

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. WINDOWS MUST BE APPROVED UNDER SEPARATE APPROVAL.
- 6) SINGLE WINDOWS TO BE MULLED ARE NOT LIMITED TO THOSE SHOWN IN THIS DRAWING. WINDOWS MUST BE MANUFACTURED BY MI WINDOWS AND DOORS, INC.
- 7) DESIGN PRESSURE OF MULLED UNIT SHALL BE CONTROLLED BY THE LESSER DESIGN PRESSURE OF THE MULLION OR THE INDIVIDUAL WINDOW OR DOOR 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.

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.

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

ANCHORING NOTES:

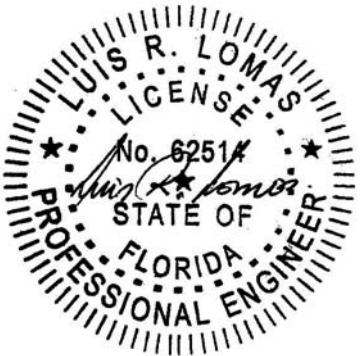
- 1) FOR ANCHORING INTO WOOD FRAMING OR 2X BUCK USE #10 WOOD SCREW WITH SUFFICIENT LENGTH TO ACHIEVE A 1 3/8" MINIMUM EMBEDMENT. LOCATE ANCHORS AS SHOWN IN INSTALLATION DETAILS SHEET 3.
- 2) FOR ANCHORING INTO CONCRETE USE 3/16" ELCO ULTRA CON TAPCON WITH SUFFICIENT LENGTH TO ACHIEVE A 1 1/4" MINIMUM EMBEDMENT WITH 1" MINIMUM EDGE DISTANCE. LOCATE ANCHORS AS SHOWN IN INSTALLATION DETAILS SHEET 4.
- 3) FOR ANCHORING INTO METAL FRAMING USE #10 SMS OR SELF DRILLING SCREW WITH SUFFICIENT LENGTH TO ACHIEVE A 3 THREADS MINIMUM BEYOND STRUCTURE INTERIOR WALL. 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:
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 (.048") FY=33KSI/FU=52KSI OR ALUMINUM 6063-T5 FU=30KSI .048" THICK MINIMUM.
- 6) FOR ATTACHING WINDOW UNITS TO MULLION USE #10 SELF TAPPING SCREWS WITH SUFFICIENT LENGTH TO ACHIEVE A MINIMUM EMBEDMENT OF THREE THREADS PAST THE MULLION WALL. LOCATE SCREWS 6" FROM EACH MULLION END AND 12" MAX. O.C. THEREAFTER. STAGGER SCREWS AT EACH WINDOW.

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	REVISED INSTALLATION DETAILS	06/10/15	R.L.
B	REVISED ANCHORING NOTES	06/07/17	R.L.

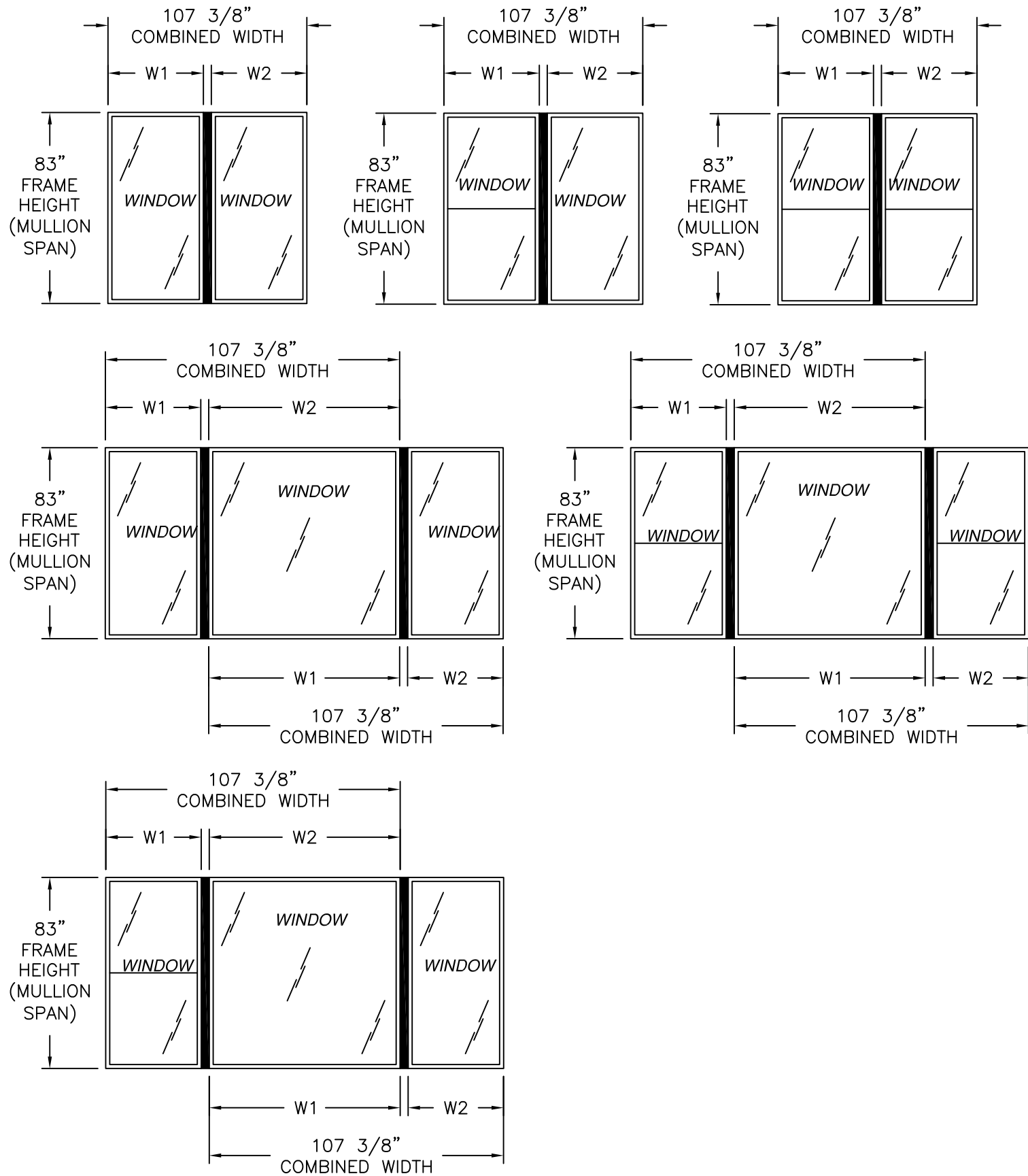
TABLE OF CONTENTS	
SHEET NO.	DESCRIPTION
1	NOTES
2	CONFIGURATIONS AND DP CHART
3	INSTALLATION DETAILS
4	COMPONENTS

MI WINDOWS AND DOORS, LLC 650 WEST MARKET STREET GRATZ, PA 17030-0370		
CM-18514 – VERTICAL MULLION 83" MULLION SPAN NOTES		
DRAWN: V.L.	DWG NO. 08-01442	REV B
SCALE NTS	DATE 01/11/12	SHEET 1 OF 4
L. ROBERTO LOMAS P.E. 1432 WOODFORD RD LEWISVILLE, NC 27023 434-688-0609 rllomas@rlomaspe.com		

SIGNED: 10/16/2017



Luis R. Lomas P.E.
FL No.: 62514



APPROVED CONFIGURATIONS
MULTIPLE UNITS MAYBE MULLED TOGETHER AS LONG AS COMBINED
WIDTH DOES NOT EXCEED 107 3/8" AS SHOWN HEREIN.

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	REVISED INSTALLATION DETAILS	06/10/15	R.L.
B	REVISED ANCHORING NOTES	06/07/17	R.L.

Design pressure rating (psf) Units anchored into wood framing							
Mullion span (in)	Tributary width (in)						
	18.13	25.50	36.00	42.00	48.00	52.13	
25.00	120.0	120.0	120.0	120.0	120.0	120.0	
37.38	120.0	120.0	120.0	120.0	120.0	120.0	
49.63	120.0	98.3	81.2	76.9	75.2	75.1	
62.00	95.1	70.0	53.2	48.1	44.8	43.3	
65.63	79.9	58.6	44.2	39.7	36.7	35.3	
72.00	60.2	43.9	32.7	29.2	26.7	25.5	
84.00	37.7	27.3	20.1	17.7	16.0	15.1	

Design pressure rating (psf) Units anchored into masonry/concrete							
Mullion span (in)	Tributary width (in)						
	18.13	25.50	36.00	42.00	48.00	52.13	
25.00	120.0	120.0	120.0	120.0	120.0	120.0	
37.38	120.0	120.0	120.0	120.0	120.0	120.0	
49.63	120.0	109.2	90.2	85.4	83.5	83.4	
62.00	95.1	70.0	53.2	48.1	44.8	43.3	
65.63	79.9	58.6	44.2	39.7	36.7	35.3	
72.00	60.2	43.9	32.7	29.2	26.7	25.5	
84.00	37.7	27.3	20.1	17.7	16.0	15.1	

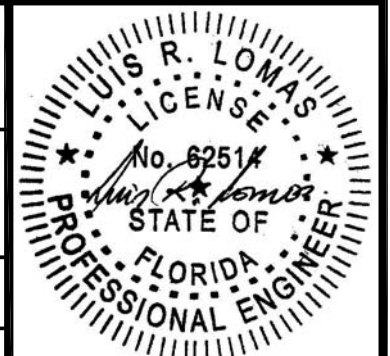
Design pressure rating with rebar option (psf) Units anchored into wood framing							
Mullion span (in)	Tributary width (in)						
	18.13	25.50	36.00	42.00	48.00	52.13	
25.00	120.0	120.0	120.0	120.0	120.0	120.0	
37.38	120.0	120.0	120.0	120.0	120.0	120.0	
49.63	120.0	98.3	81.2	76.9	75.2	75.1	
62.00	96.4	73.6	58.4	53.7	50.7	49.4	
65.63	90.2	68.6	53.9	49.3	46.3	44.8	
72.00	81.0	61.2	45.8	40.8	37.3	35.6	
84.00	52.7	38.1	28.0	24.7	22.3	21.1	

Design pressure rating with rebar option (psf) Units anchored into masonry/concrete							
Mullion span (in)	Tributary width (in)						
	18.13	25.50	36.00	42.00	48.00	52.13	
25.00	120.0	120.0	120.0	120.0	120.0	120.0	
37.38	120.0	120.0	120.0	120.0	120.0	120.0	
49.63	120.0	109.2	90.2	85.4	83.5	83.4	
62.00	107.1	81.8	64.8	59.7	56.3	54.8	
65.63	100.2	76.2	59.9	54.8	51.3	49.4	
72.00	84.2	61.4	45.8	40.8	37.3	35.6	
84.00	52.7	38.1	28.0	24.7	22.3	21.1	

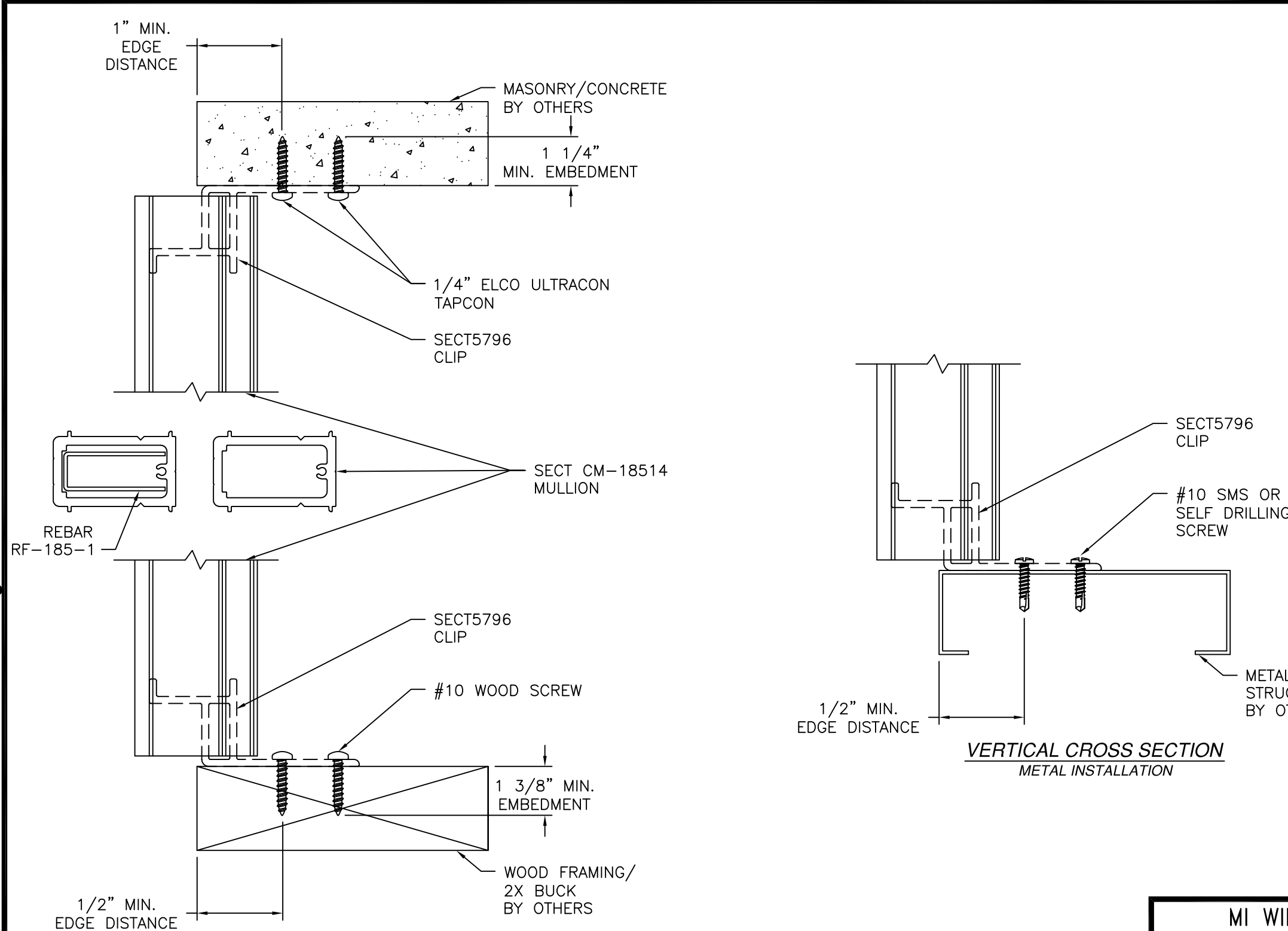
LARGE AND SMALL MISSILE IMPACT, LEVEL D, WIND ZONE 3
DIMENSIONS IN CHART ARE FRAME DIMENSIONS AND DO NOT
INCLUDE FLANGE

SIGNED: 10/16/2017

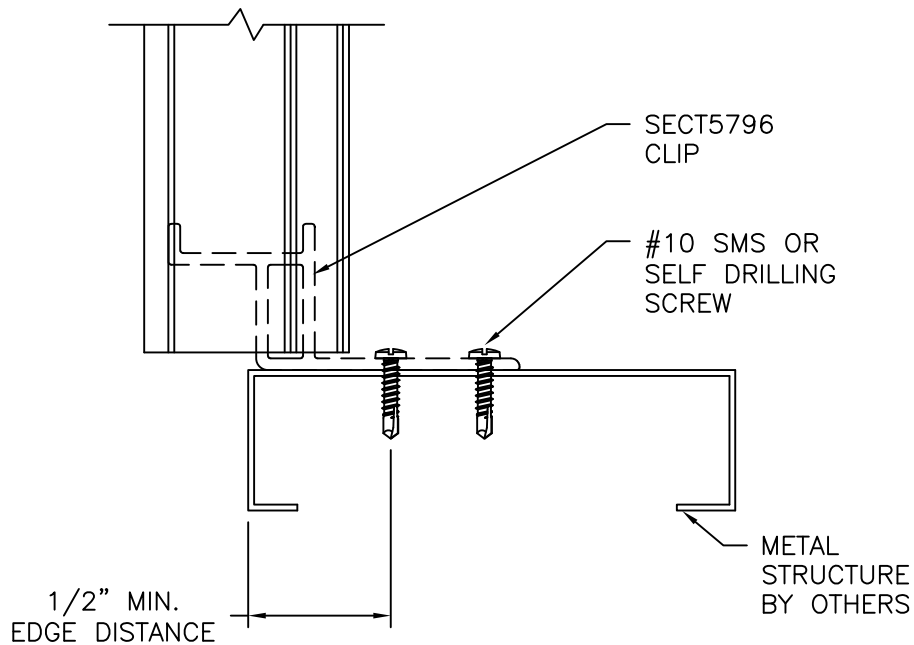
MI WINDOWS AND DOORS, LLC 650 WEST MARKET STREET GRATZ, PA 17030-0370		
CM-18514 - VERTICAL MULLION 83" MULLION SPAN CONFIGURATIONS AND DP CHARTS		
DRAWN: V.L.	DWG NO. 08-01442	REV B
SCALE NTS	DATE 01/11/12	SHEET 2 OF 4
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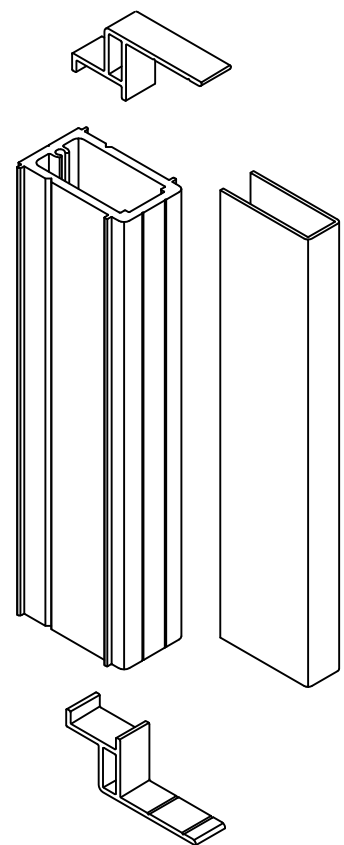
Luis R. Lomas P.E.
FL No.: 62514



VERTICAL CROSS SECTION
MASONRY/CONCRETE AND WOOD FRAMING
INSTALLATION



VERTICAL CROSS SECTION
METAL INSTALLATION



CLIP INSTALLATION

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
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MI WINDOWS AND DOORS, LLC
650 WEST MARKET STREET
GRATZ, PA 17030-0370

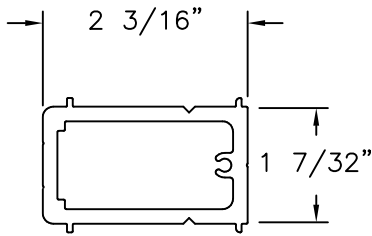
CM-18514 - VERTICAL MULLION
83" MULLION SPAN
INSTALLATION DETAILS

DRAWN: V.L.	DWG NO. 08-01442	REV B
SCALE NTS	DATE 01/11/12	SHEET 3 OF 4

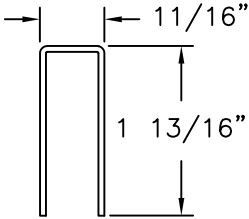
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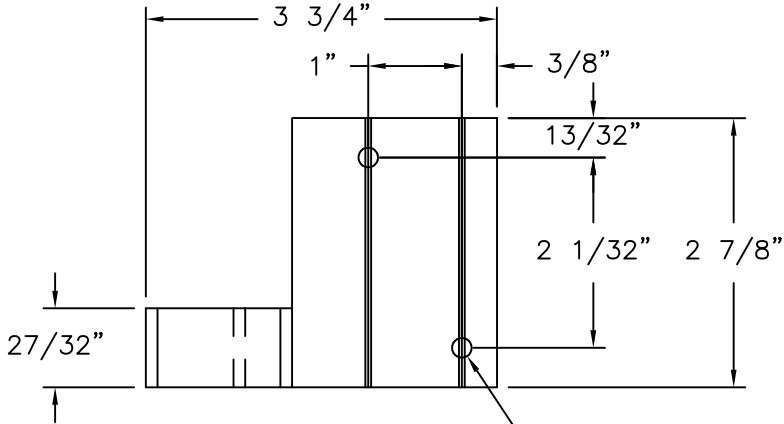
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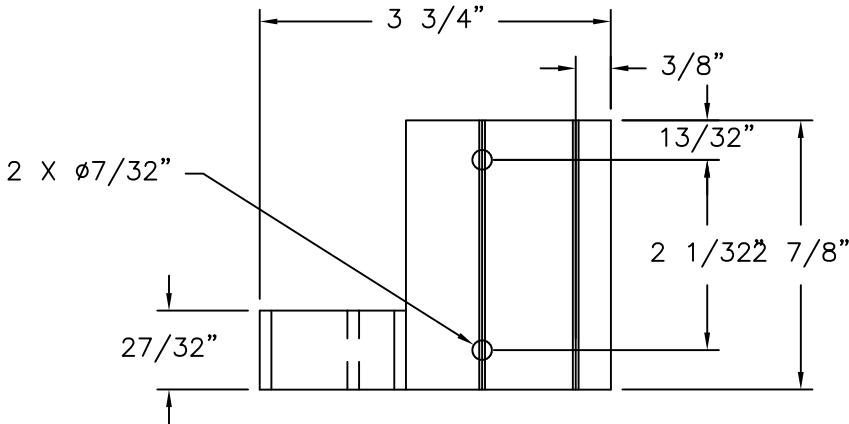
SECT CM-18514 MULLION
ALUMINUM 6005-T5 .125" THICK



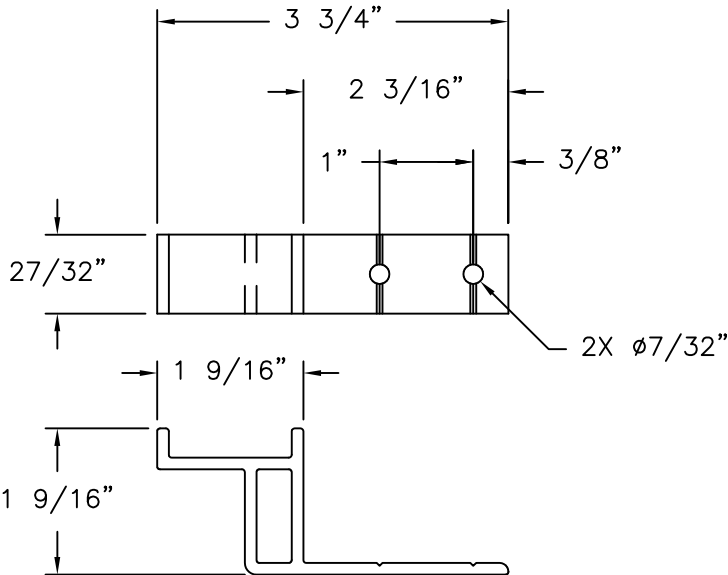
RF-185-1 REBAR
16 GA (.063") GALVANIZED STEEL



SECT5796 CLIP
FOR CONCRETE INSTALLATION
ALUMINUM 6063-T5 .125" THICK



SECT5796 CLIP
FOR CONCRETE INSTALLATION
ALUMINUM 6063-T5 .125" THICK



SECT5796 CLIP
FOR WOOD FRAMING INSTALLATION
ALUMINUM 6063-T5 .125" THICK

MI WINDOWS AND DOORS, LLC
650 WEST MARKET STREET
GRATZ, PA 17030-0370

CM-18514 – VERTICAL MULLION
83" MULLION SPAN
COMPONENTS

DRAWN:
V.L.

DWG NO.
08-01442

REV
B

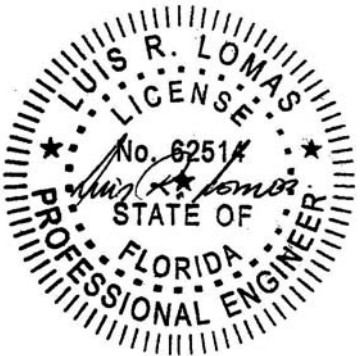
SCALE
NTS

DATE
01/11/12

SHEET
4 OF 4

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