

**GLAZING DETAIL**  
1" OVERALL INSUL. GLASS

DOORS NOT RATED FOR IMPACT.  
INSTALLATION OF THIS SYSTEM OUTSIDE THE HVHZ AREA SHALL MEET THE APPLICABLE REQUIREMENTS FOR WIND BORNE DEBRIS PROTECTION.

**SERIES ES-45T (N.I.)**  
**ALUMINUM THERMALLY BROKEN OUTSWING DOOR**

THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE 2020 (7TH EDITION)/2023 (8TH EDITION) FLORIDA BUILDING CODE FOR NON HIGH VELOCITY HURRICANE ZONE.

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.

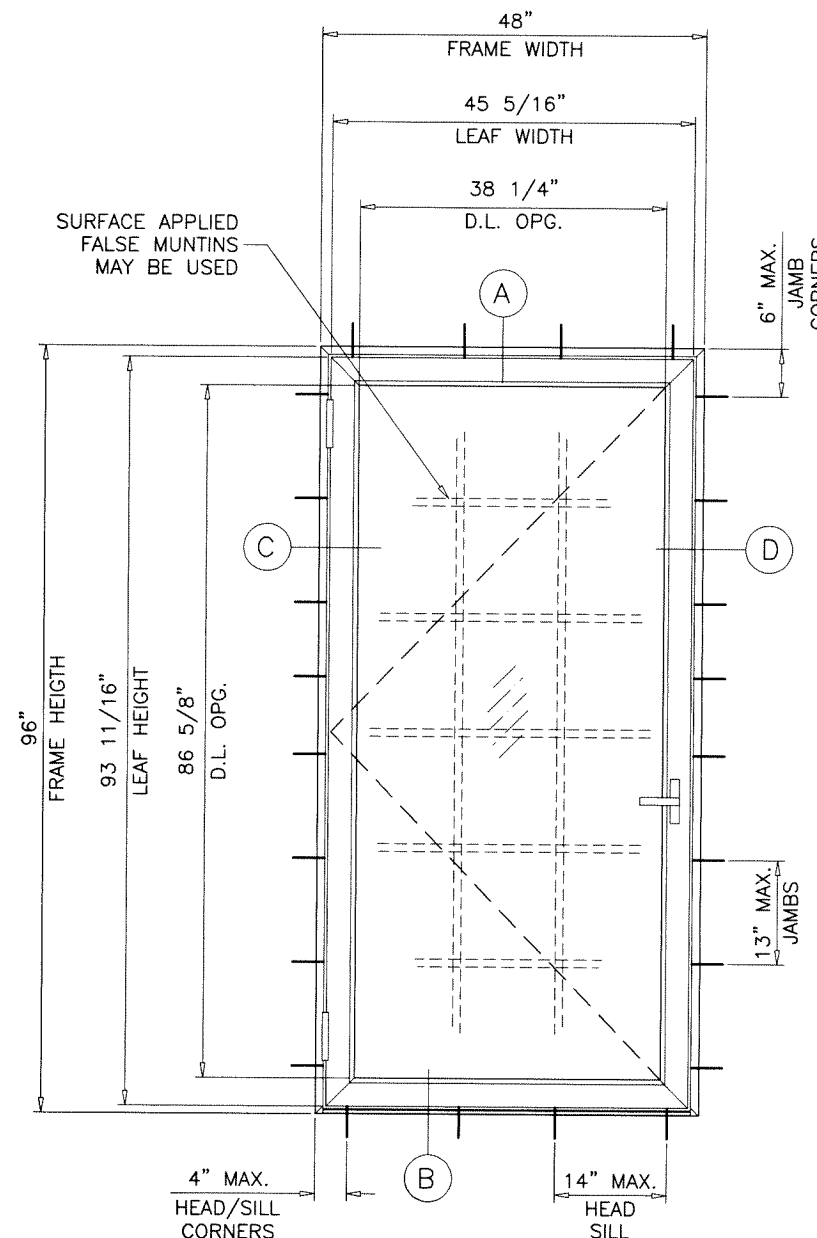
MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE 2020/2023 FLORIDA BLDG. CODE & ADOPTED STANDARDS.

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.

DOORS APPROVED FOR INSTALLATIONS WHERE WATER INFILTRATION RESISTANCE IS REQUIRED.

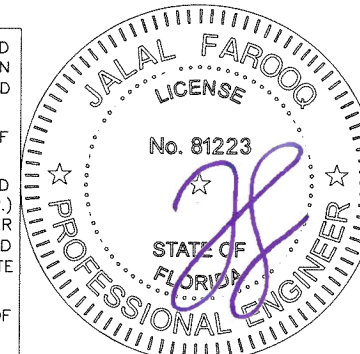


**TYPICAL ELEVATION**

**MAXIMUM DESIGN LOAD RATING = + 70.0 PSF**  
(FOR SIZES SHOWN ABOVE OR SMALLER) - 70.0 PSF

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

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.



Sealed: 8/1/2023 FL #19072

**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 W15-79ESW

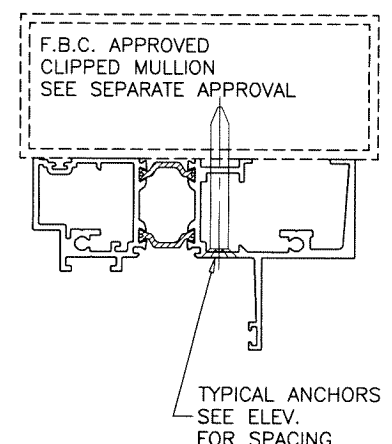
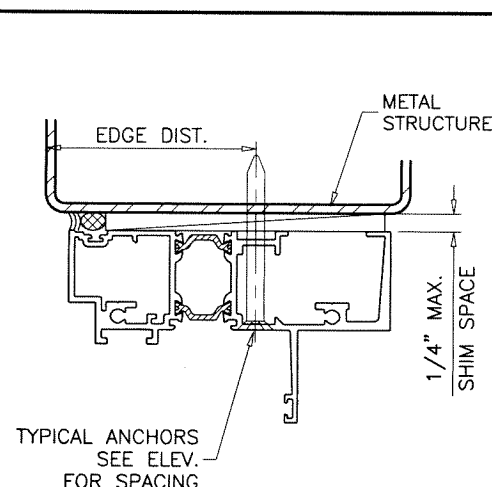
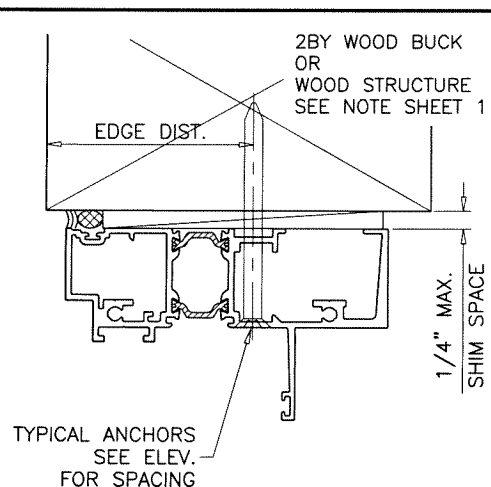
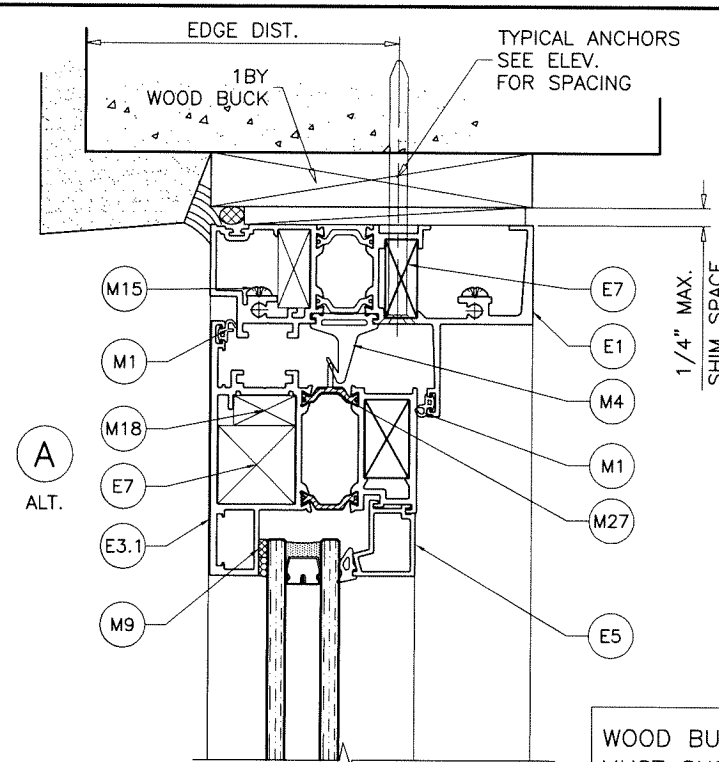
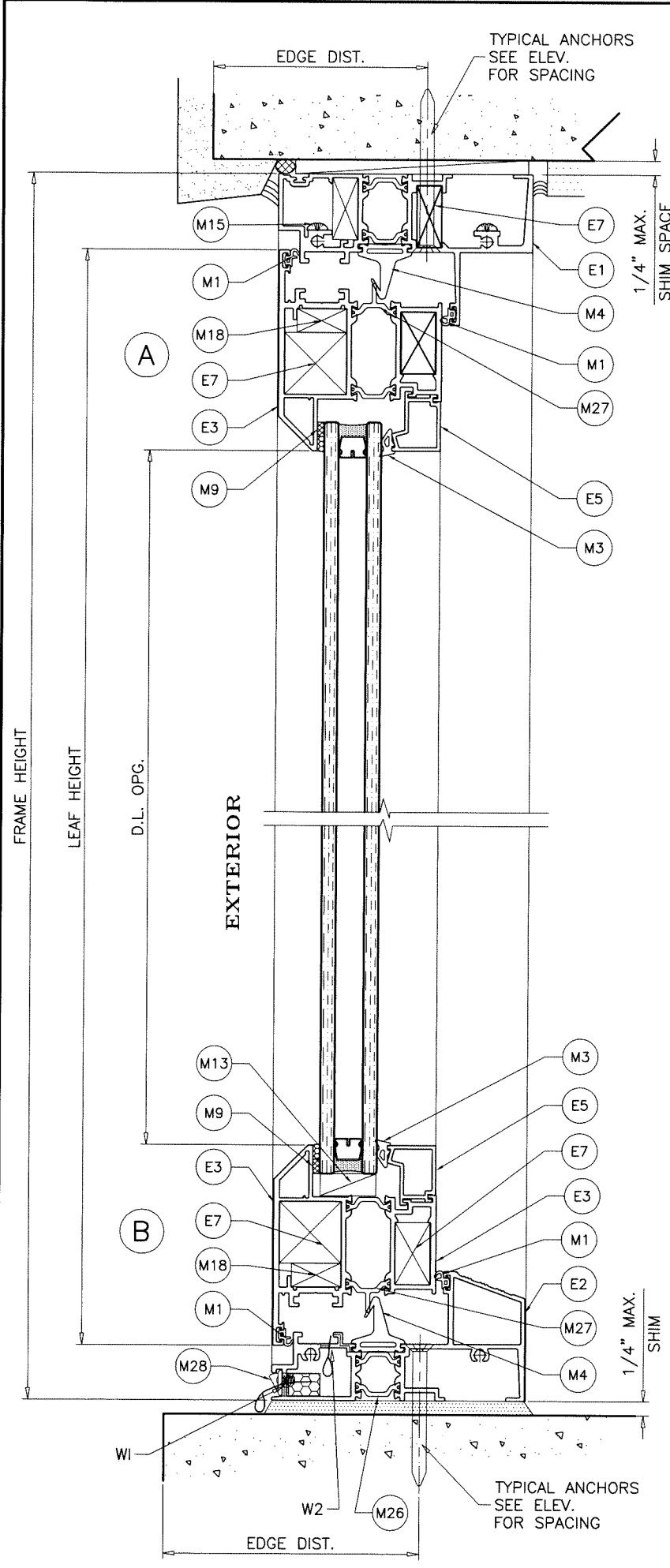
ES-45T ALUM THERMALLY BROKEN OUTSWING DOOR (N.I.)  
**E.S. WINDOWS, LLC**  
3550 N.W. 49 STREET  
MIAMI, FL. 33142  
TEL. (305) 638-5151 FAX. (305) 638-5158

no	date	description
A	04.16.19	ALT. LEAF STILE ADDED
B	12.17.20	UPDATED TO 2020 FBC
C	07.31.23	UPDATED TO 2023 FBC

revisions:

date: 10-14-15  
scale: 1/2" = 1'-0"  
dr. by: TARIQ  
chk. by:

drawing no. **W15-79**  
sheet 1 of 5



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

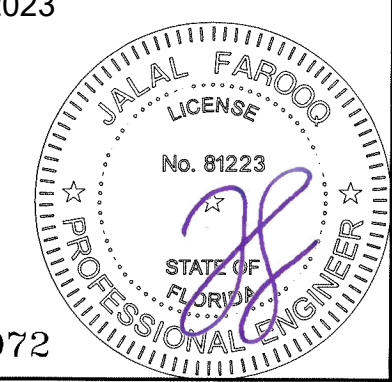
**TYPICAL ANCHORS:** SEE ELEV. FOR SPACING  
**#14 DIA. CRETE-FLEX SS4 BY 'DEWALT'** (Fu=190 KSI, Fy=127 KSI)  
**1/4" DIA. ULTRACON SS4 410 BY 'DEWALT'** (Fu=190 KSI, Fy=164 KSI)  
**1/4" DIA. ULTRACON+ BY 'DEWALT'** (Fu=164 KSI, Fy=148 KSI)  
 INTO 2BY WOOD BUCKS OR WOOD STRUCTURES  
 1-1/2" MIN. PENETRATION INTO WOOD (HEAD/JAMBS)  
 THRU 1BY BUCKS INTO CONC. OR BLOCKS  
 1-1/4" MIN. EMBED INTO CONCRETE (HEAD/JAMBS)  
 1-1/4" MIN. EMBED INTO BLOCKS (JAMBS)  
 DIRECTLY INTO CONCRETE OR BLOCKS  
 1-3/4" MIN. EMBED INTO CONCRETE (HEAD/SILL/JAMBS)  
 1-3/4" MIN. EMBED INTO FILLED BLOCKS (JAMBS)  
**1/4" DIA. BI-FLEX 300 SELF DRILLING SCREWS BY 'DEWALT'**  
**1/4" DIA. TEKS OR SELF DRILLING SCREWS** (GRADE 5 CRS)  
 INTO F.B.C. APPROVED MULLIONS  
 OR  
 INTO METAL STRUCTURES (HEAD/JAMBS)  
 (3) THREADS MIN. TO EXTEND BEYOND METAL THICKNESS  
 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 BLOCKS = 2-1/2" MIN.  
 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 HOLLOW/FILLED BLOCK AT JAMBS f'm = 2000 PSI MIN.

**WEEPHOLES:**  
 W1 = 1-3/4" X 1/4" WEEPHOLES WITH WEEP COVERS AT 6" FROM EACH END

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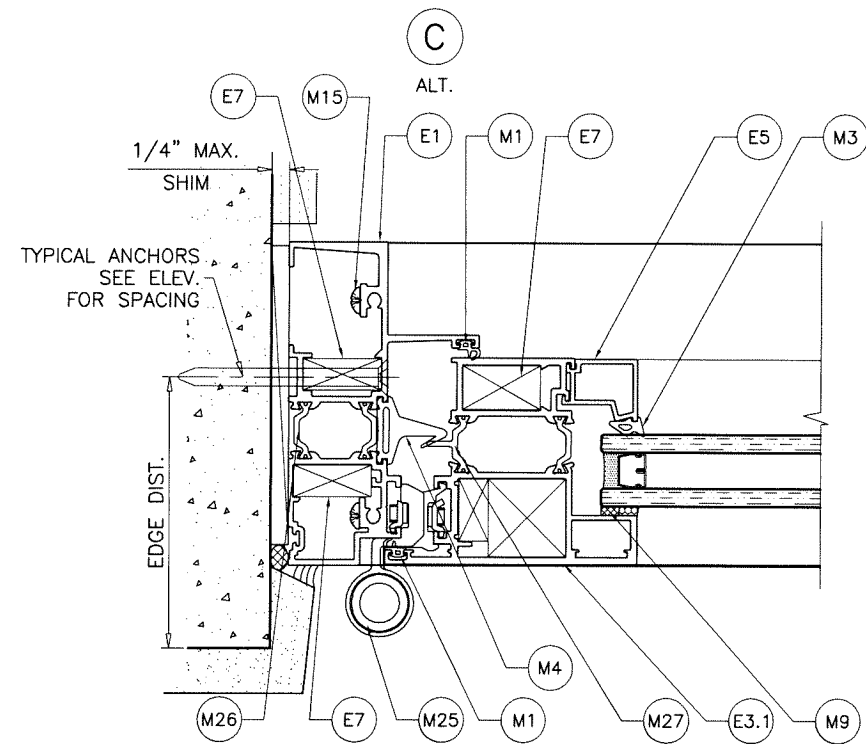
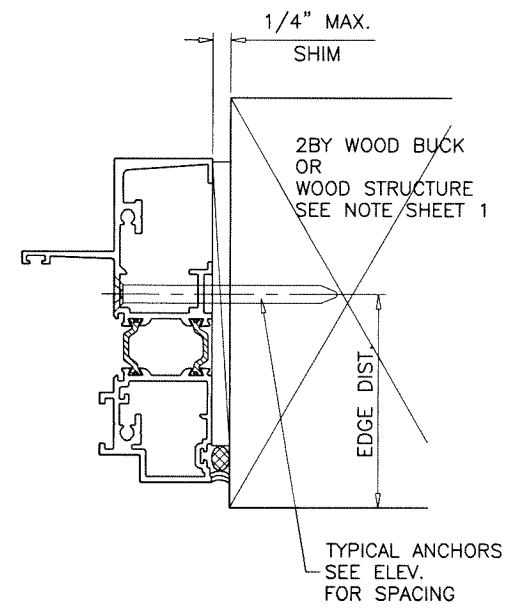
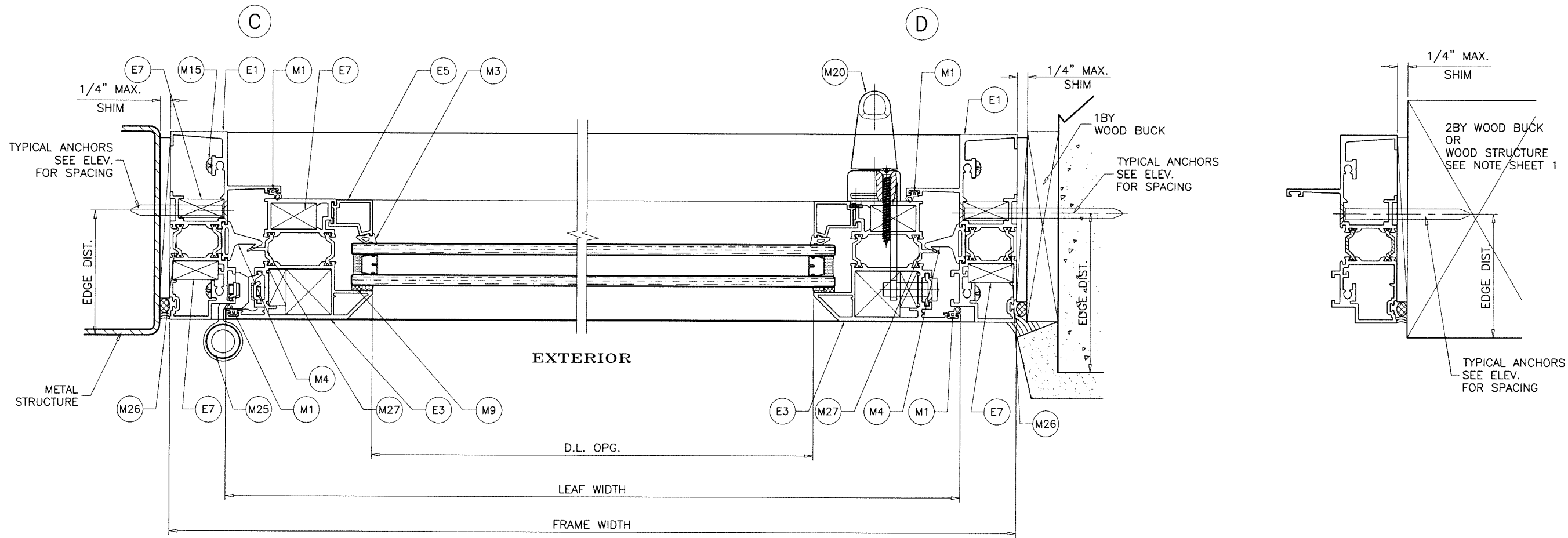
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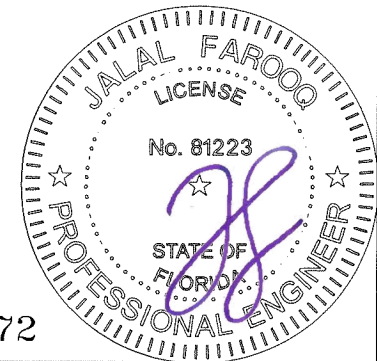
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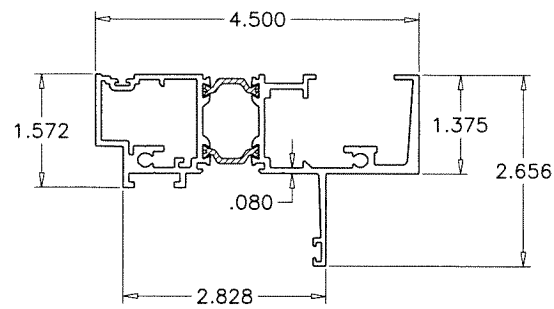
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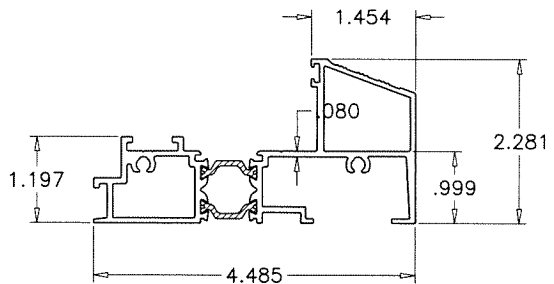
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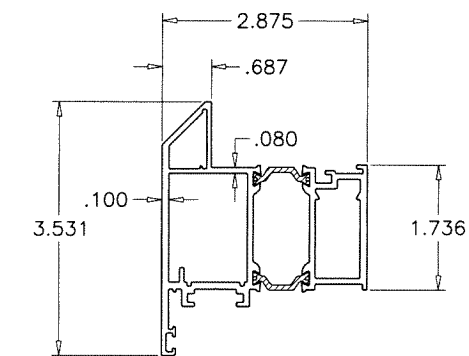




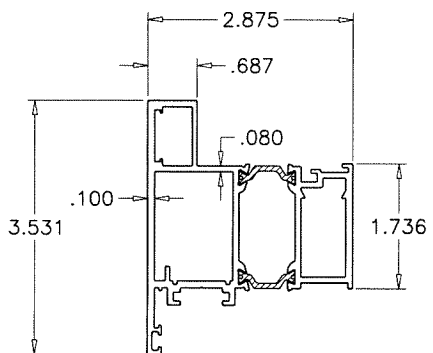
E1 FRAME HEAD/JAMB



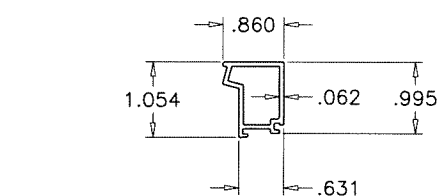
E2 FRAME SILL



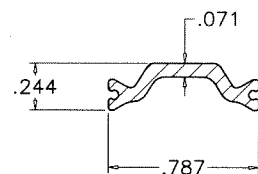
E3 LEAF STILE



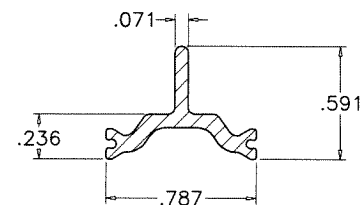
E3.1 ALT. LEAF STILE



E5 GLASS STOP



M26 20MM OFFSET



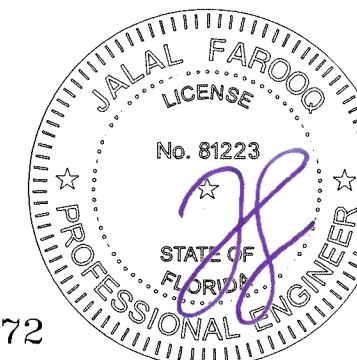
M27 20MM OFFSET W/ FIN

TECATHERM<sup>®</sup> 66 GF INSULBARS  
SCALE 1:1

MATERIAL = POLYAMIDE  
TENSILE STRENGTH = 13031 PSI  
RATE OF BURN = .752 IN./MIN.  
SELF IGNITION TEMP. = 793° F  
FLASH IGNITION TEMP. = 781°C  
SMOKE DENSITY = 1.63

ITEM #	PART #	REQD.	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
E1	ES-45T-001-002	3	FRAME HEAD/JAMB	6063-T6	-
E2	ES-45T-003-004	1	FRAME SILL	6063-T6	-
E3	ES-45T-005-006	4	LEAF STILE	6063-T6	-
E3.1	ES-45T-051	4	ALT. LEAF STILE	6063-T6	-
E5	ES-45T-007	4/	LEAF GLASS STOP	6063-T6	-
E7	ES-45T-011	AS REQD.	CORNER KEY	6063-T6	-
E14	ES-EUR-001	1	EURO BAR	6063-T6	-
M1	ES-P251-G01	AS REQD.	FRAME/LEAF GASKET	EPDM	DUROMETER 70±5 SHORE A
M3	ES-P251-G03	AS REQD.	GLAZING GASKET	EPDM	DUROMETER 70±5 SHORE A
M4	ES-P251-G04	AS REQD.	CHAMBER DIVIDER EXTRUSION	EPDM	DUROMETER 60±5 SHORE A
M5	ES-P251-G04A	AS REQD.	CHAMBER DIVIDER MOLDED CORNER	EPDM	DUROMETER 60±5 SHORE A
M9	-	AS REQD.	SINGLE FACE TAPE (1/8" X 1/4")	POLYURETHANE	-
M13	NF-315-B02	2/LITE	SETTING BLOCK, AT 1/4 POINTS	EPDM	DUROMETER 80±5 SHORE A
M15	#12 X 1-3/4" PH	-	FRAME ASSEMBLY FASTENERS	ST/ST	-
M18	ES-45T-C01	AS REQD.	CORNER JOINT	CAST ALUMINUM	MASTER #0333
M20	MHSS-1500	-	LOCKING HANDLE, AT 35-1/2" FROM BOTTOM	CAST ALUMINUM	INTERLOCK
M21	895955	-	HANDLE FORK	CAST ALUMINUM	INTERLOCK
M22	899915	-	HANDLE PIN	ST. STEEL	INTERLOCK
M25	A105	-	BUTT HINGE, AT 6-11/16" FROM TOP & BOTTOM	ALUMINUM	DR. HAHN
M26	1673	-	INSULBAR 20MM OFFSET	POLYAMIDE	ENSINGER
M27	964200	-	INSULBAR 20MM OFFSET WITH FIN	POLYAMIDE	ENSINGER
M28	WA2L	-	WEEP HOLE COVER	RIGID PVC	PREFERRED

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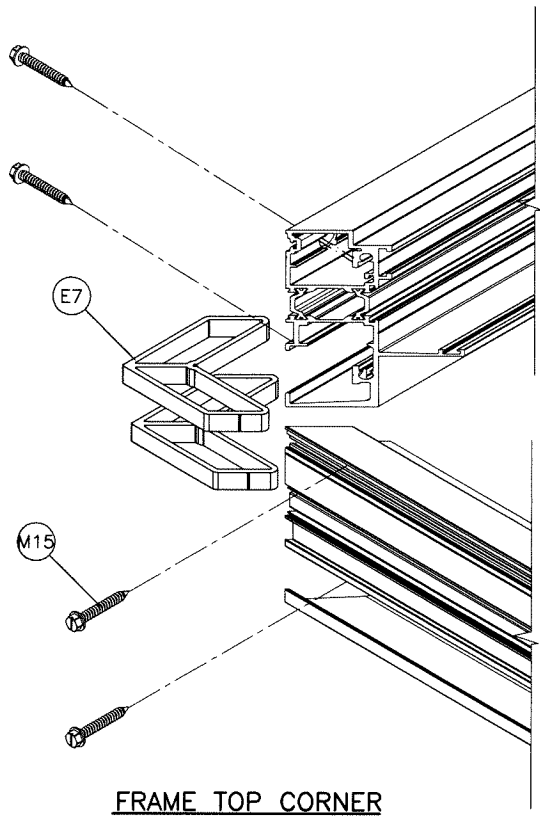
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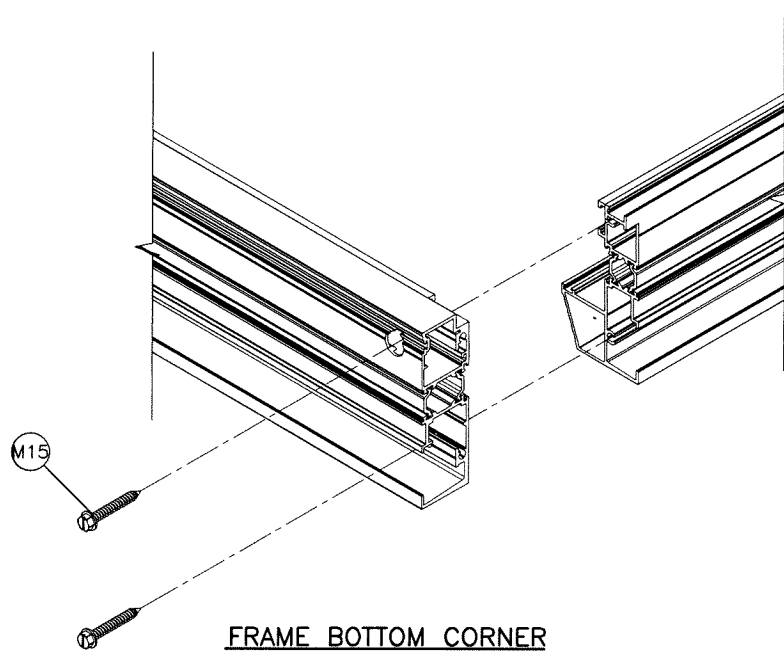
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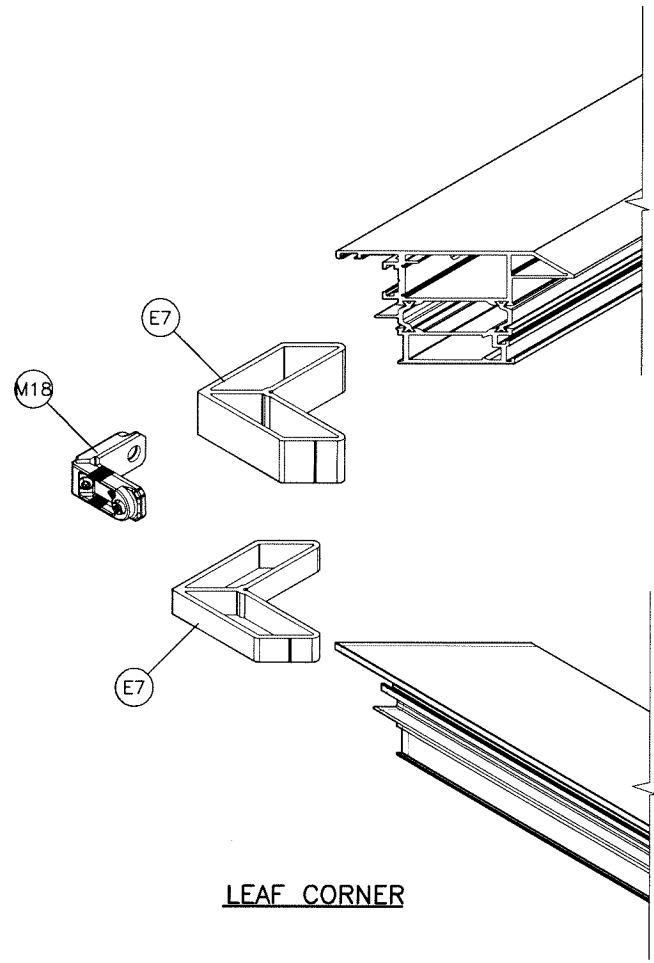
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FRAME TOP CORNER

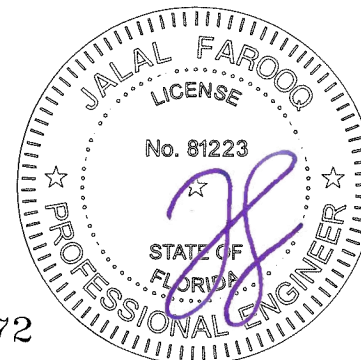


FRAME BOTTOM CORNER



LEAF CORNER

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