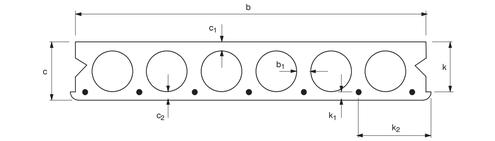
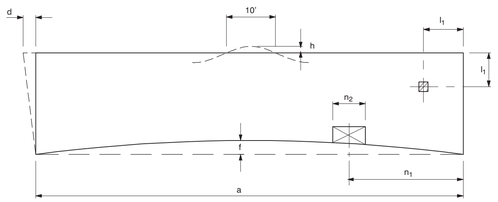
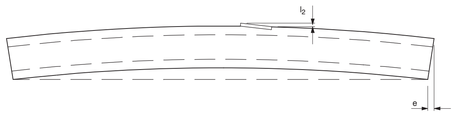
Fig. 10.13.1 Hollow-core Slabs



Cross section



Plan



Elevation

10.13 Hollow-core Slabs

a = Length ..... ±½ in. [±13 mm]

b = Width (overall) ..... ±¼ in. [±6 mm]

b_1 = Web width:
The total web width defined by the sum of the actual measured values of "b_1" shall not be less than 85 percent of the sum of the nominal web widths "$b_{1,\ nominal}$"

c = Depth (overall) ..... ±¼ in. [±6 mm]

c_1 = Top flange depth:
Top flange area defined by the actual measured values of average "c_1" x "b" shall not be less than 85 percent of the nominal area calculated by "$c_{1,\ nominal}$" x "$b_{nominal}$"

c_2 = Bottom flange depth:
Bottom flange area defined by the actual measured values of average "c_2" x "b" shall not be less than 85 percent of the nominal area calculated by "$c_{2,\ nominal}$" x "$b_{nominal}$"

d = Variation from specified plan end squareness or skew ..... ±½ in. [±13 mm]

e = Variation from specified elevation end squareness or skew
..... ±1/8 in. per 12 in., ±½ in. maximum
[±3 mm per 300 mm, ±13 mm maximum]

f = Sweep ..... ±3/8 in. [±10 mm]

g = Applications requiring close control of differential camber between adjacent members should be discussed with the producer to determine applicable tolerances.

h = Local smoothness of any surface ..... ¼ in. in 10 ft. [6 mm in 3 m]

k = Center of gravity (CG) of strand group ..... ±¼ in. [±6 mm]

k_1 = Location of strand perpendicular to plane of panel ..... ±½ in. [±13 mm]
Minimum cover ..... ¾ in. [19 mm]

k_2 = Location of strand parallel to plane of panel ..... ±¾ in. [±19 mm]
Minimum cover ..... ¾ in. [19 mm]

l_1 = Location of embedment* ..... ±2 in. [±50 mm]

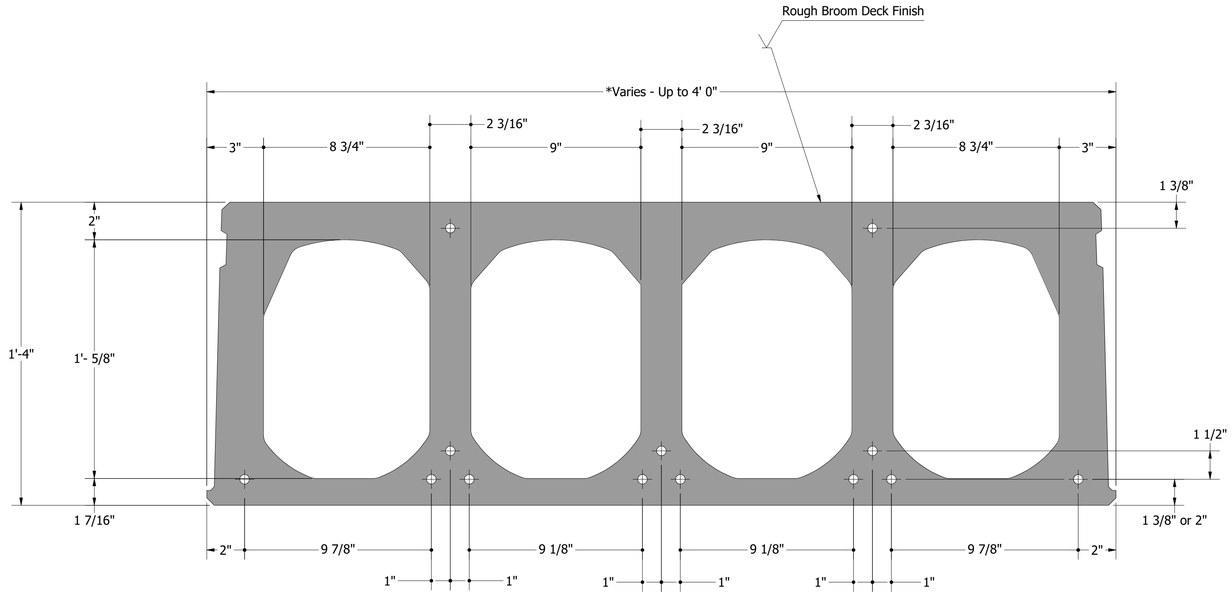
l_2 = Tipping and flushness of embedment ..... ±¼ in. [±6 mm]

n_1 = Location of blockout ..... ±2 in. [±50 mm]

n_2 = Size of blockouts ..... ±½ in. [±13 mm]

x = Weight:
Actual measured value shall not exceed 110 percent of the nominal published unit weight used in the design.

* Some hollow-core production systems do not permit the incorporation of embedments. Contact local producers for suitable alternate details if embedments are not practical.



E16" x 48" SECTION

1.125" Minimum Strand Cover

IBC Fire Ratings	No Structural Topping: Unrestrained 1 hour / Restrained 4 hours				
Section Properties	A = 346 in^2	Y_t = 7.67 in	b_w = 11.3 in		
	I = 11339 in^4	Y_b = 8.33 in	wt = 90 psf		
ϕM_n k-ft/ft	**54.20**	**75.13**	**85.43**	**103.48**	**112.35**
Series	**1.125E16-85**	**1.125E16-87**	**1.125E16-810**	**1.125E16-810**	**1.125E16-811**
Span (ft)	**Allowable Superimposed Load in lbs/ft^2**				
30	187	198	204	210	213
35	150	160	165	170	173
40	102	132	136	140	143
45	66	110	114	117	120
50		83	96	99	101
55			74	85	87

Strands: ½"ϕ 270 ksi Low-Lax Stress to 65% (26.9 kip)
Concrete Strength: f'$_c$ = 8,000 psi at 28 days
Topping Strength: f'$_c$ = 3,000 psi at 28 days

E16" x 48" SECTION

1.125" Minimum Strand Cover

IBC Fire Ratings	2" Bonded Structural Topping: Unrestrained 1 hour / Restrained 4 hours				
Section Properties	A = 402 in^2	Y_t = 8.47 in	b_w = 11.3 in		
	I = 14971 in^4	Y_b = 9.53 in	wt = 115 psf		
ϕM_n k-ft/ft	**59.90**	**82.10**	**92.93**	**111.95**	**121.28**
Series	**1.125E16-85T**	**1.125E16-87T**	**1.125E16-810T**	**1.125E16-810T**	**1.125E16-811T**
Span (ft)	**Allowable Superimposed Load in lbs/ft^2**				
30	200	211	217	223	226
35	158	169	173	178	181
40	101	137	141	145	148
45	62	113	117	120	122
50		78	97	100	102
55			67	84	86

Strands: ½"ϕ 270 ksi Low-Lax Stress to 65% (26.9 kip)
Concrete Strength: f'$_c$ = 8,000 psi at 28 days
Topping Strength: f'$_c$ = 3,000 psi at 28 days

TARACON
taraconprecast.com

DESCRIPTION:
16" HC - 4' Standard Width - Spans up to 66'

DATE: 1/1/2021

PART:
56-E16