$$P_z = 0.613 K_z G V^2 I_r C_d \ \text{(Pa)}$$
$$P_z = 0.00256 K_z G V^2 I_r C_d \ \text{(psf)}$$

Table 3.8.3-1—Wind Importance Factors, I_r

Recurrence Interval Years	Basic Wind Speed in Non-hurricane Regions	Basic Wind Speed in Hurricane Regions with $V > 45$ m/s (100 mph)	Alaska
100	1.15	1.15	1.13
50	1.00	1.00	1.00
25	0.87	0.77[a]	0.89
10	0.71	0.54[a]	0.76

[a] The design wind pressure for hurricane wind velocities greater than 45 m/s (100 mph) should not be less than th design wind pressure using $V = 45$ m/s (100 mph) with the corresponding non-hurricane I_r value.

Table 3.8.3-2—Recommended Minimum Design Life

Design Life	Structure Type
50 yr	Overhead sign structures Luminaire support structures[a] Traffic signal structures[a]
10 yr	Roadside sign structures

[a] Luminaire support structures less than 15 m (50 ft) in height and traffic signal structures may be designed for a 25-yr design life, where locations and safety considerations permit and when approved by the Owner.

Table 3.8.4-1—Height and Exposure Factors, K_z^a

Height, m (ft)	K_z^a
5.0 (16.4) or less	0.87
7.5 (24.6)	0.94
10.0 (32.8)	1.00
12.5 (41.0)	1.05
15.0 (49.2)	1.09
17.5 (57.4)	1.13
20.0 (65.6)	1.16
22.5 (73.8)	1.19
25.0 (82.0)	1.21
27.5 (90.2)	1.24
30.0 (98.4)	1.26
35.0 (114.8)	1.30
40.0 (131.2)	1.34
45.0 (147.6)	1.37
50.0 (164.0)	1.40
55.0 (180.5)	1.43
60.0 (196.9)	1.46
70.0 (229.7)	1.51
80.0 (262.5)	1.55
90.0 (295.3)	1.59
100.0 (328.1)	1.63

[a]   See Eq. C3.8.4-1 for calculation of K_z.

3.8.5—Gust Effect Factor G

The gust effect factor, G, shall be taken as a minimum of 1.14.

Table 3.8.3-3—Velocity Conversion Factors, C_v

Recurrence Interval Years	Basic Wind Speed in Non-hurricane Regions	Basic Wind Speed in Hurricane Regions with $V > 45$ m/s (100 mph)	Alaska
100	1.07	1.07	1.06
50	1.00	1.00	1.00
25	0.93	0.88	0.94
10	0.84	0.74	0.87

Table 3.8.6-1—Wind Drag Coefficients, C_d^a

Sign Panel	
L_{sign}/W_{sign} = 1.0	1.12
2.0	1.19
5.0	1.20
10.0	1.23
15.0	1.30

Variable Message Signs (VMS)		1.70	
Attachments		Drag coefficients for many attachments (cameras, luminaires, traffic signals, etc.) are often available from the manufacturer, and are typically provided in terms of effective projected area (EPA), which is the drag coefficient multiplied by the projected area. If the EPA is provided, the drag coefficient shall be taken as 1.0.	

Single Member or Truss Member	$C_vVd \leq 5.33$ m^2/s (39 mph-ft)	5.33 m^2/s (39 mph-ft) $< C_vVd$ < 10.66 m^2/s (78 mph-ft)	$C_vVd \geq 10.66$ m^2/s (78 mph-ft)
Cylindrical	1.10	$\dfrac{9.69}{(C_vVd)^{1.3}}$ (SI) $\dfrac{129}{(C_vVd)^{1.3}}$ (U.S. Customary)	0.45