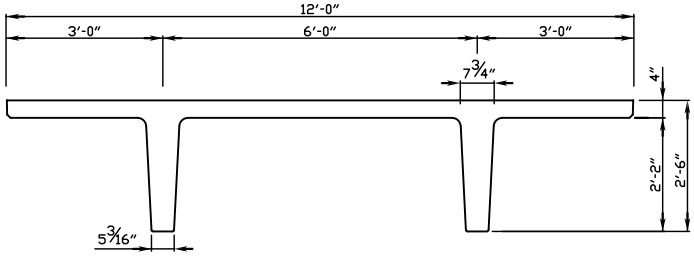
Prestressed Concrete
30" x 12' DOUBLE TEE
(PRETOPPED)

PHYSICAL PROPERTIES	
$A = 912$ in.^{2}	$S_b = 2{,}718$ in.^{3}
$I = 61{,}942$ in.^{4}	$S_t = 8{,}586$ in.^{3}
$Y_b = 22.79$ in.	Wt.= 950 PLF
$Y_t = 7.21$ in.	Wt.= 79 PSF



Depth	Strand 6 - 0.6" Ø	Parallel	Draped	Topping
30	6.6	P	D	T

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 2006 & ACI 318-05 (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
30 - 6.6 P	8,150	117	101	86	74	63	53	45	37																
30 - 8.6 P	10,412			127	111	97	85	74	64	55	48	41	34												
30 - 10.6 P	12,445					128	113	100	88	78	69	60	53	46	39										
30 - 12.6 P	14,251								110	98	87	78	69	61	54	47	41	36							
30 - 14.6 D	18,402									143	129	117	105	94	84	76	68	60	53	47	41	36			
30 - 16.6 D	20,596													107	97	87	79	71	63	57	50	45	39		
30 - 18.6 D	22,710														108	98	89	81	73	65	59	53	47	42	37

NITTERHOUSE CONCRETE PRODUCTS

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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...

11/13/08

12DT30P