

Extruded Hollow Core

8" X 48" Section

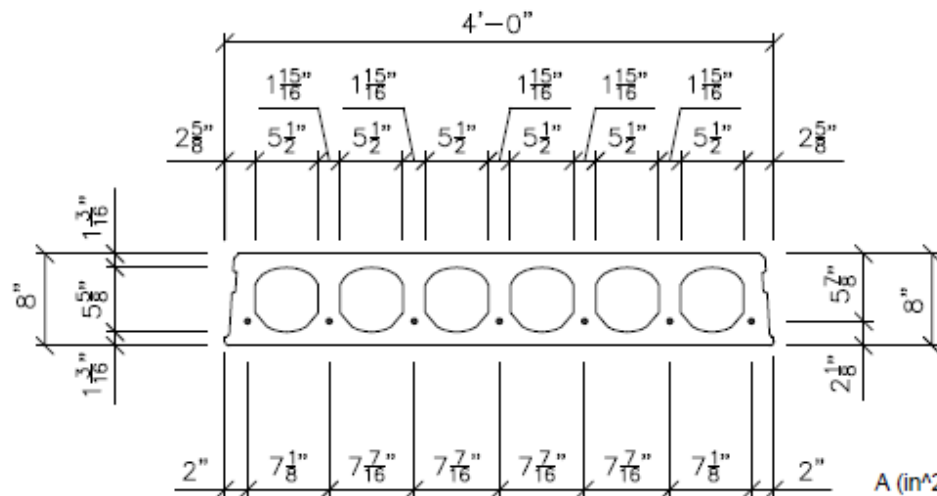
PRESTRESSED CONCRETE SLAB

Safe Load Table

UNIFORMLY DISTRIBUTED SUPERIMPOSED SERVICE LOAD IN PSF

Standard Designation	Strands No. & Size	Strand Area Sq. In.	M Ft.-Kips per Unit	ϕM_n Ft.-Kips Per Unit	Span Length (l) in Ft.																												
					15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35								
848-152	7 - 6/10	1.519	99.6	153.3	582	543	508	477	450	425	389	350	316	285	258	234	212	193	176	160	146	134	122	111	102								
848-139	5 - 6/10 & 2 - 1/2	1.391	93.3	142.3	582	543	508	477	447	399	358	322	291	263	238	215	195	177	161	146	133	121	110	100	91								
848-126	3 - 6/10 & 4 - 1/2	1.263	87.0	131.0	582	543	508	460	408	364	326	293	264	239	216	197	178	161	146	132	120	109	99	90	81								
848-107	7 - 1/2	1.071	77.6	113.4	582	508	445	392	347	309	276	247	222	200	181	164	149	135	123	111	101	91	82	73	66								
848-77	5 - 1/2	0.765	62.6	83.8	420	363	317	277	244	216	192	171	152	136	122	109	98	88	79	71	63	57	50										
848-61	4 - 1/2	0.612	55.1	68.1	333	287	249	217	190	167	147	130	115	102	91	80	71	63	56														
848-46	3 - 1/2	0.459	47.6	52.0	243	208	179	155	134	117	102	88	77	67	58	50																	

controlled by: ultimate ☐ shear ☒ service ☐



$$\begin{aligned}
 A \text{ (in}^2\text{)} &= 222.6 \text{ in}^2 & f_c &= 9000 \text{ psi} \\
 b_w \text{ (in)} &= 13.266 \text{ in} & f_{ci} &= 3500 \text{ psi} \\
 I_g \text{ (in}^4\text{)} &= 1701.04 \text{ in}^4 & f_{pu} &= 270 \text{ ksi} \\
 y_b \text{ (in)} &= 4.034 \text{ in}
 \end{aligned}$$

NOTES:

- 1) Grouted weight of structural unit is 62 psf or 248 plf based on concrete unit weight of 154 pcf.
- 2) Design is based on ACI Standard, "Building Code Requirements for Reinforced Concrete (ACI318)."
- 3) No shear reinforcement is required for the tabulated loads to the right of the heavy stepped line.
- 4) Tabulated loads are based on $U=1.2D+1.6L$ and with all load superimposed on the structural section considered as live load.
- 5) Tabulated loads in the blue area may be achieved by adding partial concrete corefill.
- 6) Tabulated loads in yellow are controlled by permissible flexural tension at service loads.
- 7) Tabulated loads in bold font have deflections in excess of $L/360$.
- 8) All strand stressed to 70% of ultimate.
- 9) For longer spans and conditions not covered in the load table, consult Molin.