

Table R502.5(1)
GIRDER AND HEADER SPANS FOR INTERIOR AND EXTERIOR LOAD CONDITIONS
 20 psf Roof Live Load

Header Supporting	Building Width (ft)	Maximum Header / Girder Spans (ft.in), for common Lumber Species (1)																								
		Douglas-Fir-Larch						Hem- Fir						Southern Pine						Spruce-Pine-Fir						
		20		28		36		20		28		36		20		28		36		20		28		36		
Header Size	ft.in	End Reaction	ft.in	End Reaction	ft.in	End Reaction	ft.in	End Reaction	ft.in	End Reaction	ft.in	End Reaction	ft.in	End Reaction	ft.in	End Reaction	ft.in	End Reaction	ft.in	End Reaction	ft.in	End Reaction	ft.in	End Reaction		
Roof and Ceiling	Roof and Ceiling	2-2x4	3.75	760	3.417	957	3.083	1110	3.5	700	3.167	887	2.917	1050	3.417	683	3.417	957	3.167	1140	3.583	717	3.25	910	3	1080
		2-2x6	5.833	1167	5	1400	4.5	1620	5.5	1100	4.917	1377	4.417	1590	5.25	1050	5.25	1470	4.667	1680	5.667	1133	5	1400	4.417	1590
		2-2x8	7.334	1467	6.417	1797	5.667	2040	7.167	1433	6.133	1717	5.5	1980	6.667	1333	6.667	1867	5.917	2130	7.25	1450	6.25	1750	5.583	2010
		2-2x10	9	1800	7.75	2170	7	2520	8.75	1750	7.583	2123	6.75	2430	8.083	1617	8.083	2263	7.25	2610	8.833	1767	7.667	2147	6.833	2460
		2-2x12	10.42	2083	9	2520	8.083	2910	10.17	2033	8.75	2450	7.833	2820	9.417	1883	9.417	2637	8.417	3030	10.25	2050	8.917	2497	8	2880
		3-2x8	8.917	1783	8	2240	7.167	2580	8.334	1667	7.583	2123	6.917	2490	8.083	1617	8.083	2263	7.417	2670	8.5	1700	7.75	2147	7	2520
		3-2x10	11.25	2250	9.75	2730	8.75	3150	10.58	2117	9.5	2660	8.5	3060	10.17	2033	10.17	2847	9.083	3270	10.83	2167	9.583	2683	8.583	3090
		3-2x12	13.08	2617	11.33	3174	10.08	3630	12.67	2533	11	3080	9.833	3540	11.75	2350	11.75	3290	10.5	3780	12.92	2583	11.17	3127	10	3600
		4-2x8	9.833	1967	8.917	2497	8.25	2970	9.167	1833	8.334	2334	7.75	2790	8.917	1783	8.917	2497	8.25	2970	9.334	1867	8.5	2380	7.917	2850
		4-2x10	12.5	2500	11.25	3150	10.08	3630	11.67	2333	10.58	2963	9.75	3510	11.25	2250	11.33	3174	10.5	3780	11.92	2383	10.83	3033	9.917	3570
		4-2x12	15.08	3017	13.08	3663	11.67	4200	14.17	2833	12.67	3547	11.33	4080	13.58	2717	13.58	3803	12.17	4380	14.58	2917	12.92	3617	11.5	4140
		Roof, Ceiling and One - Center Bearing Floor (Exterior Header)	Roof, Ceiling and One - Center Bearing Floor (Exterior Header)	2-2x4	3.334	1050	2.917	1240	2.583	1382	3.083	971	2.833	1204	2.583	1382	3.333	1050	3	1275	2.75	1471	3.167	998	2.833	1204
2-2x6	4.083			1286	4.25	1806	3.833	2051	4.667	1470	4.167	1771	3.75	2006	5	1575	4.417	1877	4	2140	4.75	1496	4.167	1771	3.75	2006
2-2x8	6.167			1943	5.417	2302	4.833	2586	6	1890	5.25	2231	4.75	2541	6.417	2021	5.583	2373	5.083	2720	6.083	1916	5.333	2267	4.75	2541
2-2x10	7.5			2363	6.583	2798	5.917	3165	7.25	2284	6.417	2727	5.75	3076	7.833	2467	6.833	2904	6.167	3290	7.417	2336	6.5	2763	5.833	3121
2-2x12	8.667			2730	7.667	3258	6.917	3700	8.417	2651	7.417	3152	6.667	3567	9.083	2861	7.917	3365	7.167	3834	8.583	2704	7.5	3188	6.75	3611
3-2x8	7.667			2415	6.75	2869	6.083	3255	7.333	2310	6.583	2798	5.917	3165	7.917	2494	7	2975	6.334	3389	7.5	2363	6.667	2833	6	3210
3-2x10	9.417			2966	8.25	3506	7.417	3968	9.083	2861	8	3400	7.25	3879	9.75	3071	8.583	3648	7.75	4146	9.25	2914	8.083	3435	7.333	3923
3-2x12	10.92			3439	9.583	4073	8.583	4592	10.58	3334	9.25	3931	8.417	4503	11.33	3570	9.917	4215	9	4815	10.75	3386	9.417	4002	8.5	4548
4-2x8	8.667			2730	7.75	3294	7	3745	8.083	2546	7.417	3152	6.833	3656	8.667	2730	7.917	3365	7.334	3924	8.333	2625	7.583	3223	6.917	3700
4-2x10	10.83			3412	9.5	4038	8.583	4592	10.33	3255	9.25	3931	8.333	4458	11.08	3491	9.917	4215	8.917	4770	10.58	3334	9.417	4002	8.5	4548
4-2x12	12.58			3964	11	4675	9.917	5305	12.25	3859	10.75	4569	9.667	5172	13.08	4121	11.5	4888	10.33	5529	12.42	3911	10.92	4640	9.833	5261
Roof, Ceiling and One - Center Bearing Floor (Interior Header)	Roof, Ceiling and One - Center Bearing Floor (Interior Header)			2-2x4	3.334	1300	2.917	1546	2.583	1731	3.083	1202	2.833	1502	2.583	1731	3.333	1300	3	1590	2.75	1843	3.167	1235	2.833	1502
		2-2x6	4.083	1592	4.25	2253	3.833	2568	4.667	1820	4.167	2208	3.75	2513	5	1590	4.417	2341	4	2680	4.75	1853	4.167	2208	3.75	2513
		2-2x8	6.167	2405	5.417	2871	4.833	3238	6	2340	5.25	2783	4.75	3183	6.417	2503	5.583	2959	5.083	3406	6.083	2372	5.333	2827	4.75	3183
		2-2x10	7.5	2925	6.583	3489	5.917	3964	7.25	2828	6.417	3401	5.75	3853	7.833	3055	6.833	3622	6.167	4132	7.417	2893	6.5	3445	5.833	3908
		2-2x12	8.667	3380	7.667	4063	6.917	4634	8.417	3283	7.417	3931	6.667	4467	9.083	3542	7.917	4196	7.167	4802	8.583	3347	7.5	3975	6.75	4523
		3-2x8	7.667	2990	6.75	3578	6.083	4076	7.333	2860	6.583	3489	5.917	3964	7.917	3088	7	3710	6.334	4244	7.5	2925	6.667	3533	6	4020
		3-2x10	9.417	3673	8.25	4373	7.417	4969	9.083	3542	8	4240	7.25	4858	9.75	3083	8.583	4549	7.75	5193	9.25	3608	8.083	4284	7.333	4913
		3-2x12	10.92	4258	9.583	5079	8.583	5751	10.58	4127	9.25	4903	8.417	5639	11.33	4420	9.917	5256	9	6030	10.75	4193	9.417	4091	8.5	5695
		4-2x8	8.667	3380	7.75	4108	7	4690	8.083	3152	7.417	3931	6.833	4578	8.667	3380	7.917	4196	7.334	4914	8.333	3250	7.583	4919	6.917	4634
		4-2x10	10.83	4225	9.5	5035	8.583	5751	10.33	4030	9.25	4903	8.333	5583	11.08	4322	9.917	5256	8.917	5974	10.58	4127	9.417	4091	8.5	5695
		4-2x12	12.58	4907	11	5830	9.917	6644	12.25	4778	10.75	5698	9.667	6477	13.08	5102	11.5	6095	10.33	6924	12.42	4843	10.92	5786	9.833	6588
		Roof, Ceiling and One - Clear - Span Floor	Roof, Ceiling and One - Clear - Span Floor	2-2x4	2.917	1283	2.5	1500	2.25	1710	2.833	1247	2.417	1450	2.167	1647	3	1320	2.583	1550	2.334	1774	2.333	1027	2.333	1400
2-2x6	4.25			1870	3.667	2200	3.25	2470	4.083	1797	3.583	2150	3.167	2447	4.417	1943	3.833	2300	3.417	2597	3.917	1723	3.417	2050	3.083	2343
2-2x8	5.333			2347	4.583	2716	4.167	3167	5.167	2273	4.5	2700	4	3040	5.583	2457	4.833	2900	4.334	3294	5	2200	4.417	2850	3.917	2977
2-2x10	6.5			2860	5.667	3400	5.083	3863	6.333	2787	5.5	3300	4.917	3737	6.75	2970	5.833	3500	5.25	3990	6.083	2677	5.333	3200	4.833	3673
2-2x12	7.583			3337	6.583	3950	5.833	4433	7.333	3227	6.333	3800	5.667	4307	7.833	3447	6.833	4100	6.083	4623	7.083	3117	6.167	3700	5.583	4243
3-2x8	6.667			2933	5.75	3450	5.167	3927	6.5	2860	5.833	3350	5	3800	6.917	3043	6	3600	5.417	4117	6.25	2750	5.5	3300	4.917	3737
3-2x10	8.167			3593	7.083	4233	6.333	4813	7.917	3483	6.833	4100	6.167	4687	8.5	3740	7.333	4400	6.583	5003	7.667	3373	6.667	4000	6	5660
3-2x12	9.5			4180	8.167	4900	7.333	5573	9.167	4033	8	4800	7.083	5383	9.833	4327	8.5	5100	7.667	5827	8.833	3887	7.75	4650	7	5320
4-2x8	7.75			3410	6.667	4000	6	4560	7.417	3263	6.5	3900	5.833	4433	7.917	3483	6.917	4150	6.25	4750	7.25	3190	6.333	3800	5.667	4307
4-2x10	9.417			4143	8.167	4900	7.333	5573	9.167	4033	7.917	4750	7.083	5383	9.833	4327	8.5	5100	7.583	5763	8.833	3887	7.75	4650	7	5320
4-2x12	10.92			4803	9.5	5700	8.5	6460	10.58	4657	9.167	5500	8.25	6270	11.33	4987	9.917	5950	8.833	6713	10.25	4510	9	5400	8.083	6143
Roof, Ceiling and Two - Center Bearing Floors (Exterior Header)	Roof, Ceiling and Two - Center Bearing Floors (Exterior Header)			2-2x4	2.75	1251	2.417	1462	2.167	1636	2.667	1213	2.333	1412	2.083	1573	2.833	1289	2.5	1513	2.25	1699	2.667	1213	2.333	1412
		2-2x6	4	1820	3.5	2118	3.167	2391	3.917	1782	3.417	2067	3.083	2328	4.167	1896	3.667	2218	3.25	2454	3.917	1782	3.417	2067	3.083	2328
		2-2x8	5.083	2313	4.417	2672	4	3020	4.917	2237	4.333	2622	3.917	2957	5.25	2389	4.583	2773	4.167	3146	5	2275	4.417	2672	3.917	2957
		2-2x10	6.083	2768	5.417	3277	4.917	3712	6	2730	5.25	3176	4.75	3586	6.417	2920	5.667	3428	5.083	3838	6.083	2768	5.333	3227	4.833	3649
		2-2x12	7.167	3261	6.333	3832	5.667	4278	7	3185																