

received  
1-13-14



**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 EXTENSION

**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: 1/13/14

Permit Number: 2013-06-038  
Original Permit Number Issued

Contact Name Lindsey Kaplan Phone: 407-333-2645

Project Address 2511 Oak Island Pt Belle Isle, FL 32809 32812

Reason for Extension need to obtain final inspection

Notice of Commencement Expiration Date n/a (if applicable)

FBC 105.4.1.1 "If work has commenced and the permit is revoked, becomes null and void, or expires because of lack of progress or abandonment, a new permit covering the proposed construction shall be obtained before proceeding with the work."  
The City of Belle Isle issues this extension in place of a new permit.

**EXTENSION IS GOOD FOR 90 DAYS FROM ISSUANCE!**

*M. Buiss*  
BUISS



Date \_\_\_\_\_ Finalized/Inspected by: \_\_\_\_\_

Fee: \$ <u>3700</u>	Cash/Check #: <u>VISA 5294</u>	Date Rec'd: <u>1-14-14</u>	Rec'd By: <u>eg</u>
---------------------	--------------------------------	----------------------------	---------------------

To schedule an inspection please email your request to: [BDscheduling@UniversalEngineering.com](mailto:BDscheduling@UniversalEngineering.com)



# City of Belle Isle

1600 Nela Avenue, Belle Isle, FL 32809 \* Tel 407-851-7730 \* Fax 407-240-2222 \* [www.cityofbelleislefl.org](http://www.cityofbelleislefl.org)

## PERMIT – 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 Town, Orange County, State of Florida and/or Federal codes and/or ordinances. Separate permits are required for Signs, 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>Project Information:</b>		<b>Permit Number: 2013-06-038</b>
<b>Scope of Work</b>	MECHANICAL: (1) unit 2 ton split system, HVAC changeout NO DUCT WORK	<b>Date of Application</b> 06/11/2013 <b>Date Permit Issued</b> 06/12/2013
<b>Address</b>	2511 Oak Island Pointe, Belle Isle	<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.
<b>Parcel ID</b>	18-23-30-6031-00-030	
<b>Property Owner</b>	Jennifer France	
<b>Phone</b>	386-214-9058	
<b>Contractor</b>	DEL-AIR HEATING, AC & REFRIG INC	
<b>Name</b>	R. Dello Russo	
<b>License Number</b>	CAC032448	
<b>Address</b>	531 Codisco Way, Sanford	
<b>Phone Number</b>	407-333-2665	

### BUILDING FEATURES

<p><b>IMPACT FEES</b></p> <p>School _____ Traffic _____</p> <p><b>CITY OF BELLE ISLE - ZONING FEES</b></p> <p>Zoning Fee _____ Tree Removal _____ Fence _____ Driveway _____ Pavers _____</p> <p><b>UNIVERSAL ENG - BUILDING FEES</b></p> <p>Pre-Demo _____ Building Fee _____ Cert of Occupancy _____ Prepower _____ Electrical Fee _____ Temp Pole _____ Plumbing Fee _____ Mechanical Fee _____ 74.00 Gas Fee _____ Revision Fee _____ Roofing _____</p> <p><b>SURCHARGE FEES</b></p> <p>Surcharge Fee _____ 4.00</p> <p><b>TOTAL FEES</b> _____ 78.00</p> <p><b>Date Paid</b> 6/19/13</p> <p><b>Check #</b> 197642</p> <p>CITY OF BELLE ISLE BUILDING DEPARTMENT RCO: _____ PERMETER CONTROL:</p>	<p style="text-align: center;"><b>BUILDING INSPECTOR USE ONLY</b></p> <p><b>IF APPLICABLE:</b> Silt fencing in place? YES <input type="checkbox"/> NO <input type="checkbox"/> Turbidity Barrier in place? YES <input type="checkbox"/> NO <input type="checkbox"/></p> <p><input type="checkbox"/> <b>BUILDING/ROOFING</b></p> <p>ROOFING Dry-in/Flashing _____ ROOFING Other /FINAL _____ 1<sup>st</sup> _____ (Footing/Foundation) <b>Survey specific foundation plan must be submitted and approved by the City before slab pour.</b> 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 &amp; Windows/Doors Installed) 6<sup>th</sup> _____ (Insulation to be Made After Roof Installed) 7<sup>th</sup> _____ (Sidewalk/Driveway) 8<sup>th</sup> _____ (Other) 9<sup>th</sup> _____ (Final to be Made After Plumb/ Mech/Elect Finals)</p> <p><input type="checkbox"/> <b>PLUMBING</b> (INCL–Pool-Piping, Solar, Irrigation and Water Treatment Equip.) 1<sup>ST</sup> _____ (Underground) 2<sup>nd</sup> _____ (Sewer) 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 ___ Natural ___ LP    <input type="checkbox"/> HOOD VENTILATION    <input type="checkbox"/> REFRIGERATION <input type="checkbox"/> MECHANICAL    <input type="checkbox"/> ELECTRICAL    <input type="checkbox"/> LOW VOLTAGE 1<sup>st</sup> _____ (Rough-In)    2<sup>nd</sup> _____ (Final)</p> <p><i>If work is being performed on a lakefront property, you are required to call 407-851-7730 for inspection of your silt fencing and/or turbidity barrier PRIOR TO COMMENCING WORK. If this is not done, a Stop Work Order will be issued.</i></p>
---	--

The person accepting the listed permit shall conform to the terms of the applications on file in the City Office and construction shall conform to the requirements of the FI Building Codes. To schedule an inspection please email your request to: [BIIDcheduling@UniversalEngineering.com](mailto:BIIDcheduling@UniversalEngineering.com) a confirmation email reply will follow. **INSPECTION REQUESTS can be made from 8:00am-1:00pm Monday-Friday.** It is requested that inspections be scheduled 24 hours in advance via email. Please include the following in your request: Permit #, current date, project address & lot number, the builder name, the date of the inspection, a contact name & phone number for someone on site should our inspector need to reach them, requested time frame of inspection – A.M. or P.M.  
Updated: 07/2012 - FORM #PERMIT001



# City of Belle Isle

1600 Nela Avenue, Belle Isle, FL 32809

Tel 407-851-7730 \* Fax 407-240-2222 \* [www.cityofbelleislefl.org](http://www.cityofbelleislefl.org)

## 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: 6/11/13 PERMIT NUMBER 2013-06-038  
PLEASE PRINT. The undersigned hereby applies for a permit to make installations as indicated below:

Project Address 2511 Oak Island Pkwy Belle Isle FL X 32809 32812  
Property Owner Jennifer Francis Phone 386-214-9058  
Property Owner's Mailing Address 12615 Orlando St 320 City W. Palm  
State FL Zip Code 32789 Parcel Id Number: 18-23-30-6031-00-030

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

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

- REQUIRED Tie Down Engineering and Equipment Sizing Calculation
- REQUIRED, adding A/C to new space – provide Energy Calculations
- REQUIRED, if replacing unit with no duct work, provide a Duct Certification as per FB 101.4.7.1 (form can be found on website)

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

Air Conditioning: # of Units 1 Tons Per Unit 2 Total Tons 2  
Type of System: Water to Air  Chiller  Split System  Package  Heat Pump  Estimated Cost \$ 3993  
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) Just Change belt - no duct work Estimated Cost \$ \_\_\_\_\_

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

Building Official: [Signature] Date 6/12/2013

Review & Permit Fee \$ 74.00  
3% Florida Surcharge \$ 4.00  
Total Permit Fee \$ 78.00

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.

**ROBERT G. DELLO RUSSO**  
LICENSE # **CACO 32448**

LICENSE HOLDER SIGNATURE \_\_\_\_\_ LICENSE # \_\_\_\_\_

LICENSE HOLDER NAME DEL-AIR **ROBERT G. DELLO RUSSO** COMPANY NAME \_\_\_\_\_

Street Address 531 CODISCO WAY

City SANFORD, FL 32371 State \_\_\_\_\_ Zip Code \_\_\_\_\_ Phone Number \_\_\_\_\_

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 \_\_\_\_\_

6/18/13 Lindsay will have some one to P/U  
9:46



# CITY OF BELLE ISLE, FLORIDA

1600 Nela Avenue  
Belle Isle, Florida 32809  
(407) 851-7730 • FAX (407) 240-2222  
www.cityofbelleislefl.org

## DUCT INSPECTION AND SEALING CERTIFICATION

As required by the 2010 Florida Building Code Energy Conservation, Section 101.4.7.1  
(TO BE ATTACHED TO THE AIR HANDLER UNIT BY FINAL INSPECTION)

Permit Number: 2013-06-038 Date Inspected: 6/11/13  
Address of Install: 2511 Oak Island Pointe, Belle Isle, FL 32809 32812  
Contractor Name: Robert Dello Russo Company Name: Del Air Heating & AC  
License Number: CAE032448 Phone Number: 407-333-2665

I hereby certify that the ductwork at the above address associated with an HVAC equipment change-out has been inspected and sealed in accordance with the 2010 Florida Building Code Energy Conservation, Section 101.4.7.1 by the following allowable method(s):

- Where needed, all existing and accessible ducts (minimum of 30 inches clearance) in the distribution system have been sealed using reinforced mastic or a code-approved equivalent.
- Ductwork was found to be located within conditioned space where further inspection and sealing is not required. (Exception 1, Section 101.4.7.1.1)
- Ductwork was inspected at time of install and we found that joints and/or seams were already sealed with an approved fabric or mastic. (Exception 2, Section 101.4.7.1.1)
- The duct system was tested and repairs were made, as necessary. (Exception 3, Section 101.4.7.1.1)

Duct system tested on (date) \_\_\_\_\_  
Duct system tested by (company and individual) \_\_\_\_\_

Signature of Qualifier [Handwritten Signature]

ROBERT G. DELLO RUSSO  
Printed Name of Qualifier

State of Florida  
County of Sumter

The foregoing instrument was acknowledged before me this 12 day of June, 2013  
by ROBERT G. DELLO RUSSO who is personally known by me or who produced the following as identification



[Handwritten Signature]  
Signature of Notary

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

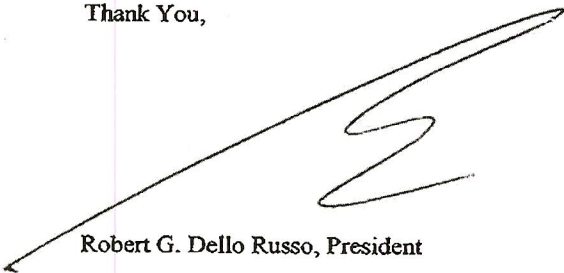
Date

City Of Belle Isle  
Building Division

Dear Sir:

This letter is written to give authorization for Ernie Deluyelle to pull the mechanical permit for Del-Air Heating, Air Conditioning & Refrigeration, Inc. for 511 Oak Island Point

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 11 day of June, 2009 2013

Mirinda C. Turner  
NOTARY PUBLIC  
MY COMMISSION EXPIRES 6/14/15



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

SALES  
SERVICE  
INSTALLATION

- Searches
- Sales Search
- Results
- Details
- My Favorites

**2511 Oak Island Pointe** < 18-23-30-6031-00-030 >

Name(s) 2511 Oak Island Pointe LLC	Physical Street Address 2511 Oak Island Pointe
Mailing Address On File 1201 S Orlando Ave Ste 370 Winter Park, FL 32789-7107	Postal City and Zipcode Orlando, FL 32809
Incorrect Mailing Address?	Property Use 0102 - Single Fam Class II
	Municipality Belle Isle

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

**Property Description**

OAK ISLAND SECOND REPLAT 24/105 LOT 3

**Total Land Area** 24,039 sqft (+/-) | 0.55 acres (+/-) GIS Calculated Notice

**Land**

Land Use Code	Zoning	Land Units	Unit Price	Land Value
0130 - Sfr - Lake Front	R-1-AA	1 LOT(S)	\$410,000.00	\$410,000

Page 1 of 1 (1 total records)

**Buildings**

	Important Information	Structure
	<b>Model Code:</b> 01 - Single Fam Residence	<b>Actual Year Built:</b> 1997
	<b>Type Code:</b> 0102 - Single Fam Class II	<b>Beds:</b> 5
	<b>Building Value:</b> \$666,234	<b>Baths:</b> 6.0
	<b>Estimated New Cost:</b> \$841,205	<b>Floors:</b> 2

Page 1 of 1 (1 total records)

**Extra Features**

Description	Date Built	Units
FPL2 - Average Fireplace	01/01/1997	2 Unit
BD2 - Boat Dock 2	01/01/1997	1 Unit
BC3 - Boat Cover 3	01/01/1997	1 Unit
PL2 - Above Average Pool	01/01/1997	1 Unit



# Certificate of Product Ratings

AHRI Certified Reference Number: 3620211

Date: 6/11/2013

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

Outdoor Unit Model Number: ASZ130241A\*

Indoor Unit Model Number: AWUF24XX16B\*

Manufacturer: AMANA HEATING AND AIR CONDITIONING

Trade/Brand name: ASZ13 SERIES

Manufacturer responsible for the rating of this system combination is AMANA HEATING AND 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): 22600

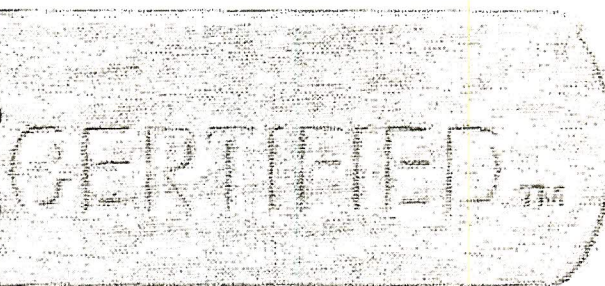
EER Rating (Cooling): 11.00

SEER Rating (Cooling): 13.00

Heating Capacity(Btuh) @ 47 F: 23000

Region IV HSPF Rating (Heating): 8.00

Heating Capacity(Btuh) @ 17 F: 13400



\* 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.

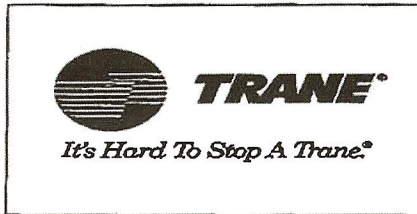
#### CERTIFICATE VERIFICATION

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 below.



©2013 Air-Conditioning, Heating, and Refrigeration Institute

CERTIFICATE NO.: 130154048329605204



**Residential Whole-House Heat Load Calculator**

Customer's Name: Jennifer France Address: 2511 Oak Island Pointe  
 City: Orlando State: fl Zip: 32809 Telephone: 386 214 9058

Winter: Inside Design Temp 72 Outside Design Temp = 30 Heating Temp Diff 42  
 Summer: Outside Design Temp 95 Inside Design Temp = 74 Cooling Temp Diff 21

Heating		COMMON DATA SECTION			COOLING	
BTUH Loss	Heating Factor	Subject	SQ. FT.	COOLING FACTOR	BTUH GAIN	
		GROSS WALL	650			
0		DOORS & WINDOWS (Table A and B)	0		9459	
0		NET WALL (Table C)	650	1.7	1138	
0		CEILING (Table C)	950	2.1	2043	
0		FLOORS (Table C)			0	
		AVERAGE CEILING HEIGHT				
		VOLUME OF BUILDING (CUBIC FEET)	0			
0		Infiltration (BTU/HR)			0	
0		SUB-TOTAL BTUH LOSS				
		PEOPLE (Assume 2 per bedroom)	6		1800	
		Number of Appliances			0	
0		DUCT LOSS/GAIN FACTOR (Table D)	1.15		2166	
		SUB-TOTAL BTUH (Sensible Gain)			16605	
		Moisture Removal			21586	
0		<b>TOTAL BTUH LOSS/GAIN</b>			<b>21586</b>	

Disclaimer: The Trane Company is not responsible or accountable for any errors in calculations or assumptions by users of this program. All calculations should be checked and rechecked manually or by other methods to insure accuracy.



**Table A - HEATING-DOORS & WOOD FRAME WINDOWS**

For sliding glass doors - use factors for the same type window construction

Window & Door Type	Frame Multiplier			Multiplier	Area	Btuh Loss
	Wood	TIM	Metal			
Single Pane Clear	9.9	10.45	11.55			0
With Storm	4.75	5.25	6.5			0
Double Pane Clear	5.51	6.09	7.25			0
With Storm	3.41	3.85	4.9			0
Triple Pane Clear	3.8	4.39	5.46			0
Jalousie Single	-	-	11			0
Single w/storm	-	-	5			0
Skylights Single	11.07	11.69	12.92			0
Double	6.65	7.35	8.75			0
Door Wood only	4.6	-	-			0
Wood w/storm	3.2	-	-			0
Urethane Core (R-5)	-	-	1.9			0
w/storm	-	-	1.7			0
<b>TOTAL AREA</b>					<b>0</b>	
<b>HEAT LOSS/ WINDOW &amp; DOORS</b>						<b>0</b>

**Table B - COOLING - DOORS & WINDOWS**

Factors assume windows have inside shading by draperies or venetian blinds and sliding glassdoors are treated as windows.

Direction	Single Glass Area	Single Btuh Gain	Double Glass Area	Double Btuh Gain	Triple Glass Area	Triple Btuh Gain
N	43	980.4		0		0
NE & NW		0		0		0
E & W	110	6248		0		0
SE & SW		0		0		0
S	68	2230.4		0		0
Skylights		0		0		
Wood Doors		0		0		0
Metal Doors		0		0		0

**TOTAL AREA                      221**

# 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.

Florida Building Code Online

# Business & Professional Regulation

[DCBS Home](#) | 
 [Log In](#) | 
 [User Registration](#) | 
 [Hot Topics](#) | 
 [Submit Searches](#) | 
 [Stats & Facts](#) | 
 [Publications](#) | 
 [FBC Staff](#) | 
 [DCBS Site Map](#) | 
 [Links](#) | 
 [Search](#)



**Product Approval**  
 USER: Public User

[Product Approval Menu](#) > 
 [Product Approval Request](#) > 
 [Application List](#) > 
 Application Detail

FL #	FL14239-R1						
Application Type	Revision						
Code Version	2010						
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	Frank L. Bennardo, P.E.						
Evaluation Report							
Florida License	PE 0046549						
Quality Assurance Entity	National Accreditation & Management Institute,						
Quality Assurance Contract Expiration Date	12/31/2013						
Validated By	Ryan J. King, P.E.						
	<input checked="" type="checkbox"/> Validation Checklist - Hardcopy Received						
Certificate of Independence	<a href="#">FL14239-R1_COI.pdf</a>						
Referenced Standard and Year (of Standard)	<table border="0"> <tr> <td><b>Standard:</b></td> <td><b>Year:</b></td> </tr> <tr> <td>ASTM D1761-06</td> <td>2006</td> </tr> <tr> <td>ASTM D1761-88</td> <td>2008</td> </tr> </table>	<b>Standard:</b>	<b>Year:</b>	ASTM D1761-06	2006	ASTM D1761-88	2008
<b>Standard:</b>	<b>Year:</b>						
ASTM D1761-06	2006						
ASTM D1761-88	2008						
Equivalence of Product Standards Certified By	Florida Licensed Professional Engineer or Architect <a href="#">FL14239-R1_Equiv_Eval.pdf</a>						
Sections from the Code							
Product Approval Method	Method 1 Option D						
Date Submitted	09/29/2011						
Date Validated	12/13/2011						
Date Pending FBC Approval	12/18/2011						
Date Approved	01/31/2012						

**Summary of Products:**

FL #	Model, Number or Name	Description
14239.1	Slotted Steel Tie-Down Clips, 1" and 2" Models	Steel Tie-Down Clip System (For Use with Mechanical Units at Roof or Grade)
<b>Limits of Use</b> Approved for use in HVHZ: Yes Approved for use outside HVHZ: Yes Impact Resistant: N/A Design Pressure: N/A Other: This design provides allowable capacities for the system. The required site-specific design pressure (demand) shall be calculated by others for use with this design.		<b>Installation Instructions</b> <a href="#">FL14239-R1-IT-Dwg.pdf</a> Verified By: Frank L. Bennardo, P.E. 0046549 Created by Independent Third Party: Yes <b>Evaluation Reports</b> <a href="#">FL14239-R1-AE-Eval.pdf</a> Created by Independent Third Party: Yes



## Product Evaluation Report

November 4, 2011

Application Number: FL #14239  
 FLB Project Number: 11-BMP-0001-01

Product Manufacturer: BMP International

Manufacturer Address: 4710 28th Street North  
St. Petersburg, FL 33714

Product Name: Slotted Steel Tie-Down Clips, 1" and 2" Models  
 Product Description: Steel Tie-Down Clip System (For Use with Mechanical Units at Roof or Grade)

### Scope of Evaluation:

This Product Evaluation Report is being issued in accordance with the requirements of the Florida Department of Community Affairs (Florida Building Commission) Rule Chapter 9N-3.005, F.A.C., for statewide acceptance per Method 1(d). The product noted above has been tested and/or evaluated as summarized herein to show compliance with the 2010 Florida Building Code and is, for the purpose intended, at least equivalent to that required by the Code. Re-evaluation of this product shall be required following pertinent Florida Building Code modifications or revisions.

### Substantiating Data:

- **PRODUCT EVALUATION DOCUMENTS**

FLB drawing #11-BMP-0001-01 titled "Mechanical Unit Steel Tie-Down Clip Capacities: At-Grade and Roof-Top Mounted Applications", sheets 1-4, prepared by Engineering Express, signed & sealed by Frank L. Bennardo, P.E. is an integral part of this Evaluation Report.

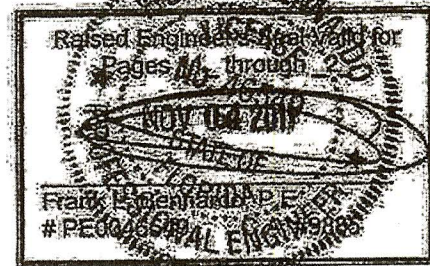
- **TEST REPORTS**

Ultimate test loading structural performance has been tested in accordance with ASTM D1761-88 test standards per test report(s) #TEL 01970387A and #TEL 01970387B by Testing Evaluation Laboratories, Inc.

- **STRUCTURAL ENGINEERING CALCULATIONS**

Structural engineering calculations have been prepared which evaluate the product based on comparative and/or rational analysis to qualify the following design criteria:

1. Maximum Allowable Unit Wind Pressures
2. Minimum Allowable Unit Width
3. Maximum Allowable Unit Height
4. Minimum Unit Weight
5. Maximum Allowable Unit Surface Area
6. Clip Configuration and Anchor Spacing
7. Anchor Capacity for Various Substrates





November 4, 2011

BMP INTERNATIONAL - SLOTTED STEEL TIEDOWN CLIPS 1 1/2"

Page 2 of 2

8. Maximum Allowable Additional Uplift per Clip in Combination with Lateral Forces (For Use with Rooftop Applications)

No 33% increase in allowable stress has been used in the design of this product.

**Impact Resistance:**

Not applicable to this product.

**Wind Load Resistance**

This product has been designed to resist wind loads as indicated in the design schedule(s) on the Product Evaluation Document (i.e. engineering drawing).

**Installation**

The product listed above shall be installed in strict compliance with the Product Evaluation Document (i.e. engineering drawing), along with all components noted therein.

The product components shall be of the material specified in the Product Evaluation Document (i.e. engineering drawing).

**Limitations & Conditions of Use:**

Use of this product shall be in strict accordance with the Product Evaluation Document (i.e. engineering drawing) as noted herein.

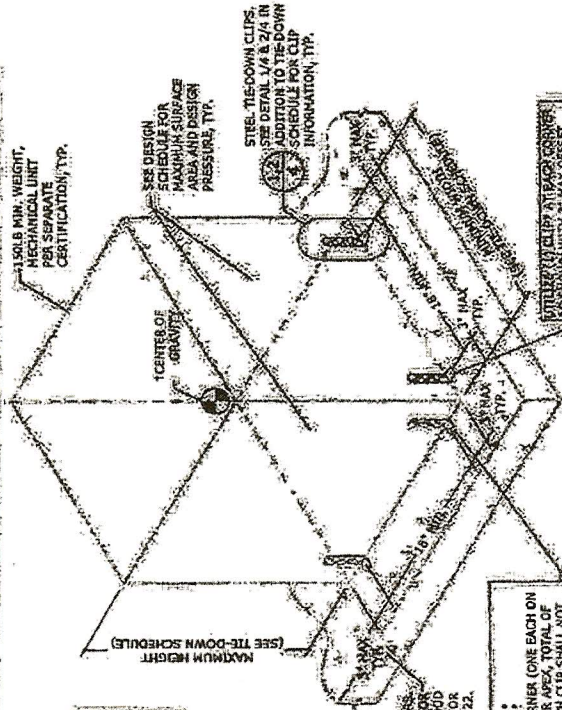
All supporting host structures shall be designed to resist all superimposed loads and shall be of a material listed in this product's respective anchor schedule. Host structure conditions which are not accounted for in this product's respective anchor schedule shall be designed for on a site-specific basis by a registered professional engineer.

All components which are permanently installed shall be protected against corrosion, contamination, and other such damage at all times.

This product has been designed for use within the High Velocity Hurricane Zone (HVHZ).

# BMP INTERNATIONAL, INC.

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



### MECHANICAL UNIT TIE-DOWN ISOMETRIC

FOR CLARITY, THIS ISOMETRIC ONLY SHOWS 1" CLIPS. THE ISOMETRIC LAYOUT IS TYPICAL FOR BOTH 1" AND 2" CLIP APPLICATIONS. 2" CLIPS ARE NOT CERTIFIED FOR ANCHORAGE TO CONCRETE.

**DOUBLE CLIP OPTION:**  
 (2) TOTAL CLIPS MAY BE USED AT EACH CORNER (ONE EACH ON OPPOSING CORNER FACES, 3" FROM CORNER APX). TOTAL OF (8) CLIPS PER UNIT FOR THIS OPTION. EACH CLIP SHALL NOT EXCEED 3" MAX OFFSET FROM END OF MECHANICAL UNIT AS DETAILED HEREIN. DO NOT SPACE CONCRETE ANCHORS CLOSER THAN 4" FROM EACH OTHER. SEE SCHEDULES FOR TIE-DOWN ANCHORS SCHEDULES. SEE SHEETS 203 FOR MORE INFORMATION.

### TIE-DOWN CLIP DIRECTIVE EXAMPLE

THE FOLLOWING EXAMPLES ILLUSTRATE THE PROCESS USED TO DETERMINE THE MAXIMUM ALLOWABLE WIND PRESSURE FOR ANY GIVEN MECHANICAL UNIT THAT COMPLIES TO THE DIMENSION RESTRICTIONS LISTED HEREIN. SEE SHEETS 203 FOR TIE-DOWN SCHEDULES.

#### MECHANICAL UNIT CRITERIA:

CONSIDER THE INSTALLATION OF (3) MECHANICAL UNIT WITH THE FOLLOWING CRITERIA:  
 36" TALL x 24" WIDE x 24" WIDE, 150 LB WEIGHT AS VERIFIED BY OTHERS, INSTALLED TO GRADE AS VERIFIED BY OTHERS.

#### PROCEDURE:

STEP	PROCEDURE STEP	RESULT
1	LOCATE CENTER OF GRAVITY OF MECHANICAL UNIT AND SELECT CLIP TYPE	
2	DETERMINE MAXIMUM SURFACE AREA OF MECHANICAL UNIT TO BE INSTALLED	
3	SELECT ANCHOR TYPE AND INSTALLATION METHOD FROM SCHEDULES	
4	DETERMINE THE MAXIMUM ALLOWABLE WIND PRESSURE FOR THE MECHANICAL UNIT	

CONCLUSION: MAXIMUM ALLOWABLE LATERAL DESIGN PRESSURE = 0.25PSI  
 (COMPARE THIS VALUE TO THE SEPARATE SITE SPECIFIC REQUIRED DESIGN WIND PRESSURE PROVIDED BY A LICENSED ENGINEER OR REGISTERED ARCHITECT; NOT INCLUDED IN THIS CERTIFICATION)

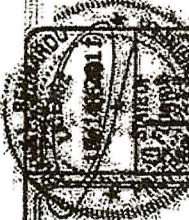
- GENERAL NOTES:**
- THIS PRODUCT HAS BEEN DESIGNED AND SHALL BE FABRICATED BY ACCORDANCE WITH THE REQUIREMENTS OF THE 2010 FLORIDA BUILDING CODE. FOR USE WITHIN AND OUTSIDE OF THE HIGH VELOCITY HURRICANE ZONE, DESIGN OF THIS SYSTEM.
  - NO 33-42PSI INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS SYSTEM.
  - REPORTS #11, 01270127A, #12, 01270127B BY TESTING EVALUATION LABORATORIES, INC., NO SUBSTITUTIONS WITHOUT WRITTEN APPROVAL BY THIS ENGINEER, SHALL BE FURNISHED.
  - ALLOWABLE DESIGN PRESSURES TO QUALIFY CAPACITY OF CLIPS AS LISTED HEREIN ARE DETERMINED THROUGH TESTING REPORT DATA AND RATIONALLY DERIVED FOR CONSISTENCY WITH EACH TEST REPORT.
  - ALLOWABLE DESIGN PRESSURES CALCULATED FOR USE WITH THIS PRODUCT SHALL BE CORRELATED WITH THE GOVERNING CODES.
  - MAXIMUM MINIMUM DIMENSIONS AND MINIMUM WEIGHT OF MECHANICAL UNIT SHALL CONFORM TO SPECIFICATIONS STATED HEREIN. ALL MECHANICAL MANUFACTURERS (CLEAR SPACE, TONNAGE, ETC.) SHALL BE AS PER MANUFACTURER RECOMMENDATIONS AND ARE THE EXPRESS RESPONSIBILITY OF THE CONTRACTOR.
  - PASTERESS TO BE #12 X 1/4 OR GREATER S&B GRADE 5 UNLESS NOTED OTHERWISE. TAPCONS REFERRED TO HEREIN SHALL BE ITTY BUILDX BRAND, CARBON STEEL ONLY, INSTALLED TO 3192 KSI MIN CONCRETE. SEE ANCHOR SCHEDULE FOR ANCHOR REQUIREMENTS. ALL PASTERESS SHALL HAVE APPROPRIATE CORROSION PROTECTION TO PREVENT ELECTROLYSIS.
  - ALL STEEL CLIPS SHALL BE ASTM A36 STEEL (GRADE D) WITH PY 33 USI OR BETTER. ALL STEEL CLIPS SHALL BE EITHER 1" OR 2" WIDE WITH AN ANCHOR END WITH THE 2010 FBC SECTION 2108.2 AND 2220.6 (90-DEGREE) COATING REQUIRED FOR ALL COASTAL INSTALLATIONS.
  - ALL CONCRETE SPECIFIED 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 3192 PSI, UNLESS NOTED OTHERWISE.
  - ALL WOOD MEMBERS SHALL BE PRESSURE TREATED SOUTHERN YELLOW PINE GRADE #2 WITH SPECIFIC GRAVITY G = 0.54 OR GREATER. DIRECT CONNECTION TO WOOD MEMBERS/SLEEPERS IS NOT PERMITTED FOR ROOF-TOP APPLICATIONS PER FBC SECTION 1522.
  - THE CONTRACTOR IS RESPONSIBLE TO INSULATE ALL MEMBERS FROM DISSIPILAR MATERIALS TO PREVENT ELECTROLYSIS, I.E. ALUMINUM PER F.B.C. OTHERS.
  - ALL MECHANICAL GROUNDS, WHEN REQUIRED, TO BE DESIGNED & INSTALLED BY OTHERS.
  - THE ADEQUACY OF ANY EXISTING STRUCTURE TO WITHSTAND SUPERIMPOSED LOADS SHALL BE VERIFIED BY THE ON-SITE DESIGN PROFESSIONAL, AND IS NOT INCLUDED BY THIS CERTIFICATION. EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED.
  - 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 CONNECTION WITH THIS DESIGN. SUBSTRATE SHALL BE THE FULL RESPONSIBILITY OF THE INSTALLING CONTRACTOR. CONTRACTOR SHALL ENSURE THAT ANY REMOVED OR ALTERED WATERPROOFING MEMBRANE IS RESTORED AFTER FABRICATION AND INSTALLATION OF STRUCTURE. PROPOSED HEREIN. THIS ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY WATERPROOFING OR LEAKAGE ISSUES WHICH MAY OCCUR AS WATER-TIGHTNESS SHALL BE THE FULL RESPONSIBILITY OF THE INSTALLING CONTRACTOR.

**BMP INTERNATIONAL, INC.**  
 4710 28TH STREET NORTH  
 ST. PETERSBURG, FL 33711  
 PH: (727) 577-1613  
 WWW.BMPINC.COM  
 PROJECT APPROVAL

FLORIDA STATEWIDE APPROVAL

MECHANICAL UNIT STEEL TIE-DOWN CLIPS

11-BMP-0001  
 SCALE: AS SHOWN  
 DATE: 05/15/13



**BMP INTERNATIONAL, INC.**  
 4710 28TH STREET NORTH  
 ST. PETERSBURG, FL 33711  
 PH: (727) 577-1613  
 MECHANICAL UNIT STEEL TIE-DOWN CLIPS  
 FLORIDA STATEWIDE APPROVAL

**BMP INTERNATIONAL, INC.**  
 4710 28TH STREET NORTH  
 ST. PETERSBURG, FL 33711  
 PH: (727) 577-1613  
 MECHANICAL UNIT STEEL TIE-DOWN CLIPS  
 FLORIDA STATEWIDE APPROVAL

11-BMP-0001	2
-------------	---

**1" STEEL CLIP TIE-DOWN SCHEDULE: AT GRADE INSTALLATIONS:**

MAXIMUM SURFACE AREA OF UNITS LARGEST FACE	UNIT HEIGHT	UNIT WIDTH	ANCHOR SCHEDULE: AT GRADE INSTALLATIONS				ANCHOR SCHEDULE: AT GRADE INSTALLATIONS						
			TAPCON TO CONCRETE	SHEET METAL SCREW TO ALUMINUM	SHEET METAL SCREW TO STEEL	WOOD SCREW TO WOOD	TAPCON TO CONCRETE	SHEET METAL SCREW TO ALUMINUM	SHEET METAL SCREW TO STEEL	WOOD SCREW TO WOOD			
6 FT <sup>2</sup>	48" MAX	24" MIN	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF
12 FT <sup>2</sup>	48" MAX	24" MIN	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF
18 FT <sup>2</sup>	48" MAX	24" MIN	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF
24 FT <sup>2</sup>	48" MAX	24" MIN	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF
30 FT <sup>2</sup>	48" MAX	24" MIN	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF
36 FT <sup>2</sup>	48" MAX	24" MIN	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF
42 FT <sup>2</sup>	48" MAX	24" MIN	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF
48 FT <sup>2</sup>	48" MAX	24" MIN	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF
54 FT <sup>2</sup>	48" MAX	24" MIN	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF
60 FT <sup>2</sup>	48" MAX	24" MIN	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF	81 PSF

- TIE-DOWN CLIPS SHALL BE FASTENED TO MECHANICAL HOUSING UNIT WITH (3)-#12 SAE GRADE 5 SHEET METAL SCREWS. (5)-SHEET METAL SCREWS REQUIRED FOR LONG CLIPS, SEE DETAIL-1/4.
- MECHANICAL HOUSING UNITS SHALL CONFORM TO THE FOLLOWING:
  - ALUMINUM HOUSING UNITS SHALL BE 6063-T6 MIN. ALUMINUM SHEET WITH PV-30 KSI, 0.133" MIN. THICKNESS.
  - STEEL HOUSING UNITS SHALL BE 330815 MIN. STEEL, GRADE 33, 23GA MIN. (40-0399).
  - MAXIMUM ALLOWABLE WIND PRESSURES FOR EACH INDIVIDUAL SUBSTRATE MAY BE EQUIVALENT DUE TO THE LIMITING CAPACITY OF THE 1" CLIP.
  - A MAXIMUM ALLOWABLE VALUE OF 100 PSF HAS BEEN UTILIZED; FOR HIGHER DEMAND CAPACITIES CONTACT THIS ENGINEER FOR SITE-SPECIFIC ENGINEERING.

**ANCHOR SCHEDULE:**

SUBSTRATE	ANCHOR
CONCRETE	(1)-#4 CARBON STEEL T/W BUILTUP TAPCON, 1/2" FULL EMBED TO CONCRETE, 24" MIN. EDGE DISTANCE, 3" MIN. SPACING TO ANY ADJACENT ANCHOR.
ALUMINUM	(1)-#14 SAE GRADE 5 SHEET METAL SCREW TO ALUMINUM PROVIDE (3) PINCHES MIN. PAST THREAD PLANE FOR SHEET METAL SCREW.
STEEL	(1)-#14 SAE GRADE 5 SHEET METAL SCREW TO STEEL, PROVIDE (3) PINCHES MIN. PAST THREAD PLANE FOR SHEET METAL SCREW.
SEALED WOOD	(1)-#14 SAE GRADE 5 WOOD SCREW TO WOOD MEMBER, PROVIDE 1/2" MIN. THREAD PENETRATION, 1" MIN. EDGE DISTANCE, 1" MIN. END DISTANCE.
SOUTHERN YELLOW PINE, 4-0.5S OR BETTER	(1)-#14 SAE GRADE 5 WOOD SCREW TO WOOD MEMBER, PROVIDE 1/2" MIN. THREAD PENETRATION, 1" MIN. EDGE DISTANCE, 1" MIN. END DISTANCE.

**2" STEEL CLIP TIE-DOWN SCHEDULE: AT GRADE INSTALLATIONS:**

MAXIMUM SURFACE AREA OF UNITS LARGEST FACE	UNIT HEIGHT	UNIT WIDTH	ANCHOR SCHEDULE: AT GRADE INSTALLATIONS				ANCHOR SCHEDULE: AT GRADE INSTALLATIONS					
			TAPCON TO CONCRETE	SHEET METAL SCREW TO ALUMINUM	SHEET METAL SCREW TO STEEL	WOOD SCREW TO WOOD	TAPCON TO CONCRETE	SHEET METAL SCREW TO ALUMINUM	SHEET METAL SCREW TO STEEL	WOOD SCREW TO WOOD		
6 FT <sup>2</sup>	48" MAX	24" MIN	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF
12 FT <sup>2</sup>	48" MAX	24" MIN	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF
18 FT <sup>2</sup>	48" MAX	24" MIN	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF
24 FT <sup>2</sup>	48" MAX	24" MIN	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF
30 FT <sup>2</sup>	48" MAX	24" MIN	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF
36 FT <sup>2</sup>	48" MAX	24" MIN	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF
42 FT <sup>2</sup>	48" MAX	24" MIN	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF
48 FT <sup>2</sup>	48" MAX	24" MIN	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF
54 FT <sup>2</sup>	48" MAX	24" MIN	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF
60 FT <sup>2</sup>	48" MAX	24" MIN	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF

- TIE-DOWN CLIPS SHALL BE FASTENED TO MECHANICAL HOUSING UNIT WITH (3)-#14 SAE GRADE 5 SHEET METAL SCREWS.
- MECHANICAL HOUSING UNITS SHALL CONFORM TO THE FOLLOWING:
  - ALUMINUM HOUSING UNITS SHALL BE 6063-T6 MIN. ALUMINUM SHEET WITH PV-30 KSI, 0.133" MIN. THICKNESS.
  - STEEL HOUSING UNITS SHALL BE 330815 MIN. STEEL, GRADE 33, 23GA MIN. (40-0399).
  - A MAXIMUM ALLOWABLE VALUE OF 100 PSF HAS BEEN UTILIZED; FOR HIGHER DEMAND CAPACITIES CONTACT THIS ENGINEER FOR SITE-SPECIFIC ENGINEERING.

**ANCHOR SCHEDULE:**

SUBSTRATE	ANCHOR
CONCRETE	(1)-#4 CARBON STEEL T/W BUILTUP TAPCON, 1/2" FULL EMBED TO CONCRETE, 24" MIN. EDGE DISTANCE, 3" MIN. SPACING TO ANY ADJACENT ANCHOR.
ALUMINUM	(1)-#14 SAE GRADE 5 SHEET METAL SCREW TO ALUMINUM, PROVIDE (3) PINCHES MIN. PAST THREAD PLANE FOR SHEET METAL SCREW.
STEEL	(1)-#14 SAE GRADE 5 SHEET METAL SCREW TO STEEL, PROVIDE (3) PINCHES MIN. PAST THREAD PLANE FOR SHEET METAL SCREW.
SEALED WOOD	(1)-#14 SAE GRADE 5 WOOD SCREW TO WOOD MEMBER, PROVIDE 1/2" MIN. THREAD PENETRATION, 1" MIN. EDGE DISTANCE, 1" MIN. END DISTANCE.
SOUTHERN YELLOW PINE, 4-0.5S OR BETTER	(1)-#14 SAE GRADE 5 WOOD SCREW TO WOOD MEMBER, PROVIDE 1/2" MIN. THREAD PENETRATION, 1" MIN. EDGE DISTANCE, 1" MIN. END DISTANCE.

- TIE-DOWN CLIPS SHALL BE FASTENED TO MECHANICAL HOUSING UNIT WITH (3)-#14 SAE GRADE 5 SHEET METAL SCREWS.
- MECHANICAL HOUSING UNITS SHALL CONFORM TO THE FOLLOWING:
  - ALUMINUM HOUSING UNITS SHALL BE 6063-T6 MIN. ALUMINUM SHEET WITH PV-30 KSI, 0.133" MIN. THICKNESS.
  - STEEL HOUSING UNITS SHALL BE 330815 MIN. STEEL, GRADE 33, 23GA MIN. (40-0399).
  - A MAXIMUM ALLOWABLE VALUE OF 100 PSF HAS BEEN UTILIZED; FOR HIGHER DEMAND CAPACITIES CONTACT THIS ENGINEER FOR SITE-SPECIFIC ENGINEERING.

**WORLDWIDE ENGINEERING**  
 160 SW 12TH AVENUE, SUITE 200  
 DEERFIELD BEACH, FL 33447  
 PHONE: (561) 698-0050  
 WWW.WWENG.COM

**BMP INTERNATIONAL, INC.**  
 4710 28TH STREET NORTH  
 ST. PETERSBURG, FL 33471  
 PHONE: (772) 577-1613

MECHANICAL UNIT STEEL TIE-DOWN CLIPS  
 FLORIDA STATEWIDE APPROVAL

DATE: 01/11/2013  
 SCALE: 1/8" = 1'-0"  
 DRAWING NO.: 11-BMP-0001  
 SHEET NO.: 01  
 TOTAL SHEETS: 01

3

### 1" STEEL CLIP TIE-DOWN SCHEDULE: ROOF-TOP MOUNTED INSTALLATIONS

MAXIMUM ALLOWABLE WIND PRESSURE (MINIMUM TO ROOF STRUCTURE)  
 (1) CLIP AT EACH CORNER (TOTAL OF 4 CLIPS PER UNIT)  
 (2) CLIP AT EACH CORNER (TOTAL OF 4 CLIPS PER UNIT)

MAXIMUM SURFACE AREA OF UNITS LARGEST FACE	UNIT HEIGHT	UNIT WIDTH	TAPCON TO CONCRETE	SHEET METAL SCREW TO ALUMINUM	SHEET METAL SCREW TO STEEL	SHEET METAL SCREW TO CONCRETE	SHEET METAL SCREW TO ALUMINUM	SHEET METAL SCREW TO STEEL
4 FT	48" MAX	24" MIN	47 PSF	45 PSF	45 PSF	140 PSF	100 PSF	100 PSF
6 FT	48" MAX	24" MIN	47 PSF	45 PSF	45 PSF	140 PSF	100 PSF	100 PSF
8 FT	48" MAX	24" MIN	47 PSF	45 PSF	45 PSF	140 PSF	100 PSF	100 PSF
10 FT	48" MAX	24" MIN	47 PSF	45 PSF	45 PSF	140 PSF	100 PSF	100 PSF
12 FT	48" MAX	24" MIN	47 PSF	45 PSF	45 PSF	140 PSF	100 PSF	100 PSF
14 FT	48" MAX	24" MIN	47 PSF	45 PSF	45 PSF	140 PSF	100 PSF	100 PSF
16 FT	48" MAX	24" MIN	47 PSF	45 PSF	45 PSF	140 PSF	100 PSF	100 PSF
18 FT	48" MAX	24" MIN	47 PSF	45 PSF	45 PSF	140 PSF	100 PSF	100 PSF
20 FT	48" MAX	24" MIN	47 PSF	45 PSF	45 PSF	140 PSF	100 PSF	100 PSF

1. TIE-DOWN CLIPS SHALL BE FASTENED TO MECHANICAL HOUSING UNIT WITH (1) #14 SAE GRADE 5 SHEET METAL SCREWS; (2) SHEET METAL SCREWS REQUIRED FOR LONG CLIPS. SEE DETAIL (JA).  
 2. MECHANICAL HOUSING UNIT SHALL CONFORM TO THE FOLLOWING:  
 2.1. ALUMINUM HOUSING UNITS SHALL BE 6061-T6 MIN. ALUMINUM SHEET WITH R<sub>0.30</sub> KSI, 0.125" MIN. THICKNESS.  
 2.2. STEEL HOUSING UNITS SHALL BE 33KSI MIN. STEEL, GRADE 55, 23GA MIN. (60-0.039").  
 2.3. STEEL HOUSING UNITS SHALL BE 33KSI MIN. STEEL, GRADE 55, 23GA MIN. (60-0.039").  
 3. MAXIMUM ALLOWABLE WIND PRESSURES FOR EACH INDIVIDUAL SUBSTRATE MAY BE EQUIVALENT DUE TO THE LIMITING CAPACITY OF THE 1" CLIP. ENGINEER'S ALLOWABLE VALUE OF 140 PSF HAS BEEN UTILIZED FOR HIGHER DEMAND CAPACITIES CONTACT THIS ENGINEER FOR SITE-SPECIFIC ENGINEERING.

### ANCHOR SCHEDULE:

SUBSTRATE	ANCHOR
CONCRETE	(1) #4'S CARBON STEEL NYLON/ALUMINUM TAPCON, 14" FULL CHAIR TO CONCRETE @ 24" MIN. EDGE DISTANCE, 3" MIN. STANCH TO ANY ADJACENT ANCHOR.
ALUMINUM	(1) #4'S SAE GRADE 5 SHEET METAL SCREW TO ALUMINUM, PROVIDE (5) PINCHES MIN. PAST THREAD PLANE FOR SHEET METAL SCREW.
STEEL	(1) #4'S SAE GRADE 5 SHEET METAL SCREW TO STEEL, PROVIDE (5) PINCHES MIN. PAST THREAD PLANE FOR SHEET METAL SCREW.
(0.125" MIN. THICK, 33 KSI MIN. STEEL)	

1. EMBEDMENT AND EDGE DISTANCE EXCLUDES FINISHES, IF APPLICABLE.  
 2. ENSURE MINIMUM EDGE DISTANCE AS NOTED IN ANCHOR SCHEDULE.

### 2" STEEL CLIP TIE-DOWN SCHEDULE: ROOF-TOP MOUNTED INSTALLATIONS

MAXIMUM ALLOWABLE WIND PRESSURE (MINIMUM TO ROOF STRUCTURE)  
 (1) CLIP AT EACH CORNER (TOTAL OF 4 CLIPS PER UNIT)  
 (2) CLIP AT EACH CORNER (TOTAL OF 4 CLIPS PER UNIT)

MAXIMUM SURFACE AREA OF UNITS LARGEST FACE	UNIT HEIGHT	UNIT WIDTH	TAPCON TO CONCRETE	SHEET METAL SCREW TO ALUMINUM	SHEET METAL SCREW TO STEEL	SHEET METAL SCREW TO CONCRETE	SHEET METAL SCREW TO ALUMINUM	SHEET METAL SCREW TO STEEL
4 FT	48" MAX	24" MIN	47 PSF	45 PSF	45 PSF	140 PSF	100 PSF	100 PSF
6 FT	48" MAX	24" MIN	47 PSF	45 PSF	45 PSF	140 PSF	100 PSF	100 PSF
8 FT	48" MAX	24" MIN	47 PSF	45 PSF	45 PSF	140 PSF	100 PSF	100 PSF
10 FT	48" MAX	24" MIN	47 PSF	45 PSF	45 PSF	140 PSF	100 PSF	100 PSF
12 FT	48" MAX	24" MIN	47 PSF	45 PSF	45 PSF	140 PSF	100 PSF	100 PSF
14 FT	48" MAX	24" MIN	47 PSF	45 PSF	45 PSF	140 PSF	100 PSF	100 PSF
16 FT	48" MAX	24" MIN	47 PSF	45 PSF	45 PSF	140 PSF	100 PSF	100 PSF
18 FT	48" MAX	24" MIN	47 PSF	45 PSF	45 PSF	140 PSF	100 PSF	100 PSF
20 FT	48" MAX	24" MIN	47 PSF	45 PSF	45 PSF	140 PSF	100 PSF	100 PSF

1. TIE-DOWN CLIPS SHALL BE FASTENED TO MECHANICAL HOUSING UNIT WITH (1) #14 SAE GRADE 5 SHEET METAL SCREWS; (2) SHEET METAL SCREWS REQUIRED FOR LONG CLIPS. SEE DETAIL (JA).  
 2. MECHANICAL HOUSING UNIT SHALL CONFORM TO THE FOLLOWING:  
 2.1. ALUMINUM HOUSING UNITS SHALL BE 6061-T6 MIN. ALUMINUM SHEET WITH R<sub>0.30</sub> KSI, 0.125" MIN. THICKNESS.  
 2.2. STEEL HOUSING UNITS SHALL BE 33KSI MIN. STEEL, GRADE 55, 23GA MIN. (60-0.039").  
 2.3. STEEL HOUSING UNITS SHALL BE 33KSI MIN. STEEL, GRADE 55, 23GA MIN. (60-0.039").  
 3. MAXIMUM ALLOWABLE WIND PRESSURES FOR EACH INDIVIDUAL SUBSTRATE MAY BE EQUIVALENT DUE TO THE LIMITING CAPACITY OF THE 2" CLIP. ENGINEER'S ALLOWABLE VALUE OF 140 PSF HAS BEEN UTILIZED FOR HIGHER DEMAND CAPACITIES CONTACT THIS ENGINEER FOR SITE-SPECIFIC ENGINEERING.

### ANCHOR SCHEDULE:

SUBSTRATE	ANCHOR
CONCRETE	(1) #4'S SAE GRADE 5 SHEET METAL SCREW TO CONCRETE, PROVIDE (5) PINCHES MIN. PAST THREAD PLANE FOR SHEET METAL SCREW.
ALUMINUM	(1) #4'S SAE GRADE 5 SHEET METAL SCREW TO ALUMINUM, PROVIDE (5) PINCHES MIN. PAST THREAD PLANE FOR SHEET METAL SCREW.
STEEL	(1) #4'S SAE GRADE 5 SHEET METAL SCREW TO STEEL, PROVIDE (5) PINCHES MIN. PAST THREAD PLANE FOR SHEET METAL SCREW.
(0.125" MIN. THICK, 33 KSI MIN. STEEL)	

1. EMBEDMENT AND EDGE DISTANCE EXCLUDES FINISHES, IF APPLICABLE.  
 2. ENSURE MINIMUM EDGE DISTANCE AS NOTED IN ANCHOR SCHEDULE.

WIND RESISTANCE... (REQUIRED UPLIFT...)  
 UPLIFT...  
 UPLIFT...  
 UPLIFT...

### ADDITIONAL ALLOWABLE UPLIFT: 90 LBS/CLIP

DESIGN TABLE ACCURACIES MAY BE OBTAINED AS ADDITIONAL UPLIFT IN COMBINATION WITH UPLIFT CAUSED BY DRIFTING FROM LATERAL FORCES. SEE ASCE 7-10 SECTION 18.3 FOR MORE INFORMATION.)

**ADDITIONAL UPLIFT PER SQUARE FOOT OF ROOF AREA**  
 UPLIFT...  
 UPLIFT...

**TABLE LEGEND:**  
 ■ INDICATES VALUES NOT APPROVED FOR USE

UPLIFT...  
 UPLIFT...  
 UPLIFT...

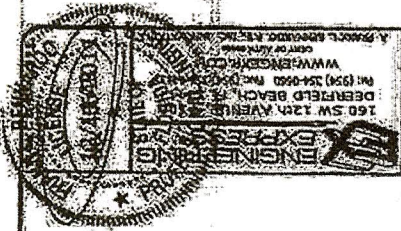
### ADDITIONAL ALLOWABLE UPLIFT: 90 LBS/CLIP

DESIGN TABLE ACCURACIES MAY BE OBTAINED AS ADDITIONAL UPLIFT IN COMBINATION WITH UPLIFT CAUSED BY DRIFTING FROM LATERAL FORCES. SEE ASCE 7-10 SECTION 18.3 FOR MORE INFORMATION.)

**ADDITIONAL UPLIFT PER SQUARE FOOT OF ROOF AREA**  
 UPLIFT...  
 UPLIFT...

**TABLE LEGEND:**  
 ■ INDICATES VALUES NOT APPROVED FOR USE

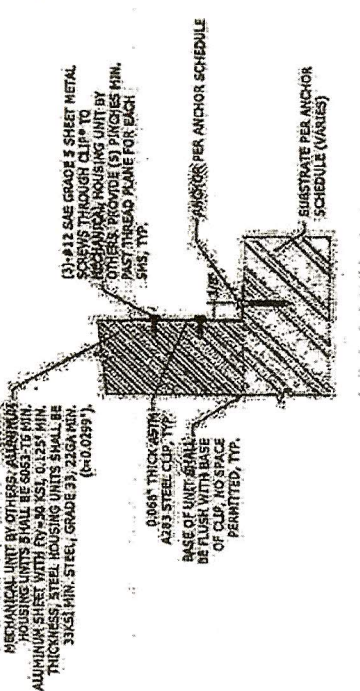




**BMP INTERNATIONAL, INC.**  
 4210 28TH STREET NORTH  
 ST. PETERSBURG, FL 34721  
 PH: (822) 777-1613  
 MECHANICAL UNIT STEEL TIE-DOWN CLIPS  
 FLORIDA STATEWIDE APPROVAL

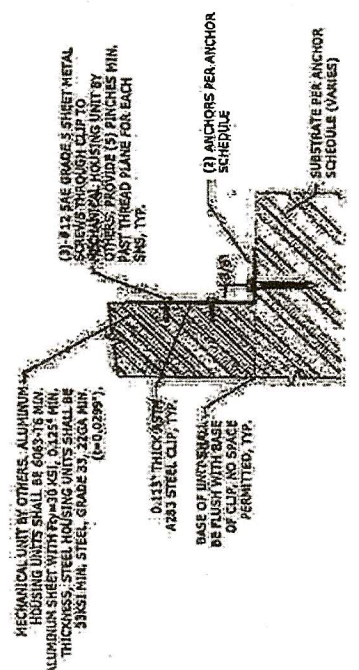
PROJECT NO.	11-BMP-0001
DATE	05/20/13
SCALE	AS SHOWN
DRAWN BY	W. J. BROWN
CHECKED BY	W. J. BROWN
DATE	05/20/13

4



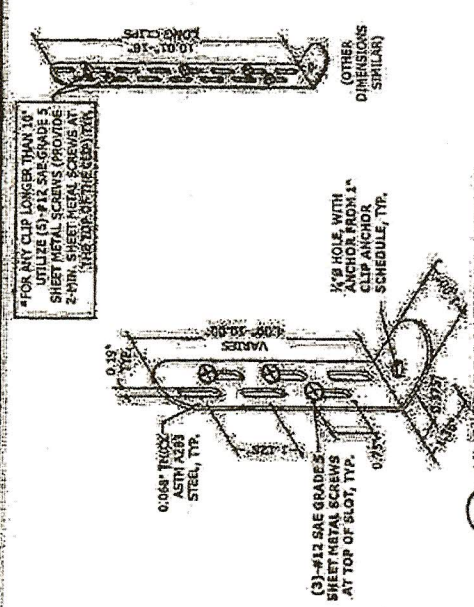
**1" TIE-DOWN CLIP ANCHOR DETAIL**  
 3/4" x 1/4"

DETAIL  
 CLIP IS DESIGNED FOR FULL CONTACT WITH THE BASE OF EACH MECHANICAL UNIT, TYP.

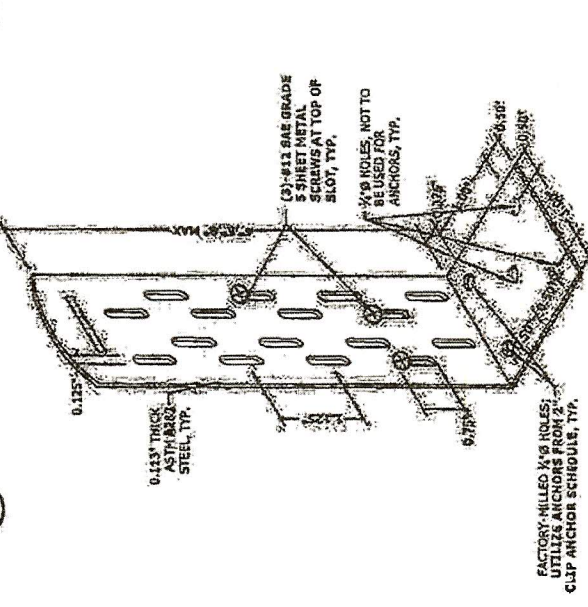


**2" TIE-DOWN CLIP ANCHOR DETAIL**  
 1" x 1/4"

DETAIL  
 CLIP IS DESIGNED FOR FULL CONTACT WITH THE BASE OF EACH MECHANICAL UNIT, TYP.



**1" CLIP ISOMETRIC DETAIL**  
 N.T.S.



**2" CLIP ISOMETRIC DETAIL**  
 N.T.S.

\* FOR ANY CLIP LONGER THAN 10" UTILIZE (5) #12 SAE GRADE 5 SHEET METAL SCREWS (PROVIDE 2-MIN. SHEET METAL SCREWS AT 2" INTERVALS ALONG THE LENGTH).

MECHANICAL UNIT BY OTHERS, ALUMINUM HOUSING UNITS SHALL BE 6063-T5 MIN. ALUMINUM SHEET WITH F<sub>y</sub>=36 KSI, 0.125" MIN. THICKNESS. STEEL HOUSING UNITS SHALL BE 304/316 MIN. STEEL, GRADE 33, 2.0GA MIN. (M=0.0299).

0.065" THICK ASTH A283 STEEL CLIP, TYP.  
 BASE OF UNIT SHALL BE FLUSH WITH BASE OF CLIP. HOLES AT TOP OF CLIP, IF PERMITTED, TYP.

(3) #12 SAE GRADE 5 SHEET METAL SCREWS THROUGH CLIP TO MECHANICAL HOUSING UNIT BY OTHERS. PROVIDE (5) PICKETS MIN. PAST THREAD PLANE FOR EACH SWS, TYP.

(3) ANCHORS PER ANCHOR SCHEDULE (VARIES)

SUBSTRATE PER ANCHOR SCHEDULE (VARIES)

MECHANICAL UNIT BY OTHERS, ALUMINUM HOUSING UNITS SHALL BE 6063-T5 MIN. ALUMINUM SHEET WITH F<sub>y</sub>=36 KSI, 0.125" MIN. THICKNESS. STEEL HOUSING UNITS SHALL BE 304/316 MIN. STEEL, GRADE 33, 2.0GA MIN. (M=0.0299).

0.113" THICK ASTH A283 STEEL CLIP, TYP.  
 BASE OF UNIT SHALL BE FLUSH WITH BASE OF CLIP. NO SPACE PERMITTED, TYP.

(3) #12 SAE GRADE 5 SHEET METAL SCREWS THROUGH CLIP TO MECHANICAL HOUSING UNIT BY OTHERS. PROVIDE (5) PICKETS MIN. PAST THREAD PLANE FOR EACH SWS, TYP.

(3) ANCHORS PER ANCHOR SCHEDULE

SUBSTRATE PER ANCHOR SCHEDULE (VARIES)

0.065" THICK ASTH A283 STEEL, TYP.

(3) #12 SAE GRADE 5 SHEET METAL SCREWS AT TOP OF SLOT, TYP.

1/8" HOLE WITH ANCHOR FROM 1" CLIP ANCHOR SCHEDULE, TYP.

(OTHER DIMENSIONS SIMILAR)

0.113" THICK ASTH A283 STEEL, TYP.

(3) #12 SAE GRADE 5 SHEET METAL SCREWS AT TOP OF SLOT, TYP.

1/8" HOLES, NOT TO BE USED FOR ANCHORS, TYP.

FACTORY-MILLED 1/8" HOLES; UTILIZES ANCHORS FROM 2" CLIP ANCHOR SCHEDULE, TYP.

**BMP INTERNATIONAL, INC**  
4710 28<sup>th</sup> St N, St Petersburg, FL 33714  
Phone: 727-458- 0544

**State Approved Equipment Tie Down - FL14239**

On March 23<sup>rd</sup> 2012 the governor signed HB 704 amending SECTION 16 of the 2010 FBC to the 2007 FBC. See the copy below.

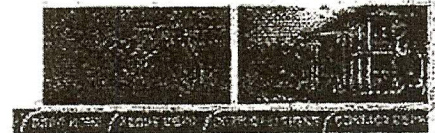
**HB 704 – Relating to the Florida Building Commission and the Florida Building Code**

**Chapter Law Number: Chapter No. 2012-1  
Approved by the Governor 3/23/2012**

**Section 16**

4) Notwithstanding the provisions of this section, exposed mechanical equipment or appliances fastened to a roof or installed on the ground in compliance with the code using rated stands, platforms, curbs, slabs, or other means are deemed to comply with the wind resistance requirements of the 2007 Florida Building Code, as amended. Further support or enclosure of such mechanical equipment or appliances is not required by a state or local official having authority to enforce the Florida Building Code. This subsection expires on the effective date of the 2013 ~~2010~~ Florida Building Code.

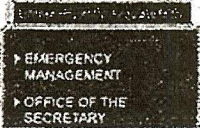
The following files from [www.floridabuilding.org](http://www.floridabuilding.org) Code Version 2007, number FL 14239, contain the necessary compliance information for tie down clip approval. The specific information required by building departments may vary. Consult with the individual building department for what portion of the following information is needed for permit approval.



BCIS Home | Log In | User Registration | Hot Topics | Submit Surcharge | Stats & Facts | Publications | FBC Staff | BCIS Site Map | Links | Search



Product Approval  
USER: Public User



Product Approval Menu > Product or Application Search > Application List > Application Detail

FL #	FL14239-R0
Application Type	New
Code Version	2007
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.	Kristina S. Daugherty, P.E.
Florida License	PE-68455
Quality Assurance Entity	National Accreditation & Management Institute,
Quality Assurance Contract Expiration Date	12/31/2013
Validated By	Steven M. Urich, PE <input checked="" type="checkbox"/> Validation Checklist - Hardcopy Received
Certificate of Independence	<a href="#">FL14239_R0_COI_COI_BMP.pdf</a>
Referenced Standard and Year (of Standard)	
Equivalence of Product Standards Certified By	
Sections from the Code	Chapter 22

Product Approval Method Method 2 Option B

Date Submitted 11/05/2010

Date Validated 11/05/2010

Date Pending FBC Approval 11/15/2010

Date Approved 12/07/2010

Date Revised 09/29/2011

**Summary of Products**

FL #	Model, Number or Name	Description
14239.1	A/C Hold Down Clip	A/C Hold Down Clip
<b>Limits of Use</b> Approved for use in HVHZ: Yes Approved for use outside HVHZ: Yes Impact Resistant: N/A Design Pressure: N/A Other:		<b>Installation Instructions</b> <a href="#">FL14239_RO_II_BMP003.pdf</a> Verified By: Kristina S. Daugherty, P.E. 68455 Created by Independent Third Party: Yes <b>Evaluation Reports</b> <a href="#">FL14239_RO_AE_PER_1196.pdf</a> Created by Independent Third Party: Yes



Contact Us :: 1240 North Monroe Street, Tallahassee, FL 32399 Phone: 850-487-1824

The State of Florida is an AA/EEO employer. Copyright 2007-2010 State of Florida. :: Privacy Statement :: Accessibility Statement :: Refund Statement

Under Florida law, e-mail addresses are public records. If you do not want your e-mail address released in response to a public-records request, do not send electronic mail to this entity. Instead, contact the office by phone or by traditional mail. If you have any questions regarding DBPR's ADA web accessibility, please contact our Web Master at [webmaster@floridabuilding.org](mailto:webmaster@floridabuilding.org)

Product Approval Accepts:



# BMP INTERNATIONAL, INC.

## A/C HOLD DOWN CLIP

TITLE <b>A/C HOLD DOWN CLIP</b> INSTALLATION & GENERAL NOTES		PREPARED BY: GERTWORKS, LLC 127 W. FAYBANKS AVE., STE. 43B WINTER PARK, FL 32789 PH: (407) 644-1987 FAX: (407) 644-2346	
REVISIONS		NO.	DESCRIPTION
DATE	DWN BY	CHK BY	SCALE
DWG. NO.	DATE	NTS	DATE
BMP INTERNATIONAL, INC.		BMP003 SHEET 1 OF 2	

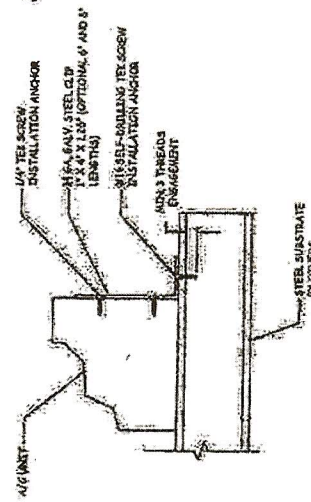
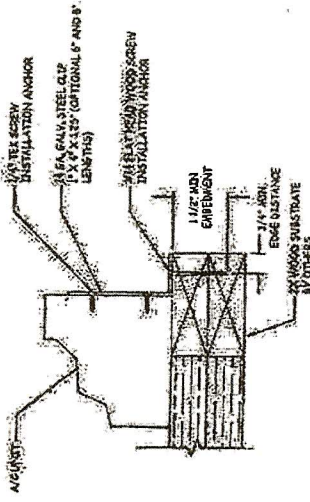
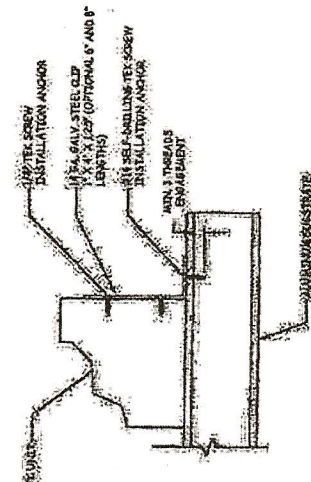
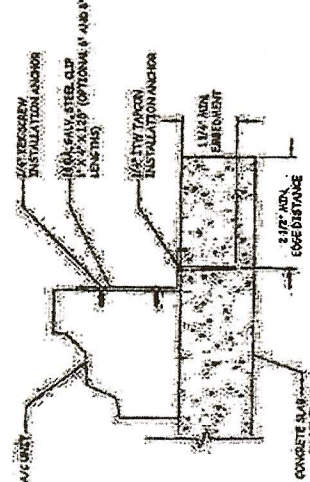
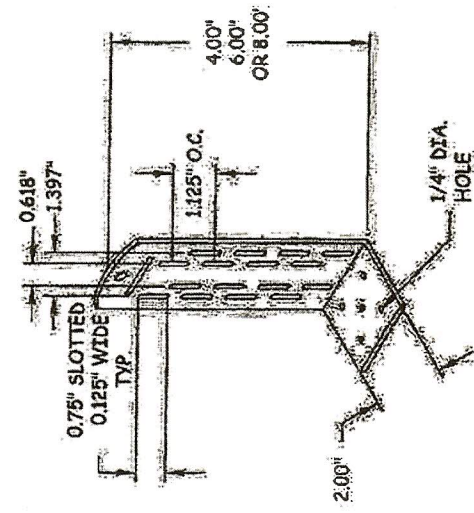
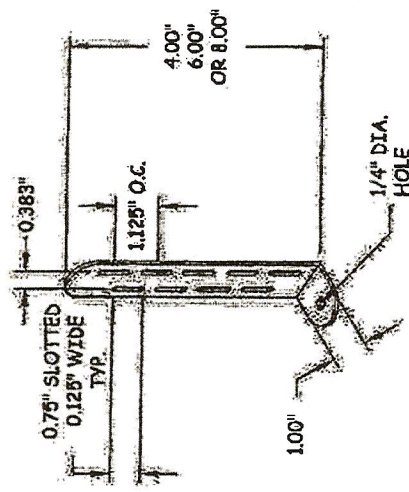


TABLE OF CLIP ATTACHMENT TO SUPPORTING STRUCTURE OR A/C UNIT (SEE REMARKS) - 4 CLIPS PER UNIT		
HEIGHT ABOVE GROUND (FT)	NUMBER OF SCREWS PER CLIP TO CONCRETE (1/4" X 1 1/4")	NUMBER OF SCREWS PER CLIP TO CORRUGATED METAL DECK (1/4" X 1 1/4")
0-1	3	3
1-2	3	3
2-3	3	3
3-4	3	3
4-5	3	3
5-6	3	3
6-7	3	3
7-8	3	3
8-9	3	3
9-10	3	3
10-11	3	3
11-12	3	3
12-13	3	3
13-14	3	3
14-15	3	3
15-16	3	3
16-17	3	3
17-18	3	3
18-19	3	3
19-20	3	3
20-21	3	3
21-22	3	3
22-23	3	3
23-24	3	3
24-25	3	3
25-26	3	3
26-27	3	3
27-28	3	3
28-29	3	3
29-30	3	3
30-31	3	3
31-32	3	3
32-33	3	3
33-34	3	3
34-35	3	3
35-36	3	3
36-37	3	3
37-38	3	3
38-39	3	3
39-40	3	3
40-41	3	3
41-42	3	3
42-43	3	3
43-44	3	3
44-45	3	3
45-46	3	3
46-47	3	3
47-48	3	3
48-49	3	3
49-50	3	3

- NOTES:**
1. ASSEMBLY NOTES ON SHEET OF SCREWS & CLIPS, ASSUME 4 CLIPS PER UNIT, EXCEPT WHERE INDICATED OTHERWISE. PROVIDE PROTECTIVE COATING FOR CLIPS & SCREWS TO BE INSTALLED INTO THE ROOF RAFTERS.
  2. PROVIDE PROTECTIVE COATING FOR CLIPS & SCREWS TO BE INSTALLED INTO THE ROOF RAFTERS.
  3. REQUIRE WOOD TO BE TREATED WITH AN ANTI-FUNGUS PRESERVATIVE. PROVIDE AN ANTI-FUNGUS PRESERVATIVE TO ALL CONTACTING SURFACES.
  4. STAINLESS STEEL SCREWS MAY BE USED WHERE REQUIRED BY GOVERNING AGENCY.

**REVISIONS**

NO.	DESCRIPTION	BY	DATE

**TITLE:** A/C HOLD DOWN CLIP  
**INSTALLATION & GENERAL NOTES**

**PREPARED BY:** CERTWORKS, LLC  
 127 W. FAIRBANKS AVE., STE. 438  
 WINTER PARK, FL 32789  
 THE (407) 644-1987 F20 (407) 644-2368

**BWP INTERNATIONAL, INC.**  
 2770 STEVENSON BLVD., SUITE 200  
 FORT LAUDERDALE, FL 33311  
 THE (954) 468-0094

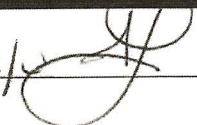
**DATE:** 06.30.10  
**SCALE:** 2XK BY: 3/4  
**NTS**

**DWG. #**  
**BMP003**  
**SHEET: 2 OF 2**

**GENERAL NOTES:**

1. DESIGN CALCULATIONS WERE BASED ON THE FLORIDA BUILDING CODE 2007 WITH 2009 AMENDMENTS, 4 FOOT RAIN LOAD AND 20 P.S.F. LOADS AND WIND VELOCITIES OF 95 MPH AND 115 MPH. AN IMPORTANCE FACTOR OF 1.4 AND SUPPORT CLASSIFICATION C WAS USED IN THE DESIGN.
2. A/C UNIT MAXIMUM SIZE: 4 FT. X 4 FT. X 4 FT. MINIMUM WEIGHT OF 150 LBS.
3. ALL SCREWS USED TO ATTACH CLIP SHALL BE GALVANIZED AND SELF DRILLING WITH A MINIMUM HEAD DIAMETER OF 0.3125 IN. SCREWS SHALL BE DRILLED TIGHT, NOT OVER TIGHTENED.
4. JACKONS USED TO ATTACH CLIP TO CONCRETE SHALL BE APPROVED WITH A RATED TENSILE STRENGTH OF 480 LBS WITH A MINIMUM EMBEDMENT OF 1.3/4 IN. MINIMUM EDGE DISTANCE OF 2.5", AND MINIMUM CENTER TO CENTER DISTANCE OF 3".
5. WHEN UNIT IS SUPPORTED BY WOOD USE #10 WOOD SCREWS WITH A MINIMUM 1.1/2 IN. EMBEDMENT.
6. SCREWS AT THE BOTTOM OF CLIP ATTACHMENT TO SUPPORTING STRUCTURE REQUIRE WASHERS OF 24 GA. STEEL MINIMUM WITH A YIELD STRENGTH OF 38 KSI.
7. CLIPS SHALL BE MANUFACTURED OUT OF MINIMUM #10101 STEEL THAT IS G90 GALVANIZED OR STAINLESS STEEL.
8. UNIT SIZE MAY INCREASE TO 6 FT. X 6 FT. X 4 FT. AND REQUIRE TWO (2) CLIPS AT CORNERS AND MAY NOT BE HIGHER THAN 45 FT FROM GRADE.
9. #12 GALV. SELF DRILLING SCREWS MAY BE USED ON UNITS WHICH ARE INSTALLED NO HIGHER THAN 40 FT FROM GRADE FOR WIND VELOCITY ZONES ARE 146 MPH OR LESS.
10. INSTALLATION ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH ANCHOR MANUFACTURER'S INSTALLATION INSTRUCTIONS, AND ANCHORS SHALL NOT BE USED IN SUBSTRATES WITH STRENGTHS LESS THAN THE MINIMUM STRENGTH SPECIFIED BY THE ANCHOR MANUFACTURER.
11. INSTALLATION ANCHOR CAPACITIES FOR PRODUCTS HEREIN ARE BASED ON SUBSTRATE MATERIALS WITH THE FOLLOWING PROPERTIES:  
 A. WOOD - MINIMUM SPECIFIC GRAVITY OF 0.55.  
 B. CONCRETE - MINIMUM COMPRESSIVE STRENGTH OF 2700 PSI.  
 C. ALUMINUM - MINIMUM 6061-T5 ALLOY (MINIMUM WALL THICKNESS OF .125")  
 D. STEEL - MINIMUM YIELD STRENGTH OF 33 KSI. MINIMUM WALL THICKNESS OF 3/8 INLS.  
 12. CLIPS CAN ALSO BE SUPPLIED IN A POWDER-COATED FINISH.
13. INSTALLATION ANCHORS AND ASSOCIATED HARDWARE MUST BE MADE OF CORROSION RESISTANT MATERIAL OR HAVE A CORROSION RESISTANT COATING. SIMILAR MATERIALS MUST BE SEPARATED OR COATED IN ACCORDANCE WITH FIG SECTION 8003 B.A.

**City of Belle Isle  
Building Permit Application Review Sheet**

2013-05-066	2013-06-038
Property Owner	JENNIFER FRANCE
Address	2511 OAK ISLAND POINTE
Nature of Improvement	A/C (1) 2 TON CHANGE OUT – NO DUCT WORK
Received Application	6/11/2013
Zoning Clerk Review	N/A
Zoning Complete Date	N/A
Zoning Passed	N/A
Variance Approved	n/a
Universal Eng Notified	
Universal Eng Pickup	
Universal Eng Approved	6/12/2013
Comments	
1.	20/12/13 Debbie will let Ernie know to p/ly 
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11.	
12.	
13.	
14.	