Uplift Matrix for Unenclosed Carport Structures

Carport			
Uplift for 8'-6" eve height 5' centers			
Wind Speed	70	80	90
Pressure	12	16	20
10	-29	46	121
12	-50	40	130
20	-102	48	198
24	-120	60	240
30	-47	82	307

Carport			
Uplift for 8'-6" eve height 4' centers			
Wind Speed	70	80	90
Pressure	12	16	20
10	-23	62	148
12	-40	53	147
20	-82	51	184
24	-96	59	213
30	-114	74	263

Uplift for 10'-6" eve height 5' centers			
Wind Speed	70	80	90
Pressure	12	16	20
10	-5	110	225
12	-30	93	217
20	-90	80	250
24	-110	87	283
30	-135	103	342

Uplift for 10'-6" eve height 4' centers			
Wind Speed	70	80	90
Pressure	12	16	20
10	-4	88	180
12	-24	75	173
20	-72	64	200
24	-88	69	227
30	-108	83	273

Uplift for 12'-6" eve height 5' centers			
Wind Speed	70	80	90
Pressure	12	16	20
10	19	142	265
12	-10	120	250
20	-78	96	270
24	-100	100	300
30	-127	114	355

Uplift for 12'-6" eve height 4' centers			
Wind Speed	70	80	90
Pressure	12	16	20
10	15	114	212
12	-8	96	200
20	-62	77	216
24	-80	80	240
30	-102	91	284

Uplift value is in pounds (lbs).
Updated 3/26/03
Wind Speed is in miles per hour (mph).
Wind Pressure is in pounds per square foot (psf).
Values are based on 2' vertical sheeting return down side post.
Uplift Formula is: U=(.5span x frame spacing x pressure) x (.75 x span)/span +
(vertical return x frame spacing x pressure) x eve height/span - frame dead weight.
Uplift force includes dead weight of structure.
Negative values indicate (NO UPLIFT EXISTS).
Calculation assumes one holdown at each side post.

Allowable Anchor Force

Holdown Force of Buried Plate (lbs)				
	square plate dimension			
embedment	4	5	6	8
18	240	252	265	290
24	541	562	583	627
30	1024	1056	1089	1156
36	1733	1779	1825	1920

Based on Soil Density of 110 lbs/cu ft
F = V*Density*0.50
V=1/3 pi r^2 h

Updated: 3/31/02