Product Approval
USER: Public User

FL #	FL27401-R7
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	Curtain Walls
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	FL27401_R7_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

Sections from the Code

Product Approval Method	Method 1 Option D
Date Submitted	03/19/2024
Date Validated	04/09/2024
Date Pending FBC Approval	04/14/2024
Date Approved	06/18/2024

Summary of Products

FL #	Model, Number or Name	Description
27401.1	Series 2000 Aluminum Stick Curtain Wall System	Small missile impact resistant aluminum stick curtain wall system.
Limits of Use **Approved for use in HVHZ:** Yes **Approved for use outside HVHZ:** Yes **Impact Resistant:** Yes **Design Pressure:** +80/-110 **Other:** See drawing 18-55F for installation instructions.		**Installation Instructions** FL27401_R7_II_SS - 2000 CW (SMI) - DWG 18-55F 2023.1.pdf Verified By: Jalal Farooq PE 81223 Created by Independent Third Party: Yes **Evaluation Reports** FL27401_R7_AE_SS - 2000 CW (SMI) - PAE 2023.pdf Created by Independent Third Party: Yes
27401.2	Series 2000 Aluminum Stick Curtain Wall System	Large missile impact resistant aluminum stick curtain wall system.
Limits of Use **Approved for use in HVHZ:** Yes **Approved for use outside HVHZ:** Yes **Impact Resistant:** Yes **Design Pressure:** +90/-100 **Other:** See drawing 19-18F for span vs. load combinations and installation instructions.		**Installation Instructions** FL27401_R7_II_SS - 2000 CW (LMI) - DWG 19-18F 2023 R1.pdf Verified By: Jalal Farooq PE 81223 Created by Independent Third Party: Yes **Evaluation Reports** FL27401_R7_AE_SS - 2000 CW (LMI) - PAE 2023.pdf Created by Independent Third Party: Yes

Back Next

AL-FAROOQ CORPORATION

CONSULTING ENGINEERS & PRODUCT DEVELOPMENT

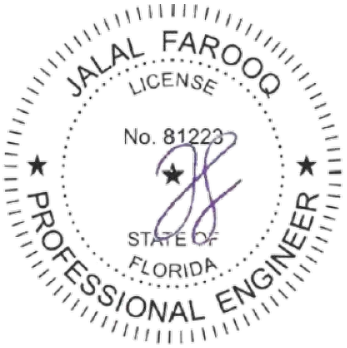
January 23, 2023

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

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

FL 27401
Date: 7/21/2023

Detailed Product Description:

Manufacturer: MR-GLASS DOORS & WINDOWS MANUFACTURING LLC.

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

Model Name: SERIES 2000 STICK CURTAIN WALL SYSTEM

Maximum Load: +80 PSF, -110 PSF (Small Missile Impact)

Installation Drawings # 18-55F

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 ___ Yes __X__ 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	Hurricane Engineering & Testing, Inc.	04/17/2018	HETI-18-6023	Rafael E. Droz-Seda, P.E.
ASTM E331 OR ASTM 547 & TAS 202	Water Penetration	Hurricane Engineering & Testing, Inc.	04/17/2018	HETI-18-6023	Rafael E. Droz-Seda, P.E.
ASTM E330 & TAS 202	Uniform Static Air Press.	Hurricane Engineering & Testing, Inc.	04/17/2018	HETI-18-6023	Rafael E. Droz-Seda, P.E.

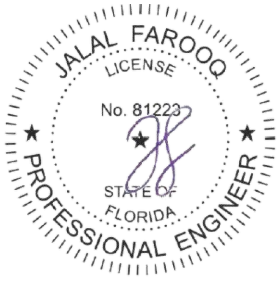
Supplemental Tests (Tested in accordance with TAS-201 and TAS-203)

TEST	DESCRIPTION	TEST LOCATION	TEST REPORT DATE	TEST REPORT #	Test Sealed by
FBC 1626.3 (TAS 201 & 203) ASTM E1886/E1996	Small Missile Impact & Cyclic	Hurricane Engineering & Testing, Inc.	04/17/2018	HETI-18-6024	Rafael E. Droz-Seda, P.E.

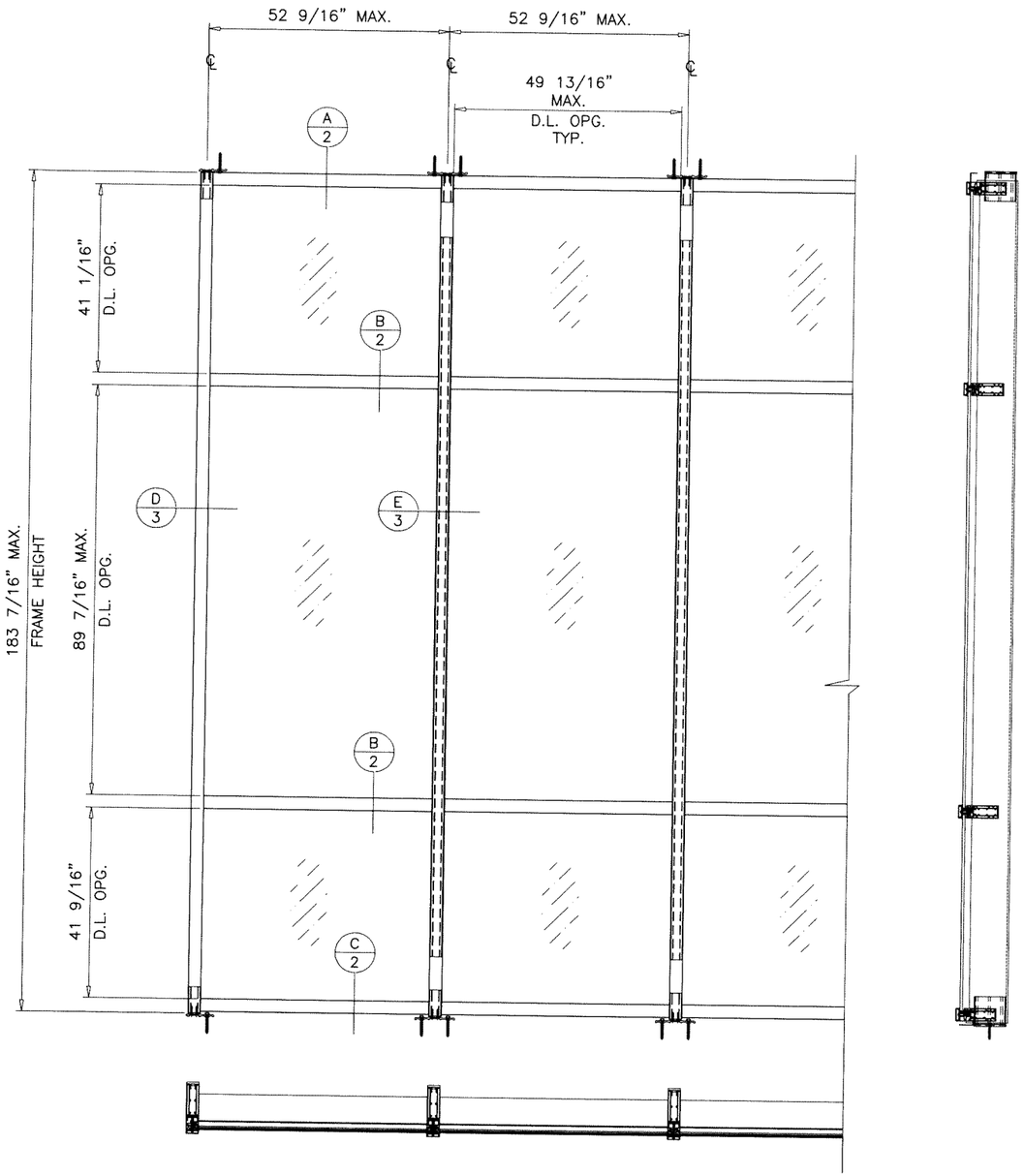
Under the limitations of the attached installation drawings, to the best of my knowledge and ability, the above product conforms to the requirements of the 2023 Florida Building Code.

Evaluation Report Engineer:

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



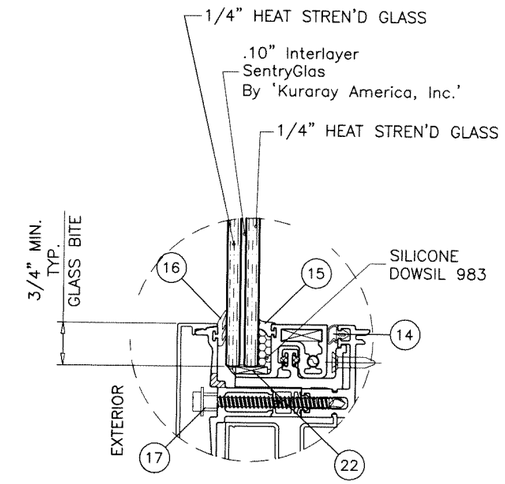
Sealed: 7/21/2023



TYPICAL ELEVATION

MAXIMUM DESIGN LOAD RATING = + 80.0 PSF
(FOR SIZES SHOWN ABOVE OR SMALLER) − 110.0 PSF

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



GLAZING DETAIL

THIS SYSTEM IS RATED FOR SMALL MISSILE IMPACT.
F.B.C. APPROVED IMPACT RESISTANT SHUTTERS
REQUIRED FOR INSTALLATIONS UP TO 30 FT. OF GRADE.
SHUTTERS NOT REQD. FOR INSTALLATIONS ABOVE 30 FT. OF GRADE.

SERIES 2000 STICK
ALUMINUM CURTAIN WALL 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).

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

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

MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE 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)'.

Sealed: 8/1/2023

FL #27401

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.

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\18−55F−MG

SERIES 2000 STICK ALUM. CURTAIN WALL SYS. (S.M.I.)

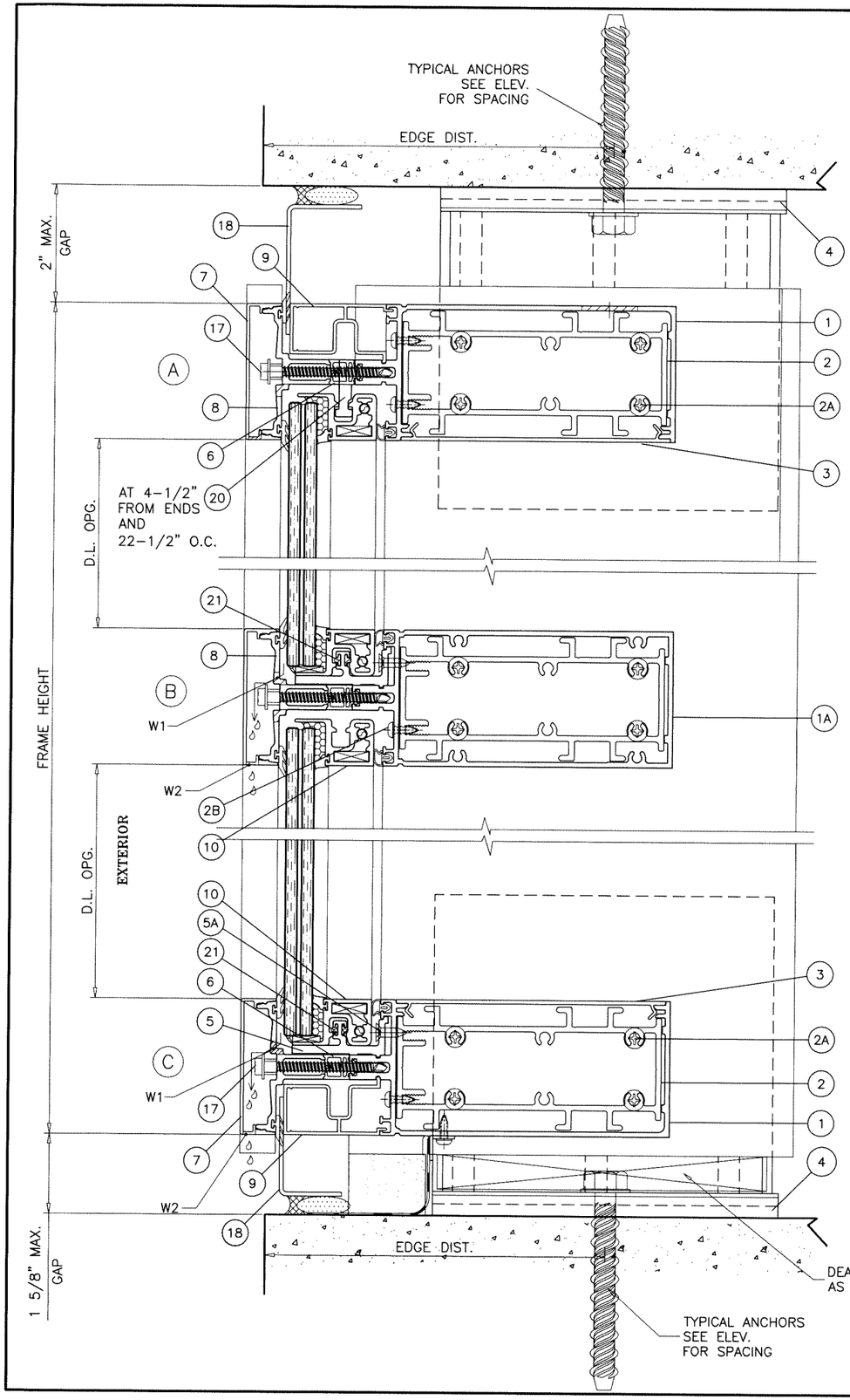
MR−GLASS DOORS & WINDOWS MANUFACTURING, LLC
8051 N.W. 79th Place
Medley, FL. 33166
Tel. (305) 764−3963 Fax. (305) 470−8285

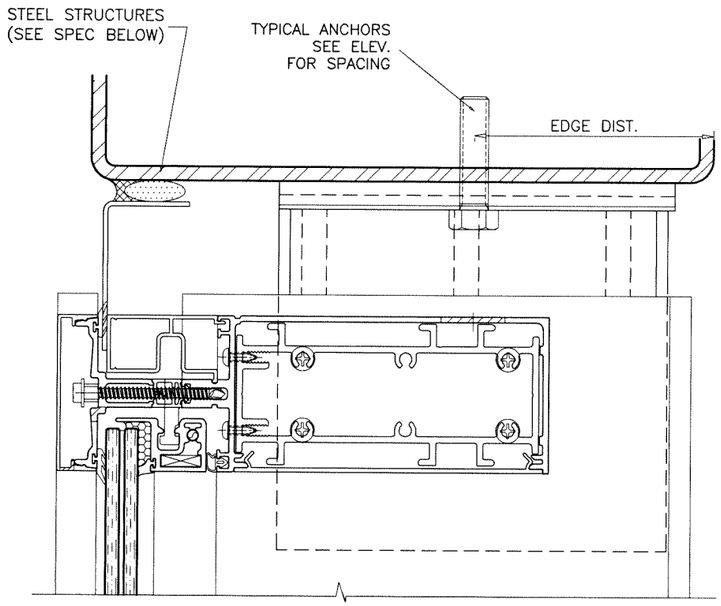
revisions:			
no	date	by	description
A	07.22.20		UPDATED TO 2020 FBC
B	07.21.23		UPDATED TO 2023 FBC

date: 05−08−18
scale: 3/8"=1'−0"
dr. by: TARIQ
chk. by:

drawing no. 18−55F

sheet 1 of 6





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

1/2" DIA. KWIK HUS-EZ ANCHOR BY 'HILTI'

INTO 4000 PSI MIN. CONCRETE (MAX. DESIGN LOAD = +80, -90 PSF)
INTO 6000 PSI MIN. CONCRETE (MAX. DESIGN LOAD = +80, -110 PSF)
4-1/4" MIN. EMBED
5" MIN. CENTERLINE-TO-CENTERLINE SPACING
4-1/2" MIN. EDGE DISTANCE

1/2" DIA. MACHINE SCREWS (GRADE 5 CRS)

INTO STEEL STRUCTURES
1/8" THK. MIN. (Fy = 36 KSI MIN.)
(3) THREADS MIN. TO EXTEND BEYOND METAL THICKNESS
(STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

NOTE:
ANCHOR TORQUED AND OTHERWISE INSTALLED AS
PER MANUFACTURER SPECIFICATIONS.

WEEPS:

W1 = 5/16" X 1-3/4" WEEP SLOTS (3) PER LITE
AT 8" FROM EACH END AND AT CENTER

W2 = 3/16" X 1-1/2" WEEP SLOTS (2) PER LITE
AT 3-1/2" FROM ENDS

Sealed: 8/1/2023

FL #27401

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TEL. (305) 264-8100 FAX. (305) 262-6978

COMP-ANL\18-55F-MG

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revisions:

no	date	by	description

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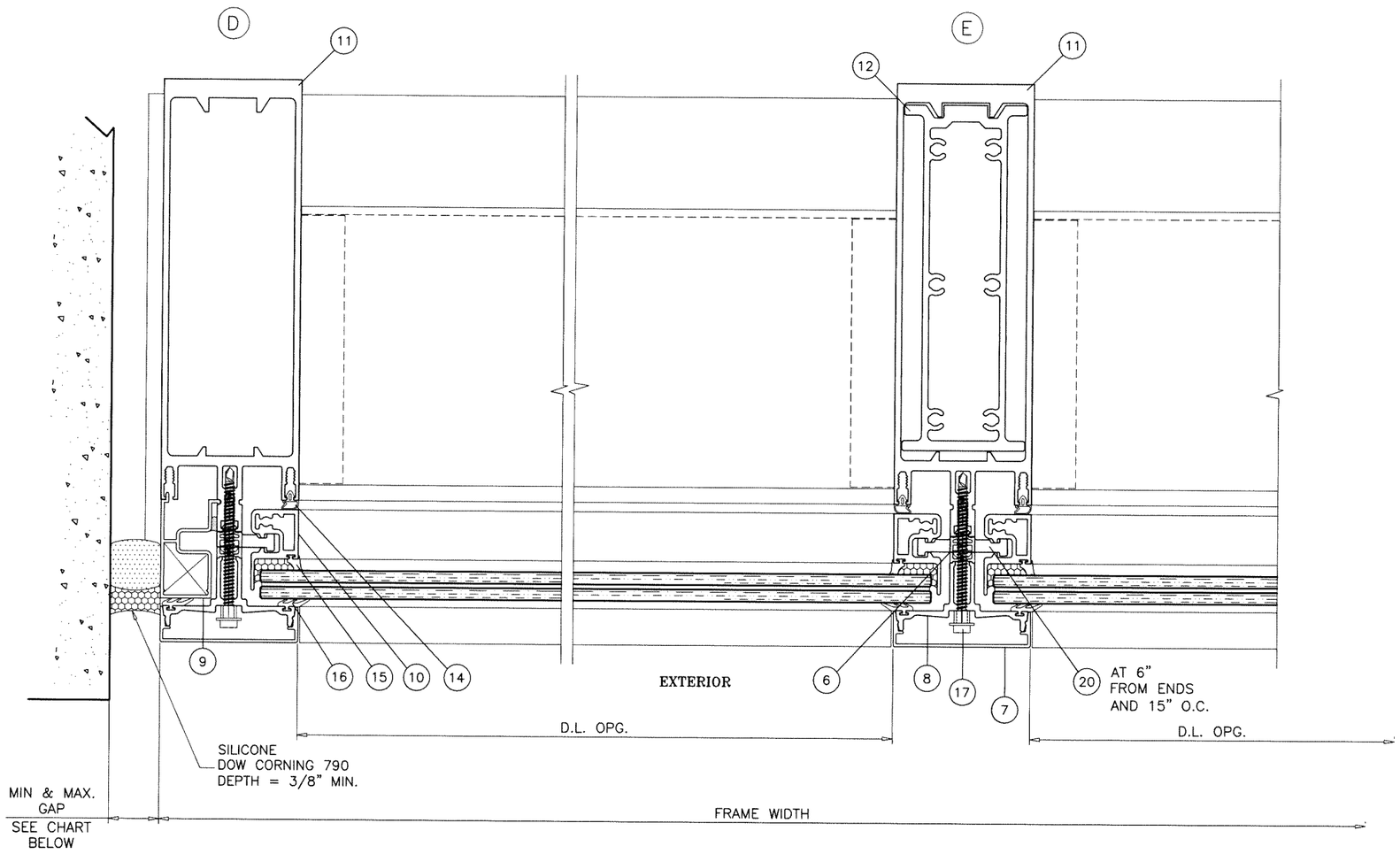
scale: 3/8" = 1"
dr. by: TARIQ
chk. by:

drawing no. 18-55F



MAX. FRAME HEIGHT	GAP	
	MIN.	MAX.
120"	3/8"	3/4"
138"	1/2"	3/4"
184"	9/16"	3/4"

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.

Sealed: 8/1/2023

FL #27401

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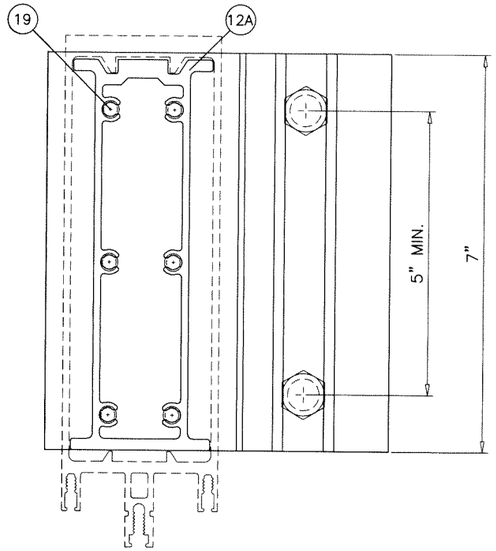
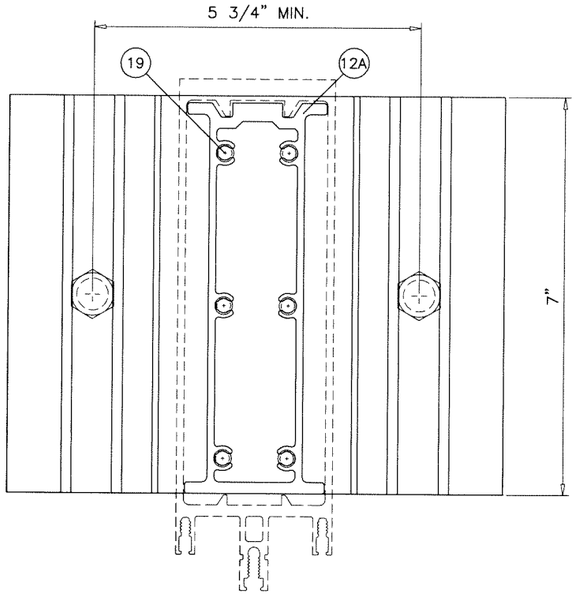
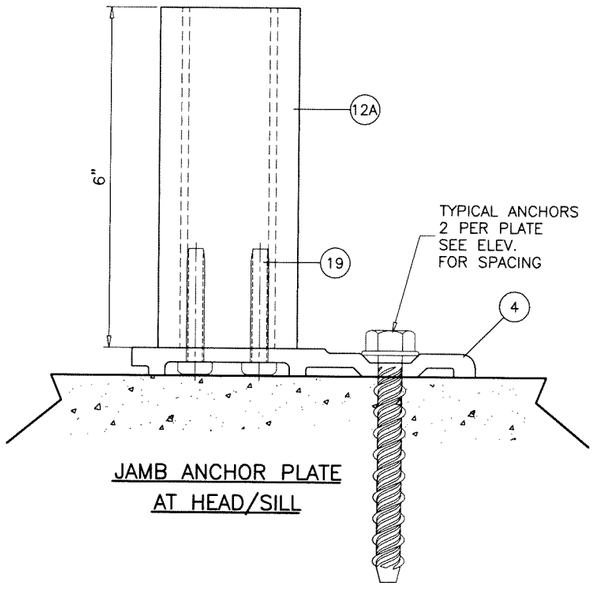
dr. by: TARIQ
chk. by:

drawing no. 18-55F

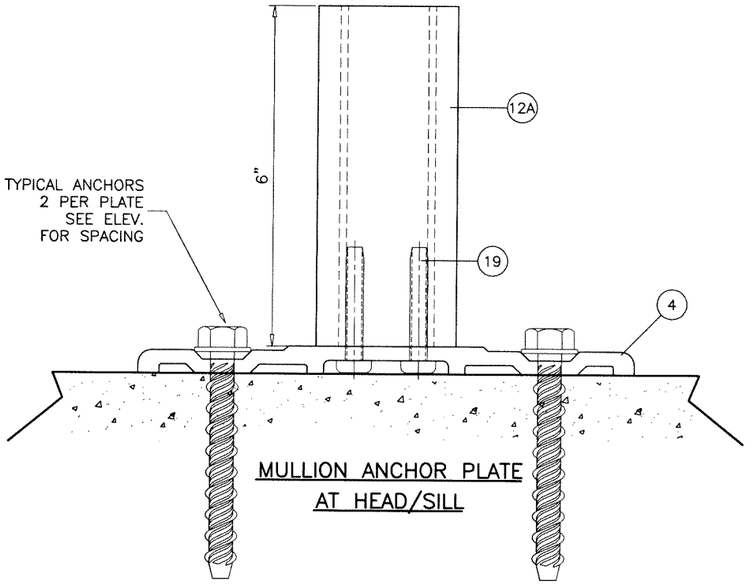
sheet 3 of 6







JAMB ANCHOR PLATE
AT HEAD/SILL



MULLION ANCHOR PLATE
AT HEAD/SILL

Sealed: 8/1/2023

FL #27401

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LICENSE
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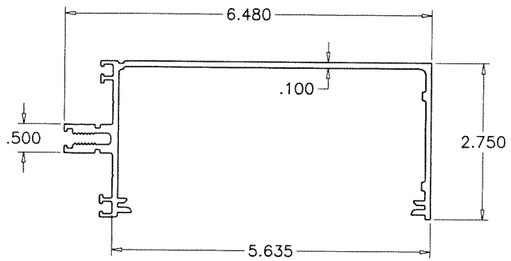
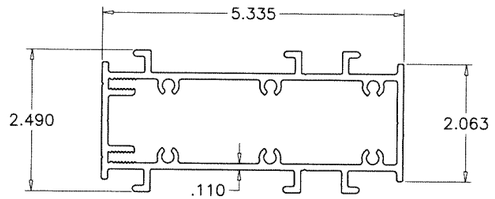
18-55F

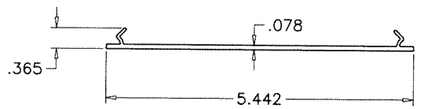
sheet 4 of 6



1 FRAME HEAD/SILL



2 SHEAR BLOCK



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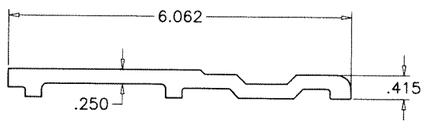
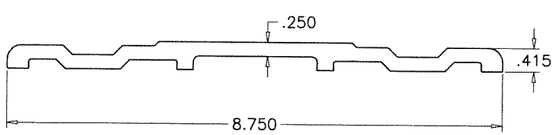
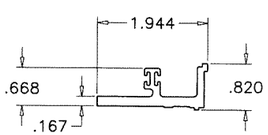


4 ANCHOR PLATE (JAMB)



4 ANCHOR PLATE (MULLION)



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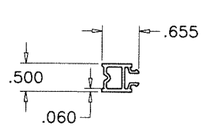

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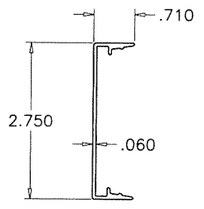
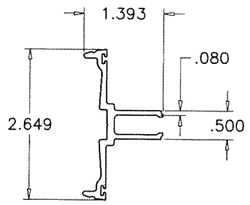
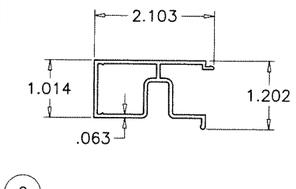


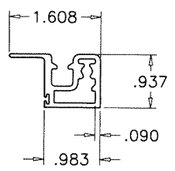
7 PRESSURE PLATE CAP



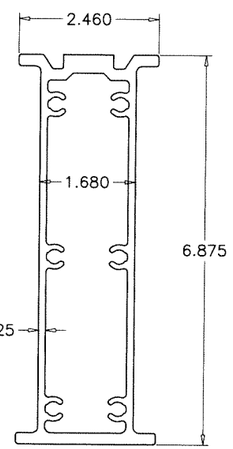
8 PRESSURE PLATE



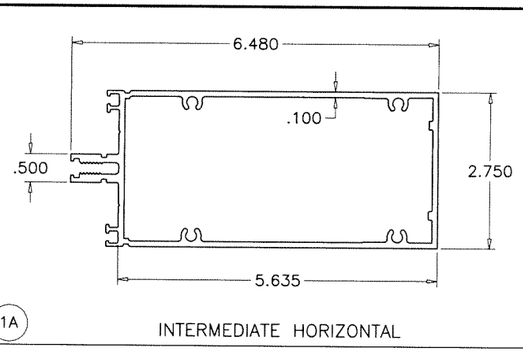
9 POCKET FILLER



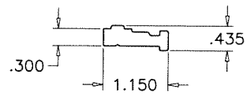
10 SUB FRAME



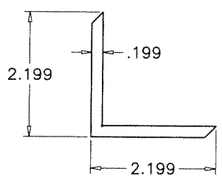
12 JAMB/MULL REINF.



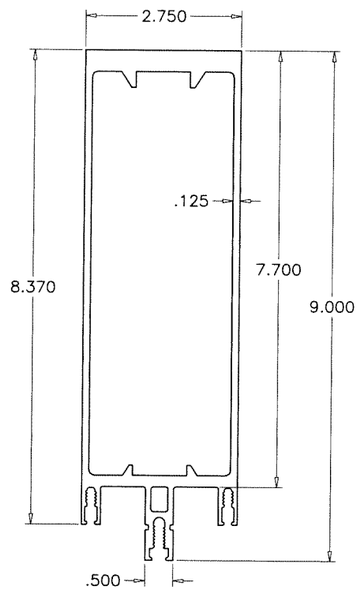
1A INTERMEDIATE HORIZONTAL



20 RETAINER CLIP



13 SUB FRAME CORNER KEY



11 FRAME JAMB/MULLION

Sealed: 8/1/2023

FL #27401

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\18-55F-MG

SERIES 2000 STICK ALUM. CURTAIN WALL SYS. (S.M.I.)

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

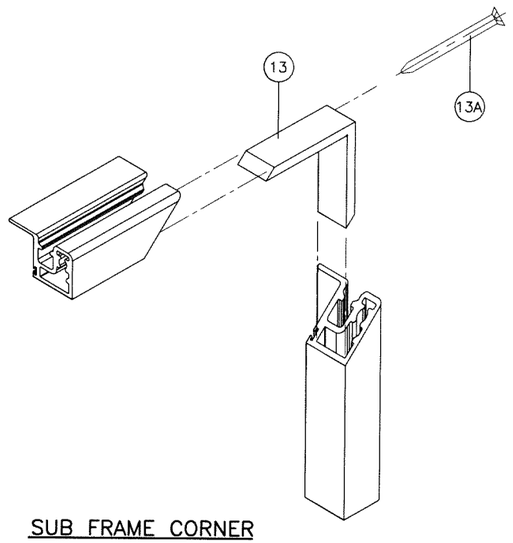
revisions:

no	date	by	description

date: 05-08-18
scale: 3/8" = 1"
dr. by: TARIQ
chk. by:

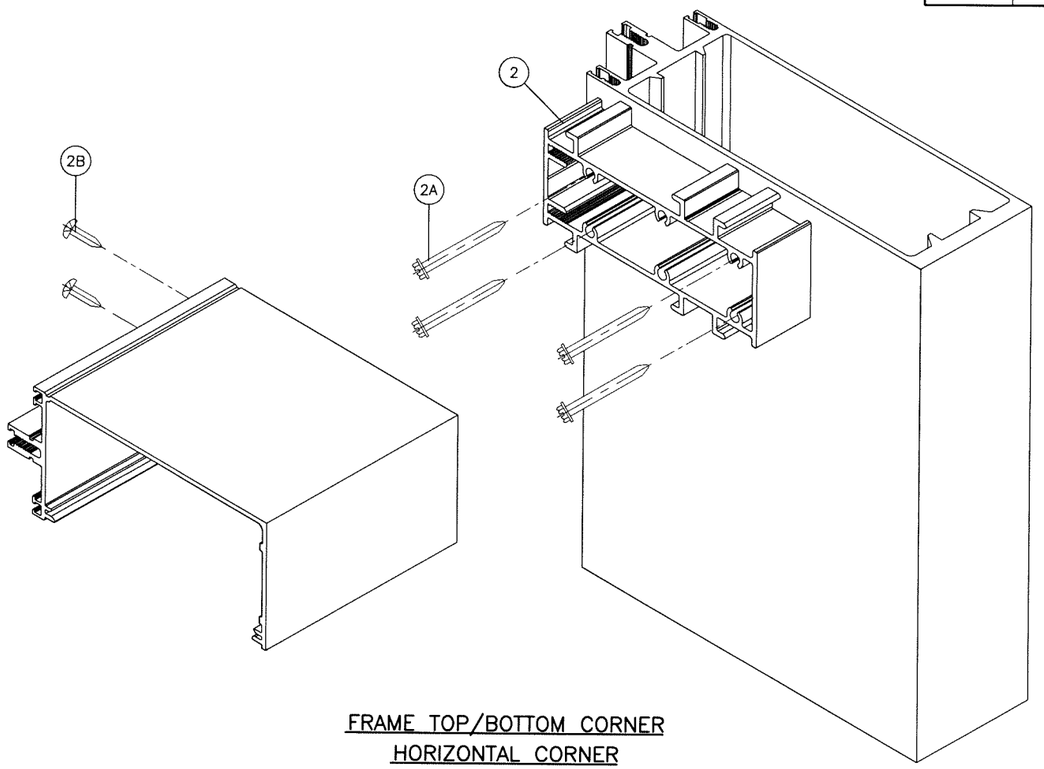
drawing no. 18-55F

sheet 5 of 6



SUB FRAME CORNER

ITEM NO.	PART NUMBER	QUANTITY	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
1	E-2007	AS REQD.	FRAME HEAD/SILL	6063-T6	–
1A	E-2006	AS REQD.	INTERMEDIATE HORIZONTAL	6063-T6	–
2	E-2010	AS REQD.	SHEAR BLOCK, 7/8" LONG	6063-T6	–
2A	#12 1-1/4"	4/ BLOCK	SHEAR BLOCK FASTENERS	ST. STEEL	PH SELF DRILLING
2B	#10 X 3/4"	2/ BLOCK	SHEAR BLOCK FASTENERS	ST. STEEL	PH SELF DRILLING
3	E-2046	AS REQD.	FRAME COVER	6063-T5	–
4	E-2013	AS REQD.	ANCHOR PLATE	6063-T6	–
5	E-2036	2/ LITE	SITTING SHELF, 6" LONG	6063-T6	–
5A	#12 X 3/4"	2/ SHELF	SITTING SHELF FASTENERS	ST. STEEL	PH SMS
6	G-2005	AS REQD.	THERMAL BREAK	RIGID OVC	–
7	E-2045	AS REQD.	PRESSURE PLATE CAP	6063-T5	–
8	E-2040	AS REQD.	PRESSURE PLATE	6063-T6	–
9	E-2047	AS REQD.	POCKET FILLER	6063-T5	–
10	E-2030	AS REQD.	SUB FRAME	6063-T6	–
11	E-2001	AS REQD.	FRAME JAMB/MULLION	6063-T6	–
12	E-2021	AS REQD.	JAMB/MULL REINFORCEMENT (LENGTH = FRAME HT. - 24")	6063-T6	–
12A	E-2021	AS REQD.	ANCHOR INSERT, 6" LONG	6063-T6	–
13	E-2037	AS REQD.	SUB FRAME CORNER KEY	6063-T6	–
13A	#12 X 2-1/2"	1/ CORNER	SUB FRAME ASSEMBLY FASTENERS	ST. STEEL	FH SELF DRILLING
14	G-2002	AS REQD.	SUB FRAME GASKET	EPDM	DUROMETER 80±5 SHORE A
15	G-2001	AS REQD.	INTERIOR GLAZING GASKET	SANTOPRENE	DUROMETER 70±5 SHORE A
16	G-2003	AS REQD.	PRESSURE PLATE GASKET	EPDM	DUROMETER 80±5 SHORE A
17	#12 X 3"	AS REQD.	PRESSURE PLATE FASTENERS, AT 1" FROM ENDS AND 6" O.C.	ST. STEEL	HH SELF DRILLING
18	–	AS REQD.	BREAK METAL COVER, .080" THK.	ALUMINUM	–
19	5/16" X 2"	6/ PLATE	PLATE FASTENERS	ST. STEEL	PH TAPPING SCREW
20	E-2033	AS REQD.	RETAINER CLIP, 2" LONG	6063-T5	–
21	G-2006	AS REQD.	BUMPER (AT SITTING SHELF)	EPDM	DUROMETER 80±5 SHORE A
22	–	2/ LITE	SETTING BLOCKS (9/16" X 1/8" X 4" LONG) AT 1/4 POINTS	SILICONE	DUROMETER 80±5 SHORE A



FRAME TOP/BOTTOM CORNER
HORIZONTAL CORNER

SEALANTS:

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

Sealed: 8/1/2023

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