

FLORIDA DEPARTMENT OF
Business & Professional Regulation



[DBPR HOME](#) | [ABOUT DBPR](#) | [DBPR DIVISIONS](#) | [CONTACT DBPR](#)

[BCIS Home](#) | [Log In](#) | [User Registration](#) | [Hot Topics](#) | [Submit Surcharge](#) | [Stats & Facts](#) | [Publications](#) | [Contact Us](#) | [BCIS Site Map](#) | [Links](#) | [Search](#)



Product Approval
USER: Public User

[Product Approval Menu](#) > [Product or Application Search](#) > [Application List](#) > **Application Detail**

► OFFICE OF THE
SECRETARY

FL #	FL21557-R6
Application Type	Revision
Code Version	2023
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	Horizontal Slider												
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	Abel Carrasco, PE ☐ Validation Checklist - Hardcopy Received												
Certificate of Independence	FL21557_R6_COI_SS - Certificate of Independence 2023.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>ASTM E1886</td> <td>2013</td> </tr> <tr> <td>ASTM E1996</td> <td>2017</td> </tr> <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>	ASTM E1886	2013	ASTM E1996	2017	TAS 201	1994	TAS 202	1994	TAS 203	1994
<u>Standard</u>	<u>Year</u>												
ASTM E1886	2013												
ASTM E1996	2017												
TAS 201	1994												
TAS 202	1994												
TAS 203	1994												
Equivalence of Product Standards Certified By	Florida Licensed Professional Engineer or Architect FL21557_R6_Equiv_Equiv Ltr ASTM E1886-1996.pdf												
Sections from the Code													
Product Approval Method	Method 1 Option D												

Date Submitted	08/21/2023
Date Validated	08/21/2023
Date Pending FBC Approval	08/27/2023
Date Approved	10/17/2023

Summary of Products

FL #	Model, Number or Name	Description
21557.1	Series ES-EL200 Aluminum Horizontal Rolling Window	Large missile impact resistant aluminum horizontal rolling window.
Limits of Use Approved for use in HVHZ: Yes Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: +80/-90 Other: See attached drawing W16-69 for installation details.		Installation Instructions FL21557 R6 II SS - ES-EL200 HR (LMI) - DWG W16-69 (2023).pdf Verified By: Jalal Farooq PE # 81223 Created by Independent Third Party: Yes Evaluation Reports FL21557 R6 AE SS - ES-EL200 HR (LMI)-PAE 2023.pdf Created by Independent Third Party: Yes
21557.2	Series ES-EL200 Aluminum Horizontal Rolling Window	Non-Impact resistant aluminum horizontal rolling window.
Limits of Use Approved for use in HVHZ: Yes Approved for use outside HVHZ: Yes Impact Resistant: No Design Pressure: +80/-100 Other: See attached drawing 20-63F for installation details.		Installation Instructions FL21557 R6 II SS - ES-EL200 HR (NI) - DWG 20-63F (2023).pdf Verified By: Jalal Farooq PE #81223 Created by Independent Third Party: Yes Evaluation Reports FL21557 R6 AE SS - ES-EL200 HR (NI)-PAE 2023.pdf Created by Independent Third Party: Yes

[Back](#)
[Next](#)

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

The State of Florida is an AA/EEO employer. [Copyright 2007-2013 State of Florida.](#) :: [Privacy Statement](#) :: [Accessibility Statement](#) :: [Refund Statement](#)

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](#).

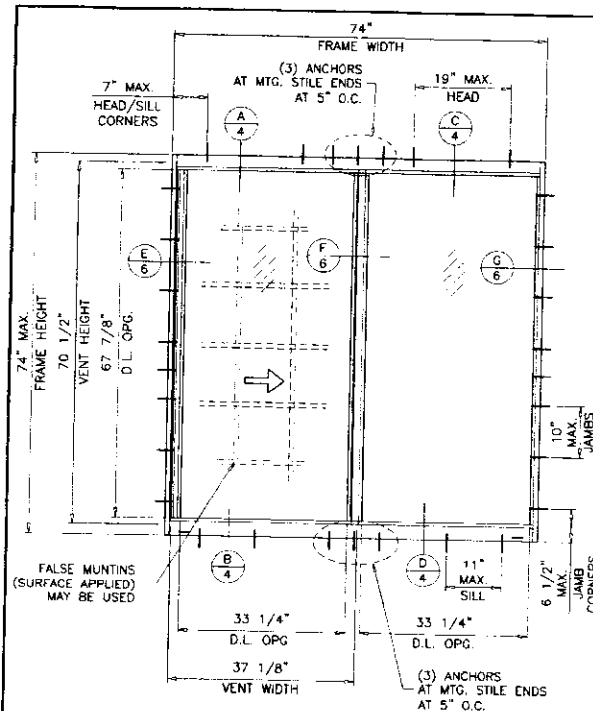
Product Approval Accepts:



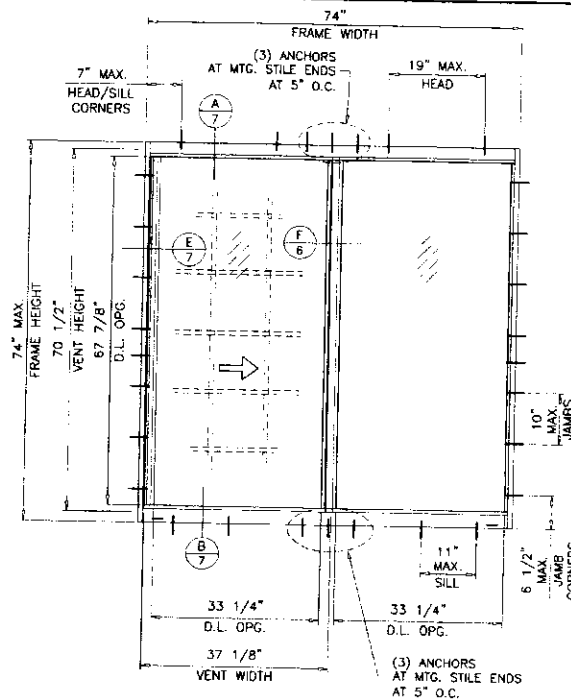
Credit Card

Safe

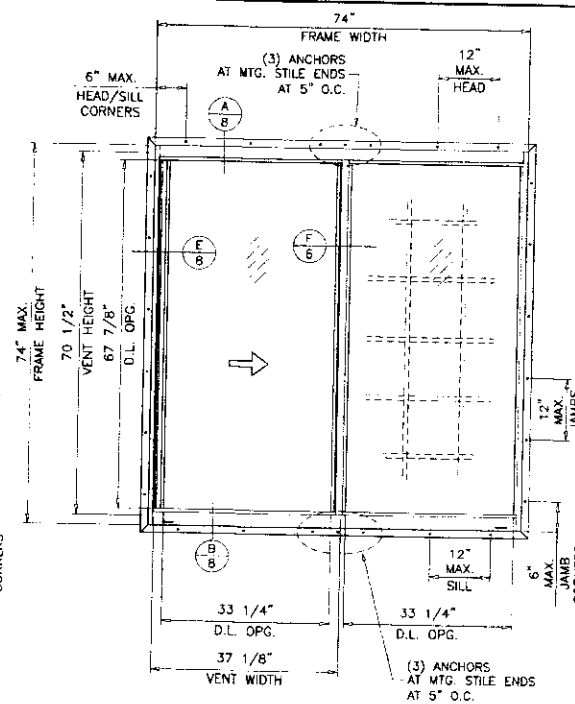
securityMETRICS®



TYPICAL ELEVATION
FLANGE FRAMES



TYPICAL ELEVATION
FLANGE FRAMES WITH FLUSH ADAPTER



TYPICAL ELEVATION
FLANGE FRAMES WITH FIN ADAPTER

ES-EL200

HORIZONTAL ROLLING ALUMINUM WINDOW (L.M.I.)

DESIGN LOAD RATINGS FOR THESE WINDOWS TO BE AS PER CHARTS SHOWN ON SHEETS 2.1 & 2.2.

APPROVAL APPLIES TO SINGLE UNITS OR SIDE BY SIDE COMBINATIONS OF H.R./H.R. OR HORIZONTAL ROLLING 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)'.

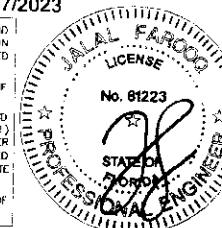
MANUFACTURER'S LABEL SHALL BE LOCATED ON A READILY VISIBLE LOCATION IN ACCORDANCE WITH SECTION 1709.9.3 OF FLORIDA BUILDING CODE. LABELING TO COMPLY WITH SECTION 1709.9.2.

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

Sealed: 8/17/2023

FL #21557

- 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.



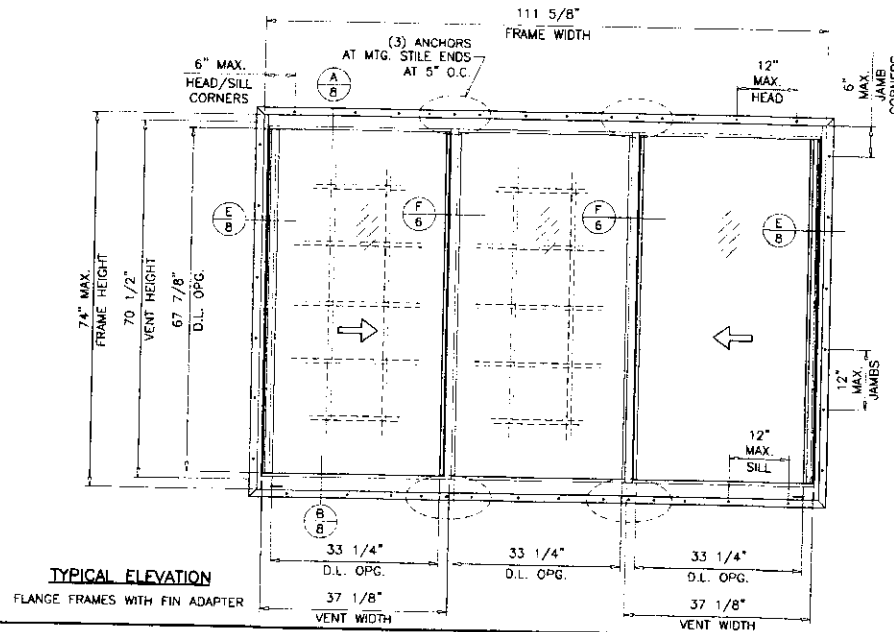
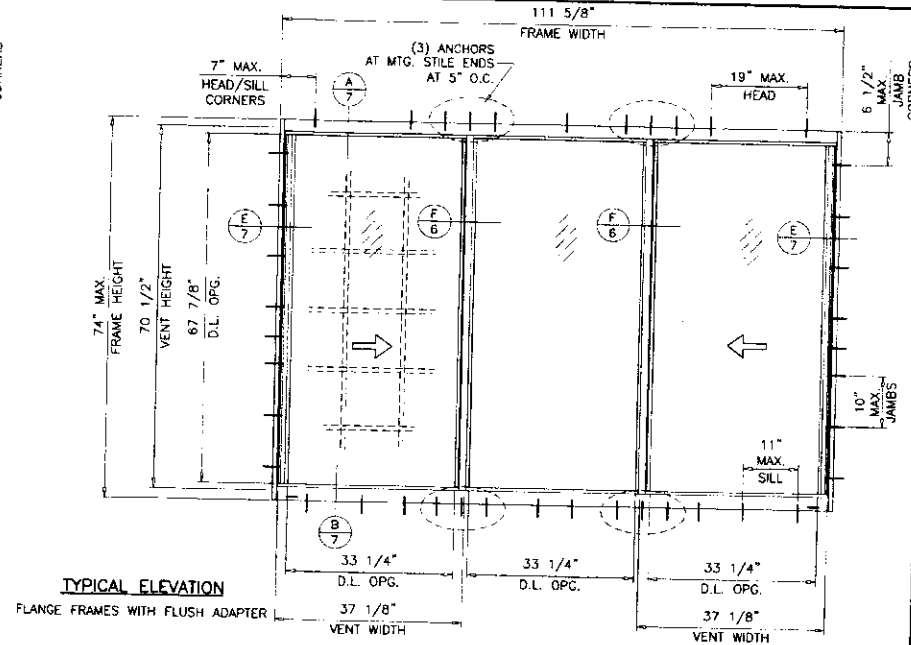
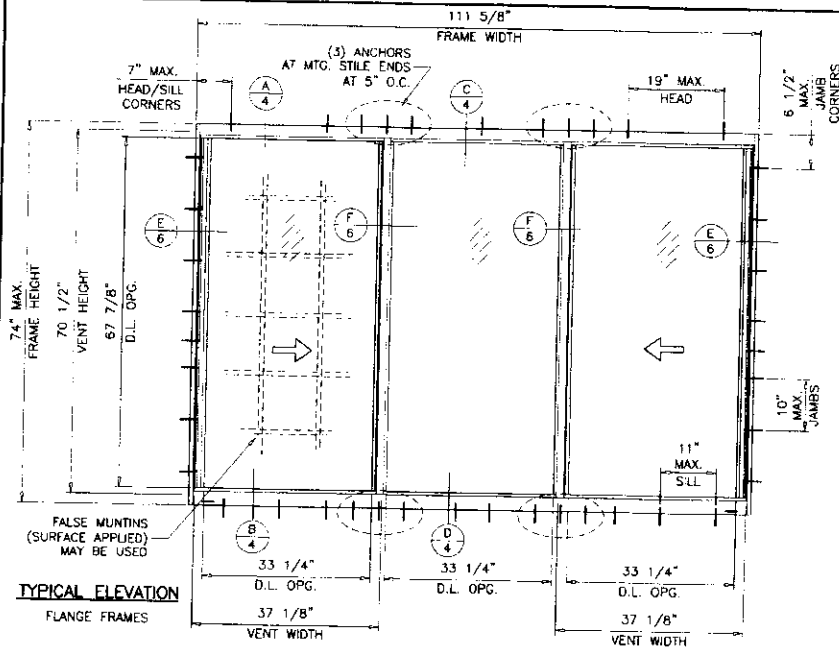
AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL: (305) 264-8100 FAX: (305) 262-6978

COMP-ANL W16-69ES

ES-EL200 HORIZONTAL ROLLING ALUM. WDW. (L.M.I.)
E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL 33142
TEL: (305) 638-5151 FAX: (305) 638-5158

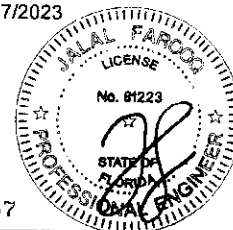
REV.	DATE	DESCRIPTION
1	08/05/20	UPDATED TO 2020 FBC
2	09/16/20	CLASS TYPE 4, ASSED
3	07/28/22	GENERAL REVISION
4	07/28/22	UPDATED TO 2023 FBC

date: 11-13-18
scale: 1/2" = 1'-0"
dr. by: JAF
chk. by: JAF
drawing no: **W16-69**
sheet 1 of 11



Sealed: 8/17/2023

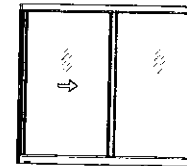
FL #21557



AL-FAROOQ CORPORATION ENGINEERS & PRODUCT DEVELOPMENT 9380 SUNSET DRIVE, SUITE 220 MIAMI, FLORIDA 33173 TEL. (305) 284-8100 FAX (305) 282-6978 (C.A.N. 3538)		af c
ES-EL200 HORIZONTAL ROLLING ALUM. WDW. (L.M.I.) E.S. WINDOWS, LLC 3550 N.W. 49 STREET MIAMI, FL. 33142 TEL. (305) 638-3151 FAX (305) 638-5198		drawing no. W16-69 sheet 2 of 11
revisions: no. date by description	date: 11-13-18 scale: 1/2"=1'-0" dr. by: FARQ ch. by:	

DESIGN LOAD CAPACITY - PSF (XO OR OX SIZES)									
WINDOW DIMS.		W/O REINF.				WITH REINF.			
		GLASS TYPES		GLASS TYPES		GLASS TYPES		GLASS TYPES	
		1, 11, 2, 21	2A, 2A1, 3, 41	1, 11, 2, 21	2A, 2A1, 3, 41	1, 11, 2, 21	2A, 2A1, 3, 41	1, 11, 2, 21	2A, 2A1, 3, 41
WIDTH	HEIGHT	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)
26-1/2"	26"	65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
37"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
53-1/8"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
74"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
80"		-	-	-	-	75.0	80.0	-	-
26-1/2"	38-3/8"	65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
37"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
53-1/8"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
74"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
80"		-	-	-	-	75.0	80.0	-	-
26-1/2"	50-5/8"	65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
37"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
53-1/8"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
74"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
80"		-	-	-	-	75.0	80.0	-	-
26-1/2"	63"	65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
37"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
53-1/8"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
74"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
80"		-	-	-	-	75.0	80.0	-	-
26-1/2"	74"	-	-	-	-	75.0	80.0	-	-
37"		-	-	-	-	75.0	80.0	-	-
53-1/8"		-	-	-	-	75.0	80.0	-	-
74"		-	-	-	-	75.0	80.0	-	-
80"		-	-	-	-	75.0	80.0	-	-

DESIGN LOAD CAPACITY - PSF (XO OR OX SIZES)									
WINDOW DIMS.		W/O REINF.				WITH REINF.			
		GLASS TYPES		GLASS TYPES		GLASS TYPES		GLASS TYPES	
		1, 11, 2, 21	2A, 2A1, 3, 41	1, 11, 2, 21	2A, 2A1, 3, 41	1, 11, 2, 21	2A, 2A1, 3, 41	1, 11, 2, 21	2A, 2A1, 3, 41
WIDTH	HEIGHT	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)
24"	24"	65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
36"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
48"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
60"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
72"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
76"	36"	-	-	-	-	75.0	80.0	-	-
80"		-	-	-	-	75.0	80.0	-	-
24"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
36"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
48"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
60"	48"	65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
72"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
76"		-	-	-	-	75.0	80.0	-	-
80"		-	-	-	-	75.0	80.0	-	-
24"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
36"	60"	65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
48"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
60"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
72"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
76"		-	-	-	-	75.0	80.0	-	-
80"	72"	-	-	-	-	75.0	80.0	-	-
24"		-	-	-	-	75.0	80.0	-	-
36"		-	-	-	-	75.0	80.0	-	-
48"		-	-	-	-	75.0	80.0	-	-
60"		-	-	-	-	75.0	80.0	-	-
72"	76"	-	-	-	-	75.0	79.2	-	-
76"		-	-	-	-	75.0	79.2	-	-
80"		-	-	-	-	75.0	76.5	-	-
24"		-	-	-	-	75.0	80.0	-	-
36"		-	-	-	-	75.0	80.0	-	-

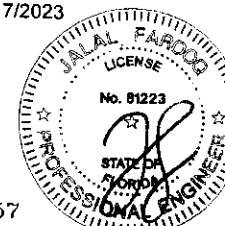


'XO OR OX'

OPERATING VENTS CAN BE 1/4 TO 1/3 OF WINDOW WIDTH
 MAX. D.L. OPG. FOR FIXED LITE NOT TO EXCEED
 12.7 SQ. FT. FOR GLASS TYPES 1, 11, 2, 21, 2A, 2A1, 3 & 4;
 15.7 SQ. FT. FOR GLASS TYPES 5 & 51
 FOR ALTERNATE SIZE UNITS MAX. FRAME AREA OF WINDOW
 NOT TO EXCEED TESTED FRAME AREA OF
 31.5 SQ. FT. FOR GLASS TYPES 1, 11, 2, 21, 2A, 2A1, 3 & 4;
 38.0 SQ. FT. FOR GLASS TYPES 5 & 51

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

Sealed: 8/17/2023

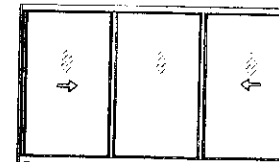


FL #21557

AL-FAROOQ CORPORATION ENGINEERS & PRODUCT DEVELOPMENT 9360 SUNSET DRIVE, SUITE 220 MIAMI, FLORIDA 33173 TEL. (305) 264-8100 FAX (305) 262-8978 (C.A.N. 5598)		ES-EL200 HORIZONTAL ROLLING ALUM. 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: 11-13-16 SCALE: 1/2"=1'-0" DR. BY: JAF CHK. BY:	drawing no. W16-69 sheet 2 of 11	

DESIGN LOAD CAPACITY - PSF (XOX SIZES)									
WINDOW DIMS.		W/O REINF.		WITH REINF.					
		GLASS TYPES		GLASS TYPES		GLASS TYPES		GLASS TYPES	
		1, 1i, 2, 2i	2A, 2Ai, 3, 4i	1, 1i, 2, 2i	2A, 2Ai, 3, 4i	5, 5i	1, 1i, 2, 2i	2A, 2Ai, 3	5, 5i
WIDTH	HEIGHT	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)
74"	26"	65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
106-1/4"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
111"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
114"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
118"	38-3/8"	65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
111"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
114"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
118"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
74"	50-5/8"	65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
106-1/4"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
111"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
114"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
118"	63"	65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
106-1/4"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
111"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
114"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
74"	74"	65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
106-1/4"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
111"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
114"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0

DESIGN LOAD CAPACITY - PSF (XOX SIZES)									
WINDOW DIMS.		W/O REINF.		WITH REINF.					
		GLASS TYPES		GLASS TYPES		GLASS TYPES		GLASS TYPES	
		1, 1i, 2, 2i	2A, 2Ai, 3, 4i	1, 1i, 2, 2i	2A, 2Ai, 3, 4i	5, 5i	1, 1i, 2, 2i	2A, 2Ai, 3	5, 5i
WIDTH	HEIGHT	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)
72"	24"	65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
84"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
96"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
108"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
120"	36"	65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
72"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
84"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
96"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
108"	48"	65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
72"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
84"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
96"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
108"	60"	65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
72"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
84"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
96"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
108"	72"	65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
72"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
84"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
96"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
108"	108"	65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
72"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
84"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0
96"		65.0	65.0	80.0	80.0	75.0	80.0	80.0	90.0

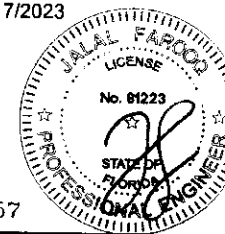


'XOX'

OPERATING VENTS CAN BE 1/4 TO 1/3 OF WINDOW WIDTH
 MAX. D.L. OPG. FOR FIXED LITE NOT TO EXCEED
 12.7 SQ. FT. FOR GLASS TYPES 1, 1i, 2, 2i, 2A, 2Ai, 3 & 4i
 15.7 SQ. FT. FOR GLASS TYPES 5 & 5i
 FOR ALTERNATE SIZE UNITS MAX. FRAME AREA OF WINDOW
 NOT TO EXCEED TESTED FRAME AREA OF
 47.4 SQ. FT. FOR GLASS TYPES 1, 1i, 2, 2i, 2A, 2Ai, 3 & 4i
 57.3 SQ. FT. FOR GLASS TYPES 5 & 5i

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

Sealed: 8/17/2023

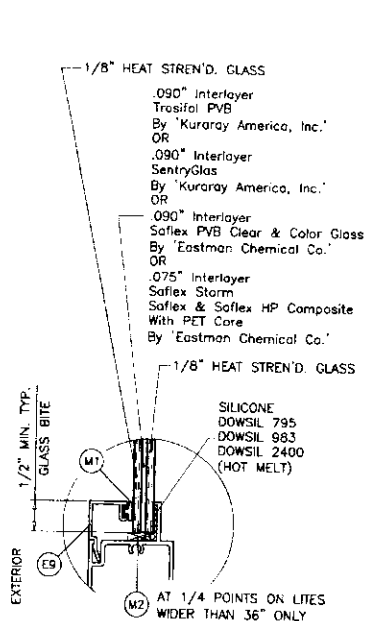


FL #21557

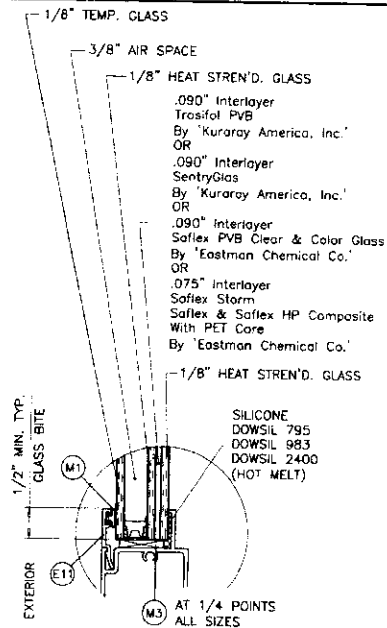
AL-FAROOQ CORPORATION
 ENGINEERS & PRODUCT DEVELOPMENT
 9360 SUNSET DRIVE, SUITE 220
 MIAMI, FLORIDA 33173
 TEL. (305) 264-8100 FAX. (305) 264-8978
 (C.A.N. 3238)

ES-EL200 HORIZONTAL ROLLING ALUM. 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:
 date: 11-13-16
 no. date by description
 scale: 1/2"=1'-0"
 dr. by: JAF
 chg. by:
 drawing no.
W16-69
 sheet 22 of 11



GLASS TYPE '1'
5/16" OVERALL LAM. GLASS



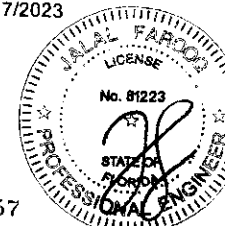
GLASS TYPE '1'
7/8" OVERALL INSUL. LAM. GLASS

GLAZING OPTIONS

5/16" & 3/8" AIR SPACE CONSISTING OF:
SPACER:
'HELIMA' LOW PROFILE ALUMINUM SPACER
BY 'LINGERMANN GMBH'
AROUND THE PERIMETER OF THE GLASS.
PERIMETER SEALANT:
SILICONE
DOWSIL 791
GE 2000

Sealed: 8/17/2023

FL #21557

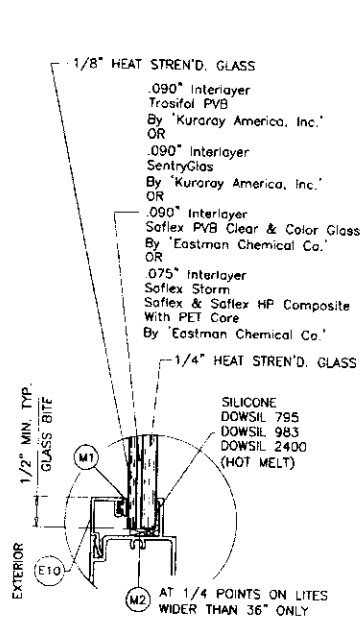


AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL (305) 264-8100 FAX (305) 262-6978
COMP-ANL W16-69ES

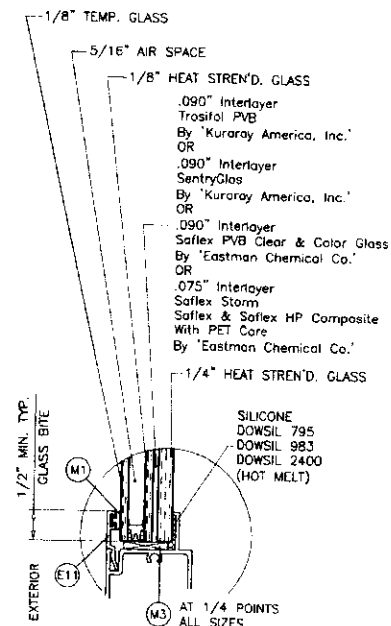
ES-EL200 HORIZONTAL ROLLING ALUM. WDW. (L.M.I.)

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

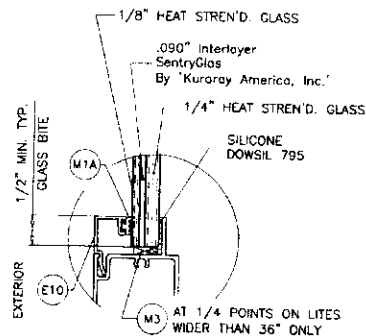
revisions:	no.	date	by	description
1	1	11-13-16		
scale: 1/2" = 1'				
dr. by: TARGO				
chk. by:				
drawing no.				
W16-69				
sheet 3 of 11				



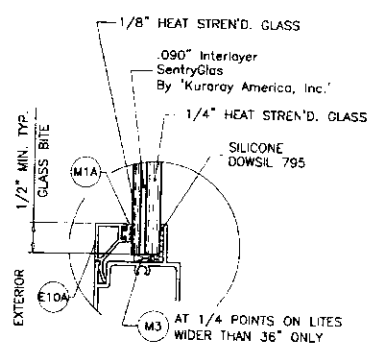
GLASS TYPE '2'
7/16" OVERALL LAM. GLASS



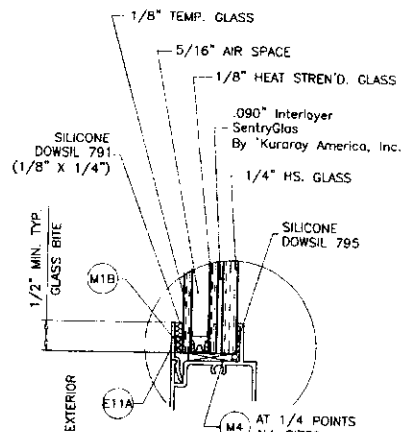
GLASS TYPE '2i'
7/8" OVERALL INSUL. LAM. GLASS



GLASS TYPE '2A'
7/16" OVERALL LAM. GLASS

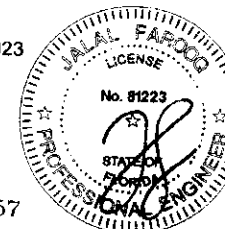


GLASS TYPE '2Ai'
7/8" OVERALL INSUL. LAM. GLASS



5/16" & 3/8" AIR SPACE CONSISTING OF:
SPACER:
'HELIMA' LOW PROFILE ALUMINUM SPACER
BY 'LINGERMANN GMBH'
AROUND THE PERIMETER OF THE GLASS.
PERIMETER SEALANT:
SILICONE
DOWSIL 791
GE 2000

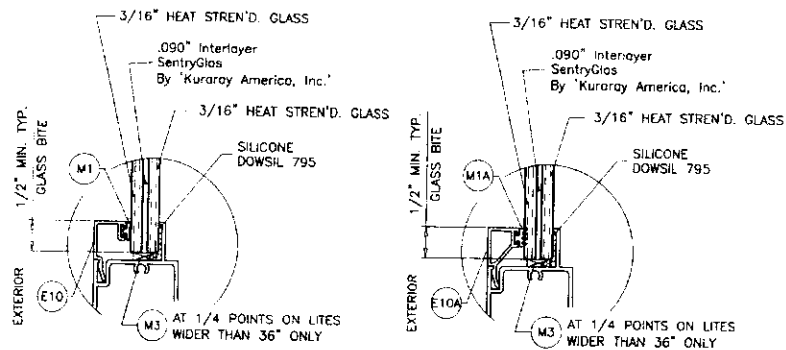
Sealed: 8/17/2023



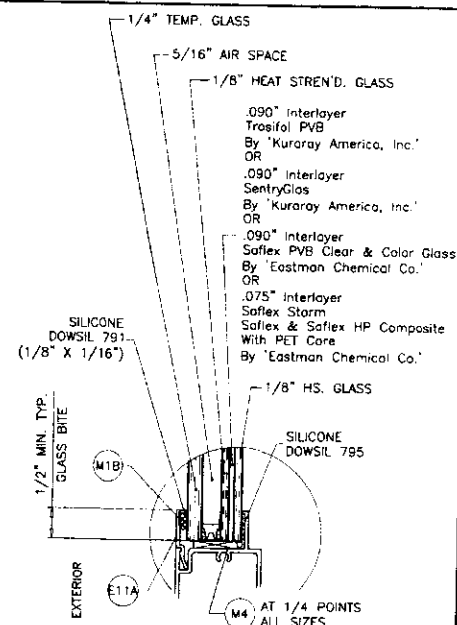
AL-FAROOQ CORPORATION ENGINEERS & PRODUCT DEVELOPMENT 9360 SUNSET DRIVE, SUITE 220 MIAMI, FLORIDA 33173 TEL (305) 264-8100 FAX (305) 262-6978 COMP-AN\W16-69ES	
ES-EL200 HORIZONTAL ROLLING ALUM. WDW. (L.M.I.) E.S. WINDOWS, LLC 3550 N.W. 49 STREET MIAMI, FL. 33142 TEL (305) 638-5151 FAX (305) 638-5158	
REVISIONS: NO. DATE BY DESCRIPTION	date: 11-13-16 scale: 1/2" = 1" dr. by: TARD chg. by:
drawing no. W16-69 sheet 3 of 11	

GLAZING OPTIONS

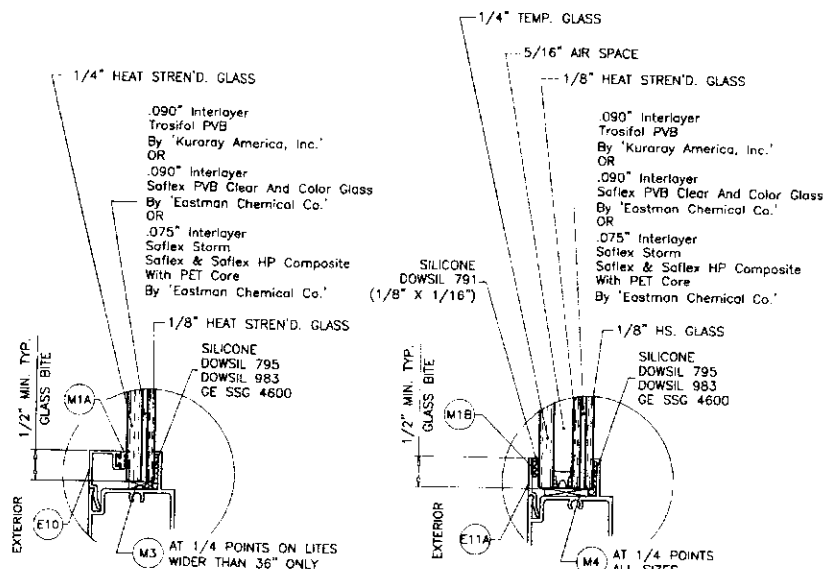
FL #21557



GLASS TYPE '3'
7/16" OVERALL LAM. GLASS



GLASS TYPE '4i'
7/8" OVERALL INSUL. LAM. GLASS

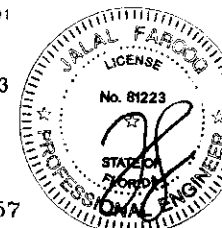


GLASS TYPE '5'
7/16" OVERALL LAM. GLASS

GLASS TYPE '5i'
7/8" OVERALL INSUL. LAM. GLASS

5/16" 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: 8/17/2023



GLAZING OPTIONS

FL #21557

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9380 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173 (C.A.N. 3538)
TEL. (305) 264-8100 FAX. (305) 262-8978
COMP-ANL W16-69ES

ES-EL200 HORIZONTAL ROLLING ALUM. WDW. (I.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
11-13-16	1			
Scale	1/2" = 1"			
Dr.	by: JARQ			
chk.	by:			
drawing no.				
W16-69				
Sheet 3.2 of 11				

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' (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
1-1/2" MIN. EMBED INTO CONCRETE (HEAD/SILL/JAMBS)
1-1/4" MIN. EMBED INTO BLOCKS (JAMBS)

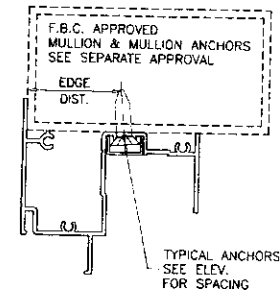
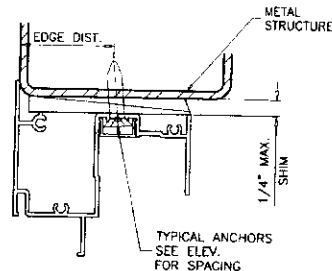
1/4" DIA. TEKS OR SELF DRILLING SCREWS (GRADE 5 CRS)

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. (Fy = 36 KSI MIN.)
(STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

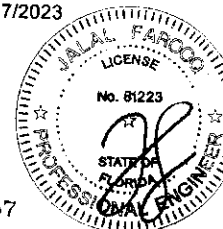
TYPICAL EDGE DISTANCE

INTO CONCRETE AND MASONRY = 2-1/2" MIN.
INTO WOOD STRUCTURE = 1" MIN.
INTO METAL STRUCTURE = 3/4" MIN.

WOOD AT HEAD, SILL OR JAMBS SG = 0.55 MIN.
CONCRETE AT HEAD, SILL OR JAMBS f'c = 3000 PSI MIN.
C-90 HOLLOW/FILLED BLOCK AT JAMBS f'm = 2000 PSI MIN.



Sealed: 8/17/2023



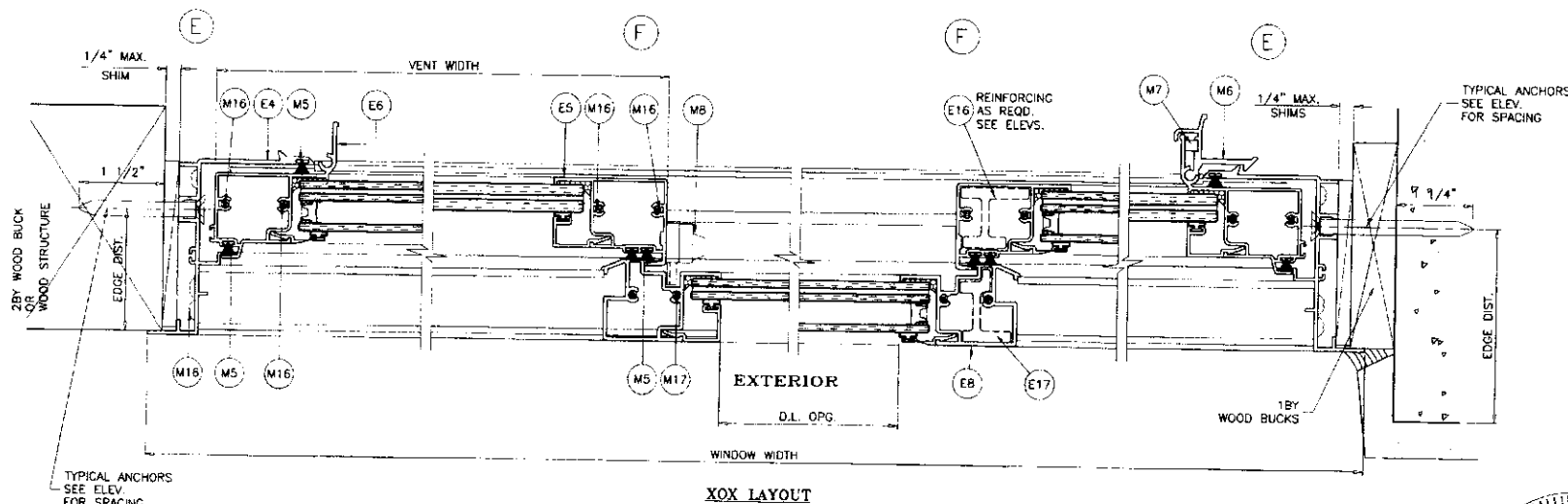
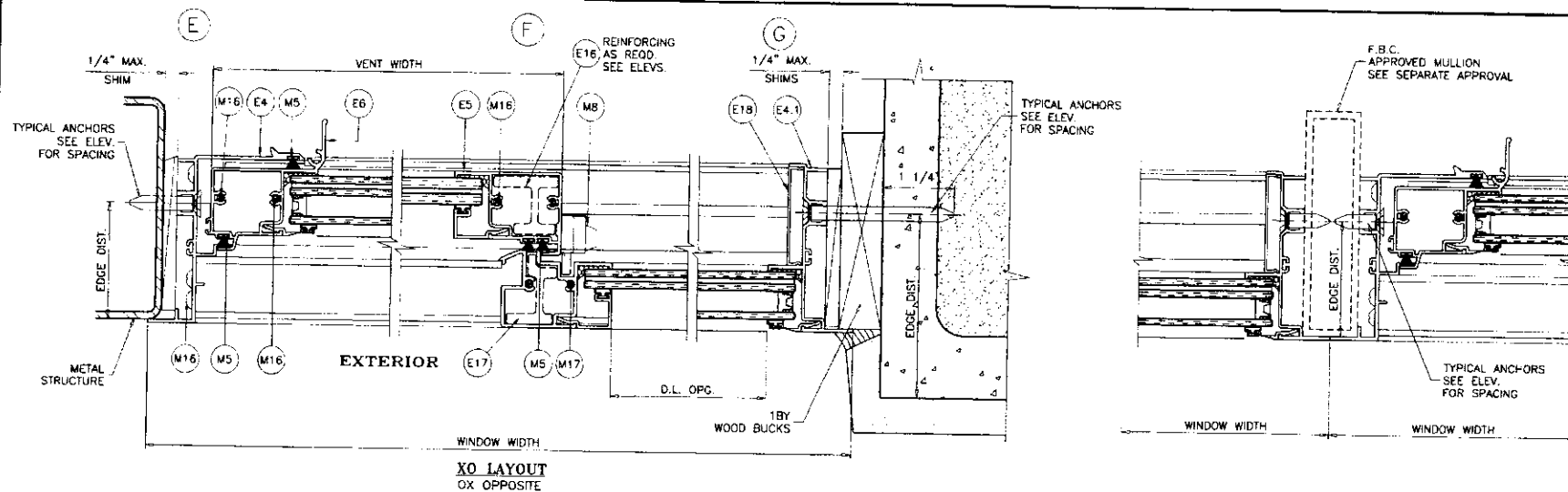
FL #21557

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

ES-EL200 HORIZONTAL ROLLING ALUM. WDW (L.M.I.)
E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL (305) 638-5151 FAX (305) 638-5158

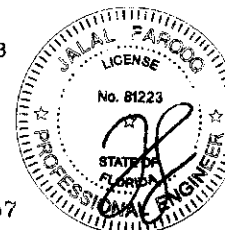
date: 11-13-16	scale: 1/2" = 1"	dr. by: TARIQ	chk. by:
no. date: by description			
drawing no. W16-69		sheet 5 of 11	

COMP-ANL W16-69ES



Sealed: 8/17/2023

FL #21557



AL-FAROOQ CORPORATION
 ENGINEERS & PRODUCT DEVELOPMENT
 5360 SUNSET DRIVE, SUITE 220
 MIAMI, FLORIDA 33173
 TEL. (305) 264-8100 FAX. (305) 262-6978
 C.O.A.N. 3538
 COMP - ANL W16-69'S

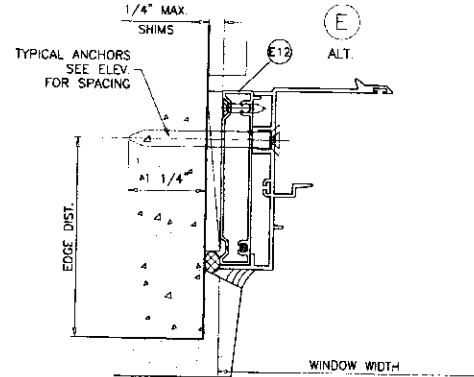
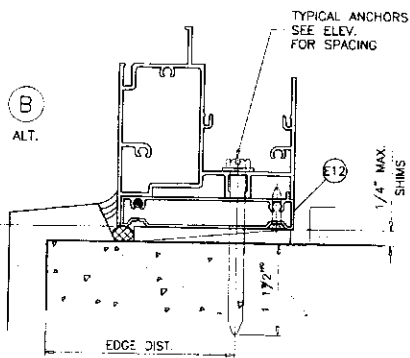
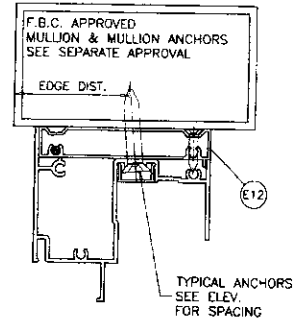
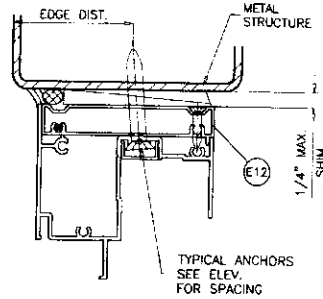
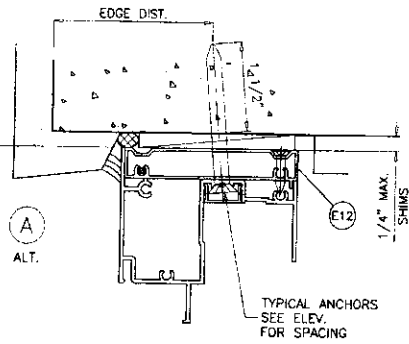
ES-EL200 HORIZONTAL ROLLING ALUM. WDW. (L.M.I.)
E.S. WINDOWS, LLC
 3550 N.W. 49 STREET
 MIAMI, FL. 33142
 TEL. (305) 638-5151 FAX. (305) 638-5156

revisions	no.	date	by	description
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55				
56				
57				
58				
59				
60				
61				
62				
63				
64				
65				
66				
67				
68				
69				
70				
71				
72				
73				
74				
75				
76				
77				
78				
79				
80				
81				
82				
83				
84				
85				
86				
87				
88				
89				
90				
91				
92				
93				
94				
95				
96				
97				
98				
99				
100				

drawing no.
W16-69
 sheet 6 of 11

WINDOW HEIGHT

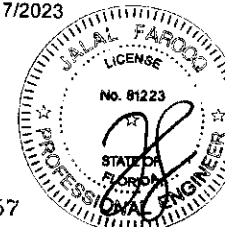
EXTERIOR



INSTALLATION DETAILS WITH FLUSH FRAME ADAPTER
SEE SHEETS 4 & 6 FOR WINDOW DETAILS

Sealed: 8/17/2023

FL #21557

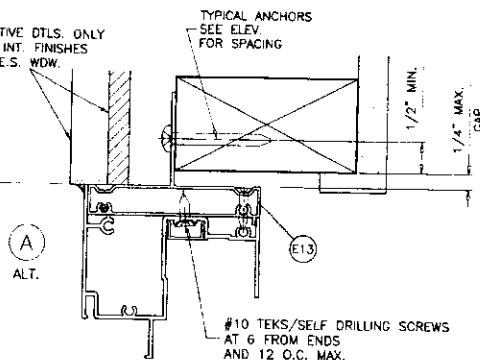


AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33179
TEL. (305) 264-8100 FAX (305) 262-8978
C.O.A.N. #5538
COMP - ANL W16-69ES

ES-EL200 HORIZONTAL ROLLING ALUM. 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
1	11-13-16			
2	1/27 - 17			
3			dr. by: TARG	
4			chk. by:	
drawing no. W16-69				
sheet 7 of 11				

ILLUSTRATIVE DTLS. ONLY
EXT. OR INT. FINISHES
NOT BY E.S. WDW.

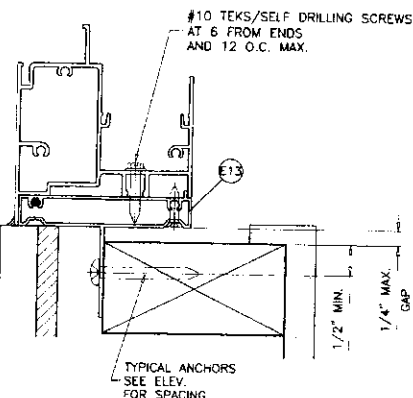


(A)
ALT.

#10 TEKs/SELF DRILLING SCREWS
AT 6 FROM ENDS
AND 12 O.C. MAX.

WINDOW HEIGHT
EXTERIOR

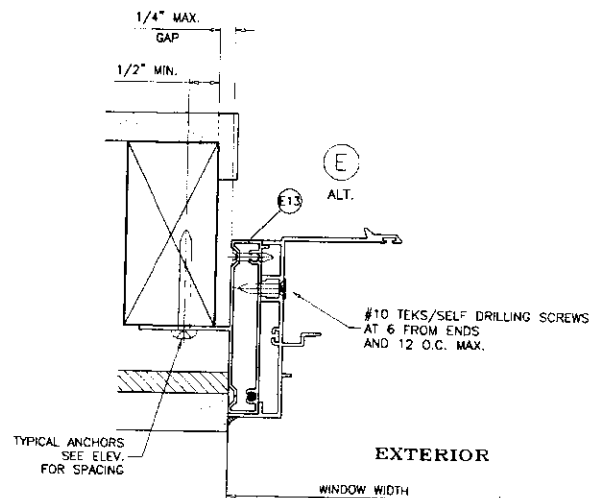
(B)
ALT.



#10 TEKs/SELF DRILLING SCREWS
AT 6 FROM ENDS
AND 12 O.C. MAX.

TYPICAL ANCHORS: SEE ELEV. FOR SPACING

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



(E)
ALT.

#10 TEKs/SELF DRILLING SCREWS
AT 6 FROM ENDS
AND 12 O.C. MAX.

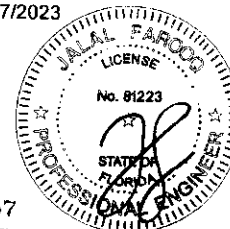
EXTERIOR

WINDOW WIDTH

INSTALLATION DETAILS WITH FIN FRAME ADAPTER
SEE SHEETS 4 & 5 FOR WINDOW DETAILS

Sealed: 8/17/2023

FL #21557



AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL (305) 264-8100 FAX (305) 262-8978
C.O.N. 3538

ES-EL200 HORIZONTAL ROLLING ALUM. WDW. (L.M.L.)

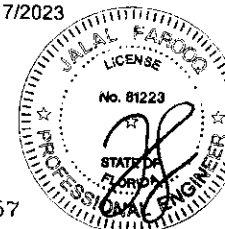
E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL (305) 638-5151 FAX (305) 638-5158

REVISIONS:	no.	date	by	description
1	11-13-16			
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55				
56				
57				
58				
59				
60				
61				
62				
63				
64				
65				
66				
67				
68				
69				
70				
71				
72				
73				
74				
75				
76				
77				
78				
79				
80				
81				
82				
83				
84				
85				
86				
87				
88				
89				
90				
91				
92				
93				
94				
95				
96				
97				
98				
99				
100				

drawing no.
W16-69
sheet 8 of 11

ITEM #	PART #	REQD.	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
E1	ES-EL104	1	FRAME HEAD	6063-T6	-
E2	ES-EL201	1	FRAME SILL	6063-T6	-
E3	ES-EL202	1	SILL TRACK	6063-T6	-
E4	ES-EL102	2	FRAME JAMB (OPERATING)	6063-T6	-
E4.1	ES-EL101A	2	FRAME JAMB (FIXED)	6063-T6	-
E5	ES-EL105	1	INTERLOCK STYLE	6063-T6	-
E6	ES-EL106	1	JAMB STYLE	6063-T6	-
E7	ES-EL107	2	VENT TOP & BOTTOM RAIL	6063-T6	-
E8	ES-EL108A	1	FIXED MTG. STYLE	6063-T6	-
E9	ES-EL109	AS REQD.	GLAZING BEAD (5/16" LAM. GLASS)	6063-T6	-
E10	ES-EL110	AS REQD.	GLAZING BEAD (7/16" LAM. GLASS)	6063-T6	-
E10A	ES-EL123	AS REQD.	GLAZING BEAD (7/16" LAM. GLASS)	6063-T6	-
E11	ES-EL111	AS REQD.	GLAZING BEAD (INSUL. LAM. GLASS)	6063-T6	-
E11A	ES-EL116	AS REQD.	GLAZING BEAD (INSUL. LAM. GLASS)	6063-T6	-
E12	ES-EL112	AS REQD.	FLUSH FRAME ADAPTER	6063-T6	-
E13	ES-EL115	AS REQD.	FLUSH FRAME ADAPTER WITH FIN	6063-T5	-
E14	ES-EL114	AS REQD.	HEAD SCREW COVER	6063-T6	-
E15	ES-2011	AS REQD.	SILL RISER	6063-T6	-
E16	ES-EL220	AS REQD.	INTERLOCK STYLE STIFFENER	6005-T5	-
E17	ES-EL221	AS REQD.	FIX. MTG. STYLE STIFFENER	6005-T5	-
E18	ES-EL113A	AS REQD.	JAMB SCREW COVER	6063-T6	-
M1	ES-5008A	AS REQD.	GLAZING BEAD BULB	SILICONE	DUROMETER 60±5 SHORE A
M1A	EL100-G02	AS REQD.	EXTERIOR LEAF GASKET	SILICONE	DUROMETER 60±5 SHORE A
M1B	ES-H-340-G05	AS REQD.	EXTERIOR WEDGE GASKET	SILICONE	DUROMETER 65±5 SHORE A
M2	80-372A	2/ LITE	SETTING BLOCK AT 1/4 POINTS (LAM. GLASS)	SILICONE	DUROMETER 80±5 SHORE A
M3	EL100-B01	2/ LITE	SETTING BLOCK AT 1/4 POINTS (INSUL. LAM. GLASS)	SILICONE	DUROMETER 80±5 SHORE A
M4	EL100-301	AS REQD.	VENT STOP	RIGID PVC	-
M5	W23211NG	AS REQD.	PILE W/STRIPPING WITH PLASTIC FIN	POLYPROPYLENE	-
M6	SK08-401C	2/ VENT	SPRING LOADED LATCH	6063-T6	ALTERNATE TO SWEEP LATCH
M7	ES-1012	2/ LATCH	LATCH SPRING	ST. STEEL	-
M8	SL302-XX	2/ VENT	SWEEP LATCH	DIE CAST ALUM	-
M9	WA2L	2	WEEP HOLE COVER	RIGID PVC	-
M10	ES-1000-P1L	-	LEFT NOTCH CAP	NYLON	-
M11	ES-1000-P1R	-	RIGHT NOTCH CAP	NYLON	-
M12	WPSA-N1	2	3/4" x 3/4" RETIC FOAM PAD	FOAM	-
M13	TAR-16019P-A	2	ROLLER	POLYAMIDE & ACETAL	-
M14	TAR-16019P	2	ROLLER HOUSING	POLYAMIDE	-
M15	#8 X 1"	-	FLUSH FRAME ADAPTER ASSEMBLY FASTENERS	ST. STEEL	PH SMS
M16	#8 X 1"	-	FRAME AND VENT ASSEMBLY FASTENERS	ST. STEEL	PH SMS
M17	#8 X 3"	-	FRAME SILL ASSEMBLY FASTENERS	ST. STEEL	PH SMS
M18	#8 X 3/4"	-	SWEEP LATCH FASTENERS	ST. STEEL	PH SMS
M20	#14 X 3/4"	-	ASSEMBLY FASTENERS FOR FLUSH ADAPTER	ST. STEEL	PH SMS

Sealed: 8/17/2023

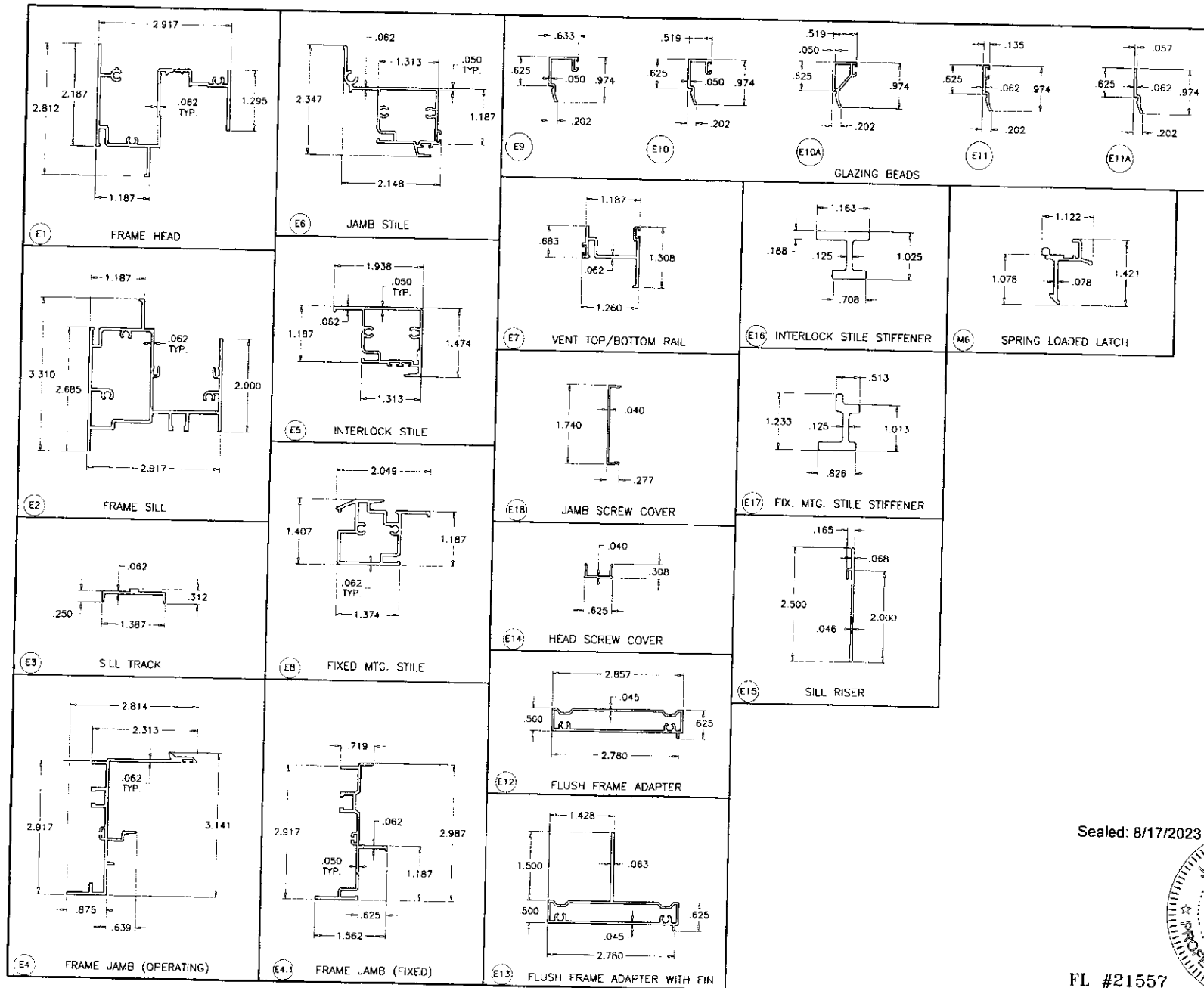


FL #21557

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 W16-69ES

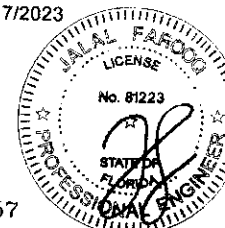
ES-EL200 HORIZONTAL ROLLING ALUM. WDW. (L.M.I.)
E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

Revisions:
date: 11-13-16
scale: 1/2" = 1"
dr. by: TARGO
chk. by:
drawing no.
W16-69
sheet 9 of 11

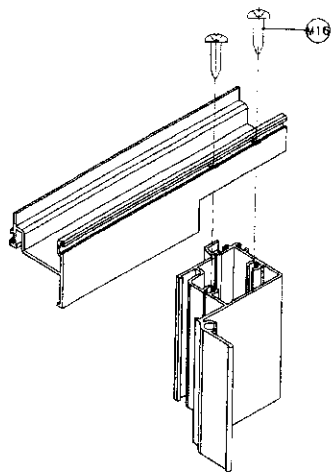


Sealed: 8/17/2023

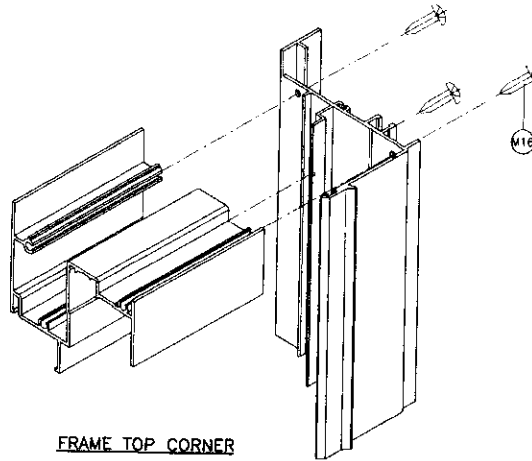
FL #21557



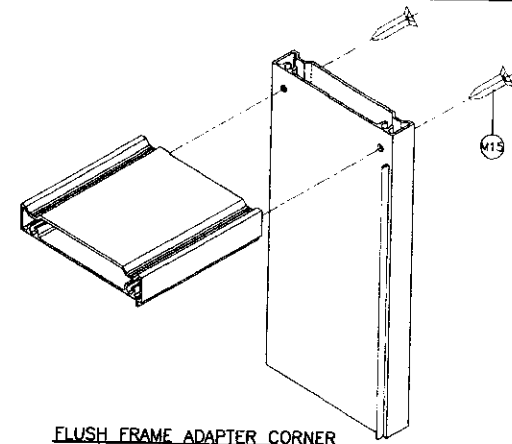
AL-FAROOQ CORPORATION ENGINEERS & PRODUCT DEVELOPMENT 9380 SUNSET DRIVE, SUITE 220 MIAMI, FLORIDA 33173 TEL (305) 264-8100 FAX (305) 262-6978 COMP-ANL W16-69ES	
E.S. WINDOWS, LLC 3550 N.W. 49 STREET MIAMI, FL 33142 TEL (305) 638-5151 FAX (305) 638-5158	
ES-EL200 HORIZONTAL ROLLING ALUM. WDW. (L.M.I.)	
Revisions: no. date by description	date: 11-13-16 scale: 1/2" = 1" dr. by: TARO chk. by:
drawing no. W16-69 sheet 10 of 11	



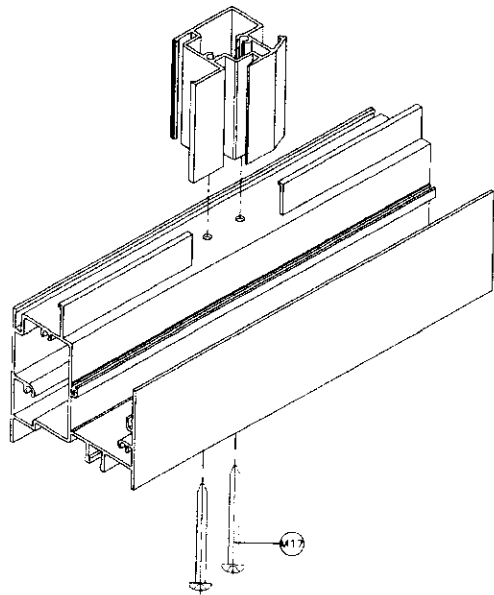
VENT TOP & BOTTOM CORNER



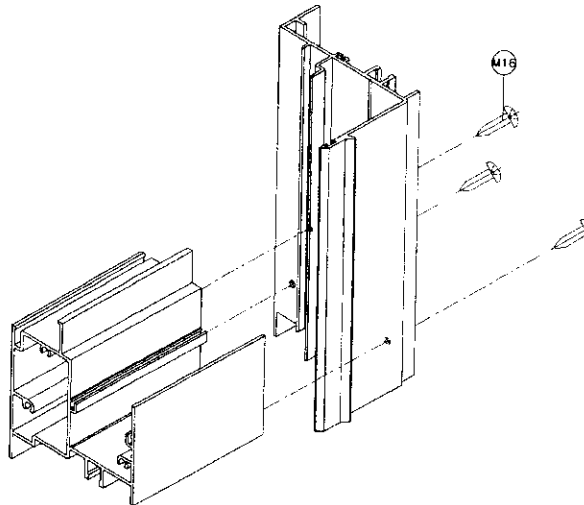
FRAME TOP CORNER



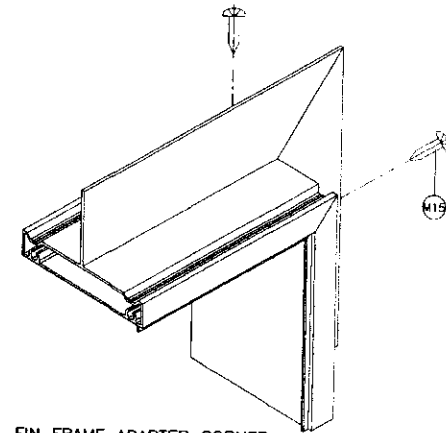
FLUSH FRAME ADAPTER CORNER



FIX. MTC. RAIL CORNER

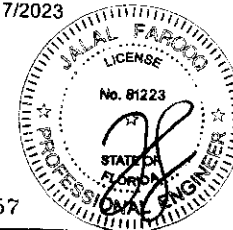


FRAME BOTTOM CORNER



FIN FRAME ADAPTER CORNER

Sealed: 8/17/2023



FL #21557

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9380 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100 FAX (305) 262-8978
C.O.A. # 35382
COMP-ANL W16-69ES

ES-EL200 HORIZONTAL ROLLING ALUM. 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:	by description
date	no date
11-13-16	
scale: 1/2" = 1"	
dr. by: JAF	
chk. by:	
drawing no.	
W16-69	
sheet 11 of 11	