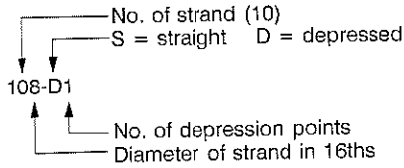


Strand Pattern Designation



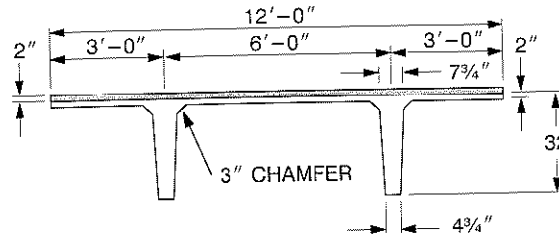
Safe loads shown include dead load of 10 psf for untopped members and 15 psf for topped members. Remainder is live load. Long-time cambers include superimposed dead load but do not include live load.

Key

- 177 — Safe superimposed service load, psf
- 1.2 — Estimated camber at erection, in.
- 1.6 — Estimated long-time camber, in.

DOUBLE TEE

12'-0" x 32"
Lightweight Concrete



Section Properties

	Untopped	Topped
A	= 690 in ²	—
I	= 64,620 in ⁴	88,305 in ⁴
y _b	= 22.75 in.	26.08 in.
y _t	= 9.25 in.	7.92 in.
S _b	= 2,840 in ³	3,386 in ³
S _t	= 6,986 in ³	11,150 in ³
wt	= 551 plf	851 plf
	46 psf	71 psf
V/S	= 1.70 in.	

f'_c = 5,000 psi
f_{pu} = 270,000 psi

12LDT32

Table of safe superimposed service load (psf) and cambers (in.)

No Topping

Strand Pattern	e _s , in. e _c , in.	Span, ft																											
		40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80	82	84					
108-D1	12.75	177	157	140	125	112	100	90	80	72	65	58	52	46	41	37	32	29	25										
	19.75	1.2	1.3	1.4	1.5	1.5	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.5	1.4	1.2										
128-D1	11.08		191	171	153	138	124	112	101	91	82	74	67	61	55	50	45	40	36	32	29	25							
	19.50		1.5	1.7	1.7	1.9	2.0	2.0	2.1	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.2	2.1	2.0	1.8	1.7	1.5							
148-D1	9.89			181	163	147	133	121	110	100	91	82	75	68	62	57	51	47	42	38	34	31	28						
	19.25			2.0	2.1	2.2	2.3	2.5	2.6	2.7	2.7	2.8	2.9	2.9	2.9	2.9	2.8	2.8	2.7	2.6	2.5	2.4	2.2	2.0					
168-D1	9.75									117	107	98	90	82	75	69	63	58	53	48	44	40	36						
	19.00									3.1	3.2	3.3	3.4	3.5	3.5	3.6	3.6	3.6	3.6	3.5	3.4	3.2	3.1						
188-D1	8.36																	87	80	73	67	62	57	52	48	44			
	18.75																	3.9	4.0	4.0	4.1	4.1	4.1	4.1	4.0	3.9			
208-D1	7.25																									65	60	55	51
	18.50																									4.6	4.6	4.5	4.5

12LDT32+2

Table of safe superimposed service load (psf) and cambers (in.)

2" Normal Weight Topping

Strand Pattern	e _s , in. e _c , in.	Span, ft																												
		40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80	82	84						
108-D1	12.75			189	166	146	128	112	99	87	76	67	58	51	43	37	31	26												
	19.75			1.4	1.5	1.5	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.5	1.4												
128-D1	11.08				196	173	153	135	119	105	92	81	71	62	54	47	41	35	29											
	19.50				1.7	1.9	2.0	2.0	2.1	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.2	2.1	2.0											
148-D1	9.89					199	177	158	140	125	111	98	87	76	67	58	50	43	37	32	27									
	19.25					2.1	2.2	2.3	2.5	2.6	2.7	2.7	2.8	2.9	2.9	2.9	2.8	2.8	2.7	2.6	2.5									
168-D1	9.75										130	116	103	92	81	72	63	55	48	41	35	29								
	19.00										3.1	3.2	3.3	3.4	3.5	3.5	3.6	3.6	3.6	3.6	3.5	3.4								
188-D1	8.36																		84	74	66	58	51	44	38	32	26			
	18.75																		3.9	4.0	4.0	4.1	4.1	4.1	4.1	4.0	3.9			
208-D1	7.25																										53	46	40	34
	18.50																										4.6	4.6	4.5	4.5

Strength based on strain compatibility; bottom tension limited to 12√f'_c; see pages 2-2-2-6 for explanation. Shaded values require release strengths higher than 3500 psi.