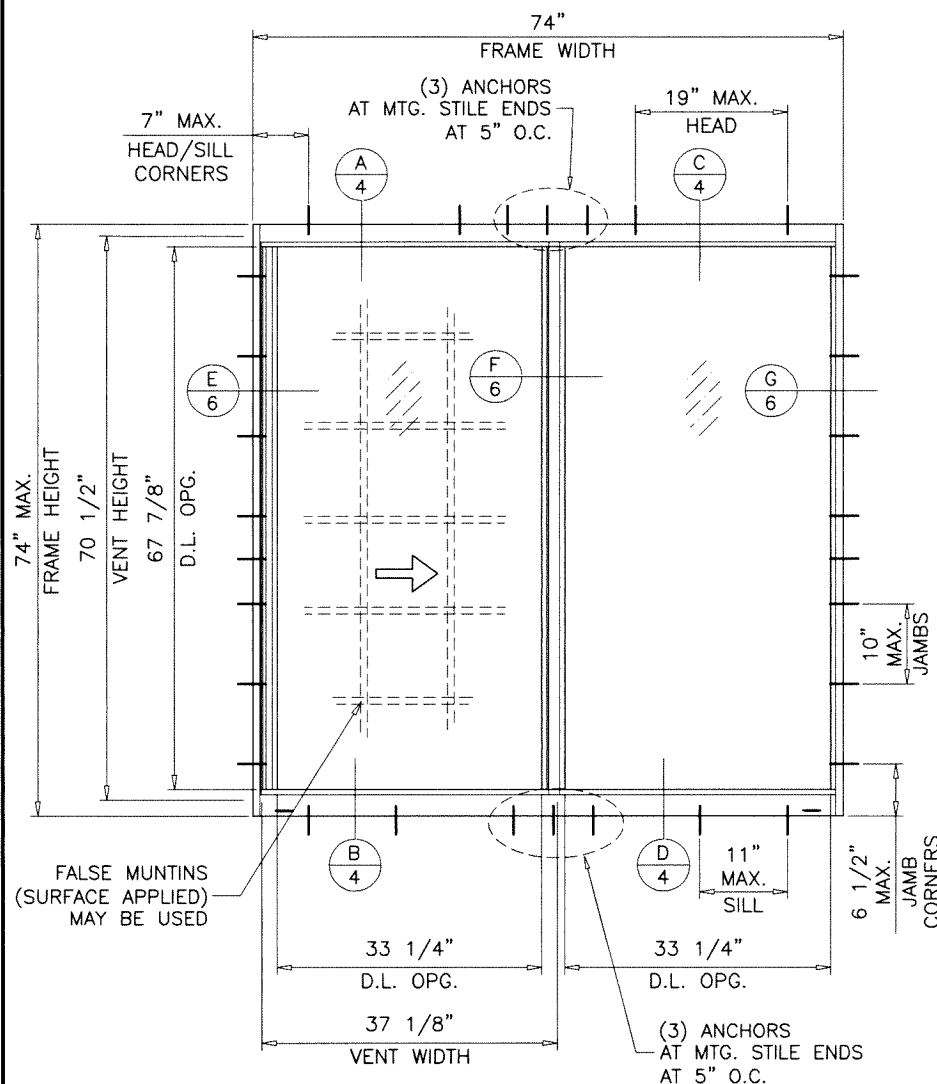
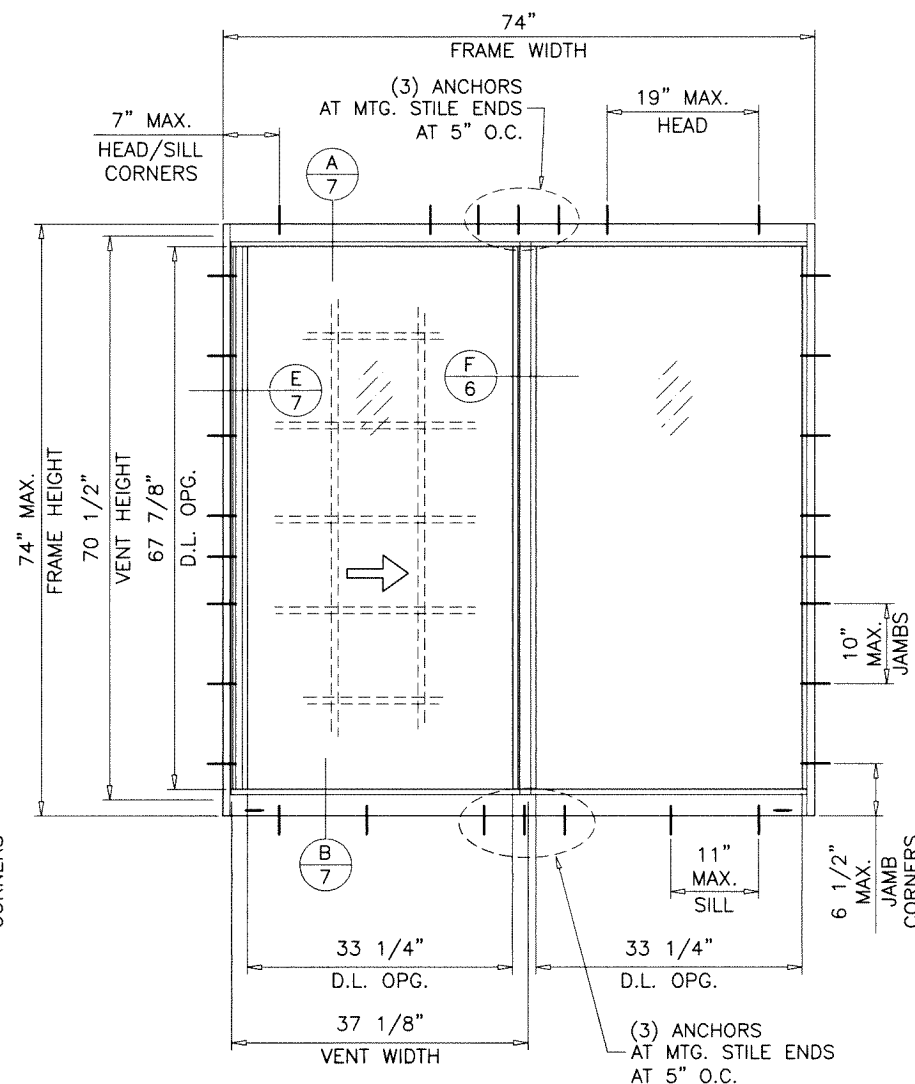




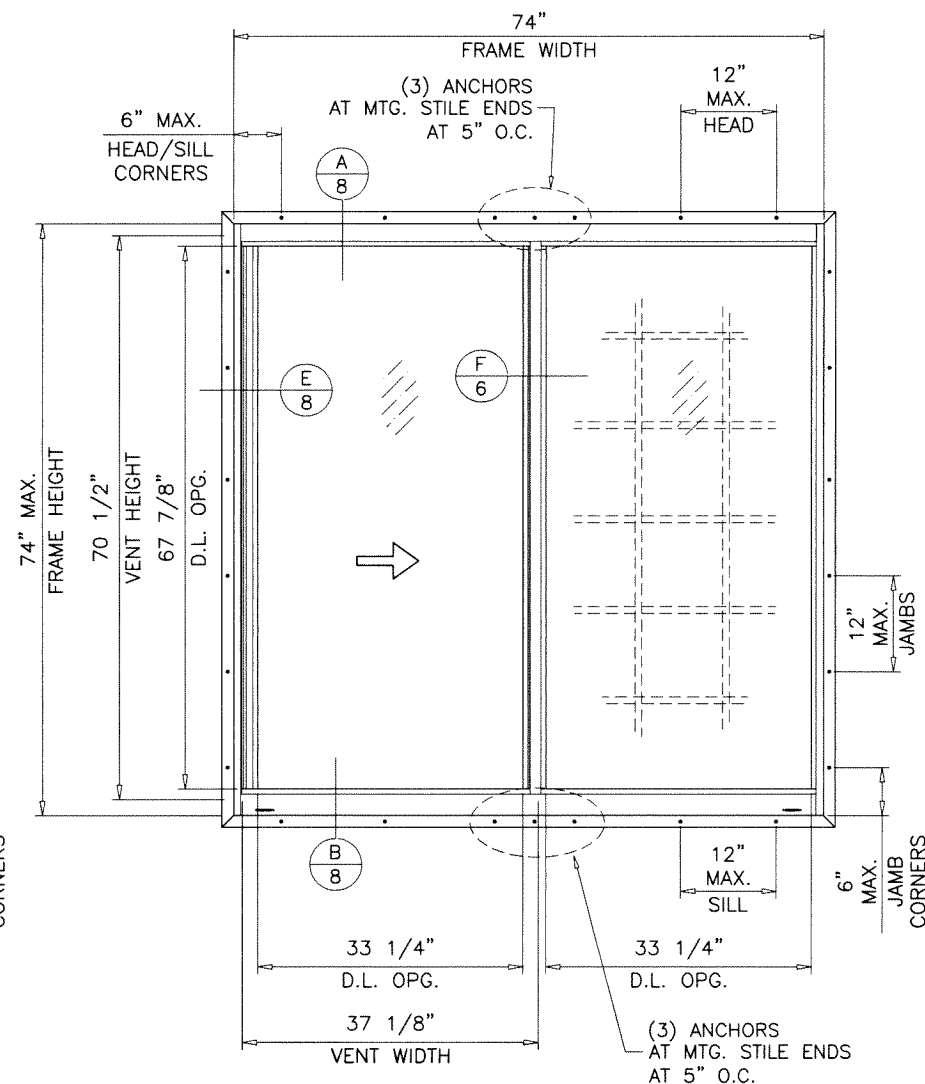
TYPICAL ELEVATION

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.

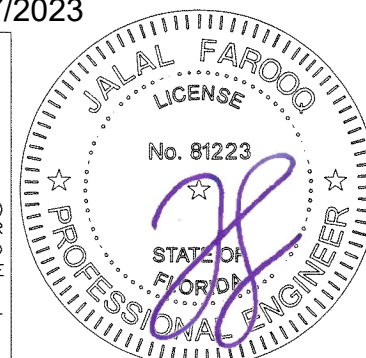
DESIGN LOADS SHOWN ARE BASED ON 'ALLOWABLE STRESS DESIGN (ASD)'.

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.

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

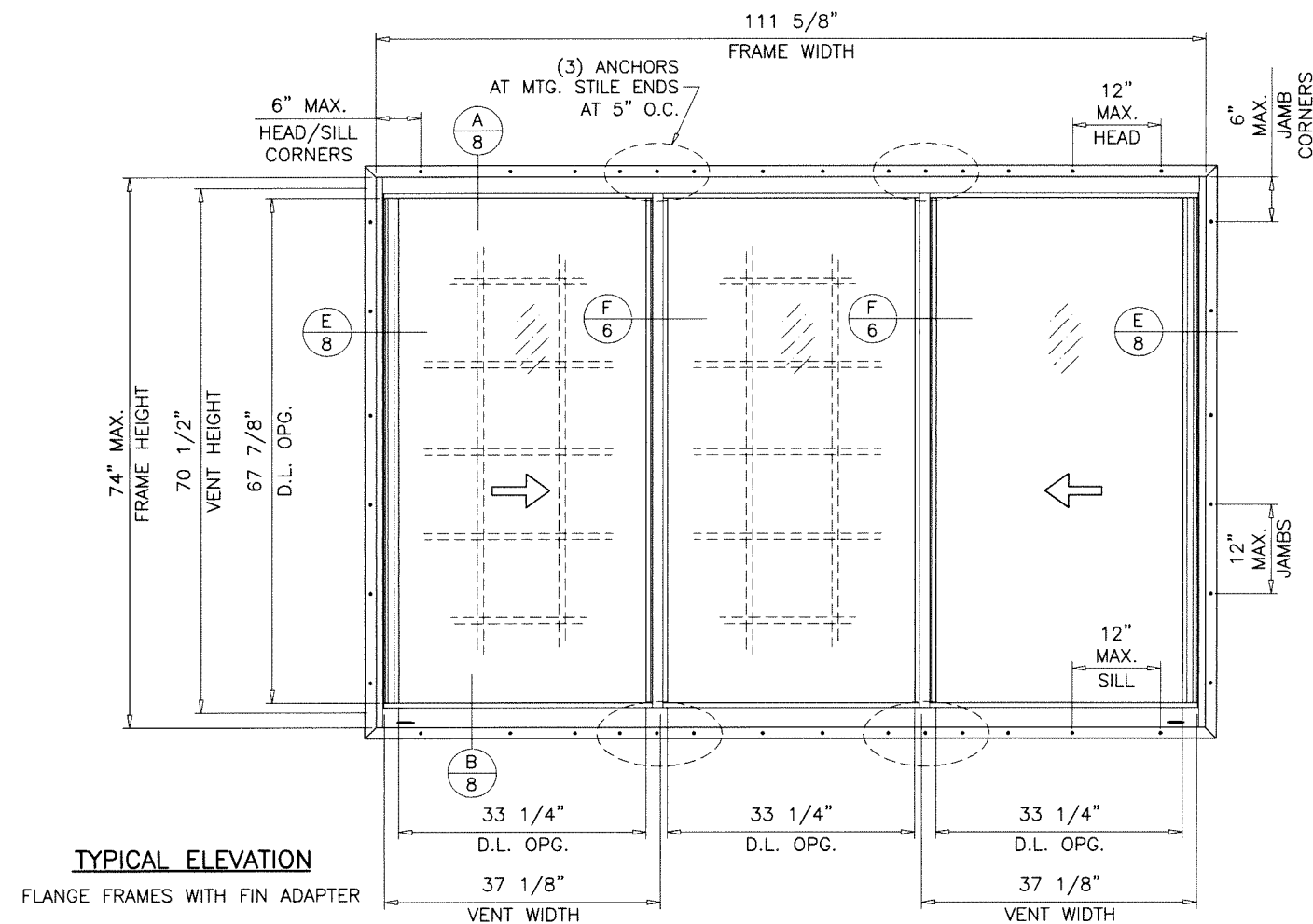
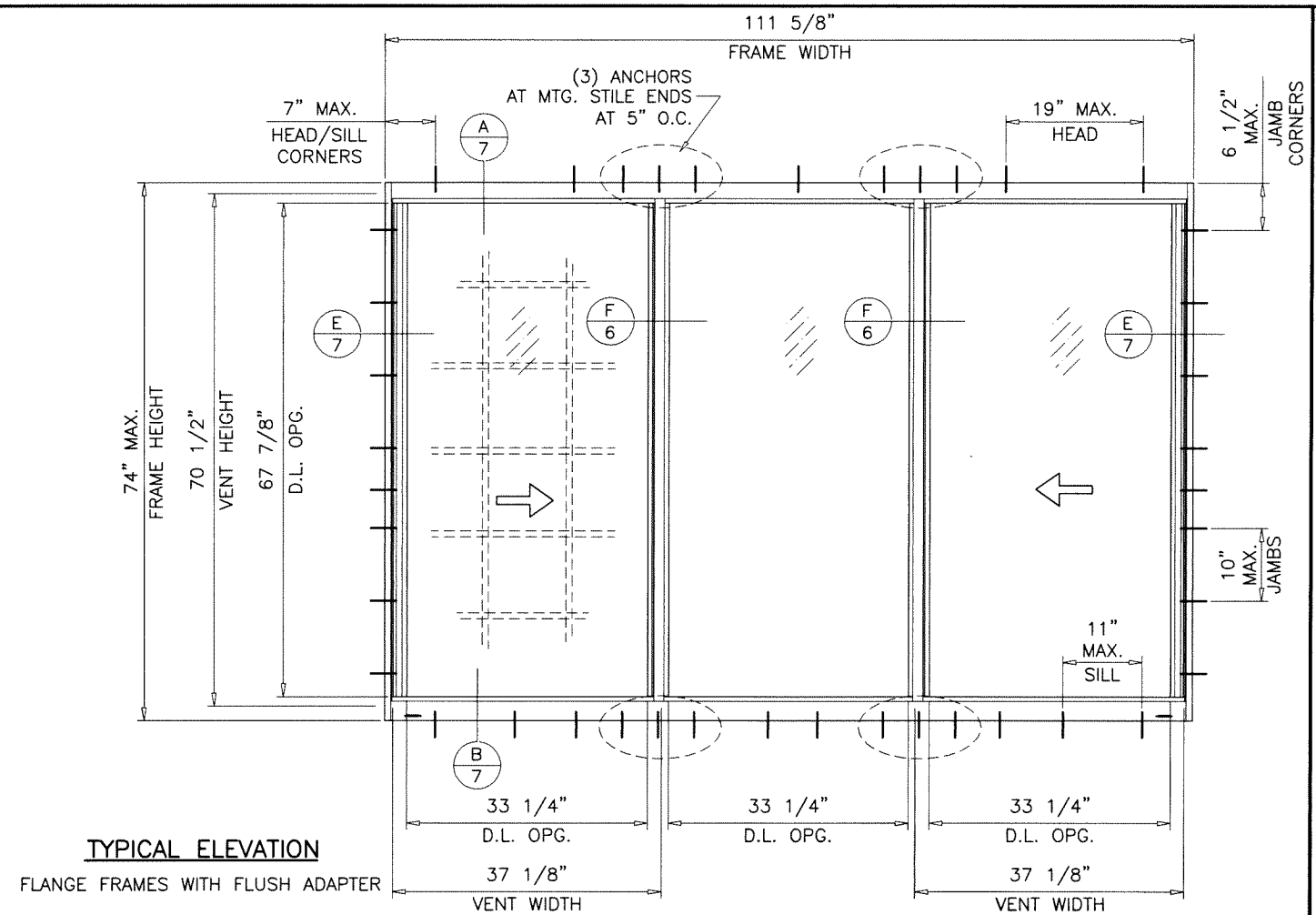
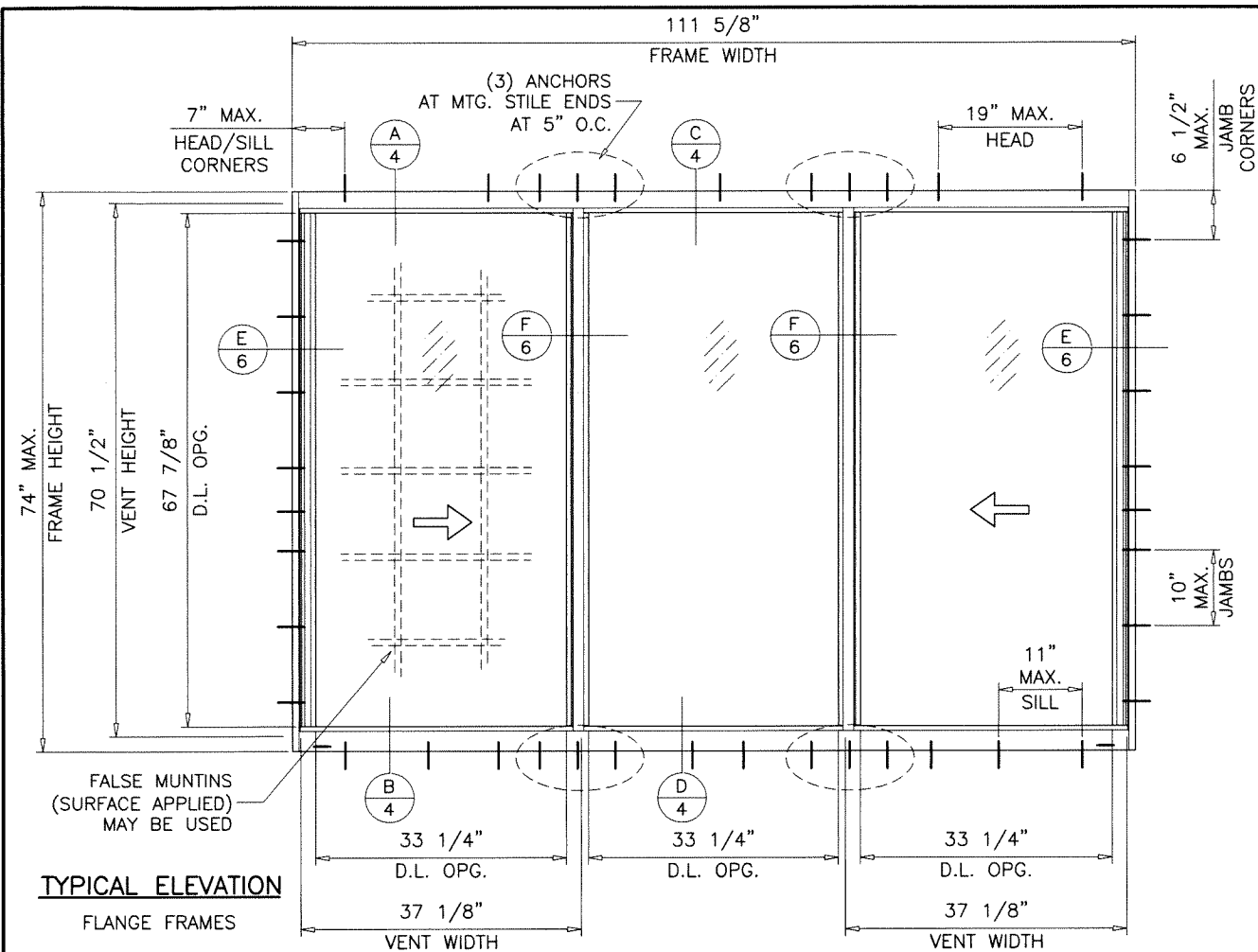
AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173 (C.A.N. 3538)
TEL. (305) 264-8100 FAX. (305) 262-6978

COMP-ANL W16-69ES

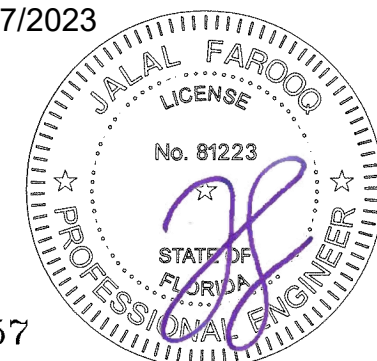
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	C	08.05.20		UPDATED TO 2020 FBC
	D	09.16.20		GLASS TYPE 41 ADDED
	E	07.28.22		GENERAL REVISION
	F	07.07.23		UPDATED TO 2023 FBC

date:	11-13-16
scale:	1/2"=1'-0"
dr. by:	TARIQ
chk. by:	

drawing no.	W16-69
sheet	1 of 11



Sealed: 8/17/2023



FL #21557

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
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COMP-ANL W16-69ES

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

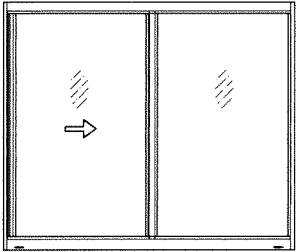
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date: 11-13-16
scale: 1/2"=1'-0"
dr. by: TARIQ
chk. by:

drawing no. **W16-69**
sheet 2 of 11

DESIGN LOAD CAPACITY - PSF (XO OR OX SIZES)									
WINDOW DIMS.		W/O REINF.		WITH REINF.					
		GLASS TYPES 1, 1i, 2, 2i 2A, 2Ai, 3, 4i		GLASS TYPES 1, 1i, 2, 2i 2A, 2Ai, 3, 4i		GLASS TYPES 5, 5i		GLASS TYPES 1, 1i, 2, 2i 2A, 2Ai, 3	
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
76"		-	-	-	-	75.0	80.0	-	-
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
76"		-	-	-	-	75.0	80.0	-	-
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
76"		-	-	-	-	75.0	80.0	-	-
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
76"		-	-	-	-	75.0	80.0	-	-
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	75.0	-	-

DESIGN LOAD CAPACITY - PSF (XO OR OX SIZES)									
WINDOW DIMS.		W/O REINF.		WITH REINF.					
		GLASS TYPES 1, 1i, 2, 2i 2A, 2Ai, 3, 4i		GLASS TYPES 1, 1i, 2, 2i 2A, 2Ai, 3, 4i		GLASS TYPES 5, 5i		GLASS TYPES 1, 1i, 2, 2i 2A, 2Ai, 3	
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"		-	-	-	-	75.0	80.0	-	-
80"		-	-	-	-	75.0	80.0	-	-
24"	36"	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"		-	-	-	-	75.0	80.0	-	-
80"		-	-	-	-	75.0	80.0	-	-
24"	48"	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"		-	-	-	-	75.0	80.0	-	-
80"		-	-	-	-	75.0	80.0	-	-
24"	60"	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"		-	-	-	-	75.0	80.0	-	-
80"		-	-	-	-	75.0	80.0	-	-
24"	72"	-	-	-	-	75.0	80.0	-	-
36"		-	-	-	-	75.0	80.0	-	-
48"		-	-	-	-	75.0	80.0	-	-
60"		-	-	-	-	75.0	80.0	-	-
72"		-	-	-	-	75.0	79.2	-	-
76"		-	-	-	-	75.0	76.5	-	-
76"		-	-	-	-	75.0	76.5	-	-



'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, 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
31.5 SQ. FT. FOR GLASS TYPES 1, 1i, 2, 2i, 2, 2Ai, 3 & 4i
38.0 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) 262-6978
(C.A.N. 3538)

COMP-ANL\W16-69ES

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

E.S. WINDOWS, LLC
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MIAMI, FL. 33142
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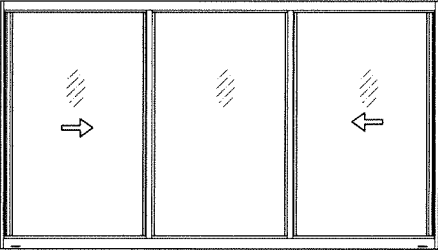
revisions:
no date by description

date: 11-13-16
scale: 1/2"=1'-0"
dr. by: TARIQ
chk. by:

drawing no.
W16-69
sheet 2.1 of 11

DESIGN LOAD CAPACITY - PSF (XOX SIZES)									
WINDOW DIMS.		W/O REINF.		WITH REINF.					
		GLASS TYPES 1, 1i, 2, 2i 2A, 2Ai, 3, 4i		GLASS TYPES 1, 1i, 2, 2i 2A, 2Ai, 3, 4i		GLASS TYPES 5, 5i		GLASS TYPES 1, 1i, 2, 2i 2A, 2Ai, 3	
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"		-	-	-	-	75.0	80.0	-	-
118"		-	-	-	-	75.0	80.0	-	-
74"	38-3/8"	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"		-	-	-	-	75.0	80.0	-	-
118"		-	-	-	-	75.0	80.0	-	-
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"		-	-	-	-	75.0	80.0	-	-
118"		-	-	-	-	75.0	80.0	-	-
74"	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"		-	-	-	-	75.0	80.0	-	-
118"		-	-	-	-	75.0	80.0	-	-
74"	74"	-	-	-	-	75.0	80.0	-	-
106-1/4"		-	-	-	-	75.0	77.3	-	-
111"		-	-	-	-	75.0	75.0	-	-

DESIGN LOAD CAPACITY - PSF (XOX SIZES)									
WINDOW DIMS.		W/O REINF.		WITH REINF.					
		GLASS TYPES 1, 1i, 2, 2i 2A, 2Ai, 3, 4i		GLASS TYPES 1, 1i, 2, 2i 2A, 2Ai, 3, 4i		GLASS TYPES 5, 5i		GLASS TYPES 1, 1i, 2, 2i 2A, 2Ai, 3	
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"		-	-	-	-	75.0	80.0	-	-
72"	36"	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"		-	-	-	-	75.0	80.0	-	-
72"	48"	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"		-	-	-	-	75.0	80.0	-	-
72"	60"	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"		-	-	-	-	75.0	80.0	-	-
72"	72"	-	-	-	-	75.0	80.0	-	-
84"		-	-	-	-	75.0	80.0	-	-
96"		-	-	-	-	75.0	80.0	-	-
108"		-	-	-	-	75.0	79.2	-	-
120"		-	-	-	-	75.0	79.2	-	-



'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, 2, 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

afcc

AL-FAROOQ CORPORATION

ENGINEERS & PRODUCT DEVELOPMENT

9360 SUNSET DRIVE, SUITE 220

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revisions:

no	date	by	description

date: 11-13-16

scale: 1/2"=1'-0"

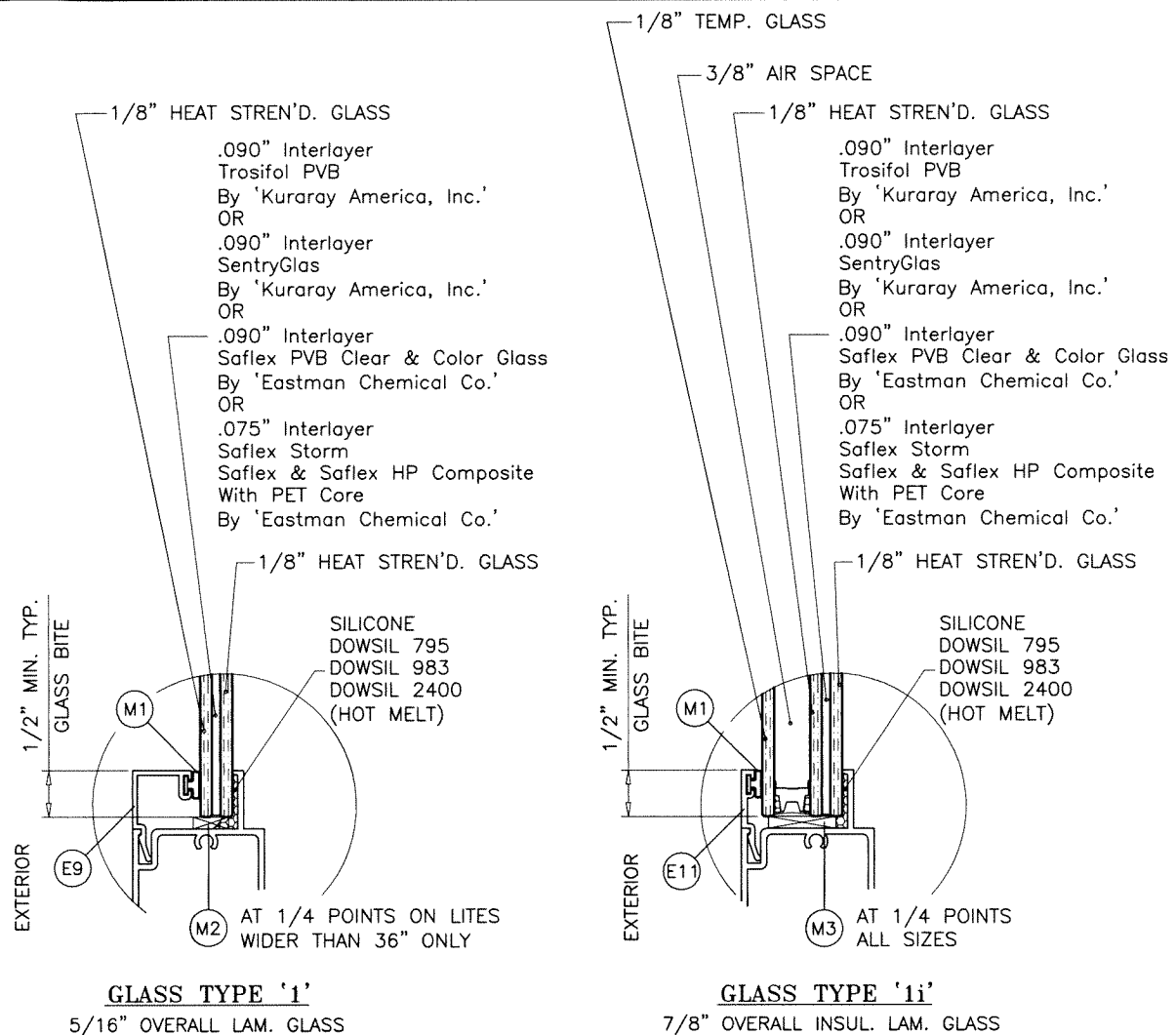
dr. by: TARIQ

chk. by:

drawing no.

W16-69

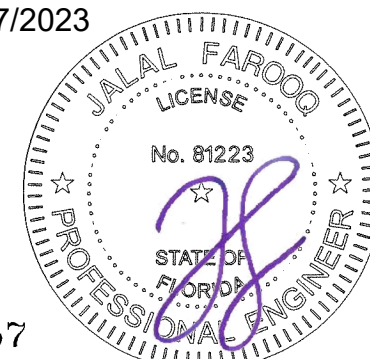
sheet 2.2 of 11



GLAZING OPTIONS

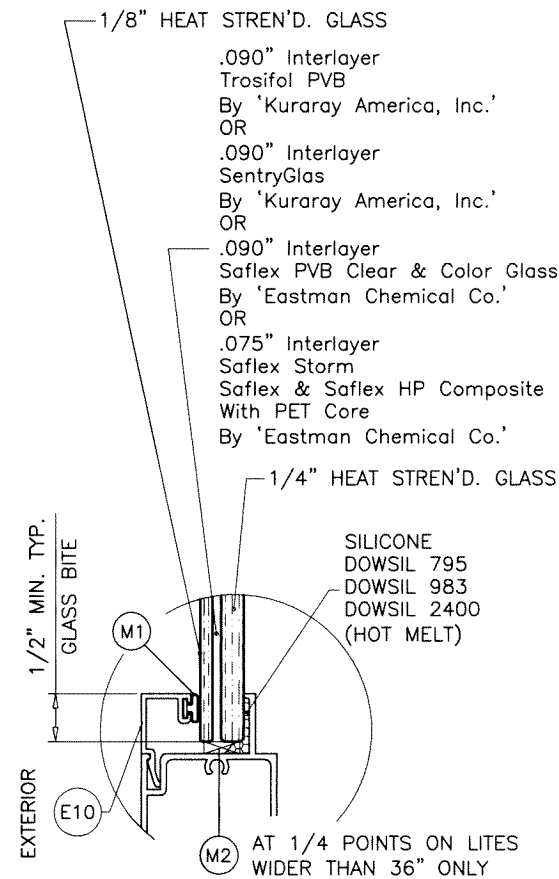
5/16" & 3/8" AIR SPACE CONSISTING OF:
SPACER:
 'HELIMA' LOW PROFILE ALUMINUM SPACER
 BY 'LINGERMANN GMBH'
 AROUND THE PERIMETER OF THE GLASS.
PERIMETER SEALANT:
 SILICONE
 DOWSIL 791
 GE 2000

Sealed: 8/17/2023

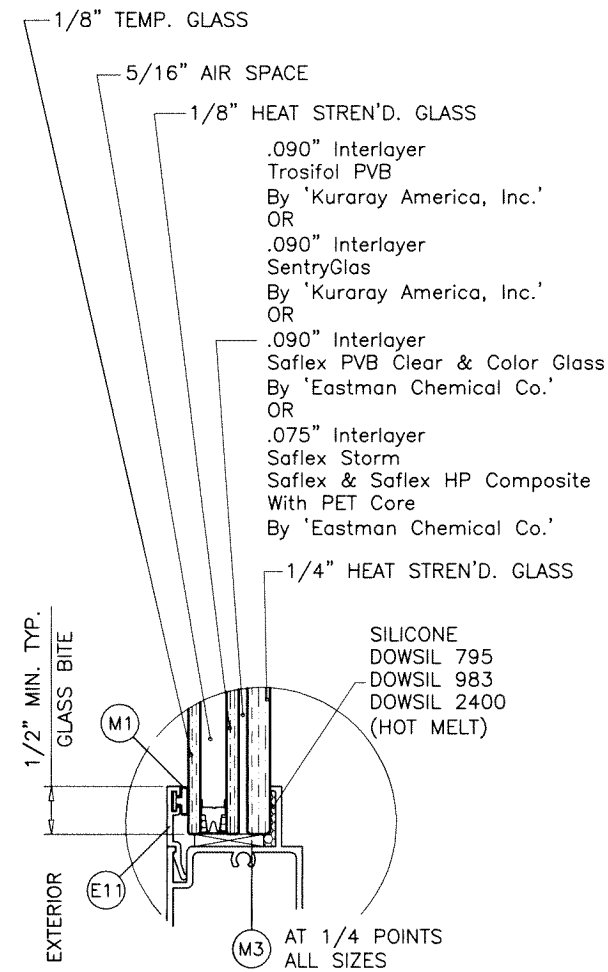


FL #21557

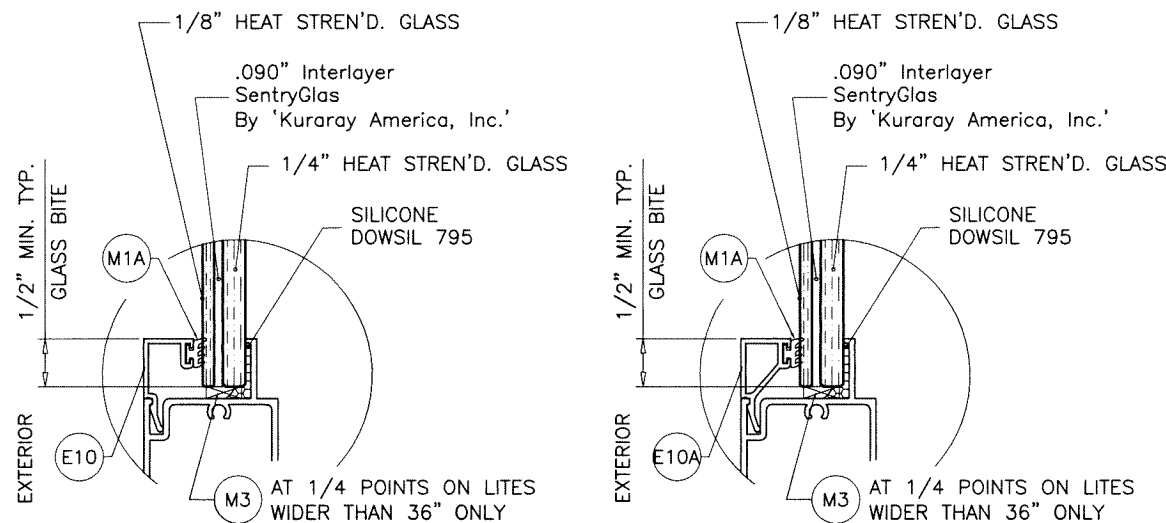
AL-FAROOQ CORPORATION ENGINEERS & PRODUCT DEVELOPMENT 9360 SUNSET DRIVE, SUITE 220 MIAMI, FLORIDA 33173 TEL. (305) 264-8100 FAX. (305) 262-6978 (C.A.N. 3538)		COMP-ANL\W16-69ES	
ES-EL200 HORIZONTAL ROLLING ALUM. WDW. (L.M.I.)		E.S. WINDOWS, LLC 3550 N.W. 49 STREET MIAMI, FL. 33142 TEL. (305) 638-5151 FAX. (305) 638-5158	
revisions: no. date by description	date: 11-13-16 scale: 1/2" = 1" dr. by: TARIQ chk. by:		
drawing no. W16-69		sheet 3 of 11	



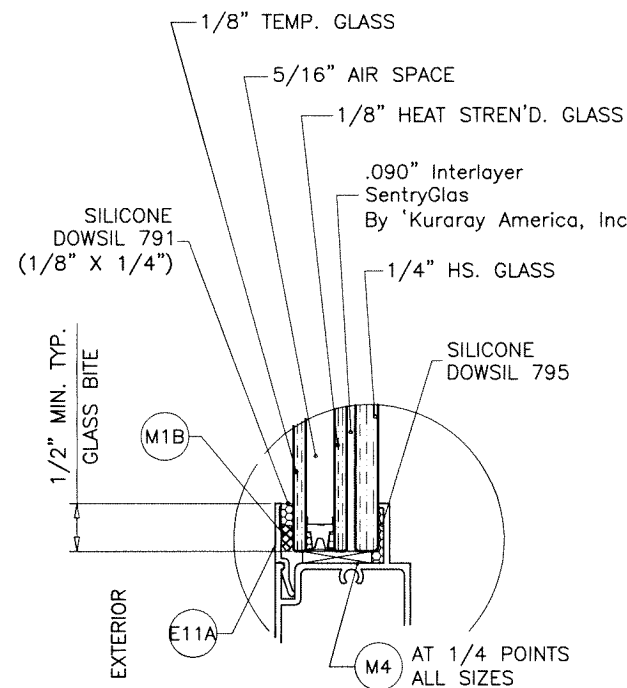
GLASS TYPE '2'
7/16" OVERALL LAM. GLASS



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



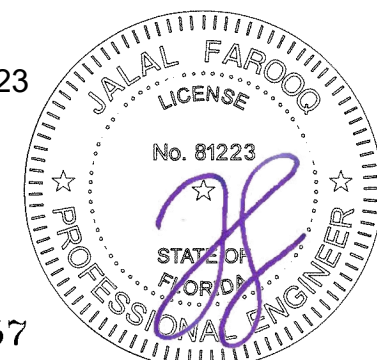
GLASS TYPE '2A'
7/16" OVERALL LAM. GLASS



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

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GLAZING OPTIONS

FL #21557

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
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COMP-ANL W16-69ES

E.S. WINDOWS, LLC
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revisions:	
no	date by description

date: 11-13-16

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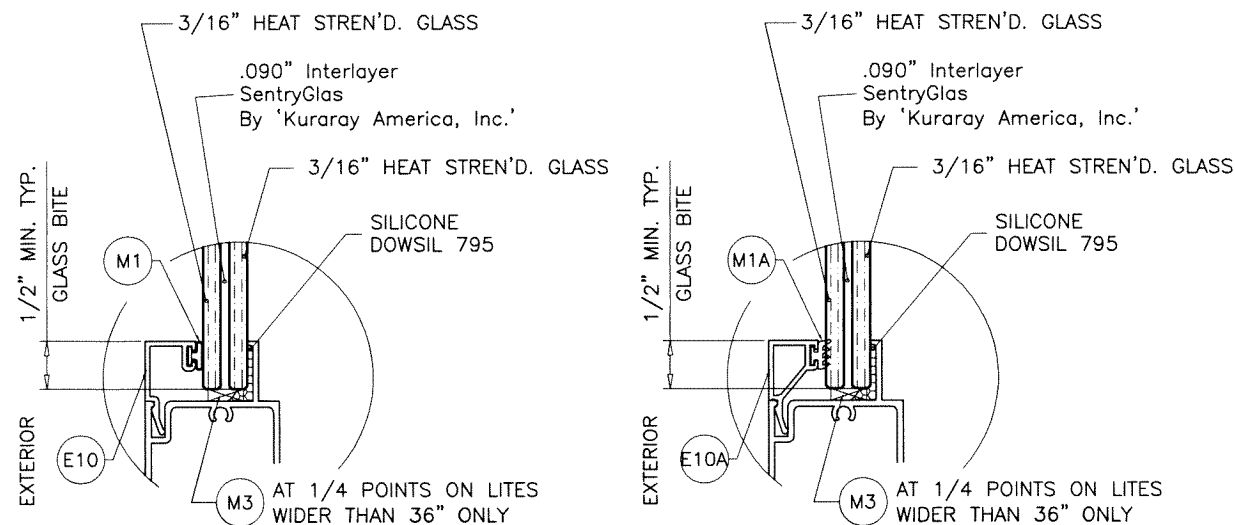
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chk. by:

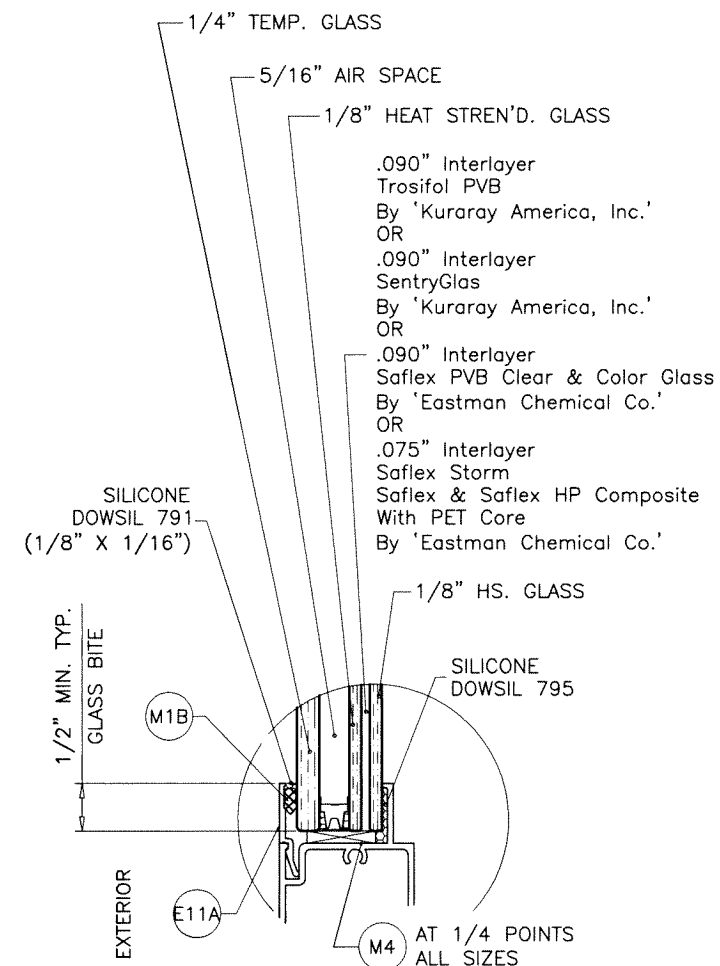
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W16-69

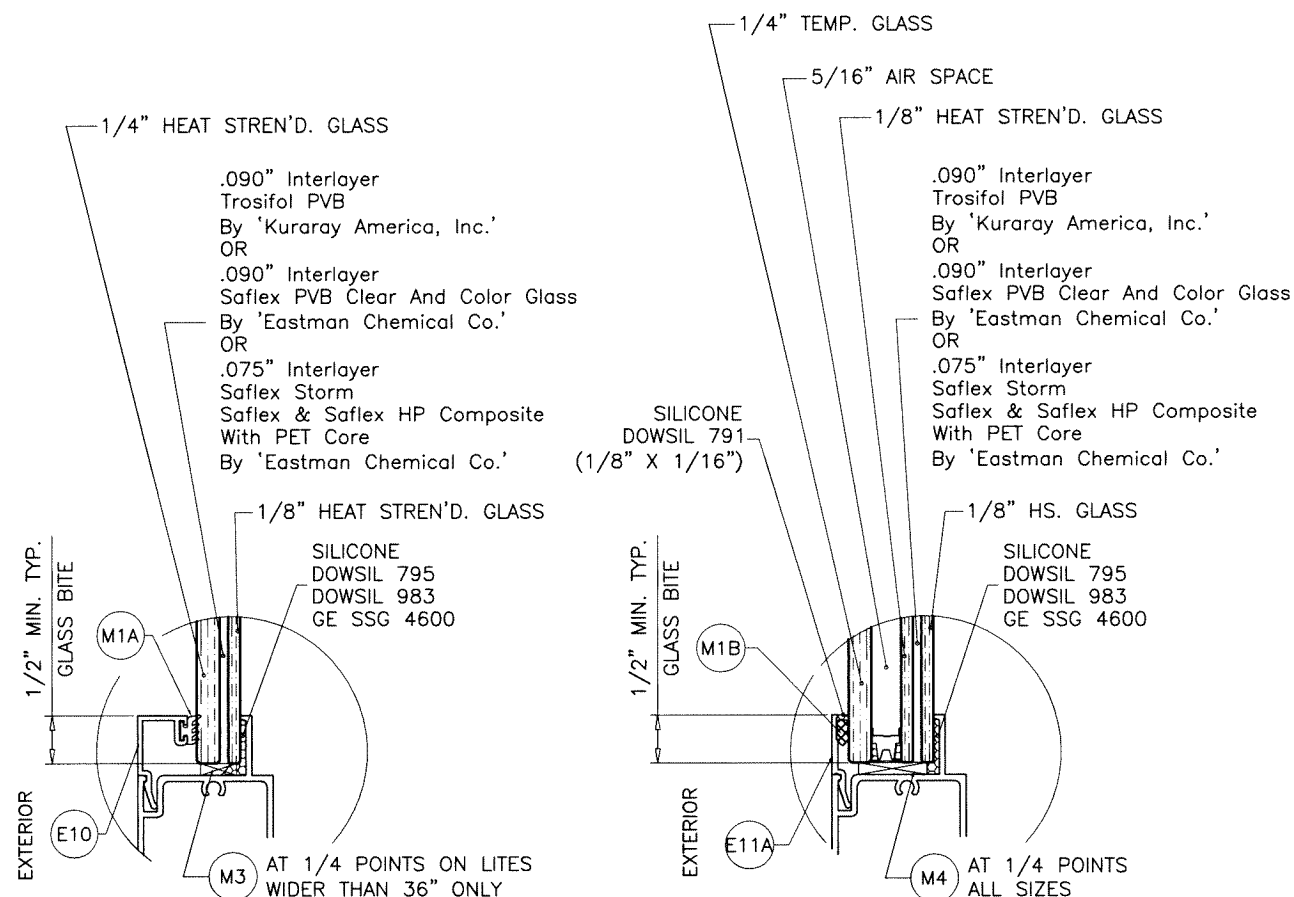
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7/16" OVERALL LAM. GLASS



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

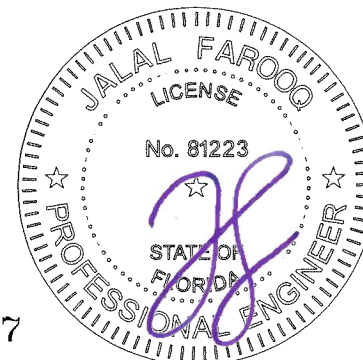


GLASS TYPE '5'
7/16" OVERALL LAM. GLASS

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

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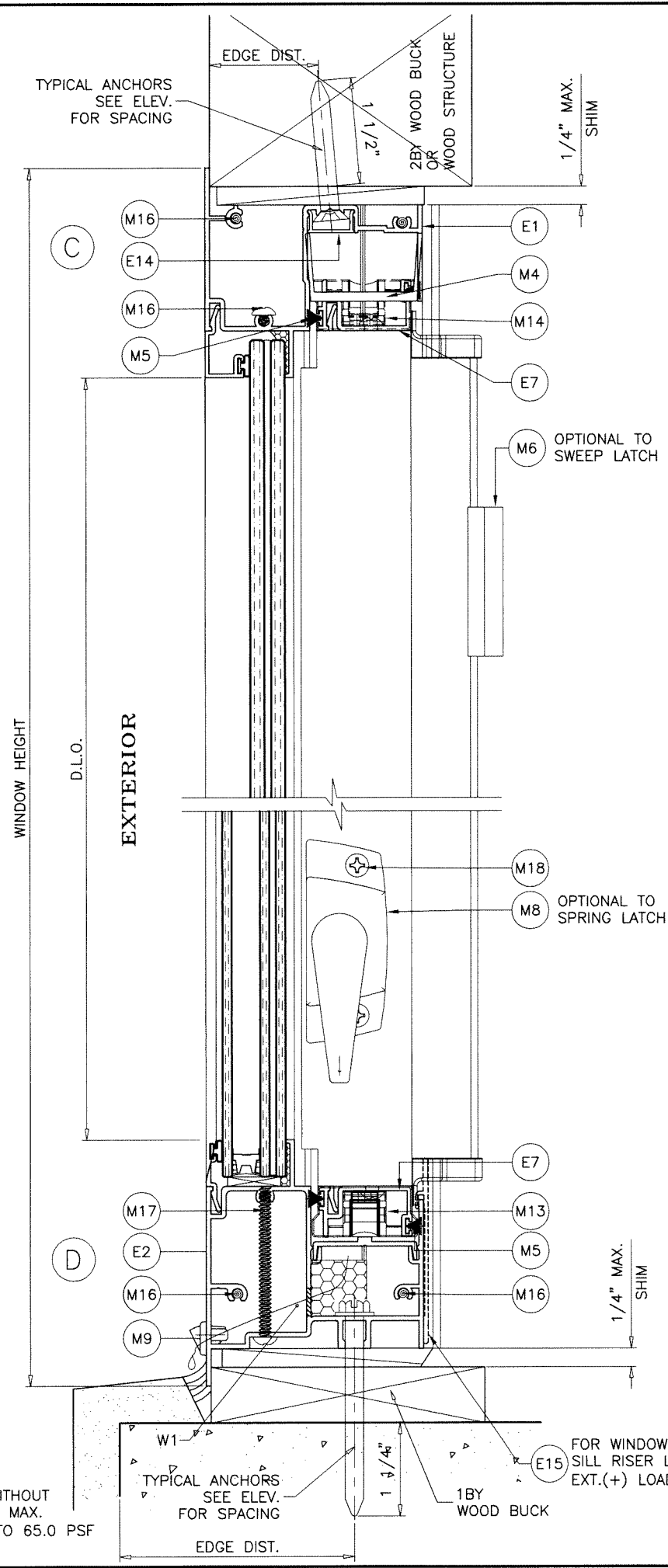
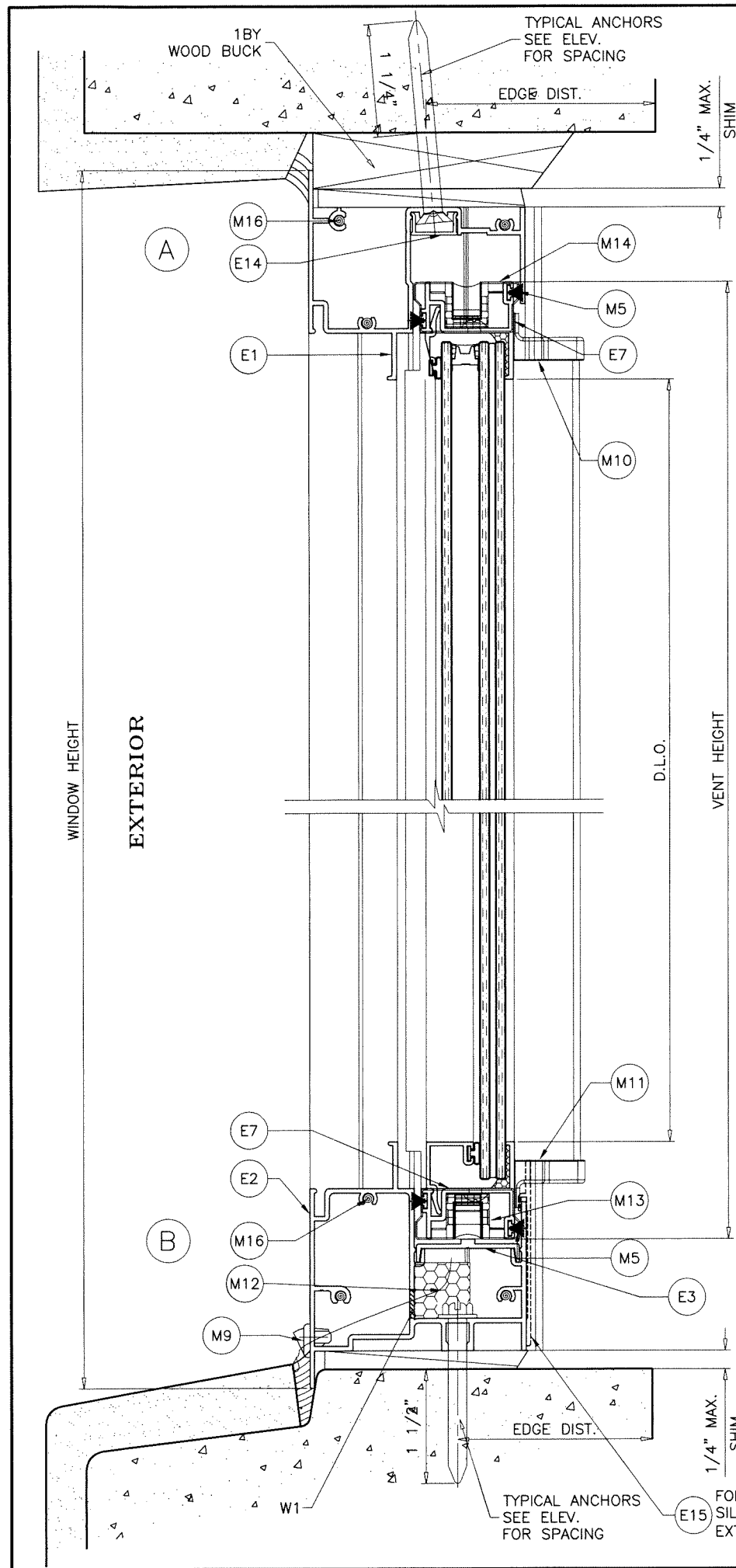
ES-EL200 HORIZONTAL ROLLING ALUM. WDW. (L.M.I.)

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

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dr. by: TARIQ
chk. by:

drawing no.
W16-69
sheet 3.2 of 11

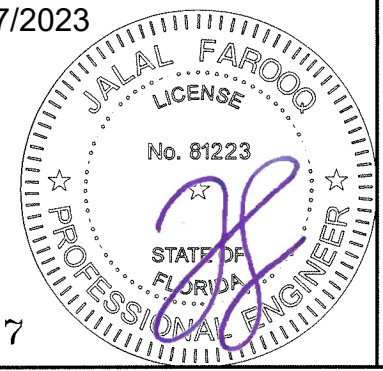


WEEPHOLES:

W1 = 1-1/2" X 5/16" WEEPHOLES AT 5-1/2" FROM EACH END

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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		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.)	W16-69	drawing no.	sheet 4 of 11
revisions: no. date by description	date: 11-13-16 scale: 1/2" = 1" dr. by: TARIQ chk. by:	no. date by description	no. date by description

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)

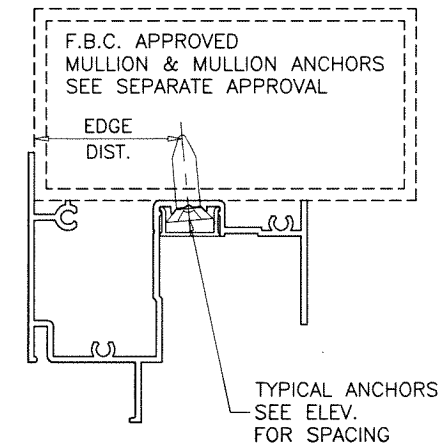
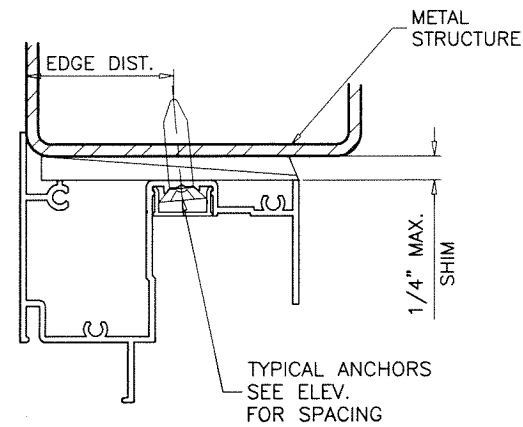
DIRECTLY INTO CONCRETE OR BLOCKS
1-1/2" MIN. EMBED INTO CONCRETE (HEAD/SILL/JAMBS)
1-1/4" MIN. EMBED INTO BLOCKS (JAMBS)

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)

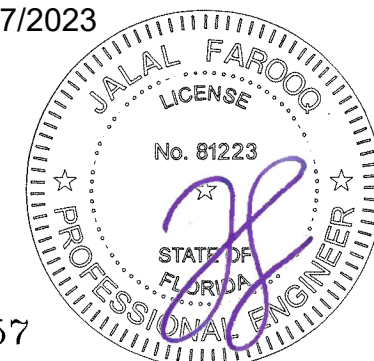
TYPICAL EDGE DISTANCE

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.



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(C.A.N. 3538)

COMP-ANL W16-69ES

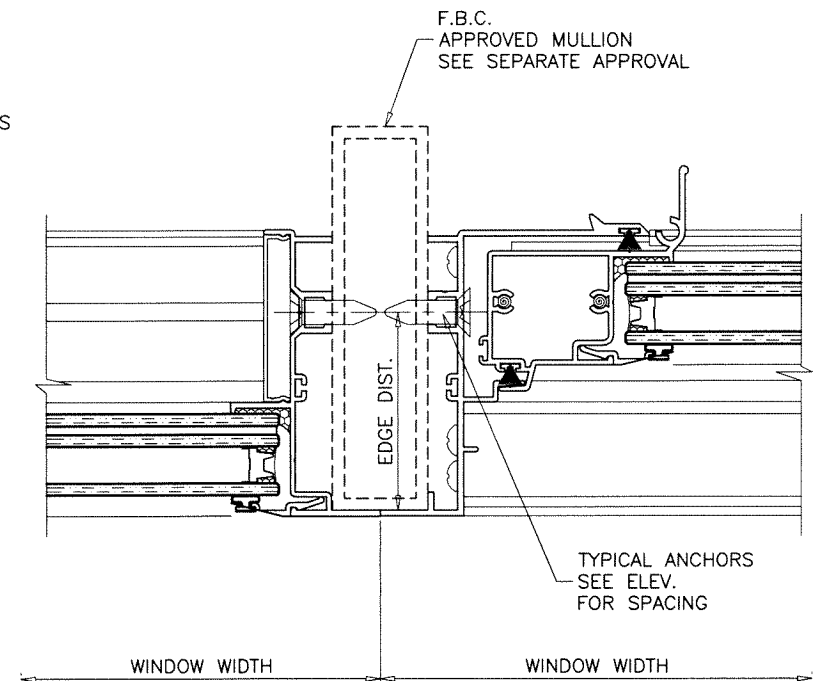
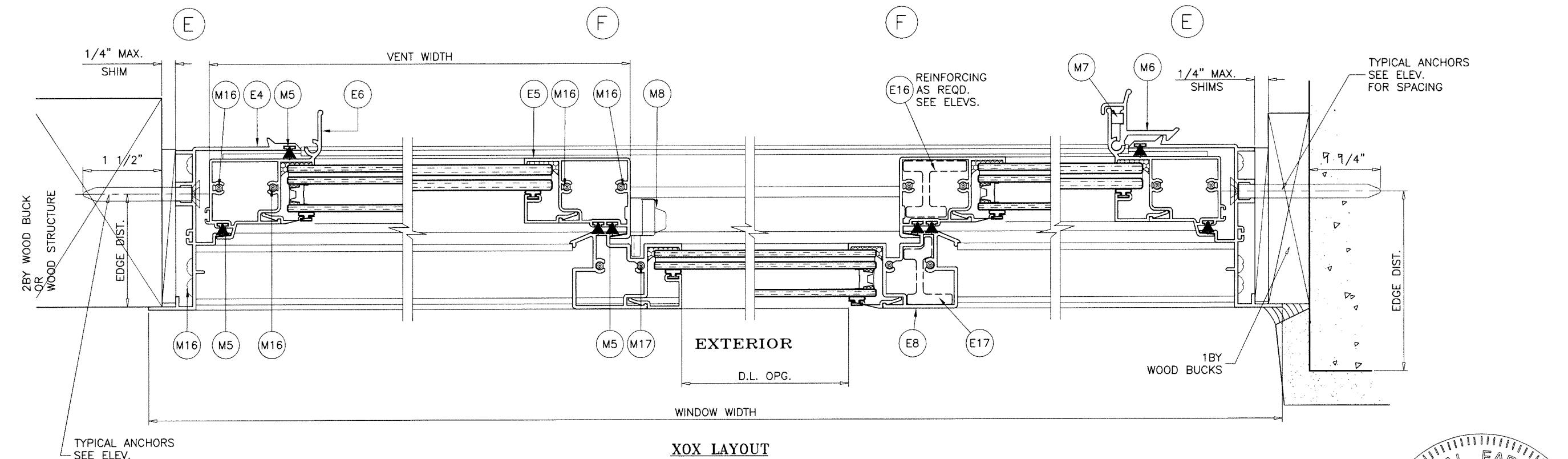
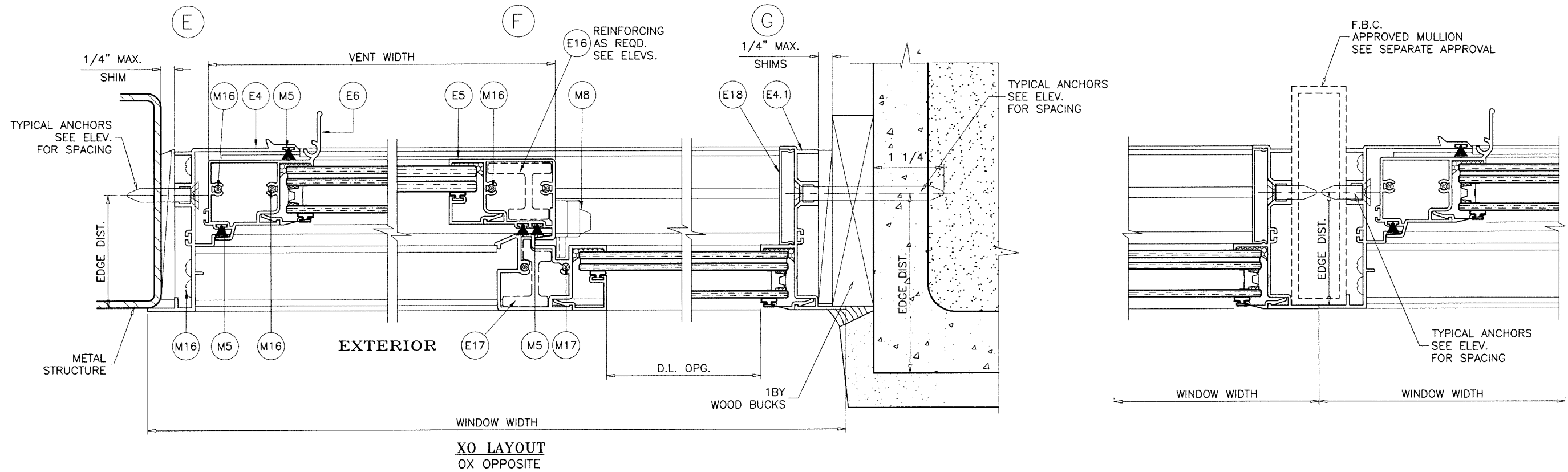
ES-EL200 HORIZONTAL ROLLING ALUM. WDW. (L.M.I.)

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MIAMI, FL. 33142
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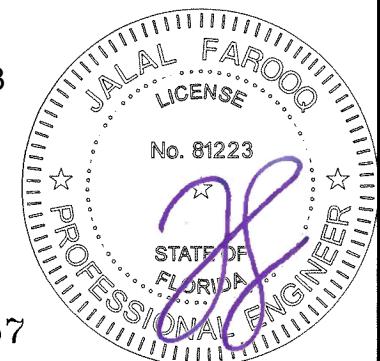
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drawing no.	no.
W16-69	
sheet	5 of 11



Sealed: 8/17/2023



FL #21557

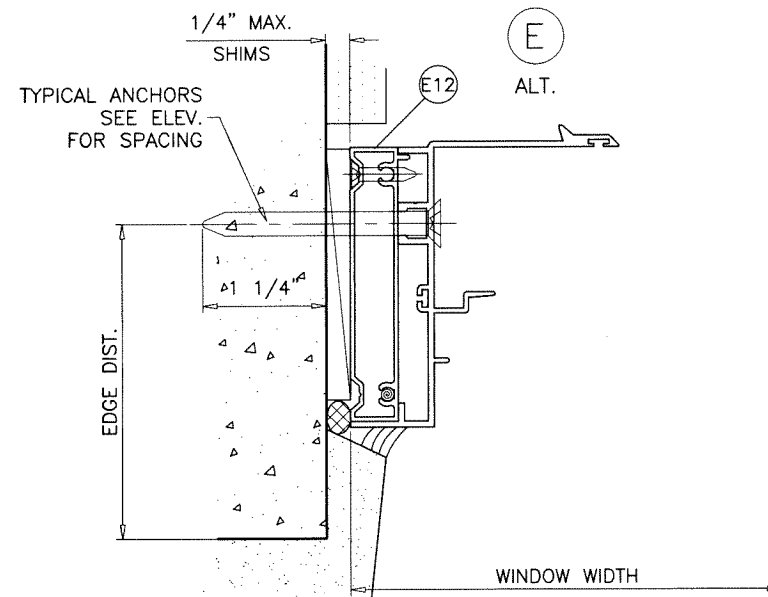
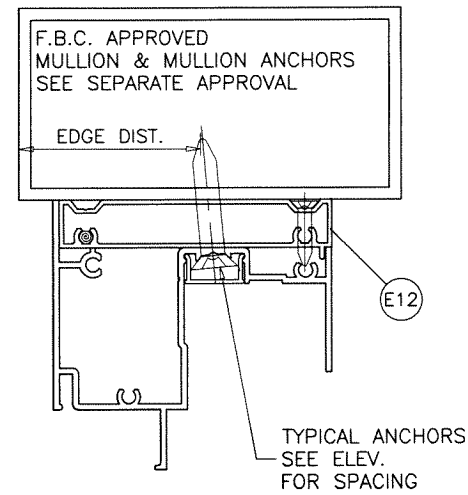
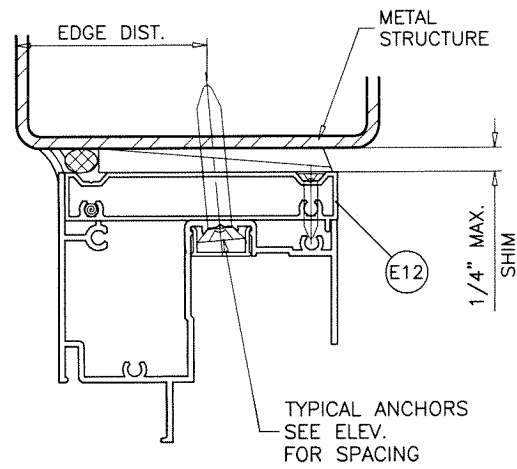
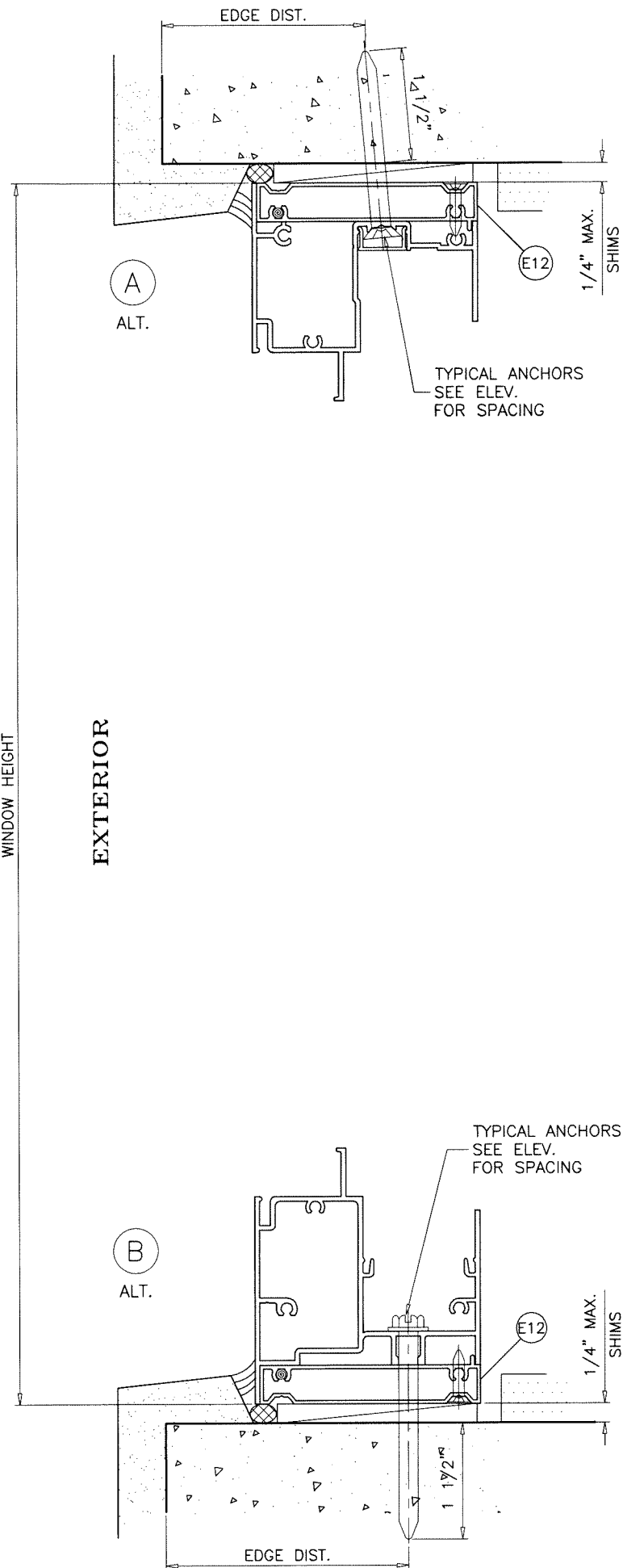
AL-FAROOQ CORPORATION
 ENGINEERS & PRODUCT DEVELOPMENT
 9360 SUNSET DRIVE, SUITE 220
 MIAMI, FLORIDA 33173 (C.A.N. 3538)
 TEL. (305) 264-8100 FAX. (305) 262-6978
 COMP-ANL W16-69ES

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dr. by:	TARIQ	chk. by:	
drawing no.	W16-69		
sheet	6 of 11		

WINDOW HEIGHT

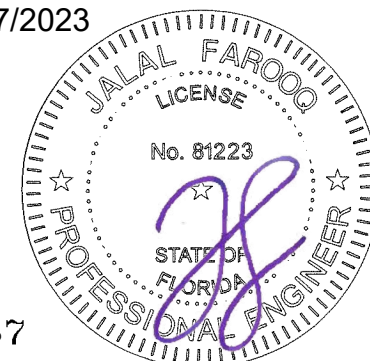
EXTERIOR



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

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FL #21557



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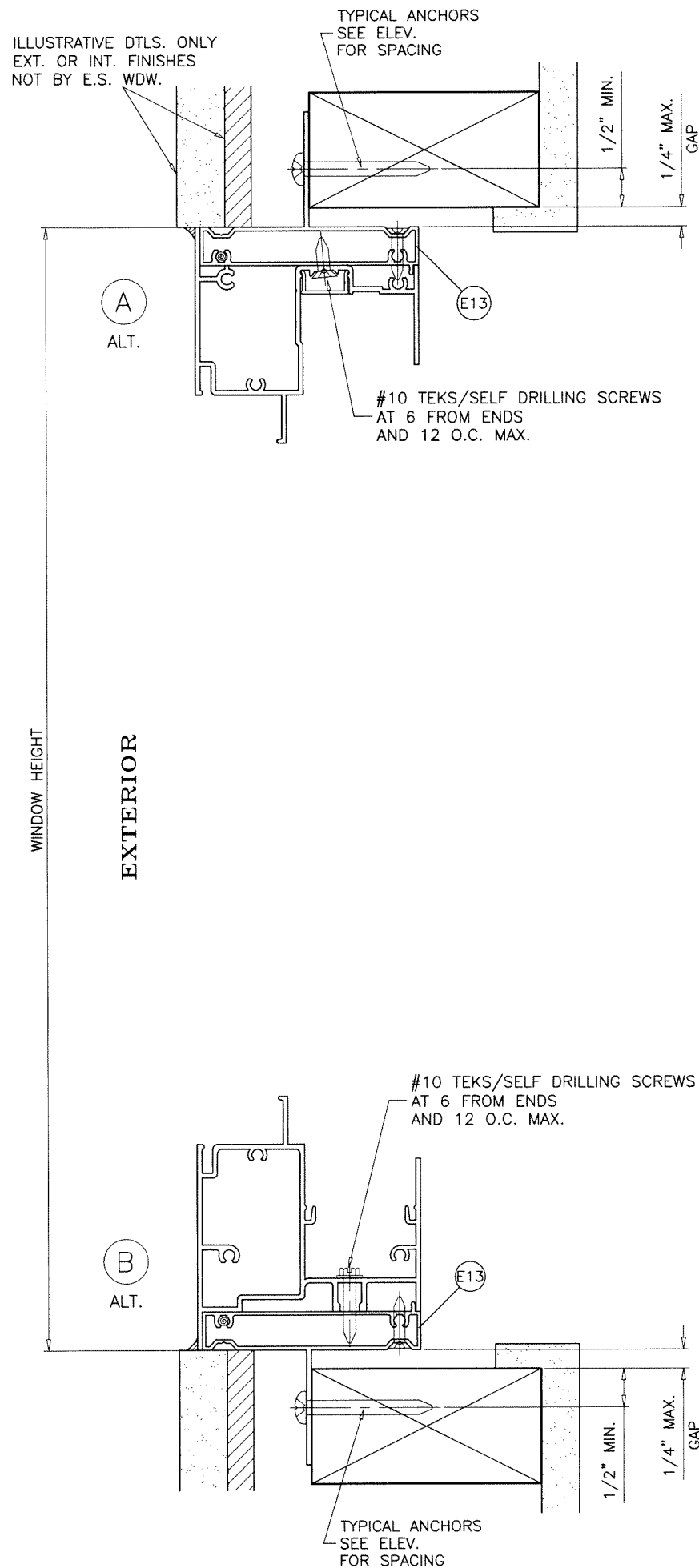
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W16-69

sheet 7 of 11

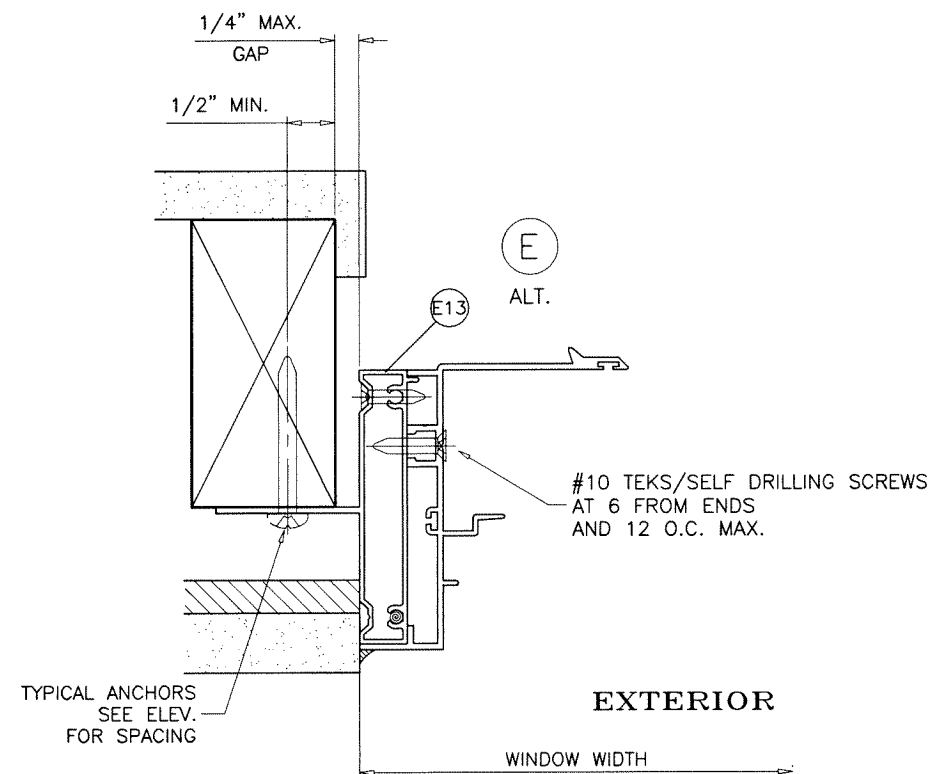
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COMP-ANL W16-69ES



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

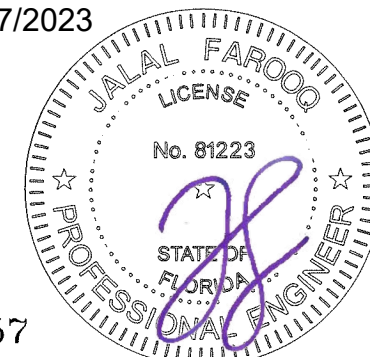


INSTALLATION DETAILS WITH FIN FRAME ADAPTER

SEE SHEETS 4 & 6 FOR WINDOW DETAILS

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FL #21557



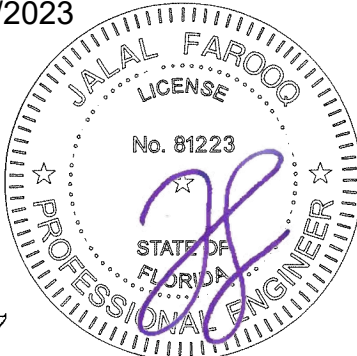
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AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220 (C.A.N. 3538)
MIAMI, FLORIDA 33173
TEL. (305) 264-8100 FAX. (305) 262-6978
COMP-ANL \ W16-69ES

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dr. by:	TARIQ	chk. by:	
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 STILE	6063-T6	-
E6	ES-EL106	1	JAMB STILE	6063-T6	-
E7	ES-EL107	2	VENT TOP & BOTTOM RAIL	6063-T6	-
E8	ES-EL108A	1	FIXED MTG. STILE	6063-T6	-
E9	ES-EL109	AS RQD.	GLAZING BEAD (5/16" LAM. GLASS)	6063-T6	-
E10	ES-EL110	AS RQD.	GLAZING BEAD (7/16" LAM. GLASS)	6063-T6	-
E10A	ES-EL123	AS RQD.	GLAZING BEAD (7/16" LAM. GLASS)	6063-T6	-
E11	ES-EL111	AS RQD.	GLAZING BEAD (INSUL. LAM. GLASS)	6063-T6	-
E11A	ES-EL116	AS RQD.	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 STILE STIFFENER	6005-T5	-
E17	ES-EL221	AS REQD.	FIX. MTG. STILE 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	SK08-4010	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	FH 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	FH SMS
M20	#14 X 3/4"	-	ASSEMBLY FASTENERS FOR FLUSH ADAPTER	ST. STEEL	PH SMS

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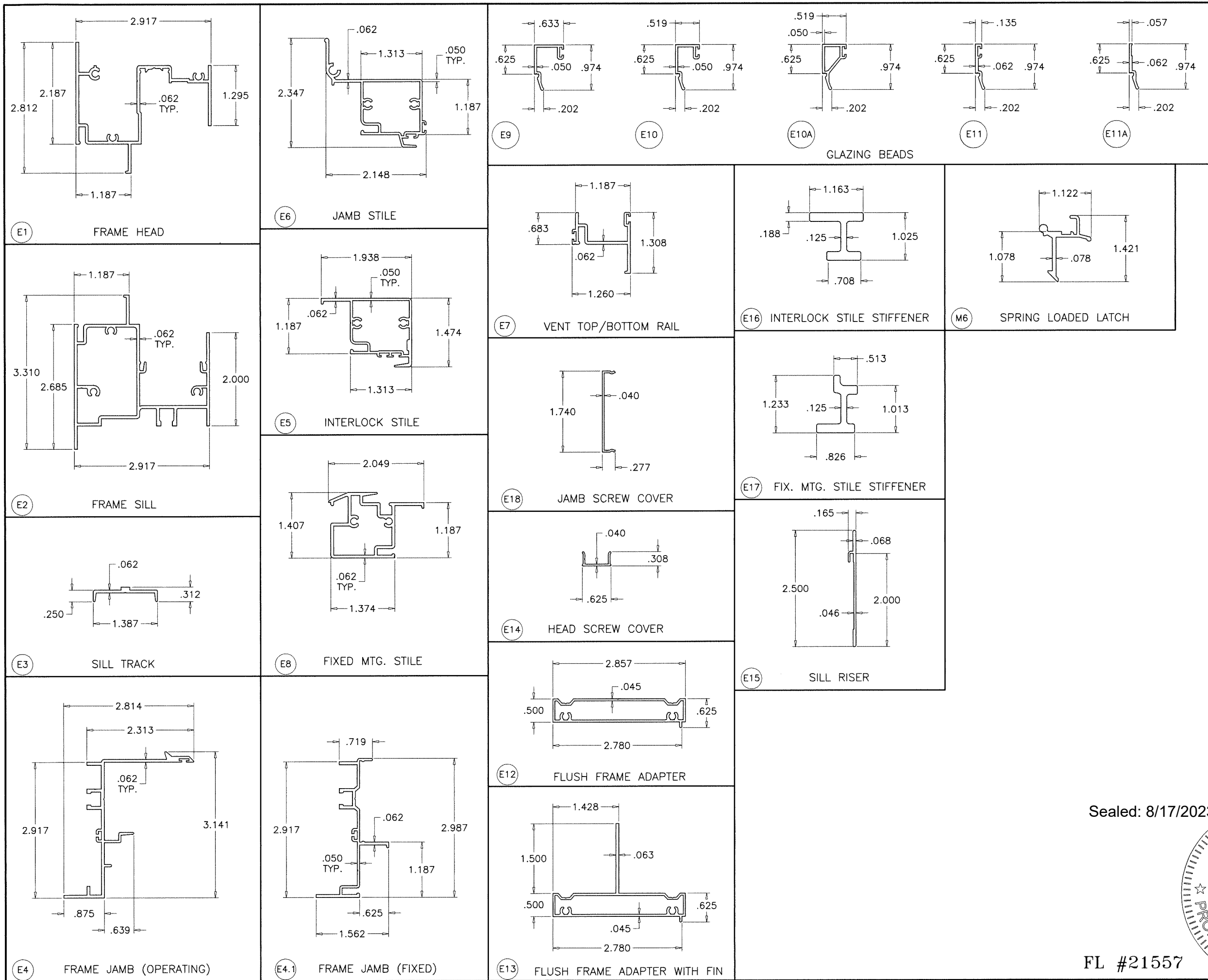
E.S. WINDOWS, LLC
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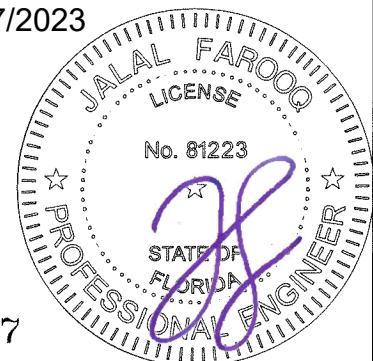
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W16-69

sheet 9 of 11



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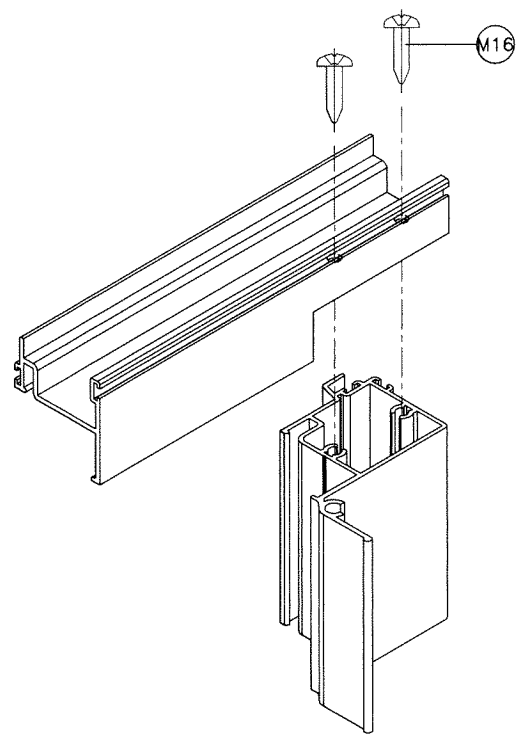
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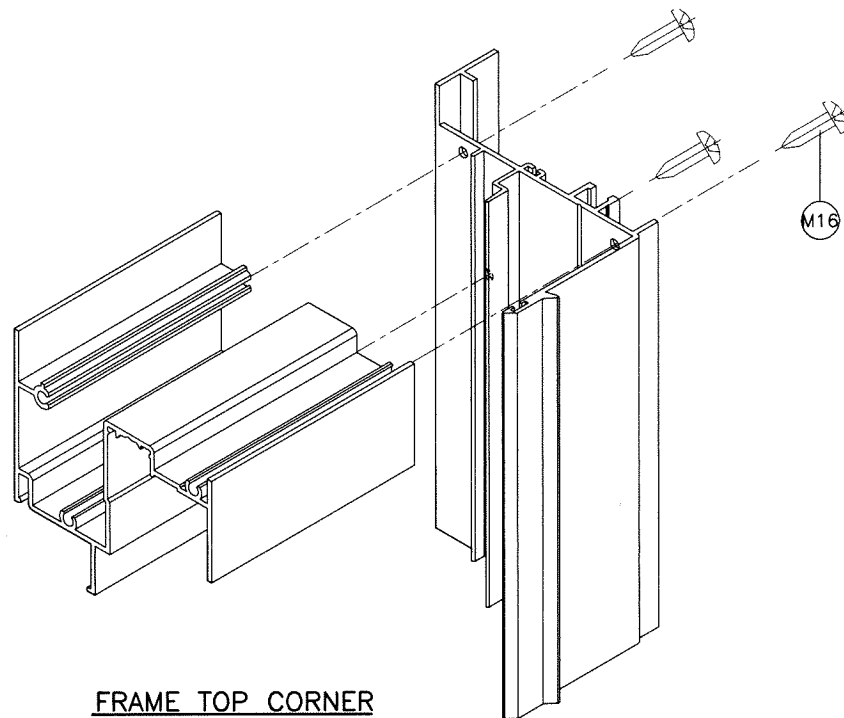
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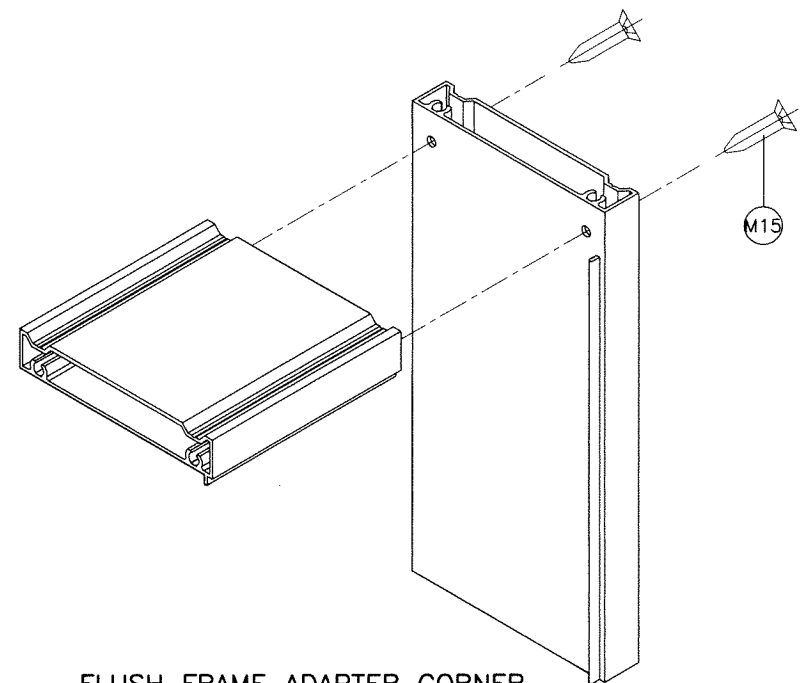
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W16-69
sheet 10 of 11



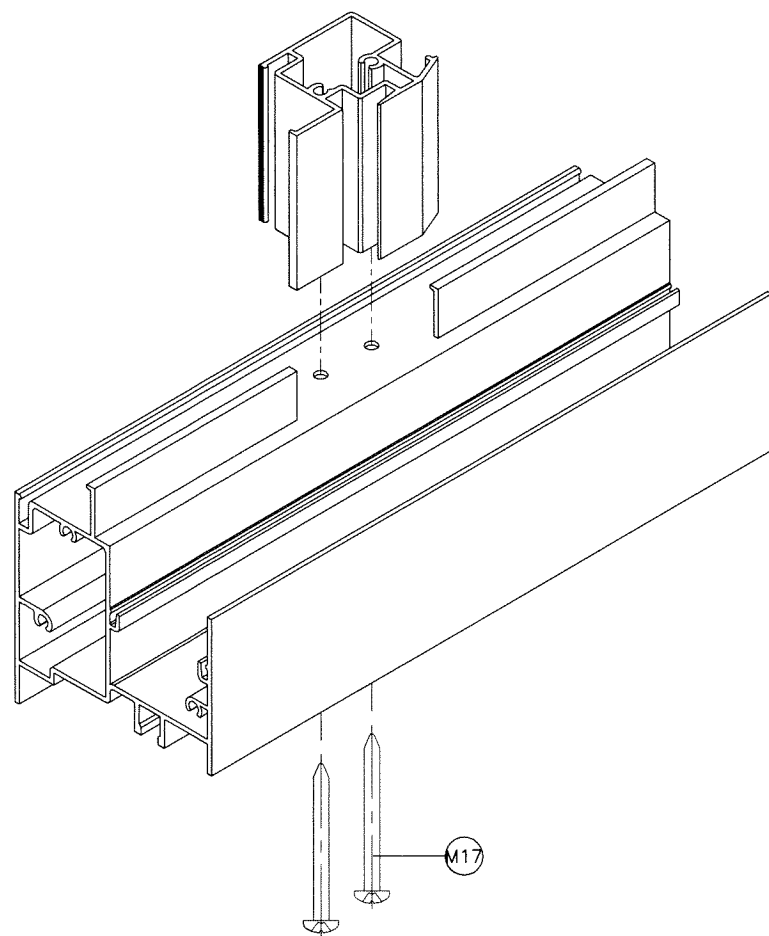
VENT TOP & BOTTOM CORNER



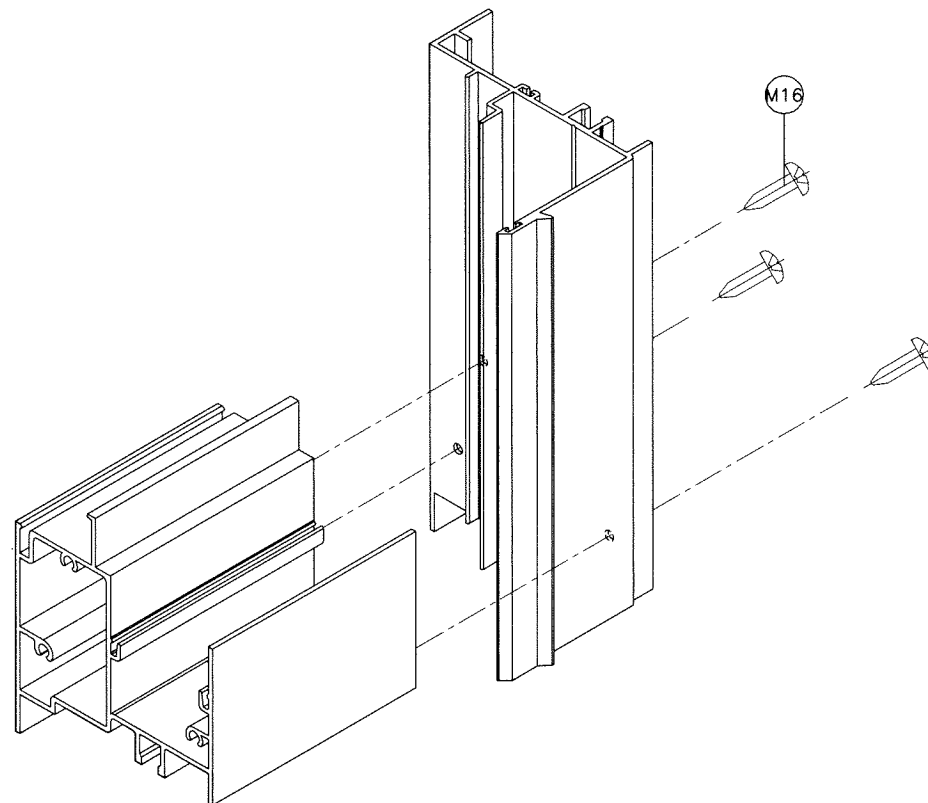
FRAME TOP CORNER



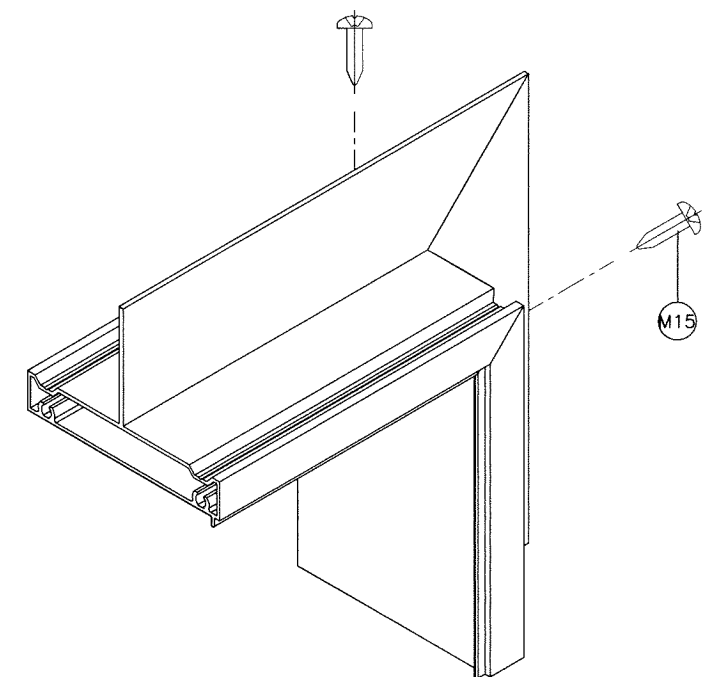
FLUSH FRAME ADAPTER CORNER



FIX. MTG. RAIL CORNER

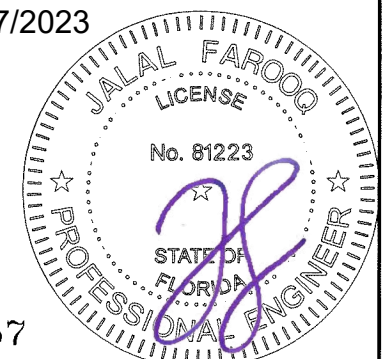


FRAME BOTTOM CORNER



FIN FRAME ADAPTER CORNER

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af c
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 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

date: 11-13-16	scale: 1/2" = 1"	dr. by: TARIQ	chk. by:
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W16-69
 sheet 11 of 11