Product Approval
USER: Public User

FL #	FL18411-R4
Application Type	Revision
Code Version	2023
Application Status	Approved
Comments	
Archived	☐
Product Manufacturer	Mr-Glass Doors & Windows Manufacturing, LLC
Address/Phone/Email	8051 NW 79th Place Medley, FL 33166 (305) 470-8284 ulises@mrglasswindows.com
Authorized Signature	Ulises Senaris ulises@mrglasswindows.com
Technical Representative	Augusto Arias
Address/Phone/Email	8120 NW 84th St Medley, FL 33166 (305) 470-8284 aarias@mrglasswindows.com
Quality Assurance Representative	
Address/Phone/Email	
Category	Panel Walls
Subcategory	Storefronts
Compliance Method	Evaluation Report from a Florida Registered Architect or a Licensed Florida Professional Engineer ☐ Evaluation Report - Hardcopy Received
Florida Engineer or Architect Name who developed the Evaluation Report	Jalal Farooq
Florida License	PE-81223
Quality Assurance Entity	Keystone Certifications, Inc.
Quality Assurance Contract Expiration Date	04/30/2035
Validated By	Abel Carrasco, PE ☑ Validation Checklist - Hardcopy Received
Certificate of Independence	FL18411_R4_COI_SS - Certificate of Independence 2023.pdf

Referenced Standard and Year (of Standard)

Standard	Year
AAMA 501	2015
TAS-201	1994
TAS-202	1994
TAS-203	1994

Equivalence of Product Standards Certified By	Florida Licensed Professional Engineer or Architect FL18411_R4_Equiv_SS -Equiv Ltr 501-15.pdf

Sections from the Code

Product Approval Method	Method 1 Option D
Date Submitted	07/25/2023
Date Validated	07/25/2023
Date Pending FBC Approval	08/01/2023
Date Approved	10/17/2023

Summary of Products

FL #	**Model, Number or Name**	**Description**
18411.1	Series MG-6000 Aluminum Window Wall System	Large Missile Impact Resistant Aluminum Window Wall System.
Limits of Use **Approved for use in HVHZ:** Yes **Approved for use outside HVHZ:** Yes **Impact Resistant:** Yes **Design Pressure:** +100/-145 **Other:** See installation drawing W15-71 for span vs. load combinations and installation details.		**Installation Instructions** FL18411_R4_II_SS - MG-6000 WW (LMI)-DWG W15-71 (2023).pdf Verified By: Jalal Farooq PE # 81223 Created by Independent Third Party: Yes **Evaluation Reports** FL18411_R4_AE_SS - MG-6000 WW (LMI)-PAE 2023.pdf Created by Independent Third Party: Yes

Back Next

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Product Approval Accepts:

Credit Card Safe securityMETRICS

AL-FAROOQ CORPORATION

CONSULTING ENGINEERS & PRODUCT DEVELOPMENT

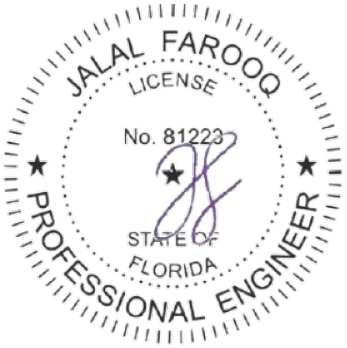
January 23, 2023

Product Approval Administrator
Building Codes & Standards Section
Department of Business & Professional Regulations
1940 North Monroe Street, Suite 90
Tallahassee, FL 32399-2100

To whom it may concern,

As the design engineer retained to prepare the product approval(s) associated with this letter as shown below on this same web page, I do hereby declare that I do not have and will not have any financial interest in any company manufacturing or distributing the referenced product(s), nor do I have or will have any financial interest with any other entity involved in the approval process of the referenced product(s).

Sincerely,



Jalal Farooq, P.E.
CFO

Sealed: 1/23/2023

9360 Sunset Drive, Suite 220 | Miami, FL 33173 | T: 305.264.8100 | F: 305.262.6978 | www.afceng.com | alfarooq@afceng.com

AL-FAROOQ CORPORATION
CONSULTING ENGINEERS & PRODUCT DEVELOPMENT

August 12, 2020

Product Approval Administrator
Building Codes & Standards Section
Department of Business & Professional Regulations
1940 North Monroe Street, Suite 90
Tallahassee, FL 32399-2100

Ref: Engineer's Statement of Equivalency

To whom it may concern,

As the design engineer retained to prepare the product approval(s) associated with this letter as shown in the summary of products section below, the purpose of this letter is to state that some reference standards have changed. For the scope contained within the subject product approval, the requirements of required items within the new reference standard(s) is still met because:

- AAMA 501-05 is no longer applicable, and instead the reference standard is AAMA 501-15. A comparison of the older standard with the newer standard shows that they are equivalent, as relevant and applicable.

If you have any questions, please feel free to call our office.

Sincerely,

8-28-2020

Jalal Farooq, P.E.
CFO

9360 Sunset Drive, Suite 220 | Miami, FL 33173 | T: 305.264.8100 | F: 305.262.6978 | www.afceng.com | alfarooq@afceng.com

AL-FAROOQ CORPORATION

CONSULTING ENGINEERS & PRODUCT DEVELOPMENT

PRODUCT APPROVAL EVALUATION
RULE CHAPTER #61G20-3 • METHOD 1 OPTION D

FL 18411
Date: 7/24/2023

Detailed Product Description:

Manufacturer: MR-GLASS DOORS & WINDOWS MANUFACTURING, LLC.

Manufacturer Address: 8051 NW 79th PLACE, MEDLEY, FL 33166

Model Name: SERIES MG-6000 ALUMINUM WINDOW WALL SYSTEM

Maximum Load: +100 PSF, -145 PSF (Large Missile Impact)

Installation Drawings # W15-71

This product complies with the High Velocity Hurricane Zone (HVHZ) testing requirements.

For maximum sizes, combination of span vs loads and anchor type refer to installation drawings.

Comparative analysis used __X__ Yes ___ No

Mandatory Tests (Tested in accordance with AAMA 501/101/I.S.2/NAFS/TAS-202)

TEST	DESCRIPTION	TEST LOCATION	TEST REPORT DATE	TEST REPORT #	TEST SEALED BY
ASTM E283	Air Infiltration Leakage	Fenestration Testing Laboratory	08/06/2015	FTL-8021	Idalmis Ortega, P.E.
ASTM E331 OR ASTM 547 & TAS 202	Water Penetration	Fenestration Testing Laboratory	08/06/2015	FTL-8021	Idalmis Ortega, P.E.
ASTM E330 & TAS 202	Uniform Static Air Press.	Fenestration Testing Laboratory	08/06/2015	FTL-8021	Idalmis Ortega, P.E.

Supplemental Tests (Tested in accordance with TAS-201 and TAS-203)

TEST	DESCRIPTION	TEST LOCATION	TEST REPORT DATE	TEST REPORT #	TEST SEALED BY
FBC 1626.2 (TAS 201 & 203) ANSI Z97.1	Large Missile Impact & Cyclic	Fenestration Testing Laboratory	11/12/2015 08/06/2015	FTL-8643 FTL-8021	Idalmis Ortega, P.E. Idalmis Ortega, P.E.

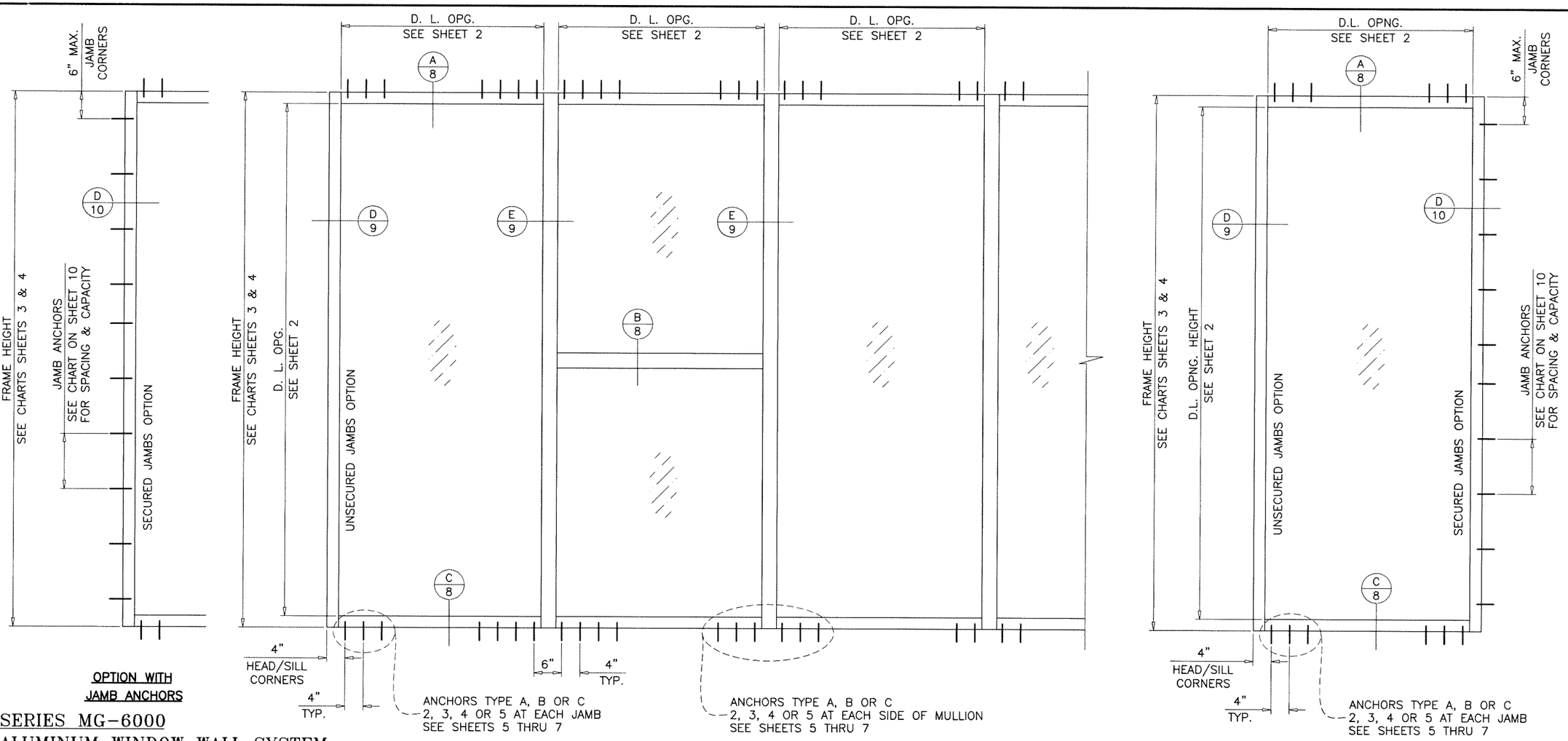
Under the limitations of the attached installation drawings, to the best of my knowledge and ability, the above product conforms to the requirements of the 2023 Florida Building Code.

Evaluation Report Engineer:

Jalal Farooq PE # 81223
Al-Farooq Corporation EB # 3538

Sealed: 7/24/2023

9360 Sunset Drive Ste 220 | Miami, FL 33173 | T: 305.264.8100 | F: 305.262.6978 | www.afceng.com | alfarooq@afceng.com



OPTION WITH
JAMB ANCHORS

TYPICAL ELEVATIONS

SERIES MG-6000
ALUMINUM WINDOW WALL SYSTEM

THIS SYSTEM IS RATED FOR LARGE & SMALL MISSILE IMPACT SHUTTERS ARE NOT REQUIRED.

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

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

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

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

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

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

THIS PRODUCT APPROVAL IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT, i.e. LIFE SAFETY OF THIS PRODUCT, ADEQUACY OF STRUCTURE RECEIVING THIS PRODUCT AND SEALING AROUND OPENING FOR WATER INFILTRATION RESISTANCE ETC.
CONDITIONS NOT SHOWN IN THIS DRAWING ARE TO BE ANALYZED SEPARATELY, AND TO BE REVIEWED BY BUILDING OFFICIAL.

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

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

INSTRUCTIONS:

USE CHARTS AS FOLLOWS.

STEP 1 DETERMINE DESIGN WIND PRESSURE REQUIREMENTS BASED ON WIND VELOCITY, BLDG. HEIGHT, WIND ZONE USING APPLICABLE ASCE 7 STANDARD.

STEP 2 SEE CHARTS ON SHEET 2 FOR GLASS DESIGN LOAD CAPACITY.

STEP 3 CHECK MULLION DESIGN LOAD CAPACITY FOR A GIVEN SPACING AND HEIGHT USING CHARTS ON SHEETS 3 & 4 THE CAPACITY SHOULD EXCEED THE DESIGN LOAD.

STEP 4 USING CHARTS ON SHEET 5 THRU 7 SELECT ANCHOR OPTION WITH DESIGN LOAD CAPACITY MORE THAN DESIGN LOAD SPECIFIED IN STEP 1 ABOVE.

STEP 5 FOR SECURED JAMB OPTION CHECK JAMB ANCHOR CAPACITY USING CHART ON SHEET 10.

STEP 6 THE LOWEST VALUE RESULTING FROM STEPS 2, 3, 4 AND 5 THAT EXCEED THE DESIGN WIND PRESSURES DETERMINED THRU STEP 1 SHALL APPLY TO ENTIRE SYSTEM.

STEP 7 FOR SYSTEMS WITH UNANCHORED JAMBS, USING SHEET 9, DETERMINE THE MIN. & MAX. GAP DIMENSIONS.

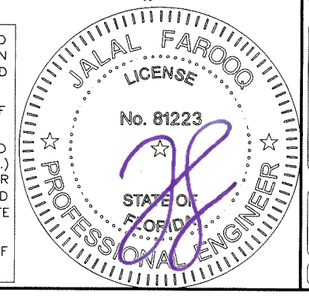
SINGLE 'O' PANEL:
FRAME WIDTH = D.L.O. WIDTH + 5.0"
FRAME HEIGHT = D.L.O. HEIGHT + 5.0"

PRODUCT COMPLIES WITH REQUIREMENTS OF ANSI Z97.1.

LARGE MISSILE IMPACT

Sealed: 7/24/2023

FL #18411



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

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

C- SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT WHICH WILL BECOME THE ENGINEER OF RECORD (E.O.R.) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE P.E.D. ENGINEER OF RECORD, ACTING AS A DELEGATED ENGINEER TO THE P.E.D. ENGINEER SHALL SUBMIT TO THIS LATTER THE SITE SPECIFIC DRAWINGS FOR REVIEW.

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

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173 *(C.A.N. 3538)*
TEL. (305) 264-8100 FAX. (305) 262-6978
COMP-ANL\W15-71MG

SERIES MG-6000 ALUM WINDOW WALL SYSTEM (L.M.I.)

MR-GLASS DOORS & WINDOWS MANUFACTURING, LLC
8051 N.W. 79th Place
Medley, FL. 33166
Tel. (305) 764-3963 Fax. (305) 470-8285

revisions:

no	date	by	description
A	12.10.15		LOADS REVISED
B	01.26.18		UPDATED TO 2017 FBC
C	07.23.20		UPDATED TO 2020 FBC
D	07.21.23		UPDATED TO 2023 FBC

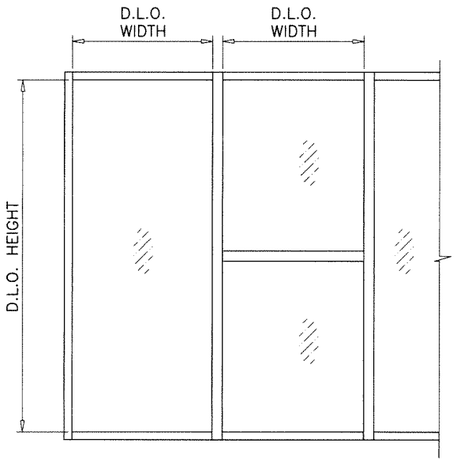
date: 08-27-15
scale: 3/8" = 1"
dr. by: TARIQ
chk. by:

drawing no.
W15-71

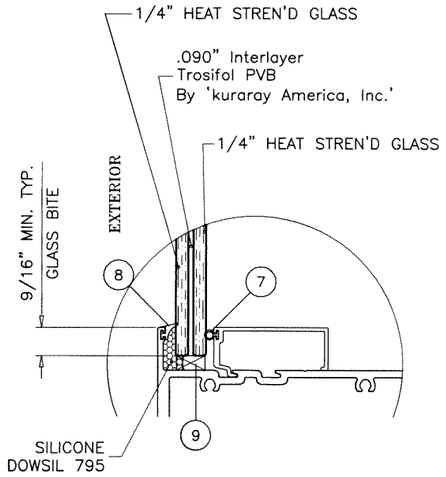
sheet 1 of 12

GLASS LOAD CAPACITY – PSF					
NOMINAL DIMS.		GLASS TYPES 'G1L' & 'G1LI'		GLASS TYPES 'G2L' & 'G2LI'	
D.L.O. WIDTH	D.L.O. HEIGHT	EXT.(+)	INT.(–)	EXT.(+)	INT.(–)
45"	85"	70.0	70.0	100.0	145.0
48"		70.0	70.0	100.0	145.0
51"		70.0	70.0	100.0	145.0
54"		70.0	70.0	100.0	145.0
57"		70.0	70.0	100.0	145.0
60"		70.0	70.0	100.0	145.0
63"		65.0	65.0	100.0	145.0
66"		65.0	65.0	100.0	145.0
69"		65.0	65.0	100.0	145.0
45"	91"	70.0	70.0	100.0	145.0
48"		70.0	70.0	100.0	145.0
51"		70.0	70.0	100.0	145.0
54"		70.0	70.0	100.0	145.0
57"		65.0	65.0	100.0	145.0
60"		65.0	65.0	100.0	145.0
63"		65.0	65.0	100.0	145.0
66"		65.0	65.0	100.0	143.0
69"		65.0	65.0	100.0	137.0
45"	97"	70.0	70.0	100.0	145.0
48"		70.0	70.0	100.0	145.0
51"		70.0	70.0	100.0	145.0
54"		70.0	70.0	100.0	145.0
57"		65.0	65.0	100.0	145.0
60"		65.0	65.0	100.0	145.0
63"		65.0	65.0	100.0	142.0
66"		–	–	100.0	136.0
69"		–	–	100.0	129.0
45"	103"	70.0	70.0	100.0	145.0
48"		70.0	70.0	100.0	145.0
51"		65.0	65.0	100.0	145.0
54"		65.0	65.0	100.0	145.0
57"		65.0	65.0	100.0	145.0
60"		65.0	65.0	100.0	140.0
63"		–	–	100.0	133.0
45"	109"	70.0	70.0	100.0	145.0
48"		70.0	70.0	100.0	145.0
51"		65.0	65.0	100.0	145.0
54"		65.0	65.0	100.0	145.0
57"		65.0	65.0	100.0	139.0
60"		–	–	100.0	132.0
45"	115"	70.0	70.0	100.0	145.0
48"		65.0	65.0	100.0	145.0
51"		65.0	65.0	100.0	145.0
54"		65.0	65.0	100.0	141.0
57"		–	–	100.0	133.0
45"	121"	65.0	65.0	100.0	115.0
48"		65.0	65.0	100.0	115.0
51"		65.0	65.0	100.0	115.0
54"		–	–	100.0	115.0
45"	127"	65.0	65.0	100.0	115.0
48"		65.0	65.0	100.0	115.0
51"		–	–	100.0	115.0
45"	133"	65.0	65.0	100.0	115.0
48"		65.0	65.0	100.0	115.0
45"	139"	65.0	65.0	100.0	115.0

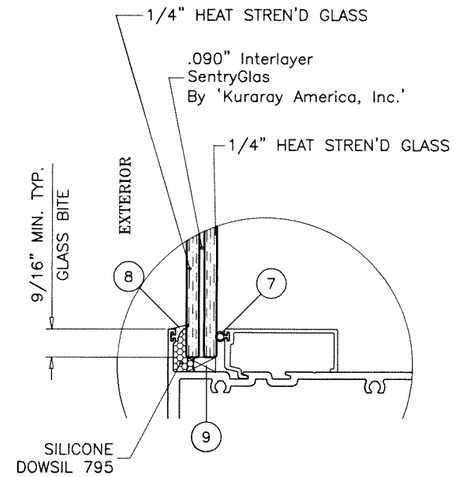
INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.



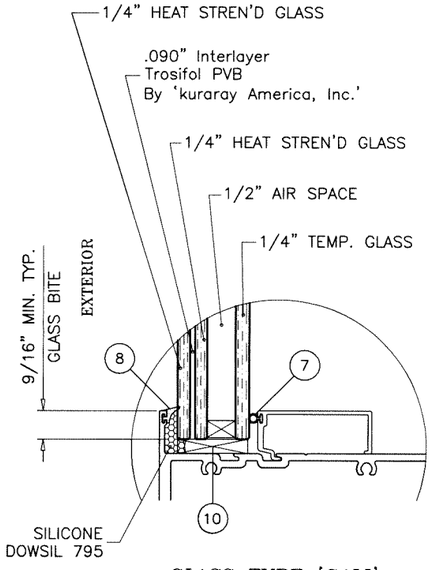
NOTE:
GLASS CAPACITIES ON THIS SHEET ARE BASED ON ASTM E1300–09 (3 SEC. GUSTS).



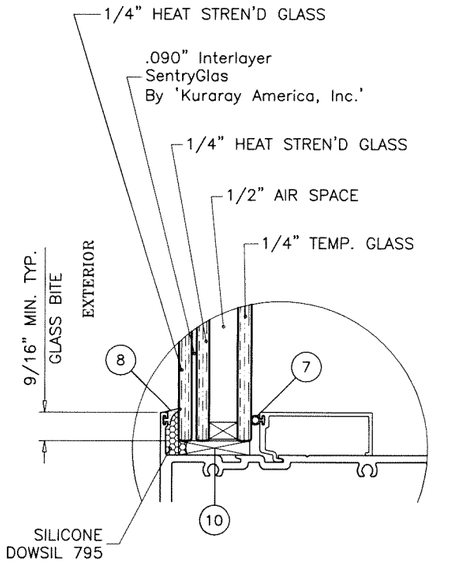
GLASS TYPE 'G1L'
9/16" OVERALL LAM. GLASS



GLASS TYPE 'G2L'
9/16" OVERALL LAM. GLASS



GLASS TYPE 'G1LI'
1–5/16" OVERALL INSUL. LAM. GLASS



GLASS TYPE 'G2LI'
1–5/16" OVERALL INSUL. LAM. GLASS

GLAZING OPTIONS

1/2" AIR SPACE CONSISTING OF:
SPACER:
ALUMINUM BOX SPACER AROUND THE PERIMETER OF THE GLASS.
PERIMETER SEALANT:
SILICONE
DOWSIL 791
GE 2000

GLASS

Sealed: 7/24/2023
FL #18411

JALAL FAROOQ LICENSE No. 81223 STATE OF FLORIDA PROFESSIONAL ENGINEER

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\W15–71MG

SERIES MG–6000 ALUM WINDOW WALL SYSTEM (L.M.I.)

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8051 N.W. 79th Place
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revisions:

no	date	by	description

date: 08–27–15
scale: 3/8" = 1"
dr. by: TARIQ
chk. by:

drawing no. W15–71

sheet 2 of 12

DESIGN LOAD CAPACITY – PSF
MULLION
WITHOUT INTERMEDIATE HORIZONTALS

NOMINAL DIMS.		JAMB 'J1' MULLION 'M1'	
WIDTH (W)	FRAME HEIGHT	EXT.(+)	INT.(−)
30"	90"	100.0	110.0
36"		100.0	110.0
42"		100.0	110.0
48"		100.0	110.0
54"		100.0	110.0
55"		100.0	110.0
60"		70.0	70.0
30"	96"	100.0	110.0
36"		100.0	110.0
42"		100.0	110.0
48"		100.0	106.5
51"		97.0	97.0
54"		70.0	70.0
60"		70.0	70.0
30"	102"	100.0	110.0
36"		100.0	110.0
42"		100.0	104.0
48"		92.7	92.7
54"		70.0	70.0
57"		70.0	70.0
30"	108"	70.0	70.0
36"		70.0	70.0
42"		70.0	70.0
48"		70.0	70.0
54"		70.0	70.0
30"	114"	70.0	70.0
36"		70.0	70.0
42"		70.0	70.0
48"		70.0	70.0
51"		68.3	68.3
30"	120"	70.0	70.0
36"		70.0	70.0
42"		70.0	70.0
48"		62.8	62.8

DESIGN LOAD CAPACITY – PSF
MULLION
WITHOUT INTERMEDIATE HORIZONTALS

NOMINAL DIMS.		JAMB 'J2' MULLION 'M2'	
WIDTH (W)	FRAME HEIGHT	EXT.(+)	INT.(−)
48"	120"	65.0	65.0
54"		65.0	65.0
58"		65.0	65.0
30"	126"	65.0	65.0
36"		65.0	65.0
42"		65.0	65.0
48"		65.0	65.0
54"		65.0	65.0
55"		65.0	65.0
30"	132"	65.0	65.0
36"		65.0	65.0
42"		65.0	65.0
48"		65.0	65.0
53"		63.9	63.9
30"	138"	65.0	65.0
36"		65.0	65.0
42"		65.0	65.0
48"		60.7	60.7
50"		58.6	58.6
30"	144"	65.0	65.0
36"		65.0	65.0
42"		60.2	60.2
48"		53.2	53.2

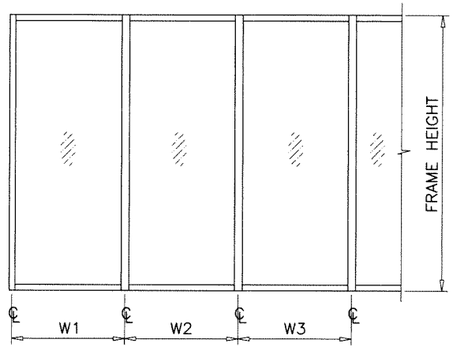
DESIGN LOAD CAPACITY – PSF
MULLION
WITHOUT INTERMEDIATE HORIZONTALS

NOMINAL DIMS.		JAMB 'J2' MULLION 'M3'		JAMB 'J2' MULLION 'M3'	
WIDTH (W)	FRAME HEIGHT	EXT.(+)	INT.(−)	EXT.(+)	INT.(−)
30"	96"	100.0	145.0	–	–
36"		100.0	145.0	–	–
42"		100.0	145.0	–	–
48"		100.0	145.0	–	–
54"		100.0	145.0	–	–
60"		100.0	145.0	–	–
66"		100.0	115.0	–	–
72"		100.0	115.0	–	–
30"	102"	100.0	145.0	–	–
36"		100.0	145.0	–	–
42"		100.0	145.0	–	–
48"		100.0	145.0	–	–
54"		100.0	145.0	–	–
60"		100.0	115.0	–	–
66"		100.0	115.0	–	–
71"		100.0	115.0	–	–
30"	108"	100.0	145.0	–	–
36"		100.0	145.0	–	–
42"		100.0	145.0	–	–
48"		100.0	144.0	100.0	145.0
54"		100.0	115.0	–	–
60"		100.0	115.0	–	–
66"		100.0	112.5	–	–
67"		100.0	111.3	–	–
30"	114"	100.0	145.0	–	–
36"		100.0	145.0	–	–
42"		100.0	145.0	100.0	145.0
48"		100.0	129.2	100.0	145.0
54"		100.0	115.0	–	–
60"		100.0	107.1	100.0	115.0
63"		100.0	103.1	100.0	115.0
30"	120"	100.0	145.0	–	–
36"		100.0	145.0	–	–
42"		100.0	130.8	100.0	145.0
48"		100.0	115.0	100.0	137.3
54"		100.0	104.6	100.0	115.0
60"		95.7	95.7	100.0	113.4
30"	126"	100.0	115.0	–	–
36"		100.0	115.0	–	–
42"		100.0	115.0	–	–
48"		100.0	104.6	100.0	115.0
54"		94.2	94.2	100.0	108.6
55"		92.7	92.7	100.0	107.0
30"	132"	100.0	115.0	–	–
36"		100.0	115.0	–	–
42"		100.0	107.3	100.0	115.0
48"		94.9	94.9	–	–
53"		86.8	86.8	–	–
				*	

DESIGN LOAD CAPACITY – PSF
MULLION
WITHOUT INTERMEDIATE HORIZONTALS

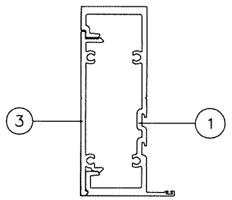
NOMINAL DIMS.		JAMB 'J2' MULLION 'M3'		JAMB 'J2' MULLION 'M3'	
WIDTH (W)	FRAME HEIGHT	EXT.(+)	INT.(−)	EXT.(+)	INT.(−)
30"	138"	100.0	115.0	–	–
36"		100.0	113.3	100.0	115.0
42"		97.9	97.9	100.0	102.4
48"		86.5	86.5	90.6	90.6
50"		83.3	83.3	87.4	87.4
30"	144"	100.0	115.0	–	–
36"		100.0	103.5	–	–
42"		89.5	89.5	–	–
48"		79.2	79.2	–	–
				*	

* LOADS SHOWN ARE WITH COLD ROLLED STEEL STIFFENER Fu MIN. = 70 KSI



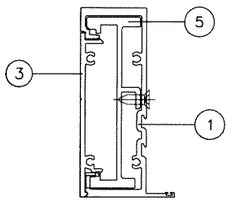
WIDTH (W) = W1
AT FRAME JAMB

WIDTH (W) = (W2 + W3) / 2
AT FRAME MULLION



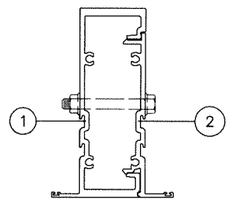
JAMB 'J1'

Ix IN^4	Sx IN^3
7.602	3.005



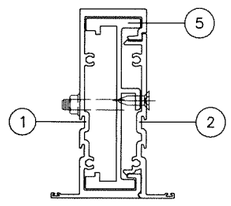
JAMB 'J2'

Ix IN^4	Sx IN^3
11.510	4.549



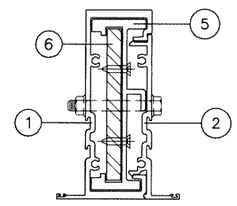
MULLION 'M1'

Ix IN^4	Sx IN^3
7.878	3.092



MULLION 'M2'

Ix IN^4	Sx IN^3
11.787	4.626



MULLION 'M3'

	Ix IN^4	Sx IN^3
ALUMINUM	11.787	4.626
STEEL	2.000	1.000
TOTAL Ix ALUM + Ix STL X 2.9	17.587	

INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.

SEE SHEET 9 FOR UNANCHORED JAMB REINFORCING LIMITS

MULLIONS

Sealed: 7/24/2023

FL #18411

JALAL FAROOQ LICENSE No. 81223 STATE OF FLORIDA PROFESSIONAL ENGINEER

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\W15–71MG

SERIES MG–6000 ALUM WINDOW WALL SYSTEM (L.M.I.)

MR-GLASS DOORS & WINDOWS MANUFACTURING, LLC
8051 N.W. 79th Place
Medley, FL. 33166
Tel. (305) 764–3963 Fax. (305) 470–8285

revisions:

no	date	by	description

date: 08–27–15
scale: –
dr. by: TARIQ
chk. by:

drawing no. W15–71

sheet 3 of 12

DESIGN LOAD CAPACITY – PSF
MULLION
WITH INTERMEDIATE HORIZONTALS

NOMINAL DIMS.		JAMB 'J1' MULLION 'M1'	
WIDTH (W)	FRAME HEIGHT	EXT.(+)	INT.(–)
30"	90"	100.0	110.0
36"		100.0	110.0
42"		100.0	110.0
48"		100.0	110.0
54"		99.7	99.7
55"		97.9	97.9
60"		70.0	70.0
30"	96"	100.0	110.0
36"		100.0	110.0
42"		100.0	110.0
48"		97.9	97.9
51"		92.1	92.1
54"		70.0	70.0
60"		70.0	70.0
30"	102"	100.0	110.0
36"		100.0	110.0
42"		98.3	98.3
48"		86.0	86.0
54"		70.0	70.0
57"		70.0	70.0
30"	108"	70.0	70.0
36"		70.0	70.0
42"		70.0	70.0
48"		70.0	70.0
54"		67.7	67.7
30"	114"	70.0	70.0
36"		70.0	70.0
42"		70.0	70.0
48"		67.9	67.9
51"		63.9	63.9
30"	120"	70.0	70.0
36"		70.0	70.0
42"		67.4	67.4
48"		58.9	58.9

DESIGN LOAD CAPACITY – PSF
MULLION
WITH INTERMEDIATE HORIZONTALS

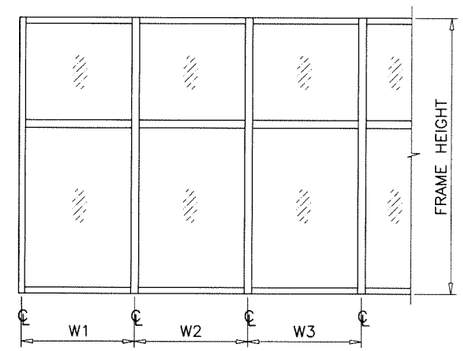
NOMINAL DIMS.		JAMB 'J2' MULLION 'M2'	
WIDTH (W)	FRAME HEIGHT	EXT.(+)	INT.(–)
48"	120"	65.0	65.0
54"		65.0	65.0
58"		65.0	65.0
30"	126"	65.0	65.0
36"		65.0	65.0
42"		65.0	65.0
48"		65.0	65.0
54"		65.0	65.0
55"		65.0	65.0
30"	132"	65.0	65.0
36"		65.0	65.0
42"		65.0	65.0
48"		65.0	65.0
53"		60.0	60.0
30"	138"	65.0	65.0
36"		65.0	65.0
42"		65.0	65.0
48"		58.0	58.0
50"		55.7	55.7
30"	144"	65.0	65.0
36"		65.0	65.0
42"		58.3	58.3
48"		51.0	51.0

DESIGN LOAD CAPACITY – PSF
MULLION
WITH INTERMEDIATE HORIZONTALS

NOMINAL DIMS.		JAMB 'J2' MULLION 'M3'		JAMB 'J2' MULLION 'M3'	
WIDTH (W)	FRAME HEIGHT	EXT.(+)	INT.(–)	EXT.(+)	INT.(–)
30"	96"	100.0	145.0	–	–
36"		100.0	145.0	–	–
42"		100.0	145.0	–	–
48"		100.0	145.0	–	–
54"		100.0	145.0	–	–
60"		100.0	137.4	100.0	145.0
30"	102"	100.0	145.0	–	–
36"		100.0	145.0	–	–
42"		100.0	145.0	–	–
48"		100.0	145.0	–	–
54"		100.0	135.2	100.0	145.0
60"		100.0	115.0	–	–
30"	108"	100.0	145.0	–	–
36"		100.0	145.0	–	–
42"		100.0	145.0	–	–
48"		100.0	135.7	100.0	145.0
54"		100.0	115.0	–	–
60"		100.0	108.5	–	–
30"	114"	100.0	145.0	–	–
36"		100.0	145.0	–	–
42"		100.0	139.2	100.0	145.0
48"		100.0	121.8	100.0	145.0
54"		100.0	108.2	100.0	115.0
60"		97.4	97.4	100.0	115.0
30"	120"	100.0	145.0	–	–
36"		100.0	145.0	–	–
42"		100.0	125.6	100.0	145.0
48"		100.0	109.9	100.0	129.8
54"		97.7	97.7	100.0	115.0
60"		87.9	87.9	100.0	103.8
30"	126"	100.0	115.0	–	–
36"		100.0	115.0	–	–
42"		100.0	113.9	100.0	115.0
48"		99.7	99.7	100.0	110.0
54"		88.6	88.6	100.0	100.7
55"		87.0	87.0	98.9	98.9
30"	132"	100.0	115.0	–	–
36"		100.0	115.0	–	–
42"		100.0	103.8	100.0	112.6
48"		90.8	90.8	98.5	98.5
53"		82.3	82.3	89.2	89.2
30"	138"	100.0	115.0	–	–
36"		100.0	110.8	100.0	115.0
42"		95.0	95.0	98.6	98.6
48"		83.1	83.1	86.2	86.2
50"		79.8	79.8	82.8	82.8
30"	144"	100.0	115.0	–	–
36"		100.0	101.2	–	–
42"		86.7	86.7	–	–
48"		75.9	75.9	–	–
				*	

* LOADS SHOWN ARE WITH COLD ROLLED STEEL STIFFENER Fu MIN. = 70 KSI

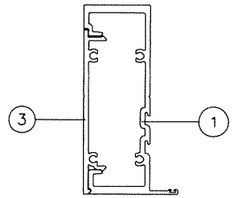
INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.



WIDTH (W) = W1
AT FRAME JAMB

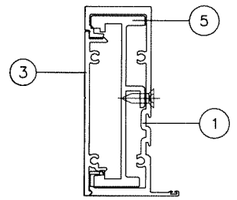
WIDTH (W) = $\frac{W2 + W3}{2}$
AT FRAME MULLION

SEE SHEET 9 FOR UNANCHORED JAMB REINFORCING LIMITS



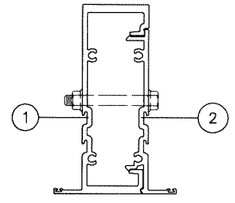
JAMB 'J1'

Ix IN^4	Sx IN^3
7.602	3.005



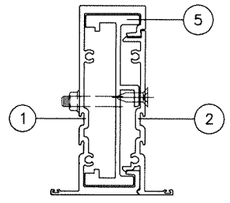
JAMB 'J2'

Ix IN^4	Sx IN^3
11.510	4.549



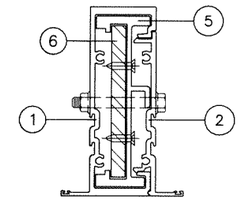
MULLION 'M1'

Ix IN^4	Sx IN^3
7.878	3.092



MULLION 'M2'

Ix IN^4	Sx IN^3
11.787	4.626



MULLION 'M3'

	Ix IN^4	Sx IN^3
ALUMINUM	11.787	4.626
STEEL	2.000	1.000
TOTAL Ix ALUM + Ix STL X 2.9	17.587	

MULLIONS

Sealed: 7/24/2023

FL #18411

JALAL FAROOQ LICENSE No. 81223 STATE OF FLORIDA PROFESSIONAL ENGINEER

AL-FAROOQ CORPORATION
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TEL. (305) 264-8100 FAX. (305) 262-6978

COMP–ANL\W15–71MG

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revisions:

no	date	by	description

date: 08–27–15
scale: –
dr. by: TARIQ
chk. by:

drawing no. W15–71

sheet 4 of 12

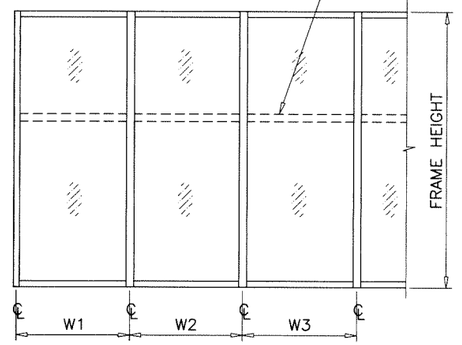
ANCHOR LOAD CAPACITY – PSF
EXT.(+) & INT.(–)

NOMINAL DIMS.		ANCHORS TYPE 'A'											
		1/4" MAX. SHIM				3/8" MAX. SHIM				1/2" MAX. SHIM			
WIDTH (W)	FRAME HEIGHT	A2	A3	A4	A5	A2	A3	A4	A5	A2	A3	A4	A5
30"	90"	145.0	145.0	145.0	145.0	111.4	145.0	145.0	145.0	87.9	131.8	145.0	145.0
36"		122.0	145.0	145.0	145.0	92.8	139.2	145.0	145.0	73.2	109.9	145.0	145.0
42"		104.5	145.0	145.0	145.0	79.5	119.3	145.0	145.0	62.8	94.2	125.6	145.0
48"		91.5	137.2	145.0	145.0	69.6	104.4	139.2	145.0	54.9	82.4	109.9	137.3
54"		81.3	122.0	145.0	145.0	61.9	92.8	123.7	145.0	48.8	73.2	97.7	122.1
60"		73.2	109.8	145.0	145.0	55.7	83.5	111.4	139.2	43.9	65.9	87.9	109.9
66"		66.5	99.8	133.0	145.0	50.6	75.9	101.2	126.5	40.0	59.9	79.9	99.9
72"		61.0	91.5	122.0	145.0	46.4	69.6	92.8	116.0	36.6	54.9	73.2	91.6
30"	96"	137.2	145.0	145.0	145.0	104.4	145.0	145.0	145.0	82.4	123.6	145.0	145.0
36"		114.3	145.0	145.0	145.0	87.0	130.5	145.0	145.0	68.7	103.0	137.3	145.0
42"		98.0	145.0	145.0	145.0	74.6	111.9	145.0	145.0	58.9	88.3	117.7	145.0
48"		85.8	128.6	145.0	145.0	65.3	97.9	130.5	145.0	51.5	77.3	103.0	128.8
54"		76.2	114.3	145.0	145.0	58.0	87.0	116.0	145.0	45.8	68.7	91.6	114.4
60"		68.6	102.9	137.2	145.0	52.2	78.3	104.4	130.5	41.2	61.8	82.4	103.0
66"		62.4	93.5	124.7	145.0	47.5	71.2	94.9	118.6	37.5	56.2	74.9	93.6
72"		57.2	85.8	114.3	142.9	43.5	65.3	87.0	108.8	34.3	51.5	68.7	85.8
30"	102"	129.1	145.0	145.0	145.0	98.3	145.0	145.0	145.0	77.6	116.3	145.0	145.0
36"		107.6	145.0	145.0	145.0	81.9	122.8	145.0	145.0	64.6	96.9	129.3	145.0
42"		92.2	138.4	145.0	145.0	70.2	105.3	140.4	145.0	55.4	83.1	110.8	138.5
48"		80.7	121.1	145.0	145.0	61.4	92.1	122.8	145.0	48.5	72.7	96.9	121.2
54"		71.7	107.6	143.5	145.0	54.6	81.9	109.2	136.5	43.1	64.6	86.2	107.7
60"		64.6	96.8	129.1	145.0	49.1	73.7	98.3	122.8	38.8	58.2	77.6	96.9
66"		58.7	88.0	117.4	145.0	44.7	67.0	89.3	111.7	35.3	52.9	70.5	88.1
30"	108"	122.0	145.0	145.0	145.0	92.8	139.2	145.0	145.0	73.2	109.9	145.0	145.0
36"		101.6	145.0	145.0	145.0	77.3	116.0	145.0	145.0	61.0	91.6	122.1	145.0
42"		87.1	130.7	145.0	145.0	66.3	99.4	132.6	145.0	52.3	78.5	104.6	130.8
48"		76.2	114.3	145.0	145.0	58.0	87.0	116.0	145.0	45.8	68.7	91.6	114.4
54"		67.8	101.6	135.5	145.0	51.6	77.3	103.1	128.9	40.7	61.0	81.4	101.7
60"		61.0	91.5	122.0	145.0	46.4	69.6	92.8	116.0	36.6	54.9	73.2	91.6
66"		55.4	83.2	110.9	138.6	42.2	63.3	84.4	105.5	33.3	49.9	66.6	83.2
30"	114"	115.5	145.0	145.0	145.0	87.9	131.9	145.0	145.0	69.4	104.1	138.8	145.0
36"		96.3	144.4	145.0	145.0	73.3	109.9	145.0	145.0	57.8	86.7	115.6	144.6
42"		82.5	123.8	145.0	145.0	62.8	94.2	125.6	145.0	49.6	74.3	99.1	123.9
48"		72.2	108.3	144.4	145.0	54.9	82.4	109.9	137.4	43.4	65.1	86.7	108.4
54"		64.2	96.3	128.4	145.0	48.8	73.3	97.7	122.1	38.5	57.8	77.1	96.4
60"		57.8	86.7	115.5	144.4	44.0	65.9	87.9	109.9	34.7	52.0	69.4	86.7
30"	120"	109.8	145.0	145.0	145.0	83.5	125.3	145.0	145.0	65.9	98.9	131.8	145.0
36"		91.5	137.2	145.0	145.0	69.6	104.4	139.2	145.0	54.9	82.4	109.9	137.3
42"		78.4	117.6	145.0	145.0	59.7	89.5	119.3	145.0	47.1	70.6	94.2	117.7
48"		68.6	102.9	137.2	145.0	52.2	78.3	104.4	130.5	41.2	61.8	82.4	103.0
54"		61.0	91.5	122.0	145.0	46.4	69.6	92.8	116.0	36.6	54.9	73.2	91.6
60"		54.9	82.3	109.8	137.2	41.8	62.6	83.5	104.4	33.0	49.4	65.9	82.4
30"	126"	104.5	115.0	115.0	115.0	79.5	115.0	115.0	115.0	62.8	94.2	115.0	115.0
36"		87.1	115.0	115.0	115.0	66.3	99.4	115.0	115.0	52.3	78.5	104.6	115.0
42"		74.7	112.0	115.0	115.0	56.8	85.2	113.6	115.0	44.8	67.3	89.7	112.1
48"		65.3	98.0	115.0	115.0	49.7	74.6	99.4	115.0	39.2	58.9	78.5	98.1
54"		58.1	87.1	115.0	115.0	44.2	66.3	88.4	110.5	34.9	52.3	69.8	87.2
30"	132"	99.8	115.0	115.0	115.0	75.9	113.9	115.0	115.0	59.9	89.9	115.0	115.0
36"		83.2	115.0	115.0	115.0	63.3	94.9	115.0	115.0	49.9	74.9	99.9	115.0
42"		71.3	106.9	115.0	115.0	54.2	81.4	108.5	115.0	42.8	64.2	85.6	107.0
48"		62.4	93.5	115.0	115.0	47.5	71.2	94.9	115.0	37.5	56.2	74.9	93.6
54"		55.4	83.2	110.9	115.0	42.2	63.3	84.4	105.5	33.3	49.9	66.6	83.2

INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.

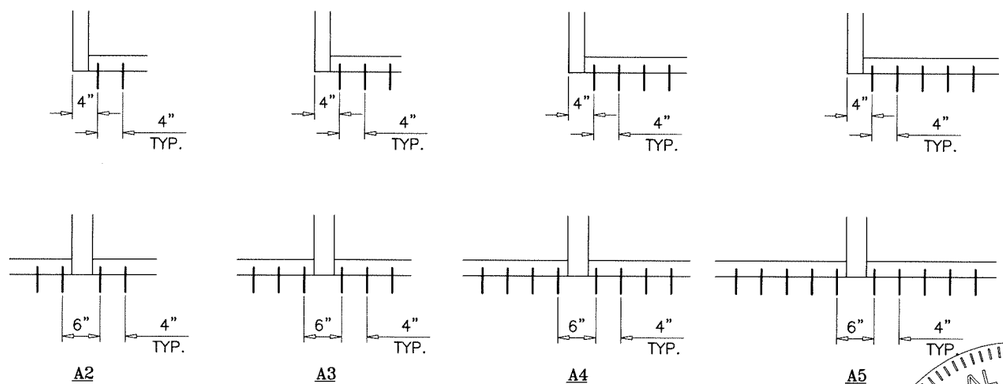
ANCHOR LOAD CAPACITY – PSF
EXT.(+) & INT.(–)

NOMINAL DIMS.		ANCHORS TYPE 'A'											
		1/4" MAX. SHIM				3/8" MAX. SHIM				1/2" MAX. SHIM			
WIDTH (W)	FRAME HEIGHT	A2	A3	A4	A5	A2	A3	A4	A5	A2	A3	A4	A5
30"	138"	95.4	115.0	115.0	115.0	72.6	108.9	115.0	115.0	57.3	86.0	114.6	115.0
36"		79.5	115.0	115.0	115.0	60.5	90.8	115.0	115.0	47.8	71.7	95.5	115.0
42"		68.2	102.3	115.0	115.0	51.9	77.8	103.8	115.0	40.9	61.4	81.9	102.4
48"		59.7	89.5	115.0	115.0	45.4	68.1	90.8	113.5	35.8	53.7	71.7	89.6
30"	144"	91.5	115.0	115.0	115.0	69.6	104.4	115.0	115.0	54.9	82.4	109.9	115.0
36"		76.2	114.3	115.0	115.0	58.0	87.0	115.0	115.0	45.8	68.7	91.6	114.4
42"		65.3	98.0	115.0	115.0	49.7	74.6	99.4	115.0	39.2	58.9	78.5	98.1
48"		57.2	85.8	114.3	115.0	43.5	65.3	87.0	108.8	34.3	51.5	68.7	85.8



WIDTH (W) = W1
AT FRAME JAMB

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



ANCHORS TYPES: SEE SHEET 8 FOR DESCRIPTION

A2 = (2) ANCHORS TYPE 'A' AT EACH SIDE OF JAMB AND MULLION
A3 = (3) ANCHORS TYPE 'A' AT EACH SIDE OF JAMB AND MULLION
A4 = (4) ANCHORS TYPE 'A' AT EACH SIDE OF JAMB AND MULLION
A5 = (5) ANCHORS TYPE 'A' AT EACH SIDE OF JAMB AND MULLION

ANCHORS

Sealed: 7/24/2023

FL #18411

JALAL FAROOQ LICENSE No. 81223 STATE OF FLORIDA PROFESSIONAL ENGINEER

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\W15–71MG

SERIES MG–6000 ALUM WINDOW WALL SYSTEM (L.M.I.)

MR–GLASS DOORS & WINDOWS MANUFACTURING, LLC
8051 N.W. 79th Place
Medley, FL. 33166
Tel. (305) 764–3963 Fax. (305) 470–8285

revisions:

no	date	by	description

date: 08–27–15
scale: –
dr. by: TARIQ
chk. by:

drawing no. W15–71

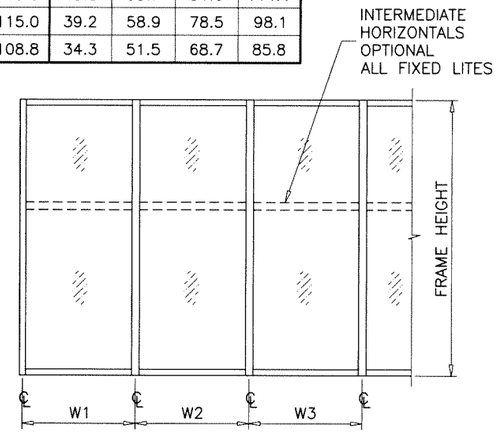
ANCHOR LOAD CAPACITY – PSF
EXT.(+) & INT.(–)

NOMINAL DIMS.		ANCHORS TYPE 'B'											
		1/4" MAX. SHIM				3/8" MAX. SHIM				1/2" MAX. SHIM			
WIDTH (W)	FRAME HEIGHT	B2	B3	B4	B5	B2	B3	B4	B5	B2	B3	B4	B5
30"	90"	145.0	145.0	145.0	145.0	111.4	145.0	145.0	145.0	87.9	131.8	145.0	145.0
36"		145.0	145.0	145.0	145.0	92.8	139.2	145.0	145.0	73.2	109.9	145.0	145.0
42"		134.7	145.0	145.0	145.0	79.5	119.3	145.0	145.0	62.8	94.2	125.6	145.0
48"		117.9	145.0	145.0	145.0	69.6	104.4	139.2	145.0	54.9	82.4	109.9	137.3
54"		104.8	145.0	145.0	145.0	61.9	92.8	123.7	145.0	48.8	73.2	97.7	122.1
60"		94.3	141.4	145.0	145.0	55.7	83.5	111.4	139.2	43.9	65.9	87.9	109.9
66"		85.7	128.6	145.0	145.0	50.6	75.9	101.2	126.5	40.0	59.9	79.9	99.9
72"		78.6	117.9	145.0	145.0	46.4	69.6	92.8	116.0	36.6	54.9	73.2	91.6
30"	96"	145.0	145.0	145.0	145.0	104.4	145.0	145.0	145.0	82.4	123.6	145.0	145.0
36"		145.0	145.0	145.0	145.0	87.0	130.5	145.0	145.0	68.7	103.0	137.3	145.0
42"		126.3	145.0	145.0	145.0	74.6	111.9	145.0	145.0	58.9	88.3	117.7	145.0
48"		110.5	145.0	145.0	145.0	65.3	97.9	130.5	145.0	51.5	77.3	103.0	128.8
54"		98.2	145.0	145.0	145.0	58.0	87.0	116.0	145.0	45.8	68.7	91.6	114.4
60"		88.4	132.6	145.0	145.0	52.2	78.3	104.4	130.5	41.2	61.8	82.4	103.0
66"		80.4	120.5	145.0	145.0	47.5	71.2	94.9	118.6	37.5	56.2	74.9	93.6
72"		73.7	110.5	145.0	145.0	43.5	65.3	87.0	108.8	34.3	51.5	68.7	85.8
30"	102"	145.0	145.0	145.0	145.0	98.3	145.0	145.0	145.0	77.6	116.3	145.0	145.0
36"		138.7	145.0	145.0	145.0	81.9	122.8	145.0	145.0	64.6	96.9	129.3	145.0
42"		118.9	145.0	145.0	145.0	70.2	105.3	140.4	145.0	55.4	83.1	110.8	138.5
48"		104.0	145.0	145.0	145.0	61.4	92.1	122.8	145.0	48.5	72.7	96.9	121.2
54"		92.4	138.7	145.0	145.0	54.6	81.9	109.2	136.5	43.1	64.6	86.2	107.7
60"		83.2	124.8	145.0	145.0	49.1	73.7	98.3	122.8	38.8	58.2	77.6	96.9
66"		75.6	113.5	145.0	145.0	44.7	67.0	89.3	111.7	35.3	52.9	70.5	88.1
30"	108"	145.0	145.0	145.0	145.0	92.8	139.2	145.0	145.0	73.2	109.9	145.0	145.0
36"		131.0	145.0	145.0	145.0	77.3	116.0	145.0	145.0	61.0	91.6	122.1	145.0
42"		112.3	145.0	145.0	145.0	66.3	99.4	132.6	145.0	52.3	78.5	104.6	130.8
48"		98.2	145.0	145.0	145.0	58.0	87.0	116.0	145.0	45.8	68.7	91.6	114.4
54"		87.3	131.0	145.0	145.0	51.6	77.3	103.1	128.9	40.7	61.0	81.4	101.7
60"		78.6	117.9	145.0	145.0	46.4	69.6	92.8	116.0	36.6	54.9	73.2	91.6
66"		71.4	107.2	142.9	145.0	42.2	63.3	84.4	105.5	33.3	49.9	66.6	83.2
30"	114"	145.0	145.0	145.0	145.0	87.9	131.9	145.0	145.0	69.4	104.1	138.8	145.0
36"		124.1	145.0	145.0	145.0	73.3	109.9	145.0	145.0	57.8	86.7	115.6	144.6
42"		106.3	145.0	145.0	145.0	62.8	94.2	125.6	145.0	49.6	74.3	99.1	123.9
48"		93.1	139.6	145.0	145.0	54.9	82.4	109.9	137.4	43.4	65.1	86.7	108.4
54"		82.7	124.1	145.0	145.0	48.8	73.3	97.7	122.1	38.5	57.8	77.1	96.4
60"		74.4	111.7	145.0	145.0	44.0	65.9	87.9	109.9	34.7	52.0	69.4	86.7
30"	120"	141.4	145.0	145.0	145.0	83.5	125.3	145.0	145.0	65.9	98.9	131.8	145.0
36"		117.9	145.0	145.0	145.0	69.6	104.4	139.2	145.0	54.9	82.4	109.9	137.3
42"		101.0	145.0	145.0	145.0	59.7	89.5	119.3	145.0	47.1	70.6	94.2	117.7
48"		88.4	132.6	145.0	145.0	52.2	78.3	104.4	130.5	41.2	61.8	82.4	103.0
54"		78.6	117.9	145.0	145.0	46.4	69.6	92.8	116.0	36.6	54.9	73.2	91.6
60"		70.7	106.1	141.4	145.0	41.8	62.6	83.5	104.4	33.0	49.4	65.9	82.4
30"	126"	115.0	115.0	115.0	115.0	79.5	115.0	115.0	115.0	62.8	94.2	115.0	115.0
36"		112.3	115.0	115.0	115.0	66.3	99.4	115.0	115.0	52.3	78.5	104.6	115.0
42"		96.2	115.0	115.0	115.0	56.8	85.2	113.6	115.0	44.8	67.3	89.7	112.1
48"		84.2	115.0	115.0	115.0	49.7	74.6	99.4	115.0	39.2	58.9	78.5	98.1
54"		74.8	112.3	115.0	115.0	44.2	66.3	88.4	110.5	34.9	52.3	69.8	87.2
30"	132"	115.0	115.0	115.0	115.0	75.9	113.9	115.0	115.0	59.9	89.9	115.0	115.0
36"		107.2	115.0	115.0	115.0	63.3	94.9	115.0	115.0	49.9	74.9	99.9	115.0
42"		91.8	115.0	115.0	115.0	54.2	81.4	108.5	115.0	42.8	64.2	85.6	107.0
48"		80.4	115.0	115.0	115.0	47.5	71.2	94.9	115.0	37.5	56.2	74.9	93.6
54"		71.4	107.2	142.9	115.0	42.2	63.3	84.4	105.5	33.3	49.9	66.6	83.2

INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.

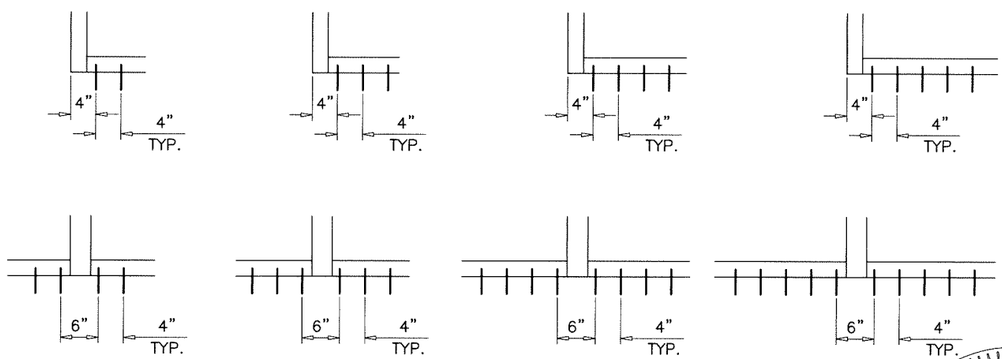
ANCHOR LOAD CAPACITY – PSF
EXT.(+) & INT.(–)

NOMINAL DIMS.		ANCHORS TYPE 'B'											
		1/4" MAX. SHIM				3/8" MAX. SHIM				1/2" MAX. SHIM			
WIDTH (W)	FRAME HEIGHT	B2	B3	B4	B5	B2	B3	B4	B5	B2	B3	B4	B5
30"	138"	115.0	115.0	115.0	115.0	72.6	108.9	115.0	115.0	57.3	86.0	114.6	115.0
36"		102.5	115.0	115.0	115.0	60.5	90.8	115.0	115.0	47.8	71.7	95.5	115.0
42"		87.9	115.0	115.0	115.0	51.9	77.8	103.8	115.0	40.9	61.4	81.9	102.4
48"		76.9	115.0	115.0	115.0	45.4	68.1	90.8	113.5	35.8	53.7	71.7	89.6
30"	144"	115.0	115.0	115.0	115.0	69.6	104.4	115.0	115.0	54.9	82.4	109.9	115.0
36"		98.2	115.0	115.0	115.0	58.0	87.0	115.0	115.0	45.8	68.7	91.6	114.4
42"		84.2	115.0	115.0	115.0	49.7	74.6	99.4	115.0	39.2	58.9	78.5	98.1
48"		73.7	110.5	115.0	115.0	43.5	65.3	87.0	108.8	34.3	51.5	68.7	85.8



WIDTH (W) = W1
AT FRAME JAMB

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



ANCHORS TYPES: SEE SHEET 8 FOR DESCRIPTION

B2 = (2) ANCHORS TYPE 'B' AT EACH SIDE OF JAMB AND MULLION
B3 = (3) ANCHORS TYPE 'B' AT EACH SIDE OF JAMB AND MULLION
B4 = (4) ANCHORS TYPE 'B' AT EACH SIDE OF JAMB AND MULLION
B5 = (5) ANCHORS TYPE 'B' AT EACH SIDE OF JAMB AND MULLION

ANCHORS

Sealed: 7/24/2023

FL #18411

JALAL FAROOQ LICENSE No. 81223 STATE OF FLORIDA PROFESSIONAL ENGINEER

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
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COMP-ANL\W15-71MG

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revisions:			
no	date	by	description

date: 08-27-15
scale: –
dr. by: TARIQ
chk. by:

drawing no. W15–71

sheet 6 of 12

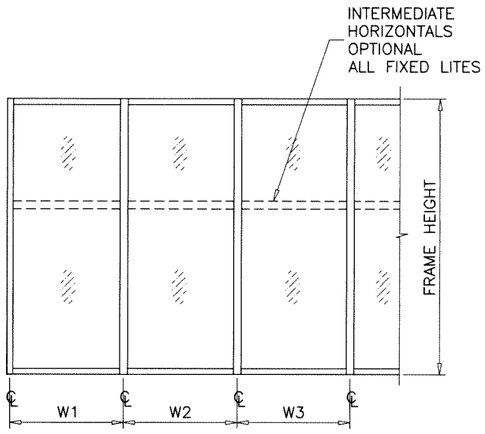
ANCHOR LOAD CAPACITY – PSF
EXT.(+) & INT.(–)

NOMINAL DIMS.		ANCHORS TYPE 'C' 1/4" MAX. SHIM		
WIDTH (W)	FRAME HEIGHT	C2	C3	C4
30"	90"	145.0	145.0	145.0
36"		145.0	145.0	145.0
42"		136.5	145.0	145.0
48"		119.5	145.0	145.0
54"		106.2	145.0	145.0
60"		95.6	143.4	145.0
66"		86.9	130.3	145.0
72"		79.6	119.5	145.0
30"	96"	145.0	145.0	145.0
36"		145.0	145.0	145.0
42"		128.0	145.0	145.0
48"		112.0	145.0	145.0
54"		99.6	145.0	145.0
60"		89.6	134.4	145.0
66"		81.5	122.2	145.0
72"		74.7	112.0	145.0
30"	102"	145.0	145.0	145.0
36"		140.5	145.0	145.0
42"		120.5	145.0	145.0
48"		105.4	145.0	145.0
54"		93.7	140.5	145.0
60"		84.3	126.5	145.0
66"		76.7	115.0	145.0
30"	108"	145.0	145.0	145.0
36"		132.7	145.0	145.0
42"		113.8	145.0	145.0
48"		99.6	145.0	145.0
54"		88.5	132.7	145.0
60"		79.6	119.5	145.0
66"		72.4	108.6	144.8
30"	114"	145.0	145.0	145.0
36"		125.8	145.0	145.0
42"		107.8	145.0	145.0
48"		94.3	141.5	145.0
54"		83.8	125.8	145.0
60"		75.5	113.2	145.0
30"	120"	143.4	145.0	145.0
36"		119.5	145.0	145.0
42"		102.4	145.0	145.0
48"		89.6	134.4	145.0
54"		79.6	119.5	145.0
60"		71.7	107.5	143.4
30"	126"	115.0	115.0	115.0
36"		113.8	115.0	115.0
42"		97.5	115.0	115.0
48"		85.3	115.0	115.0
54"		75.9	113.8	115.0
30"	132"	115.0	115.0	115.0
36"		108.6	115.0	115.0
42"		93.1	115.0	115.0
48"		81.5	115.0	115.0
54"		72.4	108.6	115.0

ANCHOR LOAD CAPACITY – PSF
EXT.(+) & INT.(–)

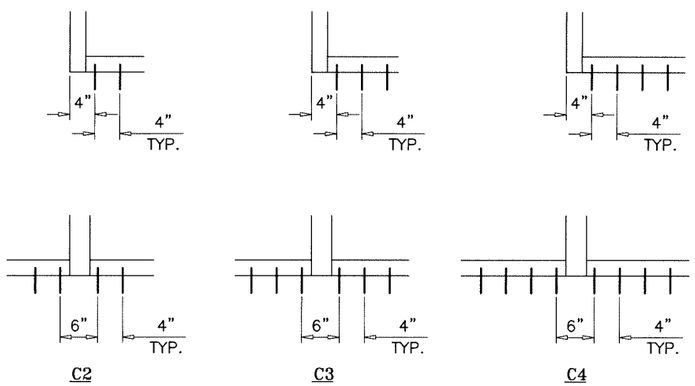
NOMINAL DIMS.		ANCHORS TYPE 'C' 1/4" MAX. SHIM		
WIDTH (W)	FRAME HEIGHT	C2	C3	C4
30"	138"	115.0	115.0	115.0
36"		103.9	115.0	115.0
42"		89.0	115.0	115.0
48"		77.9	115.0	115.0
30"	144"	115.0	115.0	115.0
36"		99.6	115.0	115.0
42"		85.3	115.0	115.0
48"		74.7	112.0	115.0

INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.



WIDTH (W) = W1
AT FRAME JAMB

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



ANCHORS TYPES: SEE SHEET 8 FOR DESCRIPTION

C2 = (2) ANCHORS TYPE 'C' AT EACH SIDE OF JAMB AND MULLION
C3 = (3) ANCHORS TYPE 'C' AT EACH SIDE OF JAMB AND MULLION
C4 = (4) ANCHORS TYPE 'C' AT EACH SIDE OF JAMB AND MULLION

ANCHORS

Sealed: 7/24/2023

FL #18411

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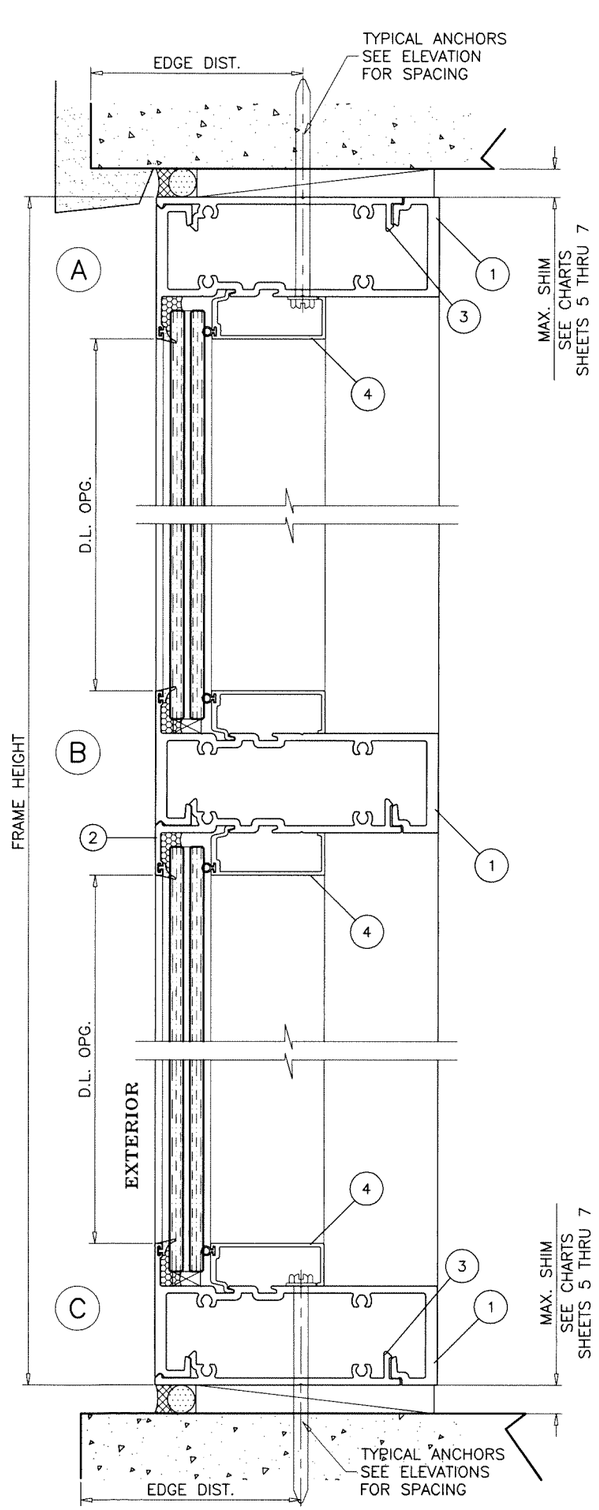
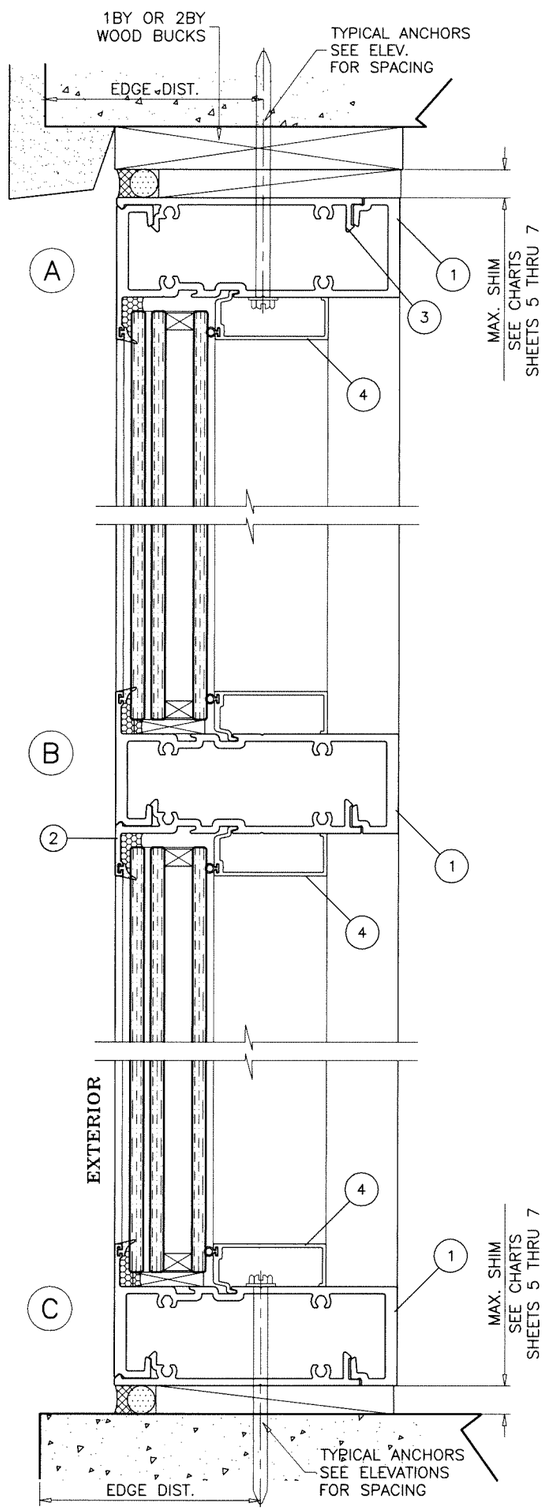
revisions:

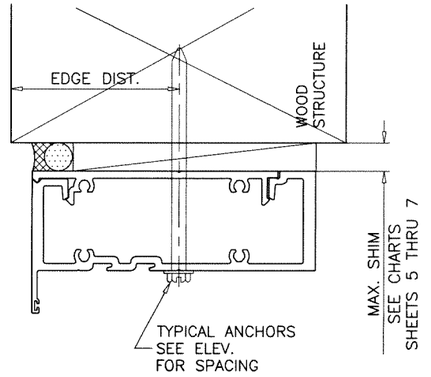
no	date	by	description

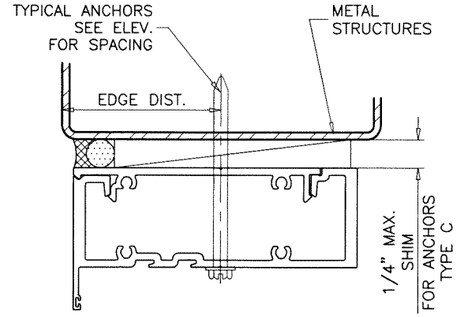
date: 08-27-15
scale: –
dr. by: TARIQ
chk. by:

drawing no. W15-71









WOOD BUCKS AND METAL STRUCTURE NOT BY 'MR-GLASS' MUST SUSTAIN LOADS IMPOSED BY GLAZING SYSTEM AND TRANSFER THEM TO THE BUILDING STRUCTURE.

TYPICAL ANCHORS: SEE ELEV. FOR SPACING

TYPE 'A'– **5/16" DIA ULTRACON BY 'DEWALT'** (Fu=177 KSI, Fy=155 KSI)
INTO WOOD STRUCTURES
2" MIN. PENETRATION INTO WOOD (HEAD/SILL/JAMBS)

THRU 1BY OR 2BY WOOD BUCKS INTO CONCRETE
1-1/4" MIN. EMBED INTO CONCRETE (HEAD/SILL/JAMBS)
1-1/4" MIN. EMBED INTO BLOCKS (JAMBS)

ANCHOR EDGE DISTANCES
INTO CONCRETE AND BLOCKS = 2-1/2" MIN.
INTO WOOD STRUCTURE = 1-1/4" MIN.

TYPE 'B'– **5/16" DIA ULTRACON BY 'DEWALT'** (Fu=177 KSI, Fy=155 KSI)
DIRECTLY INTO CONCRETE
1-3/4" MIN. EMBED INTO CONC. (HEAD/SILL/JAMBS)
1-3/4" MIN. EMBED INTO GROUT FILLED-BLOCKS (JAMBS)

ANCHOR EDGE DISTANCES
INTO CONCRETE AND BLOCKS = 2-1/2" MIN.

TYPE 'C'– **#14 SMS OR SELF DRILLING SCREWS ST/ST** (GRADE 2 CRS)
INTO METAL STRUCTURES (HEAD/SILL/JAMBS)
(3) THREADS MIN. TO EXTEND BEYOND METAL THICKNESS
ALUMINUM: 1/8" THK. MIN. (6063-T5 MIN.)
STEEL: 1/8" THK. MIN. (Fy = 36 KSI MIN.)
(STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

ANCHOR EDGE DISTANCES
INTO METAL STRUCTURE = 5/8" MIN.

WOOD AT HEAD, SILL OR JAMBS SG = 0.55 MIN.
CONCRETE AT HEAD, SILL OR JAMBS f'c = 3000 PSI MIN.
C-90 GROUT FILLED BLOCK AT JAMBS f'm = 2000 PSI MIN.

Sealed: 7/24/2023

FL #18411

JALAL FAROOQ LICENSE No. 81223 STATE OF FLORIDA PROFESSIONAL ENGINEER

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

COMP-ANL\W15-71MG

SERIES MG-6000 ALUM WINDOW WALL SYSTEM (L.M.I.)

MR-GLASS DOORS & WINDOWS MANUFACTURING, LLC
8051 N.W. 79th Place
Medley, FL. 33166
Tel. (305) 764-3963 Fax. (305) 470-8285

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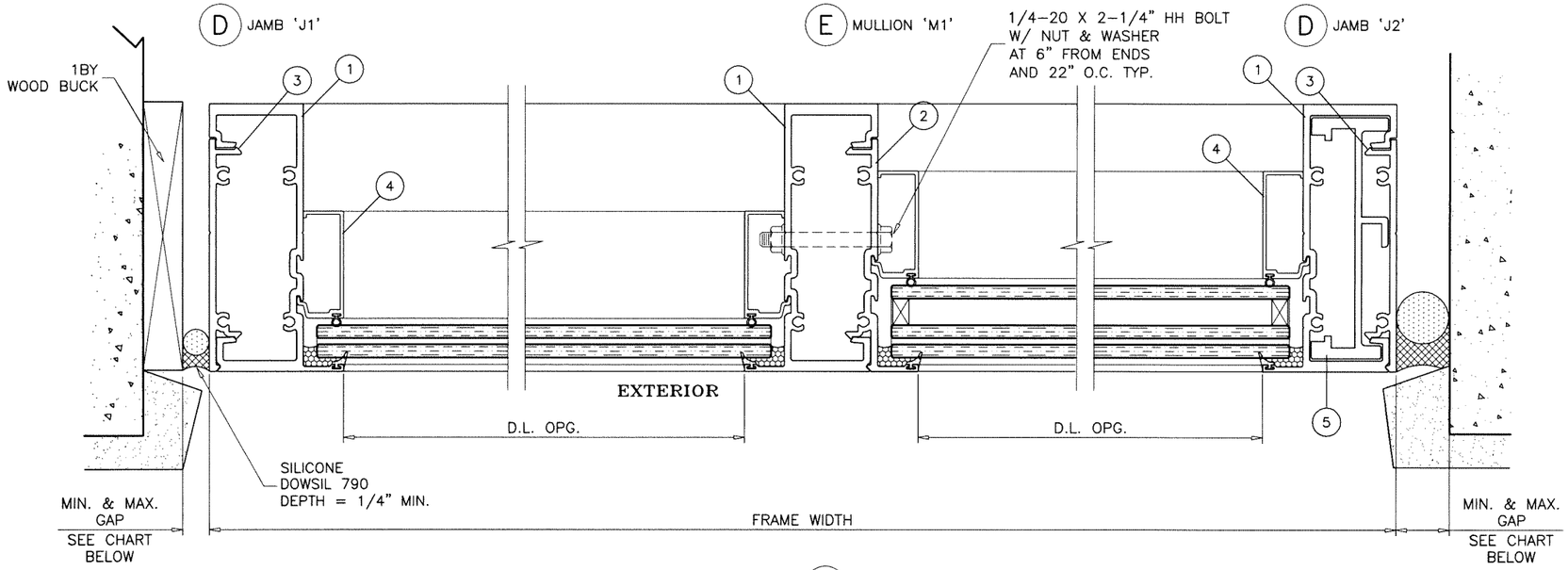


JAMB 'J1'

Ix IN^4	Sx IN^3
7.602	3.005

JAMB 'J2'

Ix IN^4	Sx IN^3
11.510	4.549

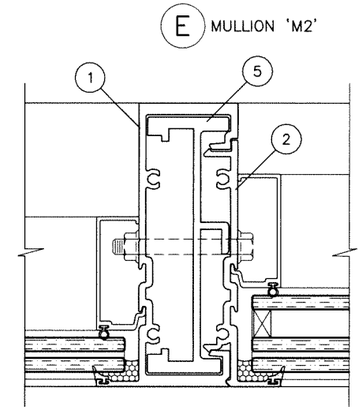
MAX. FRAME HEIGHT	MAX. GAPS FOR UNANCHORED JAMBS			
	JAMB 'J1'		JAMB 'J2'	
	MIN.	MAX.	MIN.	MAX.
96"	3/8"	1"	–	–
102"	3/8"	1"	–	–
108"	3/8"	1"	–	–
120"	3/8"	1"	–	–
132"	–	–	3/8"	1"
144"	–	–	3/8"	1"

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

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

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

REFER TO SHEETS 4 THRU 7 FOR SELECTION OF MULLION/JAMB WITH REINFORCED & UNREINFORCED FRAMES.



SEE SHEETS 3 & 4 FOR MULLION CAPACITY

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FL #18411

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afc
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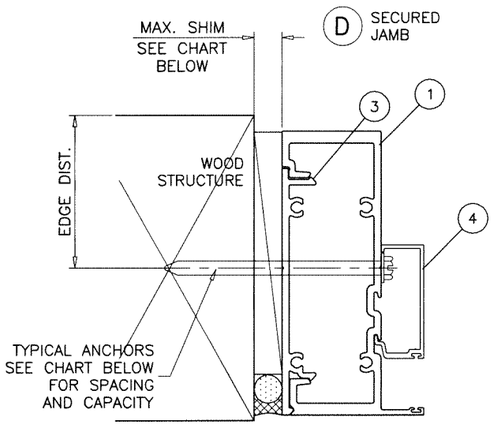
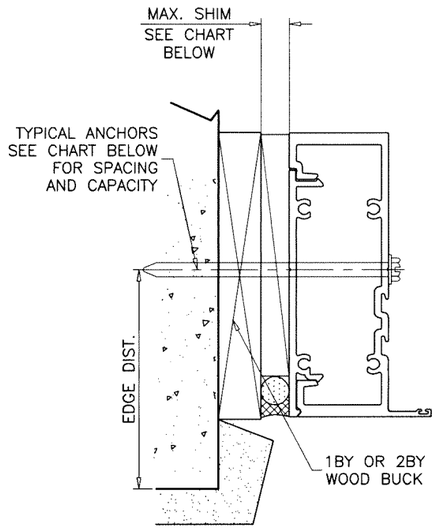
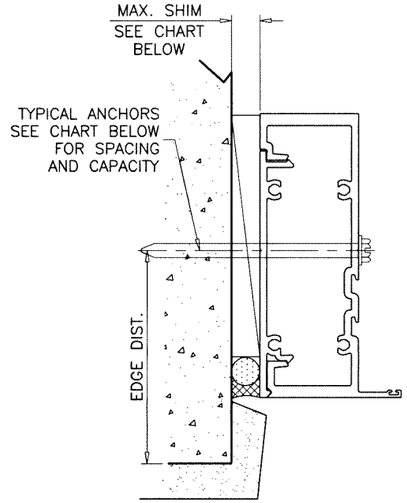
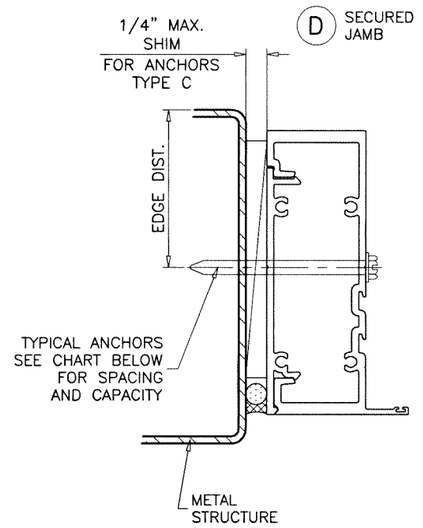
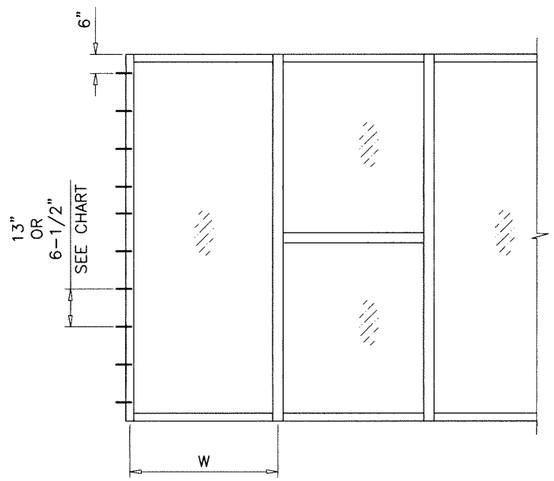








JAMB ANCHORS DESIGN LOAD CAPACITY – PSF					
	13" MAX. SPACING			6-1/2" SPACING	
	1/4" MAX. SHIM	3/8" MAX. SHIM	1/2" MAX. SHIM	3/8" MAX. SHIM	1/2" MAX. SHIM
WIDTH (W)	EXT.(+) INT.(–)	EXT.(+) INT.(–)	EXT.(+) INT.(–)	EXT.(+) INT.(–)	EXT.(+) INT.(–)
30"	145.0	145.0	145.0	145.0	145.0
36"	145.0	145.0	126.8	145.0	145.0
42"	145.0	137.7	108.7	145.0	145.0
48"	145.0	120.5	95.1	145.0	145.0
54"	140.7	107.1	84.5	145.0	145.0
60"	126.6	96.4	76.1	145.0	145.0
66"	115.1	87.6	69.1	145.0	138.3
72"	105.5	80.3	63.4	145.0	126.8



SECURED JAMBS

(REINFORCING NOT REQUIRED)

Sealed: 7/24/2023

FL #18411

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AL-FAROOQ CORPORATION
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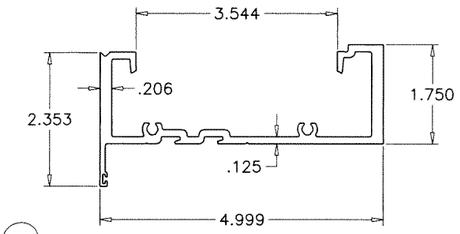
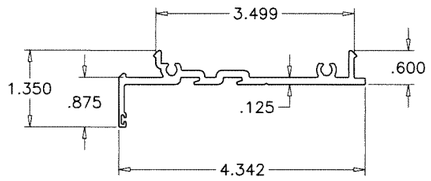
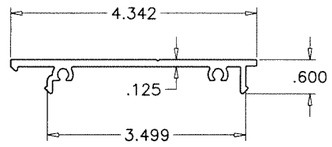
ITEM #	PART #	REQ'D	DESCRIPTION	MATERIAL	MANF. / SUPPLIER / REMARKS
1	MRG-1	AS REQ'D	HEAD, INTERM., SILL, JAMB AND MULLION	6063-T6	–
2	MRG-2	AS REQ'D	FIN SNAP	6063-T6	–
3	MRG-3	AS REQ'D	FLAT SNAP	6063-T6	–
4	MRG-5	AS REQ'D	GLASS STOP	6063-T6	–
5	MRG-?	AS REQ'D	MULLION STIFFENER	6063-T6	–
6	–	–	MULLION STIFFENER	STEEL	–
7	E238	AS REQ'D	GASKET (AT INTERIOR), BULB TPE, BASE POLYPROPYLENE	–	ULTRAFAB
8	–	AS REQ'D	SPACER / OUTER GASKET (BULB SANTOPRENE, BASE POLYPROPYLENE)	–	CENTRAL PLASTICS INC.
9	–	2/ LITE	SETTING BLOCKS (3/8" X 1/4" X 4" LG.)	EPDM	TREMCO, DUROMETER 80±5 SHORE A
10	–	2/ LITE	SETTING BLOCKS (1 1/4" X 1/4" X 4" LG.)	EPDM	TREMCO, DUROMETER 80±5 SHORE A
11	#12 X 1 1/2"	4/CORNER	FRAME ASSEMBLY SCREWS	ST. STEEL	HEX. HEAD MACHINE SCREW



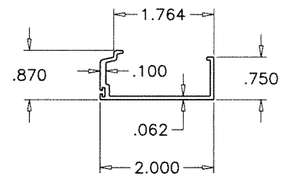
1 HEAD/SILL/JAMB/INTERMEDIATE & MULLION



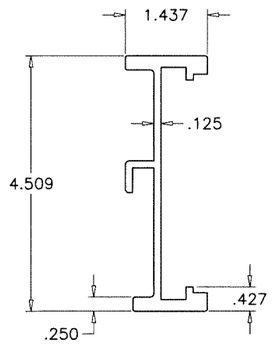
2 FIN SNAP



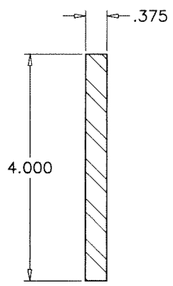
3 FLAT SNAP



4 GLASS STOP



5 MULLION STIFFENER



HR 36 KSI
OR
CR 70 KSI
SEE MULLION CHARTS

6 MULLION STIFFENER

SEALANTS:

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

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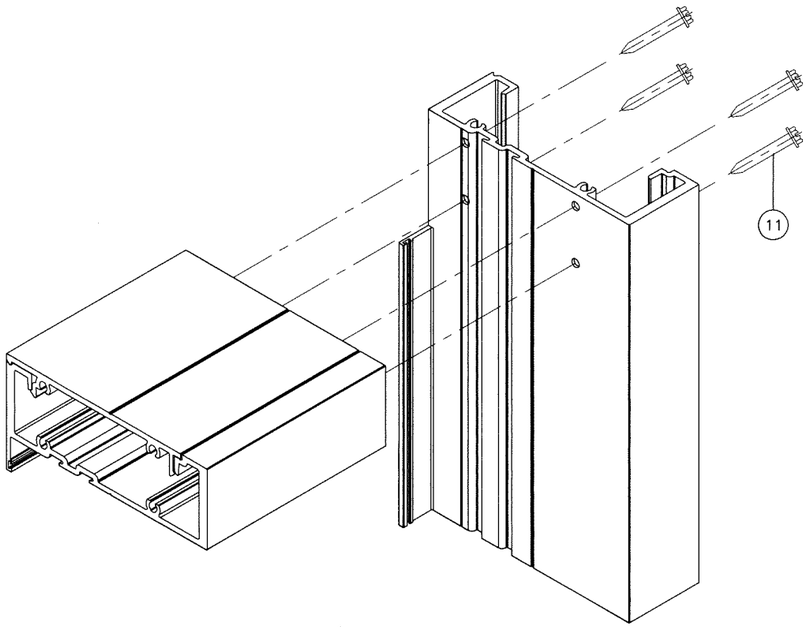
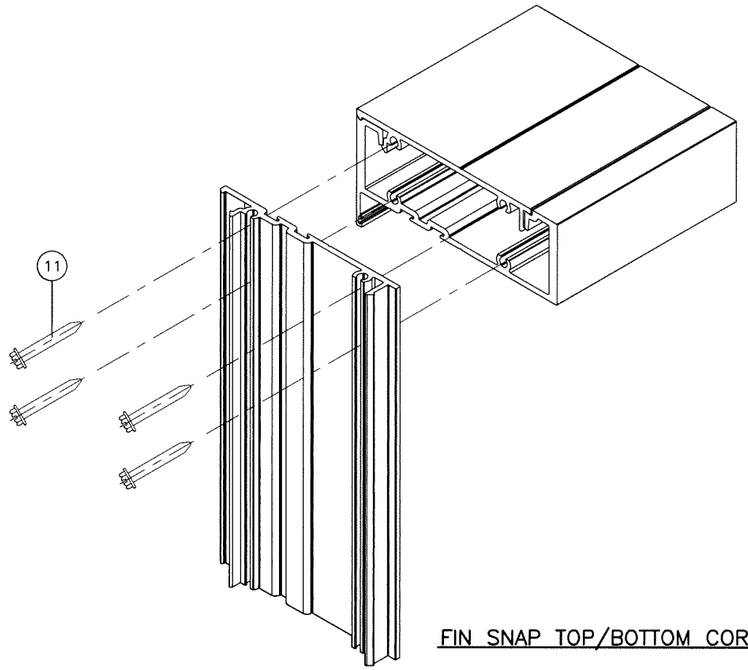
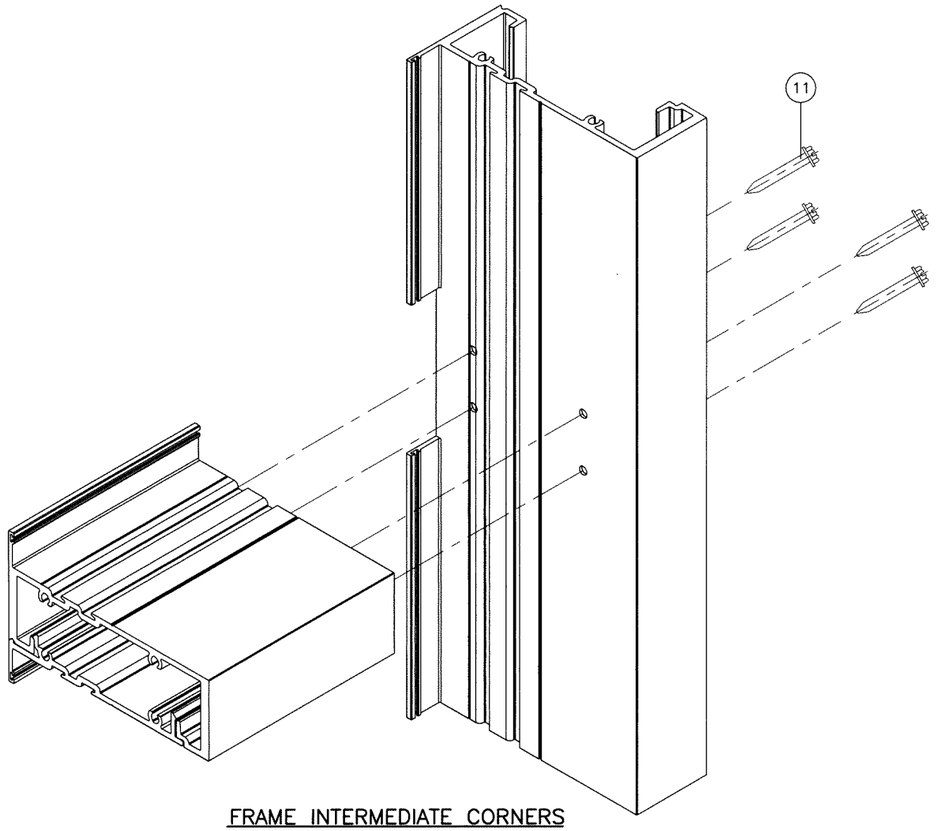


FRAME TOP/BOTTOM CORNERS



FIN SNAP TOP/BOTTOM CORNERS



FRAME INTERMEDIATE CORNERS

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