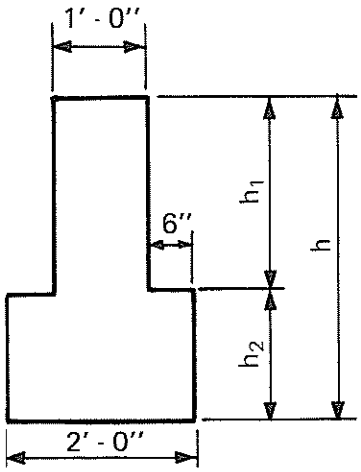
INVERTED TEE BEAMS

TYPE "B" LOAD TABLE

Normal Weight Concrete



Section Properties								
Designation	h (in.)	h_1/h_2 (in.)	A (in.^{2})	I (in.^{4})	y_b (in.)	Z_b (in.^{3})	Z_t (in.^{3})	wt (plf)
24IT20	20	12/8	336	10,981	8.29	1325	938	350
24IT22	22	14/8	360	14,610	9.13	1600	1135	375
24IT26	26	14/12	456	24,132	10.79	2237	1587	475
24IT30	30	18/12	504	37,059	12.43	2981	2109	525
24IT36	36	24/12	576	63,936	15.00	4262	3045	600
24IT40	40	24/16	672	87,845	16.57	5301	3749	700
24IT44	44	28/16	720	116,877	18.27	6397	4542	750
24IT48	48	32/16	768	151,552	20.00	7578	5413	800
24IT52	52	36/16	816	192,275	21.76	8836	6358	850
24IT56	56	40/16	864	239,445	23.56	10,163	7381	900
24IT60	60	44/16	912	293,460	25.37	11,567	8474	950

Key

1576 – Safe superimposed load, plf
0.31 – Anticipated initial camber, in.
0.73 – Deflection due to superimposed load shown, in.

Table of Safe Superimposed Loads, Cambers and Deflections

Designation	No. Strand	e	Span, ft. 16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50
24IT20	8	6.29	6422 0.12 0.24	5001 0.14 0.30	3984 0.17 0.36	3232 0.20 0.43	2660 0.23 0.50	2214 0.26 0.58	1861 0.29 0.65	1576 0.31 0.73										
24IT22	8	7.13	7366 0.10 0.21	5742 0.12 0.26	4580 0.15 0.31	3720 0.17 0.37	3066 0.20 0.44	2557 0.23 0.50	2153 0.25 0.57	1827 0.27 0.64	1560 0.30 0.70									
24IT26	10	8.36		8397 0.11 0.23	6711 0.13 0.28	5464 0.16 0.33	4515 0.18 0.39	3777 0.21 0.45	3191 0.23 0.51	2719 0.26 0.57	2332 0.28 0.64	2012 0.30 0.70	1743 0.32 0.76	1516 0.33 0.82						
24IT30	12	9.60			9305 0.12 0.25	7599 0.15 0.30	6302 0.17 0.35	5292 0.20 0.41	4490 0.22 0.47	3844 0.25 0.53	3315 0.27 0.59	2876 0.29 0.65	2509 0.32 0.71	2198 0.34 0.78	1933 0.35 0.84	1704 0.37 0.90	1506 0.38 0.96			
24IT36	16	11.98						8556 0.20 0.38	7295 0.23 0.44	6277 0.25 0.50	5444 0.28 0.56	4754 0.31 0.62	4176 0.34 0.69	3686 0.37 0.75	3268 0.40 0.82	2909 0.42 0.89	2597 0.45 0.96	2325 0.47 1.02	2086 0.49 1.09	1876 0.51 1.15
24IT40	16	12.79						9638 0.15 0.31	8214 0.17 0.36	7065 0.20 0.41	6125 0.22 0.46	5346 0.24 0.51	4693 0.26 0.56	4140 0.28 0.62	3668 0.30 0.67	3262 0.32 0.72	2910 0.34 0.78	2603 0.35 0.83	2333 0.36 0.88	2096 0.37 0.94
24IT44	18	14.08								8788 0.19 0.38	7633 0.21 0.43	6676 0.23 0.48	5874 0.25 0.53	5195 0.27 0.58	4615 0.29 0.63	4116 0.31 0.69	3684 0.33 0.74	3307 0.35 0.79	2976 0.37 0.85	2684 0.38 0.90
24IT48	20	15.38									9292 0.20 0.40	8140 0.22 0.45	7174 0.24 0.50	6357 0.26 0.55	5659 0.28 0.60	5059 0.30 0.65	4538 0.33 0.70	4084 0.34 0.76	3685 0.36 0.81	3334 0.38 0.86
24IT52	22	16.68										9733 0.21 0.42	8590 0.23 0.47	7622 0.25 0.52	6796 0.27 0.57	6085 0.30 0.62	5469 0.32 0.67	4932 0.34 0.72	4460 0.36 0.77	4044 0.38 0.82
24IT56	24	18.01												8995 0.24 0.49	8030 0.26 0.54	7200 0.29 0.59	6480 0.31 0.64	5852 0.33 0.69	5301 0.35 0.74	4815 0.37 0.79
24IT60	26	19.32													9354 0.26 0.51	8396 0.28 0.56	7566 0.30 0.61	6841 0.32 0.65	6206 0.34 0.70	5645 0.36 0.75

Notes: All safe loads shown on this sheet are controlled by ultimate.
Additional top reinforcing required.
f'_c = 5000 psi f_{pu} = 270,000 psi