Roseburg

1-Ply, 1.75" 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)	127	244	528	1010	1083	1657	-	-					
	Unfactored Load (TL)	188	364	788	-	-	-	-	-					
	Total Factored Load	436	671	986	1328	1374	1712	1841	2320					
	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					
8	Unfactored Load (LL)	55	107	237	468	503	794	915	1396					
	Unfactored Load (TL)	80	158	352	697	751	-	-	-					
	Total Factored Load	244	376	632	934	964	1183	1265	1561					
	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					
10	Unfactored Load (LL)	28	56	125	251	270	434	503	785					
	Unfactored Load (TL)	41	81	184	372	401	646	750	1171					
	Total Factored Load	156	240	403	638	671	903	963	1175					
	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					
12	Unfactored Load (LL)	17	33	73	149	161	260	303	479					
	Unfactored Load (TL)	23	46	107	219	237	386	450	713					
	Total Factored Load	107	166	279	442	464	639	707	942					
	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					
14	Unfactored Load (LL)	10	21	47	95	103	168	196	312					
	Unfactored Load (TL)	14	29	67	139	150	247	289	462					
	Total Factored Load	78	121	204	323	340	468	518	706					
	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					
16	Unfactored Load (LL)		14	31	64	70	114	133	214					
	Unfactored Load (TL)		18	44	93	100	166	195	315					
	Total Factored Load		92	155	246	259	357	395	539					
	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	3 / 7.5					
18	Unfactored Load (LL)		10	22	46	49	81	95	153					
	Unfactored Load (TL)		12	30	64	70	117	137	223					
	Total Factored Load		72	122	193	203	280	311	424					
	Min. end / Int. bearing		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					
20	Unfactored Load (LL)			16	33	36	60	70	113					
	Unfactored Load (TL)			21	46	50	84	99	163					
	Total Factored Load			98	156	164	226	250	342					
	Min. end / Int. bearing			1.5 / 3	1.5 / 3	1.5 / 3	1.6 / 4	1.8 / 4.4	2.4 / 6					
22	Unfactored Load (LL)			12	25	27	45	53	85					
	Unfactored Load (TL)			15	34	37	63	74	122					
	Total Factored Load			80	128	135	186	206	281					
	Min. end / Int. bearing			1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.6	1.6 / 4	2.2 / 5.4					
24	Unfactored Load (LL)				19	21	35	41	66					
	Unfactored Load (TL)				25	27	47	56	93					
	Total Factored Load				107	112	155	172	235					
	Min. end / Int. bearing				1.5 / 3	1.5 / 3	1.5 / 3.3	1.5 / 3.7	2 / 5					
26	Unfactored Load (LL)				15	17	27	32	52					
	Unfactored Load (TL)				19	21	36	43	72					
	Total Factored Load				90	95	131	145	199					
	Min. end / Int. bearing				1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.4	1.8 / 4.6					
28	Unfactored Load (LL)				12	13	22	26	42					
	Unfactored Load (TL)				14	16	28	34	57					
	Total Factored Load				77	81	112	125	171					
	Min. end / Int. bearing				1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.1	1.7 / 4.3					
30	Unfactored Load (LL)						18	21	34					
	Unfactored Load (TL)						22	26	45					
	Total Factored Load						97	108	148					
	Min. end / Int. bearing						1.5 / 3	1.5 / 3	1.6 / 4					
32	Unfactored Load (LL)						15	17	28					
	Unfactored Load (TL)						17	21	36					
	Total Factored Load						85	94	129					
	Min. end / Int. bearing						1.5 / 3	1.5 / 3	1.5 / 3.7					
34	Unfactored Load (LL)						12	15	24					
	Unfactored Load (TL)						14	17	29					
	Total Factored Load						74	82	113					
	Min. end / Int. bearing						1.5 / 3	1.5 / 3	1.5 / 3.5					
36	Unfactored Load (LL)							12	20					
	Unfactored Load (TL)							13	24					
	Total Factored Load							73	100					
	Min. end / Int. bearing							1.5 / 3	1.5 / 3.3					
38	Unfactored Load (LL)								17					
	Unfactored Load (TL)								19					
	Total Factored Load								89					
	Min. end / Int. bearing								1.5 / 3.1					
40	Unfactored Load (LL)								15					
	Unfactored Load (TL)								16					
	Total Factored Load								80					
	Min. end / Int. bearing								1.5 / 3					

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, 1.75" 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)	254	489	1055	2021	2165	3314	-	-	-	-	-	-	-
	Unfactored Load (TL)	377	728	1577	-	-	-	-	-	-	-	-	-	-
	Total Factored Load	873	1342	1972	2657	2748	3423	3682	4639	5669	6852	8224	9835	11753
	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)	110	214	473	935	1006	1588	1831	2793	-	-	-	-	-
	Unfactored Load (TL)	161	316	703	1395	1501	-	-	-	-	-	-	-	-
	Total Factored Load	489	752	1265	1868	1929	2366	2530	3122	3730	4398	5132	5943	6845
	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)	57	111	249	501	541	867	1006	1569	2224	2996	-	-	-
	Unfactored Load (TL)	81	162	368	744	803	1291	1499	2341	-	-	-	-	-
	Total Factored Load	311	479	807	1276	1342	1807	1926	2350	2778	3235	3726	4254	4824
	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)	33	65	147	298	322	521	607	959	1378	1882	2469	3136	-
	Unfactored Load (TL)	46	93	214	439	474	771	900	1426	2052	-	-	-	-
	Total Factored Load	215	331	558	883	929	1277	1414	1883	2211	2557	2923	3310	3722
	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)	21	41	93	191	206	336	392	625	906	1249	1655	2123	2652
	Unfactored Load (TL)	27	57	134	278	301	494	577	925	1345	1858	-	-	-
	Total Factored Load	156	242	408	646	680	935	1035	1412	1816	2113	2403	2708	3028
	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)	14	28	63	129	139	228	267	428	625	867	1157	1496	1882
	Unfactored Load (TL)	17	37	88	185	201	333	390	630	923	1285	1719	2224	-
	Total Factored Load	119	184	310	492	518	713	790	1078	1386	1731	2039	2290	2550
	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)	10	20	44	91	99	162	190	306	448	625	838	1089	1378
	Unfactored Load (TL)	11	24	60	129	140	233	274	446	658	921	1240	1614	2045
	Total Factored Load	93	144	244	387	407	561	621	848	1092	1364	1664	1983	2202
	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)	7	14	32	67	72	119	139	225	331	464	625	815	1036
	Unfactored Load (TL)	7	17	42	92	100	169	199	326	483	680	920	1203	1532
	Total Factored Load	74	115	196	311	328	452	501	684	881	1101	1343	1608	1895
	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)		11	24	50	55	90	105	171	252	353	477	625	796
	Unfactored Load (TL)		11	30	68	74	125	148	244	364	514	699	918	1174
	Total Factored Load		94	160	256	269	371	412	563	725	906	1106	1325	1562
	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)		8	19	39	42	70	82	132	196	275	372	489	625
	Unfactored Load (TL)		8	22	50	55	95	112	186	279	397	541	714	916
	Total Factored Load		78	134	213	224	310	344	470	606	758	926	1110	1308
	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)			15	31	33	55	64	105	155	218	296	389	498
	Unfactored Load (TL)			16	38	42	73	86	145	218	312	427	564	727
	Total Factored Load			113	180	190	262	291	399	514	643	786	942	1111
	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)			12	25	27	44	52	84	125	176	239	315	404
	Unfactored Load (TL)			12	29	32	56	67	114	173	248	341	453	585
	Total Factored Load			96	154	162	225	249	342	441	552	675	809	954
	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)			10	20	22	36	42	69	102	144	196	258	331
	Unfactored Load (TL)			8	22	24	44	53	91	139	200	276	368	476
	Total Factored Load			83	133	140	194	215	296	382	478	585	701	828
	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)			8	17	18	30	35	57	84	119	162	214	275
	Unfactored Load (TL)			6	17	19	35	42	73	112	163	226	302	392
	Total Factored Load			72	116	122	169	188	258	333	418	511	614	724
	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)				14	15	25	29	47	70	100	136	179	231
	Unfactored Load (TL)				13	14	27	33	59	92	134	186	250	325
	Total Factored Load				101	107	148	165	227	293	368	451	541	639
	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)				12	13	21	25	40	59	84	115	152	196
	Unfactored Load (TL)				9	11	21	26	48	75	111	155	208	272
	Total Factored Load				89	94	131	146	201	260	326	400	480	567
	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)				10	11	18	21	34	51	72	98	130	167
	Unfactored Load (TL)				7	8	17	21	39	62	92	129	175	230
	Total Factored Load				79	83	116	129	178	231	291	356	428	506
	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)				9	9	15	18	29	44	62	84	111	144
	Unfactored Load (TL)				5	5	13	16	32	51	77	109	148	195
	Total Factored Load				70	74	104	115	160	207	260	319	384	454
	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

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.
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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.
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Directions for use of Table:

1. Determine the total factored load, unfactored live load and unfactored total load.
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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, 1.75" 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)	85	167	374	752	811	1301	1510	2354	3337	4495	-	-	-
	Unfactored Load (TL)	122	243	552	1116	1204	1937	2249	3512	-	-	-	-	-
	Total Factored Load	467	719	1210	1914	2013	2710	2889	3525	4166	4853	5589	6381	7236
	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)	50	98	220	447	482	781	910	1438	2066	2823	3704	4704	-
	Unfactored Load (TL)	69	139	321	658	711	1157	1349	2139	3078	-	-	-	-
	Total Factored Load	322	497	837	1325	1393	1916	2121	2825	3316	3836	4384	4966	5583
	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)	31	62	140	286	309	503	588	937	1359	1874	2483	3185	3978
	Unfactored Load (TL)	41	86	201	417	451	740	866	1387	2017	2787	-	-	-
	Total Factored Load	235	362	612	969	1019	1403	1553	2118	2724	3169	3605	4062	4541
	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)	21	42	94	193	209	342	400	642	937	1301	1736	2243	2823
	Unfactored Load (TL)	26	55	132	278	301	499	585	945	1385	1928	2578	3336	-
	Total Factored Load	178	275	465	739	777	1070	1185	1616	2080	2597	3059	3435	3826
	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)	15	29	67	137	148	243	285	458	672	937	1257	1633	2066
	Unfactored Load (TL)	16	37	90	193	210	350	411	669	987	1382	1859	2421	3068
	Total Factored Load	139	216	365	580	610	841	932	1272	1638	2046	2495	2974	3303
	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)	11	21	49	100	109	179	209	338	497	696	937	1223	1553
	Unfactored Load (TL)	10	25	64	138	150	253	298	489	725	1020	1379	1805	2299
	Total Factored Load	111	173	294	467	492	678	751	1026	1321	1651	2015	2413	2843
	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)	8	16	37	76	82	135	158	256	378	530	716	937	1195
	Unfactored Load (TL)	6	17	46	101	110	188	222	366	545	772	1048	1377	1761
	Total Factored Load	91	141	241	383	404	557	617	844	1088	1360	1660	1988	2343
	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)	6	12	28	58	63	104	122	199	293	413	559	733	937
	Unfactored Load (TL)	4	11	33	76	82	142	168	280	419	595	812	1071	1374
	Total Factored Load	75	117	200	320	337	465	516	706	910	1138	1389	1664	1962
	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)		10	22	46	50	82	97	157	232	327	444	584	748
	Unfactored Load (TL)		7	24	57	62	109	129	217	327	467	640	847	1090
	Total Factored Load		99	169	270	284	394	436	598	771	965	1179	1413	1666
	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)		8	18	37	40	66	78	126	187	264	358	472	606
	Unfactored Load (TL)		5	17	43	48	84	101	171	259	372	511	679	877
	Total Factored Load		84	144	231	243	337	374	512	661	828	1012	1213	1431
	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)		6	15	30	33	54	63	103	153	216	293	387	497
	Unfactored Load (TL)		2	12	33	36	66	79	136	208	300	414	551	714
	Total Factored Load		72	124	199	210	291	323	443	573	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	1.6 / 4	2 / 5.1	2.5 / 6.4	3.1 / 7.8	3.7 / 9.3	4.4 / 10.9
32	Unfactored Load (LL)			12	25	27	44	52	85	126	179	243	321	413
	Unfactored Load (TL)			8	25	28	52	63	109	168	244	338	452	588
	Total Factored Load			107	173	183	254	282	387	500	627	767	920	1087
	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)			10	21	22	37	44	71	106	149	204	269	346
	Unfactored Load (TL)			5	19	21	41	50	88	137	200	279	375	488
	Total Factored Load			94	152	160	222	247	340	440	552	676	811	958
	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)			8	17	19	31	37	60	89	126	172	228	293
	Unfactored Load (TL)			3	14	16	32	40	72	113	166	232	313	409
	Total Factored Load			82	134	141	196	218	301	390	489	599	720	850
	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)			7	15	16	27	31	51	76	108	147	194	251
	Unfactored Load (TL)			1	10	12	25	31	58	93	138	194	263	344
	Total Factored Load			73	118	125	174	194	268	347	436	534	642	759
	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)				13	14	23	27	44	65	93	126	167	216
	Unfactored Load (TL)				7	8	20	25	47	77	115	163	222	292
	Total Factored Load				105	111	156	173	239	311	391	479	576	681
	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)				11	12	20	23	38	56	80	109	145	187
	Unfactored Load (TL)				4	5	15	19	39	64	96	138	188	249
	Total Factored Load				94	99	139	155	215	279	352	432	519	614
	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)				10	10	17	20	33	49	70	95	126	163
	Unfactored Load (TL)				2	3	11	15	31	53	81	117	161	213
	Total Factored Load				84	89	125	140	194	252	318	390	470	556
	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, 1.75" 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)	113	223	499	1003	1081	1735	2013	3138	4449	5993	-	-	-
	Unfactored Load (TL)	163	325	736	1488	1605	2582	2998	4683	-	-	-	-	-
	Total Factored Load	622	959	1613	2553	2684	3613	3852	4700	5555	6470	7452	8508	9648
	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)	66	130	294	596	643	1042	1213	1917	2755	3763	4938	6272	-
	Unfactored Load (TL)	91	186	428	877	948	1543	1799	2852	4105	-	-	-	-
	Total Factored Load	429	662	1116	1766	1857	2554	2828	3767	4422	5114	5846	6621	7443
	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)	42	82	187	381	412	671	784	1249	1812	2498	3311	4247	5304
	Unfactored Load (TL)	55	114	267	555	601	987	1155	1850	2689	3716	-	-	-
	Total Factored Load	313	483	815	1292	1359	1870	2071	2824	3632	4226	4807	5416	6055
	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)	28	55	126	258	279	457	534	856	1249	1735	2315	2991	3763
	Unfactored Load (TL)	34	74	176	371	402	665	780	1260	1846	2570	3437	4448	-
	Total Factored Load	237	367	621	985	1036	1426	1579	2155	2773	3462	4079	4579	5101
	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)	20	39	89	183	197	324	379	611	896	1249	1676	2178	2755
	Unfactored Load (TL)	22	49	121	258	279	466	548	892	1315	1843	2479	3228	4091
	Total Factored Load	185	288	487	774	814	1122	1242	1697	2184	2727	3327	3965	4404
	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)	14	29	65	134	145	238	279	451	663	928	1249	1630	2071
	Unfactored Load (TL)	14	33	85	184	200	337	398	652	966	1360	1839	2407	3065
	Total Factored Load	148	231	391	623	655	904	1001	1368	1762	2202	2687	3217	3791
	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)	11	21	49	101	109	180	211	342	503	707	955	1249	1593
	Unfactored Load (TL)	9	23	61	135	147	250	296	488	727	1029	1397	1836	2347
	Total Factored Load	121	189	321	511	538	743	823	1126	1450	1813	2213	2650	3124
	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)	8	17	38	78	84	139	163	265	391	550	745	977	1249
	Unfactored Load (TL)	5	15	44	101	110	189	224	373	559	794	1082	1428	1832
	Total Factored Load	100	156	267	426	449	620	688	941	1213	1517	1852	2219	2617
	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)	7	13	30	61	67	110	129	209	310	436	592	778	997
	Unfactored Load (TL)	2	10	32	76	83	145	173	290	437	623	853	1129	1453
	Total Factored Load	84	132	225	360	379	525	582	797	1028	1287	1572	1884	2222
	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)	5	10	24	49	53	88	103	168	249	352	478	629	807
	Unfactored Load (TL)	0	6	23	58	63	113	134	228	346	496	682	905	1169
	Total Factored Load	71	112	192	308	324	449	498	683	882	1104	1349	1618	1908
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.1	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	19	40	43	72	84	137	204	288	391	516	663
	Unfactored Load (TL)		3	16	44	49	88	106	182	277	400	552	735	952
	Total Factored Load		96	165	266	280	388	431	591	764	957	1170	1403	1656
	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)		7	16	33	36	59	70	113	168	238	324	428	550
	Unfactored Load (TL)		1	11	33	37	69	84	146	225	326	451	603	783
	Total Factored Load		83	143	231	243	338	375	516	667	836	1023	1227	1449
	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)		6	13	28	30	50	58	95	141	199	271	359	462
	Unfactored Load (TL)		-1	7	25	28	55	66	118	183	267	372	499	651
	Total Factored Load		72	125	202	213	297	330	453	587	736	901	1082	1277
	Min. end / Int. bearing		1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.5	1.8 / 4.5	2.2 / 5.6	2.7 / 6.8	3.3 / 8.2	3.9 / 9.6
36	Unfactored Load (LL)			11	23	25	42	49	80	119	168	230	303	391
	Unfactored Load (TL)			4	19	21	43	53	96	150	221	309	417	545
	Total Factored Load			110	178	188	262	291	401	520	652	799	960	1134
	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)			10	20	21	36	42	68	101	144	196	259	334
	Unfactored Load (TL)			2	14	16	34	42	78	124	184	259	350	459
	Total Factored Load			97	158	167	233	259	357	463	581	713	856	1012
	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)			8	17	18	31	36	59	87	123	168	223	288
	Unfactored Load (TL)			0	9	11	26	33	63	103	154	218	296	389
	Total Factored Load			86	141	148	207	231	319	414	521	639	768	908
	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)			7	15	16	26	31	51	75	107	146	193	249
	Unfactored Load (TL)			-2	6	7	20	26	51	85	129	184	251	332
	Total Factored Load			77	126	133	186	207	287	372	469	575	692	819
	Min. end / Int. bearing			1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.6	1.8 / 4.6	2.2 / 5.5	2.7 / 6.6	3.1 / 7.8
44	Unfactored Load (LL)				13	14	23	27	44	66	93	127	168	217
	Unfactored Load (TL)				3	4	15	20	42	70	108	156	214	284
	Total Factored Load				113	119	167	186	258	336	424	520	626	742
	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