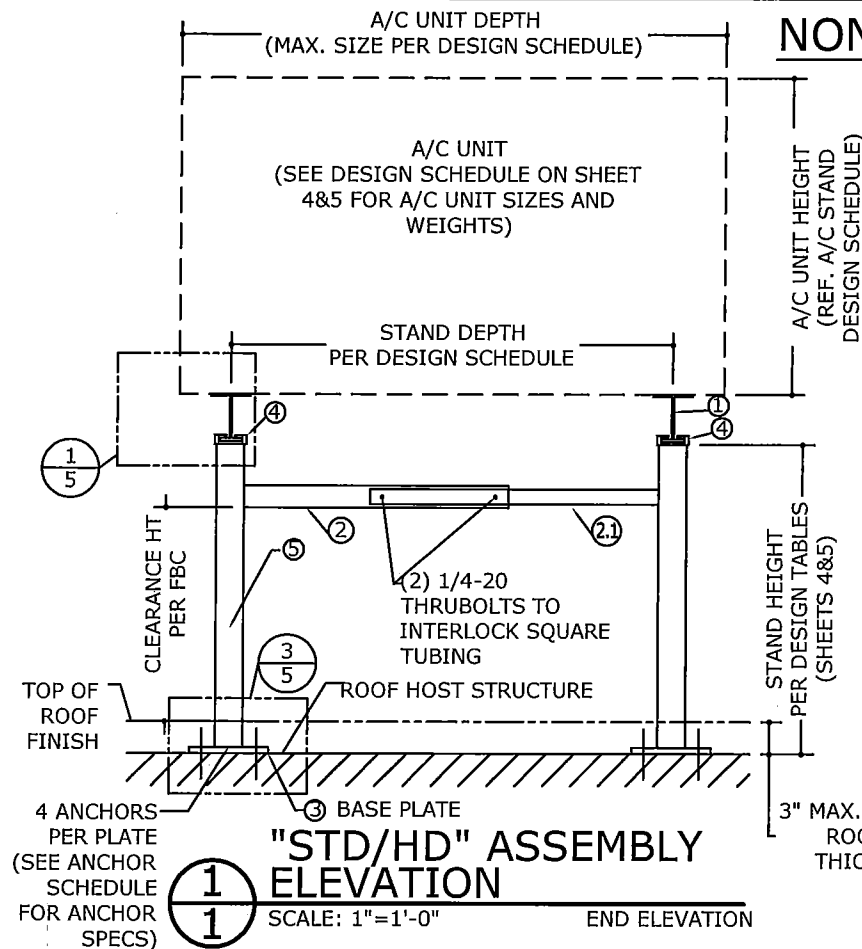
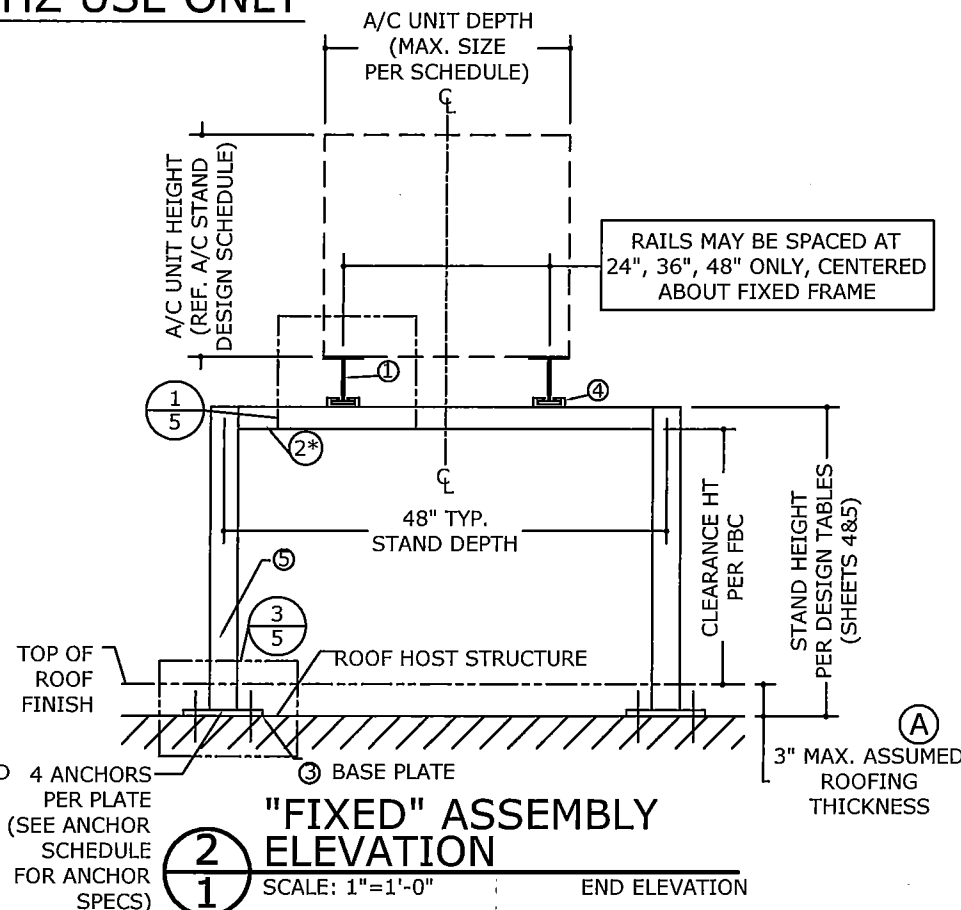


# ALUMINUM STANDS FOR MECHANICAL UNITS

## NON-HVHZ USE ONLY

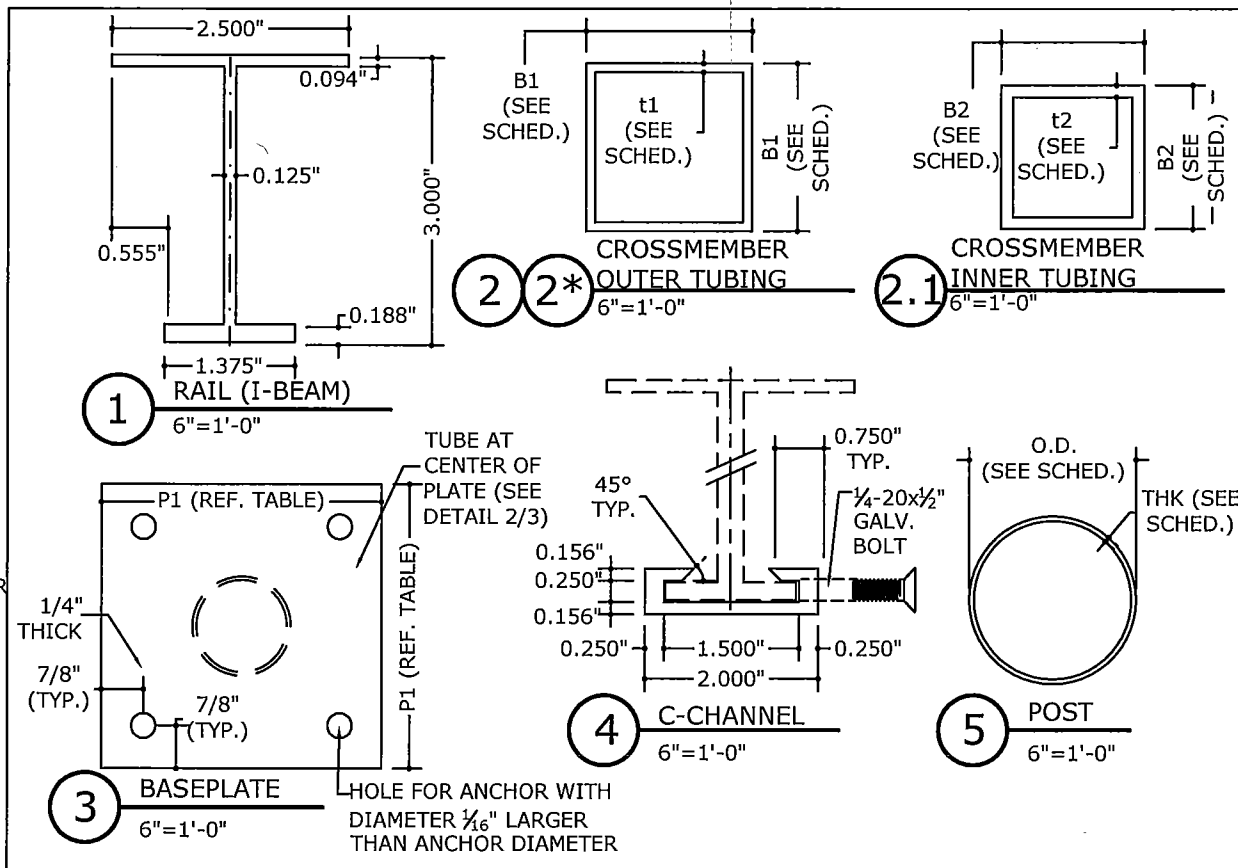
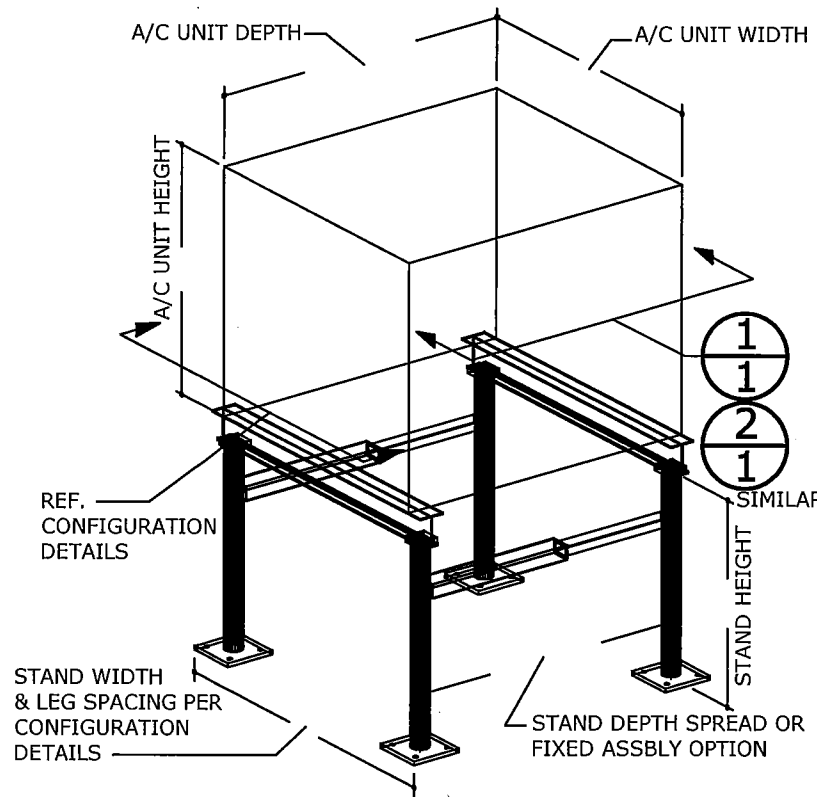


**"STD/HD" ASSEMBLY ELEVATION**  
SCALE: 1"=1'-0" END ELEVATION



**"FIXED" ASSEMBLY ELEVATION**  
SCALE: 1"=1'-0" END ELEVATION

(A) UTILIZE NEXT-HIGHEST STAND HEIGHT FOR LARGER ROOF THICKNESS. FOR ROOFING WITHOUT INSULATION OMIT 3" THICKNESS AND UTILIZE CLEAR HEIGHT FROM FINISHED FLOOR. SPECIAL CONDITIONS REQUIRE SITE-SPECIFIC ENGINEERING.



## USER NOTE:

THIS DOCUMENT SHALL BE USED AS A CERTIFICATION FOR THE FOLLOWING:

**GROUND MOUNTED A/C STAND INSTALLATIONS:** FOR GROUND MOUNTED INSTALLATIONS (AT GRADE), THIS DOCUMENT CERTIFIES ALLOWABLE UNIT/STAND CONFIGURATIONS AND PROVIDES (3) DESIGN TABLES FOR THE ALLOWABLE EXPOSURE CATEGORY (C OR D) FOR USE WITH INSTALLATIONS WITHIN A WIND ZONE EQUAL TO Vult=175 MPH **OUTSIDE THE HVHZ (HIGH VELOCITY HURRICANE ZONE) ONLY.**

**ROOF-TOP MOUNTED A/C STAND INSTALLATIONS:** FOR ROOF-TOP INSTALLATIONS (UP TO 100 FT MAXIMUM HEIGHT), THIS DOCUMENT CERTIFIES ALLOWABLE UNIT/STAND CONFIGURATIONS AND PROVIDES (3) DESIGN TABLES FOR THE ALLOWABLE PRESSURE OF EACH CONFIGURATION.

THE ALLOWABLE WIND PRESSURE FOR EACH CONFIGURATION CAN BE CROSS REFERENCED WITH THE "WIND LOAD DESIGN PRESSURE FOR ROOF-TOP MOUNTED UNITS" TABLE IN ORDER TO DETERMINE THE ALLOWABLE MRH OF THE SUPPORTING STRUCTURE AND THE ALLOWABLE EXPOSURE CATEGORY (C OR D) FOR USE WITH INSTALLATIONS OUTSIDE THE HVHZ WITHIN A WIND ZONE EQUAL TO Vult=175 MPH.

## GENERAL NOTES

- THIS SYSTEM HAS BEEN DESIGNED AND SHALL BE FABRICATED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE FIFTH EDITION (2014) FOR USE **OUTSIDE OF THE HIGH VELOCITY HURRICANE ZONE ONLY.**
- MAXIMUM DIMENSIONS AND WEIGHT OF MECHANICAL UNITS SHALL CONFORM TO SPECIFICATIONS STATED HEREIN, MINIMUM 100LB OR MAXIMUM AS LISTED HEREIN.
- CONTRACTOR SHALL ENSURE THAT EACH INSTALLATION ASSEMBLY MEET THE MINIMUM CLEARANCE HEIGHT PER FBC SECTION 1509.6.5 FOR NON-HVHZ APPLICATIONS.
- 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.
- REACTION FORCES LISTED FOR USE WITH HOST STRUCTURE VERIFICATION ARE CALCULATED USING ASD METHODOLOGY. DESIGN PROFESSIONAL OF RECORD SHALL VERIFY APPLICABILITY AND/OR ADDITIONAL FACTORS FOR USE WITH HOST STRUCTURE VERIFICATION.
- ALL FASTENERS TO BE #12 SAE GRADE 5 CADMIUM PLATED OR OTHERWISE CORROSION RESISTANT MATERIAL (UNLESS NOTED OTHERWISE) AND SHALL COMPLY WITH J.3.1, SPECIFICATIONS FOR ALUMINUM STRUCTURES, THE ALUMINUM ASSOCIATION, INC., FBC R4406.1.8 IN ADDITION TO APPLICABLE FEDERAL, STATE, AND LOCAL CODES. STAINLESS STEEL FASTENERS SHALL BE ASTM F593 316 SS COLD WORKED CONDITION. PROVIDE (5) PITCHES MINIMUM PAST THE THREAD PLANE FOR ALL SCREW CONNECTIONS.
- ALL EXTRUDED MEMBERS SHALL BE ALUMINUM ALLOY TYPE 6061-T6.
- ALL EXISTING CONCRETE SUBSTRATE SHALL HAVE MINIMUM  $f_c$  COMPRESSIVE STRENGTH OF 3000 PSI (4" MIN. DEPTH) AS VERIFIED BY OTHERS.
- ALUMINUM WELDING SHALL BE PERFORMED IN ACCORDANCE WITH FBC SECTION 2003.8.1.3 & 2003.8.1.4 WITH WELD FILLER CONFORMING TO THE ULTIMATE DESIGN STRENGTH IN ACCORDANCE WITH THE ALUMINUM DESIGN MANUAL PART I-A, TABLE J.2.1. SUGGESTED WELD FILLER: 5356 ELECTRODES. ALL ALUMINUM CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE TOLERANCES, QUALITY AND METHODS OF CONSTRUCTION AS SET FORTH IN FBC SECTION 2003.2 AND THE AMERICAN WELDING SOCIETY'S STRUCTURAL WELDING CODE-ALUMINUM (D1.2). MINIMUM WELD IS  $\frac{1}{8}$ " THROAT FULL PERIMETER FILLET WELD UNLESS OTHERWISE NOTED.
- 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 HERETO 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.
- 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.
- EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED.
- AC STANDS SHALL BE PERMANENTLY LABELED WITH A MINIMUM OF ONE LABEL PER FRAME ASSEMBLY CONTAINING THE FOLLOWING:  
PRECISION ALUMINUM, MIAMI FLORIDA  
FLORIDA BUILDING CODE APPROVED

FRANK L. BENNARDO, P.E.  
PE# 0046549

08/28/2015

IF CHECKED, CERTIFYING P.E. APPLIES

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NON-HVHZ APPLICATION ONLY  
FBC 5TH EDITION (2014) PRODUCT APPROVAL #FL16921

REMARKS	DRWN	CHKD	DATE
INIT ISSUE	TSB	FLB	07/08/09
REV 2010 FBC	CSL	TSB	05/11/12
REV FBC 5TH (2014)	CSL	CSL	06/15/15
DATE OF USE REVIEW	FLB	FLB	8/25/15

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SCALE:

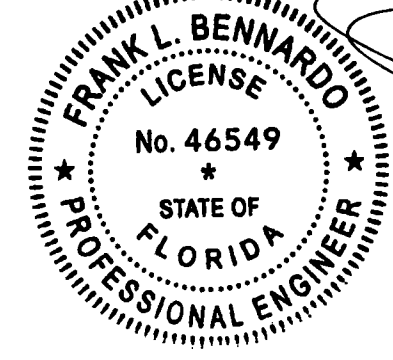
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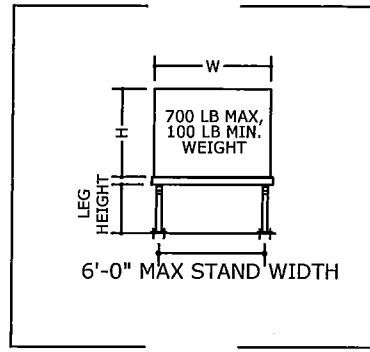
# STAND CONFIGURATION TYPES & COMPONENT SCHEDULE

NON-HVHZ USE ONLY

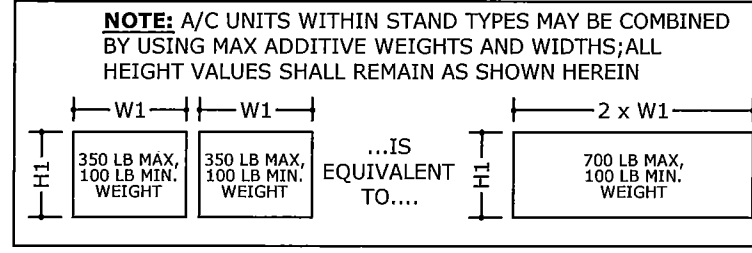
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PE# 0046549



08/28/2015



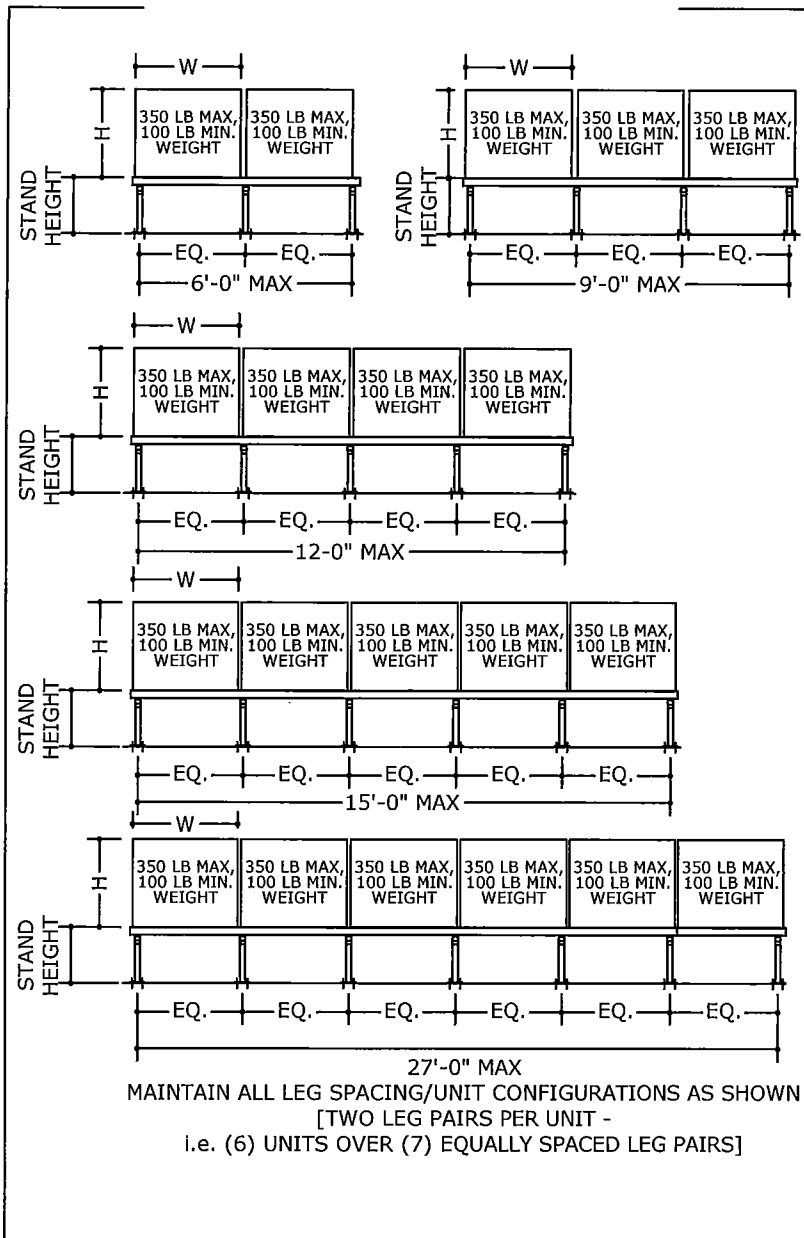
**NOTE:** USE ANY COMBINATION OF UNITS TO FIT STAND PER MANUFACTURER'S REQUIREMENTS. THE NUMBER OF UNITS MAY BE LESS THAN SHOWN, BUT MAY NOT EXCEED CONFIGURATION LIMITS AS SHOWN. WHEN USING MULTIPLE SIZES ON ONE STAND, UTILIZE MAXIMUM UNIT SIZE TO DETERMINE ALLOWABLE DESIGN FROM DESIGN TABLES.



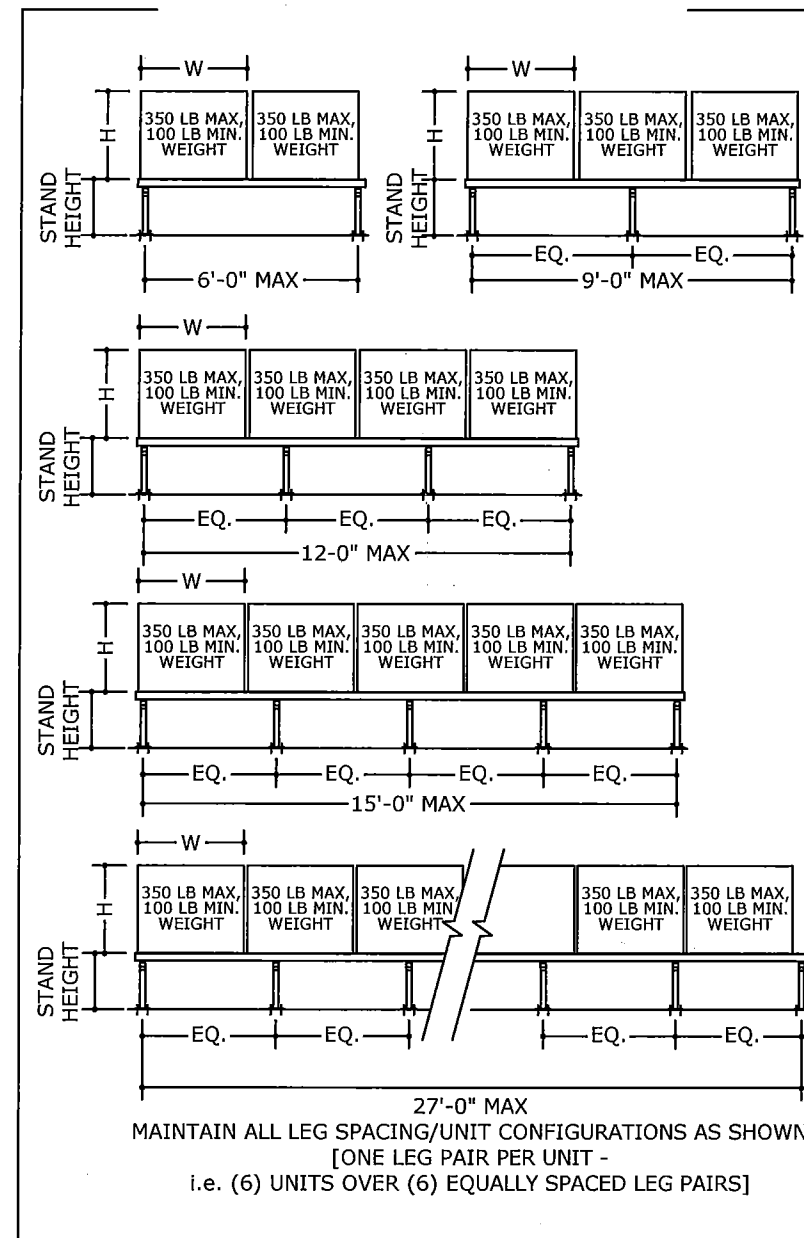
PART	DESCR.	STAND TYPE	
		HD/FIXED	STD
②	OUTER TUBE SIZE (B1 x B1 x t1)	1.5" x 1.5" x 0.093"	1.25" x 1.25" x 0.093"
②*	OUTER TUBE SIZE (B1 x B1 x t1)	2.00" x 2.00" x 0.095"	N/A
②.1	INNER TUBE SIZE (B2 x B2 x t2)	1.25" x 1.25" x 0.125"	1.00" x 1.00" x 0.125"
④	POST SIZE (OD X THK)	1.9" x 0.145"	1.5" x 0.090"
⑤	BASEPLATE SIZE (P1 X P1)	5" X 5"	•4" X 4" UP TO 24" STAND HT •5" X 5" FOR 30" STAND HT

**LEGEND:**  
 • "HD" = HEAVY DUTY  
 • "STD" = STANDARD  
 ②\* SHALL BE UTILIZED FOR FIXED ASSEMBLY ONLY

**A** STAND CONFIGURATION A

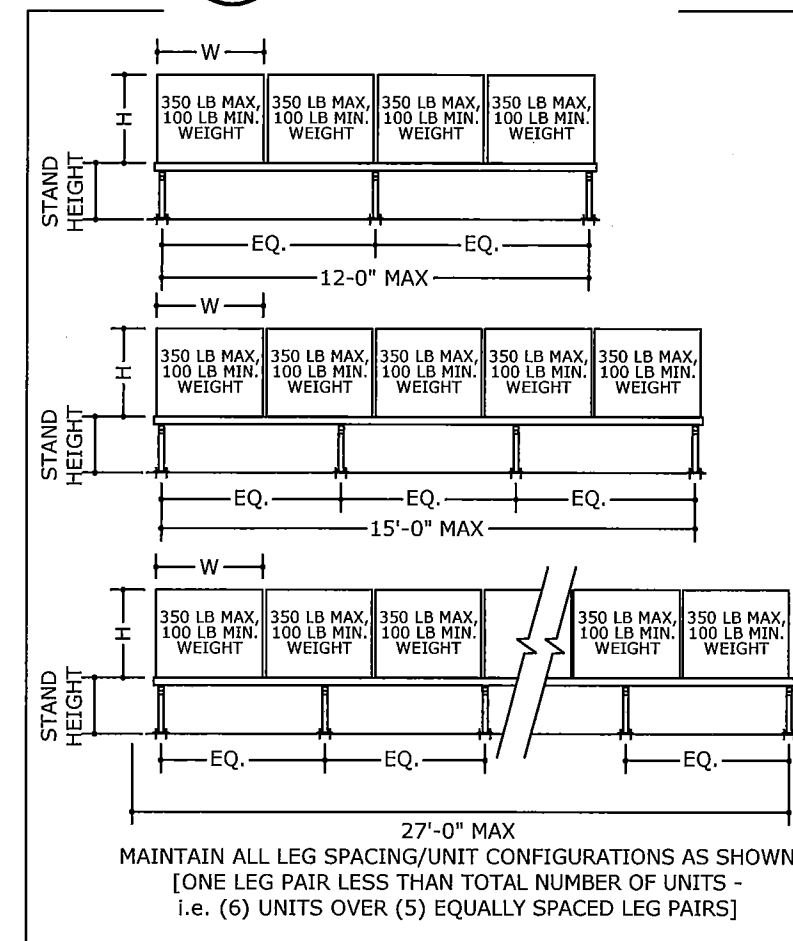


**B** STAND CONFIGURATION B



**C** STAND CONFIGURATION C

**2** STAND TYPE/COMPONENT SCHEDULE



**D** STAND CONFIGURATION D

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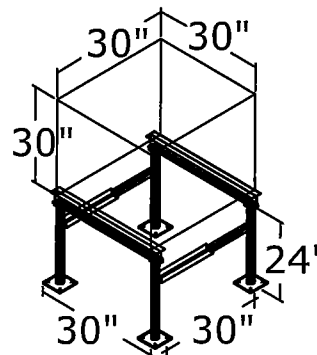
SCALE:

**ROOF TOP MECHANICAL UNIT STAND EXAMPLE:**

**DESIGN CONDITION:**

CONSIDER THE INSTALLATION OF (1) MECHANICAL UNIT 30" TALL x 30" DEEP x 30" WIDE, 350 LB MAX WEIGHT BEING INSTALLED OUTSIDE THE HVHZ WITH THE FOLLOWING CRITERIA:

- NUMBER OF LEG FRAMES= (2) FRAMES (4 LEGS)
- STAND HEIGHT= 24" HEIGHT
- STAND DEPTH= 36" STAND DEPTH SPREAD
- HOST STRUCTURE TYPE= 3,000 PSI CONCRETE (4" MIN. DEPTH)



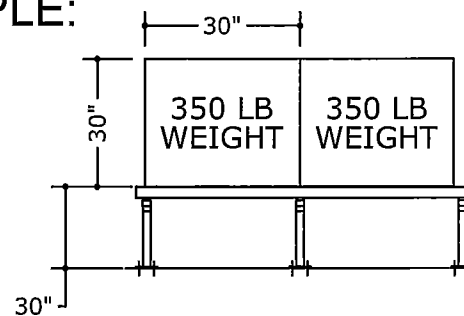
PROCEDURE		RESULT
1	DETERMINE STAND CONFIGURATION TYPE ON SHEET 2	(1) UNIT PER (2) LEG FRAMES OPTION FALLS WITHIN CONFIGURATION <b>TYPE A, SHEET 2</b>
2	LOCATE DESIGN SCHEDULE FOR 36" ROOF TOP STAND DEPTH SPREAD	SCHEDULE CAN BE FOUND ON <b>SHEET 4</b>
3	DETERMINE WHICH TYPE OF STAND COMPONENTS APPLY	THE 30" STAND DEPTH DESIGN SCHEDULE PROVIDES VALUES FOR "HD" STANDS ONLY
4	DETERMINE THE MAXIMUM ALLOWABLE LATERAL & UPLIFT WIND LOADS	FOR A 30"W x 30"D x 30"H UNIT ON AN 24" STAND HEIGHT WITH CONFIGURATION TYPE A, THE ALLOWABLE WIND LOADS ARE AS FOLLOWS FROM SHEET 4: <ul style="list-style-type: none"> <li>• ALLOWABLE LATERAL WIND LOAD: <b>103.3 PSF</b></li> <li>• ALLOWABLE UPLIFT WIND LOAD: <b>51.6 PSF</b></li> </ul>
5	DETERMINE PERMISSIBLE ANCHOR TYPES AND VERIFY HOST STRUCTURE TYPE	UTILIZE ANCHOR TYPES FROM DESIGN SCHEDULE ASSOCIATED WITH THE ALLOWABLE WIND VALUES DETERMINED IN STEP 4. FOR THIS EXAMPLE, <b>ANCHOR TYPES 1 OR 2 MAY BE APPLIED</b> . FOR THIS EXAMPLE UTILIZE ANCHOR TYPE 1 FOR CONCRETE HOST STRUCTURE TYPE. INSTALL STANDS PER ANCHOR SCHEDULE AND DETAILS AS ILLUSTRATED ON SHEET 5.
6	DETERMINE THE ALLOWABLE MOUNTING HEIGHT & WIND EXPOSURE CATEGORY FOR USE OUTSIDE THE HVHZ.	USING SHEET 5, AND THE STAND CONFIGURATION ALLOWANCE FOR A LATERAL LOAD OF 103.3 PSF AND UPLIFT LOAD OF 51.6 PSF FROM ABOVE: <ul style="list-style-type: none"> <li>• THIS CORRESPONDS TO AN INSTALLATION ON A ROOFTOP WITH A MEAN ROOF HEIGHT UP TO 15 FT MAX &amp; WIND SPEED OF 175 MPH WITH AN EXPOSURE 'C' OR 120MPH EXPOSURE 'D' UP TO 60' MRH</li> </ul>

**GROUND MOUNTED MECHANICAL UNIT STAND EXAMPLE:**

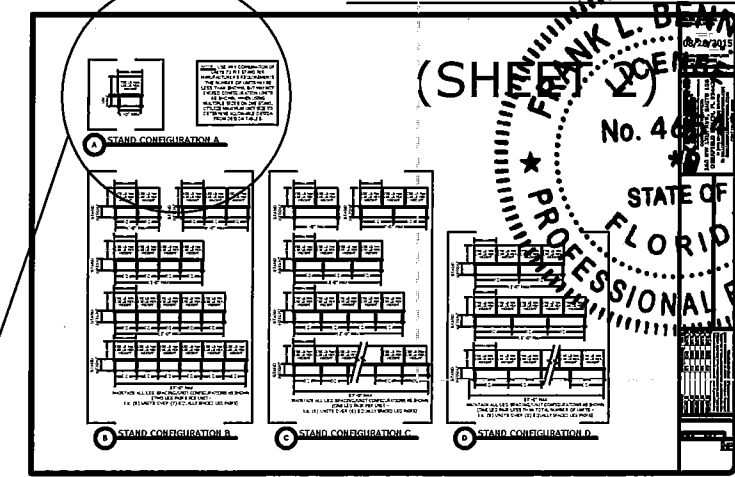
**DESIGN CONDITION:**

CONSIDER THE INSTALLATION OF (2) MECHANICAL UNITS 30" TALL x 30" DEEP x 30" WIDE, 350 LB MAX WEIGHT, BEING INSTALLED WITH THE FOLLOWING CRITERIA:

- NUMBER OF LEG FRAMES= (3) FRAMES (6 LEGS)
- STAND HEIGHT= 30" HEIGHT
- STAND DEPTH= 36" STAND DEPTH SPREAD DOWN TO 30"
- HOST STRUCTURE TYPE= 3,000 PSI CONCRETE (4" MIN. DEPTH)
- 120MPH EXPOSURE 'C' INSTALLED CONDITION



PROCEDURE:		RESULT:
1	DETERMINE STAND CONFIGURATION TYPE ON SHEET 2	(2) UNITS PER (3) LEG FRAMES OPTION FALLS WITHIN CONFIG. <b>TYPE B, SHEET 2</b>
2	LOCATE DESIGN SCHEDULE FOR 36" ROOF TOP STAND DEPTH SPREAD	SCHEDULE CAN BE FOUND ON <b>SHEET 4</b>
3	DETERMINE WHICH TYPE OF STAND COMPONENTS APPLY	THE 36" STAND DEPTH DESIGN SCHEDULE PROVIDES VALUES FOR "HD" STANDS ONLY
4	DETERMINE THE LATERAL FORCE CAPACITY ACTING ON THE UNITS FROM THE 24" MIN. DESIGN SCHEDULE ON SHEET 4	FOR A SQUARE 30"W x 30"D x 30"H UNIT ON AN 30" STAND HEIGHT WITH CONFIGURATION TYPE B, FROM SHEET 4 FIND AN ALLOWABLE INSTALLATION LATERAL PRESSURE OF 31.9PSF
5	DETERMINE IF THE MAXIMUM ALLOWABLE UNIT PRESSURE IS OK FOR THE 120 B INSTALLATION REQUIREMENT	FROM SHEET 5, WIND LOAD PRESSURES FOR GROUND MOUNTED UNITS TABLE, FIND FOR SQUARE UNITS THAT THE DESIGN PRESSURE FOR 120MPH EXPOSURE 'B' CONDITION IS 16.7PSF WHICH IS LESS THAN THE MAX ALLOWABLE PRESSURE FOR THIS EXAMPLE UNIT OF 31.9PSF <b>APPROVED</b>
5	DETERMINE PERMISSIBLE ANCHOR TYPES AND VERIFY HOST STRUCTURE TYPE	UTILIZE ANCHOR TYPES FROM DESIGN SCHEDULE ASSOCIATED WITH THE ALLOWABLE WIND VALUES DETERMINED IN STEP 4. FOR THIS EXAMPLE, <b>ANCHOR TYPES 1 OR 2 MAY BE APPLIED</b> . FOR THIS EXAMPLE UTILIZE ANCHOR TYPE 1 FOR CONCRETE HOST STRUCTURE TYPE. INSTALL STANDS PER ANCHOR SCHEDULE AND DETAILS AS ILLUSTRATED ON SHEET 6.



DESIGN SCHEDULE - 24" STAND DEPTH CONFIGURATIONS (STD & HD):

WIND SPEED (MPH)	WIND EXPOSURE	MEAN ROOF HEIGHT (FT)	WIND PRESSURE (PSF)	UPLIFT PRESSURE (PSF)
15	B	0-15	103.3	51.6
20	B	0-15	103.3	51.6
25	B	0-15	103.3	51.6
30	B	0-15	103.3	51.6
35	B	0-15	103.3	51.6
40	B	0-15	103.3	51.6
45	B	0-15	103.3	51.6
50	B	0-15	103.3	51.6
55	B	0-15	103.3	51.6
60	B	0-15	103.3	51.6

DESIGN SCHEDULE - 36" STAND DEPTH CONFIGURATIONS (HD ONLY):

WIND SPEED (MPH)	WIND EXPOSURE	MEAN ROOF HEIGHT (FT)	WIND PRESSURE (PSF)	UPLIFT PRESSURE (PSF)
15	B	0-15	103.3	51.6
20	B	0-15	103.3	51.6
25	B	0-15	103.3	51.6
30	B	0-15	103.3	51.6
35	B	0-15	103.3	51.6
40	B	0-15	103.3	51.6
45	B	0-15	103.3	51.6
50	B	0-15	103.3	51.6
55	B	0-15	103.3	51.6
60	B	0-15	103.3	51.6

(SHEET 4)

DESIGN SCHEDULE - 48" STAND DEPTH CONFIGURATIONS (FIXED ONLY):

WIND SPEED (MPH)	WIND EXPOSURE	MEAN ROOF HEIGHT (FT)	WIND PRESSURE (PSF)	UPLIFT PRESSURE (PSF)
15	B	0-15	103.3	51.6
20	B	0-15	103.3	51.6
25	B	0-15	103.3	51.6
30	B	0-15	103.3	51.6
35	B	0-15	103.3	51.6
40	B	0-15	103.3	51.6
45	B	0-15	103.3	51.6
50	B	0-15	103.3	51.6
55	B	0-15	103.3	51.6
60	B	0-15	103.3	51.6

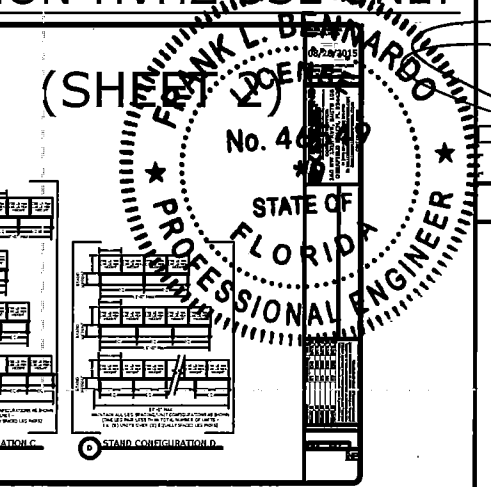
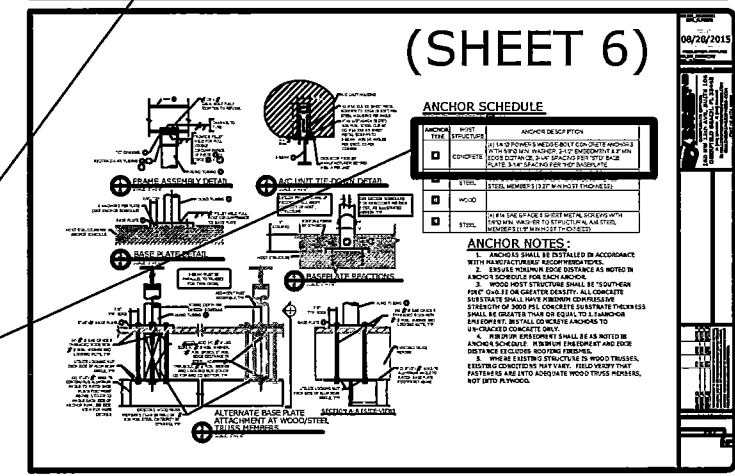
WIND LOAD DESIGN PRESSURES FOR ROOF-TOP MOUNTED UNITS TABLE:

WIND SPEED (MPH)	WIND EXPOSURE	MEAN ROOF HEIGHT (FT)	WIND PRESSURE (PSF)	UPLIFT PRESSURE (PSF)
15	B	0-15	103.3	51.6
20	B	0-15	103.3	51.6
25	B	0-15	103.3	51.6
30	B	0-15	103.3	51.6
35	B	0-15	103.3	51.6
40	B	0-15	103.3	51.6
45	B	0-15	103.3	51.6
50	B	0-15	103.3	51.6
55	B	0-15	103.3	51.6
60	B	0-15	103.3	51.6

WIND LOAD DESIGN PRESSURES FOR GROUND MOUNTED UNITS:

WIND SPEED (MPH)	WIND EXPOSURE	MEAN ROOF HEIGHT (FT)	WIND PRESSURE (PSF)	UPLIFT PRESSURE (PSF)
15	B	0-15	16.7	31.9
20	B	0-15	16.7	31.9
25	B	0-15	16.7	31.9
30	B	0-15	16.7	31.9
35	B	0-15	16.7	31.9
40	B	0-15	16.7	31.9
45	B	0-15	16.7	31.9
50	B	0-15	16.7	31.9
55	B	0-15	16.7	31.9
60	B	0-15	16.7	31.9

(SHEET 5)



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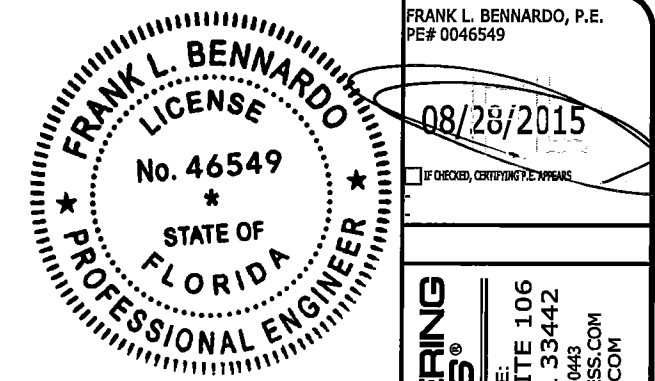


# DESIGN SCHEDULE - 48" DEPTH (FIXED) STAND DEPTH ROOF-TOP MOUNTED CONFIGURATIONS

NON-HVHZ USE ONLY

LOAD TRANSFER INFORMATION FOR USE WITH HOST STRUCTURE VERIFICATION ONLY

A/C UNIT DIMENSIONS			STAND HEIGHT	MAXIMUM ALLOWABLE WIND PRESSURES; "HD" STAND ONLY								MAX. BASE MOMENT (M)	MAX. BASE SHEAR (V)	MAX. BASE UPLIFT (T)	MAX. BASE GRAVITY (C)
(W)	(D)	(H)		CONFIG: A		CONFIG: B		CONFIG: C		CONFIG: D					
				ANCHOR TYPES: 1 OR 2		ANCHOR TYPES: 1 OR 2		ANCHOR TYPES: 1 OR 2		ANCHOR TYPES: 1 OR 2					
				LATERAL LOAD (PSF)	UPLIFT LOAD (PSF)	LATERAL LOAD (PSF)	UPLIFT LOAD (PSF)	LATERAL LOAD (PSF)	UPLIFT LOAD (PSF)	LATERAL LOAD (PSF)	UPLIFT LOAD (PSF)				
24"	24"	24"	18"	229.5 PSF	114.7 PSF	135.4 PSF	67.7 PSF	118.1 PSF	59.0 PSF	88.8 PSF	44.4 PSF	246.9 LB-FT	265.8 LB	454.8 LB	387.0 LB
30"	30"	30"		154.6 PSF	77.3 PSF	90.2 PSF	45.1 PSF	77.3 PSF	38.6 PSF	58.1 PSF	29.0 PSF	246.9 LB-FT	265.8 LB	504.6 LB	417.5 LB
36"	36"	36"		109.0 PSF	54.5 PSF	63.6 PSF	31.8 PSF	54.5 PSF	27.2 PSF	41.0 PSF	20.5 PSF	246.9 LB-FT	265.8 LB	539.7 LB	448.9 LB
42"	42"	42"		81.0 PSF	40.5 PSF	47.2 PSF	23.6 PSF	40.5 PSF	20.2 PSF	30.4 PSF	15.2 PSF	246.9 LB-FT	265.8 LB	574.3 LB	480.8 LB
48"	48"	48"	24"	62.5 PSF	31.2 PSF	36.4 PSF	18.2 PSF	31.2 PSF	15.6 PSF	23.5 PSF	11.7 PSF	246.9 LB-FT	265.8 LB	608.6 LB	513.0 LB
24"	24"	24"		184.4 PSF	92.2 PSF	107.6 PSF	53.8 PSF	92.2 PSF	46.1 PSF	69.3 PSF	34.6 PSF	246.9 LB-FT	207.4 LB	414.3 LB	384.5 LB
30"	30"	30"		120.7 PSF	60.3 PSF	70.4 PSF	35.2 PSF	60.3 PSF	30.1 PSF	45.3 PSF	22.6 PSF	246.9 LB-FT	207.4 LB	442.4 LB	408.4 LB
36"	36"	36"		85.1 PSF	42.5 PSF	49.6 PSF	24.8 PSF	42.5 PSF	21.2 PSF	32.0 PSF	16.0 PSF	246.9 LB-FT	207.4 LB	469.7 LB	432.9 LB
42"	42"	42"	30"	63.2 PSF	31.6 PSF	36.8 PSF	18.4 PSF	31.6 PSF	15.8 PSF	23.7 PSF	11.8 PSF	246.9 LB-FT	207.4 LB	496.7 LB	457.7 LB
48"	48"	48"		48.8 PSF	24.4 PSF	28.4 PSF	14.2 PSF	24.4 PSF	12.2 PSF	23.7 PSF	11.8 PSF	246.9 LB-FT	207.4 LB	523.5 LB	482.9 LB
24"	24"	24"		151.0 PSF	75.5 PSF	88.0 PSF	44.0 PSF	75.5 PSF	37.7 PSF	56.7 PSF	28.3 PSF	245.9 LB-FT	169.8 LB	379.0 LB	382.6 LB
30"	30"	30"		98.8 PSF	49.4 PSF	57.6 PSF	28.8 PSF	49.4 PSF	24.7 PSF	37.1 PSF	18.5 PSF	245.9 LB-FT	169.8 LB	401.9 LB	402.1 LB
36"	36"	36"	36"	69.6 PSF	34.8 PSF	40.6 PSF	20.3 PSF	34.8 PSF	17.4 PSF	26.2 PSF	13.1 PSF	245.9 LB-FT	169.8 LB	424.3 LB	422.2 LB
42"	42"	42"		51.7 PSF	25.8 PSF	30.2 PSF	15.1 PSF	25.8 PSF	12.9 PSF	24.5 PSF	10.6 PSF	245.9 LB-FT	169.8 LB	446.4 LB	442.5 LB
48"	48"	48"		39.9 PSF	19.9 PSF	23.3 PSF	11.6 PSF	23.3 PSF	11.6 PSF	24.5 PSF	10.6 PSF	245.9 LB-FT	169.8 LB	468.3 LB	463.1 LB
24"	24"	24"		122.5 PSF	61.2 PSF	71.4 PSF	35.7 PSF	61.2 PSF	30.6 PSF	46.0 PSF	23.0 PSF	234.7 LB-FT	137.8 LB	339.1 LB	371.2 LB
30"	30"	30"	36"	80.1 PSF	40.0 PSF	46.7 PSF	23.3 PSF	40.0 PSF	20.0 PSF	30.1 PSF	15.0 PSF	234.7 LB-FT	137.8 LB	357.7 LB	387.1 LB
36"	36"	36"		56.5 PSF	28.2 PSF	32.9 PSF	16.4 PSF	28.2 PSF	14.1 PSF	21.2 PSF	10.6 PSF	234.7 LB-FT	137.8 LB	375.9 LB	403.3 LB
42"	42"	42"		42.0 PSF	21.0 PSF	24.5 PSF	12.2 PSF	21.0 PSF	10.5 PSF	234.7 LB-FT	137.8 LB	393.9 LB	419.9 LB		
48"	48"	48"		32.4 PSF	16.2 PSF	24.5 PSF	12.2 PSF	21.0 PSF	10.5 PSF	234.7 LB-FT	137.8 LB	411.6 LB	436.5 LB		



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## WIND LOAD DESIGN PRESSURE GUIDE FOR ROOF-TOP MOUNTED UNITS TABLE:

MOUNTING HEIGHT	UNIT SIZE		WIND LOAD COMPONENT	ROOFTOP-MOUNTED UNITS - WIND LOAD DESIGN PRESSURES											
				120 MPH, EXP. B†		120 MPH, EXP. C†		120 MPH, EXP. D†		170 MPH, EXP. B††		170 MPH, EXP. C††		170 MPH, EXP. D††	
				SQUARE	ROUND, HEX/OCTAGONAL	SQUARE	ROUND, HEX/OCTAGONAL	SQUARE	ROUND, HEX/OCTAGONAL	SQUARE	ROUND, HEX/OCTAGONAL	SQUARE	ROUND, HEX/OCTAGONAL	SQUARE	ROUND, HEX/OCTAGONAL
≤ 15 FT	≤48 IN	≤48 IN	LATERAL	21.7 PSF	22.9 PSF	32.1 PSF	33.9 PSF	39.0 PSF	41.1 PSF	43.6 PSF	46.0 PSF	64.4 PSF	68.0 PSF	78.2 PSF	82.5 PSF
			UPLIFT	17.2 PSF	18.1 PSF	25.3 PSF	26.8 PSF	30.8 PSF	32.5 PSF	34.4 PSF	36.4 PSF	50.9 PSF	53.7 PSF	61.7 PSF	65.2 PSF
≤ 30 FT	≤48 IN	≤48 IN	LATERAL	26.5 PSF	28.0 PSF	37.2 PSF	39.2 PSF	44.0 PSF	46.4 PSF	53.2 PSF	56.1 PSF	74.6 PSF	78.7 PSF	88.2 PSF	93.1 PSF
			UPLIFT	20.9 PSF	22.1 PSF	29.3 PSF	31.0 PSF	34.7 PSF	36.6 PSF	42.0 PSF	44.3 PSF	58.9 PSF	62.1 PSF	69.6 PSF	73.5 PSF
≤ 40 FT	≤48 IN	≤48 IN	LATERAL	28.8 PSF	30.4 PSF	39.5 PSF	41.7 PSF	46.2 PSF	48.8 PSF	57.7 PSF	60.9 PSF	79.2 PSF	83.6 PSF	92.7 PSF	97.9 PSF
			UPLIFT	22.7 PSF	24.0 PSF	31.2 PSF	32.9 PSF	36.5 PSF	38.5 PSF	45.6 PSF	48.1 PSF	62.5 PSF	66.0 PSF	73.2 PSF	77.3 PSF
≤ 60 FT	≤48 IN	≤48 IN	LATERAL	32.3 PSF	34.1 PSF	43.0 PSF	45.4 PSF	49.6 PSF	52.3 PSF	64.8 PSF	68.4 PSF	86.3 PSF	91.1 PSF	99.5 PSF	105.1 PSF
			UPLIFT	25.5 PSF	26.9 PSF	33.9 PSF	35.8 PSF	39.1 PSF	41.3 PSF	51.2 PSF	54.0 PSF	68.1 PSF	71.9 PSF	78.6 PSF	82.9 PSF
≤ 70 FT	≤48 IN	≤48 IN	LATERAL	20.0 PSF	16.3 PSF	26.2 PSF	21.3 PSF	30.0 PSF	24.3 PSF	40.2 PSF	32.6 PSF	52.6 PSF	42.7 PSF	60.2 PSF	48.9 PSF
			UPLIFT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
≤ 80 FT	≤48 IN	≤48 IN	LATERAL	20.8 PSF	16.8 PSF	26.9 PSF	21.8 PSF	30.6 PSF	24.9 PSF	41.6 PSF	33.8 PSF	54.0 PSF	43.8 PSF	61.5 PSF	49.9 PSF
			UPLIFT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
≤ 100 FT	≤48 IN	≤48 IN	LATERAL	22.0 PSF	17.9 PSF	28.1 PSF	22.8 PSF	31.8 PSF	25.8 PSF	44.2 PSF	35.9 PSF	56.4 PSF	45.8 PSF	63.8 PSF	51.8 PSF
			UPLIFT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

WIND LOAD DESIGNS ARE BASED ON THE FOLLOWING:

- Kd=0.90 FOR SQUARE UNITS.
- Kd=0.95 FOR ROUND, HEXAGONAL & OCTAGONAL SHAPED UNITS.
- LATERAL Gcf=1.90 FOR LOCATIONS OUTSIDE OF THE HVHZ & MRH≤60 FT (PER ASCE 7-10 29.5).
- LATERAL Gcf=VARIES FOR LOCATIONS OUTSIDE OF THE HVHZ & MRH>60FT (PER ASCE 7-10 29.5).
- VERTICAL Gcf=1.50 FOR ALL LOCATIONS (PER ASCE 7-10 29.5 & FBC 1620.6).
- ALL GROUND MOUNTED UNIT DESIGN CRITERIA CONSIDERS ASCE 7-10 SECTION 29.4.1 FOR "OTHER STRUCTURES - SOLID FREESTANDING WALLS" INSTALLATIONS AT GRADE.
- ALL ROOFTOP MOUNTED UNIT DESIGN CRITERIA CONSIDERS ASCE 7-10 SECTION 29.5 FOR ROOF TOP HEIGHTS>60 FT & SECTION 29.5.1 FOR ROOF TOP HEIGHTS ≤60 FT.
- ALL OTHER DESIGN VARIABLES ARE IN ACCORDANCE WITH ASCE 7-10.
- FOR AN EXPLANATION OF EXPOSURE CATEGORIES THAT ACCOMPANY THE Vult WIND SPEEDS IN THIS APPROVAL, SEE SECTION 26.7.3 OF ASCE 7-10.
- ALL VALUES ON THIS SHEET REPRESENT (ASD) DESIGN PRESSURES.
- ALL ROOFTOP-MOUNTED DESIGN PRESSURES ALLOW FOR A MAXIMUM 36" TALL A/C STAND PER THIS APPROVAL.

### DESIGN SCHEDULE NOTES:

- WHEN USING MULTIPLE SIZES ON ONE STAND, UTILIZE MAXIMUM UNIT SIZE TO DETERMINE ALLOWABLE WIND PRESSURES FROM DESIGN SCHEDULES HEREIN.
- REFERENCE ANCHOR SCHEDULE FOR ANCHOR TYPES LISTED HEREIN.

### TABLE LEGEND:

-DENOTES VALUES NOT APPROVED FOR USE

## WIND LOAD DESIGN PRESSURE GUIDE FOR GROUND MOUNTED UNITS:

UNIT SIZE			WIND LOAD COMPONENT	UNIT TYPE	GROUND MOUNTED UNITS - WIND LOAD DESIGN PRESSURES					
WIDTH/DIAMETER	HEIGHT	WIND LOAD COMPONENT			120 MPH, EXP. B†	120 MPH, EXP. C†	120 MPH, EXP. D†	170 MPH, EXP. B††	170 MPH, EXP. C††	170 MPH, EXP. D††
≤48 IN	≤48 IN	LATERAL	SQUARE	16.7 PSF	24.6 PSF	29.9 PSF	33.5 PSF	49.4 PSF	60.0 PSF	
≤48 IN	≤48 IN	LATERAL	ROUND, HEX/OCT.	17.6 PSF	26.0 PSF	31.5 PSF	35.3 PSF	52.2 PSF	63.3 PSF	

† THIS WIND SPEED IS PERMISSIBLE TO BE USED WITHIN BREVARD COUNTY OR SIMILAR COUNTIES WITH AN ULTIMATE WIND VELOCITY OF 120 MPH, RISK CATEGORY II STRUCTURE.

††THIS WIND SPEED IS PERMISSIBLE TO BE USED WITHIN PALM BEACH COUNTY OR SIMILAR COUNTIES WITH AN ULTIMATE WIND VELOCITY OF 170 MPH, RISK CATEGORY II STRUCTURE.

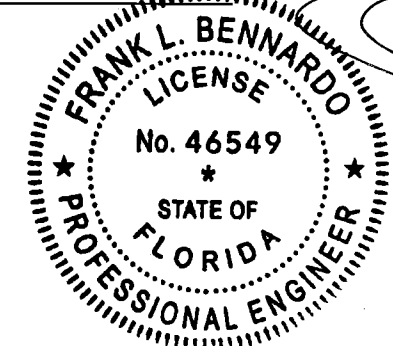
REMARKS	DRWN	CHKD	DATE
INIT ISSUE	FLB	TSB	07/08/09
REV 2010 FBC	CSL	TSB	05/11/12
REV FBC 5TH (2014)	CSL	FLB	06/15/15
DATE OF USE REVIEW	FLB	FLB	8/25/15

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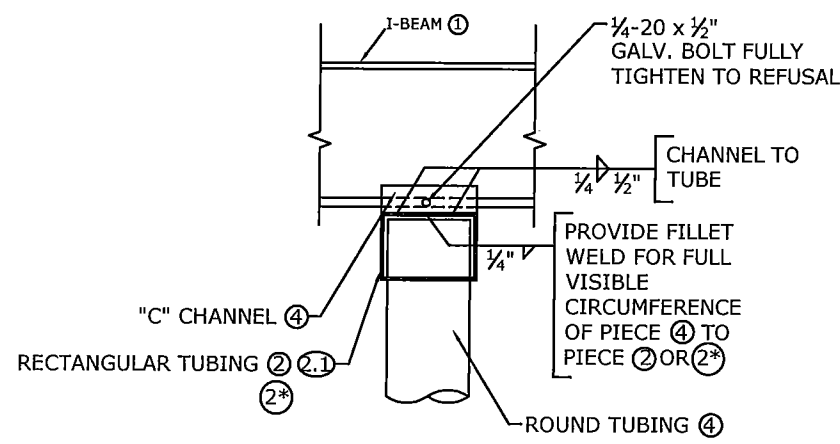
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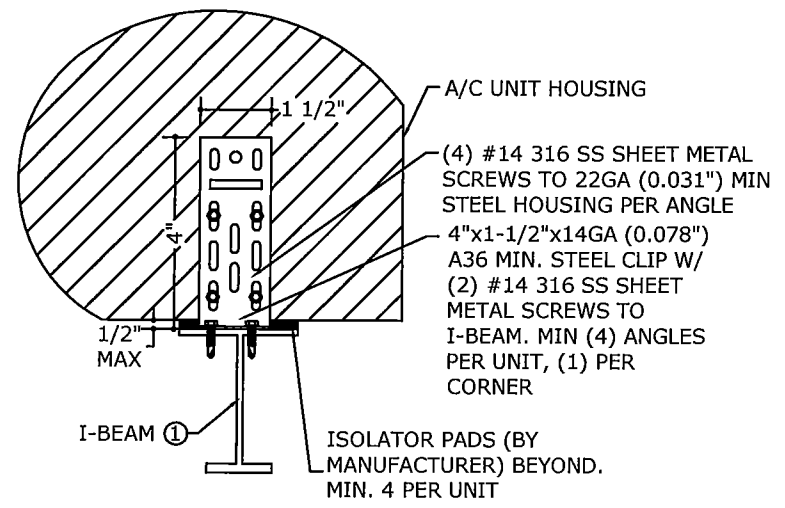
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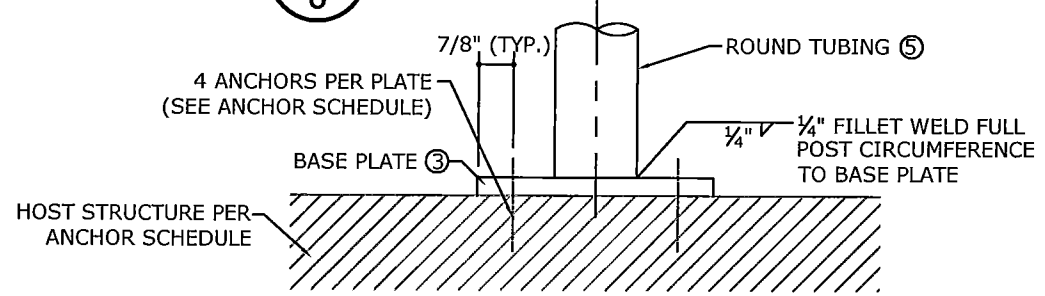
08/28/2015 - 12:49pm zachr V:\Projects\15-2480 Aluminum AC Stand - FSA - Update FL16921 for 2014 Florida Bldg Code-Project\WP15-2480\_b AC Stand FSA (Non HVHZ)\_FLB.dwg



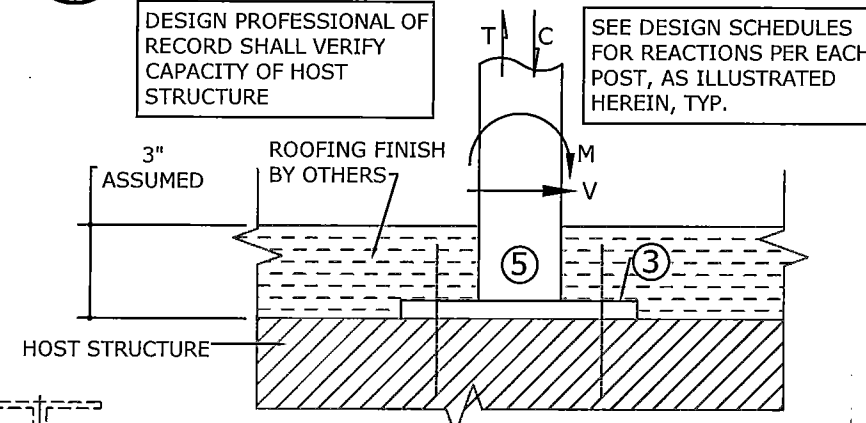
**1**  
**6** FRAME ASSEMBLY DETAIL



**2**  
**6** A/C UNIT TIE-DOWN DETAIL



**3**  
**6** BASE PLATE DETAIL



**4**  
**6** BASEPLATE REACTIONS  
FOR ILLUSTRATIVE PURPOSES ONLY

**ANCHOR SCHEDULE**

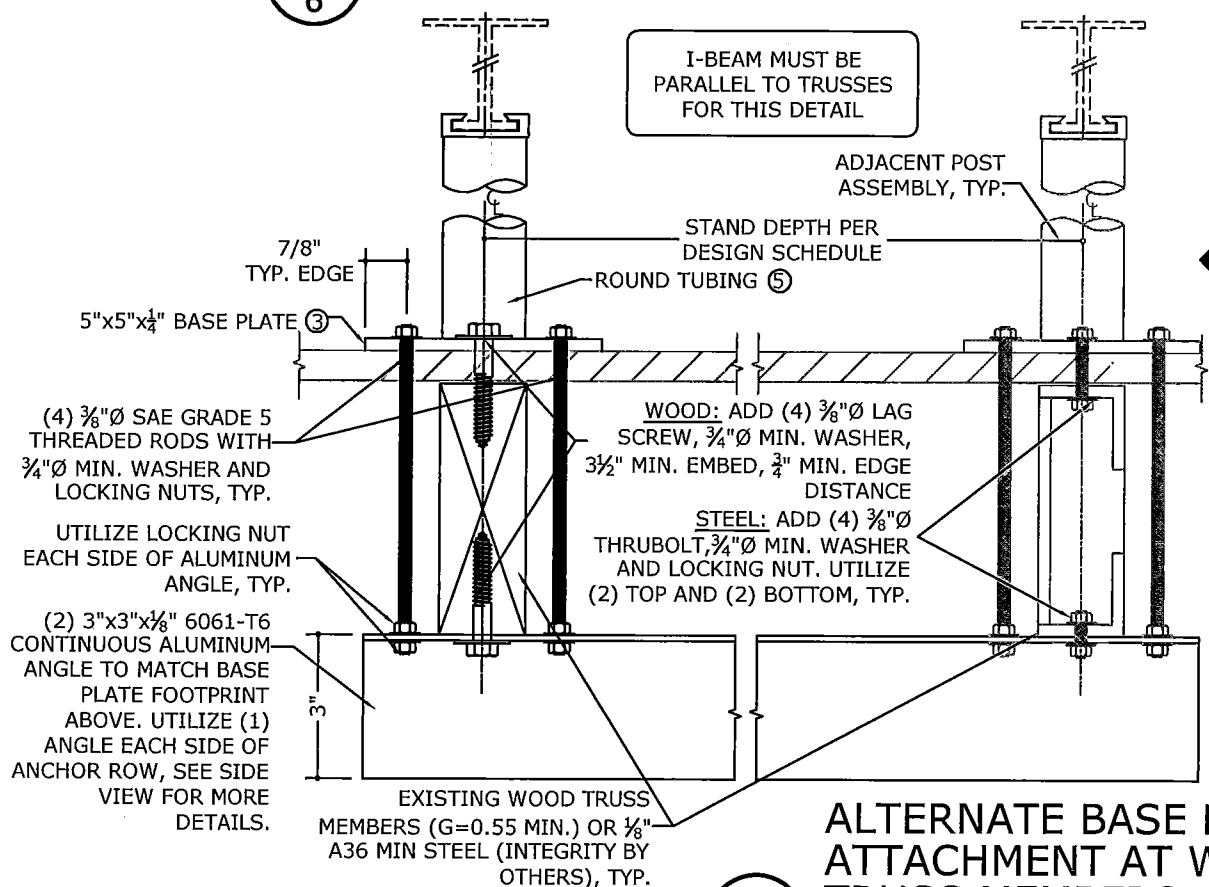
FOR USE WITH DETAIL 3 ON THIS SHEET ONLY

ANCHOR TYPE	HOST STRUCTURE	ANCHOR DESCRIPTION
1	CONCRETE	(4) 1/4"Ø POWERS WEDGE-BOLT CONCRETE ANCHORS WITH 5/8"Ø MIN. WASHER, 2-1/2" EMBEDMENT & 3" MIN EDGE DISTANCE, 2-1/4" SPACING PER "STD" BASE PLATE, 3-1/4" SPACING PER "HD" BASEPLATE
2	STEEL	(4) 3/8"Ø SAE GRADE 2 GALVANIZED BOLTS W/ NUT & 3/4"Ø MIN. WASHER, TO STRUCTURAL A36 STEEL MEMBERS (0.27" MIN HOST THICKNESS)
3	WOOD	USE DETAIL 5/6. USE DETAIL 3/6 FOR GROUND MOUNT ONLY WHEN APPROVED BY EOR/BUILDING OFFICIAL (SEE NOTES BELOW)
4	STEEL	(4) #14 SAE GRADE 5 SHEET METAL SCREWS WITH 5/8"Ø MIN. WASHER TO STRUCTURAL A36 STEEL MEMBERS (1/8" MIN HOST THICKNESS)

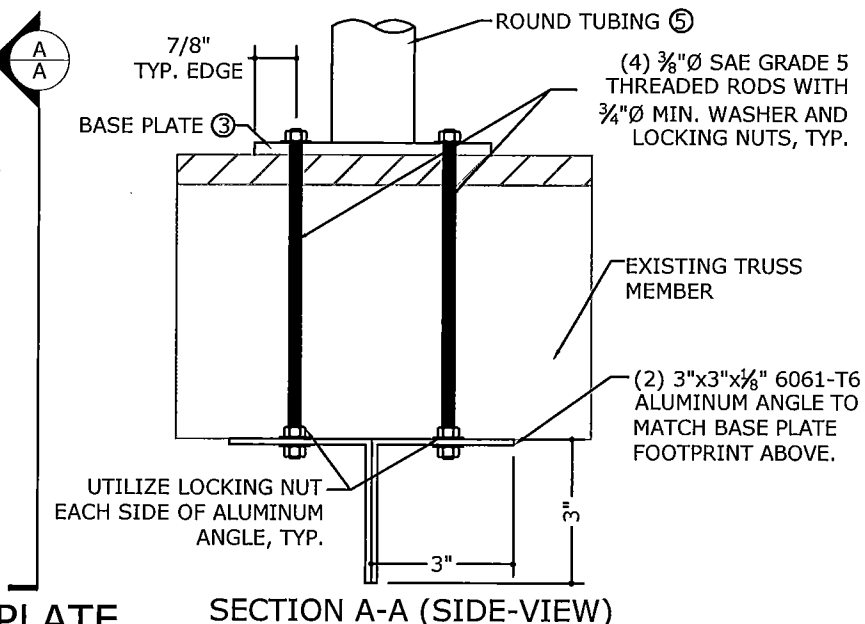
**ANCHOR NOTES:**

IT IS UP TO THE INSTALLER TO ENSURE THAT THE HOST STRUCTURE IS SOLID AND CREATES A FIXED CONNECTION WITH THE AC STAND IN THAT ROTATION IS STRICTLY PREVENTED. IF THIS IS AT ALL IN QUESTION, THE BUILDING OFFICIAL SHALL REQUIRE A SITE SPECIFIC EVALUATION TO ENSURE STAND STABILITY

- ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.
- ENSURE MINIMUM EDGE DISTANCE AS NOTED IN ANCHOR SCHEDULE FOR EACH ANCHOR.
- ALL CONCRETE SUBSTRATE SHALL HAVE MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI. CONCRETE SUBSTRATE THICKNESS SHALL BE GREATER THAN OR EQUAL TO 1.5xANCHOR EMBEDMENT. INSTALL CONCRETE ANCHORS TO UN-CRACKED CONCRETE ONLY.
- MINIMUM EMBEDMENT SHALL BE AS NOTED IN ANCHOR SCHEDULE. MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDES ROOFING FINISHES.



**5**  
**6** ALTERNATE BASE PLATE ATTACHMENT AT WOOD/STEEL TRUSS MEMBERS  
FOR USE AS AN ALTERNATE ATTACHMENT METHOD FOR ALL ANCHOR TYPES ON DESIGN SCHEDULE TABLES. SITE SPECIFIC DESIGN RECOMMENDED.



SECTION A-A (SIDE-VIEW)