

12/13/2023 5:02 PM MILTON c:\users\milton\engineering\express\production - documents\projects\23-123-66573 miami tech wall bracket ac mount - heavy duty fbc 2023 update\work\drawings & cad\23-66573a miami tech wall bracket

MIAMI TECH, INC.

ALUMINUM WALL BRACKET SUPPORTS

VALID FOR USE INSIDE AND OUTSIDE THE HVHZ ZONE (SEE LIMITATIONS HEREIN)

NON-SITE-SPECIFIC STRUCTURAL PERFORMANCE EVALUATION. A DESIGN PROFESSIONAL SHALL BE RESPONSIBLE FOR CERTIFYING THE APPLICATION OF THIS INFORMATION TO ANY SITE-SPECIFIC LOCATION.

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MAXIMUM ALLOWABLE DESIGN PRESSURES (ASD):

+/- 170 PSF

DESIGN NOTES:

DESIGN PRESSURES CALCULATED FOR USE WITH THIS SYSTEM SHALL BE DETERMINED SEPARATELY ON A JOB-SPECIFIC BASIS IN ACCORDANCE WITH THE GOVERNING CODE USING ASD METHODOLOGY. SITE-SPECIFIC PRESSURE REQUIREMENTS AS DETERMINED IN ACCORDANCE WITH ASCE 7-22 AND CHAPTER 16 OF FLORIDA BUILDING CODE EIGHTH EDITION (2023) SHALL BE LESS THAN OR EQUAL TO THE LATERAL AND UPLIFT DESIGN PRESSURE CAPACITY VALUES LISTED HEREIN FOR ANY ASSEMBLY AS SHOWN.

TERMINOLOGY:

THE FOLLOWING ABBREVIATIONS MAY APPEAR IN THIS APPROVAL:

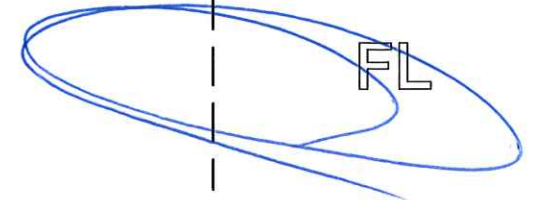
"ADDTL." FOR "ADDITIONAL", "AHJ" FOR "AUTHORITY HAVING JURISDICTION", "ALUM" FOR "ALUMINUM", "ASD" FOR "ALLOWABLE STRESS DESIGN", "BO" FOR "BUILD-OUT", "CS" FOR "CARBON STEEL", "EA." FOR "EACH", "E.D."/"EDGE"/"EDGE DIST." FOR "EDGE DISTANCE", "ELEV" FOR "ELEVATION", "EMBED" FOR "EMBEDMENT", "EQ"/"EQUIV." FOR "EQUIVALENT", "EXT" FOR "EXTERIOR", "FBC" FOR "FLORIDA BUILDING CODE", "ft" OR " ' " FOR "FEET", "G" FOR "SPECIFIC GRAVITY", "GA" FOR "GAUGE", "GALV" FOR "GALVANIZED", "GFB" FOR "GROUT-FILLED BLOCK", "GR" FOR "GRADE", "HOLLOW" FOR "HOLLOW BLOCK", "HORIZ" FOR "HORIZONTAL", "HVHZ" FOR "HIGH-VELOCITY HURRICANE ZONE", "in" OR " ' " FOR "INCHES", "INT" FOR "INTERIOR", "KSI" FOR "1,000 lb / in²", "L" FOR "LENGTH", "LB" FOR "POUND", "MAX" FOR "MAXIMUM", "MIN" FOR "MINIMUM", "N.T.S." FOR "NOT TO SCALE", "O.C." FOR "ON-CENTER", "P.E." FOR "PROFESSIONAL ENGINEER", "PERP" FOR "PERPENDICULAR", "PSF" FOR "POUNDS PER SQUARE FOOT (lb/ft²)", "PSI" FOR "POUNDS PER SQUARE INCH (lb/in²)", "QTY" FOR "QUANTITY", "REF." FOR "REFERENCE", "SCHED." FOR "SCHEDULE", "SDS" FOR "SELF-DRILLING SCREWS", "SMS" FOR "SHEET METAL SCREWS", "SPECS" FOR "SPECIFICATIONS", "SS" FOR "STAINLESS STEEL", "SUB" FOR "SUBMITTAL", "TAS" FOR "TESTING APPLICATION STANDARD", "TYP." FOR "TYPICAL", "ULT" FOR "ULTIMATE LOADS", "U.N.O." FOR "UNLESS NOTED OTHERWISE", "UTS" OR "Fu" FOR "ULTIMATE TENSILE STRENGTH/STRESS", "VERT" FOR "VERTICAL", "WLL" FOR "WORKING LOAD LIMIT", "W/" FOR "WITH", "W/O" FOR "WITHOUT", "YS" FOR "YIELD STRENGTH", "#" FOR "NUMBER", "&" FOR "AND", AND "Ø" FOR "DIAMETER".

CONTACT ENGINEERING EXPRESS FOR ADDITIONAL ABBREVIATION/TERMINOLOGY CLARIFICATIONS.

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Frank Bennardo PE
FL PE0046549 COA #9885

DECEMBER 13, 2023



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GENERAL NOTES:

- THIS SYSTEM HAS BEEN DESIGNED AND SHALL BE FABRICATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE 8TH EDITION (2023). ALSO APPLICABLE FOR THE IBC/IRC (2021). DESIGN SHALL UTILIZE ASD DESIGN METHOD USING ASCE 7-22 CODES FOR SITE SPECIFIC APPLICATIONS AS APPLICABLE.
- APPLICABLE FOR USE WITHIN AND OUTSIDE THE HVHZ. DESIGN CRITERIA BEYOND AS STATED HEREIN MAY REQUIRE ADDITIONAL SITE-SPECIFIC SEALED ENGINEERING.
- THE ARCHITECT/ENGINEER OF RECORD FOR THE PROJECT SUPERSTRUCTURE WITH WHICH THIS DESIGN IS USED SHALL BE RESPONSIBLE FOR THE INTEGRITY OF ALL SUPPORTING SURFACES TO THIS DESIGN WHICH SHALL BE COORDINATED BY THE PERMITTING CONTRACTOR.
- MAXIMUM DIMENSIONS AND WEIGHT OF A/C UNIT SHALL CONFORM TO SPECIFICATIONS STATED HEREIN.
- SEPARATE 'SITE-SPECIFIC' SEALED ENGINEERING SHALL BE REQUIRED IN ORDER TO DEVIATE FROM LOADS, OR MAXIMUM MEMBER SPANS CONTAINED HEREIN.
- 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.
- ALL FASTENERS TO BE 3/8"Ø OR GREATER SAE GR 5 UNLESS NOTED OTHERWISE. FASTENERS SHALL BE CADMIUM-PLATED OR OTHERWISE CORROSION-RESISTANT MATERIAL AND SHALL COMPLY WITH "SPECIFICATIONS FOR ALUMINUM STRUCTURES" & ANY APPLICABLE FEDERAL, STATE, AND/OR LOCAL CODES.
- ALL ALUMINUM EXTRUSIONS/ MEMBERS SHALL BE 6061-T6 OR 6005-T5 ALUMINUM ALLOY, UNLESS NOTED OTHERWISE.

GENERAL NOTES (CONTINUED):

- ALUMINUM WELDING SHALL BE PERFORMED IN ACCORDANCE WITH FBC SECTION 2003.8.1.4 WITH WELD FILLER ALLOYS MEETING ANSI/AWS A5.10 STANDARDS TO ACHIEVE ULTIMATE DESIGN STRENGTH IN ACCORDANCE WITH THE ALUMINUM DESIGN MANUAL, TABLE A.3.6, ALL ALUMINUM CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE TOLERANCES, QUALITY AND METHODS OF CONSTRUCTION AS SET FORTH IN FBC SECTION 2003.2. MINIMUM WELD IS 3/16" THROAT FULL PERIMETER FILLET WELD UNLESS OTHERWISE NOTED.
- CONCRETE ANCHORS NOTED HEREIN SHALL BE EMBEDDED TO UN-CRACKED CONCRETE ONLY. INSTALL ALL CONCRETE ANCHORS PER MANUFACTURER'S RECOMMENDATIONS.
- THE CONTRACTOR IS RESPONSIBLE TO INSULATE ALL MEMBERS FROM DISSIMILAR MATERIALS TO PREVENT ELECTROLYSIS.
- ELECTRICAL GROUND, WHEN REQUIRED, TO BE DESIGNED & INSTALLED BY OTHERS. ALL MECHANICAL SPECIFICATIONS (CLEAR SPACE, TONNAGE, ETC) SHALL BE AS PER MANUFACTURER RECOMMENDATIONS AND ARE THE EXPRESS RESPONSIBILITY OF THE CONTRACTOR.
- ENGINEER SEAL AFFIXED HERE TO VALIDATES STRUCTURAL DESIGN AS SHOWN ONLY. USE OF THIS SPECIFICATION BY CONTRACTOR, et. al. INDEMNIFIES & SAVES HARMLESS THIS ENGINEER FOR ALL COST & DAMAGES INCLUDING LEGAL FEES & APPELLATE FEES RESULTING FROM MATERIAL FABRICATION, SYSTEM ERECTION, & CONSTRUCTION PRACTICES BEYOND THAT WHICH IS CALLED FOR BY LOCAL, STATE, & FEDERAL CODES & FROM DEVIATIONS OF THIS PLAN.
- EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED.
- ALTERATIONS, ADDITIONS OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE THIS CERTIFICATION.

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1	COVER SHEET
2	WALL BRACKETS SPECIFICATIONS

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ALUMINUM WALL STAND FOR A/C EQUIPMENT
WASTE PLAN SHEET
FBC 8TH ED (2023) | IBC (2021)

REMARKS	DRWN	CHKD	DATE
PREV. VERSION (20-26643)	COB	FLB	11/19/21
2023 FBC UPDATE	MRT	RVN	12/13/23

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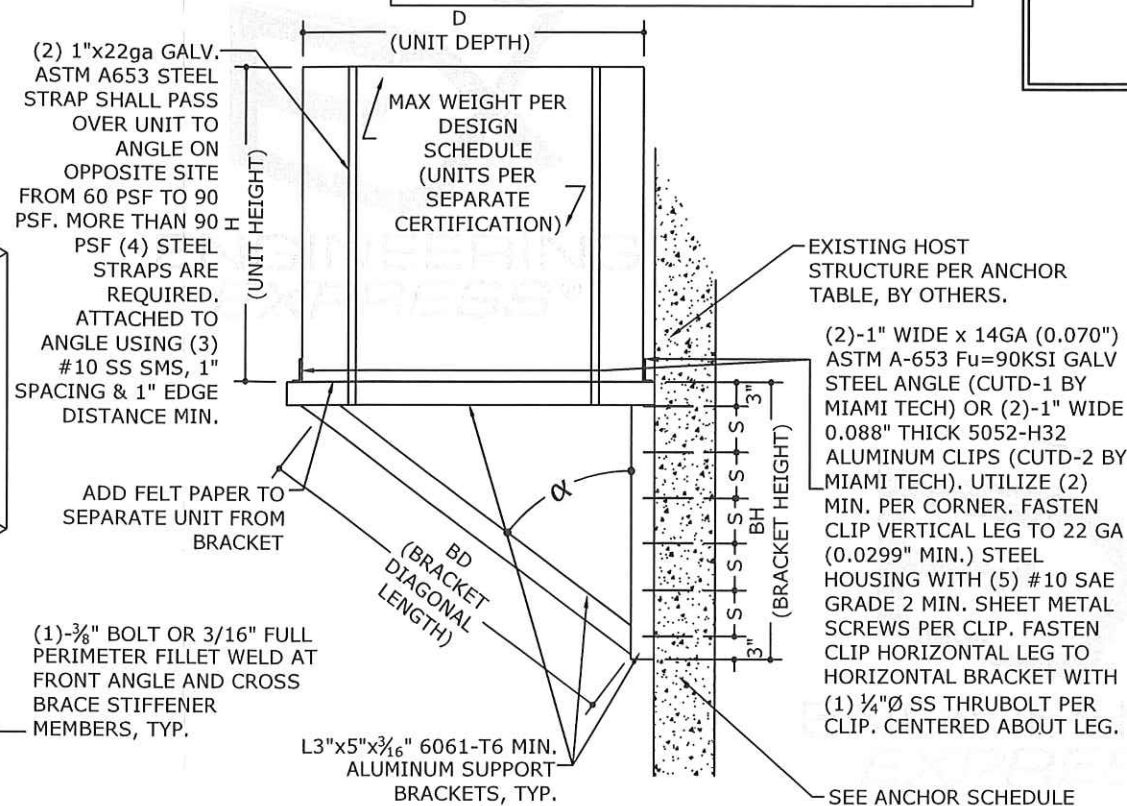
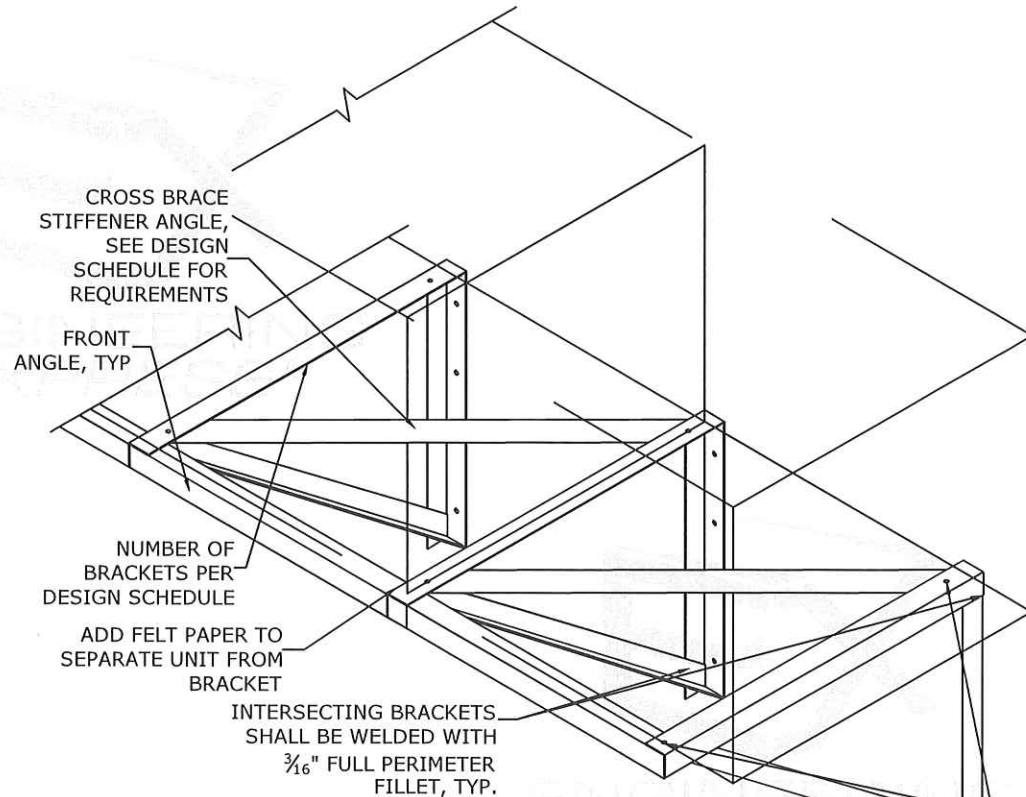
ALUMINUM WALL BRACKET SPECIFICATIONS

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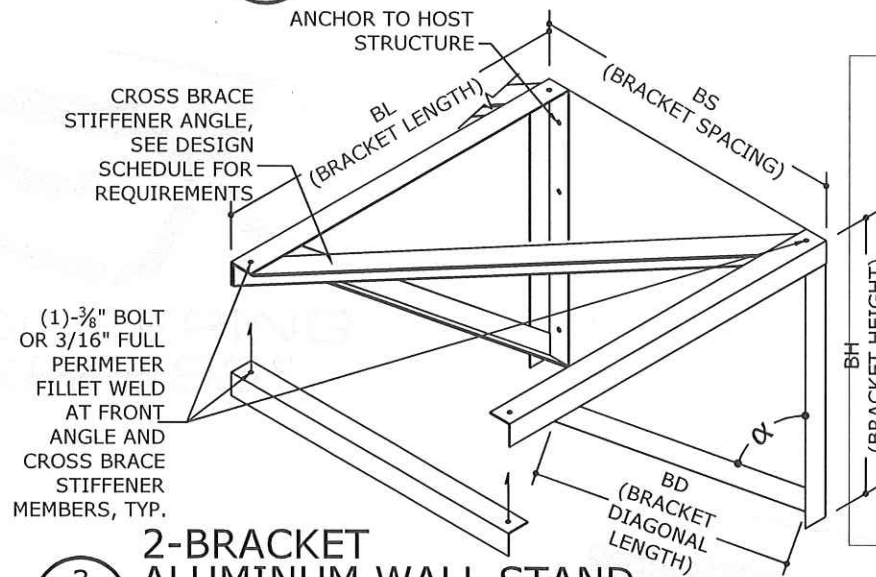
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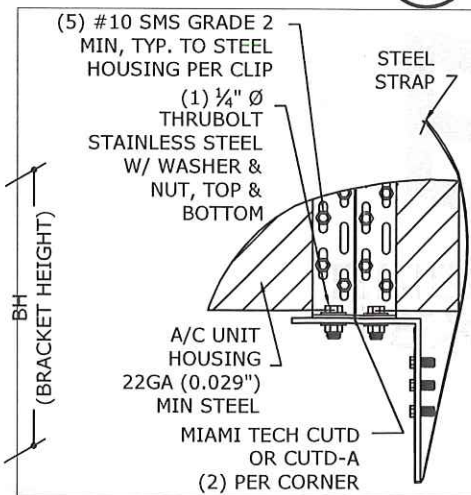
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1 MULTI-BRACKET ALUMINUM WALL STAND
N.T.S. ISOMETRIC VIEW

2 ALUMINUM WALL STAND
N.T.S. SECTION VIEW



3 2-BRACKET ALUMINUM WALL STAND
N.T.S. ISOMETRIC VIEW



4 STRAP DETAIL
N.T.S. SECTION VIEW

ANCHOR SCHEDULE:

SUBSTRATE	ANCHOR
CONCRETE: (5/4" THICK MIN, 3000 PSI MIN.)	3/8" Ø DEWALT SCREW-BOLT+ WITH STD SAE WASHER, 3/2" FULL EMBED TO NON-CRACKED CONCRETE, 4.5" MIN. EDGE DISTANCE, SPACING AS ILLUSTRATED IN ELEVATION/SECTION.
GROUT FILLED CMU: (SHALL CONFORM TO ASTM C90)	3/8" Ø DEWALT SCREW-BOLT+ WITH STD SAE WASHER, 3/2" FULL EMBED TO GROUT FILLED BLOCK, 12" MIN. EDGE DISTANCE, SPACING AS ILLUSTRATED IN ELEVATION/SECTION.
WOOD: (G=0.55 MIN.) SEE NOTE 5	1/2" Ø CARBON STEEL WOOD LAG SCREW W/ 1/2" Ø SAE WASHER, 2" MIN. THREAD PENETRATION TO WOOD HOST, 3/4" MIN. EDGE DISTANCE, SPACING AS ILLUSTRATED IN SECTION.

1. EMBEDMENT AND EDGE DISTANCE EXCLUDES FINISHES, IF APPLICABLE.
2. ENSURE MINIMUM EDGE DISTANCE AS NOTED IN ANCHOR SCHEDULE.
3. INSTALL ALL ANCHORS PER MANUFACTURER'S SPECIFICATIONS.
4. PRE-DRILL WOOD LAGS TO AVOID SPLITTING OF WOOD MEMBERS.
5. FOR DESIGN PRESSURES **MORE THAN 90 PSF** A SITE SPECIFIC ATTACHMENT **IS REQUIRED** FOR WOOD SUBSTRATES.

DESIGN SCHEDULE:

CONFIGURATION TYPE	BRACKET DIMENSIONS					MAX UNIT DIMENSIONS		ANCHORS		MAXIMUM TOTAL UNIT WEIGHT				UTILIZE STIFFENERS FOR INSTALLATIONS WITH THE FOLLOWING NUMBER OF BRACKETS
	BL	BS	BH	BD	α	D	H	QTY. PER BRACKET LEG	S	(NUMBER OF BRACKETS)				
										(2)	(3)	(4)	(5)	
AWB143036-WLR24	30"	24"	36"	±47"	±40°	30"	30"	(6)	6"	550 LB	1100 LB	1650 LB	2200 LB	2 BRACKETS ONLY
AWB143636-WLR30	36"	30"	36"	±50"	±45°	36"	38"	(6)	6"	550 LB	1100 LB	1650 LB	2200 LB	2 BRACKETS ONLY
AWB144836-WLR36	48"	36"	36"	±60"	±53°	45"	45"	(6)	6"	550 LB	1100 LB	1650 LB	2200 LB	2 & 3 BRACKETS

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