

TYPICAL ELEVATION

OX
XO

DAYLITE OPENINGS WIDTHS:
FIX. PANEL WIDTH - 6.50"
MOV. PANEL WIDTH - 6.750"

DAYLITE OPENING HEIGHT:
PANEL HEIGHT - 5.375"

PANEL HEIGHT = DOOR FRAME HEIGHT - 2.0625"

DOORS NOT RATED FOR IMPACT.
INSTALLATION OF THIS PRODUCT IN THE HVHZ AREA REQUIRES THE USE OF APPROVED SHUTTERS OR EXTERNAL PROTECTION DEVICES COMPLYING WITH HVHZ REQUIREMENTS.
INSTALLATION OF THIS SYSTEM OUTSIDE THE HVHZ AREA SHALL MEET THE APPLICABLE REQUIREMENTS FOR WIND BORNE DEBRIS PROTECTION.

**SERIES ES-SD450 (N.I.)
ALUMINUM THERMALLY BROKEN SLIDING GLASS DOOR**

DESIGN LOAD RATING FOR DOORS TO BE AS PER CHARTS SHOWN ON SHEET 2.

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.

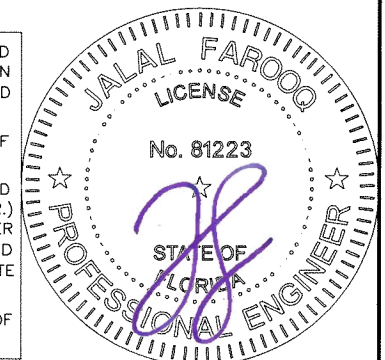
DESIGN LOADS SHOWN ARE BASED ON 'ALLOWABLE STRESS DESIGN (ASD)'.

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.

Sealed: 10/5/2023

FL #19073

- 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-SD450 ALUM THERMALLY BROKEN S.G.D. (N.I.)

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

| no | date | by | description |
|----|----------|----|---------------------|
| A | 02.02.18 | | UPDATED TO 2017 FBC |
| B | 02.12.21 | | UPDATED TO 2020 FBC |
| C | 09.27.23 | | UPDATED TO 2023 FBC |

date: 10-07-15
scale: 1/2" = 1'-0"
dr. by: TARIQ
chk. by:

drawing no.
W15-75

sheet 1 of 8

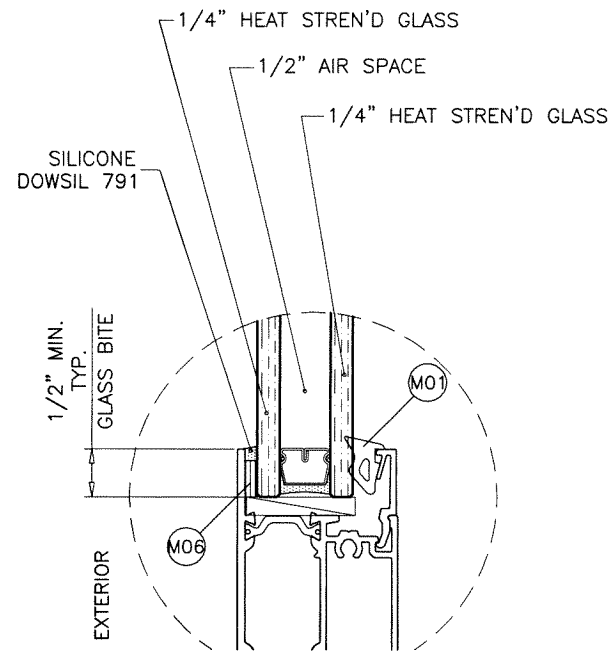
AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100 FAX. (305) 262-6978
COMP - ANL \ W15 - 75ESW

| DESIGN LOAD CAPACITY - PSF | | | |
|----------------------------|--------------------------|-------------------------|---------|
| AVERAGE PANEL WIDTH INCHES | DOOR FRAME HEIGHT INCHES | 1" OVERALL INSUL. GLASS | |
| | | EXT.(+) | INT.(-) |
| 30 | 82 | 97.2 | 97.2 |
| 36 | | 84.8 | 84.8 |
| 42 | | 76.3 | 76.3 |
| 48 | | 70.2 | 70.2 |
| 54 | | 65.8 | 65.8 |
| 61-1/32 | | 62.6 | 62.6 |
| 30 | 84 | 94.4 | 94.4 |
| 36 | | 82.3 | 82.3 |
| 42 | | 73.9 | 73.9 |
| 48 | | 67.9 | 67.9 |
| 54 | | 63.5 | 63.5 |
| 61-1/32 | | 60.3 | 60.3 |
| 30 | 90 | 86.9 | 86.9 |
| 36 | | 75.4 | 75.4 |
| 42 | | 67.4 | 67.4 |
| 48 | | 61.7 | 61.7 |
| 54 | | 57.4 | 57.4 |
| 61-1/32 | | 54.3 | 54.3 |
| 30 | 96 | 80.4 | 80.4 |
| 36 | | 69.6 | 69.6 |
| 42 | | 62.0 | 62.0 |
| 48 | | 56.5 | 56.5 |
| 54 | | 51.7 | 51.7 |
| 61-1/32 | | 48.1 | 48.1 |

LOADS SHOWN IN CHART ABOVE ARE FOR INSTALLATIONS WHERE WATER INFILTRATION RESISTANCE IS NOT REQUIRED.

LIMIT ALL EXT.(+) LOADS TO 41.6 PSF FOR INSTALLATIONS WHERE WATER INFILTRATION RESISTANCE IS REQUIRED.

$$\text{AVERAGE PANEL WIDTH} = \frac{\text{DOOR FRAME WIDTH}}{\text{NUMBER OF PANELS}}$$

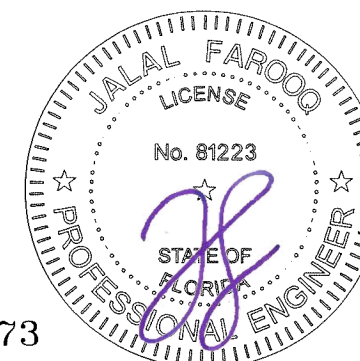


GLAZING DETAIL
1" OVERALL INSUL. GLASS

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

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FL #19073



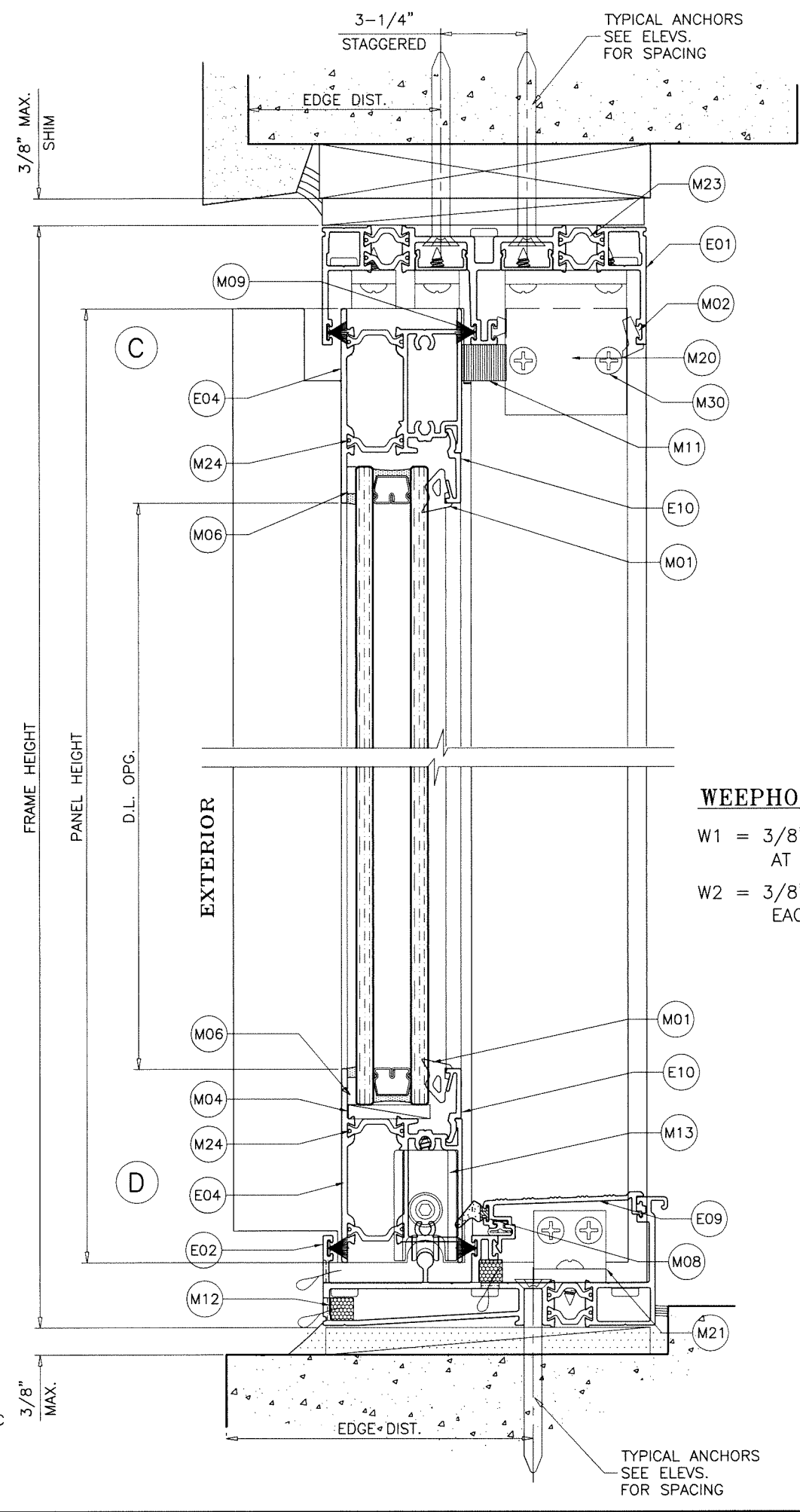
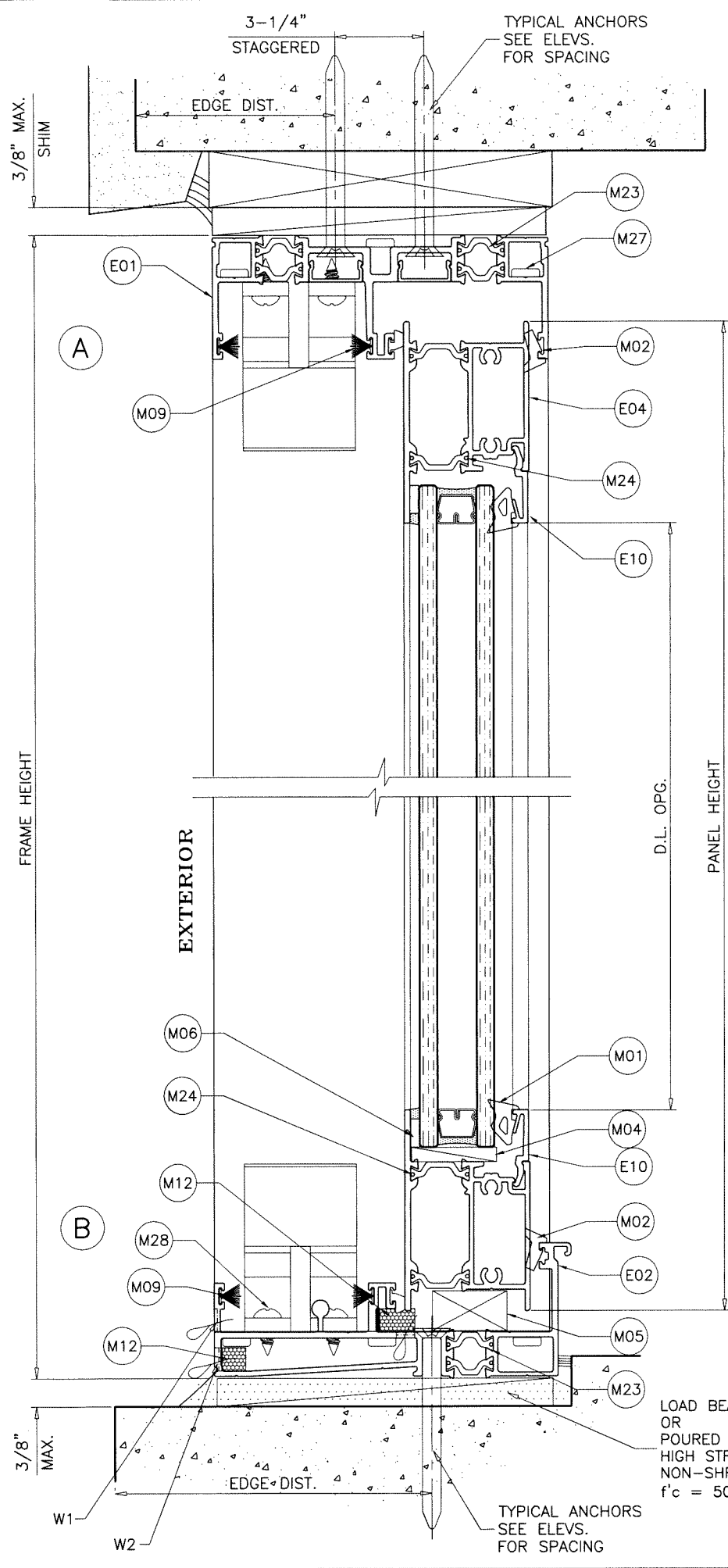
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COMP-ANL\W15-75ESW

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| revisions: | |
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| no | date by description |
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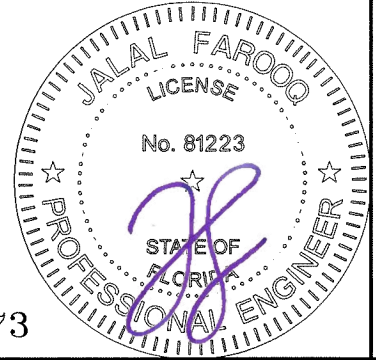
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W15-75
sheet 2 of 8



WEEPHOLES:

- W1 = 3/8" X 2" LONG WEEP NOTCH AT FIXED PANEL AT 12" FROM SIDE AND CENTER OF D.L.O.
- W2 = 3/8" X 2" LONG WEEP NOTCH AT 6" FROM EACH SIDE AND CENTER FRAME SILL

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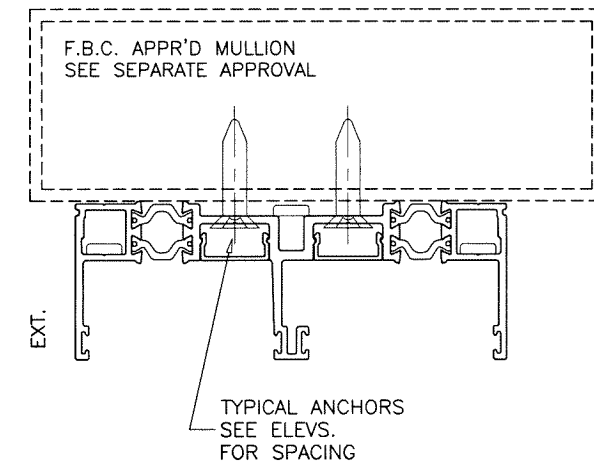
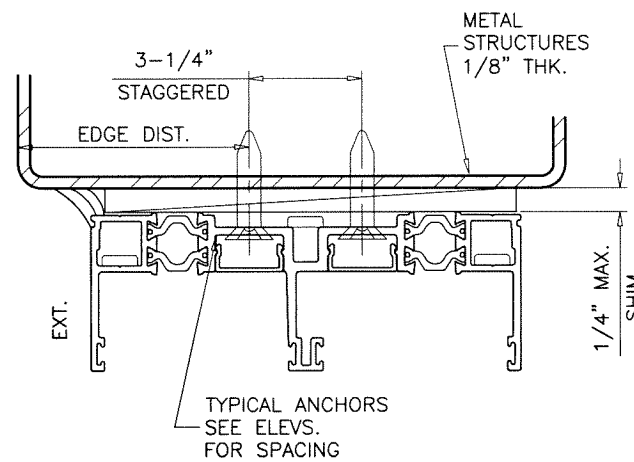
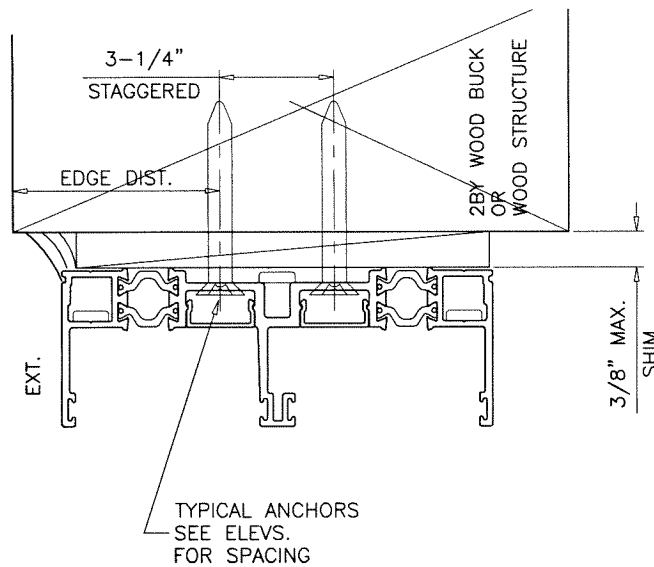
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| drawing no. W15-75 | |
| sheet 3 of 8 | |



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.

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/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
1-3/4" MIN. EMBED INTO CONCRETE (HEAD/SILL/JAMBS)
1-3/4" MIN. EMBED INTO GROUT-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
AND
INTO METAL STRUCTURES (HEAD/SILL/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)

CRITICAL EDGE DISTANCE

INTO CONCRETE AND BLOCKS = 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.

afc

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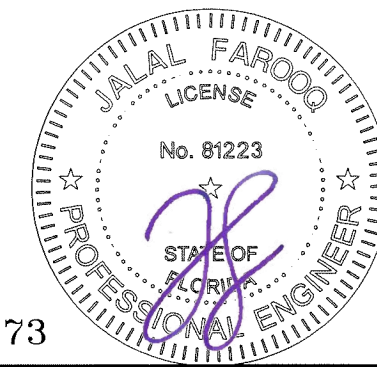
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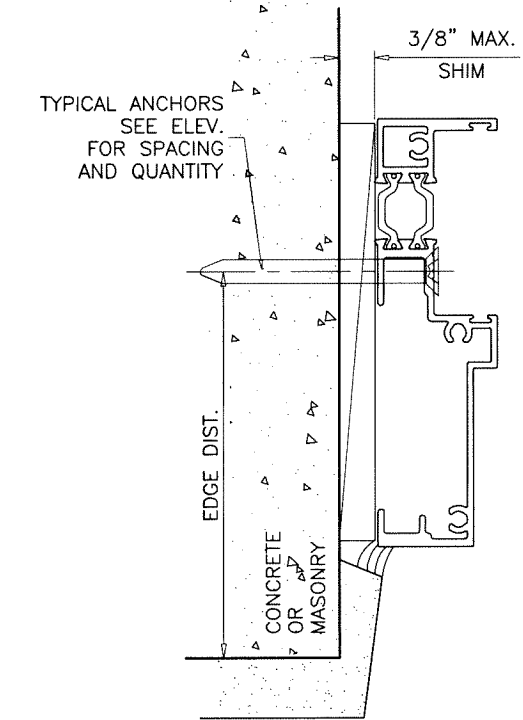
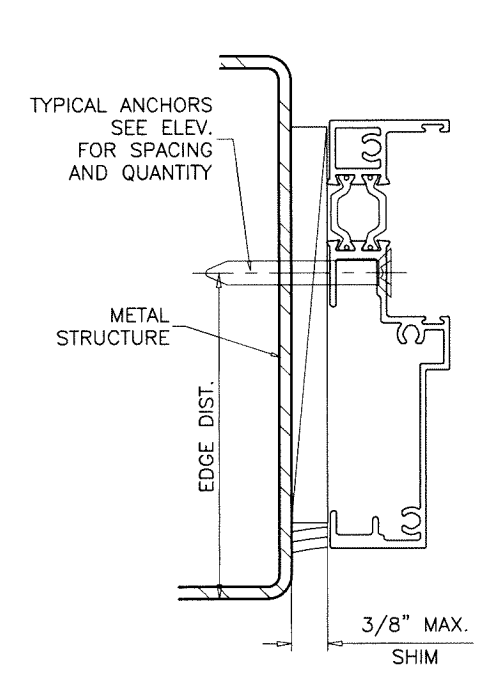
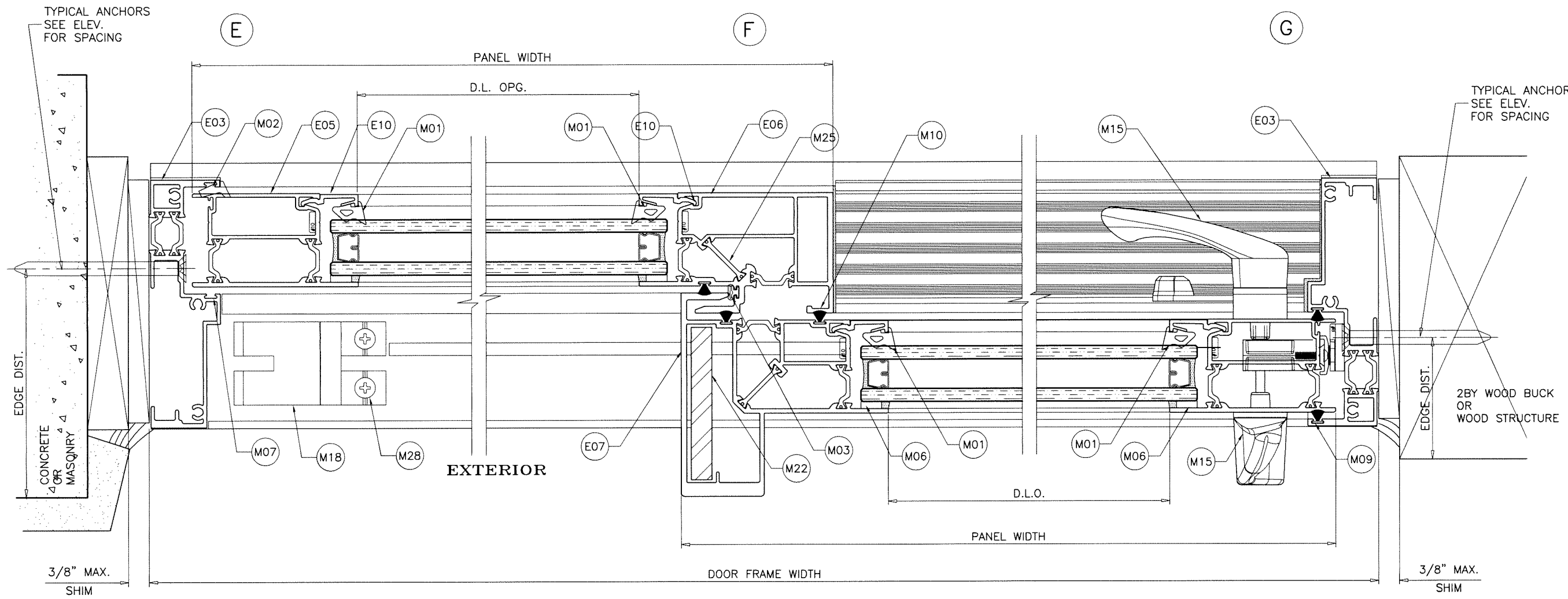
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W15-75
sheet 4 of 8

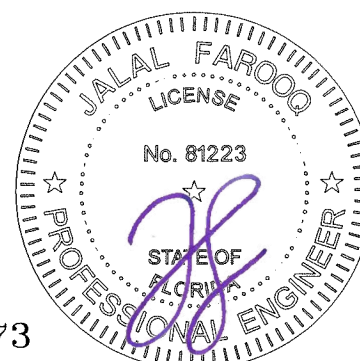
Sealed: 10/5/2023



FL #19073



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drawing no.
W15-75
sheet 5 of 8

COMP-ANL\W15-75ESW

| ITEM # | PART # | QUANTITY | DESCRIPTION | MATERIAL | MANF./SUPPLIER/REMARKS |
|--------|------------------|---------------|---|----------------|------------------------|
| E01 | ES-SD450-002-001 | 1 | FRAME HEAD | 6063-T6 | - |
| E02 | ES-SD450-002-003 | 1 | FRAME SILL | 6063-T6 | - |
| E03 | ES-SD450-005-006 | 2 | FRAME JAMB | 6063-T6 | - |
| E04 | ES-SD450-009-010 | 2/ PANEL | TOP AND BOTTOM RAIL | 6063-T6 | - |
| E05 | ES-SD450-007-008 | 2 | JAMB STILE | 6063-T6 | - |
| E06 | ES-SD450-012-013 | 1 | INTERIOR INTERLOCK | 6063-T6 | - |
| E07 | ES-SD450-014-015 | 1 | EXTERIOR INTERLOCK | 6063-T6 | - |
| E08 | ES-6011 | AS REQD. | FRAME COVER | 6063-T6 | - |
| E09 | ES-SD450-004 | 1 | THRESHOLD | 6063-T6 | - |
| E10 | ES-SD450-011 | 4/ PANEL | GLASS STOP | 6063-T6 | - |
| M01 | TR-02943E-4 | AS REQD. | GLAZING SPACER | EPDM | DUROMETER 70±5 SHORE A |
| M02 | 27-420 | AS REQD. | FIX. PANEL INTERIOR WEDGE | EPDM | DUROMETER 70±5 SHORE A |
| M03 | 27-425 | AS REQD. | BULB GASKET | EPDM | DUROMETER 70±5 SHORE A |
| M04 | NP-200-M41 | AS REQD. | SETTING BLOCK | EPDM | DUROMETER 80±5 SHORE A |
| M05 | ES-21-B02 | AS REQD. | SETTING BLOCK | EPDM | DUROMETER 80±5 SHORE A |
| M06 | - | 4/ PANEL | 1/8" X 3/8" SINGLE FACE GLAZING TAPE | POLYURETHANE | - |
| M07 | 27-448 | AS REQD. | FIX PANEL EXTERIOR WEDGE | EPDM | DUROMETER 75±5 SHORE A |
| M08 | QLON 52109 | AS REQD. | COMPRESSION SEAL FOR ASTRAGAL | FOAM CELL | - |
| M09 | W23291NK | AS REQD. | FRAME W'STRIPPING, PILE WITH INTEGRAL FIN | PILE | - |
| M10 | W22252NK | AS REQD. | INTERLOCK W'STRIPPING, PILE WITH INTEGRAL FIN | PILE | - |
| M11 | P6304 AFK | AS REQD. | 4" X 1" ADHESIVE PILE PAD | PILE | - |
| M12 | ES-SD450-F01 | AS REQD. | 5/8" X 5/8" X 2" RETICULATED FOAM 30PPI | OPEN CELL FOAM | - |
| M13 | GTT-R34/3-01-A | 2/ MOV. PANEL | ROLLER ASSEMBLY (ZAMAK WITH ACETAL WHEELS) | - | - |
| M14 | PS01-1020 | 1 | 2 POINT MORTISE LOCK | CAST ALUMINUM | - |
| M15 | PS01-0014-117 | 1 | 2 POINT LOCK HANDLE KIT | CAST ALUMINUM | - |
| M16 | 191036 | 1 | SBML STRIKER | ST/ST | - |
| M17 | ES-SD450-P01 | 1 | 3/16" PLATE FOR STRIKE ASSEMBLY | ALUMINUM | - |
| M18 | SGD 1600 | AS REQD. | BUMPER | ALUMINUM | - |
| M19 | PLUG 2-500 | AS REQD. | ROLLER SCREW PLUG | PVC | - |
| M20 | ALU-A-028 | 1 | FIXED PANEL CLIP AT TOP RAIL | ALUMINUM | - |
| M21 | ALU-A-028 | 1 | FIXED PANEL CLIP AT BOTTOM RAIL | ALUMINUM | - |
| M22 | - | 1 | INTERLOCK REINFORCING | GALV. STEEL | - |
| M23 | 1945 | AS REQD. | INSULBAR 16MM OFFSET | POLYAMIDE | ENSINGER |
| M24 | 1673 | AS REQD. | INSULBAR 20MM OFFSET | POLYAMIDE | ENSINGER |
| M25 | 1175 | AS REQD. | INSULBAR 24MM FLAT | POLYAMIDE | ENSINGER |
| M27 | #10 X 1-1/4" | AS REQD. | FRAME AND PANEL ASSEMBLY FASTENERS | ST/ST | PH SMS |
| M28 | #10 X 1/2" | AS REQD. | BUMPER AND ROLLER ASSEMBLY FASTENERS | ST/ST | PH SMS |
| M29 | #8 X 5/8" | AS REQD. | ALUMINUM PLATE ASSEMBLY FASTENERS | ST/ST | PH SMS |
| M30 | #8 X 1/2" | AS REQD. | BUMPER ASSEMBLY FASTENERS | ST/ST | PH SMS |
| M31 | #8 X 1/2" | AS REQD. | ASSEMBLY FASTENER AT STRIKE PLATE | ST/ST | FH SMS |

LOCK:

SURFACE MOUNT METALLIC HANDLE AT 43" FROM BOTTOM
FASTENED TO LOCK STILE WITH
(2) 8-32 X 2" FH MS

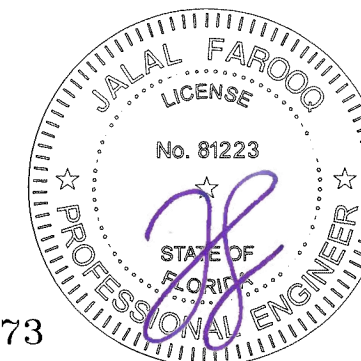
SURFACE MOUNT METALLIC 3 PLY DUAL HOOK LOCK
43" FROM BOTTOM
FASTENED TO LOCK STILE WITH
(2) #10 X 1" FH SMS

SURFACE MOUNT METALLIC KEEPER AT 44" FROM BOTTOM
FASTENED TO FRAME JAMB WITH
(3) #8 X 1/2" PH SMS

SEALANT:

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

Sealed: 10/5/2023



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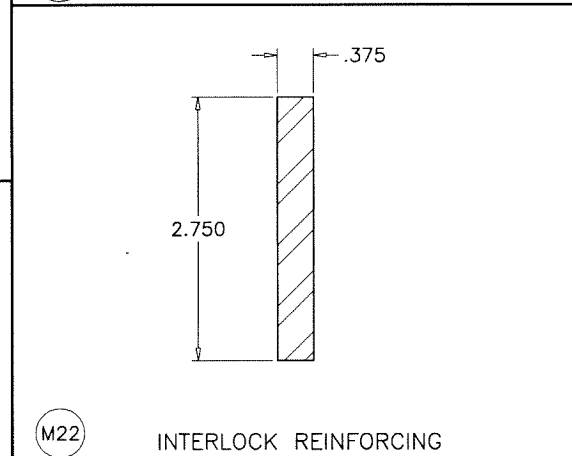
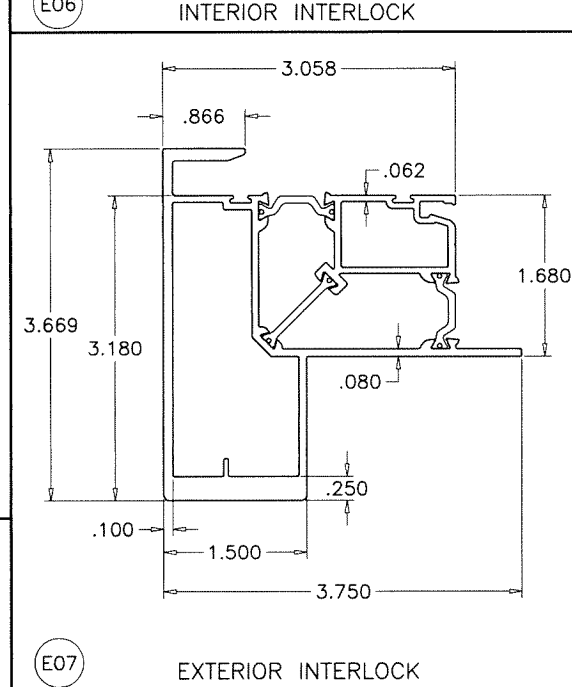
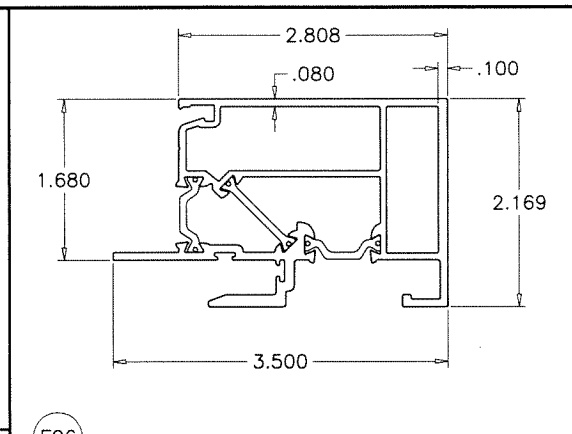
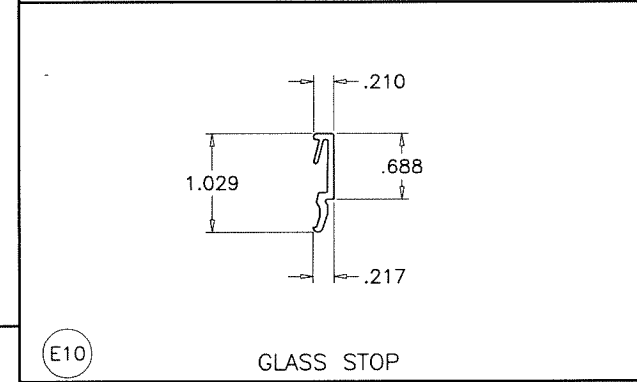
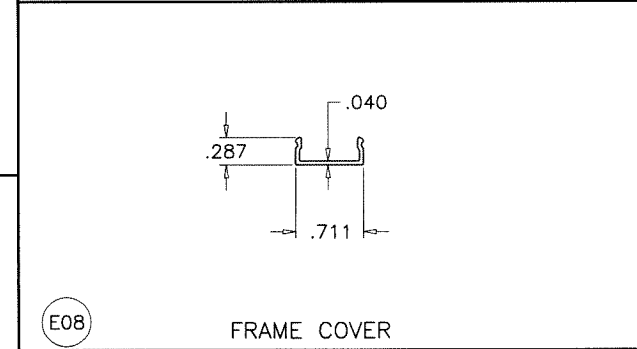
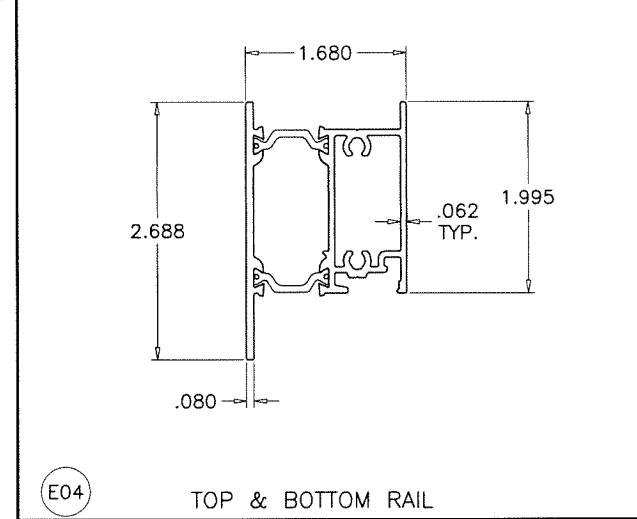
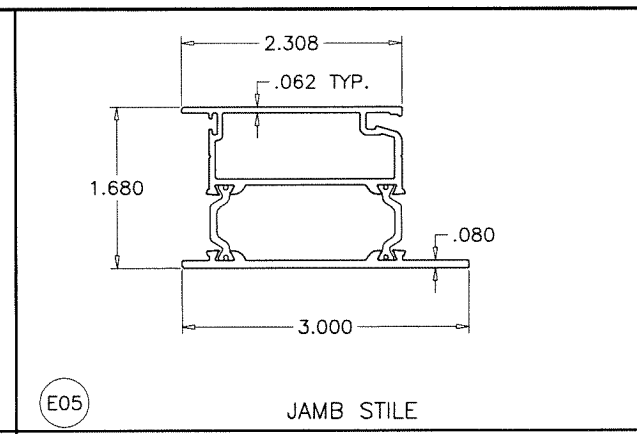
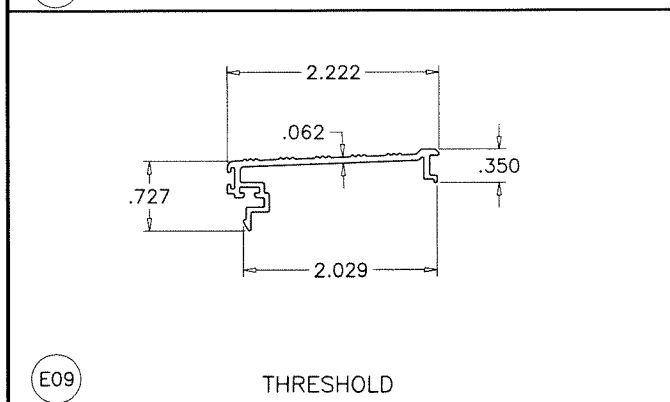
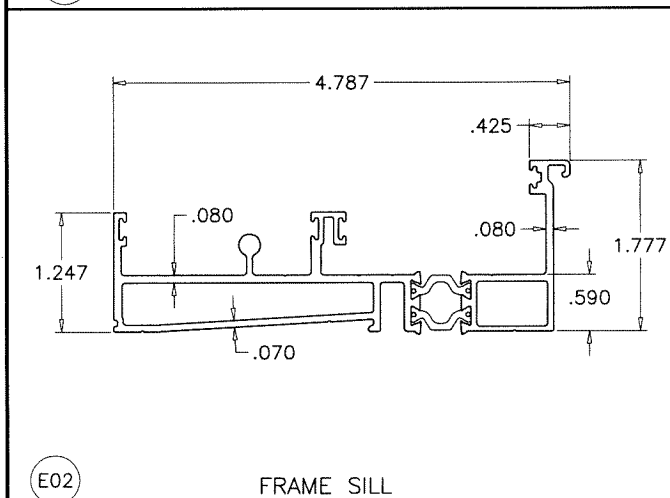
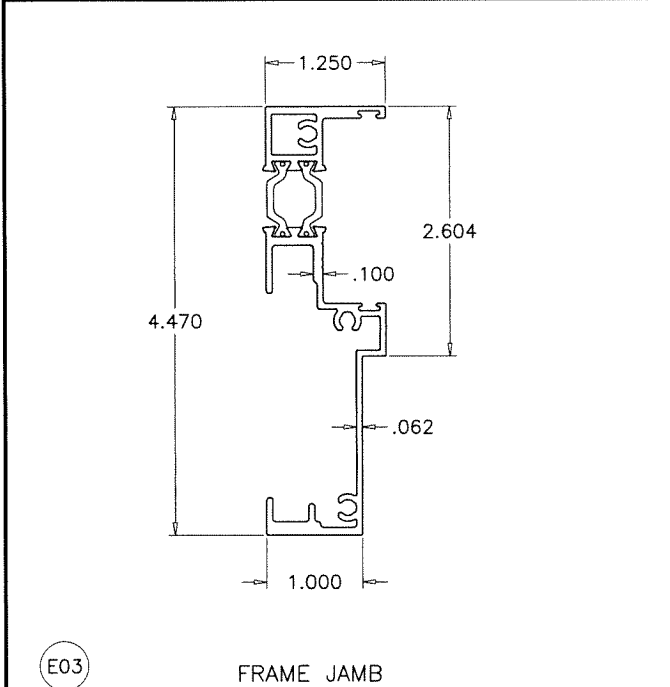
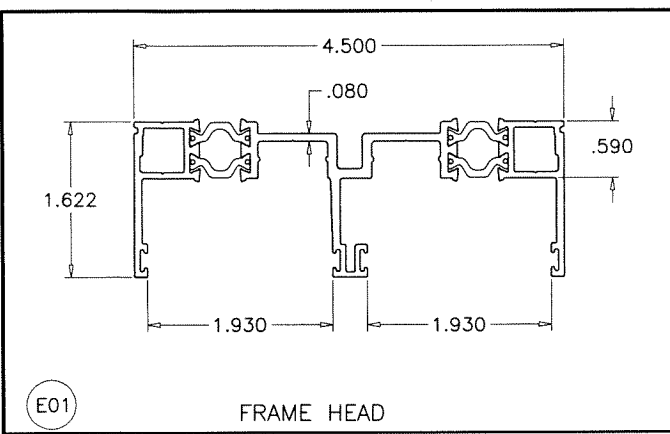
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sheet 6 of 8



M23 16MM OFFSET

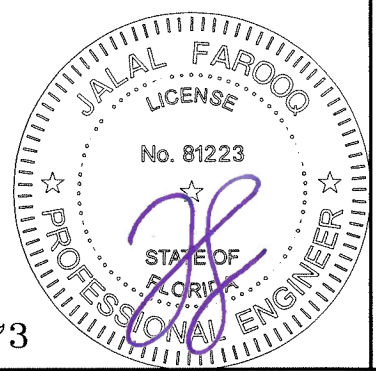
M24 20MM OFFSET

M25 24MM FLAT

TECATHERM® 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

Sealed: 10/5/2023



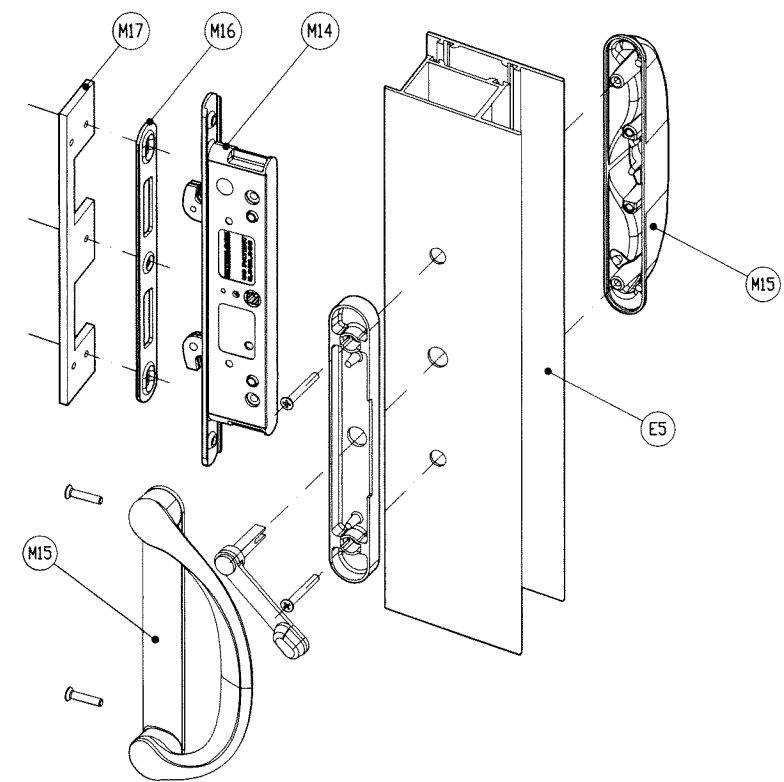
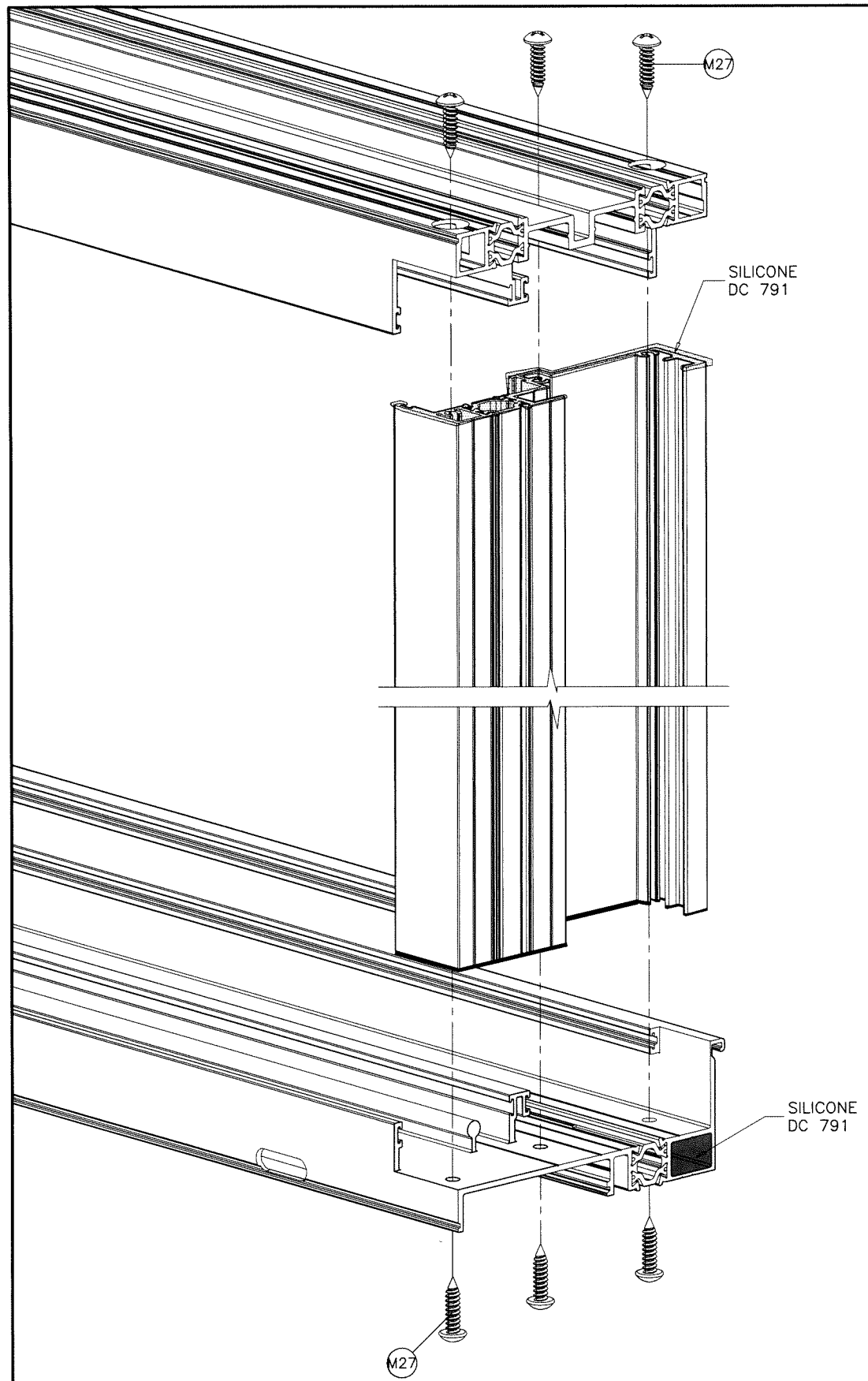
FL #19073

af c
AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100 FAX. (305) 262-6978
COMP-ANL\W15-75ESW

ES-SD450 ALUM THERMALLY BROKEN S.G.D. (N.I.)
E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

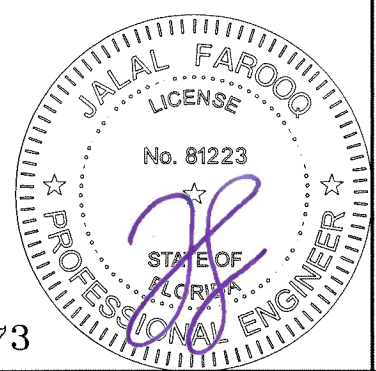
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| | | |
| | | |

date: 10-07-15
scale: 1/2" = 1"
dr. by: TARIQ
chk. by:
drawing no.
W15-75
sheet 7 of 8



Sealed: 10/5/2023

FL #19073



af c
AL-FAROOQ CORPORATION
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| revisions: | |
|------------|---------------------|
| no | date by description |
| | |
| | |
| | |

date: 10-07-15
 scale: 1/2" = 1"
 dr. by: TARIQ
 chk. by:

drawing no.
W15-75
 sheet 8 of 8