

MULLION SYSTEM IS RATED FOR LARGE & SMALL MISSILE IMPACT. AND CAN BE USED WITH ALL F.B.C. APPROVED IMPACT AND NON-IMPACT RESISTANT PRODUCTS.

**TYPICAL MULLION ARRANGEMENT**

INDEX OF DRAWING	
SHEET NO.	DESCRIPTION
1	GENERAL NOTES
2	WINDOW FRAME DETAILS
3	DOOR FRAME DETAILS
4	MULLION DETAILS
5	CHART FOR 4-9/16" & 6-9/16" MULLIONS WITHOUT HORIZONTALS
6	CHART FOR 4-9/16" & 6-9/16" MULLIONS WITH HORIZONTALS
7 THRU 10	DETAILS SHOWS VERTICAL AND HORIZONTAL MULLION CONNECTION WITH FRAME MEMBERS.
11	HORIZ./VERT. MULLION CONNECTION DETAILS WITH BRACKET
12	HORIZ./VERT. MULLION CONNECTION DETAILS WITH GUSSET PLATE
13	VERT. MULLION CONNECTION DETAIL TO HORIZ. MULLION

**INSTRUCTIONS:**

USE DRAWING AS FOLLOWS.

1. DETERMINE THE PRESSURE (LOAD) REQUIREMENTS FOR THE INSTALLATION USING ASCE 7 FOR THE OPENING.
2. DEPENDING ON THE 'TYPICAL MULLION ARRANGEMENT' ON SHEET 1, SELECT THE MULLION SPAN, TRIBUTARY WIDTH (W) AND MULLION SIZE 4-9/16" OR 6-9/16".
3. DEPENDING ON THE WINDOWS ARRANGEMENT AND SIZE OF MULLION, USING SHEETS 7 TO 10, SELECT THE GROUP NUMBER.
4. USING SHEETS 5 AND 6 DETERMINE THE DESIGN PRESSURE RATING, THE MULLION SELECTED MUST MEET OR EXCEED THE PRESSURE (LOAD) REQUIRED IN STEP 1.
5. USING SHEETS 7, 8, 9 AND 10 DETERMINE THE WINDOW TO MULLION ANCHOR.
6. USING SHEETS 11 AND 12, DETERMINE THE MULLION TO SUBSTRATE ANCHORS.
7. USING SHEET 13, DETERMINE MULLION TO MULLION ANCHORS.

**LAMINATED VENEERED LUMBER (LVL) MULLION SYSTEM WINDOW FRAME MEMBERS INCLUDED IN PROPERTIES**

DESIGN LOAD RATING FOR THIS MULLION TO BE AS PER CHARTS SHOWN ON SHEETS 5 AND 6.

APPROVAL APPLIES TO MULLIONS COMBINATIONS WITH FRAME MEMBERS OF ANDERSEN CORPORATION WINDOW AND DOORS IN ANY COMBINATIONS SEE SHEET 2 FOR WINDOW FRAME MEMBER DETAILS. SEE SHEET 3 FOR DOOR FRAME MEMBER DETAILS.

SEE SEPARATE APPROVAL FOR WINDOW/DOOR ANCHORS AND DESIGN LOAD CAPACITY.

LOWEST VALUE RESULTING FROM MULLION, WINDOW OR DOOR APPROVAL WILL APPLY TO ENTIRE SYSTEM.

THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE 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.

WOOD BUCKS BY OTHERS, MUST BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE STRUCTURE.

ANCHORS SHALL BE AS LISTED, SPACED AS SHOWN ON DETAILS, EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL COVERING (STUCCO, TILE ETC.).

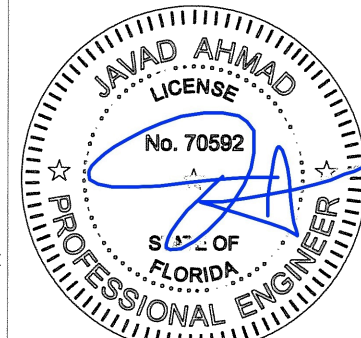
ANCHORING CONDITIONS OTHER THAN THOSE SHOWN IN THESE DETAILS ARE NOT PART OF THIS APPROVAL.

A LOAD DURATION INCREASE IS USED IN DESIGN OF ANCHORS INTO WOOD ONLY.

MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE FLORIDA BUILDING CODE.

MANUFACTURER'S LABEL SHALL BE LOCATED ON A READILY VISIBLE LOCATION IN ACCORDANCE WITH SECTION 1710.8.3 OF FLORIDA BUILDING CODE. LABELING TO COMPLY WITH SECTION 1710.8.2.

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 A DELEGATED ENGINEER TO THE P.E.D. ENGINEER SHALL SUBMIT TO THIS LATTER THE SITE SPECIFIC DRAWINGS FOR REVIEW.  
 E- THIS P.E.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.

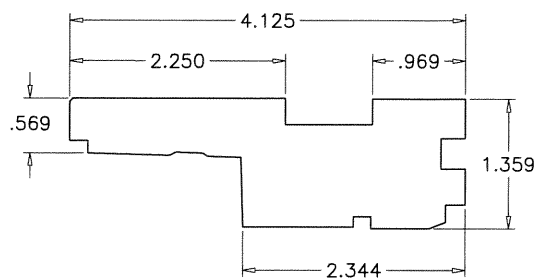


FL #17720

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 MIAMI, FLORIDA 33174  
 TEL. (305) 264-8100 FAX. (305) 262-6978

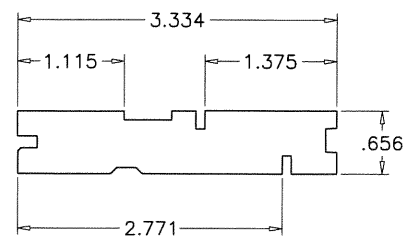
LAMINATED VENEERED LUMBER MULLION SYSTEM  
**ANDERSEN CORPORATION**  
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 BAYPORT, MN. 55003-1096  
 TEL. (800) 426-7691 FAX (-)

revisions:	no	date	by	description
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chk. by:				
drawing no.	M15-01			
sheet	1 of 13			

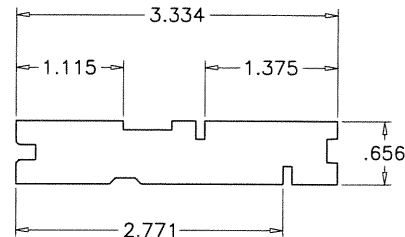


CASEMENT  
FRAME HEAD/SILL  
30835  
WOOD

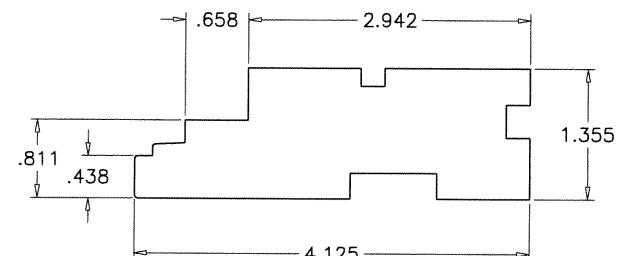
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FRAME HEAD/SILL  
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WOOD



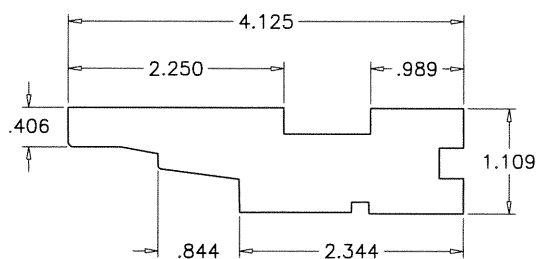
TILT-WASH DOUBLE HUNG  
FRAME HEAD  
WOOD



WOODWRIGHT DOUBLE HUNG  
FRAME HEAD/JAMB  
WOOD

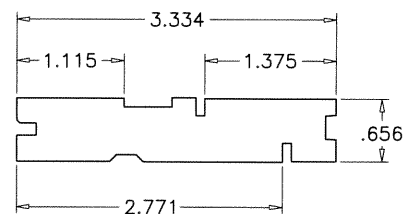


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WOOD



CASEMENT  
FRAME JAMB  
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WOOD

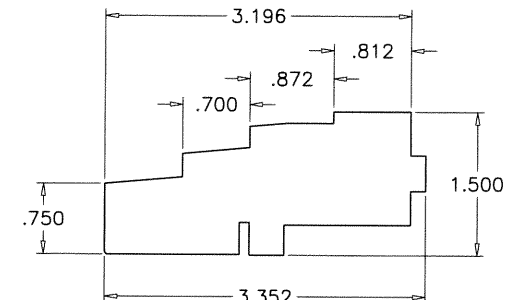
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FRAME HEAD/SILL  
30838  
WOOD



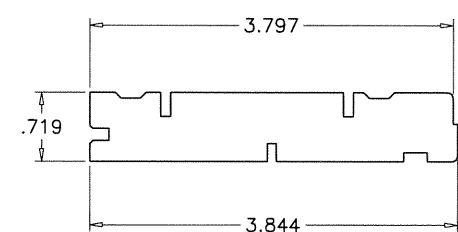
TILT-WASH DOUBLE HUNG  
FRAME JAMB  
WOOD

TILT-WASH FIXED  
FRAME HEAD/SILL/JAMB  
WOOD

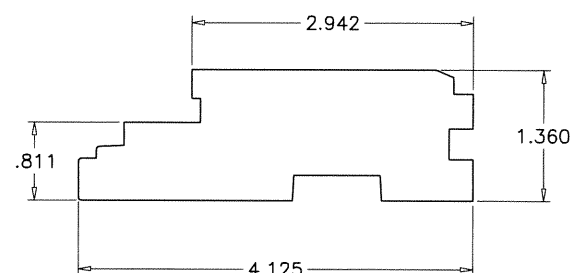
WOODWRIGHT FIXED  
FRAME HEAD/SILL/JAMB  
WOOD



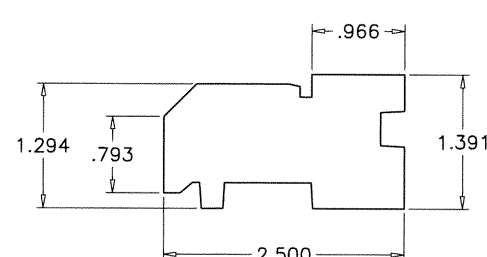
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FRAME SILL  
27122  
WOOD



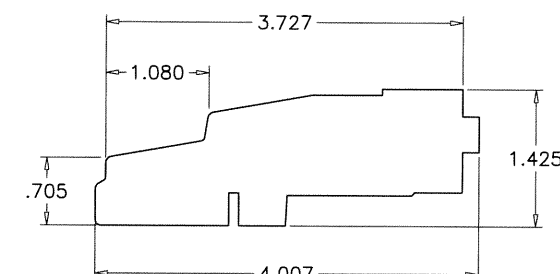
PSNL  
FRAME HEAD/SILL/JAMB  
WOOD



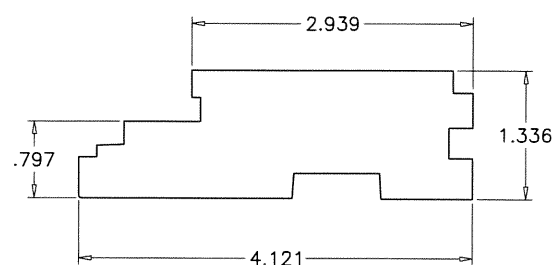
CASEMENT PICTURE  
FRAME HEAD/SILL/JAMB  
WOOD



FLEXIFRAME FIXED  
FRAME HEAD/SILL/JAMB  
WOOD



SPECIALITY DIRECT SET (ET)  
FRAME SILL  
53103  
WOOD



CASEMENT PICTURE (P)  
FRAME HEAD/SILL/JAMB  
30394  
WOOD



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ENGINEERS & PRODUCT DEVELOPMENT  
1235 S.W. 87 AVE  
MIAMI, FLORIDA 33174  
TEL. (305) 264-8100 FAX. (305) 262-6978

MULLION\M15-01AC

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**ANDERSEN CORPORATION**  
100 FOURTH AVE. NORTH  
BAYPORT, MN. 55003-1096  
TEL. (800) 426-7691 FAX (-)

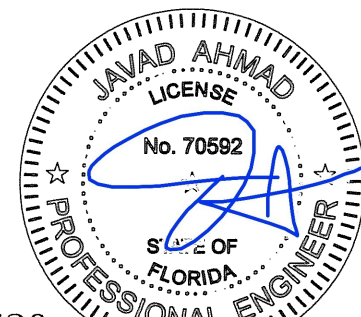


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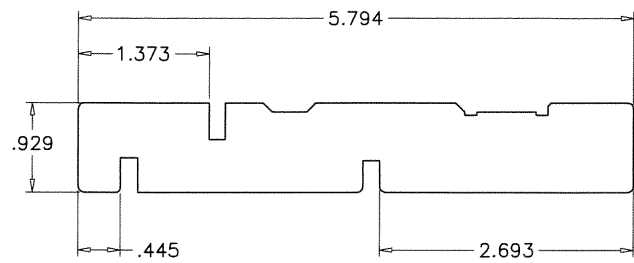
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sheet 2 of 13

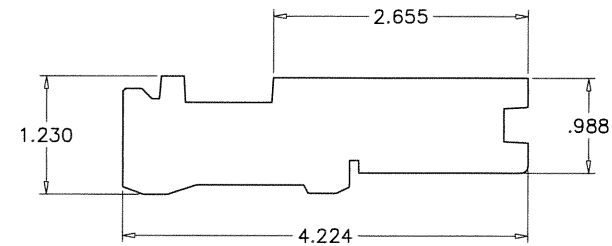


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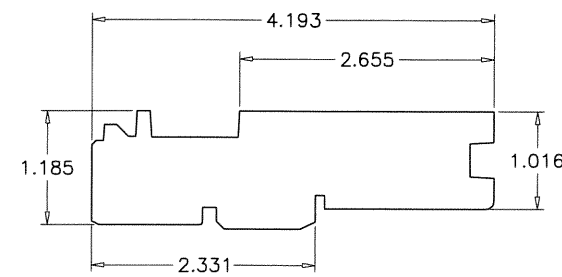
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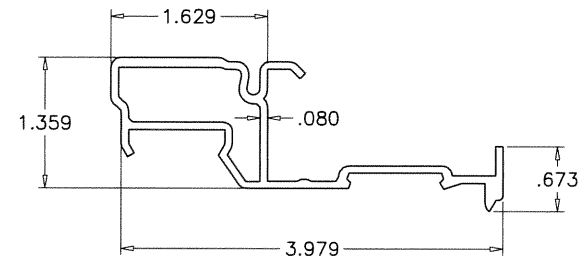
FWG  
GLIDING DOOR FRAME HEAD  
WOOD



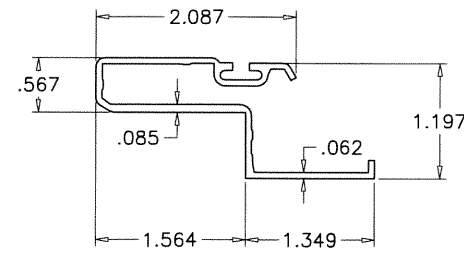
FWH  
HINGED DOOR HEAD/JAMB (OPERATING/STATIONARY)  
52253  
WOOD



FWO  
OUTSWING DOOR HEAD/JAMB (OPERATING/STATIONARY)  
57019  
WOOD




FWH  
HINGED HEAD/JAMB COVER (OPERATING/STATIONARY)  
52225  
FIBERGLASS



FWO  
OUTSWING HEAD/JAMB COVER (OPERATING/STATIONARY)  
57031  
FIBERGLASS

**a f c**

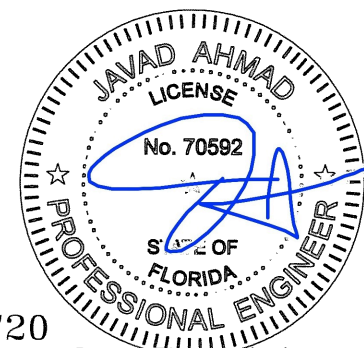
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TEL. (305) 264-8100 FAX. (305) 262-6978  
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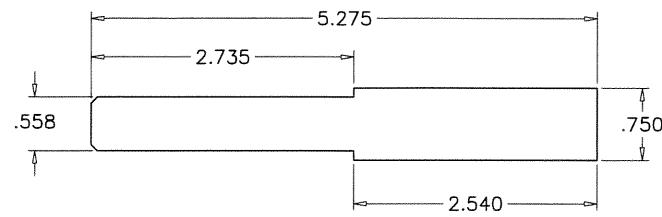
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drawing no.  
**M15-01**  
sheet 3 of 13

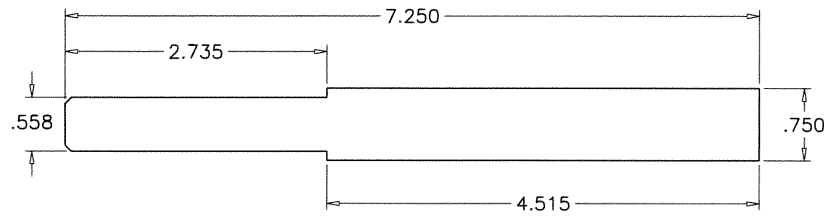


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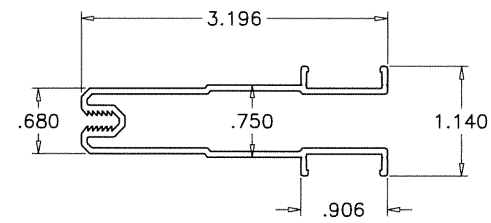
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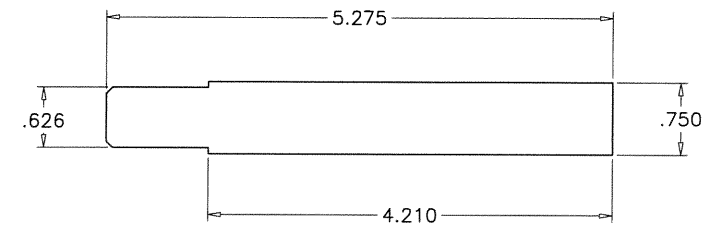
4-9/16" MULLION  
-  
LAMINATED VENEERED LUMBER



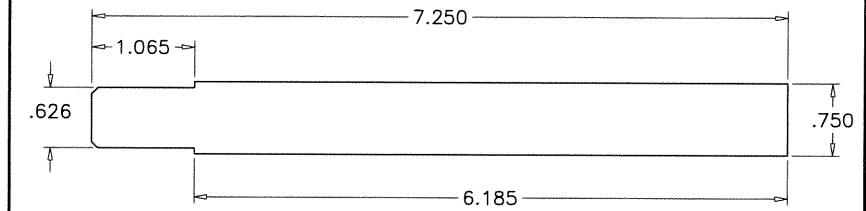
6-9/16" MULLION  
-  
LAMINATED VENEERED LUMBER



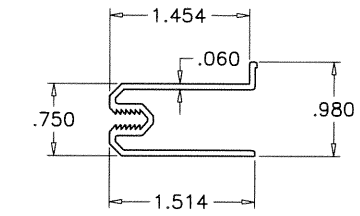
MULLION COVER  
-  
ALUMINUM



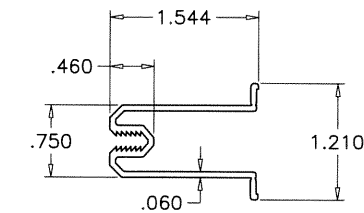
4-9/16" MULLION  
29353  
LAMINATED VENEERED LUMBER



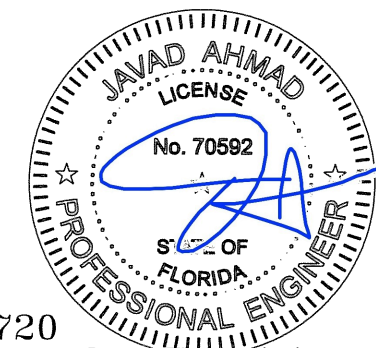
6-9/16" MULLION  
29434  
LAMINATED VENEERED LUMBER



MULLION COVER  
29351  
ALUMINUM



MULLION COVER  
29351  
ALUMINUM



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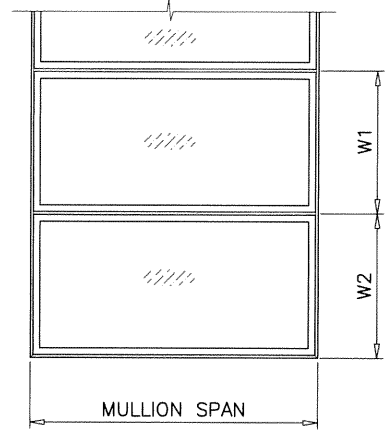
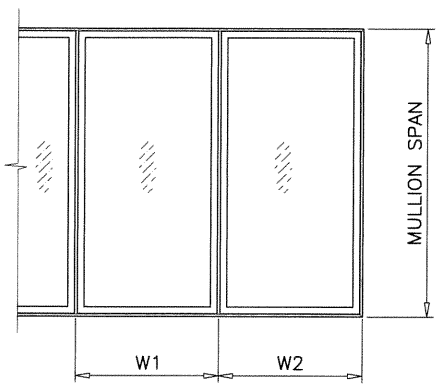
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sheet 4 of 13

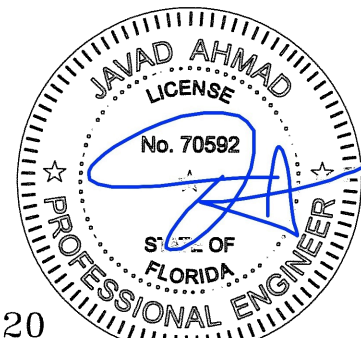
DESIGN LOAD CAPACITY - PSF 4-9/16" MULLION						
WINDOW DIMS. WIDTH (W) MULL SPAN		W/O INTERMEDIATE HORIZONTALS				
		GROUP #1	GROUP #2	GROUP #3	GROUP #4	
30"	48"	70.0	70.0	70.0	70.0	
36"		70.0	70.0	70.0	70.0	
42"		70.0	70.0	70.0	70.0	
48"		70.0	70.0	70.0	70.0	
51-3/8"		70.0	70.0	70.0	70.0	
54"		70.0	70.0	70.0	70.0	
60"		70.0	70.0	70.0	70.0	
66"		70.0	70.0	70.0	70.0	
72"	70.0	70.0	70.0	70.0		
30"	54"	70.0	70.0	70.0	70.0	
36"		70.0	70.0	70.0	70.0	
42"		70.0	70.0	70.0	70.0	
48"		70.0	70.0	70.0	70.0	
51-3/8"		70.0	70.0	70.0	70.0	
54"		70.0	70.0	70.0	70.0	
60"		68.0	68.0	68.0	68.0	
66"		61.8	61.8	61.8	61.8	
72"	56.7	56.7	56.7	56.7		
30"	60"	70.0	70.0	70.0	70.0	
36"		70.0	70.0	70.0	70.0	
42"		70.0	70.0	70.0	70.0	
48"		70.0	70.0	70.0	70.0	
51-3/8"		65.0	65.0	65.0	65.0	
54"		61.5	61.5	61.5	61.5	
60"		55.1	55.1	55.1	55.1	
66"		50.1	50.1	50.1	50.1	
72"	45.9	45.9	45.9	45.9		
30"	66"	70.0	70.0	70.0	70.0	
36"		67.4	70.0	70.0	70.0	
42"		60.1	68.2	68.2	68.2	
48"		55.3	58.6	58.6	58.6	
51-3/8"		53.4	54.2	54.2	54.2	
54"		51.3	51.3	51.3	51.3	
60"		45.7	45.7	45.7	45.7	
30"		72"	65.0	70.0	70.0	70.0
36"	55.6		63.3	69.4	69.4	
42"	49.3		56.1	58.1	58.1	
48"	44.9		49.8	49.8	49.8	
51-3/8"	43.1		46.1	46.1	46.1	
54"	41.9		43.6	43.6	43.6	
60"	38.7		38.7	38.7	38.7	
30"	78"		54.9	62.5	70.0	70.0
36"		46.8	53.2	59.9	59.9	
42"		41.2	46.9	50.1	50.1	
48"		37.3	42.5	43.0	43.0	
51-3/8"		35.6	39.7	39.7	39.7	
54"		34.5	37.5	37.5	37.5	
30"		84"	47.0	53.5	64.2	64.2
36"			39.9	45.4	52.2	52.2
42"	35.0		39.9	43.7	43.7	
48"	31.5		35.9	37.5	37.5	
51-3/8"	30.0		34.1	34.6	34.6	



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

DESIGN LOAD CAPACITY - PSF 6-9/16" MULLION							
WINDOW DIMS. WIDTH (W) MULL SPAN		W/O INTERMEDIATE HORIZONTALS					
		GROUP #5	GROUP #6	GROUP #7	GROUP #8	GROUP #9	
24"	60"	70.0	70.0	70.0	70.0	70.0	
30"		70.0	70.0	70.0	70.0	70.0	
36"		70.0	70.0	70.0	70.0	70.0	
40"		70.0	70.0	70.0	70.0	70.0	
42"		70.0	70.0	70.0	70.0	70.0	
48"		70.0	70.0	70.0	70.0	70.0	
54"		70.0	70.0	70.0	70.0	70.0	
60"		70.0	70.0	70.0	70.0	70.0	
66"		64.0	64.0	64.0	64.0	64.0	
72"		58.7	58.7	58.7	58.7	58.7	
24"		66"	70.0	70.0	70.0	70.0	70.0
30"			70.0	70.0	70.0	70.0	70.0
36"	70.0		70.0	70.0	70.0	70.0	
40"	70.0		70.0	70.0	70.0	70.0	
42"	70.0		70.0	70.0	70.0	70.0	
48"	70.0		70.0	70.0	70.0	70.0	
54"	70.0		70.0	70.0	70.0	70.0	
60"	64.2		64.2	64.2	64.2	64.2	
24"	72"		70.0	70.0	70.0	70.0	70.0
30"			70.0	70.0	70.0	70.0	70.0
36"			70.0	70.0	70.0	70.0	70.0
40"			70.0	70.0	70.0	70.0	70.0
42"		70.0	70.0	70.0	70.0	70.0	
48"		69.9	69.9	69.9	69.9	69.9	
54"		61.1	61.1	61.1	61.1	61.1	
60"		54.3	54.3	54.3	54.3	54.3	
24"		78"	70.0	70.0	70.0	70.0	70.0
30"			70.0	70.0	70.0	70.0	70.0
36"			70.0	70.0	70.0	70.0	70.0
40"			70.0	70.0	70.0	70.0	70.0
42"	70.0		70.0	70.0	70.0	70.0	
48"	60.3		60.3	60.3	60.3	60.3	
54"	52.6		52.6	52.6	52.6	52.6	
24"	84"		70.0	70.0	70.0	70.0	70.0
30"			70.0	70.0	70.0	70.0	70.0
36"			68.6	70.0	70.0	70.0	70.0
40"			62.7	64.9	64.9	64.9	64.9
42"			60.2	61.3	61.3	61.3	61.3
48"		52.6	52.6	52.6	52.6	52.6	
24"		90"	70.0	70.0	70.0	70.0	70.0
30"			70.0	70.0	70.0	70.0	70.0
36"			59.3	64.4	64.4	64.4	64.4
40"			54.1	57.1	57.1	57.1	57.1
42"			51.9	54.0	54.0	54.0	54.0
48"			46.3	46.3	46.3	46.3	46.3
24"	96"		70.0	70.0	70.0	70.0	70.0
30"			61.2	70.0	70.0	70.0	70.0
36"			51.8	57.1	57.1	57.1	57.1
40"			47.1	50.6	50.6	50.6	50.6
42"			45.2	47.9	47.9	47.9	47.9
45"			42.2	44.7	44.7	44.7	44.7

DESIGN LOAD CAPACITY - PSF 6-9/16" MULLION						
WINDOW DIMS. WIDTH (W) MULL SPAN		W/O INTERMEDIATE HORIZONTALS				
		GROUP #5	GROUP #6	GROUP #7	GROUP #8	GROUP #9
24"	102"	66.9	70.0	70.0	70.0	70.0
30"		54.1	61.9	62.6	62.6	62.6
36"		45.6	51.0	51.0	51.0	51.0
40"		41.5	45.2	45.2	45.2	45.2
42"		39.7	42.8	42.8	42.8	42.8
24"	108"	59.6	68.2	70.0	70.0	70.0
30"		48.1	55.0	56.2	56.2	56.2
36"		40.5	45.8	45.8	45.8	45.8
40"		36.8	40.7	40.7	40.7	40.7



FL #17720

**afC**  
**AL-FAROOQ CORPORATION**  
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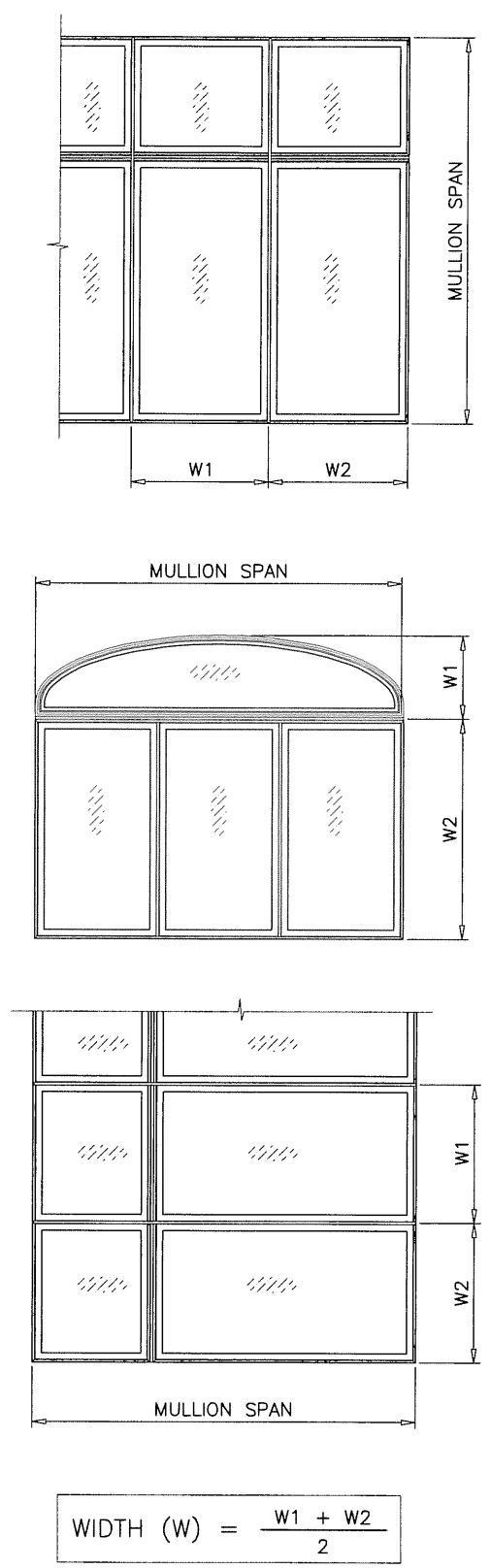
LAMINATED VENEERED LUMBER MULLION SYSTEM  
**ANDERSEN CORPORATION**  
 100 FOURTH AVE. NORTH  
 BAYPORT, MN. 55003-1096  
 TEL. (800) 426-7691 FAX (-)

revisions:	no	date	by	description

date: 04-28-15  
 scale: 1/2" = 1"  
 dr. by: HAMID  
 chk. by:

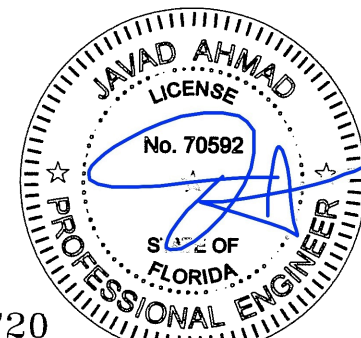
drawing no.  
**M15-01**  
 sheet 5 of 13

DESIGN LOAD CAPACITY - PSF 4-9/16" MULLION						
WINDOW DIMS. WIDTH (W) MULL SPAN		WITH INTERMEDIATE HORIZONTALS				
		GROUP #1	GROUP #2	GROUP #3	GROUP #4	
30"	48"	70.0	70.0	70.0	70.0	
36"		70.0	70.0	70.0	70.0	
42"		70.0	70.0	70.0	70.0	
48"		70.0	70.0	70.0	70.0	
51-3/8"		70.0	70.0	70.0	70.0	
54"		70.0	70.0	70.0	70.0	
60"		69.0	70.0	70.0	70.0	
66"		62.7	70.0	70.0	70.0	
72"	57.5	65.4	70.0	70.0		
30"	54"	70.0	70.0	70.0	70.0	
36"		70.0	70.0	70.0	70.0	
42"		70.0	70.0	70.0	70.0	
48"		68.1	70.0	70.0	70.0	
51-3/8"		63.7	70.0	70.0	70.0	
54"		60.6	68.9	70.0	70.0	
60"		54.5	62.0	70.0	70.0	
66"		49.6	56.4	70.0	70.0	
72"	45.4	51.7	64.8	65.2		
30"	60"	70.0	70.0	70.0	70.0	
36"		70.0	70.0	70.0	70.0	
42"		63.1	70.0	70.0	70.0	
48"		55.2	62.8	70.0	70.0	
51-3/8"		51.6	58.7	70.0	70.0	
54"		49.1	55.8	70.0	70.0	
60"		44.2	50.3	63.0	70.0	
66"		40.1	45.7	57.2	64.0	
72"	36.8	41.9	52.5	58.7		
30"	66"	70.0	70.0	70.0	70.0	
36"		60.8	69.2	70.0	70.0	
42"		52.1	59.3	70.0	70.0	
48"		45.6	51.9	65.0	70.0	
51-3/8"		42.6	48.5	60.8	70.0	
54"		40.5	46.2	57.8	67.5	
60"		36.5	41.5	52.0	60.7	
30"		72"	61.3	69.8	70.0	70.0
36"	51.1		58.2	70.0	70.0	
42"	43.8		49.9	62.5	70.0	
48"	38.3		43.6	54.7	63.8	
51-3/8"	35.8		40.8	51.1	59.6	
54"	34.1		38.8	48.6	56.7	
60"	30.7		34.9	43.7	51.0	
30"	78"		52.3	59.5	70.0	70.0
36"		43.5	49.6	62.1	70.0	
42"		37.3	42.5	53.2	62.1	
48"		32.7	37.2	46.6	54.3	
51-3/8"		30.5	34.7	43.5	50.8	
54"		29.0	33.0	41.4	48.3	
30"		84"	45.1	51.3	64.3	70.0
36"			37.5	42.7	53.5	60.6
42"	32.2		36.6	45.9	51.9	
48"	28.2		32.1	40.2	45.4	
51-3/8"	26.3		29.9	37.5	42.4	



DESIGN LOAD CAPACITY - PSF 6-9/16" MULLION							
WINDOW DIMS. WIDTH (W) MULL SPAN		WITH INTERMEDIATE HORIZONTALS					
		GROUP #5	GROUP #6	GROUP #7	GROUP #8	GROUP #9	
24"	60"	70.0	70.0	70.0	70.0	70.0	
30"		70.0	70.0	70.0	70.0	70.0	
36"		70.0	70.0	70.0	70.0	70.0	
40"		70.0	70.0	70.0	70.0	70.0	
42"		70.0	70.0	70.0	70.0	70.0	
48"		70.0	70.0	70.0	70.0	70.0	
54"		70.0	70.0	70.0	70.0	70.0	
60"		70.0	70.0	70.0	70.0	70.0	
66"		64.0	64.0	64.0	64.0	64.0	
72"		58.7	-	-	-	-	
24"		66"	70.0	70.0	70.0	70.0	70.0
30"			70.0	70.0	70.0	70.0	70.0
36"	70.0		70.0	70.0	70.0	70.0	
40"	70.0		70.0	70.0	70.0	70.0	
42"	70.0		70.0	70.0	70.0	70.0	
48"	70.0		70.0	70.0	70.0	70.0	
54"	69.7		70.0	70.0	70.0	70.0	
60"	62.7		64.0	64.0	64.0	64.0	
24"	72"		70.0	70.0	70.0	70.0	70.0
30"			70.0	70.0	70.0	70.0	70.0
36"			70.0	70.0	70.0	70.0	70.0
40"			70.0	70.0	70.0	70.0	70.0
42"		70.0	70.0	70.0	70.0	70.0	
48"		65.9	70.0	70.0	70.0	70.0	
54"		58.6	65.2	65.2	65.2	65.2	
60"		52.7	58.7	58.7	-	-	
24"		78"	70.0	70.0	70.0	70.0	70.0
30"			70.0	70.0	70.0	70.0	70.0
36"			70.0	70.0	70.0	70.0	70.0
40"			67.4	70.0	70.0	70.0	70.0
42"	64.2		70.0	70.0	70.0	70.0	
48"	56.1		64.3	67.7	67.7	67.7	
54"	49.9		57.1	60.2	-	-	
24"	84"		70.0	70.0	70.0	70.0	70.0
30"			70.0	70.0	70.0	70.0	70.0
36"			64.5	70.0	70.0	70.0	70.0
40"			58.1	66.5	70.0	70.0	70.0
42"			55.3	63.3	69.8	70.0	70.0
48"		48.4	55.4	61.1	62.9	62.9	
24"		90"	70.0	70.0	70.0	70.0	70.0
30"			67.5	70.0	70.0	70.0	70.0
36"			56.2	64.4	70.0	70.0	70.0
40"			50.6	57.9	63.8	68.7	68.7
42"			48.2	55.2	60.8	65.4	65.4
48"			42.2	48.3	53.2	57.2	57.2
24"	96"		70.0	70.0	70.0	70.0	70.0
30"			59.3	67.9	70.0	70.0	70.0
36"			49.4	56.6	62.3	67.0	67.1
40"			44.5	50.9	56.1	60.3	60.4
42"			42.4	48.5	53.4	57.5	57.5
45"			39.6	45.3	49.8	53.6	53.6

DESIGN LOAD CAPACITY - PSF 6-9/16" MULLION						
WINDOW DIMS. WIDTH (W) MULL SPAN		WITH INTERMEDIATE HORIZONTALS				
		GROUP #5	GROUP #6	GROUP #7	GROUP #8	GROUP #9
24"	102"	65.7	70.0	70.0	70.0	70.0
30"		52.5	60.1	66.3	70.0	70.0
36"		43.8	50.1	55.2	59.4	59.4
40"		39.4	45.1	49.7	53.5	53.5
42"		37.5	42.9	47.3	50.9	50.9
24"	108"	58.6	67.0	70.0	70.0	70.0
30"		46.8	53.6	59.1	62.5	62.5
36"		39.0	44.7	49.3	52.1	52.1
40"		35.1	40.2	44.3	46.9	46.9



FL #17720 Date & Time: 05/01/15 16:18

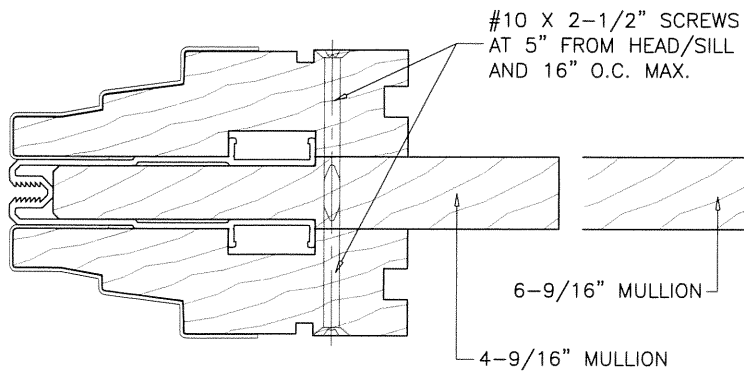
**af c**  
**AL-FAROOQ CORPORATION**  
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 MIAMI, FLORIDA 33174  
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 MULLION\M15-01AC

LAMINATED VENEERED LUMBER MULLION SYSTEM  
**ANDERSEN CORPORATION**  
 100 FOURTH AVE. NORTH  
 BAYPORT, MN. 55003-1096  
 TEL. (800) 426-7691 FAX (-)

revisions:	no	date	by	description

date: 04-28-15  
 scale: 1/2" = 1"  
 dr. by: HAMID  
 chk. by:

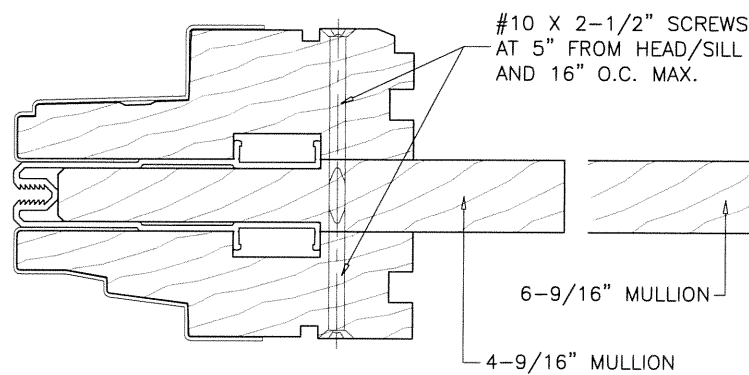
drawing no.  
**M15-01**  
 sheet 6 of 13



CASEMENT TO CASEMENT  
VERTICAL JOIN

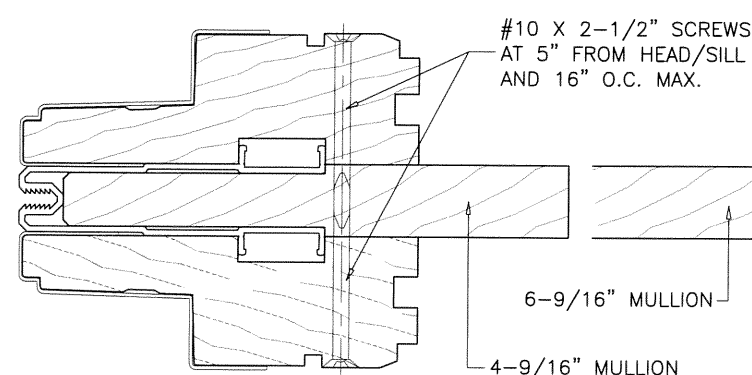
MULLION TYPE	GROUP NO.
4-9/16"	3
6-9/16"	7

AWNING TO AWNING  
HORIZONTAL JOIN



CASEMENT TO AWNING  
VERTICAL OR HORIZONTAL JOIN

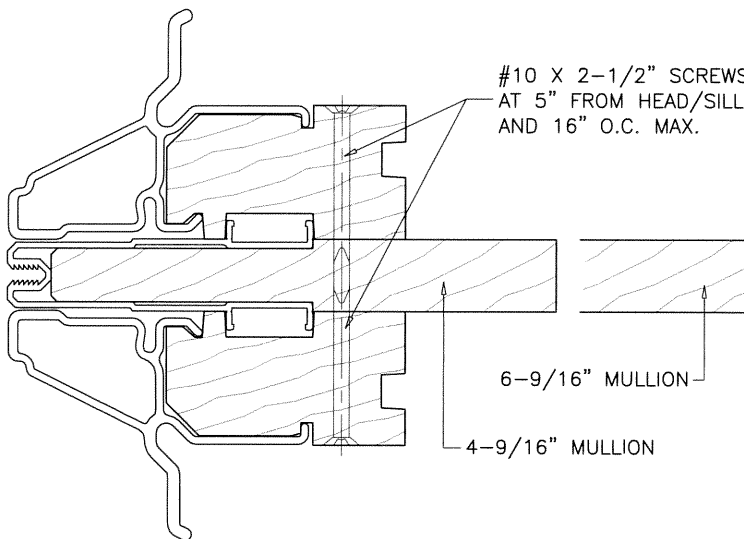
MULLION TYPE	GROUP NO.
4-9/16"	3
6-9/16"	7



CASEMENT TO CASEMENT  
HORIZONTAL JOIN

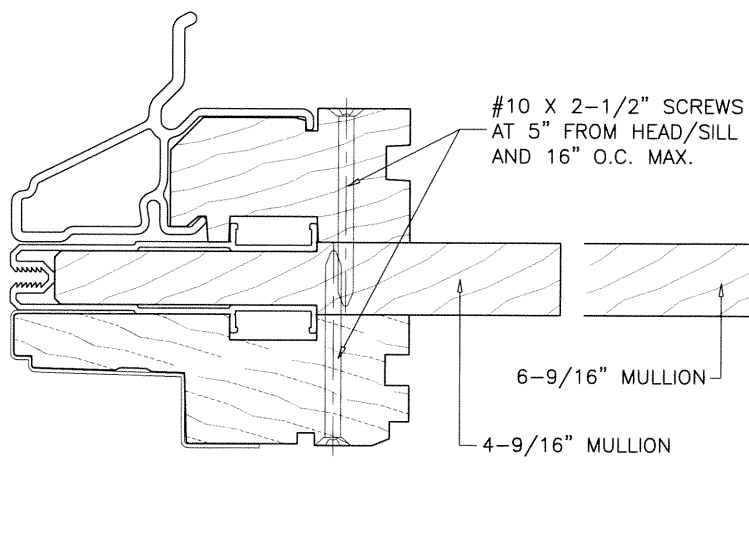
MULLION TYPE	GROUP NO.
4-9/16"	3
6-9/16"	7

AWNING TO AWNING  
VERTICAL JOIN



FLEXIFRAME TO FLEXIFRAME  
VERTICAL OR HORIZONTAL JOIN

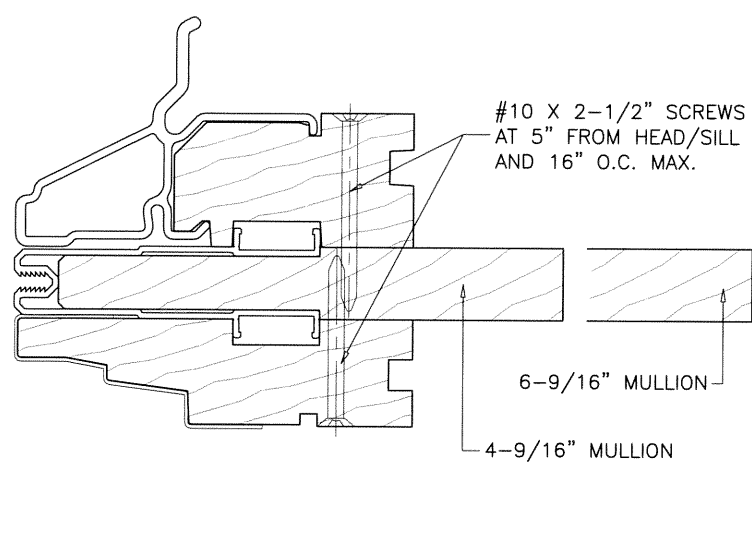
MULLION TYPE	GROUP NO.
4-9/16"	2
6-9/16"	5



CASEMENT TO FLEXIFRAME  
HORIZONTAL JOIN

MULLION TYPE	GROUP NO.
4-9/16"	2
6-9/16"	6

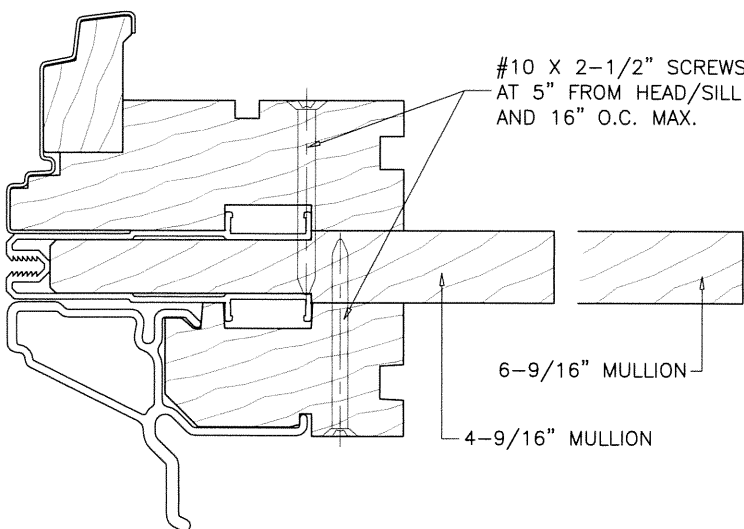
AWNING TO FLEXIFRAME  
VERTICAL JOIN



CASEMENT TO FLEXIFRAME  
VERTICAL JOIN

MULLION TYPE	GROUP NO.
4-9/16"	2
6-9/16"	6

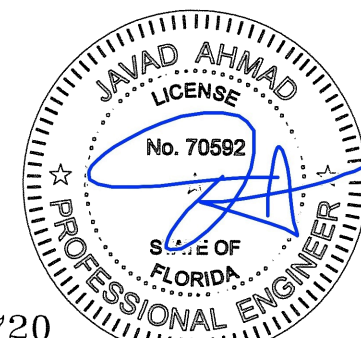
AWNING TO FLEXIFRAME  
HORIZONTAL JOIN



FLEXIFRAME TO CIRCLE TOP/QUARTER  
VERTICAL OR HORIZONTAL JOIN

MULLION TYPE	GROUP NO.
4-9/16"	2
6-9/16"	6

SEE SHEET 9 FOR 'I' VALUES OF VARIOUS GROUPS



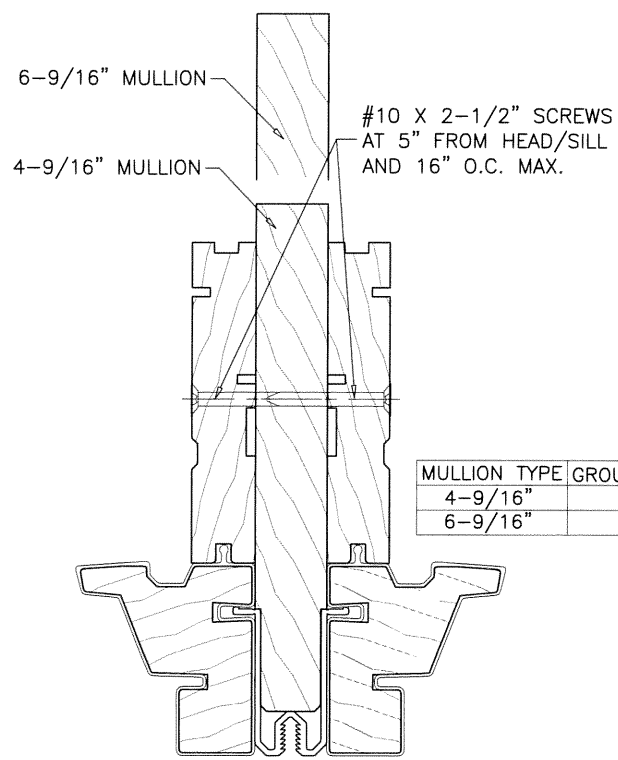
FL #17720 Date & Title: 05/01/15 16:18

**af c**  
**AL-FAROOQ CORPORATION**  
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 MULLION\M15-01AC

LAMINATED VENEERED LUMBER MULLION SYSTEM  
**ANDERSEN CORPORATION**  
 100 FOURTH AVE. NORTH  
 BAYPORT, MN. 55003-1096  
 TEL. (800) 426-7691 FAX (-)

REVISIONS:	
no	date by description

date: 04-28-15  
 scale: 1/2" = 1"  
 dr. by: HAMID  
 chk. by:   
 drawing no.  
**M15-01**  
 sheet 7 of 13



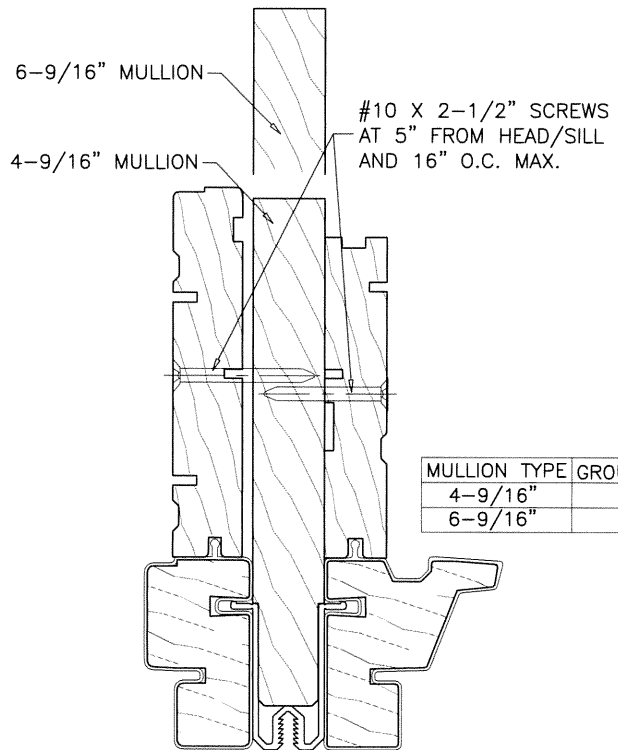
#10 X 2-1/2" SCREWS  
AT 5" FROM HEAD/SILL  
AND 16" O.C. MAX.

MULLION TYPE	GROUP NO.
4-9/16"	3
6-9/16"	7

MULLION TYPE	GROUP NO.
4-9/16"	1
6-9/16"	8

400 TWDH WDW TO 400 TWDH WDW  
VERTICAL JOIN

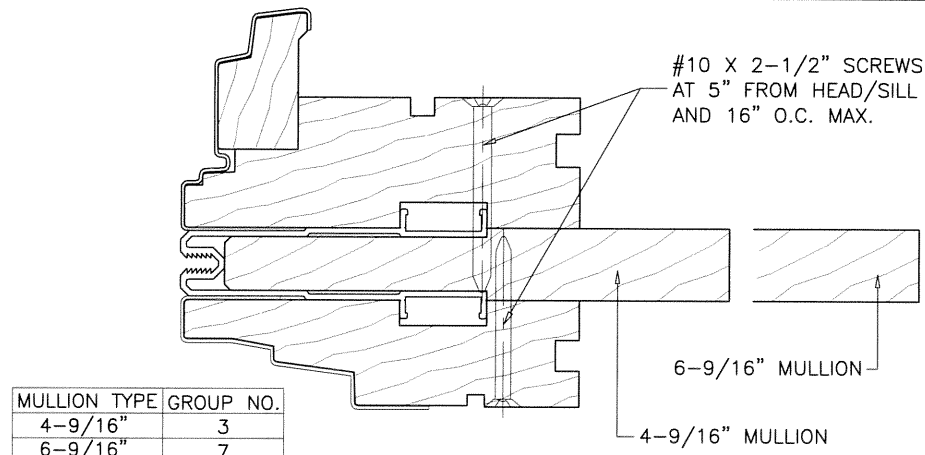
400 TWDH WDW TO 400 TWDH PICTURE WDW  
VERTICAL JOIN



#10 X 2-1/2" SCREWS  
AT 5" FROM HEAD/SILL  
AND 16" O.C. MAX.

MULLION TYPE	GROUP NO.
4-9/16"	1
6-9/16"	8

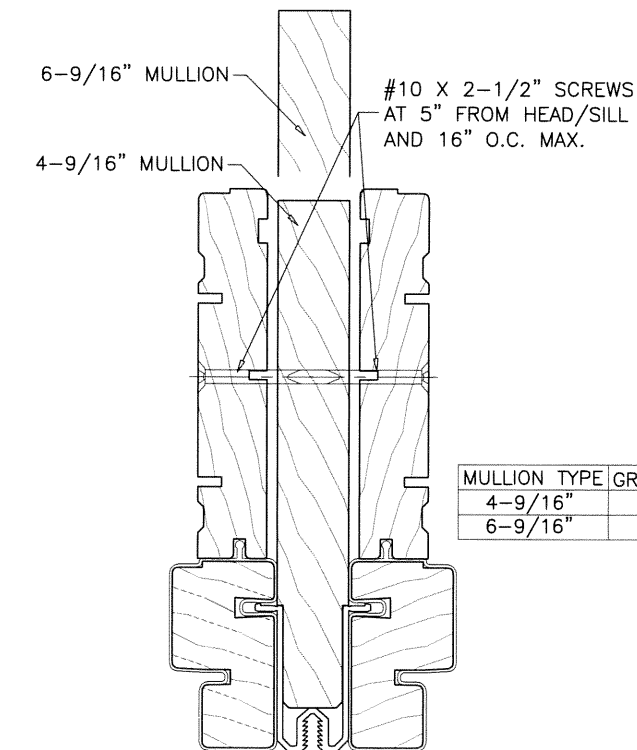
PSNL WDW TO 400 TWDH PICTURE WDW  
VERTICAL JOIN



#10 X 2-1/2" SCREWS  
AT 5" FROM HEAD/SILL  
AND 16" O.C. MAX.

CIRCLE TOP TO AWNING  
HORIZONTAL JOIN

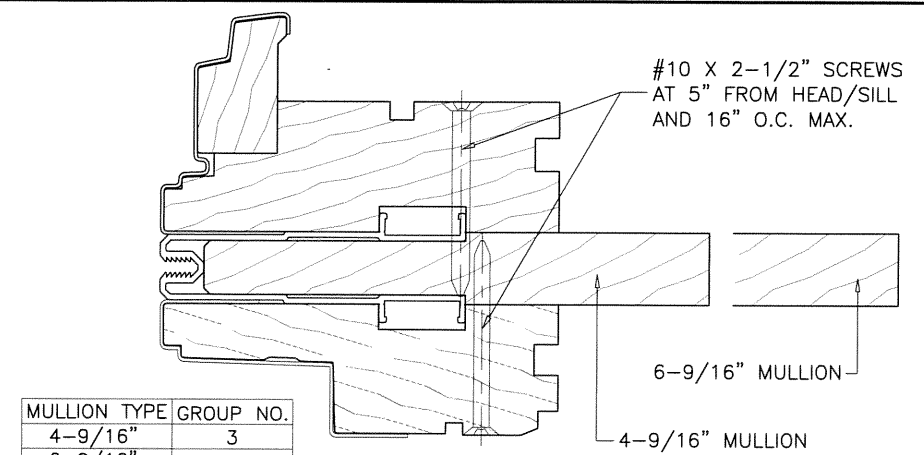
SEE SHEET 9 FOR 'I' VALUES OF VARIOUS GROUPS



#10 X 2-1/2" SCREWS  
AT 5" FROM HEAD/SILL  
AND 16" O.C. MAX.

MULLION TYPE	GROUP NO.
4-9/16"	1
6-9/16"	9

PSNL WDW TO PSNL WDW  
VERTICAL JOIN



#10 X 2-1/2" SCREWS  
AT 5" FROM HEAD/SILL  
AND 16" O.C. MAX.

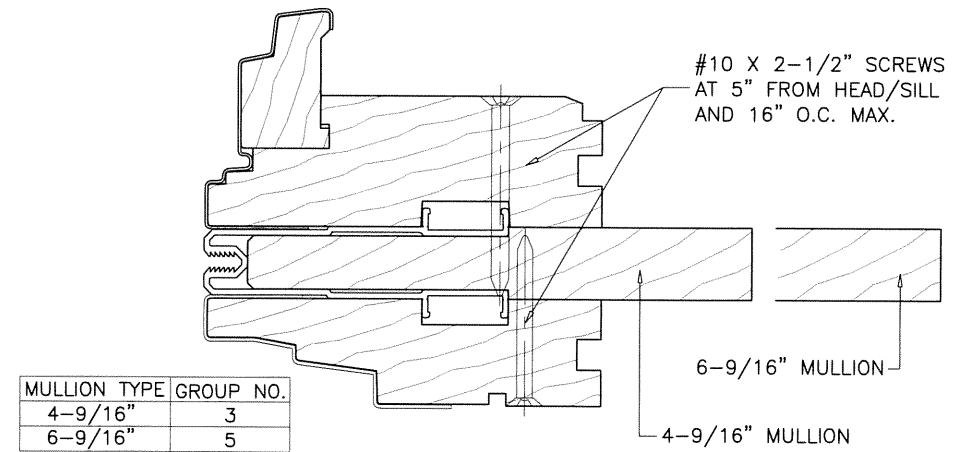
CIRCLE TOP TO CASEMENT  
HORIZONTAL JOIN

MULLION TYPE	GROUP NO.
4-9/16"	3
6-9/16"	7

MULLION TYPE	GROUP NO.
4-9/16"	3
6-9/16"	5

CASMT PICTURE WDW. TO AWNING  
VERTICAL JOIN

CASMT PICTURE WDW. TO CASEMENT  
HORIZONTAL JOIN

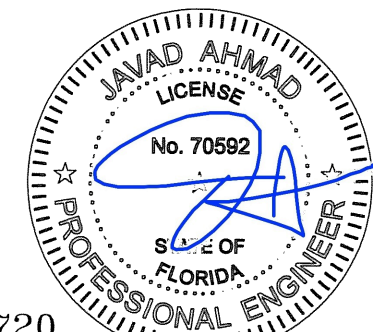


#10 X 2-1/2" SCREWS  
AT 5" FROM HEAD/SILL  
AND 16" O.C. MAX.

MULLION TYPE	GROUP NO.
4-9/16"	3
6-9/16"	5

CASMT PICTURE WDW. TO AWNING  
HORIZONTAL JOIN

CASMT PICTURE WDW. TO CASEMENT  
VERTICAL JOIN



FL #17720

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**af c**  
**AL-FAROOQ CORPORATION**  
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LAMINATED VENEERED LUMBER MULLION SYSTEM  
**ANDERSEN CORPORATION**  
100 FOURTH AVE. NORTH  
BAYPORT, MN. 55003-1096  
TEL. (800) 426-7691 FAX (-)  
**ANDERSEN AW**

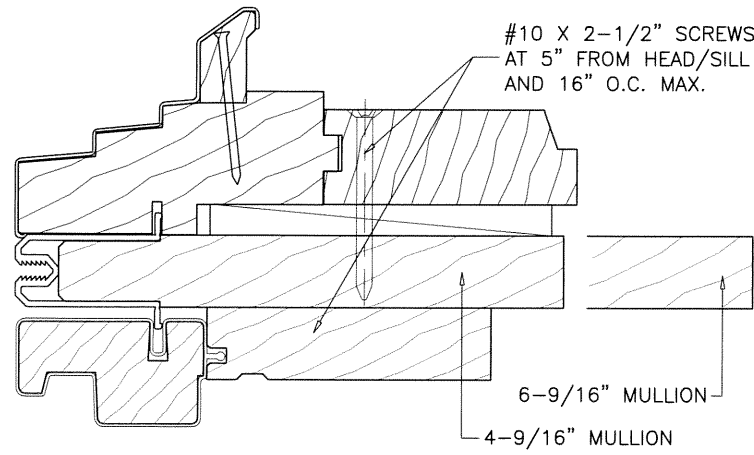
revisions:	no	date	by	description

date: 04-28-15  
scale: 1/2" = 1"  
dr. by: HAMID  
chk. by:

drawing no.  
**M15-01**

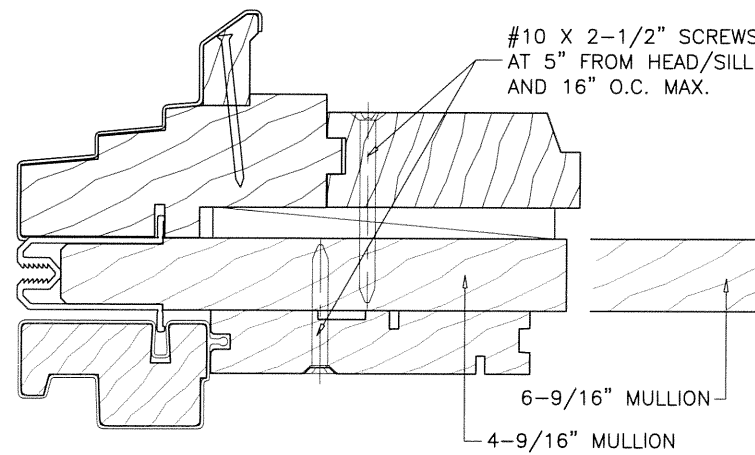
sheet 8 of 13





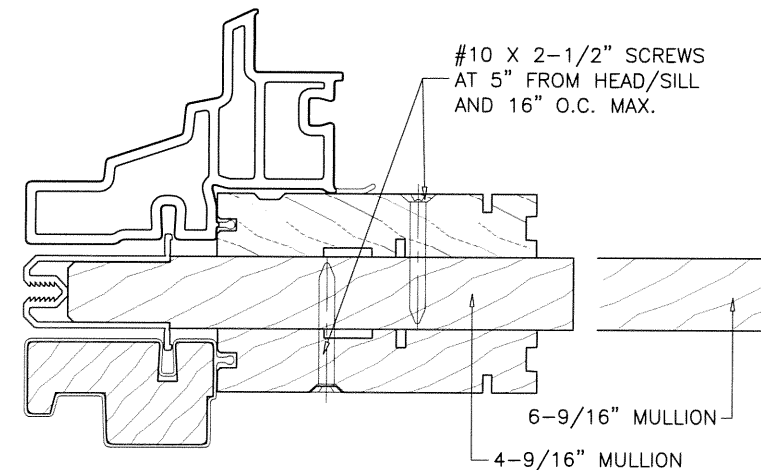
PSNL TO CIRCLE TOP-NL  
HORIZONTAL JOIN

MULLION TYPE	GROUP NO.
4-9/16"	1
6-9/16"	8



400 TW TO CIRCLE TOP-NL  
HORIZONTAL JOIN

MULLION TYPE	GROUP NO.
4-9/16"	1
6-9/16"	9

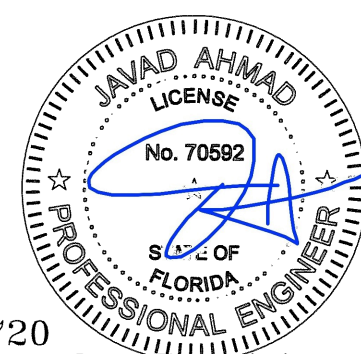


400 TW TO TW TRANSOM  
HORIZONTAL JOIN

MULLION TYPE	GROUP NO.
4-9/16"	1
6-9/16"	6

VALUES USED GROUP		ALUMINUM COVER	WOOD+MULL 4-9/16"	WOOD+MULL 6-9/16"	TOTAL 'I' IN TERMS OF WOOD
1	Ix IN^4	0.0655	12.2451	-	12.7489
	Sx IN^3	0.0719	4.5182	-	
2	Ix IN^4	0.5801	10.7178	-	15.1801
	Sx IN^3	0.3427	3.7804	-	
3	Ix IN^4	0.5801	11.7200	-	16.1823
	Sx IN^3	0.3427	5.2952	-	
4	Ix IN^4	0.0655	15.6790	-	16.1828
	Sx IN^3	0.0719	8.0691	-	
5	Ix IN^4	0.5801	-	25.1317	29.5940
	Sx IN^3	0.3427	-	6.8663	
6	Ix IN^4	0.5801	-	25.1317	29.5940
	Sx IN^3	0.3427	-	7.8598	
7	Ix IN^4	0.0655	-	29.0902	29.5940
	Sx IN^3	0.0719	-	10.0284	
8	Ix IN^4	0.0655	-	29.0902	29.5940
	Sx IN^3	0.0719	-	10.7842	
9	Ix IN^4	0.0655	-	29.0902	29.5940
	Sx IN^3	0.0719	-	11.9135	

NOTE: TO OBTAIN TOTAL COMBINED 'I' VALUES  
 $E_{ALUM} = 10^7$   
 $E_{WOOD} = 1,300,000 \text{ PSI}$



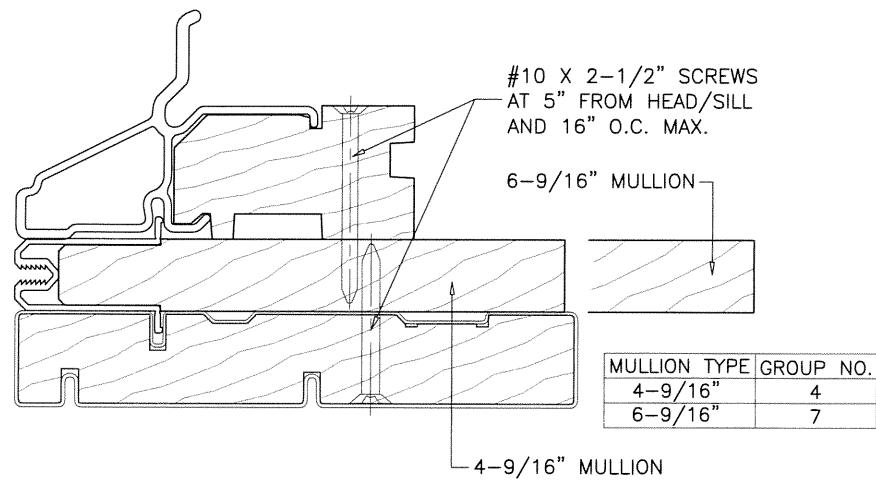
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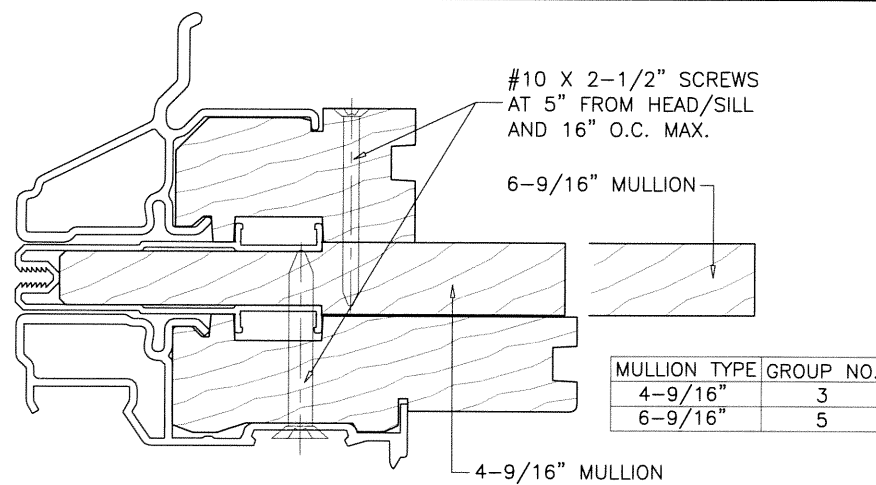
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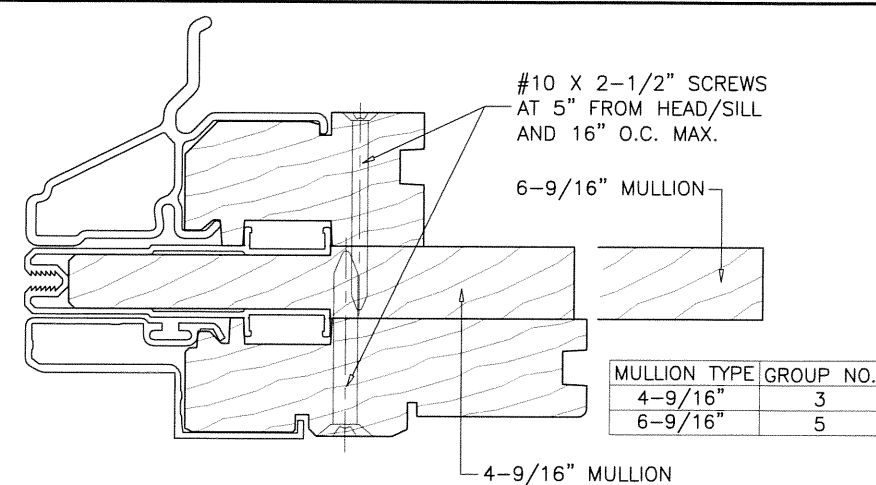
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drawing no.	M15-01	sheet	9 of 13	



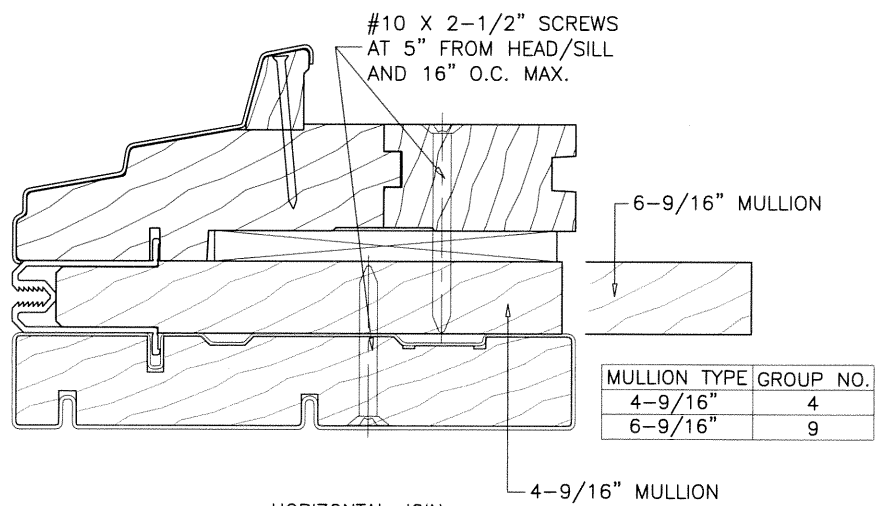
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HORIZONTAL JOIN



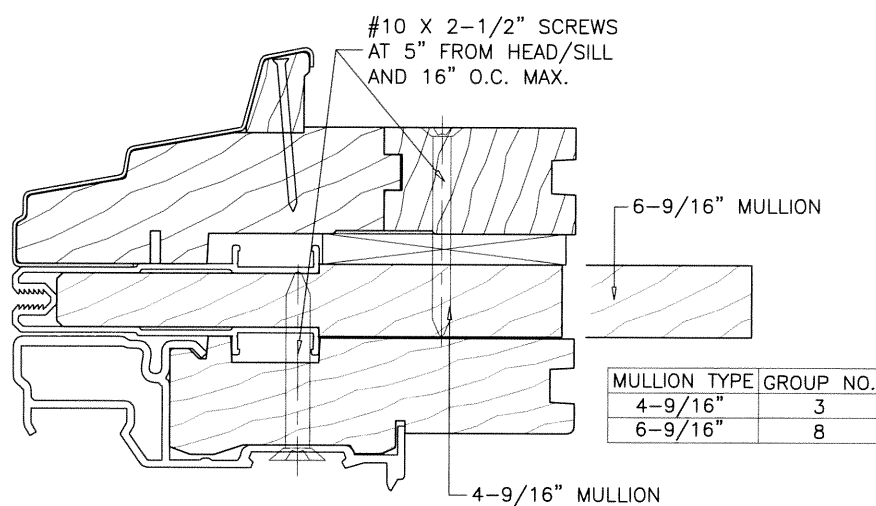
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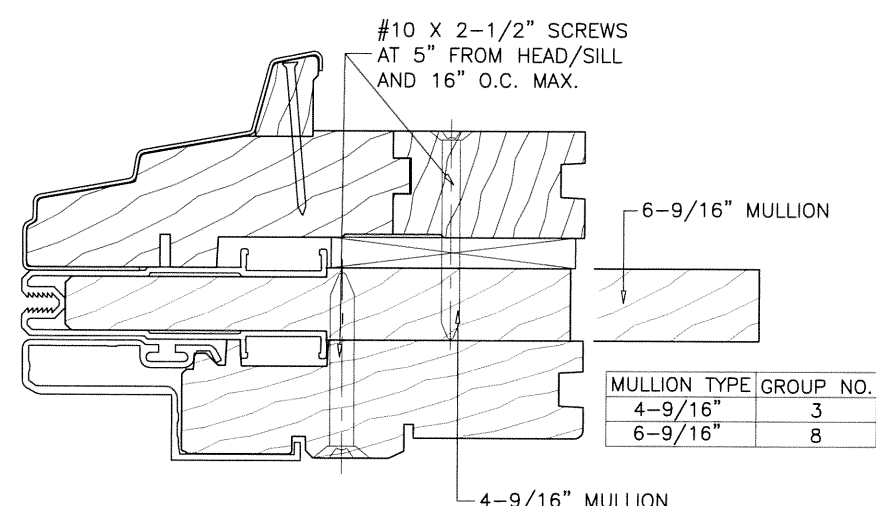
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HORIZONTAL JOIN



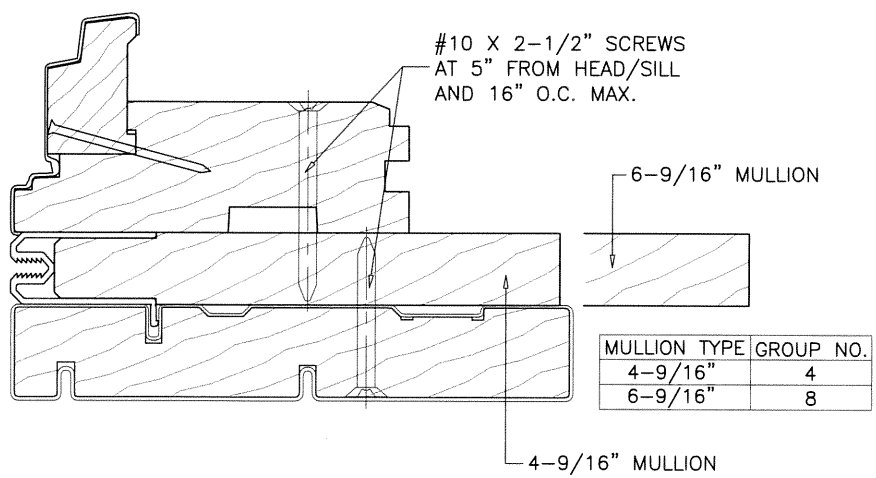
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HORIZONTAL JOIN



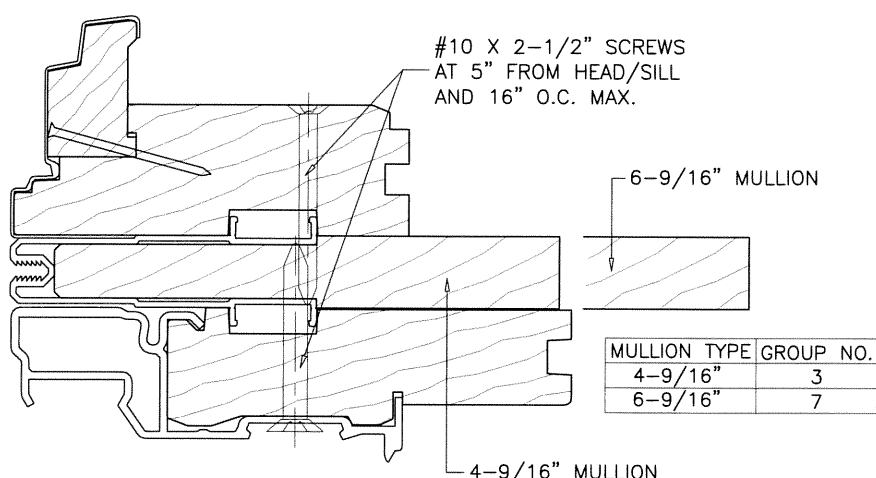
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HORIZONTAL JOIN



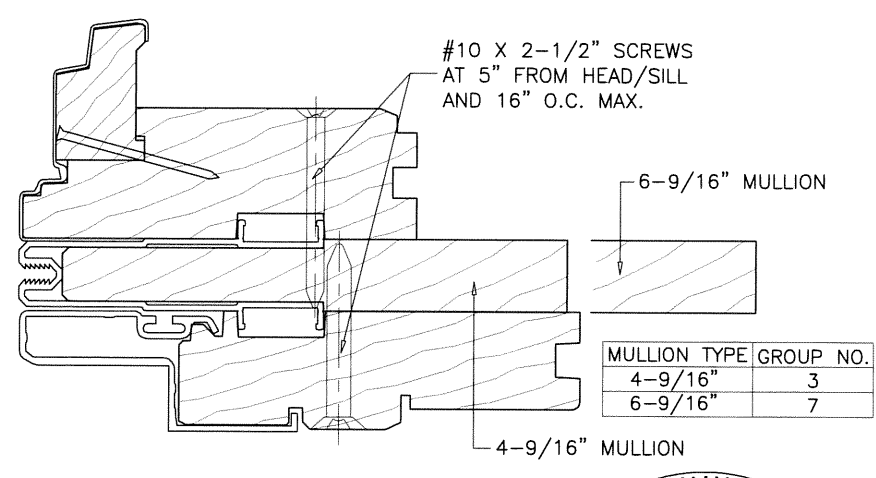
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HORIZONTAL JOIN



PSCA PICTURE WDW TO FW GLIDING DOOR  
HORIZONTAL JOIN

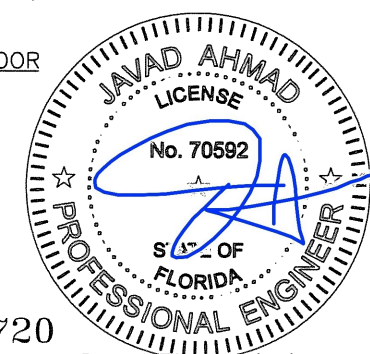


PSCA PICTURE WDW TO FWH DOOR  
HORIZONTAL JOIN



PSCA PICTURE WDW TO FWO DOOR  
HORIZONTAL JOIN

SEE SHEET 9 FOR 'I' VALUES OF VARIOUS GROUPS



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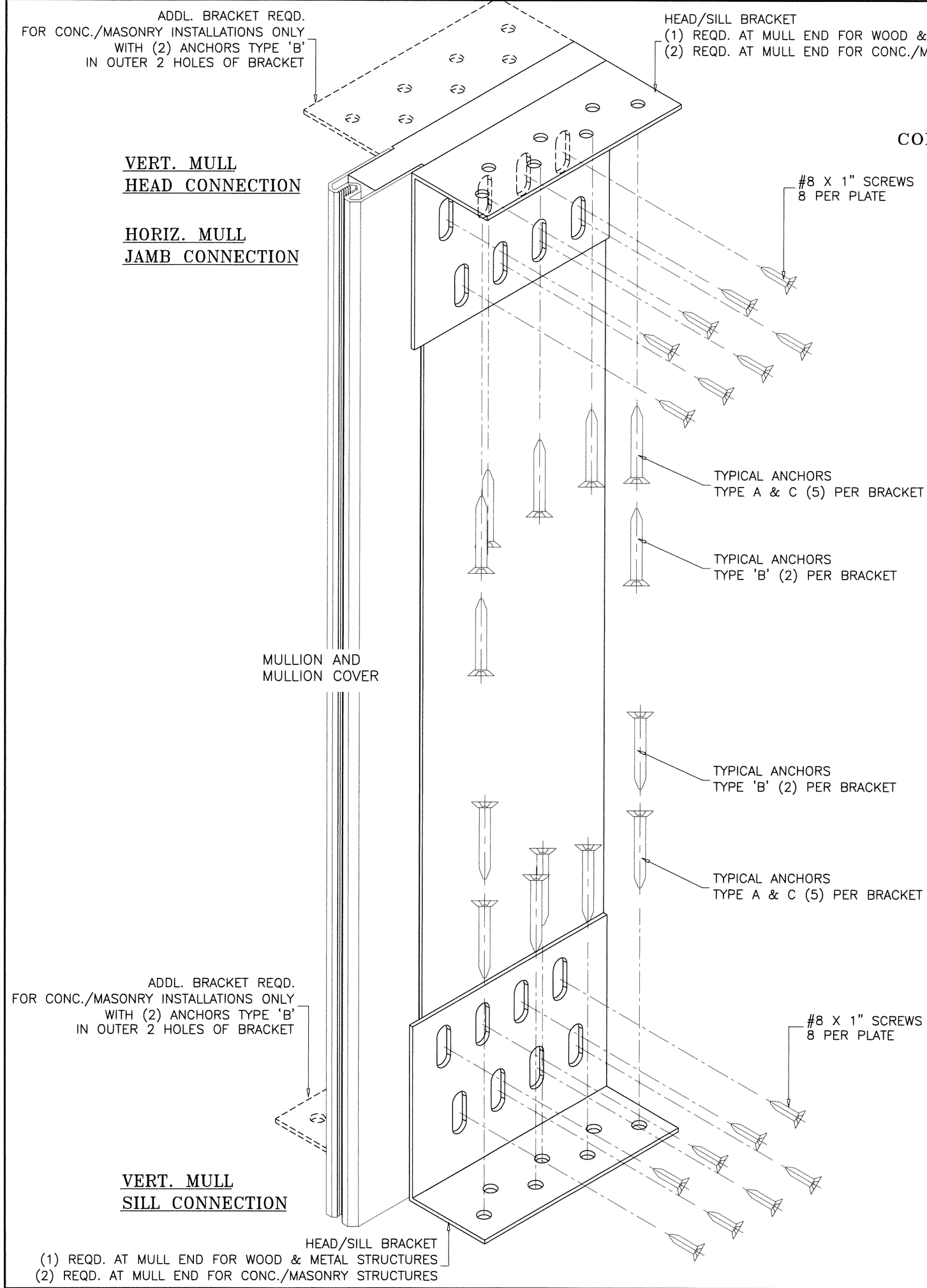
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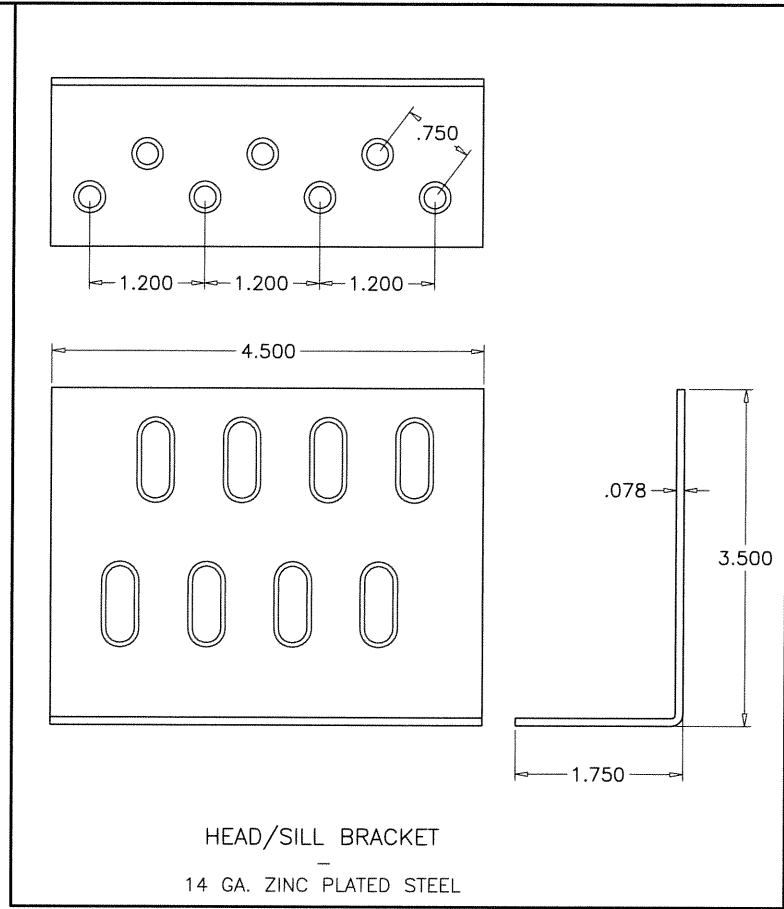
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chk. by:

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4-9/16" MULLION  
6-9/16" MULLION  
CONNECTION DETAIL W/ BRACKET



**TYPICAL ANCHORS:** SEE ELEV. FOR SPACING

**TYPE 'A'**- 1/4" DIA. ULTRACON BY 'ELCO' (Fu=177 KSI, Fy=155 KSI)  
 INTO 2BY WOOD BUCKS OR WOOD STRUCTURES  
 1-1/2" MIN. PENETRATION INTO WOOD

**TYPE 'B'**- 1/4" DIA. ULTRACON BY 'ELCO' (Fu=177 KSI, Fy=155 KSI)  
 THRU 1BY BUCKS INTO CONC. OR MASONRY  
 1-1/4" MIN. EMBED INTO CONC. OR MASONRY  
 DIRECTLY INTO CONC. OR MASONRY  
 1-1/4" MIN. EMBED INTO CONC. OR MASONRY

**TYPE 'C'**- #12 SMS OR SELF DRILLING SCREWS (GRADE 2 CRS)  
 INTO METAL STRUCTURES  
 STEEL : 12 GA. MIN. (Fy = 36 KSI MIN.)  
 ALUMINUM : 1/8" THK. MIN. (6063-T5 MIN.)  
 (STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

**TYPICAL EDGE DISTANCE**  
 INTO CONCRETE AND MASONRY = 2" MIN.  
 INTO WOOD STRUCTURE = 1" MIN.  
 INTO METAL STRUCTURE = 3/4" MIN.

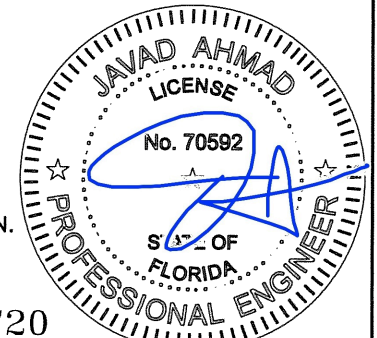
**ANCHORS CL TO CL DISTANCES**  
 INTO CONCRETE AND MASONRY = 3" MIN.  
 INTO WOOD STRUCTURE = 3/4" MIN.  
 INTO METAL STRUCTURE = 3/4" MIN.

CONCRETE AT HEAD, SILL OR JAMBS f'c = 3000 PSI MIN.  
 C-90 HOLLOW/FILLED BLOCK AT JAMBS f'm = 2000 PSI MIN.

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**TYPICAL ANCHORS:** SEE ELEV. FOR SPACING

**TYPE 'A' - 1/4" DIA. ULTRACON BY 'ELCO'** ( $F_u=177$  KSI,  $F_y=155$  KSI)  
 INTO 2BY WOOD BUCKS OR WOOD STRUCTURES  
 1-1/2" MIN. PENETRATION INTO WOOD

**TYPE 'B' - 1/4" DIA. ULTRACON BY 'ELCO'** ( $F_u=177$  KSI,  $F_y=155$  KSI)  
 THRU 1BY BUCKS INTO CONC. OR MASONRY  
 1-1/4" MIN. EMBED INTO CONC. OR MASONRY  
 DIRECTLY INTO CONC. OR MASONRY  
 1-1/4" MIN. EMBED INTO CONC. OR MASONRY

**TYPE 'D' - #8 SMS OR SELF DRILLING SCREWS** (GRADE 2 CRS)  
 INTO METAL STRUCTURES  
 STEEL : 12 GA. MIN. ( $F_y = 36$  KSI MIN.)  
 ALUMINUM : 1/8" THK. MIN. (6063-T5 MIN.)  
 (STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

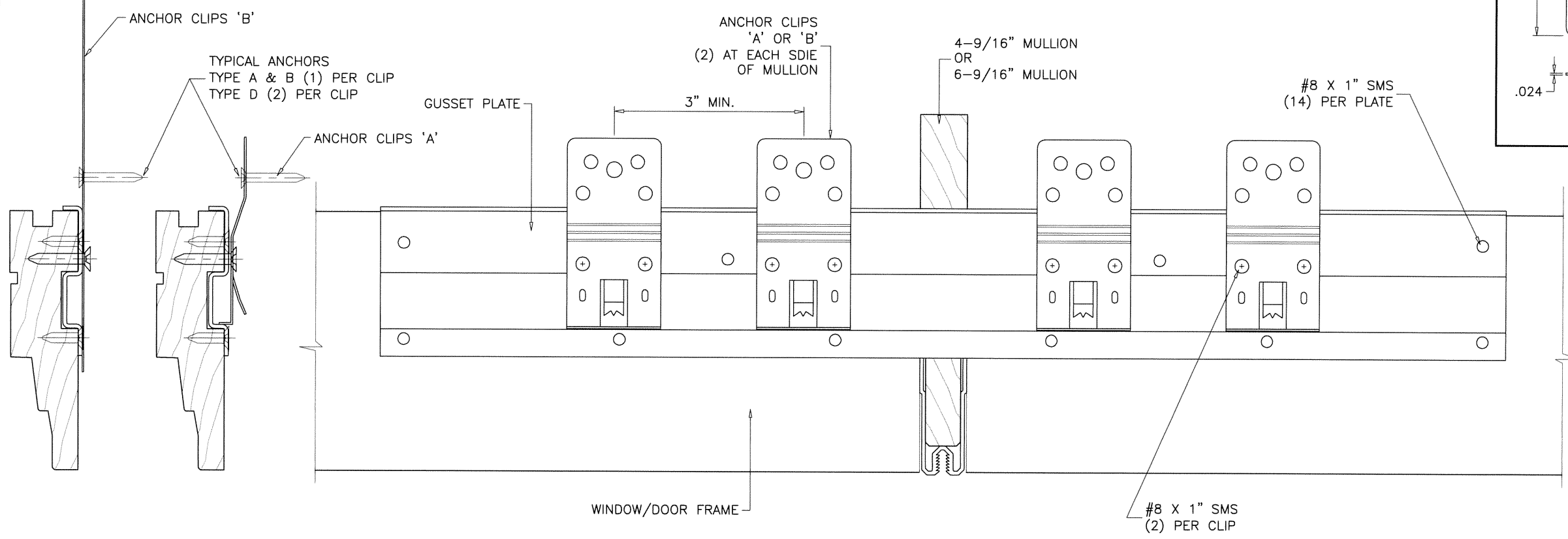
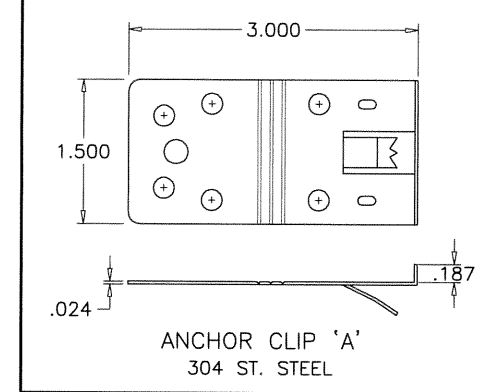
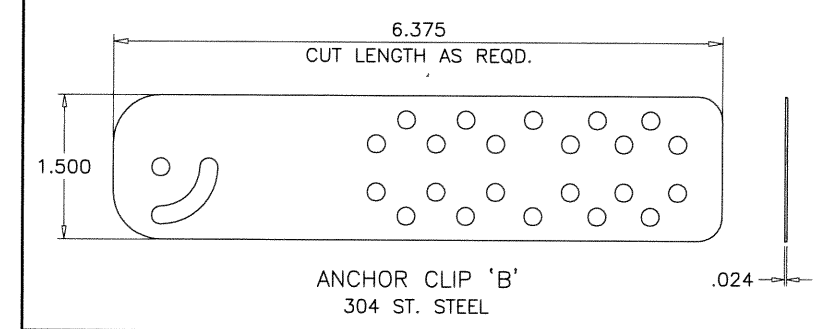
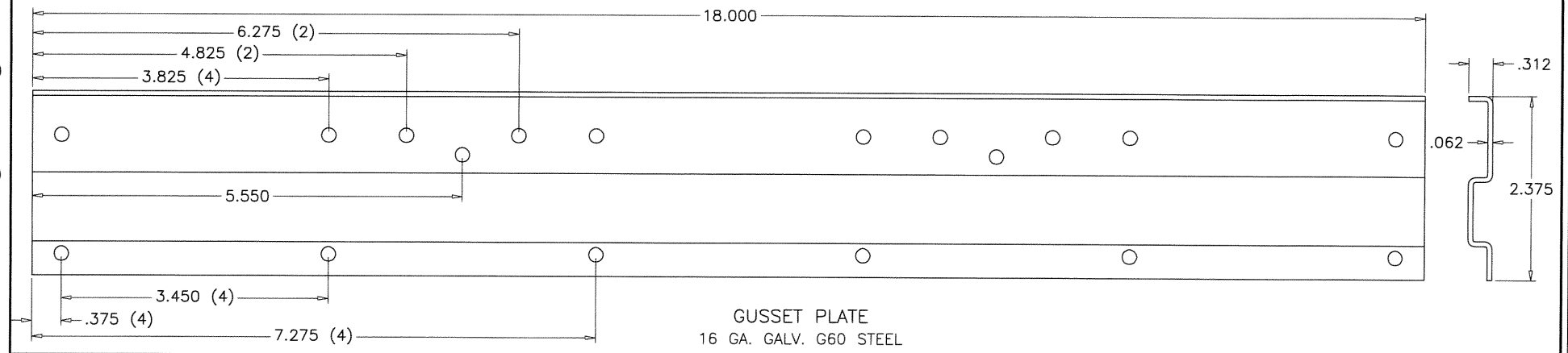
**TYPICAL EDGE DISTANCE**

INTO CONCRETE AND MASONRY = 1-1/4" MIN.  
 INTO WOOD STRUCTURE = 1" MIN.  
 INTO METAL STRUCTURE = 3/4" MIN.

**ANCHORS CL TO CL DISTANCES**

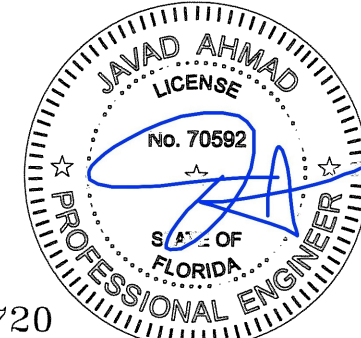
INTO CONCRETE AND MASONRY = 3" MIN.  
 INTO WOOD STRUCTURE = 3/4" MIN.  
 INTO METAL STRUCTURE = 3/4" MIN.

CONCRETE AT HEAD, SILL OR JAMBS  $f'_c = 3000$  PSI MIN.  
 C-90 HOLLOW/FILLED BLOCK AT JAMBS  $f'_m = 2000$  PSI MIN.



**4-9/16" MULLION  
 6-9/16" MULLION  
 CONNECTION DETAIL W/ GUSSET PLATE**

GUSSET PLATE FASTENED TO HEAD OR SILL OF TWO ADJACENT DOOR/WINDOW FRAMES.  
 ANCHOR CLIPS ATTACHED TO GUSSET PLATES AS SHOWN ABOVE.  
 SEE SHEET 12.1 FOR ILLUSTRATION



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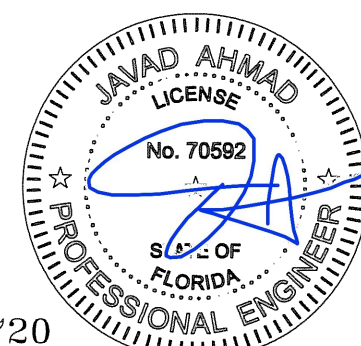
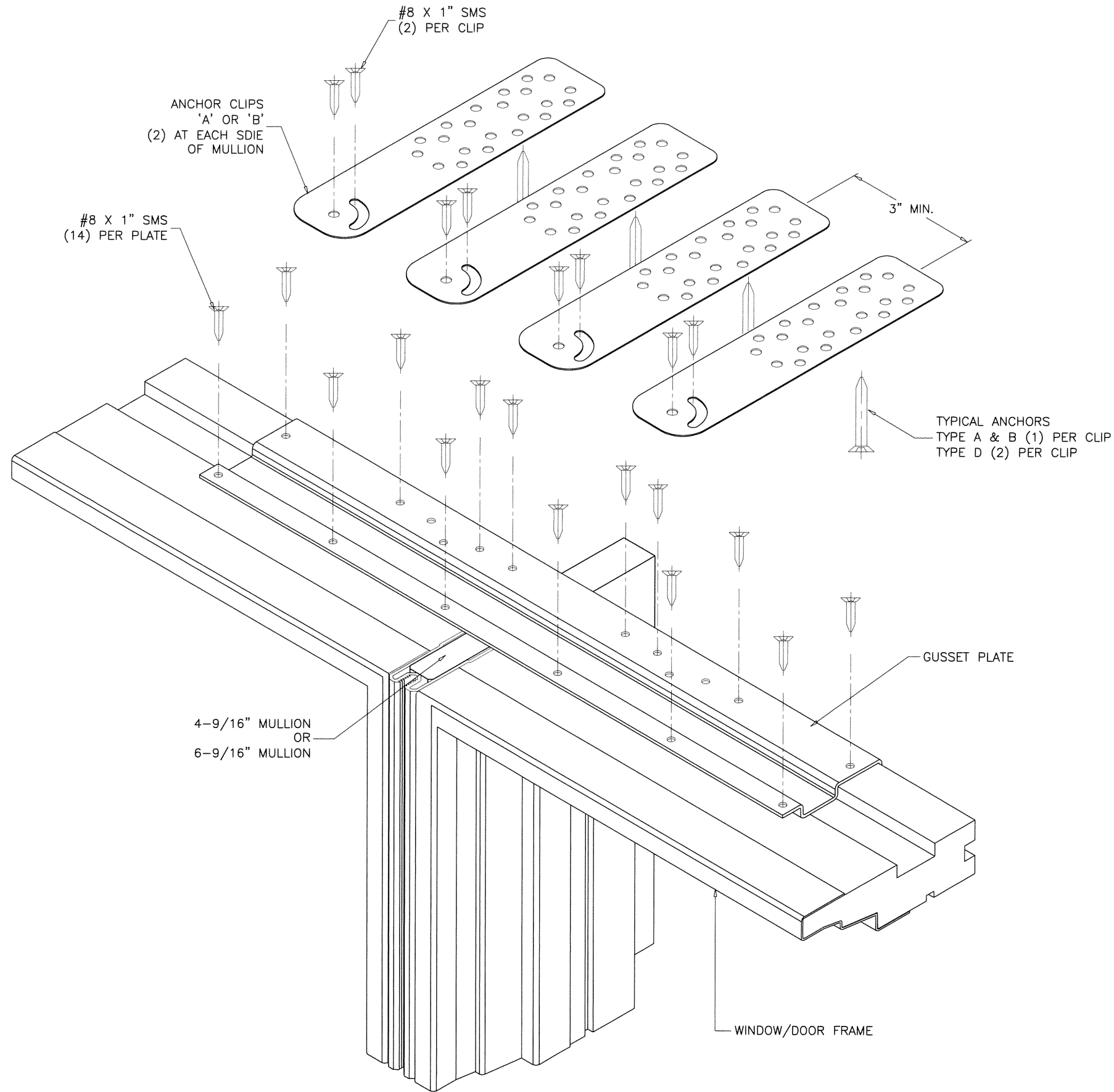
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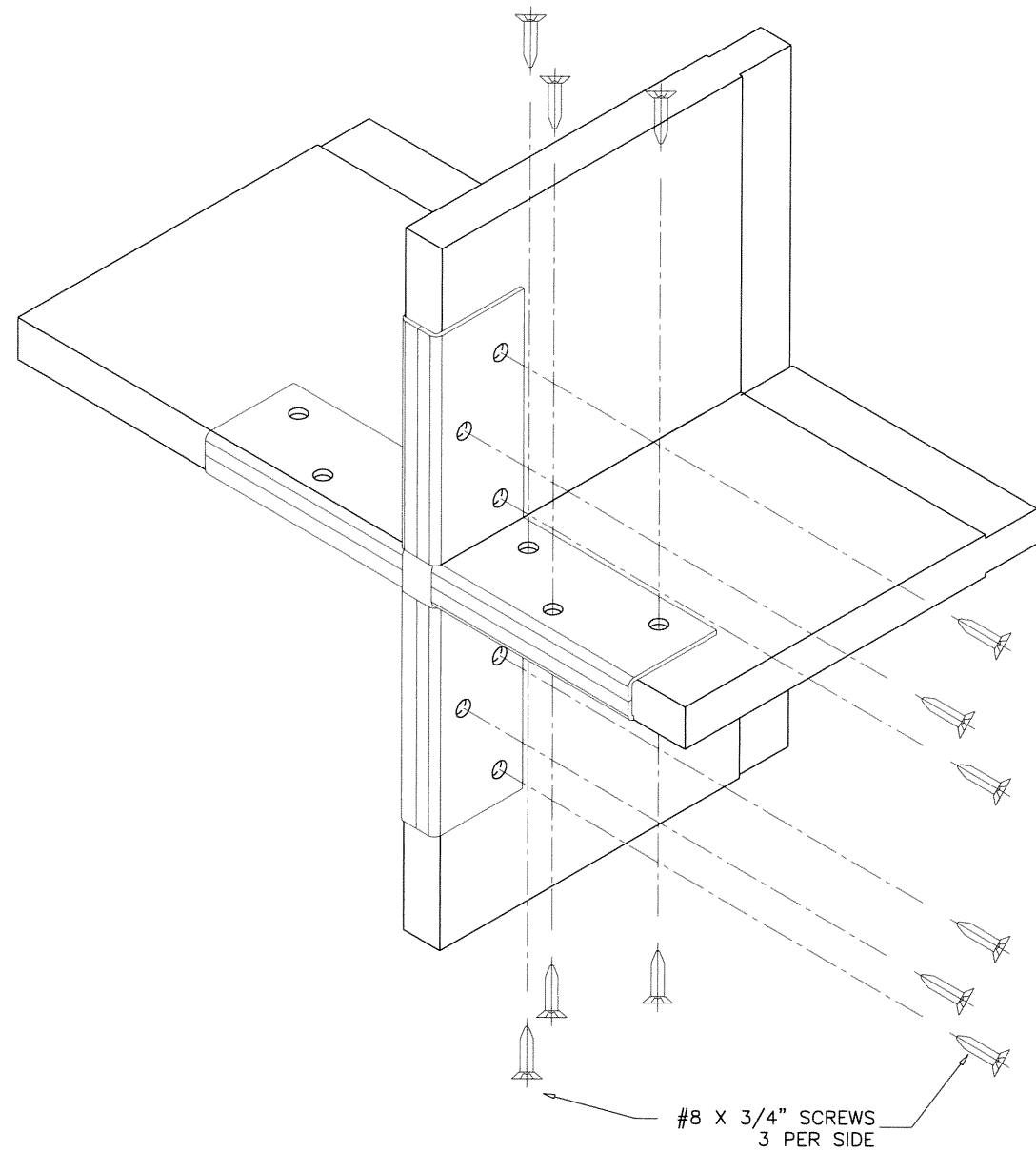
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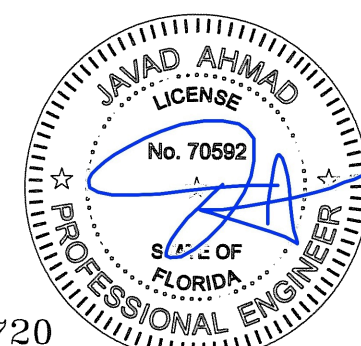
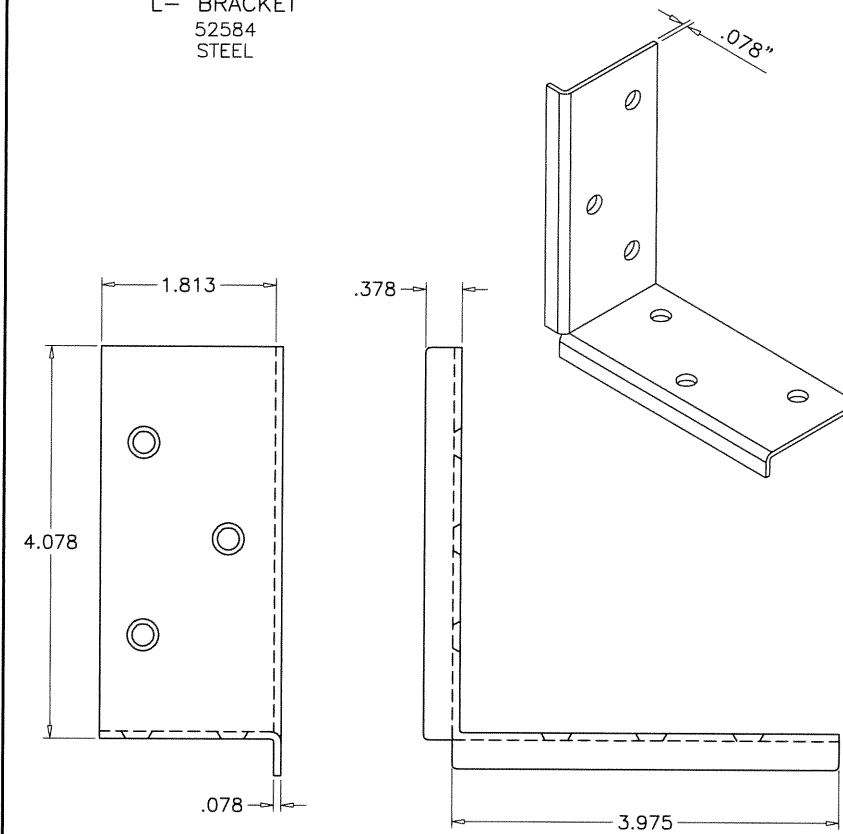
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VERT. MULLION CONNECTION TO HORIZONTAL MULLION

L- BRACKET  
52584  
STEEL



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