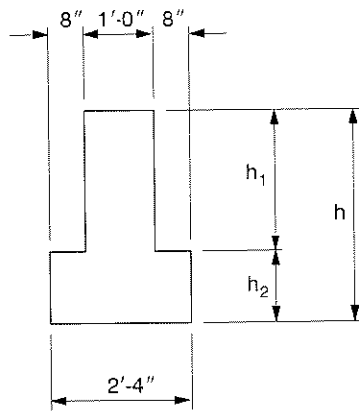


INVERTED TEE BEAMS

Normal Weight Concrete



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

1/2 in. diameter
 low-relaxation strand

Section Properties								
Designation	h in.	h_1/h_2 in.	A in ²	I in ⁴	y_b in.	S_b in ³	S_t in ³	wt plf
28IT20	20	12/8	368	11,688	7.91	1,478	967	383
28IT24	24	12/12	480	20,275	9.60	2,112	1,408	500
28IT28	28	16/12	528	32,076	11.09	2,892	1,897	550
28IT32	32	20/12	576	47,872	12.67	3,778	2,477	600
28IT36	36	24/12	624	68,101	14.31	4,759	3,140	650
28IT40	40	24/16	736	93,503	15.83	5,907	3,869	767
28IT44	44	28/16	784	124,437	17.43	7,139	4,683	817
28IT48	48	32/16	832	161,424	19.08	8,460	5,582	867
28IT52	52	36/16	880	204,884	20.76	9,869	6,558	917
28IT56	56	40/16	928	255,229	22.48	11,354	7,614	967
28IT60	60	44/16	976	312,866	24.23	12,912	8,747	1,017

1. Check local area for availability of other sizes.
2. Safe loads shown include 50% superimposed dead load and 50% live load. 800 psi top tension has been allowed, therefore additional top reinforcement is required.
3. Safe loads can be significantly increased by use of structural composite topping.

Key

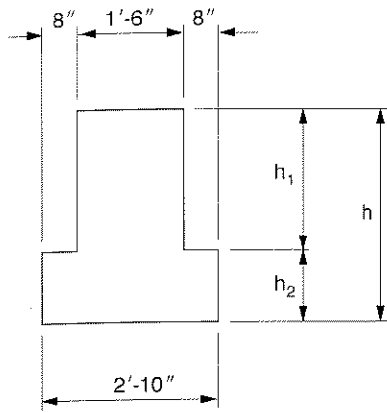
- 6,929 — Safe superimposed service load, plf
- 0.3 — Estimated camber at erection, in.
- 0.1 — Estimated long-time camber, in.

Table of safe superimposed service load (plf) and cambers

Designation	No. Strand	e	Span, ft																		
			16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	
28IT20	9	5.82	6929	5402	4310	3502	2887	2409	2029	1723	1473	1265	1091								
			0.3	0.3	0.4	0.4	0.5	0.6	0.6	0.7	0.7	0.8	0.8								
			0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	-0.1	-0.1							
28IT24	11	6.77	9714	7580	6054	4925	4066	3398	2868	2440	2090	1799	1556	1351	1175	1024					
			0.2	0.3	0.3	0.4	0.4	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.8						
			0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	-0.1	-0.2				
28IT28	13	8.44			8505	6951	5768	4848	4118	3529	3047	2648	2313	2030	1788	1579	1399	1242	1103	981	
					0.3	0.4	0.5	0.5	0.6	0.7	0.7	0.8	0.9	0.9	1.0	1.0	1.1	1.1	1.1	1.1	1.1
					0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0
28IT32	15	9.17				9202	7646	6435	5474	4698	4064	3538	3097	2724	2406	2132	1894	1687	1505	1345	
						0.3	0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.9	0.9	0.9	0.9	0.9
						0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
28IT36	16	10.81					8485	7236	6227	5402	4718	4145	3660	3246	2890	2581	2311	2075	1866		
							0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.9	0.9	0.9	0.9	
							0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	-0.1
28IT40	19	11.28						8615	7415	6433	5620	4938	4361	3868	3444	3077	2756	2475	2226		
							0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.9	
							0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
28IT44	20	12.89							9308	8092	7083	6239	5524	4913	4368	3932	3535	3186	2879		
							0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.7	0.7	0.8	0.8	0.8	0.8	
							0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
28IT48	22	14.16								9741	8539	7532	6680	5952	5326	4783	4310	3894	3528		
							0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8		
							0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
28IT52	24	15.44									8935	7934	7080	6345	5707	5151	4664	4233			
							0.5	0.5	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8		
							0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
28IT56	26	16.74										9284	8294	7442	6703	6059	5493	4994			
							0.5	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8		
							0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
28IT60	28	18.04												9590	8613	7766	7027	6379	5807		
							0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8		
							0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

INVERTED TEE BEAMS

Normal Weight Concrete



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

1/2 in. diameter
 low-relaxation strand

Key

- 8,164 — Safe superimposed service load, plf
- 0.4 — Estimated camber at erection, in.
- 0.1 — Estimated long-time camber, in.

Section Properties								
Designation	h in.	h ₁ /h ₂ in.	A in ²	I in ⁴	y _b in.	S _b in ³	S _t in ³	wt plf
34IT20	20	12/8	488	16,082	8.43	1,908	1,390	508
34IT24	24	12/12	624	27,825	10.15	2,741	2,009	650
34IT28	28	16/12	696	44,130	11.79	3,743	2,722	725
34IT32	32	20/12	768	65,856	13.50	4,878	3,560	800
34IT36	36	24/12	840	93,616	15.26	6,136	4,513	875
34IT40	40	24/16	976	128,656	16.85	7,635	5,558	1,017
34IT44	44	28/16	1,048	171,157	18.58	9,212	6,733	1,092
34IT48	48	32/16	1,120	221,906	20.34	10,910	8,023	1,167
34IT52	52	36/16	1,192	281,504	22.13	12,721	9,424	1,242
34IT56	56	40/16	1,264	350,546	23.95	14,637	10,938	1,317
34IT60	60	44/16	1,336	429,623	25.78	16,662	12,556	1,392

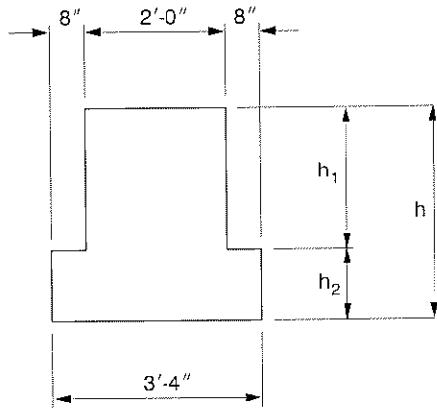
1. Check local area for availability of other sizes.
2. Safe loads shown include 50% superimposed dead load and 50% live load. 800 psi top tension has been allowed, therefore additional top reinforcement is required.
3. Safe loads can be significantly increased by use of structural composite topping.

Table of safe superimposed service load (plf) and cambers

Designation	No. Strand	e	Span, ft																	
			18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	
34IT20	14	9.48	8164	6525	5313	4391	3674	3104	2645	2269	1958	1697	1476	1287	1125	984				
			0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.0	1.1	1.2	1.2	1.3	1.3	1.3				
			0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.0			
34IT24	17	7.32	9171	7478	6190	5187	4392	3750	3225	2790	2425	2116	1853	1626	1429	1258	1107	974		
			0.4	0.5	0.6	0.6	0.7	0.8	0.9	0.9	1.0	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	
			0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0	-0.1	
34IT28	20	8.63	8675	7295	6200	5316	4593	3994	3492	3067	2704	2392	2121	1885	1678	1495				
			0.5	0.6	0.7	0.7	0.8	0.9	1.0	1.0	1.1	1.1	1.2	1.2	1.2	1.3	1.3			
			0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1
34IT32	23	10.00	9743	8301	7138	6186	5397	4736	4177	3699	3288	2932	2621	2348	2107					
			0.5	0.6	0.7	0.7	0.8	0.9	1.0	1.0	1.1	1.1	1.2	1.2	1.2	1.3	1.3			
			0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2
34IT36	24	12.32	9477	8239	7207	6340	5605	4978	4439	3971	3563	3205	2892							
			0.7	0.7	0.8	0.9	1.0	1.0	1.1	1.1	1.2	1.3	1.3	1.4						
			0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
34IT40	30	12.30	9771	8550	7527	6662	5923	5287	4735	4254	3832	3460								
			0.6	0.7	0.8	0.8	0.9	1.0	1.0	1.1	1.1	1.2	1.2	1.2						
			0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4						
34IT44	30	14.04	9478	8406	7490	6702	6019	5423	4900	4439										
			0.7	0.7	0.8	0.9	0.9	1.0	1.0	1.1	1.1	1.2	1.2	1.2						
			0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2						
34IT48	33	15.42	9049	8110	7295	6585	5962	5412												
			0.8	0.8	0.9	0.9	1.0	1.0	1.1	1.1	1.2	1.2	1.2	1.2						
			0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3						
34IT52	36	16.81	9637	8691	7848	7116	6470													
			0.8	0.9	0.9	1.0	1.0	1.1	1.1	1.2	1.2	1.2	1.2	1.2						
			0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3						
34IT56	39	18.21	9208	8360	7611															
			0.9	0.9	1.0															
			0.3	0.3	0.3															
34IT60	42	19.59	9689	8831																
			0.8	0.9																
			0.2	0.2																

INVERTED TEE BEAMS

Normal Weight Concrete



$f'_c = 5,000$ psi
 $f_{pu} = 270,000$ psi
 1/2 in. diameter
 low-relaxation strand

Key

8,741 — Safe superimposed service load, plf
 0.5 — Estimated camber at erection, in.
 0.2 — Estimated long-time camber, in.

Section Properties								
Designation	h in.	h_1/h_2 in.	A in ²	I in ⁴	y_b in.	S_b in ³	S_t in ³	wt plf
40IT20	20	12/8	608	20,321	8.74	2,325	1,805	633
40IT24	24	12/12	768	35,136	10.50	3,346	2,603	800
40IT28	28	16/12	864	55,765	12.22	4,563	3,534	900
40IT32	32	20/12	960	83,200	14.00	5,943	4,622	1,000
40IT36	36	24/12	1,056	118,237	15.82	7,474	5,859	1,100
40IT40	40	24/16	1,216	162,564	17.47	9,305	7,215	1,267
40IT44	44	28/16	1,312	216,215	19.27	11,220	8,743	1,367
40IT48	48	32/16	1,408	280,266	21.09	13,289	10,415	1,467
40IT52	52	36/16	1,504	355,503	22.94	15,497	12,233	1,567

1. Check local area for availability of other sizes.
2. Safe loads shown include 50% superimposed dead load and 50% live load. 800 psi top tension has been allowed, therefore additional top reinforcement is required.
3. Safe loads can be significantly increased by use of structural composite topping.

Table of safe superimposed service load (plf) and cambers

Designation	No. Strand	e	Span, ft																
			20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	
40IT20	18	6.65	8741	7124	5895	4938	4179	3567	3066	2650	2302	2008	1756	1538	1349	1184	1039		
			0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.4	1.5	1.5	1.5	1.5		
			0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.0	0.1	
40IT24	22	7.67			8313	6976	5916	5060	4360	3780	3293	2882	2530	2228	1966	1737	1536	1359	
					0.6	0.7	0.8	0.9	1.0	1.0	1.1	1.2	1.3	1.3	1.4	1.4	1.4	1.4	
					0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.0
40IT28	26	9.06				9787	8327	7149	6185	5386	4716	4149	3666	3249	2888	2573	2297	2053	
						0.6	0.7	0.8	0.9	1.0	1.0	1.1	1.1	1.2	1.3	1.3	1.4	1.5	1.5
						0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
40IT32	30	10.50					9577	8308	7256	6375	5629	4992	4444	3969	3555	3191	2870		
							0.7	0.8	0.9	1.0	1.1	1.1	1.2	1.3	1.4	1.4	1.4	1.5	
							0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3
40IT36	32	12.32						9610	8453	7474	6638	5918	5295	4751	4276	3860			
							0.8	0.9	1.0	1.0	1.1	1.1	1.2	1.3	1.3	1.3	1.4		
							0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	
40IT40	38	12.92							8963	7977	7129	6394	5753	5190	4694				
									0.9	1.0	1.0	1.1	1.1	1.2	1.2	1.3			
									0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4		
40IT44	40	14.73										9016	8106	7311	6614	5999			
													1.0	1.0	1.1	1.2	1.2		
													0.3	0.3	0.3	0.3	0.3		
40IT48	44	16.17												9808	8861	8030	7296		
															1.0	1.0	1.1	1.2	
															0.3	0.3	0.3	0.4	
40IT52	48	17.62														9537	8666		
																	1.0	1.1	
																	0.3	0.3	