

Composite Design Safe Load Table



See instructions on back side of sheet for using this table.

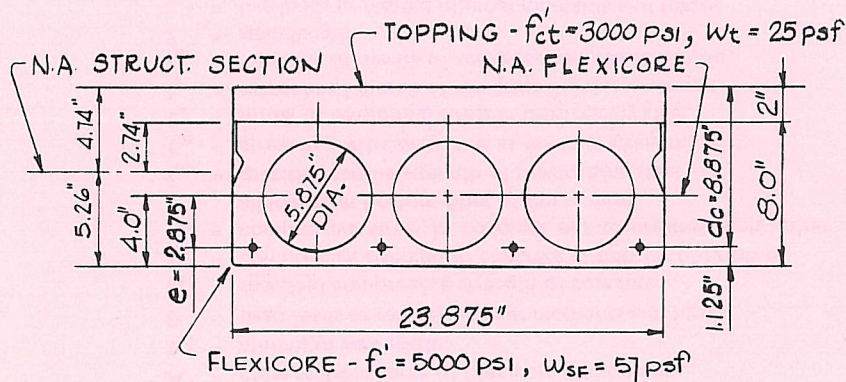
**8" x 24" SECTION PLUS
2" STRUCTURAL TOPPING**

UNIFORMLY DISTRIBUTED SUPERIMPOSED* LOAD IN PSF

Standard Designation	Strands No. & Size	Strand Area Sq. In.	M in Ft.-Kips per Unit	ϕM_n in 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
T824B-D50	2-1/2 & 2-7/16	0.504	48.77	70.94	487	452	422	394	370	348	311	277	248	222	198	174	153	134	117	102	88	76	65
T824B-D43	4-7/16	0.432	43.28	62.32	485	450	420	385	339	299	265	235	210	186	162	142	123	106	91	78	66	55	44
T824B-D38	2-7/16 & 2-3/8	0.376	39.02	55.29	473	439	383	334	293	258	227	201	178	156	135	116	100	85	71	59	48		
T824B-D32	4-3/8	0.320	34.76	47.94	434	373	323	280	245	214	188	165	146	127	108	91	76	63	51	40			
T824B-D29	2-1/2	0.288	32.32	43.59	378	333	287	249	216	189	165	144	126	110	92	77	63	50					
T824B-D26	2-3/8 & 2-5/16	0.276	31.41	41.34	371	318	274	237	206	179	156	136	119	104	86	71	58	46					

*TABULATED LOADS ARE BASED ON $U = 1.4D + 1.7L$ AND WITH ALL LOAD SUPERIMPOSED ON THE STRUCTURAL SECTION CONSIDERED AS LIVE LOAD. (ALSO SEE NOTE 6)

PHYSICAL PROPERTIES OF STRUCTURAL SECTION AND SPECIFICATIONS



$A = 109.7 \text{ in.}^2$ $I_g = 843.2 \text{ in.}^4$ $f'_c = 5000 \text{ psi}$ $f_{pu} = 250 \text{ ksi}$
 $b_w = 6.25 \text{ in.}$ $I_{gc} = 1547.1 \text{ in.}^4$ $f'_{ci} = 3500 \text{ psi}$ $f_{si} = 175 \text{ ksi}$

NOTES:

1. Grouted weight of structural unit is 82 psf or 164 plf based on concrete unit weight of 150 pcf.
2. Design is based on ACI Standard, "Building Code Requirements for Reinforced Concrete (ACI 318-77)."
3. For spans in shaded area consult your local manufacturer.
4. No shear reinforcement is required for the tabulated loads.
5. Tabulated loads to the left of solid stepped line are controlled by shear strength of the concrete. Shear reinforcement may be added to increase the safe loads.
6. Tabulated loads to the right of dashed stepped line are controlled by permissible flexural tension at service loads.
7. Tabulated load in italics is controlled by bond.
8. For longer spans and conditions not covered in the load table, consult your local manufacturer.