

E.S. WINDOWS, LLC.
SERIES ES-7525
ALUMINUM CURTAINWALL SYSTEM

CURTAIN WALL SYSTEM IS RATED FOR LARGE & SMALL MISSILE IMPACT.
SHUTTERS ARE NOT REQD.

CODE REQUIREMENTS FOR SAFEGUARDS MUST BE OBSERVED.

THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE
REQUIREMENTS OF THE 2023 (8TH 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 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 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)'.

INSTRUCTIONS:

USE CHARTS AS FOLLOWS.

- STEP 1** DETERMINE DESIGN WIND LOAD REQUIREMENT BASED ON
WIND VELOCITY, BLDG. HEIGHT, WIND ZONE USING
APPLICABLE ASCE 7 STANDARD.
- STEP 2** SEE CHARTS ON SHEET 4 THRU 4.4 FOR DESIGN LOAD
CAPACITY OF DESIRED GLASS SIZE.
- STEP 3** CHECK MULLION CAPACITY FOR A GIVEN SPACING AND HEIGHT
USING CHARTS ON SHEETS 6 THRU 7.1 FOR SINGLE SPANS, AND
CHARTS ON SHEETS 8 THRU 10.1 FOR EQUAL MULTIPLE SPANS.
- STEP 4** USING HEAD/SILL ANCHOR DETAILS ON SHEETS 5 & 5.1
SELECT ANCHOR OPTION.
- STEP 5** CHECK INTERMEDIATE ANCHOR CAPACITY FOR MULTIPLE SPANS
USING CHARTS OR DETAILS ON SHEETS 18 THRU 27.
- STEP 6** THE LOWEST VALUE RESULTING FROM STEPS 2, 3, 4
AND 5 SHALL APPLY TO ENTIRE SYSTEM.

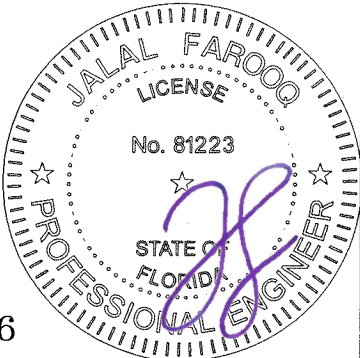
INDEX OF DRAWING	
SHEET NO.	DESCRIPTION
1	GENERAL NOTES
2 & 3	TYPICAL CURTAIN WALL ELEVATION
4 THRU 4.2	GLAZING DETAILS, GLASS CAPACITY CHARTS (LEVEL D IMPACT)
4.3 & 4.4	GLAZING DETAILS, GLASS CAPACITY CHARTS (LEVEL E IMPACT)
5 THRU 5.4	HEAD/SILL ANCHOR DETAILS AND CAPACITY CHARTS
6 THRU 7.2	SINGLE SPAN JAMB & MULLION CAPACITY CHARTS
8 THRU 10.1	TWIN SPAN JAMB & MULLION CAPACITY CHARTS
11	SINGLE SPAN CORNER MULLION CAPACITY CHARTS
12	TWIN SPAN CORNER MULLION CAPACITY CHARTS
13 & 14	VERTICAL AND HORIZONTAL SECTION DETAILS
15	DOOR SUBFRAME DETAILS
16 & 17	CORNER MULLION DETAILS
18 THRU 20.1	WIND LOAD ANCHOR DETAILS AND CAPACITY CHARTS
21 THRU 23	WIND LOAD + DEAD LOAD ANCHOR DETAILS AND CAPACITY
24 THRU 27	WIND LOAD + DEAD LOAD CORNER MULLION ANCHOR DETAILS
28 & 28.1	EXTRUSION DETAILS
29	BILL OF MATERIALS
30	CORNER CONSTRUCTION DETAILS

CURTAIN WALL WITH GLASS TYPES 'A2', 'A3', 'B' & 'B1'
COMPLY WITH REQUIREMENTS OF ANSI Z97.1.

LAMINATED GLASS
INSUL. LAM. GLASS
LARGE MISSILE IMPACT

- 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: 03/20/2026



FL #17896

afcc

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

SERIES ES-7525 ALUM CURTAIN WALL SYSTEM (L.M.I.)

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

revisions:

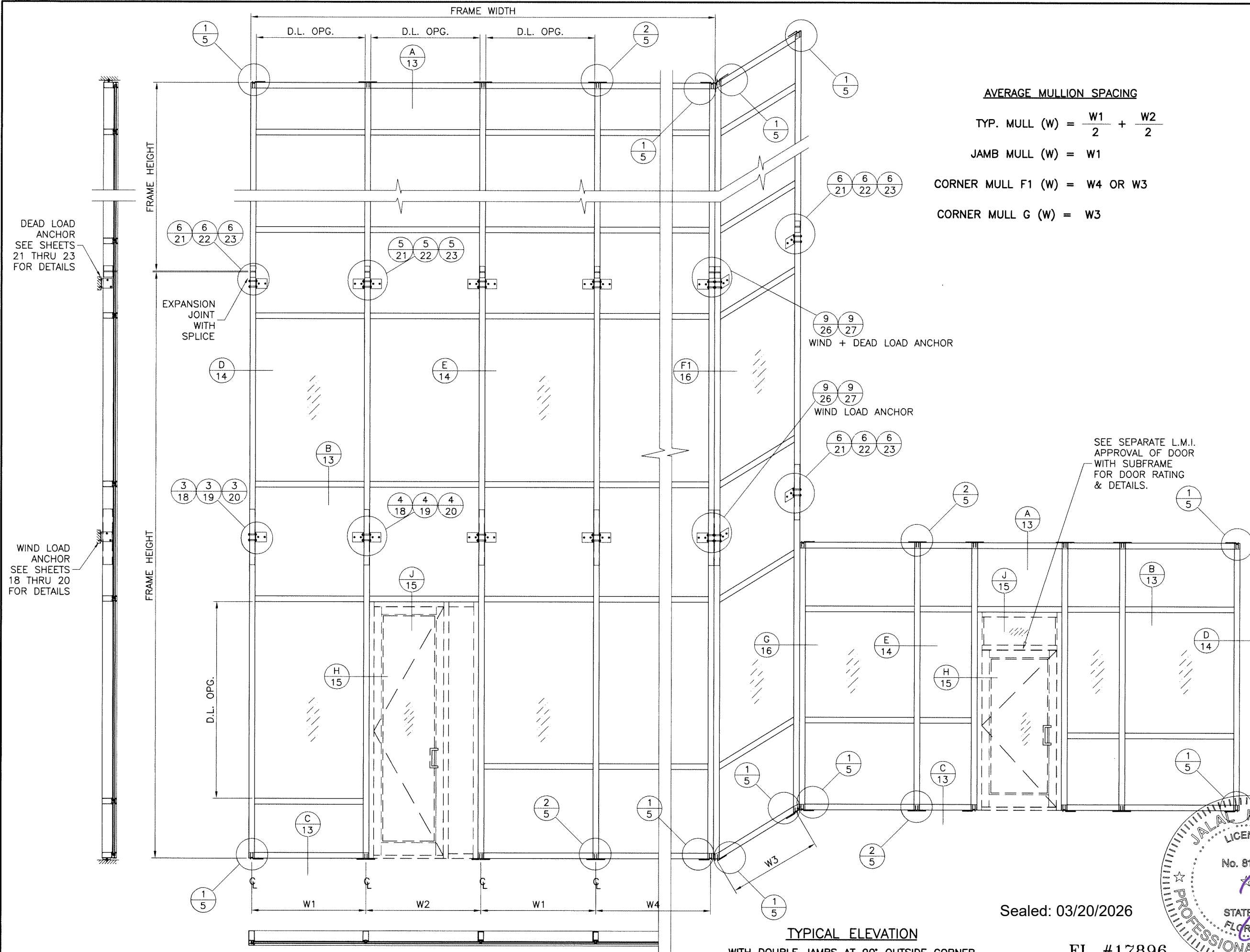
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C	10.18.19		NEW TEST ADDED
D	05.19.20		LEVEL E GLAZING ADDED
E	09.11.23		UPDATED TO 2023 FBC
F	02.27.26		INSUL. GLASS MUNTIN ADDED

date: 07-17-15
scale: -
dr. by: TARIQ
chk. by:

drawing no.
W15-38

sheet 1 of 30

COMP-ANL\W15-38ESW



AVERAGE MULLION SPACING

TYP. MULL (W) = $\frac{W1}{2} + \frac{W2}{2}$

JAMB MULL (W) = W1

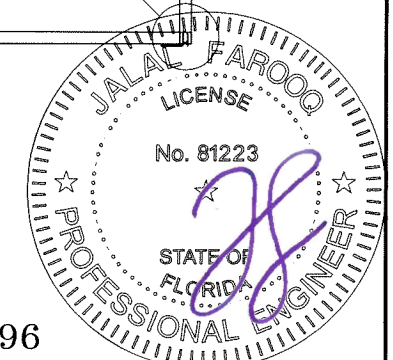
CORNER MULL F1 (W) = W4 OR W3

CORNER MULL G (W) = W3

TYPICAL ELEVATION
WITH DOUBLE JAMBS AT 90° OUTSIDE CORNER

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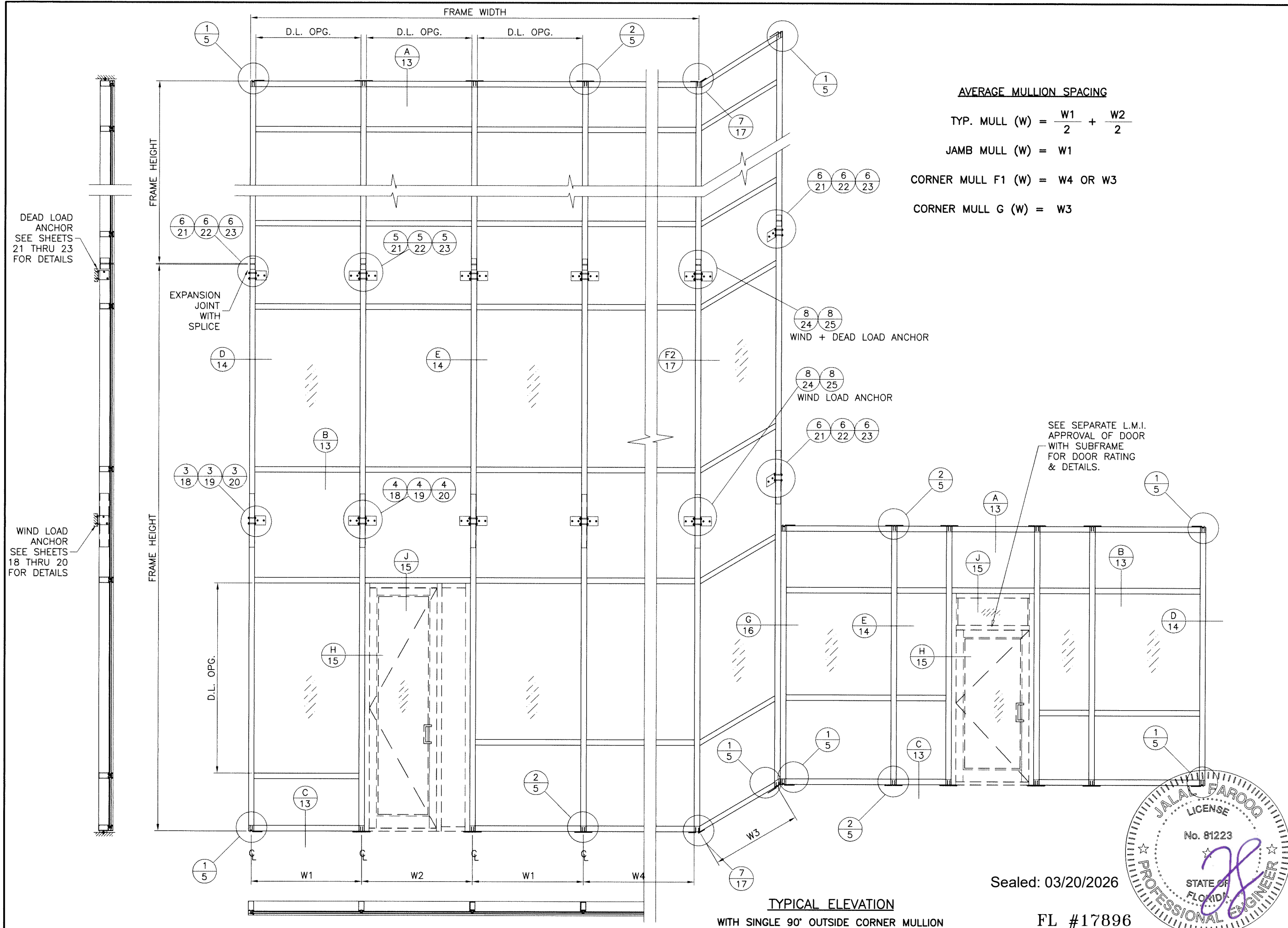
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drawing no.

W15-38

sheet 2 of 30



AVERAGE MULLION SPACING

$$\text{TYP. MULL (W)} = \frac{W1}{2} + \frac{W2}{2}$$

$$\text{JAMB MULL (W)} = W1$$

$$\text{CORNER MULL F1 (W)} = W4 \text{ OR } W3$$

$$\text{CORNER MULL G (W)} = W3$$

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(C.A.N. 3538)

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revisions:	no	date	by	description

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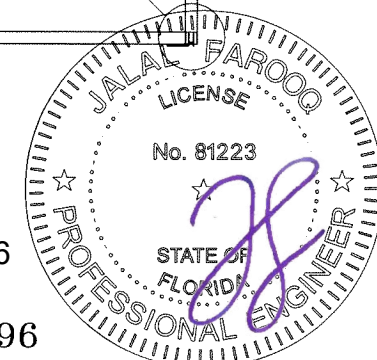
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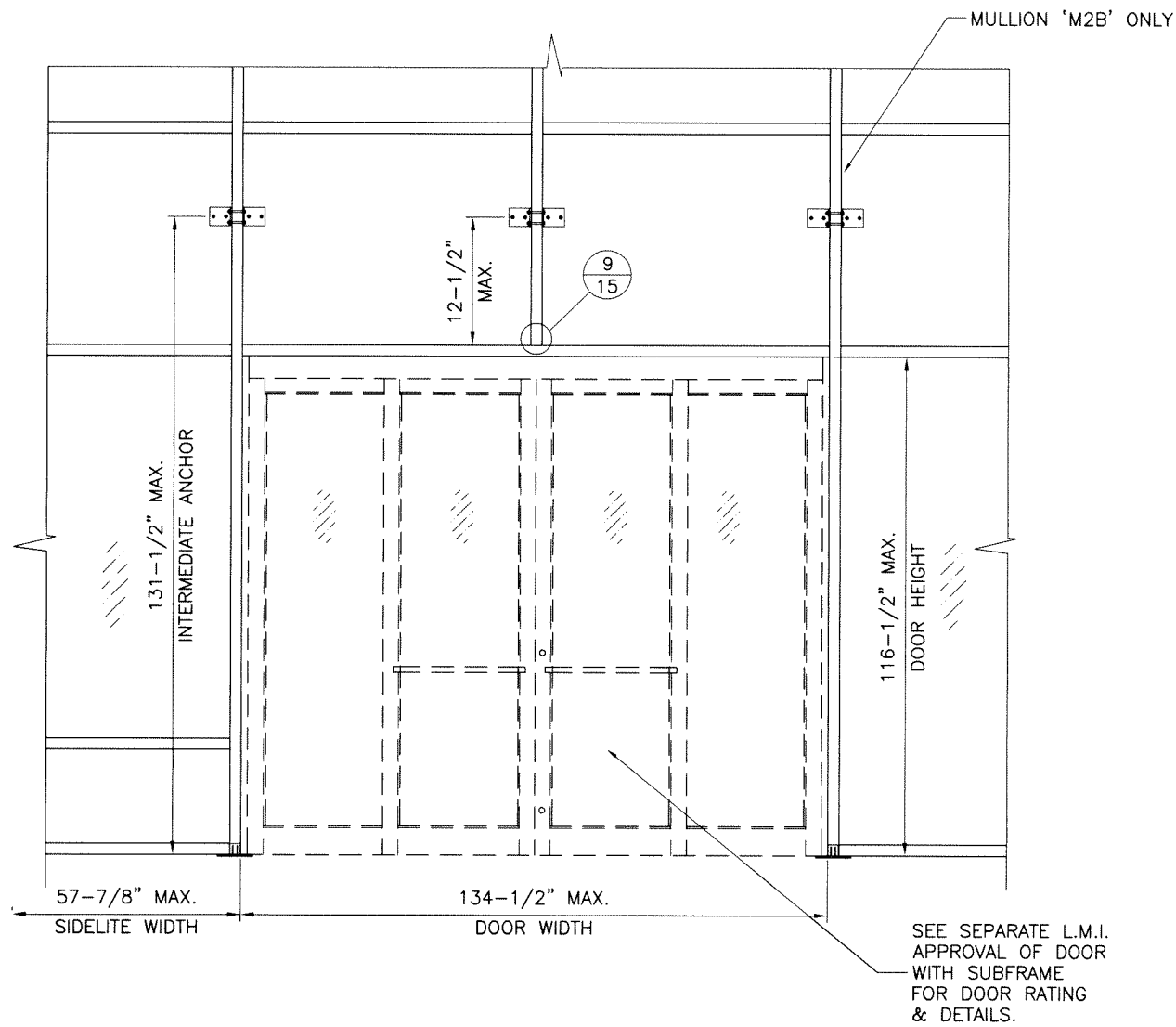
W15-38

sheet 3 of 30

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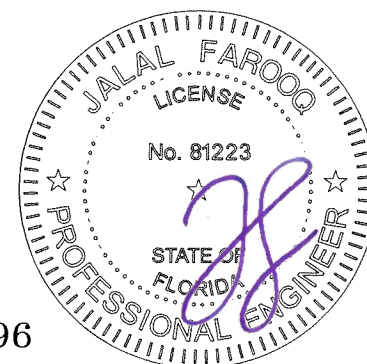
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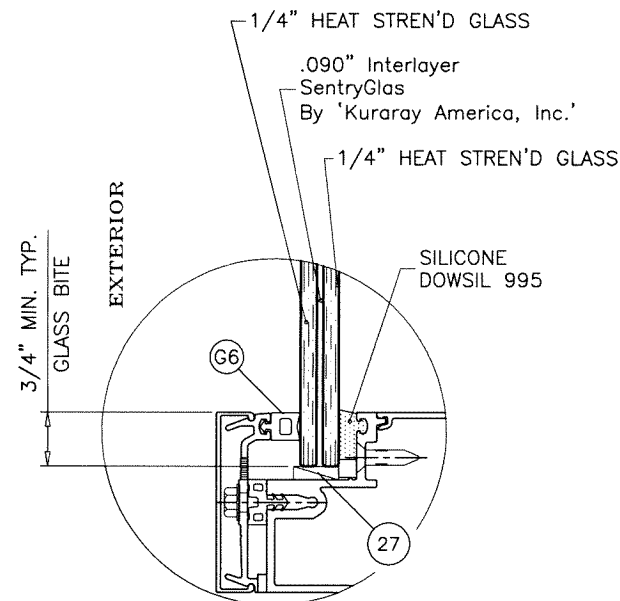
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revisions:	
no	by description

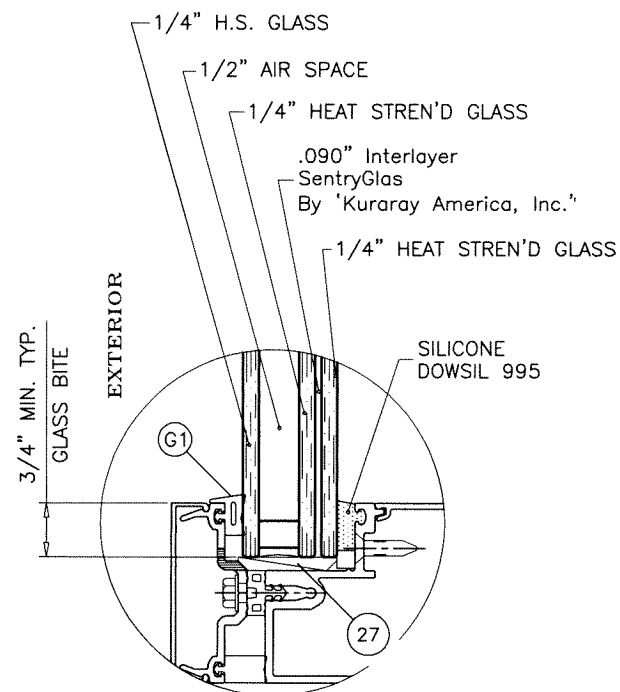
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 chk. by:

drawing no.
W15-38
 sheet 3.2 of 30

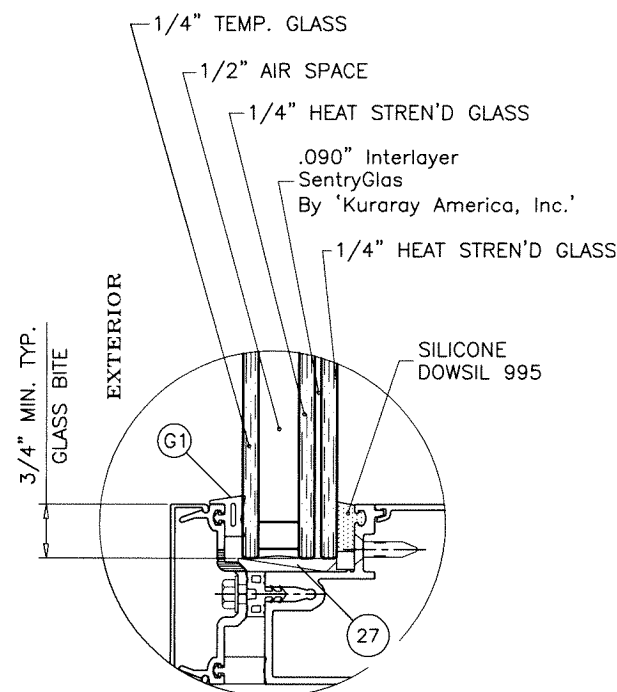
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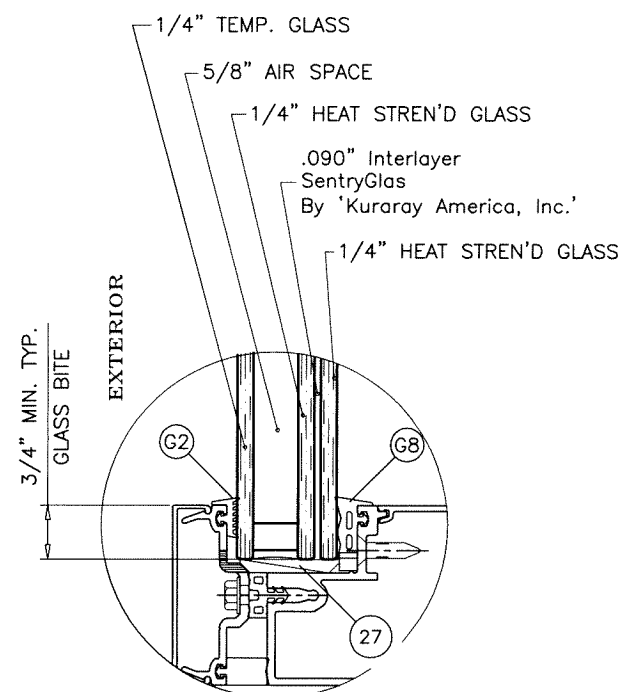
GLASS TYPE 'A'



GLASS TYPE 'A1'



GLASS TYPE 'A2'

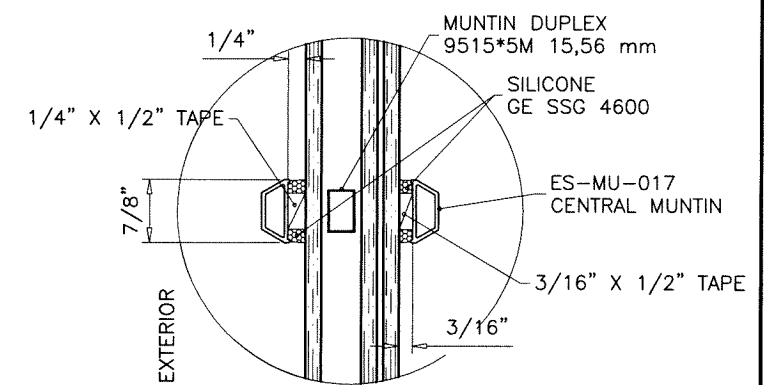


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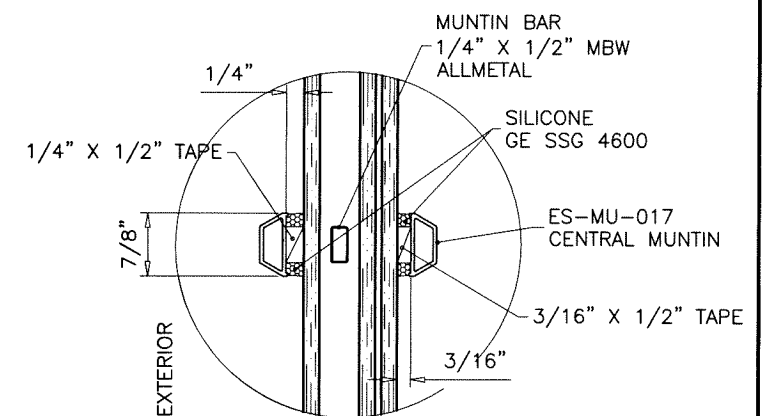
**GLAZING OPTIONS
LEVEL 'D' IMPACT**

1/2" & 5/8" AIR SPACE CONSISTING OF:
SPACER:
 'HELIMA' LOW PROFILE ALUMINUM SPACER
 BY 'LINGERMANN GMBH'
 AROUND THE PERIMETER OF THE GLASS.
PERIMETER SEALANT:
 SILICONE
 DOWSIL 791
 GE 2000

NOTE:
 GLASS TYPE 'A1' NOT APPROVED FOR INSTALLATIONS
 ABOVE 30 FT. OF GRADE.

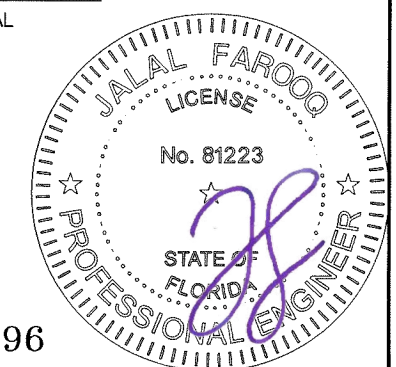


**ALUMINUM MUNTINS
OPTIONAL**



**ALUMINUM MUNTINS
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Revisions:	
no	date by description

date: 07-17-15

scale: 3/8" = 1"

dr. by: TARIQ

chk. by:

drawing no.
W15-38

sheet 4 of 30

GLASS LOAD CAPACITY - PSF		
NOMINAL DIMS.		GLASS TYPE 'A'
D.L.O. WIDTH	D.L.O. HEIGHT	EXT. (+) INT. (-)
36"	90"	119.0
39"		119.0
42"		119.0
45"		119.0
48"		119.0
51"		119.0
54"		119.0
57"		119.0
60"		119.0
36"	96"	119.0
39"		119.0
42"		119.0
45"		119.0
48"		119.0
51"		119.0
54"		119.0
57"		119.0
60"		86.4
36"	102"	119.0
39"		119.0
42"		119.0
45"		119.0
48"		119.0
51"		119.0
54"		119.0
57"		86.4
60"		70.0
36"	108"	119.0
39"		119.0
42"		119.0
45"		119.0
48"		119.0
51"		119.0
54"		86.4
57"		70.0
60"		70.0
36"	114"	119.0
39"		119.0
42"		119.0
45"		119.0
48"		119.0
51"		86.4
54"		70.0
57"		70.0
60"		70.0
36"	120"	119.0
39"		119.0
42"		119.0
45"		119.0
48"		86.4
51"		70.0
54"		70.0
57"		70.0

GLASS LOAD CAPACITY - PSF		
NOMINAL DIMS.		GLASS TYPE 'A'
D.L.O. WIDTH	D.L.O. HEIGHT	EXT. (+) INT. (-)
36"	126"	119.0
39"		119.0
42"		119.0
45"		86.4
48"		70.0
51"		70.0
54"		70.0
60"		100.0
36"	132"	119.0
39"		119.0
42"		86.4
45"		70.0
48"		70.0
51"		70.0
54"		100.0
60"		100.0
36"	138"	119.0
39"		119.0
42"		86.4
45"		70.0
48"		70.0
51"		70.0
54"		100.0
60"		100.0
36"	144"	119.0
39"		86.4
42"		70.0
45"		70.0
48"		70.0
51"		100.0
54"		100.0
60"		100.0
36"	150"	119.0
39"		86.4
42"		70.0
45"		70.0
48"		100.0
51"		100.0
54"		100.0
60"		100.0
36"	153-5/8"	119.0
39"		70.0
42"		70.0
45"		70.0
48"		100.0
51"		100.0
54"		100.0
60"		100.0
36"	156-1/4"	119.0
39"		70.0
42"		70.0
45"		70.0
48"		100.0
51"		100.0
54"		100.0
60"		100.0

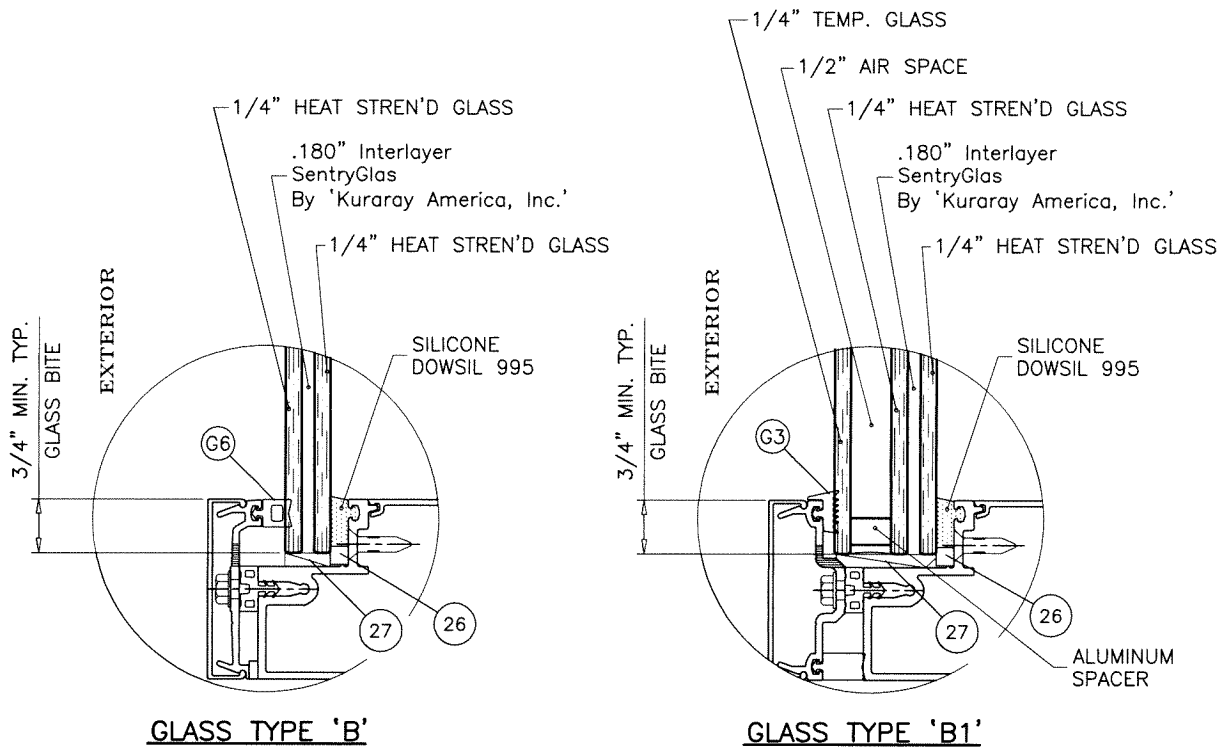
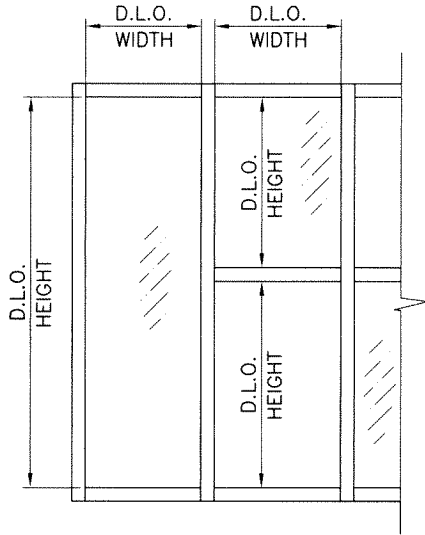
GLASS LOAD CAPACITY - PSF		
NOMINAL DIMS.		GLASS TYPE 'A1'
D.L.O. WIDTH	D.L.O. HEIGHT	EXT. (+) INT. (-)
36"	90"	100.0
39"		100.0
42"		100.0
45"		100.0
48"		100.0
51"		100.0
54"		100.0
57"		100.0
60"		100.0
36"	96"	100.0
39"		100.0
42"		100.0
45"		100.0
48"		100.0
51"		100.0
54"		100.0
57"		100.0
60"		100.0
36"	102"	100.0
39"		100.0
42"		100.0
45"		100.0
48"		100.0
51"		100.0
54"		100.0
57"		100.0
60"		50.0
36"	108"	100.0
39"		100.0
42"		100.0
45"		100.0
48"		100.0
51"		100.0
54"		100.0
57"		100.0
60"		50.0
36"	114"	100.0
39"		100.0
42"		100.0
45"		100.0
48"		100.0
51"		100.0
54"		100.0
57"		100.0
60"		50.0
36"	120"	100.0
39"		100.0
42"		100.0
45"		100.0
48"		100.0
51"		100.0
54"		100.0
57"		100.0
60"		50.0
36"	126"	100.0
39"		100.0
42"		100.0
45"		100.0
48"		100.0
51"		100.0
54"		100.0
57"		100.0
60"		50.0
36"	132"	100.0
39"		100.0
42"		100.0
45"		100.0
48"		100.0
51"		100.0
54"		100.0
57"		100.0
60"		50.0
36"	138"	100.0
39"		100.0
42"		100.0
45"		100.0
48"		100.0
51"		100.0
54"		100.0
57"		100.0
60"		50.0
36"	144"	100.0
39"		100.0
42"		100.0
45"		100.0
48"		100.0
51"		100.0
54"		100.0
57"		100.0
60"		50.0

GLASS LOAD CAPACITY - PSF		
NOMINAL DIMS.		GLASS TYPE 'A2'
D.L.O. WIDTH	D.L.O. HEIGHT	EXT. (+) INT. (-)
36"	90"	100.0
39"		100.0
42"		100.0
45"		100.0
48"		100.0
51"		100.0
54"		100.0
57"		100.0
60"		100.0
36"	96"	100.0
39"		100.0
42"		100.0
45"		100.0
48"		100.0
51"		100.0
54"		100.0
57"		100.0
60"		50.0
36"	102"	100.0
39"		100.0
42"		100.0
45"		100.0
48"		100.0
51"		100.0
54"		100.0
57"		50.0
60"		50.0
36"	108"	100.0
39"		100.0
42"		100.0
45"		100.0
48"		100.0
51"		100.0
54"		100.0
57"		50.0
60"		50.0
36"	114"	100.0
39"		100.0
42"		100.0
45"		100.0
48"		100.0
51"		50.0
54"		50.0
57"		50.0
60"		50.0
36"	120"	100.0
39"		100.0
42"		100.0
45"		100.0
48"		100.0
51"		50.0
54"		50.0
57"		50.0
60"		50.0
36"	126"	100.0
39"		100.0
42"		100.0
45"		100.0
48"		100.0
51"		50.0
54"		50.0
57"		50.0
60"		50.0
36"	132"	100.0
39"		100.0
42"		100.0
45"		100.0
48"		100.0
51"		50.0
54"		50.0
57"		50.0
60"		50.0
36"	138"	100.0
39"		100.0
42"		100.0
45"		100.0
48"		100.0
51"		50.0
54"		50.0
57"		50.0
60"		50.0
36"	144"	100.0
39"		100.0
42"		100.0
45"		100.0
48"		100.0
51"		50.0
54"		50.0
57"		50.0
60"		50.0

GLASS LOAD CAPACITY - PSF		
NOMINAL DIMS.		GLASS TYPE 'A2'
D.L.O. WIDTH	D.L.O. HEIGHT	EXT. (+) INT. (-)
36"	126"	100.0
39"		100.0
42"		100.0
45"		50.0
48"		50.0
51"		50.0
54"		50.0
60"		50.0
36"	132"	100.0
39"		100.0
42"		50.0
45"		50.0
48"		50.0
51"		50.0
54"		50.0
60"		50.0
36"	138"	100.0
39"		100.0
42"		50.0
45"		50.0
48"		50.0
51"		50.0
54"		50.0
60"		50.0
36"	144"	100.0
39"		50.0
42"		50.0
45"		50.0
48"		50.0
51"		50.0
54"		50.0
60"		50.0

GLASS LOAD CAPACITY - PSF				
NOMINAL DIMS.		GLASS TYPE 'A3'		
D.L.O. WIDTH	D.L.O. HEIGHT	EXT.(+)	INT.(−)	
48"	102"	113.0	120.0	
51"		113.0	120.0	
54"		113.0	120.0	
57"		113.0	120.0	
60"		113.0	120.0	
63"		113.0	120.0	
66"		113.0	120.0	
69"		113.0	120.0	
72"		113.0	120.0	
75"		113.0	120.0	
78"		113.0	120.0	
81"		113.0	115.9	
84"		111.7	111.7	
87"		107.9	107.9	
90"		104.3	104.3	
48"	108"	113.0	120.0	
51"		113.0	120.0	
54"		113.0	120.0	
57"		113.0	120.0	
60"		113.0	120.0	
63"		113.0	120.0	
66"		113.0	120.0	
69"		113.0	120.0	
72"		113.0	120.0	
75"		113.0	117.0	
78"		113.0	113.0	
81"		109.0	109.0	
84"		107.0	107.0	
87"		104.0	104.0	
48"		114"	113.0	120.0
51"	113.0		120.0	
54"	113.0		120.0	
57"	113.0		120.0	
60"	113.0		120.0	
63"	113.0		120.0	
66"	113.0		120.0	
69"	113.0		119.0	
72"	113.0		115.0	
75"	111.0		111.0	
78"	108.0		108.0	
81"	105.0		105.0	
48"	120"		113.0	120.0
51"			113.0	120.0
54"			113.0	120.0
57"		113.0	120.0	
60"		113.0	120.0	
63"		113.0	120.0	
66"		113.0	118.0	
69"		113.0	113.0	
72"		109.0	109.0	
75"		107.0	107.0	
78"		104.0	104.0	

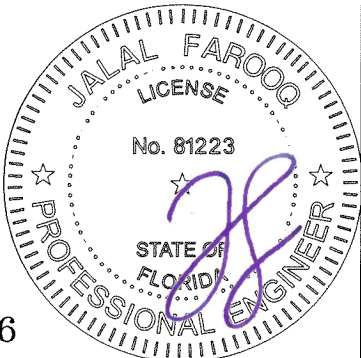
GLASS LOAD CAPACITY - PSF		
NOMINAL DIMS.		GLASS TYPES
D.L.O. WIDTH	D.L.O. HEIGHT	EXT. (+) INT. (-)
36"	105-1/2"	130.0
39"		130.0
42"		130.0
45"		130.0
48"		130.0
51"		130.0
54"		130.0
57"		130.0
57-1/2"		130.0
36"	108"	130.0
39"		130.0
42"		130.0
45"		130.0
48"		130.0
51"		130.0
54"		130.0
36"	114"	130.0
39"		130.0
42"		130.0
45"		130.0
48"		130.0
51"		130.0
36"	120"	130.0
39"		130.0
42"		130.0
45"		130.0
48"		130.0
36"	126"	130.0
39"		130.0
42"		130.0
45"		130.0
48"		130.0
36"	132"	130.0
39"		130.0
42"		130.0
45"		130.0
36"	138"	130.0
39"		130.0
42"		130.0
36"	144"	130.0
39"		130.0



GLAZING OPTIONS
LEVEL 'E' IMPACT

NOTE:
GLASS CAPACITIES ON THIS SHEET ARE BASED ON
ASTM E1300-09 (3 SEC. GUSTS)

Sealed: 03/20/2026



FL #17896

af c
AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100 FAX. (305) 262-6978
COMP - ANL W15-38ESW

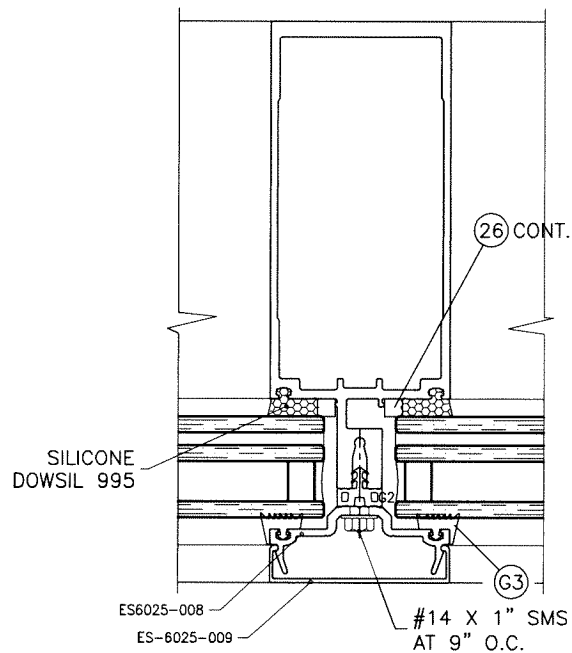
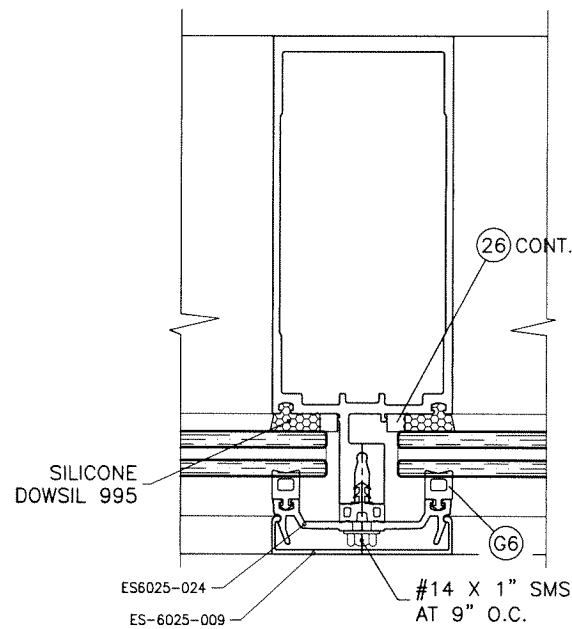
SERIES ES-7525 ALUM CURTAIN WALL SYSTEM (L.M.I.)
E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

revisions:
no date by description
no date by description
no date by description
no date by description
no date by description
no date by description
no date by description
no date by description
no date by description
no date by description

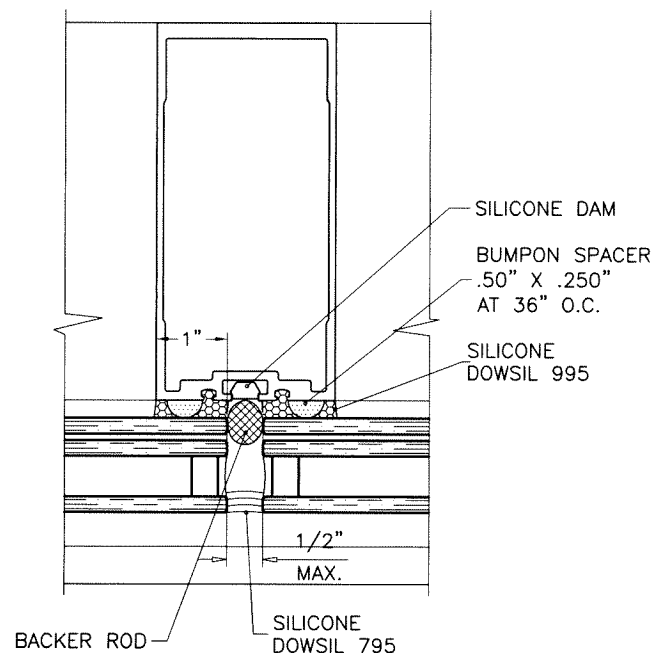
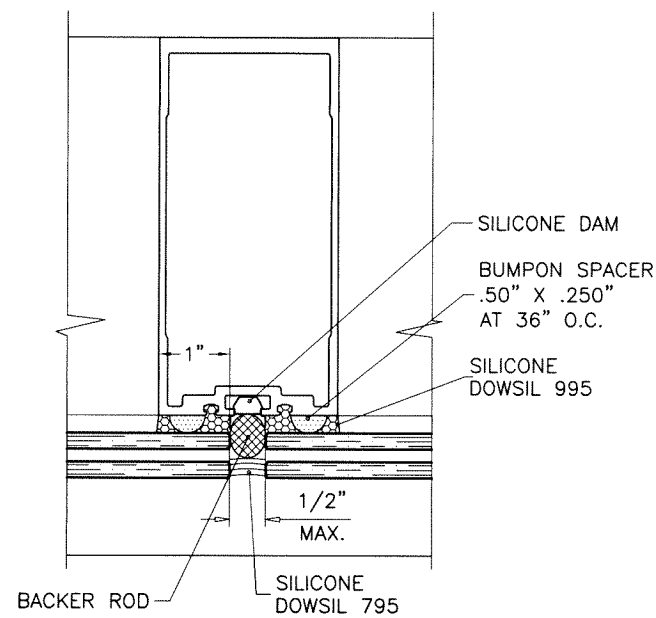
date: 07-17-15
scale: 3/8" = 1"
dr. by: TARIQ
chk. by:
drawing no.
W15-38
sheet **4.3** of **30**

MULLION WITHOUT PRESSURE PLATE
LIMIT MAX. LOADS AS PER CHART

NOMINAL DIMS.		BUTT GLAZE MULLION 1" SILICONE
D.L.O. WIDTH	D.L.O. HEIGHT	EXT. (+) INT. (-)
36"	105-1/2"	130.0
39"		130.0
42"		129.4
45"		121.3
48"		114.1
51"		107.7
54"		101.9
57"		96.8
57-1/2"		96.0
36"	108"	130.0
39"		130.0
42"		129.4
45"		121.3
48"		114.1
51"		107.7
54"		101.9
36"	114"	130.0
39"		130.0
42"		129.4
45"		121.3
48"		114.1
51"		107.7
36"	120"	130.0
39"		130.0
42"		129.4
45"		121.3
48"		114.1
36"	126"	130.0
39"		130.0
42"		129.4
45"		121.3
48"		114.1
36"	132"	130.0
39"		130.0
42"		129.4
45"		121.3
36"	138"	130.0
39"		130.0
42"		129.4
36"	144"	130.0
39"		130.0



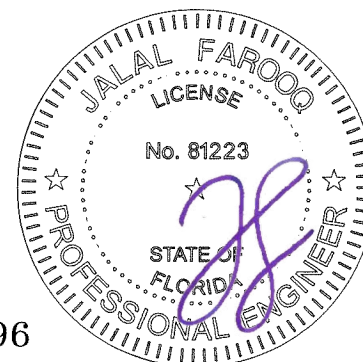
HEAVY MULLION
WITH PRESS PLATE



BUTT GLAZED MULLION
WITHOUT PRESS PLATE
1" SILICONE

SEE SHEET 4.3 FOR DESIGN LOAD CAPACITY OF DESIRED
GLASS TYPE.
SEE CHART ABOVE FOR SILICONE CAPACITY OF BUTT GLAZED SYSTEM
WITHOUT PRESSURE PLATE.
LOWER VALUES FROM GLASS CHART OR SILICONE CAPACITY
CHART WILL APPLY.
SEE DETAILS ABOVE FOR MULLIONS WITHOUT PRESSURE PLATE.

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FL #17896

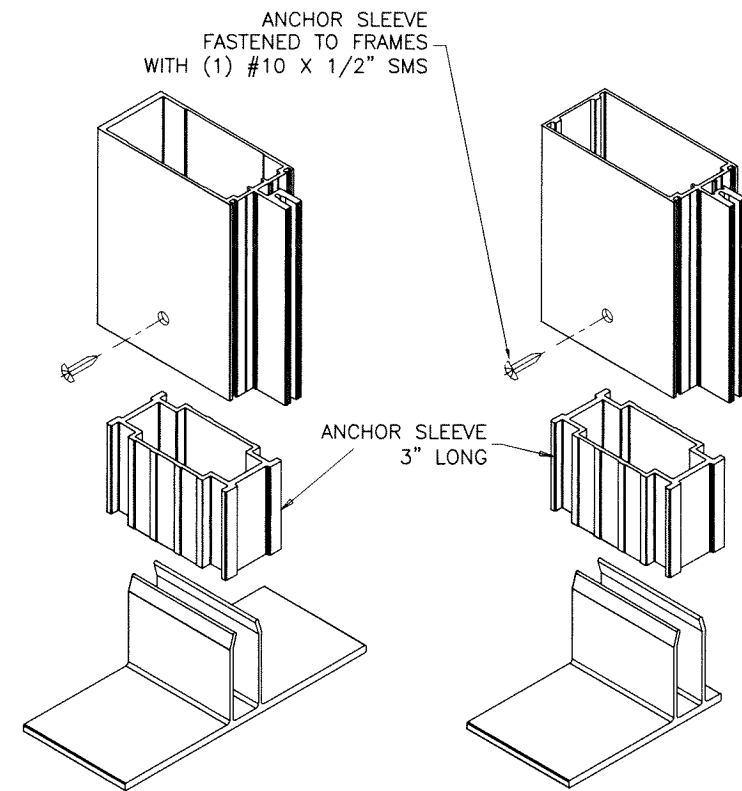
af c
AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173 (C.A.N. 3538)
TEL. (305) 262-6978 FAX. (305) 264-8100
COMP-ANL W15-38ESW

SERIES ES-7525 ALUM CURTAIN WALL SYSTEM (L.M.I.)
E.S. WINDOWS, LLC
3550 N.W. 49 STREET
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revisions:	no	date	by	description

date: 07-17-15
scale: 3/8" = 1"
dr. by: TARIQ
chk. by:

drawing no.
W15-38
sheet 4.4 of 30



**MULLION ANCHOR CLIP
DETAIL '2'**

**JAMB ANCHOR CLIP
DETAIL '1'**

ANCHOR 'A'

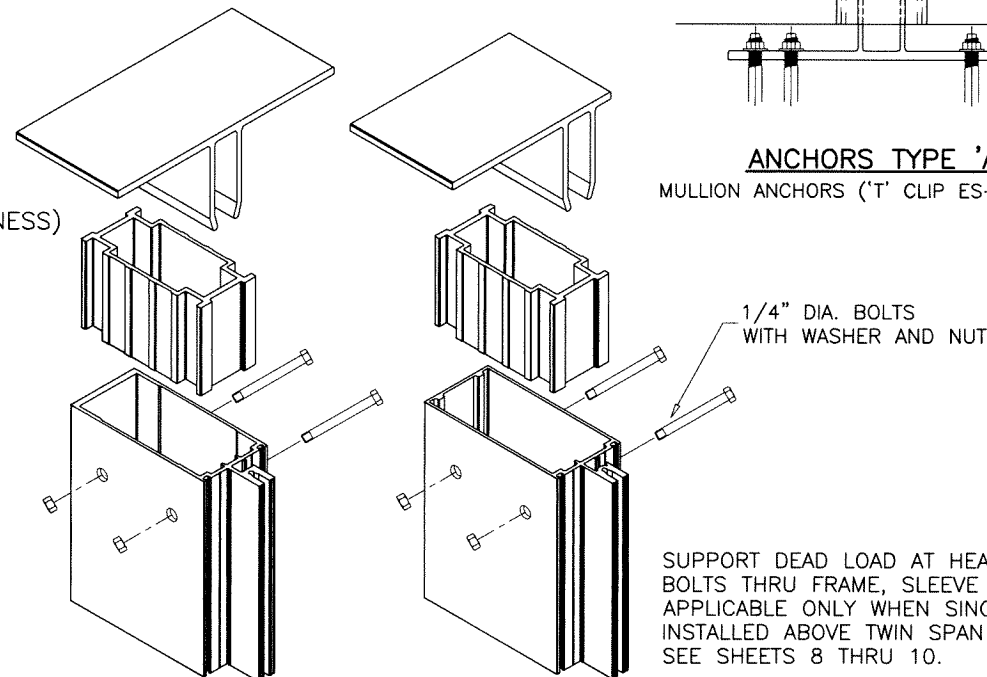
DIRECTLY INTO CONCRETE
3/8" DIA. KWIK BOLT-3 EXPANSION ANCHOR
(2) PER SIDE
WITH 2-1/2" MIN. EMBED INTO CONCRETE.
3" MIN. EDGE DIST.
2-1/2" MIN. SPACING

ANCHOR 'B'

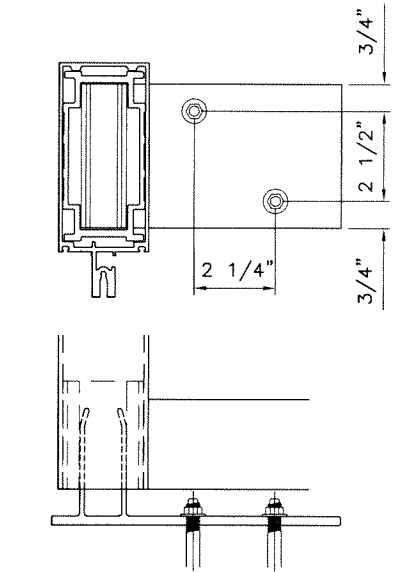
DIRECTLY INTO CONCRETE
1/2" DIA. KWIK BOLT-3 EXPANSION ANCHOR
(1) PER SIDE
WITH 3-1/2" MIN. EMBED INTO CONCRETE.
3-3/4" MIN. EDGE DIST.
6-1/2" MIN. SPACING

ANCHOR 'C'

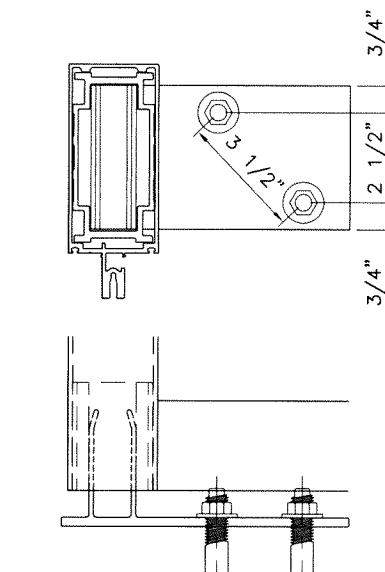
INTO METAL STRUCTURES (STEEL 3/16" MIN. THICKNESS)
5/16" DRIL-FLEX SELF DRILLING SCREWS
(3) PER SIDE
1/2" MIN. EDGE DIST.
3/4" MIN. SPACING



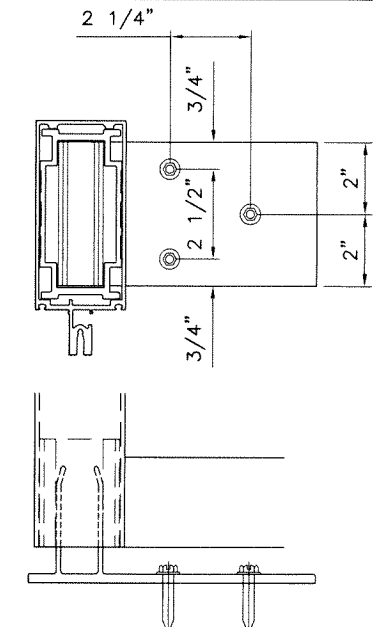
SUPPORT DEAD LOAD AT HEAD ANCHORS USING
BOLTS THRU FRAME, SLEEVE AND CLIP LEGS.
APPLICABLE ONLY WHEN SINGLE SPAN FRAMES ARE
INSTALLED ABOVE TWIN SPAN FRAMES.
SEE SHEETS 8 THRU 10.



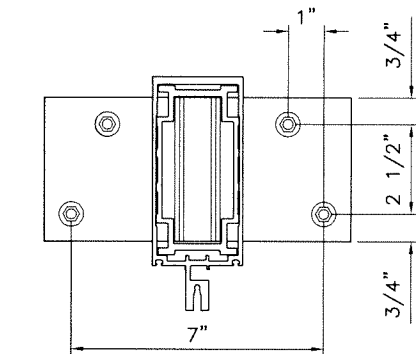
ANCHORS TYPE 'A'
JAMB ANCHORS ('F' CLIP ES-7525-51)



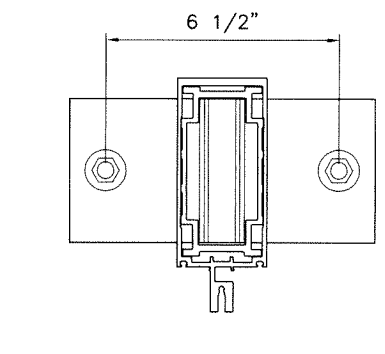
ANCHORS TYPE 'B'
JAMB ANCHORS ('F' CLIP ES-7525-51)



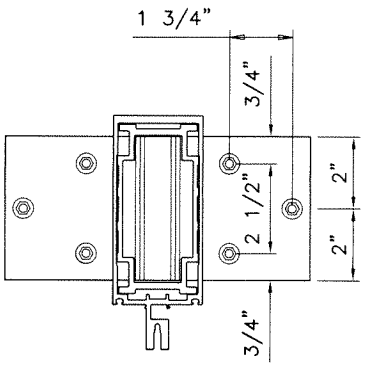
ANCHORS TYPE 'C'
JAMB ANCHORS ('F' CLIP ES-7525-51)



ANCHORS TYPE 'A'
MULLION ANCHORS ('T' CLIP ES-7525-50)



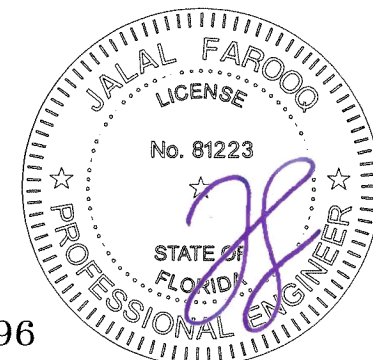
ANCHORS TYPE 'B'
MULLION ANCHORS ('T' CLIP ES-7525-50)



ANCHORS TYPE 'C'
MULLION ANCHORS ('T' CLIP ES-7525-50)

SEE SHEET 5.1 FOR ANCHOR CAPACITIES

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FL #17896

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100 FAX. (305) 262-6978
COMP-ANL W15-38ESW

SERIES ES-7525 ALUM CURTAIN WALL SYSTEM (L.M.I.)
E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

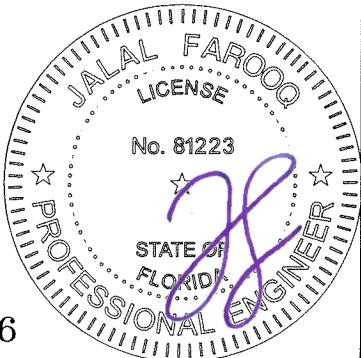
revisions:		no date by description	
date:	07-17-15	scale:	
dr. by:	TARIQ	chk. by:	
drawing no.		W15-38	
sheet 5 of 30			

ANCHORS LOAD CAPACITY - PSF				
NOMINAL DIMS.		ANCHORS TYPE 'A'	ANCHORS TYPE 'B'	ANCHORS TYPE 'C'
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)
36"	102"	119.0	119.0	119.0
42"		119.0	119.0	119.0
48"		119.0	119.0	119.0
54"		119.0	119.0	119.0
60"		119.0	119.0	119.0
36"	108"	119.0	119.0	119.0
42"		119.0	119.0	119.0
48"		119.0	119.0	119.0
54"		119.0	119.0	119.0
60"		119.0	117.0	119.0
36"	114"	119.0	119.0	119.0
42"		119.0	119.0	119.0
48"		119.0	119.0	119.0
54"		119.0	119.0	119.0
60"		119.0	110.0	119.0
36"	120"	119.0	119.0	119.0
42"		119.0	119.0	119.0
48"		119.0	119.0	119.0
54"		119.0	117.0	119.0
60"		117.0	105.0	119.0
36"	126"	119.0	119.0	119.0
42"		119.0	119.0	119.0
48"		119.0	119.0	119.0
54"		119.0	111.0	119.0
60"		112.0	100.0	119.0
36"	132"	119.0	119.0	119.0
42"		119.0	119.0	119.0
48"		119.0	119.0	119.0
54"		118.0	106.0	119.0
60"		107.0	95.0	119.0
36"	138"	119.0	119.0	119.0
42"		119.0	119.0	119.0
48"		119.0	114.0	119.0
54"		113.0	101.0	119.0
60"		102.0	91.0	119.0
36"	144"	119.0	119.0	119.0
42"		119.0	119.0	119.0
48"		119.0	109.0	119.0
54"		109.0	97.0	119.0
60"		98.0	87.0	119.0
36"	147"	119.0	119.0	119.0
42"		119.0	119.0	119.0
48"		119.0	107.0	119.0
54"		106.0	95.0	119.0
60"		96.0	86.0	119.0
36"	150"	119.0	119.0	119.0
42"		119.0	119.0	119.0
48"		117.0	105.0	119.0
54"		104.0	93.0	119.0
60"		94.0	84.0	119.0
36"	156"	119.0	119.0	119.0
42"		119.0	115.0	119.0
48"		113.0	101.0	119.0
54"		100.0	90.0	119.0
60"		90.0	81.0	119.0

ANCHORS LOAD CAPACITY - PSF				
NOMINAL DIMS.		ANCHORS TYPE 'A'	ANCHORS TYPE 'B'	ANCHORS TYPE 'C'
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)
36"	159"	119.0	119.0	119.0
42"		119.0	113.0	119.0
48"		111.0	99.0	119.0
54"		98.0	88.0	119.0
60"		89.0	79.0	119.0
36"	168"	119.0	119.0	119.0
42"		119.0	107.0	119.0
48"		105.0	94.0	119.0
54"		93.0	83.0	119.0
60"		84.0	75.0	119.0
36"	180"	119.0	117.0	119.0
42"		112.0	100.0	119.0
48"		98.0	87.0	119.0
54"		87.0	78.0	119.0
60"		78.0	70.0	119.0
36"	184-1/8"	119.0	114.0	119.0
42"		109.0	98.0	119.0
48"		96.0	85.0	119.0
54"		85.0	76.0	119.0
60"		76.0	68.0	119.0
36"	192"	119.0	109.0	119.0
42"		105.0	94.0	119.0
48"		92.0	82.0	119.0
54"		81.0	73.0	119.0
60"		73.0	66.0	119.0
36"	196-3/4"	119.0	107.0	119.0
42"		102.0	91.0	119.0
48"		89.0	80.0	119.0
54"		79.0	71.0	119.0
60"		72.0	64.0	119.0

SEE SHEET 5 FOR HEAD/SILL ANCHOR DETAILS

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AL-FAROOQ CORPORATION
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revisions:
no. date by description

date: 07-17-15
scale:
dr. by: TARIQ
chk. by:

drawing no.
W15-38
sheet 5.1 of 30

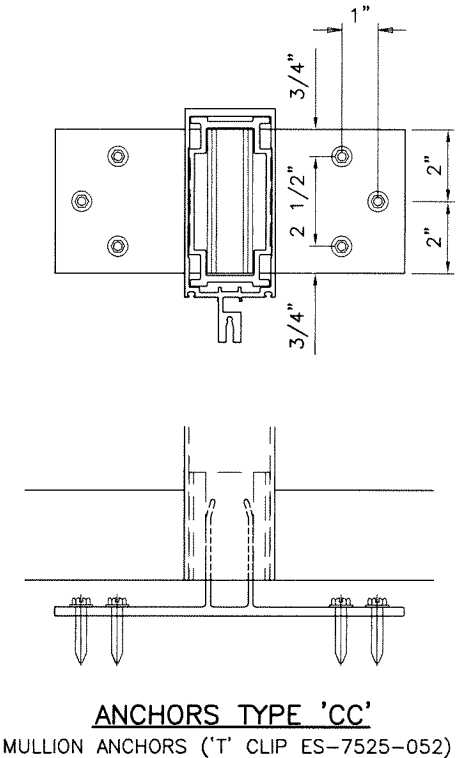
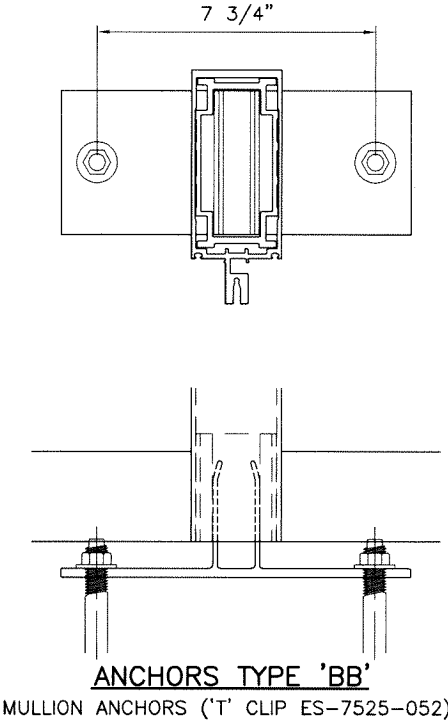
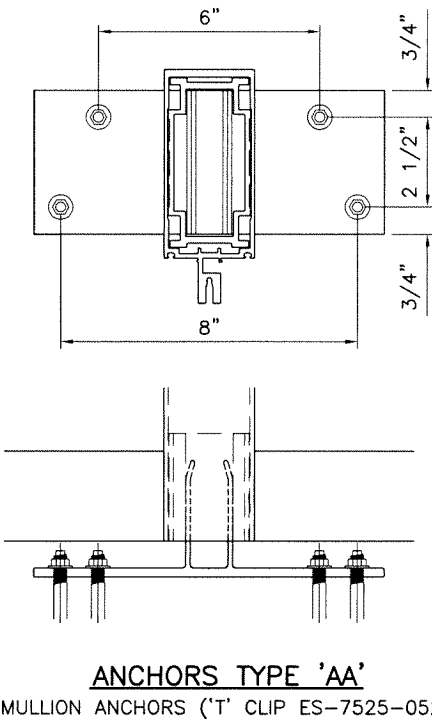
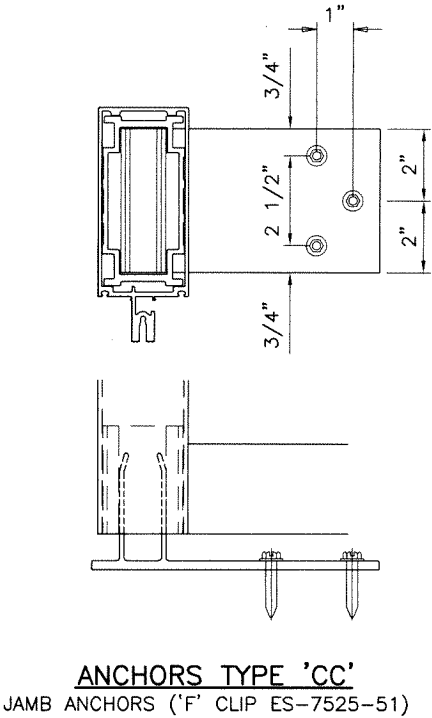
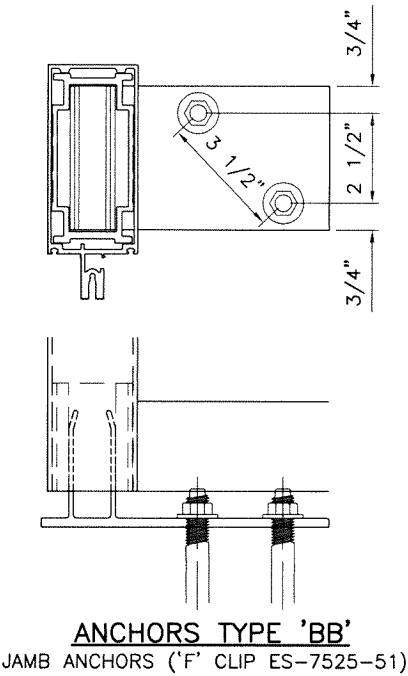
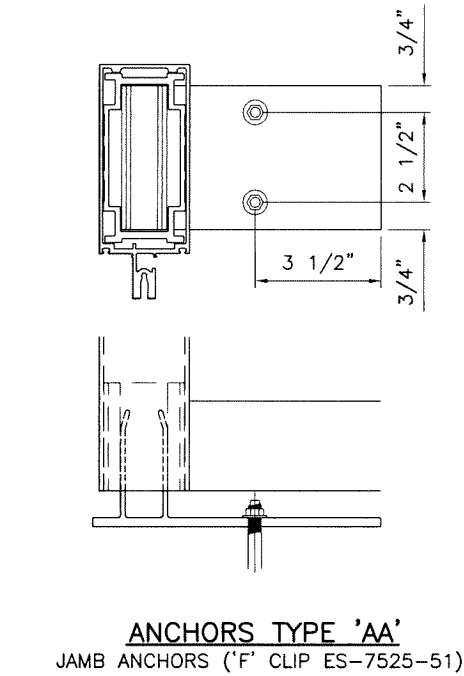
COMP-ANL\W15-38ESW

ANCHORS LOAD CAPACITY - PSF				
NOMINAL DIMS.		ANCHORS TYPE 'AA'	ANCHORS TYPE 'BB'	ANCHORS TYPE 'CC'
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)
36"	114"	130.0	130.0	130.0
42"		130.0	130.0	130.0
48"		130.0	130.0	130.0
54"		130.0	122.7	130.0
60"		123.5	110.4	130.0
36"	120"	130.0	130.0	130.0
42"		130.0	130.0	130.0
48"		130.0	130.0	130.0
54"		130.0	116.5	130.0
60"		117.3	104.9	130.0
36"	126"	130.0	130.0	130.0
42"		130.0	130.0	130.0
48"		130.0	124.9	130.0
54"		124.1	111.0	130.0
60"		111.7	99.9	130.0
36"	130"	130.0	130.0	130.0
42"		130.0	130.0	130.0
48"		130.0	121.0	130.0
54"		120.3	107.6	130.0
60"		108.3	96.8	130.0
36"	132"	130.0	130.0	130.0
42"		130.0	130.0	130.0
48"		130.0	119.2	130.0
54"		118.5	105.9	130.0
60"		106.6	95.3	130.0
36"	138"	130.0	130.0	130.0
42"		130.0	130.0	130.0
48"		127.5	114.0	130.0
54"		113.3	101.3	130.0
60"		102.0	91.2	130.0
36"	144"	130.0	130.0	130.0
42"		130.0	124.9	130.0
48"		122.2	109.3	130.0
54"		108.6	97.1	130.0
60"		97.7	87.4	130.0
36"	150"	130.0	130.0	130.0
42"		130.0	119.9	130.0
48"		117.3	104.9	130.0
54"		104.2	93.2	130.0
60"		93.8	83.9	130.0
36"	156"	130.0	130.0	130.0
42"		128.9	115.3	130.0
48"		112.8	100.8	130.0
54"		100.2	89.6	130.0
60"		90.2	80.7	130.0
36"	168"	130.0	124.9	130.0
42"		119.7	107.0	130.0
48"		104.7	93.6	130.0
54"		93.1	83.2	130.0
60"		83.8	74.9	130.0
36"	180"	130.0	116.5	130.0
42"		111.7	99.9	130.0
48"		97.7	87.4	130.0
54"		86.9	77.7	130.0
60"		78.2	69.9	130.0

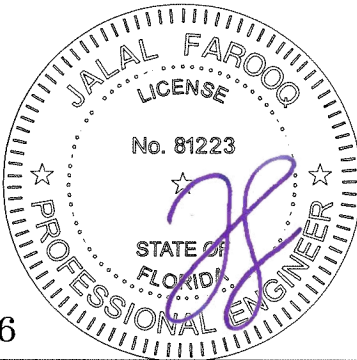
ANCHOR 'AA'
DIRECTLY INTO CONCRETE
3/8" DIA. KWIK BOLT-3 EXPANSION ANCHOR
(2) PER SIDE
WITH 2-1/2" MIN. EMBED INTO CONCRETE.
3" MIN. EDGE DIST.
2-1/2" MIN. SPACING

ANCHOR 'BB'
DIRECTLY INTO CONCRETE
1/2" DIA. KWIK BOLT-3 EXPANSION ANCHOR
(1) PER SIDE
WITH 3-1/2" MIN. EMBED INTO CONCRETE.
3-3/4" MIN. EDGE DIST.
6-1/2" MIN. SPACING

ANCHOR 'CC'
INTO METAL STRUCTURES (STEEL 3/16" MIN. THICKNESS)
5/16" DRIL-FLEX SELF DRILLING SCREWS
(3) PER SIDE
1/2" MIN. EDGE DIST.
3/4" MIN. SPACING



Sealed: 03/20/2026



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TEL. (305) 262-6978
FAX. (305) 262-6978
COMP-ANL W15-38ESW

SERIES ES-7525 ALUM CURTAIN WALL SYSTEM (L.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

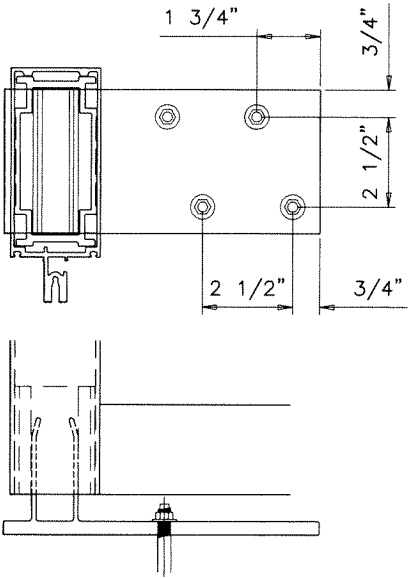
date: 07-17-15
scale:
dr. by: TARIQ
chk. by:

drawing no.
W15-38
sheet 5.2 of 30

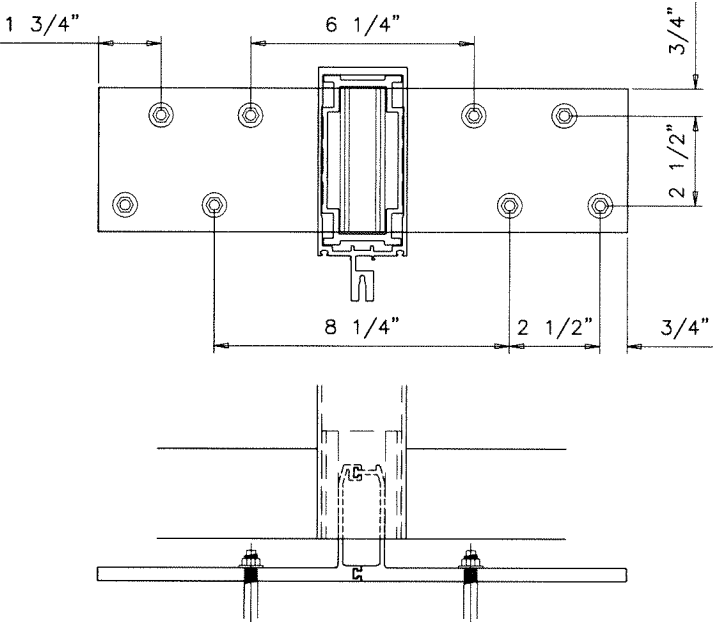
ANCHORS LOAD CAPACITY - PSF		
NOMINAL DIMS.		ANCHORS TYPE 'AAA'
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (-)
36"	114"	130.0
42"		130.0
48"		130.0
54"		130.0
60"		130.0
36"	120"	130.0
42"		130.0
48"		130.0
54"		130.0
60"		130.0
36"	126"	130.0
42"		130.0
48"		130.0
54"		130.0
60"		130.0
36"	130"	130.0
42"		130.0
48"		130.0
54"		130.0
60"		130.0
36"	132"	130.0
42"		130.0
48"		130.0
54"		130.0
60"		130.0
36"	138"	130.0
42"		130.0
48"		130.0
54"		130.0
60"		130.0
36"	144"	130.0
42"		130.0
48"		130.0
54"		130.0
60"		130.0
36"	150"	130.0
42"		130.0
48"		130.0
54"		130.0
60"		130.0
36"	156"	130.0
42"		130.0
48"		130.0
54"		130.0
60"		130.0
36"	168"	130.0
42"		130.0
48"		130.0
54"		130.0
60"		130.0
36"	180"	130.0
42"		130.0
48"		130.0
54"		130.0
60"		130.0

ANCHOR 'AAA'
DIRECTLY INTO CONCRETE
3/8" DIA. KWIK BOLT-3 EXPANSION ANCHOR
(4) PER SIDE
WITH 2-1/2" MIN. EMBED INTO CONCRETE.
3" MIN. EDGE DIST.
2-1/2" MIN. SPACING

FOR HEAD AND SILL INCLUDING DEAD LOAD ANCHORS AT TOP

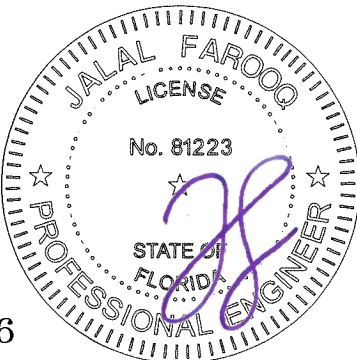


ANCHORS TYPE 'AAA'
JAMB ANCHORS ('F' CLIP ES-7525-061)



ANCHORS TYPE 'AAA'
MULLION ANCHORS CLIPS (ES-7525-059)
(ES-7525-060)

Sealed: 03/20/2026



FL #17896

afcc

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

SERIES ES-7525 ALUM CURTAIN WALL SYSTEM (L.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: 07-17-15

scale:

dr. by: TARIQ

chk. by:

drawing no.

W15-38

sheet 5.3 of 30

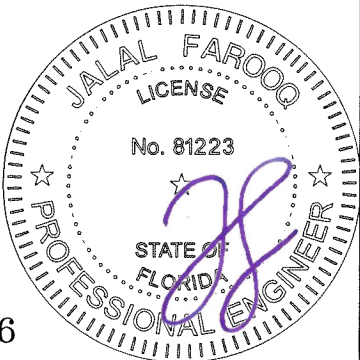
DEAD LOAD ANCHOR CAPACITY – PSF				
NOMINAL DIMS.		ANCHORS TYPE 'A'	ANCHORS TYPE 'B'	ANCHORS TYPE 'C'
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (–)	EXT. (+) INT. (–)	EXT. (+) INT. (–)
36"	102"	119.0	119.0	119.0
42"		119.0	119.0	119.0
48"		119.0	119.0	119.0
54"		119.0	116.9	119.0
60"		115.8	103.2	119.0
36"	108"	119.0	119.0	119.0
42"		119.0	119.0	119.0
48"		119.0	119.0	119.0
54"		119.0	109.3	119.0
60"		108.1	96.3	119.0
36"	114"	119.0	119.0	119.0
42"		119.0	119.0	119.0
48"		119.0	117.8	119.0
54"		115.0	102.5	119.0
60"		101.3	90.2	119.0
36"	120"	119.0	119.0	119.0
42"		119.0	119.0	119.0
48"		119.0	110.9	119.0
54"		108.1	96.3	119.0
60"		95.1	84.7	119.0
36"	126"	119.0	119.0	119.0
42"		119.0	119.0	119.0
48"		117.4	104.7	119.0
54"		101.9	90.8	119.0
60"		89.5	79.7	119.0
36"	132"	119.0	119.0	119.0
42"		119.0	116.0	119.0
48"		111.1	99.0	119.0
54"		96.3	85.7	119.0
60"		84.4	75.2	119.0
36"	138"	119.0	119.0	119.0
42"		119.0	110.1	119.0
48"		105.3	93.8	119.0
54"		91.1	81.1	119.0
60"		79.8	71.0	119.0
36"	144"	119.0	119.0	119.0
42"		117.4	104.7	119.0
48"		100.0	89.1	119.0
54"		86.4	76.9	119.0
60"		75.5	67.2	119.0
36"	147"	119.0	119.0	119.0
42"		114.6	102.1	119.0
48"		97.5	86.8	119.0
54"		84.2	74.9	119.0
60"		73.6	65.4	119.0
36"	150"	119.0	119.0	119.0
42"		111.9	99.7	119.0
48"		95.1	84.7	119.0
54"		82.1	73.0	119.0
60"		71.6	63.7	119.0
36"	156"	119.0	114.3	119.0
42"		106.7	95.1	119.0
48"		90.6	80.7	119.0
54"		78.1	69.4	119.0
60"		68.0	60.5	119.0

DEAD LOAD ANCHOR CAPACITY – PSF				
NOMINAL DIMS.		ANCHORS TYPE 'A'	ANCHORS TYPE 'B'	ANCHORS TYPE 'C'
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (–)	EXT. (+) INT. (–)	EXT. (+) INT. (–)
36"	159"	119.0	111.7	119.0
42"		104.3	92.9	119.0
48"		88.5	78.7	119.0
54"		76.2	67.8	119.0
60"		66.3	59.0	119.0
36"	168"	117.4	104.7	119.0
42"		97.5	86.8	119.0
48"		82.5	73.4	119.0
54"		70.9	63.0	119.0
60"		61.6	54.7	119.0
36"	180"	108.1	96.3	119.0
42"		89.5	79.7	119.0
48"		75.5	67.2	119.0
54"		64.7	57.5	119.0
60"		56.0	49.7	119.0
36"	184–1/8"	105.2	93.7	119.0
42"		87.0	77.5	119.0
48"		73.4	65.2	119.0
54"		62.7	55.8	119.0
60"		54.3	48.2	119.0
36"	192"	100.0	89.1	119.0
42"		82.5	73.4	119.0
48"		69.4	61.7	119.0
54"		59.3	52.6	119.0
60"		51.1	45.4	119.0
36"	196–3/4"	97.0	86.4	119.0
42"		80.0	71.2	119.0
48"		67.2	59.8	119.0
54"		57.3	50.9	119.0
60"		49.3	43.8	119.0

SEE SHEET 5 FOR HEAD ANCHOR DETAILS

DEAD LOAD ANCHOR CAPACITY – PSF				
NOMINAL DIMS.		ANCHORS TYPE 'AA'	ANCHORS TYPE 'BB'	ANCHORS TYPE 'CC'
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (–)	EXT. (+) INT. (–)	EXT. (+) INT. (–)
36"	114"	130.0	130.0	130.0
42"		130.0	130.0	130.0
48"		130.0	117.8	130.0
54"		115.0	102.5	130.0
60"		101.3	90.2	130.0
36"	120"	130.0	130.0	130.0
42"		130.0	129.6	130.0
48"		124.4	110.9	130.0
54"		108.1	96.3	130.0
60"		95.1	84.7	130.0
36"	126"	130.0	130.0	130.0
42"		130.0	122.5	130.0
48"		117.4	104.7	130.0
54"		101.9	90.8	130.0
60"		89.5	79.7	130.0
36"	130"	130.0	130.0	130.0
42"		130.0	118.1	130.0
48"		113.1	100.8	130.0
54"		98.1	87.4	130.0
60"		86.1	76.6	130.0
36"	132"	130.0	130.0	130.0
42"		130.0	116.0	130.0
48"		111.1	99.0	130.0
54"		96.3	85.7	130.0
60"		84.4	75.2	130.0
36"	138"	130.0	130.0	130.0
42"		123.5	110.1	130.0
48"		105.3	93.8	130.0
54"		91.1	81.1	130.0
60"		79.8	71.0	130.0
36"	144"	130.0	125.5	130.0
42"		117.4	104.7	130.0
48"		100.0	89.1	130.0
54"		86.4	76.9	130.0
60"		75.5	67.2	130.0
36"	150"	130.0	119.6	130.0
42"		111.9	99.7	130.0
48"		95.1	84.7	130.0
54"		82.1	73.0	130.0
60"		71.6	63.7	130.0
36"	156"	128.2	114.3	130.0
42"		106.7	95.1	130.0
48"		90.6	80.7	130.0
54"		78.1	69.4	130.0
60"		68.0	60.5	130.0
36"	168"	117.4	104.7	130.0
42"		97.5	86.8	130.0
48"		82.5	73.4	130.0
54"		70.9	63.0	130.0
60"		61.6	54.7	130.0
36"	180"	108.1	96.3	130.0
42"		89.5	79.7	130.0
48"		75.5	67.2	130.0
54"		64.7	57.5	130.0
60"		56.0	49.7	130.0

Sealed: 03/20/2026



FL #17896

af c
AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 262-6978
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COMP – ANL \ W15 – 38ESW

SERIES ES-7525 ALUM CURTAIN WALL SYSTEM (L.M.I.)

E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151
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revisions:
no. date by description

date: 07-17-15
scale:
dr. by: TARIQ
chk. by:

drawing no.
W15-38
sheet **5** of **30**

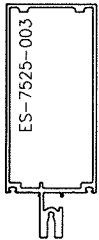
JAMB LOAD CAPACITY - PSF SINGLE SPANS WITH OR W/O HORIZ.		
NOMINAL DIMS.		JAMB 'J1'
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (-)
36"	99-3/4"	100.0
39"		100.0
42"		100.0
45"		100.0
48"		100.0
51"		100.0
54"		100.0
57"		100.0
60"		100.0



JAMB 'J1'

Ix IN ⁴	Sx IN ³
8.8201	3.3166

JAMB LOAD CAPACITY - PSF SINGLE SPANS WITH OR W/O HORIZ.		
NOMINAL DIMS.		JAMB 'J2'
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (-)
36"	108"	130.0
39"		130.0
42"		130.0
45"		130.0
48"		130.0
51"		130.0
54"		130.0
57"		130.0
60"		130.0
36"	110-1/2"	130.0
39"		130.0
42"		130.0
45"		130.0
48"		130.0
51"		130.0
54"		130.0
57"		130.0
60"		124.2
36"	114"	120.0
39"		120.0
42"		120.0
45"		120.0
48"		120.0
51"		120.0
54"		120.0
57"		120.0
60"		116.5
36"	120"	120.0
39"		120.0
42"		120.0
45"		120.0
48"		120.0
51"		120.0
54"		116.4
57"		110.3
60"		89.2
36"	126"	120.0
39"		120.0
42"		120.0
45"		120.0
48"		118.4
51"		111.4
54"		105.2
57"		85.1
60"		80.8



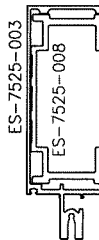
JAMB 'J2'

Ix IN ⁴	Sx IN ³
10.0003	2.9374

JAMB 'J2' RATED FOR LEVEL 'E' IMPACT

JAMB LOAD CAPACITY - PSF SINGLE SPANS WITH OR W/O HORIZ.		
NOMINAL DIMS.		JAMB 'J2'
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (-)
36"	132"	120.0
39"		120.0
42"		120.0
45"		114.7
48"		107.5
51"		101.2
54"		81.8
57"		77.5
60"		73.6
36"	138"	120.0
39"		120.0
42"		112.1
45"		104.6
48"		98.1
51"		79.2
54"		74.8
57"		70.8
60"		67.3
36"	144"	115.5
39"		106.6
42"		99.0
45"		92.4
48"		86.6
51"		75.8
54"		71.6
57"		67.8
60"		64.4
36"	150"	100.0
39"		94.3
42"		87.6
45"		81.7
48"		76.6
51"		72.1
54"		68.1
57"		64.5
60"		61.3

JAMB LOAD CAPACITY - PSF SINGLE SPANS WITH OR W/O HORIZ.		
NOMINAL DIMS.		JAMB 'J2A'
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (-)
36"	110-1/2"	130.0
39"		130.0
42"		130.0
45"		130.0
48"		130.0
51"		130.0
54"		130.0
57"		130.0
60"		130.0
36"	114"	120.0
39"		120.0
42"		120.0
45"		120.0
48"		120.0
51"		120.0
54"		120.0
57"		120.0
60"		120.0
36"	120"	120.0
39"		120.0
42"		120.0
45"		120.0
48"		120.0
51"		120.0
54"		120.0
57"		120.0
60"		120.0
36"	126"	120.0
39"		120.0
42"		120.0
45"		120.0
48"		120.0
51"		120.0
54"		120.0
57"		120.0
60"		120.0
36"	132"	120.0
39"		120.0
42"		120.0
45"		120.0
48"		120.0
51"		120.0
54"		120.0
57"		120.0
60"		120.0
36"	138"	120.0
39"		120.0
42"		120.0
45"		120.0
48"		120.0
51"		120.0
54"		120.0
57"		120.0
60"		120.0

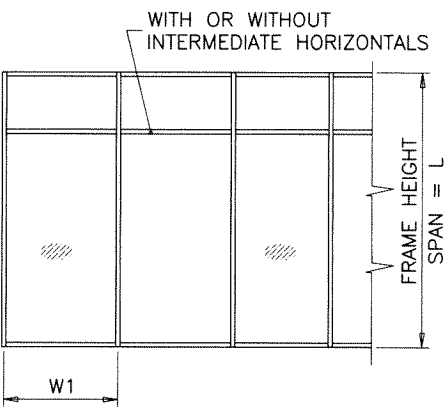


JAMB 'J2A'

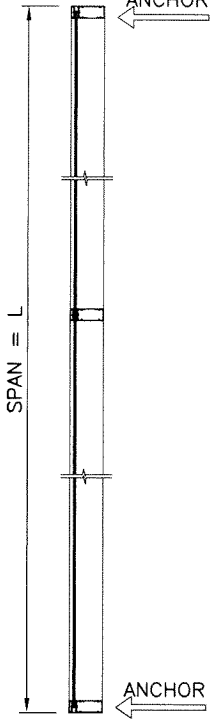
Ix IN ⁴	Sx IN ³
16.3551	4.8041

JAMB 'J2A' RATED FOR LEVEL 'E' IMPACT

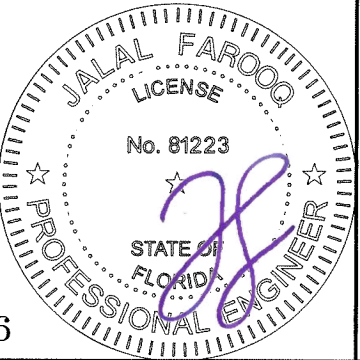
JAMB LOAD CAPACITY - PSF SINGLE SPANS WITH OR W/O HORIZ.		
NOMINAL DIMS.		JAMB 'J2A'
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (-)
36"	144"	120.0
39"		120.0
42"		120.0
45"		120.0
48"		120.0
51"		120.0
54"		120.0
57"		119.3
60"		113.3
36"	150"	120.0
39"		120.0
42"		120.0
45"		120.0
48"		120.0
51"		117.9
54"		111.4
57"		105.5
60"		100.2
36"	156"	120.0
39"		120.0
42"		120.0
45"		118.8
48"		111.4
51"		104.8
54"		99.0
57"		93.8
60"		89.1
36"	168"	120.0
39"		111.7
42"		103.7
45"		96.8
48"		90.8
51"		85.4
54"		80.7
57"		76.4
36"	180"	96.7
39"		89.2
42"		82.9
45"		77.3
48"		72.5
51"		68.2
54"		64.5
36"	132"	120.0
39"		120.0
42"		120.0
45"		120.0
48"		120.0
51"		120.0
54"		120.0
57"		120.0
60"		120.0



WIDTH (W) = W1
AT FRAME JAMB



Sealed: 03/20/2026



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)

SERIES ES-7525 ALUM CURTAIN WALL SYSTEM (L.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

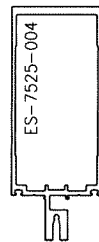
date:	07-17-15
scale:	-
dr. by:	TARIQ
chk. by:	

drawing no.
W15-38
sheet 6 of 30

JAMB LOAD CAPACITY - PSF SINGLE SPANS WITH OR W/O HORIZONTALS				
NOMINAL DIMS.		JAMB 'J3'	JAMB 'J4'	JAMB 'J5'
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)
36"	110-1/2"	130.0	130.0	119.0
39"		130.0	130.0	119.0
42"		130.0	130.0	119.0
45"		130.0	130.0	100.0
48"		130.0	130.0	100.0
51"		130.0	130.0	100.0
54"		130.0	130.0	100.0
57"		130.0	130.0	100.0
60"		130.0	130.0	100.0
36"	114"	120.0	120.0	119.0
39"		120.0	120.0	119.0
42"		120.0	120.0	119.0
45"		120.0	120.0	100.0
48"		120.0	120.0	100.0
51"		120.0	120.0	100.0
54"		120.0	120.0	100.0
57"		120.0	120.0	100.0
60"		120.0	120.0	100.0
36"	120"	120.0	120.0	119.0
39"		120.0	120.0	119.0
42"		120.0	120.0	119.0
45"		120.0	120.0	100.0
48"		120.0	120.0	100.0
51"		120.0	120.0	100.0
54"		120.0	120.0	100.0
57"		120.0	120.0	100.0
60"		100.0	120.0	100.0
36"	126"	120.0	120.0	119.0
39"		120.0	120.0	119.0
42"		120.0	120.0	119.0
45"		120.0	120.0	100.0
48"		120.0	120.0	100.0
51"		120.0	120.0	100.0
54"		120.0	120.0	100.0
57"		100.0	120.0	100.0
60"		100.0	120.0	100.0
36"	132"	120.0	120.0	119.0
39"		120.0	120.0	119.0
42"		120.0	120.0	119.0
45"		120.0	120.0	100.0
48"		120.0	120.0	100.0
51"		120.0	120.0	100.0
54"		100.0	120.0	100.0
57"		100.0	120.0	100.0
60"		100.0	120.0	100.0
36"	138"	120.0	120.0	119.0
39"		120.0	120.0	119.0
42"		120.0	120.0	119.0
45"		120.0	120.0	100.0
48"		120.0	120.0	100.0
51"		100.0	120.0	100.0
54"		100.0	120.0	100.0
57"		97.4	120.0	100.0
60"		92.5	120.0	100.0

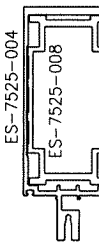
JAMB LOAD CAPACITY - PSF SINGLE SPANS WITH OR W/O HORIZONTALS				
NOMINAL DIMS.		JAMB 'J3'	JAMB 'J4'	JAMB 'J5'
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)
36"	144"	120.0	120.0	119.0
39"		120.0	120.0	119.0
42"		120.0	120.0	119.0
45"		120.0	120.0	100.0
48"		114.4	120.0	100.0
51"		99.5	120.0	100.0
54"		93.9	120.0	100.0
57"		89.0	120.0	100.0
60"		84.5	120.0	100.0
36"	147"	100.0	120.0	119.0
39"		100.0	120.0	119.0
42"		100.0	120.0	119.0
45"		100.0	120.0	100.0
48"		100.0	120.0	100.0
51"		95.2	120.0	100.0
54"		89.9	120.0	100.0
57"		85.2	120.0	100.0
60"		80.9	117.5	100.0
36"	150"	100.0	120.0	100.0
39"		100.0	120.0	100.0
42"		100.0	120.0	100.0
45"		100.0	120.0	100.0
48"		96.9	120.0	100.0
51"		91.2	120.0	100.0
54"		86.1	120.0	100.0
57"		81.6	120.0	100.0
60"		77.5	117.5	100.0
36"	156"	50.0	120.0	100.0
39"		50.0	120.0	100.0
42"		50.0	120.0	100.0
45"		50.0	120.0	100.0
48"		50.0	120.0	100.0
51"		50.0	120.0	100.0
54"		50.0	116.1	100.0
57"		50.0	110.0	100.0
60"		50.0	104.5	100.0
36"	159"	50.0	120.0	75.0
39"		50.0	120.0	75.0
42"		50.0	120.0	75.0
45"		50.0	113.5	75.0
48"		50.0	106.4	50.0
51"		50.0	100.2	50.0
54"		50.0	94.6	50.0
57"		50.0	89.6	50.0
60"		50.0	50.0	50.0
36"	168"	50.0	120.0	70.0
39"		50.0	120.0	70.0
42"		50.0	120.0	70.0
45"		50.0	113.5	70.0
48"		50.0	106.4	70.0
51"		50.0	100.2	50.0
54"		50.0	94.6	50.0
57"		50.0	89.6	50.0
60"		50.0	50.0	50.0

JAMB LOAD CAPACITY - PSF SINGLE SPANS WITH OR W/O HORIZONTALS				
NOMINAL DIMS.		JAMB 'J3'	JAMB 'J4'	JAMB 'J5'
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)
36"	180"	50.0	113.3	70.0
39"		50.0	104.6	70.0
42"		50.0	97.1	70.0
45"		50.0	90.7	70.0
48"		50.0	85.0	70.0
51"		50.0	80.0	50.0
54"		50.0	75.6	50.0
57"		47.9	50.0	50.0
60"		45.5	50.0	50.0
36"	184-1/4"	50.0	50.0	70.0
39"		50.0	50.0	70.0
42"		50.0	50.0	70.0
45"		50.0	50.0	70.0
48"		50.0	50.0	70.0
51"		50.0	50.0	50.0
54"		47.2	50.0	50.0
57"		44.7	50.0	50.0
60"		42.5	50.0	50.0
36"	192"	50.0	50.0	50.0
39"		50.0	50.0	50.0
42"		50.0	50.0	50.0
45"		49.9	50.0	50.0
48"		46.8	50.0	50.0
51"		44.1	50.0	50.0
54"		41.6	50.0	50.0
57"		39.4	50.0	50.0
60"		37.5	50.0	50.0
36"	196-3/4"	50.0	50.0	50.0
39"		50.0	50.0	50.0
42"		49.7	50.0	50.0
45"		46.4	50.0	50.0
48"		43.5	50.0	50.0
51"		41.0	50.0	50.0
54"		38.7	50.0	50.0
57"		36.6	50.0	50.0
60"		34.8	50.0	50.0



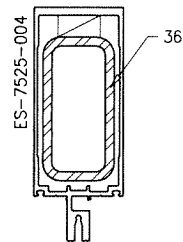
JAMB 'J3'

I _x IN ⁴	S _x IN ³
12.8176	3.7763



JAMB 'J4'

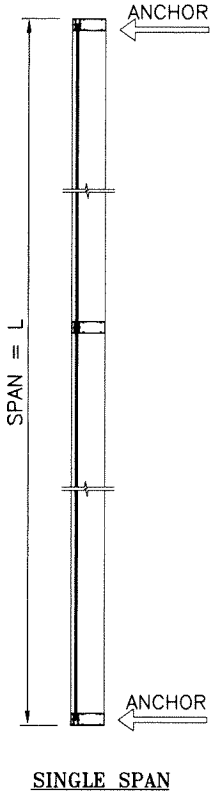
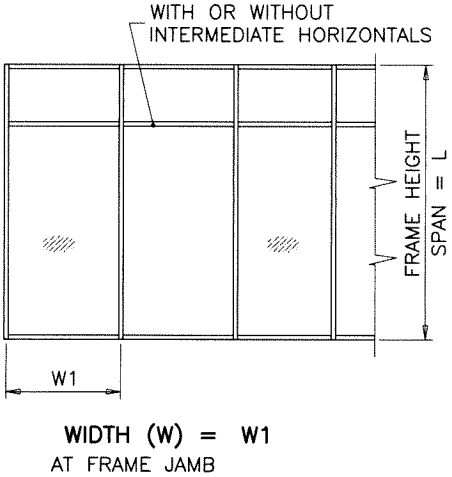
I _x IN ⁴	S _x IN ³
19.1717	5.6484



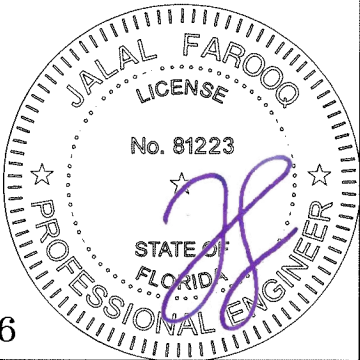
JAMB 'J5'

I _x IN ⁴	S _x IN ³	
12.8175	3.7763	
STEEL	4.4900	2.2500
TOTAL	I _x ALUM + I _x STL X 2.9	25.8386

REINF. LENGTH = MULL LENGTH-6"



Sealed: 03/20/2026



JAMBS 'J3 AND 'J4' RATED FOR LEVEL 'E' IMPACT

FL #17896



AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100 FAX. (305) 262-6978
COMP - ANL \ W15 - 38ESW

SERIES ES-7525 ALUM CURTAIN WALL SYSTEM (L.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: 07-17-15
scale: -
dr. by: TARIQ
chk. by:

drawing no.
W15-38
sheet 6.1 of 30

MULLION LOAD CAPACITY - PSF				
SINGLE SPANS WITH OR WITHOUT INTERMEDIATE HORIZONTALS				
NOMINAL DIMS.		MULLION 'M1'	MULLION 'M2'	MULLION 'M1B'
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)
36"	96"	100.0	100.0	100.0
39"		100.0	100.0	100.0
42"		100.0	100.0	100.0
45"		100.0	100.0	100.0
48"		100.0	100.0	100.0
51"		100.0	100.0	100.0
54"		98.4	100.0	100.0
57"		93.2	100.0	100.0
60"		88.5	99.5	100.0
36"	99-3/4"	100.0	100.0	100.0
39"		100.0	100.0	100.0
42"		100.0	100.0	100.0
45"		100.0	100.0	100.0
48"		100.0	100.0	100.0
51"		96.1	100.0	100.0
54"		90.8	100.0	100.0
57"		86.0	96.7	100.0
60"		81.7	91.8	100.0
36"	102"	100.0	100.0	100.0
39"		100.0	100.0	100.0
42"		100.0	100.0	100.0
45"		100.0	100.0	100.0
48"		97.5	100.0	100.0
51"		91.7	100.0	100.0
54"		86.6	97.4	100.0
57"		82.1	92.2	100.0
60"		78.0	87.6	100.0
36"	108"	100.0	100.0	100.0
39"		100.0	100.0	100.0
42"		98.8	100.0	100.0
45"		92.2	100.0	100.0
48"		86.5	97.1	100.0
51"		81.4	91.4	100.0
54"		76.9	86.3	100.0
57"		72.8	81.8	100.0
60"		69.2	77.7	100.0
36"	110-1/2"	100.0	100.0	100.0
39"		94.7	100.0	100.0
42"		88.0	99.0	100.0
45"		82.1	92.4	100.0
48"		77.0	86.7	100.0
51"		72.4	81.6	100.0
54"		68.4	77.0	100.0
57"		64.8	73.0	100.0
60"		61.6	69.3	100.0
36"	114"	100.0	100.0	100.0
39"		94.7	100.0	100.0
42"		88.0	99.0	100.0
45"		82.1	92.4	100.0
48"		77.0	86.7	100.0
51"		72.4	81.6	100.0
54"		68.4	77.0	100.0
57"		64.8	73.0	100.0
60"		61.6	69.3	100.0

MULLION LOAD CAPACITY - PSF				
SINGLE SPANS WITH OR WITHOUT INTERMEDIATE HORIZONTALS				
NOMINAL DIMS.		MULLION 'M1'	MULLION 'M2'	MULLION 'M1B'
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)
36"	120"	88.0	100.0	100.0
39"		81.2	95.7	100.0
42"		75.4	88.9	100.0
45"		70.4	82.9	100.0
48"		66.0	77.8	100.0
51"		-	73.2	100.0
54"		-	69.1	100.0
57"		-	65.5	100.0
60"		-	62.2	100.0
36"	126"	76.0	93.5	100.0
39"		70.2	86.3	100.0
42"		65.1	80.2	100.0
45"		60.8	74.8	100.0
48"		-	70.1	100.0
51"		-	66.0	100.0
54"		-	62.3	100.0
57"		-	59.1	100.0
60"		-	56.1	98.6
36"	132"	66.1	84.7	100.0
39"		61.0	78.2	100.0
42"		56.7	72.6	100.0
45"		52.9	67.8	100.0
48"		-	63.6	100.0
51"		-	59.8	100.0
54"		-	56.5	99.8
57"		-	53.5	94.6
60"		-	50.8	89.8
36"	138"	57.8	77.1	100.0
39"		53.4	71.2	100.0
42"		49.6	66.1	100.0
45"		-	61.7	100.0
48"		-	57.8	100.0
51"		-	54.4	96.7
54"		-	51.4	91.3
57"		-	48.7	86.5
60"		-	46.3	82.2
36"	144"	50.9	70.4	100.0
39"		47.0	65.0	100.0
42"		-	60.4	100.0
45"		-	56.4	100.0
48"		-	52.8	94.4
51"		-	49.7	88.8
54"		-	47.0	83.9
57"		-	44.5	79.5
60"		-	42.3	-
36"	147"	47.9	67.4	100.0
39"		44.2	62.2	100.0
42"		-	57.8	100.0
45"		-	53.9	94.8
48"		-	50.6	88.9
51"		-	47.6	83.7
54"		-	44.9	79.0
57"		-	42.6	-
60"		-	40.5	-

MULLION LOAD CAPACITY - PSF				
SINGLE SPANS WITH OR WITHOUT INTERMEDIATE HORIZONTALS				
NOMINAL DIMS.		MULLION 'M1'	MULLION 'M2'	MULLION 'M1B'
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)
36"	150"	45.0	64.6	100.0
39"		41.6	59.6	100.0
42"		-	55.4	95.6
45"		-	51.7	89.2
48"		-	48.4	83.7
51"		-	45.6	78.7
54"		-	43.1	74.4
57"		-	40.8	-
60"		-	38.7	-

MULLION 'M1'

Ix IN^4	Sx IN^3
8.8201	3.3166

MULLION 'M2'

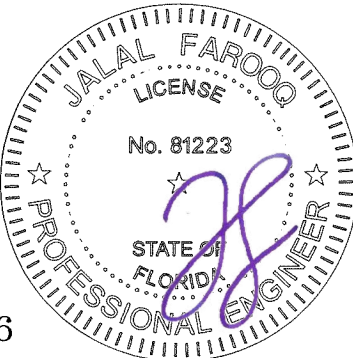
Ix IN^4	Sx IN^3
12.8176	3.7763

MULLION 'M1B'

ALUMINUM	Ix IN^4	Sx IN^3
STEEL	4.4900	2.2500
TOTAL		
Ix ALUM + Ix STL X 2.9	21.8411	

REINF. LENGTH = MULL LENGTH-6"

Sealed: 03/20/2026



FL #17896

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100 FAX. (305) 262-6978
COMP-ANL\W15-38ESW

SERIES ES-7525 ALUM CURTAIN WALL SYSTEM (L.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

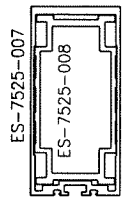
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dr. by:	TARIQ
chk. by:	

drawing no.	W15-38
sheet	7 of 30

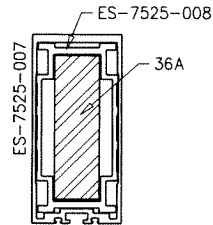
MULLION LOAD CAPACITY - PSF			
SINGLE SPANS WITH OR WITHOUT INTERMEDIATE HORIZONTALS			
NOMINAL DIMS.		MULLION 'M1A'	MULLION 'M1C'
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (-)	EXT. (+) INT. (-)
36"	96"	130.0	130.0
39"		130.0	130.0
42"		130.0	130.0
45"		130.0	130.0
48"		130.0	130.0
51"		130.0	130.0
54"		130.0	130.0
57"		130.0	130.0
60"		130.0	130.0
36"	99-3/4"	130.0	130.0
39"		130.0	130.0
42"		130.0	130.0
45"		130.0	130.0
48"		130.0	130.0
51"		130.0	130.0
54"		130.0	130.0
57"		130.0	130.0
60"		130.0	130.0
36"	102"	130.0	130.0
39"		130.0	130.0
42"		130.0	130.0
45"		130.0	130.0
48"		130.0	130.0
51"		130.0	130.0
54"		130.0	130.0
57"		130.0	130.0
60"		130.0	130.0
36"	108"	130.0	130.0
39"		130.0	130.0
42"		130.0	130.0
45"		130.0	130.0
48"		130.0	130.0
51"		130.0	130.0
54"		130.0	130.0
57"		130.0	130.0
60"		124.6	130.0
36"	110-1/2"	130.0	130.0
39"		130.0	130.0
42"		130.0	130.0
45"		130.0	130.0
48"		130.0	130.0
51"		130.0	130.0
54"		129.2	130.0
57"		122.4	130.0
60"		116.3	130.0
36"	114"	120.0	120.0
39"		120.0	120.0
42"		120.0	120.0
45"		120.0	120.0
48"		120.0	120.0
51"		120.0	120.0
54"		117.7	120.0
57"		111.5	120.0
60"		105.9	120.0

MULLION LOAD CAPACITY - PSF			
SINGLE SPANS WITH OR WITHOUT INTERMEDIATE HORIZONTALS			
NOMINAL DIMS.		MULLION 'M1A'	MULLION 'M1C'
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (-)	EXT. (+) INT. (-)
36"	120"	120.0	120.0
39"		120.0	120.0
42"		120.0	120.0
45"		120.0	120.0
48"		113.5	120.0
51"		106.8	120.0
54"		100.9	120.0
57"		95.6	120.0
60"		90.8	120.0
36"	126"	120.0	120.0
39"		120.0	120.0
42"		112.1	120.0
45"		104.6	120.0
48"		98.1	120.0
51"		92.3	120.0
54"		87.2	120.0
57"		82.6	120.0
60"		-	120.0
36"	132"	113.7	120.0
39"		105.0	120.0
42"		97.5	120.0
45"		91.0	120.0
48"		85.3	120.0
51"		80.3	120.0
54"		75.8	120.0
57"		-	120.0
60"		-	120.0
36"	138"	99.5	120.0
39"		91.9	120.0
42"		85.3	120.0
45"		79.6	120.0
48"		74.6	120.0
51"		70.3	120.0
54"		66.4	120.0
57"		-	120.0
60"		-	120.0
36"	144"	87.6	120.0
39"		80.9	120.0
42"		75.1	120.0
45"		70.1	120.0
48"		65.7	120.0
51"		61.8	120.0
54"		-	120.0
57"		-	120.0
60"		-	118.9
36"	147"	82.3	120.0
39"		76.0	120.0
42"		70.6	120.0
45"		65.9	120.0
48"		61.8	120.0
51"		-	120.0
54"		-	116.8
57"		-	110.7
60"		-	105.2

MULLION LOAD CAPACITY - PSF			
SINGLE SPANS WITH OR WITHOUT INTERMEDIATE HORIZONTALS			
NOMINAL DIMS.		MULLION 'M1A'	MULLION 'M1C'
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (-)	EXT. (+) INT. (-)
36"	150"	77.5	120.0
39"		71.5	120.0
42"		66.4	120.0
45"		62.0	120.0
48"		58.1	120.0
51"		-	120.0
54"		-	116.8
57"		-	110.7
60"		-	105.2
36"	156"	-	120.0
39"		-	120.0
42"		-	120.0
45"		-	120.0
48"		-	116.9
51"		-	110.0
54"		-	103.9
57"		-	98.4
60"		-	93.5
36"	168"	-	120.0
39"		-	117.2
42"		-	108.8
45"		-	101.6
48"		-	95.2
51"		-	89.6
54"		-	84.7
57"		-	80.2
36"	180"	-	101.4
39"		-	93.6
42"		-	86.9
45"		-	81.1
48"		-	76.1
51"		-	71.6
54"		-	67.6



MULLION 'M1A'	
Ix IN^4	Sx IN^3
15.1742	5.7059

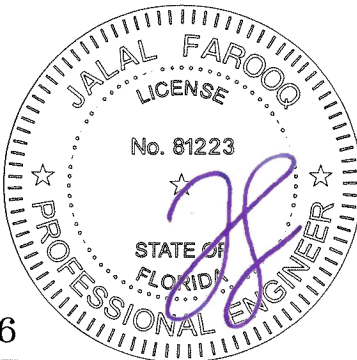


MULLION 'M1C'	
Ix IN^4	Sx IN^3
ALUMINUM	15.1742
STEEL	-
TOTAL	-
Ix ALUM + Ix STL X 2.9	

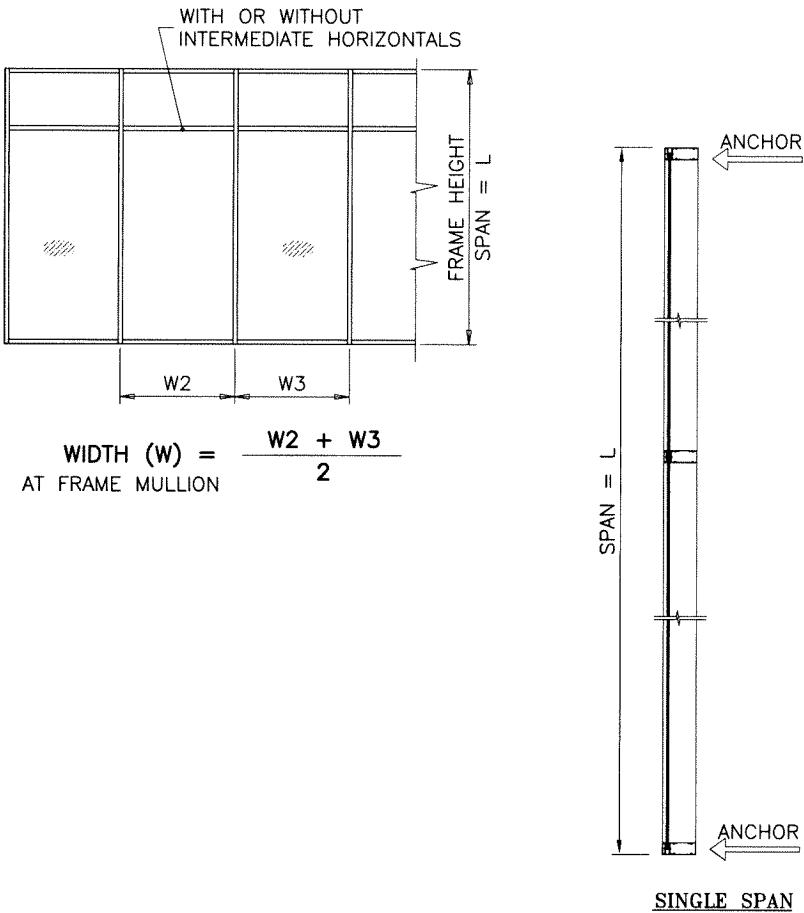
REINF. LENGTH = MULL LENGTH-6"

Sealed: 03/20/2026

MULLIONS 'M1A' AND 'M1C' RATED FOR
LEVEL 'E' IMPACT



FL #17896



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

AT FRAME MULLION

**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)

SERIES ES-7525 ALUM CURTAIN WALL SYSTEM (L.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: 07-17-15 scale: - dr. by: TARIQ chk. by:

drawing no.
W15-38

sheet 7.1 of 30

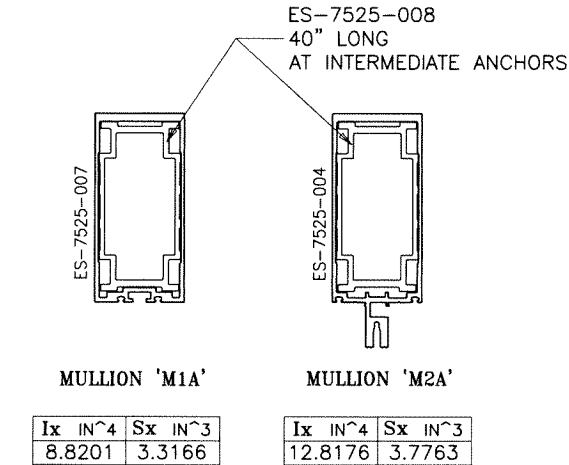
COMP-ANL\W15-38ESW

MULLION LOAD CAPACITY - PSF SINGLE SPANS WITH OR W/O HORIZONTALS				
NOMINAL DIMS.		MULLION 'M2A'	MULLION 'M2B'	MULLION 'M2C'
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)
36"	108"	130.0	120.0	130.0
39"		130.0	120.0	130.0
42"		130.0	120.0	130.0
45"		130.0	120.0	130.0
48"		130.0	120.0	130.0
51"		130.0	120.0	130.0
54"		130.0	120.0	130.0
57"		130.0	120.0	130.0
60"	110-1/2"	124.2	120.0	130.0
66"		-	120.0	-
72"		-	120.0	-
36"		130.0	120.0	130.0
39"		130.0	120.0	130.0
42"		130.0	120.0	130.0
45"		130.0	120.0	130.0
48"		130.0	120.0	130.0
51"		130.0	120.0	130.0
54"		130.0	120.0	130.0
57"		124.7	120.0	130.0
60"	114"	118.5	120.0	130.0
66"		-	120.0	-
72"		-	120.0	-
36"		120.0	120.0	120.0
39"		120.0	120.0	120.0
42"		120.0	120.0	120.0
45"		120.0	120.0	120.0
48"		120.0	120.0	120.0
51"	120"	120.0	120.0	120.0
54"		120.0	120.0	120.0
57"		116.9	120.0	120.0
60"		111.1	120.0	120.0
66"		-	120.0	-
72"		-	116.5	-
36"		120.0	120.0	120.0
39"		120.0	120.0	120.0
42"	126"	120.0	120.0	120.0
45"		120.0	120.0	120.0
48"		120.0	120.0	120.0
51"		117.5	120.0	120.0
54"		111.0	120.0	120.0
57"		105.2	120.0	120.0
60"		91.8	120.0	120.0
66"		-	114.0	-
72"		-	104.5	-
36"	128"	120.0	120.0	120.0
39"		120.0	120.0	120.0
42"		120.0	120.0	120.0
45"		120.0	120.0	120.0
48"		112.9	120.0	120.0
51"		106.2	120.0	120.0
54"		100.3	120.0	120.0
57"		87.1	119.1	120.0
60"	132"	82.8	113.1	120.0
66"		-	102.8	-
72"		-	94.3	-
36"		120.0	119.0	120.0
39"		120.0	119.0	120.0
42"		117.1	119.0	120.0
45"		109.3	100.0	120.0
48"		102.5	100.0	120.0
51"	138"	96.5	100.0	120.0
54"		83.3	100.0	120.0
57"		78.9	115.2	120.0
60"		75.0	109.4	120.0
66"		-	99.5	-
72"		-	92.3	-
36"		120.0	119.0	120.0
39"		120.0	119.0	120.0
42"	144"	117.1	119.0	120.0
45"		109.3	100.0	120.0
48"		102.5	100.0	120.0
51"		96.5	100.0	120.0
54"		83.3	100.0	120.0
57"		78.9	100.0	120.0
60"		75.0	100.0	120.0
66"		115.0	119.0	120.0
72"	150"	106.8	119.0	120.0
36"		99.7	100.0	120.0
39"		93.5	100.0	120.0
42"		80.2	100.0	120.0
45"		75.8	100.0	120.0
48"		71.8	98.2	120.0
51"		68.2	93.3	120.0
54"		110.7	119.0	120.0
57"		102.2	119.0	120.0
60"	156"	94.9	119.0	120.0
66"		88.5	100.0	120.0
72"		83.0	100.0	120.0
36"		73.3	100.0	120.0
39"		69.2	94.7	120.0
42"		65.6	89.7	120.0
45"		62.3	85.2	120.0
48"		99.3	119.0	120.0
51"	168"	91.7	119.0	120.0
54"		85.1	116.5	120.0
57"		79.5	100.0	120.0
60"		74.5	100.0	120.0
66"		70.1	95.9	120.0
72"		66.2	90.6	120.0
36"		62.7	85.8	120.0
39"		59.6	81.5	120.0
42"	180"	95.1	100.0	120.0
45"		87.8	100.0	120.0
48"		81.5	100.0	120.0
51"		76.1	100.0	120.0
54"		71.3	97.6	120.0
57"		67.2	91.9	120.0
60"		63.4	86.8	120.0
66"		60.1	82.2	120.0
72"	192"	57.1	78.1	117.4
36"		46.7	50.0	-
39"		43.1	50.0	-
42"		40.0	50.0	-
45"		37.4	50.0	-
48"		35.0	50.0	-
51"		33.0	50.0	-
54"		31.1	50.0	-
57"	196-3/4"	29.5	39.7	-
60"		28.0	37.8	-
66"		25.2	50.0	104.4
72"		52.2	50.0	104.4
36"	156"	82.2	75.0	120.0
39"		75.9	75.0	120.0
42"		70.5	75.0	120.0
45"		65.8	75.0	113.4
48"		61.7	50.0	106.3
51"		58.0	50.0	100.1
54"		54.8	50.0	94.5
57"		51.9	50.0	89.5
60"	159"	49.3	50.0	-
36"		69.7	70.0	120.0
39"		64.3	70.0	120.0
42"		59.7	70.0	120.0
45"		55.8	70.0	113.4
48"		52.3	70.0	106.3
51"		49.2	50.0	100.1
54"		46.5	50.0	94.5
57"	168"	44.0	50.0	89.5
60"		41.8	50.0	-
36"		56.7	70.0	113.2
39"		52.3	70.0	104.5
42"		48.6	70.0	97.1
45"		45.3	70.0	90.6
48"		42.5	57.3	84.9
51"		40.0	50.0	79.9
54"	180"	37.8	50.0	75.5
57"		35.8	50.0	-
60"		34.0	50.0	-
36"		52.9	70.0	-
39"		48.9	70.0	-
42"		45.4	70.0	-
45"		42.4	57.1	-
48"		39.7	53.5	-
51"	184-1/8"	37.4	50.0	-
54"		35.3	50.0	-
57"		33.4	50.0	-
60"		31.8	50.0	-
36"		46.7	50.0	-
39"		43.1	50.0	-
42"		40.0	50.0	-
45"		37.4	50.0	-
48"	192"	35.0	50.0	-
51"		33.0	50.0	-
54"		31.1	50.0	-
57"		29.5	39.7	-
60"		28.0	37.8	-
66"		25.2	50.0	104.4
72"		52.2	50.0	104.4

MULLION LOAD CAPACITY - PSF SINGLE SPANS WITH OR W/O HORIZONTALS				
NOMINAL DIMS.		MULLION 'M2A'	MULLION 'M2B'	MULLION 'M2C'
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)
36"	128"	120.0	120.0	120.0
39"		120.0	120.0	120.0
42"		117.1	120.0	120.0
45"		109.3	120.0	120.0
48"		102.5	120.0	120.0
51"		96.5	120.0	120.0
54"		83.3	120.0	120.0
57"		78.9	115.2	120.0
60"		75.0	109.4	120.0
66"		-	99.5	-
71-1/8"		-	92.3	-
36"		132"	120.0	119.0
39"	120.0		119.0	120.0
42"	117.1		119.0	120.0
45"	109.3		100.0	120.0
48"	102.5		100.0	120.0
51"	96.5		100.0	120.0
54"	83.3		100.0	120.0
57"	78.9		100.0	120.0
60"	75.0		100.0	120.0
36"	138"		120.0	119.0
39"		115.0	119.0	120.0
42"		106.8	119.0	120.0
45"		99.7	100.0	120.0
48"		93.5	100.0	120.0
51"		80.2	100.0	120.0
54"		75.8	100.0	120.0
57"		71.8	98.2	120.0
60"		68.2	93.3	120.0
36"		144"	110.7	119.0
39"	102.2		119.0	120.0
42"	94.9		119.0	120.0
45"	88.5		100.0	120.0
48"	83.0		100.0	120.0
51"	73.3		100.0	120.0
54"	69.2		94.7	120.0
57"	65.6		89.7	120.0
60"	62.3		85.2	120.0
36"	147"		99.3	119.0
39"		91.7	119.0	120.0
42"		85.1	116.5	120.0
45"		79.5	100.0	120.0
48"		74.5	100.0	120.0
51"		70.1	95.9	120.0
54"		66.2	90.6	120.0
57"		62.7	85.8	120.0
60"		59.6	81.5	120.0
36"		150"	95.1	100.0
39"	87.8		100.0	120.0
42"	81.5		100.0	120.0
45"	76.1		100.0	120.0
48"	71.3		97.6	120.0
51"	67.2		91.9	120.0
54"	63.4		86.8	120.0
57"	60.1		82.2	120.0
60"	57.1		78.1	117.4

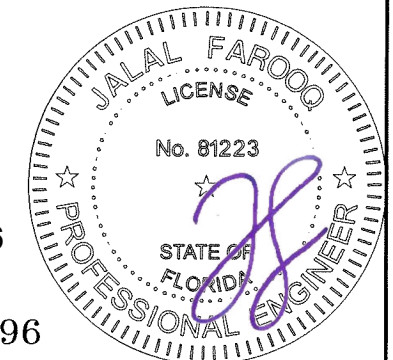
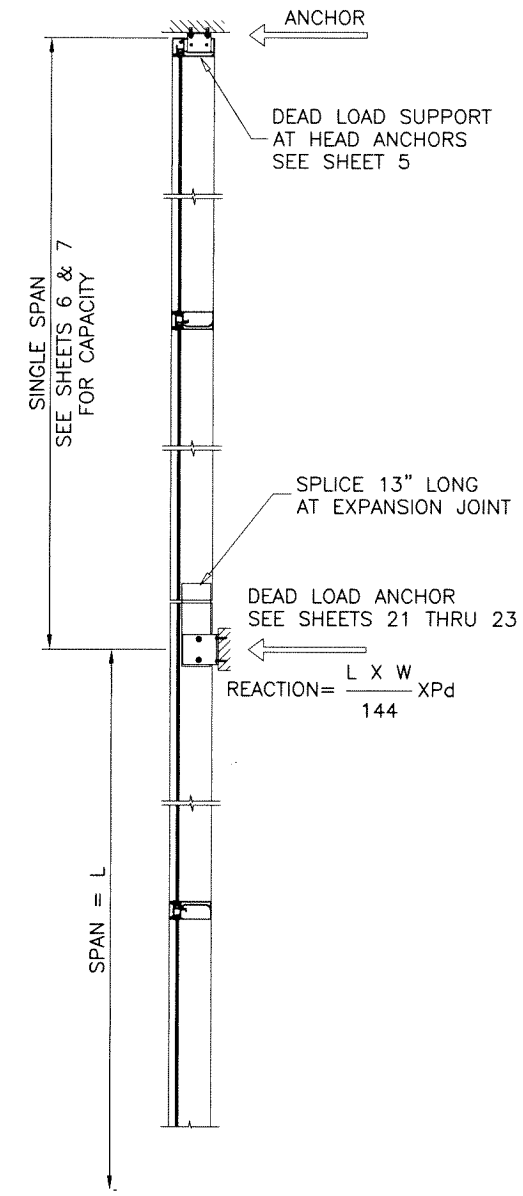
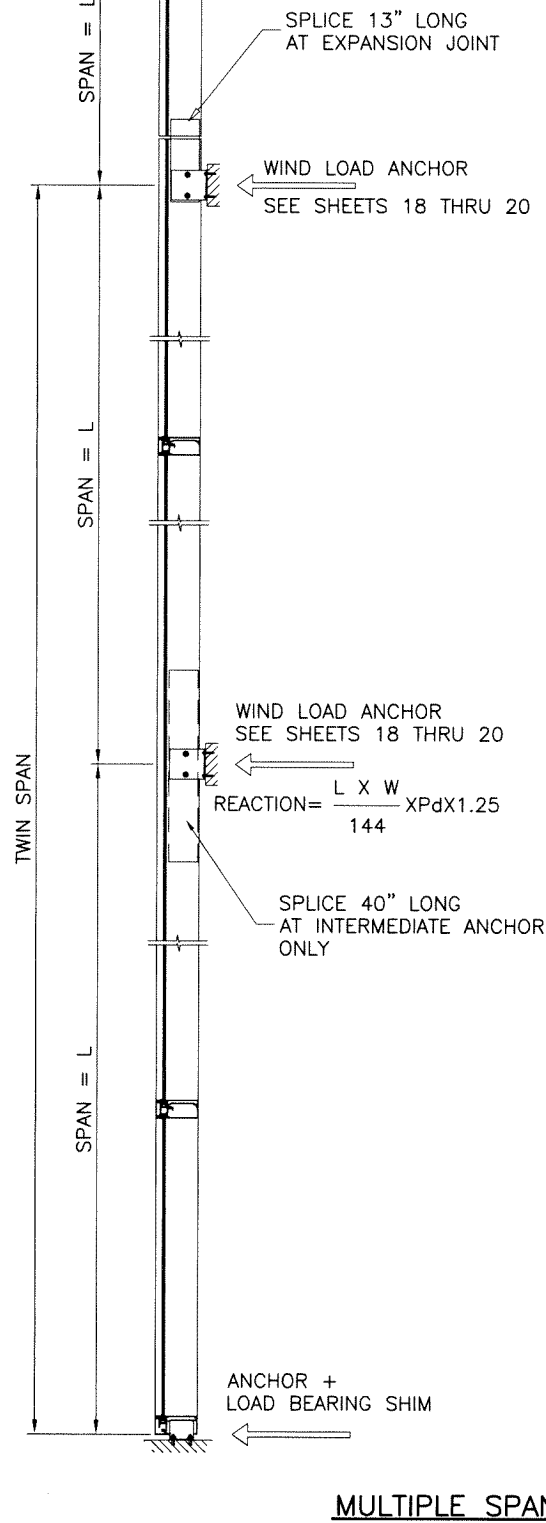
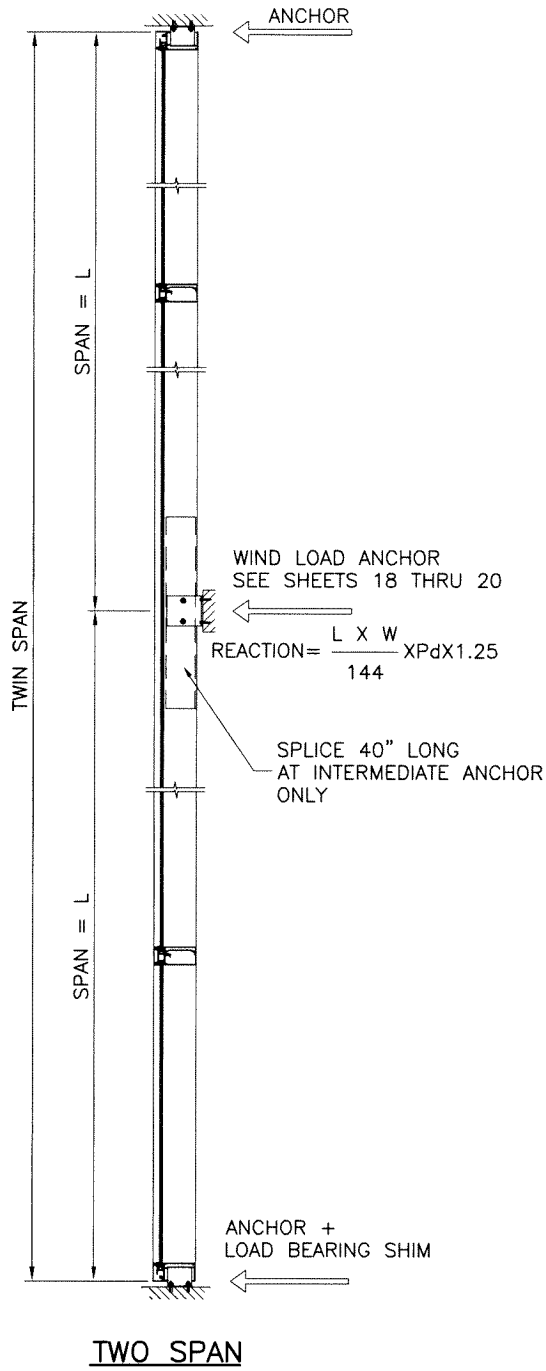
MULLION LOAD CAPACITY - PSF			
TWIN SPANS			
NOMINAL DIMS.		MULLION 'M1A'	MULLION 'M2A'
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (-)	EXT. (+) INT. (-)
36"	114"	100.0	100.0
39"		100.0	100.0
42"		100.0	100.0
45"		100.0	100.0
48"		100.0	100.0
51"		100.0	100.0
54"		100.0	100.0
57"		100.0	100.0
60"		100.0	100.0
36"	120"	100.0	100.0
39"		100.0	100.0
42"		100.0	100.0
45"		100.0	100.0
48"		100.0	100.0
51"		-	100.0
54"		-	100.0
57"		-	96.6
60"		-	91.8
36"	126"	100.0	100.0
39"		100.0	100.0
42"		100.0	100.0
45"		100.0	100.0
48"		-	100.0
51"		-	97.4
54"		-	92.0
57"		-	87.1
60"		-	82.8
36"	132"	100.0	100.0
39"		100.0	100.0
42"		100.0	100.0
45"		100.0	100.0
48"		-	93.7
51"		-	88.2
54"		-	83.3
57"		-	78.9
60"		-	75.0
36"	138"	100.0	100.0
39"		100.0	100.0
42"		98.3	97.4
45"		-	90.9
48"		-	85.3
51"		-	80.2
54"		-	75.8
57"		-	71.8
60"		-	68.2
36"	144"	100.0	100.0
39"		96.7	95.8
42"		-	89.0
45"		-	83.0
48"		-	77.9
51"		-	73.3
54"		-	69.2
57"		-	65.6
60"		-	62.3

MULLION LOAD CAPACITY - PSF			
TWIN SPANS			
NOMINAL DIMS.		MULLION 'M1A'	MULLION 'M2A'
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (-)	EXT. (+) INT. (-)
36"	147"	100.0	99.3
39"		92.5	91.7
42"		-	85.1
45"		-	79.5
48"		-	74.5
51"		-	70.1
54"		-	66.2
57"		-	62.7
60"		-	59.6
36"	150"	96.0	95.1
39"		88.6	87.8
42"		-	81.5
45"		-	76.1
48"		-	71.3
51"		-	67.2
54"		-	63.4
57"		-	60.1
60"		-	57.1



UN-REINFORCED MULLION TWIN SPAN TABLES

NOTE:
THIS TABLE IS APPLICABLE FOR TWIN SPANS
FOR SINGLE SPAN CAPACITY SEE TABLES ON SHEETS 6 & 7.



Sealed: 03/20/2026

FL #17896

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
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SERIES ES-7525 ALUM CURTAIN WALL SYSTEM (L.M.I.)

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revisions:	no	date	by	description

date: 07-17-15

scale: -

dr. by: TARIQ

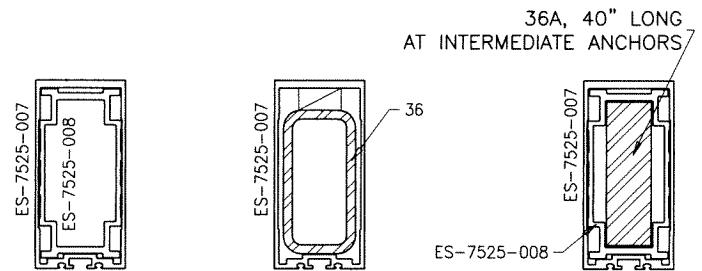
chk. by:

drawing no.
W15-38

sheet 9 of 30

MULLION LOAD CAPACITY - PSF TWIN SPANS				
NOMINAL DIMS.		MULLION 'M1A'	MULLION 'M1B'	MULLION 'M1C'
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)
36"	114"	100.0	100.0	130.0
39"		100.0	100.0	130.0
42"		100.0	100.0	130.0
45"		100.0	100.0	130.0
48"		100.0	100.0	130.0
51"		100.0	100.0	130.0
54"		100.0	100.0	130.0
57"		100.0	100.0	130.0
60"		100.0	100.0	130.0
36"	120"	100.0	100.0	130.0
39"		100.0	100.0	130.0
42"		100.0	100.0	130.0
45"		100.0	100.0	130.0
48"		100.0	100.0	130.0
51"		100.0	100.0	130.0
54"		100.0	100.0	130.0
57"		97.5	100.0	130.0
60"		92.7	100.0	130.0
36"	126"	100.0	100.0	130.0
39"		100.0	100.0	130.0
42"		100.0	100.0	130.0
45"		100.0	100.0	130.0
48"		100.0	100.0	130.0
51"		98.3	100.0	130.0
54"		92.8	100.0	130.0
57"		87.9	100.0	130.0
60"		-	98.6	130.0
36"	132"	100.0	100.0	130.0
39"		100.0	100.0	130.0
42"		100.0	100.0	130.0
45"		100.0	100.0	130.0
48"		94.6	100.0	130.0
51"		89.0	100.0	130.0
54"		84.1	99.8	130.0
57"		-	94.6	130.0
60"		-	89.8	130.0
36"	138"	100.0	100.0	130.0
39"		100.0	100.0	130.0
42"		98.3	100.0	130.0
45"		91.8	100.0	130.0
48"		86.0	100.0	130.0
51"		81.0	96.7	130.0
54"		76.5	91.3	130.0
57"		-	86.5	130.0
60"		-	82.2	130.0
36"	144"	100.0	100.0	130.0
39"		96.7	100.0	130.0
42"		89.8	100.0	130.0
45"		83.8	100.0	130.0
48"		78.6	94.4	130.0
51"		73.9	88.8	130.0
54"		-	83.9	130.0
57"		-	79.5	125.8
60"		-	-	119.5
36"	147"	100.0	100.0	130.0
39"		92.5	100.0	130.0
42"		85.9	100.0	130.0
45"		80.2	96.6	130.0
48"		75.2	90.5	130.0
51"		-	85.2	130.0
54"		-	80.5	127.4
57"		-	-	120.7
60"		-	-	114.7

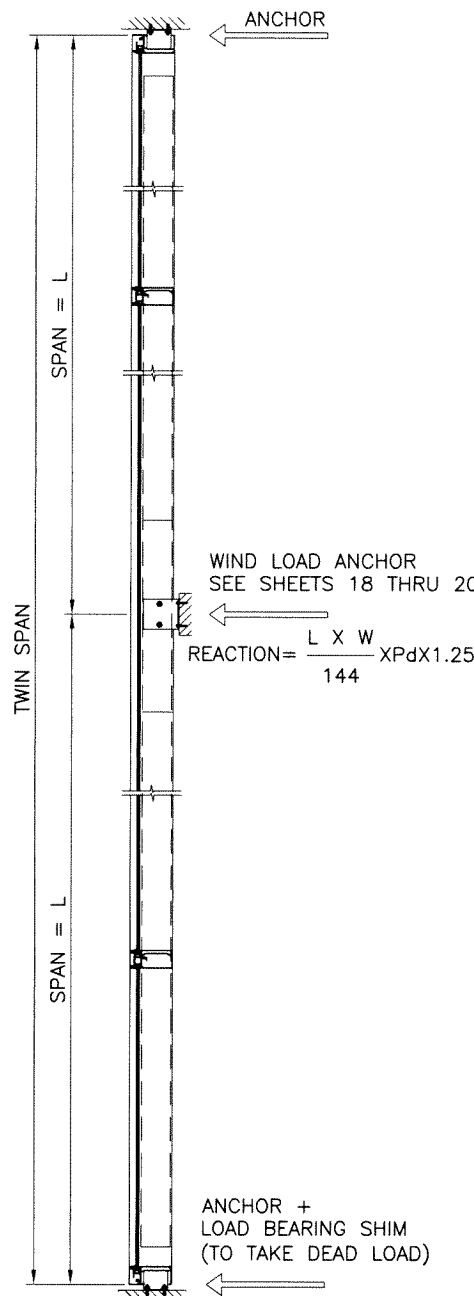
MULLION LOAD CAPACITY - PSF TWIN SPANS				
NOMINAL DIMS.		MULLION 'M1A'	MULLION 'M1B'	MULLION 'M1C'
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)
36"	150"	96.0	100.0	130.0
39"		88.6	100.0	130.0
42"		82.3	99.4	130.0
45"		76.8	92.8	130.0
48"		72.0	87.0	130.0
51"		-	81.8	129.6
54"		-	77.3	122.4
57"		-	-	115.9
60"		-	-	110.1
36"	156"	-	-	130.0
39"		-	-	130.0
42"		-	-	130.0
45"		-	-	130.0
48"		-	-	124.5
51"		-	-	117.2
54"		-	-	110.6
57"		-	-	104.8
60"		-	-	99.6
36"	159"	-	-	130.0
39"		-	-	130.0
42"		-	-	130.0
45"		-	-	125.4
48"		-	-	117.6
51"		-	-	110.6
54"		-	-	104.5
57"		-	-	99.0
36"	168"	-	-	130.0
39"		-	-	124.9
42"		-	-	115.9
45"		-	-	108.2
48"		-	-	101.4
51"		-	-	95.5
54"		-	-	90.2
57"		-	-	85.4
60"		-	-	81.2
36"	180"	-	-	108.0
39"		-	-	99.7
42"		-	-	92.6
45"		-	-	86.4
48"		-	-	81.0
51"		-	-	76.3
54"		-	-	72.0
57"		-	-	67.0
60"		-	-	62.5



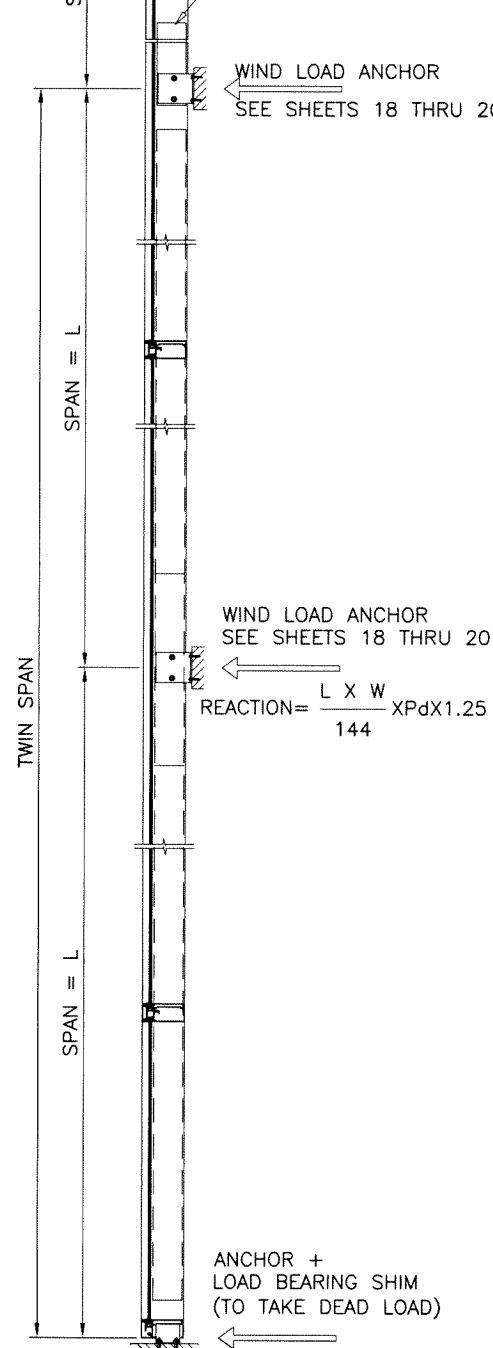
MULLION 'M1A'		MULLION 'M1B'		MULLION 'M1C'	
Ix IN ⁴	Sx IN ³	Ix IN ⁴	Sx IN ³	Ix IN ⁴	Sx IN ³
15.1742	5.7059	ALUMINUM	8.8201	3.3166	
		STEEL	4.4900	2.2500	
		TOTAL			
		Ix ALUM + Ix STL X 2.9	21.8411		

REINF. LENGTH = MULL LENGTH-6"

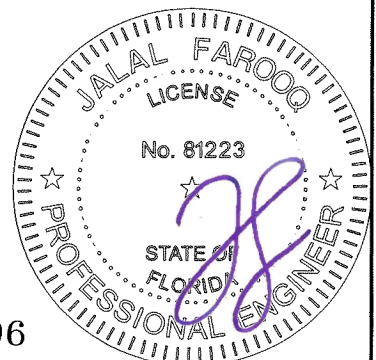
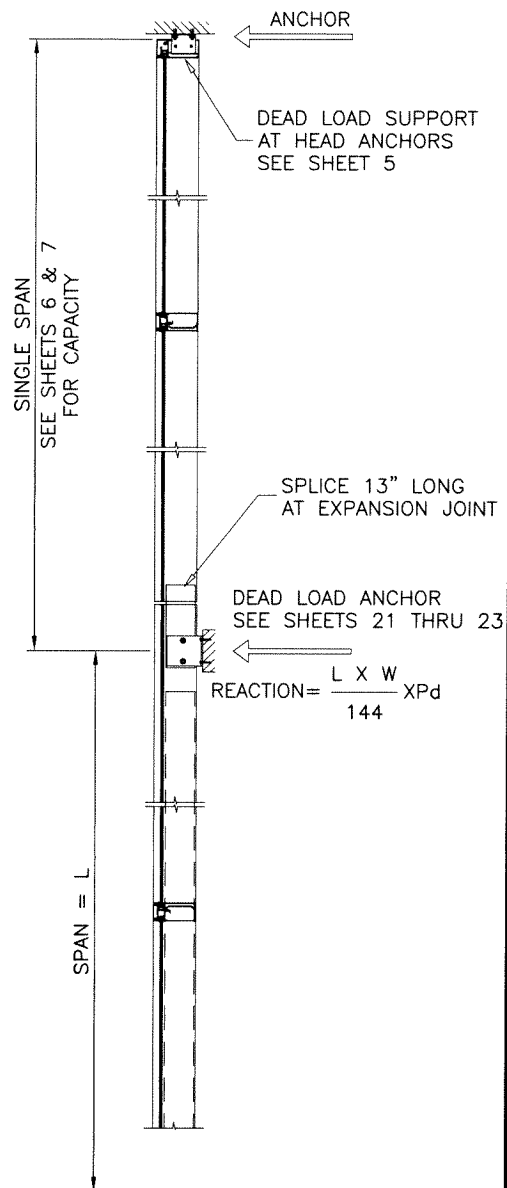
REINFORCED MULLION TWIN SPAN TABLES



TWO SPAN



MULTIPLE SPANS



MULLIONS 'M1C' RATED FOR
LEVEL 'E' IMPACT

NOTE:
THIS TABLE IS APPLICABLE FOR TWIN SPANS
FOR SINGLE SPAN CAPACITY SEE TABLES ON SHEETS 6 & 7. FL #17896

Sealed: 03/20/2026

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100 FAX. (305) 262-6978
COMP - ANL W15-38ESW

SERIES ES-7525 ALUM CURTAIN WALL SYSTEM (L.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

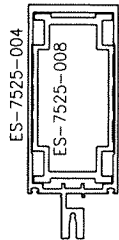
date: 07-17-15	scale: -	dr. by: TARIQ	chk. by:
drawing no. W15-38			
sheet 10 of 30			

MULLION LOAD CAPACITY - PSF TWIN SPANS				
NOMINAL DIMS.		MULLION 'M2A'	MULLION 'M2B'	MULLION 'M2C'
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)
36"	102"	100.0	120.0	130.0
39"		100.0	120.0	130.0
42"		100.0	120.0	130.0
45"		100.0	120.0	130.0
48"		100.0	120.0	130.0
51"		100.0	120.0	130.0
54"		100.0	120.0	130.0
57"		100.0	120.0	130.0
60"		100.0	120.0	130.0
66"	108"	-	120.0	-
72"		-	120.0	-
36"		100.0	120.0	130.0
39"		100.0	120.0	130.0
42"		100.0	120.0	130.0
45"		100.0	120.0	130.0
48"		100.0	120.0	130.0
51"		100.0	120.0	130.0
54"		100.0	120.0	130.0
57"		100.0	120.0	130.0
60"		100.0	120.0	130.0
66"		-	120.0	-
36"	114"	100.0	120.0	130.0
39"		100.0	120.0	130.0
42"		100.0	120.0	130.0
45"		100.0	120.0	130.0
48"		100.0	120.0	130.0
51"		100.0	120.0	130.0
54"		100.0	120.0	130.0
57"		100.0	120.0	130.0
60"		100.0	120.0	130.0
66"		-	120.0	-
36"	120"	100.0	120.0	130.0
39"		100.0	120.0	130.0
42"		100.0	120.0	130.0
45"		100.0	120.0	130.0
48"		100.0	120.0	130.0
51"		100.0	120.0	130.0
54"		100.0	120.0	130.0
57"		96.6	120.0	130.0
60"		91.8	120.0	130.0
36"	126"	100.0	120.0	130.0
39"		100.0	120.0	130.0
42"		100.0	120.0	130.0
45"		100.0	120.0	130.0
48"		100.0	120.0	130.0
51"		97.4	120.0	130.0
54"		92.0	120.0	130.0
57"		87.1	119.1	130.0
60"		82.8	100.0	130.0

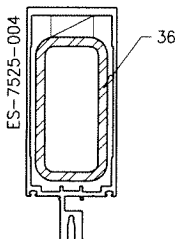
MULLION LOAD CAPACITY - PSF TWIN SPANS				
NOMINAL DIMS.		MULLION 'M2A'	MULLION 'M2B'	MULLION 'M2C'
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)
36"	130"	100.0	120.0	130.0
39"		100.0	120.0	130.0
42"		100.0	120.0	130.0
45"		100.0	120.0	130.0
48"		93.7	120.0	130.0
51"		88.2	120.0	130.0
54"		83.3	117.6	130.0
57"		78.9	110.9	130.0
60"		75.0	100.0	130.0
36"	132"	100.0	119.0	130.0
39"		100.0	119.0	130.0
42"		100.0	119.0	130.0
45"		100.0	100.0	130.0
48"		93.7	100.0	130.0
51"		88.2	100.0	130.0
54"		83.3	100.0	130.0
57"		78.9	100.0	130.0
60"		75.0	100.0	130.0
36"	138"	100.0	119.0	130.0
39"		100.0	119.0	130.0
42"		97.4	119.0	130.0
45"		90.9	100.0	130.0
48"		85.3	100.0	130.0
51"		80.2	100.0	130.0
54"		75.8	100.0	130.0
57"		71.8	98.2	130.0
60"		68.2	93.3	130.0
36"	144"	100.0	119.0	130.0
39"		95.8	119.0	130.0
42"		89.0	119.0	130.0
45"		83.0	100.0	130.0
48"		77.9	100.0	130.0
51"		73.3	100.0	130.0
54"		69.2	94.7	130.0
57"		65.6	89.7	128.1
60"		62.3	85.2	121.7
36"	147"	99.3	119.0	130.0
39"		91.7	119.0	130.0
42"		85.1	116.5	130.0
45"		79.5	100.0	130.0
48"		74.5	100.0	130.0
51"		70.1	95.9	130.0
54"		66.2	90.6	129.7
57"		62.7	85.8	122.9
60"		59.6	81.5	116.7
36"	150"	95.1	100.0	130.0
39"		87.8	100.0	130.0
42"		81.5	100.0	130.0
45"		76.1	100.0	130.0
48"		71.3	97.6	130.0
51"		67.2	91.9	130.0
54"		63.4	86.8	124.6
57"		60.1	82.2	118.0
60"		57.1	78.1	112.1

MULLION LOAD CAPACITY - PSF TWIN SPANS				
NOMINAL DIMS.		MULLION 'M2A'	MULLION 'M2B'	MULLION 'M2C'
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)
36"	156"	87.5	75.0	130.0
39"		80.7	75.0	130.0
42"		75.0	75.0	130.0
45"		70.0	75.0	130.0
48"		65.6	50.0	129.6
51"		61.7	50.0	122.0
54"		58.3	50.0	115.2
57"		55.2	50.0	109.1
60"		52.5	50.0	103.7
36"	159"	84.0	75.0	130.0
39"		77.6	75.0	130.0
42"		72.0	75.0	130.0
45"		67.2	75.0	130.0
48"		63.0	50.0	130.0
51"		59.3	50.0	124.7
54"		56.0	50.0	117.4
57"		53.1	50.0	110.9
60"		50.4	50.0	105.0
36"	168"	75.3	70.0	130.0
39"		69.5	70.0	130.0
42"		64.5	70.0	127.7
45"		60.2	70.0	119.2
48"		56.5	70.0	111.7
51"		53.1	50.0	105.2
54"		50.2	50.0	99.3
57"		47.5	50.0	94.1
60"		45.2	50.0	89.4
36"	180"	65.6	70.0	129.8
39"		60.5	70.0	119.8
42"		56.2	70.0	111.2
45"		52.5	70.0	103.8
48"		49.2	67.3	103.8
51"		46.3	50.0	91.6
52"		43.7	50.0	90.0
54"		41.4	50.0	86.5
57"		39.3	50.0	82.0
60"		62.7	50.0	77.9
36"	184-1/8"	57.9	70.0	-
39"		53.7	70.0	-
42"		50.1	70.0	-
45"		47.0	68.6	-
48"		44.2	64.4	-
51"		41.8	50.0	-
54"		39.6	50.0	-
57"		37.6	50.0	-
60"			50.0	-

MULLION LOAD CAPACITY - PSF TWIN SPANS				
NOMINAL DIMS.		MULLION 'M2A'	MULLION 'M2B'	MULLION 'M2C'
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)
36"	192"	57.6	50.0	-
39"		53.2	50.0	-
42"		49.4	50.0	-
45"		46.1	50.0	-
48"		43.2	50.0	-
51"		40.7	50.0	-
54"		38.4	50.0	-
57"		36.4	49.8	-
60"		34.6	47.4	-
36"	196-3/4"	54.9	50.0	-
39"		50.7	50.0	-
42"		47.0	50.0	-
45"		43.9	50.0	-
48"		41.2	50.0	-
51"		38.7	50.0	-
54"		36.6	50.0	-
57"		34.7	47.5	-
60"		32.9	45.1	-



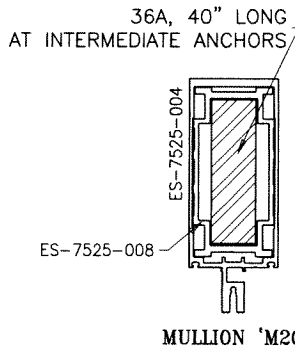
MULLION 'M2A'		
Ix	IN ⁴	Sx IN ³
19.1717	5.6484	



MULLION 'M2B'

ALUMINUM		
12.8175	3.7763	
STEEL		
4.4900	2.2500	
TOTAL		
1x ALUM + 1x STL X 2.9	25.8386	

REINF. LENGTH = MULL LENGTH-6"

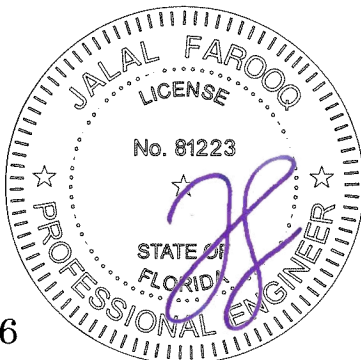


MULLION 'M2C'

MULLIONS 'M2C' RATED FOR
LEVEL 'E' IMPACT

Sealed: 03/20/2026

FL #17896



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

SERIES ES-7525 ALUM CURTAIN WALL SYSTEM (L.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: 07-17-15

scale: -

dr. by: TARIQ

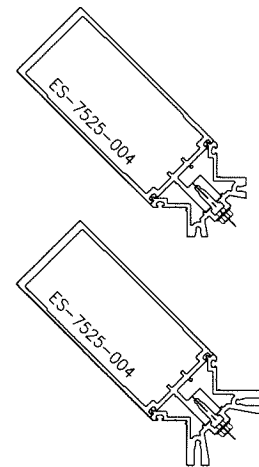
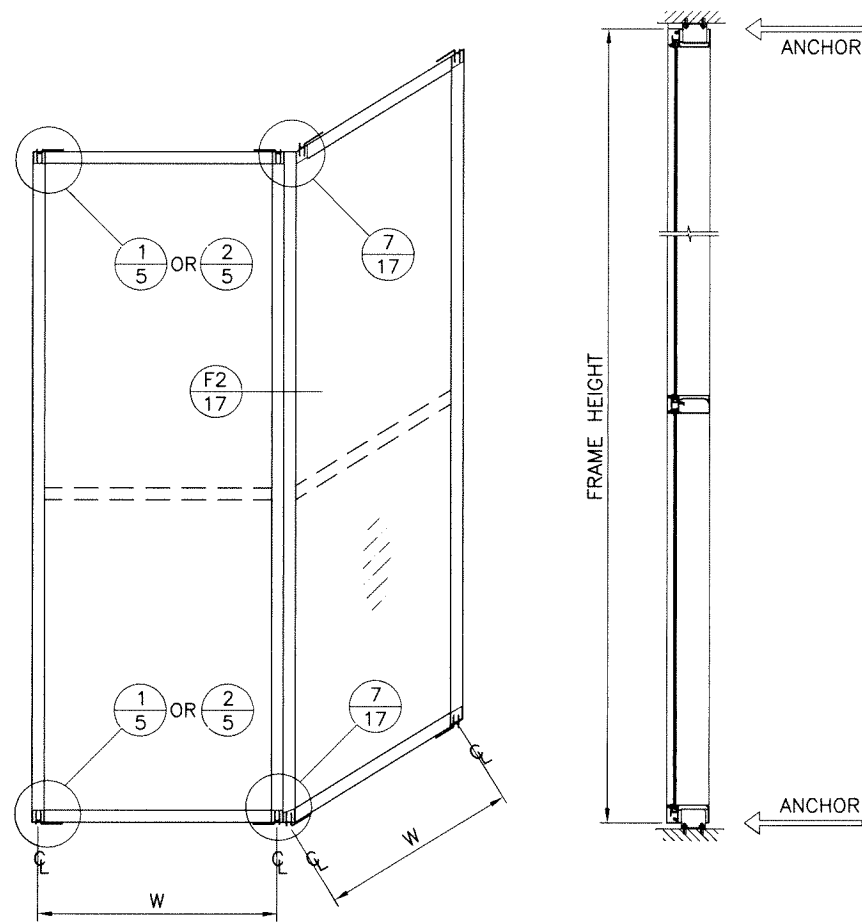
chk. by:

drawing no.

W15-38

sheet 10.1 of 30

CORNER MULLION W/O REINFORCING
SINGLE SPAN WITH OR WITHOUT HORIZONTAL

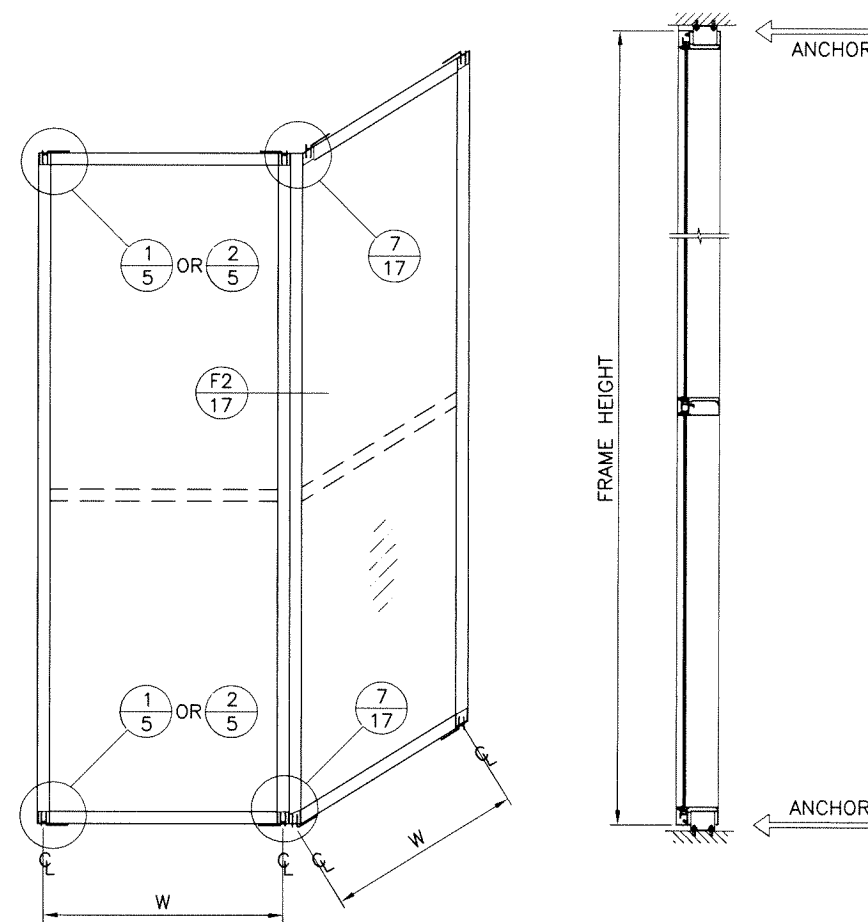


CORNER MULLION

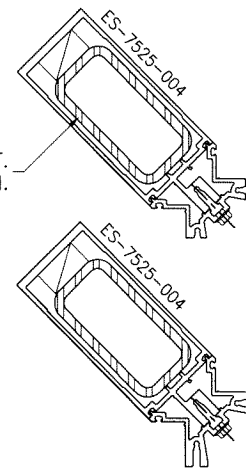
WIDTH-W INCHES	FRAME HEIGHT INCHES	DESIGN LOAD CAPACITY PSF
42	108	100.0
48		100.0
54		100.0
60		100.0
42	114	100.0
48		100.0
54		100.0
60		96.3
42	120	100.0
48		100.0
54		96.2
60		86.6

NOTE:
USE 'F' ANCHOR CLIP DETAIL ① AT JAMB AND
'T' ANCHOR CLIP DETAIL ② AT MULLION

CORNER MULLION WITH REINFORCING
SINGLE SPAN WITH OR WITHOUT HORIZONTAL



STEEL TUBE REINF.
LENGTH = FRAME HT. - 6 IN.

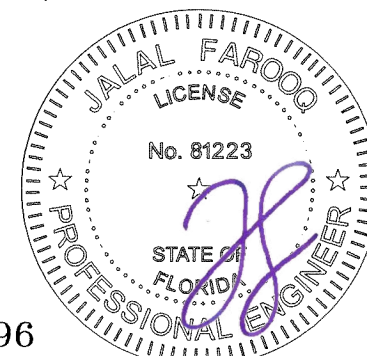


CORNER MULLION
W/ STEEL REINF.

WIDTH-W INCHES	FRAME HEIGHT INCHES	DESIGN LOAD CAPACITY PSF
42	150	100.0
48		100.0
54		100.0
60		100.0

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FL #17896



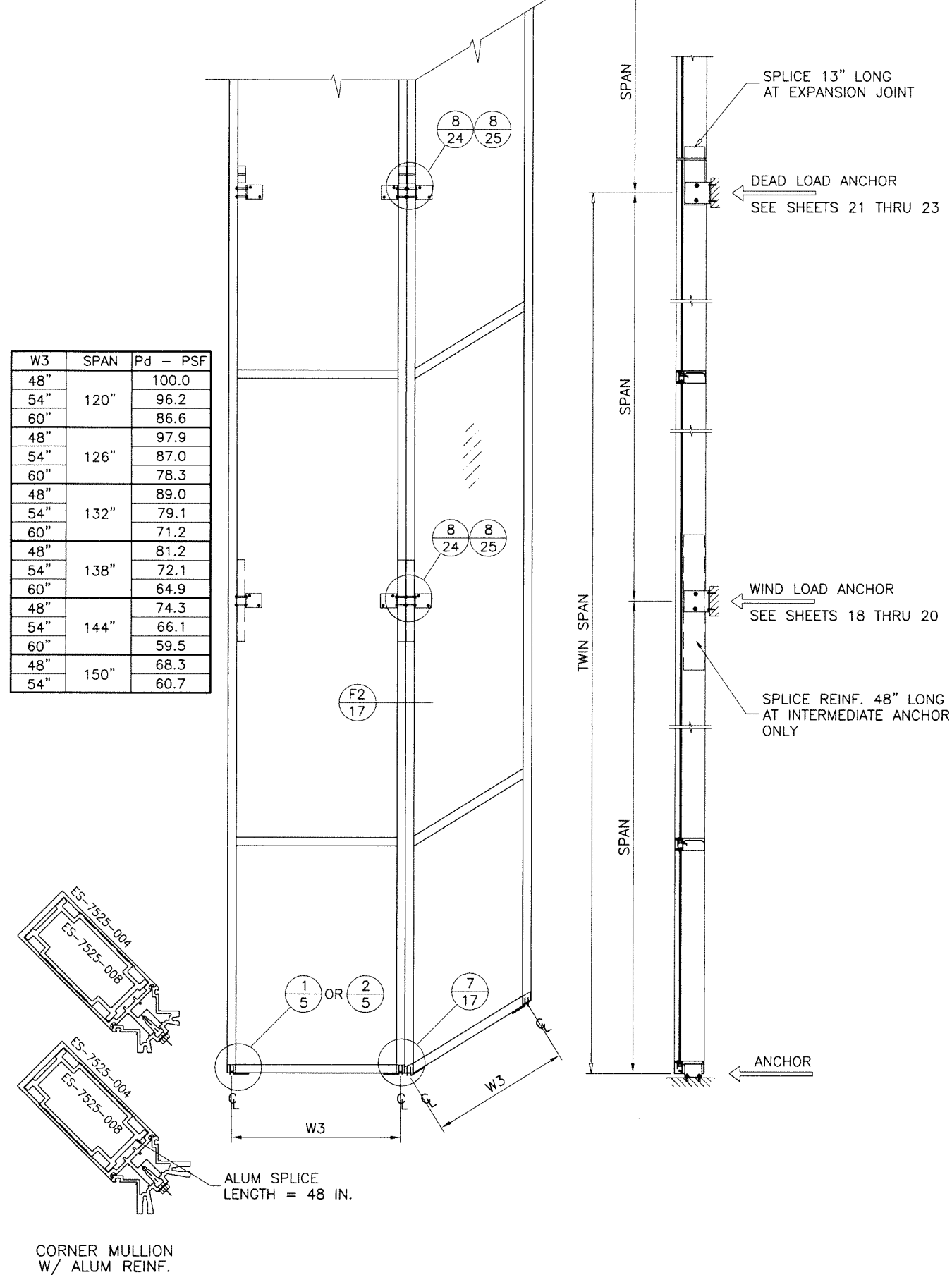
AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100 FAX. (305) 262-6978
COMP-ANL W15-38ESW

SERIES ES-7525 ALUM CURTAIN WALL SYSTEM (L.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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no	date by description
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dr. by:	TARIQ
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drawing no.	
W15-38	
sheet 11 of 30	

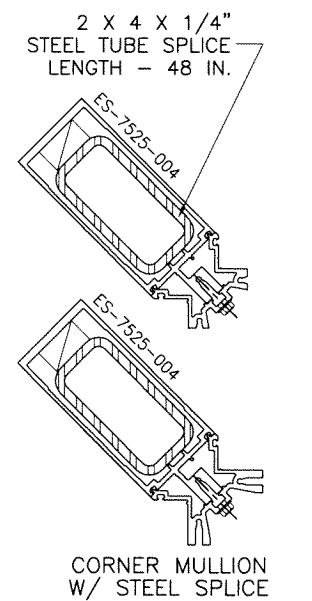
CORNER MULLION W/ ALUM REINF. AT ANCHOR LOCATION
TWIN SPAN WITH OR WITHOUT HORIZONTAL

W3	SPAN	Pd - PSF
48"	120"	100.0
54"	120"	96.2
60"	120"	86.6
48"	126"	97.9
54"	126"	87.0
60"	126"	78.3
48"	132"	89.0
54"	132"	79.1
60"	132"	71.2
48"	138"	81.2
54"	138"	72.1
60"	138"	64.9
48"	144"	74.3
54"	144"	66.1
60"	144"	59.5
48"	150"	68.3
54"	150"	60.7

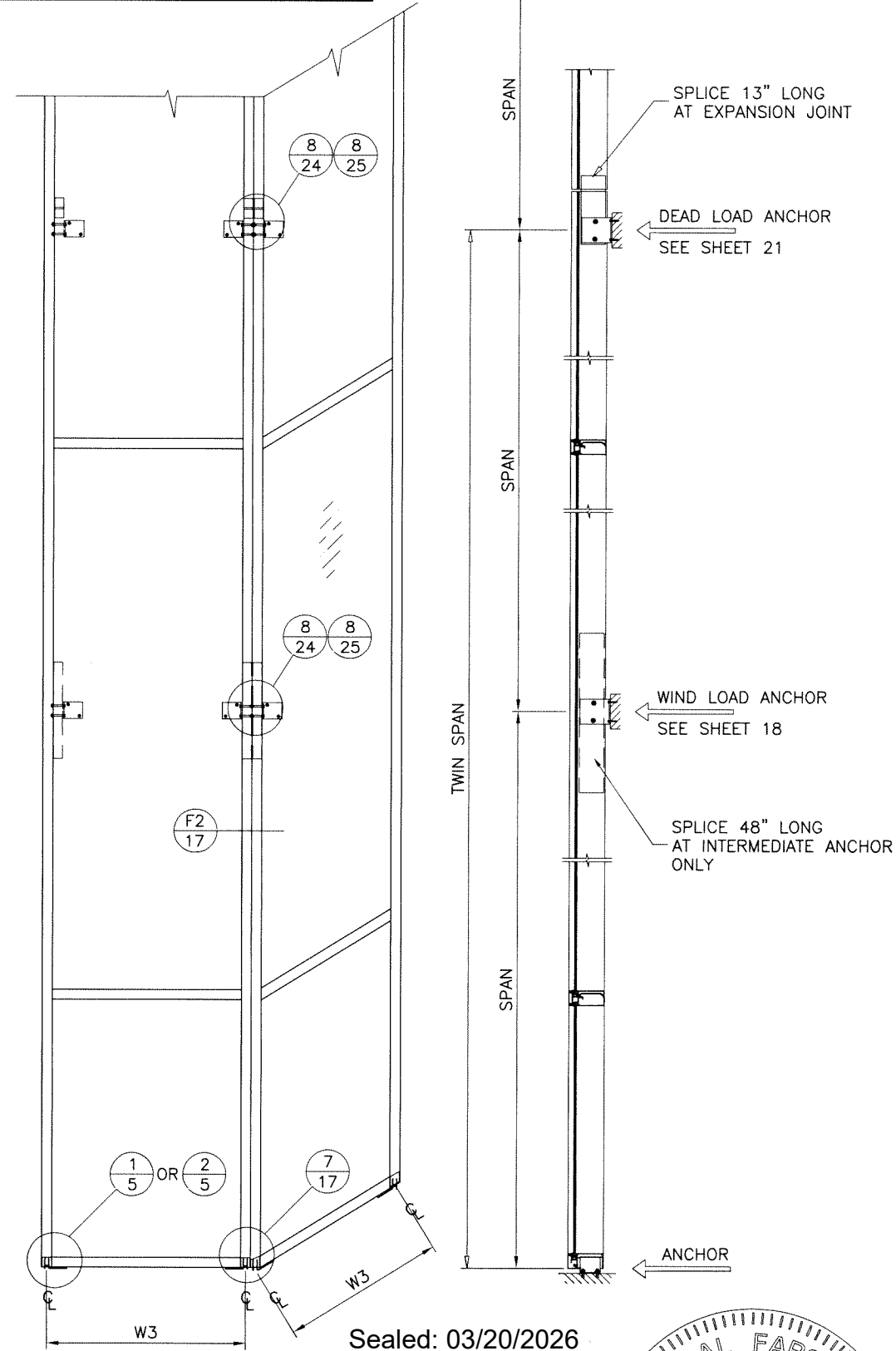
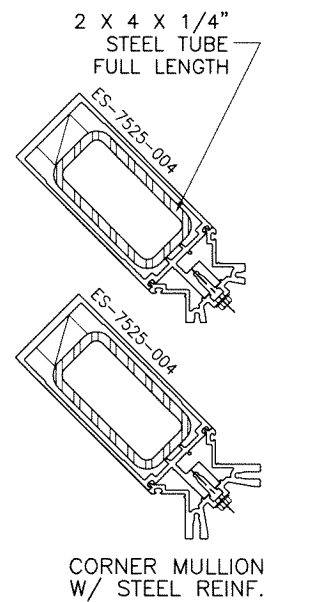


CORNER MULLION WITH STEEL REINF. AT ANCHOR LOCATION
TWIN SPAN WITH OR WITHOUT HORIZONTAL

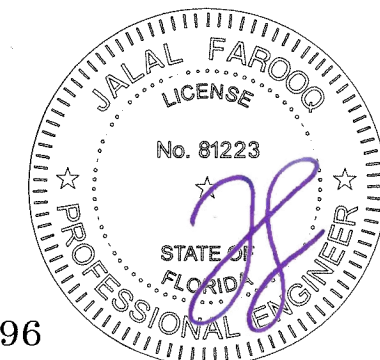
W3	SPAN	Pd - PSF
48"	144"	100.0
54"	144"	100.0
60"	144"	100.0
48"	150"	100.0
54"	150"	100.0



W3	SPAN	Pd - PSF
90"	114"	120.0
84"	120"	120.0
90"	120"	113.5
72"	126"	120.0
78"	126"	118.8
84"	126"	110.3
90"	126"	103.0
72"	130"	120.0
78"	130"	111.6
84"	130"	103.6
90"	130"	96.9



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NOTE:
USE 'F' ANCHOR CLIP DETAIL 1/5 AT JAMB AND
'T' ANCHOR CLIP DETAIL 2/5 AT MULLION

FL #17896

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100 FAX. (305) 262-6978
COMP-ANL\W15-38ESW

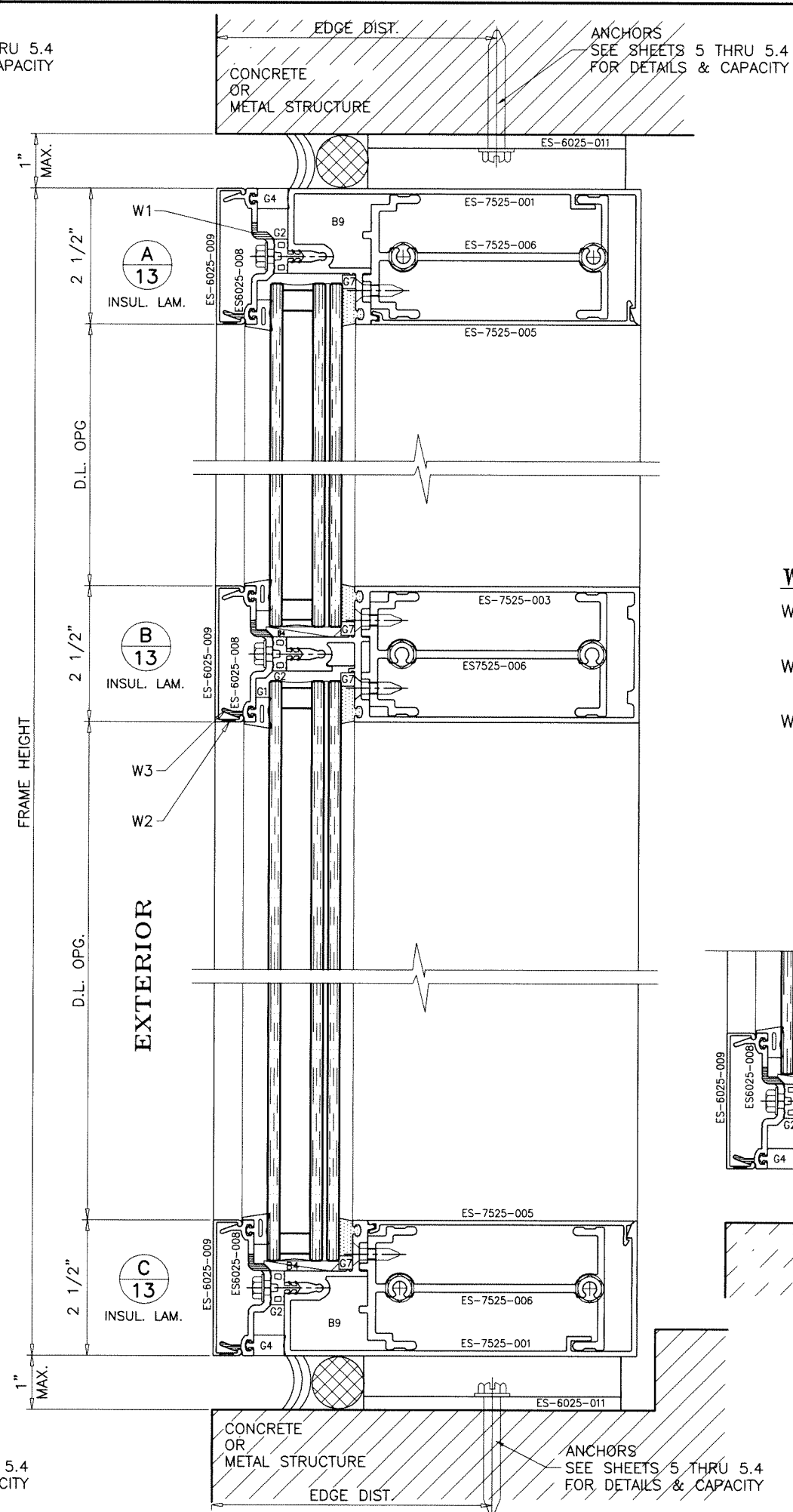
SERIES ES-7525 ALUM CURTAIN WALL SYSTEM (L.M.I.)

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

no	date	by	description

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dr. by: TARIQ
chk. by: -

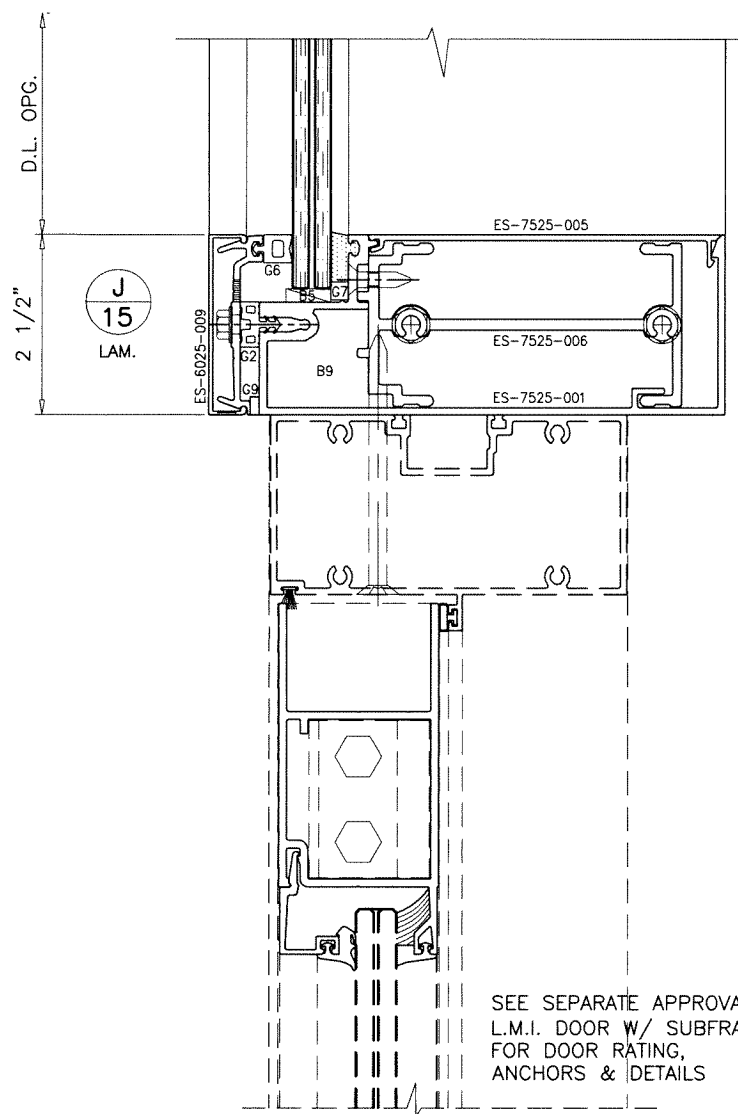
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W15-38
sheet 12 of 30



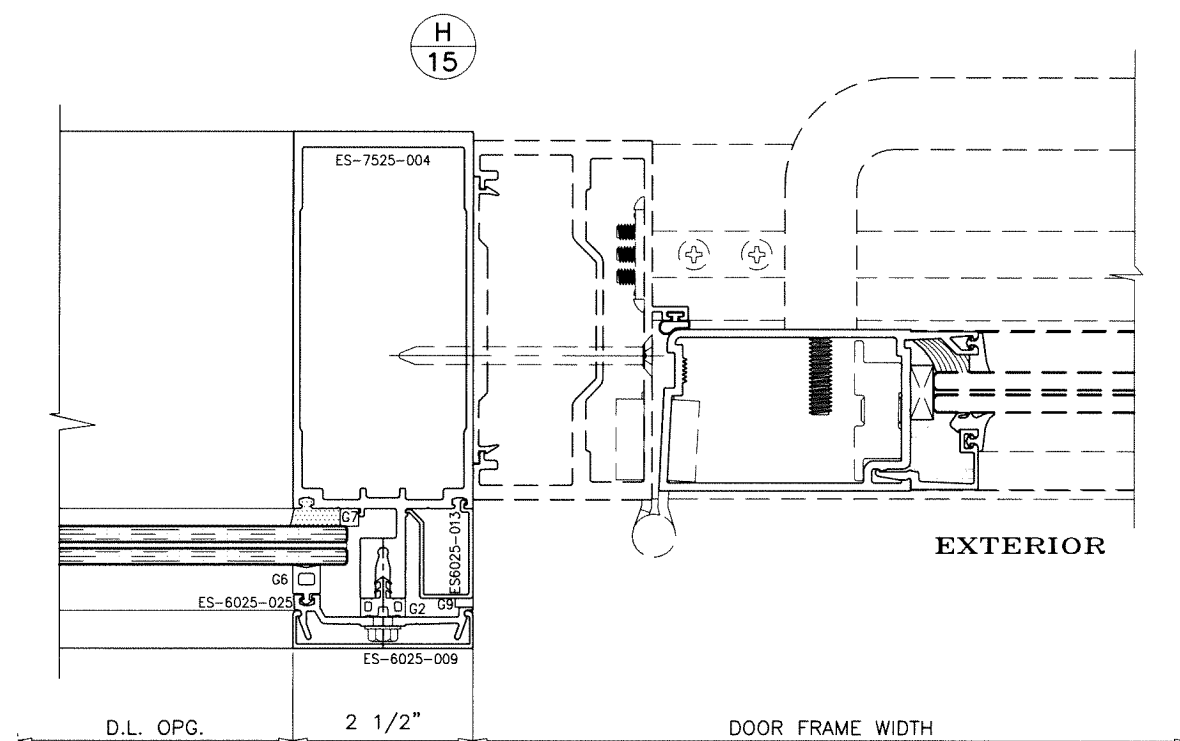
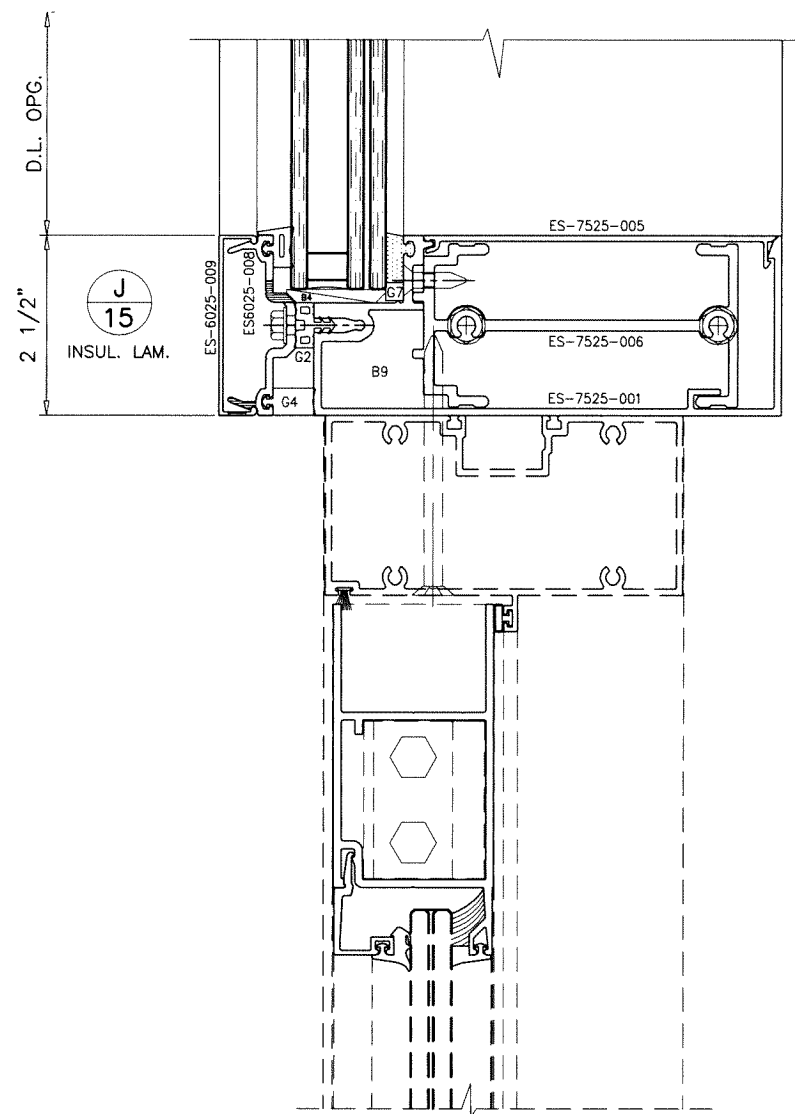
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W15-38

sheet 13 of 30

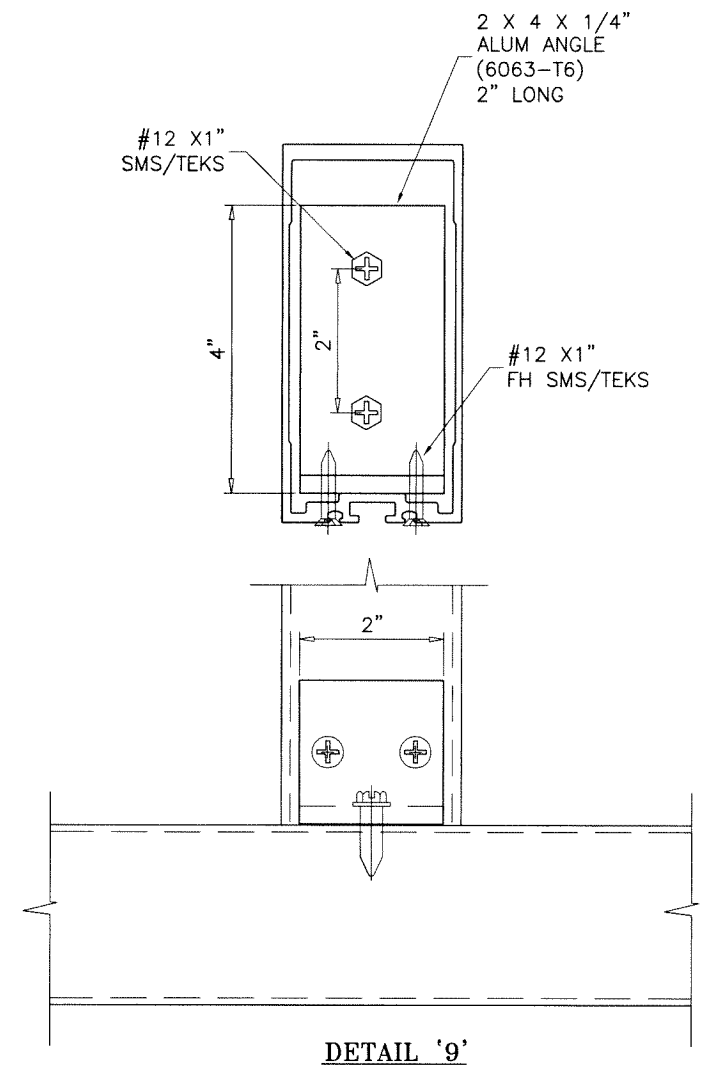
COMP--ANL\W15--38ESW



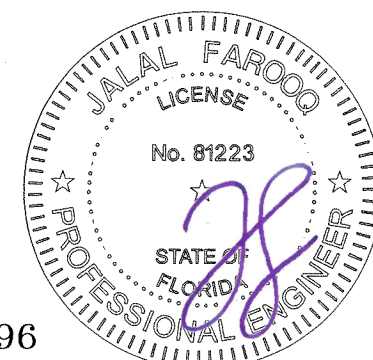
SEE SEPARATE APPROVAL OF
L.M.I. DOOR W/ SUBFRAME
FOR DOOR RATING,
ANCHORS & DETAILS



CONCRETE AND METAL STRUCTURE NOT BY ES WINDOWS
MUST SUSTAIN LOADS IMPOSED BY GLAZING SYSTEM
AND TRANSFER THEM TO THE BUILDING STRUCTURE.



Sealed: 03/20/2026



FL #17896

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

a f c
COMP-ANL\W15-38ESW

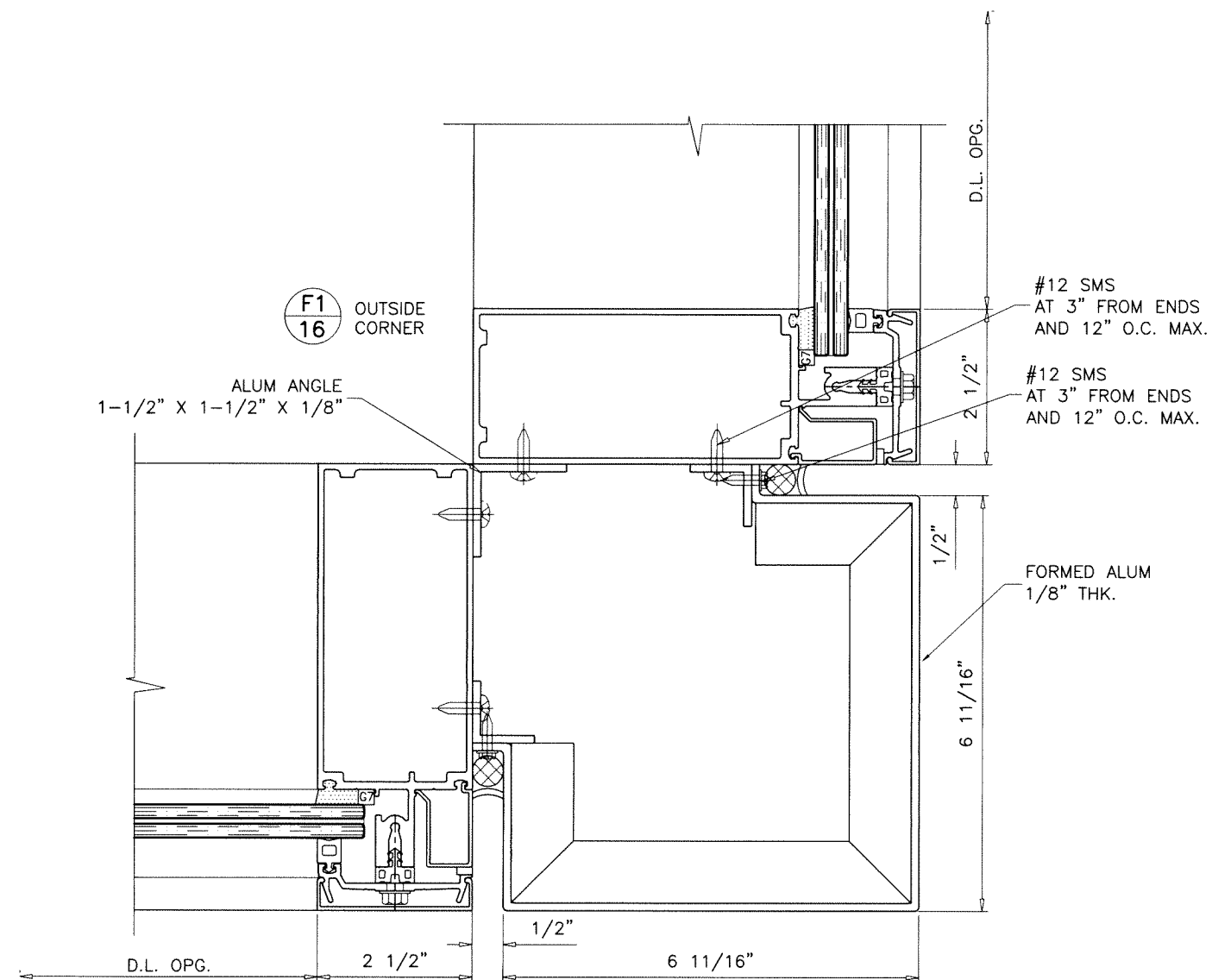
SERIES ES-7525 ALUM CURTAIN WALL SYSTEM (L.M.I.)

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

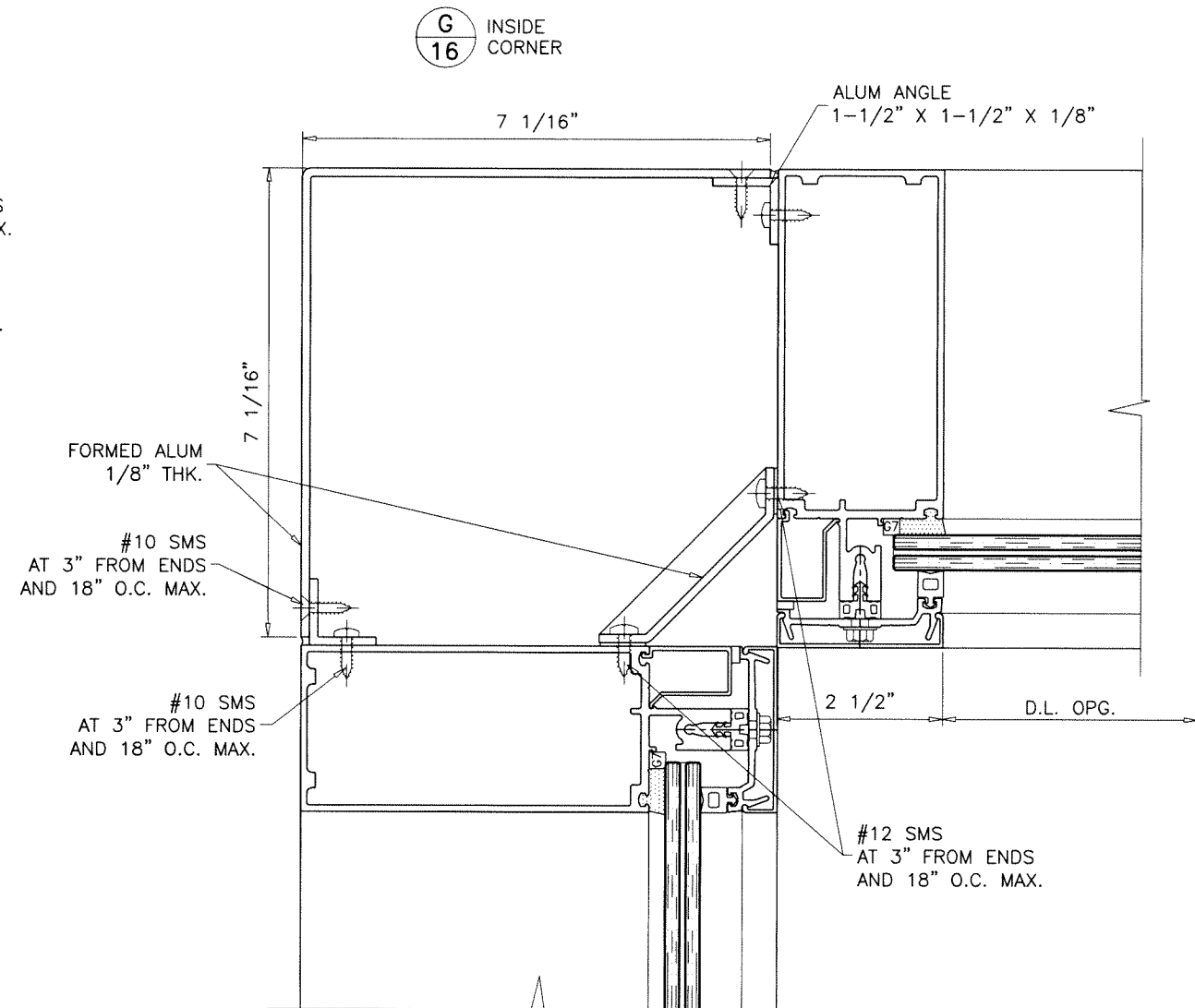
revisions:	
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chk. by:

drawing no.
W15-38
sheet 15 of 30

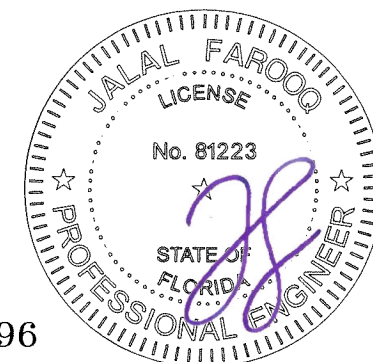


FOR MULLION CAPACITY
SINGLE SPAN SEE SHEET 6
TWIN SPANS SEE SHEET 8



FOR MULLION CAPACITY
SINGLE SPAN SEE SHEET 6
TWIN SPANS SEE SHEET 8

Sealed: 03/20/2026



FL #17896

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

SERIES ES-7525 ALUM CURTAIN WALL SYSTEM (L.M.I.)

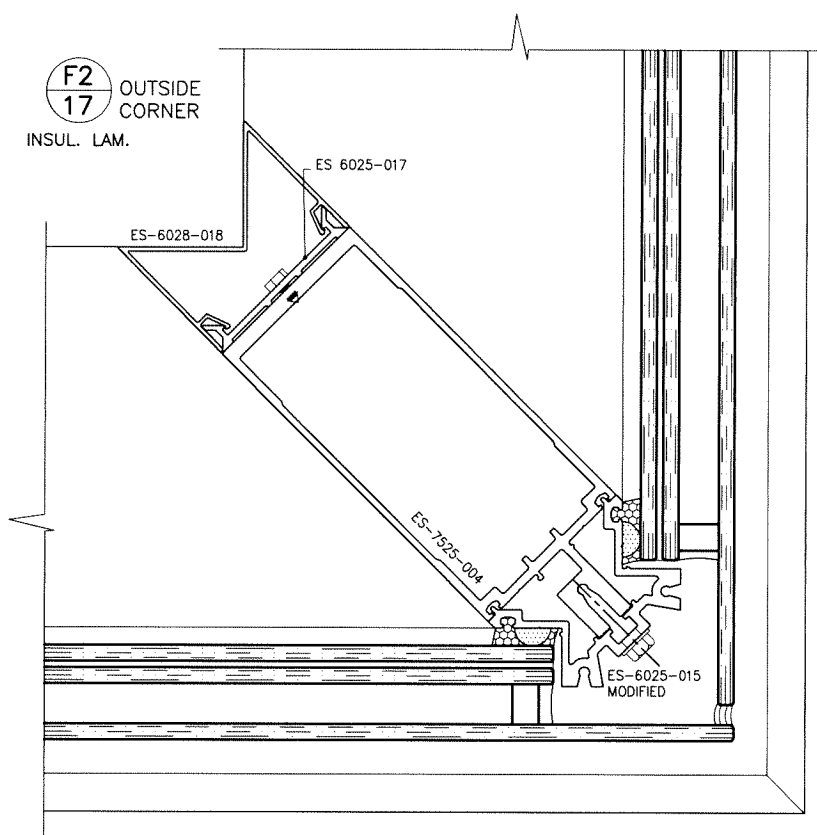
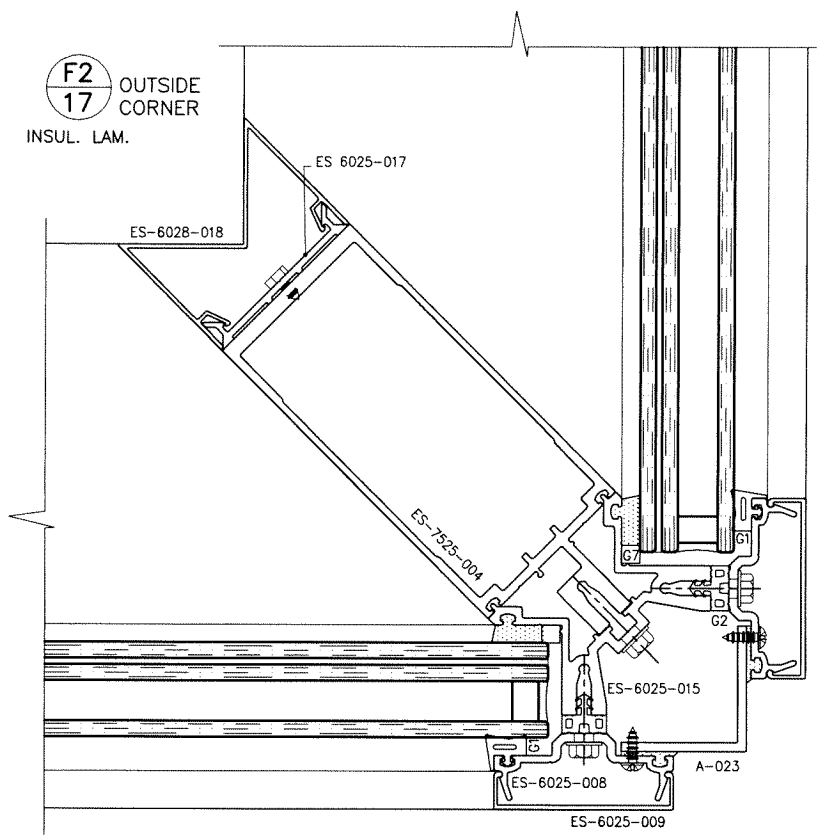
E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX.

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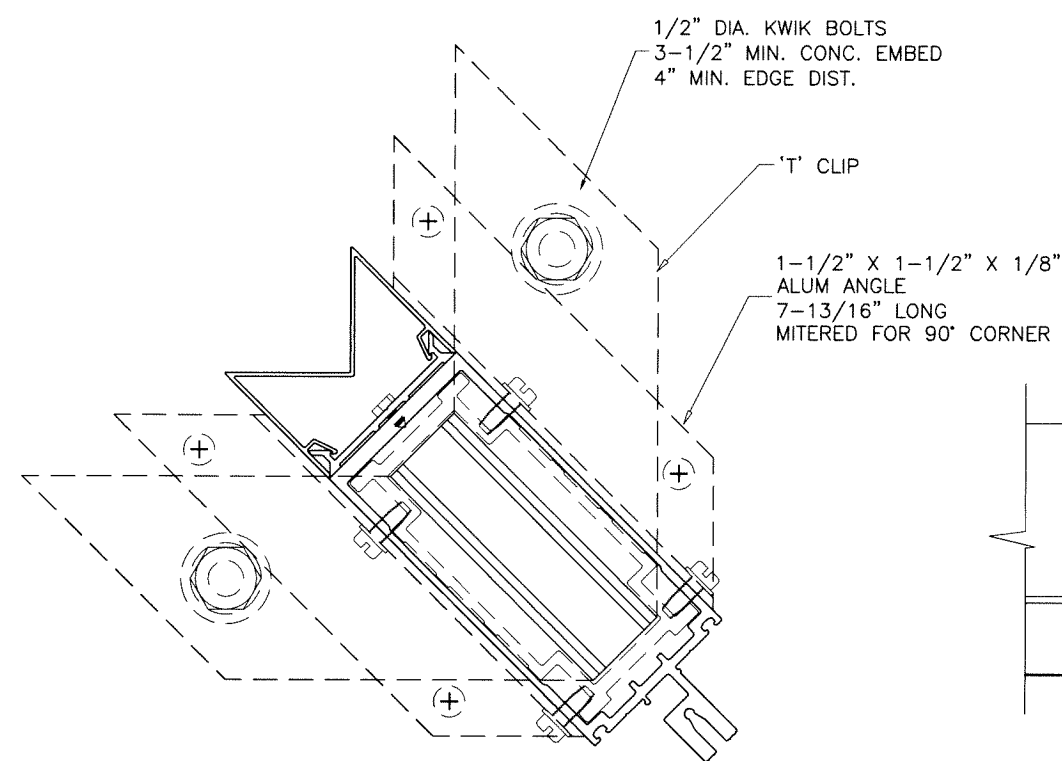
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chk. by:

drawing no.
W15-38

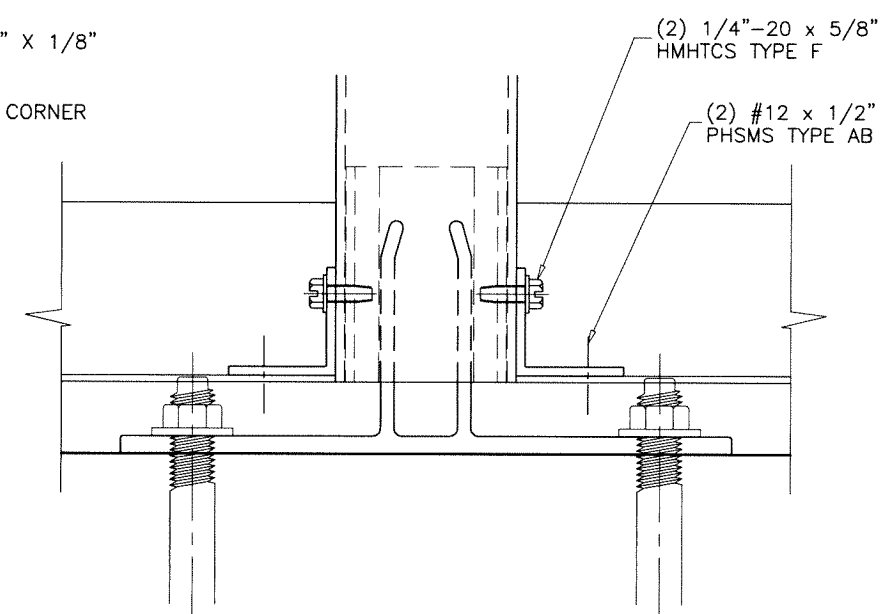
sheet 16 of 30



FOR MULLION CAPACITY
SINGLE SPAN SEE SHEET 11
TWIN SPANS SEE SHEET 12

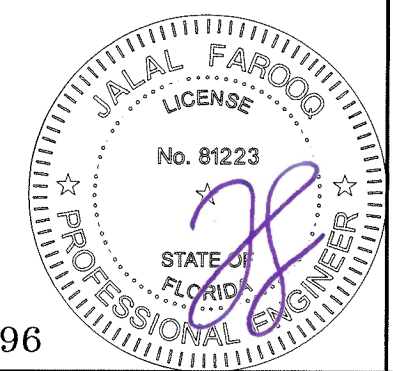


CORNER MULLION ANCHORS
HEAD/SILL
DETAIL '7'



CORNER MULLION ANCHORS
FRONT VIEW

Sealed: 03/20/2026



FL #17896

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
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COMP-ANL\W15-38ESW

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SERIES ES-7525 ALUM CURTAIN WALL SYSTEM (L.M.I.)

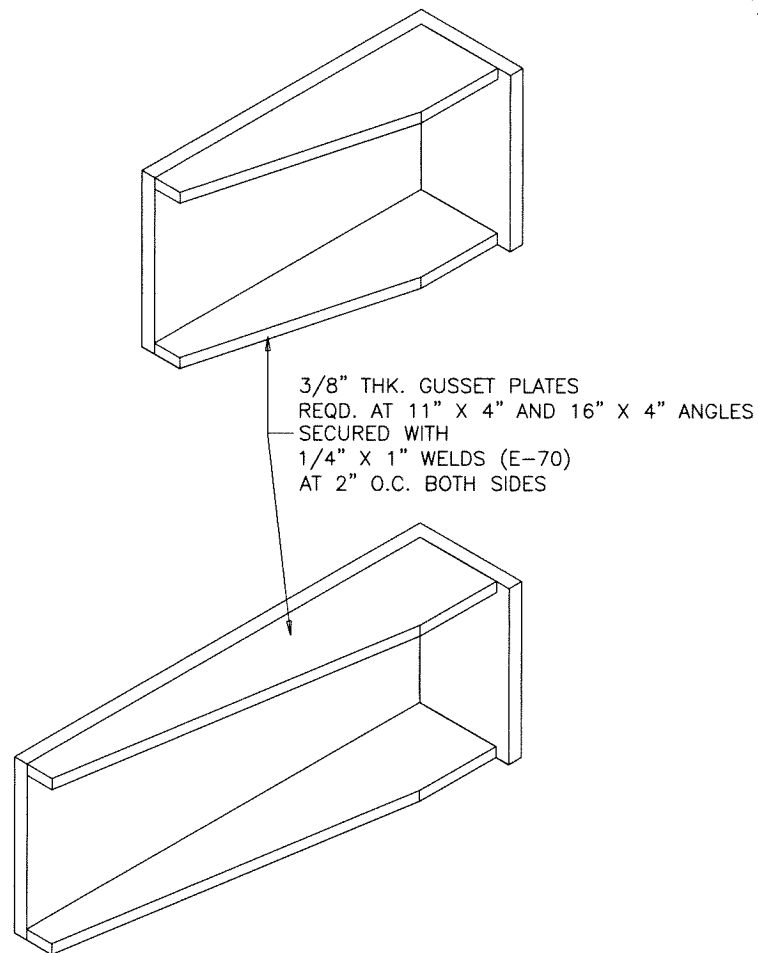
E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

revisions:

no	date	by	description

date: 07-17-15
scale: 3/8" = 1"
dr. by: TARIQ
chk. by:

drawing no.
W15-38
sheet 17 of 30



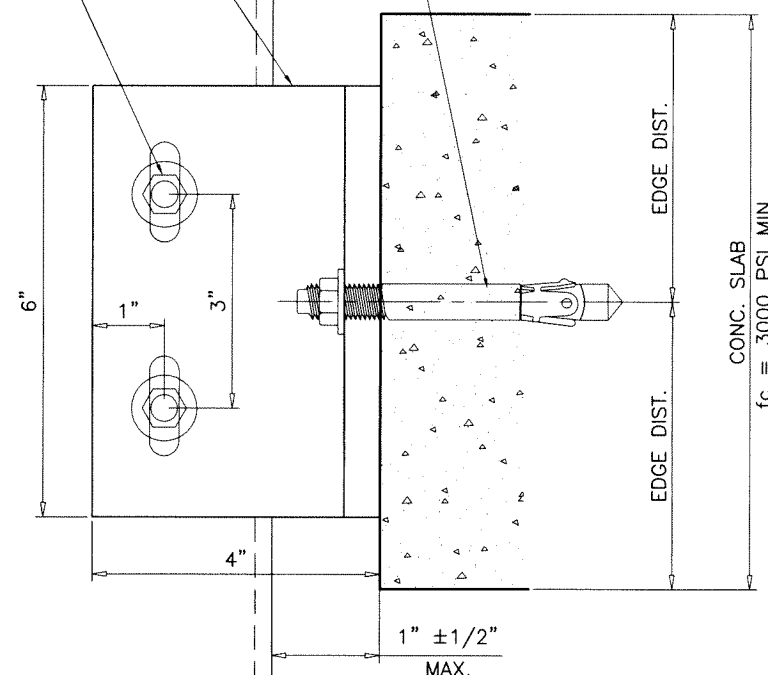
7 X 4 X 1/2" (FOR 2 ANCHORS)
11 X 4 X 1/2" (FOR 3 ANCHORS)
16 X 4 X 1/2" (FOR 4 ANCHORS)
STL. ANGLE, 6" LONG
AT EACH SIDE OF MULLION

1/2" DIA. THRU BOLT GRADE 5
WITH WASHER & NUT
IN 2" LONG SLOTTED HOLES

DETAIL '4'

DETAIL '3'

1/2" DIA. KWIK BOLT-3 EXPANSION ANCHOR
2, 3 OR 4 PER ANGLE (SEE CHART FOR CAPACITY)
3-1/2" MIN. EMBED
4-1/2" C/C SPACING
4" MIN. EDGE DIST.



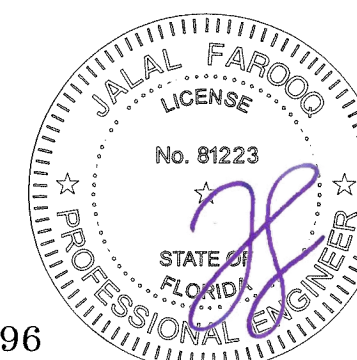
INTERMEDIATE ANCHORS
DETAIL '4' AT CENTER MULLION
DETAIL '3' AT JAMB MULLION

ANCHORS INTO CONCRETE

ALL ANGLES AND PLATES
TO BE A-36 STEEL
F_y = 36 KSI MIN.

WIND LOAD ANCHOR

Sealed: 03/20/2026



SEE SHEET 18.1 FOR ANCHOR CAPACITIES

NOTE:
FOR SLABS LESS THAN 8 INCHES IN THICKNESS
ANCHORS TO BE DESIGNED ON JOB TO JOB BASIS.
THE DESIGN TO BE REVIEWED BY AUTHORITY HAVING
JURISDICTION.

FL #17896

AL-FAROOQ CORPORATION
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MIAMI, FLORIDA 33173
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(C.A.N. 3538)

SERIES ES-7525 ALUM CURTAIN WALL SYSTEM (L.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: 07-17-15

scale: 3/8" = 1"

dr. by: TARIQ

chk. by:

drawing no.

W15-38

sheet 18 of 30

MAX. DESIGN LOAD -PSF DUE TO ANCHOR CAPACITY EXT.(+) & INT.(-)				
NOMINAL DIMS.		(2) 1/2" DIA.	(3) 1/2" DIA.	(4) 1/2" DIA.
WIDTH (W)	FRAME HEIGHT	KWIK BOLT	KWIK BOLT	KWIK BOLT
36"	90"	130.0	130.0	130.0
42"		130.0	130.0	130.0
48"		130.0	130.0	130.0
54"		120.0	120.0	120.0
60"		108.0	120.0	120.0
66"		98.2	120.0	120.0
72"		90.0	120.0	120.0
78"		83.1	120.0	120.0
84"		77.2	115.7	120.0
90"		72.0	108.0	120.0
36"	96"	130.0	130.0	130.0
42"		130.0	130.0	130.0
48"		126.6	130.0	130.0
54"		112.5	130.0	130.0
60"		101.3	130.0	130.0
66"		92.1	120.0	120.0
72"		84.4	120.0	120.0
78"		77.9	116.9	120.0
84"		72.3	108.5	120.0
90"		67.5	101.3	120.0
36"	99-3/4"	130.0	130.0	130.0
42"		130.0	130.0	130.0
48"		120.0	130.0	130.0
54"		108.3	130.0	130.0
60"		97.5	130.0	130.0
66"		88.6	120.0	120.0
72"		81.2	120.0	120.0
78"		75.0	112.5	120.0
84"		69.6	104.4	120.0
90"		65.0	97.5	120.0
36"	102"	130.0	130.0	130.0
42"		130.0	130.0	130.0
48"		119.2	130.0	130.0
54"		105.9	130.0	130.0
60"		95.3	130.0	130.0
66"		86.7	120.0	120.0
72"		79.4	119.2	120.0
78"		73.3	110.0	120.0
84"		68.1	102.1	120.0
90"		63.5	95.3	120.0
36"	108"	130.0	130.0	130.0
42"		128.5	130.0	130.0
48"		112.5	130.0	130.0
54"		100.0	130.0	130.0
60"		90.0	130.0	130.0
66"		81.8	120.0	120.0
72"		75.0	112.5	120.0
78"		69.3	103.9	120.0
84"		64.3	96.5	120.0
90"		60.0	90.0	120.0

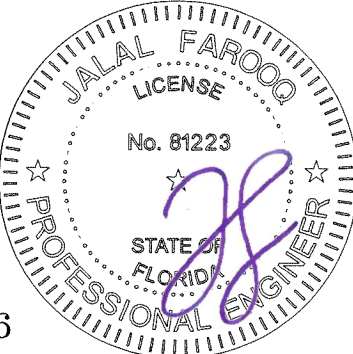
MAX. DESIGN LOAD -PSF DUE TO ANCHOR CAPACITY EXT.(+) & INT.(-)				
NOMINAL DIMS.		(2) 1/2" DIA.	(3) 1/2" DIA.	(4) 1/2" DIA.
WIDTH (W)	FRAME HEIGHT	KWIK BOLT	KWIK BOLT	KWIK BOLT
36"	114"	130.0	130.0	130.0
42"		121.8	130.0	130.0
48"		106.6	130.0	130.0
54"		94.8	130.0	130.0
60"		85.3	127.9	130.0
66"		77.5	116.3	120.0
72"		71.1	106.6	120.0
78"		65.6	98.4	120.0
84"		60.9	91.4	120.0
90"		56.9	85.3	113.7
36"	120"	120.0	130.0	130.0
42"		115.7	130.0	130.0
48"		101.3	130.0	130.0
54"		90.0	130.0	130.0
60"		81.0	121.5	130.0
66"		73.7	110.5	120.0
72"		67.5	101.3	120.0
78"		62.3	93.5	120.0
84"		57.9	86.8	115.7
90"		54.0	81.0	108.0
36"	126"	128.6	130.0	130.0
42"		110.2	130.0	130.0
48"		96.5	130.0	130.0
54"		85.7	128.6	130.0
60"		77.2	115.7	130.0
66"		70.2	105.2	120.0
72"		64.3	96.5	120.0
78"		59.4	89.0	118.7
84"		55.1	82.7	110.2
90"		51.4	77.2	102.9
36"	130"	124.7	130.0	130.0
42"		106.8	130.0	130.0
48"		93.5	130.0	130.0
54"		83.1	124.7	130.0
60"		74.8	112.2	130.0
66"		68.0	102.0	120.0
72"		62.3	93.5	120.0
78"		57.5	86.3	115.1
84"		53.4	80.1	106.8
90"		49.9	74.9	99.9
36"	132"	122.8	130.0	130.0
42"		105.2	130.0	130.0
48"		92.1	130.0	130.0
54"		81.8	122.8	130.0
60"		73.7	110.5	130.0
36"	138"	117.4	130.0	130.0
42"		100.7	130.0	130.0
48"		88.1	130.0	130.0
54"		78.3	117.4	130.0
60"		70.5	105.7	130.0

MAX. DESIGN LOAD -PSF DUE TO ANCHOR CAPACITY EXT.(+) & INT.(-)				
NOMINAL DIMS.		(2) 1/2" DIA.	(3) 1/2" DIA.	(4) 1/2" DIA.
WIDTH (W)	FRAME HEIGHT	KWIK BOLT	KWIK BOLT	KWIK BOLT
36"	144"	112.5	130.0	130.0
42"		96.5	130.0	130.0
48"		84.4	126.6	130.0
54"		75.0	112.5	130.0
60"		67.5	101.3	130.0
36"	147"	108.0	130.0	130.0
42"		92.6	130.0	130.0
48"		81.0	121.5	130.0
54"		72.0	108.0	130.0
60"		64.8	97.2	129.6
36"	150"	108.0	130.0	130.0
42"		92.6	130.0	130.0
48"		81.0	121.5	130.0
54"		72.0	108.0	130.0
60"		64.8	97.2	129.6
36"	156"	103.9	130.0	130.0
42"		89.0	130.0	130.0
48"		77.9	116.9	130.0
54"		69.3	103.9	130.0
60"		62.3	93.5	124.7
36"	159"	102.0	130.0	130.0
42"		87.0	130.0	130.0
48"		76.0	130.0	130.0
54"		68.0	130.0	130.0
60"		61.0	130.0	130.0
36"	168"	96.5	130.0	130.0
42"		82.7	124.0	130.0
48"		72.3	108.5	130.0
54"		64.3	96.5	128.6
60"		57.9	86.8	115.7
36"	180"	90.0	130.0	130.0
42"		77.2	115.7	130.0
48"		67.5	101.3	130.0
54"		60.0	90.0	120.0
60"		54.0	81.0	108.0
36"	184-1/8"	88.0	-	-
42"		75.0	-	-
48"		66.0	-	-
54"		59.0	-	-
60"		53.0	-	-
36"	192"	84.0	-	-
42"		72.0	-	-
48"		63.0	-	-
54"		56.0	-	-
60"		51.0	-	-
36"	196-3/4"	82.0	-	-
42"		71.0	-	-
48"		62.0	-	-
54"		55.0	-	-
60"		49.0	-	-

SEE SHEET 18 FOR WIND LOAD ANCHOR DETAILS

WIND LOAD ANCHOR

Sealed: 03/20/2026



FL #17896

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)

SERIES ES-7525 ALUM CURTAIN WALL SYSTEM (L.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: 07-17-15

scale: 3/8" = 1"

dr. by: TARIQ

chk. by:

drawing no.

W15-38

sheet 18.1 of 30

COMP-ANL\W15-38ESW

EXTERIOR

6"

1"

3"

4"

1" $\pm$ 1/2" MAX.

4 X 4 X 1/4" STEEL ANGLE, 6" LONG AT EACH SIDE OF MULLION

1/4" WELDS WELDING ELECTRODE E-70

DETAIL '4' (ALT.)

DETAIL '3' (ALT.)

ALL ANGLES AND PLATES TO BE A-36 STEEL
Fy = 36 KSI MIN.

WIND LOAD ANCHOR

Sealed: 03/20/2026

1/2" DIA. THRU BOLT GRADE 5 WITH WASHER & NUT IN 2" LONG SLOTTED HOLES

AL FARGO

ALL ANGLES AND PLATES
TO BE A-36 STEEL
 $F_y = 36$ KSI MIN.

WIND LOAD ANCHOR

Sealed: 03/20/2026

INTERMEDIATE ANCHORS
DETAIL '4' ALT. AT CENTER MULLION
DETAIL '3' ALT. AT JAMB MULLION

METAL STRUCTURES
COMMERCIAL STEEL — 1/4" MIN. THICKNESS

FL #17896

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

SERIES ES-7525 ALUM CURTAIN WALL SYSTEM (L.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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date: 07-17-15

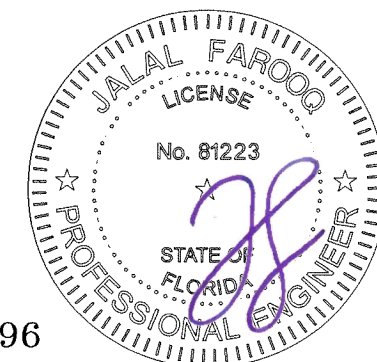
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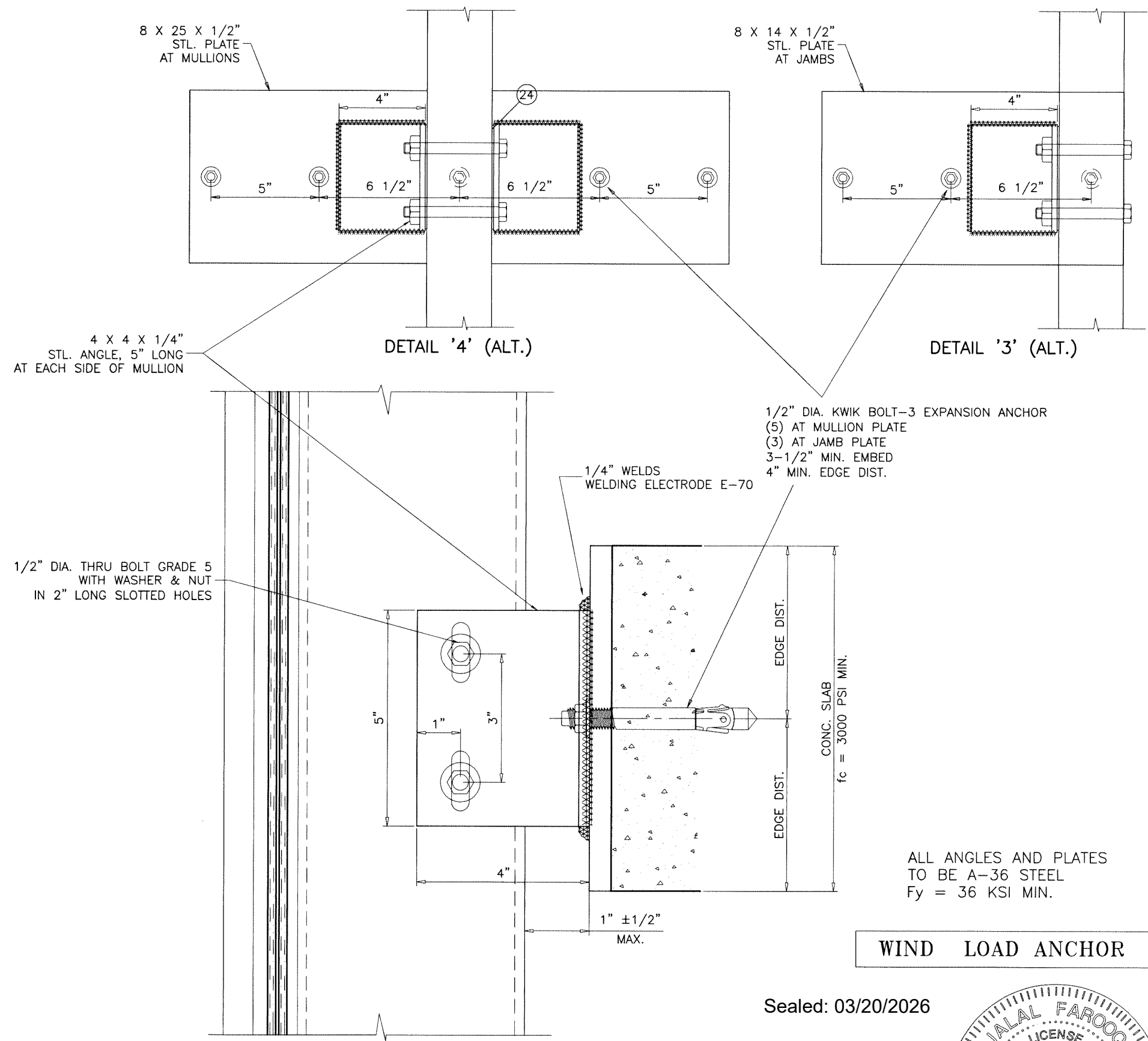
dr. by: TARIQ

chk. by:

drawing no.
W15-38

sheet 19 of 30





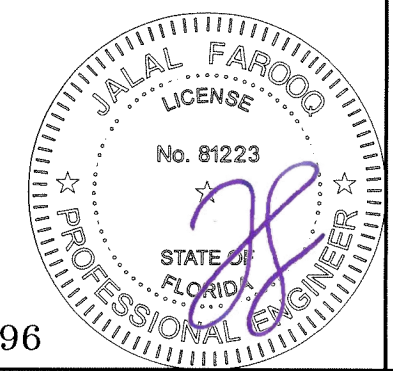
SEE SHEET 20.1 FOR ANCHOR CAPACITIES

NOTE:
FOR SLABS LESS THAN 8 INCHES IN THICKNESS
ANCHORS TO BE DESIGNED ON JOB TO JOB BASIS.
THE DESIGN TO BE REVIEWED BY AUTHORITY HAVING
JURISDICTION.

INTERMEDIATE ANCHORS
DETAIL '4' AT CENTER MULLION
DETAIL '3' AT JAMB MULLION
ANCHORS INTO CONCRETE

WIND LOAD ANCHOR

Sealed: 03/20/2026



FL #17896

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
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a f c
COMP-ANL\W15-38ESW

SERIES ES-7525 ALUM CURTAIN WALL SYSTEM (L.M.I.)

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MIAMI, FL. 33142
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revisions:	no	date	by description

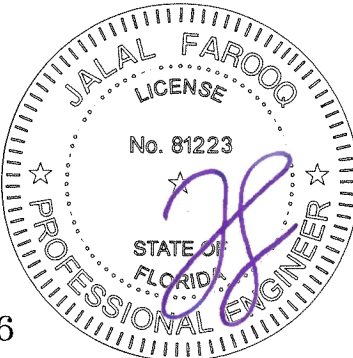
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dr. by: TARIQ
chk. by:

drawing no.
W15-38
sheet 20 of 30

MAX. DESIGN LOAD –PSF DUE TO ANCHOR CAPACITY EXT.(+) & INT.(–)			MAX. DESIGN LOAD –PSF DUE TO ANCHOR CAPACITY EXT.(+) & INT.(–)			MAX. DESIGN LOAD –PSF DUE TO ANCHOR CAPACITY EXT.(+) & INT.(–)			
NOMINAL DIMS.		1/2" DIA. KWIK BOLT	NOMINAL DIMS.		1/2" DIA. KWIK BOLT	NOMINAL DIMS.		1/2" DIA. KWIK BOLT	
WIDTH (W)	FRAME HEIGHT		WIDTH (W)	FRAME HEIGHT		WIDTH (W)	FRAME HEIGHT		
36"	90"	130.0	36"	120"	130.0	36"	150"	130.0	
42"		130.0	42"		130.0	42"		124.2	
48"		130.0	48"		130.0	48"		108.6	
54"		130.0	54"		120.7	54"		96.6	
60"		130.0	60"		108.6	60"		86.9	
66"		120.0	66"		98.8	36"	156"	130.0	
72"		120.0	72"		90.5			42"	119.4
78"		111.4	78"		83.6			48"	104.5
84"		103.5	84"		77.6			54"	92.9
90"		96.6	90"		72.4			60"	83.6
36"	96"	130.0	36"	126"	130.0	36"	159"	119.0	
42"		130.0	42"		130.0	42"		117.0	
48"		130.0	48"		129.3	48"		102.0	
54"		130.0	54"		115.0	54"		91.0	
60"		130.0	60"		103.5	60"		82.0	
66"		120.0	66"		94.1	36"	168"	129.3	
72"		113.2	72"		86.2			42"	110.9
78"		104.5	78"		79.6			48"	97.0
84"		97.0	84"		73.9			54"	86.2
90"		90.5	90"		69.0			60"	78.0
36"	102"	130.0	36"	130"	130.0	36"	180"	120.7	
42"		130.0	42"		130.0	42"		103.5	
48"		130.0	48"		125.4	48"		90.5	
54"		130.0	54"		111.4	54"		80.5	
60"		127.8	60"		100.3	60"		72.0	
66"		116.2	66"		91.2	36"	184–1/8"	118.0	
72"		106.5	72"		83.6			42"	101.0
78"		98.3	78"		77.1			48"	89.0
84"		91.3	84"		71.6			54"	79.0
90"		85.2	90"		66.9			60"	71.0
36"	108"	130.0	36"	132"	130.0	36"	192"	113.0	
42"		130.0	42"		130.0	42"		97.0	
48"		130.0	48"		123.5	48"		85.0	
54"		130.0	54"		109.7	54"		75.0	
60"		120.7	60"		98.8	60"		68.0	
66"		109.7	36"	138"	130.0	36"	196–3/4"	110.0	
72"		100.6	42"		130.0			42"	95.0
78"		92.9	48"		118.1			48"	83.0
84"		86.2	54"		105.0			54"	74.0
90"		80.5	60"		94.5			60"	66.0
36"	114"	130.0	36"	144"	130.0				
42"		130.0	42"		129.3				
48"		130.0	48"		113.2				
54"		127.1	54"		100.6				
60"		114.4	60"		90.5				
66"		104.0	36"	147"	119.0				
72"		95.3	42"		119.0				
78"		88.0	48"		111.0				
84"		81.7	54"		99.0				
90"		76.2	60"		89.0				

SEE SHEET 20 FOR WIND LOAD ANCHOR DETAILS

Sealed: 03/20/2026



FL #17896

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

SERIES ES-7525 ALUM CURTAIN WALL SYSTEM (L.M.I.)

E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151
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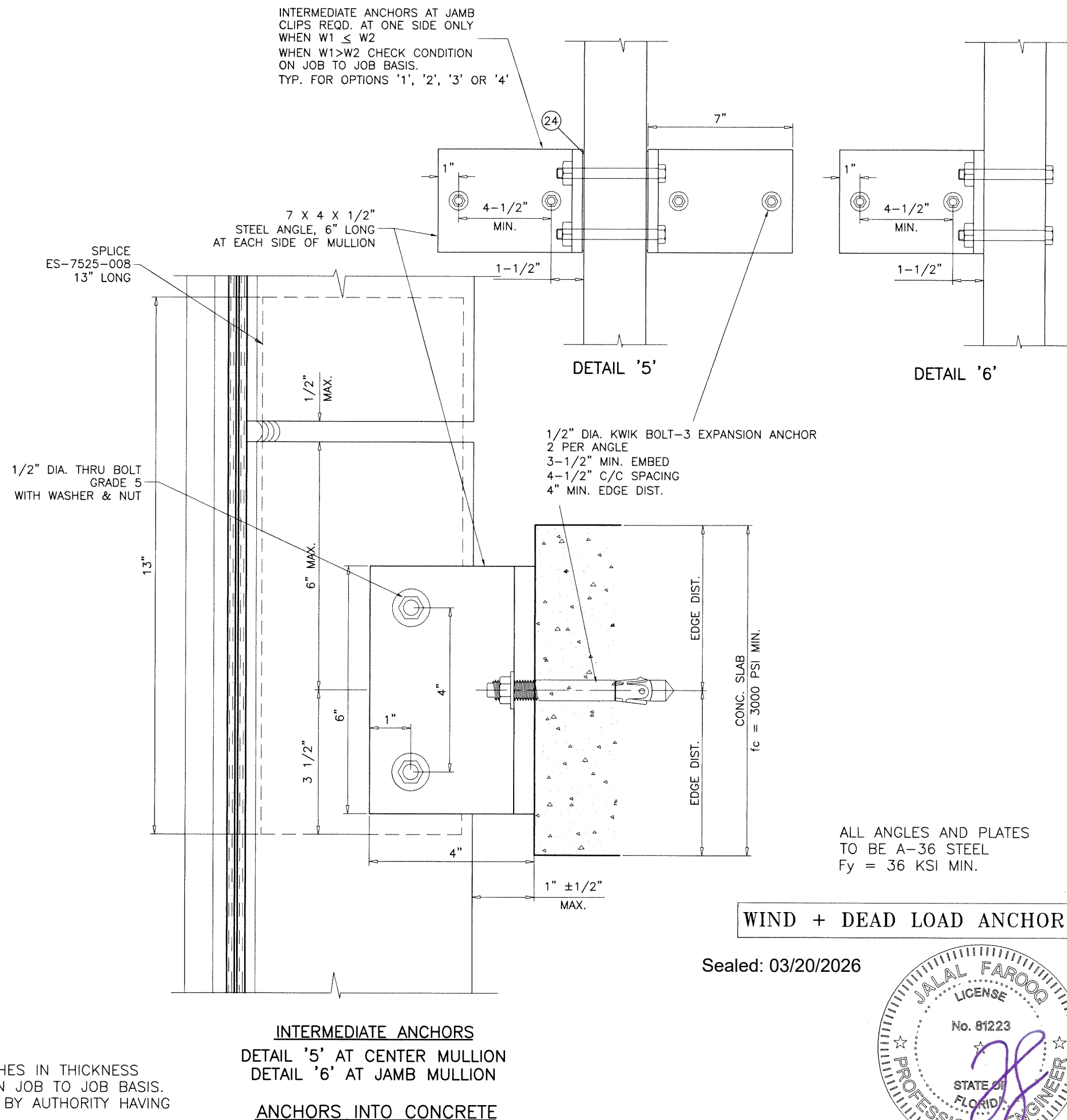
revisions:
no. date by description

date: 07-17-15
scale: 3/8" = 1"
dr. by: TARIQ
chk. by:

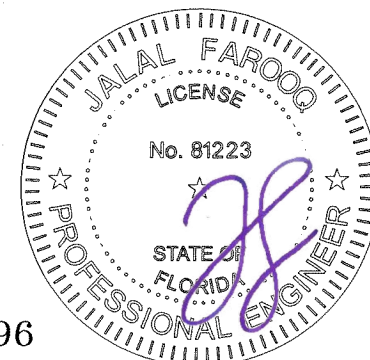
drawing no.
W15-38
sheet 20.1 of 30

COMP-ANL\W15-38ESW

MAX. DESIGN LOAD -PSF DUE TO ANCHOR CAPACITY EXT.(+) & INT.(-)			MAX. DESIGN LOAD -PSF DUE TO ANCHOR CAPACITY EXT.(+) & INT.(-)		
NOMINAL DIMS.		1/2" DIA. KWIK BOLT	NOMINAL DIMS.		1/2" DIA. KWIK BOLT
WIDTH (W)	FRAME HEIGHT		WIDTH (W)	FRAME HEIGHT	
36"	90"	130.0	36"	147"	91.5
42"		130.0	42"		75.7
48"		116.3	48"		63.9
54"		101.3	54"		54.7
60"		89.3	60"		47.4
36"	96"	130.0	36"	150"	89.3
42"		125.9	42"		73.9
48"		107.9	48"		62.3
54"		93.8	54"		53.3
60"		82.5	60"		46.1
36"	99-3/4"	130.0	36"	156"	85.1
42"		120.5	42"		70.3
48"		103.1	48"		59.2
54"		89.6	54"		50.5
60"		78.7	60"		43.6
36"	102"	130.0	36"	159"	83.2
42"		117.4	42"		68.6
48"		100.4	48"		57.7
54"		87.2	54"		49.2
60"		76.6	60"		42.4
36"	108"	130.0	36"	168"	77.7
42"		109.9	42"		63.9
48"		93.8	48"		53.6
54"		81.3	54"		45.6
60"		71.3	60"		42.0
36"	114"	123.4	36"	180"	71.3
42"		103.1	42"		58.4
48"		87.9	48"		48.8
54"		76.0	54"		41.3
60"		66.5	60"		35.3
36"	120"	116.3	36"	184-1/8"	69.3
42"		97.0	42"		56.7
48"		82.5	48"		47.3
54"		71.3	54"		39.9
60"		62.3	60"		34.1
36"	126"	109.9	36"	192"	65.7
42"		91.5	42"		53.6
48"		77.7	48"		44.6
54"		67.0	54"		37.5
60"		58.4	60"		31.9
36"	132"	104.0	36"	196-3/4"	63.6
42"		86.5	42"		51.9
48"		73.3	48"		43.0
54"		63.1	54"		36.2
60"		54.9	60"		30.7
36"	138"	98.7	NOTE: FOR SLABS LESS THAN 8 ANCHORS TO BE DESIGNED THE DESIGN TO BE REVIEW JURISDICTION.		
42"		81.9			
48"		69.3			
54"		59.5			
60"		51.7			
36"	144"	93.8			
42"		77.7			
48"		65.7			
54"		56.3			
60"		48.8			



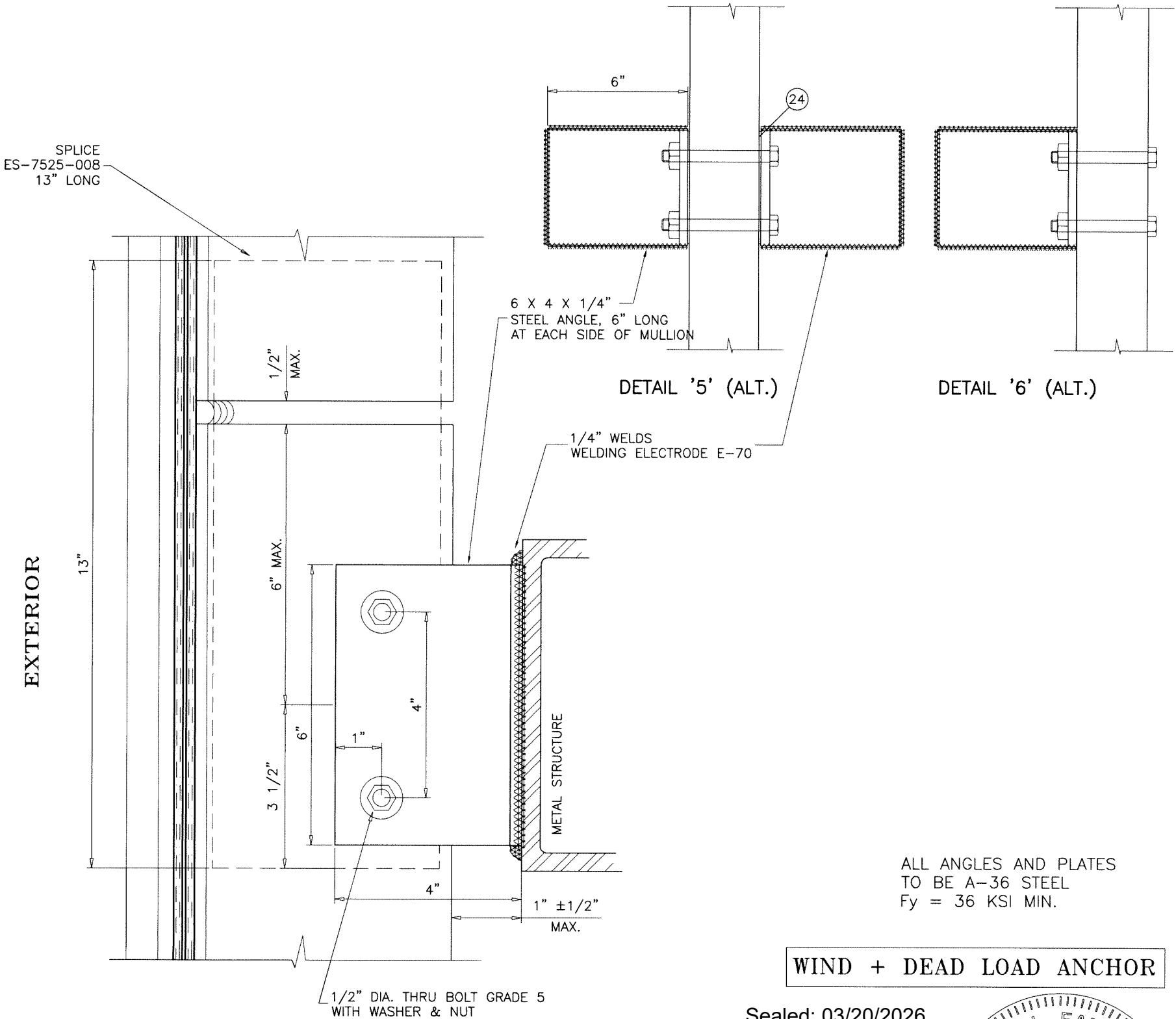
Sealed: 03/20/2026



AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
(C.A.N. 35398)
TEL. (305) 264-8100 FAX. (305) 262-6978

date: 07-17-15
scale: $3/8" = 1"$
dr. by: TARIQ
chk. by:

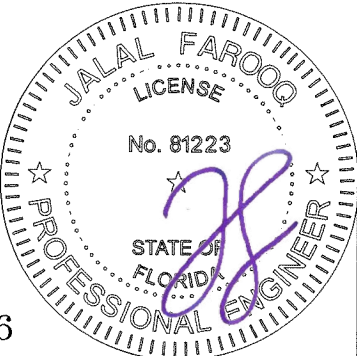
REACTION AT
MULLION INTERMEDIATE ANCHOR
WIND LOAD $\leq$ 12000 LBS
DEAD LOAD $\leq$ 1000 LBS
JAMB INTERMEDIATE ANCHOR
WIND LOAD $\leq$ 6000 LBS
DEAD LOAD $\leq$ 500 LBS



INTERMEDIATE ANCHORS
DETAIL '5' (ALT.) AT CENTER MULLION
DETAIL '6' (ALT.) AT JAMB MULLION

METAL STRUCTURES
COMMERCIAL STEEL - 1/4" MIN. THICKNESS

FL #17896



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)

SERIES ES-7525 ALUM CURTAIN WALL SYSTEM (L.M.I.)
E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

revisions:	
no	description

date: 07-17-15
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dr. by: TARIQ
chk. by:

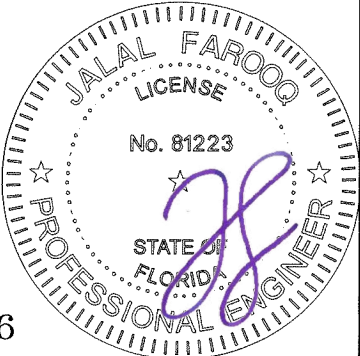
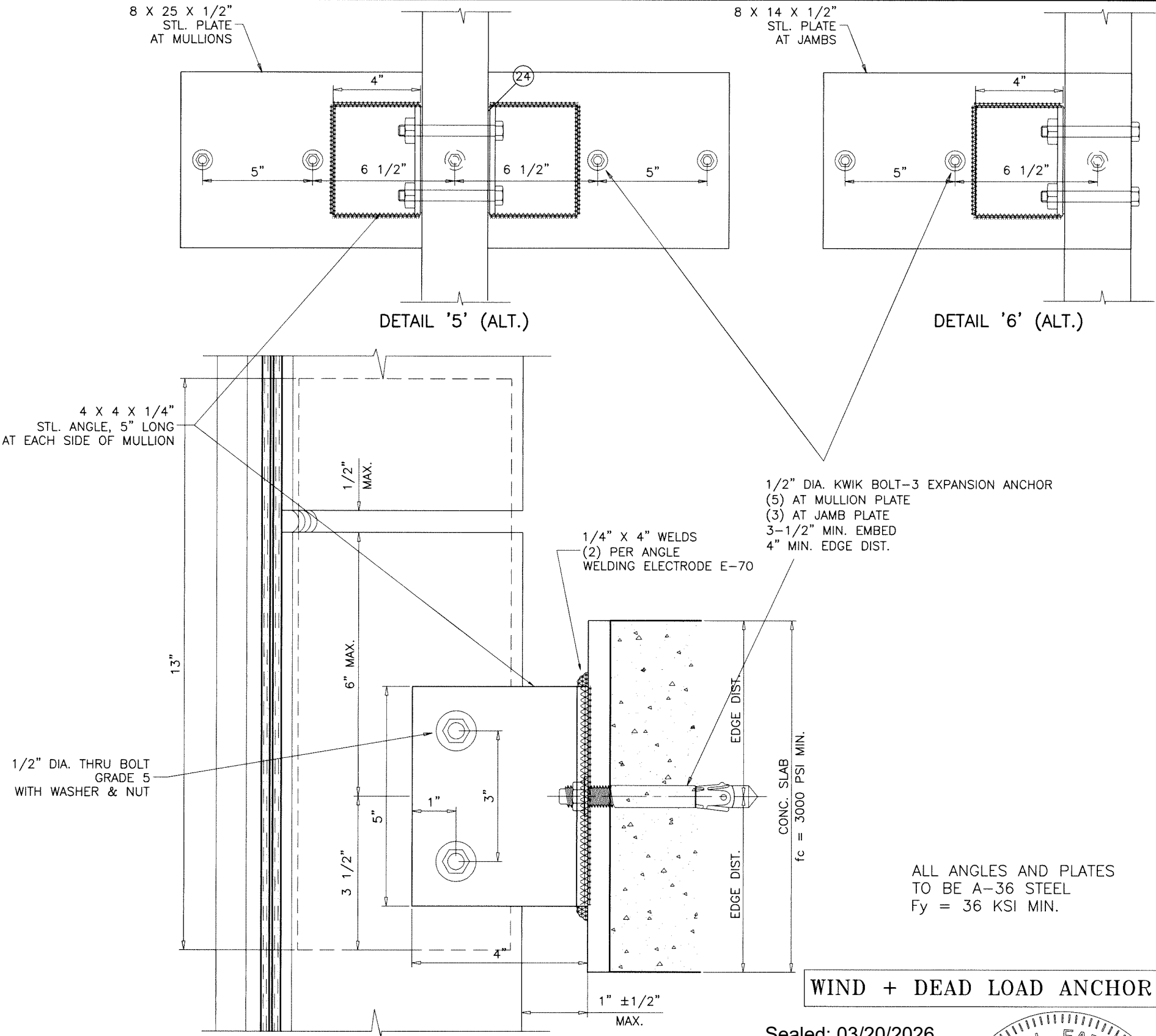
drawing no.
W15-38
sheet 22 of 30

COMP-ANL\W15-38ESW

MAX. DESIGN LOAD -PSF DUE TO ANCHOR CAPACITY EXT.(+) & INT.(-)		
NOMINAL DIMS.		1/2" DIA. KWIK BOLT
WIDTH (W)	FRAME HEIGHT	
36"	90"	130.0
42"		130.0
48"		130.0
54"		130.0
60"		116.3
36"	96"	130.0
42"		130.0
48"		130.0
54"		121.9
60"		107.9
36"	99-3/4"	130.0
42"		130.0
48"		130.0
54"		116.6
60"		103.1
36"	102"	130.0
42"		130.0
48"		130.0
54"		113.6
60"		100.4
36"	108"	130.0
42"		130.0
48"		121.9
54"		106.3
60"		93.8
36"	114"	130.0
42"		130.0
48"		114.5
54"		99.7
60"		87.9
36"	120"	130.0
42"		125.9
48"		107.9
54"		93.8
60"		82.5
36"	126"	130.0
42"		119.1
48"		101.8
54"		88.4
60"		77.7
36"	132"	130.0
42"		112.8
48"		96.3
54"		83.6
60"		73.3
36"	138"	128.0
42"		107.1
48"		91.3
54"		79.1
60"		69.3
36"	144"	121.9
42"		101.8
48"		86.8
54"		75.0
60"		65.7

MAX. DESIGN LOAD -PSF DUE TO ANCHOR CAPACITY EXT.(+) & INT.(-)		
NOMINAL DIMS.		1/2" DIA. KWIK BOLT
WIDTH (W)	FRAME HEIGHT	
36"	147"	119.1
42"		99.4
48"		84.6
54"		73.1
60"		63.9
36"	150"	116.3
42"		97.0
48"		82.5
54"		71.3
60"		62.3
36"	156"	111.1
42"		92.6
48"		78.6
54"		67.8
60"		59.2
36"	159"	108.7
42"		90.5
48"		76.8
54"		66.2
60"		57.7
36"	168"	101.8
42"		84.6
48"		71.7
54"		61.6
60"		57.0
36"	180"	93.8
42"		77.7
48"		65.7
54"		56.3
60"		48.8
36"	184-1/8"	91.3
42"		75.6
48"		63.8
54"		54.6
60"		47.3
36"	192"	86.8
42"		71.7
48"		60.4
54"		51.6
60"		44.6
36"	196-3/4"	84.2
42"		69.5
48"		58.5
54"		49.9
60"		43.0

NOTE:
FOR SLABS LESS THAN 8 INCHES IN THICKNESS
ANCHORS TO BE DESIGNED ON JOB TO JOB BASIS.
THE DESIGN TO BE REVIEWED BY AUTHORITY HAVING
JURISDICTION.



FL #17896

af c

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

SERIES ES-7525 ALUM CURTAIN WALL SYSTEM (L.M.I.)

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

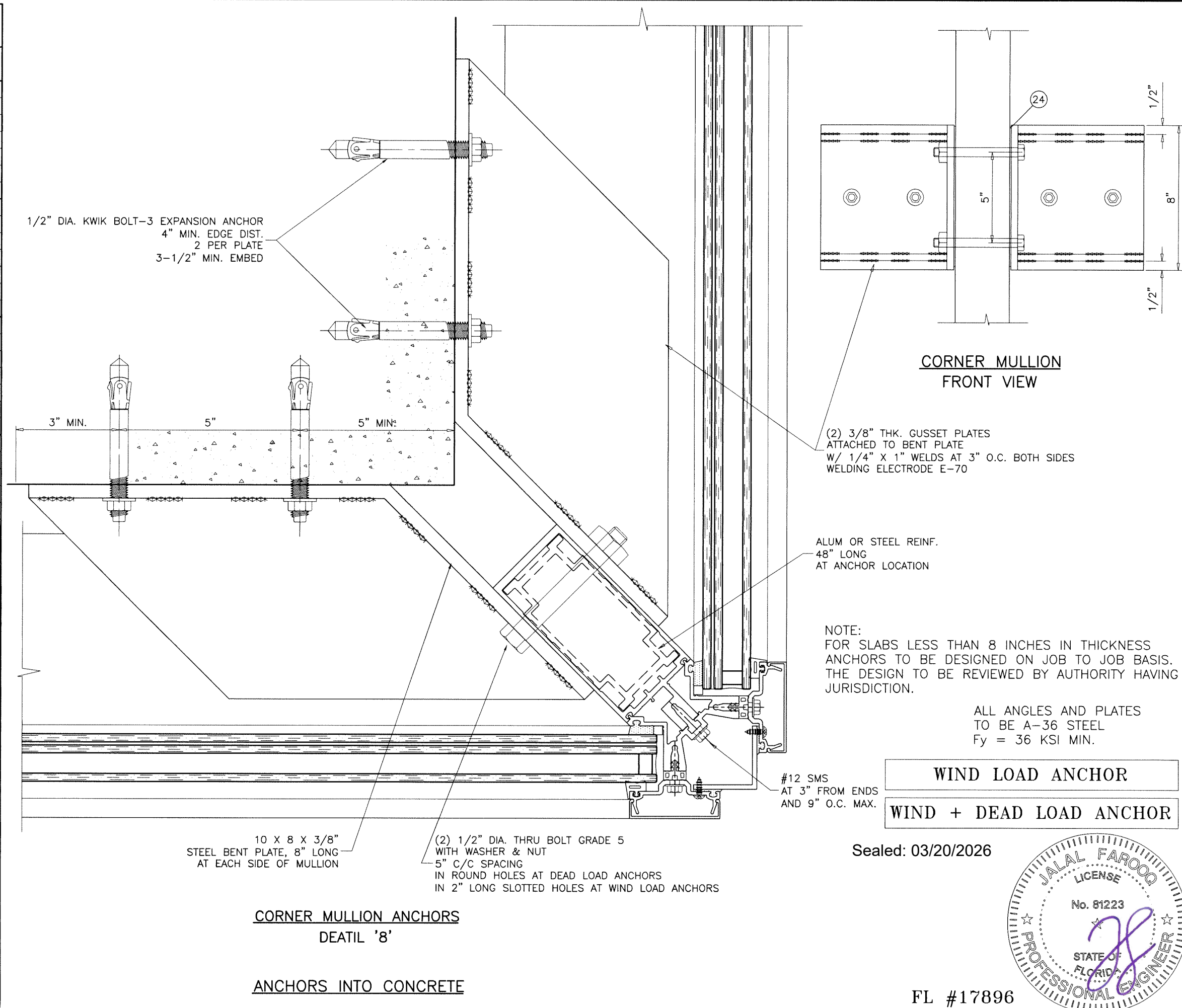
revisions:

no	date	by	description

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scale: 3/8" = 1"
dr. by: TARIQ
chk. by:

drawing no.
W15-38
sheet 23 of 30

MAX. DESIGN LOAD -PSF DUE TO ANCHOR CAPACITY EXT.(+) & INT.(-)		
NOMINAL DIMS.		1/2" DIA. KWIK BOLT
WIDTH (W)	FRAME HEIGHT	
36"	108"	100.0
40"		100.0
42"		100.0
48"		89.6
50"		86.0
54"		79.6
60"		71.7
36"	114"	100.0
40"		100.0
42"		97.0
48"		84.9
50"		81.5
54"		75.4
60"		67.9
36"	120"	100.0
40"		96.7
42"		92.1
48"		80.6
50"		77.4
54"		71.7
60"		64.5
36"	126"	100.0
40"		92.1
42"		87.7
48"		76.7
50"		73.7
54"		68.2
60"		61.4
36"	132"	97.7
40"		87.9
42"		83.8
48"		73.3
50"		70.4
54"		65.1
60"		58.6
36"	138"	93.5
40"		84.1
42"		80.1
48"		70.1
50"		67.3
54"		62.3
60"		56.1
36"	144"	89.6
40"		80.6
42"		76.8
48"		67.2
50"		64.5
54"		59.7
60"		53.7
36"	150"	86.0
40"		77.4
42"		73.7
48"		64.5
50"		61.9
54"		57.3



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AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100 FAX. (305) 262-6978
COMP-ANL W15-38ESW

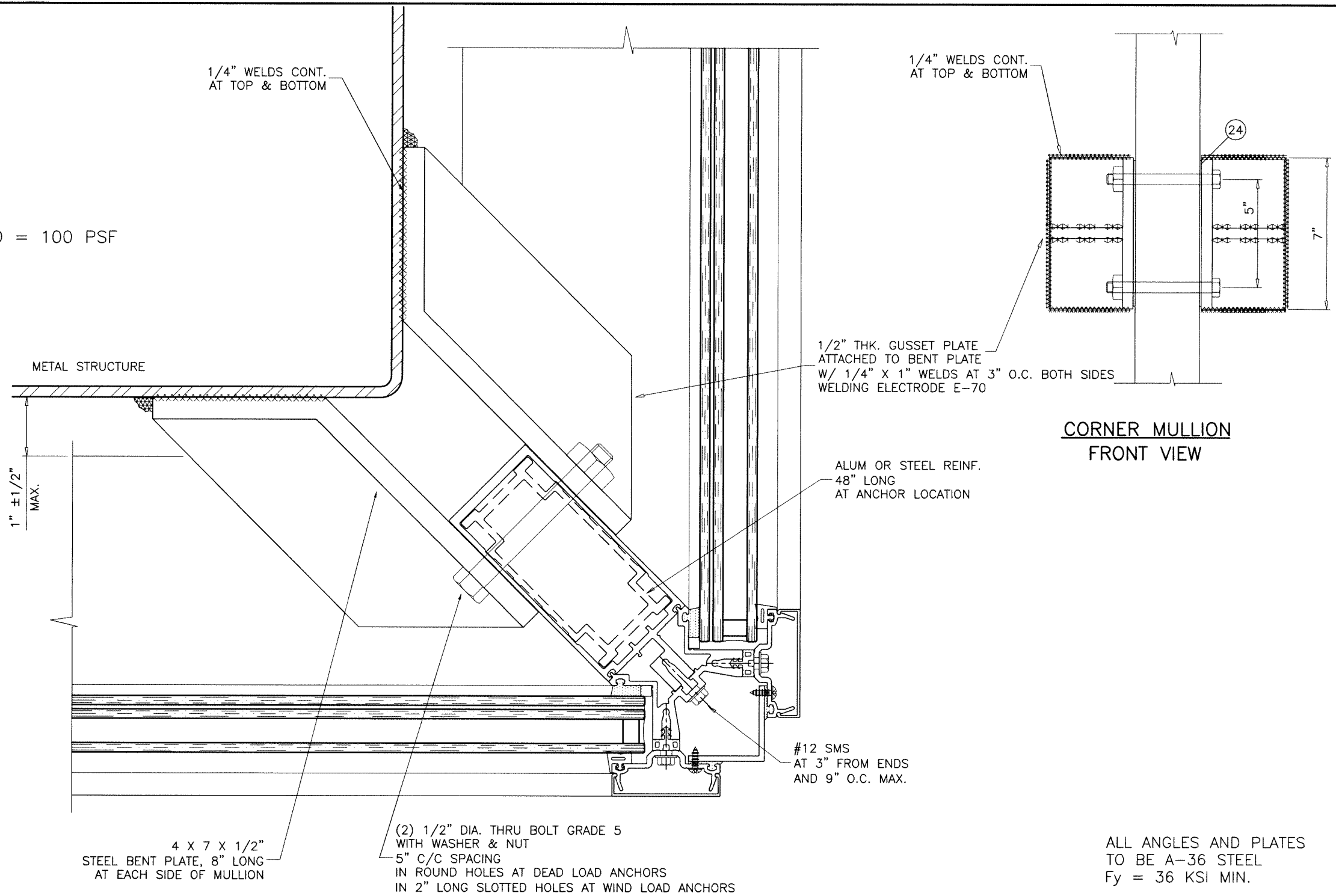
SERIES ES-7525 ALUM CURTAIN WALL SYSTEM (L.M.I.)
E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

revisions:
no date by description

date: 07-17-15
scale: 3/8" = 1"
dr. by: TARIQ
chk. by:

drawing no.
W15-38
sheet 24 of 30

MAX. DESIGN LOAD = 100 PSF



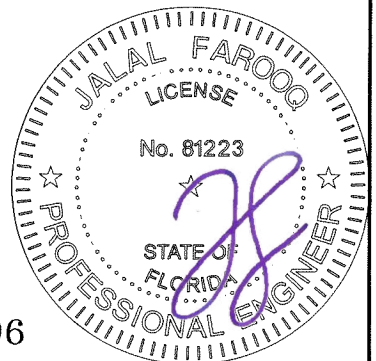
CORNER MULLION ANCHORS
DETAIL '8' (ALT.)

ANCHORS INTO METAL STRUCTURES
1/4" MIN. THICKNESS STEEL

WIND LOAD ANCHOR

WIND + DEAD LOAD ANCHOR

Sealed: 03/20/2026



FL #17896

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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)

SERIES ES-7525 ALUM CURTAIN WALL SYSTEM (L.M.I.)
E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

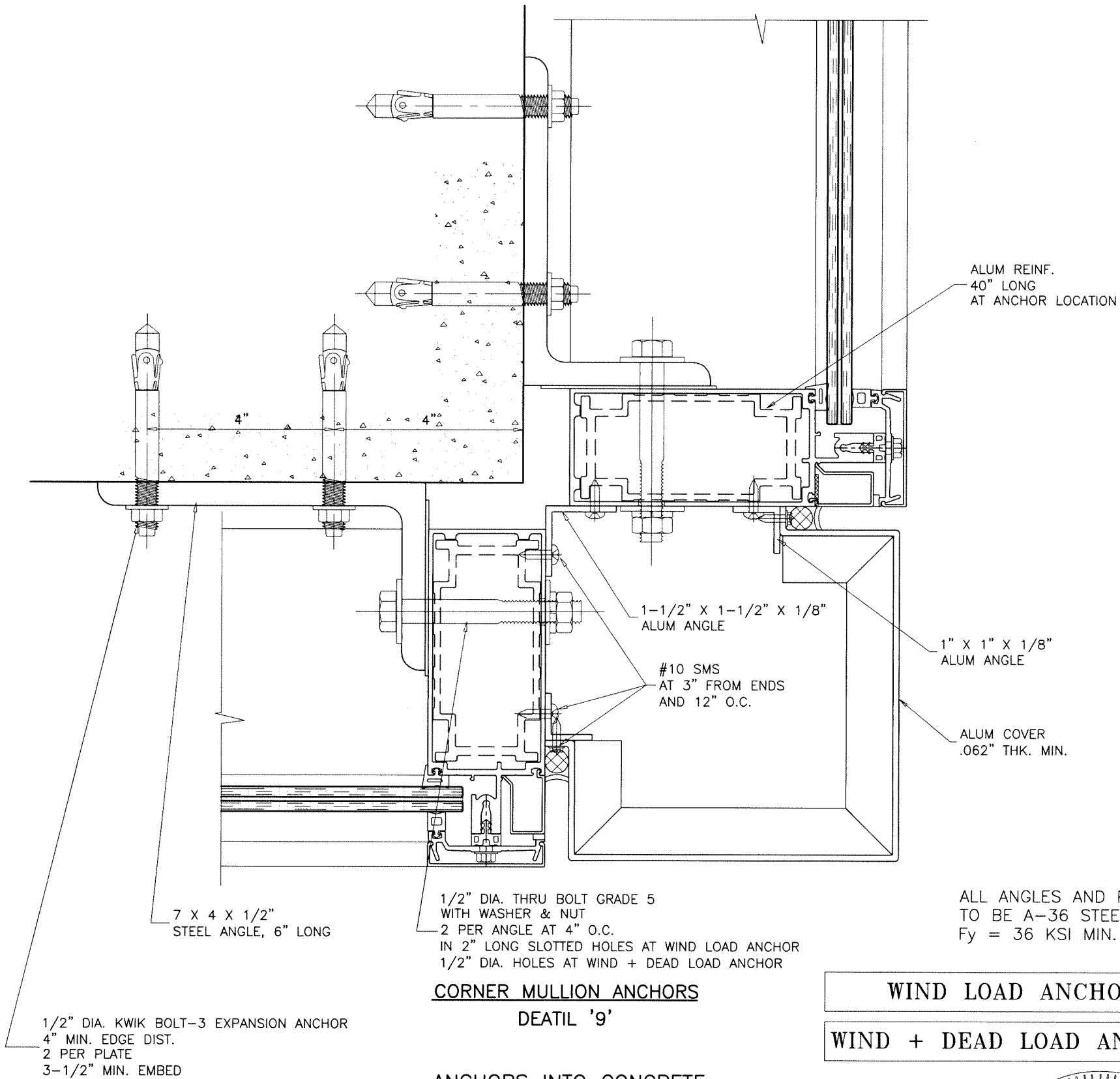
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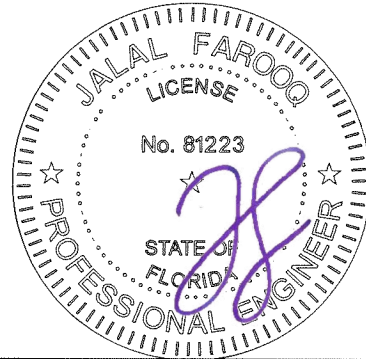
drawing no.	
W15-38	
sheet 25 of 30	

COMP-ANL\W15-38ESW

WIND LOAD ANCHOR			WIND + DEAD LOAD ANCHOR		
MAX. DESIGN LOAD -PSF DUE TO ANCHOR CAPACITY EXT.(+) & INT.(-)			MAX. DESIGN LOAD -PSF DUE TO ANCHOR CAPACITY EXT.(+) & INT.(-)		
NOMINAL DIMS.		1/2" DIA. KWIK BOLT	NOMINAL DIMS.		1/2" DIA. KWIK BOLT
WIDTH (W)	FRAME HEIGHT		WIDTH (W)	FRAME HEIGHT	
36"	108"	74.0	36"	108"	58.6
40"		66.6	40"		51.2
42"		63.4	42"		48.0
48"		55.5	48"		40.1
50"		53.3	50"		37.9
54"		49.3	54"		34.0
60"		44.4	60"		29.0
36"	114"	70.1	36"	114"	54.7
40"		63.1	40"		47.7
42"		60.1	42"		44.7
48"		52.6	48"		37.2
50"		50.5	50"		35.1
54"		46.7	54"		31.4
60"		42.1	60"		26.7
36"	120"	66.6	36"	120"	51.2
40"		59.9	40"		44.6
42"		57.1	42"		41.7
48"		49.9	48"		34.6
50"		47.9	50"		32.6
54"		44.4	54"		29.0
60"		39.9	60"		24.6
36"	126"	63.4	36"	126"	48.0
40"		57.1	40"		41.7
42"		54.4	42"		39.0
48"		47.6	48"		32.2
50"		45.7	50"		30.3
54"		42.3	54"		26.9
60"		38.0	60"		22.7
36"	132"	60.5	36"	132"	45.2
40"		54.5	40"		39.1
42"		51.9	42"		36.5
48"		45.4	48"		30.0
50"		43.6	50"		28.2
54"		40.4	54"		25.0
60"		36.3	60"		21.0
36"	138"	57.9	36"	138"	42.5
40"		52.1	40"		36.7
42"		49.6	42"		34.3
48"		43.4	48"		28.1
50"		41.7	50"		26.3
54"		38.6	54"		23.2
60"		34.7	60"		19.4
36"	144"	55.5	36"	144"	40.1
40"		49.9	40"		34.6
42"		47.6	42"		32.2
48"		41.6	48"		26.2
50"		39.9	50"		24.6
54"		37.0	54"		21.6
60"		33.3	60"		17.9
36"	150"	53.3	36"	150"	37.9
40"		47.9	40"		32.6
42"		45.7	42"		30.3
48"		39.9	48"		24.6
50"		38.4	50"		23.0
54"		35.5	54"		20.1



NOTE:
FOR SLABS LESS THAN 8 INCHES IN THICKNESS
ANCHORS TO BE DESIGNED ON JOB TO JOB BASIS.
THE DESIGN TO BE REVIEWED BY AUTHORITY HAVING
JURISDICTION.



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

SERIES ES-7525 ALUM CURTAIN WALL SYSTEM (L.M.I.)

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

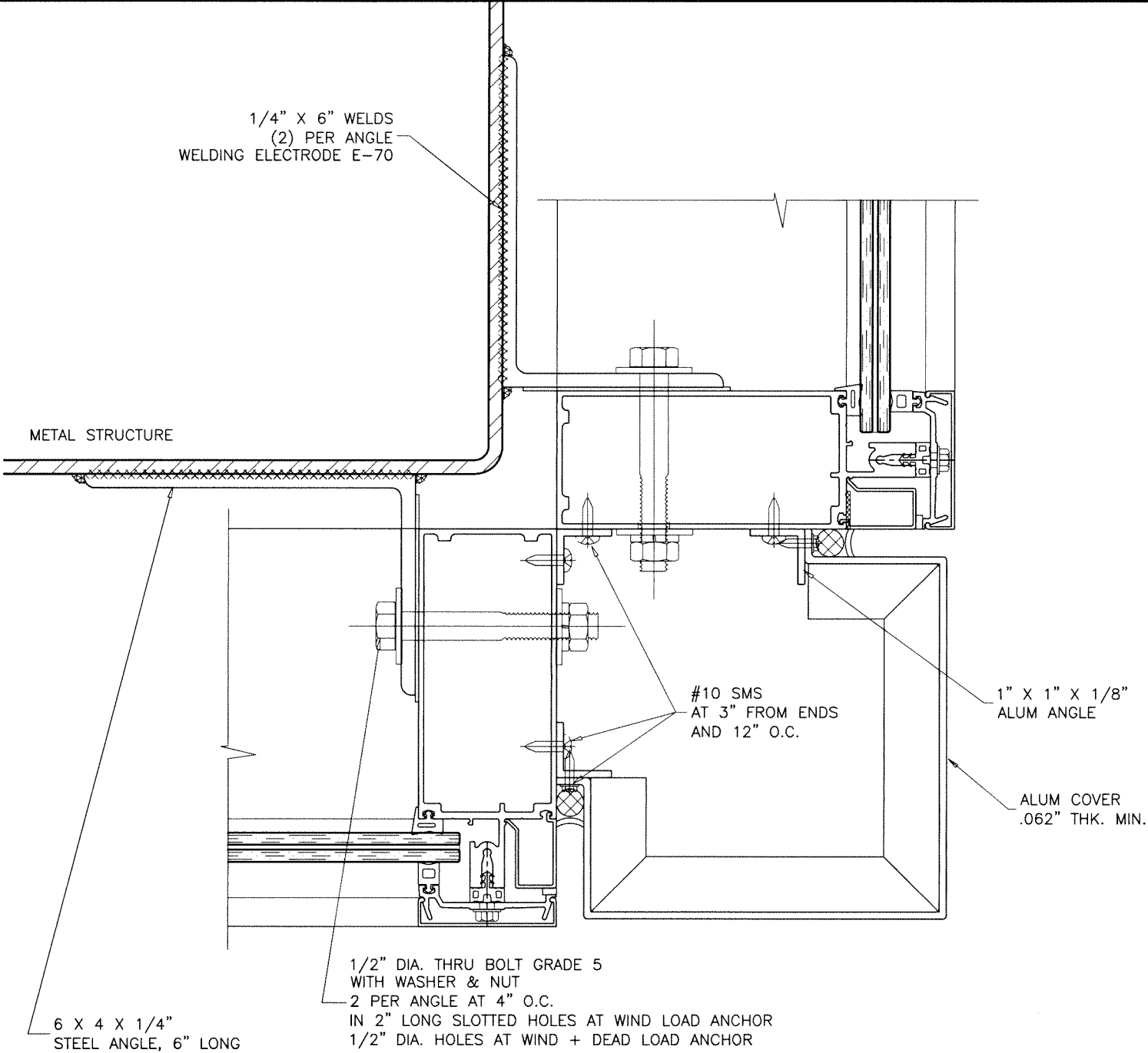
revisions:
no date by description

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dr. by: TARIQ
chk. by:

drawing no.
W15-38
sheet 26 of 30

COMP-ANL\W15-38ESW

MAX. DESIGN LOAD = 100 PSF



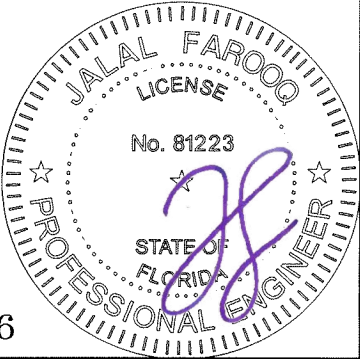
CORNER MULLION ANCHORS
DETAIL '9' (ALT.)

ANCHORS INTO METAL STRUCTURES
1/4" MIN. THICKNESS STEEL

ALL ANGLES AND PLATES
TO BE A-36 STEEL
Fy = 36 KSI MIN.

- WIND LOAD ANCHOR
- WIND + DEAD LOAD ANCHOR

Sealed: 03/20/2026



FL #17896

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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)

SERIES ES-7525 ALUM CURTAIN WALL SYSTEM (L.M.I.)

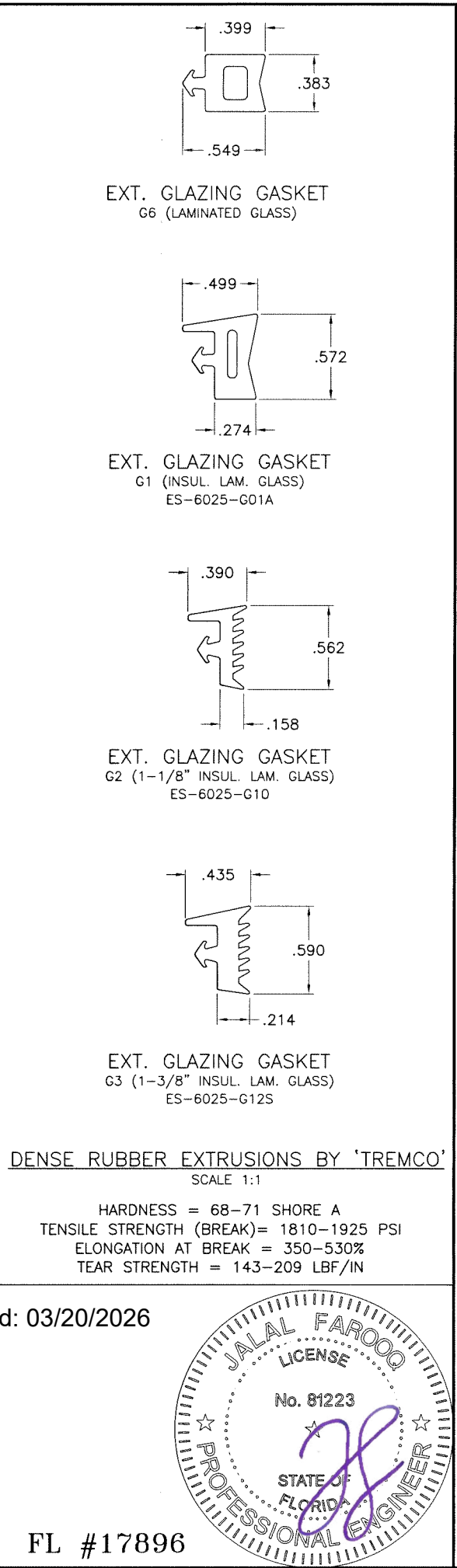
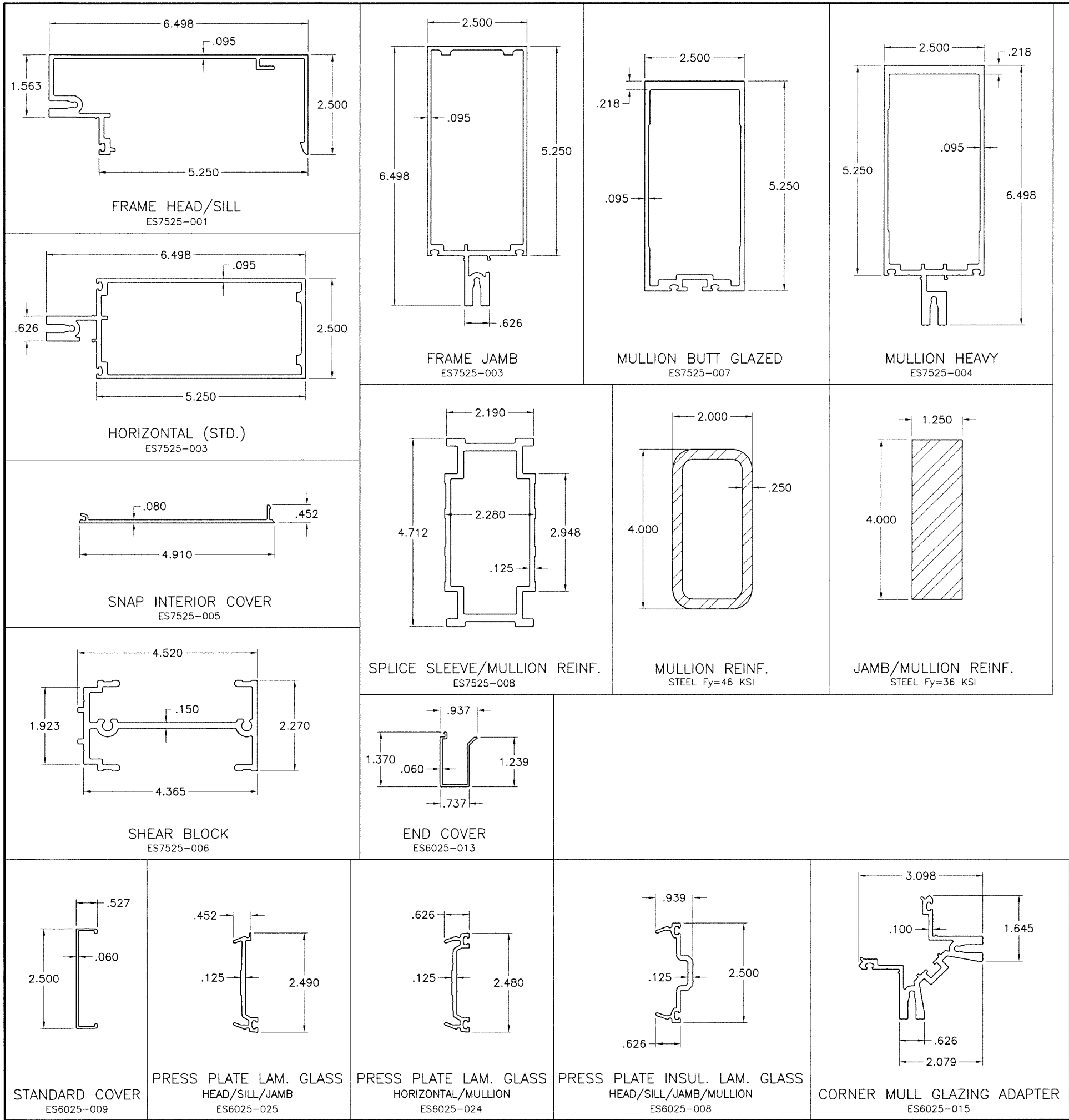
E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

revisions:		by	description
no	date		

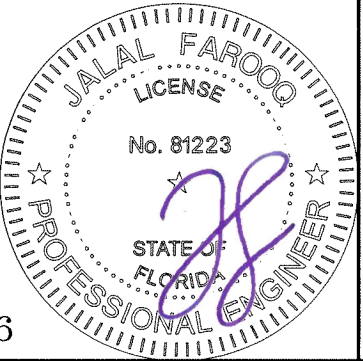
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drawing no.	no.
W15-38	
sheet 27 of 30	

COMP-ANL\W15-38ESW



Sealed: 03/20/2026



FL #17896

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
COMP-ANL\W15-38ESW

SERIES ES-7525 ALUM CURTAIN WALL SYSTEM (L.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: 07-17-15

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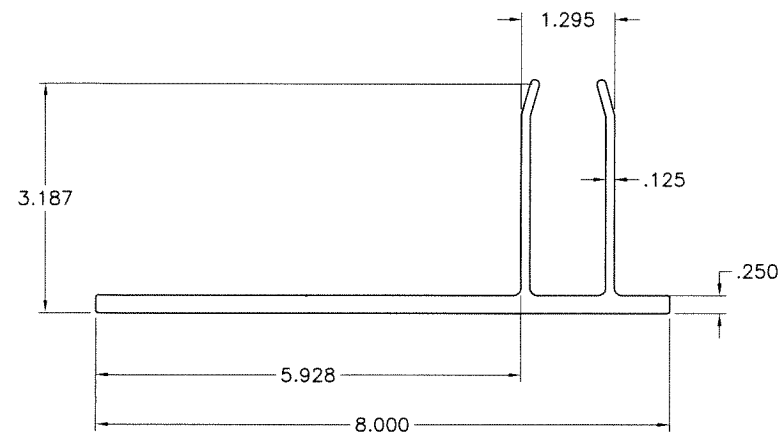
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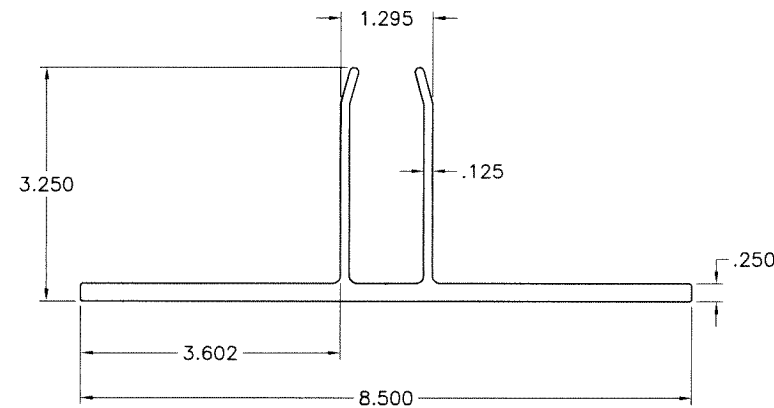
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W15-38

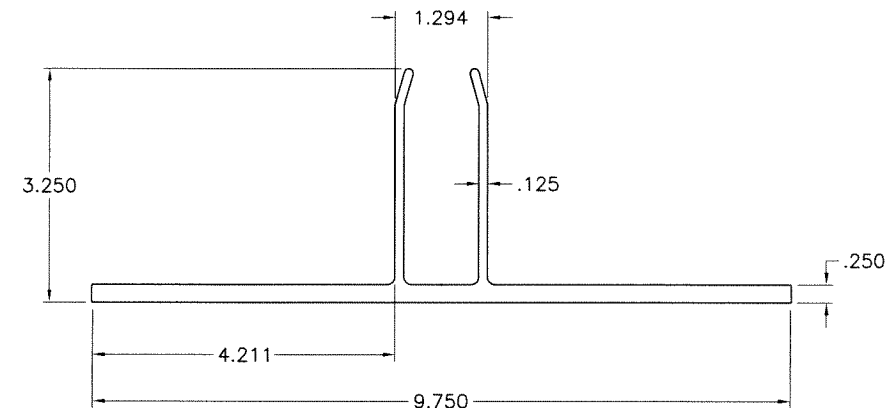
sheet 28 of 30



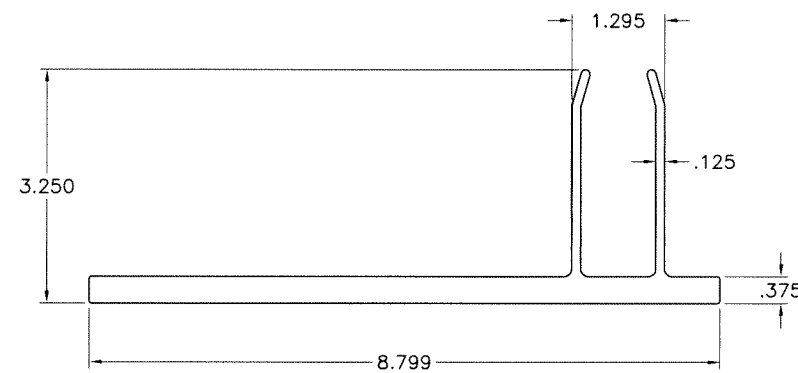
'F' ANCHOR CLIP
ES-7525-51



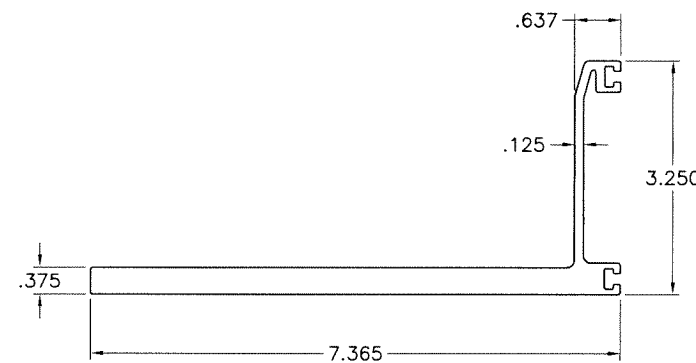
'T' ANCHOR CLIP
ES-7525-50



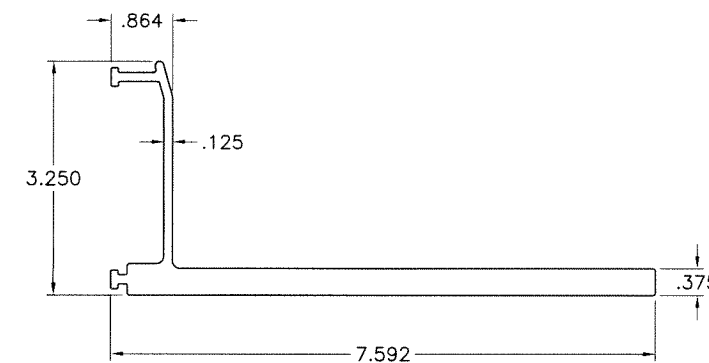
'T' ANCHOR CLIP
ES-7525-052



'F' ANCHOR CLIP
ES-7525-061

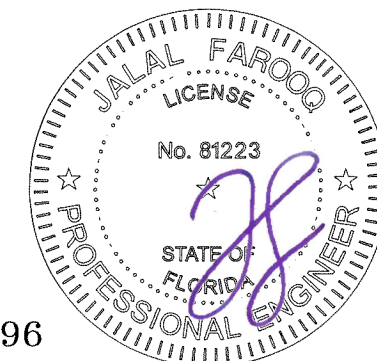


FEMALE MULLION CLIP
ES-7525-059



MALE MULLION CLIP
ES-7525-060

Sealed: 03/20/2026



FL #17896

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
COMP-ANL\W15-38ESW

SERIES ES-7525 ALUM CURTAIN WALL SYSTEM (L.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

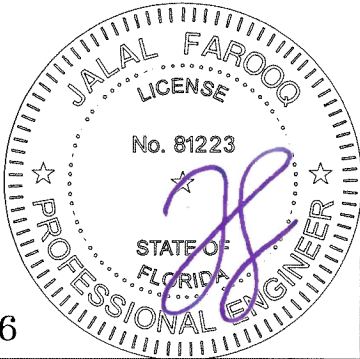
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drawing no.
W15-38
sheet 28.1 of 30

ITEM NO.	PART NO.	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
1	ES-7525-001	HEAD	6063-T5	
2	ES-7525-001	SILL	6063-T5	
3	ES-7525-003	JAMB	6063-T6	
4	ES-7525-003	MULLION STD.	6063-T6	
5	ES-7525-003	HORIZONTAL STD.	6063-T6	
6	ES-7525-002	OPEN HORIZONTAL	6063-T6	
7	ES-7525-004	VERTICAL MULLION HEAVY	6063-T6	
8	ES-7525-005	SNAP INTERIOR COVER (HEAD/SILL/HORIZONTAL)	6063-T5	
9	ES-7525-006	SHEAR BLOCK	6063-T5	1 1/4" LG.
10	ES-7525-007	ALT. VERTICAL MULLION BUTT GLAZED	6063-T6	
11	ES-7525-008	SPLICE SLEEVE	6063-T6	6" LG.
11A	ES-7525-008	SPLICE SLEEVE AS MID-ANCHOR REINF.	6063-T6	40" LG.
11B	ES-7525-008	SPLICE SLEEVE AS MULLION REINF	6063-T6	MULLION LG. -6"
11C	ES-7525-008	SPLICE SLEEVE AS ANCHOR SLEEVE	6063-T6	3" LG.
12	ES-6025-008	DEEP PRESSURE PLATE	6063-T5	1 5/16" GLASS
13	ES-6025-009	STANDARD COVER	6063-T5	
14	ES-6025-010	JAMB END ANCHOR	6063-T5	4 3/4" LG.
15	ES-6025-011*	MULLION END ANCHOR	6063-T5	* MODIFIED (4" LG.)
15A	ES-6025-011*	CORNER END ANCHOR	6063-T5	* MODIFIED (SEE DET.)
16	ES-6025-013	POCKET FILLER	6063-T5	
17	ES-6025-015	90° ADAPTER	6063-T6	
18	ES-6025-017	90° INTERIOR ADAPTER	6063-T5	
19	ES-6025-018	90° INTERIOR COVER	6063-T5	
20	AL-019	SHEAR BLOCK FOR 90° OUTSIDE CORNER	6063-T5	LEFT & RIGHT (1 1/2" x 1 1/2" x 1/8")
21	AL-023	EXTERIOR COVER - 90° OUTSIDE CORNER	6063-T5	LEFT & RIGHT (1 3/4" x 1 3/4" x 1/8")
22	ES-6025-G01	INTERIOR / EXTERIOR GASKET	EPDM	
23	ES-6025-G02	ISOLATOR	EPDM	
24	ES-6025-G04	SPACER AT JAMB	EPDM	1 5/16" GLASS
25	ES-6025-G05	INTERIOR SPACER FOR SILICONE BUTT GLAZE	SILICONE **	**OR SILICONE COMPATIBLE EPDM 70 DURO.
26	ES-6025-G07	POLYURETHANE TAPE (ADHESIVE 1 SIDE)	POLYURETHANE	1/4" x 1/4" REF: NORTON V-2100
27	ES-6025-B04	SETTING BLOCK, 4" LONG, ADHESIVE 1 SIDE	EPDM	DUROMETER 80±5 SHORE A
28	ES-6025-B07	JOINT PLUG EXTENSION	FOAM	
29	ES-6025-B08	JOINT PLUG FOR BUTT GLAZING	EPDM	
30	ES-6025-B09	END PLUG	FOAM	3/4" LONG. (CANT: 2/HEAD + 2/SILL)
31	ES-6025-B10	JOINT PLUG	FOAM	1 5/16" GLASS
32	ES-6025-C02	MULLION END CAP	ALUM. SHEET	1 5/16" GLASS
33	ES-6025-C05	90° OUTSIDE CORNER MULLION END CAP	ALUM. SHEET	1 5/16" GLASS
34	ES-6025-M01	STD. FLOOR ANCHOR WIND LOAD	PAINTED ST.	4" x 4" x 1/4" ANGLE, 5" LONG.
34A	ES-6025-M02	STD. FLOOR ANCHOR DEAD LOAD	PAINTED ST.	4" x 4" x 1/4" ANGLE, 5" LONG.
35	ES-6025-M16	90° CORNER FLOOR ANCHOR DEAD LOAD	PAINTED ST.	FORMED STEEL ANGLE, 5" LONG.
36	--	TUBE REINFORCEMENT	STEEL	2" X 4" X 1/4"
36A	--	BAR REINFORCEMENT	STEEL	1-1/4" X 4"
37	ES-6025-M03	ANCHOR METAL SEPARATOR	NYLON SHEET	1/FLOOR ANCHOR
38	F4	#8 x 1/2" PHSMS	ST.	FOR ATTACH MULLION END CAP
39	F6	#12 x 3/4" FHSMS	ST. ST.	FOR ATTACH HORIZONTAL TO SHEAR BLOCK
40	F7	1/4" - 20 x 1 1/2" HH TYPE "F"	ST. ST.	FOR ATTACH SHEAR BLOCK TO VERTICAL
41	F8	1/4" - 20 x 1/2" HH TYPE "F"	ST. ST.	FOR ATTACH SHEAR BLOCK TO VERT. COR.
42	F9	HBOLT 1/2" - 20 x 4" HWHMS	ST. ST.	FOR ATTACH FLOOR ANCHOR TO VERTICAL
43	F10	1/4" x 1" HWH TYPE AB PT.	ST. ST.	FOR ATTACH PRESSURE PLATE
44	F11	1/2" PLAIN FLAT WASHER	ST. ST.	FLOOR ANCHOR ASSEMBLY
45	F12	1/2" LOCK WASHER	ST. ST.	FLOOR ANCHOR ASSEMBLY
46	F13	1/2" - 20 HEX BOLT NUT HHMS	ST. ST.	FLOOR ANCHOR ASSEMBLY
47	F14	#10 x 3/8" HH TYPE F	ST. ST.	90° INTERIOR COVER
48	--	SILICONE DOW 795	SILICONE	FOR PERIMETER & WEATHER SEALS
49	--	SILICONE DOW 995	SILICONE	FOR STRUCTURAL JOINTS
50	ES-6025-G06	EXTERIOR GLAZING GASKET (LAM. GLASS)	EPDM	-
51	--	BUMPON SPACER	SILICONE	-

ITEM NO.	PART NO.	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
52	ES-7525-50	'T' ANCHOR CLIP	6005-T5	-
52A	ES-7525-52	'T' ANCHOR CLIP	6005-T5	-
53	ES-7525-51	'F' ANCHOR CLIP	6005-T5	-
54	ES-7525-061	'F' ANCHOR CLIP	6005-T5	-
55	ES-7525-059	FEMALE MULLION CLIP	6005-T5	-
56	ES-7525-060	MALE MULLION CLIP	6005-T5	-

Sealed: 03/20/2026



FL #17896

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)

af c

SERIES ES-7525 ALUM CURTAIN WALL SYSTEM (L.M.I.)

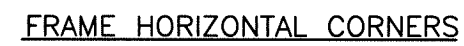
E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151
FAX. (305) 638-5158

revisions:
no. date by description

date: 07-17-15
scale: 3/8" = 1"
dr. by: TARIQ
chk. by:

drawing no.
W15-38
sheet 29 of 30

COMP - ANL \ W15 - 38ESW



A circular professional engineer seal for Jalal Farooq. The outer ring contains the text "JALAL FAROOQ" at the top and "PROFESSIONAL ENGINEER" at the bottom, separated by two stars. Inside the ring, the word "LICENSE" is at the top, "No. 81223" is in the center, and "STATE OF FLORIDA" is at the bottom, also separated by two stars. A large, stylized purple signature is written across the center of the seal.

FL #17896

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