

DOUBLE TEE

TYPE "A" LOAD TABLE

10LDT 32

Table of safe superimposed live load (psf)

Lightweight Concrete

No Topping

10'-0" x 32" Double Tee

Strand Pattern	Span, ft																							
	54	56	58	60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92	94	96	98	
88-S	55*	48*	42*	37*	32*																			
108-S	73*	65*	58*	52*	46*	40*	36*	31*																
128-S	92*	83*	74*	67*	60*	54*	48*	43*	38*	34*	30*													
148-S	100*	90*	81*	73*	66*	59*	53*	48*	43*	38*	34*													
128-D1			104*	94*	86*	78*	71*	64*	58*	53*	48*	43*	39*	35*	32*	28*								
148-D1					103*	94*	86*	79*	72*	66*	60*	55*	50*	45*	41*	37	33	29						
168-D1						109*	100*	92*	84*	78*	71*	65*	59	54	49	44	40	36	32	29				
188-D1								104	96	88	80	74	67	62	56	51	47	42	38	35	31	28		
208-D1										82	75	69	63	58	53	48	44	40	36	33	29			
Dead Load	f_t	360	387	415	444	475	506	538	571	605	640	676	713	752	791	831	872	914	957	1001	1046	1092	1139	1187
	f_b	-790	-850	-912	-976	-1042	-1110	-1181	-1253	-1328	-1405	-1484	-1566	-1649	-1735	-1823	-1913	-2005	-2099	-2196	-2295	-2395	-2498	-2604
	a	0.654	0.756	0.870	0.996	1.136	1.289	1.458	1.643	1.845	2.065	2.305	2.564	2.845	3.148	3.475	3.826	4.204	4.609	5.043	5.506	6.001	6.528	7.089
100 plf Live Load	f_t	73	78	84	90	96	103	109	116	123	130	137	145	153	161	169	177	186	194	203	213	222	231	241
	f_b	-160	-173	-185	-198	-212	-226	-240	-255	-270	-286	-302	-318	-335	-353	-371	-389	-408	-427	-447	-467	-487	-508	-530
	a	0.111	0.129	0.148	0.170	0.193	0.220	0.248	0.280	0.314	0.352	0.393	0.437	0.485	0.536	0.592	0.652	0.716	0.785	0.859	0.938	1.022	1.112	1.208

*Capacity governed by ultimate strength

Values below heavy line require release strengths higher than 3500 psi

$f_c = 5000$ psi

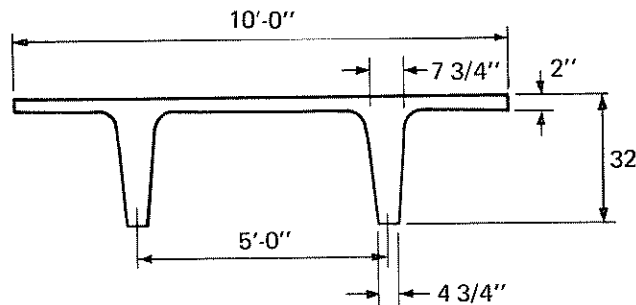
$f_{pu} = 270,000$ psi

Notation

- f_t = top fiber stress, psi (after assumed 25% loss)
- 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

- No. of strand (10)
- S = straight, D = depressed
- No. of depression points
- Diameter of strand in 16ths



Section Properties

- A = 615 in.²
- I = 59,720 in.⁴
- Y_b = 21.98 in.
- Y_t = 10.02 in.
- Z_b = 2717 in.³
- Z_t = 5960 in.³
- wt = 491 plf
- 49 psf

Lightweight Concrete
No Topping
10'-0" x 32" Double Tee

10LDT 32

Strand Pattern	Eccentricity in.		Prestress alone					M_U
			end		center		α	
	end	ctr	f_t	f_b	f_t	f_b		
88-S	14.48	14.48	-139	1207	-139	1207	0.378	7115
108-S	13.58	13.58	-141	1437	-141	1437	0.443	8505
128-S	12.98	12.98	-143	1667	-143	1667	0.508	9874
148-S	11.12	11.12	-72	1737	-72	1737	0.508	10,478
128-D1	12.98	18.73	-143	1667	-394	2218	0.658	12,423
148-D1	11.12	18.48	-72	1737	-448	2560	0.732	14,105
168-D1	9.23	18.23	26	1744	-497	2894	0.794	15,672
188-D1	7.76	17.98	126	1750	-543	3220	0.855	17,187
208-D1	6.38	17.73	241	1724	-585	3538	0.909	18,618