"	2'-6"	2'-11"	3'-5"	3'-11"	1'-0"	2'-1"	3'-5"	3'-9"	4'-2"	-
		14'	1'-7"	3'-2"	5'-0"	5'-7"	6'-1"	-	3'-3"	4'-7"	5'-11"	6'-5"	-	-
		18'	3'-11"	5'-8"	7'-9"	8'-4"	-	-	5'-9"	7'-1"	-	-	-	-
LPI 42Plus & LPI 52Plus	11-7/8"	10'	1'-0"	1'-0"	1'-9"	3'-3"	3'-9"	4'-3"	1'-0"	1'-9"	2'-10"	4'-0"	4'-5"	-
		14'	1'-5"	2'-9"	4'-2"	5'-11"	6'-6"	-	3'-1"	4'-3"	5'-4"	-	-	-
		18'	3'-8"	5'-2"	6'-9"	8'-8"	-	-	5'-7"	6'-9"	7'-11"	-	-	-
		22'	6'-1"	7'-9"	9'-6"	-	-	-	8'-1"	9'-3"	-	-	-	-
	14"	14'	1'-0"	1'-0"	1'-0"	2'-8"	4'-11"	5'-9"	1'-0"	1'-0"	2'-6"	4'-2"	5'-10"	-
		18'	1'-0"	1'-0"	2'-11"	5'-1"	7'-7"	8'-6"	1'-7"	3'-3"	5'-0"	6'-8"	-	-
		22'	1'-4"	3'-3"	5'-4"	7'-8"	10'-5"	-	4'-1"	5'-9"	7'-6"	9'-2"	-	-
		26'	3'-6"	5'-7"	7'-10"	10'-4"	-	-	6'-7"	8'-3"	10'-0"	12'-0"	-	-
	16"	18'	1'-0"	1'-0"	2'-5"	4'-4"	6'-5"	-	1'-5"	3'-0"	4'-6"	6'-1"	7'-8"	-
		22'	1'-2"	2'-11"	4'-9"	6'-10"	9'-2"	-	3'-11"	5'-6"	7'-0"	8'-7"	10'-6"	-
		26'	3'-4"	5'-2"	7'-2"	9'-5"	11'-11"	-	6'-5"	8'-0"	9'-6"	11'-1"	-	-
		30'	5'-8"	7'-7"	9'-9"	12'-1"	-	-	8'-11"	10'-6"	12'-0"	14'-0"	-	-

DESIGN ASSUMPTIONS:

1. The hole locations listed above are valid for floor joists supporting only uniform loads. The total uniform load shall not exceed 130 plf (e.g., 40 psf Live Load and 25 psf Dead Load spaced 24" oc).
2. Hole location is measured from the inside face of bearing to the nearest edge of a rectangular hole, from the closest support.
3. Clear Span has not been verified for these joists and is shown for informational purposes only! Verify that the joist selected will work for the span and loading conditions needed before checking hole location.
4. The maximum hole depth for rectangular holes is the I-joist Depth less 4", except the maximum hole depth is 6" for 9-1/2" LPI joists, and 8" for 11-7/8" LPI Joists. Where the Maximum Hole Dimension exceeds the hole depth, the dimension refers to hole width and the depth of the hole is assumed to be the maximum for that joist depth. The maximum hole width is 18", regardless of I-joist Depth.
5. Holes cannot be located in the span where designated "-", without further analysis by a design professional.

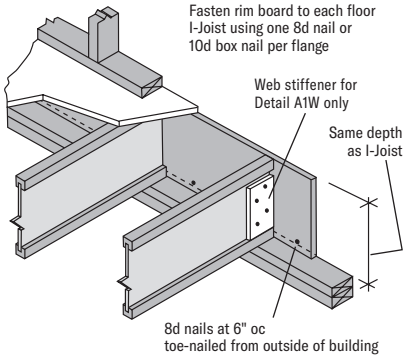
NOTES:

1. Holes may be placed anywhere within the depth of the web. A minimum 1/4" clear distance from the flanges is recommended so as not to cut a flange.
2. Round holes up to 1-1/2" diameter may be placed anywhere in the web.
3. Perforated "knockouts" may be neglected when locating web holes.
4. Holes larger than 1-1/2" are not permitted in cantilevers without special engineering.
5. Multiple holes shall have a clear separation along the length of the joist of at least twice the larger dimension of the larger adjacent hole, or a minimum of 12" center-to-center, whichever is greater.
6. Multiple holes may be spaced closer provided they fit within the boundary of an acceptable larger hole. Example: two 3" round holes aligned parallel to the joist length may be spaced 2" apart (clear distance) provided that a 3" high by 8" long rectangle or an 8" diameter round hole are acceptable for the joist depth at that location and completely encompass the holes.
7. For conditions not covered in this table, use LP's design software or contact your local LP® SolidStart® Engineered Wood Products distributor for more information.

Floor Details

A1 RIM BOARD

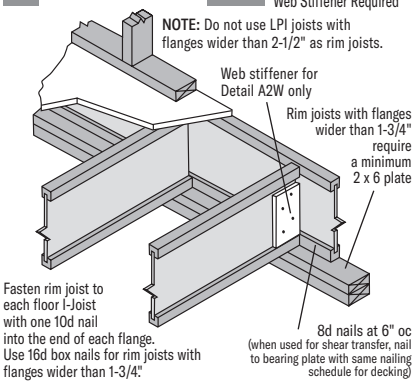
Fasten rim board to each floor I-Joist using one 8d nail or 10d box nail per flange



A1W RIM BOARD
Web Stiffener Required

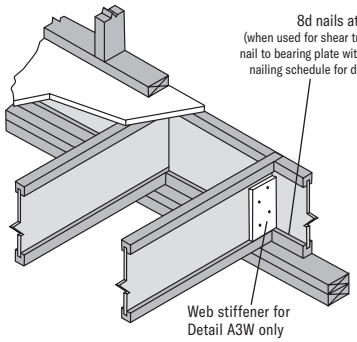
A2 RIM JOIST

NOTE: Do not use LPI joists with flanges wider than 2-1/2" as rim joists.



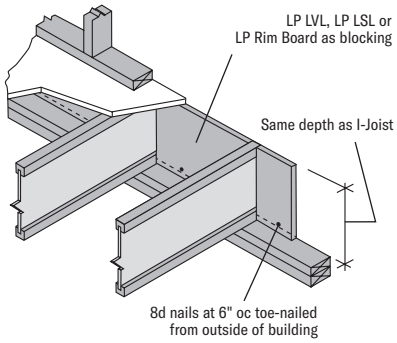
A2W RIM JOIST
Web Stiffener Required

A3 BLOCKING AT EXTERIOR WALL



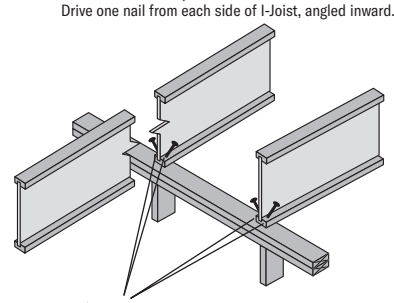
A3W BLOCKING AT EXTERIOR WALL
Web Stiffener Required

A4 SOLID BLOCKING AT EXTERIOR WALL



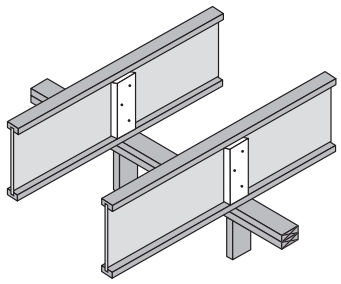
A5 JOIST SUPPORT NAILING

Secure I-Joist to plate with two 8d nails or 10d box. Drive one nail from each side of I-Joist, angled inward.



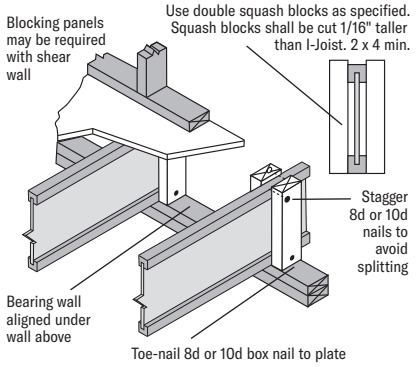
Place nail 1-1/2" min. from end of I-Joist. If nails are close to edge of plate, drive at an angle to reduce splitting

B1 WEB STIFFENERS AT INTERIOR SUPPORT
(When Required)



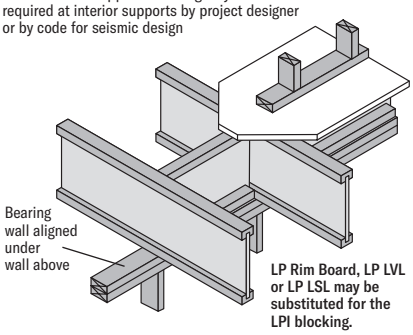
Verify stiffener requirements (see Web Stiffener detail)

B2 SQUASH BLOCKS



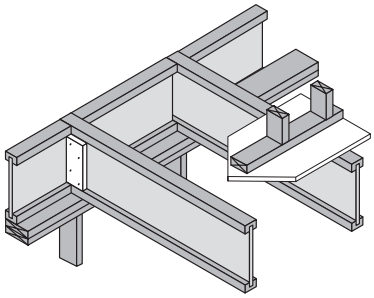
B3 BLOCKING AT INTERIOR SUPPORT

Blocking is not required if no wall above unless I-Joists end at support. Blocking may be required at interior supports by project designer or by code for seismic design



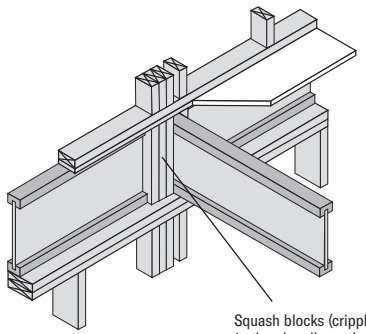
LP Rim Board, LP LVL or LP LSL may be substituted for the LPI blocking.

NON-STACKING WALLS

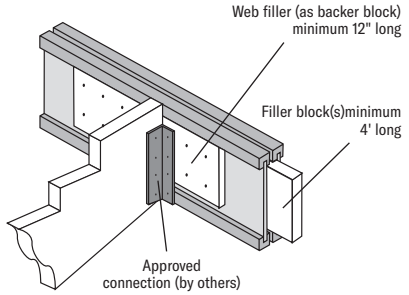


LP® SolidStart® I-Joists shall be designed to carry all applied loads including walls from above that do not stack directly over the I-Joist support.

D2 POST LOADS



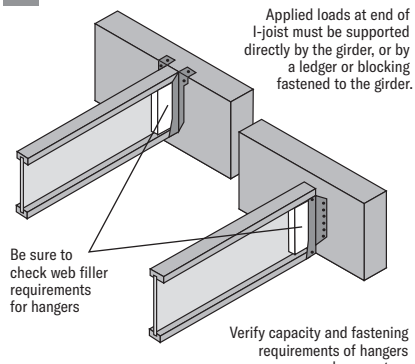
E1 STAIR STRINGER



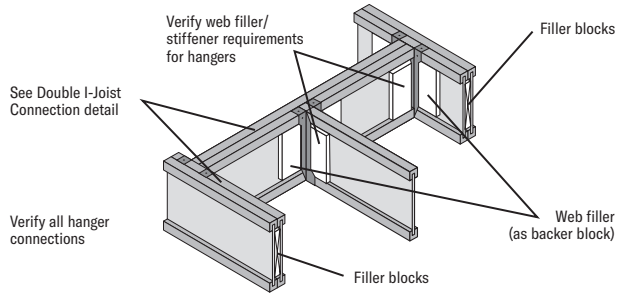
See I-Joist Header Cross-Section for connection information of the filler and backer blocks

See I-Joist Filler Schedule for filler block and web filler sizes

E2 HANGER DETAIL



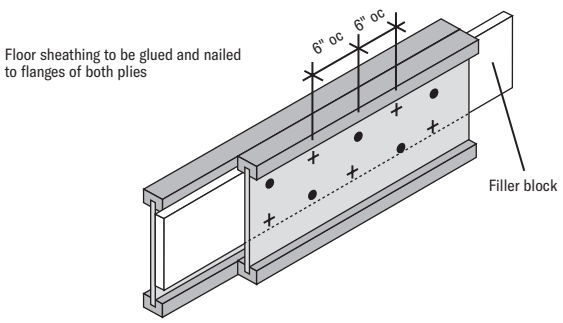
E3 I-JOIST HEADER



See I-Joist Header Cross-Section for information on attaching web fillers and filler blocks

Refer to I-Joist Filler Thickness table for web filler (backer block) and filler block sizes

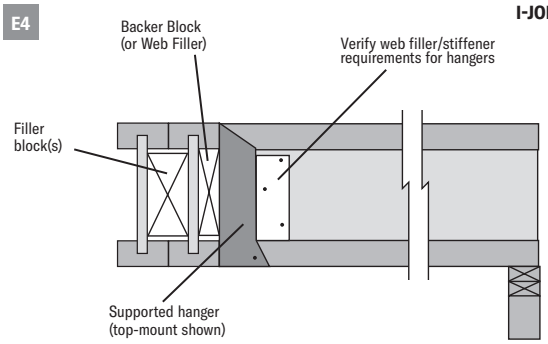
E5 DOUBLE I-JOIST CONNECTION



See I-Joist Header Cross-Section for information on attaching filler blocks

Refer to I-Joist Filler Thickness table for filler block sizes

E4 I-JOIST HEADER CROSS-SECTION



Filler Blocks:

Fasten I-Joists together with filler blocks between the LPI webs using 2 rows of 0.131"x3.25" nails at 6" o.c. from both sides, stagger rows, and clinch where possible.
Refer to the I-Joist Filler Thickness table for the correct filler block thickness for each LPI series.
Filler blocks must be at least 4' long, located at each support, and centered behind each hanger.
For joists supporting only top loads that are equally applied to both plies, filler blocks can be spaced at 8' on center maximum.

Backer Blocks:

Fasten min. 12" long backer blocks at all hangers and concentrated loads, center backer block on load, using a minimum of 10 nails (0.131"x3.25", clinch where possible) spaced to avoid splitting with half the nails to each side of the center of the supported hanger.
Refer to the I-Joist Filler Tickness table for the correct backer block thickness for each LPI series.
For a single I-joist header, install backer blocks to both sides of the web.
Backer blocks may be omitted for top-mount hangers supporting only downward loads not exceeding 250 lbs.
Install backer blocks tight to top flange for top-mount hangers or top concentrated loads unevenly applied to both plies. Install tight to bottom flange for joists supporting face-mount hangers.

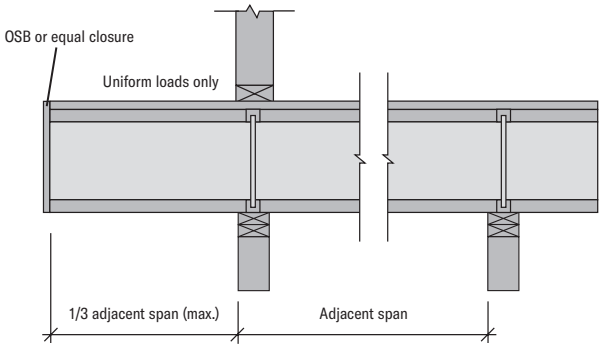
NOTES:

1. For double LPI's the maximum "Side-Applied" unfactored loads for standardard duration: Uniform Load = 520 plf, Concentrated Load = 1200 lbs. Loads may be increased with more nails, and adjusted for other load durations.
2. Filler and backer blocks shall consist of APA Rated wood structural panel (OSB or plywood), 2 x lumber (SPF or better) or LP® SolidStart® LVL, LSL or OSB Rim Board.
3. Filler and backer blocks for members that are top-loaded only, or for hangers that do not require nailing into the web, shall be at least 5-1/2" deep for I-joists to 11-7/8" deep, and shall be at least 7-1/4" deep for I-joists 14" and deeper. Otherwise filler blocks shall fit the clear distance between flanges with a gap of at least 1/8", but not more than 1".

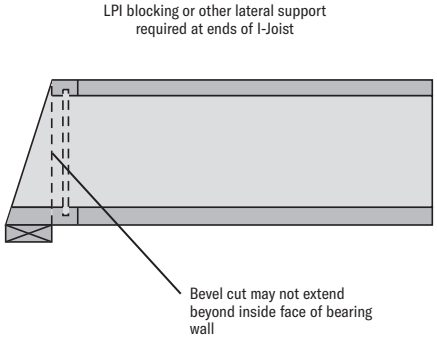
Filler Block Example: Lumber fillers may be stacked to achieve the required depth. Two 2 x 8s may be stacked vertically to achieve the filler depth for an 18" deep I-joist (min. req. is 18"–3"–1"=14"). One row of nails must be in each row of stacked fillers.

Backer Block Example: Two pieces of 2 x 8 (min.) lumber, cut to the proper height, may be set vertically side-by-side to achieve the required minimum 12" length.

NON LOAD-BEARING CANTILEVER



BEVEL CUT/FIRE CUT



I-JOIST FILLER THICKNESS

Series	Filler Block	Web Filler/Backer Block
LPI 18 LPI 20Plus LPI 32Plus	2-1/8"	1"
LPI 36	1-7/8"	7/8"
LPI 42Plus LPI 52Plus LPI 56	3"	1-1/2"

NOTES:

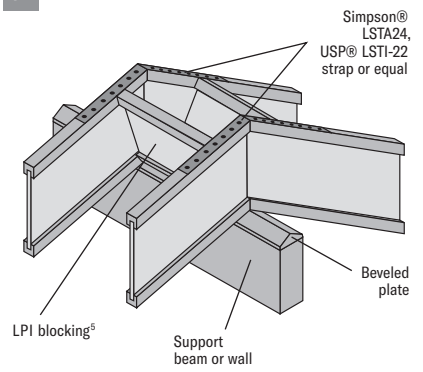
1. Backer blocks and filler blocks shall consist of APA Rated wood structural panel (OSB or plywood), or 2x lumber (SPF or better).
2. LP LVL, LSL or OSB Rim Board may also be used.
3. Refer to the Notes for the I-Joist Header Cross-Section above for details on the required height and length, and nailing of the backer blocks and filler blocks.

GENERAL NOTES:

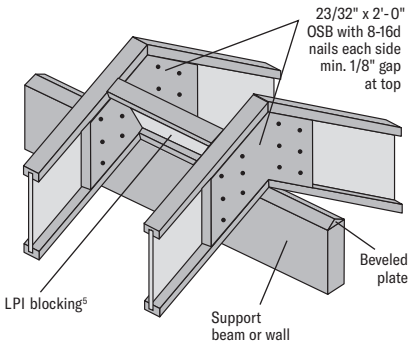
1. Some wind or seismic loads may require different or additional details and connections.
2. Verify building code requirements for suitability of details shown.
3. Refer to page 4 for bearing length requirements.
4. Refer to page 28 for Flange Face Nailing Schedule for LPI rim joist or blocking panel nailing.
5. Lateral support shall be considered for bottom flange when there is no sheathing on underside.
6. Verify capacity and fastening requirements of hangers and connectors.
7. Squash block capacity designed by others.

Roof Details

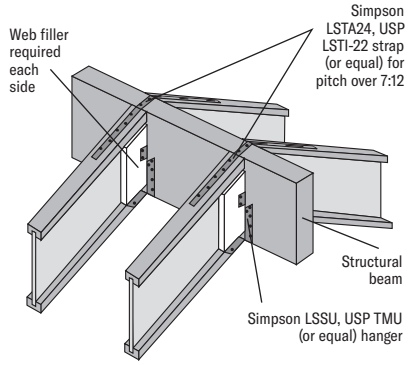
J1 **RAFTER CONNECTION**



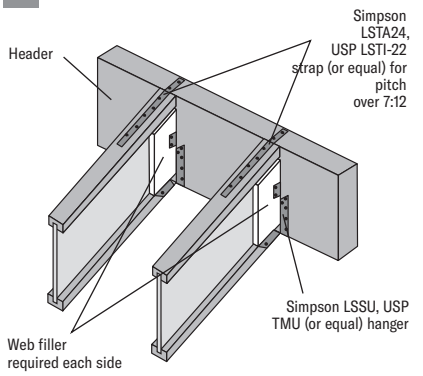
J2 **RAFTER CONNECTION WITH FITTED OSB GUSSET**



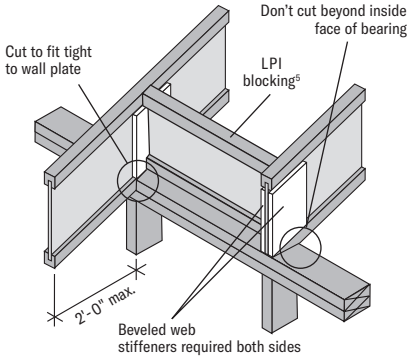
J3 **RIDGE RAFTER CONNECTION**



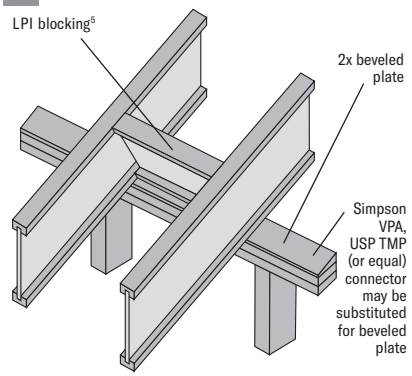
J4 **HEADER CONNECTION**



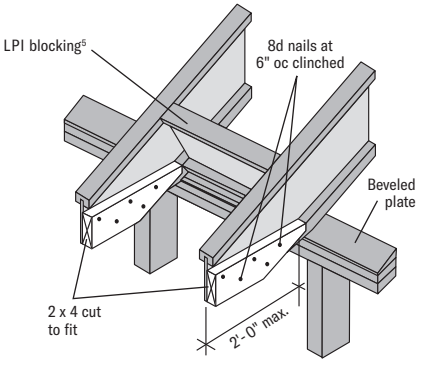
H1 **BIRD'S MOUTH**
(Lower bearing only)



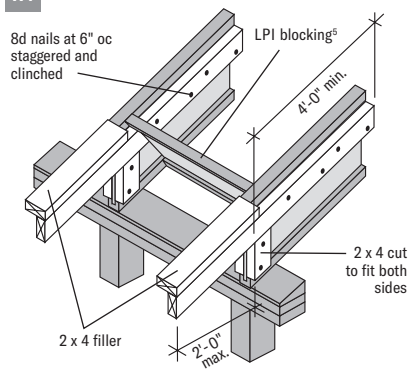
H2 **BEVELED PLATE**



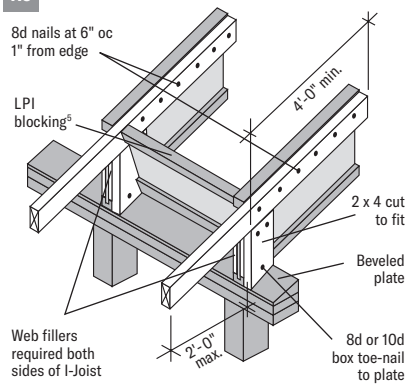
H3 **FLAT SOFFIT**
(Fascia Support)



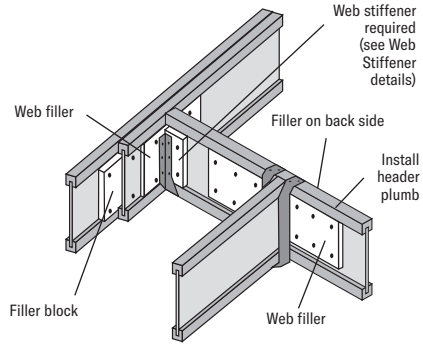
H4 **OVERHANG**



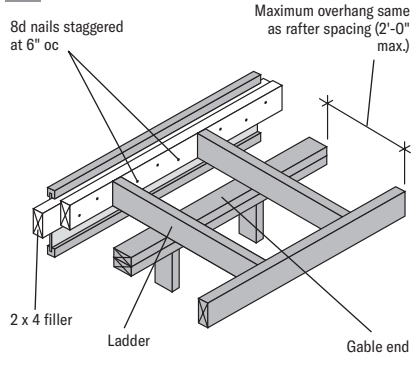
H5 **OVERHANG**



K1 **ROOF OPENING**
Hanger Connections



K2 **OUTRIGGER**



NOTES:

1. Minimum pitch: 1/4" per foot (1/4:12).
   Maximum pitch: 12" per foot (12:12).
2. Verify capacity and fastening requirements of hangers and connectors.
3. Some wind or seismic loads may require different or additional details and connections. Uplift anchors may be required.
4. 4" diameter hole(s) may be cut in blocking for ventilation.
5. Lateral resistance shall be provided. Other methods of restraint, such as full depth LP® SolidStart® OSB Rim Board, LP SolidStart LVL, LP SolidStart LSL or metal X-bracing may be substituted for the LP blocking shown.

GENERAL NOTES:

1. The following tables provide a list of the more common hangers and connectors for use with LP® SolidStart® I-Joists.
2. Refer to the manufacturer's connector guide for a complete list of hangers and to verify the suitability of a hanger or connector for a particular application.
3. Follow all connector manufacturers' installation guidelines.

SIMPSON STRONG-TIE®

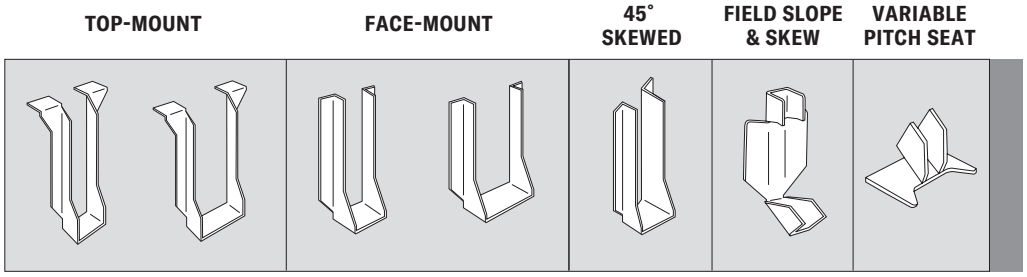
Series	Depth	Top-Mount		Face-Mount		45˚ Skewed	Field Slope & Skew	Variable Pitch Seat
		Single	Double	Single	Double	Single	Single	Single
LPI 18 LPI 20Plus LPI 32Plus	9-1/2"	ITS2.56/9.5	MIT39.5-2	IUS2.56/9.5	MIU5.12/9	SUR/L2.56/9	LSSUH310 *	VPA3
	11-7/8"	ITS2.56/11.88	MIT311.88-2	IUS2.56/11.88	MIU5.12/12	SUR/L2.56/11	LSSUH310 *	VPA3
LPI 20Plus LPI 32Plus	14"	ITS2.56/14	MIT314-2	IUS2.56/14	MIU5.12/14	SUR/L2.56/14	LSSUH310 *	VPA3
	16"	ITS2.56/16	MIT5.12/16	IUS2.56/16	MIU5.12/16	SUR/L2.56/14 *	**	VPA3
LPI 36	11-7/8"	ITS2.37/11.88	MIT3511.88-2	IUS2.37/11.88	MIU4.75/11	SUR/L2.37/11	LSSUI35 *	VPA35
	14"	ITS2.37/14	MIT3514-2	IUS2.37/14	MIU4.75/14	SUR/L2.37/14	LSSUI35 *	VPA35
	16"	ITS2.37/16	MIT4.75/16	IUS2.37/16	MIU4.75/16	SUR/L2.37/14 *	**	VPA35
LPI 42Plus LPI 52Plus LPI 56	9-1/2"	ITS3.56/9.5	B7.12/9.5 *	IUS3.56/9.5	HU410-2 *	SUR/L410 *	LSSU410 *	VPA4
	11-7/8"	ITS3.56/11.88	B7.12/11.88 *	IUS3.56/11.88	HU412-2 *	SUR/L410 *	LSSU410 *	VPA4
	14"	ITS3.56/14	B7.12/14 *	IUS3.56/14	HU414-2 *	SUR/L414 *	LSSU410 *	VPA4
	16"	ITS3.56/16	B7.12/16 *	IUS3.56/16	HU414-2 *	SUR/L414 *	**	VPA4

* Web filler required for proper installation of hanger.
** Refer to Simpson Strong-Tie "Wood Construction Connectors" catalog for hanger selection.

USP STRUCTURAL CONNECTORS®

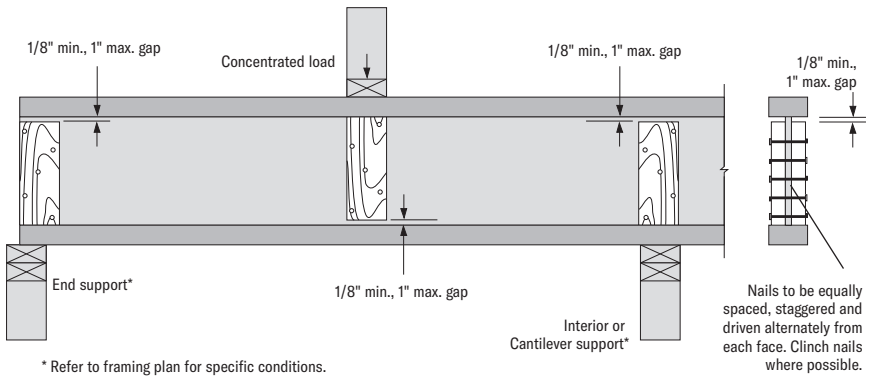
Series	Depth	Top-Mount		Face-Mount		45˚ Skewed	Field Slope & Skew	Variable Pitch Seat[1]
		Single	Double	Single	Double	Single	Single	Single
LPI 18 LPI 20Plus LPI 32Plus	9-1/2"	TFL2595	THO25950-2 *	THFI2595	IHF25925-2 *	SKH2520L/R *	LSSH25 *	TMP25 or TMPH25 *
	11-7/8"	TFL25118	THO25118-2 *	THFI25118	IHF25112-2 *	SKH2520L/R *	LSSH25 *	TMP25 or TMPH25 *
LPI 20Plus LPI 32Plus	14"	TFL2514	THO25140-2 *	THFI2514	THF25140-2 *	SKH2524L/R *	LSSH25 *	TMP25 or TMPH25 *
	16"	TFL2516	THO25160-2 *	IHFL2516	THF25160-2 *	SKH2524L/R *	LSSH25 * †	TMP25 or TMPH25 *
LPI 36	11-7/8"	TFL23118	THO23118-2 *	IHFL23112	THF23118-2 *	SKH2320L/R *	LSSH23 *	TMP23 or TMPH23 *
	14"	TFL2314	THO23140-2 *	IHFL2314	THF23140-2 *	SKH2324L/R *	LSSH23 *	TMP23 or TMPH23 *
	16"	TFL2316	THO23160-2 *	IHFL2316	THF23160-2 *	SKH2324L/R *	LSSH23 * †	TMP23 or TMPH23 *
LPI 42Plus LPI 52Plus LPI 56	9-1/2"	THO35950	BPH7195 *	IHFL35925	HD7100 *	HD410_SK45L/R_BV * **	LSSH35 *	TMP4 or TMPH4 *
	11-7/8"	THO35118	BPH71118 *	IHFL35112	HD7120 *	HD410_SK45L/R_BV * **	LSSH35 *	TMP4 or TMPH4 *
	14"	THO35140	BPH7114 *	IHFL3514	HD7140 *	HD414_SK45L/R_BV * **	LSSH35 *	TMP4 or TMPH4 *
	16"	THO35160	BPH7116 *	IHFL3516	HD7160 *	HD414_SK45L/R_BV * **	LSSH35 * †	TMP4 or TMPH4 *

* Web filler required for proper installation of hanger.
** Miter cut required on end of joist.
† Hanger height is less than 60% of the joist depth. Supplemental lateral support of the top flange is required. Refer to MiTek's installation instructions.
1. Use TMP seats for joist pitch of 1:12 to 6:12. Use TMPH for joist pitch of 6:12 and greater.



Web Stiffeners, Rim & Blocking, Nailing

WEB STIFFENER REQUIREMENTS



* Refer to framing plan for specific conditions.

NOTES:

1. Web stiffeners shall be installed in pairs – one to each side of the web. Web stiffeners are always required for the "Bird's Mouth" roof joist bearing detail.
2. Web stiffeners shall be cut to fit between the flanges of the LP® SolidStart® I-Joist, leaving a minimum 1/8" gap (1" maximum). At bearing locations, the stiffeners shall be installed tight to the bottom flange. At locations of concentrated loads, the stiffeners shall be installed tight to the top flange.
3. Web stiffeners shall be cut from APA Rated OSB (or equal) or from LP SolidStart LVL, LSL or OSB Rim Board. 2x lumber is permissible. Do NOT use 1x lumber as it tends to split. Do NOT build up the required stiffener thickness from multiple pieces.
4. Web stiffeners shall be the same width as the bearing surface, with a minimum of 3-1/2".
5. See Web Stiffener Requirements for minimum stiffener thickness, maximum stiffener height and required nailing.

WEB STIFFENER REQUIREMENTS

Series	Depth	Minimum Thickness	Maximum Height	Nail Size*	Nail Qty
LPI 18 LPI 20Plus LPI 32Plus	9-1/2"	23/32"	6-3/8"	8d (2-1/2")	3
	11-7/8"	23/32"	8-3/4"	8d (2-1/2")	3
LPI 20Plus LPI 32Plus	14"	23/32"	10-7/8"	8d (2-1/2")	3
	16"	23/32"	12-7/8"	8d (2-1/2")	3
LPI 36	11-7/8"	23/32"	8-3/4"	8d (2-1/2")	4
	14"	23/32"	10-7/8"	8d (2-1/2")	5
	16"	23/32"	12-7/8"	8d (2-1/2")	6
LPI 42Plus	9-1/2"	1-1/2"	6-3/8"	10d (3")	3
LPI 42Plus LPI 52Plus	11-7/8"	1-1/2"	8-3/4"	10d (3")	3
	14"	1-1/2"	10-7/8"	10d (3")	3
	16"	1-1/2"	12-7/8"	10d (3")	3
LPI 56	11-7/8"	1-1/2"	8-3/4"	10d (3")	4
	14"	1-1/2"	10-7/8"	10d (3")	5
	16"	1-1/2"	12-7/8"	10d (3")	6

* Nails may be Box or Common.

RIM & BLOCKING CAPACITY

Series	Depth	Uniform Vertical Load Capacity
		(plf)
LPI 18 LPI 20Plus	9-1/2"	1900
	11-7/8"	1760
LPI 20Plus	14"	1600
	16"	1500
LPI 32Plus LPI 42Plus	9-1/2"	2200
	11-7/8"	2200
	14"	1600
	16"	1500
LPI 36	11-7/8"	1800
	14"	1800
	16"	1800
LPI 52Plus LPI 56	11-7/8"	2400
	14"	2200
	16"	1900

NOTES:

1. Uniform Vertical Load Capacity shall not be adjusted for load duration.
2. Concentrated vertical loads require the addition of squash blocks. Do not use LPI rim or blocking to support concentrated vertical loads.
3. Lateral load capacity for all series above is 200 plf but may be limited by the connection details used. Do not exceed the Flange Face Nailing requirements at right.

FLANGE FACE NAILING

Series	Nail Size and Type	Minimum Nail Distance	
		oc Spacing	End
LPI 18 LPI 20Plus LPI 32Plus LPI 42Plus LPI 52Plus	8d (2-1/2") Box or Common	2"	1"
	10d (3") or 12d (3-1/4") Box	2"	1"
	10d (3") or 12d (3-1/4") Common	3"	1-1/2"
	16d Sinker (3-1/4")	3"	1-1/2"
	16d (3-1/2") Box or Common	4"	1-1/2"
LPI 36 LPI 56	8d (2-1/2") Box or Common	3"	1-1/2"
	10d (3") or 12d (3-1/4") Box	3"	1-1/2"
	10d (3") or 12d (3-1/4") Common	3"	1-1/2"
	16d Sinker (3-1/4")	3"	1-1/2"
	16d (3-1/2") Box or Common	5"	1-1/2"

NOTES:

1. Use only 10d box or 8d nails when securing an LPI floor or roof joist to its supports.

RIM BOARD CAPACITIES

Material	Grade	Thickness	Vertical Load Capacity[1]			Lateral[4,5,6] Load Capacity (plf)
			Uniform[2] (plf)		Concentrated[3] (lbs)	
			d ≤ 16"	16" < d ≤ 24"	d ≤ 24"	
LP OSB	APA C2/Rim Board[7]	1"	3300	1650	3500	180
	APA C1/Rim Board[7]	1-1/8"	4400	3000	3500	180
LP LSL	1.35E	1-1/4"	6000	3800	3800	250
		1-1/2"	7000	4500	4500	280

NOTES:

1. The Vertical Load Capacity shall not be increased for short-term load duration.
2. The Uniform Vertical Load Capacity is based on the capacity of the rim board and may need to be reduced based on the bearing capacity of the supporting wall plate or the attached floor sheathing. Example: The allowable bearing stress for commodity floor sheathing is 360 psi so the bearing capacity of a 1-1/4" x 16" deep rim board would be limited to 5400 plf (360 psi x 1-1/4" x 12).
3. The Concentrated Vertical Load Capacity is assumed to be applied through a minimum 4-1/2" bearing length (3-stud post).
4. The Lateral Load Capacity is based on a short-term load duration and shall not be increased.
5. The Lateral Load Capacity is based on the connections specified in the Installation details on page 4.
6. Additional framing connectors fastened to the face of the rim board may be used to increase lateral capacity for wind and seismic design.
7. The APA C1 and C2 grades in product standard ANSI/APA PRR 410-2011 are equivalent to the rim board grade in product standard APA PRR-401.

ALLOWABLE UNIFORM LOADS (PLF) FOR RIM BOARD HEADERS: MAXIMUM 4' CLEAR SPAN

Material	Thickness	Rim Board Depth			
		9-1/2"	11-7/8"	2-Ply 14"	2-Ply 16"
LP OSB	1"	330 (1-1/2")	480 (3")	1280 (3")	1670 (4-1/2")
	1-1/8"	370 (1-1/2")	540 (3")	1440 (3")	1880 (4-1/2")
LP LSL	1-1/4"	655 (1-1/2")	1240 (3")	3540 (4-1/2")	4485 (6")
	1-1/2"	785 (1-1/2")	1490 (3")	4180 (4-1/2")	4645 (6")

NOTES:

1. This table is for preliminary design for uniform gravity loads only. Final design should include a complete analysis of all loads and connections.
2. The allowable loads are for a maximum 4' clear span with minimum bearings for each end (listed in parentheses) based on the bearing capacity of the rim board. For headers bearing on wood plates, the bearing length may need to be increased based on the ratio of the bearing capacity of the rim board divided by the bearing capacity of the plate species.
3. Normal load duration is assumed and shall be adjusted according to code.
4. Depths greater than 11-7/8" shall be used with a minimum of two plies, as shown. Depths of 11-7/8" and less may be used as a two-ply header by multiplying the allowable loads by two.
5. Multiple-ply headers shall be toe-nailed to the plate from both faces. Fasten the floor sheathing to the top of each ply to provide proper lateral support for each ply.
6. For multiple-ply headers supporting top-loads only, fasten plies together with minimum 8d box nails (2-1/2" x 0.113") at a maximum spacing of 12" oc. Use 2 rows of nails for 9-1/2" and 11-7/8." Use 3 rows for depths 14" and greater. Clinch the nails where possible. For side-loaded multiple-ply headers, refer to the Connection Capacity For Side-Loaded 2-Ply Rim Board Headers table below for the required nailing and the allowable side load that can be applied.
7. The designer shall verify proper bearing for the header.
8. Joints in the rim are not allowed over openings and must be located at least 12" from any opening.
9. Refer to the "APA Performance Rated Rim Boards" (Form No. W345) for additional information including allowable loads for smaller openings.
10. Use LP SolidStart LSL for headers with clear spans longer than 4' or for loads greater than tabulated above. See the Design Values table below.

CONNECTION CAPACITY FOR SIDE-LOADED 2-PLY RIM BOARD HEADERS (PLF)

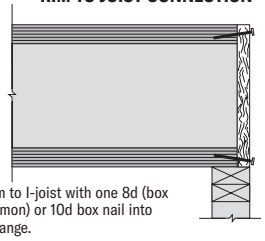
Material	Thickness	Minimum Nail Size	3 Rows of Nails at 6" oc	4 Rows of Nails at 6" oc	5 Rows of Nails at 6" oc	6 Rows of Nails at 6" oc
LP OSB	1" & 1-1/8"	8d (2-1/2" x 0.113")	768	1024	1280	1536
LP LSL	1-1/4"	8d (2-1/2" x 0.113")	864	1152	1440	1728
	1-1/2"	10d (3" x 0.120")	972	1296	1620	1944

NOTES:

1. This table represents the uniform side-load capacity of the connection for a 2-ply header. The total applied uniform load, including top-load and side-load, shall not exceed the allowable uniform load capacity of the header as tabulated above.
2. The tabulated side-load capacity is for normal load duration and shall be adjusted according to code.
3. Use 3 rows of nails for 9-1/2" and 11-7/8"; 4 rows for 14" and 16"; 5 rows for 18" and 20"; 6 rows for 24" deep rim board. Clinch the nails where possible.
4. Headers consisting of more than 2 plies, alternate fastening or higher side loads are possible but require proper design of the connection.

INSTALLATION

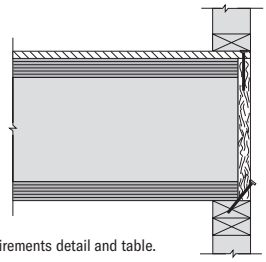
RIM TO JOIST CONNECTION



Nail rim to I-joist with one 8d (box or common) or 10d box nail into each flange.

DECK TO RIM AND RIM TO PLATE CONNECTIONS[1]

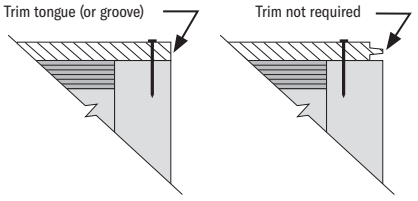
- Nail floor sheathing to rim board with 8d nails at 6" oc.
- Nail wall plate through floor sheathing into rim per code.
- Toe-nail rim board to wall plate with 8d nails at 6" oc.



See T&G Trim Requirements detail and table.

T&G TRIM REQUIREMENTS[2]

See T&G Trim Requirements table below for when to trim tongue or groove.



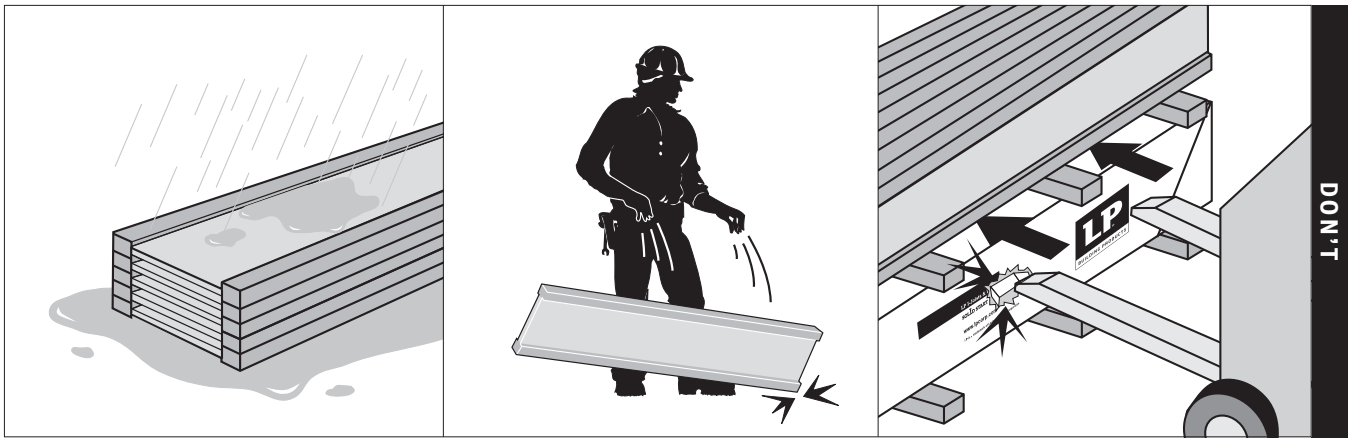
NOTE:

1. Additional framing connectors to the face of the rim board may be used to increase lateral capacity for wind and seismic design.
2. Trim the tongue or groove of the floor sheathing in accordance with the T&G Trim Requirements table.

T&G TRIM REQUIREMENTS

Floor Sheathing Thickness	Rim Board Thickness			
	1"	1-1/8"	1-1/4"	> 1-1/4"
≤ 7/8"	Trim	Not Required	Not Required	Not Required
> 7/8"	Trim	Trim	Trim	Not Required

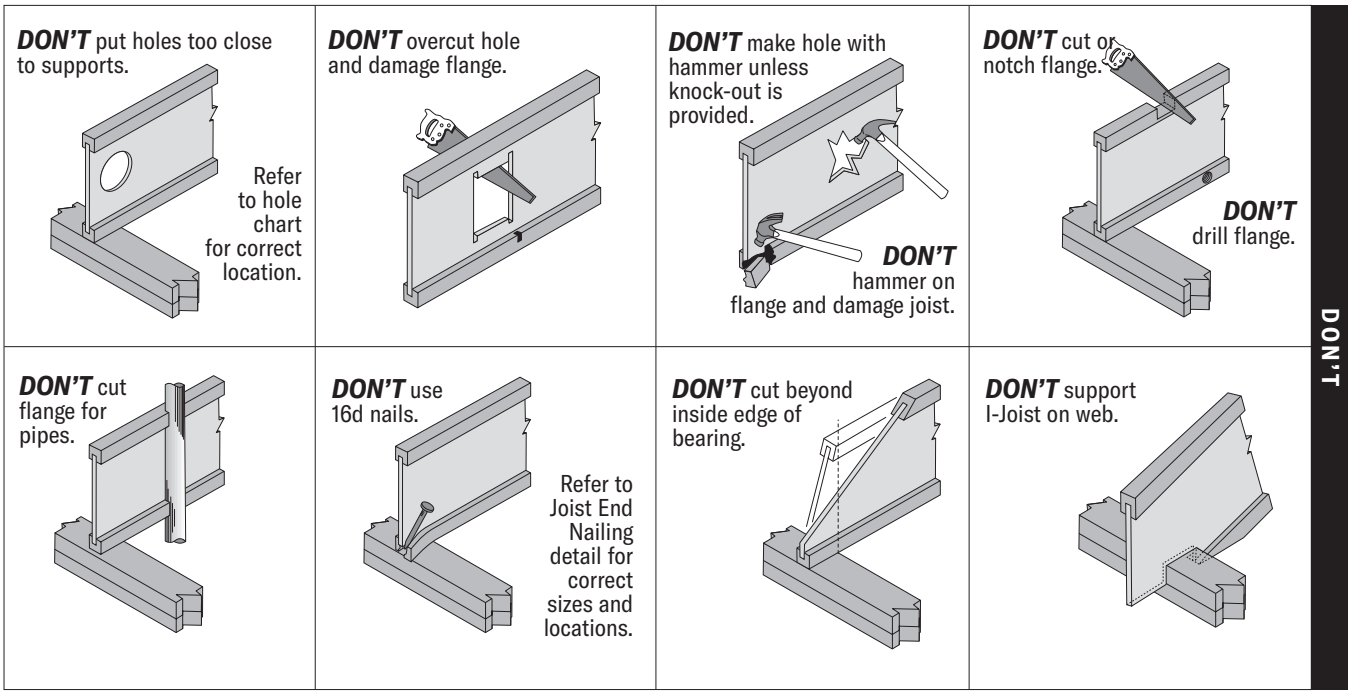
Warnings



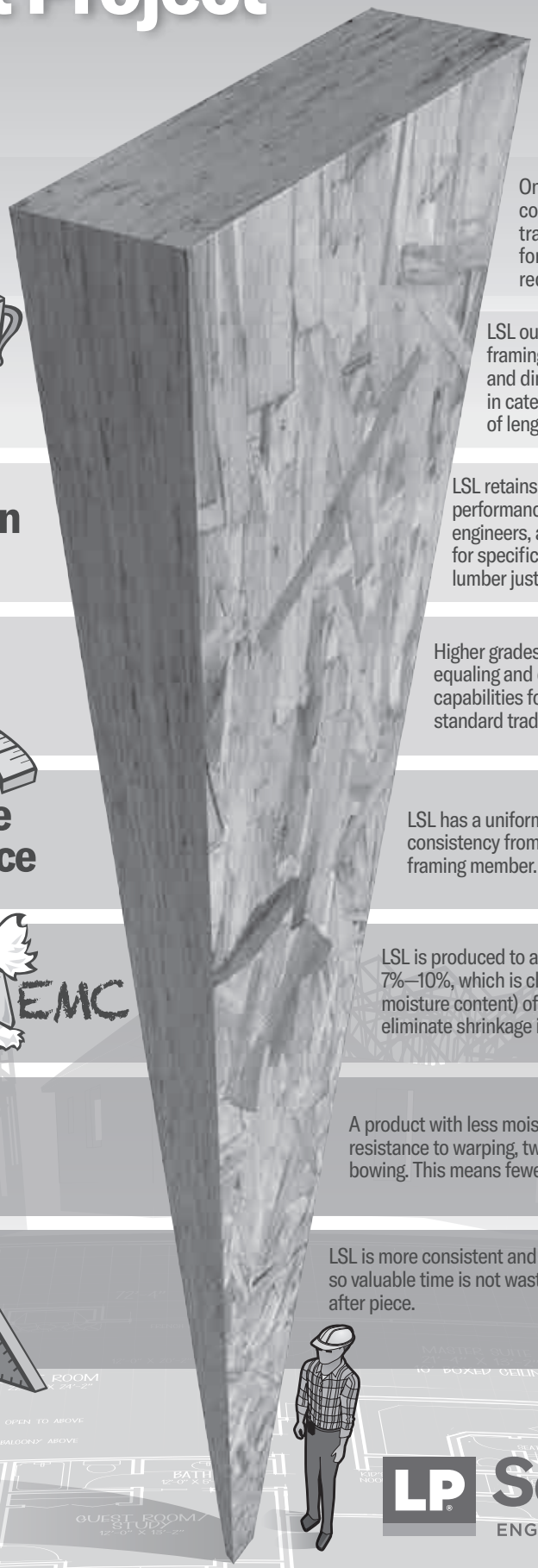
W A R N I N G S

The following conditions are **NOT** permitted!

Do not use visually damaged products without first checking with your local LP® SolidStart® Engineered Wood Products distributor or sales office.



Eight Reasons to Consider LSL for Your Next Project



1 Faster Installation

One piece of LSL is needed, compared to two pieces of traditional lumber (plus the filler), for window and door headers, reducing installation time.

2 Outperforms Lumber

LSL outperforms traditional lumber framing products in both performance and dimensional stability, specifically in categories pertaining to availability of length and consistency.

3 Greater Design Flexibility

LSL retains a consistent and predictable performance, allowing architects, designers, engineers, and contractors to count on it for specific applications where traditional lumber just does not measure up.

4 Greater Spans

Higher grades of LSL allow for longer spans, equaling and even exceeding span capabilities found in similar sizes of standard traditional lumber products.

5 Predictable Performance

LSL has a uniform density, which means consistency from framing member to framing member.

6 Manufacturing Innovations

LSL is produced to a finished moisture content of 7%—10%, which is close to the EMC (equilibrium moisture content) of most homes, helping eliminate shrinkage in the finished structure.

7 Less Moisture

A product with less moisture has a greater resistance to warping, twisting, shrinking, and bowing. This means fewer builder callbacks.

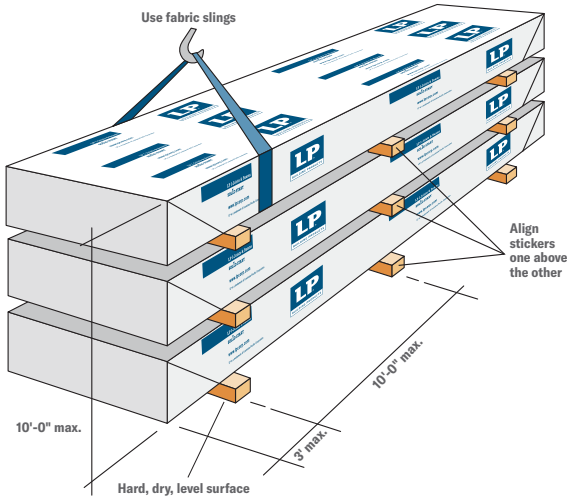
8 No Culling

LSL is more consistent and straighter than lumber, so valuable time is not wasted picking through piece after piece.

LP SolidStart® ENGINEERED WOOD

HANDLING & STORAGE GUIDELINES

- **WARNING:** Failure to follow proper procedures for handling, storage and installation could result in unsatisfactory performance, unsafe structures and possible collapse.
- Keep LP® SolidStart® Engineered Wood Products dry. These products are intended to resist the effects of moisture on structural performance from normal construction delays but are not intended for permanent exposure to the weather.
- Unload products carefully, by lifting. Support the bundles to reduce excessive bowing. Individual products should be handled in a manner which prevents physical damage during measuring, cutting, erection, etc. I-Joists shall be handled vertically and not flatwise.
- Keep products stored in wrapped and strapped bundles, stacked no more than 10' high. Support and separate bundles with 2x4 (or larger) stickers spaced no more than 10' apart. Keep stickers in line vertically.
- Product must not be stored in contact with the ground, or have prolonged exposure to the weather.
- Use forklifts and cranes carefully to avoid damaging product.



- Do not use a visually damaged product. Call your local LP SolidStart Engineered Wood Products distributor for assistance when damaged products are encountered.
- For satisfactory performance, LP SolidStart Engineered Wood Products must be used under dry, covered and well-ventilated interior conditions in which the equivalent moisture content in lumber will not exceed 16%.
- For built-up members, LP SolidStart I-Joists, LSL and LVL shall be dry before nailing or bolting to avoid trapping moisture.
- LP SolidStart I-Joists, LSL and LVL shall not be used for unintended purposes such as ramps and planks.

LP SolidStart I-Joists

LPI 18
Width: 2-1/2"
Depths: 9-1/2", 11-7/8"
Web Thickness: 3/8"
Flange Material: Solid Sawn
Flange Depth: 1-1/2"

LPI 20Plus & LPI 32Plus
Width: 2-1/2"
Depths: 9-1/2", 11-7/8", 14", 16"
Web Thickness: 3/8"
Flange Material: Solid Sawn
Flange Depth: 1-1/2"

LPI 36
Width: 2-1/4"
Depths: 11-7/8", 14", 16"
Web Thickness: 3/8"
Flange Material: LVL
Flange Depth: 1-1/2"

LPI 42Plus
Width: 3-1/2"
Depths: 9-1/2", 11-7/8", 14", 16"
Web Thickness: 3/8"
Flange Material: Solid Sawn
Flange Depth: 1-1/2"

LPI 52Plus
Width: 3-1/2"
Depths: 11-7/8", 14", 16"
Web Thickness: 7/16"
Flange Material: Solid Sawn
Flange Depth: 1-1/2"

LPI 56
Width: 3-1/2"
Depths: 11-7/8", 14", 16"
Web Thickness: 7/16"
Flange Material: LVL
Flange Depth: 1-1/2"

CODE EVALUATION

Code evaluation reports can be obtained at www.lpcorp.com

ICC ESR 1305

APA PR-L238

For more information on the full line of LP SolidStart Engineered Wood Products or the nearest distributor, visit our web site at LPCorp.com.

Phone: 1-888-820-0325
E-mail: customer.support@LPCorp.com.

LP SolidStart Engineered Wood Products are manufactured at different locations in the United States and Canada.
Please verify availability with the LP SolidStart Engineered Wood Products distributor in your area before specifying these products.

SUSTAINABLE FORESTRY INITIATIVE
Good for you. Good for our forests.
www.sfiprogram.org
BV-SFICOC-US09000262

PEFC
PEFC/29-31-102

LP SolidStart® ENGINEERED WOOD

For product catalog & complete warranty details, visit LPCorp.com

Cal. Prop 65 Warning:

WARNING: Drilling, sawing, sanding or machining wood products can expose you to wood dust, a substance known to the State of California to cause cancer. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection. For more information go to www.P65Warnings.ca.gov.wood.

NOTE: Louisiana-Pacific Corporation periodically updates and revises its product information. To verify that this version is current, contact the nearest sales office, visit LPCorp.com, or call 1-888-820-0325.

LPEW0357 2/20 OS/ARGENT