Roseburg

1-Ply, 1.5" 1.6E true RigidLam LVL - Standard Term - Floor/Roof (PLF) L/360 LL L/240 TL Douglas-fir

ALLOWABLE UNIFORM LOAD - POUNDS PER LINEAL FOOT (Limit States Design)

Span (ft)	Depth =	4.375"	5.5"	7.25"	9.25"	9.5"	11.25"	11.875"	14"	16"	18"	20"	22"	24"
6	Unfactored Load (LL)	109	209	452	866	928	1420	-						
	Unfactored Load (TL)	161	312	676	-	-	-	-						
	Total Factored Load	374	575	845	1139	1178	1467	1578						
	Min. end / Int. bearing	1.5 / 3	1.5 / 3.4	2 / 5.1	2.7 / 6.8	2.8 / 7.1	3.5 / 8.8	3.8 / 9.5						
8	Unfactored Load (LL)	47	92	203	401	431	680	785						
	Unfactored Load (TL)	69	135	301	598	643	-	-						
	Total Factored Load	210	322	542	801	827	1014	1084						
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.7 / 4.3	2.6 / 6.4	2.6 / 6.6	3.2 / 8.1	3.5 / 8.7						
10	Unfactored Load (LL)	24	48	107	215	232	372	431						
	Unfactored Load (TL)	35	70	158	319	344	553	642						
	Total Factored Load	133	205	346	547	575	774	825						
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3.5	2.2 / 5.5	2.3 / 5.8	3.1 / 7.8	3.3 / 8.3						
12	Unfactored Load (LL)	14	28	63	128	138	223	260						
	Unfactored Load (TL)	20	40	92	188	203	331	386						
	Total Factored Load	92	142	239	379	398	547	606						
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.8 / 4.6	1.9 / 4.8	2.6 / 6.6	2.9 / 7.3						
14	Unfactored Load (LL)		18	40	82	88	144	168						
	Unfactored Load (TL)		24	57	119	129	212	247						
	Total Factored Load		104	175	277	291	401	444						
	Min. end / Int. bearing		1.5 / 3	1.5 / 3	1.6 / 3.9	1.6 / 4.1	2.3 / 5.7	2.5 / 6.3						
16	Unfactored Load (LL)		12	27	55	60	98	114						
	Unfactored Load (TL)		16	38	79	86	143	167						
	Total Factored Load		79	133	211	222	306	338						
	Min. end / Int. bearing		1.5 / 3	1.5 / 3	1.5 / 3.4	1.5 / 3.6	2 / 4.9	2.2 / 5.5						
18	Unfactored Load (LL)			19	39	42	69	81						
	Unfactored Load (TL)			26	55	60	100	117						
	Total Factored Load			104	166	174	240	266						
	Min. end / Int. bearing			1.5 / 3	1.5 / 3	1.5 / 3.2	1.8 / 4.4	1.9 / 4.9						
20	Unfactored Load (LL)			14	29	31	51	60						
	Unfactored Load (TL)			18	40	43	72	85						
	Total Factored Load			84	133	140	194	215						
	Min. end / Int. bearing			1.5 / 3	1.5 / 3	1.5 / 3	1.6 / 4	1.8 / 4.4						
22	Unfactored Load (LL)				22	23	39	45						
	Unfactored Load (TL)				29	32	54	63						
	Total Factored Load				110	115	159	176						
	Min. end / Int. bearing				1.5 / 3	1.5 / 3	1.5 / 3.6	1.6 / 4						
24	Unfactored Load (LL)				17	18	30	35						
	Unfactored Load (TL)				22	24	41	48						
	Total Factored Load				91	96	133	147						
	Min. end / Int. bearing				1.5 / 3	1.5 / 3	1.5 / 3.3	1.5 / 3.7						
26	Unfactored Load (LL)				13	14	24	28						
	Unfactored Load (TL)				16	18	31	37						
	Total Factored Load				77	81	112	125						
	Min. end / Int. bearing				1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.4						
28	Unfactored Load (LL)						19	22						
	Unfactored Load (TL)						24	29						
	Total Factored Load						96	107						
	Min. end / Int. bearing						1.5 / 3	1.5 / 3.1						
30	Unfactored Load (LL)						15	18						
	Unfactored Load (TL)						19	23						
	Total Factored Load						83	92						
	Min. end / Int. bearing						1.5 / 3	1.5 / 3						
32	Unfactored Load (LL)						13	15						
	Unfactored Load (TL)						15	18						
	Total Factored Load						72	80						
	Min. end / Int. bearing						1.5 / 3	1.5 / 3						
34	Unfactored Load (LL)							12						
	Unfactored Load (TL)							14						
	Total Factored Load							71						
	Min. end / Int. bearing							1.5 / 3						
36	Unfactored Load (LL)													
	Unfactored Load (TL)													
	Total Factored Load													
	Min. end / Int. bearing													
38	Unfactored Load (LL)													
	Unfactored Load (TL)													
	Total Factored Load													
	Min. end / Int. bearing													
40	Unfactored Load (LL)													
	Unfactored Load (TL)													
	Total Factored Load													
	Min. end / Int. bearing													

Notes:

1. The values shown are the maximum uniform unfactored and factored loads in pounds per linear foot that can be applied to the beam. The weight of the beam has been deducted from the Total Unfactored Load (TL) and Total Factored Load.
2. Bearing lengths are in inches based on the compression perpendicular to grain resistance of the LVL beam. For bearing on other wood materials, the bearing resistance of the supporting material should be checked.
3. The tabulated values are for simple span or for continuous span beams.
4. Design span is the clear span between supports plus one half of the required bearing at each end.
5. The table is for standard term loading and dry service conditions.
6. Lateral support at points of bearing and continuous lateral support for top of beam must be provided to prevent rotation or lateral displacement.
7. Calculations have been carried out in accordance with CSA O86-14.
8. 1-1/2" thick LVL members 14" and deeper and 1-3/4" thick LVL members 16" and deeper must be a minimum of 2 plies unless designed by a design professional.
9. See Roseburg EWP Design Guide for information regarding the connection of multiple-ply members and installation guidelines.
10. Allowable loads shown for multiple ply LVL members are also applicable to factory glued LVL beams with the same thickness as the combined multiple plies.

Directions for use of Table:

1. Determine the total factored load, unfactored live load and unfactored total load.
2. Choose a span that meets or exceeds the actual design span (centre to centre of bearing).
3. Scan from left to right within the span row to find a cell where: the L/360 (LL) load exceeds the unfactored live load; the L/240 (TL) load exceeds the unfactored total load; the factored total load resistance exceeds the factored total load. All four rows including minimum bearing must be checked. Where no unfactored loads are shown, total factored load will govern.
4. If the selected beam is too deep or the bearing length is too long, resize the beam using a wider member.
5. For an L/480 live load deflection limit, multiply the tabulated L/360 (LL) loads by 0.75. For an L/180 total load limit, multiply the tabulated L/240 (TL) loads by 1.33.

Nov. 2020

Roseburg

2-Ply, 1.5" 1.6E true RigidLam LVL - Standard Term - Floor/Roof (PLF) L/360 LL L/240 TL Douglas-fir

ALLOWABLE UNIFORM LOAD - POUNDS PER LINEAL FOOT (Limit States Design)

Span (ft)	Depth =	4.375"	5.5"	7.25"	9.25"	9.5"	11.25"	11.875"	14"	16"	18"	20"	22"	24"
6	Unfactored Load (LL)	217	419	905	1732	1856	2841	-	-	-	-	-	-	-
	Unfactored Load (TL)	323	624	1351	-	-	-	-	-	-	-	-	-	-
	Total Factored Load	748	1150	1690	2277	2355	2934	3156	3977	4859	5873	7049	8430	10074
	Min. end / Int. bearing	1.5 / 3	1.5 / 3.4	2 / 5.1	2.7 / 6.8	2.8 / 7.1	3.5 / 8.8	3.8 / 9.5	4.8 / 11.9	5.8 / 14.5	7 / 17.6	8.4 / 21.1	10.1 / 25.2	12.1 / 30.1
8	Unfactored Load (LL)	94	183	406	802	863	1361	1569	2394	-	-	-	-	-
	Unfactored Load (TL)	138	271	603	1196	1287	-	-	-	-	-	-	-	-
	Total Factored Load	419	645	1084	1602	1653	2028	2169	2676	3198	3769	4398	5094	5867
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.7 / 4.3	2.6 / 6.4	2.6 / 6.6	3.2 / 8.1	3.5 / 8.7	4.3 / 10.7	5.1 / 12.8	6 / 15.1	7 / 17.6	8.1 / 20.4	9.4 / 23.4
10	Unfactored Load (LL)	49	96	214	430	463	743	863	1345	1907	2568	-	-	-
	Unfactored Load (TL)	70	139	315	638	688	1107	1285	2007	-	-	-	-	-
	Total Factored Load	267	411	691	1094	1150	1548	1651	2014	2381	2773	3194	3646	4135
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3.5	2.2 / 5.5	2.3 / 5.8	3.1 / 7.8	3.3 / 8.3	4 / 10.1	4.8 / 11.9	5.6 / 13.9	6.4 / 16	7.3 / 18.2	8.3 / 20.7
12	Unfactored Load (LL)	28	56	126	255	276	446	520	822	1181	1613	2116	2688	-
	Unfactored Load (TL)	39	80	183	376	406	661	771	1222	1759	-	-	-	-
	Total Factored Load	184	284	478	757	796	1095	1212	1614	1895	2192	2505	2838	3190
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.8 / 4.6	1.9 / 4.8	2.6 / 6.6	2.9 / 7.3	3.9 / 9.7	4.6 / 11.4	5.3 / 13.2	6 / 15.1	6.8 / 17.1	7.7 / 19.2
14	Unfactored Load (LL)	18	35	80	163	176	288	336	535	776	1071	1419	1820	2273
	Unfactored Load (TL)	24	49	115	238	258	423	495	793	1153	1593	-	-	-
	Total Factored Load	134	207	349	554	582	801	888	1210	1557	1811	2060	2321	2595
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.6 / 3.9	1.6 / 4.1	2.3 / 5.7	2.5 / 6.3	3.4 / 8.5	4.4 / 10.9	5.1 / 12.7	5.8 / 14.5	6.5 / 16.3	7.3 / 18.2
16	Unfactored Load (LL)	12	24	54	111	120	196	229	367	535	743	992	1282	1613
	Unfactored Load (TL)	15	32	75	159	172	285	334	540	791	1102	1473	1906	-
	Total Factored Load	102	157	266	422	444	611	677	924	1188	1484	1748	1963	2186
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.4	1.5 / 3.6	2 / 4.9	2.2 / 5.5	3 / 7.5	3.8 / 9.6	4.8 / 11.9	5.6 / 14.1	6.3 / 15.8	7 / 17.6
18	Unfactored Load (LL)	8	17	38	78	85	139	163	262	384	535	718	933	1181
	Unfactored Load (TL)	9	21	52	110	120	200	235	382	564	790	1062	1383	1753
	Total Factored Load	79	123	209	332	349	481	532	727	936	1169	1426	1699	1888
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.2	1.8 / 4.4	1.9 / 4.9	2.7 / 6.6	3.4 / 8.5	4.2 / 10.6	5.2 / 12.9	6.2 / 15.4	6.8 / 17.1
20	Unfactored Load (LL)		12	28	57	62	102	120	193	284	398	535	699	888
	Unfactored Load (TL)		14	36	79	86	145	170	279	414	583	788	1031	1313
	Total Factored Load		99	168	267	281	387	429	586	755	944	1151	1379	1625
	Min. end / Int. bearing		1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.6 / 4	1.8 / 4.4	2.4 / 6	3.1 / 7.7	3.8 / 9.6	4.7 / 11.6	5.6 / 13.9	6.6 / 16.4
22	Unfactored Load (LL)		9	21	43	47	77	90	146	216	303	409	535	683
	Unfactored Load (TL)		10	26	58	63	107	127	209	312	441	599	787	1006
	Total Factored Load		81	137	219	231	318	353	482	621	777	948	1136	1339
	Min. end / Int. bearing		1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.6	1.6 / 4	2.2 / 5.4	2.8 / 7	3.5 / 8.7	4.2 / 10.6	5.1 / 12.7	6 / 14.9
24	Unfactored Load (LL)			16	33	36	60	70	114	168	236	319	419	535
	Unfactored Load (TL)			19	43	47	81	96	160	239	340	464	612	785
	Total Factored Load			114	183	192	266	295	403	520	650	794	951	1121
	Min. end / Int. bearing			1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.3	1.5 / 3.7	2 / 5	2.6 / 6.4	3.2 / 8	3.9 / 9.7	4.6 / 11.6	5.5 / 13.7
26	Unfactored Load (LL)			13	26	29	47	55	90	133	187	254	334	427
	Unfactored Load (TL)			14	33	36	62	74	124	187	267	366	484	623
	Total Factored Load			97	154	163	225	249	342	441	551	674	807	952
	Min. end / Int. bearing			1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.4	1.8 / 4.6	2.4 / 5.9	2.9 / 7.4	3.6 / 9	4.3 / 10.7	5 / 12.6
28	Unfactored Load (LL)			10	21	23	38	44	72	107	151	205	270	346
	Unfactored Load (TL)			10	25	27	48	58	98	148	213	292	388	501
	Total Factored Load			82	132	139	192	214	293	378	473	578	693	818
	Min. end / Int. bearing			1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.1	1.7 / 4.3	2.2 / 5.5	2.7 / 6.8	3.3 / 8.3	4 / 9.9	4.7 / 11.7
30	Unfactored Load (LL)			8	17	19	31	36	59	87	123	168	221	284
	Unfactored Load (TL)			7	19	21	38	45	78	119	171	236	315	408
	Total Factored Load			71	114	120	166	185	253	327	410	501	601	710
	Min. end / Int. bearing			1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.6 / 4	2 / 5.1	2.5 / 6.4	3.1 / 7.8	3.7 / 9.3	4.4 / 10.9
32	Unfactored Load (LL)				14	15	25	30	49	72	102	139	183	236
	Unfactored Load (TL)				14	16	30	36	62	96	140	193	258	336
	Total Factored Load				99	104	145	161	221	286	358	438	526	621
	Min. end / Int. bearing				1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.7	1.9 / 4.8	2.4 / 6	2.9 / 7.3	3.5 / 8.7	4.1 / 10.2
34	Unfactored Load (LL)				12	13	21	25	41	60	85	116	154	198
	Unfactored Load (TL)				11	12	23	28	50	78	115	159	214	279
	Total Factored Load				87	91	127	141	194	251	315	386	464	547
	Min. end / Int. bearing				1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.5	1.8 / 4.5	2.2 / 5.6	2.7 / 6.8	3.3 / 8.2	3.9 / 9.6
36	Unfactored Load (LL)				10	11	18	21	34	51	72	98	130	168
	Unfactored Load (TL)				8	9	18	23	41	64	95	133	179	233
	Total Factored Load				76	81	112	125	172	223	280	342	411	486
	Min. end / Int. bearing				1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.3	1.7 / 4.3	2.1 / 5.3	2.6 / 6.5	3.1 / 7.7	3.6 / 9.1
38	Unfactored Load (LL)					9	15	18	29	43	62	84	111	143
	Unfactored Load (TL)					7	14	18	33	53	79	111	150	197
	Total Factored Load					71	100	111	153	198	249	305	367	434
	Min. end / Int. bearing					1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.1	1.6 / 4	2 / 5	2.5 / 6.1	2.9 / 7.3	3.5 / 8.6
40	Unfactored Load (LL)						13	15	25	37	53	72	96	123
	Unfactored Load (TL)						11	14	27	44	66	93	127	167
	Total Factored Load						89	99	137	178	223	274	329	389
	Min. end / Int. bearing						1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.8	1.9 / 4.8	2.3 / 5.8	2.8 / 7	3.3 / 8.2

Notes:

1. The values shown are the maximum uniform unfactored and factored loads in pounds per linear foot that can be applied to the beam. The weight of the beam has been deducted from the Total Unfactored Load (TL) and Total Factored Load.
2. Bearing lengths are in inches based on the compression perpendicular to grain resistance of the LVL beam. For bearing on other wood materials, the bearing resistance of the supporting material should be checked.
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7. Calculations have been carried out in accordance with CSA O86-14.
8. 1-1/2" thick LVL members 14" and deeper and 1-3/4" thick LVL members 16" and deeper must be a minimum of 2 plies unless designed by a design professional.
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Directions for use of Table:

1. Determine the total factored load, unfactored live load and unfactored total load.
2. Choose a span that meets or exceeds the actual design span (centre to centre of bearing).
3. Scan from left to right within the span row to find a cell where: the L/360 (LL) load exceeds the unfactored live load; the L/240 (TL) load exceeds the unfactored total load; the factored total load resistance exceeds the factored total load. All four rows including minimum bearing must be checked. Where no unfactored loads are shown, total factored load will govern.
4. If the selected beam is too deep or the bearing length is too long, resize the beam using a wider member.
5. For an L/480 live load deflection limit, multiply the tabulated L/360 (LL) loads by 0.75. For an L/180 total load limit, multiply the tabulated L/240 (TL) loads by 1.33.

Nov. 2020

Roseburg

3-Ply, 1.5" 1.6E true RigidLam LVL - Standard Term - Floor/Roof (PLF) L/360 LL L/240 TL Douglas-fir

ALLOWABLE UNIFORM LOAD - POUNDS PER LINEAL FOOT (Limit States Design)

Span (ft)	Depth =	4.375"	5.5"	7.25"	9.25"	9.5"	11.25"	11.875"	14"	16"	18"	20"	22"	24"
10	Unfactored Load (LL)	73	143	321	645	695	1115	1294	2017	2860	3853	-	-	-
	Unfactored Load (TL)	104	209	473	957	1032	1660	1927	3010	-	-	-	-	-
	Total Factored Load	400	616	1037	1641	1725	2323	2476	3022	3571	4159	4791	5470	6202
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3.5	2.2 / 5.5	2.3 / 5.8	3.1 / 7.8	3.3 / 8.3	4 / 10.1	4.8 / 11.9	5.6 / 13.9	6.4 / 16	7.3 / 18.2	8.3 / 20.7
12	Unfactored Load (LL)	42	84	189	383	413	670	780	1233	1771	2419	3175	4032	-
	Unfactored Load (TL)	59	119	275	564	609	992	1157	1833	2639	-	-	-	-
	Total Factored Load	276	426	717	1136	1194	1642	1818	2421	2843	3288	3758	4256	4785
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.8 / 4.6	1.9 / 4.8	2.6 / 6.6	2.9 / 7.3	3.9 / 9.7	4.6 / 11.4	5.3 / 13.2	6 / 15.1	6.8 / 17.1	7.7 / 19.2
14	Unfactored Load (LL)	27	53	120	245	265	432	504	803	1165	1606	2128	2730	3409
	Unfactored Load (TL)	35	73	172	357	386	635	742	1189	1729	2389	-	-	-
	Total Factored Load	201	311	524	831	874	1202	1331	1816	2335	2716	3090	3482	3893
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.6 / 3.9	1.6 / 4.1	2.3 / 5.7	2.5 / 6.3	3.4 / 8.5	4.4 / 10.9	5.1 / 12.7	5.8 / 14.5	6.5 / 16.3	7.3 / 18.2
16	Unfactored Load (LL)	18	36	81	166	179	294	343	551	803	1115	1488	1923	2419
	Unfactored Load (TL)	22	47	113	238	258	428	501	810	1187	1652	2210	2860	-
	Total Factored Load	153	236	399	633	666	917	1015	1386	1783	2226	2622	2944	3279
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.4	1.5 / 3.6	2 / 4.9	2.2 / 5.5	3 / 7.5	3.8 / 9.6	4.8 / 11.9	5.6 / 14.1	6.3 / 15.8	7 / 17.6
18	Unfactored Load (LL)	13	25	57	117	127	208	244	393	576	803	1077	1400	1771
	Unfactored Load (TL)	14	31	77	166	180	300	352	574	846	1185	1594	2075	2630
	Total Factored Load	119	185	313	497	523	721	799	1091	1404	1753	2139	2549	2831
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.2	1.8 / 4.4	1.9 / 4.9	2.7 / 6.6	3.4 / 8.5	4.2 / 10.6	5.2 / 12.9	6.2 / 15.4	6.8 / 17.1
20	Unfactored Load (LL)	9	18	42	86	93	153	179	290	426	596	803	1048	1331
	Unfactored Load (TL)	9	21	54	119	129	217	256	419	621	874	1182	1547	1970
	Total Factored Load	95	148	252	400	421	581	644	880	1133	1415	1727	2068	2437
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.6 / 4	1.8 / 4.4	2.4 / 6	3.1 / 7.7	3.8 / 9.6	4.7 / 11.6	5.6 / 13.9	6.6 / 16.4
22	Unfactored Load (LL)	7	14	31	65	70	116	136	220	324	454	614	803	1024
	Unfactored Load (TL)	6	15	39	87	95	161	190	314	468	661	898	1180	1509
	Total Factored Load	78	121	206	329	346	477	529	724	932	1165	1423	1704	2008
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.6	1.6 / 4	2.2 / 5.4	2.8 / 7	3.5 / 8.7	4.2 / 10.6	5.1 / 12.7	6 / 14.9
24	Unfactored Load (LL)		11	24	50	54	89	105	170	251	354	479	628	803
	Unfactored Load (TL)		10	28	65	71	122	144	240	359	510	696	918	1178
	Total Factored Load		101	172	274	288	399	442	605	780	975	1191	1427	1682
	Min. end / Int. bearing		1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.3	1.5 / 3.7	2 / 5	2.6 / 6.4	3.2 / 8	3.9 / 9.7	4.6 / 11.6	5.5 / 13.7
26	Unfactored Load (LL)		8	19	39	43	71	83	135	199	281	381	500	641
	Unfactored Load (TL)		6	21	49	53	93	111	186	281	401	548	726	934
	Total Factored Load		85	145	232	244	337	374	512	661	827	1011	1211	1428
	Min. end / Int. bearing		1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.4	1.8 / 4.6	2.4 / 5.9	2.9 / 7.4	3.6 / 9	4.3 / 10.7	5 / 12.6
28	Unfactored Load (LL)		7	15	32	34	57	67	108	160	226	307	405	519
	Unfactored Load (TL)		4	15	37	41	72	86	147	222	319	438	582	752
	Total Factored Load		72	123	198	208	289	320	439	567	710	867	1040	1227
	Min. end / Int. bearing		1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.1	1.7 / 4.3	2.2 / 5.5	2.7 / 6.8	3.3 / 8.3	4 / 9.9	4.7 / 11.7
30	Unfactored Load (LL)			12	26	28	46	54	88	131	185	251	332	426
	Unfactored Load (TL)			11	28	31	57	68	117	178	257	355	473	612
	Total Factored Load			106	171	180	249	277	380	491	615	752	902	1064
	Min. end / Int. bearing			1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.6 / 4	2 / 5.1	2.5 / 6.4	3.1 / 7.8	3.7 / 9.3	4.4 / 10.9
32	Unfactored Load (LL)			10	21	23	38	45	73	108	153	208	275	354
	Unfactored Load (TL)			7	22	24	45	54	94	144	209	290	388	504
	Total Factored Load			92	149	156	217	241	332	429	537	658	789	931
	Min. end / Int. bearing			1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.7	1.9 / 4.8	2.4 / 6	2.9 / 7.3	3.5 / 8.7	4.1 / 10.2
34	Unfactored Load (LL)			9	18	19	32	37	61	90	128	174	231	297
	Unfactored Load (TL)			5	16	18	35	43	76	118	172	239	321	418
	Total Factored Load			80	130	137	191	212	292	377	473	579	695	821
	Min. end / Int. bearing			1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.5	1.8 / 4.5	2.2 / 5.6	2.7 / 6.8	3.3 / 8.2	3.9 / 9.6
36	Unfactored Load (LL)			7	15	16	27	32	51	76	108	148	195	251
	Unfactored Load (TL)			3	12	14	28	34	61	97	142	199	268	350
	Total Factored Load			71	115	121	168	187	258	334	419	514	617	729
	Min. end / Int. bearing			1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.3	1.7 / 4.3	2.1 / 5.3	2.6 / 6.5	3.1 / 7.7	3.6 / 9.1
38	Unfactored Load (LL)				13	14	23	27	44	65	92	126	167	215
	Unfactored Load (TL)				9	10	22	27	50	80	118	166	225	295
	Total Factored Load				102	107	150	166	229	298	374	458	550	651
	Min. end / Int. bearing				1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.1	1.6 / 4	2 / 5	2.5 / 6.1	2.9 / 7.3	3.5 / 8.6
40	Unfactored Load (LL)				11	12	20	23	38	56	79	108	143	185
	Unfactored Load (TL)				6	7	17	21	41	66	99	140	190	250
	Total Factored Load				90	95	133	148	205	266	335	411	494	584
	Min. end / Int. bearing				1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.8	1.9 / 4.8	2.3 / 5.8	2.8 / 7	3.3 / 8.2
42	Unfactored Load (LL)				9	10	17	20	33	48	69	94	124	160
	Unfactored Load (TL)				4	5	13	17	33	55	83	118	161	213
	Total Factored Load				81	85	120	133	184	239	301	370	445	527
	Min. end / Int. bearing				1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.6	1.8 / 4.6	2.2 / 5.5	2.7 / 6.6	3.1 / 7.8
44	Unfactored Load (LL)				8	9	15	17	28	42	60	82	108	140
	Unfactored Load (TL)				2	3	9	13	27	45	69	100	138	183
	Total Factored Load				72	76	107	120	166	216	272	335	403	477
	Min. end / Int. bearing				1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.5	1.7 / 4.3	2.1 / 5.3	2.5 / 6.3	3 / 7.4

Notes:

1. The values shown are the maximum uniform unfactored and factored loads in pounds per linear foot that can be applied to the beam. The weight of the beam has been deducted from the Total Unfactored Load (TL) and Total Factored Load.
2. Bearing lengths are in inches based on the compression perpendicular to grain resistance of the LVL beam. For bearing on other wood materials, the bearing resistance of the supporting material should be checked.
3. The tabulated values are for simple span or for continuous span beams.
4. Design span is the clear span between supports plus one half of the required bearing at each end.
5. The table is for standard term loading and dry service conditions.
6. Lateral support at points of bearing and continuous lateral support for top of beam must be provided to prevent rotation or lateral displacement.
7. Calculations have been carried out in accordance with CSA O86-14.
8. 1-1/2" thick LVL members 14" and deeper and 1-3/4" thick LVL members 16" and deeper must be a minimum of 2 plies unless designed by a design professional.
9. See Roseburg EWP Design Guide for information regarding the connection of multiple-ply members and installation guidelines.
10. Allowable loads shown for multiple ply LVL members are also applicable to factory glued LVL beams with the same thickness as the combined multiple plies.

Directions for use of Table:

1. Determine the total factored load, unfactored live load and unfactored total load.
2. Choose a span that meets or exceeds the actual design span (centre to centre of bearing).
3. Scan from left to right within the span row to find a cell where: the L/360 (LL) load exceeds the unfactored live load; the L/240 (TL) load exceeds the unfactored total load; the factored total load resistance exceeds the factored total load. All four rows including minimum bearing must be checked. Where no unfactored loads are shown, total factored load will govern.
4. If the selected beam is too deep or the bearing length is too long, resize the beam using a wider member.
5. For an L/480 live load deflection limit, multiply the tabulated L/360 (LL) loads by 0.75. For an L/180 total load limit, multiply the tabulated L/240 (TL) loads by 1.33.

Nov. 2020

Roseburg

4-Ply, 1.5" 1.6E true RigidLam LVL - Standard Term - Floor/Roof (PLF) L/360 LL L/240 TL Douglas-fir

ALLOWABLE UNIFORM LOAD - POUNDS PER LINEAL FOOT (Limit States Design)

Span (ft)	Depth =	4.375"	5.5"	7.25"	9.25"	9.5"	11.25"	11.875"	14"	16"	18"	20"	22"	24"
10	Unfactored Load (LL)	97	191	428	860	927	1487	1725	2690	3813	5137	-	-	-
	Unfactored Load (TL)	139	278	631	1275	1376	2213	2570	4014	-	-	-	-	-
	Total Factored Load	534	822	1383	2188	2300	3097	3302	4029	4762	5546	6388	7293	8270
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3.5	2.2 / 5.5	2.3 / 5.8	3.1 / 7.8	3.3 / 8.3	4 / 10.1	4.8 / 11.9	5.6 / 13.9	6.4 / 16	7.3 / 18.2	8.3 / 20.7
12	Unfactored Load (LL)	57	112	252	510	551	893	1040	1643	2362	3226	4233	5376	-
	Unfactored Load (TL)	78	159	366	752	813	1322	1542	2444	3518	-	-	-	-
	Total Factored Load	368	567	956	1514	1592	2189	2424	3229	3790	4383	5011	5675	6380
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.8 / 4.6	1.9 / 4.8	2.6 / 6.6	2.9 / 7.3	3.9 / 9.7	4.6 / 11.4	5.3 / 13.2	6 / 15.1	6.8 / 17.1	7.7 / 19.2
14	Unfactored Load (LL)	36	71	160	327	353	575	672	1071	1553	2141	2838	3640	4546
	Unfactored Load (TL)	47	98	229	476	515	846	990	1585	2305	3185	-	-	-
	Total Factored Load	268	414	699	1108	1165	1603	1775	2421	3113	3622	4120	4642	5190
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.6 / 3.9	1.6 / 4.1	2.3 / 5.7	2.5 / 6.3	3.4 / 8.5	4.4 / 10.9	5.1 / 12.7	5.8 / 14.5	6.5 / 16.3	7.3 / 18.2
16	Unfactored Load (LL)	24	48	108	221	239	391	458	734	1071	1487	1984	2564	3226
	Unfactored Load (TL)	29	63	151	318	344	570	669	1080	1582	2203	2946	3813	-
	Total Factored Load	203	315	532	844	888	1222	1354	1847	2377	2968	3496	3925	4372
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.4	1.5 / 3.6	2 / 4.9	2.2 / 5.5	3 / 7.5	3.8 / 9.6	4.8 / 11.9	5.6 / 14.1	6.3 / 15.8	7 / 17.6
18	Unfactored Load (LL)	17	33	76	156	169	278	325	524	768	1071	1437	1866	2362
	Unfactored Load (TL)	19	42	103	221	240	400	470	765	1128	1579	2125	2767	3506
	Total Factored Load	159	246	417	663	698	961	1065	1454	1872	2338	2852	3399	3775
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.2	1.8 / 4.4	1.9 / 4.9	2.7 / 6.6	3.4 / 8.5	4.2 / 10.6	5.2 / 12.9	6.2 / 15.4	6.8 / 17.1
20	Unfactored Load (LL)	12	24	56	115	124	204	239	386	568	795	1071	1397	1775
	Unfactored Load (TL)	12	28	73	158	172	289	341	558	828	1166	1576	2063	2627
	Total Factored Load	127	198	336	534	562	775	858	1173	1510	1887	2303	2757	3249
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.6 / 4	1.8 / 4.4	2.4 / 6	3.1 / 7.7	3.8 / 9.6	4.7 / 11.6	5.6 / 13.9	6.6 / 16.4
22	Unfactored Load (LL)	9	18	42	86	94	154	181	293	432	606	818	1071	1365
	Unfactored Load (TL)	7	19	52	116	126	214	253	418	623	882	1197	1573	2012
	Total Factored Load	104	162	275	438	461	637	706	965	1243	1554	1897	2272	2678
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.6	1.6 / 4	2.2 / 5.4	2.8 / 7	3.5 / 8.7	4.2 / 10.6	5.1 / 12.7	6 / 14.9
24	Unfactored Load (LL)	7	14	32	67	72	119	140	227	335	472	639	838	1071
	Unfactored Load (TL)	4	13	38	86	94	162	192	320	479	681	928	1224	1570
	Total Factored Load	86	134	229	366	385	532	589	806	1040	1300	1588	1902	2243
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.3	1.5 / 3.7	2 / 5	2.6 / 6.4	3.2 / 8	3.9 / 9.7	4.6 / 11.6	5.5 / 13.7
26	Unfactored Load (LL)	6	11	25	53	57	94	110	179	265	374	507	667	855
	Unfactored Load (TL)	2	8	27	65	71	124	148	248	374	534	731	968	1246
	Total Factored Load	72	113	193	309	325	450	499	683	881	1103	1347	1615	1904
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.4	1.8 / 4.6	2.4 / 5.9	2.9 / 7.4	3.6 / 9	4.3 / 10.7	5 / 12.6
28	Unfactored Load (LL)		9	20	42	46	76	89	144	214	302	410	539	692
	Unfactored Load (TL)		5	20	49	54	96	115	195	297	425	584	776	1002
	Total Factored Load		96	165	264	278	385	427	586	756	946	1157	1387	1636
	Min. end / Int. bearing		1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.1	1.7 / 4.3	2.2 / 5.5	2.7 / 6.8	3.3 / 8.3	4 / 9.9	4.7 / 11.7
30	Unfactored Load (LL)		7	17	34	37	62	72	118	175	247	335	442	568
	Unfactored Load (TL)		3	14	38	42	75	91	156	238	343	473	630	816
	Total Factored Load		82	142	228	240	333	369	507	655	820	1003	1203	1419
	Min. end / Int. bearing		1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.6 / 4	2 / 5.1	2.5 / 6.4	3.1 / 7.8	3.7 / 9.3	4.4 / 10.9
32	Unfactored Load (LL)		6	14	28	31	51	60	97	144	204	278	367	472
	Unfactored Load (TL)		1	10	29	32	59	72	125	192	279	387	517	672
	Total Factored Load		71	123	198	209	290	322	442	572	717	877	1052	1242
	Min. end / Int. bearing		1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.7	1.9 / 4.8	2.4 / 6	2.9 / 7.3	3.5 / 8.7	4.1 / 10.2
34	Unfactored Load (LL)			11	24	26	42	50	81	121	171	233	307	396
	Unfactored Load (TL)			6	22	24	47	57	101	157	229	319	428	558
	Total Factored Load			107	173	183	254	282	389	503	631	772	927	1095
	Min. end / Int. bearing			1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.5	1.8 / 4.5	2.2 / 5.6	2.7 / 6.8	3.3 / 8.2	3.9 / 9.6
36	Unfactored Load (LL)			10	20	22	36	42	69	102	144	197	260	335
	Unfactored Load (TL)			4	16	18	37	45	82	129	189	265	357	467
	Total Factored Load			94	153	161	225	250	344	445	559	685	822	972
	Min. end / Int. bearing			1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.3	1.7 / 4.3	2.1 / 5.3	2.6 / 6.5	3.1 / 7.7	3.6 / 9.1
38	Unfactored Load (LL)			8	17	18	30	36	58	87	123	168	222	286
	Unfactored Load (TL)			1	12	13	29	36	67	106	158	222	300	394
	Total Factored Load			83	135	143	199	222	306	397	498	611	734	868
	Min. end / Int. bearing			1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.1	1.6 / 4	2 / 5	2.5 / 6.1	2.9 / 7.3	3.5 / 8.6
40	Unfactored Load (LL)			7	15	16	26	31	50	75	106	144	191	247
	Unfactored Load (TL)			0	8	9	22	28	54	88	132	186	254	334
	Total Factored Load			74	120	127	178	198	274	355	446	548	658	779
	Min. end / Int. bearing			1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.8	1.9 / 4.8	2.3 / 5.8	2.8 / 7	3.3 / 8.2
42	Unfactored Load (LL)				13	14	23	27	43	65	92	125	165	214
	Unfactored Load (TL)				5	6	17	22	44	73	110	157	215	285
	Total Factored Load				108	114	159	177	246	319	402	493	593	702
	Min. end / Int. bearing				1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.6	1.8 / 4.6	2.2 / 5.5	2.7 / 6.6	3.1 / 7.8
44	Unfactored Load (LL)				11	12	20	23	38	56	80	109	144	186
	Unfactored Load (TL)				3	4	13	17	36	60	93	133	183	244
	Total Factored Load				97	102	143	160	222	288	363	446	537	636
	Min. end / Int. bearing				1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.5	1.7 / 4.3	2.1 / 5.3	2.5 / 6.3	3 / 7.4

Notes:

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