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Product Approval
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 Application Detail

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SECRETARY

FL #	FL41000-R0								
Application Type	New								
Code Version	2020								
Application Status	Approved								
Comments									
Archived	☐								
Product Manufacturer	E.S. Windows, Inc.								
Address/Phone/Email	10653 NE Quaybridge Ct. Miami, FL 33138 (305) 624-7775 achamorro@eswllc.com								
Authorized Signature	Jalal Farooq veronica@afceng.com								
Technical Representative	Samir Sabagh								
Address/Phone/Email	3550 NW 49th St. Miami, FL 33142 (305) 638-5151 ssabagh@energiasolarsa.com								
Quality Assurance Representative									
Address/Phone/Email									
Category	Windows								
Subcategory	Casement								
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	07/16/2025								
Validated By	JAVAD AHMAD PE, INC. ☐ Validation Checklist - Hardcopy Received								
Certificate of Independence	FL41000_R0_COI_SS - Certificate of Independence 2021.pdf								
Referenced Standard and Year (of Standard)	<table border="0"> <thead> <tr> <th><u>Standard</u></th> <th><u>Year</u></th> </tr> </thead> <tbody> <tr> <td>TAS 201</td> <td>1994</td> </tr> <tr> <td>TAS 202</td> <td>1994</td> </tr> <tr> <td>TAS 203</td> <td>1994</td> </tr> </tbody> </table>	<u>Standard</u>	<u>Year</u>	TAS 201	1994	TAS 202	1994	TAS 203	1994
<u>Standard</u>	<u>Year</u>								
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 02/16/2022
 Date Validated 02/22/2022
 Date Pending FBC Approval 03/02/2022
 Date Approved 04/13/2022
 Date Revised 08/01/2023

Summary of Products

FL #	Model, Number or Name	Description
41000.1	Series 5000 Aluminum Casement Window	Large missile impact resistant aluminum casement window.
Limits of Use Approved for use in HVHZ: Yes Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: +90/-114 Other: See installation drawings 21-68F for span vs load combinations and installation details.		Installation Instructions FL41000_R0_II_SS - 5000 Casement (LMI)-DWG 21-68F.pdf Verified By: Jalal Farooq PE # 81223 Created by Independent Third Party: Yes Evaluation Reports FL41000_R0_AE_SS - 5000 Casement (LMI)-PAE 2020.pdf Created by Independent Third Party: Yes

[Back](#) [Next](#)
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Under Florida law, email addresses are public records. If you do not want your e-mail address released in response to a public-records request, do not send electronic mail to this entity. Instead, contact the office by phone or by traditional mail. If you have any questions, please contact 850.487.1395. *Pursuant to Section 455.275(1), Florida Statutes, effective October 1, 2012, licensees licensed under Chapter 455, F.S. must provide the Department with an email address if they have one. The emails provided may be used for official communication with the licensee. However email addresses are public record. If you do not wish to supply a personal address, please provide the Department with an email address which can be made available to the public. To determine if you are a licensee under Chapter 455, F.S., please click [here](#).

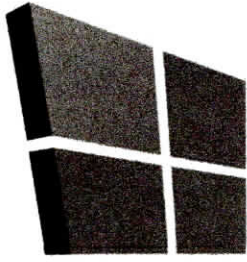
Product Approval Accepts:



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,

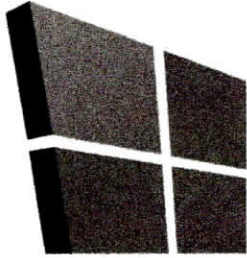
As the design engineer retained to prepare the product approval(s) associated with this letter as shown below on this same web page, I do hereby declare that I do not have and will not have any financial interest in any company manufacturing or distributing the referenced product(s), nor do I have or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



AL-FAROOQ CORPORATION

CONSULTING ENGINEERS & PRODUCT DEVELOPMENT

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

FL 41000

Date: 02/08/2022

Detailed Product Description:

Manufacturer: E.S. WINDOWS, LLC.

Manufacturer Address: 3550 N.W. 49 STREET – MIAMI, FL. 33142

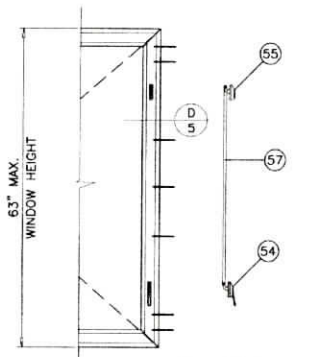
Model Name: SERIES 5000 ALUMINUM CASEMENT WINDOW

Maximum Load: +90 PSF, -114 PSF (Large Missile Impact)

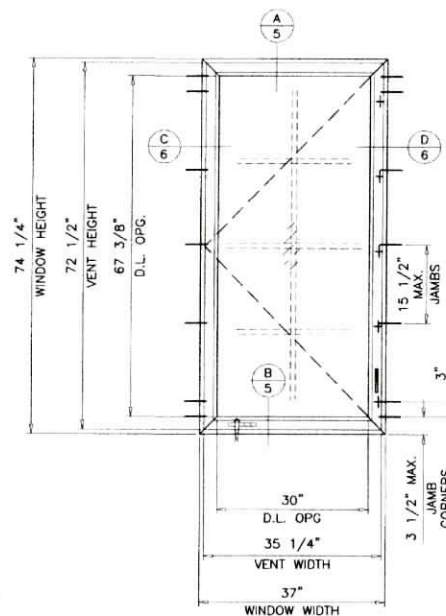
Installation Drawings # 21-68F

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 <u> X </u> Yes <u> </u> 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	Fenestration Testing Laboratory, Inc	03/16/2011 03/16/2011 11/16/2007 06/19/2020 02/04/2022	FTL-6294 FTL-6295 FTL-58336 FTL-12112 FTL-12657	Marlin D Brinson, PE Marlin D Brinson, PE Carlos S Rionda, PE Idalmis Ortega, PE Idalmis Ortega, PE
ASTM E331 OR ASTM 547 & TAS 202	Water Penetration	Fenestration Testing Laboratory, Inc	03/16/2011 03/16/2011 11/16/2007 06/19/2020 02/04/2022	FTL-6294 FTL-6295 FTL-58336 FTL-12112 FTL-12657	Marlin D Brinson, PE Marlin D Brinson, PE Carlos S Rionda, PE Idalmis Ortega, PE Idalmis Ortega, PE
ASTM E330 & TAS 202	Uniform Static Air Press.	Fenestration Testing Laboratory, Inc	03/16/2011 03/16/2011 11/16/2007 06/19/2020 02/04/2022	FTL-6294 FTL-6295 FTL-58336 FTL-12112 FTL-12657	Marlin D Brinson, PE Marlin D Brinson, PE Carlos S Rionda, PE Idalmis Ortega, PE Idalmis Ortega, PE
ASTM F588	Forced Entry	Fenestration Testing Laboratory, Inc	03/16/2011 03/16/2011 11/16/2007 02/04/2022	FTL-6294 FTL-6295 FTL-58336 FTL-12657	Marlin D Brinson, PE Marlin D Brinson, PE Carlos S Rionda, PE Idalmis Ortega, 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	Large Missile Impact & Cyclic	Fenestration Testing Laboratory, Inc	07/26/2018	FTL-9711	Idalmis Ortega, PE
			03/16/2011	FTL-6294	Marlin D Brinson, PE
			03/16/2011	FTL-6295	Marlin D Brinson, PE
			11/16/2007	FTL-58336	Carlos S Rionda, PE
			06/19/2020	FTL-12112	Idalmis Ortega, PE
			02/04/2022	FTL-12657	Idalmis Ortega, 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 2020 Florida Building Code.					
Evaluation Report Engineer:					
Jalal Farooq Al-Farooq Corporation		PE # 81223 EB # 3538		Sealed: 2/16/2022	

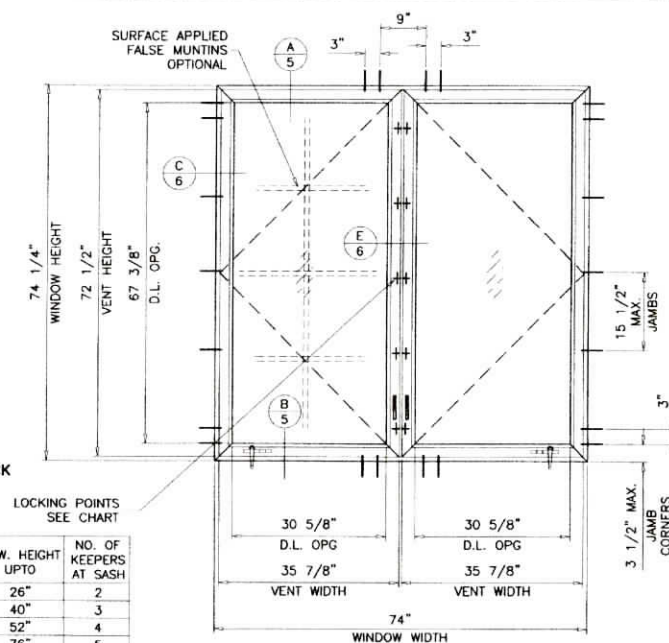


CAM LOCKS
(2) LOCKING POINTS
ALL SIZES



SINGLE (X)
FRAMES WITH OR W/O FLUSH ADAPTER

MULTI POINT LOCK



DOUBLE (XX)
FRAMES WITH OR W/O FLUSH ADAPTER

LOCKING POINTS
SEE CHART

WDW. HEIGHT UP TO	NO. OF KEEPERS AT SASH
26"	2
40"	3
52"	4
76"	5

TYPICAL ELEVATIONS

SERIES 5000

ALUMINUM OUTSWING CASEMENT WINDOW

DESIGN LOAD RATINGS FOR THESE WINDOWS TO BE AS PER CHARTS SHOWN ON SHEETS 3 AND 3.1.

APPROVAL APPLIES TO SINGLE OR DOUBLE WINDOWS OR SIDE BY SIDE COMBINATIONS OF CASMT/CASMT OR CASEMENT WITH SERIES 5100 FIXED WINDOWS USING MULLIONS IN BETWEEN. LOWER DESIGN PRESSURE FROM CASEMENT WINDOW, FIXED WINDOW OR MULLION CHART WILL APPLY TO ENTIRE SYSTEM.

THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE 2020 (7TH 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 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.

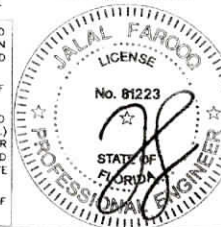
LABELING TO COMPLY WITH SECTION 1709.9.2.

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

Sealed: 2/18/2022

FL #41000

- 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.



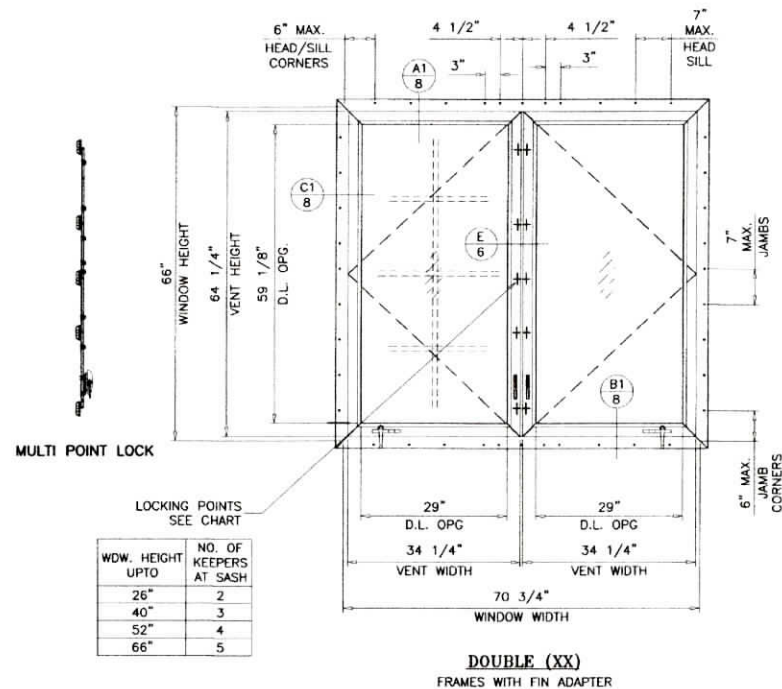
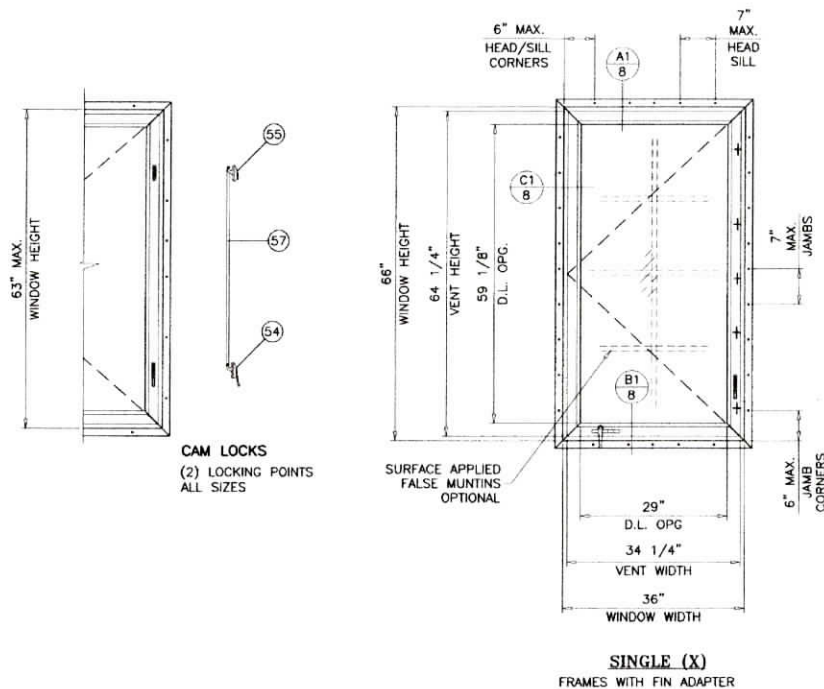


AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL (305) 264-8100 FAX (305) 262-8978
WWW.AFCENG.COM

S-5000 ALUM OUTSWING CASEMENT WDW. (L.M.I.)

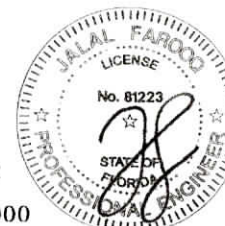
E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL (305) 638-5151 FAX (305) 638-5158

revisions:	no.	date	by	description
09-30-21	1	09-30-21	1	09-30-21
scale:	1/2"=1'-0"	dr. by:	TAR/Q	chk. by:
drawing no. 21-68F				
sheet 1 of 12				



TYPICAL ELEVATION

FOR WINDOWS WITH FIN FRAME ADAPTERS LIMIT MAX. DESIGN LOAD TO ± 70.0 PSF



Sealed: 2/18/2022

FL #41000

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revisions:	no	date	by	description
date:	09-30-21			
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dr. by:	TARIQ			
chk. by:				
drawing no.	21-68F			
sheet	2 of 12			

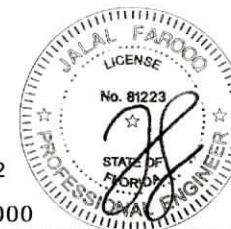
DESIGN LOAD CAPACITY - PSF FOR (X) SIZES																	
WINDOW DIMS.		WITH CAM LOCKS				WINDOWS WITH MULTI POINT LOCK											
		GLASS TYPES A, B, C, D, E, F				GLASS TYPE 'H'		GLASS TYPE 'A'		GLASS TYPE 'B'		GLASS TYPES 'C', 'D', 'E', 'F'		GLASS TYPE 'G'		GLASS TYPE 'H'	
		EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)
19-1/8"	26"	85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	114.0	70.0	70.0
26-1/2"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	114.0	70.0	70.0
37"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	102.8	70.0	70.0
42"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.6	70.0	70.0
19-1/8"	38-3/8"	85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	114.0	70.0	70.0
26-1/2"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	114.0	70.0	70.0
37"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	104.5	70.0	70.0
42"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	92.0	70.0	70.0
19-1/8"	50-5/8"	85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	114.0	70.0	70.0
26-1/2"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	114.0	70.0	70.0
37"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	105.6	70.0	70.0
42"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	93.0	70.0	70.0
19-1/8"	63"	85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	114.0	70.0	70.0
26-1/2"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	114.0	70.0	70.0
37"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	106.1	70.0	70.0
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19-1/8"	66"	-	-	-	-	-	-	-	-	-	-	90.0	90.0	90.0	114.0	70.0	70.0
26-1/2"		-	-	-	-	-	-	-	-	-	-	90.0	90.0	90.0	114.0	70.0	70.0
36"		-	-	-	-	-	-	-	-	-	-	90.0	90.0	90.0	90.0	70.0	70.0
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37"		-	-	-	-	-	-	-	-	-	-	90.0	90.0	90.0	90.0	-	-
42"		-	-	-	-	-	-	-	-	-	-	90.0	90.0	90.0	90.0	-	-
19-1/8"	76"	-	-	-	-	-	-	-	-	-	-	90.0	90.0	90.0	114.0	70.0	70.0
26-1/2"		-	-	-	-	-	-	-	-	-	-	90.0	90.0	90.0	111.1	57.8	57.8
36"		-	-	-	-	-	-	-	-	-	-	85.4	85.4	85.4	85.4	-	-
42"		-	-	-	-	-	-	-	-	-	-	85.4	85.4	85.4	85.4	-	-
24"	48"	85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	114.0	70.0	70.0
28"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	114.0	70.0	70.0
32"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	114.0	70.0	70.0
36"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	114.0	70.0	70.0
40"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	103.0	70.0	70.0
42"	54"	85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	98.1	70.0	70.0
24"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	114.0	70.0	70.0
28"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	114.0	70.0	70.0
32"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	114.0	70.0	70.0
36"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	114.0	70.0	70.0
40"	60"	85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	109.0	70.0	70.0
42"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	109.0	70.0	70.0
24"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	114.0	70.0	70.0
28"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	114.0	70.0	70.0
32"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	114.0	70.0	70.0
36"	66"	85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	114.0	70.0	70.0
40"		-	-	-	-	-	-	-	-	-	90.0	90.0	90.0	103.0	-	-	
42"		-	-	-	-	-	-	-	-	-	-	90.0	90.0	90.0	98.1	-	-
26-3/8"	60-3/4"	-	-	-	-	-	-	-	-	-	-	-	-	90.0	114.0	-	-
36"		-	-	-	-	-	-	-	-	-	-	-	-	-	-	70.0	70.0
24"	66"	85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	114.0	70.0	70.0
28"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	114.0	70.0	70.0
32"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	114.0	70.0	70.0
36"		-	-	-	-	-	-	-	-	-	-	90.0	90.0	90.0	104.1	70.0	70.0
40"		-	-	-	-	-	-	-	-	-	-	90.0	90.0	90.0	93.7	-	-
24"	72"	-	-	-	-	-	-	-	-	-	-	90.0	90.0	90.0	114.0	70.0	70.0
28"		-	-	-	-	-	-	-	-	-	-	90.0	90.0	90.0	114.0	65.1	65.1
32"		-	-	-	-	-	-	-	-	-	-	90.0	90.0	90.0	107.3	58.1	58.1
36"		-	-	-	-	-	-	-	-	-	-	90.0	90.0	90.0	95.4	-	-
40"		-	-	-	-	-	-	-	-	-	-	90.0	90.0	90.0	95.4	-	-
24"	76"	-	-	-	-	-	-	-	-	-	-	90.0	90.0	90.0	114.0	63.2	63.2
28"		-	-	-	-	-	-	-	-	-	-	90.0	90.0	90.0	105.7	55.0	55.0
32"		-	-	-	-	-	-	-	-	-	-	90.0	90.0	90.0	94.1	-	-
36"		-	-	-	-	-	-	-	-	-	-	85.4	85.4	85.4	85.4	-	-
40"		-	-	-	-	-	-	-	-	-	-	85.4	85.4	85.4	85.4	-	-

FOR WINDOWS WITH FIN FRAME ADAPTERS LIMIT MAX. DESIGN LOAD TO ± 70.0 PSF
AND MAX. WINDOW AREA FOR (X) SIZES = 16.5 SQ. FT.

NOTE:
GLASS CAPACITIES ON THIS SHEET ARE
BASED ON ASTM E1300-09 (3 SEC. GUSTS)
AND FLORIDA BUILDING COMMISSION
DECLARATORY STATEMENT DCA05-DEC-219

Sealed: 2/18/2022

FL #41000



AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL (305) 264-8100 FAX (305) 262-4978
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S-5000 ALUM. OUTSWING CASEMENT WDW. (L.M.I.)
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revisions:
no. date by description
date: 09-30-21
scale: -
dr. by: TARIQ
chk. by:
drawing no.
21-68F
sheet 3 of 12

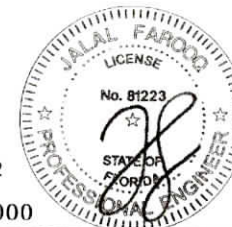
DESIGN LOAD CAPACITY - PSF FOR (XX) SIZES																	
WINDOW DIMS.		WITH CAM LOCKS				WINDOWS WITH MULTI POINT LOCK											
		GLASS TYPES A, B, C, D, E, F				GLASS TYPE 'H'		GLASS TYPE 'A'		GLASS TYPE 'B'		GLASS TYPES 'C', 'D', 'E', 'F', 'G'				GLASS TYPE 'H'	
		EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)		
WIDTH	HEIGHT																
37"	26"	85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	70.0	70.0		
53-1/8"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	70.0	70.0		
37"	38-3/8"	85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	70.0	70.0		
53-1/8"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	70.0	70.0		
74"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	70.0	70.0		
84"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	70.0	70.0		
37"	50-5/8"	85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	70.0	70.0		
53-1/8"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	70.0	70.0		
74"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	70.0	70.0		
84"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	70.0	70.0		
37"	63"	85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	70.0	70.0		
53-1/8"		79.6	79.6	70.0	70.0	79.6	79.6	79.6	79.6	79.6	79.6	79.6	79.6	70.0	70.0		
74"		61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4		
84"		-	-	-	-	-	-	-	-	-	-	56.5	56.5	-	-		
37"	74-1/4"	-	-	-	-	-	-	-	-	-	-	66.6	66.6	66.6	66.6		
53-1/8"		-	-	-	-	-	-	-	-	-	-	47.6	47.6	47.6	47.6		
74"		-	-	-	-	-	-	-	-	-	-	36.0	36.0	-	-		
37"	76"	-	-	-	-	-	-	-	-	-	-	62.0	62.0	62.0	62.0		
53-1/8"		-	-	-	-	-	-	-	-	-	-	44.3	44.3	44.3	44.3		
74"		-	-	-	-	-	-	-	-	-	-	33.4	33.4	-	-		
48"	48"	85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	70.0	70.0		
56"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	70.0	70.0		
64"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	70.0	70.0		
72"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	70.0	70.0		
80"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	70.0	70.0		
84"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	70.0	70.0		
48"	54"	85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	70.0	70.0		
56"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	70.0	70.0		
64"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	70.0	70.0		
72"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	70.0	70.0		
80"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	70.0	70.0		
84"		85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	70.0	70.0		
48"	60"	85.0	85.0	70.0	70.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	70.0	70.0		
56"		85.0	85.0	70.0	70.0	85.0	85.0	88.9	88.9	88.9	88.9	88.9	88.9	70.0	70.0		
64"		80.0	80.0	70.0	70.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	70.0	70.0		
72"		73.5	73.5	70.0	70.0	73.5	73.5	73.5	73.5	73.5	73.5	73.5	73.5	70.0	70.0		
80"		-	-	-	-	-	-	-	-	-	-	68.7	68.7	-	-		
84"		-	-	-	-	-	-	-	-	-	-	66.8	66.8	-	-		
48"	66"	75.2	75.2	75.2	75.2	75.2	75.2	75.2	75.2	75.2	75.2	75.2	75.2	70.0	70.0		
56"		65.7	65.7	65.7	65.7	65.7	65.7	65.7	65.7	65.7	65.7	65.7	65.7	65.7	65.7		
64"		58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9		
72"		-	-	-	-	-	-	-	-	-	-	53.8	53.8	53.8	53.8		
80"		-	-	-	-	-	-	-	-	-	-	49.9	49.9	-	-		
48"	72"	-	-	-	-	-	-	-	-	-	-	57.4	57.4	-	-		
56"		-	-	-	-	-	-	-	-	-	-	50.0	50.0	-	-		
64"		-	-	-	-	-	-	-	-	-	-	44.6	44.6	-	-		
72"		-	-	-	-	-	-	-	-	-	-	40.6	40.6	-	-		
48"	76"	-	-	-	-	-	-	-	-	-	-	48.6	48.6	-	-		
56"		-	-	-	-	-	-	-	-	-	-	42.3	42.3	-	-		
64"		-	-	-	-	-	-	-	-	-	-	37.6	37.6	-	-		
72"		-	-	-	-	-	-	-	-	-	-	34.1	34.1	-	-		

FOR WINDOWS WITH FIN FRAME ADAPTERS LIMIT MAX. DESIGN LOAD TO ± 70.0 PSF
AND MAX. WINDOW AREA FOR (XX) SIZES = 32.4 SQ. FT.

NOTE:
GLASS CAPACITIES ON THIS SHEET ARE
BASED ON ASTM E1300-09 (3 SEC. GUSTS)
AND FLORIDA BUILDING COMMISSION
DECLARATORY STATEMENT DCA05-DEC-219

Sealed: 2/18/2022

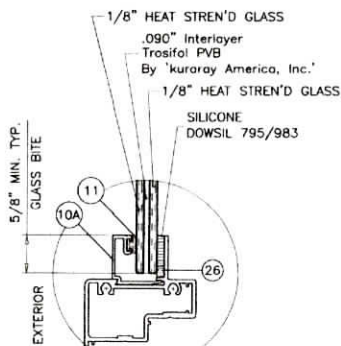
FL #41000



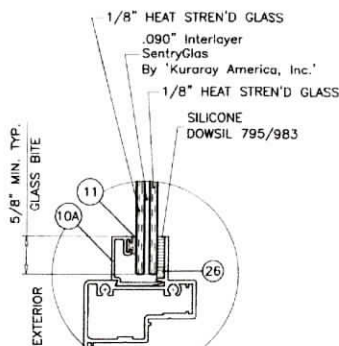
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ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173 (C.A.N. 3538)
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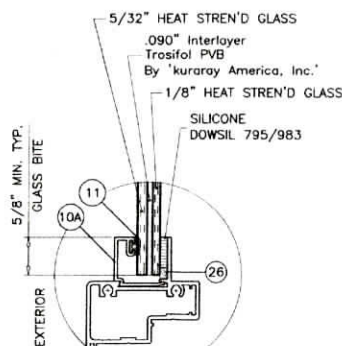
revisions:
no. date by description
date: 09-30-21
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sheet 3 of 12



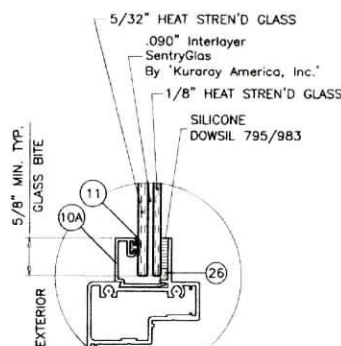
GLASS TYPE 'A'



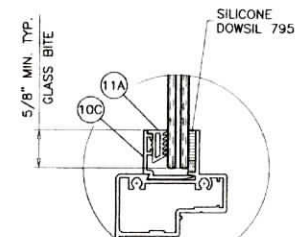
GLASS TYPE 'B'



GLASS TYPE 'C'

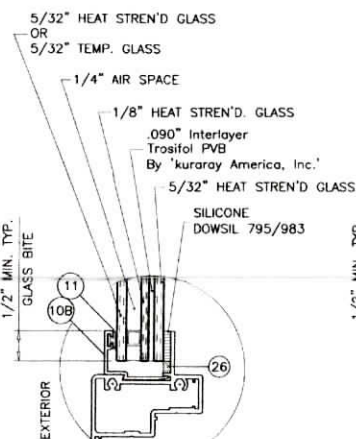


GLASS TYPE 'D'

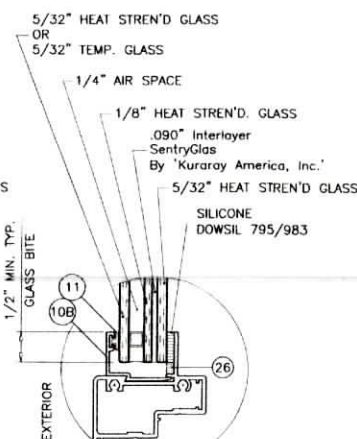


ALT. GLAZING OPTION

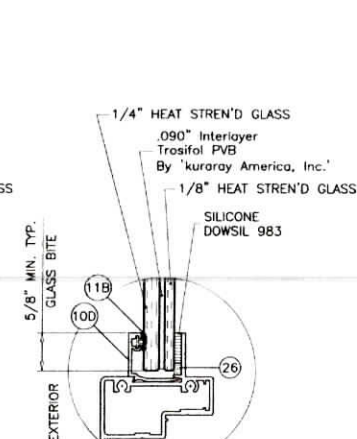
THESE GLAZING STOP CAN BE USED WITH GLASS TYPES 'A', 'B', 'C' & 'D'.



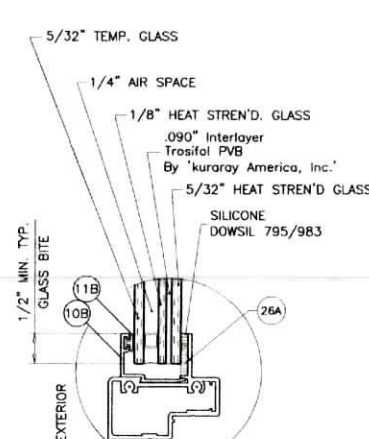
GLASS TYPE 'E'



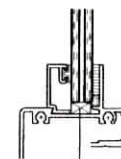
GLASS TYPE 'F'



GLASS TYPE 'G'

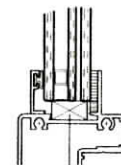


GLASS TYPE 'H'



25 AT 1/4 POINTS ON LITES WIDER THAN 36"

SETTING BLOCKS AT LAM. GLASS NOTCH GLAZING BEAD LEG TO CLEAR BLOCKS



25A AT 1/4 POINTS ALL SIZES

SETTING BLOCKS AT INSUL. LAM. GLASS NOTCH GLAZING BEAD LEG TO CLEAR BLOCKS

GLAZING OPTIONS

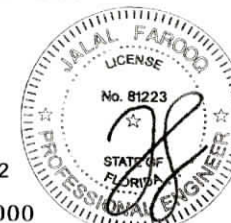
NOTE:
TO QUALIFY FOR SMALL MISSILE IMPACT RATING
EXTERIOR PLY OF GLASS TYPES 'E' & 'F' MUST BE TEMPERED.

1/4" 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

Sealed: 2/18/2022

FL #41000

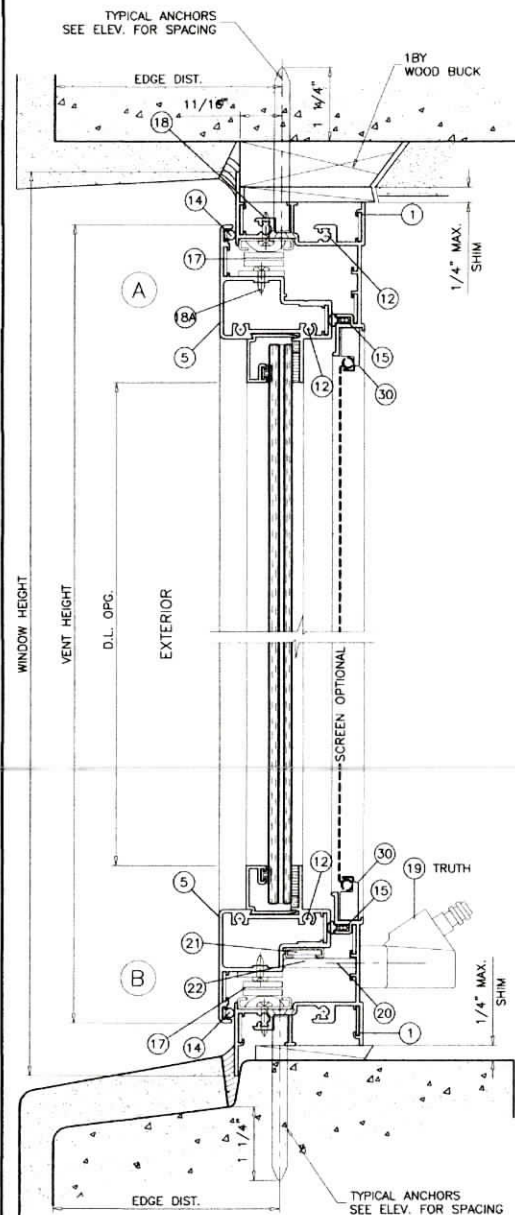


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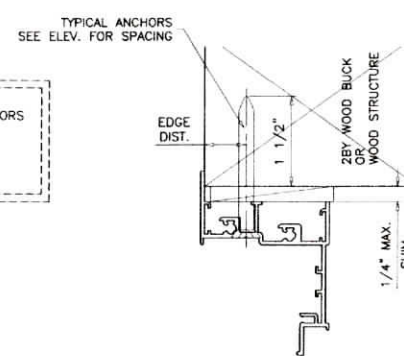
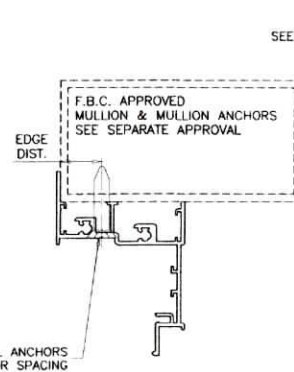
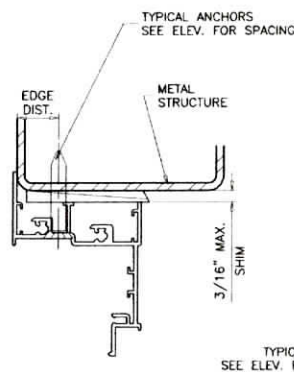
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Revisions:	no.	date	by	description
1	09-30-21			
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drawing no.
21-68F
sheet 4 of 12



WOOD BUCKS AND METAL STRUCTURE NOT BY 'E.S. WINDOWS' 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' ($F_u=164$ KSI, $F_y=148$ 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)

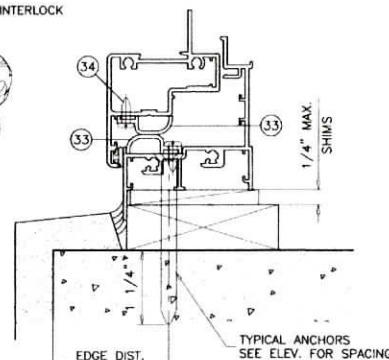
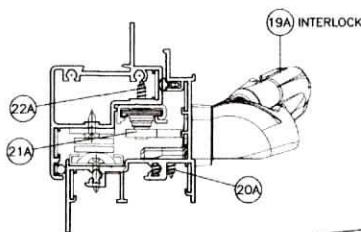
DIRECTLY INTO CONCRETE OR BLOCKS
 1-1/4" MIN. EMBED INTO CONCRETE (HEAD/SILL/JAMBS)
 1-1/4" MIN. EMBED INTO BLOCKS (JAMBS)
 1-3/4" MIN. EMBED INTO CONC. (FOR MULLION CLIPS ONLY)

#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. PENETRATION BEYOND SUBSTRATE
 ALUMINUM: 1/8" THK. MIN. (6063-T5 MIN.)
 STEEL: 1/8" THK. MIN. ($F_y = 36$ KSI MIN.)
 (STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

TYPICAL EDGE DISTANCE

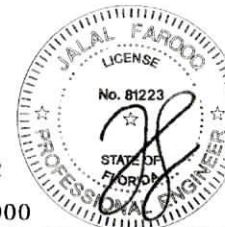
INTO CONCRETE AND MASONRY = 2-1/2" MIN.
 INTO CONCRETE = 1-1/2" MIN. (INTERIOR ANCHORS AT MULL CLIP)
 INTO WOOD STRUCTURE = 11/16" MIN.
 INTO METAL STRUCTURE = 11/16" MIN.

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: 2/18/2022

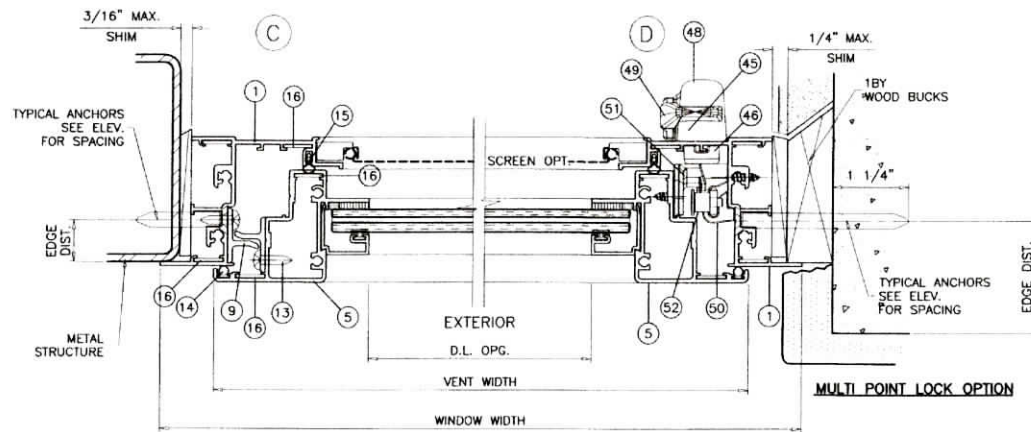
FL #41000



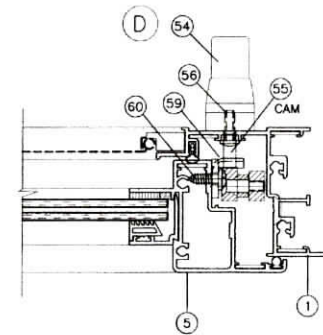
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S-5000 ALUM. OUTSWING CASSETTE WDW. (L.M.I.)
E.S. WINDOWS, LLC
 3550 N.W. 49 STREET
 MIAMI, FL. 33142
 TEL. (305) 638-5151 FAX. (305) 638-5158

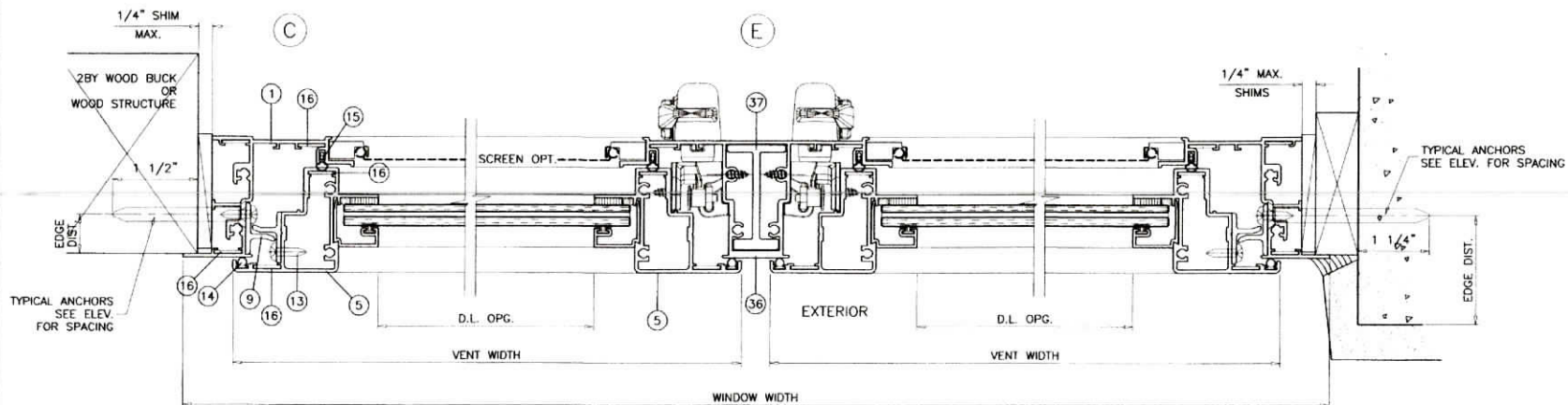
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 sheet 5 of 12



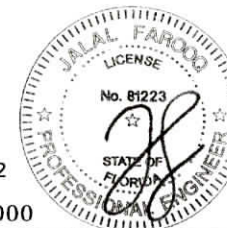
SINGLE VENT WINDOWS



CAM LOCKS OPTION



DUAL VENT WINDOWS



Sealed: 2/18/2022

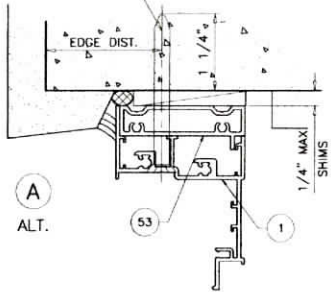
FL #41000

af c
AL-FAROOQ CORPORATION
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 9360 SUNSET DRIVE, SUITE 220
 MIAMI, FLORIDA 33173 (C.A.N. 3538)
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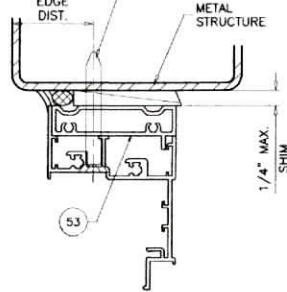
S-5000 ALUM OUTSWING CASEMENT WDW. (L.M.I.)
E.S. WINDOWS, LLC
 3550 N.W. 49 STREET
 MIAMI, FL. 33142
 TEL (305) 638-5151 FAX (305) 638-5158

revisions:		no	date	by	description
date:	09-30-21				
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chk. by:					
drawing no.	21-68F				
sheet	6 of 12				

TYPICAL ANCHORS
SEE ELEV. FOR SPACING

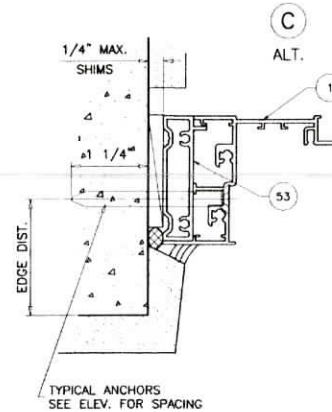
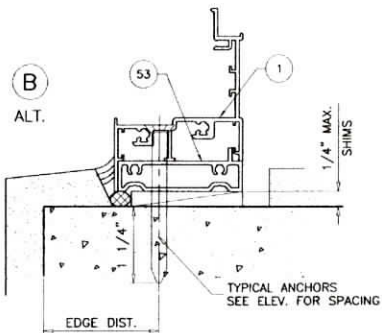
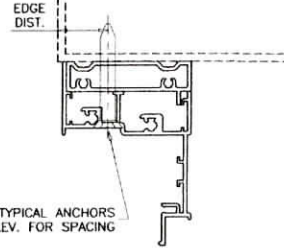


TYPICAL ANCHORS
SEE ELEV. FOR SPACING



F.B.C. APPROVED
MULLION & MULLION ANCHORS
SEE SEPARATE APPROVAL

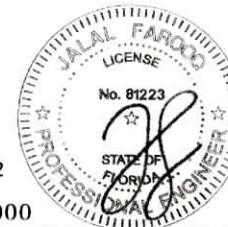
TYPICAL ANCHORS
SEE ELEV. FOR SPACING



INSTALLATION DETAILS WITH FLUSH FRAME ADAPTER
SEE SHEETS 5 & 6 FOR WINDOW DETAILS

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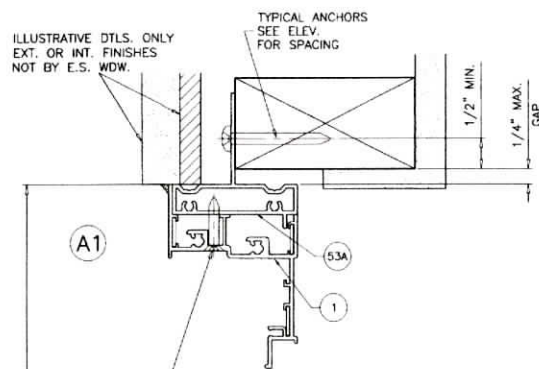
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no	date	no	date	no	date



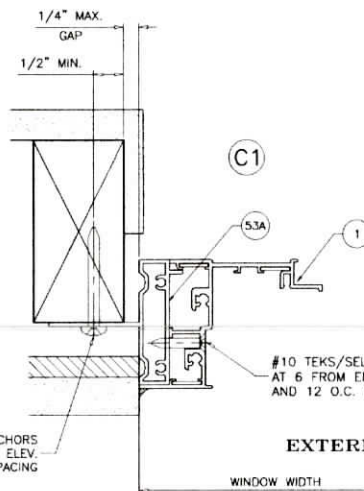
#10 TEK/Self DRILLING SCREWS
AT 6 FROM ENDS
AND 12 O.C. MAX.

WINDOW HEIGHT
EXTERIOR

A1

TYPICAL ANCHORS: SEE ELEV. FOR SPACING

#12 WOOD SCREWS (GRADE 2 CRS)
INTO 2BY WOOD BUCKS OR WOOD STRUCTURES
1-1/4" MIN. PENETRATION INTO WOOD



#10 TEK/Self DRILLING SCREWS
AT 6 FROM ENDS
AND 12 O.C. MAX.

EXTERIOR

WINDOW WIDTH

C1

B1

#10 TEK/Self DRILLING SCREWS
AT 6 FROM ENDS
AND 12 O.C. MAX.

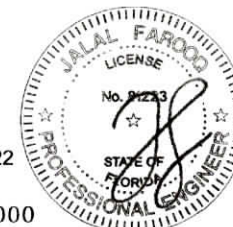
TYPICAL ANCHORS
SEE ELEV.
FOR SPACING

INSTALLATION DETAILS WITH FIN FRAME ADAPTERS

SEE SHEETS 5 & 6 FOR WINDOW DETAILS

Sealed: 2/18/2022

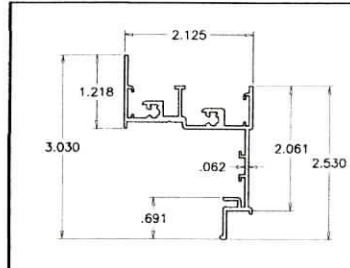
FL #41000



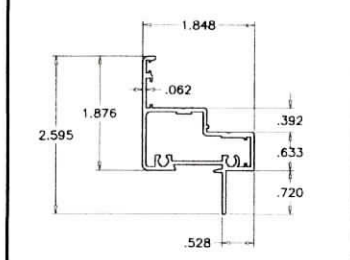
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AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
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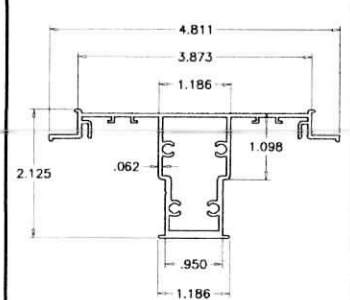
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drawing no.	21-68F	sheet	8 of 12	



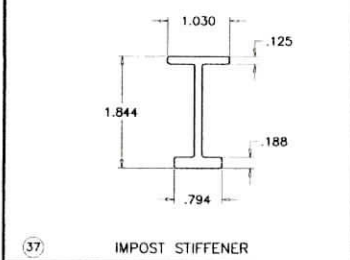
(1) FRAME HEAD/SILL/JAMB



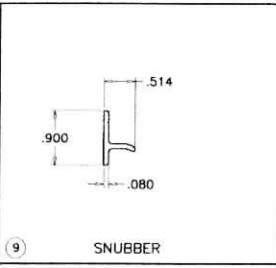
(5) VENT TOP/BOTTOM/SIDE RAIL



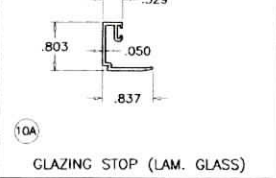
(36) IMPOST



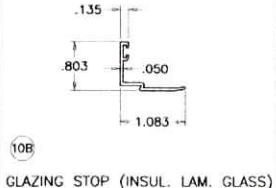
(37) IMPOST STIFFENER



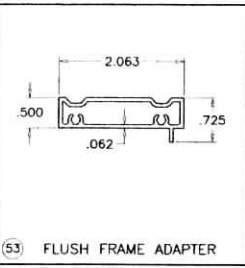
(9) SNUBBER



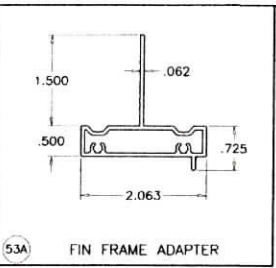
(10A) GLAZING STOP (LAM. GLASS)



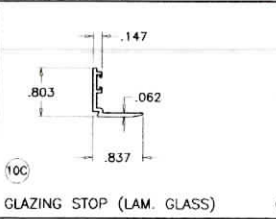
(10B) GLAZING STOP (INSUL. LAM. GLASS)



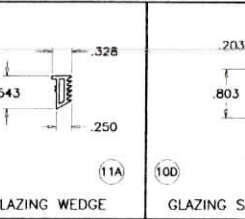
(53) FLUSH FRAME ADAPTER



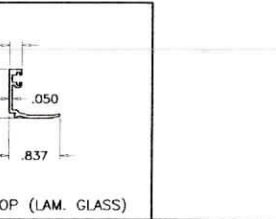
(53A) FIN FRAME ADAPTER



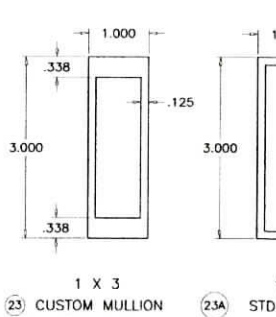
(10C) GLAZING STOP (LAM. GLASS)



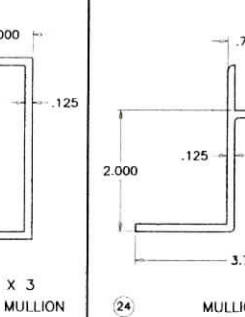
(11A) GLAZING WEDGE



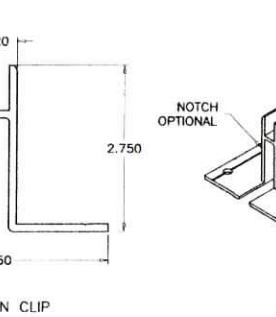
(100) GLAZING STOP (LAM. GLASS)



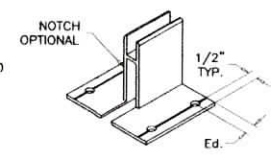
(23) CUSTOM MULLION



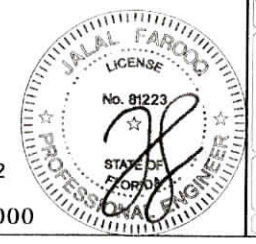
(23A) STD. MULLION



(24) MULLION CLIP



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FL #41000



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S-5000 ALUM. OUTSWING CASEMENT WDW. (L.M.I.)

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3550 N.W. 49 STREET
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drawing no.
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sheet 9 of 12

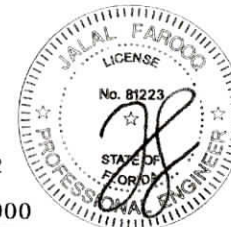
ITEM	PART #	QUANTITY	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
1	ES5001	1	FRAME HEAD/SILL/JAMB	6063-T6	-
5	ES5002	1/ VENT	VENT TOP/BOTTOM/SIDE RAIL	6063-T6	-
9	ES5004	2/ VENT	SNUBBERS, 2-1/2" LONG	6063-T6	-
10A	ES1103	AS REQD.	GLAZING BEAD (LAM. GLASS)	6063-T5	-
10B	-	AS REQD.	GLAZING BEAD (INSUL. LAM. GLASS)	6063-T5	-
10C	ES1008	AS REQD.	GLAZING BEAD (LAM. GLASS)	6063-T6	-
10D	ES-1017	AS REQD.	GLAZING BEAD (LAM. GLASS)	6063-T6	-
11	27-425	AS REQD.	GLAZING GASKET	EPDM	DUROMETER 60±5 SHORE 'A'
11A	ES1010	AS REQD.	GLAZING WEDGE	SOFT PVC	DUROMETER 65±5 SHORE 'A'
11B	5008A	AS REQD.	GLAZING WEDGE	SILICONE	DUROMETER 65±5 SHORE 'A'
12	-	AS REQD.	FRAME & VENT ASSEMBLY SCREWS	-	#10 X 1-1/2" PH SMS
12A	-	AS REQD.	FLUSH/FIN ADAPTER ASSEMBLY SCREWS	-	#10 X 1" PH SMS
13	-	2/ SNUBBER	SNUBBER INSTALLATION SCREWS	-	#8 X 1/2" PH SMS
14	E202	AS REQD.	OUTER WEATHERSTRIPPING (POLYPROPYLENE BASE, TPE BULB)	-	DUROMETER 65 SHORE 'A'
15	ES5005	AS REQD.	INNER WEATHERSTRIPPING	EPDM	DUROMETER 60 SHORE 'A'
16	PJ540-SS	AS REQD.	CORNER LOCK	ST. STEEL	SULLIVAN & ASSOCIATES
17	30155	2/ VENT	4 BAR HINGES-HEAVY DUTY	-	TRUTH HARDWARE
18	-	3/ HINGE	HINGE MOUNTING SCREWS AT FRAME	-	#10 X 1/2" PH SMS
18A	-	4/ HINGE	HINGE MOUNTING SCREWS AT VENT	-	#10 X 1/2" PH SMS
19	23 SERIES	1/ VENT	SINGLE ARM OPERATOR (AT 8-1/2" FROM ENDS)	-	TRUTH HARDWARE
19A	NOVA	1/ VENT	SINGLE ARM OPERATOR (AT 8-1/2" FROM ENDS)	-	INTERLOCK
20	-	4/ OPER.	OPERATOR MOUNTING SCREWS	-	#10-24 X 3/8" PH SMS
20A	-	8/ OPER.	OPERATOR MOUNTING SCREWS	-	#8 X 1/2" FH SMS
21	30175	1/ OPER.	13-3/4" LONG TRACK	ST. STEEL	TRUTH HARDWARE
21A	-	1/ OPER.	OPERATOR TRACK	ST. STEEL	INTERLOCK
22	-	2/ TRACK	TRACK MOUNTING SCREWS	-	#10 X 3/8" PH SS SMS
22A	-	3/ TRACK	TRACK MOUNTING SCREWS	-	#8 X 1/2" FH SMS
23	-	AS REQD.	1X3 CUSTOM MULLION	6063-T6	-
23A	-	AS REQD.	1X3 STANDARD MULLION	6063-T6	-
24	-	AS REQD.	MULLION CLIP	6063-T6	-
25	27-372	2/ LITE	SETTING BLOCK, 7/16" X 3/16" X 3-1/2" LONG	EPDM	AT 6" FROM EACH END, DUROMETER 75±5 SHORE A
25A	NS-25-B04A S	2/ LITE	SETTING BLOCK, 5/16" X 5/8" X 4" LONG	EPDM	AT 6" FROM EACH END, DUROMETER 75±5 SHORE A
26	-	8/ LITE	TAPE SPACER (1/4" X 1/2")	FOAM	AT 6" FROM GLASS ENDS
26A	-	AS REQD.	GLAZING TAPE (3/16" X 1/2")	POLYURETHANE	-
30	-	OPTIONAL	5/16" BOX SCREEN	-	-
33	ES5009	2/ VENT	ANTI SAG SKATE, 2" LONG	NYLON/CFEICON	M&M PLASTICS
34	-	2/ SKATE	SKATE MOUNTING SCREWS	-	#6 X 1/2" PHSMS
36	ES5003	1	IMPOST	6063-T6	-
37	ES5010	AS REQD.	IMPOST STIFFENER	6063-T6	-
45	CL01-0500	-	MULTI-POINT LOCK MECHANISM	-	INTERLOCK
46	-	-	LOCK FASTENER PLATE	-	-
47	-	2/ LOCK	LOCK FASTENER SCREWS	-	THREAD FORMING
48	CL01-2250-XXX	-	SNAP ON COVER	-	-
49	CL01-1050-XXX	-	SNAP ON HANDLE	-	-
50	-	-	GUIDE (ACETAL)	-	-
51	-	-	KEEPER (ACETAL)	-	-
52	-	-	LOCK BAR (304 ST/ST)	-	-
53	ES-5017	AS REQD.	FLUSH FRAME ADAPTER	6063-T5	OPTIONAL
53A	ES-5023	AS REQD.	FIN FRAME ADAPTER	6063-T6	OPTIONAL
54	-	1/ VENT	LOCKING HANDLE	-	SULLIVAN & ASSOC.
55	-	2/ VENT	LOCKING CAM (AT 11-1/2" & 50-1/2" FROM BOTTOM)	-	SULLIVAN & ASSOC.
56	-	2/ LOCK	LOCK MOUNTING SCREWS	-	#6-32 X 1/2 PH MS
57	ES5013	1/ VENT	LOCK HANDLE/CAM CONNECTOR	-	1/4" X 1/2" ALUM. BAR
58	ES5011	2/ BAR	CONNECTOR SCREWS	-	CUSTOM
59	CS-200K-SS	2/ VENT	KEEPERS (AT 12" & 51" FROM BOTTOM)	ST STEEL	SULLIVAN & ASSOC.
60	-	2/ KEEPER	KEEPER MOUNTING SCREWS	-	#10 X 3/8" PH SMS

SEALANTS:

ALL FRAME AND VENT CORNERS AND INSTALLATION SCREWS SEALED WITH CLEAR/ALUMINUM COLORED SEALANT.

Sealed: 2/18/2022

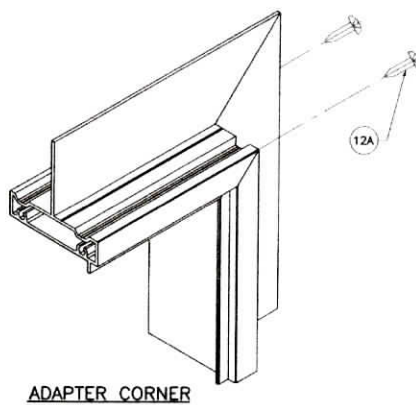
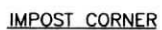
FL #41000



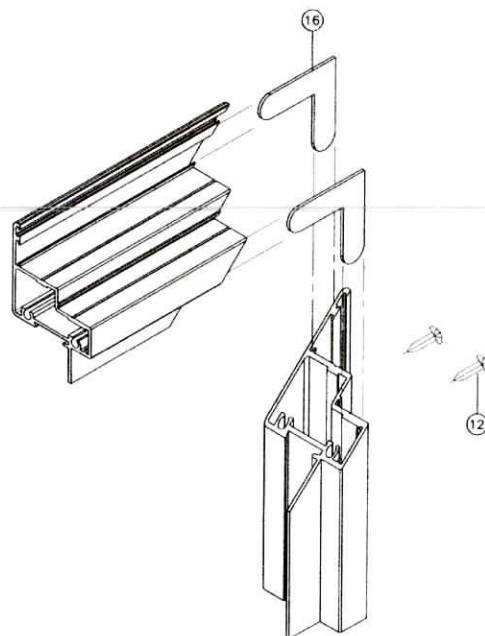
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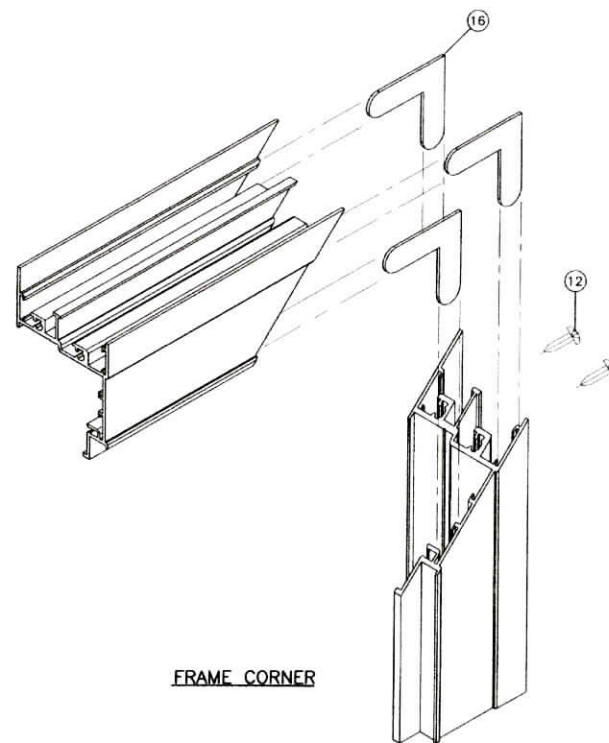
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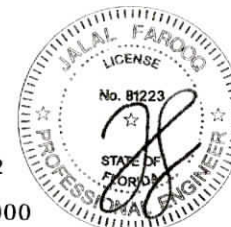
ADAPTER CORNER



VENT CORNER



FRAME CORNER



Sealed: 2/18/2022

FL #41000

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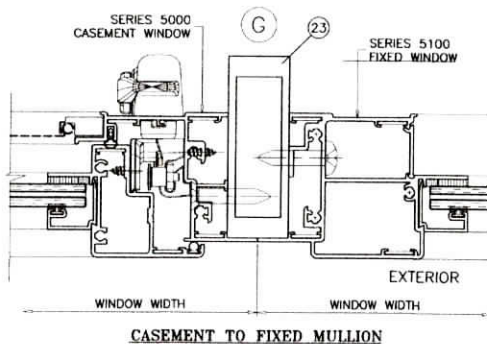
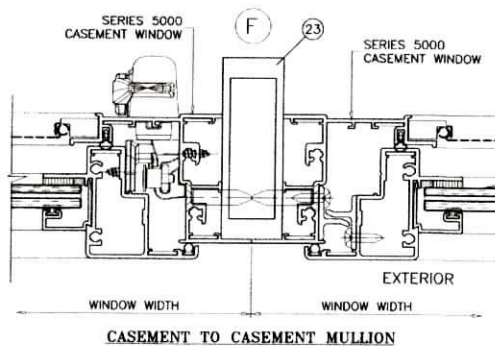
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sheet 11 of 12

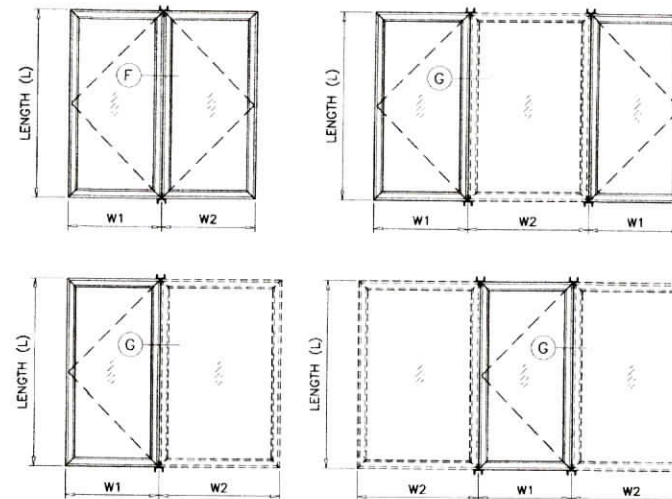
MULLION LOAD CAPACITY - PSF				MULLION LOAD CAPACITY - PSF			
WINDOW DIMS.		1 X 3 STD. MULL.	1 X 3 CUSTOM MULL.	WINDOW DIMS.		1 X 3 STD. MULL.	1 X 3 CUSTOM MULL.
WIDTH (W)	LENGTH (L)	EXT.(+) INT.(-)	EXT.(+) INT.(-)	WIDTH (W)	LENGTH (L)	EXT.(+) INT.(-)	EXT.(+) INT.(-)
26-1/2"	58"	90.0	90.0	30"	54"	90.0	90.0
37"		90.0	90.0	36"		90.0	90.0
42"		90.0	90.0	42"		90.0	90.0
45"		90.0	90.0	48"		90.0	90.0
48"		90.0	90.0	54"		90.0	90.0
53-1/8"		90.0	90.0	60"		90.0	90.0
62"		90.0	90.0	62"		90.0	90.0
26-1/2"	63"	90.0	90.0	30"	60"	90.0	90.0
37"		90.0	90.0	36"		90.0	90.0
42"		90.0	90.0	42"		90.0	90.0
45"		90.0	90.0	48"		90.0	90.0
48"		90.0	90.0	54"		90.0	90.0
53-1/8"		90.0	90.0	60"		90.0	90.0
62"		90.0	90.0	62"		90.0	90.0
26-1/2"	74-1/4"	90.0	90.0	30"	66"	90.0	90.0
37"		90.0	90.0	36"		90.0	90.0
42"		83.3	90.0	42"		90.0	90.0
45"		79.4	90.0	48"		90.0	90.0
48"		76.1	90.0	54"		90.0	90.0
53-1/8"		71.7	90.0	59"		90.0	90.0
26-1/2"	76"	90.0	90.0	30"	72"	90.0	90.0
37"		85.0	90.0	36"		90.0	90.0
42"		77.2	90.0	42"		90.0	90.0
45"		73.5	90.0	48"		84.5	90.0
48"		70.4	88.3	54"		79.2	90.0
51"		67.8	85.0	30"	76"	90.0	90.0
				36"		86.9	90.0
				42"		77.2	90.0
				48"		70.4	88.3
				51"		67.8	85.0

NOTES:

1. USE CHART ON THIS SHEET FOR SIDE BY SIDE CONNECTION CAPACITY OF WINDOW MULLION.
2. FOR CASEMENT WINDOW CAPACITY SEE SHEET 3 OF 12.
3. FOR FIXED WINDOW CAPACITY SEE SEPARATE APPROVAL.
4. LOWER VALUES FROM STEPS 1, 2 OR 3 WILL APPLY TO ENTIRE SYSTEM.



CLIPPED MULLIONS

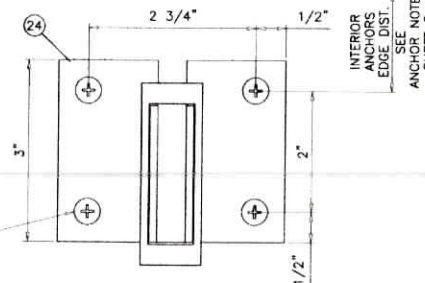


TYPICAL ELEVATIONS SIDE BY SIDE WINDOWS

SIDE BY SIDE APPLIES TO TWO OR MORE WINDOWS

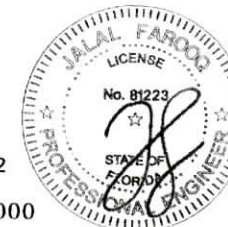
$$\text{WIDTH (W)} = \frac{W1 + W2}{2}$$

TYPICAL ANCHORS
4 PER CLIP
SEE SHEET 4
FOR DESCRIPTION



Sealed: 2/18/2022

FL #41000



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S-5000 ALUM. OUTSWING CASEMENT WDW. (L.M.L.)

revisions:	no date	by description
date:	08-30-21	scale: 1/2" = 1"
dr. by:	TARLO	chk. by:
drawing no.	21-68F	sheet 12 of 12