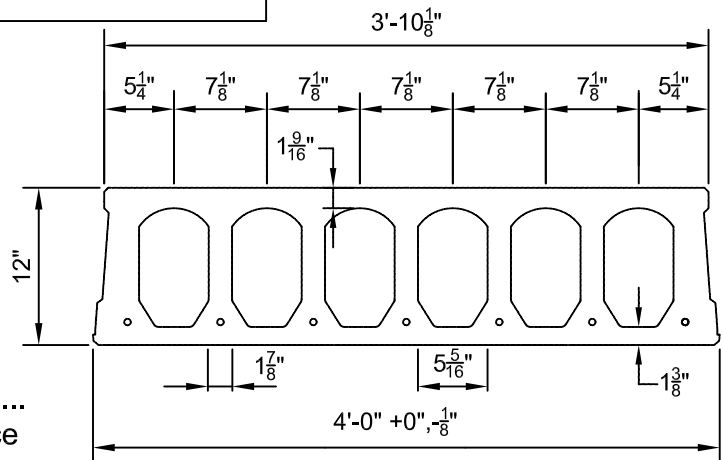


Prestressed Concrete 12"x4'-0" NiCore Plank

2 Hour Fire Resistance Rating (Untopped)

PHYSICAL PROPERTIES Precast	
A = 296 in. ²	b _w = 14.25 in.
I = 5191 in. ⁴	S _b = 867 in. ³
Y _b = 5.99 in.	S _t = 863 in. ³
Y _t = 6.01 in.	Wt. = 308 PLF
e = 4.24 in.	Wt. = 77.00 PSF



DESIGN DATA

- Precast Strength @ 28 days = 6000 PSI
- Precast Strength @ release = 3800 PSI
- Precast Density = 150 PCF
- Strand = 1/2"Ø and 0.6"Ø 270K Lo-Relaxation.
- Strand Height = 1.75 in.
- Ultimate moment capacity (when fully developed)...
6-1/2"Ø, 270K = 180.4 k-ft at 60% jacking force
7-1/2"Ø, 270K = 207.5 k-ft at 60% jacking force
- Maximum bottom tensile stress is $10\sqrt{f'_c} = 775$ PSI
- All superimposed load is treated as live load in the strength analysis of flexure and shear.
- Flexural strength capacity is based on stress/strain strand relationships.
- Deflection limits were not considered when determining allowable loads in this table.
- All load values are controlled by ultimate flexural strength or structural fire endurance.
- Camber is inherent in all prestressed hollow core slabs and is a function of the amount of eccentric prestressing force needed to carry the superimposed design loads along with a number of other variables. Because prediction of camber is based on empirical formulas it is at best an estimate, with the actual camber usually higher than calculated values.
- At 2 hours the calculated strand temperature is 790 degrees Fahrenheit @ 49% of yield strength.

SAFE SUPERIMPOSED SERVICE LOADS		IBC 2012 & ACI 318-11 (1.2 D + 1.6 L)																		
Strand Pattern		SPAN (FEET)																		
		29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
6 - 1/2"Ø	LOAD (PSF)	160	144	130	117	106	95	85	76	68	61	54	47	41	36	30	XXXXXXXXXX			
7 - 1/2"Ø	LOAD (PSF)	197	179	163	148	135	122	111	101	91	83	74	67	60	54	48	42	37	32	27



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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, flange or stem openings and narrow widths. The allowable loads shown in this table reflect a 2 Hour & 0 Minute fire resistance rating.