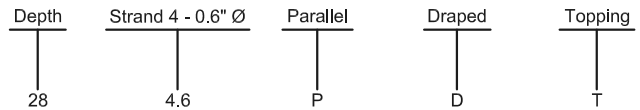
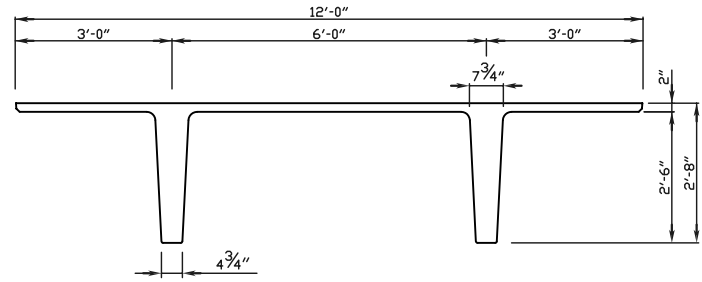


# Prestressed Concrete 32" x 12' DOUBLE TEE (NO TOPPING)

PHYSICAL PROPERTIES	
A = 663 in. <sup>2</sup>	S <sub>b</sub> = 2,800 in. <sup>3</sup>
I = 63,362 in. <sup>4</sup>	St = 6,761 in. <sup>3</sup>
Y <sub>b</sub> = 22.63 in.	Wt. = 691 PLF
Y <sub>t</sub> = 9.37 in.	Wt. = 69 PSF



## DESIGN DATA

1. Precast Strength @ release = 3,500 PSI.
2. Precast Strength @ release for draped tees = 4,500 PSI.
3. Precast Strength @ 28 days = 6,000 PSI.
4. Precast Density = 150 PCF.
5. Strand = 0.6" Ø 270K Lo-Relaxation.
6. Maximum moment capacity is critical at midspan for parallel strands and is critical near 0.4 span for draped strands.
7. Maximum bottom tensile stress is  $12\sqrt{f'_c} = 930$  PSI.
8. Flexural capacity is based on stress/strain strand relationships.
9. All superimposed load is treated as live load in the flexural strength analysis. To determine the allowable live load if the amount of superimposed dead load is known use the following conversion method...

$$\text{Allowable Live Load} = \frac{(1.6)(\text{Load Table Value}) - (1.2)(\text{Superimposed Dead Load})}{1.6}$$

10. If the above conversion is used then allowable stress limits must be checked so they are not exceeded.
11. Deflection limits were not considered when determining allowable loads in this table.

ALLOWABLE SUPERIMPOSED LIVE LOADS (psf)												IBC 2012 & ACI 318-11 (1.2 D + 1.6 L)													
Section	Ø Mn (in. Kips)	Span (Feet)																							
		40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80	82	84	86
32 - 4.6 P	6,083	88	76	65	56	48	41	34																	
32 - 6.6 P	8,783				100	89	78	69	61	54	47	41	36												
32 - 8.6 P	11,255							101	90	81	72	65	58	52	46	41	36								
32 - 10.6 P	13,500									106	96	87	78	71	64	58	52	47	42	37					
32 - 12.6 P	15,516										106	96	88	80	73	66	60	55	50	45	39				
32 - 14.6 D	20,406														111	102	94	86	79	72	66	60	55	50	46
32 - 16.6 D	23,001															115	106	98	89	82	76	70	64	59	54
32 - 18.6 D	25,516																116	107	99	92	85	78	72	67	61



2655 Molly Pitcher Hwy. South, Box N  
Chambersburg, PA 17202-9203  
717-267-4505 Fax 717-267-4518

This table is for simple spans and uniform loads. Design data for any of these span-load conditions is available on request. Individual designs may be furnished to satisfy unusual conditions of heavy loads, concentrated loads, cantilevers, etc...