

DOUBLE TEE

TYPE "A" LOAD TABLE

8LDT 20+2

Table of safe superimposed live load (psf)

Lightweight Concrete

2" Normal Weight Topping

8'-0" x 20" Double Tee

Strand Pattern	Span, ft																	
	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56
48-S	196*	157*	126*	102*	82*	66*	52*	41*	32*	24*								
68-S			193*	160*	133*	110*	92*	76*	63*	52*	43*	34*	27*					
88-S			178*	149*	124*	104*	88*	73*	61*	51*	41*	31*						
68-D1			208*	175*	148*	125*	106*	90*	76*	64*	54*	45*	37*	30*	24			
88-D1									110*	95*	82*	70*	60*	52*	43	34	27	

Dead Load	Span, ft																	
	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56
f_t	153	182	214	248	285	324	366	410	457	506	558	613	670	729	791	856	923	993
f_b	-413	-492	-577	-669	-768	-874	-987	-1107	-1233	-1366	-1506	-1653	-1807	-1968	-2135	-2309	-2490	-2678
a	0.080	0.113	0.156	0.209	0.276	0.357	0.455	0.572	0.710	0.872	1.059	1.276	1.524	1.807	2.128	2.489	2.895	3.348

100 plf Live Load	Span, ft																	
	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56
f_t	11	14	16	19	22	25	28	31	35	39	43	47	51	56	61	66	71	76
f_b	-67	-80	-94	-109	-125	-143	-161	-181	-201	-223	-246	-270	-295	-321	-349	-377	-407	-438
a	0.010	0.014	0.020	0.026	0.035	0.045	0.057	0.072	0.089	0.110	0.133	0.160	0.192	0.227	0.267	0.313	0.364	0.421

*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 25% loss) (precast section)

f_b = bottom fiber stress, psi (after assumed 25% loss)

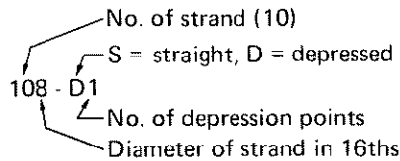
a = center deflection, in.

$0.001 l^2 \alpha$ = initial center camber, in. (after assumed 10% loss)

l = span (ft)

M_u = ult. moment capacity, in.-kips

Strand Pattern Designation

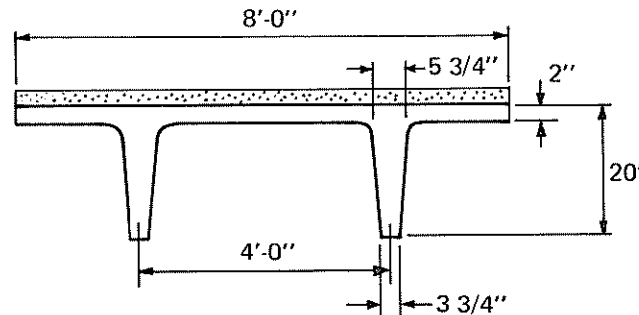


Section Properties

- I = 18,278 in.⁴
- Y_b = 17.02 in.
- Y_t = 4.98 in.
- Z_b = 1074 in.³
- Z_t = 3670 in.³
- wt = 490 plf
- 61 psf

See preceding page for untopped section properties.

Strand Pattern	Eccentricity in.		Prestress alone					M_u
			end		center		α	
	end	ctr	f_t	f_b	f_t	f_b		
48-S	9.59	9.59	-119	1206	-119	1206	0.595	2438
68-S	8.59	8.59	-123	1658	-123	1658	0.800	3368
88-S	6.09	6.09	22	1707	22	1707	0.756	3662
68-D1	8.59	12.09	-123	1658	-319	2188	1.017	4148
88-D1	6.09	11.84	22	1707	-407	2867	1.231	5237



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