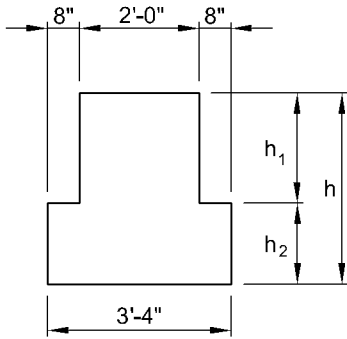


INVERTED TEE BEAMS

Normal Weight Concrete



$f'_c = 5,000$ psi
 $f_{pu} = 270,000$ psi
 $\frac{1}{2}$ 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
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 0.4 0.4 0.4 0.4 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														
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 0.3 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														
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														
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														