

MR. GLASS DOORS AND WINDOWS, INC. SERIES MRG-400 FIXED WINDOW LARGE & SMALL MISSILE IMPACT

DRAWINGS INDEX				
SHEET	TITLE	CONTENT	REV.	DATE
01	COVER	GENERAL NOTES AND INSTRUCTIONS		
02	E1	WINDOW ELEVATION		
03	G1	GLASS CAPACITY CHARTS		
04	D1	WINDOW DETAILS		
05	A1	ANCHOR OPTIONS		
06	A2	ANCHOR OPTIONS		
07	BOM	BILL OF MATERIALS		
08	ISO	ASSEMBLE DRAWINGS		

GENERAL NOTES:


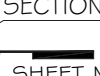
- THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE 6TH EDITION FLORIDA BUILDING CODE (2017) INCLUDING HIGH VELOCITY HURRICANE ZONE (HVHZ).
- WINDOWS RATED FOR LARGE MISSILE IMPACT. IMPACT SHUTTERS ARE NOT REQUIRED.
- THESE WINDOWS ARE APPROVED FOR AIR AND WATER INFILTRATION.
- ANCHORS SHALL BE AS LISTED, SPACED AS SHOWN ON DETAILS. ANCHOR 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 6TH EDITION FLORIDA BUILDING CODE (2017) SECTION AS APPLICABLE.
- METAL STRUCTURES NOT BY MR. GLASS DOOR & WINDOWS, INC. 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 7-10, MULTIPLIED BY 0.6 SHALL BE LESS THAN OR EQUAL TO THE MAX. DESIGN LOAD IN THIS DOCUMENT. THE DESIGN LOADS SHOWN IN THIS DOCUMENT ARE ALLOWABLE DESIGN LOADS.

INSTRUCTIONS:

USE CHARTS AS FOLLOWS.

- STEP 1: DETERMINE DESIGN WIND LOAD REQUIREMENTS BASED ON WIND VELOCITY, BLDG. HEIGHT, WIND ZONE USING APPLICABLE ASCE 7-10 STANDARD BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT.
- STEP 2: SEE SHEET G1 FOR GLASS OPTIONS AND CHART FOR APPROVED LOAD OF DESIRED FRAME SIZE WITH GLASS OPTIONS.
- STEP 3: APPROVED ANCHOR OPTIONS SHEETS A1 & A2. ANCHOR SPACING SEE SHEET E1.
- STEP 4: THE LOWEST VALUE RESULTING FROM STEPS 2 AND 3 SHALL APPLY TO ENTIRE SYSTEM.

ABBREVIATIONS AND SYMBOLS

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

LIMITATIONS OF USE

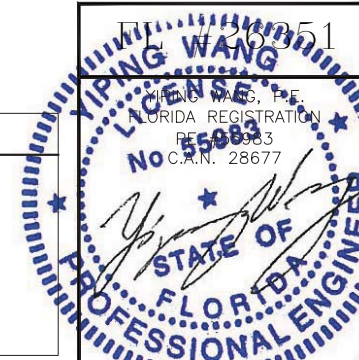
A- THIS PRODUCT EVALUATION DOCUMENT (P.E.D.) PREPARED BY THIS ENGINEER IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT; i.e. WHERE THE SITE CONDITIONS DEVIATE FROM THE P.E.D.

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.

THIS P.E.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.



NO	DATE	DESCRIPTION



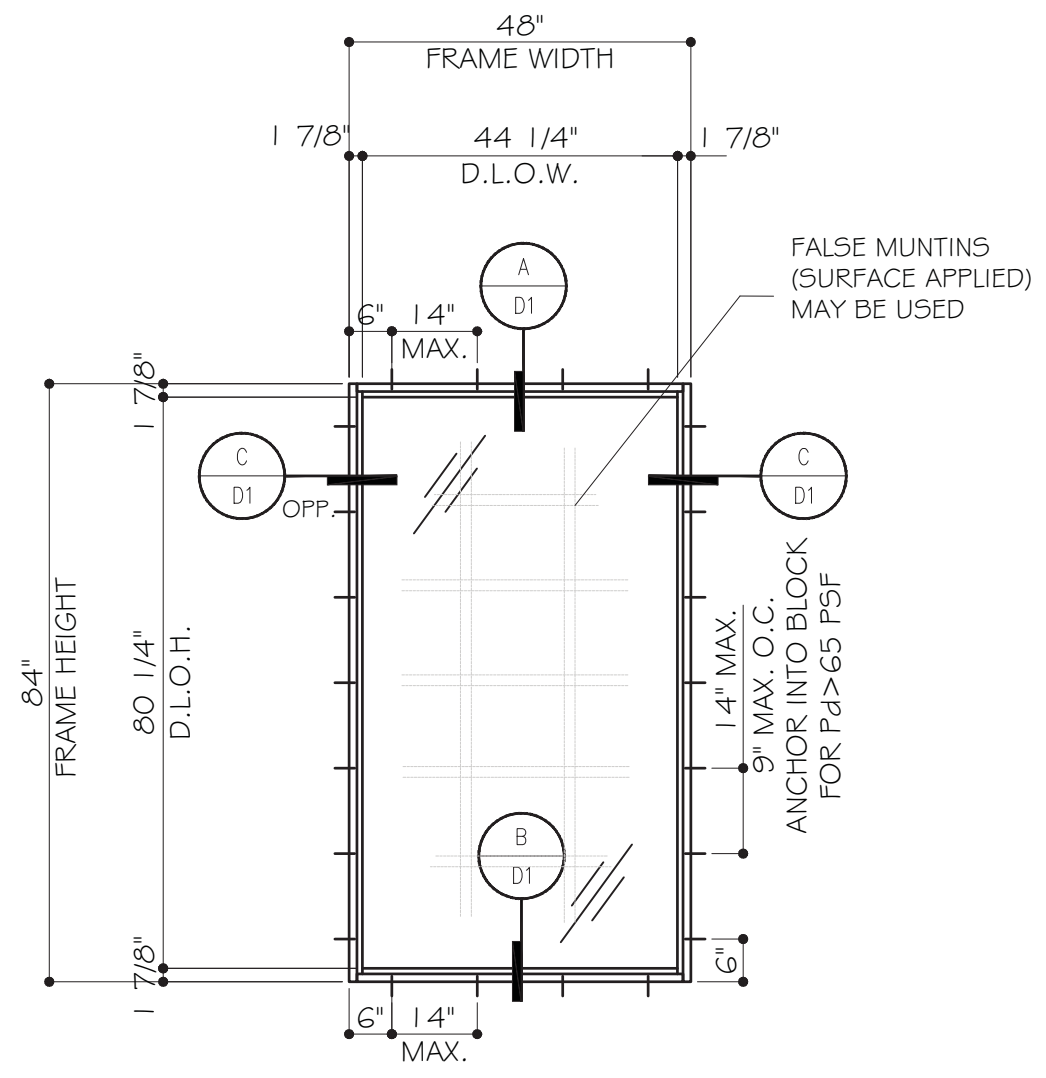
MCY ENGINEERING, INC.
GLAZING CONSULTANTS

8501 SW 124 Ave, Ste. 205A P: 305.271.0117
MIAMI, FL 33183 F: 305.279.6818
www.MCYEngineering.com MCY.Engineering@Att.net

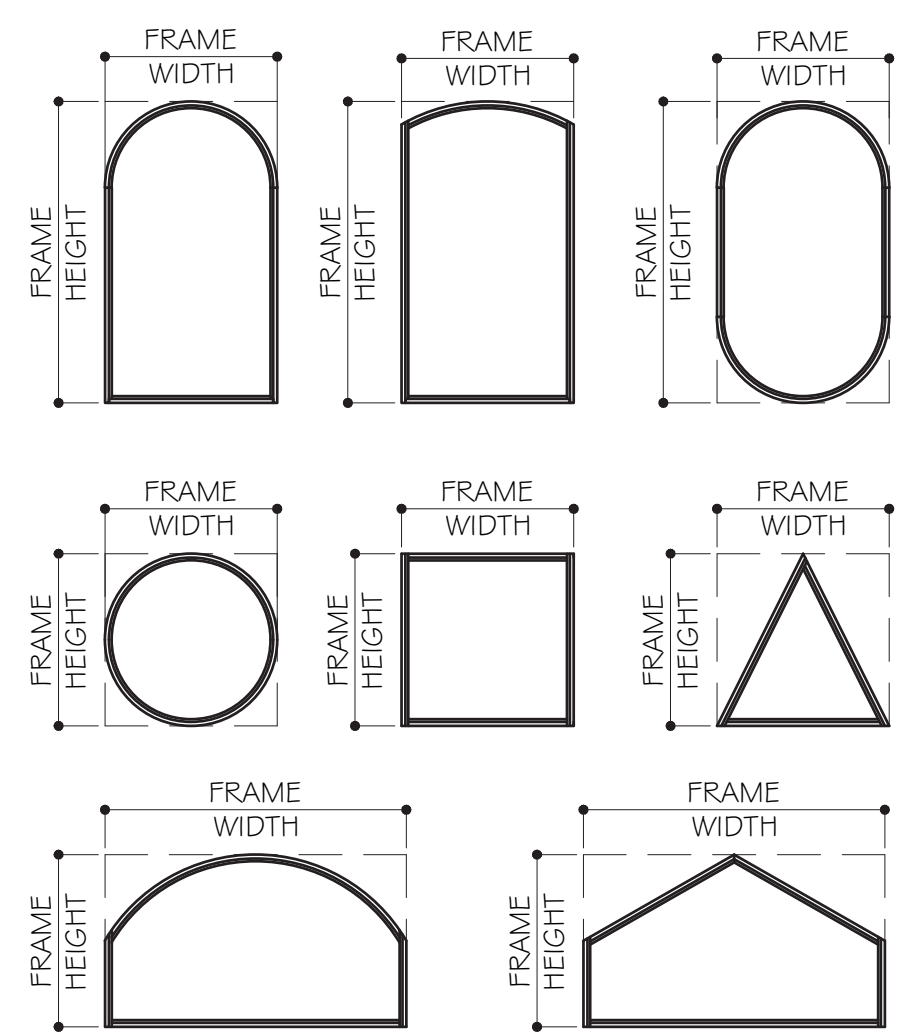
SERIES MRG-400 FIXED WINDOW (L.M.I.)

MR. GLASS DOORS AND WINDOWS, INC
8120 NW 84TH STREET, MIAMI, FL 33166
TEL ??? FAX ???

C1	
DATE	02/06/18
SCALE	AS SHOWN
DRAWN	Bin
PROJECT	
DRAWING NO.	AD18-01
1 OF 9	

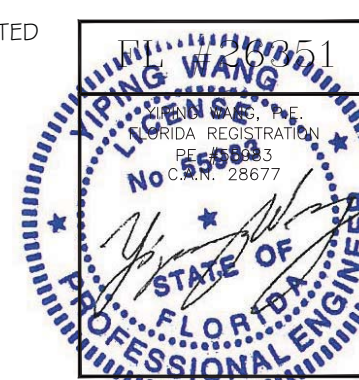


FIXED WINDOW ELEVATION
(TEST SIZE SHOWN)



ALLOWABLE LOADS FOR ALTERNATE SHAPES AS SHOWN ABOVE OR SIMILAR CAN BE VERIFIED BY INSCRIBING PICTURE WINDOW SHAPE WITHIN SQUARE OR RECTANGLE AS SHOWN IN DOTTED LINES AND OBTAIN ALLOWABLE LOADS FROM THOSE SHAPES.

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



NO	DATE	DESCRIPTION

MCY ENGINEERING, INC.
GLAZING CONSULTANTS

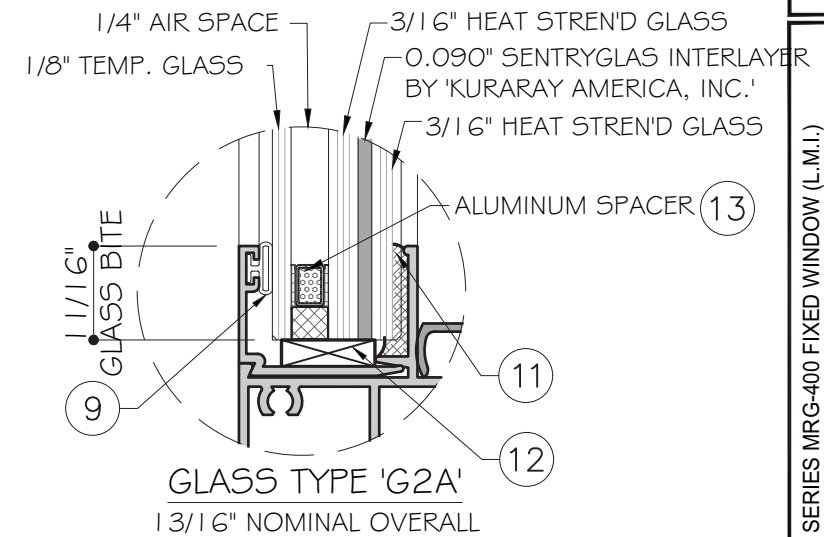
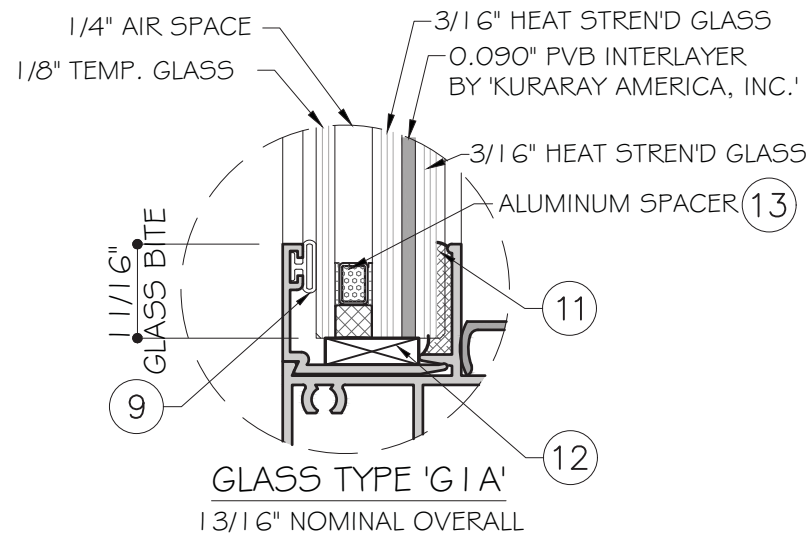
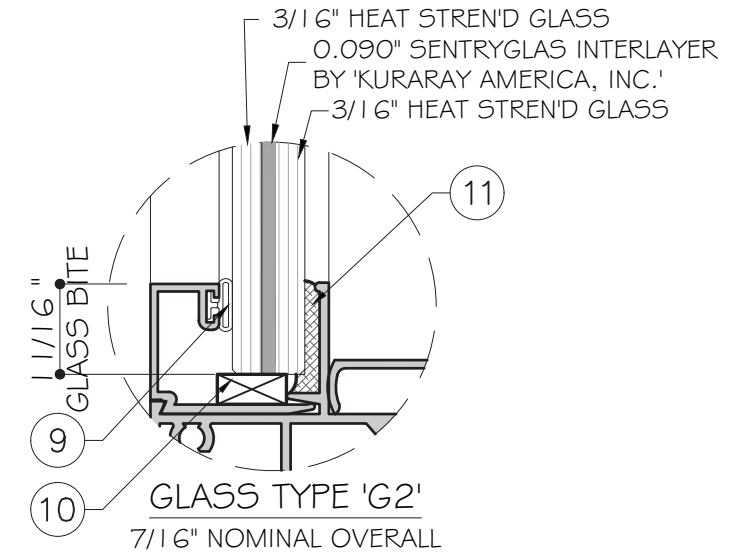
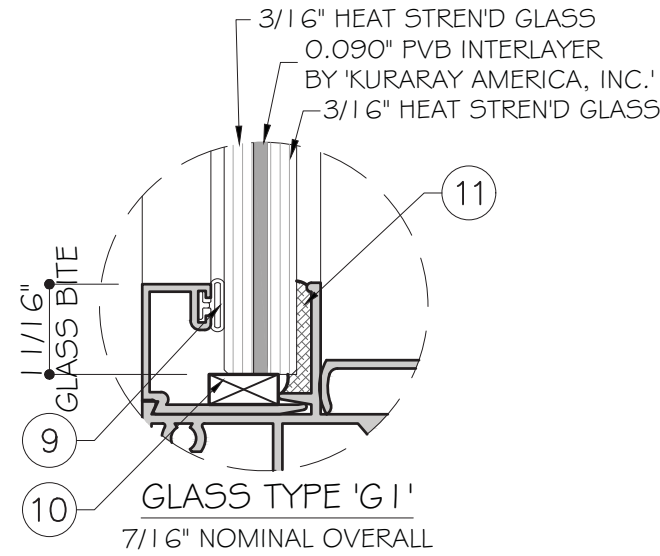
8501 SW 124 Ave Ste. 205A
MIAMI, FL 33183
P: 305.271.0117
F: 305.279.6818
www.MCYEngineering.com MCY.Engineering@Att.net

SERIES MRG-400 FIXED WINDOW (L.M.I.)

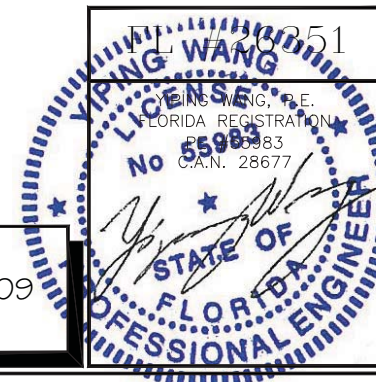
MR. GLASS DOORS AND WINDOWS, INC
8120 NW 84TH STREET, MIAMI, FL 33166
TEL ??? FAX ???

E1	
DATE	02/06/18
SCALE	AS SHOWN
DRAWN	Bin
PROJECT	
DRAWING NO.	AD18-01
2 OF 9	

DESIGN LOAD CAPACITY - PSF (GLASS)				DESIGN LOAD CAPACITY - PSF (GLASS)			
FRAME SIZES		GLASS TYPES		FRAME SIZES		GLASS TYPES	
FRAME WIDTH	FRAME HEIGHT	G1 & G1A	G2 & G2A	WIDTH	HEIGHT	G1 & G1A	G2 & G2A
(IN)	(IN)	+/- PSF	+/- PSF	(IN)	(IN)	+/- PSF	+/- PSF
30	54	65.0	100.0	19 1/8	26	65.0	100.0
36		65.0	100.0	26 1/2		65.0	100.0
42		65.0	100.0	37		65.0	100.0
48		65.0	100.0	53 1/8		65.0	100.0
54		58.0	89.0	19 1/8		65.0	100.0
60	60	58.0	89.0	26 1/2	38 3/8	65.0	100.0
30		65.0	100.0	37		65.0	100.0
36		65.0	100.0	53 1/8		65.0	100.0
42		65.0	100.0	19 1/8		65.0	100.0
48		65.0	100.0	26 1/2		65.0	100.0
54	66	58.0	89.0	37	50 5/8	65.0	100.0
60		52.0	80.0	53 1/8		62.0	95.0
30		65.0	100.0	19 1/8		65.0	100.0
36		65.0	100.0	26 1/2		65.0	100.0
42		65.0	100.0	37		65.0	100.0
48	72	65.0	100.0	53 1/8	63	59.0	90.0
54		58.0	89.0	19 1/8		65.0	100.0
30		65.0	100.0	26 1/2		65.0	100.0
36		65.0	100.0	37		65.0	100.0
42		65.0	100.0	53 1/8		59.0	90.0
48	78	65.0	100.0	19 1/8	76	65.0	100.0
54		58.0	89.0	26 1/2		65.0	100.0
30		65.0	100.0	37		65.0	100.0
36		65.0	100.0	53 1/8		65.0	100.0
42		65.0	100.0	19 1/8		65.0	100.0
48	84	65.0	100.0	26 1/2	76	65.0	100.0
54		58.0	89.0	37		65.0	100.0
30		65.0	100.0	53 1/8		59.0	90.0
36		65.0	100.0	19 1/8		65.0	100.0
42		65.0	100.0	26 1/2		65.0	100.0
48	90	65.0	100.0	37	76	65.0	100.0
54		58.0	89.0	53 1/8		62.0	95.0
30		65.0	100.0	19 1/8		65.0	100.0
36		65.0	100.0	26 1/2		65.0	100.0
42		65.0	100.0	37		65.0	100.0
48	96	65.0	100.0	53 1/8	76	59.0	90.0
54		58.0	89.0	19 1/8		65.0	100.0
30		65.0	100.0	26 1/2		65.0	100.0
36		65.0	100.0	37		65.0	100.0
42		65.0	100.0	53 1/8		59.0	90.0
48	102	65.0	100.0	19 1/8	76	65.0	100.0
54		58.0	89.0	26 1/2		65.0	100.0
30		65.0	100.0	37		65.0	100.0
36		65.0	100.0	53 1/8		65.0	100.0
42		65.0	100.0	19 1/8		65.0	100.0
48	108	65.0	100.0	26 1/2	76	65.0	100.0
54		58.0	89.0	37		65.0	100.0
30		65.0	100.0	53 1/8		62.0	95.0
36		65.0	100.0	19 1/8		65.0	100.0
42		65.0	100.0	26 1/2		65.0	100.0
48	114	65.0	100.0	37	76	65.0	100.0
54		58.0	89.0	53 1/8		62.0	95.0
30		65.0	100.0	19 1/8		65.0	100.0
36		65.0	100.0	26 1/2		65.0	100.0
42		65.0	100.0	37		65.0	100.0



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



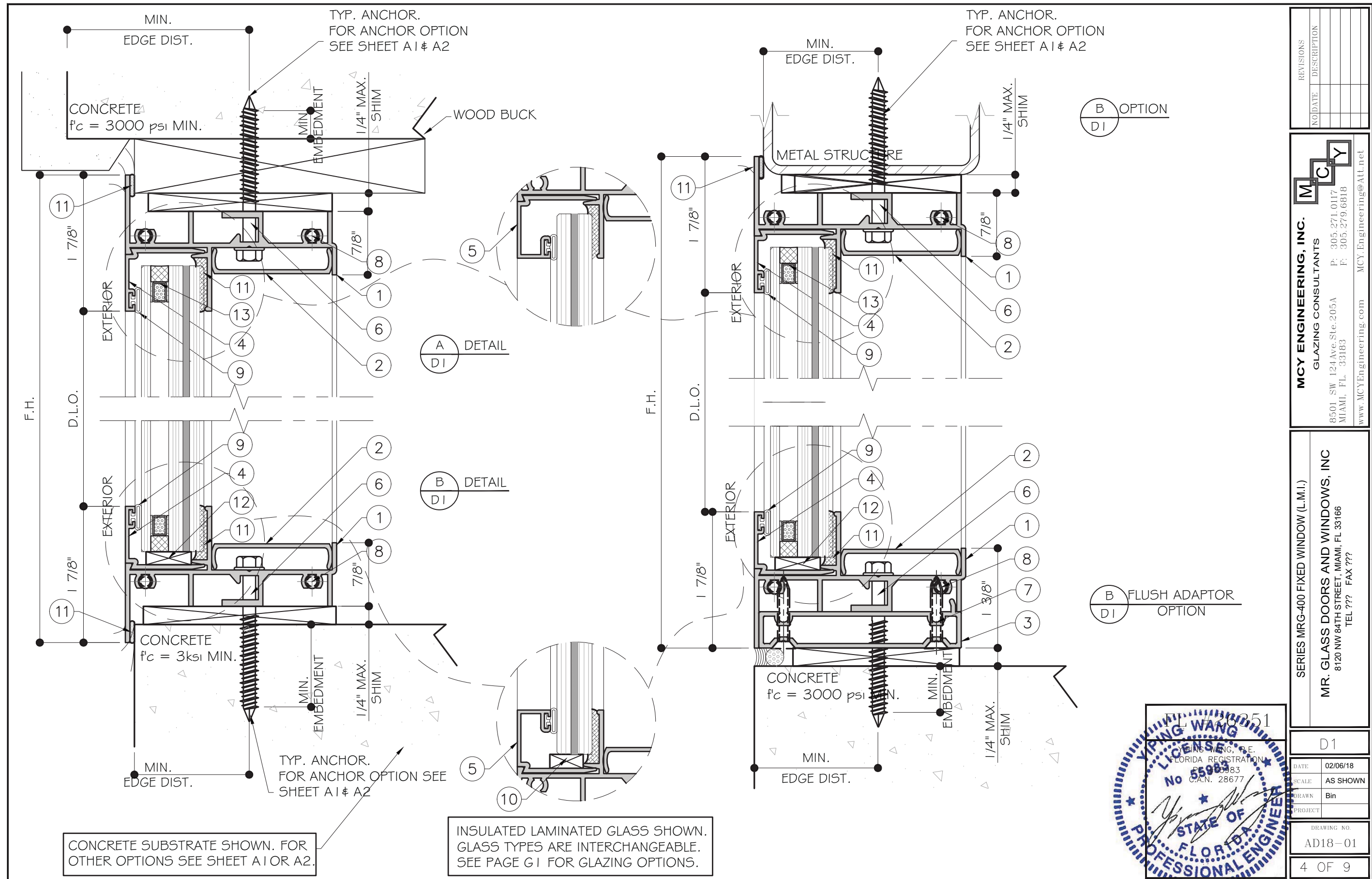
REVISIONS	DESCRIPTION
NO.	DATE

MCY
MCY ENGINEERING, INC.
 GLAZING CONSULTANTS
 8501 SW 124 Ave, Ste. 205A
 MIAMI, FL 33183
 P: 305.271.0117
 F: 305.279.6818
 www.MCYEngineering.com
 MCY.Engineering@AtL.net

SERIES MRG-400 FIXED WINDOW (L.M.I.)
MR. GLASS DOORS AND WINDOWS, INC
 8120 NW 84TH STREET, MIAMI, FL 33166
 TEL ??? FAX ???

G1

DATE: 02/06/18
 SCALE: AS SHOWN
 DRAWN: Bin
 PROJECT:
 DRAWING NO.
 AD18-01
 3 OF 9



CONCRETE SUBSTRATE SHOWN. FOR OTHER OPTIONS SEE SHEET A1 OR A2.

INSULATED LAMINATED GLASS SHOWN. GLASS TYPES ARE INTERCHANGEABLE. SEE PAGE G1 FOR GLAZING OPTIONS.

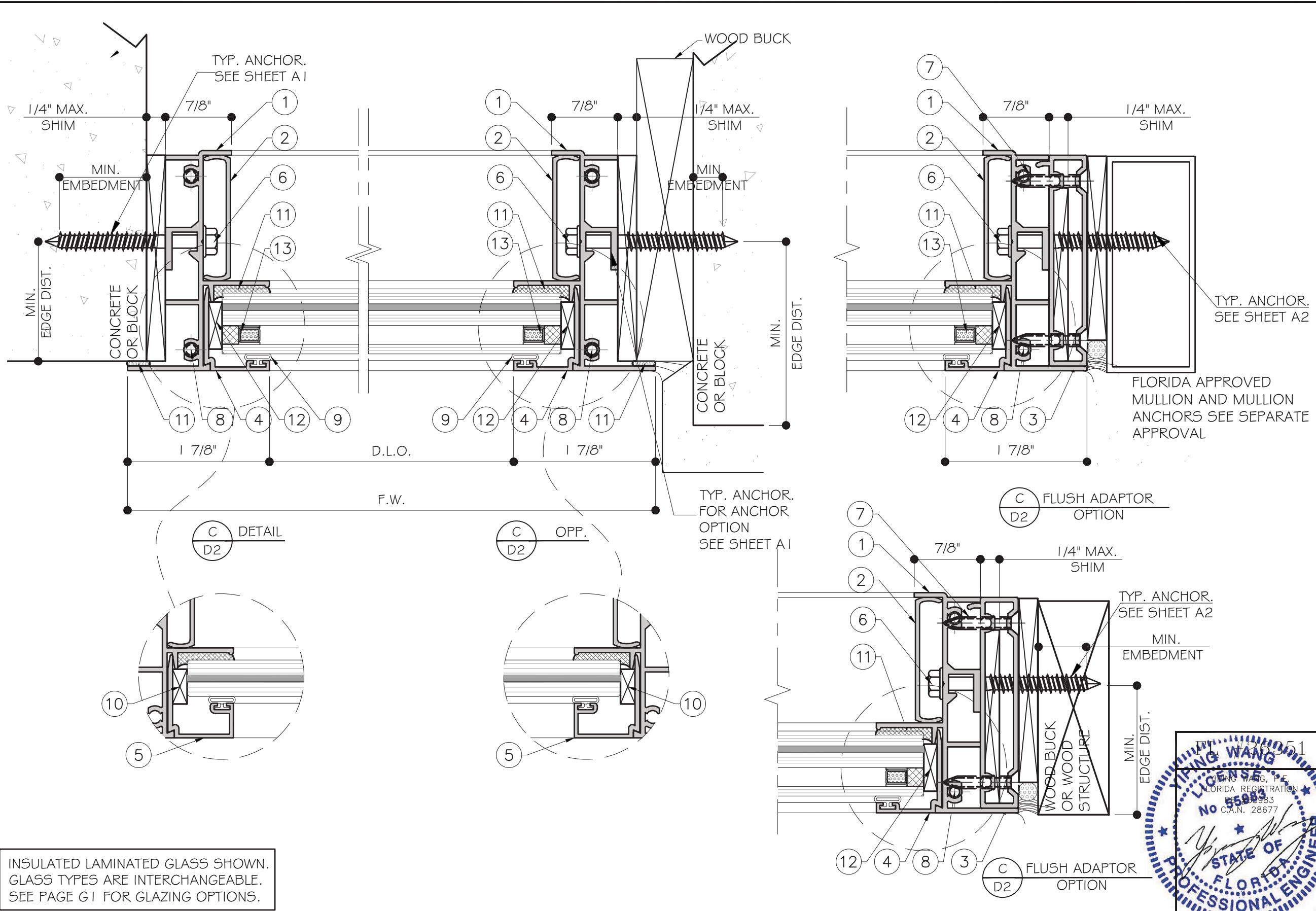


REVISIONS	
NO. DATE	DESCRIPTION

MCY ENGINEERING, INC.	
GLAZING CONSULTANTS	
8501 SW 124 Ave. Ste. 205A MIAMI, FL 33183	P: 305.271.0117 F: 305.279.6818
www.MCYEngineering.com MCY-Engineering@Att.net	

SERIES MRG-400 FIXED WINDOW (L.M.I.)	
MR. GLASS DOORS AND WINDOWS, INC	
8120 NW 84TH STREET, MIAMI, FL 33166	
TEL ??? FAX ???	

DATE	02/06/18
SCALE	AS SHOWN
DRAWN	Bin
PROJECT	
DRAWING NO.	AD18-01
4 OF 9	

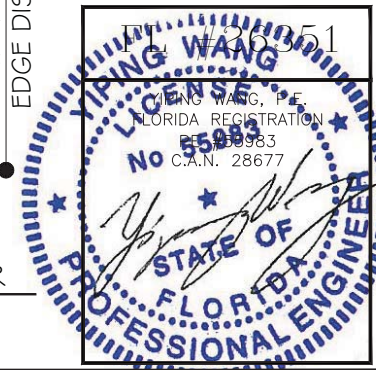


INSULATED LAMINATED GLASS SHOWN.
GLASS TYPES ARE INTERCHANGEABLE.
SEE PAGE G1 FOR GLAZING OPTIONS.

NO.	DATE	DESCRIPTION

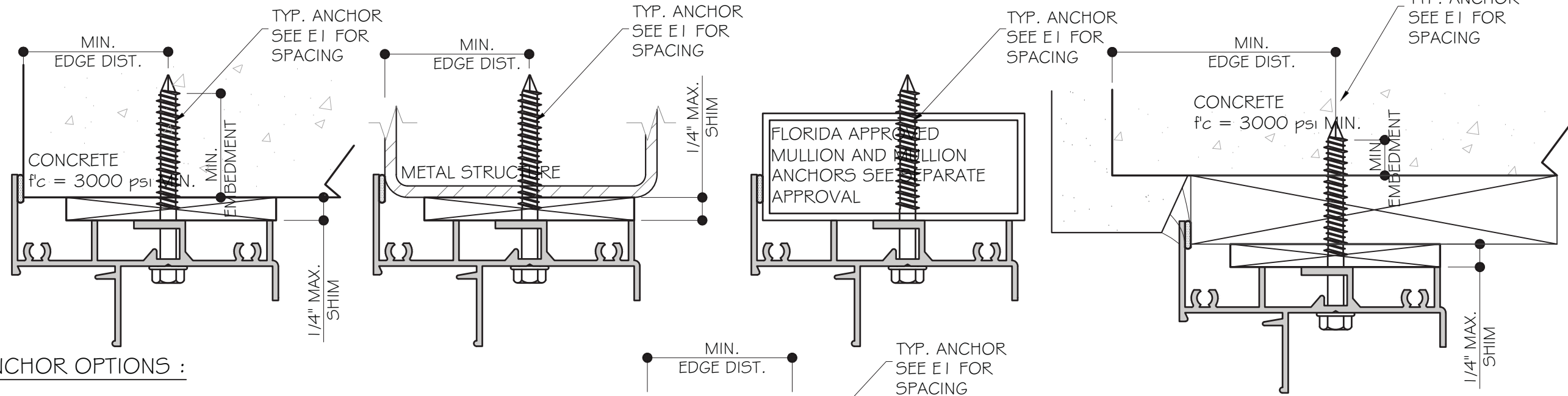
MCY ENGINEERING, INC.
GLAZING CONSULTANTS
8501 SW 124 Ave. Ste. 205A
MIAMI, FL 33183
P: 305.271.0117
F: 305.279.6818
www.MCYEngineering.com
MCY_Engineering@A1t.net

SERIES MRG-400 FIXED WINDOW (L.M.I.)
MR. GLASS DOORS AND WINDOWS, INC
8120 NW 84TH STREET, MIAMI, FL 33166
TEL ??? FAX ???



D2
DATE 02/06/18
SCALE AS SHOWN
DRAWN Bin
PROJECT
DRAWING NO. AD18-01
5 OF 9

FEBRUARY 20TH, 2018



ANCHOR OPTIONS :

- TYPE "A": 1/4" DIA. 'ELCO' ULTRACON (Fu=177KSI, Fy=155KSI)
1 1/2" EMBED INTO WOOD (SG=0.55)
- TYPE "B": 1/4" DIA. 'ELCO' ULTRACON
1 3/4" EMBED INTO fc'=3 KSI MIN. CONCRETE
OR THRU 1X WOOD BUCK INTO CONCRETE
W/ 1 3/4" EMBEDMENT INTO CONCRETE

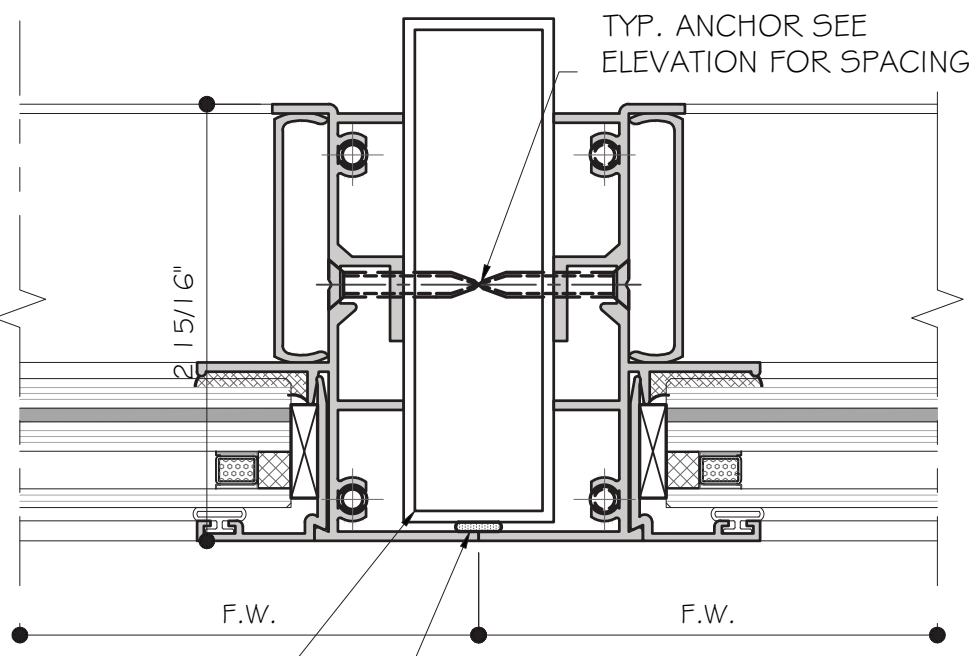
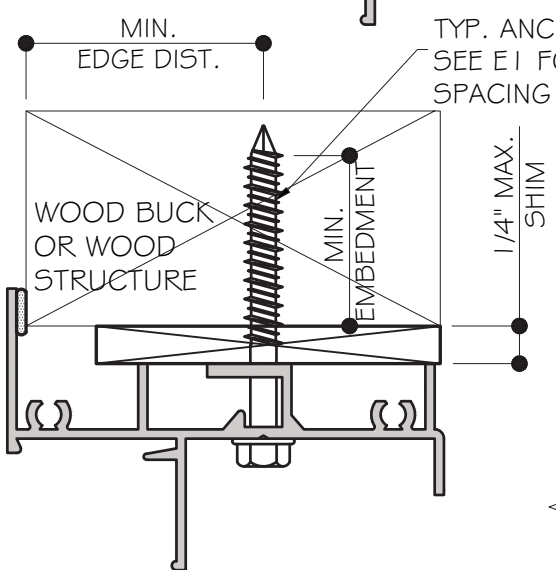
1/4" DIA. 'ELCO' ULTRACON (Fu=177KSI, Fy=155KSI)
1 1/4" MIN. EMBED INTO HOLLOW BLOCK
1 3/4" MIN. EMBED INTO GROUT FILLED BLOCK (JAMB ONLY)

OR THRU 1X WOOD BUCK INTO HOLLOW BLOCK
OR GROUT FILLED BLOCK WITH
1 1/4" MIN. EMBED INTO HOLLOW BLOCK
1 3/4" MIN. EMBED INTO GROUT FILLED BLOCK (JAMB ONLY)
- TYPE "C": #14 SMS SCREW (Fu=74KSI, Fy=57KSI)
INTO 1/8" MIN. THK ALUMINUM MEMBER (6063-T5 MIN.)

#14 TEKS SCREW (Fu=120 KSI, Fy=92KSI)
INTO 1/8" MIN. THK STEEL.

ANCHOR EDGED DISTANCE:
 INTO CONCRETE & MASONRY= 1 1/2" MIN.
 INTO WOOD STRUCTURE = 1" MIN.
 INTO METAL = 3/4"

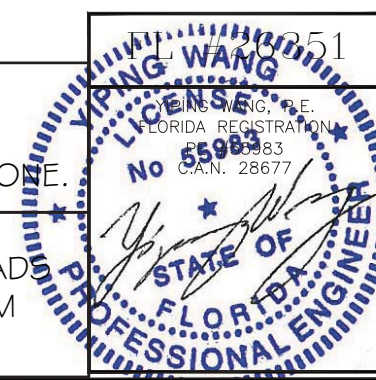
CONCRETE AT HEAD , SILL OR JAMB fc'=3000 PSI MIN. UNLESS SPECIFIED
 C-90 HOLLOW /FILLED BLOCK AT JAMB fm'=2000 PSI MIN.
 WOOD SG=0.55 MIN.



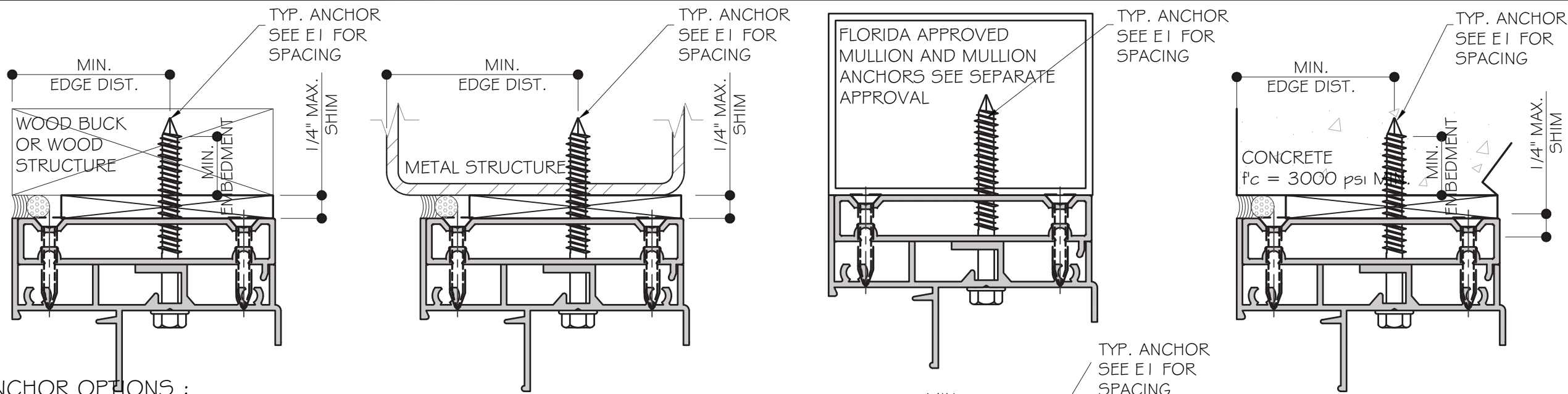
FLORIDA APPROVAL MULLION
 SEE SEPARATE APPROVAL

SEALANT:
 ALL JOINTS AND THE FRAME
 CONNECTION SEALED WITH SILICONE.

WOOD BUCKS AND METAL STRUCTURE NOT BY MR.
 GLASS WINDOWS AND DOORS, MUST SUSTAIN LOAD
 IMPOSED BY GLAZING SYSTEM AND TRANSFER THEM
 TO THE BUILDING STRUCTURE



REVISIONS	
NO. DATE	DESCRIPTION
MCY ENGINEERING, INC. GLAZING CONSULTANTS 8501 SW 124 Ave. Ste. 205A P: 305.271.0117 MIAMI, FL 33183 F: 305.279.6818 www.MCYEngineering.com MCY.Engineering@Att.net	
SERIES MRG-400 FIXED WINDOW (L.M.I.) MR. GLASS DOORS AND WINDOWS, INC 8120 NW 84TH STREET, MIAMI, FL 33166 TEL ??? FAX ???	
DATE	02/06/18
SCALE	AS SHOWN
DRAWN	Bin
PROJECT	
DRAWING NO.	AD18-01
6 OF 9	



ANCHOR OPTIONS :

TYPE "A": 1/4" DIA. 'ELCO' ULTRACON (Fu=177KSI, Fy=155KSI)
1 1/2" EMBED INTO WOOD (SG=0.55)

TYPE "B": 1/4" DIA. 'ELCO' ULTRACON
1 3/4" EMBED INTO fc'=3 KSI MIN. CONCRETE
 OR THRU 1X WOOD BUCK INTO CONCRETE
 W/ 1 3/4" EMBEDMENT INTO CONCRETE

1/4" DIA. 'ELCO' ULTRACON (Fu=177KSI, Fy=155KSI)
1 1/4" MIN. EMBED INTO HOLLOW BLOCK
1 3/4" MIN. EMBED INTO GROUT FILLED BLOCK (JAMB ONLY)

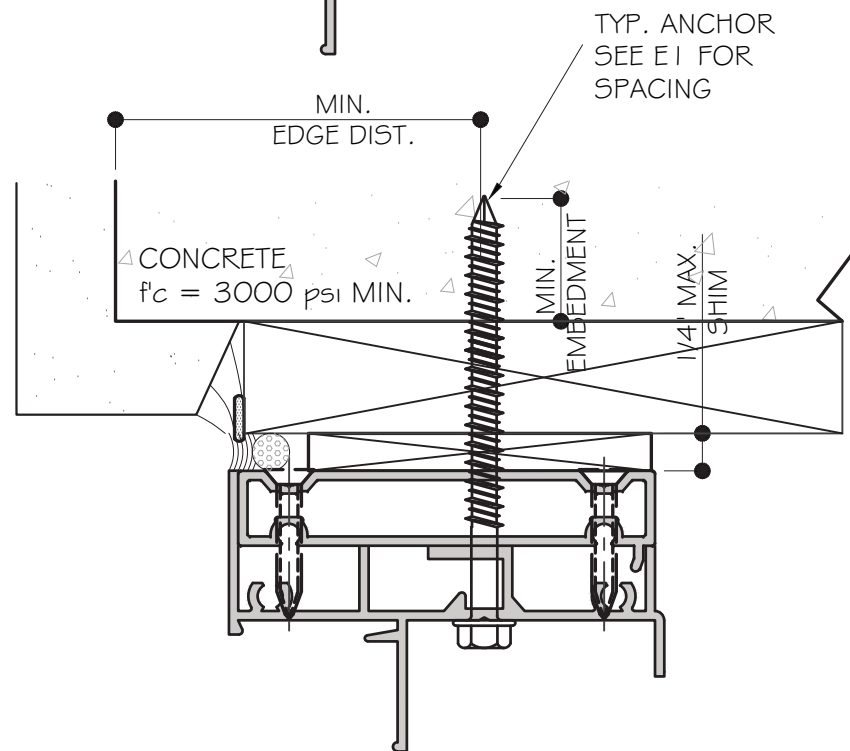
OR THRU 1X WOOD BUCK INTO HOLLOW BLOCK
 OR GROUT FILLED BLOCK WITH
1 1/4" MIN. EMBED INTO HOLLOW BLOCK
1 3/4" MIN. EMBED INTO GROUT FILLED BLOCK (JAMB ONLY)

TYPE "C": #14 SMS SCREW (Fu=74KSI, Fy=57KSI)
INTO 1/8" MIN. THK ALUMINUM MEMBER (6063-T5 MIN.)

#14 TEKS SCREW (Fu=120 KSI, Fy=92KSI)
INTO 1/8" MIN. THK STEEL.

ANCHOR EDGED DISTANCE:
 INTO CONCRETE & MASONRY= 1 1/2" MIN.
 INTO WOOD STRUCTURE = 1" MIN.
 INTO METAL = 3/4"

CONCRETE AT HEAD, SILL OR JAMB fc'=3000 PSI MIN. UNLESS SPECIFIED
 C-90 HOLLOW /FILLED BLOCK AT JAMB fm'=2000 PSI MIN.
 WOOD SG=0.55 MIN.



SEALANT:
 ALL JOINTS AND THE FRAME
 CONNECTION SEALED WITH SILICONE.

WOOD BUCKS AND METAL STRUCTURE NOT BY MR.
 GLASS WINDOWS AND DOORS, MUST SUSTAIN LOADS
 IMPOSED BY GLAZING SYSTEM AND TRANSFER THEM
 TO THE BUILDING STRUCTURE

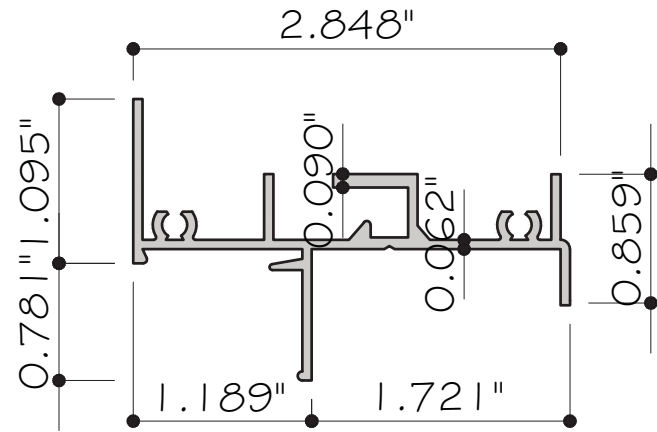


NO	DATE	DESCRIPTION

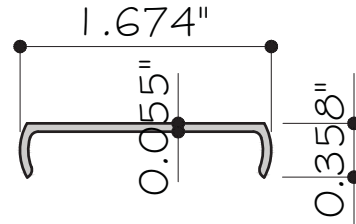
MCY ENGINEERING, INC.
 GLAZING CONSULTANTS
 8501 SW 124 Ave, Ste. 205A
 MIAMI, FL 33183
 P: 305.271.0117
 F: 305.279.6818
 www.MCYEngineering.com
 MCY.Engineering@All.net

SERIES MRG-400 FIXED WINDOW (L.M.I.)
MR. GLASS DOORS AND WINDOWS, INC
 8120 NW 84TH STREET, MIAMI, FL 33166
 TEL ??? FAX ???

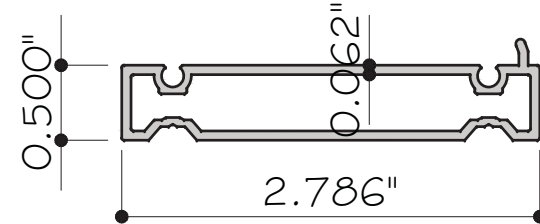
DATE	02/06/18
SCALE	AS SHOWN
DRAWN	Bin
PROJECT	
DRAWING NO.	AD18-01
	7 OF 9



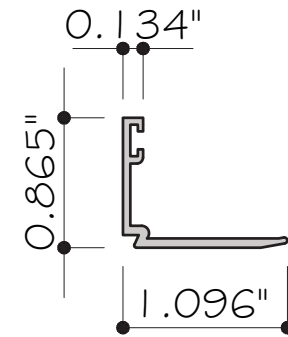
1 FRAME HEAD, SILL & JAMBS
MGR-201 6063-T6



2 PERIMETER COVER
MRG-215 6063-T6



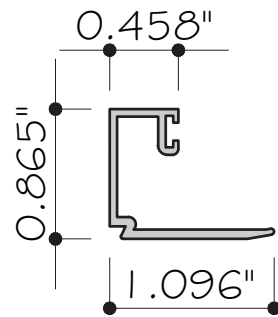
3 FLUSH FRAME ADAPTER
MGR-212 6063-T6



4 GLASS STOP
MGR-209 6063-T6

BILL OF MATERIALS

ITEM	PART	DESCRIPTION	MATERIAL	MANUF. / REMARKS
1	MGR-201	FRAME HEAD	6063-T6	TECNOGLASS
2	MGR-215	PERIMETER COVER	6063-T6	TECNOGLASS
3	MGR-212	FLUSH ANCHOR ADAPTOR	6063-T6	TECNOGLASS
4	MGR-209	GLASS STOP (INSULATED LAMINATED GLASS)	6063-T6	TECNOGLASS
5	MGR-210	GLASS STOP (LAMINATED GLASS)	6063-T6	TECNOGLASS
6	-	1/4" HH TAPCON	AS REQUIRED	-
7	-	8-18 PH FH 55300 L=1" ASSY SCREW	ST/ST	-
8	-	10-16 SMS PH FH L=1" 55300	ST/ST	-
9	-	BULB GASKET ULTRAFAB E201	VINYL	-
10	-	SETTING BLOCK 3/16" THK X 1/2" X 1" SANTOPRENE	-	-
11	DC975	DOW CORNING 795	SILICONE	DOW
12	-	1/2" X 5/8" SETTING BLOCK LAMINATED GLASS	SANTOPRENE	-
13	-	GLASS SPACER	ALUMINUM	TECNOGLASS



5 GLASS STOP
MGR-210 6063-T6

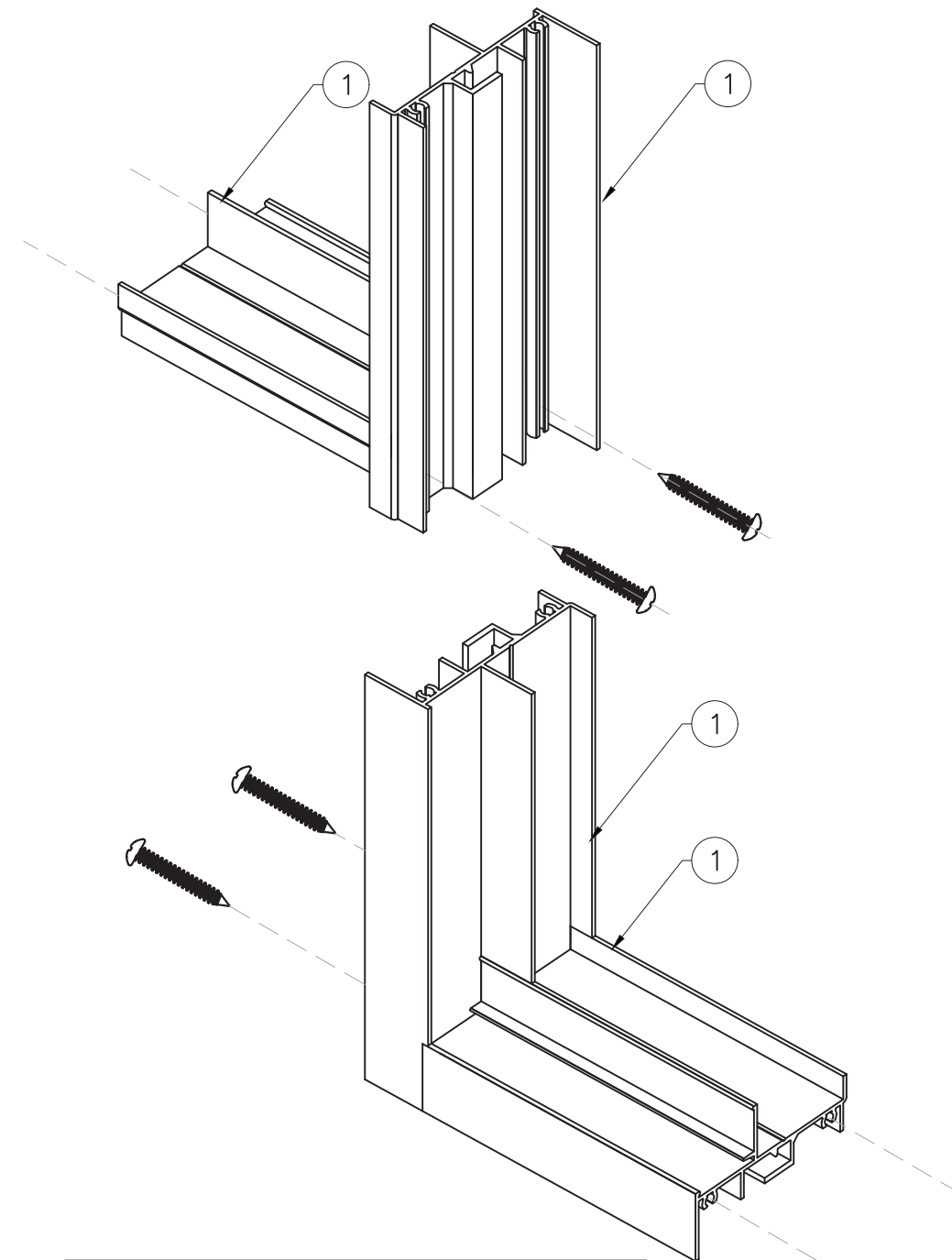
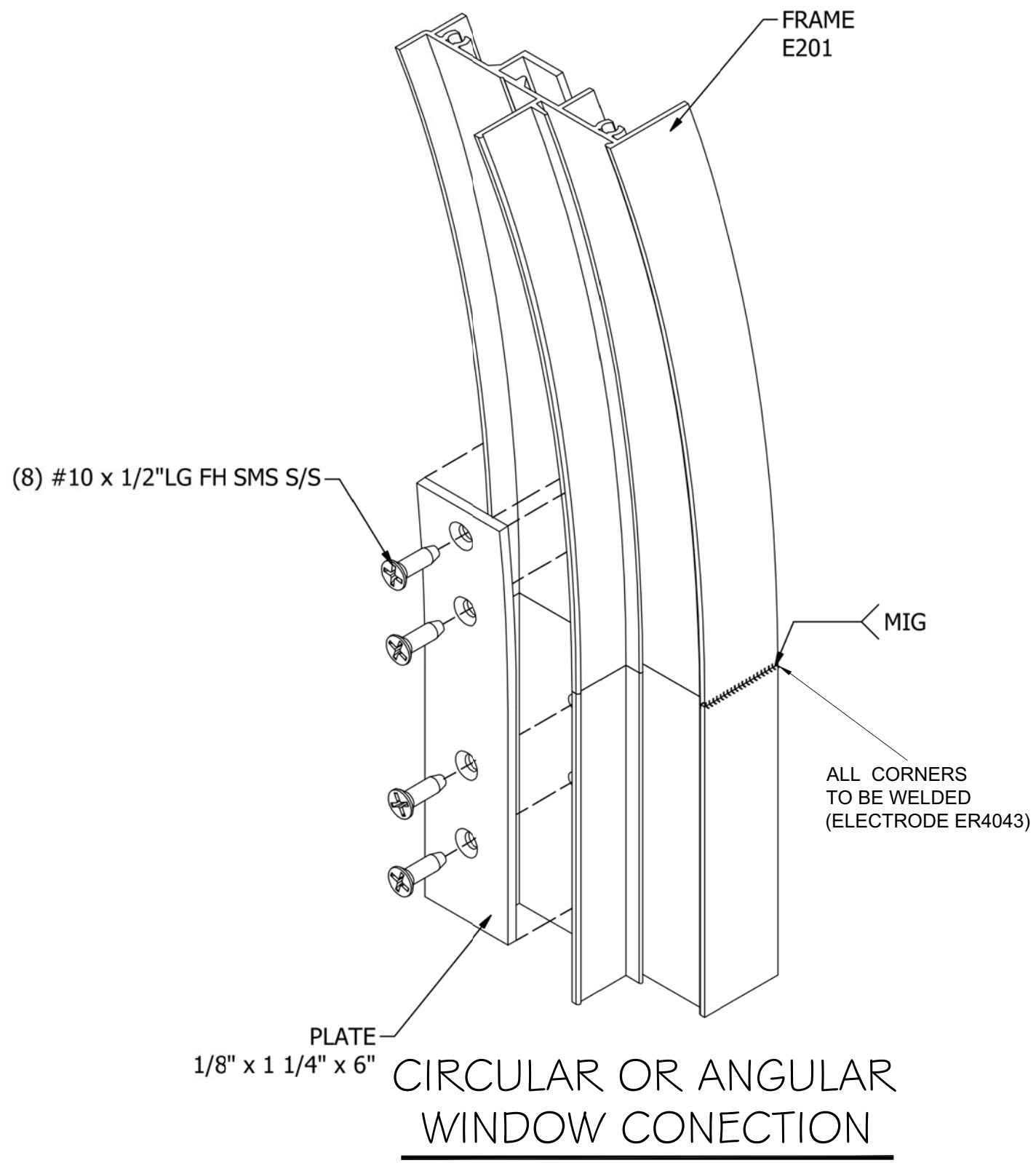
NO	DATE	DESCRIPTION

MCY ENGINEERING, INC.
GLAZING CONSULTANTS
8501 SW 124 Ave. Ste. 205A P: 305.271.0117
MIAMI, FL 33183 F: 305.279.6818
www.MCYEngineering.com MCY.Engineering@Att.net

SERIES MRG-400 FIXED WINDOW (L.M.I.)
MR. GLASS DOORS AND WINDOWS, INC
8120 NW 84TH STREET, MIAMI, FL 33166
TEL ??? FAX ???

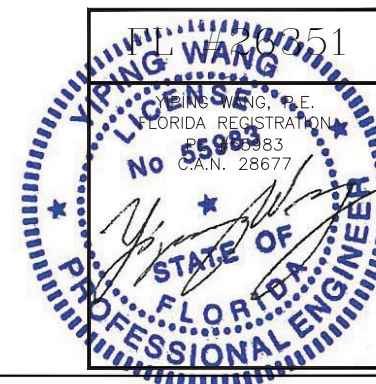
YIPING WANG
ENGINEER, P.E.
FLORIDA REGISTRATION
No. 55983
C.A.N. 28677
STATE OF FLORIDA
PROFESSIONAL ENGINEER

PARTS	
DATE	02/06/18
SCALE	AS SHOWN
DRAWN	Bin
PROJECT	
DRAWING NO.	AD18-01
	8 OF 9



SEALANT:
ALL JOINTS AND THE FRAME CONNECTION SEALED WITH SILICONE.

RECT. OR SQUARE WINDOW CORNER



REVISIONS	
NO	DATE

MCY	
MCY ENGINEERING, INC.	
GLAZING CONSULTANTS	
8501 SW 124 Ave. Ste. 205A	P: 305.271.0117
MIAMI, FL 33183	F: 305.279.6818
www.MCYEngineering.com	MCY-Engineering@Att.net

SERIES MRG-400 FIXED WINDOW (L.M.I.)	
MR. GLASS DOORS AND WINDOWS, INC	
8120 NW 84TH STREET, MIAMI, FL 33166	
TEL ??? FAX ???	

ISO	
DATE	02/06/18
SCALE	AS SHOWN
DRAWN	Bin
PROJECT	
DRAWING NO.	AD18-01
9 OF 9	