

STEP 1: DETERMINE WIND VELOCITY PER LOCATION, RISK, AND EXPOSURE



ASCE 7-10 & 7-16 ULT WIND VELOCITY TO ASD DESIGN PRESSURE AT GRADE CONVERSION CHART - HVHZ OR NON HVHZ									
EXAMPLE COUNTY	RISK I	EXPOSURE C D		RISK II	EXPOSURE C D		RISK III, IV	EXPOSURE C D	
FORT MYERS	145 MPH	29.4 PSF	35.6 PSF	160 MPH	35.8 PSF	43.4 PSF	175 MPH	42.8 PSF	51.9 PSF
PALM BEACH	150 MPH	31.5 PSF	38.1 PSF	170 MPH	40.4 PSF	49.0 PSF	180 MPH	45.3 PSF	54.9 PSF
BROWARD	156 MPH	34.0 PSF	41.2 PSF	170 MPH	40.4 PSF	49.0 PSF	180 MPH	45.3 PSF	54.9 PSF
MIAMI-DADE	165 MPH	38.1 PSF	46.1 PSF	175 MPH	42.8 PSF	51.9 PSF	186 MPH	48.4 PSF	58.6 PSF
MONROE	175 MPH	42.8 PSF	51.9 PSF	180 MPH	45.3 PSF	54.9 PSF	200 MPH	55.9 PSF	67.8 PSF
Kz (Exp C/D) (Table 26.10-1) =		0.85	1.03	Kd (Table 26.6-1) =		0.9	G (Section 26.11) =		0.85
		Kzt (Section 26.8.2) =		1.0		Ke (Section 26.9) =		1	
						Cf (Table 29.4-1) =		1.4	

NOTE: TABLE ABOVE INCLUDES A QUICK REFERENCE OF COMMON FLORIDA CONDITIONS (AT ULTIMATE DESIGN WIND VELOCITIES) FOR SITE-SPECIFIC CONDITIONS, CONSULT LOCAL BUILDING MUNICIPALITY. MAXIMUM DESIGN WIND PRESSURES AT GRADE PER SPECIFIED EXPOSURE REMAIN CONSTANT FOR ANY MAX WIND VELOCITY. FOR SITE-SPECIFIC WIND VELOCITY AND PRESSURE CONVERSIONS, SEE QR LINK PROVIDED BELOW.

STEP 2: DETERMINE CONCRETE PAD PER ALLOWABLE WIND PRESSURE

TABLE 2.1: CONCRETE PAD INFORMATION

PRECAST PADS	MODEL	L, IN	W, IN	H, IN	WT, LB
32 X 54 X 6, SOLID CONCRETE		32	54	6	900

TABLE 2.2: ALLOWABLE LATERAL ASD PRESSURE FOR PAD / GENERATOR COMBINATION

BRAND	CAPACITY	MODEL	L, IN	W, IN	H, IN	WT, LB	ALLOWABLE ASD PRESSURE	EQUIVALENT WIND	
								EXP C	EXP D
GENERAC	10 KW	005871 & 005883	25.0	48.0	28.8	387	43.8 PSF	175 MPH	160 MPH
	14 KW	005872 & 005884	25.0	48.0	28.8	439	45.6 PSF	180 MPH	160 MPH
	16 KW	7035, 7036, 7037	25.0	48.0	28.8	406	44.5 PSF	175 MPH	160 MPH
	16 KW	007176 & 7178	25.5	48.5	28.6	420	44.5 PSF	175 MPH	160 MPH
	16 KW	006721	25.0	48.0	28.8	448	45.9 PSF	180 MPH	160 MPH
	16 KW	6459, 6461, 6462	25.0	48.0	28.8	513	48.1 PSF	180 MPH	165 MPH
	17 KW	005874 & 005886	25.0	48.0	28.8	421	45.0 PSF	175 MPH	160 MPH
	17 KW	005873 & 005885	25.0	48.0	28.8	455	46.1 PSF	180 MPH	165 MPH
	18 KW	007226 & 007228	25.0	48.0	29.0	420	44.6 PSF	175 MPH	160 MPH
	20 KW	007038 & 007039	25.0	48.0	28.8	448	45.9 PSF	180 MPH	160 MPH
	20 KW	005875 & 005887	25.0	48.0	28.8	451	46.0 PSF	180 MPH	160 MPH
	20 KW	006729 & 006730	25.0	48.0	28.8	516	48.2 PSF	180 MPH	165 MPH
	22 KW	007042 & 7043	25.0	48.0	28.8	466	46.5 PSF	180 MPH	165 MPH
	22 KW	006551 & 006552	25.0	48.0	28.8	526	48.6 PSF	186 MPH	165 MPH
	24 KW	007209 & 7210	25.0	48.0	29.0	455	45.8 PSF	180 MPH	160 MPH
	26 KW	7290 & 7291	25.0	48.0	29.0	455	45.8 PSF	180 MPH	160 MPH
KOHLER	20 KW	14RES & 20RES	26.0	48.0	28.8	500	47.0 PSF	180 MPH	165 MPH

NOTES:

- 1- CONCRETE PADS WEIGHT CALCULATED PER STANDARD WEIGHT CONCRETE (150 PCF)
- 2- MIN REQUIRED WEIGHTS LISTED. REFER MANUFACTURER SPECS FOR SPECIFIC MODEL WEIGHT
- 3- CONCRETE MIN COMPRESSIVE STRENGTH TO BE f'c=6,000 PSI AT 28 DAYS.
- 4- UNITS NOT SHOWN ARE RATED TO EQUIVALENT PRESSURES GIVEN EQUAL SIZE & EQUAL OR GREATER WEIGHT. FOR UNITS OR CONDITIONS REQUIRING GREATER ALLOWABLE PRESSURE, LARGER PAD OR ADDITIONAL ANCHORAGE MAY BE REQUIRED.
5. UPLIFT HAS BEEN CONSIDERED IN DESIGN CALCULATIONS. UPLIFT CALCULATED AS THE MAXIMUM OF 1.5/1.9 X LATERAL PRESSURE & 0.6 X qh

ALLOWABLE DESIGN PRESSURE

REQUIRED WIND LOAD DESIGN PRESSURES CALCULATED FOR USE WITH THIS SYSTEM SHALL BE DETERMINED UNDER SEPARATE CERTIFICATION ON A JOB-SPECIFIC BASIS IN ACCORDANCE WITH THE GOVERNING CODE. SITE-SPECIFIC LOAD REQUIREMENTS AS DETERMINED IN ACCORDANCE WITH THE APPLICABLE BUILDING CODE SHALL BE LESS THAN OR EQUAL TO THE POSITIVE OR NEGATIVE DESIGN PRESSURE "ASD" CAPACITY VALUES LISTED HEREIN FOR ANY ASSEMBLY AS SHOWN.

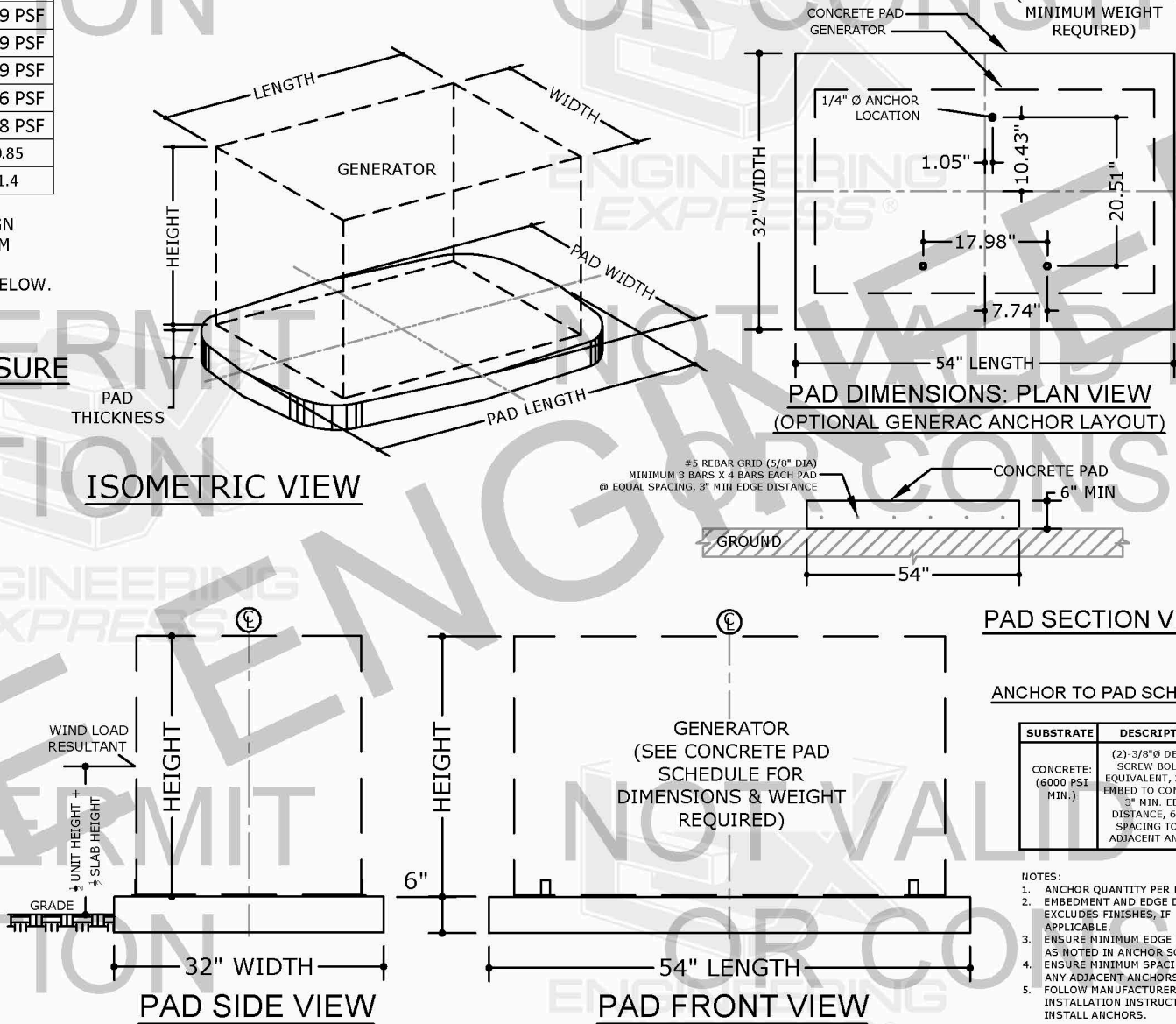
VISIT [ECALC.IO/36082](https://ecalculator.com/36082)

FOR ENGINEER CERTIFIED ORIGINALS & MORE INFORMATION ABOUT THIS DOCUMENT OR SCAN THIS QR CODE

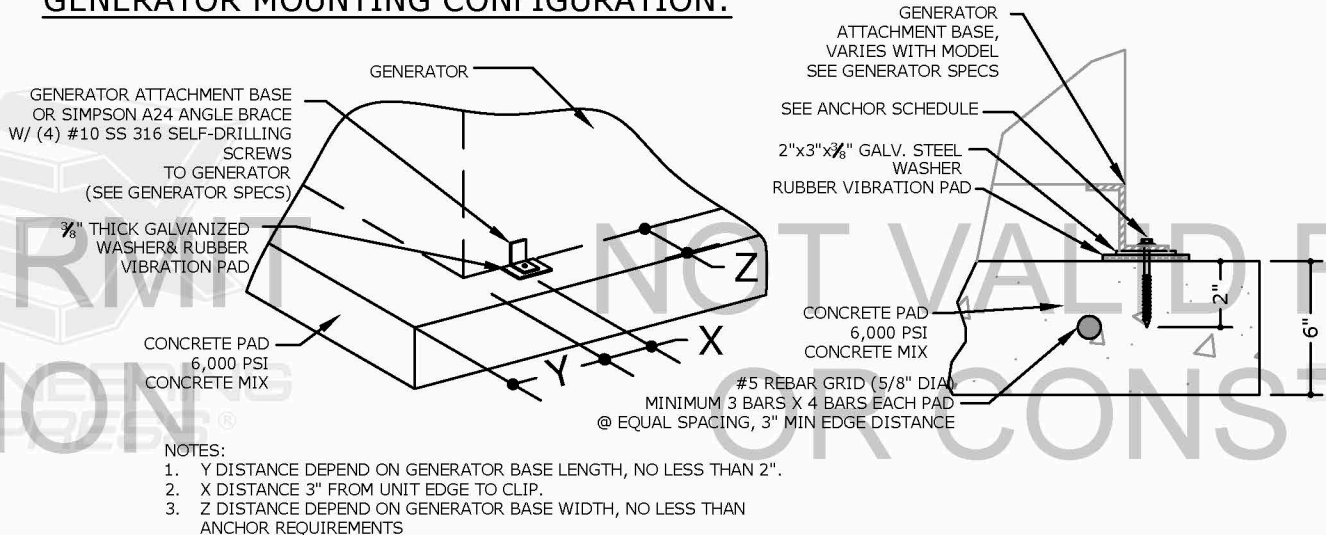
VISIT [ENGINEERINGEXPRESS.COM/PRECASTPADS](https://engineeringexpress.com/precastpads) FOR ADDITIONAL PLANS, REPORTS & RESOURCES



PRECAST PADS
SOLID CONCRETE GENERATOR PAD
32 X 54 X 6 IN, SOLID CONCRETE (900 LB MIN)
(ON-GRADE APPLICATIONS ONLY)



GENERATOR MOUNTING CONFIGURATION:



SPACE RESERVED FOR DIGITAL SEAL INFORMATION
WHEN DIGITALLY SEALED, THIS NOTE SHALL BE FULLY COVERED ON SHEET 1
WHEN PRINTED OR PHYSICALLY SEALED, SEAL OF CERTIFYING ENGINEER, AND DATE OF CERTIFICATION SHALL BE SHOWN TO THE RIGHT.
IN ALL CASES, CERTIFYING ENGINEER AND CERT OF AUTH AS LISTED ON STAMP

PE SEAL REQUIRED
COPIES NOT VALID FOR PERMIT

DESIGN NOTES

1. THIS SYSTEM HAS BEEN DESIGNED AND SHALL BE FABRICATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE SIXTH & SEVENTH EDITION (2017 & 2020).
2. POSITIVE AND NEGATIVE DESIGN PRESSURES CALCULATED FOR USE WITH THIS SYSTEM SHALL BE DETERMINED BY OTHERS ON A JOB-SPECIFIC BASIS IN ACCORDANCE WITH THE GOVERNING CODE.
3. MAXIMUM DIMENSIONS AND WEIGHT OF GENERATORS UNIT SHALL CONFORM TO SPECIFICATIONS STATED HEREIN.
4. THE AREA UNDER CONCRETE SLAB ON GROUND SHALL HAVE ALL VEGETATION, STUMPS, ROOTS, AND FOREIGN MATERIALS REMOVED PRIOR TO INSTALLATION ON COMPACTED SOIL AS VERIFIED BY OTHERS. THESE CONCRETE PADS HAVE BEEN DESIGNED FOR A MINIMUM BEARING CAPACITY OF 2,000 PSF AND MINIMUM SUBGRADE MODULUS = 100 PCI. SHOULD OTHER CONDITIONS OR MATERIALS BE ENCOUNTERED, THE ENGINEER OF RECORD SHALL BE NOTIFIED PRIOR TO PROCEEDING WITH THE WORK.
5. UPLIFT HAS BEEN CONSIDERED IN DESIGN CALCULATIONS. UPLIFT CALCULATED AS THE MAXIMUM OF 1.5/1.9 X LATERAL PRESSURE & 0.6 X qh
6. SLIDING IS ASSUMED RESISTED BY 2" EMBEDMENT OF PAD IN GROUND ALONG WITH RESISTANCE FROM CONNECTED CABLING, NOMIAL SLIDING IS NOT ASSUMED A FAILURE CASE IN THIS DESIGN

GENERAL NOTES

7. ELECTRICAL GROUND, WHEN REQUIRED, TO BE DESIGNED & INSTALLED BY OTHERS. ALL MECHANICAL SPECIFICATIONS (CLEAR SPACE, TONNAGE, ETC.) SHALL BE AS PER MANUFACTURER RECOMMENDATIONS AND ARE THE EXPRESS RESPONSIBILITY OF THE CONTRACTOR.
8. ENGINEER SEAL AFFIXED HERETO VALIDATES STRUCTURAL DESIGN AS SHOWN ONLY. USE OF THIS SPECIFICATION BY CONTRACTOR, ET AL. INDEMNIFIES & SAVES HARMLESS THIS ENGINEER FOR ALL COST & DAMAGES INCLUDING LEGAL FEES & APPELATE FEES RESULTING FROM MATERIAL FABRICATION, SYSTEM ERECTION, CONSTRUCTION PRACTICES BEYOND THAT WHICH IS CALLED FOR BY LOCAL, STATE, & FEDERAL CODES & FROM DEVIATIONS OF THIS PLAN. 15.
9. HOLLOW PADS FOR USE WHERE APPLICABLE BY CODE. USE OF PADS MAY BE SUBJECT TO BUILDING DEPT APPROVAL
10. WATER-TIGHTNESS OF EXISTING FINISHES SHALL BE THE FULL RESPONSIBILITY OF THE INSTALLING CONTRACTOR. CONTRACTOR SHALL ENSURE THAT ANY REMOVED OR ALTERED WATERPROOFING MEMBRANE IS RESTORED AFTER FABRICATION AND INSTALLATION OF STRUCTURE PROPOSED HEREIN. THIS ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY WATERPROOFING OR LEAKAGE ISSUES WHICH MAY OCCUR AS WATER-TIGHTNESS SHALL BE THE FULL RESPONSIBILITY OF THE INSTALLING CONTRACTOR.
11. THE ROLE OF THIS ENGINEER FOR THIS PROJECT IS THAT OF SPECIALTY ENGINEER AND NOT THE ENGINEER OF RECORD. CONSEQUENTLY, THE ARCHITECT/ENGINEER OF RECORD SHALL BE RESPONSIBLE FOR THE INTEGRITY OF ALL SUPPORTING SURFACES TO THIS DESIGN WHICH SHALL BE COORDINATED BY THE PERMITTING CONTRACTOR.
12. THIS DOCUMENT IS GENERIC AND DOES NOT PERTAIN TO ANY SPECIFIC PROJECT SITE. INFORMATION CONTAINED HEREIN IS BASED ON CONTRACTOR-SUPPLIED DATA AND MEASUREMENTS. ENGINEERING EXPRESS SHALL NOT BE HELD RESPONSIBLE OR LIABLE IN ANY WAY FOR ERRONEOUS OR INACCURATE DATA OR MEASUREMENTS. DIMENSIONS ARE SHOWN TO ILLUSTRATE DESIGN FORCES AND OTHER DESIGN CRITERIA. THEY MAY VARY SLIGHTLY, BUT MUST REMAIN WITHIN THE LIMITATIONS SPECIFIED HEREIN. WORK SHALL BE FIELD VERIFIED BY OTHERS PRIOR TO CONSTRUCTION. ENGINEERING EXPRESS SHALL BE NOTIFIED AND GIVEN AN OPPORTUNITY TO REEVALUATE OUR WORK UPON DISCOVERY OF ANY INACCURATE INFORMATION PRIOR TO MODIFICATION OF EXISTING FIELD CONDITIONS AND FABRICATION AND INSTALLATION OF MATERIALS. ALTERATIONS OR ADDITIONS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE OUR CERTIFICATION.
13. EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED.

DIGITAL SEAL NOTICE:
IF THIS DOCUMENT IS DIGITALLY SIGNED, THIS SHEET IS PART OF A DIGITALLY SIGNED FILE. IT SHALL REMAIN IN DIGITAL FORMAT, SHALL BE VERIFIED BY ELECTRONIC MEANS, & PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED.
PRINTED DOCUMENT NOTICE:
IF THIS DOCUMENT IS PRINTED & DOES NOT CONTAIN AN ENGINEER'S ORIGINAL SIGNATURE & SEAL, THIS DOCUMENT IS VOID & NOT VALID FOR USE. PHOTOCOPIES ARE NOT PERMITTED FOR USE.
VALID FOR 1 PERMIT ONLY U.N.O.



POSTAL ADDRESS:
401 W. ATLANTIC AVE R10 #219
DELRAY BEACH, FL 33444
ENGINEERINGEXPRESS.COM

PRECAST PADS

39801 FOREST DRIVE
EUSTIS, FL 32736
(305) 764 - 1136

CONCRETE PAD MASTER PLAN
PRECAST CONCRETE GENERATOR PADS
FLORIDA BUILDING CODE 7TH ED (2020)

REMARKS	DRWN	CHKD	DATE
INIT ISSUE (19-16293)	LO	FLB	10/14/19
2020 FBC	CCB	FLB	1/15/21
GENERATOR TABLE UPDATE	CCB	FLB	6/14/22

THIS DOCUMENT IS THE PROPERTY OF ENGINEERING EXPRESS, AND SHALL NOT BE REPRODUCED IN WHOLE OR PART WITHOUT WRITTEN CONSENT OF ENGINEERING EXPRESS. ALTERATIONS, ADDITIONS, OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE OUR CERTIFICATION.

COPYRIGHT ENGINEERING EXPRESS®

21-36082

SCALE: NTS UNLESS NOTED

1 OF 1