VELOCITY PRESSURES

Based on Chapter 30 (Sections 1 and 3) of the American Society of Civil Engineers (ASCE)
Standard ASCE 7-10, *Minimum Design Loads for Buildings and Other Structures*.

Report Preparation

Report ID: DL_Uplift_Pressure_Report_795
Date: 02/13/2015
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Company: Duro-Last

Project Location Information

Project: SPC Clearwater Campus
Roof Area: LA Builidng
Street: 2465 Drew Street
City, State: Clearwater, FL
Lat/Lng: 27.96514 N / -82.73610 E
Exposure Category: C
Risk Category: II
Enclosure Category: Partial
Special Wind Region: No
Basic Wind Speed (V): 150 mph

Roof Information

Roof Height: 12 ft
Roof Dimensions: 260 ft x 168 ft
Construction: Overlay
Deck Type: Steel
Fastener Type: #15 HD Screw
Pullout Resistance: 500 lb.

Velocity Pressure (Qh)

$Qh = 0.00256 * Kz * Kzt * Kd * V^2$ [lb/ft²]

Velocity Pressure Coefficient (Kz): 0.849
Topographic Factor (Kzt):   1
Wind Directionality Factor (Kd):   0.85
Velocity Pressure (Qh):   41.56 lb/ft²

Zone Coefficients

Internal Pressure Coefficient (GCpi):   0.55
External Pressure Coefficient (GCp) Zone 1: -1
External Pressure Coefficient (GCp) Zone 2: -1.8
External Pressure Coefficient (GCp) Zone 3: -2.8
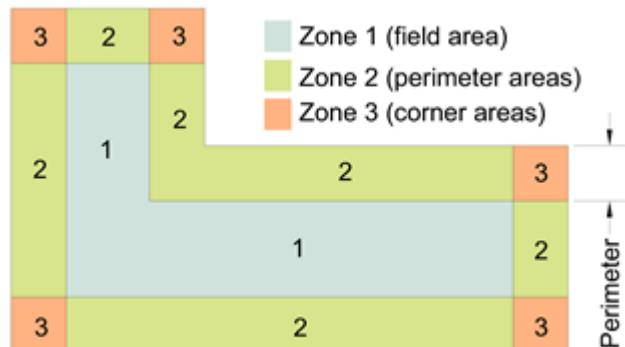
Zone Velocity Pressures (zVP)

- For Allowable Stress Design (ASD)

$zVP = 0.6 * Qh * (GCp - Gcpi)$ [lb/ft²]

Zone 1: -38.65 lb/ft²
Zone 2: -58.6 lb/ft²
Zone 3: -83.54 lb/ft²