Adjustment Factor for Building Height and Exposure, λ

Mean roof height (ft)	Exposure B	C	D
15	1.00	1.21	1.47
20	1.00	1.29	1.55
25	1.00	1.35	1.61
30	1.00	1.40	1.66
35	1.05	1.45	1.70
40	1.09	1.49	1.74
45	1.12	1.53	1.78
50	1.16	1.56	1.81
55	1.19	1.59	1.84
60	1.22	1.62	1.87

Note: Unit conversions for tables: 1.0 ft = 0.3048 m; 1.0 lb/ft^2 = 0.0479 kN/m^2; 1 mph = 1.6 km/h

FIGURE 28.5-1 Main Wind Force Resisting System, Part 2 [$h \le 60$ ft ($h \le 18.3$ m)]: Design Wind Pressures for Enclosed Buildings—Walls and Roofs

MWFRS: ADJUSTMENT FACTOR FOR BUILDING HEIGHT AND EXPOSURE (LAMBDA)

continues

Adjustment Factor for Building Height and Exposure, λ

Mean Roof Height (ft)	Exposure B	C	D
15	0.82	1.21	1.47
20	0.89	1.29	1.55
30	1.00	1.40	1.66
35	1.05	1.45	1.70
40	1.09	1.49	1.74
45	1.12	1.53	1.78
50	1.16	1.56	1.81
55	1.19	1.59	1.84
60	1.22	1.62	1.87

Note: Metric conversions: 1.0 ft = 0.3048 m; 1.0 ft^2 = 0.0929 m^2; 1.0 lb/ft^2 = 0.0479 kN/m^2.

C/C: ADJUSTMENT FACTOR FOR BUILDING HEIGHT AND EXPOSURE (LAMBDA)

FIGURE 30.4-1 (*Continued*). Components and Cladding, Part 2 [$h \le 60$ ft ($h \le 18.3$ m)]: Design Wind Pressures for Enclosed Buildings—Walls and Roofs

Table 30.5-1 Steps to Determine C&C Wind Loads for Enclosed or Partially Enclosed Building with $h > 60$ ft ($h > 18.3$ m)

ASCE 7-16 Wind Forces Chpt 28, Pt2 & Chpt 30, Pt2 PRINT CANCEL SAVE SAVE & CLOSE

General | Applicability Checklists | Analysis Values

General Design Values

V : Basic Wind Speed per Figure 26.5-1 or 2: 97.0 mph

Please specify an absolute minimum design pressure: 10.0 psf

Select Occupancy per Table 1.5-1: I | II | III | IV

All Buildings and other structures except those listed as Category I, III, and IV

Select Exposure Category per 26.7: Exposure C

MRH : Mean Roof Height: 20.420 ft

Main Force Resisting System Values

Roof Slope Angle: 30 to 45 degrees

λ : Height & exposure factor per Figure 28.5-1, Pg 316: 1.30

K1, K2 & K3 per Figure 26.8-1, Page 267

K1 = 1.0 K2 = 1.0 K3 = 1.0

Topographic Factor per 26.8 : Kzt = (1+K1*K2*K3)^2 = 1.00

☑ Force Kzt to 1.0

☑ Interpolate "Lambda" values based on height

Component & Cladding Values

Effective Wind Area of Component & Cladding: 10.0 ft^2

(Area will be limited to 100 for Roof Zone 1,2 & 3)

Roof pitch for cladding pressure: Flat/Hip/Gable Roof 0 to 7 Degrees

LHD : Least Horizontal Dimension: ft

a = Width of pressure coefficient zone: 3.000 ft

max (0.04 * LHD, 3, min(0.10 * LHD, 0.4*MRH))

λ : Height & exposure factor per Figure 30.4-1, Pg 362: 1.29