

DOUBLE TEE

TYPE "A" LOAD TABLE

8DT 16

Table of safe superimposed live load (psf)

Normal Weight Concrete No Topping 8'-0" x 16" Double Tee

Strand Pattern	Span, ft																				
	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	
28-S	91*	69*	52*	39*	29*																
48-S			99*	79*	64*	51*	40*	32*	24*												
68-S				107*	87*	71*	59*	48*	39*	31*	25*										
68-D1							100*	84*	71*	60*	51*	43*	36*	30*	25*						
88-D1											73*	63*	54*	46*	40*	34*	29*	24			
108-D1																40	34	29	24		
Dead Load	f_t	124	150	179	210	244	280	319	360	403	449	498	549	603	659	717	778	842	908	977	1048
	f_b	-365	-441	-526	-617	-715	-821	-935	-1055	-1183	-1318	-1461	-1610	-1767	-1932	-2104	-2283	-2469	-2662	-2863	-3072
100 plf Live Load	f_t	36	44	53	62	72	82	94	106	119	132	147	162	178	194	212	230	248	268	288	309
	f_b	-107	-130	-155	-182	-211	-242	-276	-311	-349	-389	-431	-475	-522	-570	-621	-674	-729	-786	-845	-907
	a	0.051	0.075	0.106	0.146	0.197	0.259	0.336	0.428	0.538	0.668	0.820	0.996	1.200	1.433	1.699	2.001	2.341	2.722	3.148	3.623
	a	0.013	0.019	0.026	0.036	0.049	0.064	0.083	0.106	0.133	0.165	0.203	0.246	0.297	0.354	0.420	0.494	0.578	0.673	0.778	0.895

*Capacity governed by ultimate strength

Values below heavy line require release strengths higher than 3500 psi

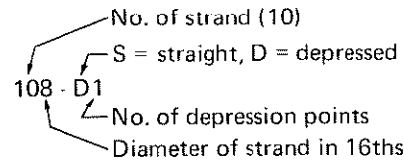
$f'_c = 5000$ psi

$f_{pu} = 270,000$ psi

Notation

- f_t = top fiber stress, psi (after assumed 22% loss)
- f_b = bottom fiber stress, psi (after assumed 22% loss)
- a = center deflection, in.
- $0.001 l^2 \alpha$ = initial center camber, in. (after assumed 10% loss)
- l = span (ft)
- M_U = ult. moment capacity, in.-kips

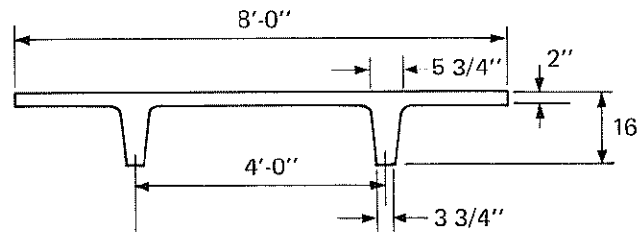
Strand Pattern Designation



Section Properties

- A = 325 in.²
- I = 6634 in.⁴
- y_b = 11.93 in.
- y_t = 4.07 in.
- Z_b = 556 in.³
- Z_t = 1630 in.³
- wt = 339 plf
- 42 psf

Strand Pattern	Eccentricity in.		Prestress alone					M_U
			end		center		α	
	end	ctr	f_t	f_b	f_t	f_b		
28-S	9.93	9.93	-136	944	-136	944	0.391	1028
48-S	6.93	6.93	-106	1402	-106	1402	0.546	1582
68-S	5.26	5.26	-20	1698	-20	1698	0.622	1961
68-D1	5.26	9.43	-20	1698	-366	2713	0.951	281 /
88-D1	3.43	9.18	175	1669	-461	3536	1.145	3526
108-D1	2.73	8.93	316	1802	-542	4318	1.352	4208



Normal Weight Concrete
No Topping
8'-0" x 16" Double Tee

8DT 16