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<u>Product Approval Menu > Product or Application Search > Application List > Application Detail</u>

FL40676-R0 Application Type New Code Version 2020 **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

Ulises Senaris Authorized Signature

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

Windows Category 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

Florida License

Quality Assurance Entity

Quality Assurance Contract Expiration Date

Validated By

Jalal Farooq

PE-81223

Keystone Certifications, Inc.

08/27/2025

JAVAD AHMAD PE, INC.

☑ Validation Checklist - Hardcopy Received

Certificate of Independence FL40676_R0_COI_SS - Certificate of Independence 2021.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 1 Option D

 Date Submitted
 02/04/2022

 Date Validated
 02/07/2022

 Date Pending FBC Approval
 02/07/2022

 Date Approved
 04/13/2022

 Date Revised
 07/25/2023

Summary of Products

FL # Model, Number or Name		Description		
40676.1 Series MG-450 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: +85/-120 Other: See drawings 21-76F for span vs load combination and installation details.		Installation Instructions FL40676 R0 II SS - MG450 Fixed (LMI) - DWG 21-76F.pdf Verified By: Jalal Farooq PE # 81223 Created by Independent Third Party: Yes Evaluation Reports FL40676 R0 AE SS - MG450 FIXED (LMI) - PAE 2020.pdf Created by Independent Third Party: Yes		
40676.2 Series MG-450 Aluminum Fixed Window		Small 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: +85/-115 Other: See drawings 22-01F for span vs load combination and installation details.		Installation Instructions FL40676 R0 II SS - MG450 Fixed (SMI) - DWG 22-01F Verified By: Jalal Farooq PE # 81223 Created by Independent Third Party: Yes Evaluation Reports FL40676 R0 AE SS - MG450 FIXED (SMI) - PAE 2020.F Created by Independent Third Party: Yes		





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

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AL-FAROOQ CORPORATION

CONSULTING ENGINEERS & PRODUCT DEVELOPMENT

September 24, 2021

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,

AL FAROON No. 812237

No. 812237

STATE OF STORIDA CANAL STORICA CANAL S

Sealed: 9/24/2021

Jalal Farooq, P.E. CFO



AL-FAROOQ CORPORATION

CONSULTING ENGINEERS & PRODUCT DEVELOPMENT

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

FL 40676

Date: 01/10/2022

Detailed Product Description:

Manufacturer: MR-GLASS DOORS & WINDOWS MANUFACTURING LLC. Manufacturer Address: 8051 NW 79th PLACE, MEDLEY, FL 33166

Model Name: <u>SERIES MG-450 ALUMINUM FIXED WINDOW</u> Maximum Load: +85 PSF, -120 PSF (Large Missile Impact)

Installation Drawings # 21-76F

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.								
T OT THUM	Comparative analysis used X Yes No							
М	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								
1231	DESCRIPTION	TEST ESCATION	DATE	#	rest scared by			
ASTM E283	Air	Hurricane Engineering	12/06/2021	HETI-21-7037	Dr. Ram Tewari, PE			
	Infiltration	& Testing, Inc	12/06/2021	HETI-21-7040				
	Leakage		12/06/2021	HETI-21-7043				
			12/06/2021	HETI-21-7068				
			10/28/2021	HETI-21-7090				
ASTM E331	Water	Hurricane Engineering	12/06/2021	HETI-21-7037	Dr. Ram Tewari, PE			
OR ASTM 547	Penetration	& Testing, Inc	12/06/2021	HETI-21-7040				
& TAS 202			12/06/2021	HETI-21-7043				
			12/06/2021	HETI-21-7068				
			10/28/2021	HETI-21-7090				
ASTM E330	Uniform	Hurricane Engineering	12/06/2021	HETI-21-7037	Dr. Ram Tewari, PE			
& TAS 202	Static Air	& Testing, Inc	12/06/2021	HETI-21-7040				
	Press.		12/06/2021	HETI-21-7043				
			12/06/2021	HETI-21-7068				
			10/28/2021	HETI-21-7090				
			12/06/2021	HETI-21-7103				

Supplemental Tests (Tested in accordance with TAS-201 and TAS-203)						
TEST	DESCRIPTION	DESCRIPTION TEST LOCATION TEST REPORT TEST REPO		TEST REPORT	Test Sealed by	
			DATE	#		
FBC 1626.2	Large Missile	Hurricane	12/06/2021	HETI-21-7037	Dr. Ram Tewari, PE	
TAS 201 & 203	Impact &	Engineering &	12/06/2021	HETI-21-7040		
ASTME1886/1996	Cyclic	Testing, Inc	12/06/2021	HETI-21-7062		
ANSI Z97.1			12/06/2021	HETI-21-7068		
			10/28/2021	HETI-21-7090		
			12/06/2021	HETI-21-7103		
			12/06/2021	HETI-21-7119		

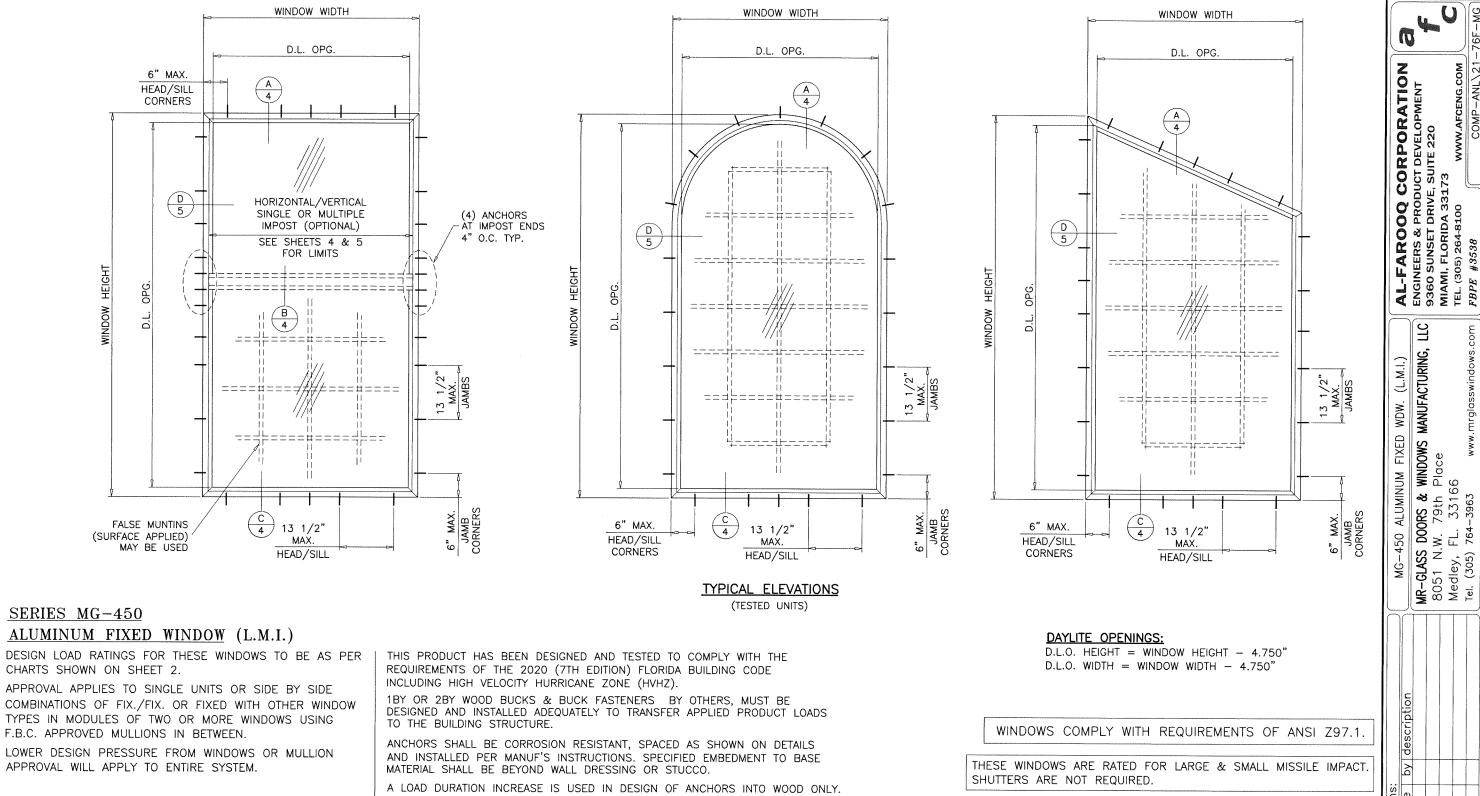
Under the limitations of the attached installation drawings, to the best of my knowledge and ability, the above product conforms to the requirements of the 2020 Florida Building Code.

Evaluation Report Engineer:

No. 81223

Jalal FarooqPE # 81223Al-Farooq CorporationEB # 3538

Sealed: 1/12/2022



F.B.C. APPROVED MULLIONS IN BETWEEN

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 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.

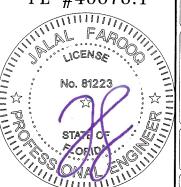
DESIGN LOADS SHOWN ARE BASED ON 'ALLOWABLE STRESS DESIGN (ASD)'.

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.

Sealed: 1/10/2022

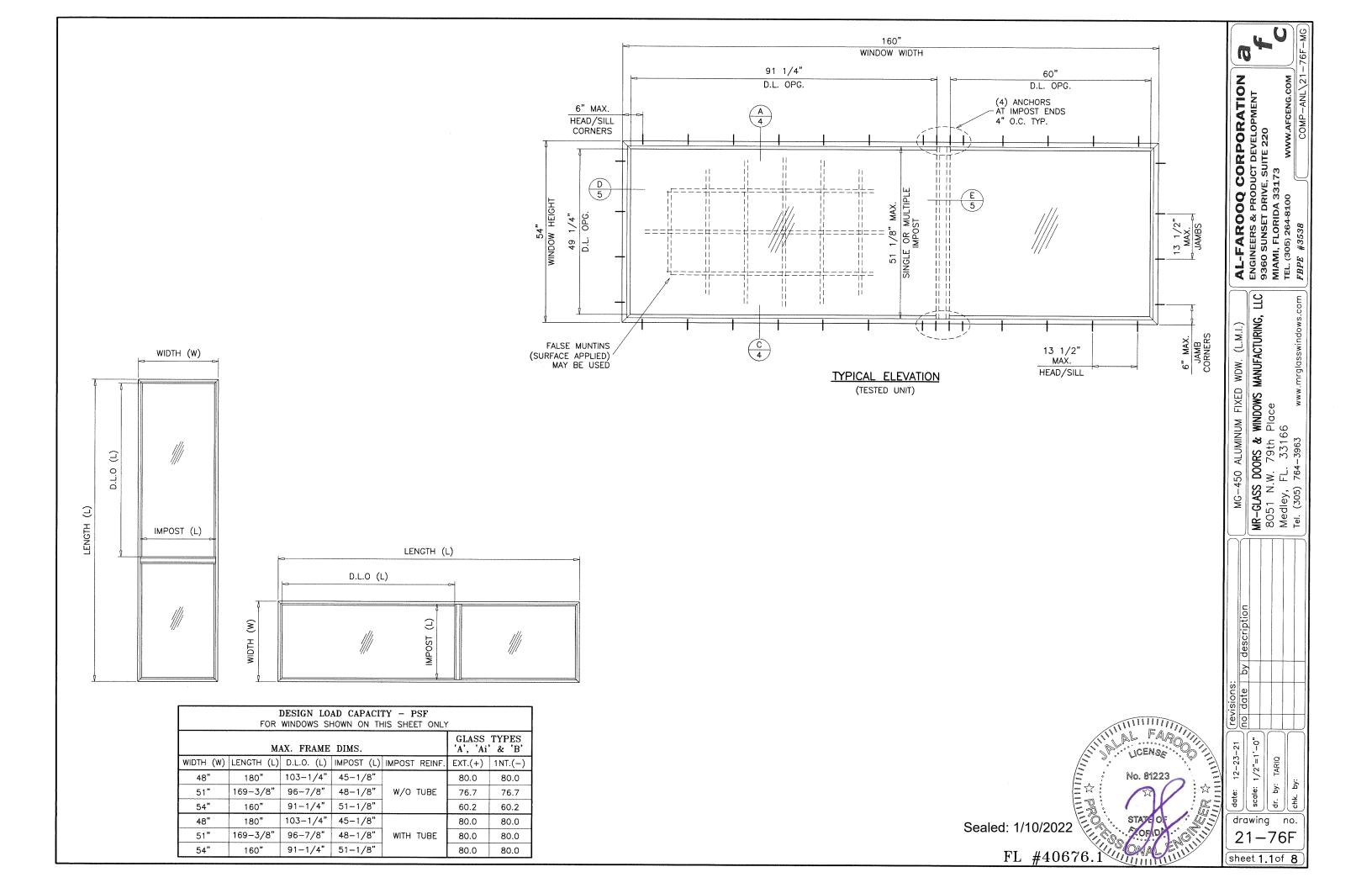
- CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION OF THIS PRODUCT BASED ON THIS PRODUCT EVALUATION PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT.
- B-THIS PRODUCT EVALUATION DOCUMENT WILL BE CONSIDERED INVALID IF ALTERED BY ANY MEANS.
- C-SITE 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.
- THIS P.E.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.

FL #40676.1



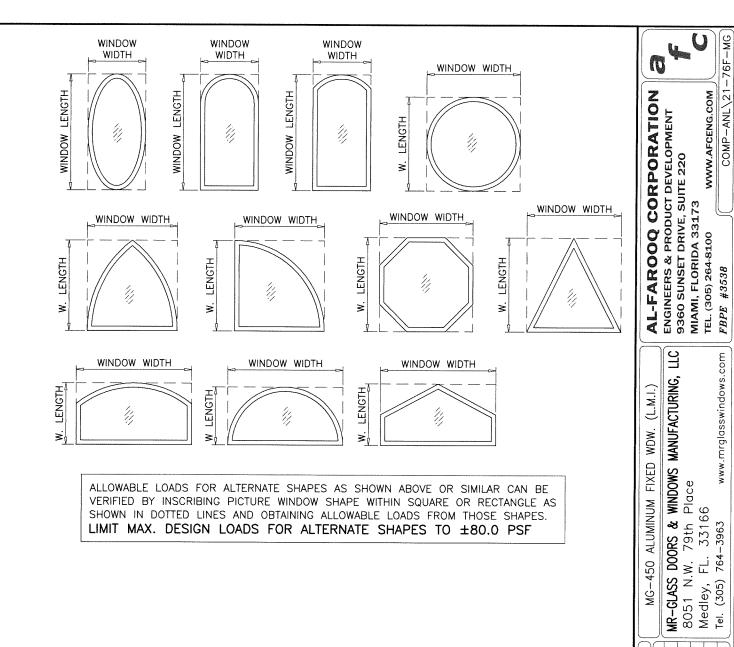
revisions:	no date				
date: 12_22_21	17-67-71	scale: 1/2"=1'-0"		dr. by: TARIQ	
C	Irc	iwi	na		no

21-76F sheet 1 of 8



DESIGN LOAD CAPACITY - PSF						
MAX. FRAME DIMS.			TYPES : 'Ai'	GLASS TYPE		
WIDT (W)	LENGTH (L)	EXT.(+)	1NT.(-)	EXT.(+)	1NT.(-)	
19-1/8"		80.0	80.0	85.0	120.0	
26-1/2"	26"	80.0	80.0	85.0	120.0	
37"	20	80.0	80.0	85.0	120.0	
53-1/8"		80.0	80.0	85.0	120.0	
19-1/8"		80.0	80.0	85.0	120.0	
26-1/2"	38-3/8"	80.0	80.0	85.0	120.0	
37"	30-376	80.0	80.0	85.0	120.0	
53-1/8"		80.0	80.0	85.0	120.0	
19-1/8"		80.0	80.0	85.0	120.0	
26-1/2"	50-5/8"	80.0	80.0	85.0	120.0	
37"	30 3/0	80.0	80.0	85.0	120.0	
53-1/8"		80.0	80.0	80.6	113.8	
19-1/8"		80.0	80.0	85.0	120.0	
26-1/2"	56"	80.0	80.0	85.0	120.0	
37"	30	80.0	80.0	85.0	120.0	
53-1/8"		80.0	80.0	80.0	108.4	
19-1/8"		80.0	80.0	85.0	120.0	
26-1/2"	63"	80.0	80.0	85.0	120.0	
37"	65	80.0	80.0	85.0	120.0	
53-1/8"		80.0	80.0	80.0	108.4	
19-1/8"		80.0	80.0	85.0	120.0	
26-1/2"	72"	80.0	80.0	85.0	120.0	
37"	/2	80.0	80.0	85.0	120.0	
53-1/8"		80.0	80.0	80.0	108.4	
19-1/8"		80.0	80.0	85.0	120.0	
26-1/2"	76"	80.0	80.0	85.0	120.0	
37"	/6	80.0	80.0	85.0	120.0	
53-1/8"		80.0	80.0	80.0	108.4	

1		DESIGN I	LOAD CAF	PACITY -	PSF	
	MAX. FRA	AME DIMS.	GLASS TYPES 'A' & 'Ai'		GLASS TYPE 'B'	
1	WIDT (W)	LENGTH (L)	EXT.(+)	1NT.(-)	EXT.(+)	1NT.(-)
1	30"		80.0	80.0	85.0	120.0
1	36"		80.0	80.0	85.0	120.0
	42"		80.0	80.0	85.0	120.0
1	48"	48"	80.0	80.0	85.0	120.0
	54"		80.0	80.0	85.0	120.0
	60"		80.0	80.0	85.0	120.0
	66"		80.0	80.0	85.0	120.0
-	72"		80.0	80.0	85.0	120.0
	30"		80.0	80.0	85.0	120.0
	36"		80.0	80.0	85.0	120.0
ł	42"	00"	80.0	80.0	85.0	120.0
-	48"	60"	80.0	80.0	85.0	120.0
\blacksquare	54"		80.0	80.0	80.0	106.7
-	60"		72.0	72.0	72.0	96.0
-	66"		72.0	72.0	72.0	96.0
\mathbf{I}	72"	***************************************	72.0	72.0	72.0	96.0
-	30"		80.0	80.0	85.0	120.0
$\ $	36"		80.0	80.0	85.0	120.0
$\ $	42"	70"	80.0	80.0	85.0	120.0
-	48"	72"	80.0	80.0	85.0	120.0
	54"		80.0	80.0	80.0	106.7
-	60"		72.0	72.0	72.0	96.0
	66"		65.5	65.5	65.5	87.3
	72"		60.0	60.0	60.0	80.0
	30"	ŀ	80.0	80.0	85.0	120.0
$\ $	36"		80.0	80.0	85.0	120.0
$\ $	42"	84"	80.0	80.0	85.0	120.0
]	48" 54"	04	80.0	80.0	85.0	120.0
	60"		80.0		80.0	106.7
	1		72.0	72.0	72.0	96.0
	66" 30"		80.0	80.0	61.8	87.3
	36"		80.0	80.0 80.0	85.0 85.0	120.0 120.0
	42"	-	80.0	80.0	85.0	120.0
	48"	96"	80.0	80.0	85.0	120.0
	54"		80.0	80.0	80.0	106.7
	60"				68.0	96.0
	30"		80.0	80.0	85.0	120.0
	36"	}	80.0	80.0	85.0	120.0
	42"	108"	80.0	80.0	85.0	120.0
	48"	ľ	80.0	80.0	85.0	120.0
	30"		80.0	80.0	85.0	120.0
ĺ	36"		80.0	80.0	85.0	120.0
	42"	120"	80.0	80.0	85.0	120.0
	48"	ľ	_	_	85.0	120.0
-	30"		80.0	80.0	85.0	120.0
	36"	132"	80.0	80.0	85.0	120.0
-	42"				85.0	120.0
ı	30"		80.0	80.0	85.0	120.0
-	36"	144"	80.0	80.0	85.0	120.0
f	30"	4"	80.0	80.0	85.0	120.0
	36"	156"	-	_	85.0	120.0
ı	30"	168"	80.0	80.0	85.0	120.0



WIDTH (W) SINGLE OR MULTIPLE IMPOSTS (OPTIONAL) SEE SHEETS 4 & 5 FOR LIMITS LENGTH (L) LENGTH (L) **МІ**ДТН (W)

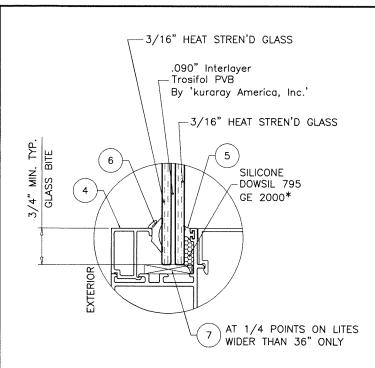
NOTE:
WIDTH AND LENGTH DIMENSIONS CAN BE ORIENTED VERTICALLY OR HORIZONTALLY AS SHOWN ABOVE.

Sealed: 1/10/2022

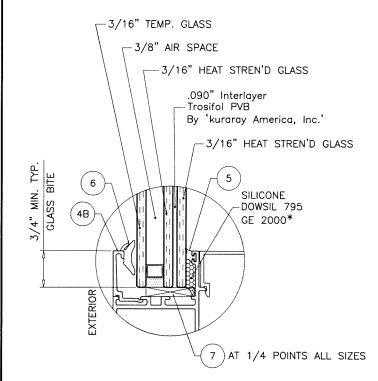
1/10/2022 STATE ON STATE OF THE #40676.1 by: no. 21-76F sheet 2 of 8

by description

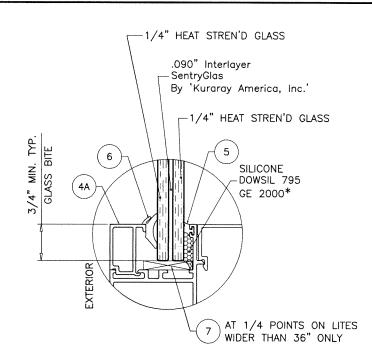
GLASS CAPACITIES ON THIS SHEET ARE BASED ON ASTM E1300-09 (3 SEC. GUSTS). revisions: no date



GLASS TYPE 'A' 7/16" OVERALL LAM. GLASS



GLASS TYPE 'Ai' 13/16" OVERALL INSUL. LAM. GLASS



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

LIMIT MAX. DESIGN LOAD TO ±80.0 PSF FOR GE 2000 SILICONE

3/8" 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 OR 'DURASEAL' EDGE SEAL SYSTEM BY 'QUANEX'

1/10/2022 STATE OF FL #40676.1 Sealed: 1/10/2022

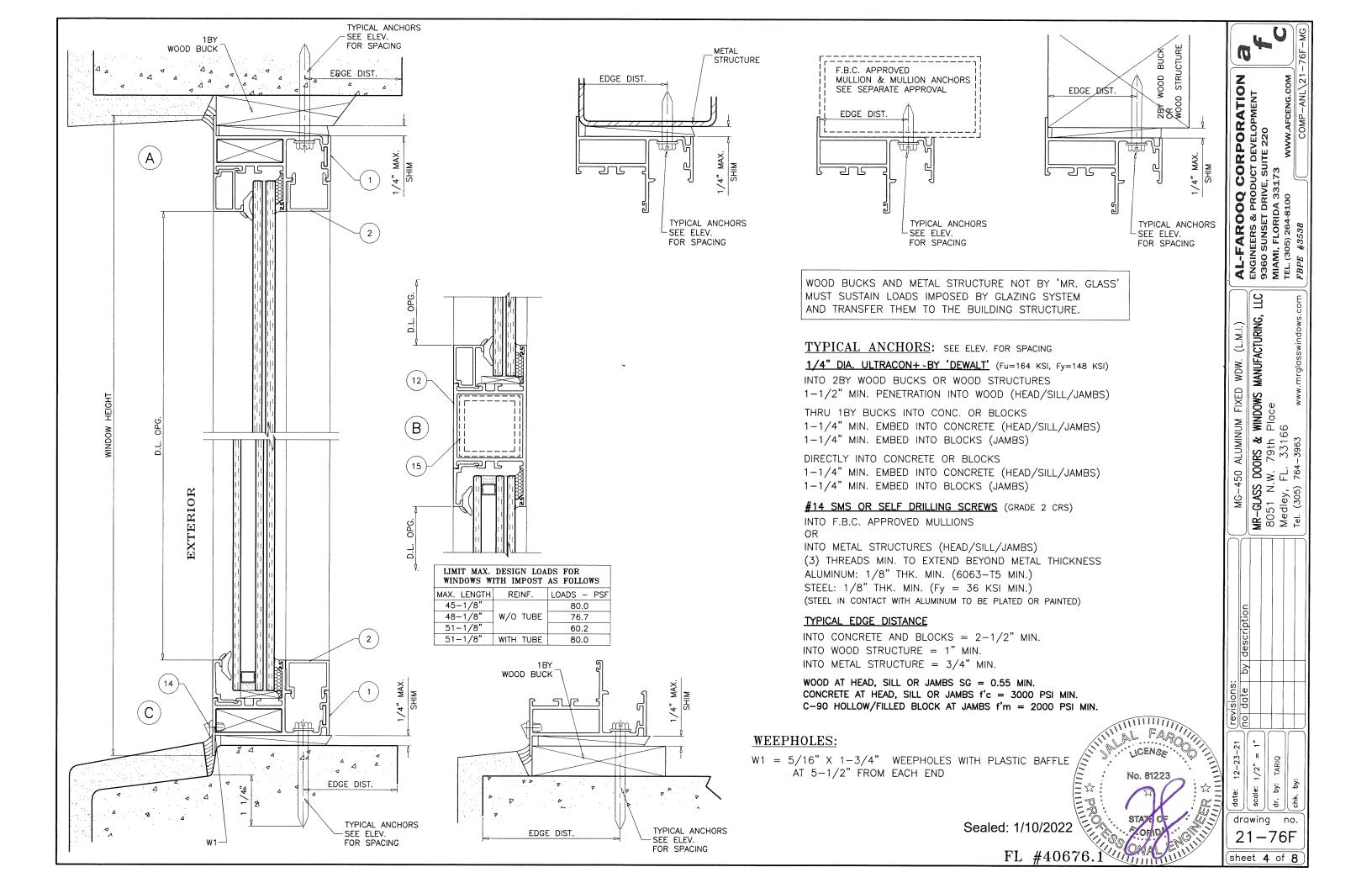
MR-GLASS DOORS & WINDOWS MANUFACTURING, LLC 8051 N.W. 79th Place Medley, FL. 33166
Tel. (305) 764-3963 www.mrglasswindows.com (L.M.I.) MG-450 ALUMINUM FIXED WDW.

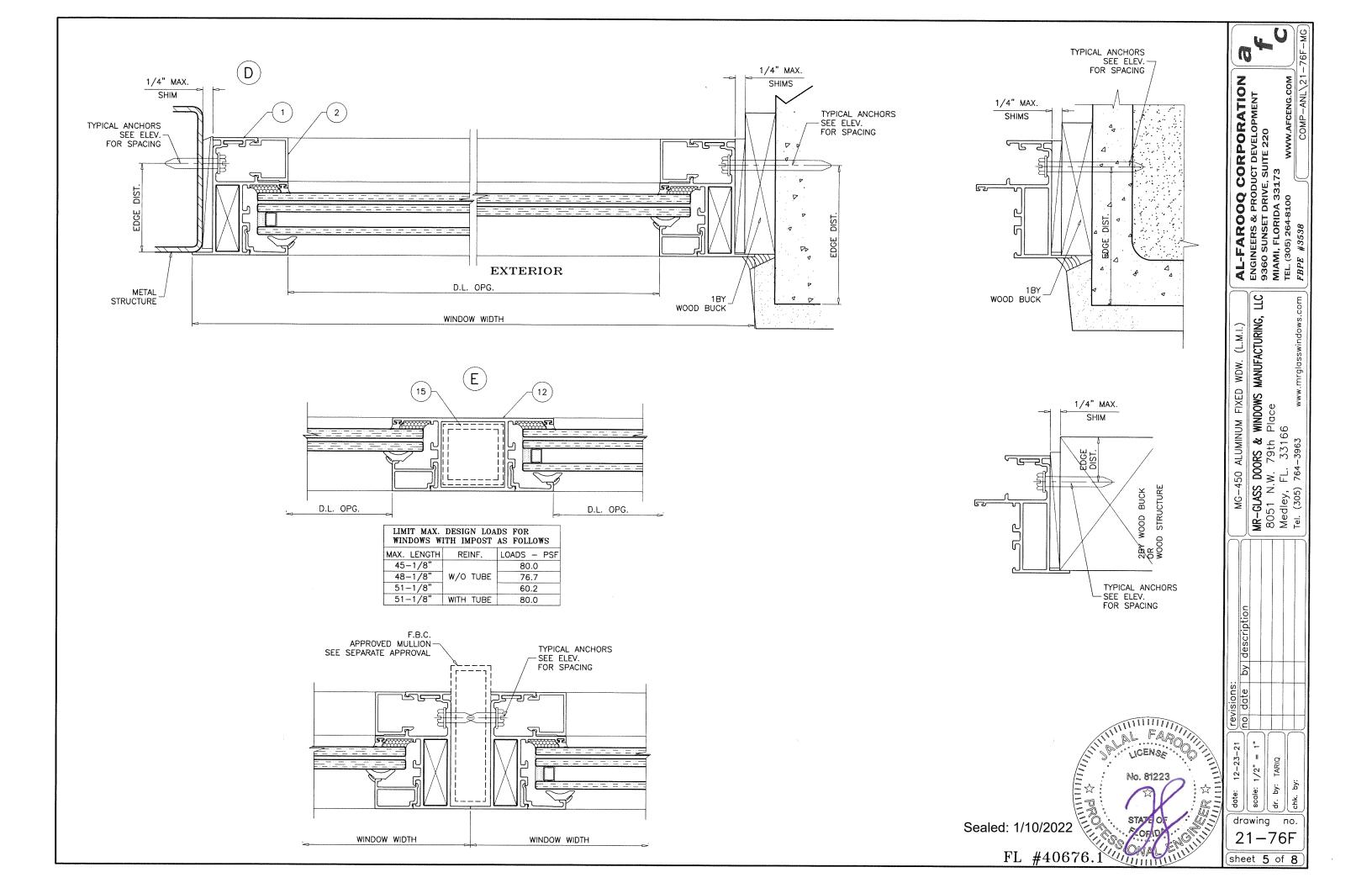
by description date

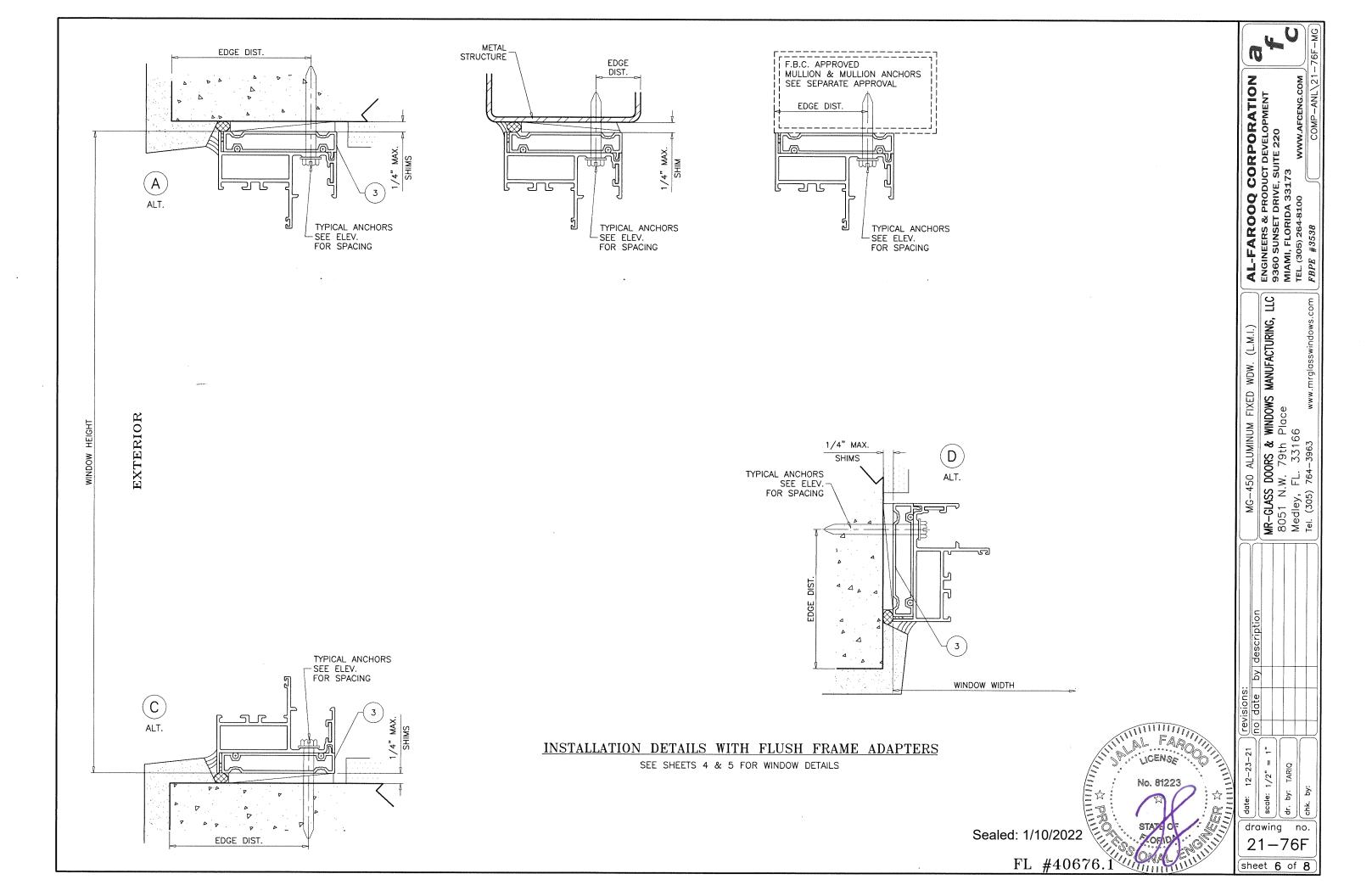
ь Э å. no. 21-76F

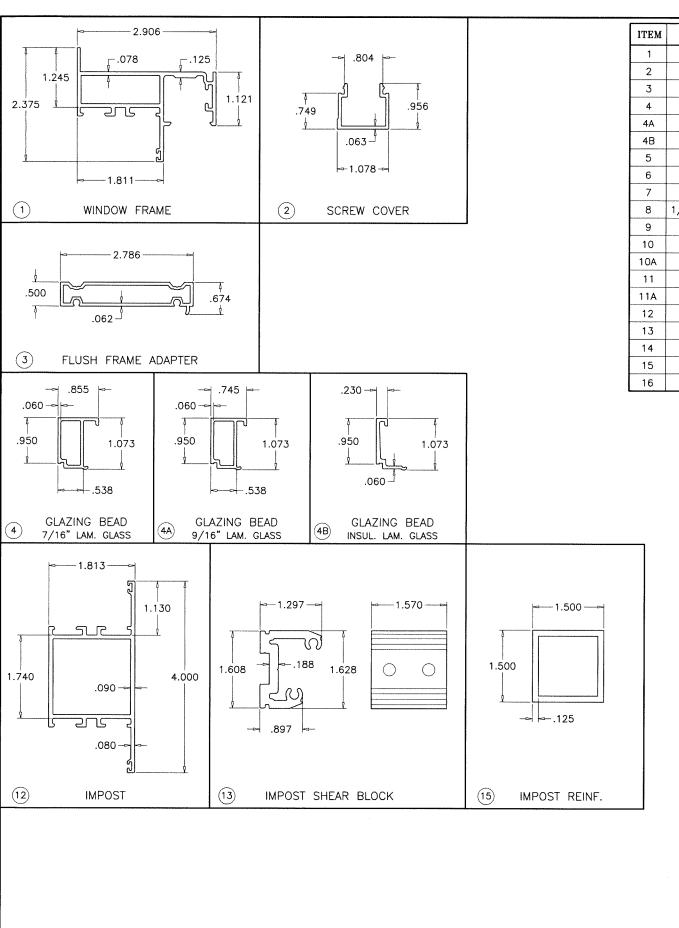
sheet 3 of 8

drawing









ITEM	PART #	QUANTITY	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
1	E-451	4	WINDOW FRAME	6063-T6	-
2	E-452	4	SCREW COVER	6063-T5	-
3	E-212	4	FLUSH FRAME ADAPTER	6063-T6	-
4	E-9001	4	GLAZING BEAD (7/16" LAM. GLASS)	6063-T6	_
4A	E-9004	4	GLAZING BEAD (9/16" LAM. GLASS)	6063-T6	
4B	E-9002	4	GLAZING BEAD (INSUL. LAM. GLASS)	6063-T6	-
5	G30-01	AS REQD.	INTERIOR GLAZING GASKET	SANTOPRENE	_
6	G10-04	AS REQD.	EXTERIOR GLAZING GASKET	EPDM	-
7	G25-08	AS REQD.	SETTING BLOCKS AT 1/4 POINTS	EPDM	DUROMETER 80±5 SHORE A
8	1/4-20 X 9/16"	AS REQD.	FRAME ASSEMBLY FASTENERS	ST/ST	SOCKET HEAD MS
9	#10 X 1"	AS REQD.	ADAPTER ASSEMBLY FASTENERS	ST/ST	F.H. SMS
10	A45-01	1/ CORNER	FIXED CORNER KEY	6063-T5	
10A	A45-01	1/ CORNER	ADJUSTABLE CORNER KEY	6063-T5	_
11	A45-11	1/ CORNER	FIXED ALIGNMENT KEY	ST. STEEL	_
11A	A45-12	1/ CORNER	ADJUSTABLE ALIGNMENT KEY	6063-T5	_
12	E-3012	AS REQD.	IMPOST	6063-T6	_
13	A30-02	AS REQD.	IMPOST SHEAR BLOCK	6063-T6	-
14	G2-01	2	DRAIN VALVE	PLASTIC	
15		AS REQD.	TUBE REINF. AT IMPOST	6063-T6	-
16	-		_	_	_

SEALANT:

ALL JOINTS AND FRAME CONNECTIONS SEALED WITH SILICONE.

MG-450 ALUMINUM FIXED WDW. (L.M.I.)

MR-GLASS DOORS & WINDOWS MANUFACTURING, LLC

8051 N.W. 79th Place
Medley, FL. 33166
Tel. (305) 764-3963 www.mrglasswindows.com by description revisions: no date J: 1/10/2022 STATE OF THE #40676.1 by: drawing no. 21-76F sheet 7 of 8

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100
WWW.AFCENG.COM
FBPE #3538
COMP-ANL\21-7

Sealed: 1/10/2022

