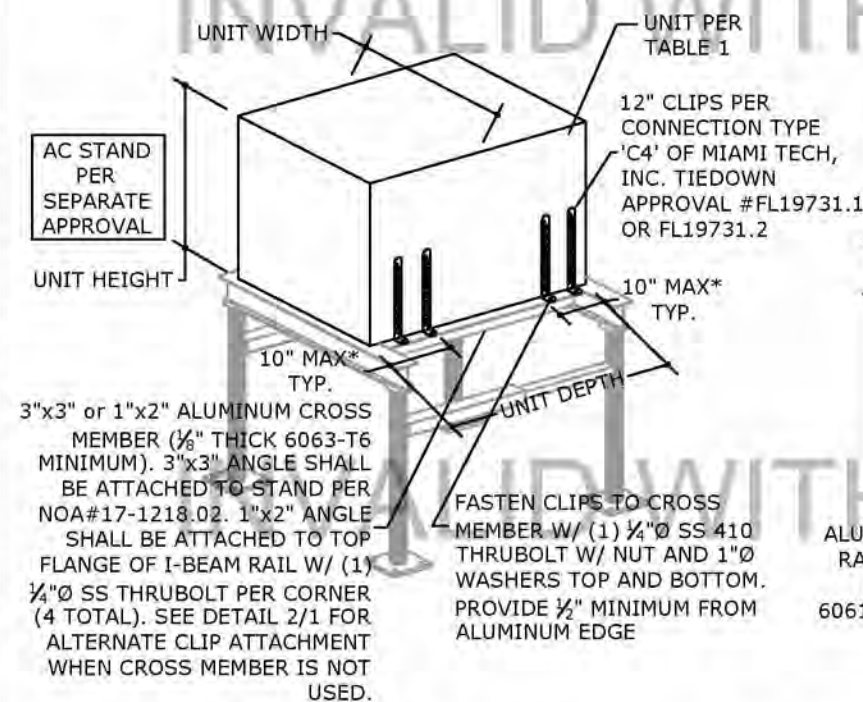


# LUXAIRE CONDENSING UNIT

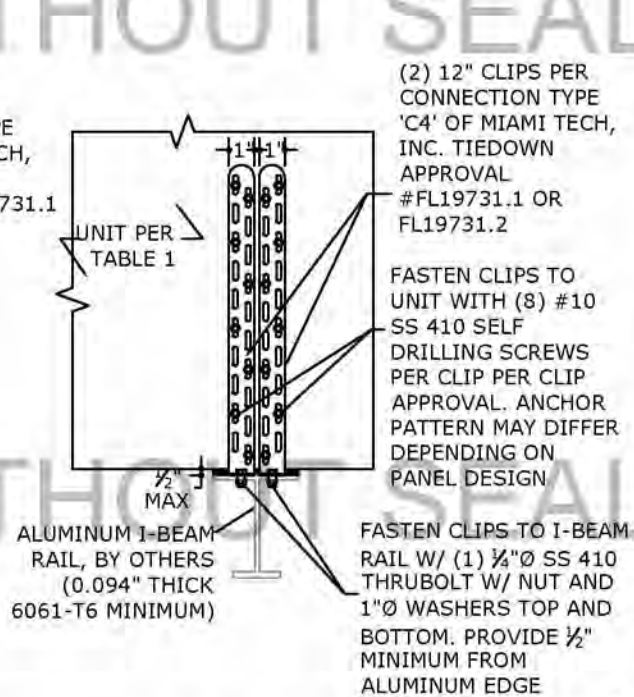
## TIE-DOWN MASTER PLAN SHEET UTILIZING MIAMI TECH, INC. STEEL OR ALUMINUM CUTD CLIPS

(SEE SHEET 2 FOR ALTERNATE TIEDOWN KIT OPTION)



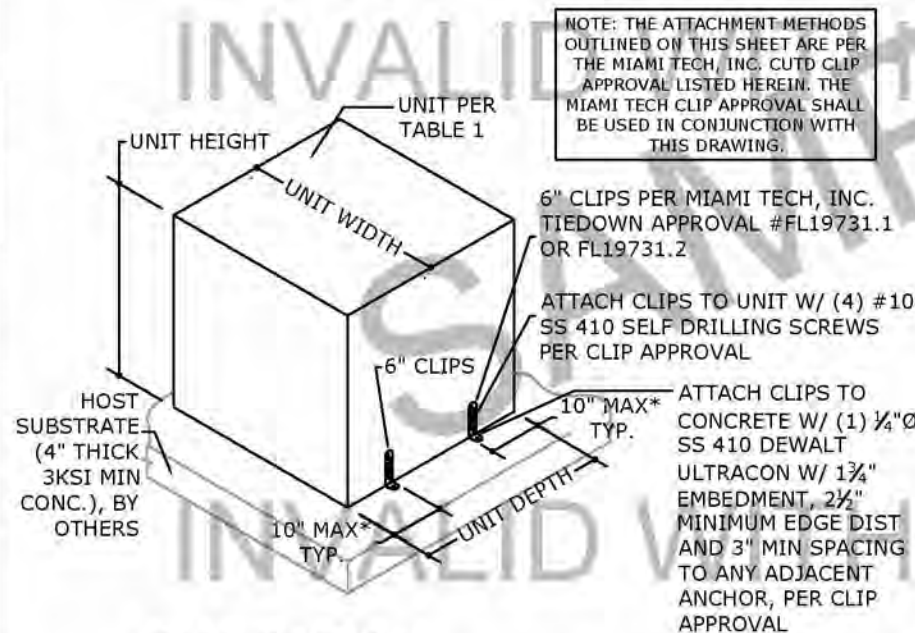
**1** CLIP OPTION (ROOFTOP STAND INSTALLATION)

SCALE: NTS ISOMETRIC VIEW



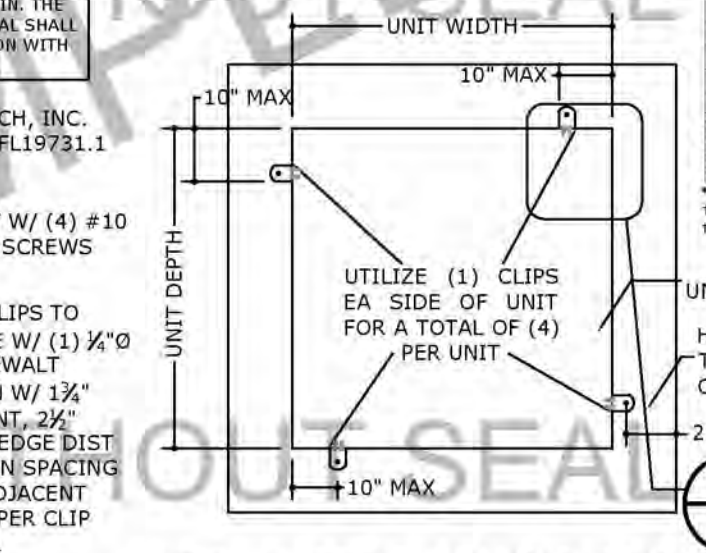
**2** ALTERNATE CLIP LOCATION (ROOFTOP STAND INSTALLATION)

SCALE: NTS SECTION VIEW



**3** CLIP OPTION (AT GRADE INSTALLATION)

SCALE: NTS ISOMETRIC VIEW



**4** ALTERNATE CLIP LOCATION (AT GRADE INSTALLATION)

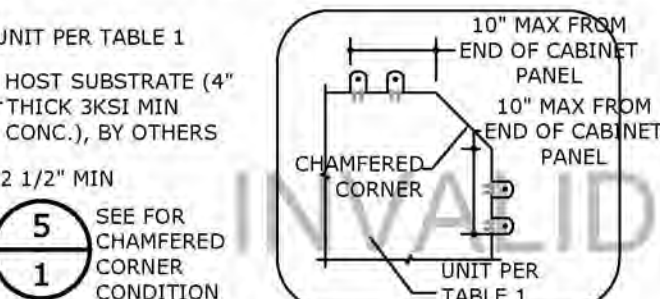
SCALE: NTS PLAN VIEW  
THIS DETAIL MAY BE USED AS AN ALTERNATE GEOMETRIC PATTERN FOR ALL CONNECTION TYPES THAT UTILIZE (1) CLIP AT EACH CORNER FOR A TOTAL OF (4) CLIPS PER UNIT.

### APPROVED DESIGN CRITERIA:

MAXIMUM DESIGN WIND PRESSURES		
ROOF MOUNT	LATERAL	UPLIFT
	150 PSF	100 PSF
GROUND MOUNT	LATERAL	UPLIFT
	60 PSF	30 PSF

TABLE 1: Tested Unit Construction E-Chassis					Number of Clips Required (Ground/Roof)
OD Model	Operating Dimensions w/screw heads			Operating Weight (lbs)	
	Width (in)	Depth (in)	Height (in)		
YFE60B215A	34.25	38.00	39.50	256	(4) / (8)
YHE60B215	34.25	38.00	42.75	261	
Models Listed Below Are of Same Construction as The Tested Units Listed Above*					
OD Model	Operating Dimensions w/screw heads			Operating Weight (lbs)	Number of Clips Required (Ground/Roof)
	Width (in)	Depth (in)	Height (in)		
TF4B182*	24.00	24.00	36.25	120	
TF4B242*	29.25	29.25	30.00	131	(4) / (8)
TF4B302*	29.25	29.25	36.25	150	(4) / (8)
TF4B362*	31.75	35.25	39.50	176	(4) / (8)
TF4B422*	31.75	35.25	39.50	230	(4) / (8)
TF4B482*	31.75	35.25	39.50	235	(4) / (8)
TF4B602*	34.25	38.00	39.50	256	(4) / (8)
TC4B182*	24.00	24.00	33.25	140	(4) / (8)
TC4B242*	29.25	29.25	30.00	155	(4) / (8)
TC4B302*	29.25	29.25	30.00	155	(4) / (8)
TC4B362*	29.25	29.25	36.25	180	(4) / (8)
TC4B422*	31.75	35.25	33.25	215	(4) / (8)
TC4B482*	31.75	35.25	33.25	200	(4) / (8)
TC4B602*	34.25	38.00	36.25	205	(4) / (8)
TC7B182*	29.25	29.25	30.00	150	(4) / (8)
TC7B242*	29.25	29.25	30.00	150	(4) / (8)
TC7B302*	31.75	35.25	36.25	165	(4) / (8)
TC7B362*	31.75	35.25	36.25	175	(4) / (8)
TC7B422*	34.25	38.00	39.50	220	(4) / (8)
TC7B482*	34.25	38.00	39.50	220	(4) / (8)
TC7B602*	34.25	38.00	32.75	235	(4) / (8)
GAW14L18C2*	29.25	29.25	30.00	131	(4) / (8)
GAW14L24C2*	29.25	29.25	30.00	131	(4) / (8)
GAW14L30C2*	29.25	29.25	36.25	150	(4) / (8)
GAW14L36C2*	31.75	35.25	33.25	175	(4) / (8)
GAW14L42C2*	31.75	35.25	33.25	175	(4) / (8)
GAW14L48C2*	34.25	38.00	36.25	195	(4) / (8)
GAW14L60C2*	34.25	38.00	42.25	235	(4) / (8)
PCE4*242* †	35.75	51.25	47.00	343	(4) / (8)
PCE4*302* †	35.75	51.25	47.00	389	(4) / (8)
PCE4*362* †	35.75	51.25	49.00	395	(4) / (8)
PCE4*422* †	35.75	51.25	49.00	466	(4) / (8)
PCE4*482* †	45.75	51.25	53.00	483	(4) / (8)
PCE4*602* †	45.75	51.25	55.00	500	(4) / (8)
PCE6*242* †	35.75	51.25	47.00	343	(4) / (8)
PCE6*302* †	35.75	51.25	47.00	389	(4) / (8)
PCE6*362* †	45.75	51.25	49.00	460	(4) / (8)
PCE6*422* †	45.75	51.25	49.00	466	(4) / (8)
PCE6*482* †	45.75	51.25	53.00	483	(4) / (8)
PCE6*602* †	45.75	51.25	55.00	500	(4) / (8)
RAC17L4B215 ††	38.00	34.25	39.25	235	(4) / (8)
RAC17L4B215 ††	38.00	34.25	39.25	235	(4) / (8)
RAC17L6B215 ††	38.00	34.25	42.75	250	(4) / (8)

\*MAY BE ANY NUMBER(S)/CHARACTER(S) - (DOES NOT AFFECT STRUCTURAL INTEGRITY)  
†CONFIGURATION NOT TESTED, APPROVED PER SEPARATE CALCULATIONS  
††UNIT MANUFACTURED BY GUARDIAN



**5** CLIP LOCATION FOR UNITS WITH CHAMFERED CORNER CONDITION

SCALE: NTS PLAN VIEW

COPIES NOT VALID FOR PERMIT

COPIES NOT VALID FOR PERMIT

### GENERAL NOTES:

- THIS SYSTEM HAS BEEN DESIGNED AND SHALL BE FABRICATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE 7TH EDITION (2020). ALSO APPLICABLE FOR THE FBC 6TH EDITION (2017), IBC/IRC (2015 & 2018), AS WELL AS CURRENT VERSIONS OF THE MN, NC, NJ, NY, OH, SC, & VA BUILDING CODES AS APPLICABLE. CODE ENFORCED COMPLIES WITH STATE OF SEAL AND IF MULTIPLE VERSIONS ARE LISTED THEN MOST STRINGENT APPLIES. DESIGN SHALL UTILIZE ASD DESIGN METHOD USING ASCE 7-16 OR ASCE 7-10 CODES FOR SITE SPECIFIC APPLICATIONS AS APPLICABLE. THESE SYSTEMS MAY BE USED WITHIN AND OUTSIDE THE HIGH VELOCITY HURRICANE ZONE.
- LATERAL AND UPLIFT DESIGN PRESSURES CALCULATED FOR USE WITH THESE UNITS SHALL BE DETERMINED SEPARATELY ON A JOB-SPECIFIC BASIS IN ACCORDANCE WITH THE GOVERNING CODES ABOVE. SITE-SPECIFIC LOAD REQUIREMENTS SHALL BE LESS THAN OR EQUAL TO THE LATERAL OR UPLIFT DESIGN PRESSURE CAPACITY VALUES LISTED HEREIN FOR ANY ASSEMBLY AS SHOWN.
- THIS MASTER PLAN SHEET IS NOT INTENDED TO CERTIFY SPECIFIC UNIT CABINETS. THIS ENGINEERED DRAWING IS INTENDED TO CERTIFY THE UNIT TIE-DOWN TO HOST ATTACHMENTS FOR THE UNIT MODELS DESCRIBED HEREIN FOR WIND LOADING ONLY. THIS CERTIFICATION DOES NOT INCLUDE IMPACT RESISTANCE. SEE TER-18-6038 FOR COMPLETE UNIT CABINETS CERTIFICATION BY THIS OFFICE.
- NO 33-1/3% INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS SYSTEM.
- ALL DIMENSIONS AND THE MINIMUM WEIGHTS OF MECHANICAL UNITS SHALL CONFORM TO LIMITATIONS STATED HEREIN. ALL MECHANICAL SPECIFICATIONS (CLEAR SPACE, TONNAGE, ETC.) SHALL BE AS PER MANUFACTURER RECOMMENDATIONS AND ARE THE EXPRESS RESPONSIBILITY OF THE CONTRACTOR.
- ALL SHEET METAL SCREWS USED TO FASTEN BRACKETS TO MECHANICAL UNITS SHALL BE #10 (14 MIN THREADS PER INCH) ASTM F593 410 STAINLESS STEEL OR EQUIVALENT ONLY. BOLTS USED TO FASTEN ALUMINUM ANGLES TO SUPPORTING FRAME (BY OTHERS) SHALL BE ASTM F593 410 STAINLESS STEEL OR EQUIVALENT AND SHALL UTILIZE SAE GRADE WASHERS & NUTS. PROVIDE (5) PITCHES MINIMUM PAST THE THREAD PLANE FOR SHEET METAL SCREWS. ALL FASTENERS SHALL HAVE APPROPRIATE CORROSION PROTECTION TO PREVENT ELECTROLYSIS. ALL FASTENER CONNECTIONS TO ALUMINUM SHALL PROVIDE 2xDIAMETER EDGE DISTANCE.
- THE CONTRACTOR IS RESPONSIBLE TO INSULATE ALL MEMBERS FROM DISSIMILAR MATERIALS TO PREVENT ELECTROLYSIS.
- ELECTRICAL GROUND, WHEN REQUIRED, TO BE DESIGNED & INSTALLED BY OTHERS.
- THE ADEQUACY OF ANY EXISTING STRUCTURE TO WITHSTAND SUPERIMPOSED LOADS SHALL BE VERIFIED BY THE ONSITE 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 CONJUNCTION WITH THIS DOCUMENT.
- WATER-TIGHTNESS OF EXISTING HOST 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.
- ALL STEEL UNIT COMPONENTS SHALL HAVE AN Fy=33KSI MIN.

VISIT [ECALC.IO/37370](http://ECALC.IO/37370)

FOR ENGINEER CERTIFIED ORIGINALS & MORE INFORMATION ABOUT THIS DOCUMENT OR SCAN THIS QR CODE

VISIT [ENGINEERINGEXPRESS.COM/STORE](http://ENGINEERINGEXPRESS.COM/STORE) FOR ADDITIONAL PLANS, REPORTS & RESOURCES



PE SEAL REQUIRED  
02/22/2021  
CERTIFYING ENGINEER AND CERT OF AUTH AS LISTED ON STAMP  
VALID FOR 1 PERMIT ONLY U.N.O.

DIGITAL SEAL NOTICE:  
IF THIS DOCUMENT IS DIGITALLY SIGNED, THIS SHEET IS PART OF A DIGITALLY SIGNED FILE. IT SHALL REMAIN IN DIGITAL FORMAT, SHALL BE VERIFIED BY ELECTRONIC MEANS & PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED.  
PRINTED DOCUMENT NOTICE:  
IF THIS DOCUMENT IS PRINTED & DOES NOT CONTAIN AN ENGINEER'S ORIGINAL SIGNATURE & SEAL, THIS DOCUMENT IS VOID & NOT VALID FOR USE. PHOTOCOPIES ARE NOT PERMITTED FOR USE.

**ENGINEERING EXPRESS**  
CORPORATE OFFICE:  
160 SW 12th AVE, SUITE 106  
DEERFIELD BEACH, FL 33442  
(954) 354-0660 | (866) 396-9999  
TEAM@ENGINEERINGEXPRESS.COM  
ENGINEERINGEXPRESS.COM

**MARCONE SUPPLY**  
8861 NW 18TH TERRACE, SUITE 110  
DORAL, FL 33172  
(877) 859-2126  
LUXAIRE CONDENSING UNIT TIEDOWN  
FLORIDA BUILDING CODE 7TH ED (2020)  
INTERNATIONAL BUILDING CODE (2018)

DATE	DRWN	CHKD	FLB	FLB
3/30/18				
2/22/21				

REMARKS:  
INIT ISSUE  
2020 FEB

THIS DOCUMENT IS THE PROPERTY OF ENGINEERING EXPRESS, AND SHALL NOT BE REPRODUCED IN WHOLE OR PART WITHOUT WRITTEN CONSENT OF ENGINEERING EXPRESS. ALTERATIONS, ADDITIONS, OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE OUR CERTIFICATION.

21-37370  
SCALE: NTS UNLESS NOTED

1 OF 2



# LUXAIRE CONDESING UNIT

## TIE-DOWN MASTER PLAN SHEET UTILIZING S1-1HK INSTALLATION KITS (ROOF AND GROUND MOUNTS)

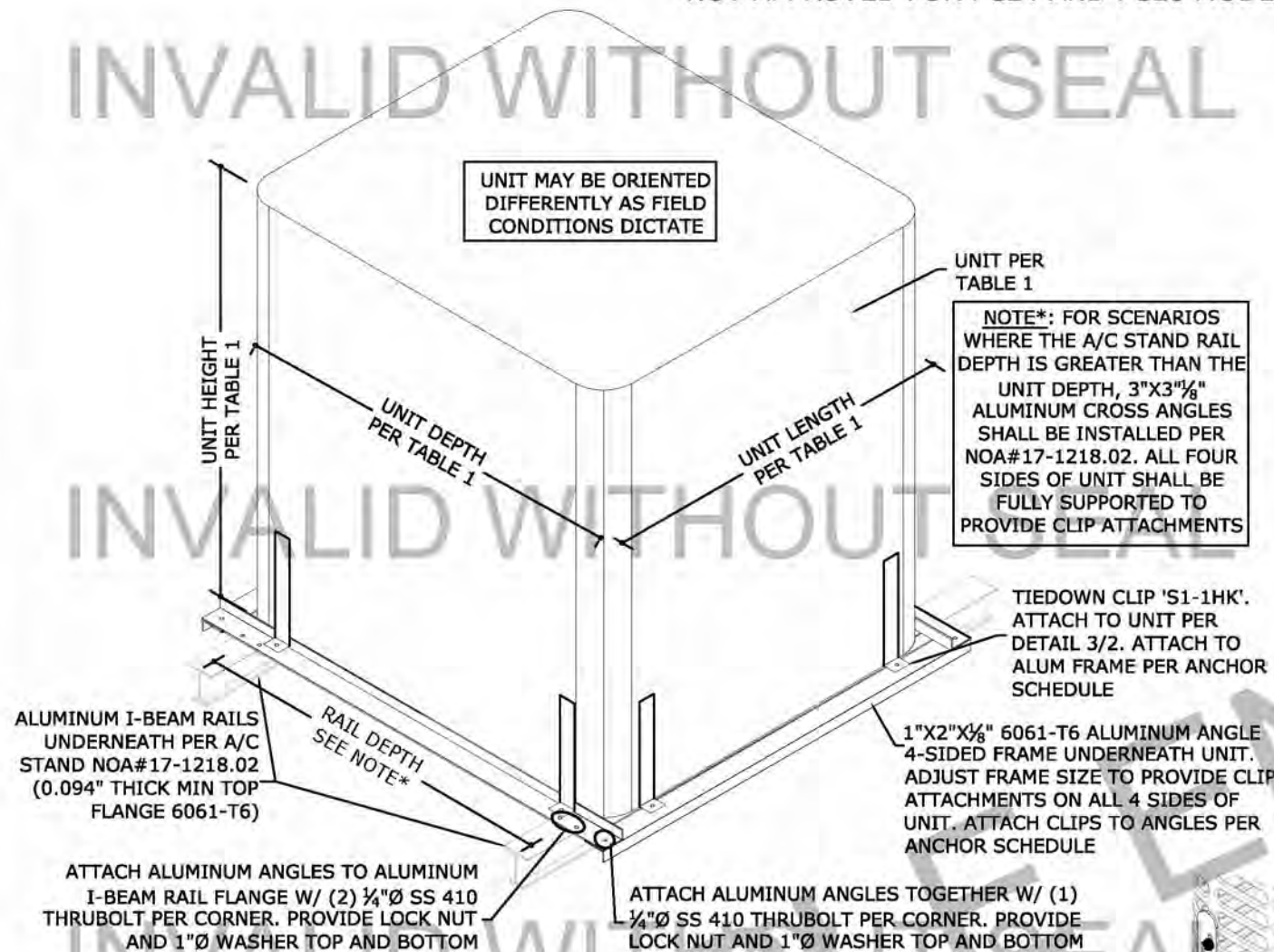
NOT APPROVED FOR PCE4 AND PCE6 MODELS

THE TIE-DOWN ROOF KITS SHOWN ON THIS SHEET ARE QUALIFIED BY TESTING THROUGH TEST REPORT #0127.01-17 BY AMERICAN TEST LAB OF SOUTH FLORIDA

COPIES NOT VALID FOR PERMIT

COPIES NOT VALID FOR PERMIT

PE SEAL REQUIRED  
02/22/2021  
CERTIFYING ENGINEER AND CERT OF AUTH AS LISTED ON STAMP  
VALID FOR 1 PERMIT ONLY U.N.O.



### UNIT BASE FRAME ATTACHMENT (ROOF INSTALL ONLY)

- 1 N.T.S.
- 2 ISOMETRIC

**NOTE\*:** FOR SCENARIOS WHERE THE A/C STAND RAIL DEPTH IS GREATER THAN THE UNIT DEPTH, 3"X3"X $\frac{1}{8}$ " ALUMINUM CROSS ANGLES SHALL BE INSTALLED PER NOA#17-1218.02. ALL FOUR SIDES OF UNIT SHALL BE FULLY SUPPORTED TO PROVIDE CLIP ATTACHMENTS

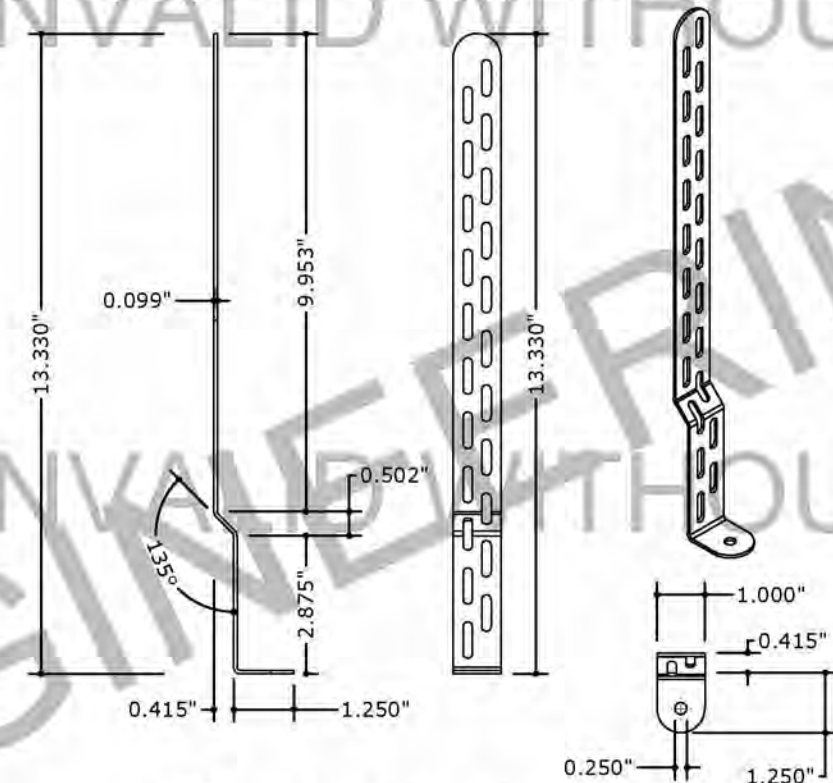
TIEDOWN CLIP 'S1-1HK'. ATTACH TO UNIT PER DETAIL 3/2. ATTACH TO ALUM FRAME PER ANCHOR SCHEDULE

1"X2"X $\frac{1}{8}$ " 6061-T6 ALUMINUM ANGLE 4-SIDED FRAME UNDERNEATH UNIT. ADJUST FRAME SIZE TO PROVIDE CLIP ATTACHMENTS ON ALL 4 SIDES OF UNIT. ATTACH CLIPS TO ANGLES PER ANCHOR SCHEDULE

ALUMINUM I-BEAM RAILS UNDERNEATH PER A/C STAND NOA#17-1218.02 (0.094" THICK MIN TOP FLANGE 6061-T6)

ATTACH ALUMINUM ANGLES TO ALUMINUM I-BEAM RAIL FLANGE W/ (2)  $\frac{1}{4}$ " $\varnothing$  SS 410 THURBOLT PER CORNER. PROVIDE LOCK NUT AND 1" $\varnothing$  WASHER TOP AND BOTTOM

ATTACH ALUMINUM ANGLES TOGETHER W/ (1)  $\frac{1}{4}$ " $\varnothing$  SS 410 THURBOLT PER CORNER. PROVIDE LOCK NUT AND 1" $\varnothing$  WASHER TOP AND BOTTOM

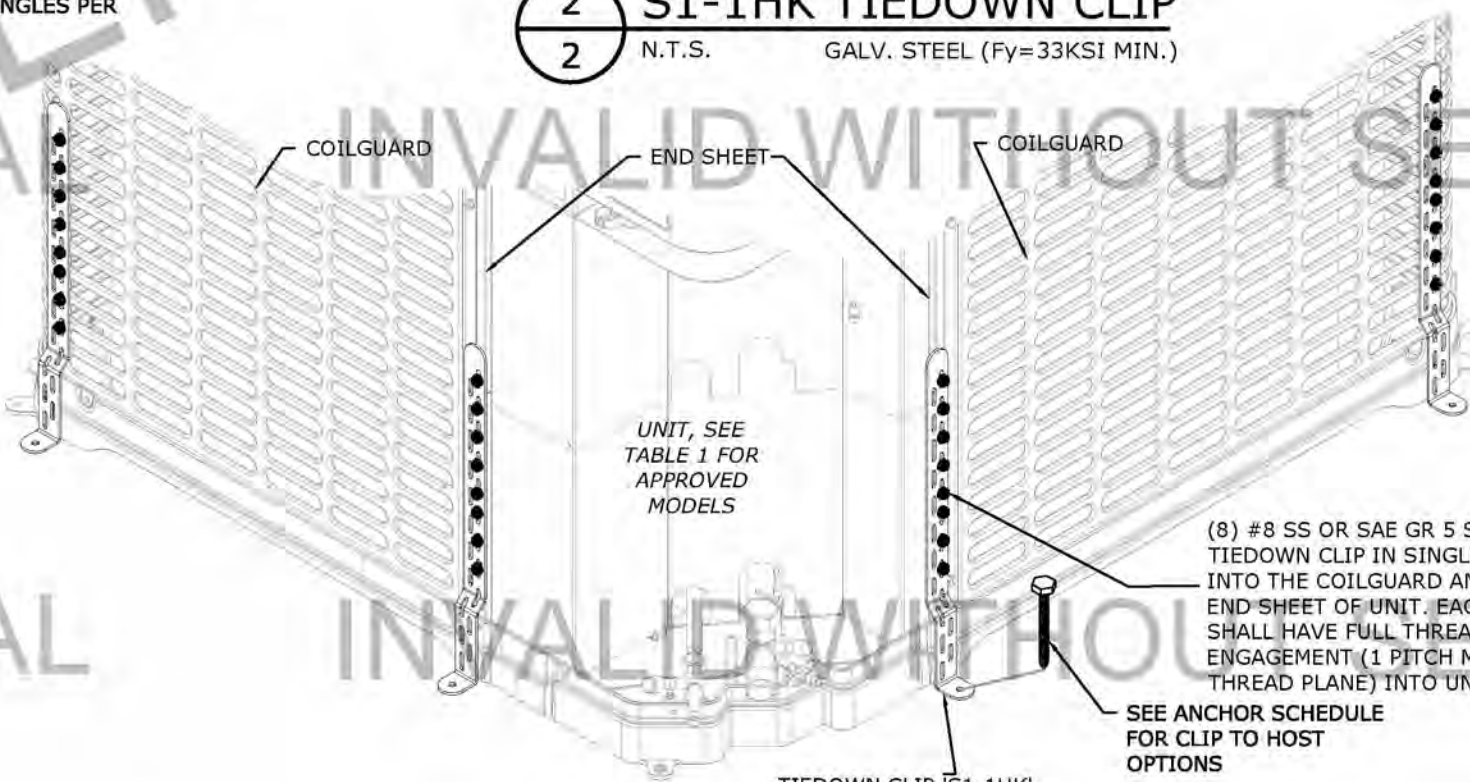


### 2 S1-1HK TIEDOWN CLIP

2 N.T.S. GALV. STEEL (Fy=33KSI MIN.)

SUBSTRATE	ANCHOR TYPE	NO. OF CLIPS REQUIRED
CONCRETE (3 KSI MIN)	1/4" DEWALT SCREW BOLT W/ 2" MIN EMBED & 3" MIN EDGE DIST OR	(4)
	1/4" ITW TAPCON W/ 1 $\frac{1}{2}$ " EMBED & 2 $\frac{1}{2}$ " MIN EDGE DIST OR	
	1/4" DEWALT ULTRACON W/ 1 $\frac{3}{4}$ " EMBED & 2 $\frac{1}{2}$ " MIN EDGE DIST	
WOOD (G=0.55 MIN)	3/8" LAG SCREW W/ 1 3/4" MIN THREAD PENETRATION & 1" MIN EDGE DIST	(4)
ALUMINUM (1/8" 6063-T6 MIN)	1/4"-20X $\frac{3}{4}$ " LONG SS HH BOLTS W/ WASHERS AND NUTS	(8)
STEEL (15 GA MIN)	1/4"-20X $\frac{3}{4}$ " LONG SS HH BOLTS W/ WASHERS AND NUTS	(8)

- WOOD AND CONCRETE SUBSTRATES NOT APPROVED FOR ROOFTOP APPLICATIONS



### 3 TIEDOWN DIRECTIVE

2 N.T.S. GALV. STEEL (Fy=33KSI MIN.)

(8) #8 SS OR SAE GR 5 SMS PER TIEDOWN CLIP IN SINGLE ROW INTO THE COILGUARD AND/OR END SHEET OF UNIT. EACH SCREW SHALL HAVE FULL THREAD ENGAGEMENT (1 PITCH MIN PAST THREAD PLANE) INTO UNIT, TYP.

SEE ANCHOR SCHEDULE FOR CLIP TO HOST OPTIONS

DIGITAL SEAL NOTICE:  
IF THIS DOCUMENT IS DIGITALLY SIGNED, THIS SHEET IS PART OF A DIGITALLY SIGNED FILE. IT SHALL REMAIN IN DIGITAL FORMAT, SHALL BE VERIFIED BY ELECTRONIC MEANS, & PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED.  
PRINTED DOCUMENT NOTICE:  
IF THIS DOCUMENT IS PRINTED & DOES NOT CONTAIN AN ENGINEER'S ORIGINAL SIGNATURE & SEAL, THIS DOCUMENT IS VOID & NOT VALID FOR USE. PHOTOCOPIES ARE NOT PERMITTED FOR USE.

**ENGINEERING EXPRESS**  
CORPORATE OFFICE:  
160 SW 12TH AVE, SUITE 106  
DEERFIELD BEACH, FL 33442  
(954) 354-0660 | (866) 396-9999  
TEAM@ENGINEERINGEXPRESS.COM  
ENGINEERINGEXPRESS.COM

**MARCONE SUPPLY**  
8861 NW 18TH TERRACE, SUITE 110  
DORAL, FL 33172  
(877) 859-2126  
CONDENSING UNIT TIEDOWN  
FLORIDA BUILDING CODE 7TH ED (2020)  
INTERNATIONAL BUILDING CODE (2018)

DRWN	CHKD	DATE
FWN	FLB	3/30/18
OCB	FLB	2/22/21

REMARKS  
INIT ISSUE  
2020 FBC

THIS DOCUMENT IS THE PROPERTY OF ENGINEERING EXPRESS, AND SHALL NOT BE REPRODUCED IN WHOLE OR PART WITHOUT WRITTEN CONSENT OF ENGINEERING EXPRESS. ALTERATIONS, ADDITIONS, OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE OUR CERTIFICATION.

21-37370

SCALE: NTS UNLESS NOTED