

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

SERIES ES P250 (N.I.)
ALUMINUM THERMALLY BROKEN FIXED WINDOW

DESIGN LOAD RATINGS FOR THESE WINDOWS TO BE AS PER
CHARTS SHOWN ON SHEET 2.

APPROVAL APPLIES TO SINGLE UNITS OR SIDE BY SIDE
COMBINATIONS OF FIX./FIX. OR FIXED 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 2023 (8TH EDITION)/2026 (9TH 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.

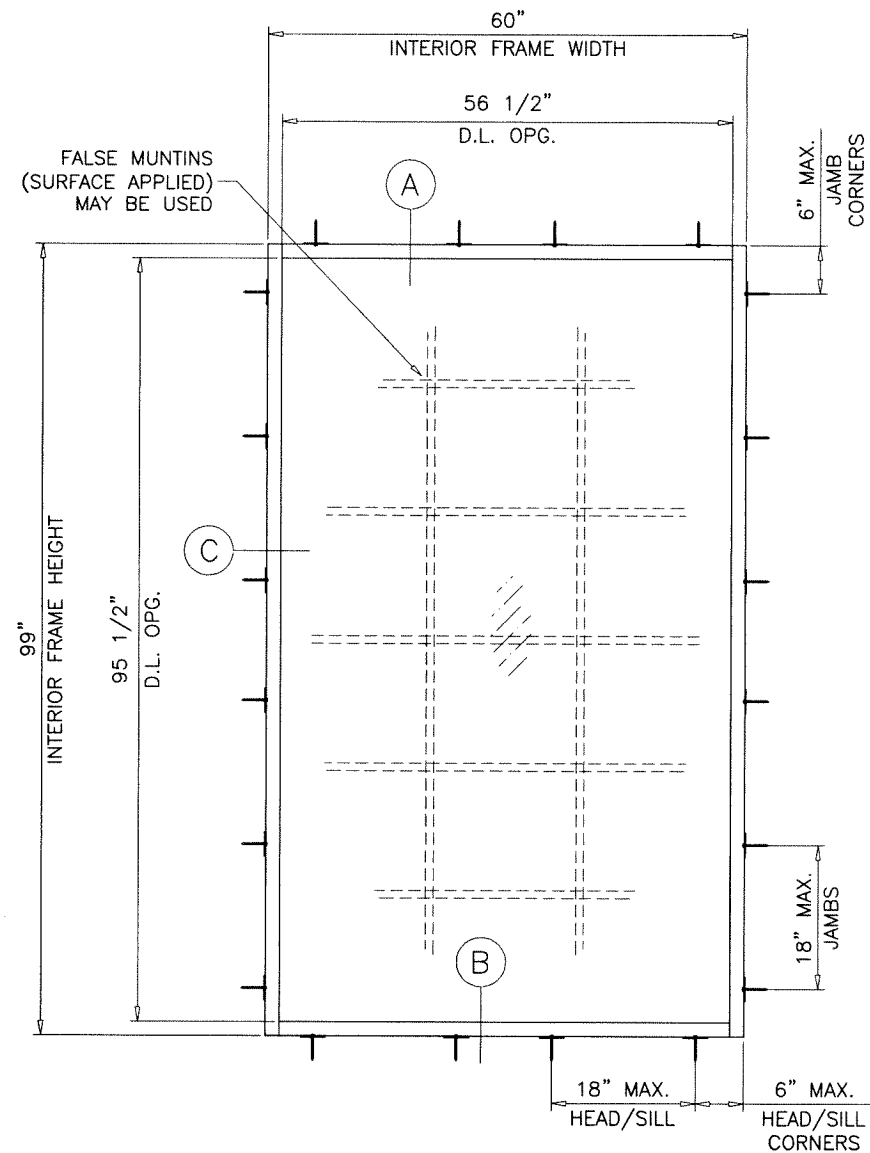
ALL SHIMS TO BE LOAD-BEARING, (HIGH DENSITY PLASTIC/COMPOSITE, METAL
OR OTHER RIGID MATERIALS).

MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS, THAT
COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE
REQUIREMENTS OF THE 2023/2026 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.



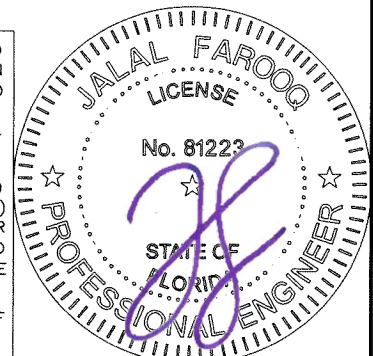
TYPICAL ELEVATION

FASTENERS AND CONNECTORS (AS APPLICABLE) SHOWN IN THIS APPROVAL MAY NOT MEET
CORROSION RESISTANCE REQUIREMENTS FOR COASTAL OR SALT WATER EXPOSURE ZONES.
COMPLIANCE WITH THESE CONDITIONS TO BE CHECKED PER FBC 1711.

Sealed: 9/17/2026

FL #19063

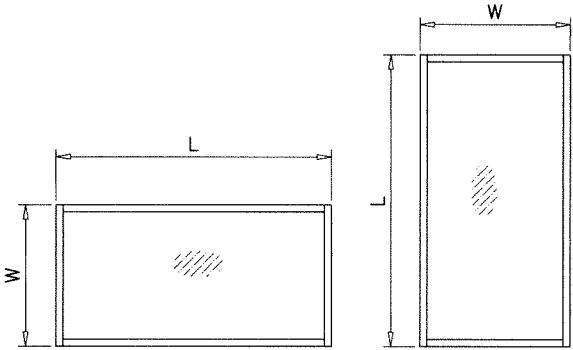
- A- CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND
INSTALLATION OF THIS PRODUCT BASED ON THIS PRODUCT EVALUATION
PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED
ON THIS DOCUMENT.
- B- THIS PRODUCT EVALUATION DOCUMENT WILL BE CONSIDERED INVALID IF
ALTERED BY ANY MEANS.
- C- 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.



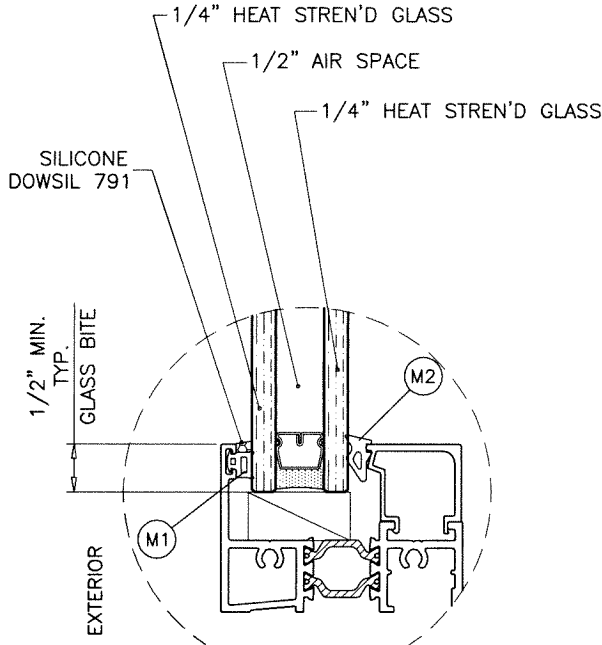
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AL-FAROOQ CORPORATION ENGINEERS & PRODUCT DEVELOPMENT 9360 SUNSET DRIVE, SUITE 220 MIAMI, FLORIDA 33173 TEL. (305) 264-8100 FAX. (305) 262-6978 (C.A.N. 3538)	
ES-P250 ALUM THERMALLY BROKEN FIXED W. (N.I.)	
E.S. WINDOWS, LLC 3550 N.W. 49 STREET MIAMI, FL. 33142 TEL. (305) 638-5151 FAX. (305) 638-5158	
revisions:	
no	date
A	10.13.17
B	01.21.21
C	09.27.23
D	09.15.26
description	by
UPDATED TO 2017 FBC	
UPDATED TO 2020 FBC	
UPDATED TO 2023 FBC	
UPDATED TO 2026 FBC	
date: 10-13-15	
scale: 1/2"=1'-0"	
dr. by: TARIQ	
chk. by:	
drawing no.	
W15-78	
sheet 1 of 6	

DESIGN LOAD CAPACITY -- PSF			
INTERIOR FRAME DIMS.		1" OVERALL INSUL. GLASS	
WIDTH	HEIGHT	EXT.(+)	1NT.(-)
30"	48"	120.0	120.0
36"		120.0	120.0
42"		114.3	114.3
48"		100.0	100.0
54"		100.0	100.0
60"		100.0	100.0
66"		100.0	100.0
72"		100.0	100.0
30"	54"	120.0	120.0
36"		120.0	120.0
42"		114.3	114.3
48"		100.0	100.0
54"		88.9	88.9
60"		88.9	88.9
66"		88.9	88.9
72"		88.9	88.9
30"	60"	120.0	120.0
36"		120.0	120.0
42"		114.3	114.3
48"		100.0	100.0
54"		88.9	88.9
60"		80.0	80.0
66"		80.0	80.0
72"		80.0	80.0
30"	66"	120.0	120.0
36"		119.3	119.3
42"		109.1	109.1
48"		100.0	100.0
54"		88.9	88.9
60"		80.0	80.0
66"		72.7	72.7
72"		72.7	72.7
30"	72"	120.0	120.0
36"		120.0	120.0
42"		112.5	112.5
48"		100.0	100.0
54"		88.9	88.9
60"		80.0	80.0
66"		72.7	72.7
72"		66.7	66.7
30"	78"	120.0	120.0
36"		119.3	119.3
42"		107.7	107.7
48"		99.4	99.4
54"		88.9	88.9
60"		80.0	80.0
66"		72.7	72.7
72"		66.7	66.7

DESIGN LOAD CAPACITY -- PSF			
INTERIOR FRAME DIMS.		1" OVERALL INSUL. GLASS	
WIDTH	HEIGHT	EXT.(+)	1NT.(-)
30"	84"	120.0	120.0
36"		108.5	108.5
42"		97.4	97.4
48"		89.5	89.5
54"		83.7	83.7
60"		79.6	79.6
66"		72.7	72.7
30"	90"	120.0	120.0
36"		116.2	116.2
42"		103.9	103.9
48"		95.0	95.0
54"		88.5	88.5
60"		80.0	80.0
66"		72.7	72.7
30"	96"	120.0	120.0
36"		110.2	110.2
42"		98.2	98.2
48"		89.5	89.5
54"		83.0	83.0
60"		78.1	78.1
30"	102"	118.5	118.5
36"		102.3	102.3
42"		90.9	90.9
48"		82.6	82.6
54"		76.4	76.4
30"	108"	120.0	120.0
36"		111.4	111.4
42"		98.8	98.8
48"		89.5	89.5
54"		82.5	82.5
30"	114"	120.0	120.0
36"		104.4	104.4
42"		92.4	92.4
48"		83.5	83.5



NOTE:
WIDTH AND LENGTH DIMENSIONS CAN BE ORIENTED
VERTICALLY OR HORIZONTALLY AS SHOWN ABOVE.



GLAZING DETAIL
1" OVERALL INSUL. GLASS

Sealed: 9/17/2026

NOTE:
GLASS CAPACITIES ON THIS SHEET ARE
BASED ON ASTM E1300-16 (3 SEC. GUSTS).

FL #19063



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AL-FAROOQ CORPORATION
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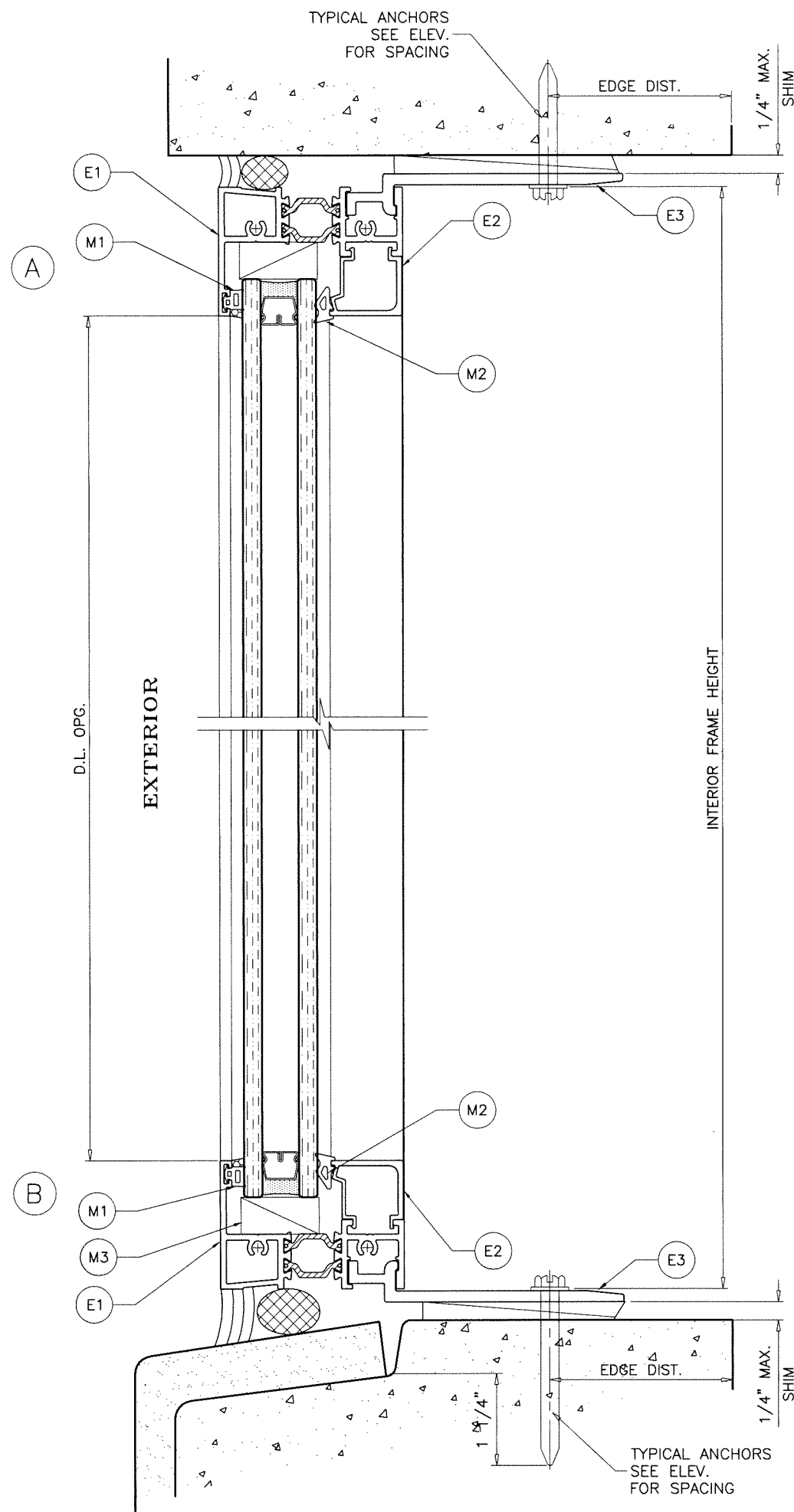
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revisions:	
no	description

date: 10-13-15	scale: 1/2" = 1"	dr. by: TARIQ	chk. by:
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drawing no.	W15-78
sheet	2 of 6



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' ($F_u=190$ KSI, $F_y=127$ KSI)

1/4" DIA. ULTRACON+ BY 'DEWALT' ($F_u=164$ KSI, $F_y=148$ KSI)

INTO 2BY WOOD BUCKS OR WOOD STRUCTURES

1-1/2" MIN. PENETRATION INTO WOOD (HEAD/SILL/JAMBS)

THRU 1BY BUCKS INTO CONC. OR MASONRY

1-1/4" MIN. EMBED INTO CONCRETE (HEAD/SILL)

1-1/4" MIN. EMBED INTO CONC. OR MASONRY (JAMBS)

DIRECTLY INTO CONC. OR MASONRY

1-1/4" MIN. EMBED INTO CONCRETE (HEAD/SILL)

1-1/4" MIN. EMBED INTO CONC. OR MASONRY (JAMBS)

1/4" DIA. BI-FLEX 300 SELF DRILLING SCREWS BY 'DEWALT' ($F_u=96$ KSI, $F_y=57$ KSI)

1/4" DIA. DRIL-FLEX SELF DRILLING SCREWS BY 'DEWALT' (GRADE 5 CRS)

INTO F.B.C. APPROVED MULLIONS (MIN. THK. = 1/8")

INTO METAL STRUCTURES

STEEL : 1/8" THK. MIN. ($F_y = 36$ KSI MIN.)

ALUMINUM : 1/8" THK. MIN. (6063-T5 MIN.)

(STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

ANCHOR EDGE DISTANCES

INTO CONCRETE AND MASONRY = 2-1/2" MIN.

INTO WOOD STRUCTURE = 1" MIN.

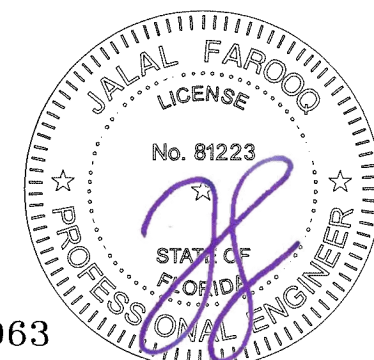
INTO METAL STRUCTURE = 3/4" MIN.

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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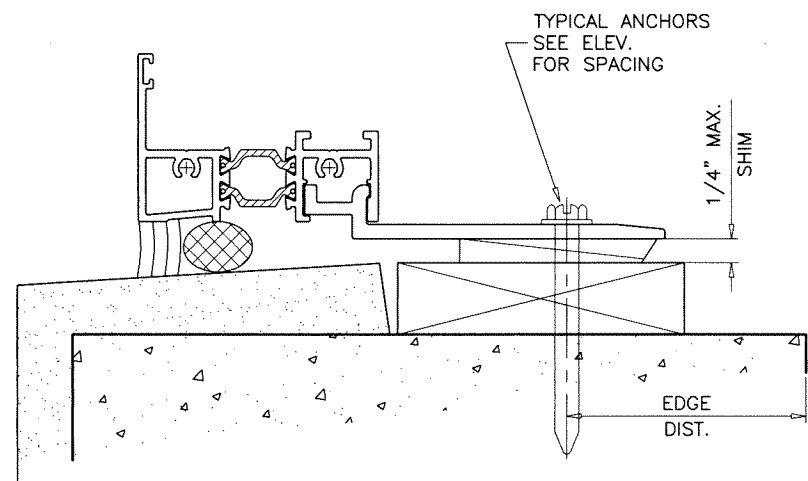
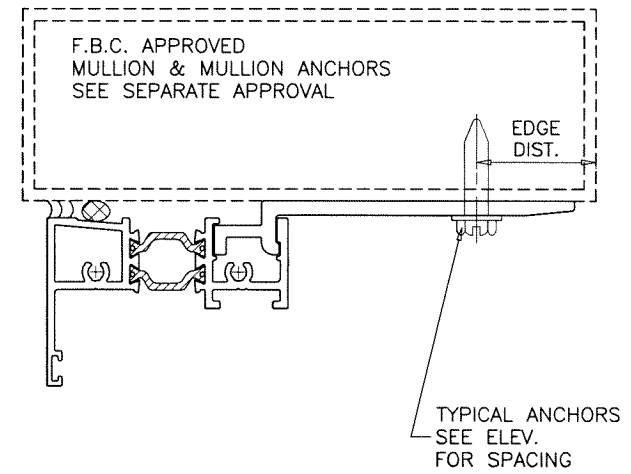
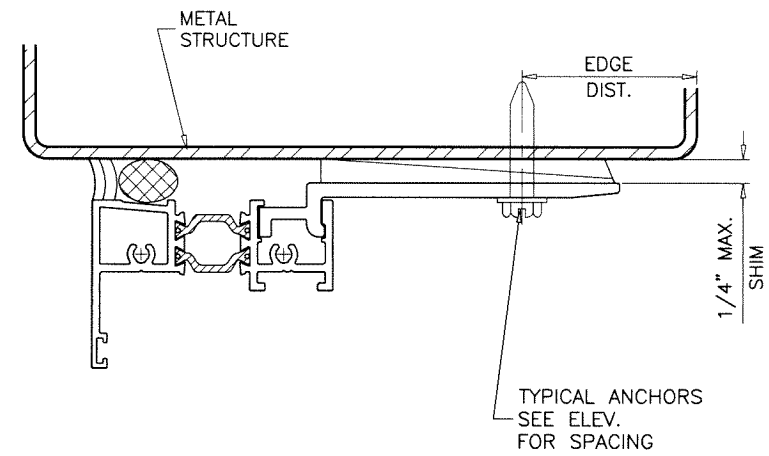
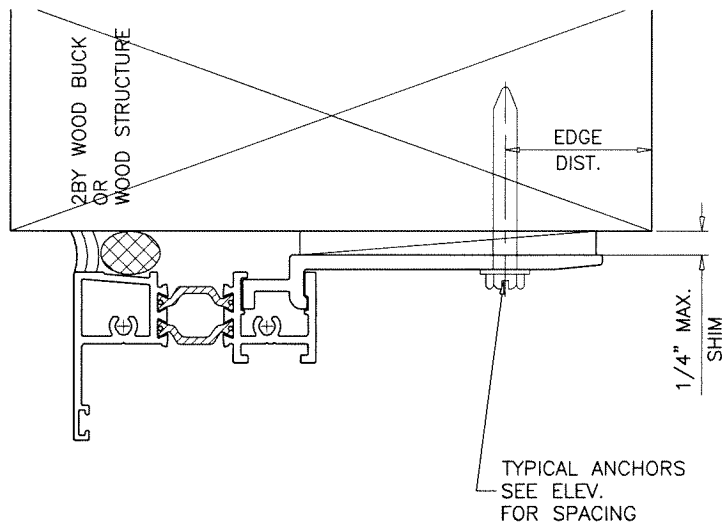
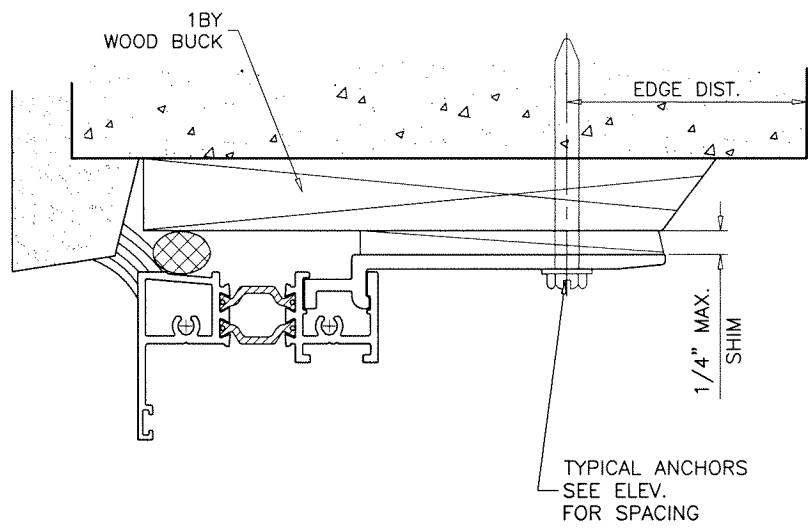
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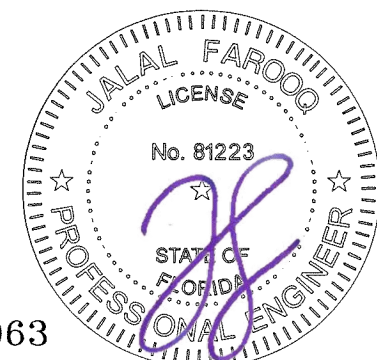
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COMP-ANL W15-78ESW

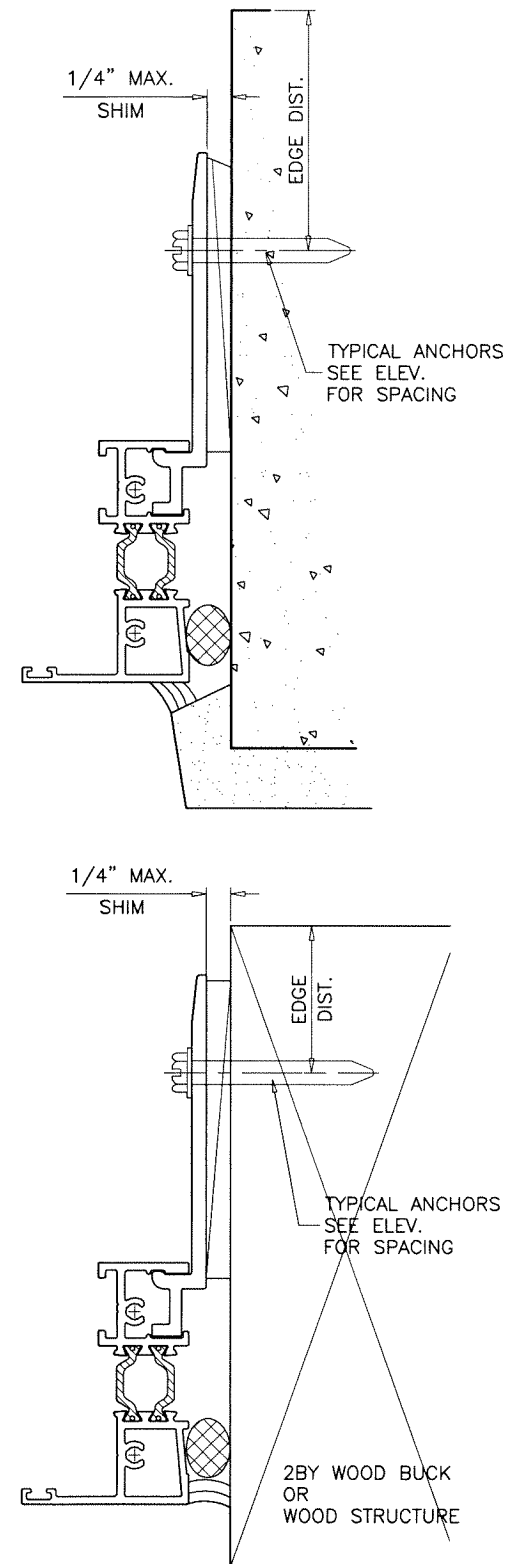
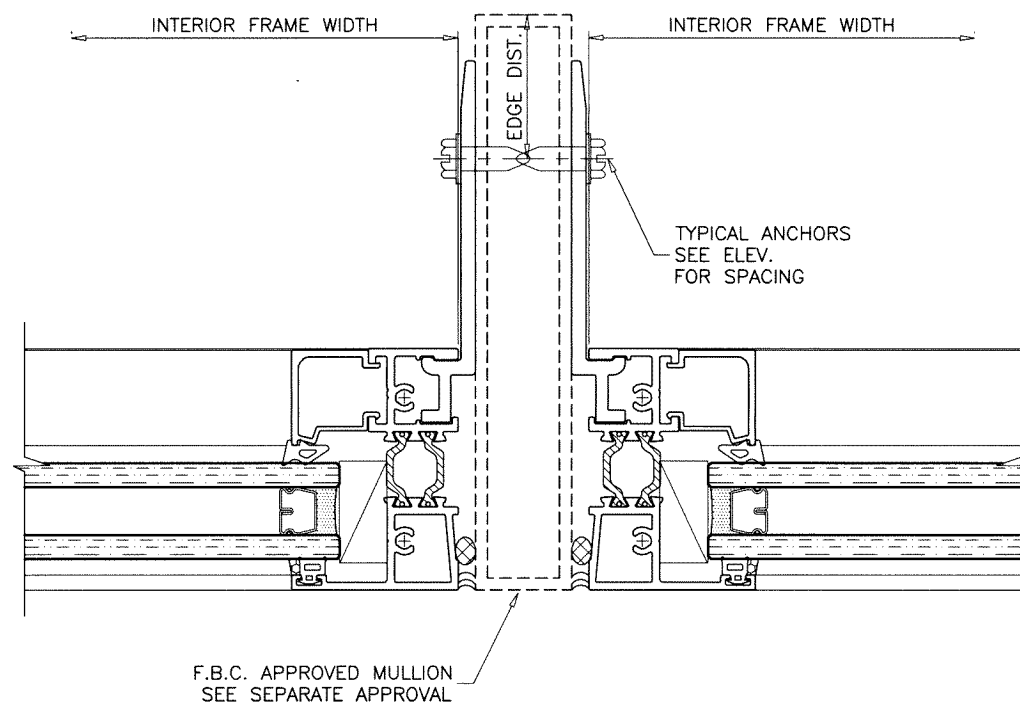
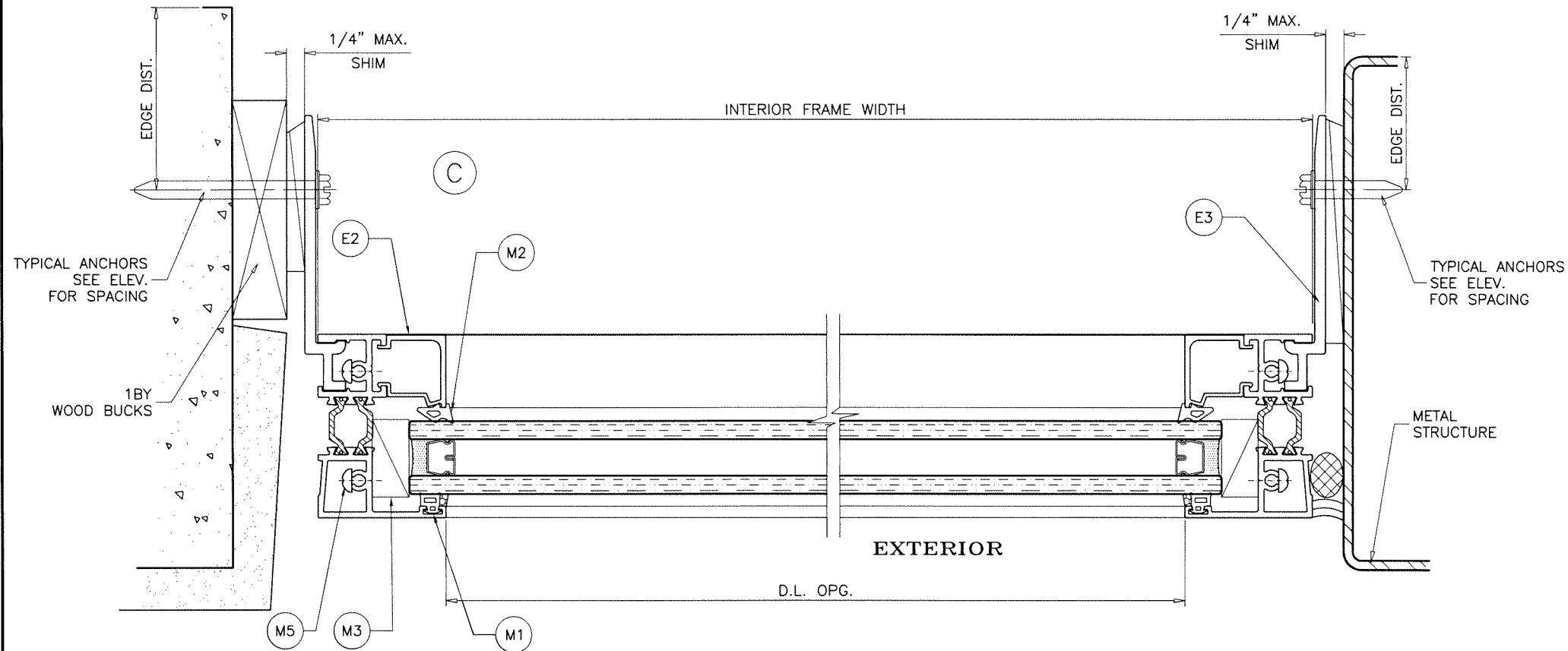
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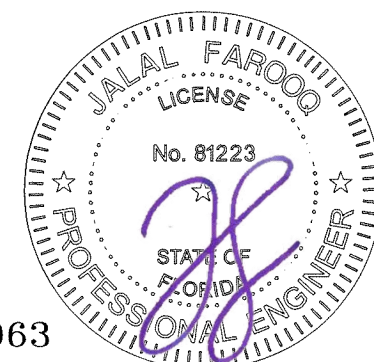
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COMP-ANL\W15-78ESW

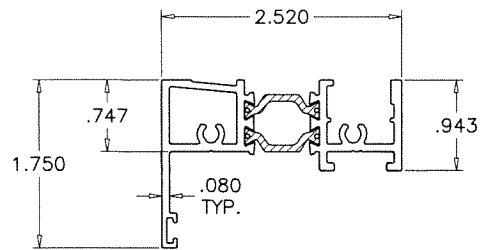
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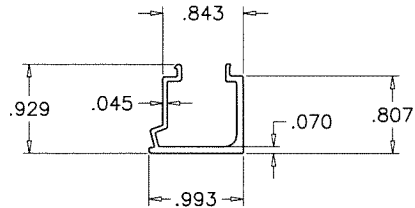
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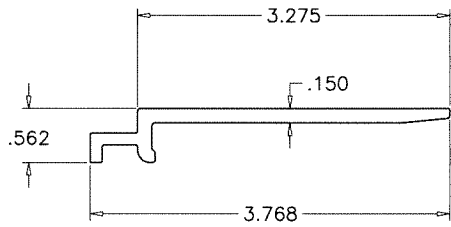
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W15-78
sheet 5 of 6



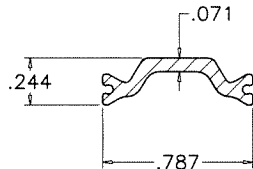
E1 WINDOW FRAME



E2 GLASS STOP



E3 STRAP ANCHOR



M4 20MM OFFSET

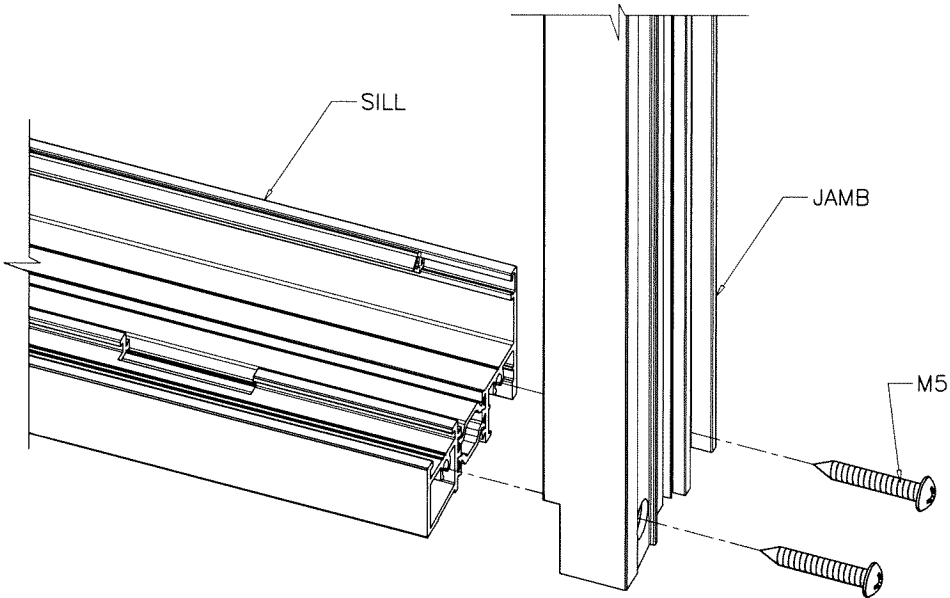
TECATHERM® 66 GF INSULBARS
SCALE 1:1

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

ITEM #	PART #	REQD.	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
E1	ES-P250-006-007	4	WINDOW FRAME	6063-T6	-
E2	ES-P250-008	4	GLASS STOP	6063-T5	-
E3	ES-P252-007	AS REQD.	STRAP ANCHOR, 4" LONG	6005-T5	-
M1	ES-P251-G02	AS REQD.	GLAZING GASKET (EXTERIOR)	SCR-900	TREMCO TR-19619SW, DUROMETER 70±5 SHORE A
M2	ES-P251-G03	AS REQD.	GLAZING GASKET (INTERIOR)	EPDM	TREMCO TR-3234E, DUROMETER 70±5 SHORE A
M3	ES-45T-B01	2/ SIDE	SETTING BLOCK, 4" LONG, AT 1/4 POINTS	EPDM	SOLUCIONESENCAUCHO, DUROMETER 80±5 SHORE A
M4	2479	AS REQD.	INSULBAR 20MM OFFSET	POLYAMIDE	ENSINGER
M5	#10 X 1-1/4"	-	ASSEMBLY FASTENERS	ST/ST	PH SMS

SEALANT:

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



FRAME ASSEMBLY

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