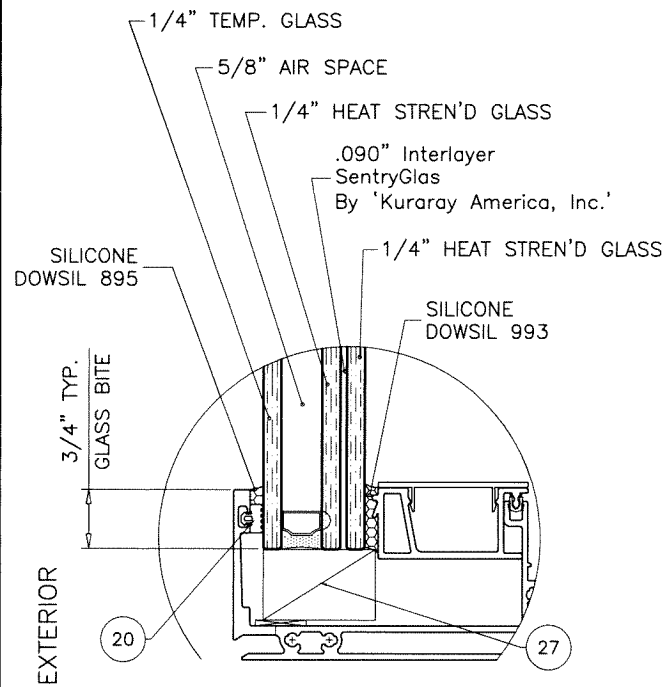
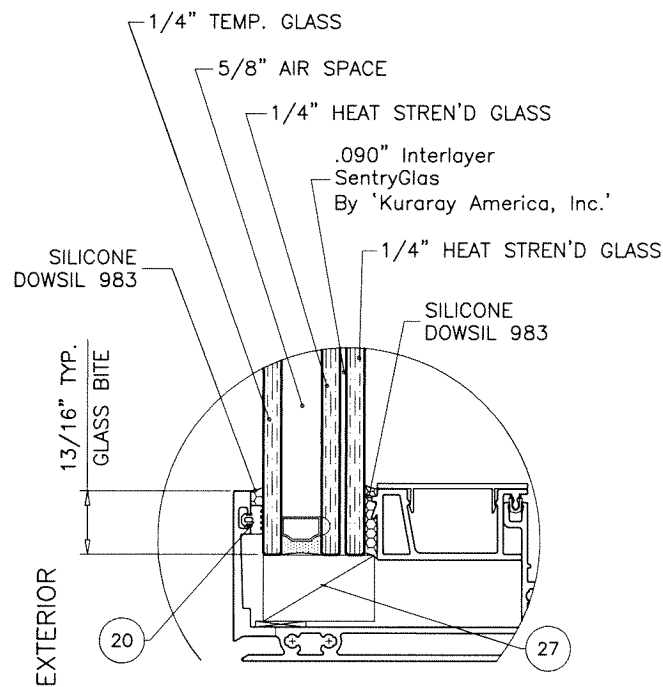




GLASS TYPE 'A'

1-3/8" OVERALL INSUL. LAM. GLASS



GLASS TYPE 'A1'

1-3/8" OVERALL INSUL. LAM. GLASS

5/8" 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

PRODUCT WITH GLASS TYPE 'A1' COMPLIES WITH REQUIREMENTS OF ANSI Z97.1.
SAFEGUARD REQUIREMENTS TO BE VERIFIED.

ES-LS7035

ALUMINUM SLIDING GLASS DOOR

DESIGN LOAD RATING FOR DOORS TO BE AS PER CHARTS SHOWN
ON SHEET 3.

THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE
REQUIREMENTS OF THE 2023 (8TH EDITION) FLORIDA BUILDING CODE
INCLUDING HIGH VELOCITY HURRICANE ZONE (HVHZ).

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.

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 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)'.

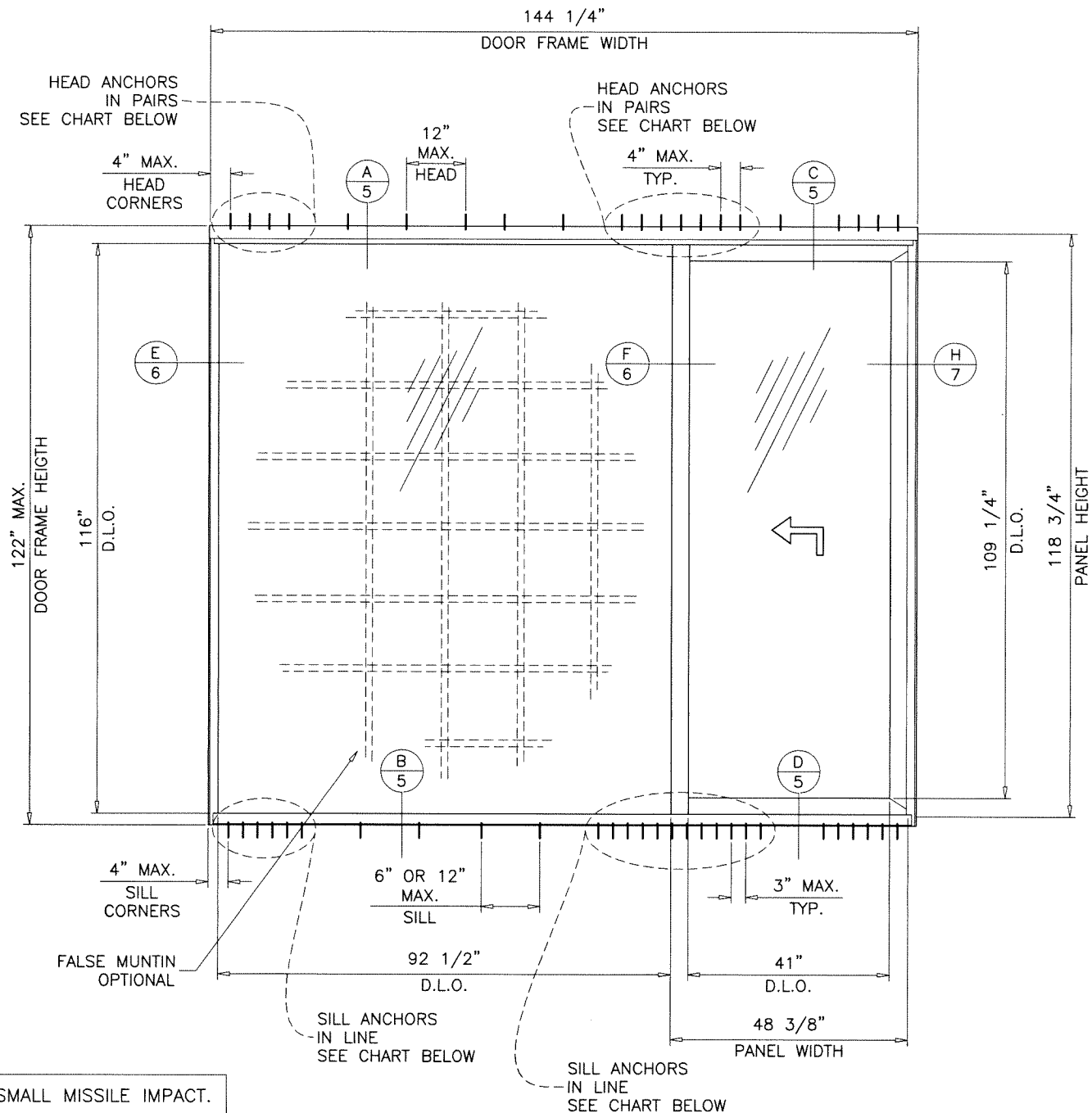
MANUFACTURER'S LABEL SHALL BE LOCATED ON A READILY VISIBLE LOCATION
IN ACCORDANCE WITH SECTION 1709.9.3 OF FLORIDA BUILDING CODE.
LABELING TO COMPLY WITH SECTION 1709.9.2.

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

DOOR HT. UPTO	DESIGN LOADS UPTO	NO. OF ANCHOR PAIRS AT HEAD			NO. OF IN LINE ANCHORS AT SILL			
		JAMB ENDS	INTERLOCK ENDS		JAMB ENDS	INTERLOCK ENDS		
122"	120 PSF	1/2" SHIM 3/4" SHIM	1/2" SHIM 3/4" SHIM	3/8" SHIM 5/8" SHIM	3/8" SHIM 5/8" SHIM	3/8" SHIM 5/8" SHIM	3/8" SHIM 5/8" SHIM	3/8" SHIM 5/8" SHIM
127-3/8"	78 PSF	4	4	7	7	6	6	12
		3	-	5	-	6	-	10

DAYLITE OPENINGS WIDTHS:
OPERABLE PANEL WIDTH - 7.375"
FIXED PANEL WIDTH - 5.525"

DAYLITE OPENING HEIGHT:
OPERABLE PANEL HEIGHT - 9.50"
FRAME HEIGHT - 6.0"
PANEL HEIGHT = DOOR FRAME HEIGHT - 3.250"



TYPICAL ELEVATION

(OX)
TESTED UNIT

Sealed: 6/20/2025

INSUL. LAM. GLASS
LARGE MISSILE IMPACT

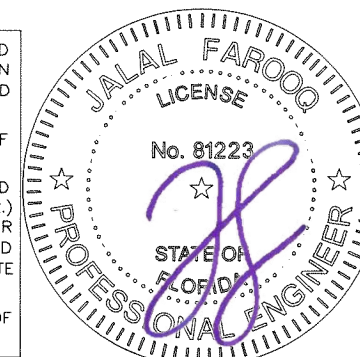
FL #29516

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 (C.A.N. 3538)
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COMP-ANL \ 19-23F-ES

ES-LS7035 ALUMINUM SLIDING GL. DOOR (L.M.I.)

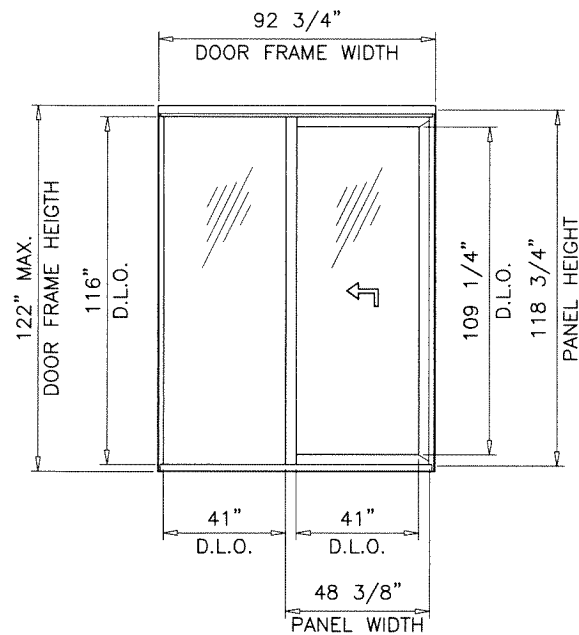
E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

revisions:	no	date	description	by
	A	12.10.20	UPDATED TO 2020 FBC	
	B	02.03.23	NEW TESTS ADDED	
	C	09.19.23	UPDATED TO 2023 FBC	
	D	02.18.25	PRODUCT SERIES REVISED	
	E	06.19.25	ALT. JAMB ADDED	

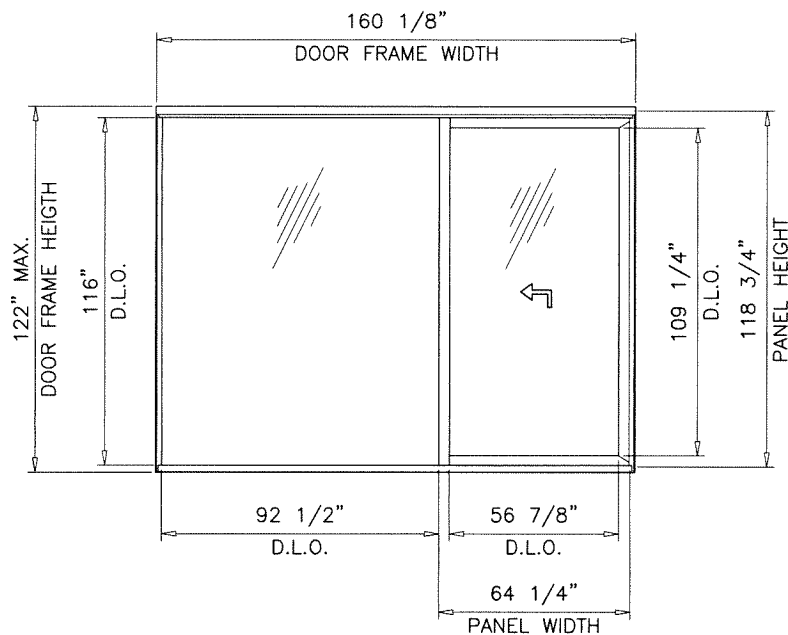
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chk. by:

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19-23F

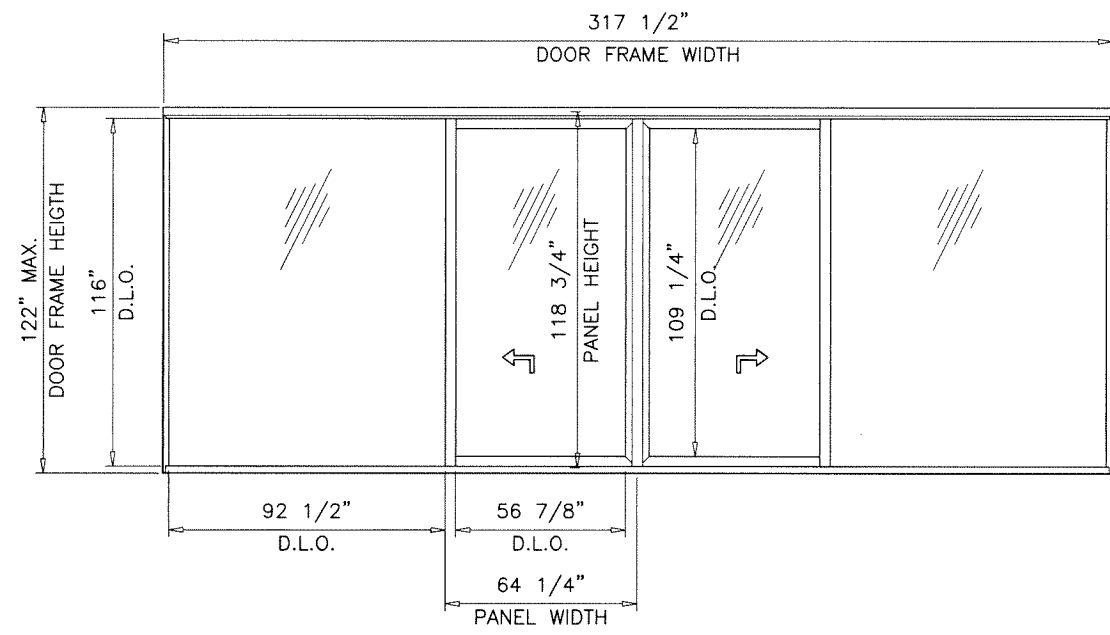
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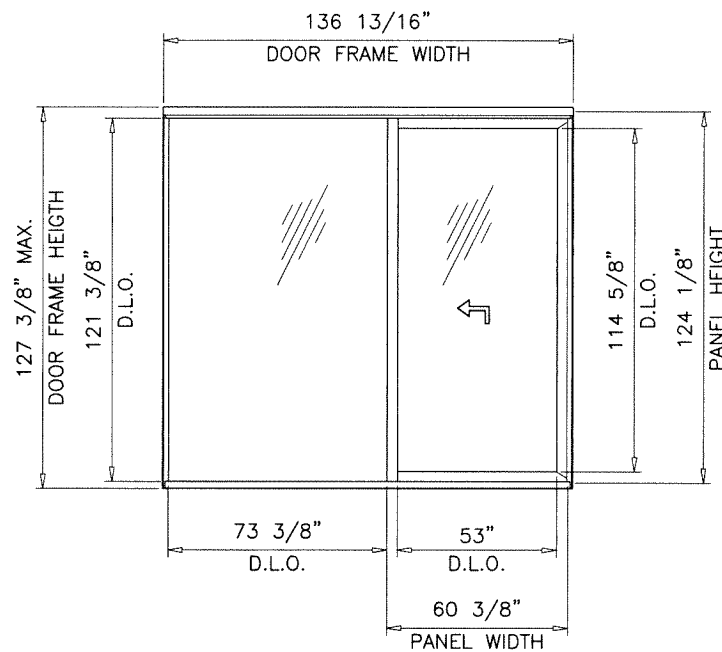
GLASS TYPE 'A'
 MAXIMUM DESIGN LOAD RATING = + 120.0 PSF
 (FOR SIZES SHOWN ABOVE OR SMALLER) - 120.0 PSF



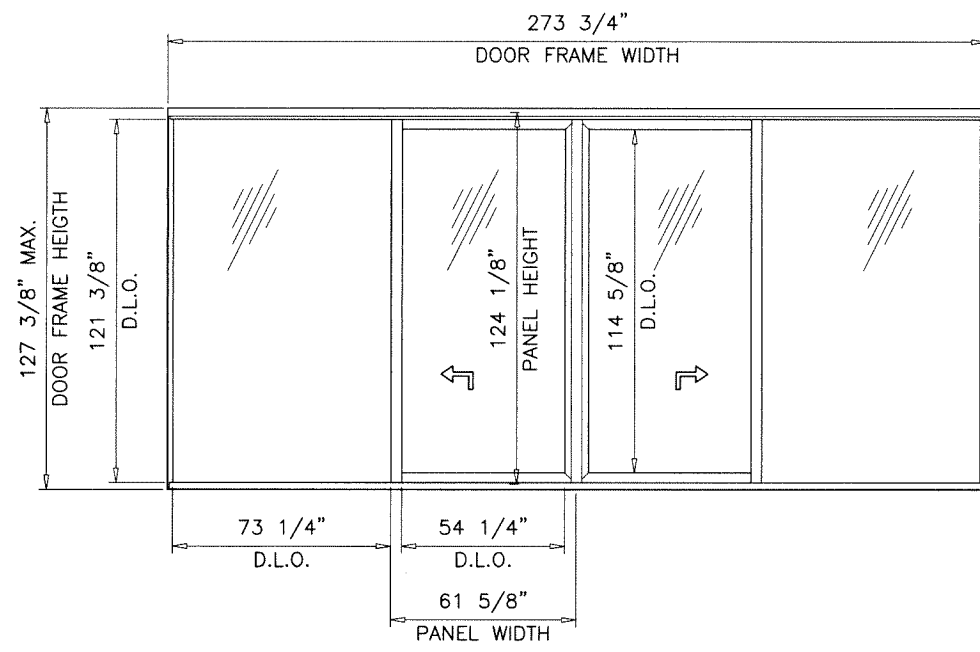
GLASS TYPE 'A'
 MAXIMUM DESIGN LOAD RATING = + 98.0 PSF
 (FOR SIZES SHOWN ABOVE OR SMALLER) - 98.0 PSF



GLASS TYPE 'A'
 MAXIMUM DESIGN LOAD RATING = + 98.0 PSF
 (FOR SIZES SHOWN ABOVE OR SMALLER) - 98.0 PSF



GLASS TYPE 'A1'
 MAXIMUM DESIGN LOAD RATING = + 78.0 PSF
 (FOR SIZES SHOWN ABOVE OR SMALLER) - 78.0 PSF



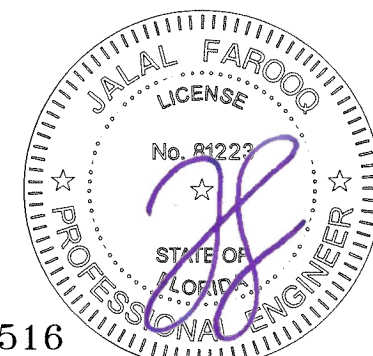
GLASS TYPE 'A1'
 MAXIMUM DESIGN LOAD RATING = + 78.0 PSF
 (FOR SIZES SHOWN ABOVE OR SMALLER) - 78.0 PSF

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

DOOR HEIGHT AND WIDTH SIZE MUST COMPLY
 EGRESS REQUIREMENTS PER FBC AS REQUIRED.

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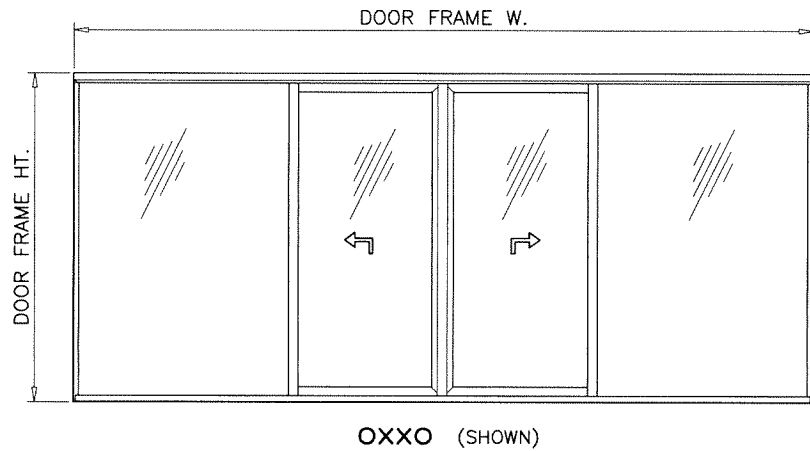
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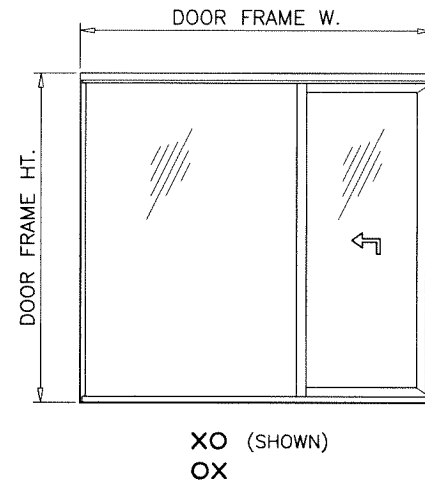
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drawing no.
19-23F
 sheet 3 of 10

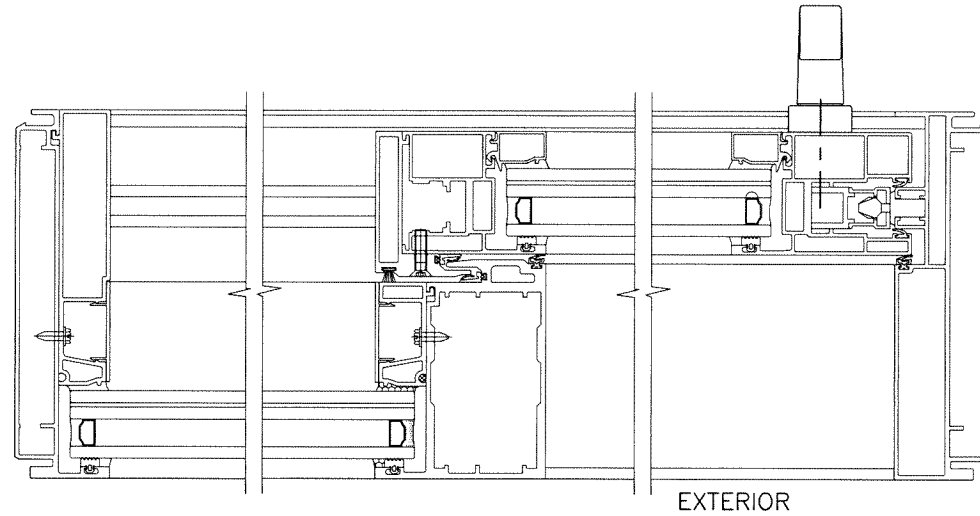
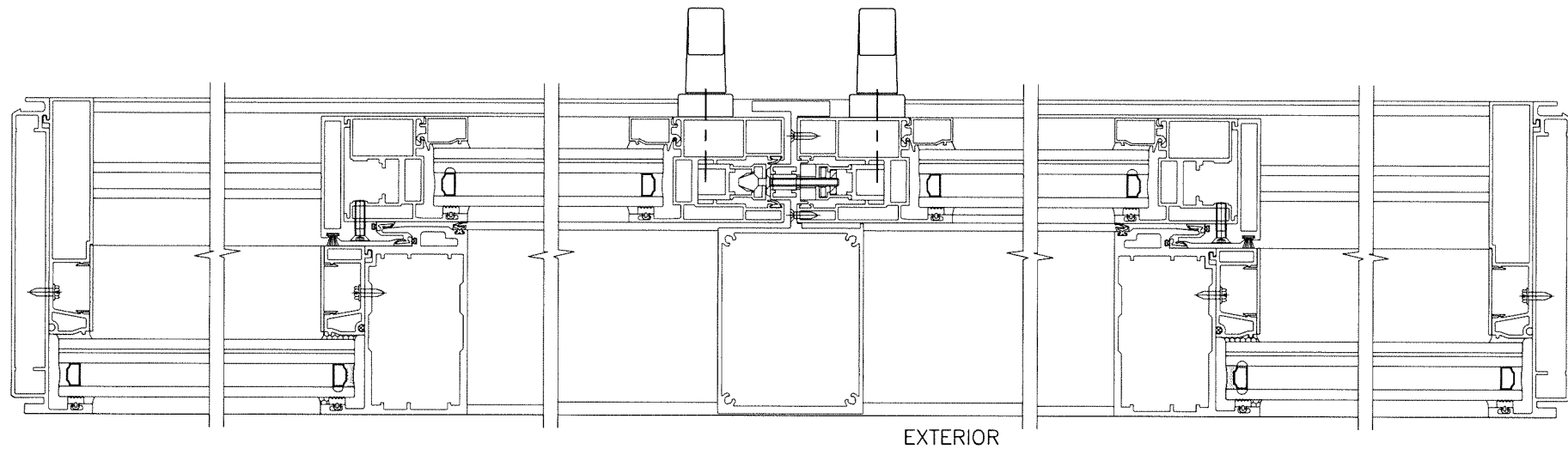


OXXO (SHOWN)



XO (SHOWN)
OX

APPROVED CONFIGURATIONS



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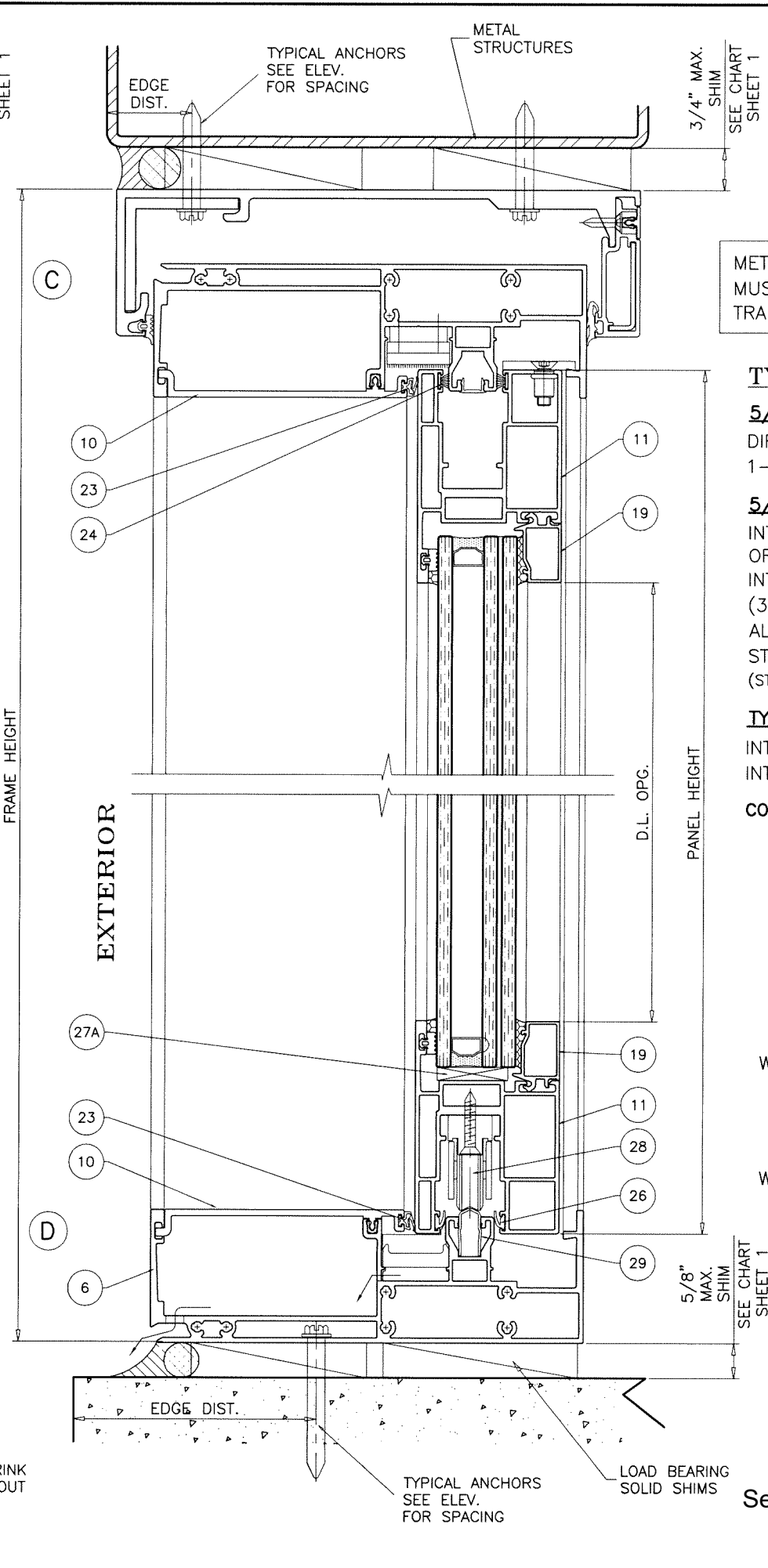
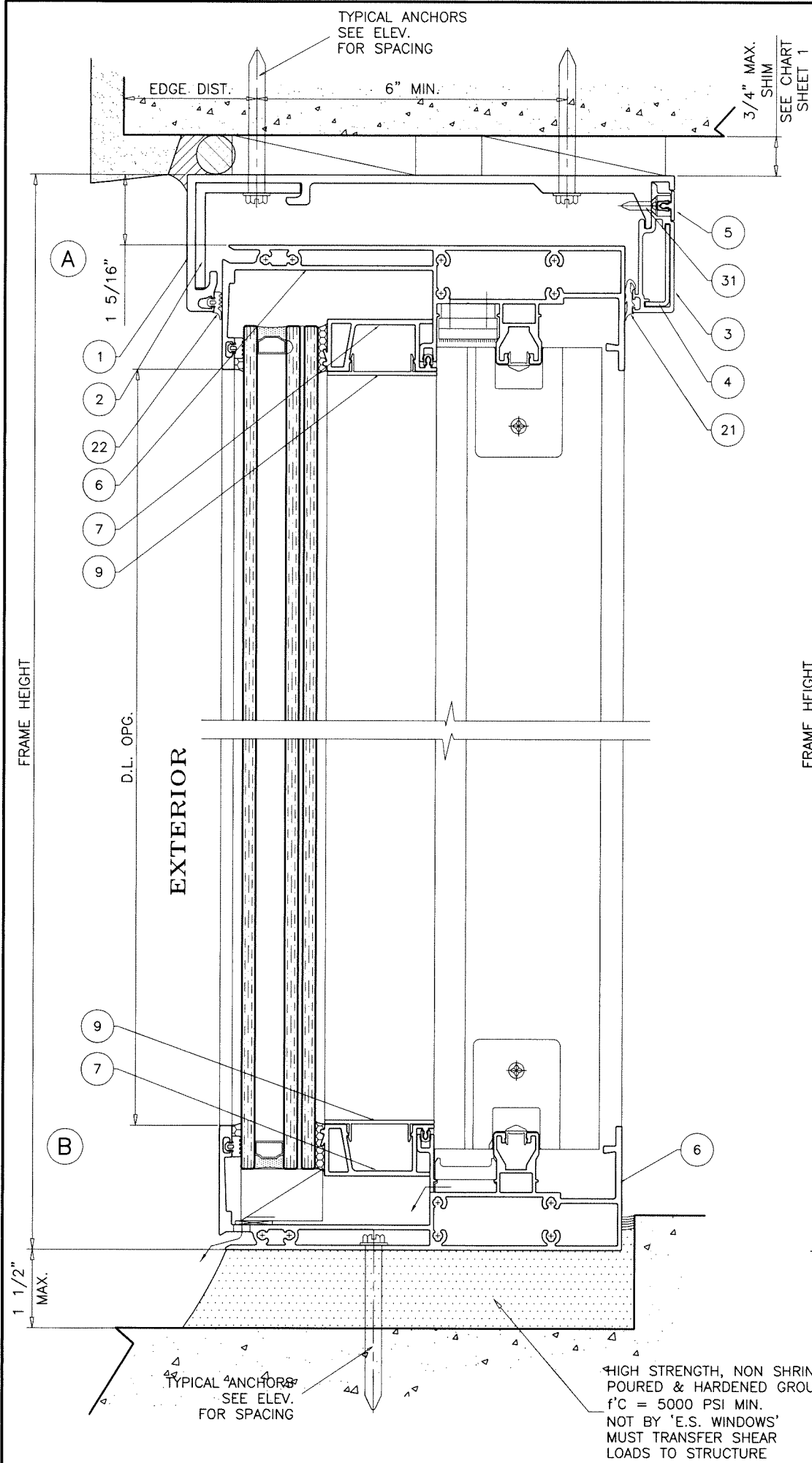


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sheet 4 of 10					

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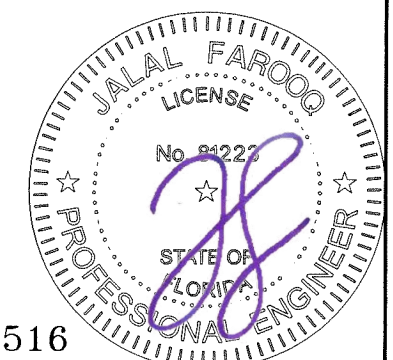


METAL STRUCTURES NOT BY 'E.S. WDW.'
MUST SUPPORT LOADS IMPOSED BY GLAZING SYSTEM AND
TRANSFER THEM TO THE BUILDING STRUCTURE.

TYPICAL ANCHORS: SEE ELEV. FOR SPACING
5/16" DIA. ULTRACON BY 'DEWALT' ($F_u=177$ KSI, $F_y=155$ KSI)
 DIRECTLY INTO CONCRETE
 1-3/4" MIN. EMBED INTO CONCRETE (HEAD/SILL)
5/16" DIA. TEKS OR SELF DRILLING SCREWS (GRADE 5 CRS)
 INTO F.B.C. APPROVED MULLIONS
 OR
 INTO METAL STRUCTURES (HEAD/SILL)
 (3) THREADS MIN. TO EXTEND BEYOND METAL THICKNESS
 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 = 2-1/2" MIN.
 INTO METAL STRUCTURE = 3/4" MIN.
 CONCRETE AT HEAD, SILL $f'_c = 3000$ PSI MIN.

WEEPHOLES:
 W1 = 5/16" DIA. WEEP HOLES IN CLUSTERS OF 3
 SPACED TOGETHER 1/2" APART.
 CLUSTERS LOCATED AT 4" FROM EACH END
 AND 8" TO THE LEFT AND RIGHT OF CENTERLINE.
 W2 = 5/16" DIA. WEEP HOLES IN CLUSTERS OF 3
 SPACED TOGETHER 1/2" APART.
 CLUSTERS LOCATED AT 26" FROM EACH END
 AND 22" O.C.



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Revisions:	
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date: 03-30-19

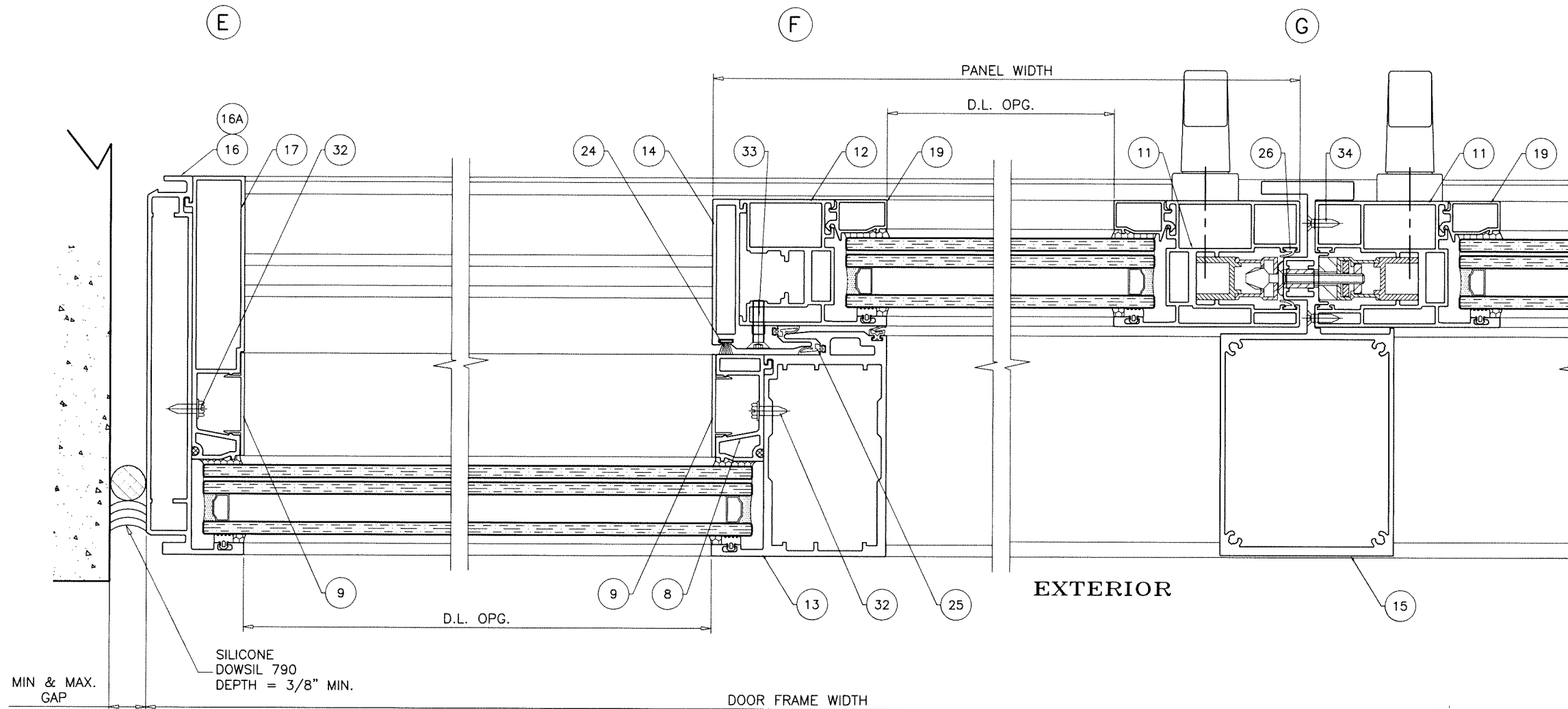
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drawing no.
19-23F

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MAX. FRAME HEIGHT	GAP	
	MIN.	MAX.
96"	3/8"	3/4"
122"	7/16"	3/4"
127-3/8"	7/16"	3/4"

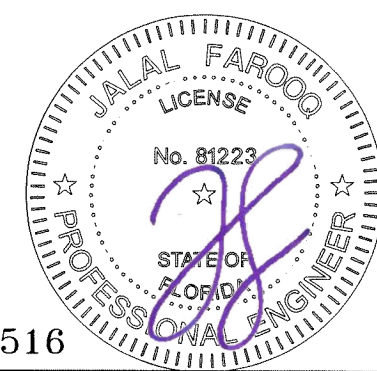
NOTE:
 MAX. MOVEMENT CONSIDERED=100% STRETCH.
 PLEASE REFER TO SEALANT MANUFACTURER'S DATA AND APPLICATION MANUAL FOR COMPATABILITY OF SEALANT TO SUBSTRATE & WINDOWALL MATERIAL/FINISH AND COMPLIANCE FOR WARRANTY.
 REFER TO ACI-117-10 FOR CONSTRUCTION TOLERANCES.

ALTERNATE SEALANTS AT JAMB GAPS CAN BE DESIGNED BY ENGINEER OF RECORD BASED ON MANUFACTURER GUIDE LINES.

GAPS LESS THAN 1/4" MAY BE DESIGNED BY ENGINEER OF RECORD BY THE USE OF BOND BREAKER TAPE OR 15% OF GAP ALLOWED MOVEMENT.

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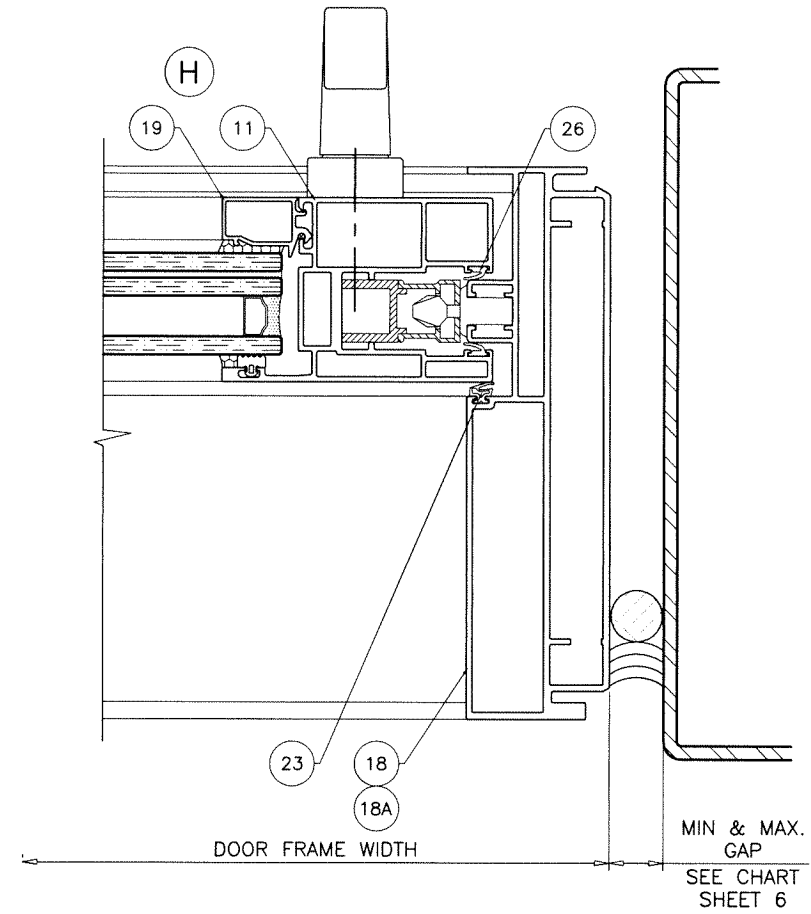
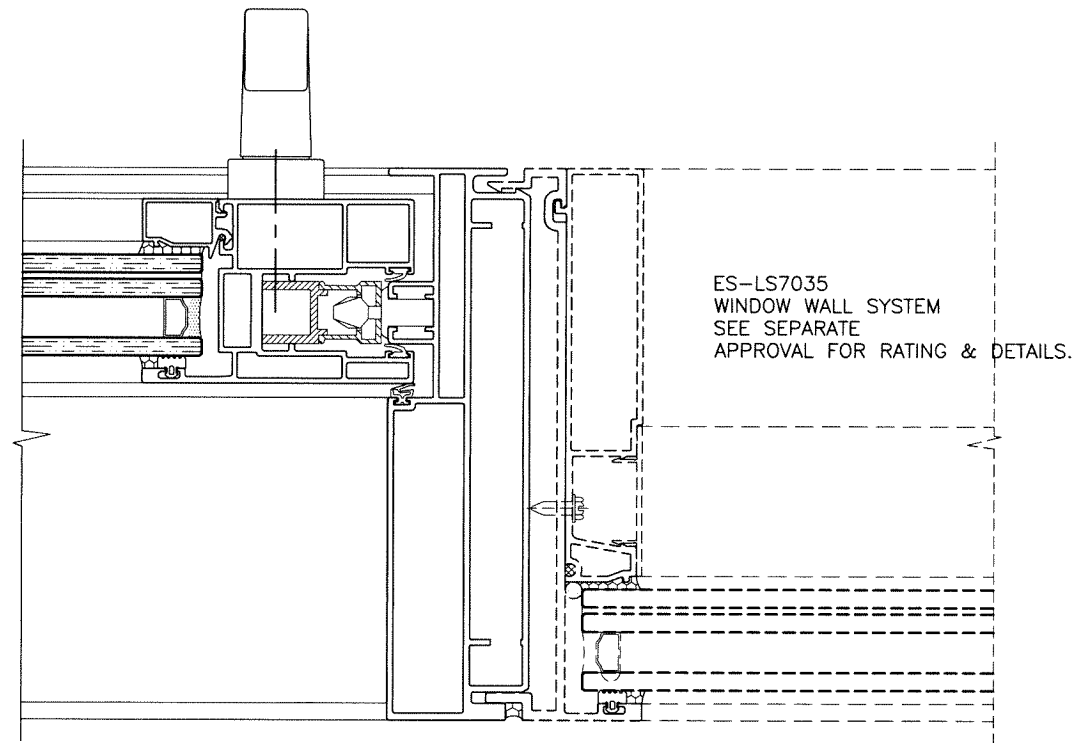
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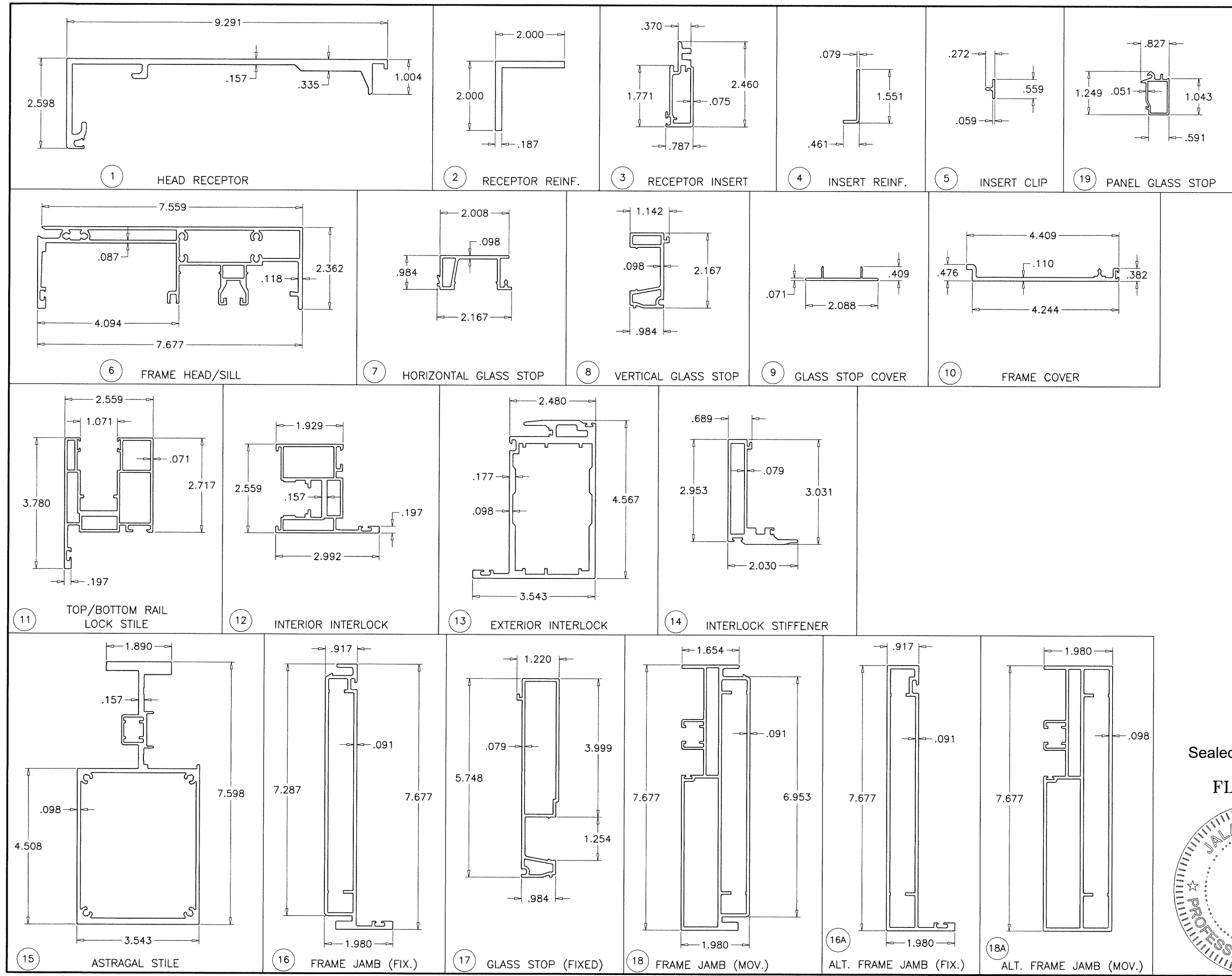


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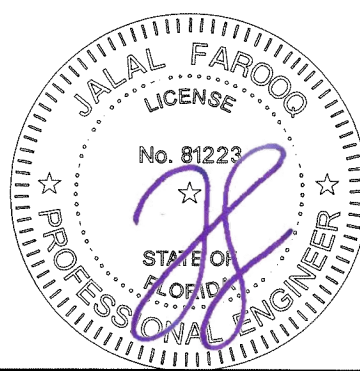
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AL-FAROOQ CORPORATION ENGINEERS & PRODUCT DEVELOPMENT 9360 SUNSET DRIVE, SUITE 220 MIAMI, FLORIDA 33173 TEL. (305) 264-8100 FAX. (305) 262-6978 (C.A.N. 3538)		COMP-ANL\19-23F-ES	
ES-LS7035 ALUMINUM SLIDING GL. DOOR (L.M.I.)		E.S. WINDOWS, LLC 3550 N.W. 49 STREET MIAMI, FL. 33142 TEL. (305) 638-5151 FAX. (305) 638-5158	
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drawing no. 19-23F		sheet 7 of 10	
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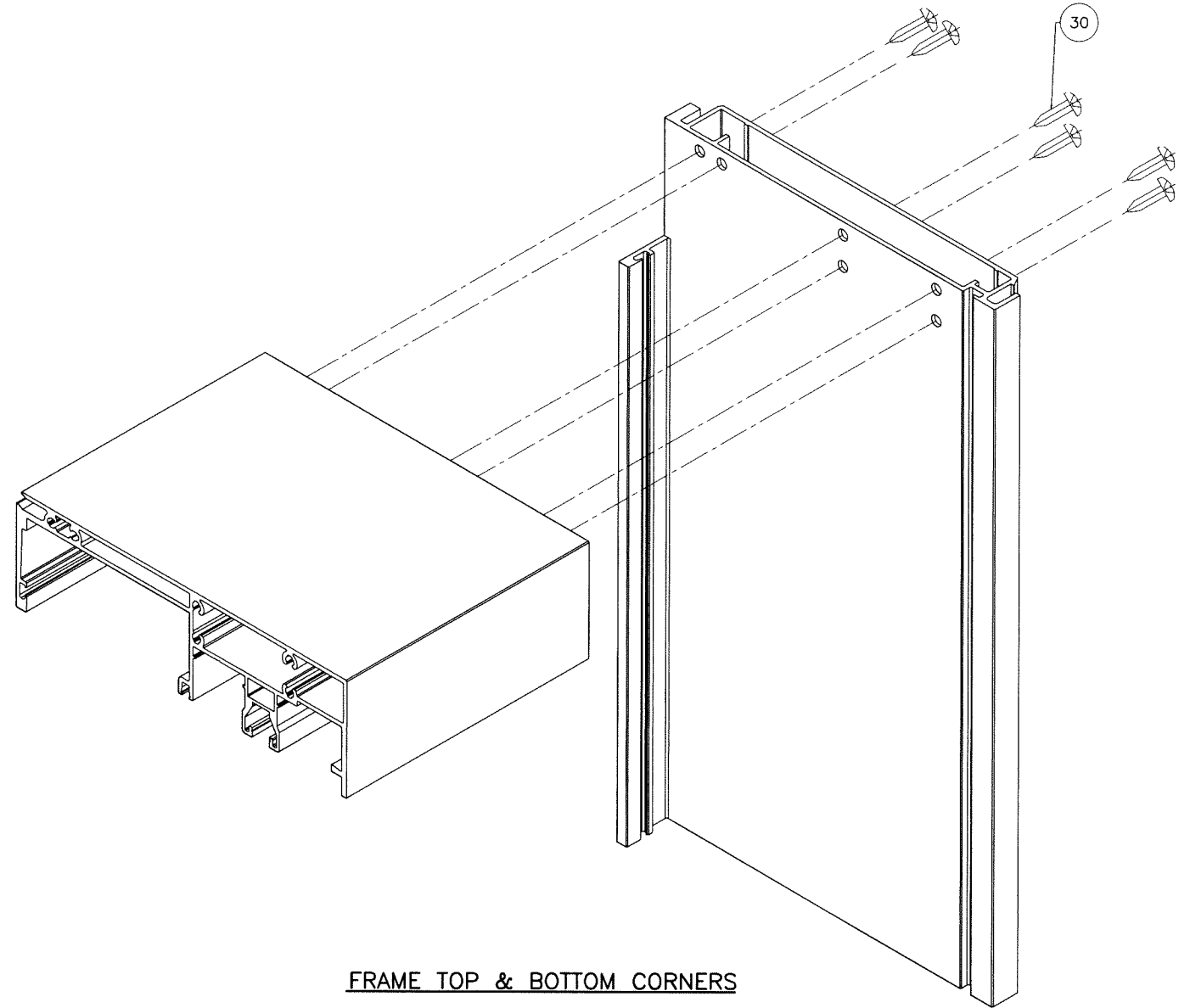
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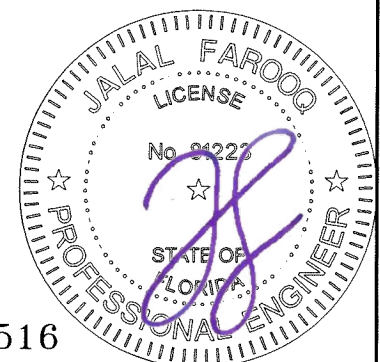
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FRAME TOP & BOTTOM CORNERS

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sheet 10 of 10									

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