



Product Approval
USER: Public User

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OFFICE OF THE SECRETARY

FL #	FL41889-R1	
Application Type	Revision	
Code Version	2023	
Application Status	Approved	
Comments		
Archived	<input type="checkbox"/>	
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	Windows	
Subcategory	Fixed	
Compliance Method	Evaluation Report from a Florida Registered Architect or a Licensed Florida Professional Engineer <input type="checkbox"/> 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 <input checked="" type="checkbox"/> Validation Checklist - Hardcopy Received	
Certificate of Independence	FL41889 R1 COI SS - Certificate of Independence 2023.pdf	
Referenced Standard and Year (of Standard)	<u>Standard</u>	<u>Year</u>
	TAS 201	1994
	TAS 202	1994
	TAS 203	1994
Equivalence of Product Standards		
Certified By		

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 10/18/2023

Summary of Products

FL #	Model, Number or Name	Description
41889.1	Series MG-350 Aluminum Fixed Window	Large missile impact resistant aluminum fixed window
Limits of Use Approved for use in HVHZ: Yes Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: +65/-65 Other: See attached drawing 23-03F for span vs. load combination and installation details		Installation Instructions FL41889 R1 II SS - MG350 FIXED (LMI) - DWG 23-03F 2023.pdf Verified By: Jalal Farooq PE # 81223 Created by Independent Third Party: Yes Evaluation Reports FL41889 R1 AE SS - MG350 FIXED (LMI) - PAE 2023.pdf Created by Independent Third Party: Yes

[Back](#) [Next](#)

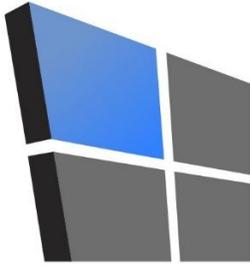
Contact Us :: 2601 Blair Stone Road, Tallahassee FL 32399 Phone: 850-487-1824

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Product Approval Accepts:





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,

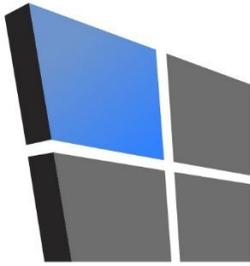
As the design engineer retained to prepare the product approval(s) associated with this letter as shown below on this same web page, I do hereby declare that I do not have and will not have any financial interest in any company manufacturing or distributing the referenced product(s), nor do I have or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



AL-FAROOQ CORPORATION

CONSULTING ENGINEERS & PRODUCT DEVELOPMENT

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

FL 41889

Date: 07/21/2023

Detailed Product Description:

Manufacturer: MR-GLASS DOORS & WINDOWS MANUFACTURING LLC.

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

Model Name: SERIES MG-350 ALUMINUM FIXED WINDOW

Maximum Load: +65 PSF, -65 PSF (Large Missile Impact)

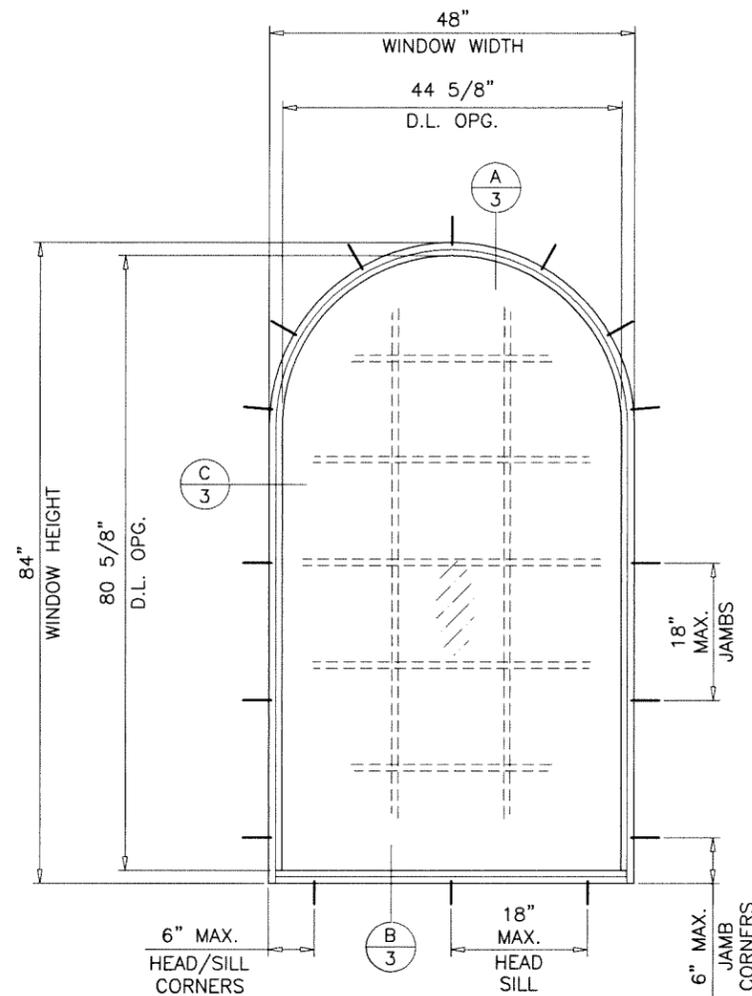
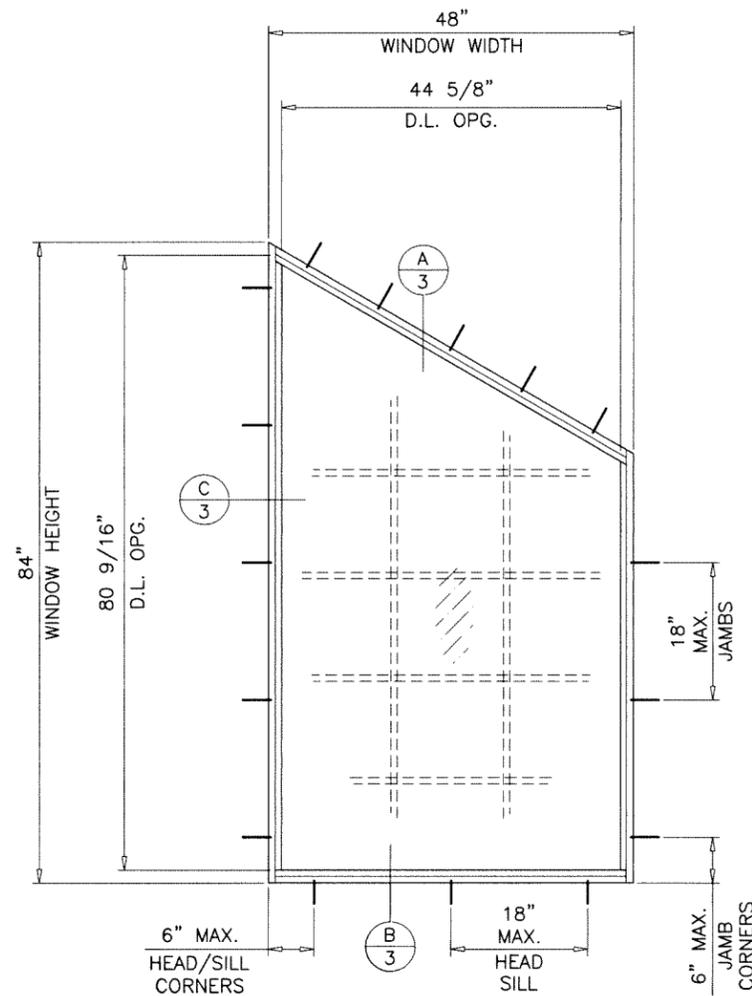
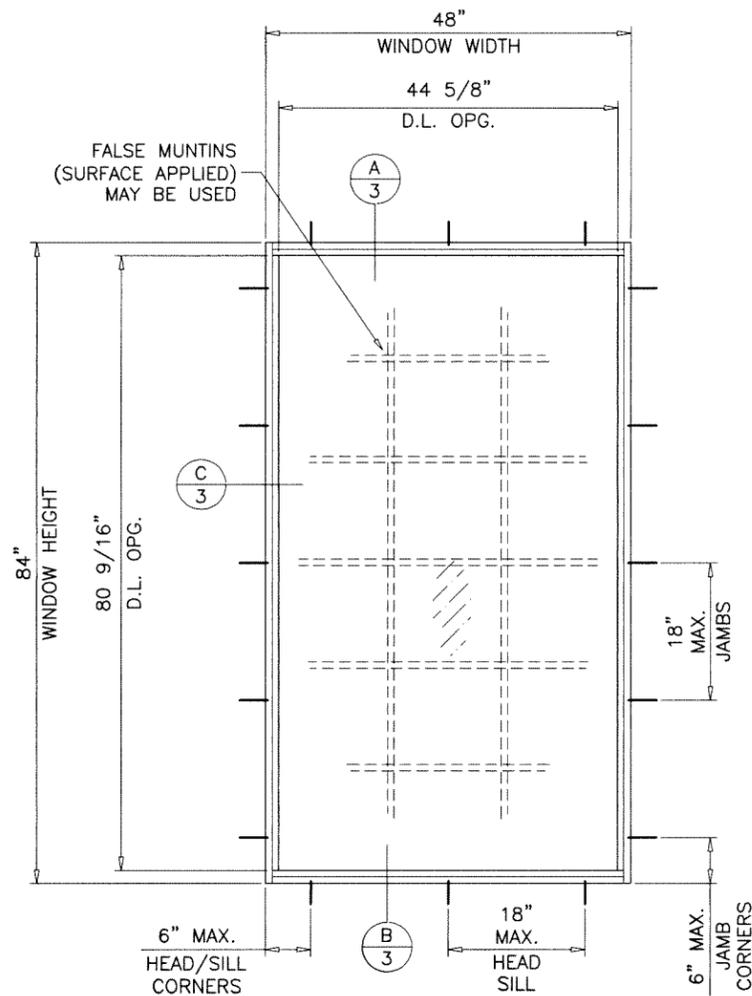
Installation Drawings # 23-03F

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 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
Mandatory Tests (Tested in accordance with AAMA 101/I.S.2/NAFS/TAS-202)					
TEST	DESCRIPTION	TEST LOCATION	TEST REPORT	TEST REPORT #	Test Sealed by
ASTM E283	Air Infiltration Leakage	Hurricane Engineering & Testing, Inc	11/09/2022 12/21/2022 01/11/2023	HETI-22-7232 HETI-22-7281 HETI-23-8000	Dr. Ram Tewari, PE
ASTM E331 OR ASTM 547 & TAS 202	Water Penetration	Hurricane Engineering & Testing, Inc	11/09/2022 12/21/2022 01/11/2023	HETI-22-7232 HETI-22-7281 HETI-23-8000	Dr. Ram Tewari, PE
ASTM E330 & TAS 202	Uniform Static Air Press.	Hurricane Engineering & Testing, Inc	11/09/2022 12/21/2022 01/11/2023	HETI-22-7232 HETI-22-7281 HETI-23-8000	Dr. Ram Tewari, PE

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 ASTME1886/1996 ANSI Z97.1	Large Missile Impact & Cyclic	Hurricane Engineering & Testing, Inc	11/09/2022 12/21/2022 01/11/2023	HETI-22-7232 HETI-22-7281 HETI-23-8000	Dr. Ram Tewari, PE

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 Al-Farooq Corporation	PE # 81223 EB # 3538	
		Sealed: 7/21/2023



TYPICAL ELEVATION
TESTED UNITS

MG-350
ALUMINUM FIXED WINDOW

DESIGN LOAD RATINGS FOR THESE WINDOWS TO BE AS PER CHARTS SHOWN ON SHEET 2.

APPROVAL APPLIES TO SINGLE UNITS OR SIDE BY SIDE COMBINATIONS OF FIX./FIX. OR FIXED WITH OTHER WINDOW TYPES IN MODULES OF TWO OR MORE WINDOWS USING F.B.C. APPROVED MULLIONS IN BETWEEN.

LOWER DESIGN PRESSURE FROM WINDOWS OR MULLION APPROVAL WILL APPLY TO ENTIRE SYSTEM.

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.

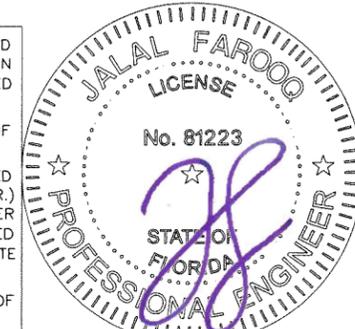
WINDOWS COMPLY WITH REQUIREMENTS OF ANSI Z97.1.

THESE WINDOWS ARE RATED FOR LARGE & SMALL MISSILE IMPACT. SHUTTERS ARE NOT REQUIRED.

Sealed: 7/21/2023

FL #41889

- 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.



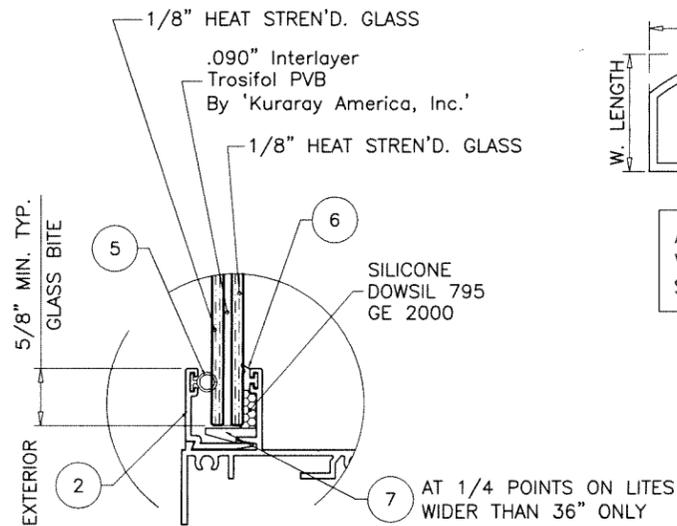
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AL-FAROOQ CORPORATION
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9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100
WWW.AFCENG.COM
FBPE #3538
COMP-ANL\23-03F-MG

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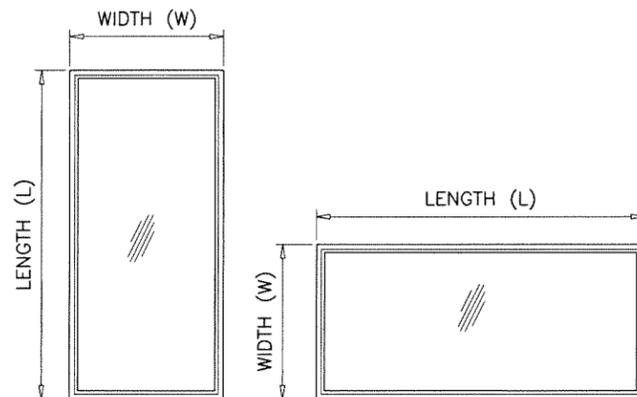
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dr. by:	TARIQ		
chk. by:			
drawing no.	23-03F		
sheet	1 of 5		

DESIGN LOAD CAPACITY - PSF			
MAX. FRAME DIMS.		5/16" LAM. GLASS	
WIDTH (W)	LENGTH (L)	EXT.(+)	INT.(-)
19-1/8"	26"	65.0	65.0
26-1/2"		65.0	65.0
37"		65.0	65.0
53-1/8"		65.0	65.0
19-1/8"	38-3/8"	65.0	65.0
26-1/2"		65.0	65.0
37"		65.0	65.0
53-1/8"		65.0	65.0
19-1/8"	50-5/8"	65.0	65.0
26-1/2"		65.0	65.0
37"		65.0	65.0
53-1/8"		61.6	61.6
19-1/8"	56"	65.0	65.0
26-1/2"		65.0	65.0
37"		65.0	65.0
53-1/8"		58.7	58.7
19-1/8"	63"	65.0	65.0
26-1/2"		65.0	65.0
37"		65.0	65.0
53-1/8"		58.7	58.7
19-1/8"	72"	65.0	65.0
26-1/2"		65.0	65.0
37"		65.0	65.0
53-1/8"		58.7	58.7
19-1/8"	76"	65.0	65.0
26-1/2"		65.0	65.0
37"		65.0	65.0

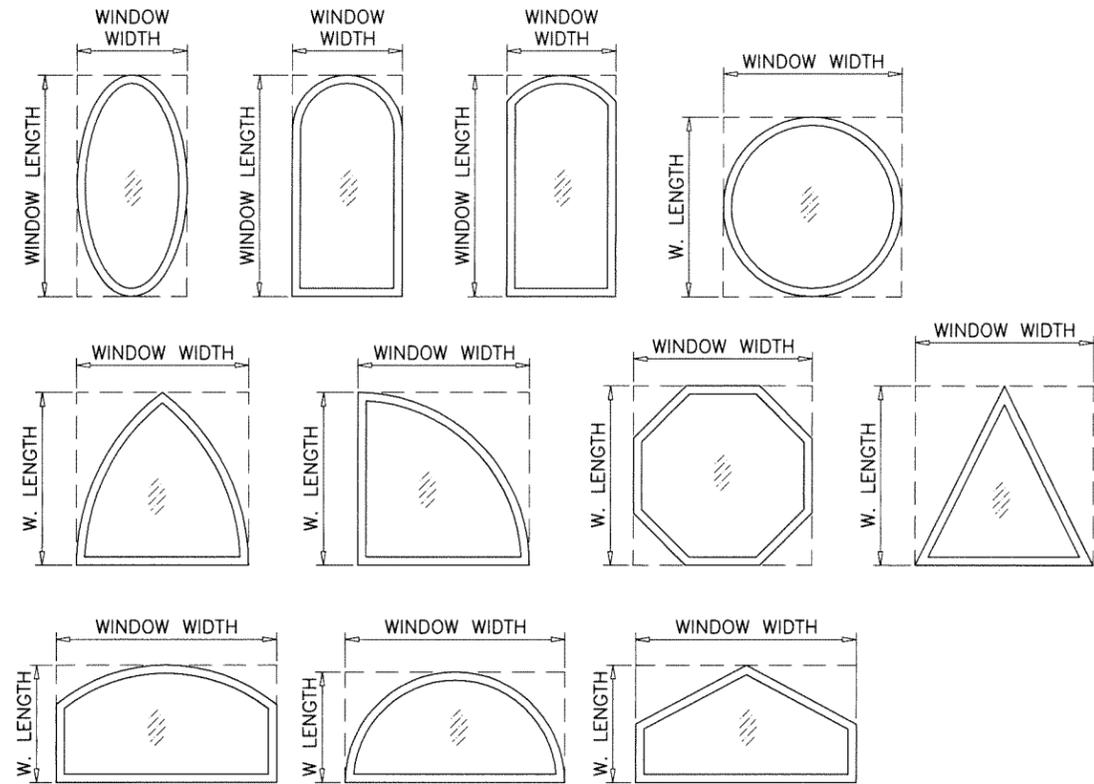
DESIGN LOAD CAPACITY - PSF				
MAX. FRAME DIMS.		5/16" LAM. GLASS		
WIDTH (W)	LENGTH (L)	EXT.(+)	INT.(-)	
24"	48"	65.0	65.0	
30"		65.0	65.0	
36"		65.0	65.0	
42"		65.0	65.0	
48"		65.0	65.0	
54"		65.0	65.0	
60"		65.0	65.0	
66"		65.0	65.0	
72"		65.0	65.0	
78"		65.0	65.0	
84"	65.0	65.0		
24"	60"	65.0	65.0	
30"		65.0	65.0	
36"		65.0	65.0	
42"		65.0	65.0	
48"		65.0	65.0	
54"		57.8	57.8	
60"		52.0	52.0	
66"		52.0	52.0	
24"		72"	65.0	65.0
30"			65.0	65.0
36"	65.0		65.0	
42"	65.0		65.0	
48"	65.0		65.0	
54"	57.8		57.8	
24"	76"		65.0	65.0
30"			65.0	65.0
36"			65.0	65.0
42"			65.0	65.0
48"		65.0	65.0	
53"		58.9	58.9	
24"		84"	65.0	65.0
30"			65.0	65.0
36"			65.0	65.0
42"			65.0	65.0
48"	96"	65.0	65.0	
24"		65.0	65.0	
30"		65.0	65.0	
36"		65.0	65.0	
42"	108"	65.0	65.0	
24"		65.0	65.0	
30"		65.0	65.0	
32"		65.0	65.0	
24"	120"	65.0	65.0	
30"		65.0	65.0	
32"		65.0	65.0	
24"	132"	65.0	65.0	
30"		65.0	65.0	
24"	144"	65.0	65.0	
28"		65.0	65.0	
24"	168"	65.0	65.0	



GLAZING DETAIL
5/16" OVERALL LAM. GLASS



NOTE:
WIDTH AND LENGTH DIMENSIONS CAN BE
ORIENTED VERTICALLY OR HORIZONTALLY
AS SHOWN ABOVE.

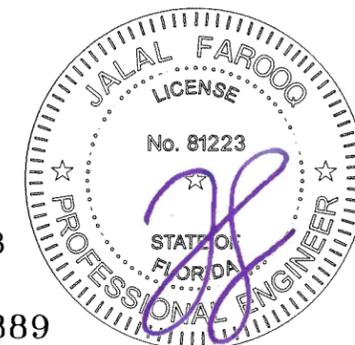


ALLOWABLE LOADS FOR ALTERNATE SHAPES AS SHOWN ABOVE OR SIMILAR CAN BE
VERIFIED BY INSCRIBING PICTURE WINDOW SHAPE WITHIN SQUARE OR RECTANGLE AS
SHOWN IN DOTTED LINES AND OBTAINING ALLOWABLE LOADS FROM THOSE SHAPES.

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

Sealed: 7/21/2023

FL #41889

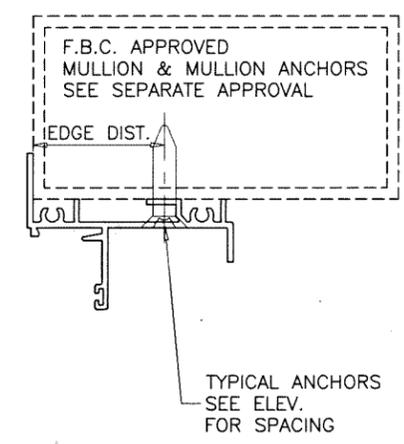
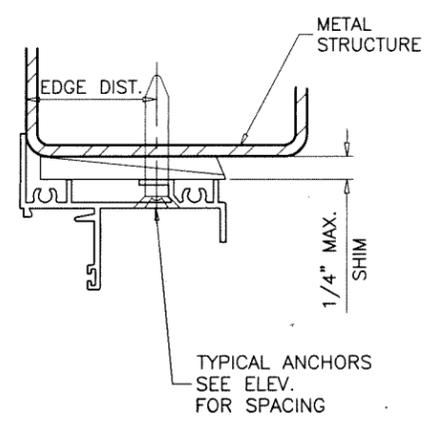
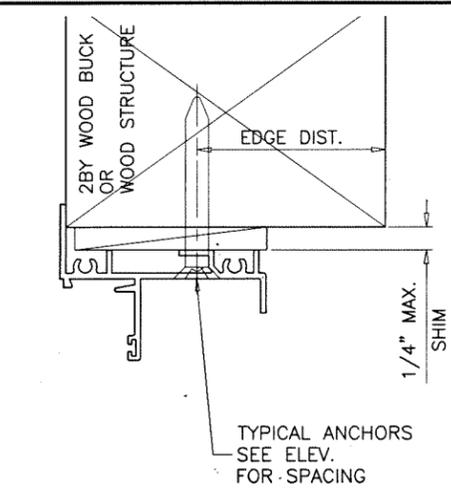
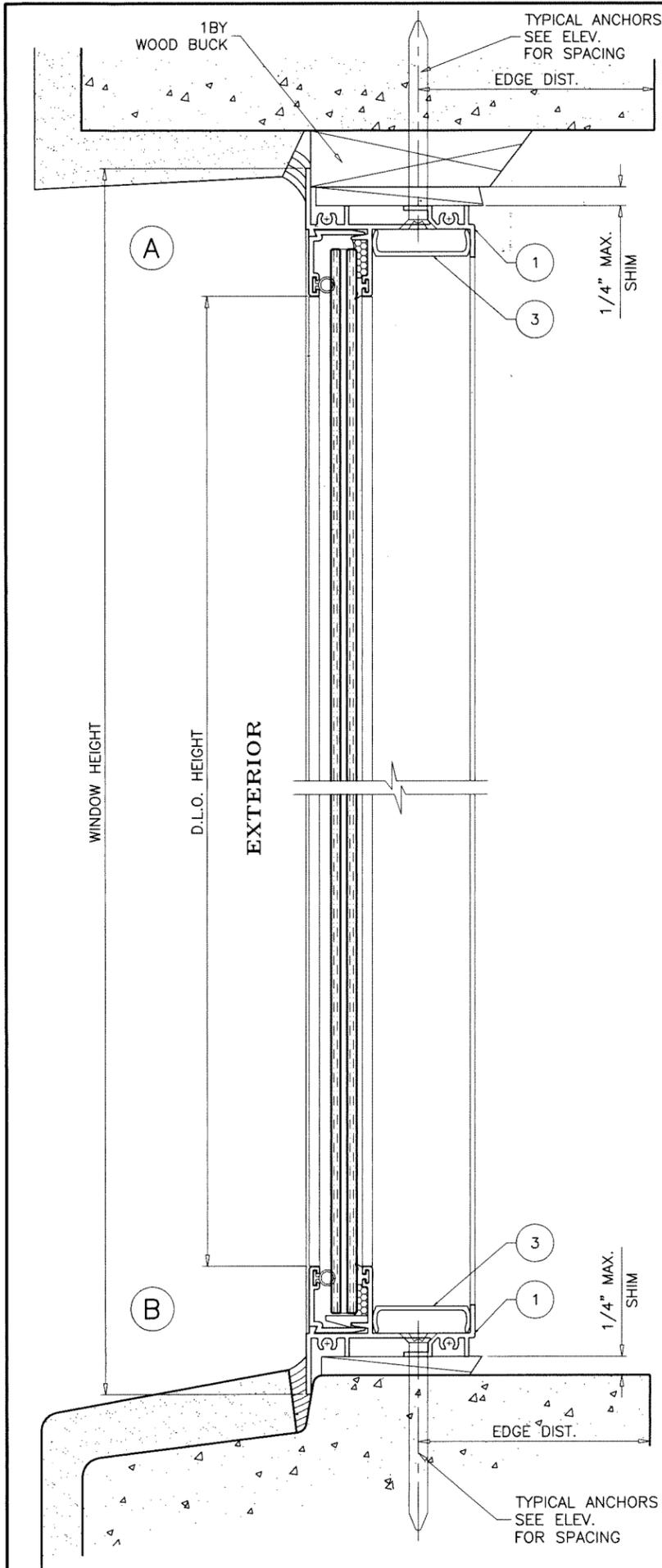


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sheet 2 of 5

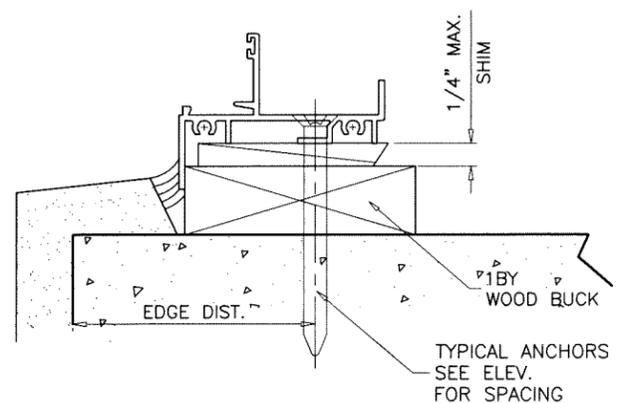


WOOD BUCKS AND METAL STRUCTURE NOT BY 'MR-GLASS' MUST SUSTAIN LOADS IMPOSED BY GLAZING SYSTEM AND TRANSFER THEM TO THE BUILDING STRUCTURE.

TYPICAL ANCHORS: SEE ELEV. FOR SPACING
1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)
 INTO 2BY WOOD BUCKS OR WOOD STRUCTURES
 1-1/2" MIN. PENETRATION INTO WOOD (HEAD/JAMBS)
 THRU 1BY BUCKS INTO CONC. OR BLOCKS
 1-1/4" MIN. EMBED INTO CONCRETE (HEAD/JAMBS)
 1-1/4" MIN. EMBED INTO BLOCKS (JAMBS)
 DIRECTLY INTO CONCRETE OR BLOCKS
 1-1/4" MIN. EMBED INTO CONCRETE (HEAD/JAMBS)
 1-1/4" MIN. EMBED INTO BLOCKS (JAMBS)
#14 SMS OR SELF-DRILLING SCREWS (GRADE 2 CRS)
 INTO F.B.C. APPROVED MULLIONS
 OR
 INTO METAL STRUCTURES (HEAD/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)

CRITICAL EDGE DISTANCE
 INTO CONCRETE AND BLOCKS = 2-1/2" MIN.
 INTO WOOD STRUCTURE = 1" MIN.
 INTO METAL STRUCTURE = 3/4" MIN.

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



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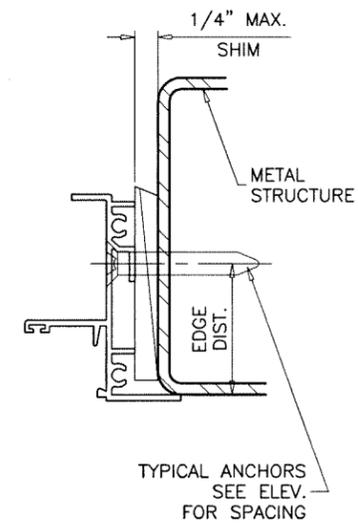
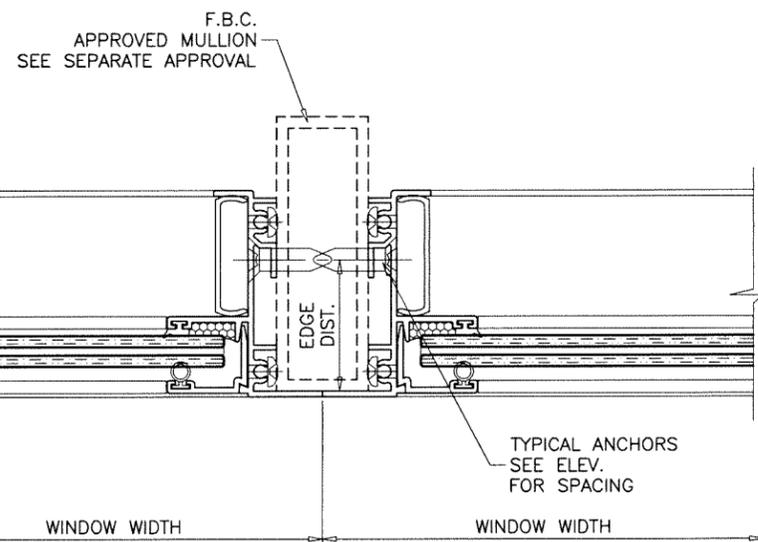
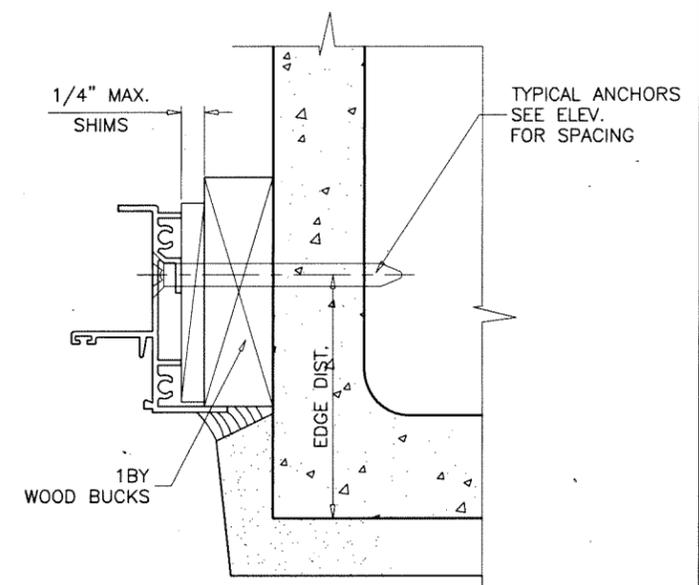
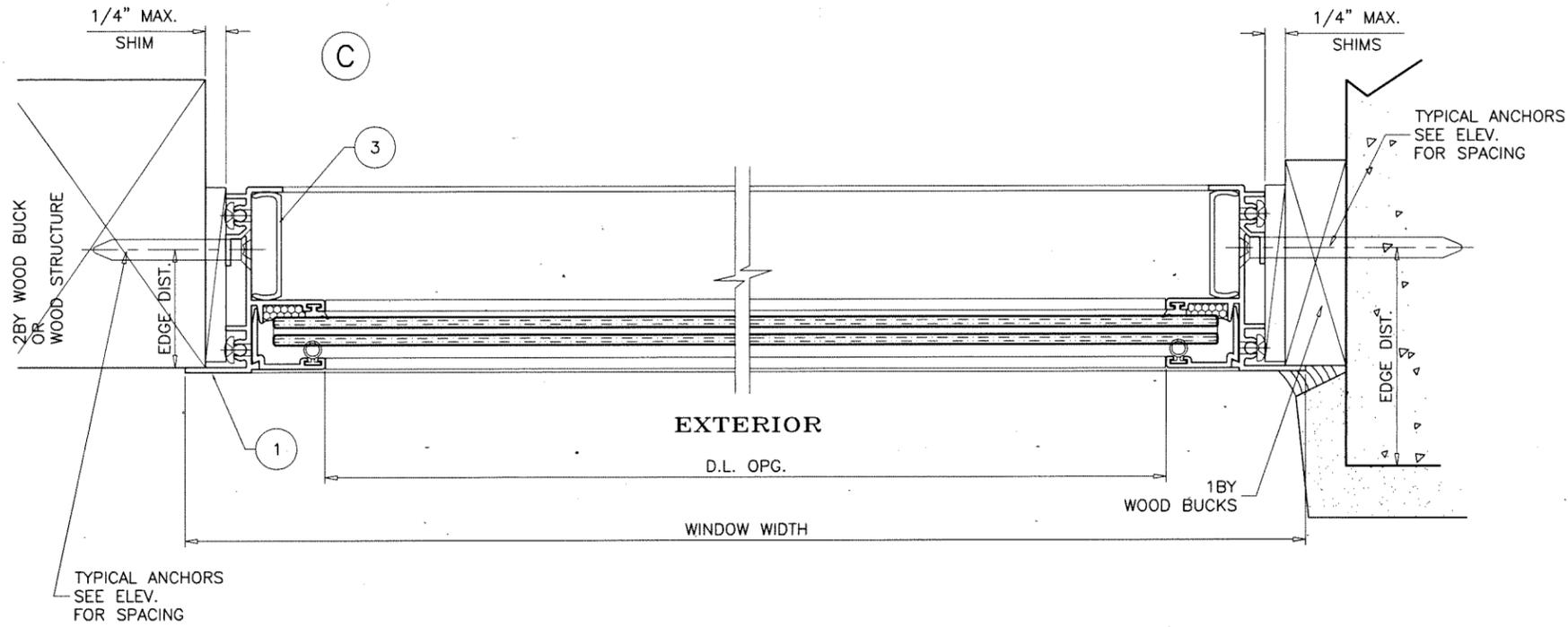
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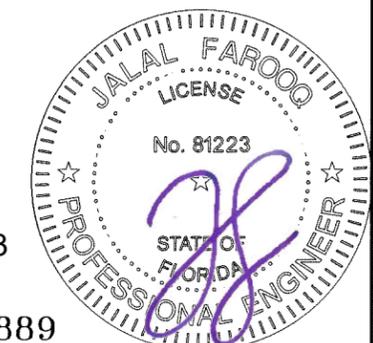
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sheet	3 of 5			



Sealed: 7/21/2023

FL #41889



afc

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MG-350 ALUMINUM FIXED WINDOW (L.M.I.)

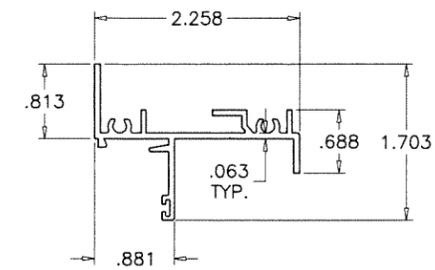
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revisions:	
no	description

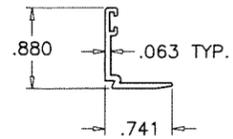
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drawing no.
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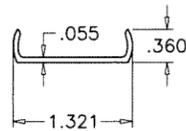
sheet 4 of 5



① WINDOW FRAME



② GLAZING BEAD

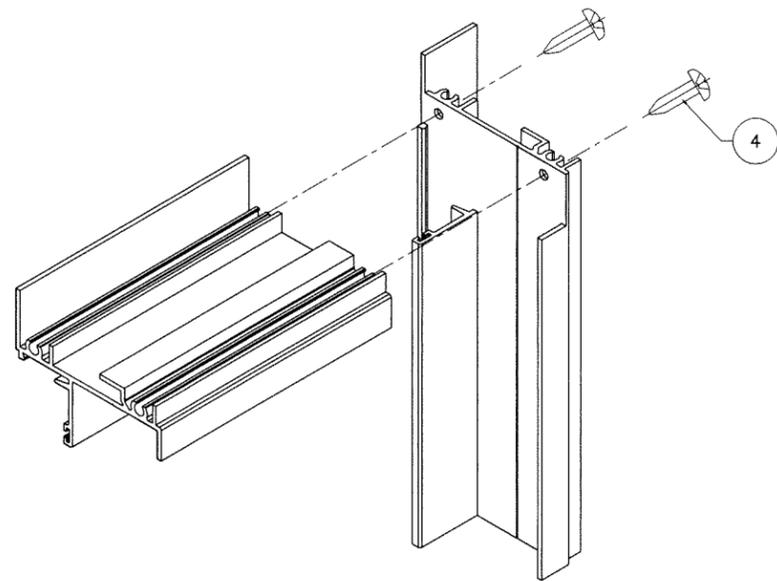


③ SCREW COVER

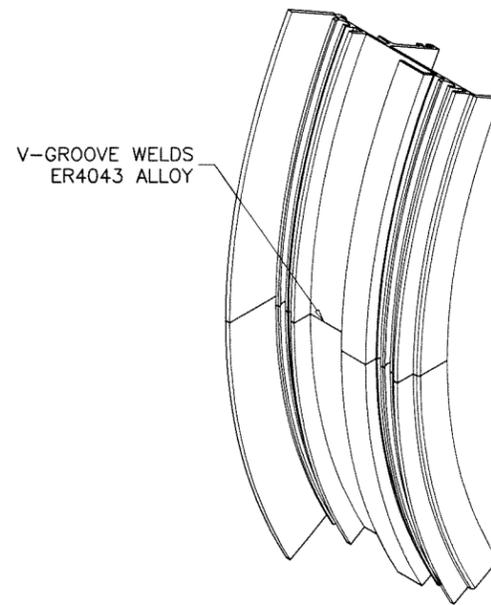
ITEM	PART #	QUANTITY	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
1	E-360	4	WINDOW FRAME	6063-T6	-
2	E-361	AS REQD.	GLAZING BEAD	6063-T6	-
3	E-365	AS REQD.	SCREW COVER	6063-T5	-
4	#8 X 1-1/2"	AS REQD.	ASSEMBLY SCREWS	ST. STEEL	PH SMS
5	G20-07	AS REQD.	EXTERIOR GLAZING GASKET	EPDM	ULTRAFAB, DUROMETER 65±5 SHORE A
6	G25-01	AS REQD.	INTERIOR GLAZING GASKET	SANTOPRENE	CPI
7	G35-02	AS REQD.	SETTING BLOCKS, AT 1/4 POINTS	EPDM	DUROMETER 80±5 SHORE A
8	-	-	-	-	-

SEALANTS:

ALL FRAME CORNERS AND INSTALLATION SCREWS IN SILL SEALED WITH ALUMINUM COLORED SEALANT.



FRAME CORNERS
RECT. OR SQUARE WINDOWS



FRAME CORNERS
CIRCULAR WINDOWS

Sealed: 7/21/2023

FL #41889



af c
AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100
WWW.AFCENG.COM
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MG-350 ALUMINUM FIXED WINDOW (L.M.I.)
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www.mrglasswindows.com

revisions:	no.	date	by	description
date:	01-14-23	scale:	1/2" = 1"	
dr. by:	TARIQ	chk. by:		
drawing no.	23-03F			
sheet	5 of 5			

COMP-ANL\23-03F-MG