

BOOZERBEAM™

WINDOW AND DOOR HEADERS

1.6E • 1800F_b

- Stronger than 1.3E TimberStrand (LSL) and headers made in the field from 2-ply dimension lumber.
- Less expensive than LSL, LVL and PSL.
- Exceptional value in cost vs. performance.
- Unlike field made headers, these require no assembly at all. Just measure, cut and install. Saves time and money!
- Available in lengths from 6' up to 52'.
- More dimensionally stable than headers made from dimension lumber. Consistently straight and true.
- Constant 3 1/2" widths match 4" framing and require no blocking. Also available in 5 1/2" Widths
- Quality inspected by the American Institute of Timber Construction (AITC).



**HANDCRAFTED WITH PRIDE
IN THE U.S.A.**



American Institute of
Timber Construction



North American
Wholesale
Lumber Association

BOOZERBEAM 1.6E Window and Door Headers are available in 3 1/2" widths and depths that are compatible with I-Joists, conventional framing and traditional glulam. Standard depths include:

5 1/2" 7" 7 1/4" 7 1/2" 8 3/8" 9 1/4" 9 1/2" 11 1/4" 11 7/8" 14" 16"

Other depths available upon request.

Please contact your nearest **BOOZERBEAM** dealer for sizes available in your market.

BOOZERBEAM HOLDS UP!

FLOOR BEAMS
FLOOR LIVE LOAD

F_{bx} F_{vx} E_x C_D Deflection limit
1800 300 1.6 1.00 Span / 360
 psi psi million psi for LIVE LOAD

Simple Span Beams
For Preliminary Design Purposes
Lamination thickness: 1-3/8 in.

FLOOR LOAD FACTOR = 0.80

BEAM SIZE		BEAM	BEAM CAPACITY, UNIFORM LOAD w, pif																
Width b, in.	Depth d, in.	WEIGHT plf	SPAN, ft																
			4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0	8 1/4	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0	9 5/8	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0	11	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0	12 3/8	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0	13 3/4	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0	15 1/8	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0	16 1/2	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0	17 7/8	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0	19 1/4	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0	20 5/8	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3 1/2	5 1/2	4.8	1323 B	847 B	588 B	419 D	281 D	197 D	144 D	108 D	83 D	65 D	--	--	--	--	--	--	--
3 1/2	7	6.1	2144 B	1372 B	953 B	700 B	536 B	407 D	296 D	223 D	172 D	135 D	108 D	88 D	72 D	60 D	--	--	--
3 1/2	7 1/4	6.3	2300 B	1472 B	1022 B	751 B	575 B	452 D	329 D	247 D	191 D	150 D	120 D	98 D	80 D	67 D	56 D	--	--
3 1/2	8 3/8	7.3	3000 *	1964 B	1364 B	1002 B	767 B	606 B	491 B	381 D	294 D	231 D	185 D	150 D	124 D	103 D	87 D	74 D	63 D
3 1/2	9 1/4	8.1	3000 *	2396 B	1664 B	1222 B	936 B	739 B	599 B	495 B	396 D	311 D	249 D	203 D	167 D	139 D	117 D	100 D	85 D
3 1/2	9 1/2	8.3	3000 *	2527 B	1755 B	1289 B	987 B	780 B	632 B	522 B	429 D	337 D	270 D	220 D	181 D	151 D	127 D	108 D	93 D
3 1/2	11 1/4	9.8	3000 *	3000 *	2461 B	1808 B	1384 B	1094 B	886 B	732 B	615 B	524 B	448 D	365 D	300 D	250 D	211 D	179 D	154 D
3 1/2	11 7/8	10.4	3000 *	3000 *	2742 B	2015 B	1542 B	1219 B	987 B	816 B	685 B	584 B	429 D	353 D	295 D	248 D	211 D	181 D	181 D
3 1/2	12 5/8	11.0	3000 *	3000 *	3000 *	2277 B	1743 B	1377 B	1116 B	922 B	775 B	660 B	569 B	496 B	425 D	354 D	298 D	254 D	217 D
3 1/2	14	12.3	3000 *	3000 *	3000 *	2800 B	2144 B	1694 B	1372 B	1134 B	953 B	812 B	700 B	610 B	536 B	475 B	407 D	346 D	296 D
3 1/2	15 3/8	13.5	3000 *	3000 *	3000 *	3000 *	2586 B	2043 B	1655 B	1368 B	1149 B	979 B	844 B	735 B	646 B	573 B	511 B	458 D	393 D
3 1/2	16	14.0	3000 *	3000 *	3000 *	3000 *	2800 B	2212 B	1792 B	1481 B	1244 B	1060 B	914 B	796 B	700 B	620 B	553 B	496 B	442 D
3 1/2	16 1/2	14.4	3000 *	3000 *	3000 *	3000 *	2978 B	2353 B	1906 B	1575 B	1323 B	1128 B	972 B	847 B	744 B	659 B	588 B	528 B	476 B
3 1/2	18	15.8	3000 *	3000 *	3000 *	3000 *	3000 *	2800 B	2268 B	1874 B	1575 B	1342 B	1157 B	1008 B	886 B	785 B	700 B	628 B	567 B
5 1/2	5 1/2	7.6	2080 B	1331 B	924 B	659 D	441 D	310 D	226 D	170 D	131 D	103 D	--	--	--	--	--	--	--
5 1/2	7	9.6	3369 B	2156 B	1497 B	1100 B	842 B	639 D	466 D	350 D	270 D	212 D	170 D	138 D	114 D	95 D	--	--	--
5 1/2	7 1/4	10.0	3614 B	2313 B	1606 B	1180 B	903 B	710 D	518 D	389 D	299 D	236 D	189 D	153 D	126 D	105 D	89 D	--	--
5 1/2	8 3/8	11.5	4822 B	3086 B	2143 B	1575 B	1206 B	953 B	772 B	599 D	462 D	363 D	291 D	236 D	195 D	162 D	137 D	116 D	100 D
5 1/2	9 1/4	12.7	5882 B	3765 B	2614 B	1921 B	1471 B	1162 B	941 B	778 B	622 D	489 D	392 D	318 D	262 D	219 D	184 D	157 D	134 D
5 1/2	9 1/2	13.1	6000 *	3971 B	2758 B	2026 B	1551 B	1226 B	993 B	820 B	674 D	530 D	424 D	345 D	284 D	237 D	200 D	170 D	146 D
5 1/2	11 1/4	15.5	6000 *	5569 B	3867 B	2841 B	2175 B	1719 B	1392 B	1151 B	967 B	824 B	705 D	573 D	472 D	394 D	332 D	282 D	242 D
5 1/2	11 7/8	16.3	6000 *	6000 *	4309 B	3166 B	2424 B	1915 B	1551 B	1282 B	1077 B	918 B	791 B	674 D	555 D	463 D	390 D	332 D	284 D
5 1/2	12 5/8	17.4	6000 *	6000 *	4870 B	3578 B	2740 B	2165 B	1753 B	1449 B	1218 B	1037 B	895 B	779 B	667 D	556 D	469 D	398 D	342 D
5 1/2	14	19.3	6000 *	6000 *	5989 B	4400 B	3369 B	2662 B	2156 B	1782 B	1497 B	1276 B	1100 B	958 B	842 B	746 B	639 D	543 D	466 D
5 1/2	15 3/8	21.1	6000 *	6000 *	6000 *	5307 B	4063 B	3210 B	2600 B	2149 B	1806 B	1539 B	1327 B	1156 B	1013 B	895 B	796 B	712 B	617 D
5 1/2	16	22.0	6000 *	6000 *	6000 *	5747 B	4400 B	3477 B	2816 B	2327 B	1956 B	1666 B	1437 B	1250 B	1095 B	967 B	860 B	770 B	693 B
5 1/2	16 1/2	22.7	6000 *	6000 *	6000 *	6000 *	4679 B	3697 B	2995 B	2475 B	2080 B	1772 B	1528 B	1328 B	1163 B	1027 B	914 B	818 B	736 B
5 1/2	18	24.8	6000 *	6000 *	6000 *	6000 *	5569 B	4400 B	3564 B	2945 B	2475 B	2109 B	1812 B	1573 B	1378 B	1217 B	1082 B	969 B	872 B
5 1/2	0	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5 1/2	0	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE SPECIFICATIONS: This table applies to straight, simply supported glued laminated timber beams under dry conditions of use.

Beams must be laterally supported at the top along the length of the beam and at the top and bottom at the ends.

The load carrying capacities tabulated are for total load including the weight of the member.

BEAM WEIGHT: 36.0 pounds per cubic foot was used to determine beam weight per lineal foot shown in the table.

DESIGN VALUE MODIFICATIONS: The allowable stress in bending, F_{bx} , has been adjusted by the AITC volume factor, C_v .

For determination of load carrying capacities governed by shear, loads within a distance "d" (the depth of the beam) from the ends have been neglected.

DEFLECTION LIMITS: For floor beams, deflection is limited to span/360 for live load.

Live load of 80% of total load is used.

CONTROLLING VALUES: Values marked with a D are controlled by deflection, B are bending controlled, and S are shear controlled.

SPAN: Span is defined as the length from centerline to centerline of bearing. This span is the length used in standard engineering equations to calculate deflection, bending and shear.

* The values have been limited to reasonable capacities. Engineering calculations may allow for greater capacities.

While these capacity tables have been prepared in accordance with recognized engineering principles and are based on the most accurate and reliable technical data available, these tables should not be used or relied upon for any general or specific application without competent professional examination and verification of their accuracy, suitability, and applicability by a licensed professional engineer, designer, or architect.

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TABLE 18F-V2

SOUTHERN PINE

THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION

Structural Glued Laminated Timber

FLOOR BEAMS

FLOOR LIVE LOAD

F_{bx} 1800 psi **F_{vx} 300 psi** **E_x 1.6 million psi** **C_D 1.00** **Deflection limit Span / 360 for LIVE LOAD**

Simple Span Beams
For Preliminary Design Purposes

Lamination thickness: 1-3/8 in.

FLOOR LOAD FACTOR = 0.80

BEAM SIZE		BEAM WEIGHT plf	BEAM CAPACITY, UNIFORM LOAD w, plf																	
Width b, in.	Depth d, in.		SPAN, ft		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
0	8 1/4	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0	9 5/8	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0	11	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0	12 3/8	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0	13 3/4	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0	15 1/8	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0	16 1/2	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0	17 7/8	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0	19 1/4	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0	20 5/8	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3 1/2	5 1/2	4.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3 1/2	7	6.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3 1/2	7 1/4	6.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3 1/2	8 3/8	7.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3 1/2	9 1/4	8.1	74 D	64 D	56 D	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3 1/2	9 1/2	8.3	80 D	70 D	61 D	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3 1/2	11 1/4	9.8	133 D	116 D	101 D	89 D	79 D	70 D	63 D	56 D	--	--	--	--	--	--	--	--	--	--
3 1/2	11 7/8	10.4	156 D	136 D	119 D	105 D	93 D	82 D	74 D	66 D	59 D	--	--	--	--	--	--	--	--	--
3 1/2	12 5/8	11.0	188 D	163 D	143 D	126 D	111 D	99 D	88 D	79 D	71 D	64 D	58 D	--	--	--	--	--	--	--
3 1/2	14	12.3	256 D	223 D	195 D	172 D	152 D	135 D	120 D	108 D	97 D	88 D	80 D	72 D	66 D	60 D	55 D	--	--	--
3 1/2	15 3/8	13.5	339 D	295 D	258 D	227 D	201 D	179 D	160 D	143 D	129 D	116 D	105 D	96 D	87 D	80 D	73 D	67 D	--	--
3 1/2	16	14.0	382 D	332 D	291 D	256 D	227 D	201 D	180 D	161 D	145 D	131 D	119 D	108 D	98 D	90 D	83 D	76 D	--	--
3 1/2	16 1/2	14.4	419 D	365 D	319 D	281 D	248 D	221 D	197 D	177 D	159 D	144 D	130 D	118 D	108 D	99 D	91 D	83 D	--	--
3 1/2	18	15.8	514 B	467 B	414 D	365 D	323 D	287 D	256 D	230 D	207 D	187 D	169 D	154 D	140 D	128 D	118 D	108 D	--	--
5 1/2	5 1/2	7.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5 1/2	7	9.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5 1/2	7 1/4	10.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5 1/2	8 3/8	11.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5 1/2	9 1/4	12.7	116 D	101 D	88 D	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5 1/2	9 1/2	13.1	126 D	109 D	96 D	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5 1/2	11 1/4	15.5	209 D	182 D	159 D	140 D	124 D	110 D	98 D	88 D	--	--	--	--	--	--	--	--	--	--
5 1/2	11 7/8	16.3	246 D	214 D	187 D	165 D	146 D	129 D	116 D	104 D	93 D	--	--	--	--	--	--	--	--	--
5 1/2	12 5/8	17.4	295 D	257 D	225 D	198 D	175 D	155 D	139 D	124 D	112 D	101 D	92 D	--	--	--	--	--	--	--
5 1/2	14	19.3	402 D	350 D	306 D	270 D	238 D	212 D	189 D	170 D	153 D	138 D	125 D	114 D	104 D	95 D	87 D	--	--	--
5 1/2	15 3/8	21.1	533 D	464 D	406 D	357 D	316 D	281 D	251 D	225 D	202 D	183 D	166 D	151 D	137 D	126 D	115 D	106 D	--	--
5 1/2	16	22.0	601 D	522 D	457 D	402 D	356 D	316 D	283 D	253 D	228 D	206 D	187 D	170 D	155 D	142 D	130 D	119 D	--	--
5 1/2	16 1/2	22.7	659 D	573 D	501 D	441 D	390 D	347 D	310 D	278 D	250 D	226 D	205 D	186 D	170 D	155 D	142 D	131 D	--	--
5 1/2	18	24.8	789 B	717 B	651 D	573 D	507 D	451 D	402 D	361 D	325 D	293 D	266 D	242 D	220 D	202 D	185 D	170 D	--	--
5 1/2	0	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5 1/2	0	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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For determination of load carrying capacities governed by shear, loads within a distance "d" (the depth of the beam) from the ends have been neglected.

DEFLECTION LIMITS: For floor beams, deflection is limited to span/360 for live load.

Live load of 80% of total load is used.

CONTROLLING VALUES: Values marked with a D are controlled by deflection, B are bending controlled, and S are shear controlled.

SPAN: Span is defined as the length from centerline to centerline of bearing. This span is the length used in standard engineering equations to calculate deflection, bending and shear.

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**ROOF BEAMS
SNOW LOAD**

F_{bx} F_{vx} E_x C_D Deflection limit
1800 300 1.6 1.15 Span / 180
 psi psi million for TOTAL LOAD
 psi

Simple Span Beams
 For Preliminary Design Purposes
 Lamination thickness: 1-3/8 in.

BEAM SIZE		BEAM WEIGHT plf	BEAM CAPACITY, UNIFORM LOAD w, plf																	
Width b, in.	Depth d, in.		SPAN, ft	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0	8 1/4	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0	9 5/8	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0	11	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0	12 3/8	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0	13 3/4	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0	15 1/8	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0	16 1/2	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0	17 7/8	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0	19 1/4	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0	20 5/8	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3 1/2	5 1/2	4.8	1522 B	974 B	676 B	497 B	380 B	301 B	230 D	173 D	133 D	105 D	--	--	--	--	--	--	--	--
3 1/2	7	6.1	2465 B	1578 B	1096 B	805 B	616 B	487 B	394 B	326 B	274 B	216 D	173 D	141 D	116 D	97 D	--	--	--	--
3 1/2	7 1/4	6.3	2645 B	1693 B	1175 B	864 B	661 B	522 B	423 B	350 B	294 B	240 D	192 D	156 D	129 D	107 D	90 D	--	--	--
3 1/2	8 3/8	7.3	3000 *	2259 B	1568 B	1152 B	882 B	697 B	565 B	467 B	392 B	334 B	288 B	241 D	198 D	165 D	139 D	118 D	102 D	--
3 1/2	9 1/4	8.1	3000 *	2755 B	1913 B	1406 B	1076 B	850 B	689 B	569 B	478 B	408 B	351 B	306 B	267 D	223 D	188 D	160 D	137 D	--
3 1/2	9 1/2	8.3	3000 *	2906 B	2018 B	1483 B	1135 B	897 B	727 B	600 B	505 B	430 B	371 B	323 B	284 B	241 D	203 D	173 D	148 D	--
3 1/2	11 1/4	9.8	3000 *	3000 *	2830 B	2079 B	1592 B	1258 B	1019 B	842 B	708 B	603 B	520 B	453 B	398 B	353 B	314 B	282 B	246 D	--
3 1/2	11 7/8	10.4	3000 *	3000 *	3000 *	2317 B	1774 B	1401 B	1135 B	938 B	788 B	672 B	579 B	505 B	443 B	393 B	350 B	314 B	284 B	--
3 1/2	12 5/8	11.0	3000 *	3000 *	3000 *	2619 B	2005 B	1584 B	1283 B	1060 B	891 B	759 B	655 B	570 B	501 B	444 B	396 B	355 B	321 B	--
3 1/2	14	12.3	3000 *	3000 *	3000 *	3000 *	2465 B	1948 B	1578 B	1304 B	1096 B	934 B	805 B	701 B	616 B	546 B	487 B	437 B	394 B	--
3 1/2	15 3/8	13.5	3000 *	3000 *	3000 *	3000 *	2973 B	2349 B	1903 B	1573 B	1321 B	1126 B	971 B	846 B	743 B	658 B	587 B	527 B	476 B	--
3 1/2	16	14.0	3000 *	3000 *	3000 *	3000 *	3000 *	2544 B	2061 B	1703 B	1431 B	1219 B	1051 B	916 B	805 B	713 B	636 B	571 B	515 B	--
3 1/2	16 1/2	14.4	3000 *	3000 *	3000 *	3000 *	3000 *	2706 B	2192 B	1811 B	1522 B	1297 B	1118 B	974 B	856 B	758 B	676 B	607 B	548 B	--
3 1/2	18	15.8	3000 *	3000 *	3000 *	3000 *	3000 *	3000 *	2608 B	2156 B	1811 B	1543 B	1331 B	1159 B	1019 B	902 B	805 B	722 B	652 B	--
5 1/2	5 1/2	7.6	2392 B	1531 B	1063 B	781 B	598 B	472 B	362 D	272 D	209 D	165 D	--	--	--	--	--	--	--	--
5 1/2	7	9.6	3874 B	2479 B	1722 B	1265 B	969 B	765 B	620 B	512 B	430 B	339 D	272 D	221 D	182 D	152 D	--	--	--	--
5 1/2	7 1/4	10.0	4156 B	2660 B	1847 B	1357 B	1039 B	821 B	665 B	550 B	462 B	377 D	302 D	245 D	202 D	169 D	142 D	--	--	--
5 1/2	8 3/8	11.5	5545 B	3549 B	2465 B	1811 B	1386 B	1095 B	887 B	733 B	616 B	525 B	453 B	378 D	312 D	260 D	219 D	186 D	160 D	--
5 1/2	9 1/4	12.7	6000 *	4329 B	3007 B	2209 B	1691 B	1336 B	1082 B	895 B	752 B	640 B	552 B	481 B	420 D	350 D	295 D	251 D	215 D	--
5 1/2	9 1/2	13.1	6000 *	4567 B	3171 B	2330 B	1784 B	1409 B	1142 B	944 B	793 B	676 B	582 B	507 B	446 B	379 D	319 D	272 D	233 D	--
5 1/2	11 1/4	15.5	6000 *	6000 *	4447 B	3267 B	2502 B	1977 B	1601 B	1323 B	1112 B	947 B	817 B	712 B	625 B	554 B	494 B	443 B	387 D	--
5 1/2	11 7/8	16.3	6000 *	6000 *	4955 B	3641 B	2787 B	2202 B	1784 B	1474 B	1239 B	1056 B	910 B	793 B	697 B	617 B	551 B	494 B	446 B	--
5 1/2	12 5/8	17.4	6000 *	6000 *	5601 B	4115 B	3150 B	2489 B	2016 B	1666 B	1400 B	1193 B	1029 B	896 B	788 B	698 B	622 B	558 B	502 B	--
5 1/2	14	19.3	6000 *	6000 *	6000 *	5060 B	3874 B	3061 B	2479 B	2049 B	1722 B	1467 B	1265 B	1102 B	969 B	857 B	763 B	683 B	614 B	--
5 1/2	15 3/8	21.1	6000 *	6000 *	6000 *	6000 *	4672 B	3692 B	2990 B	2471 B	2077 B	1769 B	1526 B	1329 B	1165 B	1029 B	915 B	819 B	738 B	--
5 1/2	16	22.0	6000 *	6000 *	6000 *	6000 *	5060 B	3998 B	3238 B	2676 B	2249 B	1916 B	1652 B	1438 B	1260 B	1112 B	989 B	886 B	797 B	--
5 1/2	16 1/2	22.7	6000 *	6000 *	6000 *	6000 *	5381 B	4252 B	3444 B	2846 B	2392 B	2038 B	1757 B	1527 B	1337 B	1181 B	1051 B	940 B	846 B	--
5 1/2	18	24.8	6000 *	6000 *	6000 *	6000 *	6000 *	5060 B	4099 B	3387 B	2846 B	2425 B	2084 B	1809 B	1585 B	1400 B	1245 B	1114 B	1003 B	--
5 1/2	0	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5 1/2	0	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE SPECIFICATIONS: This table applies to straight, simply supported glued laminated timber beams under dry conditions of use.

Beams must be laterally supported at the top along the length of the beam and at the top and bottom at the ends.

The load carrying capacities tabulated are for total load including the weight of the member.

BEAM WEIGHT: 36.0 pounds per cubic foot was used to determine beam weight per lineal foot shown in the table.

DESIGN VALUE MODIFICATIONS: The allowable stress in bending, F_{bx} , has been adjusted by the AITC volume factor, C_v .

For determination of load carrying capacities governed by shear, loads within a distance "d" (the depth of the beam) from the ends have been neglected.

DEFLECTION LIMITS: For roof beams, deflection is limited to span /180 for total load.

CONTROLLING VALUES: Values marked with a D are controlled by deflection, B are bending controlled, and S are shear controlled.

SPAN: Span is defined as the length from centerline to centerline of bearing. This span is the length used in standard engineering equations to calculate deflection, bending and shear.

* The values have been limited to reasonable capacities. Engineering calculations may allow for greater capacities.

While these capacity tables have been prepared in accordance with recognized engineering principles and are based on the most accurate and reliable technical data available, these tables should not be used or relied upon for any general or specific application without competent professional examination and verification of their accuracy, suitability, and applicability by a licensed professional engineer, designer, or architect.

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TABLE 18F-V2
SOUTHERN PINE

THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION
Structural Glued Laminated Timber

ROOF BEAMS
SNOW LOAD

F_{bx} F_{vx} E_x C_D Deflection limit
1800 300 1.6 1.15 Span / 180
psi psi million psi for TOTAL LOAD

Simple Span Beams
For Preliminary Design Purposes
Lamination thickness: 1-3/8 in.

BEAM SIZE		BEAM WEIGHT plf	BEAM CAPACITY, UNIFORM LOAD w, plf															
Width b, in.	Depth d, in.		SPAN, ft															
			21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
0	8 1/4	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0	9 5/8	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0	11	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0	12 3/8	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0	13 3/4	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0	15 1/8	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0	16 1/2	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0	17 7/8	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0	19 1/4	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0	20 5/8	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3 1/2	5 1/2	4.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3 1/2	7	6.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3 1/2	7 1/4	6.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3 1/2	8 3/8	7.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3 1/2	9 1/4	8.1	118 D	103 D	90 D	--	--	--	--	--	--	--	--	--	--	--	--	--
3 1/2	9 1/2	8.3	128 D	111 D	97 D	--	--	--	--	--	--	--	--	--	--	--	--	--
3 1/2	11 1/4	9.8	213 D	185 D	162 D	142 D	126 D	112 D	100 D	90 D	--	--	--	--	--	--	--	--
3 1/2	11 7/8	10.4	250 D	217 D	190 D	167 D	148 D	132 D	118 D	105 D	95 D	--	--	--	--	--	--	--
3 1/2	12 5/8	11.0	291 B	261 D	229 D	201 D	178 D	158 D	141 D	127 D	114 D	103 D	93 D	--	--	--	--	--
3 1/2	14	12.3	358 B	326 B	298 B	274 B	243 D	216 D	193 D	173 D	156 D	141 D	127 D	116 D	106 D	97 D	88 D	--
3 1/2	15 3/8	13.5	432 B	393 B	360 B	330 B	304 B	280 B	255 D	229 D	206 D	186 D	169 D	153 D	140 D	128 D	117 D	108 D
3 1/2	16	14.0	467 B	426 B	390 B	357 B	328 B	303 B	280 B	258 D	232 D	210 D	190 D	173 D	158 D	144 D	132 D	121 D
3 1/2	16 1/2	14.4	497 B	453 B	414 B	379 B	349 B	322 B	298 B	276 B	255 D	230 D	208 D	190 D	173 D	158 D	145 D	133 D
3 1/2	18	15.8	591 B	537 B	490 B	449 B	413 B	381 B	353 B	328 B	305 B	284 B	266 B	246 D	224 D	205 D	188 D	173 D
5 1/2	5 1/2	7.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5 1/2	7	9.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5 1/2	7 1/4	10.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5 1/2	8 3/8	11.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5 1/2	9 1/4	12.7	186 D	162 D	141 D	--	--	--	--	--	--	--	--	--	--	--	--	--
5 1/2	9 1/2	13.1	201 D	175 D	153 D	--	--	--	--	--	--	--	--	--	--	--	--	--
5 1/2	11 1/4	15.5	334 D	291 D	254 D	224 D	198 D	176 D	157 D	141 D	--	--	--	--	--	--	--	--
5 1/2	11 7/8	16.3	393 D	342 D	299 D	263 D	233 D	207 D	185 D	166 D	149 D	--	--	--	--	--	--	--
5 1/2	12 5/8	17.4	454 B	411 D	359 D	316 D	280 D	249 D	222 D	199 D	179 D	162 D	147 D	--	--	--	--	--
5 1/2	14	19.3	556 B	505 B	461 B	423 B	382 D	339 D	303 D	272 D	244 D	221 D	200 D	182 D	166 D	152 D	139 D	--
5 1/2	15 3/8	21.1	667 B	607 B	554 B	508 B	467 B	431 B	399 B	360 D	324 D	292 D	265 D	241 D	220 D	201 D	184 D	169 D
5 1/2	16	22.0	721 B	656 B	599 B	549 B	505 B	466 B	431 B	400 B	365 D	330 D	299 D	272 D	248 D	226 D	208 D	191 D
5 1/2	16 1/2	22.7	766 B	696 B	636 B	582 B	536 B	494 B	458 B	425 B	395 B	362 D	328 D	298 D	272 D	248 D	228 D	209 D
5 1/2	18	24.8	908 B	825 B	753 B	690 B	635 B	586 B	542 B	503 B	468 B	437 B	408 B	383 B	353 D	322 D	296 D	272 D
5 1/2	0	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5 1/2	0	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE SPECIFICATIONS: This table applies to straight, simply supported glued laminated timber beams under dry conditions of use.

Beams must be laterally supported at the top along the length of the beam and at the top and bottom at the ends.

The load carrying capacities tabulated are for total load including the weight of the member.

BEAM WEIGHT: 36.0 pounds per cubic foot was used to determine beam weight per lineal foot shown in the table.

DESIGN VALUE MODIFICATIONS: The allowable stress in bending, F_{bx} , has been adjusted by the AITC volume factor, C_v .

For determination of load carrying capacities governed by shear, loads within a distance "d" (the depth of the beam) from the ends have been neglected.

DEFLECTION LIMITS: For floor beams, deflection is limited to span/360 for live load.

CONTROLLING VALUES: Values marked with a D are controlled by deflection, B are bending controlled, and S are shear controlled.

SPAN: Span is defined as the length from centerline to centerline of bearing. This span is the length used in standard engineering equations to calculate deflection, bending and shear.

* The values have been limited to reasonable capacities. Engineering calculations may allow for greater capacities.

While these capacity tables have been prepared in accordance with recognized engineering principles and are based on the most accurate and reliable technical data available, these tables should not be used or relied upon for any general or specific application without competent professional examination and verification of their accuracy, suitability, and applicability by a licensed professional engineer, designer, or architect.

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Performance Guide for 3 1/2” Window and Door Headers

Header Beam Type	Allow. Roof Load	Allow. Floor Load
2-Ply #2 dimension lbr 2 x 8 x 4'	1396 PLF Total Load	1225 PLF Total Load
2-Ply #2 dimension lbr 2 x 10 x 4'	1925 PLF Total Load	1697 PLF Total Load
2-Ply #2 dimension lbr 2 x 12 x 4'	2536 PLF Total Load	2249 PLF Total Load
1.3E LSL 5 1/2" x 4'	1539 PLF Total Load	1337 PLF Total Load
1.6E BoozerHeader 5 1/2" x 4'	1522 PLF Total Load	1323 PLF Total Load
1.3E LSL 7 1/4" x 4'	2609 PLF Total Load	2268 PLF Total Load
1.6E BoozerHeader 7" x 4'	2121 PLF Total Load	1845 PLF Total Load
1.6E BoozerHeader 8 3/8" x 4'	2761 PLF Total Load	2401 PLF Total Load
2-Ply #2 dimension lbr 2 x 8 x 6'	644 PLF Total Load	562 PLF Total Load
2-Ply #2 dimension lbr 2 x 10 x 6'	906 PLF Total Load	792 PLF Total Load
2-Ply #2 dimension lbr 2 x 12 x 6'	1222 PLF Total Load	1071 PLF Total Load
1.3E LSL 5 1/2" x 6'	615 PLF Total Load	590 PLF Total Load
1.6E BoozerHeader 5 1/2" x 6'	676 PLF Total Load	588 PLF Total Load
1.3E LSL 7 1/4" x 6'	1156 PLF Total Load	1004 PLF Total Load
1.6E BoozerHeader 7" x 6'	1096 PLF Total Load	953 PLF Total Load
1.6E BoozerHeader 8 3/8" x 6'	1562 PLF Total Load	1343 PLF Total Load
1.6E BoozerHeader 9 1/2" x 6'	1847 PLF Total Load	1606 PLF Total Load
2-Ply #2 dimension lbr 2 x 10 x 8'	517 PLF Total Load	451 PLF Total Load
2-Ply #2 dimension lbr 2 x 12 x 8'	704 PLF Total Load	615 PLF Total Load
1.3E LSL 7 1/4" x 8'	443 PLF Total Load	443 PLF Total Load
1.6E BoozerHeader 7" x 8'	616 PLF Total Load	536 PLF Total Load
1.3E LSL 8 5/8" x 8'	902 PLF Total Load	784 PLF Total Load
1.6E BoozerHeader 8 3/8" x 8'	882 PLF Total Load	755 PLF Total Load

*Values shown are maximum uniform loads on 4', 6' and 8' clear spans respectively that can be applied to each header in addition to its own weight.

BOOZERBEAM