

REVISIONS			
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NOTES:

- 1. THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH REQUIREMENTS OF THE FLORIDA BUILDING CODE.
- 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 Cd=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. BUCKS SHALL EXTEND BEYOND UNIT FRAME INTERIOR FACE SO THAT FULL FRAME SUPPORT IS PROVIDED.
- 7. FENESTRATION UNITS TO BE MULLED ARE NOT LIMITED TO THOSE SHOWN IN THIS DRAWING. FENESTRATION UNITS MUST BE MANUFACTURED BY FENESTAR USA.
- 8. DESIGN PRESSURE OF MULLED UNIT SHALL BE CONTROLLED BY THE LESSER DESIGN PRESSURE OF THE MULLION OR THE INDIVIDUAL FENESTRATION UNIT.
- 9. UNITS MAY BE MULLED TOGETHER INDEFINITELY AS LONG AS SINGLE UNIT WIDTH AND HEIGHT ARE NOT EXCEEDED AND MULLION IS ANCHORED AS SHOWN HEREIN.

ANCHORING NOTES:

- 1. FOR ANCHORING INTO WOOD FRAMING OR 2X BUCK USE #14 WOOD SCREW WITH SUFFICIENT LENGTH TO ACHIEVE A 1 7/16" MINIMUM EMBEDMENT WITH 5/8" MINIMUM EDGE DISTANCE. LOCATE ANCHORS AS SHOWN IN INSTALLATION DETAILS.
- 2. FOR ANCHORING INTO CONCRETE USE 1/4" TAPCON WITH SUFFICIENT LENGTH TO ACHIEVE A 1 3/4" MINIMUM EMBEDMENT WITH 2" MINIMUM EDGE DISTANCE. LOCATE ANCHORS AS SHOWN IN INSTALLATION DETAILS.
- 3. FOR ANCHORING INTO METAL STRUCTURE USE #14 SMS OR SELF DRILLING SCREWS WITH SUFFICIENT LENGTH TO ACHIEVE 3 THREADS MINIMUM BEYOND STRUCTURE INTERIOR WALL AND 5/8" MINIMUM EDGE DISTANCE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
- 4. ALL FASTENERS TO BE CORROSION RESISTANT.
- 5. 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:
 - 5.1. WOOD – MINIMUM SPECIFIC GRAVITY OF G=0.42
 - 5.2. CONCRETE – MINIMUM COMPRESSIVE STRENGTH OF 3,200 PSI.
 - 5.3. MASONRY – GROUT/FILLED BLOCK PER ASTM C90 WITH Fm=2,000PSI MINIMUM.
 - 5.4. METAL STRUCTURE: STEEL 18GA (.048") Fy=33KSI/FU=52KSI OR ALUMINUM 6063-T5 125" THICK MINIMUM
- 6. FENESTRATION UNITS ATTACHED TO MULLION MUST BE ANCHORED IN ACCORDANCE WITH THE FENESTRATION MANUFACTURER'S INSTALLATION INSTRUCTIONS AND FENESTRATION APPROVAL DOCUMENTATION.

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FENESTAR USA
110 JABEZ ST. SUITE 309
NEWARK, NJ 07105

STEEL VERTICAL MULLION ASSEMBLY
X CONFIGURATION – IMPACT
NOTES

DRAWN:
A.R.

DWG NO.
08-04094

REV
-

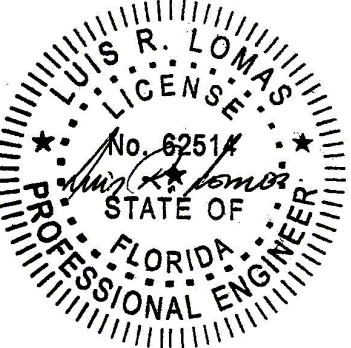
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DATE 09/10/2024

SHEET 1 OF 13

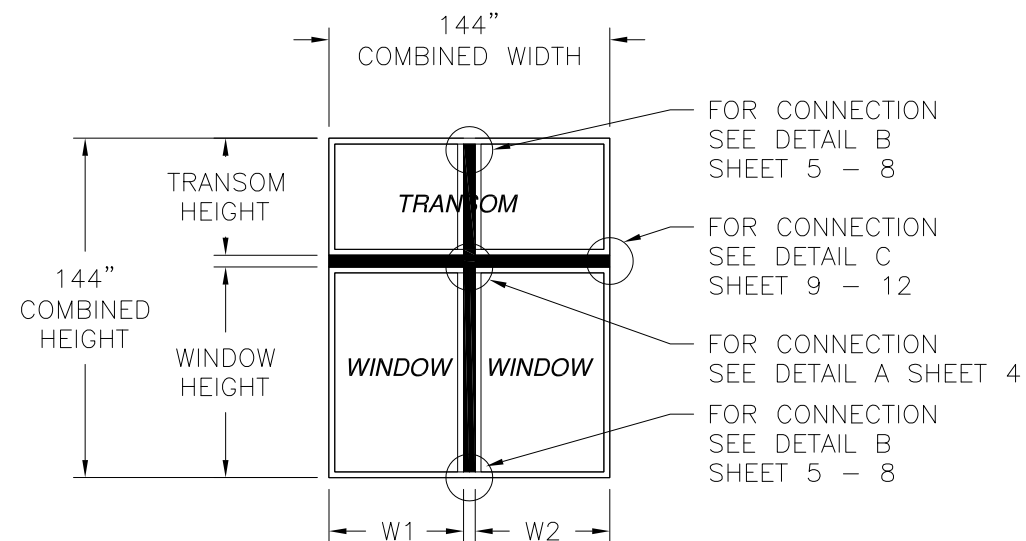
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SEE DESIGN PRESSURE CHART, SHEET 3

DESIGN PRESSURE TABLE INSTRUCTIONS:

1. DEFINE REQUIRED DESIGN LOAD PER FLORIDA BUILDING CODE CHAPTER 16.
2. DETERMINE MULLION SPAN AND TRIBUTARY WIDTH OF PRODUCT TO BE INSTALLED BASED ON FORMULA FOR TRIBUTARY WIDTH BELOW.
3. TO DETERMINE MULLION RATING LOCATE COLUMN FOR WINDOW HEIGHT AND TRIBUTARY WIDTH, FIND THE INTERSECTION OF THIS COLUMN AND ROW. MULLION RATING IS LOCATED AT THIS INTERSECTION.
4. MULLION RATING MUST BE EQUAL OR GREATER THAN REQUIRED DESIGN PRESSURE OBTAINED IN STEP 3.
5. WINDOW/DOOR AND TRANSOM TO BE ANCHORED ON ALL FOUR SIDES.

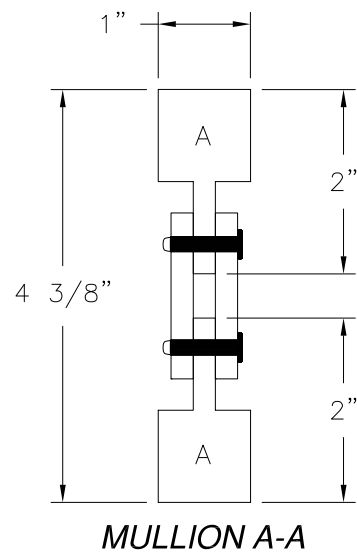
TRIBUTARY HEIGHT = $\frac{H1 + H2}{2}$

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

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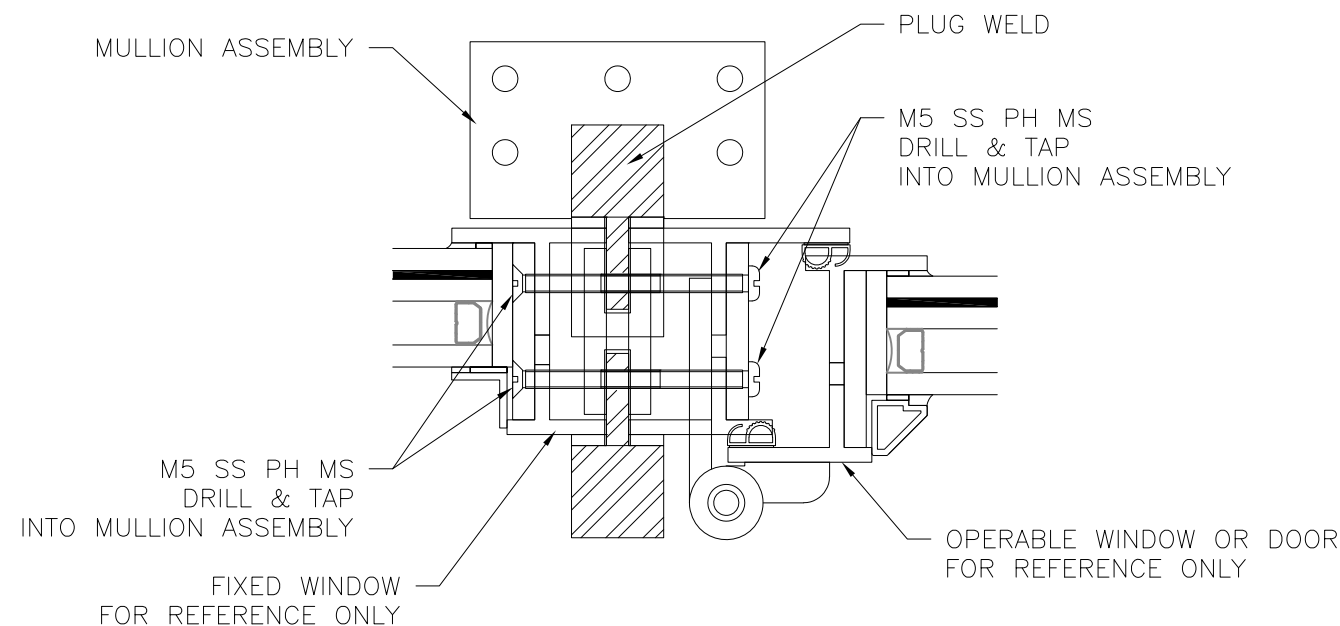
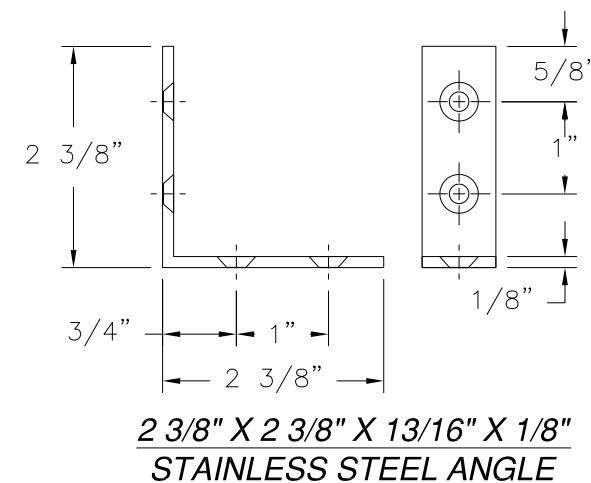
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STEEL VERTICAL MULLION ASSEMBLY X CONFIGURATION – IMPACT APPROVED CONFIGURATIONS		
DRAWN: A.R.	DWG NO. 08-04094	REV -
SCALE NTS	DATE 09/10/2024	SHEET 2 OF 13
L. ROBERTO LOMAS P.E. 208 7th Ave, INDIALANTIC, FL 32903 434-688-0609 rllomas@lrlomaspe.com		

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Maximum design pressure chart (psf)
Design pressures are positive and negatives

Mullion span (in)	Tributary Height (in)	Tributary width (in)								
		24.00	30.00	36.00	42.00	48.00	54.00	60.00	66.00	72.00
36.00	18.00	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42.00	21.00	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
48.00	24.00	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
54.00	27.00	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
60.00	30.00	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
66.00	33.00	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
72.00	36.00	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
78.00	39.00	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
84.00	42.00	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	112.3
90.00	45.00	120.0	120.0	120.0	120.0	120.0	120.0	118.1	110.1	103.1
96.00	48.00	120.0	120.0	120.0	120.0	120.0	117.1	108.8	101.5	95.2
102.00	51.00	120.0	120.0	120.0	120.0	117.1	108.2	100.6	94.0	88.2
108.00	54.00	120.0	120.0	120.0	120.0	108.8	100.3	93.4	87.3	82.0
114.00	57.00	120.0	120.0	120.0	112.3	101.5	93.4	86.9	80.6	73.8
120.00	60.00	120.0	120.0	119.4	105.5	95.2	87.3	80.0	72.7	66.6
126.00	63.00	120.0	120.0	112.8	99.5	89.6	80.6	72.5	65.9	60.5
132.00	66.00	120.0	120.0	106.9	94.1	82.6	73.4	66.1	60.1	55.1
138.00	69.00	120.0	118.9	100.8	86.4	75.6	67.2	60.5	55.0	50.4
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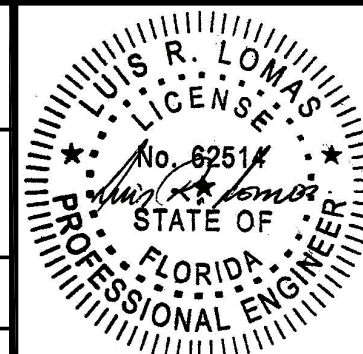
**WINDOW/DOOR TO MULLION ASSEMBLY
CONNECTION DETAIL**

3 1/8" X 3 1/8" X 3/16" STAINLESS STEEL PLATE SHOWN
4 5/16" X 4 5/16" X 3/16" STEEL PLATE SIMILAR

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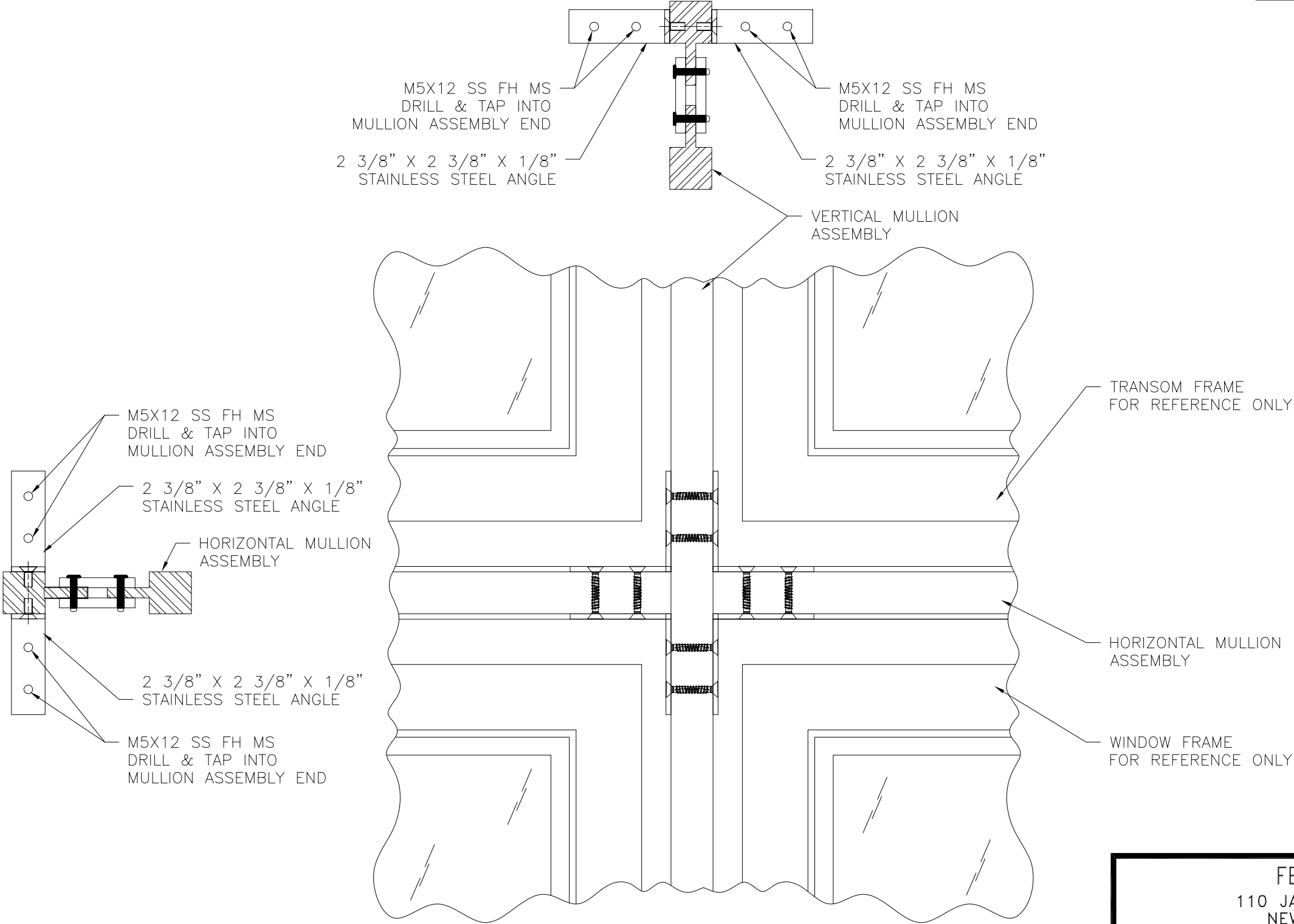
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STEEL VERTICAL MULLION ASSEMBLY X CONFIGURATION – IMPACT COMPONENTS AND DESIGN PRESSURE CHART		
DRAWN: A.R.	DWG NO. 08-04094	REV -
SCALE NTS	DATE 09/10/2024	SHEET 3 OF 13
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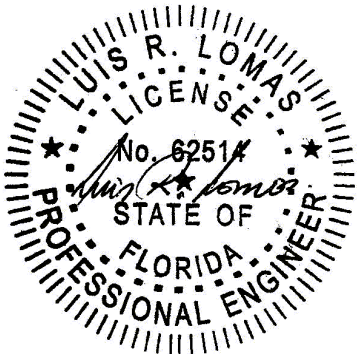
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TRANSOM/WINDOW CONNECTION DETAIL A

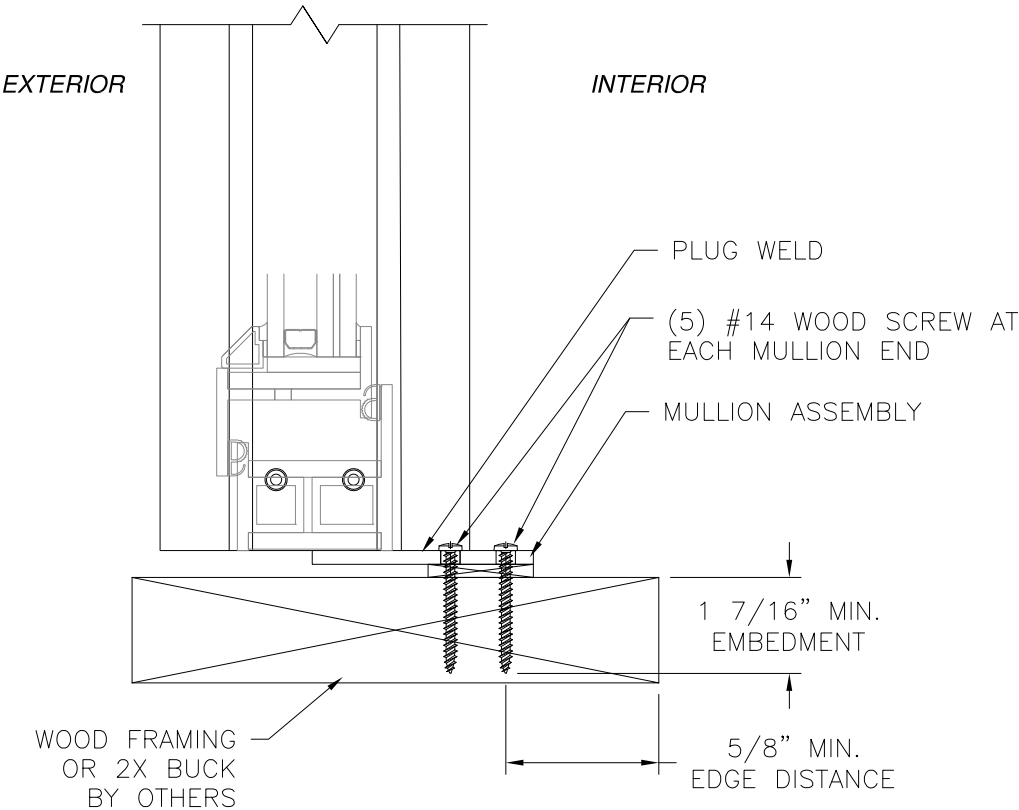
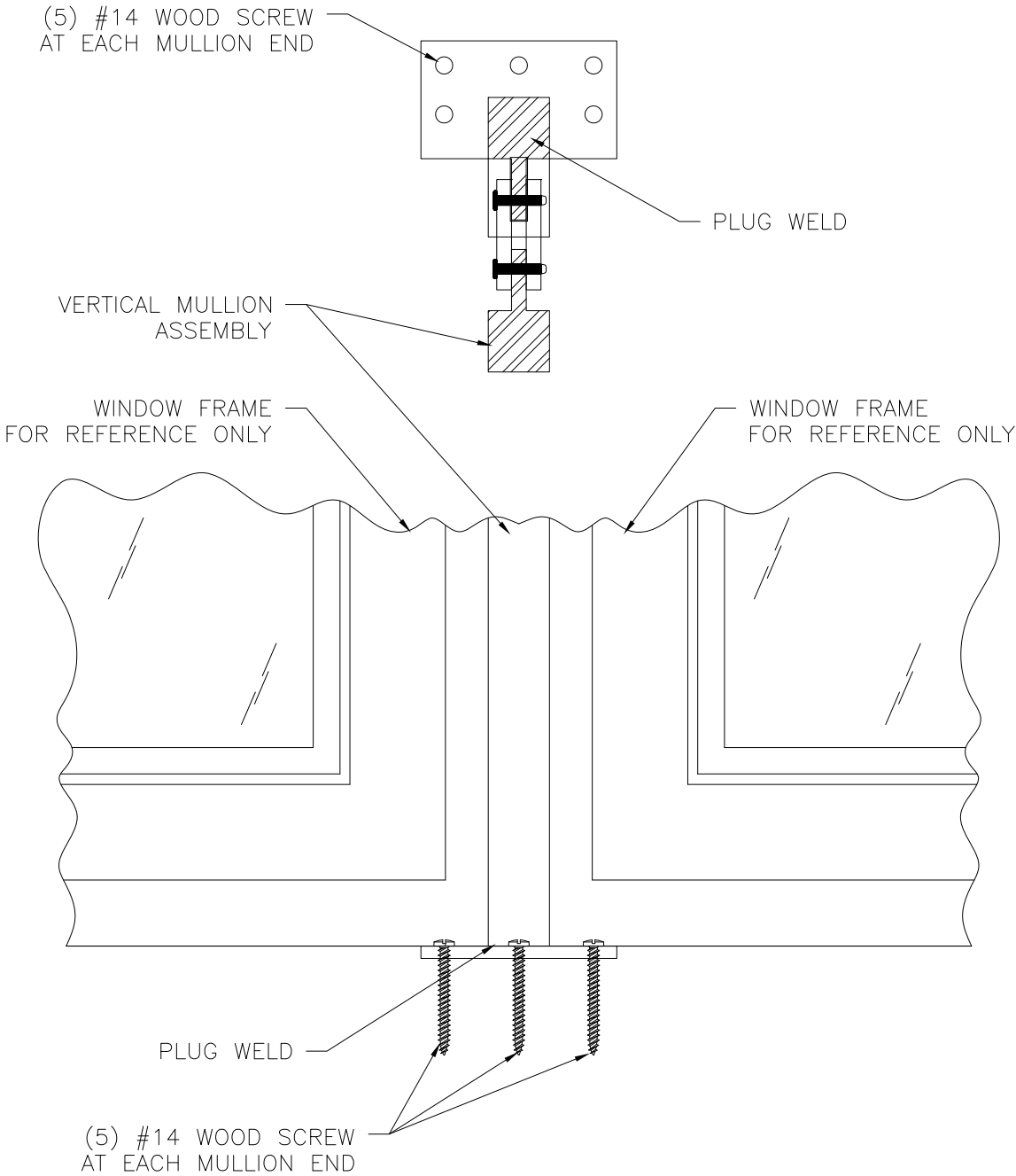
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STEEL VERTICAL MULLION ASSEMBLY X CONFIGURATION – IMPACT INSTALLATION DETAILS		
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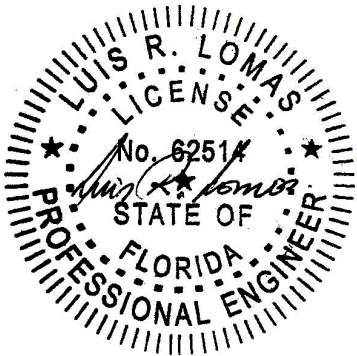
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INSTALLATION DETAIL B
WOOD FRAMING OR 2X BUCK
SILL SHOWN, HEAD SIMILAR

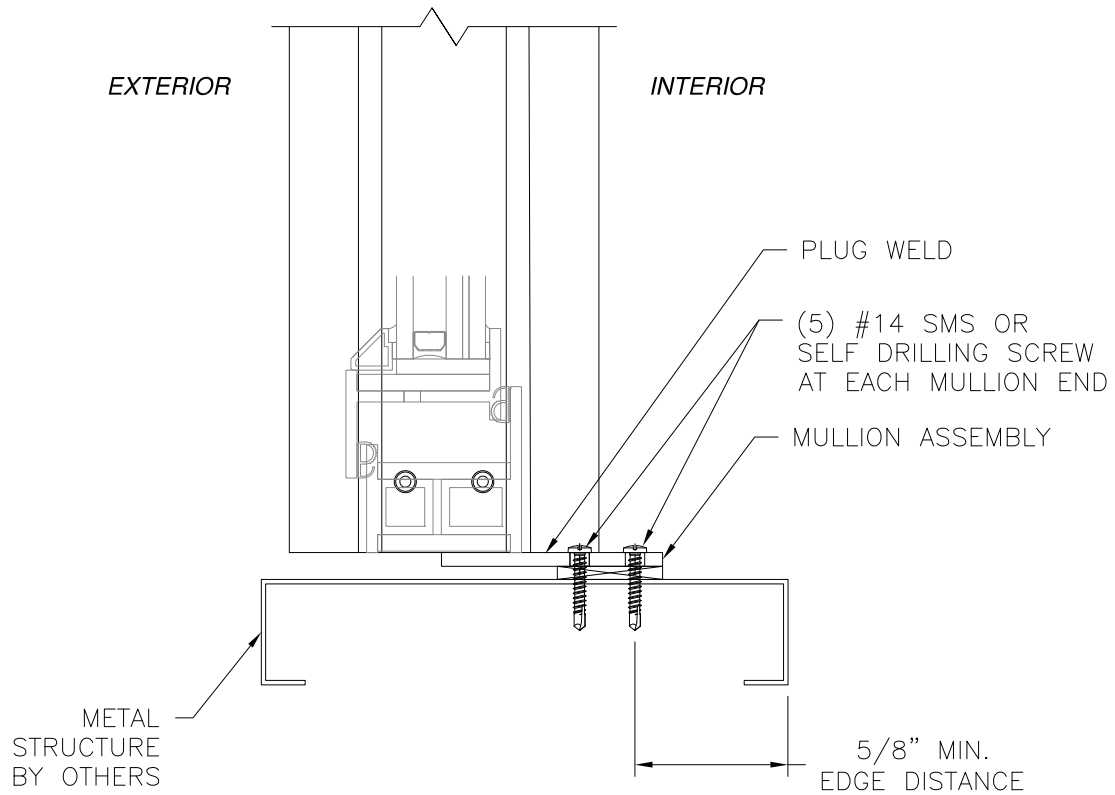
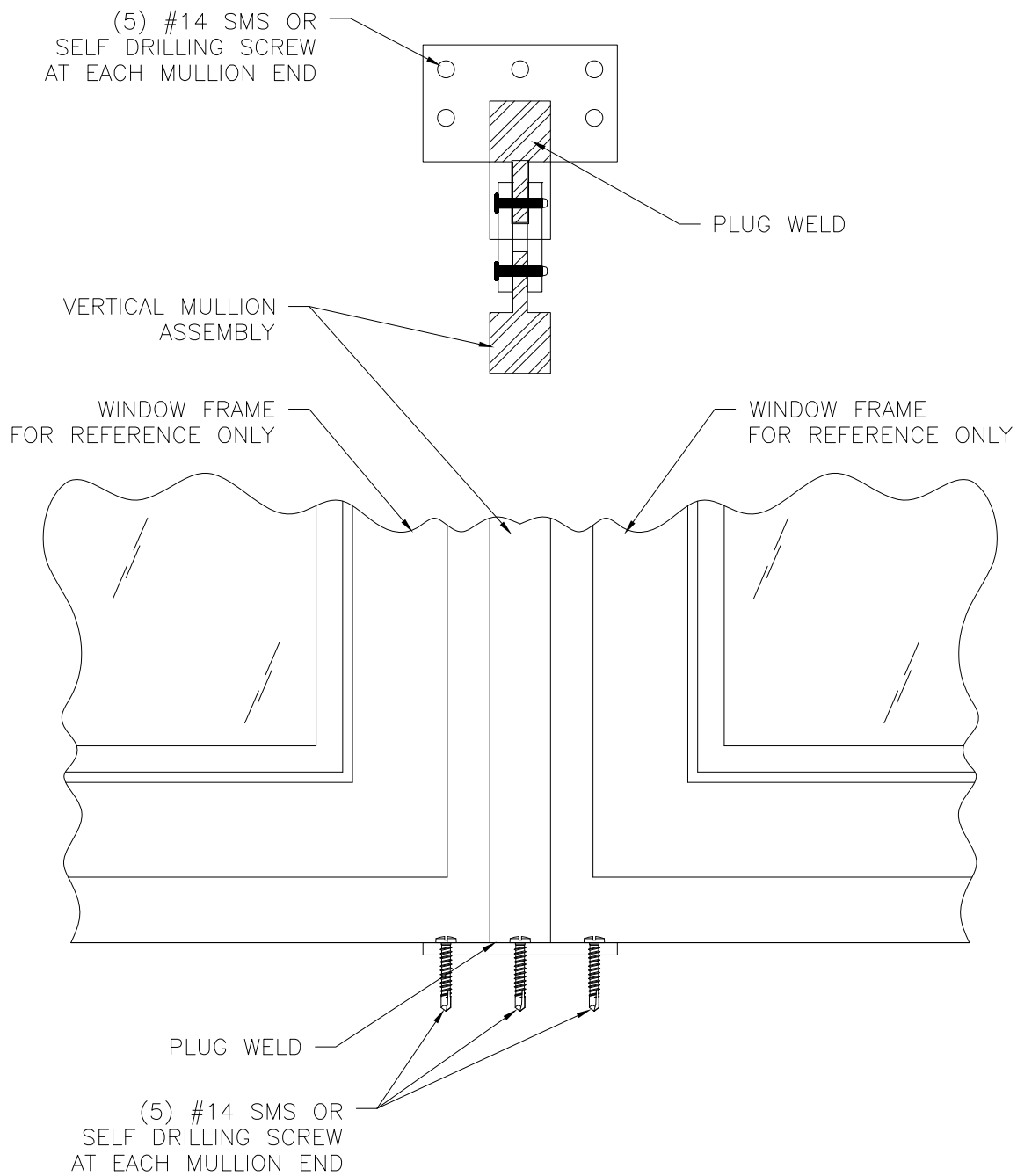
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STEEL VERTICAL MULLION ASSEMBLY X CONFIGURATION – IMPACT VERTICAL INSTALLATION DETAILS		
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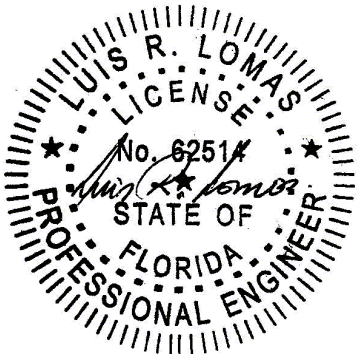
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INSTALLATION DETAIL B
 METAL STRUCTURE
 SILL SHOWN, HEAD SIMILAR

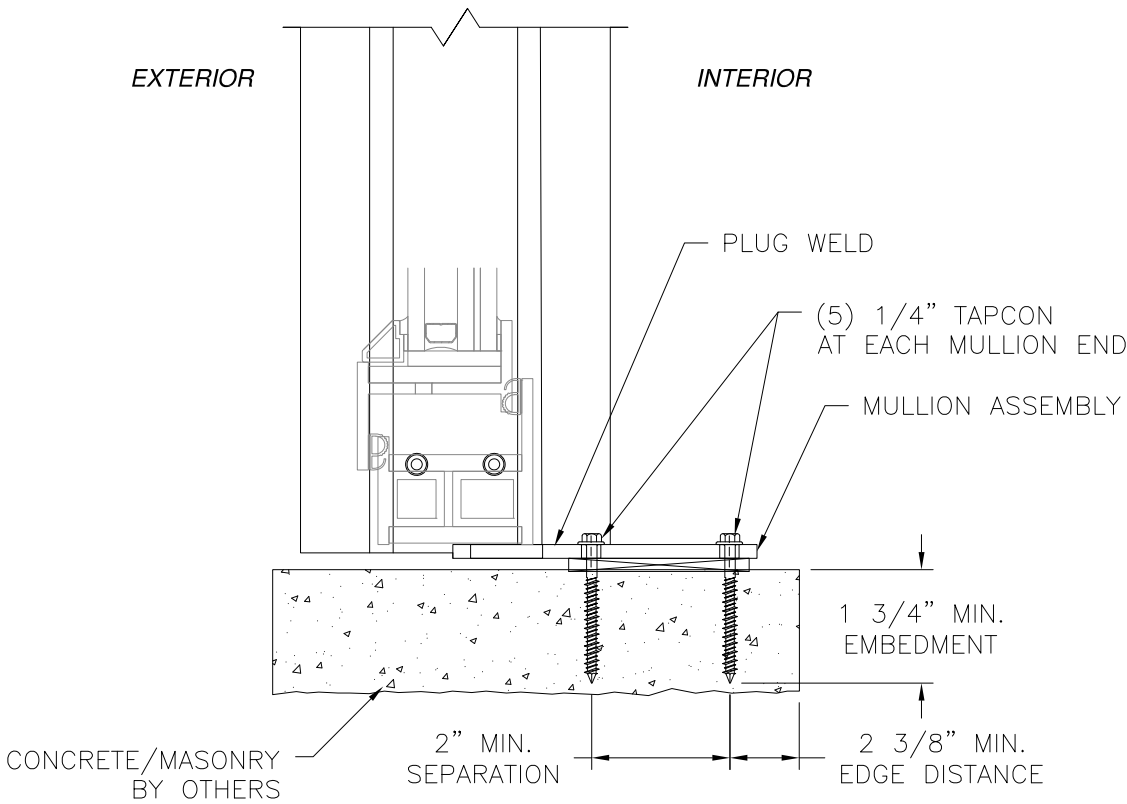
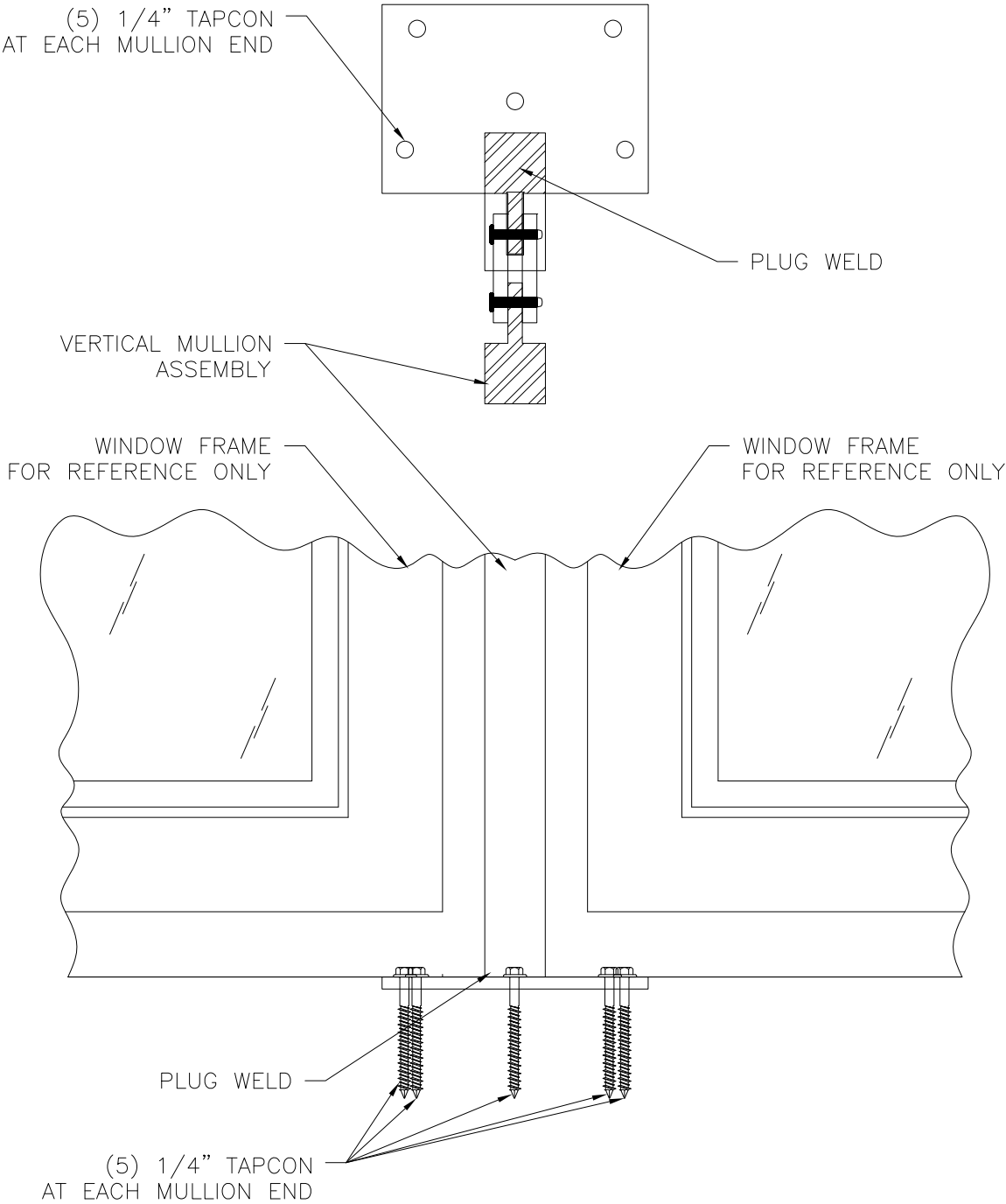
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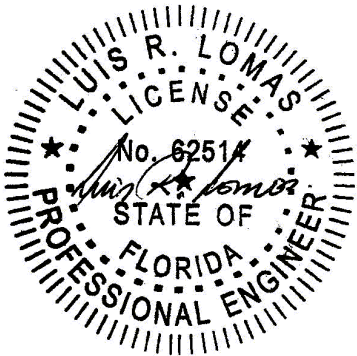
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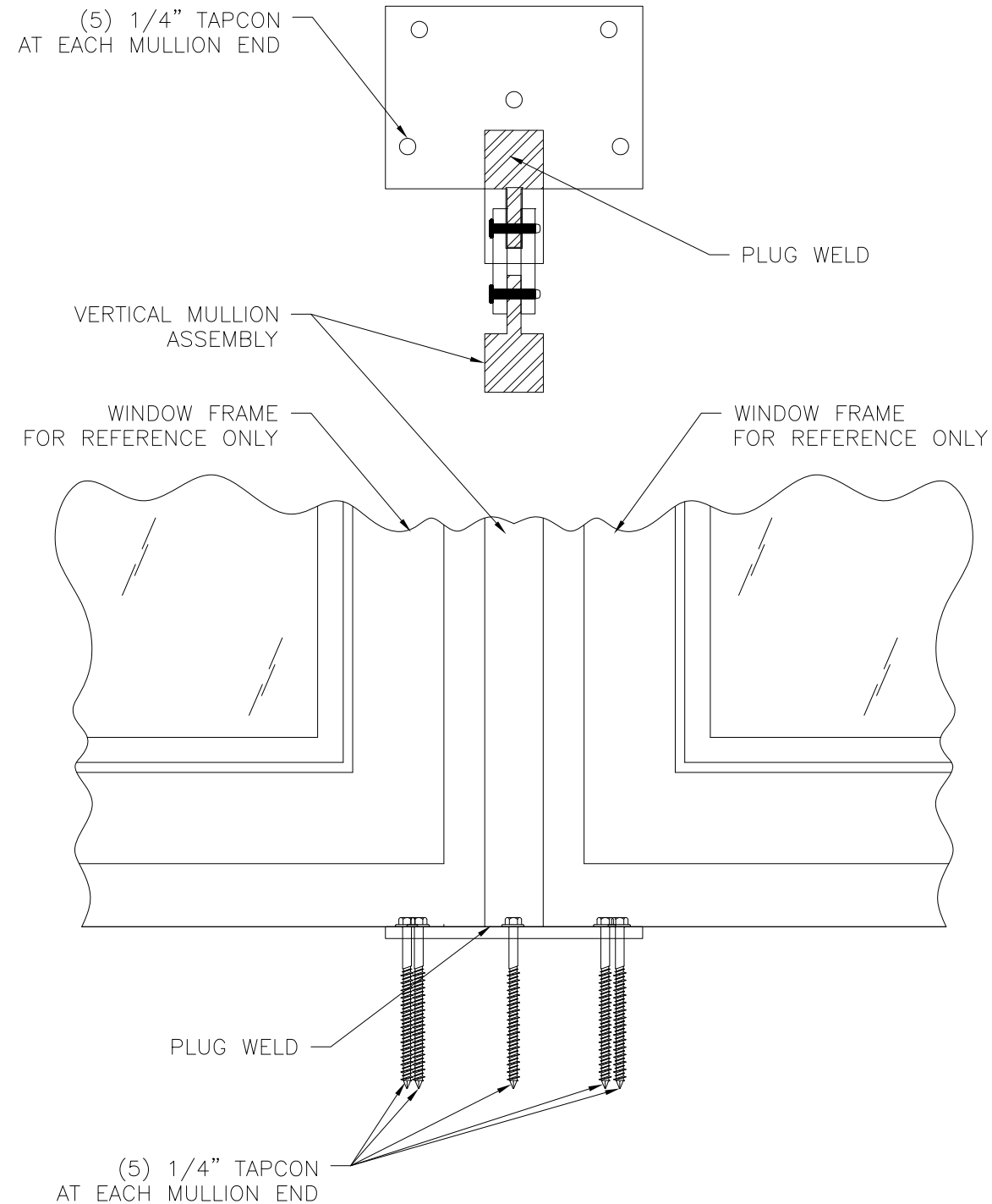
INSTALLATION DETAIL B
 CONCRETE/MASONRY
 SILL SHOWN, HEAD SIMILAR

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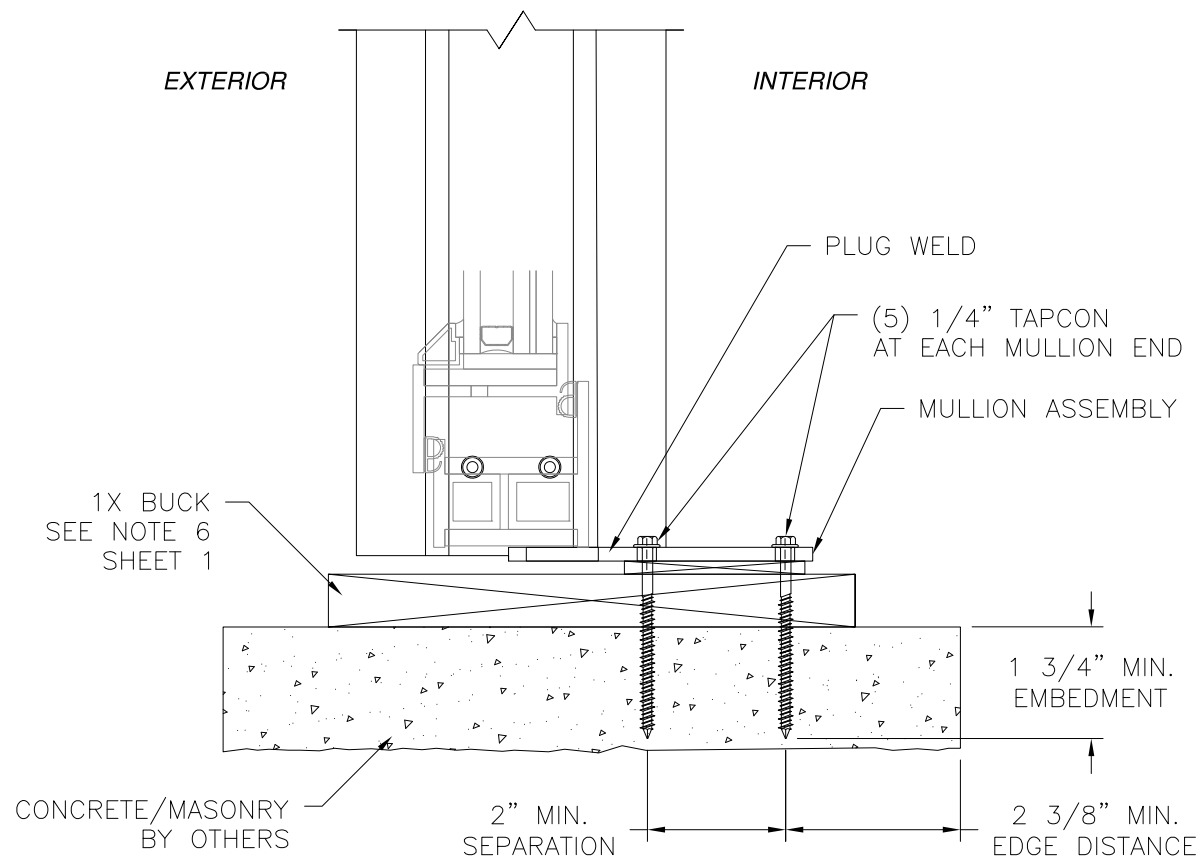
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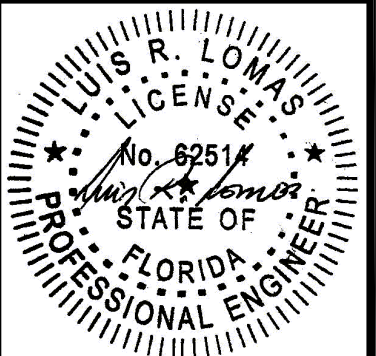
INSTALLATION DETAIL B
CONCRETE/MASONRY W/1X BUCK
SILL SHOWN, HEAD SIMILAR



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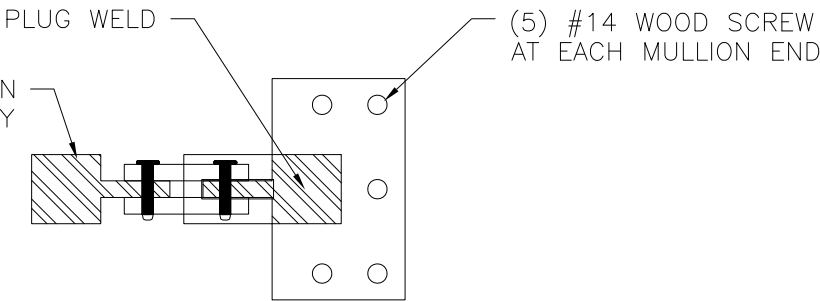
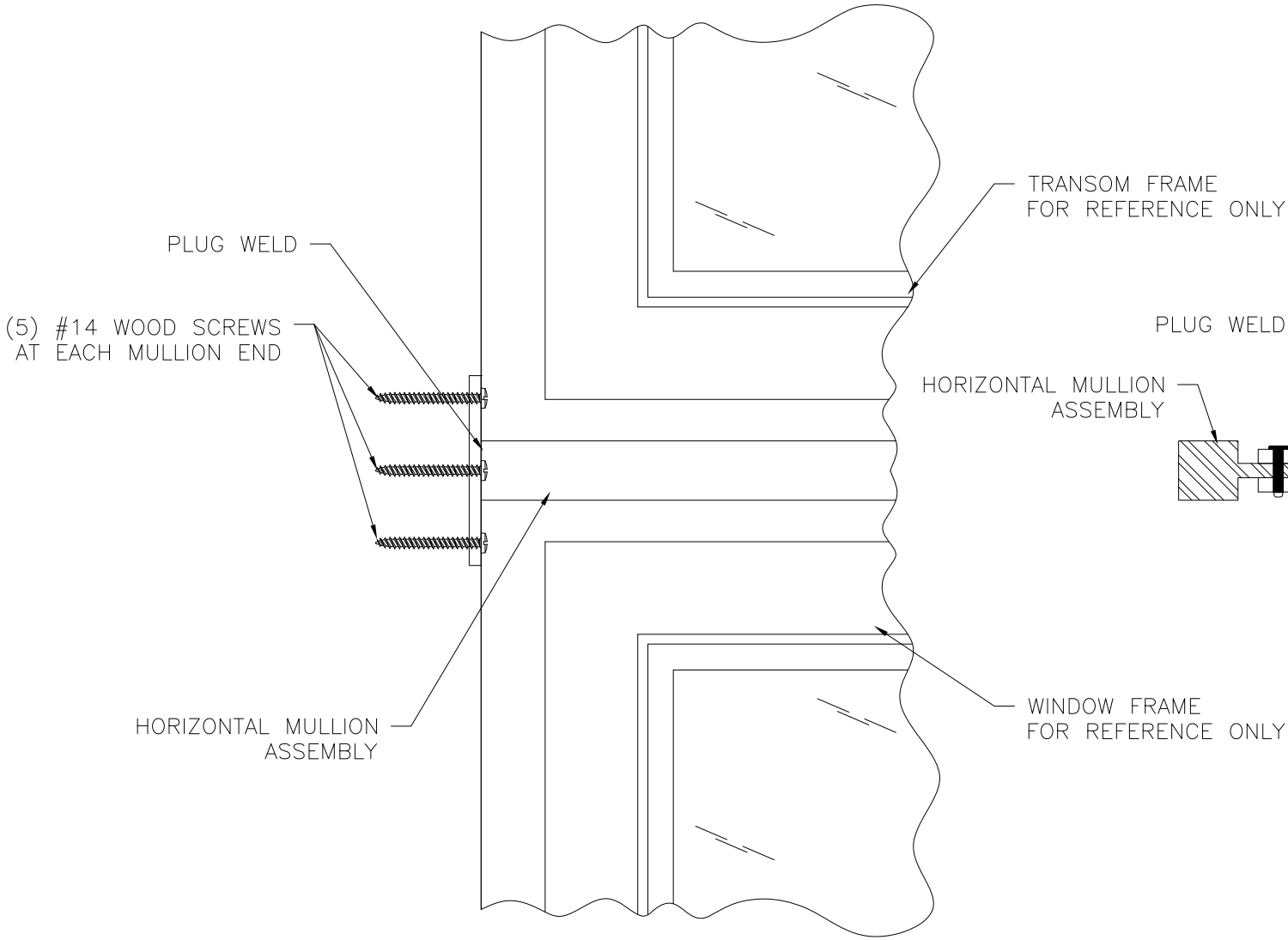
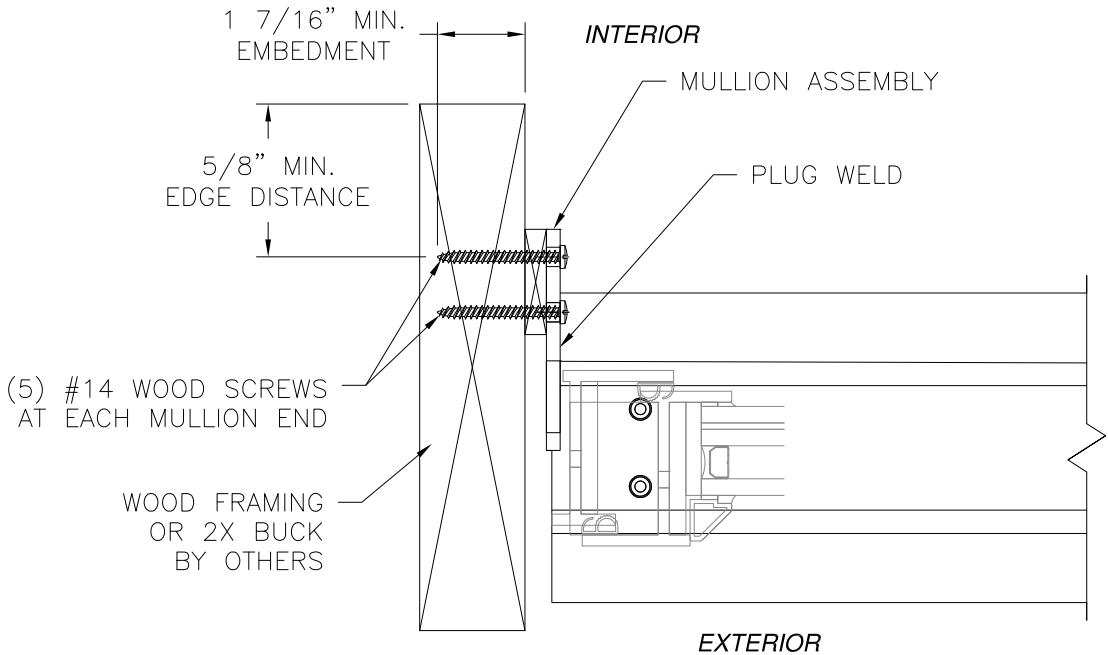
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STEEL VERTICAL MULLION ASSEMBLY X CONFIGURATION – IMPACT VERTICAL INSTALLATION DETAILS		
DRAWN: A.R.	DWG NO. 08-04094	REV -
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L. ROBERTO LOMAS P.E. 208 7th Ave, INDIALANTIC, FL 32903 434-688-0609 rllomas@rlomaspe.com		

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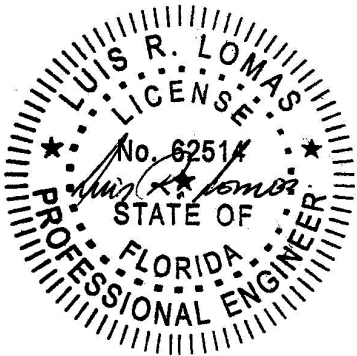
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INSTALLATION DETAIL C
WOOD FRAMING OR 2X BUCK

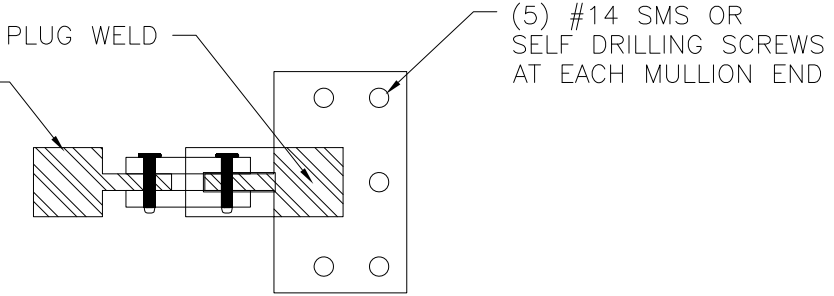
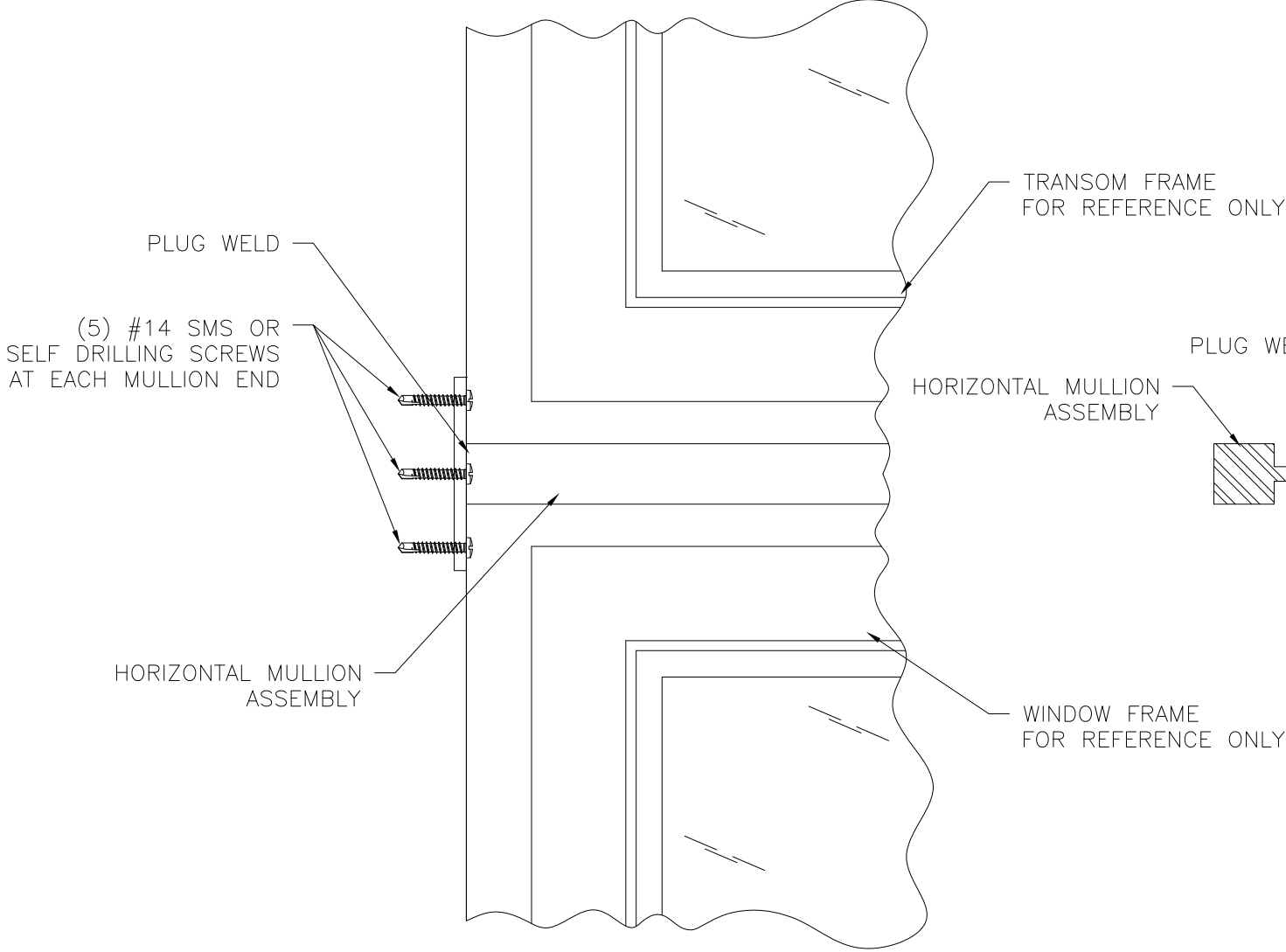
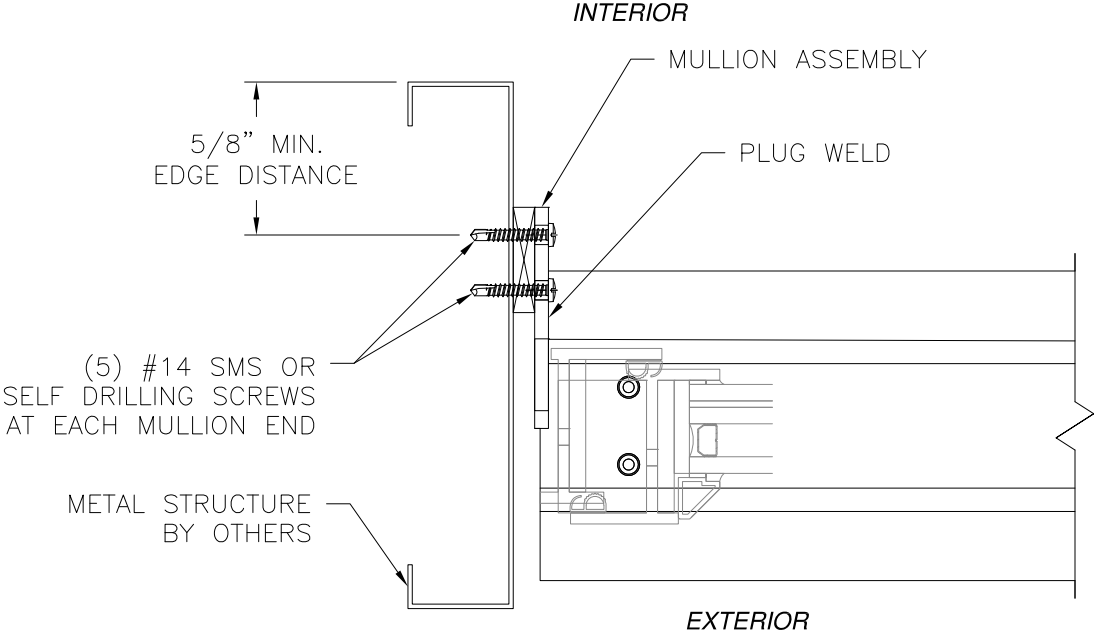
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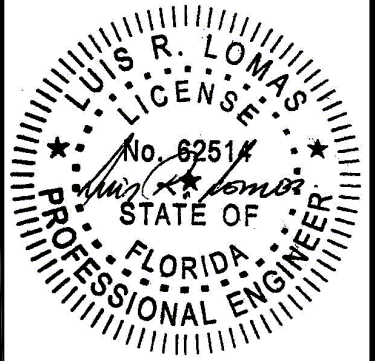
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INSTALLATION DETAIL C
METAL STRUCTURE

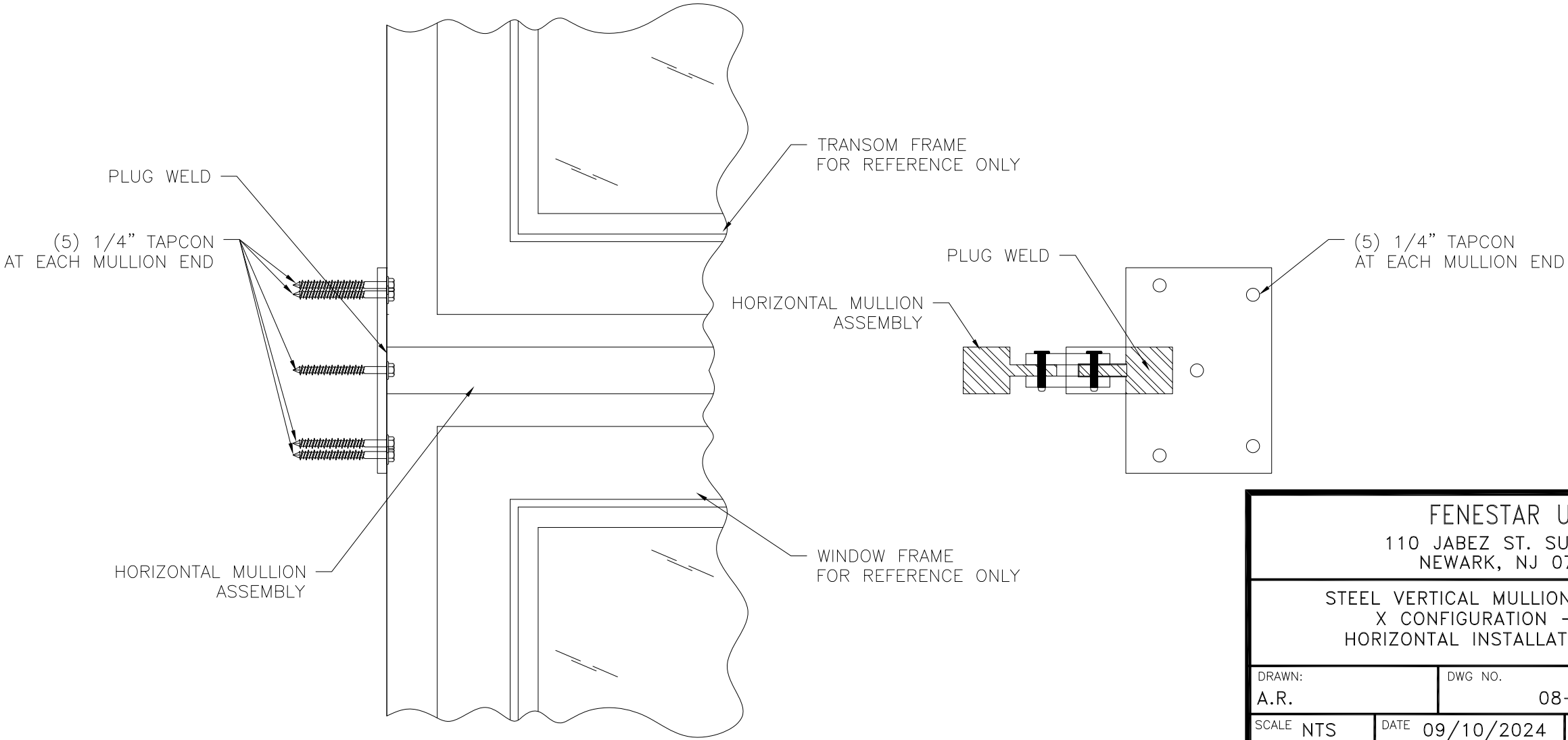
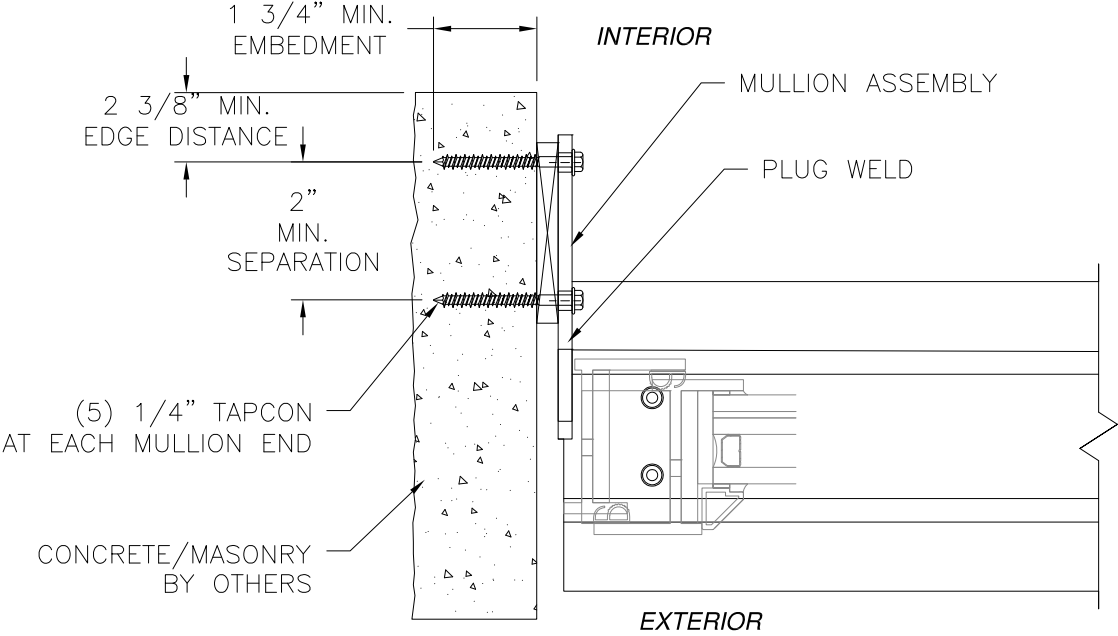
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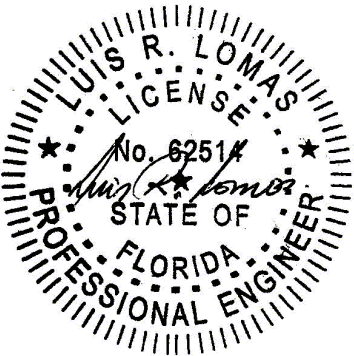
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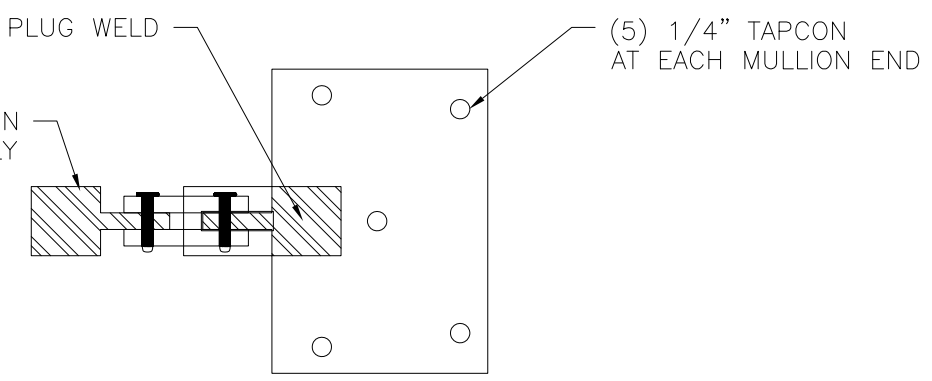
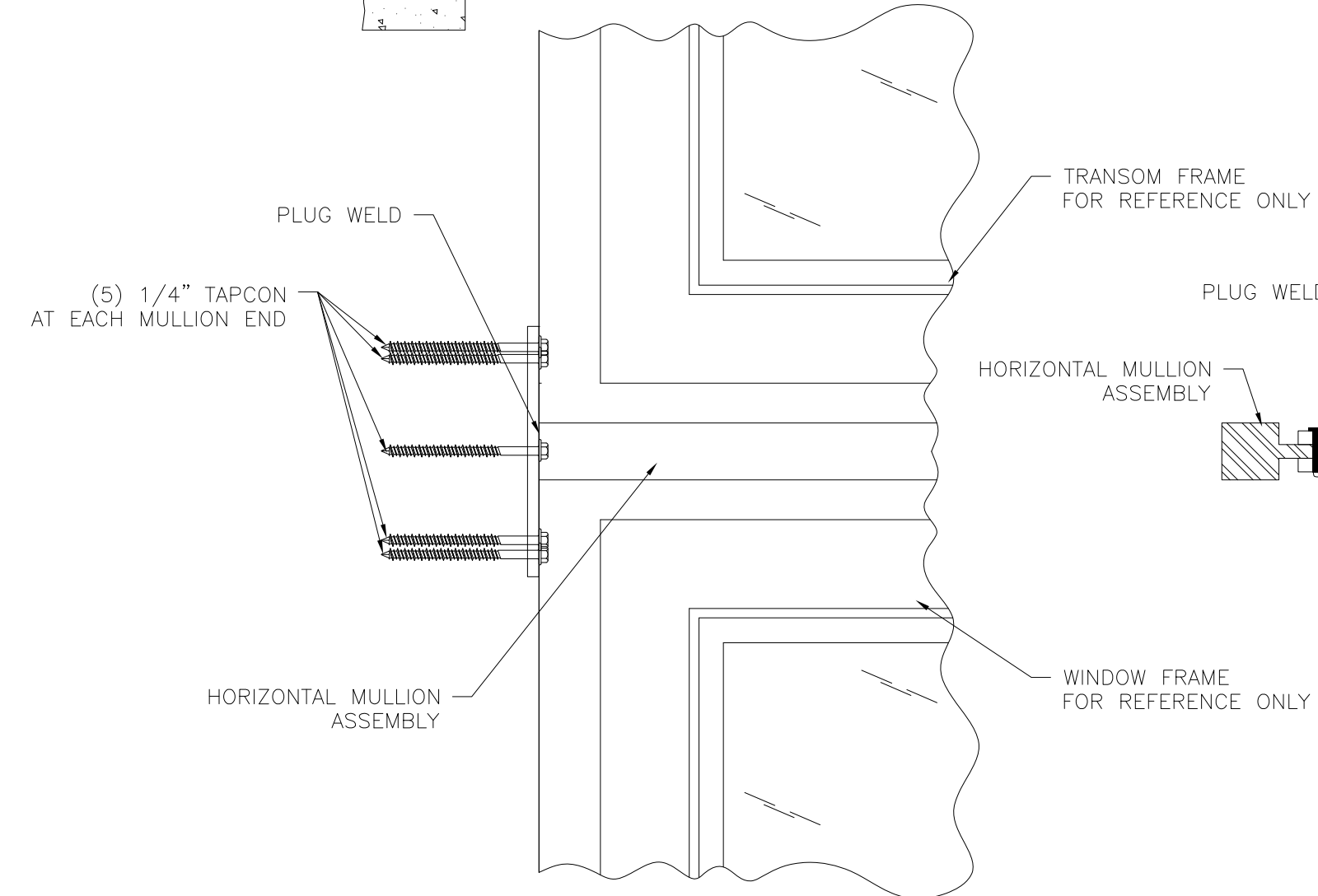
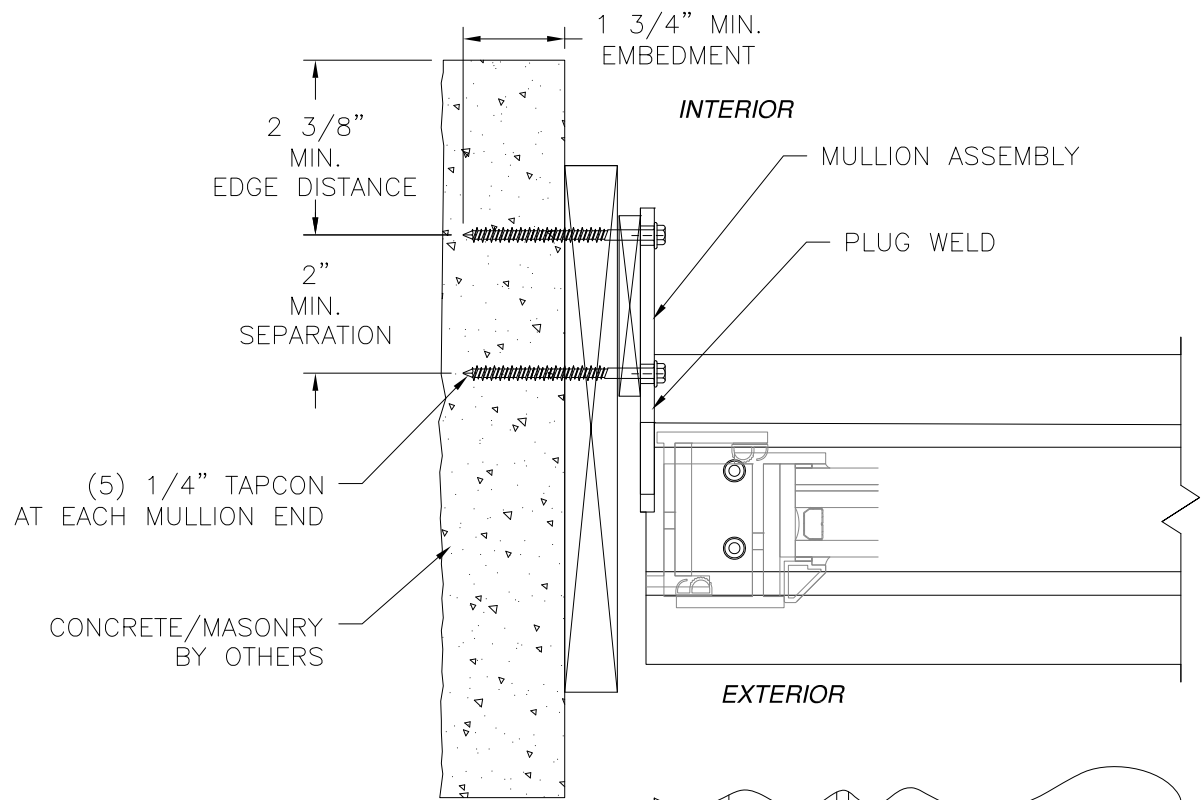
INSTALLATION DETAIL C
CONCRETE/MASONRY

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STEEL VERTICAL MULLION ASSEMBLY X CONFIGURATION – IMPACT HORIZONTAL INSTALLATION DETAILS		
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L. ROBERTO LOMAS P.E. 208 7th Ave, INDIALANTIC, FL 32903 434-688-0609 rllomas@lrlomaspe.com		



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INSTALLATION DETAIL C
CONCRETE/MASONRY W/1X BUCK

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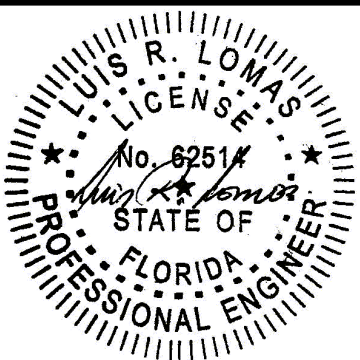
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FENESTAR USA
110 JABEZ ST. SUITE 309
NEWARK, NJ 07105

STEEL VERTICAL MULLION ASSEMBLY
X CONFIGURATION – IMPACT
HORIZONTAL INSTALLATION DETAILS

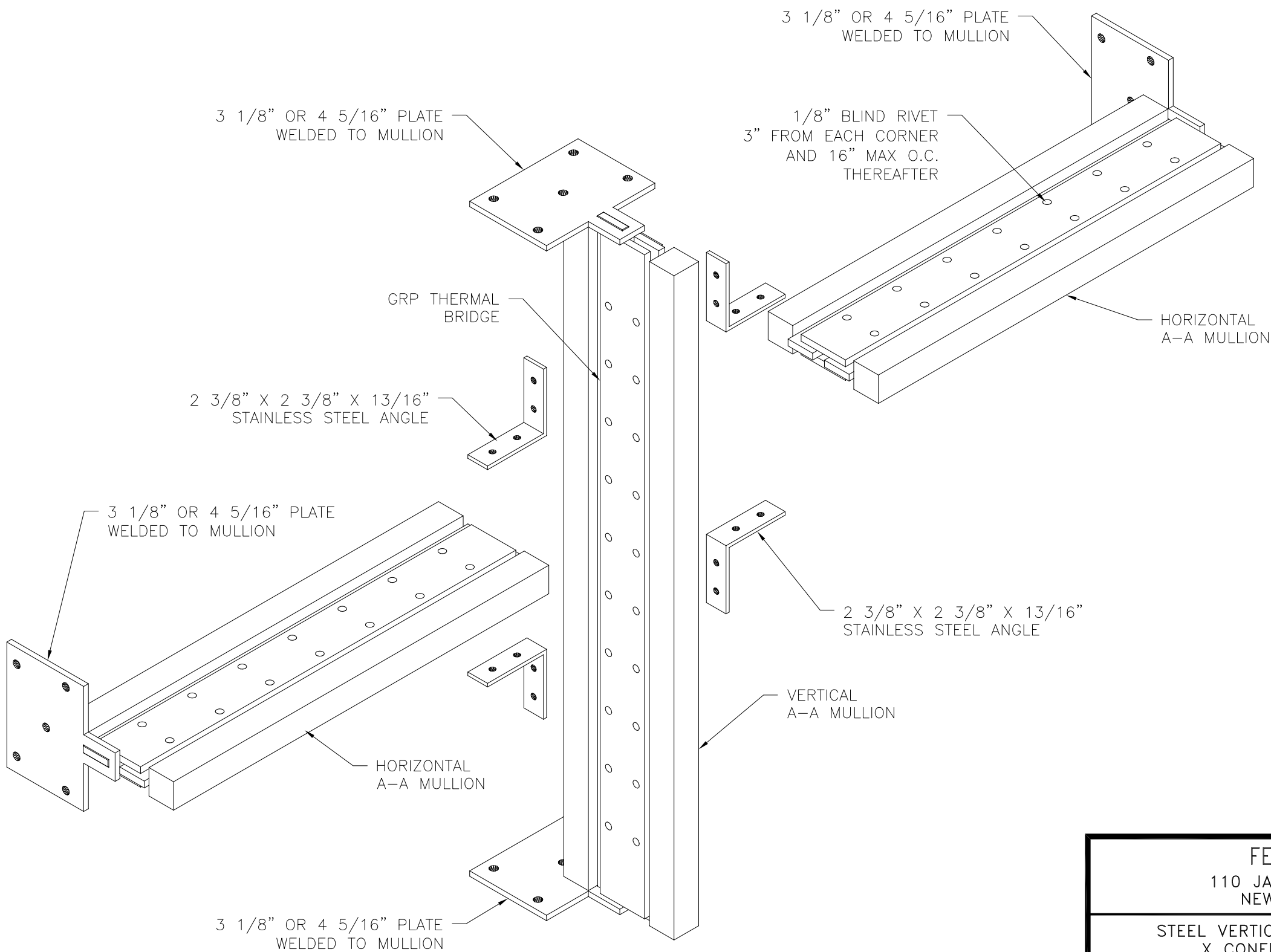
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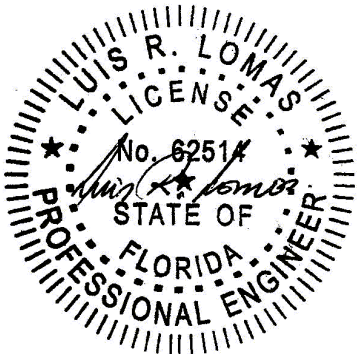
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VERTICAL TO HORIZONTAL MULLIONS INSTALLATION

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STEEL VERTICAL MULLION ASSEMBLY X CONFIGURATION – IMPACT CONNECTION DETAILS		
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SCALE NTS	DATE 09/10/2024	SHEET 13 OF 13
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