



250 Staunton Turnpike, Parkersburg, WV 26104

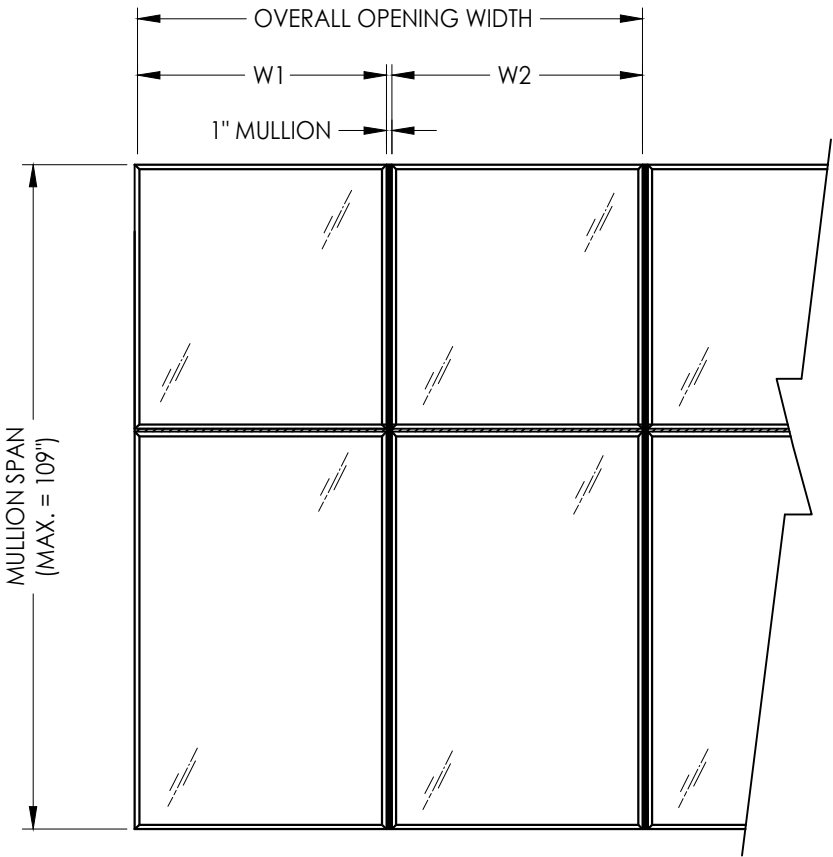
TMP-2603
EXTRUDED ALUMINUM
VERTICAL CLIPPED COMBINATION MULLION



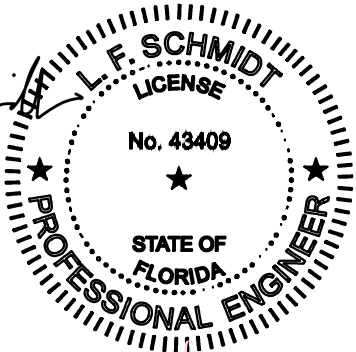
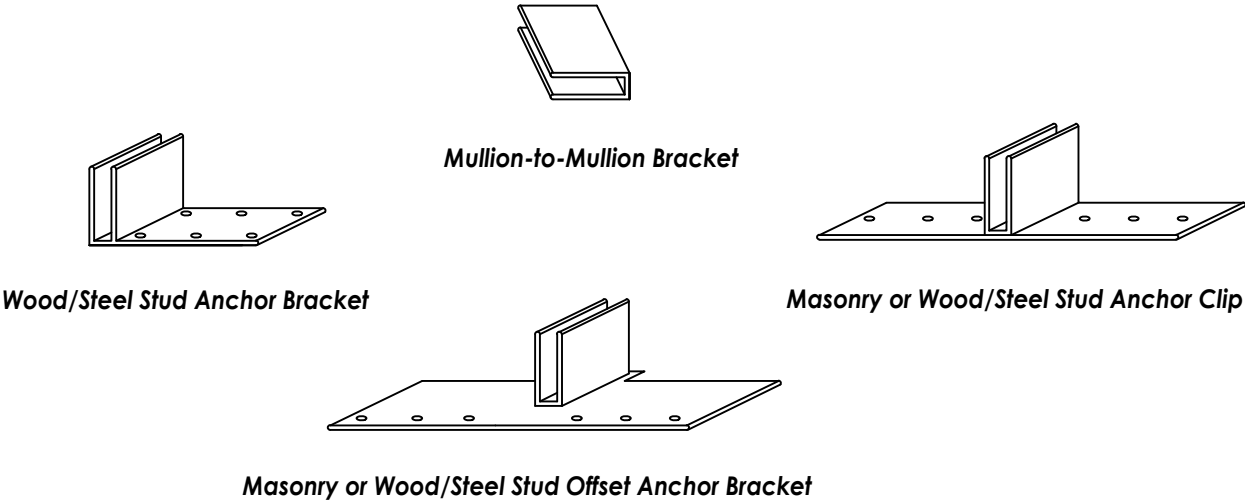
GENERAL NOTES

1. This product has been evaluated and is in compliance with the 8th Edition (2023) Florida Building Code (FBC) structural requirements, excluding the "High Velocity Hurricane Zone".
2. When used in areas requiring wind borne debris protection, this product (if mulled together with impact rated windows), complies with FBC Sections 1609.1.2 & R301.2.1.2 and does not require an impact resistant covering. This product meets missile level "D" and includes Wind Zone 4 as defined in ASTM E1996 and FBC Sections 1609.1.2.2 & R301.2.1.2.1.
3. Wood bucks by others, must be anchored properly to transfer loads to the structure and be reviewed by the Building Official.
4. 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.
5. 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.
6. Mullion anchor embedment to base material shall be beyond wall dressing or stucco.
7. Any conditions not covered in this evaluation are subject to separate engineering evaluation.

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4	Masonry or Wood/Steel Stud Anchor Clip Details



VERTICAL MULLED WINDOW UNITS
ADJOINING WINDOW UNITS CAN BE EQUAL OR UNEQUAL WIDTHS



Digitally signed by Lyndon F Schmidt
Date: 2023.07.06 14:47:07 -04'00'

This item has been digitally signed and sealed by
L. F. Schmidt, P.E. on the date adjacent to the seal.
Printed copies of this document are not
considered signed and sealed and the signature
must be verified on any electronic copies.

THIS PRODUCT APPROVAL IS VALID
ONLY FOR THE STATE OF FLORIDA

Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

PRODUCT:
ALUMINUM CLIPPED MULLION

DATE: 10/01/13

SCALE: N.T.S.

DWG. BY: JK

CHK. BY: LFS

DRAWING NO.: FL-16542.2

SHEET 1 OF 4

Building Consultants, Inc.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
. FBPE Registry No. 9813

PART OR ASSEMBLY:
TYPICAL ELEVATIONS
& GENERAL NOTES

REVISIONS

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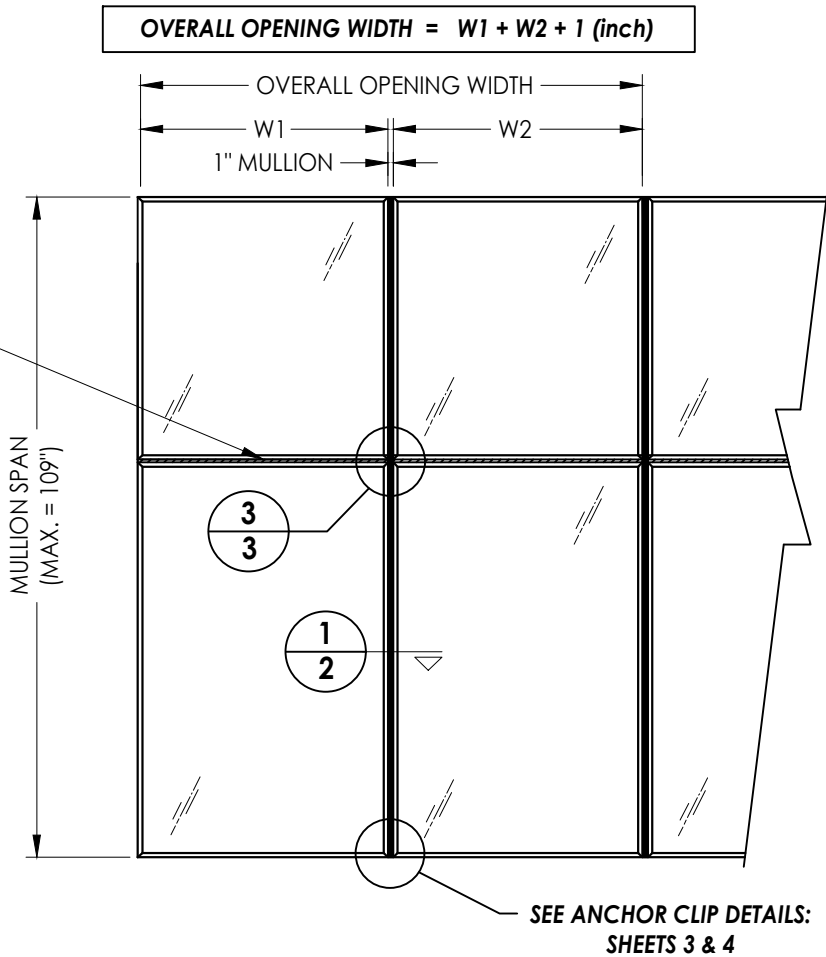
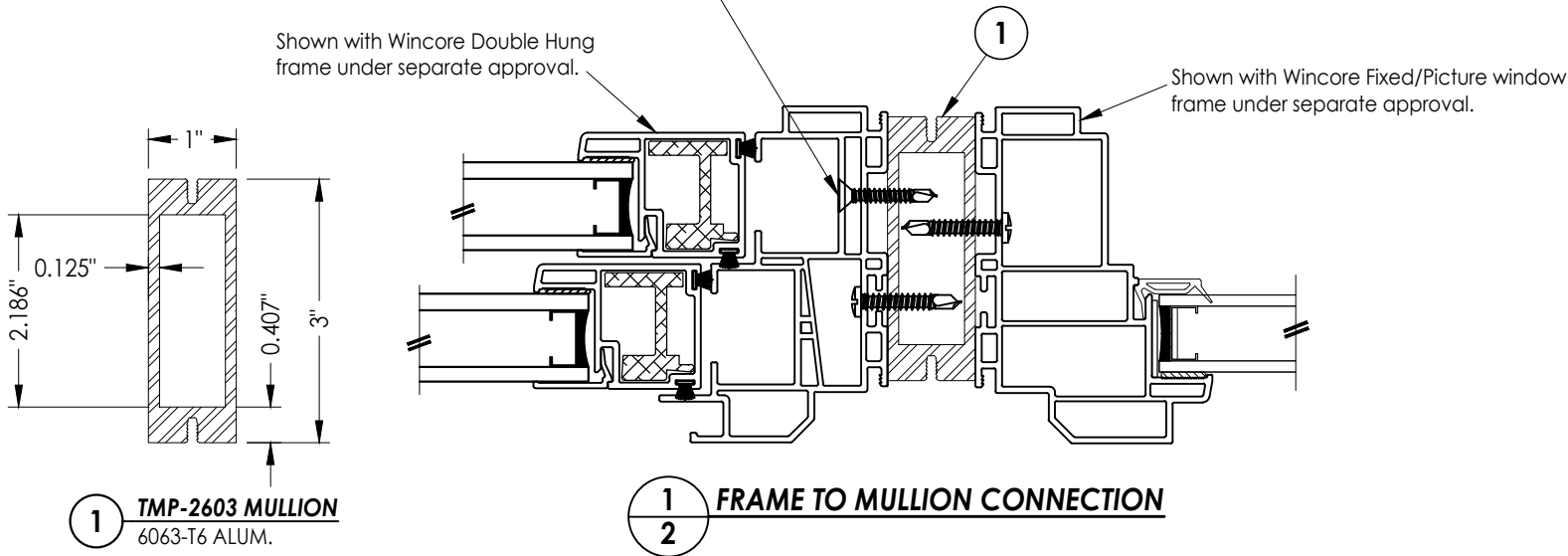
CLIPPED MULLION		TMP-2603 EXTRUDED ALUMINUM VERTICAL CLIPPED COMBINATION MULLION LOAD TABLE (PSF)																								
		OVERALL OPENING WIDTH																								
		49"	53"	57"	61"	65"	69"	73"	77"	81"	85"	89"	93"	97"	101"	105"	109"	113"	117"	121"	125"	129"	133"	137"	141"	145"
MAXIMUM MULLION LENGTH	109"	27.5	25.5	23.5	22.5	21.5	20.0	19.0	18.0	17.0	16.0	15.5	15.0	-	-	-	-	-	-	-	-	-	-	-	-	-
	104"	32.0	29.5	27.0	25.0	23.5	22.5	21.5	20.5	19.5	18.5	18.0	17.5	16.5	16.0	15.5	-	-	-	-	-	-	-	-	-	-
	100"	34.0	31.5	29.0	27.5	26.0	24.5	23.5	22.0	21.0	20.5	19.5	19.0	18.0	17.5	17.0	16.5	16.0	15.5	15.0	-	-	-	-	-	-
	96"	42.0	39.0	36.5	34.0	32.0	30.0	28.0	26.5	25.0	24.0	23.0	22.0	21.0	20.5	20.0	19.5	18.0	17.5	17.0	16.5	16.0	15.5	15.0	-	-
	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	24.0	23.0	22.0	21.0	20.5	20.0	19.5	19.0	18.0	17.5	17.0	16.5	16.0
	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	24.5	23.5	23.0	22.5	21.5	21.0	20.0	19.5	19.0	18.5
	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	24.0	23.5	22.5	22.0	21.0	20.5	20.0
	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	24.0	23.5
	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

See Horizontal Clipped Mullion Approval (FL-16542.3), if applicable, for design pressure chart & connection details.

Refer to separate window approval for quantity, location, size & head type of anchors required to fasten window frame to mullion. At a minimum, substitute a #10-16 Self-Drilling SMS for each connector with at least 3 threads protruding completely through the mullion face.



Documents Prepared By:
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RW BUILDING CONSULTANTS, INC.
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. FBPE Registry No. 9813

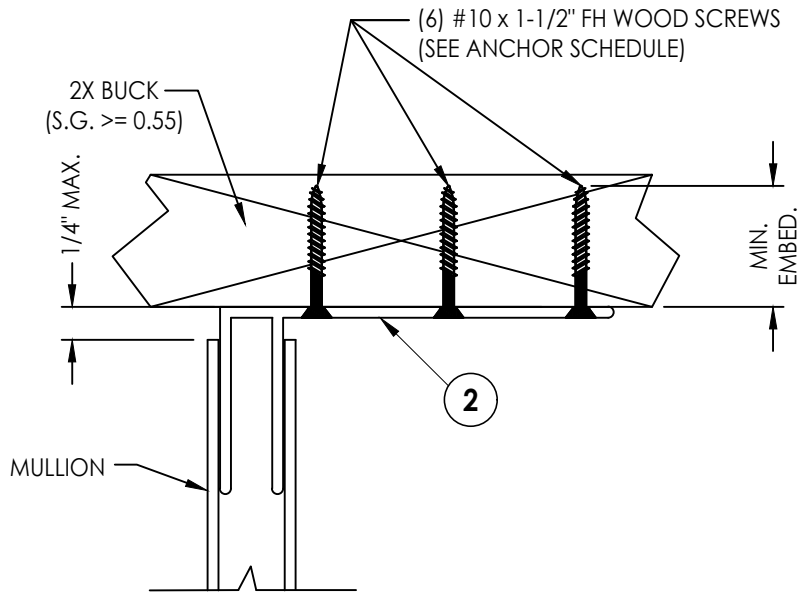
PRODUCT:
ALUMINUM CLIPPED MULLION

PART OR ASSEMBLY:
MULLION DESIGN PRESSURE
TABLE & CROSS SECTIONS

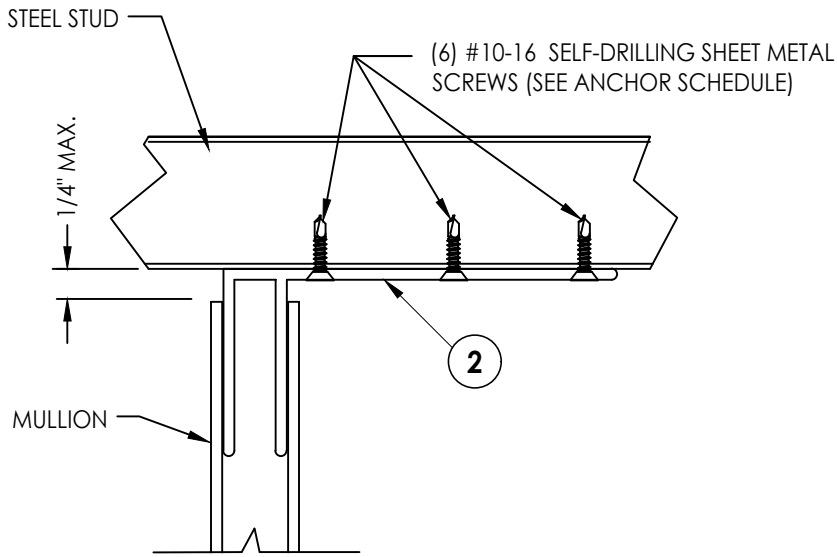
NO.	DATE	REVISIONS
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5	7/09/20	UPDATE TO 7TH ED. (2020) FBC
4	6/01/17	UPDATE TO 6TH ED. (2017) FBC
3	5/05/16	MODIFY ANCHOR CLIP
2	1/28/15	UPDATE TO 5TH ED. (2014) FBC
1	4/8/14	REVISE ANCHOR CLIPS
NO.	DATE	BY

DATE: 10/01/13
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-16542.2
SHEET 2 OF 4

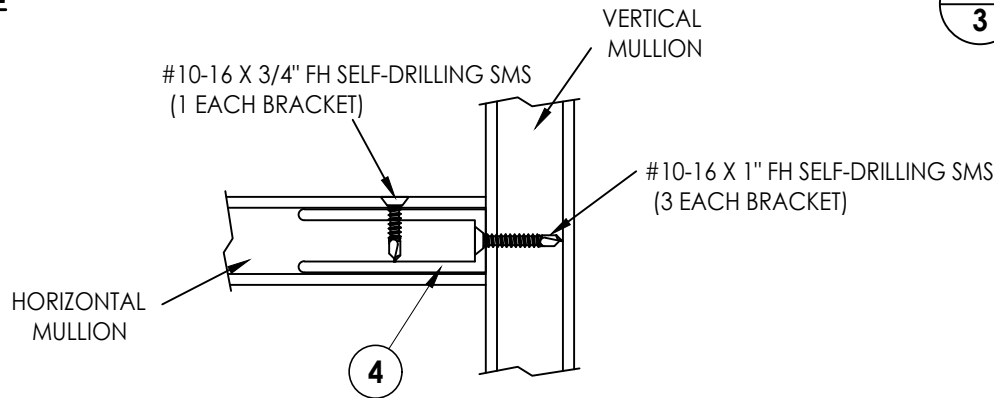
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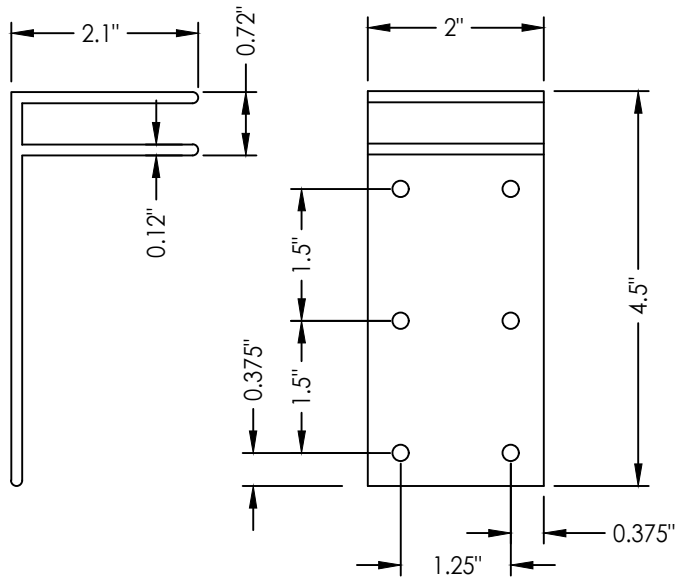
1 ANCHOR BRACKET DETAIL
Anchor to 2x Buck



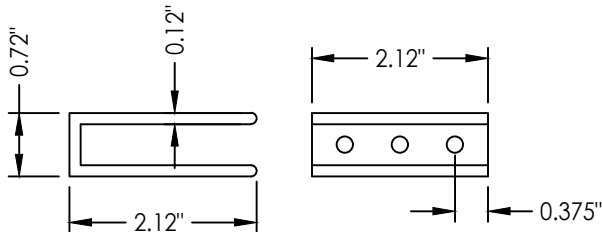
2 ANCHOR BRACKET DETAIL
Anchor to Steel Stud



3 HORIZONTAL CROSS SECTION
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. >= 0.55)
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

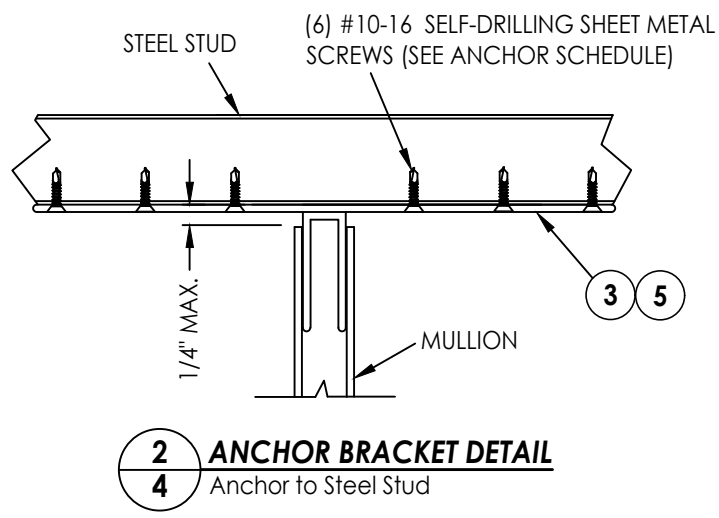
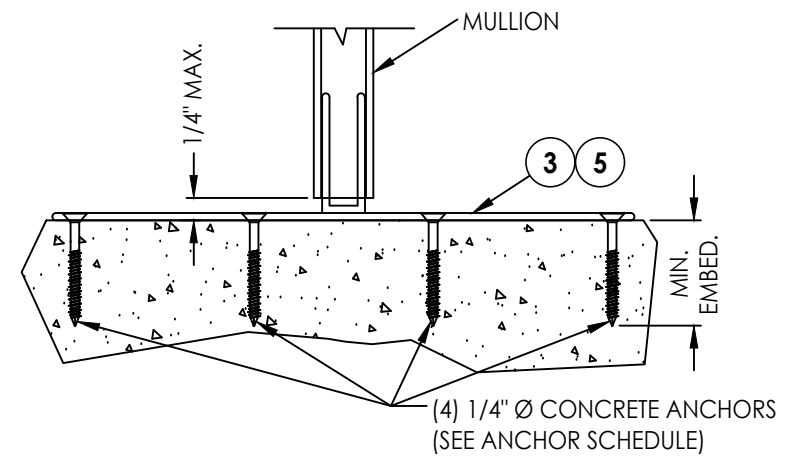
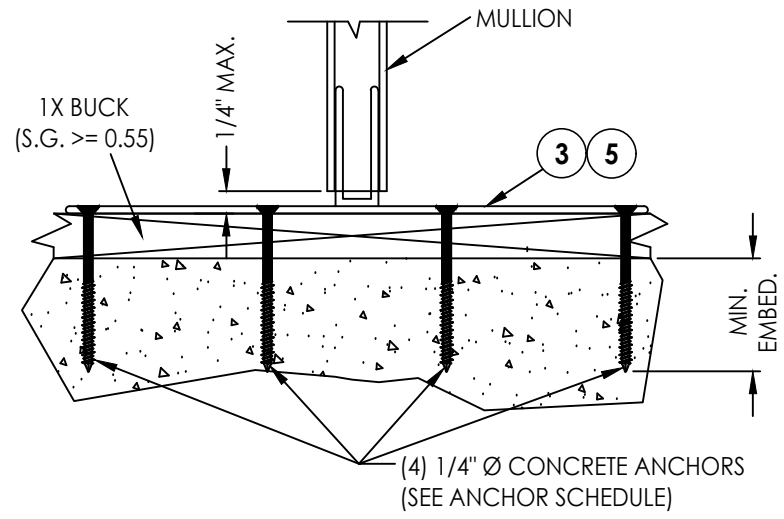
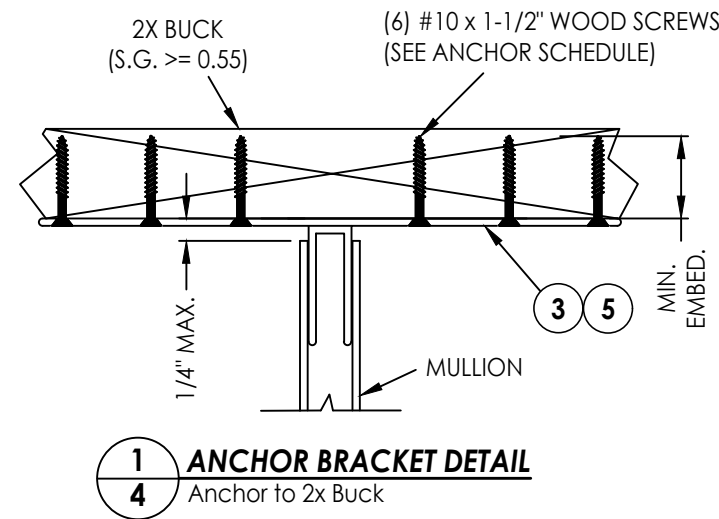
Documents Prepared By:
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FBPE Registry No. 9813

PRODUCT:
ALUMINUM CLIPPED MULLION
PART OR ASSEMBLY:
WOOD/STEEL STUD ANCHOR BRACKET DETAILS

NO.	DATE	REVISIONS
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NO.	DATE	BY
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SCALE:	N.T.S.	
DWG. BY:	JK	
CHK. BY:	LFS	
DRAWING NO.:	FL-16542.2	
SHEET	3	OF 4

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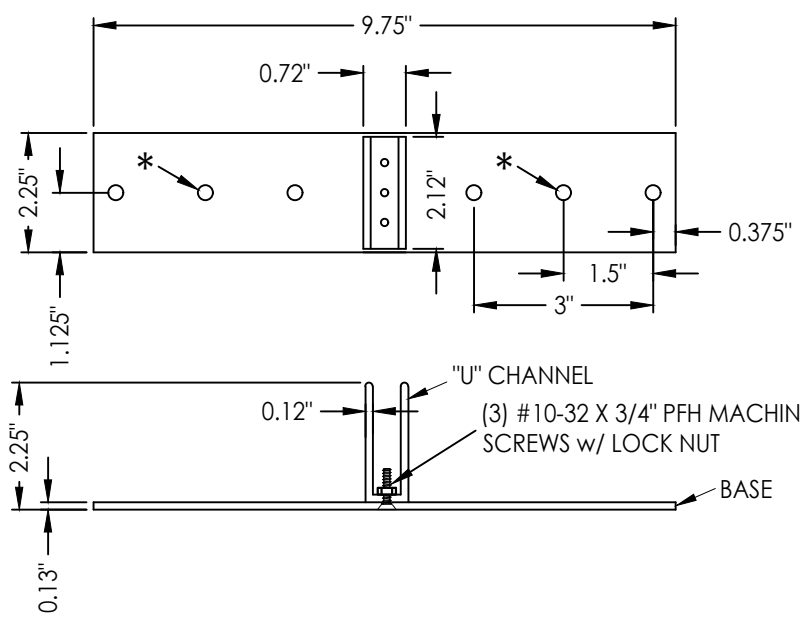
3 ANCHOR BRACKET DETAIL
Anchor to Masonry thru 1x Buck

4 ANCHOR BRACKET DETAIL
Anchor Direct to Masonry

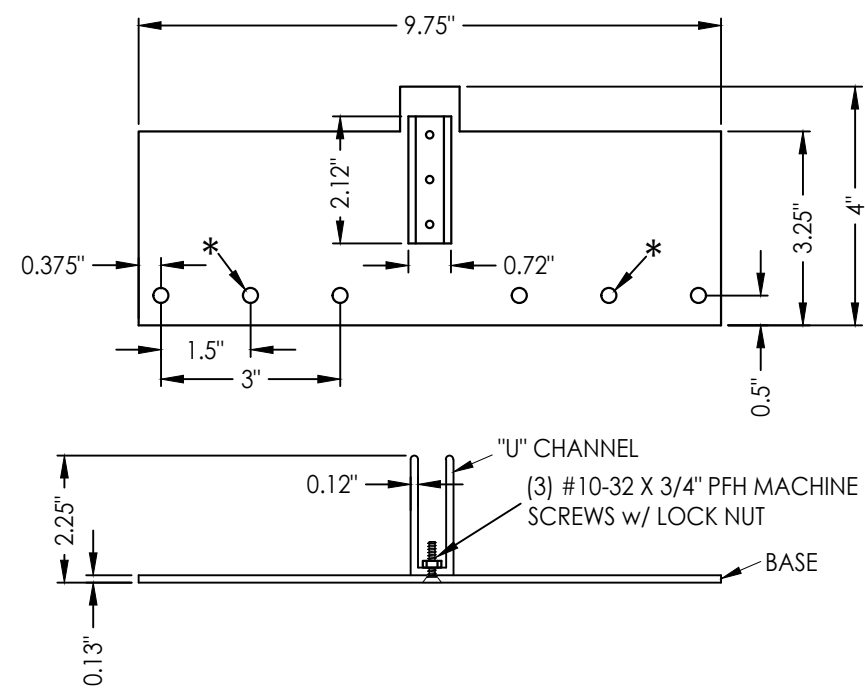
- Notes:
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 - Mullion bracket anchoring details shown may be used at either end of mullion.

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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FBPE Registry No. 9813

PRODUCT:	ALUMINUM CLIPPED MULLION
PART OR ASSEMBLY:	MASONRY OR WOOD/STEEL STUD ANCHOR BRACKET DETAILS
DATE:	10/01/13
SCALE:	N.T.S.
DWG. BY:	JK
CHK. BY:	LFS
DRAWING NO.:	FL-16542.2
SHEET	4 OF 4

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