

| REVISIONS |                      |            |          |
|-----------|----------------------|------------|----------|
| REV       | DESCRIPTION          | DATE       | APPROVED |
| E         | REVISED PER NEW CODE | 07/31/2024 | R.L.     |

NOTES:

1. THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH REQUIREMENTS OF THE FLORIDA BUILDING CODE INCLUDING THE HVHZ.
2. WOOD FRAMING, METAL 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. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING STRUCTURAL INTEGRITY OF OPENING.
4. APPROVED IMPACT PROTECTIVE SYSTEM IS NOT REQUIRED FOR THIS PRODUCT IN AREAS WHERE WIND BORNE DEBRIS PROTECTION IS REQUIRED.
5. UNITS MUST BE GLAZED PER ASTM E1300. SEE SHEET 3 FOR GLAZING DETAILS.
6. FOR ANCHORING INTO WOOD FRAMING OR 2X BUCK USE #10 WOOD SCREW WITH SUFFICIENT LENGTH TO ACHIEVE A 1 1/4" MINIMUM EMBEDMENT INTO SUBSTRATE, LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
7. FOR ANCHORING INTO MASONRY USE 3/16" TAPCONS WITH SUFFICIENT LENGTH TO ACHIEVE A 1 3/4" MINIMUM EMBEDMENT INTO SUBSTRATE WITH 2" MINIMUM EDGE DISTANCE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
8. 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.
9. ALL FASTENER TO BE CORROSION RESISTANT.
10. 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 BELOW:

A. WOOD – MINIMUM SPECIFIC GRAVITY OF G=0.42

B. CONCRETE – MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI.

C. MASONRY – STRENGTH CONFORMANCE TO ASTM C-90, WITH Fm=2,000 PSI

D. METAL STRUCTURE – STEEL 18 GA (.048") FY=33KSI/FU=52KSI OR ALUMINUM 6063-T5 FU=30KSI .125" THICK MINIMUM.
10. 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.
11. MAIN FRAME AND SUBFRAME MATERIAL: ALUMINUM 6063-T52
12. PANEL MAY BE MULLED INDEFINITELY AS LONG AS PANEL SIZE AS SHOWN IS NOT EXCEDED AND ANCHORED AS SHOWN IN THIS DOCUMENT.
13. SHUTTERS ARE TO BE INSTALLED PERMANENTLY
- SHUTTERS ARE NOT TO BE REMOVED ONCE INSTALLATION IS COMPLETE.

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BOVARD STUDIO, INC.  
2281 HIGHWAY 34 EAST  
FAIRFILED, IA 52556

1850 ALUMINUM FIXED SHUTTER  
49 5/8" X 97 5/8" (SINGLE PANEL)  
NOTES

DRAWN:  
R.L.

DWG NO.  
08-00462

REV  
E

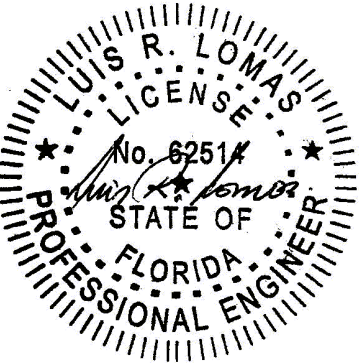
SCALE NTS

DATE 11/20/12

SHEET 1 OF 6

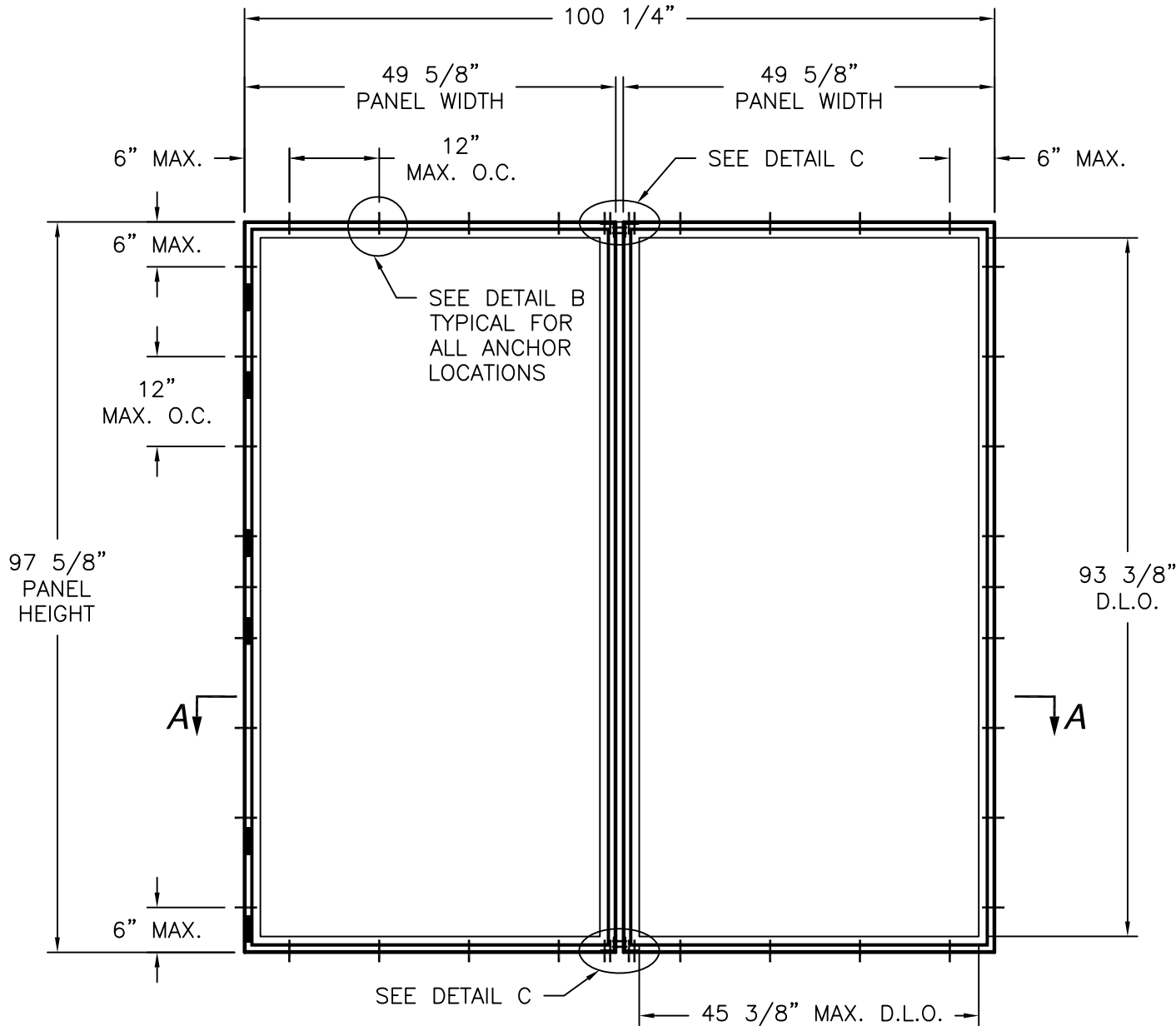
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434-688-0609 rllomas@lrlomaspe.com

SIGNED: 06/18/2025



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

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**1850 ALUMINUM FIXED SHUTTER**  
EXTERIOR VIEW

| DESIGN PRESSURE RATING | IMPACT RATING                  |
|------------------------|--------------------------------|
| ±75.0PSF               | LARGE AND SMALL MISSILE IMPACT |

2 PANELS SHOWN. MULTIPLE PANELS ARE APPROVED AS LONG AS INDIVIDUAL PANEL AREA DOES NOT EXCEED 33.6 FT²

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ELEVATION

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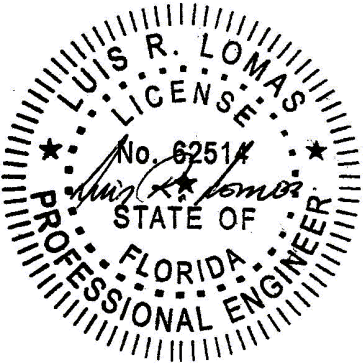
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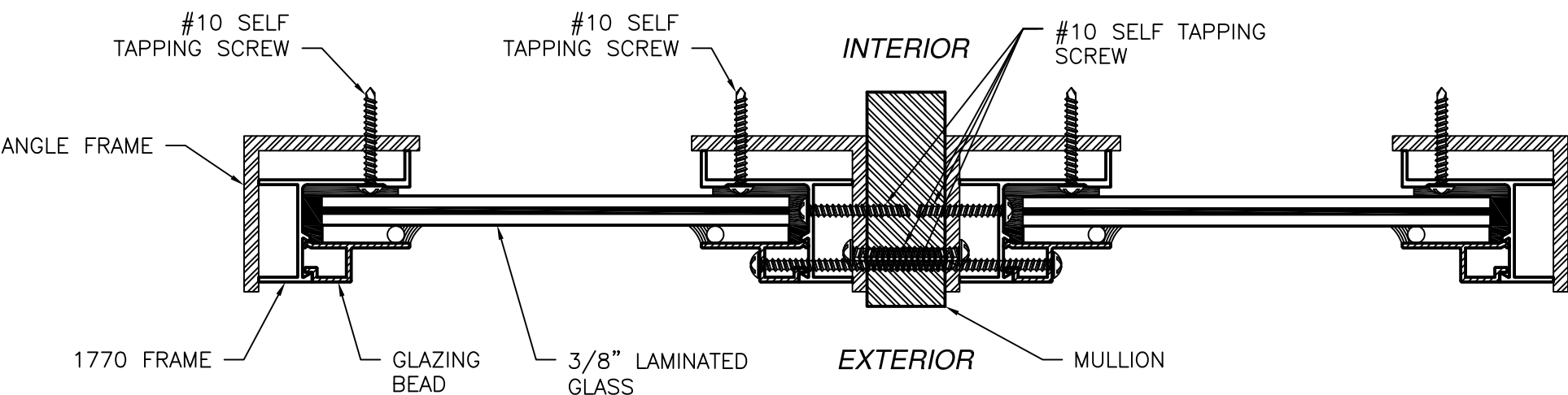
SHEET 2 OF 6

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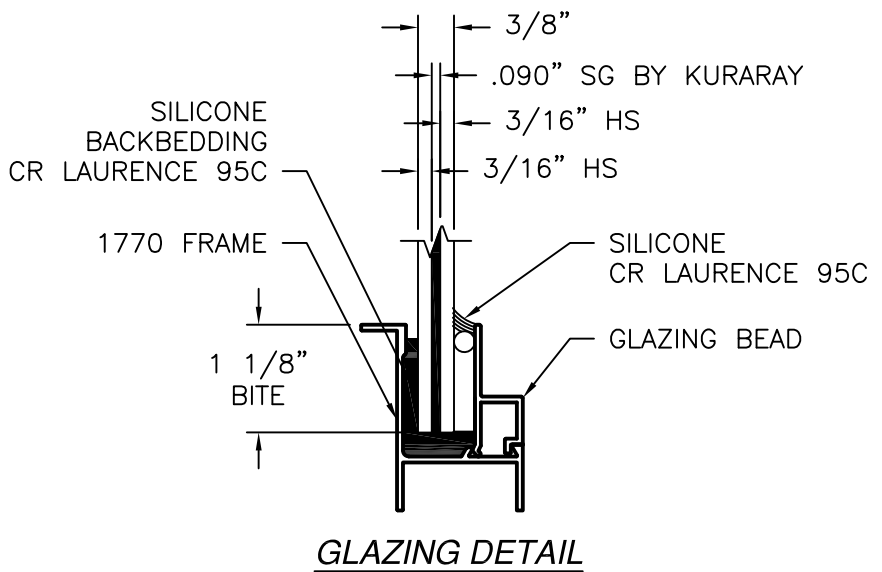
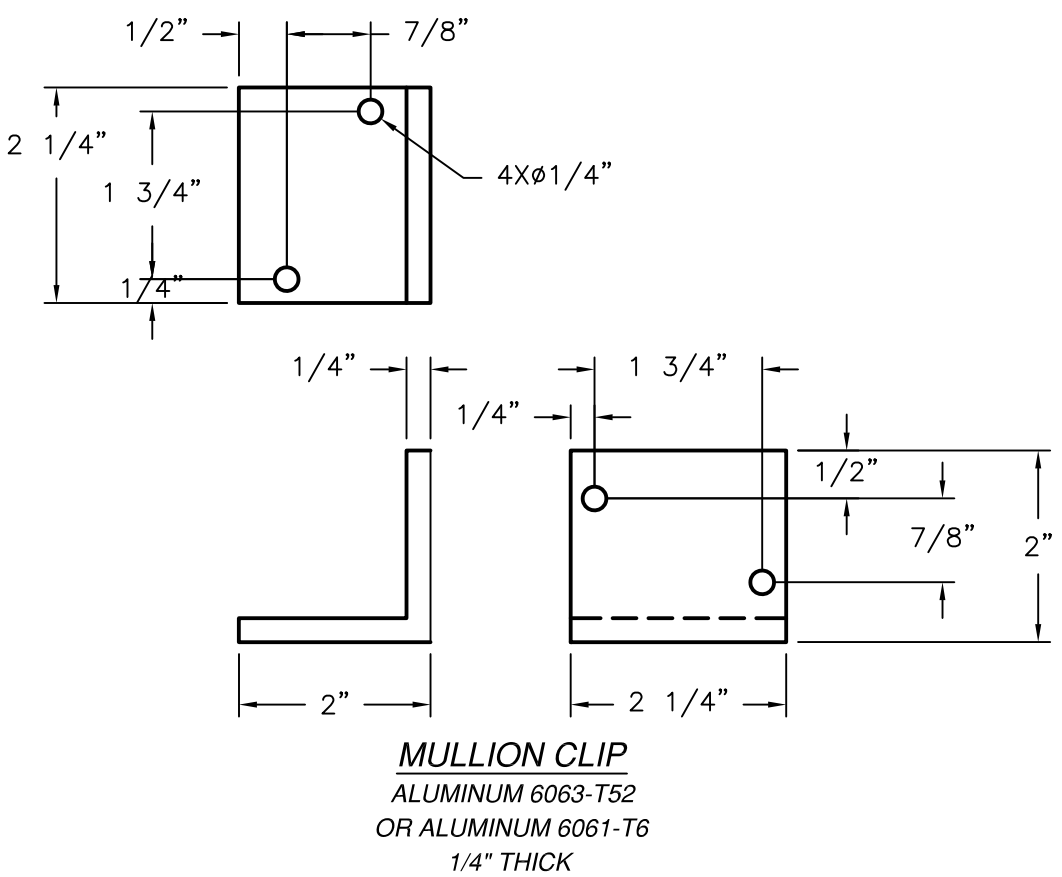
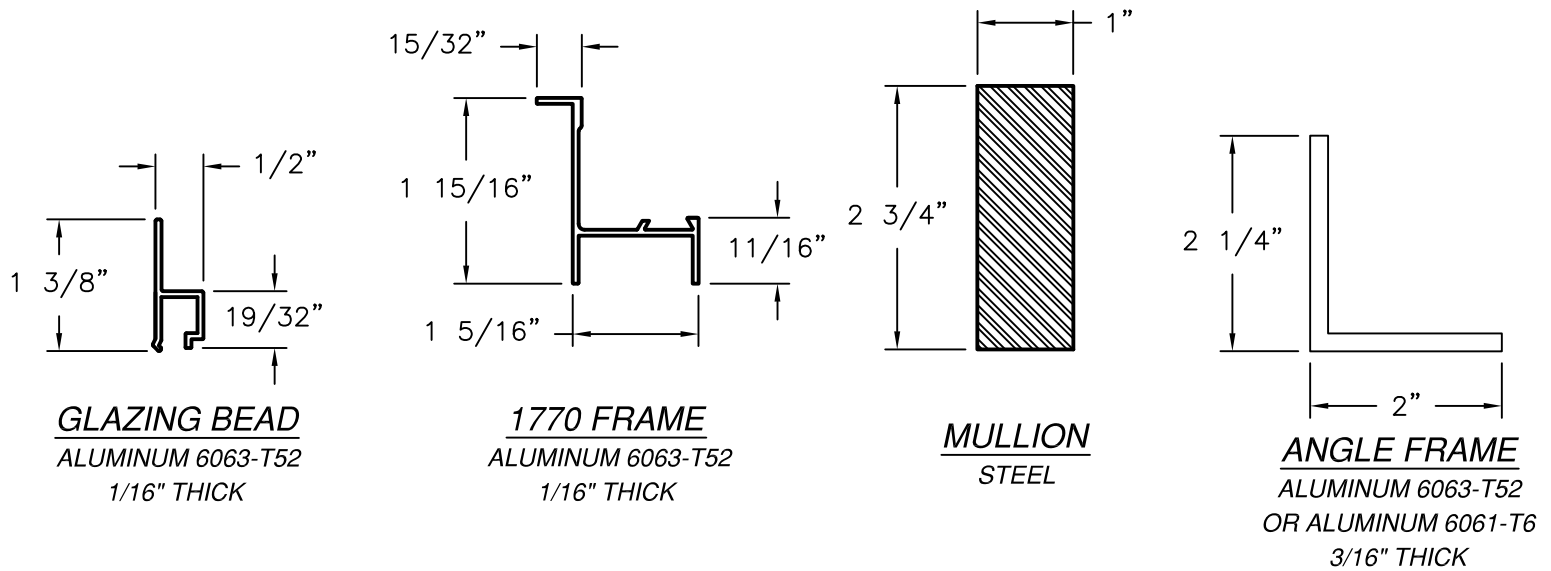


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**SECTION A-A**  
HORIZONTAL SECTION SHOWN  
VERTICAL SECTION SIMILAR



**GLAZING DETAIL**

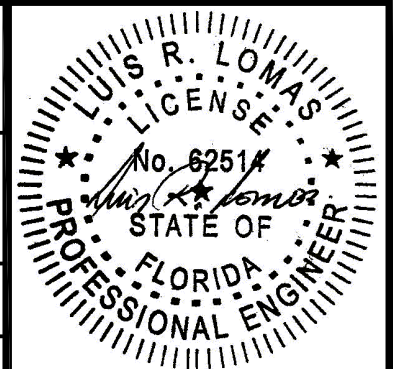
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2281 HIGHWAY 34 EAST  
FAIRFILED, IA 52556

1850 ALUMINUM FIXED SHUTTER  
49 5/8" X 97 5/8" (SINGLE PANEL)  
CROSS SECTIONS AND COMPONENTS

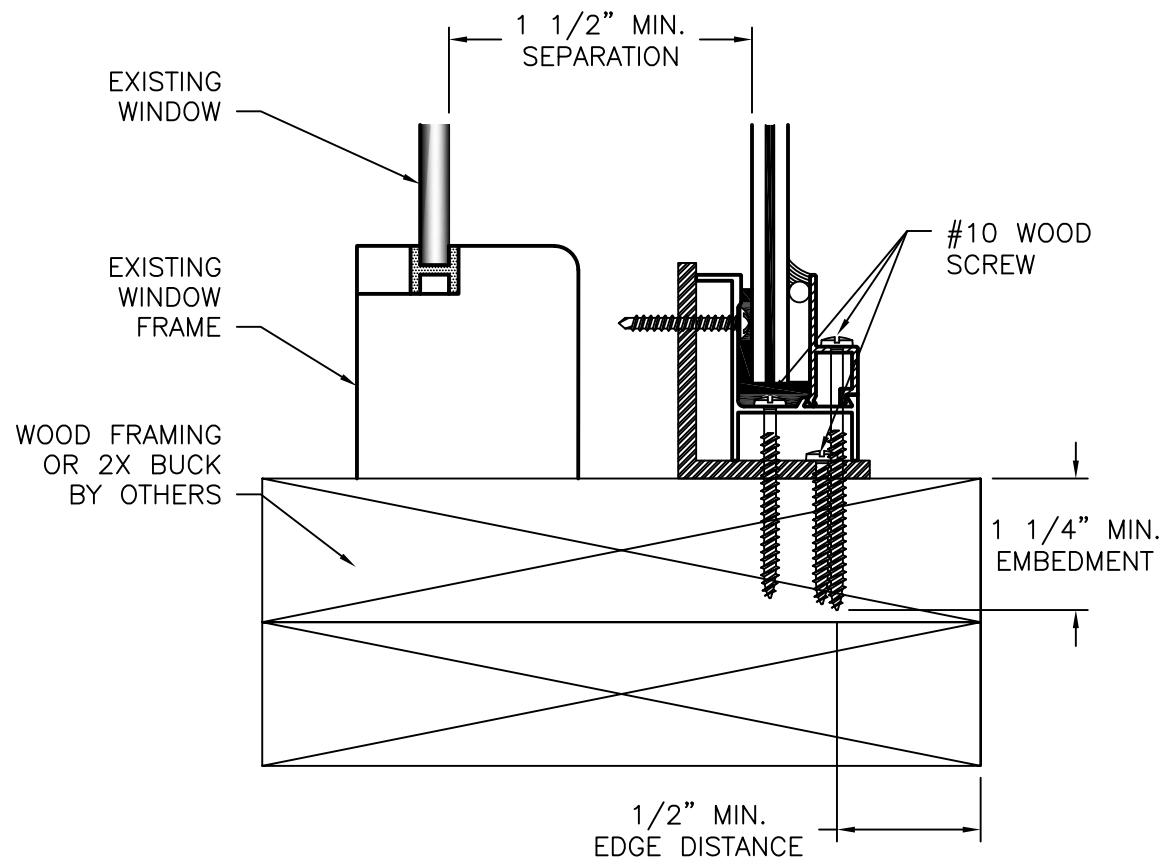
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| SCALE<br>NTS   | DATE<br>11/20/12    | SHEET<br>3 OF 6 |

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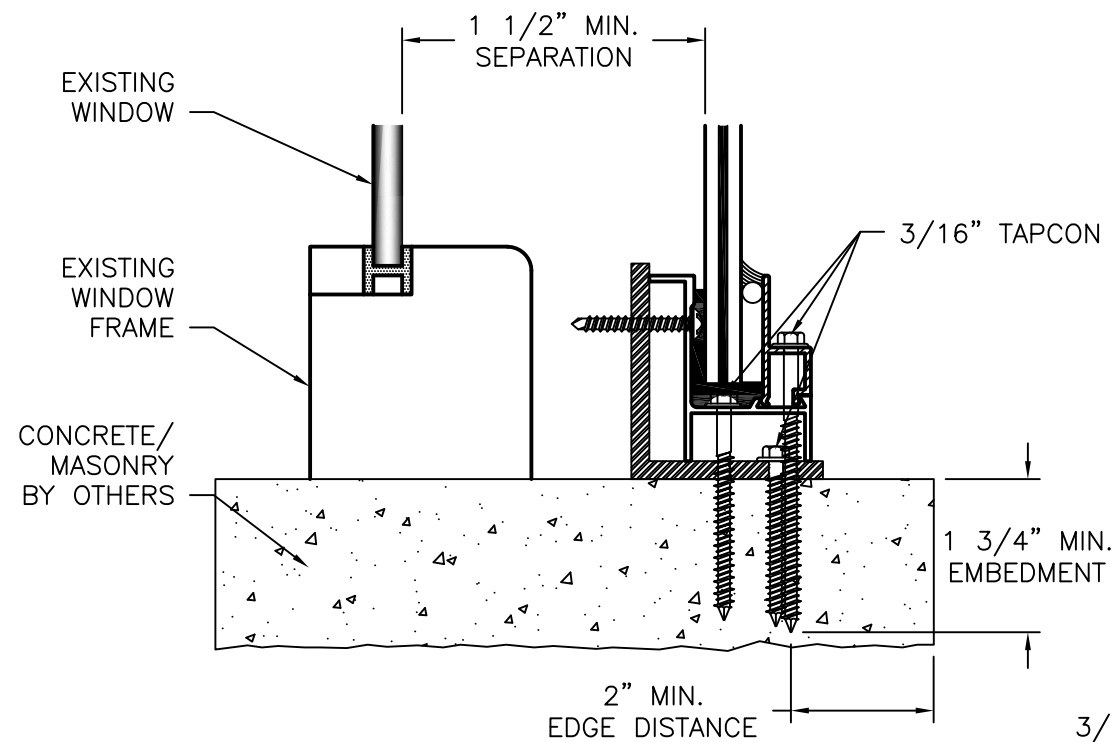
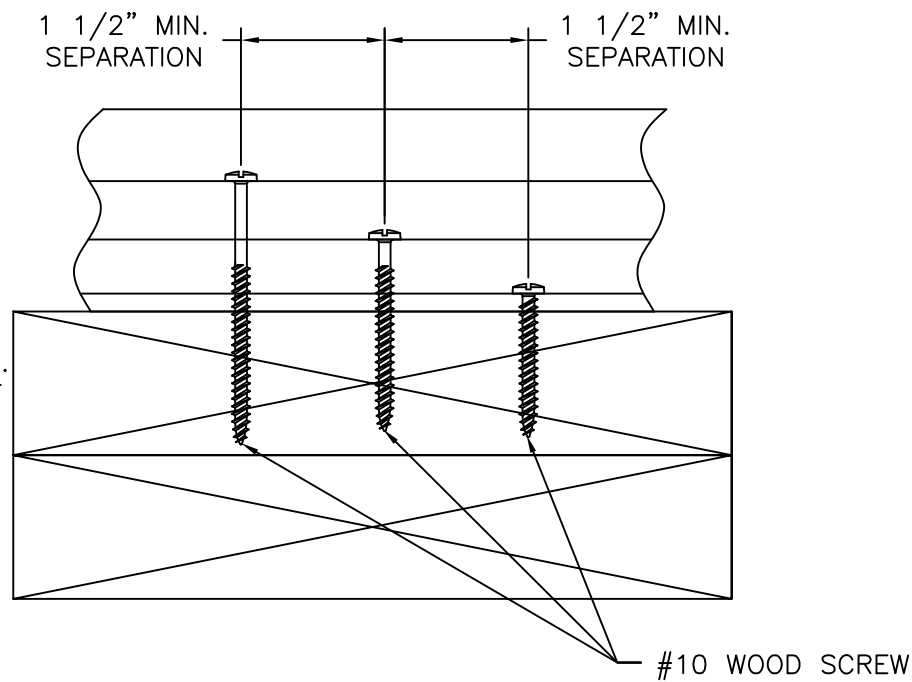
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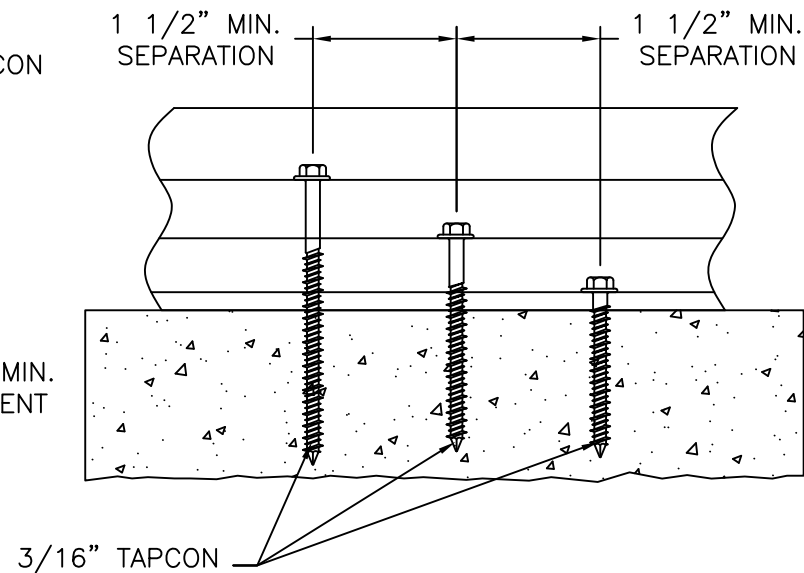
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**DETAIL B**  
PERIMETER ANCHOR INSTALLATION  
WOOD FRAMING OR 2X BUCK



**DETAIL B**  
PERIMETER ANCHOR INSTALLATION  
CONCRETE/MASONRY



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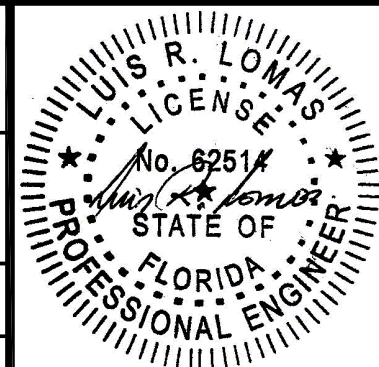
1850 ALUMINUM FIXED SHUTTER  
49 5/8" X 97 5/8" (SINGLE PANEL)  
INSTALLATION DETAILS

|                |                     |          |
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| DRAWN:<br>R.L. | DWG NO.<br>08-00462 | REV<br>E |
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| SCALE<br>NTS | DATE<br>11/20/12 | SHEET<br>4 OF 6 |
|--------------|------------------|-----------------|

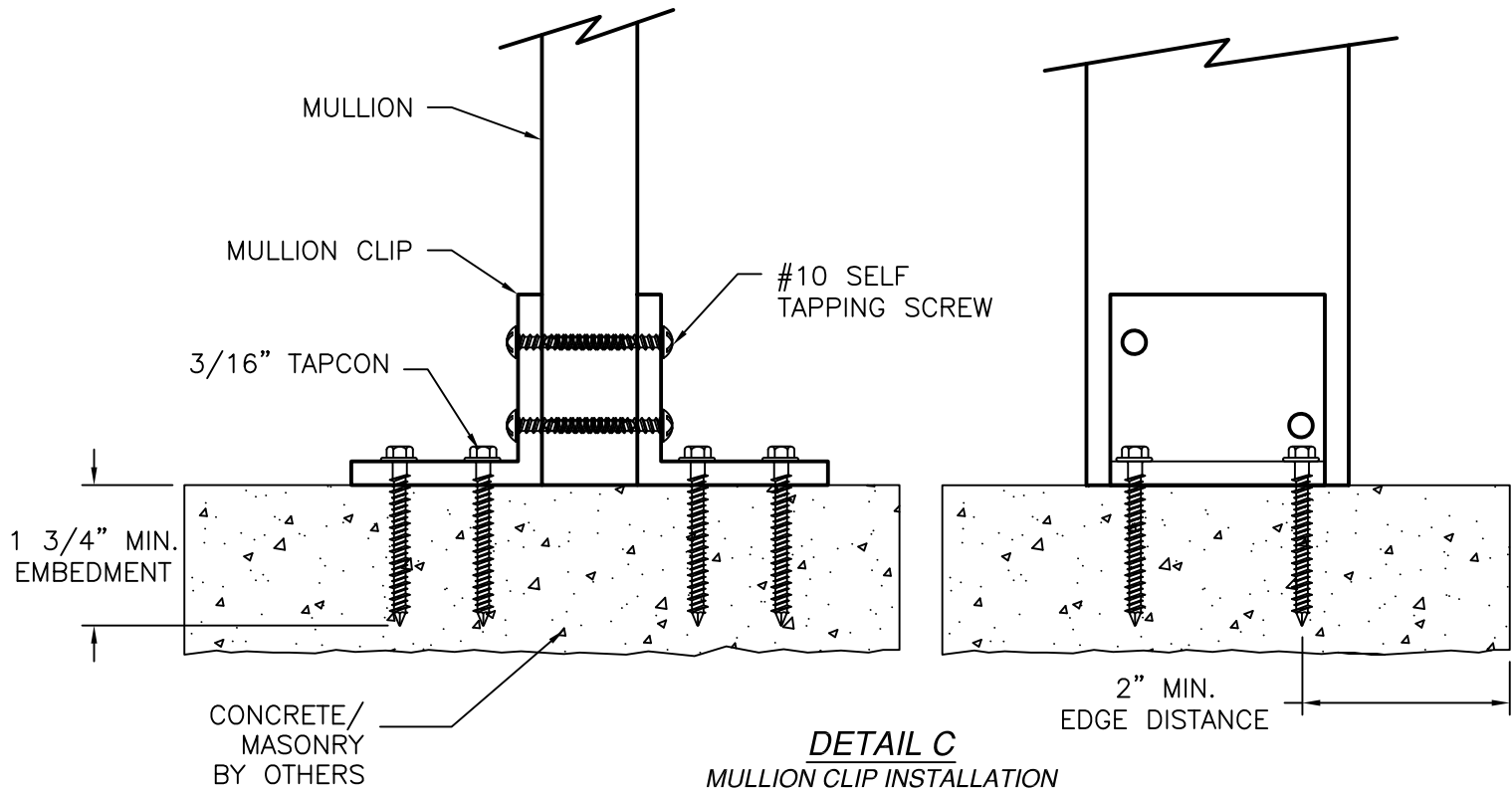
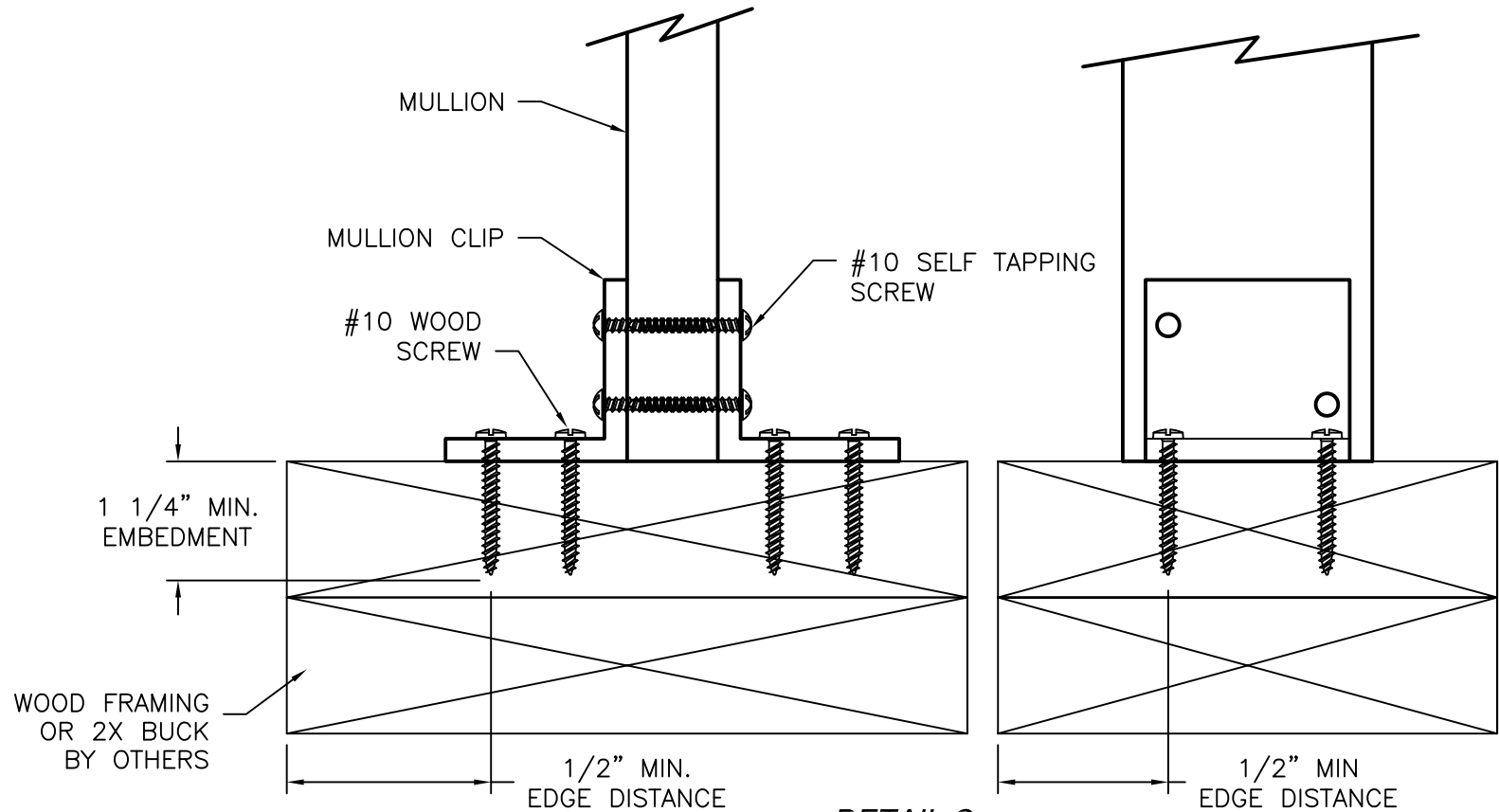
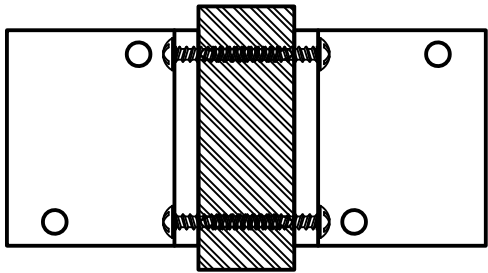
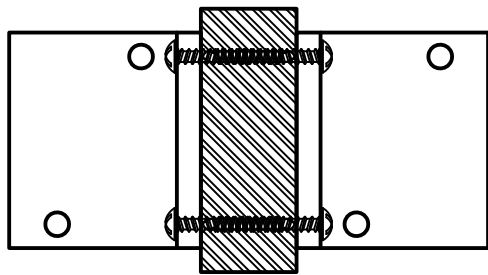
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**DETAIL C**  
MULLION CLIP INSTALLATION  
WOOD FRAMING OR 2X BUCK

**DETAIL C**  
MULLION CLIP INSTALLATION  
CONCRETE/MASONRY

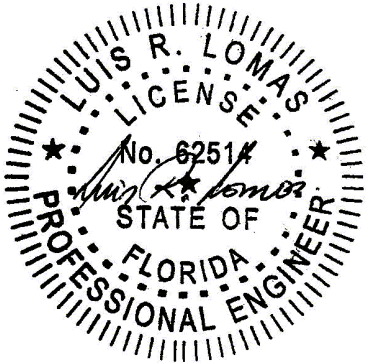
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2281 HIGHWAY 34 EAST  
FAIRFILED, IA 52556

1850 ALUMINUM FIXED SHUTTER  
49 5/8" X 97 5/8" (SINGLE PANEL)  
INSTALLATION DETAILS

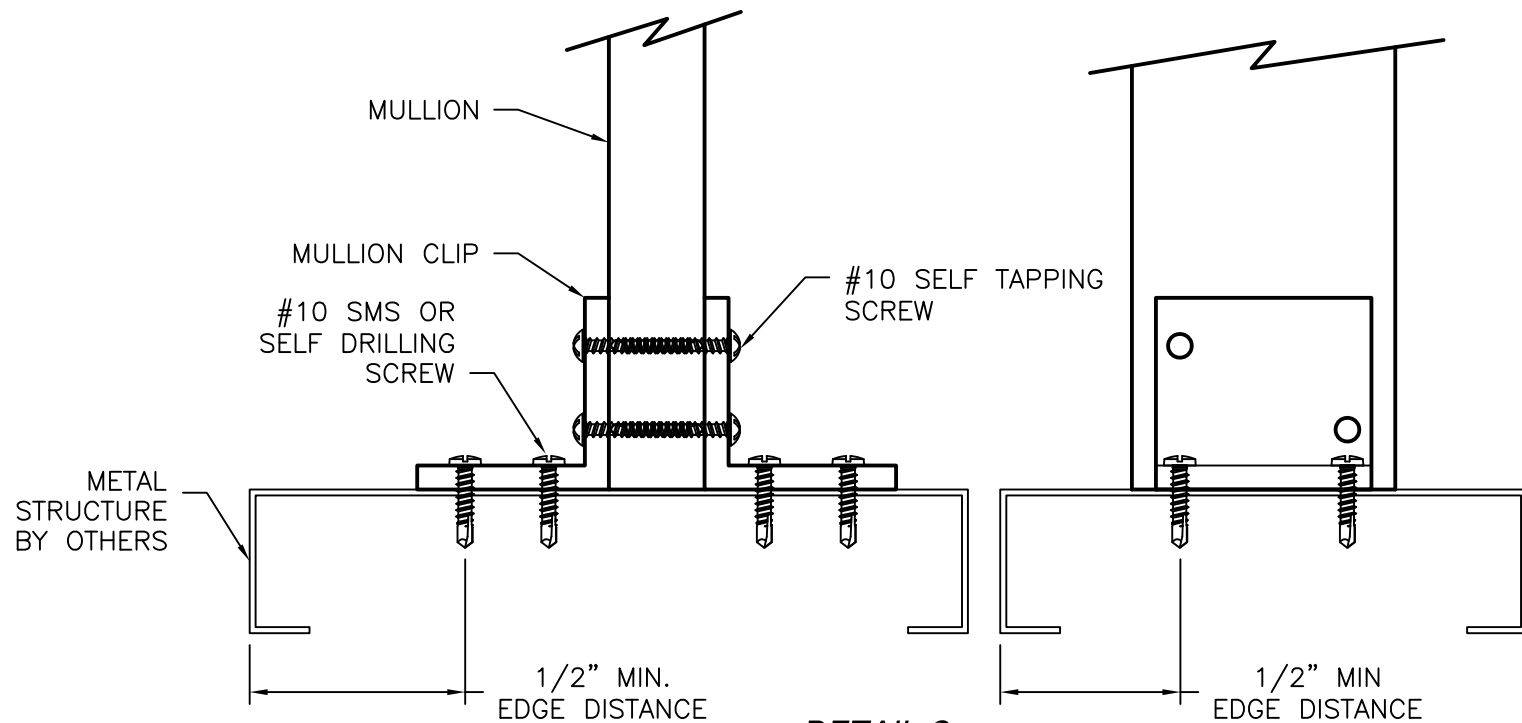
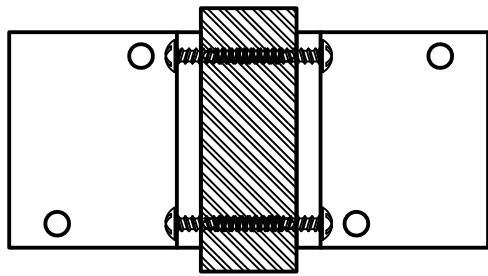
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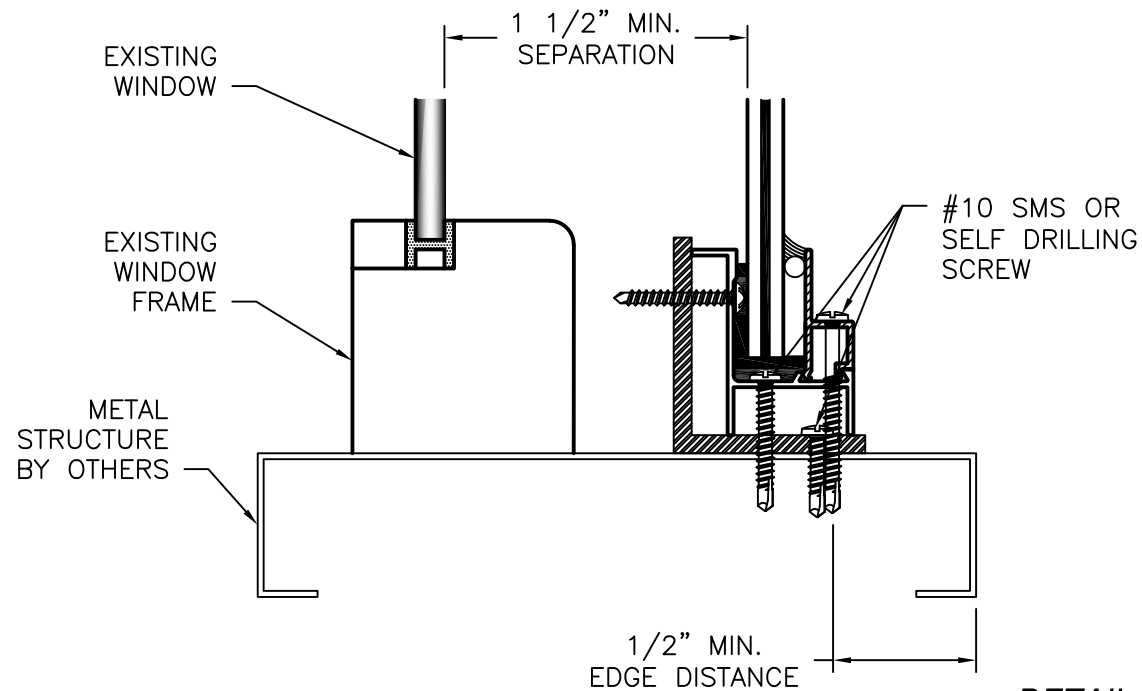


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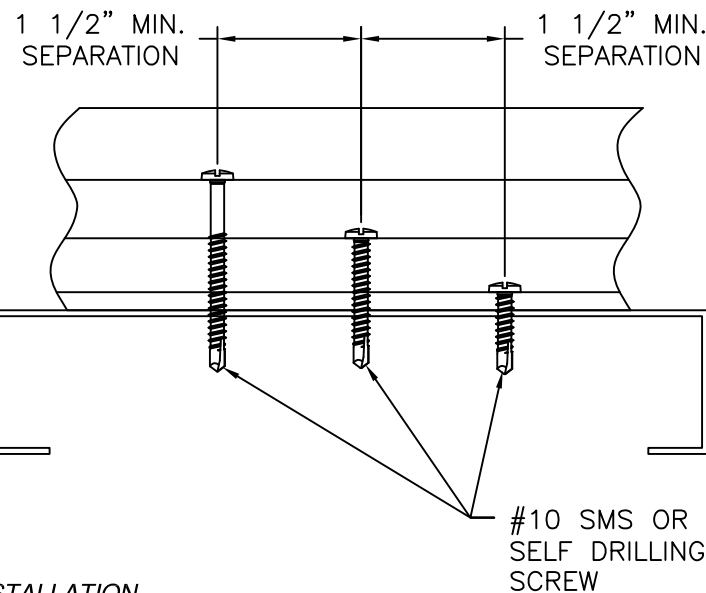
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**DETAIL C**  
MULLION CLIP INSTALLATION  
METAL STRUCTURE

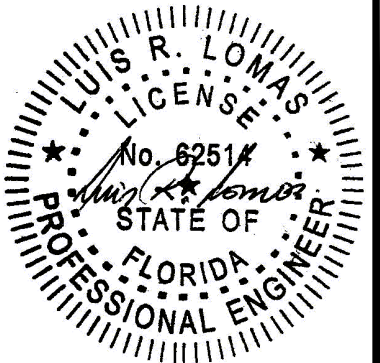


**DETAIL B**  
PERIMETER ANCHOR INSTALLATION  
METAL STRUCTURE



|                                                                                                   |                     |                 |
|---------------------------------------------------------------------------------------------------|---------------------|-----------------|
| BOVARD STUDIO, INC.<br>2281 HIGHWAY 34 EAST<br>FAIRFILED, IA 52556                                |                     |                 |
| 1850 ALUMINUM FIXED SHUTTER<br>49 5/8" X 97 5/8" (SINGLE PANEL)<br>INSTALLATION DETAILS           |                     |                 |
| DRAWN:<br>R.L.                                                                                    | DWG NO.<br>08-00462 | REV<br>E        |
| SCALE<br>NTS                                                                                      | DATE<br>11/20/12    | SHEET<br>6 OF 6 |
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