BOOZERBEAM™

HIGH STRENGTH STRUCTURAL GLUED LAMINATED TIMBER
2.1E • 3000F$_b$ • 300F$_v$

BOOZERBEAM 2.1E is a high strength structural glulam beam that is made from the finest E-rated dense southern yellow pine lamstock and waterproof adhesives. Since it's rated to be at least as strong and as stiff as is PSL and LVL and also I-joist compatible in all its dimensions, it can be seamlessly integrated into any engineered wood system.

• Exceptional value in cost vs. performance.

• I-Joist compatible depths for seamless substitution.

• Available in any length up to 52'.

• Individual wrapping with water resistant paper available.

• Wax coated with LiquiSeal™.

• As strong and as stiff as is PSL and LVL.

• Made of the finest E-rated dense southern yellow pine lumber and waterproof adhesive available.

• Quality inspected by APA-The Engineered Wood Association..

HANDCRAFTED WITH PRIDE IN THE U.S.A.

NAWLA — NORTH AMERICAN WHOLESALE LUMBER ASSOCIATION

APA

BOOZERBEAM 2.1E High Strength Structural Glulam is available in widths of:

3 1/2"   5 1/4"   5 1/2"   7"   7 1/4"

and depths that are compatible with I-joists, conventional framing and traditional glulam.

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

BOOZERBEAM
HOLDS UP!

APA

3000Fb-2.1E-300Fv Southern Pine Glulam Roof Beams (lbf/ft) – Snow Load

Load Duration Factor = 1.15, Fbx = 3,000 psi, Fvx = 300 psi, Ex = 2,100,000 psi

3-1/2-INCH WIDTH										SPAN (ft)										
Depth (in.)	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48
7-1/4	1096	685	394	246	163	112	80	59	---	---	---	---	---	---	---	---	---	---	---	---	---
9-1/4	1786	1140	789	515	343	238	171	127	96	74	57	---	---	---	---	---	---	---	---	---	---
9-1/2	1884	1203	833	559	372	258	186	138	104	80	63	---	---	---	---	---	---	---	---	---	---
11-1/4	2643	1688	1169	857	621	433	313	233	177	137	108	86	69	56	---	---	---	---	---	---	---
11-7/8	2946	1882	1303	955	729	511	369	275	209	163	128	102	82	67	55	---	---	---	---	---	---
14	3965	2617	1814	1329	1015	799	610	455	348	271	215	172	140	114	94	79	66	55	---	---	---
15-1/8	4431	3056	2118	1553	1186	934	754	576	441	344	273	219	178	147	121	101	85	72	60	51	---
16	4816	3421	2371	1738	1328	1046	845	684	524	409	325	261	213	175	145	121	102	86	73	62	53
18	5780	4124	3003	2202	1682	1326	1071	879	733	586	466	376	307	254	211	177	150	127	108	93	80
19-1/4	6451	4546	3436	2520	1925	1518	1223	1003	837	707	573	463	378	313	261	219	185	158	135	116	100
20	6883	4813	3698	2721	2079	1639	1319	1082	902	763	644	520	426	352	294	247	209	178	153	132	114
22	8155	5573	4231	3294	2517	1978	1590	1304	1088	921	788	682	570	472	395	333	283	242	208	179	155

Notes:

(1) For preliminary design use only. Final design should include a complete analysis, including bearing stresses and lateral stability.

(2) Span = simply supported beam.

(3) Maximum deflection = L/180 under total load. Other deflection limits may apply.

(4) Service condition = dry.

(5) Tabulated values represent total loads and have taken the dead weight of the beam (assumed 36 pcf) into account.

(6) Sufficient bearing length shall be provided at supports

(7) Maximum beam shear is located at a distance from the supports equal to the depth of the beam.

(8) Upper-right areas limited by deflection; medium areas limited by bending strength; lower-left areas limited by shear strength.

3000Fb-2.1E-300Fv Southern Pine Glulam Roof Beams (lbf/ft) – Snow Load

Load Duration Factor = 1.15, Fbx = 3,000 psi, Fvx = 300 psi, Ex = 2,100,000 psi

5-1/4-INCH WIDTH										SPAN (ft)										
Depth (in.)	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48
7-1/4	1643	1028	591	369	244	168	120	88	66	---	---	---	---	---	---	---	---	---	---	---	---
9-1/4	2678	1710	1184	773	514	357	257	190	144	110	86	68	54	---	---	---	---	---	---	---	---
9-1/2	2825	1804	1249	838	557	388	279	207	156	120	94	74	59	---	---	---	---	---	---	---	---
11-1/4	3965	2532	1754	1285	932	650	470	349	266	206	162	129	104	84	68	56	---	---	---	---	---
11-7/8	4419	2822	1955	1432	1093	766	554	413	314	244	192	153	124	100	82	67	56	---	---	---	---
14	5948	3926	2721	1994	1522	1198	915	683	522	407	322	258	210	172	142	118	98	82	69	58	---
15-1/8	6647	4584	3177	2329	1779	1394	1119	865	662	516	409	329	268	220	182	152	127	107	91	77	65
16	7224	5131	3557	2608	1987	1557	1250	1025	786	613	487	392	319	263	218	182	153	129	110	94	80
18	8670	6186	4505	3299	2503	1961	1576	1292	1077	880	700	564	461	380	317	266	224	191	163	139	120
19-1/4	9677	6820	5154	3762	2855	2237	1798	1474	1229	1039	859	694	567	469	391	329	278	237	203	174	150
20	10324	7219	5547	4054	3077	2411	1938	1589	1325	1121	959	780	638	528	441	371	314	268	229	197	171
22	12232	8360	6347	4885	3708	2907	2336	1917	1599	1352	1158	1001	856	709	592	499	424	362	311	269	233
24	14459	9629	7214	5765	4397	3447	2771	2274	1897	1605	1375	1189	1038	913	775	654	557	476	410	355	309
26-1/8	17271	11141	8218	6507	5191	4070	3273	2686	2241	1897	1625	1406	1227	1080	957	850	724	621	536	464	405
27-1/2	19402	12225	8918	7017	5739	4500	3619	2970	2479	2098	1798	1556	1358	1195	1059	944	846	728	629	546	476
28-7/8	21839	13405	9664	7552	6195	4951	3982	3268	2728	2310	1979	1713	1496	1317	1167	1040	933	840	731	635	555

Notes:

(1) For preliminary design use only. Final design should include a complete analysis, including bearing stresses and lateral stability.

(2) Span = simply supported beam.

(3) Maximum deflection = L/180 under total load. Other deflection limits may apply.

(4) Service condition = dry.

(5) Tabulated values represent total loads and have taken the dead weight of the beam (assumed 36 pcf) into account.

(6) Sufficient bearing length shall be provided at supports

(7) Maximum beam shear is located at a distance from the supports equal to the depth of the beam.

(8) Upper-right areas limited by deflection; medium areas limited by bending strength; lower-left areas limited by shear strength.

3000Fb-2.1E-300Fv Southern Pine Glulam Roof Beams (lbf/ft) – Snow Load

Load Duration Factor = 1.15, Fbx = 3,000 psi, Fvx = 300 psi, Ex = 2,100,000 psi

| 5-1/2-INCH WIDTH | | | | | | | | | | SPAN (ft) | | | | | | | | | | |
Depth (in.)	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48
7-1/4	1722	1077	619	386	255	176	126	92	69	52	---	---	---	---	---	---	---	---	---	---	---
9-1/4	2806	1791	1240	810	538	374	269	199	151	116	90	71	56	---	---	---	---	---	---	---	---
9-1/2	2960	1890	1308	878	584	406	293	217	164	126	98	77	62	---	---	---	---	---	---	---	---
11-1/4	4154	2653	1838	1346	976	681	492	366	278	216	170	135	108	88	72	59	---	---	---	---	---
11-7/8	4629	2957	2048	1501	1145	803	581	432	329	255	201	161	129	105	86	71	58	---	---	---	---
14	6231	4113	2850	2089	1595	1252	959	716	547	426	337	271	220	180	148	123	103	86	73	61	52
15-1/8	6963	4802	3329	2440	1860	1457	1170	906	693	541	429	345	280	230	191	159	133	112	95	81	68
16	7568	5375	3726	2732	2077	1627	1307	1071	823	643	510	411	334	275	228	191	161	136	115	98	84
18	9083	6481	4719	3448	2617	2050	1647	1350	1126	922	733	591	483	398	332	278	235	200	170	146	126
19-1/4	10138	7144	5399	3932	2984	2338	1879	1541	1285	1086	900	727	594	491	410	344	291	248	212	183	157
20	10815	7563	5811	4238	3216	2520	2025	1661	1385	1171	1002	817	669	553	462	388	329	280	240	207	179
22	12814	8758	6649	5106	3876	3038	2442	2003	1671	1414	1210	1046	896	742	621	523	444	380	326	282	244
24	15147	10087	7557	6039	4596	3603	2896	2376	1983	1678	1437	1243	1085	954	812	685	583	499	430	372	323
26-1/8	18093	11671	8609	6816	5425	4254	3420	2807	2343	1983	1698	1469	1283	1129	1000	891	759	650	561	487	424
27-1/2	20326	12807	9343	7351	5998	4703	3782	3104	2591	2193	1879	1626	1420	1249	1107	987	885	763	658	572	498
28-7/8	22879	14043	10124	7912	6490	5174	4162	3416	2851	2414	2068	1790	1563	1376	1219	1087	975	878	766	666	581

Notes:
(1) For preliminary design use only. Final design should include a complete analysis, including bearing stresses and lateral stability.
(2) Span = simply supported beam.
(3) Maximum deflection = L/180 under total load. Other deflection limits may apply.
(4) Service condition = dry.
(5) Tabulated values represent total loads and have taken the dead weight of the beam (assumed 36 pcf) into account.
(6) Sufficient bearing length shall be provided at supports
(7) Maximum beam shear is located at a distance from the supports equal to the depth of the beam.
(8) Upper-right areas limited by deflection; medium areas limited by bending strength; lower-left areas limited by shear strength.

3000Fb-2.1E-300Fv Southern Pine Glulam Roof Beams (lbf/ft) – Snow Load

Load Duration Factor = 1.15, Fbx = 3,000 psi, Fvx = 300 psi, Ex = 2,100,000 psi

7-INCH WIDTH	SPAN (ft)																				
Depth (in.)	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48
7-1/4	2191	1370	788	491	325	224	160	117	87	66	50	---	---	---	---	---	---	---	---	---	---
9-1/4	3571	2280	1578	1031	685	476	343	254	192	147	115	90	71	57	---	---	---	---	---	---	---
9-1/2	3767	2405	1665	1117	743	517	372	276	208	160	125	99	78	63	50	---	---	---	---	---	---
11-1/4	5287	3376	2339	1713	1242	866	626	466	354	274	216	172	138	112	91	74	61	50	---	---	---
11-7/8	5892	3763	2607	1910	1455	1021	739	550	419	325	256	204	165	134	109	90	74	61	51	---	---
14	7931	5235	3628	2651	2010	1574	1220	911	696	542	429	344	279	229	189	157	131	110	92	78	66
15-1/8	8862	6112	4236	3084	2339	1832	1471	1153	882	688	546	439	357	293	243	202	170	143	121	103	87
16	9632	6841	4733	3443	2612	2045	1643	1346	1047	818	649	523	426	350	291	243	204	173	147	125	106
18	11561	8249	5959	4336	3290	2577	2071	1697	1415	1173	933	753	614	507	422	354	299	254	217	186	160
19-1/4	12902	9093	6794	4944	3752	2940	2362	1937	1615	1366	1146	925	756	625	521	438	371	316	270	232	200
20	13765	9625	7321	5328	4044	3169	2546	2088	1741	1473	1260	1040	851	704	587	494	419	357	306	263	228
22	16309	11147	8462	6420	4873	3820	3070	2519	2101	1777	1521	1315	1141	945	790	666	565	483	415	359	311
24	19278	12838	9618	7611	5778	4530	3642	2988	2493	2109	1806	1562	1363	1199	1033	872	742	635	547	473	412
26-1/8	23028	14854	10957	8675	6822	5348	4301	3529	2945	2493	2135	1847	1613	1419	1257	1120	966	828	714	619	539
27-1/2	25869	16300	11891	9355	7542	5913	4755	3903	3257	2757	2362	2044	1785	1570	1392	1240	1112	971	838	727	634
28-7/8	29119	17873	12885	10069	8260	6506	5232	4295	3585	3035	2600	2250	1965	1730	1533	1367	1225	1104	975	847	740

Notes:
(1) For preliminary design use only. Final design should include a complete analysis, including bearing stresses and lateral stability.
(2) Span = simply supported beam.
(3) Maximum deflection = L/180 under total load. Other deflection limits may apply.
(4) Service condition = dry.
(5) Tabulated values represent total loads and have taken the dead weight of the beam (assumed 36 pcf) into account.
(6) Sufficient bearing length shall be provided at supports
(7) Maximum beam shear is located at a distance from the supports equal to the depth of the beam.
(8) Upper-right areas limited by deflection; medium areas limited by bending strength; lower-left areas limited by shear strength.

3000Fb-2.1E-300Fv Southern Pine Glulam Floor Beams (lbf/ft)

Load Duration Factor = 1.0, Fbx = 3,000 psi, Fvx = 300 psi, Ex = 2,100,000 psi

3-1/2-INCH WIDTH									SPAN (ft)											
Depth (in.)	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48
7-1/4	838	426	244	151	99	68	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
9-1/4	1552	890	511	319	211	146	104	76	57	---	---	---	---	---	---	---	---	---	---	---	---
9-1/2	1637	964	554	346	229	158	113	83	62	---	---	---	---	---	---	---	---	---	---	---	---
11-1/4	2297	1467	925	579	384	267	192	142	107	82	64	---	---	---	---	---	---	---	---	---	---
11-7/8	2560	1635	1089	682	453	315	227	168	127	98	76	60	---	---	---	---	---	---	---	---	---
14	3447	2274	1576	1122	748	521	377	280	213	165	130	103	83	67	54	---	---	---	---	---	---
15-1/8	3851	2656	1840	1348	945	660	477	355	271	210	166	132	107	87	71	58	---	---	---	---	---
16	4186	2973	2060	1510	1120	783	567	422	322	250	198	158	128	104	86	71	59	---	---	---	---
18	5024	3584	2609	1913	1461	1119	811	605	463	361	286	229	186	153	126	105	88	74	62	52	---
19-1/4	5608	3951	2985	2189	1672	1317	995	743	568	444	352	283	230	189	157	131	110	92	78	66	56
20	5983	4183	3213	2363	1805	1423	1117	835	639	499	396	319	259	213	177	148	124	105	89	76	65
22	7088	4844	3677	2862	2186	1717	1380	1115	854	668	531	428	349	288	240	201	169	144	123	105	90

Notes:

(1) For preliminary design use only. Final design should include a complete analysis, including bearing stresses and lateral stability.

(2) Span = simply supported beam.

(3) Maximum deflection = L/360 under live load, based on live/total load = 0.8. Where additional stiffness is desired or for other live/total load ratios, design for deflection must be modified per requirements.

(4) Service condition = dry.

(5) Tabulated values represent total loads based on live/total load = 0.8 and have taken the dead weight of the beam (assumed 36 pcf) into account.

(6) Sufficient bearing length shall be provided at supports

(7) Maximum beam shear is located at a distance from the supports equal to the depth of the beam.

(8) Upper-right areas limited by deflection; medium areas limited by bending strength; lower-left areas limited by shear strength.

3000Fb-2.1E-300Fv Southern Pine Glulam Floor Beams (lbf/ft)

Load Duration Factor = 1.0, Fbx = 3,000 psi, Fvx = 300 psi, Ex = 2,100,000 psi

5-1/4-INCH WIDTH											SPAN (ft)										
Depth (in.)	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48
7-1/4	1257	639	366	227	149	102	72	51	---	---	---	---	---	---	---	---	---	---	---	---	---
9-1/4	2327	1334	767	479	317	219	156	114	85	64	---	---	---	---	---	---	---	---	---	---	---
9-1/2	2455	1446	832	519	344	238	170	125	93	71	54	---	---	---	---	---	---	---	---	---	---
11-1/4	3446	2200	1387	868	577	401	288	213	160	123	96	75	59	---	---	---	---	---	---	---	---
11-7/8	3840	2452	1633	1023	680	473	341	252	191	147	114	90	71	57	---	---	---	---	---	---	---
14	5170	3412	2364	1683	1121	782	565	420	319	247	194	155	124	100	82	67	55	---	---	---	---
15-1/8	5777	3984	2760	2023	1417	990	716	533	406	315	248	198	160	130	106	87	72	60	---	---	---
16	6279	4459	3090	2265	1680	1174	850	633	483	376	296	237	192	156	128	106	88	73	61	51	---
18	7536	5376	3914	2866	2174	1678	1217	908	694	541	428	344	279	229	189	157	131	110	93	78	66
19-1/4	8411	5927	4478	3268	2480	1942	1492	1115	853	665	528	424	345	284	235	196	164	139	117	99	84
20	8974	6274	4820	3522	2672	2094	1675	1252	958	748	594	478	389	320	265	222	186	157	134	114	97
22	10633	7266	5515	4244	3221	2524	2028	1663	1282	1002	796	642	524	432	359	301	254	216	184	157	135
24	12569	8369	6269	5009	3819	2993	2406	1973	1646	1307	1040	840	686	567	473	397	336	286	245	210	181
26-1/8	15014	9683	7141	5653	4509	3535	2841	2331	1945	1645	1348	1089	892	738	616	519	440	375	322	277	240
27-1/2	16866	10625	7750	6097	4985	3908	3142	2578	2151	1820	1558	1274	1044	864	722	609	517	441	379	327	284
28-7/8	18986	11651	8399	6562	5382	4300	3457	2837	2367	2003	1716	1479	1212	1004	840	709	602	515	443	383	332

Notes:

(1) For preliminary design use only. Final design should include a complete analysis, including bearing stresses and lateral stability.

(2) Span = simply supported beam.

(3) Maximum deflection = L/360 under live load, based on live/total load = 0.8. Where additional stiffness is desired or for other live/total load ratios, design for deflection must be modified per requirements.

(4) Service condition = dry.

(5) Tabulated values represent total loads based on live/total load = 0.8 and have taken the dead weight of the beam (assumed 36 pcf) into account.

(6) Sufficient bearing length shall be provided at supports

(7) Maximum beam shear is located at a distance from the supports equal to the depth of the beam.

(8) Upper-right areas limited by deflection; medium areas limited by bending strength; lower-left areas limited by shear strength.

3000Fb-2.1E-300Fv Southern Pine Glulam Floor Beams (lbf/ft)

Load Duration Factor = 1.0, Fbx = 3,000 psi, Fvx = 300 psi, Ex = 2,100,000 psi

5-1/2-INCH WIDTH

Depth (in.)	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48
7-1/4	1317	669	383	238	156	106	75	54	---	---	---	---	---	---	---	---	---	---	---	---	---
9-1/4	2438	1398	804	501	332	229	164	120	89	68	52	---	---	---	---	---	---	---	---	---	---
9-1/2	2572	1515	871	544	360	249	178	130	97	74	57	---	---	---	---	---	---	---	---	---	---
11-1/4	3610	2305	1453	909	604	420	302	223	168	129	100	79	62	---	---	---	---	---	---	---	---
11-7/8	4023	2569	1711	1071	712	495	357	264	200	153	120	94	75	60	---	---	---	---	---	---	---
14	5416	3574	2476	1763	1175	819	592	440	335	259	204	162	130	105	86	70	57	---	---	---	---
15-1/8	6052	4173	2892	2119	1485	1037	750	558	425	330	260	208	167	136	111	92	76	62	52	---	---
16	6578	4671	3237	2373	1760	1230	891	664	506	393	311	248	201	164	134	111	92	77	64	53	---
18	7895	5632	4100	2995	2272	1758	1275	951	727	567	449	360	292	240	198	165	138	116	97	82	69
19-1/4	8812	6209	4691	3416	2592	2030	1563	1168	893	697	553	444	362	297	246	205	172	145	123	104	88
20	9401	6573	5049	3681	2793	2188	1755	1312	1004	784	622	501	408	335	278	232	195	165	140	119	101
22	11139	7612	5778	4436	3366	2638	2120	1738	1343	1050	834	673	549	453	377	316	266	226	193	165	141
24	13167	8767	6567	5247	3992	3128	2514	2062	1720	1369	1089	880	719	594	495	416	352	300	256	220	190
26-1/8	15729	10144	7481	5923	4713	3694	2970	2436	2032	1719	1412	1141	934	773	645	543	461	393	337	291	251
27-1/2	17670	11131	8119	6387	5211	4085	3284	2694	2248	1902	1629	1335	1093	905	757	638	541	463	397	343	297
28-7/8	19890	12206	8799	6875	5639	4494	3614	2965	2474	2094	1793	1550	1270	1052	880	742	631	539	464	401	348

Notes:
(1) For preliminary design use only. Final design should include a complete analysis, including bearing stresses and lateral stability.
(2) Span = simply supported beam.
(3) Maximum deflection = L/360 under live load, based on live/total load = 0.8. Where additional stiffness is desired or for other live/total load ratios, design for deflection must be modified per requirements.
(4) Service condition = dry.
(5) Tabulated values represent total loads based on live/total load = 0.8 and have taken the dead weight of the beam (assumed 36 pcf) into account.
(6) Sufficient bearing length shall be provided at supports
(7) Maximum beam shear is located at a distance from the supports equal to the depth of the beam.
(8) Upper-right areas limited by deflection; medium areas limited by bending strength; lower-left areas limited by shear strength.

3000Fb-2.1E-300Fv Southern Pine Glulam Floor Beams (lbf/ft)

Load Duration Factor = 1.0, Fbx = 3,000 psi, Fvx = 300 psi, Ex = 2,100,000 psi

7-INCH WIDTH												SPAN (ft)									
Depth (in.)	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48
7-1/4	1676	852	488	302	198	136	95	68	---	---	---	---	---	---	---	---	---	---	---	---	---
9-1/4	3103	1779	1023	638	422	292	208	152	114	86	66	50	---	---	---	---	---	---	---	---	---
9-1/2	3274	1928	1109	692	458	317	226	166	124	94	72	55	---	---	---	---	---	---	---	---	---
11-1/4	4595	2933	1850	1157	769	534	384	284	214	164	127	100	79	62	---	---	---	---	---	---	---
11-7/8	5120	3270	2178	1364	907	631	454	336	254	195	152	120	95	76	61	---	---	---	---	---	---
14	6893	4549	3151	2244	1495	1043	754	560	426	330	259	206	165	134	109	89	73	60	---	---	---
15-1/8	7703	5311	3680	2678	1890	1319	955	711	541	420	331	264	213	173	142	117	96	79	66	54	---
16	8372	5945	4112	2990	2241	1565	1133	845	644	501	395	316	256	208	171	141	117	97	81	67	56
18	10049	7169	5177	3766	2857	2237	1622	1211	926	721	571	459	372	305	252	210	175	147	124	104	88
19-1/4	11215	7903	5904	4295	3258	2552	1989	1486	1137	887	703	566	460	378	313	261	219	185	156	133	113
20	11965	8365	6362	4629	3512	2751	2210	1669	1278	998	792	637	519	427	354	296	249	210	178	151	129
22	14177	9688	7354	5578	4233	3316	2665	2185	1709	1336	1062	856	699	576	479	402	339	288	245	210	180
24	16758	11158	8358	6613	5019	3933	3161	2593	2162	1742	1387	1119	915	756	630	530	448	381	326	280	242
26-1/8	20018	12911	9522	7538	5926	4645	3734	3063	2555	2161	1797	1452	1189	983	821	691	586	500	429	370	320
27-1/2	22488	14167	10334	8129	6552	5136	4129	3388	2826	2391	2047	1699	1392	1152	963	812	689	589	506	437	378
28-7/8	25314	15535	11198	8749	7176	5651	4543	3728	3111	2632	2254	1950	1616	1339	1120	945	803	687	591	511	443

Notes:

(1) For preliminary design use only. Final design should include a complete analysis, including bearing stresses and lateral stability.

(2) Span = simply supported beam.

(3) Maximum deflection = L/360 under live load, based on live/total load = 0.8. Where additional stiffness is desired or for other live/total load ratios,
   design for deflection must be modified per requirements.

(4) Service condition = dry.

(5) Tabulated values represent total loads based on live/total load = 0.8 and have taken the dead weight of the beam (assumed 36 pcf) into account.

(6) Sufficient bearing length shall be provided at supports

(7) Maximum beam shear is located at a distance from the supports equal to the depth of the beam.

(8) Upper-right areas limited by deflection; medium areas limited by bending strength; lower-left areas limited by shear strength.

BOOZERBEAM™

INSTALLATION AND STORAGE REQUIREMENTS AND USE MEASURES APPLICABLE TO ALL BOOZER PRODUCTS.
(Revised as of January 18, 2019)

Specific use, storage and installation requirements and instructions applicable to all Boozer products, including but not limited to Boozer Glued Laminated Timber Beams, Treated Beams, Columns, Joists, and Headers (the "Product") may be found at http://boozer-beam.com/products/. The following precautions should be taken both when handling any BoozerBeam™ Product and in determining where to use and dispose of the Product. These requirements and instructions are provided as part of and incorporated by reference into Boozer's Limited Warranty.

• The Product should not be exposed to the elements (sun, rain, snow, water, moisture, excessive heat, excessive cold, etc.), other than very short periods prior to installation.

• The Product should not be used in direct water or marine applications, below grade, or in applications in which the Product is in direct contact with the soil. Columns may be installed on concrete if a installed onto a metal plate that separates the columns from the concrete.

• The Product should not be used where it will be in frequent or prolonged contact with bare skin, unless an effective sealer has been applied.

• The Product is not suitable for food garden uses.

• All shipping containers, plastic, or other wrapping applied during shipment should be removed from the Product prior to installation.

• Do not use the Product for cutting-boards or countertops.

• For all interior applications, the purchaser is responsible for ensuring that the installation of a treated product complies with all applicable indoor air quality standards (IAQs) as prescribed by the federal or applicable state or local regulatory authority.

• Dispose of the Product by ordinary trash collection or burial. Treated wood should not be burned in open fires or in stoves, fireplaces, or residential boilers because toxic chemicals may be produced as part of the smoke and ashes. Treated wood from commercial or industrial use (e.g., construction sites) may be burned only in commercial or industrial incinerators or boilers in accordance with state and federal regulations.

• Avoid frequent or prolonged inhalation of sawdust from the Product. When sawing and machining treated wood, wear a dust mask. Whenever possible, these operations should be performed outdoors to avoid indoor accumulations of airborne sawdust from treated wood.

• When power sawing and machining, wear goggles to protect eyes from flying particles.

• After working with the Product, and before eating, drinking, and use of tobacco products, wash all exposed skin areas thoroughly and completely.

• If oily preservatives or Product sawdust accumulate on clothes, launder before reuse of the clothes. Work clothes exposed to the Product or its sawdust or preservatives should be washed separately from other clothing.

• While in storage, the Product should be kept dry and under cover and not be exposed to standing water or marine conditions.

• It is the purchaser and intended user of the Product's sole responsibility to install the Product correctly and to select the proper-sized Product for its/his/her intended use.

• When storing a Product for any extended amount of time, the Product should be stored on its down-side, with gravity acting on the Product as it would in its eventual installation.

• All Products should be installed with the standard, as-designed orientation (e.g., for Beams, with the narrow side down). For Products with a specific or designated orientation instruction (which should appear on the Product), that instruction should be strictly followed.

BOOZERBEAM™
LIMITED WARRANTY
(Revised as of January 18, 2019)

1. <u>LIMITED WARRANTY COVERAGE:</u> Boozer Laminated Beam Company, Inc. ("Boozer") warrants (for installation within the U.S.) to the purchaser and all transferees prior to and including the first owner of the structure to which the Product (as hereafter defined) is properly installed (each a "<u>Covered Person</u>") that each Product sold by Boozer, including but not limited to Boozer Glued Laminated Timber Beams, Treated Beams, Columns, Joists, and Headers (the "<u>Product</u>"), when manufactured is free from defects in material and manufacture and, when used for its intended purpose and in accordance with Boozer's installation and use requirements, will perform in accordance with the published Product specifications. This Limited Warranty only covers defects and failures of the Product that result in structural failure of the Product. If the Product is defective in material or manufacture (when used for its intended purpose and in accordance with Boozer's installation and use requirements), Boozer will replace the Product with a non-defective Product (or equivalent product, if the Product is no longer available) at no charge. Boozer's replacement of the defective Product pursuant to this Section 1 of this Limited Warranty SHALL BE THE SOLE AND EXCLUSIVE REMEDY available to the Covered Person with respect to defects in material or manufacture or any performance of the Product that is not in accordance with relevant specifications. Boozer will not refund or pay any costs in connection with labor or accessory materials or for any other damages regardless of whether caused by the Product or otherwise.

2. <u>CONDITIONS OF WARRANTY:</u> Boozer's liability hereunder to the Covered Person shall be subject to the following terms and conditions:

(a) The claimant must provide reasonable proof that he/she is a Covered Person.

(b) The Product must be properly stored and installed in accordance with Boozer's installation, storage and use requirements (available at: http://boozerbeam.com/products/) and all applicable building codes, rules, and ordinances ("<u>Applicable Building Rules</u>") adopted by federal, state or local governments or government agencies and applicable to the installation. Failure to install the Product in accordance with Boozer's installation requirements and all Applicable Building Rules voids this Limited Warranty.

(c) The Covered Person must provide written notice of any claim under this Limited Warranty to Boozer within 45 days after discovery of any claimed Product failure covered by this Limited Warranty and before beginning any permanent repair. The notice must describe the location of the Product, details of the failure, and provide all information necessary for Boozer to investigate the claim. Photos of the Product, showing defect or failure, should accompany the notice. Before any permanent repair, the Covered Person must allow Boozer or Boozer's agent to enter the property and structure where the Product is installed, and examine, photograph and take samples of the Product.

(d) Upon discovery of a possible Product defect or failure, the Covered Person must immediately, and at the Covered Person's own expense, provide for protection of all property that could be affected until the problem or failure is remedied.

(e) Only defects and failures that result in the structural failure of the Product are covered by this Limited Warranty

3. <u>EXCLUSIONS:</u> This Limited Warranty does not cover loss, damage or defects resulting from or in any way attributable to: (a) any Product failure due to any reason other than structural failure or defect in material and manufacture; (b) the improper storage, shipping, handling or installation of the Product (including, without limitation, failure of the Product to be installed in strict compliance with Boozer's installation, storage and use requirements and all Applicable Building Rules) or improper installation of other accessories; (c) repair or alteration of the Product; (d) settlement or structural movement or movement of materials to which the Product is attached; (e) damage from incorrect or improper design of the structure; (f) exceeding any applicable maximum designed weight or wind loads; (g) acts of God including, but not limited to, hurricanes, tornados, floods, earthquakes, extreme weather or other natural phenomena, (including, but not limited to, unusual climate conditions); (h) performance of any paints or coatings; (i) lack of proper maintenance;
(j) damage during the construction process; (k) damage caused by the weathering of the Product including, but not limited to including but not limited to, raised grain, splitting, checking, twisting, warping, shrinkage, swelling; or de-lamination; (l) damage caused by the use of inappropriate fasteners; (m) any Product failure or damage due to water or marine applications; (n) discoloration or minor cosmetic defects; (o) failure due to moisture or exposure to elements; (p) wet use applications or any application in which the Product is enclosed and moisture cannot naturally evaporate from the Product; (q) any application in which the Product is in direct contact with the ground (except, in the case of Treated Columns, when the column is mounted on a metal plate on a concrete slab, in accordance with Boozer's general and specific installation requirements and Applicable Building Rules); (r) failures or defects if the Product is subjected to further processing or alteration after shipment; (s) damage due to fungal decay of or termite attack (any such warranty on a Treated Product will be provided, if at all, by a third-party applicator as provided in Paragraph 4, below); (t) any unapproved pressure or topical treatment; or (u) any other neglect, abuse, or misuse by the Covered Person or a third party. In addition, only defects and failures of the Product that result in the structural failure of the Product are covered by this Limited Warranty.

4. <u>TREATED PRODUCTS ONLY</u>: To the extent a Covered Person has purchased or possesses a Boozer Product that has been treated with a chemical designed to deter or prevent insect damage or fungal growth on the Product (a "Treated Product"), Boozer assigns to such Covered Person any and all warranties applicable to the Treated Product, if any, against fungal damage or insect attack provided to Boozer from the manufacturers and applicators of such product.

5. <u>DISCLAIMER</u>: The statements in this Limited Warranty constitute the only warranty extended by Boozer for the Product. BOOZER DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, EXCEPT AS PROVIDED BY APPLICABLE STATE LAW IN WHICH CASE THE DURATION OF ANY APPLICABLE IMPLIED WARRANTIES ARE LIMITED TO THE FULLEST EXTENT ALLOWED BY APPLICABLE LAW. NO OTHER WARRANTY IS OR WILL BE MADE BY OR ON BEHALF OF THE MANUFACTURER OR THE SELLER OR BY OPERATION OF LAW OR BY USAGE OF TRADE OR COURSE OF DEALING WITH RESPECT TO THE PRODUCT OR ITS INSTALLATION, STORAGE, HANDLING, MAINTENANCE, USE, REPLACEMENT OR REPAIR.

6. <u>EXCLUSION OF INCIDENTAL AND CONSEQUENTIAL DAMAGES</u>: EXCEPT AS EXPRESSLY OVERRIDDEN BY APPLICABLE LAW, IN NO EVENT WILL BOOZER BE LIABLE FOR ANY INCIDENTAL, SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGES, WHETHER RESULTING FROM NONDELIVERY OR FROM THE USE, MISUSE, OR INABILITY TO USE THE PRODUCT OR FROM DEFECTS IN THE PRODUCT.

7. <u>SETTLEMENT OF CLAIM</u>: Any warranty payment or material replacement by Boozer pursuant to Section 1 hereof shall constitute a full settlement and release of all claims of any Covered Person or their successors and assigns hereunder for damages or other relief, and shall be a complete bar to any litigation arising out of this warranty or the Covered Person's purchase or use of the Product filed subsequent to the Covered Person's acceptance of such compensation.