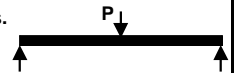


**RESIDENTIAL ROOF HEADERS WITH CONCENTRATED CENTER LOAD (L/180)**  
**California Building Code 2007 Edition (CBC), NDS 2005**

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/180 for Dead plus Live load.



SIZES W x D		GRADE	ALLOWABLE CONCENTRATED LOAD AT CENTER OF SPAN (Lbs)														
			LENGTH (FEET) THE MEMBER SPANS														
			4	6	8	10	12	14	16	18	20	22	24	26	28	30	32
4 x 4	SS		1675	1117	686	439	305	224	171	<b>NOTES</b> 1. Horizontal shear at "d" distance from support controls design in area left of solid line. ( <b>Bold Italics</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+	1340	893	650	416	289	212	162									
4 x 4	#1	1117	744	558	393	273	200	153									
4 x 4	#2	1005	670	502	370	257	189	144									
4 x 6	SS		3584	2390	1792	1434	1183	869	665	<b>LENGTH (FEET) THE MEMBER SPANS</b> 18    20    22    24    26    28    30    32							
4 x 6	#1+	2867	1912	1434	1147	956	819	630									
4 x 6	#1	2390	1593	1195	956	797	683	595									
4 x 6	#2	2151	1434	1075	860	717	614	538									
4 x 8	SS		6228	4152	3114	2491	2076	1779	1524	1204	975	806	677	577	498	433	381
4 x 8	#1+		4982	3322	2491	1993	1661	1424	1246	1107	924	764	642	547	471	411	361
4 x 8	#1		4152	2768	2076	1661	1384	1186	1038	923	830	721	606	516	445	388	341
4 x 8	#2		3737	2491	1868	1495	1246	1068	934	830	747	679	570	486	419	365	321
4 x 10	SS		9358	6239	4679	3743	3119	2674	2340	2080	1872	1674	1407	1199	1033	900	791
4 x 10	#1+		7487	4991	3743	2995	2496	2139	1872	1664	1497	1361	1248	1135	979	853	750
4 x 10	#1		6239	4159	3119	2496	2080	1783	1560	1386	1248	1134	1040	960	891	805	708
4 x 10	#2		5615	3743	2808	2246	1872	1604	1404	1248	1123	1021	936	864	802	749	666
4 x 12	SS		11813	8459	6345	5076	4230	3625	3172	2820	2538	2307	2115	1952	1813	1619	1423
4 x 12	#1+		10151	6768	5076	4061	3384	2900	2538	2256	2030	1846	1692	1562	1450	1354	1269
4 x 12	#1		8459	5640	4230	3384	2820	2417	2115	1880	1692	1538	1410	1301	1208	1128	1057
4 x 12	#2		7614	5076	3807	3045	2538	2175	1903	1692	1523	1384	1269	1171	1088	1015	952
4 x 14	SS		13913	10668	8001	6401	5334	4572	4000	3556	3200	2909	2667	2462	2286	2134	2000
4 x 14	#1+		12801	8534	6401	5121	4267	3658	3200	2845	2560	2328	2134	1969	1829	1707	1600
4 x 14	#1		10668	7112	5334	4267	3556	3048	2667	2371	2134	1940	1778	1641	1524	1422	1333
4 x 14	#2		9601	6401	4801	3840	3200	2743	2400	2134	1920	1746	1600	1477	1372	1280	1200
4 x 16	SS		16013	14131	10599	8479	7066	6056	5299	4710	4239	3854	3533	3261	3028	2826	2650
4 x 16	#1+		16013	11305	8479	6783	5653	4845	4239	3768	3392	3083	2826	2609	2423	2261	2120
4 x 16	#1		14131	9421	7066	5653	4710	4038	3533	3140	2826	2569	2355	2174	2019	1884	1766
4 x 16	#2		12718	8479	6359	5087	4239	3634	3180	2826	2544	2312	2120	1957	1817	1696	1590
6 x 6	SS		4333	2888	2166	1733	1444	1150	880	696	563	466	391	333	287	250	220
6 x 6	#1		3466	2311	1733	1386	1155	990	867	696	563	466	391	333	287	250	220
6 x 8	SS		8057	5371	4028	3223	2686	2302	2014	1764	1429	1181	992	845	729	635	558
6 x 8	#1		6445	4297	3223	2578	2148	1842	1611	1432	1289	1172	992	845	729	635	558
6 x 10	SS		13788	9192	6894	5515	4596	3939	3447	3064	2758	2400	2016	1718	1481	1290	1134
6 x 10	#1		11634	7756	5817	4654	3878	3324	2908	2585	2327	2115	1939	1718	1481	1290	1134
6 x 12	SS		17921	13470	10102	8082	6735	5773	5051	4490	4041	3674	3367	3048	2628	2289	2012
6 x 12	#1		17048	11365	8524	6819	5683	4871	4262	3788	3410	3100	2841	2623	2435	2273	2012
6 x 14	SS		21038	18319	13739	10991	9159	7851	6870	6106	5496	4996	4580	4227	3925	3664	3255
6 x 14	#1		21038	15453	11590	9272	7727	6623	5795	5151	4636	4215	3863	3566	3311	3091	2897
6 x 16	SS		24154	23782	17836	14269	11891	10192	8918	7927	7135	6486	5945	5488	5096	4756	4459
6 x 16	#1		24154	20065	15049	12039	10033	8599	7524	6688	6020	5472	5016	4630	4300	4013	3762
6 x 18	SS		27271	27271	22429	17943	14953	12817	11215	9968	8972	8156	7476	6901	6408	5981	5607
6 x 18	#1		27271	25227	18920	15136	12613	10811	9460	8409	7568	6880	6307	5822	5406	5045	4730
6 x 20	SS		30388	30388	27504	22003	18336	15716	13752	12224	11002	10001	9168	8463	7858	7334	6876
6 x 20	#1		30388	30388	23219	18575	15480	13268	11610	10320	9288	8443	7740	7144	6634	6192	5805
8 x 8	SS		10986	7324	5493	4395	3662	3139	2747	2405	1948	1610	1353	1153	994	866	761
8 x 8	#1		8789	5859	4395	3516	2930	2511	2197	1953	1758	1598	1353	1153	994	866	761
8 x 10	SS		17627	11751	8813	7051	5876	5036	4407	3917	3525	3205	2750	2343	2020	1760	1547
8 x 10	#1		14102	9401	7051	5641	4701	4029	3525	3134	2820	2564	2350	2169	2015	1760	1547
8 x 12	SS		24438	18368	13776	11021	9184	7872	6888	6123	5510	5009	4592	4156	3583	3122	2744
8 x 12	#1		23247	15498	11624	9299	7749	6642	5812	5166	4649	4227	3875	3576	3321	3100	2744
8 x 14	SS		28688	24980	18735	14988	12490	10706	9368	8327	7494	6813	6245	5765	5353	4996	4438
8 x 14	#1		28688	21073	15804	12644	10536	9031	7902	7024	6322	5747	5268	4863	4516	4215	3951
8 x 16	SS		32938	32430	24322	19458	16215	13898	12161	10810	9729	8844	8107	7484	6949	6486	6081
8 x 16	#1		32938	27362	20521	16417	13681	11726	10261	9121	8209	7462	6840	6314	5863	5472	5130
8 x 18	SS		37188	37188	30585	24468	20390	17477	15293	13593	12234	11122	10195	9411	8739	8156	7646
8 x 18	#1		37188	34400	25800	20640	17200	14743	12900	11467	10320	9382	8600	7938	7371	6880	6450
8 x 20	SS		41438	41438	37505	30004	25003	21432	18753	16669	15002	13638	12502	11540	10716	10001	9376
8 x 20	#1		41438	41438	31663	25330	21108	18093	15831	14072	12665	11514	10554	9742	9046	8443	7916
8 x 22	SS		45688	45688	45112	36089	30074	25778	22556	20050	18045	16404	15037	13880	12889	12030	11278
8 x 22	#1		45688	45688	38069	30456	25380	21754	19035	16920	15228	13843	12690	11714	10877	10152	9517
8 x 24	SS		49938	49938	49938	42684	35570	30489	26678	23714	21342	19402	17785	16417	15244	14228	13339
8 x 24	#1		49938	49938	45014	36011	30009	25722	22507	20006	18006	16369	15005	13851	12861	12004	11254

**DIVISION OF BUILDING AND SAFETY**  
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*Jim MacDonald*

DATE: 01/01/08