Uplift Matrix for Fully Enclosed Garage Structures

Garage			
Uplift for 8' eve height 5' centers			
Wind Speed	70	80	90
Pressure	11	14	18
10	-92	61	264
12	-159	-12	185
20	-312	-151	63
24	-358	-183	50
30	-414	-213	55

Garage			
Uplift for 8' eve height 4' centers			
Wind Speed	70	80	90
Pressure	11	14	18
10	-73	48	211
12	-127	-9	148
20	-249	-121	50
24	-287	-147	40
30	-331	-171	44

Uplift for 10' eve height 5' centers			
Wind Speed	70	80	90
Pressure	11	14	18
10	6	213	488
12	-94	98	355
20	-313	-125	125
24	-376	-178	85
30	-448	-229	63

Uplift for 10' eve height 4' centers			
Wind Speed	70	80	90
Pressure	11	14	18
10	5	170	390
12	-75	79	284
20	-250	-100	100
24	-301	-143	68
30	-358	-183	50

Uplift for 12' eve height 5' centers			
Wind Speed	70	80	90
Pressure	11	14	18
10	148	421	784
12	8	255	585
20	-292	-71	223
24	-375	-150	150
30	-467	-227	95

Uplift for 12' eve height 4' centers			
Wind Speed	70	80	90
Pressure	11	14	18
10	-51	166	457
12	-174	24	288
20	-453	-277	-42
24	-540	-360	-120
30	-644	-451	-194

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 +
(eve height 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