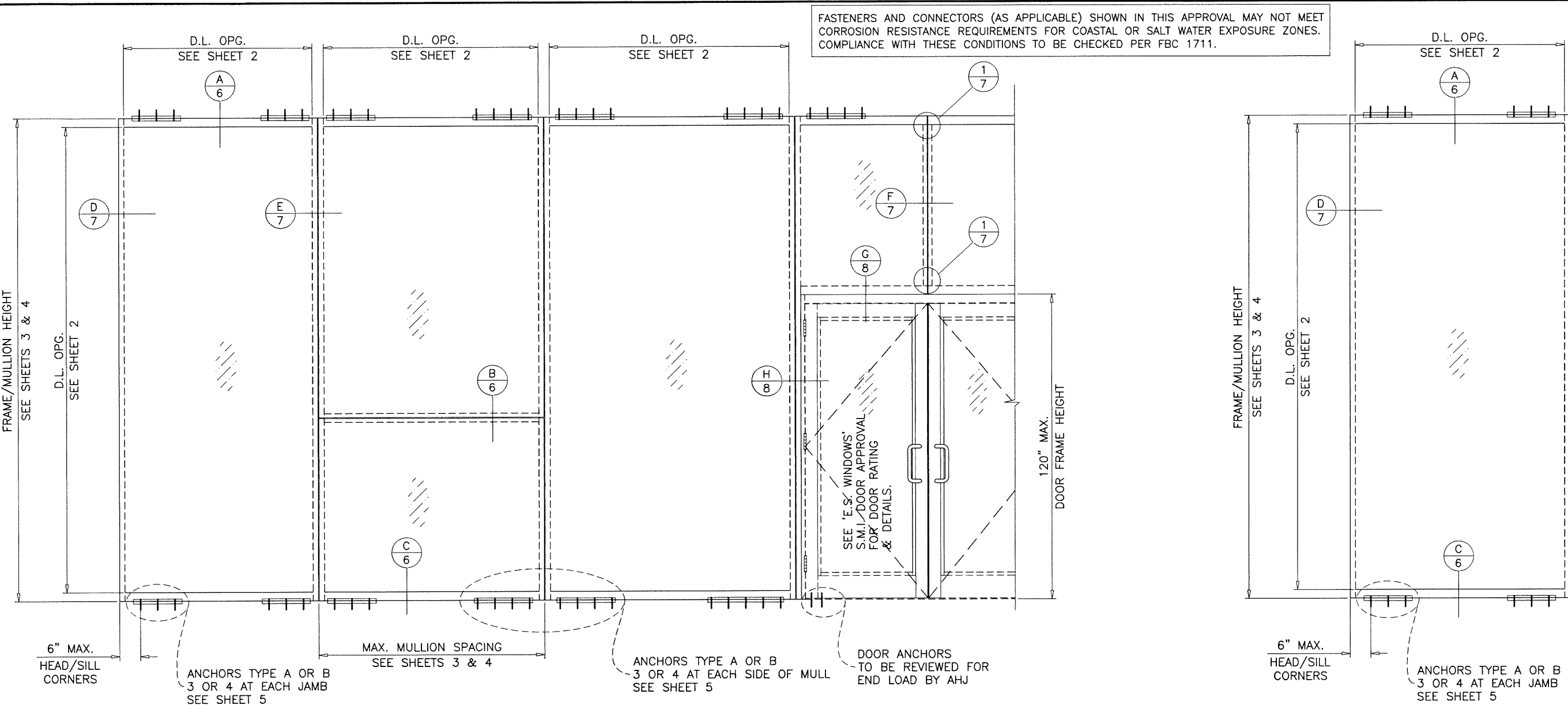




ES-WW8832-A
ALUMINUM WINDOW WALL SYSTEM

THIS SYSTEM MAY BE USED IN CONJUNCTION WITH 'E.S. WINDOWS' APPR'D SMALL MISSILE IMPACT RESISTANT DOORS. LOWER DESIGN PRESSURE FROM WINDOW WALL SYSTEM OR DOOR APPROVAL WILL APPLY TO ENTIRE SYSTEM.

THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE 2023 (8TH EDITION)/2026 (9TH EDITION) FLORIDA BUILDING CODE INCLUDING HIGH VELOCITY HURRICANE ZONE (HVHZ).

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.

ALL SHIMS TO BE LOAD-BEARING, (HIGH DENSITY PLASTIC/COMPOSITE, METAL OR OTHER RIGID MATERIALS).

MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE 2023/2026 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)'.

TYPICAL ELEVATIONS

WINDOW WALL SYSTEM WITH DOORS LIMITED TO
MAX. $D_p = \pm 100.0$ PSF
MAX. DOOR FRAME HEIGHT = 120"
MAX. DOOR FRAME WIDTH = 90"

INSTRUCTIONS:

USE CHARTS AS FOLLOWS.

- STEP 1** DETERMINE DESIGN WIND PRESSURE REQUIREMENTS BASED ON WIND VELOCITY, BLDG. HEIGHT, WIND ZONE USING APPLICABLE ASCE 7 STANDARD.
- STEP 2** SEE CHARTS ON SHEET 2 FOR GLASS DESIGN LOAD CAPACITY.
- STEP 3** CHECK MULLION DESIGN LOAD CAPACITY FOR A GIVEN SPACING AND HEIGHT USING CHARTS ON SHEET 3 & 4 THE CAPACITY SHOULD EXCEED THE DESIGN LOAD.
- STEP 4** USING CHARTS ON SHEET 5 SELECT ANCHOR OPTION WITH DESIGN LOAD CAPACITY MORE THAN DESIGN LOAD SPECIFIED IN STEP 1 ABOVE.
- STEP 5** THE LOWEST VALUE RESULTING FROM STEPS 2, 3 AND 4 THAT EXCEED THE DESIGN WIND PRESSURES DETERMINED THRU STEP 1 SHALL APPLY TO ENTIRE SYSTEM.
- STEP 6** FOR SYSTEMS WITH UNANCHORED JAMBS (FREE JAMBS), USING SHEET 7, DETERMINE THE MIN. & MAX. GAP DIMENSIONS.

- 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.

Sealed: 8/4/2026



SINGLE 'O' PANEL:
FRAME WIDTH = D.L.O. WIDTH + 3.125"
FRAME HEIGHT = D.L.O. HEIGHT + 5.00"

WINDOW WALL SYSTEM COMPLIES WITH REQUIREMENTS OF ANSI Z97.1.

THIS SYSTEM IS RATED FOR SMALL MISSILE IMPACT. F.B.C. APPROVED IMPACT RESISTANT SHUTTERS REQUIRED FOR INSTALLATIONS UP TO 30 FT. OF GRADE. SHUTTERS NOT REQD. FOR INSTALLATIONS ABOVE 30 FT. OF GRADE.

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)

STORE 20-14F-ES

ES-WW8832-A ALUM WINDOW WALL SYSTEM (S.M.I.)

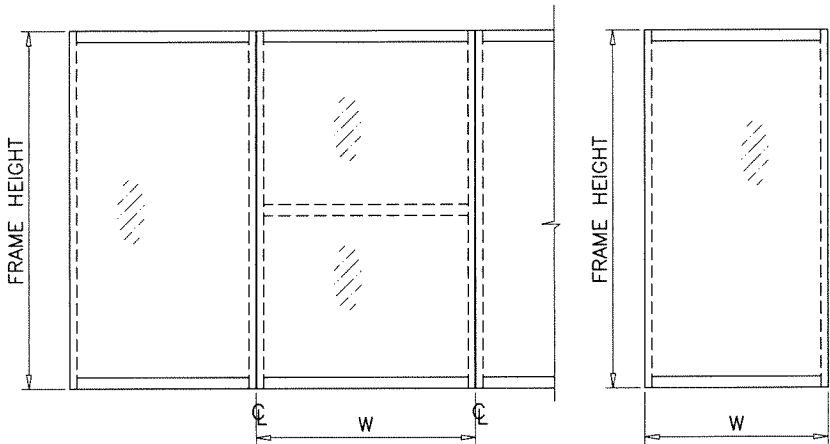
E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

no	date	by	description
A	07.01.20		UPDATED TO 2020 FBC
B	09.26.23		UPDATED TO 2023 FBC
C	07.31.26		UPDATED TO 2026 FBC

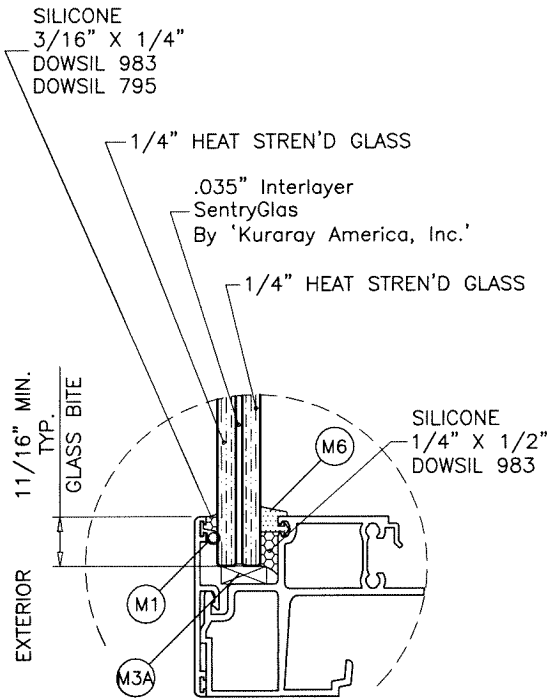
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dr. by: TARIQ
chk. by:

drawing no.
20-14F
sheet 1 of 11

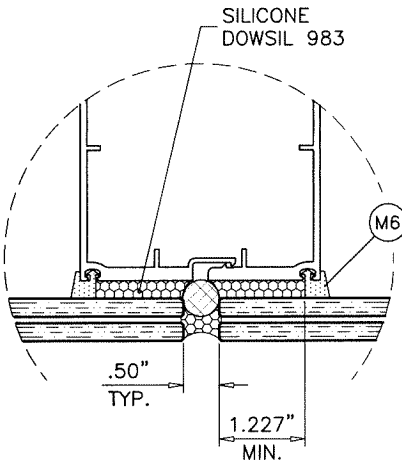
GLASS LOAD CAPACITY - PSF			
NOMINAL DIMS.		GLASS TYPE 'GL4'	
WIDTH (W)	FRAME HEIGHT	EXT.(+)	INT.(-)
30"	102"	130.0	140.0
36"		130.0	140.0
42"		130.0	140.0
48"		130.0	140.0
49-5/8"		110.0	140.0
52-1/2"		110.0	140.0
54-1/2"		110.0	130.0
30"	108"	130.0	140.0
36"		130.0	140.0
42"		130.0	140.0
48"		130.0	140.0
49-5/8"		110.0	140.0
52-1/2"		110.0	140.0
54-1/2"		110.0	130.0
30"	115"	130.0	140.0
36"		130.0	140.0
42"		130.0	140.0
48"		130.0	140.0
49-5/8"		110.0	140.0
52-1/2"		110.0	140.0
54-1/2"		110.0	130.0
30"	121-1/2"	110.0	140.0
36"		110.0	140.0
42"		110.0	140.0
48"		110.0	140.0
49-5/8"		110.0	140.0
52-1/2"		110.0	140.0
54-1/2"		110.0	130.0
30"	127-1/2"	110.0	140.0
36"		110.0	140.0
42"		110.0	140.0
48"		110.0	140.0
52-1/2"		110.0	140.0
54-1/2"		110.0	130.0
52-1/2"	156"	110.0	140.0
54-1/2"		110.0	130.0



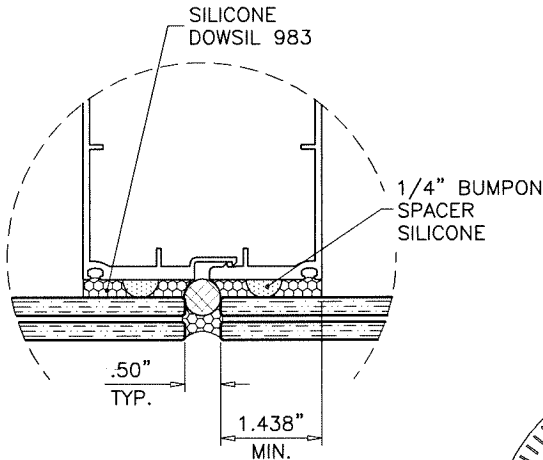
GLASS LIMITS AS PER SIZES SHOWN ON THIS SHEET
FOR MULTIPLE AND SINGLE LITES



GLASS TYPE 'GL4'
GLAZING DETAIL AT HEAD/SILL



GLAZING DETAIL AT HORIZONTAL & VERTICALS



Sealed: 8/4/2026



NOTE:
GLASS CAPACITIES ON THIS SHEET ARE
BASED ON ASTM E1300-16 (3 SEC. GUSTS).

FL #21875

af c

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

ES-WW8832-A ALUM WINDOW WALL SYSTEM (S.M.I.)

E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
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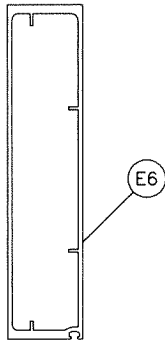
revisions:
no date by description

date: 02-18-20
scale: 3/8" = 1"
dr. by: TARIQ
chk. by:

drawing no.
20-14F
sheet 2 of 11

STORE\20-14F-ES

MULLION LOAD CAPACITY - PSF			
NOMINAL DIMS.		JAMB 'J1'	
WIDTH (W)	FRAME HEIGHT	EXT.(+)	INT.(-)
30"	96"	140.0	140.0
36"		140.0	140.0
42"		140.0	140.0
48"		140.0	140.0
49-3/8"		140.0	140.0
49-5/8"		140.0	140.0
52-1/2"		100.0	130.0
54-1/2"		100.0	130.0
30"	108"	140.0	140.0
36"		140.0	140.0
42"		139.4	139.4
48"		121.9	130.0
49-3/8"		118.6	130.0
49-5/8"		118.0	130.0
52-1/2"		100.0	130.0
54-1/2"		100.0	130.0
30"	109"	140.0	140.0
36"		140.0	140.0
42"		136.6	136.6
48"		119.5	130.0
49-3/8"		116.2	130.0
49-5/8"		115.6	130.0
52-1/2"		100.0	130.0
54-1/2"		100.0	130.0
30"	120"	140.0	140.0
36"		129.1	130.0
42"		110.7	130.0
48"		100.0	130.0
49-3/8"		100.0	130.0
49-5/8"		100.0	130.0
52-1/2"		100.0	126.1
54-1/2"		100.0	120.9
30"	121-1/2"	140.0	140.0
36"		100.0	130.0
42"		100.0	130.0
48"		100.0	130.0
49-5/8"		100.0	129.4
52-1/2"		100.0	122.9
54-1/2"		100.0	117.8
30"	124"	100.0	130.0
36"		100.0	130.0
42"		100.0	130.0
48"		100.0	128.2
52-1/2"		100.0	117.7
54-1/2"		100.0	112.9
30"	132"	100.0	130.0
36"		100.0	130.0
42"		100.0	128.4
48"		100.0	112.3
52-1/2"		100.0	103.2
54-1/2"		98.9	98.9



JAMB 'J1'

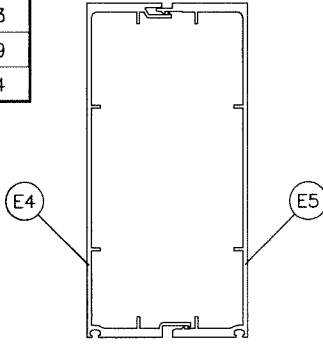
Ix	IN ⁴	Sx	IN ³
11.588		3.281	

MULLION LOAD CAPACITY - PSF			
NOMINAL DIMS.		JAMB 'J1'	
WIDTH (W)	FRAME HEIGHT	EXT.(+)	INT.(-)
30"	144"	100.0	130.0
36"		100.0	124.6
42"		100.0	106.8
48"		93.5	93.5
52-1/2"		85.9	85.9
54-1/2"		82.3	82.3
30"	156"	100.0	126.2
36"		100.0	105.2
42"		90.2	90.2
48"		78.9	78.9
52-1/2"		72.5	72.5
54-1/2"		69.5	69.5

INTERPOLATION BETWEEN WIDTHS AND HEIGHTS ALLOWED.

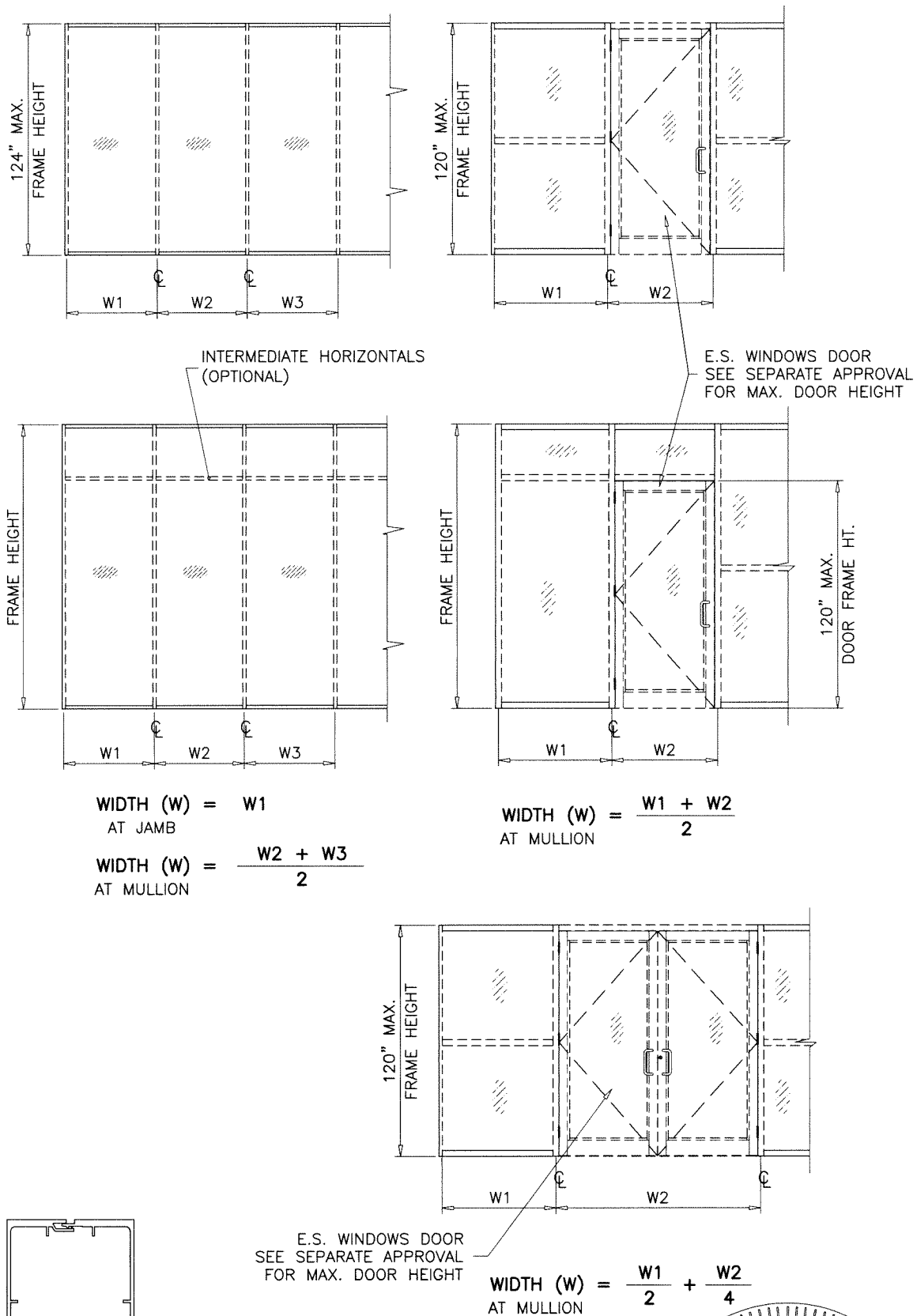
MULLION LOAD CAPACITY - PSF			
NOMINAL DIMS.		MULLION 'M1'	
WIDTH (W)	FRAME HEIGHT	EXT.(+)	INT.(-)
30"	96"	140.0	140.0
36"		140.0	140.0
42"		140.0	140.0
48"		140.0	140.0
49-3/8"		140.0	140.0
49-5/8"		140.0	140.0
52-1/2"		100.0	130.0
54-1/2"		100.0	130.0
30"	108"	140.0	140.0
36"		140.0	140.0
42"		140.0	140.0
48"		121.9	130.0
49-3/8"		118.6	130.0
49-5/8"		118.0	130.0
52-1/2"		100.0	130.0
54-1/2"		100.0	130.0
30"	109"	140.0	140.0
36"		140.0	140.0
42"		136.6	136.6
48"		119.5	130.0
49-3/8"		116.2	130.0
49-5/8"		115.6	130.0
52-1/2"		100.0	130.0
54-1/2"		100.0	130.0
30"	120"	140.0	140.0
36"		129.1	130.0
42"		110.7	130.0
48"		100.0	124.4
49-5/8"		100.0	120.4
52-1/2"		100.0	114.3
54-1/2"		100.0	109.6
30"	121-1/2"	140.0	140.0
36"		140.0	140.0
42"		107.7	130.0
48"		100.0	121.3
49-5/8"		100.0	117.3
52-1/2"		100.0	111.4
54-1/2"		100.0	106.8
30"	124"	100.0	130.0
36"		100.0	130.0
42"		100.0	130.0
48"		100.0	116.3
52-1/2"		100.0	106.9
54-1/2"		100.0	102.4

INTERPOLATION BETWEEN WIDTHS AND HEIGHTS ALLOWED.



MULLION 'M1'

Ix	IN ⁴	Sx	IN ³
19.315		5.481	



$$\begin{aligned} \text{WIDTH (W)} &= W1 \\ &\text{AT JAMB} \\ \text{WIDTH (W)} &= \frac{W2 + W3}{2} \\ &\text{AT MULLION} \end{aligned}$$

$$\begin{aligned} \text{WIDTH (W)} &= \frac{W1 + W2}{2} \\ &\text{AT MULLION} \end{aligned}$$

$$\begin{aligned} \text{WIDTH (W)} &= \frac{W1}{2} + \frac{W2}{4} \\ &\text{AT MULLION} \end{aligned}$$



Sealed: 8/4/2026

FL #21875

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

STORE 20-14F-ES

ES-WW832-A ALUM WINDOW WALL SYSTEM (S.M.I.)

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

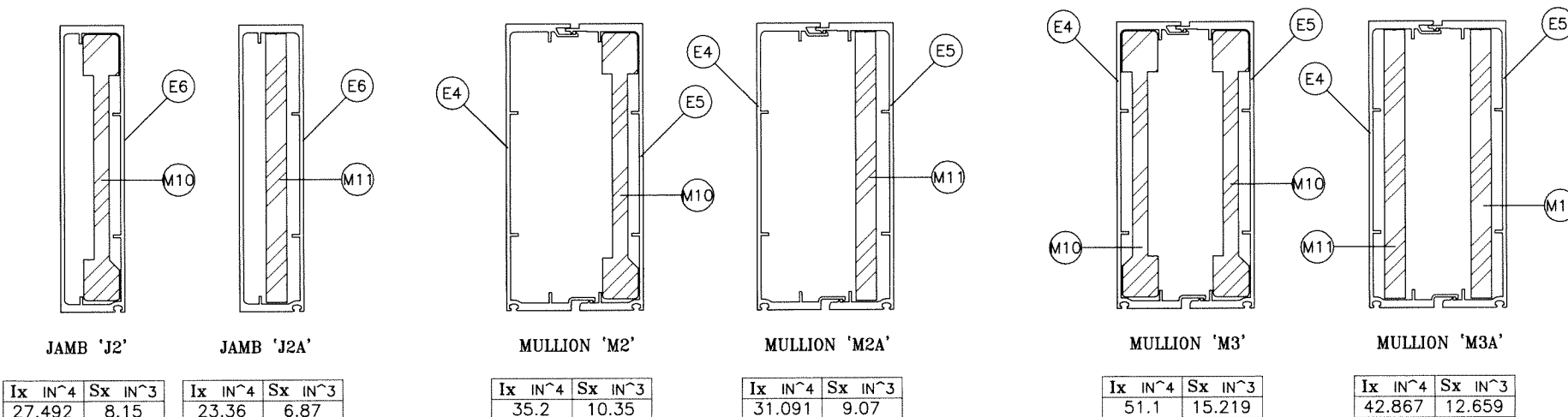
revisions:

no	date	by	description

date: 02-18-20
scale: -
dr. by: TARIQ
chk. by: -

drawing no.
20-14F

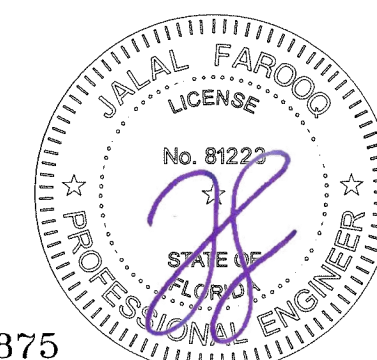
sheet **3** of 11



MULLION LOAD CAPACITY - PSF							
NOMINAL DIMS.		JAMB 'J2'/'J2'		MULL 'M2'/'M2A'		MULL 'M3'/'M3A'	
WIDTH (W)	FRAME HEIGHT	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)
30"	121-1/2"	140.0	140.0	140.0	140.0	140.0	140.0
36"		140.0	140.0	140.0	140.0	140.0	140.0
42"		140.0	140.0	140.0	140.0	140.0	140.0
48"		140.0	140.0	140.0	140.0	140.0	140.0
49-5/8"		140.0	140.0	140.0	140.0	140.0	140.0
52-1/2"		100.0	130.0	100.0	130.0	100.0	130.0
54-1/2"		100.0	130.0	100.0	130.0	100.0	130.0
30"	132"	100.0	130.0	100.0	130.0	100.0	130.0
36"		100.0	130.0	100.0	130.0	100.0	130.0
42"		100.0	130.0	100.0	130.0	100.0	130.0
48"		100.0	130.0	100.0	130.0	100.0	130.0
49-5/8"		100.0	130.0	100.0	130.0	100.0	130.0
52-1/2"		100.0	130.0	100.0	130.0	100.0	130.0
54-1/2"		100.0	130.0	100.0	130.0	100.0	130.0
30"	144"	100.0	130.0	100.0	130.0	100.0	130.0
36"		100.0	130.0	100.0	130.0	100.0	130.0
42"		100.0	130.0	100.0	130.0	100.0	130.0
48"		100.0	130.0	100.0	130.0	100.0	130.0
49-5/8"		100.0	130.0	100.0	130.0	100.0	130.0
52-1/2"		100.0	130.0	100.0	130.0	100.0	130.0
54-1/2"		100.0	130.0	100.0	130.0	100.0	130.0
30"	156"	100.0	130.0	100.0	130.0	100.0	130.0
36"		100.0	130.0	100.0	130.0	100.0	130.0
42"		100.0	130.0	100.0	130.0	100.0	130.0
48"		100.0	130.0	100.0	127.9	100.0	130.0
49-5/8"		100.0	130.0	100.0	119.9	100.0	130.0
52-1/2"		100.0	130.0	100.0	110.2	100.0	130.0
54-1/2"		100.0	130.0	100.0	105.6	100.0	130.0
30"	168"	90.0	90.0	90.0	90.0	90.0	90.0
36"		90.0	90.0	90.0	90.0	90.0	90.0
42"		90.0	90.0	90.0	90.0	90.0	90.0
45"		90.0	90.0	90.0	90.0	90.0	90.0
30"	175-3/4"	90.0	90.0	90.0	90.0	90.0	90.0
36"		90.0	90.0	90.0	90.0	90.0	90.0
42"		90.0	90.0	90.0	90.0	90.0	90.0
45"		87.8	87.8	87.8	87.8	90.0	90.0
30"	180"	80.0	80.0	-	-	-	-
36"		80.0	80.0	-	-	-	-
42"		80.0	80.0	-	-	-	-
45"		80.0	80.0	-	-	-	-

INTERPOLATION BETWEEN WIDTHS AND HEIGHTS ALLOWED.

Sealed: 8/4/2026



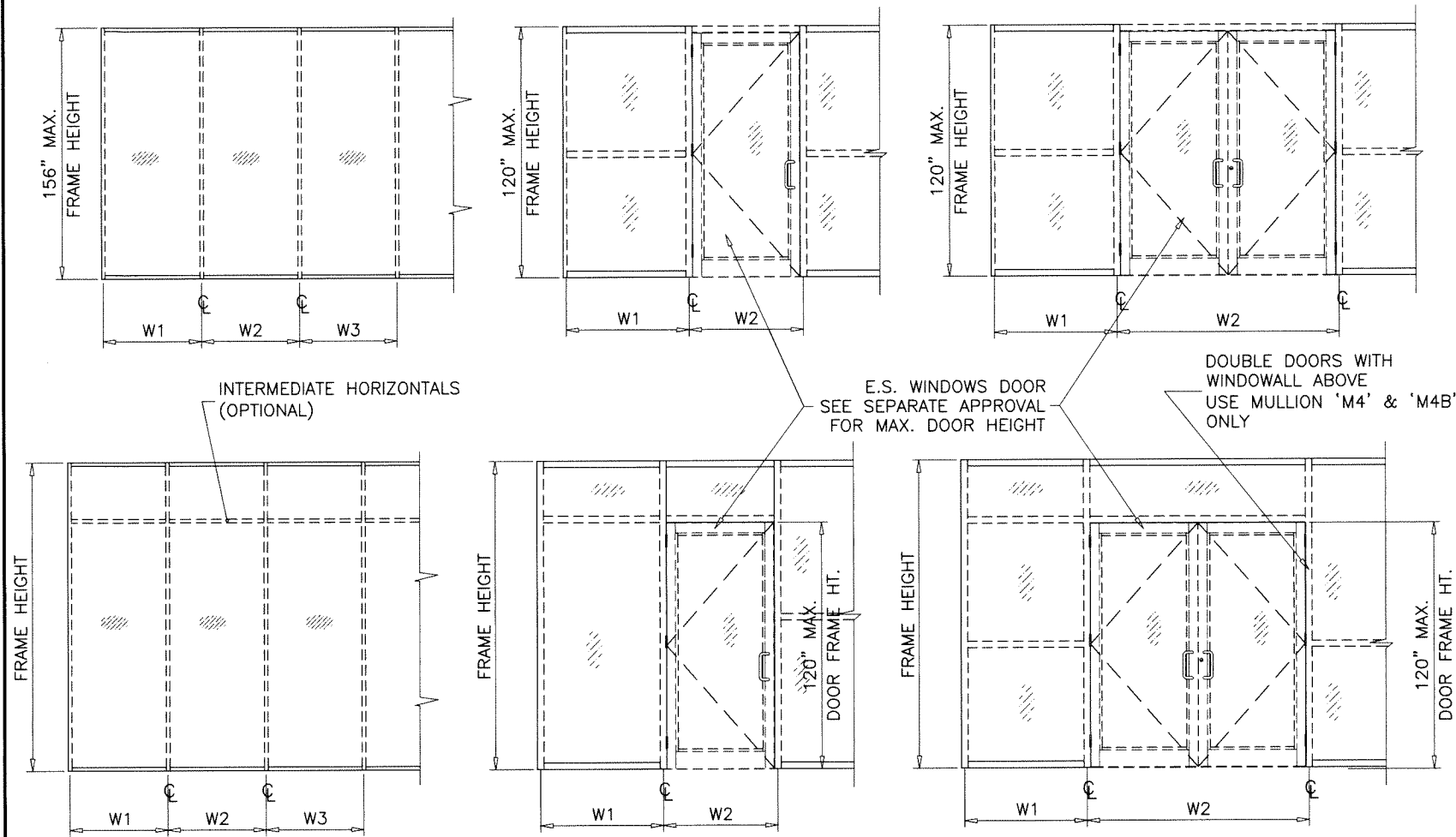
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scale: -		no	date	by	description
dr. by: TARIQ					
chk. by:					
drawing no.					
20-14F					
sheet 4 of 11					

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

af c

E.S. WINDOWS, LLC
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STORE 20-14F-ES

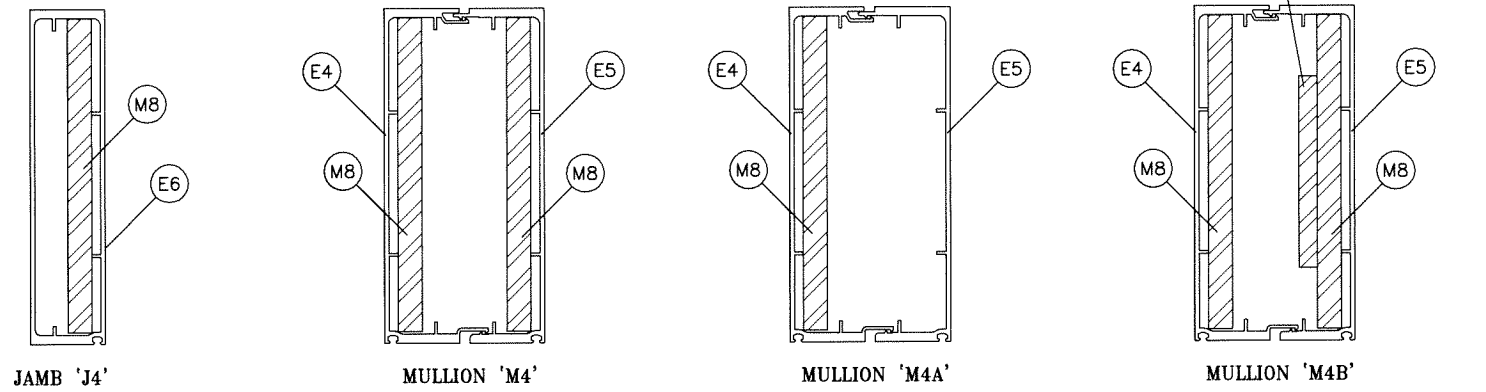


WIDTH (W) = W1
AT JAMB

WIDTH (W) = $\frac{W2 + W3}{2}$
AT MULLION

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

WIDTH (W) = $\frac{W1}{2} + \frac{W2}{4}$
AT MULLION



	Ix IN ⁴	Sx IN ³		Ix IN ⁴	Sx IN ³		Ix IN ⁴	Sx IN ³		Ix IN ⁴	Sx IN ³
ALUMINUM	11.581	3.28	ALUMINUM	19.3	5.48	ALUMINUM	19.3	5.48	ALUMINUM	19.3	5.48
STEEL	11.776	3.589	STEEL	23.552	7.178	STEEL	11.776	3.589	STEEL	25.552	7.787
TOTAL			TOTAL			TOTAL			TOTAL		
Ix ALUM + Ix STL X 2.9	45.73		Ix ALUM + Ix STL X 2.9	87.60		Ix ALUM + Ix STL X 2.9	53.450		Ix ALUM + Ix STL X 2.9	93.40	

MULLION LOAD CAPACITY - PSF									
NOMINAL DIMS.		JAMB 'J4'		MULLION 'M4'		MULLION 'M4A'		MULLION 'M4B'	
WIDTH (W)	FRAME HEIGHT	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)
30"	121-1/2"	140.0	140.0	140.0	140.0	110.0	130.0	140.0	140.0
36"		140.0	140.0	140.0	140.0	110.0	130.0	140.0	140.0
42"		140.0	140.0	140.0	140.0	110.0	130.0	140.0	140.0
48"		140.0	140.0	140.0	140.0	110.0	130.0	140.0	140.0
49-5/8"		140.0	140.0	140.0	140.0	110.0	130.0	140.0	140.0
52-1/2"		110.0	140.0	110.0	140.0	80.0	80.0	110.0	140.0
30"	132"	140.0	140.0	140.0	140.0	110.0	130.0	140.0	140.0
36"		140.0	140.0	140.0	140.0	110.0	130.0	140.0	140.0
42"		140.0	140.0	140.0	140.0	110.0	130.0	140.0	140.0
48"		110.0	140.0	110.0	140.0	110.0	130.0	110.0	140.0
52-1/2"		110.0	140.0	110.0	140.0	80.0	80.0	110.0	140.0
30"	144"	140.0	140.0	140.0	140.0	110.0	130.0	140.0	140.0
36"		140.0	140.0	140.0	140.0	110.0	130.0	140.0	140.0
42"		140.0	140.0	140.0	140.0	110.0	130.0	140.0	140.0
48"		110.0	140.0	110.0	140.0	110.0	130.0	110.0	140.0
52-1/2"		110.0	140.0	110.0	140.0	110.0	129.5	110.0	140.0
30"	156"	140.0	140.0	140.0	140.0	80.0	80.0	140.0	140.0
36"		140.0	140.0	140.0	140.0	80.0	80.0	140.0	140.0
42"		140.0	140.0	140.0	140.0	80.0	80.0	140.0	140.0
48"		110.0	140.0	110.0	140.0	80.0	80.0	110.0	140.0
52-1/2"		110.0	140.0	110.0	140.0	80.0	80.0	110.0	140.0
30"	168"	140.0	140.0	140.0	140.0	80.0	80.0	140.0	140.0
36"		140.0	140.0	140.0	140.0	80.0	80.0	140.0	140.0
42"		140.0	140.0	140.0	140.0	80.0	80.0	140.0	140.0
48"		110.0	140.0	110.0	140.0	80.0	80.0	110.0	140.0
52-1/2"		110.0	140.0	110.0	140.0	80.0	80.0	110.0	140.0
30"	175-3/4"	140.0	140.0	140.0	140.0	80.0	80.0	140.0	140.0
36"		140.0	140.0	140.0	140.0	80.0	80.0	140.0	140.0
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48"		110.0	140.0	110.0	140.0	80.0	80.0	110.0	140.0
52-1/2"		110.0	140.0	110.0	140.0	80.0	80.0	110.0	140.0
30"	180"	110.0	140.0	110.0	140.0	80.0	80.0	110.0	140.0
36"		110.0	140.0	110.0	140.0	80.0	80.0	110.0	140.0
42"		110.0	140.0	110.0	140.0	80.0	80.0	110.0	140.0
48"		110.0	140.0	110.0	140.0	80.0	80.0	110.0	140.0
52-1/2"		110.0	140.0	110.0	135.6	80.0	80.0	110.0	140.0

INTERPOLATION BETWEEN WIDTHS AND HEIGHTS ALLOWED.

Sealed: 8/4/2026



FL #21875

af c

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

ES-WW832-A ALUM WINDOW WALL SYSTEM (S.M.I.)

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: 02-18-20

scale: -

dr. by: TARIQ

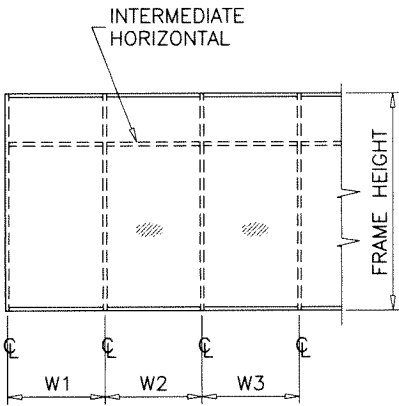
chk. by: -

drawing no. **20-14F**

sheet **4A** of **11**

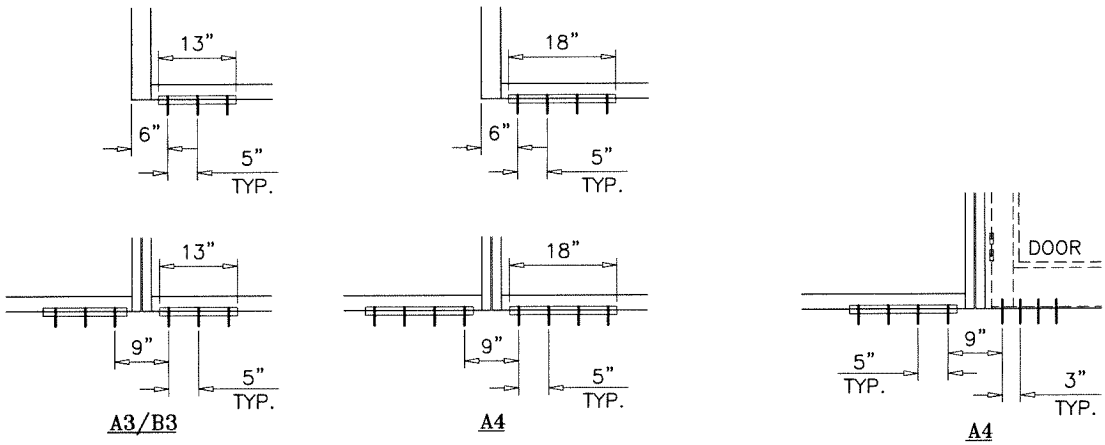
ANCHORS LOAD CAPACITY - PSF EXT.(+) & INT.(-)					
NOMINAL DIMS.		ANCHOR TYPE 'A'		ANCHOR TYPE 'B'	
WIDTH (W)	FRAME HEIGHT	A3	A4	B3	B4
30"	121-1/2"	140.0	-	140.0	-
36"		140.0	-	140.0	-
42"		140.0	-	140.0	-
45"		140.0	-	140.0	-
48"		140.0	-	140.0	-
52-1/2"		140.0	-	140.0	-
54-1/2"		140.0	-	140.0	-
30"	124"	140.0	-	140.0	-
36"		140.0	-	140.0	-
42"		140.0	-	140.0	-
45"		140.0	-	140.0	-
48"		140.0	-	140.0	-
52-1/2"		140.0	-	140.0	-
54-1/2"		140.0	-	140.0	-
30"	132"	140.0	-	140.0	-
36"		140.0	-	140.0	-
42"		140.0	-	140.0	-
45"		140.0	-	140.0	-
48"		140.0	-	140.0	-
52-1/2"		140.0	-	140.0	-
54-1/2"		140.0	-	140.0	-
30"	144"	140.0	-	140.0	-
36"		140.0	-	140.0	-
42"		140.0	-	140.0	-
45"		140.0	-	140.0	-
48"		140.0	-	140.0	-
52-1/2"		138.6	140.0	140.0	-
54-1/2"		132.9	140.0	140.0	-
30"	156"	140.0	-	140.0	-
36"		140.0	-	140.0	-
42"		140.0	-	140.0	-
45"		140.0	-	140.0	-
48"		139.3	140.0	140.0	-
52-1/2"		128.0	140.0	136.0	140.0
54-1/2"		122.7	140.0	131.0	140.0
30"	168"	140.0	-	140.0	-
36"		140.0	-	140.0	-
42"		140.0	-	140.0	-
45"		138.0	140.0	140.0	-
48"		129.3	140.0	138.1	140.0
52-1/2"		118.8	140.0	126.3	140.0
54-1/2"		113.9	140.0	121.7	140.0
30"	175-3/4"	140.0	-	140.0	-
36"		140.0	-	140.0	-
42"		131.9	140.0	140.0	-
45"		123.6	140.0	140.0	-
48"		113.6	140.0	132.0	140.0
52-1/2"		108.9	140.0	120.7	140.0
30"	180"	140.0	-	140.0	-
36"		140.0	-	140.0	-
42"		138.0	140.0	140.0	-
45"		128.8	140.0	137.5	140.0
48"		120.7	140.0	128.9	140.0
52-1/2"		110.9	140.0	117.9	140.0

INTERPOLATION BETWEEN WIDTHS AND HEIGHTS ALLOWED.



WIDTH (W) = W1
AT FRAME JAMB

WIDTH (W) = $\frac{W2 + W3}{2}$
AT FRAME MULLION



ANCHORS TYPES: SEE SHEET 6 FOR DESCRIPTION

A3 = (3) ANCHORS TYPE 'A' AT EACH SIDE OF JAMB AND MULLION

A4 = (4) ANCHORS TYPE 'A' AT EACH SIDE OF JAMB AND MULLION

B3 = (3) ANCHORS TYPE 'B' AT EACH SIDE OF JAMB AND MULLION

FL #21875



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ES-WW832-A ALUM WINDOW WALL SYSTEM (S.M.I.)

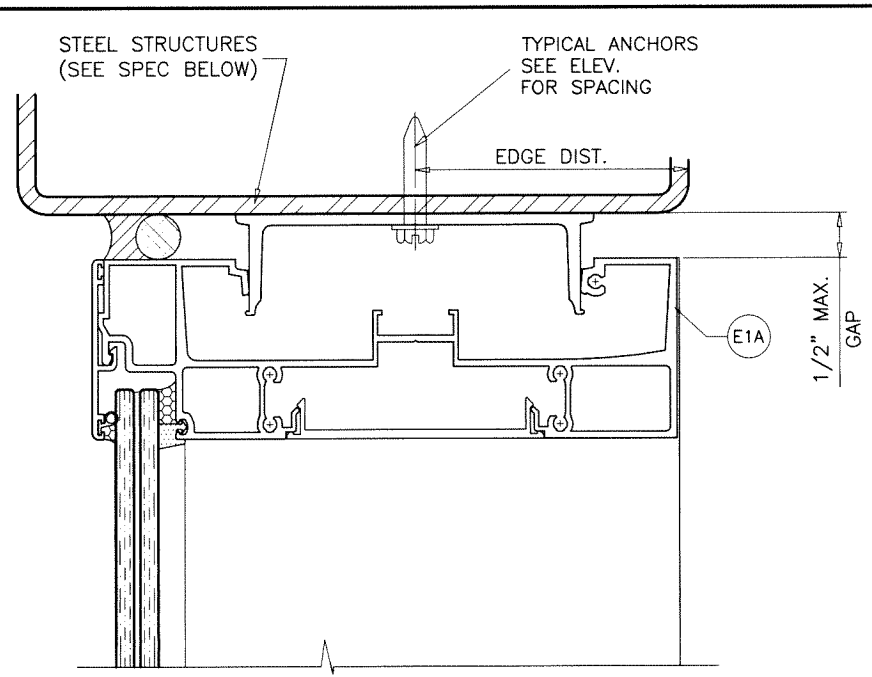
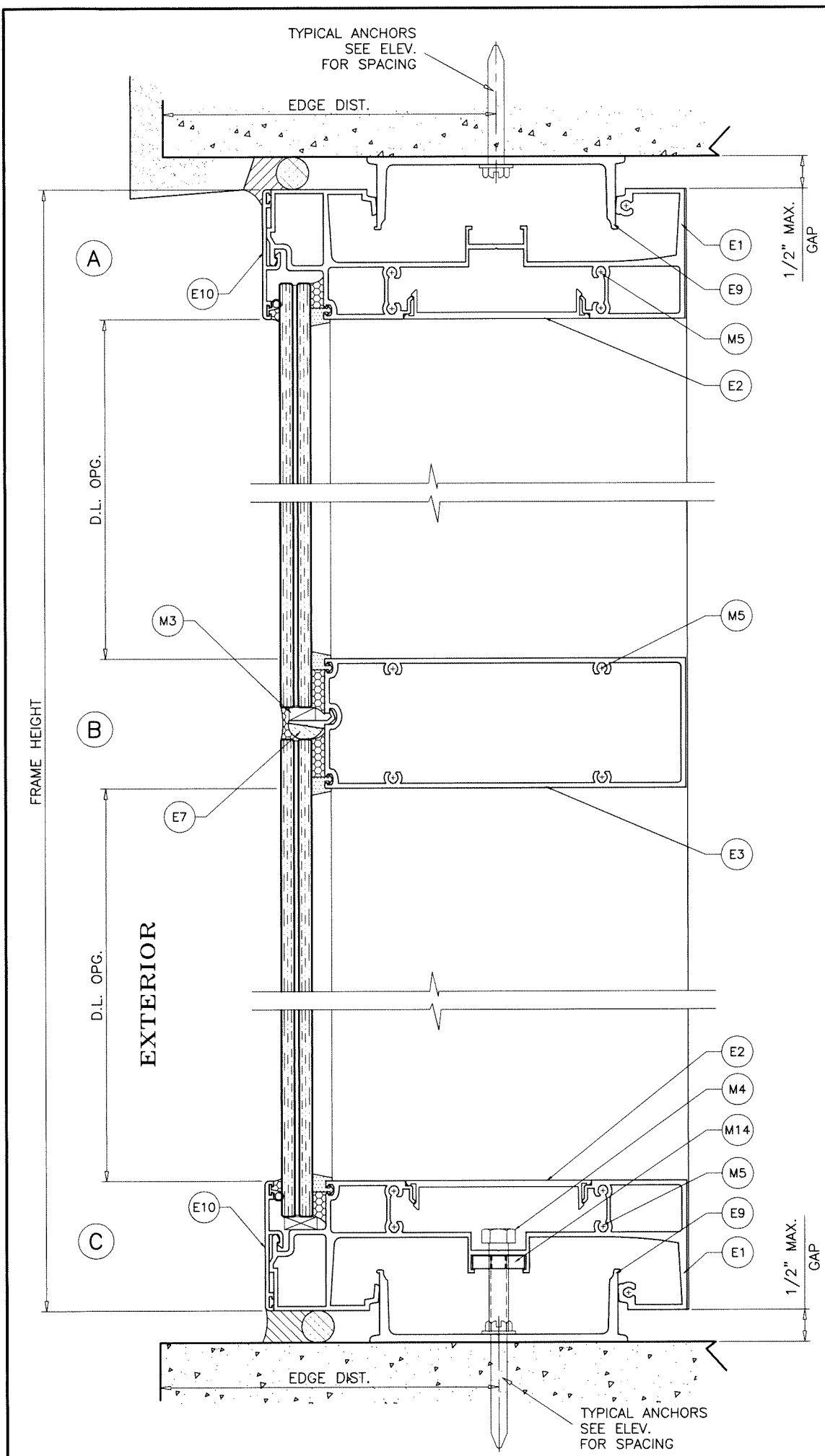
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3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

revisions:
no date by description

date: 02-18-20
scale: -
dr. by: TARIQ
chk. by:

drawing no.
20-14F
sheet 5 of 11

STORE 20-14F-ES



METAL STRUCTURES NOT BY 'E.S. WDW.'
MUST SUPPORT LOADS IMPOSED BY GLAZING SYSTEM AND
TRANSFER THEM TO THE BUILDING STRUCTURE.

TYPICAL ANCHORS: SEE ELEV. FOR SPACING

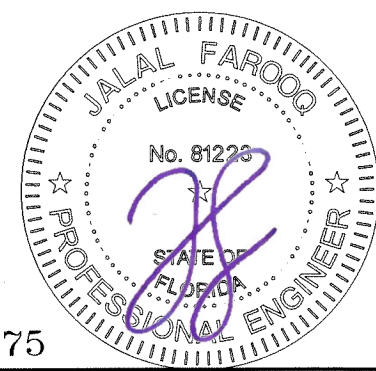
TYPE 'A' (HEAD/SILL)
5/16" DIA ULTRACON BY 'DEWALT' (Fu=177 KSI, Fy=155 KSI)
DIRECTLY INTO CONCRETE (3500 PSI MIN.)
WITH 2" MIN. EMBED INTO CONCRETE, 5" O.C. MIN.

ANCHOR EDGE DISTANCES
INTO CONCRETE = 3-1/8" MIN.

TYPE 'B' (HEAD/SILL)
5/16" DIA. DRILL-FLEX SELF DRILLING SCREWS (Fu=120 KSI, Fy=92 KSI)
INTO METAL STRUCTURES, 3" O.C. MIN.
STEEL : 1/4" THK. MIN. (Fy = 36 KSI MIN.)
(STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

ANCHOR EDGE DISTANCES
INTO METAL STRUCTURE = 1" MIN.

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af c
STORE 20-14F-ES

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revisions:	
no	date by description

date: 02-18-20

scale: 3/8" = 1"

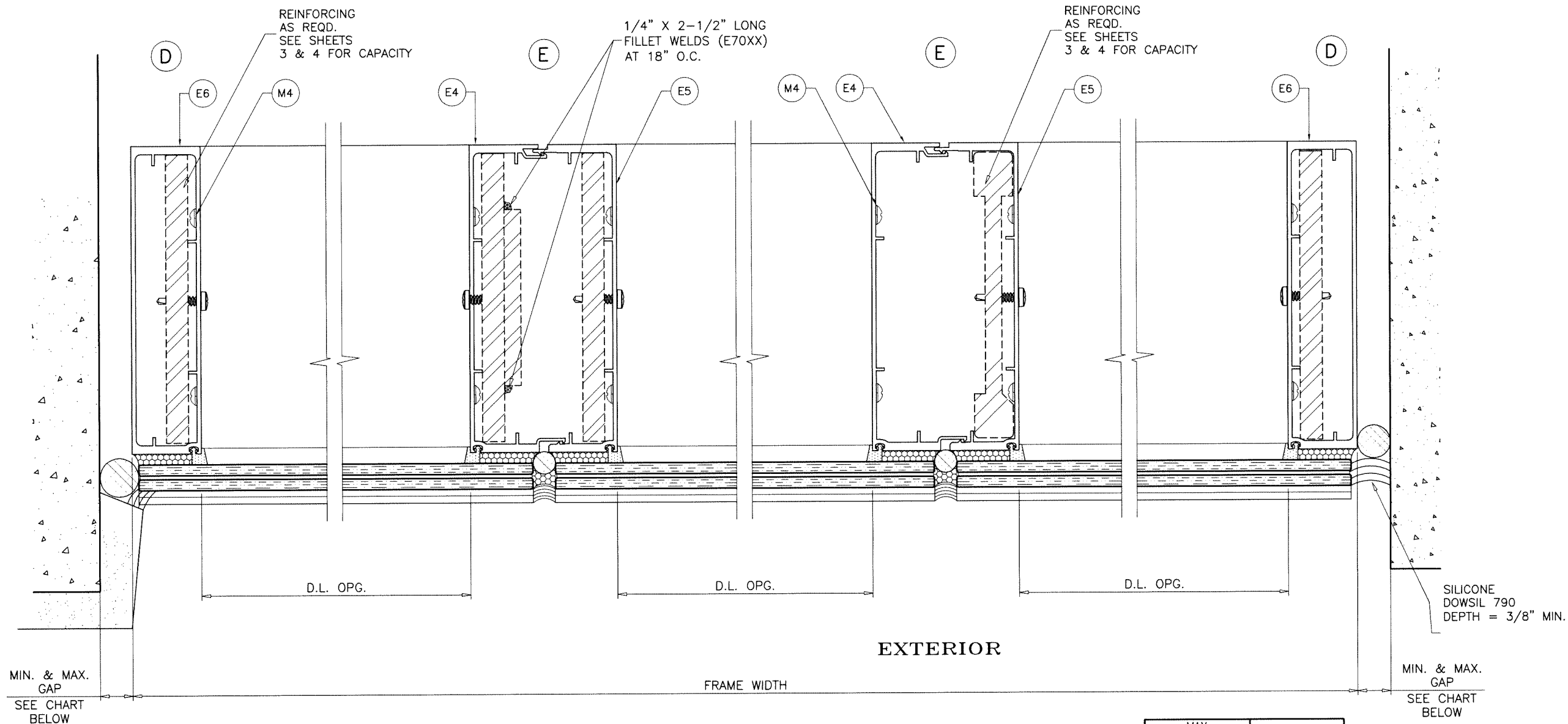
dr. by: TARIQ

chk. by:

drawing no.

20-14F

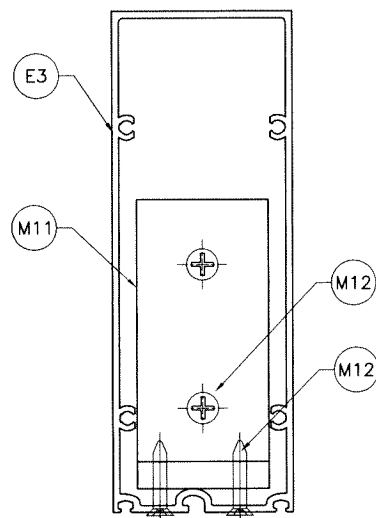
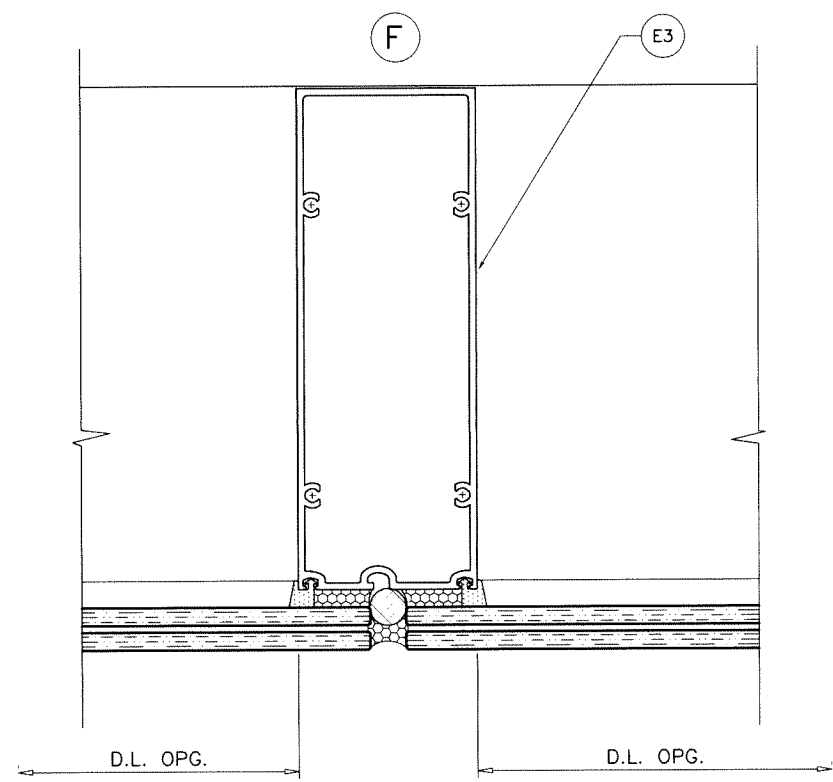
sheet 6 of 11



EXTERIOR

MIN. & MAX.
GAP
SEE CHART
BELOW

MIN. & MAX.
GAP
SEE CHART
BELOW



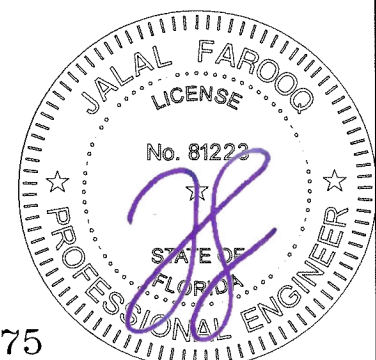
DETAIL '1'

MAX. FRAME HEIGHTS UPTO	GAP	
	MIN.	MAX.
132"	7/16"	3/4"
156"	1/2"	3/4"
180"	5/8"	3/4"

NOTE:
MAX. MOVEMENT CONSIDERED=100% STRETCH.
PLEASE REFER TO SEALANT MANUFACTURER'S DATA AND APPLICATION
MANUAL FOR COMPATABILITY OF SEALANT TO SUBSTRATE & WINDOWALL
MATERIAL/FINISH AND COMPLIANCE FOR WARRANTY.
REFER TO ACI-117-10 FOR CONSTRUCTION TOLERANCES.

ALTERNATE SEALANTS AT JAMB GAPS CAN BE DESIGNED BY
ENGINEER OF RECORD BASED ON MANUFACTURER GUIDE LINES.

GAPS LESS THAN 1/4" MAY BE DESIGNED BY ENGINEER OF RECORD BY
THE USE OF BOND BREAKER TAPE OR 15% OF GAP ALLOWED MOVEMENT.



Sealed: 8/4/2026

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STORE 20-14F-ES

ES-WW832-A ALUM WINDOW WALL SYSTEM (S.M.I.)

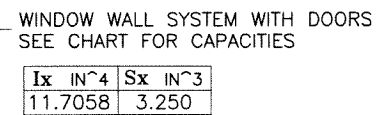
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3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

revisions:		date	no	by	description

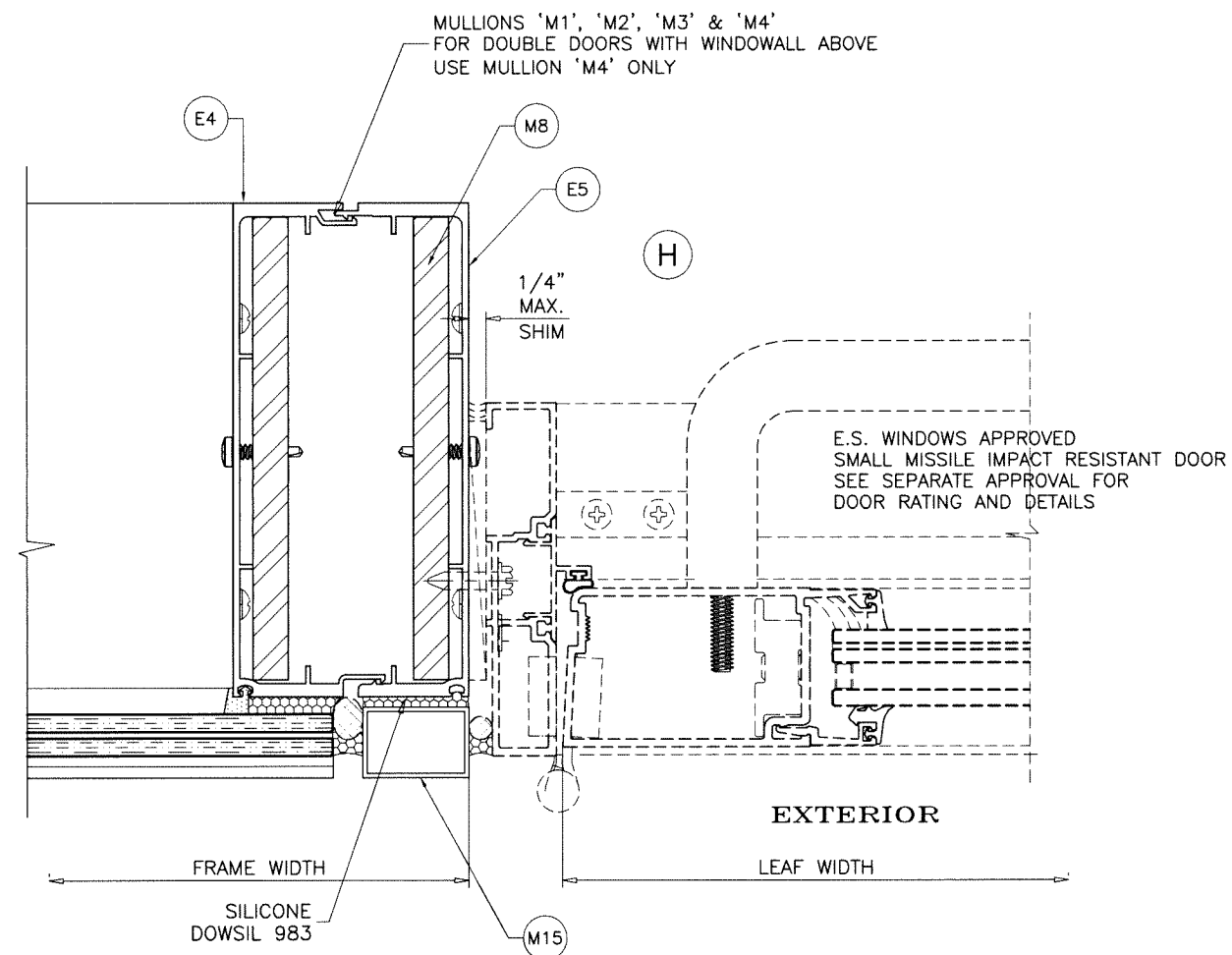
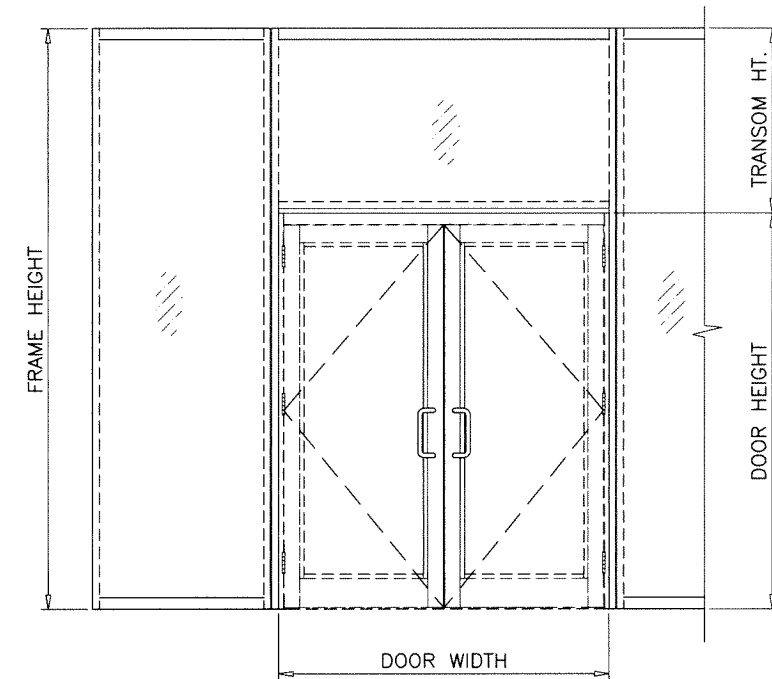
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dr. by: TARIQ
chk. by:

drawing no.
20-14F

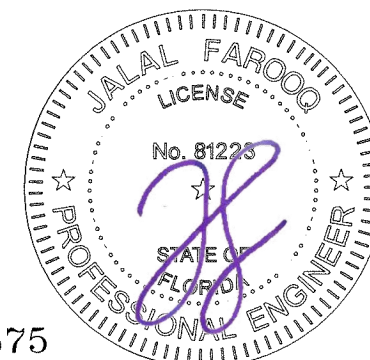
sheet 7 of 11



DOOR HORIZONTAL LOAD CAPACITY – PSF					
DOOR WIDTH INCHES	TRANSMOM HT. INCHES	FRAME HEIGHT INCHES	DOOR HEIGHT INCHES	EXT.(+)	INT.(–)
90	24	144	120	100.0	100.0
	30	150		96.4	96.4
	36	156		92.0	92.0
	42	162		87.9	87.9
	48	168		84.1	84.1
	54	174		80.6	80.6
	55–3/4	175–3/4		79.6	79.6



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FL #21875

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9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173 (C.A.N. 3538)
TEL. (305) 264-8100 FAX. (305) 262-6978

ES-WW8832-A ALUM WINDOW WALL SYSTEM (S.M.I.)

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

FAX. (305) 638-5158

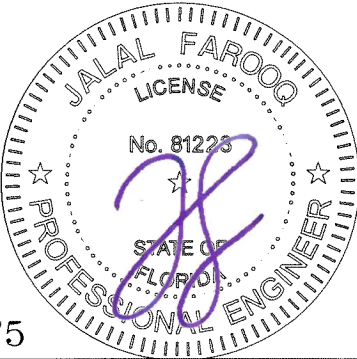
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ITEM NO.	PART NUMBER	QUANTITY	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
E1	ES-WW8832-053	AS REQD.	FRAME HEAD/SILL (LAM. GLASS)	6005-T5	-
E2	ES-WW8832-052	AS REQD.	SCREW COVER	6005-T5	-
E3	ES-WW8832-101	AS REQD.	INTERMEDIATE HORIZONTAL	6005-T5	-
E4	ES-WW8832-102	AS REQD.	FEMALE MULLION	6063-T6	-
E5	ES-WW8832-103	AS REQD.	MALE MULLION	6063-T6	-
E6	ES-WW8832-104	AS REQD.	FRAME JAMB	6063-T6	-
E7	-	AS REQD.	SETTING CHAIR	6005-T5	-
E7A	-	AS REQD.	SETTING CHAIR FILLER	6005-T5	-
E9	ES-WW8832-201	AS REQD.	ANCHOR BASE	6005-T5	-
E9A	-	AS REQD.	ANCHOR BASE, AT SLANTED SYSTEM	6005-T5	-
E10	ES-7006	AS REQD.	GLAZING STOP	6063-T5	-
E11	-	AS REQD.	SHEAR BLOCK, AT SLANTED SYSTEM	6063-T5	-
M1	ES7000-G01	AS REQD.	EXTERIOR GLASS SEAL	SILICONE	TREMCO, DUROMETER 60±5 SHORE A
M3	ES7000-B01A	2/ LITE	SETTING BLOCKS AT 1/4 POINTS (INSUL. LAM. GLASS)	EPDM	TREMCO, DUROMETER 85±5 SHORE A
M3A	80-378	2/ LITE	SETTING BLOCKS AT 1/4 POINTS (LAM. GLASS)	EPDM	TREMCO, DUROMETER 85±5 SHORE A
M3B	ES-6025-B01A	2/ LITE	SETTING BLOCKS AT 1/4 POINTS (AT DOOR HORIZONTAL)	EPDM	TREMCO, DUROMETER 85±5 SHORE A
M4	3/8-16 X 2"	AS REQD.	LEVELING SCREW	ST/ST	HWH
M5	#12 X 1"	AS REQD.	FRAME ASSEMBLY FASTENERS	ST/ST	PH SMS
M6	ES-U3525-G08	AS REQD.	SPACER GASKET	SILICONE	TREMCO, DUROMETER 70±5 SHORE A
M8	-	AS REQD.	STEEL REINFORCING BAR (LENGTH = FRAME LENGTH - 6")	STEEL	A36, Fu MIN. = 58 KSI
M9	-	AS REQD.	STEEL REINFORCING BAR (LENGTH = FRAME LENGTH - 6")	STEEL	A36, Fu MIN. = 58 KSI
M10	ES-WW8832-204	AS REQD.	ALUMINUM REINFORCING (LENGTH = FRAME LENGTH - 6")	6063-T6	-
M11	-	AS REQD.	ALUMINUM REINFORCING BAR (LENGTH = FRAME LENGTH - 6")	6063-T6	-
M12	#12 X 1"	AS REQD.	SHEAR BLOCK ASSEMBLY FASTENERS	ST/ST	FH SMS
M13	-	AS REQD.	SHEAR BLOCK ANGLE	6063-T6	-
M14	ALU-P-020	AS REQD.	1" X 1" SILL LEVELER	ALUMINUM	-
M15	-	AS REQD.	FILLER TUBE (1" X 1-1/2" X 1/16")	6063-T5	-

SEALANTS:

ALL FRAME CORNERS, JOINTS, MULLION SEAMS AND PERIMETER OF GLAZING BEAD TO FRAME SEALED WITH SILICONE SEALANT.

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FL #21875

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AL-FAROOQ CORPORATION
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9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100 FAX. (305) 262-6978

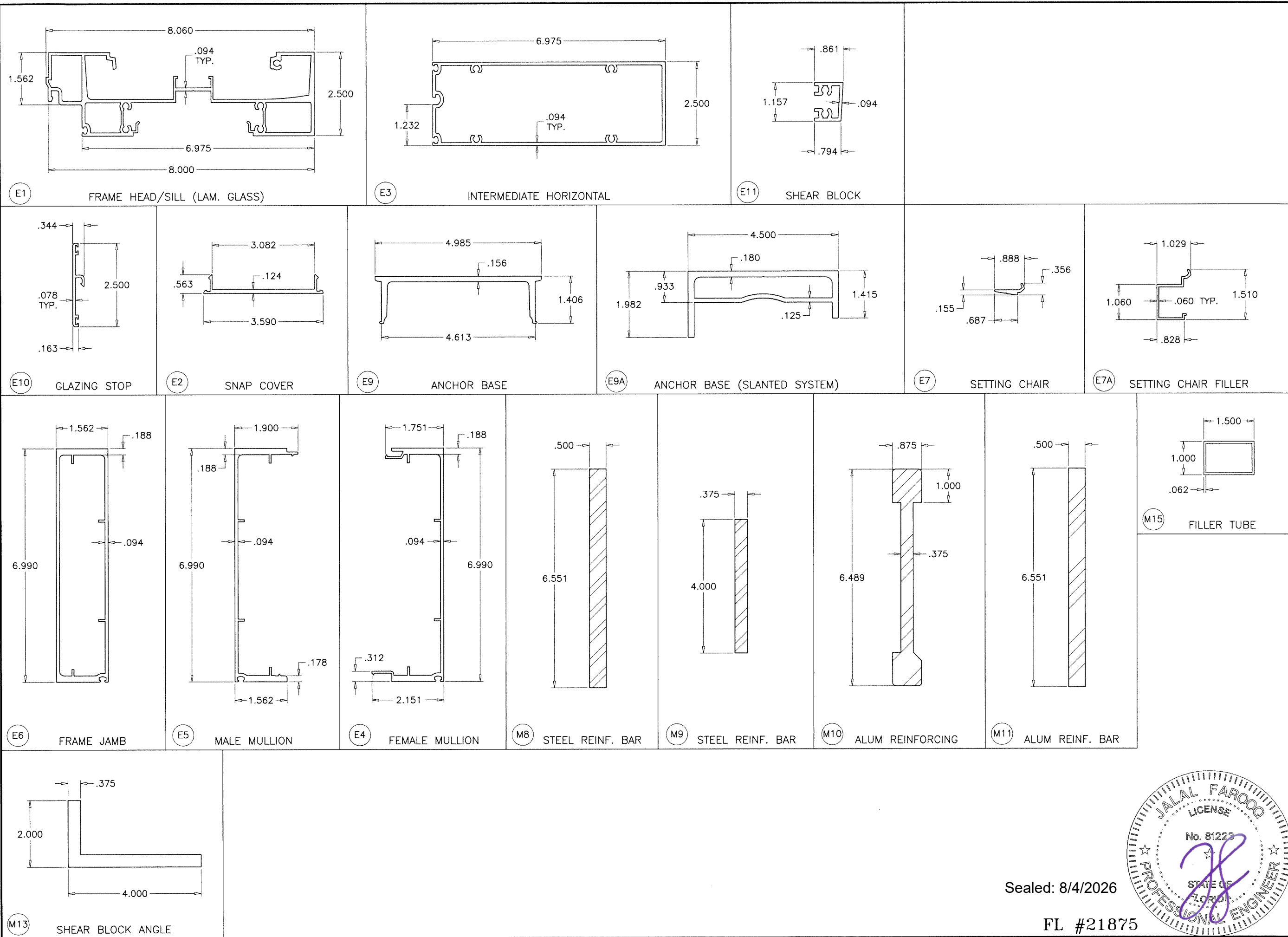
ES-WW8832-A ALUM WINDOW WALL SYSTEM (S.M.I.)

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sheet 9 of 11



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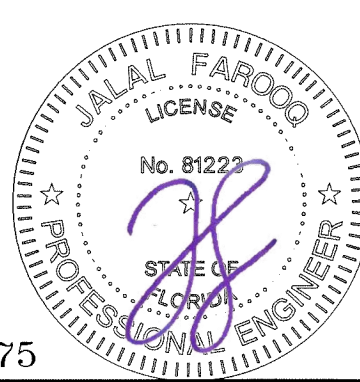
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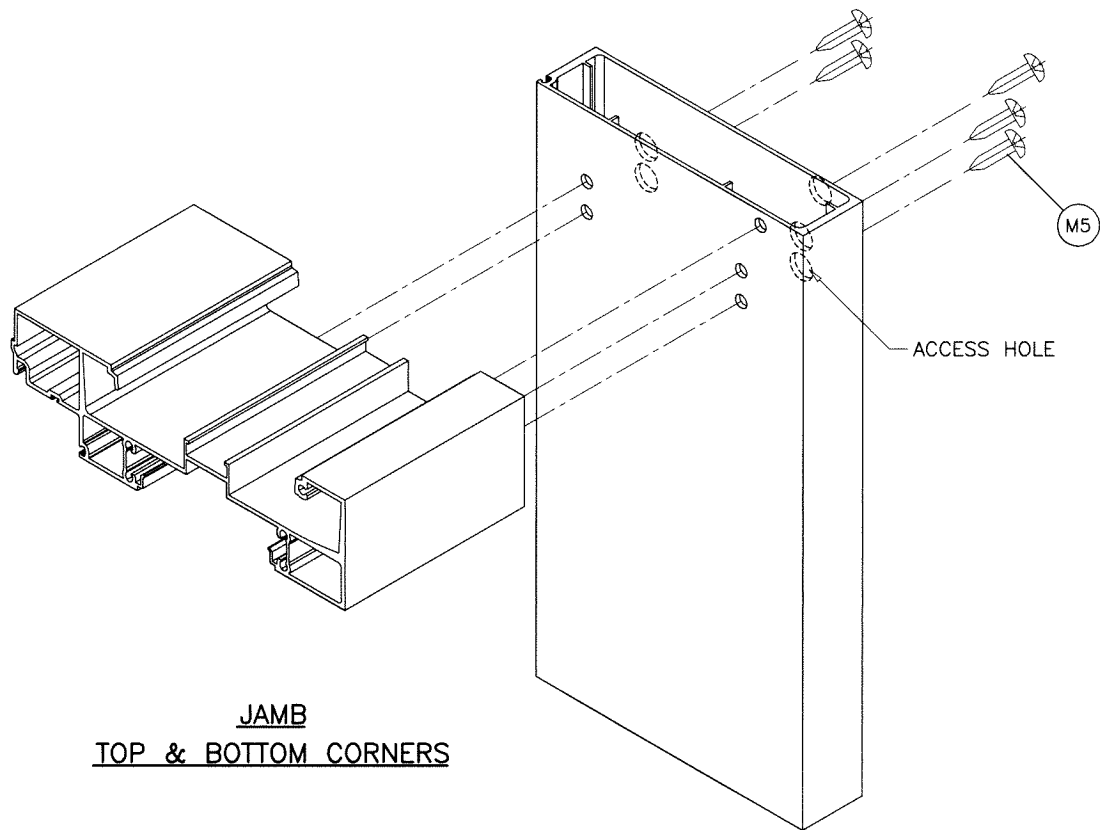
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sheet 10 of 11

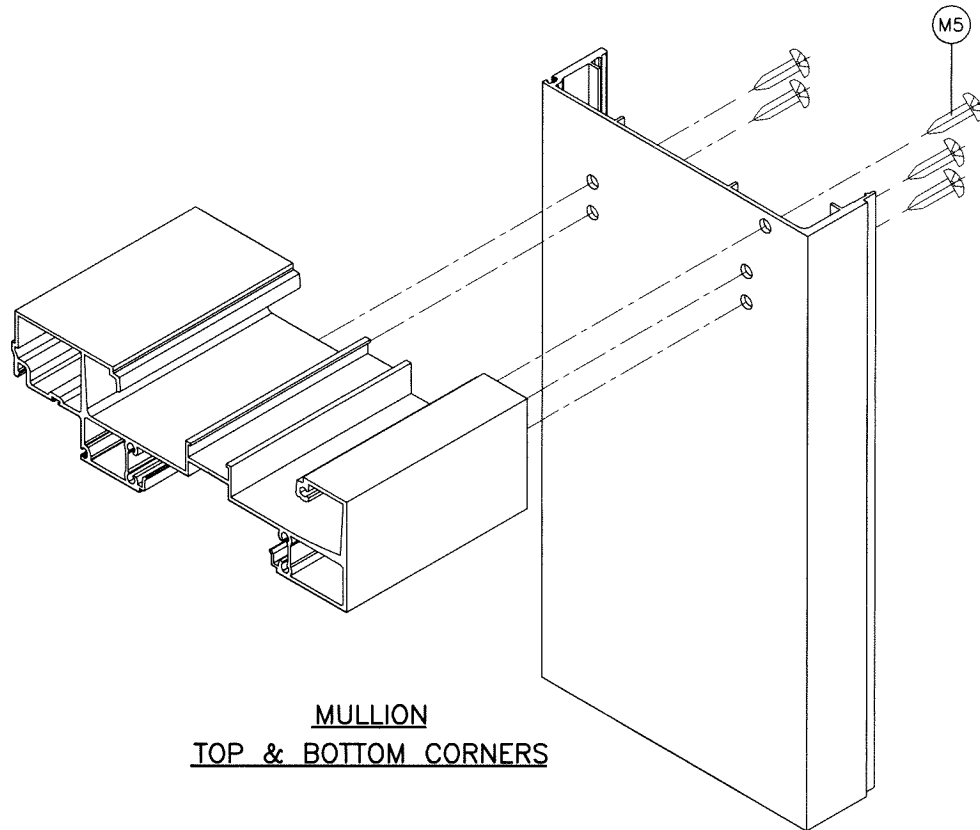
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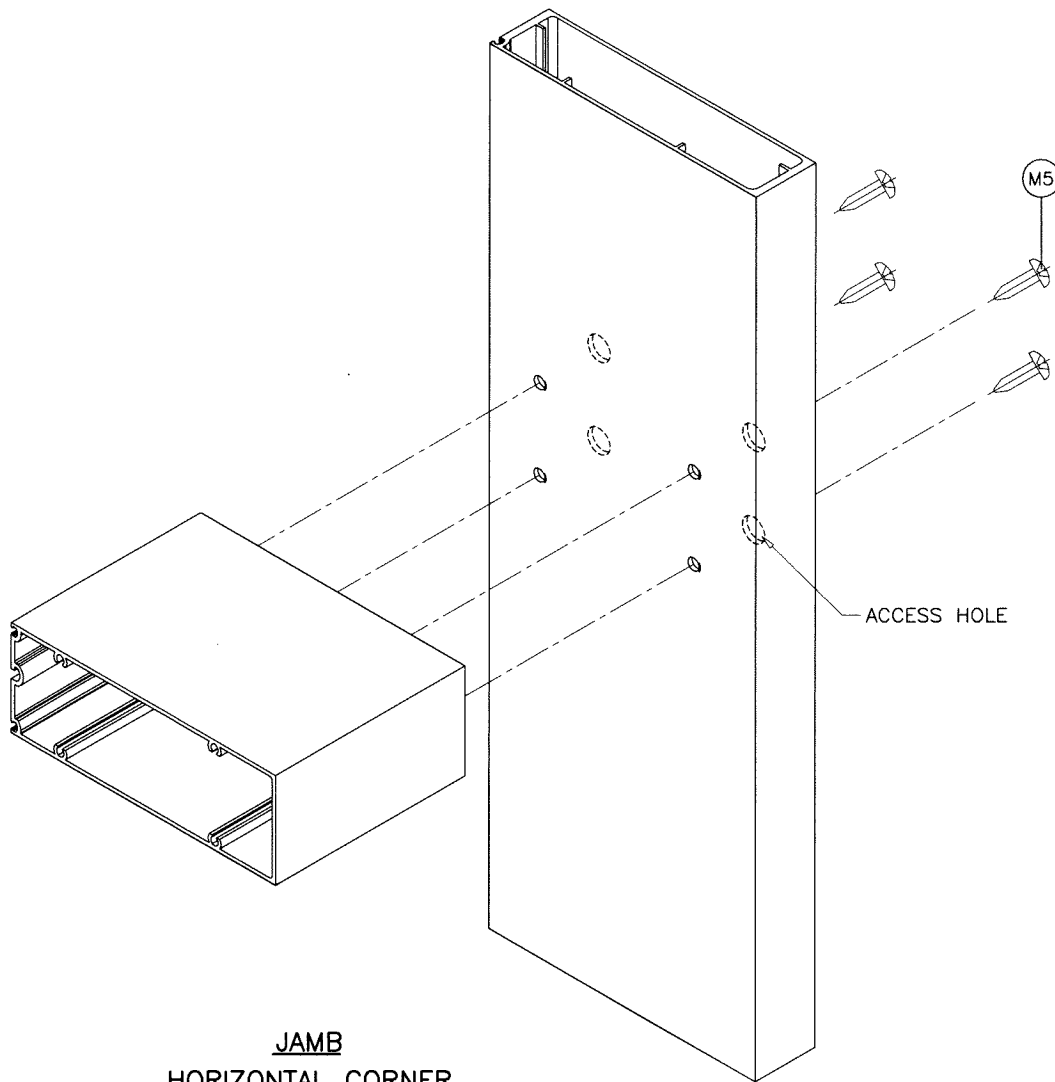




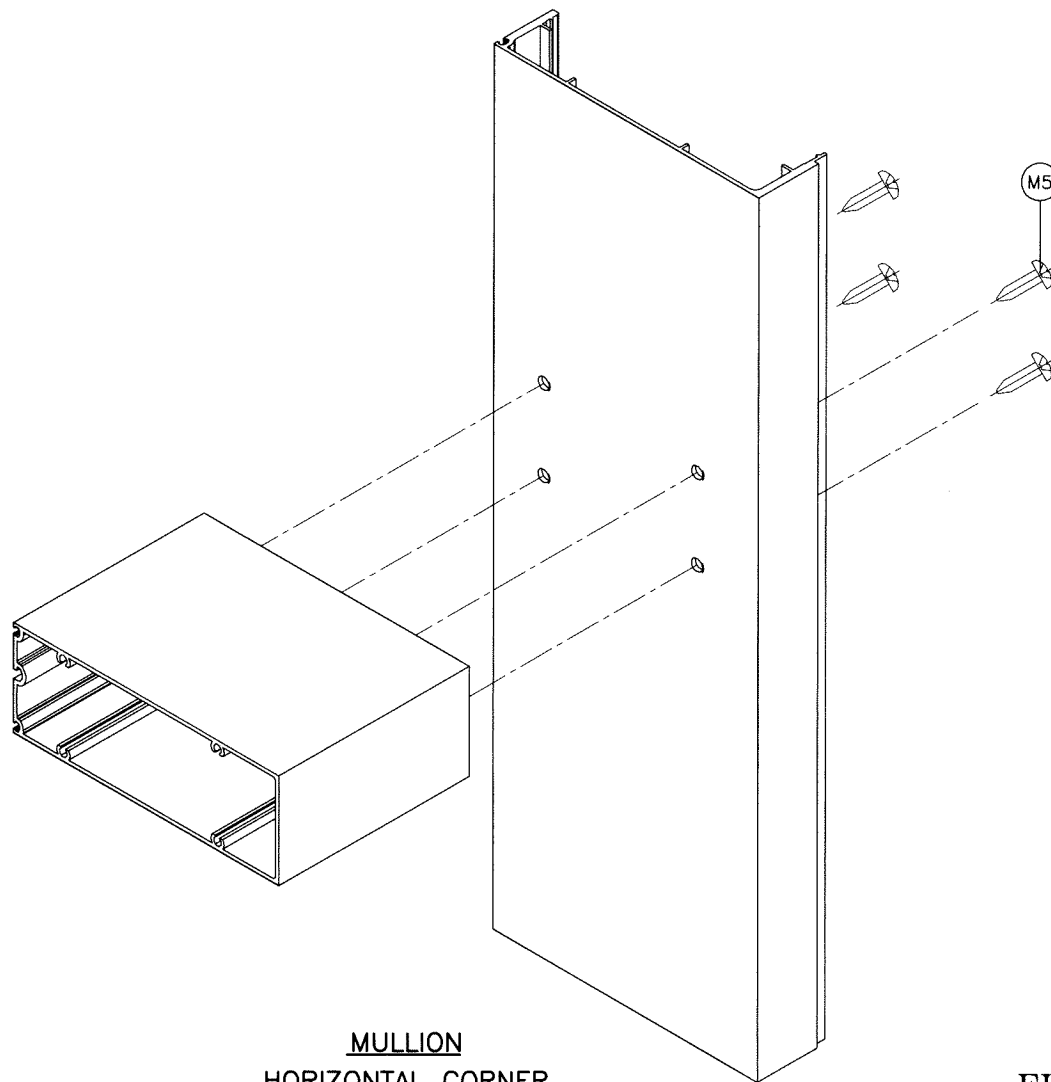
JAMB
TOP & BOTTOM CORNERS



MULLION
TOP & BOTTOM CORNERS

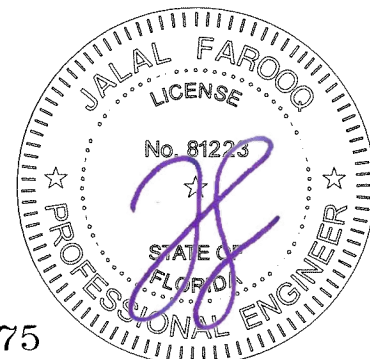


JAMB
HORIZONTAL CORNER



MULLION
HORIZONTAL CORNER

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afc

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sheet 11 of 11