



## INTRODUCING Ultralam™ LVL for Beams and Headers

- Manufactured with state-of-the-art technology.
- Available in a variety of dimensions.
- Cost effective alternative compared to conventional lumber.
- Environmentally manufactured with virtually no waste.
- High strength and dimensionally consistent.
- Light weight.
- Easy to use with traditional tools.

*ultralam*™  
 Taleon Terra product

# RICHMOND INTERNATIONAL ENGINEERED WOOD DIVISION



**Richmond International Forest Products, LLC (RIFP)** was founded in 1982 and is a subsidiary of the Forest City Trading Group, one of the largest wholesale lumber companies in the United States. Our purpose is to bring value to our customers by helping navigate the complicated maze of supply and demand. We pride ourselves on being a full-service company with our customer and mill relationships founded on honesty and integrity.

Throughout RIFP, we have industry experts who know how to help manage market fluctuations, trade and transportation logistics, and credit and fiscal risk speculation. We use the latest technology, and all of our trading is done on-line and in real-time.

Although RIFP started out as a lumber trader only, our new goal is to become the preferred source for the domestic board market. Besides supplying a wide variety of wood products, such as commodity lumber and panels, we also offer: boards, timbers and squares, shop and molding, industrial grade products, stair treads and ponderosa pine. After decades of engineered lumber's proven performance, we're now expanding into this market as well.

## NEW VENTURE Richmond International Engineered Wood Division

Our traditional expertise in supply chain management will ensure on-ground inventory and inbound materials that will meet your demands quickly. The people behind Richmond International Engineered Wood Division have been in the engineered wood business for over 20 years. We provide experience in all aspects of delivering quality products to the end user including: manufacturing, engineering, distribution and retail operations. We offer personalized service to meet your many needs.

We are proud to offer Ultralam™ LVL as our first engineered product line, because the quality,

price, and availability have met our high expectations. This high-strength laminated veneer lumber is manufactured with the most advanced laminated veneer technologies, in an environmentally conscious process that virtually produces no waste.

Current RIFP customers know of our excellent service and can expect the same from the new Engineered Wood Division. We offer our counsel, and unmatched expertise to help you through the ups and downs of a volatile market.



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Modern Lumber Technology LLC produces FSC certified Ultralam™ LVL with the latest state-of-the-art technology. By using the world's largest laminated veneer continuous press and microwave preheating, the bonding quality of veneer sheets is extremely uniform. This highly efficient manufacturing process produces a high strength, cost effective, and easy-to-use engineered wood product.

Once pressed, the over-sized billets are cut into a variety of lengths and dimensions ideal for construction framing as beams, headers, joists, rafters, columns and wall studs. Ultralam™ LVL can also be used in metal-plated trusses and concrete forming.

Other applications include recreational and manufactured housing, packaging, crating, door, window, and furniture parts. All of these manufacturing components can easily be cut to exact customer specifications.

The manufacturing and quality assurance program is monitored by PFS Corporation, an independent third-party inspection agency. Ultralam™ LVL is produced according to ASTM standards and has been issued an evaluation report (ESR-3147) from ICC-ES.

Manufacturing Ultralam™ LVL has virtually no waste since all of the timber by-products are used to manufacture wood pellets or used as energy to supply the manufacturing facility.



Coniferous logs



Peeling the log takes less than 3 seconds



Sheets of veneer go to grading and processing



The Dieffenbacher press is the longest in the world



Quality inspections



Billets are cut, packed, and shipped



## DESIGN PROPERTIES

### 2.0E – 1 3/4" Thick

Depth (in.)	5 1/2"	7 1/4"	9 1/4"	9 1/2"	11 1/4"	11 7/8"	14"	16"	18"
Moment (Ft-lbs)	2,175	3,635	5,720	6,010	8,225	9,095	12,350	15,825	19,690
Shear (lbs)	1,280	1,690	2,155	2,215	2,625	2,770	3,265	3,730	4,200
Moment of inertia (in <sup>4</sup> )	24.3	55.6	115.4	125.0	207.6	244.2	400.2	597.3	850.5
Weight (PLF)	2.5	3.3	4.2	4.3	5.2	5.4	6.4	7.3	8.2

### Allowable Design Stress (PSI)<sup>1,2</sup>

Property	2.0E	
Modulus of Elasticity (MOE)	Joist	2,000,000
	Plank	2,000,000
Flexural stress-MaR (F <sub>b</sub> ) <sup>3,5</sup>	Joist	2,650
	Plank	3,300
Tensile strength (F <sub>t</sub> ) <sup>4</sup>	2,100	
Longitudinal Shear (F <sub>v</sub> )	Joist	200
	Plank	150
Compression Parallel (F <sub>c</sub> )	2,600	
Compression Perpendicular (F <sub>c</sub> )	Joist	590

1. The allowable design stresses apply to protected, dry service conditions.
2. The tabulated allowable design stresses to the left are permitted to be adjusted for duration of load as provided in the NDS-2005.
3. The tabulated flexural stresses above are permitted to be increased by 4% for repetitive member stresses as provided in the applicable code.
4. The tabulated tensile stress is based on gage length (L) of 3 feet. For other gage lengths, the tabulated tensile stress is adjusted by multiplying F<sub>t</sub> by (3/L)<sup>0.125</sup> where L is measured in feet.
5. The tabulated flexural stresses are based on load of normal duration and a reference depth of 12 inches. For other depths, the tabulated flexural stresses are adjusted by a depth size factor adjustment of (12/d)<sup>0.17</sup> as shown in the table below.

### Size Effects

Depth (in.)	3 1/2"	5 1/2"	7 1/4"	9 1/2"	11 7/8"	14"	16"	18"	24"
1.8E and 2.0E	1.2	1.12	1.08	1.04	1.0	0.98	0.96	0.94	0.9

# FLOOR LOAD CHART

## Simple or Continuous Beams Supporting Floor Loads

1 3/4" Wide – 1 Ply									3 1/2" Wide – 2 Ply												
Beam Span and Condition	Beam Depth								Beam Span and Condition	Beam Depth											
	5 1/2"	7 1/2"	9 1/4"	9 1/2"	11 1/4"	11 7/8"	14"	5 1/2"		7 1/2"	9 1/4"	9 1/2"	11 1/4"	11 7/8"	14"	16"	18"				
6'	Total Load	387	534	720	745	928	998	1258	6'	Total Load	775	1069	1441	1490	1856	1997	2516	3075	3717		
	Live Load	333								6'	Live Load	666									
	Brg (SPF)	1.6/4.0	2.3/5.6	3.1/7.6	3.2/7.9	4.0/9.9	4.4/10.7	5.6/13.7			6'	Brg (SPF)	1.6/4.0	2.3/5.6	3.1/7.6	3.2/7.9	4.0/9.9	4.4/10.7	5.6/13.7	7.0/17.1	8.7/21.1
	Brg (2)	1.5/3.5	1.6/4.0	2.2/5.4	2.3/5.6	2.9/7.1	3.1/7.6	4.0/9.7				6'	Brg (2)	1.5/3.5	1.6/4.0	2.2/5.4	2.3/5.6	2.9/7.1	3.1/7.6	4.0/9.7	4.9/12.0
Total Load	208	382	506	522	641	685	846	8'	Total Load				416	763	1012	1045	1282	1371	1692	2022	2384
Live Load	140	322							8'	Live Load			281	643							
Brg (SPF)	1.5/3.5	2.1/5.3	2.8/7.1	2.9/7.3	3.6/9.0	3.9/9.7	4.9/12.0			8'	Brg (SPF)		1.5/3.5	2.1/5.3	2.8/7.1	2.9/7.3	3.6/9.0	3.9/9.7	4.9/12.0	5.9/14.6	7.1/17.3
Brg (2)	1.5/3.5	1.6/3.8	2.1/5.1	2.1/5.2	2.6/6.5	2.8/6.9	3.5/8.6				10'	Brg (2)	1.5/3.5	1.6/3.8	2.1/5.1	2.1/5.2	2.6/6.5	2.8/6.9	3.5/8.6	4.2/10.3	5.0/12.2
Total Load	105	244	390	402	489	521	636	10'				Total Load	211	487	779	804	978	1043	1272	1504	1752
Live Load	72	165	342	370					10'			Live Load	144	329	684	741					
Brg (SPF)	1.5/3.5	1.7/4.2	2.7/6.8	2.8/7.0	3.4/8.5	3.7/9.1	4.5/11.2			10'		Brg (SPF)	1.5/3.5	1.7/4.2	2.7/6.8	2.8/7.0	3.4/8.5	3.7/9.1	4.5/11.2	5.4/13.4	6.4/15.7
Brg (2)	1.5/3.5	1.5/3.5	2.0/4.9	2.0/5.0	2.5/6.1	2.6/6.5	3.2/8.0				12'	Brg (2)	1.5/3.5	1.5/3.5	2.0/4.9	2.0/5.0	2.5/6.1	2.6/6.5	3.2/8.0	3.9/9.5	4.5/11.1
Total Load		140	293	317	395	420	509	12'				Total Load	120	279	585	635	790	840	1019	1196	1384
Live Load		95	198	214	356	419			12'			Live Load	83	191	396	429	712	837			
Brg (SPF)		1.5/3.5	2.4/6.1	2.6/6.6	3.3/8.3	3.5/8.8	4.3/10.7			12'		Brg (SPF)	1.5/3.5	1.5/3.5	2.4/6.1	2.6/6.6	3.3/8.3	3.5/8.8	4.3/10.7	5.1/12.7	6.0/14.7
Brg (2)		1.5/3.5	1.8/4.4	1.9/4.8	2.4/5.9	2.5/6.3	3.1/7.7				12'	Brg (2)	1.5/3.5	1.5/3.5	1.8/4.4	1.9/4.8	2.4/5.9	2.5/6.3	3.1/7.7	3.7/9.0	4.2/10.47
Total Load			183	198	319	351	424	14'				Total Load		173	365	396	637	702	849	992	1142
Live Load			125	135	224	264			14'			Live Load		120	249	270	448	527			
Brg (SPF)			1.8/4.4	1.9/4.8	3.1/7.8	3.4/8.6	4.2/10.4			14'		Brg (SPF)		1.5/3.5	1.8/4.4	1.9/4.8	3.1/7.8	3.4/8.6	4.2/10.4	4.9/12.2	5.7/14.1
Brg (2)			1.5/3.5	1.5/3.5	2.3/5.6	2.5/6.2	3.0/7.4				14'	Brg (2)		1.5/3.5	1.5/3.5	1.5/3.5	2.3/5.6	2.5/6.2	3.0/7.4	3.5/8.7	4.1/10.1
Total Load			121	131	220	260	363	16'				Total Load		114	242	263	440	519	727	847	972
Live Load			83	90	150	177	289		16'			Live Load		80	167	181	300	353	579		
Brg (SPF)			1.5/3.5	1.5/3.7	2.5/6.1	2.9/7.2	4.1/10.2			16'		Brg (SPF)		1.5/3.5	1.5/3.5	1.5/3.7	2.5/6.1	2.9/7.2	4.1/10.2	4.8/11.9	5.5/13.7
Brg (2)			1.5/3.5	1.5/3.5	1.8/4.4	2.1/5.2	2.9/7.3				16'	Brg (2)		1.5/3.5	1.5/3.5	1.5/3.5	1.8/4.4	2.1/5.2	2.9/7.3	3.4/8.5	3.9/9.8
Total Load					153	181	289	18'				Total Load			167	182	306	361	577	734	845
Live Load					105	124	203		18'			Live Load			117	127	211	248	407	607	
Brg (SPF)					1.9/4.8	2.3/5.7	3.6/9.1			18'		Brg (SPF)			1.5/3.5	1.5/3.5	1.9/4.8	2.3/5.7	3.6/9.1	4.6/11.6	5.4/13.4
Brg (2)					1.5/3.5	1.7/4.1	2.7/6.6				18'	Brg (2)			1.5/3.5	1.5/3.5	1.5/3.5	1.7/4.1	2.7/6.6	3.4/8.4	3.9/9.6
Total Load					110	130	216	20'				Total Load			120	130	220	261	432	597	738
Live Load					77	90	148		20'			Live Load			85	93	154	181	296	442	630
Brg (SPF)					1.6/3.9	1.8/4.6	3.0/7.6			20'		Brg (SPF)			1.5/3.5	1.5/3.5	1.6/3.9	1.8/4.6	3.0/7.6	4.2/10.5	5.2/13.0
Brg (2)					1.5/3.5	1.5/3.5	2.2/5.5				20'	Brg (2)			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	2.2/5.5	3.1/7.6	3.8/9.4
Total Load							161	22'				Total Load					163	193	321	484	612
Live Load							111		22'			Live Load					116	136	223	332	473
Brg (SPF)							2.5/6.2			22'		Brg (SPF)					1.5/3.5	1.5/3.8	2.5/6.2	3.7/9.3	4.7/11.8
Brg (2)							1.8/4.5				22'	Brg (2)					1.5/3.5	1.3/3.5	1.8/4.5	2.7/6.7	3.4/9.4
Total Load							122	24'				Total Load					123	146	245	370	514
Live Load							86		24'			Live Load					89	105	172	256	365
Brg (SPF)							2.1/5.2			24'		Brg (SPF)					1.5/3.5	1.5/3.5	2.1/5.2	3.1/7.8	4.4/10.9
Brg (2)							1.5/3.8				24'	Brg (2)					1.5/3.5	1.5/3.5	1.5/3.8	2.3/5.6	3.2/7.9
Total Load								26'				Total Load					113	190	288	414	
Live Load									26'			Live Load					82	135	201	287	
Brg (SPF)										26'		Brg (SPF)					1.5/3.5	1.8/4.5	2.7/6.7	3.8/9.5	
Brg (2)											26'	Brg (2)					1.5/3.5	1.5/3.5	1.9/4.8	2.8/6.9	
Total Load								28'				Total Load						147	227	328	
Live Load									28'			Live Load						108	161	230	
Brg (SPF)										28'		Brg (SPF)						1.5/3.8	2.3/5.7	3.3/8.2	
Brg (2)											28'	Brg (2)						1.5/3.5	1.7/4.1	2.4/5.9	

- Spans indicated are clear spans based on worst case for either simple or continuous beam applications.
- Bearings required in inches is indicated for both Bearing (SPF) plates and for Bearing (2) applications on columns. The first number is bearing required at ends of beams followed by bearing required at interior supports for continuous applications.
- For continuous beam applications the shorter span must be longer than 40% of the longer span to avoid uplift.
- Allowable loads shown are in pounds per foot (less weight of the beam).
- Deflection limited to L/360 LL and L/240 TL.
- Continuous lateral support is required on compression edge of beam.
- Loads applied to side of beam must comply with connection and fastener details shown on page 13.

# FLOOR LOAD CHART

## Simple Beams Supporting Floor Loads

1 3/4" Wide – 1 Ply								3 1/2" Wide – 2 Ply											
Beam Span and Condition	Beam Depth							Beam Span and Condition	Beam Depth										
	5 1/2"	7 1/2"	9 1/4"	9 1/2"	11 1/4"	11 7/8"	14"		5 1/2"	7 1/2"	9 1/4"	9 1/2"	11 1/4"	11 7/8"	14"	16"	18"		
6'	Total Load	456	703	964	999	1268	1373	1775	6'	Total Load	913	1406	1928	1999	2535	2746	3551	4465	5584
	Live Load	333								666									
	Brg (SPF)	1.9	3.1	4.1	4.3	5.5	6.0	7.9		Brg (SPF)	1.9	3.1	4.1	4.3	5.5	6.0	7.9	10.2	13.1
	Brg (2)	1.5	2.2	2.9	3.0	3.9	4.3	5.6		Brg (2)	1.5	2.2	2.9	3.0	3.9	4.3	5.6	7.1	9.1
8'	Total Load	208	430	660	687	852	915	1147	8'	Total Load	416	860	1320	1373	1704	1830	2293	2785	3344
	Live Load	140	356							281	712								
	Brg (SPF)	1.5	2.5	3.7	3.9	4.8	5.2	6.6		Brg (SPF)	1.5	2.5	3.7	3.9	4.8	5.2	6.6	8.1	9.9
	Brg (2)	1.5	1.9	2.7	2.8	3.5	3.7	4.7		Brg (2)	1.5	1.9	2.7	2.8	3.5	3.7	4.7	5.8	7.0
10'	Total Load	105	244	431	452	608	669	846	10'	Total Load	211	487	863	904	1216	1338	1692	2022	2384
	Live Load	72	182	342	370					144	365	684	741						
	Brg (SPF)	1.5	1.9	3.0	3.1	4.3	4.7	6.0		Brg (SPF)	1.5	1.9	3.0	3.1	4.3	4.7	6.0	7.2	8.6
	Brg (2)	1.5	1.5	2.2	2.3	3.1	3.5	4.3		Brg (2)	1.5	1.5	2.2	2.3	3.1	3.5	4.3	5.2	6.1
12'	Total Load		140	293	317	430	473	631	12'	Total Load	120	279	585	635	860	946	1262	1585	1850
	Live Load		105	198	214	356	419			83	211	396	429	712	837				
	Brg (SPF)		1.5	2.4	2.6	3.6	4.0	5.3		Brg (SPF)	1.5	1.5	2.4	2.6	3.6	4.0	5.3	6.7	7.9
	Brg (2)		1.5	1.8	1.9	2.6	2.9	3.9		Brg (2)	1.5	1.5	1.8	1.9	2.6	2.9	3.9	4.8	5.7
14'	Total Load			183	198	319	351	471	14'	Total Load		173	365	396	637	702	942	1190	1462
	Live Load			125	135	224	264	432		Live Load		133	249	270	448	527	864		
	Brg (SPF)			1.8	1.9	3.1	3.4	4.6		Brg (SPF)		1.5	1.8	1.9	3.1	3.4	4.6	5.9	7.3
	Brg (2)			1.5	1.5	2.3	2.5	3.4		Brg (2)		1.5	1.5	1.5	2.3	2.5	3.4	4.3	5.3
16'	Total Load			121	131	220	260	364	16'	Total Load		114	242	263	440	519	727	923	1135
	Live Load			83	90	150	177	289		Live Load		89	167	181	300	353	579	864	
	Brg (SPF)			1.5	1.5	2.5	2.9	4.1		Brg (SPF)		1.5	1.5	1.5	2.5	2.9	4.1	5.2	6.4
	Brg (2)			1.5	1.5	1.8	2.1	3.0		Brg (2)		1.5	1.5	1.5	1.8	2.1	3.0	3.8	4.7
18'	Total Load					153	181	289	18'	Total Load			167	182	306	361	577	734	906
	Live Load					105	124	203		Live Load			117	127	211	248	407	607	864
	Brg (SPF)					1.9	2.3	3.6		Brg (SPF)			1.5	1.5	1.9	2.3	3.6	4.6	5.7
	Brg (2)					1.5	1.7	2.7		Brg (2)			1.5	1.5	1.5	1.7	2.7	3.4	4.2
20'	Total Load					110	130	216	20'	Total Load			120	130	220	261	432	597	738
	Live Load					77	90	148		Live Load			85	93	154	181	296	442	630
	Brg (SPF)					1.6	1.8	3.0		Brg (SPF)			1.5	1.5	1.6	1.8	3.0	4.2	5.2
	Brg (2)					1.5	1.5	2.2		Brg (2)			1.5	1.5	1.5	1.5	2.2	3.1	3.8
22'	Total Load							161	22'	Total Load					163	193	321	484	612
	Live Load							111		Live Load					116	136	223	332	473
	Brg (SPF)							2.5		Brg (SPF)					1.5	1.5	2.5	3.7	4.7
	Brg (2)							1.8		Brg (2)					1.5	1.5	1.8	2.7	3.4
24'	Total Load							122	24'	Total Load					123	146	245	370	514
	Live Load							86		Live Load					89	105	172	256	365
	Brg (SPF)							2.1		Brg (SPF)					1.5	1.5	2.1	3.1	4.3
	Brg (2)							1.5		Brg (2)					1.5	1.5	2.3	3.2	
26'	Total Load								26'	Total Load					113	190	288	414	
	Live Load									Live Load					82	135	201	287	
	Brg (SPF)									Brg (SPF)					1.5	1.8	2.7	3.8	
	Brg (2)									Brg (2)					1.5	1.5	1.9	2.8	
28'	Total Load								28'	Total Load						149	227	328	
	Live Load									Live Load						108	161	230	
	Brg (SPF)									Brg (SPF)						1.5	2.3	3.3	
	Brg (2)									Brg (2)						1.5	1.7	2.4	

• Only simple beam conditions apply to this chart.

- Bearings required in inches is indicated for both Bearing (SPF) plates and for Bearing (2) applications on columns. The first number is bearing required at ends of beams followed by bearing required at interior supports for continuous applications.
- For continuous beam applications the shorter span must be longer than 40% of the longer span to avoid uplift.
- Allowable loads shown are in pounds per foot (less weight of the beam).
- Deflection limited to L/360 LL and L/240 TL.
- Beam weight not included in LL deflection calculations.
- Continuous lateral support is required on compression edge of beam.
- Loads applied to side of beam must comply with connection and fastener details shown on page 13.

# ROOF LOAD CHART

## Simple or Continuous Beams Supporting Roof Loads – 1.15 DOL

Beam Span and Condition		1¾" Wide – 1 Ply							Beam Span and Condition		3½" Wide – 2 Ply									
		Beam Depth									Beam Depth									
		5½"	7¼"	9¼"	9½"	11¼"	117/8"	14"			5½"	7¼"	9¼"	9½"	11¼"	117/8"	14"	16"	18"	
6'	Total Load	446	615	829	857	1068	1149	1448	6'	Total Load	892	1230	1658	1715	2136	2298	2896	3539	4277	
	Live Load									Live Load										
	Brg (SPF)	1.9/4.6	2.6/6.5	3.6/8.8	3.7/9.1	4.7/11.5	5.1/12.5	6.5/16.0		Brg (SPF)	1.9/4.6	2.6/6.5	3.6/8.8	3.7/9.1	4.7/11.5	5.1/12.5	6.5/16.0	8.2/20.0	10.2/24.7	
	Brg (2)	1.5/3.5	1.9/4.6	2.6/6.3	2.6/6.5	3.3/8.2	3.6/8.8	4.6/11.3		Brg (2)	1.5/3.5	1.9/4.6	2.6/6.3	2.6/6.5	3.3/8.2	3.6/8.8	4.6/11.3	5.7/13.9	7.1/17.1	
8'	Total Load	278	439	583	601	738	789	974	8'	Total Load	557	879	1165	1203	1476	1578	1947	2327	2744	
	Live Load	211								Live Load	421									
	Brg (SPF)	1.5/3.8	2.4/6.1	3.3/8.2	3.4/8.4	4.2/10.4	4.5/11.2	5.7/14.0		Brg (SPF)	1.5/3.8	2.4/6.1	3.3/8.2	3.4/8.4	4.2/10.4	4.5/11.2	5.7/14.0	6.9/16.9	8.2/20.1	
	Brg (2)	1.5/3.5	1.8/4.4	2.4/5.8	2.4/6.0	3.0/7.4	3.2/8.0	4.0/9.9		Brg (2)	1.5/3.5	1.8/4.4	2.4/5.8	2.4/6.0	3.0/7.4	3.2/8.0	4.0/9.9	4.9/11.9	5.8/14.2	
10'	Total Load	141	320	449	463	563	600	733	10'	Total Load	283	639	898	925	1126	1201	1465	1732	2017	
	Live Load	108	247							Live Load	216	494								
	Brg (SPF)	1.5/3.5	2.2/5.5	3.1/7.9	3.2/8.1	4.0/9.9	4.3/10.5	5.2/13.0		Brg (SPF)	1.5/3.5	2.2/5.5	3.1/7.9	3.2/8.1	4.0/9.9	4.3/10.5	5.2/13.0	6.3/15.4	7.4/18.4	
	Brg (2)	1.5/3.5	1.6/4.0	2.3/5.6	2.3/5.8	2.9/7.1	3.0/7.5	3.7/9.2		Brg (2)	1.5/3.5	1.6/4.0	2.3/5.6	2.3/5.8	2.9/7.1	3.0/7.5	3.7/9.2	4.4/11.0	5.2/12.9	
12'	Total Load		187	347	364	455	484	587	12'	Total Load	161	375	694	727	910	968	1174	1378	1594	
	Live Load		143	297	322					Live Load	125	286	594	643						
	Brg (SPF)		1.6/3.9	2.9/7.2	3.0/7.6	3.8/9.5	4.1/10.2	5.0/12.4		Brg (SPF)	1.5/3.5	1.6/3.9	2.9/7.2	3.0/7.6	3.8/9.5	4.1/10.2	5.0/12.4	5.9/14.6	6.9/17.0	
	Brg (2)		1.5/3.5	2.1/5.3	2.2/5.5	2.7/6.8	2.9/7.3	3.6/8.9		Brg (2)	1.5/3.5	1.5/3.5	2.1/5.3	2.2/5.5	2.7/6.8	2.9/7.3	3.6/8.9	4.2/10.4	4.9/12.1	
14'	Total Load		117	245	266	365	402	489	14'	Total Load	100	233	490	531	730	804	978	1143	1316	
	Live Load		90	187	203	336	396			Live Load	79	180	374	405	673	791				
	Brg (SPF)		1.5/3.5	2.4/5.9	2.6/6.5	3.6/8.9	3.9/9.8	4.8/12.0		Brg (SPF)	1.5/3.5	1.5/3.5	2.4/5.9	2.6/6.5	3.6/8.9	3.9/9.8	4.8/12.0	5.7/14.1	6.6/16.3	
	Brg (2)		1.5/3.5	1.7/4.3	1.9/4.6	2.6/6.5	2.9/7.1	3.5/8.6		Brg (2)	1.5/3.5	1.5/3.5	1.7/4.3	1.9/4.6	2.6/6.5	2.9/7.1	3.5/8.6	4.1/10.0	4.7/11.6	
16'	Total Load			163	177	281	310	416	16'	Total Load		154	326	353	562	620	832	976	1120	
	Live Load			125	136	225	265			Live Load		121	250	271	451	530				
	Brg (SPF)			1.8/4.5	2.0/4.9	3.1/7.8	3.5/8.6	4.7/11.6		Brg (SPF)		1.5/3.5	1.8/4.5	2.0/4.9	3.1/7.8	3.5/8.6	4.7/11.6	5.5/13.7	6.4/15.8	
	Brg (2)		1.5/3.5	1.5/3.5	1.5/3.6	2.3/5.7	2.5/6.3	3.4/8.4		Brg (2)	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.6	2.4/5.9	2.8/7.0	3.4/8.4	3.9/9.8	4.5/11.3	
18'	Total Load			113	123	206	243	331	18'	Total Load		106	226	245	412	485	662	841	974	
	Live Load			88	95	158	186	305		Live Load		85	176	191	316	372	610			
	Brg (SPF)			1.5/3.6	1.5/3.9	2.6/6.5	3.0/7.6	4.2/10.4		Brg (SPF)		1.5/3.5	1.5/3.6	1.5/3.9	2.6/6.5	3.0/7.6	4.2/10.4	5.3/13.3	6.2/15.4	
	Brg (2)		1.5/3.5	1.5/3.5	1.5/3.5	1.9/4.7	2.2/5.5	3.0/7.6		Brg (2)		1.5/3.5	1.5/3.5	1.5/3.5	1.9/4.7	2.2/5.5	3.0/7.6	3.9/9.6	4.4/11.0	
20'	Total Load					149	175	269	20'	Total Load			163	177	297	351	537	684	845	
	Live Load					115	136	222		Live Load			128	139	231	271	445	664		
	Brg (SPF)					2.1/5.2	2.5/6.1	3.8/9.4		Brg (SPF)			1.5/3.5	1.5/3.5	2.1/5.2	2.5/6.1	3.8/9.4	4.8/12	5.9/14.9	
	Brg (2)					1.5/3.8	1.8/4.4	2.8/6.8		Brg (2)			1.5/3.5	1.5/3.5	1.5/3.8	1.8/4.4	2.9/7.3	3.6/8.6	4.4/10.8	
22'	Total Load					110	130	216	22'	Total Load			120	131	221	261	433	567	702	
	Live Load					87	102	167		Live Load			96	104	173	204	334	499		
	Brg (SPF)					1.7/4.3	2.0/5.1	3.3/8.3		Brg (SPF)			1.5/3.5	1.5/3.5	1.7/4.3	2.0/5.1	3.3/8.3	4.4/11.0	5.4/13.6	
	Brg (2)					1.5/3.5	1.5	2.4/6.0		Brg (2)			1.5/3.5	1.5/3.5	1.5/3.5	1.5	2.4/6.0	3.2/8.0	3.9/9.8	
24'	Total Load							165	24'	Total Load					168	199	330	477	591	
	Live Load							129		Live Load					134	157	257	384	547	
	Brg (SPF)							2.8/7.0		Brg (SPF)					1.5/3.6	1.7/4.2	2.8/7.0	4.0/10.0	5.0/12.5	
	Brg (2)							2.0/5.0		Brg (2)					1.5/3.5	1.5/3.5	2.0/5.0	2.9/7.3	3.6/9.0	
26'	Total Load							129	26'	Total Load					130	154	257	388	504	
	Live Load							101		Live Load					105	124	202	302	430	
	Brg (SPF)							2.4/5.9		Brg (SPF)					1.5/3.5	1.5/3.6	2.4/5.9	3.6/8.9	4.6/11.6	
	Brg (2)							1.7/4.3		Brg (2)					1.5/3.5	1.5/3.5	1.7/4.3	2.6/6.4	3.4/8.4	
28'	Total Load							102	28'	Total Load					102	121	203	308	434	
	Live Load							81		Live Load					84	99	162	242	344	
	Brg (SPF)							2.1/5.1		Brg (SPF)					1.5/3.5	1.5/3.5	2.1/5.1	3.1/7.7	4.3/10.7	
	Brg (2)							1.5/3.7		Brg (2)					1.5/3.5	1.5/3.5	1.5/3.7	2.2/5.5	3.1/7.0	

- Spans indicated are clear spans based on worst case for either simple or continuous beam applications.
- Bearings required in inches is indicated for both Bearing (SPF) plates and for Bearing (2) applications on columns. The first number is bearing required at ends of beams followed by bearing required at interior supports for continuous applications.
- For continuous beam applications the shorter span must be longer than 40% of the longer span to avoid uplift.
- Allowable loads shown are in pounds per foot (less weight of the beam).
- Deflection limited to L/240 LL and L/180 TL.
- Continuous lateral support is required on compression edge of beam.
- Values shown in table include a load duration effect of 1.15 to account for snow load. User to verify with local building code.
- Loads applied to side of beam must comply with connection and fastener details shown on page 13.

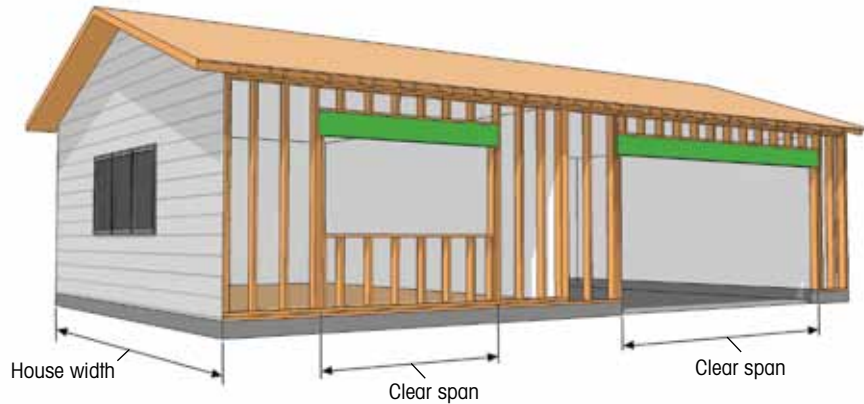
# ROOF LOAD CHART

## Simple Beams Supporting Roof Loads – 1.15 DOL

1 3/4" Wide – 1 Ply								3 1/2" Wide – 2 Ply											
Beam Span and Condition	Beam Depth							Beam Span and Condition	Beam Depth										
	5 1/2"	7 1/2"	9 1/4"	9 1/2"	11 1/4"	11 7/8"	14"		5 1/2"	7 1/2"	9 1/4"	9 1/2"	11 1/4"	11 7/8"	14"	16"	18"		
6'	Total Load	521	809	1109	1150	1459	1580	2043	6'	Total Load	1042	1617	2218	2300	2917	3159	4085	5137	6424
	Live Load	499								998									
	Brg (SPF)	2.2	3.6	4.8	5.0	6.4	7.0	9.2		Brg (SPF)	2.2	3.6	4.8	5.0	6.4	7.0	9.2	11.9	15.3
	Brg (2)	1.6	2.6	3.4	3.5	4.5	4.9	6.5		Brg (2)	1.6	2.6	3.4	3.5	4.5	4.9	6.5	8.3	10.6
8'	Total Load	278	491	752	788	981	1053	1320	8'	Total Load	557	982	1503	1575	1961	2106	2639	3205	3848
	Live Load	211								421									
	Brg (SPF)	1.5	2.9	4.2	4.4	5.6	6.0	7.7		Brg (SPF)	1.5	2.9	4.2	4.4	5.6	6.0	7.7	9.4	11.5
	Brg (2)	1.5	2.1	3.1	3.2	4.0	4.3	5.4		Brg (2)	1.5	2.1	3.1	3.2	4.0	4.3	5.4	6.5	8.1
10'	Total Load	141	320	493	517	693	762	974	10'	Total Load	283	639	986	1033	1386	1523	1947	2327	2744
	Live Load	108	273							216	547								
	Brg (SPF)	1.5	2.4	3.4	3.6	4.9	5.4	6.9		Brg (SPF)	1.5	2.4	3.4	3.6	4.9	5.4	6.9	8.4	10.0
	Brg (2)	1.5	1.7	2.5	2.6	3.6	4.0	5.0		Brg (2)	1.5	1.7	2.5	2.6	3.6	4.0	5.0	6.0	7.1
12'	Total Load		187	347	364	491	540	718	12'	Total Load	161	375	694	728	983	1081	1437	1814	2130
	Live Load		158	297	322					125	316	594	643						
	Brg (SPF)		1.7	2.9	3.0	4.1	4.5	6.1		Brg (SPF)	1.5	1.7	2.9	3.0	4.1	4.5	6.1	7.8	9.2
	Brg (2)		1.5	2.1	2.2	3.0	3.3	4.5		Brg (2)	1.5	1.5	2.1	2.2	3.0	3.3	4.5	5.6	6.5
14'	Total Load		117	245	266	365	402	538	14'	Total Load	100	233	490	531	730	804	1076	1357	1663
	Live Load		100	187	203	336	396			79	199	374	405	673	791				
	Brg (SPF)		1.5	2.4	2.6	3.6	3.9	5.3		Brg (SPF)	1.5	1.5	2.4	2.6	3.6	3.9	5.3	6.7	8.3
	Brg (2)		1.5	1.7	1.9	2.6	2.9	3.9		Brg (2)	1.5	1.5	1.7	1.9	2.6	2.9	3.9	4.9	6.1
16'	Total Load		77	163	177	281	310	416	16'	Total Load		154	326	353	562	620	833	1055	1295
	Live Load			125	136	225	265			134	250	271	451	530					
	Brg (SPF)			1.8	2.0	3.1	3.5	4.7		Brg (SPF)		1.5	1.8	2.0	3.1	3.5	4.7	5.9	7.3
	Brg (2)			1.5	1.5	2.3	2.5	3.4		Brg (2)		1.5	1.5	1.5	2.3	2.5	3.4	4.3	5.4
18'	Total Load			113	123	206	243	331	18'	Total Load		106	226	245	412	485	662	841	1036
	Live Load			88	95	158	186	305		94	176	191	316	372	610				
	Brg (SPF)			1.5	1.5	2.6	3.0	4.2		Brg (SPF)		1.5	1.5	1.5	2.6	3.0	4.2	5.3	6.6
	Brg (2)			1.5	1.5	1.9	2.2	3.0		Brg (2)		1.5	1.5	1.5	1.9	2.2	3.0	3.9	4.8
20'	Total Load					149	175	269	20'	Total Load			163	177	297	351	538	685	846
	Live Load					115	136	222		128	139	231	271	445	664				
	Brg (SPF)					2.1	2.5	3.8		Brg (SPF)			1.5	1.5	2.1	2.5	3.8	4.8	5.9
	Brg (2)					1.5	1.8	2.7		Brg (2)			1.5	1.5	1.5	1.8	2.7	3.5	4.3
22'	Total Load					110	130	216	22'	Total Load			120	131	221	261	433	567	702
	Live Load					87	102	167		96	104	173	204	334	499				
	Brg (SPF)					1.7	2.0	3.3		Brg (SPF)			1.5	1.5	1.7	2.0	3.3	4.4	5.4
	Brg (2)					1.5	1.5	2.4		Brg (2)			1.5	1.5	1.5	1.5	2.4	3.2	4.0
24'	Total Load							165	24'	Total Load					168	199	330	477	591
	Live Load							129		Live Load					134	157	257	384	547
	Brg (SPF)							2.8		Brg (SPF)					1.5	1.7	2.8	4.0	5.0
	Brg (2)							2.0		Brg (2)					1.5	1.5	2.0	2.9	3.6
26'	Total Load							129	26'	Total Load					130	154	257	388	504
	Live Load							101		Live Load					105	124	202	302	430
	Brg (SPF)							2.4		Brg (SPF)					1.5	1.5	2.4	3.6	4.6
	Brg (2)							1.7		Brg (2)					1.5	1.5	1.7	2.6	3.4
28'	Total Load							102	28'	Total Load					102	121	203	308	434
	Live Load							81		Live Load					84	99	162	242	344
	Brg (SPF)							2.1		Brg (SPF)					1.5	1.5	2.1	3.1	4.3
	Brg (2)							1.5		Brg (2)					1.5	1.5	1.5	2.2	3.1

- Only simple beam conditions apply to this chart.
- Bearings required in inches is indicated for both Bearing (SPF) plates and for Bearing (2) applications on columns. The first number is bearing required at ends of beams followed by bearing required at interior supports for continuous applications.
- For continuous beam applications the shorter span must be longer than 40% of the longer span to avoid uplift.
- Allowable loads shown are in pounds per foot (less weight of the beam).
- Deflection limited to L/240 LL and L/180 TL.
- Continuous lateral support is required on compression edge of beam.
- Values shown in table include a load duration effect of 1.15 to account for snow load. User to verify with local building code.
- Loads applied to side of beam must comply with connection and fastener details shown on page 13.

# SIZING CHART



## 3 1/2" Wide – 2 Ply Window Door Beam Supporting 1/2 Roof

Beam Span and Condition		Roof Load 20 Live 20 Dead				Roof Load 30 Live 15 Dead				Roof Load 40 Live 15 dead			
		24'	28'	32'	36'	24'	28'	32'	36'	24'	28'	32'	36'
6'	Depth	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	7 1/4"	5 1/2"	5 1/2"	7 1/4"	7 1/4"
	Brg (SPF)	1.5/3.5	1.5/3.5	1.5/3.7	1.7/4.2	1.5/3.5	1.5/3.7	1.7/4.2	1.9/4.7	1.6/4.0	1.8/4.5	2.1/5.1	2.3/5.7
	Brg (2)	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.7	1.7/4.1
8'	Depth	5 1/2"	7 1/4"	7 1/4"	7 1/4"	7 1/4"	7 1/4"	7 1/4"	9 1/4"	7 1/4"	7 1/4"	9 1/4"	9 1/4"
	Brg (SPF)	1.6/3.9	1.8/4.4	2.0/5.0	2.2/5.5	1.8/4.3	2.0/5.0	2.3/5.6	2.5/6.2	2.1/5.3	2.4/6.1	2.7/6.8	3.1/7.6
	Brg (2)	1.5/3.5	1.5/3.5	1.5/3.6	1.6/4.0	1.5/3.5	1.5/3.6	1.6/4.0	1.8/4.5	1.6/3.8	1.8/4.4	2.0/4.9	2.2/5.5
10'	Depth	7 1/4"	7 1/4"	9 1/4"	9 1/4"	7 1/4"	9 1/4"	9 1/4"	9 1/4"	9 1/4"	9 1/4"	11 1/4"	11 1/4"
	Brg (SPF)	1.9/4.8	2.2/5.5	2.5/6.2	2.8/6.9	2.2/5.4	2.5/6.2	2.8/7.0	3.1/7.8	2.6/6.6	3.0/7.6	3.4/8.6	3.8/9.5
	Brg (2)	1.5/3.5	1.6/3.9	1.8/4.4	2.0/4.9	1.6/3.9	1.8/4.4	2.0/5.0	2.2/5.6	1.9/4.8	2.2/5.4	2.5/6.1	2.7/6.8
12'	Depth	9 1/4"	9 1/4"	9 1/2"	11 1/4"	9 1/4"	9 1/2"	11 1/4"	11 1/4"	11 1/4"	11 1/4"	14"	14"
	Brg (SPF)	2.3/5.8	2.7/6.6	3.0/7.4	3.3/8.3	2.6/6.5	3.0/7.4	3.4/8.4	3.8/9.3	3.2/7.9	3.6/9.1	4.1/10.3	4.6/11.4
	Brg (2)	1.7/4.1	1.9/4.7	2.1/5.3	2.4/5.9	1.9/4.6	2.1/5.3	2.4/6.0	2.7/6.7	2.3/5.7	2.6/6.5	2.9/7.3	3.3/8.2
14'	Depth	11 1/4"	11 1/4"	11 1/4"	11 7/8"	11 1/4"	11 1/4"	11 7/8"	14"	11 7/8"	14"	14"	16"
	Brg (SPF)	2.7/6.7	3.1/7.7	3.5/8.7	3.9/9.7	3.0/7.5	3.5/8.7	3.9/9.8	4.4/10.9	3.7/9.3	4.2/10.6	4.8/12	5.3/13.4
	Brg (2)	1.9/4.8	2.2/5.5	2.5/6.2	2.8/6.9	2.2/5.4	2.5/6.2	2.8/7.0	3.1/7.8	2.7/6.6	3.0/7.6	3.4/8.6	3.8/9.6
16'	Depth	11 1/4"	14"	14"	14"	11 7/8"	14"	14"	16"	14"	16"	16"	18"
	Brg (SPF)	3.1/7.7	3.5/8.8	4.0/9.9	4.4/11.0	3.5/8.6	4.0/9.9	4.5/11.2	5.0/12.4	4.2/10.6	4.9/12.1	5.5/13.7	6.1/15.3
	Brg (2)	2.2/5.5	2.5/6.3	2.9/7.1	3.2/7.9	2.5/6.2	2.8/7.1	3.2/8.0	3.6/8.9	3.0/7.6	3.5/8.7	3.9/9.8	4.4/10.9
16'9"	Depth	11 7/8"	14"	14"	16"	14"	14"	16"	16"	14"	16"	18"	
	Brg (SPF)	3.2/8.0	3.7/9.2	4.2/10.4	4.6/11.5	3.6/9.1	4.2/10.4	4.7/11.7	5.2/13.0	4.4/11.1	5.1/12.7	5.7/14.3	
	Brg (2)	2.3/5.8	2.6/6.6	3.0/7.4	3.3/8.3	2.6/6.5	3.0/7.4	3.4/8.4	3.7/9.3	3.2/7.9	3.7/9.1	4.1/10.3	
18'	Depth	14"	14"	16"	16"	14"	16"	16"	18"	16"	18"	18"	
	Brg (SPF)	3.5/8.6	4.0/9.9	4.5/11.1	5.0/12.4	3.9/9.7	4.5/11.1	5.0/12.6	5.6/14.0	4.8/11.9	5.5/13.6	6.2/15.4	
	Brg (2)	2.5/6.2	2.8/7.1	3.2/8.0	3.6/8.9	2.8/7.0	3.2/8.0	3.6/9.0	4.0/10.0	3.4/8.5	3.9/9.8	4.4/11.0	

- Only simple beam conditions apply to this chart.
- Bearings required in inches is indicated for both Bearing (SPF) plates and for Bearing (2) applications on columns. The first number is bearing required at ends of beams followed by bearing required at interior supports for continuous applications.
- For continuous beam applications the shorter span must be longer than 40% of the longer span to avoid uplift.
- Deflection limited to L/240 LL and L/180 TL.
- Continuous lateral support is required on compression edge of beam.
- Values shown in table include a load duration effect of 1.15 to account for snow load. User to verify with local building code.
- Roof loads are clear span to exterior walls plus 2 foot overhang.



# SIZING CHART



## 3 1/2" Wide – 2 Ply Ridge Beam

Beam Span and Condition		Roof Live Load 20 Live 20 Dead				Roof Live Load 30 Live 15 Dead				Roof Live Load 40 Live 15 dead			
		Roof Span				Roof Span				Roof Span			
		24'	28'	32'	36'	24'	28'	32'	36'	24'	28'	32'	36'
6'	Depth	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	7 1/4"
	Brg (SPF)	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.7	1.5/3.5	1.5/3.5	1.5/3.7	1.7/4.2	1.5/3.5	1.6/4.0	1.9/4.6	2.1/5.2
	Brg (2)	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.7
8'	Depth	5 1/2"	5 1/2"	7 1/4"	7 1/4"	5 1/2"	7 1/4"	7 1/4"	7 1/4"	7 1/4"	7 1/4"	7 1/4"	9 1/4"
	Brg (SPF)	1.5/3.5	1.6/3.9	1.8/4.4	2.0/5.0	1.5/3.7	1.7/4.3	2.0/5.0	2.3/5.6	1.8/4.6	2.1/5.3	2.5/6.1	2.8/6.9
	Brg (2)	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.6	1.5/3.5	1.5/3.5	1.5/3.6	1.6/4.0	1.5/3.5	1.5/3.8	1.8/4.4	2.0/4.9
10'	Depth	7 1/4"	7 1/4"	7 1/4"	9 1/4"	7 1/4"	7 1/4"	9 1/4"	9 1/4"	9 1/4"	9 1/4"	9 1/4"	11 1/4"
	Brg (SPF)	1.7/4.1	1.9/4.8	2.2/5.5	2.5/6.2	1.9/4.6	2.2/5.4	2.5/6.2	2.8/7.0	2.3/5.7	2.7/6.6	3.1/7.6	3.4/8.6
	Brg (2)	1.5/3.5	1.5/3.5	1.6/3.9	7.7/4.4	1.5/3.5	1.6/3.9	1.8/4.4	2.0/5.0	1.6/4.1	1.9/4.8	2.2/5.5	2.5/6.1
12'	Depth	9 1/4"	9 1/4"	9 1/4"	9 1/2"	9 1/4"	9 1/4"	9 1/2"	11 1/4"	9 1/4"	11 1/4"	11 1/4"	14"
	Brg (SPF)	2.0/4.9	2.3/5.8	2.7/6.6	3.0/7.4	2.2/5.6	2.6/6.5	3.0/7.4	3.4/8.4	2.7/6.8	3.2/8.0	3.7/9.1	4.1/10.3
	Brg (2)	1.5/3.5	1.7/4.1	1.9/4.7	2.1/5.3	1.6/4.0	1.9/4.7	2.1/5.3	2.4/6.0	2.0/4.9	2.3/5.7	2.6/6.5	3.0/7.4
14'	Depth	9 1/4"	11 1/4"	11 1/4"	11 1/4"	9 1/2"	11 1/4"	11 1/4"	11 7/8"	11 1/4"	11 7/8"	14"	14"
	Brg (SPF)	2.3/5.7	2.7/6.7	3.1/7.7	3.5/8.7	2.6/6.5	3.0/7.6	3.5/8.7	3.9/9.8	3.2/7.9	3.7/9.3	4.3/10.6	4.8/12/0
	Brg (2)	1.7/4.1	1.9/4.8	2.2/5.5	2.5/6.2	1.9/4.6	2.2/5.4	2.5/6.2	2.8/7.0	2.3/5.7	2.7/6.6	3.1/7.6	3.4/8.6
16'	Depth	11 1/4"	11 1/4"	14"	14"	11 1/4"	11 7/8"	14"	14"	14"	14"	16"	16"
	Brg (SPF)	2.6/6.6	3.1/7.7	3.5/8.8	4.0/9.9	3.0/7.4	3.5/8.6	4.0/9.9	4.5/11.2	3.6/9.1	4.3/10.6	4.9/12.2	5.5/13.7
	Brg (2)	1.9/4.7	2.2/5.5	2.5/6.3	2.9/7.1	2.1/5.3	2.5/6.2	2.9/7.1	3.2/8.0	2.6/6.5	3.0/7.6	3.5/8.7	3.9/9.8
18'	Depth	11 7/8"	14"	14"	16"	14"	14"	16"	16"	14"	16"	18"	18"
	Brg (SPF)	3.0/7.4	3.5/8.6	4.0/9.9	4.6/11.1	3.4/8.3	4.0/9.7	4.6/11.1	5.1/12.6	4.2/10.2	4.9/11.9	5.6/13.7	6.3/15.4
	Brg (2)	2.2/5.3	2.6/6.2	2.9/7.1	3.3/8.0	2.4/6.0	2.8/7.0	3.3/8.0	3.7/9.0	3.0/7.3	3.5/8.5	4.0/9.8	4.5/11.0

- Spans indicated are clear spans based on worst case for either simple or continuous beam applications.
- Bearings required in inches is indicated for both Bearing (SPF) plates and for Bearing (2) applications on columns. The first number is bearing required at ends of beams followed by bearing required at interior supports for continuous applications.
- For continuous beam applications the shorter span must be longer than 40% of the longer span to avoid uplift.
- Deflection limited to L/240 LL and L/180 TL.
- Continuous lateral support is required on compression edge of beam.
- Values shown in table include a load duration effect of 1.15 to account for snow load. User to verify with local building code.

# SIZING CHART

## Window/Door Header Supporting 1/2 Roof + 1/2 Floor + Wall and Overhang

3 1/2" Wide – 2 Ply													
Beam Span and Condition		Roof Load 20 Live 20 Dead				Roof Load 30 Live 15 Dead				Roof Load 40 Live 15 dead			
		Roof Span				Roof Span				Roof Span			
		24'	28'	32'	36'	24'	28'	32'	36'	24'	28'	32'	36'
6'	Depth	9 1/4"	9 1/4"	9 1/4"	11 1/4"	9 1/4"	9 1/4"	9 1/2"	11 1/4"	9 1/4"	9 1/2"	11 1/4"	11 1/4"
	Brg (SPF)	2.7/6.6	3.1/7.6	3.5/8.6	3.9/9.7	2.8/7.0	3.2/8.1	3.7/9.1	4.1/10.2	3.1/7.8	3.6/9.0	4.1/10.2	4.6/11.4
	Brg (2)	1.9/4.7	2.2/5.4	2.5/6.1	2.8/6.9	2.0/5.0	2.3/5.7	2.6/6.5	2.9/7.3	2.2/5.5	2.6/6.4	2.9/7.2	3.2/8.0
8'	Depth	11 1/4"	11 1/4"	14"	14"	11 1/4"	11 1/2"	14"	14"	11 1/4"	14"	14"	16"
	Brg (SPF)	3.5/8.8	4.1/10.2	4.6/11.5	5.2/12.9	3.7/9.3	4.3/10.8	4.8/12.2	5.5/13.6	4.2/10.4	4.8/11.9	5.4/13.5	14.9/15.1
	Brg (2)	2.5/6.3	2.9/7.2	3.3/8.2	3.7/9.2	2.7/6.4	3.1/7.7	3.5/8.7	3.9/9.6	3.0/7.4	3.4/8.5	3.8/9.6	4.3/10.7
10'	Depth	14"	14"	16"	18"	14"	16"	16"	18"	14"	16"	18"	
	Brg (SPF)	4.4/11.0	5.1/12.7	5.8/14.4	6.4/16.1	4.7/11.7	5.4/13.4	6.1/15.2	6.8/17.0	5.2/12.9	6.0/14.9	6.8/16.9	
	Brg (2)	3.2/7.9	3.6/9.0	4.1/10.2	4.6/11.4	3.3/8.3	3.8/9.6	4.3/10.8	4.8/12.1	3.7/9.2	4.3/10.6	4.8/12.0	
12'	Depth	16"	18"			16"	18"			18"			
	Brg (SPF)	5.3/13.2	6.1/15.2			5.6/14.0	6.5/16.1			6.2/15.5			
	Brg (2)	3.8/9.4	4.4/10.9			4.0/10.0	4.6/11.5			4.4/11.0			
14'	Depth	18"											
	Brg (SPF)	6.2/15.4											
	Brg (2)												

5 1/4" Wide – 3 Ply													
Beam Span and Condition		5 1/2"	7 1/4"	7 1/4"	7 1/4"	5 1/2"	7 1/4"	7 1/4"	9 1/4"	7 1/4"	7 1/4"	9 1/4"	9 1/4"
		Roof Span				Roof Span				Roof Span			
		24'	28'	32'	36'	24'	28'	32'	36'	24'	28'	32'	36'
6'	Depth	5 1/2"	7 1/4"	7 1/4"	7 1/4"	5 1/2"	7 1/4"	7 1/4"	9 1/4"	7 1/4"	7 1/4"	9 1/4"	9 1/4"
	Brg (SPF)	1.8/4.4	2.0/5.0	2.3/5.7	2.6/6.3	1.9/4.6	2.1/5.3	2.4/6.0	2.7/6.7	2.1/5.1	2.4/5.9	2.7/6.7	3.0/7.4
	Brg (2)	1.5/3.5	1.5/3.6	1.6/4.1	1.8/4.5	1.5/3.5	1.5/3.8	2.7/4.3	1.9/4.8	1.6/3.7	1.7/4.2	1.9/4.7	2.1/5.3
8'	Depth	7 1/4"	9 1/4"	9 1/4"	9 1/2"	9 1/4"	9 1/4"	9 1/4"	11 1/4"	9 1/4"	9 1/4"	11 1/4"	11 1/4"
	Brg (SPF)	2.3/5.8	2.7/7.7	3.0/7.6	3.4/8.4	2.5/6.2	2.8/7.1	3.2/8.0	3.6/8.9	2.7/6.8	3.2/7.8	3.6/8.9	4.0/9.9
	Brg (2)	1.7/4.2	1.9/4.8	2.2/5.4	2.4/6.0	1.8/4.4	2.0/5.0	2.3/5.7	2.6/6.4	2.0/4.9	2.3/5.6	2.5/6.3	2.8/7.0
10'	Depth	9 1/4"	11 1/4"	11 1/4"	11 7/8"	9 1/4"	11 7/8"	11 7/8"	14"	11 1/4"	11 1/4"	14"	14"
	Brg (SPF)	2.9/7.3	3.4/8.4	3.8/9.5	4.2/10.6	3.1/7.7	3.5/8.8	4.0/10.0	4.5/11.2	3.4/8.5	3.9/9.8	4.4/11.1	5.0/12.4
	Brg (2)	2.1/5.2	2.4/6.0	2.7/6.8	3.0/7.5	2.2/5.5	2.5/6.3	2.9/7.1	3.2/8.0	2.4/6.1	2.8/7.0	3.2/7.9	3.5/8.8
12'	Depth	11 1/4"	11 7/8"	14"	16"	11 1/4"	14"	14"	16"	14"	14"	16"	18"
	Brg (SPF)	3.5/8.7	4.0/10.0	4.5/11.3	5.0/12.5	3.7/9.2	4.2/10.6	4.8/12.0	5.3/13.2	4.1/10.2	4.7/11.8	5.3/13.3	5.9/14.7
	Brg (2)	2.5/6.3	2.9/7.2	3.3/8.1	3.6/8.9	2.7/6.6	3.0/7.6	3.4/8.6	3.8/9.4	2.9/7.3	3.4/8.4	3.8/9.5	4.2/10.5
14'	Depth	14"	14"	16"	18"	14"	16"	16"	18"	14"	16"	18"	
	Brg (SPF)	4.1/10.2	4.7/11.7	5.2/13.0	5.7/14.3	4.3/10.8	4.9/12.4	5.5/13.8	6.1/15.1	4.8/11.9	5.5/13.7	6.1/15.3	
	Brg (2)	2.9/7.3	3.4/8.4	3.7/9.3	4.1/10.2	3.1/7.7	3.5/8.8	3.9/9.8	4.3/10.7	3.4/8.5	3.9/9.8	4.4/10.9	
16'	Depth	14"	16"	18"		16"	18"	18"	18"	16"	18"	18"	
	Brg (SPF)	4.7/11.6	5.3/13.1	5.8/14.6		4.9/12.3	5.6/13.9	6.2/15.4		5.5/13.6	6.2/15.4		
	Brg (2)	3.3/8.3	3.8/9.4	4.2/10.4		3.5/8.8	4.0/9.9	4.4/11.0		3.9/9.7	4.4/11.0		
16'9"	Depth	16"	18"	18"		16"	18"			18"			
	Brg (SPF)	4.9/12.2	5.5/13.7	6.1/15.2		5.2/12.9	5.8/14.5			5.7/14.2			
	Brg (2)	3.5/8.7	3.9/9.8	4.4/10.8		3.7/9.2	4.1/10.3			4.1/10.2			
18'	Depth	16"	18"			18"	18"			18"			
	Brg (SPF)	5.3/12.9	6.0/14.6			5.6/13.7	6.3/15.4			6.2/15.2			
	Brg (2)	3.8/9.3	4.3/10.4			4.0/9.8	4.5/11.0			4.4/10.8			



- Spans indicated are clear spans based on worst case for either simple or continuous beam applications.
- Bearings required in inches is indicated for both Bearing (SPF) plates and for Bearing (2) applications on columns. The first number is bearing required at ends of beams followed by bearing required at interior supports for continuous applications.
- For continuous beam applications the shorter span must be longer than 40% of the longer span to avoid uplift.
- Allowable loads shown are in pounds per foot (less weight of the beam).
- Deflection limited to L/240 LL and L/180 TL.
- Continuous lateral support is required on compression edge of beam.
- Values shown in table include a load duration effect of 1.15 to account for snow load. User to verify with local building code.
- Roof loads plus two feet overhang assumed to bear on outside walls only.
- Floor loads assumed to be 40 PSF live and 12 PSF dead.

# SIZING CHART

## Window/Door Beam Supporting 1/2 Roof + Overhang + 1/4 Floor + Exterior Wall

3 1/2" Wide – 2 Ply													
Beam Span and Condition	Roof Load 20 Live 20 Dead				Roof Load 30 Live 15 Dead				Roof Load 40 Live 15 dead				
	Roof Span				Roof Span				Roof Span				
	24'	28'	32'	36'	24'	28'	32'	36'	24'	28'	32'	36'	
6'	Depth	7 1/4"	7 1/4"	7 1/4"	9 1/4"	7 1/4"	7 1/4"	9 1/4"	9 1/4"	7 1/4"	9 1/4"	9 1/4"	9 1/4"
	Brg (SPF)	2.0/5.0	2.3/5.7	2.6/6.4	2.9/7.1	2.1/5.3	2.5/6.1	2.8/6.9	3.1/7.6	2.4/6.1	2.8/7.0	3.2/7.8	3.5/8.7
	Brg (2)	1.5/3.6	1.6/4.0	1.8/4.6	2.0/5.1	1.5/3.8	1.8/4.4	2.0/4.8	2.2/5.4	1.8/4.4	2.0/5.0	2.3/5.6	2.5/6.2
8'	Depth	9 1/4"	9 1/4"	11 1/4"	11 1/4"	9 1/4"	9 1/4"	11 1/4"	11 1/4"	9 1/4"	11 1/4"	11 1/4"	14"
	Brg (SPF)	2.6/6.6	3.0/7.5	3.4/8.5	3.8/9.4	2.8/7.1	3.2/8.1	3.6/9.1	4.0/10.2	3.2/8.1	3.7/9.3	4.1/10.4	4.6/11.6
	Brg (2)	1.9/4.7	2.2/5.4	2.4/6.1	2.7/6.7	2.0/5.1	2.3/5.8	2.6/6.5	2.9/7.3	2.3/5.8	2.6/6.6	3.0/7.4	3.3/8.3
10'	Depth	11 1/4"	11 1/4"	14"	14"	11 1/4"	11 7/8"	14"	14"	14"	14"	16"	16"
	Brg (SPF)	3.3/8.2	3.8/9.4	4.3/10.6	4.7/11.8	3.6/8.9	4.1/10.1	4.6/11.4	5.1/12.7	4.1/10.1	4.6/11.6	5.2/13.1	5.8/14.5
	Brg (2)	2.4/5.9	2.7/6.7	3.0/7.6	3.4/8.4	2.6/6.3	2.9/7.2	3.3/8.1	3.6/9.1	2.9/7.2	3.3/8.3	3.7/9.3	4.2/10.3
12'	Depth	14"	14"	16"	16"	14"	14"	14"	18"	14"	16"	18"	
	Brg (SPF)	4.0/9.0	4.5/11.3	5.1/12.7	5.7/14.2	4.3/10.6	4.9/12.2	5.5/13.7	6.1/15.2	4.9/12.1	5.6/13.9	6.3/15.7	
	Brg (2)	2.8/7.1	3.2/8.1	3.7/9.1	4.1/10.1	3.1/7.6	3.5/8.7	3.9/9.8	4.4/10.9	3.5/8.5	4.0/9.9	4.5/11.2	
14'	Depth	14"	16"	18"		16"	18"	18"		18"	18"		
	Brg (SPF)	4.6/11.5	5.3/13.15	5.9/14.8		5.0/12.4	5.7/14.2	6.4/16.0		5.7/14.2	6.5/16.2		
	Brg (2)	3.3/8.3	3.8/9.4	4.3/10.6		3.6/8.9	4.1/10.1	4.6/11.4		4.1/10.1	4.6/11.6		
16'	Depth	16"	18"			18"							
	Brg (SPF)	5.3/13.2	6.0/15.1			5.7/14.2							
	Brg (2)	3.8/9.4	4.3/10.8			4.1/10.1							
16'9"	Depth	18"				18"							
	Brg (SPF)	5.5/13.8				6.0/14.8							
	Brg (2)	4.0/9.9				4.3/10.6							
18'	Depth	18"											
	Brg (SPF)	5.9/14.8											
	Brg (2)	4.3/10.6											
5 1/4" Wide – 3 ply													
8'	Depth	7 1/4"	7 1/4"	7 1/4"	9 1/4"	7 1/4"	7 1/4"	7 1/4"	9 1/4"	7 1/4"	7 1/4"	9 1/4"	9 1/4"
	Brg (SPF)	1.7/4.4	2.0/5.0	2.3/5.6	2.5/6.2	1.9/4.7	2.2/5.4	2.4/6.0	2.7/6.7	2.2/5.4	2.5/6.1	2.8/6.9	3.1/7.3
	Brg (2)	1.5/3.5	1.5/3.6	1.6/4.0	1.8/4.5	1.5/3.5	1.6/3.8	1.7/4.3	1.9/4.8	1.6/3.8	1.8/4.4	2.0/4.9	2.2/5.5
10'	Depth	9 1/4"	9 1/4"	9 1/4"	9 1/4"	9 1/4"	9 1/4"	11 1/4"	9 1/4"	9 1/4"	9 1/4"	11 1/4"	11 1/4"
	Brg (SPF)	2.2/5.5	2.5/6.2	2.8/7.0	3.1/7.8	3.3/5.9	2.7/6.7	3.0/7.5	3.3/8.4	2.7/6.7	3.1/7.6	3.4/8.6	3.8/9.6
	Brg (2)	1.6/3.9	1.8/4.5	2.0/5.0	2.2/5.6	1.7/4.2	1.9/4.8	2.2/5.4	2.4/6.0	1.9/4.8	2.2/5.5	2.5/6.1	2.7/6.8
12'	Depth	9 1/2"	11 1/4"	11 1/4"	11 1/4"	11 1/4"	11 1/4"	11 7/8"	11 7/8"	11 1/4"	11 1/4"	14"	14"
	Brg (SPF)	2.6/6.5	3.0/7.5	3.4/8.4	3.7/9.3	2.8/7.0	3.2/8.0	3.6/9.0	4.0/10.0	3.2/8.0	3.7/9.2	4.1/10.3	4.6/11.5
	Brg (2)	1.9/4.7	2.2/5.4	2.4/6.0	2.7/6.7	2.0/5.0	2.3/5.8	2.6/6.5	2.9/7.2	2.3/5.7	2.6/6.6	3.0/7.4	3.3/8.2
14'	Depth	11 1/4"	11 7/8"	14"	14"	11 7/8"	11 7/8"	14"	14"	14"	14"	14"	16"
	Brg (SPF)	3.1/7.6	3.5/8.7	3.9/9.8	4.4/10.9	3.3/8.2	3.8/9.4	4.2/10.5	4.7/11.7	3.7/9.3	4.3/10.7	4.8/12.0	5.4/13.4
	Brg (2)	2.2/5.5	2.5/6.2	2.8/7.0	3.1/7.8	2.4/5.9	2.7/6.7	3.0/7.5	3.4/8.4	2.7/6.7	3.1/7.6	3.5/8.6	3.8/9.6
16'	Depth	14"	14"	14"	16"	14"	14"	16"	16"	14"	16"	16"	18"
	Brg (SPF)	3.5/8.7	4.0/9.9	4.5/11.2	5.0/12.4	3.8/9.4	4.3/10.7	4.8/12.0	5.4/13.4	4.3/10.7	4.9/12.2	5.5/13.7	6.1/15.3
	Brg (2)	2.5/6.3	2.9/7.1	3.2/8.0	3.6/8.9	2.7/6.7	3.1/7.7	3.5/8.6	3.8/9.6	3.1/7.7	3.5/8.7	3.9/9.8	4.4/10.9
16'9"	Depth	14"	14"	16"	16"	14"	16"	16"	16"	16"	16"	18"	
	Brg (SPF)	3.7/9.1	4.2/10.4	4.7/11.7	5.2/13.0	3.9/9.8	4.5/11.2	5.1/12.6	5.6/14.0	4.5/11.2	5.1/12.8	5.8/14.4	
	Brg (2)	2.6/6.5	3.0/7.5	3.4/8.4	3.7/9.3	2.8/7.0	3.2/8.0	3.6/9.0	4.0/10.0	3.2/8.0	3.7/9.1	4.1/10.3	
18'	Depth	16"	16"	16"	18"	16"	16"	18"	18"	16"	18"	18"	
	Brg (SPF)	3.9/9.8	4.5/11.2	5.0/12.6	5.6/14.0	4.2/10.5	4.8/12.0	5.4/13.5	6.0/15.0	4.8/12.0	5.5/13.7	6.2/15.4	
	Brg (2)	2.8/7.0	3.2/8.0	3.6/9.0	4.0/10.0	3.0/7.6	3.5/8.6	3.9/9.7	4.3/10.8	3.5/8.6	3.9/9.8	4.4/11.0	
20'	Depth	16"	18"	18"		18"	18"	18"		18"			
	Brg (SPF)	4.4/10.9	5.0/12.4	5.6/14.0		4.7/11.7	5.4/13.4	6.0/15.0		5.4/13.3			
	Brg (2)	3.1/7.8	3.6/8.9	4.0/10.0		3.4/8.4	3.8/9.6	4.3/10.8		3.8/9.6			



- Spans indicated are clear spans and are worst case for simple or continuous spans.
- Bearings required in inches is indicated for both Bearing (SPF) plates and for Bearing (2) applications on columns. The first number is bearing required at ends of beams followed by bearing required at interior supports for continuous applications.
- For continuous spans the shorter span must be greater than 40% of the longer span to avoid uplift.
- Deflection limited to LL/360, TL / 240.
- Floor Loads are 40 PSF live, 12 PSF dead
- Roof loads are assumed to be bearing on exterior walls only plus 2 foot overhang.
- Beams to have continuous lateral support along compression edge.
- The weight of the exterior wall is assumed to be 80 PLF.

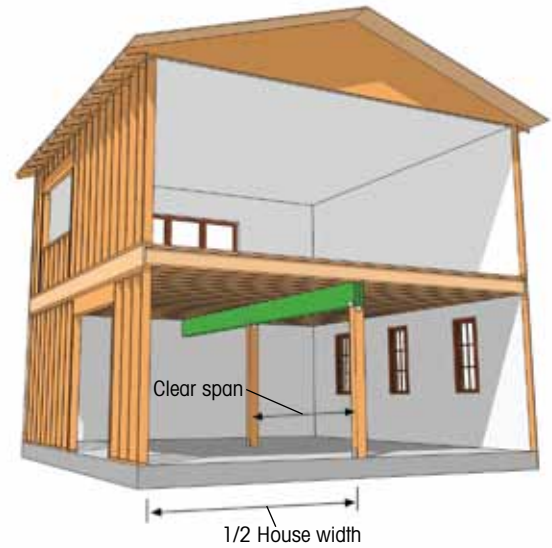
# SIZING CHARTS

## Floor Beam – One Story Girder Supporting 1/2 Floor Load

Beam Span and Condition	3 1/2" Wide – 2 Ply				5 1/4" Wide – 3 Ply				
	House Depth				House Depth				
	24'	28'	32'	36'	24'	28'	32'	36'	
6'	Depth	5 1/2"	7 1/4"	7 1/4"	9 1/4"	5 1/2"	5 1/2"	5 1/2"	5 1/2"
	Brg (SPF)	1.6/4.0	1.9/4.7	2.2/5.4	2.5/6.1	1.5/3.5	1.5/3.5	1.5/3.6	1.6/4.0
	Brg (2)	1.5/3.5	1.5/3.5	1.6/3.9	1.8/4.4	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5
8'	Depth	9 1/4"	9 1/4"	9 1/2"	11 1/4"	7 1/4"	7 1/4"	7 1/4"	9 1/4"
	Brg (SPF)	2.2/5.4	2.5/6.3	2.8/7.2	3.3/8.2	1.5/3.6	1.7/4.2	1.9/4.8	2.2/5.4
	Brg (2)	1.6/3.9	1.8/4.5	2.1/5.2	2.4/5.8	1.5/3.5	1.5/3.5	1.5/3.5	1.6/3.9
10'	Depth	9 1/4"	11 1/4"	11 7/8"	14"	9 1/4"	9 1/4"	9 1/4"	9 1/4"
	Brg (SPF)	2.7/6.7	3.2/7.9	3.6/9.0	4.0/9.8	1.8/4.5	2.1/5.2	2.4/6.0	2.6/6.5
	Brg (2)	1.9/4.8	2.3/5.6	2.6/6.5	2.8/7.0	1.5/3.5	1.5	1.7/4.3	1.9/4.7
12'	Depth	11 1/4"	14"	14"	16"	9 1/2"	11 1/4"	11 1/4"	11 1/4"
	Brg (SPF)	3.2/8.1	3.7/9.3	4.1/10.3	4.5/11.2	2.2/5.4	2.5/6.2	2.7/6.8	3.0/7.4
	Brg (2)	2.3/5.8	2.7/6.7	3.0/7.4	3.2/8.0	1.6/3.8	1.8/4.4	2.0/4.9	2.1/5.3
14'	Depth	14"	14"	16"	18"	11 1/4"	11 1/4"	11 7/8"	11 7/8"
	Brg (SPF)	3.7/9.3	4.2/10.4	4.6/11.5	5.0/12.5	2.5/6.2	2.8/6.9	3.1/7.6	3.3/8.3
	Brg (2)	2.7/6.7	3.0/7.4	3.3/8.2	3.6/9.0	1.8/4.4	2.0/5.0	2.2/5.4	2.4/5.9
16'	Depth	16"	16"	18"		14"	14"	14"	14"
	Brg (SPF)	4.1/10.2	4.6/11.4	5.1/12.6		2.7/6.8	3.0/7.6	3.4/8.4	3.7/9.1
	Brg (2)	2.9/7.3	3.3/8.2	3.6/9.1		2.0/4.9	2.2/5.4	2.4/6.0	2.6/6.6
18'	Depth	16"	18"			14"	14"	16"	16"
	Brg (SPF)	4.5/11.1	5.0/12.5			3.0/7.4	3.3/8.3	3.7/9.1	4.0/10.0
	Brg (2)	3.2/8.0	3.6/8.9			2.1/5.3	2.4/5.9	2.6/6.6	2.9/7.2
20'	Depth	18"				16"	16"	16"	18"
	Brg (SPF)	4.8/12.0				3.2/7.9	3.6/8.9	4.0/9.9	4.3/10.8
	Brg (2)	3.5/8.6				2.3/5.7	2.6/6.4	2.9/7.1	3.1/7.8

### Notes Apply to Both Floor Beam Tables

- Spans indicated are clear spans and are worst case for simple or continuous spans.
- Bearings required in inches is indicated for both Bearing (SPF) plates and for Bearing (2) applications on columns. The first number is bearing required at ends of beams followed by bearing required at interior supports for continuous applications.
- Continuous spans must have shorter span at least 40% of the length of longer span to avoid uplift.
- Tables assume no roof loads. Floor loads are 40 PSF live and 12 PSF dead.
- Live loads reduced per IBC 1607.9.
- Deflection limited to L/360 LL and L/240 TL.
- Beams must be laterally supported along compression edge.

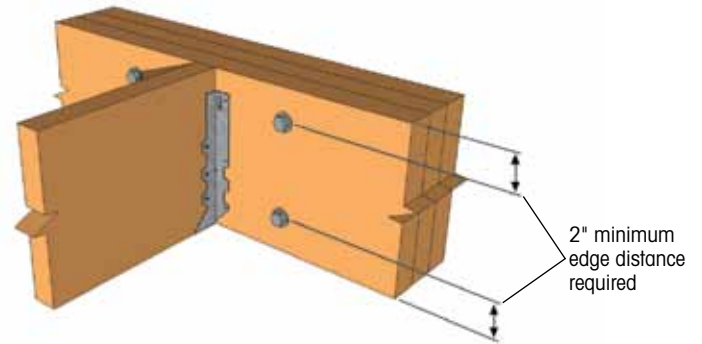
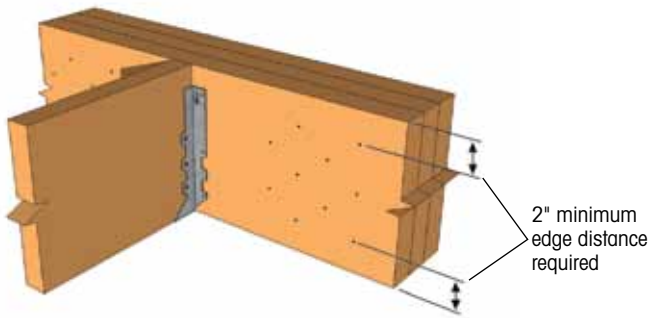


## Floor Beam – Two Story

Beam Span and Condition	3 1/2" Wide – 2 Ply				5 1/4" Wide – 3 Ply				
	House Depth				House Depth				
	24'	28'	32'	36'	24'	28'	32'	36'	
6'	Depth	11 1/4"	11 1/4"	14"	14"	9 1/4"	9 1/4"	9 1/4"	9 1/2"
	Brg (SPF)	3.4/8.6	4.0/9.9	4.4/10.9	4.8/11.9	2.5/5.6	2.6/6.5	2.9/7.1	3.1/7.8
	Brg (2)	2.5/6.1	2.8/7.0	3.1/7.7	3.4/8.4	1.6/4.0	1.9/4.6	2.1/5.1	2.2/5.5
8'	Depth	14"	16"	16"	18"	9 1/2"	11 1/4"	11 1/4"	11 7/8"
	Brg (SPF)	4.4/10.9	4.8/12.2	5.4/13.4	5.9/14.7	2.9/7.1	3.2/8.0	3.5/8.8	3.9/9.6
	Brg (2)	3.1/7.7	3.5/8.6	3.8/9.5	4.2/10.4	2.1/5.1	2.3/5.7	2.5/6.3	2.8/6.9
10'	Depth	16"	18"			11 1/4"	14"	14"	16"
	Brg (SPF)	5.1/12.8	5.7/14.3			3.4/8.4	3.8/9.4	4.2/10.4	4.6/11.4
	Brg (2)	3.7/9.1	4.1/10.2			2.4/6.0	2.7/6.7	3.0/7.4	3.3/8.1
12'	Depth	18"				14"	16"	16"	18"
	Brg (SPF)	5.9/14.6				3.9/9.6	4.3/10.8	4.8/11.9	5.2/13.1
	Brg (2)	4.2/10.4				2.8/6.9	3.1/7.7	3.4/8.5	3.7/9.3
14'	Depth					16"	16"	18"	
	Brg (SPF)					4.3/10.8	4.9/12.1	5.4/13.4	
	Brg (2)					3.1/7.7	3.5/8.7	3.9/9.6	
16'	Depth					18"	18"		
	Brg (SPF)					4.8/12.0	5.4/13.5		
	Brg (2)					3.4/8.6	3.9/9.6		
18'	Depth					18"			
	Brg (SPF)					5.3/13.1			
	Brg (2)					3.8/9.4			

- Interior wall assumed to be 60 PLF.





## Fasteners

Test		Nearest SPP Combination Recommended
Withdrawal 8d Nail Installed in Face	Withdrawal	Red Maple (0.58)
Withdrawal 8d Nail Installed in Edge	Withdrawal	
Bearing 10d Nail Installed in Face	Loaded in L Direction	Western White Pine (0.40)
	Loaded in X Direction	
Bearing 10d Nail Installed in Edge	Loaded in L Direction	
	Loaded in X Direction	
Bearing Loaded in Parallel Direction	1/2" Bolt	Red Maple (0.58)
	3/4" Bolt	
Bearing Loaded in Perpendicular Direction	1/2" Bolt	Red Pine (0.44)
	3/4" Bolt	

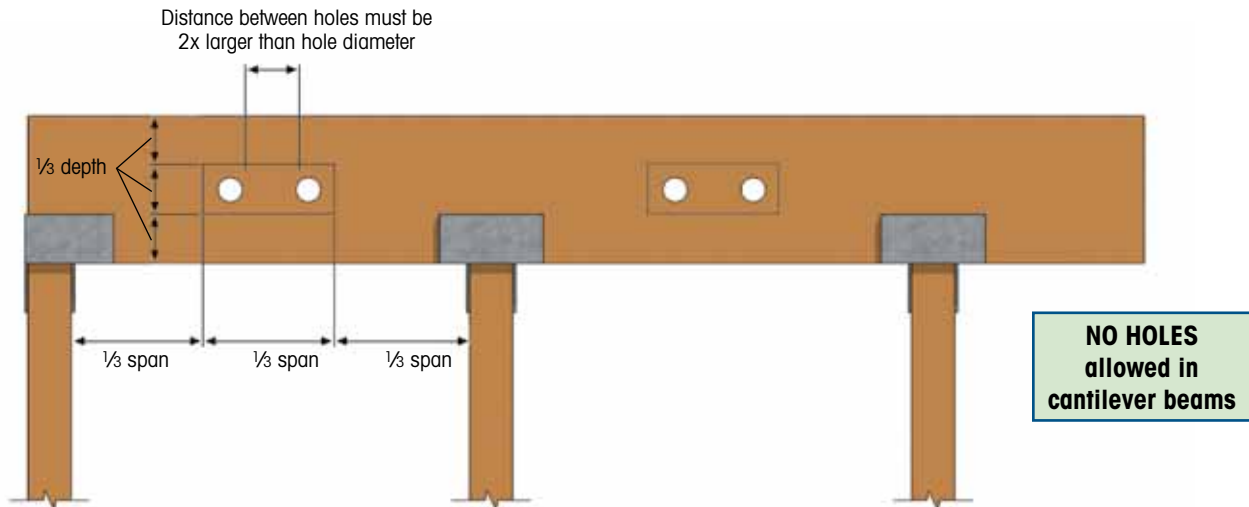
- Allowable values for nails noted in the applicable code are applicable to the Ultralam™ LVL for conditions and species noted in the table.

## Allowable Side Loads

Type of Fastener	Number of Rows	2 Ply member		3 Ply Member		4 Ply Member	
10d (.128 x 3") Nails	2	12" o.c.	300	12" o.c.	225	N/A	
		6" o.c.	600	6" o.c.	450		
		4" o.c.	900	4" o.c.	675		
10d (.128 x 3") Nails	3	12" o.c.	450	12" o.c.	340	N/A	
		6" o.c.	900	6" o.c.	680		
		4" o.c.	1350	4" o.c.	1020		
1/2" A307 Through Bolts	2	24" o.c.	415	24" o.c.	310	24" o.c.	275
		19.2" o.c.	520	19.2" o.c.	390	19.2" o.c.	345
		16" o.c.	630	16" o.c.	470	16" o.c.	420
		12" o.c.	830	12" o.c.	620	12" o.c.	550

- Loads shown are allowable load applied to side of beam, given in Pounds per lineal foot.
- Bolts to have washers. Holes to be pre-drilled to 1/32 to 1/16" Maximum over the diameter of the bolt.
- Specific Gravity of 0.44 used for bolted connections. SG= 0.40 used for nailed connections.
- Values listed are for 100% load duration. May be increased 15% for snow loading and 25% for non-snow roof loads where allowed by code.
- Minimum edge distance for fasteners to be 2". Minimum end distance for bolts to end of beam to be 6".
- Beam adequacy should be checked using PLF or application tables or by design professional.
- When using nails on three ply beams, specified nail pattern must be installed from both sides of the beam.
- For applications outside the scope of this table consult a design professional.

# HOLE CHART AND TAPERED END CUTS

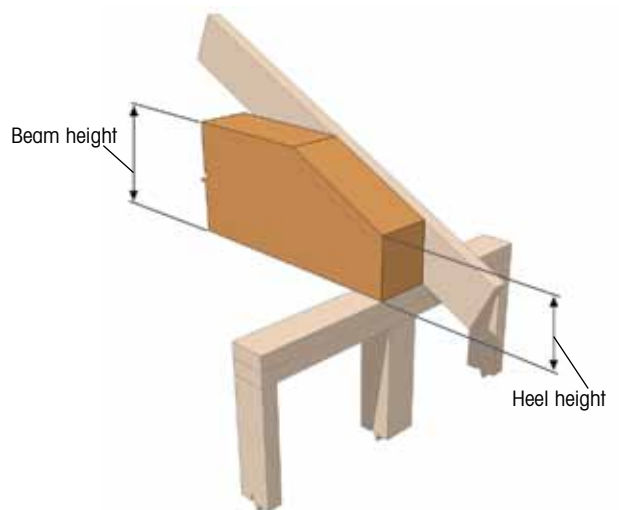


## Allowable Holes

- All beams must be in the middle third of the span and in the middle third of the beam depth.
- Holes must have a 2 diameter spacing between adjacent holes.
- Holes should be round and carefully cut to avoid damage to beam.
- Three holes maximum per beam.
- In beams greater than 7 1/2" and where length of beam is greater than 11 times the depth of the beam, an additional 1" diameter hole may be placed in the middle third of the beam and no closer than 6 inches from the bearing.

## Allowable Reactions for 3 1/2" Wide Beams

Beam Depth	Roof Slope	Height at Heel								
		4	4 1/2	5	5 1/2	6	6 1/2	7	7 1/2	8
7 1/4"	4/12	2770	3175	3580	3805	3885	3890	3890	3890	3890
	6/12	3470	3715	3850	3890	3890	3890	3890	3890	3890
	8/12	3780	3870	3890	3890	3890	3890	3890	3890	3890
9 1/4"	4/12	2770	3040	3305	3575	3885	4435	4730	4900	4960
	6/12	3085	3415	3970	4370	4650	4830	4930	4960	4960
	8/12	3880	4275	4560	4755	4880	4945	4960	4960	4960
11 1/4"	4/12	2770	3040	3305	3575	3840	4110	4380	4790	5205
	6/12	3085	3350	3620	3890	4340	4865	5205	5205	5205
	8/12	3395	3735	4350	4835	5205	5205	5205	5205	5205
14"	4/12		3040	3305	3575	3845	4110	4380	4650	4915
	6/12	3085	3350	3620	3890	4155	4425	4695	4960	5205
	8/12	3395	3665	3935	4200	4470	5080	5205	5205	5205
16"	4/12				3575	3845	4110	4380	4650	4915
	6/12			3620	3890	4155	4725	4695	4960	5205
	8/12		3665	3935	4200	4470	4740	5005	5205	5205
18"	4/12						4110	4380	4650	4915
	6/12				3890	4155	4425	4690	4960	5205
	8/12			3935	4200	4470	4740	5005	5205	5205



- Lateral support must be provided at bearing and along compression (top) edge of beam.
- No taper cut is allowed when inside face is less than 40% of beam depth.
- No holes or concentrated loads allowed within tapered cut.
- For 1 3/4" and 5 1/4" beams multiply by 0.5 and 1.5 respectively.
- Loads indicated are allowable reaction limited by shear in the beam or by bearing.
- Bearing assumed to be 3 1/2" wide and assumes bearing is on plate material with F<sub>c</sub> perp of 425 psi.
- Shear load in beams assumes snow load (1.15 DOL). No increase in bearing stresses for DOL permitted.
- Loads are for vertical downward loads only. Consult a design professional for uplift loads and other conditions.

Simpson Strong-Tie®						USP Structural Connectors®				
Supported Width	Depth	Top Mounted Hangers		Face Mounted Hangers		Depth	Top Mounted Hangers		Face Mounted Hangers	
		Hanger	Capacity* (100%)	Hanger	Capacity (100%)		Hanger	Capacity (100%)	Hanger	Capacity (100%)
1 3/4"	7 1/4"	WP1.81/7.25	2600	HU7	1540	7 1/4"	PHXU17725	3800	HD1770	1700
	9 1/4"	LBV1.81/9.25	2060	HU9	2305	9 1/4"	BPH17925	2870	HD17925	2180
	9 1/4"	WPU1.81/9.25	4165	HUS1.81/10	4705	9 1/4"	PHXU17925	3800	HUS179	4570
	9 1/2"	LBV1.81/9.5	2060	HU9	2305	9 1/2"	BPH1795	2870	HD17925	2180
	9 1/2"	WP9	2600	HUS1.81/10	4705	9 1/2"	PHXU1795	3800	HUS179	4570
	11 1/4"	LBV1.81/11.25	2060	HU11	2820	11 1/4"	BPH17112	2870	HD17112	2470
	11 1/4"	WPU1.81/11.25	4165	HUS1.81/10	4705	11 1/4"	PHXU17112	3800	HUS179	4570
	11 7/8"	MIT1.88	1665	HU11	2820	11 7/8"	BPH17118	2870	HD17112	2470
	11 7/8"	BA1.81/11.88	2665	HUS1.81/10	4705	11 7/8"	PHXU17118	3800	HUS179	4570
	14"	MIT1.81/14	1665	HU14	3590	14"	BPH1714	2870	HD1714	2670
14"	WP14	2600	HUS1.81/10	4705	14"	PHXU1714	3800	HUS179	4570	
3 1/2"	7 1/4"	WPU3.56/7.25	4165	HHUS48	3615	7 1/4"				
	9 1/4"	HB3.56/9.25	3820	HHUS410	4835	9 1/4"	PHM35925	3220	THD410	4610
	9 1/4"	HWU3.56/9.25	5415	HGUS410	7825	9 1/4"	PHXU35925	5720	THDH410	7100
	9 1/2"	HB3.56/9.5	3820	HHUS410	4835	9 1/2"	PHM3595	3220	THD410	4610
	9 1/2"	HWU3.56/9.5	5415	HGUS410	7825	9 1/2"	PHXU3595	5720	THDH410	7100
	11 1/4"	HB3.56/11.25	3820	HHUS410	4835	11 1/4"	PHM35112	3220	THD412	5820
	11 1/4"	HWU3.56/11.25	5415	HGUS412	8255	11 1/4"	PHXU35112	5720	THDH412	8470
	11 7/8"	HB3.56/11.88	3820	HHUS410	4835	11 7/8"	PHM35118	3220	THD412	5820
	11 7/8"	HWU3.56/11.88	5415	HGUS412	8255	11 7/8"	PHXU35118	5720	THDH412	8470
	14"	HB3.56/14	3820	HHUS410	4835	14"	PHM3514	3220	THD412	5820
	14"	HWU3.56/14	5415	HGUS414	8685	14"	PHXU3514	5720	THDH412	8470
	16"	HWU3.56/16	5415	HGUS414	8685	16"	PHXU3516	5720	THD414	6060
	16"	HGLTV3.516	6770			16"	HLBH3516	9130	THDH414	8470
	18"	HWU3.56/18	5415	HGUS414	8685	18"	PHXU3518	5720	THD414	6060
18"	HGLTV3.518	6770			18"	HLBH3518	9130	THDH414	8470	
5 1/4"	7 1/4"	WPU5.50/7.25	4165	HGUS5.50/8	6415	7 1/4"				
	9 1/4"	GLTV5.50/9.25	5145	HHUS5.50/10	4835	9 1/4"	PHXU55925	5720	THD610	4870
	9 1/2"	GLTV5.50/9.5	5145	HHUS5.50/10	4835	9 1/2"	PHXU5595	5720	THD610	4870
	11 1/4"	GLTV5.50/11.25	5145	HGUS5.50/12	8255	11 1/4"	PHXU559112	5720	THDH612	8540
	11 7/8"	HGLTV5.511	6770	HGUS5.50/12	8255	11 7/8"	HLBH55118	9130	THDH612	8540
	14"	HGLTV5.514	6770	HGUS5.50/14	8685	14"	HLBH5514	9130	THDH614	10010
	16"	HGLTV5.516	6770	HGUS5.50/14	8685	16"	HLBH5516	9130	THDH614	10010
16"	HGLTV5.518	6770	HGUS5.50/14	8685	16"	HLBH5518	9130	THDH614	10010	

\* Fill all round nail holes with 16d common.

## PRODUCT HANDLING AND STORAGE

### Proper Product Storage and Handling – Why is it important?

- **Customer Expectations** – customers expect quality, visually appealing wood products.
- **Structural Performance** – wet, weathered wood products lose strength and stiffness.
- **Dimensional Tolerances** – depth and thickness tolerances cannot be maintained on wet, weathered products and compromise the product warranty.

### Proper Product Storage – How is it accomplished?

- Tarping/covering is encouraged regardless if the bundle is opened.
- Allow the bottom of the bundle to breathe to avoid greenhouse effects.
- Sticker bundles at approximately 10' on-center, using stickers of appropriate size to insure no contact with ground and/or moisture or have prolonged exposure to the weather.
- Stickers should align for stacked bundles. Stacked bundles should not exceed 10'.
- Store products as shipped in a flat orientation.
- Do not re-wrap wet material.

### Proper Product Handling – How is it accomplished?

- Unload products carefully, by lifting with forklifts or cranes carefully to avoid damaging product. Support the bundles to reduce excessive bowing.
- Individual products should be handled in a manner that prevents physical damage.
- Except as described in technical literature, product should not be cut, drilled or notched.
- Product should never be used for unintended purposes such as ramps, storage and walk planks.
- Do not install wet or visually damaged product. Multi-ply products should be dry before nailing or bolting to avoid trapping moisture.
- Temporary construction loads that cause stresses beyond design limits are not permitted.
- 1 3/4" beams deeper than 14" must only be used in multi-ply application.
- Failure to follow proper procedures for handling, storage and installation could result in unsatisfactory performance, unsafe structures and voids the product warranty.
- Avoid handling or walking on wet product – slippery when wet.

**Follow these guidelines to ensure quality performance.**

### General Notes

- Loads should be checked by qualified designer as capacities can vary based on supporting member. Connector capacity may not meet maximum beam capacity.
- Loads listed assume that all hanger manufacture recommendations for fastener quantity and size are used as well as thickness of member the connector is attached to.
- Some loads may be increased for load duration; refer to manufacturer technical literature for other allowable load durations.
- Hanger information above can be found in each manufactures technical literature. For additional information refer to their literature.
- Hanger loads are for HF/SPF or have been adjusted for HF/SPF as per manufactures specification. For additional information refer to their literature.





Leading the new Engineered Wood Division is Chad Carnes. His many years and diverse roles in the wood industry have given him insight on building effective business partnerships throughout the entire supply chain.

Chad began his career as an engineer, and soon branched out into various sales and management roles within the ever-changing engineered wood business. Eventually, he was promoted to a Region General Manager with responsibility for a Sales and Customer Service Center that recognized over \$64 million in annual gross sales in engineered wood products.

Later, Chad accepted an executive role with a building materials supplier thus gaining even more valuable experience regarding supply chain and end user needs. Working closely with builders provided the opportunity to analyze channel expectations within the engineered wood products category. Chad expanded his skills when leading business development for a product manufacturer outside of engineered wood – reinforcing how simple, basic values transcend product categories to build the foundation of a valuable supply partner.

Because Chad has gained this vast array of knowledge in supply chain management and end user needs he has made a very clear goal for Richmond's Engineered Wood Division; "Our business will be personalized to meet not only our customer's Engineered Wood needs, but those of their customers as well, all delivered efficiently utilizing the backbone of RIFP's proven delivery system".



**Richmond International**  
ENGINEERED WOOD DIVISION

**PRODUCT WARRANTY**

Modern Lumber Technologies (MLT) warrants Ultralam™ Laminated Veneer Lumber to be free from defects due to faulty material or workmanship in the manufacturing process in accordance with our specifications.

MLT further warrants that Ultralam™ LVL, when correctly handled, stored and installed, will meet or exceed established design specifications for the normal life of the structure.

Richmond International Forest Products, LLC (RIFP) administers the Product Warranty on behalf of MLT for product sold by RIFP. For copies of the MLT warranty contact RIFP.

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