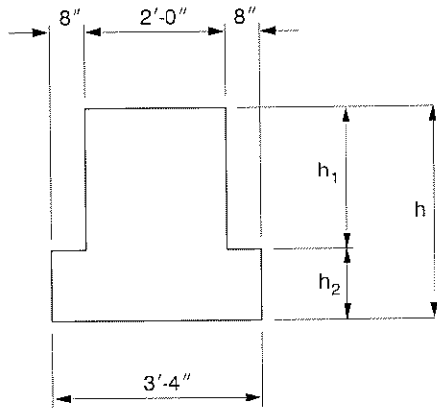


INVERTED TEE BEAMS

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	