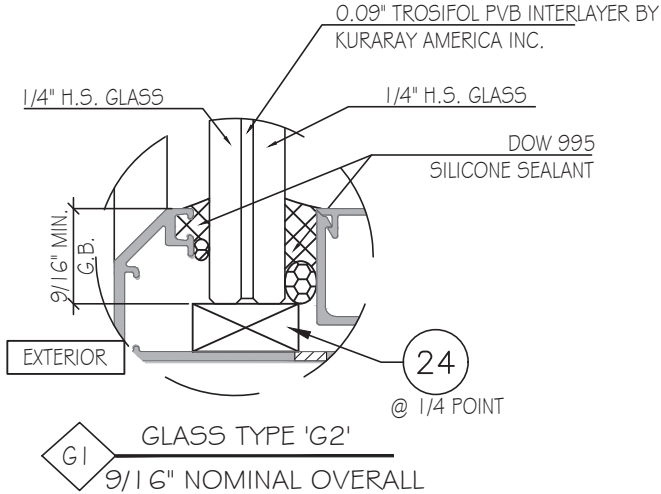


K RESEARCH & DEVELOPMENT, LLC
SP60 CASEMENT WINDOW LARGE MISSILE IMPACT



GENERAL NOTES:

- THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE 8TH EDITION OF FLORIDA BUILDING CODE 2023 INCLUDING HIGH VELOCITY HURRICANE ZONE (HVHZ).
- WINDOWS ARE RATED FOR LARGE MISSILE IMPACT. IMPACT SHUTTERS ARE NOT REQUIRED.
- THESE WINDOWS ARE APPROVED FOR AIR AND WATER INFILTRATION.
- ANCHORS SHALL BE AS LISTED, SPACED AS SHOWN ON DETAILS.
ANCHORS EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO.
- ANCHORING OR LOADING CONDITIONS NOT SHOWN IN THESE DETAILS 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 8TH EDITION OF 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 7-22, 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.
- SEALANT:
ALL FRAME CORNERS, JOINTS, MULLION SEAMS AND PERIMETER GLAZING BEAD TO FRAME INSTALLATION FASTENERS SEALED WITH SILICONE SEALANT.

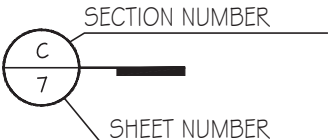
NOTE:
GLASS COMPLIES WITH ASTM E 1300-09
(3 SEC. GUSTS).

USE CHARTS AS FOLLOWS.

- STEP 1: DETERMINE DESIGN WIND LOAD REQUIREMENTS BASED ON WIND VELOCITY, BLDG. HEIGHT, WIND ZONE USING APPLICABLE ASCE 7-22 STANDARD OR WIND TUNNEL REPORTS.
- STEP 2: SEE SHEET E I FOR APPROVED TYPICAL ELEVATION & CONFIGURATION.
- STEP 3: ANCHOR OPTION SEE SHEET A I. ANCHOR LAYOUT SEE SHEET E I.
- STEP 4: THE LOWEST VALUE RESULTING FROM STEPS 2 & 3 THAT EXCEED THE DESIGN WIND PRESSURES DETERMINED THRU STEP 1 SHALL APPLY TO ENTIRE SYSTEM.

ABBREVIATIONS AND SYMBOLS

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

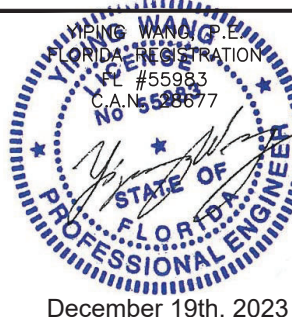


LIMITATIONS OF USE

- 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 HE/SHE 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 P.E.D ENGINEER OF RECORD, ACTING AS DESIGNATED 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

FLORIDA APPROVAL •

FL#46000



SP60 CASEMENT WINDOW - L.M.I.

K RESEARCH & DEVELOPMENT, LLC
202 RINGLING BOULEVARD SUITE 301
SARASOTA, FLORIDA

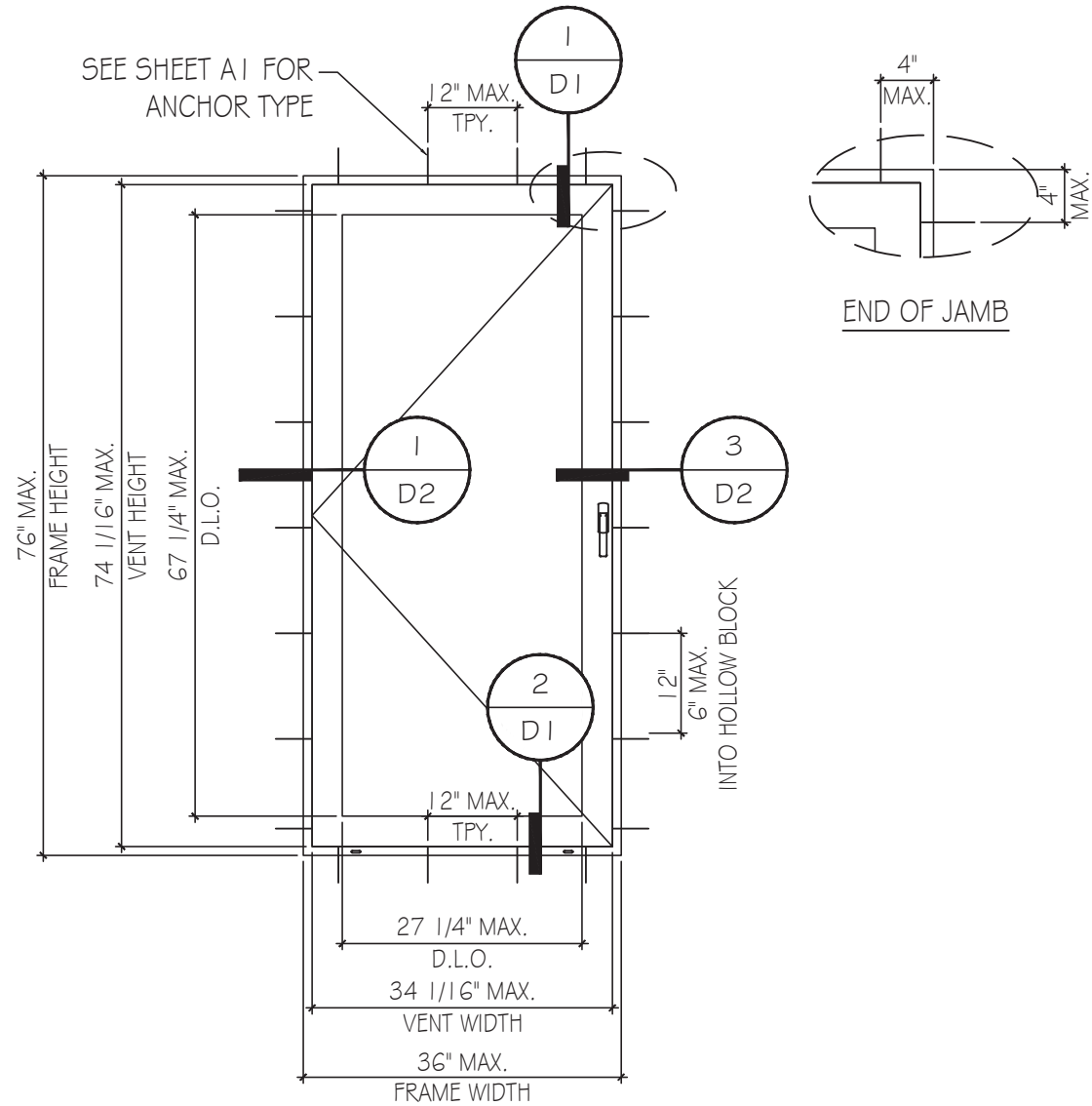
MCY ENGINEERING, INC.
GLAZING CONSULTANTS



12781 MIRAMAR PKWY, STE. 301
MIRAMAR, FL 33027 P: 305.271.0117

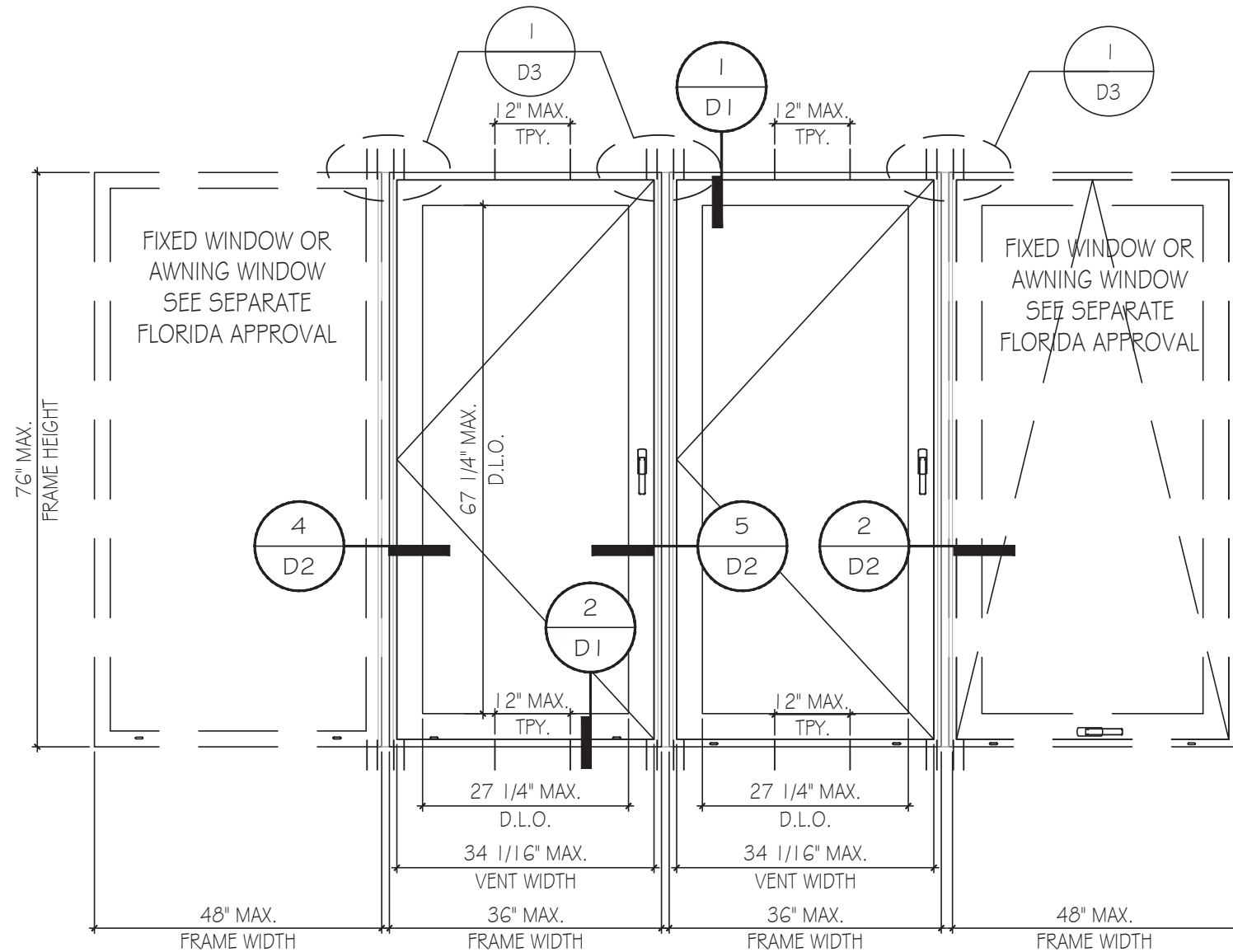
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TYPICAL EXTERIOR ELEVATION

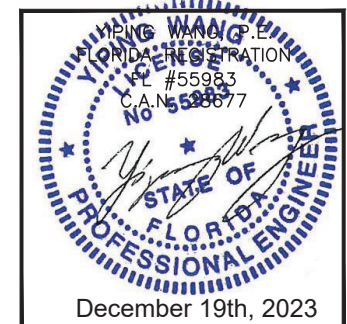
DESIGN LOAD
FOR SIZE SHOWN ABOVE OR SMALLER AS PERMITTED BY FBC
+60 PSF -60 PSF



TYPICAL EXTERIOR ELEVATION

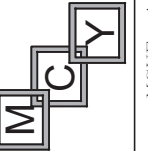
DESIGN LOAD
FOR SIZE SHOWN ABOVE OR SMALLER AS PERMITTED BY FBC
+60 PSF -60 PSF

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GLAZING CONSULTANTS

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MIRAMAR, FL 33027 P: 305.271.0117
www.MCYEngineering.com mcy@mcyengineering.com

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RT	12.14.2023	JAMES	NEW APPLICATION
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NOTE:
METAL/ WOOD STRUCTURE BY OTHERS MUST BE DESIGNED AND
ANCHORED PROPERLY TO SUSTAIN LOADS IMPOSED BY GLAZING
SYSTEM AND TRANSFER THEM TO THE BUILDING STRUCTURE.

ANCHOR TYPES: (SEE ELEVATIONS FOR SPACING)

- TYPE 'A' -- 1/4" DIA. ULTRACON+ BY 'DEWALT' (F_u=164 KSI, F_y=148 KSI)
DIRECTLY INTO CONCRETE OR BLOCKS
1 3/4" MIN. EMBED INTO CONCRETE (HEAD/ SILL/ JAMB)
1 3/4" MIN. EMBED INTO HOLLOW OR GROUT FILLED BLOCKS (JAMB ONLY)
INTO 2BY WOOD BUCKS OR WOOD STRUCTURE
WITH 1 1/2" MIN. PENETRATION INTO WOOD (HEAD/ SILL/ JAMB)

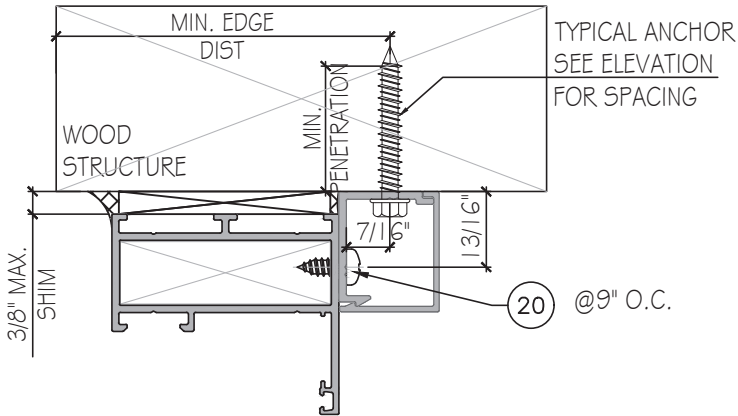
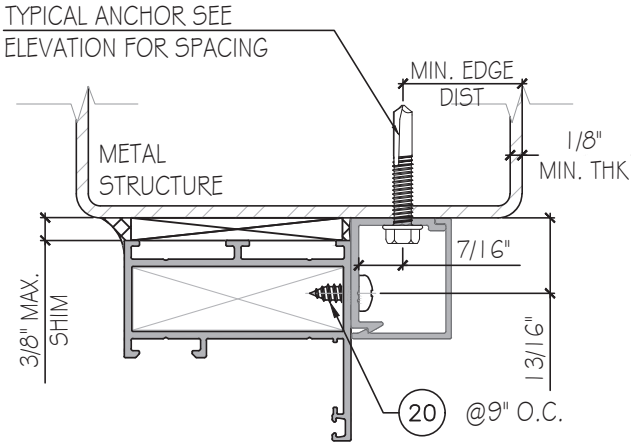
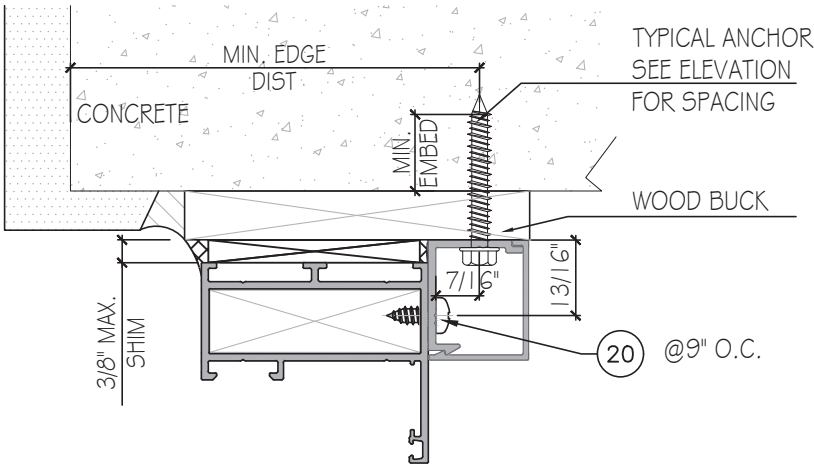
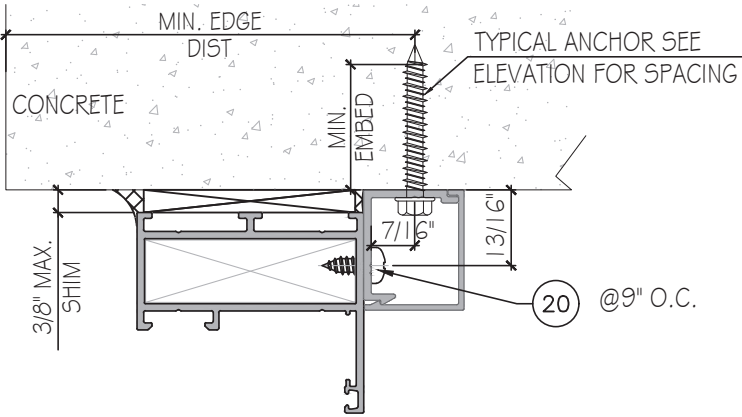
THRU 1BY WOOD BUCK INTO CONCRETE
WITH 1 3/4" MIN. EMBED INTO CONCRETE (HEAD/ SILL/ JAMB)
WITH 1 3/4" MIN. EMBED INTO BLOCKS (JAMB ONLY)

- TYPE 'B' -- 1/4" DIA. SS SCREW (F_u=100 KSI, F_y= 65 KSI)
OR 1/4" TEKS (GRADE 5) (F_u=120KSI, F_y= 92KSI)
INTO FBC APPROVED MULLIONS (1/8" THK. MIN.)
OR INTO METAL STRUCTURES, STEEL: 1/8" THK. MIN. (A36 MIN.)
(3) THREADS MIN. TO EXTEND BEYOND METAL THICKNESS
(STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

TYPICAL EDGE DISTANCE

INTO CONCRETE OR BLOCKS = 2-1/2" MIN.
INTO METAL STRUCTURE = 3/4" MIN.

CONCRETE AT HEAD, SILL OR JAMB f_c=3000PSI MIN.
BLOCK AT JAMB f_m=2000 PSI MIN.
WOOD SG=0.55 MIN.

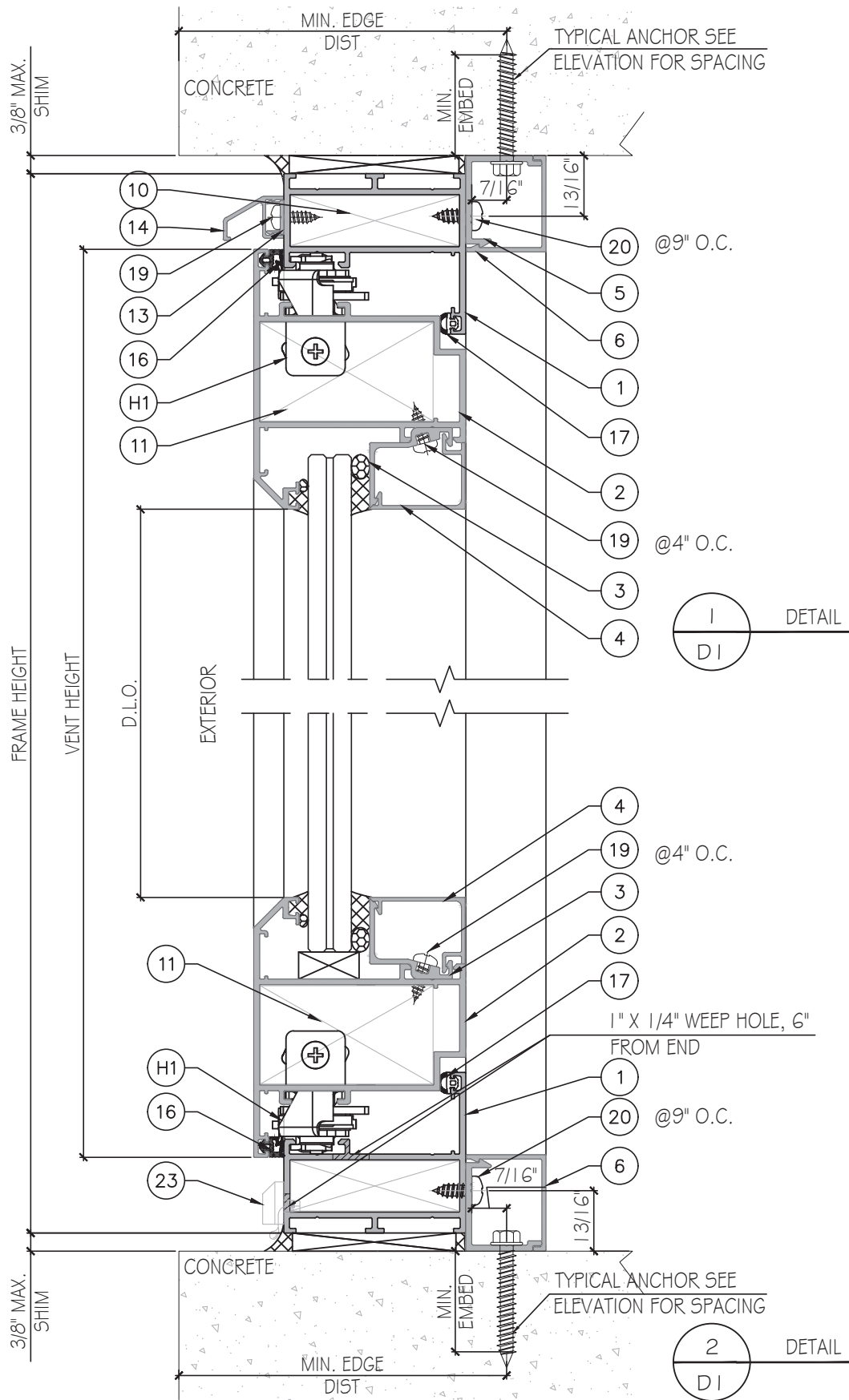


FLORIDA APPROVAL:
FL#46000

YIPING WANG
P.E.
FLORIDA REGISTRATION
#55983
C.A.N. 559877

December 19th, 2023

MCY MCY ENGINEERING, INC. GLAZING CONSULTANTS 12781 MIRAMAR PKWY. STE. 301 MIRAMAR, FL 33027 P: 305.271.0117 www.MCYEngineering.com mcy@mcyengineering.com			
SP60 CASEMENT WINDOW - L.M.I.			
K RESEARCH & DEVELOPMENT, LLC 202 RINGLING BOULEVARD SUITE 301 SARASOTA, FLORIDA P: (941) 266-0300			
		NEW APPLICATION	Description
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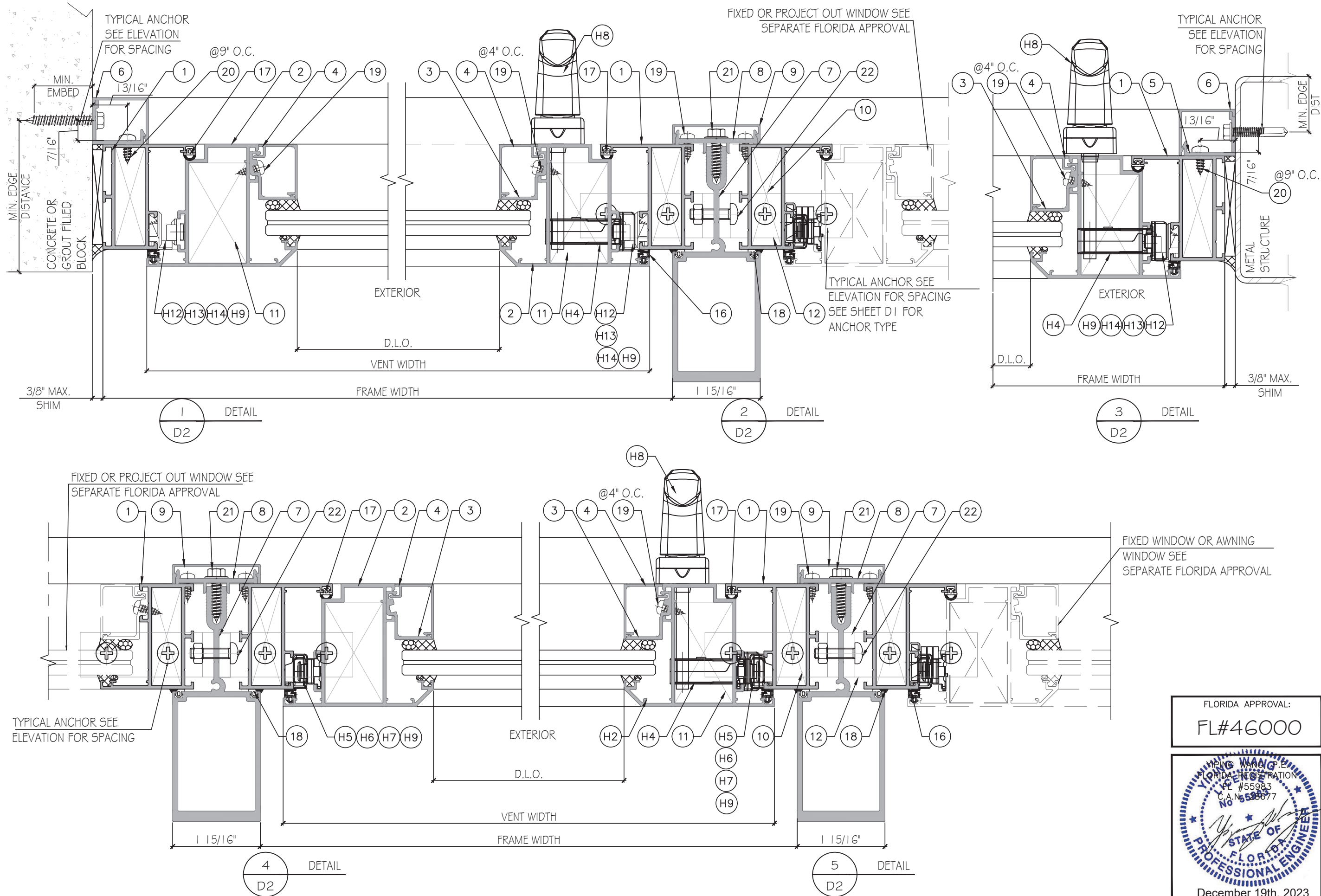
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P: (941) 266-0300

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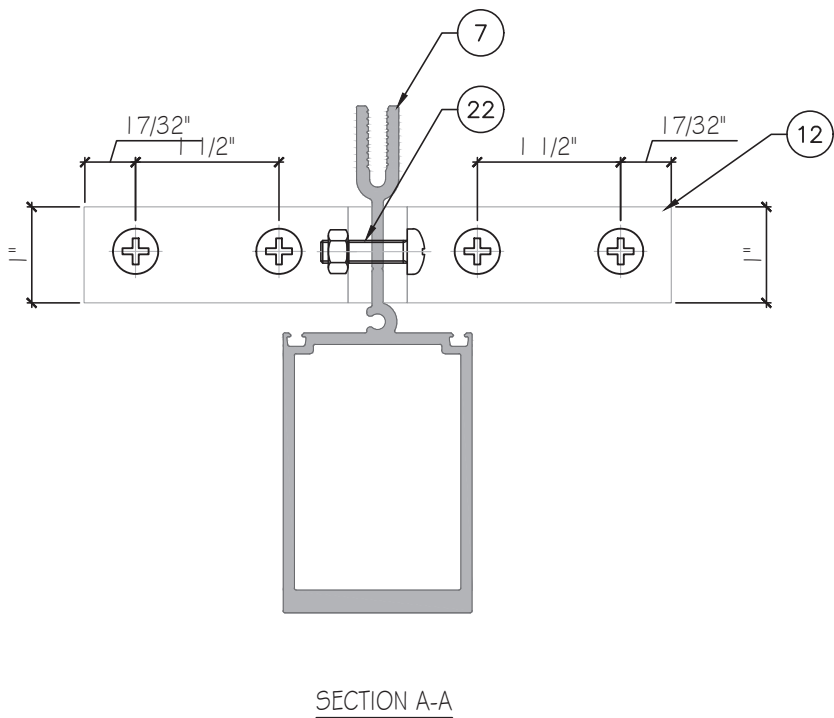
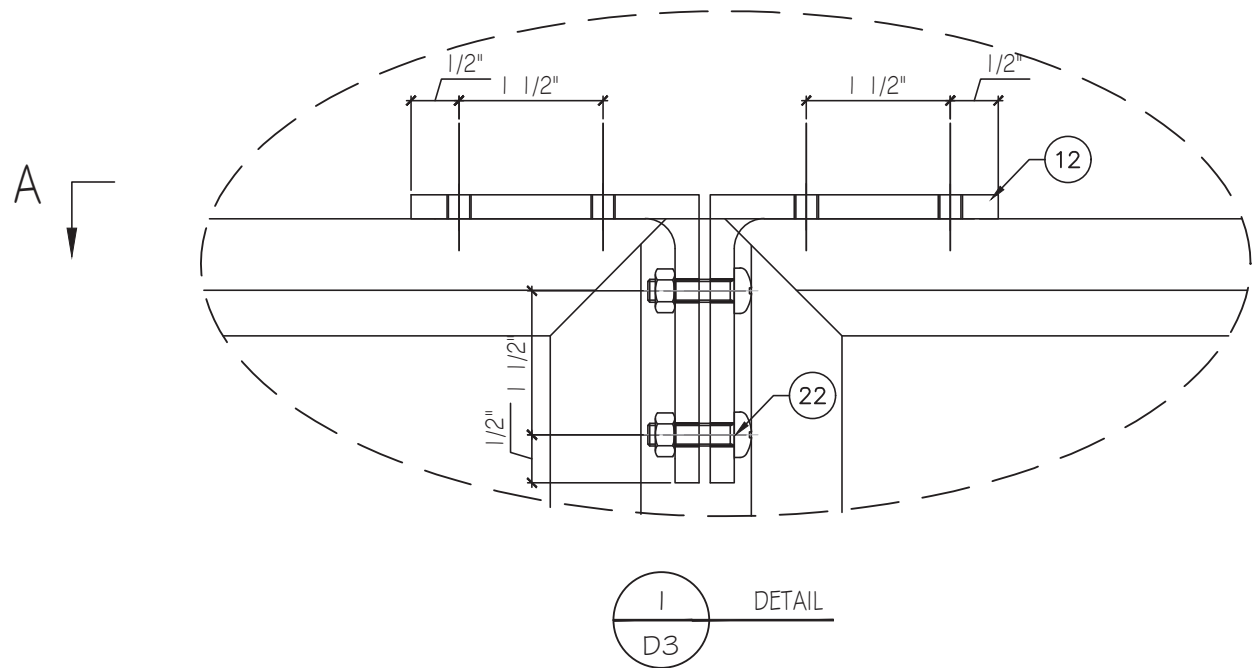
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MULLION ANCHOR:

TYPE 'A' -- 1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)
DIRECTLY INTO CONCRETE ONLY
1 3/4" MIN. EMBED INTO CONCRETE
INTO 2BY WOOD BUCKS OR WOOD STRUCTURE
WITH 1 1/2" MIN. PENETRATION INTO WOOD

THRU 1BY WOOD BUCK INTO CONCRETE
WITH 1 3/4" MIN. EMBED INTO CONCRETE

TYPE 'B' -- 1/4" DIA. S5 SCREW (Fu=100 KSI, Fy= 65 KSI)
1/4" DIA. TEKS (Fu=120 KSI, Fy= 92KSI)
INTO FBC APPROVED MULLIONS (1/8" THK. MIN.)
OR INTO METAL STRUCTURES, STEEL: 1/8" THK. MIN. (A36 MIN.)
(3) THREADS MIN. TO EXTEND BEYOND METAL THICKNESS
(STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

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

CONCRETE AT HEAD, SILL OR JAMB f'c=3000PSI MIN.
WOOD SG=0.55 MIN.

FOR CONDITION NOT COVERED, TO BE CHECKED BY
DELEGATED ENGINEER ON JOB BASES.

FLORIDA APPROVAL:
FL#46000

YOUNG WANG
P.E.
FLORIDA REGISTRATION
#55983
CA#559877

December 19th, 2023

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GLAZING CONSULTANTS
12781 MIRAMAR PKWY, STE. 301
MIRAMAR, FL 33027
P: 305.271.0117
www.MCYEngineering.com mcy@mcyengineering.com

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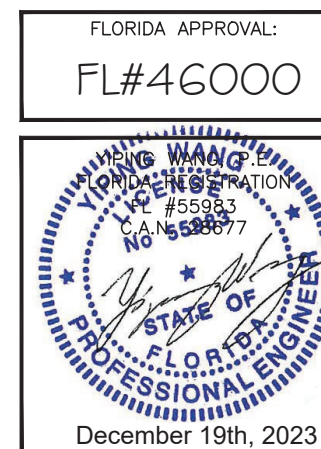
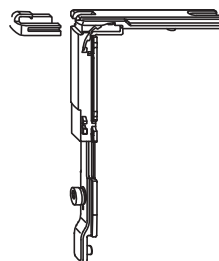
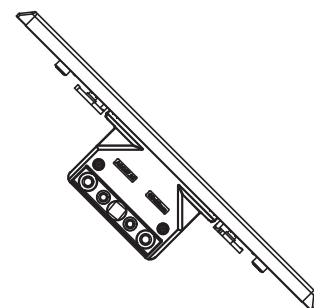
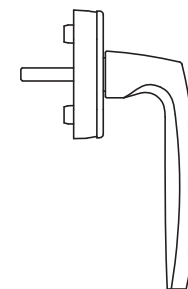
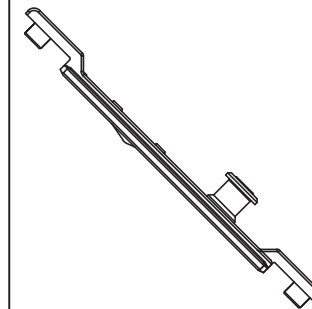
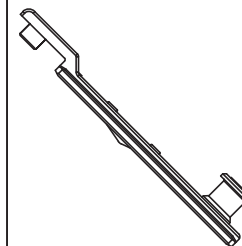
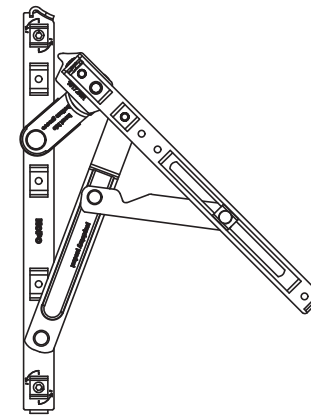
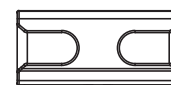
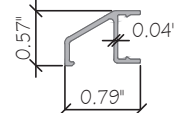
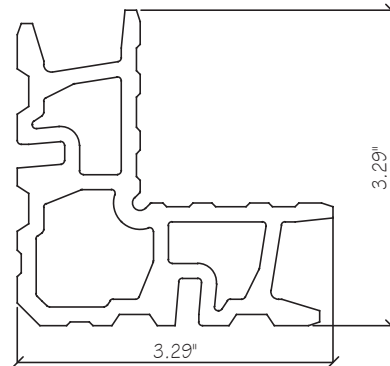
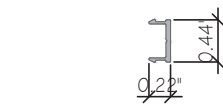
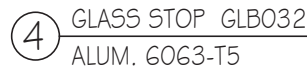
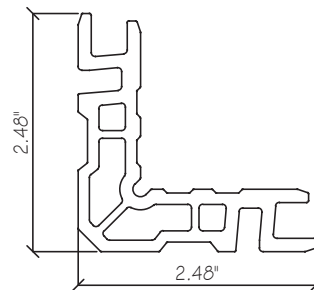
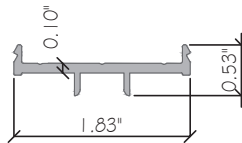
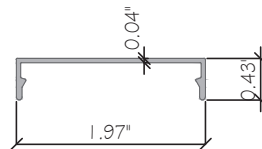
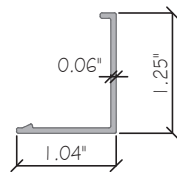
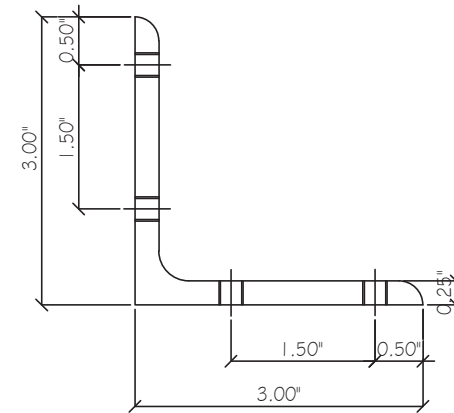
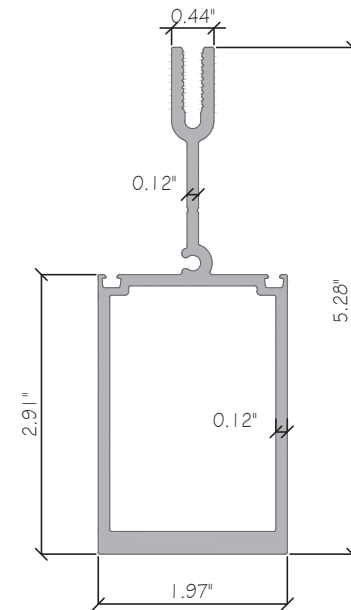
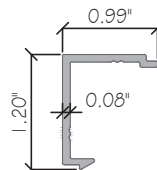
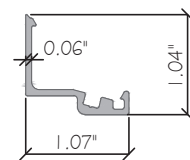
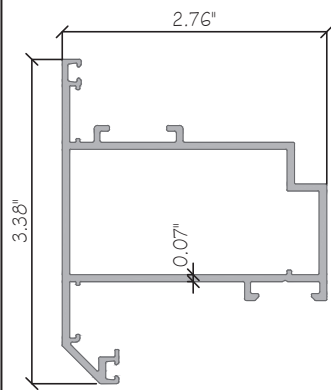
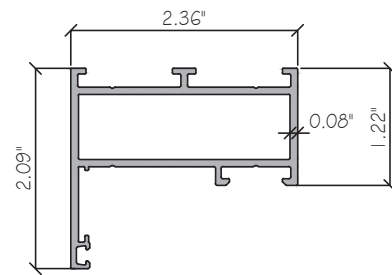
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SARASOTA, FLORIDA
P: (941) 266-0300

[illegible]

BILL OF MATERIALS

ITEM #	PROFILE	DESCRIPTION	MATERIAL	MANUFACTURER/REMARKS
1	SP6001	FRAME	ALUM. 6063-T5	SUPERHOUSE
2	SP6004	VENT	ALUM. 6063-T5	SUPERHOUSE
3	GLA032	GLASS STOP	ALUM. 6063-T5	SUPERHOUSE
4	GLB032	GLASS STOP COVER	ALUM. 6063-T5	SUPERHOUSE
5	SP6051	CLIP	ALUM. 6063-T5	SUPERHOUSE
6	SP6052	COVER	ALUM. 6063-T5	SUPERHOUSE
7	SP6007	STACKING MULLION	ALUM. 6063-T5	SUPERHOUSE
8	SP6008	PRESSURE BAR	ALUM. 6063-T5	SUPERHOUSE
9	SP6009	COVER	ALUM. 6063-T5	SUPERHOUSE
10	JM0022	CLAMPING CORNER	ALUM. 6063-T5	SUPERHOUSE
11	JM0026	CLAMPING CORNER	ALUM. 6063-T5	SUPERHOUSE
12	ZL-758	MULLION CLIP, 1" LONG	ALUM. 6063-T5	SUPERHOUSE
13	JNSP10005	CLIP	ALUM. 6063-T5	SUPERHOUSE
14	JNSP10006	CORNICE	ALUM. 6063-T5	SUPERHOUSE
15	-			
16	SBWG-001	EPDM GASKET	HARDNESS:30 ± 5 DURO	SUPERHOUSE
17	SBWG-006	EPDM GASKET	HARDNESS:30 ± 5 DURO	SUPERHOUSE
18	SBWG-002	EPDM GASKET	HARDNESS:30 ± 5 DURO	SUPERHOUSE
19	-	SCREW, DIA. 5/32" X 1/2".	STEEL	VARIES
20	-	#12 X 1/2" S.S. SCREW, 4" FROM EACH END, @9" O.C. Fu=100 PSI, Fy=65 PSI	STEEL	VARIES
21	-	HEX HEAD SCREW, DIA. 1/4" X 3 1/32"	STEEL	VARIES
22	-	1/4" DIA. X 3 1/32" PAN HEAD S.S. SCREW, WITH 1/4" DIA. NUT, (2) AT EACH MULLION END, Fu=100 PSI, Fy=65 PSI.	STEEL	VARIES
23	-	WEEP HOLE COVER, 5/16" X 1-1/32"	-	SUPERHOUSE
24	-	SETTING BLOCK, 1/4" X 1".	SILICONE	75 +/- 2A DURO.
H1	FH06	FRICTION HINGE	-	HOPO
H4	AGC37.35	FLUSH-ENCASED GEARBOX	-	HOPO
H5	ALP33	STRIKER	-	HOPO
H6	ALR21	LOCKING CAM	-	HOPO
H7	ALR28	LOCKING CAM	-	HOPO
H8	O738	HANDLE	-	HOPO
H9	VSO TS K50	COVER DRIVE	-	SIEGENIA
H12	266533	STRIKER	-	SIEGENIA
H13	254509	LOCKING CAM	-	SIEGENIA
H14	303511	LOCKING CAM		SIEGENIA

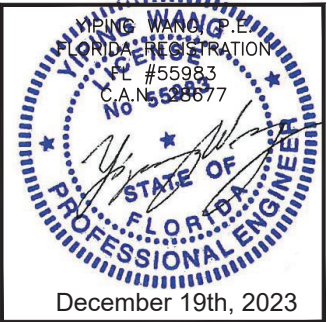
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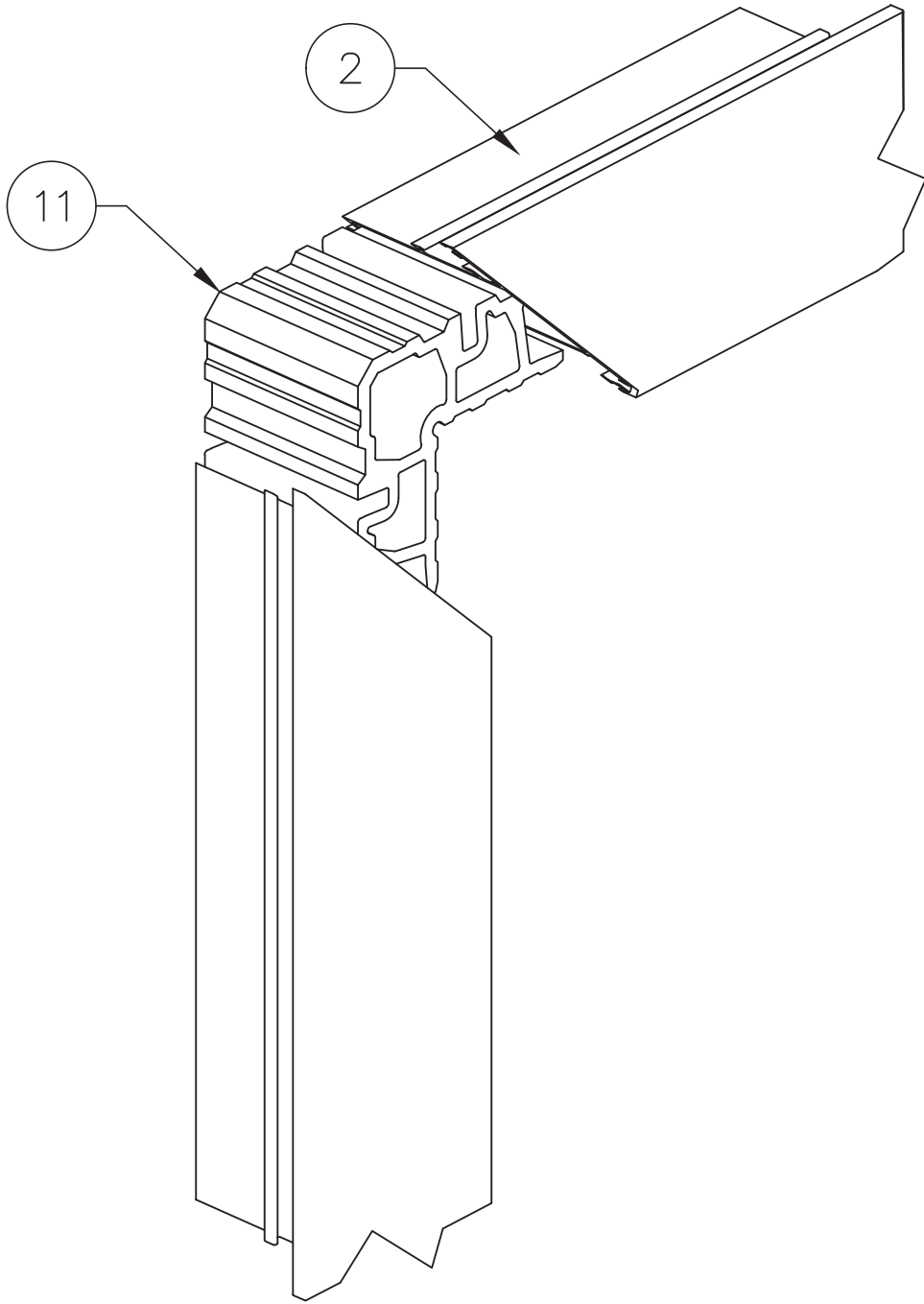
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P: (941) 266-0300 □

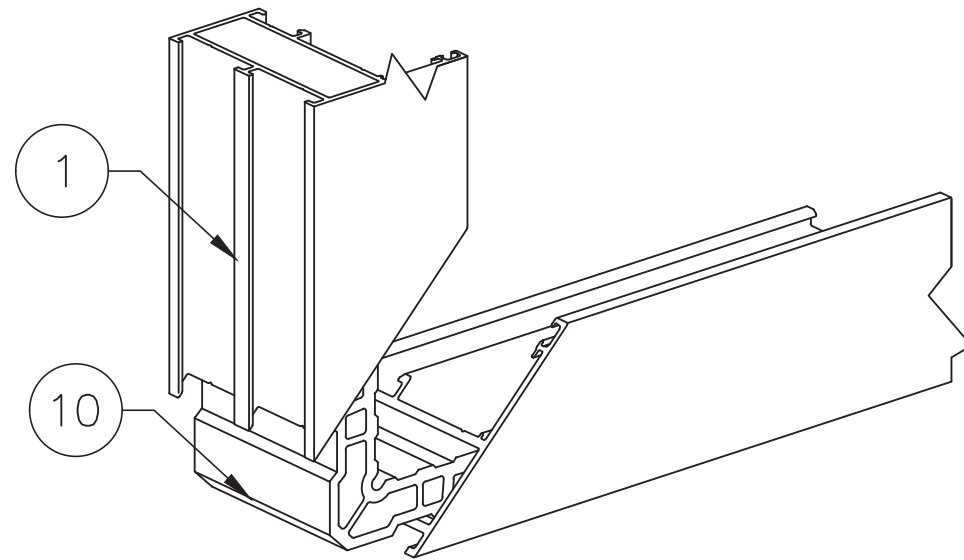
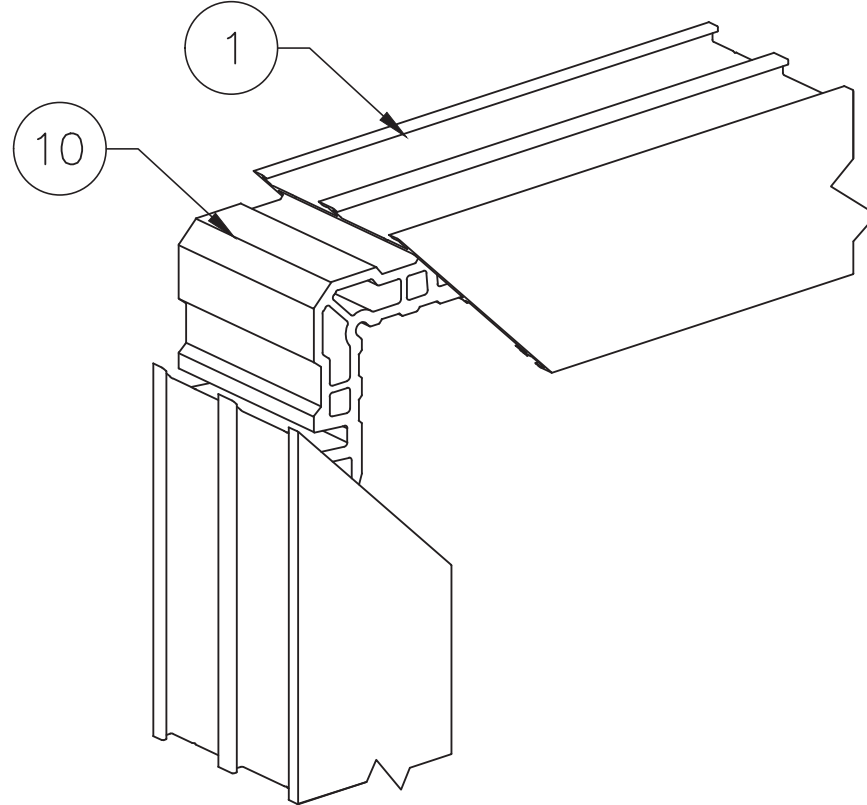
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FLORIDA APPROVAL:
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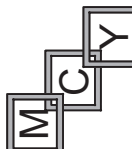
VENT CORNER



FRAME CORNER

FLORIDA APPROVAL:
FL#46000

YOUNG WANG P.E.
FLORIDA REGISTRATION
FL #55983
CAN #558677
December 19th, 2023

**MCY ENGINEERING, INC.**
GLAZING CONSULTANTS
12781 MIRAMAR PKWY, STE. 301
MIRAMAR, FL 33027 P: 305.271.0117
www.MCYEngineering.com mcy@mcyengineering.com

SP60 CASEMENT WINDOW - L.M.I.
K RESEARCH & DEVELOPMENT, LLC
202 RINGLING BOULEVARD SUITE 301
SARASOTA, FLORIDA
P: (941) 266-0300

Rev. No.	Date	Drawn By	Description
RT	12.14.2023	JAMES	NEW APPLICATION

Drawn Date	Scale
12.14.2023	AS SHOWN

DRAWING NO.
AD23-61

ASSEMBLY

Sheet No.
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