

LP SOLIDSTART I-JOISTS RESIDENTIAL CONSTRUCTION CANADIAN (LSD) TECHNICAL GUIDE



SolidStart[®]
ENGINEERED WOOD



Limit States Design

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 engineered wood substrate, a renewable resource with a reduced environmental impact
- Raw material procurement targets small, fast growing trees
- In LP's manufacturing process, no part of the log goes to waste
- 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



Compliant with Major Building Codes

LP SolidStart I-Joists have been evaluated by CCMC for compliance with the National Building Code of Canada. Contact your local LP SolidStart Engineered Wood Products distributor or visit www.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
Web Stiffeners, Rim & Blocking, Nailing	5
Floor Span Tables	6-9
Uniform Floor Load (PLF) Tables	10-11
Uniform Roof Load (PLF) Tables	12-13
Roof Span Tables: Low Pitch (6:12 or less)	14-15
Roof Span Tables: High Pitch (6:12 to 12:12)	16-17
Cantilevers	18-19
Web Hole Specifications: Circular Holes	20
Web Hole Specifications: Rectangular Holes	21
Floor Details	22-23
Roof Details	24
Framing Connectors	25
LP® SolidStart® Rim Board	26
Warnings	27
Handling and Storage Guidelines	28

Product Specifications & Design Values

LIMIT STATES DESIGN VALUES						
Series	Depth	Weight (plf)	Factored Moment (lb-ft)	EI (x 10 ⁹) (lb-in ²)	K (x 10 ⁶) (lb-ft/in)	Factored Shear (lbs)
LPI 18	9-1/2"	2.6	3760	142	0.355	1785
	11-7/8"	2.9	4450	248	0.435	2105
LPI 20Plus	9-1/2"	2.6	4670	185	0.358	1990
	11-7/8"	2.9	6250	318	0.438	2345
	14"	3.1	7320	474	0.512	2650
	16"	3.3	8400	652	0.582	2950
LPI 32Plus	9-1/2"	2.6	5570	221	0.358	1990
	11-7/8"	2.9	7210	375	0.438	2345
	14"	3.1	8680	549	0.512	2650
	16"	3.3	10065	743	0.582	2950
LPI 36	11-7/8"	3.1	10715	429	0.468	2550
	14"	3.4	12900	622	0.550	2890
	16"	3.6	14960	836	0.625	3190
LPI 42Plus	9-1/2"	3.4	8940	321	0.412	2115
	11-7/8"	3.5	11585	547	0.515	2565
	14"	3.8	13950	802	0.607	2960
	16"	4.0	16180	1092	0.693	3340
LPI 52Plus	11-7/8"	4.5	14085	600	0.633	3245
	14"	4.8	16960	874	0.747	3680
	16"	5.0	19670	1183	0.853	4080
LPI 56	11-7/8"	4.5	16920	668	0.549	3245
	14"	4.8	20370	968	0.641	3680
	16"	5.0	23625	1301	0.729	4080

NOTES:

- 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 average moisture content in lumber will not exceed 15% nor a maximum of 19%.
- Moment and Shear are the factored resistances for standard load duration and shall be adjusted according to code.
- Moment resistance shall not be increased for repetitive member use.
- 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.

FACTORED REACTION AND BEARING RESISTANCE

Series	Depth	End Reaction Resistance ¹ (lbs)				Interior Reaction Resistance ¹ (lbs)				Flange Bearing Resistance, ϕF_{cp} (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"	1375	1620	1570	1785	3115	3370	3480	3740	1380
	11-7/8"	1375	1805	1640	2105	3305	3585	3685	4015	
LPI 20Plus	9-1/2"	1530	1800	1750	1990	3465	3750	3865	4160	1380
	11-7/8"	1530	2010	1830	2345	3680	3985	4095	4465	
	14"	1530	2200	1895	2650	3875	4205	4300	4745	
	16"	1530	2385	1955	2950	4055	4410	4500	5010	
LPI 32Plus	9-1/2"	1530	1800	1750	1990	3465	3750	3865	4160	1695
	11-7/8"	1530	2010	1830	2345	3680	3985	4095	4465	
	14"	1530	2200	1895	2650	3875	4205	4300	4745	
	16"	1530	2385	1955	2950	4055	4410	4500	5010	
LPI 36	11-7/8"	1620	2370	2030	2550	3940	4900	4475	5475	1720
	14"	1620	2390	2090	2890	3940	5060	4475	5625	
	16"	1620	2405	2145	3190	3940	5215	4475	5770	
LPI 42Plus	9-1/2"	1870	2115	2060	2115	4575	4885	4640	5045	2450
	11-7/8"	1965	2385	2520	2565	4775	5270	4925	5550	
	14"	2050	2620	2520	2960	4955	5625	5175	6005	
	16"	2130	2840	2520	3340	5120	5960	5420	6440	
LPI 52Plus	11-7/8"	2160	2875	2670	3245	5400	6315	5740	6645	2450
	14"	2185	3110	2910	3680	5420	6725	5910	7165	
	16"	2210	3330	3135	4080	5445	7110	6075	7665	
LPI 56	11-7/8"	1805	2620	2390	3245	4940	6090	5795	6410	2720
	14"	1805	2770	2425	3680	4940	6400	5795	6785	
	16"	1805	2910	2455	4080	4940	6700	5795	7140	

NOTES:

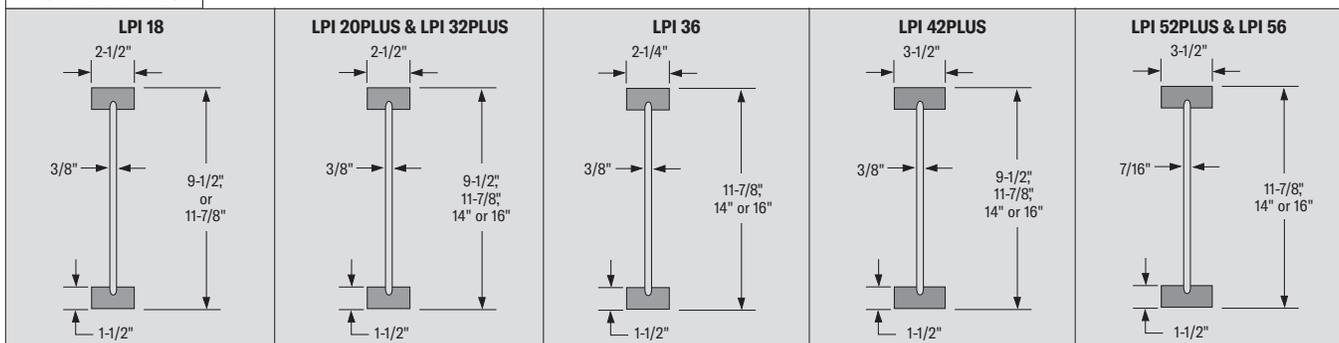
- End and Interior Reaction Resistance shall be limited by the Flange Bearing Resistance or the bearing resistance of the support material, whichever is less.
- The Flange Bearing Resistance per inch of bearing length, is based on the compression perpendicular-to-grain of the I-Joist flange, accounting for eased edges.
- 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.
- Reaction Resistance, Flange Bearing Resistance and the bearing resistance of any wood support are for standard load duration and shall be reduced according to code for longer loading duration.
- Reaction Resistance and Flange Bearing Resistance may be increased over that tabulated for the minimum bearing length. Linear interpolation of the Reaction Resistance between the minimum and maximum bearing length is permitted. Bearing lengths longer than the maximum do not further increase Reaction Resistance. Flange Bearing Resistance and that of a wood support will increase with additional bearing length.
- The Interior Reaction Resistance may be calculated to a minimum bearing length of 3 inches, based on the 3-1/2" and 5-1/2" values.
- See page 5 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 (768 psi).

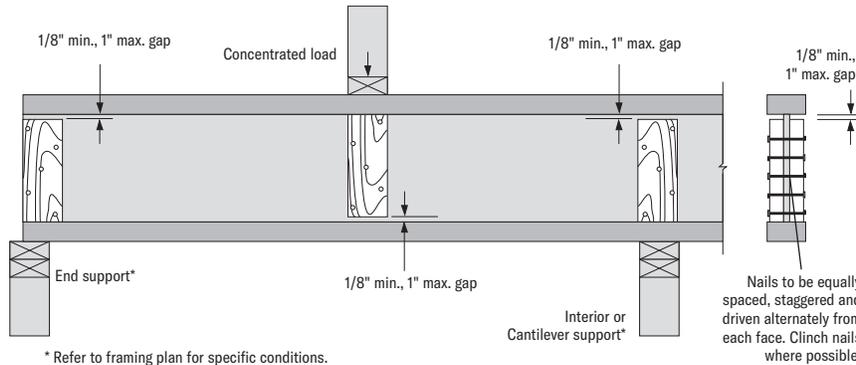
- Determine End Reaction (ER) w/Stiffeners:
ER = 2200 + (2650 - 2200) * (2" - 1.5") / (4" - 1.5") = 2290 lbs
- Determine Flange Bearing Resistance (FBR):
FBR = 1695 lb/in * 2" = 3390 lbs
- Determine wall Plate Bearing Resistance (PBR):
PBR = 0.8 * 768 psi * (2.5" - 0.25") * 2" = 2764 lbs
- Final End Reaction Resistance w/Stiffeners = 2290 lbs

PROFILE DETAILS



Web Stiffeners, Rim & Blocking, Nailing

WEB STIFFENER REQUIREMENTS



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 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	9-1/2"	23/32"	6-3/8"	8d (2-1/2")	3
LPI 20Plus	11-7/8"	23/32"	8-3/4"	8d (2-1/2")	3
LPI 32Plus					
LPI 20Plus	14"	23/32"	10-7/8"	8d (2-1/2")	3
LPI 32Plus	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	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

* Nail Size is for common wire nails.

RIM & BLOCKING CAPACITY

Series	Depth	Factored Vertical Resistance
		(plf)
LPI 18	9-1/2"	2755
	11-7/8"	2552
LPI 20Plus	14"	2320
	16"	2175
LPI 32Plus	9-1/2"	3190
	11-7/8"	3190
	14"	2320
	16"	2175
LPI 36	11-7/8"	2610
	14"	2610
	16"	2610
LPI 52Plus	11-7/8"	3480
	14"	3190
	16"	2755

NOTES:

1. The Factored Vertical Resistance is the capacity in pounds per lineal foot of length (plf) and 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 resistance for all series above is 260 plf but may be limited by the connection details used. Do not exceed the Flange Face Nailing requirements above.

FLANGE FACE NAILING

Series	Common Wire Nail Size	Minimum Nail Distance	
		oc Spacing	End
LPI 18 LPI 20Plus LPI 32Plus LPI 42Plus LPI 52Plus	2-1/2"	2"	1"
	3"	3"	1-1/2"
	3-1/4"	3"	1-1/2"
	3-1/2"	4"	1-1/2"
LPI 36 LPI 56	2-1/2"	3"	1-1/2"
	3"	3"	1-1/2"
	3-1/4"	3"	1-1/2"
	3-1/2"	5"	1-1/2"

NOTES:

1. Use only 2-1/2" or 3" nails when securing an LPI floor or roof joist to its supports.
2. Power-driven nails shall have a yield strength equivalent to common wire nails of the same shank diameter.

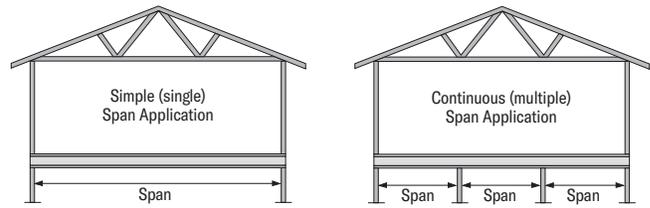
Floor Span Tables: 19/32" OSB Sheathing

SPECIFIED FLOOR LOADS: 40 PSF LIVE LOAD, 15 PSF DEAD LOAD

TO USE:

1. Select the appropriate table based on the floor system construction.
2. Select the Simple Span or Continuous Span section of the table, as required.
3. Find a span that meets or exceeds the required clear span.
4. 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.



19/32" OSB SHEATHING NAILED ONLY

Series	Depth	No Direct Attached Ceiling						Direct Attached 1/2" Gypsum Ceiling					
		Maximum Simple Spans			Maximum Continuous Spans			Maximum Simple Spans			Maximum Continuous Spans		
		12" oc	16" oc	19.2" oc	12" oc	16" oc	19.2" oc	12" oc	16" oc	19.2" oc	12" oc	16" oc	19.2" oc
LPI 18	9'-1/2"	13'-6"	12'-7"	12'-1"	14'-0"	13'-0"	12'-6"	14'-0"	13'-0"	12'-6"	14'-5"	13'-5"	12'-11"
	11'-7/8"	15'-4"	14'-4"	13'-9"	15'-10"	14'-9"	14'-2"	15'-10"	14'-9"	14'-2"	16'-5"	15'-3"	14'-8"
LPI 20Plus	9'-1/2"	14'-4"	13'-4"	12'-10"	14'-9"	13'-9"	13'-3"	14'-9"	13'-9"	13'-2"	15'-3"	14'-2"	13'-7"
	11'-7/8"	16'-2"	15'-1"	14'-5"	16'-9"	15'-7"	14'-11"	16'-7"	15'-6"	14'-10"	17'-3"	16'-1"	15'-5"
	14"	17'-8"	16'-5"	15'-10"	18'-5"	17'-0"	16'-4"	18'-3"	16'-11"	16'-3"	19'-11"	17'-7"	16'-10"
LPI 32Plus	9'-1/2"	14'-10"	13'-10"	13'-3"	15'-4"	14'-4"	13'-9"	15'-3"	14'-2"	13'-7"	15'-9"	14'-8"	14'-1"
	11'-7/8"	16'-9"	15'-7"	14'-11"	17'-4"	16'-1"	15'-6"	17'-2"	16'-0"	15'-4"	17'-10"	16'-7"	15'-11"
	14"	18'-3"	16'-11"	16'-3"	19'-2"	17'-7"	16'-10"	18'-11"	17'-5"	16'-9"	19'-11"	18'-2"	17'-4"
LPI 36	11'-7/8"	17'-3"	16'-1"	15'-5"	17'-10"	16'-7"	15'-11"	17'-8"	16'-6"	15'-9"	18'-6"	17'-1"	16'-4"
	14"	18'-11"	17'-5"	16'-9"	19'-11"	18'-2"	17'-4"	19'-7"	17'-11"	17'-2"	20'-7"	18'-10"	17'-10"
	16"	20'-8"	18'-10"	17'-11"	21'-8"	19'-9"	18'-9"	21'-4"	19'-6"	18'-6"	22'-5"	20'-6"	19'-6"
LPI 42Plus	9'-1/2"	16'-1"	15'-0"	14'-5"	16'-8"	15'-7"	14'-11"	16'-6"	15'-4"	14'-9"	17'-1"	15'-11"	15'-3"
	11'-7/8"	18'-3"	16'-11"	16'-3"	19'-2"	17'-7"	16'-10"	18'-9"	17'-4"	16'-7"	19'-9"	18'-0"	17'-3"
	14"	20'-4"	18'-7"	17'-8"	21'-5"	19'-6"	18'-6"	21'-0"	19'-2"	18'-2"	22'-1"	20'-2"	19'-1"
LPI 52Plus	11'-7/8"	18'-10"	17'-5"	16'-8"	19'-9"	18'-1"	17'-4"	19'-5"	17'-9"	17'-1"	20'-4"	18'-7"	17'-8"
	14"	21'-0"	19'-3"	18'-3"	22'-1"	20'-2"	19'-2"	21'-0"	19'-9"	18'-9"	22'-9"	20'-9"	19'-9"
	16"	22'-11"	20'-11"	19'-11"	24'-1"	22'-0"	20'-11"	23'-7"	21'-7"	20'-6"	24'-10"	22'-8"	21'-6"
LPI 56	11'-7/8"	19'-3"	17'-8"	17'-0"	20'-3"	18'-6"	17'-7"	19'-10"	18'-1"	17'-4"	20'-10"	19'-0"	18'-1"
	14"	21'-5"	19'-7"	18'-7"	22'-7"	20'-7"	19'-6"	22'-1"	20'-2"	19'-1"	23'-2"	21'-2"	20'-1"
	16"	23'-4"	21'-4"	20'-3"	24'-7"	22'-5"	21'-3"	24'-0"	22'-0"	20'-10"	25'-3"	23'-1"	21'-11"

19/32" OSB SHEATHING GLUED & NAILED

Series	Depth	No Direct Attached Ceiling						Direct Attached 1/2" Gypsum Ceiling					
		Maximum Simple Spans			Maximum Continuous Spans			Maximum Simple Spans			Maximum Continuous Spans		
		12" oc	16" oc	19.2" oc	12" oc	16" oc	19.2" oc	12" oc	16" oc	19.2" oc	12" oc	16" oc	19.2" oc
LPI 18	9'-1/2"	14'-10"	14'-0"	13'-7"	15'-4"	14'-6"	14'-0"	15'-3"	14'-6"	14'-0"	15'-10"	15'-0"	14'-6"
	11'-7/8"	16'-8"	15'-9"	15'-3"	17'-3"	16'-3"	15'-9"	17'-2"	16'-3"	15'-9"	17'-10"	16'-10"	16'-4"
LPI 20Plus	9'-1/2"	15'-5"	14'-7"	14'-1"	15'-11"	15'-0"	14'-7"	15'-11"	15'-0"	14'-6"	16'-5"	15'-6"	15'-0"
	11'-7/8"	17'-4"	16'-4"	15'-10"	17'-11"	16'-11"	16'-4"	17'-10"	16'-10"	16'-3"	18'-8"	17'-5"	16'-10"
	14"	19'-1"	17'-9"	17'-2"	20'-0"	18'-7"	17'-10"	19'-10"	18'-6"	17'-9"	20'-10"	19'-4"	18'-7"
LPI 32Plus	9'-1/2"	15'-11"	15'-0"	14'-6"	16'-5"	15'-6"	15'-0"	16'-4"	15'-5"	14'-11"	16'-11"	15'-11"	15'-5"
	11'-7/8"	17'-9"	16'-9"	16'-3"	18'-7"	17'-4"	16'-9"	18'-5"	17'-3"	16'-8"	19'-3"	17'-11"	17'-3"
	14"	19'-9"	18'-3"	17'-7"	20'-8"	19'-2"	18'-4"	20'-5"	19'-0"	18'-2"	21'-6"	19'-11"	18'-7"
LPI 36	11'-7/8"	18'-4"	17'-2"	16'-7"	19'-2"	17'-9"	17'-2"	18'-11"	17'-8"	17'-1"	19'-10"	18'-5"	17'-8"
	14"	20'-4"	18'-10"	18'-0"	21'-4"	19'-9"	18'-11"	21'-0"	19'-6"	18'-8"	22'-1"	20'-6"	19'-7"
	16"	22'-1"	20'-5"	19'-7"	23'-2"	21'-5"	20'-6"	22'-10"	21'-2"	20'-3"	24'-0"	22'-3"	21'-4"
LPI 42Plus	9'-1/2"	17'-0"	16'-0"	15'-5"	17'-7"	16'-6"	16'-0"	17'-4"	16'-4"	15'-10"	18'-1"	16'-11"	16'-4"
	11'-7/8"	19'-4"	17'-11"	17'-4"	20'-4"	18'-9"	18'-0"	20'-0"	18'-6"	17'-9"	20'-11"	19'-5"	18'-7"
	14"	21'-7"	19'-11"	19'-1"	22'-7"	20'-11"	20'-0"	22'-3"	20'-7"	19'-8"	23'-4"	21'-7"	20'-8"
LPI 52Plus	11'-7/8"	19'-11"	18'-5"	17'-8"	20'-11"	19'-4"	18'-6"	20'-6"	19'-0"	18'-2"	21'-6"	19'-11"	19'-0"
	14"	22'-2"	20'-5"	19'-7"	23'-3"	21'-5"	20'-6"	22'-9"	21'-1"	20'-2"	23'-11"	22'-2"	21'-2"
	16"	24'-1"	22'-3"	21'-3"	25'-4"	23'-4"	22'-4"	24'-10"	22'-11"	21'-11"	26'-1"	24'-1"	23'-1"
LPI 56	11'-7/8"	20'-4"	18'-9"	17'-11"	21'-4"	19'-8"	18'-10"	20'-11"	19'-4"	18'-5"	21'-11"	20'-3"	19'-4"
	14"	22'-7"	20'-10"	19'-11"	23'-8"	21'-10"	20'-10"	23'-2"	21'-5"	20'-6"	24'-4"	22'-6"	21'-6"
	16"	24'-6"	22'-7"	21'-7"	25'-9"	23'-9"	22'-8"	25'-3"	23'-4"	22'-3"	26'-6"	24'-6"	23'-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, for standard load duration.
3. These tables reflect the additional stiffness for vibration provided by a 19/32" OSB rated sheathing, or equal, attached as indicated (Nailed Only or Glued & Nailed) to the top flange.
4. Live load deflection is limited to L/360 "bare joist".
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 resistance of an SPF wall plate.

ADDITIONAL NOTES:

1. These spans have been designed to meet the Limit States Design and vibration requirements of the National Building Code of Canada.
2. Web stiffeners are not required for any of the spans in these tables.
3. Web fillers are required for I-Joists seated in hangers that do not laterally support the top flange.
4. 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.

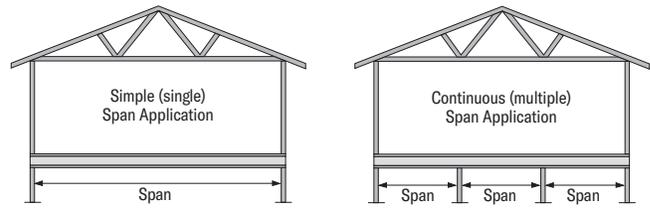
Floor Span Tables: 23/32" OSB Sheathing

SPECIFIED FLOOR LOADS: 40 PSF LIVE LOAD, 15 PSF DEAD LOAD

TO USE:

1. Select the appropriate table based on the floor system construction.
2. Select the Simple Span or Continuous Span section of the table, as required.
3. Find a span that meets or exceeds the required clear span.
4. 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.



23/32" OSB SHEATHING NAILED ONLY

Series	Depth	No Direct Attached Ceiling								Direct Attached 1/2" Gypsum Ceiling							
		Maximum Simple Spans				Maximum Continuous Spans				Maximum Simple Spans				Maximum Continuous Spans			
		12" oc	16" oc	19.2" oc	24" oc	12" oc	16" oc	19.2" oc	24" oc	12" oc	16" oc	19.2" oc	24" oc	12" oc	16" oc	19.2" oc	24" oc
LPI 18	9-1/2"	14'-2"	13'-3"	12'-8"	12'-0"	14'-8"	13'-8"	13'-1"	12'-5"	14'-7"	13'-7"	13'-0"	12'-4"	15'-1"	14'-1"	13'-5"	12'-9"
	11-7/8"	16'-1"	15'-0"	14'-4"	13'-8"	16'-8"	15'-6"	14'-10"	14'-1"	16'-6"	15'-5"	14'-9"	14'-0"	17'-1"	15'-11"	15'-3"	14'-6"
LPI 20Plus	9-1/2"	15'-0"	14'-0"	13'-4"	12'-9"	15'-6"	14'-5"	13'-10"	13'-2"	15'-4"	14'-4"	13'-8"	13'-0"	15'-11"	14'-10"	14'-2"	13'-6"
	11-7/8"	16'-11"	15'-9"	15'-1"	14'-4"	17'-6"	16'-4"	15'-7"	14'-10"	17'-4"	16'-2"	15'-6"	14'-9"	18'-1"	16'-9"	16'-0"	15'-3"
	14"	18'-8"	17'-3"	16'-6"	15'-8"	19'-7"	17'-11"	17'-1"	16'-3"	19'-3"	17'-8"	16'-11"	16'-1"	20'-3"	18'-6"	16'-0"	16'-9"
LPI 32Plus	9-1/2"	15'-7"	14'-6"	13'-10"	13'-2"	16'-1"	15'-0"	14'-4"	13'-8"	15'-11"	14'-10"	14'-2"	13'-6"	16'-6"	15'-4"	14'-8"	13'-11"
	11-7/8"	17'-6"	16'-4"	15'-7"	14'-10"	18'-3"	16'-11"	16'-2"	15'-4"	17'-11"	16'-9"	16'-0"	15'-2"	18'-10"	17'-4"	16'-7"	15'-9"
	14"	19'-5"	17'-9"	17'-0"	16'-2"	20'-5"	18'-7"	17'-7"	16'-9"	20'-0"	18'-4"	17'-5"	16'-7"	21'-0"	19'-3"	18'-2"	17'-2"
LPI 36	11-7/8"	18'-1"	16'-10"	16'-1"	15'-4"	19'-0"	17'-5"	16'-8"	15'-10"	18'-7"	17'-2"	16'-5"	15'-8"	19'-10"	17'-10"	17'-1"	16'-3"
	14"	20'-2"	18'-5"	17'-6"	16'-8"	21'-2"	19'-4"	18'-3"	17'-3"	20'-9"	18'-11"	17'-11"	17'-0"	21'-9"	19'-11"	18'-10"	17'-8"
	16"	21'-11"	20'-0"	18'-11"	17'-9"	23'-0"	21'-0"	19'-10"	18'-7"	22'-7"	20'-8"	19'-6"	18'-4"	23'-8"	21'-8"	20'-6"	19'-3"
LPI 42Plus	9-1/2"	16'-11"	15'-9"	15'-1"	14'-4"	17'-6"	16'-4"	15'-7"	14'-10"	17'-3"	16'-1"	15'-4"	14'-7"	17'-10"	16'-7"	15'-11"	15'-1"
	11-7/8"	19'-5"	17'-9"	17'-0"	16'-2"	20'-4"	18'-7"	17'-7"	16'-9"	19'-10"	18'-2"	17'-4"	16'-6"	20'-10"	19'-1"	18'-0"	17'-1"
	14"	21'-8"	19'-9"	18'-8"	17'-7"	22'-9"	20'-9"	19'-7"	18'-4"	22'-2"	20'-3"	19'-2"	18'-0"	23'-4"	21'-4"	20'-2"	18'-11"
LPI 52Plus	11-7/8"	23'-8"	21'-7"	20'-4"	19'-1"	24'-10"	22'-8"	21'-5"	20'-1"	24'-3"	22'-2"	20'-11"	19'-8"	25'-6"	23'-4"	22'-0"	20'-8"
	14"	25'-0"	23'-8"	22'-4"	21'-1"	26'-10"	24'-8"	23'-5"	22'-1"	26'-4"	24'-3"	23'-0"	21'-8"	27'-6"	25'-4"	24'-0"	22'-6"
	16"	26'-2"	24'-9"	23'-5"	22'-1"	27'-4"	25'-2"	23'-8"	22'-4"	27'-0"	25'-0"	23'-6"	22'-2"	28'-2"	26'-0"	24'-8"	23'-4"
LPI 56	11-7/8"	20'-6"	18'-8"	17'-9"	16'-10"	21'-6"	19'-8"	18'-7"	17'-6"	21'-0"	19'-2"	18'-1"	17'-2"	22'-0"	20'-1"	19'-0"	17'-10"
	14"	22'-10"	20'-10"	19'-8"	18'-5"	24'-0"	21'-10"	20'-8"	19'-4"	23'-4"	21'-4"	20'-2"	18'-11"	24'-6"	22'-5"	21'-2"	19'-10"
	16"	24'-10"	22'-8"	21'-4"	20'-1"	26'-1"	23'-10"	22'-6"	21'-1"	25'-5"	23'-3"	21'-11"	20'-7"	26'-8"	24'-5"	23'-1"	21'-8"

23/32" OSB SHEATHING GLUED & NAILED

Series	Depth	No Direct Attached Ceiling								Direct Attached 1/2" Gypsum Ceiling							
		Maximum Simple Spans				Maximum Continuous Spans				Maximum Simple Spans				Maximum Continuous Spans			
		12" oc	16" oc	19.2" oc	24" oc	12" oc	16" oc	19.2" oc	24" oc	12" oc	16" oc	19.2" oc	24" oc	12" oc	16" oc	19.2" oc	24" oc
LPI 18	9-1/2"	15'-8"	14'-10"	14'-4"	13'-2"	16'-2"	15'-4"	14'-9"	13'-7"	16'-2"	15'-3"	14'-4"	13'-2"	16'-8"	15'-9"	15'-2"	13'-7"
	11-7/8"	17'-7"	16'-7"	16'-0"	14'-10"	18'-4"	17'-2"	16'-7"	14'-9"	18'-2"	17'-2"	16'-7"	14'-10"	19'-1"	17'-9"	16'-7"	14'-9"
LPI 20Plus	9-1/2"	16'-4"	15'-4"	14'-10"	14'-3"	16'-10"	15'-11"	15'-4"	14'-8"	16'-9"	15'-10"	15'-3"	14'-5"	17'-4"	16'-4"	15'-9"	15'-2"
	11-7/8"	18'-4"	17'-3"	16'-7"	15'-11"	19'-3"	17'-10"	17'-2"	16'-6"	19'-0"	17'-9"	17'-1"	16'-5"	19'-11"	18'-6"	17'-8"	17'-0"
	14"	20'-6"	19'-0"	18'-1"	17'-4"	21'-5"	19'-11"	18'-11"	18'-0"	21'-2"	19'-8"	18'-10"	17'-10"	22'-3"	20'-8"	19'-9"	18'-9"
LPI 32Plus	9-1/2"	16'-9"	15'-10"	15'-3"	14'-8"	17'-4"	16'-4"	15'-9"	15'-1"	17'-2"	16'-2"	15'-8"	15'-0"	17'-9"	16'-9"	16'-2"	15'-6"
	11-7/8"	19'-0"	17'-8"	17'-1"	16'-4"	19'-11"	18'-6"	17'-8"	16'-11"	19'-7"	18'-3"	17'-6"	16'-10"	20'-7"	19'-1"	18'-3"	17'-5"
	14"	21'-1"	19'-7"	18'-8"	17'-9"	22'-2"	20'-6"	19'-7"	18'-7"	21'-10"	20'-3"	19'-4"	18'-4"	22'-10"	21'-3"	20'-3"	19'-3"
LPI 36	11-7/8"	19'-7"	18'-2"	17'-5"	16'-9"	20'-7"	19'-0"	18'-2"	17'-4"	20'-2"	18'-9"	17'-10"	17'-2"	21'-2"	19'-8"	18'-9"	17'-9"
	14"	21'-9"	20'-1"	19'-2"	18'-2"	22'-10"	21'-1"	20'-1"	19'-1"	22'-5"	20'-9"	19'-10"	18'-10"	23'-6"	21'-10"	20'-10"	19'-9"
	16"	23'-7"	21'-10"	20'-10"	19'-9"	24'-9"	22'-11"	21'-10"	19'-9"	24'-4"	22'-7"	21'-6"	20'-5"	25'-6"	23'-9"	22'-7"	19'-9"
LPI 42Plus	9-1/2"	17'-11"	16'-10"	16'-3"	15'-7"	18'-9"	17'-5"	16'-9"	16'-1"	18'-4"	17'-2"	16'-7"	15'-10"	19'-3"	17'-10"	17'-2"	16'-5"
	11-7/8"	20'-9"	19'-2"	18'-3"	17'-5"	21'-9"	20'-1"	19'-1"	18'-1"	21'-3"	19'-8"	18'-9"	17'-10"	22'-4"	20'-8"	19'-8"	18'-8"
	14"	23'-0"	21'-3"	20'-3"	19'-2"	24'-2"	22'-4"	21'-3"	20'-2"	23'-8"	21'-11"	20'-10"	19'-9"	24'-10"	23'-0"	21'-11"	20'-9"
LPI 52Plus	11-7/8"	25'-1"	23'-2"	22'-1"	20'-11"	26'-4"	24'-4"	23'-2"	21'-11"	25'-9"	23'-10"	22'-9"	21'-6"	27'-1"	25'-1"	23'-11"	22'-7"
	14"	23'-8"	21'-10"	20'-9"	19'-8"	24'-10"	22'-11"	21'-10"	20'-8"	24'-2"	22'-5"	21'-4"	20'-3"	25'-5"	23'-6"	22'-5"	21'-3"
	16"	25'-9"	23'-9"	22'-7"	21'-5"	27'-0"	24'-11"	23'-9"	22'-6"	26'-4"	24'-5"	23'-3"	22'-0"	27'-8"	25'-8"	24'-5"	23'-1"
LPI 56	11-7/8"	21'-9"	20'-1"	19'-1"	18'-1"	22'-10"	21'-0"	20'-0"	18'-11"	22'-3"	20'-7"	19'-7"	18'-6"	23'-4"	21'-7"	20'-6"	19'-5"
	14"	24'-1"	22'-3"	21'-2"	20'-0"	25'-4"	23'-4"	22'-2"	21'-0"	24'-8"	22'-10"	21'-8"	20'-6"	25'-11"	23'-11"	22'-10"	21'-7"
	16"	26'-2"	24'-2"	22'-11"	21'-9"	27'-6"	25'-4"	24'-1"	22'-10"	26'-9"	24'-9"	23'-7"	22'-4"	28'-2"	26'-1"	24'-9"	23'-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, for standard load duration.
3. These tables reflect the additional stiffness for vibration provided by a 23/32" OSB rated sheathing, or equal, attached as indicated (Nailed Only or Glued & Nailed) to the top flange.
4. Live load deflection is limited to L/360 "bare joist"
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 resistance of an SPF wall plate.

ADDITIONAL NOTES:

1. These spans have been designed to meet the Limit States Design and vibration requirements of the National Building Code of Canada.
2. Web stiffeners are not required for any of the spans in these tables.
3. Web fillers are required for I-Joists seated in hangers that do not laterally support the top flange.
4. 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.

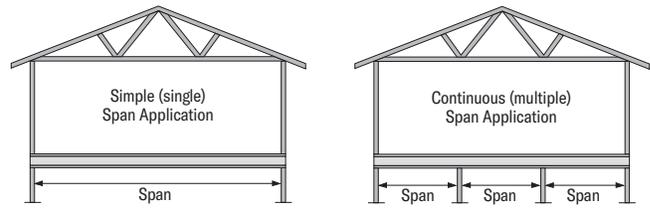
Floor Span Tables: 5/8" OSB Sheathing

SPECIFIED FLOOR LOADS: 40 PSF LIVE LOAD, 15 PSF DEAD LOAD

TO USE:

1. Select the appropriate table based on the floor system construction.
2. Select the Simple Span or Continuous Span section of the table, as required.
3. Find a span that meets or exceeds the required clear span.
4. 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.



5/8" OSB SHEATHING NAILED ONLY													
Series	Depth	No Direct Attached Ceiling						Direct Attached 1/2" Gypsum Ceiling					
		Maximum Simple Spans			Maximum Continuous Spans			Maximum Simple Spans			Maximum Continuous Spans		
		12" oc	16" oc	19.2" oc	12" oc	16" oc	19.2" oc	12" oc	16" oc	19.2" oc	12" oc	16" oc	19.2" oc
LPI 18	9'-1/2"	13'-9"	12'-9"	12'-3"	14'-2"	13'-2"	12'-8"	14'-1"	13'-2"	12'-7"	14'-7"	13'-7"	13'-0"
	11'-7/8"	15'-6"	14'-6"	13'-11"	16'-1"	15'-0"	14'-4"	16'-0"	14'-11"	14'-4"	16'-7"	15'-5"	14'-10"
LPI 20Plus	9'-1/2"	14'-6"	13'-6"	12'-11"	15'-0"	13'-11"	13'-4"	14'-11"	13'-10"	13'-3"	15'-5"	14'-4"	13'-9"
	11'-7/8"	16'-4"	15'-3"	14'-7"	16'-11"	15'-9"	15'-1"	16'-10"	15'-8"	15'-0"	17'-5"	16'-3"	15'-7"
	14"	17'-11"	16'-8"	16'-0"	18'-9"	17'-3"	16'-6"	18'-6"	17'-2"	16'-5"	19'-5"	17'-9"	17'-0"
LPI 32Plus	9'-1/2"	15'-1"	14'-0"	13'-5"	15'-7"	14'-6"	13'-11"	15'-5"	14'-4"	13'-9"	16'-0"	14'-10"	14'-3"
	11'-7/8"	16'-11"	15'-9"	15'-1"	17'-6"	16'-4"	15'-8"	17'-4"	15'-6"	16'-2"	18'-1"	16'-9"	16'-1"
	14"	18'-7"	17'-2"	16'-5"	19'-6"	17'-10"	17'-1"	19'-3"	17'-8"	16'-11"	20'-2"	18'-5"	17'-6"
LPI 36	11'-7/8"	17'-5"	16'-3"	15'-7"	18'-2"	16'-10"	16'-1"	17'-10"	16'-8"	15'-11"	18'-9"	17'-3"	16'-6"
	14"	19'-3"	17'-8"	16'-11"	20'-3"	18'-6"	17'-7"	19'-11"	18'-2"	17'-4"	20'-11"	19'-1"	18'-1"
	16"	21'-0"	19'-2"	18'-2"	22'-0"	20'-1"	19'-1"	21'-8"	19'-10"	18'-9"	22'-9"	20'-10"	19'-9"
LPI 42Plus	9'-1/2"	16'-4"	15'-2"	14'-7"	16'-11"	15'-9"	15'-1"	16'-8"	15'-7"	14'-11"	17'-3"	16'-1"	15'-5"
	11'-7/8"	18'-7"	17'-2"	16'-5"	19'-6"	17'-9"	17'-0"	19'-1"	17'-6"	16'-10"	20'-0"	18'-3"	17'-5"
	14"	20'-3"	18'-11"	17'-11"	21'-9"	19'-10"	18'-10"	21'-3"	19'-5"	18'-5"	22'-4"	20'-5"	19'-4"
LPI 52Plus	11'-7/8"	19'-2"	17'-7"	16'-11"	20'-1"	18'-4"	17'-6"	19'-8"	18'-0"	17'-3"	20'-8"	18'-11"	17'-11"
	14"	21'-4"	19'-6"	18'-6"	22'-5"	20'-6"	19'-5"	21'-11"	20'-1"	19'-0"	23'-0"	21'-1"	20'-0"
	16"	23'-4"	21'-3"	20'-2"	24'-6"	22'-4"	21'-2"	23'-11"	21'-11"	20'-9"	25'-2"	23'-0"	21'-10"
LPI 56	11'-7/8"	19'-7"	17'-11"	17'-2"	20'-7"	18'-9"	17'-10"	20'-1"	18'-4"	17'-6"	21'-2"	19'-4"	18'-3"
	14"	21'-10"	19'-11"	18'-10"	22'-11"	20'-11"	19'-10"	22'-5"	20'-5"	19'-4"	23'-6"	21'-6"	20'-4"
	16"	23'-9"	21'-8"	20'-6"	25'-0"	22'-9"	21'-7"	24'-5"	22'-3"	21'-1"	25'-8"	23'-5"	22'-2"

5/8" OSB SHEATHING GLUED & NAILED													
Series	Depth	No Direct Attached Ceiling						Direct Attached 1/2" Gypsum Ceiling					
		Maximum Simple Spans			Maximum Continuous Spans			Maximum Simple Spans			Maximum Continuous Spans		
		12" oc	16" oc	19.2" oc	12" oc	16" oc	19.2" oc	12" oc	16" oc	19.2" oc	12" oc	16" oc	19.2" oc
LPI 18	9'-1/2"	15'-0"	14'-3"	13'-9"	15'-6"	14'-8"	14'-2"	15'-6"	14'-8"	14'-2"	16'-0"	15'-2"	14'-8"
	11'-7/8"	16'-11"	16'-0"	15'-5"	17'-6"	16'-6"	16'-0"	17'-5"	16'-6"	16'-0"	18'-2"	17'-1"	16'-6"
LPI 20Plus	9'-1/2"	15'-8"	14'-9"	14'-3"	16'-2"	15'-3"	14'-9"	16'-1"	15'-2"	14'-8"	16'-8"	15'-9"	15'-2"
	11'-7/8"	17'-7"	16'-7"	16'-0"	18'-3"	17'-2"	16'-7"	18'-1"	17'-1"	16'-6"	19'-0"	17'-8"	17'-1"
	14"	19'-6"	18'-1"	17'-5"	20'-5"	18'-11"	18'-1"	20'-2"	18'-9"	18'-0"	21'-2"	19'-8"	18'-10"
LPI 32Plus	9'-1/2"	16'-1"	15'-2"	14'-8"	16'-8"	15'-8"	15'-2"	16'-6"	15'-7"	15'-1"	17'-1"	16'-2"	15'-7"
	11'-7/8"	18'-1"	17'-0"	16'-5"	18'-11"	17'-7"	17'-0"	18'-8"	17'-6"	16'-11"	19'-7"	18'-3"	17'-6"
	14"	20'-1"	18'-7"	17'-10"	21'-1"	19'-6"	18'-8"	20'-10"	19'-4"	18'-6"	21'-10"	20'-3"	19'-5"
LPI 36	11'-7/8"	18'-8"	17'-5"	16'-10"	19'-7"	18'-1"	17'-5"	19'-3"	17'-10"	17'-3"	20'-2"	18'-9"	17'-11"
	14"	20'-8"	19'-2"	18'-4"	21'-8"	20'-1"	19'-2"	21'-4"	19'-10"	18'-11"	22'-5"	20'-10"	19'-11"
	16"	22'-6"	20'-10"	19'-11"	23'-7"	21'-10"	20'-10"	23'-3"	21'-7"	20'-7"	24'-5"	22'-8"	21'-8"
LPI 42Plus	9'-1/2"	17'-3"	16'-2"	15'-8"	17'-10"	16'-9"	16'-2"	17'-7"	16'-7"	16'-0"	18'-4"	17'-2"	16'-7"
	11'-7/8"	19'-9"	18'-3"	17'-6"	20'-8"	19'-1"	18'-3"	20'-4"	18'-9"	17'-11"	21'-4"	19'-9"	18'-10"
	14"	21'-11"	20'-3"	19'-4"	23'-0"	21'-3"	20'-4"	22'-7"	20'-11"	19'-11"	23'-9"	21'-11"	21'-0"
LPI 52Plus	11'-7/8"	20'-3"	18'-9"	17'-11"	21'-3"	19'-8"	18'-9"	20'-10"	19'-3"	18'-5"	21'-10"	20'-3"	19'-4"
	14"	22'-6"	20'-10"	19'-10"	23'-8"	21'-10"	20'-10"	23'-2"	21'-5"	20'-5"	24'-4"	22'-6"	21'-6"
	16"	24'-6"	22'-8"	21'-7"	25'-9"	23'-9"	22'-8"	25'-2"	23'-4"	22'-3"	26'-6"	24'-6"	23'-5"
LPI 56	11'-7/8"	20'-8"	19'-1"	18'-3"	21'-9"	20'-0"	19'-1"	21'-3"	19'-7"	18'-9"	22'-3"	20'-7"	19'-8"
	14"	22'-11"	21'-2"	20'-2"	24'-1"	22'-3"	21'-2"	23'-7"	21'-9"	20'-9"	24'-9"	22'-11"	21'-10"
	16"	24'-11"	23'-0"	21'-11"	26'-3"	24'-2"	23'-0"	25'-7"	23'-8"	22'-7"	26'-11"	24'-11"	23'-9"

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, for standard load duration.
3. These tables reflect the additional stiffness for vibration provided by a 5/8" OSB rated sheathing, or equal, attached as indicated (Nailed Only or Glued & Nailed) to the top flange.
4. Live load deflection is limited to L/360 "bare joist".
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 resistance of an SPF wall plate.

ADDITIONAL NOTES:

1. These spans have been designed to meet the Limit States Design and vibration requirements of the National Building Code of Canada.
2. Web stiffeners are not required for any of the spans in these tables.
3. Web fillers are required for I-Joists seated in hangers that do not laterally support the top flange.
4. 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.

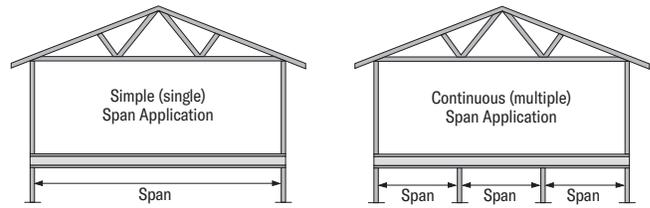
Floor Span Tables: 3/4" OSB Sheathing

SPECIFIED FLOOR LOADS: 40 PSF LIVE LOAD, 15 PSF DEAD LOAD

TO USE:

1. Select the appropriate table based on the floor system construction.
2. Select the Simple Span or Continuous Span section of the table, as required.
3. Find a span that meets or exceeds the required clear span.
4. 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.



3/4" OSB SHEATHING NAILED ONLY		No Direct Attached Ceiling								Direct Attached 1/2" Gypsum Ceiling							
Series	Depth	Maximum Simple Spans				Maximum Continuous Spans				Maximum Simple Spans				Maximum Continuous Spans			
		12" oc	16" oc	19.2" oc	24" oc	12" oc	16" oc	19.2" oc	24" oc	12" oc	16" oc	19.2" oc	24" oc	12" oc	16" oc	19.2" oc	24" oc
LPI 18	9-1/2"	14'-4"	13'-4"	12'-9"	12'-2"	14'-10"	13'-10"	13'-2"	12'-6"	14'-9"	13'-9"	13'-2"	12'-6"	15'-3"	14'-2"	13'-7"	12'-11"
	11-7/8"	16'-3"	15'-2"	14'-6"	13'-9"	16'-10"	15'-8"	15'-0"	14'-3"	16'-8"	15'-7"	14'-11"	14'-2"	17'-3"	16'-1"	15'-5"	14'-8"
LPI 20Plus	9-1/2"	15'-2"	14'-2"	13'-6"	12'-10"	15'-8"	14'-7"	13'-11"	13'-3"	15'-6"	14'-6"	13'-10"	13'-2"	16'-1"	15'-0"	14'-4"	13'-7"
	11-7/8"	17'-1"	15'-11"	15'-3"	14'-6"	17'-9"	16'-6"	15'-9"	15'-0"	17'-6"	16'-4"	15'-8"	14'-10"	18'-3"	16'-11"	16'-2"	15'-5"
	14"	18'-11"	17'-5"	16'-8"	15'-10"	19'-10"	18'-2"	17'-3"	16'-5"	19'-6"	17'-11"	17'-1"	16'-3"	20'-6"	18'-9"	17'-9"	16'-10"
LPI 32Plus	9-1/2"	15'-9"	14'-8"	14'-0"	13'-4"	16'-3"	15'-2"	14'-6"	13'-9"	16'-1"	15'-0"	14'-4"	13'-7"	16'-8"	15'-6"	14'-10"	14'-1"
	11-7/8"	17'-9"	16'-6"	15'-9"	15'-0"	18'-6"	17'-1"	16'-4"	15'-6"	18'-2"	16'-11"	16'-2"	15'-4"	19'-1"	17'-6"	16'-9"	15'-11"
	14"	19'-8"	18'-0"	17'-2"	16'-4"	20'-8"	18'-10"	17'-10"	16'-11"	20'-3"	18'-6"	17'-7"	16'-9"	21'-3"	19'-6"	18'-5"	17'-4"
LPI 36	11-7/8"	18'-4"	17'-0"	16'-3"	15'-5"	19'-3"	17'-7"	16'-10"	16'-0"	18'-10"	17'-4"	16'-7"	15'-9"	19'-9"	18'-1"	17'-3"	16'-4"
	14"	20'-5"	18'-8"	17'-8"	16'-9"	21'-5"	19'-7"	18'-6"	17'-5"	21'-0"	19'-2"	18'-1"	17'-2"	22'-0"	20'-2"	19'-0"	17'-10"
	16"	22'-3"	20'-3"	19'-2"	17'-11"	23'-4"	21'-4"	20'-1"	18'-10"	22'-10"	20'-11"	19'-9"	18'-6"	24'-0"	22'-0"	20'-9"	19'-5"
LPI 42Plus	9-1/2"	17'-1"	15'-11"	15'-3"	14'-5"	17'-8"	16'-6"	15'-9"	14'-11"	17'-5"	16'-3"	15'-6"	14'-9"	18'-1"	16'-11"	16'-1"	15'-3"
	11-7/8"	19'-8"	17'-11"	17'-2"	16'-3"	20'-7"	18'-10"	17'-9"	16'-11"	20'-1"	18'-5"	17'-6"	16'-7"	21'-1"	19'-4"	18'-3"	17'-3"
	14"	21'-11"	20'-0"	18'-11"	17'-9"	23'-0"	21'-0"	19'-10"	18'-7"	22'-5"	20'-6"	19'-5"	18'-2"	23'-7"	21'-7"	20'-5"	19'-1"
LPI 52Plus	11-7/8"	20'-4"	18'-7"	17'-7"	16'-9"	21'-4"	19'-5"	18'-5"	17'-4"	22'-9"	20'-9"	19'-0"	17'-11"	25'-10"	23'-7"	22'-4"	20'-11"
	14"	22'-7"	20'-8"	19'-6"	18'-4"	23'-9"	21'-8"	20'-6"	19'-2"	23'-1"	21'-2"	20'-0"	18'-9"	24'-3"	22'-3"	21'-0"	19'-8"
	16"	24'-8"	22'-6"	21'-3"	19'-11"	25'-11"	23'-8"	22'-4"	20'-11"	25'-3"	23'-1"	21'-10"	20'-6"	26'-6"	24'-3"	23'-0"	21'-6"
LPI 56	11-7/8"	20'-9"	19'-0"	17'-11"	17'-0"	21'-10"	19'-11"	18'-10"	17'-8"	21'-3"	19'-5"	18'-4"	17'-4"	22'-4"	20'-5"	19'-3"	18'-0"
	14"	23'-1"	21'-1"	19'-11"	18'-8"	24'-3"	22'-2"	20'-11"	19'-7"	23'-7"	21'-7"	20'-5"	19'-1"	24'-10"	22'-8"	21'-5"	20'-1"
	16"	25'-2"	22'-11"	21'-8"	20'-3"	26'-5"	24'-2"	22'-9"	21'-4"	25'-8"	23'-6"	22'-3"	20'-10"	27'-0"	24'-9"	23'-4"	21'-11"

3/4" OSB SHEATHING GLUED & NAILED		No Direct Attached Ceiling								Direct Attached 1/2" Gypsum Ceiling							
Series	Depth	Maximum Simple Spans				Maximum Continuous Spans				Maximum Simple Spans				Maximum Continuous Spans			
		12" oc	16" oc	19.2" oc	24" oc	12" oc	16" oc	19.2" oc	24" oc	12" oc	16" oc	19.2" oc	24" oc	12" oc	16" oc	19.2" oc	24" oc
LPI 18	9-1/2"	15'-10"	15'-0"	14'-4"	13'-2"	16'-5"	15'-6"	14'-11"	13'-7"	16'-4"	15'-3"	14'-4"	13'-2"	16'-11"	16'-0"	15'-2"	13'-7"
	11-7/8"	17'-10"	16'-10"	16'-3"	14'-10"	18'-7"	17'-5"	16'-7"	14'-9"	18'-5"	17'-4"	16'-8"	14'-10"	19'-4"	18'-0"	16'-7"	14'-9"
LPI 20Plus	9-1/2"	16'-6"	15'-7"	15'-0"	14'-5"	17'-1"	16'-1"	15'-6"	14'-10"	16'-11"	16'-0"	15'-5"	14'-5"	17'-6"	16'-6"	15'-11"	15'-2"
	11-7/8"	18'-8"	17'-5"	16'-10"	16'-1"	19'-6"	18'-1"	17'-5"	16'-8"	19'-3"	17'-11"	17'-3"	16'-7"	20'-3"	18'-10"	17'-11"	17'-2"
	14"	20'-9"	19'-3"	18'-4"	17'-6"	21'-9"	20'-2"	19'-3"	18'-3"	21'-6"	20'-0"	19'-1"	18'-1"	22'-7"	21'-0"	20'-0"	19'-0"
LPI 32Plus	11-7/8"	17'-0"	16'-0"	15'-5"	14'-9"	17'-7"	16'-7"	15'-11"	15'-3"	17'-5"	16'-5"	15'-10"	15'-2"	18'-1"	17'-0"	16'-4"	15'-8"
	14"	19'-4"	17'-11"	17'-3"	16'-6"	20'-3"	18'-9"	17'-10"	17'-1"	19'-11"	18'-6"	17'-8"	17'-0"	20'-10"	19'-5"	18'-6"	17'-7"
	16"	21'-5"	19'-10"	18'-11"	17'-11"	22'-6"	20'-10"	19'-10"	18'-9"	22'-1"	20'-6"	19'-7"	18'-7"	23'-2"	21'-7"	20'-7"	19'-5"
LPI 36	11-7/8"	19'-11"	18'-5"	17'-8"	16'-11"	20'-10"	19'-4"	18'-5"	17'-6"	20'-6"	19'-0"	18'-1"	17'-4"	21'-6"	19'-11"	19'-0"	18'-0"
	14"	22'-1"	20'-5"	19'-6"	18'-5"	23'-2"	21'-5"	20'-5"	19'-4"	22'-8"	21'-1"	20'-1"	19'-0"	23'-10"	22'-1"	21'-1"	19'-9"
	16"	24'-0"	22'-2"	21'-1"	20'-0"	25'-2"	23'-3"	22'-2"	19'-9"	24'-8"	22'-11"	21'-10"	20'-8"	25'-11"	24'-1"	22'-11"	19'-9"
LPI 42Plus	9-1/2"	18'-2"	17'-1"	16'-5"	15'-9"	19'-1"	17'-8"	17'-0"	16'-3"	18'-7"	17'-5"	16'-9"	16'-0"	19'-6"	18'-1"	17'-4"	16'-7"
	11-7/8"	21'-0"	19'-5"	18'-6"	17'-7"	22'-1"	20'-5"	19'-5"	18'-4"	21'-7"	20'-0"	19'-0"	18'-0"	22'-7"	20'-11"	19'-11"	18'-11"
	14"	23'-5"	21'-7"	20'-7"	19'-5"	24'-6"	22'-8"	21'-7"	20'-5"	24'-0"	22'-2"	21'-2"	20'-0"	25'-2"	23'-4"	22'-2"	21'-0"
LPI 52Plus	11-7/8"	25'-6"	23'-6"	22'-5"	21'-2"	26'-9"	24'-8"	23'-6"	22'-2"	26'-1"	24'-2"	23'-0"	21'-9"	27'-5"	25'-5"	24'-3"	22'-11"
	14"	21'-7"	20'-0"	19'-0"	18'-0"	22'-8"	20'-11"	19'-11"	18'-10"	22'-1"	20'-6"	19'-6"	18'-5"	23'-2"	21'-6"	20'-5"	19'-4"
	16"	24'-0"	22'-2"	21'-1"	19'-11"	25'-2"	23'-3"	22'-1"	20'-11"	24'-6"	22'-9"	21'-8"	20'-6"	25'-9"	23'-10"	22'-9"	21'-6"
LPI 56	11-7/8"	26'-1"	24'-1"	22'-11"	21'-8"	27'-5"	25'-4"	24'-1"	22'-9"	26'-8"	24'-9"	23'-7"	22'-3"	28'-1"	26'-0"	24'-9"	23'-5"
	14"	22'-1"	20'-4"	19'-4"	18'-4"	23'-2"	21'-4"	20'-4"	19'-2"	22'-6"	20'-10"	19'-10"	18'-9"	23'-8"	21'-11"	20'-10"	19'-8"
	16"	24'-5"	22'-7"	21'-5"	20'-3"	25'-8"	23'-8"	22'-6"	21'-3"	25'-0"	23'-1"	22'-0"	20'-9"	26'-3"	24'-3"	23'-1"	21'-10"
	16"	26'-7"	24'-6"	23'-3"	22'-0"	27'-11"	25'-9"	24'-6"	23'-1"	27'-2"	25'-2"	23'-11"	22'-7"	28'-6"	26'-5"	25'-2"	23'-9"

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, for standard load duration.
3. These tables reflect the additional stiffness for vibration provided by a 3/4" OSB rated sheathing, or equal, attached as indicated (Nailed Only or Glued & Nailed) to the top flange.
4. Live load deflection is limited to L/360 "bare joist"
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 resistance of an SPF wall plate.

ADDITIONAL NOTES:

1. These spans have been designed to meet the Limit States Design and vibration requirements of the National Building Code of Canada.
2. Web stiffeners are not required for any of the spans in these tables.
3. Web fillers are required for I-Joists seated in hangers that do not laterally support the top flange.
4. 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.

Uniform Floor Load (PLF) Tables: 9-1/2" and 11-7/8"

TO USE:

1. Select the span required.
2. Compare the factored design total load to the Factored Total Load column.
3. Compare the specified design total load to the Total L/240 column.
4. Compare the specified design live load to the Live L/480 column. For a live load deflection limit of L/360, refer to Additional Note 4 below.
5. Select a product that satisfies all three conditions.

EXAMPLE:

Select an I-Joist for a 17'-6" clear span supporting specified loads of 40 psf Live Load and 20 psf Dead Load, spaced 16" oc, at an L/480 deflection limit.

1. Factored Total Load = $(1.50 \times 40 + 1.25 \times 20) \times (16 / 12) = 114$ plf
 Unfactored Total Load = $(40 + 20) \times (16 / 12) = 80$ plf
 Unfactored Live Load = $40 \times (16 / 12) = 54$ plf
2. Select the row corresponding to an 18' span.
3. Select the first joist to exceed all three resistance criteria:
The 9-1/2" LPI 42Plus supports 185 plf Factored Total Load, 108 plf Total L/240 Deflection and 54 plf Live L/480 Deflection resistance.

Span	9-1/2" LPI 18			9-1/2" LPI 20Plus			9-1/2" LPI 32Plus			9-1/2" LPI 42Plus			Span
	Deflection		Factored Total Load	Deflection		Factored Total Load	Deflection		Factored Total Load	Deflection		Factored Total Load	
	Live L/480	Total L/240		Live L/480	Total L/240		Live L/480	Total L/240		Live L/480	Total L/240		
8'	231		303	284		337	323		337		424	8'	
9'	171		270	212		301	243		301	331		377	9'
10'	129		244	161		271	186		271	256		339	10'
11'	100	200	222	125		247	145		247	202		308	11'
12'	78	157	201	99	199	227	116		227	161		282	12'
13'	63	126	172	80	160	209	93	187	209	131		260	13'
14'	51	102	149	65	130	185	76	153	195	107	215	242	14'
15'	42	84	130	53	107	161	63	126	182	89	179	225	15'
16'	35	70	114	45	90	142	52	105	169	75	150	211	16'
17'	29	59	101	37	75	126	44	89	150	63	127	199	17'
18'	25	50	90	32	64	112	38	76	134	54	108	188	18'
19'	21	43	81	27	55	101	32	65	120	46	93	178	19'
20'	18	37	73	23	47	91	28	56	109	40	80	169	20'
21'	16	32	66	20	41	83	24	49	99	35	70	159	21'
22'	-	-	-	18	36	75	21	42	90	30	61	145	22'
23'	-	-	-	15	31	69	18	37	82	27	54	132	23'
24'	-	-	-	-	-	-	16	33	76	23	47	122	24'
25'	-	-	-	-	-	-	-	-	-	21	42	112	25'
26'	-	-	-	-	-	-	-	-	-	19	38	104	26'
27'	-	-	-	-	-	-	-	-	-	17	34	96	27'
28'	-	-	-	-	-	-	-	-	-	15	30	89	28'

Span	11-7/8" LPI 18			11-7/8" LPI 20Plus			11-7/8" LPI 32Plus			11-7/8" LPI 36			11-7/8" LPI 42Plus			11-7/8" LPI 52Plus			11-7/8" LPI 56			Span	
	Deflection		Factored Total Load	Deflection		Factored Total Load	Deflection		Factored Total Load	Deflection		Factored Total Load	Deflection		Factored Total Load	Deflection		Factored Total Load	Deflection		Factored Total Load		
	Live L/480	Total L/240		Live L/480	Total L/240		Live L/480	Total L/240		Live L/480	Total L/240		Live L/480	Total L/240		Live L/480	Total L/240		Live L/480	Total L/240			Live L/480
8'			322			358			358			384			465			526			449	8'	
9'	278		287			319			319			342			414			469			401	9'	
10'	212		259	258		288			288			308			374			423			362	10'	
11'	166		235	203		262	231		262	260		281	319		340	361		385			330	11'	
12'	131		216	162		241	185		241	209		258	258		312	290		353			303	12'	
13'	106		200	131		222	150		222	170		238	210		289	236		327	249		280	13'	
14'	86	173	176	107		207	124		207	140		221	174		268	195		304	207		260	14'	
15'	71	143	153	89	178	193	103		193	116		207	145		251	162		284	173		243	15'	
16'	59	119	135	74	149	181	86	173	181	98		194	122		235	136		266	146		228	16'	
17'	50	101	120	63	126	168	73	146	171	83	166	183	104	208	222	116	232	251	124		215	17'	
18'	42	85	107	54	108	150	62	125	161	71	142	173	89	178	209	99	198	237	107		203	18'	
19'	36	73	96	46	92	135	53	107	153	61	122	164	76	153	198	85	170	224	92	184	193	19'	
20'	31	63	87	40	80	122	46	93	141	53	106	155	66	133	189	74	148	213	80	160	183	20'	
21'	27	55	79	34	69	111	40	81	128	46	92	148	58	116	180	64	129	203	70	140	175	21'	
22'	24	48	72	30	61	101	35	71	116	40	81	141	51	102	172	56	113	194	61	123	167	22'	
23'	21	42	66	26	53	92	31	62	107	35	71	135	45	90	164	49	99	186	54	109	160	23'	
24'	18	37	60	23	47	85	27	55	98	31	63	130	40	80	157	44	88	178	48	96	153	24'	
25'	16	33	56	21	42	78	24	49	90	28	56	125	35	71	145	39	78	171	43	86	147	25'	
26'	-	-	-	-	18	37	72	22	44	83	25	50	120	31	63	134	35	70	164	38	77	141	26'
27'	-	-	-	-	16	33	67	19	39	77	22	45	115	28	57	125	31	63	152	34	69	136	27'
28'	-	-	-	-	15	30	62	17	35	72	20	40	107	25	51	116	28	56	141	31	62	131	28'

DESIGN ASSUMPTIONS:

1. Span is the clear distance between supports and is 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 values in the tables are for uniform loads only.
3. Factored Total Load resistance is for standard (100%) load duration.
4. These tables do not reflect any additional stiffness provided by the floor sheathing.
5. Live L/480 Deflection resistance is limited to L/480. Vibration has not been considered.
6. Total L/240 Deflection resistance is limited to L/240. Long term deflection (creep) has not been considered.
7. These tables assume full lateral support of the compression flange. Full support is considered to be a maximum unbraced length of 24'.
8. These tables 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.

ADDITIONAL NOTES:

1. These tables have been designed to meet the Limit States Design requirements of the National Building Code of Canada.
2. The tabulated resistances represent the capacity of the member in pounds per lineal foot (plf) of length.
3. The designer shall check the Factored Total Load, the Total L/240 Deflection and the Live L/480 Deflection resistance columns.
4. To design for an L/360 live load deflection, multiply the Live L/480 Deflection values by 1.33 or refer to the Uniform Roof Load (PLF) Tables on pages 12-13.
5. Where the Deflection resistance is blank, the Factored Total Load resistance governs the design.
6. To design a double I-Joist, the values in these tables can be doubled, or the design loads on the I-Joist may be halved to verify the capacity of each ply. The capacity is additive.
7. Web stiffeners are not required for these spans and loads.
8. 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.
9. Do not use a product where designated "-" without further analysis by a design professional.

PSF TO PLF CONVERSION

OC Spacing	Load										
	20 psf	25 psf	30 psf	35 psf	40 psf	45 psf	50 psf	55 psf	60 psf	65 psf	
12"	20	25	30	35	40	45	50	55	60	65	
16"	27	34	40	47	54	60	67	74	80	87	
19.2"	32	40	48	56	64	72	80	88	96	104	
24"	40	50	60	70	80	90	100	110	120	130	

TO CONVERT FROM SPECIFIED TO FACTORED TOTAL PLF:

Factored Total plf = 1.50 x Specified Live plf + 1.25 x Specified Dead plf

Uniform Floor Load (PLF) Tables: 14" and 16"

TO USE:

1. Select the span required.
2. Compare the factored design total load to the Factored Total Load column.
3. Compare the specified design total load to the Total L/240 column.
4. Compare the specified design live load to the Live L/480 column. For a live load deflection limit of L/360, refer to Additional Note 4 below.
5. Select a product that satisfies all three conditions.

EXAMPLE:

Select an I-Joist for a 20'-6" clear span supporting specified loads of 40 psf Live Load and 20 psf Dead Load, spaced 16" oc, at an L/480 deflection limit.

1. Factored Total Load = $(1.50 \times 40 + 1.25 \times 20) \times (16 / 12) = 114$ plf
 Unfactored Total Load = $(40 + 20) \times (16 / 12) = 80$ plf
 Unfactored Live Load = $40 \times (16 / 12) = 54$ plf
2. Select the row corresponding to an 21' span.
3. Select the first joist to exceed all three resistance criteria:

The 14" LPI 32Plus supports 145 plf Factored Total Load, 116 plf Total L/240 Deflection and 58 plf Live L/480 Deflection resistance.

Span	14" LPI 20Plus			14" LPI 32Plus			14" LPI 36			14" LPI 42Plus			14" LPI 52Plus			14" LPI 56			Span
	Deflection		Factored Total Load	Deflection		Factored Total Load	Deflection		Factored Total Load	Deflection		Factored Total Load	Deflection		Factored Total Load	Deflection		Factored Total Load	
	Live L/480	Total L/240		Live L/480	Total L/240		Live L/480	Total L/240		Live L/480	Total L/240		Live L/480	Total L/240		Live L/480	Total L/240		
14'	154		218	174		218	195		221	244		279	273		305			261	14'
15'	129		203	145		203	163		207	204		260	228		285	240		244	15'
16'	108		191	122		191	138		194	173		244	193		267	203		229	16'
17'	91		180	104		180	117		183	147		230	164		251	174		215	17'
18'	78	157	170	89		170	100		173	126		217	140		238	150		204	18'
19'	67	135	158	77	154	161	86		164	109		206	121		225	129		193	19'
20'	58	117	143	66	133	153	75	150	155	95	190	196	105	211	214	113		184	20'
21'	51	102	130	58	116	146	65	131	148	83	167	186	92	184	204	99		175	21'
22'	44	89	118	51	102	139	57	115	141	73	146	178	81	162	195	87		167	22'
23'	39	79	108	45	90	128	51	102	135	64	129	170	71	143	186	77	154	160	23'
24'	35	70	99	40	80	118	45	90	130	57	115	163	63	126	179	68	137	153	24'
25'	31	62	92	35	71	109	40	80	125	51	102	157	56	113	172	61	122	147	25'
26'	27	55	85	31	63	101	36	72	120	46	92	151	50	101	165	54	109	142	26'
27'	24	49	79	28	57	93	32	64	115	41	82	145	45	90	159	49	98	136	27'
28'	22	45	73	25	51	87	29	58	111	37	74	140	40	81	153	44	89	131	28'
29'	20	40	68	23	46	81	26	52	107	33	67	130	37	74	148	40	80	127	29'
30'	18	36	64	21	42	76	23	47	104	30	61	122	33	67	143	36	73	123	30'
31'	16	33	60	19	38	71	21	43	101	27	55	114	30	61	138	33	66	119	31'
32'	15	30	56	17	35	66	19	39	97	25	50	107	27	55	130	30	60	115	32'
33'	-	-	-	16	32	62	18	36	93	23	46	101	25	51	123	27	55	112	33'
34'	-	-	-	-	-	-	16	33	88	21	42	95	23	46	115	25	51	108	34'

Span	16" LPI 20Plus			16" LPI 32Plus			16" LPI 36			16" LPI 42Plus			16" LPI 52Plus			16" LPI 56			Span
	Deflection		Factored Total Load	Deflection		Factored Total Load	Deflection		Factored Total Load	Deflection		Factored Total Load	Deflection		Factored Total Load	Deflection		Factored Total Load	
	Live L/480	Total L/240		Live L/480	Total L/240		Live L/480	Total L/240		Live L/480	Total L/240		Live L/480	Total L/240		Live L/480	Total L/240		
14'	205		220			220			221			288			306			261	14'
15'	171		205	191		205			207	268		269			286			244	15'
16'	145		193	161		193	180		194	227		252	253		268			229	16'
17'	123		181	137		181	153		183	195		238	216		253			216	17'
18'	105		171	118		171	132		173	167		224	185		239	195		204	18'
19'	91		163	102		163	114		164	145		213	160		226	169		193	19'
20'	79		154	88		154	99		155	126		202	139		215	148		184	20'
21'	69	138	147	77		147	86		148	111		193	122		205	130		175	21'
22'	60	121	136	68	136	141	76		141	98		184	107		196	114		167	22'
23'	53	107	124	60	120	135	67		135	86	173	176	95		187	101		160	23'
24'	47	95	114	53	107	129	60	120	130	77	154	169	84	169	179	90		153	24'
25'	42	84	105	47	95	124	53	107	125	68	137	162	75	151	172	80		147	25'
26'	37	75	97	42	85	117	47	95	120	61	123	156	67	135	166	72		142	26'
27'	33	67	90	38	76	108	43	86	115	55	111	150	60	121	160	65	130	137	27'
28'	30	61	84	34	69	101	38	77	111	50	100	145	54	109	154	59	118	132	28'
29'	27	55	78	31	62	94	35	70	107	45	90	140	49	99	149	53	107	127	29'
30'	25	50	73	28	56	88	31	63	104	41	82	135	45	90	144	48	97	123	30'
31'	22	45	68	25	51	82	29	58	101	37	75	131	40	81	139	44	88	119	31'
32'	20	41	64	23	47	77	26	52	97	34	68	124	37	74	135	40	80	115	32'
33'	19	38	60	21	43	73	24	48	94	31	62	117	34	68	131	37	74	112	33'
34'	17	34	57	19	39	68	22	44	92	28	57	110	31	62	127	34	68	109	34'

DESIGN ASSUMPTIONS:

1. Span is the clear distance between supports and is 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 values in the tables are for uniform loads only.
3. Factored Total Load resistance is for standard (100%) load duration.
4. These tables do not reflect any additional stiffness provided by the floor sheathing.
5. Live L/480 Deflection resistance is limited to L/480. Vibration has not been considered.
6. Total L/240 Deflection resistance is limited to L/240. Long term deflection (creep) has not been considered.
7. These tables assume full lateral support of the compression flange. Full support is considered to be a maximum unbraced length of 24'.
8. These tables 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.

ADDITIONAL NOTES:

1. These tables have been designed to meet the Limit States Design requirements of the National Building Code of Canada.
2. The tabulated resistances represent the capacity of the member in pounds per lineal foot (plf) of length.
3. The designer shall check the Factored Total Load, the Total L/240 Deflection and the Live L/480 Deflection resistance columns.
4. To design for an L/360 live load deflection, multiply the Live L/480 Deflection values by 1.33 or refer to the Uniform Roof Load (PLF) Tables on pages 12-13.
5. Where the Deflection resistance is blank, the Factored Total Load resistance governs the design.
6. To design a double I-Joist, the values in these tables can be doubled, or the design loads on the I-Joist may be halved to verify the capacity of each ply. The capacity is additive.
7. Web stiffeners are not required for these spans and loads.
8. 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.
9. Do not use a product where designated "*" without further analysis by a design professional.

PSF TO PLF CONVERSION

OC Spacing	Load										
	20 psf	25 psf	30 psf	35 psf	40 psf	45 psf	50 psf	55 psf	60 psf	65 psf	
12"	20	25	30	35	40	45	50	55	60	65	
16"	27	34	40	47	54	60	67	74	80	87	
19.2"	32	40	48	56	64	72	80	88	96	104	
24"	40	50	60	70	80	90	100	110	120	130	

TO CONVERT FROM SPECIFIED TO FACTORED TOTAL PLF:

Factored Total plf = 1.50 x Specified Live plf + 1.25 x Specified Dead plf

Uniform Roof Load (PLF) Tables: 9-1/2" and 11-7/8"

TO USE:

- Select the span required. For roofs with a slope of 2:12 or greater, the horizontal span shall be multiplied by the appropriate roof slope adjustment factor from the table at the bottom of this page.
- Compare the factored design total load to the Factored Total Load column.
- Compare the specified design total load to the Total L/180 column.
- Compare the specified design live load to the Live L/360 column. For a live load deflection limit of L/480 or L/240, refer to Additional Note 5 below.
- Select a product that satisfies all three conditions.

EXAMPLE:

Select an I-Joist for a 12'-8" horizontal clear span supporting 45 psf Snow (Live) Load and 15 psf Dead Load, spaced 24" oc, with a roof slope of 6:12, at an L/360 deflection limit.

- Factored Total Load = $(1.50 \times 45 + 1.25 \times 15) \times (24 / 12) = 173$ plf
 Unfactored Total Load = $(45 + 15) \times (24 / 12) = 120$ plf
 Unfactored Live Load = $45 \times (24 / 12) = 90$ plf
- Sloped Span = $(12 + 8/12) \times 1.118 = 14.16'$
- Select the row corresponding to a 15' span.
- Select the first joist to exceed all three resistance criteria:
The 9-1/2" LPI 42Plus supports 222 plf Factored Total Load and 118 plf Live L/360 Deflection. Total L/180 Deflection does not control.

Span	9-1/2" LPI 18			9-1/2" LPI 20Plus			9-1/2" LPI 32Plus			9-1/2" LPI 42Plus			Span
	Deflection		Factored Total Load	Deflection		Factored Total Load	Deflection		Factored Total Load	Deflection		Factored Total Load	
	Live L/360	Total L/180		Live L/360	Total L/180		Live L/360	Total L/180		Live L/360	Total L/180		
8'			303			337			337			424	8'
9'	228		270	282		301			301			377	9'
10'	172		244	215		271	248		271			339	10'
11'	133		222	167		247	194		247	269		308	11'
12'	105		201	132		227	154		227	215		282	12'
13'	84	168	172	106		209	124		209	175		260	13'
14'	68	137	149	87	174	185	102		195	143		242	14'
15'	56	112	130	71	143	161	84	168	182	119		225	15'
16'	46	93	114	60	120	142	70	141	169	100	200	211	16'
17'	39	78	101	50	101	126	59	119	150	84	169	199	17'
18'	33	67	90	43	86	112	50	101	134	72	144	188	18'
19'	28	57	81	36	73	101	43	87	120	62	124	178	19'
20'	24	49	73	31	63	91	37	75	109	53	107	169	20'
21'	21	42	66	27	55	83	32	65	99	46	93	159	21'
22'	18	37	60	24	48	75	28	57	90	41	82	145	22'
23'	16	32	55	21	42	69	25	50	82	36	72	132	23'
24'	-	-	-	18	37	63	22	44	76	31	63	122	24'
25'	-	-	-	16	33	58	19	39	70	28	56	112	25'
26'	-	-	-	-	-	-	17	35	64	25	50	104	26'
27'	-	-	-	-	-	-	15	31	60	22	45	96	27'
28'	-	-	-	-	-	-	-	-	-	20	40	89	28'

Span	11-7/8" LPI 18			11-7/8" LPI 20Plus			11-7/8" LPI 32Plus			11-7/8" LPI 36			11-7/8" LPI 42Plus			11-7/8" LPI 52Plus			11-7/8" LPI 56			Span
	Deflection		Factored Total Load	Deflection		Factored Total Load	Deflection		Factored Total Load	Deflection		Factored Total Load	Deflection		Factored Total Load	Deflection		Factored Total Load	Deflection		Factored Total Load	
	Live L/360	Total L/180		Live L/360	Total L/180		Live L/360	Total L/180		Live L/360	Total L/180		Live L/360	Total L/180		Live L/360	Total L/180		Live L/360	Total L/180		
8'			322			358			358			384			465			526			449	8'
9'			287			319			319			342			414			469			401	9'
10'			259			288			288			308			374			423			362	10'
11'	221		235			262			262			281			340			385			330	11'
12'	175		216	216		241			241			258			312			353			303	12'
13'	141		200	175		222	201		222	227		238	281		289	315		327			280	13'
14'	115		176	143		207	165		207	187		221	232		268	260		304			260	14'
15'	95		153	119		193	137		193	155		207	194		251	216		284	231		243	15'
16'	79		135	99		181	115		181	131		194	163		235	182		266	195		228	16'
17'	67		120	84		168	97		171	111		183	138		222	154		251	166		215	17'
18'	57		107	72	144	150	83		161	94		173	118		209	132		237	142		203	18'
19'	49		96	61	123	135	71	143	153	81	163	164	102		198	113		224	123		193	19'
20'	42	84	87	53	107	122	62	124	141	70	141	155	89	178	189	98	197	213	107		183	20'
21'	36	73	79	46	93	111	54	108	128	61	123	148	77	155	180	86	172	203	93		175	21'
22'	32	64	72	40	81	101	47	95	116	54	108	141	68	136	172	75	151	194	82	164	167	22'
23'	28	56	66	35	71	92	41	83	107	47	95	135	60	120	164	66	133	186	72	145	160	23'
24'	25	50	60	31	63	85	37	74	98	42	84	130	53	106	157	59	118	178	64	128	153	24'
25'	22	44	56	28	56	78	33	66	90	37	75	125	47	95	145	52	105	171	57	114	147	25'
26'	19	39	51	25	50	72	29	59	83	33	67	120	42	85	134	46	93	164	51	102	141	26'
27'	17	35	48	22	45	67	26	52	77	30	60	115	38	76	125	42	84	152	46	92	136	27'
28'	16	32	44	20	40	62	23	47	72	27	54	107	34	68	116	37	75	141	41	83	131	28'

DESIGN ASSUMPTIONS:

- Span is the clear distance between supports and is 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.
- The values in the tables are for uniform loads only.
- Factored Total Load resistance is for standard (100%) load duration.
- These tables do not reflect any additional stiffness provided by the floor sheathing.
- Live L/360 Deflection resistance is limited to L/360. Vibration has not been considered.
- Total L/180 Deflection resistance is limited to L/180. Long term deflection (creep) has not been considered.
- These tables assume full lateral support of the compression flange. Full support is considered to be a maximum unbraced length of 24'.
- These tables 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.

ADDITIONAL NOTES:

- These tables have been designed to meet the Limit States Design requirements of the National Building Code of Canada.
- The tabulated resistances represent the capacity of the member in pounds per lineal foot (plf) of length.
- For roofs with a slope of 2:12 or greater, the horizontal span shall be multiplied by the appropriate slope adjustment factor from the table at the bottom of this page. Roof joists shall have a minimum slope of 1/4" per foot (1/4:12) for positive drainage.
- The designer shall check the Factored Total Load, the Total L/180 Deflection and the Live L/360 Deflection resistance columns.
- To design for an L/240 live load deflection, multiply the Live L/360 Deflection values by 1.5. To design for a L/480 live load deflection, multiply the Live L/360 Deflection values by 0.75 or refer to the Uniform Floor Load (PLF) Tables on pages 10-11.
- Where the Deflection resistance is blank, the Factored Total Load resistance governs the design.
- To design a double I-Joist, the values in these tables can be doubled, or the design loads on the I-Joist may be halved to verify the capacity of each ply. The capacity is additive.
- Web stiffeners are not required for these spans and loads.
- 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.
- Do not use a product where designated "-" without further analysis by a design professional.

ROOF PITCH ADJUSTMENT FACTORS

Roof Pitch	2:12	3:12	4:12	5:12	6:12	7:12	8:12	9:12	10:12	11:12	12:12
Factor	1.014	1.031	1.054	1.083	1.118	1.158	1.202	1.250	1.302	1.357	1.414

Uniform Roof Load (PLF) Tables: 14" and 16"

TO USE:

- Select the span required. For roofs with a slope of 2:12 or greater, the horizontal span shall be multiplied by the appropriate roof slope adjustment factor from the table at the bottom of this page.
- Compare the factored design total load to the Factored Total Load column.
- Compare the specified design total load to the Total L/180 column.
- Compare the specified design live load to the Live L/360 column. For a live load deflection limit of L/480 or L/240, refer to Additional Note 5 below.
- Select a product that satisfies all three conditions.

EXAMPLE:

- Select an I-Joist for a 17'-8" horizontal clear span supporting 45 psf Snow (Live) Load and 15 psf Dead Load, spaced 24" oc, with a roof slope of 6:12, at an L/360 deflection limit.
- Factored Total Load = $(1.50 \times 45 + 1.25 \times 15) \times (24 / 12) = 173$ plf
 Unfactored Total Load = $(45 + 15) \times (24 / 12) = 120$ plf
 Unfactored Live Load = $45 \times (24 / 12) = 90$ plf
 - Sloped Span = $(17 + 8/12) \times 1.118 = 19.75'$
 - Select the row corresponding to a 20' span.
 - Select the first joist to exceed all three resistance criteria:
The 14" LPI 42Plus supports 195 plf Factored Total Load and 126 plf Live L/360 Deflection. Total L/180 Deflection does not control.

Span	14" LPI 20Plus			14" LPI 32Plus			14" LPI 36			14" LPI 42Plus			14" LPI 52Plus			14" LPI 56			Span
	Deflection		Factored Total Load	Deflection		Factored Total Load	Deflection		Factored Total Load	Deflection		Factored Total Load	Deflection		Factored Total Load	Deflection		Factored Total Load	
	Live L/360	Total L/180		Live L/360	Total L/180		Live L/360	Total L/180		Live L/360	Total L/180		Live L/360	Total L/180		Live L/360	Total L/180		
14'	206		218			218			221			279			305			261	14'
15'	172		203	194		203			207			260			285			244	15'
16'	144		191	163		191	184		194	231		244	257		267			229	16'
17'	122		180	139		180	156		183	197		230	218		251			215	17'
18'	104		170	119		170	134		173	169		217	187		238	200		204	18'
19'	90		158	102		161	115		164	146		206	162		225	173		193	19'
20'	78		143	89		153	100		155	127		196	140		214	150		184	20'
21'	68		130	77		146	87		148	111		186	123		204	132		175	21'
22'	59		118	68	136	139	77		141	97		178	108		195	116		167	22'
23'	52	105	108	60	120	128	68		135	86		170	95		186	103		160	23'
24'	46	93	99	53	107	118	60	120	130	76	153	163	84	169	179	91		153	24'
25'	41	83	92	47	95	109	53	107	125	68	137	157	75	150	172	81		147	25'
26'	37	74	85	42	85	101	48	96	120	61	122	151	67	134	165	73		142	26'
27'	33	66	79	38	76	93	43	86	115	55	110	145	60	121	159	65	131	136	27'
28'	30	60	73	34	68	87	38	77	111	49	99	140	54	109	153	59	118	131	28'
29'	27	54	68	31	62	81	35	70	107	44	89	130	49	98	148	53	107	127	29'
30'	24	49	64	28	56	76	31	63	104	40	81	122	44	89	143	48	97	123	30'
31'	22	44	60	25	51	71	29	58	101	37	74	114	40	81	138	44	88	119	31'
32'	20	40	56	23	46	66	26	53	97	33	67	107	37	74	130	40	81	115	32'
33'	18	37	53	21	42	62	24	48	93	31	62	101	34	68	123	37	74	112	33'
34'	17	34	50	19	39	59	22	44	88	28	56	95	31	62	115	34	68	108	34'

Span	16" LPI 20Plus			16" LPI 32Plus			16" LPI 36			16" LPI 42Plus			16" LPI 52Plus			16" LPI 56			Span
	Deflection		Factored Total Load	Deflection		Factored Total Load	Deflection		Factored Total Load	Deflection		Factored Total Load	Deflection		Factored Total Load	Deflection		Factored Total Load	
	Live L/360	Total L/180		Live L/360	Total L/180		Live L/360	Total L/180		Live L/360	Total L/180		Live L/360	Total L/180		Live L/360	Total L/180		
14'			220			220			221			288			306			261	14'
15'			205			205			207			269			286			244	15'
16'			193			193			194			252			268			229	16'
17'	164		181			181			183			238			253			216	17'
18'	140		171	157		171			173	223		224			239			204	18'
19'	121		163	136		163	152		164	194		213	214		226			193	19'
20'	105		154	118		154	132		155	169		202	186		215			184	20'
21'	92		147	103		147	115		148	148		193	163		205	173		175	21'
22'	80		136	91		141	101		141	130		184	143		196	153		167	22'
23'	71		124	80		135	90		135	115		176	127		187	135		160	23'
24'	63		114	71		129	80		130	102		169	112		179	120		153	24'
25'	56		105	63		124	71		125	91		162	100		172	107		147	25'
26'	50		97	56	113	117	63		120	82		156	90		166	96		142	26'
27'	45		90	51	102	108	57	114	115	74	148	150	81		160	87		137	27'
28'	40	81	84	46	92	101	51	103	111	66	133	145	73	146	154	78		132	28'
29'	36	73	78	41	83	94	46	93	107	60	120	140	66	132	149	71		127	29'
30'	33	66	73	37	75	88	42	85	104	54	109	135	60	120	144	64		123	30'
31'	30	60	68	34	68	82	38	77	101	50	100	131	54	109	139	59	118	119	31'
32'	27	55	64	31	62	77	35	70	97	45	91	124	49	99	135	53	107	115	32'
33'	25	50	60	28	57	73	32	64	94	41	83	117	45	91	131	49	98	112	33'
34'	23	46	57	26	52	68	29	59	92	38	76	110	41	83	127	45	90	109	34'

DESIGN ASSUMPTIONS:

- Span is the clear distance between supports and is 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.
- The values in the tables are for uniform loads only.
- Factored Total Load resistance is for standard (100%) load duration.
- These tables do not reflect any additional stiffness provided by the floor sheathing.
- Live L/360 Deflection resistance is limited to L/360. Vibration has not been considered.
- Total L/180 Deflection resistance is limited to L/180. Long term deflection (creep) has not been considered.
- These tables assume full lateral support of the compression flange. Full support is considered to be a maximum unbraced length of 24'.
- These tables 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.

ADDITIONAL NOTES:

- These tables have been designed to meet the Limit States Design requirements of the National Building Code of Canada.
- The tabulated resistances represent the capacity of the member in pounds per lineal foot (plf) of length.
- For roofs with a slope of 2:12 or greater, the horizontal span shall be multiplied by the appropriate slope adjustment factor from the table at the bottom of this page. Roof joists shall have a minimum slope of 1/4" per foot (1/4:12) for positive drainage.
- The designer shall check the Factored Total Load, the Total L/180 Deflection and the Live L/360 Deflection resistance columns.
- To design for an L/240 live load deflection, multiply the Live L/360 Deflection values by 1.5. To design for a L/480 live load deflection, multiply the Live L/360 Deflection values by 0.75 or refer to the Uniform Floor Load (PLF) Tables on pages 10-11.
- Where the Deflection resistance is blank, the Factored Total Load resistance governs the design.
- To design a double I-Joist, the values in these tables can be doubled, or the design loads on the I-Joist may be halved to verify the capacity of each ply. The capacity is additive.
- Web stiffeners are not required for these spans and loads.
- 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.
- Do not use a product where designated "-" without further analysis by a design professional.

ROOF PITCH ADJUSTMENT FACTORS

Roof Pitch	2:12	3:12	4:12	5:12	6:12	7:12	8:12	9:12	10:12	11:12	12:12
Factor	1.014	1.031	1.054	1.083	1.118	1.158	1.202	1.250	1.302	1.357	1.414

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

TO USE:

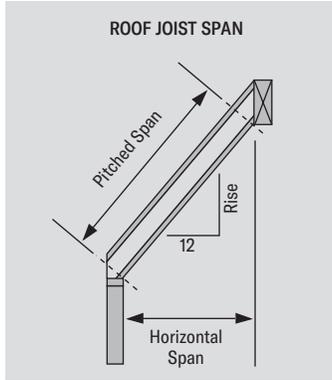
1. Select the appropriate set of tables based on roof pitch.
2. Select the section of that table that corresponds to the specified roof live or snow load.
3. Find a span that meets or exceeds the design span for the appropriate specified roof dead load (15 psf or 20 psf).
4. Read the corresponding series, 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/360.
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.
7. These tables assume full lateral support of the compression flange. Full support is considered to be a maximum unbraced length of 24'.

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.
2. 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.
3. L/360 represents the maximum deflection allowed per code for roof joists supporting plaster or gypsum ceilings. Verify deflection limits with local code requirements.
4. Roof joists must have a minimum pitch of 1/4" per foot (1/4:12) for positive drainage.
5. 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.
6. 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".

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

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

TO USE:

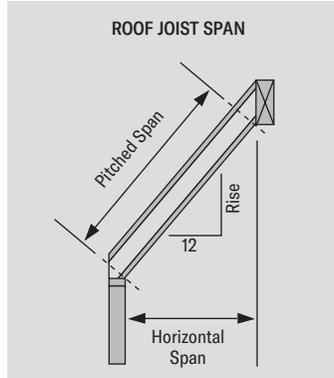
1. Select the appropriate set of tables based on roof pitch.
2. Select the section of that table that corresponds to the specified roof live or snow load.
3. Find a span that meets or exceeds the design span for the appropriate specified roof dead load (15 psf or 20 psf).
4. Read the corresponding series, 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/360.
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.
7. These tables assume full lateral support of the compression flange. Full support is considered to be a maximum unbraced length of 24".

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.
2. 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.
3. L/360 represents the maximum deflection allowed per code for roof joists supporting plaster or gypsum ceilings. Verify deflection limits with local code requirements.
4. Roof joists must have a minimum pitch of 1/4" per foot (1/4:12) for positive drainage.
5. 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.
6. 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".

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

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

TO USE:

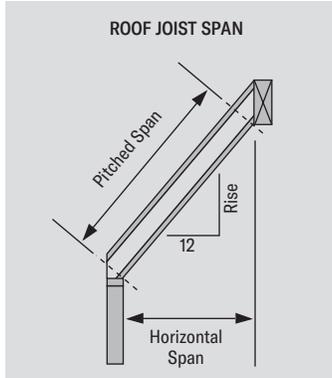
1. Select the appropriate set of tables based on roof pitch.
2. Select the section of that table that corresponds to the specified roof live or snow load.
3. Find a span that meets or exceeds the design span for the appropriate specified roof dead load (15 psf or 20 psf).
4. Read the corresponding series, 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/360.
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.
7. These tables assume full lateral support of the compression flange. Full support is considered to be a maximum unbraced length of 24".

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.
2. 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.
3. L/360 represents the maximum deflection allowed per code for roof joists supporting plaster or gypsum ceilings. Verify deflection limits with local code requirements.
4. Roof joists must have a minimum pitch of 1/4" per foot (1/4:12) for positive drainage.
5. 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.
6. 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".

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

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

TO USE:

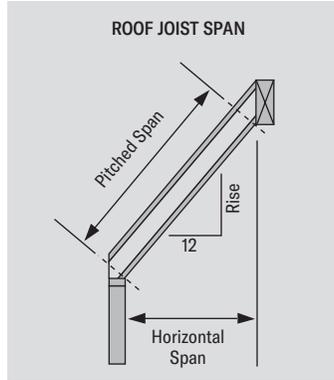
1. Select the appropriate set of tables based on roof pitch.
2. Select the section of that table that corresponds to the specified roof live or snow load.
3. Find a span that meets or exceeds the design span for the appropriate specified roof dead load (15 psf or 20 psf).
4. Read the corresponding series, 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/360.
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.
7. These tables assume full lateral support of the compression flange. Full support is considered to be a maximum unbraced length of 24'.

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.
2. 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.
3. L/360 represents the maximum deflection allowed per code for roof joists supporting plaster or gypsum ceilings. Verify deflection limits with local code requirements.
4. Roof joists must have a minimum pitch of 1/4" per foot (1/4:12) for positive drainage.
5. 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.
6. 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".

SPECIFIED ROOF LIVE OR SNOW LOAD (STANDARD DURATION)	Series	Depth	16" oc		19.2" oc		24" oc			
			Specified Dead Load →		15 psf	20 psf	15 psf	20 psf	15 psf	20 psf
			15 psf	20 psf	15 psf	20 psf	15 psf	20 psf		
40 psf Snow	LPI 18	9-1/2"	13'-8"	13'-8"	12'-10"	12'-10"	11'-11"	11'-11"		
		11-7/8"	16'-6"	16'-6"	15'-6"	15'-0"	14'-1"	13'-5"		
	LPI 20Plus	9-1/2"	14'-11"	14'-11"	14'-0"	14'-0"	13'-0"	13'-0"		
		11-7/8"	17'-11"	17'-11"	16'-10"	16'-10"	15'-7"	15'-7"		
	LPI 32Plus	14"	20'-7"	20'-7"	19'-3"	19'-3"	17'-9"	16'-1"		
		16"	22'-10"	22'-9"	21'-6"	20'-3"	17'-10"	16'-2"		
	LPI 36	9-1/2"	15'-10"	15'-10"	14'-11"	14'-11"	13'-9"	13'-9"		
		11-7/8"	19'-0"	19'-0"	17'-10"	17'-10"	16'-5"	16'-0"		
	LPI 42Plus	14"	21'-7"	21'-7"	20'-3"	20'-2"	17'-9"	16'-1"		
		16"	23'-11"	23'-11"	22'-5"	20'-3"	17'-10"	16'-2"		
	LPI 52Plus	11-7/8"	19'-10"	19'-10"	18'-8"	18'-8"	17'-3"	17'-1"		
		14"	22'-6"	22'-6"	21'-1"	21'-1"	18'-11"	17'-2"		
LPI 56	9-1/2"	18'-0"	18'-0"	16'-11"	16'-11"	15'-7"	15'-7"			
	11-7/8"	21'-7"	21'-7"	20'-3"	20'-3"	18'-8"	18'-8"			
LPI 60Plus	14"	24'-6"	24'-6"	23'-0"	23'-0"	21'-3"	21'-3"			
	16"	27'-2"	27'-2"	25'-6"	25'-6"	23'-7"	22'-5"			
LPI 60Plus	11-7/8"	22'-3"	22'-3"	20'-11"	20'-11"	19'-4"	19'-4"			
	14"	25'-4"	25'-4"	23'-9"	23'-9"	22'-0"	22'-0"			
LPI 60Plus	16"	28'-0"	28'-0"	26'-4"	26'-4"	24'-4"	23'-10"			
	11-7/8"	23'-0"	23'-0"	21'-7"	21'-7"	20'-0"	19'-3"			
LPI 60Plus	14"	26'-1"	26'-1"	24'-6"	24'-2"	21'-3"	19'-3"			
	16"	28'-10"	28'-10"	26'-8"	24'-2"	21'-3"	19'-3"			
60 psf Snow	LPI 18	9-1/2"	12'-8"	12'-8"	11'-11"	11'-11"	11'-0"	11'-0"		
		11-7/8"	15'-4"	15'-4"	14'-4"	13'-11"	13'-0"	12'-4"		
	LPI 20Plus	9-1/2"	13'-10"	13'-10"	13'-0"	13'-0"	12'-0"	12'-0"		
		11-7/8"	16'-7"	16'-7"	15'-7"	15'-7"	14'-5"	13'-10"		
	LPI 32Plus	14"	19'-0"	19'-0"	17'-10"	17'-5"	15'-1"	13'-10"		
		16"	21'-2"	21'-0"	19'-0"	17'-6"	15'-2"	13'-11"		
	LPI 36	9-1/2"	14'-8"	14'-8"	13'-9"	13'-9"	12'-9"	12'-9"		
		11-7/8"	17'-7"	17'-7"	16'-5"	16'-5"	15'-0"	13'-10"		
	LPI 42Plus	14"	19'-11"	19'-11"	18'-9"	17'-5"	15'-1"	13'-10"		
		16"	22'-1"	21'-0"	19'-0"	17'-6"	15'-2"	13'-11"		
	LPI 52Plus	11-7/8"	18'-4"	18'-4"	17'-3"	17'-3"	15'-11"	14'-9"		
		14"	20'-10"	20'-10"	19'-6"	18'-7"	16'-1"	14'-9"		
LPI 56	9-1/2"	16'-8"	16'-8"	15'-7"	15'-7"	14'-5"	14'-5"			
	11-7/8"	19'-11"	19'-11"	18'-8"	18'-8"	17'-3"	17'-3"			
LPI 60Plus	14"	22'-8"	22'-8"	21'-3"	21'-3"	19'-8"	18'-8"			
	16"	25'-2"	25'-2"	23'-7"	23'-7"	21'-0"	19'-4"			
LPI 60Plus	11-7/8"	20'-8"	20'-8"	19'-4"	19'-4"	17'-11"	17'-11"			
	14"	23'-5"	23'-5"	22'-0"	22'-0"	20'-4"	20'-1"			
LPI 60Plus	16"	25'-11"	25'-11"	24'-4"	24'-4"	22'-4"	20'-6"			
	11-7/8"	21'-4"	21'-4"	20'-0"	20'-0"	18'-0"	16'-7"			
LPI 60Plus	14"	24'-2"	24'-2"	22'-8"	20'-10"	18'-1"	16'-7"			
	16"	26'-8"	25'-1"	22'-8"	20'-10"	18'-1"	16'-7"			
60 psf Snow	LPI 18	9-1/2"	11'-11"	11'-11"	11'-2"	11'-2"	10'-4"	10'-4"		
		11-7/8"	14'-4"	14'-4"	13'-6"	13'-1"	11'-8"	10'-10"		
	LPI 20Plus	9-1/2"	13'-0"	13'-0"	12'-2"	12'-2"	11'-3"	11'-3"		
		11-7/8"	15'-7"	15'-7"	14'-7"	14'-7"	13'-1"	12'-1"		
	LPI 32Plus	14"	17'-10"	17'-10"	16'-6"	15'-3"	13'-1"	12'-2"		
		16"	19'-10"	18'-6"	16'-6"	15'-4"	13'-2"	12'-3"		
	LPI 36	9-1/2"	13'-9"	13'-9"	12'-11"	12'-11"	11'-11"	11'-11"		
		11-7/8"	16'-5"	16'-5"	15'-5"	15'-3"	13'-1"	12'-1"		
	LPI 42Plus	14"	18'-9"	18'-5"	16'-6"	15'-3"	13'-1"	12'-2"		
		16"	19'-11"	18'-6"	16'-6"	15'-4"	13'-2"	12'-3"		
	LPI 52Plus	11-7/8"	17'-3"	17'-3"	16'-2"	16'-2"	13'-11"	12'-11"		
		14"	19'-6"	19'-6"	17'-7"	16'-3"	14'-0"	13'-0"		
LPI 56	9-1/2"	15'-7"	15'-7"	14'-8"	14'-8"	13'-6"	13'-6"			
	11-7/8"	18'-8"	18'-8"	17'-6"	17'-6"	16'-2"	15'-9"			
LPI 60Plus	14"	21'-3"	21'-3"	20'-0"	20'-0"	17'-8"	16'-5"			
	16"	23'-7"	23'-7"	22'-2"	21'-4"	18'-3"	17'-0"			
LPI 60Plus	11-7/8"	19'-4"	19'-4"	18'-2"	18'-2"	16'-10"	16'-10"			
	14"	22'-0"	22'-0"	20'-8"	20'-8"	19'-1"	17'-8"			
LPI 60Plus	16"	24'-4"	24'-4"	22'-10"	22'-8"	19'-5"	18'-0"			
	11-7/8"	20'-0"	20'-0"	18'-9"	18'-9"	15'-8"	14'-6"			
LPI 60Plus	14"	22'-8"	22'-0"	19'-8"	18'-3"	15'-8"	14'-7"			
	16"	23'-9"	22'-1"	19'-9"	18'-4"	15'-9"	14'-7"			

Cantilevers

C1 NO REINFORCEMENT REQUIRED

Min. APA Rated 23/32" OSB (or equal) closure, or as required by code

LPI Blocking*

As Designed

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

C1W WEB STIFFENER REQUIRED

Min. APA Rated 23/32" OSB (or equal) closure, or as required by code

Web Stiffener

LPI Blocking*

As Designed

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

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

Min. APA Rated 23/32" OSB (or equal) closure, or as required by code

Min. APA Rated 23/32" OSB (or equal) reinforcement one side, 4'-0" long minimum

LPI Blocking*

2'-0" max. 2'-0" min.

* LP® SolidStart® Rim Board or LVL 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

Min. APA Rated 23/32" OSB (or equal) closure, or as required by code

Min. APA Rated 23/32" OSB (or equal) reinforcement both sides, 4'-0" long minimum

LPI Blocking*

2'-0" max. 2'-0" min.

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

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

C7 BRICK LEDGE CANTILEVER WEB FILLER REINFORCING

Web fillers both sides (refer to table below for size)

12" min.

Leave 1/8" gap

6" max.

Nail web filler with two rows of (3) 10d or 12d box or equivalent gun nails, clinched

Use construction adhesive between surfaces

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

C8 BRICK LEDGE CANTILEVER FULL-DEPTH REINFORCING

One Side

23/32" reinforcing - 12" min.

1" reinforcing - 18" min.

6" max.

2" min. from I-Joist end

For 14" and 16" I-Joists, web filler (both sides) and OSB or plywood reinforcing are required (see detail 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

Reinforcing shall be same depth as I-Joist

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

* NOTE: Pilot holes required when using screws

Brick-Ledge Cantilevers

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

C7 Web filler reinforcing

C8 Full depth reinforcing

LP SolidStart Rim Board closure

LP SolidStart I-Joist or Rim Board full-depth blocking

6" max.

Alternate Flat Blocking:
Use 9-1/2" LP SolidStart Rim Board or 2 x 10 (SPF min).
Blocking shall cover wall plate and extend to end of cantilever.
Nail rim board to blocking and blocking to wall plate with 8d common nails at 6" oc or as required for floor panel edge nailing.

Series	Minimum Web Filler	Factored Reaction Resistance (lbs)
LPI 18	23/32" APA Rated OSB (or equal)	3230
LPI 20Plus LPI 32Plus LPI 36	23/32" APA Rated OSB (or equal)	3660
LPI 42Plus LPI 52Plus LPI 56	1-1/8" APA Rated OSB (or equal)	5630

Series	Factored Reaction Resistance (lbs)	
	23/32" APA Rated OSB (or equal)	1" Min. LP SolidStart Rim Board
LPI 18	4360	4780
LPI 20Plus LPI 32Plus LPI 36	4930	5350
LPI 42Plus LPI 52Plus LPI 56	6760	7320

Brick-Ledge Cantilevers

EXAMPLE 1:

I-Joist: 9-1/2" LPI20Plus Wall under Cantilever: 3-1/2" wide

Specified

Design Loads: Floor: 40/10 psf **Floor System:** Joist Span = 16' **Roof System:** Roof Span = 22'
 Roof: 20/10 psf Joist Cantilever = 5" Roof Overhang = 1'
 Wall: 80 plf Joist Spacing = 16" oc

Factored FLR = (Joist Span / 2 + Joist Cantilever / 12) * (Factored Floor Load) * (Joist Spacing / 12)
 = (16' / 2 + 5" / 12) * (1.5 * 40 psf + 1.25 * 10 psf) * (16" / 12)
 = 814 lbs.

Factored WLR = (Factored Wall Load) * (Joist Spacing / 12)
 = (1.25 * 80 plf) * (16" / 12)
 = 133 lbs.

Factored RLR = (Roof Span / 2 + Roof Overhang) * (Factored Roof Load) * (Joist Spacing / 12)
 = (22' / 2 + 1') * (1.5 * 20 psf + 1.25 * 10 psf) * (16" / 12)
 = 680 lbs.

Factored TJR = 814 + 133 + 680
 = 1627 lbs.

FACTORED END REACTION RESISTANCE			
9-1/2" LPI 20Plus on a 3-1/2" wall	Min. 1-1/2" Bearing	Max. 4" Bearing	3-1/2" Bearing
w/o Web Stiffeners	1530	1750	1706
w/Web Stiffeners	1800	1990	1952
w/Web Filler Reinforcing	—	—	3660
w/ 23/32" APA Rated OSB Full-Depth Reinforcing (One Side)	—	—	4930
w/ 1" LP Rim Full-Depth Reinforcing (One Side)	—	—	5350

Since the Factored Total Joist Reaction, 1627 lbs., is less than the Factored End Reaction Resistance w/out Stiffeners for 3-1/2" bearing (1706 lbs.), no reinforcement is required.

EXAMPLE 2:

I-Joist: 11-7/8" LPI32Plus Wall under Cantilever: 3-1/2" wide

Specified

Design Loads: Floor: 40/15 psf **Floor System:** Joist Span = 16' **Roof System:** Roof Span = 32'
 Roof: 30/15 psf Joist Cantilever = 5" Roof Overhang = 1'
 Wall: 100 plf Joist Spacing = 24" oc

Factored FLR = (Joist Span / 2 + Joist Cantilever / 12) * (Factored Floor Load) * (Joist Spacing / 12)
 = (16' / 2 + 5" / 12) * (1.5 * 40 psf + 1.5 * 15 psf) * (24" / 12)
 = 1326 lbs.

Factored WLR = (Factored Wall Load) * (Joist Spacing / 12)
 = (1.25 * 100 plf) * (24" / 12)
 = 250 lbs.

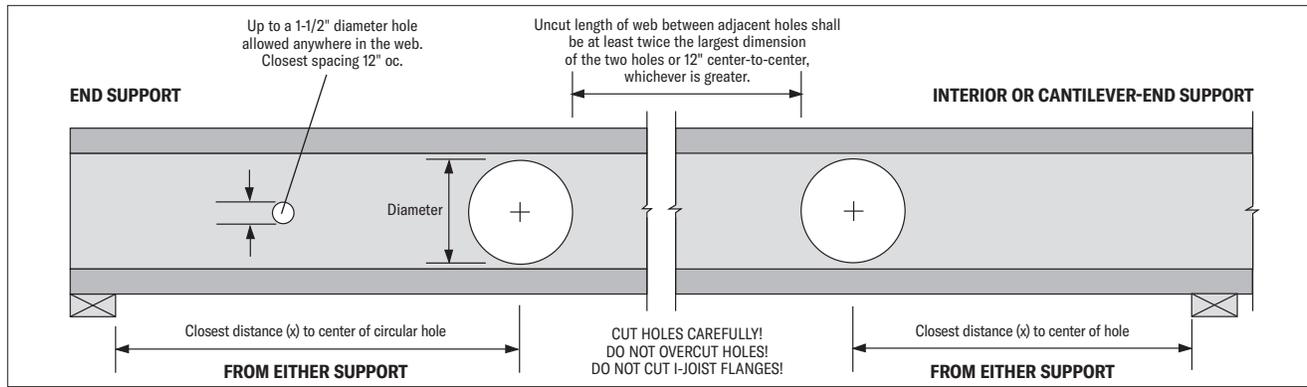
Factored RLR = (Roof Span / 2 + Roof Overhang) * (Factored Roof Load) * (Joist Spacing / 12)
 = (32' / 2 + 1') * (1.5 * 30 psf + 1.25 * 15 psf) * (24" / 12)
 = 2168 lbs.

Factored TJR = 1326 + 250 + 2168
 = 3744 lbs.

FACTORED END REACTION RESISTANCE			
11-7/8" LPI 32Plus on a 3-1/2" wall	Min. 1-1/2" Bearing	Max. 4" Bearing	3-1/2" Bearing
w/o Web Stiffeners	1530	1830	1770
w/Web Stiffeners	2010	2345	2278
w/Web Filler Reinforcing	—	—	3660
w/ 23/32" APA Rated OSB Full-Depth Reinforcing (One Side)	—	—	4930
w/ 1" LP Rim Full-Depth Reinforcing (One Side)	—	—	5350

Since the Factored Total Joist Reaction, 3744 lbs., is greater than the Factored End Reaction Resistance with Web Filler Reinforcing (3660 lbs.), but is less than the Factored End Reaction Resistance with 23/32" APA Rated OSB Full-Depth Reinforcing (4930 lbs.), this joist requires the installation of full-depth reinforcing consisting of a minimum 23/32" APA Rated OSB (or equal) attached to one side (Detail C8) 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					Distance from Interior or Cantilever-End Support						
			Hole Diameter					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"	-	-	-
	11-7/8"	18'	2'-4"	4'-7"	7'-2"	-	-	-	4'-5"	6'-3"	8'-4"	-	-	-
		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"	-	-
LPI 20Plus & LPI 32Plus	9-1/2"	18'	1'-0"	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"	-	
		10'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"	1'-0"	1'-0"	-	-	
	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"	-	-
	14"	22'	1'-8"	3'-2"	4'-10"	6'-7"	-	-	4'-4"	5'-9"	7'-1"	8'-5"	-	-
		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"	-
	16"	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"	-
		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"	-	
	14"	22'	1'-0"	1'-11"	4'-4"	7'-1"	-	-	2'-6"	4'-7"	6'-8"	8'-9"	-	
		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"	
	16"	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"	
		30'	5'-9"	7'-0"	8'-4"	9'-9"	11'-3"	12'-10"	9'-0"	10'-0"	11'-0"	12'-0"	13'-2"	
	LPI 42Plus	9-1/2"	10'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"	1'-0"	1'-0"	-	-
			14'	1'-0"	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"	-	
14"	22'	1'-8"	3'-2"	4'-10"	6'-7"	-	-	4'-4"	5'-9"	7'-1"	8'-5"	-		
	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"		
16"	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"		
	30'	5'-9"	7'-0"	8'-4"	9'-9"	11'-3"	12'-10"	9'-0"	10'-0"	11'-0"	12'-0"	13'-2"		
LPI 42Plus & LPI 52Plus	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"	-	-	
	11-7/8"	18'	1'-0"	1'-9"	3'-8"	-	-	-	2'-3"	3'-11"	5'-7"	-	-	
		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"	-	
	14"	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'	1'-0"	1'-0"	1'-0"	1'-0"	2'-2"	-	1'-0"	1'-0"	1'-5"	2'-7"	3'-9"	
	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"		

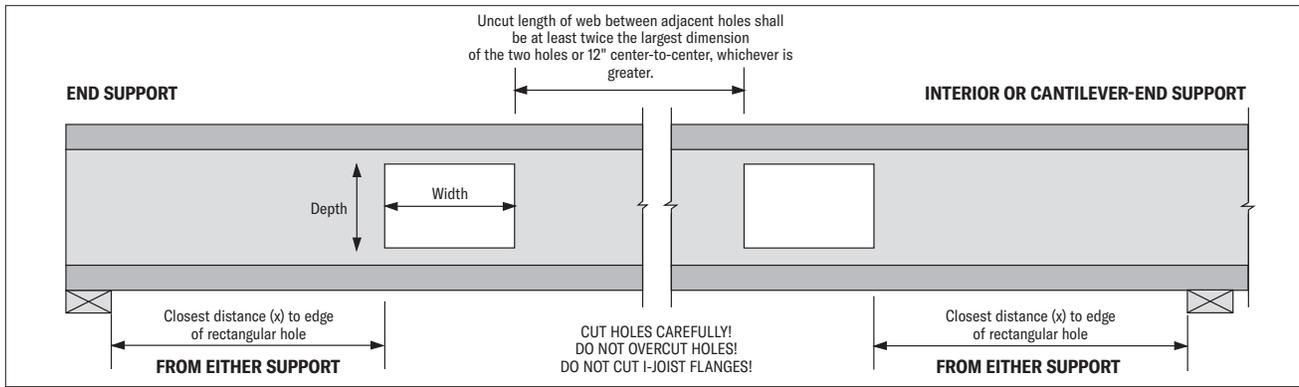
DESIGN ASSUMPTIONS:

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 joist. A minimum 1/4" clear distance is required between the hole and the flanges.
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 (width or depth). 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								Distance from Interior or Cantilever-End Support							
			Maximum Hole Dimension: Depth or Width								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'-0"	1'-2"	1'-7"	1'-0"	1'-0"	1'-3"	2'-6"	3'-9"	4'-0"	4'-5"	-	
		10'	1'-0"	1'-4"	2'-10"	3'-3"	3'-9"	4'-3"	1'-3"	2'-6"	3'-9"	5'-0"	6'-4"	-	-	-	-	
		14'	2'-2"	3'-8"	5'-5"	5'-11"	6'-6"	-	3'-9"	5'-0"	6'-4"	-	-	-	-	-	-	
	11-7/8"	18'	4'-7"	6'-3"	8'-2"	-	-	-	6'-3"	7'-6"	-	-	-	-	-	-	-	
		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"	-	-	-	-	-	-	
LPI 20Plus & LPI 32Plus	9-1/2"	18'	4'-4"	5'-9"	7'-3"	-	-	6'-1"	7'-2"	8'-5"	-	-	-	-	-	-		
		22'	6'-10"	8'-4"	10'-1"	-	-	-	8'-7"	9'-9"	-	-	-	-	-	-	-	
		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"	-	-	-	
	11-7/8"	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"	-	-	-	-	-	-	-	
14"	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'	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"	-	-	-	-	-		
16"	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"	-	-	-	-	-		
	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"	-	-	-	-	-		
	14"	22'	6'-1"	7'-9"	9'-6"	-	-	-	8'-1"	9'-3"	-	-	-	-	-	-	-	
		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"	-	-	-	-	-	
16"	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"	-	-	-	-	-		
	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 42Plus	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"	-	-	-	-		
LPI 42Plus & LPI 52Plus	11-7/8"	18'	3'-11"	5'-8"	7'-9"	8'-4"	-	5'-9"	7'-1"	-	-	-	-	-	-	-		
		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"	-	-	-	-	-		
	14"	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'	1'-0"	1'-0"	1'-0"	2'-8"	4'-11"	5'-9"	1'-0"	1'-0"	2'-6"	4'-2"	5'-10"	-	-	-	-	
16"	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"	-	-	-	-	-		
	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"	-	-	-	-	-		

DESIGN ASSUMPTIONS:

1. The hole locations listed above are valid for floor joists supporting load only uniform loads. The total uniform load shall not exceed 130 pcf (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 joist. A minimum 1/4" clear distance is required between the hole and the flanges.
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® SolidStar® Engineered Wood Products distributor for more information.

Floor Details

<p>A1 RIM BOARD</p> <p>Fasten rim board to each floor I-joist using one 8d nail or 10d box nail per flange</p> <p>Web stiffener for Detail A1W only</p> <p>Same depth as I-joist</p> <p>8d nails at 6" oc toe-nailed from outside of building</p>	<p>A1W RIM BOARD Web Stiffener Required</p> <p>Web stiffener for Detail A1W only</p> <p>Same depth as I-joist</p> <p>8d nails at 6" oc toe-nailed from outside of building</p>	<p>A2 RIM JOIST Refer to Note 8</p> <p>Fasten rim joist to each floor I-joist with one 10d nail into the end of each flange. Use 16d box nails for rim joists with flanges wider than 1-3/4".</p> <p>Rim joists with flanges wider than 1-3/4" require a minimum 2 x 6 plate</p> <p>8d nails at 6" oc (when used for shear transfer, nail to bearing plate with same nailing schedule for decking)</p>	<p>A3 BLOCKING AT EXTERIOR WALL</p> <p>8d nails at 6" oc (when used for shear transfer, nail to bearing plate with same nailing schedule for decking)</p>
--	---	---	--

<p>A4 SOLID BLOCKING AT EXTERIOR WALL</p> <p>LP LVL or LP Rim Board as blocking</p> <p>Same depth as I-joist</p> <p>8d nails at 6" oc toe-nailed from outside of building</p>	<p>A5 JOIST SUPPORT NAILING</p> <p>Secure I-joist to plate with two 8d nails or 10d box. Drive one nail from each side of I-joist, angled inward.</p> <p>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</p>	<p>B1 WEB STIFFENERS AT INTERIOR SUPPORT (When Required)</p> <p>Verify stiffener requirements (see Web Stiffener detail)</p>	
--	--	---	--

<p>B2 SQUASH BLOCKS</p> <p>Blocking panels may be required with shear wall</p> <p>Use double squash blocks as specified. Squash blocks shall be cut 1/16" taller than I-joist. 2 x 4 min.</p> <p>Stagger 8d or 10d nails to avoid splitting</p> <p>Bearing wall aligned under wall above</p> <p>Toe-nail 8d or 10d box nail to plate</p>	<p>B3 BLOCKING AT INTERIOR SUPPORT</p> <p>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</p> <p>Bearing wall aligned under wall above</p> <p>LP Rim Board or LP LVL may be substituted for the LPI blocking</p>	<p>NON-STACKING WALLS</p> <p>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.</p>	
---	---	---	--

<p>D2 POST LOADS</p> <p>Squash blocks required under all post loads</p>	<p>E1 STAIR STRINGER</p> <p>Web filler (as backer block) minimum 12" long</p> <p>Filler block(s) minimum 4' long</p> <p>Approved connection (by others)</p> <p>See I-joist Header Cross-Section for connection information of the filler and backer blocks</p> <p>See I-joist Filler Schedule for filler block and web filler sizes</p>	<p>E2 HANGER DETAIL</p> <p>Verify capacity and fastening requirements of hangers and connectors</p> <p>Verify web filler requirements for hangers</p>	
--	--	--	--

E3 I-JOIST HEADER

Verify web filler/stiffener requirements for hangers

See Double I-Joist Connection detail

Verify all hanger connections

Filler blocks

Web filler (as backer block)

Filler blocks

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

Floor sheathing to be glued and nailed to flanges of both plies

6" oc

6" oc

Filler block

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

Web filler (as backer block)

Verify web filler/stiffener requirements for hangers

Filler block(s)

Supported hanger (top-mount shown)

NOTES:

1. Backer blocks and filler blocks shall consist of APA Rated wood structural panel (OSB or plywood), 2 x lumber (SPF or better), or LP® SolidStart® LVL or OSB Rim Board, with a net thickness equivalent to that shown in the I-Joist Filler Thickness table below.
2. Except as noted in 3, backer blocks and filler blocks shall fit the clear distance between flanges with a gap of at least 1/8," but not more than 1," and shall be of sufficient depth to allow for all hanger nailing into the web. Do not force into place.
3. Backer blocks and filler blocks for double I-Joists that are top-loaded only or side-loaded supporting top-mount 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.
4. Install backer blocks tight to top flange for top-loaded joists and for joists supporting top-mount hangers (shown). Install tight to bottom flange for joists supporting face-mount hangers.
5. Clinch nails where possible.
6. For double I-Joists, additional nailing may be required to transfer point loads. For additional information, contact your LP SolidStart Engineered Wood Products distributor.

Web Filler/Backer Block: Backer blocks shall be at least 12" long and located behind every supported hanger. For a single I-Joist header, install backer blocks to both sides of the web. Two pieces of 2 x 8 (min.) lumber, cut to the proper height (see notes 2 & 3), may be set vertically side-by-side to achieve the required minimum 12" length.

Attach backer blocks with 8d nails (use 10d nails for flanges wider than 2-1/2"). Use a minimum of 10 nails spaced to avoid splitting, with half the nails to each side of the center of the supported hanger.

Note: Backer blocks may be omitted for top-mount hangers supporting only factored downward loads not exceeding 360 lbs.

Filler Blocks: Install in minimum 4' long sections at each support, centered behind each supported hanger and at no more than 8' oc. Lumber fillers may be stacked to achieve the required depth (see notes 2 & 3). For example, two 4' long 2 x 8's may be stacked vertically to achieve the filler depth for an 18" deep I-Joist (minimum required depth is 18" - 3" - 1" = 14").

Attach filler blocks with 8d nails (10d for flanges wider than 2-1/2") nails spaced 6" oc per row. Use one row of nails in each row of stacked fillers, with a minimum of two rows of nails. Drive every other nail from opposite sides.

NON LOAD-BEARING CANTILEVER

OSB or equal closure

Uniform loads only

1/3 adjacent span (max.)

Adjacent span

BEVEL CUT/FIRE CUT

LPI blocking or other lateral support required at ends of I-joist

Bevel cut may not extend beyond inside face of bearing wall

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 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 5 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.
 8. Do not use LPI joists with flanges wider than 2-1/2" as rim joists.

Roof Details

<p>J1 RAFTER CONNECTION</p> <p>Simpson® LSTA24, USP® LSTI-22 strap or equal</p> <p>LPI blocking⁵</p> <p>Support beam or wall</p> <p>Beveled plate</p>	<p>J2 RAFTER CONNECTION WITH FITTED OSB GUSSET</p> <p>23/32" x 2'-0" OSB with 8-16d nails each side min. 1/8" gap at top</p> <p>LPI blocking⁵</p> <p>Support beam or wall</p> <p>Beveled plate</p>	<p>J3 RIDGE RAFTER CONNECTION</p> <p>Web filler required each side</p> <p>Simpson LSTA24, USP LSTI-22 strap (or equal) for pitch over 7:12</p> <p>Structural beam</p> <p>Simpson LSSU, USP TMU (or equal) hanger</p>
---	--	---

<p>J4 HEADER CONNECTION</p> <p>Simpson LSTA24, USP LSTI-22 strap (or equal) for pitch over 7:12</p> <p>Simpson LSSU, USP TMU (or equal) hanger</p> <p>Web filler required each side</p> <p>Header</p>	<p>H1 BIRD'S MOUTH (Lower bearing only)</p> <p>Don't cut beyond inside face of bearing</p> <p>Cut to fit tight to wall plate</p> <p>LPI blocking⁵</p> <p>Beveled web stiffeners required both sides</p> <p>2'-0" max.</p>	<p>H2 BEVELED PLATE</p> <p>LPI blocking⁵</p> <p>2x beveled plate</p> <p>Simpson VPA, USP TMP (or equal) connector may be substituted for beveled plate</p>
--	---	--

<p>H3 FLAT SOFFIT (Fascia Support)</p> <p>LPI blocking⁵</p> <p>8d nails at 6" oc clinched</p> <p>Beveled plate</p> <p>2 x 4 cut to fit</p> <p>2'-0" max.</p>	<p>H4 OVERHANG</p> <p>8d nails at 6" oc staggered and clinched</p> <p>LPI blocking⁵</p> <p>4'-0" min.</p> <p>2 x 4 cut to fit both sides</p> <p>2 x 4 filler</p> <p>2'-0" max.</p>	<p>H5 OVERHANG</p> <p>8d nails at 6" oc 1" from edge</p> <p>LPI blocking⁵</p> <p>4'-0" min.</p> <p>2 x 4 cut to fit</p> <p>Beveled plate</p> <p>Web fillers required both sides of I-Joist</p> <p>2'-0" max.</p> <p>8d or 10d box toe-nail to plate</p>
--	--	---

<p>K1 ROOF OPENING Hanger Connections</p> <p>Web stiffener required (see Web Stiffener details)</p> <p>Web filler</p> <p>Filler on back side</p> <p>Install header plumb</p> <p>Filler block</p> <p>Web filler</p>	<p>K2 OUTRIGGER</p> <p>8d nails staggered at 6" oc</p> <p>Maximum overhang same as rafter spacing (2'-0" max.)</p> <p>2 x 4 filler</p> <p>Ladder</p> <p>Gable end</p>
---	--

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 or metal X-bracing may be substituted for the LP blocking shown.

Framing Connectors

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
2-1/2" Flange (LPI 18, 20Plus, 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
	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
2-1/4" (LPI 35)	11-7/8"	ITS2.37/11.88	MIT3511.88-2	IUS2.37/11.88	MIU4.75/11	SUR/L2.37/11	LSSU315 *	VPA35
	14"	ITS2.37/14	MIT3514-2	IUS2.37/14	MIU4.75/14	SUR/L2.37/14	LSSU315 *	VPA35
	16"	ITS2.37/16	MIT4.75/16	IUS2.37/16	MIU4.75/16	SUR/L2.37/14 *	**	VPA35
3-1/2" Flange (LPI 42Plus, 52Plus, 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.

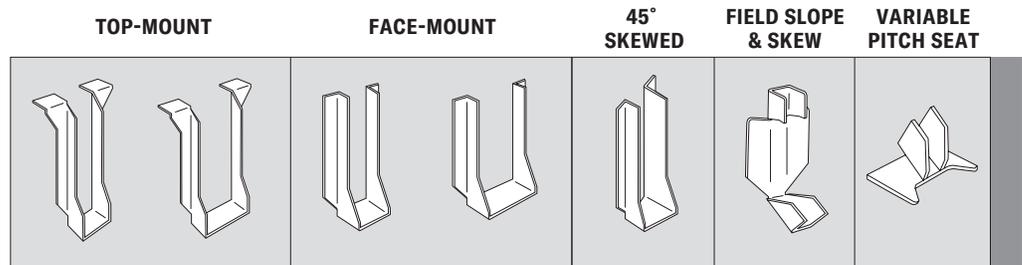
USP STRUCTURAL CONNECTORS®								
Series	Depth	Top-Mount		Face-Mount		45° Skewed	Field Slope & Skew	Variable Pitch Seat†
		Single	Double	Single	Double	Single	Single	Single
2-1/2" Flange (LPI 18, 20Plus, 32Plus)	9-1/2"	TFL2595	THO25950-2 *	THF25925	THF25925-2 *	SKH2520L/R *	LSSH25 *	TMP25 or TMPH25 *
	11-7/8"	TFL25118	THO25118-2 *	THF25112	THF25112-2 *	SKH2520L/R *	LSSH25 *	TMP25 or TMPH25 *
	14"	TFL2514	THO25140-2 *	THF25140	THF25140-2 *	SKH2524L/R *	LSSH25 *	TMP25 or TMPH25 *
	16"	TFL2516	THO25160-2 *	THF25160	THF25160-2 *	SKH2524L/R *	LSSH25 * †	TMP25 or TMPH25 *
2-1/4" (LPI 35)	11-7/8"	TFL23118	THO23118-2 *	THF23118	THF23118-2 *	SKH2320L/R *	LSSH23 *	TMP23 or TMPH23 *
	14"	TFL2314	THO23140-2 *	THF23140	THF23140-2 *	SKH2324L/R *	LSSH23 *	TMP23 or TMPH23 *
	16"	TFL2316	THO23160-2 *	THF23160	THF23160-2 *	SKH2324L/R *	LSSH23 * †	TMP23 or TMPH23 *
3-1/2" Flange (LPI 42Plus, 52Plus, 56)	9-1/2"	THO35950	BPH7195 *	THF35925	HD7100 *	SKH410L/R * **	LSSH35 *	TMP4 or TMPH4 *
	11-7/8"	THO35118	BPH7118 *	THF35112	HD7120 *	SKH410L/R * **	LSSH35 *	TMP4 or TMPH4 *
	14"	THO35140	BPH7114 *	THF35140	HD7140 *	SKH414L/R * **	LSSH35 *	TMP4 or TMPH4 *
	16"	THO35160	BPH7116 *	THF35157	HD7160 *	SKH414L/R * **	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 USP'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.



LP[®] SolidStart[®] Rim Board

FACTORED RIM BOARD RESISTANCE						
Material	Grade	Thickness	Vertical Load Resistance			Horizontal Lateral Load Resistance ^{4,5,6} , f_h (plf)
			Uniform		Concentrated	
			$d \leq 16"$	$16" < d \leq 24"$	$d \leq 24"$	
LP OSB	APA C1/Rim Board ⁷	1-1/8"	7033	4640	5075	219

NOTES:

- The Factored Vertical Load Resistance shall not be increased for short-term load duration.
- The Factored Vertical Load Resistance is based on the resistance of the rim board and may need to be reduced based on the bearing resistance of the supporting wall plate or the attached floor sheathing.
- The Factored Concentrated Vertical Load Resistance is assumed to be applied through a minimum 4-1/2" bearing length (3-stud post).
- The Factored Lateral Load Resistance is based on a short-term load duration and shall not be increased.
- The Factored Lateral Load Resistance is based on the connections specified in the Installation details below.
- Additional framing connectors fastened to the face of the rim board may be used to increase lateral resistance for wind and seismic design.
- APA C1 grade in product standard ANSI/APA PRR 410 is equivalent to the rim board grade in product standard APA PRR-401C.

FACTORED 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	1-1/8"	620 (3")	965 (3")	2220 (4-1/2")	2535 (4-1/2")

NOTES:

- This table is for preliminary design for uniform gravity loads only. Final design should include a complete analysis of all loads and connections.
- The factored load resistances are for a maximum 4' clear span with minimum bearings for each end (listed in parentheses) based on the bearing resistance 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 resistance of the rim board divided by the bearing resistance of the plate species.
- Standard load duration is assumed and shall be adjusted according to code.
- 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 resistance by two.
- 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.
- For multiple-ply headers supporting top-loads only, fasten plies together with minimum 2-1/2" nails (common wire or spiral) 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 Resistance For Side-Loaded 2-Ply Rim Board Headers table below for the required nailing and the maximum side load that can be applied.
- The designer shall verify proper bearing for the header.
- Joints in the rim are not allowed over openings and must be located at least 12" from any opening.
- Refer to the "APA Performance Rated Rim Boards - Limit States Design" (Form No. D340 CA) for additional information including uniform load resistance for smaller openings.

FACTORED CONNECTION RESISTANCE 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	1-1/8"	2-1/2"	1280	1707	2134	2561

NOTES:

- This table represents the factored uniform side-load resistance of the connection for a 2-ply header. The total factored uniform load, including top-load and side-load, shall not exceed the factored uniform load resistance of the header as tabulated above.
- The tabulated side-load resistance is for standard load duration and shall be adjusted according to code.
- 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 22" and 24" deep rim board.
- Nails may be either common wire or spiral. The factored resistances are based on spiral nails. Clinch the nails where possible.
- 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 CONNECTIONS¹

- 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.

T&G TRIM REQUIREMENTS²

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

NOTE:

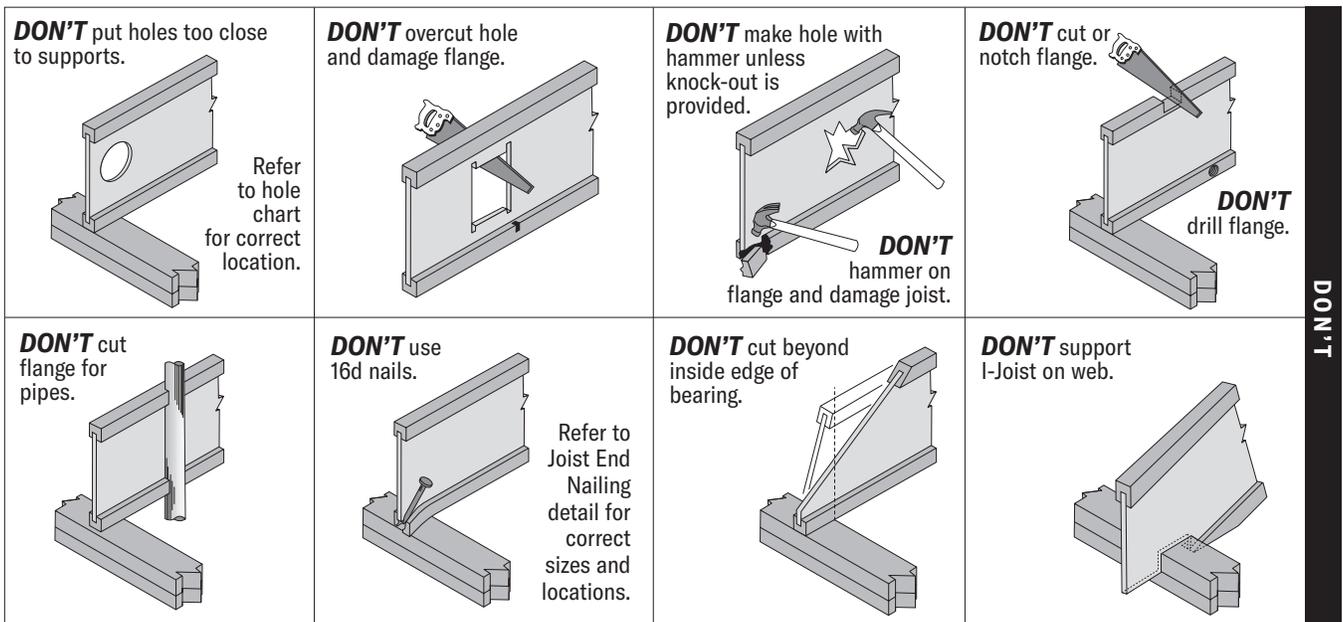
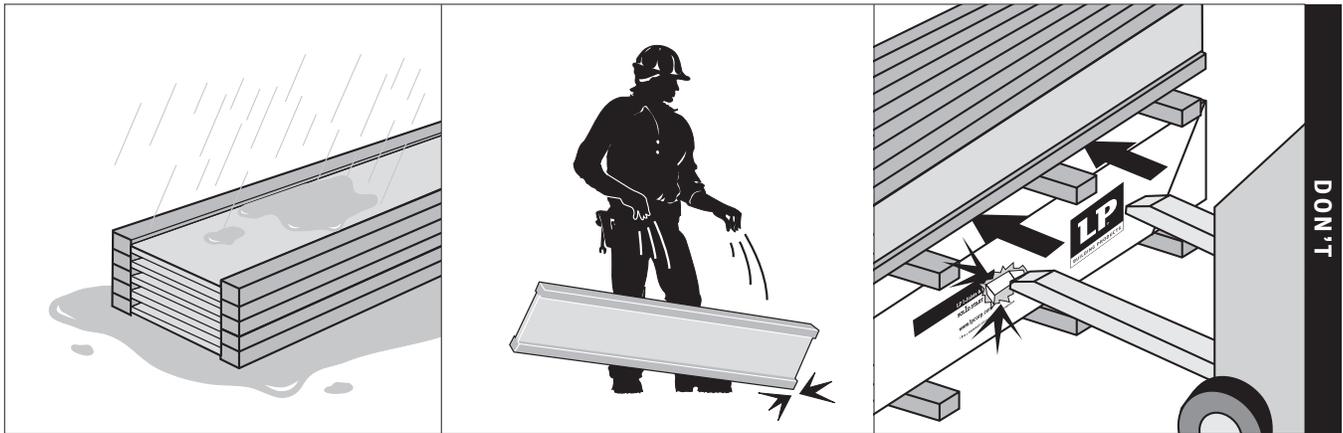
- Additional framing connectors to the face of the rim board may be used to increase lateral capacity for wind and seismic design.
- Trim the tongue or groove of the floor sheathing in accordance with the T&G Trim Requirements table.

T&G TRIM REQUIREMENTS				
Floor Sheathing Thickness	Rim Board Thickness			
	1"	1-1/8"	1-1/4"	> 1-1/4"
$\leq 7/8"$	Trim	Not Required	Not Required	Not Required
$> 7/8"$	Trim	Trim	Trim	Not Required

WARNINGS

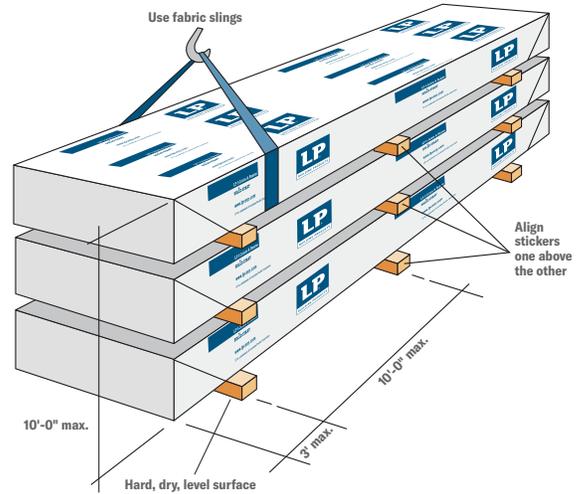
The following conditions are **NOT** permitted!

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



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 2 x 4 (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 I-Joists and LVL must be used under dry, covered and well-ventilated interior conditions in which the average equilibrium moisture content (MC) of lumber is 15% or less over a year and does not exceed 19% at any time.
- For built-up members, LP SolidStart I-Joists and LVL shall be dry before nailing or bolting to avoid trapping moisture.
- LP SolidStart I-Joists 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*

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 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"

*Lengths: Up to 60'.
 Please verify availability with the LP SolidStart Engineered Wood Products distributor in your area prior to specifying these products.

CODE EVALUATION

CCMC evaluation reports can be obtained at www.nrc-cnrc.gc.ca.
 CCMC 12412-R
 APA PR-L238C

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.



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