

ES WINDOWS, INC.
SERIES ES-CS 1377 ALUMINUM WINDOW WALL SYSTEM
LARGE & SMALL MISSILE IMPACT

GENERAL NOTES:

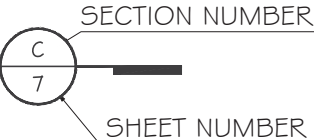
- THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE 7TH EDITION FLORIDA BUILDING CODE (2020)/ 8TH EDITION FLORIDA BUILDING CODE (2023) INCLUDING HIGH VELOCITY HURRICANE ZONE (HVHZ).
- WINDOWS RATED FOR LARGE AND SMALL MISSILE IMPACT. LMI SYSTEM TO BE USED FOR INSTALLATIONS UP TO 30 FT OF GRADE. FOR ABOVE 30 FT OF GRADE, SMI TO BE USED. IMPACT SHUTTERS ARE NOT REQUIRED.
- SYSTEM TESTED FOR LEVEL "D" IMPACT.
- PRODUCT COMPLIES WITH REQUIREMENT OF ANSI Z97.1.
- WINDOWS ARE APPROVED FOR AIR AND WATER INFILTRATION.
- MULLION TO MEET DEFLECTION RATIO OF $L/180$ (WHEN $L \leq 13'-6"$) OR $L/240 + 1/4"$ (WHEN $L > 13'-6"$).
- ANCHORS SHALL BE AS LISTED, SPACED AS SHOWN ON DETAILS.
- ANCHORING OR LOADING CONDITIONS NOT SHOWN IN THESE APPROVAL DRAWING ARE NOT PART OF THIS APPROVAL.
- MATERIALS INCLUDING BUT NOT LIMITED TO STEEL / METAL SCREWS THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE 7TH EDITION FLORIDA BUILDING CODE (2020)/ 8TH EDITION FLORIDA BUILDING CODE (2023) SECTION AS APPLICABLE.
- METAL STRUCTURES BY OTHERS TO BE DESIGNED TO SUPPORT THE LOADS IMPOSED BY THIS GLAZING SYSTEM AND TO TRANSFER SUCH LOADS TO THE BUILDING MAIN STRUCTURE.
- ULTIMATE LOAD OBTAINED FROM ASCE 7-16/ ASCE 7-22, MULTIPLY BY 0.6 SHALL BE LESS THAN OR EQUAL TO MAX. DESIGN LOAD IN THIS DOCUMENT. THE DESIGN LOADS SHOWN IN THIS DOCUMENT ARE ALLOWABLE DESIGN LOADS.
- 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.
- SEALANTS:
ALL FRAME CORNERS, JOINTS, MULLION SEAMS AND PERIMETER GLAZING BEAD TO FRAME INSTALLATION FASTENERS SEALED WITH SILICONE SEALANT.

USE CHARTS AS FOLLOWS.

- STEP 1: DETERMINE DESIGN WIND LOAD PRESSURE BASED ON WIND VELOCITY, BLDG. HEIGHT, WIND ZONE USING APPLICABLE ASCE 7-16/ ASCE 7-22 STANDARD OR WIND TUNNEL REPORTS.
- STEP 2: SEE SHEET E1 FOR TYPICAL WINDOW WALL ELEVATION. CHECK MULLION DESIGN LOAD CAPACITY FOR A GIVEN SPACING AND HEIGHT USING CHART 3 ON SHEET M1.
- STEP 3: SEE SHEET G1 FOR GLASS OPTION. GLASS CAPACITY SEE CHART 1 FOR APPROVED SIZE AND LOADS. SEE CHART 2 FOR STRUCTURAL SILICONE CAPACITIES.
- STEP 4: SEE SHEET A1 FOR ANCHOR OPTIONS. ANCHOR OPTIONS COVER ALL CONDITIONS.
- STEP 5: THE LOWEST VALUE RESULTING FROM STEPS ABOVE THAT EXCEED THE DESIGN WIND PRESSURES APPLY TO ENTIRE SYSTEM

ABBREVIATIONS AND SYMBOLS

D.L.O. - DAYLITE OPENING
F.H. - FRAME HEIGHT
F.W. - FRAME WIDTH
W/ - WITH
W/O - WITHOUT
O.C. - ON CENTER



LIMITATIONS OF USE

- A- THIS PRODUCT EVALUATION DOCUMENT (P.E.D.) PREPARED BY THIS ENGINEER IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT; I.E. WHERE THE SITE CONDITIONS DEVIATE FROM THE P.E.D.
- B- CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION OF THIS PRODUCT BASED ON THIS PRODUCT EVALUATION PROVIDED HERE'S DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT.
- C- THIS PRODUCT EVALUATION DOCUMENT WILL BE CONSIDERED INVALID IF ALTERED BY ANY MEANS.
- D- 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 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.
- E- THIS P.E.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.

FLORIDA APPROVAL:

FL #37383.1



September 07th, 2023

ES-CS1377 ALUM. WINDOW WALL SYSTEM (LMI)

ES WINDOWS, INC

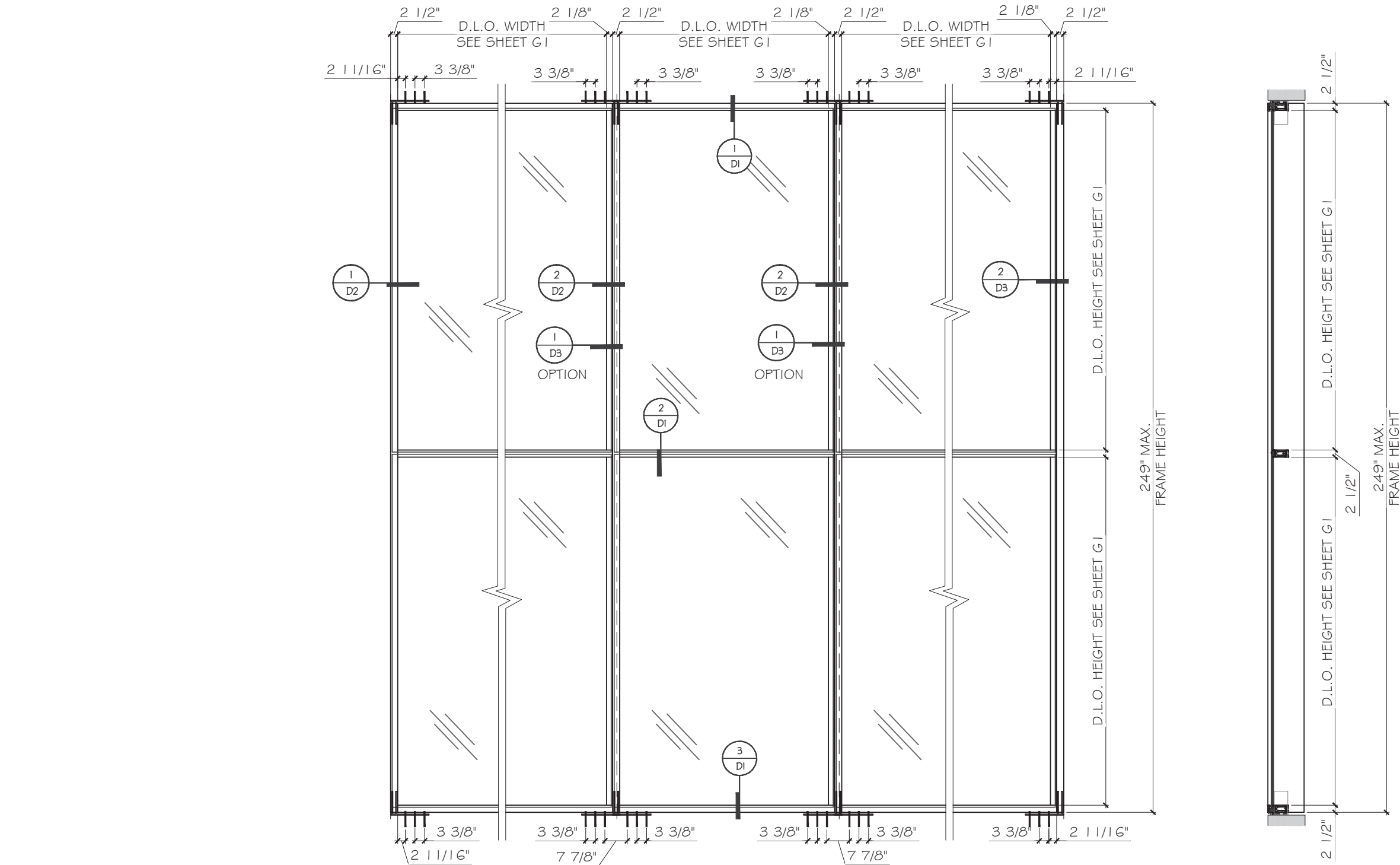
Miami, FL 33142

TEL. (305) 638-5151

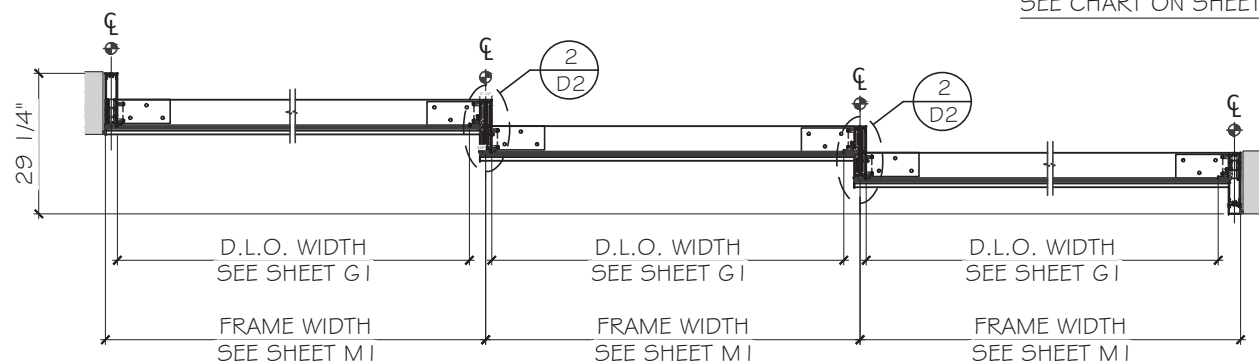
MCY ENGINEERING, INC.
GLAZING CONSULTANTS

2781 MIRAMAR PKWY.STE.301
MIRAMAR, FL 33027 P: 305.271.0117

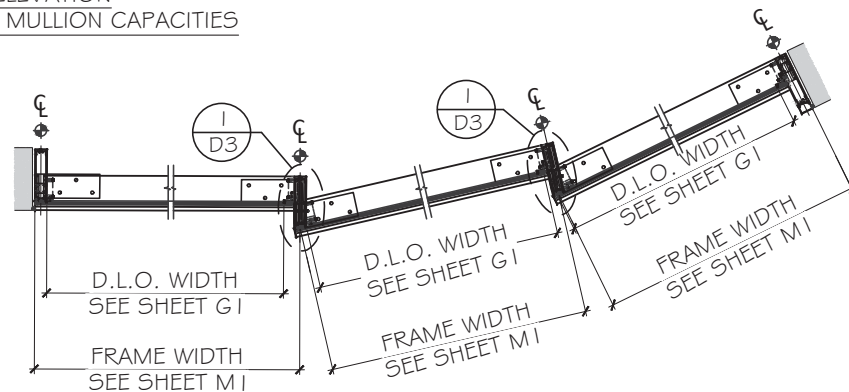
www.MCYEngineering.com mcy@mcysengineering.com



TYPICAL EXTERIOR ELEVATION
SEE CHART ON SHEET M1 FOR MULLION CAPACITIES



TYPICAL FLOOR PLAN (STRAIGHT)



FLOOR PLAN OPTION

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TEL. (305) 638-5151

Rev. No.	Date	Drawn By	Description
R2	09.11.2023	James	UPDATE FBC 2023

Drawn Date 09.11.2023	Drawn By
DRAWING NO. AD21-02	
E1	
Sheet No. 2 OF 12	

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MIRAMAR, FL 33027

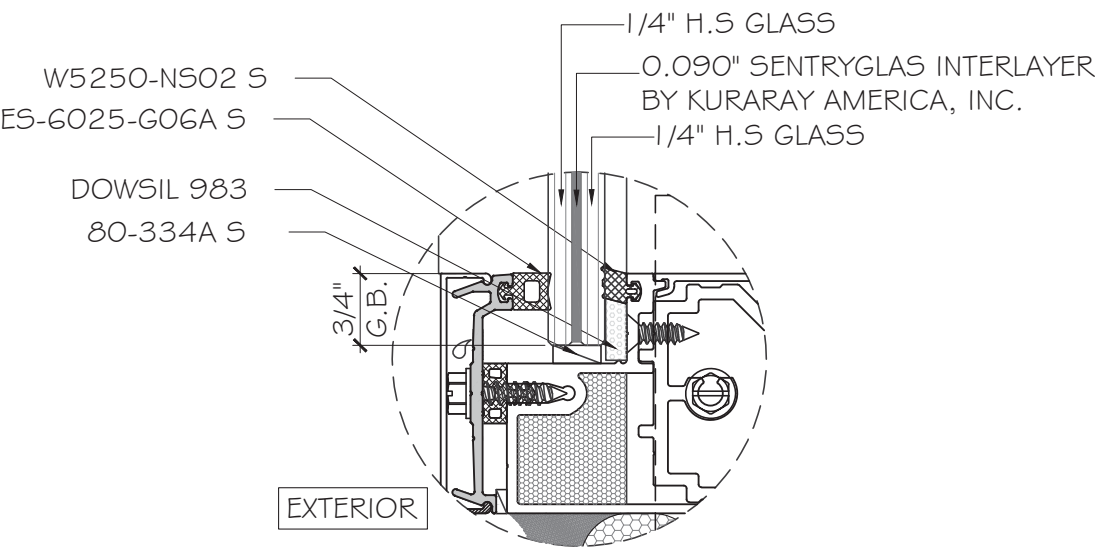
P: 305.271.0117

www.MCYEngineering.com

mcy@mcyengineering.com

CHART 1

GLASS LOAD CAPACITY - PSF		
DAYLIGHT OPENING SIZE		GLASS CAPACITY
		G1
DLOH. (IN.)	DLOW (IN.)	EXT.(+) INT.(-)
84	51.5	110
	57.5	110
	63.5	110
	69.5	110
	75.5	110
90	51.5	110
	57.5	110
	63.5	110
	69.5	110
	75.5	70
96	51.5	110
	57.5	110
	63.5	110
	69.5	70
	75.5	70
102	51.5	110
	57.5	110
	63.5	110
	69.5	70
	75.5	70
108	51.5	110
	57.5	110
	63.5	70
	69.5	70
	75.5	70
114	51.5	110
	57.5	110
	63.5	70
	69.5	70
	75.5	70
122.25	51.5	110
	57.5	70
	63.5	70
	69.5	70
	73.375	70



G1 GLASS TYPE 'G1' (L.M.I.)
9/16" NOMINAL OVERALL

NOTE:
GLASS COMPLY WITH ASTM E1300-16
(3 SEC. GUSTS).

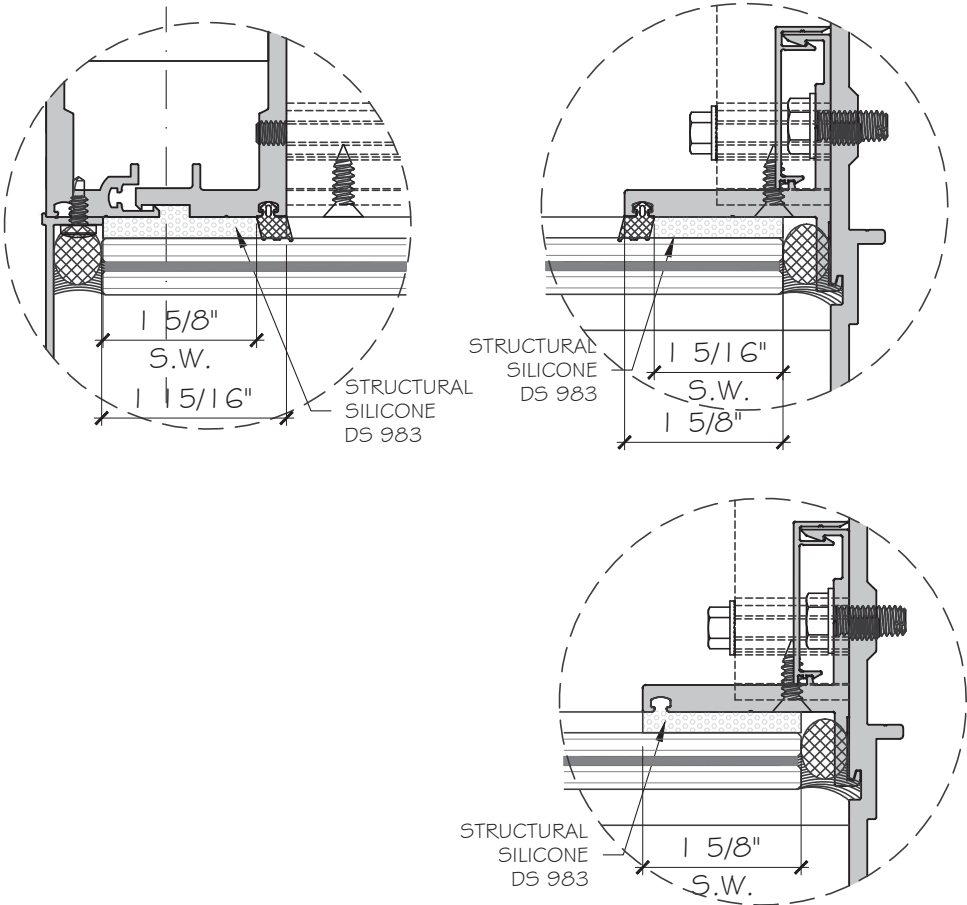
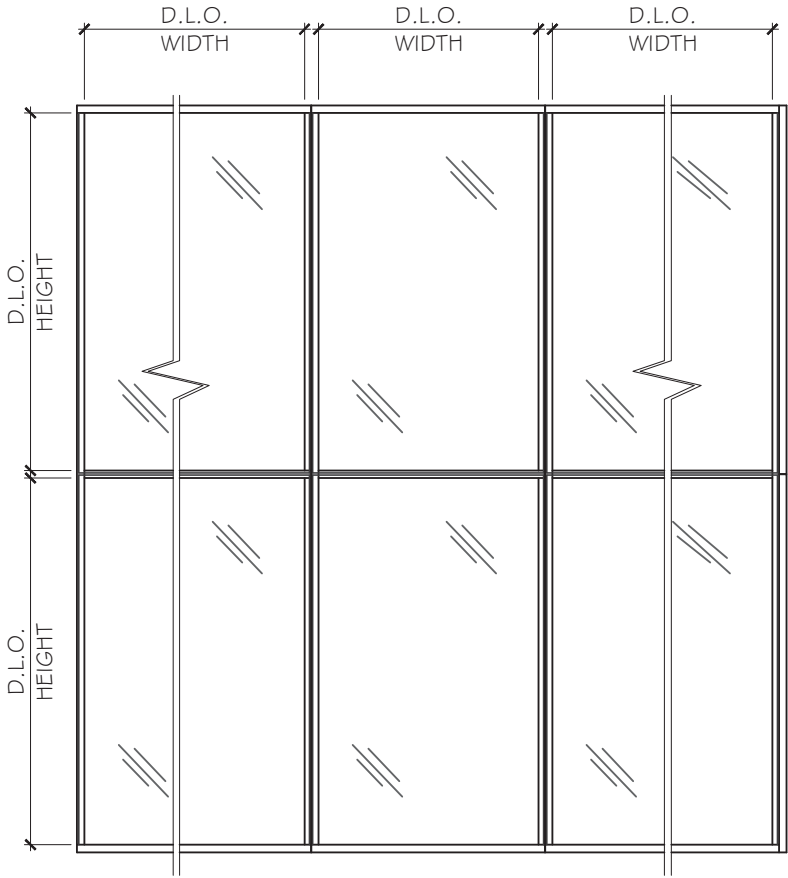
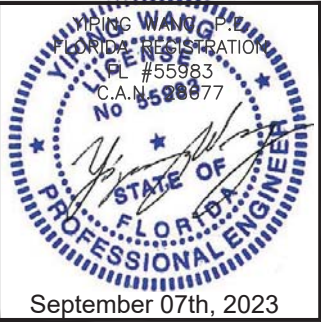


CHART 2

SILICONE CAPACITIES - PSF		
MULLION C-C	SILICONE WIDTH (S.W.)	
	1 5/16"	1 5/8"
60"	110	110
66"	110	110
72"	104	110
78"	98.7	110

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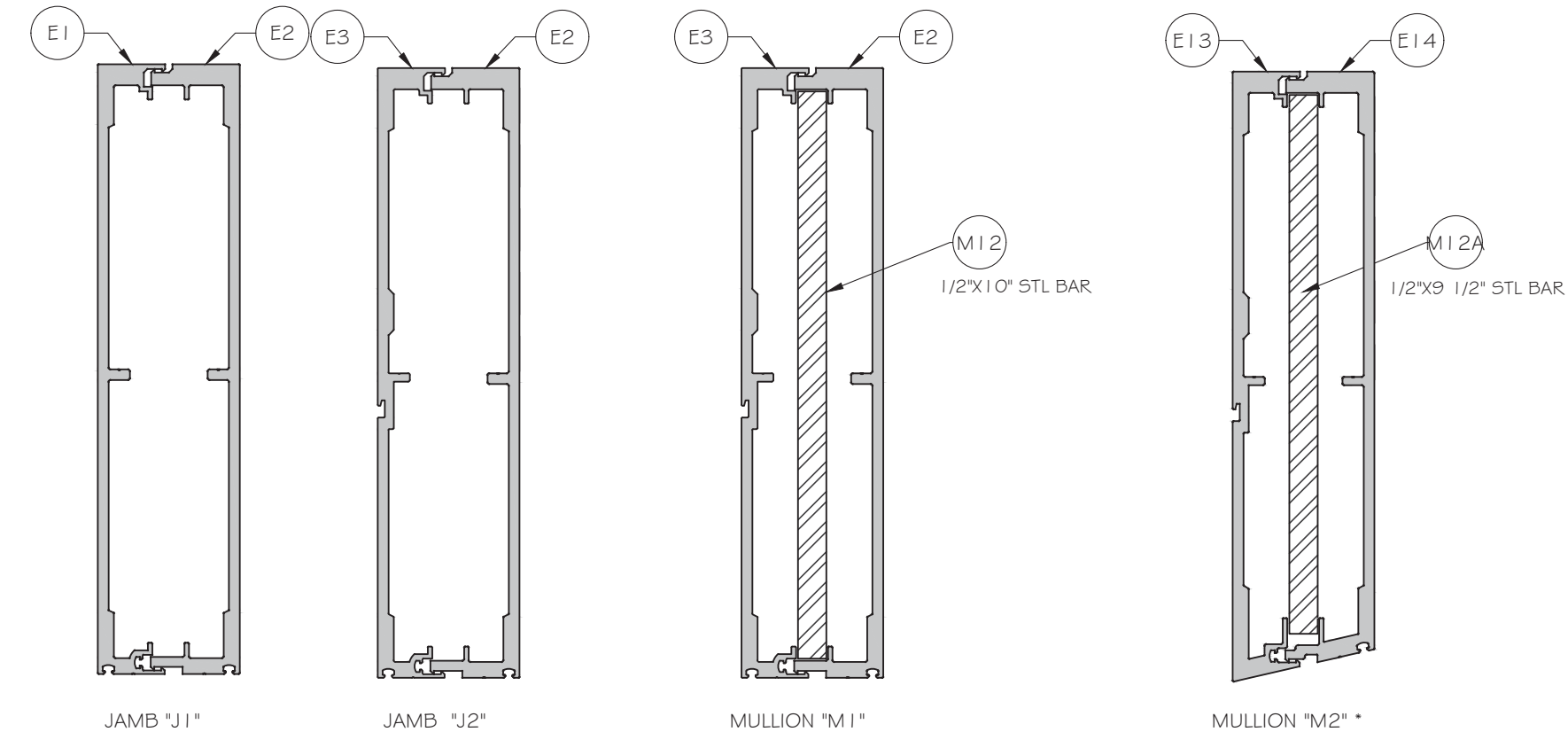
DRAWING NO.
AD21-02

G1

Sheet No.
3 OF 12

CHART 3

MULLION DESIGN LOAD CAPACITY- (PSF)			
NOMINAL DIMENSIONS		MULLION/ JAMB TYPE	
		M1, J1,J2	M2, J1, J2
F.H. (IN).	F.W. (IN).	EXT.(+) INT.(-)	EXT.(+) INT.(-)
168	60	110	110
	66	110	110
	72	110	110
	78	99	99
180	54	110	110
	60	110	110
	66	110	110
	72	104.9	110
	78	91.5	-
192	54	110	110
	60	110	110
	66	107.3	110
	72	98.3	-
	78	86.5	-
204	48	110	110
	54	110	110
	60	110	110
	66	101	-
	72	92.6	-
	78	85.4	-
216	48	110	110
	54	110	110
	60	104.9	110
	66	95.4	-
	72	87.4	-
	78	80.7	-
228	42	110	110
	48	110	110
	54	110	110
	60	99.4	-
	66	90.3	-
	72	82.8	-
	78	76.4	-
240	42	110	110
	48	110	110
	54	104.9	110
	60	94.4	-
	66	85.8	-
	72	78.7	-
	78	72.6	-
249	42	110	110
	48	110	110
	54	101.1	110
	60	91	-
	66	82.7	-
	72	75.8	-
	78	70	-



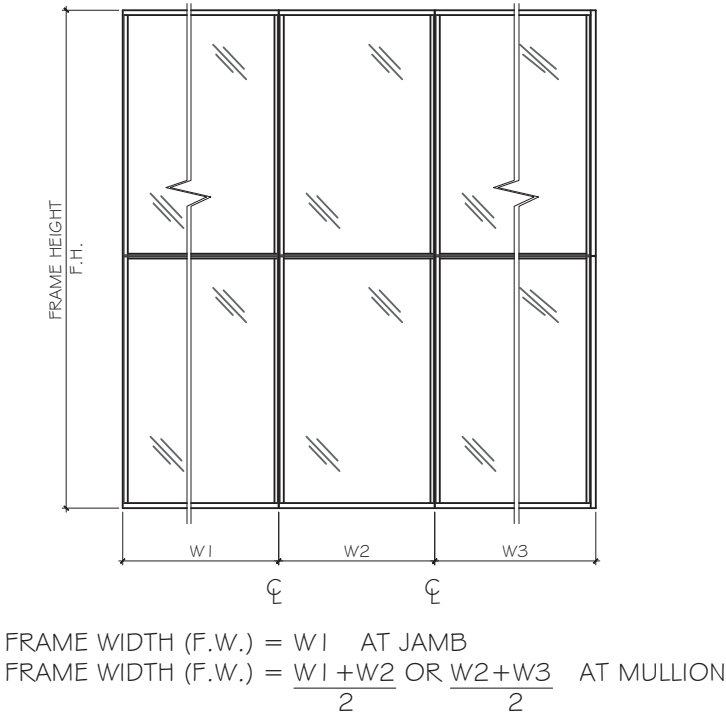
J1	$I_x \text{ IN}^4$	$S_x \text{ IN}^3$
E1	36.0215	6.4911
E2	44.2470	7.8769
TOTAL	80.2685	14.2895

J2	$\sum x^2$	$\sum x^3$
E3	36.1032	6.4914
E2	44.2470	7.8769
TOTAL	80.3502	14.3041

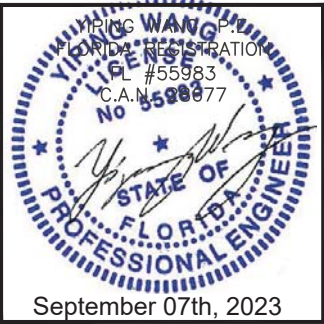
M1	$I_{x \text{ IN}^4}$	$S_{x \text{ IN}^3}$
E3	36.1032	6.4914
E2	44.2470	7.8769
1/2"x 10" STL BAR	41.6667	8.3333
TOTAL (IN ALUM.)	201.1835	-

M2	$I_x \text{ IN}^4$	$S_x \text{ IN}^3$
E I 3	39.2298	7.2222
E I 4	40.8446	7.5165
1/2"x9.5" STL BAR	35.7240	7.5208
TOTAL (IN ALUM.)	183.674	-

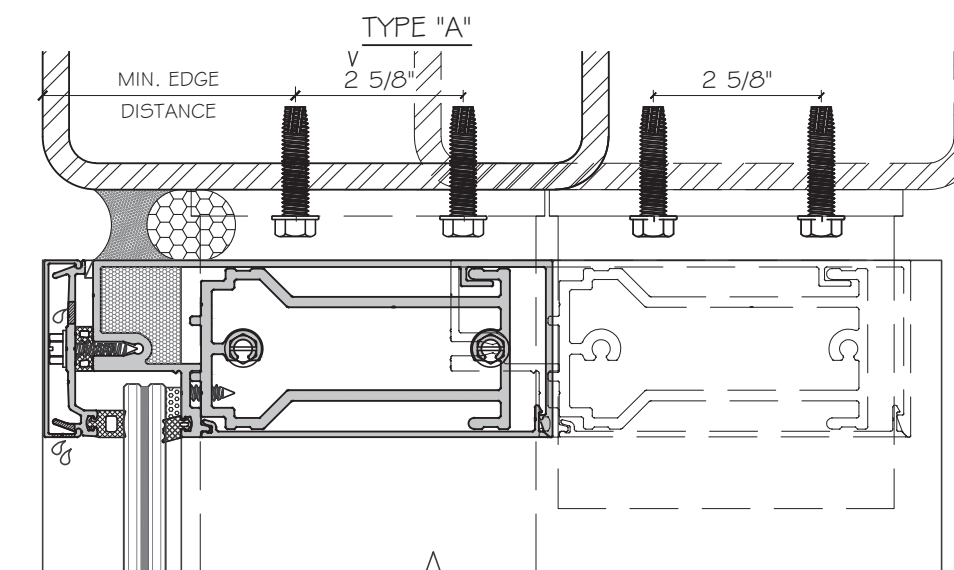
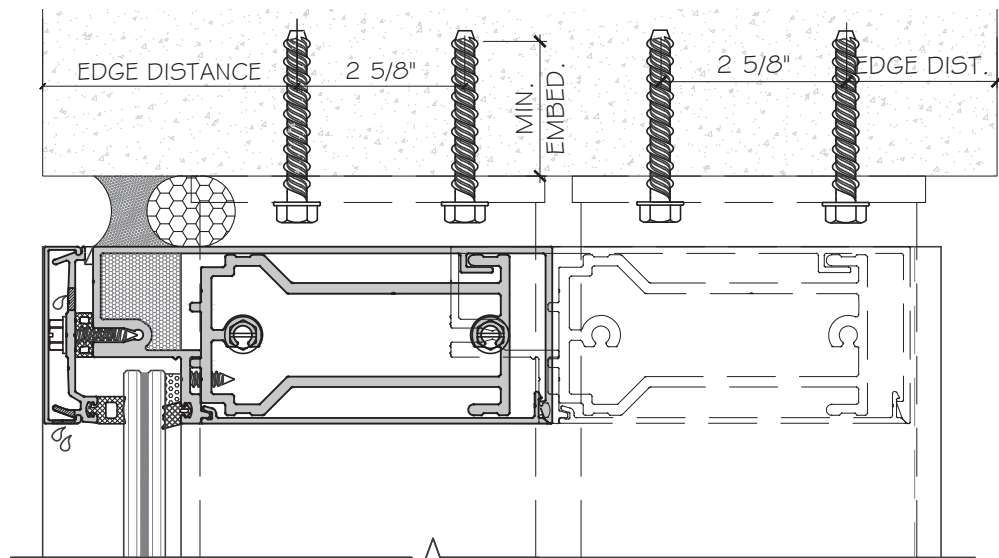
* NOTE:
CAPACITIES FOR MULLION TYPE 'M2' IN CHART IS
BASED ON MULLION UNDER POSITIVE LOAD AT
BOTH SIDE OR UNDER NEGATIVE LOAD AT BOTH
SIDES. IF JOB REQUIREMENT IS DIFFERENT, TO
BE CHECKED ON JOB BASES.



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						09.11.2023						James						UPDATE FBC 2023					
DRAWING NO.						AD21-02						M I						Sheet No.					
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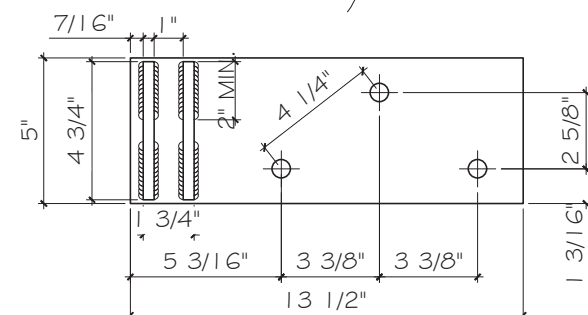
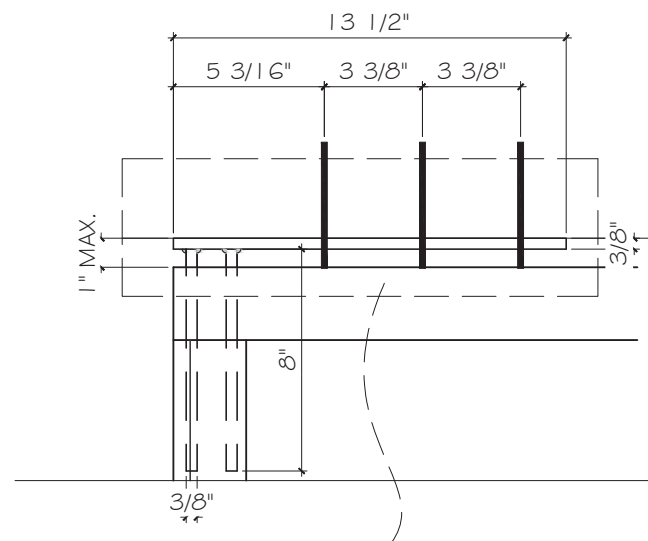
TYPICAL ANCHOR

TYPE 'A' 3/8" DIA. SCREW BOLT+ BY 'DEWALT'
($F_u=105$ KSI, $F_y=84$ KSI)
DIRECTLY INTO CONCRETE
W/ 3-1/4" MIN. EMBED

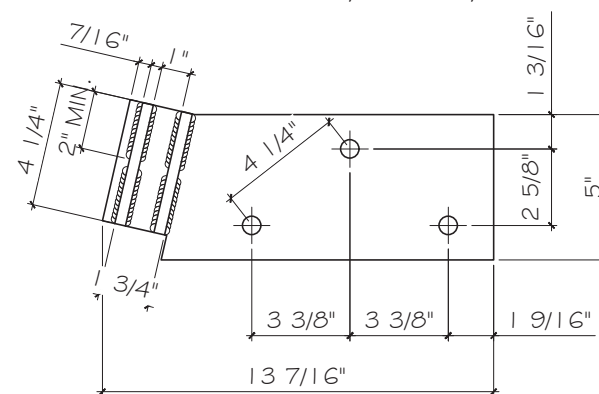
TYPE 'B' 3/8" DIA. TAP-FLEX BY 'ELCO'
($F_u=120$ KSI, $F_y=90$ KSI)
INTO STEEL STRUCTURE
STEEL : 1/4" MIN. ($F_y = 36$ KSI MIN.)
(3) THREADS MIN. PENETRATION BEYOND METAL SUBSTRATE
(STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

TYPICAL EDGE DISTANCE:
INTO CONCRETE = 3 1/4" MIN.
INTO METAL = 1 1/2" MIN.

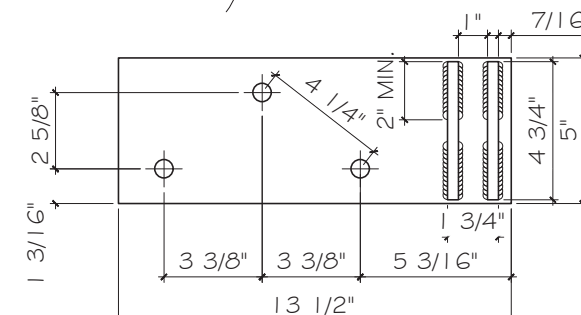
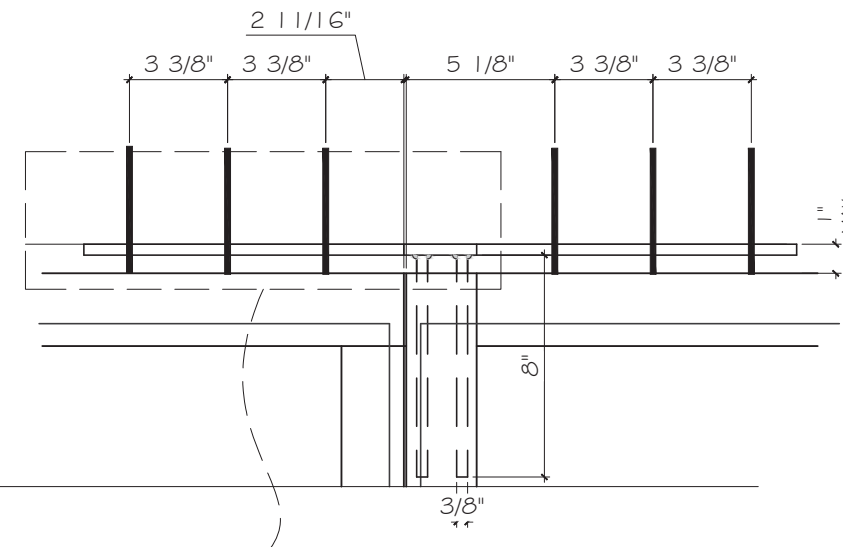
CONCRETE $f'_c=4000$ PSI MIN.
(NORMAL WEIGHT CONCRETE, UN-CRACKED)



STEEL PLATE 3/8"X13 1/2"X5"



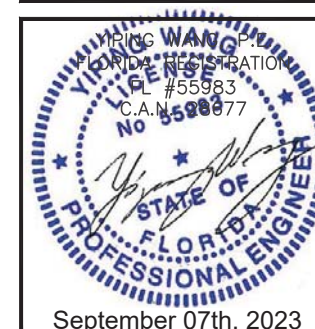
STEEL PLATE 3/8"X13 1/2"X5"



STEEL PLATE 3/8"X13 1/2"X5"

METAL STRUCTURES NOT BY ES WINDOWS
MUST BE SUPPORT LOADS IMPOSED BY GLAZING SYSTEM
AND TRANSFER THEM TO THE BUILDING STRUCTURE.

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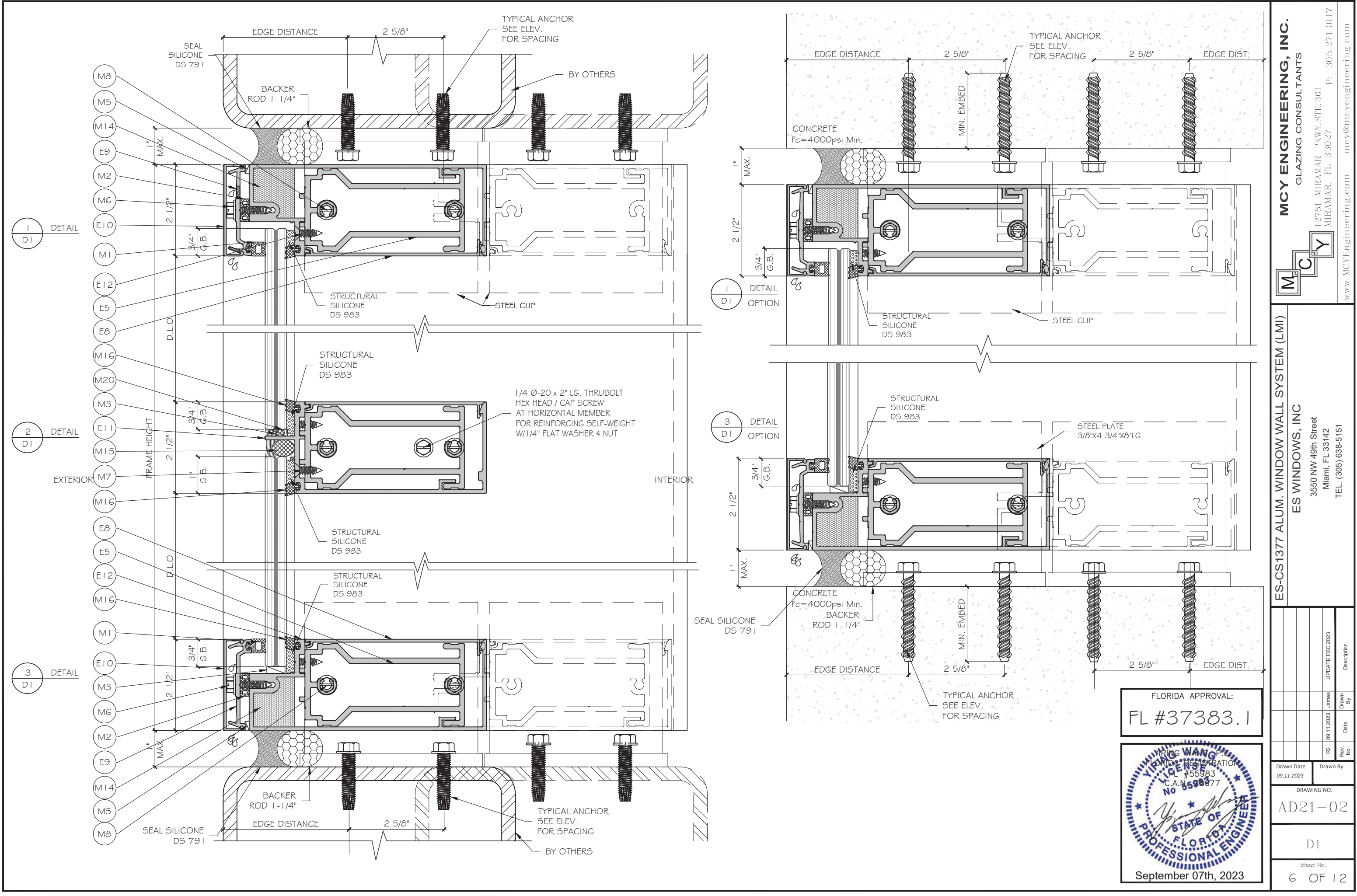
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ES-CS1377 ALUM. WINDOW WALL SYSTEM (LMI)

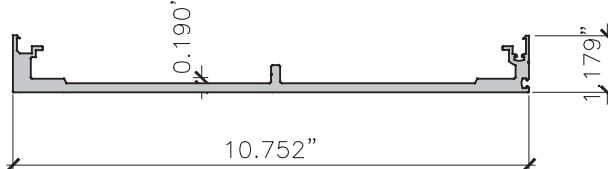
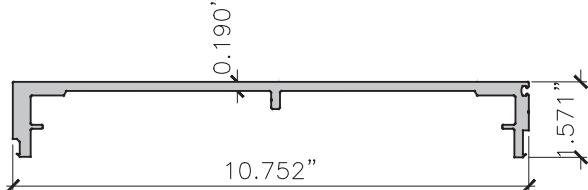
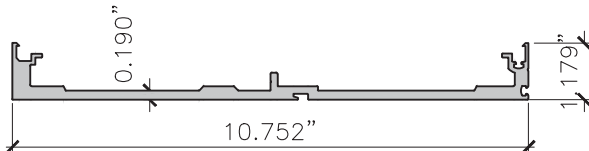
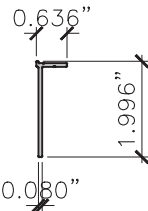
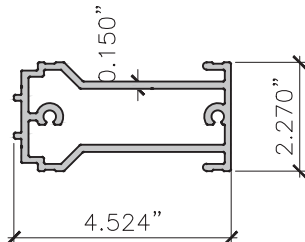
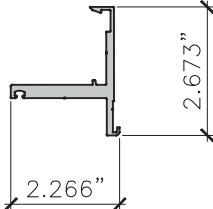
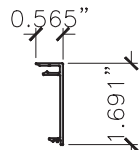
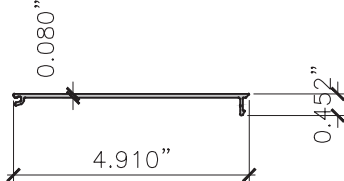
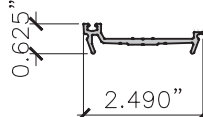
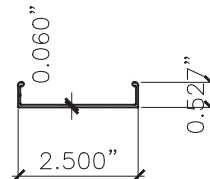
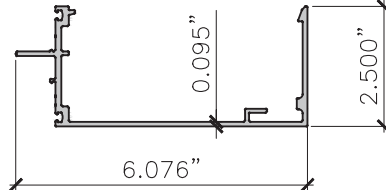
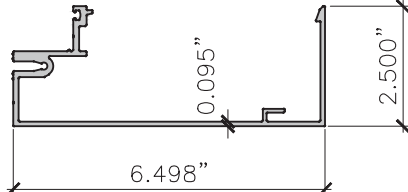
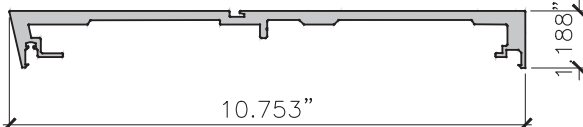
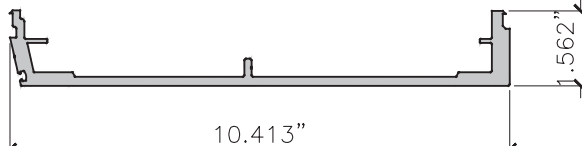
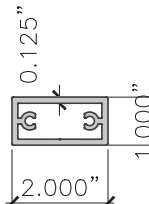
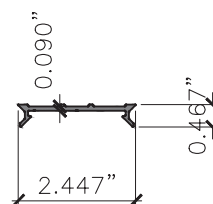
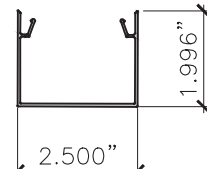
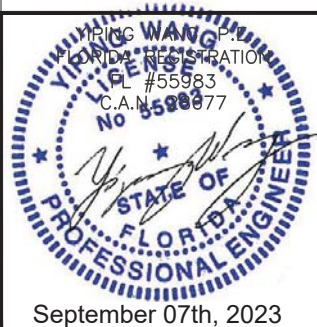
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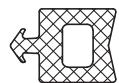
3550 NW 49th Street
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TEL. (305) 638-5151

Rev. No.	Date	Drawn By	Description
R2	09.11.2023	James	UPDATE FBC 2023
Drawing No. AD21-02			
Sheet No. 5 OF 12			

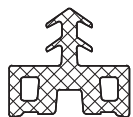


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AD21-02				
D1				
Sheet No.				
6 OF 12				

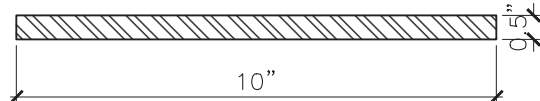
 E1 FEMALE MULLION ES-CS1325-004 6005-T5	 E2 MALE MULLION ES-CS1325-008 6005-T5	 E3 FEMALE MULLION ES-CS1377-001 6005-T5	 E4 TRIM ES-CS1377-004 6005-T5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
 E5 SHEAR BLOCK ES-CS7525-006A 6005-T5	 E6 GLASS ADAPTOR ES-CS1377-005 6063-T6	 E7 COVER NL-P1732-013 6063-T5	 E8 SNAP COVER ES-7525-005 6063-T5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
 E9 PRESSURE PLATE ES-6025-025 6063-T5	 E10 STANDAR COVER ES-6025-009 6063-T5	 E11 HORIZONTAL SSG ES-CS1325-010 6063-T6	 E12 HEAD / SILL ES-7525-001 6063-T5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
 E13 FEMALE MULLION ANGLE ES-CS1377-002 6005-T5	 E14 MALE MULLION ANGLE ES-CS1377-003 6005-T5	 E15 JAMB SPACER 103-047 6063-T5	 E16 INTERIOR ADAPTER ES-6025-017 6063-T5	 E17 COVER ES-6025-447 6063-T5	FLORIDA APPROVAL: FL #37383.1  September 07th, 2023																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
ES-CS1377 ALUM. WINDOW WALL SYSTEM (LMI) ES WINDOWS, INC 3550 NW 49th Street Miami, FL 33142 TEL. (305) 638-5151						<table><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></t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MI EXTERIOR GLASS
ES-G025-G06A S
SILICONE



M2 EXTERIOR SPECER
ES-G025-G02 E
EPDM



M12 REINFORCEMENT
STEEL

SC: 1/4



M12A REINFORCEMENT
STEEL

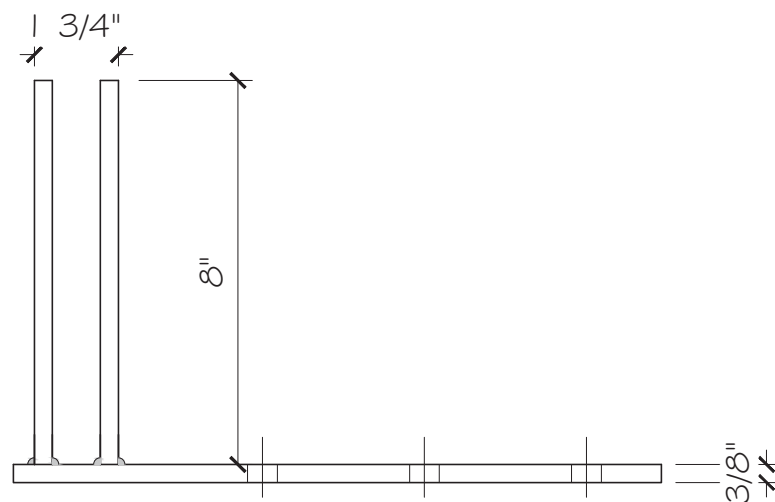
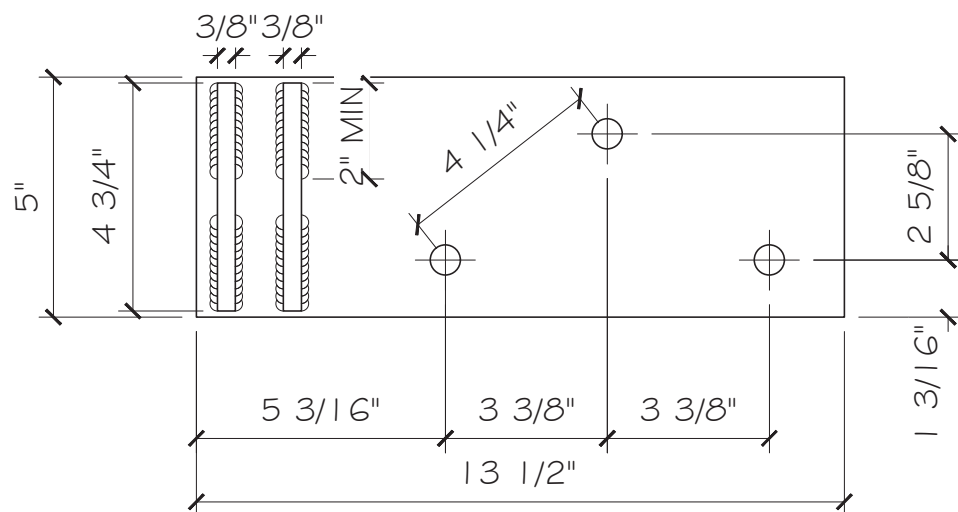
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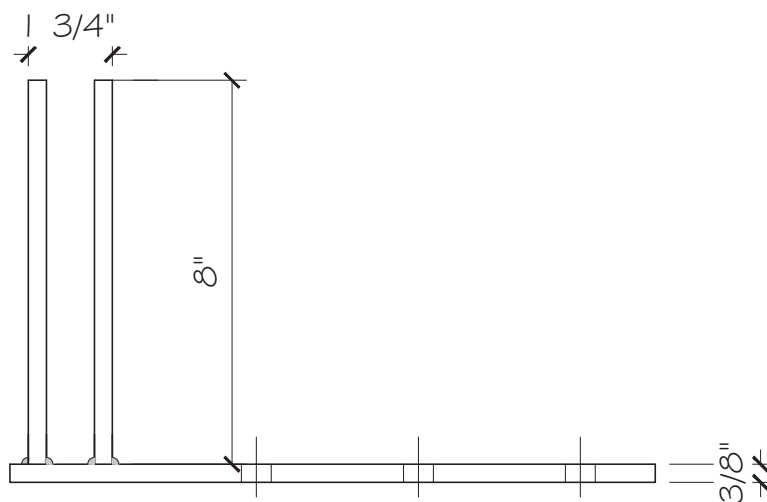
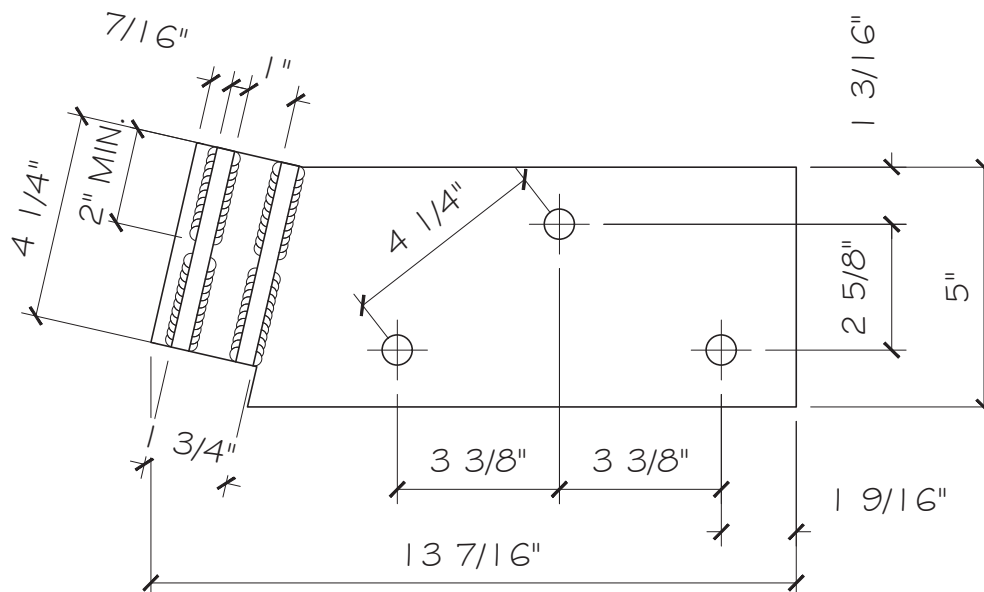
M14 END PLUG FOR HEAD /SILL
ES-G025-B09 FOAM



MIG EMP-658
W5250-NS02 S SILICONE

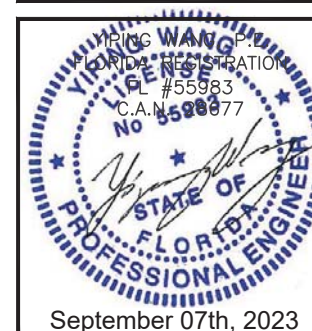


M13 STEEL PLATE 3/8"X13 1/2"X5"
STEEL



M13A STEEL PLATE 3/8"X13 11/16"X5"
STEEL

FLORIDA APPROVAL:
FL #37383.1



September 07th, 2023

ES-CS1377 ALUM. WINDOW WALL SYSTEM (LMI)

ES WINDOWS, INC.

3550 NW 49th Street

Miami, FL 33142

TEL. (305) 638-5151

MCY ENGINEERING, INC.
GLAZING CONSULTANTS

GLAZING CONSULTANTS

12781 MIRAMAR PKWY, STE. 301

12701 MIRAMAR PKWY
MIRAMAR, FL 33027

www.MCSEngineering.com mcv@mcvengeering.com

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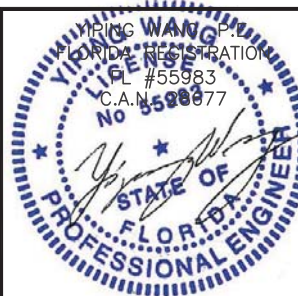
PART 2

Sheet No.
10 OF 12

BILL OF MATERIALS

CODE	PART	DESCRIPTION	MATERIAL
E1	ES-CS1325-004	FEMALE MULLION	6005-T5
E2	ES-CS1325-008	MALE MULLION	6005-T5
E3	ES-CS1377-001	FEMALE MULLION	6005-T5
E4	ES-CS1377-004	TRIM	6063-T6
E5	ES-7525-006A	SHEAR BLOCK	6005-T5
E6	ES-CS1377-005	GLASS ADAPTOR	6063-T6
E7	NL-P1732-013	COVER	6063-T5
E8	ES-7525-005	SNAP COVER	6063-T5
E9	ES-6025-025	PRESSURE PLATE	6063-T5
E10	ES-6025-009	STANDAR COVER	6063-T5
E11	ES-CS1325-010	HORIZONTAL SSG	6063-T6
E12	ES-7525-001	HEAD / SILL	6063-T5
E13	ES-CS1377-002	FEMALE MULLION ANGLE	6005-T5
E14	ES-CS1377-003	MALE MULLION ANGLE	6005-T5
E15	103-047	JAMB SPACER	6063-T5
E16	ES-6025-017	INTERIOR ADAPTER	6063-T5
E17	ES-6025-447	COVER	6063-T5
M1	ES-6025-G06A S	EXTERIOR GLASS	SILICONE
M2	ES-6025-G02 E	EXTERIOR SPECER, SHORE A HARDNESS: 60±5	EPDM
M3	80-334A S @ 1/8 POINT	SETTING BLOCK	SILICONE, 80±5 SHORE A
M4	T-BOND 1/4"X1/4"	T-BOND	SILICONE
M5	T-BOND 1/8"X1/4"	T-BOND	SILICONE
M6	TOR #14X1" HWH	FOR PRESSURE PLATE @8¼" O.C.	STEEL
M7	TOR #12X3/4" F.H SS SMS	FOR SHEAR BLOCK	STEEL
M8	1/4"-20 X1 1/2" HWH GRADE 5	FOR SHEAR BLOCK	STEEL
M9	TOR 5/16"X3/4" HWH GRADE 5	FOR ES-CS1377-005 @ 12"O.C.	STEEL
M9A	TOR 1/4"-20X2 1/4" HWH	FOR SHEAR BLOCK	STEEL
M10	TOR #12X3/4" F.H	FOR 103-047 JAMB SPACER	STEEL
M11	TOR #10X1/2" P.H SELF DRILLING	FOR TRIM VERTICAL	STEEL
M12	STEEL BAR 1/2" X 10"	REINFORCEMENT	STEEL
M12A	STEEL BAR 1/2" X 9 1/2"	REINFORCEMENT	STEEL
M13	STEEL PLATE 3/8"*13 1/2"*5"	STEEL PLATE	STEEL
M13A	STEEL PLATE 3/8"*13 11/16"*5"	STEEL PLATE	STEEL
M14	ES-6025-B09	END PLUG FOR HEAD /SILL	FOAM
M15	BACKER ROD 5/8"	BACKER ROD 5/8"	POLIETILENO
M16	W5250-NS02 S	EMP-658	SILICONE
M17	TOR 1/4"-20X2" H.H	FOR REINFORCEMENT	STEEL
M18	NUT 1/4"-20	FOR REINFORCEMENT	STEEL
M19	WASHER 1/4"	FOR REINFORCEMENT	STEEL
M20	BACKER ROD 1/4"	BACKER ROD 1/4"	POLIETILENO

FLORIDA APPROVAL:
FL #37383.1



September 07th, 2023

ES-CS1377 ALUM. WINDOW WALL SYSTEM (LMI)

ES WINDOWS, INC

3550 NW 49th Street

Miami, FL 33142

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R2	09/11/2023	JAMES			UPDATE FBC 2023
Rev. No.	Date	Drawn By	Description		

Drawn Date	Drawn By
09.11.2023	

DRAWING NO.
AD21-02

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Sheet No.
11 OF 12



YIPING WANG
FLORIDA REGISTRATION
P.L.#55983
C.A.N.#559877
No. 559877
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
September 07th, 2023

 MCY ENGINEERING, INC. GLAZING CONSULTANTS 12781 MIRAMAR PKWY., STE. 301 MIRAMAR, FL 33027 P: 305.271.0117 www.MCYEngineering.com mcy@mcyengineering.com		ES-CS1377 ALUM. WINDOW WALL SYSTEM (LMI)			
		ES WINDOWS, INC 3550 NW 49th Street Miami, FL 33142 TEL. (305) 638-5151			
Drawn Date 09.11.2023		Drawn By R2			
		09.11.2023	James	UPDATE FBC 2023	
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Sheet No. 12 OF 12					