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Product Approval
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OFFICE OF THE SECRETARY

FL #	FL40673-R3								
Application Type	Revision								
Code Version	2023								
Application Status	Approved								
Comments									
Archived	<input type="checkbox"/>								
Product Manufacturer	Mr-Glass Doors & Windows Manufacturing, LLC								
Address/Phone/Email	8051 NW 79th Place Medley, FL 33166 (305) 470-8284 ulises@mrglasswindows.com								
Authorized Signature	Ulises Senaris ulises@mrglasswindows.com								
Technical Representative	Augusto Arias								
Address/Phone/Email	8120 NW 84th St Medley, FL 33166 (305) 470-8284 aarias@mrglasswindows.com								
Quality Assurance Representative									
Address/Phone/Email									
Category	Windows								
Subcategory	Mullions								
Compliance Method	Evaluation Report from a Florida Registered Architect or a Licensed Florida Professional Engineer <input type="checkbox"/> Evaluation Report - Hardcopy Received								
Florida Engineer or Architect Name who developed the Evaluation Report	Jalal Farooq								
Florida License	PE-81223								
Quality Assurance Entity	Keystone Certifications, Inc.								
Quality Assurance Contract Expiration Date	08/27/2025								
Validated By	Abel Carrasco, PE <input checked="" type="checkbox"/> Validation Checklist - Hardcopy Received								
Certificate of Independence	FL40673_R3_COI_SS - Certificate of Independence 2022.pdf								
Referenced Standard and Year (of Standard)	<table border="0"> <thead> <tr> <th>Standard</th> <th>Year</th> </tr> </thead> <tbody> <tr> <td>TAS 201</td> <td>1994</td> </tr> <tr> <td>TAS 202</td> <td>1994</td> </tr> <tr> <td>TAS 203</td> <td>1994</td> </tr> </tbody> </table>	Standard	Year	TAS 201	1994	TAS 202	1994	TAS 203	1994
Standard	Year								
TAS 201	1994								
TAS 202	1994								
TAS 203	1994								
Equivalence of Product Standards Certified By									
Sections from the Code									

Product Approval Method Method 1 Option D

Date Submitted 07/25/2023
 Date Validated 07/25/2023
 Date Pending FBC Approval 08/02/2023
 Date Approved 10/18/2023

Summary of Products

FL #	Model, Number or Name	Description
40673.1	Extruded Aluminum Clipped Mullions	Large missile impact resistant clipped aluminum tube mullions.
Limits of Use Approved for use in HVHZ: Yes Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: +150/-150 Other: See drawing 21-75F for span vs load combination and installation details.		Installation Instructions FL40673_R3_II_SS - Alum Clipped Mullions DWG 21-75F 2023.pdf Verified By: Jalal Farooq PE # 81223 Created by Independent Third Party: Yes Evaluation Reports FL40673_R3_AE_SS - Clipped Tube Mullion (LMI) - PAE 2023.pdf Created by Independent Third Party: Yes
40673.2	Series MG150 Extruded Aluminum Unclipped Mullions	Large missile impact resistant extruded aluminum unclipped mullions.
Limits of Use Approved for use in HVHZ: Yes Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: +90/-120 Other: See drawing 22-08F for span vs load combination and installation details.		Installation Instructions FL40673_R3_II_SS - Alum Un-clipped Mullions DWG 22-08F 2023.pdf Verified By: Jalal Farooq PE # 81223 Created by Independent Third Party: Yes Evaluation Reports FL40673_R3_AE_SS - Unclipped Tube Mullion (LMI) - PAE 2023.pdf Created by Independent Third Party: Yes

[Back](#) [Next](#)

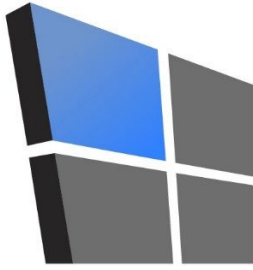
Contact Us :: [2601 Blair Stone Road, Tallahassee FL 32399](#) Phone: 850-487-1824

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Product Approval Accepts:





AL-FAROOQ CORPORATION

CONSULTING ENGINEERS & PRODUCT DEVELOPMENT

August 26, 2022

Product Approval Administrator
Building Codes & Standards Section
Department of Business & Professional Regulations
1940 North Monroe Street, Suite 90
Tallahassee, FL 32399-2100

To whom it may concern,

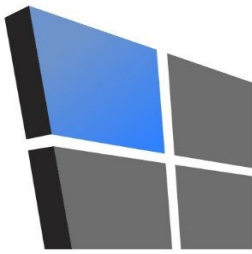
As the design engineer retained to prepare the product approval(s) associated with this letter as shown below on this same web page, I do hereby declare that I do not have and will not have any financial interest in any company manufacturing or distributing the referenced product(s), nor do I have or will have any financial interest with any other entity involved in the approval process of the referenced product(s).

Sincerely,



Sealed: 8/26/2022

Jalal Farooq, P.E.
CFO



AL-FAROOQ CORPORATION

CONSULTING ENGINEERS & PRODUCT DEVELOPMENT

PRODUCT APPROVAL EVALUATION RULE CHAPTER #61G20-3 • METHOD 1 OPTION D

FL 40673

Date: 07/20/2023

Detailed Product Description:

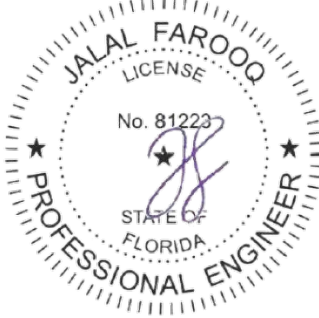
Manufacturer: MR-GLASS DOORS & WINDOWS MANUFACTURING, LLC

Manufacturer Address: 8051 N.W. 79TH PLACE. MEDLEY, FL 33166

Model Name: SERIES "MG150" EXTRUDED ALUMINUM UNCLIPPED MULLIONS

Maximum Load: +90 PSF, -120 PSF (Large Missile Impact)

Installation Drawings # 22-08F

This product complies with the High Velocity Hurricane Zone (HVHZ) testing requirements.					
For maximum sizes, combination of span vs loads and anchor type refer to installation drawings.					
Comparative analysis used <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
Mandatory Tests (Tested in accordance with ANSI/AAMA 101/I.S.2/NAFS/TAS 202)					
Test	Description	Test Location	Test Report Date	Test Report #	Test Sealed By
ASTM E283	Air Infiltration Leakage	Hurricane Engineering & Testing, Inc	2/8/2022	HETI-22-7149	Dr. Ram N. Tewari, PE
			2/8/2022	HETI-22-7153	
			2/8/2022	HETI-22-7155	
ASTM E331 OR ASTM 547 & TAS 202	Water Penetration	Hurricane Engineering & Testing, Inc	2/8/2022	HETI-22-7149	Dr. Ram N. Tewari, PE
			2/8/2022	HETI-22-7153	
			2/8/2022	HETI-22-7155	
ASTM E330 & TAS 202	Uniform Static Air Pressure	Hurricane Engineering & Testing, Inc	2/8/2022	HETI-22-7149	Dr. Ram N. Tewari, PE
			2/8/2022	HETI-22-7153	
			2/8/2022	HETI-22-7155	
Supplemental Tests (Tested in accordance with TAS-201 and TAS-203)					
Test	Description	Test Location	Test Report Date	Test Report#	Test Sealed By
FBC 1626.2 (TAS 201 & 203) ASTM E1886/1996	Large Missile Impact & Cyclic	Hurricane Engineering & Testing, Inc	2/8/2022	HETI-22-7149	Dr. Ram N. Tewari, PE
			2/8/2022	HETI-22-7153	
			2/8/2022	HETI-22-7155	
Under the limitations of the attached installation drawings, to the best of my knowledge and ability, the above product conforms to the requirements of the 2023 Florida Building Code.					
Evaluation Report Engineer:					
Jalal Farooq Al-Farooq Corporation		PE # 81223 EB # 3538			
			Sealed: 7/21/2023		

MG150 EXTRUDED ALUMINUM UNCLIPPED MULLION WINDOW FRAME MEMBERS INCLUDED IN PROPERTIES

MG150 MULLION TO BE USED WITH
 SERIES MG400 ALUMINUM FIXED WINDOW
 SERIES MG450 ALUMINUM FIXED WINDOW
 SERIES MG200 ALUMINUM SINGLE HUNG WINDOW
 SERIES MG300 ALUMINUM HORIZONTAL ROLLING WINDOW
 OR ANY COMBINATIONS OF ABOVE IN SIDE BY SIDE JOINING OR TOP AND BOTTOM JOINING.
 FOR WINDOWS IMPACT AND LOAD RATINGS SEE CORRESPONDING APPROVALS.
 LOWER DESIGN PRESSURE FROM WINDOW APPROVALS OR MULLION CHARTS WILL APPLY TO ENTIRE SYSTEM.
 MULLION MAY BE USED FOR JOINING TWO OR MORE WINDOWS TOGETHER.

NOTES:

THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE 2020 (7TH EDITION)/2023 (8TH EDITION) FLORIDA BUILDING CODE INCLUDING HIGH VELOCITY HURRICANE ZONE (HVHZ).

ALL GLAZING PRODUCTS USED WITH THESE MULLIONS MUST MEET THE APPLICABLE BUILDING CODE REQUIREMENTS I.E: WIND LOAD, WATER INFILTRATION, FORCED ENTRY RESISTANCE, SAFEGUARDS ETC.

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 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 MEET THE REQUIREMENTS OF THE 2020/2023 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.

THESE MULLIONS ARE RATED FOR LARGE & SMALL MISSILE IMPACT

INDEX OF DRAWING	
SHEET NO.	DESCRIPTION
1	GENERAL NOTES, INSTRUCTIONS AND INDEX OF DRAWINGS
2 THRU 4	VERTICAL MULLION COMBINATIONS
5 THRU 8	HORIZONTAL MULLION COMBINATIONS
9	VERTICAL MULLION CAPACITY CHARTS
10	HORIZONTAL MULLION CAPACITY CHARTS
11	MULLION ANCHORS CAPACITY CHARTS
12 THRU 15	MULLION ANCHORING DETAIL
16	MULLION AND WINDOW FRAME EXTRUSIONS

INSTRUCTIONS:

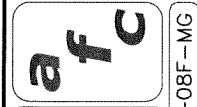
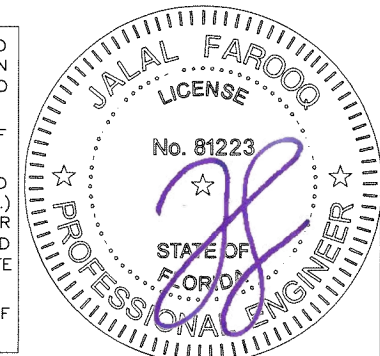
USE CHARTS AS FOLLOWS.

- STEP 1** DETERMINE DESIGN LOAD REQUIRED PER ASCE 7 FOR PARTICULAR OPENING.
- STEP 2** USE CONNECTION OF WINDOWS TO MULLION AS PER PRODUCT APPROVAL.
- STEP 3** USING CHARTS ON SHEETS 9 & 10 SELECT MULLION TYPE WITH DESIGN RATING MORE THAN THE DESIGN LOAD SPECIFIED IN STEP 1 ABOVE.
- STEP 4** USING CHARTS ON SHEET 11 SELECT ANCHOR OPTION WITH DESIGN LOAD RATING MORE THAN THE DESIGN LOAD SPECIFIED IN STEP 1 ABOVE.
- STEP 5** CAPACITY OF SELECTED MR-GLASS WINDOWS AND MULLION MUST EQUAL OR EXCEED REQUIRED LOADS.

Sealed: 7/21/2023

FL #40673

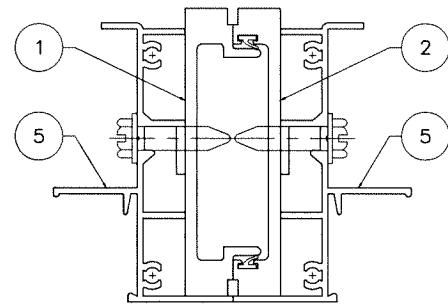
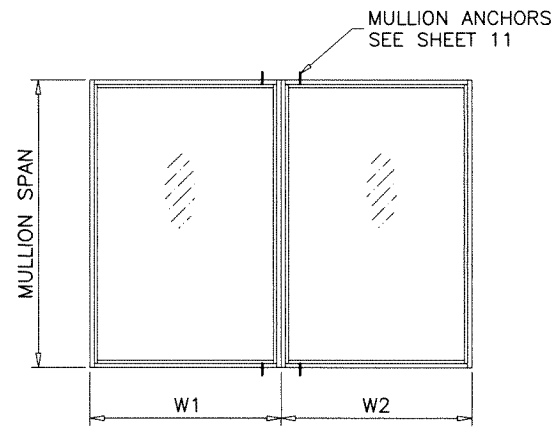
A- CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION OF THIS PRODUCT BASED ON THIS PRODUCT EVALUATION PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT.
 B- THIS PRODUCT EVALUATION DOCUMENT WILL BE CONSIDERED INVALID IF ALTERED BY ANY MEANS.
 C- SITE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



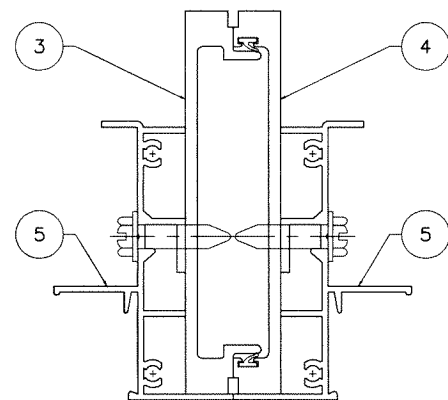
AL-FAROOQ CORPORATION
 ENGINEERS & PRODUCT DEVELOPMENT
 9360 SUNSET DRIVE, SUITE 220
 MIAMI, FLORIDA 33173
 TEL. (305) 264-8100
 WWW.AFCENG.COM
 FBPE #3538
 MULLION 22-08F-MG

MG150 EXTRUDED ALUM UNCLIPPED MULLIONS
MR-GLASS DOORS & WINDOWS MANUFACTURING, LLC
 8051 N.W. 79th Place
 Medley, FL. 33166
 Tel. (305) 764-3963
 www.mrglasswindows.com

revisions:	no.	date	by	description
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chk. by:				
drawing no.	22-08F			
sheet	1 of 16			



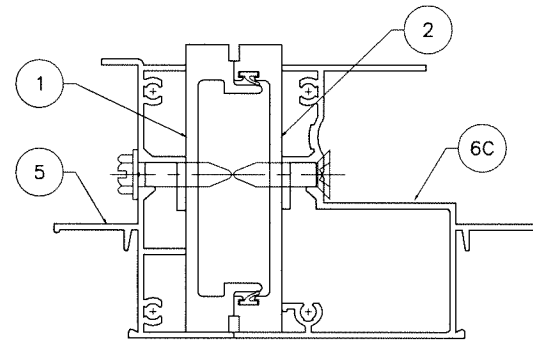
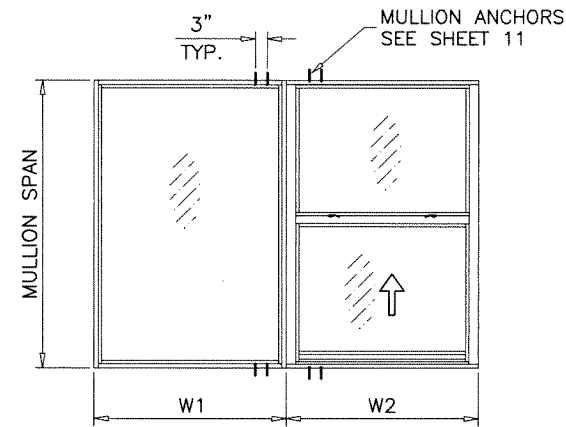
TOTAL PRPERTIES
 Ix = 2.396 IN⁴
 Sx = 1.560 IN³
GROUP 'V1A'



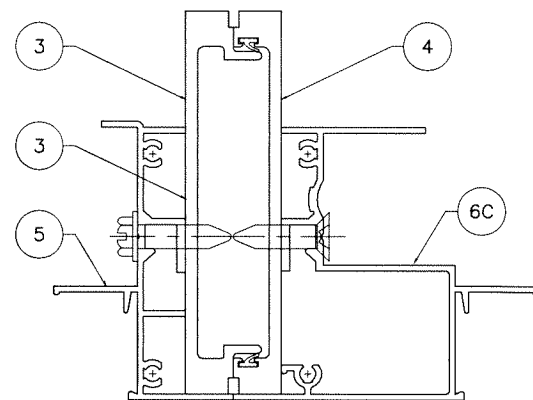
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 Ix = 4.041 IN⁴
 Sx = 2.018 IN³
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SERIES MG400
FIX. TO FIX.

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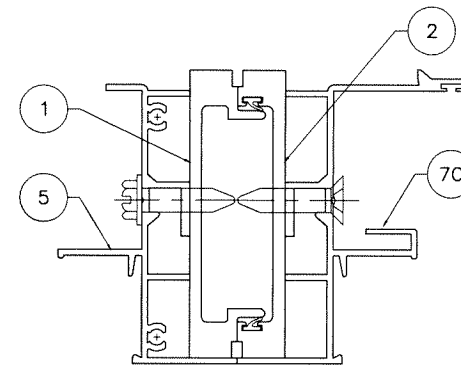
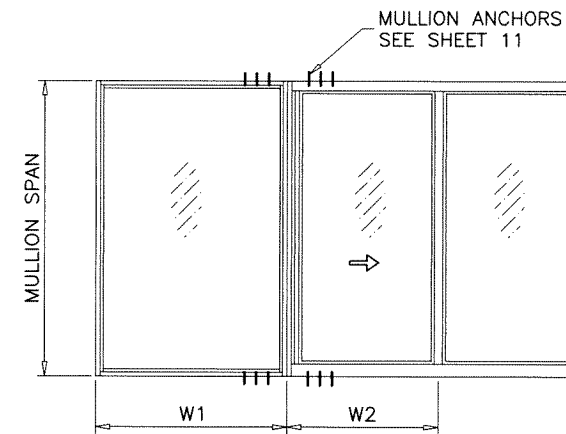
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 Sx = 1.683 IN³
GROUP 'V2A'



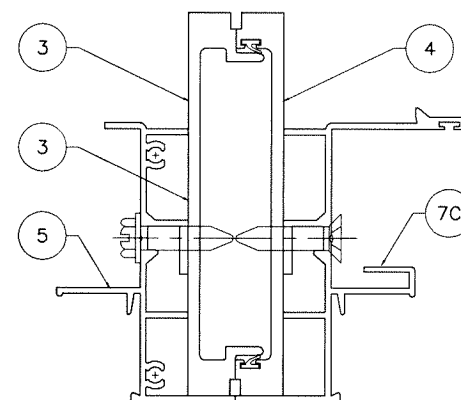
TOTAL PRPERTIES
 Ix = 4.279 IN⁴
 Sx = 2.137 IN³
GROUP 'V2B'

SERIES MG400 & SERIES MG200
FIX. TO S.H.

$$\text{WIDTH (W)} = \frac{W1 + W2}{2}$$



TOTAL PRPERTIES
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 Sx = 1.566 IN³
GROUP 'V3A'

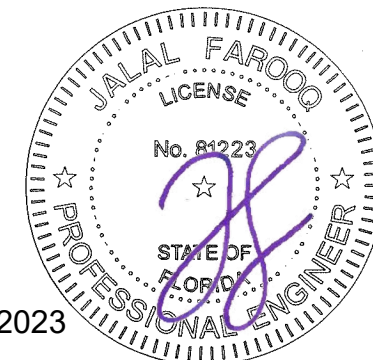


TOTAL PRPERTIES
 Ix = 4.166 IN⁴
 Sx = 2.081 IN³
GROUP 'V3B'

SERIES MG 400 & SERIES MG300
FIX. TO H.R.

$$\text{WIDTH (W)} = \frac{W1 + W2}{2}$$

Sealed: 7/21/2023



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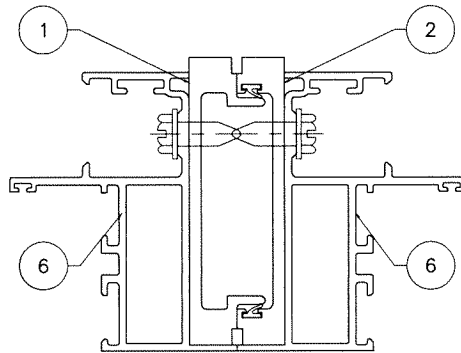
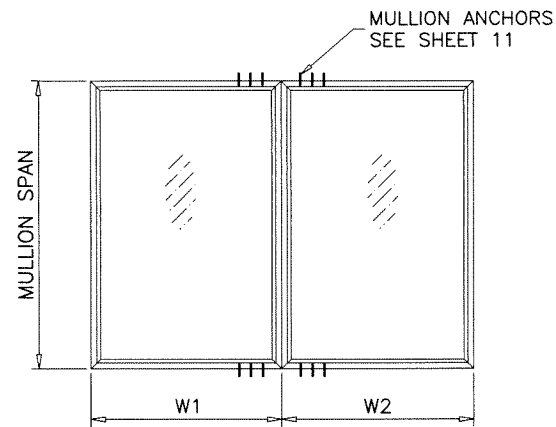
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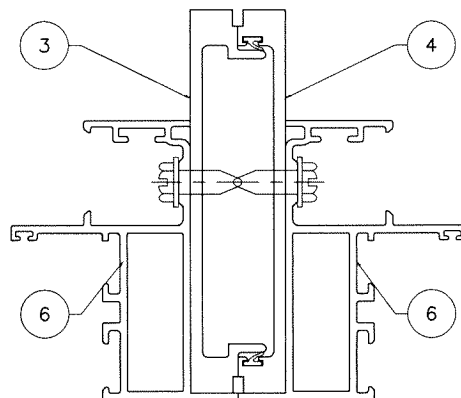
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 chk. by:

drawing no.
22-08F

sheet 2 of 16



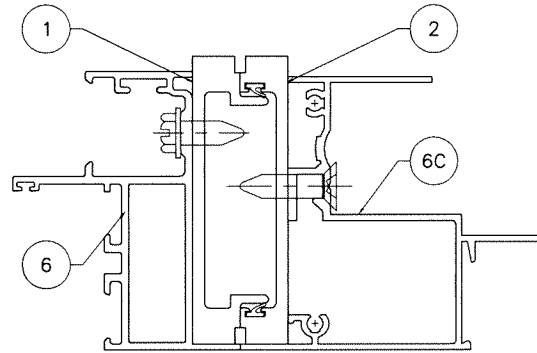
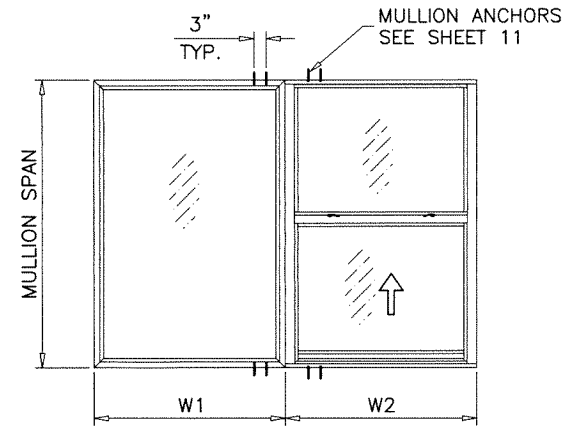
TOTAL PRPERTIES
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 Sx = 1.899 IN³
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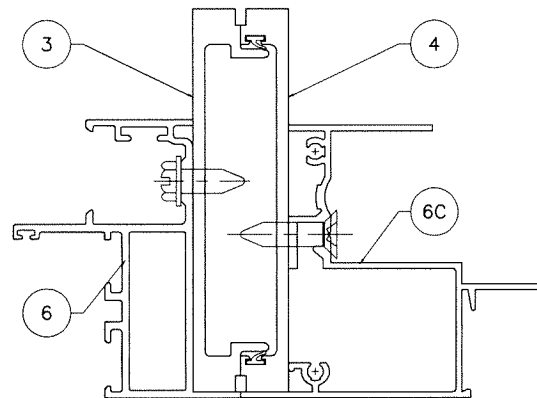
TOTAL PRPERTIES
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 Sx = 2.244 IN³
GROUP 'V4B'

SERIES MG450
FIX. TO FIX.

$$\text{WIDTH (W)} = \frac{W1 + W2}{2}$$



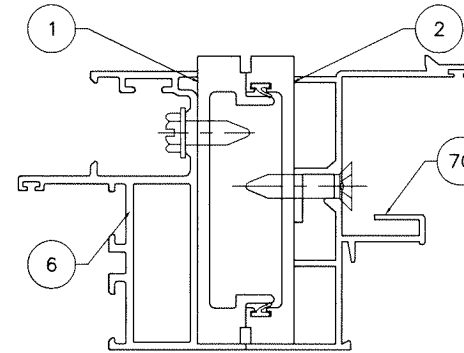
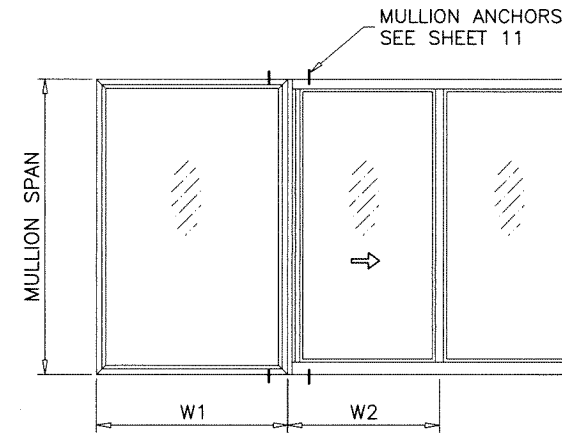
TOTAL PRPERTIES
 Ix = 2.860 IN⁴
 Sx = 1.827 IN³
GROUP 'V5A'



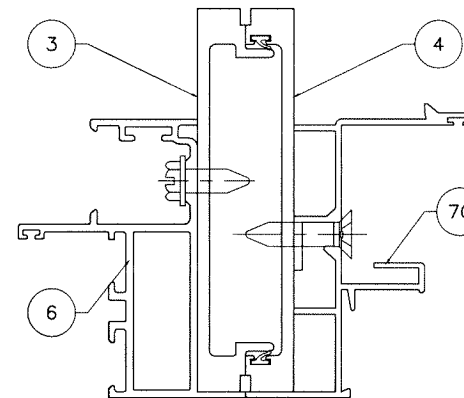
TOTAL PRPERTIES
 Ix = 4.505 IN⁴
 Sx = 2.250 IN³
GROUP 'V5B'

SERIES MG450 & SERIES MG200
FIX. TO S.H.

$$\text{WIDTH (W)} = \frac{W1 + W2}{2}$$



TOTAL PRPERTIES
 Ix = 2.747 IN⁴
 Sx = 1.706 IN³
GROUP 'V6A'

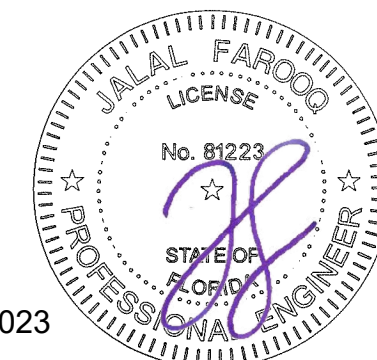


TOTAL PRPERTIES
 Ix = 4.392 IN⁴
 Sx = 2.194 IN³
GROUP 'V6B'

SERIES MG450 & SERIES MG300
FIX. TO H.R.

$$\text{WIDTH (W)} = \frac{W1 + W2}{2}$$

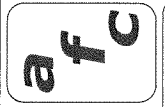
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MULLION 22-08F-MG

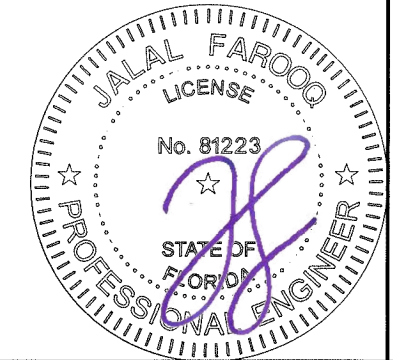
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no	date	description

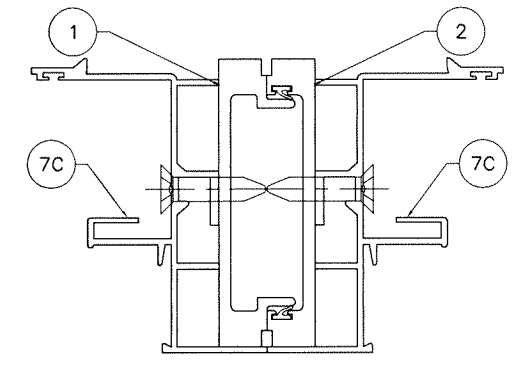
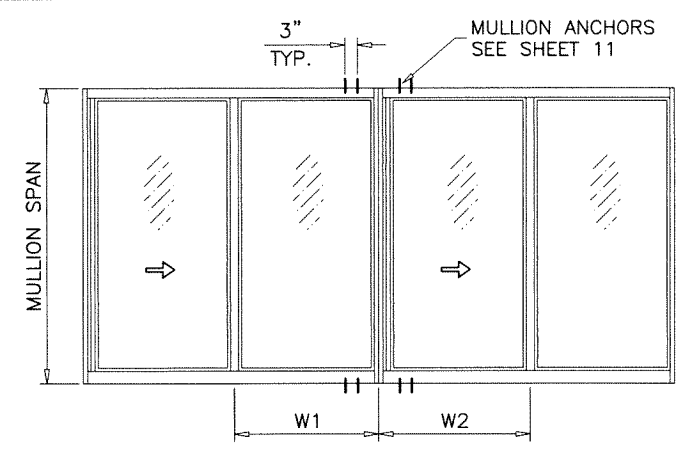
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 chk. by:

drawing no.
22-08F
 sheet 4 of 16

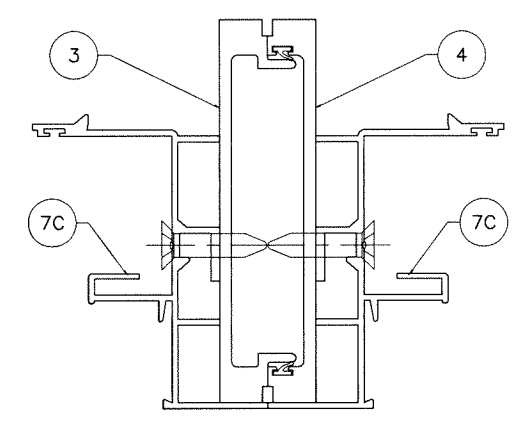
FL #40673



Sealed: 7/21/2023



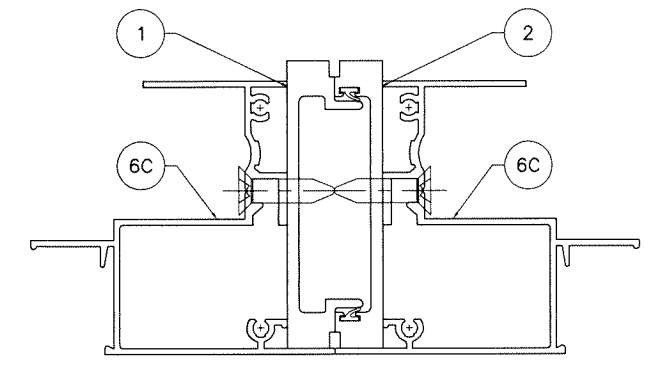
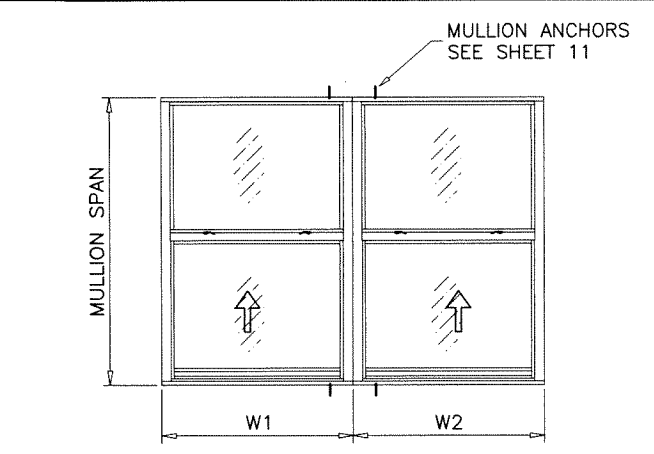
TOTAL PRPERTIES
 Ix = 2.646 IN⁴
 Sx = 1.643 IN³
GROUP 'V8A'



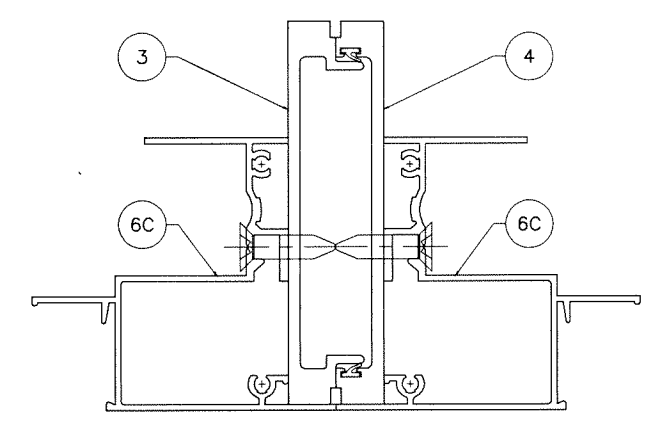
TOTAL PRPERTIES
 Ix = 4.291 IN⁴
 Sx = 2.143 IN³
GROUP 'V8B'

SERIES MG300
 H.R. TO H.R.

$$\text{WIDTH (W)} = \frac{W1 + W2}{2}$$



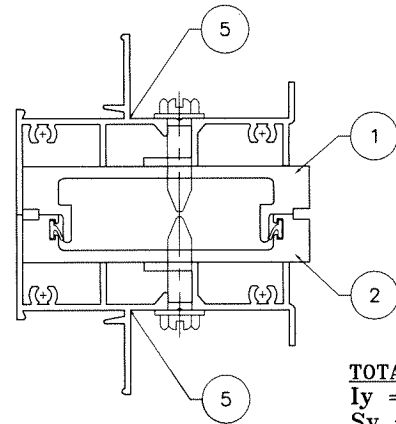
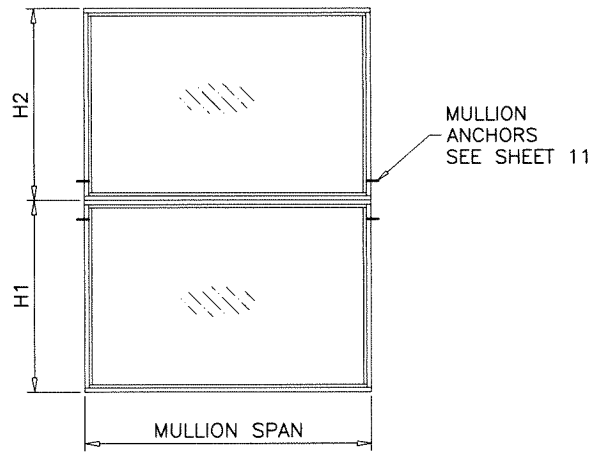
TOTAL PRPERTIES
 Ix = 2.872 IN⁴
 Sx = 1.835 IN³
GROUP 'V7A'



TOTAL PRPERTIES
 Ix = 4.517 IN⁴
 Sx = 2.256 IN³
GROUP 'V7B'

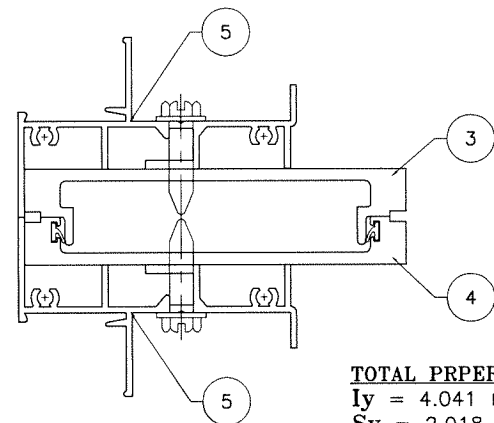
SERIES MG200
 S.H. TO S.H.

$$\text{WIDTH (W)} = \frac{W1 + W2}{2}$$



TOTAL PRPERTIES
 $I_y = 2.396 \text{ IN}^4$
 $S_y = 1.560 \text{ IN}^3$

GROUP 'H1A'

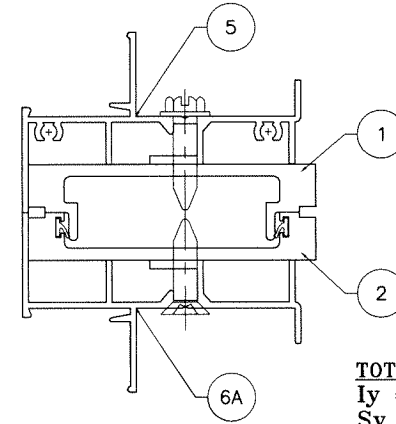
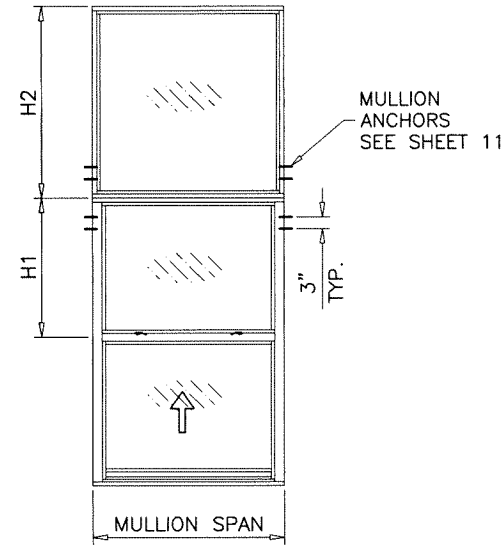


TOTAL PRPERTIES
 $I_y = 4.041 \text{ IN}^4$
 $S_y = 2.018 \text{ IN}^3$

GROUP 'H1B'

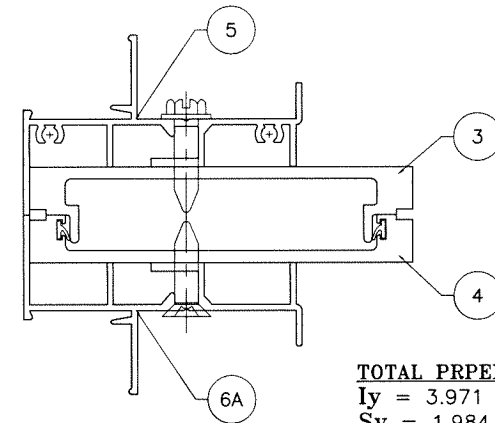
**SERIES MG400
 FIX. OVER FIX.**

$$\text{HEIGHT (H)} = \frac{H1 + H2}{2}$$



TOTAL PRPERTIES
 $I_y = 2.326 \text{ IN}^4$
 $S_y = 1.508 \text{ IN}^3$

GROUP 'H2A'

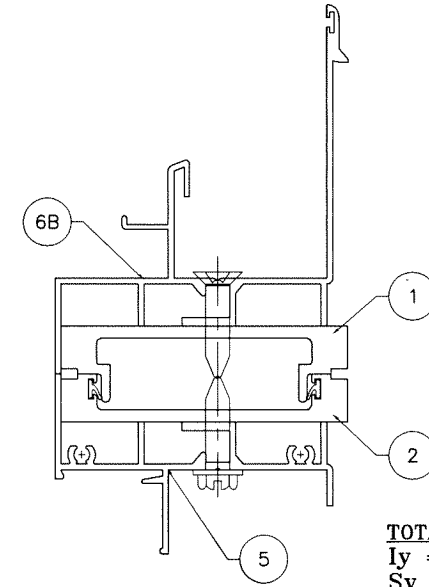
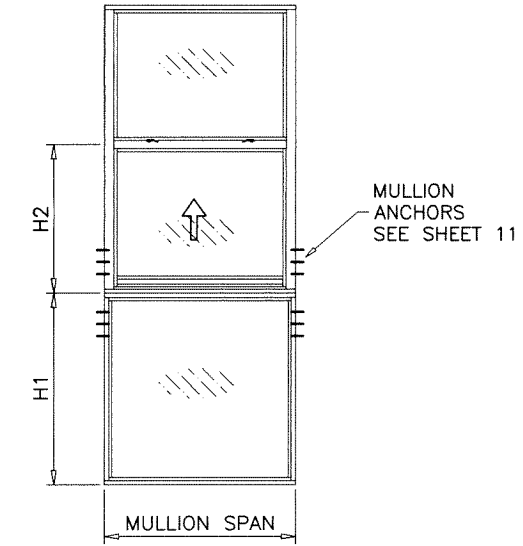


TOTAL PRPERTIES
 $I_y = 3.971 \text{ IN}^4$
 $S_y = 1.984 \text{ IN}^3$

GROUP 'H2B'

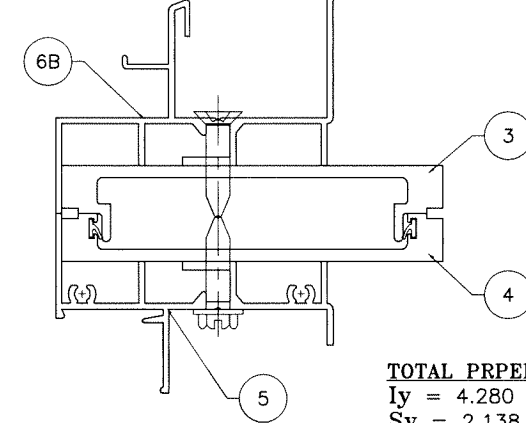
**SERIES MG400 & SERIES MG200
 FIX. OVER S.H.**

$$\text{HEIGHT (H)} = \frac{H1 + H2}{2}$$



TOTAL PRPERTIES
 $I_y = 2.635 \text{ IN}^4$
 $S_y = 1.494 \text{ IN}^3$

GROUP 'H3A'



TOTAL PRPERTIES
 $I_y = 4.280 \text{ IN}^4$
 $S_y = 2.138 \text{ IN}^3$

GROUP 'H3B'

**SERIES MG200 & SERIES MG400
 S.H. OVER FIX.**

$$\text{HEIGHT (H)} = \frac{H1 + H2}{2}$$

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FL #40673

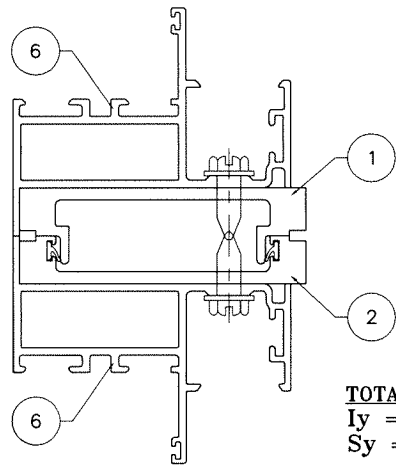
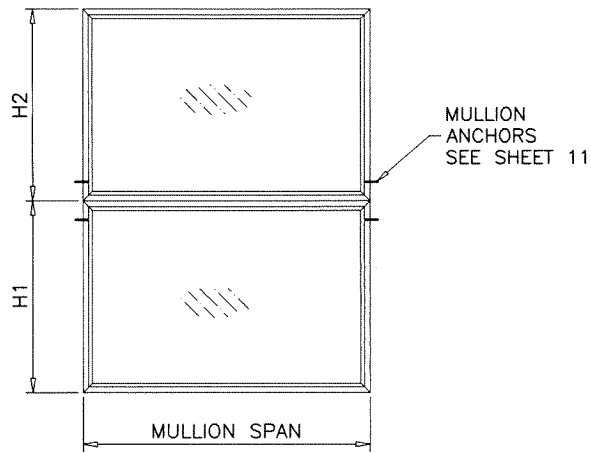


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 Medley, FL 33166
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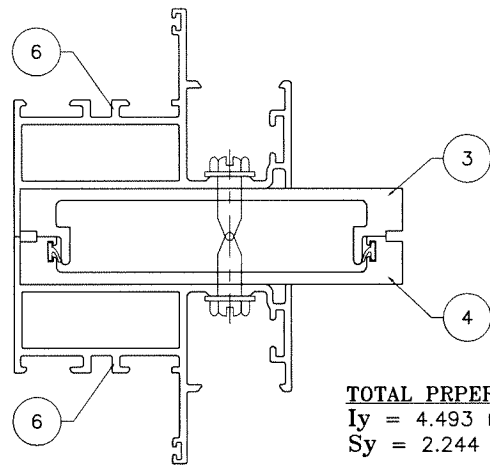
revisions:	no	date	by	description
date:	03-09-22			
scale:	1/2" = 1"			
dr. by:	TARIQ			
chk. by:				
drawing no.	22-08F			
sheet	5 of 16			

MULLION 22-08F-MG



TOTAL PRPERTIES
 $I_y = 2.848 \text{ IN}^4$
 $S_y = 1.899 \text{ IN}^3$

GROUP 'H6A'

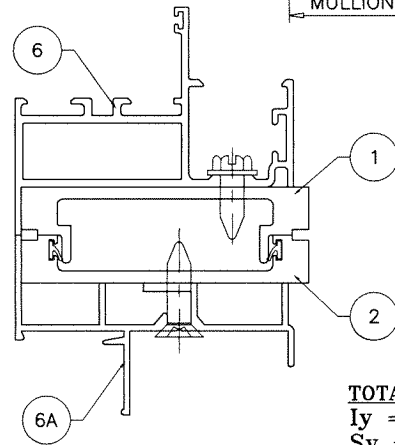
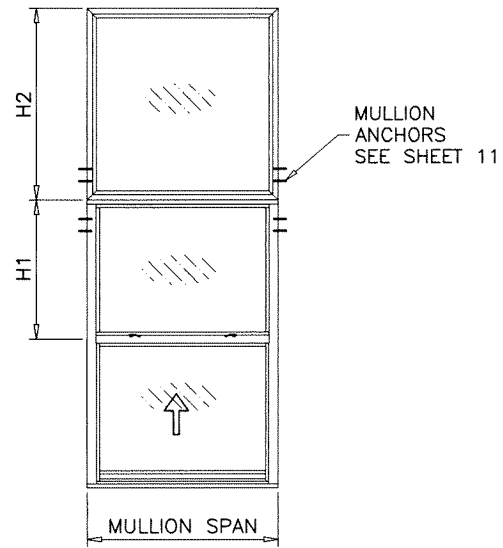


TOTAL PRPERTIES
 $I_y = 4.493 \text{ IN}^4$
 $S_y = 2.244 \text{ IN}^3$

GROUP 'H6B'

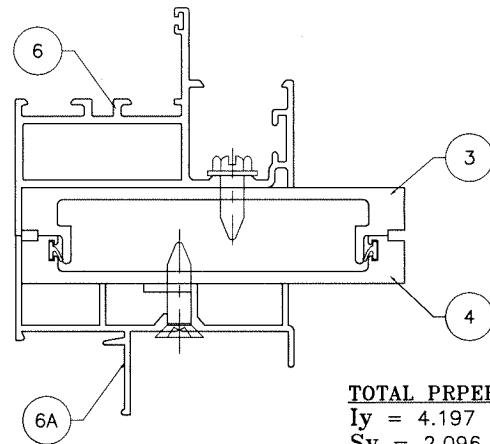
**SERIES MG450
 FIX. OVER FIX.**

$$\text{HEIGHT (H)} = \frac{H1 + H2}{2}$$



TOTAL PRPERTIES
 $I_y = 2.552 \text{ IN}^4$
 $S_y = 1.655 \text{ IN}^3$

GROUP 'H7A'

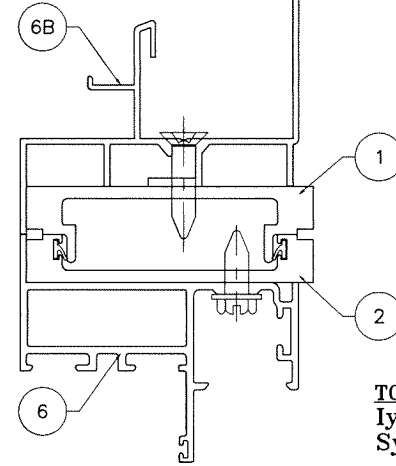
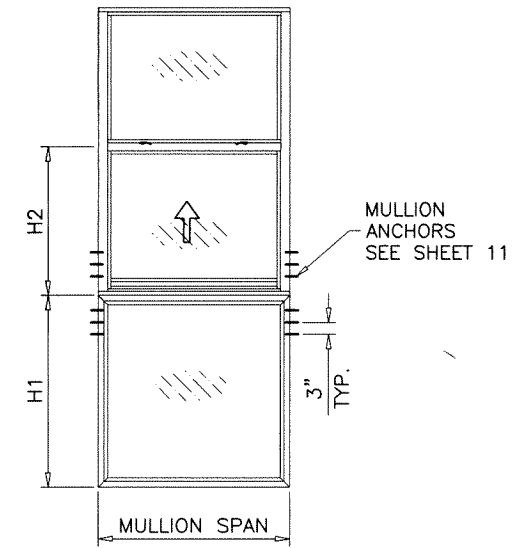


TOTAL PRPERTIES
 $I_y = 4.197 \text{ IN}^4$
 $S_y = 2.096 \text{ IN}^3$

GROUP 'H7B'

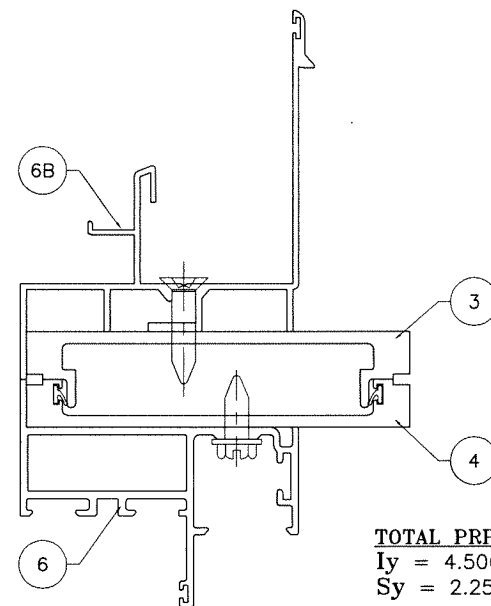
**SERIES MG450 & SERIES MG200
 FIX. OVER S.H.**

$$\text{HEIGHT (H)} = \frac{H1 + H2}{2}$$



TOTAL PRPERTIES
 $I_y = 2.861 \text{ IN}^4$
 $S_y = 1.622 \text{ IN}^3$

GROUP 'H8A'



TOTAL PRPERTIES
 $I_y = 4.506 \text{ IN}^4$
 $S_y = 2.251 \text{ IN}^3$

GROUP 'H8B'

**SERIES MG200 & SERIES MG450
 S.H. OVER FIX.**

$$\text{HEIGHT (H)} = \frac{H1 + H2}{2}$$

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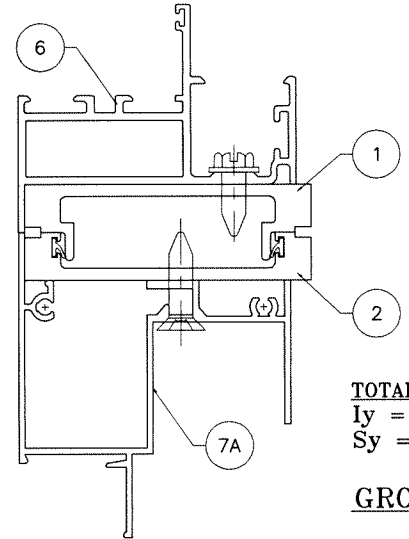
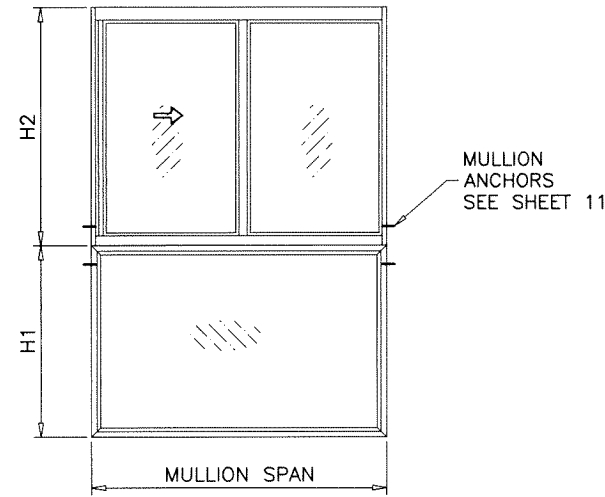
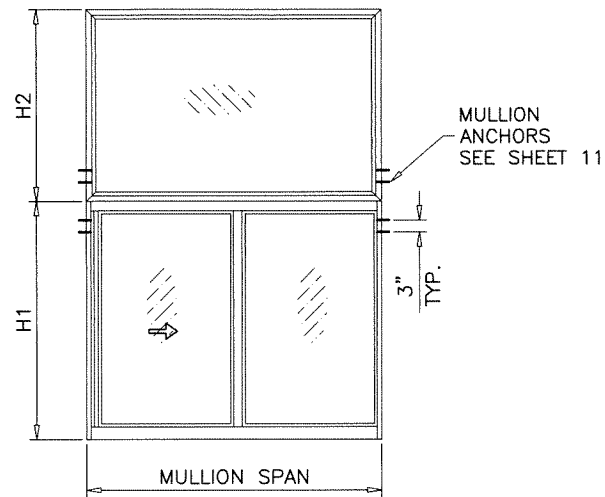
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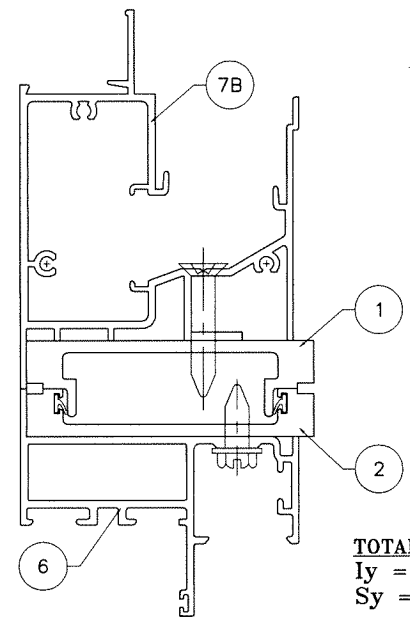
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revisions:	no	date	by	description
date:	03-09-22	scale:	1/2" = 1"	
dr. by:	TARIQ	chk. by:		
drawing no.	22-08F			
sheet	7 of 16			



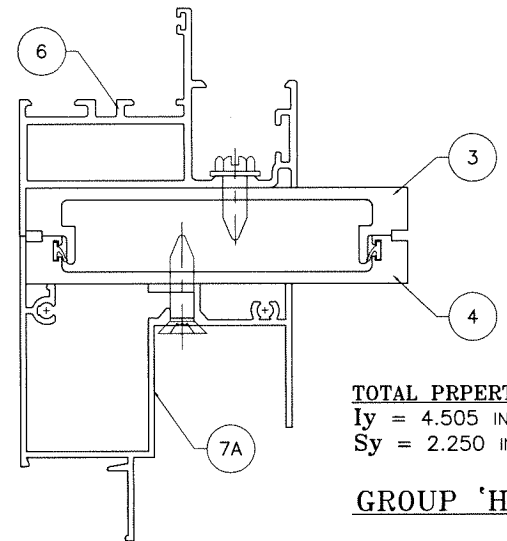
TOTAL PRPERTIES
 $I_y = 2.860 \text{ IN}^4$
 $S_y = 1.827 \text{ IN}^3$

GROUP 'H9A'



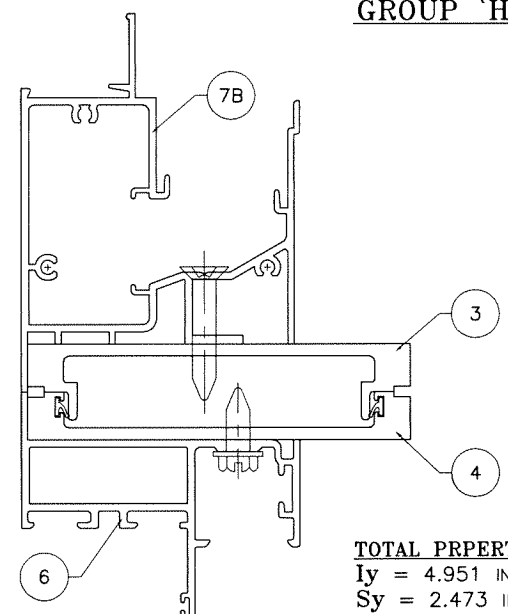
TOTAL PRPERTIES
 $I_y = 3.306 \text{ IN}^4$
 $S_y = 2.112 \text{ IN}^3$

GROUP 'H10A'



TOTAL PRPERTIES
 $I_y = 4.505 \text{ IN}^4$
 $S_y = 2.250 \text{ IN}^3$

GROUP 'H9B'



TOTAL PRPERTIES
 $I_y = 4.951 \text{ IN}^4$
 $S_y = 2.473 \text{ IN}^3$

GROUP 'H10B'

SERIES MG450 & SERIES MG300
FIX. OVER H.R.

$$\text{HEIGHT (H)} = \frac{H1 + H2}{2}$$

SERIES MG300 & SERIES MG450
H.R. OVER FIX.

$$\text{HEIGHT (H)} = \frac{H1 + H2}{2}$$

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drawing no.
22-08F

sheet 8 of 16

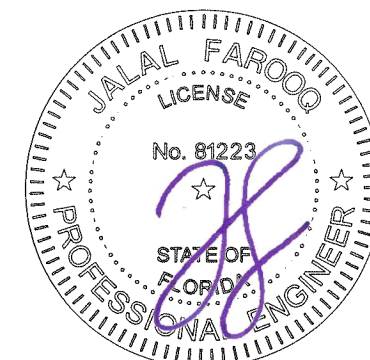
VERTICAL MULLION DESIGN LOAD CAPACITY - PSF									
WINDOW DIMS. WIDTH (W) MULL SPAN		3" MULLION GROUPS				4" MULLION GROUPS			
		'V1A', 'V3A'	'V2A', 'V8A'	'V4A', 'V6A', 'V7A'	'V5A', 'V7A'	'V1B', 'V3B', 'V8B'	'V2B', 'V8B'	'V4B', 'V6B', 'V7B'	'V5B', 'V7B'
EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)
30"	48"	90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
36"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
42"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
48"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
54"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
60"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
66"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
72"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
30"	60"	90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
36"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
42"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
48"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
54"		90.0	108.0	90.0	120.0	90.0	120.0	90.0	120.0
60"		90.0	97.2	90.0	118.1	90.0	120.0	90.0	120.0
66"		88.4	88.4	90.0	107.4	90.0	110.2	90.0	120.0
72"		81.0	81.0	90.0	98.4	90.0	101.0	90.0	120.0
30"	72"	90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
36"		90.0	109.3	90.0	120.0	90.0	120.0	90.0	120.0
42"		90.0	93.7	90.0	108.7	90.0	116.3	90.0	120.0
48"		82.0	82.0	90.0	95.1	90.0	101.8	90.0	120.0
54"		72.9	72.9	84.6	84.6	90.0	90.5	90.0	112.6
60"		65.6	65.6	76.1	76.1	81.4	81.4	90.0	101.4
66"		59.6	59.6	69.2	69.2	74.0	74.0	90.0	92.1
72"		54.7	54.7	63.4	63.4	65.0	65.0	65.0	65.0
30"	84"	83.6	83.6	90.0	95.9	90.0	115.9	90.0	120.0
36"		69.7	69.7	79.9	79.9	90.0	96.6	90.0	120.0
42"		59.7	59.7	68.5	68.5	82.8	82.8	90.0	104.5
48"		52.3	52.3	59.9	59.9	72.4	72.4	90.0	91.5
54"		46.5	46.5	53.3	53.3	64.4	64.4	81.3	81.3
60"		41.8	41.8	47.9	47.9	57.9	57.9	70.0	70.0
66"		-	-	-	-	52.7	52.7	55.0	55.0
72"		-	-	-	-	48.3	48.3	55.0	55.0
30"	96"	56.0	56.0	64.2	64.2	86.1	86.1	90.0	102.7
36"		46.7	46.7	53.5	53.5	71.7	71.7	85.6	85.6
42"		40.0	40.0	45.9	45.9	61.5	61.5	73.3	73.3
48"		35.0	35.0	40.1	40.1	53.8	53.8	64.2	64.2
54"		31.1	31.1	35.7	35.7	47.8	47.8	57.0	57.0
60"		-	-	-	-	43.0	43.0	51.3	51.3
66"		-	-	-	-	39.1	39.1	46.7	46.7
72"		-	-	-	-	-	-	-	-
30"	108"	39.3	39.3	45.1	45.1	66.0	66.0	72.1	72.1
36"		32.8	32.8	37.6	37.6	55.0	55.0	60.1	60.1
42"		28.1	28.1	32.2	32.2	47.2	47.2	51.5	51.5
48"		24.6	24.6	28.2	28.2	41.3	41.3	45.1	45.1
54"		-	-	-	-	36.7	36.7	40.1	40.1
60"		-	-	-	-	33.0	33.0	36.1	36.1
30"	120"	28.7	28.7	32.9	32.9	48.4	48.4	52.6	52.6
36"		23.9	23.9	27.4	27.4	40.3	40.3	43.8	43.8
42"		20.5	20.5	23.5	23.5	34.6	34.6	37.6	37.6
48"		-	-	-	-	30.2	30.2	32.9	32.9
54"		-	-	-	-	26.9	26.9	29.2	29.2

VERTICAL MULLION DESIGN LOAD CAPACITY - PSF									
WINDOW DIMS. WIDTH (W) MULL SPAN		3" MULLION GROUPS				4" MULLION GROUPS			
		'V1A', 'V3A'	'V2A', 'V8A'	'V4A', 'V6A', 'V7A'	'V5A', 'V7A'	'V1B', 'V3B', 'V8B'	'V2B', 'V8B'	'V4B', 'V6B', 'V7B'	'V5B', 'V7B'
EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)
19-1/8"	26"	90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
26-1/2"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
37"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
53-1/8"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
19-1/8"	38-3/8"	90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
26-1/2"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
37"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
53-1/8"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
19-1/8"	50-5/8"	90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
26-1/2"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
37"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
53-1/8"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
19-1/8"	56"	90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
26-1/2"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
37"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
53-1/8"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
19-1/8"	63"	90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
26-1/2"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
37"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
53-1/8"		90.0	98.8	90.0	120.0	90.0	120.0	90.0	120.0
19-1/8"	72"	90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
26-1/2"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
37"		90.0	106.4	90.0	120.0	90.0	120.0	90.0	120.0
53-1/8"		74.1	74.1	86.0	86.0	90.0	92.0	90.0	114.5
19-1/8"	76"	90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
26-1/2"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
37"		90.0	91.5	90.0	105.0	90.0	117.2	90.0	120.0
53-1/8"		63.8	63.8	73.1	73.1	81.6	81.6	90.0	102.1

SEE VERTICAL MULLION CHART ABOVE FOR MULLION DESIGN LOAD CAPACITY.
SEE ANCHOR CHART ON SHEET 11 FOR MULLION ANCHOR LOAD CAPACITY.
LOWER DESIGN PRESSURE FROM ABOVE WILL APPLY.

INTERPOLATION BETWEEN WIDTHS AND HEIGHTS ALLOWED.

Sealed: 7/21/2023



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22-08F

sheet 9 of 16

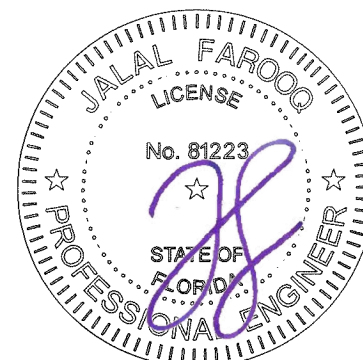
HORIZONTAL MULLION DESIGN LOAD CAPACITY - PSF									
WINDOW DIMS.		3" MULLION GROUPS				4" MULLION GROUPS			
		'H1A', 'H3A', 'H7A'	'H2A', 'H4A'	'H5A', 'H6A', 'H8A', 'H9A', 'H10A'	'H1B', 'H2B', 'H3B', 'H4B', 'H7B'	'H5B', 'H6B', 'H8B', 'H9B', 'H10B'	EXT.(+)	INT.(-)	EXT.(+)
HEIGHT (H)	MULL SPAN	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)
30"	48"	90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
36"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
42"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
48"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
54"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
60"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
66"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
72"		90.0	115.2	90.0	120.0	90.0	120.0	90.0	120.0
30"	60"	90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
36"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
42"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
48"		90.0	105.9	90.0	120.0	90.0	120.0	90.0	120.0
54"		90.0	91.4	90.0	117.4	90.0	116.3	90.0	120.0
60"		79.7	79.7	90.0	104.1	90.0	101.6	90.0	120.0
66"		70.2	70.2	90.0	93.2	89.6	89.6	90.0	120.0
72"		62.2	62.2	84.1	84.1	79.5	79.5	90.0	113.5
30"	72"	90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
36"		90.0	95.3	90.0	120.0	90.0	120.0	90.0	120.0
42"		77.7	77.7	90.0	102.2	90.0	98.5	90.0	120.0
48"		64.5	64.5	87.2	87.2	81.9	81.9	90.0	117.3
54"		54.2	54.2	75.6	75.6	69.1	69.1	90.0	101.7
60"		41.1	41.1	66.2	66.2	58.7	58.7	89.2	89.2
66"		26.5	26.5	58.6	58.6	50.0	50.0	79.0	79.0
72"		-	-	52.3	52.3	-	-	65.0	65.0
30"	84"	76.3	76.3	98.7	98.7	90.0	102.6	90.0	120.0
36"		56.4	56.4	81.4	81.4	79.5	79.5	90.0	114.2
42"		37.5	37.5	68.6	68.6	63.0	63.0	90.0	94.3
48"		-	-	58.6	58.6	28.7	28.7	79.4	79.4
54"		-	-	50.4	50.4	-	-	67.8	67.8
60"		-	-	43.5	43.5	-	-	58.5	58.5
66"		-	-	-	-	-	-	50.9	50.9
72"		-	-	-	-	-	-	44.6	44.6
30"	96"	43.3	43.3	65.2	65.2	71.4	71.4	90.0	102.8
36"		-	-	52.6	52.6	32.0	32.0	82.0	82.0
42"		-	-	42.9	42.9	-	-	66.5	66.5
48"		-	-	34.9	34.9	-	-	55.0	55.0
54"		-	-	27.9	27.9	-	-	44.3	44.3
60"		-	-	-	-	-	-	34.0	34.0
66"		-	-	-	-	-	-	23.2	23.2
30"		108"	-	-	44.2	44.2	22.5	22.5	69.8
36"	-		-	33.8	33.8	-	-	53.5	53.5
42"	-		-	25.0	25.0	-	-	39.7	39.7
48"	-		-	-	-	-	-	26.2	26.2
30"	120"	-	-	29.7	29.7	-	-	47.0	47.0
36"		-	-	-	-	-	-	31.1	31.1

HORIZONTAL MULLION DESIGN LOAD CAPACITY - PSF									
WINDOW DIMS.		3" MULLION GROUPS				4" MULLION GROUPS			
		'H1A', 'H3A', 'H7A'	'H2A', 'H4A'	'H5A', 'H6A', 'H8A', 'H9A', 'H10A'	'H1B', 'H2B', 'H3B', 'H4B', 'H7B'	'H5B', 'H6B', 'H8B', 'H9B', 'H10B'	EXT.(+)	INT.(-)	EXT.(+)
HEIGHT (H)	MULL SPAN	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)
26"	19-1/8"	90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
38-3/8"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
50-5/8"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
53-1/8"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
63"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
72"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
76"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
26"		26-1/2"	90.0	120.0	90.0	120.0	90.0	120.0	90.0
38-3/8"	90.0		120.0	90.0	120.0	90.0	120.0	90.0	120.0
50-5/8"	90.0		120.0	90.0	120.0	90.0	120.0	90.0	120.0
53-1/8"	90.0		120.0	90.0	120.0	90.0	120.0	90.0	120.0
63"	90.0		120.0	90.0	120.0	90.0	120.0	90.0	120.0
72"	90.0		120.0	90.0	120.0	90.0	120.0	90.0	120.0
76"	90.0		120.0	90.0	120.0	90.0	120.0	90.0	120.0
26"	37"		90.0	120.0	90.0	120.0	90.0	120.0	90.0
38-3/8"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
50-5/8"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
53-1/8"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
63"		90.0	120.0	90.0	120.0	90.0	120.0	90.0	120.0
72"		90.0	92.0	90.0	118.4	90.0	116.4	90.0	120.0
76"		79.7	79.7	90.0	104.5	90.0	100.9	90.0	120.0
26"		53-1/8"	90.0	120.0	90.0	120.0	90.0	120.0	90.0
38-3/8"	90.0		120.0	90.0	120.0	90.0	120.0	90.0	120.0
50-5/8"	90.0		120.0	90.0	120.0	90.0	120.0	90.0	120.0
53-1/8"	90.0		120.0	90.0	120.0	90.0	120.0	90.0	120.0
63"	81.8		81.8	90.0	106.6	90.0	104.1	90.0	120.0
72"	55.5		55.5	77.1	77.1	70.7	70.7	90.0	103.8
76"	38.5		38.5	67.2	67.2	59.7	59.7	90.0	90.4

SEE HORIZONTAL MULLION CHART ABOVE FOR MULLION DESIGN LOAD CAPACITY.
SEE ANCHOR CHART ON SHEET 11 FOR MULLION ANCHOR LOAD CAPACITY.
LOWER DESIGN PRESSURE FROM ABOVE WILL APPLY.

INTERPOLATION BETWEEN WIDTHS AND HEIGHTS ALLOWED.

Sealed: 7/21/2023



AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
WWW.AFCENG.COM
TEL. (305) 264-8100
FBPE #3538

MG150 EXTRUDED ALUM UNCLIPPED MULLIONS
MR-GLASS DOORS & WINDOWS MANUFACTURING, LLC
8051 N.W. 79th Place
Medley, FL 33166
Tel. (305) 764-3963
www.mrglasswindows.com

revisions:

no	date	description

date: 03-09-22
scale: -
dr. by: TARIQ
chk. by: -
drawing no.
22-08F
sheet 10 of 16

MULLION 22-08F-MG

MULLION ANCHORS DESIGN LOAD CAPACITY - PSF											
WINDOW DIMS.		2 ANCHORS AT MULL			4 ANCHORS AT MULL			6 ANCHORS AT MULL			
		A2	AA2	B2	A4	AA4	B4	A6	AA6	B6	
WIDTH (W)	MULL SPAN	EXT.(+) INT.(-)	EXT.(+) INT.(-)	EXT.(+) INT.(-)	EXT.(+) INT.(-)	EXT.(+) INT.(-)	EXT.(+) INT.(-)	EXT.(+) INT.(-)	EXT.(+) INT.(-)	EXT.(+) INT.(-)	
30"	48"	61.2	92.0	105.6	120.0	120.0	120.0	120.0	120.0	120.0	
36"		51.0	76.7	88.0	102.0	120.0	120.0	120.0	120.0	120.0	
42"		43.7	65.7	75.4	87.4	120.0	120.0	120.0	120.0	120.0	
48"		38.2	57.5	66.0	76.5	115.0	120.0	114.7	120.0	120.0	
54"		34.0	51.1	58.7	68.0	102.2	117.3	102.0	120.0	120.0	
60"		30.6	46.0	52.8	61.2	92.0	105.6	91.8	120.0	120.0	
66"		27.8	41.8	48.0	55.6	83.6	96.0	83.4	120.0	120.0	
72"		25.4	38.3	44.0	51.0	76.6	88.0	76.5	115.0	120.0	
30"	60"	49.0	73.6	84.5	97.9	120.0	120.0	120.0	120.0	120.0	
36"		40.8	61.3	70.4	81.6	120.0	120.0	120.0	120.0	120.0	
42"		34.9	52.6	60.3	69.9	105.1	120.0	104.9	120.0	120.0	
48"		30.6	46.0	52.8	61.2	92.0	105.6	91.8	120.0	120.0	
54"		27.1	40.8	46.9	54.4	81.8	93.8	81.6	120.0	120.0	
60"		24.4	36.7	42.2	48.9	73.6	84.5	73.4	110.4	120.0	
66"		22.1	33.4	38.3	44.5	66.9	76.8	66.7	100.3	115.2	
72"		20.3	30.6	35.1	40.7	61.3	70.4	61.2	92.0	105.6	
30"	72"	40.8	61.3	70.4	81.6	120.0	120.0	120.0	120.0	120.0	
36"		34.0	51.1	58.6	68.0	102.2	117.3	102.0	120.0	120.0	
42"		29.1	43.8	50.2	58.3	87.6	100.6	87.4	120.0	120.0	
48"		25.4	38.3	43.9	51.0	76.6	88.0	76.5	115.0	120.0	
54"		22.5	34.0	39.0	45.3	68.1	78.2	68.0	102.2	117.3	
60"		20.2	30.6	35.1	40.7	61.3	70.4	61.1	92.0	105.6	
66"		-	27.7	31.9	37.0	55.7	63.9	55.6	83.6	96.0	
72"		-	25.4	29.2	33.9	51.0	58.6	50.9	76.6	88.0	
30"	84"	34.9	52.6	60.3	69.9	105.1	120.0	104.9	120.0	120.0	
36"		29.1	43.8	50.2	58.3	87.6	100.6	87.4	120.0	120.0	
42"		24.9	37.5	43.0	49.9	75.1	86.2	74.9	112.6	120.0	
48"		21.7	32.8	37.6	43.6	65.7	75.4	65.5	98.5	113.1	
54"		-	29.1	33.4	38.8	58.3	67.0	58.2	87.6	100.5	
60"		-	26.1	30.0	34.8	52.5	60.3	52.4	78.8	90.5	
66"		-	23.7	27.3	31.6	47.7	54.8	47.6	71.6	82.2	
72"		-	21.7	24.9	29.0	43.7	50.2	43.6	65.6	75.4	
30"	96"	30.6	46.0	52.8	61.2	92.0	105.6	91.8	120.0	120.0	
36"		25.4	38.3	43.9	51.0	76.6	88.0	76.5	115.0	120.0	
42"		21.7	32.8	37.6	43.6	65.7	75.4	65.5	98.5	113.1	
48"		-	28.6	32.9	38.1	57.4	65.9	57.3	86.2	99.0	
54"		-	25.4	29.2	33.9	51.0	58.6	50.9	76.6	87.9	
60"		-	22.8	26.2	30.4	45.9	52.7	45.8	68.9	79.1	
66"		-	20.6	23.8	27.6	41.7	47.9	41.6	62.6	71.9	
30"		108"	27.1	40.8	46.9	54.4	81.8	93.8	81.6	120.0	120.0
36"	22.5		34.0	39.0	45.3	68.1	78.2	68.0	102.2	117.3	
42"	-		29.1	33.4	38.8	58.3	67.0	58.2	87.6	100.5	
48"	-		25.4	29.2	33.9	51.0	58.6	50.9	76.6	87.9	
54"	-		22.5	25.9	30.0	45.3	52.0	45.2	68.1	78.2	
60"	-		20.2	23.2	27.0	40.7	46.8	40.7	61.2	70.3	
30"	120"		24.4	36.7	42.2	48.9	73.6	84.5	73.4	110.4	120.0
36"			20.2	30.6	35.1	40.7	61.3	70.4	61.1	92.0	105.6
42"		-	26.1	30.0	34.8	52.5	60.3	52.4	78.8	90.5	
48"		-	22.8	26.2	30.4	45.9	52.7	45.8	68.9	79.1	
54"		-	20.2	23.2	27.0	40.7	46.8	40.7	61.2	70.3	

SEE CHART ON SHEET 9 FOR VERTICAL MULLION LOAD CAPACITY.
 SEE CHART ON SHEET 10 FOR HORIZONTAL MULLION LOAD CAPACITY.
 SEE CHART ABOVE FOR MULLION ANCHOR LOAD CAPACITY.
 LOWER DESIGN PRESSURE FROM ABOVE WILL APPLY.

INTERPOLATION BETWEEN WIDTHS AND HEIGHTS ALLOWED.

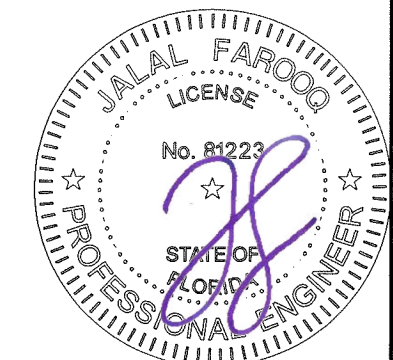
MULLION ANCHORS DESIGN LOAD CAPACITY - PSF										
WINDOW DIMS.		2 ANCHORS AT MULL			4 ANCHORS AT MULL			6 ANCHORS AT MULL		
		A2	AA2	B2	A4	AA4	B4	A6	AA6	B6
WIDTH (W)	MULL SPAN	EXT.(+) INT.(-)	EXT.(+) INT.(-)	EXT.(+) INT.(-)	EXT.(+) INT.(-)	EXT.(+) INT.(-)	EXT.(+) INT.(-)	EXT.(+) INT.(-)	EXT.(+) INT.(-)	EXT.(+) INT.(-)
19-1/8"	26"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
26-1/2"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
37"		91.6	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
53-1/8"		63.8	95.9	110.1	120.0	120.0	120.0	120.0	120.0	120.0
19-1/8"	38-3/8"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
26-1/2"		86.7	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
37"		62.1	93.3	107.1	120.0	120.0	120.0	120.0	120.0	120.0
53-1/8"		43.2	65.0	74.6	86.5	120.0	120.0	120.0	120.0	120.0
19-1/8"	50-5/8"	91.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
26-1/2"		65.7	98.8	113.3	120.0	120.0	120.0	120.0	120.0	120.0
37"		47.0	70.7	81.2	94.1	120.0	120.0	120.0	120.0	120.0
53-1/8"		32.7	49.2	56.5	65.5	98.5	113.1	98.3	120.0	120.0
19-1/8"	56"	82.3	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
26-1/2"		59.4	89.3	102.5	118.8	120.0	120.0	120.0	120.0	120.0
37"		42.5	63.9	73.4	85.1	120.0	120.0	120.0	120.0	120.0
53-1/8"		29.6	44.5	51.1	59.2	89.0	102.2	88.9	120.0	120.0
19-1/8"	63"	73.1	110.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
26-1/2"		52.8	79.4	91.1	105.6	120.0	120.0	120.0	120.0	120.0
37"		37.8	56.8	65.2	75.6	113.7	120.0	113.4	120.0	120.0
53-1/8"		26.3	39.5	45.4	52.7	79.1	90.8	79.0	118.7	120.0
19-1/8"	72"	64.0	96.2	110.4	120.0	120.0	120.0	120.0	120.0	120.0
26-1/2"		46.2	69.4	79.7	92.4	120.0	120.0	120.0	120.0	120.0
37"		33.0	49.7	57.1	66.2	99.4	114.1	99.2	120.0	120.0
53-1/8"		22.9	34.6	39.7	46.1	69.2	79.5	69.1	103.9	119.2
19-1/8"	76"	60.6	91.1	104.6	120.0	120.0	120.0	120.0	120.0	120.0
26-1/2"		43.7	65.8	75.5	87.5	120.0	120.0	120.0	120.0	120.0
37"		31.3	47.1	54.0	62.7	94.2	108.1	94.0	120.0	120.0
53-1/8"		21.7	32.7	37.6	43.7	65.6	75.3	65.5	98.4	113.0

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

TYPICAL ANCHORS:
 TYPE 'A' & 'AA'- 1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)
 INTO 2BY WOOD BUCKS OR WOOD STRUCTURES
 1-1/2" MIN. PENETRATION INTO WOOD
 THRU 1BY BUCKS INTO CONC. OR BLOCKS
 1-1/4" MIN. EMBED INTO CONCRETE OR BLOCKS
 DIRECTLY INTO CONCRETE OR BLOCKS
 1-1/4" MIN. EMBED INTO CONCRETE OR BLOCKS
 TYPE 'B'- #14 SMS OR SELF DRILLING SCREWS (GRADE 2 CRS)
 INTO METAL STRUCTURES
 (3) THREADS MIN. TO EXTEND BEYOND METAL THICKNESS
 ALUMINUM: 1/8" THK. MIN. (6063-T5 MIN.)
 STEEL: 1/8" THK. MIN. (Fy = 36 KSI MIN.)
 (STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

TYPICAL EDGE DISTANCE
 INTO CONCRETE AND BLOCKS = 1-1/2" MIN. (TYPE 'A' ANCHORS)
 INTO CONCRETE AND BLOCKS = 2-1/2" MIN. (TYPE 'AA' ANCHORS)
 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.

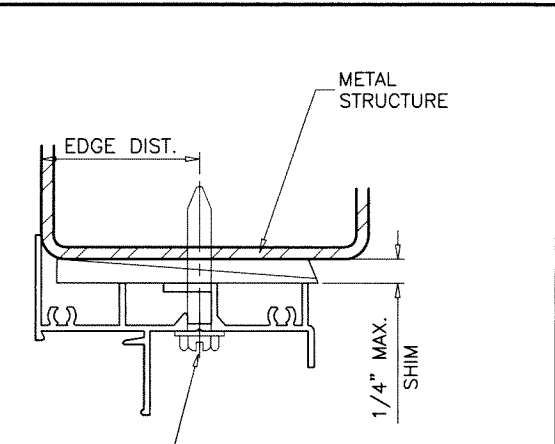
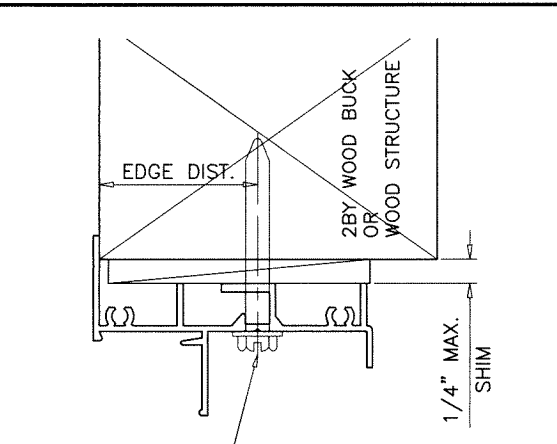
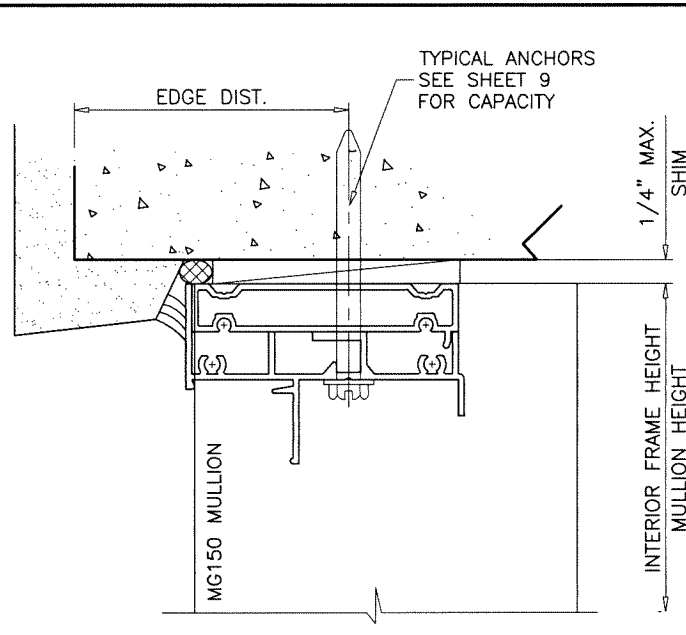
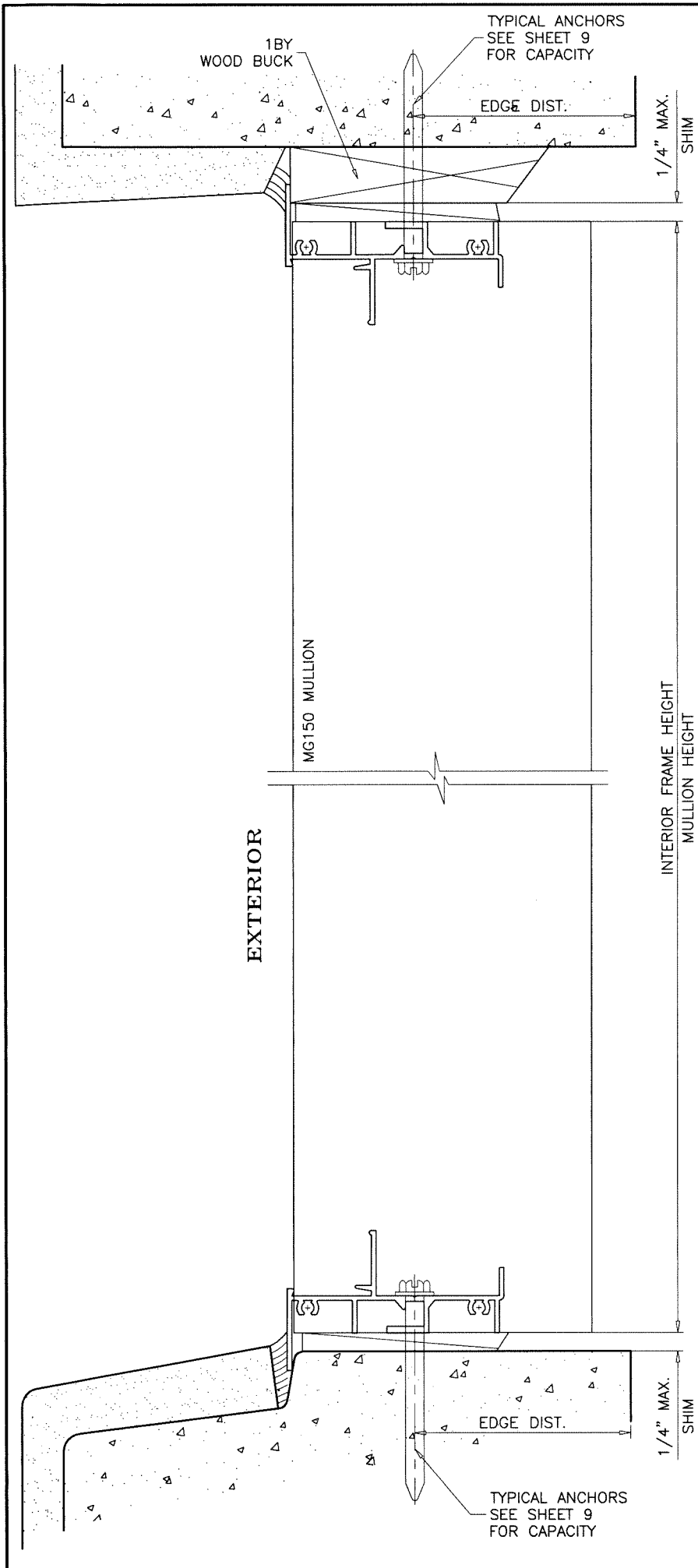
Sealed: 7/21/2023



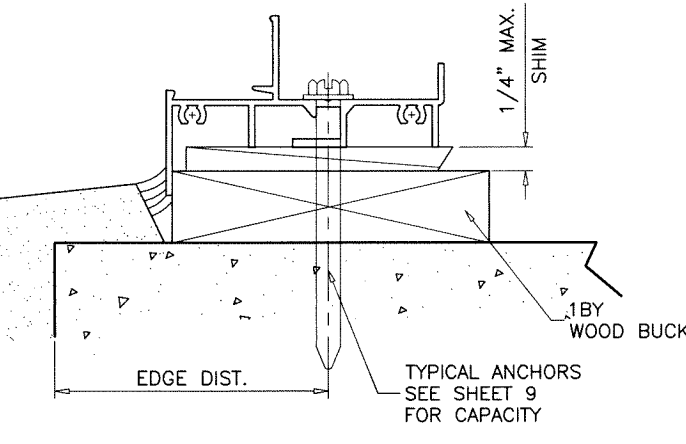
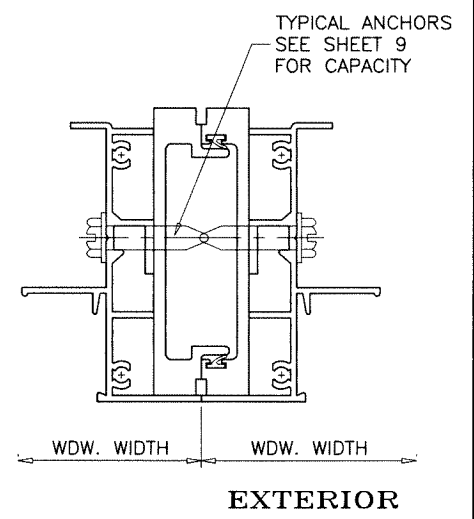
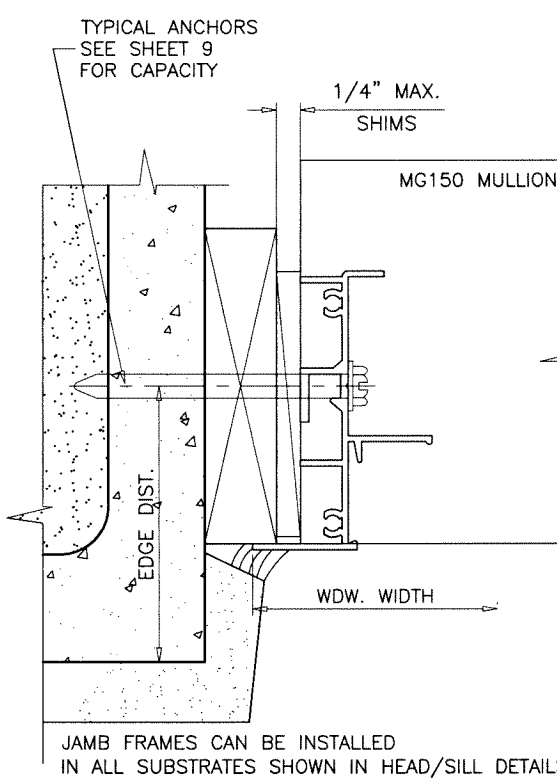
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chk. by:				
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FLANGE FRAMES WITH FLUSH FRAME ADAPTERS CAN BE USED AT ALL ANCHORAGE CONDITIONS.



MG150 MULLION
MG400 FIXED FRAMES

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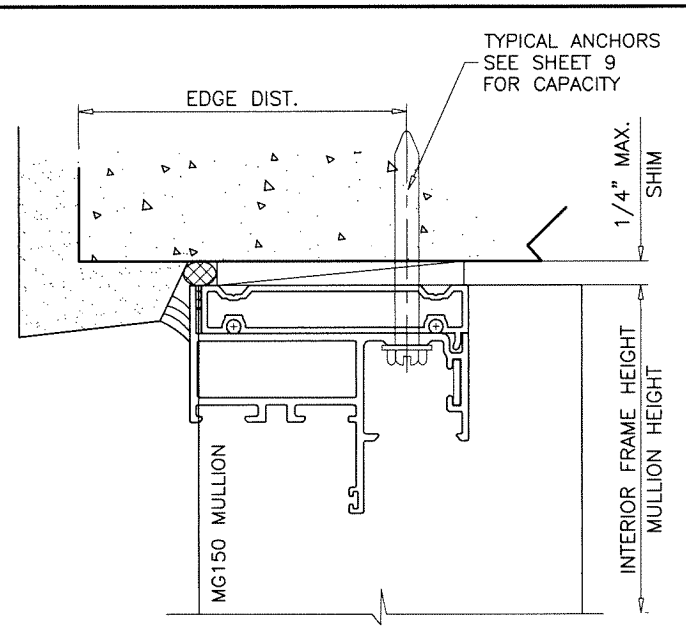
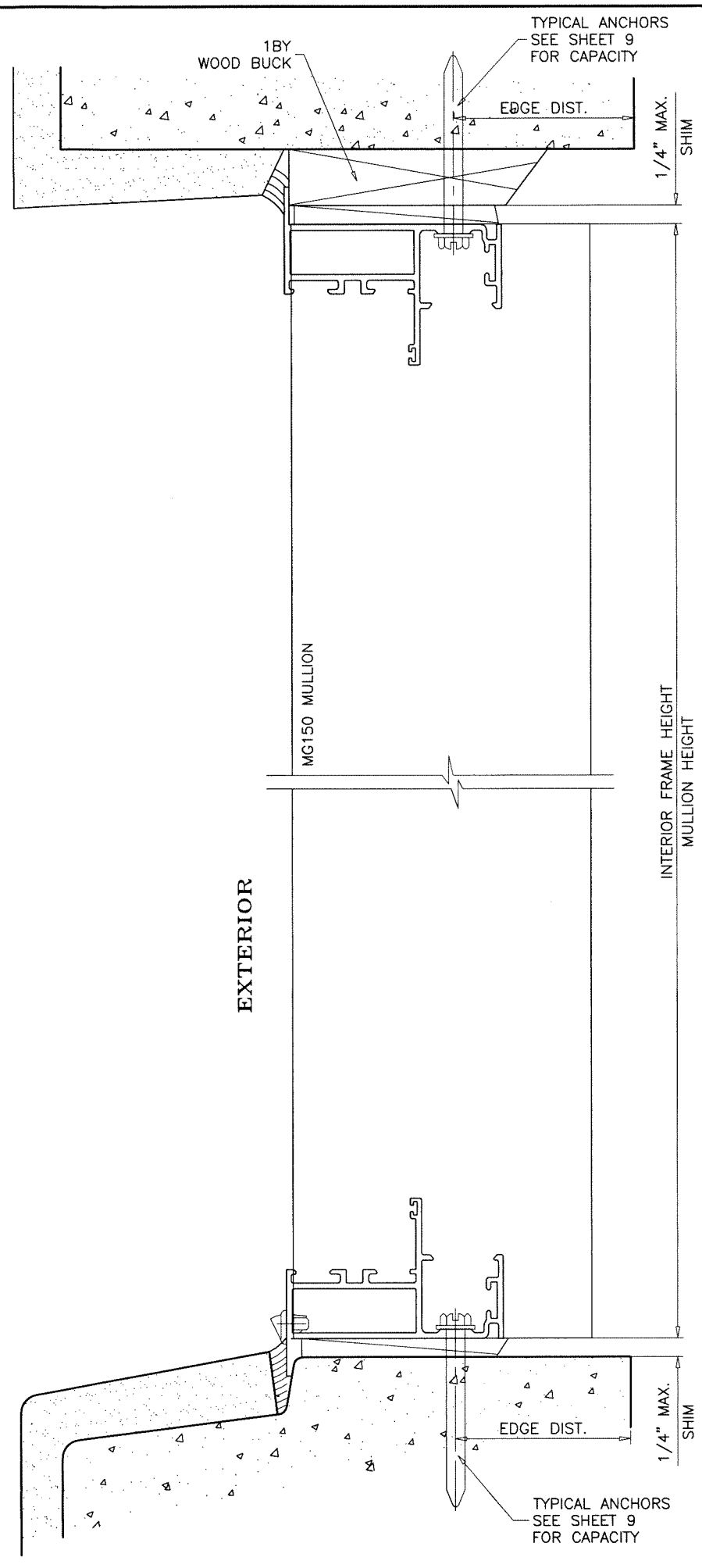
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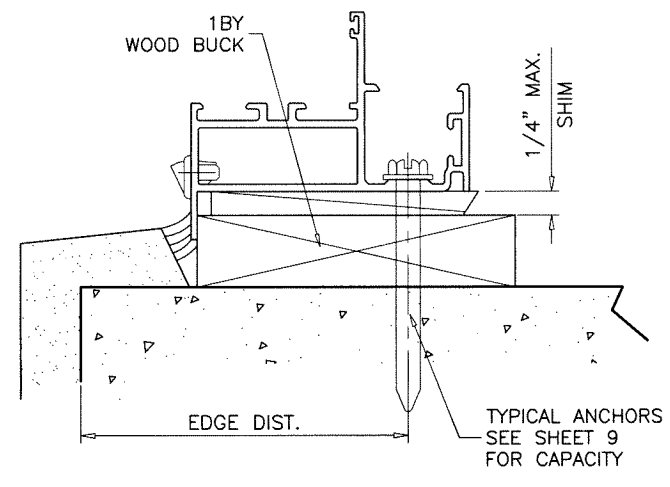
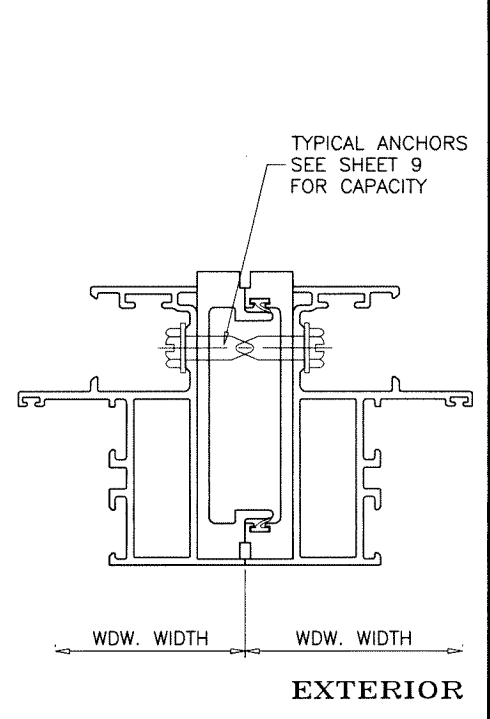
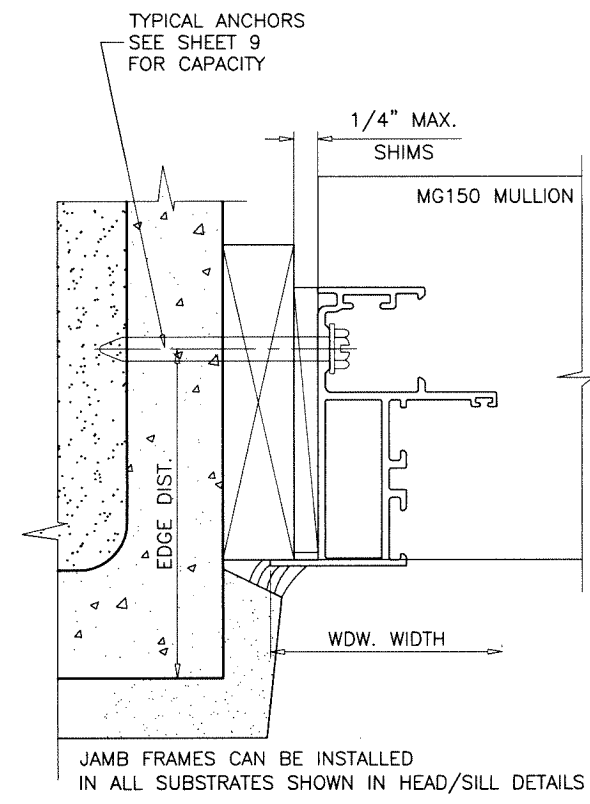
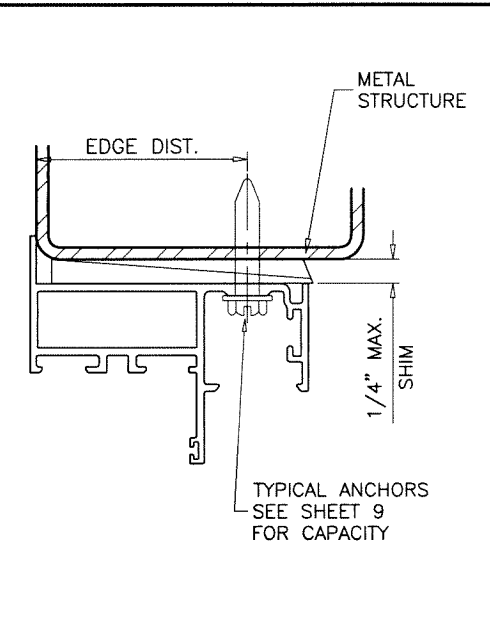
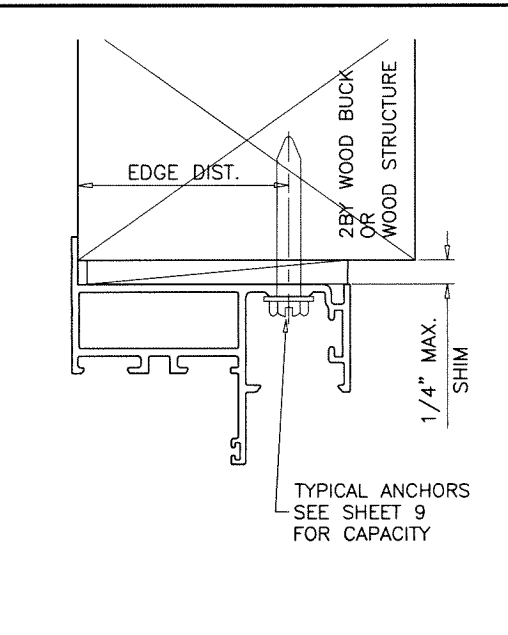
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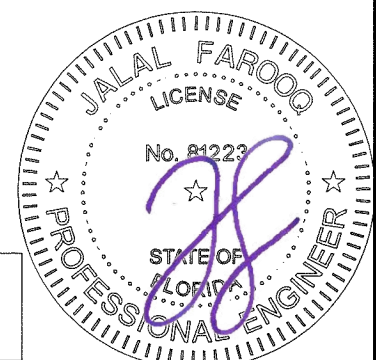


FLANGE FRAMES WITH FLUSH FRAME ADAPTERS CAN BE USED AT ALL ANCHORAGE CONDITIONS.



MG150 MULLION
MG450 FIXED FRAMES

Sealed: 7/21/2023



FL #40673

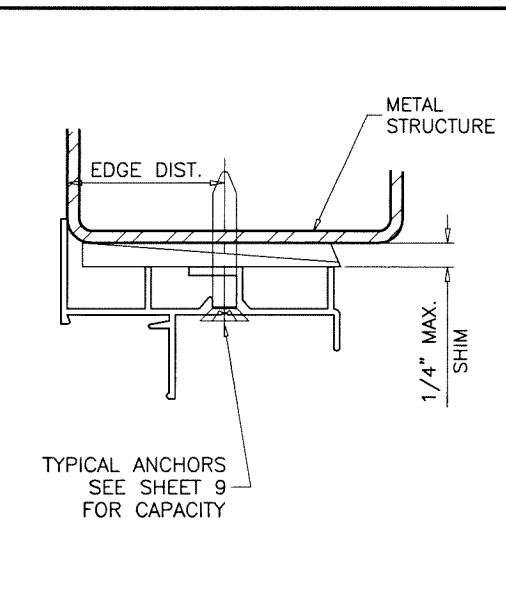
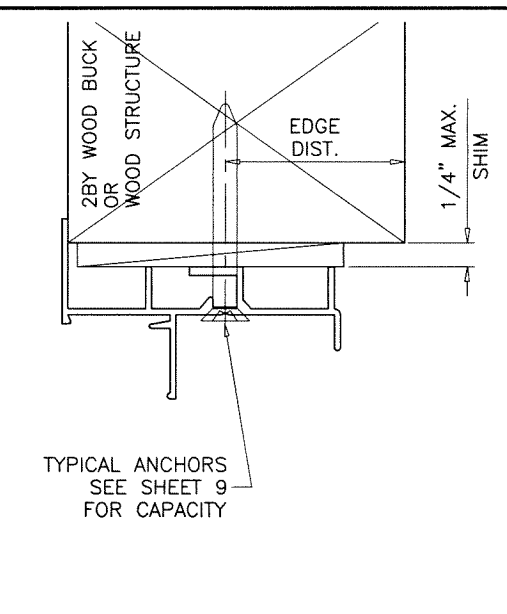
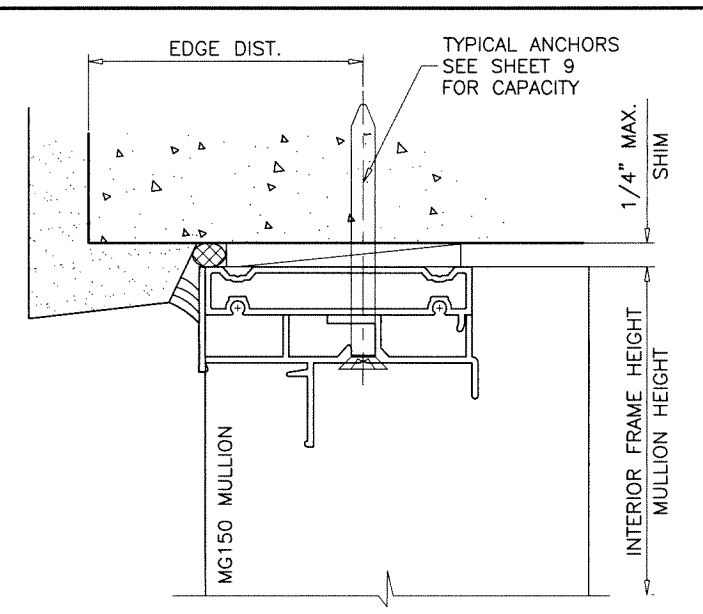
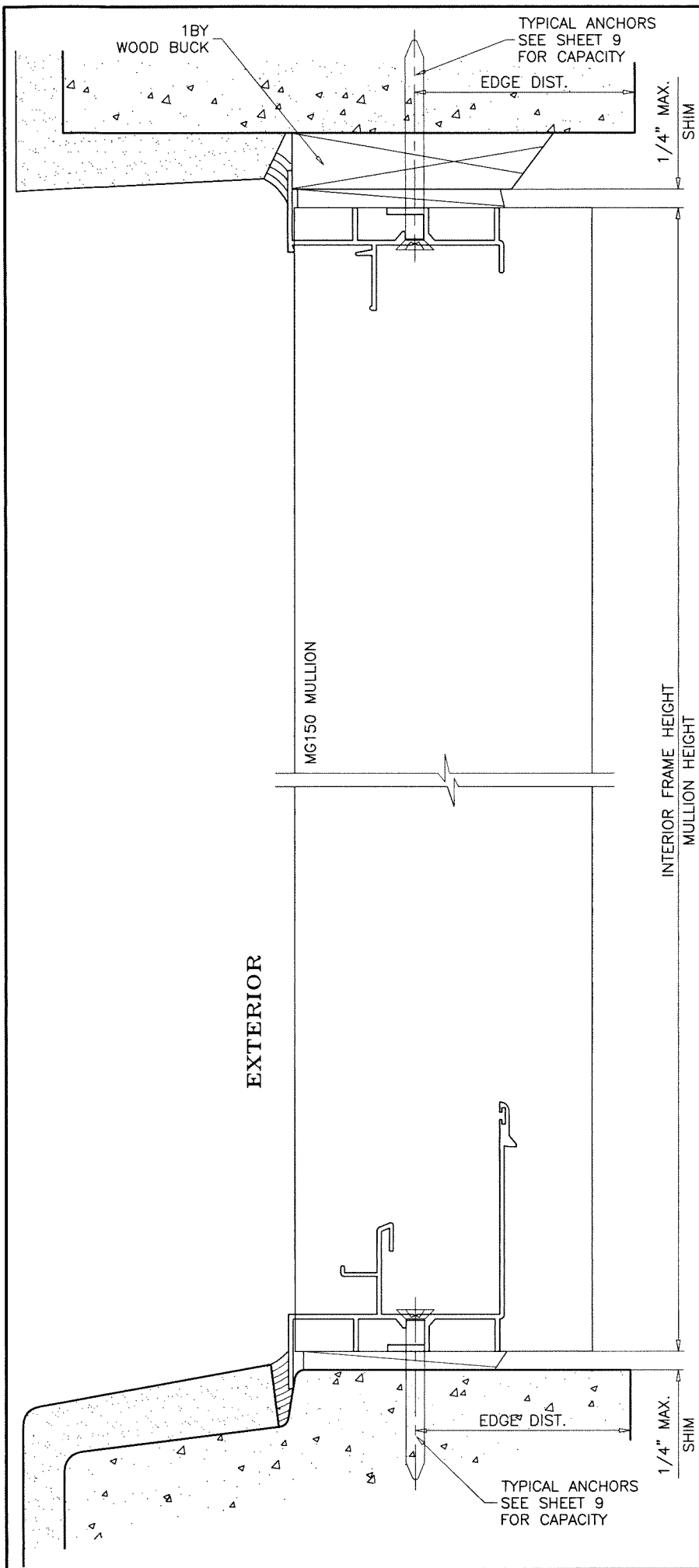
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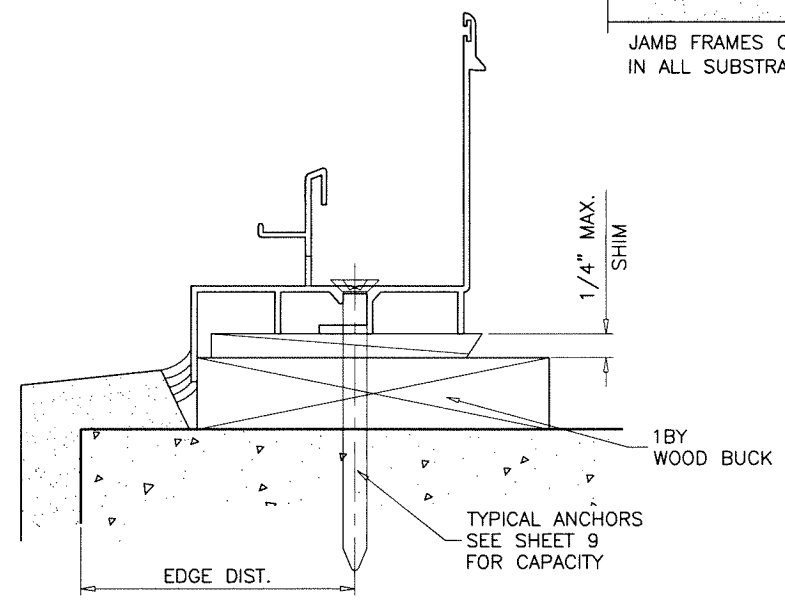
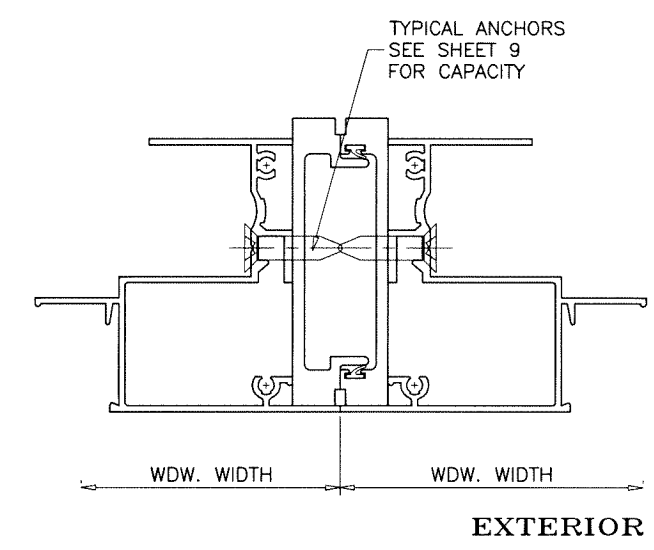
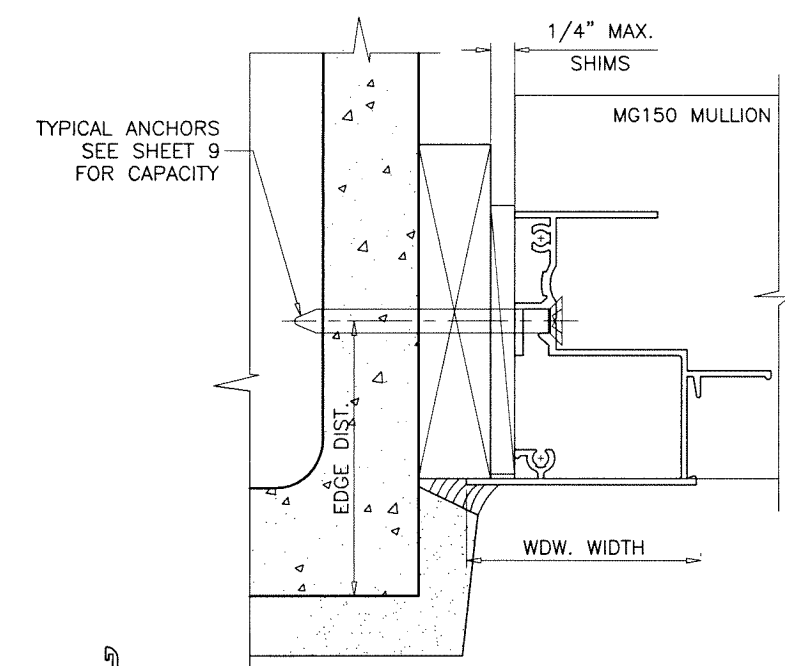
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FLANGE FRAMES WITH FLUSH FRAME ADAPTERS CAN BE USED AT ALL ANCHORAGE CONDITIONS.



JAMB FRAMES CAN BE INSTALLED IN ALL SUBSTRATES SHOWN IN HEAD/SILL DETAILS

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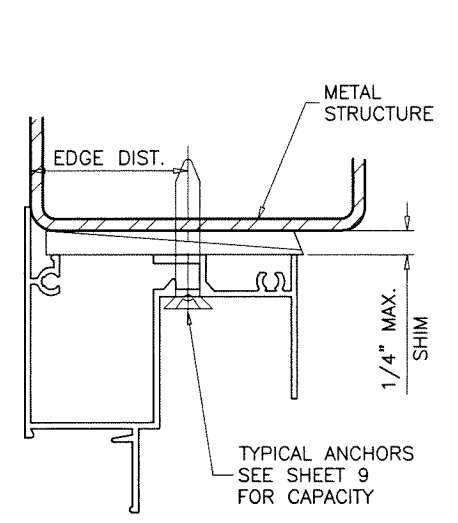
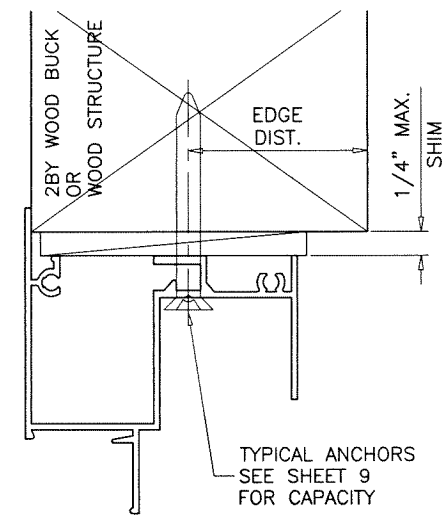
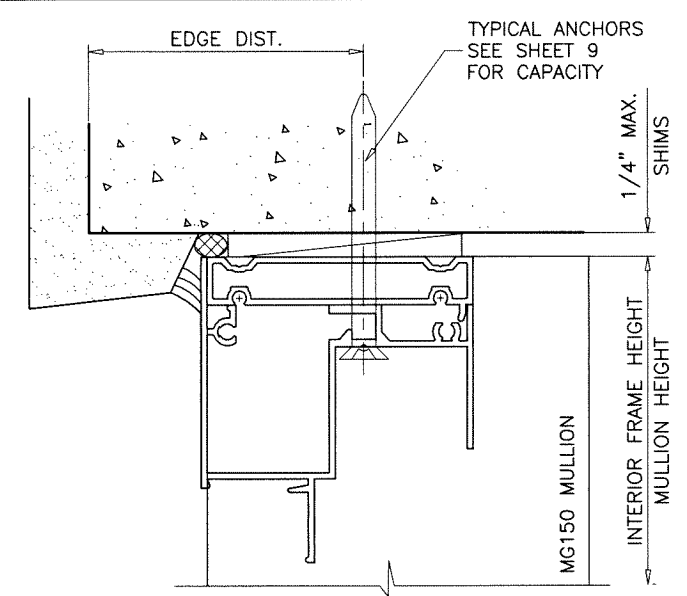
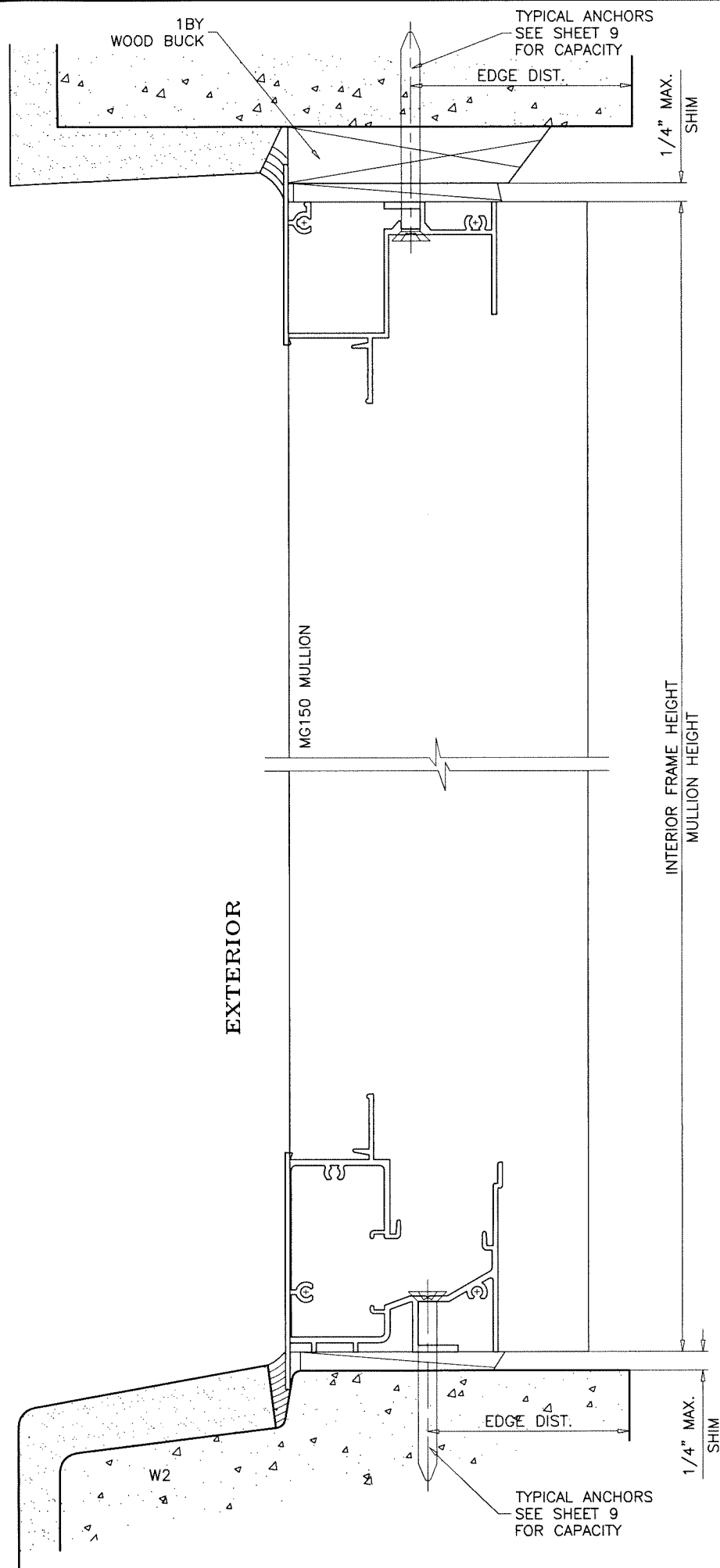
MG150 MULLION
MG200 S.H. FRAMES



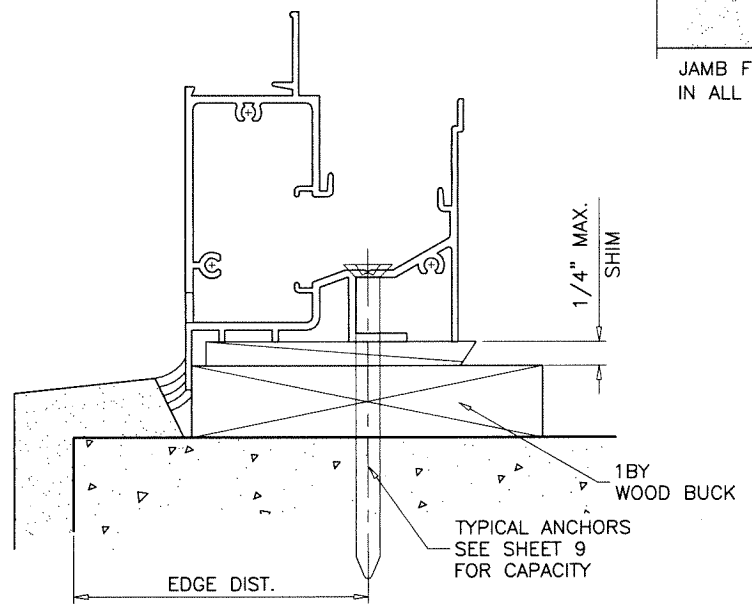
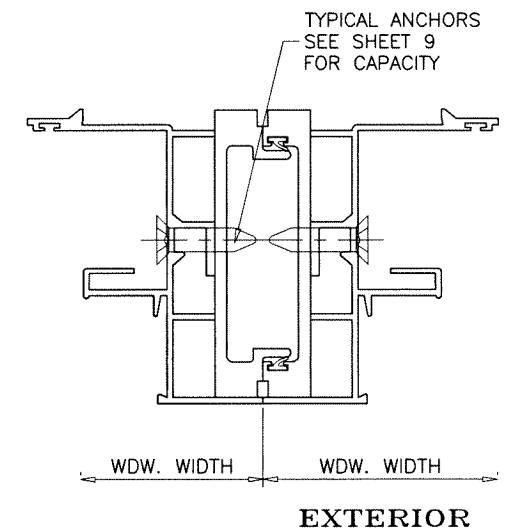
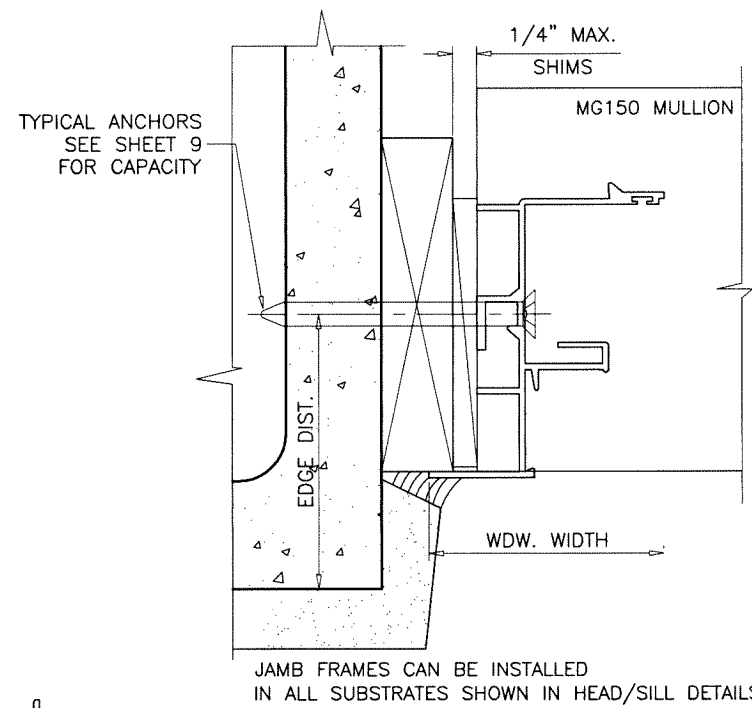
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date:	03-09-22	scale:	1/2" = 1"	
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sheet	14 of 16			



FLANGE FRAMES WITH FLUSH FRAME ADAPTERS CAN BE USED AT ALL ANCHORAGE CONDITIONS.



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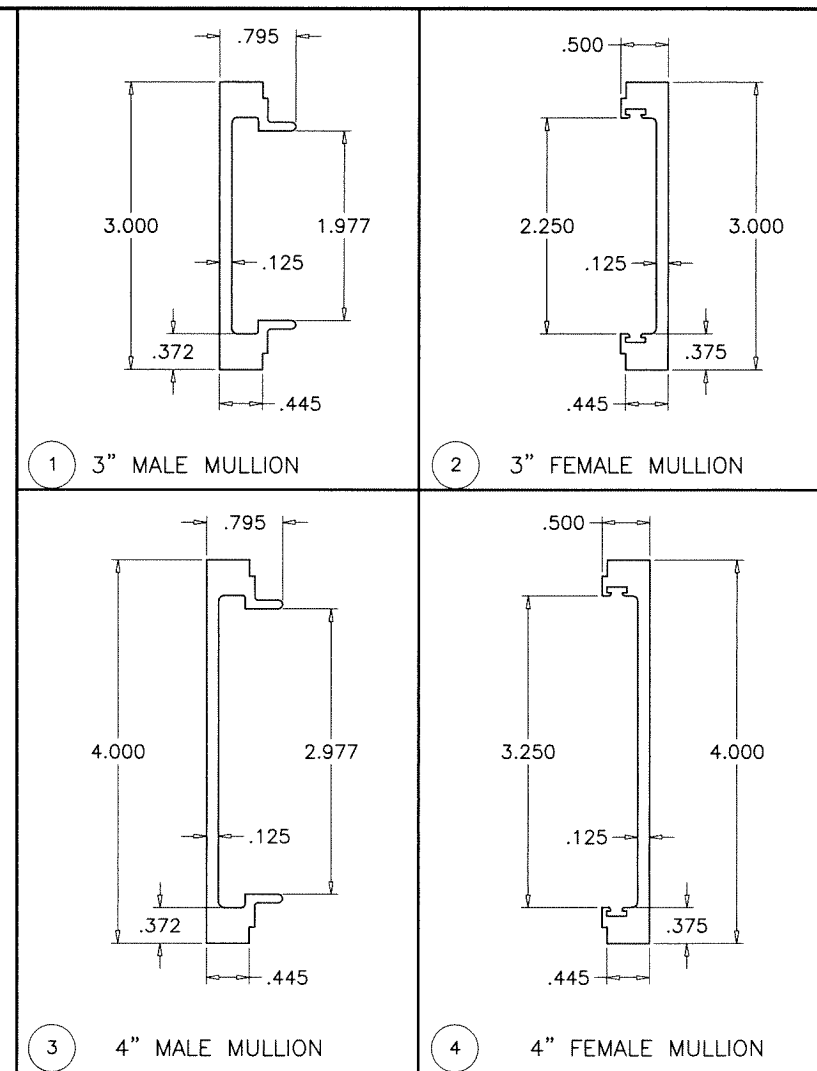
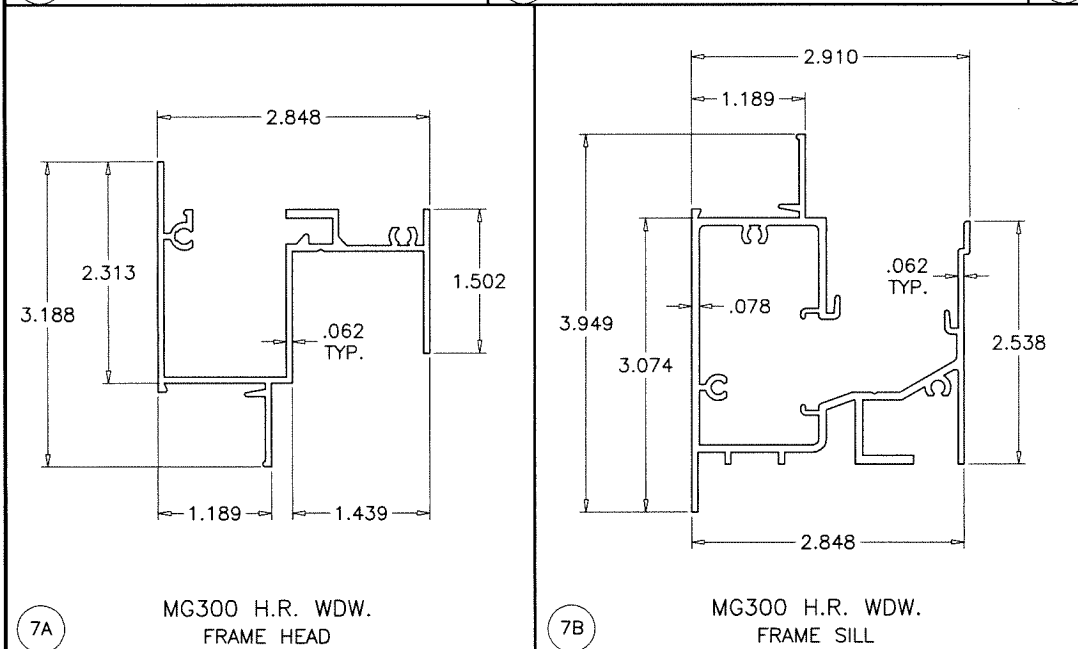
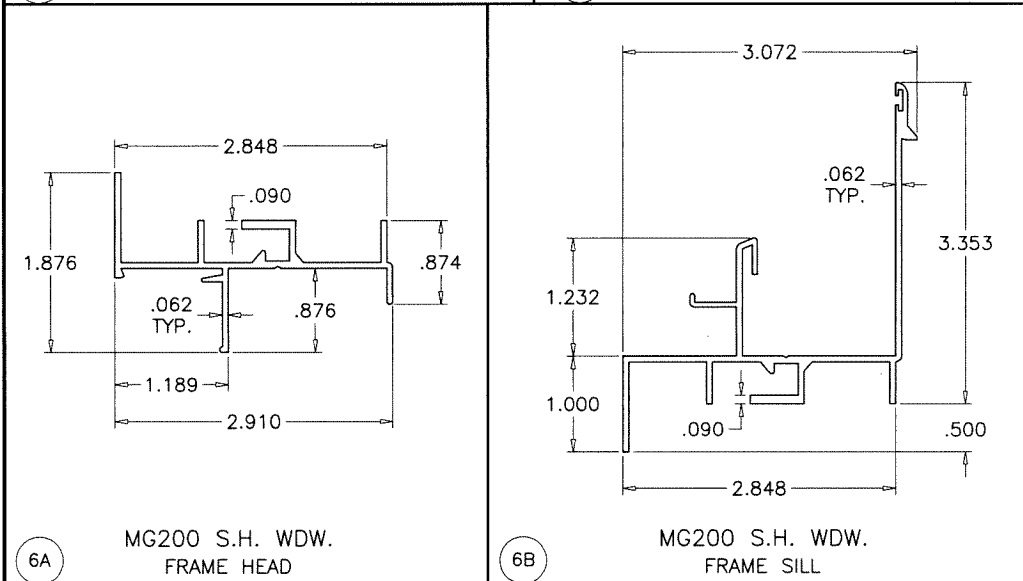
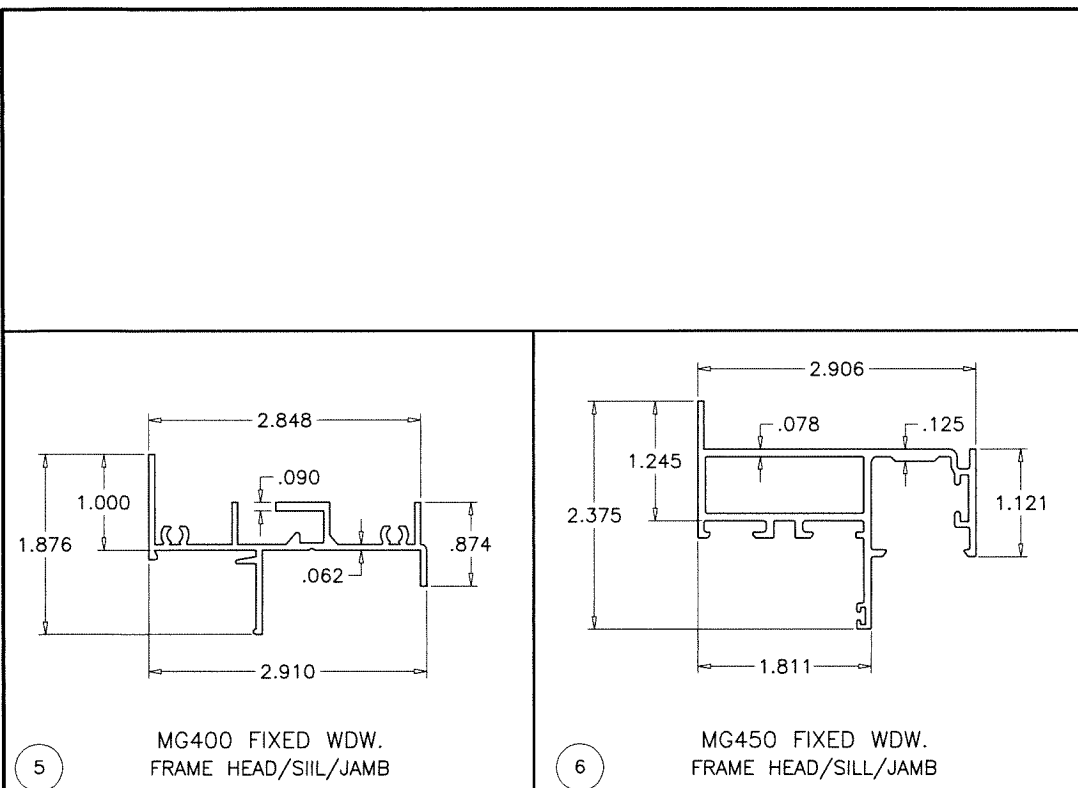
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MG300 H.R. FRAMES



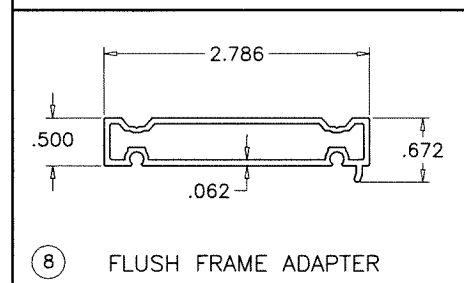
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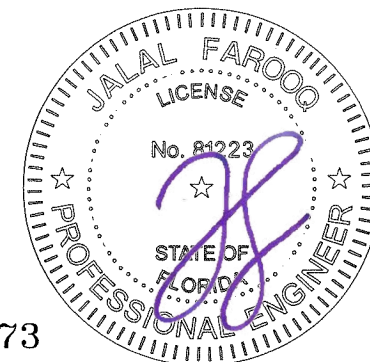


ITEM	PART #	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
1	E-154	3" MALE MULLION	6063-T6	-
2	E-155	3" FEMALE MULLION	6063-T6	-
3	E-156	4" MALE MULLION	6063-T6	-
4	E-157	4" FEMALE MULLION	6063-T6	-
5	MRG-201	MG400 FIXED WDW. FRAME HEAD/SILL/JAMB	6063-T6	-
6	E-451	MG450 FIXED WDW. FRAME HEAD/SILL/JAMB	6063-T6	-
6A	MG201	MG200 S.H. WDW. FRAME HEAD	6063-T6	-
6B	MG202	MG200 S.H. WDW. FRAME SILL	6063-T6	-
6C	MG203	MG200 S.H. WDW. FRAME JAMB	6063-T6	-
7A	MG203	MG300 H.R. WDW. FRAME HEAD	6063-T6	-
7B	MG301	MG 300 H.R. WDW. FRAME SILL	6063-T6	-
7C	MG303	MG300 H.R. WDW. FRAME JAMB	6063-T6	-
8	MG212	FLUSH FRAME ADAPTER	6063-T6	-



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