



# City of Belle Isle

Universal Engineering Sciences 3532 Maggie Blvd., Orlando, FL 32811  
 Tel 407-581-8161 \* Fax 407-581-0313 \* [www.universalengineering.com](http://www.universalengineering.com)

## PERMIT CARD – PLEASE POST AT JOB SITE

THIS DOCUMENT BECOMES YOUR PERMIT WHEN PROPERLY VALIDATED

Per FBC 105.3.3: An enforcing authority may not issue a building permit for any building construction, erection, alteration, modification, repair or addition unless the permit either includes on its face or there is attached to the permit the following statement: **"NOTICE: In addition to the requirements of this permit, there may be additional restrictions applicable to this property that may be found in the public records of this county, and there may be additional permits required from other governmental entities such as water management districts, state agencies, or federal agencies."** The issuance of this permit does not grant permission to violate any applicable City, Orange County, State of Florida and/or Federal codes and/or ordinances. Separate permits are required for Signs, Roofing, Electrical, Gas, Plumbing and Mechanical services. This permit becomes VOID if the work authorized is not commenced within 6 months, or is suspended or abandoned for a period of 6 months after commencement. WORK SHALL BE CONSIDERED SUSPENDED IF AN APPROVED INSPECTION HAS NOT BEEN MADE WITHIN A 6 MONTH PERIOD. PERMISSION IS GRANTED TO DO THE FOLLOWING WORK ACCORDING TO THE CONDITIONS HEREON AND THE APPROVED PLANS AND SPECIFICATIONS, SUBJECT TO COMPLIANCE WITH THE ORDINANCES OF THE CITY OF BELLE ISLE, FLORIDA.

<p><b>Scope of Work:</b> MECHANICAL: one 2.5-ton change out</p> <p><b>Comments:</b> None</p> <p><b>Project Information</b>        Address: 2311 Cross Lake Rd, Belle Isle, FL 32809        Parcel ID: 18-23-30-7164-00-121        Property Owner: Skarlupka, Marjorie        Phone Number: None</p> <p>*****</p> <p>Company Name: Del-Air Heating, A/C &amp; Refrigeration Inc        Contractor Name: Del Russo, Robert        License Number: CAC032448        Address: 531 Codisco Way, Sanford, FL 32771        Phone Number: 407-585-3004</p>	<p style="text-align: right;"><b>Permit Number: 2015-07-035</b></p> <p style="text-align: right;">Date of Application: <u>07/16/2015</u>        Date Permit Issued: <u>08/11/2015</u></p> <p><b>WARNING TO OWNER:</b> "YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOU PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT." ON THE JOB INSPECTION(S) MUST BE MADE BEFORE PROCEEDING WITH SUBSEQUENT WORK. THIS CARD MUST BE DISPLAYED OUTSIDE AND BE PROTECTED FROM THE WEATHER WHILE BEING VISIBLE FROM THE STREET UNTIL THE FINAL INSPECTIONS HAVE BEEN APPROVED.</p>
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### BUILDING FEATURES

<p><b>IMPACT FEES</b></p> <p>School \$        Traffic \$</p> <p><b>ZONING FEES</b></p> <p>Zoning Fee \$</p> <p><b>UNIVERSAL ENG - BUILDING FEES</b></p> <p>Cert of Occ \$        Demo \$        Building \$        Fence \$        Driveway \$        Shed \$        Window(s) \$        Door(s) \$        PrePower \$        Electrical \$        Temp Pole \$        Plumbing \$        Mechanical \$82.50        Gas \$        Roofing \$        Boat Dock \$        Screen Encl \$        Swimming Pool \$        Sign \$</p> <p><b>SURCHARGE FEES</b></p> <p>Surcharge Fee \$2.00        Surcharge Fee \$2.00</p> <p style="text-align: center;"><b>TOTAL FEES \$86.50</b></p> <p><b>Date Paid</b> <u>8-12-15</u></p> <p><b>CC or Check #</b> <u>USA 5294</u></p> <p><b>Amount Paid</b> <u>86.50</u></p> <p>The person accepting this permit shall conform to the terms of the application on file and construction shall conform to the requirements of the Florida Building Code (FS 553).</p>	<p style="text-align: center;"><b>BUILDING INSPECTOR USE ONLY</b></p> <p>IF APPLICABLE:        Have Zoning Approval Conditions Been Met? YES NO    Have Stormwater Approval Conditions Been Met? YES NO    Silt fencing in place? YES NO    Turbidity Barrier in place? YES NO</p> <p><b>BUILDING</b></p> <p>1<sup>st</sup> _____ (Footing/Foundation)        Survey specific foundation plan must be onsite before slab pour. Approved Plan on Site? ____</p> <p>2<sup>nd</sup> _____ (Slab)</p> <p>3<sup>rd</sup> _____ (Lintel)(Wall Reinforcing on Masonry Building)</p> <p>4<sup>th</sup> _____ (Exterior Framing)(Roof/Wall Sheathing)</p> <p>5<sup>th</sup> _____ (Framing) (To be made after Plumbing/ Mechanical/ Electrical Rough-Ins &amp; Windows/Doors Installed)</p> <p>6<sup>th</sup> _____ (Insulation to be Made After Roof Installed)</p> <p>7<sup>th</sup> _____ (Drywall)</p> <p>8<sup>th</sup> _____ (Sidewalk/Driveway)</p> <p>9<sup>th</sup> _____ (Other)</p> <p>10<sup>th</sup> _____ (Final – After MEP and Other Applicable Finals)</p> <p><b>ROOFING</b></p> <p>1<sup>ST</sup> ROOFING Deck Nailing/Dry-in/Flashing _____</p> <p>2<sup>nd</sup> ROOFING Covering In-Progress _____</p> <p>3<sup>rd</sup> ROOFING Covering Final _____</p> <p><b>PLUMBING</b> (Pool-Piping, Solar, Irrigation, Water Treatment Equip, Etc...)</p> <p>1<sup>ST</sup> _____ (Underground)    2<sup>nd</sup> _____ (Sewer)</p> <p>3<sup>rd</sup> _____ (Rough-In/Tub Set)    4<sup>th</sup> _____ (Final)</p> <p><b>CHECK APPROPRIATE BOX</b></p> <p><input type="checkbox"/> GAS <input type="checkbox"/> Natural <input type="checkbox"/> LP    <input type="checkbox"/> MECHANICAL    <input type="checkbox"/> ELECTRICAL    <input type="checkbox"/> LOW VOLTAGE</p> <p>1<sup>st</sup> _____ (Rough-In)    2<sup>nd</sup> _____ (Final)</p>
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Inspection requests are to be emailed to [BDscheduling@UniversalEngineering.com](mailto:BDscheduling@UniversalEngineering.com); a confirmation email will be sent back to you upon scheduling. **Next-Day Inspection requests must be made by 1pm.** Please include the following in your request: Permit #, project address, type of inspection, date of the requested inspection, a contact name & a contact phone number. AM or PM may be requested but cannot be guaranteed.

For a copy of your permit, or to check inspection results, please visit <https://universalengineering.sharefile.com/f/fo94edc4-832d-44bd-9809-ecf32f9e2e63>

login ID = [cobi@universalengineering.com](mailto:cobi@universalengineering.com)

password = universal13

PROJECT NUMBER 0115.1500999.0000

TASK NUMBER 01

**CITY OF BELLE ISLE  
Permit Application Review Sheet**

Permit Number	2015-07-035
Property Owner	SKARUPKA, MARJORIE
Address	2311 CROSS LAKE RD. (32809)
Nature of Improvement	MECHANICAL: ONE, 2.5 ton C/O
Received Application	7/16/15
Sent for Stormwater Review	
Stormwater Approved	/
Sent for Zoning Review	
Zoning Approved	/
Applied for Variance	
Variance Approved	
Sent to BO for Review	7/16/15
Building Official Approved	
Comments	
1. Jaito 7/16/15	Logged in, Created Proj. # & Task
2. " "	SENT to J. Connell For Review, WO # 54162,
3. " "	Waiting for Product Apprl. Code Versions 2014.
4. Susan 8-11-15	downloaded 2014 from fl.bldg.org
5. Susan 8-11-15	WO 55501
6. Susan 8-12-15	emailed it's ready
7.	
8.	
9.	
10.	
11.	
12.	

RECEIVED 7/16/15



### City of Belle Isle

Universal Engineering Sciences 3532 Maggie Blvd., Orlando, FL 32811  
Tel 407-581-8161 \* Fax 407-581-0313 \* [www.universalengineering.com](http://www.universalengineering.com)

## APPLICATION FOR MECHANICAL PERMIT

**WARNING TO OWNER:** YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOUR PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. A NOTICE OF COMMENCEMENT MUST BE RECORDED AND POSTED ON THE JOB SITE BEFORE THE FIRST INSPECTION. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT.

DATE OF APPLICATION: 7/14/15 PERMIT NUMBER 2015-07-035

PLEASE PRINT. The undersigned hereby applies for a permit to make installations as indicated below:

Project Address 2311 Cross Lake Rd Belle Isle FL  32809 32812  
Property Owner Marjorie Sharlupka Phone \_\_\_\_\_  
Property Owner's Mailing Address 2311 Cross Lake Rd City Belle Isle  
State FL Zip Code 32809 Parcel Id Number: 15-23-30-7164-00-221

To obtain this information, please visit <http://www.ocpaf.org/Searches/ParcelSearch.aspx>

Class of Building: Old  New  Type of Building: Residential  Commercial  Other   
Type of Work: New  Alteration  Addition  Repair

- REQUIRED certified Tie Down Engineering documentation (can be found at [www.floridabuilding.org](http://www.floridabuilding.org))
- REQUIRED: If adding A/C to new space, provide Energy Calculations & Equipment Sizing Calculations
- REQUIRED: If replacing unit with no duct work, Duct Certification as per FB 101.4.7.1, must be posted on unit

Please indicate the nature of work by completing the information below:

Air Conditioning: # of Units 1 Tons Per Unit 2.5 Total Tons 2.5  
Type of System: Water to Air  Chiller  Split System  Package  Heat Pump  Estimated Cost \$ \_\_\_\_\_

Heating: # of Units KWS Per Unit 1 Total KWS 7.5 BTU's \_\_\_\_\_ Estimated Cost \$ \_\_\_\_\_  
Oil  Electric  Boiler  Gas

(A) Estimated Cost Fee \$ 5308

Fees for items below are based on valuation of all units, equipment, materials and labor supplied by owner or contractor.

Ventilation: (Number of) Grease \_\_\_\_\_ Heat \_\_\_\_\_ Hoods, Air Intakes \_\_\_\_\_ Exhaust Fans \_\_\_\_\_ Dryer Vents \_\_\_\_\_ Estimated Cost \$ \_\_\_\_\_

Refrigeration: Number of units \_\_\_\_\_ Estimated Cost \$ \_\_\_\_\_

Piping: Air \_\_\_\_\_ Vacuum \_\_\_\_\_ Steam \_\_\_\_\_ Chill Water \_\_\_\_\_ Estimated Cost \$ \_\_\_\_\_

Others: (Specify) \_\_\_\_\_ Estimated Cost \$ \_\_\_\_\_

Was the space previously Air Conditioned? Yes  No  (B) Estimated Cost Fee \$ \_\_\_\_\_

I hereby certify that the above is true and correct to the best of my knowledge and make Application for Permit as outlined above, and if same is granted I agree to conform to all Florida Building Code Regulations and City Ordinances regulating same and in accordance with plans submitted. The issuance of this permit does not grant permission to violate any applicable Town and/or State of Florida codes and/or ordinances.

LICENSE HOLDER SIGNATURE \_\_\_\_\_ LICENSE # CPC032468  
LICENSE HOLDER NAME Robert Dello Russo COMPANY NAME Delcor Heating & A/C  
Street Address 531 Coakley Way  
City Sanford State FL Zip Code 32771 Phone Number 407-333-2665  
Email Address sales@delcor.com

Building Official: [Signature] Date 8-11-15  
Verified Contractor's Licenses & Insurance are on file [Signature] Date 7/16/15

Permit Fee \$ 55.00  
Review Fee \$ 27.50  
3% Florida Surcharge \$ 4.00  
Total Permit Fee \$ 86.50

NOTE: The Building Permit Number is required if the Mechanical Installation is associated with any construction or alteration where a Building Permit has been issued. Building Permit Number \_\_\_\_\_

## Susan Manchester

---

**From:** John Connell  
**Sent:** Tuesday, August 11, 2015 2:15 PM  
**To:** Susan Manchester  
**Subject:** RE: 2311 Cross Lake Rd - app for mechanical permit 2015-07-035 - Del-Air

Approved

---

**From:** Susan Manchester  
**Sent:** Tuesday, August 11, 2015 1:56 PM  
**To:** John Connell  
**Cc:** BIDReviews  
**Subject:** 2311 Cross Lake Rd - app for mechanical permit 2015-07-035 - Del-Air

Project 0115.1500999.0000 task 01

WO 55501

Thank you 😊

*Susan Manchester*

Universal Engineering Sciences, Inc.  
3532 Maggie Blvd.  
Orlando, FL 32811  
Phone: 407-581-8161  
Fax: 407-581-0313  
Email: [smanchester@universalengineering.com](mailto:smanchester@universalengineering.com)

ORLANDO BUSINESS JOURNAL



2015 BEST PLACES TO WORK



**DEL-AIR  
HEATING - AIR CONDITIONING  
REFRIGERATION, INC.**

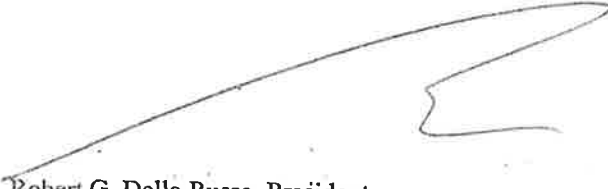
Date

City Of Belle Isle  
Building Division

Dear Sir:

This letter is written to give authorization for Ernie Dainjmit to pull the mechanical permit for Del-Air Heating, Air Conditioning & Refrigeration, Inc. for 231 Cross Lake Rd

Thank You,




Robert G. Dello Russo, President

DEL-AIR HEATING, AIR CONDITIONING &  
REFRIGERATION, INC.

RGDR/jd

Sworn to before me by Robert G. Dello Russo

on this 15 day of July, 2009 2015

  
NOTARY PUBLIC  
MY COMMISSION EXPIRES: 6/14/19



P.O. Box 520522  
Longwood, FL 32752-0522  
Phone (407)333-COOL (2665)  
(407)831-COOL (2665)

SALES  
SERVICE  
INSTALLATION



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**Product Approval**  
USER: Public User

License efficiently. Regulate fairly.

[Product Approval Menu](#) > [Product or Application Search](#) > [Application List](#) > **Application Detail**



FL #	FL14239-R3						
Application Type	Revision						
Code Version	2014						
Application Status	Approved						
Comments							
Archived	<input type="checkbox"/>						
Product Manufacturer	BMP International Inc.						
Address/Phone/Email	4710 28th Street N St. Petersburg, FL 33714 (727) 458-0544 benmeng8@yahoo.com						
Authorized Signature	Xianbin Meng benmeng8@yahoo.com						
Technical Representative							
Address/Phone/Email							
Quality Assurance Representative							
Address/Phone/Email							
Category	Structural Components						
Subcategory	Anchors						
Compliance Method	Evaluation Report from a Florida Registered Architect or a Licensed Florida Professional Engineer <input checked="" type="checkbox"/> Evaluation Report - Hardcopy Received						
Florida Engineer or Architect Name who developed the Evaluation Report	Frank L. Bennardo, P.E.						
Florida License	PE-0046549						
Quality Assurance Entity	National Accreditation & Management Institute						
Quality Assurance Contract Expiration Date	12/31/2018						
Validated By	Ted Berman, PE <input checked="" type="checkbox"/> Validation Checklist - Hardcopy Received						
Certificate of Independence	<a href="#">FL14239_R3_COI_Independ.pdf</a>						
Referenced Standard and Year (of Standard)	<table border="0"> <thead> <tr> <th><b>Standard</b></th> <th><b>Year</b></th> </tr> </thead> <tbody> <tr> <td>ASTM D1761-06</td> <td>2006</td> </tr> <tr> <td>ASTM D1761-88</td> <td>2000</td> </tr> </tbody> </table>	<b>Standard</b>	<b>Year</b>	ASTM D1761-06	2006	ASTM D1761-88	2000
<b>Standard</b>	<b>Year</b>						
ASTM D1761-06	2006						
ASTM D1761-88	2000						
Equivalence of Product Standards Certified By	Florida Licensed Professional Engineer or Architect <a href="#">FL14239_R3_Equiv_Equiv.pdf</a>						





This combination qualifies for a Federal Energy Efficiency Tax Credit when placed in service between Feb 17, 2009 and Dec 31, 2014.

# Certificate of Product Ratings

AHRI Certified Reference Number: 6937467

Date: 7/14/2015

Product: Split System: Air-Cooled Condensing Unit, Coil with Blower

Outdoor Unit Model Number: 24ABC630A\*\*30

Indoor Unit Model Number: FX4DN(B,F)037L

Manufacturer: CARRIER AIR CONDITIONING

Trade/Brand name: CARRIER

Region: Southeast and North (AL, AR, DC, DE, FL, GA, HI, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, AK, CO, CT, ID, IL, IA, IN, KS, MA, ME, MI, MN, MO, MT, ND, NE, NH, NJ, NY, OH, OR, PA, RI, SD, UT, VT, WA, WV, WI, WY, U.S. Territories)

Region Note: Central air conditioners manufactured prior to January 1, 2015, are eligible to be installed in all regions until June 30, 2016. Beginning July 1, 2016, central air conditioners can only be installed in region(s) for which they meet the regional efficiency requirement.

Series name: COMFORT SERIES PURON AC

Manufacturer responsible for the rating of this system combination is CARRIER AIR CONDITIONING

Rated as follows in accordance with AHRI Standard 210/240-2008 for Unitary Air-Conditioning and Air-Source Heat Pump Equipment and subject to verification of rating accuracy by AHRI-sponsored, independent, third party testing:

Cooling Capacity (Bluh):	28800
EER Rating (Cooling):	13.00
SEER Rating (Cooling):	16.00
IEER Rating (Cooling):	

\* Ratings followed by an asterisk (\*) indicate a voluntary rerate of previously published data, unless accompanied with a WAS, which indicates an involuntary rerate

#### DISCLAIMER

AHRI does not endorse the product(s) listed on this Certificate and makes no representations, warranties or guarantees as to, and assumes no responsibility for, the product(s) listed on this Certificate. AHRI expressly disclaims all liability for damages of any kind arising out of the use or performance of the product(s), or the unauthorized alteration of data listed on this Certificate. Certified ratings are valid only for models and configurations listed in the directory at [www.ahrldirectory.org](http://www.ahrldirectory.org).

#### TERMS AND CONDITIONS

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#### CERTIFICATE VERIFICATION

The information for the model cited on this certificate can be verified at [www.ahrldirectory.org](http://www.ahrldirectory.org), click on "Verify Certificate" link and enter the AHRI Certified Reference Number and the date on which the certificate was issued, which is listed above, and the Certificate No., which is listed at bottom right.

©2014 Air-Conditioning, Heating, and Refrigeration Institute

CERTIFICATE NO.:

130813690734748240



AIR-CONDITIONING, HEATING,  
& REFRIGERATION INSTITUTE

we make life better.™



# BMP International

## 2010 Florida Building Code State Approved, FL 14239-R1 EQUIPMENT TIE DOWNS

TD04	1" x 4" Tie Down Clip, Galv/Powder Coat, 4/Bag
TD06	1" x 6" Tie Down Clip, Galv/Powder Coat, 4/Bag
TD08	1" x 8" Tie Down Clip, Galv/Powder Coat, 4/Bag
TD04SS	1" x 4" Tie Down Clip, Stainless Steel, 4/Bag
TD06SS	1" x 6" Tie Down Clip, Stainless Steel, 4/Bag
TD042L	2" x 4" Tie Down Clip, Galv/Powder Coat, 4/Bag
TD062L	2" x 6" Tie Down Clip, Galv/Powder Coat, 4/Bag
TD062	2" x 6" Fat Cat Clip, Galvanized, 4/Bag

BMP International, Inc., 4710 28th St N, St. Petersburg, FL 33714 - 727-458-0544

**Note:** This file contains approval information from [www.floridabuilding.org](http://www.floridabuilding.org) for BMP tie down clips. Information required by building departments will vary, from listing the approval number, FL14239-R1, on your permit application to submitting copies of the drawings. Consult with the individual building departments for their requirements. This file can be downloaded in PDF format for use. Drawings 1-4 contain the installation instructions.

- Searches
- Sales Search
- Results
- Property Record Card**
- My Favorites

**2311 Cross Lake Rd** < 18-23-30-7164-00-121 >

Name(s)	Physical Street Address
Skarlupka Marjorie S Patiry	2311 Cross Lake Rd
Mailing Address On File	Postal City and Zipcode
2311 Cross Lake Rd	Orlando, FL 32809
Belle Isle, FL 32809-3508	Property Use
Incorrect Mailing Address?	0103 - Single Fam Class III
	Municipality
	Belle Isle

- Values, Exemptions and Taxes**
- Property Features
- Sales Analysis
- Location Info
- M

**Property Description**

REPLAT PLEASURE ISLAND H/71 THE E 60.5 FT OF W 125.5 FT OF LOTS 12 & 13

**Total Land Area** 6,049 sqft (+/-) | 0.14 acres (+/-) GIS Calculated Notice

**Land (includes working values)**

Land Use Code	Zoning	Land Units	Unit Price	Land Value
0100 - Single Family	R-1-A	1 LOT(S)	\$40,000.00	\$40,000

Page 1 of 1 (1 total records)

**Buildings (includes working values)**

	Important Information	Structure
	<b>Model Code:</b> 01 - Single Fam Residence <b>Type Code:</b> 0103 - Single Fam Class III <b>Building Value:</b> \$105,766 <b>Estimated New Cost:</b> \$138,801	<b>Actual Year Built:</b> 1954 <b>Beds:</b> 3 <b>Baths:</b> 2.0 <b>Floors:</b> 2

Page 1 of 1 (1 total records)

**Extra Features (includes working values)**

Description	Date Built	Units
There are no extra features associated with this parcel		

This Data Printed on 07/14/2015 and System Data Last Refreshed on 07

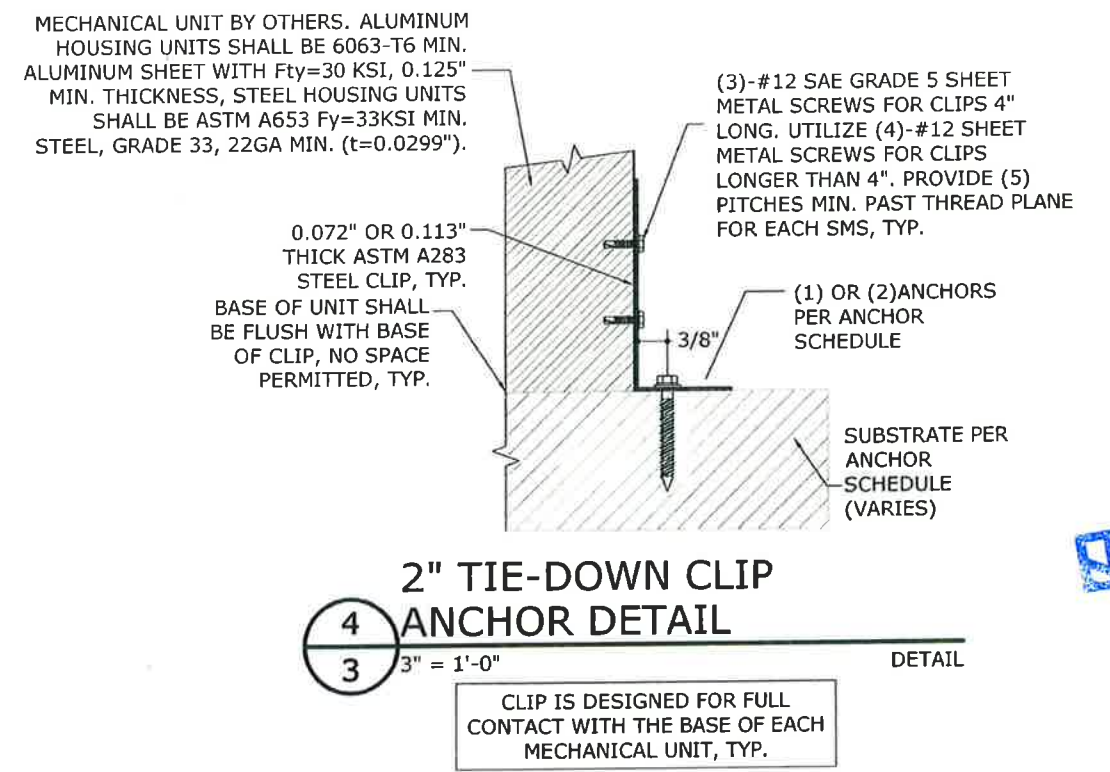
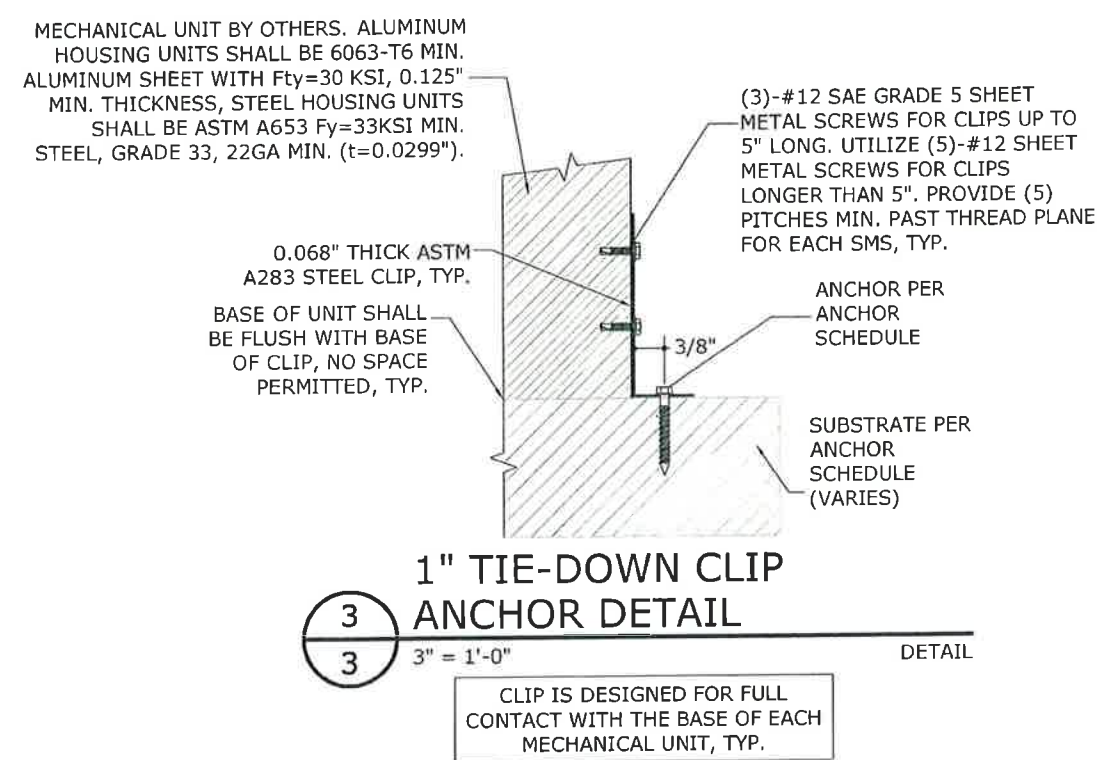
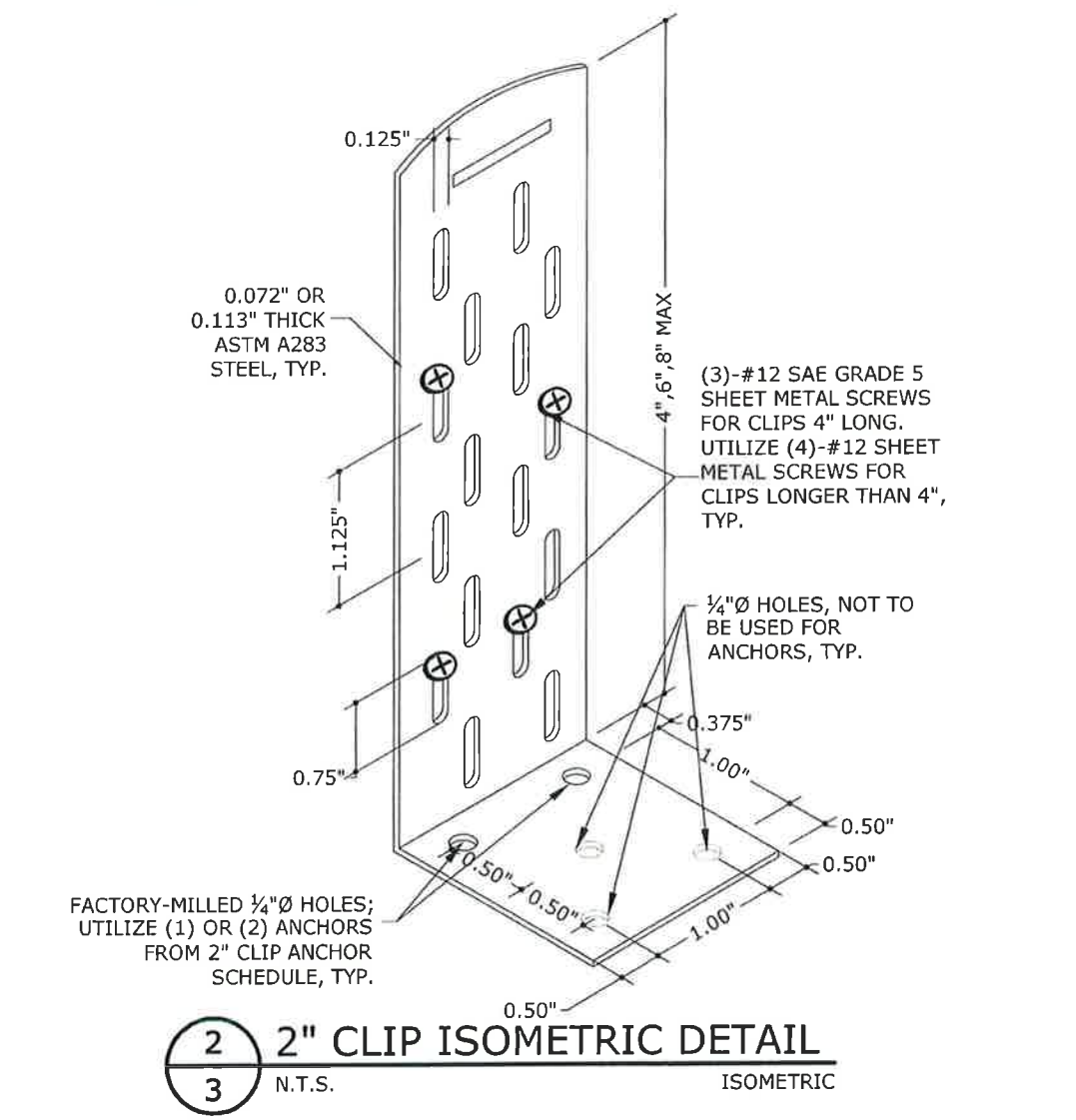
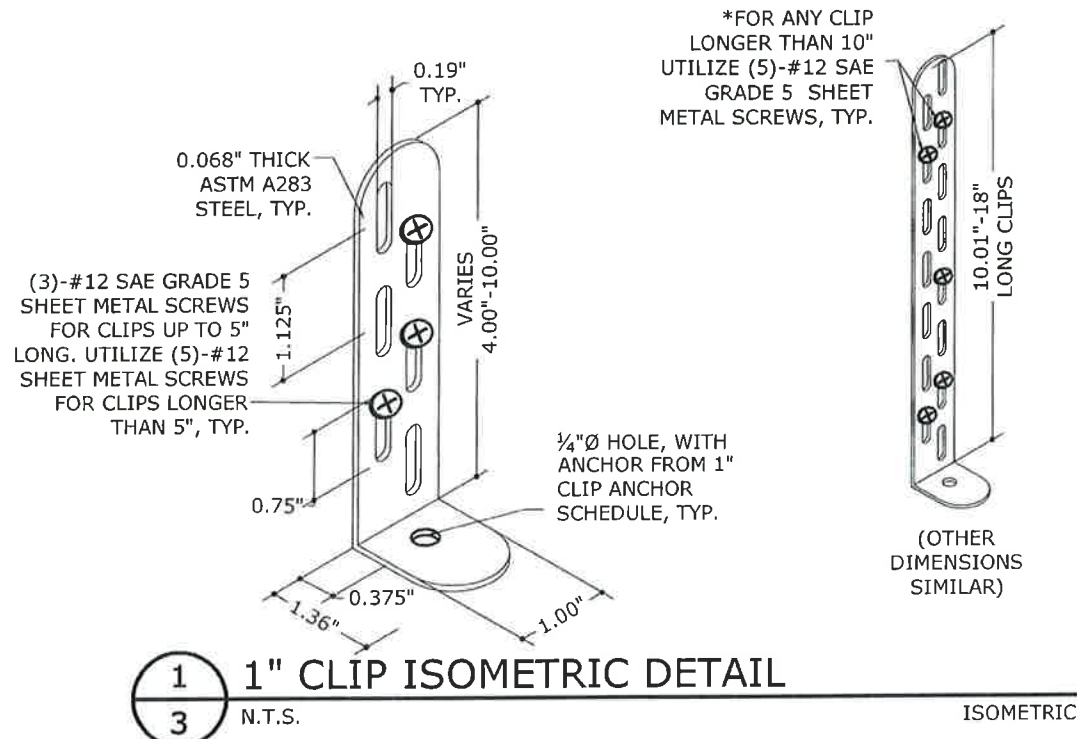








04/17/2015 - 3:56pm chen V:\Projects\15-2378 Air Handler Tiedown Clips - FSA - Update FL14239 for 2014 Florida Bldg C-Project\WP15-2378b - Air Handler Tiedown Clips - FSA - Update FL14239 for 2014 Florida Bldg C-Project.dwg



Reviewed for Code Compliance  
Universal Engineering Sciences

RECEIVED  
AUG 11 2015  
BY: \_\_\_\_\_

FRANK L. BENNARDO, P.E.  
No. 46549  
ENGINEERING EXPRESS  
160 SW 12th AVENUE, #196  
DEERFIELD BEACH, FL 33442  
Ph: (954) 354-0660 FAX: (954) 354-0443  
WWW.ENGEXP.COM  
CERT OF AUTH #9886  
A FRANK L. BENNARDO, P.E., INC. INNOVATION

**BMP INTERNATIONAL, INC.**  
4710 28TH STREET NORTH  
ST. PETERSBURG, FL 33471  
PH: (727) 577-1613  
MECHANICAL UNIT STEEL TIE-DOWN CLIPS  
FBC 5TH EDITION (2014) PRODUCT APPROVAL FL#14239.1

REMARKS	DRWN	CHKD	DATE
INIT ISSUE (11-BMP-0001)	TSB	FLB	12-11-11
REV FOR UNITS	CSL	TSB	02-15-13
REV FOR FBC 5TH (2014)	RWN	CSL	04-06-15

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15-2378  
SCALE: N.T.S.  
PAGE DESCRIPTION:  
3 OF 5



04/17/2015 - 3:56pm chen V:\Projects\15-2378 Air Handler Tiedown Clips - FSA - Update FL14239 for 2014 Florida Bldg C-Project\WP15-2378b - Air Handler Tiedown Clips - FSA - Update FL14239 for 2014 Florida Bldg C-Project.dwg

**TABLE 1: Vult=175 MPH, EXPOSURE C**

(FOR USE WITH A RISK CATEGORY II STRUCTURE IN THE HIGH VELOCITY HURRICANE ZONE\*)

MAXIMUM SURFACE AREA OF UNIT'S LARGEST FACE	UNIT HEIGHT	UNIT WIDTH	ALLOWABLE ROOF-TOP HEIGHT (H) TIE-DOWN CONFIGURATION TYPE			
			C1	C2	C3	C4
6 FT <sup>2</sup>	24" MAX	12" MIN	N/A	AT GRADE	AT GRADE	H ≤ 200 FT
9 FT <sup>2</sup>	32" MAX	15" MIN	N/A	AT GRADE	AT GRADE	H ≤ 60 FT
4 FT <sup>2</sup>	48" MAX	24" MIN	AT GRADE	H ≤ 200 FT	H ≤ 30 FT	H ≤ 200 FT
6 FT <sup>2</sup>			AT GRADE	H ≤ 40 FT	AT GRADE	H ≤ 200 FT
9 FT <sup>2</sup>			N/A	AT GRADE	AT GRADE	H ≤ 160 FT
12 FT <sup>2</sup>			N/A	AT GRADE	AT GRADE	H ≤ 40 FT
16 FT <sup>2</sup>	60" MAX	48" MIN	N/A	AT GRADE	N/A	AT GRADE
20 FT <sup>2</sup>			N/A	AT GRADE	N/A	AT GRADE
25 FT <sup>2</sup>			N/A	AT GRADE	N/A	AT GRADE
30 FT <sup>2</sup>			N/A	N/A	N/A	AT GRADE
36 FT <sup>2</sup>			N/A	N/A	N/A	AT GRADE

\*THIS TABLE IS PERMISSIBLE TO BE USED WITHIN THE HVHZ WHICH CONTAINS BROWARD AND MIAMI-DADE COUNTIES. CHECK WITH LOCAL AUTHORITY HAVING JURISDICTION FOR THE APPLICABILITY OF THIS TABLE WITHIN CERTAIN FLORIDA COUNTIES.

**TABLE 2 : Vult=175 MPH, EXPOSURE D**

(FOR USE WITH A RISK CATEGORY II STRUCTURE IN THE HIGH VELOCITY HURRICANE ZONE\*)

MAXIMUM SURFACE AREA OF UNIT'S LARGEST FACE	UNIT HEIGHT	UNIT WIDTH	ALLOWABLE ROOF-TOP HEIGHT (H) TIE-DOWN CONFIGURATION TYPE			
			C1	C2	C3	C4
6 FT <sup>2</sup>	24" MAX	12" MIN	N/A	AT GRADE	AT GRADE	H ≤ 200 FT
9 FT <sup>2</sup>	32" MAX	15" MIN	N/A	AT GRADE	N/A	H ≤ 30 FT
4 FT <sup>2</sup>	48" MAX	24" MIN	AT GRADE	H ≤ 200 FT	AT GRADE	H ≤ 200 FT
6 FT <sup>2</sup>			N/A	H ≤ 15 FT	AT GRADE	H ≤ 200 FT
9 FT <sup>2</sup>			N/A	AT GRADE	AT GRADE	H ≤ 80 FT
12 FT <sup>2</sup>			N/A	AT GRADE	N/A	AT GRADE
16 FT <sup>2</sup>	60" MAX	48" MIN	N/A	AT GRADE	N/A	AT GRADE
20 FT <sup>2</sup>			N/A	AT GRADE	N/A	AT GRADE
25 FT <sup>2</sup>			N/A	N/A	N/A	AT GRADE
30 FT <sup>2</sup>			N/A	N/A	N/A	AT GRADE
36 FT <sup>2</sup>			N/A	N/A	N/A	AT GRADE

\*THIS TABLE IS PERMISSIBLE TO BE USED WITHIN THE HVHZ WHICH CONTAINS BROWARD AND MIAMI-DADE COUNTIES. CHECK WITH LOCAL AUTHORITY HAVING JURISDICTION FOR THE APPLICABILITY OF THIS TABLE WITHIN CERTAIN FLORIDA COUNTIES.

**TABLE 3 : Vult=170 MPH, EXPOSURE C**

(FOR USE WITH A RISK CATEGORY II STRUCTURE\*)

MAXIMUM SURFACE AREA OF UNIT'S LARGEST FACE	UNIT HEIGHT	UNIT WIDTH	ALLOWABLE ROOF-TOP HEIGHT (H) TIE-DOWN CONFIGURATION TYPE			
			C1	C2	C3	C4
6 FT <sup>2</sup>	24" MAX	12" MIN	N/A	H ≤ 200 FT	AT GRADE 60 FT < H ≤ 160 FT	H ≤ 200 FT
9 FT <sup>2</sup>	32" MAX	15" MIN	N/A	H ≤ 15 FT 60 FT < H ≤ 200 FT	AT GRADE	H ≤ 200 FT
4 FT <sup>2</sup>	48" MAX	24" MIN	AT GRADE 60 FT < H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
6 FT <sup>2</sup>			AT GRADE	H ≤ 200 FT	H ≤ 40 FT 60 FT < H ≤ 200 FT	H ≤ 200 FT
9 FT <sup>2</sup>			N/A	H ≤ 200 FT	AT GRADE 60 FT < H ≤ 80 FT	H ≤ 200 FT
12 FT <sup>2</sup>			N/A	AT GRADE 60 FT < H ≤ 200 FT	N/A	H ≤ 200 FT
16 FT <sup>2</sup>	60" MAX	48" MIN	N/A	AT GRADE	N/A	H ≤ 200 FT
20 FT <sup>2</sup>			N/A	AT GRADE	N/A	H ≤ 200 FT
25 FT <sup>2</sup>			N/A	N/A	N/A	H ≤ 30 FT 60 FT < H ≤ 200 FT
30 FT <sup>2</sup>			N/A	N/A	N/A	AT GRADE 60 FT < H ≤ 180 FT
36 FT <sup>2</sup>			N/A	N/A	N/A	AT GRADE

\*AS AN EXAMPLE, THIS TABLE IS PERMISSIBLE TO BE USED WITHIN PALM BEACH COUNTY. CHECK WITH LOCAL AUTHORITY HAVING JURISDICTION FOR THE APPLICABILITY OF THIS TABLE WITHIN CERTAIN FLORIDA COUNTIES.

**TABLE 4 : Vult=170 MPH, EXPOSURE D**

(FOR USE WITH A RISK CATEGORY II STRUCTURE\*)

MAXIMUM SURFACE AREA OF UNIT'S LARGEST FACE	UNIT HEIGHT	UNIT WIDTH	ALLOWABLE ROOF-TOP HEIGHT (H) TIE-DOWN CONFIGURATION TYPE			
			C1	C2	C3	C4
6 FT <sup>2</sup>	24" MAX	12" MIN	N/A	H ≤ 200 FT	AT GRADE 60 FT < H ≤ 80 FT	H ≤ 200 FT
9 FT <sup>2</sup>	32" MAX	15" MIN	N/A	AT GRADE 60 FT < H ≤ 200 FT	N/A	H ≤ 200 FT
4 FT <sup>2</sup>	48" MAX	24" MIN	AT GRADE 60 FT < H ≤ 100 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
6 FT <sup>2</sup>			N/A	H ≤ 200 FT	H ≤ 15 FT 60 FT < H ≤ 200 FT	H ≤ 200 FT
9 FT <sup>2</sup>			N/A	H ≤ 15 FT 60 FT < H ≤ 200 FT	AT GRADE	H ≤ 200 FT
12 FT <sup>2</sup>			N/A	AT GRADE 60 FT < H ≤ 120 FT	N/A	H ≤ 200 FT
16 FT <sup>2</sup>	60" MAX	48" MIN	N/A	N/A	N/A	H ≤ 200 FT
20 FT <sup>2</sup>			N/A	AT GRADE	N/A	H ≤ 40 FT 60 FT < H ≤ 200 FT
25 FT <sup>2</sup>			N/A	N/A	N/A	AT GRADE 60 FT < H ≤ 200 FT
30 FT <sup>2</sup>			N/A	N/A	N/A	AT GRADE 60 FT < H ≤ 100 FT
36 FT <sup>2</sup>			N/A	N/A	N/A	AT GRADE

\*AS AN EXAMPLE, THIS TABLE IS PERMISSIBLE TO BE USED WITHIN PALM BEACH COUNTY. CHECK WITH LOCAL AUTHORITY HAVING JURISDICTION FOR THE APPLICABILITY OF THIS TABLE WITHIN CERTAIN FLORIDA COUNTIES.

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MECHANICAL UNIT STEEL TIE-DOWN CLIPS

FBC 5TH EDITION (2014) PRODUCT APPROVAL FL.#14239.1

REMARKS	DRWN	CHKD	DATE
INIT ISSUE (11-BMP-0001)	TSB	FLB	12-11-11
REV FOR UNITS	CSL	TSB	02-15-13
REV FOR FBC 5TH (2014)	RWN	CSL	04-06-15

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**TABLE 5 : Vult=140 MPH, EXPOSURE B**

(FOR USE WITH A RISK CATEGORY II STRUCTURE\*)

MAXIMUM SURFACE AREA OF UNIT'S LARGEST FACE	UNIT HEIGHT	UNIT WIDTH	ALLOWABLE ROOF-TOP HEIGHT (H) TIE-DOWN CONFIGURATION TYPE			
			C1	C2	C3	C4
6 FT²	24" MAX	12" MIN	H ≤ 15 FT 60 FT < H ≤ 120 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
9 FT²	32" MAX	15" MIN	AT GRADE	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
4 FT²	48" MAX	24" MIN	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
6 FT²			H ≤ 40 FT 60 FT < H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
9 FT²			AT GRADE 60 FT < H ≤ 80 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
12 FT²			AT GRADE	H ≤ 200 FT	H ≤ 40 FT 60 FT < H ≤ 200 FT	H ≤ 200 FT
16 FT²	60" MAX	48" MIN	N/A	H ≤ 200 FT	H ≤ 15 FT 60 FT < H ≤ 100 FT	H ≤ 200 FT
20 FT²			N/A	H ≤ 200 FT	H ≤ 15 FT 60 FT < H ≤ 180 FT	H ≤ 200 FT
25 FT²			N/A	H ≤ 40 FT 60 FT < H ≤ 200 FT	AT GRADE 60 FT < H ≤ 80 FT	H ≤ 200 FT
30 FT²			N/A	H ≤ 15 FT 60 FT < H ≤ 160 FT	AT GRADE	H ≤ 200 FT
36 FT²			N/A	AT GRADE 60 FT < H ≤ 80 FT	AT GRADE	H ≤ 200 FT

**TABLE 6 : Vult=140 MPH, EXPOSURE C**

(FOR USE WITH A RISK CATEGORY II STRUCTURE\*)

MAXIMUM SURFACE AREA OF UNIT'S LARGEST FACE	UNIT HEIGHT	UNIT WIDTH	ALLOWABLE ROOF-TOP HEIGHT (H) TIE-DOWN CONFIGURATION TYPE			
			C1	C2	C3	C4
6 FT²	24" MAX	12" MIN	AT GRADE	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
9 FT²	32" MAX	15" MIN	N/A	H ≤ 200 FT	H ≤ 15 FT 60 FT < H ≤ 200 FT	H ≤ 200 FT
4 FT²	48" MAX	24" MIN	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
6 FT²			AT GRADE 60 FT < H ≤ 180 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
9 FT²			AT GRADE	H ≤ 200 FT	H ≤ 40 FT 60 FT < H ≤ 200 FT	H ≤ 200 FT
12 FT²			N/A	H ≤ 200 FT	AT GRADE 60 FT < H ≤ 140 FT	H ≤ 200 FT
16 FT²	60" MAX	48" MIN	N/A	H ≤ 15 FT 60 FT < H ≤ 200 FT	AT GRADE	H ≤ 200 FT
20 FT²			N/A	H ≤ 30 FT 60 FT < H ≤ 200 FT	AT GRADE	H ≤ 200 FT
25 FT²			N/A	AT GRADE 60 FT < H ≤ 140 FT	AT GRADE	H ≤ 200 FT
30 FT²			N/A	AT GRADE	N/A	H ≤ 200 FT
36 FT²			N/A	AT GRADE	N/A	H ≤ 30 FT 60 FT < H ≤ 200 FT

**TABLE 7 : Vult=140 MPH, EXPOSURE D**

(FOR USE WITH A RISK CATEGORY II STRUCTURE\*)

MAXIMUM SURFACE AREA OF UNIT'S LARGEST FACE	UNIT HEIGHT	UNIT WIDTH	ALLOWABLE ROOF-TOP HEIGHT (H) TIE-DOWN CONFIGURATION TYPE			
			C1	C2	C3	C4
6 FT²	24" MAX	12" MIN	N/A	H ≤ 200 FT	H ≤ 30 FT 60 FT < H ≤ 200 FT	H ≤ 200 FT
9 FT²	32" MAX	15" MIN	N/A	H ≤ 200 FT	AT GRADE 60 FT < H ≤ 140 FT	H ≤ 200 FT
4 FT²	48" MAX	24" MIN	H ≤ 40 FT 60 FT < H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
6 FT²			AT GRADE 60 FT < H ≤ 100 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
9 FT²			N/A	H ≤ 200 FT	H ≤ 15 FT 60 FT < H ≤ 200 FT	H ≤ 200 FT
12 FT²			N/A	H ≤ 40 FT 60 FT < H ≤ 200 FT	AT GRADE 60 FT < H ≤ 80 FT	H ≤ 200 FT
16 FT²	60" MAX	48" MIN	N/A	AT GRADE 60 FT < H ≤ 200 FT	N/A	H ≤ 200 FT
20 FT²			N/A	AT GRADE 60 FT < H ≤ 200 FT	AT GRADE	H ≤ 200 FT
25 FT²			N/A	AT GRADE 60 FT < H ≤ 80 FT	N/A	H ≤ 200 FT
30 FT²			N/A	N/A	N/A	H ≤ 40 FT 60 FT < H ≤ 200 FT
36 FT²			N/A	N/A	N/A	AT GRADE 60 FT < H ≤ 200 FT

\*AS AN EXAMPLE, THESE TABLES ARE PERMISSIBLE TO BE USED WITHIN BREVARD COUNTY. CHECK WITH LOCAL AUTHORITY HAVING JURISDICTION FOR THE APPLICABILITY OF THIS TABLE WITHIN CERTAIN FLORIDA COUNTIES.

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