Product Approval
USER: Public User

FL #	FL40676-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
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 ☐ 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	FL40676_R2_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	Method 1 Option D
Date Submitted	10/23/2023
Date Validated	10/23/2023
Date Pending FBC Approval	10/31/2023
Date Approved	12/13/2023

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:** +100/-130 **Other:** See drawings 21-76F for span vs load combination and installation details.		**Installation Instructions** FL40676_R2_II_SS- MG450 FIXED (LMI) - DWG 21-76F 2023 R1.pdf Verified By: Jalal Farooq PE # 81223 Created by Independent Third Party: Yes **Evaluation Reports** FL40676_R2_AE_SS - MG450 FIXED (LMI) - PAE 2023 R1.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:** +100/-130 **Other:** See drawings 22-01F for span vs load combination and installation details.		**Installation Instructions** FL40676_R2_II_SS- MG450 FIXED (SMI) - DWG 22-01F 2023 R1.pdf Verified By: Jalal Farooq PE # 81223 Created by Independent Third Party: Yes **Evaluation Reports** FL40676_R2_AE_SS - MG450 FIXED (SMI) - PAE 2023 R1.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

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,

Sealed: 9/24/2021

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 40676
Date: 10/19/2023

Detailed Product Description:

Manufacturer: MR-GLASS DOORS & WINDOWS MANUFACTURING LLC.

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

Model Name: SERIES MG-450 ALUMINUM FIXED WINDOW

Maximum Load: +100 PSF, -130 PSF (Small Missile Impact)

Installation Drawings # 22-01F

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 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	12/06/2021 12/06/2021 12/06/2021 12/06/2021 10/28/2021 10/28/2021 09/25/2023	HETI-21-7037 HETI-21-7040 HETI-21-7043 HETI-21-7068 HETI-21-7090 HETI-21-7096 HETI-23-8061	Dr. Ram Tewari, PE
ASTM E331 OR ASTM 547 & TAS 202	Water Penetration	Hurricane Engineering & Testing, Inc	12/06/2021 12/06/2021 12/06/2021 12/06/2021 10/28/2021 10/28/2021 09/25/2023	HETI-21-7037 HETI-21-7040 HETI-21-7043 HETI-21-7068 HETI-21-7090 HETI-21-7096 HETI-23-8061	Dr. Ram Tewari, PE
ASTM E330 & TAS 202	Uniform Static Air Press.	Hurricane Engineering & Testing, Inc	12/06/2021 12/06/2021 12/06/2021 12/06/2021 10/28/2021 12/06/2021 10/28/2021 09/25/2023	HETI-21-7037 HETI-21-7040 HETI-21-7043 HETI-21-7068 HETI-21-7090 HETI-21-7103 HETI-21-7096 HETI-23-8061	Dr. Ram Tewari, PE

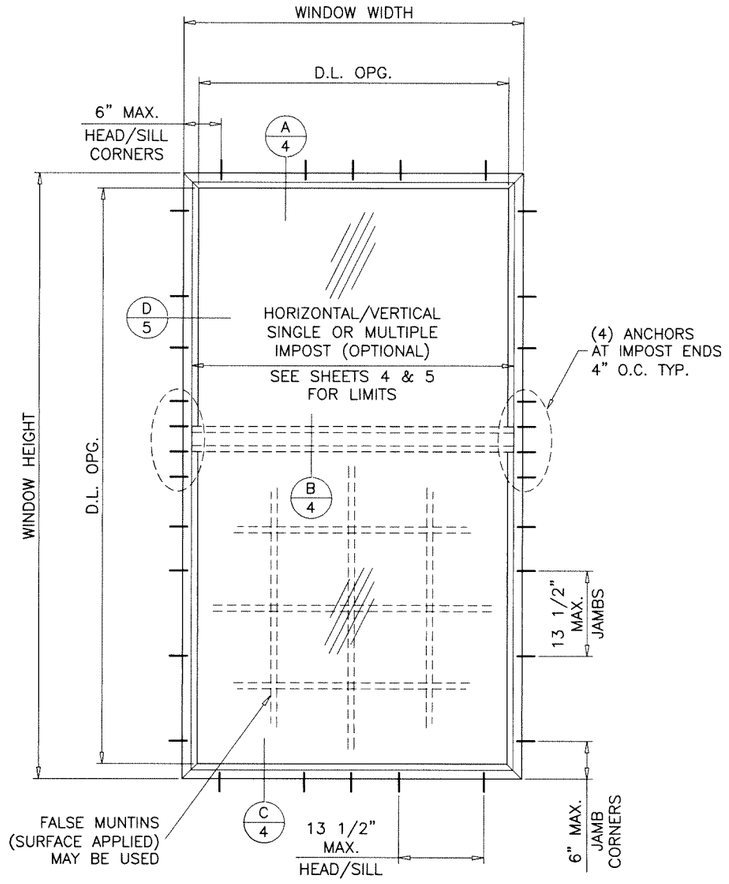
Supplemental Tests (Tested in accordance with TAS-201 and TAS-203)					
TEST	**DESCRIPTION**	**TEST LOCATION**	**TEST REPORT DATE**	**TEST REPORT #**	**Test Sealed by**
FBC 1626.3 TAS 201 & 203 ASTME1886/1996	Small Missile Impact & Cyclic	Hurricane Engineering & Testing, Inc	12/06/2021 12/06/2021 12/06/2021 12/06/2021 10/28/2021 12/06/2021 12/06/2021 10/28/2021 09/25/2023	HETI-21-7037 HETI-21-7040 HETI-21-7062 HETI-21-7068 HETI-21-7090 HETI-21-7103 HETI-21-7119 HETI-21-7096 HETI-23-8061	Dr. Ram Tewari, PE

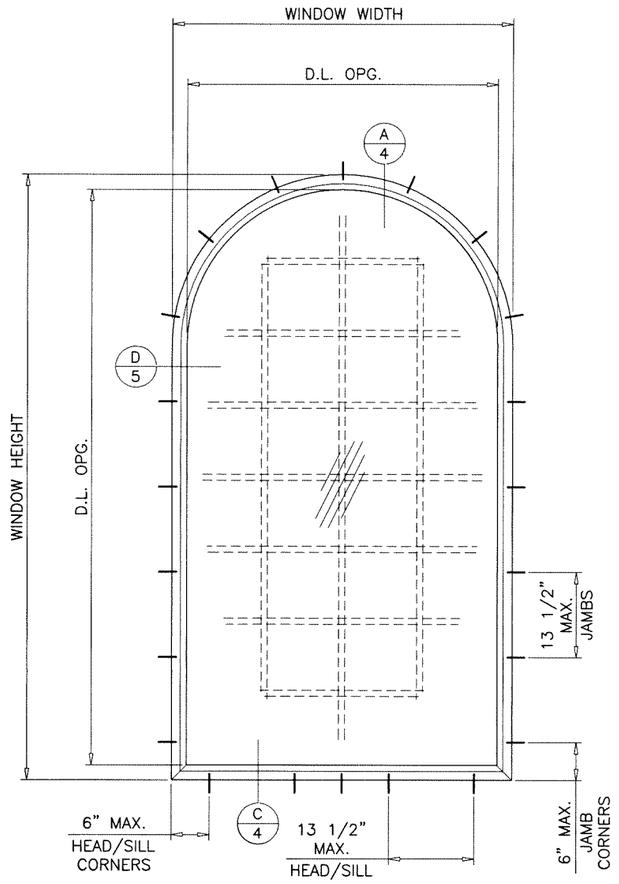
Under the limitations of the attached installation drawings, to the best of my knowledge and ability, the above product conforms to the requirements of the 2023 Florida Building Code.

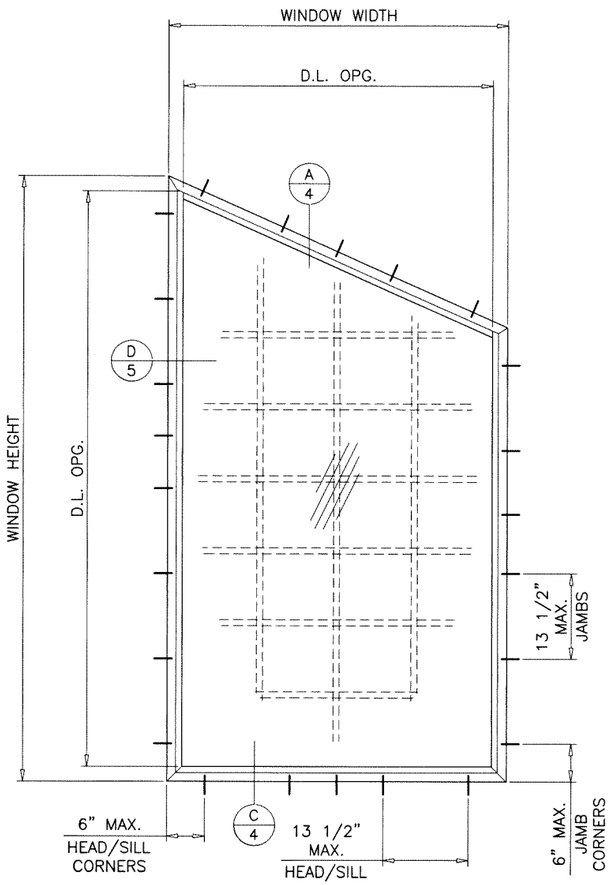
Evaluation Report Engineer:

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

Sealed: 10/19/2023







TYPICAL ELEVATIONS
(TESTED UNITS)

SERIES MG-450
ALUMINUM FIXED WINDOW (S.M.I.)

DESIGN LOAD RATINGS FOR THESE WINDOWS TO BE AS PER CHARTS SHOWN ON SHEET 3.

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.

DAYLITE OPENINGS:
D.L.O. HEIGHT = WINDOW HEIGHT – 4.750"
D.L.O. WIDTH = WINDOW WIDTH – 4.750"

WINDOWS COMPLY WITH REQUIREMENTS OF ANSI Z97.1.

THESE WINDOWS ARE 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.

FL #40676.2

Sealed: 10/23/2023

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
TEL. (305) 264-8100
WWW.AFCENG.COM
FBPE #3538

COMP-ANL\22-01F-MG

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

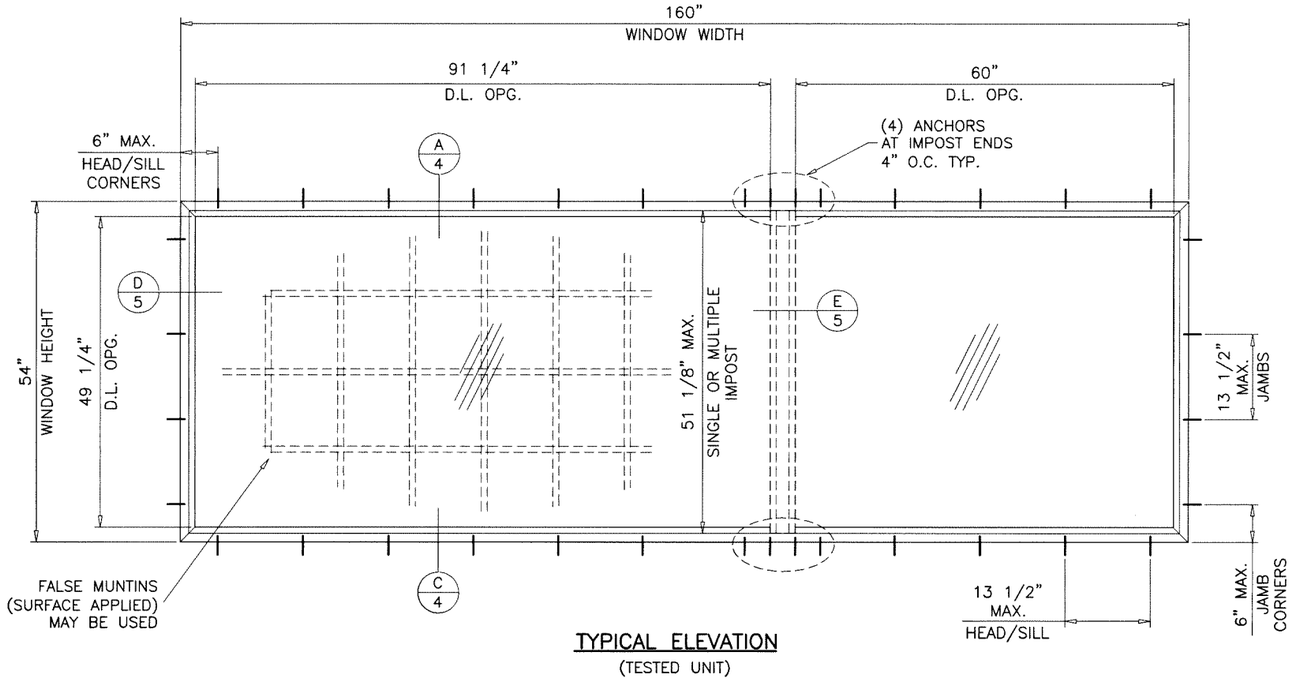
MR-GLASS DOORS & WINDOWS MANUFACTURING, LLC
8051 N.W. 79th Place
Medley, FL. 33166
Tel. (305) 764-3963 www.mrglasswindows.com

revisions:			
no	date	by	description
A	07.18.23		UPDATED TO 2023 FBC

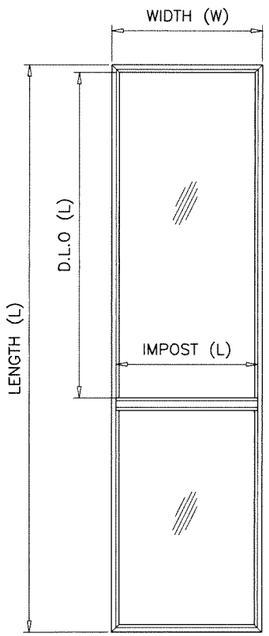
date: 01-06-22
scale: 1/2"=1'-0"
dr. by: TARIQ
chk. by:

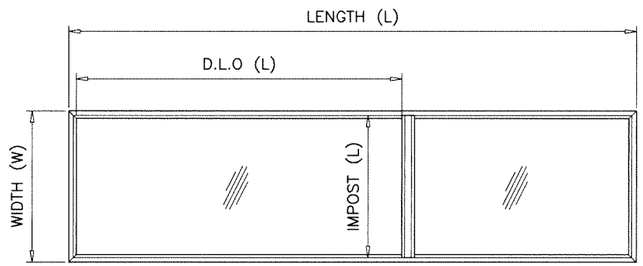
drawing no.
22-01F

sheet 1 of 8



TYPICAL ELEVATION
(TESTED UNIT)





DESIGN LOAD CAPACITY – PSF FOR WINDOWS SHOWN ON THIS SHEET ONLY						
MAX. FRAME DIMS.					9/16" LAM. GLASS	
WIDTH (W)	LENGTH (L)	D.L.O. (L)	IMPOST (L)	IMPOST REINF.	EXT.(+)	INT.(–)
48"	180"	103–1/4"	45–1/8"	W/O TUBE	80.0	80.0
51"	169–3/8"	96–7/8"	48–1/8"		76.7	76.7
54"	160"	91–1/4"	51–1/8"		60.2	60.2
48"	180"	103–1/4"	45–1/8"	WITH TUBE	80.0	80.0
51"	169–3/8"	96–7/8"	48–1/8"		80.0	80.0
54"	160"	91–1/4"	51–1/8"		80.0	80.0

Sealed: 10/23/2023

FL #40676.2

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\22-01F-MG

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

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revisions:

no	date	by	description

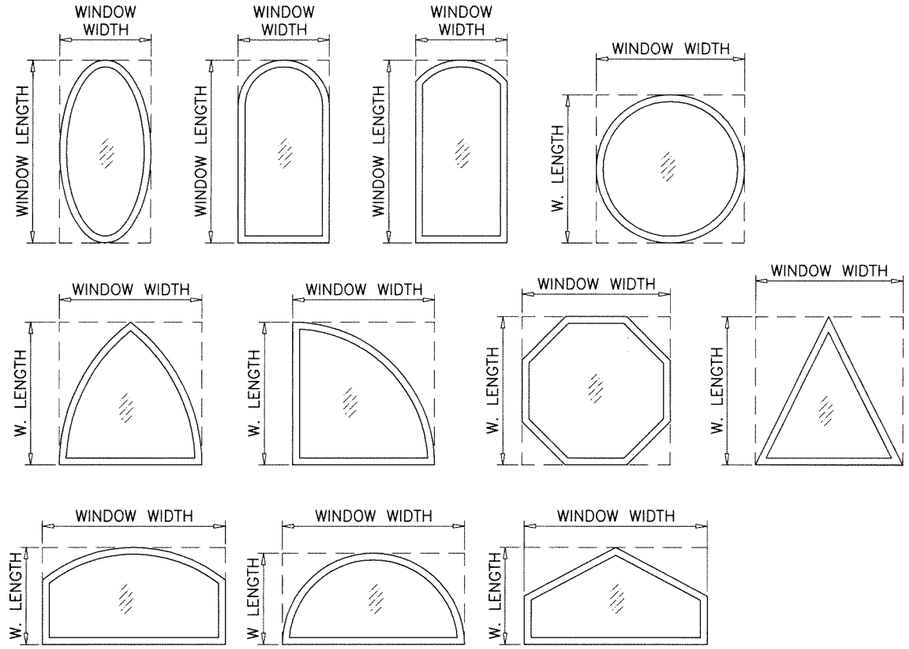
date: 01-06-22
scale: 1/2"=1'-0"
dr. by: TARIQ
chk. by:

drawing no. 22-01F

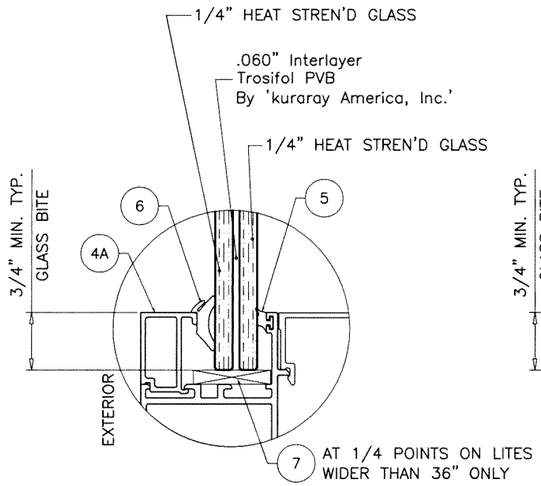
DESIGN LOAD CAPACITY – PSF					
MAX. FRAME DIMS.		GLASS TYPE 'A'		GLASS TYPE 'B'	
WIDT (W)	LENGTH (L)	EXT.(+)	1NT.(–)	EXT.(+)	1NT.(–)
30"	48"	85.0	115.0	100.0	130.0
36"		85.0	115.0	100.0	130.0
42"		85.0	115.0	100.0	130.0
48"		85.0	115.0	100.0	130.0
54"		85.0	115.0	100.0	130.0
60"		85.0	115.0	100.0	130.0
66"		85.0	115.0	100.0	130.0
72"		85.0	115.0	100.0	130.0
30"	60"	85.0	115.0	100.0	130.0
36"		85.0	115.0	100.0	130.0
42"		85.0	115.0	100.0	130.0
48"		85.0	115.0	100.0	130.0
54"		75.6	102.2	100.0	130.0
60"		68.0	92.0	100.0	130.0
66"		68.0	92.0	100.0	130.0
72"		68.0	92.0	94.2	122.8
30"	66–1/8"	85.0	115.0	100.0	130.0
36"		85.0	115.0	100.0	130.0
42"		85.0	115.0	100.0	130.0
48"		85.0	115.0	100.0	130.0
54"		75.6	102.2	100.0	130.0
60"		68.0	92.0	100.0	130.0
66"		61.8	83.6	100.0	130.0
66–1/8"		56.7	76.7	100.0	130.0
30"	72"	85.0	115.0	100.0	130.0
36"		85.0	115.0	100.0	130.0
42"		85.0	115.0	100.0	130.0
48"		85.0	115.0	100.0	130.0
54"		75.6	102.2	98.0	127.4
60"		68.0	92.0	94.5	122.8
66"		61.8	83.6	–	–
72"		56.7	76.7	–	–
30"	84"	85.0	115.0	100.0	130.0
36"		85.0	115.0	100.0	130.0
42"		85.0	115.0	100.0	130.0
48"		85.0	115.0	96.4	125.4
54"		75.6	102.2	–	–
60"		68.0	92.0	–	–
66"		61.8	83.6	–	–
30"	96"	85.0	115.0	100.0	130.0
36"		85.0	115.0	100.0	130.0
42"		85.0	115.0	100.0	130.0
48"		85.0	115.0	–	–
54"		75.6	102.2	–	–
60"		68.0	92.0	–	–
30"	108"	85.0	115.0	100.0	130.0
36"		85.0	115.0	100.0	130.0
42"		85.0	115.0	–	–
48"		85.0	115.0	–	–
30"	120"	85.0	115.0	100.0	130.0
36"		85.0	115.0	100.0	130.0
42"		85.0	115.0	–	–
48"		85.0	115.0	–	–

DESIGN LOAD CAPACITY – PSF					
MAX. FRAME DIMS.		GLASS TYPE 'A'		GLASS TYPE 'B'	
WIDT (W)	LENGTH (L)	EXT.(+)	1NT.(–)	EXT.(+)	1NT.(–)
30"	132"	85.0	115.0	100.0	130.0
36"		85.0	115.0	–	–
42"		85.0	115.0	–	–
30"	144"	85.0	115.0	100.0	130.0
36"		85.0	115.0	–	–
30"	156"	85.0	115.0	–	–
36"		85.0	115.0	–	–
30"	168"	85.0	115.0	–	–

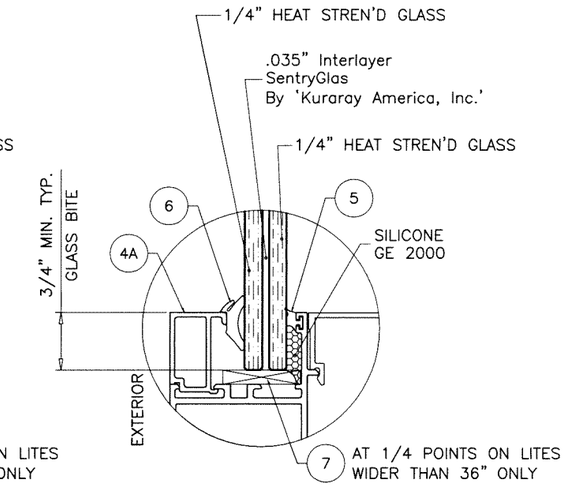
DESIGN LOAD CAPACITY – PSF					
MAX. FRAME DIMS.		GLASS TYPE 'A'		GLASS TYPE 'B'	
WIDT (W)	LENGTH (L)	EXT.(+)	1NT.(–)	EXT.(+)	1NT.(–)
19–1/8"	26"	85.0	115.0	100.0	130.0
26–1/2"		85.0	115.0	100.0	130.0
37"		85.0	115.0	100.0	130.0
53–1/8"		85.0	115.0	100.0	130.0
19–1/8"	38–3/8"	85.0	115.0	100.0	130.0
26–1/2"		85.0	115.0	100.0	130.0
37"		85.0	115.0	100.0	130.0
53–1/8"		85.0	115.0	100.0	130.0
19–1/8"	50–5/8"	85.0	115.0	100.0	130.0
26–1/2"		85.0	115.0	100.0	130.0
37"		85.0	115.0	100.0	130.0
53–1/8"		80.6	109.0	100.0	130.0
19–1/8"	56"	85.0	115.0	100.0	130.0
26–1/2"		85.0	115.0	100.0	130.0
37"		85.0	115.0	100.0	130.0
53–1/8"		76.8	103.9	100.0	130.0
19–1/8"	63"	85.0	115.0	100.0	130.0
26–1/2"		85.0	115.0	100.0	130.0
37"		85.0	115.0	100.0	130.0
53–1/8"		76.8	103.9	100.0	130.0
19–1/8"	72"	85.0	115.0	100.0	130.0
26–1/2"		85.0	115.0	100.0	130.0
37"		85.0	115.0	100.0	130.0
53–1/8"		76.8	103.9	98.6	128.2
19–1/8"	76"	85.0	115.0	100.0	130.0
26–1/2"		85.0	115.0	100.0	130.0
37"		85.0	115.0	100.0	130.0
53–1/8"		76.8	103.9	95.7	124.4



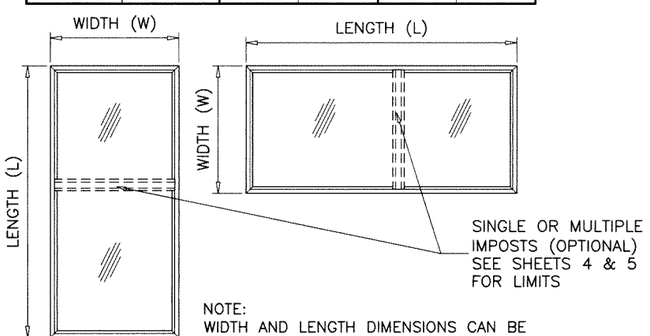
ALLOWABLE LOADS FOR ALTERNATE SHAPES AS SHOWN ABOVE OR SIMILAR CAN BE VERIFIED BY INSCRIBING PICTURE WINDOW SHAPE WITHIN SQUARE OR RECTANGLE AS SHOWN IN DOTTED LINES AND OBTAINING ALLOWABLE LOADS FROM THOSE SHAPES.
LIMIT MAX. DESIGN LOADS FOR ALTERNATE SHAPES TO ±80.0 PSF



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



GLASS TYPE 'B'
1/2" OVERALL LAM. GLASS



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).

Sealed: 10/23/2023

FL #40676.2

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
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FBPE #3538

COMP–ANL\22–01F–MG

MG–450 ALUMINUM FIXED WDW. (S.M.I.)

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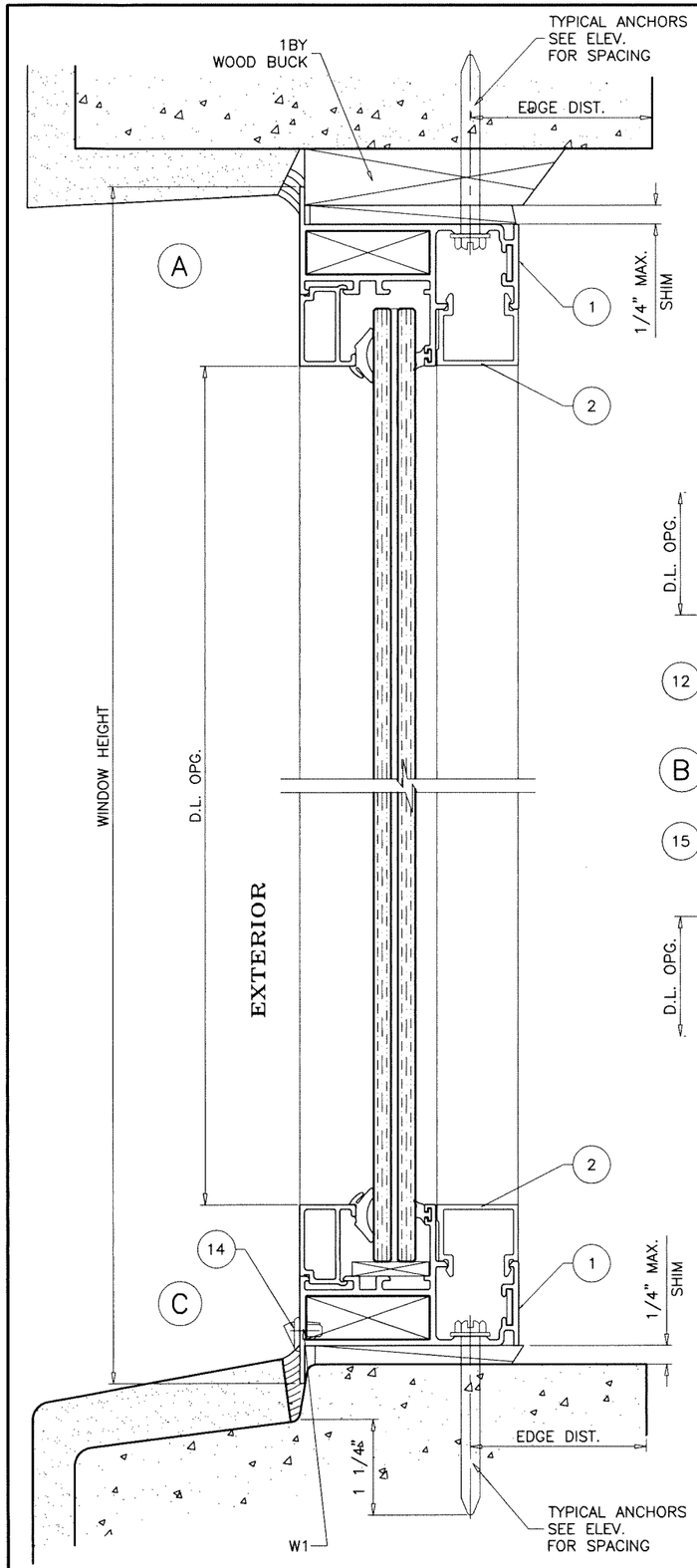
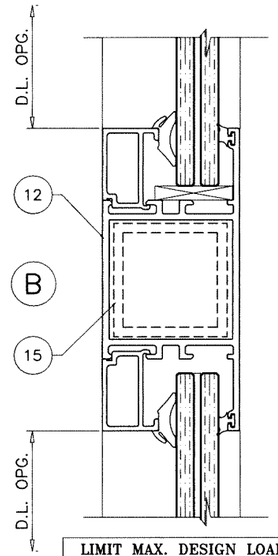
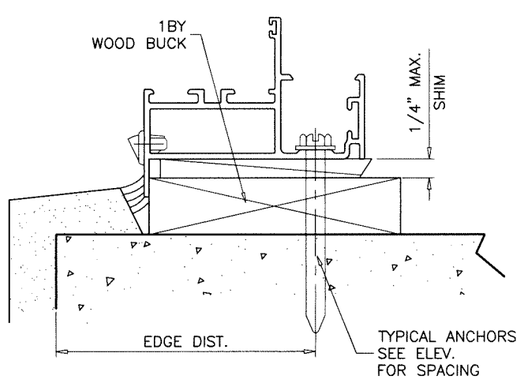
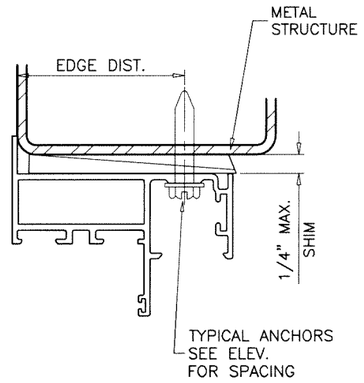
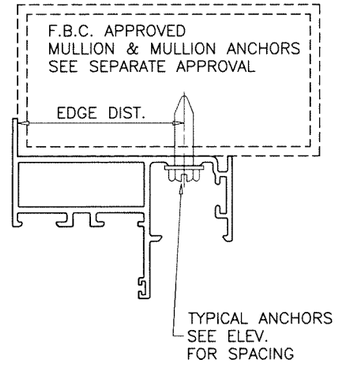


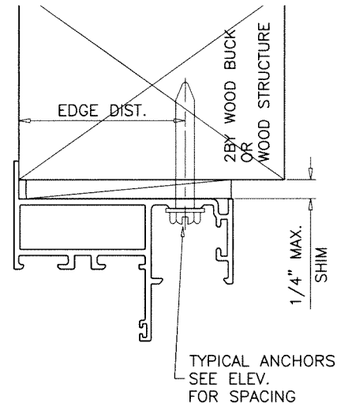


LIMIT MAX. DESIGN LOADS FOR WINDOWS WITH IMPOST AS FOLLOWS		
MAX. LENGTH	REINF.	LOADS – PSF
45–1/8"	W/O TUBE	80.0
48–1/8"		76.7
51–1/8"		60.2
51–1/8"	WITH TUBE	80.0









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 = 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.

WEEPHOLES:

W1 = 5/16" X 1–3/4" WEEPHOLES WITH PLASTIC BAFFLE AT 5–1/2" FROM EACH END

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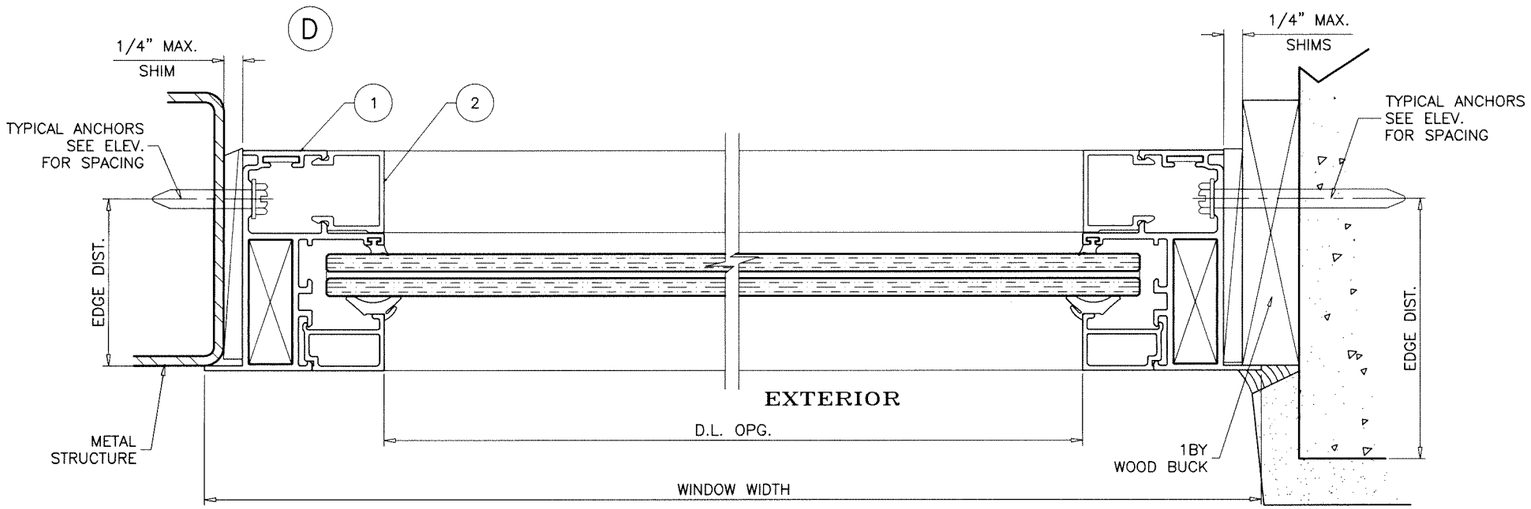

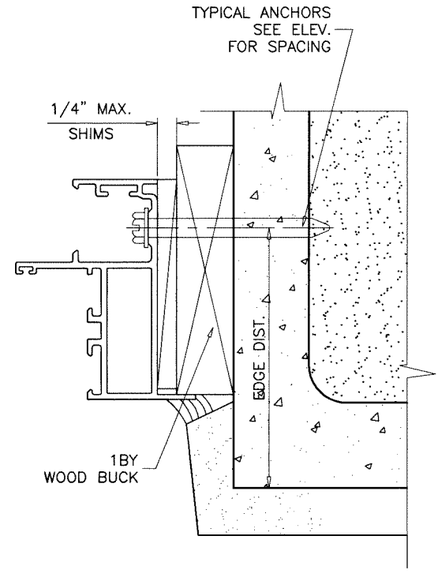

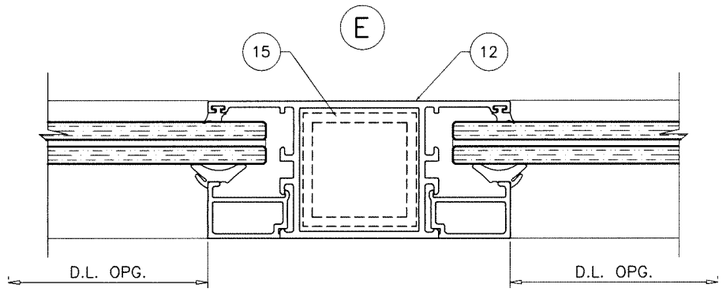

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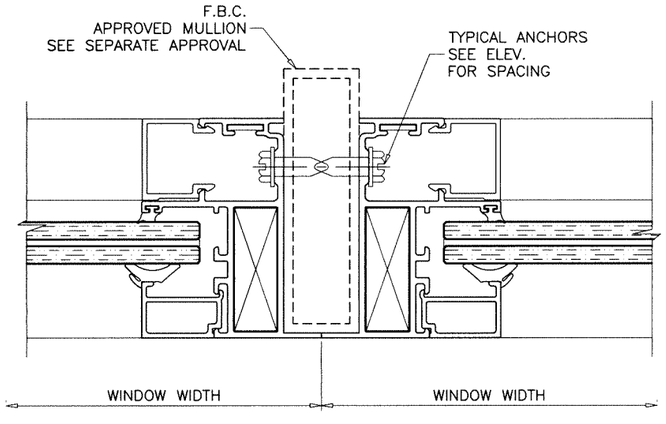

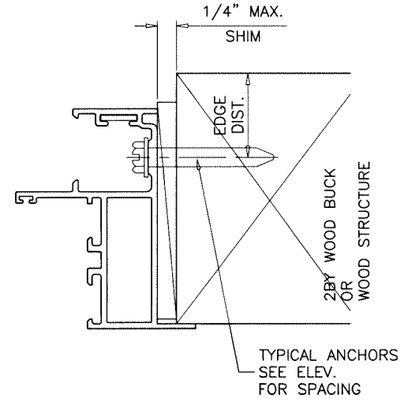

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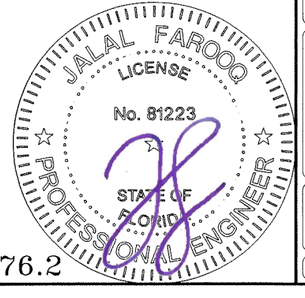

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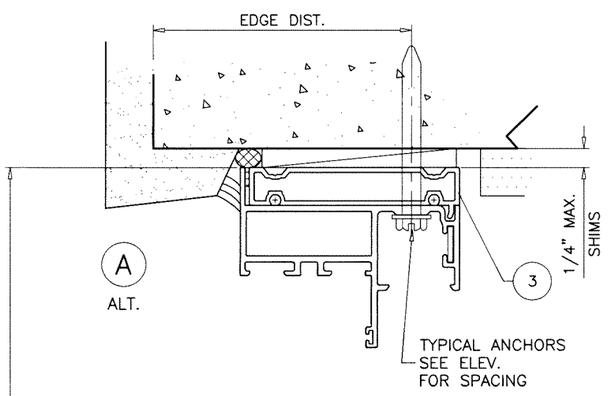

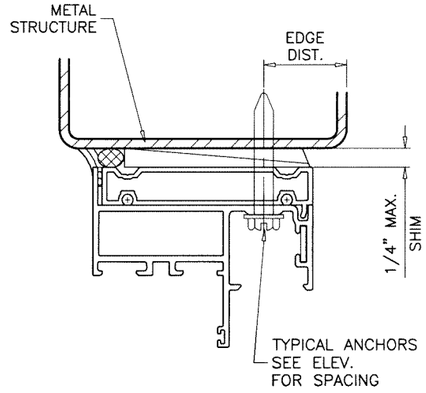

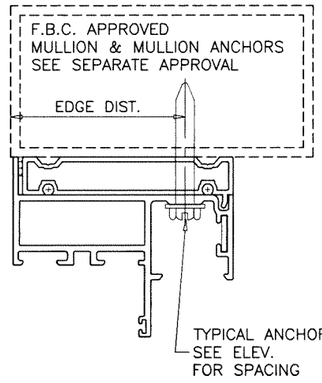

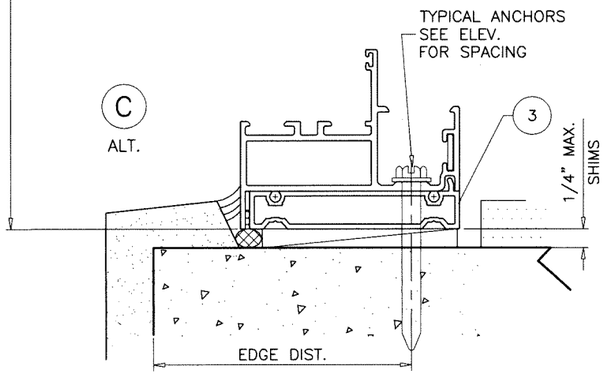

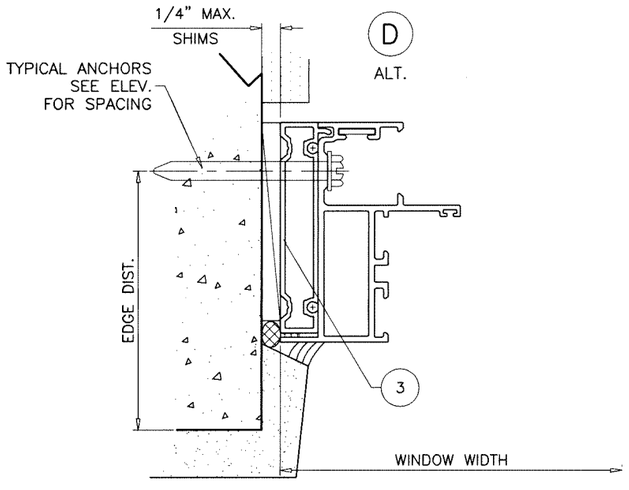

INSTALLATION DETAILS WITH FLUSH FRAME ADAPTERS

SEE SHEETS 4 & 5 FOR WINDOW DETAILS

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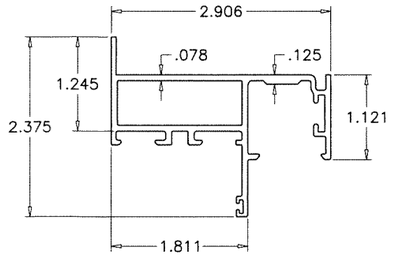

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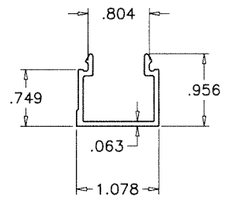
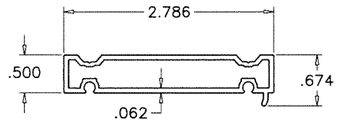
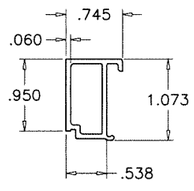


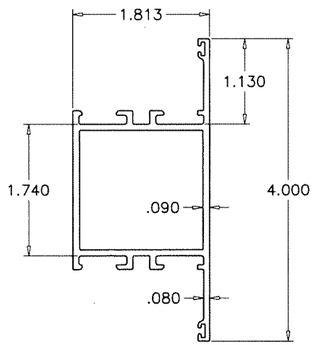
(2) SCREW COVER



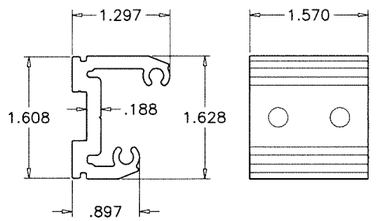
(3) FLUSH FRAME ADAPTER



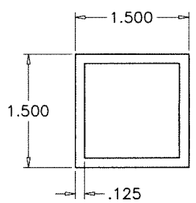
(4) GLAZING BEAD
9/16" LAM. GLASS



(12) IMPOST



(13) IMPOST SHEAR BLOCK



(15) IMPOST REINF.

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-9004	4	GLAZING BEAD (9/16" 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.

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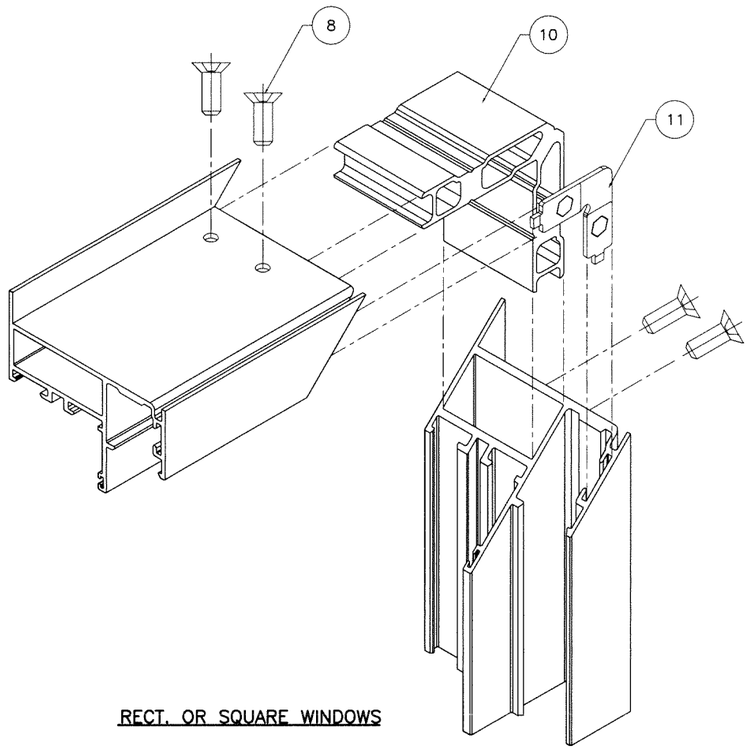
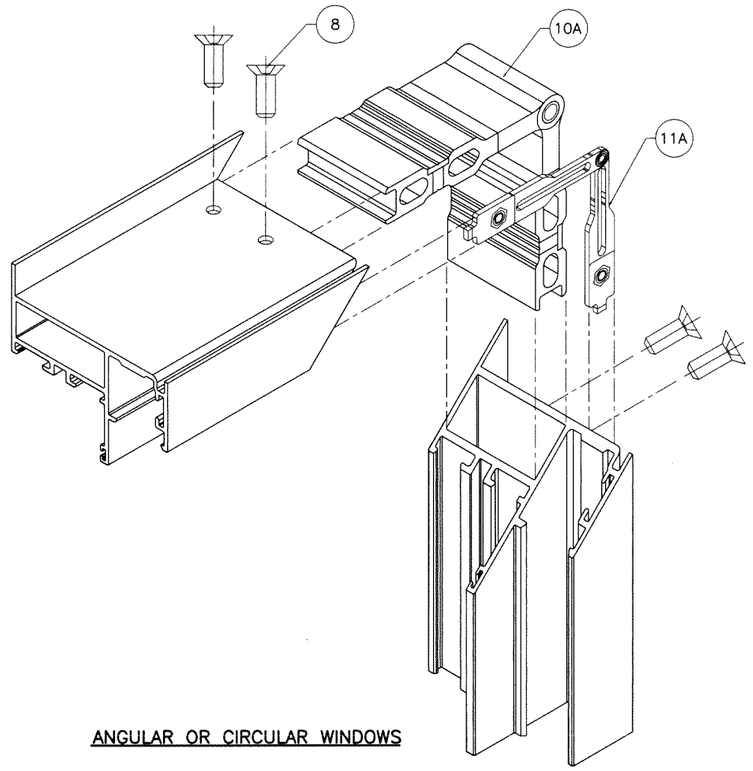
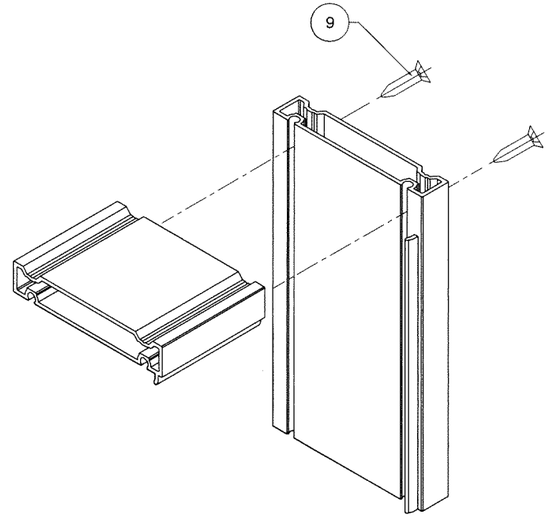


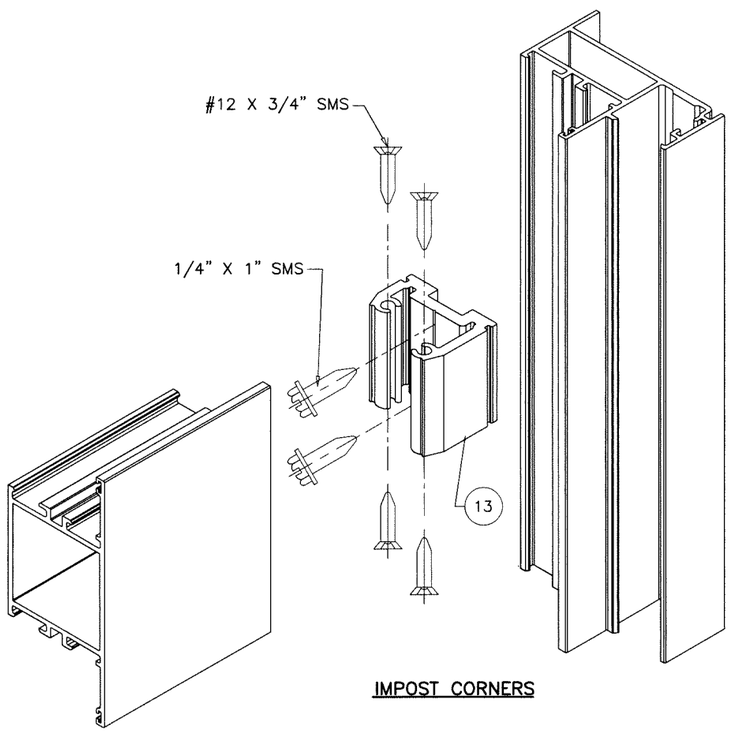
RECT. OR SQUARE WINDOWS



ANGULAR OR CIRCULAR WINDOWS



ADAPTER CORNERS



IMPOST CORNERS

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