

ES-7100 ALUMINUM SKYLIGHT SYSTEM

SMALL MISSILE IMPACT

WITH TRIPLE LAMINATED GLASS

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

THE CONTRACTOR USING THIS PRODUCT APPROVAL SHALL BE RESPONSIBLE TO INSTALL THE GLAZING PRODUCT HEREBY EVALUATED ACCORDING TO THIS DOCUMENT AND ACCORDING TO THE LIMITATIONS OF THE FLORIDA BUILDING CODE INCLUDING SECTION 2405.4 (REFER TO SHEET 2 of 9).

A QUALIFIED LICENSED DESIGN PROFESSIONAL (PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT) SHALL BE RESPONSIBLE TO PROVIDE THE LOADS THAT THE GLAZING SYSTEM IS TO WITHSTAND IN A SPECIFIC PROJECT. THOSE LOADS ARE TO BE COMPARED WITH THE ALLOWABLE LOADS HEREIN INDICATED ACCORDING TO THE INSTRUCTIONS ON THE RIGHT OF THE PAGE.

THE DESIGN PROFESSIONAL REPOSNSIBLE FOR THE SCOPE IN THE SPECIFIC PROJECT WHERE THIS PRODUCT APPROVAL IS TO BE USED WILL BECOME THE ENGINEER OF RECORD AND WILL BE RESPONSIBLE OF THE PROPER USE OF THIS DOCUMENT.

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

ANCHORS TO BE INSTALLED PER MANUF'S INSTRUCTIONS. SPECIFIED EMBEDMENT TO SUBSTRATE SHALL BE BEYOND FINISHES.

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 BE ISOLATED TO MEET THE REQUIREMENTS OF THE 2023 FLORIDA BLDG. CODE.

CONDITIONS NOT SHOWN IN THESE DRAWINGS ARE TO BE ANALYZED SEPARATELY; THEY ARE NOT COVERED BY THIS PRODUCT APPROVAL.

PRODUCT LABELS TO COMPLY WITH SECTIONS 1709.9.2 AND 1709.9.3 OF THE FLORIDA BUILDING CODE.

THIS GLAZING SYSTEM IS RATED FOR LARGE MISSILE IMPACT (LEVEL D). PROTECTIVE SHUTTERS ARE NOT REQUIRED.

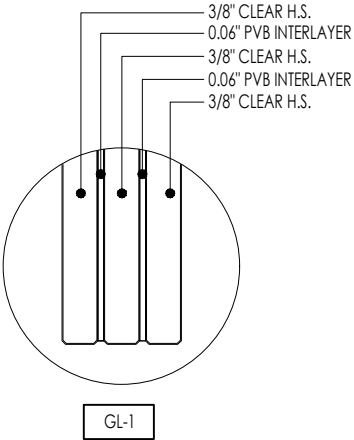
THIS DOCUMENT ADDRESSES ONLY THE STRUCTURAL COMPLIANCE OF THE GLAZING SYSTEM. ENERGY VALUES, THERMAL INFORMATION OR GLASS MANUFACTURING RESTRICTIONS SUCH AS COMPATIBILITY WITH ENERGY PERFORMANCE FILMS. ARE OUT OF THE SCOPE OF THIS DOCUMENT.

INSTRUCTIONS:

USE CHART AS FOLLOWS:

STEP 1 DETERMINE DESIGN WIND PRESSURE REQUIREMENTS BASED ON WIND VELOCITY, BUILDING HEIGHT, WIND ZONE, USING APPLICABLE ASCE 7 STANDARD.

STEP 2 SEE SHEET 3 FOR GLASS DESIGN LOAD CAPACITY. TYPE IS AS FOLLOWS:



STEP 3 USING CHART ON SHEET 04 SELECT ANCHOR OPTION WITH DESIGN LOAD CAPACITY MORE THAN DESIGN LOAD SPECIFIED IN STEP 1 ABOVE.

STEP 4 THE LOWEST VALUE RESULTING FROM STEPS 3 THAT EXCEED THE DESIGN WIND PRESSURES DETERMINED THRU STEP 1 SHALL APPLY TO ENTIRE SYSTEM.

E.S.
WINDOWS, LLC

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TEL. (305) 638-5151
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PROJECT
ES-7100
ALUMINUM SKYLIGHT
SMALL MISILE IMPACT

FLORIDA APPROVAL #
FL# 46852.1

SHEET NAME:
COVER AND NOTES

DRAWING REVISION LOG		
No.	Date:	Revision:
1	08/15/2024	PER PUBLIC COMMENTS

ENGINEER:
**DEERFIELD
TECHNICAL INC.**
CA# 36112

PO BOX 1339
DEERFIELD BEACH, FL 33443

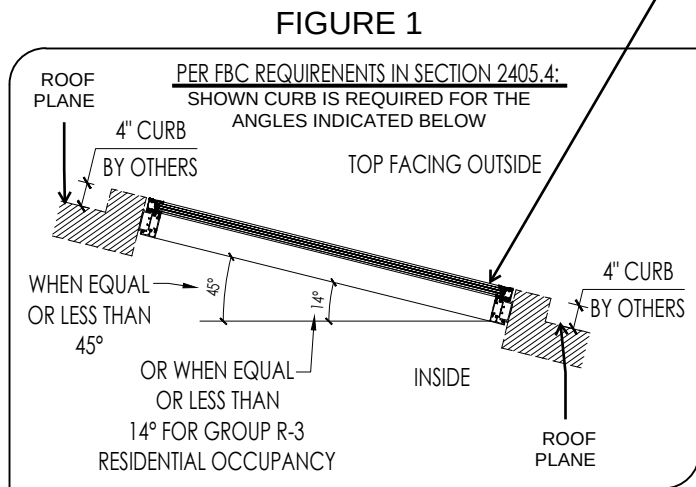
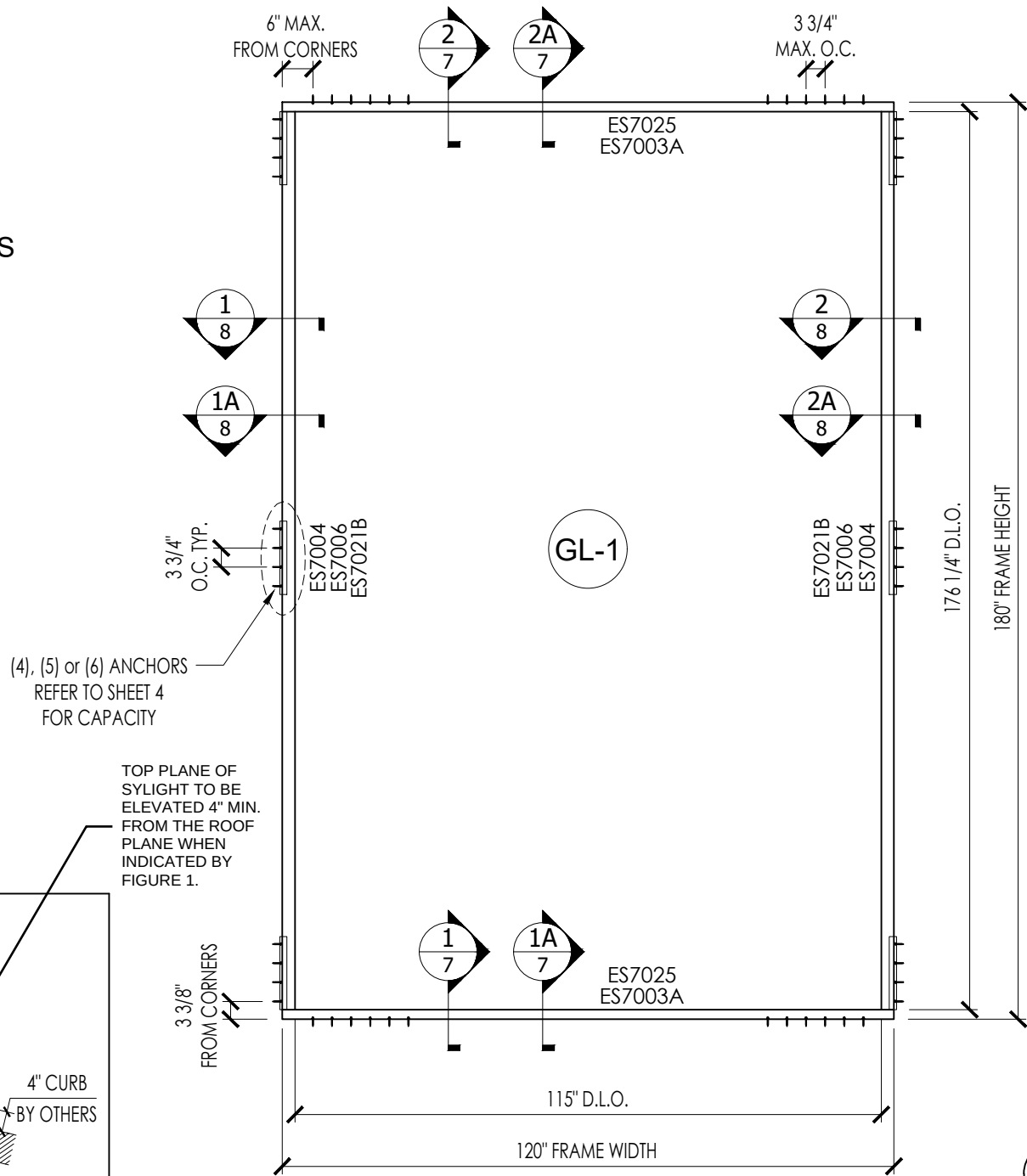
CHECKED FOR STRUCTURAL COMPLIANCE ONLY. BY:

JOHN DELGADO, P.E.
FL. REG. # 94078

John Delgado
Digitally signed by John Delgado
DN: cn=John Delgado,
ou=Deerfield Technical Inc., c=US
This item has been Digitally Signed and sealed by
John Delgado, P.E. on the date adjacent to the seal.
Printed copies of this document are not considered
signed and sealed and the signature must be verified
on any electronic copies.

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DWG NUMBER DT-PA-ESW-003	SCALE N.T.S.	
PAGE 1 of 9		

PLEASE REFER TO SHEET 4
FOR ANCHOR LAYOUT OPTIONS
AND LOAD CAPACITY



**7100 GENERIC ELEVATION
SKYLIGHT SYSTEM**

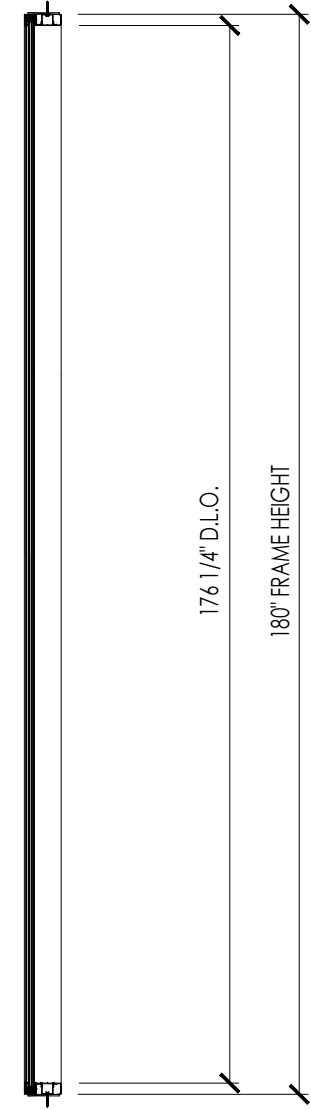
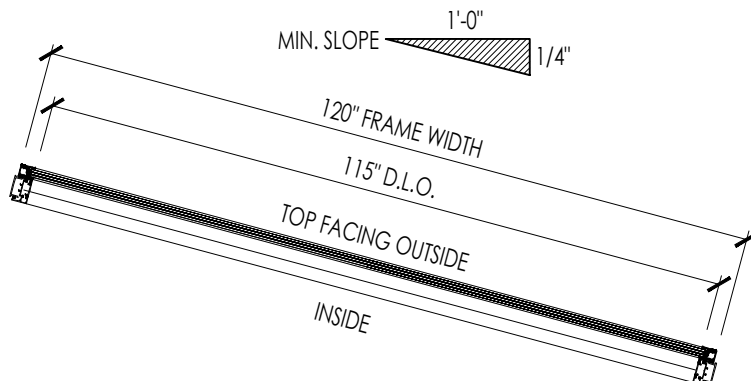


FIGURE 2
MINIMUM AND MAXIMUM ALLOWED SLOPES

SEE FIGURE 1 FOR
FBC SECTION 2405.4
REQUIREMENTS

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SHEET NAME:
ELEVATION

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ENGINEER:
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JOHN FREDY DELGADO
LICENSE
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08/18/2024
STATE OF
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PROFESSIONAL ENGINEER
JOHN DELGADO, P.E.
FL. REG. # 94078

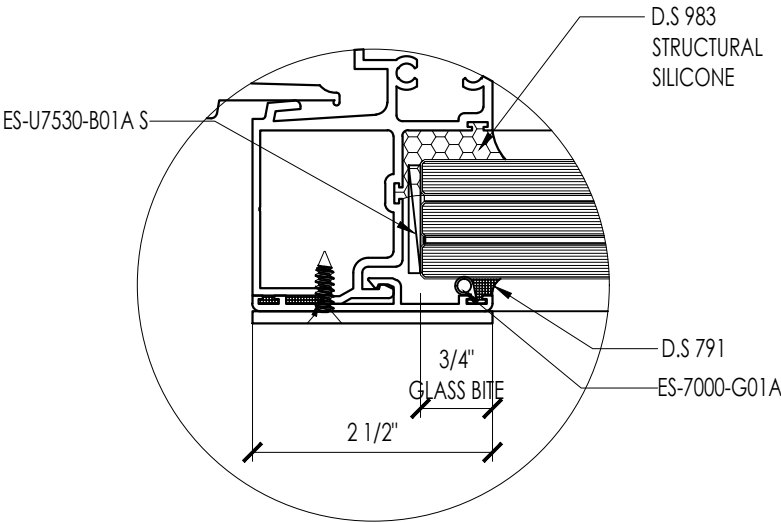
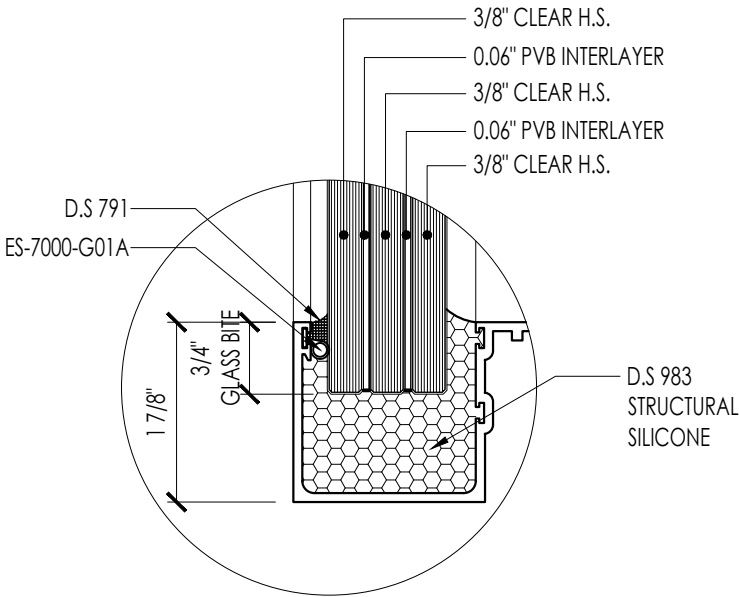
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GLAZING OPTIONS	
COMPOSITION	
G1	3/8" CLEAR H.S. + 0.060" PVB INTERLAYER + 3/8" CLEAR H.S. + 0.060" PVB INTERLAYER + 3/8" CLEAR H.S.

GLASS CAPACITY:
DLO W (115") x DLO H (176 1/4") = 140.75 SQFT
Pd: ± 150 PSF (WIND)



GL-1

PROJECT
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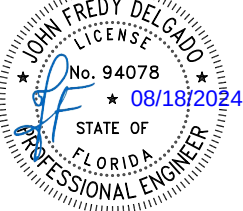
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GLAZING DETAIL

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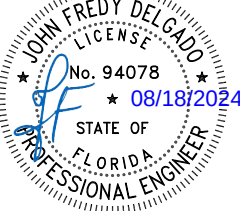
SHEET NAME:
ANCHOR CHART

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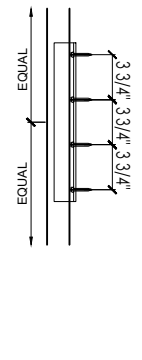
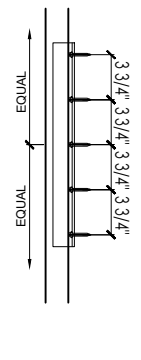
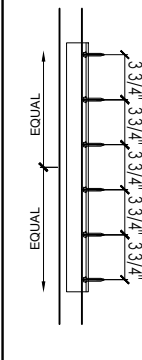
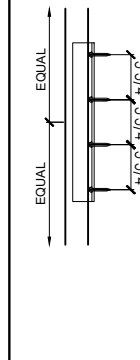
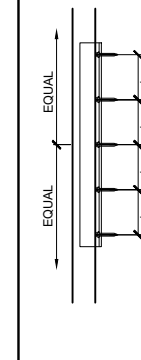
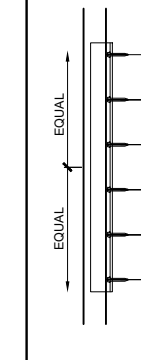
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PAGE 4 of 9		

ANCHOR DESIGN LOAD CAPACITY					
		SIDE "a"		SIDE "b" (CORNER ANCHORS)	
NOMINAL DIMS.		ANCHOR TYPE 'A'	ANCHOR TYPE 'B'	ANCHOR TYPE 'A'	ANCHOR TYPE 'B'
SIDE "a" DIMENSION	SIDE "b" DIMENSION	ALL SIDE "a" CONNECTIONS WITH ANCHORS TYPE A, AS SHOWN BELOW, WITHSTAND +/- 150 PSF.	ALL SIDE "a" CONNECTIONS WITH ANCHORS TYPE B, AS SHOWN BELOW, WITHSTAND +/- 150 PSF.	ALL SIDE "b" CONNECTIONS WITH ANCHORS TYPE A, AS SHOWN BELOW, WITHSTAND +/- 150 PSF.	ALL SIDE "b" CONNECTIONS WITH ANCHORS TYPE B, AS SHOWN BELOW, WITHSTAND +/- 150 PSF.
120	180				

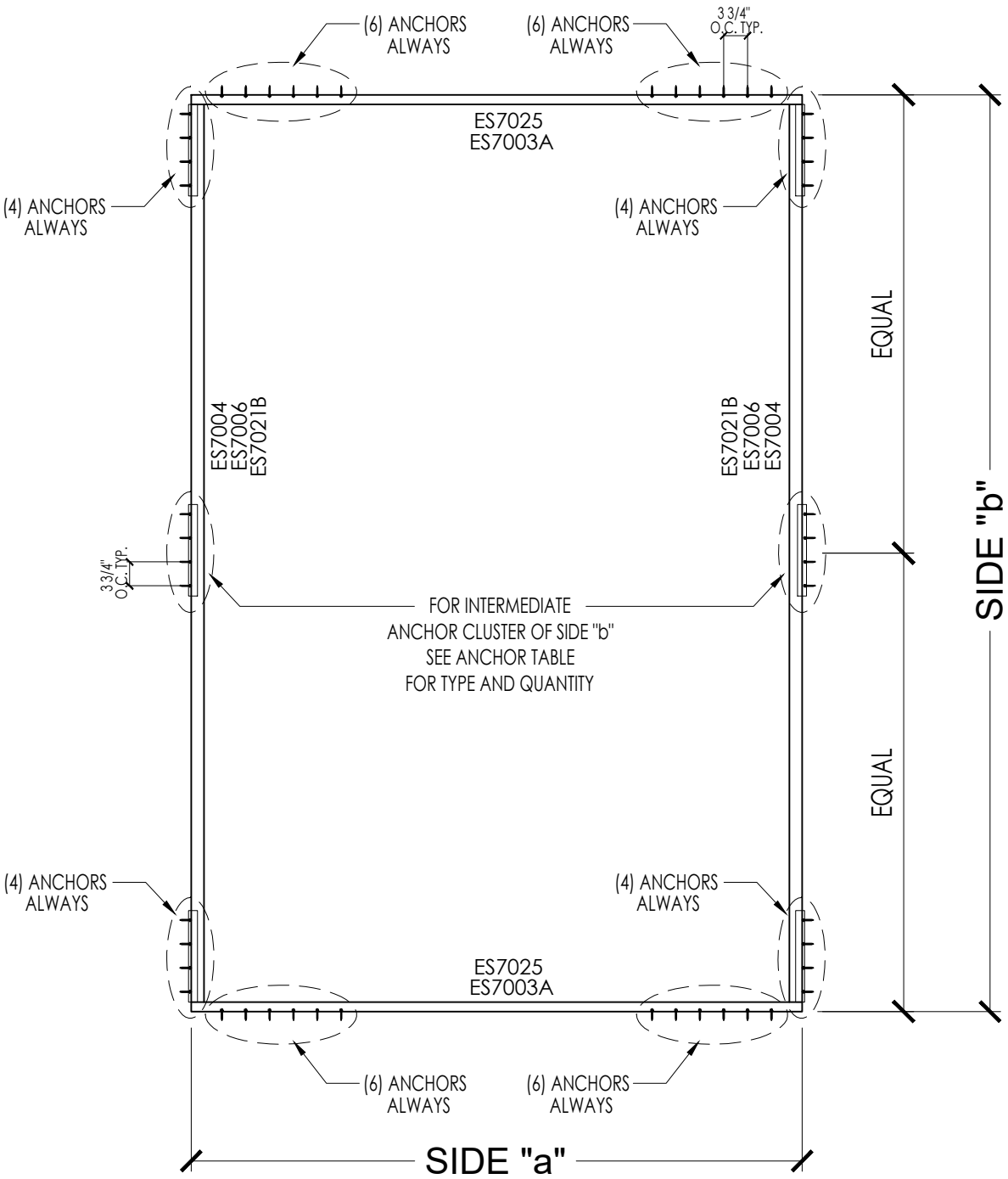
SIDE "b" (INTERMEDIATE ANCHORS)											
ANCHOR TYPE 'A'						ANCHOR TYPE 'B'					
A4		A5		A6		B4		B5		B6	
+	-	+	-	+	-	+	-	+	-	+	-
96	130	126	150	150	150	150	150	150	150	150	150
											

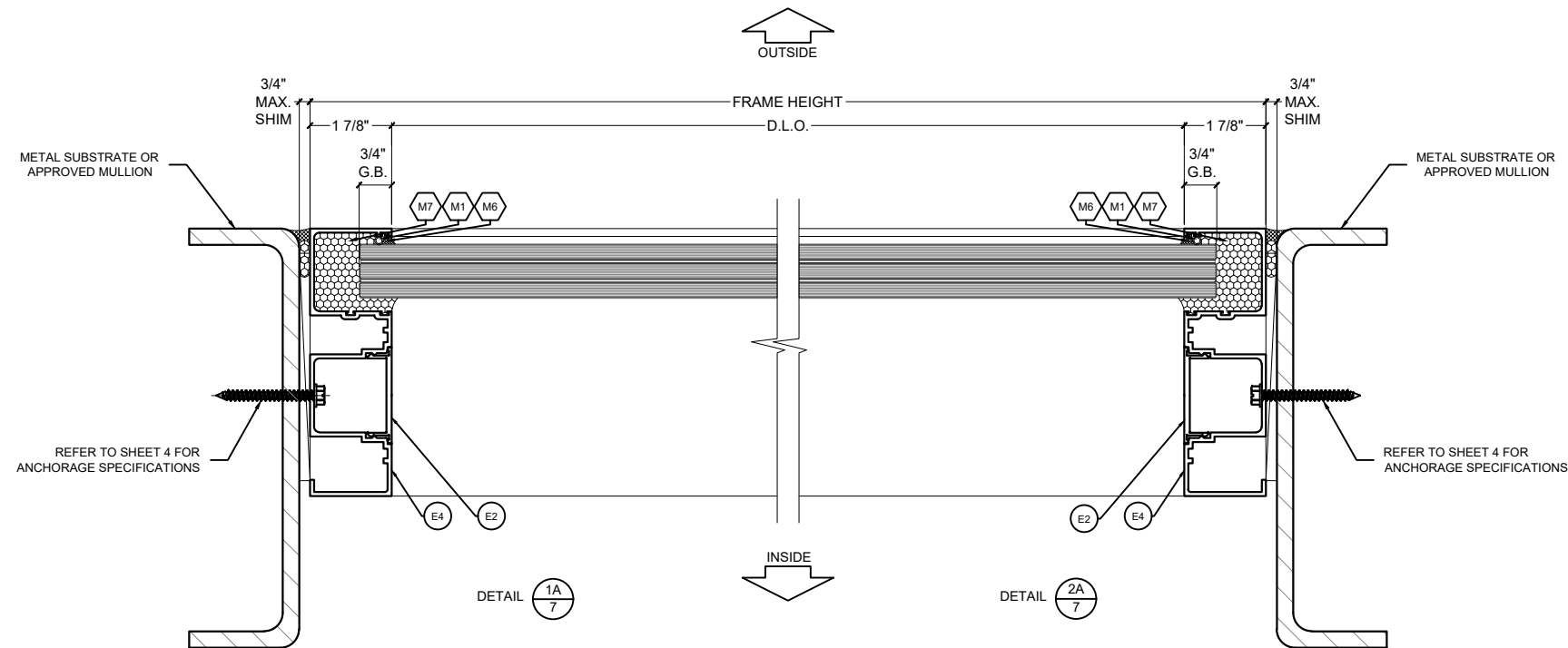
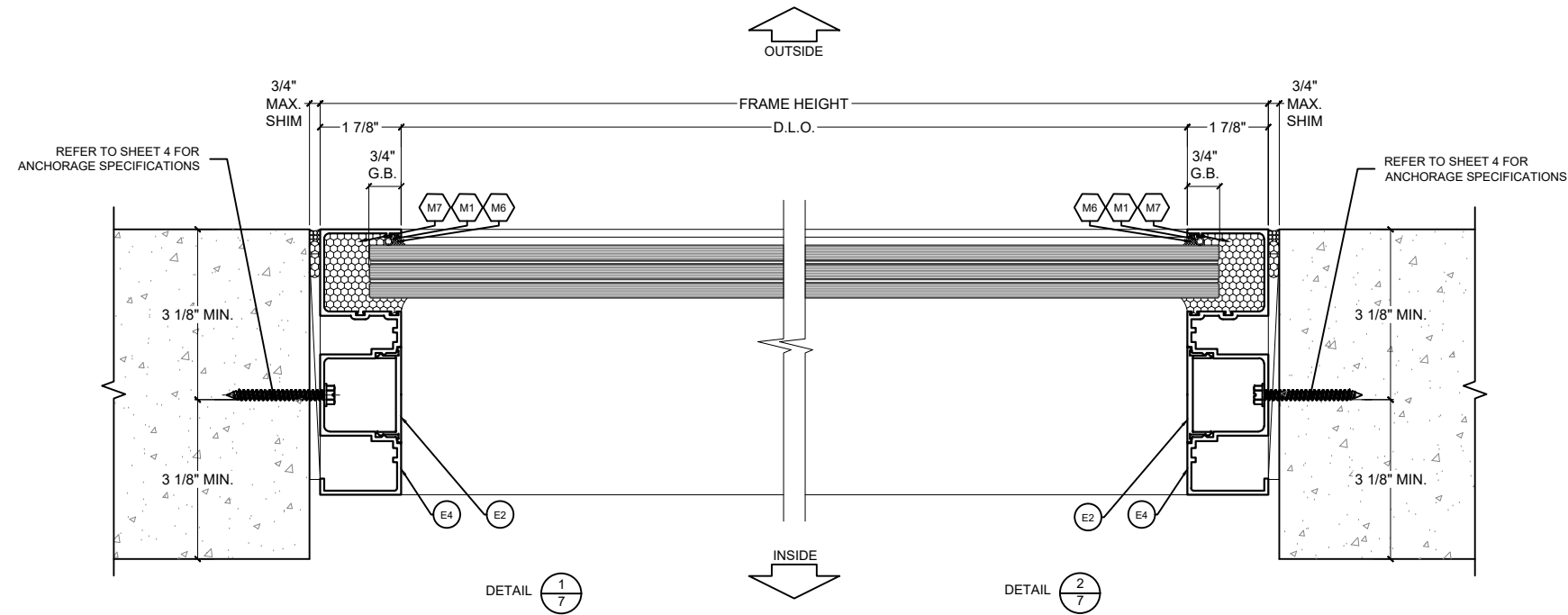
TYPICAL ANCHORS:

TYPE 'A'	TYPE 'B'
<u>5/16" DIA. ULTRACON BY 'DEWALT'</u> (FU=177 KSI, Fy=155 KSI) 2" MIN. EMBED DIRECTLY INTO CONCRETE (3500 PSI MIN.) <u>ANCHOR EDGE DISTANCES</u> INTO CONCRETE = 3 1/8" MIN.	<u>5/16" DIA. DRIL-FLEX SELF DILLING SCREWS BY 'DEWALT'</u> (GRADE 5 CRS) (3) THREADS MIN. PENETRATION BEYOND SUBSTRATE ALUMINUM: 1/4" THK. MIN. (FY=25 KSI MIN.) STEEL: 3/16" THK. MIN. (Fy = 36 KSI MIN.) (STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED) <u>ANCHOR EDGE DISTANCES</u> INTO METAL STRUCTURE = 3/4" MIN.

SEE ELEV. FOR SPACING

OTHER CONDITIONS CAN BE EVALUATED BY A FLORIDA LICENSED PROFESSIONAL ENGINEER.
HOWEVER, THE MINUMIM ANCHOR QUANTITY IS TO REMAIN AS SHOWN IN THIS DOCUMENT.





**ES7100 SKYLIGHT SYSTEM
DETAILS**

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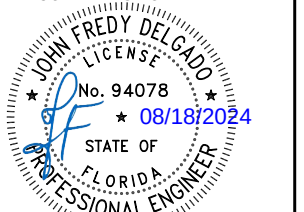
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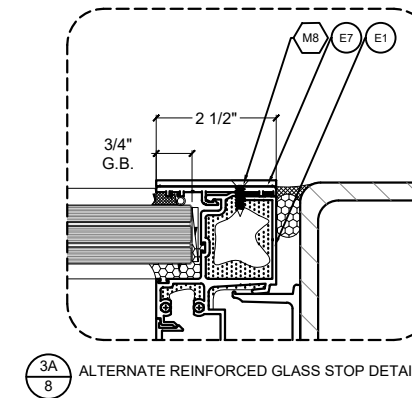
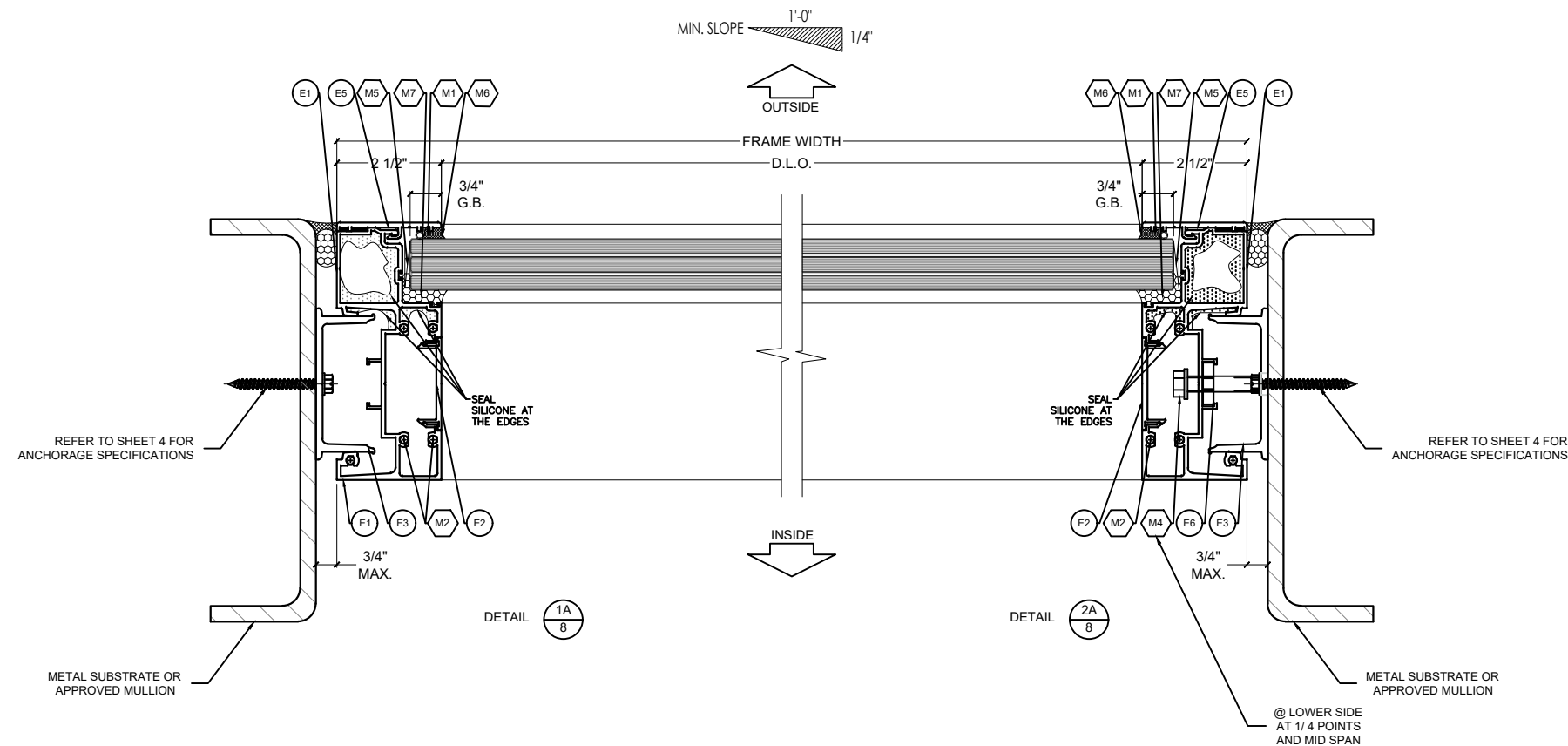
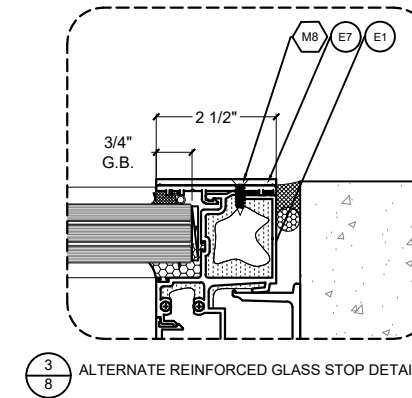
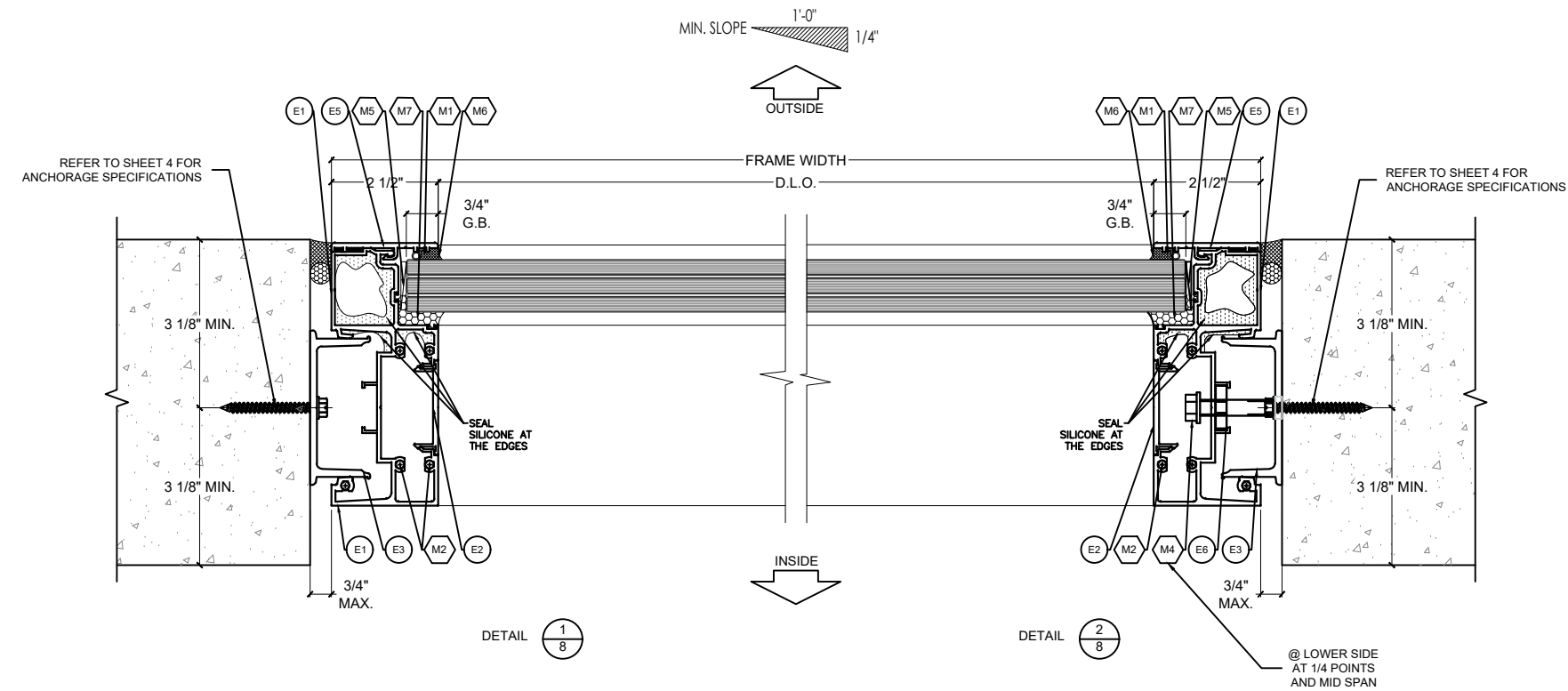
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No.	Date:	Revision:

ENGINEER:
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DWG NUMBER DT-PA-ESW-003	SCALE 3"=1'-0"	
PAGE 5 OF 9		



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08/18/2024
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FL# 46852.1

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EXTRUSIONS

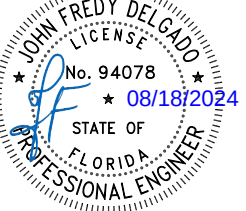
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CA# 36112

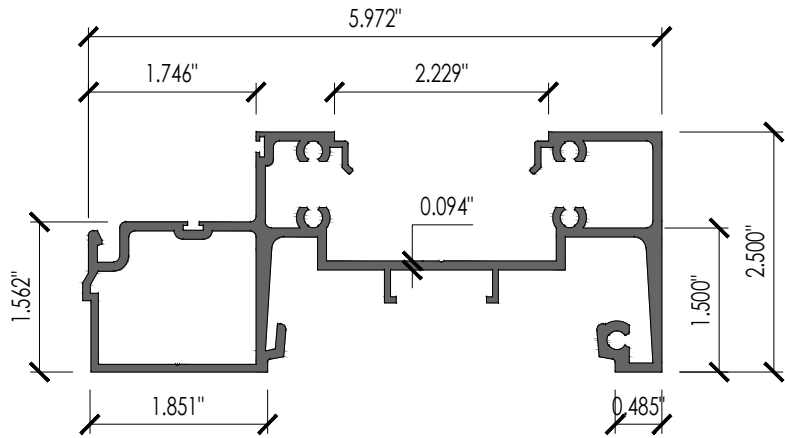
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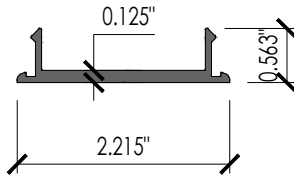


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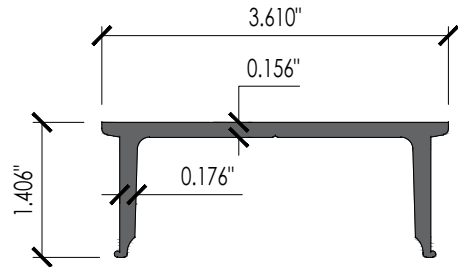
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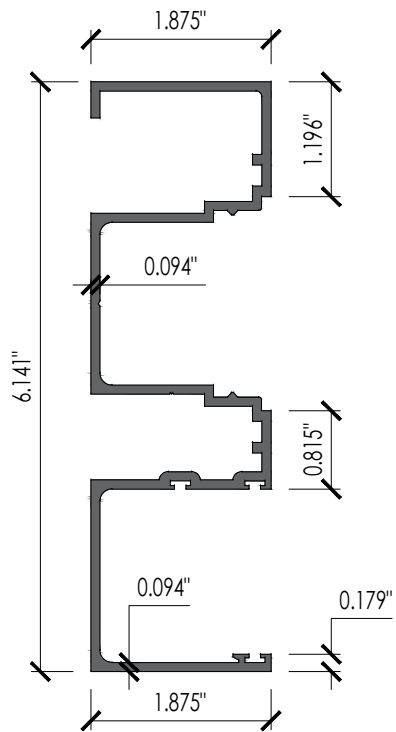
E1 FRAME HEAD/SILL



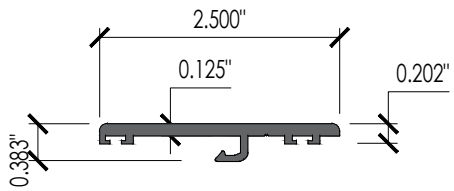
E2 SNAP COVER



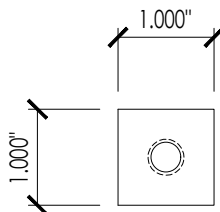
E3 ANCHOR



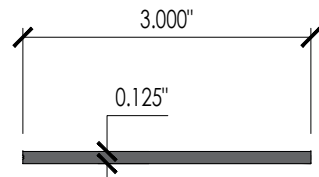
E4 SECURE JAMB - L



E5 GLAZING STOP



E6 SILL LEVELER



E7 REINFORCED GLASS STOP

BILL OF MATERIALS TABLE

E.S.
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7100 ALUMINUM SKYLIGHT SYSTEM				
ITEM NO.	PART NUMBER	QUANTITY	DESCRIPTION	MATERIAL
E1	ES-7021B	AS REQD.	FRAME HEAD AND SILL	6005-T5
E2	ES-7003A	AS REQD.	SNAP COVER	6063-T5
E3	ES-7004	AS REQD.	ANCHOR BASE	6005-T5
E4	ES-7025	AS REQD.	SECURE JAMB - L	6063-T6
E5	ES-7000-415	AS REQD.	GLAZING STOP	6063-T6
E6	ALU-P-20	AS REQD.	SILL LEVELER	6063-T6
E7	ALU-P-51	AS REQD.	REINFORCED GLASS STOP	6063-T6
M1	ED-7000-G01	AS REQD.	EXTERIOR GLASS SEAL	SILICONE 60 ± 5
M2	#12 x 1 1/2" P.H.S.M.S	AS REQD.	FRAME ASSEMBLY SCREW	STAINLESS STEEL
M3	ED-8011A 1/4" INTERIOR SPACER	AS REQD.	TEMPORARY GASKET TO MAINTAIN SPACE BETWEEN GLASS AND PROFILE. REMOVE AND SEAL AT THE END.	SILICONE 70 ± 3
M4	3/8"-16 x 2" H.W.H.	@ 1/4 POINT & MID SPAN	3/8" Ø BOLT LEVELING SCREW	STAINLESS STEEL
M5	ES-U7530-B01-AS	AS REQD.	SETTING BOCK DUROMETER 80 ± 5 SHORE A @ @ 1/4 POINT AND CENTER OF PANEL	EPDM
M6	DOWSIL 791	AS REQD.	SILICONE SEALANT	SILICONE
M7	DOWSIL 983	AS REQD.	STRUCTURAL SILICONE	SILICONE
M8	#10 x 3/4" F.H.S.M.S	@ 12" O.C.	REINFORCED GLASS STOP SCREW	STAINLESS STEEL

SEALANTS:
ALL FRAME CORNERS, MECHANICAL JOINTS AND MULLION SEAMS SEALED WITH SILICONE SEALANT.

SYMBOLS	
DETAIL	DESCRIPTION
M1	LEADER FOR INSTALLATION MISCELLANEOUS
MO1	LEADER FOR ASSEMBLY MISCELLANEOUS
E01	LEADER FOR EXTRUSIONS

PROJECT

ES-7100
ALUMINUM SKYLIGHT
SMALL MISILE IMPACT

FLORIDA APPROVAL #

FL# 46852.1

SHEET NAME:

BILL OF MATERIALS

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No.	Date:	Revision:

ENGINEER:

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CA# 36112

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JOHN FREDY DELGADO

LICENSE

No. 94078

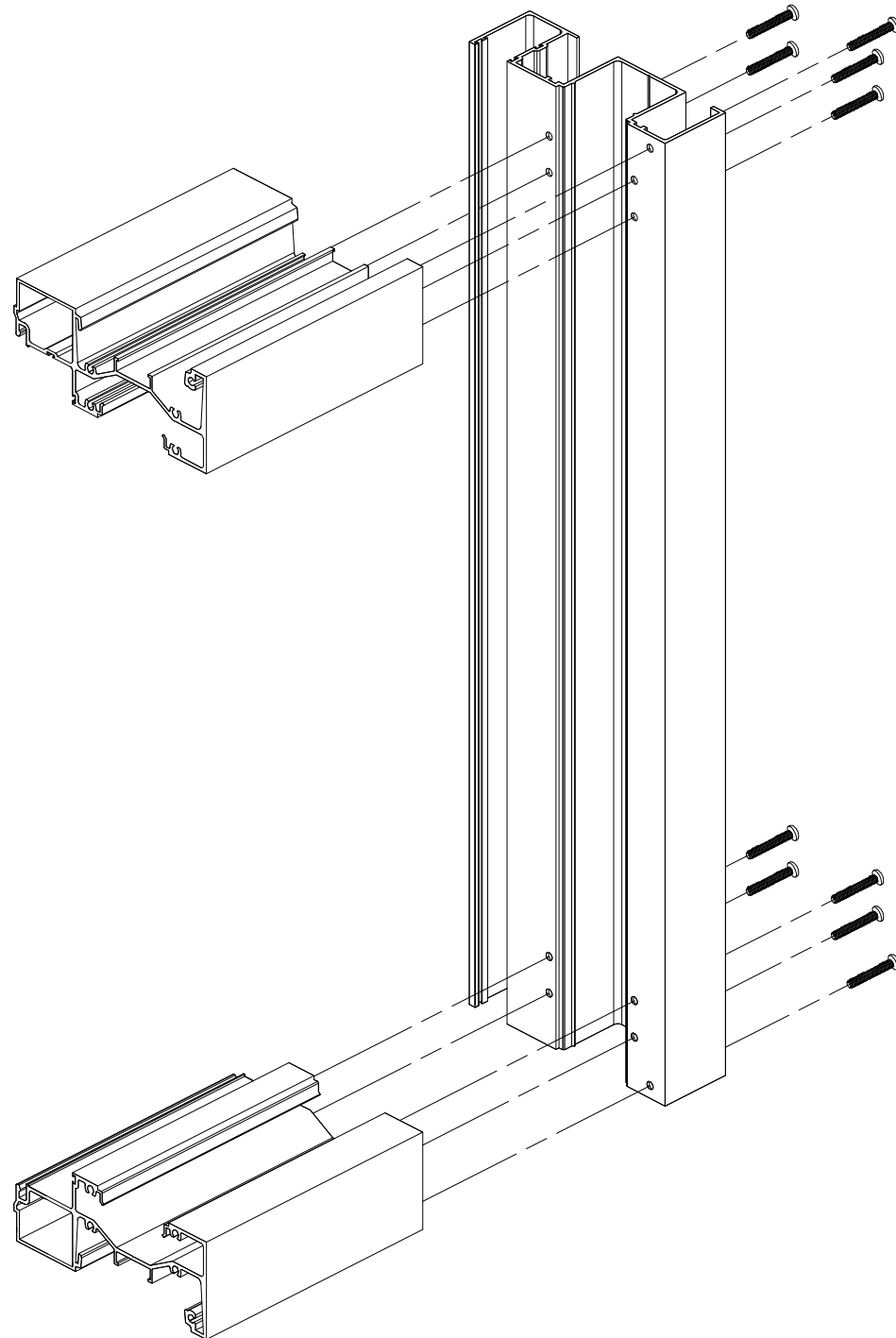
08/18/2024

STATE OF FLORIDA

PROFESSIONAL ENGINEER

JOHN DELGADO, P.E.
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PAGE	8 of 9	



TOP & BOTTOM CORNERS

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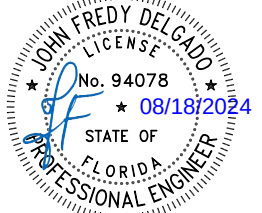
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ASSEMBLY VIEW

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