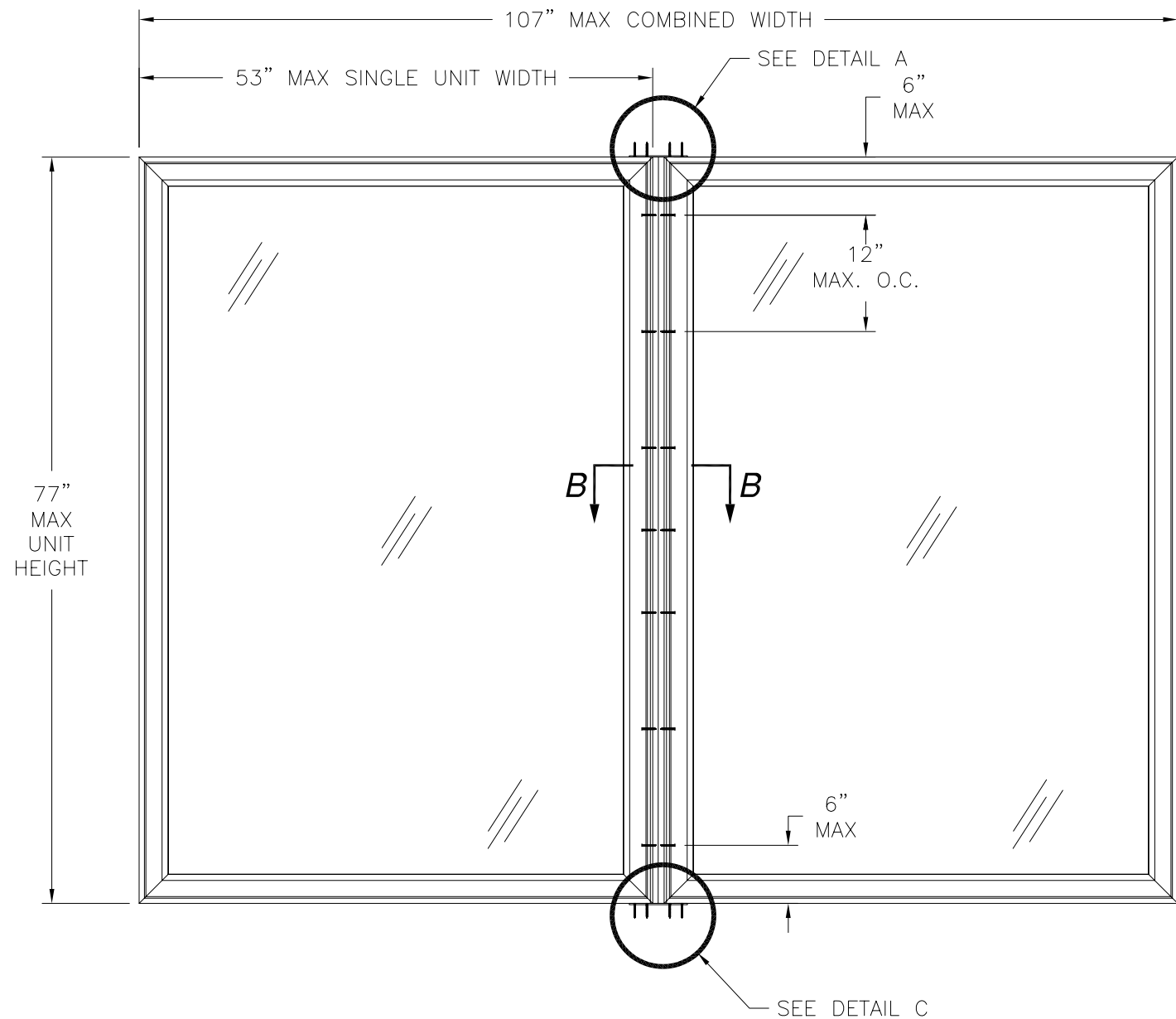


REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



**WINDQUEST V707 IMPACT MULLION**  
 SEE NOTE 13 FOR APPROVED CONFIGURATIONS  
 EXTERIOR VIEW

DESIGN PRESSURE RATING	IMPACT RATING
± 70.0 PSF	LARGE AND SMALL MISSILE IMPACT

NOTES:

- 1) THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH REQUIREMENTS OF THE 2006 INTERNATIONAL BUILDING CODE AND 2006 INTERNATIONAL RESIDENTIAL CODE WITH TEXAS STATE MODIFICATIONS.
- 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) FOR ANCHORING 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.
- 6) FOR ANCHORING 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.
- 7) FOR ANCHORING INTO METAL STRUCTURE USE #8 SMS OR SELF DRILLING SCREWS SCREWS WITH SUFFICIENT LENGTH TO ACHIEVE 3 THREADS MINIMUM BEYOND STRUCTURE INTERIOR WALL. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
- 8) ALL FASTENERS TO BE CORROSION RESISTANT.
- 9) 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 1/8" THICK MINIMUM
- 10) DESIGN PRESSURE AND INSTALLATION DETAILS SHOWN IN THIS DOCUMENT APPLY ONLY TO THE MULLION. WINDOWS MUST BE APPROVED UNDER SEPARATE APPROVAL.
- 11) UNITS TO BE MULLED ARE NOT LIMITED TO THOSE SHOWN IN THIS DRAWING. UNITS TO BE MULLED TOGETHER MUST BE MANUFACTURED BY KOLBE MILLWORK AND MUST BE MADE OUT OF VINYL PVC.
- 12) DESIGN PRESSURE OF MULLED UNIT SHALL BE CONTROLLED BY THE LESSER DESIGN PRESSURE OF MULLION OR INDIVIDUAL WINDOW UNIT.
- 13) TWIN CONFIGURATION SHOWN. UNITS MAY BE MULLED TOGETHER INDEFINITELY AS LONG AS SINGLE UNIT WIDTH AND HEIGHT DO NOT EXCEED WIDTH AND HEIGHT SHOWN HEREIN AND MULLION IS ANCHORED AS SHOWN.
- 14) 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.

TABLE OF CONTENTS	
SHEET NO.	DESCRIPTION
1	ELEVATION AND GENERAL NOTES
2 - 3	CROSS SECTIONS, B.O.M. AND INSTALLATION DETAILS
4 - 5	COMPONENTS

**KOLBE & KOLBE MILLWORK**  
 1211 DEPOT ST  
 MANAWA, MI 54949

WINDQUEST V707 IMPACT MULLION  
 77" SPAN  
 ELEVATION AND NOTES

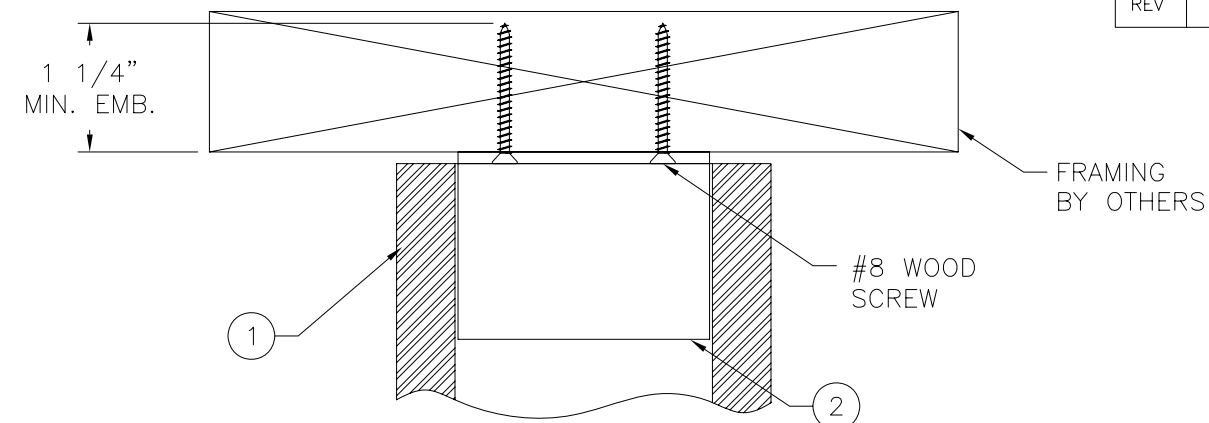
DRAWN: V.L.	DWG NO. 08-01343	REV -
SCALE NTS	DATE 05/15/07	SHEET 1 OF 5

SIGNED: 09/12/2011

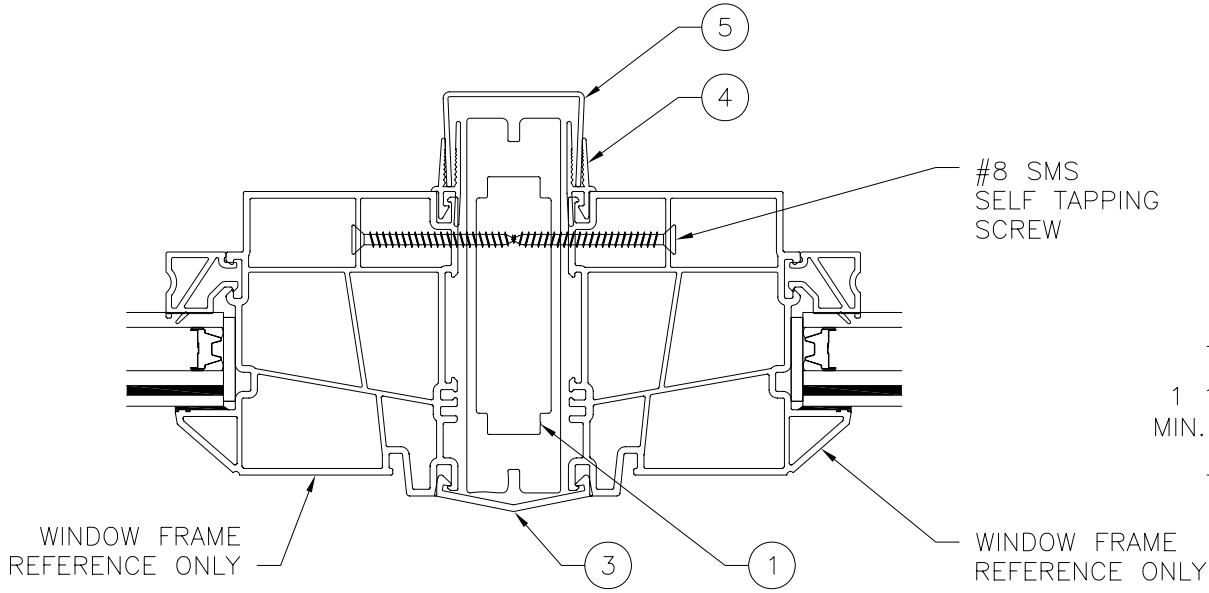
Luis R. Lomas P.E.  
 TX No.: 101889

PARTS LIST		
NO.	PART NUMBER	DESCRIPTION
1	A118-02P078	4" ALUMINUM MULLION
2	A116-02M078	MULLION CONNECTOR (CLIP)
3	4534	MULLION CAP
4	4529	ADAPTER
5	1688	CAP
6	500080	INSTALLATION CLIP
7	500110	OFFSET MULL CONNECTOR

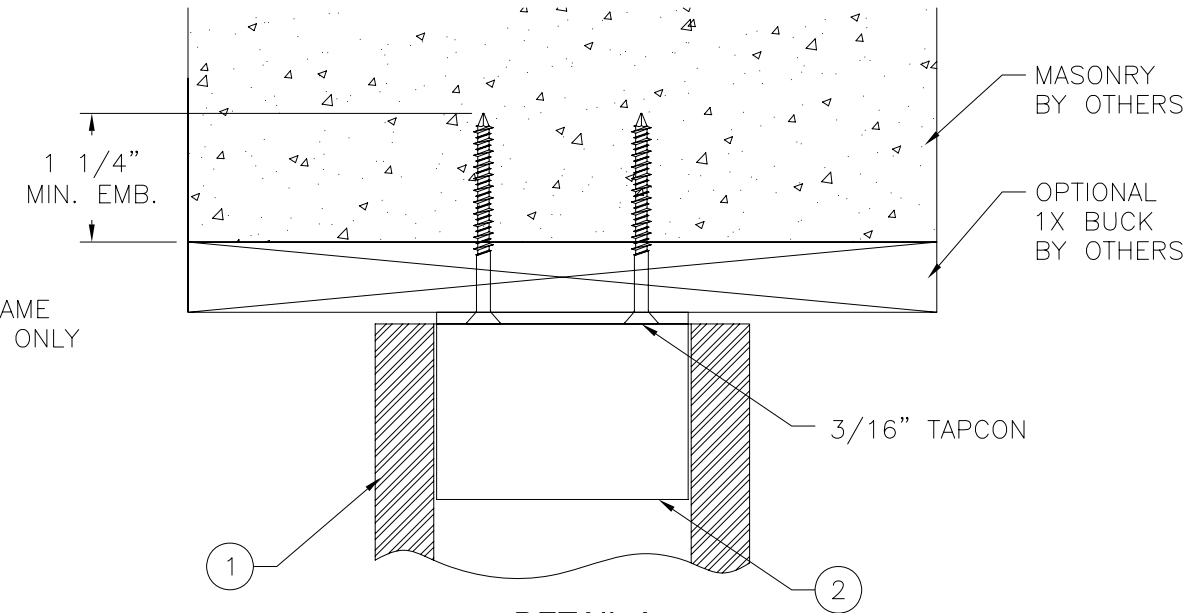
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



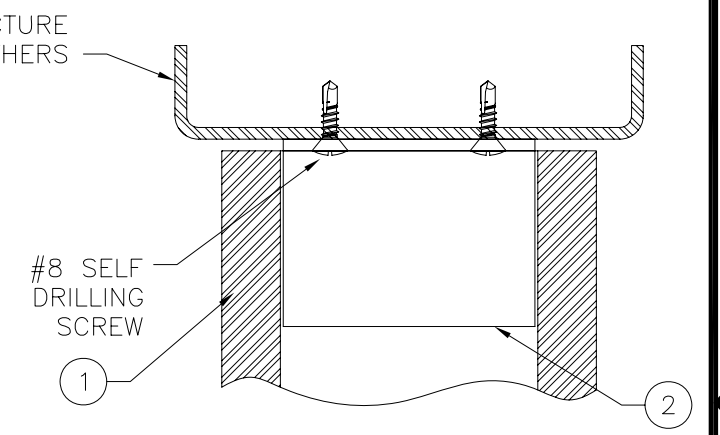
**DETAIL A**  
WOOD FRAMING/2X BUCK INSTALLATION  
TOP CLIP SHOWN, BOTTOM SIMILAR



**SECTION B-B**  
WINDOW INSTALLATION DETAIL



**DETAIL A**  
CONCRETE/MASONRY INSTALLATION  
TOP CLIP SHOWN, BOTTOM SIMILAR



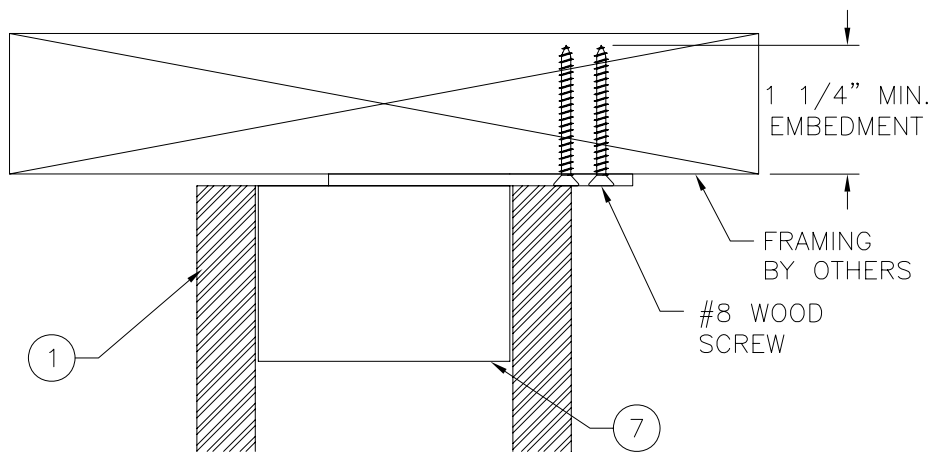
**DETAIL A**  
METAL STRUCTURE INSTALLATION  
TOP CLIP SHOWN, BOTTOM SIMILAR

NOTE: INTERIOR AND EXTERIOR FINISHES, BY OTHERS, NOT SHOWN FOR CLARITY. FOR OFFSET CLIP INSTALLATION DETAILS, SEE SHEET 3.

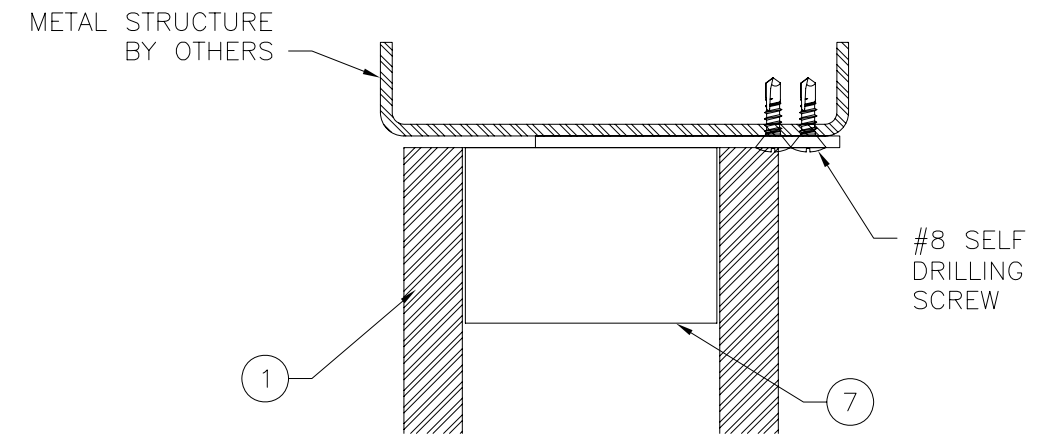
<b>KOLBE &amp; KOLBE MILLWORK</b> 1211 DEPOT ST MANAWA, MI 54949		
WINDQUEST V707 IMPACT MULLION 77" SPAN B.O.M. & STANDARD CLIP INSTALLATION		
DRAWN: V.L.	DWG NO. 08-01343	REV -
SCALE NTS	DATE 05/15/07	SHEET 2 OF 5

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

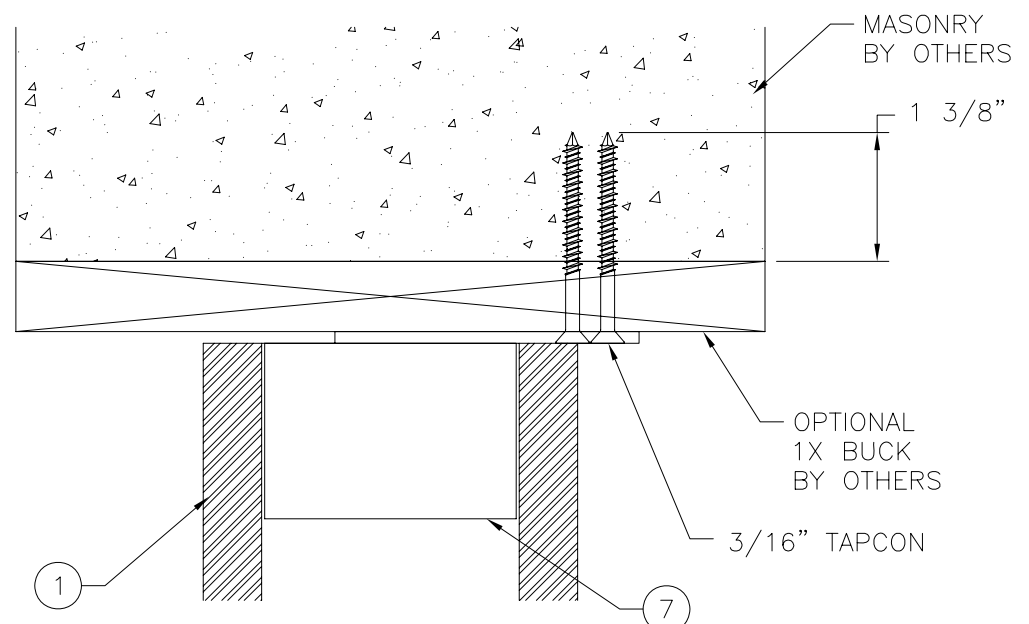
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



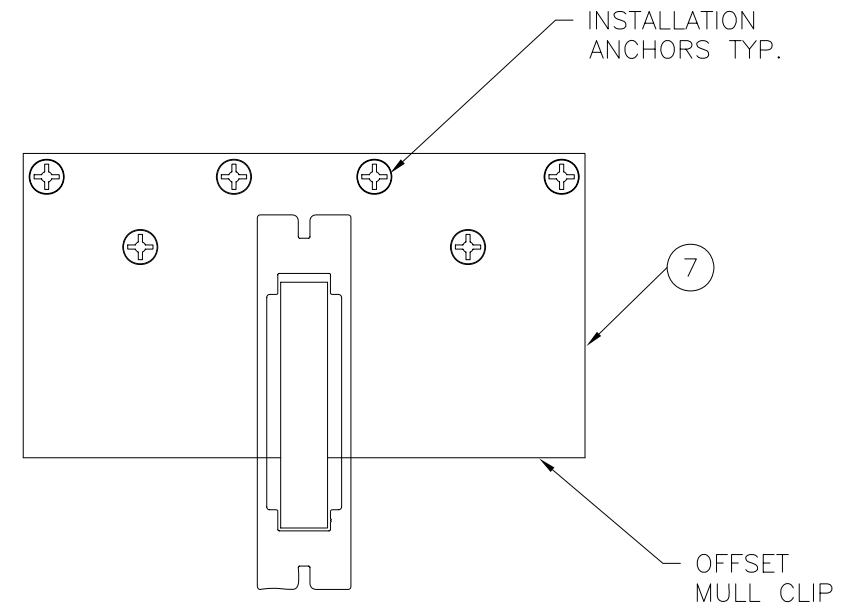
**DETAIL A**  
WOOD FRAMING/2X BUCK INSTALLATION  
TOP CLIP SHOWN, BOTTOM SIMILAR



**DETAIL A**  
METAL STRUCTURE INSTALLATION  
TOP CLIP SHOWN, BOTTOM SIMILAR



**DETAIL A**  
CONCRETE/MASONRY INSTALLATION  
TOP CLIP SHOWN, BOTTOM SIMILAR



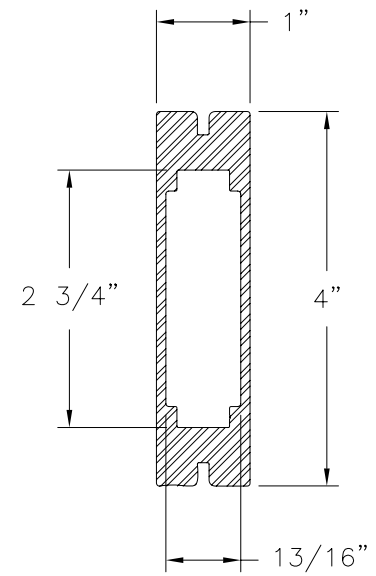
**OFFSET MULLION CLIP INSTALLATION**  
SILL AND HEAD TYP.

NOTE: INTERIOR AND EXTERIOR FINISHES, BY OTHERS, NOT SHOWN FOR CLARITY. FOR STANDARD CLIP INSTALLATION DETAILS, SEE SHEET 2.

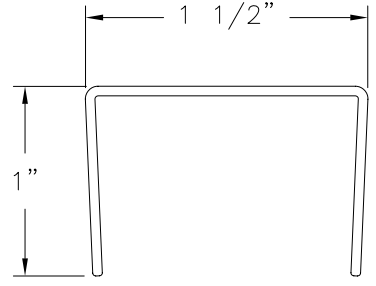
<b>KOLBE &amp; KOLBE MILLWORK</b> 1211 DEPOT ST MANAWA, MI 54949		
WINDQUEST V707 IMPACT MULLION 77" SPAN OFFSET CLIP INSTALLATION		
DRAWN: V.L.	DWG NO. 08-01343	REV -
SCALE NTS	DATE 05/15/07	SHEET 3 OF 5

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

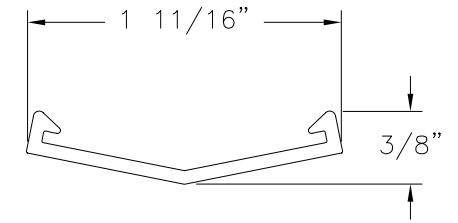
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



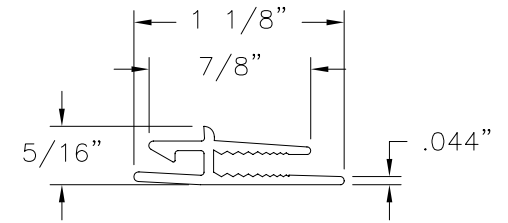
① **4" ALUMINUM MULLION**  
ALUMINUM 6063-T6



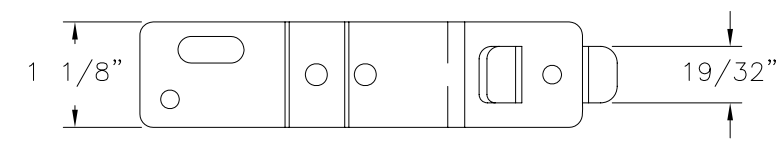
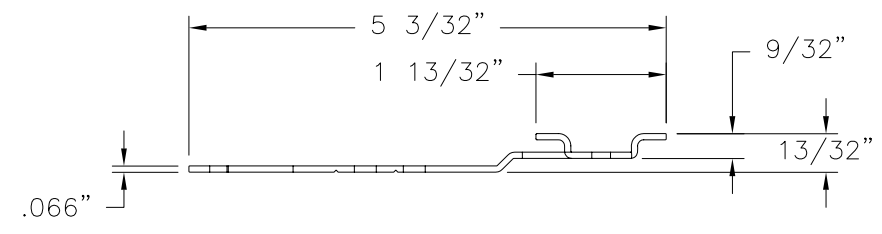
⑤ **CAP**  
VINYL PVC



③ **MULLION CAP**  
VINYL PVC



④ **ADAPTER**  
VINYL PVC

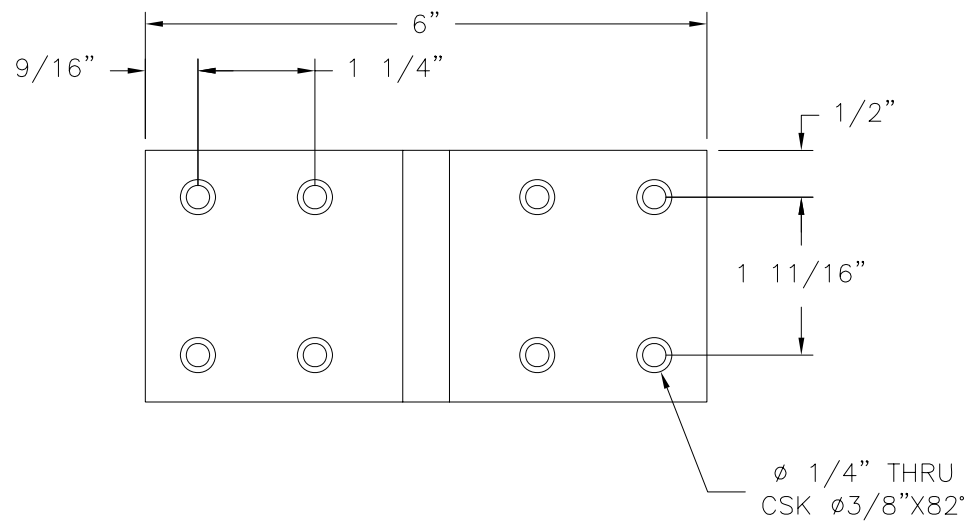


⑥ **INSTALLATION CLIP**  
GALVANIZED STEEL G60

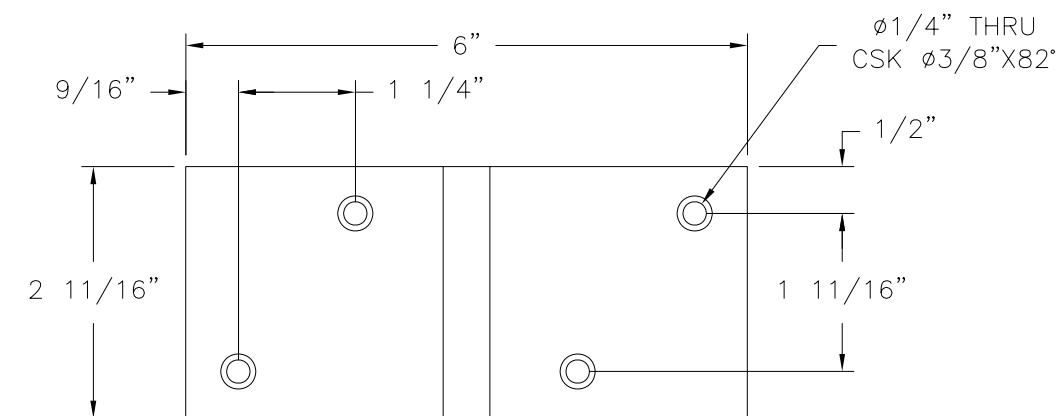
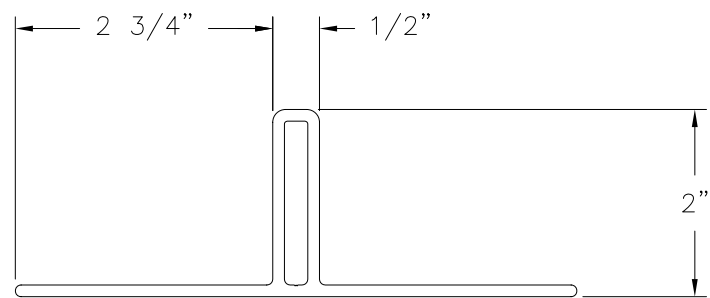
FOR COMPONENTS IDENTIFICATION AND PART NUMBERS SEE SHEET 3

KOLBE & KOLBE MILLWORK 1211 DEPOT ST MANAWA, MI 54949		
WINDQUEST V707 IMPACT MULLION 77" SPAN COMPONENTS		
DRAWN: V.L.	DWG NO. 08-01343	REV -
SCALE NTS	DATE 05/15/07	SHEET 4 OF 5

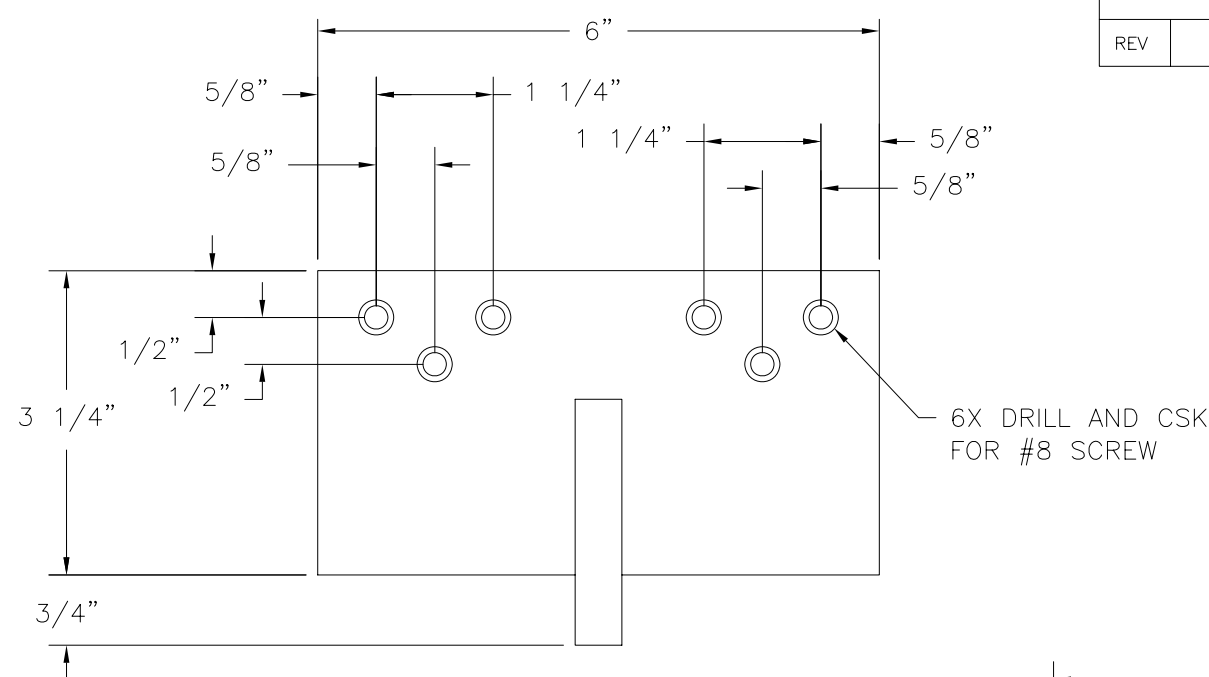
Luis R. Lomas P.E.  
TX No.: 101889



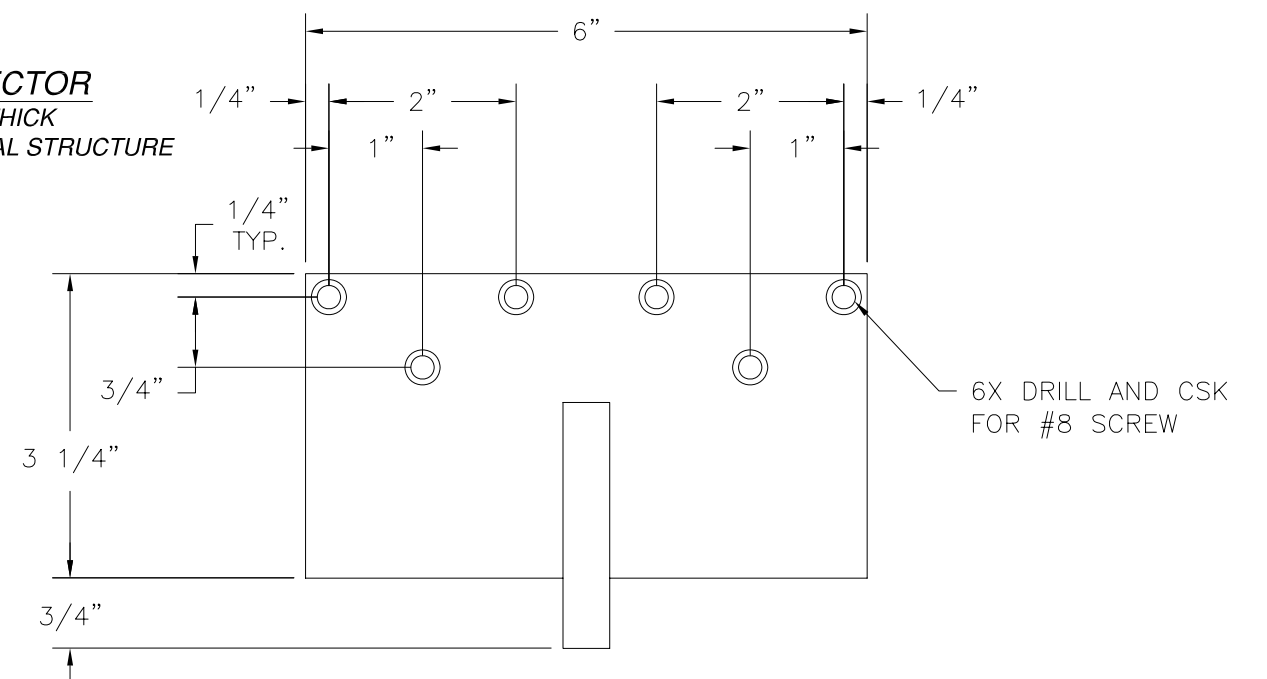
② **MULLION CONNECTOR (CLIP)**  
ALUMINUM 6063-T6 .125" THICK  
HOLE PATTERN FOR WOOD  
AND METAL STRUCTURE INSTALLATION



② **MULLION CONNECTOR (CLIP)**  
ALUMINUM 6063-T6 .125" THICK  
HOLE PATTERN FOR MASONRY INSTALLATION



⑦ **OFFSET MULL CONNECTOR**  
ALUMINUM 6063-T6 .125" THICK  
FOR 2X BUCK/WOOD FRAMING/METAL STRUCTURE  
INSTALLATION



⑦ **OFFSET MULL CONNECTOR**  
ALUMINUM 6063-T6 .125" THICK  
FOR MASONRY/CONCRETE INSTALLATION

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

FOR COMPONENTS IDENTIFICATION AND PART  
NUMBERS SEE SHEET 3

KOLBE & KOLBE MILLWORK  
1211 DEPOT ST  
MANAWA, MI 54949

WINDQUEST V707 IMPACT MULLION  
77" SPAN  
COMPONENTS (CLIP DETAILS)

DRAWN: V.L.	DWG NO. 08-01343	REV -
SCALE NTS	DATE 05/15/07	SHEET 5 OF 5



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