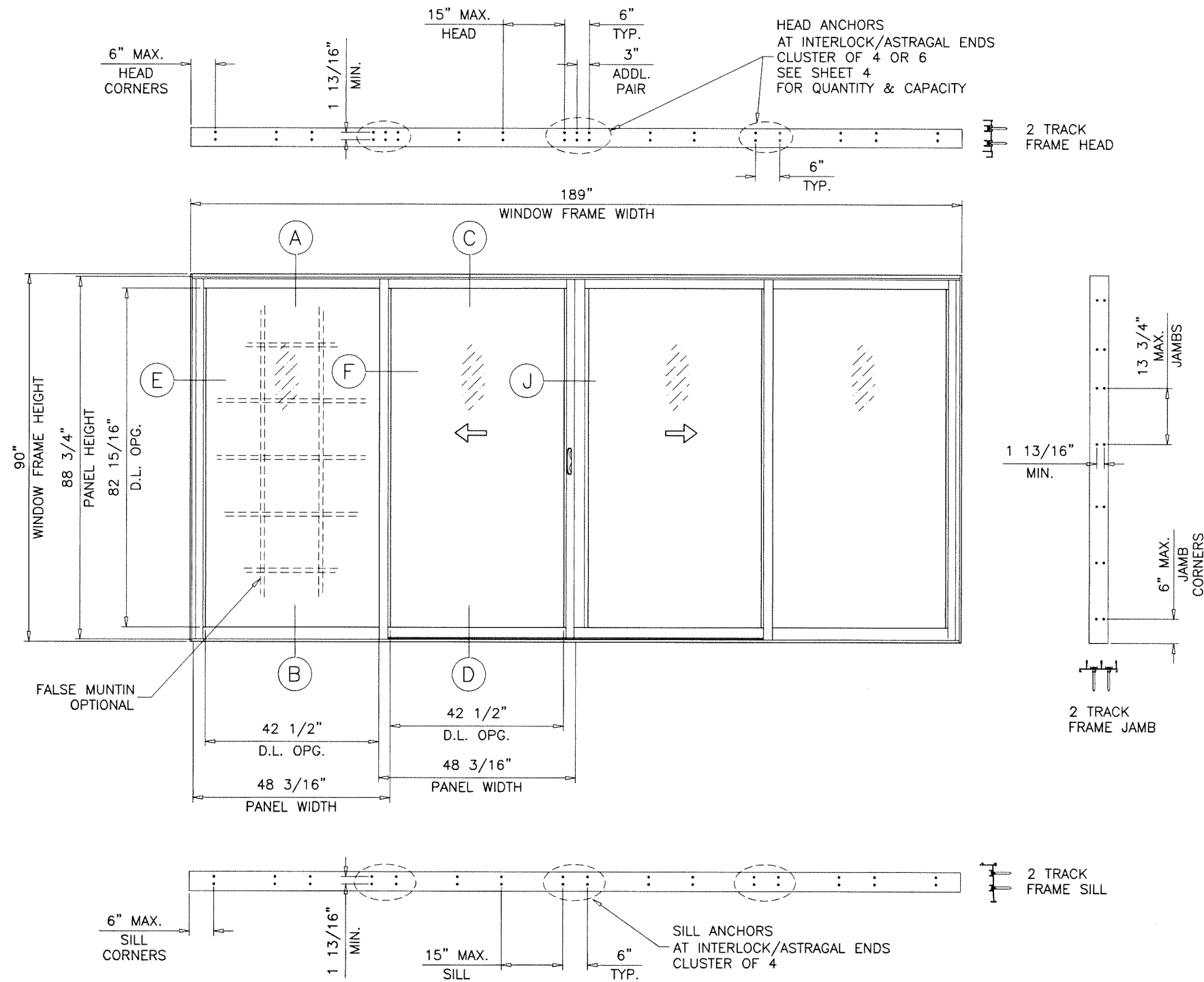


AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173 (C.A.N. 3538)
TEL. (305) 264-8100 FAX. (305) 262-6978



TYPICAL ELEVATION
OX-XO

Sealed: 7/23/2026



FL #47067

af c
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\24-76F-ES

ES-EL400 ALUM SLIDING GLASS WINDOW (L.M.I.)

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

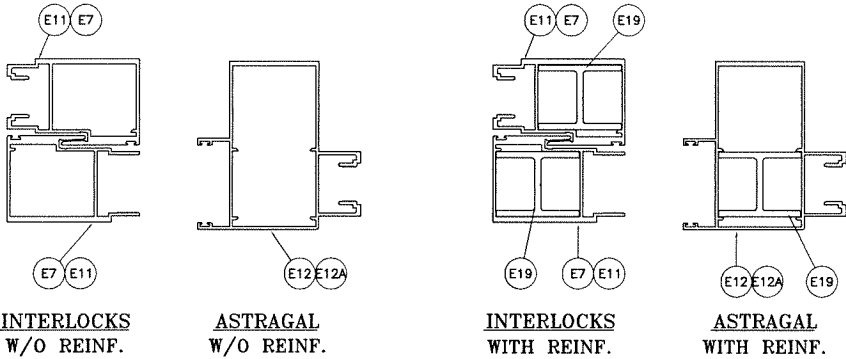
revisions:	no	date	by	description

date:	10-16-24
scale:	3/8"=1'-0"
dr. by:	TARIQ
chk. by:	

drawing no.
24-76F
sheet 2 of 11

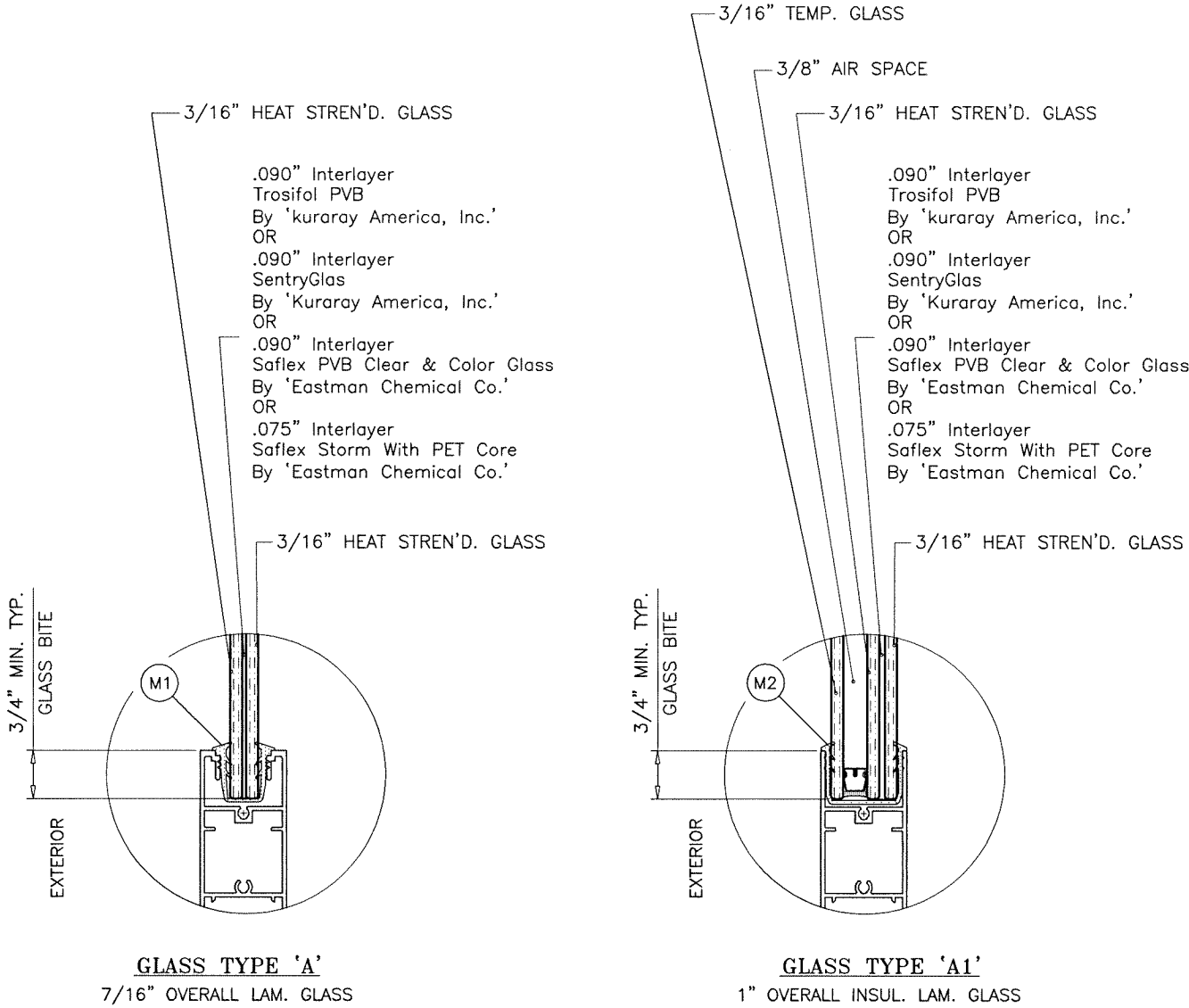
DESIGN LOAD CAPACITY - PSF					
AVERAGE PANEL WIDTH INCHES	WDW. FRAME HEIGHT INCHES	INTERLOCK & ASTRAGAL STILES WITHOUT REINF.		INTERLOCK & ASTRAGAL STILES WITH REINF.	
		EXT.(+)	INT.(-)	EXT.(+)	INT.(-)
24	82	60.0	60.0	80.0	80.0
30		60.0	60.0	80.0	80.0
36		60.0	60.0	80.0	80.0
42		60.0	60.0	80.0	80.0
47-1/4		60.0	60.0	80.0	80.0
48		59.1	59.1	78.8	78.8
54	84	52.5	52.5	70.0	70.0
60		-	-	47.3	47.3
24		60.0	60.0	80.0	80.0
30		60.0	60.0	80.0	80.0
36		60.0	60.0	80.0	80.0
42		60.0	60.0	80.0	80.0
47-1/4	90	60.0	60.0	80.0	80.0
48		59.1	59.1	78.8	78.8
54		-	-	52.5	52.5

NOTE:
GLASS CAPACITIES ON THIS SHEET ARE
BASED ON ASTM E1300-16 (3 SEC. GUSTS)
AND FLORIDA BUILDING COMMISSION
DECLARATORY STATEMENT DCA05-DEC-219



AVERAGE PANEL WIDTH = WINDOW FRAME WIDTH / NUMBER OF PANELS

LIMIT EXT.(+) LOADS AS FOLLOWS FOR VARIOUS SILL HEIGHTS.
3-11/16" SILL HEIGHT LIMIT EXT.(+) LOADS TO 80.0 PSF
3-1/8" SILL HEIGHT LIMIT EXT.(+) LOADS TO 66.6 PSF
2-3/4" SILL HEIGHT LIMIT EXT.(+) LOADS TO 53.3 PSF
SEE SHEETS 6 AND 10 FOR DETAILS



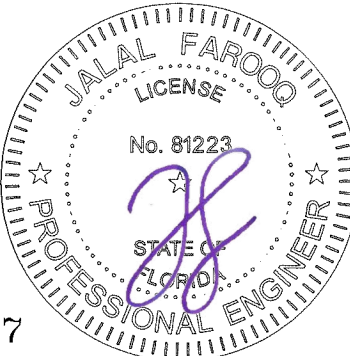
GLAZING OPTIONS

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

SEE CHART ABOVE FOR DESIGN LOAD CAPACITY OF
DESIRED GLASS SIZE AND REINFORCING TYPES.
SEE CHART ON SHEET 4 FOR HEAD ANCHOR CAPACITY.
LOWER DESIGN PRESSURES FROM DESIGN LOAD CHART
OR HEAD ANCHOR CHART WILL APPLY TO ENTIRE SYSTEM.

Sealed: 7/23/2026

FL #47067



AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173 (C.A.N. 3538)
TEL. (305) 262-6978
FAX. (305) 264-8100
COMP-ANL\24-76F-ES

ES-EL400 ALUM SLIDING GLASS WINDOW (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: 10-16-24
scale: 3/8" = 1"
dr. by: TARIQ
chk. by:

drawing no.
24-76F
sheet 3 of 11

HEAD ANCHOR LOAD CAPACITY - PSF									
AVERAGE PANEL WIDTH INCHES	WDW. FRAME HEIGHT INCHES	ANCHOR TYPES 'A' & 'B'						ANCHOR TYPE 'C'	
		1/4" MAX. SHIM		3/8" MAX. SHIM		1/2" MAX. SHIM		3/8" MAX. SHIM	
		4 ANCHORS AT MTG. STILE ENDS	6 ANCHORS AT MTG. STILE ENDS	4 ANCHORS AT MTG. STILE ENDS	6 ANCHORS AT MTG. STILE ENDS	4 ANCHORS AT MTG. STILE ENDS	6 ANCHORS AT MTG. STILE ENDS	4 ANCHORS AT MTG. STILE ENDS	6 ANCHORS AT MTG. STILE ENDS
		EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)
24	82	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
30		80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
36		80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
42		80.0	80.0	80.0	80.0	71.5	80.0	80.0	80.0
47-1/4		80.0	80.0	80.0	80.0	63.6	80.0	80.0	80.0
48		80.0	80.0	80.0	80.0	62.6	80.0	80.0	80.0
54		80.0	80.0	71.6	80.0	55.6	74.2	72.7	80.0
60		72.7	80.0	64.4	80.0	50.1	66.8	65.4	80.0
24	84	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
30		80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
36		80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
42		80.0	80.0	80.0	80.0	69.8	80.0	80.0	80.0
47-1/4		80.0	80.0	79.8	80.0	62.1	80.0	80.0	80.0
48		80.0	80.0	78.6	80.0	61.1	80.0	79.8	80.0
54		78.9	80.0	69.9	80.0	54.3	72.4	71.0	80.0
60		71.0	80.0	62.9	80.0	48.9	65.2	63.9	80.0
24	90	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
30		80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
36		80.0	80.0	80.0	80.0	76.1	80.0	80.0	80.0
42		80.0	80.0	80.0	80.0	65.2	80.0	80.0	80.0
47-1/4		80.0	80.0	74.5	80.0	57.9	77.3	75.7	80.0
48		80.0	80.0	73.4	80.0	57.0	76.1	74.5	80.0
54		73.6	80.0	65.2	80.0	50.7	67.6	66.2	80.0

SEE CHART ON SHEET 3 FOR DESIGN LOAD CAPACITY OF
DESIRED GLASS SIZE AND REINFORCING TYPES.

SEE CHART ABOVE FOR HEAD ANCHOR CAPACITY.

LOWER DESIGN PRESSURES FROM DESIGN LOAD CHART
OR HEAD ANCHOR CHART WILL APPLY TO ENTIRE SYSTEM.

Sealed: 7/23/2026



FL #47067

af c

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

ES-EL400 ALUM SLIDING GLASS WINDOW (L.M.I.)

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

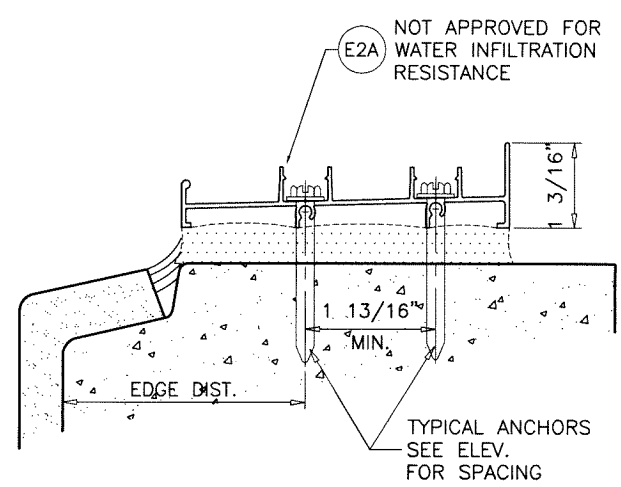
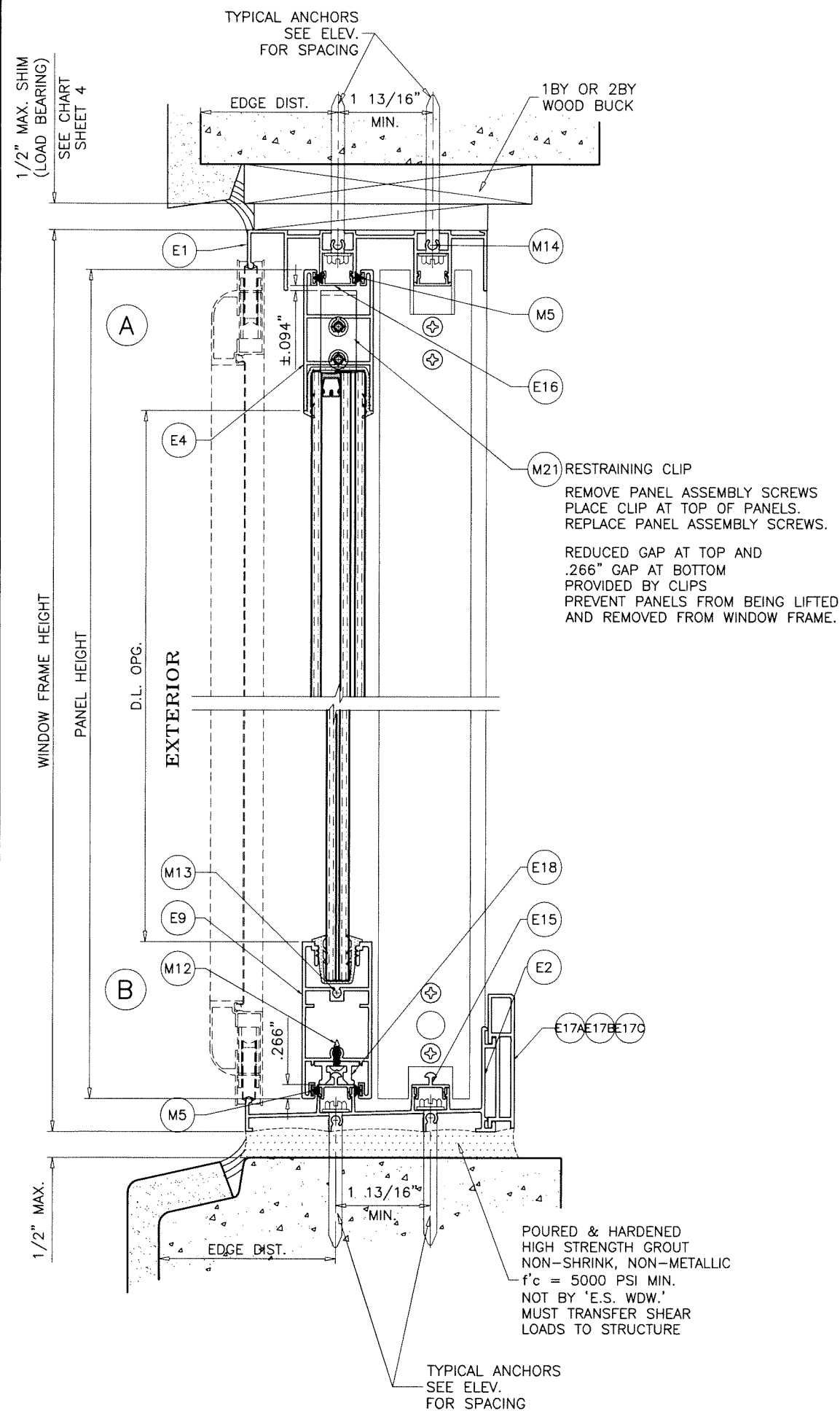
revisions:
no date by description

date: 10-16-24
scale: -
dr. by: TARIQ
chk. by:

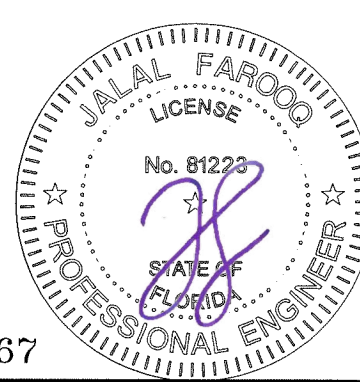
drawing no.
24-76F

sheet 4 of 11

COMP-ANL\24-76F-ES



Sealed: 7/23/2026



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-EL400 ALUM SLIDING GLASS WINDOW (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: 10-16-24		scale: 3/8" = 1"	
dr. by: TARIQ		chk. by:	
drawing no.		sheet 6 of 11	
24-76F		COMP-ANL\24-76F-ES	

TYPICAL ANCHORS: SEE ELEV. FOR SPACING
— AT HEAD

- TYPE 'A'— 1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)
INTO WOOD STRUCTURES
2" MIN. PENETRATION INTO WOOD
THRU 1BY BUCKS INTO CONCRETE
1-3/4" MIN. EMBED INTO CONCRETE, 1-1/2" MIN. EDGE DIST.
THRU 2BY BUCKS INTO CONCRETE
1-1/2" MIN. EMBED INTO CONCRETE, 1-1/2" MIN. EDGE DIST.
- TYPE 'B'— 1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)
DIRECTLY INTO CONCRETE
2" MIN. EMBED INTO CONCRETE, 1-1/2" MIN. EDGE DIST.
- TYPE 'C'— 1/4" DIA. TEKS OR SELF DRILLING SCREWS (GRADE 5 CRS)
INTO F.B.C. APPROVED MULLIONS
OR
INTO METAL STRUCTURES
(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)

— AT SILL

- TYPE 'B'— 1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)
DIRECTLY INTO CONCRETE
1-3/4" MIN. EMBED INTO CONCRETE

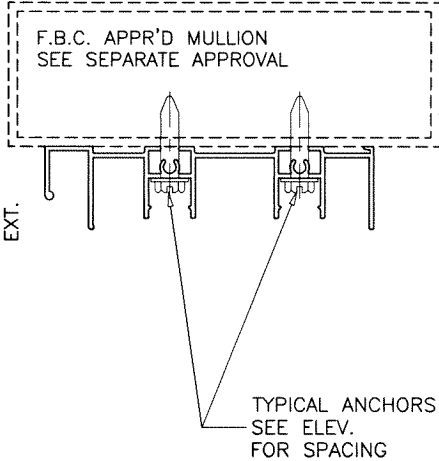
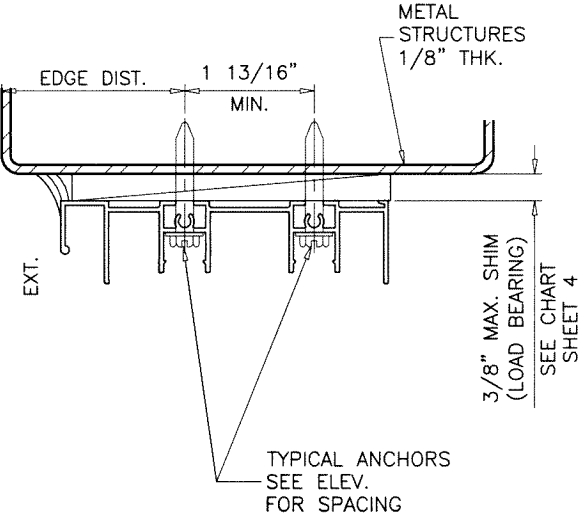
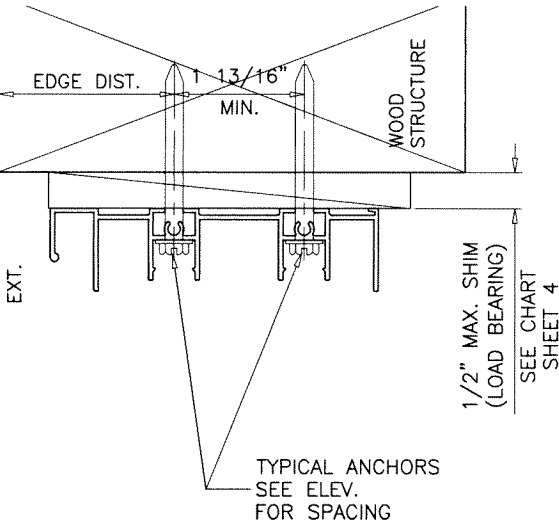
— AT JAMBS

- TYPE 'A'— 1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)
INTO WOOD STRUCTURES
2" MIN. PENETRATION INTO WOOD
THRU 1BY OR 2BY BUCKS INTO CONC. OR FILLED BLOCK
1-1/4" MIN. EMBED INTO CONCRETE
1-1/2" MIN. EMBED INTO FILLED BLOCKS
- TYPE 'B'— 1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)
DIRECTLY INTO CONCRETE OR GROUT FILLED BLOCKS
2" MIN. EMBED INTO CONCRETE
2" MIN. EMBED INTO GROUT FILLED BLOCKS
- TYPE 'C'— 1/4" DIA. TEKS OR SELF DRILLING SCREWS (GRADE 5 CRS)
INTO F.B.C. APPROVED MULLIONS
OR
INTO METAL STRUCTURES
(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)

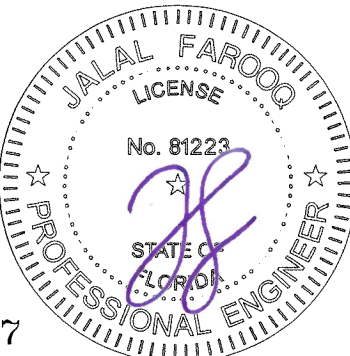
ANCHOR EDGE DISTANCES

INTO CONCRETE AND MASONRY = 2-1/2" MIN. (UNLESS SPECIFIED OTHERWISE)
INTO WOOD STRUCTURE = 1" MIN.
INTO METAL STRUCTURE = 3/4" MIN.

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



1BY OR 2BY WOOD BUCKS AND METAL STRUCTURE NOT BY 'E.S. WDW.'
MUST SUSTAIN LOADS IMPOSED BY GLAZING SYSTEM
AND TRANSFER THEM TO THE BUILDING STRUCTURE.



Sealed: 7/23/2026

FL #47067

a f c

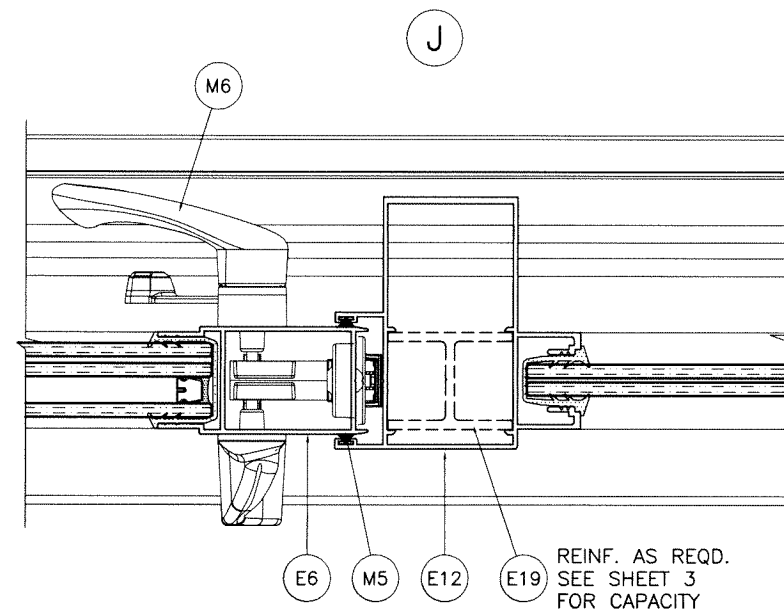
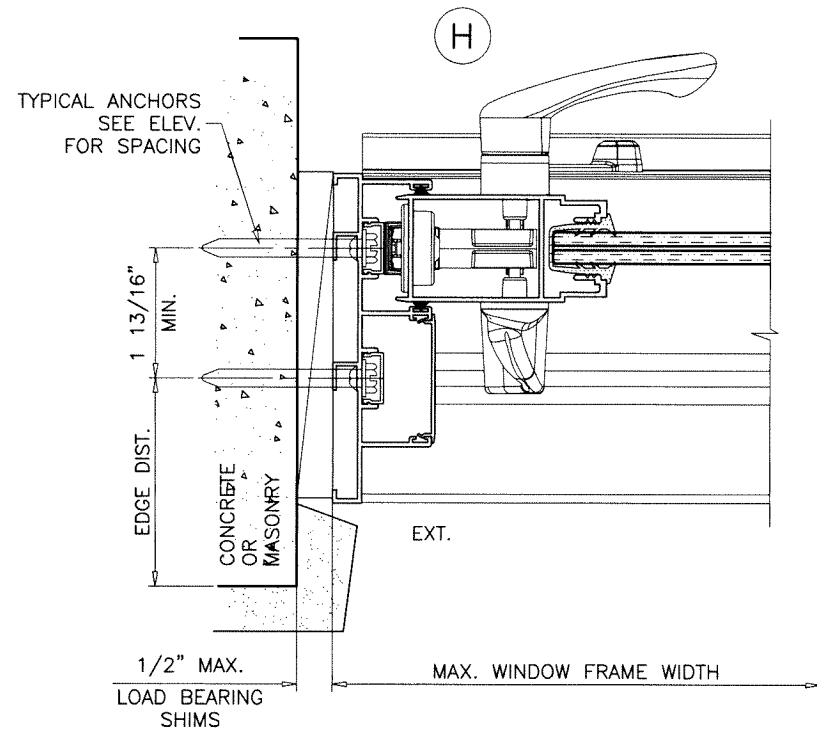
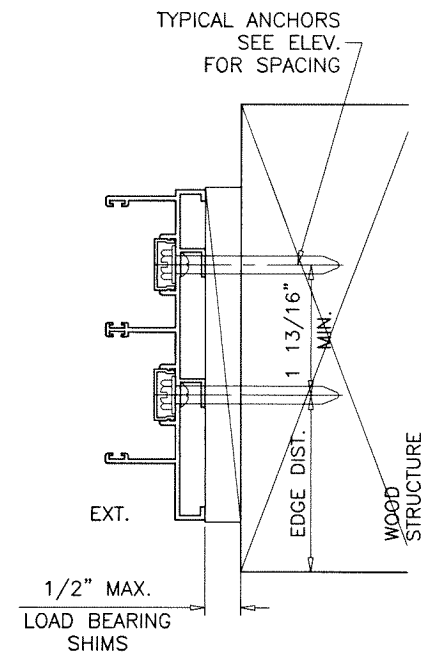
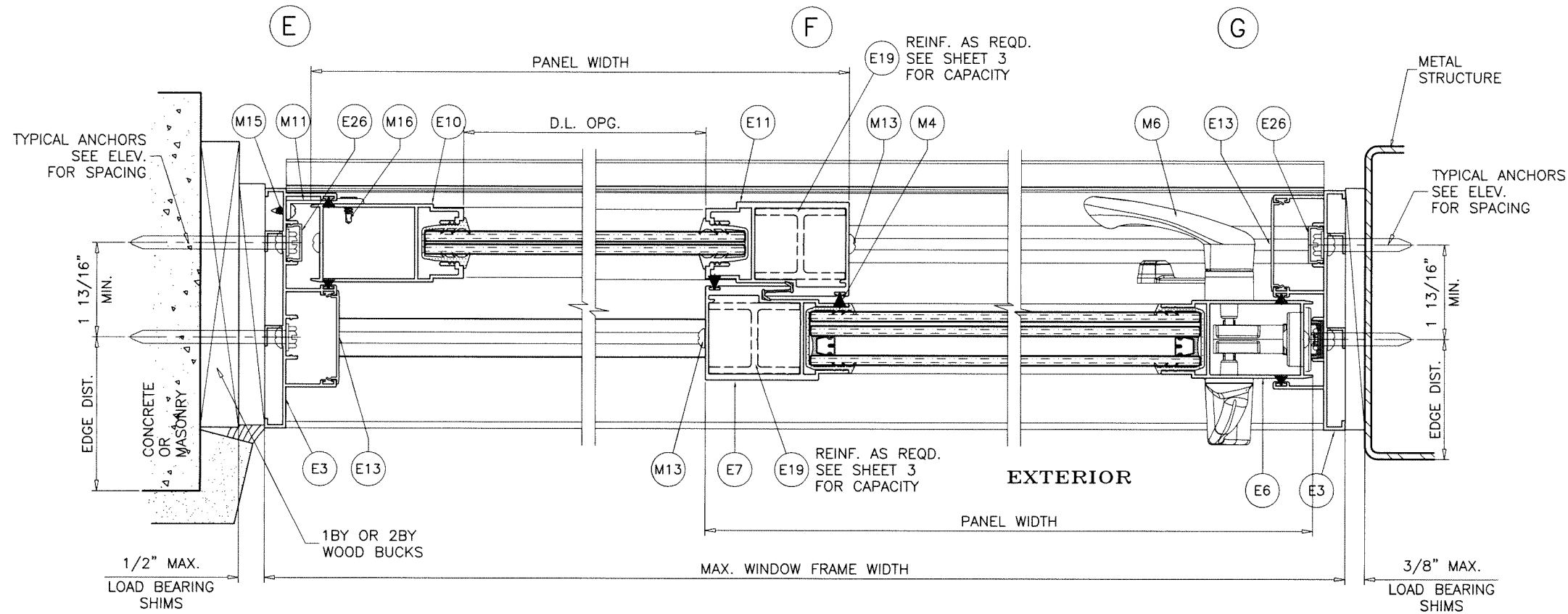
AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173 (C.A.N. 3538)
TEL. (305) 264-8100 FAX. (305) 262-6978

ES-EL400 ALUM SLIDING GLASS WINDOW (L.M.I.)

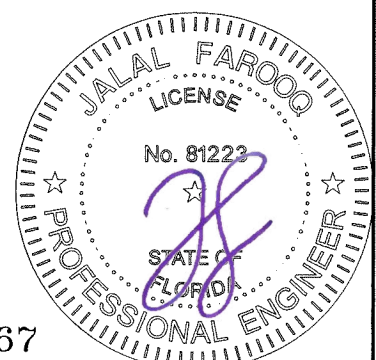
E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

revisions:		no date by description	
date:	10-16-24	scale:	3/8" = 1"
dr. by:	TARIQ	chk. by:	
drawing no.	24-76F	sheet	7 of 11

COMP-ANL\24-76F-ES



Sealed: 7/23/2026



FL #47067

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

COMP-ANL\24-76F-ES

ES-EL400 ALUM SLIDING GLASS WINDOW (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	description

date: 10-16-24	scale: 3/8" = 1"	dr. by: TARIQ	chk. by:
drawing no. 24-76F		sheet 8 of 11	

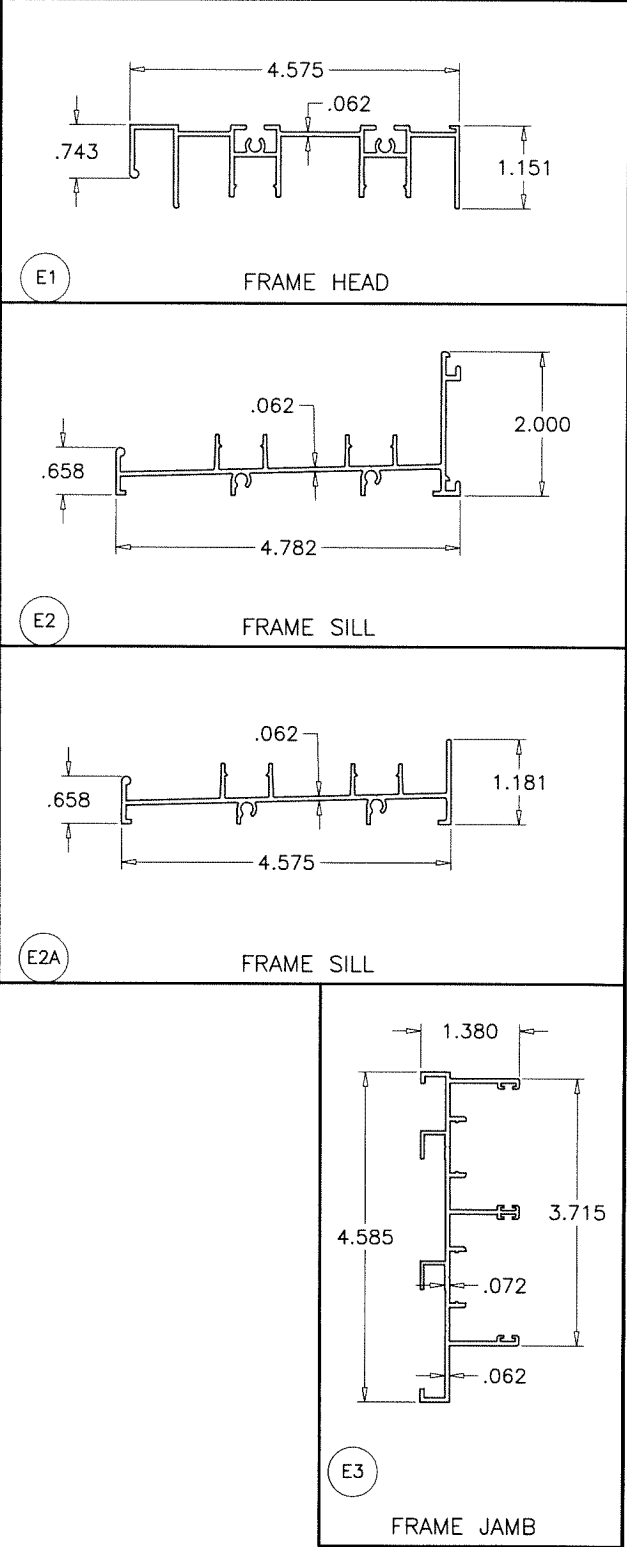
ITEM #	PART #	REQD.	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
E1	ES-EL400-001	1	FRAME HEAD	6063-T6	-
E2	ES-EL400-002	1	FRAME SILL	6063-T6	-
E2A	ES-EL400-401	1	FRAME SILL	6063-T6	-
E3	ES-EL400-003	2	FRAME JAMB	6063-T6	-
E4	ES-EL400-004	1/ PANEL	TOP RAIL (INSUL. LAM. GLASS)	6063-T6	-
E5	ES-EL400-005	1/ PANEL	BOTTOM RAIL (INSUL. LAM. GLASS)	6063-T6	-
E6	ES-EL400-006	AS REQD.	JAMB STILE (INSUL. LAM. GLASS)	6063-T6	-
E7	ES-EL400-007	AS REQD.	INTERLOCK STILE (INSUL. LAM. GLASS)	6063-T6	-
E8	ES-EL400-009	1/ PANEL	TOP RAIL (LAM. GLASS)	6063-T6	-
E9	ES-EL400-010	1/ PANEL	BOTTOM RAIL (LAM. GLASS)	6063-T6	-
E10	ES-EL400-011	AS REQD.	JAMB STILE (LAM. GLASS)	6063-T6	-
E11	ES-EL400-012	AS REQD.	INTERLOCK STILE (LAM. GLASS)	6063-T6	-
E12	ES-EL400-013	AS REQD.	ASTRAGAL STILE (LAM. GLASS)	6063-T6	-
E12A	ES-EL400-008	AS REQD.	ASTRAGAL STILE (INSUL. LAM. GLASS)	6063-T6	-
E13	ES-EL400-014	AS REQD.	JAMB COVER	6063-T5	-
E15	ES-EL400-016	AS REQD.	SILL TRACK	6063-T6	-
E16	ES-EL400-017	AS REQD.	HEAD COVER	6063-T5	-
E17A	ES-2020-008	AS REQD.	SILL RISER	6063-T6	-
E17B	ES-2020-007	AS REQD.	ALT. SILL RISER	6063-T6	-
E17C	ES-2020-041	AS REQD.	ALT. SILL RISER	6063-T6	-
E18	ES-EL400-020	AS REQD.	FIXED PANEL BOTTOM GUIDE	6063-T6	-
E19	ES-EL400-021	AS REQD.	INTERLOCK REINFORCEMENT	6005-T5	-
E26	ES-6011	AS REQD.	SCREW COVER	6063-T6	-
M1	ES-EL400-G01	4/ PANEL	GLAZING GASKET (LAM. GLASS)	SILICONE	DUROMETER 70±3 SHORE A
M2	ES-EL400-G02	4/ PANEL	GLAZING GASKET (INSUL. LAM. GLASS)	SILICONE	DUROMETER 70±3 SHORE A
M3	ES2020-G04	AS REQD.	INTERLOCK BUMPER	PVC	DUROMETER 60±5 SHORE D
M4	W33271NK	AS REQD.	PILE W'STRIPPING (INTERLOCK)	WOOL	-
M5	W33181NK	AS REQD.	PILE W'STRIPPING	WOOL	-
M6	PS01-0014	AS REQD.	WINDOW HANDLE	DIE CAST ALUM	TWO POINT HANDLE
M7	PS01-1015	AS REQD.	STRIKE FOR MORTISE LOCK	ST. STEEL	-
M8	PS01-1036	AS REQD.	MORTISE 2 POINT LOCK	ST. STEEL	-
M9	GT-R34/3-01-A	2/ PANEL	ROLLER ASSEMBLY	ZAMAK	-
M10	6844.1	AS REQD.	BUMPER	ALUM/NYLON	-
M11	ES-EL400-FPI SL	2/ PANEL	FIX. PANEL CLIPS, AT 12" FROM TOP & BOTTOM	6063-T6	-
M12	#8 X 3/4"	AS REQD.	KEEPER FASTENERS	ST. STEEL	P.H. SMS
M13	#10 X 1-1/4"	AS REQD.	PANEL ASSEMBLY FASTENERS	ST. STEEL	P.H. SMS
M14	#12 X 1-1/2"	AS REQD.	FRAME ASSEMBLY FASTENERS	ST. STEEL	P.H. SMS
M15	#6 X 3/8"	AS REQD.	FIX. PANEL CLIP FASTENERS	ST. STEEL	P.H. SMS
M16	#8 X 1/2"	AS REQD.	FIX. PANEL CLIP FASTENERS	ST. STEEL	F.H. SMS
M18	#10 X 1/2"	AS REQD.	ROLLER FASTENERS	ST. STEEL	P.H. SMS
M19	#10 X 1"	AS REQD.	LOCK INSTALLATION FASTENERS	ST. STEEL	F.H. SMS
M20	#8 X 1/2"	AS REQD.	HANDLE INSTALLATION FASTENERS	ST. STEEL	F.H. SMS
M21	-	2/ MOV. PANEL	PANEL RESTRAINING CLIP	6063-T6	-

LOCK:

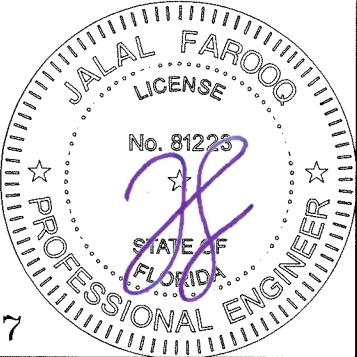
SURFACE MOUNT METALLIC HANDLE AT 44" FROM BOTTOM
FASTENED TO LOCK STILE WITH
(2) #8 X 1/2" FH SMS (M20)
SURFACE MOUNT METALLIC 3 PLY DUAL HOOK LOCK
44" FROM BOTTOM
FASTENED TO LOCK STILE WITH
(2) #10 X 1" FH SMS
SURFACE MOUNT METALLIC KEEPER AT 44" FROM BOTTOM
FASTENED TO FRAME JAMB AND ASTRAGAL STILE WITH
(3) #8 X 3/4" PH SMS (M12)

SEALANT:

ALL JOINTS AND FRAME CONNECTIONS SEALED WITH
WHITE/ALUMINUM COLORED SILICONE.



Sealed: 7/23/2026



FL #47067

af c

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

ES-EL400 ALUM SLIDING GLASS WINDOW (L.M.I.)

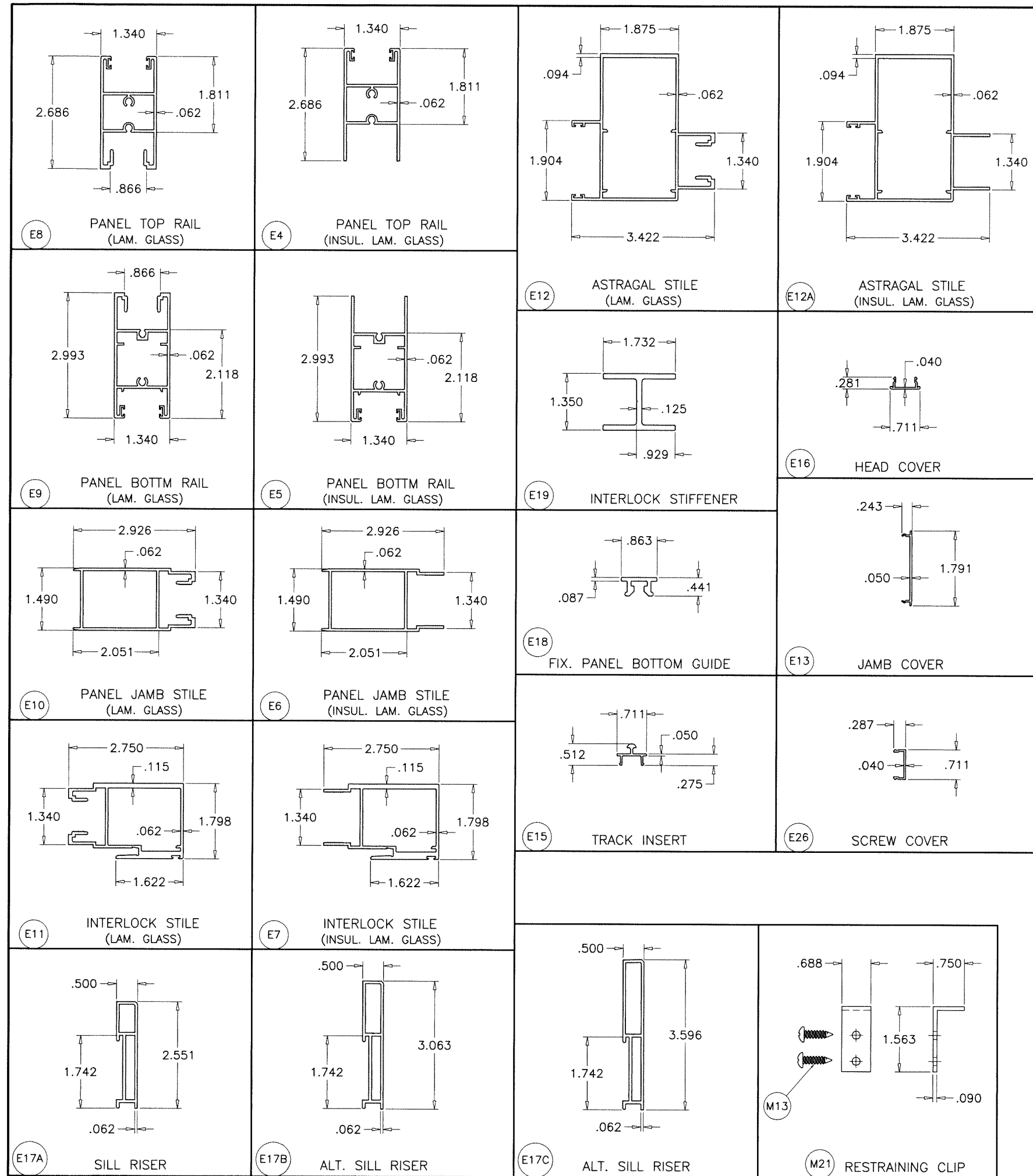
E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

revisions:
no date by description

date: 10-16-24
scale: 3/8" = 1"
dr. by: TARIO
chk. by:

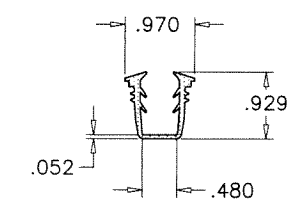
drawing no.
24-76F
sheet 9 of 11

COMP-ANL\24-76F-ES



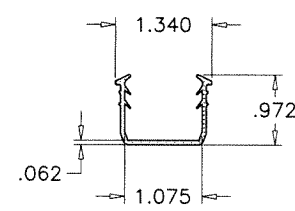
M1

GLAZING GAKET
LAM. GLASS



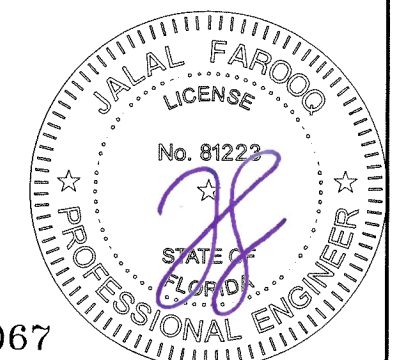
M2

GLAZING GASKET
INSUL. LAM. GLASS



MATERIAL = SILICONE
 HARDNESS = 70±3
 TENSILE STRENGTH = 1139 PSI
 ELONGATION AT BREAK = 235%
 TEAR STRENGTH = 107 Lb/IN
 BRITTLENESS TEMPERATURE = -40° F
 COMPRESSION SET = 12.5% (22h@212°F)

Sealed: 7/23/2026



FL #47067

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

af c
 (C.A.N. 3538)
 COMP-ANL\24-76F-ES

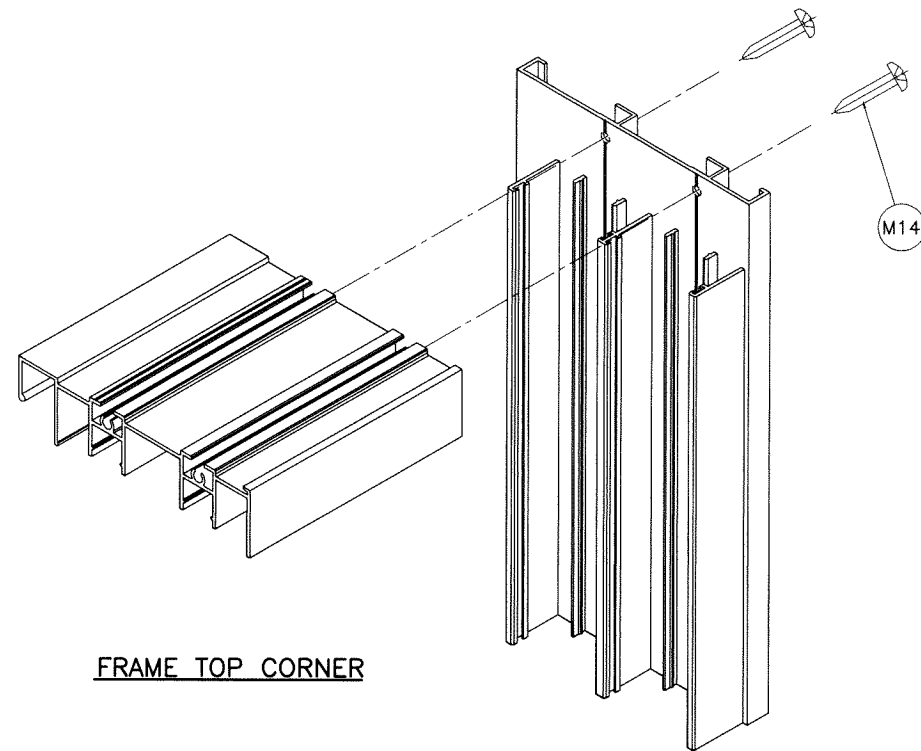
ES-EL400 ALUM SLIDING GLASS WINDOW (L.M.I.)

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

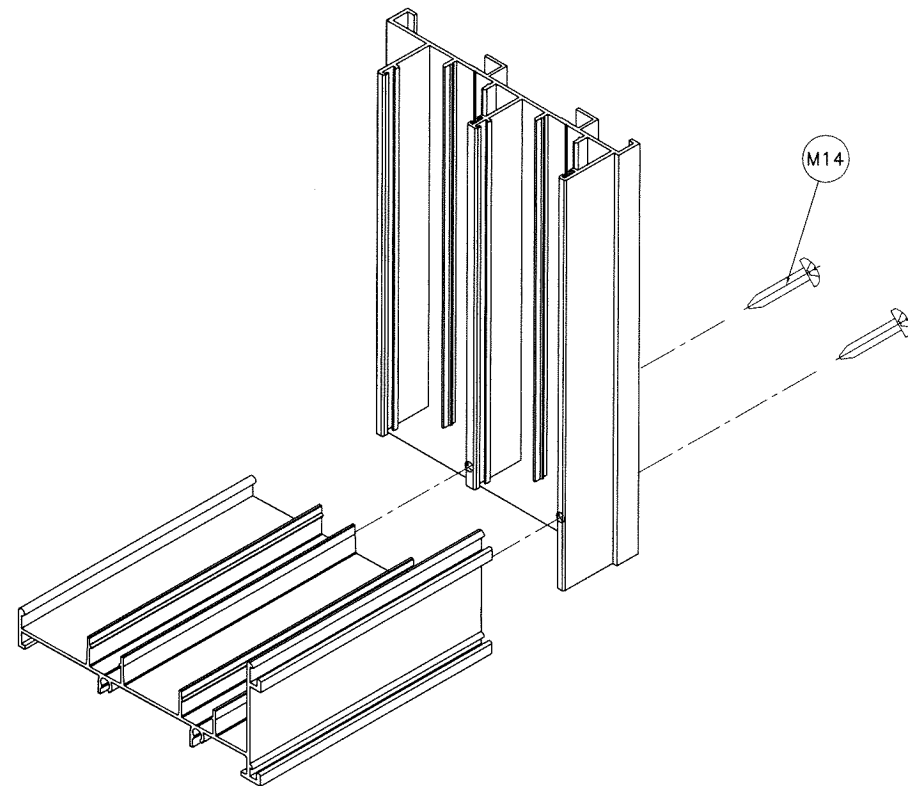
revisions:	
no	description

date: 10-16-24
 scale: 3/8" = 1"
 dr. by: TARIQ
 chk. by:

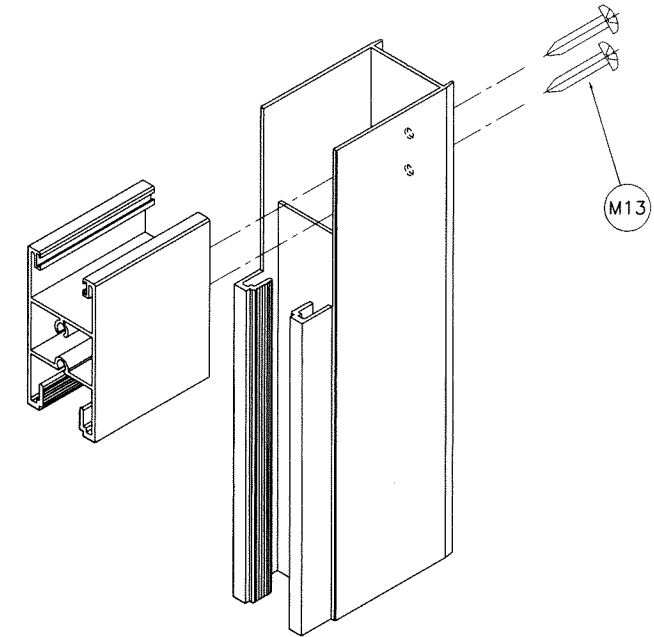
drawing no.
24-76F
 sheet 10 of 11



FRAME TOP CORNER



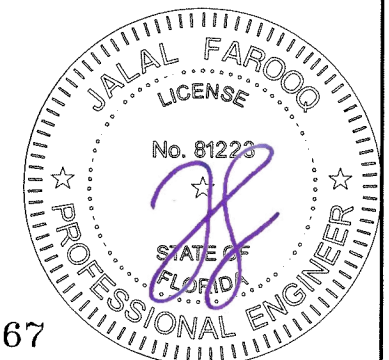
FRAME BOTTOM CORNER



PANEL TOP/BOTTOM CORNER

LAM. GLASS RAIL & STILE (SHOWN)
INSUL. LAM. GLASS RAIL & STILE (SIMILAR)

Sealed: 7/23/2026



FL #47067

af c
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\24-76F-ES

ES-EL400 ALUM SLIDING GLASS WINDOW (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	
no	date		

date: 10-16-24	scale: 3/8" = 1"	dr. by: TARIQ	chk. by:
----------------	------------------	---------------	----------

drawing no.
24-76F

sheet 11 of 11