



# 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.

<b>Scope of Work:</b> MECHANICAL: one 3 ton unit change out  <b>Comments:</b> None  <b>Project Information</b> Address: 5874 Cove Dr, Belle Isle, FL 32809 Parcel ID: 20-23-30-0000-00-029 Property Owner: Martin, Kenneth Phone Number: 407 595 3951 ***** Company Name: Del-Air Heating, A/C & Refrigeration Inc Contractor Name: Del Russo, Robert License Number: CAC032448 Address: 531 Codesco Way, Sanford, FL 32771 Phone Number: 407-585-3004	<b>Permit Number: 2016-07-012</b> <b>Date of Application: 07/05/2016</b> <b>Date Permit Issued: 07/12/2016</b>  <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.
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### BUILDING FEATURES

<b>IMPACT FEES</b> School \$ Traffic \$  <b>ZONING FEES</b> Zoning Fee \$  <b>UNIVERSAL ENG - BUILDING FEES</b>  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 \$  <b>SURCHARGE FEES</b>  Surcharge Fee \$2.00 Surcharge Fee \$2.00  <b>TOTAL FEES \$86.50</b>  Date Paid <u>8-15-16</u> CC or Check # <u>MC 1147</u> Amount Paid <u>86.50</u>  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).	<b>BUILDING INSPECTOR USE ONLY</b>  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  <input type="checkbox"/> <b>BUILDING</b> 1 <sup>st</sup> _____ (Footing/Foundation) Survey specific foundation plan must be onsite before slab pour. Approved Plan on Site? ____ 2 <sup>nd</sup> _____ (Slab) 3 <sup>rd</sup> _____ (Lintel)(Wall Reinforcing on Masonry Building) 4 <sup>th</sup> _____ (Exterior Framing)(Roof/Wall Sheathing) 5 <sup>th</sup> _____ (Framing) (To be made after Plumbing/ Mechanical/ Electrical Rough-Ins & Windows/Doors Installed) 6 <sup>th</sup> _____ (Insulation to be Made After Roof Installed) 7 <sup>th</sup> _____ (Drywall) 8 <sup>th</sup> _____ (Sidewalk/Driveway) 9 <sup>th</sup> _____ (Other) 10 <sup>th</sup> _____ (Final – After MEP and Other Applicable Finals)  <input type="checkbox"/> <b>ROOFING</b> 1 <sup>ST</sup> ROOFING Deck Nailing/Dry-in/Flashing _____ 2 <sup>nd</sup> ROOFING Covering In-Progress _____ 3 <sup>rd</sup> ROOFING Covering Final _____  <input type="checkbox"/> <b>PLUMBING</b> (Pool-Piping, Solar, Irrigation, Water Treatment Equip, Etc...) <input type="checkbox"/> 1 <sup>ST</sup> _____ (Underground)    2 <sup>nd</sup> _____ (Sewer) 3 <sup>rd</sup> _____ (Rough-In/Tub Set)    4 <sup>th</sup> _____ (Final)  <b>CHECK APPROPRIATE BOX</b> <input type="checkbox"/> <b>GAS</b> ___ Natural ___ LP <input type="checkbox"/> <b>MECHANICAL</b> <input type="checkbox"/> <b>ELECTRICAL</b> <input type="checkbox"/> <b>LOW VOLTAGE</b> 1 <sup>st</sup> _____ (Rough-In)    2 <sup>nd</sup> _____ (Final)
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Inspection requests are to be emailed to [BD scheduling@UniversalEngineering.com](mailto:BD scheduling@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

CITY OF BELLE ISLE  
Permit Application Review Sheet

Permit Number	2016-07-012
Property Owner	Martin, Kenneth
Address	5874 Cove Dr
Nature of Improvement	Mechanical - HVAC Change out - No Duct
Received Application	7/5/16
Sent for Stormwater Review	N/A
Stormwater Approved	
Sent for Zoning Review	N/A
Zoning Approved	
Applied for Variance	N/A
Variance Approved	
Sent to BO for Review	
Building Official Approved	
Comments	
1.	7/5/16 Emailed that we need a NOC
2.	7-7-16 oked B
3.	Susan 7-29-16 Rec'd NOC ✓ emailed 4's ready
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11.	
12.	



# 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: 7/5/16

PERMIT NUMBER 2016-07-012

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

Project Address 5874 COVE DR., Belle Isle FL 32809  32812  
Property Owner Kenneth Martin, Phone 407 595 3951  
Property Owner's Mailing Address 5874 COVE DR., City Orlando  
State FL Zip Code 32812 Parcel Id Number: 20-23-30-000-00-029

To obtain this information, please visit <http://www.ocpafi.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 3 Total Tons 3  
Type of System: Water to Air  Chiller  Split System  Package  Heat Pump  Estimated Cost \$ \_\_\_\_\_

Heating: # of Units KWS Per Unit 1 Total KWS 5 BTU's \_\_\_\_\_ Estimated Cost \$ \_\_\_\_\_  
Oil  Electric  Boiler  Gas

(A) Estimated Cost Fee \$ \_\_\_\_\_

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) HVAC full system c/o no ductwork Estimated Cost \$ \_\_\_\_\_

Was the space previously Air Conditioned? Yes  No  (B) Estimated Cost Fee \$ 13,570

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 # CA0032448

LICENSE HOLDER NAME Robert DeHo Busco COMPANY NAME Del-Air Heating & AC

Street Address 531 Codraco Way

City Sanford State FL Zip Code 32771 Phone Number 407 333 2605

Email Address Salesjobs@delair.com

Building Official: [Signature] Date 7-7-16  
Verified Contractor's Licenses & Insurance are on file [Signature] Date 7-29-16  
NOCV

Permit Fee	\$	<u>55.-</u>
Review Fee	\$	<u>27.50</u>
3% Florida Surcharge	\$	<u>4.-</u>
Total Permit Fee	\$	<u>86.50</u>

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.

base 37  
3x36  
18  
55.- + 2  
27.50  
82.50

Permit Number:  
Folio/Parcel ID # 20-23-30-000-00-029  
Prepared by: Patricia

Return to: Del-Air  
531 Occochee Way  
Altamonte FL 32711



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**NOTICE OF COMMENCEMENT**

State of Florida, County of Orange  
The undersigned hereby gives notice that improvement will be made to certain real property, and in accordance with Chapter 713, Florida Statutes, the following information is provided in this Notice of Commencement.

1. Description of property (legal description of the property, and street address if available)  
Reg Elycor of Lot 6 Conway Gardens 2nd add 1/59 Run N 41
2. General description of improvement  
HVAC full system change out no duct work
3. Owner information or Lessee information if the Lessee contracted for the improvement  
Name Kenneth & Patricia Martin  
Address 5874 Cove Dr Orlando, FL 32812  
Interest in Property \_\_\_\_\_  
Name and address of fee simple titleholder (if different from Owner listed above)  
Name Owner  
Address \_\_\_\_\_
4. Contractor  
Name Del Air Heating & A/C Telephone Number 4073332665  
Address 531 Occochee Way Altamonte, FL 32711
5. Surety (if applicable, a copy of the payment bond is attached)  
Name \_\_\_\_\_ Telephone Number \_\_\_\_\_  
Address \_\_\_\_\_ Amount of Bond \$ \_\_\_\_\_
6. Lender  
Name \_\_\_\_\_ Telephone Number \_\_\_\_\_  
Address \_\_\_\_\_
7. Persons within the State of Florida designated by Owner upon whom notices or other documents may be served as provided by §713.13(1)(a)7, Florida Statutes.  
Name \_\_\_\_\_ Telephone Number \_\_\_\_\_  
Address \_\_\_\_\_
8. In addition to himself or herself, Owner designates the following to receive a copy of the Lienor's Notice as provided in §713.13(1)(b), Florida Statutes.  
Name \_\_\_\_\_ Telephone Number \_\_\_\_\_  
Address \_\_\_\_\_
9. Expiration date of notice of commencement (the expiration date will be 1 year from the date of recording unless a different date is specified) \_\_\_\_\_

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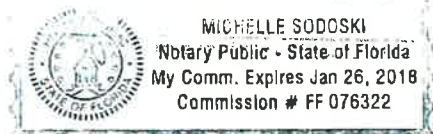


**WARNING TO OWNER: ANY PAYMENTS MADE BY THE OWNER AFTER THE EXPIRATION OF THE NOTICE OF COMMENCEMENT ARE CONSIDERED IMPROPER PAYMENTS UNDER CHAPTER 713, PART I, SECTION 713.13, FLORIDA STATUTES, AND CAN RESULT IN YOUR PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. A NOTICE OF COMMENCEMENT MUST BE RECORDED AND POSTED ON THE JOB SITE BEFORE THE FIRST INSPECTION. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE COMMENCING WORK OR RECORDING YOUR NOTICE OF COMMENCEMENT**

X Guo Ruiqun

The foregoing instrument was acknowledged before me this 6 day of July Kenneth Martin

of Michelle Sodoski for



DL# M 25-516-47-225-0

State of Florida, County of Orange  
I hereby certify that this instrument is a true and correct copy of the original as recorded in the Public Records of Orange County, Florida.  
By: Martha O. Haynie  
Comptroller of Public Accounts  
Date: July 16, 2016



This combination qualifies for a Federal Energy Efficiency Tax Credit when placed in service between Feb 17, 2009 and Dec 31, 2016.

# Certificate of Product Ratings

AHRI Certified Reference Number: 6938465 Date: 7/3/2016

Product: Split System: Heat Pump with Remote Outdoor Unit-Air-Source

Outdoor Unit Model Number: 25VNA036A\*\*30

Indoor Unit Model Number: FE4AN(B,F)005L+UI

Manufacturer: CARRIER AIR CONDITIONING

Trade/Brand name: CARRIER AIR CONDITIONING

Series name: INFINITY SERIES HP WITH GREENSPEED INTELLIGENCE

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 (Btuh):	35000
EER Rating (Cooling):	14.00
SEER Rating (Cooling):	20.00
Heating Capacity(Btuh) @ 47 F:	33400
Region IV HSPF Rating (Heating):	12.00
Heating Capacity(Btuh) @ 17 F:	31000



\* 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.ahridirectory.org](http://www.ahridirectory.org).

#### TERMS AND CONDITIONS

This Certificate and its contents are proprietary products of AHRI. This Certificate shall only be used for individual, personal and confidential reference purposes. The contents of this Certificate may not, in whole or in part, be reproduced; copied; disseminated; entered into a computer database; or otherwise utilized, in any form or manner or by any means, except for the user's individual, personal and confidential reference.

#### CERTIFICATE VERIFICATION

The information for the model cited on this certificate can be verified at [www.ahridirectory.org](http://www.ahridirectory.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

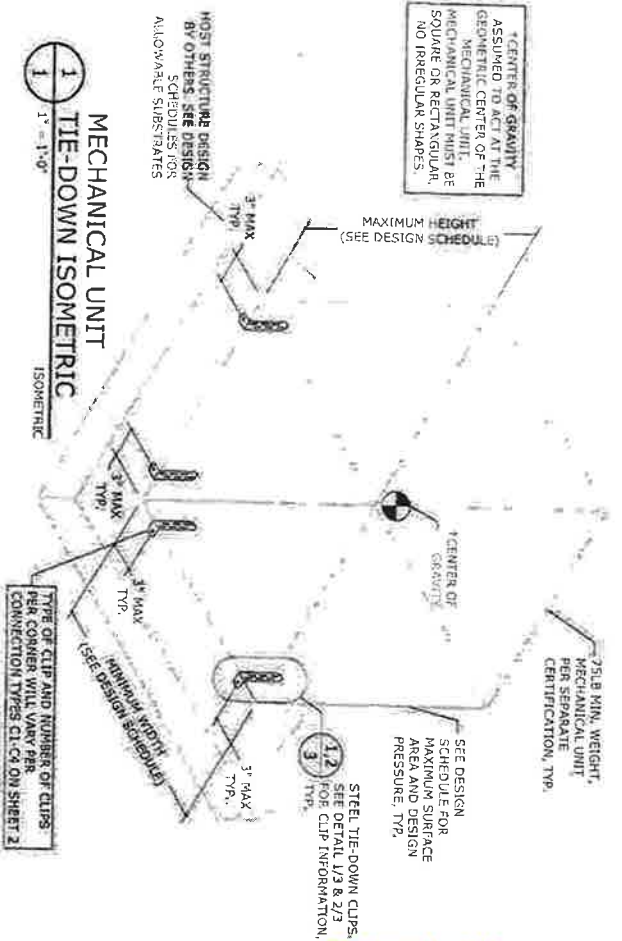


we make life better™

CERTIFICATE NO.: 131120558208244067

# BMP INTERNATIONAL, INC.

## MECHANICAL UNIT STEEL TIE-DOWN CLIPS: AT GRADE & ROOF-TOP MOUNTED APPLICATIONS



Reviewed for Code Compliance  
 Universal Engineering Sciences

### DESIGN NOTES:

THIS PRODUCT HAS BEEN DESIGNED IN ACCORDANCE WITH ASCE 7-10 AND THE FLORIDA BUILDING CODE. THE PRODUCT IS NOT TO BE USED IN HIGH WIND SPEED ZONES INDICATED IN THE FLORIDA BUILDING CODE. THE DESIGN CRITERIA USED TO CALCULATE THE ALLOWABLE ROOF-TOP INSTALLATION HEIGHTS ARE: SECTION 28.5.1 FOR ROOF-TOP HEIGHTS (H) 500 FT AND SECTION 28.5.1 FOR ROOF-TOP HEIGHTS (H) 500 FT AND SECTION 28.5.1 FOR ROOF-TOP HEIGHTS (H) 500 FT. A SECTION 28.5.1 FOR INSTALLATIONS AT GRADE: (G) 1.5 FOR ALL LOCATIONS (CONCRETE, OCCASIONALLY 1.90 OUTSIDE THE FINISH FLOOR LINE). 1.5 FOR ALL LOCATIONS (CONCRETE, OCCASIONALLY 1.90 OUTSIDE THE FINISH FLOOR LINE). THE HEIGHTS LISTED IN THE DESIGN SCHEDULES ARE IN ACCORDANCE WITH ASCE 7-10 CHAPTERS 26 & 29. THIS PRODUCT IS NOT TO BE USED IN HIGH WIND SPEED ZONES INDICATED IN THE FLORIDA BUILDING CODE. THIS PRODUCT APPROVAL ALLOWS FOR EACH UNIT TO BE INSTALLED ON A MECHANICAL UNIT (CERTIFICATION BY OTHERS) ON TOP OF THE HEIGHTS LISTED IN THE DESIGN SCHEDULES.

### GENERAL NOTES:

1. THIS PRODUCT HAS BEEN DESIGNED AND SHALL BE FABRICATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE AND ASCE 7-10. THIS PRODUCT MAY BE USED WITHIN AND OUTSIDE THE HIGH VELOCITY HURRICANE ZONE AND NO 33-175% INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS SYSTEM.
2. DESIGN IS BASED ON CLIP PROVIDED PRODUCT AND ONE SHEET FROM TEST REPORTS FILED 01230262, FILED 01230272 BY TESTING EVALUATION LABORATORIES, INC. (T.E.L.) IN PETERSBURG, FLORIDA. ALL SUBSTITUTIONS WITHOUT WRITTEN APPROVAL BY THIS ENGINEER SHALL BE THE USER'S RESPONSIBILITY.
3. MAXIMUM MINIMUM DIMENSIONS AND MINIMUM WEIGHT OF MECHANICAL UNIT SHALL CONFORM TO SPECIFICATIONS STATED HEREIN. THE MECHANICAL UNIT SHALL BE MADE OF STEEL, GALVANNEAL, OR ALUMINUM. MECHANICAL UNIT SPECIFICATIONS (CLIP SPACE, TONNAGE, ETC.) SHALL BE AS PER MANUFACTURER RECOMMENDATIONS AND ARE THE USER'S RESPONSIBILITY. THE CONTRACTOR SHALL VERIFY THE MECHANICAL UNIT FASTENERS TO BE #12 X 4" OR GREATER S&W GRADE 5 UNLESS NOTED OTHERWISE. UNLESS NOTED OTHERWISE, THE CONTRACTOR SHALL VERIFY THE MECHANICAL UNIT FASTENERS TO BE #12 X 4" OR GREATER S&W GRADE 5 UNLESS NOTED OTHERWISE. UNLESS NOTED OTHERWISE, THE CONTRACTOR SHALL VERIFY THE MECHANICAL UNIT FASTENERS TO BE #12 X 4" OR GREATER S&W GRADE 5 UNLESS NOTED OTHERWISE. UNLESS NOTED OTHERWISE, THE CONTRACTOR SHALL VERIFY THE MECHANICAL UNIT FASTENERS TO BE #12 X 4" OR GREATER S&W GRADE 5 UNLESS NOTED OTHERWISE.
4. ALL STEEL CLIPS SHALL BE ASTM A363 STEEL (GRADE D) WITH P-33 AND OR BETTER COAT OF PAINT FINISH OR BE PROTECTED AGAINST CORROSION WITH AN APPROVED MECHANICAL UNIT FASTENER PROTECTION. GALVANNEAL COATING REQUIRED FOR ALL COASTAL INSTALLATIONS.
5. ALL CONCRETE SPECIFIED HEREIN IS NOT PART OF THIS CERTIFICATION. AS A MINIMUM, MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI, UNLESS NOTED OTHERWISE.
6. THE CONTRACTOR IS RESPONSIBLE TO INSULATE ALL MEMBERS FROM DISSIPILAR MATERIALS TO PREVENT ELECTROLYSIS.
7. THE MECHANICAL UNIT, WHEN REQUIRED, TO BE DESIGNED BY OTHERS. THE CONTRACTOR SHALL VERIFY THE STRUCTURE TO WITHSTAND SUPERIMPOSED LOADS SHALL BE VERIFIED BY DESIGNING STRUCTURE TO WITHSTAND AND IS NOT INCLUDED IN THIS CERTIFICATION, EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR APPROVALS ARE INTENDED.
8. THE SYSTEM DETAILED HEREIN IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SPECIFIC SITE. FOR SITE CONDITIONS DIFFERENT FROM THE CONDITIONS DETAILED HEREIN, A LICENSED ENGINEER OR REGISTERED ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE IN CONJUNCTION WITH THIS DOCUMENT.
9. WATER-TIGHTNESS OF EXISTING HOST SUBSTRATE SHALL BE THE FULL RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL ENSURE THAT ANY REMOVED INSTALLATION OF STRUCTURE PERFORMING IS RESTORED AT PER FABRICATION AND OR ALTERED WATER-TIGHTNESS OF EXISTING HOST SUBSTRATE SHALL NOT BE RESPONSIBLE FOR ANY WATER-PROOFING OR LEAKAGE THAT MAY OCCUR AS CONTRACTOR.
10. FOR AN EXPLANATION OF EXPOSURE CATEGORIES THAT ACCOMPANY THE WIND SPEEDS USED IN THIS APPROVAL, SEE SECTION 26.7.3 OF ASCE 7-10.

**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

**ENGINEERING EXPERTS**  
 FRANK L. SCHWARDO, P.E.  
 160 SW 12th Ave  
 DEERFIELD BEACH, FL 33442  
 Ph: (954) 354-0660  
 WWW.ENGENEX.COM  
 10/16/14

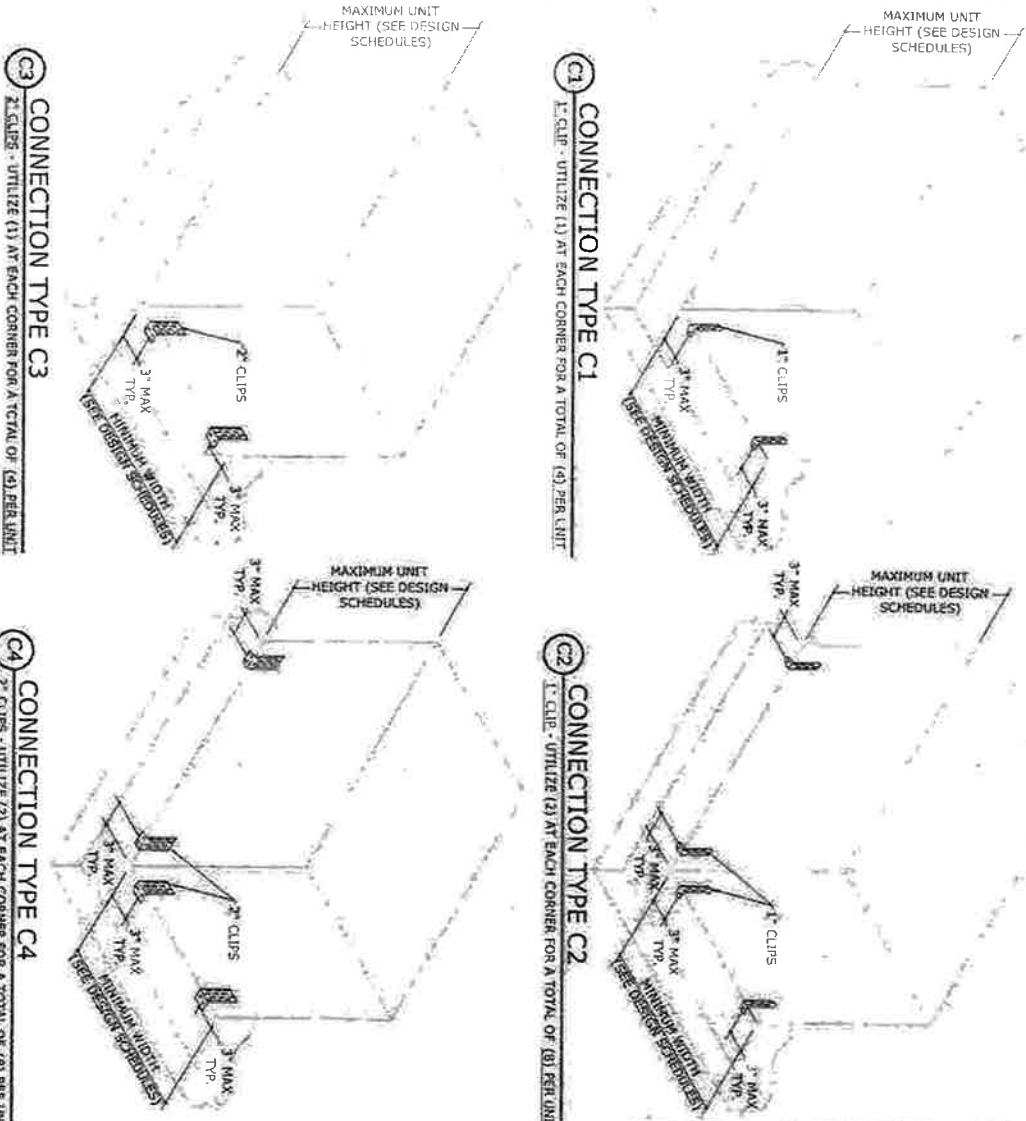
PROCEDURE STEP	CONNECTION TYPE	RESULT
1. DETERMINE THE CONNECTION TYPE BASED ON THE DIAGRAMS ON SHEET 2.	THIS INSTALLATION IS INTENDED FOR A VIDE-120 WIND EXPOSURE 'B'. THIS DESIGN CRITERIA CORRESPONDS TO TABLE 5.	
2. DETERMINE WHICH DESIGN SCHEDULE TABLE TO USE		
3. DETERMINE LARGEST FACE AREA OF MECHANICAL UNIT TO BE INSTALLED.	48" WIDE x 48" DEEP	
4. CHECK MAXIMUM UNIT HEIGHT RESTRICTION	THIS UNIT HEIGHT OF 48" IS EQUAL TO THE MAXIMUM ALLOWABLE HEIGHT OF 48" FOR THIS UNIT HEIGHT RESTRICTION. THE UNIT HEIGHT RESTRICTION IS 48" FOR ALL A/C STANDS THAT IS CHECK TO SEE THAT THE STAND DOES NOT EXCEED 50" IN HEIGHT.	
5. CHECK MINIMUM UNIT WIDTH RESTRICTION	UNIT WIDTH IS 48" WHICH IS GREATER THAN THE MINIMUM ALLOWABLE WIDTH OF 24". THIS UNIT MAY BE INSTALLED AT ROOF HEIGHTS LESS THAN OR EQUAL TO 15 FT. ADDITIONALLY, THIS UNIT MAY BE INSTALLED ON ROOF-TOP HEIGHTS GREATER THAN 15 FT. AND LESS THAN 100 FT. SEE (*) ON TABLE 5 FOR THE NUMERICAL VALUES OF THIS DESIGN EXAMPLE.	
6. DETERMINE THE ALLOWABLE ROOF-TOP HEIGHT OF THE INSTALLATION		

**TIE-DOWN CLIP DIRECTIVE EXAMPLE**  
 THE FOLLOWING EXAMPLE ILLUSTRATES THE PROCEDURE USED TO DETERMINE THE MAXIMUM ALLOWABLE ROOF-TOP INSTALLATION HEIGHT, 'H', FOR ANY GIVEN MECHANICAL UNIT THAT CONFORMS TO THE DIMENSION RESTRICTIONS AND DESIGN CRITERIA LISTED HEREIN. SEE SHEETS 4.5 FOR DESIGN SCHEDULES.)

**MECHANICAL UNIT CRITERIA:**  
 • CONSIDER THE INSTALLATION OF (1) MECHANICAL UNIT WITH THE FOLLOWING CRITERIA:  
 • VIDE-120 WIND EXPOSURE 'B'  
 • 48" TALL x 48" DEEP x 48" WIDE, 100 LB (WEIGHT AS VERIFIED BY OTHERS)  
 • INSTALLED TO 3000 PSI MIN CONCRETE WITH (1)-2" CLIP AT EACH CORNER OF UNIT (TOTAL OF (4) CLIPS)

**PROCEDURE:**

REVISIONS  
 DATE  
 BY  
 CHECKED  
 DATE  
 15-2378  
 DRAWN BY: [Signature]  
 DATE: 04-08-13



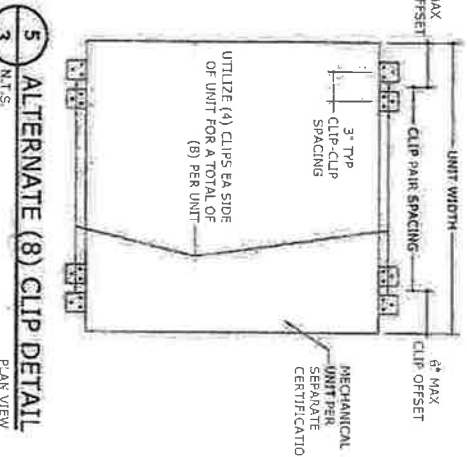
**ANCHOR SCHEDULES**  
**1" CLIPS**

SUBSTRATE	DESCRIPTION
CONCRETE: (4" THICK MIN, 3000 PSI MIN.)	(1) #15/18 CARBON STEEL TIE-BUILDUP/TIE-ON 2X FULL EMBED TO CONCRETE, 3X MIN. EDGE DISTANCE, 3X MIN. SPACING TO ANY ADJACENT ANCHOR.
ALUMINUM: (0.125" MIN. THICK, 6061-T6 MIN. ALUMINUM)	(1) #14 SAE GRADE 5 SHEET METAL SCREW TO ALUMINUM, PROVIDE (5) PITCHES MIN. PAST THREAD PLANE
STEEL: (0.125" MIN. THICK, 33 KSI MIN. STEEL)	(1) #14 SAE GRADE 5 SHEET METAL SCREW TO STEEL, PROVIDE (5) PITCHES MIN. PAST THREAD PLANE

**2" CLIPS**

SUBSTRATE	DESCRIPTION
CONCRETE: (4" THICK MIN, 3000 PSI MIN.)	(1) #15/18 CARBON STEEL TIE-BUILDUP/TIE-ON 2X FULL EMBED TO CONCRETE, 3X MIN. EDGE DISTANCE, 3X MIN. SPACING TO ANY ADJACENT ANCHOR.
ALUMINUM: (0.125" MIN. THICK, 6061-T6 MIN. ALUMINUM)	(2) #14 SAE GRADE 5 SHEET METAL SCREW TO ALUMINUM, PROVIDE (5) PITCHES MIN. PAST THREAD PLANE
STEEL: (0.125" MIN. THICK, 33 KSI MIN. STEEL)	(2) #14 SAE GRADE 5 SHEET METAL SCREW TO STEEL, PROVIDE (5) PITCHES MIN. PAST THREAD PLANE

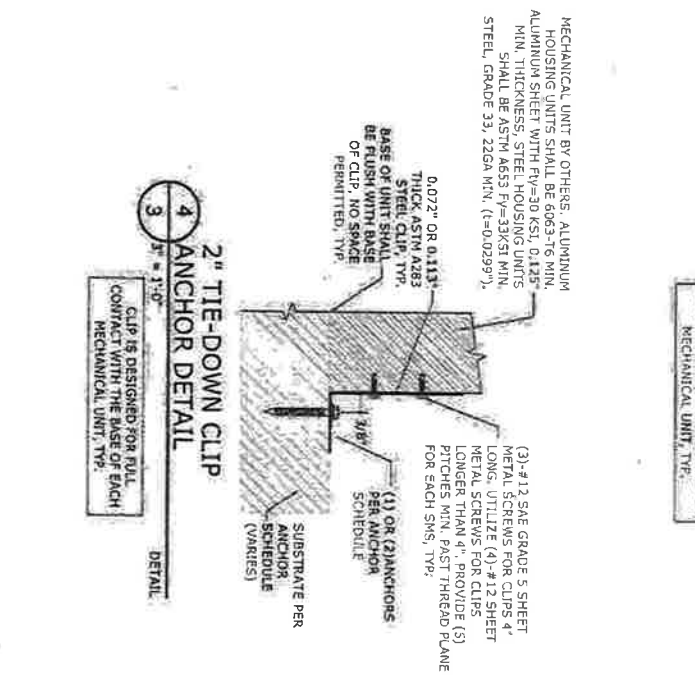
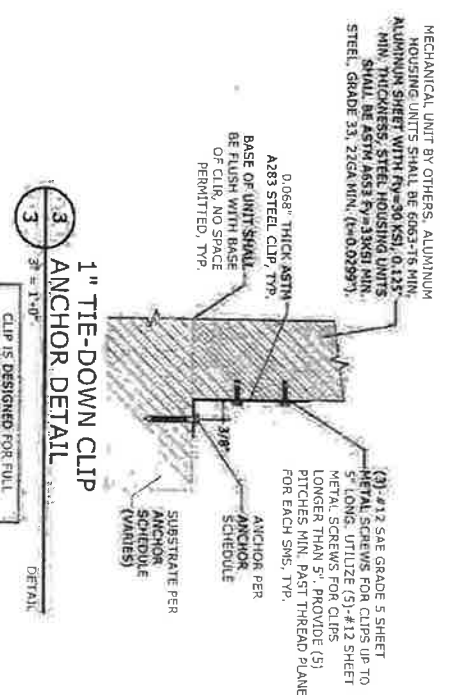
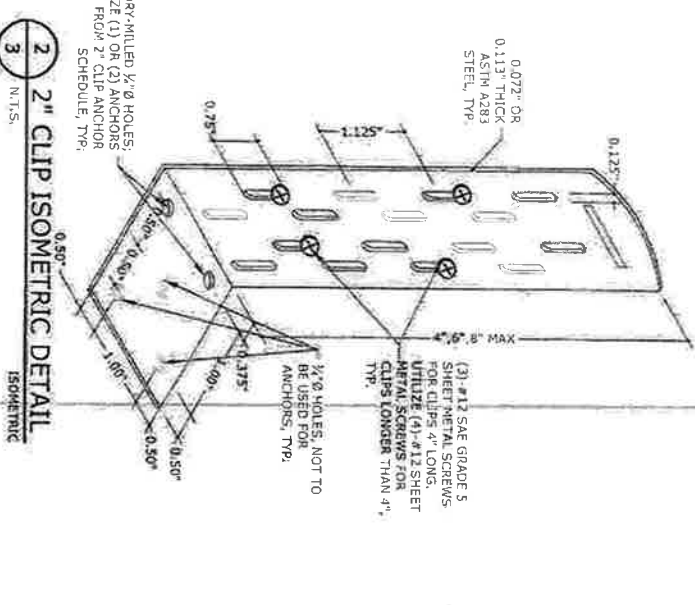
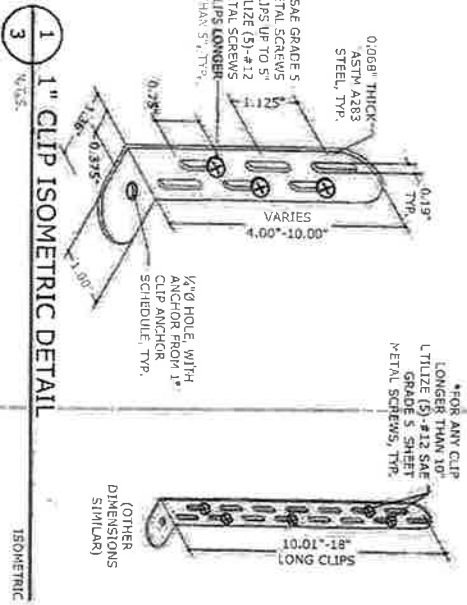
1. EMBEDMENT AND EDGE DISTANCE EXCLUDES FINISHES, IF APPLICABLE.
2. ENSURE MINIMUM EDGE DISTANCE AS NOTED IN ANCHOR SCHEDULE.
3. SEE DETAILS ON SHEET 3 FOR ANCHORS ATTACHING TO MECHANICAL UNIT.



**5 ALTERNATE (8) CLIP DETAIL**  
PLAN VIEW  
UTILIZE (4) CLIPS EA SIDE OF UNIT FOR A TOTAL OF (8) PER UNIT.

**3** THIS DETAIL MAY BE USED AS AN ALTERNATE GEOMETRIC PATTERN FOR ALL CONNECTION TYPES THAT UTILIZE (2) CLIPS AT EACH CORNER FOR A TOTAL OF (8) CLIPS PER UNIT.

<p><b>REMARKS</b></p> <p>REV FOR UNIT: [ ]</p> <p>REV FOR FBC SIGN (2014): [ ]</p> <p>DATE: [ ]</p>	<p><b>DRWN/CHKD</b></p> <p>[ ]/[ ]</p>	<p><b>DATE</b></p> <p>[ ]-[ ]-[ ]</p>	<p><b>SCALE</b></p> <p>N/A</p>	<p><b>PAGE DESCRIPTION</b></p> <p>15-2378</p>	<p><b>2</b></p>	<p><b>BMP INTERNATIONAL, INC.</b></p> <p>4710 28TH STREET NORTH ST. PETERSBURG, FL 33741 PH: (727) 577-1613</p> <p>MECHANICAL UNIT STEEL TIE-DOWN CLIPS</p> <p>FBC 5TH EDITION (2014) PRODUCT APPROVAL FL#14239.1</p>	<p><b>ENGINEERING EXPRESS</b></p> <p>160 SW 12th AVENUE, SUITE 300 DEERFIELD BEACH, FL 33442 PH: (954) 354-0660 FAX: (954) 354-0688 WWW.ENGINEERINGEXPRESS.COM</p> <p>CITY OF DADE COUNTY, FLORIDA A. FRANK L. BERNHARDT, P.E., REGISTERED PROFESSIONAL ENGINEER</p>



<p><b>BMP INTERNATIONAL, INC.</b> 4710 28TH STREET NORTH ST. PETERSBURG, FL 33471 PH: (727) 577-1613</p>	<p><b>MECHANICAL UNIT STEEL TIE-DOWN CLIPS</b></p> <p>FBC 5TH EDITION (2014) PRODUCT APPROVAL FL#14239.1</p>	<p><b>ENGINEERING EXPERTS</b> 160 SW 12th Avenue, Suite 23442 Deerfield Beach, FL 33442 PH: (954) 354-0660 FAX: (954) 354-0443 WWW.ENGINEERINGEXPERTS.COM CERT. OF AUTH. 9888 A FRANK L. BERNARDO, P.E., INC. INDEPENDENT</p>





**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) THE-DOWN CONFIGURATION TYPE			
			C1	C2	C3	C4
6 FT*	24" MAX	12" MIN	H ≤ 15 FT 60 FT < H ≤ 120 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
9 FT*	32" MAX	15" MIN	AT GRADE	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
4 FT*			H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
6 FT*			H ≤ 40 FT 60 FT < H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
9 FT*	48" MAX	24" MIN	AT GRADE 60 FT < H ≤ 80 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
12 FT*			AT GRADE	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
18 FT*			N/A	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
20 FT*			N/A	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
25 FT*			N/A	H ≤ 40 FT 60 FT < H ≤ 180 FT	H ≤ 200 FT	H ≤ 200 FT
30 FT*	50" MAX	48" MIN	N/A	H ≤ 15 FT 60 FT < H ≤ 180 FT	H ≤ 200 FT	H ≤ 200 FT
36 FT*			N/A	AT GRADE 60 FT < H ≤ 80 FT	H ≤ 200 FT	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) THE-DOWN CONFIGURATION TYPE			
			C1	C2	C3	C4
6 FT*	24" MAX	12" MIN	AT GRADE	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
9 FT*	32" MAX	15" MIN	N/A	H ≤ 300 FT	H ≤ 15 FT 60 FT < H ≤ 200 FT	H ≤ 200 FT
6 FT*			H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
6 FT*			AT GRADE 60 FT < H ≤ 180 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
9 FT*	48" MAX	24" MIN	AT GRADE	H ≤ 200 FT	H ≤ 40 FT 60 FT < H ≤ 200 FT	H ≤ 200 FT
12 FT*			N/A	H ≤ 200 FT	AT GRADE 60 FT < H ≤ 140 FT	H ≤ 200 FT
16 FT*			N/A	H ≤ 15 FT 60 FT < H ≤ 200 FT	AT GRADE	H ≤ 200 FT
20 FT*			N/A	H ≤ 30 FT 60 FT < H ≤ 200 FT	AT GRADE	H ≤ 200 FT
25 FT*			N/A	AT GRADE 60 FT < H ≤ 140 FT	AT GRADE	H ≤ 200 FT
30 FT*	60" MAX	48" MIN	N/A	AT GRADE	N/A	H ≤ 200 FT
36 FT*			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) THE-DOWN CONFIGURATION TYPE			
			C1	C2	C3	C4
6 FT*	24" MAX	12" MIN	N/A	H ≤ 200 FT	H ≤ 30 FT 60 FT < H ≤ 200 FT	H ≤ 200 FT
9 FT*	32" MAX	15" MIN	N/A	H ≤ 300 FT	AT GRADE 60 FT < H ≤ 140 FT	H ≤ 200 FT
4 FT*			H ≤ 40 FT 60 FT < H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
6 FT*			AT GRADE 60 FT < H ≤ 100 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
9 FT*	48" MAX	24" MIN	N/A	H ≤ 200 FT	H ≤ 15 FT 60 FT < H ≤ 200 FT	H ≤ 200 FT
12 FT*			N/A	H ≤ 40 FT	AT GRADE	H ≤ 200 FT
16 FT*			N/A	AT GRADE 60 FT < H ≤ 200 FT	AT GRADE 60 FT < H ≤ 80 FT	H ≤ 200 FT
20 FT*			N/A	AT GRADE 60 FT < H ≤ 200 FT	N/A	H ≤ 200 FT
25 FT*			N/A	AT GRADE 60 FT < H ≤ 200 FT	AT GRADE	H ≤ 200 FT
30 FT*	60" MAX	48" MIN	N/A	N/A	N/A	H ≤ 40 FT 60 FT < H ≤ 200 FT
36 FT*			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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 MECHANICAL UNIT STEEL TIE-DOWN CLIPS  
 FBC 5TH EDITION (2014) PRODUCT APPROVAL FL#14239.1

**ENGINEERING**  
 No. 48520  
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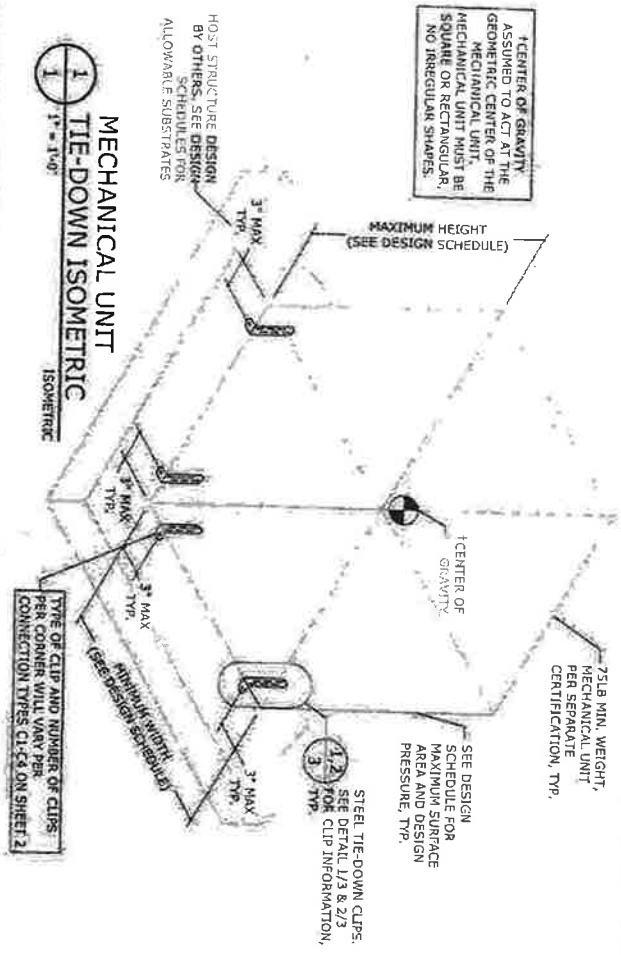
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02-13-12	REV FOR UNITS	COL	TDB
04-06-12	REV FOR UNITS	COL	TDB
	REV FOR UNITS	COL	TDB

15-2378  
 SCALE: N.T.S.  
 250% DIMENSIONAL



# BMP INTERNATIONAL, INC.

## MECHANICAL UNIT STEEL TIE-DOWN CLIP: AT GRADE & ROOF-TOP MOUNTED APPLICATIONS



### TIE-DOWN CLIP DIRECTIVE EXAMPLE

THE FOLLOWING EXAMPLE ILLUSTRATES THE PROCEDURE USED TO DETERMINE THE MAXIMUM ALLOWABLE ROOF-TOP INSTALLATION HEIGHT, H, FOR ANY GIVEN MECHANICAL UNIT THAT COMPLIES TO THE DIMENSION RESTRICTIONS AND DESIGN CRITERIA LISTED HEREIN. SEE SHEETS 4-9 FOR DESIGN SCHEDULES.)

#### MECHANICAL UNIT CRITERIA:

- CONSIDER THE INSTALLATION OF (3) MECHANICAL UNIT WITH THE FOLLOWING CRITERIA=
- VUL-170 MH, EXPOSURE B
  - 48" TALL X 48" DEEP X 48" WIDE, 100 LB (WEIGHT AS VERIFIED BY OTHERS)
  - INSTALLED TO 3000 PSI MIN CONCRETE WITH (1)-2" CLIP AT EACH CORNER OF UNIT (TOTAL OF (4) CLIPS)

#### PROCEDURE:

PROCEDURE STEP	RESULT
1. DETERMINE THE CONNECTION TYPE BASED ON THE DIAGRAMS ON SHEET 3.	CONNECTION TYPE 3
2. DETERMINE WHICH DESIGN SCHEDULE TABLE TO USE	THIS INSTALLATION IS INTENDED FOR A WALL-TOP MH, EXPOSURE B. THIS DESIGN CRITERIA CORRESPONDS TO TABLE 3
3. DETERMINE LARGEST FACE AREA OF MECHANICAL UNIT TO BE INSTALLED	48" X 48" = 18FT <sup>2</sup>
4. CHECK MAXIMUM UNIT HEIGHT RESTRICTION	THIS UNIT HEIGHT OF 48" IS EQUAL TO THE MAXIMUM ALLOWABLE HEIGHT OF 48" OF AN A/C STAND THAT IS A MAXIMUM 30" TALL. IF AN A/C STAND IS UTILIZED, CHECK TO SEE THAT THE STAND DOES NOT EXCEED 36" IN HEIGHT
5. CHECK MINIMUM UNIT WIDTH RESTRICTION	UNIT WIDTH IS 48" WHICH IS GREATER THAN THE MINIMUM ALLOWABLE WIDTH OF 24"
6. DETERMINE THE ALLOWABLE ROOF-TOP HEIGHT OF THE INSTALLATION	THIS UNIT MAY BE INSTALLED AT ROOF HEIGHTS LESS THAN OR EQUAL TO 15 FT. ADDITIONALLY, THIS UNIT MAY BE INSTALLED ON ROOF-TOP HEIGHTS GREATER THAN 15 FT. AND LESS THAN 100 FT. SEE (7) ON TABLE 3 FOR THE NUMERICAL VALUES OF THIS DESIGN EXAMPLE

#### DESIGN NOTES:

THIS PRODUCT HAS BEEN DESIGNED IN ACCORDANCE WITH ASCE 7-10 AND THE FLOOR BUILDING CODE FOR USE WITHIN A AND D WIND SPEEDS. THE HIGH VELOCITY HURRICANE ZONE INDICATED IN THE ACCOMPANYING DESIGN SCHEDULES SHALL BE USED FOR ALL DESIGN. TO CALCULATE THE ALLOWABLE ROOF-TOP HEIGHTS CONSIDER ASCE 7-10 SECTION 26.5.3 FOR ROOF TOP HEIGHTS (H), 660 FT AND SECTION 26.5 FOR ROOF TOP HEIGHTS (H) 50 FT TO SECTION 26.4.1 FOR INSTALLATIONS AT GRADE. (SEE NOTE 1.5 WITHIN THE WIND LOADS SECTION OUTSIDE THE WIND, (G)CD, -1.5 FOR ALL LOCATIONS (CONCURRENT), THE HEIGHTS USED IN THESE SCHEDULES REPRESENT THE ALLOWABLE HEIGHT OF THE BUILDING. THIS PRODUCT DESIGN SCHEDULES ALLOW FOR EACH UNIT TO BE INSTALLED ON A MAXIMUM 30" TALL A/C STAND (CERTIFICATION (H) OTHERS) ON TOP OF THE HEIGHTS LISTED IN THE DESIGN SCHEDULES.

#### GENERAL NOTES:

1. THIS PRODUCT HAS BEEN DESIGNED AND SHALL BE FABRICATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE, ASCE 7-10. THIS PRODUCT MAY BE USED WITHIN AND OUTSIDE THE HIGH VELOCITY HURRICANE ZONE.
2. NO 33:1/3% INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS SYSTEM.
3. DESIGN IS BASED ON CLIENT PROVIDED PRODUCT AND DIE SHEETS FROM TEST REPORT BY STEEL DIVISION, STEEL DIVISION BY TESTING EVALUATION LABORATORIES. THE NO SUBSTITUTIONS AFTER WRITTEN APPROVAL BY THIS ENGINEER SHALL BE PERMITTED.
4. MAXIMUM & MINIMUM DIMENSIONS AND MINIMUM WEIGHT OF MECHANICAL UNIT SHALL CONFORM TO SPECIFICATIONS STATED HEREIN. ALL MECHANICAL SPECIFICATIONS AND ARE THE EXPRESS RESPONSIBILITY OF THE CONTRACTOR.
5. FASTENERS TO BE #12 X 7/8" OR GREATER SAE GRADE 5 UNLESS NOTED OTHERWISE. FASTENERS NEEDED TO HEARIN SHALL BE 1/4" BUILDER BEAM, CARBON STEEL ONLY. REQUIREMENT FOR 3000 PSI MIN CONCRETE. SEE ANCHOR SCHEDULE FOR ANCHOR TO PREVENT ELECTRICALS.
6. ALL STEEL MEMBERS SHALL BE PROTECTED AGAINST CORROSION WITH AN APPROVED ALL STEEL MEMBERS SHALL BE PROTECTED AGAINST CORROSION WITH AN APPROVED COAT OF PAINT, ENAMEL, OR OTHER APPROVED PROTECTION. 690-DATED COATING REQUIRED FOR ALL COASTAL INSTALLATIONS.
7. ALL CONCRETE SHALL BE STRUCTURAL CONCRETE 4" MIN. THICK AND SHALL HAVE THE CUR COMPRESSIVE STRENGTH OF 3000 PSI, UNLESS NOTED OTHERWISE.
8. THE CUR COMPRESSIVE STRENGTH OF 3000 PSI, UNLESS NOTED OTHERWISE.
9. MATERIALS TO BE USED SHALL BE APPROVED. TO BE DESIGNED & INSTALLED BY OTHERS.
10. THE ADEQUACY OF ANY EXISTING STRUCTURE HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED.
11. THE SYSTEM DETAILED HEREIN IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SPECIFIC SITE. FOR SITE CONDITIONS DIFFERENT FROM THE CONDITIONS DETAILED HEREIN, A LICENSED ENGINEER OR REGISTERED ARCHITECT SHALL PREPARE SITE WATER PROOFING AND DRAINAGE DETAILS.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FULL RESPONSIBILITY OF THE INSTALLATION OF THE MECHANICAL UNIT SHALL BE THE FULL RESPONSIBILITY OF THE INSTALLING CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE WATER-TIGHTNESS SHALL BE THE FULL RESPONSIBILITY OF THE INSTALLING CONTRACTOR.
13. FOR AN EXPLANATION OF EXPOSURE CATEGORIES THAT ACCOMPANY THE WIND SPEEDS USED IN THIS APPROVAL, SEE SECTION 26.7.3 OF ASCE 7-10.

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MECHANICAL UNIT STEEL TIE-DOWN CLIPS

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

**ENGINEERING**  
**EXPOSURE**

160 SW 12th Avenue  
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FRANK L. BERNARD, P.E.

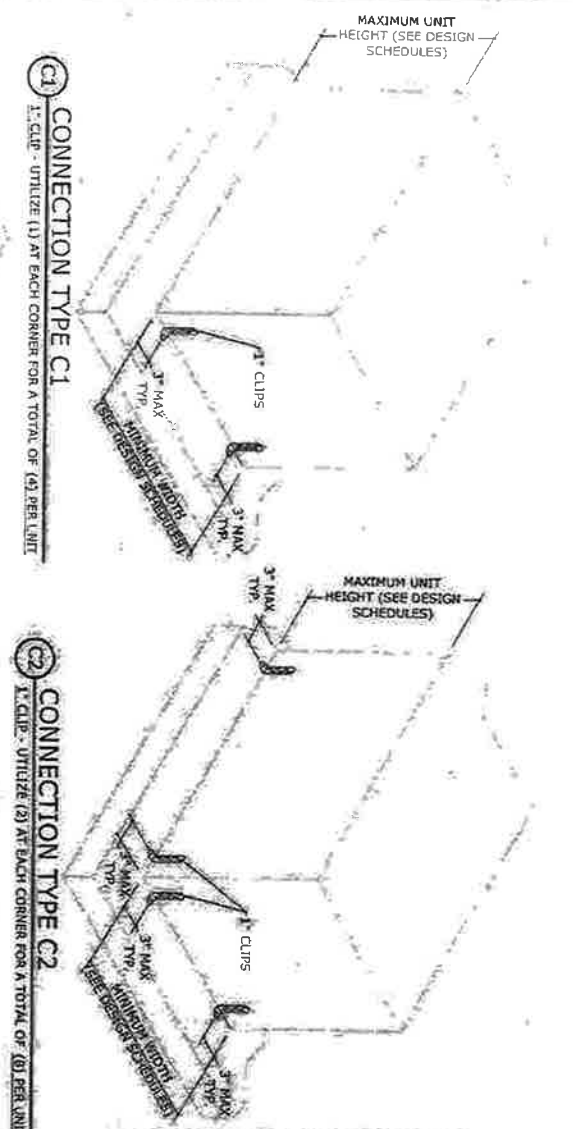
REVISIONS:

NO.	DATE	DESCRIPTION
1	10-15-11	ISSUE (FLAMP-0002)
2	03-12-11	REV FOR IFC
3	04-06-12	REV FOR FBC 5TH EDITION

DATE: 15-23-78

SCALE: N.T.S.

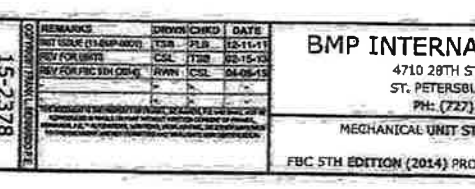
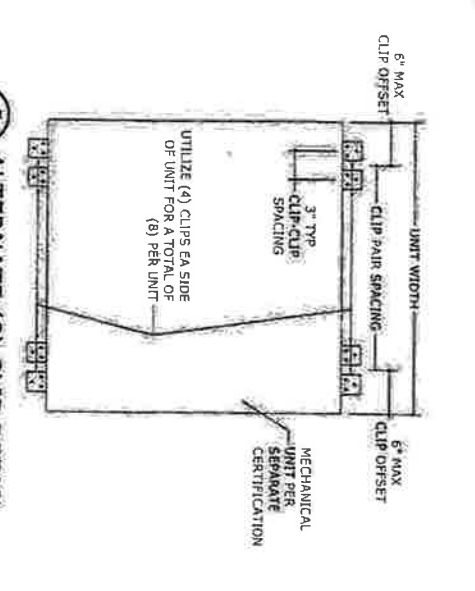
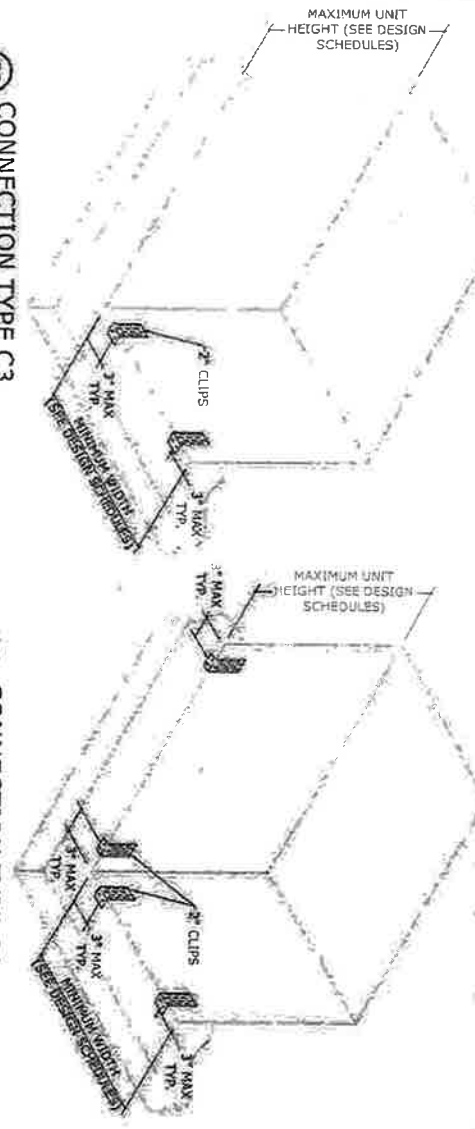
PAGE DESCRIPTION: MECHANICAL UNIT STEEL TIE-DOWN CLIPS



**ANCHOR SCHEDULE:**

1" CLIPS		2" CLIPS	
SUBSTRATE	DESCRIPTION	SUBSTRATE	DESCRIPTION
CONCRETE: (4" THICK MIN, 3000 PSI MIN.)	(1)-5/16" CARBON STEEL T/W BUILD UP TAPCON 3/4" FULL EMBED TO CONCRETE, 3/4" MIN. EDGE DISTANCE, 3/4" MIN. SPACING TO ANY ADJACENT ANCHOR.	CONCRETE: (4" THICK MIN, 3000 PSI MIN.)	(1)-5/16" CARBON STEEL T/W BUILD UP TAPCON 3/4" FULL EMBED TO CONCRETE, 3/4" MIN. EDGE DISTANCE, 3/4" MIN. SPACING TO ANY ADJACENT ANCHOR.
ALUMINUM: (0.125" MIN. THICK, 6061-T6 MIN. ALUMINUM)	(1)-#14 SAE GRADE 5 SHEET METAL SCREW TO ALUMINUM, PROVIDE (5) PITCHES MIN. PAST THREAD PLANE	ALUMINUM: (0.125" MIN. THICK, 6061-T6 MIN. ALUMINUM)	(2)-#14 SAE GRADE 5 SHEET METAL SCREW TO ALUMINUM, PROVIDE (5) PITCHES MIN. PAST THREAD PLANE
STEEL: (0.125" MIN. THICK, 33 KSI MIN. STEEL)	(1)-#14 SAE GRADE 5 SHEET METAL SCREW TO STEEL, PROVIDE (5) PITCHES MIN. PAST THREAD PLANE	STEEL: (0.125" MIN. THICK, 33 KSI MIN. STEEL)	(2)-#14 SAE GRADE 5 SHEET METAL SCREW TO STEEL, PROVIDE (5) PITCHES MIN. PAST THREAD PLANE

1. EMBEDMENT AND EDGE DISTANCE EXCLUDES FINISHES, IF APPLICABLE.
2. ENSURE MINIMUM EDGE DISTANCE AS NOTED IN ANCHOR SCHEDULE.
3. SEE DETAILS ON SHEET 3 FOR ANCHORS ATTACHING TO MECHANICAL UNITS.



**REMARKS**

DATE	BY	CHKD	DATE
12-11-11	PLB		
05-15-10	CTL		
04-08-15	CTL		

**COMMENTS:**

15-2378  
SCALE: N.T.S.  
FABR. IDENTIFICATION:

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NO. 46840



**TABLE 1 : V<sub>W</sub>=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) - THE-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 ≤ 200 FT
9 FT <sup>2</sup>	48" MAX	24" MIN	N/A	AT GRADE	AT GRADE	H ≤ 200 FT
12 FT <sup>2</sup>	48" MAX	24" MIN	N/A	AT GRADE	AT GRADE	H ≤ 200 FT
16 FT <sup>2</sup>	48" MAX	24" MIN	N/A	AT GRADE	AT GRADE	H ≤ 200 FT
20 FT <sup>2</sup>	60" MAX	48" MIN	N/A	AT GRADE	AT GRADE	H ≤ 200 FT
30 FT <sup>2</sup>	60" MAX	48" MIN	N/A	AT GRADE	AT GRADE	H ≤ 200 FT
36 FT <sup>2</sup>	60" MAX	48" MIN	N/A	AT GRADE	AT GRADE	H ≤ 200 FT

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

**TABLE 2 : V<sub>W</sub>=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) - THE-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 ≤ 200 FT
9 FT <sup>2</sup>	48" MAX	24" MIN	N/A	AT GRADE	AT GRADE	H ≤ 200 FT
12 FT <sup>2</sup>	48" MAX	24" MIN	N/A	AT GRADE	AT GRADE	H ≤ 200 FT
16 FT <sup>2</sup>	48" MAX	24" MIN	N/A	AT GRADE	AT GRADE	H ≤ 200 FT
20 FT <sup>2</sup>	60" MAX	48" MIN	N/A	AT GRADE	AT GRADE	H ≤ 200 FT
30 FT <sup>2</sup>	60" MAX	48" MIN	N/A	AT GRADE	AT GRADE	H ≤ 200 FT
36 FT <sup>2</sup>	60" MAX	48" MIN	N/A	AT GRADE	AT GRADE	H ≤ 200 FT

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

**TABLE 3 : V<sub>W</sub>=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) - THE-DOWN CONFIGURATION TYPE			
			C1	C2	C3	C4
6 FT <sup>2</sup>	24" MAX	12" MIN	N/A	H ≤ 200 FT	AT GRADE	H ≤ 200 FT
9 FT <sup>2</sup>	32" MAX	15" MIN	N/A	H ≤ 15 FT	AT GRADE	H ≤ 200 FT
9 FT <sup>2</sup>	48" MAX	24" MIN	N/A	H ≤ 200 FT	AT GRADE	H ≤ 200 FT
12 FT <sup>2</sup>	48" MAX	24" MIN	N/A	H ≤ 200 FT	AT GRADE	H ≤ 200 FT
16 FT <sup>2</sup>	48" MAX	24" MIN	N/A	H ≤ 200 FT	AT GRADE	H ≤ 200 FT
20 FT <sup>2</sup>	60" MAX	48" MIN	N/A	H ≤ 200 FT	AT GRADE	H ≤ 200 FT
30 FT <sup>2</sup>	60" MAX	48" MIN	N/A	H ≤ 200 FT	AT GRADE	H ≤ 200 FT
36 FT <sup>2</sup>	60" MAX	48" MIN	N/A	H ≤ 200 FT	AT GRADE	H ≤ 200 FT

\*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 : V<sub>W</sub>=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) - THE-DOWN CONFIGURATION TYPE			
			C1	C2	C3	C4
6 FT <sup>2</sup>	24" MAX	12" MIN	N/A	H ≤ 200 FT	AT GRADE	H ≤ 200 FT
9 FT <sup>2</sup>	32" MAX	15" MIN	N/A	H ≤ 200 FT	AT GRADE	H ≤ 200 FT
9 FT <sup>2</sup>	48" MAX	24" MIN	N/A	H ≤ 200 FT	AT GRADE	H ≤ 200 FT
12 FT <sup>2</sup>	48" MAX	24" MIN	N/A	H ≤ 200 FT	AT GRADE	H ≤ 200 FT
16 FT <sup>2</sup>	48" MAX	24" MIN	N/A	H ≤ 200 FT	AT GRADE	H ≤ 200 FT
20 FT <sup>2</sup>	60" MAX	48" MIN	N/A	H ≤ 200 FT	AT GRADE	H ≤ 200 FT
30 FT <sup>2</sup>	60" MAX	48" MIN	N/A	H ≤ 200 FT	AT GRADE	H ≤ 200 FT
36 FT <sup>2</sup>	60" MAX	48" MIN	N/A	H ≤ 200 FT	AT GRADE	H ≤ 200 FT

\*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

**ENGINEER**  
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A FRANK L. BENNARD, P.E., INC. ENGINEER

DATE: 12-11-15  
DRAWN: [Signature]  
CHECKED: [Signature]  
DATE: 04-04-16

SCALE: 1/2" = 1'-0"

FIGURE DESCRIPTION: [Blank]

**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) THE-DOWN CONFIGURATION TYPE			
			C1	C2	C3	C4
6 FT <sup>2</sup>	24" MAX	12" MIN	H ≤ 15 FT 60 FT < H ≤ 120 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
9 FT <sup>2</sup>	32" MAX	15" MIN	AT GRADE	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
4 FT <sup>2</sup>			H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
6 FT <sup>2</sup>			H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
9 FT <sup>2</sup>	48" MAX	24" MIN	H ≤ 40 FT 60 FT < H ≤ 200 FT AT GRADE 60 FT < H ≤ 80 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
12 FT <sup>2</sup>			AT GRADE	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
16 FT <sup>2</sup>			N/A	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
20 FT <sup>2</sup>			N/A	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
25 FT <sup>2</sup>			N/A	H ≤ 40 FT 60 FT < H ≤ 180 FT	H ≤ 200 FT	H ≤ 200 FT
30 FT <sup>2</sup>	60" MAX	48" MIN	N/A	H ≤ 15 FT 60 FT < H ≤ 200 FT AT GRADE 60 FT < H ≤ 80 FT	H ≤ 200 FT	H ≤ 200 FT
36 FT <sup>2</sup>			N/A	AT GRADE 60 FT < H ≤ 80 FT	H ≤ 200 FT	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) THE-DOWN CONFIGURATION TYPE			
			C1	C2	C3	C4
6 FT <sup>2</sup>	24" MAX	12" MIN	AT GRADE	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
9 FT <sup>2</sup>	32" MAX	15" MIN	N/A	H ≤ 200 FT	H ≤ 15 FT 60 FT < H ≤ 200 FT	H ≤ 200 FT
4 FT <sup>2</sup>			H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
6 FT <sup>2</sup>			H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
9 FT <sup>2</sup>	48" MAX	24" MIN	AT GRADE 60 FT < H ≤ 180 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
12 FT <sup>2</sup>			AT GRADE	H ≤ 200 FT	H ≤ 40 FT 60 FT < H ≤ 200 FT	H ≤ 200 FT
16 FT <sup>2</sup>			N/A	H ≤ 200 FT	AT GRADE	H ≤ 200 FT
20 FT <sup>2</sup>			N/A	H ≤ 30 FT 60 FT < H ≤ 200 FT	AT GRADE	H ≤ 200 FT
25 FT <sup>2</sup>			N/A	60 FT < H ≤ 140 FT	AT GRADE	H ≤ 200 FT
30 FT <sup>2</sup>	60" MAX	48" MIN	N/A	AT GRADE	AT GRADE	H ≤ 200 FT
36 FT <sup>2</sup>			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) THE-DOWN CONFIGURATION TYPE			
			C1	C2	C3	C4
6 FT <sup>2</sup>	24" MAX	12" MIN	N/A	H ≤ 200 FT	H ≤ 30 FT 60 FT < H ≤ 200 FT	H ≤ 200 FT
9 FT <sup>2</sup>	32" MAX	15" MIN	N/A	H ≤ 200 FT	AT GRADE 60 FT < H ≤ 140 FT	H ≤ 200 FT
4 FT <sup>2</sup>			H ≤ 40 FT 60 FT < H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
6 FT <sup>2</sup>			H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT	H ≤ 200 FT
9 FT <sup>2</sup>	48" MAX	24" MIN	N/A	H ≤ 200 FT	H ≤ 40 FT 60 FT < H ≤ 200 FT	H ≤ 200 FT
12 FT <sup>2</sup>			N/A	H ≤ 200 FT	AT GRADE 60 FT < H ≤ 80 FT	H ≤ 200 FT
16 FT <sup>2</sup>			N/A	AT GRADE	N/A	H ≤ 200 FT
20 FT <sup>2</sup>			N/A	AT GRADE 60 FT < H ≤ 200 FT	AT GRADE	H ≤ 200 FT
25 FT <sup>2</sup>			N/A	AT GRADE 50 FT < H ≤ 80 FT	N/A	H ≤ 200 FT
30 FT <sup>2</sup>	60" MAX	48" MIN	N/A	N/A	N/A	H ≤ 40 FT 60 FT < H ≤ 200 FT
36 FT <sup>2</sup>			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.



**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

REVISIONS	DATE	BY	CHKD
REV 001 (11-15-11)	11-15-11	FLD	FLD
REV 002 (02-15-13)	02-15-13	FLD	FLD
REV 003 (04-06-13)	04-06-13	FLD	FLD
REV 004 (05-15-13)	05-15-13	FLD	FLD
REV 005 (06-15-13)	06-15-13	FLD	FLD
REV 006 (07-15-13)	07-15-13	FLD	FLD
REV 007 (08-15-13)	08-15-13	FLD	FLD
REV 008 (09-15-13)	09-15-13	FLD	FLD
REV 009 (10-15-13)	10-15-13	FLD	FLD
REV 010 (11-15-13)	11-15-13	FLD	FLD
REV 011 (12-15-13)	12-15-13	FLD	FLD
REV 012 (01-15-14)	01-15-14	FLD	FLD
REV 013 (02-15-14)	02-15-14	FLD	FLD
REV 014 (03-15-14)	03-15-14	FLD	FLD
REV 015 (04-15-14)	04-15-14	FLD	FLD
REV 016 (05-15-14)	05-15-14	FLD	FLD
REV 017 (06-15-14)	06-15-14	FLD	FLD
REV 018 (07-15-14)	07-15-14	FLD	FLD
REV 019 (08-15-14)	08-15-14	FLD	FLD
REV 020 (09-15-14)	09-15-14	FLD	FLD
REV 021 (10-15-14)	10-15-14	FLD	FLD
REV 022 (11-15-14)	11-15-14	FLD	FLD
REV 023 (12-15-14)	12-15-14	FLD	FLD
REV 024 (01-15-15)	01-15-15	FLD	FLD
REV 025 (02-15-15)	02-15-15	FLD	FLD
REV 026 (03-15-15)	03-15-15	FLD	FLD
REV 027 (04-15-15)	04-15-15	FLD	FLD
REV 028 (05-15-15)	05-15-15	FLD	FLD
REV 029 (06-15-15)	06-15-15	FLD	FLD
REV 030 (07-15-15)	07-15-15	FLD	FLD
REV 031 (08-15-15)	08-15-15	FLD	FLD
REV 032 (09-15-15)	09-15-15	FLD	FLD
REV 033 (10-15-15)	10-15-15	FLD	FLD
REV 034 (11-15-15)	11-15-15	FLD	FLD
REV 035 (12-15-15)	12-15-15	FLD	FLD
REV 036 (01-15-16)	01-15-16	FLD	FLD
REV 037 (02-15-16)	02-15-16	FLD	FLD
REV 038 (03-15-16)	03-15-16	FLD	FLD
REV 039 (04-15-16)	04-15-16	FLD	FLD
REV 040 (05-15-16)	05-15-16	FLD	FLD
REV 041 (06-15-16)	06-15-16	FLD	FLD
REV 042 (07-15-16)	07-15-16	FLD	FLD
REV 043 (08-15-16)	08-15-16	FLD	FLD
REV 044 (09-15-16)	09-15-16	FLD	FLD
REV 045 (10-15-16)	10-15-16	FLD	FLD
REV 046 (11-15-16)	11-15-16	FLD	FLD
REV 047 (12-15-16)	12-15-16	FLD	FLD
REV 048 (01-15-17)	01-15-17	FLD	FLD
REV 049 (02-15-17)	02-15-17	FLD	FLD
REV 050 (03-15-17)	03-15-17	FLD	FLD
REV 051 (04-15-17)	04-15-17	FLD	FLD
REV 052 (05-15-17)	05-15-17	FLD	FLD
REV 053 (06-15-17)	06-15-17	FLD	FLD
REV 054 (07-15-17)	07-15-17	FLD	FLD
REV 055 (08-15-17)	08-15-17	FLD	FLD
REV 056 (09-15-17)	09-15-17	FLD	FLD
REV 057 (10-15-17)	10-15-17	FLD	FLD
REV 058 (11-15-17)	11-15-17	FLD	FLD
REV 059 (12-15-17)	12-15-17	FLD	FLD
REV 060 (01-15-18)	01-15-18	FLD	FLD
REV 061 (02-15-18)	02-15-18	FLD	FLD
REV 062 (03-15-18)	03-15-18	FLD	FLD
REV 063 (04-15-18)	04-15-18	FLD	FLD
REV 064 (05-15-18)	05-15-18	FLD	FLD
REV 065 (06-15-18)	06-15-18	FLD	FLD
REV 066 (07-15-18)	07-15-18	FLD	FLD
REV 067 (08-15-18)	08-15-18	FLD	FLD
REV 068 (09-15-18)	09-15-18	FLD	FLD
REV 069 (10-15-18)	10-15-18	FLD	FLD
REV 070 (11-15-18)	11-15-18	FLD	FLD
REV 071 (12-15-18)	12-15-18	FLD	FLD
REV 072 (01-15-19)	01-15-19	FLD	FLD
REV 073 (02-15-19)	02-15-19	FLD	FLD
REV 074 (03-15-19)	03-15-19	FLD	FLD
REV 075 (04-15-19)	04-15-19	FLD	FLD
REV 076 (05-15-19)	05-15-19	FLD	FLD
REV 077 (06-15-19)	06-15-19	FLD	FLD
REV 078 (07-15-19)	07-15-19	FLD	FLD
REV 079 (08-15-19)	08-15-19	FLD	FLD
REV 080 (09-15-19)	09-15-19	FLD	FLD
REV 081 (10-15-19)	10-15-19	FLD	FLD
REV 082 (11-15-19)	11-15-19	FLD	FLD
REV 083 (12-15-19)	12-15-19	FLD	FLD
REV 084 (01-15-20)	01-15-20	FLD	FLD
REV 085 (02-15-20)	02-15-20	FLD	FLD
REV 086 (03-15-20)	03-15-20	FLD	FLD
REV 087 (04-15-20)	04-15-20	FLD	FLD
REV 088 (05-15-20)	05-15-20	FLD	FLD
REV 089 (06-15-20)	06-15-20	FLD	FLD
REV 090 (07-15-20)	07-15-20	FLD	FLD
REV 091 (08-15-20)	08-15-20	FLD	FLD
REV 092 (09-15-20)	09-15-20	FLD	FLD
REV 093 (10-15-20)	10-15-20	FLD	FLD
REV 094 (11-15-20)	11-15-20	FLD	FLD
REV 095 (12-15-20)	12-15-20	FLD	FLD
REV 096 (01-15-21)	01-15-21	FLD	FLD
REV 097 (02-15-21)	02-15-21	FLD	FLD
REV 098 (03-15-21)	03-15-21	FLD	FLD
REV 099 (04-15-21)	04-15-21	FLD	FLD
REV 100 (05-15-21)	05-15-21	FLD	FLD

5



STATE OF FLORIDA  
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

CONSTRUCTION INDUSTRY LICENSING BOARD  
1940 NORTH MONROE STREET  
TALLAHASSEE FL 32399-0783

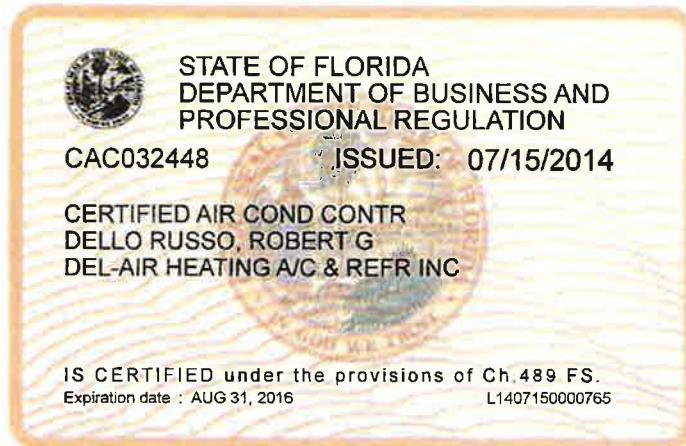
(850) 487-1395

DELLO RUSSO, ROBERT G  
DEL-AIR HEATING A/C & REFR INC  
531 CODISCO WAY  
SANFORD FL 32771

Congratulations! With this license you become one of the nearly one million Floridians licensed by the Department of Business and Professional Regulation. Our professionals and businesses range from architects to yacht brokers, from boxers to barbeque restaurants, and they keep Florida's economy strong.

Every day we work to improve the way we do business in order to serve you better. For information about our services, please log onto [www.myfloridalicense.com](http://www.myfloridalicense.com). There you can find more information about our divisions and the regulations that impact you, subscribe to department newsletters and learn more about the Department's initiatives.

Our mission at the Department is: License Efficiently, Regulate Fairly. We constantly strive to serve you better so that you can serve your customers. Thank you for doing business in Florida, and congratulations on your new license!



DETACH HERE

RICK SCOTT, GOVERNOR

KEN LAWSON, SECRETARY

STATE OF FLORIDA  
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION  
CONSTRUCTION INDUSTRY LICENSING BOARD

<b>LICENSE NUMBER</b>	
CAC032448	

The CLASS B AIR CONDITIONING CONTRACTOR  
Named below IS CERTIFIED  
Under the provisions of Chapter 489 FS.  
Expiration date: AUG 31, 2016

DELLO RUSSO, ROBERT G  
DEL-AIR HEATING A/C & REFR INC  
531 CODISCO WAY  
SANFORD FL 32771



ISSUED: 07/15/2014

DISPLAY AS REQUIRED BY LAW

SEQ # L1407150000765





# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
5/23/2016

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Stahl & Associates Insurance, Inc. 250 International Parkway Suite 128 Lake Mary FL 32746	CONTACT NAME: Karen Hall
	PHONE (A/C No. Ext): (407) 833-8998 FAX (A/C No.): (407) 833-3909 E-MAIL ADDRESS: karen.hall@stahlinsurance.com
INSURED Del-Air Heating, A/C & Refrigeration, Inc. Del-Air Appliance Centers, LLC 531 Codisco Way Sanford FL 32771	INSURER(S) AFFORDING COVERAGE
	INSURER A: National Trust Insurance Co. NAIC # 20141
	INSURER B: FCCI Insurance Co. 10178
	INSURER C:
	INSURER D:
	INSURER E:

**COVERAGES** CERTIFICATE NUMBER: CL1652331944 REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<b>GENERAL LIABILITY</b>			GL0016798	6/1/2016	6/1/2017	EACH OCCURRENCE \$ 1,000,000
	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY						DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 300,000
	<input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR						MED EXP (Any one person) \$ 10,000
	<input checked="" type="checkbox"/> Blanket Add'l Insured's						PERSONAL & ADV INJURY \$ 1,000,000
	<input checked="" type="checkbox"/> GL Extension Endorsement			GENERAL AGGREGATE \$ 2,000,000			PRODUCTS - COMP/OP AGG \$ 2,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						\$
	<input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC						\$
B	<b>AUTOMOBILE LIABILITY</b>			10000229401	6/1/2016	6/1/2017	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000
	<input checked="" type="checkbox"/> ANY AUTO						BODILY INJURY (Per person) \$
	<input type="checkbox"/> ALL OWNED AUTOS	<input type="checkbox"/> SCHEDULED AUTOS					BODILY INJURY (Per accident) \$
	<input checked="" type="checkbox"/> HIRED AUTOS	<input checked="" type="checkbox"/> NON-OWNED AUTOS					PROPERTY DAMAGE (Per accident) \$
							Uninsured motorist combined \$
A	<input checked="" type="checkbox"/> UMBRELLA LIAB			UMB0019058	6/1/2016	6/1/2017	EACH OCCURRENCE \$ 5,000,000
	<input checked="" type="checkbox"/> EXCESS LIAB	<input checked="" type="checkbox"/> OCCUR					AGGREGATE \$ 5,000,000
	<input type="checkbox"/> DED <input checked="" type="checkbox"/> RETENTION \$ -0-	<input type="checkbox"/> CLAIMS-MADE					\$
B	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b>			001WC16A73661	6/1/2016	6/1/2017	<input checked="" type="checkbox"/> WC STATUTORY LIMITS
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	N/A				E.L. EACH ACCIDENT \$ 500,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE \$ 500,000
							E.L. DISEASE - POLICY LIMIT \$ 500,000
B	<b>Contractors Equipment</b>			CM0008203	6/1/2016	6/1/2017	Leased/Rented Equipment: \$50,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

<b>CERTIFICATE HOLDER</b>	<b>CANCELLATION</b>
(407) 581-0313 smanchester@universalengin	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
City of Belle Isle 1600 Nela Avenue Belle Isle, FL 32809	AUTHORIZED REPRESENTATIVE
	Robert Bowles/DOOLEY



# SEMINOLE COUNTY BUSINESS TAX RECEIPT

RAY VALDES, SEMINOLE COUNTY TAX COLLECTOR

PO Box 630 ■ Sanford, FL 32772-0630 ■ Telephone: 407-665-1000

www.seminoletax.org

**VALID THROUGH 09/30/16**

**DEL AIR HEATING AC REFRIGERANT INC**  
531 CODISCO WAY  
SANFORD, FL 32771

**Account #: 017508**

ROBERT G DELLO RUSSO (PRES)

**REGULATED**  
License # - CA C032448  
Qualifier- DELLO RUSSO ROBERT G  
**\*\*SANFORD CITY LICENSE REQUIRED \*\***

**Receipt #: WEB#2015072911327**

**Amount Paid: \$ 45.00**

**Date Paid: 07/29/2015**

### BUSINESS OWNER, PLEASE NOTE THE FOLLOWING:

○ **DISPLAY THE ABOVE RECEIPT PROMINENTLY:** This Business Tax Receipt shall be displayed conspicuously at the place of business in such a manner that it can be open to the view of the public and subject to inspection by all duly authorized officers of the County. Upon failure to do so, the business shall be subject to the payment of another business tax for the same business or profession.

○ **RENEW THIS TAX BEFORE IT EXPIRES:** Pursuant to Florida Statutes, all Business Tax Receipts shall be issued by the Tax Collector beginning July 1<sup>st</sup> of each year, and it shall expire on September 30<sup>th</sup> of the succeeding year. Those Business Tax Receipts issued as renewal accounts beginning October 1<sup>st</sup> shall be delinquent and subject to a delinquency penalty of 10% for the month of October, plus an additional 5% penalty for each month of delinquency thereafter until paid; provided that the total penalty shall not exceed 25% of the business tax for the delinquent establishment (Florida Statute [FS] 205.053[1]).

A 25% penalty shall be imposed on any individual engaged in any new business or profession without first obtaining a Seminole County Business Tax Receipt. (FS 205.053 [2])

This Business Tax Receipt is only a receipt for business taxes paid. It does not permit the taxpayer to violate any existing regulatory or zoning laws of the state, county, or municipality, nor does it exempt the taxpayer from any other required licenses, registrations, certifications, or permits. Business Tax requirements are subject to legislative change.

○ **REPORT ALL CHANGES:** The holder of this Business Tax Receipt is required to report a change in the following: Ownership, Business Location, Mailing Address, or any other information that would alter the status of the current year's taxes. This includes, but is not limited to, the loss of or a change in a State License which was used to qualify for the business activity and/or occupation identified on the current County Business Tax Receipt. If you have any changes to report, contact the Business Tax Department at 407-665-7636.

**DEL AIR HEATING AC REFRIGERANT INC**  
531 CODISCO WAY  
SANFORD, FL 32771

County Services Building  
1101 E First Street  
Sanford, FL 32771

Casselberry Office  
104 Wilshire Blvd. Unit 1000  
Casselberry, FL 32707

Oak Groves Shoppes  
995 N SR 434 Suite 505  
Altamonte Springs, FL 32714

ShelMar Prof1 Building  
1490 Swanson Dr #100  
Oviedo, FL 32765

Commons at Primera  
845 Primera Blvd  
Lake Mary, FL 32746



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

Sign up for e-Notify...

**5874 Cove Dr** < 20-23-30-0000-00-029 >

Names)	Physical Street Address
Martin Kenneth R	5874 Cove Dr
Martin Patricia L	Postal City and Zipcode
Mailing Address On File	Orlando, FL 32812
5874 Cove Dr	Property Use
Belle Isle, FL 32812-2819	0103 - Single Fam Class III
Incorrect Mailing Address?	Municipality
	Belle Isle



- Values, Exemptions and Taxes**
- Property Features
- Sales Analysis
- Location Info
- Market Stats
- Update Information

**Property Description**

BEG ELY COR OF LOT 6 CONWAY GARDENS 2ND ADD 1/59 RUN N 41 DEG E 62.86 FT ALONG CURVE 71.02 FT N 27 DEG W 144.76 FT N 59 DEG W 214.73 FT SWLY ALONG LAKE 125.79 FT S 44 DEG E 298.55 FT TO POB IN SEC 20-23-30

**Total Land Area** 48,020 sqft (+/-) | 1.10 acres (+/-) GIS Calculated Notice

**Land (includes working values)**

Land Use Code	Zoning	Land Units	Unit Price	Land Value	Class Unit Price	Class Value
0130 - Sfr - Lake Front	R-1-AA	1 LOT(S)	\$370,000.00	\$370,000	\$0.00	\$370,000

Page 1 of 1 (1 total records)

**Buildings (includes working values)**

Important Information		Structure				
	<b>Model Code:</b>	01 - Single Fam Residence	<b>Actual Year Built:</b>	1950	<b>Gross Area:</b>	6034 sqft
	<b>Type Code:</b>	0103 - Single Fam Class III	<b>Beds:</b>	4	<b>Living Area:</b>	4652 sqft
	<b>Building Value:</b>	\$467,016	<b>Baths:</b>	4.0	<b>Exterior Wall:</b>	Concrete Block Stucco
	<b>Estimated New Cost:</b>	\$543,042	<b>Floors:</b>	1	<b>Interior Wall:</b>	Drywall

Page 1 of 1 (1 total records)

**Extra Features (includes working values)**

Description	Date Built	Units	XFOB Value
FPL3 - Good Fireplace	05/25/1990	1 Unit(s)	\$1,500
BD3 - Boat Dock 3	01/01/1996	1 Unit(s)	\$10,000
BC3 - Boat Cover 3	01/01/1996	1 Unit(s)	\$6,000
PL3 - Large Elaborate Pool	01/01/1996	1 Unit(s)	\$23,560
PT3 - Patio 3	01/01/2010	1 Unit(s)	\$4,000
PTNV - Patio No Value	01/01/2010	1 Unit(s)	\$0

Page 1 of 1 (6 total records)

This Data Printed on 07/04/2016 and System Data Last Refreshed on 07/03/2016