

DOUBLE TEE

TYPE "A" LOAD TABLE

10DT 32+2

Table of safe superimposed live load (psf)

Normal Weight Concrete

2" Normal Weight Topping

10'-0" x 32" Double Tee

Strand Pattern	Span, ft																							
	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80	82	
88-S	132*	112*	95*	80*	67*	55*	45*	36*	28*															
108-S	172*	148*	128*	110*	94*	81*	68*	58*	48*	40*	32*	25*												
128-S	184*	160*	139*	121*	105*	91*	79*	68*	58*	49*	41*	33*	27*											
148-S	200*	175*	153*	133*	116*	101*	88*	76*	66*	56*	48*	40*	32	24										
128-D1				191*	168*	149*	131*	116*	102*	90*	79*	69*	60*	51*	44*	37*	31*	24						
148-D1					201*	179*	159*	141*	126*	112*	99*	88*	77*	68*	60*	52*	45*	37	30					
168-D1						206*	184*	165*	147*	132*	118*	105*	94*	84*	74*	66*	58	49	41	33	26			
188-D1											136*	122*	110*	98*	88*	79*	70	60	52	44	36	29		
208-D1																91*	81	71	62	53	45	38	31	
Dead Load	f_t	323	358	395	433	474	516	560	606	653	702	754	806	861	918	976	1036	1098	1161	1227	1294	1363	1434	1507
	f_b	-710	-786	-867	-951	-1040	-1132	-1229	-1329	-1433	-1541	-1654	-1770	-1890	-2013	-2141	-2273	-2409	-2548	-2692	-2840	-2991	-3146	-3306
100 plf Live Load	a	0.186	0.229	0.278	0.335	0.400	0.474	0.558	0.653	0.759	0.878	1.010	1.157	1.319	1.498	1.694	1.909	2.143	2.399	2.677	2.978	3.304	3.656	4.036
	f_t	20	23	25	28	30	33	36	39	42	45	48	52	55	59	63	67	71	75	79	83	88	92	97
	f_b	-68	-76	-84	-92	-100	-109	-119	-129	-139	-149	-160	-171	-183	-195	-207	-220	-233	-247	-261	-275	-290	-305	-320
	a	0.014	0.017	0.021	0.026	0.030	0.036	0.043	0.050	0.058	0.067	0.077	0.088	0.101	0.114	0.129	0.146	0.163	0.183	0.204	0.227	0.252	0.279	0.308

*Capacity governed by ultimate strength

Values below heavy line require release strengths higher than 3500 psi

$f'_c = 5000$ psi

$f_{cu} = 270,000$ psi

Notation

f_t = top fiber stress, psi (after assumed 22% loss) (precast section)

f_b = bottom fiber stress, psi (after assumed 22% loss)

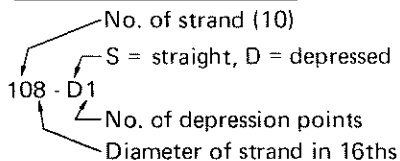
a = center deflection, in.

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

l = span (ft)

M_u = ult. moment capacity, in.-kips

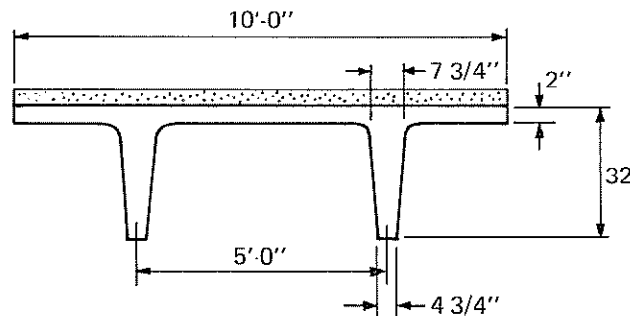
Strand Pattern Designation



Section Properties

- $I = 77,118 \text{ in.}^4$
- $Y_b = 24.54 \text{ in.}$
- $Y_t = 9.46 \text{ in.}$
- $Z_b = 3143 \text{ in.}^3$
- $Z_t = 8152 \text{ in.}^3$
- $wt = 891 \text{ plf}$
- 89 psf

See preceding page for untopped section properties.



Normal Weight Concrete
2" Normal Weight Topping
10'-0" x 32" Double Tee

10DT 32+2

Strand Pattern	Eccentricity in.		Prestress alone				α	M_u
			end		center			
	end	ctr	f_t	f_b	f_t	f_b		
88-S	14.48	14.48	-145	1255	-145	1255	0.254	7595
108-S	13.58	13.58	-147	1495	-147	1495	0.297	9070
128-S	12.98	12.98	-149	1734	-149	1734	0.341	10,510
148-S	11.12	11.12	-75	1807	-75	1807	0.341	11,175
128-D1	12.98	18.73	-149	1734	-410	2307	0.442	13,074
148-D1	11.12	18.48	-75	1807	-465	2662	0.491	14,827
168-D1	9.23	18.23	27	1813	-517	3010	0.533	16,442
188-D1	7.76	17.98	131	1820	-564	3349	0.574	17,991
208-D1	6.38	17.73	250	1793	-608	3679	0.610	19,445