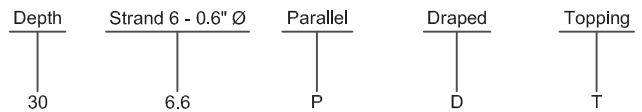
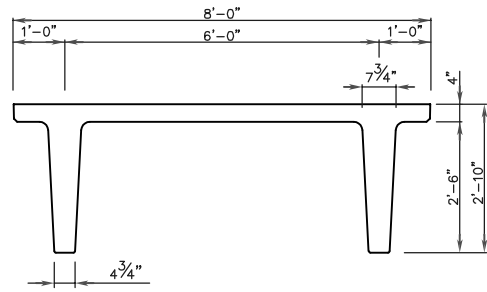


# Prestressed Concrete 34" x 8' DOUBLE TEE (PRETOPPED)

## PHYSICAL PROPERTIES

A = 759 in. <sup>2</sup>	S <sub>b</sub> = 3,119 in. <sup>3</sup>
I = 75,460 in. <sup>4</sup>	S <sub>t</sub> = 7,695 in. <sup>3</sup>
Y <sub>b</sub> = 24.19 in.	Wt. = 792 PLF
Y <sub>t</sub> = 9.81 in.	Wt. = 99 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	9,363	177	156	137	120	106	93	81	70	61	52	44	37	31												
34 - 8.6 P	12,005			197	175	157	140	125	111	99	88	78	69	61	53	46	40	34								
34 - 10.6 P	14,407					203	183	165	148	134	121	109	98	88	78	70	62	55	49	43	37	32				
34 - 12.6 P	16,569							201	182	165	150	136	123	112	101	92	83	75	67	60	54	48	42	36	32	
34 - 14.6 P	18,490								212	193	176	160	146	134	122	111	101	92	83	75	67	59	42	46	40	