

PRODUCT APPROVAL FOR ALUMINUM STANDS FOR ROOF TOP EQUIPMENT

- 1- THIS EQUIPMENT UNIT STAND SYSTEM SHOWN ON THIS PRODUCT EVALUATION DOCUMENT (P.E.D) HAS BEEN VERIFIED FOR CODE COMPLIANCE IN ACCORDANCE WITH THE 2023 (8th EDITION) OF THE FLORIDA BUILDING CODE, FOR USE WITHIN THE HIGH VELOCITY HURRICANE ZONE (HVHZ) AND OUT OF IT. 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, IN ACCORDANCE WITH ASCE 7-22 AND SECTIONS 1616.1, 1620.1, 1620.6 & 1609 OF THE FLORIDA BUILDING CODE, AND SHALL BE LESS THAN OR EQUAL TO THE LATERAL AND UPLIFT DESIGN PRESSURE CAPACITY VALUES LISTED HEREIN FOR ANY ASSEMBLY AS SHOWN.
- 2- THE ARCHITECT/ENGINEER OF RECORD FOR THE EXISTING STRUCTURE THAT WILL SUPPORT THESE ALUMINUM STANDS SHALL BE RESPONSIBLE FOR ITS INTEGRITY AND SHALL VERIFY THE ADEQUACY OF THE EXISTING STRUCTURE TO WITHSTAND THE SUPERIMPOSED LOADS (ASD) - REF "REACTION SCHEDULE" INDICATED ON SHEET 5, WHERE REACTION FORCES ARE LISTED FOR USE WITH EXISTING STRUCTURE. DESIGN PROFESSIONAL OF RECORD SHALL VERIFY APPLICABILITY AND/OR ADDITIONAL FACTORS FOR USE WITH EXISTING STRUCTURE VERIFICATION.
- 3- STAND SHALL BE INSTALLED WITH MINIMUM CLEAR HEIGHT AS SPECIFIED IN THE ABOVE-NOTED BUILDING CODE. "STAND HEIGHT" AS USED HEREIN IS NOT NECESSARILY EQUIVALENT TO "STAND CLEAR HEIGHT" AS SPECIFIED IN THE BLDG CODE. STANDS SHALL BE INSTALLED WITH A MINIMUM CLEAR HEIGHT IN ACCORDANCE WITH SECTIONS 1522 & 1510 TABLES 1522.3 & 1510.10 OF THE FLORIDA BUILDING CODE, APPLICABLE TO HIGH VELOCITY HURRICANE ZONE & ZONES OUT OF IT, RESPECTIVELY.
- 4- VIBRATION ISOLATOR PADS SHALL BE PROVIDED BY OTHERS BETWEEN UNITS & STAND.
- 5- IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT FASTENING AS SHOWN HEREIN WILL NOT VOID THE EQUIPMENT MANUFACTURER'S WARRANTY, ESPECIALLY WHERE UNITS ARE INSTALLED WITH OVERHANG PAST RAIL (SEE TIE-DOWN DETAILS). STRUCTURAL ADEQUACY OF EQUIPMENT FOR WIND RESISTANCE IS NOT PART OF THIS APPROVAL AND MUST BE VERIFIED SEPARATELY.
- 6- 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.
- 7- MAXIMUM DIMENSIONS AND WEIGHT OF MECHANICAL UNITS SHALL CONFORM TO SPECIFICATIONS STATED HEREIN, SEE SHEETS 5 AND 7 THRU 10 FOR LIMITATIONS.
- 8- ALL SCREWS & BOLTS SHALL BE AS SPECIFIED ON THIS DRAWING, AND SHALL COMPLY WITH SECTION 2411.3.3.4 OF THE FLORIDA BUILDING CODE.
- 9- ALL ALUMINUM EXTRUSIONS SHALL BE 6061-T6 ALLOY & TEMPER, UNLESS NOTED OTHERWISE. WELDING SHALL BE PERFORMED IN ACCORDANCE WITH AWS D 1.2 REQUIREMENTS, USING 5356 FILLER ALLOYS.
- 10- ALL EXISTING CONCRETE SUBSTRATE SHALL HAVE MINIMUM f_c COMPRESSIVE STRENGTH OF 3000 PSI AS VERIFIED BY OTHERS.
- 11- ALL ALUMINUM EXTRUSIONS IN CONTACT WITH DISSIMILAR MATERIALS SHALL COMPLY WITH SECTION III-6 OF THE 2020 ALUMINUM DESIGN MANUAL.
- 12- ENGINEER SEAL AFFIXED HERETO VALIDATE 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 ON THIS DOCUMENT.
- 13- 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 WAY OCCUR AS WATER-TIGHTNESS SHALL BE THE FULL RESPONSIBILITY OF THE INSTALLING CONTRACTOR.

THIS DRAWING SHALL ONLY BE USED TO OBTAIN PERMITS IN THE STATE OF FLORIDA

- 14- (a) THIS P.E.D. (PRODUCT EVALUATION DOCUMENT) PREPARED BY THIS ENGINEER IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT; i.e. WHERE THE SITE CONDITIONS DEVIATE FROM THE P.E.D.
 - (b) CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION INCLUDING LIFE SAFETY OF THIS PRODUCT, BASED ON THIS P.E.D., PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT. CONSTRUCTION SAFETY AT SITE IS THE CONTRACTOR'S RESPONSIBILITY.
 - (c) THIS P.E.D. WILL BE CONSIDERED INVALID IF ALTERED BY ANY MEANS.
 - (d) SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT WHICH WILL BECOME THE ENGINEER OF RECORD (E.O.R.) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE P.E.D.
 - (e) ORIGINAL P.E.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.
- 15- PRODUCT MANUFACTURER'S LABEL SHALL BE PLACED ON AN EXPOSED SURFACE OF STAND, AND SHALL COMPLY WITH SECTION 1703.5 OF THE FLORIDA BUILDING CODE.

SHEET #	INDEX DESCRIPTION
1	GENERAL NOTES AND INDEX
2	BILL OF MATERIALS AND COMPONENTS: STANDARD & HEAVY SYSTEMS
3	ASSEMBLY DETAILS FOR STANDS: STANDARD & HEAVY SYSTEMS
4	STAND ASSEMBLY DETAILS (CONTINUED): STANDARD & HEAVY SYSTEMS
5	SCHEDULE NOTES/ANCHOR SCHEDULE/REACTION SCHEDULE: STANDARD & HEAVY SYSTEMS
6	EQUIPMENT UNIT TIE DOWN TO RAILS STANDS: STANDARD & HEAVY SYSTEMS
7	SCHEDULE FOR MAX. PRESSURE: STANDARD SYSTEM W/ 5"x5" BASE PLATE
8	SCHEDULE FOR MAX. PRESSURE RATING: STANDARD SYSTEM W/ 6"x6" BASE PLATE
9	SCHEDULE FOR MAX. PRESSURE: HEAVY SYSTEM W/ 5"x5" BASE PLATE
10	SCHEDULE FOR MAX. PRESSURE: HEAVY SYSTEM W/ 6"x6" BASE PLATE

FLORIDA BUILDING CODE (High & Non Velocity Hurricane Zone)

DRAWN BY: W.H. DATE: 01/22/2024

ALUMINUM STANDS FOR ROOF TOP EQUIPMENT

24-010 DRAWING NO

SHEET 1 OF 10

F&L ALUMINUM PARTS, INC.
2087 N. POWERLINE RD. SUITE #1
POMPAHO BEACH, FL 33069

REV. NO.	DATE	DESCRIPTION
1	-	-
2	-	-

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TILTECO INC.

TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166
Phone: (305)971-1530 Fax: (305)971-1531
e-mail: tilteco@aol.com

WALTER A. TILLIT JR. P.E.
FLORIDA LIC. # 44167

P.E. SEAL/SIGNATURE/DATE

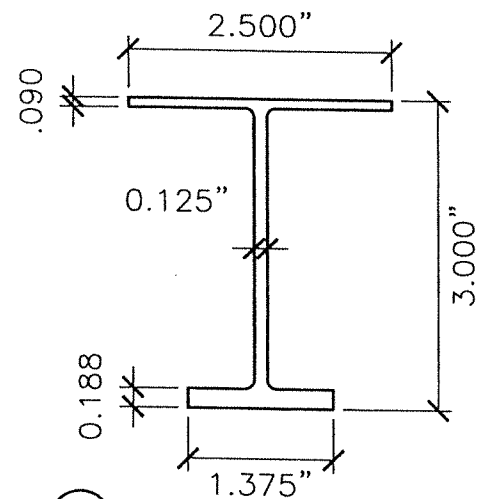
No. 44167

WALTER A. TILLIT JR. LICENSE

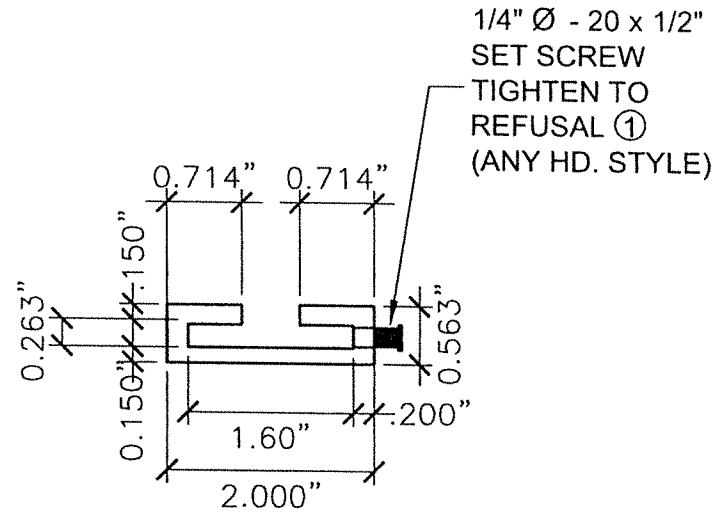
STATE OF FLORIDA PROFESSIONAL ENGINEER

BILL OF MATERIALS:

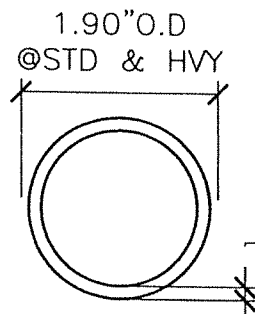
COMPONENT No.	DESCRIPTION	DIMENSIONS	MATERIAL	MANUFACTURER	NOTES
①	RAIL (I-BEAM)	2.50" X 1.375" X 3"	6061-T6 ALLOY	-	SUPPORT FOR ROOF TOP EQUIPMENT FIT AND ADJUSTED INTO ③
②A	LARGE STRUT TUBING	1.75" X 1.75" X 0.093" @STD	6061-T6 ALLOY	-	WIND BRACING COMPONENT WELDED TO ④ & BOLTED TO ②B
		2.00" X 2.00" X 0.093" @HVY			
②B	SMALL STRUT TUBING	1.50" X 1.50" X 0.125" @STD	6061-T6 ALLOY	-	WIND BRACING COMPONENT WELDED TO ④ & BOLTED TO ②A
		1.75" X 1.75" X 0.125" @HVY			
③	TOP CHANNEL	2.00" X 0.563" X 2 1/2" L	6061-T6 ALLOY	-	WELDED TO TOP OF ④ TO RECEIVE ①
④	POST	1.90" O.D X 0.145" @STD	6061-T6 ALLOY	-	WELDED TO ⑤, ②A, ②B & ③
		1.90" O.D X 0.200" @HVY			
⑤	BASE PLATE	5" X 5" X 1/4" OR 6" X 6" X 1/4"	6061-T6 ALLOY	-	WELDED TO ④ & ANCHORED TO EXISTING STRUCTURE (SEE SHEET 5 FOR SPECS.)



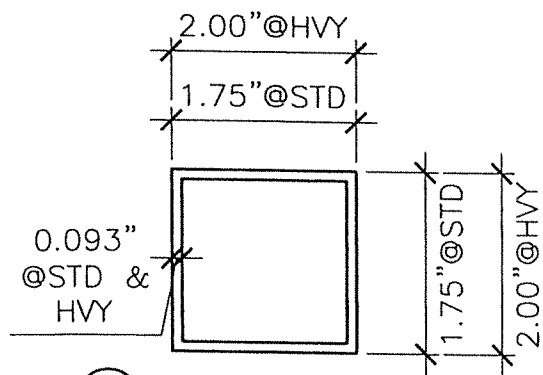
① **RAIL (I-BEAM)**



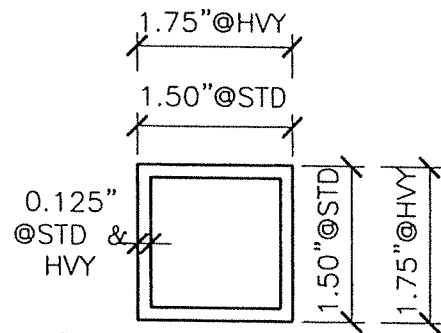
③ **TOP CHANNEL (2.50" LONG)**



④ **POSTS**

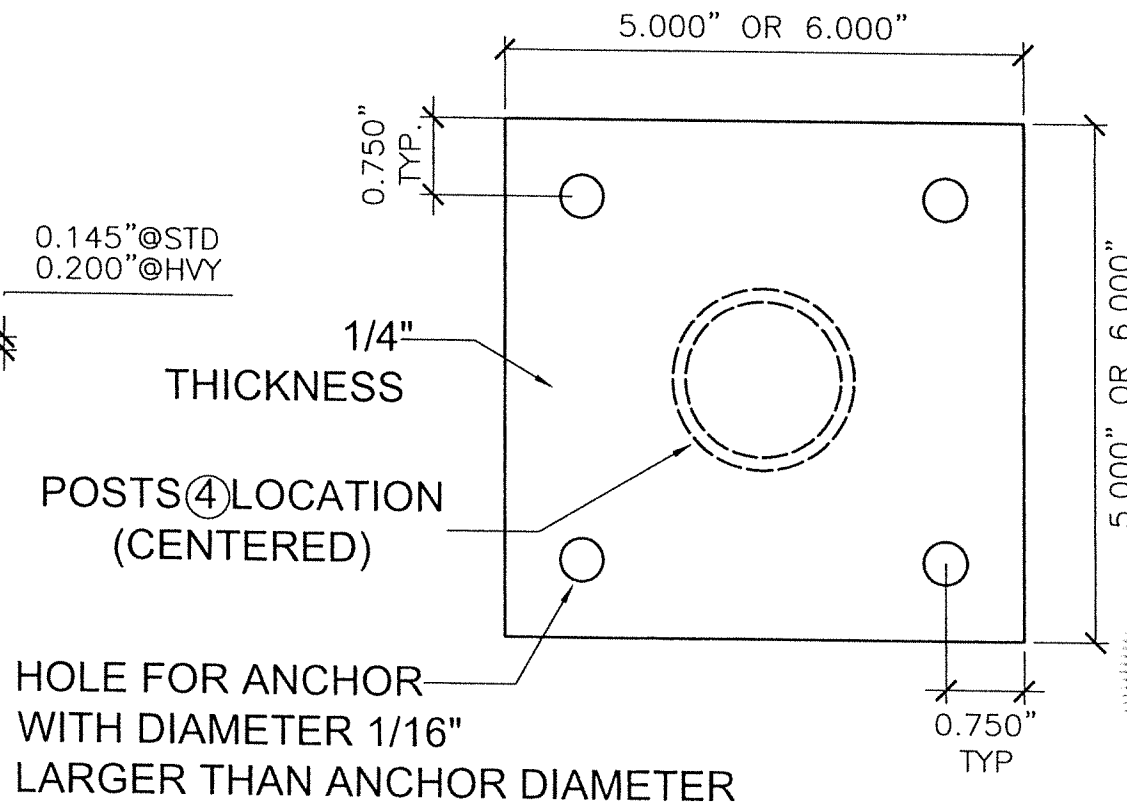


②A **LARGE STRUT TUBING**



②B **SMALL STRUT TUBING**

COMPONENTS
ESC: N.T.S.



⑤ **BASE PLATE: VALID FOR STD & HVY SYSTEMS**

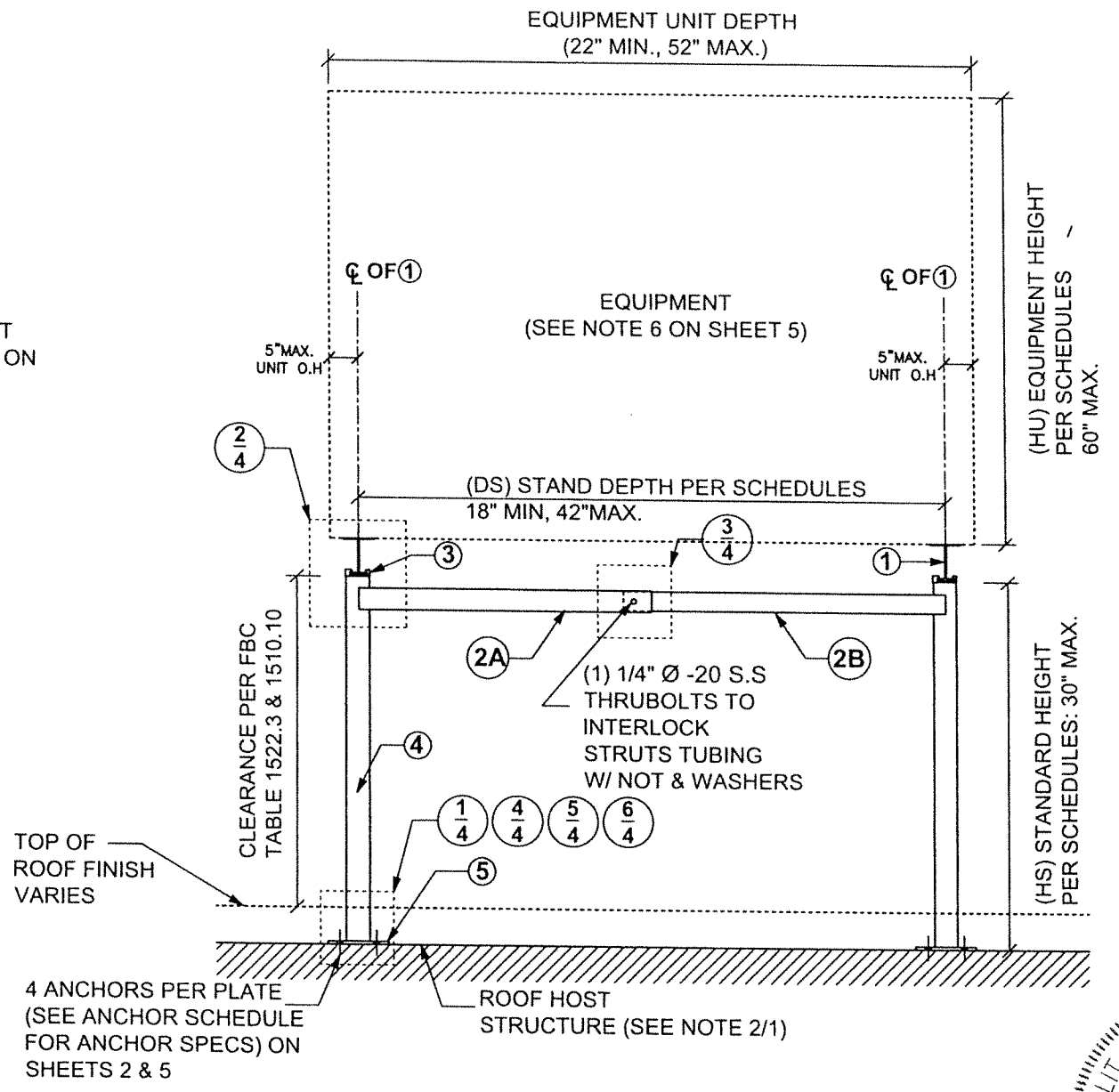
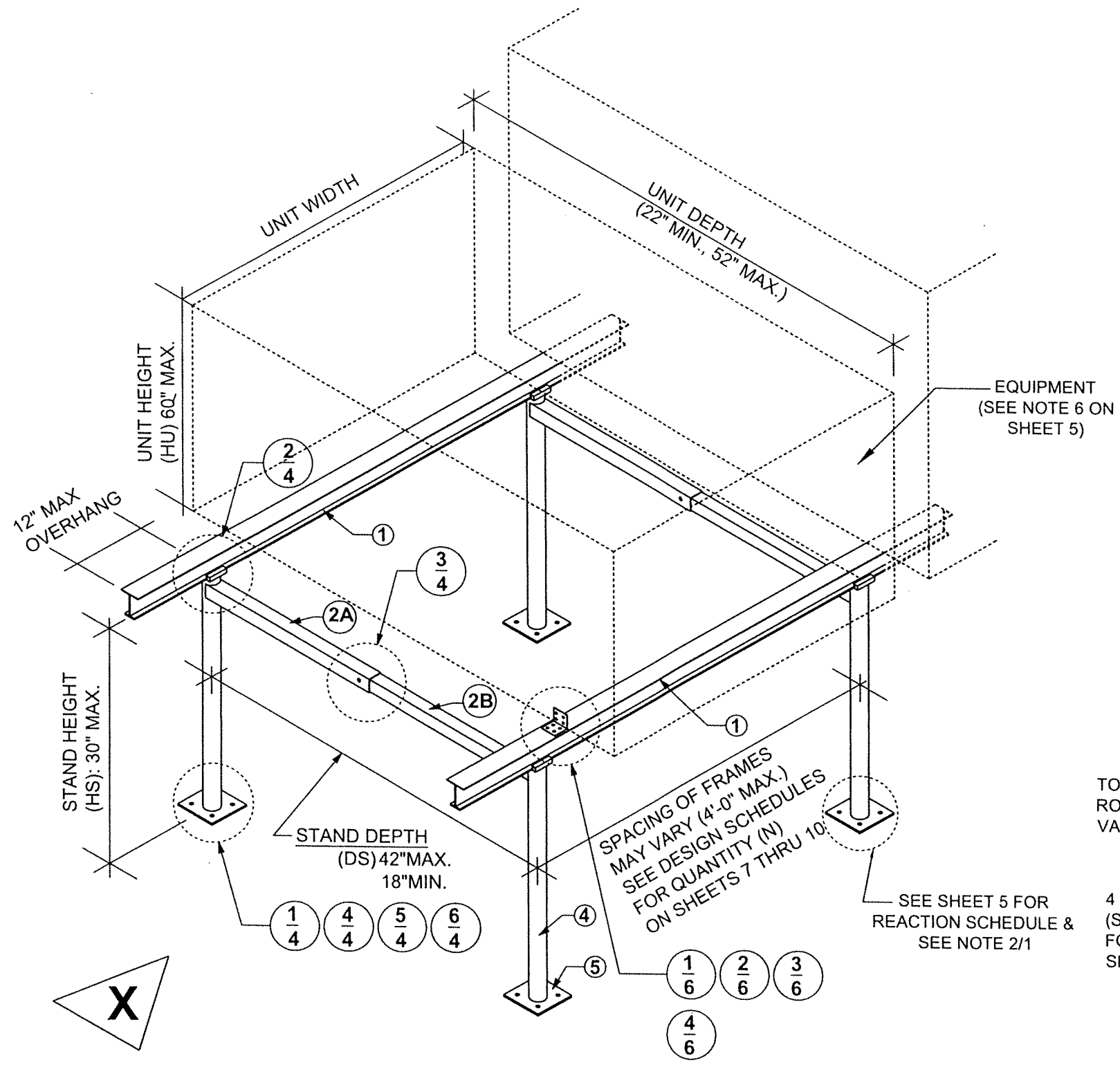
FLORIDA BUILDING CODE (High & Non Velocity Hurricane Zone)
 ALUMINUM STANDS FOR ROOF TOP EQUIPMENT
F&L ALUMINUM PARTS, INC.
 2087 N. POWERLINE RD. SUITE #1
 POMPANO BEACH, FL. 33069

DRAWN BY: W.H.
 DATE: 01/22/2024
 DRAWING No: **24-010**
 SHEET 2 OF 10

REV. No.	DATE	REV. No.	DESCRIPTION
1		3	
2		4	

TILECO INC.
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 TILLIT TESTING & ENGINEERING COMPANY
 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL. 33166
 Phone: (305)871-1330 Fax: (305)871-1531
 e-mail: tileco@tillit.com
 CA-0005719
 WALTER A. TILLIT JR., P.E.
 FLORIDA Lic. # 44167

No. 44167
 STATE OF FLORIDA
 WALTER A. TILLIT JR.
 LICENSE
 PROFESSIONAL ENGINEER
 P.E. SEAL/SIGNATURE/DATE



ASSEMBLY FOR STANDS (STANDARD & HEAVY SYSTEMS)

SCALE: N.T.S

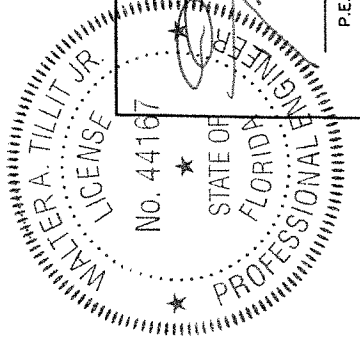
ELEVATION X

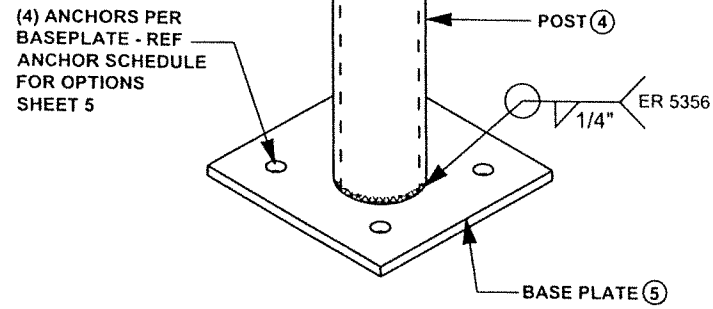
SCALE: 1/16" = 0'-1"

FLORIDA BUILDING CODE (High & Non Velocity Hurricane Zone)	
ALUMINUM STANDS FOR ROOF TOP EQUIPMENT	DATE
F&L ALUMINUM PARTS, INC. 2087 N. POWERLINE RD. SUITE #1 POMPANO BEACH, FL 33069	24-010
DRAWING NO	DATE
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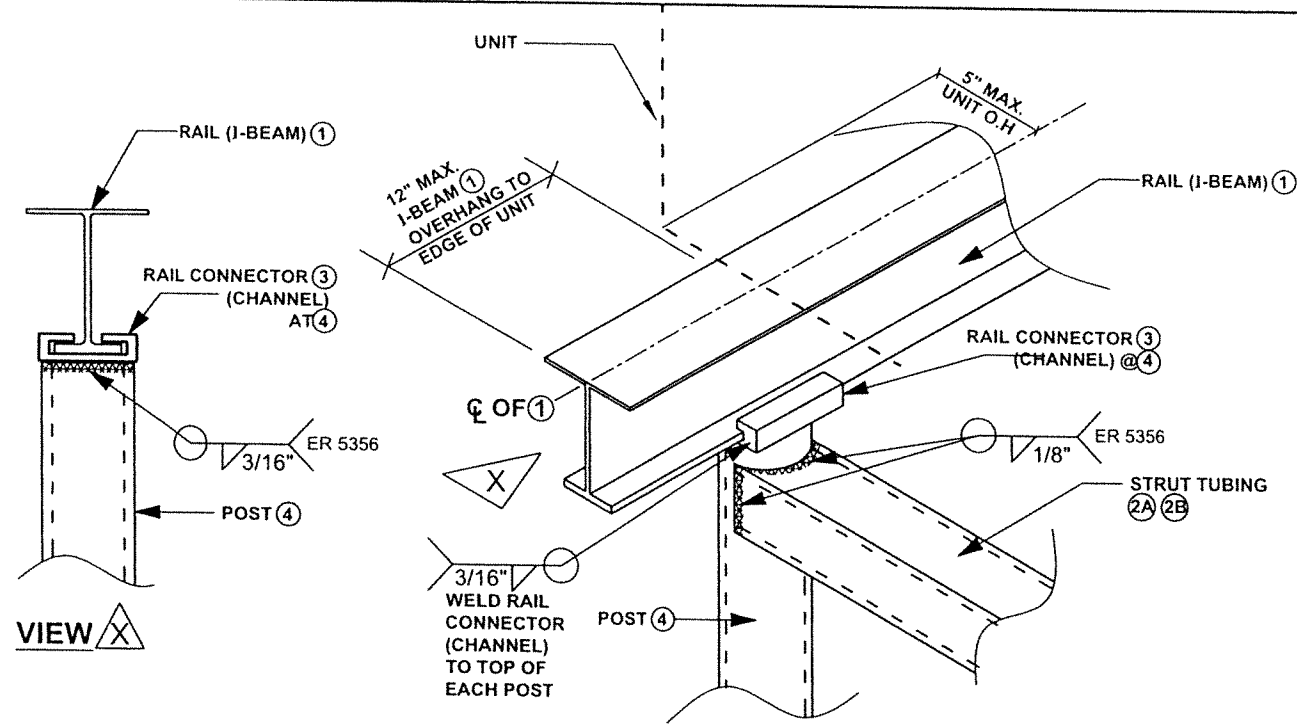
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TILTECO INC.
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 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166
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 CA-0006719
 WALTER A. TILLIT JR., P.E.
 FLORIDA Lic. # 44167

[Handwritten Signature]
 P.E. SEAL/SIGNATURE/DATE

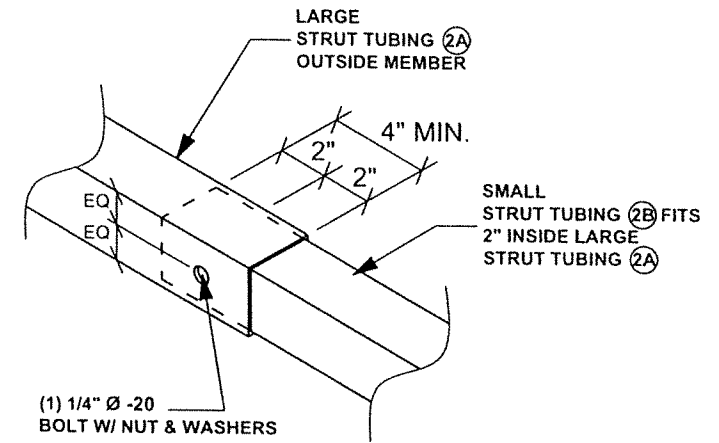




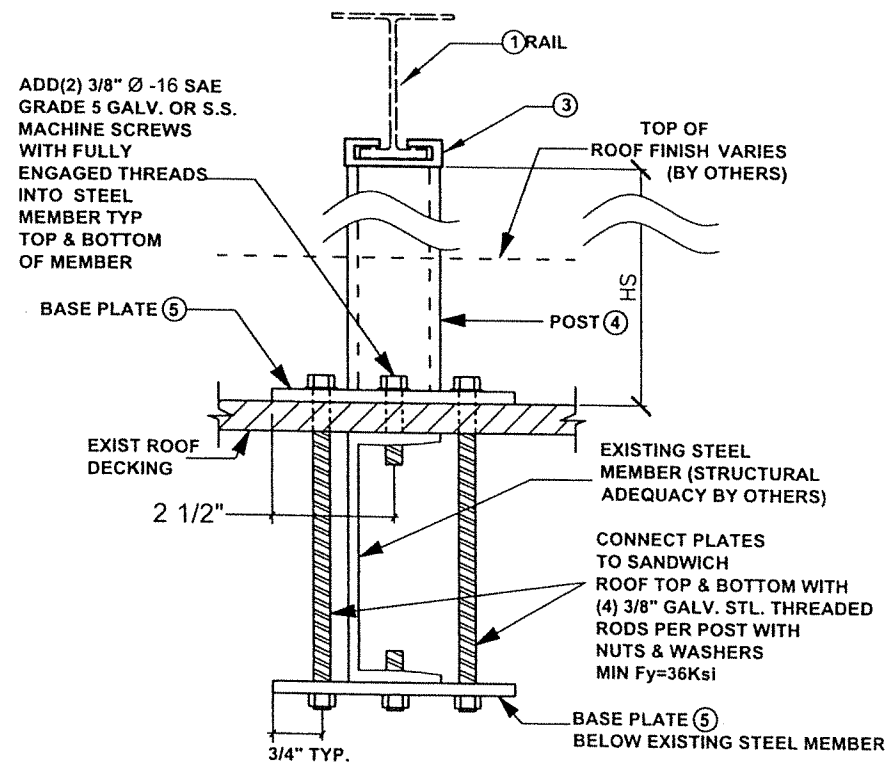
**1 POST & BASEPLATE:
STANDARD & HEAVY SYSTEMS**
SCALE: N.T.S



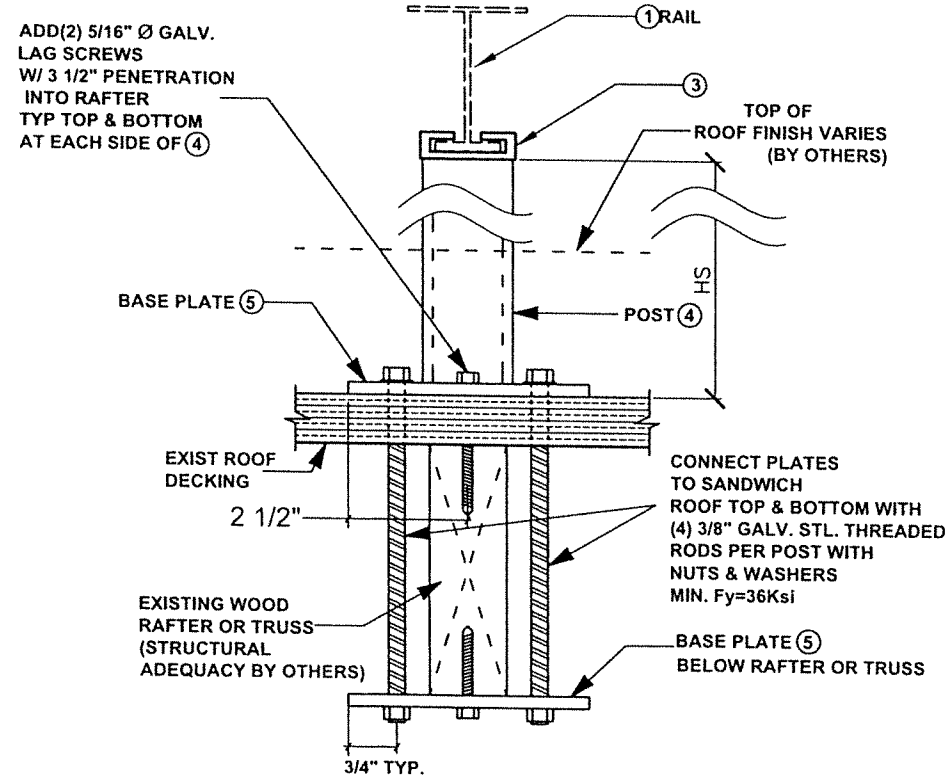
**2 POST, STRUT TUBING & TOP CHANNEL CONNECTION:
STANDARD & HEAVY SYSTEMS**
SCALE: N.T.S



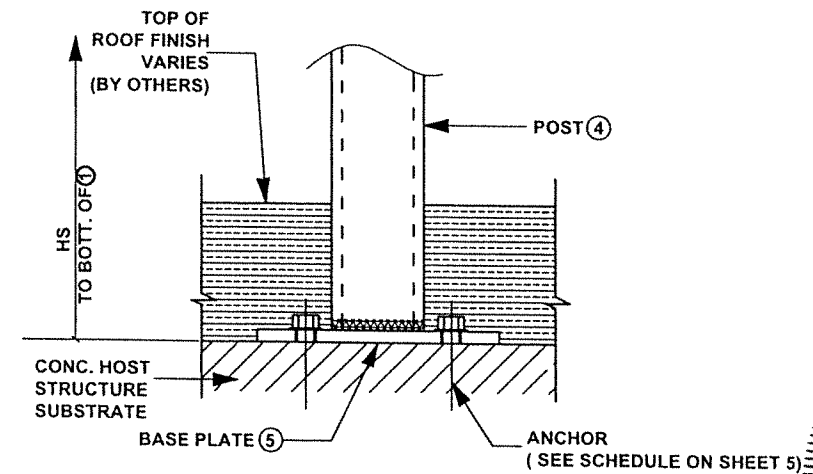
**3 STRUT SPLICE:
STANDARD & HEAVY SYSTEMS**
SCALE: N.T.S



**4 BASE PLATE ATTACHMENT TO EXISTING
STEEL TRUSS OR STEEL BEAM ROOF**
SCALE: N.T.S



**5 BASE PLATE ATTACHMENT TO EXISTING
WOOD TRUSS OR WOOD RAFTER ROOF**
SCALE: N.T.S



**6 BASE PLATE ATTACHMENT TO
EXIST CONCRETE STRUCTURAL SLAB**
SCALE: N.T.S

**TYPICAL ASSEMBLY AND POST ATTACHMENT DETAILS FOR STANDS
AT STANDARD & HEAVY SYSTEMS**

FLORIDA BUILDING CODE (High & Non Velocity Hurricane Zone)		DRAWN BY: W.H.	DATE 01/22/2024
ALUMINUM STANDS FOR ROOF TOP EQUIPMENT		REV. No	DESCRIPTION
F&L ALUMINUM PARTS, INC. 2087 N. POWERLINE RD. SUITE #1 POMPANO BEACH, FL 33069		1	
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NOTES APPLICABLE TO SCHEDULES ON SHEETS 7 THRU 10

- SCHEDULES ON SHEETS 7 THRU 10 PROVIDE MAXIMUM A.S.D LATERAL & UPLIFT WIND LOADS FOR EACH COMBINATION OF TOTAL UNIT FRONTAL AREA (AF), STAND DEPTH (DS), EQUIPMENT HEIGHT(HU), STAND HEIGHT (HS) AND NUMBER OF POST FRAMES (N) PER STAND, FOR STANDARD AND HEAVY SYSTEMS.
- TOTAL FRONTAL AREA IS TOTAL AREA OF EQUIPMENT UNIT FACE PARALLEL TO RAIL ① (EQUAL TO TOTAL SUM OF UNIT HEIGHT (IN) x UNIT WIDTH (IN) FOR ALL UNITS ON STAND), AS DEPICTED HEREIN.
- UNIT HEIGHT (HU) INCHES INCLUDED IN SCHEDULE SHALL BE DEFINED AS FOLLOWS: AVERAGE HEIGHT OF ALL UNITS IF THE DIFFERENCE IN HEIGHT BETWEEN TWO ADJACENT UNITS DOES NOT EXCEED 8", OR MAX UNIT HEIGHT OF INSTALLATION IF THE ABOVE CONDITION IS NOT COMPLIED WITH. MAX. UNIT HEIGHT IS 60" .
- STAND HEIGHT (HS), INCHES, IS AS DEPICTED HEREIN, MEASURE FROM HOST STRUCTURE TO BOTTOM OF RAIL ①, VALID FOR STANDARD AND HEAVY SYSTEMS.
- "FRAMES" HERE DENOTES ASSEMBLAGE OF 2 POSTS ④ WITH STRUTS ②A, ②B. PERPENDICULAR TO RAILS ①, VALID FOR STANDARD AND HEAVY SYSTEMS.
- EACH EQUIPMENT UNIT SHALL HAVE A MAXIMUM WEIGHT OF 500 lbs & A MIN.WEIGHT OF 75 LBS. SEE GENERAL NOTE 5 ON SHEET 1
- SPACING OR CLEARANCE BETWEEN UNITS MAY VARY, BASED ON UNITS MANUFACTURER SPECS.
- REFERENCE ANCHOR SCHEDULE BELOW FOR ALLOWABLE ANCHORS AND INSTALLATION CRITERIA, BASED ON SUBSTRATE AT ROOF.
- EQUIPMENT UNITS SHALL BE ATTACHED TO RAILS ① PER UNIT CONNECTION DETAILS ON SHEET 6. AND AS PER ACCOMPANYING NOTES BASED ON MANUFACTURER'S SPECS.

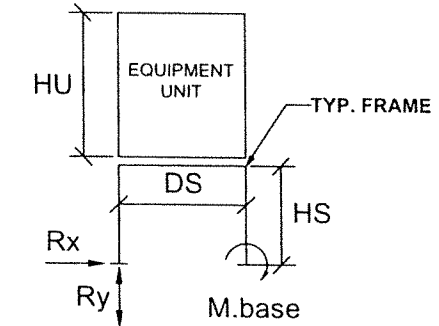
ANCHORS SCHEDULE

SUBSTRATE											
CONCRETE \triangle				STEEL \triangle				WOOD \triangle			
MANUFACTURER	DIAMETER	MIN. E.D	MIN. EMBD'T	MANUFACTURER	DIAMETER	MIN. E.D	MIN. EMBD'T	MANUFACTURER	DIAMETER	MIN. E.D	MIN. EMBD'T
DEWALT	3/8"	5"	2 1/2"	DEWALT	5/16"-24	5/8"	FULL THREAD ENGAGEMENT	N/A	3/8"	1 1/2"	3 1/2"
SCREW BOLT OR POWER BOLT				HEX WASHER HEAD DRILL FLEX STRUCTURAL DRILL SCREWS				NDS LAG SCREWS			
ELCO	3/8"	5"	2 1/2"								
CONFLEX											

- \triangle NOTES: 1 - CONCRETE TO BE MIN $f'_c = 3$ KSI
 2 - STEEL TO BE MIN ASTM A-36, 1/4" MIN THICK.
 3 - WOOD TO BE G=0.55 SOUTHERN YELLOW PINE # 2, MINIMUM 4" THICK.

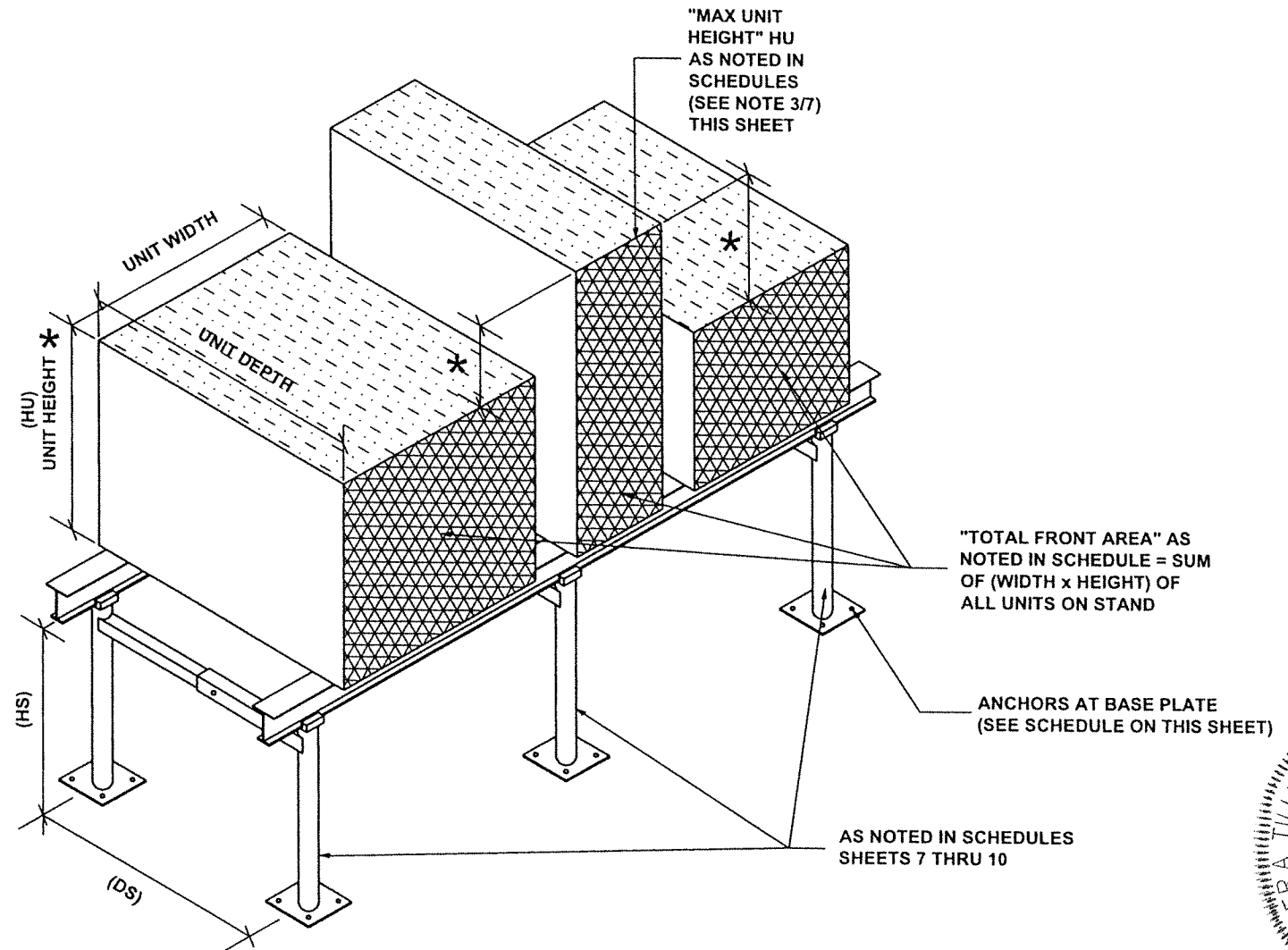
****REACTION SCHEDULE: SEE NOTE 2/1**

REACTION AT BASE Rx	REACTION AT BASE Ry	REACTION AT BASE M.base
230 LB	520 LB	3.4 K-IN



SIDE VIEW

** REACTIONS CORRESPOND TO THE WORST CASE FORCE APPLIED AT BASE PLATE FOR ANY COMBINATION OF DS, HU AND HS DIMENSIONS FOR STANDARD & HEAVY SYSTEMS



UNIT SIZES & CONFIGURATION (FOR USE WITH DESIGN SCHEDULES)

SCALE: 1/4" = 1'-0" ISOMETRIC

* SEE NOTE 3 THIS SHEET

FLORIDA BUILDING CODE (High & Non Velocity Hurricane Zone)

ALUMINUM STANDS FOR ROOF TOP EQUIPMENT

F&L ALUMINUM PARTS, INC.
 2087 N. POWERLINE RD. SUITE #1
 POMPANO BEACH, FL 33069

DRAWN BY: W.H.
 DATE: 01/22/2024

DRAWING No: 24-010

SHEET 5 OF 10

REV. No	DATE	DESCRIPTION
1		
2		

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TILTECO INC.

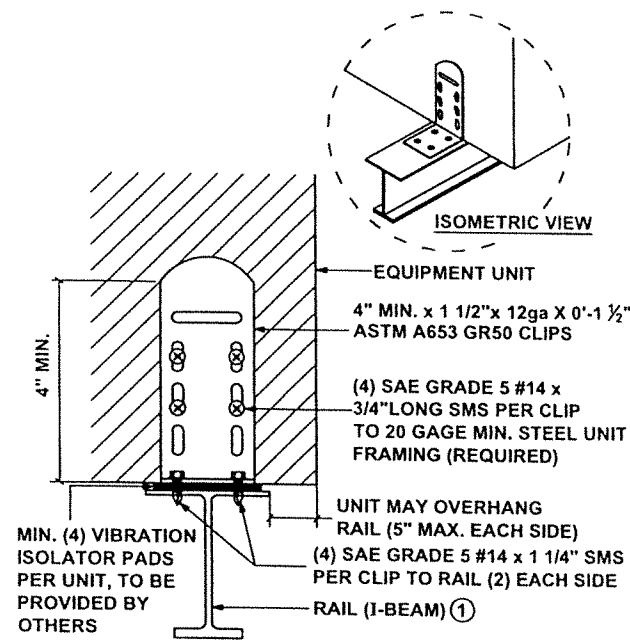
TILLIT TESTING & ENGINEERING COMPANY
 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33186
 Phone: (305)971-1530 Fax: (305)971-1531
 e-mail: tilteco@aol.com

WALTER A. TILLIT JR. P.E.
 CA-0006719
 FLORIDA Lic. # 44167

STATE OF FLORIDA
 PROFESSIONAL ENGINEER
 No. 44167
 WALTER A. TILLIT JR.
 LICENSE

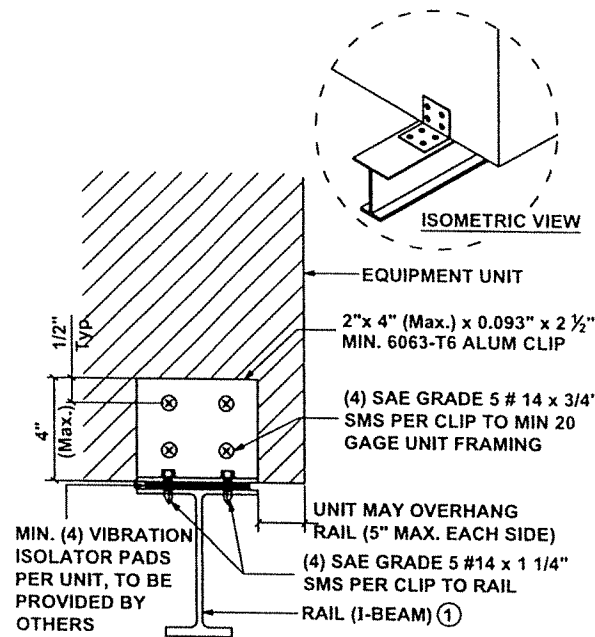
P.E. SEAL/SIGNATURE/DATE

GENERIC * EQUIPMENT UNIT ANCHORAGE TO RAIL ①:
***SEE NOTES BELOW FOR ADDITIONAL GUIDELINES FOR TIE DOWN OF EQUIPMENT TO STANDS:**
VALID FOR STANDARD & HEAVY SYSTEMS



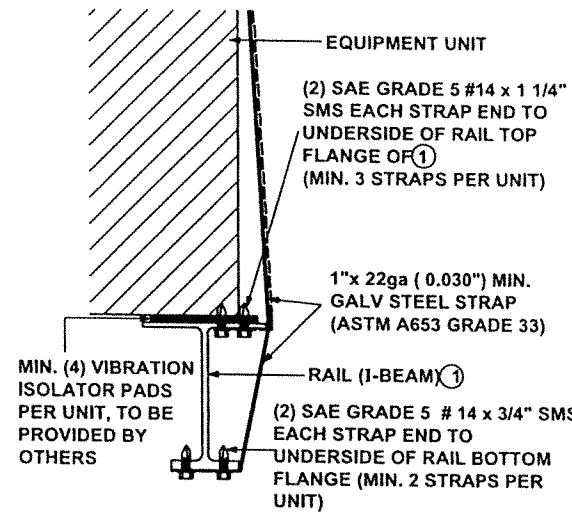
TYPICAL CONNECTION:
-MINIMUM (4) PER UNIT-

1 CLIPPED UNIT CONNECTION
SCALE: N.T.S ELEVATION



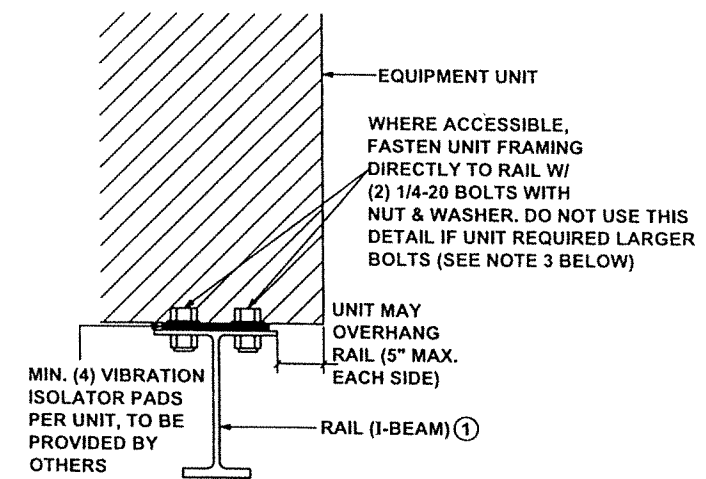
TYPICAL CONNECTION:
-MINIMUM (4) PER UNIT-

2 CLIPPED UNIT CONNECTION
SCALE: N.T.S ELEVATION



TYPICAL CONNECTION:
-MINIMUM (4) PER UNIT-

3 STRAPPED UNIT CONNECTION
SCALE: N.T.S ELEVATION



TYPICAL CONNECTION:
-MINIMUM (4) PER UNIT-

4 DIRECT UNIT CONNECTION
SCALE: N.T.S ELEVATION

* **ADDITIONAL NOTES WITH GUIDELINES AND REFERENCES FOR PERFORMING UNIT'S TIE DOWN TO STANDS:**

- (1) IF EQUIPMENT TO BE INSTALLED IS MANUFACTURED BY CARRIER, USE THEIR TECHNICAL EVALUATION REPORT, AS ENGINEERED FOR TIE DOWN PROCEDURES.
- (2) IF EQUIPMENT TO BE INSTALLED IS MANUFACTURED BY RHEEM, USE THEIR NOA FOR TIE DOWN PROCEDURES.
- (3) FOR UNITS REQUIRED TIE DOWN BOLTS LARGER THAN 1/4 Ø. RAIL ① SHALL NOT BE USED. SPECIAL ENGINEERING WILL BE APPLICABLE IN THAT CASE.
- (4) ANY OTHER CASE OF TIE DOWN NOT ADDRESSED HERE SHALL BE MADE THRU SPECIAL ENGINEERING.

FLORIDA BUILDING CODE (High & Non Velocity Hurricane Zone)		DATE	01/22/2024
ALUMINUM STANDS FOR ROOF TOP EQUIPMENT		DATE	01/22/2024
F&L ALUMINUM PARTS, INC.		DRAWING No	24-010
2087 N. POWERLINE RD. SUITE #1 POMPANO BEACH, FL 33069		DATE	01/22/2024
REV. No	DESCRIPTION	DATE	DATE
1			
2			
3			
4			

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TILTECO INC.

TILLIT TESTING & ENGINEERING COMPANY
 6255 N.W. 34th St., Ste. 305, VIRGINIA GARDENS, FL 33166
 Phone : (305)871-1530 • Fax : (305)871-1531
 e-mail: tilteco@ttiliteco.com
 CA-0006719
 WALTER A. TILLIT JR. P.E.
 FLORIDA Lic. # 44167

WALTER A. TILLIT JR.
 LICENSE
 No. 44167
 STATE OF
 FLORIDA
 PROFESSIONAL ENGINEER
 P.E. SEAL/SIGNATURE/DATE

STANDARD SYSTEM

**ASD DESIGN LATERAL (WL) & UPLIFT (WU) PRESSURE RATING (psf) SCHEDULE GIVEN A STAND WITH STAND'S DEPTH (DS), TOTAL EQUIPMENT UNIT FRONT AREA (AF), EQUIPMENT UNIT HEIGHT (HU), STAND HEIGHT (HS) AND NUMBER OF REQUIRED FRAMES (N)
W/ 5" X 5" BASE PLATE AT POSTS**

**DS ≥ 18"
MAX
UP TO 42"**

AF MAX (IN ²)	HU MAX (IN)	HS MAX (IN)	N = 2		N = 3		N = 4		N = 5		N = 6		N = 7		N = 8		N = 9		N = 10					
			WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU				
576	24	18	250	197	250	197	250	197	250	197	250	197	250	197	250	197	250	197	250	197	250	197		
		24	250	197	250	197	250	197	250	197	250	197	250	197	250	197	250	197	250	197	250	197		
		30	215	170	250	197	250	197	250	197	250	197	250	197	250	197	250	197	250	197	250	197		
864	28	18	188	148	210	166	250	197	250	197	250	197	250	197	250	197	250	197	250	197	250	197		
		24	185	146	210	166	250	197	250	197	250	197	250	197	250	197	250	197	250	197	250	197		
		30	143	113	210	166	250	197	250	197	250	197	250	197	250	197	250	197	250	197	250	197		
1152	32	18	147	116	169	133	241	191	250	197	250	197	250	197	250	197	250	197	250	197	250	197		
		24	134	106	169	133	241	191	250	197	250	197	250	197	250	197	250	197	250	197	250	197		
		30	107	85	161	127	225	170	250	197	250	197	250	197	250	197	250	197	250	197	250	197		
1440	36	18	120	95	142	112	201	159	250	197	250	197	250	197	250	197	250	197	250	197	250	197		
		24	107	85	142	112	201	159	250	197	250	197	250	197	250	197	250	197	250	197	250	197		
		30	86	68	129	102	172	136	215	170	250	197	250	197	250	197	250	197	250	197	250	197		
1728	36	18	100	79	119	94	169	133	218	172	250	197	250	197	250	197	250	197	250	197	250	197		
		24	90	71	119	94	169	133	218	172	250	197	250	197	250	197	250	197	250	197	250	197		
		30	72	57	107	85	143	114	179	141	220	170	250	197	250	197	250	197	250	197	250	197		
2304	36	18	75	59	91	72	128	101	165	130	201	159	238	188	250	197	250	197	250	197	250	197		
		24	67	53	91	72	128	101	165	130	201	159	235	186	250	197	250	197	250	197	250	197		
		30			81	64	107	85	134	106	161	127	188	148	215	170	242	191	250	197	250	197		
2880	36	18			74	58	103	82	133	105	162	128	191	152	221	174	250	197	250	197	250	197		
		24			74	58	103	82	133	105	161	127	188	148	215	170	242	191	250	197	250	197		
		30			64	51	86	68	107	85	129	102	150	119	172	136	193	153	215	170	250	197		
3600	42	18					86	68	110	87	133	105	157	124	181	143	204	160	228	180	250	197		
		24					86	68	107	85	129	102	150	119	172	136	193	153	215	170	250	197		
		30					69	54	86	68	103	81	120	95	138	109	155	122	172	136	250	197		
4320	48	18					72	57	92	73	111	88	131	103	150	119	170	134	189	149	250	197		
		24					72	57	90	71	107	85	126	99	143	113	162	127	179	141	250	197		
		30							72	57	86	68	100	79	115	90	129	102	143	113	250	197		
5760	48	18							70	55	85	67	99	78	114	90	128	101	143	113	250	197		
		24							67	53	81	64	94	74	107	85	121	95	134	106	250	197		
		30									64	51	75	59	86	68	97	76	107	85	250	197		
7200	60	18											76	60	87	69	98	78	109	86	250	197		
		24												75	59	86	68	97	76	107	85	250	197	
		30																			69	54	77	61

FLORIDA BUILDING CODE (High & Non Velocity Hurricane Zone)

DRAWN BY: W.H. DATE: 01/22/2024

DRAWING No: **24-010**

SHEET 7 OF 10

ALUMINUM STANDS FOR ROOF TOP EQUIPMENT

F&L ALUMINUM PARTS, INC.
2087 N. POWERLINE RD. SUITE #1
POMPANO BEACH, FL 33069

REV. NO.	DATE	DESCRIPTION
1	-	-
2	-	-
3	-	-
4	-	-

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TILTECO INC.

TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 35th St., Ste. 305, VIRGINIA GARDENS, FL 33166
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e-mail: tilteco@aol.com

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CA-0006719
FLORIDA Lic. # 44167

P.E. SEAL/SIGNATURE/DATE

No. 44167

STATE OF FLORIDA

WALTER A. TILLIT JR.
LICENSE
PROFESSIONAL ENGINEER

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			WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU		
576	24	18	250	197	250	197	250	197	250	197	250	197	250	197	250	197	250	197	250	197	250	197
		24	250	197	250	197	250	197	250	197	250	197	250	197	250	197	250	197	250	197	250	197
		30	215	170	250	197	250	197	250	197	250	197	250	197	250	197	250	197	250	197	250	197
864	28	18	188	148	210	166	250	197	250	197	250	197	250	197	250	197	250	197	250	197	250	197
		24	179	141	210	166	250	197	250	197	250	197	250	197	250	197	250	197	250	197	250	197
		30	143	113	210	166	250	197	250	197	250	197	250	197	250	197	250	197	250	197	250	197
1152	32	18	147	116	169	133	241	191	250	197	250	197	250	197	250	197	250	197	250	197	250	197
		24	134	106	169	133	241	191	250	197	250	197	250	197	250	197	250	197	250	197	250	197
		30	107	85	161	127	215	170	250	197	250	197	250	197	250	197	250	197	250	197	250	197
1440	36	18	120	94	142	112	201	159	250	197	250	197	250	197	250	197	250	197	250	197	250	197
		24	107	85	142	112	201	159	250	197	250	197	250	197	250	197	250	197	250	197	250	197
		30	86	68	129	102	172	136	215	170	250	197	250	197	250	197	250	197	250	197	250	197
1728	36	18	100	79	119	94	169	133	218	172	250	197	250	197	250	197	250	197	250	197	250	197
		24	90	70	119	94	169	133	218	172	250	197	250	197	250	197	250	197	250	197	250	197
		30	72	57	107	85	143	113	179	141	215	170	250	197	250	197	250	197	250	197	250	197
2304	36	18	75	59	91	72	128	101	165	130	201	159	238	188	250	197	250	197	250	197	250	197
		24	67	53	91	72	128	101	165	130	201	159	238	188	250	197	250	197	250	197	250	197
		30			81	64	107	85	134	106	161	127	188	148	215	170	250	197	250	197	250	197
2880	36	18			74	58	103	82	133	105	194	154	191	151	221	174	250	197	250	197	250	197
		24			74	58	105	82	133	105	161	127	188	148	215	170	242	191	250	197	250	197
		30			64	51	86	68	107	85	129	102	150	119	172	136	193	153	215	170	250	197
3600	42	18					86	68	110	87	133	105	157	124	181	143	204	161	228	180	250	197
		24					86	68	107	85	129	102	150	119	172	136	193	153	215	170	250	197
		30					69	54	86	68	103	81	120	95	138	109	155	122	172	136	250	197
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		24					72	56	90	71	107	85	126	99	143	113	161	127	179	141	250	197
		30							72	57	86	68	100	79	115	90	129	102	143	113	250	197
5760	48	18							70	55	85	67	99	78	114	90	128	101	143	113	250	197
		24							67	53	81	64	94	74	107	85	121	95	134	106	250	197
		30									64	51	75	59	86	68	97	76	107	85	250	197
7200	60	18																				
		24																				
		30																				

FLORIDA BUILDING CODE (High & Non Velocity Hurricane Zone)

DRAWN BY: W.H. DATE: 01/22/2024

24-010 DRAWING No

SHEET 8 OF 10

ALUMINUM STANDS FOR ROOF TOP EQUIPMENT

F&L ALUMINUM PARTS, INC.
2087 N. POWERLINE RD. SUITE #1
POMPANO BEACH, FL 33069

REV. No.	DATE	REV. No.	DATE	DESCRIPTION
1	-	2	-	-
3	-	4	-	-

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TILTECO INC.

TILIT TESTING & ENGINEERING COMPANY
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Phone : (305)971-1530 Fax : (305)971-1531
e-mail: tilteco@aol.com

WALTER A. TILIT Jr., P.E.
FLORIDA Lic. # 44167

P.E. SEAL/SIGNATURE/DATE

No. 44167

WALTER A. TILIT JR. LICENSE

STATE OF FLORIDA PROFESSIONAL ENGINEER

2/2024

HEAVY SYSTEM

**ASD DESIGN LATERAL (WL) & UPLIFT (WU) PRESSURE RATING (psf) SCHEDULE GIVEN A STAND WITH STAND'S DEPTH (DS), TOTAL EQUIPMENT UNIT FRONT AREA (AF), EQUIPMENT UNIT HEIGHT (HU), STAND HEIGHT (HS) AND NUMBER OF REQUIRED FRAMES (N)
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			WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU
576	24	18	250	197	250	197	250	197	250	197	250	197	250	197	250	197	250	197	250	197
		24	250	197	250	197	250	197	250	197	250	197	250	197	250	197	250	197	250	197
		30	230	182	250	197	250	197	250	197	250	197	250	197	250	197	250	197	250	197
864	28	18	227	179	250	197	250	197	250	197	250	197	250	197	250	197	250	197	250	197
		24	185	146	250	197	250	197	250	197	250	197	250	197	250	197	250	197	250	197
		30	156	123	218	172	250	197	250	197	250	197	250	197	250	197	250	197	250	197
1152	32	18	173	136	233	184	250	197	250	197	250	197	250	197	250	197	250	197	250	197
		24	141	111	195	154	250	197	250	197	250	197	250	197	250	197	250	197	250	197
		30	118	93	166	131	250	178	250	197	250	197	250	197	250	197	250	197	250	197
1440	36	18	139	110	193	152	250	197	250	197	250	197	250	197	250	197	250	197	250	197
		24	113	89	159	125	215	170	250	197	250	197	250	197	250	197	250	197	250	197
		30	95	75	135	106	182	144	230	181	250	197	250	197	250	197	250	197	250	197
1728	36	18	116	92	157	124	219	173	250	197	250	197	250	197	250	197	250	197	250	197
		24	94	74	132	105	180	142	227	179	250	197	250	197	250	197	250	197	250	197
		30	79	62	113	89	152	120	192	151	231	182	250	197	250	197	250	197	250	197
2304	36	18	87	69	119	94	165	130	209	165	250	197	250	197	250	197	250	197	250	197
		24	70	56	100	79	135	107	170	135	250	162	241	190	250	197	250	197	250	197
		30			85	67	114	90	144	114	174	137	203	160	250	197	250	197	250	197
2880	36	18	70	55	97	76	132	105	167	132	202	159	236	187	250	197	250	197	250	197
		24			80	63	108	86	137	108	165	130	193	152	221	174	249	196	250	197
		30			68	53	92	73	115	91	139	110	163	128	186	147	210	166	233	184
3600	42	18			79	62	107	85	135	107	163	129	191	150	218	172	246	194	250	197
		24			65	51	88	70	110	87	133	105	155	122	178	140	200	158	222	176
		30					74	59	93	73	112	88	131	103	150	118	169	133	187	148
4320	48	18					90	71	113	89	136	107	159	125	182	144	205	162	228	180
		24					73	58	92	73	111	87	129	102	148	117	167	132	185	146
		30							78	61	93	74	109	86	125	98	140	111	156	123
5760	48	18							85	67	102	81	119	94	137	108	154	122	171	135
		24							69	55	83	66	97	77	111	88	125	99	139	110
		30									70	55	82	65	94	74	106	83	117	93
7200	60	18										81	64	94	75	108	85	122	96	135
		24											66	52	77	61	90	78	110	87
		30																		

FLORIDA BUILDING CODE (High & Non Velocity Hurricane Zone)

DRAWN BY: W.H. DATE: 01/22/2024

24-010 DRAWING No

SHEET 9 OF 10

ALUMINUM STANDS FOR ROOF TOP EQUIPMENT

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2087 N. POWERLINE RD. SUITE #1
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REV. No	DATE	DESCRIPTION
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2		
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e-mail: tilteco@tillit.com

WALTER A. TILLIT JR. P.E.
FLORIDA Lic. # 44167

P.E. SEAL/SIGNATURE/DATE

WALTER A. TILLIT JR. LICENSE No. 44167

STATE OF FLORIDA PROFESSIONAL ENGINEER

HEAVY SYSTEM

**ASD DESIGN LATERAL (WL) & UPLIFT (WU) PRESSURE RATING (psf) SCHEDULE GIVEN A STAND WITH STAND'S DEPTH (DS), TOTAL EQUIPMENT UNIT FRONT AREA (AF), EQUIPMENT UNIT HEIGHT (HU), STAND HEIGHT (HS) AND NUMBER OF REQUIRED FRAMES (N)
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UP TO 42"**

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			WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU	WL	WU
576	24	18	250	197	250	197	250	197	250	197	250	197	250	197	250	197	250	197	250	197
		24	250	197	250	197	250	197	250	197	250	197	250	197	250	197	250	197	250	197
		30	227	179	250	197	250	197	250	197	250	197	250	197	250	197	250	197	250	197
864	28	18	219	173	250	197	250	197	250	197	250	197	250	197	250	197	250	197	250	197
		24	181	143	246	194	250	197	250	197	250	197	250	197	250	197	250	197	250	197
		30	154	121	212	168	250	197	250	197	250	197	250	197	250	197	250	197	250	197
1152	32	18	167	132	223	176	250	197	250	197	250	197	250	197	250	197	250	197	250	197
		24	137	108	189	149	250	197	250	197	250	197	250	197	250	197	250	197	250	197
		30	117	92	163	128	221	175	250	197	250	197	250	197	250	197	250	197	250	197
1440	36	18	135	106	184	143	250	197	250	197	250	197	250	197	250	197	250	197	250	197
		24	111	87	154	122	210	165	250	197	250	197	250	197	250	197	250	197	250	197
		30	94	74	132	104	179	141	226	178	250	197	250	197	250	197	250	197	250	197
1728	36	18	112	89	154	122	211	166	250	197	250	197	250	197	250	197	250	197	250	197
		24	92	73	129	102	175	138	221	174	250	197	250	197	250	197	250	197	250	197
		30	78	62	110	87	150	118	189	149	227	180	250	197	250	197	250	197	250	197
2304	36	18	84	66	116	92	159	125	201	158	250	192	250	197	250	197	250	197	250	197
		24	69	55	97	77	132	104	167	132	201	158	235	185	250	197	250	197	250	197
		30			83	66	113	89	142	112	171	135	200	158	229	181	250	197	250	197
2880	36	18	67	53	93	74	127	101	161	127	194	154	228	180	250	197	250	197	250	197
		24			78	62	106	83	133	105	161	127	188	149	216	170	243	192	250	197
		30			67	53	90	71	114	90	137	108	160	127	184	150	207	163	230	182
3600	42	18			76	60	103	81	131	103	157	124	184	145	211	166	238	188	250	197
		24					86	68	108	85	130	102	152	120	174	137	196	154	218	172
		30					73	58	92	72	110	87	129	102	148	117	166	131	185	146
4320	48	18					86	68	109	86	131	103	153	121	176	139	198	156	220	174
		24					72	56	90	70	108	85	126	100	145	114	163	129	181	143
		30							77	60	92	73	108	85	123	97	139	109	154	122
5760	48	18							82	65	99	78	115	91	132	104	149	117	165	131
		24							68	53	81	64	95	75	109	86	123	97	136	108
		30									69	55	81	64	93	73	104	82	116	91
7200	60	18																		
		24																		
		30																		

FLORIDA BUILDING CODE (High & Non Velocity Hurricane Zone)

ALUMINUM STANDS FOR ROOF TOP EQUIPMENT

F&L ALUMINUM PARTS, INC.
2087 N. POWERLINE RD. SUITE #1
POMPANO BEACH, FL 33069

DRAWN BY: W.H.
DATE: 01/22/2024

DRAWING NO: 24-010

SHEET 10 OF 10

REV. NO.	DATE	DESCRIPTION
1	-	-
2	-	-
3	-	-
4	-	-

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TILTECO INC.

TILLIT TESTING & ENGINEERING COMPANY
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FLORIDA Lic. # 44167

WALTER A. TILLIT JR.
LICENSE
No. 44167
STATE OF FLORIDA
PROFESSIONAL ENGINEER
P.E. SEAL/SIGNATURE/DATE