

NOTES:

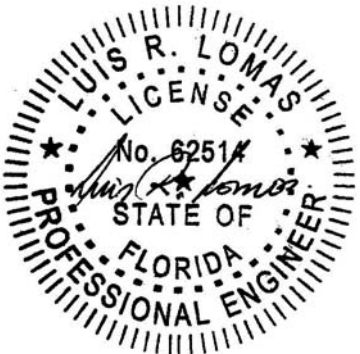
1. THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH REQUIREMENTS OF THE FLORIDA BUILDING CODE.
2. WOOD FRAMING AND MASONRY OPENING TO BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO STRUCTURE. FRAMING AND MASONRY OPENING IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER 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, PIIIX, XIIP, PIIIX AND XIIP.

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ADDED HOOK INSTALLATION	01/07/13	R.L.
B	ADDED FLANGE & FIN INSTALLATIONS	12/06/13	R.L.
C	REVISED INSTALLATION DETAILS	10/12/15	R.L.
D	REVISED INSTALLATION DETAILS	06/20/17	R.L.

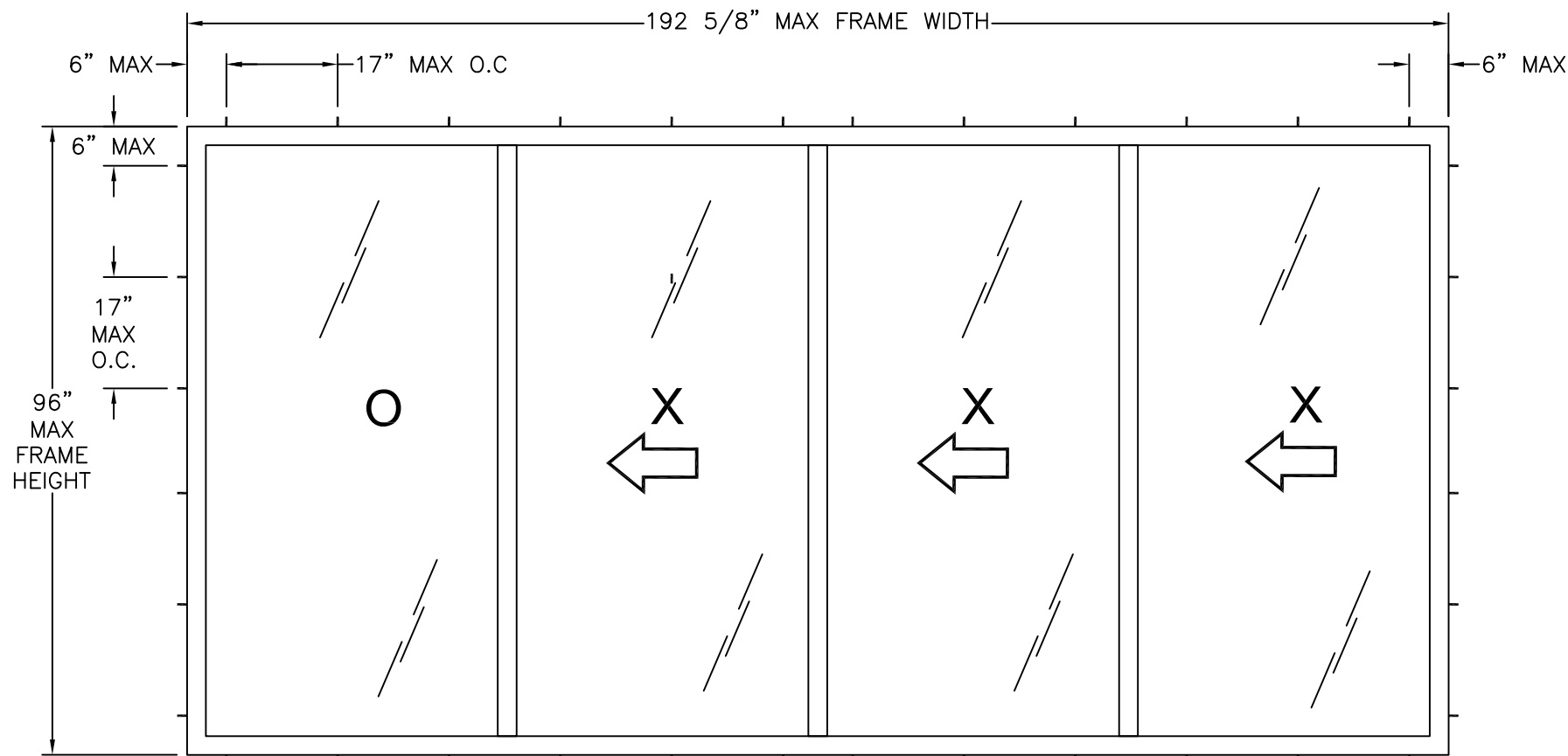
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4 - 10	INSTALLATION DETAILS

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. 08-01830	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: 06/20/2017



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



SERIES 420 OXXX SGD REINFORCED
EXTERIOR VIEW

DESIGN PRESSURE RATING	IMPACT RATING
±25.0PSF	NONE

REFER TO CHARTS #1 & #2 FOR OTHER UNITS RATINGS

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

REVISIONS			
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A	ADDED HOOK INSTALLATION	01/07/13	R.L.
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D	REVISED INSTALLATION DETAILS	06/20/17	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 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

CHART #1

WHERE WATER INFILTRATION RESISTANCE IS 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	45.8	45.8	40.1	40.1	36.2	36.2	33.3	33.3
80.0	44.4	44.4	38.8	38.8	34.9	34.9	32.2	32.2
84.0	41.8	41.8	36.4	36.4	32.7	32.7	30.0	30.0
88.0	39.5	39.5	34.4	34.4	30.8	30.8	28.1	28.1
92.0	37.5	37.5	32.5	32.5	29.0	29.0	26.5	26.5
96.0	35.6	35.6	30.8	30.8	27.5	27.5	25.0	25.0

CHART #2

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	45.8	45.8	40.1	40.1	36.2	36.2	33.3	33.3
80.0	44.4	44.4	38.8	38.8	34.9	34.9	32.2	32.2
84.0	41.8	41.8	36.4	36.4	32.7	32.7	30.0	30.0
88.0	39.5	39.5	34.4	34.4	30.8	30.8	28.1	28.1
92.0	37.5	37.5	32.5	32.5	29.0	29.0	26.5	26.5
96.0	35.6	35.6	30.8	30.8	27.5	27.5	25.0	25.0

HARDWARE SCHEDULE

A.	(1) FLAT MOUNTED HANLDE SET (99-04-145) AT 38 3/4" ON CENTER 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 AT 7 1/4" FROM EACH END AND AT MID-SPAN
D.	ALUMINUM 6063-T6 REINFORCEMENT (668) AT ALL PANEL INTERLOCKS
E.	STEEL C-CHANNEL REINFORCEMENT (9917520) INSERTED BETWEEN STILE AND PANEL ADAPTOR

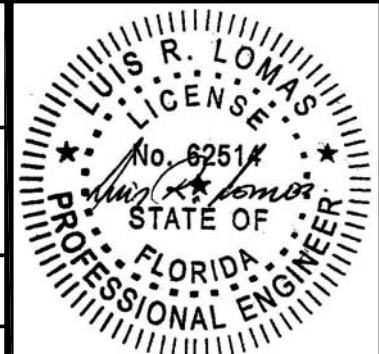
MI WINDOWS AND DOORS, LLC
650 WEST MARKET STREET
GRATZ, PA 17030

SERIES 420 OXXX SGD REINFORCED
NON – IMPACT
ELEVATION

DRAWN: J.L.	DWG NO. 08-01830	REV D
SCALE NTS	DATE 10/23/12	SHEET 2 OF 10

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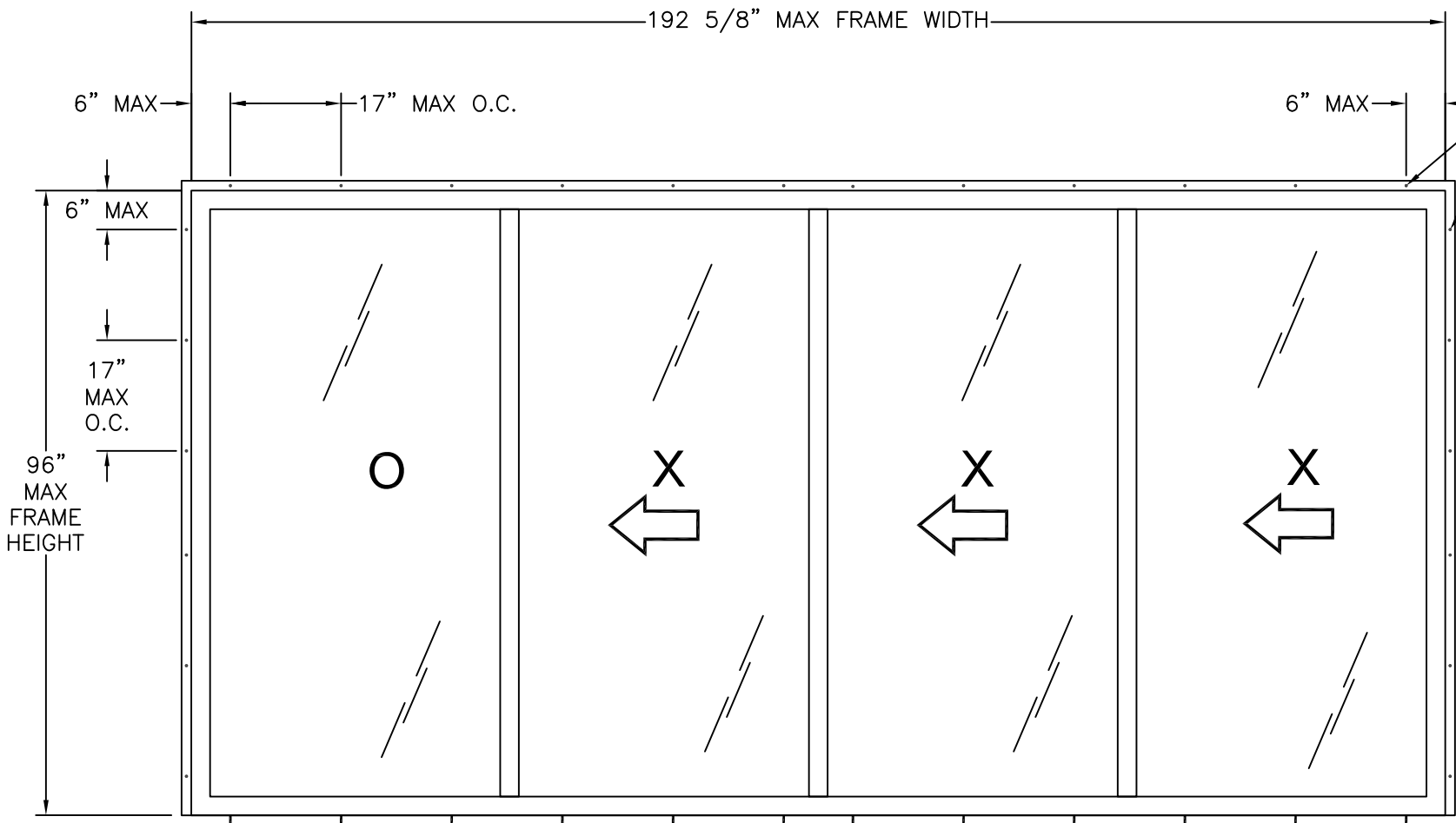
SIGNED: 06/20/2017



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



REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ADDED HOOK INSTALLATION	01/07/13	R.L.
B	ADDED FLANGE & FIN INSTALLATIONS	12/06/13	R.L.
C	REVISED INSTALLATION DETAILS	10/12/15	R.L.
D	REVISED INSTALLATION DETAILS	06/20/17	R.L.



(1) ANCHOR PER LOCATION AT HEAD & JAMBS
SEE CHARTS #4
FOR NUMBER OF ANCHORS REQUIRED

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

CHART #4 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
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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

(2) ANCHORS PER LOCATION AT SILL SEE CHART #4
FOR NUMBER OF ANCHOR LOCATIONS REQUIRED

DESIGN PRESSURE RATING	IMPACT RATING
±25.0PSF	NONE

REFER TO CHARTS #1 & #2 FOR OTHER UNITS RATINGS

HARDWARE SCHEDULE	
A.	(1) FLAT MOUNTED HANLDE SET (99-04-145) AT 38 3/4" ON CENTER FROM PANEL BOTTOM
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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. 08-01830	REV D
SCALE NTS	DATE 10/23/12	SHEET 3 OF 10

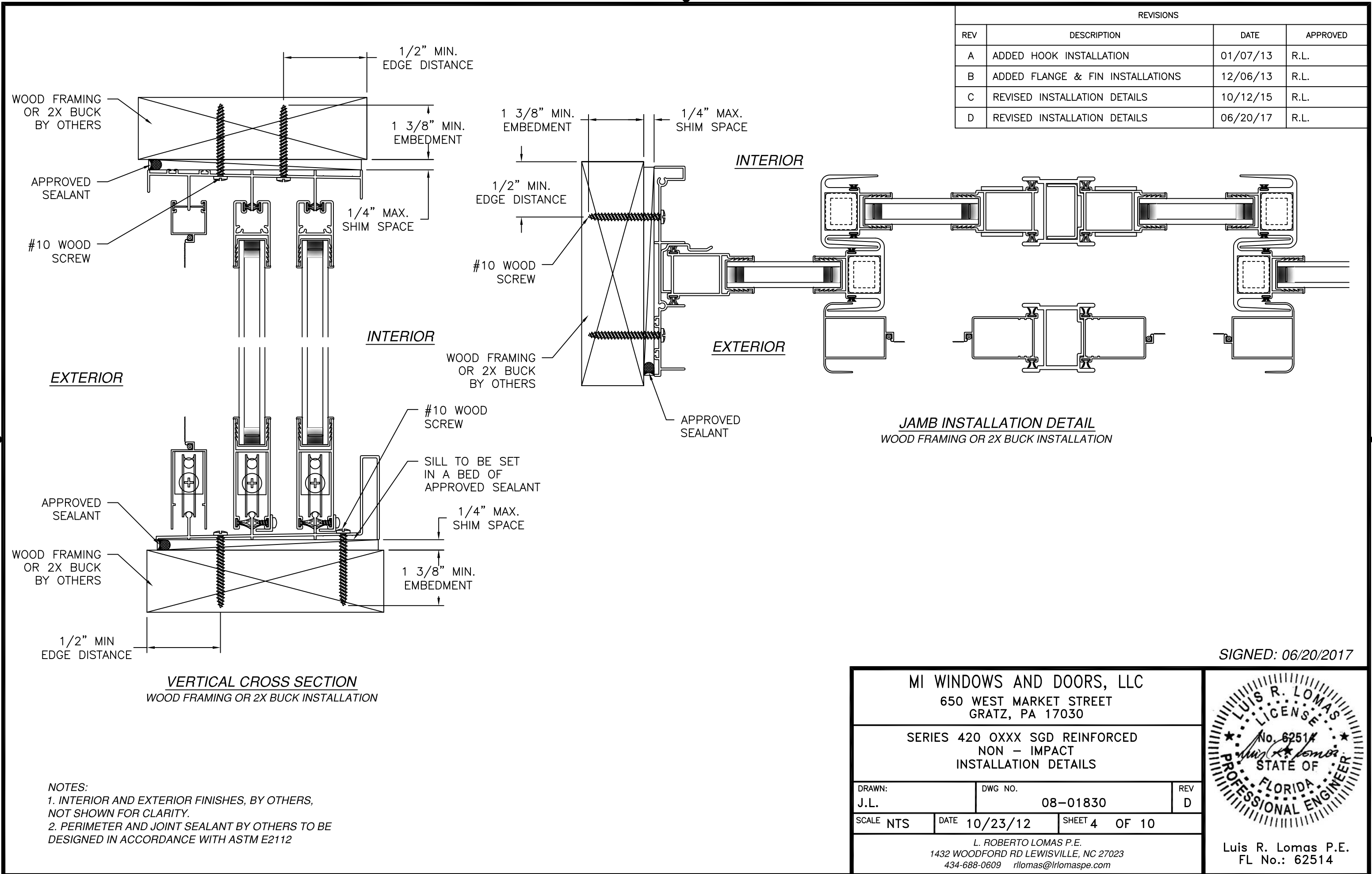
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SIGNED: 06/20/2017



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





REVISIONS			
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D	REVISED INSTALLATION DETAILS	06/20/17	R.L.

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

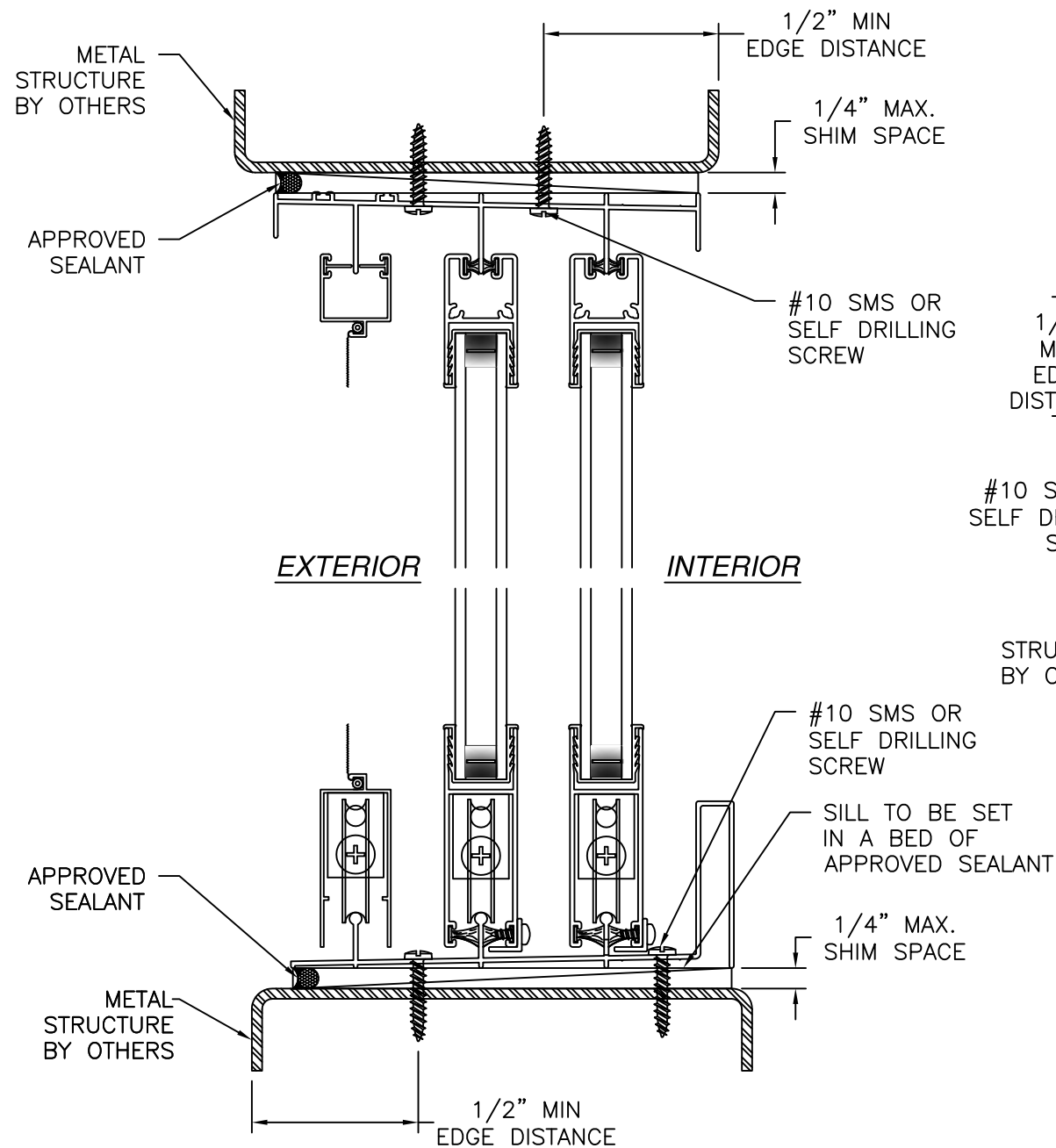
DRAWN: J.L.	DWG NO. 08-01830	REV D
SCALE NTS	DATE 10/23/12	SHEET 4 OF 10

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

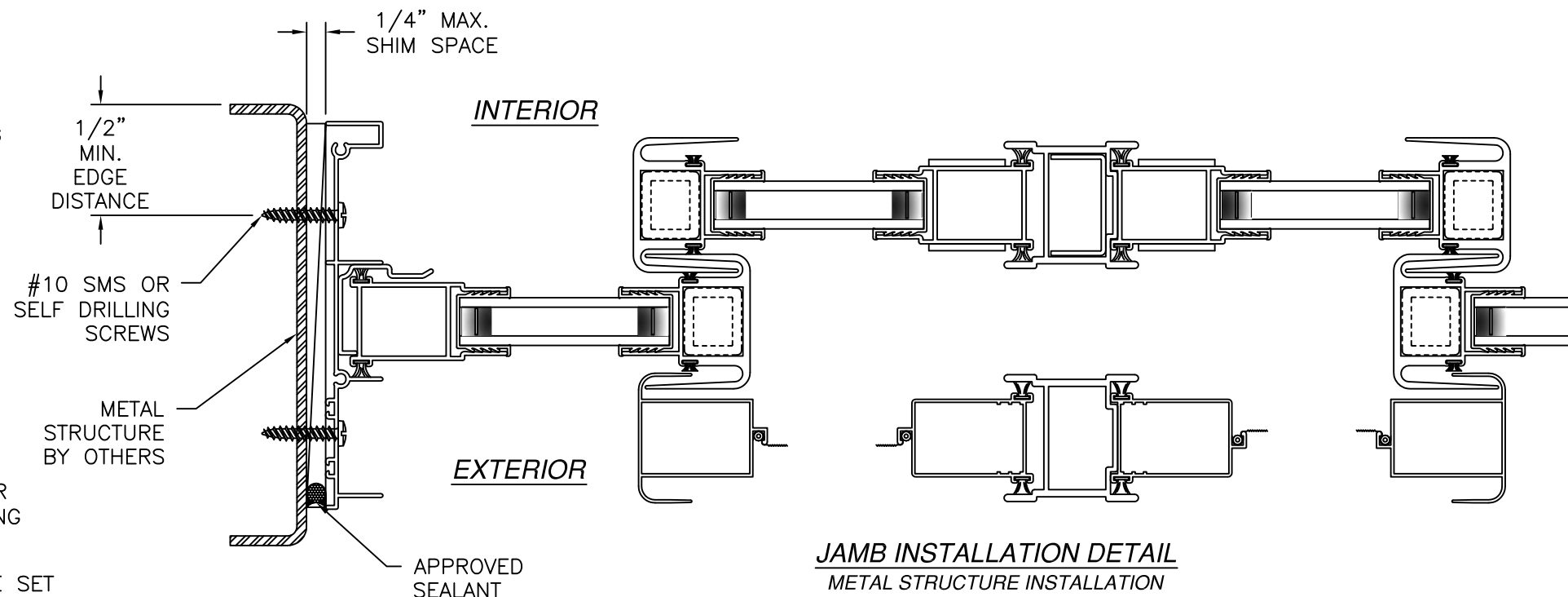
Luis R. Lomas P.E.
FL No.: 62514



VERTICAL CROSS SECTION
METAL STRUCTURE INSTALLATION

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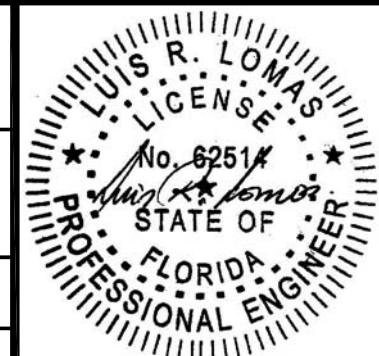
MI WINDOWS AND DOORS, LLC
650 WEST MARKET STREET
GRATZ, PA 17030

SERIES 420 OXXX SGD REINFORCED
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INSTALLATION DETAILS

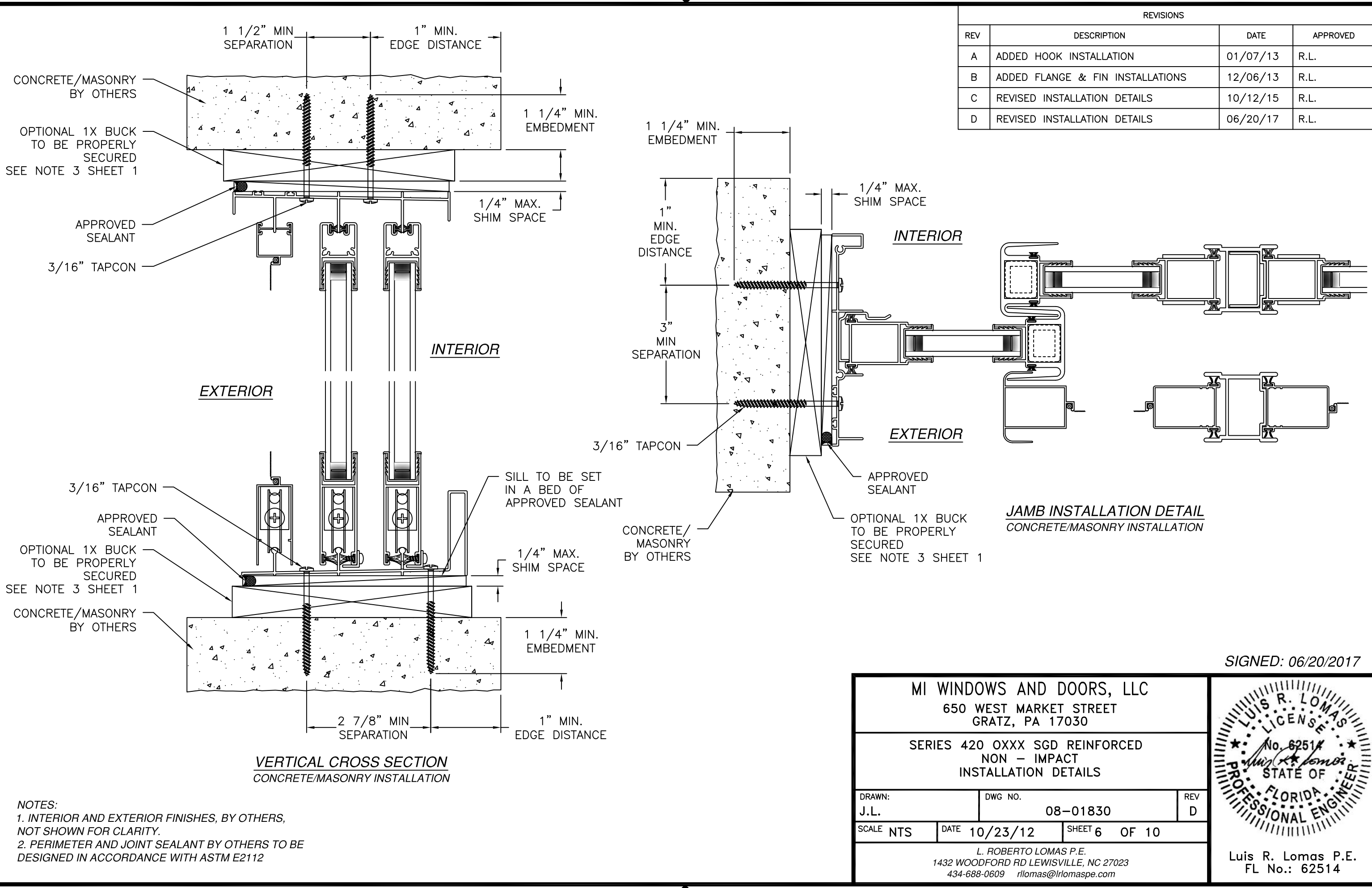
DRAWN: J.L.	DWG NO. 08-01830	REV D
SCALE NTS	DATE 10/23/12	SHEET 5 OF 10

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SIGNED: 06/20/2017



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SIGNED: 06/20/2017

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.
08-01830

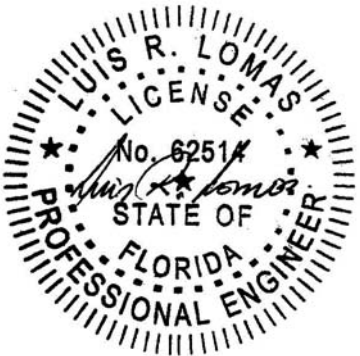
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SCALE
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DATE
10/23/12

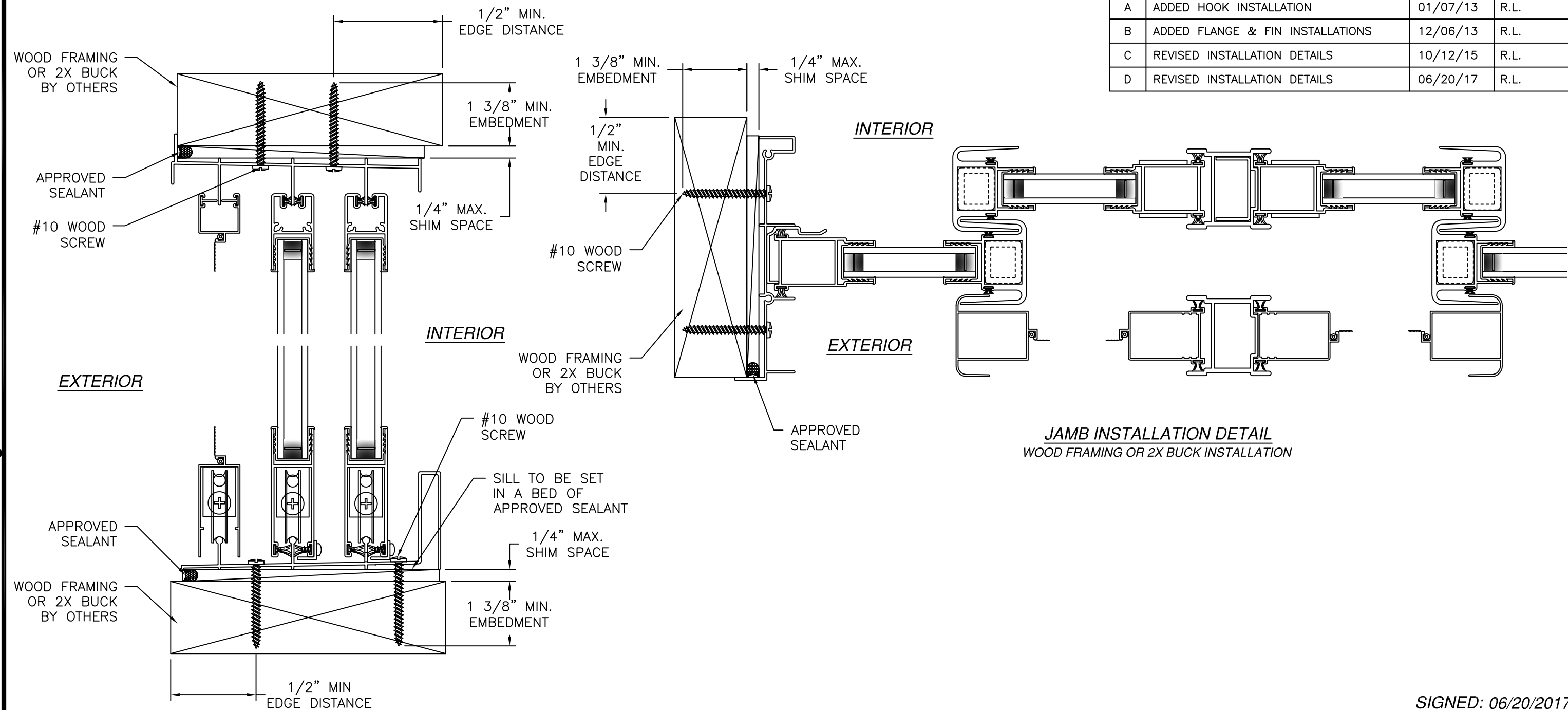
SHEET
6 OF 10

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FL No.: 62514

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VERTICAL CROSS SECTION
WOOD FRAMING OR 2X BUCK INSTALLATION

JAMB INSTALLATION DETAIL
WOOD FRAMING OR 2X BUCK INSTALLATION

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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. 08-01830

REV D

SCALE NTS

DATE 10/23/12

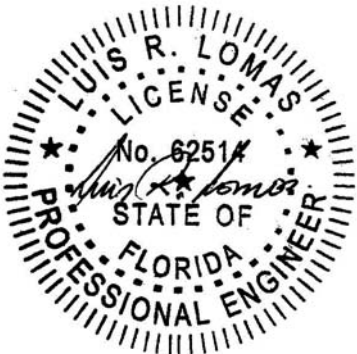
SHEET 7 OF 10

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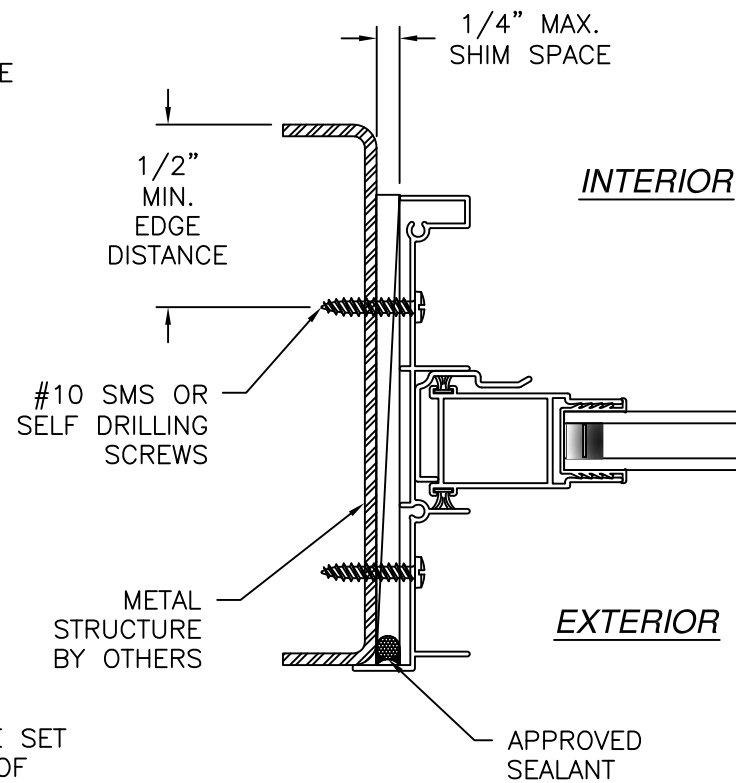
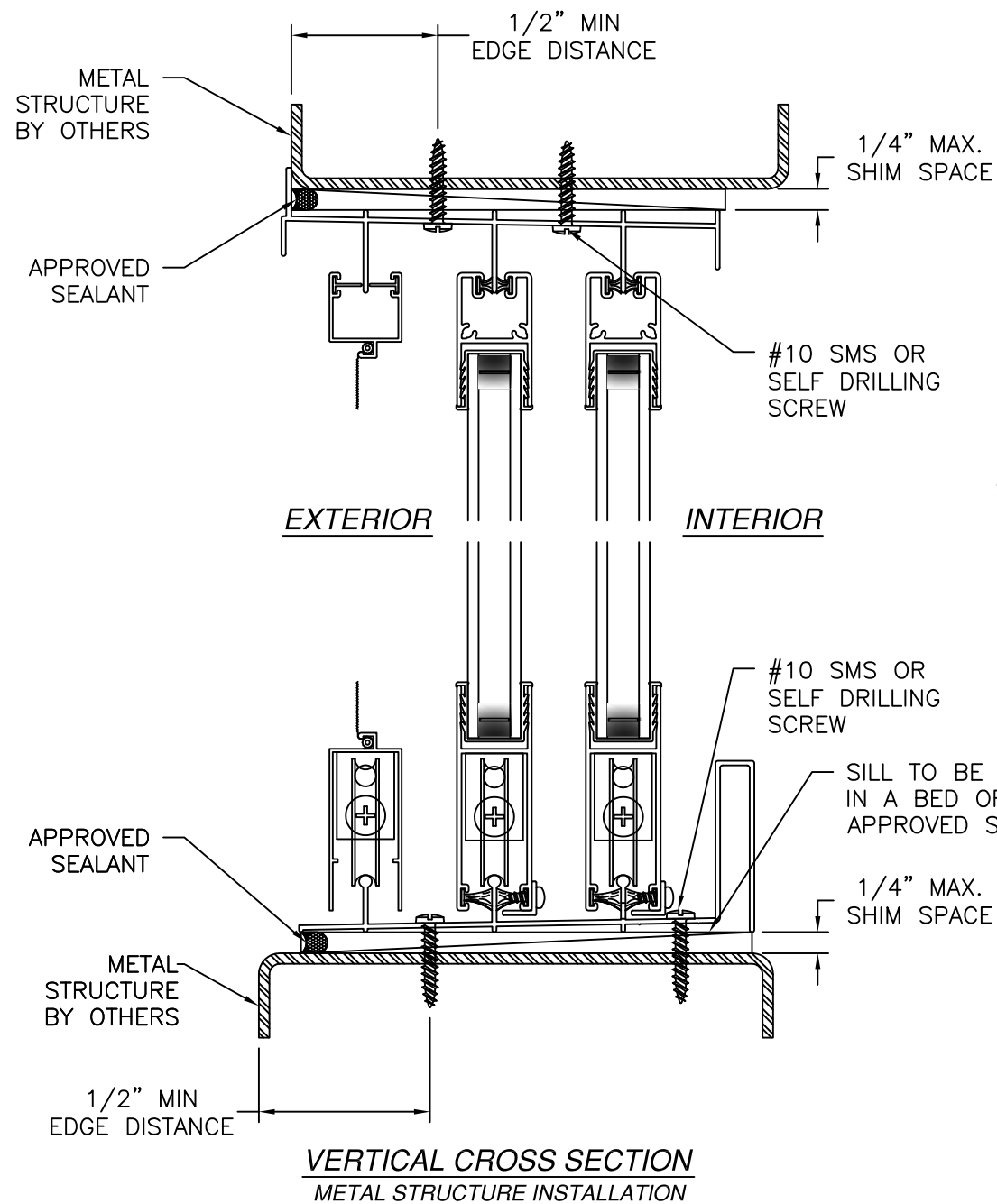
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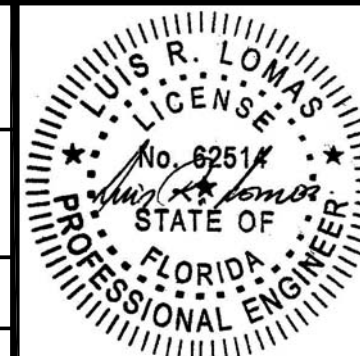


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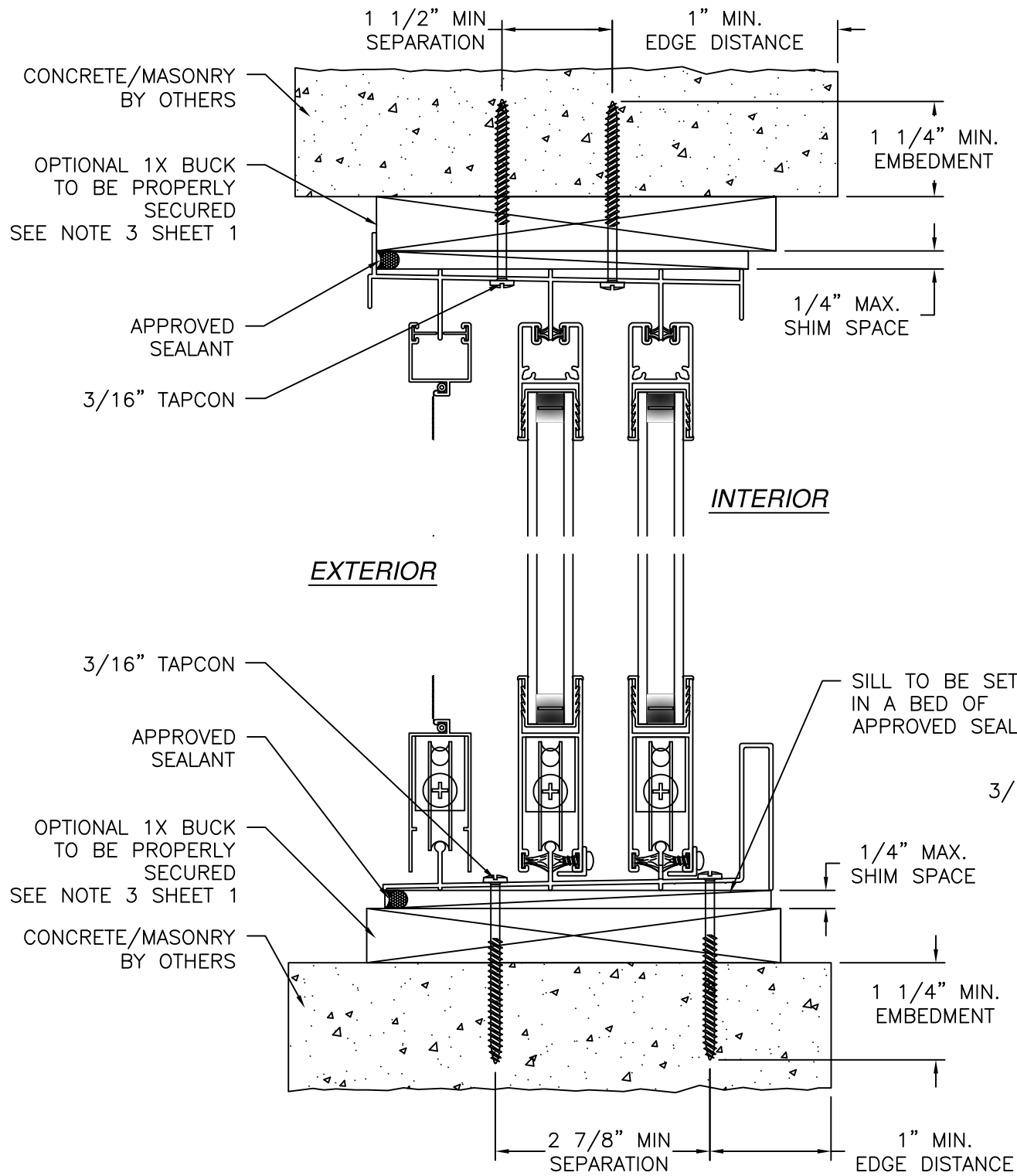
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MI WINDOWS AND DOORS, LLC 650 WEST MARKET STREET GRATZ, PA 17030		
SERIES 420 OXXX SGD REINFORCED NON - IMPACT FLANGE INSTALLATION DETAILS		
DRAWN: J.L.	DWG NO. 08-01830	REV D
SCALE NTS	DATE 10/23/12	SHEET 8 OF 10
L. ROBERTO LOMAS P.E. 1432 WOODFORD RD LEWISVILLE, NC 27023 434-688-0609 rllomas@lrlomaspe.com		

SIGNED: 06/20/2017



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



VERTICAL CROSS SECTION
CONCRETE/MASONRY INSTALLATION

INTERIOR

INTERIOR

EXTERIOR

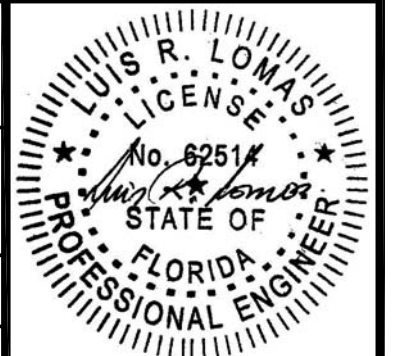
JAMB INSTALLATION DETAIL
CONCRETE/MASONRY INSTALLATION

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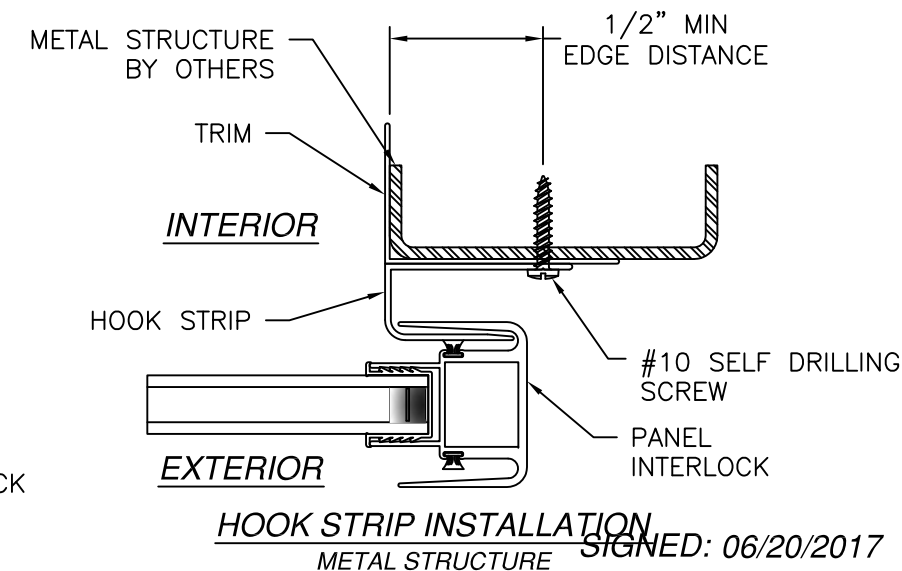
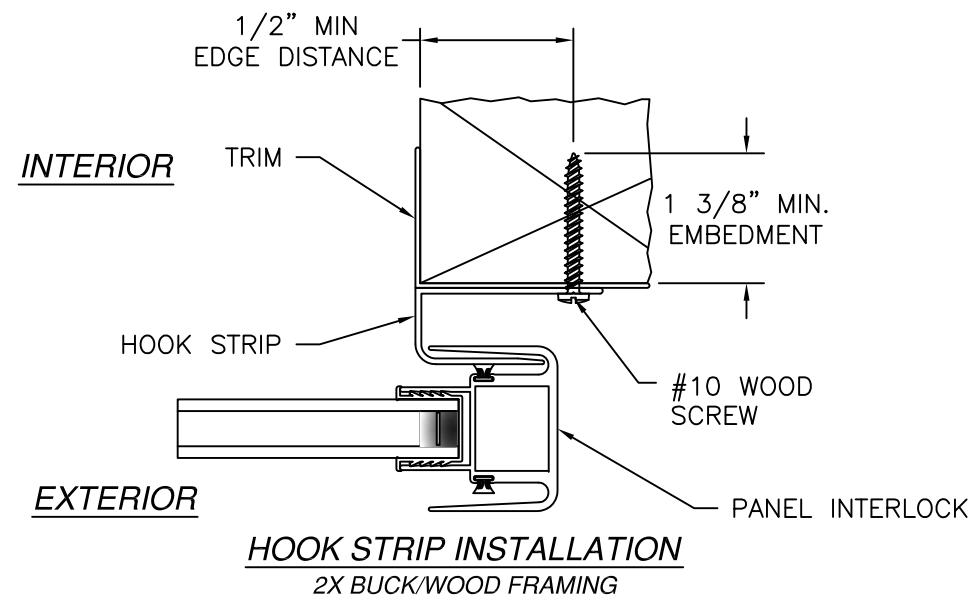
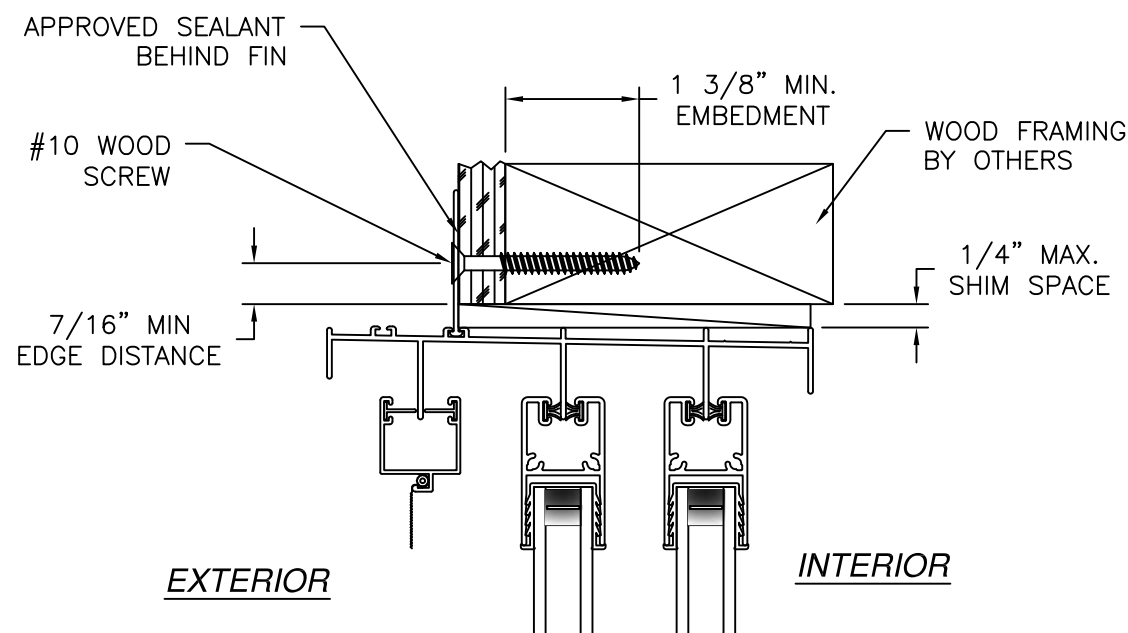
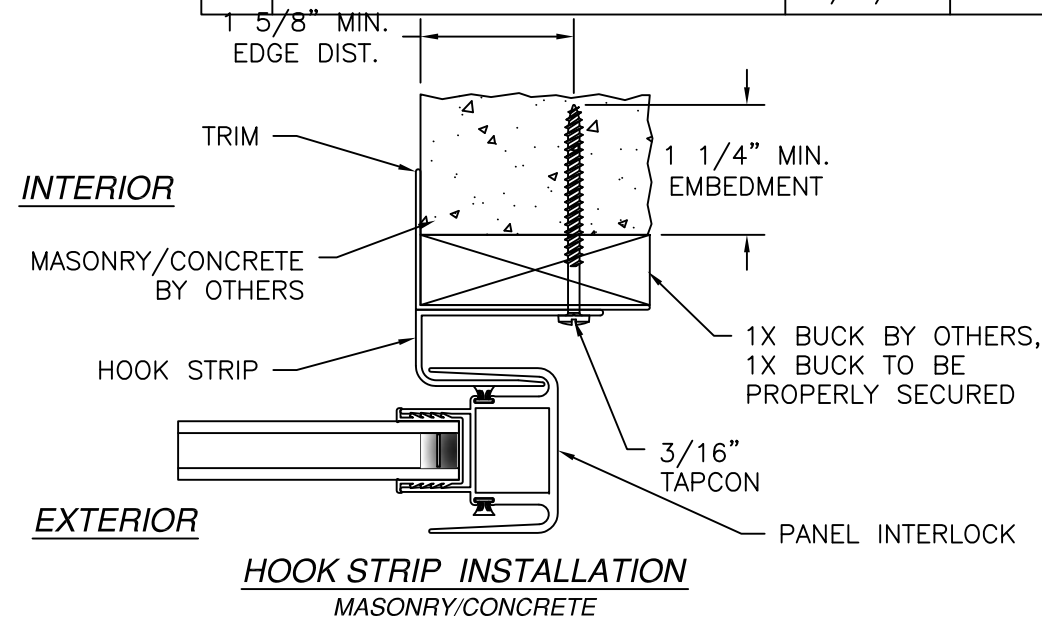
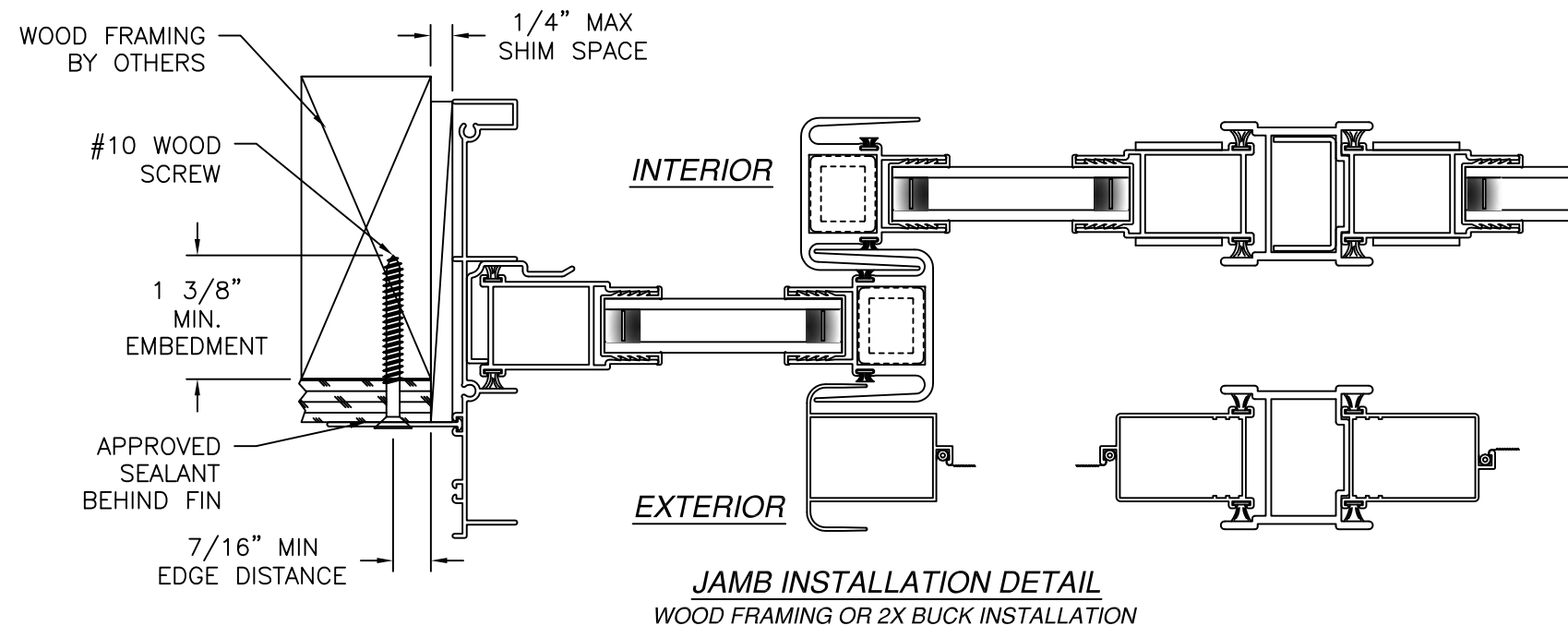
- NOTES:
1. INTERIOR AND EXTERIOR FINISHES, BY OTHERS, NOT SHOWN FOR CLARITY.
 2. PERIMETER AND JOINT SEALANT BY OTHERS TO BE DESIGNED IN ACCORDANCE WITH ASTM E2112

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. 08-01830	REV D
SCALE NTS	DATE 10/23/12	SHEET 9 OF 10
L. ROBERTO LOMAS P.E. 1432 WOODFORD RD LEWISVILLE, NC 27023 434-688-0609 rllomas@lrlomaspe.com		

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



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

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

DRAWN: J.L.	DWG NO. 08-01830	REV D
SCALE NTS	DATE 10/23/12	SHEET 10 OF 10

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SIGNED: 06/20/2017

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