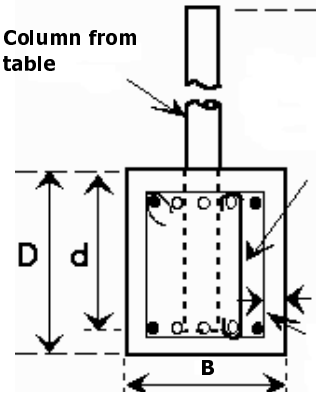
CANTILEVER TIMBER COLUMN SELECTION TABLE
WITH LATERAL LOAD APPLIED AT TOP

California Building Code 2007 Edition (CBC), NDS 2005

DESIGN CRITERIA (Based on Working Stress Design Method):

Concrete f'_C = 2500 psi

Timber posts: Basic Stresses from Plate B-5 + 1/3 increase included. Maximum deflection (using e_{MIN})=*L* / 200



CROSS-SECTION

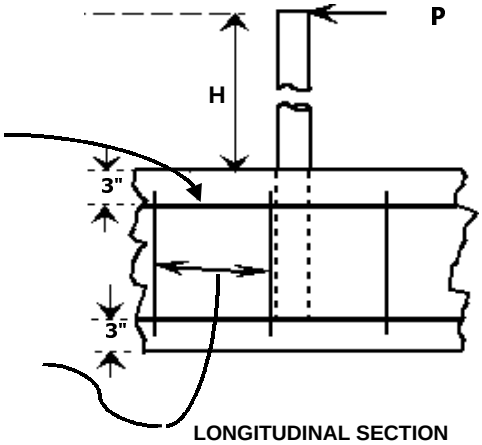
Reinforcement from table at both top and bottom. Space bars uniformly. When an odd number of bars are used at top and bottom, bend center bar 90º around column from each side.

When interior bars are more than 6" from an adjacent longitudinal bar, provide #3 Ties @ 12" o.c.

3" Typ

Provide #3 Ties @ 12" o.c. throughout, around the outside longitudinal bars.

Load "P" is applied to the stronger axis of the column.



LONGITUDINAL SECTION

DOUGLAS FIR SIZE - GRADE		H = COLUMN HEIGHTS IN FEET 7	8	9	10	11	12	13	14	15	GRADE BEAM B	D	d
		MAXIMUM P IN POUNDS (Governed by Deflection = L / 200)											
4 x 6 - #2	P	59	45	36	29	24	20	17	14	13	12	12	9
	Min A_S	0.042	0.036	0.033	0.029	0.027	0.024	0.022	0.020	0.020			
	Re-Bars	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3			
4 x 6 - #1	P	63	48	38	31	25	21	18	15	13	12	12	9
	Min A_S	0.045	0.039	0.035	0.031	0.028	0.025	0.024	0.021	0.020			
	Re-Bars	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3			
4 x 6 - #1+	P	68	52	41	33	27	23	19	17	14	12	12	9
	Min A_S	0.048	0.042	0.037	0.033	0.030	0.028	0.025	0.024	0.021			
	Re-Bars	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3			
4 x 6 - SS	P	71	54	43	34	28	24	20	17	15	12	12	9
	Min A_S	0.050	0.044	0.039	0.034	0.031	0.029	0.026	0.024	0.023			
	Re-Bars	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3			
6 x 6 - #2	P	76	58	46	37	30	25	22	19	16	12	12	9
	Min A_S	0.054	0.047	0.042	0.037	0.033	0.030	0.029	0.027	0.024			
	Re-Bars	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3			
6 x 6 - #1	P	94	71	56	46	38	31	27	23	20	12	12	9
	Min A_S	0.066	0.057	0.051	0.046	0.042	0.038	0.035	0.033	0.030			
	Re-Bars	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3			
6 x 6 - SS	P	94	71	56	46	38	31	27	23	20	12	12	9
	Min A_S	0.066	0.057	0.051	0.046	0.042	0.038	0.035	0.033	0.030			
	Re-Bars	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3			
6 x 8 - #2	P	193	147	116	94	78	65	56	48	42	18	15	12
	Min A_S	0.102	0.089	0.079	0.071	0.065	0.059	0.055	0.051	0.048			
	Re-Bars	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3			
6 x 8 - #1	P	238	182	144	116	96	81	69	59	51	18	15	12
	Min A_S	0.126	0.110	0.098	0.088	0.080	0.074	0.068	0.063	0.058			
	Re-Bars	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3			
6 x 8 - SS	P	238	182	144	116	96	81	69	59	51	18	15	12
	Min A_S	0.126	0.110	0.098	0.088	0.080	0.074	0.068	0.063	0.058			
	Re-Bars	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3			
8 x 8 - #2	P	263	201	159	129	106	89	76	65	57	18	15	12
	Min A_S	0.139	0.122	0.108	0.098	0.088	0.081	0.075	0.069	0.065			
	Re-Bars	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3			
8 x 8 - #1	P	325	248	196	159	131	110	94	81	70	18	15	12
	Min A_S	0.172	0.150	0.134	0.120	0.109	0.100	0.093	0.086	0.080			
	Re-Bars	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3			
8 x 8 - SS	P	325	248	196	159	131	110	94	81	70	18	15	12
	Min A_S	0.172	0.150	0.134	0.120	0.109	0.100	0.093	0.086	0.080			
	Re-Bars	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3			
8 x 10 - #2	P	535	409	323	262	216	182	155	133	116	18	15	12
	Min A_S	0.284	0.248	0.220	0.198	0.180	0.165	0.153	0.141	0.132			
	Re-Bars	2-#4	2-#4	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3	2-#3			
8 x 10 - #1	P	660	505	399	323	267	224	191	165	143	18	15	12
	Min A_S	0.350	0.306	0.272	0.245	0.222	0.204	0.188	0.175	0.162			
	Re-Bars	2-#4	2-#4	2-#4	2-#4	2-#3	2-#3	2-#3	2-#3	2-#3			
8 x 10 - SS	P	660	505	399	323	267	224	191	165	143	18	15	12
	Min A_S	0.350	0.306	0.272	0.245	0.222	0.204	0.188	0.175	0.162			
	Re-Bars	2-#4	2-#4	2-#4	2-#4	2-#3	2-#3	2-#3	2-#3	2-#3			

DIVISION OF BUILDING AND SAFETY

COUNTY OF VENTURA

BUILDING OFFICIAL _____ *Jim MacDonald*

B & S STD **B-38**

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