

NOTES:

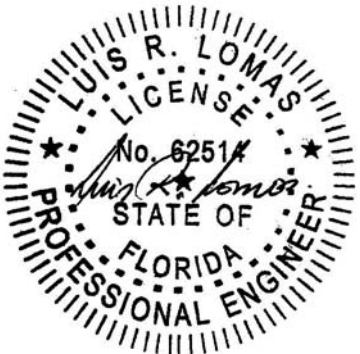
1. THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH REQUIREMENTS OF THE FLORIDA BUILDING CODE.
2. WOOD FRAMING AND MASONRY OPENING TO BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO STRUCTURE. FRAMING AND MASONRY OPENING IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.
3. 1X BUCK OVER MASONRY/CONCRETE IS OPTIONAL. WHERE 1X BUCK IS NOT USED DISSIMILAR MATERIALS MUST BE SEPARATED WITH APPROVED COATING OR MEMBRANE. SELECTION OF COATING OR MEMBRANE IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.
4. 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.
5. FRAME MATERIAL: ALUMINUM 6063-T5.
6. UNITS MUST BE GLAZED PER ASTM E1300-04/09, WITH SAFETY GLASS.
7. APPROVED IMPACT PROTECTIVE SYSTEM IS REQUIRED FOR THIS PRODUCT IN WIND BORNE DEBRIS REGIONS.
8. SHIM AS REQUIRED AT EACH INSTALLATION ANCHOR WITH LOAD BEARING SHIM. SHIM WHERE SPACE OF 1/16" OR GREATER OCCURS. MAXIMUM ALLOWABLE SHIM STACK TO BE 1/4".
9. DOOR ASSEMBLIES INSTALLED WHERE OVERHANG RATIO IS EQUAL OR GREATER THAN 1.0 DO NOT REQUIRE WATER INFILTRATION RESISTANCE.
OVERHANG RATIO = OVERHANG LENGTH/OVERHANG HEIGHT
10. FOR ANCHORING INTO WOOD FRAMING OR 2X BUCK USE #10 WOOD SCREWS WITH SUFFICIENT LENGTH TO ACHIEVE A 1 3/8" MINIMUM EMBEDMENT INTO SUBSTRATE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
11. FOR ANCHORING INTO MASONRY/CONCRETE USE 3/16" TAPCONS WITH SUFFICIENT LENGTH TO ACHIEVE A 1 1/4" MINIMUM EMBEDMENT INTO SUBSTRATE WITH 1" MINIMUM EDGE DISTANCE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
12. FOR ANCHORING INTO METAL STRUCTURE USE #10 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.
13. ALL FASTENERS TO BE CORROSION RESISTANT.
14. 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 3,192 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 .048" THICK MINIMUM
15. APPROVED CONFIGURATIONS: OX, XO, PX, XP, OXXO, PXXP, PIXXIP, PIX, XIP, PIIX, XIIP, PIIX AND XIIP.

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ADDED HOOK INSTALLATION	01/07/13	R.L.
B	ADDED FLANGE & FIN INSTALLATIONS	12/09/13	R.L.
C	REVISED INSTALLATION DETAILS	10/12/15	R.L.
D	REVISED INSTALLATION DETAILS	06/22/17	R.L.

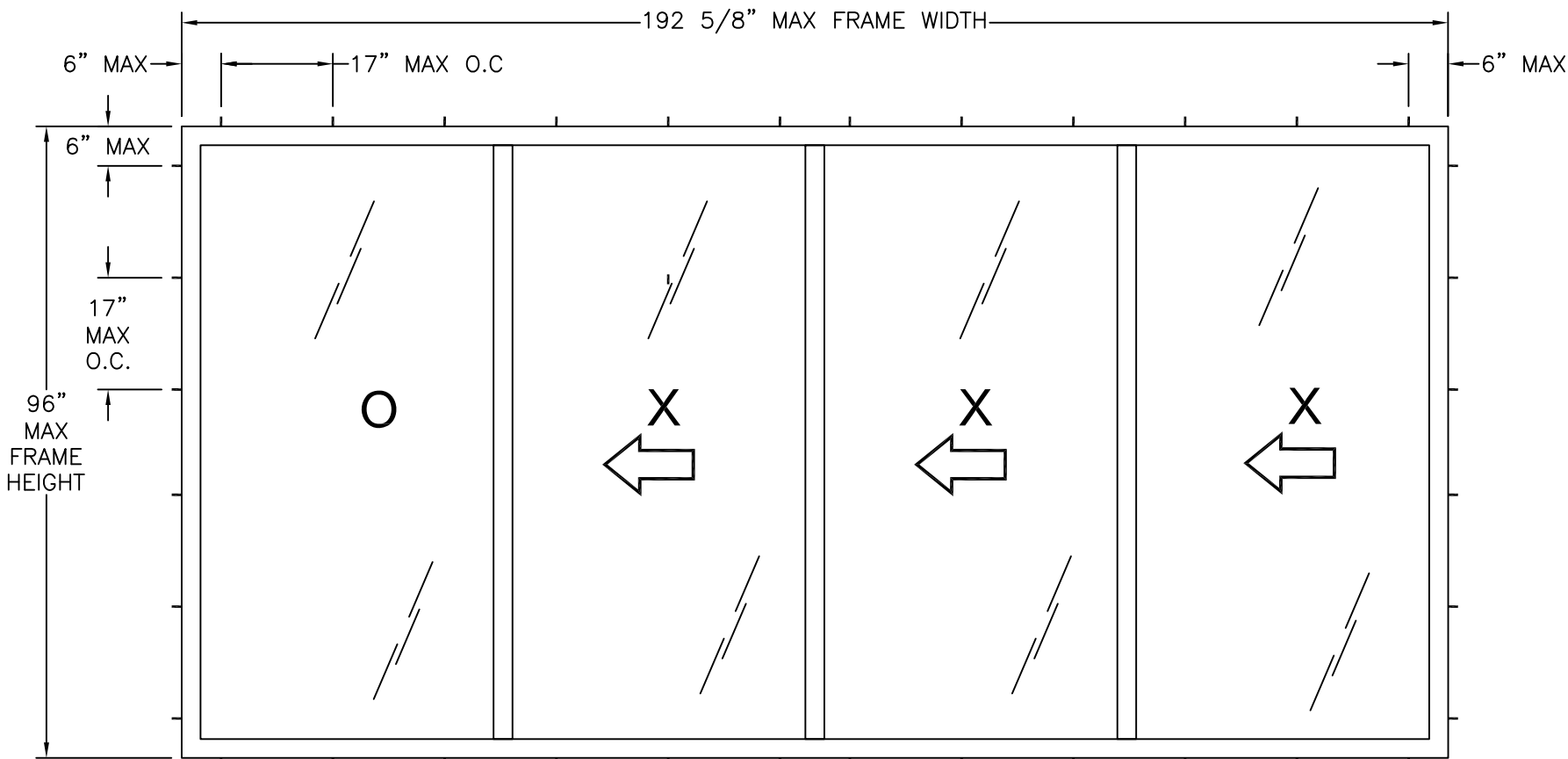
TABLE OF CONTENTS	
SHEET NO.	DESCRIPTION
1	NOTES
2 - 3	ELEVATION AND ANCHORING
4 - 10	INSTALLATION DETAILS

MI WINDOWS AND DOORS LLC 650 WEST MARKET STREET GRATZ, PA 17030		
SERIES 420 OXXX SGD REINFORCED NON - IMPACT NOTES		
DRAWN: J.L.	DWG NO. 08-01831	REV D
SCALE NTS	DATE 10/23/12	SHEET 1 OF 10
L. ROBERTO LOMAS P.E. 1432 WOODFORD RD LEWISVILLE, NC 27023 434-688-0609 rllomas@lrlomaspe.com		

SIGNED: 06/22/2017



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



SERIES 420 OXXX SGD REINFORCED
EXTERIOR VIEW

DESIGN PRESSURE RATING	IMPACT RATING
±30.0PSF	NONE

REFER TO CHART #1 FOR OTHER UNITS RATINGS

- NOTES:
1. MAXIMUM PANEL SIZE: 48 1/2" x 95"
 2. MAXIMUM D.L.O.: 44 9/16" x 90 1/4"

HARDWARE SCHEDULE

A.	(1) FLAT MOUNTED HANDLE SET (99-04-145) AT 38 3/4" FROM PANEL BOTTOM
B.	(1) METALLIC TANDEM ROLLERS (99-17-195) AT EACH END OF PANEL BOTTOM RAILS
C.	(3) EXTRUDED ALUMINUM RETAINERS (4221) AT FIXED PANEL JAMB STILE 7 1/4" FROM EACH END AND AT MID-SPAN
D.	ALUMINUM 6063-T6 REINFORCEMENT (668) AT ALL PANEL INTERLOCKS
E.	ALUMINUM 6063-T5 (4237) INTERLOCK ADAPTOR AT INTERIOR FACE OF OPERABLE PANEL INTERLOCK
F.	STEEL C-CHANNEL REINFORCEMENT (9917520) INSERTED BETWEEN STILE AND PANEL ADAPTOR

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
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B	ADDED FLANGE & FIN INSTALLATIONS	12/09/13	R.L.
C	REVISED INSTALLATION DETAILS	10/12/15	R.L.
D	REVISED INSTALLATION DETAILS	06/22/17	R.L.

CHART #1
WHERE WATER INFILTRATION RESISTANCE IS REQUIRED AND
WHERE WATER INFILTRATION RESISTANCE IS NOT REQUIRED
SEE NOTE 9 SHEET 1

Design pressure chart (psf)								
Frame Height (in)	Single Panel and Total Frame Width (in)							
	30.0		36.0		42.0		48.2	
	120.00		144.00		168.00		192.63	
	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg
78.0	55.0	55.0	48.1	48.1	43.4	43.4	40.0	40.0
80.0	53.3	53.3	46.6	46.6	41.9	41.9	38.6	38.6
84.0	50.2	50.2	43.7	43.7	39.3	39.3	36.0	36.0
88.0	47.4	47.4	41.2	41.2	36.9	36.9	33.8	33.8
92.0	45.0	45.0	39.0	39.0	34.8	34.8	31.8	31.8
96.0	42.8	42.8	37.0	37.0	33.0	33.0	30.0	30.0

CHART #2

Number of anchor locations required								
Frame Height (in)	Single Panel and Total Frame Width (in)							
	30.0		36.0		42.0		48.2	
	120.0		144.0		168.0		192.6	
	H&S	Jamb	H&S	Jamb	H&S	Jamb	H&S	Jamb
78.0	8	5	9	5	11	5	12	5
80.0	8	5	9	5	11	5	12	5
84.0	8	6	9	6	11	6	12	6
88.0	8	6	9	6	11	6	12	6
92.0	8	6	9	6	11	6	12	6
96.0	8	6	9	6	11	6	12	6

(2) ANCHORS PER LOCATION
SEE CHART #2
FOR NUMBER OF
ANCHOR LOCATIONS REQUIRED

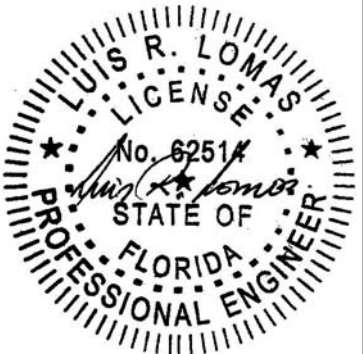
SIGNED: 06/22/2017

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

SERIES 420 OXXX SGD REINFORCED
NON – IMPACT
ELEVATION

DRAWN: J.L.	DWG NO. 08-01831	REV D
SCALE NTS	DATE 10/23/12	SHEET 2 OF 10

L. ROBERTO LOMAS P.E.
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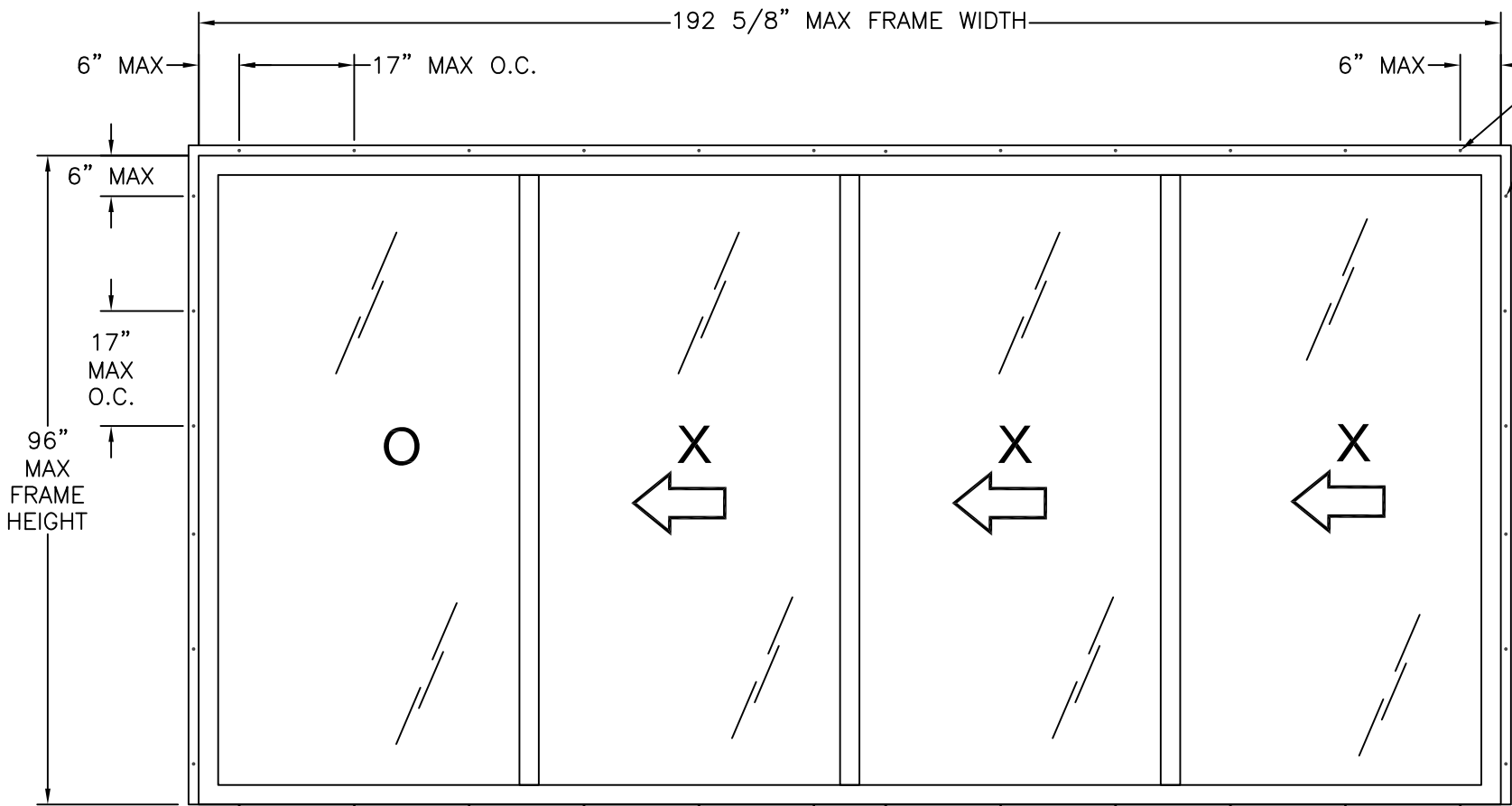
Luis R. Lomas P.E.
FL No.: 62514

REVISIONS			
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D	REVISED INSTALLATION DETAILS	06/22/17	R.L.

NOTES:
1. MAXIMUM PANEL SIZE: 48 1/2" x 95"
2. MAXIMUM D.L.O.: 44 9/16" x 90 1/4"

CHART #3

Number of anchor locations required								
Frame Height (in)	Single Panel and Total Unit Width (in)							
	30.0		36.0		42.0		48.2	
	120.0		144.0		168.0		192.6	
	H&S	Jamb	H&S	Jamb	H&S	Jamb	H&S	Jamb
78.0	9	5	10	5	11	5	12	5
80.0	9	5	10	5	11	5	12	5
84.0	9	6	9	6	11	6	12	6
88.0	9	6	9	6	11	6	12	6
92.0	9	6	9	6	11	6	12	6
96.0	9	6	9	6	11	6	12	6



SERIES 420 OXXX SGD REINFORCED
EXTERIOR VIEW

DESIGN PRESSURE RATING	IMPACT RATING
±30.0PSF	NONE

REFER TO CHART #1 FOR OTHER UNITS RATINGS

(2) ANCHORS PER LOCATION
AT SILL SEE CHART #3
FOR NUMBER OF
ANCHOR LOCATIONS REQUIRED

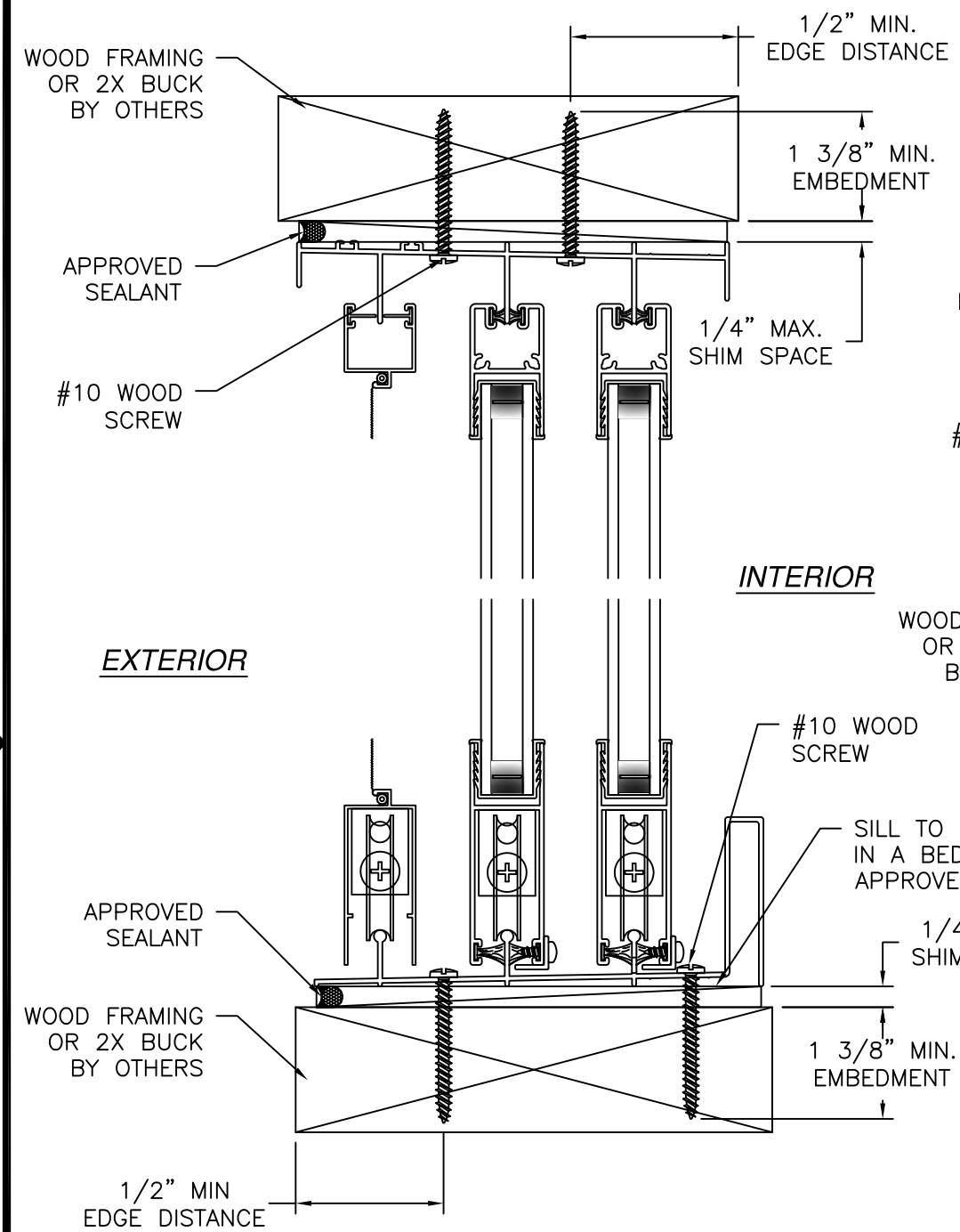
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MI WINDOWS AND DOORS LLC 650 WEST MARKET STREET GRATZ, PA 17030		
SERIES 420 OXXX SGD REINFORCED NON – IMPACT ELEVATION AND COMPONENTS		
DRAWN: J.L.	DWG NO. 08-01831	REV D
SCALE NTS	DATE 10/23/12	SHEET 3 OF 10
L. ROBERTO LOMAS P.E. 1432 WOODFORD RD LEWISVILLE, NC 27023 434-688-0609 rllomas@lrlomaspe.com		

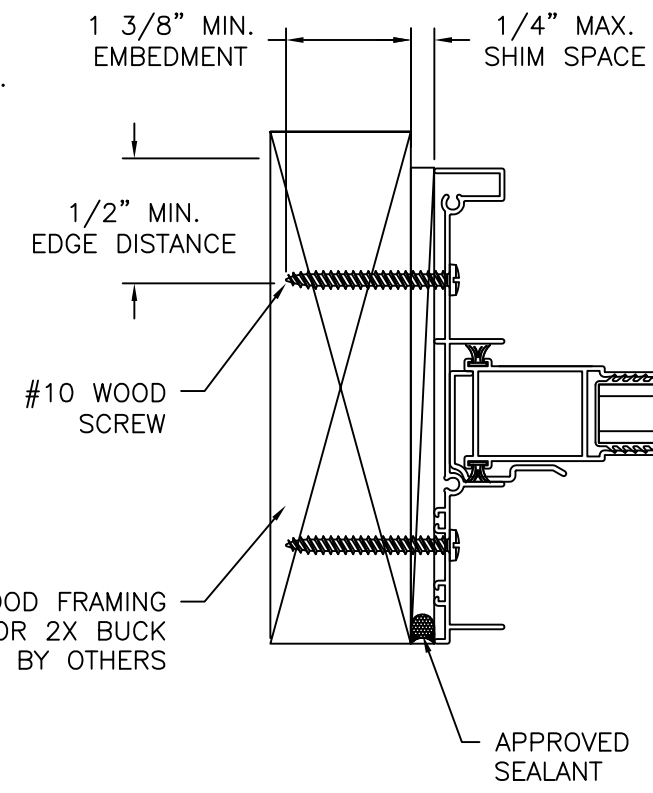
SIGNED: 06/22/2017



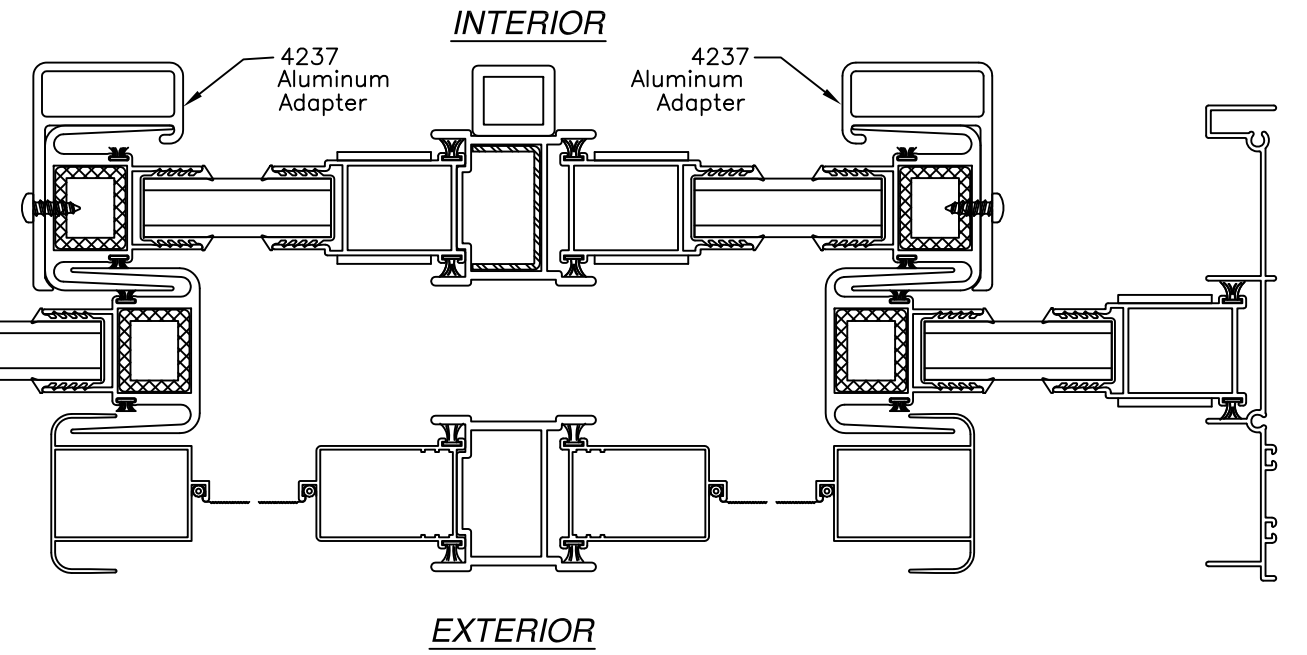
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FL No.: 62514



VERTICAL CROSS SECTION
WOOD FRAMING OR 2X BUCK INSTALLATION



REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
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D	REVISED INSTALLATION DETAILS	06/22/17	R.L.



JAMB INSTALLATION DETAIL
WOOD FRAMING OR 2X BUCK INSTALLATION

NOTES:
1. INTERIOR AND EXTERIOR FINISHES, BY OTHERS, NOT SHOWN FOR CLARITY.
2. PERIMETER AND JOINT SEALANT BY OTHERS TO BE DESIGNED IN ACCORDANCE WITH ASTM E2112

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

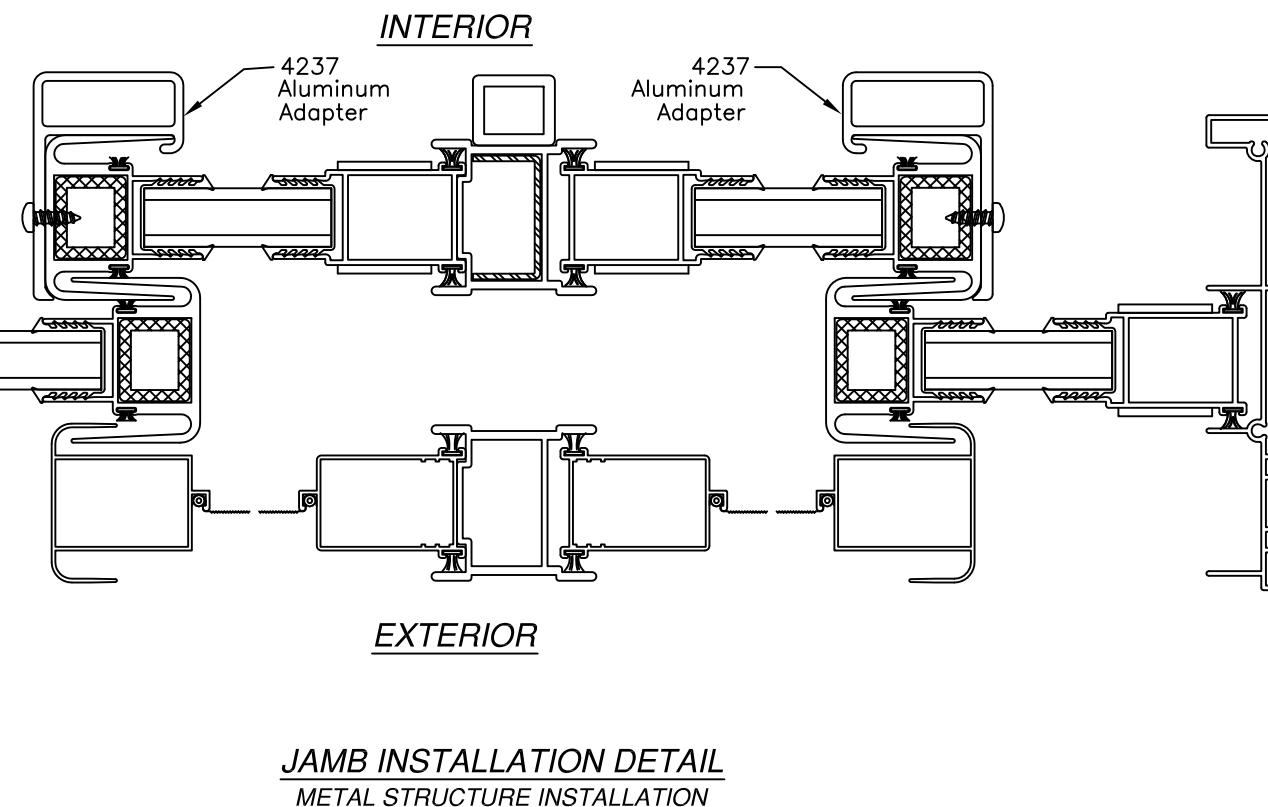
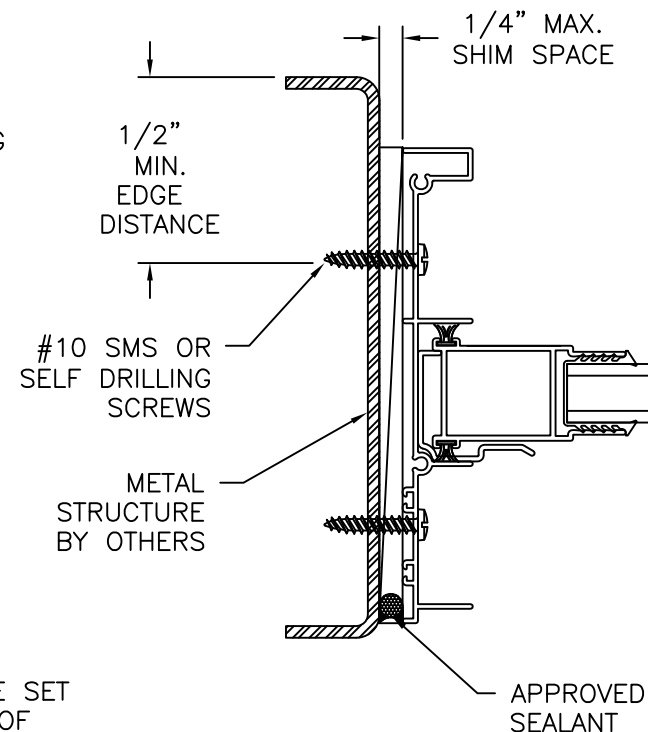
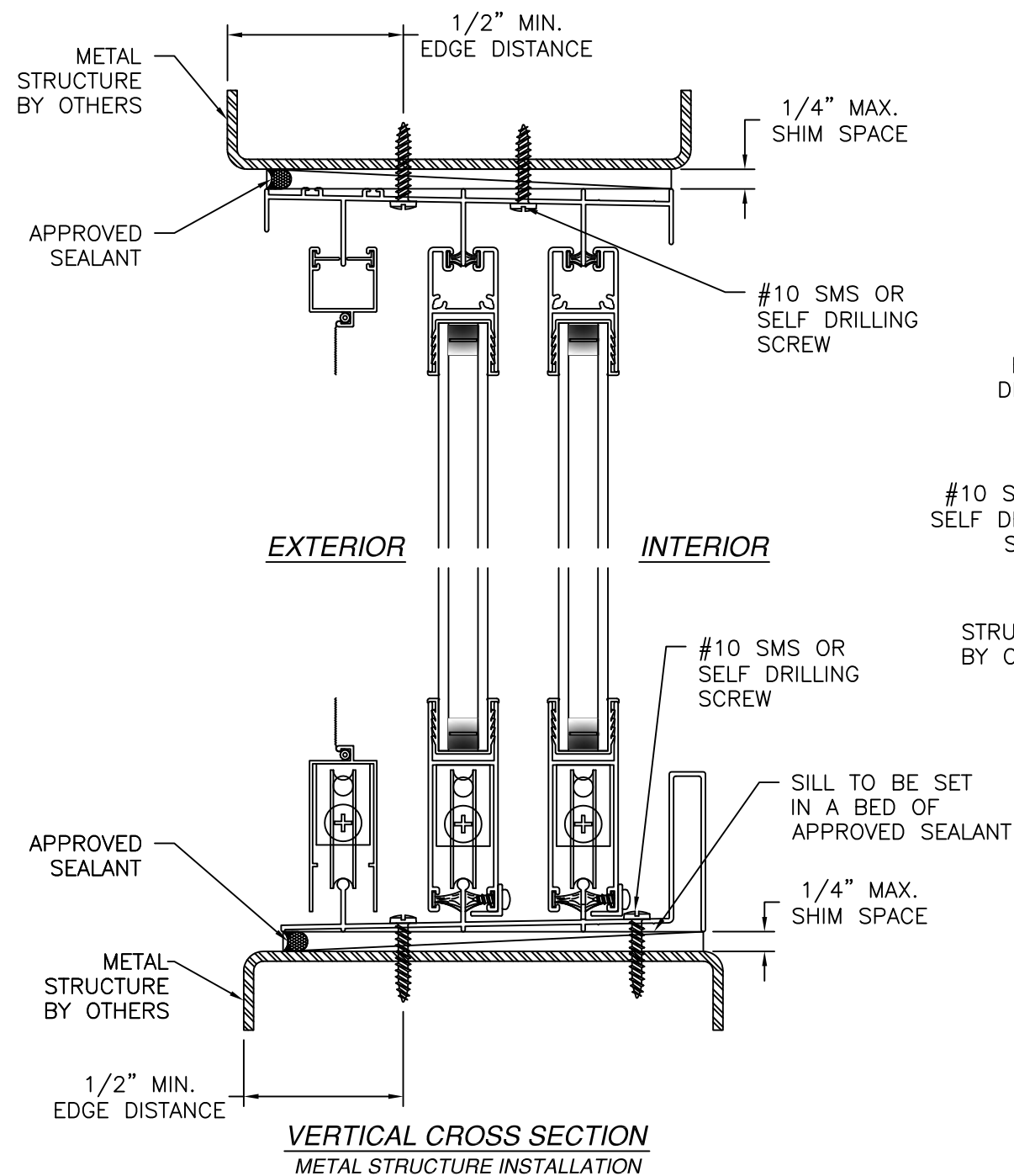
SERIES 420 OXXX SGD REINFORCED
NON - IMPACT
INSTALLATION DETAILS

DRAWN: J.L.
SCALE NTS
DATE 10/23/12
SHEET 4 OF 10

DWG NO. 08-01831
REV D
L. ROBERTO LOMAS P.E.
1432 WOODFORD RD LEWISVILLE, NC 27023
434-688-0609 rllomas@lrlomaspe.com

SIGNED: 06/22/2017

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

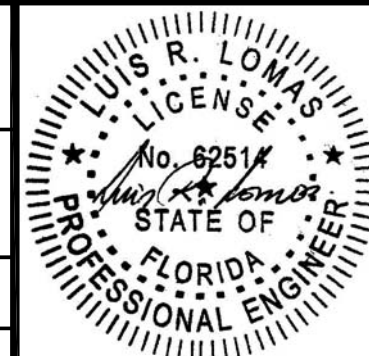


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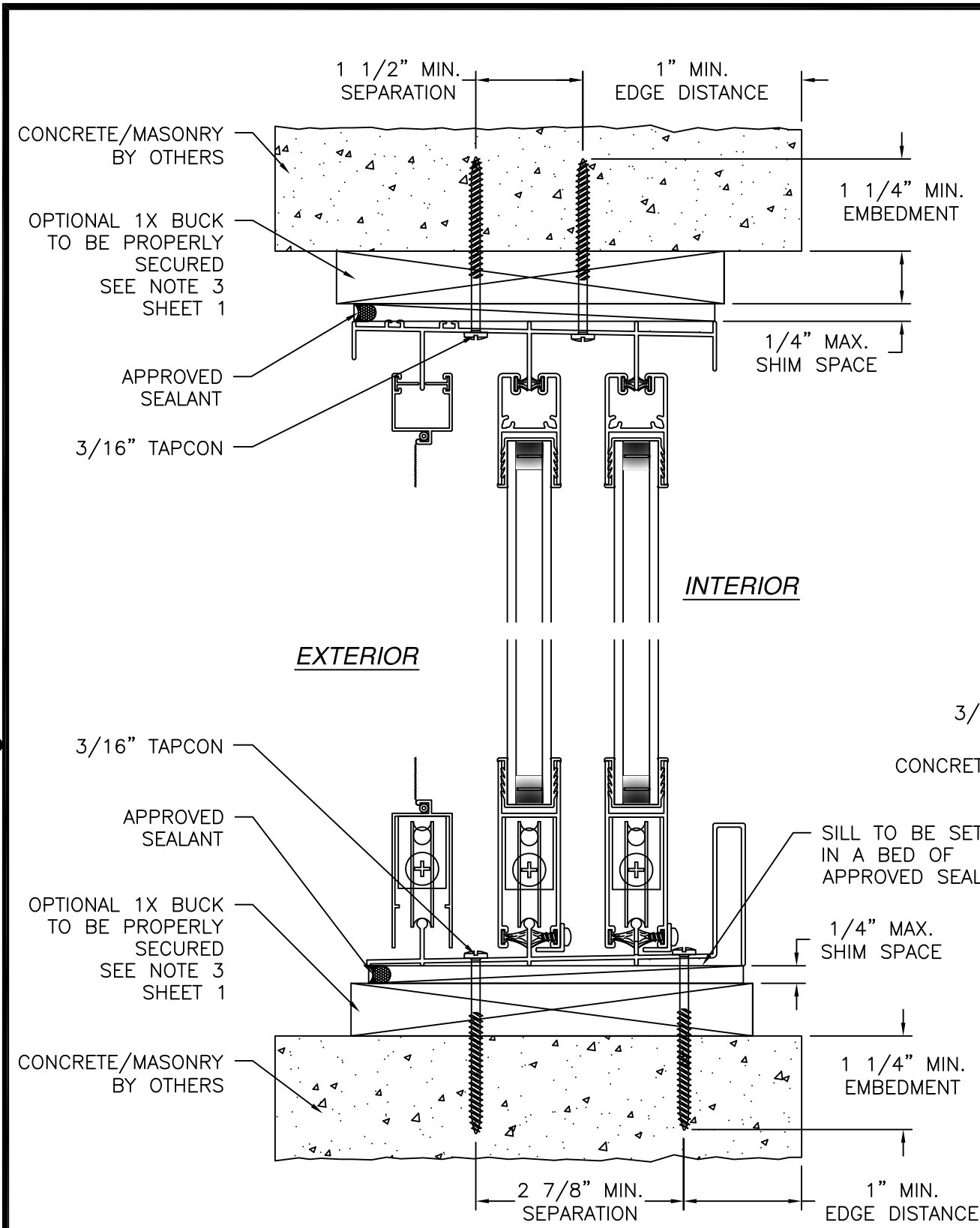
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MI WINDOWS AND DOORS LLC 650 WEST MARKET STREET GRATZ, PA 17030		
SERIES 420 OXXX SGD REINFORCED NON - IMPACT INSTALLATION DETAILS		
DRAWN: J.L.	DWG NO. 08-01831	REV D
SCALE NTS	DATE 10/23/12	SHEET 5 OF 10
L. ROBERTO LOMAS P.E. 1432 WOODFORD RD LEWISVILLE, NC 27023 434-688-0609 rllomas@lrlomaspe.com		

SIGNED: 06/22/2017

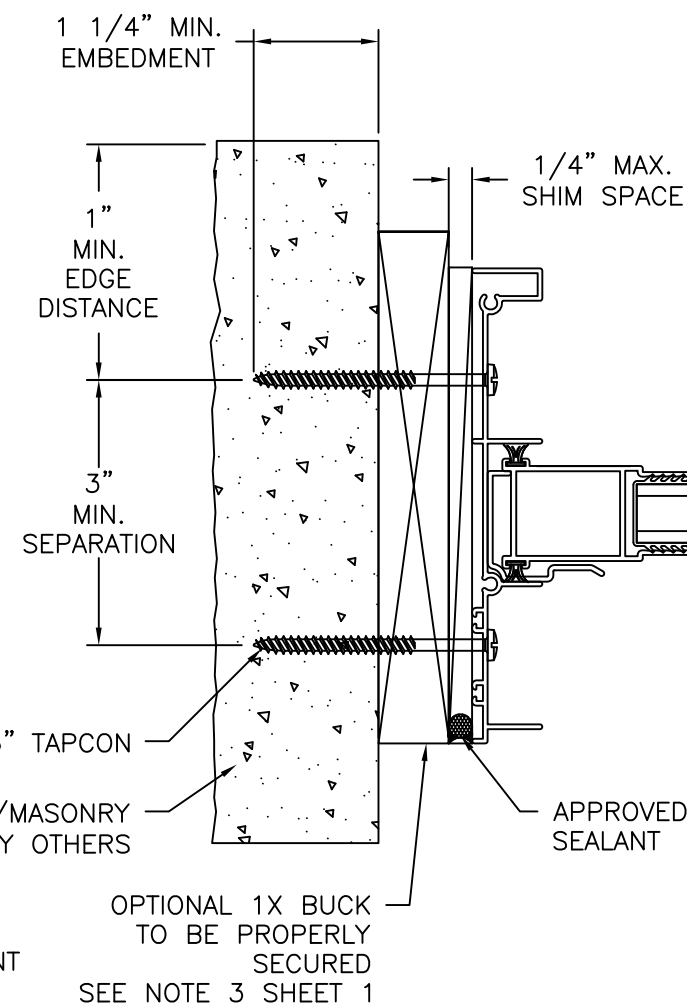


Luis R. Lomas P.E.
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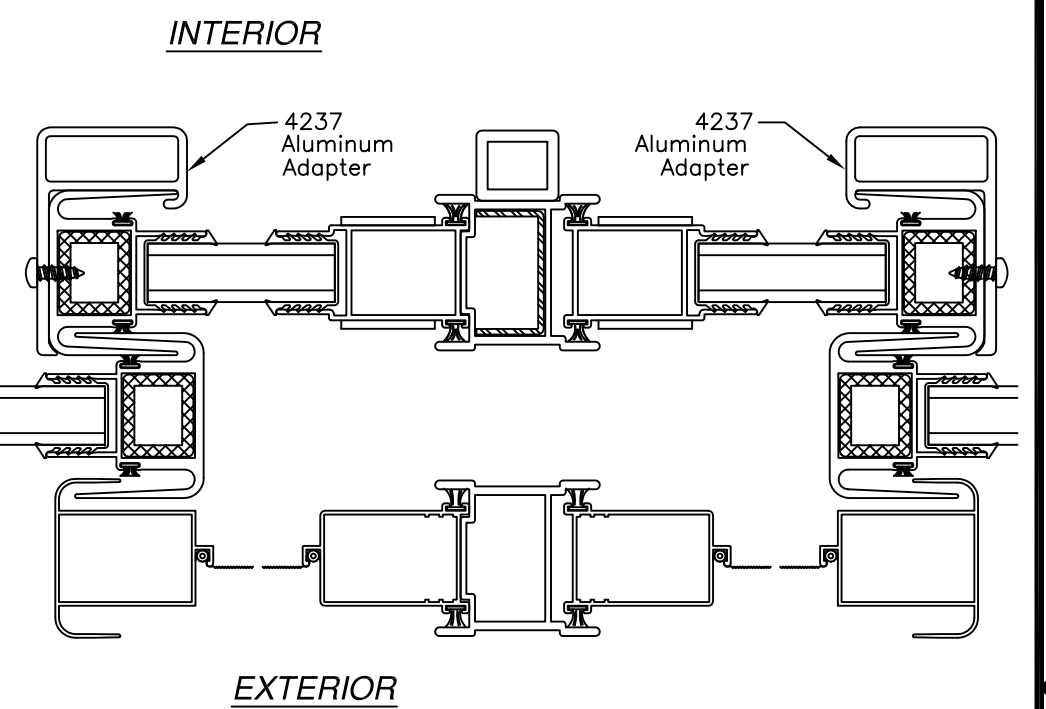


VERTICAL CROSS SECTION
CONCRETE/MASONRY INSTALLATION

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D	REVISED INSTALLATION DETAILS	06/22/17	R.L.



JAMB INSTALLATION DETAIL
CONCRETE/MASONRY INSTALLATION

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

**SERIES 420 OXXX SGD REINFORCED
NON - IMPACT
INSTALLATION DETAILS**

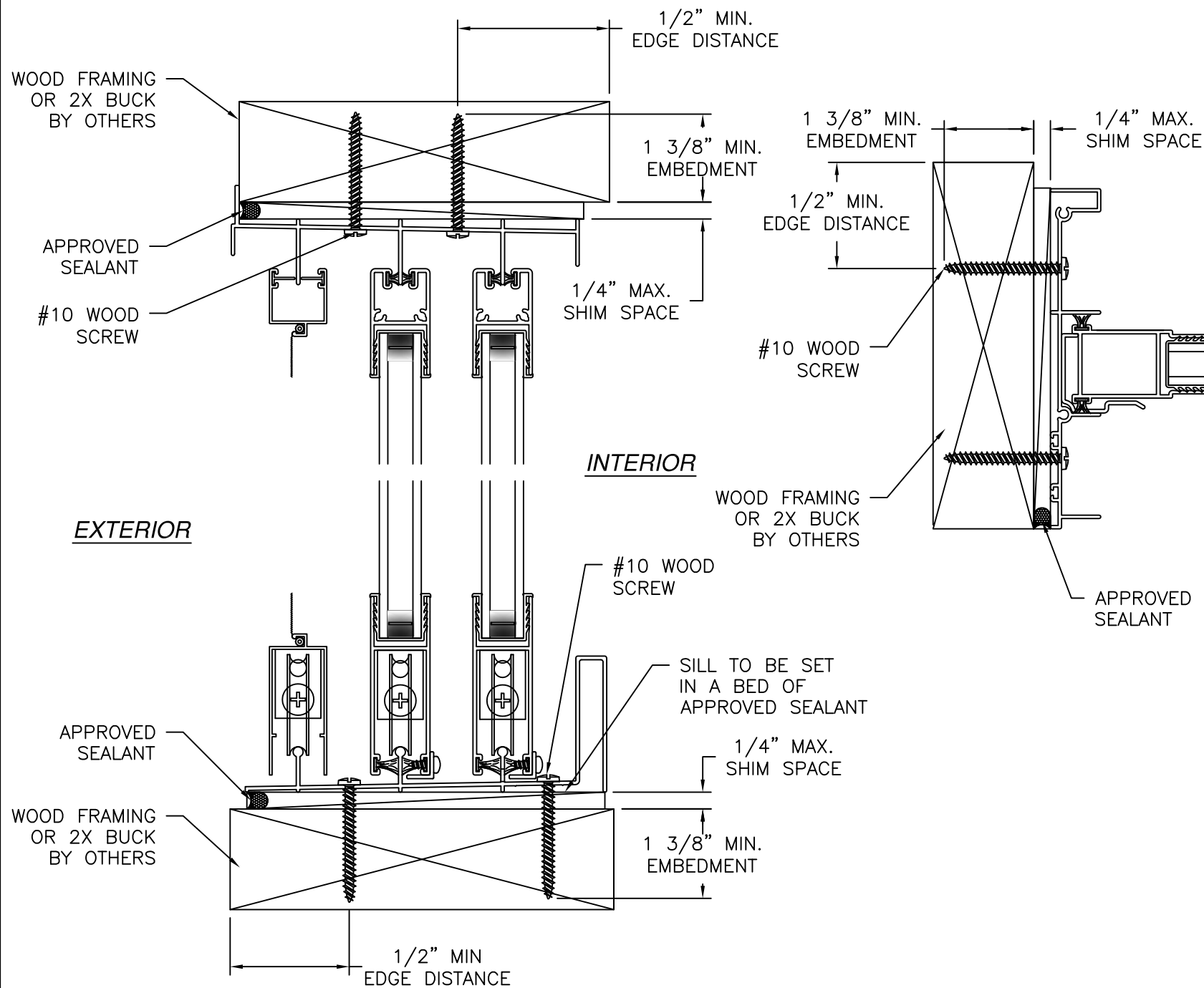
DRAWN: J.L.	DWG NO. 08-01831	REV D
SCALE NTS	DATE 10/23/12	SHEET 6 OF 10

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

SIGNED: 06/22/2017

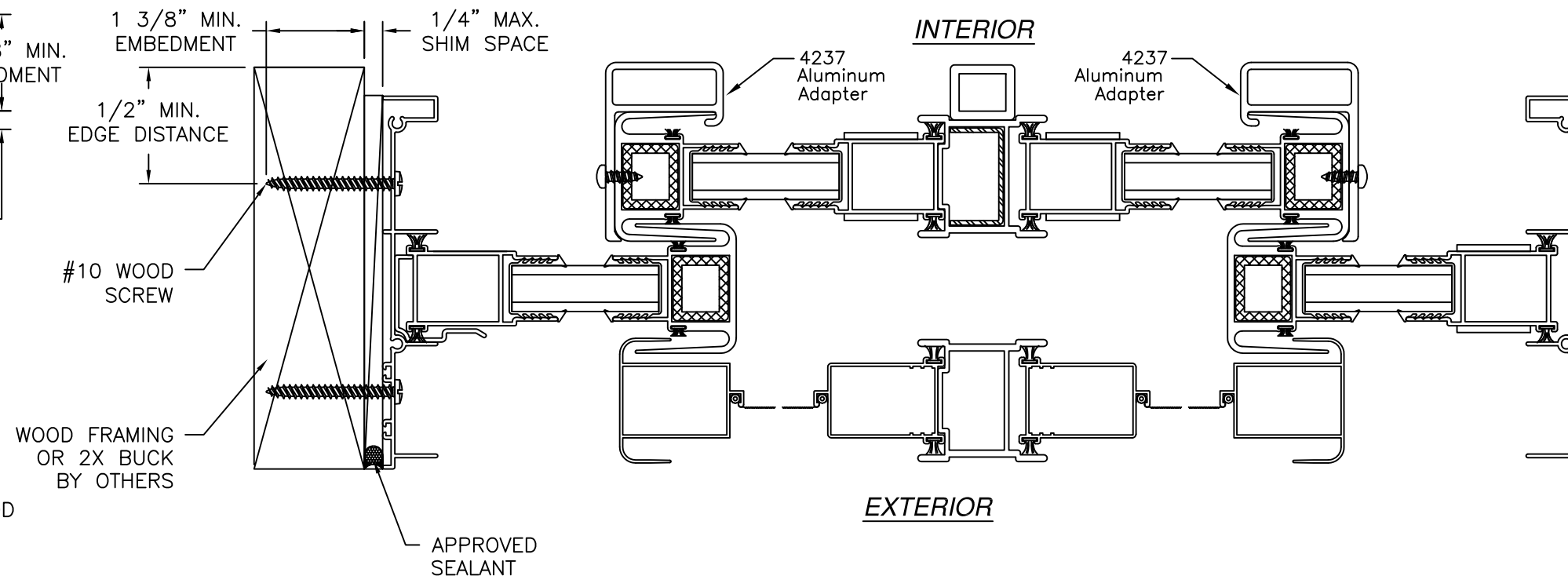
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VERTICAL CROSS SECTION
WOOD FRAMING OR 2X BUCK INSTALLATION

- NOTES:
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 2. PERIMETER AND JOINT SEALANT BY OTHERS TO BE DESIGNED IN ACCORDANCE WITH ASTM E2112



JAMB INSTALLATION DETAIL
WOOD FRAMING OR 2X BUCK INSTALLATION

MI WINDOWS AND DOORS LLC

650 WEST MARKET STREET
GRATZ, PA 17030

SERIES 420 OXXX SGD REINFORCED
NON – IMPACT
FLANGE INSTALLATION DETAILS

DRAWN: J.L.

DWG NO. 08-01831

REV D

SCALE NTS

DATE 10/23/12

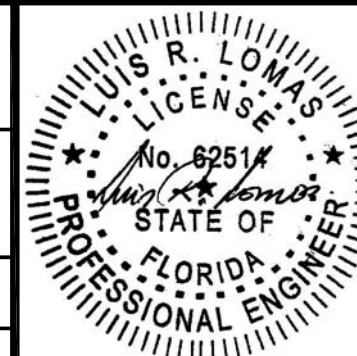
SHEET 7 OF 10

L. ROBERTO LOMAS P.E.

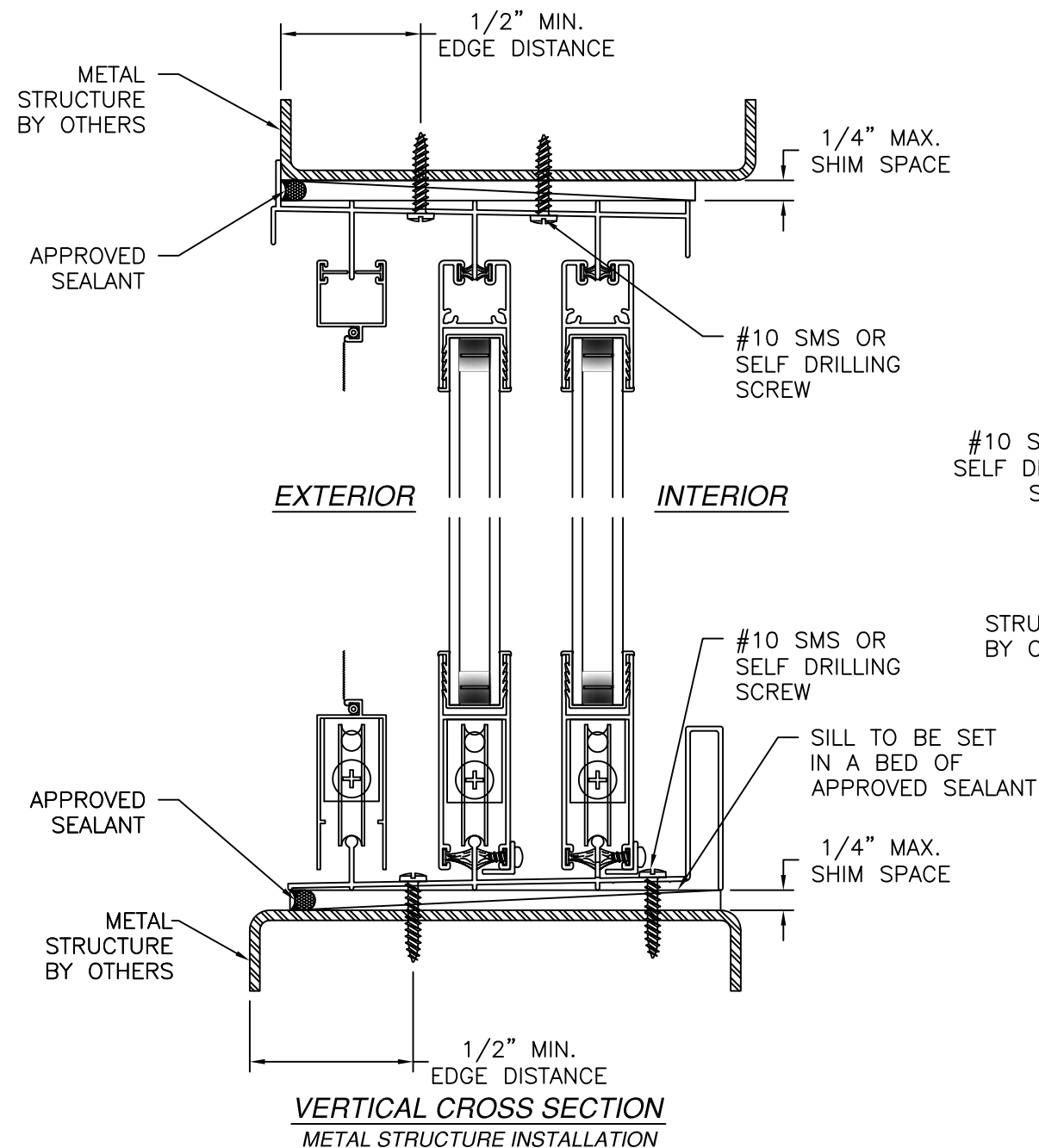
1432 WOODFORD RD LEWISVILLE, NC 27023

434-688-0609 rllomas@rlomaspe.com

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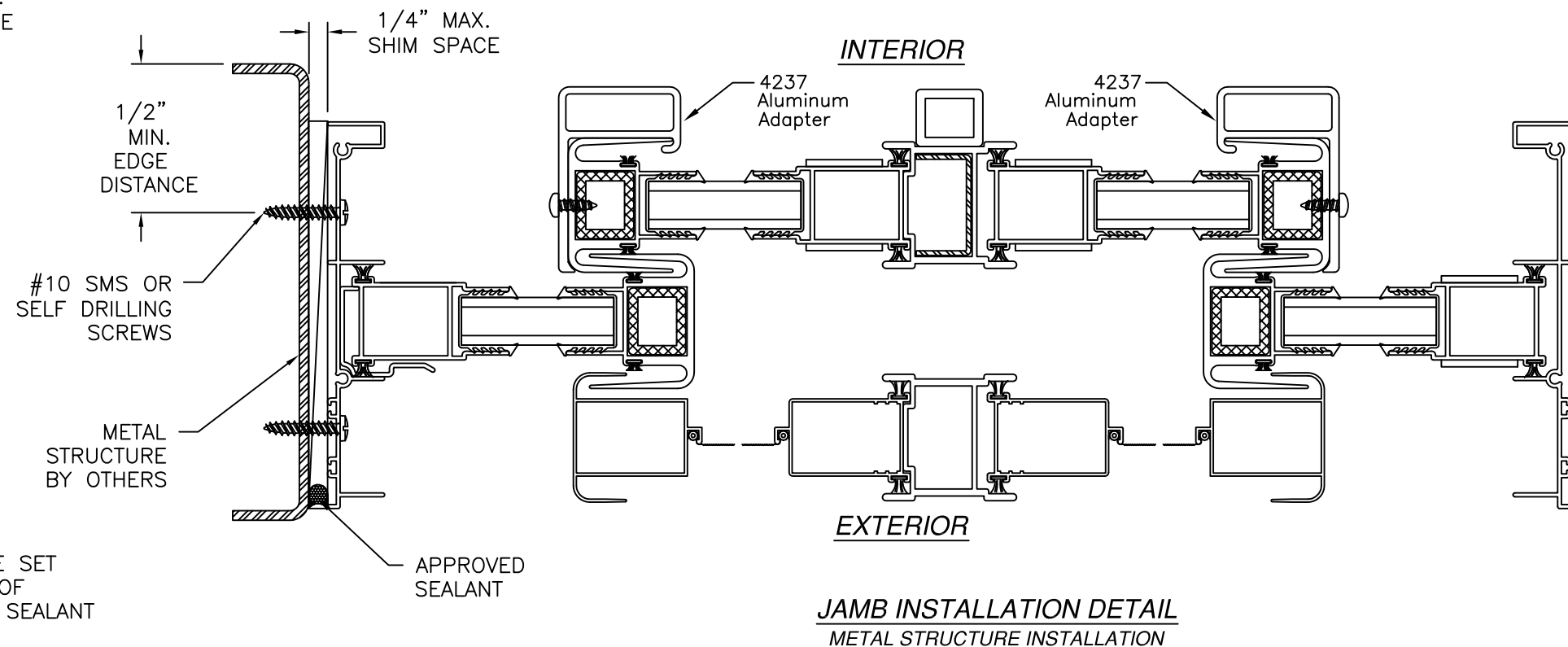


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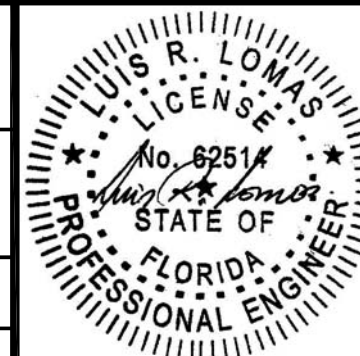
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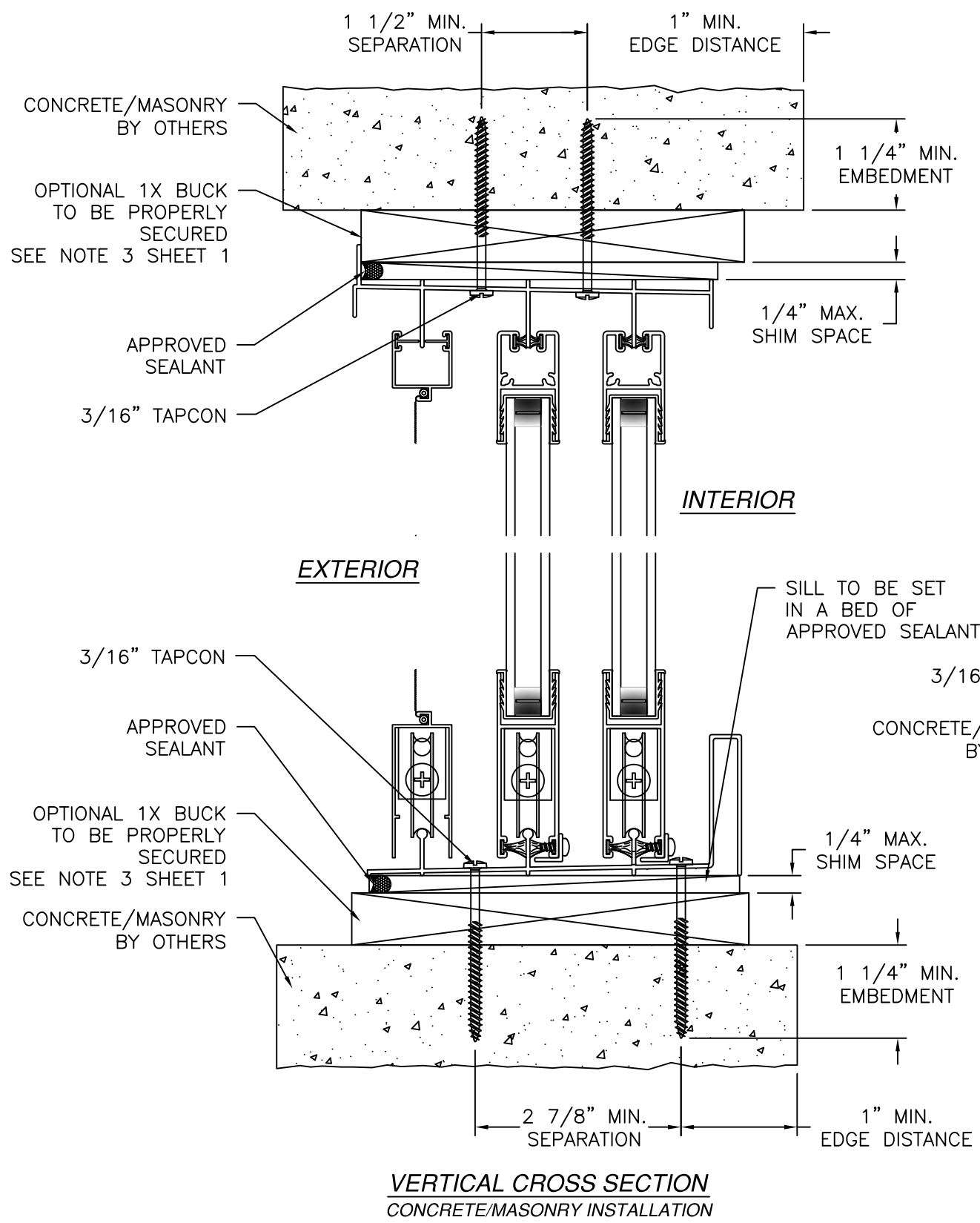


MI WINDOWS AND DOORS LLC 650 WEST MARKET STREET GRATZ, PA 17030		
SERIES 420 OXXX SGD REINFORCED NON - IMPACT FLANGE INSTALLATION DETAILS		
DRAWN: J.L.	DWG NO. 08-01831	REV D
SCALE NTS	DATE 10/23/12	SHEET 8 OF 10
L. ROBERTO LOMAS P.E. 1432 WOODFORD RD LEWISVILLE, NC 27023 434-688-0609 rllomas@rlomaspe.com		

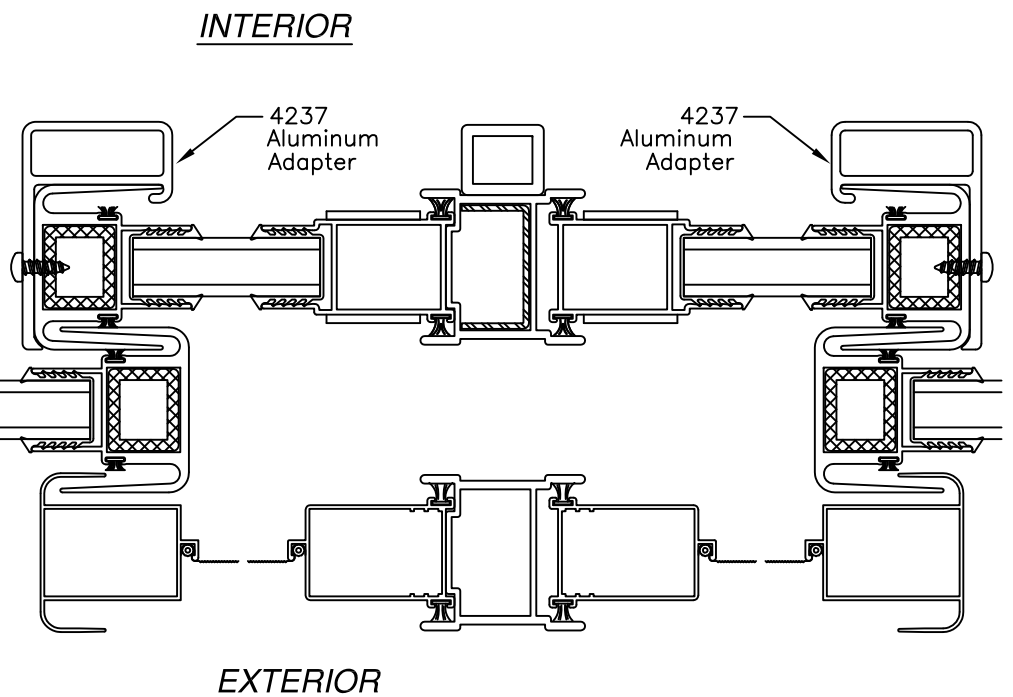
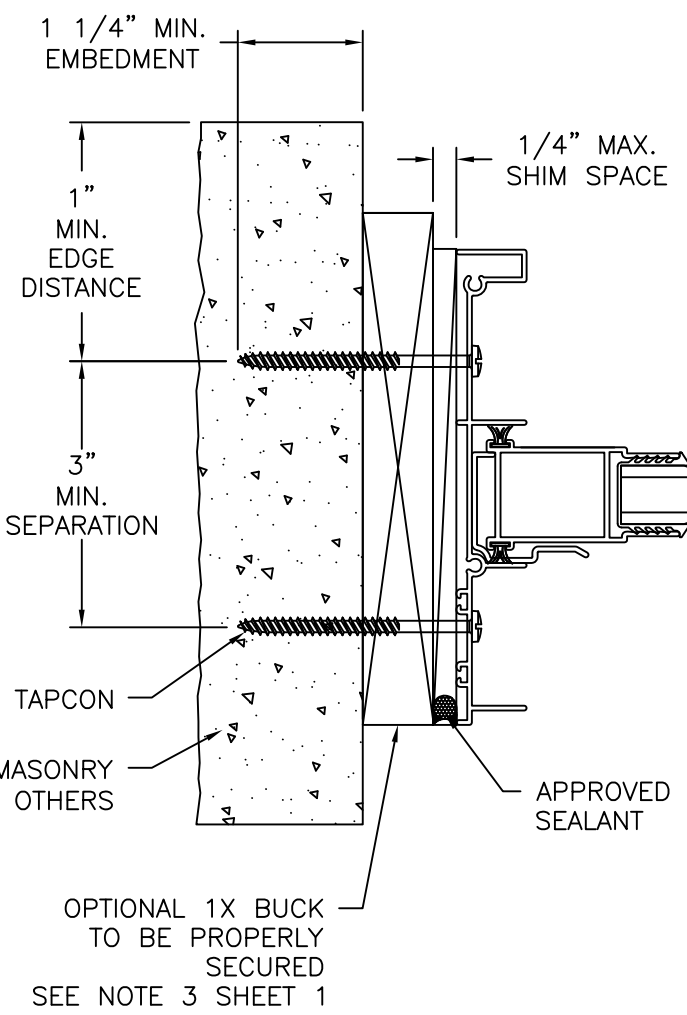
SIGNED: 06/22/2017



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



NOTES:
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REVISIONS			
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MI WINDOWS AND DOORS LLC
 650 WEST MARKET STREET
 GRATZ, PA 17030

**SERIES 420 OXXX SGD REINFORCED
 NON - IMPACT
 FLANGE INSTALLATION DETAILS**

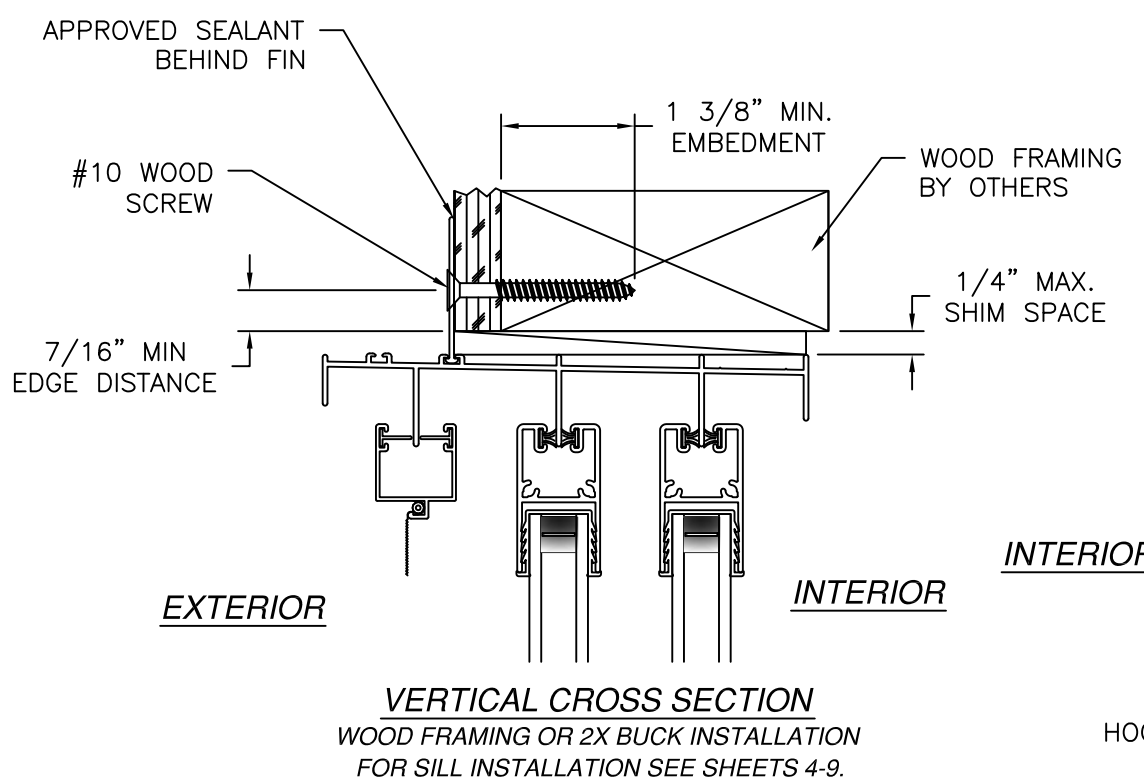
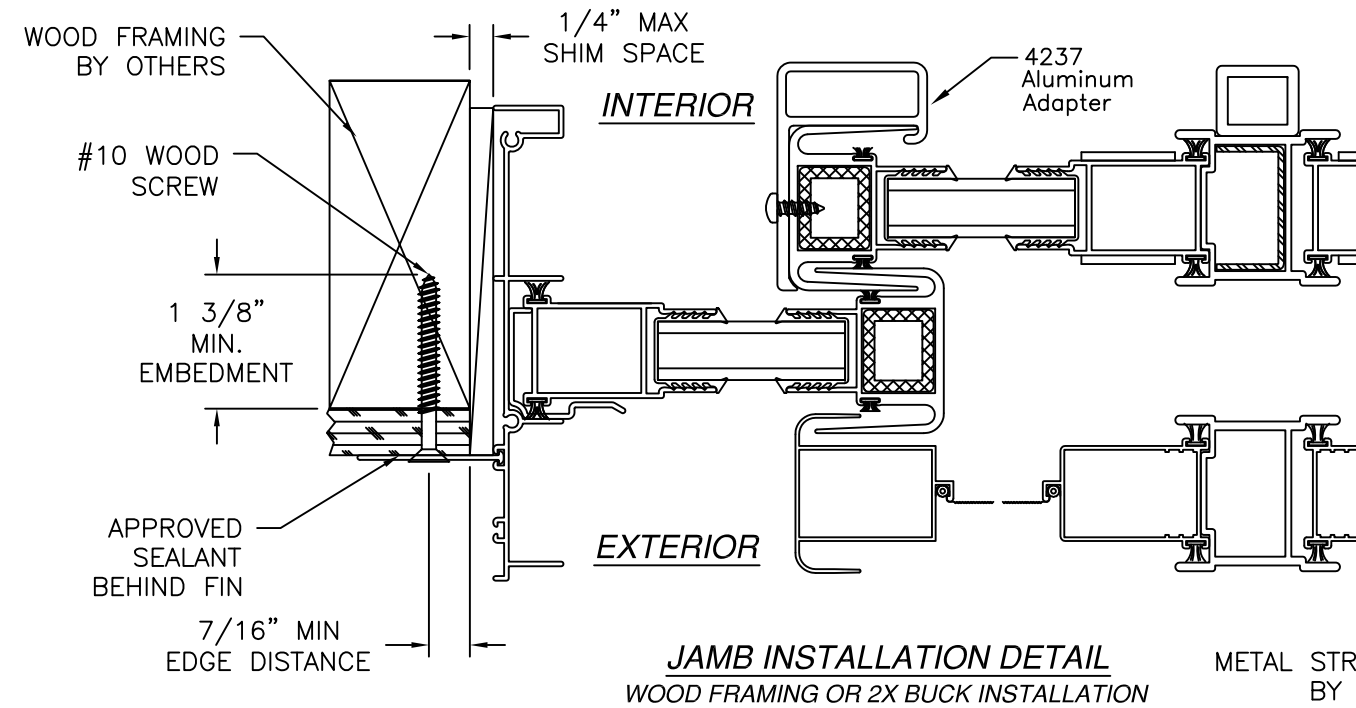
DRAWN: J.L.	DWG NO. 08-01831	REV D
SCALE NTS	DATE 10/23/12	SHEET 9 OF 10

L. ROBERTO LOMAS P.E.
 1432 WOODFORD RD LEWISVILLE, NC 27023
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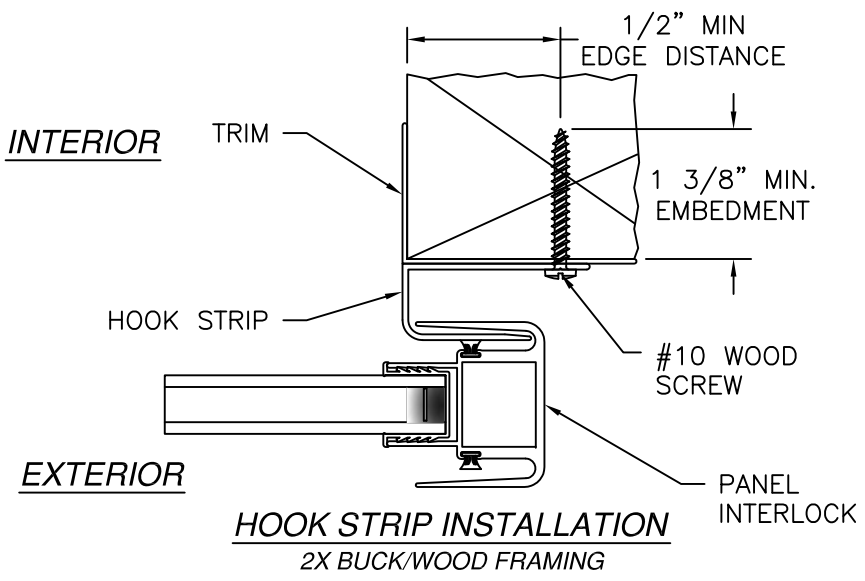
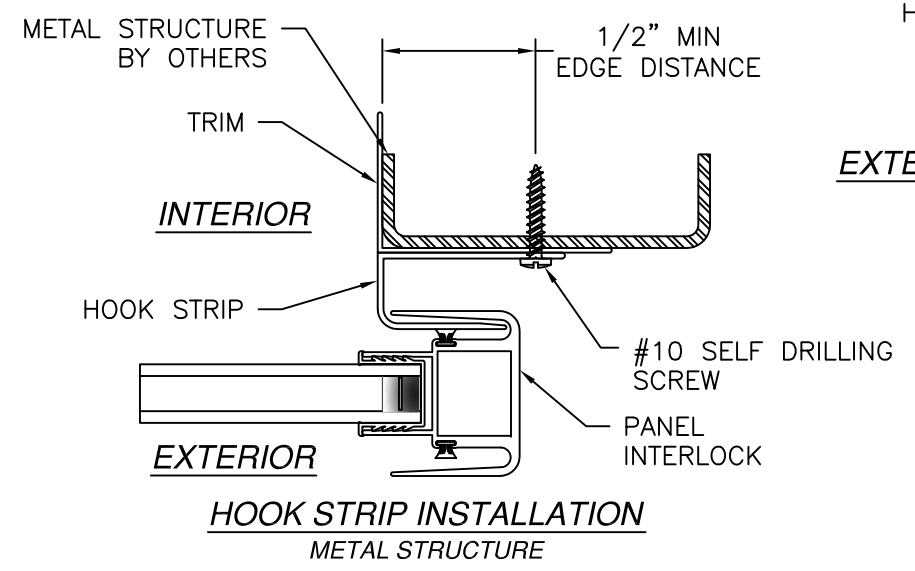
SIGNED: 06/22/2017

LUIS R. LOMAS
 LICENSED PROFESSIONAL ENGINEER
 No. 62514
 STATE OF FLORIDA

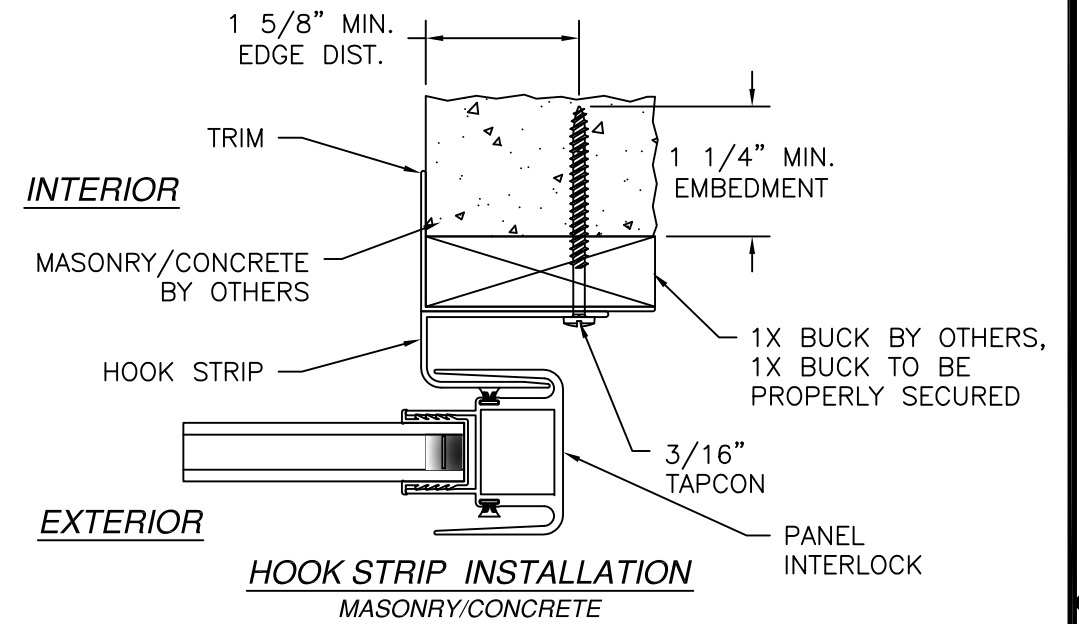
Luis R. Lomas P.E.
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NOTES:
1. INTERIOR AND EXTERIOR FINISHES, BY OTHERS, NOT SHOWN FOR CLARITY.
2. PERIMETER AND JOINT SEALANT BY OTHERS TO BE DESIGNED IN ACCORDANCE WITH ASTM E2112



REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ADDED HOOK INSTALLATION	01/07/13	R.L.
B	ADDED FLANGE & FIN INSTALLATIONS	12/09/13	R.L.
C	REVISED INSTALLATION DETAILS	10/12/15	R.L.
D	REVISED INSTALLATION DETAILS	06/22/17	R.L.



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

**SERIES 420 OXXX SGD REINFORCED
NON - IMPACT
FIN AND HOOK INSTALLATION DETAILS**

DRAWN: J.L.	DWG NO. 08-01831	REV D
SCALE NTS	DATE 10/23/12	SHEET 10 OF 10

L. ROBERTO LOMAS P.E.
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SIGNED: 06/22/2017

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