

# Extruded Hollow Core

PRESTRESSED CONCRETE SLAB

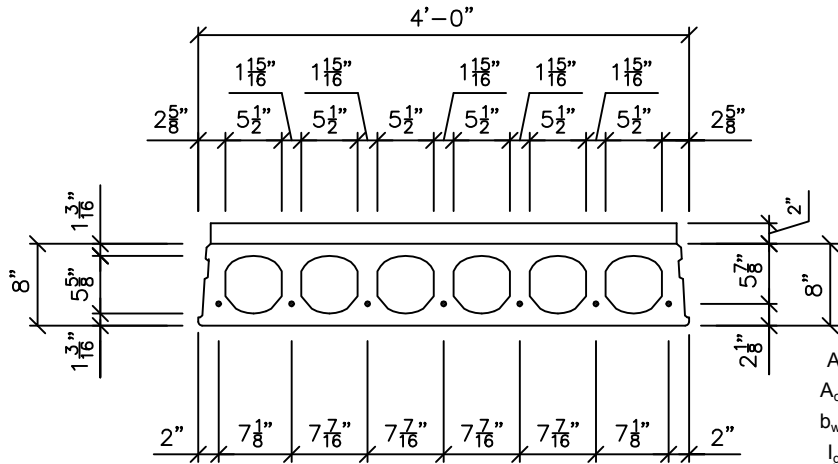
# 8" X 48" Section 2" Structural Topping

Safe Load Table

UNIFORMLY DISTRIBUTED SUPERIMPOSED SERVICE LOAD IN PSF

Standard Designation	Strands No. & Size	Strand Area Sq. In.	M Ft.-Kips per Unit	$\phi M_n$ 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
T848-152	7 - 6/10	1.519	133.6	173.4	777	725	678	604	536	477	427	383	345	312	282	256	233	212	193	176	161	146	130	116	103
T848-139	5 - 6/10 & 2 - 1/2	1.391	125.2	163.3	777	725	642	566	501	446	398	357	321	290	262	237	216	196	178	162	145	129	115	101	89
T848-126	4 - 6/10 & 3 - 1/2	1.263	116.8	152.5	777	680	595	524	464	412	368	329	296	267	241	218	197	179	162	144	128	113	99	87	75
T848-107	7 - 1/2	1.071	104.1	135.0	685	594	519	456	403	357	318	284	254	228	205	185	167	150	132	116	101	88	76	65	55
T848-77	5 - 1/2	0.765	83.9	103.1	508	439	382	333	293	258	228	202	179	159	142	126	112	99	84	71	59				
T848-61	4 - 1/2	0.612	73.9	85.3	410	352	305	265	231	202	177	156	137	121	106	93	82	72	60						
T848-46	3 - 1/2	0.459	63.8	66.2	303	259	222	191	165	142	123	106	92	79	68	58									

controlled by: ultimate  shear  service



$A = 222.6 \text{ in}^2$   
 $A_c = 281.54 \text{ in}^2$   
 $b_w = 13.266 \text{ in}$   
 $I_g = 1701.04 \text{ in}^4$   
 $I_{gc} = 2869.78 \text{ in}^4$   
 $y_b = 4.034 \text{ in}$   
 $y_{bc} = 5.074 \text{ in}$   
 $f'_c = 9000 \text{ psi}$   
 $f'_{ci} = 3500 \text{ psi}$   
 $f_{pu} = 270 \text{ ksi}$

**NOTES:**

- 1) Grouted weight of structural unit is 87 psf or 348 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.



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