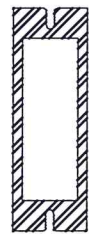


WINCORE™

WINDOWS & DOORS

250 Staunton Turnpike, Parkersburg, WV 26104

TMP-2603 EXTRUDED ALUMINUM VERTICAL CLIPPED COMBINATION MULLION



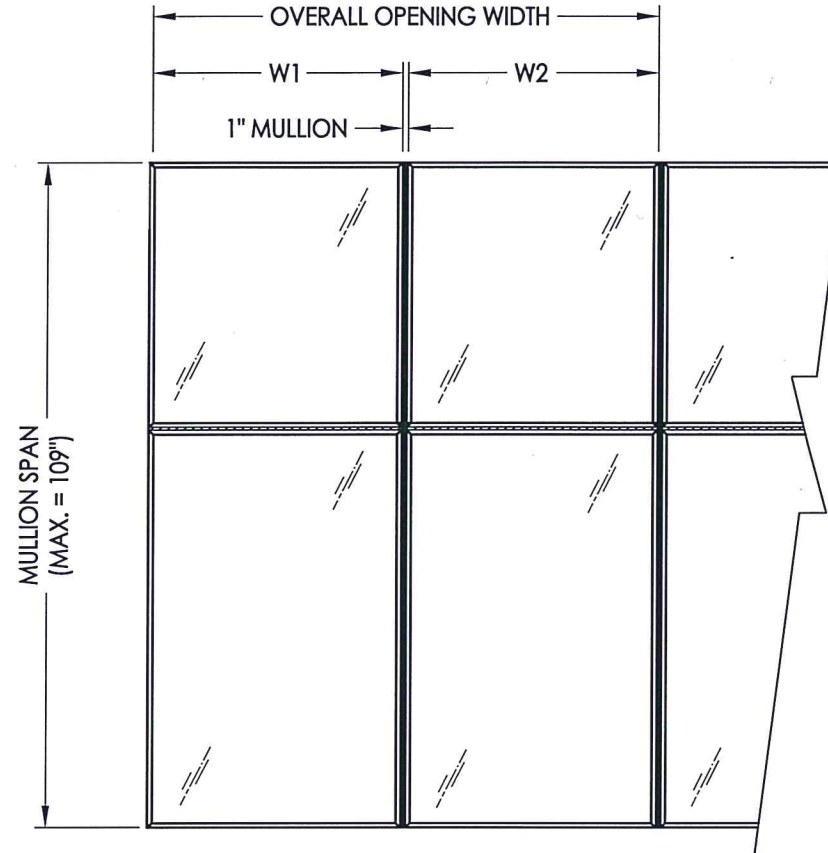
EVALUATED FOR USE IN THE STATE OF TEXAS

The Wincore Structural Mullion described herein complies with the 2018 International Residential Code (IRC), Section R609.8 and the 2018 International Building Code (IBC), subject to the following conditions:

1. Anchors shall be as listed and spaced as shown in the details. Anchor embedment to base material shall be beyond roof covering.
2. When used in areas requiring wind-borne debris protection (Seaward and Inland I areas), this product complies with Section R301.2.1.2 of the IRC and Section 1609.2 of the IBC and does not require impact protection. This product meets missile level "D" and includes Wind Zone 3 as defined in ASTM E 1996.
3. Separate product approvals for each glazing product used with these mullions must be submitted along with this mullion product approval. The design pressure rating of the assembly shall be the lesser of the load capacity of the mullion as specified using this approval or the design pressure rating of the individual glazing products used.
4. Anchoring of each glazing product to the mullion shall be as shown in this drawing or as shown in each individual glazing product approval, whichever is more stringent.
5. Any conditions not covered in this evaluation are subject to separate engineering evaluation.
6. Mullioned assemblies may be either factory assembled or site assembled.

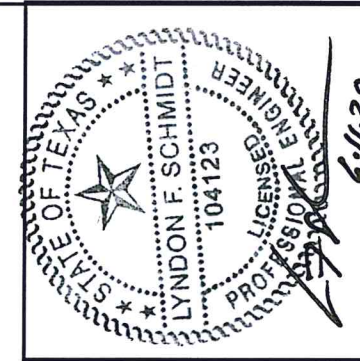
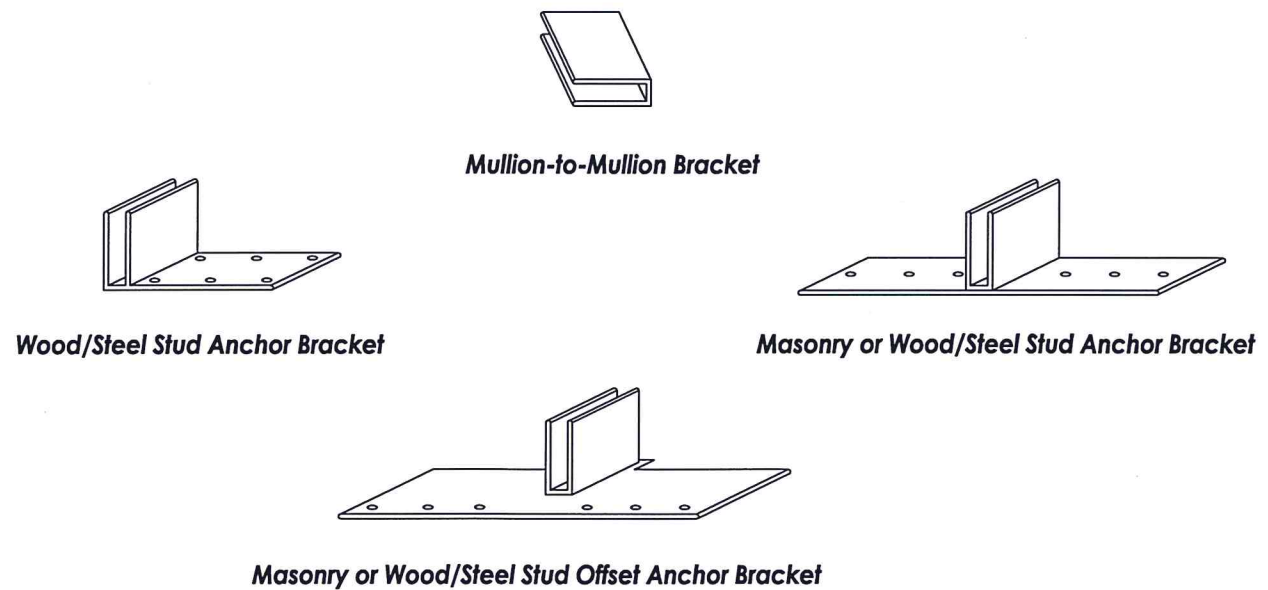
TDI MU-27

TABLE OF CONTENTS	
SHEET #	DESCRIPTION
1	Typical elevations & general notes
2	Mullion design pressure table & cross sections
3	Wood/Steel Stud Anchor Bracket details & cross sections
4	Masonry or Wood/Steel Stud Anchor Bracket details & cross sections



VERTICAL MULLED WINDOW UNITS

ADJOINING WINDOW UNITS CAN BE EQUAL OR UNEQUAL WIDTHS



Documents Prepared By: Lyndon F. Schmidt, P.E.
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P.O. Box 230 Valrico FL 33595
Phone No.: 813.659.9197

TEXAS BOARD OF PROFESSIONAL ENGINEERS
CERTIFICATE OF REGISTRATION # F-11852

PRODUCT:	ALUMINUM CLIPPED MULLION	
PART OR ASSEMBLY:	TYPICAL ELEVATIONS & GENERAL NOTES	
NO.	DATE	BY
2	6/11/20	LFS
1	5/04/16	LFS
REVISIONS		
DATE: 11/25/14		
SCALE: N.T.S.		
DWG. BY: JK		
CHK. BY: LFS		
DRAWING NO.: TX-4387		
SHEET 1 OF 4		

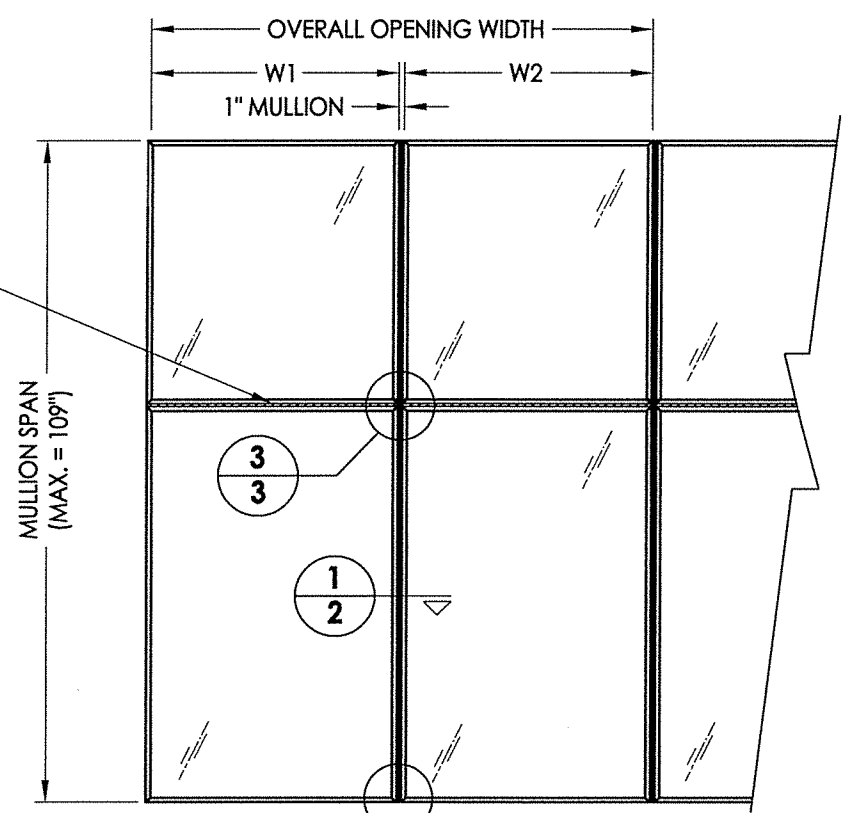
CLIPPED MULLION	TMP-2603 EXTRUDED ALUMINUM VERTICAL CLIPPED COMBINATION MULLION LOAD TABLE (PSF)																									
	OVERALL OPENING WIDTH																									
	49"	53"	57"	61"	65"	69"	73"	77"	81"	85"	89"	93"	97"	101"	105"	109"	113"	117"	121"	125"	129"	133"	137"	141"	145"	
MAXIMUM MULLION LENGTH	109"	27.5	25.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	104"	32.0	29.5	27.0	25.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	100"	34.0	31.5	29.0	27.5	26.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	96"	42.0	39.0	36.5	34.0	32.0	30.0	28.0	26.5	25.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	92"	47.5	44.0	40.5	37.5	35.5	33.0	31.5	30.0	28.5	27.5	26.0	25.0	-	-	-	-	-	-	-	-	-	-	-	-	
	88"	54.0	50.0	45.5	43.0	40.5	38.0	36.0	34.0	32.0	31.5	30.0	28.5	27.5	26.5	25.5	-	-	-	-	-	-	-	-	-	
	84"	63.0	58.0	54.0	50.0	47.0	44.0	41.5	39.5	37.5	35.5	33.5	32.0	31.0	29.5	28.0	27.0	26.0	25.0	-	-	-	-	-	-	
	80"	73.0	67.5	63.0	58.5	55.0	51.5	48.5	46.0	43.5	41.5	39.5	37.5	36.0	34.5	33.0	31.5	30.5	29.5	28.5	27.5	26.5	25.5	25.0	-	-
	76"	75.0	75.0	73.0	68.5	64.0	60.5	57.0	54.0	51.0	48.5	46.0	44.0	42.5	40.5	39.0	37.5	36.0	34.5	33.5	32.5	31.0	30.0	29.5	28.5	27.5
	72"	75.0	75.0	75.0	75.0	73.0	71.5	67.5	63.5	60.5	57.5	55.0	52.5	50.0	48.0	46.0	44.0	42.5	41.0	39.5	38.5	37.0	36.0	35.0	34.0	33.0
	68"	75.0	75.0	75.0	75.0	75.0	75.0	75.0	73.0	72.5	69.0	65.5	62.5	60.0	57.5	55.0	53.0	51.0	49.0	47.0	46.0	44.5	43.0	42.0	40.5	39.5
	64"	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	73.0	72.0	69.5	67.0	64.0	62.0	59.5	57.5	55.5	54.0	52.5	50.5	49.5	47.5
60"	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	73.5	71.5	69.5	67.5	65.5	63.5	61.5	59.5	57.5	56.0	54.5	52.5	

DESIGN PRESSURE TABLE NOTES:

- Determine the Overall Opening Width for the two windows to be mullied together. If multiple units are to be mullied together, use the maximum Overall Opening Width for the two widest adjacent windows.
- Enter the table at the intersection of the Mullion Length and the Overall Opening Width to determine the maximum approved Design Pressure.

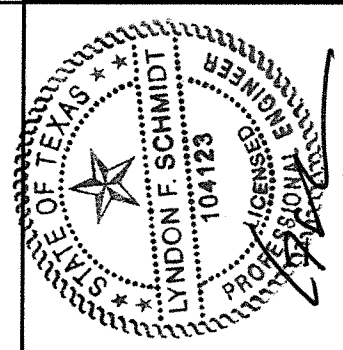
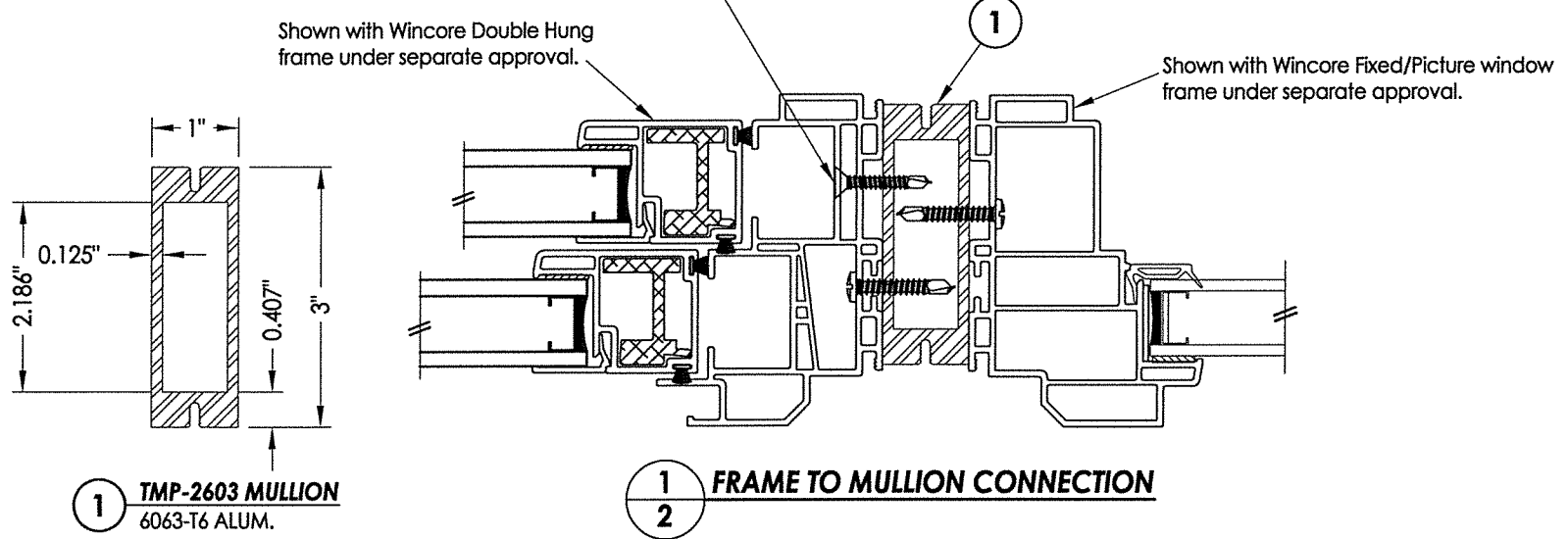
- APPROVED WINDOW UNIT TYPES**
- Fixed/Picture Windows
 - Casement Windows
 - Awning Windows
 - Horizontal Slider Windows
 - Single Hung Windows
 - Double Hung Windows

OVERALL OPENING WIDTH = W1 + W2 + 1 (inch)



At a minimum, install #10-16 Self-Drilling SMS located 4" from each end of mullion and 8" o.c. max. thereafter. At least 3 threads must protrude completely through the mullion face.

See Horizontal Clipped Mullion Approval (TX-4388), if applicable, for design pressure chart & connection details.

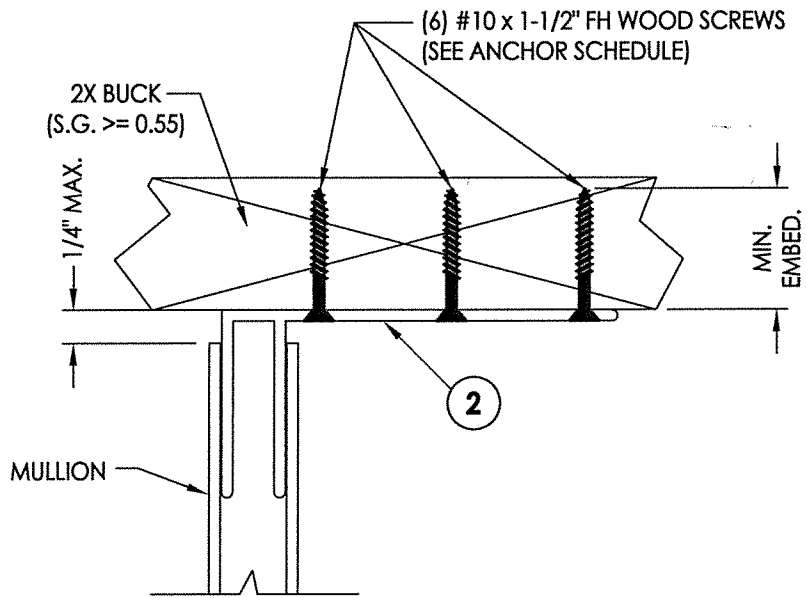


Documents Prepared By: Lyndon F. Schmidt, P.E.
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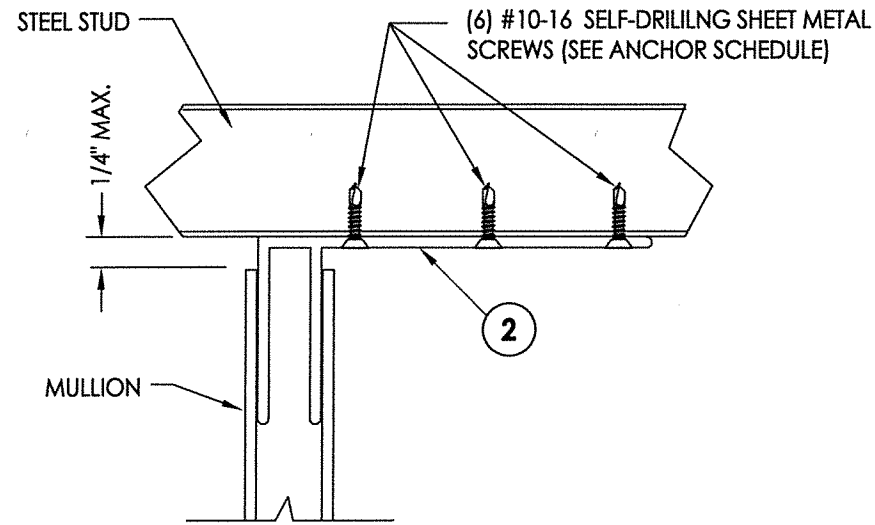
R.W. BUILDING CONSULTANTS, INC.
P.O. Box 230 Valrico FL 33595
Phone No.: 813.659.9197

TEXAS BOARD OF PROFESSIONAL ENGINEERS
CERTIFICATE OF REGISTRATION # F-11852

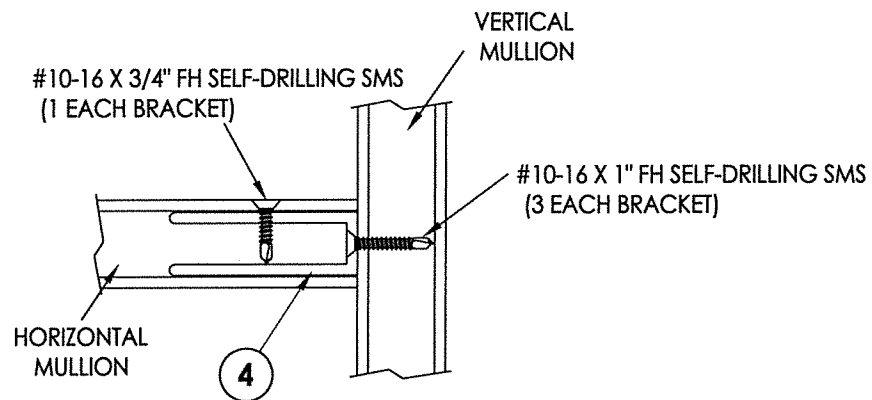
PRODUCT:	ALUMINUM CLIPPED MULLION	
PART OR ASSEMBLY:	MULLION DESIGN PRESSURE TABLE & CROSS SECTIONS	
NO.	DATE	REVISIONS
2	6/11/20	UPDATE TO 2018 IBC/IRC
1	5/04/16	MODIFY ANCHOR CLIP
DATE:	11/25/14	
SCALE:	N.T.S.	
DWG. BY:	JK	
CHK. BY:	LFS	
DRAWING NO.:	TX-4387	
SHEET	2	OF 4



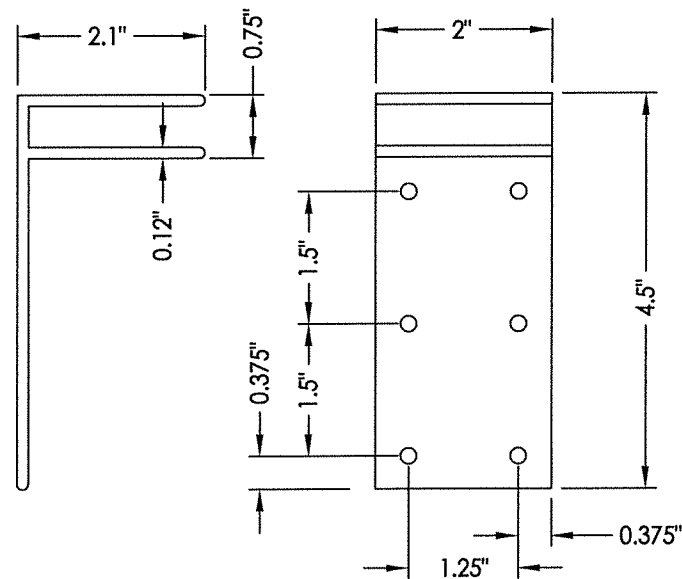
1 ANCHOR BRACKET DETAIL
3 Anchor to 2x Buck



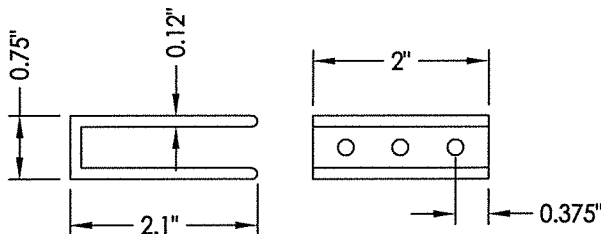
2 ANCHOR BRACKET DETAIL
3 Anchor to Steel Stud



3 HORIZONTAL CROSS SECTION
3 Mullion-to-Mullion connection



2 WOOD/STEEL STUD ANCHOR BRACKET
 6063-T6 ALUM.

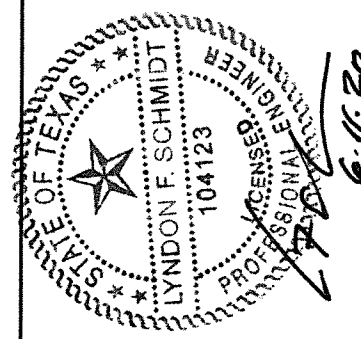


4 MULLION-TO-MULLION ANCHOR BRACKET
 6063-T6 ALUM.

- Notes:**
- Refer to individual window product approval for fabrication and installation requirements, including glazing details, frame reinforcement and anchor specifications.
 - Mullion bracket anchoring details shown may be used at either end of mullion.

MULLION ANCHOR BRACKET ANCHOR SCHEDULE				
ANCHOR	SUBSTRATE	EMBEDMENT (MIN.)	EDGE DISTANCE (MIN.)	CENTER-TO-CENTER SPACING (MIN.)
#10 PFH WOOD SCREW	WOOD	1-3/8"	1"	1-1/4"
#10-16 SELF-DRILLING SHEET METAL SCREW	STEEL	A MIN. OF 3 THREADS SHALL PROTRUDE COMPLETELY THROUGH THE STEEL SUBSTRATE	1"	1-1/4"

WOOD FRAMING (S.G. >= 0.42)
 STEEL CONFORMING TO ASTM A653, 16 GA., 0.060" MIN. THICKNESS (Fy = 33,000 PSI, Fu = 45,000 PSI)
 SHEET METAL SCREWS [SAE GRADE 5 MIN.]: HILTI KWIK-FLEX or ELCO DRIL-FLEX



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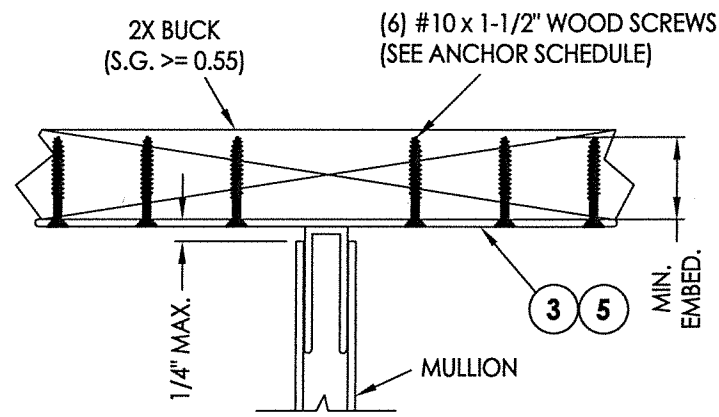
TEXAS BOARD OF PROFESSIONAL ENGINEERS
 CERTIFICATE OF REGISTRATION # F-11852

PRODUCT: ALUMINUM CLIPPED MULLION

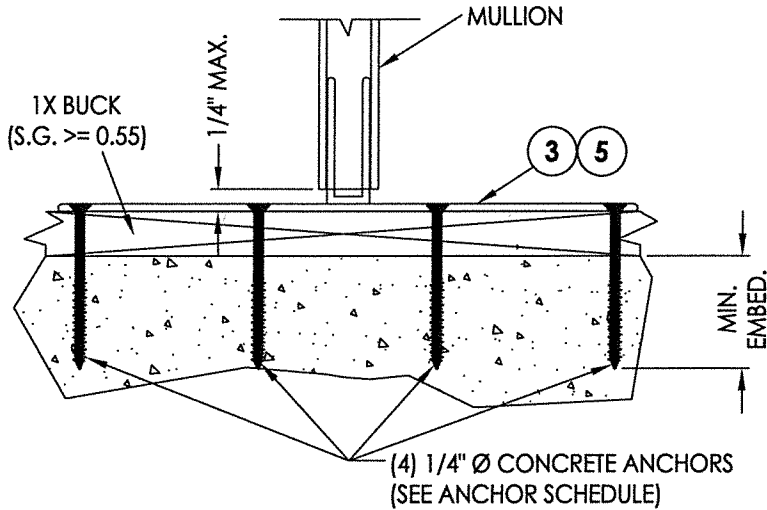
PART OR ASSEMBLY: ANCHOR BRACKET DETAILS & CROSS SECTIONS

NO.	DATE	BY	REVISIONS
2	6/11/20	LFS	UPDATE TO 2018 IBC/IRC
1	5/04/16	LFS	MODIFY ANCHOR CLIP

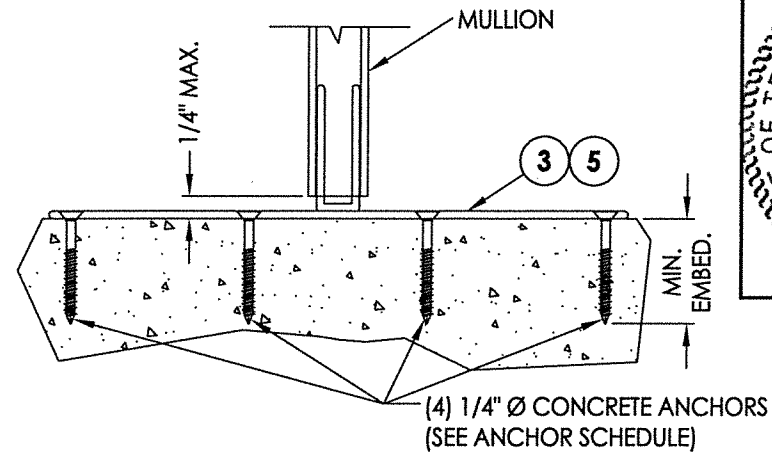
DATE: 11/25/14
 SCALE: N.T.S.
 DWG. BY: JK
 CHK. BY: LFS
 DRAWING NO.: TX-4387
 SHEET 3 OF 4



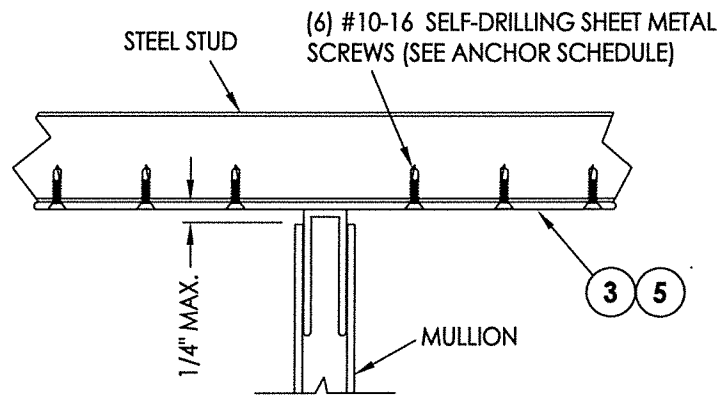
1 ANCHOR BRACKET DETAIL
4 Anchor to 2x Buck



3 ANCHOR BRACKET DETAIL
4 Anchor to Masonry thru 1x Buck



4 ANCHOR BRACKET DETAIL
4 Anchor Direct to Masonry

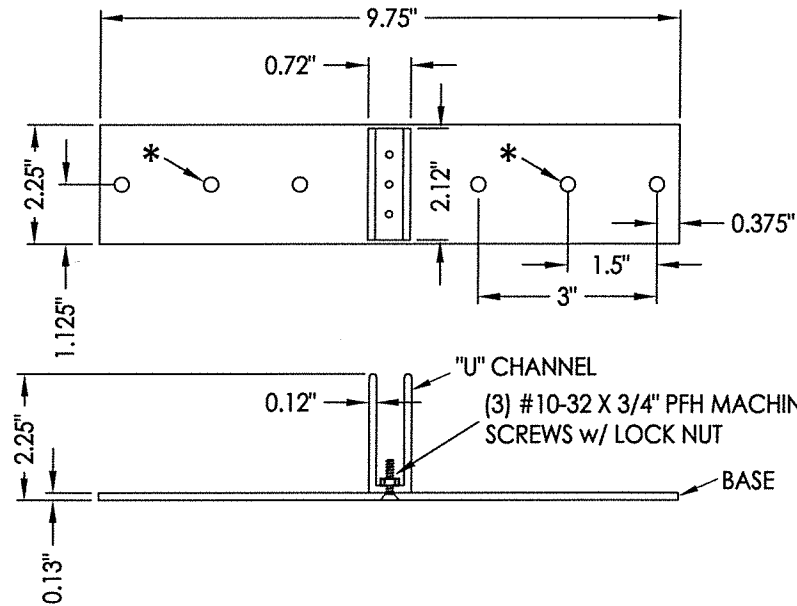


2 ANCHOR BRACKET DETAIL
4 Anchor to Steel Stud

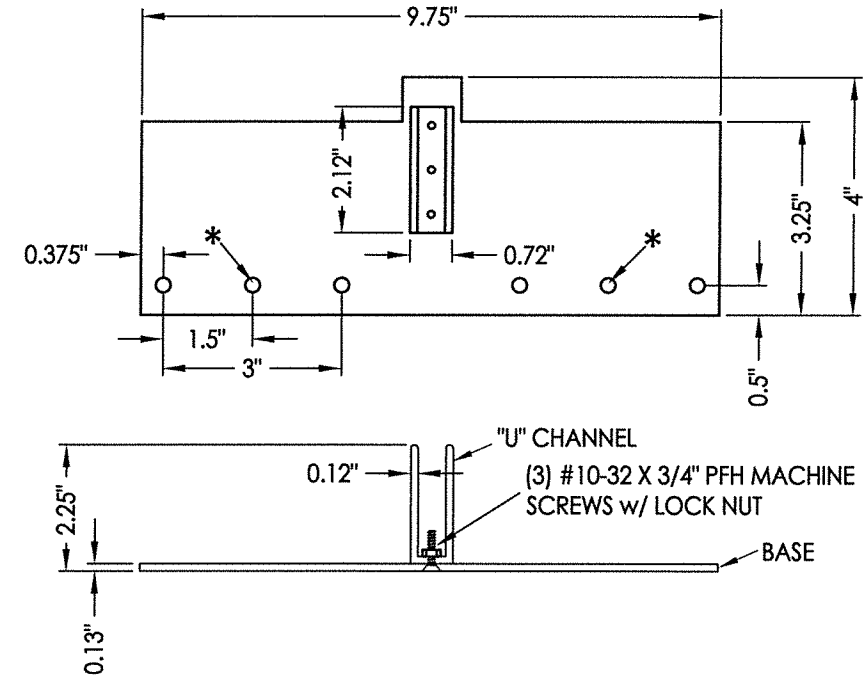
- Notes:
- Refer to individual window product approval for fabrication and installation requirements, including glazing details, frame reinforcement and anchor specifications.
 - Mullion bracket anchoring details shown may be used at either end of mullion.

MULLION ANCHOR BRACKET ANCHOR SCHEDULE				
ANCHOR	SUBSTRATE	EMBEDMENT (MIN.)	EDGE DISTANCE (MIN.)	CENTER-TO-CENTER SPACING (MIN.)
#10 PFH WOOD SCREW	WOOD	1-3/8"	3/4"	1-1/4"
#10-16 SELF-DRILLING SHEET METAL SCREW	STEEL	A MIN. OF 3 THREADS SHALL PROTRUDE COMPLETELY THROUGH THE STEEL SUBSTRATE	3/4"	1-1/4"
1/4" Ø PFH HILTI KWIK-CON II+	HOLLOW BLOCK	1-1/4"	2-1/2"	3"
	CONCRETE	1-1/4"	2-1/2"	3"

WOOD FRAMING (S.G. >= 0.55)
 STEEL CONFORMING TO ASTM A653, 16 GA., 0.060" MIN. THICKNESS (Fy = 33,000 PSI, Fu = 45,000 PSI)
 SHEET METAL SCREWS (SAE GRADE 5 MIN.): HILTI KWIK-FLEX or ELCO DRIL-FLEX
 CONCRETE CONFORMING TO ACI 301 (3,000 PSI MIN.) OR HOLLOW BLOCK CONFORMING TO ASTM C90

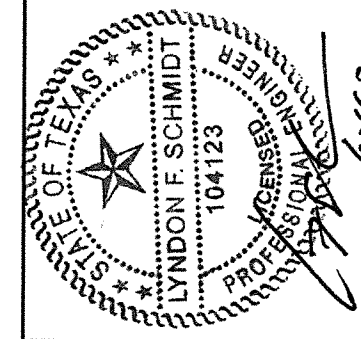


3 MASONRY OR WOOD/STEEL STUD ANCHOR BRACKET
BASE (6061-T6 ALUM.)
"U" CHANNEL (6063-T6 ALUM.)



5 MASONRY OR WOOD/STEEL STUD OFFSET ANCHOR BRACKET
BASE (6061-T6 ALUM.)
"U" CHANNEL (6063-T6 ALUM.)

*Holes indicated to be used for wood/steel stud installations only. Do not use for concrete screws.



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TEXAS BOARD OF PROFESSIONAL ENGINEERS
CERTIFICATE OF REGISTRATION # F-11852

PRODUCT: ALUMINUM CLIPPED MULLION
PART OR ASSEMBLY: ANCHOR BRACKET DETAILS & CROSS SECTIONS

NO.	DATE	REVISIONS
2	6/11/20	UPDATE TO 2018 IBC/IRC
1	5/04/16	MODIFY ANCHOR CLIP

DATE: 11/25/14
 SCALE: N.T.S.
 DWG. BY: JK
 CHK. BY: LFS
 DRAWING NO.: TX-4387
 SHEET 4 OF 4