

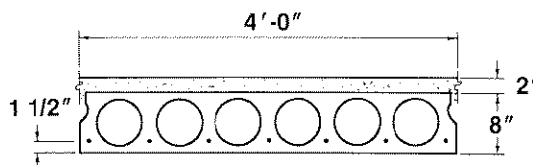
# HOLLOW-CORE

4'-0" x 8"  
Lightweight Concrete

## Strand Patterns

Producer may vary size and strength of strands. See "explanation of load tables"

Safe loads shown include dead load of 10 psf for untopped members and 15 psf for topped members. Remainder is live load. Long-time cambers include superimposed dead load but do not include live load.



## Section Properties

	Untopped	Topped
A =	215 in. <sup>2</sup>	—
I =	1666 in. <sup>4</sup>	3529 in. <sup>4</sup>
Y <sub>b</sub> =	4.00 in.	5.70 in.
Y <sub>t</sub> =	4.00 in.	4.30 in.
Z <sub>b</sub> =	416 in. <sup>3</sup>	619 in. <sup>3</sup>
Z <sub>t</sub> =	416 in. <sup>3</sup>	821 in. <sup>3</sup>
b <sub>w</sub> =	12.00 in.	12.00 in.
wt =	172 plf	271 plf
	43 psf	68 psf
V/S =	1.92 in.	

Capacity of sections of other configurations are similar. For precise values, see local hollow-core manufacturer.

$$f'_c = 5000 \text{ psi}$$

$$f'_{ci} = 3500 \text{ psi}$$

## Key

295 — Safe superimposed service load, psf

0.2 — Estimated camber at erection, in.

0.3 — Estimated long-time camber, in.

**4LHC8**

Table of safe superimposed service load (psf) and cambers

No Topping

Strand Designation Code	Span, ft.																					
	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33		
30-S	295	253	218	189	165	145	127	112	99	88	78	69	62	55	49	43						
	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.0						
	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.1	0.1	0.0	-0.2	-0.3	-0.5						
40-S		291	258	226	200	177	157	140	126	113	101	91	82	74	66	59	52	47	41			
		0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.3	0.2	0.1			
		0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.1	-0.1	-0.3	-0.5	-0.7		
50-S			298	277	252	224	200	178	160	143	128	116	104	94	84	76	69	62	55			
			0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.7	0.7			
			0.7	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.7	0.6	0.4	0.2	0.0		
60-S				286	268	252	231	210	189	170	153	139	125	114	103	93	85	77	70			
				0.8	0.9	0.9	1.0	1.1	1.1	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.2			
				1.0	1.1	1.2	1.2	1.3	1.3	1.3	1.4	1.4	1.3	1.3	1.3	1.3	1.2	1.1	0.9	0.8		
70-S					292	274	258	243	231	216	197	178	161	147	133	121	111	101	92	84		
					1.0	1.1	1.1	1.2	1.3	1.4	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.8	1.8	1.8		
					1.2	1.3	1.4	1.5	1.6	1.7	1.7	1.8	1.8	1.9	1.9	1.8	1.8	1.7	1.6	1.5		

**4LHC8 + 2**

Table of safe superimposed service load (psf) and cambers

2" Normal Weight Topping

Strand Designation Code	Span, ft.																					
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33				
30-S	271	234	203	176	154	135	118	104	91	79	67	54	44									
	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.1									
	0.2	0.2	0.2	0.2	0.1	0.1	0.0	-0.1	-0.2	-0.3	-0.5	-0.6	-0.9									
40-S		280	245	216	191	170	151	134	117	101	86	73	61	51								
		0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.4								
		0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.1	0.0	-0.2	-0.4	-0.6	-0.8								
50-S			275	244	218	195	175	154	135	118	103	89	76	65	55							
			0.7	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.7							
			0.6	0.6	0.6	0.6	0.5	0.5	0.4	0.3	0.1	-0.1	-0.3	-0.5	-0.8							
60-S				294	263	236	213	191	169	149	132	116	102	89	77	67						
				1.0	1.1	1.1	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.2						
				0.9	0.9	0.9	0.9	0.9	0.8	0.7	0.6	0.5	0.3	0.1	-0.1	-0.4						
70-S					288	273	248	225	203	181	161	144	128	113	100	88						
					1.3	1.4	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.8	1.8	1.8						
					1.2	1.2	1.3	1.2	1.2	1.2	1.2	1.1	1.0	0.9	0.7	0.5	0.3					

Bold type — Capacity governed by stresses, others governed by flexural or shear strength