



City of Belle Isle

Universal Engineering Sciences 3532 Maggie Blvd., Orlando, FL 32811
 Tel 407-581-8161 * Fax 407-581-0313 * 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.

Scope of Work: MECHANICAL: one 3.5 ton change out Comments: None Project Information Address: 5120 Louvre Avenue, Belle Isle, FL 32809 Parcel ID: 17-23-30-4379-02-270 Property Owner: Santos, Shirley Phone Number: None ***** Company Name: Sunshine Heat & Air Inc Contractor Name: Mattingly, Robert License Number: RA0041156 Address: 1606 Aber Rd, Orlando, FL 32807 Phone Number: 407 282 6885	Permit Number: 2015-04-070 Date of Application: 04/27/2015 Date Permit Issued: 04/29/2015 WARNING TO OWNER: "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

IMPACT FEES School \$ Traffic \$ ZONING FEES Zoning Fee \$ UNIVERSAL ENG - BUILDING FEES 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 \$ SURCHARGE FEES Surcharge Fee \$2.00 Surcharge Fee \$2.00 TOTAL FEES \$86.50 Date Paid <u>4-29-15</u> CC or Check # <u>VISA 2707</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).	<div style="text-align: right;">BUILDING INSPECTOR USE ONLY</div> 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 BUILDING 1 st _____ (Footing/Foundation) Survey specific foundation plan must be onsite before slab pour. Approved Plan on Site? ____ 2 nd _____ (Slab) 3 rd _____ (Lintel)(Wall Reinforcing on Masonry Building) 4 th _____ (Exterior Framing)(Roof/Wall Sheathing) 5 th _____ (Framing) (To be made after Plumbing/ Mechanical/ Electrical Rough-Ins & Windows/Doors Installed) 6 th _____ (Insulation to be Made After Roof Installed) 7 th _____ (Drywall) 8 th _____ (Sidewalk/Driveway) 9 th _____ (Other) 10 th _____ (Final – After MEP and Other Applicable Finals) ROOFING 1 ST ROOFING Deck Nailing/Dry-in/Flashing _____ 2 nd ROOFING Covering In-Progress _____ 3 rd ROOFING Covering Final _____ PLUMBING (Pool-Piping, Solar, Irrigation, Water Treatment Equip, Etc...) 1 ST _____ (Underground) 2 nd _____ (Sewer) 3 rd _____ (Rough-In/Tub Set) 4 th _____ (Final) CHECK APPROPRIATE BOX <input type="checkbox"/> GAS <u> Natural </u> <input type="checkbox"/> LP <input type="checkbox"/> MECHANICAL <input type="checkbox"/> ELECTRICAL <input type="checkbox"/> LOW VOLTAGE 1 st _____ (Rough-In) 2 nd _____ (Final)
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Inspection requests are to be emailed to BDscheduling@UniversalEngineering.com; a confirmation email will be sent back to you upon scheduling. **Next-Day Inspection requests must be made by 1pm.** Please include the following in your request: Permit #, project address, type of inspection, date of the requested inspection, a contact name & a contact phone number. AM or PM may be requested but cannot be guaranteed.

PROJECT NUMBER 0115.1300823.0000

TASK NUMBER 04

CITY OF BELLE ISLE
Permit Application Review Sheet

Permit Number	2015-04-070
Property Owner	Santos
Address	Mechanical
Nature of Improvement	5120 Lawrence Ave
Received Application	4-27-15
Sent for Stormwater Review	
Stormwater Approved	/
Sent for Zoning Review	
Zoning Approved	/
Applied for Variance	
Variance Approved	
Sent to BO for Review	4-27-15
Building Official Approved	4-28-15 [Signature]
Comments	
1.	Susan 4-27-15 review w/ # 50318
2.	Susan 4-29-15 emailed it's ready
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11.	
12.	

Susan Manchester

SM

RECEIVED
4-27-15



City of Belle Isle

Universal Engineering Sciences 3532 Maggie Blvd., Orlando, FL 32811
Tel 407-581-8161 * Fax 407-581-0313 * www.universalengineering.com

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: _____ PERMIT NUMBER 2015-04-070
PLEASE PRINT. The undersigned hereby applies for a permit to make installations as indicated below.

Project Address 5120 Louvre Ave Belle Isle FL 32809 32812
Property Owner SANTOS Shukry Phone _____
Property Owner's Mailing Address Same AS ABOVE City _____
State _____ Zip Code _____ Parcel Id Number: 17-23-30 4379 02 220

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

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

- REQUIRED certified Tie Down Engineering documentation (can be found at www.floridabuilding.org)
- 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 3.5 Total Tons 3.5
Type of System: Water to Air _____ Chiller _____ Split System _____ Package _____ Heat Pump _____
Estimated Cost \$ _____

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

(A) Estimated Cost Fee \$ 4887.

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

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

Refrigeration: Number of units _____
Estimated Cost \$ _____

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

Others: (Specify) _____
Estimated Cost \$ _____

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

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

LICENSE HOLDER SIGNATURE Robert Mattingly LICENSE # RA0041156
LICENSE HOLDER NAME Robert Mattingly COMPANY NAME Sunshine Heating & Air
Street Address 1606 ABER Rd
City ORLANDO State FL Zip Code 32807 Phone Number 407 287 6825
Email Address coolair @ sunshineheating AND air.com

Building Official: [Signature] Date 4-28-15
Verified Contractor's licenses & Insurance are on file [Signature] Date 4-27-15

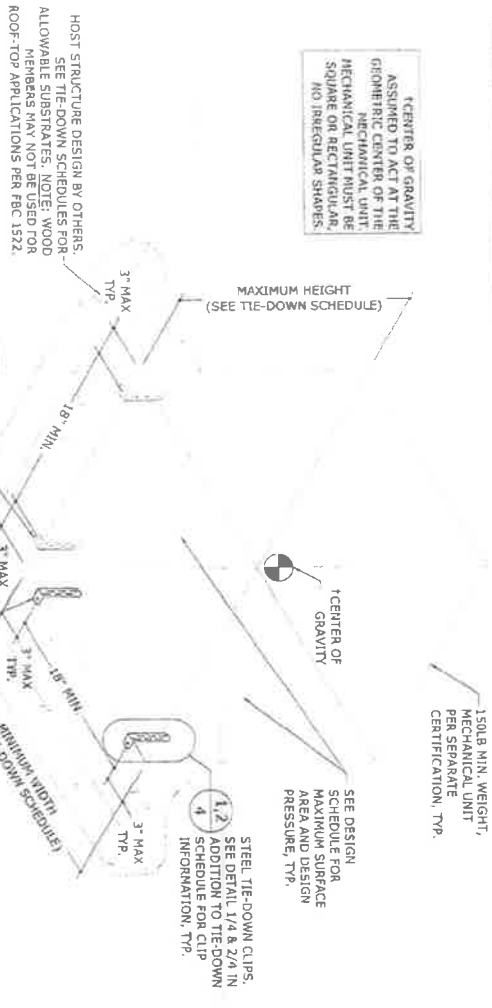
Permit Fee \$ 55.00
Review Fee \$ 22.50
3% Florida Surcharge \$ 4.00
Total Permit Fee \$ 86.50

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

BMP INTERNATIONAL, INC.

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

VERTICES OF GRAVITY ASSIGNED TO ACT AT THE GEOMETRIC CENTER OF THE MECHANICAL UNIT MUST BE SQUARE OR RECTANGULAR. NO IRREGULAR SHAPES.



DOUBLE CLIP OPTION:

(2) TOTAL CLIPS MAY BE USED AT EACH CORNER (ONE EACH ON OPPOSING CORNER FACES, 3" FROM CORNER EDGE, 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 THE ALLOWED SPACING LISTED IN THE TIE-DOWN ANCHOR SCHEDULES. SEE SHEETS 2&3 FOR MORE INFORMATION.

TIE-DOWN CLIP DIRECTIVE EXAMPLE

THE FOLLOWING EXAMPLE ILLUSTRATES THE PROCEDURE USED TO DETERMINE THE MAXIMUM ALLOWABLE WIND PRESSURE FOR ANY GIVEN MECHANICAL UNIT THAT CONFORMS TO THE DIMENSION RESTRICTIONS LISTED HEREIN. SEE SHEETS 2&3 FOR TIE-DOWN SCHEDULES.)

MECHANICAL UNIT CRITERIA:

CONSIDER THE INSTALLATION OF (1) MECHANICAL UNIT WITH THE FOLLOWING CRITERIA:
 16" TALL x 36" DEEP x 24" WIDE, 150 LB WEIGHT AS VERIFIED BY OTHERS, INSTALLED TO 3192 KSI MIN. CONCRETE AT GRADE AS VERIFIED BY OTHERS.

PROCEDURE:

PROCEDURE STEP	RESULT
1. LOCATE THE AT GRADE TIE-DOWN SCHEDULE ON SHEET 2 AND SELECT CLIP TYPE	CONSIDER 1" STEEL CLIP
2. DETERMINE LOGGED FACE AREA OF MECHANICAL UNIT TO BE INSTALLED	36" X 36" - 9 FT ²
3. CHECK MAXIMUM UNIT HEIGHT RESTRICTION	UNIT HEIGHT IS 36" WHICH IS LESS THAN THE MAXIMUM ALLOWABLE HEIGHT OF 48"
4. CHECK MAXIMUM UNIT WIDTH RESTRICTION	UNIT WIDTH IS 24" WHICH IS EQUIVALENT TO THE MAXIMUM ALLOWABLE WIDTH OF 24"
5. DETERMINE THE NUMBER OF CLIPS TO BE USED AT EACH CORNER OF THE MECHANICAL UNIT	CONSIDER (1) CLIP AT EACH CORNER, INSTALLED TO CONCRETE SUBSTRATE

CONCLUSION: MAXIMUM ALLOWABLE LATERAL DESIGN PRESSURE = 40PSF
 (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:

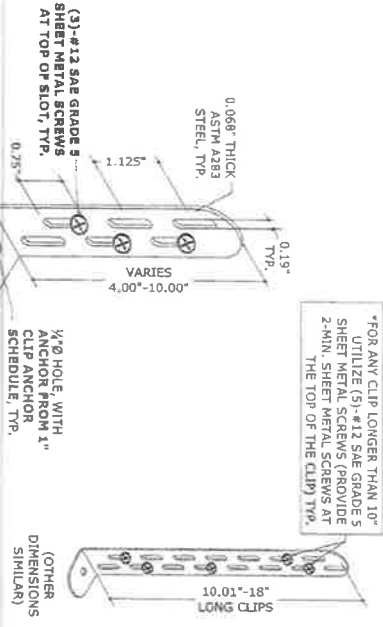
- THIS PRODUCT HAS BEEN DESIGNED AND SHALL BE FABRICATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2010 FLORIDA BUILDING CODE FOR USE WITHIN AND OUTSIDE THE HIGH VELOCITY HURRICANE ZONE. NO 33-1/3% INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS SYSTEM.
- DESIGN IS BASED ON CLIENT PROVIDED PRODUCT AND DIE SHEETS FROM TEST LABORATORIES, INC. NO SUBSTITUTIONS WITHOUT WRITTEN APPROVAL BY THIS ENGINEER SHALL BE PERMITTED.
- ALLOWABLE DESIGN PRESSURES TO QUALIFY CAPACITY OF CLIPS AS LISTED HEREIN ARE DETERMINED THROUGH TESTING REPORT DATA AND RATIONALLY CHECKED FOR CONSISTENCY WITH EACH TEST PERFORMANCE.
- REQUIRED LATERAL AND/OR UPLIFT DESIGN PRESSURES CALCULATED FOR USE WITH THIS SYSTEM SHALL BE DETERMINED BY OTHERS ON A SITE-SPECIFIC BASIS IN ACCORDANCE WITH THE GOVERNING BUILDING CODE AND RATIONALLY CHECKED FOR CONSISTENCY WITH EACH TEST PERFORMANCE.
- MAXIMUM & MINIMUM DIMENSIONS AND MINIMUM WEIGHT OF MECHANICAL UNIT SHALL CONFORM TO SPECIFICATIONS STATED HEREIN. ALL MECHANICAL UNITS SHALL CONFORM TO SPECIFICATIONS STATED HEREIN. ALL MECHANICAL UNITS SHALL CONFORM TO SPECIFICATIONS STATED HEREIN. ALL MECHANICAL UNITS SHALL CONFORM TO SPECIFICATIONS STATED HEREIN. ALL MECHANICAL UNITS SHALL CONFORM TO SPECIFICATIONS STATED HEREIN.
- FASTENERS TO BE USED SHALL BE 3/8" x 3" OR GREATER SAE GRADE 5 UNLESS NOTED OTHERWISE. ALL FASTENERS SHALL HAVE AN ANCHOR REQUIREMENT. ALL FASTENERS SHALL HAVE APPROPRIATE CORROSION PROTECTION TO PREVENT ELECTROLYSIS.
- ALL STEEL MEMBERS SHALL BE PROTECTED AGAINST CORROSION WITH AN APPROVED COAT OF PAINT, ENAMEL OR OTHER APPROVED PROTECTION IN ACCORDANCE WITH THE 2010 FBC, SECTIONS 2203.7 AND 2220.990-RATED 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 = 0.55 OR GREATER. DIRECT CONNECTION TO WOOD MEMBERS/SHEEPS IS NOT PERMITTED FOR ROOF-TOP APPLICATIONS PER FBC SECTION 1522.
- THE CONTRACTOR IS RESPONSIBLE TO INSULATE ALL MEMBERS FROM DISPERSED MATERIALS TO PREVENT ELECTROLYSIS, I.E. ALUMINUM PER F.B.C. 2003.8.4.
- ELECTRICAL GROUND, WHEN REQUIRED, TO BE DESIGNED & INSTALLED BY OTHERS.
- THE AGENCY OF ANY EXISTING STRUCTURE TO WITHSTAND SUPERIMPOSED LOADS SHALL BE VERIFIED BY THE ON-SITE DESIGN PROFESSIONAL AND IS NOT INCLUDED IN 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 DOCUMENT.
- WATER-TIGHTNESS OF EXISTING HOST SUBSTRATE SHALL BE THE FULL RESPONSIBILITY OF THE INSTALLING CONTRACTOR. CONTRACTOR SHALL RESPOND AFTER FABRICATION AND BE RESPONSIBLE FOR ANY WATER PENETRATING OR LEAKAGE ISSUES WHICH MAY OCCUR AS WATER TIGHTNESS SHALL BE THE FULL RESPONSIBILITY OF THE INSTALLING CONTRACTOR.

ENGINEERING EXPRESS
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER
 LICENSE NO. 120112
 EXPIRES 12/31/2018
 NO. 45549
 A. FRANK L. BERNARDO, P.E., INC.

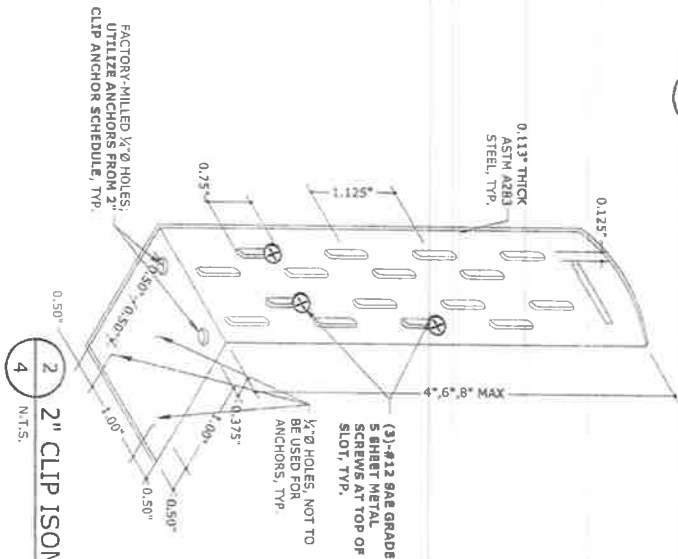
BMP INTERNATIONAL, INC.
 4710 28TH STREET NORTH
 ST. PETERSBURG, FL 33471
 PH: (727) 577-1613
 MECHANICAL UNIT STEEL TIE-DOWN CLIPS
 FLORIDA STATEWIDE APPROVAL

REVISIONS	DATE	BY	CHKD
1	12-11-11	FLB	FLB

11-BMP-0001
 SCALE: AS SHOWN
 DATE REVISION

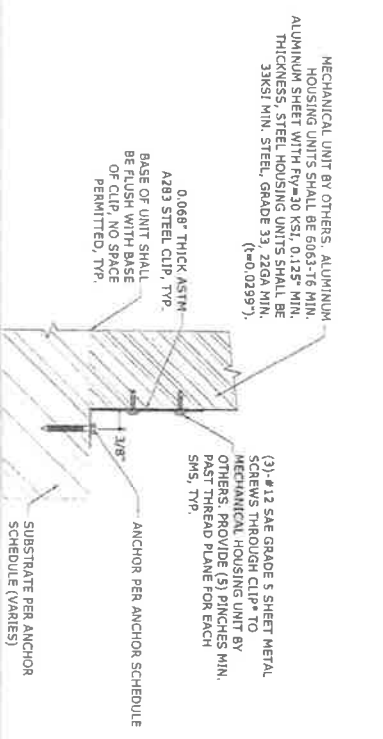


1 1" CLIP ISOMETRIC DETAIL
4 N.T.S.

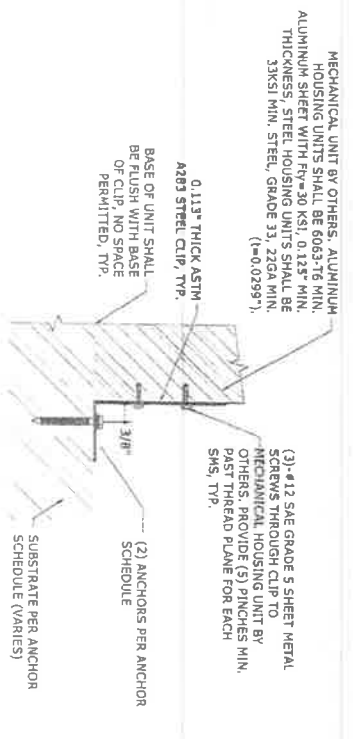


2 2" CLIP ISOMETRIC DETAIL
4 N.T.S.

3 1" TIE-DOWN CLIP ANCHOR DETAIL
4 3" = 1'-0"



4 2" TIE-DOWN CLIP ANCHOR DETAIL
4 3" = 1'-0"



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

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 4710 28TH STREET NORTH
 ST. PETERSBURG, FL 33471
 PH: (727) 577-1613

MECHANICAL UNIT STEEL TIE-DOWN CLIPS

FLORIDA STATEWIDE APPROVAL

ENGINEER EXPRESS

160 SW 12th AVENUE
 DEERFIELD BEACH, FL 33442
 PH: (954) 354-0660 FAX: (954) 354-0661
 WWW.ENGEXP.COM

CERT. OF AUTH. REGS.
 A FRANK L. BERNARDO, P.E., INC. ENGINEER

FRANK L. BERNARDO, P.E.
 LICENSE NO. 14243
 STATE OF FLORIDA

DATE	DRAWN/CHKD	REMARKS
12-11-11	TSS/FLB	ISSUE

CONTRACT NO. 11-BMP-0001
 SCALE: 1/8" = 1'-0"
 DRAWING NO. 101
 DATE DESCRIBTION

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

MAXIMUM ALLOWABLE LATERAL WIND PRESSURE (ANCHOR TO HOST STRUCTURE)

MAXIMUM SURFACE AREA OF UNITS LARGEST FACE	UNIT HEIGHT	UNIT WIDTH	(1) CLIP AT EACH CORNER (TOTAL OF 4 CLIPS PER UNIT)														
			TARCON TO CONCRETE	SHEET METAL SCREW TO ALUMINUM	SHEET METAL SCREW TO STEEL	WOOD SCREW TO WOOD	TARCON TO CONCRETE	SHEET METAL SCREW TO ALUMINUM	SHEET METAL SCREW TO STEEL	WOOD SCREW TO WOOD	TARCON TO CONCRETE	SHEET METAL SCREW TO ALUMINUM	SHEET METAL SCREW TO STEEL	WOOD SCREW TO WOOD			
4 FT ²	0 FT		91 PSF	91 PSF	91 PSF	91 PSF	91 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF
9 FT ²	0 FT		91 PSF	91 PSF	91 PSF	91 PSF	91 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF
12 FT ²	48" MAX	24" MIN	40 PSF	40 PSF	40 PSF	40 PSF	40 PSF	58 PSF	58 PSF	58 PSF	58 PSF	58 PSF	58 PSF	58 PSF	58 PSF	58 PSF	58 PSF
18 FT ²			30 PSF	30 PSF	30 PSF	30 PSF	30 PSF	43 PSF	43 PSF	43 PSF	43 PSF	43 PSF	43 PSF	43 PSF	43 PSF	43 PSF	43 PSF
20 FT ²			22 PSF	22 PSF	22 PSF	22 PSF	22 PSF	40 PSF	40 PSF	40 PSF	40 PSF	40 PSF	40 PSF	40 PSF	40 PSF	40 PSF	40 PSF
25 FT ²			26 PSF	26 PSF	26 PSF	26 PSF	26 PSF	30 PSF	30 PSF	30 PSF	30 PSF	30 PSF	30 PSF	30 PSF	30 PSF	30 PSF	30 PSF
30 FT ²	80" MAX	48" MIN						31 PSF	31 PSF	31 PSF	31 PSF	31 PSF	31 PSF	31 PSF	31 PSF	31 PSF	31 PSF
30 FT ²								27 PSF	27 PSF	27 PSF	27 PSF	27 PSF	27 PSF	27 PSF	27 PSF	27 PSF	27 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 UNIT SHALL CONFORM TO THE FOLLOWING:
 - ALUMINUM HOUSING UNITS SHALL BE 6063-T6 MIN. ALUMINUM SHEET WITH RY=30 KSI, 0.125" MIN. THICKNESS.
 - STEEL HOUSING UNITS SHALL BE 36ksi MIN. STEEL, GRADE 33, 2XGA MIN. (1=0.0293") SUBSTRATE FOR 6063-T6 ALUMINUM SHEET.
 - MAXIMUM ALLOWABLE VALUE OF 100 PSF HAS BEEN UTILIZED FOR HIGHER DEMAND CAPACITIES CONTACT THIS ENGINEER FOR SITE-SPECIFIC ENGINEERING.
 - 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: (4" THICK MIN., 3192KSI MIN.)	(1)-1/2" Ø CARBON STEEL T1V BUILDER TARCON, 1 1/2" FULL EMBED TO CONCRETE, 24" MIN. EDGE DISTANCE, 3" 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) PINCHES MIN. PAST THREAD PLANE FOR SHEET METAL SCREW.
STEEL: (0.125" MIN. THICK, 33 KSI MIN. STEEL)	(1)-#14 SAE GRADE 5 SHEET METAL SCREW TO STEEL, PROVIDE (5) PINCHES MIN. PAST THREAD PLANE FOR SHEET METAL SCREW.
SEALED WOOD: (SOUTHERN YELLOW PINE, 2-0.55 OR BETTER)	(1)-#14 SAE GRADE 5 WOOD SCREW TO WOOD MEMBERS PROVIDE 1 1/2" MIN. THREAD PENETRATION, 1" MIN. EDGE DISTANCE, 1" MIN. END DISTANCE.

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

MAXIMUM ALLOWABLE LATERAL WIND PRESSURE (ANCHOR TO HOST STRUCTURE)

MAXIMUM SURFACE AREA OF UNITS LARGEST FACE	UNIT HEIGHT	UNIT WIDTH	(1) CLIP AT EACH CORNER (TOTAL OF 4 CLIPS PER UNIT)													
			SHEET METAL SCREW TO ALUMINUM	SHEET METAL SCREW TO STEEL	WOOD SCREW TO WOOD	SHEET METAL SCREW TO ALUMINUM	SHEET METAL SCREW TO STEEL	WOOD SCREW TO WOOD	SHEET METAL SCREW TO ALUMINUM	SHEET METAL SCREW TO STEEL	WOOD SCREW TO WOOD	SHEET METAL SCREW TO ALUMINUM	SHEET METAL SCREW TO STEEL	WOOD SCREW TO WOOD		
4 FT ²	0 FT		100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF	100 PSF
9 FT ²	48" MAX	24" MIN	67 PSF	67 PSF	67 PSF	67 PSF	67 PSF	67 PSF	67 PSF	67 PSF	67 PSF	67 PSF	67 PSF	67 PSF	67 PSF	67 PSF
12 FT ²			59 PSF	59 PSF	59 PSF	59 PSF	59 PSF	59 PSF	59 PSF	59 PSF	59 PSF	59 PSF	59 PSF	59 PSF	59 PSF	59 PSF
16 FT ²			38 PSF	38 PSF	38 PSF	38 PSF	38 PSF	38 PSF	38 PSF	38 PSF	38 PSF	38 PSF	38 PSF	38 PSF	38 PSF	38 PSF
20 FT ²			41 PSF	41 PSF	41 PSF	41 PSF	41 PSF	41 PSF	41 PSF	41 PSF	41 PSF	41 PSF	41 PSF	41 PSF	41 PSF	41 PSF
25 FT ²	60" MAX	48" MIN	33 PSF	33 PSF	33 PSF	33 PSF	33 PSF	33 PSF	33 PSF	33 PSF	33 PSF	33 PSF	33 PSF	33 PSF	33 PSF	33 PSF
30 FT ²			27 PSF	27 PSF	27 PSF	27 PSF	27 PSF	27 PSF	27 PSF	27 PSF	27 PSF	27 PSF	27 PSF	27 PSF	27 PSF	27 PSF

- TIE-DOWN CLIPS SHALL BE FASTENED TO MECHANICAL HOUSING UNIT WITH (3)-#12 SAE GRADE 5 SHEET METAL SCREWS.
- MECHANICAL HOUSING UNIT SHALL CONFORM TO THE FOLLOWING:
 - ALUMINUM HOUSING UNITS SHALL BE 6063-T6 MIN. ALUMINUM SHEET WITH RY=30 KSI, 0.125" MIN. THICKNESS.
 - STEEL HOUSING UNITS SHALL BE 36ksi MIN. STEEL, GRADE 33, 2XGA MIN. (1=0.0293") SUBSTRATE FOR 6063-T6 ALUMINUM SHEET.
 - 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
ALUMINUM: (0.125" MIN. THICK, 6061-T6 MIN. ALUMINUM)	(2)-#14 SAE GRADE 5 SHEET METAL SCREW TO ALUMINUM, PROVIDE (5) PINCHES MIN. PAST THREAD PLANE FOR SHEET METAL SCREW.
STEEL: (0.125" MIN. THICK, 33 KSI MIN. STEEL)	(2)-#14 SAE GRADE 5 SHEET METAL SCREW TO STEEL, PROVIDE (5) PINCHES MIN. PAST THREAD PLANE FOR SHEET METAL SCREW.
SEALED WOOD, 1-1/2" MIN THICKNESS: (SOUTHERN YELLOW PINE, 2-0.55 OR BETTER)	(2)-#14 SAE GRADE 5 WOOD SCREW TO WOOD MEMBERS, PROVIDE 1 1/2" MIN. THREAD PENETRATION, 1" MIN. EDGE DISTANCE, 1" MIN. END DISTANCE.

REMARKS:

1. ANCHOR SCHEDULE NOTES:

2. EMBEDMENT AND EDGE DISTANCE EXCLUDES FINISHES, IF APPLICABLE.

3. ENSURE MINIMUM EDGE DISTANCE AS NOTED IN ANCHOR SCHEDULE.

TABLE LEGEND:

- DENOTES EXAMPLE VALUE FOR USE WITH COVER PAGE DIRECTIVE

- DENOTES VALUES NOT APPROVED FOR USE

ANCHOR SCHEDULE NOTES:

1. EMBEDMENT AND EDGE DISTANCE EXCLUDES FINISHES, IF APPLICABLE.

2. ENSURE MINIMUM EDGE DISTANCE AS NOTED IN ANCHOR SCHEDULE.

3. DENOTES VALUES NOT APPROVED FOR USE

BMP INTERNATIONAL, INC.
4710 28TH STREET NORTH
ST. PETERSBURG, FL 33741
PH: (727) 577-1613

MECHANICAL UNIT STEEL TIE-DOWN CLIPS

FLORIDA STATEWIDE APPROVAL

ENGINEERING EXPRESS
160 SW 12th AVENUE
DEERFIELD BEACH, FL
PH: (954) 354-0660 FAX: (954) 354-0661
WWW.ENGEXP.COM

CERT. OF AUTH. #288
A. FRANK L. GENARDO, P.E., INC. (IMD)

DATE: 12-11-11
DRAWN: FLS
CHECKED: []
SCALE: 1/16"
DATE REVISION: []

11-BMP-0001
SCALE: 1/16"
DATE REVISION: []

2

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



LICENSE NUMBER

RA0041156

The CLASS B AIR CONDITIONING CONTRACTOR

Named below HAS REGISTERED

Under the provisions of Chapter 489, F.S.

Expiration date: AUG 31, 2015

(INDIVIDUAL MUST MEET ALL LOCAL LICENSING
REQUIREMENTS PRIOR TO CONTRACTING IN ANY AREA)

MATTINGLY, ROBERT C
SUNSHINE HEATING & AIR CONDITIONING
750 ROBIN LN
OVIDO FL 32765

RICK SCOTT
GOVERNOR

ISSUED: 07/24/2013 SEQ # L1307240000513
DISPLAY AS REQUIRED BY LAW

KEN LAWSON
SECRETARY

Scott Randolph, Tax Collector

This local business tax receipt is in addition to, and not in lieu of, any other tax required by law or municipal ordinance. Businesses are subject to regulation of zoning, health and other lawful authorities. This receipt is valid from October 1 through September 30 of receipt year. Delinquent penalty is added October 1.

2014

1804 CONTR-HARV

\$30.00

10 EMPLOYEES + \$3000 BUSINESS OFFICE

\$30.00

1804-0023281

10 EMPLOYEES ;

TOTAL TAX \$60.00
PREVIOUSLY PAID \$60.00
TOTAL DUE \$0.00

1806 ABER RD
U - ORLANDO, 32807

PAID: \$60.00 2504-00641058 9/18/2014

Local Business Tax Receipt

Orange County, Florida



MATTINGLY ROBERT C

SUNSHINE HEATING & AIR COND INC

MATTINGLY ROBERT C

1806 ABER RD

ORLANDO FL 32807-6212