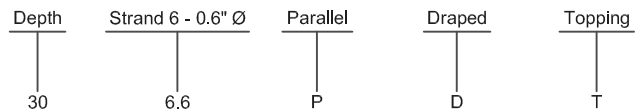
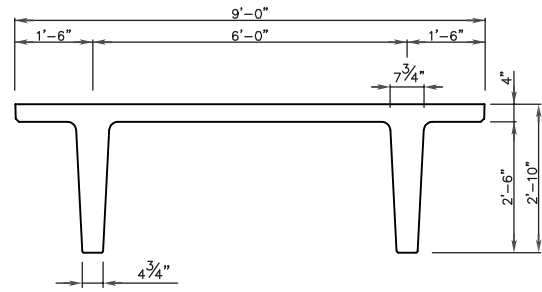


# Prestressed Concrete 34" x 9' DOUBLE TEE (PRETOPPED)

## PHYSICAL PROPERTIES

A = 807 in. <sup>2</sup>	S <sub>b</sub> = 3,174 in. <sup>3</sup>
I = 78,275 in. <sup>4</sup>	S <sub>t</sub> = 8,379 in. <sup>3</sup>
Y <sub>b</sub> = 24.66 in.	Wt. = 846 PLF
Y <sub>t</sub> = 9.34 in.	Wt. = 94 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 = 145 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)

Section	Ø Mn (in. Kips)	SPAN (FEET)																								
		44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	
34 - 6.6 P	9,377	154	135	118	103	90	78	68	58	50	42	35														
34 - 8.6 P	12,030				152	135	120	107	95	84	74	65	57	50	43	37										
34 - 10.6 P	14,447						159	143	128	115	103	93	83	74	66	58	52	45	39	34						
34 - 12.6 P	16,626								158	143	130	117	106	96	87	78	70	63	56	50	44	39	33			
34 - 14.6 P	18,569									168	153	139	127	115	105	95	86	78	71	64	56	50	44	38	32	