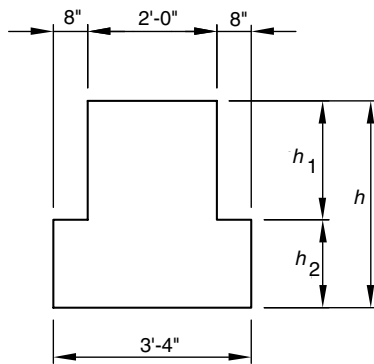


3.11 Inverted-Tee Beam Load Tables (cont.)

Normalweight Concrete



Designation	Section Properties							
	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 lb/ft
40IT20	20	12/8	608	20,321	8.74	2325	1805	633
40IT24	24	12/12	768	35,136	10.50	3346	2603	800
40IT28	28	16/12	864	55,765	12.22	4563	3534	900
40IT32	32	20/12	960	83,200	14.00	5943	4622	1000
40IT36	36	24/12	1056	118,237	15.82	7474	5859	1000
40IT40	40	24/16	1216	162,564	17.47	9305	7215	1267
40IT44	44	28/16	1312	216,215	19.27	11,220	8743	1367
40IT48	48	32/16	1408	280,266	21.09	13,289	10,415	1467
40IT52	52	36/16	1504	355,503	22.94	15,497	12,233	1567

$f'_c = 5000$ psi
 $f_{pu} = 270,000$ psi
 1/2-in.-diameter,
 low-relaxation strand

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
 8420 – Safe superimposed service load, lb/ft
 0.5 – Estimated camber at erection, in.
 0.2 – Estimated long-time camber, in.

Table of safe superimposed service load, lb/ft, and cambers, in.

Designation	Number strand	y _s in.	Span, ft																			
			16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50		
40IT20	18	2.22	8420	6870	5680	4760	4030	3440	2960	2560	2220	1940	1690	1490	1310	1150	1010					
			0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.3	1.4	1.4	1.5	1.5	1.5					
			0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.0	-0.1			
40IT24	22	2.67	9990	8280	6960	5900	5050	4360	3780	3300	2890	2540	2240	1980	1750	1550	1380					
			0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.2	1.3	1.4	1.4	1.5	1.5	1.5					
			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	0.2	0.1	0.0				
40IT28	26	3.08	9670	8230	7070	6120	5330	4670	4110	3640	3230	2870	2560	2290	2050							
			0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.2	1.3	1.4	1.4	1.5	1.5							
			0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3						
40IT32	30	3.33	9520	8260	7220	6350	5610	4980	4440	3970	3560	3190	2880									
			0.8	0.8	0.9	1.0	1.1	1.2	1.3	1.3	1.4	1.5	1.5									
			0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4						
40IT36	32	3.50	9410	8290	7340	6530	5840	5230	4710	4250	3840											
			0.8	0.9	1.0	1.1	1.1	1.2	1.3	1.4	1.4											
			0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.3									
40IT40	38	4.32	8940	7960	7120	6390	5760	5200	4700													
			0.9	1.0	1.1	1.2	1.2	1.3	1.4													
			0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4											
40IT44	40	4.40	9950	8910	8020	7230	6550	5940														
			0.9	1.0	1.1	1.1	1.2	1.3														
			0.3	0.4	0.4	0.4	0.4	0.4														
40IT48	44	4.87	9650	8720	7910	7190																
			1.0	1.1	1.2	1.2																
			0.4	0.4	0.4	0.4																
40IT52	46	5.05	9490	8640																		
			1.1	1.1																		
			0.4	0.4																		