

# 7<sup>TH</sup> & 8<sup>TH</sup> EDITION FLORIDA BUILDING CODE (2020 & 2023) ASCE 7-16 & 7-22 'ASD' DESIGN PRESSURES FOR COMPONENTS AND CLADDING

'ASD' IS ALLOWABLE STRESS DESIGN AND SHALL MATCH SUCH LIMITING DESIGN PRESSURES ON ANY CORRESPONDING DOCUMENTS  
NOT TO BE USED OR MATCHED WITH 'LRFD' OR 'ULTIMATE' DESIGN LIMITING PRESSURES

WIND VELOCITY = 175 MPH  
EXPOSURE 'C'  
ENCLOSED STRUCTURE, FLAT TERRAIN

MRH ≤ 60'

BASED ON K<sub>d</sub> = 0.85  
MRH = MEAN ROOF HEIGHT  
WIND VELOCITY IS Vult

COPIES NOT VALID FOR PERMIT

## INTERIOR ZONE ④ PRESSURES

## EXTERIOR ZONE ⑤ PRESSURES

| Mean Roof Height | DESIGN PRESSURES (PSF) - ZONE 4 |                |                |                |                |
|------------------|---------------------------------|----------------|----------------|----------------|----------------|
|                  | Tributary Area (Sq Ft)          |                |                |                |                |
|                  | 10                              | 20             | 30             | 40             | 50             |
| 0 - 15 ft        | -43.4<br>+40.1                  | -41.6<br>+38.2 | -40.6<br>+37.2 | -39.8<br>+36.4 | -39.3<br>+35.9 |
| 18 ft            | -45.1<br>+41.6                  | -43.3<br>+39.7 | -42.2<br>+38.6 | -41.4<br>+37.9 | -40.8<br>+37.3 |
| 20 ft            | -46.2<br>+42.6                  | -44.2<br>+40.6 | -43.1<br>+39.5 | -42.3<br>+38.7 | -41.7<br>+38.1 |
| 25 ft            | -48.4<br>+44.6                  | -46.4<br>+42.6 | -45.2<br>+41.4 | -44.4<br>+40.6 | -43.7<br>+39.9 |
| 30 ft            | -50.3<br>+46.3                  | -48.2<br>+44.3 | -47.0<br>+43.0 | -46.1<br>+42.2 | -45.4<br>+41.5 |
| 35 ft            | -51.9<br>+47.9                  | -49.8<br>+45.7 | -48.5<br>+44.5 | -47.6<br>+43.6 | -46.9<br>+42.9 |
| 40 ft            | -53.4<br>+49.2                  | -51.2<br>+47.0 | -49.9<br>+45.7 | -49.0<br>+44.8 | -48.3<br>+44.1 |
| 45 ft            | -54.8<br>+50.5                  | -52.5<br>+48.2 | -51.1<br>+46.9 | -50.2<br>+45.9 | -49.5<br>+45.2 |
| 50 ft            | -56.0<br>+51.6                  | -53.7<br>+49.3 | -52.3<br>+47.9 | -51.3<br>+47.0 | -50.6<br>+46.2 |
| 55 ft            | -57.1<br>+52.7                  | -54.7<br>+50.3 | -53.4<br>+48.9 | -52.4<br>+47.9 | -51.6<br>+47.1 |
| 60 ft            | -58.2<br>+53.6                  | -55.8<br>+51.2 | -54.3<br>+49.8 | -53.3<br>+48.8 | -52.6<br>+48.0 |

COPIES NOT VALID FOR PERMIT

ORIGINAL SIGNATURE & RAISED SEAL OR DIGITAL SEAL ONLY VALID FOR USE.

| Mean Roof Height | DESIGN PRESSURES (PSF) - ZONE 5 |                |                |                |                |
|------------------|---------------------------------|----------------|----------------|----------------|----------------|
|                  | Tributary Area (Sq Ft)          |                |                |                |                |
|                  | 10                              | 20             | 30             | 40             | 50             |
| 0 - 15 ft        | -53.6<br>+40.1                  | -50.0<br>+38.2 | -47.9<br>+37.2 | -46.4<br>+36.4 | -45.2<br>+35.9 |
| 18 ft            | -55.7<br>+41.6                  | -52.0<br>+39.7 | -49.8<br>+38.6 | -48.2<br>+37.9 | -47.0<br>+37.3 |
| 20 ft            | -57.0<br>+42.6                  | -53.1<br>+40.6 | -50.9<br>+39.5 | -49.3<br>+38.7 | -48.1<br>+38.1 |
| 25 ft            | -59.7<br>+44.6                  | -55.7<br>+42.6 | -53.3<br>+41.4 | -51.7<br>+40.6 | -50.4<br>+39.9 |
| 30 ft            | -62.1<br>+46.3                  | -57.9<br>+44.3 | -55.4<br>+43.0 | -53.7<br>+42.2 | -52.4<br>+41.5 |
| 35 ft            | -64.1<br>+47.9                  | -59.8<br>+45.7 | -57.3<br>+44.5 | -55.5<br>+43.6 | -54.1<br>+42.9 |
| 40 ft            | -65.9<br>+49.2                  | -61.5<br>+47.0 | -58.9<br>+45.7 | -57.1<br>+44.8 | -55.6<br>+44.1 |
| 45 ft            | -67.6<br>+50.5                  | -63.0<br>+48.2 | -60.4<br>+46.9 | -58.5<br>+45.9 | -57.0<br>+45.2 |
| 50 ft            | -69.1<br>+51.6                  | -64.4<br>+49.3 | -61.7<br>+47.9 | -59.8<br>+47.0 | -58.3<br>+46.2 |
| 55 ft            | -70.5<br>+52.7                  | -65.8<br>+50.3 | -63.0<br>+48.9 | -61.0<br>+47.9 | -59.5<br>+47.1 |
| 60 ft            | -71.8<br>+53.6                  | -67.0<br>+51.2 | -64.1<br>+49.8 | -62.1<br>+48.8 | -60.6<br>+48.0 |

## INSTRUCTIONS FOR TABLE USE:

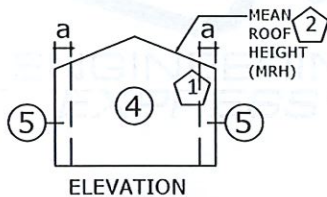
- IDENTIFY THE ZONE OF THE OPENING AS INTERIOR (ZONE 4) OR EXTERIOR (BUILDING CORNER, ZONE 5) PER THE FIGURE BELOW LEFT OR INFORMATION PROVIDED TO YOU BY OTHERS.
- 1.1. ANY QUESTIONABLE OPENING IS TO BE CONSIDERED THE MORE CRITICAL (EXTERIOR) ZONE 5.
- IDENTIFY THE BUILDING MEAN (AVERAGE) ROOF HEIGHT FROM THE LOWEST GROUND ELEVATION. IF THE MEAN ROOF HEIGHT CANNOT BE IDENTIFIED, USE THE PEAK (HIGHEST) ROOF HEIGHT.
- 2.1. WHEN IN QUESTION, ALWAYS ROUND ROOF HEIGHTS UP TO THE NEXT TABLE VALUE.
- 2.2. VALID FOR ALL ROOF SLOPES. FOR SLOPES <10°, SEE AN ENGINEER FOR REDUCTIONS.
- CALCULATE THE TRIBUTARY AREA OF THE OPENING IN QUESTION AS THE GREATER OF (HEIGHT \* WIDTH) OR THE SPAN LENGTH (HEIGHT) \* AN EFFECTIVE WIDTH OF 1/3 THE HEIGHT (HEIGHT<sup>2</sup> / 3).
- 3.1. USE THE AREA BETWEEN STRUCTURAL OPENINGS ONLY- THIS INCLUDES AREAS BETWEEN STRUCTURAL MULLS, COLUMNS, ETC.
- 3.2. IF THE TRIBUTARY AREA OF AN OPENING CANNOT BE IDENTIFIED, THE SMALLEST AREA APPLICABLE TO THE DESIGN TABLE (10 SQUARE FEET) SHALL BE USED.
- 3.3. ALWAYS ROUND TRIBUTARY AREA DOWN TO THE SMALLER TABLE VALUE. FOR LARGER TRIBUTARY AREAS THAN PUBLISHED, USE THE LARGEST PUBLISHED VALUE.
- READ OFF POSITIVE AND NEGATIVE PRESSURES FOR USE AS REQUIRED BY THE LOCAL MUNICIPALITY IN ACCORDANCE WITH CODE.
- FOR SITUATIONS THAT REQUIRE K<sub>d</sub>=1.0, TABLE VALUES ARE UNDER-DESIGNED BY A FACTOR OF 1.18. VERIFY K<sub>d</sub> REQUIREMENTS WITH LOCAL MUNICIPALITY PRIOR TO TABLE USE.

## GENERAL NOTES:

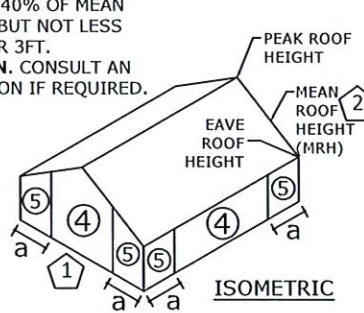
- THIS DOCUMENT IS ONLY VALID WITH AN ORIGINAL SIGNATURE & RAISED SEAL OR DIGITALLY SEALED WITH DATE-GEOGRAPHIC AREA & PERMITTEE LIMITATIONS.
- TABLES ARE TO BE USED IN CONFORMANCE WITH (ASD) "ALLOWABLE STRESS DESIGN METHODOLOGY" PER ASCE 7-16 & 7-22 SECTION 2.4.1 AND CHAPTER 30 PART 1 OR 3, USING THE CRITERIA AS OUTLINED HEREIN.
- DESIGN IS BASED ON THE ULTIMATE 3 SECOND GUST (WIND VELOCITY) FOR THE WIND VELOCITY & EXPOSURE SPECIFIED. 'Worst Case' CRITICAL CONDITIONS SHALL BE ASSUMED FOR DETERMINING PRESSURE RATINGS.
- 1.1. ASCE 7-16 & 7-22 RISK CATEGORY IS INDEPENDENT OF THESE RESULTS. FIND RISK CATEGORY VELOCITY TO BE LESS THAN THE RATED LIMITING ULTIMATE WIND VELOCITY REFERENCED ABOVE.
- TOPOGRAPHIC FACTOR K<sub>zt</sub>=1.0 FOR FLAT TERRAIN USE ONLY. NO HILLS SHALL BE NEARBY AREA.
- HOST STRUCTURE SHALL BE CONSTRUCTED AT GRADE AND NOT ARTIFICIALLY ELEVATED ON STILTS OR PLATFORMS.
- INTERNAL PRESSURE COEFFICIENT (G<sub>ci</sub>)=+/-0.18 - FOR USE WITH AN ENCLOSED STRUCTURE ONLY.
- VERIFY USE OF K<sub>d</sub> (DIRECTIONALITY FACTOR REFERENCED ABOVE) WITH LOCAL BUILDING DEPARTMENT.
- HVHZ = HIGH VELOCITY HURRICANE ZONE (BROWARD & DADE COUNTIES).
- TABLES ARE FOR VERTICAL SURFACES ONLY & FOR ALL ELEVATIONS ABOVE SEA LEVEL (K<sub>e</sub>=1.0).
- THIS MASTER PLAN SHEET IS GENERIC IN NATURE AND DOES NOT SERVE AS A SITE-SPECIFIC DOCUMENT.
- THIS DOCUMENT ILLUSTRATES ALLOWABLE DESIGN WIND PRESSURES (ASD) AS LISTED. APPLICATION OF THESE TABLES AND CORRESPONDING WIND VELOCITY, EXPOSURE, & OTHER COEFFICIENTS LISTED HEREIN SHALL BE DICTATED AND VERIFIED BY THE GOVERNING BUILDING DEPARTMENT AND PERMIT HOLDER. NO WARRANTY FOR APPLICABILITY OF THE USE OF THESE TABLES IS OFFERED HEREIN.
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- ADHERE TO ALL LOCAL IMPACT PROTECTION SYSTEM ORDINANCES.
- NO CERTIFICATION IS OFFERED FOR THE INTEGRITY OF THE HOST STRUCTURE.
- EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED.

## INTERIOR ZONE ④, EXTERIOR CORNER ZONE ⑤ & MEAN ROOF HEIGHT (MRH) EXPLAINED

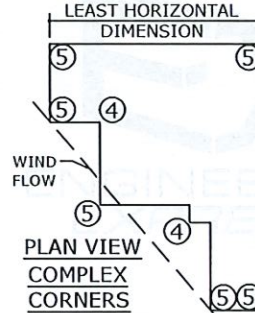
a= 10% OF LEAST HORIZONTAL DIMENSION OR 40% OF MEAN ROOF HEIGHT (MRH), WHICHEVER IS SMALLER, BUT NOT LESS THAN 4% OF LEAST HORIZONTAL DIMENSION OR 3FT.  
USE CORNER ZONE 5 IF AT ALL IN QUESTION. CONSULT AN ENGINEER FOR A MORE SPECIFIC INTERPRETATION IF REQUIRED.



ELEVATION



ISOMETRIC



PLAN VIEW  
COMPLEX  
CORNERS

VISIT [ecal.io/wind](http://ecal.io/wind) TO LEARN MORE ABOUT THIS DOCUMENT & FOR ADDITIONAL ENGINEERING FOR PERMIT.



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|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|----------|------|------|----------|
| SCALE: N.T.S.                                                                                                                                                                                                                                                     | 23-414 | REMARKS  | DRWN | CHKD | DATE     |
|                                                                                                                                                                                                                                                                   |        | 2020 FBC | CCB  | FLB  | 12/01/20 |
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FLORIDA BUILDING CODE  
7TH & 8TH EDITION (2020 & 2023)  
ASCE 7-16 & 7-22, CHAPTER 30  
DESIGN LOADS FOR COMPONENTS & CLADDING  
GENERAL PERFORMANCE EVALUATION TABLES

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