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CEILING JOIST SPAN TABLES

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TABLE A: ALLOWABLE CEILING JOIST SPANS, FT ^{1,2,3,4,5}										
Member Identification	Wt. psf	Spc o.c. in	Ceiling Dead Loads ¹							
			4 psf		6 psf		13 psf		15 psf	
			L/ 240	L/ 360	L/ 240	L/ 360	L/ 240	L/ 360	L/ 240	L/ 360
162 S125-018	0.2742	12	7.70	7.29	6.35	6.35	4.37	4.37	4.07	4.07
	0.2056	16	6.72	6.66	5.53	5.53	3.79	3.79	3.53	3.53
	0.1371	24	5.53	5.53	4.54	4.54	3.11	3.11	2.89	2.89
162 S125-024 (50ksi)	0.3671	12	9.10	7.95	8.02	7.01	5.68	5.47	5.30	5.22
	0.2753	16	8.32	7.27	7.18	6.40	4.94	4.94	4.60	4.60
	0.1836	24	7.18	6.40	5.90	5.62	4.04	4.04	3.77	3.77
162 S125-027	0.4090	12	9.40	8.22	8.30	7.25	5.87	5.67	5.48	5.41
	0.3068	16	8.61	7.52	7.41	6.62	5.10	5.10	4.76	4.76
	0.2045	24	7.41	6.62	6.10	5.82	4.18	4.18	3.90	3.90
162 S125-030	0.4497	12	9.66	8.44	8.54	7.46	6.24	5.84	5.82	5.58
	0.3373	16	8.86	7.74	7.80	6.82	5.43	5.32	5.06	5.06
	0.2248	24	7.80	6.82	6.49	5.99	4.45	4.45	4.15	4.15
162 S125-033	0.4971	12	9.94	8.69	8.80	7.68	6.67	6.02	6.23	5.75
	0.3728	16	9.12	7.97	8.04	7.03	5.81	5.49	5.42	5.24
	0.2486	24	8.04	7.03	6.94	6.18	4.76	4.76	4.44	4.44
162 S125-043	0.6415	12	10.67	9.32	9.47	8.27	7.45	6.50	7.11	6.21
	0.4811	16	9.81	8.57	8.67	7.57	6.79	5.93	6.49	5.67
	0.3208	24	8.67	7.57	7.64	6.67	5.75	5.20	5.36	4.97
162 S137-024 (50ksi)	0.3983	12	9.36	8.17	8.26	7.21	6.45	5.64	6.04	5.38
	0.2987	16	8.56	7.48	7.54	6.59	5.62	5.13	5.24	4.90
	0.1991	24	7.54	6.59	6.62	5.79	4.61	4.50	4.30	4.29
162 S137-027	0.4542	12	9.72	8.49	8.59	7.50	6.72	5.87	6.42	5.61
	0.3407	16	8.91	7.78	7.85	6.86	6.10	5.35	5.69	5.11
	0.2271	24	7.85	6.86	6.90	6.03	5.00	4.69	4.66	4.47
162 S137-030	0.4996	12	9.99	8.72	8.83	7.72	6.92	6.05	6.61	5.78
	0.3747	16	9.16	8.00	8.08	7.06	6.31	5.51	6.01	5.26
	0.2498	24	8.08	7.06	7.10	6.21	5.29	4.83	4.93	4.61
162 S137-033	0.5524	12	10.27	8.97	9.10	7.95	7.14	6.24	6.82	5.96
	0.4143	16	9.43	8.24	8.33	7.27	6.51	5.69	6.22	5.43
	0.2762	24	8.33	7.27	7.33	6.40	5.61	4.99	5.23	4.76
162 S137-043	0.7289	12	11.04	9.64	9.82	8.57	7.74	6.76	7.40	6.46
	0.5467	16	10.16	8.88	9.00	7.86	7.06	6.17	6.75	5.89
	0.3645	24	9.00	7.86	7.94	6.93	6.20	5.41	5.92	5.17
162 S150-024 (50ksi)	0.4243	12	9.58	8.36	8.46	7.39	6.61	5.78	6.31	5.52
	0.3182	16	8.77	7.66	7.73	6.75	6.03	5.26	5.75	5.02
	0.2122	24	7.73	6.75	6.79	5.93	5.08	4.61	4.74	4.40
162 S162-024 (50ksi)	0.4454	12	9.77	8.53	8.63	7.54	6.75	5.90	6.45	5.63
	0.3340	16	8.95	7.82	7.89	6.89	6.15	5.38	5.87	5.13
	0.2227	24	7.89	6.89	6.93	6.05	5.34	4.71	4.97	4.49
162 S162-027	0.5081	12	10.15	8.86	8.98	7.84	7.04	6.15	6.72	5.87
	0.3811	16	9.31	8.13	8.21	7.17	6.41	5.60	6.12	5.35
	0.2541	24	8.21	7.17	7.22	6.31	5.44	4.91	5.07	4.69
162 S162-030	0.5590	12	10.42	9.10	9.23	8.06	7.25	6.33	6.92	6.05
	0.4192	16	9.57	8.36	8.45	7.38	6.61	5.77	6.31	5.51
	0.2795	24	8.45	7.38	7.43	6.49	5.78	5.06	5.38	4.83
162 S162-033	0.6183	12	10.72	9.36	9.51	8.30	7.47	6.53	7.14	6.24
	0.4637	16	9.85	8.60	8.71	7.60	6.82	5.95	6.51	5.69
	0.3091	24	8.71	7.60	7.67	6.70	5.98	5.22	5.71	4.98
162 S162-043	0.8485	12	11.52	10.06	10.27	8.97	8.12	7.09	7.76	6.78
	0.6364	16	10.62	9.28	9.43	8.23	7.41	6.48	7.08	6.19
	0.4243	24	9.43	8.23	8.32	7.27	6.51	5.69	6.22	5.43
250 S125-018	0.3301	12	9.90	9.90	8.19	8.19	5.64	5.64	5.26	5.26
	0.2476	16	8.66	8.66	7.14	7.14	4.90	4.90	4.57	4.57
	0.1650	24	7.14	7.14	5.87	5.87	4.02	4.02	3.74	3.74
250 S125-024 (50ksi)	0.4407	12	12.40	10.93	10.29	9.66	7.13	7.13	6.65	6.65
	0.3305	16	10.87	10.01	8.99	8.82	6.20	6.20	5.78	5.78
	0.2204	24	8.99	8.82	7.41	7.41	5.08	5.08	4.73	4.73
250 S125-027	0.4932	12	12.68	11.29	10.55	9.98	7.32	7.32	6.83	6.83
	0.3699	16	11.14	10.35	9.23	9.13	6.37	6.37	5.94	5.94
	0.2466	24	9.23	9.13	7.61	7.61	5.22	5.22	4.87	4.87
250 S125-030	0.5425	12	13.28	11.60	11.12	10.27	7.73	7.73	7.21	7.21
	0.4069	16	11.73	10.65	9.73	9.40	6.72	6.72	6.27	6.27
	0.2713	24	9.73	9.40	8.03	8.03	5.52	5.52	5.14	5.14

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Member Identification	Wt. psf	Spc o.c. in	Ceiling Dead Loads ¹							
			4 psf		6 psf		13 psf		15 psf	
			L/ 240	L/ 360	L/ 240	L/ 360	L/ 240	L/ 360	L/ 240	L/ 360
250 S137-024 (50ksi)	0.4719	12	12.86	11.23	11.36	9.93	8.19	7.78	7.64	7.42
	0.3539	16	11.78	10.29	10.33	9.08	7.12	7.09	6.64	6.64
	0.2359	24	10.33	9.08	8.51	7.98	5.84	5.84	5.44	5.44
250 S137-027	0.5384	12	13.35	11.67	11.82	10.33	8.86	8.10	8.27	7.74
	0.4038	16	12.26	10.71	10.82	9.45	7.71	7.39	7.19	7.05
	0.2692	24	10.82	9.45	9.20	8.31	6.33	6.33	5.90	5.90
250 S137-030	0.5924	12	13.72	11.99	12.16	10.63	9.33	8.35	8.71	7.97
	0.4443	16	12.60	11.01	11.13	9.73	8.13	7.61	7.58	7.27
	0.2962	24	11.13	9.73	9.70	8.56	6.67	6.67	6.22	6.22
250 S137-033	0.6553	12	14.11	12.33	12.53	10.94	9.86	8.61	9.23	8.23
	0.4915	16	12.98	11.34	11.48	10.03	8.61	7.86	8.04	7.50
	0.3277	24	11.48	10.03	10.11	8.83	7.07	6.89	6.60	6.58
250 S137-043	0.8631	12	15.18	13.26	13.54	11.82	10.71	9.35	10.24	8.94
	0.6473	16	14.00	12.23	12.43	10.86	9.78	8.54	9.34	8.16
	0.4316	24	12.43	10.86	10.98	9.59	8.54	7.50	7.97	7.16
250 S137-054 (50ksi)	1.0871	12	16.06	14.03	14.38	12.56	11.43	9.99	10.94	9.56
	0.8153	16	14.86	12.98	13.23	11.56	10.46	9.13	10.00	8.73
	0.5436	24	13.23	11.56	11.72	10.24	9.20	8.03	8.78	7.67
250 S150-024 (50ksi)	0.4979	12	13.14	11.48	11.62	10.15	9.02	7.96	8.42	7.60
	0.3734	16	12.05	10.53	10.63	9.29	7.85	7.25	7.32	6.92
	0.2490	24	10.63	9.29	9.35	8.16	6.44	6.36	6.00	6.00
250 S162-024 (50ksi)	0.5190	12	13.38	11.69	11.84	10.34	9.29	8.11	8.87	7.75
	0.3892	16	12.28	10.72	10.83	9.46	8.31	7.39	7.75	7.06
	0.2595	24	10.83	9.46	9.53	8.32	6.82	6.48	6.36	6.18
250 S162-027	0.5923	12	13.89	12.14	12.32	10.76	9.68	8.45	9.15	8.08
	0.4442	16	12.76	11.15	11.28	9.85	8.53	7.71	7.96	7.36
	0.2962	24	11.28	9.85	9.93	8.67	7.01	6.76	6.53	6.45
250 S162-030	0.6518	12	14.27	12.47	12.67	11.07	9.97	8.71	9.52	8.32
	0.4888	16	13.12	11.46	11.61	10.14	9.03	7.94	8.42	7.59
	0.3259	24	11.61	10.14	10.22	8.93	7.41	6.97	6.91	6.65
250 S162-033	0.7212	12	14.68	12.82	13.05	11.40	10.28	8.98	9.83	8.59
	0.5409	16	13.51	11.80	11.96	10.45	9.38	8.20	8.96	7.83
	0.3606	24	11.96	10.45	10.55	9.21	7.94	7.19	7.41	6.87
250 S162-043	0.9827	12	15.84	13.84	14.16	12.37	11.23	9.81	10.74	9.38
	0.7370	16	14.64	12.79	13.02	11.37	10.26	8.97	9.81	8.57
	0.4914	24	13.02	11.37	11.51	10.06	9.02	7.88	8.61	7.53
250 S162-054 (50ksi)	1.2180	12	16.69	14.58	14.98	13.08	11.95	10.44	11.44	9.99
	0.9135	16	15.47	13.51	13.81	12.06	10.93	9.55	10.46	9.13
	0.6090	24	13.81	12.06	12.24	10.69	9.62	8.41	9.19	8.03
350 S125-018	0.3940	12	12.19	12.19	10.10	10.10	6.98	6.98	6.51	6.51
	0.2955	16	10.67	10.67	8.82	8.82	6.07	6.07	5.66	5.66
	0.1970	24	8.82	8.82	7.26	7.26	4.97	4.97	4.63	4.63
350 S125-024 (50ksi)	0.5249	12	14.98	14.07	12.48	12.45	8.67	8.67	8.09	8.09
	0.3936	16	13.17	12.91	10.91	10.91	7.54	7.54	7.03	7.03
	0.2624	24	10.91	10.91	9.00	9.00	6.19	6.19	5.77	5.77
350 S125-027	0.5894	12	15.27	14.52	12.74	12.74	8.87	8.87	8.28	8.28
	0.4421	16	13.44	13.34	11.16	11.16	7.73	7.73	7.21	7.21
	0.2947	24	11.16	11.16	9.22	9.22	6.34	6.34	5.91	5.91
350 S125-030	0.6486	12	15.98	14.92	13.36	13.24	9.33	9.33	8.71	8.71
	0.4864	16	14.09	13.71	11.72	11.72	8.13	8.13	7.58	7.58
	0.3243	24	11.72	11.72	9.69	9.69	6.68	6.68	6.22	6.22
350 S125-033	0.7177	12	16.80	15.34	14.08	13.63	9.85	9.85	9.21	9.21
	0.5383	16	14.84	14.12	12.36	12.36	8.59	8.59	8.02	8.02
	0.3588	24	12.36	12.36	10.23	10.23	7.06	7.06	6.59	6.59
350 S125-043	0.9290	12	18.81	16.43	16.18	14.67	11.41	11.41	10.67	10.67
	0.6968	16	17.02	15.17	14.25	13.48	9.97	9.97	9.31	9.31
	0.4645	24	14.25	13.48	11.85	11.85	8.21	8.21	7.66	7.66
350 S125-054 (50ksi)	1.1506	12	19.82	17.32	17.77	15.52	12.84	12.36	12.02	11.83
	0.8630	16	18.36	16.04	15.96	14.30	11.23	11.23	10.50	10.50
	0.5753	24	15.96	14.30	13.32	12.67	9.27	9.27	8.65	8.65
350 S137-024 (50ksi)	0.5560	12	16.52	14.43	14.39	12.78	10.00	10.00	9.34	9.34
	0.4170	16	15.16	13.25	12.59	11.70	8.71	8.71	8.12	8.12
	0.2780	24	12.59	11.70	10.40	10.29	7.15	7.15	6.66	6.66

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Member Identification	Wt. psf	Spc o.c. in	Ceiling Dead Loads ¹							
			4 psf		6 psf		13 psf		15 psf	
			L/ 240	L/ 360	L/ 240	L/ 360	L/ 240	L/ 360	L/ 240	L/ 360
350 S137-027	0.6347	12	17.15	14.98	15.22	13.30	10.77	10.46	10.06	9.99
	0.4760	16	15.77	13.77	13.54	12.18	9.39	9.39	8.76	8.76
	0.3173	24	13.54	12.18	11.19	10.73	7.71	7.71	7.19	7.19
350 S137-030	0.6985	12	17.62	15.39	15.65	13.67	11.34	10.77	10.59	10.29
	0.5238	16	16.21	14.16	14.23	12.53	9.88	9.83	9.22	9.22
	0.3492	24	14.23	12.53	11.77	11.05	8.12	8.12	7.57	7.57
350 S150-024 (50ksi)	0.5820	12	16.86	14.73	14.94	13.05	11.02	10.25	10.29	9.79
	0.4365	16	15.48	13.53	13.68	11.95	9.60	9.35	8.95	8.93
	0.2910	24	13.68	11.95	11.45	10.52	7.88	7.88	7.34	7.34
350 S162-024 (50ksi)	0.6031	12	17.14	14.97	15.20	13.28	11.73	10.43	10.95	9.97
	0.4523	16	15.75	13.76	13.92	12.16	10.21	9.52	9.53	9.09
	0.3015	24	13.92	12.16	12.18	10.70	8.39	8.34	7.82	7.82
350 S162-027	0.6885	12	17.79	15.54	15.81	13.81	12.05	10.88	11.26	10.39
	0.5164	16	16.37	14.30	14.49	12.65	10.50	9.92	9.80	9.48
	0.3443	24	14.49	12.65	12.52	11.15	8.63	8.63	8.05	8.05
350 S162-030	0.7579	12	18.27	15.96	16.25	14.20	12.72	11.20	11.88	10.71
	0.5684	16	16.83	14.70	14.91	13.02	11.09	10.23	10.35	9.77
	0.3789	24	14.91	13.02	13.15	11.49	9.12	8.97	8.50	8.50
350 S162-033	0.8389	12	18.78	16.40	16.73	14.62	13.23	11.56	12.65	11.05
	0.6291	16	17.32	15.13	15.36	13.42	11.85	10.55	11.06	10.08
	0.4194	24	15.36	13.42	13.56	11.85	9.75	9.27	9.10	8.85
350 S162-043	1.1360	12	20.29	17.73	18.18	15.89	14.48	12.65	13.85	12.10
	0.8520	16	18.79	16.41	16.75	14.63	13.24	11.57	12.66	11.06
	0.5680	24	16.75	14.63	14.84	12.96	11.65	10.18	11.13	9.72
350 S162-054 (50ksi)	1.4104	12	21.36	18.66	19.24	16.80	15.41	13.46	14.76	12.89
	1.0578	16	19.85	17.34	17.76	15.52	14.12	12.33	13.51	11.80
	0.7052	24	17.76	15.52	15.79	13.79	12.44	10.87	11.89	10.38
350 S200-030	0.8417	12	19.11	16.69	17.03	14.88	13.46	11.76	12.87	11.24
	0.6312	16	17.62	15.39	15.63	13.66	12.08	10.74	11.28	10.26
	0.4208	24	15.63	13.66	13.81	12.06	9.94	9.43	9.27	9.01
350 S200-033	0.9318	12	19.63	17.15	17.53	15.31	13.89	12.13	13.28	11.60
	0.6989	16	18.13	15.84	16.11	14.07	12.69	11.09	11.98	10.59
	0.4659	24	16.11	14.07	14.24	12.44	10.56	9.74	9.85	9.30
350 S200-043	1.2510	12	21.13	18.46	18.97	16.58	15.15	13.23	14.50	12.67
	0.9383	16	19.59	17.12	17.49	15.28	13.86	12.11	13.26	11.58
	0.6255	24	17.49	15.28	15.52	13.56	12.20	10.66	11.66	10.19
350 S200-054 (50ksi)	1.5548	12	22.23	19.42	20.06	17.53	16.12	14.08	15.45	13.49
	1.1661	16	20.69	18.07	18.55	16.21	14.78	12.91	14.14	12.36
	0.7774	24	18.55	16.21	16.51	14.42	13.03	11.39	12.46	10.88
362 S125-018	0.4020	12	12.46	12.46	10.33	10.33	7.14	7.14	6.66	6.66
	0.3015	16	10.91	10.91	9.02	9.02	6.21	6.21	5.79	5.79
	0.2010	24	9.02	9.02	7.42	7.42	5.09	5.09	4.74	4.74
362 S125-024 (50ksi)	0.5354	12	15.29	14.45	12.74	12.74	8.85	8.85	8.26	8.26
	0.4015	16	13.44	13.26	11.14	11.14	7.70	7.70	7.18	7.18
	0.2677	24	11.14	11.14	9.20	9.20	6.32	6.32	5.89	5.89
362 S125-027	0.6015	12	15.57	14.91	13.00	13.00	9.06	9.06	8.46	8.46
	0.4511	16	13.71	13.70	11.39	11.39	7.89	7.89	7.36	7.36
	0.3007	24	11.39	11.39	9.41	9.41	6.48	6.48	6.04	6.04
362 S125-030	0.6619	12	16.30	15.32	13.63	13.60	9.52	9.52	8.89	8.89
	0.4964	16	14.37	14.08	11.96	11.96	8.29	8.29	7.74	7.74
	0.3309	24	11.96	11.96	9.89	9.89	6.81	6.81	6.35	6.35
362 S125-033	0.7324	12	17.12	15.75	14.36	14.00	10.05	10.05	9.39	9.39
	0.5493	16	15.13	14.50	12.61	12.61	8.76	8.76	8.18	8.18
	0.3662	24	12.61	12.61	10.44	10.44	7.21	7.21	6.72	6.72
362 S125-043	0.9482	12	19.31	16.87	16.47	15.06	11.62	11.62	10.87	10.87
	0.7112	16	17.32	15.58	14.51	13.85	10.15	10.15	9.48	9.48
	0.4741	24	14.51	13.85	12.06	12.06	8.36	8.36	7.80	7.80
362 S125-054 (50ksi)	1.1747	12	20.35	17.78	18.25	15.94	13.05	12.70	12.22	12.16
	0.8810	16	18.85	16.47	16.22	14.69	11.42	11.42	10.68	10.68
	0.5874	24	16.22	14.69	13.54	13.02	9.43	9.43	8.80	8.80
362 S137-024 (50ksi)	0.5665	12	16.96	14.82	14.69	13.13	10.22	10.22	9.54	9.54
	0.4249	16	15.50	13.60	12.86	12.01	8.90	8.90	8.30	8.30
	0.2832	24	12.86	12.01	10.62	10.57	7.30	7.30	6.81	6.81

TABLE A: ALLOWABLE CEILING JOIST SPANS, FT ^{1,2,3,4,5}										
Member Identification	Wt. psf	Spc o.c. in	Ceiling Dead Loads ¹							
			4 psf		6 psf		13 psf		15 psf	
			L/ 240	L/ 360	L/ 240	L/ 360	L/ 240	L/ 360	L/ 240	L/ 360
362 S137-027	0.6467	12	17.61	15.38	15.63	13.65	11.00	10.74	10.28	10.26
	0.4850	16	16.19	14.14	13.82	12.51	9.59	9.59	8.95	8.95
	0.3233	24	13.82	12.51	11.43	11.02	7.87	7.87	7.34	7.34
362 S137-030	0.7117	12	18.08	15.80	16.07	14.04	11.57	11.07	10.81	10.57
	0.5338	16	16.64	14.54	14.52	12.87	10.09	10.09	9.42	9.42
	0.3559	24	14.52	12.87	12.02	11.35	8.29	8.29	7.73	7.73
362 S137-033	0.7877	12	18.59	16.24	16.55	14.46	12.24	11.42	11.44	10.91
	0.5908	16	17.13	14.97	15.19	13.27	10.67	10.42	9.97	9.96
	0.3938	24	15.19	13.27	12.71	11.71	8.78	8.78	8.19	8.19
362 S137-043	1.0356	12	19.99	17.46	17.88	15.62	14.20	12.41	13.53	11.87
	0.7767	16	18.48	16.15	16.45	14.37	12.64	11.34	11.82	10.84
	0.5178	24	16.45	14.37	14.56	12.72	10.42	9.97	9.73	9.52
362 S137-054 (50ksi)	1.3036	12	21.14	18.47	19.00	16.60	15.19	13.27	14.54	12.70
	0.9777	16	19.62	17.14	17.53	15.31	13.90	12.15	13.30	11.62
	0.6518	24	17.53	15.31	15.56	13.59	12.06	10.69	11.27	10.22
362 S150-024 (50ksi)	0.5926	12	17.31	15.12	15.34	13.40	11.26	10.53	10.51	10.06
	0.4444	16	15.90	13.89	14.05	12.27	9.81	9.60	9.15	9.15
	0.2963	24	14.05	12.27	11.70	10.80	8.05	8.05	7.51	7.51
362 S162-024 (50ksi)	0.6136	12	17.59	15.37	15.60	13.63	11.99	10.71	11.19	10.24
	0.4602	16	16.17	14.12	14.29	12.48	10.44	9.77	9.74	9.33
	0.3068	24	14.29	12.48	12.45	10.99	8.57	8.57	7.99	7.99
362 S162-027	0.7006	12	18.26	15.95	16.22	14.17	12.32	11.17	11.51	10.67
	0.5254	16	16.80	14.68	14.87	12.99	10.74	10.19	10.02	9.73
	0.3503	24	14.87	12.99	12.80	11.45	8.83	8.83	8.23	8.23
362 S162-030	0.7711	12	18.75	16.38	16.68	14.57	13.00	11.50	12.15	10.99
	0.5783	16	17.27	15.09	15.30	13.37	11.34	10.50	10.58	10.03
	0.3856	24	15.30	13.37	13.50	11.80	9.32	9.22	8.69	8.69
362 S162-033	0.8536	12	19.27	16.83	17.18	15.00	13.58	11.87	12.97	11.35
	0.6402	16	17.77	15.53	15.77	13.78	12.11	10.84	11.31	10.35
	0.4268	24	15.77	13.78	13.93	12.17	9.97	9.52	9.30	9.09
362 S162-043	1.1552	12	20.82	18.19	18.67	16.31	14.87	12.99	14.23	12.43
	0.8664	16	19.29	16.85	17.19	15.02	13.60	11.88	13.01	11.36
	0.5776	24	17.19	15.02	15.24	13.31	11.97	10.45	11.43	9.99
362 S162-054 (50ksi)	1.4345	12	21.92	19.15	19.75	17.25	15.83	13.83	15.16	13.24
	1.0759	16	20.37	17.80	18.24	15.93	14.50	12.67	13.87	12.12
	0.7173	24	18.24	15.93	16.21	14.16	12.78	11.16	12.21	10.67
362 S200-030	0.8549	12	19.60	17.12	17.47	15.26	13.82	12.07	13.21	11.54
	0.6412	16	18.08	15.79	16.04	14.02	12.36	11.03	11.54	10.53
	0.4275	24	16.04	14.02	14.17	12.38	10.17	9.68	9.49	9.24
362 S200-033	0.9465	12	20.14	17.59	17.98	15.71	14.26	12.45	13.63	11.91
	0.7099	16	18.60	16.25	16.53	14.44	13.03	11.38	12.25	10.87
	0.4733	24	16.53	14.44	14.61	12.77	10.80	10.00	10.08	9.55
362 S200-043	1.2702	12	21.67	18.93	19.47	17.01	15.55	13.58	14.88	13.00
	0.9527	16	20.10	17.56	17.95	15.68	14.23	12.43	13.61	11.89
	0.6351	24	17.95	15.68	15.93	13.92	12.53	10.95	11.97	10.46
362 S200-054 (50ksi)	1.5788	12	22.80	19.91	20.58	17.98	16.55	14.46	15.86	13.85
	1.1841	16	21.23	18.54	19.04	16.63	15.18	13.26	14.52	12.69
	0.7894	24	19.04	16.63	16.95	14.80	13.38	11.69	12.79	11.17
400 S125-018*	0.4260	12	13.25	13.25	11.00	11.00	7.61	7.61	7.10	7.10
	0.3195	16	11.61	11.61	9.60	9.60	6.61	6.61	6.17	6.17
	0.2130	24	9.60	9.60	7.91	7.91	5.42	5.42	5.05	5.05
400 S125-024 (50ksi)	0.5669	12	16.18	15.57	13.49	13.49	9.39	9.39	8.76	8.76
	0.4252	16	14.24	14.24	11.81	11.81	8.17	8.17	7.63	7.63
	0.2835	24	11.81	11.81	9.76	9.76	6.71	6.71	6.25	6.25
400 S125-027	0.6352	12	16.39	16.03	13.70	13.70	9.55	9.55	8.92	8.92
	0.4764	16	14.44	14.44	12.01	12.01	8.32	8.32	7.77	7.77
	0.3176	24	12.01	12.01	9.93	9.93	6.84	6.84	6.37	6.37
400 S125-030	0.7016	12	17.21	16.50	14.42	14.42	10.08	10.08	9.42	9.42
	0.5262	16	15.19	15.18	12.65	12.65	8.79	8.79	8.20	8.20
	0.3508	24	12.65	12.65	10.47	10.47	7.22	7.22	6.74	6.74
400 S125-033	0.7765	12	18.07	16.96	15.17	15.10	10.64	10.64	9.94	9.94
	0.5824	16	15.97	15.63	13.33	13.33	9.28	9.28	8.66	8.66
	0.3883	24	13.33	13.33	11.05	11.05	7.63	7.63	7.12	7.12

TABLE A: ALLOWABLE CEILING JOIST SPANS, FT ^{1,2,3,4,5}										
Member Identification	Wt. psf	Spc o.c. in	Ceiling Dead Loads ¹							
			4 psf		6 psf		13 psf		15 psf	
			L/ 240	L/ 360	L/ 240	L/ 360	L/ 240	L/ 360	L/ 240	L/ 360
400 S125-043	1.0057	12	20.47	18.16	17.31	16.23	12.24	12.24	11.45	11.45
	0.7543	16	18.19	16.79	15.26	14.93	10.70	10.70	9.99	9.99
	0.5029	24	15.26	14.93	12.70	12.70	8.81	8.81	8.23	8.23
400 S125-054 (50ksi)	1.2469	12	21.90	19.13	19.18	17.18	13.68	13.68	12.81	12.81
	0.9352	16	20.13	17.74	16.98	15.84	11.98	11.98	11.20	11.20
	0.6235	24	16.98	15.84	14.19	14.05	9.89	9.89	9.24	9.24
400 S137-024 (50ksi)	0.5980	12	18.26	15.96	15.59	14.15	10.86	10.86	10.14	10.14
	0.4485	16	16.44	14.66	13.66	12.95	9.46	9.46	8.82	8.82
	0.2990	24	13.66	12.95	11.28	11.28	7.76	7.76	7.24	7.24
400 S137-027	0.6828	12	18.96	16.56	16.71	14.71	11.67	11.59	10.91	10.91
	0.5121	16	17.44	15.24	14.66	13.48	10.17	10.17	9.50	9.50
	0.3414	24	14.66	13.48	12.13	11.88	8.36	8.36	7.80	7.80
400 S137-030	0.7515	12	19.47	17.01	17.32	15.13	12.28	11.93	11.47	11.41
	0.5636	16	17.93	15.66	15.39	13.87	10.70	10.70	9.99	9.99
	0.3757	24	15.39	13.87	12.75	12.24	8.80	8.80	8.21	8.21
400 S137-033	0.8318	12	20.01	17.48	17.83	15.58	12.97	12.31	12.13	11.77
	0.6239	16	18.45	16.12	16.24	14.30	11.32	11.24	10.57	10.57
	0.4159	24	16.24	14.30	13.47	12.62	9.31	9.31	8.69	8.69
400 S137-043	1.0931	12	21.51	18.79	19.26	16.82	15.26	13.38	14.28	12.80
	0.8198	16	19.90	17.39	17.73	15.49	13.35	12.24	12.48	11.70
	0.5466	24	17.73	15.49	15.70	13.71	11.01	10.76	10.28	10.28
400 S137-054 (50ksi)	1.3758	12	22.74	19.86	20.46	17.87	16.38	14.31	15.68	13.70
	1.0319	16	21.12	18.45	18.89	16.50	15.00	13.11	14.35	12.54
	0.6879	24	18.89	16.50	16.78	14.66	12.69	11.54	11.85	11.03
400 S150-024 (50ksi)	0.6241	12	18.63	16.27	16.52	14.44	11.97	11.35	11.17	10.84
	0.4681	16	17.12	14.96	15.04	13.22	10.42	10.35	9.73	9.73
	0.3121	24	15.04	13.22	12.43	11.64	8.56	8.56	7.98	7.98
400 S162-024 (50ksi)	0.6451	12	18.93	16.53	16.80	14.67	12.76	11.54	11.91	11.03
	0.4838	16	17.40	15.20	15.39	13.44	11.11	10.53	10.37	10.06
	0.3226	24	15.39	13.44	13.25	11.84	9.13	9.13	8.51	8.51
400 S162-027	0.7367	12	19.64	17.16	17.46	15.26	13.12	12.03	12.26	11.50
	0.5525	16	18.08	15.80	16.01	13.99	11.44	10.98	10.68	10.49
	0.3683	24	16.01	13.99	13.62	12.34	9.40	9.40	8.77	8.77
400 S162-030	0.8109	12	20.16	17.61	17.96	15.69	13.83	12.39	12.92	11.85
	0.6082	16	18.58	16.23	16.48	14.40	12.06	11.32	11.26	10.81
	0.4054	24	16.48	14.40	14.36	12.71	9.92	9.92	9.26	9.26
400 S162-033	0.8977	12	20.72	18.10	18.48	16.15	14.64	12.78	13.79	12.22
	0.6733	16	19.12	16.70	16.98	14.83	12.88	11.68	12.03	11.16
	0.4488	24	16.98	14.83	15.00	13.11	10.60	10.26	9.89	9.80
400 S162-043	1.2127	12	22.39	19.56	20.09	17.55	16.02	14.00	15.34	13.40
	0.9095	16	20.75	18.13	18.52	16.17	14.66	12.81	14.02	12.25
	0.6064	24	18.52	16.17	16.42	14.34	12.90	11.27	12.33	10.77
400 S162-054 (50ksi)	1.5067	12	23.56	20.58	21.24	18.56	17.06	14.90	16.34	14.27
	1.1300	16	21.91	19.14	19.64	17.15	15.63	13.66	14.96	13.07
	0.7534	24	19.64	17.15	17.47	15.26	13.78	12.04	13.17	11.51
400 S200-030	0.8947	12	21.06	18.39	18.78	16.41	14.87	12.99	14.06	12.42
	0.6710	16	19.43	16.98	17.26	15.07	13.13	11.87	12.26	11.34
	0.4474	24	17.26	15.07	15.25	13.32	10.81	10.42	10.08	9.95
400 S200-033	0.9906	12	21.63	18.89	19.33	16.89	15.34	13.40	14.67	12.82
	0.7430	16	19.99	17.46	17.78	15.53	13.97	12.25	13.05	11.71
	0.4953	24	17.78	15.53	15.72	13.74	11.51	10.76	10.74	10.28
400 S200-043	1.3277	12	23.27	20.33	20.93	18.28	16.73	14.62	16.02	14.00
	0.9958	16	21.60	18.87	19.31	16.87	15.32	13.39	14.66	12.80
	0.6639	24	19.31	16.87	17.14	14.98	13.49	11.79	12.89	11.26
400 S200-054 (50ksi)	1.6510	12	24.47	21.38	22.12	19.32	17.81	15.56	17.07	14.91
	1.2383	16	22.80	19.92	20.47	17.88	16.34	14.27	15.64	13.66
	0.8255	24	20.47	17.88	18.24	15.93	14.41	12.59	13.78	12.04
550 S125-024* (50ksi)	0.6931	12	18.67	18.67	15.63	15.63	10.93	10.93	10.21	10.21
	0.5198	16	16.47	16.47	13.71	13.71	9.52	9.52	8.89	8.89
	0.3466	24	13.71	13.71	11.35	11.35	7.83	7.83	7.30	7.30
550 S125-027	0.7795	12	19.19	19.19	16.11	16.11	11.30	11.30	10.56	10.56
	0.5846	16	16.97	16.97	14.16	14.16	9.86	9.86	9.20	9.20
	0.3898	24	14.16	14.16	11.73	11.73	8.11	8.11	7.56	7.56

TABLE A: ALLOWABLE CEILING JOIST SPANS, FT ^{1,2,3,4,5}										
Member Identification	Wt. psf	Spc o.c. in	Ceiling Dead Loads ¹							
			4 psf		6 psf		13 psf		15 psf	
			L/ 240	L/ 360	L/ 240	L/ 360	L/ 240	L/ 360	L/ 240	L/ 360
550 S125-030	0.8608	12	20.28	20.28	17.07	17.07	12.01	12.01	11.23	11.23
	0.6456	16	17.97	17.97	15.02	15.02	10.48	10.48	9.79	9.79
	0.4304	24	15.02	15.02	12.47	12.47	8.63	8.63	8.05	8.05
550 S125-033	0.9530	12	21.44	21.44	18.09	18.09	12.77	12.77	11.94	11.94
	0.7147	16	19.03	19.03	15.94	15.94	11.16	11.16	10.42	10.42
	0.4765	24	15.94	15.94	13.26	13.26	9.19	9.19	8.58	8.58
550 S125-043	1.2357	12	23.99	23.09	20.40	20.40	14.55	14.55	13.62	13.62
	0.9268	16	21.41	21.41	18.06	18.06	12.74	12.74	11.91	11.91
	0.6179	24	18.06	18.06	15.09	15.09	10.52	10.52	9.82	9.82
550 S125-054 (50ksi)	1.5355	12	26.02	24.29	22.30	21.91	16.06	16.06	15.06	15.06
	1.1516	16	23.36	22.60	19.83	19.83	14.09	14.09	13.19	13.19
	0.7678	24	19.83	19.83	16.64	16.64	11.67	11.67	10.90	10.90
550 S137-024* (50ksi)	0.7242	12	22.57	20.33	18.92	18.07	13.24	13.24	12.37	12.37
	0.5432	16	19.93	18.71	16.61	16.57	11.54	11.54	10.78	10.78
	0.3621	24	16.61	16.57	13.75	13.75	9.49	9.49	8.85	8.85
550 S137-027	0.8271	12	23.99	21.08	20.17	18.78	14.17	14.17	13.25	13.25
	0.6203	16	21.23	19.43	17.74	17.24	12.37	12.37	11.55	11.55
	0.4135	24	17.74	17.24	14.72	14.72	10.18	10.18	9.49	9.49
550 S137-030	0.9106	12	24.76	21.63	21.12	19.30	14.88	14.88	13.92	13.92
	0.6830	16	22.21	19.97	18.60	17.74	13.00	13.00	12.14	12.14
	0.4553	24	18.60	17.74	15.45	15.45	10.70	10.70	9.98	9.98
550 S137-033	1.0083	12	25.43	22.22	22.13	19.87	15.65	15.65	14.64	14.64
	0.7562	16	23.27	20.54	19.52	18.27	13.68	13.68	12.78	12.78
	0.5042	24	19.52	18.27	16.24	16.16	11.27	11.27	10.52	10.52
550 S137-043	1.3231	12	27.27	23.83	24.52	21.42	18.21	17.13	17.06	16.40
	0.9923	16	25.32	22.12	22.57	19.77	15.96	15.69	14.93	14.93
	0.6616	24	22.57	19.77	18.88	17.55	13.19	13.19	12.32	12.32
550 S137-054 (50ksi)	1.6645	12	28.79	25.15	26.03	22.74	20.66	18.31	19.38	17.55
	1.2484	16	26.83	23.44	24.09	21.05	18.15	16.80	17.00	16.08
	0.8323	24	24.09	21.05	21.41	18.75	15.04	14.82	14.06	14.06
550 S150-024* (50ksi)	0.7503	12	23.68	20.69	20.45	18.40	14.33	14.33	13.39	13.39
	0.5627	16	21.54	19.05	17.96	16.88	12.49	12.49	11.66	11.66
	0.3751	24	17.96	16.88	14.88	14.88	10.27	10.27	9.58	9.58
550 S162-024* (50ksi)	0.7714	12	24.02	20.99	21.32	18.68	14.95	14.74	13.97	13.97
	0.5785	16	22.13	19.33	18.73	17.13	13.04	13.04	12.17	12.17
	0.3857	24	18.73	17.13	15.52	15.12	10.72	10.72	10.00	10.00
550 S162-027*	0.8810	12	24.91	21.76	22.21	19.41	16.12	15.36	15.07	14.68
	0.6607	16	22.98	20.08	20.15	17.82	14.07	14.03	13.14	13.14
	0.4405	24	20.15	17.82	16.73	15.75	11.58	11.58	10.81	10.81
550 S162-030	0.9700	12	25.55	22.32	22.83	19.94	16.96	15.82	15.86	15.13
	0.7275	16	23.61	20.62	20.99	18.33	14.82	14.46	13.84	13.81
	0.4850	24	20.99	18.33	17.60	16.21	12.21	12.21	11.39	11.39
550 S162-033	1.0741	12	26.24	22.92	23.49	20.52	18.05	16.31	16.89	15.61
	0.8056	16	24.28	21.21	21.62	18.89	15.78	14.92	14.75	14.26
	0.5371	24	21.62	18.89	18.72	16.72	13.01	13.01	12.15	12.15
550 S162-043	1.4427	12	28.31	24.73	25.50	22.28	20.45	17.86	19.58	17.11
	1.0820	16	26.31	22.99	23.56	20.58	18.73	16.37	17.92	15.66
	0.7214	24	23.56	20.58	20.94	18.29	16.34	14.42	15.26	13.78
550 S162-054 (50ksi)	1.7953	12	29.74	25.98	26.94	23.53	21.76	19.01	20.86	18.22
	1.3465	16	27.75	24.25	24.96	21.81	19.97	17.45	19.12	16.70
	0.8977	24	24.96	21.81	22.27	19.46	17.63	15.40	16.86	14.73
550 S200-030	1.0538	12	26.58	23.22	23.78	20.78	18.43	16.51	17.25	15.79
	0.7904	16	24.58	21.47	21.88	19.12	16.12	15.10	15.06	14.43
	0.5269	24	21.88	19.12	19.13	16.92	13.29	13.27	12.40	12.40
550 S200-033	1.1671	12	27.28	23.83	24.46	21.37	19.49	17.03	18.42	16.29
	0.8753	16	25.27	22.08	22.53	19.69	17.22	15.58	16.09	14.89
	0.5836	24	22.53	19.69	19.97	17.45	14.21	13.71	13.26	13.09
550 S200-043	1.5577	12	29.31	25.61	26.46	23.11	21.26	18.58	20.37	17.80
	1.1683	16	27.28	23.83	24.46	21.37	19.49	17.03	18.65	16.30
	0.7789	24	24.46	21.37	21.77	19.02	17.19	15.02	16.38	14.35
550 S200-054 (50ksi)	1.9397	12	30.77	26.88	27.93	24.40	22.62	19.76	21.70	18.95
	1.4548	16	28.76	25.12	25.92	22.64	20.78	18.16	19.90	17.39
	0.9699	24	25.92	22.64	23.15	20.23	18.36	16.04	17.56	15.34

TABLE A: ALLOWABLE CEILING JOIST SPANS, FT ^{1,2,3,4,5}										
Member Identification	Wt. psf	Spc o.c. in	Ceiling Dead Loads ¹							
			4 psf		6 psf		13 psf		15 psf	
			L/ 240	L/ 360	L/ 240	L/ 360	L/ 240	L/ 360	L/ 240	L/ 360
600 S125-024* (50ksi)	0.7352	12	19.39	19.39	16.25	16.25	11.38	11.38	10.63	10.63
	0.5514	16	17.12	17.12	14.27	14.27	9.92	9.92	9.26	9.26
	0.3676	24	14.27	14.27	11.82	11.82	8.16	8.16	7.61	7.61
600 S125-027*	0.8300	12	20.00	20.00	16.82	16.82	11.82	11.82	11.05	11.05
	0.6225	16	17.71	17.71	14.79	14.79	10.31	10.31	9.63	9.63
	0.4150	24	14.79	14.79	12.27	12.27	8.49	8.49	7.92	7.92
600 S125-030	0.9138	12	21.08	21.08	17.77	17.77	12.53	12.53	11.71	11.71
	0.6853	16	18.69	18.69	15.65	15.65	10.94	10.94	10.22	10.22
	0.4569	24	15.65	15.65	13.00	13.00	9.01	9.01	8.40	8.40
600 S125-033	1.0118	12	22.30	22.30	18.85	18.85	13.34	13.34	12.48	12.48
	0.7589	16	19.82	19.82	16.63	16.63	11.65	11.65	10.89	10.89
	0.5059	24	16.63	16.63	13.84	13.84	9.60	9.60	8.96	8.96
600 S125-043	1.3124	12	25.05	24.67	21.35	21.35	15.26	15.26	14.29	14.29
	0.9843	16	22.39	22.39	18.92	18.92	13.37	13.37	12.51	12.51
	0.6562	24	18.92	18.92	15.82	15.82	11.05	11.05	10.32	10.32
600 S125-054 (50ksi)	1.6317	12	27.07	25.93	23.26	23.26	16.80	16.80	15.75	15.75
	1.2238	16	24.34	24.16	20.70	20.70	14.75	14.75	13.81	13.81
	0.8159	24	20.70	20.70	17.40	17.40	12.22	12.22	11.42	11.42
600 S137-024* (50ksi)	0.7663	12	22.24	21.73	18.66	18.66	13.08	13.08	12.23	12.23
	0.5747	16	19.66	19.66	16.40	16.40	11.41	11.41	10.65	10.65
	0.3832	24	16.40	16.40	13.59	13.59	9.38	9.38	8.75	8.75
600 S137-027*	0.8752	12	24.00	22.53	20.21	20.09	14.23	14.23	13.30	13.30
	0.6564	16	21.27	20.79	17.79	17.79	12.42	12.42	11.60	11.60
	0.4376	24	17.79	17.79	14.77	14.77	10.22	10.22	9.54	9.54
600 S137-030	0.9637	12	25.36	23.11	21.41	20.65	15.12	15.12	14.14	14.14
	0.7227	16	22.51	21.35	18.87	18.87	13.21	13.21	12.34	12.34
	0.4818	24	18.87	18.87	15.69	15.69	10.88	10.88	10.15	10.15
600 S137-033	1.0671	12	26.76	23.74	22.66	21.24	16.06	16.06	15.03	15.03
	0.8003	16	23.81	21.96	20.01	19.55	14.04	14.04	13.13	13.13
	0.5336	24	20.01	19.55	16.67	16.67	11.58	11.58	10.81	10.81
600 S137-043	1.3998	12	29.11	25.43	26.21	22.90	19.05	18.34	17.85	17.56
	1.0499	16	27.05	23.63	23.58	21.14	16.70	16.70	15.63	15.63
	0.6999	24	23.58	21.14	19.75	18.79	13.81	13.81	12.90	12.90
600 S137-054 (50ksi)	1.7607	12	30.71	26.83	27.81	24.29	21.65	19.60	20.32	18.79
	1.3205	16	28.65	25.03	25.76	22.50	19.03	17.99	17.83	17.23
	0.8804	24	25.76	22.50	22.42	20.07	15.79	15.79	14.76	14.76
600 S150-024* (50ksi)	0.7923	12	25.15	22.11	21.13	19.68	14.83	14.83	13.86	13.86
	0.5942	16	22.25	20.37	18.57	18.06	12.93	12.93	12.08	12.08
	0.3962	24	18.57	18.06	15.40	15.40	10.64	10.64	9.92	9.92
600 S162-024* (50ksi)	0.8134	12	25.66	22.41	22.07	19.96	15.50	15.50	14.49	14.49
	0.6100	16	23.24	20.66	19.41	18.32	13.52	13.52	12.63	12.63
	0.4067	24	19.41	18.32	16.09	16.09	11.13	11.13	10.38	10.38
600 S162-027*	0.9291	12	26.59	23.23	23.74	20.74	16.76	16.43	15.67	15.67
	0.6968	16	24.55	21.45	20.93	19.06	14.64	14.64	13.67	13.67
	0.4645	24	20.93	19.06	17.40	16.85	12.05	12.05	11.25	11.25
600 S162-030	1.0231	12	27.28	23.83	24.39	21.31	17.95	16.92	16.79	16.19
	0.7673	16	25.22	22.03	22.38	19.60	15.69	15.47	14.66	14.66
	0.5116	24	22.38	19.60	18.63	17.34	12.93	12.93	12.07	12.07
600 S162-033	1.1330	12	28.00	24.46	25.09	21.92	19.09	17.45	17.86	16.70
	0.8498	16	25.93	22.65	23.11	20.19	16.70	15.96	15.61	15.26
	0.5665	24	23.11	20.19	19.80	17.89	13.77	13.77	12.86	12.86
600 S162-043	1.5194	12	30.19	26.37	27.23	23.79	21.87	19.10	20.95	18.30
	1.1396	16	28.09	24.54	25.17	21.99	20.04	17.51	19.18	16.75
	0.7597	24	25.17	21.99	22.39	19.56	17.25	15.44	16.12	14.75
600 S162-054 (50ksi)	1.8915	12	31.69	27.69	28.75	25.12	23.27	20.32	22.31	19.49
	1.4186	16	29.61	25.87	26.67	23.29	21.37	18.67	20.46	17.87
	0.9458	24	26.67	23.29	23.81	20.80	18.87	16.49	18.05	15.77
600 S200-030	1.1069	12	28.33	24.75	25.38	22.17	19.14	17.64	17.92	16.88
	0.8302	16	26.23	22.91	23.37	20.41	16.74	16.13	15.65	15.42
	0.5535	24	23.37	20.41	19.86	18.08	13.81	13.81	12.89	12.89
600 S200-033	1.2259	12	29.08	25.40	26.10	22.80	20.82	18.19	19.50	17.41
	0.9194	16	26.96	23.55	24.06	21.02	18.23	16.65	17.05	15.92
	0.6130	24	24.06	21.02	21.34	18.64	15.05	14.65	14.05	14.00

TABLE A: ALLOWABLE CEILING JOIST SPANS, FT ^{1,2,3,4,5}										
Member Identification	Wt. psf	Spc o.c. in	Ceiling Dead Loads ¹							
			4 psf		6 psf		13 psf		15 psf	
			L/ 240	L/ 360	L/ 240	L/ 360	L/ 240	L/ 360	L/ 240	L/ 360
600 S200-043	1.6344	12	31.22	27.27	28.22	24.65	22.71	19.84	21.76	19.01
	1.2258	16	29.09	25.41	26.11	22.81	20.83	18.20	19.94	17.42
	0.8172	24	26.11	22.81	23.26	20.32	18.38	16.05	17.33	15.35
600 S200-054 (50ksi)	2.0359	12	32.76	28.61	29.77	26.01	24.16	21.11	23.18	20.25
	1.5269	16	30.65	26.77	27.65	24.15	22.21	19.40	21.27	18.58
	1.0180	24	27.65	24.15	24.72	21.60	19.63	17.15	18.78	16.40
<u>800 S125-030*</u>	1.1260	12	23.67	23.67	20.07	20.07	14.26	14.26	13.34	13.34
	0.8445	16	21.08	21.08	17.74	17.74	12.47	12.47	11.66	11.66
	0.5630	24	17.74	17.74	14.79	14.79	10.29	10.29	9.60	9.60
<u>800 S125-033*</u>	1.2471	12	25.10	25.10	21.36	21.36	15.23	15.23	14.26	14.26
	0.9353	16	22.41	22.41	18.91	18.91	13.34	13.34	12.47	12.47
	0.6236	24	18.91	18.91	15.80	15.80	11.02	11.02	10.29	10.29
800 S125-043	1.6191	12	28.49	28.49	24.47	24.47	17.66	17.66	16.57	16.57
	1.2143	16	25.61	25.61	21.77	21.77	15.51	15.51	14.52	14.52
	0.8096	24	21.77	21.77	18.30	18.30	12.85	12.85	12.01	12.01
800 S125-054 (50ksi)	2.0166	12	30.82	30.82	26.70	26.70	19.51	19.51	18.33	18.33
	1.5125	16	27.89	27.89	23.89	23.89	17.19	17.19	16.11	16.11
	1.0083	24	23.89	23.89	20.19	20.19	14.28	14.28	13.36	13.36
<u>800 S137-030*</u>	1.1758	12	28.47	28.47	24.18	24.18	17.21	17.21	16.11	16.11
	0.8819	16	25.39	25.39	21.39	21.39	15.06	15.06	14.08	14.08
	0.5879	24	21.39	21.39	17.85	17.85	12.43	12.43	11.60	11.60
<u>800 S137-033*</u>	1.3024	12	29.97	29.97	25.54	25.54	18.25	18.25	17.09	17.09
	0.9768	16	26.79	26.79	22.62	22.62	15.98	15.98	14.95	14.95
	0.6512	24	22.62	22.62	18.92	18.92	13.21	13.21	12.33	12.33
800 S137-043	1.7065	12	34.93	31.59	30.05	28.58	21.76	21.76	20.41	20.41
	1.2799	16	31.44	29.45	26.78	26.46	19.12	19.12	17.91	17.91
	0.8533	24	26.78	26.46	22.54	22.54	15.85	15.85	14.82	14.82
800 S137-054 (50ksi)	2.1456	12	38.04	33.23	34.21	30.26	25.09	24.60	23.58	23.58
	1.6092	16	35.63	31.13	30.65	28.12	22.12	22.12	20.75	20.75
	1.0728	24	30.65	28.12	25.96	25.17	18.40	18.40	17.22	17.22
<u>800 S162-030*</u>	1.2352	12	32.22	29.61	27.41	26.58	19.54	19.54	18.30	18.30
	0.9264	16	28.77	27.45	24.26	24.26	17.11	17.11	16.00	16.00
	0.6176	24	24.26	24.26	20.27	20.27	14.13	14.13	13.19	13.19
<u>800 S162-033*</u>	1.3682	12	34.56	30.37	29.50	27.33	21.12	21.12	19.79	19.79
	1.0262	16	30.93	28.20	26.16	25.22	18.51	18.51	17.32	17.32
	0.6841	24	26.16	25.22	21.90	21.90	15.30	15.30	14.30	14.30
800 S162-043	1.8261	12	37.36	32.64	33.86	29.58	26.44	23.90	24.82	22.92
	1.3696	16	34.88	30.47	31.38	27.42	23.26	21.95	21.79	21.01
	0.9131	24	31.38	27.42	27.38	24.47	19.30	19.30	18.05	18.05
800 S162-054 (50ksi)	2.2764	12	39.13	34.18	35.68	31.17	29.09	25.41	27.92	24.39
	1.7073	16	36.70	32.06	33.20	29.00	26.77	23.38	25.65	22.41
	1.1382	24	33.20	29.00	29.75	25.99	23.04	20.70	21.52	19.80
<u>800 S200-030*</u>	1.3190	12	35.07	30.63	30.36	27.54	21.70	21.70	20.33	20.33
	0.9893	16	31.84	28.43	26.90	25.41	19.02	19.02	17.79	17.79
	0.6595	24	26.90	25.41	22.50	22.50	15.71	15.71	14.68	14.68
<u>800 S200-033*</u>	1.4612	12	35.95	31.40	32.40	28.30	23.50	22.70	22.02	21.74
	1.0959	16	33.42	29.20	29.05	26.15	20.61	20.61	19.29	19.29
	0.7306	24	29.05	26.15	24.35	23.25	17.05	17.05	15.93	15.93
800 S200-043	1.9411	12	38.49	33.63	34.94	30.53	28.31	24.73	27.14	23.71
	1.4558	16	35.98	31.43	32.42	28.32	26.00	22.71	24.90	21.75
	0.9706	24	32.42	28.32	28.97	25.30	22.40	20.07	20.95	19.19
800 S200-054 (50ksi)	2.4208	12	40.29	35.20	36.81	32.15	30.09	26.28	28.89	25.24
	1.8156	16	37.83	33.05	34.28	29.95	27.70	24.20	26.56	23.20
	1.2104	24	34.28	29.95	30.77	26.88	24.44	21.44	21.42	20.52

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm, 1 psf = 47.88 Pa.

Notes:

1. Dead weight of the member has been added to the ceiling dead loads for calculating ceiling spans.
2. Studs have not been checked for web crippling. See STEELER's ICC ESR-2054 Table 11 for allowable web crippling loads.
3. Members marked with * indicate (h/t) web height to thickness ratios exceeding 200 but less than 260 and require web stiffeners.
4. Top flange bracing is required at 6 ft spacings.
5. Member shown in bold and underlined are being added to STEELER's ICC ESR-2054 in the next review issue.

TABLE B: S-Member Section Properties for Ceiling Span Table^{1,2,3,4}

Member ID Designation	Design T in	Min. t in	Full Properties						Torsional Properties				Effective Properties					
			Area in ²	Wt. lb/ft	Ix in ⁴	rx in	Iy in ⁴	ry in	J 10 ⁻³ in ⁴	Cw in ⁶	ro in	Xo in	Maxo k-in	Ieff in ⁴	Ixe in ⁴	Sxe(t) in ³	Vay k	Ae in ²
350 S162-027	0.0283	0.0269	0.2025	0.6885	0.4029	1.4104	0.0705	0.5902	0.0541	0.1685	1.9510	-1.2120	3.385	0.3989	0.3401	0.1713	0.359	0.1068
400 S125-018*	0.0188	0.0179	0.1253	0.4260	0.2959	1.5368	0.0219	0.4179	0.0148	0.0639	1.7630	-0.7561	1.754	0.2828	0.2191	0.0888	0.156	0.0469
400 S162-027	0.0283	0.0269	0.2167	0.7367	0.5474	1.5895	0.0736	0.5830	0.0578	0.2255	2.0491	-1.1544	3.943	0.5428	0.4582	0.1995	0.398	0.1077
550 S125-024* (50ksi)	0.0247	0.0235	0.2039	0.6931	0.8433	2.0339	0.0331	0.4030	0.0416	0.1878	2.1809	-0.6760	5.563	0.7548	0.6299	0.1858	0.255	0.0668
550 S137-024* (50ksi)	0.0247	0.0235	0.2130	0.7242	0.9078	2.0644	0.0455	0.4623	0.0435	0.2604	2.2636	-0.8052	6.042	0.8904	0.6826	0.2018	0.255	0.0729
550 S150-024* (50ksi)	0.0247	0.0235	0.2207	0.7503	0.9628	2.0888	0.0585	0.5147	0.0450	0.3349	2.3395	-0.9195	6.340	0.9312	0.7189	0.2118	0.255	0.0766
550 S162-024* (50ksi)	0.0247	0.0235	0.2269	0.7713	1.0091	2.1091	0.0712	0.5603	0.0463	0.4053	2.4076	-1.0170	6.379	0.9607	0.7330	0.2131	0.255	0.0768
550 S162-027	0.0283	0.0269	0.2591	0.8810	1.1506	2.1073	0.0809	0.5587	0.0692	0.4595	2.4041	-1.0134	6.125	1.1396	0.9694	0.3100	0.382	0.1089
600 S125-024* (50ksi)	0.0247	0.0235	0.2162	0.7352	1.0419	2.1951	0.0338	0.3953	0.0441	0.2293	2.3223	-0.6467	6.108	0.9179	0.7624	0.2040	0.233	0.0669
600 S125-027*	0.0283	0.0269	0.2441	0.8300	1.1658	2.1853	0.0354	0.3810	0.0652	0.2377	2.3015	-0.6134	5.276	1.1035	0.9451	0.2670	0.349	0.0890
600 S137-024* (50ksi)	0.0247	0.0235	0.2254	0.7663	1.1191	2.2283	0.0465	0.4544	0.0460	0.3173	2.4016	-0.7719	6.631	0.9832	0.8255	0.2215	0.233	0.0730
600 S137-027*	0.0283	0.0269	0.2574	0.8752	1.2758	2.2263	0.0528	0.4528	0.0687	0.3593	2.3983	-0.7685	6.046	1.2321	1.0666	0.3060	0.349	0.1029
600 S150-024* (50ksi)	0.0247	0.0235	0.2330	0.7923	1.1848	2.2548	0.0598	0.5066	0.0476	0.4078	2.4739	-0.8830	6.957	1.1270	0.8688	0.2324	0.233	0.0767
600 S162-024* (50ksi)	0.0247	0.0235	0.2392	0.8134	1.2400	2.2767	0.0729	0.5521	0.0488	0.4936	2.5386	-0.9780	7.001	1.1553	0.8852	0.2338	0.233	0.0769
600 S162-027*	0.0283	0.0269	0.2733	0.9291	1.4141	2.2748	0.0828	0.5505	0.0730	0.5597	2.5352	-0.9744	6.623	1.4048	1.1659	0.3351	0.349	0.1091
800 S125-030*	0.0312	0.0296	0.3312	1.1260	2.6172	2.8112	0.0410	0.3520	0.1075	0.5044	2.8805	-0.5201	8.426	2.3814	2.0539	0.4264	0.347	0.1049
800 S125-033*	0.0346	0.0329	0.3668	1.2471	2.8939	2.8089	0.0451	0.3505	0.1464	0.5533	2.8776	-0.5173	9.895	2.6777	2.3636	0.5008	0.474	0.1244
800 S137-030*	0.0312	0.0296	0.3458	1.1758	2.8373	2.8643	0.0616	0.4221	0.1122	0.7581	2.9691	-0.6582	9.539	2.6398	2.2946	0.4827	0.347	0.1198
800 S137-033*	0.0346	0.0329	0.3830	1.3024	3.1378	2.8621	0.0678	0.4206	0.1529	0.8329	2.9661	-0.6552	11.225	2.9539	2.6425	0.5681	0.474	0.1423
800 S162-030*	0.0312	0.0296	0.3633	1.2352	3.1102	2.9259	0.0973	0.5176	0.1179	1.1815	3.0888	-0.8437	10.081	2.9079	2.4538	0.5101	0.347	0.1264
800 S162-033*	0.0346	0.0329	0.4024	1.3682	3.4403	2.9239	0.1072	0.5161	0.1606	1.2997	3.0858	-0.8406	11.671	3.2732	2.7958	0.5906	0.474	0.1472
800 S200-030*	0.0312	0.0296	0.3880	1.3190	3.4983	3.0029	0.1676	0.6573	0.1259	1.9985	3.2735	-1.1253	10.533	3.4500	2.6251	0.5330	0.347	0.1312
800 S200-033*	0.0346	0.0329	0.4298	1.4612	3.8704	3.0010	0.1848	0.6557	0.1715	2.2011	3.2703	-1.1219	12.479	3.8181	3.0256	0.6315	0.474	0.1532

For S1: 1 inch = 25.4 mm, 1 in² = 645 mm², 1 in³ = 1.64x10⁴ mm³, 1 in⁶ = 2.69x10⁸, 1 kip-in = 113.3 N-m, 1 lb/ft = 14.6 N/m, 1 kip = 4.4 kN

Notes:

1. Refer to STEELER ICC-ES REPORT ESR-2054 for other member section properties.
2. Values shown above are for fully braced members.
3. For ceiling joist spans, member effective properties are based on unbraced lengths (Ly, Lt) of 6 feet.
4. Members marked with * indicate web stiffeners are required. Members with (h/T) web height to thickness ratios exceeding 200 but less than 260 (see web stiffener Detail 3 on Dwg SK-2).

Table C--Allowable Web Crippling Loads, kips								
S-Member Depth, inches					EOF, End One Flange			
					N Bearing Length, in.			
Depth	T, in.	mils	Fy	Radius	1.00	1.25	1.50	2.00
1.625	0.0188	18	33	0.0843	0.055	0.060	0.064	0.071
1.625	0.0247	24	50	0.0814	0.143	0.155	0.165	0.184
1.625	0.0283	27	33	0.0796	0.122	0.132	0.141	0.157
1.625	0.0312	30	33	0.0782	0.148	0.159	0.170	0.188
1.625	0.0346	33	33	0.0764	0.180	0.194	0.206	0.228
1.625	0.0451	43	33	0.0712	0.298	0.319	0.339	0.374
2.500	0.0188	18	33	0.0843	0.052	0.056	0.060	0.067
2.500	0.0247	24	50	0.0814	0.136	0.147	0.157	0.175
2.500	0.0283	27	33	0.0796	0.117	0.126	0.135	0.149
2.500	0.0312	30	33	0.0782	0.141	0.152	0.162	0.180
2.500	0.0346	33	33	0.0764	0.173	0.186	0.198	0.219
2.500	0.0451	43	33	0.0712	0.287	0.308	0.328	0.361
2.500	0.0566	54	50	0.0849	0.656	0.702	0.744	0.817
3.500	0.0188	18	33	0.0843	0.049	0.053	0.057	0.064
3.500	0.0247	24	50	0.0814	0.130	0.140	0.150	0.167
3.500	0.0283	27	33	0.0796	0.112	0.121	0.129	0.143
3.500	0.0312	30	33	0.0782	0.135	0.146	0.156	0.173
3.500	0.0346	33	33	0.0764	0.166	0.179	0.190	0.211
3.500	0.0451	43	33	0.0712	0.278	0.298	0.317	0.349
3.500	0.0566	54	50	0.0849	0.637	0.681	0.722	0.794
3.625	0.0188	18	33	0.0843	0.049	0.053	0.057	0.063
3.625	0.0247	24	50	0.0814	0.129	0.139	0.149	0.166
3.625	0.0283	27	33	0.0796	0.111	0.120	0.128	0.142
3.625	0.0312	30	33	0.0782	0.135	0.145	0.155	0.172
3.625	0.0346	33	33	0.0764	0.165	0.178	0.189	0.210
3.625	0.0451	43	33	0.0712	0.277	0.297	0.315	0.348
3.625	0.0566	54	50	0.0849	0.634	0.679	0.719	0.791
4.000	0.0188	18	33	0.0843	0.048	0.052	0.055	0.062
4.000	0.0247	24	50	0.0814	0.127	0.137	0.146	0.163
4.000	0.0283	27	33	0.0796	0.109	0.118	0.126	0.140
4.000	0.0312	30	33	0.0782	0.133	0.143	0.153	0.169
4.000	0.0346	33	33	0.0764	0.163	0.176	0.187	0.207
4.000	0.0451	43	33	0.0712	0.274	0.294	0.312	0.344
4.000	0.0566	54	50	0.0849	0.628	0.672	0.712	0.783
5.500	0.0247	24	50	0.0814	0.119	0.129	0.138	0.153
5.500	0.0283	27	33	0.0796	0.103	0.112	0.119	0.132
5.500	0.0312	30	33	0.0782	0.126	0.136	0.145	0.161
5.500	0.0346	33	33	0.0764	0.155	0.167	0.178	0.197
5.500	0.0451	43	33	0.0712	0.262	0.282	0.299	0.330
5.500	0.0566	54	50	0.0849	0.606	0.648	0.687	0.755

Table C--Allowable Web Crippling Loads, kips								
S-Member Depth, inches					EOF, End One Flange			
					N Bearing Length, in.			
Depth	T, in.	mils	Fy	Radius	1.00	1.25	1.50	2.00
6.000	0.0247	24	50	0.0814	0.117	0.126	0.135	0.150
6.000	0.0283	27	33	0.0796	0.102	0.110	0.117	0.130
6.000	0.0312	30	33	0.0782	0.124	0.134	0.143	0.158
6.000	0.0346	33	33	0.0764	0.153	0.165	0.175	0.194
6.000	0.0451	43	33	0.0712	0.259	0.278	0.295	0.326
6.000	0.0566	54	50	0.0849	0.599	0.641	0.679	0.747
8.000	0.0312	30	33	0.0782	0.117	0.126	0.134	0.149
8.000	0.0346	33	33	0.0764	0.144	0.155	0.165	0.183
8.000	0.0451	43	33	0.0712	0.247	0.265	0.281	0.311
8.000	0.0566	54	50	0.0849	0.575	0.615	0.651	0.716

Notes:

1. The above coefficients apply when $h/t < 200$, $N/t < 210$, $N/h < 2.0$
2. Coefficient from 2001 NASPEC Table C3.4.1-2,
Single Web Channel and C-Sections, Flange Fastened to Support.
3. NASPEC Eq. C3.4.1-1 was used to calculate ASD values---
Web Crippling Strength of Webs without Holes.
4. When a web hole is within the bearing length, a bearing stiffener shall be added.
5. When web hole is within 10" to end of member use NASPEC Section C3.4.2 for reduction factor.

Table D: Ceiling Joist Reaction, lbs & Track Thickness, -mils

Dead Load psf	Joist Spc, in.	Ceiling Joist Span, ft							
		9 ft	12 ft	15 ft	18 ft	21 ft	24 ft	27 ft	30 ft
4	12	18.0 lbs-24 mils	24.0 lbs-24 mils	30.0 lbs-27 mils	36.0 lbs-30 mils	42.0 lbs-30 mils	48.0 lbs-33 mils	54.0 lbs-43 mils	60.0 lbs-43 mils
	16	24.0 lbs-24 mils	32.0 lbs-27 mils	40.0 lbs-30 mils	48.0 lbs-33 mils	56.0 lbs-43 mils	64.0 lbs-43 mils	72.0 lbs-43 mils	80.0 lbs-43 mils
	24	36.0 lbs-30 mils	48.0 lbs-33 mils	60.0 lbs-43 mils	72.0 lbs-43 mils	84.0 lbs-43 mils	96.0 lbs-54 mils	108.0 lbs-54 mils	120.0 lbs-54 mils
6	12	27.0 lbs-27 mils	36.0 lbs-30 mils	45.0 lbs-33 mils	54.0 lbs-43 mils	63.0 lbs-43 mils	72.0 lbs-43 mils	81.0 lbs-43 mils	90.0 lbs-43 mils
	16	36.0 lbs-30 mils	48.0 lbs-33 mils	60.0 lbs-43 mils	72.0 lbs-43 mils	84.0 lbs-43 mils	96.0 lbs-54 mils	108.0 lbs-54 mils	120.0 lbs-54 mils
	24	54.0 lbs-43 mils	72.0 lbs-43 mils	90.0 lbs-43 mils	108.0 lbs-54 mils	126.0 lbs-54 mils	144.0 lbs-54 mils	162.0 lbs-68 mils	180.0 lbs-68 mils
13	12	58.5 lbs-43 mils	78.0 lbs-43 mils	97.5 lbs-54 mils	117.0 lbs-54 mils	136.5 lbs-54 mils	156.0 lbs-68 mils	175.5 lbs-68 mils	195.0 lbs-68 mils
	16	78.0 lbs-43 mils	104.0 lbs-54 mils	130.0 lbs-54 mils	156.0 lbs-68 mils	182.0 lbs-68 mils	208.0 lbs-68 mils	234.0 lbs-68 mils	260.0 lbs-97 mils
	24	117.0 lbs-54 mils	156.0 lbs-68 mils	195.0 lbs-68 mils	234.0 lbs-68 mils	273.0 lbs-97 mils	312.0 lbs-97 mils	351.0 lbs-97 mils	390.0 lbs-97 mils
15	12	67.5 lbs-43 mils	90.0 lbs-43 mils	112.5 lbs-54 mils	135.0 lbs-54 mils	157.5 lbs-68 mils	180.0 lbs-68 mils	202.5 lbs-68 mils	225.0 lbs-68 mils
	16	90.0 lbs-43 mils	120.0 lbs-54 mils	150.0 lbs-68 mils	180.0 lbs-68 mils	210.0 lbs-68 mils	240.0 lbs-97 mils	270.0 lbs-97 mils	300.0 lbs-97 mils
	24	135.0 lbs-54 mils	180.0 lbs-68 mils	225.0 lbs-68 mils	270.0 lbs-97 mils	315.0 lbs-97 mils	360.0 lbs-97 mils	405.0 lbs-97 mils	450.0 lbs-97 mils

Notes:

1. Track leg values are based on the average capacity of the track legs from 1.00 to 2.00 inches. >>>>>

2. Design Example:

Ceiling Span, L = 15 ft
 Spacing = 16 " oc
 Deflection: L/ 360 0.50 inches at mid span
 Total Dead Load = 4 psf: Weight of misc framing (top flange bracing), gypsum board, lighting, etc..
 (Dead weight of the member has been included see Note 1, page 8)

Use:

Stud:

400S162-024 (50ksi): Allowable Span = 15.20 ft (Least weight per sq. ft. = 0.484 psf)

Thick. mils	Average Capacity, lbs
18	15.4
24	26.8
27	35.2
30	42.8
33	52.7
43	90.0
54	145.1
68	239.4
97	538.8
118	889.6

Track:

400T100-030 from Table above: Reaction = 40 lbs-30 mils

Check: Allowable Web Crippling for 4" stud 24 mils from Table C- Allowable Web Crippling (EOF) = 0.127 kips=127 lbs>40 lbs therefore OK

Other Members that meet the design criteria are as follows:

Member	Allowable Span	Weight, lbs/ft ²
350S125-043	15.17 ft	0.6968
350S162-033	15.13 ft	0.6291
350S200-030	15.39 ft	0.6312
362S125-043	15.58 ft	0.7112
400S125-030	15.18 ft	0.5262
400S137-027	15.24 ft	0.5121
400S162-024 (50ksi)	15.20 ft	0.4838

Thick. mils	Fu ksi	Design T, in	Min. t, in	#6 Screw		#8 Screw		#10 Screw		#12 Screw		1/4 Screw	
				Shear	Pullout	Shear	Pullout	Shear	Pullout	Shear	Pullout	Shear	Pullout
18	45	0.0188	0.0179	61	34	65	38						
24	65	0.0247	0.0235	132	64	142	73						
27	45	0.0283	0.0269	112	51	120	58						
30	45	0.0312	0.0296	130	56	139	64	151	76				
33	45	0.0346	0.0329	152	62	162	71	177	84	186	93		
43	45	0.0451	0.0428	226	81	241	92	263	109	277	121	302	144
54	65	0.0566	0.0538			490	167	467	198	562	219	613	261
68	65	0.0713	0.0677					467	249	667	276	866	328
97	65	0.1017	0.0966					467	356	667	393	867	468
118	65	0.1242	0.1180					467	435	667	480	867	572

Notes:

- Above suggested values are calculated using AISI STANDARD NASPEC 2007 Edition per Section E4 Screw Connections: E4.3 Shear, E4.4-1 Pull-Out, Safety Factor $\Omega=3.0$
- Shear values are base on same thickness of both materials: $T_1=T_2$.

Fastener	Nominal	Tensile	Shear
dia-tpi	Dia., in	Pts	Pss
6-20	0.140	1285	750
8-18	0.160	1545	1000
10-16	0.190	1936	1400
12-14	0.210	2778	2000
1/4-14	0.250	4060	2600

Fastener	Nominal	Tensile	Shear
dia.	Dia., in	Pts/ Ω	Pss/ Ω
6-20	0.140	428	250
8-18	0.160	515	333
10-16	0.190	645	467
12-14	0.210	926	667
1/4-14	0.250	1353	867

Notes:

- Pts, Pss: Mfgr Nom. Tension and Shear Strengths from ITW-Buildex Product Catalog, Tek's Self-Drilling Fasteners, page 6
- Safety Factor: $\Omega=3.0$

Thick. mils	Design T, in	Fu/Fxx ksi	Nominal Pn	ASD Pn/ Ω
18	0.0188	45	635	208
24	0.0247	65	1204	395
27	0.0283	45	955	313
30	0.0312	45	1053	345
33	0.0346	45	1168	383
43	0.0451	45	1522	499
54	0.0566	65	2759	905
68	0.0713	65	3476	1140
97	0.1017	70	3775	1480
118	0.1242	70	4610	1808

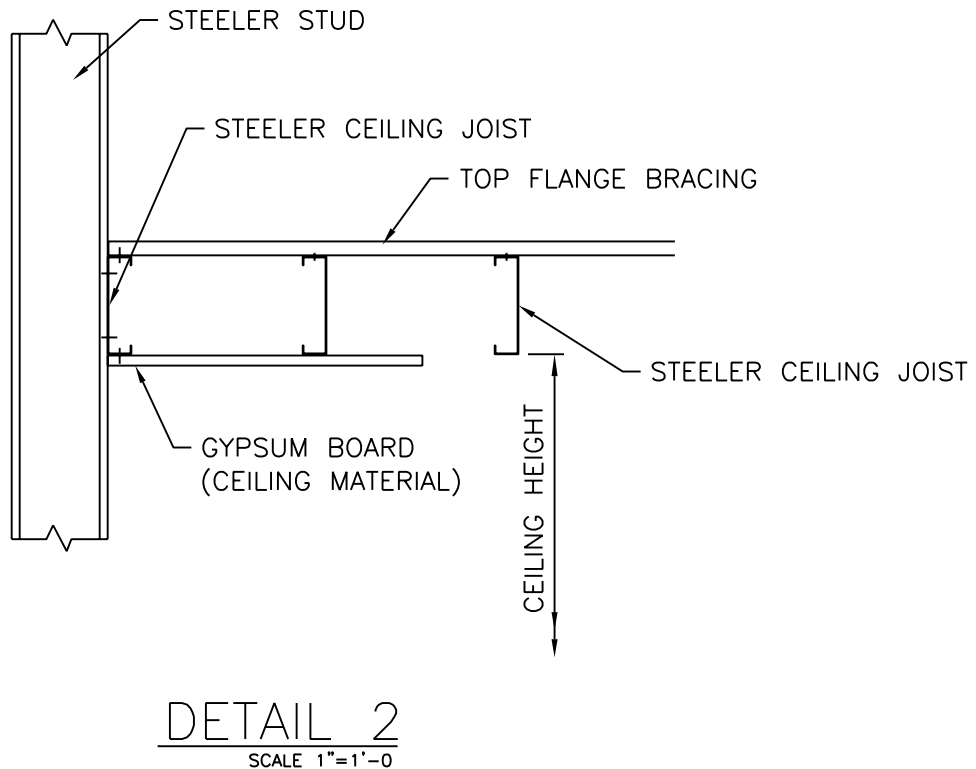
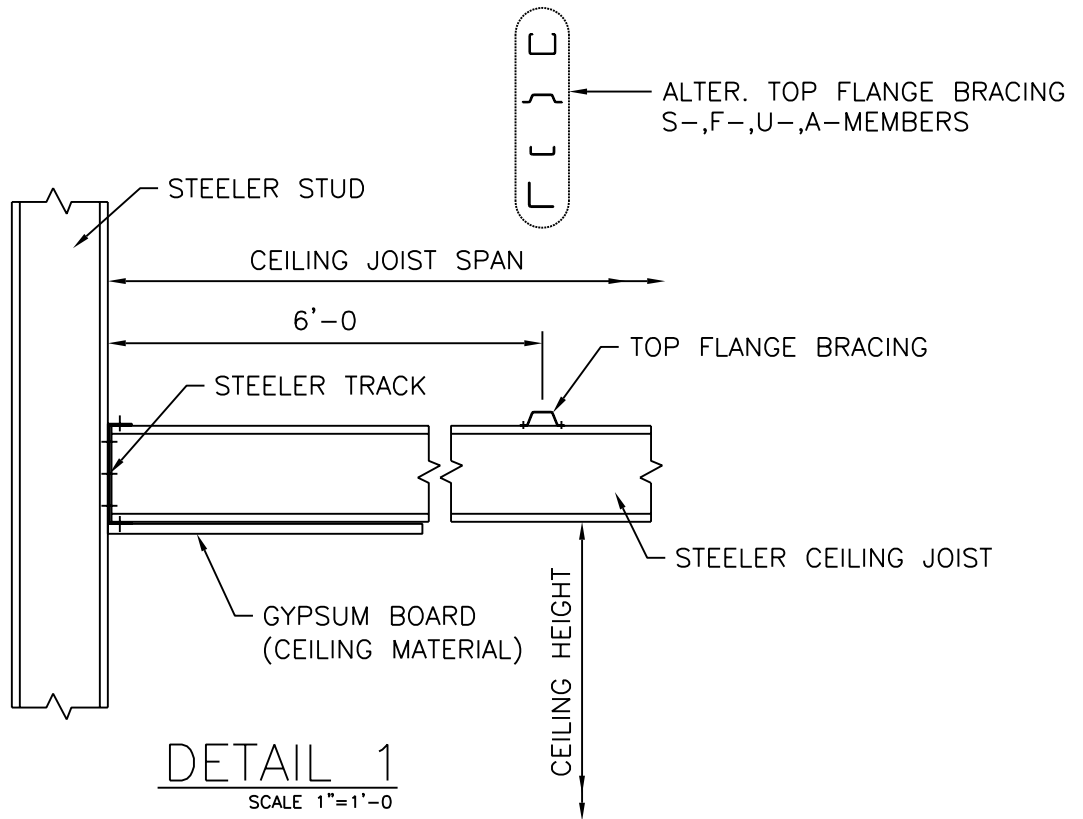
Thick. mils	Design T, in	Fu ksi	dw in	Nominal Pnov	ASD Pnov/ Ω
18	0.0188	45	0.250	317	106
24	0.0247	65	0.250	602	201
27	0.0283	45	0.250	478	159
30	0.0312	45	0.250	527	176
33	0.0346	45	0.3125	730	243
43	0.0451	45	0.3125	951	317
54	0.0566	65	0.3125	1725	575
68	0.0713	65	0.3125	2172	724
97	0.1017	65	0.3125	3099	1033
118	0.1242	65	0.3125	3784	1261

Notes:

- Welds are calculated per AISI Section E2.4 Fillet Welds
 P_n = Nominal Strength Capacity
 $P_n = 0.75 \cdot T \cdot L \cdot F_u$ for $T \leq 0.10$: $\Omega = 3.05$ (Eq. E2.4-2)
 $P_n = 0.75 \cdot t_w \cdot L \cdot F_{xx}$ for $T > 0.10$: $\Omega = 2.55$ (Eq. E2.4-4)
 L = Length (1 inch)
 T = Design Thickness; t_w = Effective throat $0.707 \cdot T$, inches
 F_u = Tensile strength of steel, ksi
 F_{xx} = Tensile strength of electrode, ksi
- ASD: Allowable Strength Design

Notes:

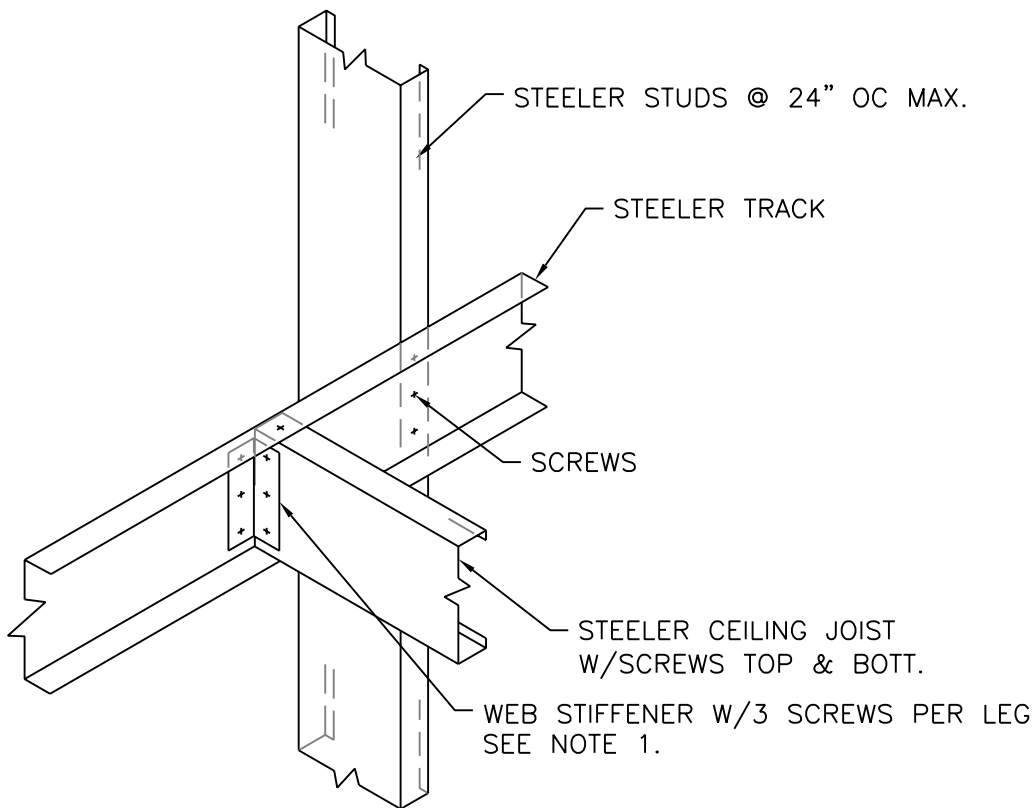
- $P_{nov} = 1.5 \cdot T \cdot d_w \cdot F_u$: Eq. E4.4.2-1; $\Omega = 3.0$
- Safety Factor: $\Omega = 3.0$



CEILING SPAN DETAILS

DATE: 10 December 2010

SHEET: SK-1



DETAIL 3
SCALE 1 1/2"=1'-0

NOTES

1. MEMBERS MARKED WITH * REQUIRE WEB STIFFENERS.
2. WEB STIFFENERS TO BE SAME THICKNESS AS STUD AND CUT FROM ANGLE WITH 1.50 INCH LEGS.
3. USE STEELER #6 SCREW FOR 18 TO 30 MILS, #8 SCREW FOR 33 TO 43 MILS AND #10 SCREW FOR 54 MILS AND THICKER.

CEILING SPAN DETAILS

DATE: 10 November 2010

SHEET: SK-2

Design Calculation Example 1

ID Member Part No.	Def. Coef. DC= 1.0			Weight lbs/sf	Spc o.c. in	Lateral Loading	
	Maxo, k-in	Ieff, in4	Vay, k			4 psf	
						L/ 240	L/ 360
400 S162-024 (50ksi)	3.331	0.4804	0.3046	0.6451	12	18.93	16.53
			f(Maxo)=			21.86	21.86
			f(Ixe)=			18.93	16.53
			f(Vay)=			131.15	131.15
				0.4838	16	17.40	15.20
			f(Maxo)=			19.27	19.27
			f(Ixe)=			17.40	15.20
			f(Vay)=			101.90	101.90
				0.3226	24	15.39	13.44
			f(Maxo)=			16.03	16.03
			f(Ixe)=			15.39	13.44
			f(Vay)=			70.47	70.47

Top Flange Bracing
Ly= 6.00 ft
Lt= 6.00 ft

Input items shown in blue.

Verification Calculations for Table A: Allowable Ceiling Joist Spans, ft

Maxo =	3.331 k-in	$L = (8 * \text{Maxo} / w)^{0.5} =$	19.27 ft
Ixe =	0.480 in ⁴	$L = [(384 * E * I_{xe}) / (120, 180, 240, 360) * DC * 5 * w]^{(1/3)} =$	15.20 ft
Vay =	0.305 k	$L = 2 * V_{ay} / w =$	101.90 ft
Load =	4.4838 psf	Minimum L =	<u>15.20 ft</u>
Spc =	16 in		
w =	5.978 plf		
E =	29500 ksi		
L/X, X =	360		
DC =	1.0		

Note: Maxo and Ieff determined from CFS Version 6.0.2 by RSG Software Inc. using minor axis bracing Ly=Lt= 6 feet.