

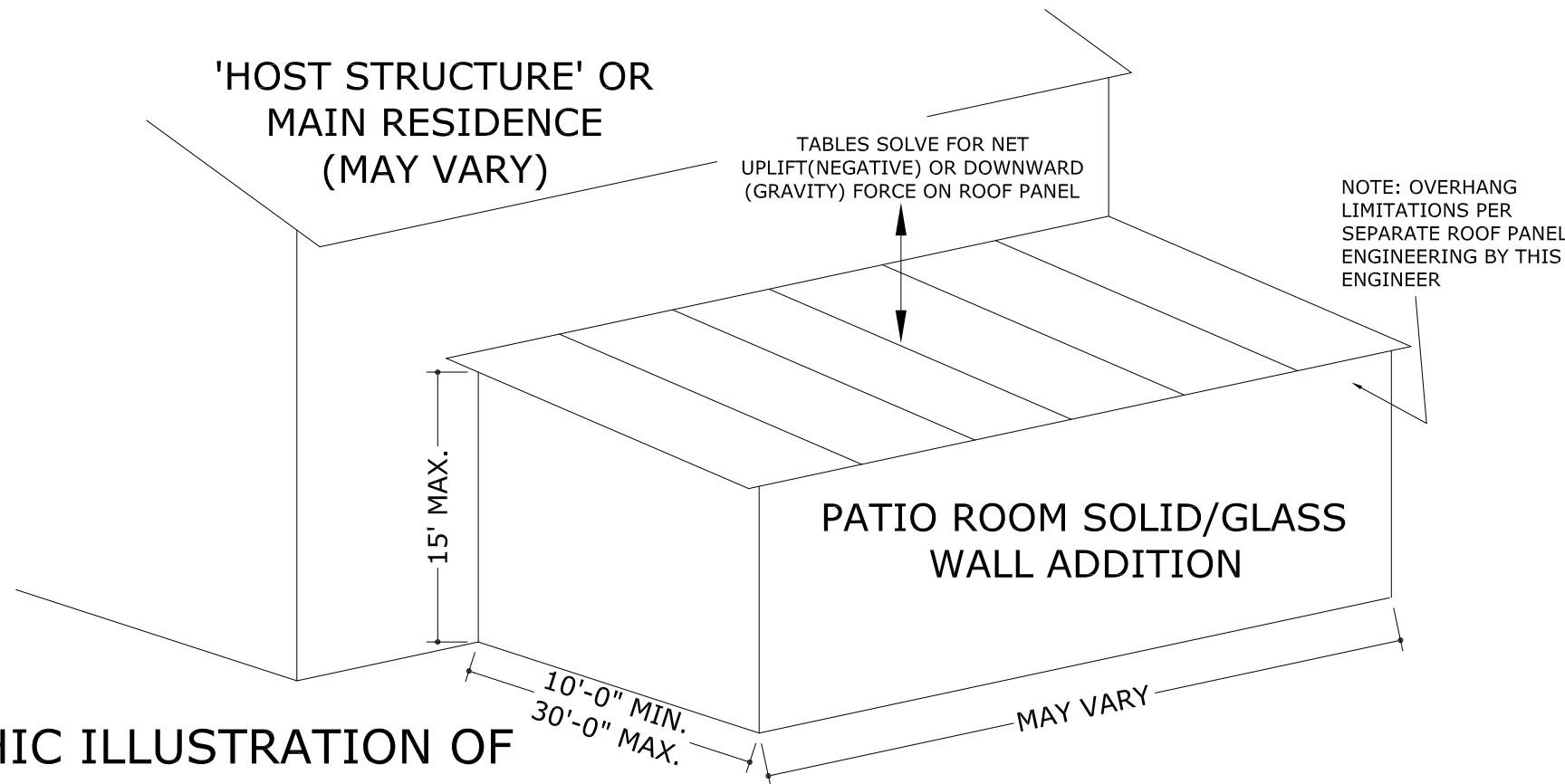
# ASCE 7-10 COMPONENTS & CLADDING REQUIRED WIND LOAD AND ROOF PRESSURE CHARTS

ROOF SLOPE <10 DEGREES			
SOLID WALLS			
WIND SPEED	EXPOSURE	NEGATIVE PRESSURE	POSITIVE PRESSURE
130 MPH	B	-19.79 PSF	16.00 PSF
	C	-23.97 PSF	16.00 PSF
140 MPH	B	-22.95 PSF	16.00 PSF
	C	-27.81 PSF	16.00 PSF
150 MPH	B	-26.34 PSF	16.00 PSF
	C	-31.92 PSF	16.96 PSF
160 MPH	B	-29.97 PSF	16.00 PSF
	C	-36.32 PSF	19.29 PSF
170 MPH	B	-33.84 PSF	17.98 PSF
	C	-41.00 PSF	21.78 PSF
180 MPH	B	-37.93 PSF	20.15 PSF
	C	-45.96 PSF	24.42 PSF

ROOF SLOPE <10 DEGREES			
SCREEN WALLS			
WIND SPEED	EXPOSURE	NEGATIVE PRESSURE	POSITIVE PRESSURE
120 MPH	B	-16.00 PSF	16.00 PSF
	C	-16.00 PSF	16.00 PSF
130 MPH	B	-16.00 PSF	16.00 PSF
	C	-16.00 PSF	16.00 PSF
140 MPH	B	-16.00 PSF	16.00 PSF
	C	-16.51 PSF	16.51 PSF
150 MPH	B	-16.00 PSF	16.00 PSF
	C	-18.58 PSF	18.58 PSF
160 MPH	B	-18.00 PSF	18.00 PSF
	C	-21.16 PSF	21.16 PSF
170 MPH	B	-19.80 PSF	19.80 PSF
	C	-23.74 PSF	23.74 PSF

ROOF SLOPE <10 DEGREES			
OPEN WALLS			
WIND SPEED	EXPOSURE	NEGATIVE PRESSURE	POSITIVE PRESSURE
120 MPH	B	-16.00 PSF	16.00 PSF
	C	-18.87 PSF	16.00 PSF
130 MPH	B	-18.28 PSF	16.00 PSF
	C	-22.15 PSF	16.00 PSF
140 MPH	B	-21.20 PSF	16.00 PSF
	C	-25.69 PSF	16.00 PSF
150 MPH	B	-24.34 PSF	16.00 PSF
	C	-29.48 PSF	16.00 PSF
160 MPH	B	-27.69 PSF	16.00 PSF
	C	-33.55 PSF	16.84 PSF
170 MPH	B	-31.26 PSF	16.00 PSF
	C	-37.87 PSF	19.01 PSF

USE PRESSURE RESULTS FROM THESE TABLES FOR APPLICABLE WIND AREAS TO SELECT  
ROOF PANELS FROM ROOF PANEL CLEAR SPAN TABLES  
(SEPARATE DOCUMENTS BY THIS ENGINEER FOR ELITE ALUMINUM CORPORATION ONLY)



**GRAPHIC ILLUSTRATION OF ENCLOSURE PRESSURE ZONES**

## GENERAL NOTES

- THIS DETAIL ONLY VALID WHEN SIGNED AND RAISED SEALED BY FRANK L. BENNARDO, P.E.
- THIS SPECIFICATION HAS BEEN CREATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2010 FLORIDA BUILDING CODE USING ASCE 7-10 "ASD" METHODOLOGY.
- THIS INFORMATION IS PROVIDED AS SUPPLEMENTAL INFORMATION TO BE PROVIDED WITH ELITE ROOF PANEL SPANS FOR PATIO ENCLOSURE TYPE ROOM SYSTEMS ONLY FOR THE UPLIFT VALUES SPECIFIED FOR GIVEN REGIONS. **THIS DOCUMENT IS TO BE USED ONLY WITH SEALED ELITE ROOF SPAN ENGINEERING BY THIS ENGINEER.**
- THIS DOCUMENT IS INTENDED TO PROVIDE A CORRELATION BETWEEN FIELD CONDITIONS AND WIND PRESSURE ONLY, AND IS NOT INTENDED TO SERVE AS A CONSTRUCTION DOCUMENT OF ANY KIND. NO PRODUCT OR SYSTEM IS CERTIFIED WITH THIS INFORMATION. REFER TO ADDITIONAL SEALED ENGINEERING BY THIS ENGINEER FOR DESIGN INFORMATION WHICH SHALL BE USED IN CONJUNCTION WITH THIS DOCUMENT.
- USE OF THIS SPECIFICATION BY ANY CONTRACTOR, et al. INDEMNIFIES AND SAVES HARMLESS THIS ENGINEER FOR ALL COSTS AND DAMAGES INCLUDING LEGAL FEES AND APPELLATE FEES RESULTING FROM MATERIAL FABRICATION, SYSTEM ERECTION, AND CONSTRUCTION PRACTICES BEYOND THAT WHICH IS CALLED FOR BY LOCAL, STATE, AND FEDERAL CODES AND FROM DEVIATIONS OF THIS DETAIL.
- FOR HIGH VELOCITY HURRICANE ZONES, THE MINIMUM ROOF LIVE LOAD REQUIRED SHALL BE 30 PSF. CONTRACTOR SHALL VERIFY GOVERNING ROOF LOAD IN HVHZ BEFORE USE.
- EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED.

## DESIGN CONSIDERATIONS:

- ASCE 7-10 DESIGN PARAMETERS:
  - SOLID WALLS CHART: RISK CATEGORY II STRUCTURE ENCLOSED,  $G_{cpi} = +/-0.18$
  - OPEN WALLS & SCREENS: RISK CATEGORY I STRUCTURE OPEN, OR FBC TABLE 2002.4
  - MEAN ROOF HEIGHT OF ENCLOSURE = 15'
  - ROOF TYPE: MONOSLOPE WITH 2:12 ROOF PITCH.
  - TRIBUTARY AREA = 10 SF AS APPLICABLE
  - ZONE 1 CONSIDERED FOR ASCE ROOF LOADING AS CRITICAL PANEL SPAN LIES IN ZONE 1 FOR STEPPED ROOFS. ADDITIONAL ZONES MAY APPLY; CONTACT THIS ENGINEER FOR SITE-SPECIFIC REQUIREMENTS AT ROOF ZONES NOT LISTED HEREIN.
  - DIRECTIONALITY FACTOR  $K_d = 0.85$
  - TOPOGRAPHIC FACTOR  $K_{zt} = 1.0$  (NO STEEP HILLS NEARBY)
- PROJECTION OF ENCLOSURE FROM RESIDENCE NOT TO EXCEED 30', 10' MIN. USED IN CALCULATIONS.
- MAX. HEIGHT OF ENCLOSURE NOT TO EXCEED THE LESSER OF MASTER PLAN SHEET LIMITATIONS OR AN ENCLOSURE AVERAGE HEIGHT (MEAN ROOF HEIGHT) OF 15'. HOUSE HEIGHT MAY VARY.
- MONOSLOPE UPLIFT  $G_{cp}$  CHARTS USED FROM ASCE 7.
- ROOF PANEL DEAD LOADS HAVE NOT BEEN ACCOUNTED FOR IN THIS DOCUMENT; SEE SEPARATE SPAN CHARTS FOR ROOF PANEL DEAD LOAD REDUCTIONS AND INCREASES ON A CASE-BY-CASE BASIS.
- RESULTING PRESSURE SHALL BE COMPARED TO A PRODUCT APPROVED PATIO ROOM ROOF PANEL SPAN CHART WHICH SHALL HAVE HIGHER APPROVED/ALLOWABLE PRESSURES THAN LISTED HEREIN FOR A GIVEN CONFIGURATION WITH CRITERIA SET AND VERIFIED BY OTHERS.

## OTHER CONSIDERATIONS:

- OBTAIN THE APPROPRIATE DESIGN WIND VELOCITY AND EXPOSURE FOR THE LOCATION IN QUESTION FROM THE LOCAL MUNICIPALITY OR ASCE 7-10 WIND VELOCITY CHARTS.
- ROUND UP TO THE NEAREST CONSERVATIVE PRESSURE ON THE CHART IF NECESSARY (DO NOT INTERPOLATE). IF EXPOSURE CATEGORY IS NOT CERTAIN, USE 'C'. THIS CHART NOT APPLICABLE FOR EXPOSURE 'D' CRITERIA.

FRANK L. BENNARDO, P.E.  
# PE0046549



VALID FOR (1) JOB(S) ONLY  
VALID ONLY WITH RAISED ENGINEER SEAL

**ENGINEERING EXPRESS**  
160 SW 12th AVENUE, #106  
DEERFIELD BEACH, FL 33442  
Ph: (954) 354-0660 Fax: (954) 354-0443  
WWW.ENGENXP.COM  
CERT OF AUTH #9885  
A FRANK L. BENNARDO, P.E., INC. INNOVATION

**ELITE ALUMINUM CORPORATION**  
4650 LYONS TECHNOLOGY PARKWAY  
COCONUT CREEK, FL 33073  
ASCE 7-10 AND 2010 FBC  
WIND LOAD DESIGN PRESSURE  
MASTER PLAN SHEET

REMARKS	DRWN	CHKD	DATE
INIT ISSUE	FLB	FLB	02/24/06
REV. PER 2006 IBC/IRC	KL	CL	02/22/08
REV. PER 2010 FBC	GSS	TSB	03/28/12

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