



Eastern
Engineering Group

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(305) 599-8133
info@easterneg.com
www.easterneg.com

6100 W Suburban Dr Eastern Engineering Group

Job. No: 25-0997

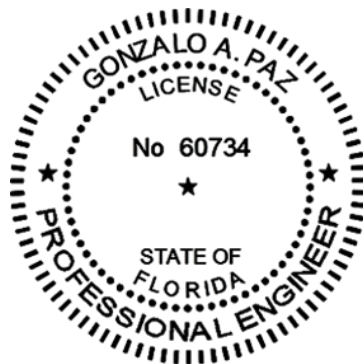
WINDOWS & DOORS SHOP DRAWINGS

6100 W Suburban Dr, Pinecrest,
FL 33156, EE. UU.

STRUCTURAL CALCULATION

THIS ITEM HAS BEEN DIGITALLY SIGNED AND
SEALED BY **GONZALO A. PAZ, PE** ON THE DATE
ADJACENT TO THE SEAL.

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Prepared By:
☐ Gonzalo Paz , PE
Lic. No. 60734
CAN # 26655

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Product Approval
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SECRETARY

FL #	FL39086-R1								
Application Type	Revision								
Code Version	2023								
Application Status	Approved								
Comments									
Archived	☐								
Product Manufacturer	E.S. Windows, Inc.								
Address/Phone/Email	10653 NE Quaybridge Ct. Miami, FL 33138 (305) 624-7775 achamorro@eswillc.com								
Authorized Signature	Jalal Farooq veronica@afceng.com								
Technical Representative	Samir Sabagh								
Address/Phone/Email	3550 NW 49th St. Miami, FL 33142 (305) 638-5151 ssabagh@energiasolarsa.com								
Quality Assurance Representative									
Address/Phone/Email									
Category	Windows								
Subcategory	Mullions								
Compliance Method	Evaluation Report from a Florida Registered Architect or a Licensed Florida Professional Engineer ☐ Evaluation Report - Hardcopy Received								
Florida Engineer or Architect Name who developed the Evaluation Report	Jalal Farooq								
Florida License	PE-81223								
Quality Assurance Entity	Keystone Certifications, Inc.								
Quality Assurance Contract Expiration Date	07/16/2025								
Validated By	Abel Carrasco, PE ☒ Validation Checklist - Hardcopy Received								
Certificate of Independence	FL39086_R1_COI_SS - Certificate of Independence.pdf								
Referenced Standard and Year (of Standard)	<table> <thead> <tr> <th><u>Standard</u></th><th><u>Year</u></th></tr> </thead> <tbody> <tr> <td>TAS 201</td><td>1994</td></tr> <tr> <td>TAS 202</td><td>1994</td></tr> <tr> <td>TAS 203</td><td>1994</td></tr> </tbody> </table>	<u>Standard</u>	<u>Year</u>	TAS 201	1994	TAS 202	1994	TAS 203	1994
<u>Standard</u>	<u>Year</u>								
TAS 201	1994								
TAS 202	1994								
TAS 203	1994								
Equivalence of Product Standards Certified By									
Sections from the Code									

Product Approval Method

Method 1 Option D

Date Submitted

07/19/2023

Date Validated

07/20/2023

Date Pending FBC Approval

07/24/2023

Date Approved

10/18/2023

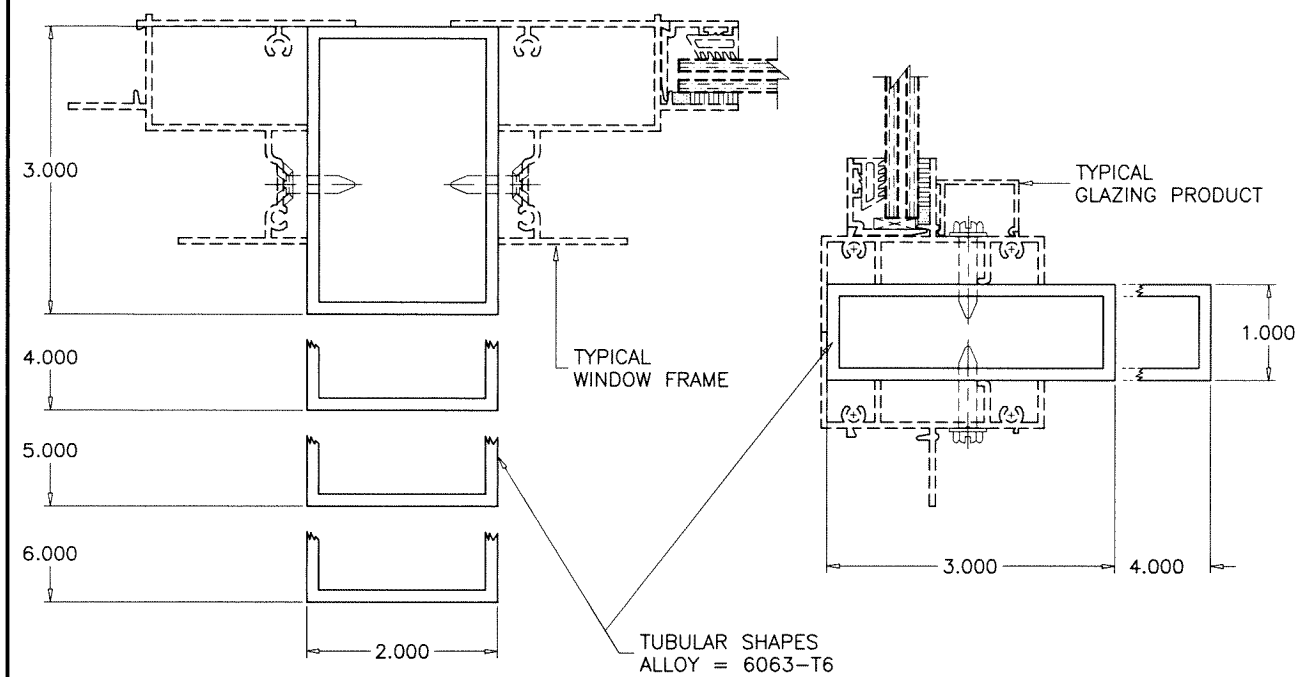
Summary of Products

FL #	Model, Number or Name	Description
39086.1	Clipped, Extruded Aluminum Tube Mullion	Large missile impact resistant clipped aluminum tube mullion.
Limits of Use Approved for use in HVHZ: Yes Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: +150/-150 Other: See drawing 21-45F for installation details.		Installation Instructions FL39086_R1_II_SS - Clipped Tube Mullion (LMI) - DWG 21-45F 2023.pdf Verified By: Jalal Farooq PE #81223 Created by Independent Third Party: Yes Evaluation Reports FL39086_R1_AE_SS - Clipped Tube Mullion (LMI) - PAE 2023.pdf Created by Independent Third Party: Yes

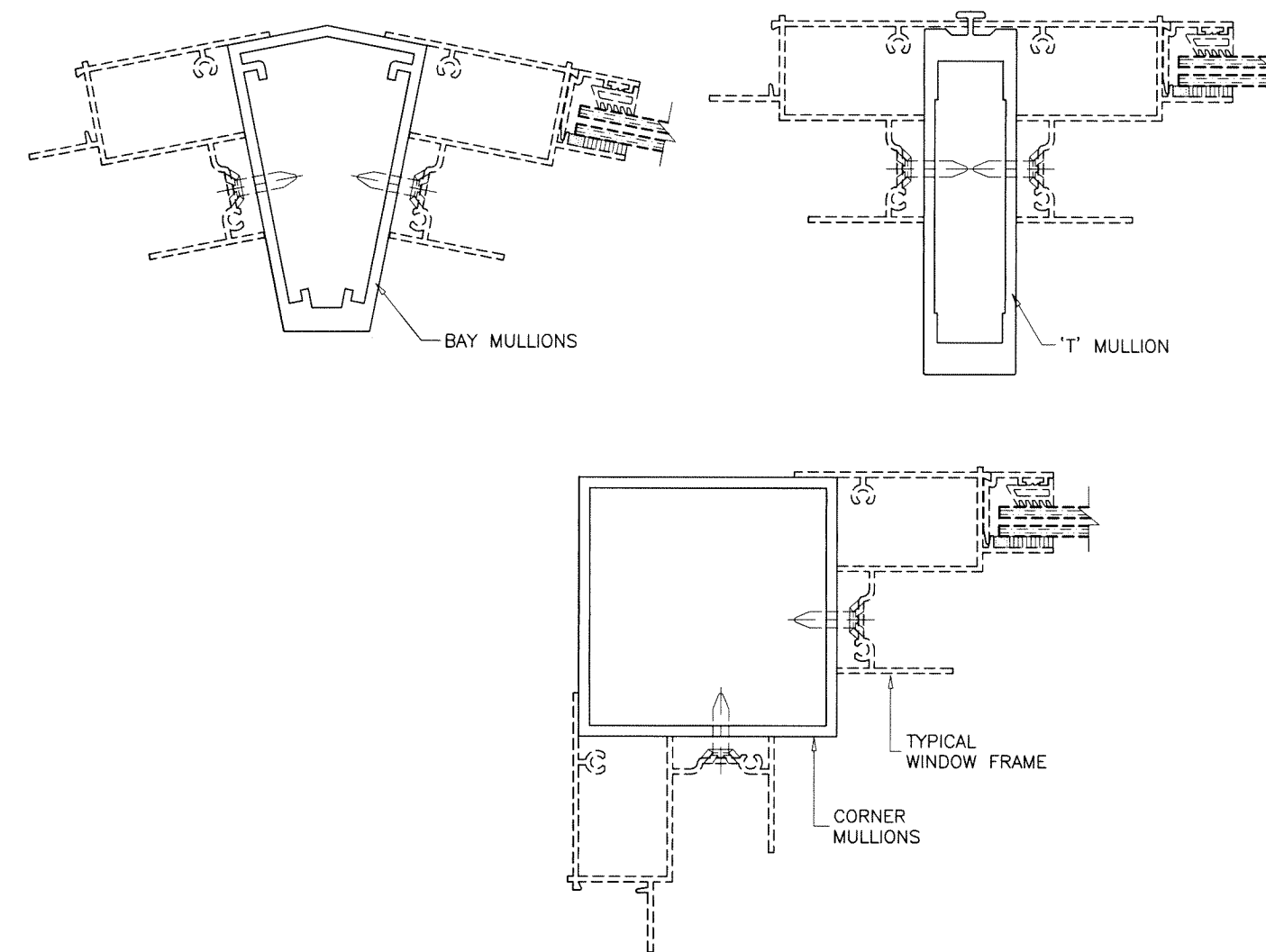
[Back](#)[Next](#)[Contact Us](#) :: 2601 Blair Stone Road, Tallahassee FL 32399 Phone: 850-487-1824The State of Florida is an AA/EEO employer. [Copyright 2007-2013 State of Florida.](#) :: [Privacy Statement](#) :: [Accessibility Statement](#) :: [Refund Statement](#)

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Product Approval Accepts:



MULLIONS CONTAINING TYPICAL GLAZING PRODUCTS
SEE WINDOW OR DOOR APPROVAL FOR FASTENERS SIZES AND SPACING



**ALUMINUM TUBE MULLIONS
USING MULLION PROPERTIES ONLY**

NOTES:

THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE 2020 (7TH EDITION)/2023 (8TH EDITION) FLORIDA BUILDING CODE INCLUDING HIGH VELOCITY HURRICANE ZONE (HVHZ).

ALL GLAZING PRODUCTS USED WITH THESE MULLIONS MUST MEET THE APPLICABLE BUILDING CODE REQUIREMENTS I.E: WIND LOAD, WATER INFILTRATION, FORCED ENTRY RESISTANCE, SAFEGUARDS ETC.

1BY OR 2BY WOOD BUCKS & BUCK FASTENERS BY OTHERS, MUST BE DESIGNED AND INSTALLED ADEQUATELY TO TRANSFER APPLIED PRODUCT LOADS TO THE BUILDING STRUCTURE.

ANCHORS SHALL BE CORROSION RESISTANT, SPACED AS SHOWN ON DETAILS AND INSTALLED PER MANUF'S INSTRUCTIONS. SPECIFIED EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO.

A LOAD DURATION INCREASE IS USED IN DESIGN OF ANCHORS INTO WOOD ONLY.

ALL SHIMS TO BE HIGH IMPACT, NON-METALLIC AND NON-COMPRESSIBLE.

MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE 2020/2023 FLORIDA BLDG. CODE & ADOPTED STANDARDS.

THIS PRODUCT APPROVAL IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT, I.E. LIFE SAFETY OF THIS PRODUCT, ADEQUACY OF STRUCTURE RECEIVING THIS PRODUCT AND SEALING AROUND OPENING FOR WATER INFILTRATION RESISTANCE ETC.

CONDITIONS NOT SHOWN IN THIS DRAWING ARE TO BE ANALYZED SEPARATELY, AND TO BE REVIEWED BY BUILDING OFFICIAL.

DESIGN LOADS SHOWN ARE BASED ON 'ALLOWABLE STRESS DESIGN (ASD)'.

MANUFACTURER'S LABEL SHALL BE LOCATED ON A READILY VISIBLE LOCATION IN ACCORDANCE WITH SECTION 1709.9.3 OF FLORIDA BUILDING CODE. LABELING TO COMPLY WITH SECTION 1709.9.2.

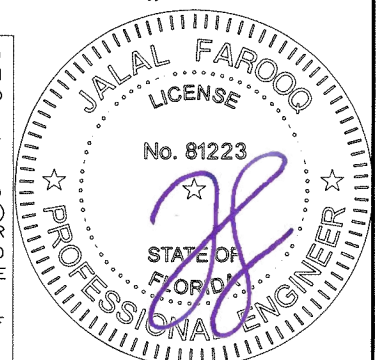
INSTRUCTIONS:

- USE CHARTS AS FOLLOWS.
- STEP 1** DETERMINE DESIGN LOAD REQUIRED PER ASCE 7 FOR PARTICULAR OPENING.
 - STEP 2** USE F.B.C. APPROVED GLAZING PRODUCTS MEETING ABOVE LOAD REQUIREMENTS.
 - STEP 3** USE CONNECTION TO MULLION AS PER PRODUCT APPROVAL.
 - STEP 4** USING CHARTS ON SHEETS 4 & 5 SELECT MULLION SIZE WITH DESIGN RATING MORE THAN DESIGN LOAD SPECIFIED IN STEP 1 ABOVE.
 - STEP 5** USING ANCHOR TYPES ON SHEETS 7 THRU 13 AND ANCHOR CHARTS ON SHEET 6, SELECT ANCHOR TYPE WITH DESIGN RATING MORE THAN THE DESIGN LOADS SPECIFIED IN STEP 1 ABOVE.

MULLION SYSTEM IS RATED FOR LARGE & SMALL MISSILE IMPACT. AND CAN BE USED WITH ALL F.B.C. APPROVED IMPACT AND NON-IMPACT RESISTANT PRODUCTS.

Sealed: 7/19/2023

FL #39086



A- CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION OF THIS PRODUCT BASED ON THIS PRODUCT EVALUATION PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT.

B- THIS PRODUCT EVALUATION DOCUMENT WILL BE CONSIDERED INVALID IF ALTERED BY ANY MEANS.

C- 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. ENGINEER OF RECORD, ACTING AS A DELEGATED ENGINEER TO THE P.E.D. ENGINEER SHALL SUBMIT TO THIS LATTER THE SITE SPECIFIC DRAWINGS FOR REVIEW.

D- THIS P.E.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100 FAX. (305) 262-6978
MULLION 21-45F-ESW

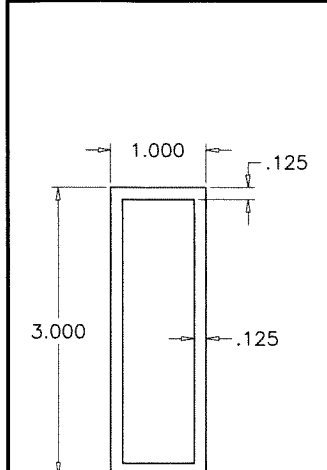
ALUMINUM TUBE MULLIONS

E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

revisions:	no	date	by	description
	A	07.07.23		UPDATED TO 2023 FBC

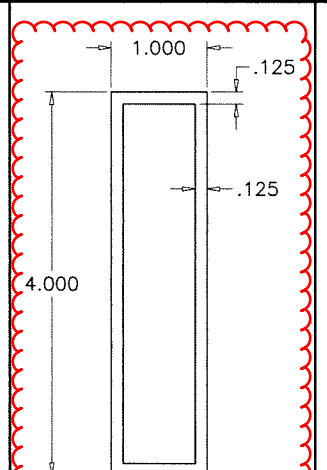
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dr. by:	TARIQ
chk. by:	

drawing no. **21-45F**
4 de 16
sheet **1 of 13**



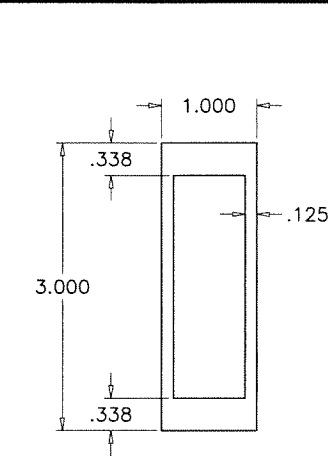
$I_x = .950 \text{ IN}^4$
 $S_x = .634 \text{ IN}^3$

1 X 3
STD. MULLION
6063-T6



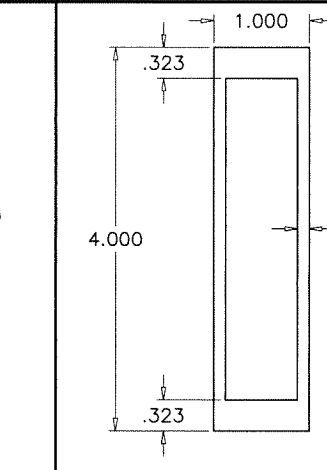
$I_x = 2.037 \text{ IN}^4$
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1 X 4
STD. MULLION
6063-T6



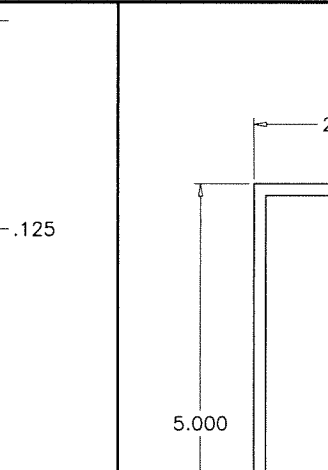
$I_x = 1.466 \text{ IN}^4$
 $S_x = .977 \text{ IN}^3$

1 X 3
CUSTOM MULLION
6063-T6



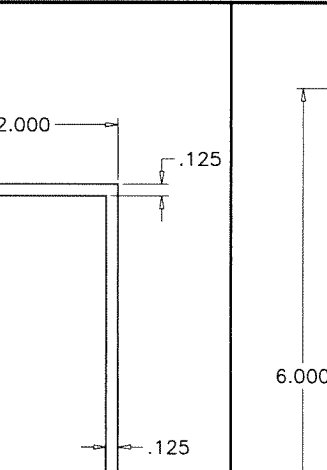
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CUSTOM MULLION
6063-T6



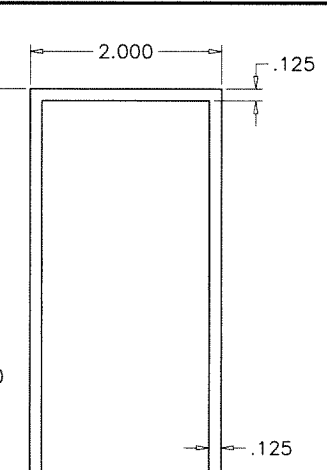
$I_x = 5.204 \text{ IN}^4$
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2 X 5
STD. MULLION
6063-T6



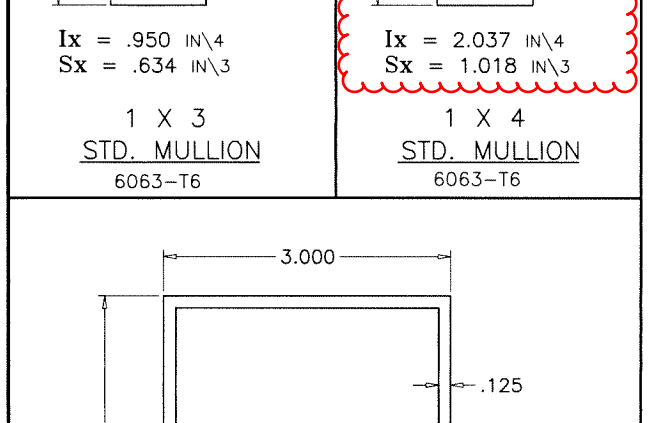
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 $S_x = 2.758 \text{ IN}^3$

2 X 6
STD. MULLION
6063-T6



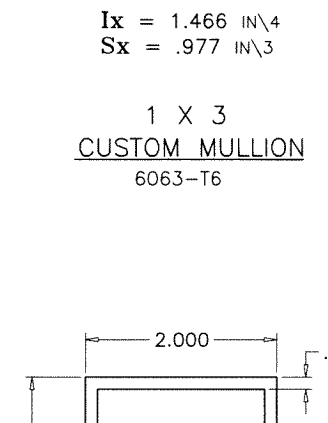
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2 X 6
HEAVY MULLION
6063-T6



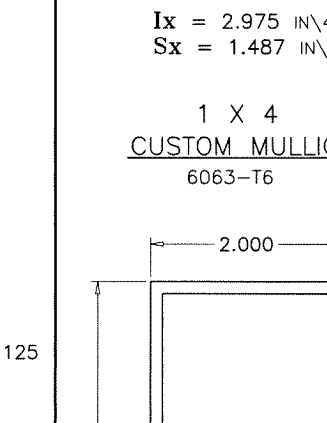
$I_x = 1.467 \text{ IN}^4$
 $S_x = .978 \text{ IN}^3$

3 X 3
STD. MULLION
6063-T6



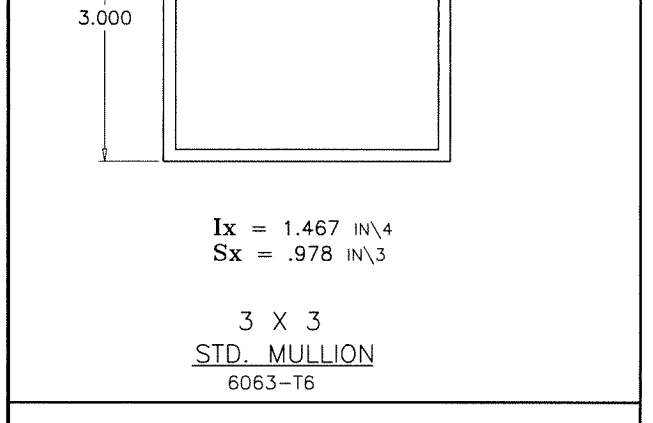
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 $S_x = .978 \text{ IN}^3$

2 X 3
STD. MULLION
6063-T6



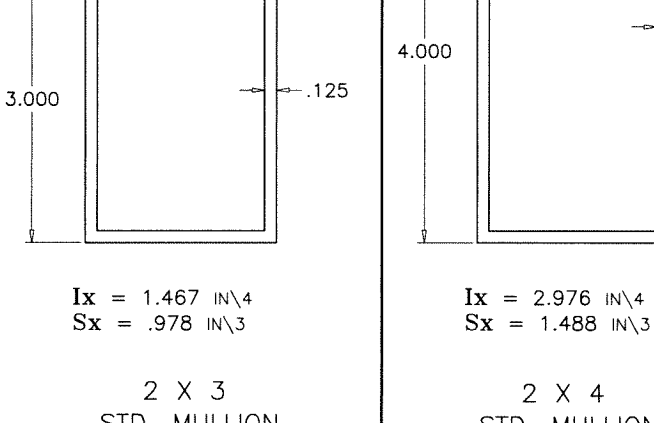
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 $S_x = 1.488 \text{ IN}^3$

2 X 4
STD. MULLION
6063-T6



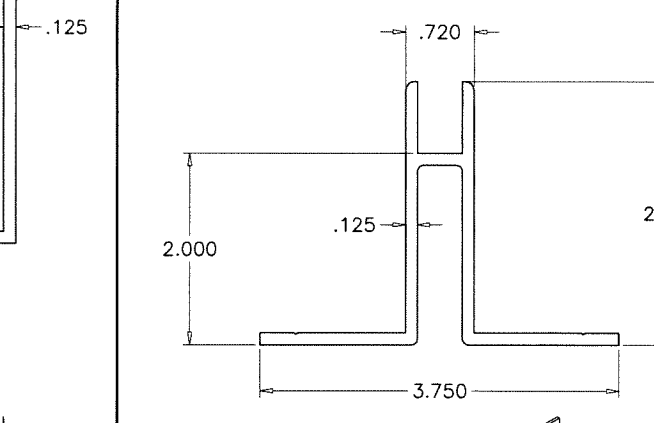
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4 X 4
STD. MULLION
6063-T6



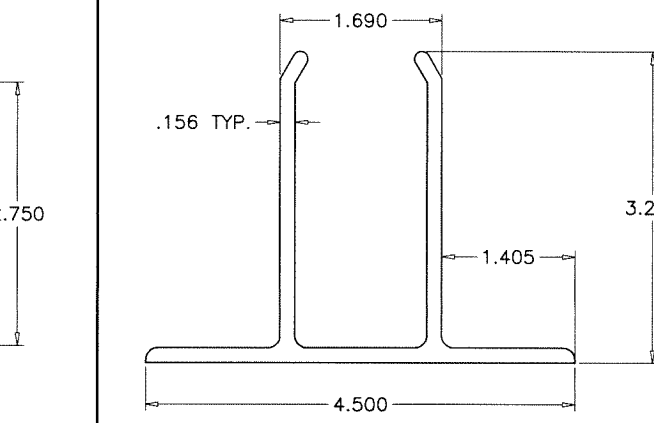
$Ed = \text{MIN. EDGE DIST.}$
 $1/2"$ FOR $1/4"$ DIA. ANCHORS
 $5/8"$ FOR $5/16"$ DIA. ANCHORS

ANGLE CLIP
6063-T5



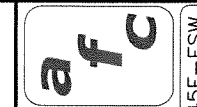
$Ed = \text{MIN. EDGE DIST.}$
 $1/2"$ FOR $1/4"$ DIA. ANCHORS
 $5/8"$ FOR $5/16"$ DIA. ANCHORS

MULLION CLIP
6063-T6



$Ed = \text{MIN. EDGE DIST.}$
 $1/2"$ FOR $1/4"$ DIA. ANCHORS
 $5/8"$ FOR $5/16"$ DIA. ANCHORS

MULLION CLIP
6063-T6



AL-FAROOQ CORPORATION
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ALUMINUM TUBE MULLIONS

E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

no	date	by	description

date: 05-21-21

scale: 1/2" = 1"

dr. by: TARIQ

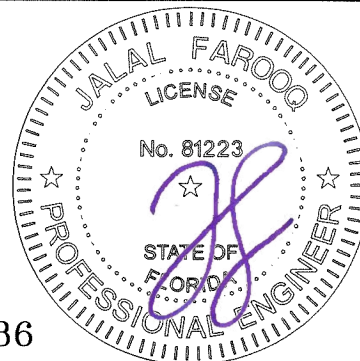
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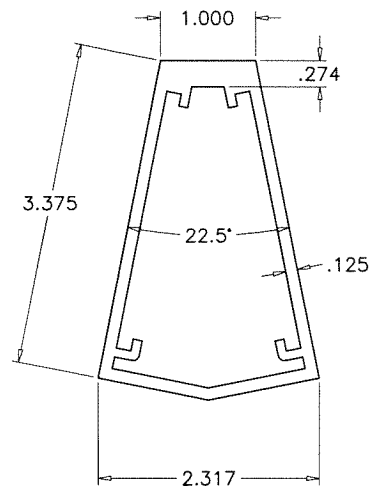
drawing no.
21-45F
5 de 16

sheet **2** of **13**

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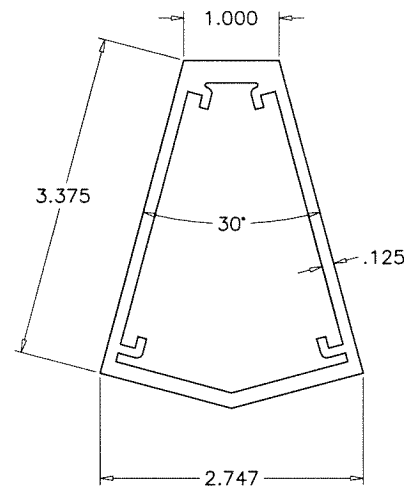
FL #39086





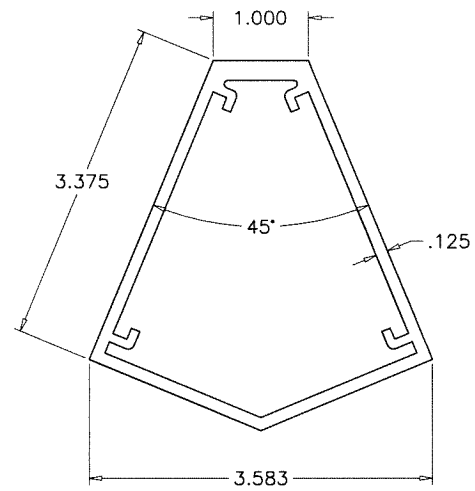
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22-1/2° BAY MULLION
 6063-T6



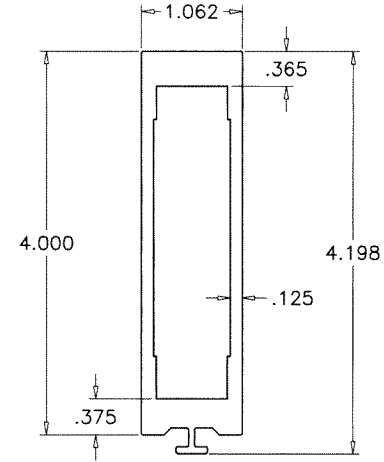
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30° BAY MULLION
 6063-T6



$I_x = 2.680 \text{ IN}^4$
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45° BAY MULLION
 6063-T6

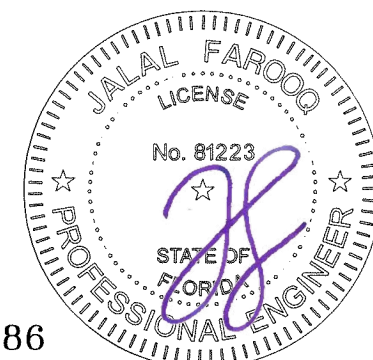


$I_x = 3.439 \text{ IN}^4$
 $S_x = 1.5754 \text{ IN}^3$

'T' MULLION
 6063-T6

Sealed: 7/19/2023

FL #39086



af c
AL-FAROOQ CORPORATION
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revisions:	
no	description

date: 05-21-21
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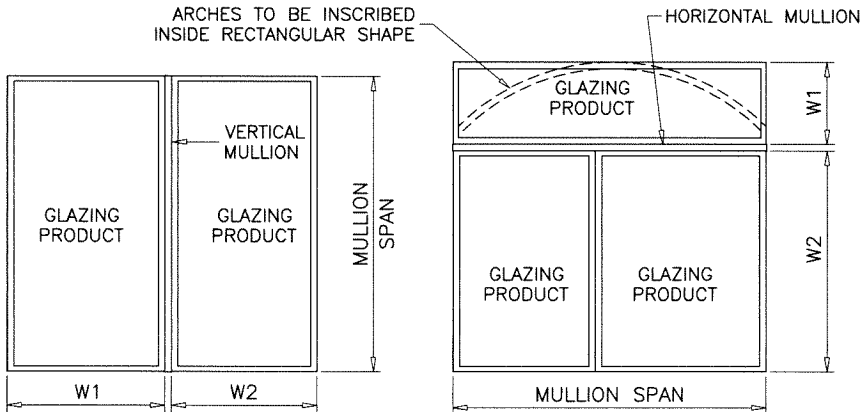
drawing no.
21-45F
 6 de 16
 sheet 3 of 13

MULLION 21-45F-ESW

DESIGN LOAD CAPACITY - PSF (TUBE MULLIONS)								
WINDOW DIMS. WIDTH (W) MULL SPAN		1 X 3 STD.	1 X 4 STD.	1 X 3 CUSTOM	1 X 4 CUSTOM	2 X 5 STD.	2 X 6 STD.	2 X 6 HEAVY
				2 X 3 STD.	2 X 4 STD.			
19-1/8"	38-3/8"	150.0	150.0	150.0	150.0	150.0	150.0	150.0
26-1/2"		150.0	150.0	150.0	150.0	150.0	150.0	150.0
30"		150.0	150.0	150.0	150.0	150.0	150.0	150.0
37"		150.0	150.0	150.0	150.0	150.0	150.0	150.0
42"		150.0	150.0	150.0	150.0	150.0	150.0	150.0
48"		140.6	150.0	150.0	150.0	150.0	150.0	150.0
54"		124.9	150.0	150.0	150.0	150.0	150.0	150.0
60"		112.5	150.0	150.0	150.0	150.0	150.0	150.0
66"	50-5/8"	102.2	150.0	150.0	150.0	150.0	150.0	150.0
72"		93.7	150.0	150.0	150.0	150.0	150.0	150.0
19-1/8"		150.0	150.0	150.0	150.0	150.0	150.0	150.0
26-1/2"		143.9	150.0	150.0	150.0	150.0	150.0	150.0
30"		127.1	150.0	150.0	150.0	150.0	150.0	150.0
37"		103.0	150.0	150.0	150.0	150.0	150.0	150.0
42"		90.8	144.4	137.1	150.0	150.0	150.0	150.0
48"		79.4	126.4	119.9	150.0	150.0	150.0	150.0
54"		70.6	112.3	106.6	150.0	150.0	150.0	150.0
60"		63.5	101.1	95.9	144.4	150.0	150.0	150.0
66"		57.8	91.9	87.2	131.3	150.0	150.0	150.0
72"		53.0	84.2	80.0	120.4	150.0	150.0	150.0
19-1/8"	58"	150.0	150.0	150.0	150.0	150.0	150.0	150.0
26-1/2"		108.6	150.0	150.0	150.0	150.0	150.0	150.0
30"		95.9	150.0	144.6	150.0	150.0	150.0	150.0
37"		77.8	123.6	117.2	150.0	150.0	150.0	150.0
42"		68.5	108.9	103.3	150.0	150.0	150.0	150.0
48"		60.0	95.3	90.4	135.9	150.0	150.0	150.0
54"		53.3	84.7	80.3	120.8	150.0	150.0	150.0
60"		48.0	76.2	72.3	108.7	150.0	150.0	150.0
66"	63"	43.6	69.3	65.7	98.9	150.0	150.0	150.0
72"		40.0	63.5	60.2	90.6	137.8	150.0	150.0
19-1/8"		123.3	150.0	150.0	150.0	150.0	150.0	150.0
26-1/2"		89.0	145.3	137.3	150.0	150.0	150.0	150.0
30"		78.6	128.4	121.3	150.0	150.0	150.0	150.0
37"		63.7	104.1	98.3	148.3	150.0	150.0	150.0
42"		56.1	91.7	86.6	130.7	150.0	150.0	150.0
48"		49.1	80.2	75.8	114.3	150.0	150.0	150.0
54"		43.7	71.3	67.4	101.6	150.0	150.0	150.0
60"		39.3	64.2	60.6	91.5	139.7	150.0	150.0
66"		35.7	58.4	55.1	83.1	127.0	150.0	150.0
72"		32.7	53.5	50.5	76.2	116.4	150.0	150.0

DESIGN LOAD CAPACITY - PSF (TUBE MULLIONS)								
WINDOW DIMS. WIDTH (W) MULL SPAN		1 X 3 STD.	1 X 4 STD.	1 X 3 CUSTOM	1 X 4 CUSTOM	2 X 5 STD.	2 X 6 STD.	2 X 6 HEAVY
				2 X 3 STD.	2 X 4 STD.			
19-1/8"	74-1/4"	75.3	143.0	116.2	150.0	150.0	150.0	150.0
26-1/2"		54.3	103.2	83.9	146.6	150.0	150.0	150.0
30"		48.0	91.1	74.1	129.5	150.0	150.0	150.0
37"		38.9	73.9	60.1	105.0	150.0	150.0	150.0
42"		34.3	65.1	52.9	92.5	142.5	150.0	150.0
48"		30.0	57.0	46.3	81.0	124.7	150.0	150.0
54"		26.7	50.6	41.2	72.0	110.8	146.2	150.0
60"		24.0	45.6	37.0	64.8	99.7	131.6	150.0
66"	84"	21.8	41.4	33.7	58.9	90.7	119.6	150.0
72"		20.0	38.0	30.9	54.0	83.1	109.7	150.0
19-1/8"		52.0	110.4	80.3	150.0	150.0	150.0	150.0
26-1/2"		37.5	79.7	57.9	113.0	150.0	150.0	150.0
30"		33.2	70.4	51.2	99.8	150.0	150.0	150.0
37"		26.9	57.1	41.5	81.0	125.6	150.0	150.0
42"		23.7	50.3	36.5	71.3	110.6	145.9	150.0
48"		20.7	44.0	32.0	62.4	96.8	127.6	150.0
54"	96"	-	39.1	28.4	55.5	86.0	113.5	150.0
60"		-	35.2	25.6	49.9	77.4	102.1	150.0
66"		-	32.0	23.3	45.4	70.4	92.8	150.0
72"		-	29.3	21.3	41.6	64.5	85.1	150.0
19-1/8"		34.8	74.7	53.8	109.1	150.0	150.0	150.0
26-1/2"		25.1	53.9	38.8	78.7	133.2	150.0	150.0
30"		22.2	47.6	34.3	69.6	117.7	150.0	150.0
37"		-	38.6	27.8	56.4	95.4	125.8	150.0
42"	108"	-	34.0	24.5	49.7	84.1	110.8	150.0
48"		-	29.8	21.4	43.5	73.5	97.0	150.0
54"		-	26.5	-	38.6	65.4	86.2	150.0
60"		-	23.8	-	34.8	58.8	77.6	142.0
66"		-	21.6	-	31.6	53.5	70.5	129.0
72"		-	-	-	29.0	49.0	64.6	118.3
19-1/8"		-	52.5	37.8	76.6	134.0	150.0	150.0
26-1/2"		-	37.9	27.3	55.3	96.7	137.7	150.0
30"	120"	-	33.4	24.1	48.9	85.5	121.7	150.0
37"		-	27.1	-	39.6	69.3	98.7	150.0
42"		-	23.9	-	34.9	61.0	86.9	150.0
48"		-	20.9	-	30.5	53.4	76.0	139.1
54"		-	-	-	27.1	47.5	67.6	123.7
60"		-	-	-	24.4	42.7	60.8	111.3
66"		-	-	-	22.2	38.8	55.3	101.2
72"		-	-	-	20.4	35.6	50.7	92.7

DESIGN LOAD CAPACITY - PSF (TUBE MULLIONS)								
WINDOW DIMS. WIDTH (W) MULL SPAN		1 X 3 STD.	1 X 4 STD.	1 X 3 CUSTOM	1 X 4 CUSTOM	2 X 5 STD.	2 X 6 STD.	2 X 6 HEAVY
				2 X 3 STD.	2 X 4 STD.			
19-1/8"	120"	-	38.2	27.5	55.9	97.7	150.0	150.0
26-1/2"		-	27.6	-	40.3	70.5	110.8	150.0
30"		-	24.4	-	35.6	62.3	97.9	150.0
37"		-	-	-	28.9	50.5	79.3	145.1
42"		-	-	-	25.4	44.5	69.9	127.8
48"		-	-	-	22.3	38.9	61.2	111.9
54"		-	-	-	-	34.6	54.4	99.4
60"		-	-	-	-	31.1	48.9	89.5
66"	132"	-	-	-	-	28.3	44.5	81.4
72"		-	-	-	-	26.0	40.8	74.6
19-1/8"		-	28.7	20.7	42.0	73.4	116.8	150.0
26-1/2"		-	20.7	-	30.3	53.0	84.3	150.0
30"		-	-	-	26.8	46.8	74.4	136.7
37"		-	-	-	21.7	37.9	60.3	110.9
42"		-	-	-	-	33.4	53.2	97.7
48"		-	-	-	-	29.3	46.5	85.5
54"	144"	-	-	-	-	26.0	41.4	76.0
60"		-	-	-	-	23.4	37.2	68.4
66"		-	-	-	-	21.3	33.8	62.1
72"		-	-	-	-	-	31.0	57.0
19-1/8"		-	-	-	32.3	56.5	89.9	150.0
26-1/2"		-	-	-	23.3	40.8	64.9	119.2
30"		-	-	-	20.6	36.0	57.3	105.3
37"		-	-	-	-	29.2	46.5	85.4
42"	144"	-	-	-	-	25.7	41.0	75.2
48"		-	-	-	-	22.5	35.8	65.8
54"		-	-	-	-	20.0	31.9	58.5
60"		-	-	-	-	-	28.7	52.7
66"		-	-	-	-	-	26.1	47.9
72"		-	-	-	-	-	23.9	43.9

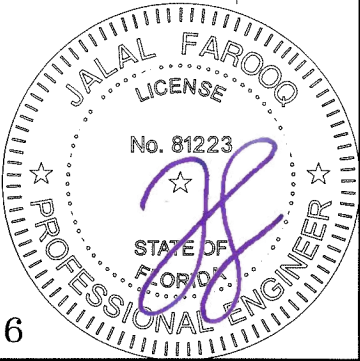


TYPICAL MULLION ARRANGEMENTS

$$\text{WIDTH (W)} = \frac{W1 + W2}{2}$$

Sealed: 7/19/2023

FL #39086



ALL LOADS ARE EXT.(+)/INT.(-).

NOTE:
MULLIONS RATED IN THESE CHARTS MAY BE ORIENTED VERTICALLY OR HORIZONTALLY.
(INTERPOLATION BETWEEN WIDTHS ALLOWED)

ANCHORS TYPE 'D' AND 'E' APPLICABLE TO 4", 5" AND 6" TUBE MULLIONS.
ANCHORS TYPE 'A', 'B', 'C', 'F' AND 'G' APPLICABLE TO ALL TUBE MULLIONS.

MULLIONS

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 262-6978 FAX. (305) 262-6978

E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

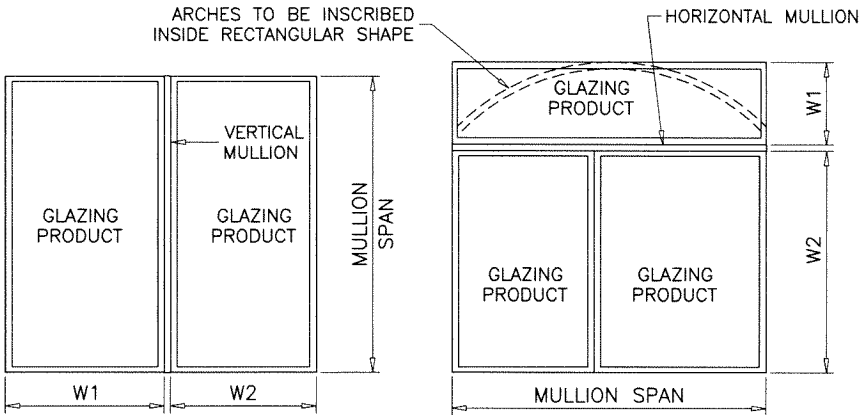
revisions: no. date by description

date: 05-21-21
scale:
dr. by: TARIQ
chk. by:
drawing no. 21-45F
sheet 4 of 13

DESIGN LOAD CAPACITY – PSF (BAY MULLIONS)					
WINDOW DIMS.		22-1/2°	30°	45°	'T'
WIDTH (W)	MULL SPAN	BAY MULL	BAY MULL	BAY MULL	MULL
19-1/8"	38-3/8"	150.0	150.0	150.0	150.0
26-1/2"		150.0	150.0	150.0	150.0
30"		150.0	150.0	150.0	150.0
36"		150.0	150.0	150.0	150.0
42"		150.0	150.0	150.0	150.0
48"		150.0	150.0	150.0	150.0
54"		150.0	150.0	150.0	150.0
60"		150.0	150.0	150.0	150.0
66"		150.0	150.0	150.0	150.0
72"		150.0	150.0	150.0	150.0
19-1/8"	50-5/8"	150.0	150.0	150.0	150.0
26-1/2"		150.0	150.0	150.0	150.0
30"		150.0	150.0	150.0	150.0
36"		150.0	150.0	150.0	150.0
42"		150.0	150.0	150.0	150.0
48"		150.0	150.0	150.0	150.0
54"		150.0	150.0	150.0	150.0
60"		143.0	140.4	145.1	150.0
66"		130.0	127.7	131.9	137.9
72"		119.2	117.0	120.9	126.4
19-1/8"	58"	150.0	150.0	150.0	150.0
26-1/2"		150.0	150.0	150.0	150.0
30"		150.0	150.0	150.0	150.0
36"		150.0	150.0	150.0	150.0
42"		150.0	150.0	150.0	150.0
48"		136.1	132.9	137.4	142.7
54"		121.0	118.1	122.1	126.8
60"		108.9	106.3	109.9	114.1
66"		99.0	96.6	99.9	103.8
72"		90.8	88.6	91.6	95.1
19-1/8"	63"	150.0	150.0	150.0	150.0
26-1/2"		150.0	150.0	150.0	150.0
30"		150.0	150.0	150.0	150.0
36"		150.0	149.5	150.0	150.0
42"		131.8	128.1	132.6	137.1
48"		115.3	112.1	116.0	119.9
54"		102.5	99.7	103.1	106.6
60"		92.3	89.7	92.8	96.0
66"		83.9	81.5	84.4	87.2
72"		76.9	74.8	77.3	80.0
19-1/8"	74-1/4"	150.0	150.0	150.0	150.0
26-1/2"		130.2	144.9	150.0	150.0
30"		115.0	128.0	132.6	135.8
36"		95.8	106.7	110.5	113.1
42"		82.2	91.4	94.7	97.0
48"		71.9	80.0	82.8	84.8
54"		63.9	71.1	73.6	75.4
60"		57.5	64.0	66.3	67.9
66"		52.3	58.2	60.3	61.7
72"		47.9	53.3	55.2	56.6

DESIGN LOAD CAPACITY – PSF (BAY MULLIONS)					
WINDOW DIMS.		22-1/2°	30°	45°	'T'
WIDTH (W)	MULL SPAN	BAY MULL	BAY MULL	BAY MULL	MULL
19-1/8"	84"	124.6	140.3	146.7	150.0
26-1/2"		89.9	101.2	105.9	118.4
30"		79.4	89.4	93.5	104.6
36"		66.2	74.5	77.9	87.1
42"		56.7	63.9	66.8	74.7
48"		49.6	55.9	58.5	65.3
54"		44.1	49.7	52.0	58.1
60"		39.7	44.7	46.8	52.3
66"		36.1	40.6	42.5	47.5
72"		33.1	37.3	39.0	43.6
19-1/8"	96"	83.5	94.0	98.3	123.5
26-1/2"		60.2	67.8	70.9	89.1
30"		53.2	59.9	62.7	78.7
36"		44.3	49.9	52.2	65.6
42"		38.0	42.8	44.8	56.2
48"		33.3	37.4	39.2	49.2
54"		29.6	33.3	34.8	43.7
60"		26.6	30.0	31.3	39.4
66"		24.2	27.2	28.5	35.8
72"		22.2	25.0	26.1	32.8
19-1/8"	108"	58.6	66.0	69.0	88.6
26-1/2"		42.3	47.6	49.8	63.9
30"		37.4	42.1	44.0	56.5
36"		31.1	35.1	36.7	47.1
42"		26.7	30.1	31.4	40.3
48"		23.4	26.3	27.5	35.3
54"		20.8	23.4	24.4	31.4
60"		–	21.0	22.0	28.2
66"		–	–	20.0	25.7
72"		–	–	–	23.5
19-1/8"	120"	42.7	48.1	50.3	64.6
26-1/2"		30.8	34.7	36.3	46.6
30"		27.2	30.7	32.1	41.2
36"		22.7	25.6	26.7	34.3
42"		–	21.9	22.9	29.4
48"		–	–	20.1	25.7
54"		–	–	–	22.9
60"		–	–	–	20.6
19-1/8"	132"	32.1	36.1	37.8	48.5
26-1/2"		23.2	26.1	27.3	35.0
30"		20.5	23.0	24.1	30.9
36"		–	–	20.1	25.8
42"	144"	–	–	–	22.1
19-1/8"		24.7	27.8	29.1	37.4
26-1/2"		–	20.1	21.0	27.0
30"		–	–	–	23.8

ALL LOADS ARE EXT.(+)/INT.(–).



TYPICAL MULLION ARRANGEMENTS

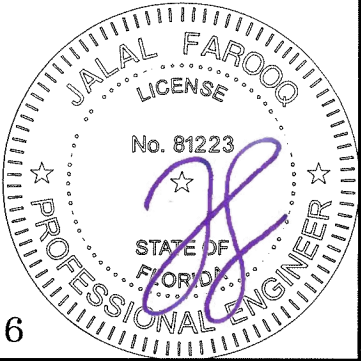
$$\text{WIDTH (W)} = \frac{W1 + W2}{2}$$

NOTE:
'T' MULLION RATED IN THESE CHARTS MAY BE ORIENTED VERTICALLY OR HORIZONTALLY.
(INTERPOLATION BETWEEN WIDTHS ALLOWED)

MULLIONS

Sealed: 7/19/2023

FL #39086



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AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220 (C.A.N. 3538)
MIAMI, FLORIDA 33173
TEL. (305) 264-8100 FAX. (305) 262-6978
MULLION\21-45F-ESW

ALUMINUM TUBE MULLIONS
E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

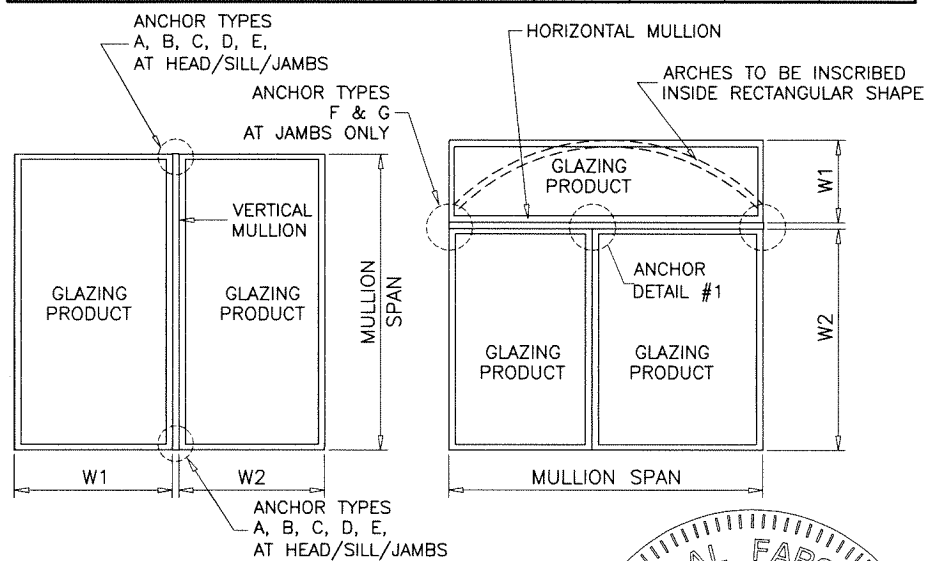
revisions:
no. date by description

date: 05-21-21
scale:
dr. by: TARIQ
chk. by:
drawing no.
21-45F
8 de 16
sheet 5 of 13

DESIGN LOAD CAPACITY - PSF								
WINDOW DIMS.		ANCHORS TYPE						
WIDTH (W)	MULL SPAN	A	B	C	D	E	F	G
19-1/8"	38-3/8"	150.0	150.0	150.0	150.0	150.0	117.7	150.0
26-1/2"		143.9	150.0	150.0	150.0	150.0	85.0	150.0
30"		127.1	150.0	150.0	150.0	150.0	75.0	150.0
37"		103.0	150.0	140.8	150.0	150.0	60.9	121.7
42"		90.8	150.0	124.0	150.0	150.0	53.6	107.2
48"		79.4	150.0	108.5	150.0	150.0	46.9	93.8
54"		70.6	141.2	96.5	150.0	150.0	41.7	83.4
60"		63.5	127.1	86.8	150.0	150.0	37.5	75.0
66"	50-5/8"	57.8	115.5	78.9	150.0	150.0	34.1	68.2
72"		5.9	72.3	144.7	150.0	150.0	31.3	62.5
19-1/8"		0.0	150.0	150.0	150.0	150.0	89.2	150.0
26-1/2"		0.0	149.0	150.0	150.0	150.0	64.4	128.8
30"		96.3	150.0	131.6	150.0	150.0	56.9	113.8
37"		78.1	150.0	106.7	150.0	150.0	46.1	92.3
42"		68.8	137.6	94.0	150.0	150.0	40.6	81.3
48"		60.2	120.4	82.3	150.0	150.0	35.6	71.1
54"	58"	53.5	107.0	73.1	146.2	150.0	31.6	63.2
60"		48.2	96.3	65.8	131.6	150.0	28.4	56.9
66"		43.8	87.6	59.8	119.6	139.3	25.9	51.7
72"		40.1	80.3	54.8	109.7	127.7	23.7	47.4
19-1/8"	63"	131.9	150.0	150.0	150.0	150.0	77.9	150.0
26-1/2"		95.2	150.0	130.0	150.0	150.0	56.2	112.4
30"		84.1	150.0	114.9	150.0	150.0	49.7	99.3
37"		68.2	136.4	93.1	150.0	150.0	40.3	80.5
42"		60.1	120.1	82.0	150.0	150.0	35.5	70.9
48"		52.6	105.1	71.8	143.6	150.0	31.0	62.1
54"		46.7	93.4	63.8	127.6	148.6	27.6	55.2
60"		42.0	84.1	57.4	114.9	133.7	24.8	49.7
66"	63"	38.2	76.4	52.2	104.4	121.6	22.6	45.1
72"		35.0	70.1	47.9	95.7	111.4	20.7	41.4
19-1/8"	63"	121.4	150.0	150.0	150.0	150.0	71.7	143.4
26-1/2"		87.6	150.0	119.7	150.0	150.0	51.8	103.5
30"		77.4	150.0	105.8	150.0	150.0	45.7	91.4
37"		62.8	125.5	85.7	150.0	150.0	37.1	74.1
42"		55.3	110.6	75.5	150.0	150.0	32.7	65.3
48"		48.4	96.8	66.1	132.2	150.0	28.6	57.1
54"		43.0	86.0	58.8	117.5	136.8	25.4	50.8
60"		38.7	77.4	52.9	105.8	123.1	22.9	45.7
66"	63"	35.2	70.4	48.1	96.1	111.9	20.8	41.6
72"		32.3	64.5	44.1	88.1	102.6	-	38.1

DESIGN LOAD CAPACITY - PSF								
WINDOW DIMS.		ANCHORS TYPE						
WIDTH (W)	MULL SPAN	A	B	C	D	E	F	G
19-1/8"	74-1/4"	103.0	150.0	140.8	150.0	150.0	60.8	121.7
26-1/2"		74.4	148.7	101.6	150.0	150.0	43.9	87.8
30"		65.7	131.4	89.7	150.0	150.0	38.8	77.6
37"		53.3	106.5	72.8	145.5	150.0	31.4	62.9
42"		46.9	93.8	64.1	128.2	149.2	27.7	55.4
48"		41.1	82.1	56.1	112.2	130.6	24.2	48.5
54"		36.5	73.0	49.8	99.7	116.1	21.5	43.1
60"		32.8	65.7	44.9	89.7	104.5	-	38.8
66"	84"	29.9	59.7	40.8	81.6	95.0	-	35.3
72"		27.4	54.7	37.4	74.8	87.1	-	32.3
19-1/8"		91.1	150.0	124.4	150.0	150.0	53.8	107.6
26-1/2"		65.7	131.5	89.8	150.0	150.0	38.8	77.6
30"		58.1	116.1	79.3	150.0	150.0	34.3	68.6
37"		47.1	94.1	64.3	128.6	149.7	27.8	55.6
42"		41.5	82.9	56.7	113.3	131.9	24.5	49.0
48"		36.3	72.6	49.6	99.1	115.4	21.4	42.9
54"	96"	32.3	64.5	44.1	88.1	102.6	-	38.1
60"		29.0	58.1	39.7	79.3	92.3	-	34.3
66"		26.4	52.8	36.1	72.1	83.9	-	31.2
72"		24.2	48.4	33.0	66.1	77.0	-	28.6
19-1/8"		79.7	150.0	108.9	150.0	150.0	47.1	94.1
26-1/2"		57.5	115.0	78.6	150.0	150.0	34.0	67.9
30"		50.8	101.6	69.4	138.8	150.0	30.0	60.0
37"		41.2	82.4	56.3	112.5	131.0	24.3	48.6
42"	108"	36.3	72.6	49.6	99.1	115.4	21.4	42.9
48"		31.8	63.5	43.4	86.8	101.0	-	37.5
54"		28.2	56.4	38.6	77.1	89.8	-	33.3
60"		25.4	50.8	34.7	69.4	80.8	-	30.0
66"		23.1	46.2	31.5	63.1	73.5	-	27.3
72"		21.2	42.3	28.9	57.8	67.3	-	25.0
19-1/8"		70.8	141.7	96.8	150.0	150.0	41.8	83.7
26-1/2"		51.1	102.2	69.8	139.7	150.0	30.2	60.4
30"	108"	45.2	90.3	61.7	123.4	143.6	26.7	53.3
37"		36.6	73.2	50.0	100.0	116.5	21.6	43.2
42"		32.3	64.5	44.1	88.1	102.6	-	38.1
48"		28.2	56.4	38.6	77.1	89.8	-	33.3
54"		25.1	50.2	34.3	68.5	79.8	-	29.6
60"		22.6	45.2	30.8	61.7	71.8	-	26.7
66"		20.5	41.1	28.0	56.1	65.3	-	24.2
72"		-	37.6	25.7	51.4	59.9	-	22.2

DESIGN LOAD CAPACITY - PSF								
WINDOW DIMS.		ANCHORS TYPE						
WIDTH (W)	MULL SPAN	A	B	C	D	E	F	G
19-1/8"	120"	63.7	127.5	87.1	150.0	150.0	37.6	75.3
26-1/2"		46.0	92.0	62.9	125.7	146.4	27.2	54.3
30"		40.6	81.3	55.5	111.0	129.3	24.0	48.0
37"		33.0	65.9	45.0	90.0	104.8	-	38.9
42"		29.0	58.1	39.7	79.3	92.3	-	34.3
48"		25.4	50.8	34.7	69.4	80.8	-	30.0
54"		22.6	45.2	30.8	61.7	71.8	-	26.7
60"		20.3	40.6	27.8	55.5	64.6	-	24.0
66"	132"	-	36.9	25.2	50.5	58.8	-	21.8
72"		-	33.9	23.1	46.3	53.9	-	20.0
19-1/8"		58.0	115.9	79.2	150.0	150.0	34.2	68.4
26-1/2"		41.8	83.7	57.1	114.3	133.0	24.7	49.4
30"		36.9	73.9	50.5	100.9	117.5	21.8	43.6
37"		30.0	59.9	40.9	81.8	95.3	-	35.4
42"		26.4	52.8	36.1	72.1	83.9	-	31.2
48"		23.1	46.2	31.5	63.1	73.5	-	27.3
54"	144"	20.5	41.1	28.0	56.1	65.3	-	24.2
60"		-	36.9	25.2	50.5	58.8	-	21.8
66"		-	33.6	22.9	45.9	53.4	-	-
72"		-	30.8	21.0	42.1	49.0	-	-
19-1/8"		53.1	106.2	72.6	145.2	150.0	31.4	62.7
26-1/2"		38.3	76.7	52.4	104.8	122.0	22.6	45.3
30"		33.9	67.7	46.3	92.5	107.7	20.0	40.0
37"		27.5	54.9	37.5	75.0	87.4	-	32.4
42"	144"	24.2	48.4	33.0	66.1	77.0	-	28.6
48"		-	42.3	28.9	57.8	67.3	-	25.0
54"		-	37.6	25.7	51.4	59.9	-	22.2
60"		-	33.9	23.1	46.3	53.9	-	20.0
66"		-	30.8	21.0	42.1	49.0	-	-
72"		-	28.2	-	38.6	44.9	-	-



TYPICAL MULLION ARRANGEMENTS

$$\text{WIDTH (W)} = \frac{W1 + W2}{2}$$

Sealed: 7/19/2023



ALL LOADS ARE EXT.(+)/INT.(-).

NOTE:
ANY ANCHOR CONDITION SHOWN HEREIN MAY COVER LOCATIONS AT HEAD, SILL OR JAMB ENDS.
FOR ANCHORS DESCRIPTION SEE SHEETS 7 THRU 13. (INTERPOLATION BETWEEN WIDTHS OR SPANS ALLOWED)

ANCHORS TYPE 'D' AND 'E' APPLICABLE TO 4", 5" AND 6" TUBE MULLIONS.
ANCHORS TYPE 'A', 'B', 'C', 'F' AND 'G' APPLICABLE TO ALL TUBE MULLIONS.

ANCHORS

FL #39086

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 262-6978 FAX. (305) 262-6978

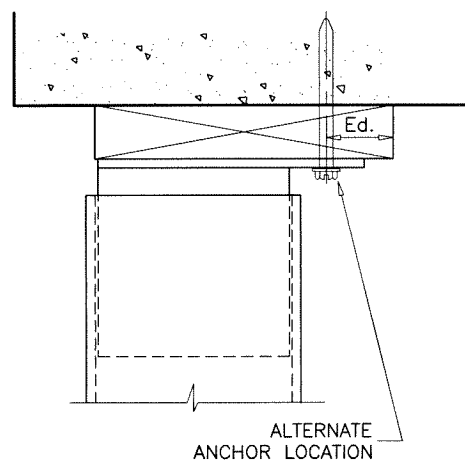
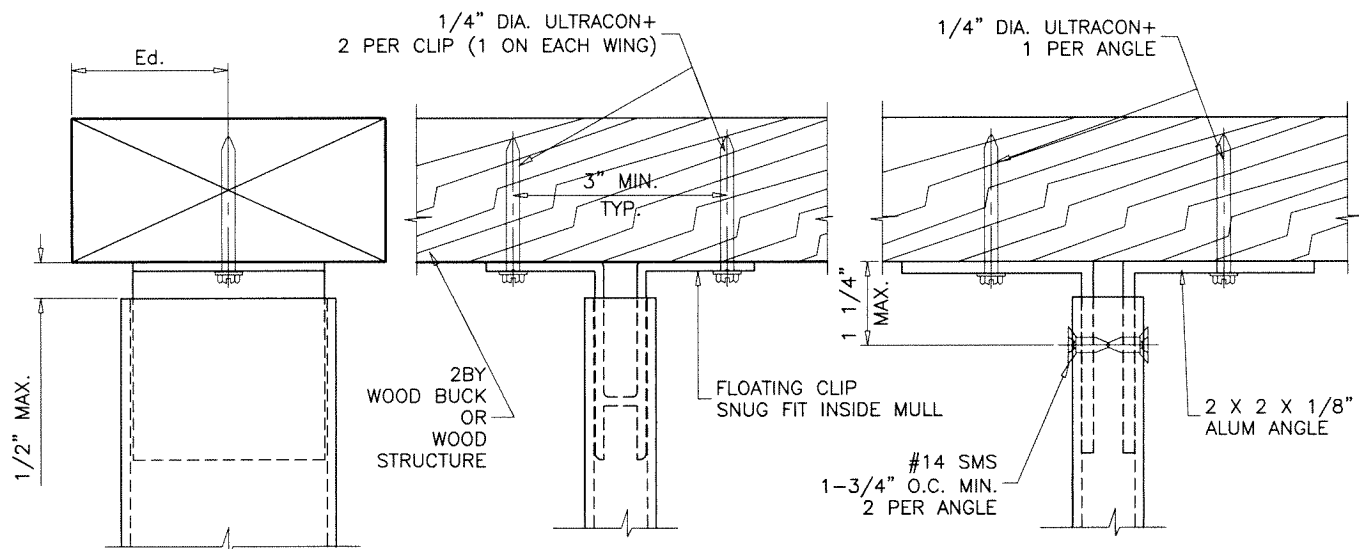
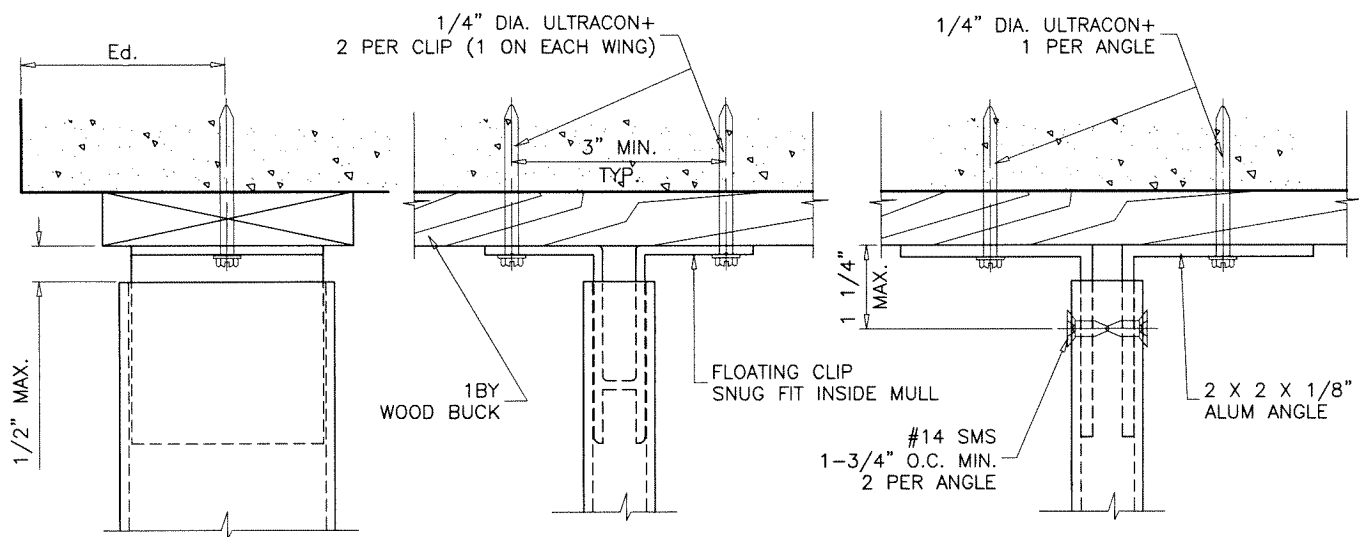
ALUMINUM TUBE MULLIONS

E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

revisions:

no	date	by	description

date: 05-21-21
scale:
dr. by: TARIQ
chk. by:
drawing no. **21-45F**
sheet **6** of **13**

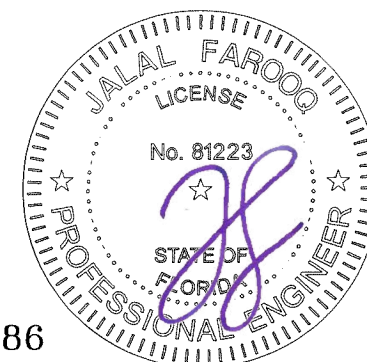
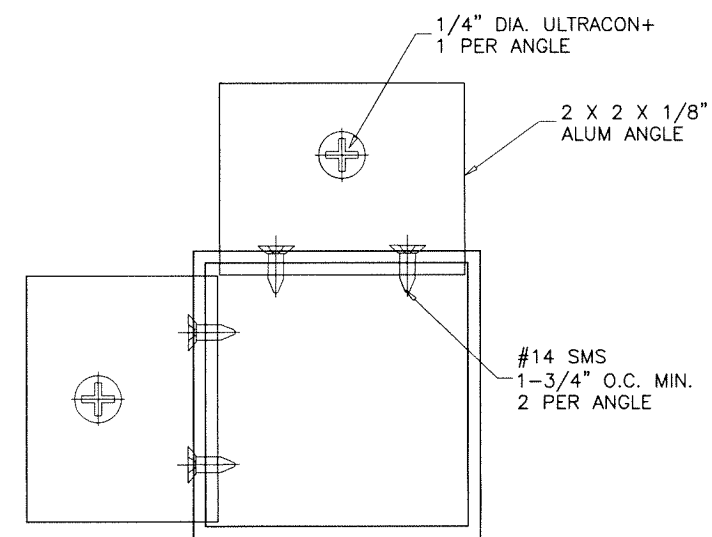
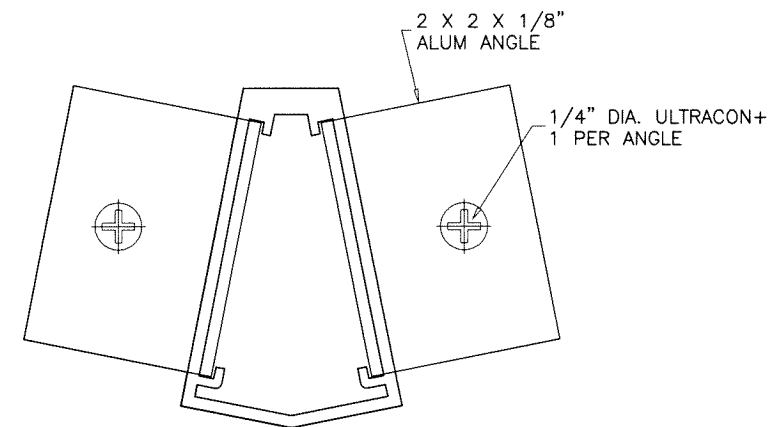


ANCHORS TYPE 'A'

1/4" DIA. ULTRACON+ BY 'DEWALT'		
(Fu=164 KSI, Fy=148 KSI)		
ULTRACON+ MAY BE HEX OR FLAT HEAD		
SUBSTRATE	Ed. = MIN. EDGE DIST.	MIN. EMBEDMENT
WOOD	1"	1-1/2"
CONCRETE	2-1/2"	1-3/4"

WOOD = 2BY WOOD BUCKS OR WOOD STRUCTURE S.G. = 0.55 MIN.
CONCRETE = f'c = 3000 PSI MIN.

ALL CLIPS AND ANGLES TO FIT SNUG INTO TUBE MULLIONS.
CLIPS OR ANGLES CONNECTED DIRECTLY TO MASONRY TO BE PROTECTED
WITH ALKALI-RESISTANT COATINGS, SUCH AS BITUMINOUS PAINT OR
WATER-WHITE METHACRYLATE LACQUER.



Sealed: 7/19/2023

FL #39086

af c
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ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220 (C.A.N. 3538)
MIAMI, FLORIDA 33173
TEL. (305) 264-8100 FAX. (305) 262-6978
MULLION\21-45F-ESW

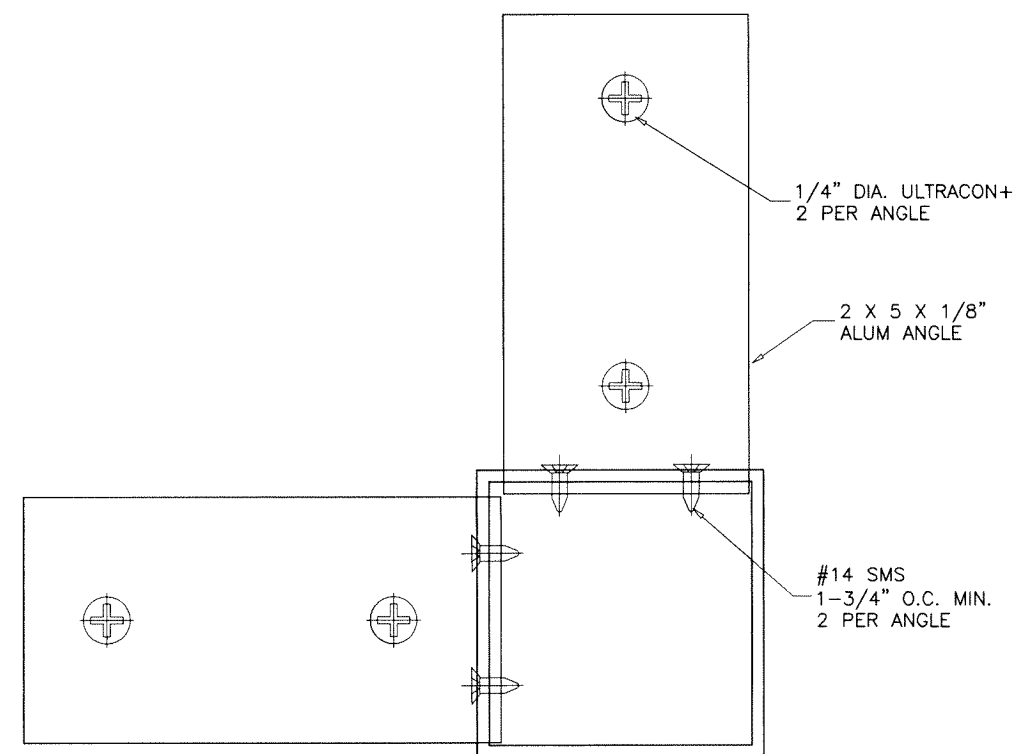
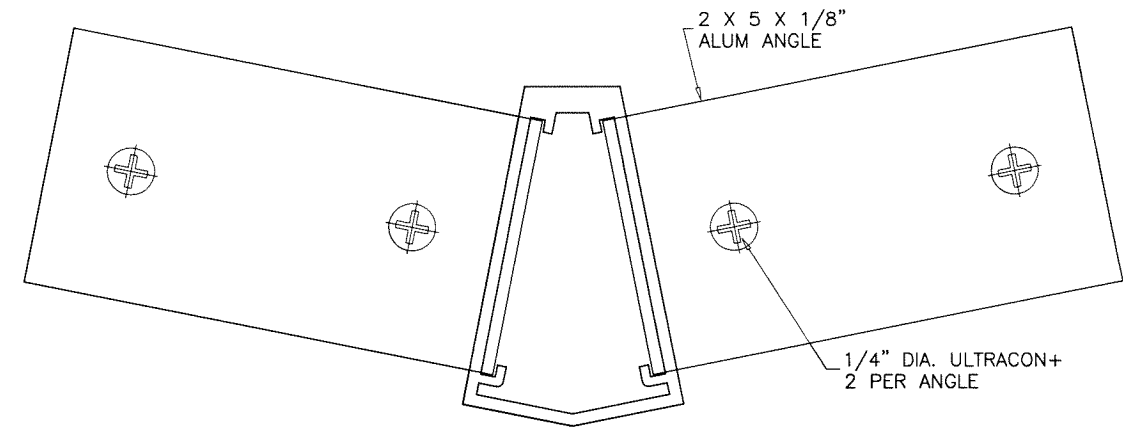
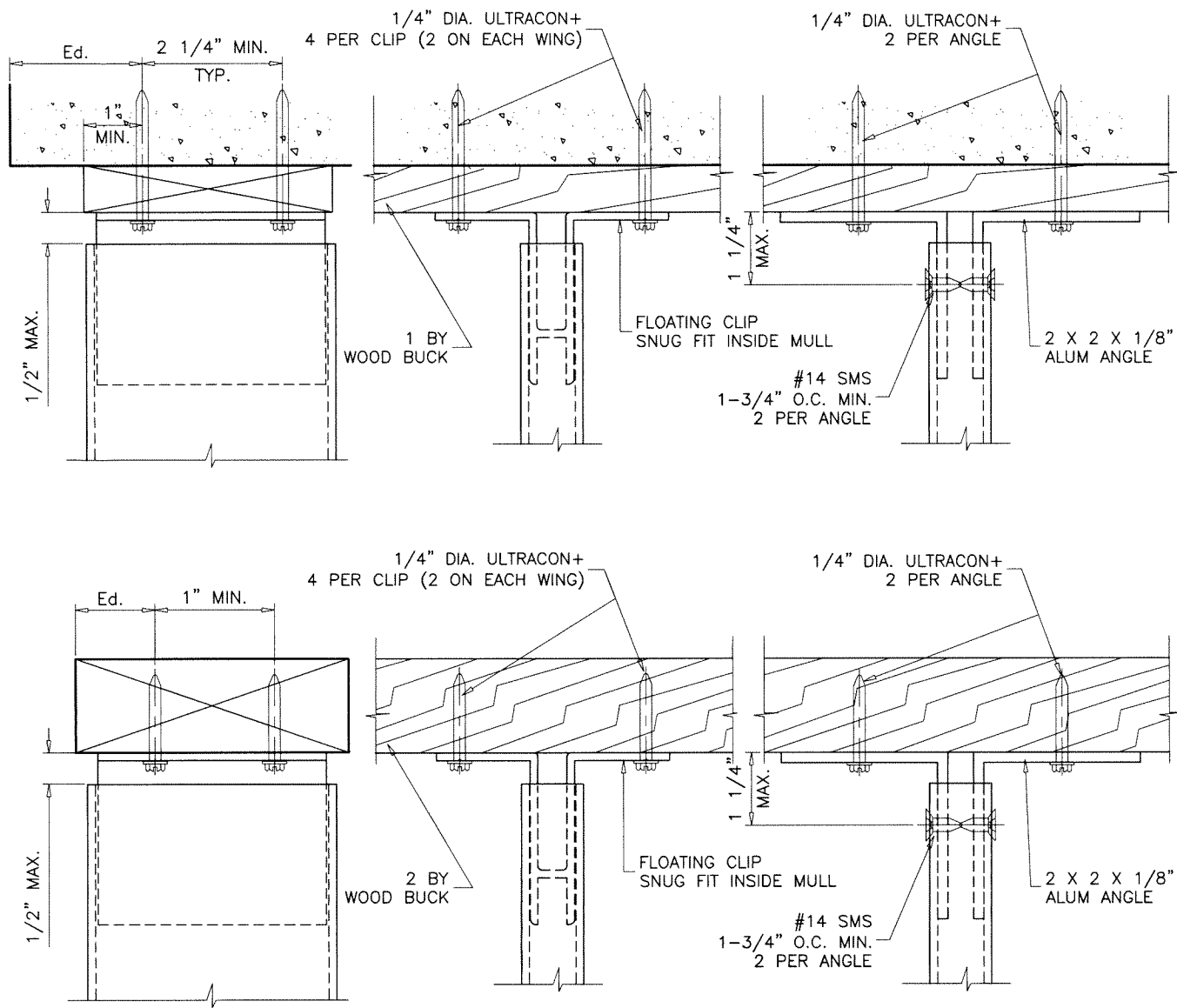
ALUMINUM TUBE MULLIONS

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3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

revisions:	no	date	by	description

date: 05-21-21	scale: 3/8" = 1"	dr. by: TARIQ	chk. by:
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drawing no.
21-45F
10 de 16
sheet 7 of 13



ANCHORS TYPE 'B'

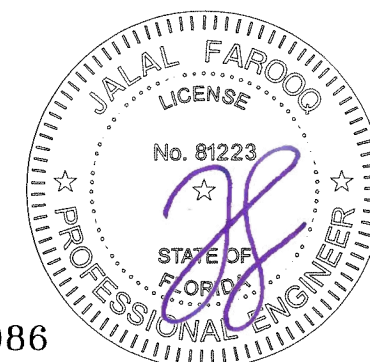
1/4" DIA. ULTRACON+ BY 'DEWALT'		
(Fu=164 KSI, Fy=148 KSI)		
ULTRACON+ MAY BE HEX OR FLAT HEAD		
SUBSTRATE	Ed. = MIN. EDGE DIST.	MIN. EMBEDMENT
WOOD	1"	1-1/2"
CONCRETE	2-1/2"	1-3/4"

WOOD = 2BY WOOD BUCKS OR WOOD STRUCTURE S.G. = 0.55 MIN.
 CONCRETE = f'c = 3000 PSI MIN.

ALL CLIPS AND ANGLES TO FIT SNUG INTO TUBE MULLIONS.
 CLIPS OR ANGLES CONNECTED DIRECTLY TO MASONRY TO BE PROTECTED
 WITH ALKALI-RESISTANT COATINGS, SUCH AS BITUMINOUS PAINT OR
 WATER-WHITE METHACRYLATE LACQUER.

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FL #39086



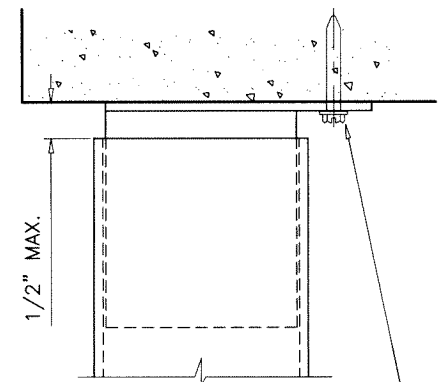
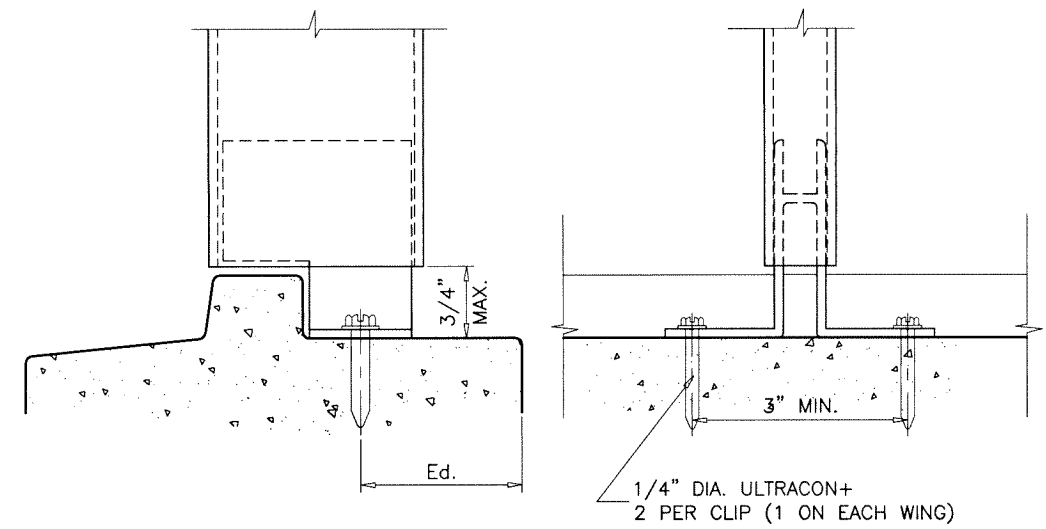
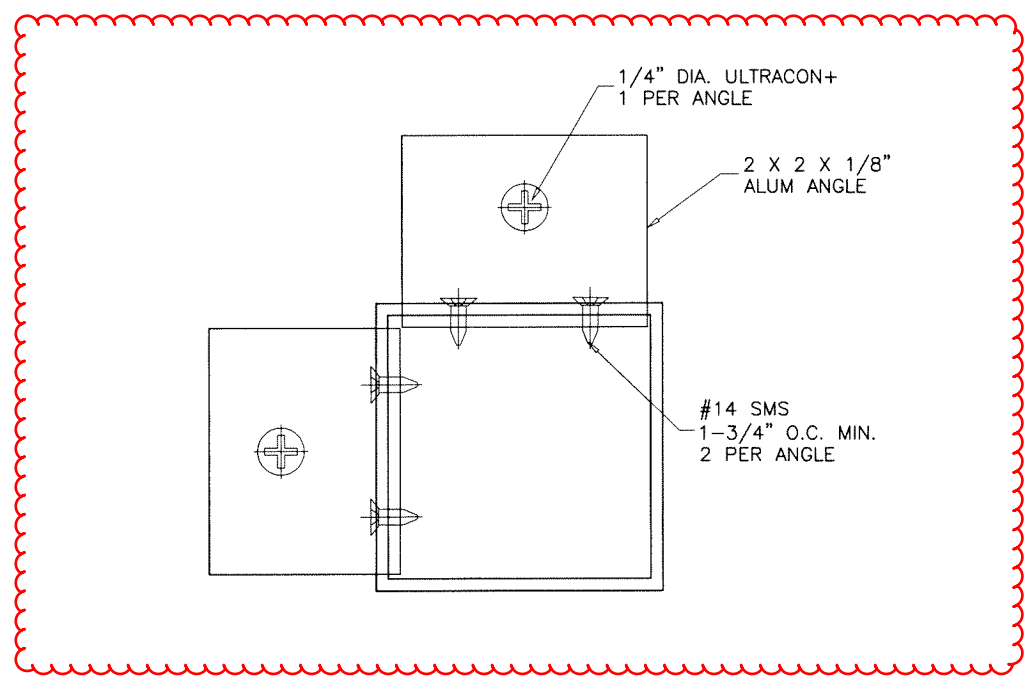
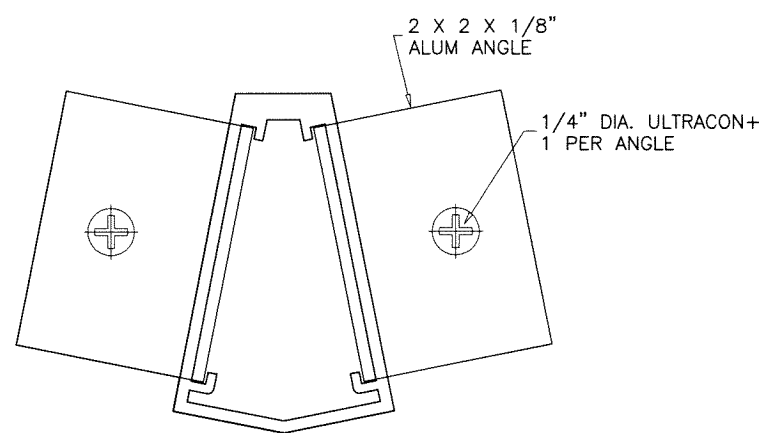
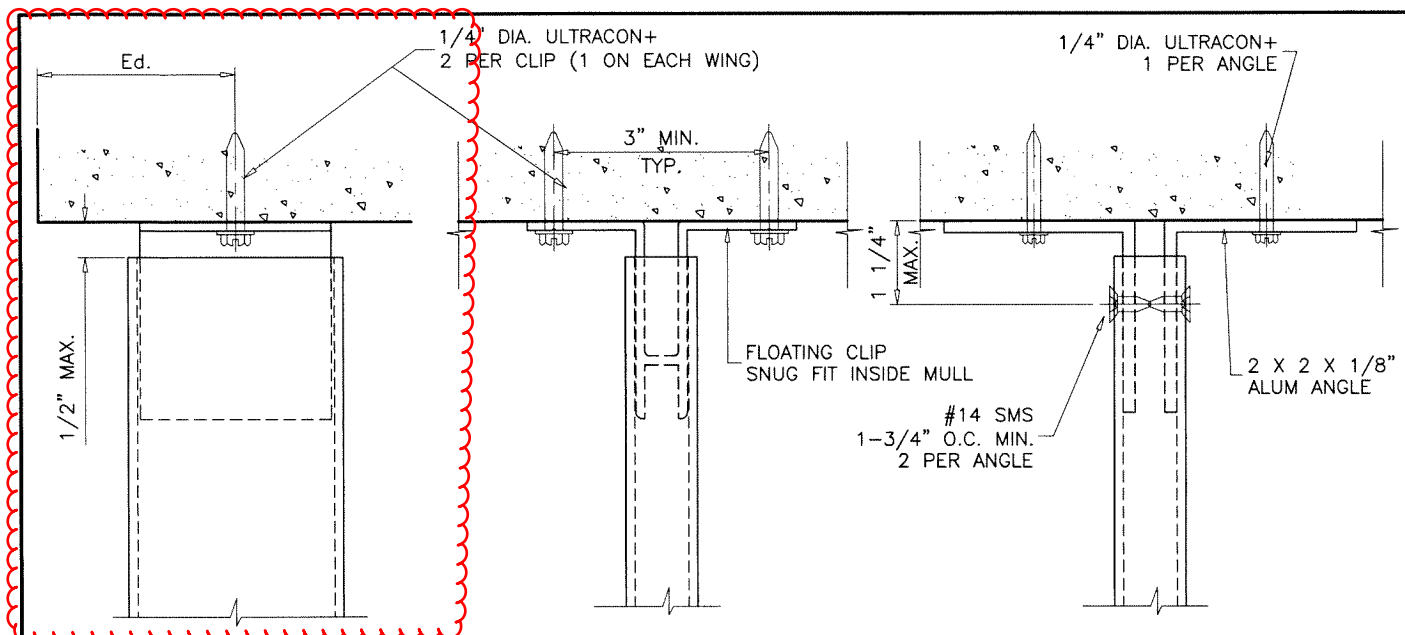
af c
AL-FAROOQ CORPORATION
 ENGINEERS & PRODUCT DEVELOPMENT
 9360 SUNSET DRIVE, SUITE 220 (C.A.N. 3538)
 MIAMI, FLORIDA 33173
 TEL. (305) 264-8100 FAX. (305) 262-6978
 MULLION\21-45F-ESW

ALUMINUM TUBE MULLIONS
E.S. WINDOWS, LLC
 3550 N.W. 49 STREET
 MIAMI, FL. 33142
 TEL. (305) 638-5151 FAX. (305) 638-5158

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date: 05-21-21
 scale: 3/8" = 1"
 dr. by: TARIQ
 chk. by:

drawing no.
21-45F
 11 de 16
 sheet 8 of 13



ANCHORS TYPE 'C'

1/4" DIA. ULTRACON+ BY 'DEWALT'		
(Fu=164 KSI, Fy=148 KSI)		
ULTRACON+ MAY BE HEX OR FLAT HEAD		
SUBSTRATE	Ed. = MIN. EDGE DIST.	MIN. EMBEDMENT
CONCRETE	2-1/2"	1-3/4"
CONCRETE = f'c = 3000 PSI MIN.		

ALL CLIPS AND ANGLES TO FIT SNUG INTO TUBE MULLIONS.
CLIPS OR ANGLES CONNECTED DIRECTLY TO MASONRY TO BE PROTECTED
WITH ALKALI-RESISTANT COATINGS, SUCH AS BITUMINOUS PAINT OR
WATER-WHITE METHACRYLATE LACQUER.

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FL #39086



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ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
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C.A.N. 3538

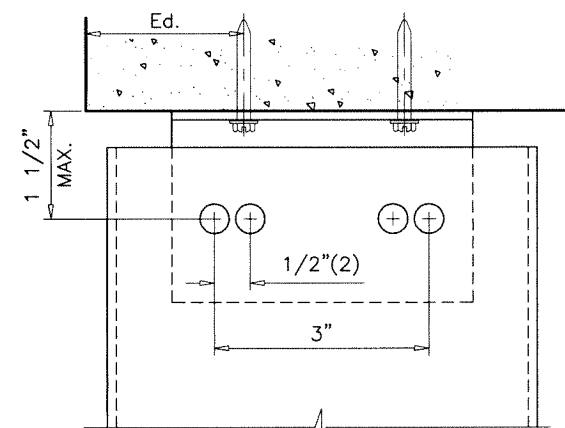
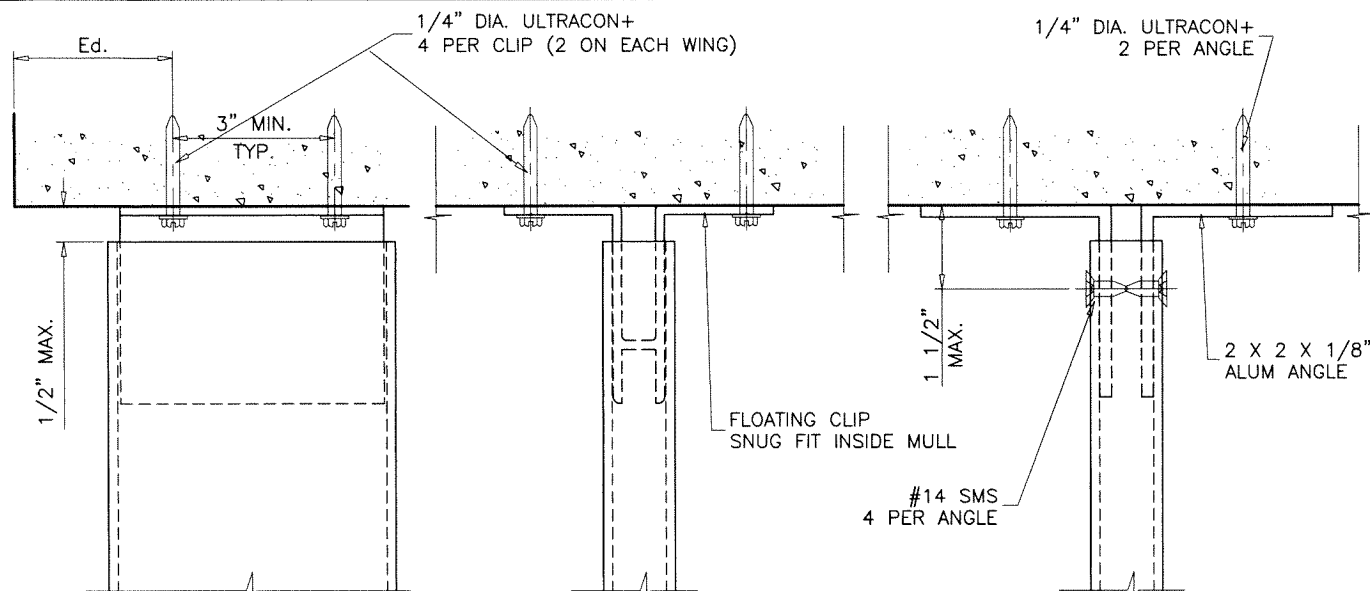
ALUMINUM TUBE MULLIONS

E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

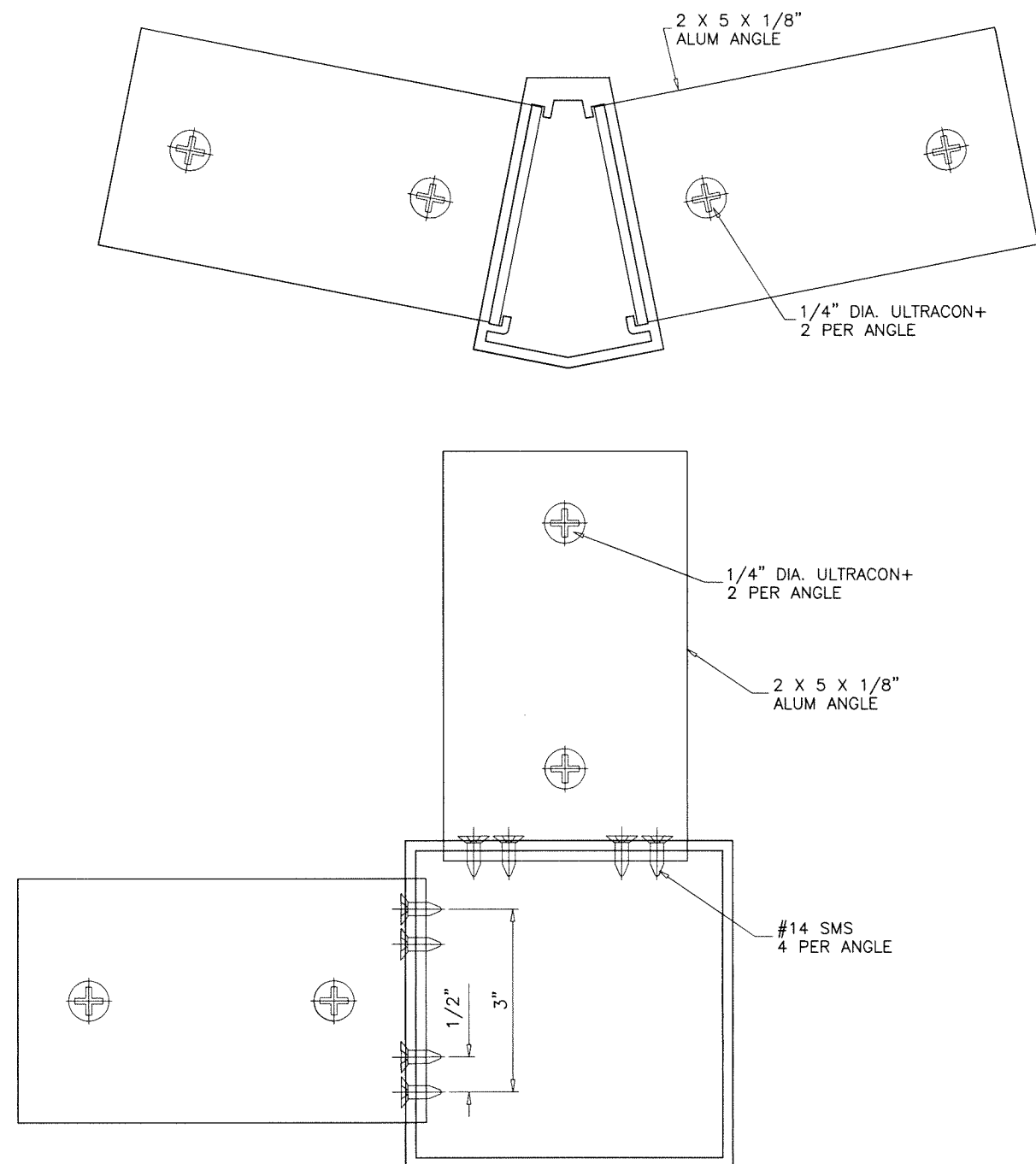
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date: 05-21-21
scale: 3/8" = 1"
dr. by: TARIQ
chk. by:

drawing no.
21-45F
12 de 16
sheet 9 of 13



LOCATION OF SCREWS CONNECTING
ANGLES TO TUBES



ANCHORS TYPE 'D'

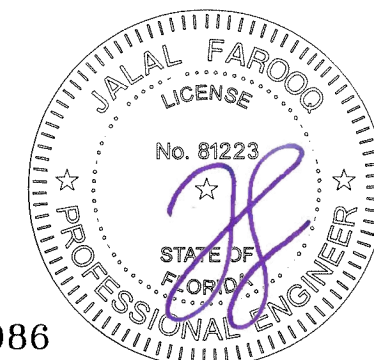
APPLICABLE FOR 4", 5" AND 6" TUBE MULLIONS

1/4" DIA. ULTRAACON+ BY 'DEWALT'		
(Fu=164 KSI, Fy=148 KSI)		
ULTRAACON+ MAY BE HEX OR FLAT HEAD		
SUBSTRATE	Ed. = MIN. EDGE DIST.	MIN. EMBEDMENT
CONCRETE	2-1/2"	1-3/4"

CONCRETE = f'c = 3000 PSI MIN.

ALL CLIPS AND ANGLES TO FIT SNUG INTO TUBE MULLIONS.
CLIPS OR ANGLES CONNECTED DIRECTLY TO MASONRY TO BE PROTECTED
WITH ALKALI-RESISTANT COATINGS, SUCH AS BITUMINOUS PAINT OR
WATER-WHITE METHACRYLATE LACQUER.

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FL #39086

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100 FAX. (305) 262-6978
(C.A.N. 3538)

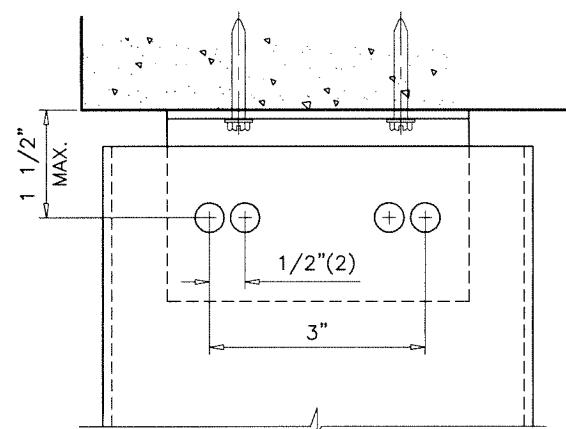
ALUMINUM TUBE MULLIONS

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MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

revisions:	no	date	by	description

date: 05-21-21	scale: 3/8" = 1"	dr. by: TARIQ	chk. by:
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drawing no.
21-45F
13 de 16
sheet 10 of 13



FL #39086

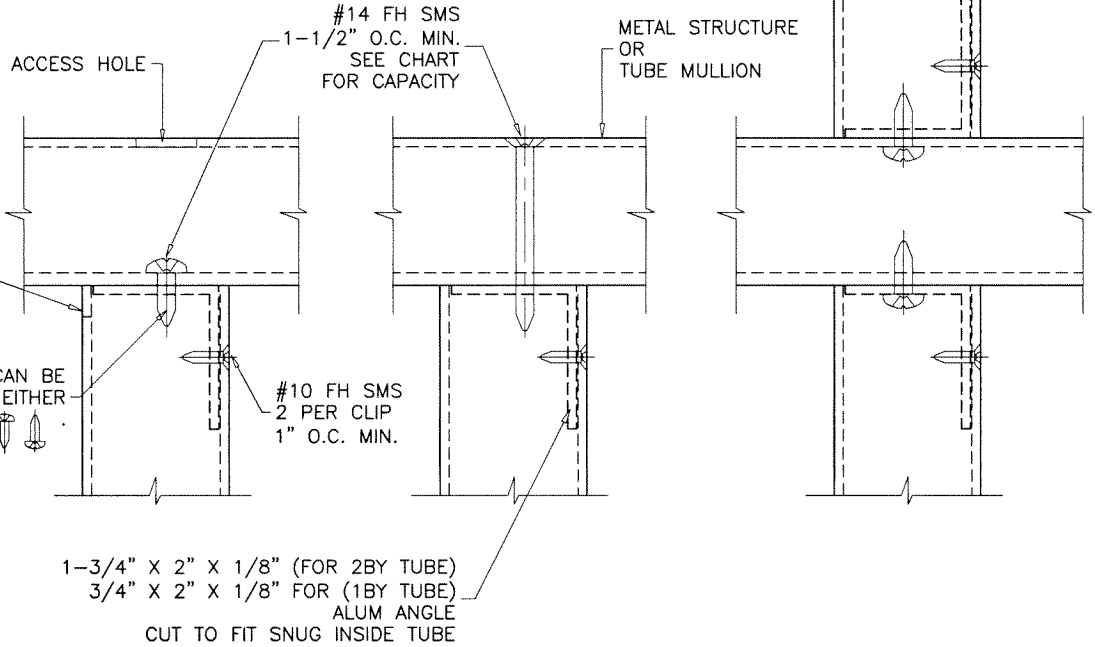
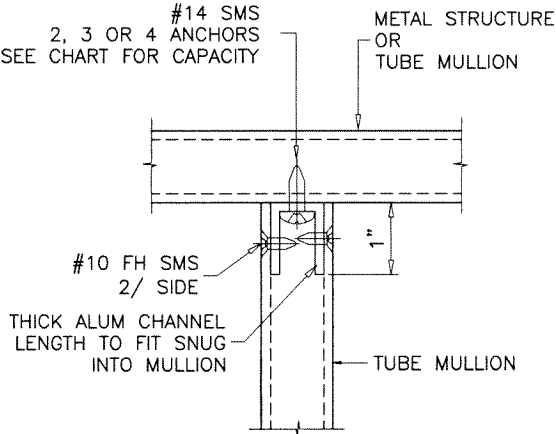
DESIGN LOAD CAPACITY - PSF				
WINDOW DIMS.		ANCHORS QUANTITY		
WIDTH (W)	MULL SPAN	2	3	4
19-1/8"	38-3/8"	150.0	150.0	150.0
26-1/2"		150.0	150.0	150.0
30"		150.0	150.0	150.0
37"		150.0	150.0	150.0
42"		150.0	150.0	150.0
48"		140.1	150.0	150.0
54"		124.5	150.0	150.0
60"		112.1	150.0	150.0
66"		101.9	150.0	150.0
72"		93.4	140.1	150.0
19-1/8"	50-5/8"	150.0	150.0	150.0
26-1/2"		150.0	150.0	150.0
30"		150.0	150.0	150.0
37"		137.8	150.0	150.0
42"		121.4	150.0	150.0
48"		106.2	150.0	150.0
54"		94.4	141.6	150.0
60"		85.0	127.4	150.0
66"		77.2	115.8	150.0
72"		70.8	106.2	141.6
19-1/8"	58"	150.0	150.0	150.0
26-1/2"		150.0	150.0	150.0
30"		148.3	150.0	150.0
37"		120.2	150.0	150.0
42"		105.9	150.0	150.0
48"		92.7	139.0	150.0
54"		82.4	123.6	150.0
60"		74.2	111.2	148.3
66"		67.4	101.1	134.8
72"		61.8	92.7	123.6
19-1/8"	63"	150.0	150.0	150.0
26-1/2"		150.0	150.0	150.0
30"		136.5	150.0	150.0
37"		110.7	150.0	150.0
42"		97.5	146.3	150.0
48"		85.3	128.0	150.0
54"		75.9	113.8	150.0
60"		68.3	102.4	136.5
66"		62.1	93.1	124.1
72"		56.9	85.3	113.8
19-1/8"	74-1/4"	150.0	150.0	150.0
26-1/2"		131.1	150.0	150.0
30"		115.8	150.0	150.0
37"		93.9	140.9	150.0
42"		82.7	124.1	150.0
48"		72.4	108.6	144.8
54"		64.4	96.5	128.7
60"		57.9	86.9	115.8
66"		52.7	79.0	105.3
72"		48.3	72.4	96.5

DESIGN LOAD CAPACITY - PSF				
WINDOW DIMS.		ANCHORS QUANTITY		
WIDTH (W)	MULL SPAN	2	3	4
19-1/8"	84"	150.0	150.0	150.0
26-1/2"		115.9	150.0	150.0
30"		102.4	150.0	150.0
37"		83.0	124.5	150.0
42"		73.1	109.7	146.3
48"		64.0	96.0	128.0
54"		56.9	85.3	113.8
60"		51.2	76.8	102.4
66"		46.5	69.8	93.1
72"		42.7	64.0	85.3
19-1/8"	96"	140.5	150.0	150.0
26-1/2"		101.4	150.0	150.0
30"		89.6	134.4	150.0
37"		72.6	109.0	145.3
42"		64.0	96.0	128.0
48"		56.0	84.0	112.0
54"		49.8	74.7	99.6
60"		44.8	67.2	89.6
66"		40.7	61.1	81.5
72"		37.3	56.0	74.7
19-1/8"	108"	124.9	150.0	150.0
26-1/2"		90.2	135.2	150.0
30"		79.6	119.5	150.0
37"		64.6	96.9	129.2
42"		56.9	85.3	113.8
48"		49.8	74.7	99.6
54"		44.2	66.4	88.5
60"		39.8	59.7	79.6
66"		36.2	54.3	72.4
72"		33.2	49.8	66.4
19-1/8"	120"	112.4	150.0	150.0
26-1/2"		81.1	121.7	150.0
30"		71.7	107.5	143.4
37"		58.1	87.2	116.2
42"		51.2	76.8	102.4
48"		44.8	67.2	89.6
54"		39.8	59.7	79.6
60"		35.8	53.8	71.7
66"		32.6	48.9	65.2
72"		29.9	44.8	59.7
19-1/8"	132"	102.2	150.0	150.0
26-1/2"		73.8	110.7	147.5
30"		65.2	97.7	130.3
37"		52.8	79.3	105.7
42"		46.5	69.8	93.1
48"		40.7	61.1	81.5
54"		36.2	54.3	72.4
60"		32.6	48.9	65.2
66"		29.6	44.4	59.2
72"		27.2	40.7	54.3

DESIGN LOAD CAPACITY - PSF				
WINDOW DIMS.		ANCHORS QUANTITY		
WIDTH (W)	MULL SPAN	2	3	4
19-1/8"	144"	93.7	140.5	150.0
26-1/2"		67.6	101.4	135.2
30"		59.7	89.6	119.5
37"		48.4	72.6	96.9
42"		42.7	64.0	85.3
48"		37.3	56.0	74.7
54"		33.2	49.8	66.4
60"		29.9	44.8	59.7
66"		27.2	40.7	54.3
72"		24.9	37.3	49.8

TUBES MAY BE NOTCHED
AS SHOWN TO ALLOW INSTALLATION
OF CLIP ANGLE
CAULK JOINT AFTER ASSEMBLY

THIS SCREW CAN BE
INSTALLED IN EITHER
DIRECTION



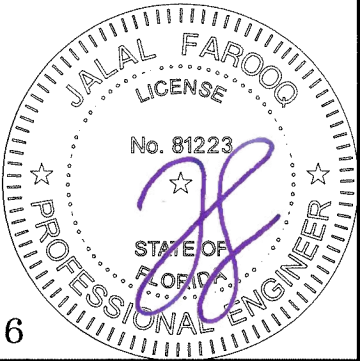
ANCHORS DETAIL #1
METAL TO METAL CONNECTION

#14 SMS/TEKS		
SUBSTRATE	Ed. = MIN. EDGE DIST.	MIN. CL TO CL SPACING
METAL	5/8"	1/2"

METAL = 1/8" MIN. THK. STEEL Fy = 36 KSI MIN.
1/8" MIN. THK. ALUMINUM (6063-T6 MIN.)

Sealed: 7/19/2023

FL #39086



af c
AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
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scale: 3/8" = 1"
dr. by: TARIQ
chk. by:

drawing no.
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