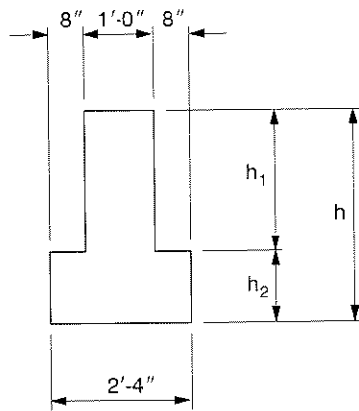


# INVERTED TEE BEAMS

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 <sub>1</sub> /h <sub>2</sub> in.	A in <sup>2</sup>	I in <sup>4</sup>	y <sub>b</sub> in.	S <sub>b</sub> in <sup>3</sup>	S <sub>t</sub> in <sup>3</sup>	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	-0.1
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	0.0	0.0	0.0	0.0	-0.1
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	0.0	-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	0.8		
							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	0.8		
							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	0.8		
							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	0.8	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	0.2