REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

NOTES:

1) THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH REQUIREMENTS OF THE 2006 IBC AND THE 2006 IRC WITH STATE OF TEXAS MODIFICATIONS AND WITH THE 2009 IBC, 2009 IRC, 2012 IBC, 2012 IRC, 2015 IBC AND 2015 IRC.
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 TEXAS 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 ULTRCON 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 3.
3) FOR ANCHORING INTO METAL USE #10 SMS OR SELF DRILLING SCREW WITH SUFFICIENT LENGTH TO ACHIEVE 3 THREADS MINIMUM BEYOND STRUCTURE INTERIOR WALL. LOCATE ANCHORS AS SHOWN IN INSTALLATION DETAILS SHEET 3.
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 .062" 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.

SIGNED: 10/24/2019

TABLE OF CONTENTS

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

5764 – VERTICAL MULLION
83" MULLION SPAN
GENERAL NOTES

DRAWN:	DWG NO.	REV
A.R.	08–03429	–

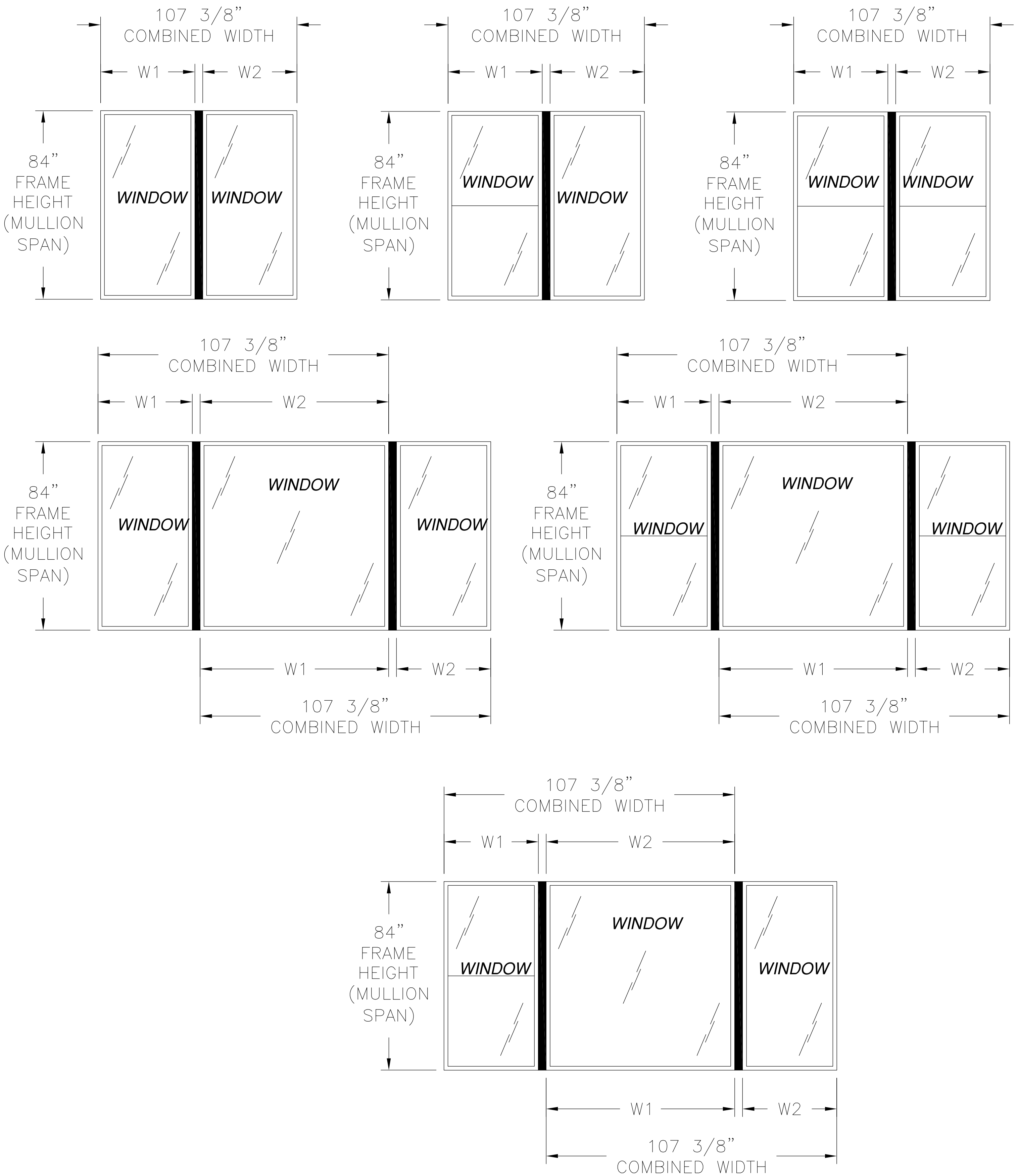
SCALE	DATE	SHEET
NTS	04/16/19	1 OF 4

L. ROBERTO LOMAS P.E.
1432 WOODFORD RD LEWISVILLE, NC 27023
434-688-0609 rllomas@lrlomaspe.com

STATE OF TEXAS
LUIS R. LOMAS
101889
LICENSED
PROFESSIONAL ENGINEER

Luis R. Lomas P.E.
TX No.: 101889

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



APPROVED CONFIGURATIONS

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

Design pressure rating (psf)

For units installed in wood and metal 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	71.0	52.2	39.7	35.9	33.4	32.3
65.63	59.6	43.7	33.0	29.6	27.4	26.3
72.00	44.9	32.7	24.4	21.8	19.9	19.0
84.00	28.1	20.3	-	-	-	-

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

Design pressure rating (psf)

For units installed in 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	105.9	84.1	78.6	76.4	76.3
62.00	71.0	52.2	39.7	35.9	33.4	32.3
65.63	59.6	43.7	33.0	29.6	27.4	26.3
72.00	44.9	32.7	24.4	21.8	19.9	19.0
84.00	28.1	20.3	-	-	-	-

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

Design pressure rating (psf) with rebar

For units installed in wood and metal 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	95.2	70.0	53.3	48.1	44.8	43.4
65.63	80.0	58.6	44.2	39.7	36.7	35.3
72.00	60.3	43.9	32.8	29.2	26.7	25.5
84.00	37.7	27.3	20.1	17.7	16.0	15.1

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

Design pressure rating (psf) with rebar

For units installed in masonry

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	95.2	70.0	53.3	48.1	44.8	43.4
65.63	80.0	58.6	44.2	39.7	36.7	35.3
72.00	60.3	43.9	32.8	29.2	26.7	25.5
84.00	37.7	27.3	20.1	17.7	16.0	15.1

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

SIGNED: 10/24/2019

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

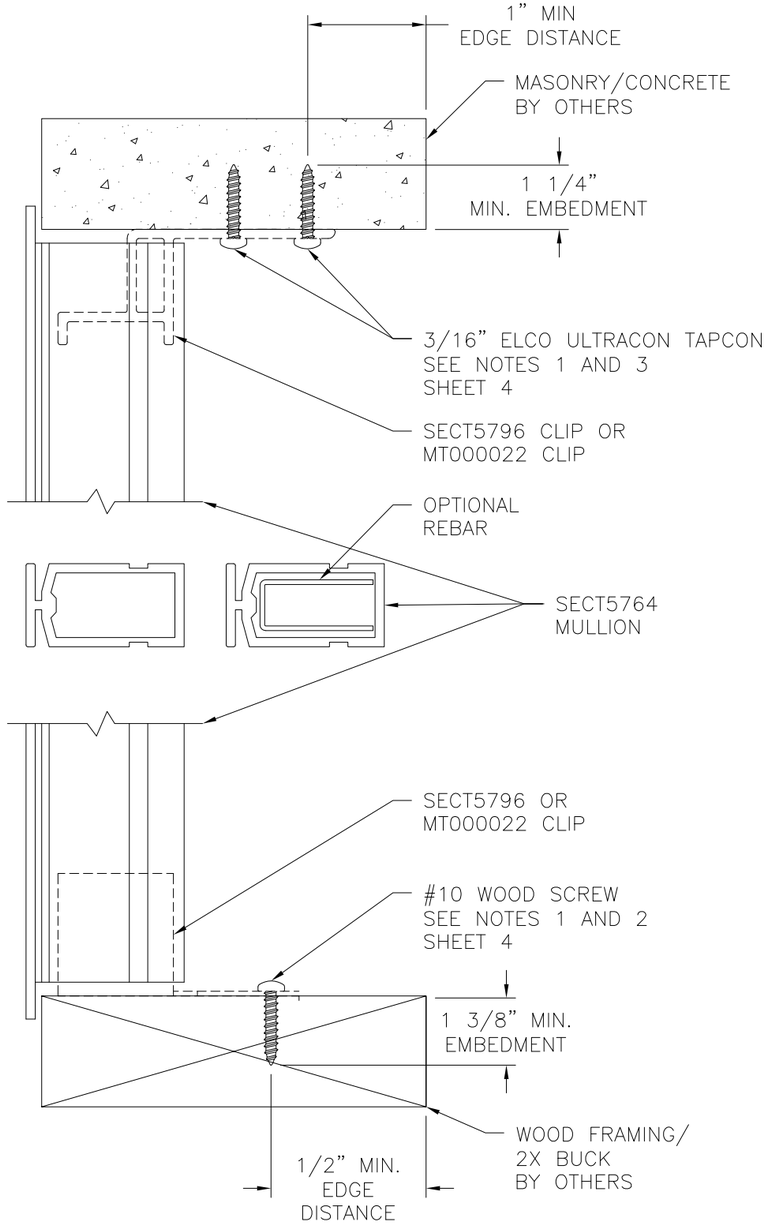
5764 – VERTICAL MULLION
83" MULLION SPAN
APPROVED CONFIGURATIONS AND RATING CHARTS

DRAWN:	DWG NO.	REV
A.R.	08-03429	–
SCALE NTS	DATE 04/16/19	SHEET 2 OF 4

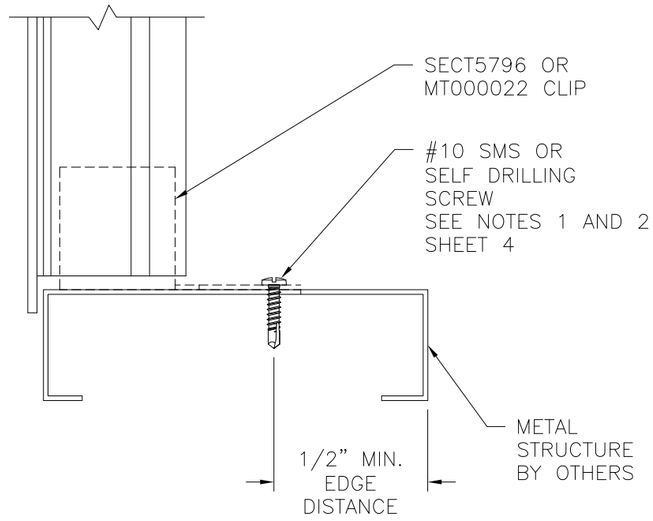
L. ROBERTO LOMAS P.E.
1432 WOODFORD RD LEWISVILLE, NC 27023
434-688-0609 rllomas@lrlomaspe.com

Luis R. Lomas P.E.
TX No.: 101889

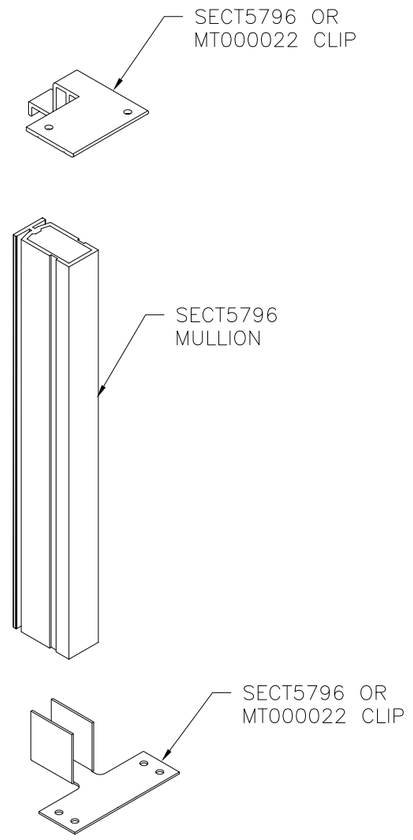
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



VERTICAL CROSS SECTION
MASONRY/CONCRETE AND WOOD FRAMING INSTALLATION



VERTICAL CROSS SECTION
METAL INSTALLATION



CLIP INSTALLATION

SIGNED: 10/24/2019

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

5764 - VERTICAL MULLION
83" MULLION SPAN
INSTALLATION DETAILS

DRAWN:	DWG NO.	REV
A.R.	08-03429	-
SCALE NTS	DATE 04/16/19	SHEET 3 OF 4

L. ROBERTO LOMAS P.E.
1432 WOODFORD RD LEWISVILLE, NC 27023
434-688-0609 rllomas@lrlomaspe.com

STATE OF TEXAS
LUIS R. LOMAS
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Luis R. Lomas P.E.
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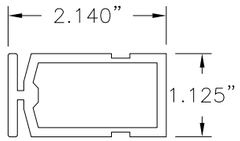
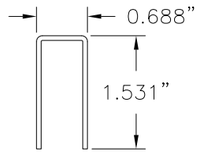
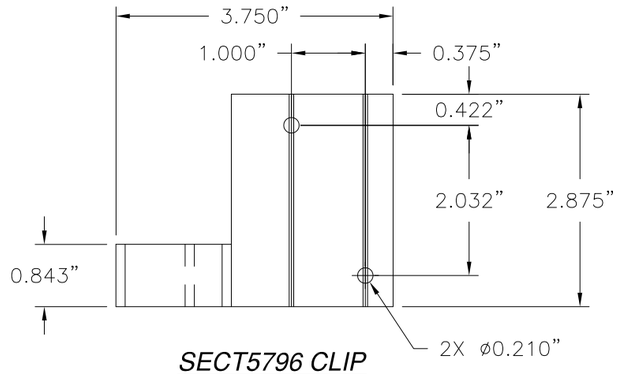
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



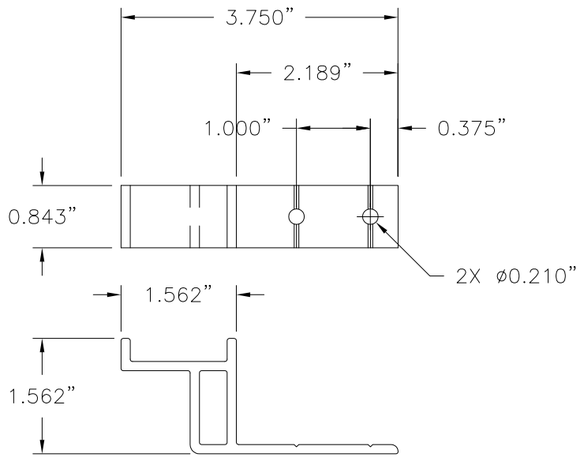
SECT5764 MULLION
ALUMINUM 6005-T5 .125" THICK



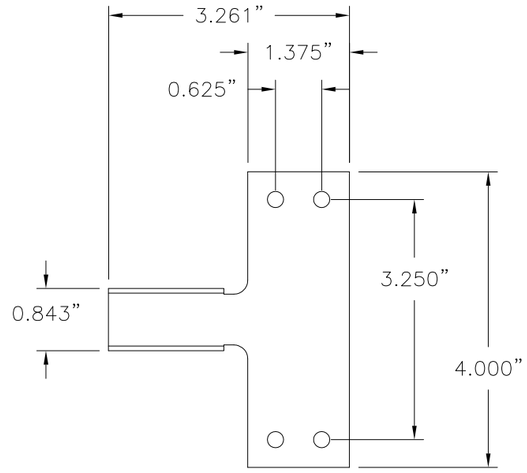
RF-185-2 REBAR
16 GA (.062) GALVANIZED STEEL



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



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



MT000022 CLIP
16GA (.063") GALVANIZED STEEL
SEE NOTE 2 & 3, THIS SHEET.

NOTES:
1. CLIPS MAY BE USED IN MASONRY/CONCRETE OR WOOD FRAMING SUBSTRATE.
2. FOR WOOD & METAL INSTALLATION USE ALL FOUR ANCHOR LOCATIONS.
3. FOR CONCRETE INSTALLATION USE 2 ANCHOR LOCATIONS ONLY WITH 3 1/4” SEPARATION BETWEEN ANCHORS.

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MI WINDOWS AND DOORS, LLC
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5764 – VERTICAL MULLION
83” MULLION SPAN
COMPONENTS

DRAWN:	DWG NO.	REV
A.R.	08–03429	–
SCALE NTS	DATE 04/16/19	SHEET 4 OF 4

L. ROBERTO LOMAS P.E.
1432 WOODFORD RD LEWISVILLE, NC 27023
434-688-0609 rllomas@lrlomaspe.com

STATE OF TEXAS
LUIS R. LOMAS
101889
LICENSED
PROFESSIONAL ENGINEER

Luis R. Lomas P.E.
TX No.: 101889