

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

NOTES:

1. THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH REQUIREMENTS OF THE 2006 IBC AND IRC WITH STATE OF TEXAS MODIFICATIONS.
2. WOOD FRAMING TO BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO STRUCTURE. FRAMING IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.
3. ALLOWABLE STRESS INCREASE OF 1/3 WAS NOT USED IN THE DESIGN OF THE PRODUCT SHOWN HEREIN. WIND LOAD DURATION FACTOR $C_d=1.6$ WAS USED FOR WOOD ANCHOR CALCULATIONS.
4. APPROVED IMPACT PROTECTIVE SYSTEM IS NOT REQUIRED FOR THIS PRODUCT IN WIND BORNE DEBRIS REGIONS UP TO WIND ZONE 3.
5. DESIGN PRESSURE AND INSTALLATION DETAILS SHOWN IN THIS DOCUMENT APPLY ONLY TO MULLION. FENESTRATION UNITS MUST BE APPROVED UNDER SEPARATE APPROVAL.
6. SINGLE FENESTRATION UNITS TO BE MULLED ARE NOT LIMITED TO THOSE SHOWN IN THIS DRAWING. FENESTRATION UNITS MUST BE MANUFACTURED BY WinDoor INC.
7. DESIGN PRESSURE OF MULLED UNIT SHALL BE CONTROLLED BY THE LESSER DESIGN PRESSURE OF THE MULLION OR THE INDIVIDUAL FENESTRATION UNIT.
8. UNITS MAY BE MULLED TOGETHER INDEFINITELY AS LONG AS SINGLE UNIT WIDTH AND HEIGHT ARE NOT EXCEEDED AND MULLION IS ANCHORED AS SHOWN HEREIN.
9. MULLION VERTICAL INSTALLATION IS SHOWN, MULLION MAY BE USED IN HORIZONTAL APPLICATIONS AS LONG AS DIMENSIONS INDICATED HEREIN ARE NOT EXCEEDED AND MULLION IS ANCHORED ACCORDING TO THIS DOCUMENT.

ANCHORING NOTES:

1. FOR ANCHORING INTO WOOD FRAMING OR 2X BUCK USE #14 WOOD SCREW WITH 7/8" MIN. EDGE DISTANCE AND SUFFICIENT LENGTH TO ACHIEVE A 1 7/16" MINIMUM EMBEDMENT. LOCATE ANCHORS AS SHOWN IN INSTALLATION DETAILS.
2. FOR ANCHORING INTO CONCRETE USE 1/4" TAPCON WITH SUFFICIENT LENGTH TO ACHIEVE A 1 1/4" MINIMUM EMBEDMENT WITH 2 1/2" MINIMUM EDGE DISTANCE. LOCATE ANCHORS AS SHOWN IN INSTALLATION DETAILS.
3. FOR ANCHORING INTO METAL STRUCTURE USE #12 SMS OR SELF DRILLING SCREWS WITH SUFFICIENT LENGTH TO ACHIEVE 3 THREADS MINIMUM BEYOND STRUCTURE INTERIOR WALL. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
4. FOR ATTACHING WINDOW UNITS TO MULLION USE MINIMUM #10 SELF DRILLING SCREWS WITH SUFFICIENT LENGTH TO ACHIEVE A MINIMUM OF THREE THREADS PAST THE MULLION WALL. LOCATE SCREWS IN ACCORDANCE WITH WINDOW ANCHORING SCHEDULE AS SHOWN IN WINDOW SEPARATE APPROVAL.
5. ALL FASTENERS TO BE CORROSION RESISTANT.
6. INSTALLATION ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH ANCHOR MANUFACTURER'S INSTALLATION INSTRUCTIONS, AND ANCHORS SHALL NOT BE USED IN SUBSTRATES WITH STRENGTHS LESS THAN THE MINIMUM STRENGTH SPECIFIED BELOW:
 - A. WOOD - MINIMUM SPECIFIC GRAVITY OF $G=0.42$
 - B. CONCRETE - MINIMUM COMPRESSIVE STRENGTH OF 3,200 PSI.
 - C. MASONRY - STRENGTH CONFORMANCE TO ASTM C-90, GRADE N, TYPE 1 (OR GREATER).
 - D. METAL STRUCTURE: STEEL 18GA, 33KSI OR ALUMINUM 6063-T5 1/8" THICK MINIMUM

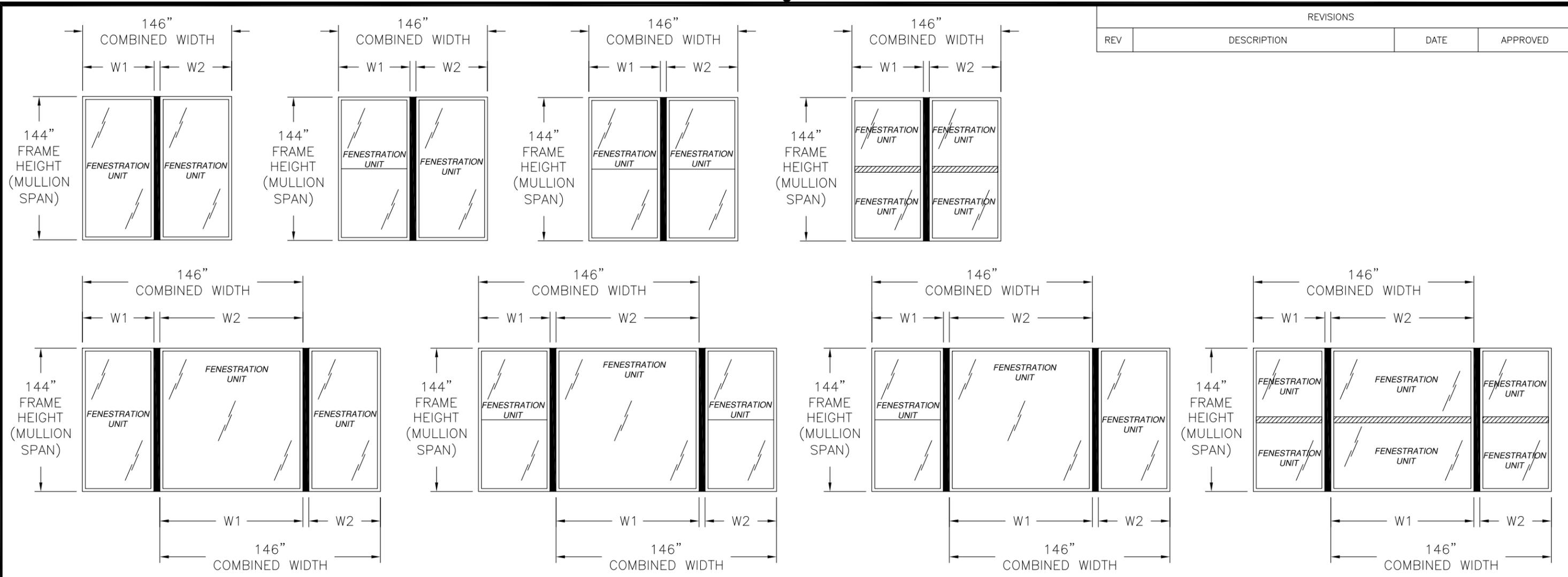
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TABLE OF CONTENTS	
SHEET NO.	DESCRIPTION
1	NOTES
2	ELEVATIONS
3 - 6	INSTALLATION DETAILS
7	COMPONENTS

		7500 AMSTERDAM DRIVE ORLANDO, FL 32832 Phone: 407.481.8400 Fax: 407.481.0505 www.windoorinc.com	
2"X4" TUBE MULLION IMPACT NOTES			
DRAWN:		DWG NO.	
N.G.		08-02371	
SCALE		DATE	
NTS		01/29/15	
SHEET 1 OF 7			



Luis R. Lomas P.E.
Texas No. 101889



REVISIONS			
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APPROVED CONFIGURATIONS
 TWIN AND TRIPLE UNITS ARE SHOWN. UNLIMITED NUMBER OF UNITS MAY BE MULLED TOGETHER AS LONG AS UNIT SIZES DO NOT EXCEED SIZES SHOWN HEREIN AND MULLION IS ANCHORED AS SHOWN IN INSTALLATION DETAILS
 MULLION MAY BE USED HORIZONTALLY

- DESIGN PRESSURE TABLE INSTRUCTIONS:
1. DEFINE REQUIRED DESIGN LOAD PER FLORIDA BUILDING CODE CHAPTER 16.
 2. DETERMINE TRIBUTARY WIDTH AND MULLION SPAN BASED ON PRODUCT TO BE INSTALLED. SEE FORMULA FOR TRIBUTARY WIDTH.
 3. LOCATE MULLION SPAN (UNIT HEIGHT) AND TRIBUTARY WIDTH. AT THE INTERSECTION OF ROW AND COLUMN CONTAINING THE MULLION SPAN AND TRIBUTARY WIDTH RESPECTIVELY IS THE MULLION RATING FOR PRODUCT IN STEP 2. MULLION RATING MUST BE EQUAL OR GREATER THAN REQUIRED DESIGN PRESSURE OBTAINED IN STEP 1.

$$\text{TRIBUTARY WIDTH} = \frac{W1 + W2}{2}$$

Design pressure rating (psf)								
Mullion span (in)	Tributary width (in)							
	36.00	42.00	48.00	54.00	60.00	66.00	72.00	
60.00	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0
66.00	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0
72.00	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0
78.00	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0
84.00	150.0	150.0	145.6	134.3	126.2	120.4	116.5	
90.00	147.1	129.2	116.2	106.7	99.6	94.4	90.6	
96.00	120.3	105.3	94.4	86.3	80.2	75.6	72.1	
102.00	99.6	87.0	77.8	70.9	65.6	61.5	58.4	
108.00	83.4	72.7	64.9	58.9	54.4	50.8	48.0	
114.00	70.6	61.4	54.7	49.6	45.6	42.5	40.1	
120.00	60.3	52.4	46.5	42.1	38.7	35.9	33.8	
126.00	51.9	45.0	40.0	36.1	33.1	30.7	28.8	
132.00	45.0	39.0	34.6	31.2	28.5	26.4	24.7	
138.00	39.3	34.0	30.1	27.1	24.8	22.9	21.4	
144.00	34.5	29.9	26.4	23.8	21.7	20.0	18.6	

IMPACT RATED UP TO WIND ZONE 3

WinDoor
INCORPORATED

7500 AMSTERDAM DRIVE
ORLANDO, FL 32832
Phone: 407.481.8400
Fax: 407.481.0505
www.windoorinc.com

**2"X4" TUBE MULLION
IMPACT
ELEVATIONS**

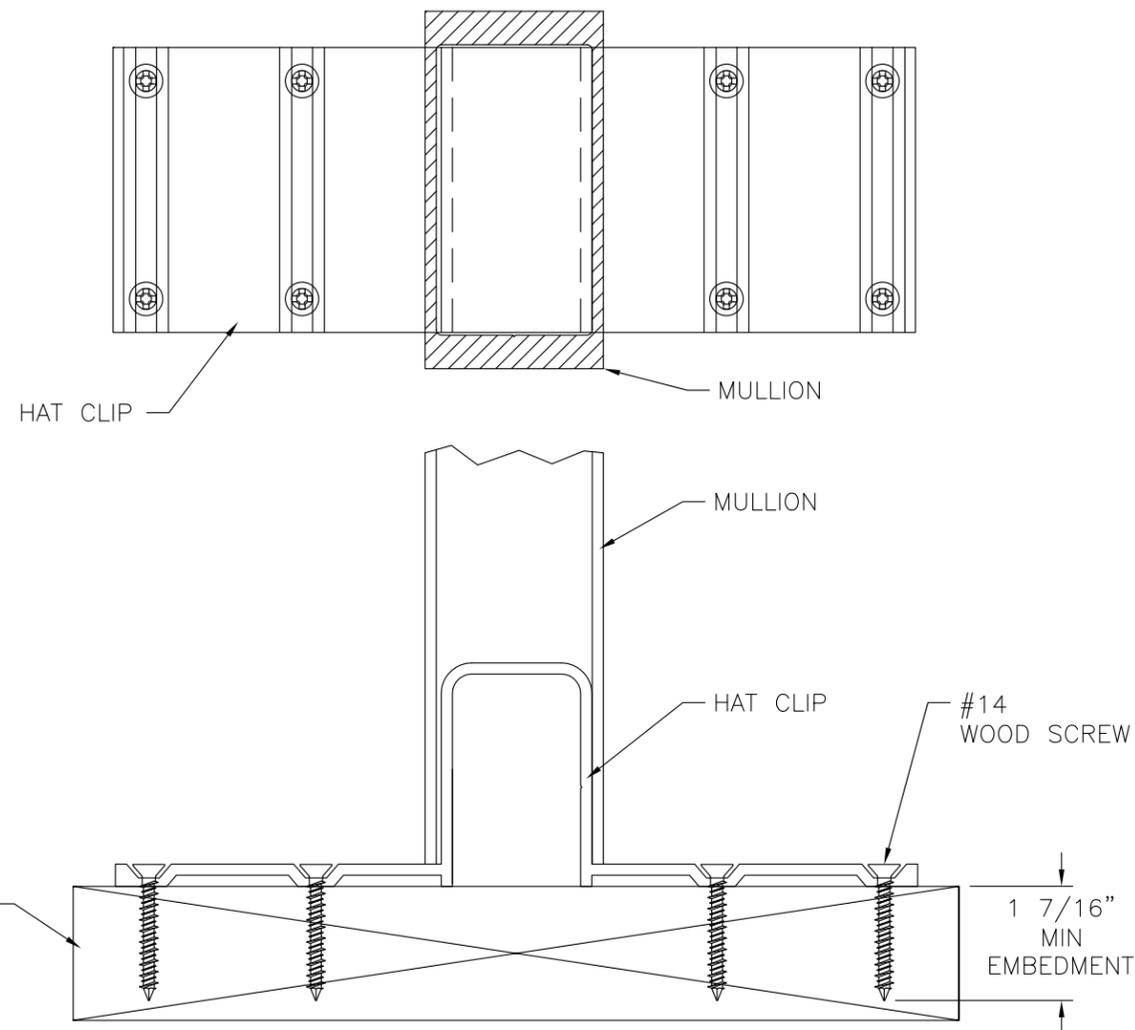
DRAWN: N.G.	DWG NO. 08-02371	REV -
SCALE NTS	DATE 01/29/15	SHEET 2 OF 7

SIGNED: 01/30/2015

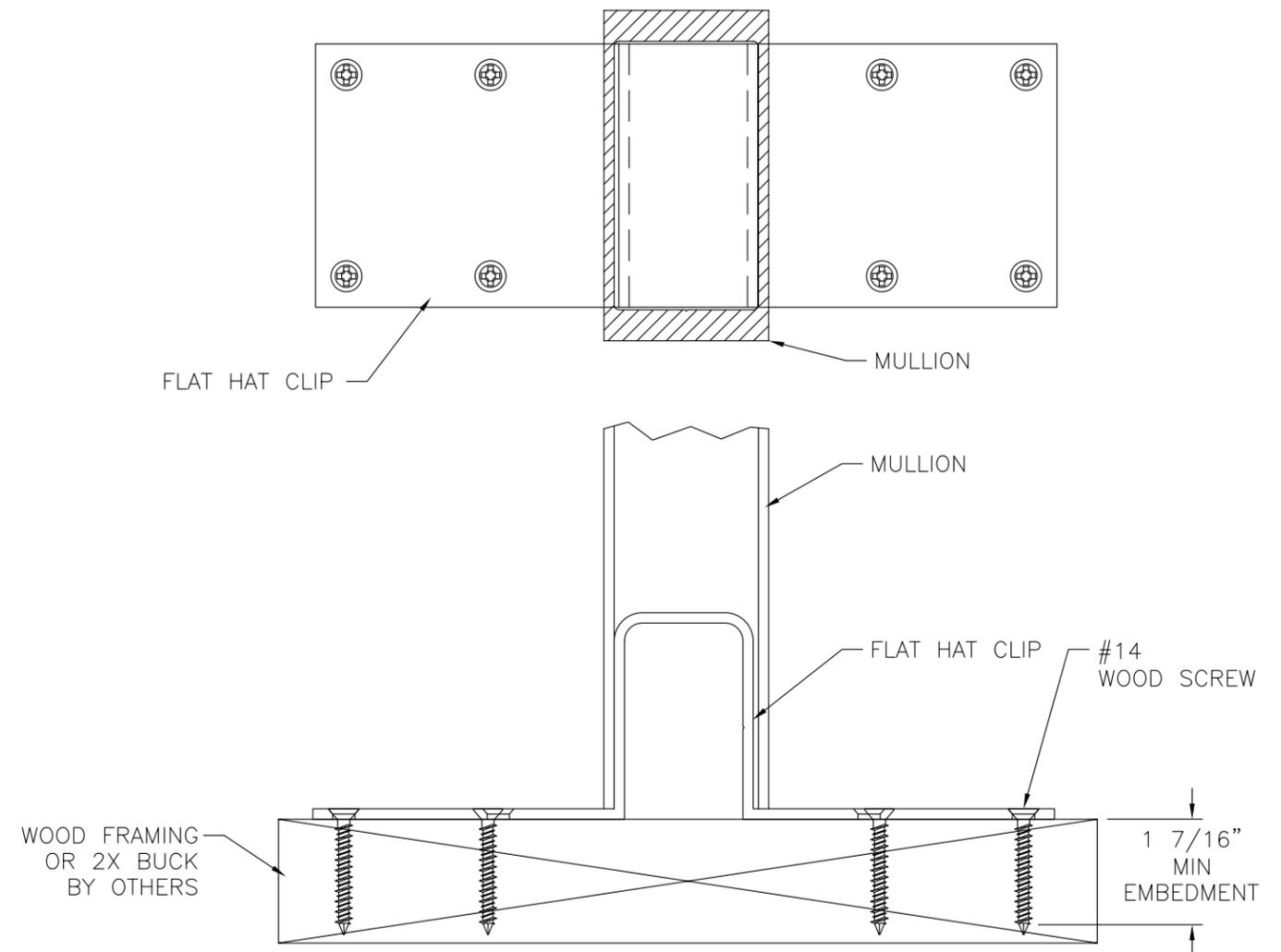


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VERTICAL MULLION WITH HAT CLIP DETAIL
 WOOD FRAMING OR 2X BUCK INSTALLATION
 SILL SHOWN - HEAD SIMILAR
 ALSO APPLIES TO HORIZONTAL MULLION



VERTICAL MULLION WITH FLAT HAT CLIP DETAIL
 WOOD FRAMING OR 2X BUCK INSTALLATION
 SILL SHOWN - HEAD SIMILAR
 ALSO APPLIES TO HORIZONTAL MULLION

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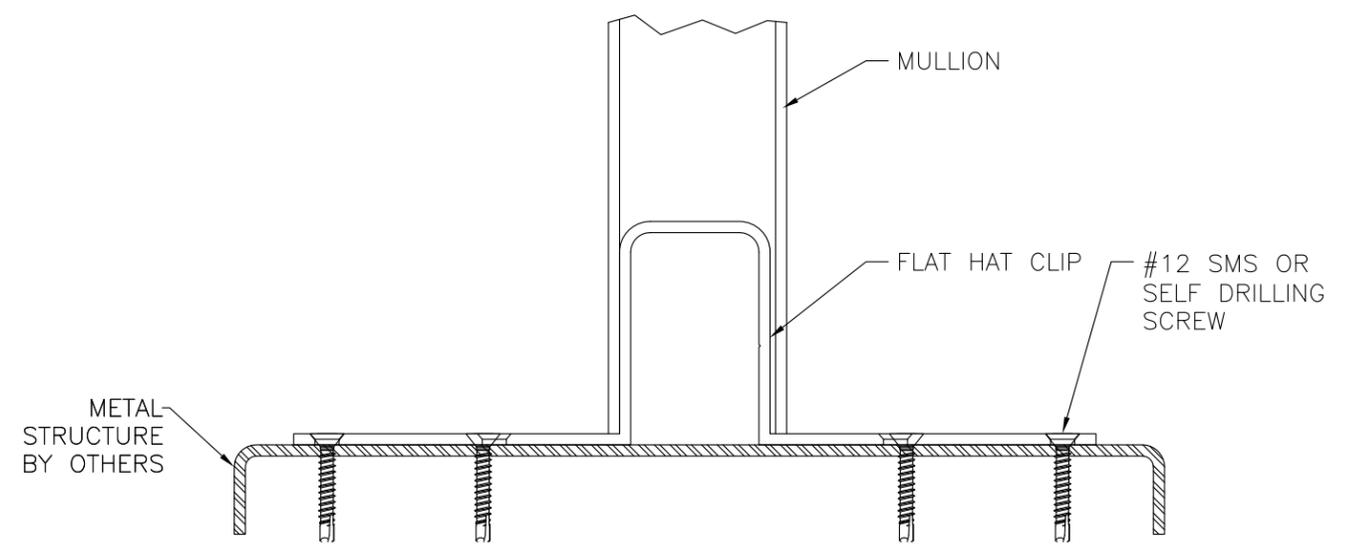
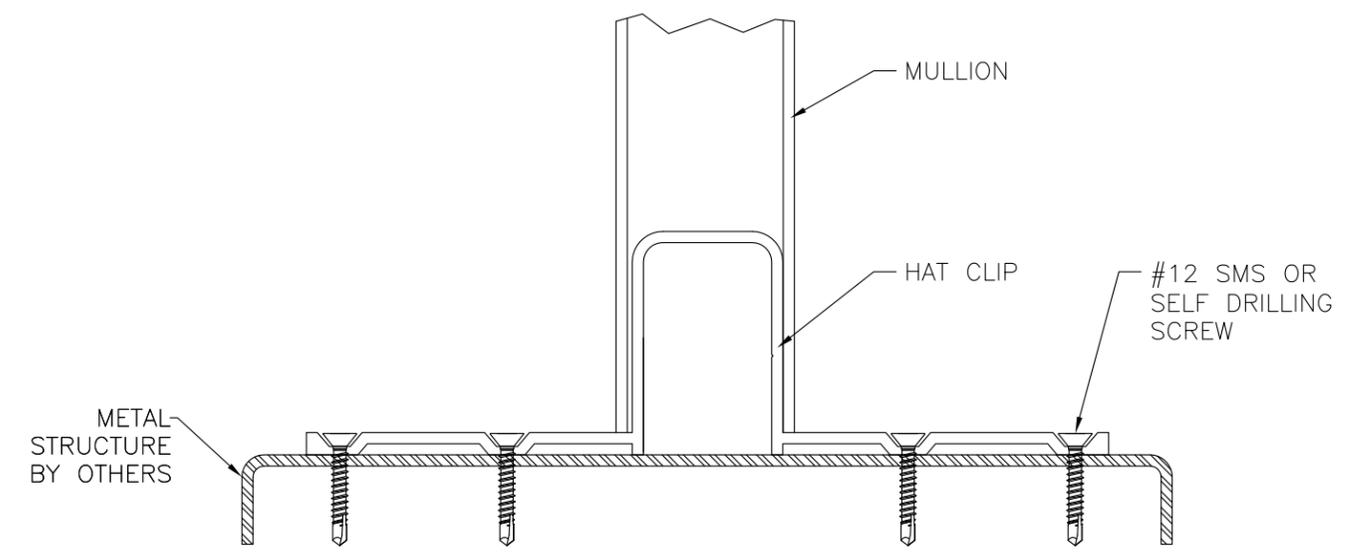
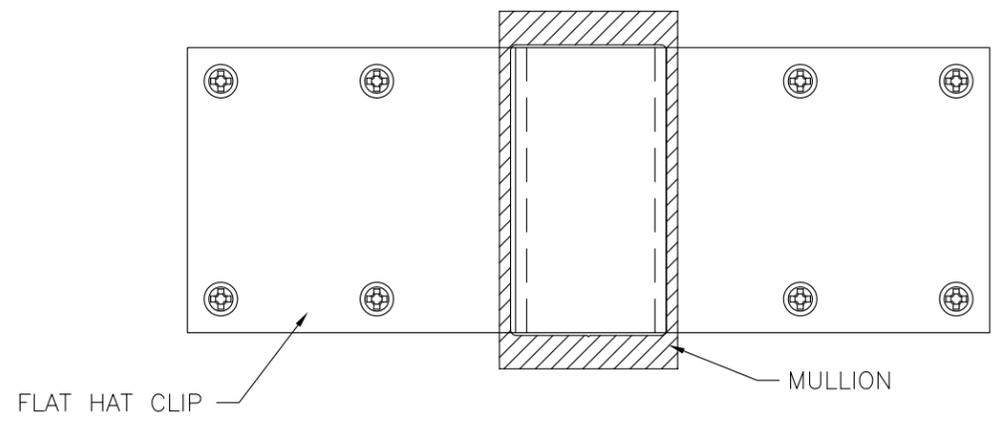
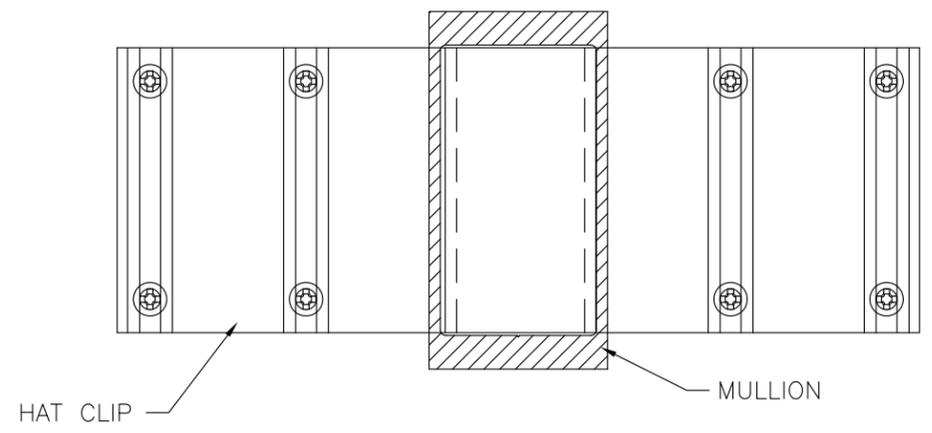
2"X4" TUBE MULLION
 IMPACT
 INSTALLATION DETAILS

DRAWN: N.G.	DWG NO. 08-02371	REV -
SCALE NTS	DATE 01/29/15	SHEET 3 OF 7



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VERTICAL MULLION WITH HAT CLIP DETAIL
 METAL STRUCTURE INSTALLATION
 SILL SHOWN - HEAD SIMILAR
 ALSO APPLIES TO HORIZONTAL MULLION

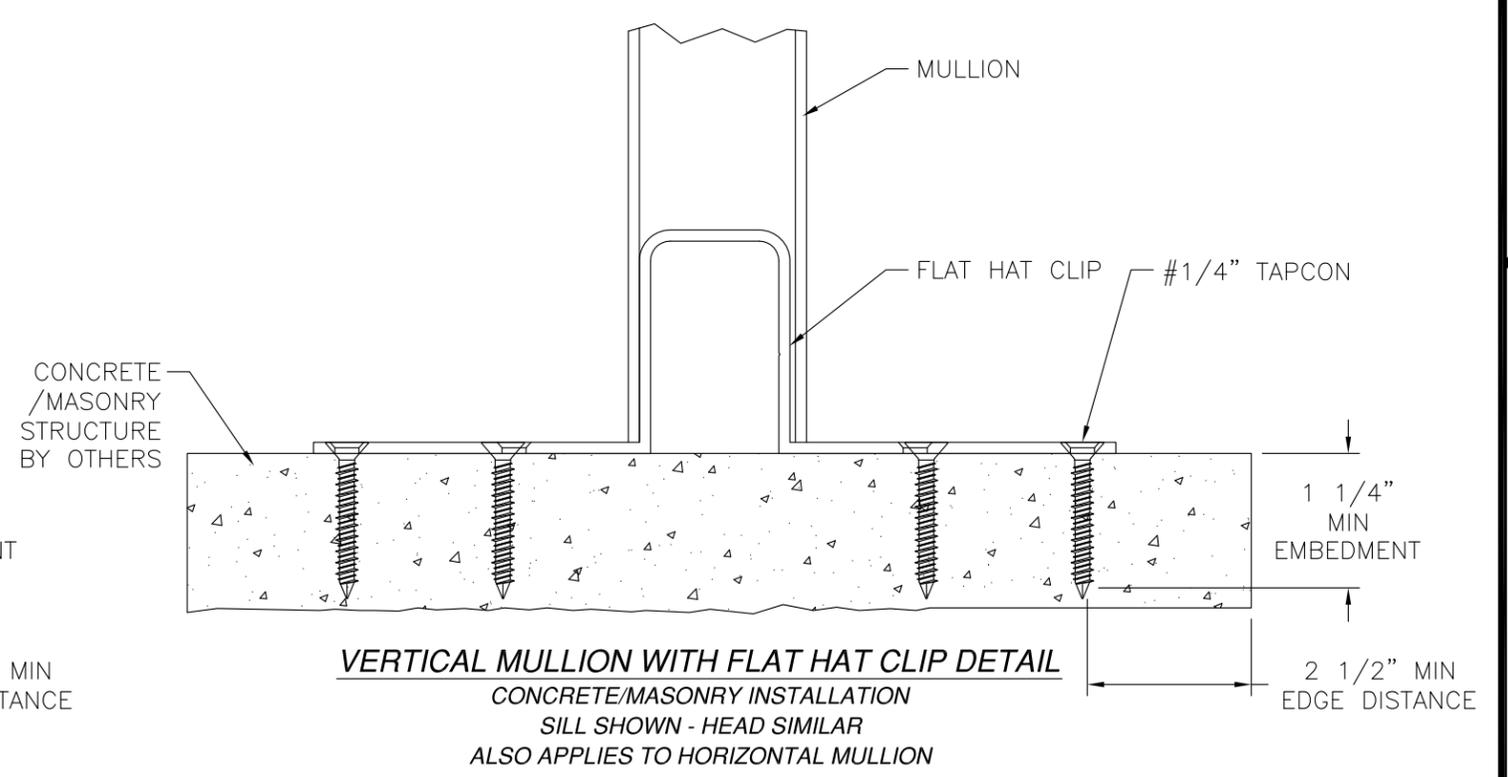
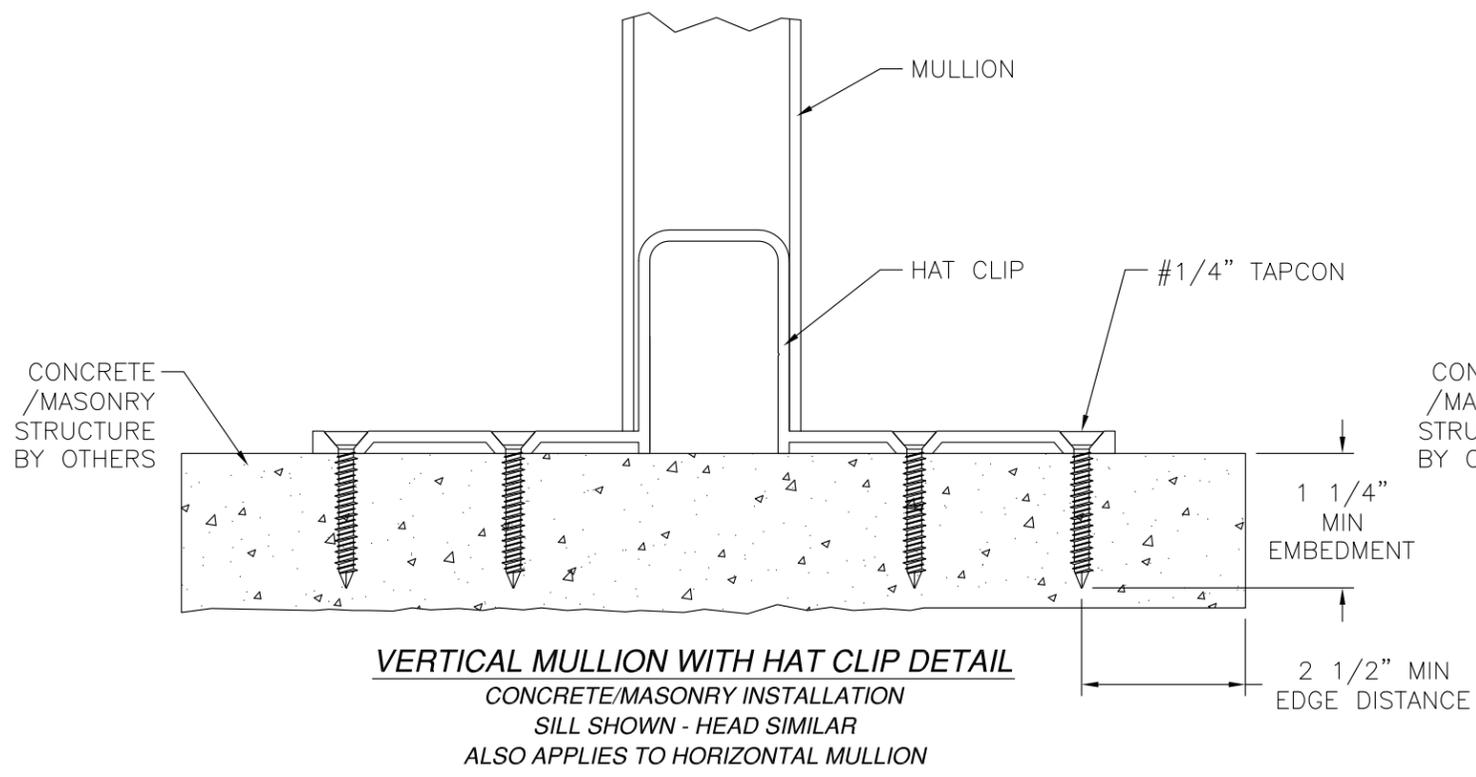
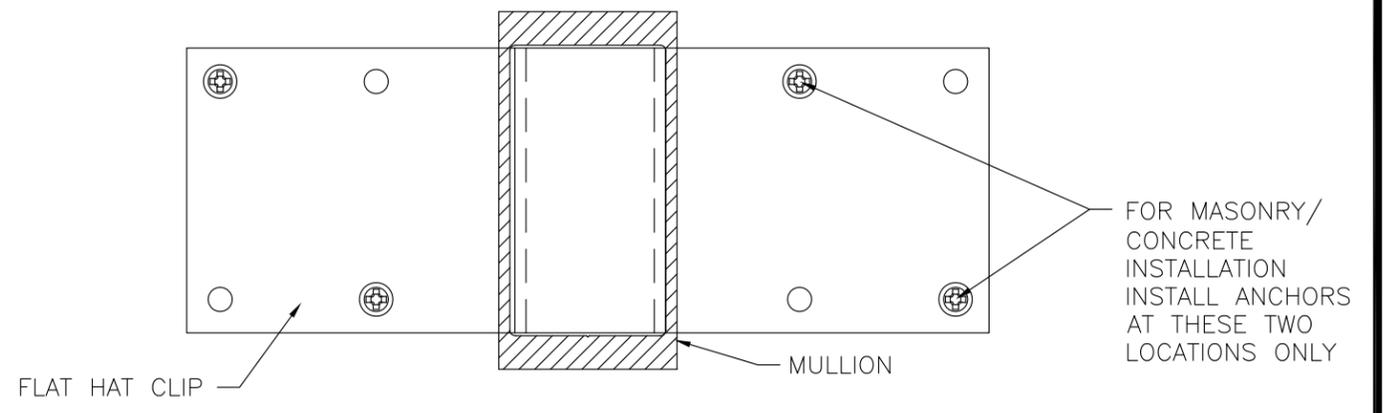
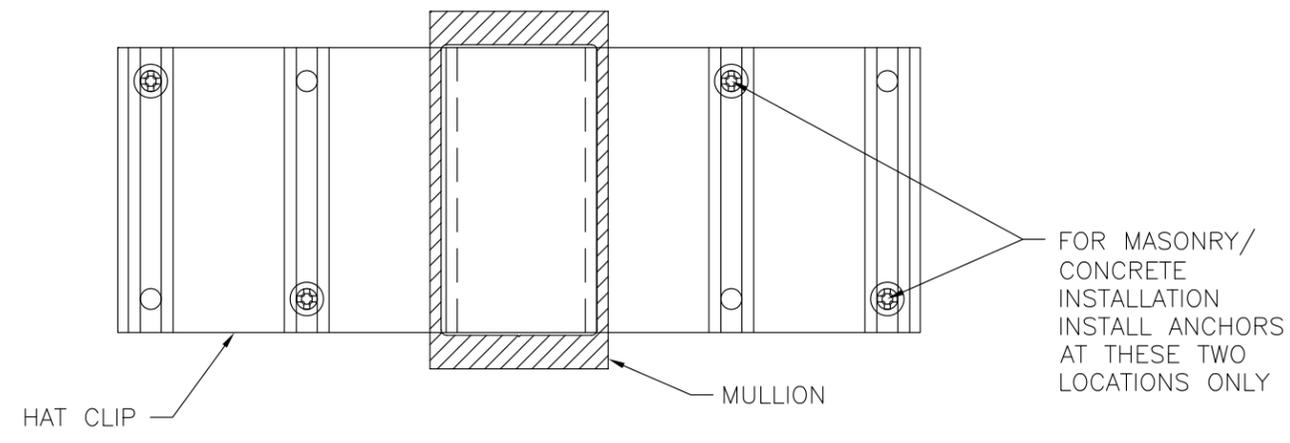
VERTICAL MULLION WITH FLAT HAT CLIP DETAIL
 METAL STRUCTURE INSTALLATION
 SILL SHOWN - HEAD SIMILAR
 ALSO APPLIES TO HORIZONTAL MULLION

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WinDoor INCORPORATED		7500 AMSTERDAM DRIVE ORLANDO, FL 32832 Phone: 407.481.8400 Fax: 407.481.0505 www.windoorinc.com	
2"X4" TUBE MULLION IMPACT INSTALLATION DETAILS			
DRAWN: N.G.	DWG NO. 08-02371	REV -	
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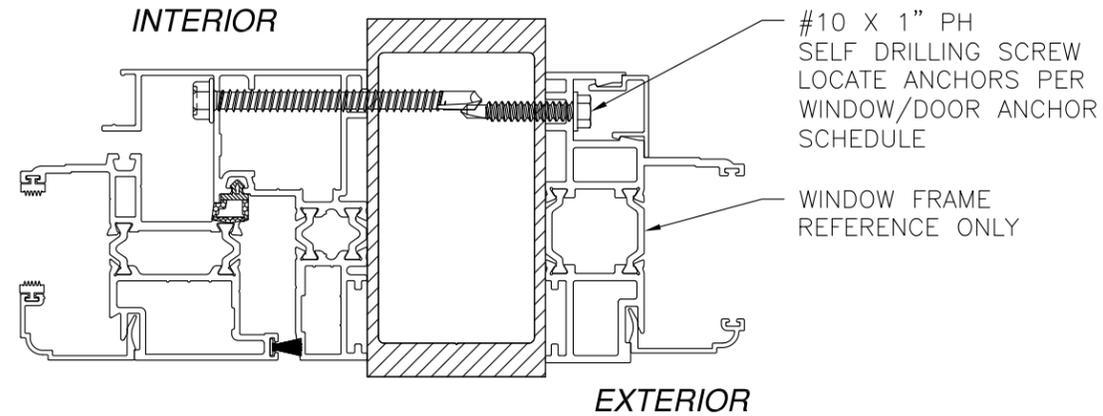


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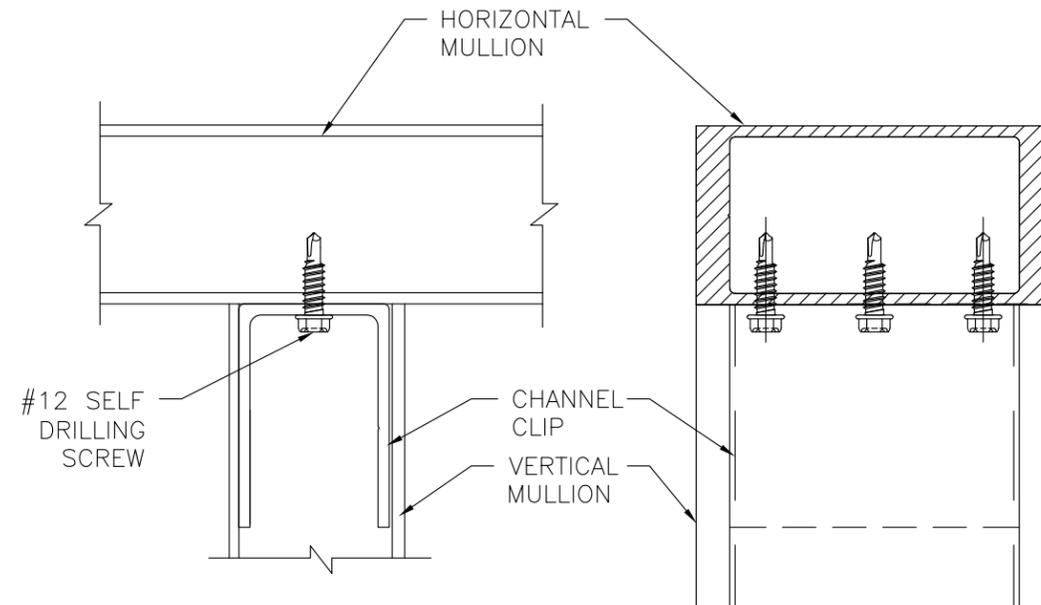
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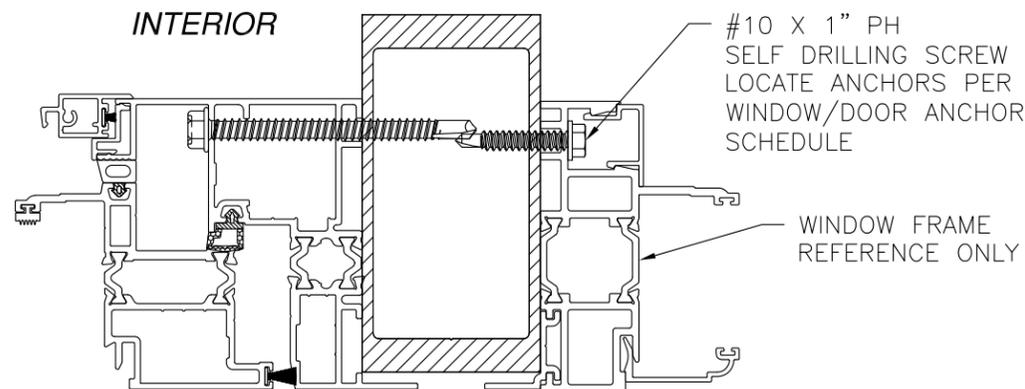
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WINDOW TO MULLION FLUSH INSTALLATION DETAIL
 WINDOW FRAME SHOWN FOR DETAIL PURPOSES ONLY, MULLION IS NOT LIMITED TO THIS PRODUCT



VERTICAL TO HORIZONTAL MULLION WITH U CLIP CONNECTION DETAIL
 HORIZONTAL TO VERTICAL MULLION SIMILAR
 TUBE TO TUBE MULLION SIMILAR



WINDOW TO MULLION FLANGE INSTALLATION DETAIL
 WINDOW FRAME SHOWN FOR DETAIL PURPOSES ONLY, MULLION IS NOT LIMITED TO THIS PRODUCT

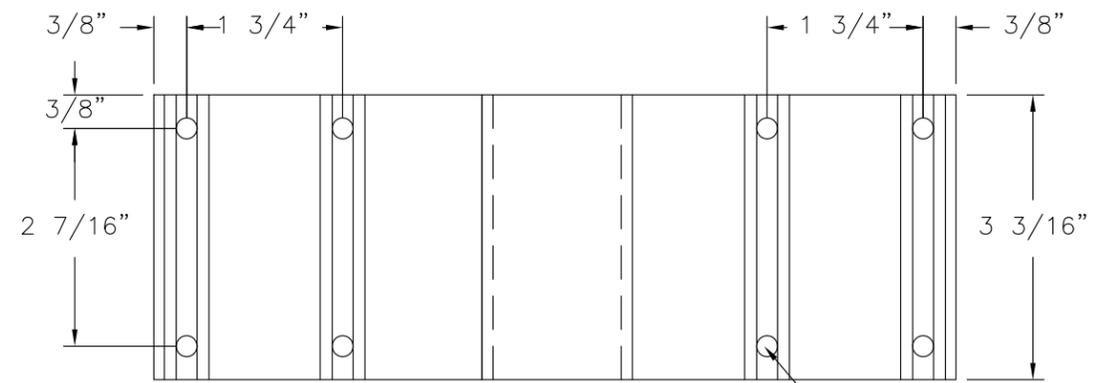
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SCALE NTS	DATE 01/29/15	SHEET 6 OF 7	

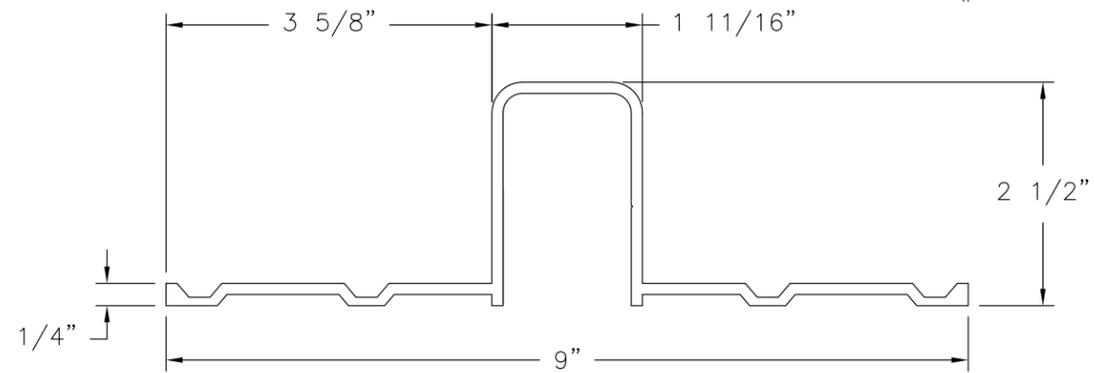


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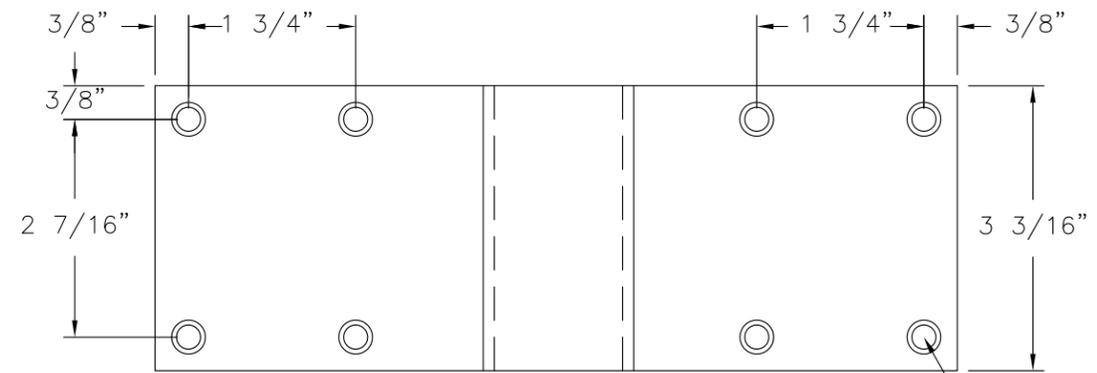
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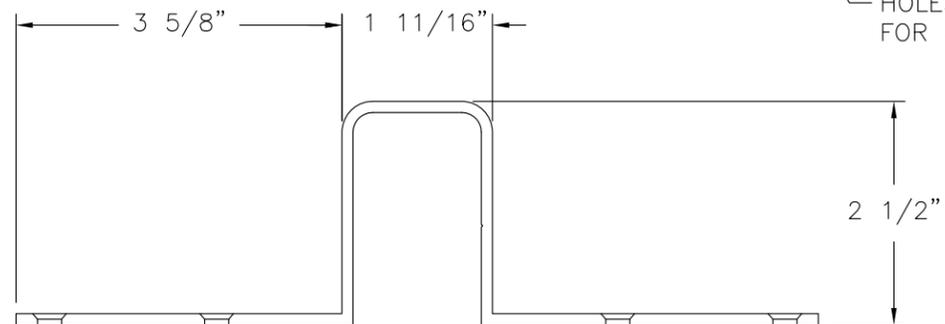
HOLES ARE FOR #14 SCREW



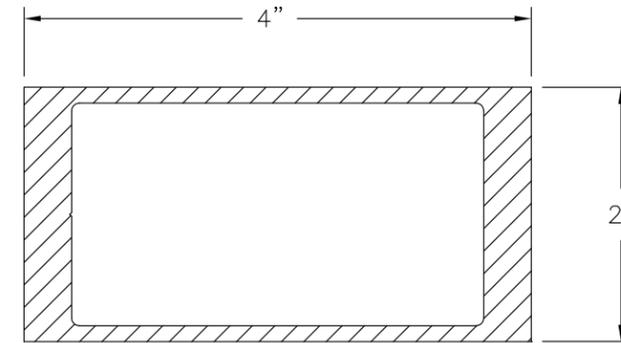
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ALUMINUM 6063-T6 .125" THICK



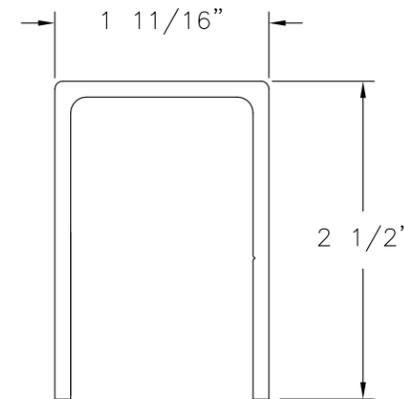
HOLES ARE CSK FOR #14 SCREW



FLAT HAT CLIP 11008611
ALUMINUM 6063-T6 .125" THICK



2X4 TUBE MULLION
ALUMINUM 6063-T6 .125" THICK
MOMENT OF INERTIA: 5.668 IN⁴
SECTION MODULUS: 2.834 IN³



CHANNEL CLIP 11008481
ALUMINUM 6063-T6 .125" THICK

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2"X4" TUBE MULLION IMPACT COMPONENTS			
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