

**RESIDENTIAL ROOF HEADERS WITH SYMMETRICAL TRIANGULAR LOAD (L/240)**

California Building Code 2007 Edition (CBC), NDS 2005

Lumber: Douglas Fir-Larch, Surfaced-Dry condition (19% maximum moisture content).

Design Criteria: Strength: Based on allowable bending stresses and shear stresses for Dead + Live loads.  
25% Stress increase included due to duration of load.

Deflection: Based on L/240 for Dead plus Live load.



**ALLOWABLE SYMMETRICAL TRIANGULAR LOAD - W (Lbs)**

SIZES W x D	GRADE	LENGTH (FEET) THE MEMBER SPANS														
		4	6	8	10	12	14	16	18	20	22	24	26	28	30	32
4 x 4	SS	2512	1146	645	412	286	210	161	NOTES 1. Horizontal shear controls design in area left of solid line. ( <b><i>Bold Italics</i></b> ) 2. Deflection controls design in area right of double line. ( <b>Bold</b> ) 3. Bending stress controls design in area between solid and double lines.							
4 x 4	#1+	2010	1086	611	391	271	199	153								
4 x 4	#1	1675	1025	577	369	256	188	144								
4 x 4	#2	1507	965	543	347	241	177	136								
4 x 6	SS	4876	3584	2501	1601	1112	817	625								
4 x 6	#1+	4301	2867	2151	1516	1053	774	592								
4 x 6	#1	3584	2390	1792	1432	995	731	559								
4 x 6	#2	3226	2151	1613	1290	936	688	527								
4 x 8	SS	6702	6228	4671	3666	2546	1871	1432	1132	917	758	637	542	468	407	358
4 x 8	#1+	6702	4982	3737	2989	2412	1772	1357	1072	868	718	603	514	443	386	339
4 x 8	#1	6228	4152	3114	2491	2076	1674	1281	1012	820	678	570	485	418	364	320
4 x 8	#2	5605	3737	2803	2242	1868	1575	1206	953	772	638	536	457	394	343	302
4 x 10	SS	9126	8319	7019	5615	4679	3885	2974	2350	1904	1573	1322	1126	971	846	744
4 x 10	#1+	9126	7487	5615	4492	3743	3209	2808	2226	1803	1490	1252	1067	920	802	704
4 x 10	#1	9126	6239	4679	3743	3119	2674	2340	2080	1703	1408	1183	1008	869	757	665
4 x 10	#2	8423	5615	4211	3369	2808	2406	2106	1872	1603	1325	1113	949	818	712	626
4 x 12	SS	12111	10473	9517	7614	6345	5438	4758	4228	3425	2830	2378	2026	1747	1522	1338
4 x 12	#1+	12111	10151	7614	6091	5076	4351	3807	3384	3045	2681	2253	1920	1655	1442	1267
4 x 12	#1	12111	8459	6345	5076	4230	3625	3172	2820	2538	2307	2115	1813	1563	1362	1197
4 x 12	#2	11420	7614	5710	4568	3807	3263	2855	2538	2284	2076	1903	1706	1471	1282	1127
4 x 14	SS	16010	12874	12001	9601	8001	6858	6001	5334	4801	4364	3885	3311	2855	2487	2186
4 x 14	#1+	16010	12801	9601	7681	6401	5486	4801	4267	3840	3491	3200	2954	2704	2356	2071
4 x 14	#1	16002	10668	8001	6401	5334	4572	4000	3556	3200	2909	2667	2462	2286	2134	1956
4 x 14	#2	14402	9601	7201	5761	4801	4115	3600	3200	2880	2618	2400	2216	2057	1920	1800
4 x 16	SS	21485	15611	14248	12718	10599	9084	7949	7066	6359	5781	5299	4892	4352	3791	3332
4 x 16	#1+	21485	15611	12718	10175	8479	7268	6359	5653	5087	4625	4239	3913	3634	3392	3157
4 x 16	#1	21197	14131	10599	8479	7066	6056	5299	4710	4239	3854	3533	3261	3028	2826	2650
4 x 16	#2	19077	12718	9539	7631	6359	5451	4769	4239	3815	3469	3180	2935	2725	2544	2385
6 x 6	SS	6499	4333	3250	2118	1471	1081	827	654	530	438	368	313	270	235	207
6 x 6	#1	5199	3466	2600	2080	1471	1081	827	654	530	438	368	313	270	235	207
6 x 8	SS	10362	8057	6042	4834	3730	2740	2098	1658	1343	1110	932	795	685	597	525
6 x 8	#1	9668	6445	4834	3867	3223	2740	2098	1658	1343	1110	932	795	685	597	525
6 x 10	SS	14044	12730	10341	8273	6894	5569	4264	3369	2729	2255	1895	1615	1392	1213	1066
6 x 10	#1	14044	11634	8725	6980	5817	4986	4264	3369	2729	2255	1895	1615	1392	1213	1066
6 x 12	SS	18609	15966	15154	12123	10102	8659	7564	5976	4841	4001	3362	2864	2470	2151	1891
6 x 12	#1	18609	15966	12786	10229	8524	7306	6393	5683	4841	4001	3362	2864	2470	2151	1891
6 x 14	SS	24620	19584	18276	16487	13739	11776	10304	9159	7831	6472	5438	4634	3995	3480	3059
6 x 14	#1	24620	19584	17385	13908	11590	9934	8692	7727	6954	6322	5438	4634	3995	3480	3059
6 x 16	SS	33151	23721	21573	20705	17836	15288	13377	11891	10702	9729	8231	7013	6047	5268	4630
6 x 16	#1	33151	23721	21573	18059	15049	12899	11287	10033	9029	8209	7524	6946	6047	5268	4630
6 x 18	SS	46586	28567	25161	23845	22429	19225	16822	14953	13457	12234	11215	10094	8703	7581	6663
6 x 18	#1	46586	28567	25161	22704	18920	16217	14190	12613	11352	10320	9460	8732	8109	7568	6663
6 x 20	SS	71534	34404	29115	27181	26234	23575	20628	18336	16502	15002	13752	12694	11787	10489	9219
6 x 20	#1	69658	34404	29115	27181	23219	19902	17415	15480	13932	12665	11610	10717	9951	9288	8707
8 x 8	SS	14130	10986	8240	6592	5086	3737	2861	2261	1831	1513	1272	1083	934	814	715
8 x 8	#1	13184	8789	6592	5273	4395	3737	2861	2261	1831	1513	1272	1083	934	814	715
8 x 10	SS	19151	17359	13220	10576	8813	7554	5814	4594	3721	3075	2584	2202	1899	1654	1454
8 x 10	#1	19151	14102	10576	8461	7051	6044	5288	4594	3721	3075	2584	2202	1899	1654	1454
8 x 12	SS	25377	21772	20664	16531	13776	11808	10314	8149	6601	5455	4584	3906	3368	2934	2579
8 x 12	#1	25377	21772	17435	13948	11624	9963	8718	7749	6601	5455	4584	3906	3368	2934	2579
8 x 14	SS	33573	26705	24921	22482	18735	16059	14051	12490	10679	8825	7416	6319	5448	4746	4171
8 x 14	#1	33573	26705	23707	18965	15804	13547	11853	10536	9483	8621	7416	6319	5448	4746	4171
8 x 16	SS	45205	32346	29418	28234	24322	20848	18242	16215	14593	13267	11224	9564	8246	7183	6313
8 x 16	#1	45205	32346	29418	24626	20521	17590	15391	13681	12313	11193	10261	9471	8246	7183	6313
8 x 18	SS	63526	38955	34311	32516	30585	26216	22939	20390	18351	16683	15293	13764	11868	10338	9086
8 x 18	#1	63526	38955	34311	30960	25800	22114	19350	17200	15480	14073	12900	11908	11057	10320	9086
8 x 20	SS	97546	46915	39703	37065	35774	32147	28129	25003	22503	20457	18753	17310	16074	14303	12571
8 x 20	#1	94988	46915	39703	37065	31663	27139	23747	21108	18998	17271	15831	14614	13570	12665	11874
8 x 22	SS	135335	56814	45724	41935	40128	38667	33834	30074	27067	24606	22556	20821	19334	18045	16850
8 x 22	#1	114208	56814	45724	41935	38069	32631	28552	25380	22842	20765	19035	17571	16315	15228	14276
8 x 24	SS	160066	69614	52545	47189	44713	43342	40017	35570	32013	29103	26678	24626	22867	21342	20008
8 x 24	#1	135042	69614	52545	47189	44713	38584	33761	30009	27008	24553	22507	20776	19292	18006	16880

**DIVISION OF BUILDING AND SAFETY  
COUNTY OF VENTURA**

*Jim MacDonald*

BUILDING OFFICIAL \_\_\_\_\_

B & S  
STD

**B-74**

DATE: 01/01/08