

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	REVISED ANCHOR SPACING & CHARTS	07/11/16	R.L.
B	REVISED GLAZING	09/29/17	R.L.

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.
4. WHERE SHIM OR BUCK THICKNESS IS LESS THAN 1–1/2” WINDOW UNITS MUST BE ANCHORED THROUGH THE FRAME IN ACCORDANCE WITH MANUFACTURER’S PUBLISHED INSTALLATION INSTRUCTIONS. ANCHORS SHALL BE SECURELY FASTENED DIRECTLY INTO MASONRY, CONCRETE OR OTHER STRUCTURAL SUBSTRATE MATERIAL.
5. WHERE WOOD BUCK THICKNESS IS 1–1/2” OR GREATER, BUCK SHALL BE SECURELY FASTENED TO MASONRY, CONCRETE OR OTHER STRUCTURAL SUBSTRATE. WINDOW UNITS MAY BE ANCHORED THROUGH FRAME TO SECURED WOOD BUCK IN ACCORDANCE WITH MANUFACTURER’S PUBLISHED INSTALLATION INSTRUCTIONS.
6. 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.
7. BUCKS SHALL EXTEND BEYOND WINDOW INTERIOR FACE SO THAT FULL FRAME SUPPORT IS PROVIDED.
8. FOR FIN INSTALLATION SHIM AS NEEDED. FOR FRAME INSTALLATION SHIM AS REQUIRED AT EACH ANCHOR LOCATION WITH LOAD BEARING SHIM. SHIM WHERE SPACE OF 1/16” OR GREATER OCCURS. MAXIMUM ALLOWABLE SHIM STACK TO BE 1/4”.
9. SHIMS SHALL BE LOCATED, APPLIED AND MADE FROM MATERIALS AND THICKNESS CAPABLE OF SUSTAINING APPLICABLE LOADS.
10. WIND LOAD DURATION FACTOR Cd=1.6 WAS USED FOR WOOD ANCHOR CALCULATIONS.
11. FRAME MATERIAL: EXTRUDED ALUMINUM 6063–T5.
12. UNITS MUST BE GLAZED PER ASTM E1300–04/09, SEE SHEET 9 FOR GLASS DETAILS.
13. APPROVED IMPACT PROTECTIVE SYSTEM IS NOT REQUIRED FOR THIS PRODUCT IN WIND BORNE DEBRIS REGIONS.
14. FOR ANCHORING THROUGH FIN INTO WOOD FRAMING OR 2X BUCK USE #8 WOOD SCREWS WITH SUFFICIENT LENGTH TO ACHIEVE A 1 1/4” MINIMUM EMBEDMENT INTO SUBSTRATE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.

15. FOR ANCHORING THROUGH FRAME INTO WOOD FRAMING OR 2X BUCK USE #10 WOOD SCREWS WITH SUFFICIENT LENGTH TO ACHIEVE A 1 1/4” MINIMUM EMBEDMENT INTO SUBSTRATE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
16. FOR ANCHORING THROUGH FRAME INTO MASONRY/CONCRETE USE 3/16” TAPCONS WITH SUFFICIENT LENGTH TO ACHIEVE A 1 1/4” MINIMUM EMBEDMENT INTO SUBSTRATE WITH 2 1/2” MINIMUM EDGE DISTANCE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
17. FOR ANCHORING THROUGH FRAME 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.
18. ALL FASTENERS TO BE CORROSION RESISTANT.
19. 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 2,000 PSI.

C. MASONRY: HOLLOW/FILLED BLOCK PER ASTM C90 WITH Fm=2,000PSI MINIMUM.

D. METAL STRUCTURE: STEEL 18GA (.048”) FY=33KSI/FU=52KSI OR ALUMINUM 6063–T5 FU=30KSI .048” THICK MINIMUM

TABLE OF CONTENTS	
SHEET NO.	DESCRIPTION
1	NOTES
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9	COMPONENTS & GLASS DETAILS

MI WINDOWS AND DOORS, LLC

650 WEST MARKET STREET

GRATZ, PA 17030–0370

SERIES 185 ALUMINUM SINGLE HUNG WINDOW

52”x72” IMPACT

NOTES

DRAWN:

N.G.

DWG NO.

08–02544

REV

B

SCALE

NTS

DATE

12/09/14

SHEET

1

OF

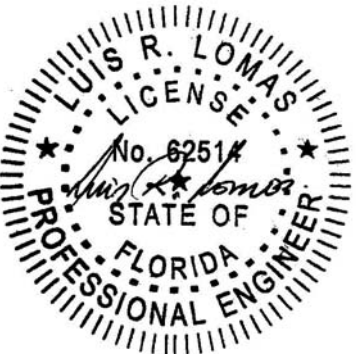
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L. ROBERTO LOMAS P.E.

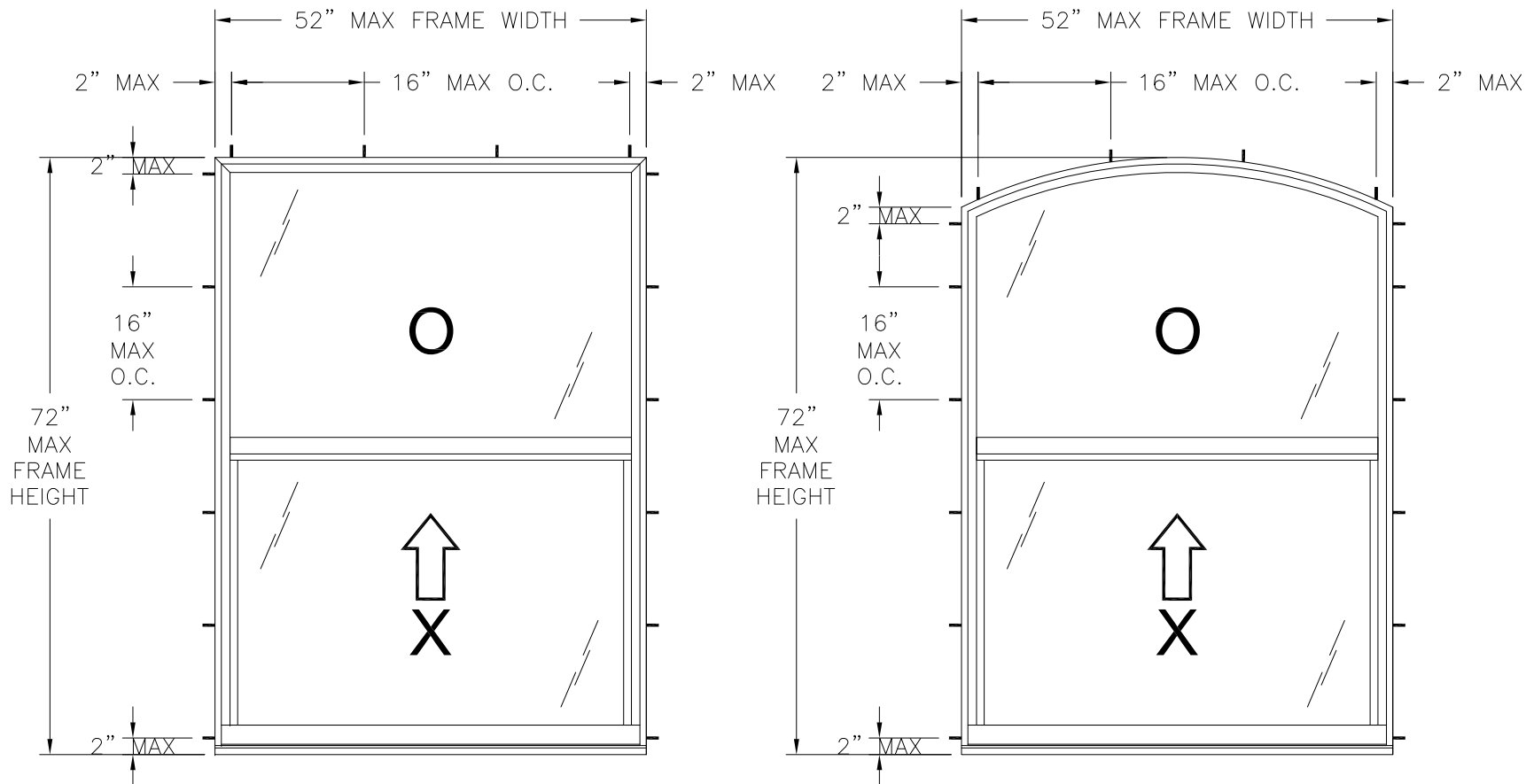
1432 WOODFORD RD LEWISVILLE, NC 27023

434-688-0609 rllomas@lrlomaspe.com

SIGNED: 02/27/2020



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



185 ALUMINUM SINGLE HUNG WINDOW

EXTERIOR VIEW

FLANGE & FINLESS INSTALLATION

SEE CHART #1 FOR SMALLER UNITS REQUIRED ANCHORS

185 ALUMINUM SINGLE HUNG WINDOW

DESIGNER EXTERIOR VIEW

FLANGE & FINLESS INSTALLATION

SEE CHART #1 FOR SMALLER UNITS REQUIRED ANCHORS

DESIGN PRESSURE RATING	IMPACT RATING
±55.0PSF	LARGE MISSILE IMPACT

MISSILE LEVEL D, WIND ZONE 3

NOTES:

1. MAXIMUM SASH SIZE: 51" X 36".
2. MAXIMUM SASH D.L.O.: 47 5/8" X 32 1/2".
3. MAXIMUM FIXED D.L.O.: 49 3/8" X 32 1/2".

HARDWARE SCHEDULE

A.	(2) METAL SWEEP LOCK AT 8" FROM EACH END INTERIOR MEETING RAIL
B.	(2) BLOCK AND TACKLE BALANCE AT JAMBS

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CHART #1

Number of anchor locations required														
Frame Height (in)	Frame Width (in)													
	18.00		24.00		30.00		36.00		42.00		48.00		52.00	
	Head	Jamb	Head	Jamb	Head	Jamb	Head	Jamb	Head	Jamb	Head	Jamb	Head	Jamb
24.00	2	3	3	3	3	3	3	3	4	3	4	3	4	3
30.00	2	3	3	3	3	3	3	3	4	3	4	3	4	3
36.00	2	3	3	3	3	3	3	3	4	3	4	3	4	3
42.00	2	4	3	4	3	4	3	4	4	4	4	4	4	4
48.00	2	4	3	4	3	4	3	4	4	4	4	4	4	4
54.00	2	5	3	5	3	5	3	5	4	5	4	5	4	5
60.00	2	5	3	5	3	5	3	5	4	5	4	5	4	5
66.00	2	5	3	5	3	5	3	5	4	5	4	5	4	5
72.00	2	6	3	6	3	6	3	6	4	6	4	6	4	6

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MI WINDOWS AND DOORS, LLC

650 WEST MARKET STREET
GRATZ, PA 17030-0370

SERIES 185 ALUMINUM SINGLE HUNG WINDOW
52"x72" IMPACT
FLANGE & FINLESS ELEVATIONS

DRAWN: N.G.	DWG NO. 08-02544	REV B
SCALE NTS	DATE 12/09/14	SHEET 2 OF 9

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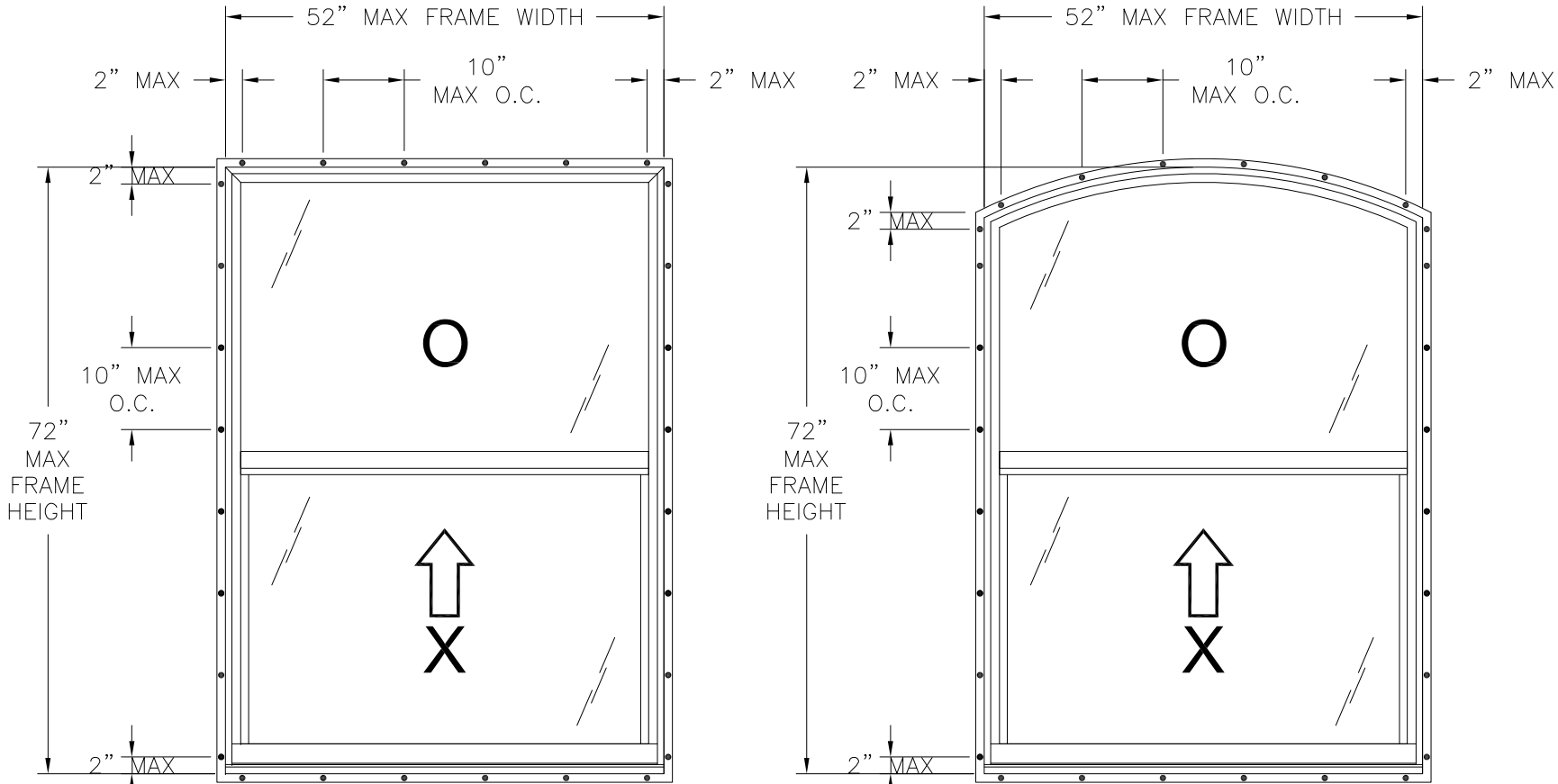


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CHART #2

Number of anchor locations required														
Frame Height (in)	Frame Width (in)													
	18.00		24.00		30.00		36.00		42.00		48.00		52.00	
	H & S	Jamb	H & S	Jamb	H & S	Jamb	H & S	Jamb	H & S	Jamb	H & S	Jamb	H & S	Jamb
24.00	3	3	3	3	4	3	5	3	5	3	6	3	6	3
30.00	3	4	3	4	4	4	5	4	5	4	6	4	6	4
36.00	3	5	3	5	4	5	5	5	5	5	6	5	6	5
42.00	3	5	3	5	4	5	5	5	5	5	6	5	6	5
48.00	3	6	3	6	4	6	5	6	5	6	6	6	6	6
54.00	3	6	3	6	4	6	5	6	5	6	6	6	6	6
60.00	3	7	3	7	4	7	5	7	5	7	6	7	6	7
66.00	3	8	3	8	4	8	5	8	5	8	6	8	6	8
72.00	3	8	3	8	4	8	5	8	5	8	6	8	6	8



185 ALUMINUM SINGLE HUNG WINDOW
EXTERIOR VIEW
FIN INSTALLATION
SEE CHART #2 FOR SMALLER UNITS REQUIRED ANCHORS

185 ALUMINUM SINGLE HUNG WINDOW
DESIGNER EXTERIOR VIEW
FIN INSTALLATION
SEE CHART #2 FOR SMALLER UNITS REQUIRED ANCHORS

DESIGN PRESSURE RATING	IMPACT RATING
±55.0PSF	LARGE MISSILE IMPACT

MISSILE LEVEL D, WIND ZONE 3

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650 WEST MARKET STREET
GRATZ, PA 17030-0370

SERIES 185 ALUMINUM SINGLE HUNG WINDOW
52"x72" IMPACT
FIN ELEVATIONS

DRAWN:
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DWG NO.
08-02544

REV
B

SCALE NTS

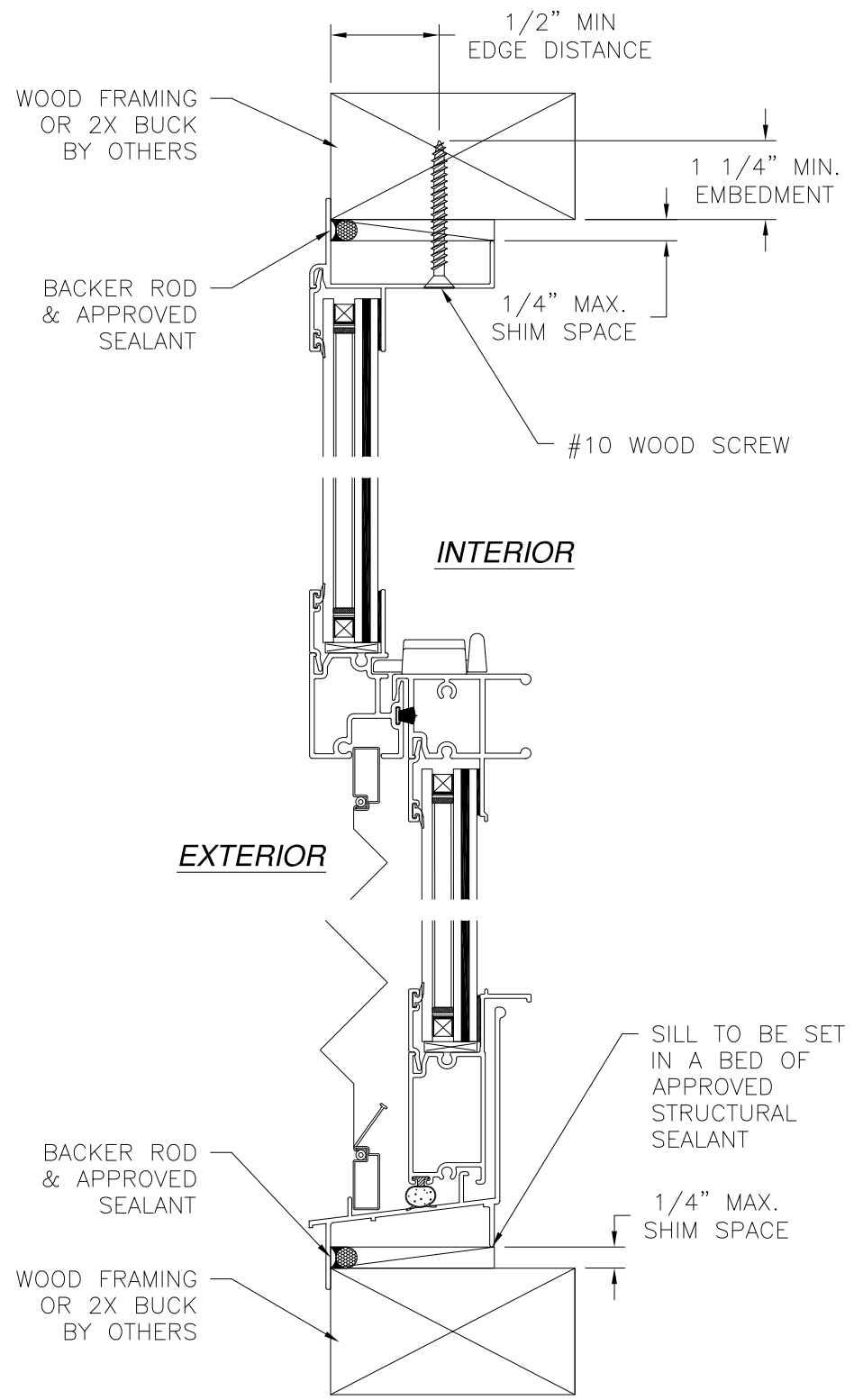
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SHEET 3 OF 9

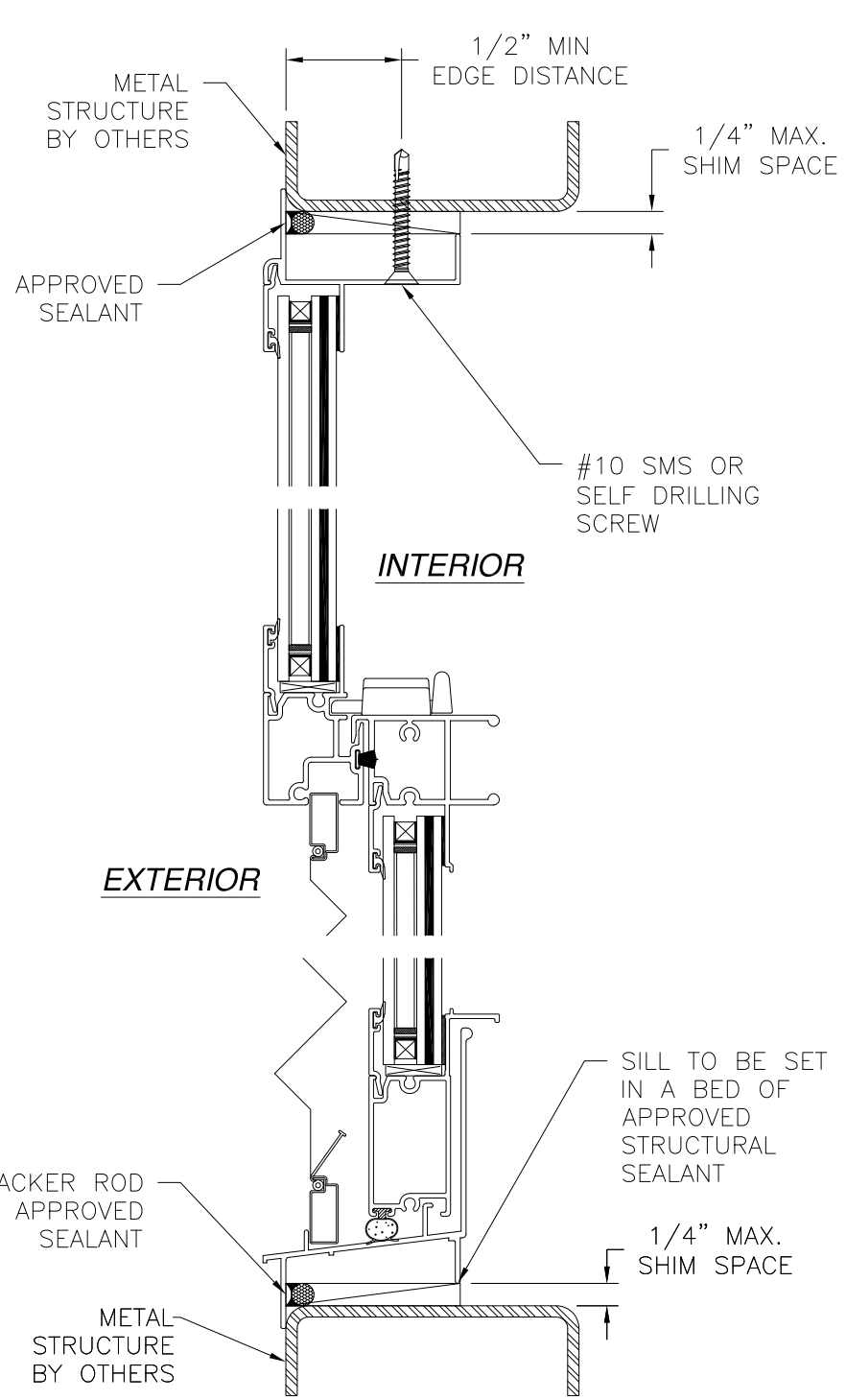
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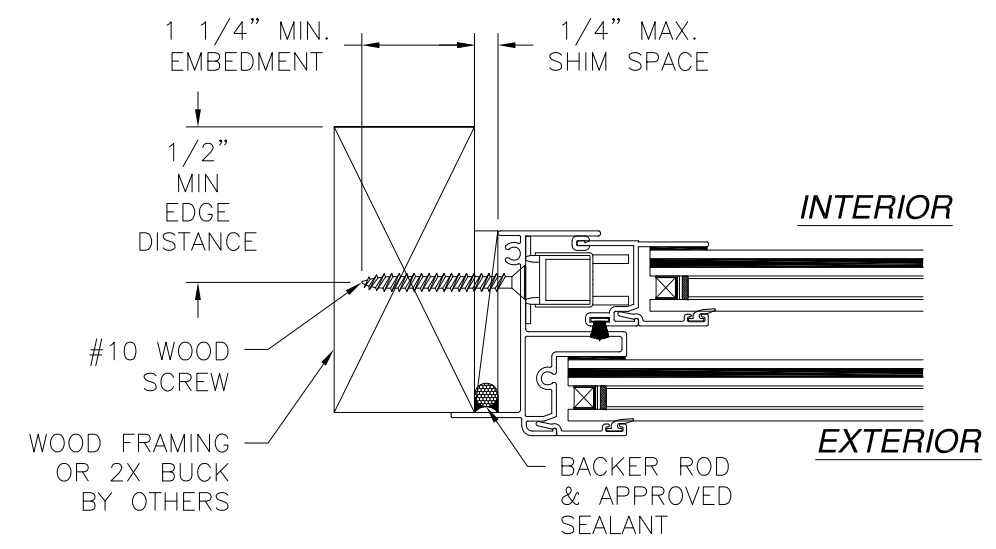
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WOOD FRAMING OR 2X BUCK INSTALLATION



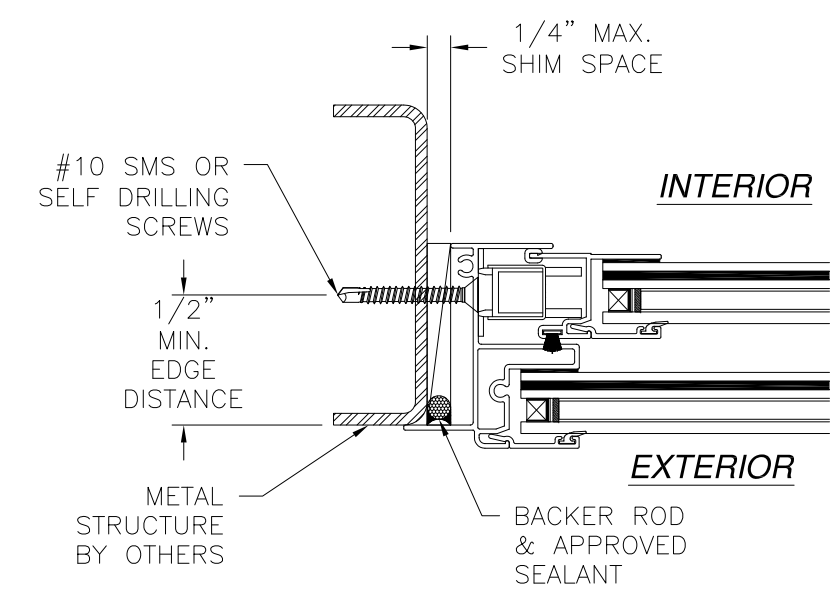
VERTICAL CROSS SECTION
METAL STRUCTURE INSTALLATION

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

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JAMB INSTALLATION DETAIL
WOOD FRAMING OR 2X BUCK INSTALLATION



JAMB INSTALLATION DETAIL
METAL STRUCTURE INSTALLATION

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650 WEST MARKET STREET
GRATZ, PA 17030-0370

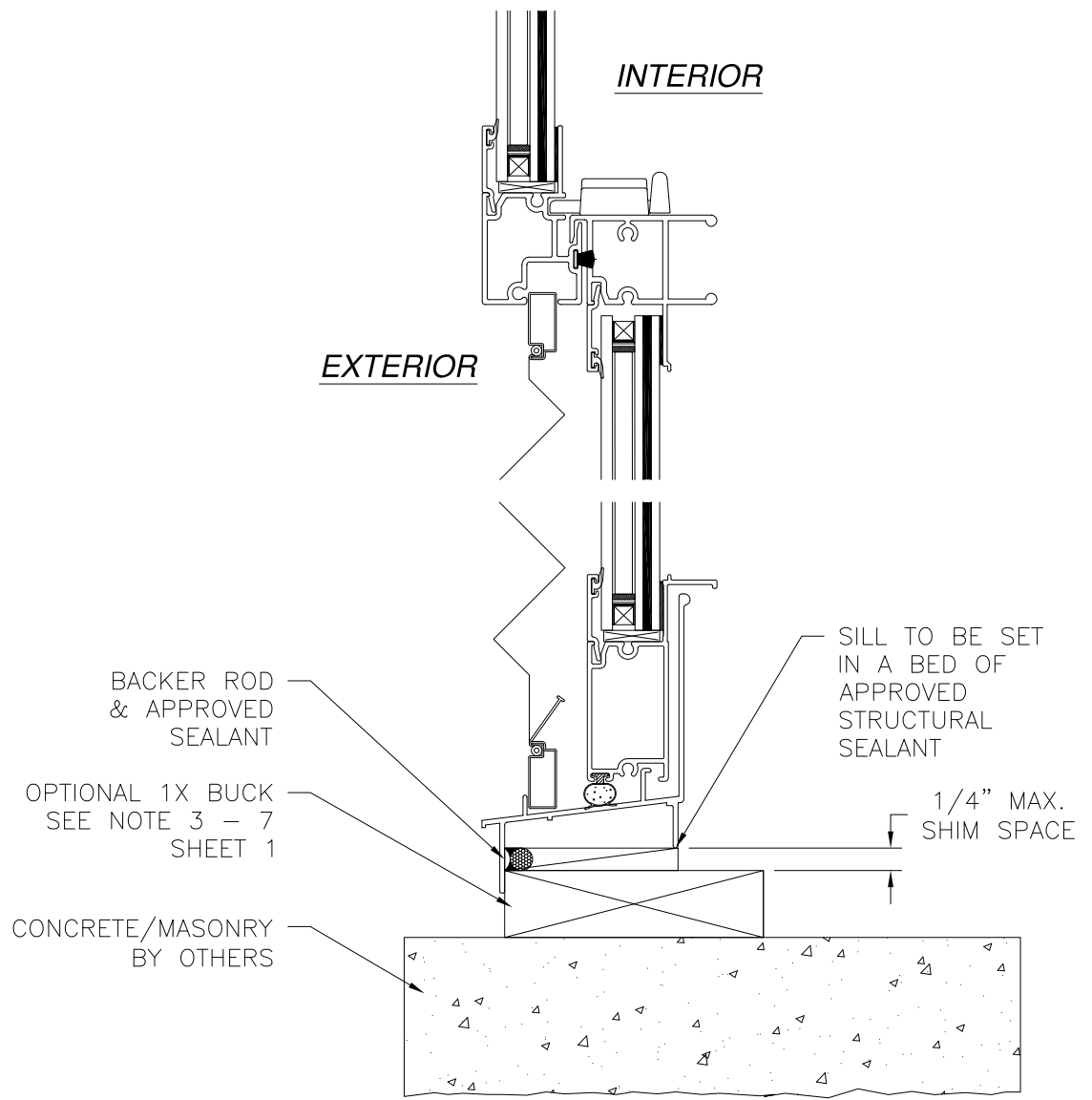
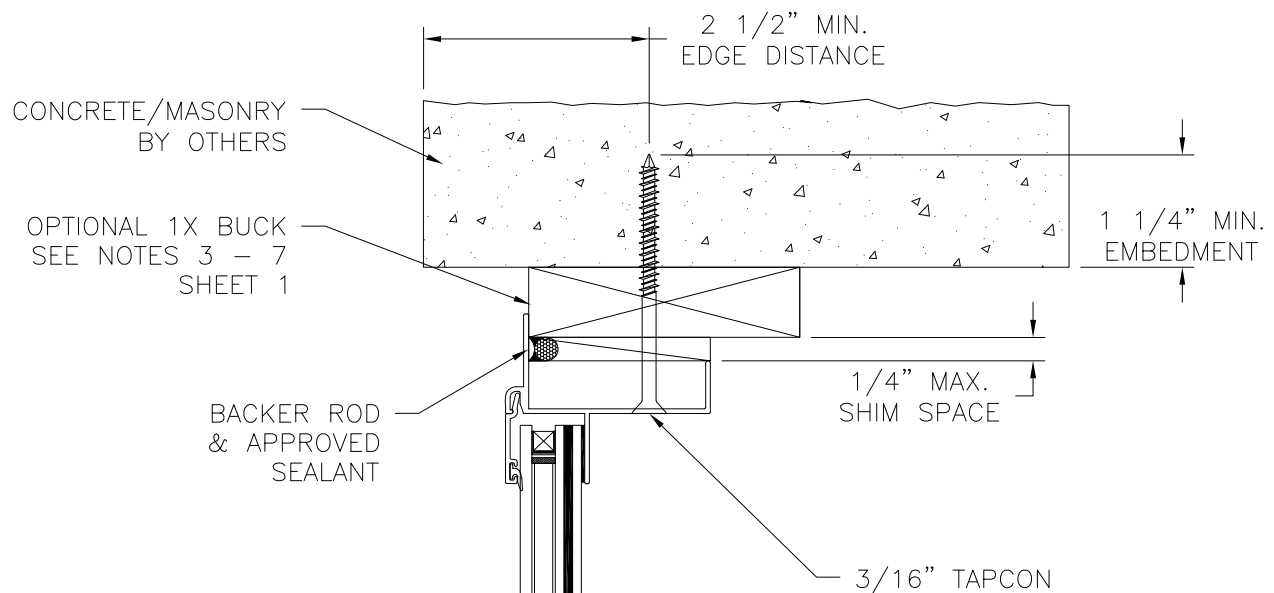
SERIES 185 ALUMINUM SINGLE HUNG WINDOW
52"x72" IMPACT
FLANGE INSTALLATION DETAILS

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SCALE NTS	DATE 12/09/14	SHEET 4 OF 9

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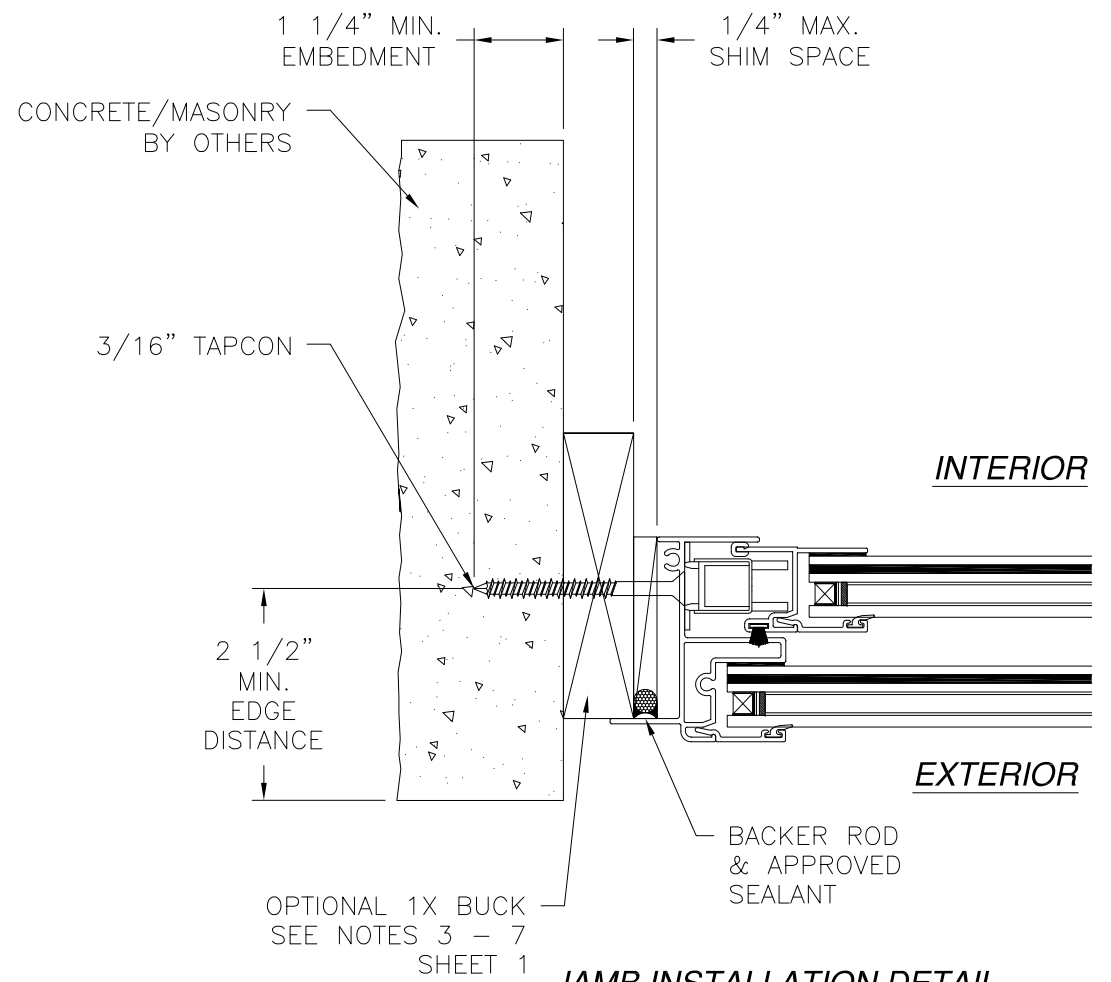
LUIS R. LOMAS
P.E.
No. 62514
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

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



VERTICAL CROSS SECTION
CONCRETE/MASONRY INSTALLATION

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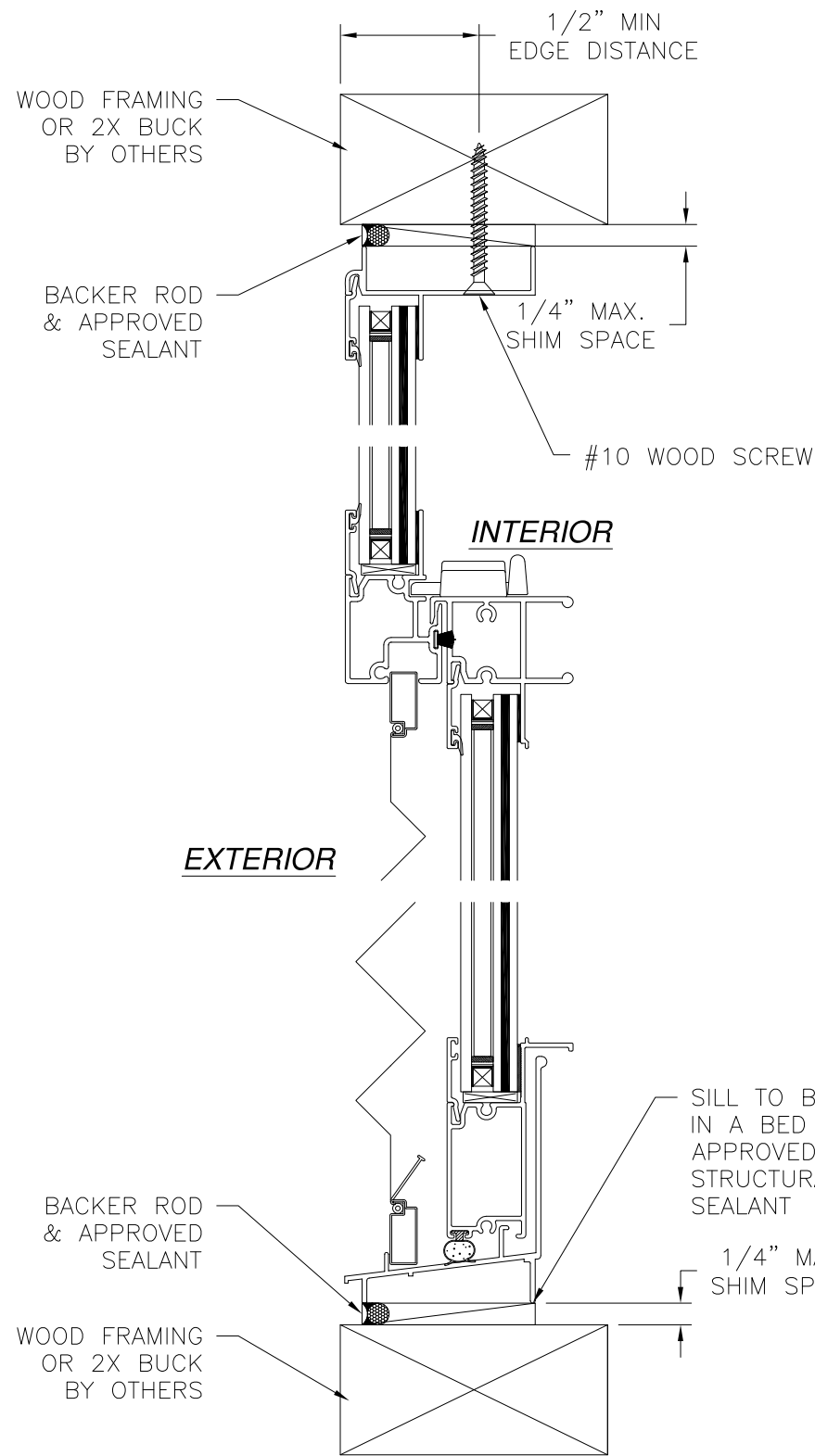
JAMB INSTALLATION DETAIL
CONCRETE/MASONRY INSTALLATION

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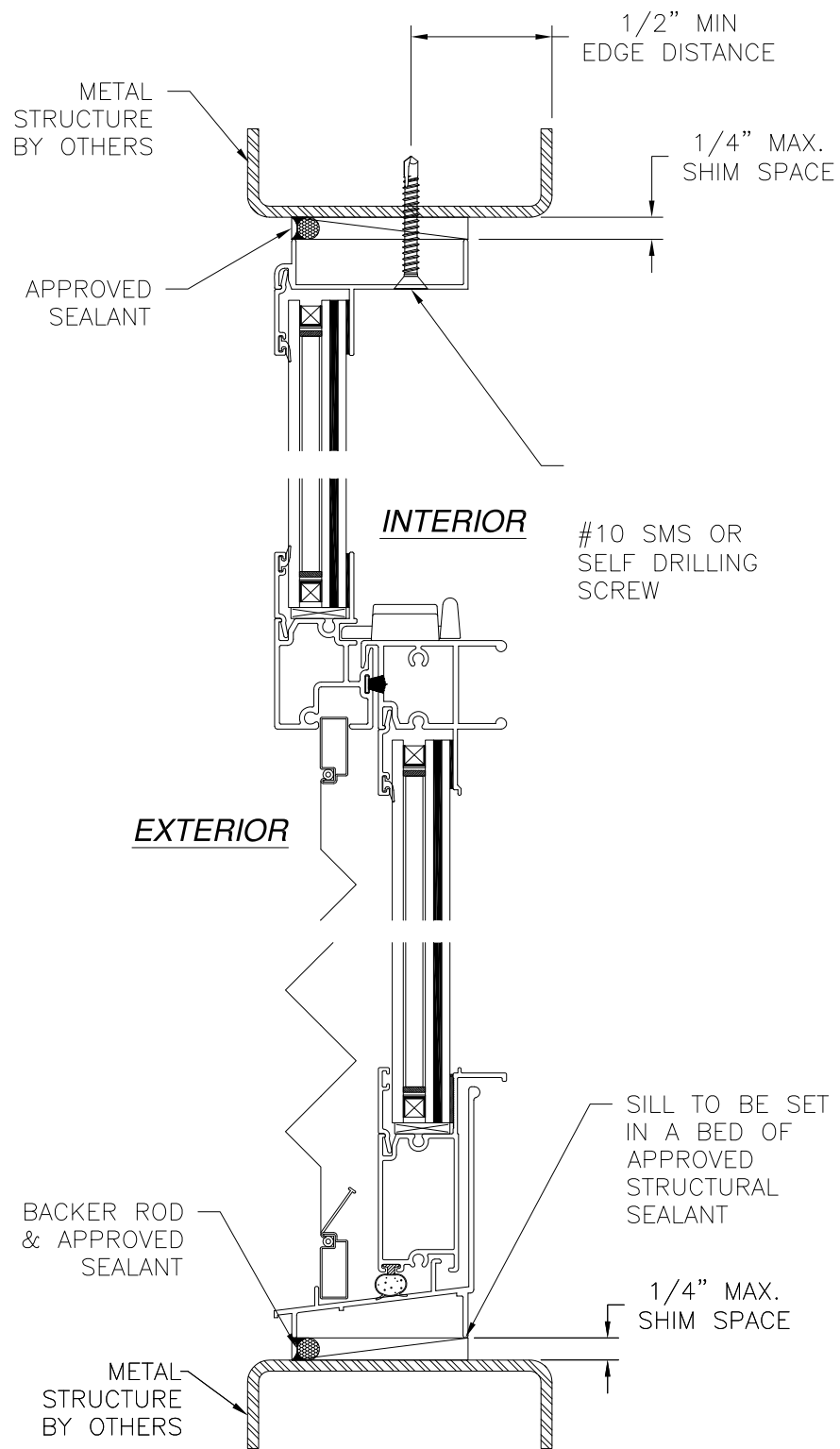
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SERIES 185 ALUMINUM SINGLE HUNG WINDOW 52"x72" IMPACT FLANGE INSTALLATION DETAILS		
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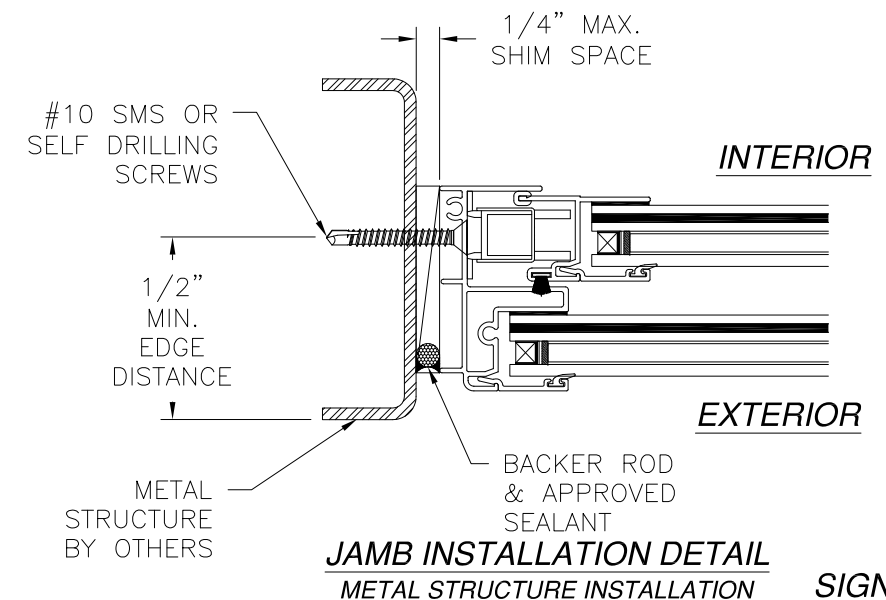
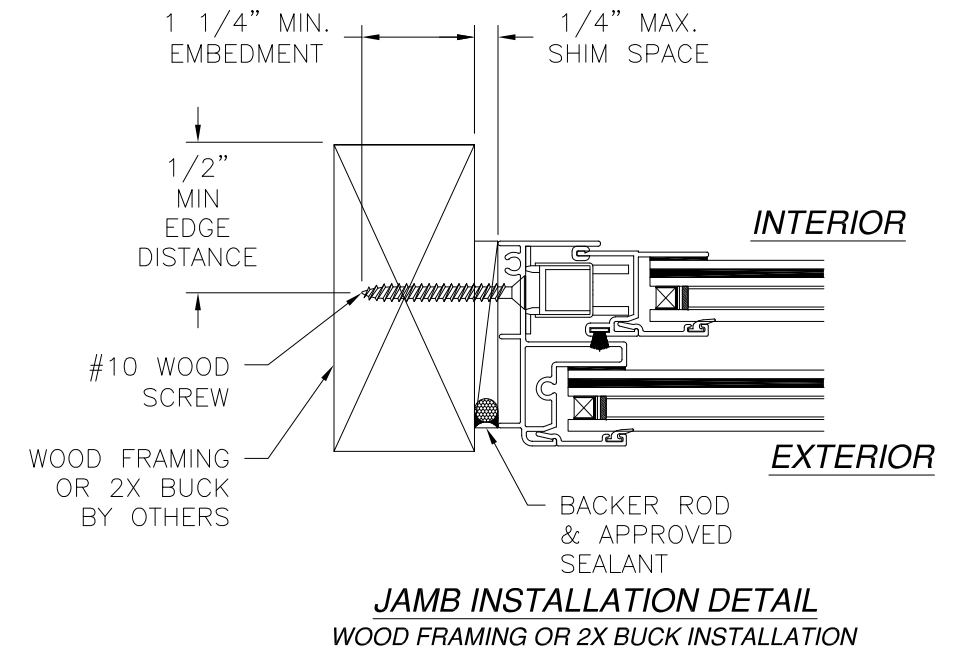
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WOOD FRAMING OR 2X BUCK INSTALLATION

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VERTICAL CROSS SECTION
METAL STRUCTURE INSTALLATION

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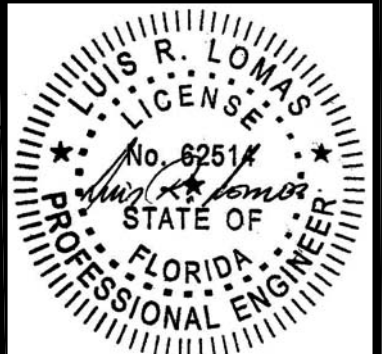
MI WINDOWS AND DOORS, LLC
650 WEST MARKET STREET
GRATZ, PA 17030-0370

SERIES 185 ALUMINUM SINGLE HUNG WINDOW
52"x72" IMPACT
FINLESS INSTALLATION DETAILS

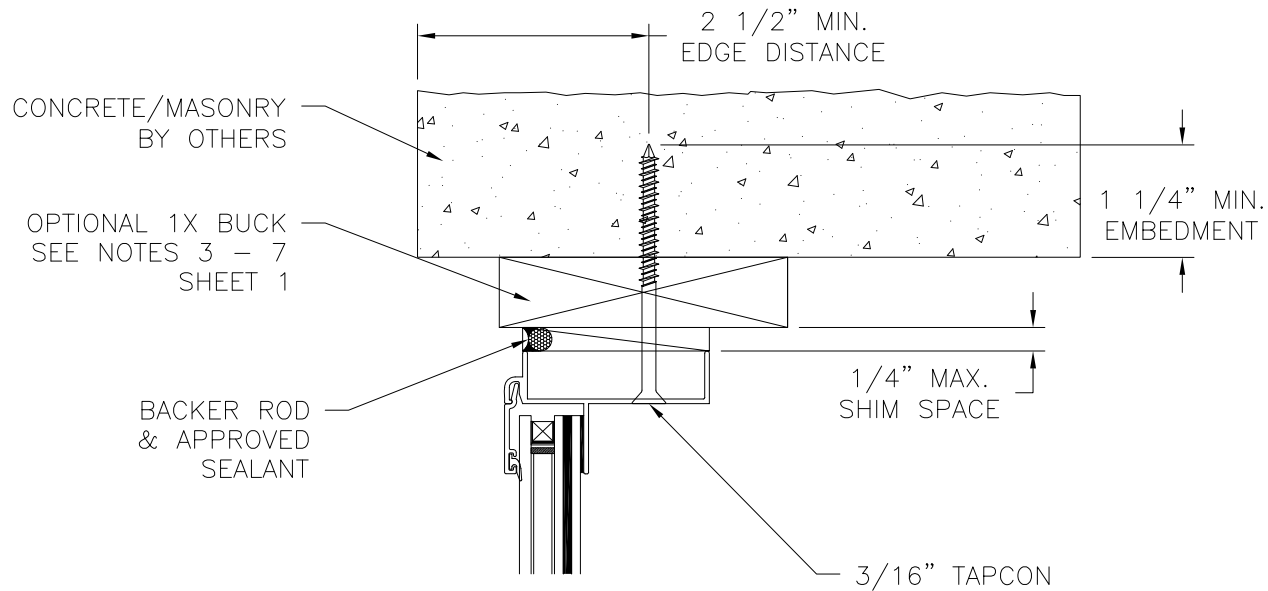
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SCALE NTS	DATE 12/09/14	SHEET 6 OF 9

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434-688-0609 rllomas@lrlomaspe.com

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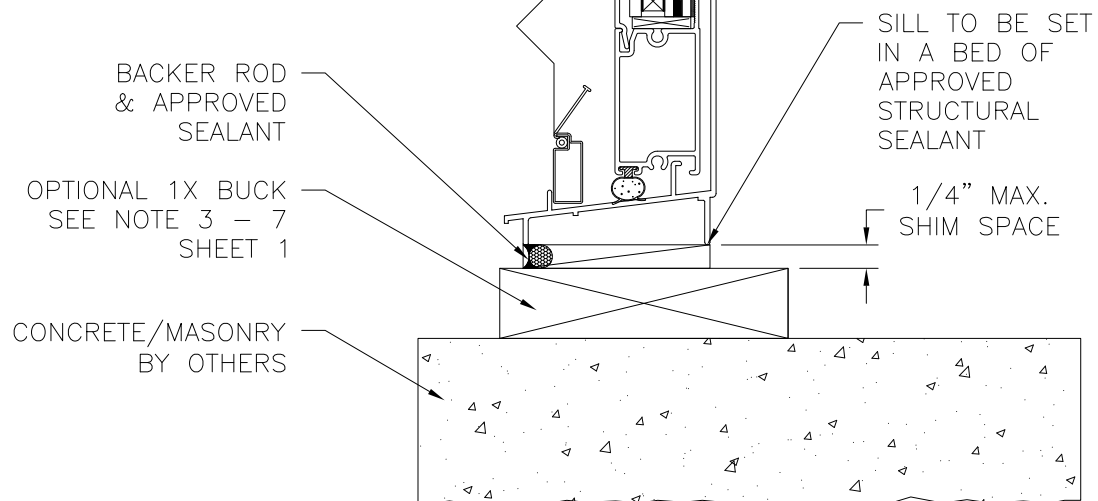


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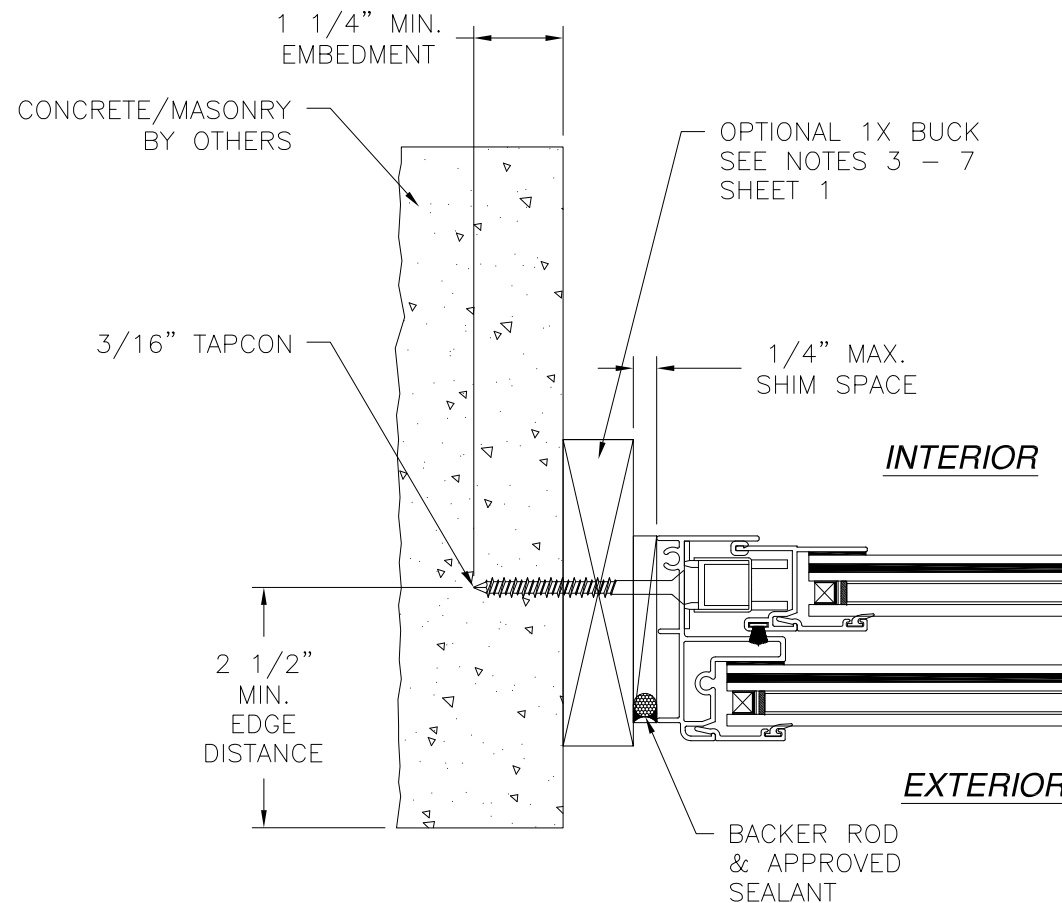


INTERIOR

EXTERIOR



VERTICAL CROSS SECTION
CONCRETE/MASONRY INSTALLATION



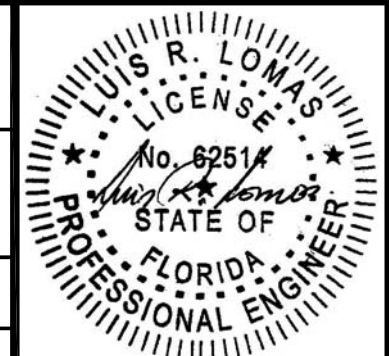
JAMB INSTALLATION DETAIL
CONCRETE/MASONRY INSTALLATION

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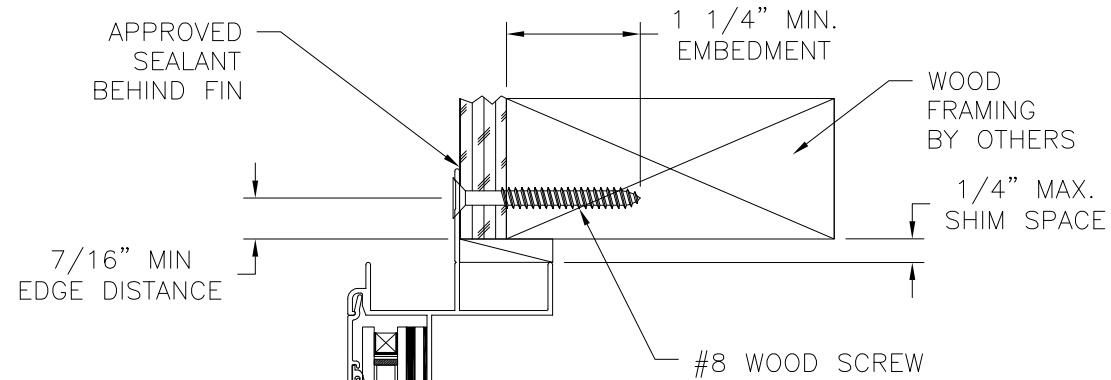
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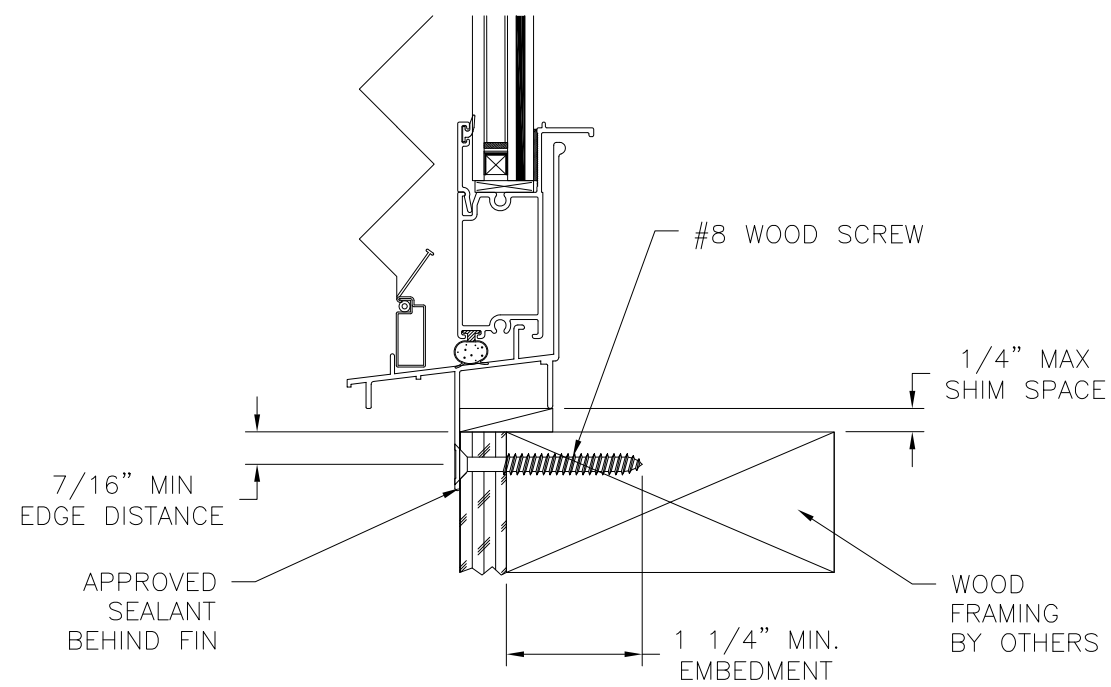


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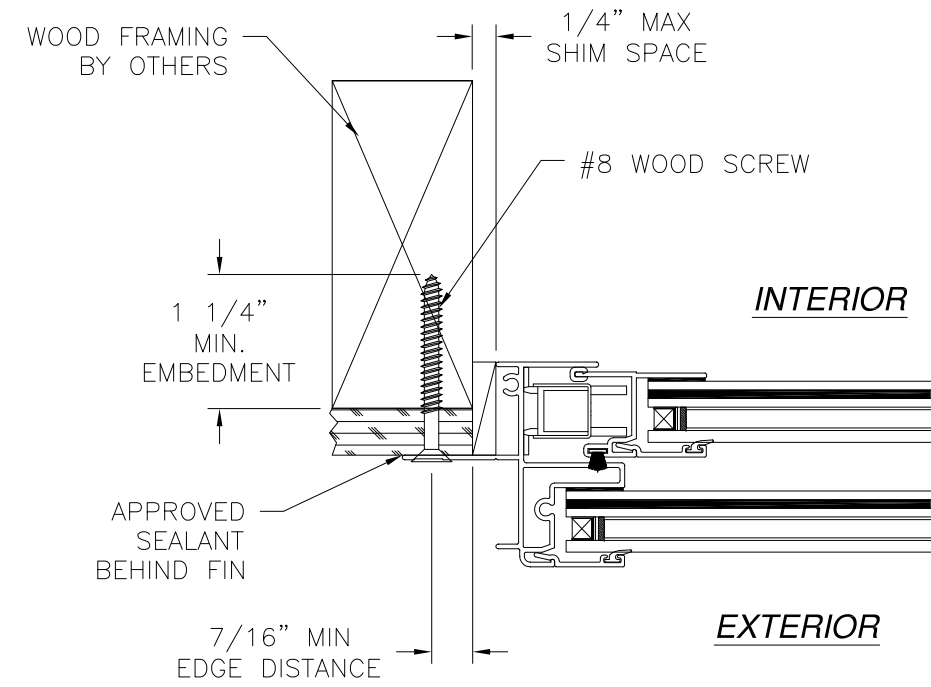


INTERIOR

EXTERIOR



VERTICAL CROSS SECTION
WOOD FRAMING OR 2X BUCK INSTALLATION



JAMB INSTALLATION DETAIL
WOOD FRAMING OR 2X BUCK INSTALLATION

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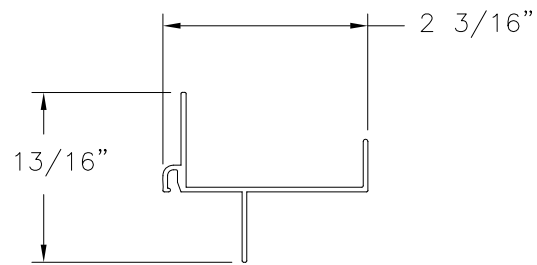
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52"x72" IMPACT
FIN INSTALLATION DETAILS

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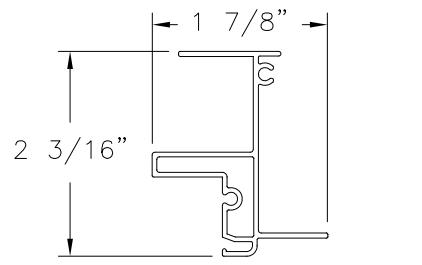
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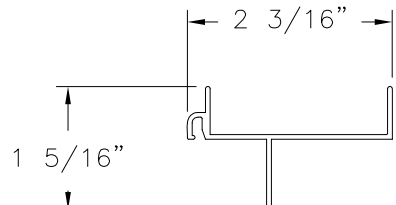
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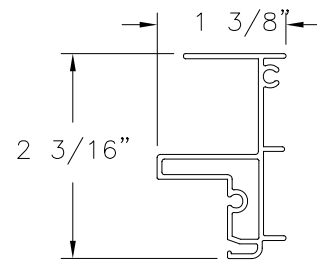
FLANGE FRAME HEAD
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ALUMINUM 6063-T5 .050" THICK



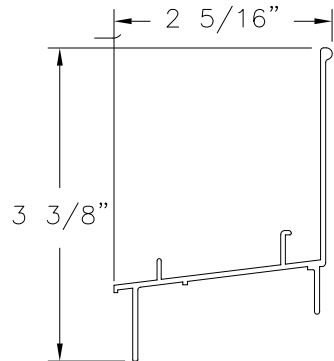
FLANGE FRAME JAMB
CM-18503
ALUMINUM 6063-T5 .050" THICK



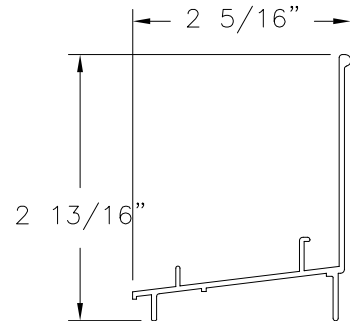
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CM-18553
ALUMINUM 6063-T5 .050" THICK



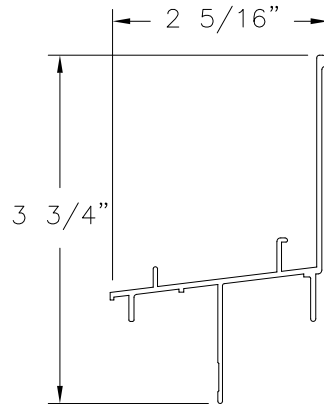
FINLESS FRAME JAMB
CM-18513
ALUMINUM 6063-T5 .050" THICK



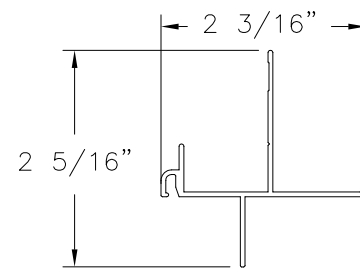
FLANGE FRAME SILL
CM-18502
ALUMINUM 6063-T5 .055" THICK



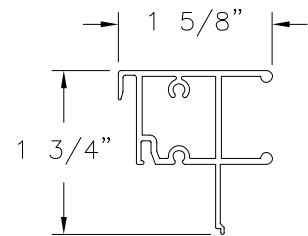
FINLESS FRAME SILL
CM-18554
ALUMINUM 6063-T5 .055" THICK



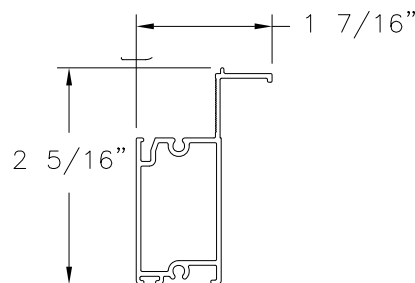
FIN FRAME SILL
CM-18509
ALUMINUM 6063-T5 .055" THICK



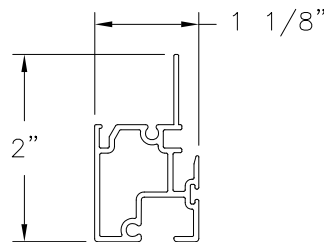
FIN FRAME HEAD
CM-18508
ALUMINUM 6063-T5 .050" THICK



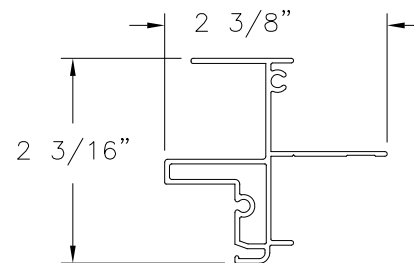
LOCK RAIL/STILE
CM-18505
ALUMINUM 6063-T5 .062" THICK



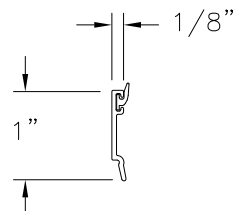
SASH BOTTOM RAIL
CM-18555
ALUMINUM 6063-T5 .050" THICK



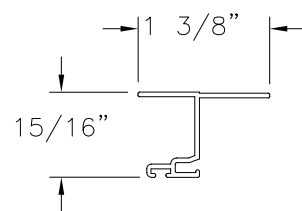
MEETING RAIL
CM-18504
ALUMINUM 6063-T5 .055" THICK



FIN FRAME JAMB
CM-18510
ALUMINUM 6063-T5 .050" THICK

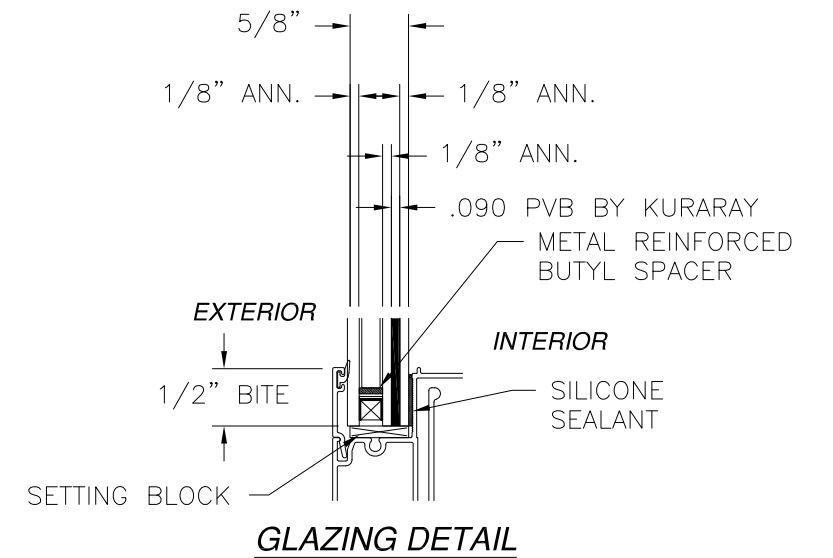


GLAZING BEAD
CM-18535
RIGID PVC .050" THICK



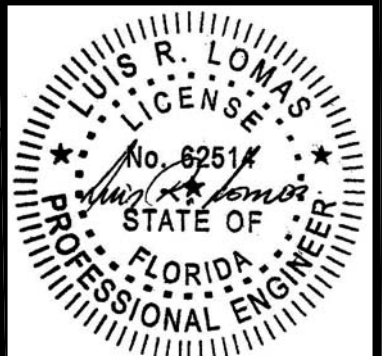
SASH STILE
CM-18507
ALUMINUM 6063-T5 .050" THICK

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	REVISED ANCHOR SPACING & CHARTS	07/11/16	R.L.
B	REVISED GLAZING	09/29/17	R.L.



MI WINDOWS AND DOORS, LLC 650 WEST MARKET STREET GRATZ, PA 17030-0370		
SERIES 185 ALUMINUM SINGLE HUNG WINDOW 52"x72" IMPACT COMPONENTS		
DRAWN: N.G.	DWG NO. 08-02544	REV B
SCALE NTS	DATE 12/09/14	SHEET 9 OF 9
L. ROBERTO LOMAS P.E. 1432 WOODFORD RD LEWISVILLE, NC 27023 434-688-0609 rllomas@lrlomaspe.com		

SIGNED: 02/27/2020



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