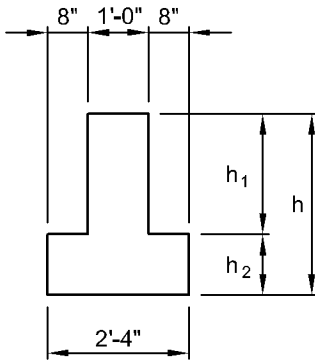


INVERTED TEE BEAMS

Normal Weight Concrete



Section Properties								
Designation	h in.	h ₁ /h ₂ in./in.	A in. ²	I in. ⁴	y _b in.	S _b ₃ in. ³	S _t ₃ 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

$f'_c = 5,000$ psi
 $f_{pu} = 270,000$ psi
 $\frac{1}{2}$ 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

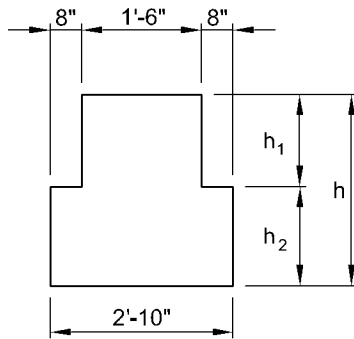
- 6511 – Safe superimposed service load, plf.
- 0.2 – Estimated camber at erection, in.
- 0.1 – Estimated long-time camber, in.

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

Designation	No. Strand	y _s (end) in. y _s (center) in.	Span, ft																		
			16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	
28IT20	98-S	2.44 2.44	6511	5076	4049	3289	2711	2262	1905	1617	1381	1186	1022								
			0.2	0.3	0.4	0.4	0.5	0.5	0.6	0.7	0.7	0.7	0.8								
			0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28IT24	188-S	2.73 2.73	9612	7504	5997	4882	4034	3374	2850	2427	2081	1795	1555	1351	1178	1029					
			0.2	0.3	0.3	0.4	0.4	0.5	0.6	0.6	0.7	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	0.1	0.1	0.0	0.0	-0.1	-0.2			
28IT28	138-S	3.08 3.08	8353	6822	5657	4750	4031	3451	2976	2582	2252	1973	1735	1530	1352	1197	1061				
			0.3	0.3	0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.9	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	0.0	0.0	-0.1	-0.2	-0.2	
28IT32	158-S	3.47 3.47	9049	7521	5333	5389	4628	4006	3490	3057	2691	2379	2110	1876	1673	1495	1337				
			0.3	0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.8	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	0.1	0.1	0.1	0.0	0.0	0.0	0.0	-0.1
28IT36	168-S	3.50 3.50	9832	8295	7075	6092	5287	4619	4060	3587	3183	2835	2534	2271	2040	1836					
			0.3	0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.8	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	0.1	0.1	0.0	0.0	0.0	0.0	0.0	-0.1
28IT40	198-S	4.21 4.21	8638	7440	6460	5647	4966	4390	3898	3474	3107	2787	2506	2258							
			0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.8	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	0.1	0.1	0.1	0.1	0.1	0.1
28IT44	208-S	4.40 4.40	9186	7989	6997	6165	5462	4861	4344	3896	3505	3162	2859								
			0.4	0.5	0.5	0.6	0.6	0.7	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	0.1	0.1	0.1	0.1	0.0
28IT48	228-S	4.55 4.55	9719	8525	7523	6676	5953	5330	4791	4320	3907	3542									
			0.4	0.5	0.5	0.6	0.6	0.7	0.7	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	0.1	0.1	0.1	0.1	0.1
28IT52	248-S	5.17 5.17	9987	8823	7838	6998	6274	5647	4100	4619	4196										
			0.5	0.5	0.6	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
28IT56	268-S	5.23 5.23	9307	8319	7469	6731	6088	5524	5026												
			0.5	0.6	0.6	0.7	0.7	0.8	0.8												
			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
28IT60	288-S	5.57 5.57	9645	8668	7820	7081	6432	5859													
			0.6	0.6	0.7	0.7	0.8	0.8													
			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

INVERTED TEE BEAMS

Normal Weight Concrete



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

Section Properties								
Designation	h in.	h_1/h_2 in./in.	A in. ²	I in. ⁴	y_b in.	S_{b_3} in. ³	S_{t_3} 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	6,135	4,514	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	23/16	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
34IT60	60	44/16	1,336	439,623	25.78	17,053	12,847	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.

Key

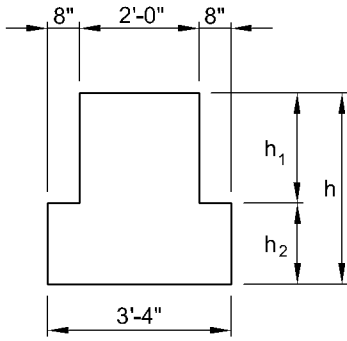
- 7822 – Safe superimposed service load, plf.
- 0.4 – Estimated camber at erection, in.
- 0.1 – Estimated long-time camber, in.

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

Designation	No. Strand	$y_s(\text{end})$ in. $y_s(\text{center})$ in.	Span, ft																				
			16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50			
34IT20	148-S	2.29 2.29	7822	6253	5092	4209	3522	2977	2537	2177	1879	1629	1417	1237	1081								
			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	178-S	2.59 2.59	9221	7524	6233	5229	4432	3789	3262	2826	2461	2151	1887	1660	1463	1291	1140	1007					
			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	1.3	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	0.1	0.0	-0.1				
34IT28	208-S	3.00 3.00	8641	7271	6183	5306	4589	3994	3495	3073	2713	2403	2134	1900	1694	1513							
			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	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	0.1					
34IT32	238-S	3.48 3.48	9589	8174	7032	6097	5323	4674	4124	3655	3252	2902	2597	2329	2093								
			0.5	0.6	0.7	0.8	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	0.2	0.2					
34IT36	248-S	3.50 3.50	9223	8016	7015	6176	5466	4860	4338	3886	3492	3146	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					
34IT40	308-S	4.40 4.40	9720	8510	7497	6639	5907	5277	4731	4254	3836	3467											
			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									
34IT44	308-S	4.40 4.40	9362	8307	7406	6630	5958	5372	4857	4403													
			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									
34IT48	338-S	4.73 4.73	8963	8037	7234	6533	5919	5376															
			0.8	0.8	0.9	1.0	1.0	1.1	1.1	1.2	1.2	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									
34IT52	368-S	5.22 5.22	9503	8564	7745	7026	6392																
			0.8	0.9	0.9	1.0	1.0																
			0.3	0.3	0.3	0.3	0.3	0.3															
34IT56	398-S	5.59 5.59	8269	7532																			
			1.0	1.0																			
			0.3	0.3																			
34IT60	408-S	6.00 6.00	9564	8721																			
			0.8	0.9																			
			0.3	0.3																			

INVERTED TEE BEAMS

Normal Weight Concrete



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

Designation	Section Properties							
	h in.	h_1/h_2 in./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.

Key

- 8427 – Safe superimposed service load, plf.
- 0.5 – Estimated camber at erection, in.
- 0.2 – Estimated long-time camber, in.

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

Designation	No. Strand	$y_s(\text{end})$ in. $y_s(\text{center})$ in.	Span, ft																		
			16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	
40IT20	188-S	2.22 2.22	8427	6870	5686	4764	4033	3444	2961	2561	2225	1942	1699	1491	1310	1153	1014				
			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	228-S	2.67 2.67	9994	8288	6961	5907	5057	4362	3786	3303	2894	2545	2244	1984	1757	1558	1382				
			0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.2	1.3	1.4	1.4	1.4	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	0.3	0.2	0.1	0.0		
40IT28	268-S	3.08 3.08	9672	8233	7073	6123	5336	4676	4118	3641	3231	2875	2565	2293	2052						
			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	0.3	0.3	0.3		
40IT32	308-S	3.33 3.33	9527	8269	7227	6354	5615	4984	4441	3970	3560	3199	2881								
			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	0.4	0.4	0.4	0.4	
40IT36	328-S	3.50 3.50	9410	8292	7345	6537	5842	5239	4713	4252	3844										
			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	0.3	0.3									
40IT40	388-S	4.32 4.32	8947	7969	7127	6398	5761	5202	4709												
			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	0.4									
40IT44	408-S	4.40 4.40	9950	8916	8020	7238	6552	5946													
			0.9	1.0	1.1	1.1	1.2	1.3													
			0.3	0.4	0.4	0.4	0.4	0.4	0.4												
40IT48	448-S	4.87 4.87	9652	8724	7910	7191															
			1.0	1.1	1.2	1.2															
			0.4	0.4	0.4	0.4															
40IT52	468-S	5.05 5.05	9494	8645																	
			1.1	1.1																	
			0.4	0.4																	