

## DESIGN NOTES:

1. THIS PRODUCT HAS BEEN DESIGNED IN ACCORDANCE WITH ASCE 7 AND THE
FLORIDA BUILDING CODE SEVENTH EDITON ( 2020 ) FOR USE WITHIN AND O
 DESIGN SCHEDULES. THE DESIGN CRITERIA USED TO CALCULATE THE REQUIRED
DESIGN PRESSURSS CONSIDRS
FBC SECTON 1609 FOR NON-HVHZ AND SECTION 1620 FOR HVHZ (GCCLLateral 1.90 WITHIN THE HVHZ \& OUTSIDE THE HVHZ
2. ALL
3. 29 .
4. The heights listed in the allowable pressure schedule represents the

5. THESIGN TIT BASED ON CLIENT PROVIDED PRODUCT AND DIE SHEETS FROM TEST

6. BE PERMITED.
7. STEELCLIPS SHALL BE 12ga ASTM AG53 STEEL WITH FY=39 KSI OR BETTER. STEEL
MEMBERS SHALL BE PROTECTED AGAINST CORROSION WITH AN APPROVED COATOF PAINT, ENAMEL OR OTHER APPROVED PROTECTION. G90-RATED COATING REQUIRED
FOR COASTAL GFNERAL NOTES
THis product has been designed and shall be fabricated in accordance WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE \& ASCE 7. THIS
PRODUCT MAY BE USED WTTHIN AND OUTSIDE THE HIGH VELOCITY HURRICANE
ZONE. MAXIM \& \& minimum dimensions and minimum weight of mechanical un SHALL CONFORM TO SPECIIICATIONS STATTD HEREIN. ALL MECHANICAL

8. FASTENERS TO BE \# \& X X4O OR GREATR SAE GR 5 SR STANLESS STEEL 410 BRAND, INSTALLED TO 3000 PSI MIN CONCRETE. ALTERNATE CONCRETE ANCHORS MAY BE USED IF CERTFIED BY OTHERS TO HAVE GREATER OR EQUAL ALLOWABLE ENSION/SHEAR CAPACTIES. SEE ANCHOR TO HOST SCHEDULE FOR ANC
EQUIREMENTS. ALL FASTENERS SHALL HAVE APPROPRIATE CORROSION
PROTECTION TO PREVENT ELECTROHSIS.
9. ALL COMCR ETE SRECIFIED HEREIN IS NOT PART OF THIS CERTIFICATION. AS A MINIMUM, ALL CONCRETE SHALL BE STRUCTURAL CONCRETE 4" MIN. THICK AND
SHALL HAVE MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI, UNLESS NOTED
OTHERWISE.

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& \text { OTHE RWITE. } \\
& \text { THA CONTACTOR IS RESPONSTBLE TO } \\
& \text { MATETALS TO PEVENT ELECROLYSIS }
\end{aligned}
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trolysis.
6. ELECTRLCA GRONDD, WHEN REQUTRED, TO BE DESTGNED \& INSTALLED BY OTHERS
 INCLUDED IN THIS CERTHICATION. EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDIIONAL CERTIFICATIONS OR AFIRMATIONS ARE INTENDED.
THE SYSTEM DETAILED HEREIN IS GENERIC AND DOES NOT PROVIDE INFORMATIO FOR A SPECIFIC SITE. FOR SITE CONDITONS DIFFERENT FROM THE CONDITIONS DETAILED HEREIN, A LICENSED ENGINEER OR REGISTERED ARCHITECT SHAL
PREPARE SITE SPECIITC DOCUMENTS FOR USE IN CONJUNCTION WITH THIS
document
WATER-TIGHTNESS OF EXISTING HOST SUBSTRATE SHALL BE THE FULL RESPONSIBLILTY OF THE INSTALLING CONTRACTOR. CONTRACTOR SHALL ENSURE
THAT ANY REMOVED OR ALTERED WATERPROOFING MEMBRANE IS RESTORED AFTE FABRICATION AND INSTALLATION OF STRUCTURE PROPOSED HEREIN. THIS ENGINEER SHALL NOT BE RESPO NSIBLE FOR ANY WATERPROOFING OR L
ISSUES WHICH MAY OCCUR AS WATER-TIGHTNESS SHALL BE THE FULL IRSUPONSIBILTTY OF THE INSTALING CONTRACTOR

UNIT DEPTH SHALL ALWAYS B LESSER OR EQUAL TO UNIT
WIDTH WHEN USING DESIGN SCHEDULES


| $\underset{\text { MEIGHT }}{\text { MAX UNIT }}$ | MAX UNIT FACE AREA | MIN UNITDEPTH | MAX ALLOWABLE DESIGN PRESSURES W/ (1) CLIP PER CORNER |  | MAX ALLOWABLE DESIGN PRESSURES W/ (2) CLIPS PER CORNER |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | LATERAL DESIGN PRESSURE | UPLIFT DESIGN PRESSURE | LATERAL DESIGN PRESSURE | UPLIFT DESIGN PRESSURE | MIN UNIT WEIGHT (LB) |
| 24 in | 576 in^2 | 15 in | 133.0 psf | 105.0 psf | 180.0 psf | 142.1 psf | 50 |
|  |  | 24 in | 154.0 psf | 121.6 psf | 180.0 psf | 142.1 psf | 50 |
| 36 in | 1296 in^2 | 15 in | 49.0 psf | 38.7 psf | 96.0 psf | 75.8 psf | 75 |
|  |  | 24 in | 65.0 psf | 51.3 psf | 127.0 psf | 100.3 psf | 125 |
|  |  | 36 in | 76.0 psf | 60.0 psf | 144.0 psf | 113.7 psf | 200 |
| 48 in | 2304 in^2 | 24 in | 33.0 psf | 26.1 psf | 63.0 psf | 49.7 psf | 150 |
|  |  | 36 in | 40.0 psf | 31.6 psf | 77.0 psf | 60.8 psf | 200 |
|  |  | 48 in | 45.0 psf | 35.5 psf | 83.0 psf | 65.5 psf | 300 |
| 60 in | 3600 in^2 | 36 in | 24.0 psf | 18.9 psf | 45.0 psf | 35.5 psf | 200 |
|  |  | 48 in | 26.0 psf | 20.5 psf | 50.0 psf | 39.5 psf | 250 |
|  |  | 60 in | 30.0 psf | 23.7 psf | 54.0 psf | 42.6 psf | 350 |

TABLE 2: CLIP DESIGN SCHEDULE (22 GA MIN. UNIT HOUSING)

| MAX UNIT HEIGHT | MAX UNIT <br> FACE <br> AREA | MIN UNIT | MAX ALLOWABLE DESIGN PRESSURES W/ (1) CLIP PER CORNER |  | MAX ALLOWABLE DESIGN PRESSURES W/ (2) CLIPS PER CORNER |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | LATERAL DESIGN PRESSURE | UPLIFT DESIGN PRESSURE | LATERAL DESIGN PRESSURE PRESSURE | UPLIFT DESIGN PRESSURE | MIN UNIT WEIGHT (LB) |
| 24 in | 576 in^2 | 15 in | 122.0 psf | 96.3 psf | 180.0 psf | 142.1 psf | 50 |
|  |  | 24 in | 140.0 psf | 110.5 psf | 180.0 psf | 142.1 psf | 50 |
| 36 in | 1296 in^2 | 15 in | 45.0 psf | 35.5 psf | 89.0 psf | 70.3 psf | 75 |
|  |  | 24 in | 59.0 psf | 46.6 psf | 115.0 psf | 90.8 psf | 125 |
|  |  | 36 in | 68.0 psf | 53.7 psf | 129.0 psf | 101.8 psf | 200 |
| 48 in | 2304 in^2 | 24 in | 30.0 psf | 23.7 psf | 58.0 psf | 45.8 psf | 150 |
|  |  | 36 in | 36.0 psf | 28.4 psf | 69.0 psf | 54.5 psf | 200 |
|  |  | 48 in | 40.0 psf | 31.6 psf | 75.0 psf | 59.2 psf | 300 |
| 60 in | 3600 in^2 | 36 in | 22.0 psf | 17.4 psf | 41.0 psf | 32.4 psf | 200 |
|  |  | 48 in | 24.0 psf | 18.9 psf | 46.0 psf | 36.3 psf | 250 |
|  |  | 60 in | 27.0 psf | 21.3 psf | 50.0 psf | 39.5 psf | 350 |

TABLE 3: ANCHOR TO HOST SCHEDULE

| SUBSTRATE | DESCRIPTION |
| :---: | :---: |
| CONCRETE: (2-5/8" THICK MIN, 3000 PSI MIN.) | (1)-1/4"Ø DEWALT OR DEWALT ULTRACON, $13 / 4^{\prime \prime}$ FULL EMBED TO CONCRETE, 212" MIN. EDGE DISTANCE, $3^{\prime \prime}$ MIN. SPACING TO ANY ADJACENT ANCHOR. |
| $\begin{gathered} \text { ALUMINUM: } \\ \text { (0.090" MIN. } \\ \text { THICK, 6061-T6 } \\ \text { MIN. ALUMINUM) } \end{gathered}$ | (1)-\#14 SAE GR 5 OR STAINLESS STEEL BOLT 410 WITH NUT AND WASHER TOP \& BOTTOM SS OD 1", <br> 12" MINIMUM EDGE DISTANCE TO METAL EDGE |
| STEEL: <br> (0.100" MIN. THICK, 36 KSI MIN. STEEL) | (1)-\#14 SAE GR 5 OR STAINLESS STEEL BOLT 410 WITH NUT AND WASHER TOP \& BOTTOM SS OD 1", $1 / 2 "$ MINIMUM EDGE DISTANCE TO METAL EDGE |

$\frac{\text { TABLE } 1 \& 2 \text { NOTES: }}{\text { 1. UTILIZE THE UNIT }}$ DIMENSION DIRECTIVE
ON SHEET 1 FOR ON SHEET 1 FOR
DEFINITIONS OF DEFIGITT, UNIT DEPTH AND FACE AREA.
2. MAXIMUM ALLOWABLE
ANCHOR CLIP TENSION ANCHOR CLIP TENSION UTTLIZED TO CREATE THESE SCHEDULES ARE BASED ON TESTED DATA
PER THE TEST REPORT PER THE TEST REPDRT
LISTED IN THE DESIGN NOTES WITH A SAFETY FACTOR OF 2.
INDIVIDUAL UNIT WEIGHTS SHALL NOT BE
LESS THAN THE WEIGHTS LISTED IN THESE DESIGN
SCHEDULES
4. LINEAR INTERPOLATION between unit face AREAS AND UNIT
5. DEPTHS IS PERMITTED. PRESSURES SHALL BE LESS THAN OR EQUAL TO THE ALLOWABLE ASD
PRESSURES WITHIN PRESSURES WITH
THESE DESIGN SCHEDULES.
6. THE REQUIRED DESIGN PRESSURE SCHEDULE
(TABLE 4) MAY BE USED TO FIND REQUIRED DESIGN PRESSURES OR REQUIRED DESIGN
PRESSURES SHALL BE CALCULATED
SEPARATELY.

TABLE 4: REQUIRED DESIGN PRESSURE SCHEDULE

| MAXIMUM MEAN ROOF HEIGHT | ultimate WIND SPEED | EXPOSURE | LATERAL DESIGN PRESSURE (ASD) | UPLIFT DESIGN PRESSURE (ASD |
| :---: | :---: | :---: | :---: | :---: |
| AT GRADE | 140 mph | C | 43.7 psf | 34.5 psf |
| At GRade |  | D | 53.0 psf | 41.9 psf |
|  |  | c | 50.4 psf | 39.8 psf |
| 25 ft |  | D | 59.7 psf | 47.1 psf |
| 50 ft |  | C | 57.3 psf | 45.3 psf |
|  |  | D | 66.4 psf | 52.4 psf |
| 75 ft |  | C | 62.1 psf | 49.0 psf |
|  |  | D | 70.9 psf | 56.0 psf |
| 100 ft |  | C | 65.8 psf | 51.9 psf |
|  |  | D | 74.3 psf | 58.7 psf |
| 150 ft |  | C | 71.4 psf | 56.4 psf |
|  |  | D | 79.6 psf | 62.8 psf |
| AT GRADE | 170 mph | c | 64.5 psf | 50.9 psf |
|  |  | D | 78.2 psf | 61.8 psf |
| 25 ft |  | C | 74.3 psf | 58.7 psf |
|  |  | D | 90.0 psf | 69.4 psf |
| 50 ft |  | c | 84.6 psf | 66.8 psf |
|  |  | D | 97.9 psf | 77.3 psf |
| 75 ft |  | C | 91.5 psf | 72.3 psf |
|  |  | D | 104.5 psf | 82.5 psf |
| 100 ft |  | C | 97.0 psf | 76.6 psf |
|  |  | D | 109.6 psf | 86.5 psf |
| 150 ft |  | C | 105.3 psf | 83.1 psf |
|  |  | D | 117.3 psf | 92.6 psf |
| 200 ft |  | C | 111.7 psf | 88.2 psf |
|  |  | D | 123.2 psf | 97.3 psf |
| AT GRADE | 175 mph | c | 68.3 psf | 53.9 psf |
|  |  | D | 82.9 psf | 65.4 psf |
| 25 ft |  | C | 78.7 psf | 62.2 psf |
|  |  | D | 93.2 psf | 73.6 psf |
| 50 ft |  | c | 89.6 psf | 70.7 psf |
|  |  | D | 103.7 psf | 81.9 psf |
| 75 ft |  | c | 97.0 psf | 76.6 psf |
|  |  | D | 110.8 psf | 87.4 psf |
| 100 ft |  | c | 102.8 psf | 81.1 psf |
|  |  | D | 116.2 psf | 91.7 psf |
| 150 ft |  | C | 111.6 psf | 88.1 psf |
|  |  | D | 124.3 psf | 89.2 psf |
| 200 ft |  | c | 118.4 psf | 93.4 psf |
|  |  | D | 130.5 psf | 103.1 psf |

TABLE 4 NOTES:
THE REQUIRED ASD DESIGN PRESSURES LISTED IN THIS SCHEDULE WERE CALCULATED
BASED ON THE FOLOWING PARAMETERS: BASED ON THE FOLLOWING PARAMETERS:
1.1. ASCE 7 SECTION 29.5 "ROOFTOP STRUCTURES AND EQUIPMENT"
$\begin{array}{ll}\text { 1.2. } & \text { STRUCTURE } \\ \text { 1.3. } & \mathrm{z}=4.5 \mathrm{FT}\end{array}$
1.4. LATERAL GC_f $=1.90$; UPLIFT GC_f $=1.50$
. THIS REQUIRED PRESSURE SCHEDULE IS FOR REFERENCE ONLY AND SHALL BE
APPROVED BY THE AUTHORITY HAVING JURISDICTION AS BEING ADEQUATE FOR USE. IF THE DESIGN PRESSURES LISTED IN THE SCHEDULE ARE NOT USED, REQUIRED
DESIGN PRESSURES SHALL BE CALCULATED ON A SITE SPECIFIC BASIS BY OTHERS,


20-31532 SCALE: NTS UNLESS NOTED

