

Extruded Hollow Core

PRESTRESSED CONCRETE SLAB

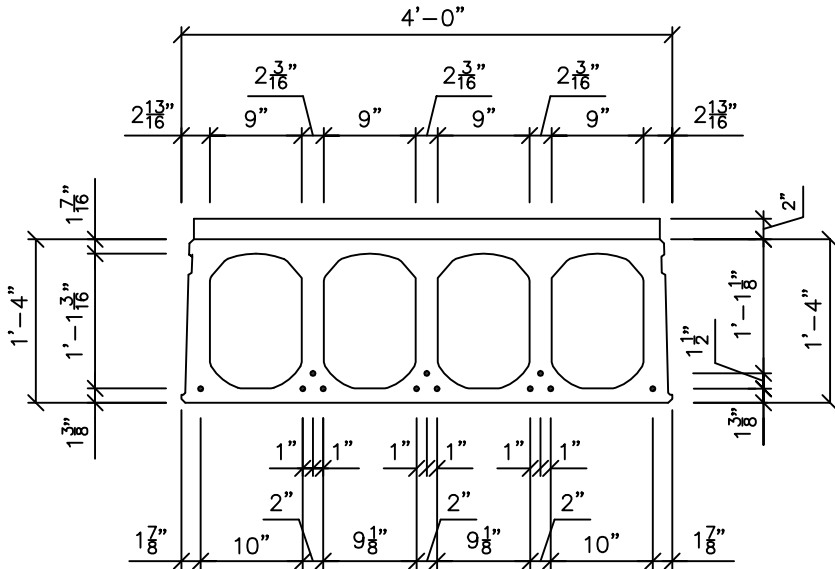
16" X 48" Light Section 2" Structural Topping

Safe Load Table

UNIFORMLY DISTRIBUTED SUPERIMPOSED SERVICE LOAD IN PSF

Standard Designation	Strands No. & Size	Strand Area Sq. In.	M Ft.-Kips per Unit	ϕM_n Ft.-Kips Per Unit	Span Length (l) in Ft.																																			
					30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65
T1648-239	11 - 6/10	2.387	454.2	583.9	419	403	388	373	359	346	334	323	312	302	292	282	273	265	257	249	242	235	225	212	200	189	178	168	159	150	141	133	125	118	110	102	94	86	79	72
T1648-226	9 - 6/10 & 2 - 1/2	2.259	434.5	559.4	417	400	385	370	357	344	332	320	310	299	290	280	271	263	255	247	239	225	212	200	188	177	167	157	148	140	131	124	116	107	99	91	83	76	70	63
T1648-213	7 - 6/10 & 4 - 1/2	2.131	417.7	538.0	416	400	385	370	357	344	332	320	309	299	289	280	271	263	255	241	226	213	200	189	177	167	157	148	139	131	123	114	106	97	89	82	75	68	61	55
T1648-179	4 - 6/10 & 6 - 1/2	1.786	369.5	472.3	409	393	378	364	350	338	326	314	304	294	277	260	243	228	213	200	188	176	165	154	145	135	127	119	111	102	93	85	77	70	63	56	50			
T1648-148	4 - 6/10 & 4 - 1/2	1.480	329.3	412.3	403	387	372	358	345	329	306	285	265	247	231	215	201	187	175	163	152	142	132	123	115	107	99	92	83	75	67	60	53							
T1648-117	4 - 6/10 & 2 - 1/2	1.174	282.2	338.0	378	348	321	297	274	253	235	217	201	186	173	160	148	137	127	117	108	100	92	84	78	71	65	58	51											
T1648-77	5 - 1/2	0.765	219.2	230.2	228	208	189	173	157	143	130	119	108	98	88	80	72	64	57	51																				

controlled by: ultimate shear service



$A = 351.9 \text{ in}^2$ $f'_c = 9000 \text{ psi}$
 $A_c = 410.844 \text{ in}^2$ $f'_{ci} = 3500 \text{ psi}$
 $b_w = 11.234 \text{ in}$ $f'_{ct} = 3000 \text{ psi}$
 $I_g = 11581.1 \text{ in}^4$ $f_{pu} = 270 \text{ ksi}$
 $I_{gc} = 15765.7 \text{ in}^4$
 $y_b = 7.917 \text{ in}$
 $y_{bc} = 9.220 \text{ in}$

NOTES:

- 1) Grouted weight of topped structural unit is 124 psf or 496 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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