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MEMO

TO: All Building Officials in Miami-Dade County

FROM: Secretary of the Board  for
Board of Rules and Appeals (BORA)

DATE: January 22nd, 2021

SUBJECT: BORA Interpretation
Wind Load Table for Openings in Walls -
One- and Two-Family Detached and Multiple Single-Family Dwellings
with Mean Roof Height of 30 Feet or Less

At their meeting of January 21, 2021, the Board of Rules and Appeals (BORA) considered an interpretation of the Code to provide guidance on wind pressures to be used in the replacement of windows, doors and overhead sectional (garage) doors, to include French doors, solid doors, and sliding glass doors, in one- and two-family detached dwellings and multiple single-family dwellings (townhouses) with a mean roof height of 30 feet or less.

The interpretation was sought in order to make such replacements easier for homeowners and contractors to meet the minimum requirements of the Code.

Upon discussion, the Board agreed and interpreted that ***"The attached Miami-Dade County Wind Load Chart for Openings meets the minimum requirements of the Code and can be used throughout Miami-Dade County."*** The values contained in the attached reference document were determined to be in accordance with ASCE 7-16 Chapter 30 and 2020 FBC sections 1620.2 and 1620.3. (175 mph (3-second gust) /Exposure C).

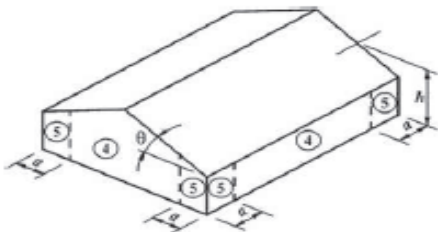
If you have any additional questions on this matter, please contact Jeanne (Lundy) Clarke, Senior Code Officer at (786) 315- 2057 or via email at Jeanne.Clarke@miamidade.gov.

Miami-Dade County Wind Load Chart for Openings

Based on ASCE 7-16 for Detached One- and Two-Family Dwellings and Multiple Single-Family Dwellings (Townhouses) with a mean roof height < 30 feet
175 mph (3-second gust) / Exposure C/ $K_d=.85$, / Pressures in PSF / ASD

These tables are to be used only for one- and two-family detached dwellings and multiple single-family dwellings (townhouses) with a mean roof height of 30 feet or less. They are to be used for replacement windows. These tables can be used for French doors, sliding glass doors, solid doors, and for sectional (overhead) garage doors. They may not be used for roll-up doors due to catenary forces acting on the supports that must be checked.

The pressures are provided in pounds per square foot (psf) for allowable stress design (ASD). A positive (+) pressure acts towards the structure; negative pressure (-) acts away from the structure (suction).



The width of zone 5 is the 'a' distance; it is either 10% of the least horizontal dimension of the structure - or - 0.4 times the mean roof height, but not less than 4% of the least horizontal distance -or- 3 feet. It is measured from the corner of the structure. Note that 3-feet is not the default value, it is the minimum width.

To determine the least horizontal dimension, inscribe a box around the entire structure and use the smallest dimension of the resulting rectangle.

Windows

The effective wind area of a window is based on the size of a single pane of glass. Likewise, a sliding glass door or French door would use the size of one of the leaves, not the size of the opening.

Garage Doors

The wind area of a sectional door is based on the size of a single panel, usually no more than 24" deep, and the width of the door.

Dual Pressure Zones

A common placement for a garage door is near a corner of a residence, which would put a portion of the door in zone 5, leaving the remainder in zone 4. You can select the door based on the zone 5 pressure, or you may use a weighted average. For example, if you have a 10-ft wide door and 2-ft are in zone 5, the zone 5 suction is -50 and the zone 4 suction is -42: $((2 \times 50) + (10-2) \times 42) / 10 = (100 + 336) / 10 = 436 / 10 = -43.6$ psf. (Round up to -44 psf)

If a window is placed in zone 4 and zone 5, use the zone 5 pressure.

A_{eff} (ft ²)	15 ft Mean Roof Height				20 ft Mean Roof Height				25 ft Mean Roof height				30 ft Mean Roof Height			
	Zone 4		Zone 5		Zone 4		Zone 5		Zone 4		Zone 5		Zone 4		Zone 5	
	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
10	40	43	40	54	43	46	43	57	45	48	45	60	46	50	46	62
20	38	42	38	50	41	44	41	53	43	46	43	56	44	48	44	58
50	36	39	36	45	38	42	38	48	40	44	40	50	42	45	42	52
100	34	37	34	42	36	40	36	44	38	42	38	46	39	43	39	48
500	30	33	30	33	32	35	32	35	33	37	33	37	35	38	35	38

Wind analysis per MecaWind Pro V2335