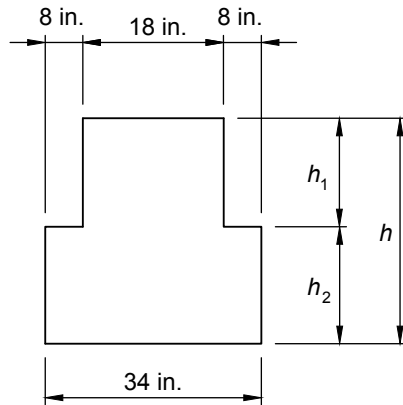


3.11 Inverted T Beam Load Tables (cont.)

Normalweight concrete



$f'_c = 5000$ 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 lb/ft
34IT20	20	12/8	488	16,082	8.43	1908	1390	508
34IT24	24	12/12	624	27,825	10.15	2741	2009	650
34IT28	28	16/12	696	44,130	11.79	3743	2722	725
34IT32	32	20/12	768	65,856	13.5	4878	3560	800
34IT36	36	24/12	840	93,616	15.26	6135	4514	875
34IT40	40	24/16	976	128,656	16.85	7635	5558	1017
34IT44	44	28/16	1048	171,157	18.58	9212	6733	1092
34IT48	48	32/16	1120	221,906	20.34	10,910	8023	1167
34IT52	52	36/16	1192	281,504	22.13	12,718	9426	1242
34IT56	56	40/16	1264	350,546	23.95	14,637	10,937	1317
34IT60	60	44/16	1336	439,623	25.78	17,053	12,848	1392

1. Check local area for availability of other sizes.
2. Loads shown include 50% superimposed dead load and 50% live load. Top tension stress at transfer has been allowed to exceed $6\sqrt{f'_c}$; therefore, top reinforcement is required.
3. Loads can be significantly increased by use of structural composite topping.

Key
 7820 – Superimposed service load capacity, lb/ft
 0.4 – Estimated camber at erection, in.
 0.1 – Estimated long-time camber, in.

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

Designation	Number strand	y_s in.	Span, ft																				
			18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50				
34IT20	14	2.29	7820	6250	5090	4200	3520	2970	2530	2170	1870	1620	1410	1230	1080								
			0.4	0.5	0.6	0.7	0.7	0.8	0.9	1.0	1.1	1.1	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						
34IT24	17	2.59	9220	7520	6230	5220	4430	3780	3260	2820	2460	2150	1880	1660	1460	1290	1140	1000					
			0.4	0.5	0.6	0.7	0.7	0.8	0.9	1.0	1.1	1.1	1.2	1.2	1.2	1.3	1.3	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	0.2	0.2	0.2	0.1	0.0	-0.1			
34IT28	20	3.00	8640	7270	6180	5300	4580	3990	3490	3070	2710	2400	2130	1900	1690	1510							
			0.5	0.6	0.7	0.7	0.8	0.9	1.0	1.0	1.1	1.2	1.2	1.3	1.3	1.3							
			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	0.2	0.2	0.2	0.2	0.1			
34IT32	23	3.48	9580	8170	7030	6090	5320	4670	4120	3650	3250	2900	2590	2320	2090								
			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								
			0.2	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	0.2			
34IT36	24	3.50	9220	8010	7010	6170	5460	4860	4330	3880	3490	3140	2840										
			0.6	0.7	0.7	0.8	0.9	0.9	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
34IT40	30	4.40	9720	8510	7490	6630	5900	5270	4730	4250	3830	3460											
			0.6	0.7	0.8	0.9	0.9	1.0	1.1	1.1	1.2	1.2	1.3										
			0.3	0.3	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	0.4	0.4	0.4		
34IT44	30	4.40	9360	8300	7400	6630	5950	5370	4850	4400													
			0.7	0.7	0.8	0.9	0.9	1.0	1.0	1.1	1.1	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
34IT48	33	4.73	8960	8030	7230	6530	5910	5370															
			0.8	0.8	0.9	1.0	1.0	1.1	1.1	1.2	1.2	1.3	1.3										
			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	0.3	0.3	0.3	0.3		
34IT52	36	5.22	9500	8560	7740	7020	6390																
			0.8	0.9	0.9	1.0	1.0	1.1	1.1	1.2	1.2	1.3	1.3										
			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	0.3	0.3	0.3	0.3		
34IT56	39	5.59	8620	7530																			
			1.0	1.0																			
			0.3	0.3																			
34IT60	40	6.00	9560	8720																			
			0.8	0.9																			
			0.3	0.3																			

Strength is based on strain compatibility; bottom tension is limited to $12\sqrt{f'_c}$; see pages 3–8 through 3–11 for explanation.