



Product Approval
USER: Public User

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OFFICE OF THE
SECRETARY

FL # FL37319-R2
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
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Medley, FL 33166
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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
☐ 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 [FL37319-R2-COI-SS - Certificate of Independence.pdf](#)

Referenced Standard and Year (of Standard)	Standard	Year
	TAS 201	1994
	TAS 202	1994
	TAS 203	1994

Equivalence of Product Standards
Certified By

Sections from the Code

Product Approval Method

Method 1 Option D

Date Submitted

07/21/2023

Date Validated

07/22/2023

Date Pending FBC Approval

07/25/2023

Date Approved

10/18/2023

Summary of Products

FL #	Model, Number or Name	Description
37319.1	MRG-400 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: +100/-100 Other: See drawings 21-02F for span vs load combination and installation details.		Installation Instructions FL37319_R2_II_SS - MG-400 Fixed WDW (LMI) DWG 21-02F 2023.pdf Verified By: Jalal Farooq PE #81223 Created by Independent Third Party: Yes Evaluation Reports FL37319_R2_AE_SS - MG400 FIXED (LMI) - PAE 2023.pdf Created by Independent Third Party: Yes

[Back](#)

[Next](#)

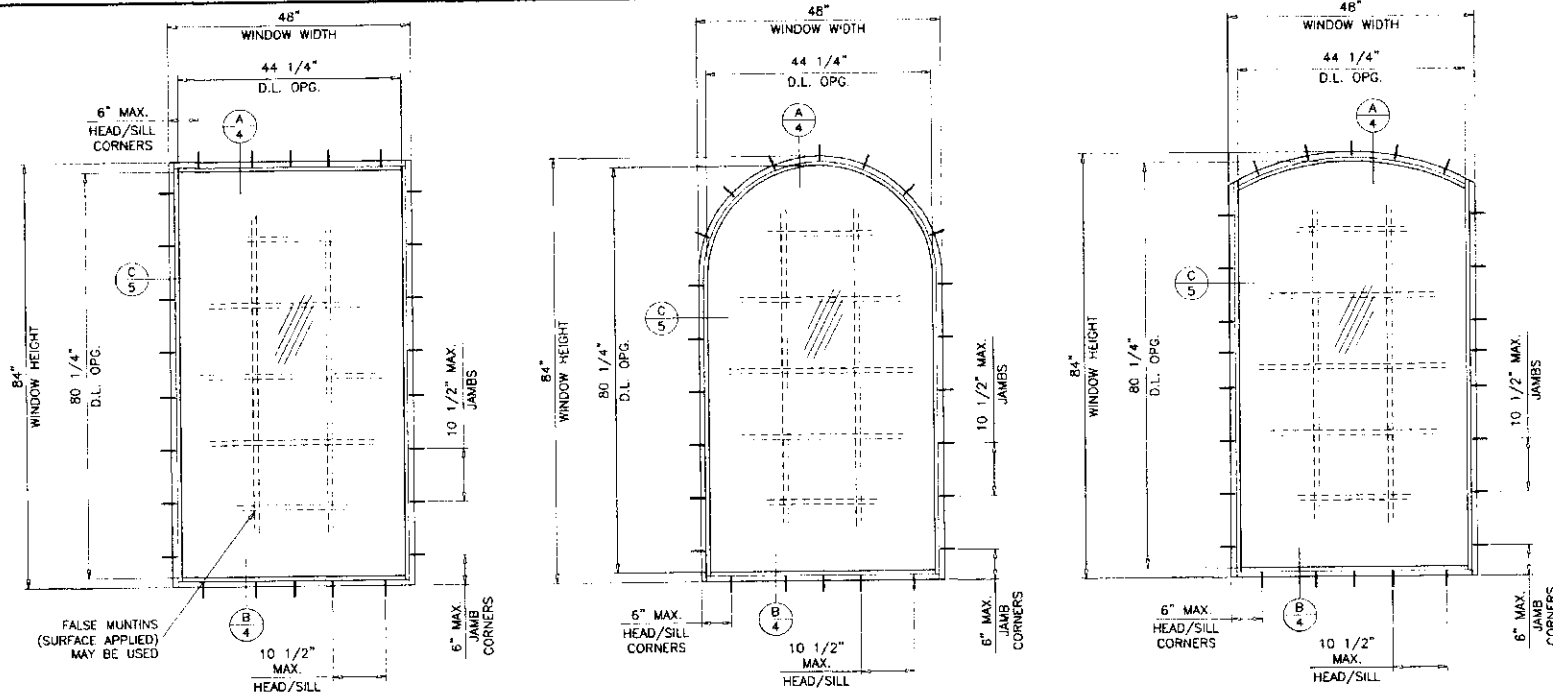
[Contact Us](#) :: 2601 Blair Stone Road, Tallahassee FL 32399 Phone: 850-487-1824

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Product Approval Accepts:





TYPICAL ELEVATIONS
(TESTED UNITS)

SERIES MRG-400 **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.

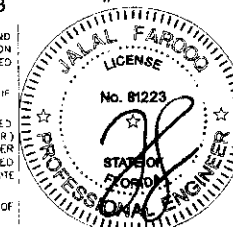
WINDOWS WITH GLASS TYPE 'B' COMPLY WITH REQUIREMENTS OF ANSI Z97.1.

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

Sealed: 7/21/2023

FL #37319

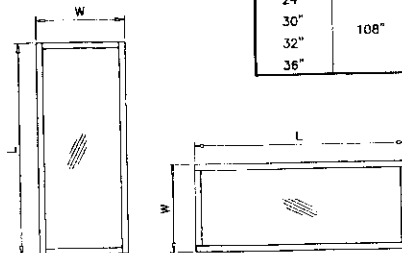
- A- CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION OF THIS PRODUCT BASED ON THIS PRODUCT EVALUATION PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT.
- B- THIS PRODUCT EVALUATION DOCUMENT WILL BE CONSIDERED INVALID IF ALTERED BY ANY MEANS.
- C- SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT WHICH WILL BECOME THE ENGINEER OF RECORD (EOR) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE P.E.D. ENGINEER OF RECORD, ACTING AS A DELEGATED ENGINEER TO THE P.E.D. ENGINEER SHALL SUBMIT TO THIS LATTER THE SITE SPECIFIC DRAWINGS FOR REVIEW.
- D- THIS P.E.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.



AL-FAROOQ CORPORATION ENGINEERS & PRODUCT DEVELOPMENT 9360 SUNSET DRIVE, SUITE 220 MIAMI, FLORIDA 33173 TEL. (305) 284-8100 FAX. (305) 282-8978 COMP-ANL/21-02F-MG	
MRG-400 ALUMINUM FIXED WDW. (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: 01-08-21 1/2" x 1" - 0"	Description: Updated to 2023 FBC 1/2" x 1" - 0"
Date: 7/21/23	Drawing no. 21-02F
Dr. by: JAF/21	Sheet 1 of 7

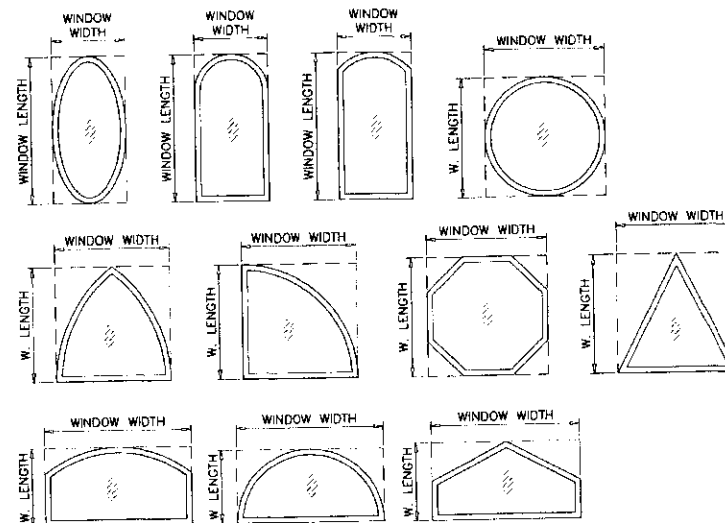
DESIGN LOAD CAPACITY - PSF					
FRAME DIMS.		GLASS TYPES 'A' & 'Ai'		GLASS TYPES 'B' & 'Bi'	
WIDTH	HEIGHT	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)
19-1/8"	26"	65.0	65.0	100.0	100.0
26-1/2"		65.0	65.0	100.0	100.0
37"		65.0	65.0	100.0	100.0
53-1/8"		65.0	65.0	100.0	100.0
19-1/8"	38-3/8"	65.0	65.0	100.0	100.0
26-1/2"		65.0	65.0	100.0	100.0
37"		65.0	65.0	100.0	100.0
53-1/8"		65.0	65.0	100.0	100.0
19-1/8"	50-5/8"	65.0	65.0	100.0	100.0
26-1/2"		65.0	65.0	100.0	100.0
37"		65.0	65.0	100.0	100.0
53-1/8"		65.0	65.0	94.8	94.8
19-1/8"	56"	65.0	65.0	100.0	100.0
26-1/2"		65.0	65.0	100.0	100.0
37"		65.0	65.0	100.0	100.0
53-1/8"		65.0	65.0	90.4	90.4
19-1/8"	63"	65.0	65.0	100.0	100.0
26-1/2"		65.0	65.0	100.0	100.0
37"		65.0	65.0	100.0	100.0
53-1/8"		65.0	65.0	90.4	90.4
19-1/8"	72"	65.0	65.0	100.0	100.0
26-1/2"		65.0	65.0	100.0	100.0
37"		65.0	65.0	100.0	100.0
53-1/8"		65.0	65.0	90.4	90.4
19-1/8"	76"	65.0	65.0	100.0	100.0
26-1/2"		65.0	65.0	100.0	100.0
37"		65.0	65.0	100.0	100.0
		65.0	65.0	100.0	100.0

DESIGN LOAD CAPACITY - PSF					
FRAME DIMS.		GLASS TYPES 'A' & 'Ai'		GLASS TYPES 'B' & 'Bi'	
WIDTH	HEIGHT	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)
24"	48"	65.0	65.0	100.0	100.0
30"		65.0	65.0	100.0	100.0
32"		65.0	65.0	100.0	100.0
36"		65.0	65.0	100.0	100.0
42"		65.0	65.0	100.0	100.0
48"		65.0	65.0	100.0	100.0
54"		65.0	65.0	100.0	100.0
54"		65.0	65.0	88.9	88.9
24"	60"	65.0	65.0	100.0	100.0
30"		65.0	65.0	100.0	100.0
32"		65.0	65.0	100.0	100.0
36"		65.0	65.0	100.0	100.0
42"		65.0	65.0	100.0	100.0
48"		65.0	65.0	100.0	100.0
54"		65.0	65.0	88.9	88.9
54"		65.0	65.0	88.9	88.9
24"	72"	65.0	65.0	100.0	100.0
30"		65.0	65.0	100.0	100.0
32"		65.0	65.0	100.0	100.0
36"		65.0	65.0	100.0	100.0
42"		65.0	65.0	100.0	100.0
48"		65.0	65.0	100.0	100.0
54"		65.0	65.0	88.9	88.9
54"		65.0	65.0	88.9	88.9
24"	84"	65.0	65.0	100.0	100.0
30"		65.0	65.0	100.0	100.0
32"		65.0	65.0	100.0	100.0
36"		65.0	65.0	100.0	100.0
42"		65.0	65.0	100.0	100.0
48"		65.0	65.0	100.0	100.0
54"		65.0	65.0	88.9	88.9
54"		65.0	65.0	88.9	88.9
24"	96"	65.0	65.0	100.0	100.0
30"		65.0	65.0	100.0	100.0
32"		65.0	65.0	100.0	100.0
36"		65.0	65.0	100.0	100.0
42"		65.0	65.0	100.0	100.0
48"		65.0	65.0	100.0	100.0
54"		65.0	65.0	88.9	88.9
54"		65.0	65.0	88.9	88.9
24"	108"	65.0	65.0	100.0	100.0
30"		65.0	65.0	100.0	100.0
32"		65.0	65.0	100.0	100.0
36"		65.0	65.0	100.0	100.0
42"		65.0	65.0	100.0	100.0
48"		65.0	65.0	100.0	100.0
54"		65.0	65.0	88.9	88.9
54"		65.0	65.0	88.9	88.9



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

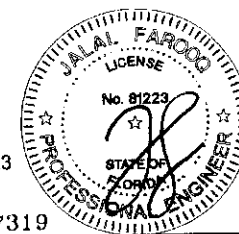
NOTE:
GLASS CAPACITIES ON THIS SHEET ARE
BASED ON ASTM E1300-09 (3 SEC. GUSTS).



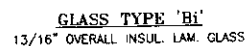
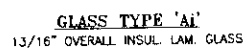
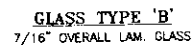
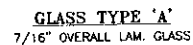
ALLOWABLE LOADS FOR ALTERNATE SHAPES AS SHOWN ABOVE OR SIMILAR CAN BE
VERIFIED BY INSCRIBING PICTURE WINDOW SHAPE WITHIN SQUARE OR RECTANGLE AS
SHOWN IN DOTTED LINES AND OBTAINING ALLOWABLE LOADS FROM THOSE SHAPES.

Sealed: 7/21/2023

FL #37319

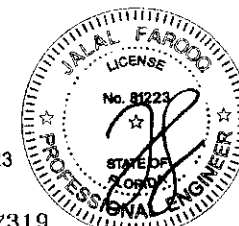


AL-FAROOQ CORPORATION ENGINEERS & PRODUCT DEVELOPMENT 9360 SUNSET DRIVE, SUITE 220 MIAMI, FLORIDA 33173 TEL. (305) 264-8100 FAX. (305) 262-6978 C.O.P.E. 3538 COMP-ANL 21-02F-MG			
MRG-400 ALUMINUM FIXED HDW. (L.M.I.) MR-GLASS DOORS & WINDOWS MANUFACTURING, LLC 8051 N.W. 79th Place Medley, FL 33166 Tel. (305) 764-3963 Fax. (305) 470-8285			
Revisions: 01-08-21 date by description scale: - dr. by: TARIO ch. by:	drawing no. 21-02F	sheet 2 of 7	Sealed: 7/21/2023 FL #37319



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FL #37319

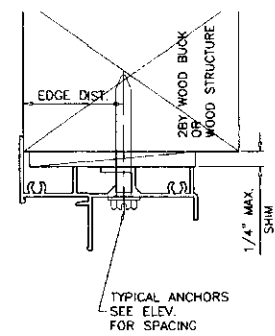
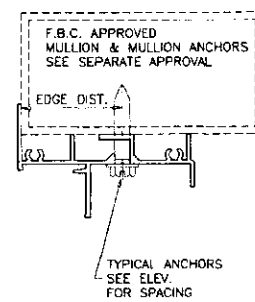
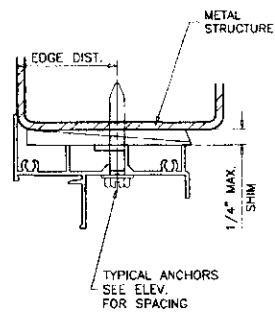
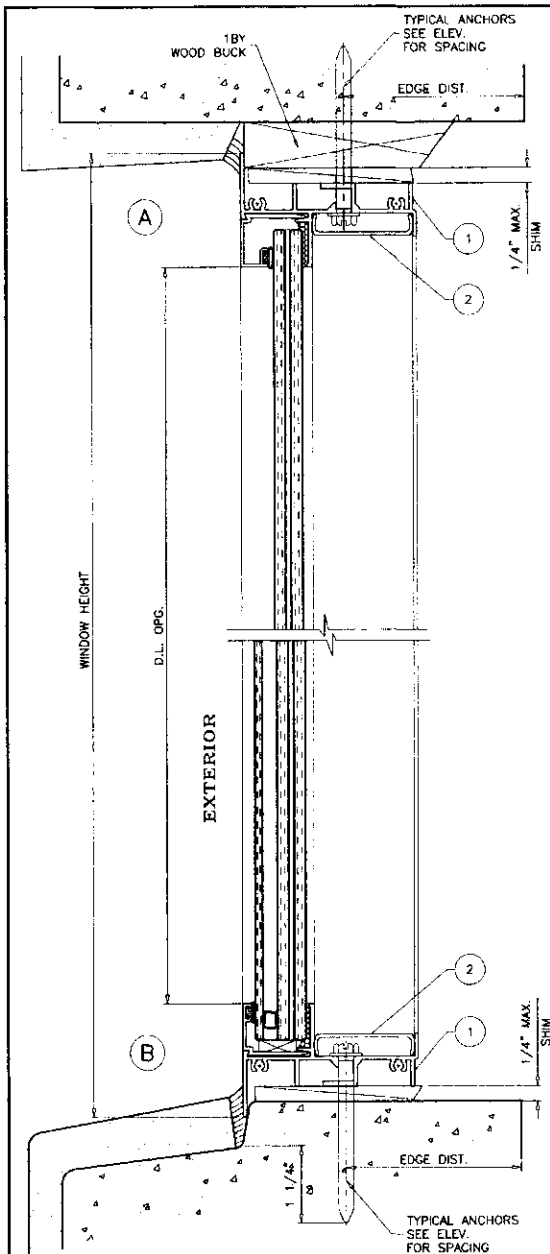


AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
(C.A.N. 3538)
TEL. (305) 264-8100 FAX. (305) 262-6978

MRG-400 ALUMINUM FIXED WDW. (L.M.I.)

MR-GLASS DOORS & WINDOWS MANUFACTURING, LLC.
8051 N.W. 79th Place
Medley, FL 33166
Tel (305) 764-3963 Fax (305) 470-8295

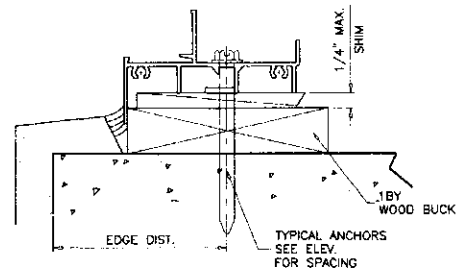
date: 01-08-21	revisions:
scale: 1/2" = 1'	no. date by description
dr. by: TARIQ	



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

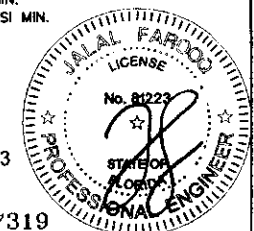
TYPICAL ANCHORS: SEE ELEV. FOR SPACING
1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)
 INTO 2BY WOOD BUCKS OR WOOD STRUCTURES
 1-1/2" MIN. PENETRATION INTO WOOD (HEAD/SILL/JAMBS)
 THRU 1BY BUCKS INTO CONC. OR BLOCKS
 1-1/4" MIN. EMBED INTO CONCRETE (HEAD/SILL/JAMBS)
 1-1/4" MIN. EMBED INTO BLOCKS (JAMBS)
 DIRECTLY INTO CONCRETE OR BLOCKS
 1-1/4" MIN. EMBED INTO CONCRETE (HEAD/SILL/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/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)

TYPICAL EDGE DISTANCE
 INTO CONCRETE AND BLOCKS = 1-1/2" 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.



Sealed: 7/21/2023

FL #37319



AL-FAROOQ CORPORATION
 ENGINEERS & PRODUCT DEVELOPMENT
 9360 SUNSET DRIVE, SUITE 250
 MIAMI, FLORIDA 33173
 TEL. (305) 264-8100

af c

MRG-400 ALUMINUM FIXED WDW (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

REVISONS:	no.	date	description

date: 01-08-21

scale: 1/2" = 1"

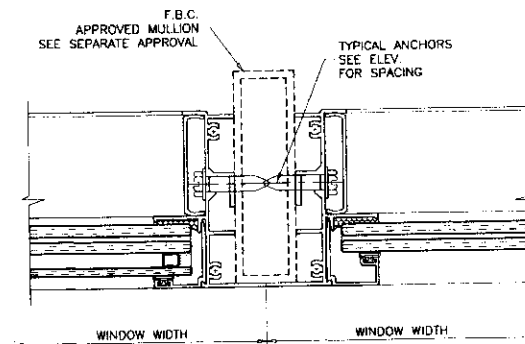
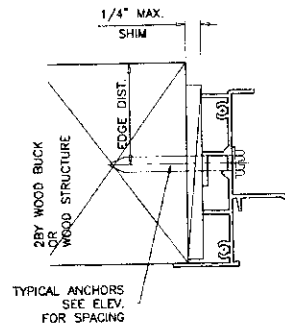
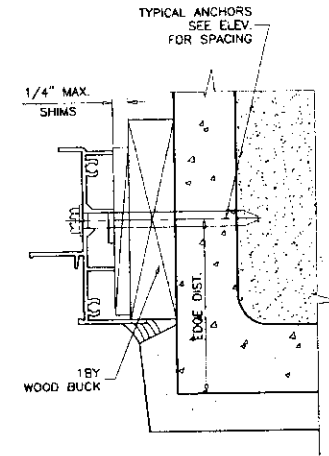
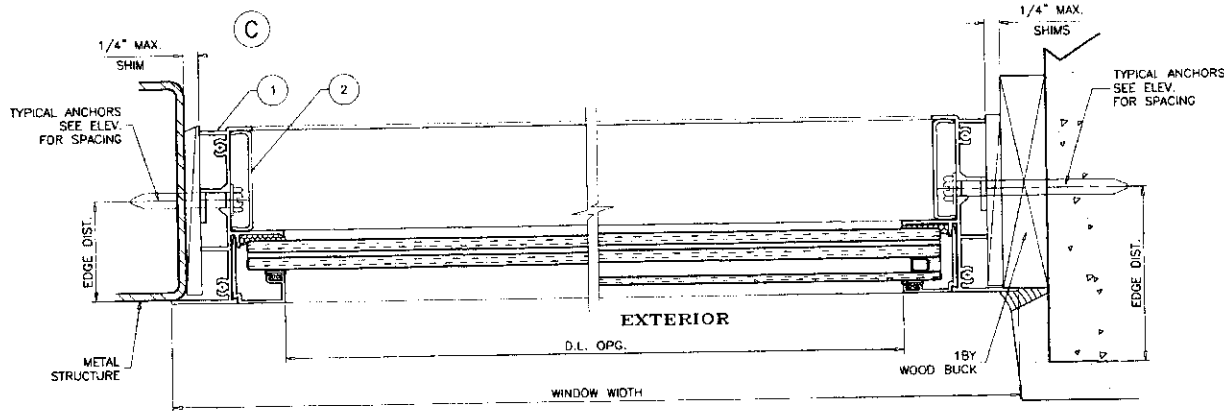
dr. by: JARQ

chk. by:

drawing no.

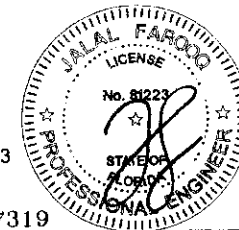
21-02F

sheet 4 of 7

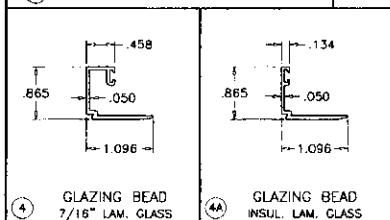
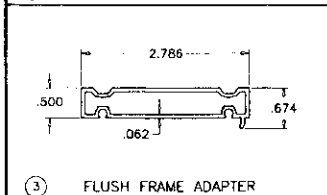
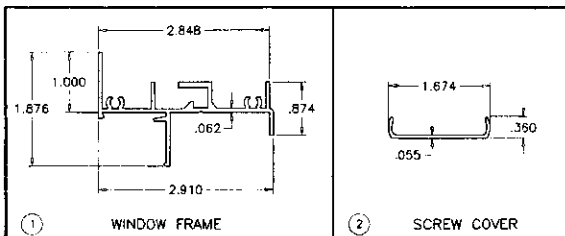


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FL #37319



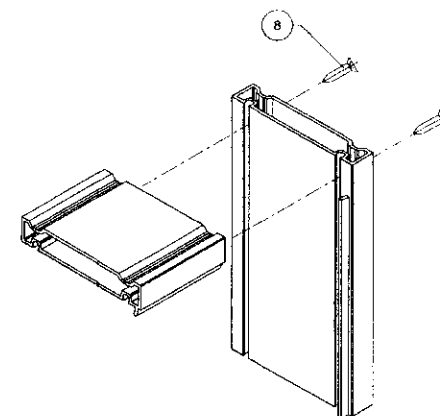
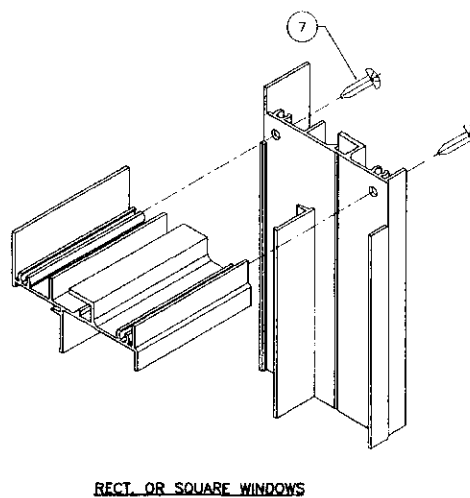
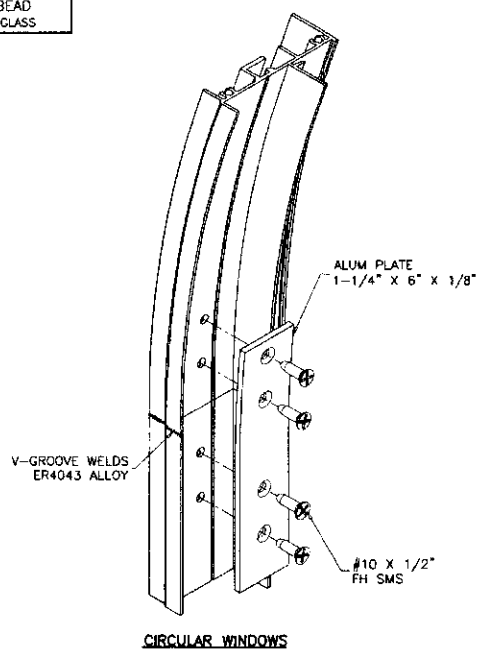
AL-FAROOQ CORPORATION ENGINEERS & PRODUCT DEVELOPMENT 9360 SUNSET DRIVE, SUITE 220 MIAMI, FLORIDA 33173 TEL. (305) 264-8100 FAX (305) 262-8978 COMP-ANL 21-02F-MG	
MRG-400 ALUMINUM FIXED WDW. (L.M.I.) MR-GLASS DOORS & WINDOWS MANUFACTURING, LLC 8051 N.W. 79th Place Medley, FL 33166 Tel. (305) 764-3983 Fax (305) 470-8285	
Revisions: no. date by description	date: 01-08-21 scale: 1/2" = 1" dr. by: JMRG chg. by:
drawing no. 21-02F	
sheet 5 of 7	



ITEM	PART #	QUANTITY	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
1	MRG-201	4	WINDOW FRAME	6063-T6	-
2	MRG-215	4	SCREW COVER	6063-T6	-
3	MRG-212	4	FLUSH FRAME ADAPTER	6063-T6	-
4	MRG-208	4	GLAZING BEAD (7/16" LAM. GLASS)	6063-T6	-
4A	MRG-210	4	GLAZING BEAD (INSUL. LAM. GLASS)	6063-T6	-
5	E201	AS REQD.	GLAZING BEAD BULB	NEOPRENE	ULTRAFAB
6	-	AS REQD.	SETTING BLOCKS AT 1/4 POINTS (3/16" X 1/2" X 1")	EPDM	DUROMETER 80±5 SHORE A
7	#10 X 1"	AS REQD.	FRAME ASSEMBLY FASTENERS	ST/ST	P.H. SMS
8	#8 X 1"	AS REQD.	ADAPTER ASSEMBLY FASTENERS	ST/ST	F.H. SMS
9	-	-	-	-	-

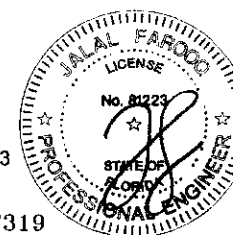
SEALANT:

ALL JOINTS AND FRAME CONNECTIONS SEALED WITH SILICONE.



Sealed: 7/21/2023

FL #37319



AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9380 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL (305) 264-8100 FAX (305) 262-6978
COMP-ANL\21-02F-MG

MRG-400 ALUMINUM FIXED WDW (L.M.I.)
MR-GLASS DOORS & WINDOWS MANUFACTURING, LLC
8051 N.W. 79th Place
Medley, FL 33166
Tel: (305) 764-3863 Fax: (305) 470-8285

Revisions:	NO	date	by	description
1				
date:	01-08-21	scale:	1/2" = 1"	dr. by: TARIQ
drawing no.	21-02F			
sheet	7 of 7			