

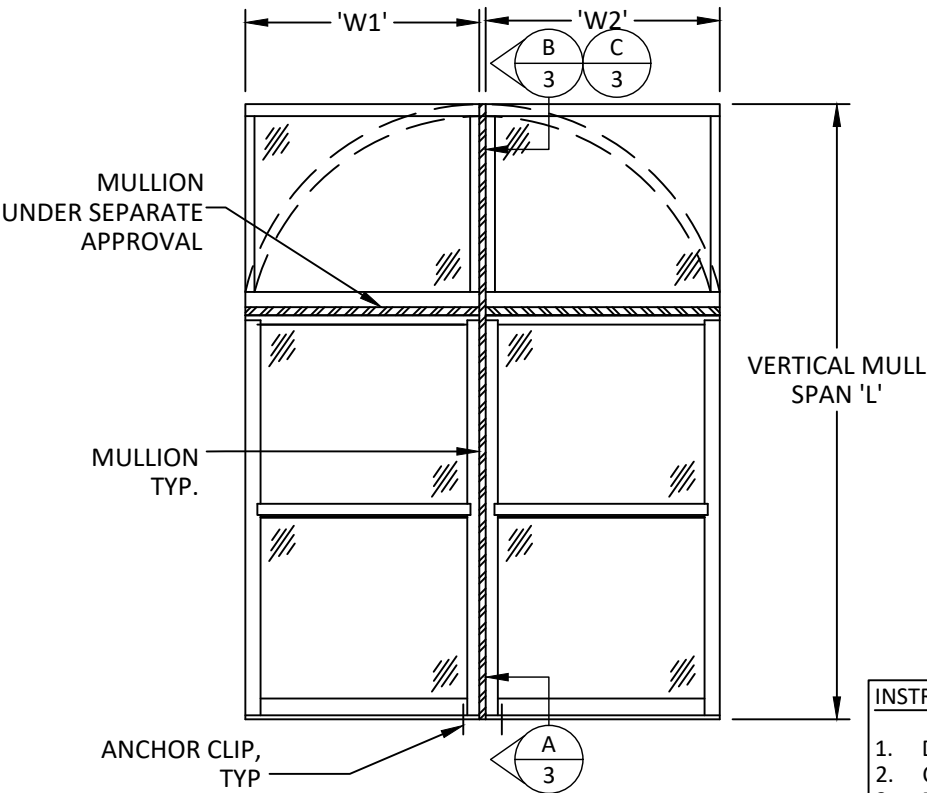
EASTERN ARCHITECTURAL SYSTEMS

HVHZ CLIPPED ALUMINUM BAY/BOW MULLIONS

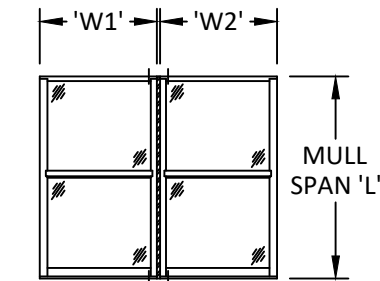
GENERAL NOTES:

1. THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH THE CURRENT FLORIDA BUILDING CODE, **INCLUDING** THE HIGH VELOCITY HURRICANE ZONE (HVHZ).
3. APPROVED IMPACT PROTECTIVE SYSTEM **IS NOT REQUIRED** FOR THIS PRODUCT IN WIND BORNE DEBRIS REGIONS. INDIVIDUAL UNITS ATTACHED TO MULLIONS MUST BE IMPACT RATED.
4. ADEQUACY OF THE EXISTING STRUCTURAL CONCRETE/MASONRY AND 2X FRAMING AS A MAIN WIND FORCE RESISTING SYSTEM CAPABLE OF WITHSTANDING AND TRANSFERRING APPLIED PRODUCT LOADS TO THE FOUNDATION IS THE RESPONSIBILITY OF THE ENGINEER OR ARCHITECT OF RECORD FOR THE PROJECT OF INSTALLATION.
5. 1X AND 2X BUCKS (WHEN USED) SHALL BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO THE STRUCTURE. BUCK DESIGN AND INSTALLATION IS THE RESPONSIBILITY OF THE ENGINEER OR ARCHITECT OF RECORD FOR THE PROJECT OF INSTALLATION.
6. THE INSTALLATION DETAILS DESCRIBED HEREIN ARE GENERIC AND MAY NOT REFLECT ACTUAL CONDITIONS FOR A SPECIFIC SITE. IF SITE CONDITIONS CAUSE INSTALLATION TO DEVIATE FROM THE REQUIREMENTS DETAILED HEREIN, A LICENSED ENGINEER OR ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE WITH THIS DOCUMENT IN NON-HVHZ AREAS. IN HVHZ AREAS, ONE TIME PRODUCT APPROVAL TO BE OBTAINED FROM MIAMI-DADE RER.
7. MULLION & CLIP MATERIAL: ALUMINUM 6005-T5 & 6063-T6 (AS NOTED)
8. MULLIONS MAY BE USED WITH ANY APPROVED FENESTRATION PRODUCT, UNDER SEPARATE APPROVAL.
9. SEE SHEETS 3-7 FOR INSTALLATION ANCHOR REQUIREMENTS FOR SPECIFIC ANCHORING REQUIREMENTS, MULLION CONFIGURATIONS, AND DESIGN LOAD CAPACITIES.
10. DISSIMILAR METALS INCLUDING FASTENERS THAT MAY COME INTO CONTACT WITH ALUMINUM UNIT FRAMING SHALL BE PROTECTED IN ACCORDANCE WITH CURRENT FLORIDA BUILDING CODE.

TABLE OF CONTENTS	
SHEET	SHEET DESCRIPTION
1	GENERAL NOTES, INSTRUCTIONS, AND ELEVATIONS
2	MULLION ASSEMBLY AND MULLION AND CLIP DETAILS
3	MULLION CROSS SECTIONS
4	22.50° MULLION DESIGN LOAD TABLES
5	30° MULLION DESIGN LOAD TABLES
6	45° MULLION DESIGN LOAD TABLES
7	90° MULLION DESIGN LOAD TABLES
8	MULLION ASSEMBLY AND LOAD EXAMPLES



TYPICAL MULLION ASSEMBLY



VERTICAL SPAN

- INSTRUCTIONS:
1. DETERMINE REQUIRED DESIGN PRESSURE FOR OPENING.
2. CHOOSE A MULLION THAT PROPERLY FITS THE FENESTRATION PRODUCT.
3. DETERMINE WHETHER ASSEMBLY REQUIRES ONE-WAY OR TWO-WAY MULLIONS:
 - ASSEMBLIES CONSISTING OF STACKED OR SIDE-BY-SIDE UNITS REQUIRE USE OF ONE-WAY MULLIONS.
 - ASSEMBLIES CONSISTING OF MULTIPLE UNITS MULLED TOGETHER WITH MULTIPLE MULLIONS REQUIRE USE OF TWO-WAY MULLIONS.
 - SEE SHEET 8 FOR ASSEMBLY EXAMPLES.
 - IF ASSEMBLY TYPE CANNOT BE DETERMINED USE TWO-WAY MULLION CHART.
4. VERIFY THAT MULLION DESIGN PRESSURE MEETS OR EXCEEDS REQUIRED DESIGN PRESSURE OF OPENING USING CHARTS ON SHEETS 4-7.
5. QUALIFIED CLIP TYPES APPEAR ON SHEETS 4-7. MULTIPLE ANCHOR TYPE/SUBSTRATE/CLIP COMBINATIONS WITHIN AN OPENING ARE ALLOWED.
6. MULLIONS SHOWN HEREIN SHALL BE USED IN A VERTICAL MANNER ONLY. HOWEVER, HORIZONTAL MULLIONS UNDER SEPARATE APPROVAL MAY BE USED IN CONJUNCTION WITH MULLIONS SHOWN HEREIN IN A TWO-WAY CONFIGURATION.
7. THE LESSER DESIGN PRESSURE OF MULLION OR FENESTRATION PRODUCT WILL GOVERN OVERALL ASSEMBLY DESIGN PRESSURE RATING.

HERMES F. NORERO
LICENSE
No. 73778
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

HERMES F. NORERO
P.E. No. 73778
BUILDING DROPS, INC.
1900 NE MIAMI CT. SUITE 2-15
MIAMI, FL 33132
FBPE CERT. OF AUTHORIZATION NO. 29578

REVISIONS			
LH	7/30/26	CURRENT FBC	4
SH	8/31/23	MISC. UPDATES	3
SM	5/25/21	FBC UPDATES	2
SM	2/6/18	6TH ED. FBC UPDATES	1
BY	DATE	DESCRIPTION	REV

EASTERN ARCHITECTURAL SYSTEMS
A DIVISION OF
CORNERSTONE BUILDING BRANDS

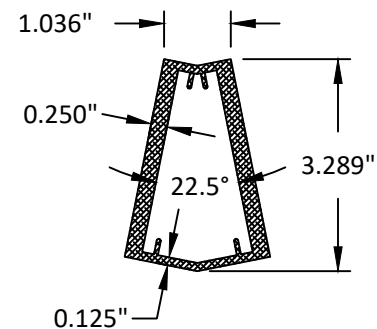
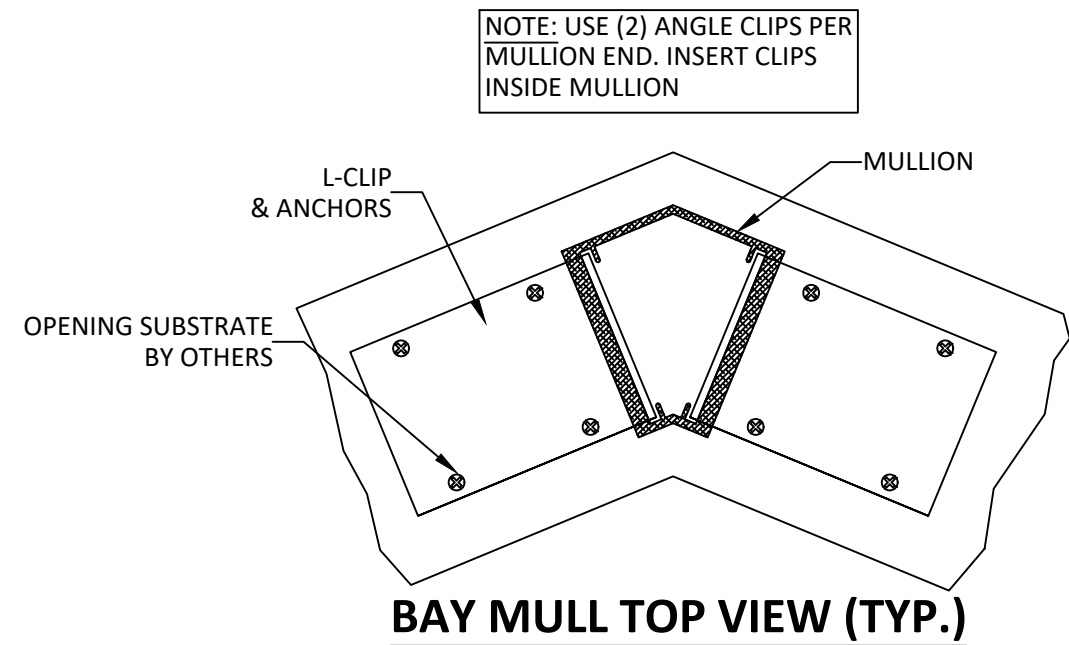
16341 DOMESTIC AVE.
FT MYERS, FL 33912
1-877-401-2190

TITLE:
HVHZ CLIPPED ALUMINUM BAY/BOW MULLIONS
VERTICAL AND HORIZONTAL CONFIGURATIONS
GENERAL AND INSTALLATION ELEVATIONS

DATE: 02/05/13		DRAWN BY: TJH	
DRAWING NO: PA-0004		SCALE: N.T.S.	
SHEET: 1 OF 8		REV: 4	

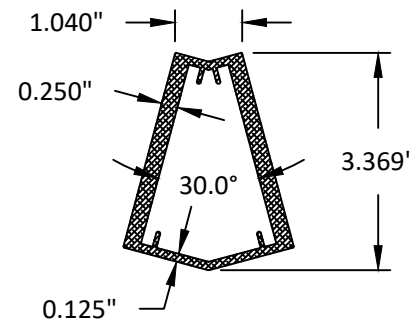
BUILDING DROPS

1900 NE MIAMI CT. SUITE 2-15
MIAMI, FL 33132
PH: (954)399-8478
FAX: (954)744.4738
WEB: www.buildingdrops.com



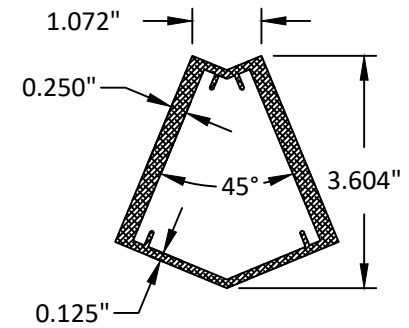
22.50 DEGREE MULLION

USE WITH CLIP TYPE(S):
• L-CLIPS (PAIRS)
USE CLIP DEPTH= 2-3/4"



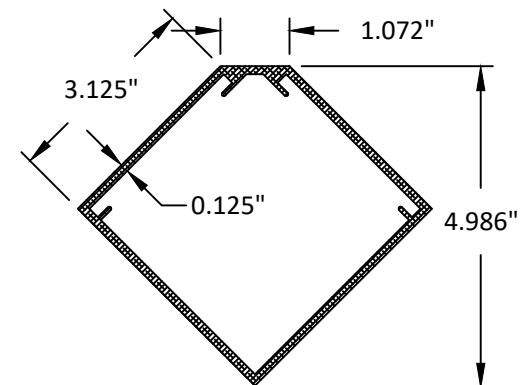
30 DEGREE MULLION

USE WITH CLIP TYPE(S):
• L-CLIPS (PAIRS)
USE CLIP DEPTH= 2-3/4"



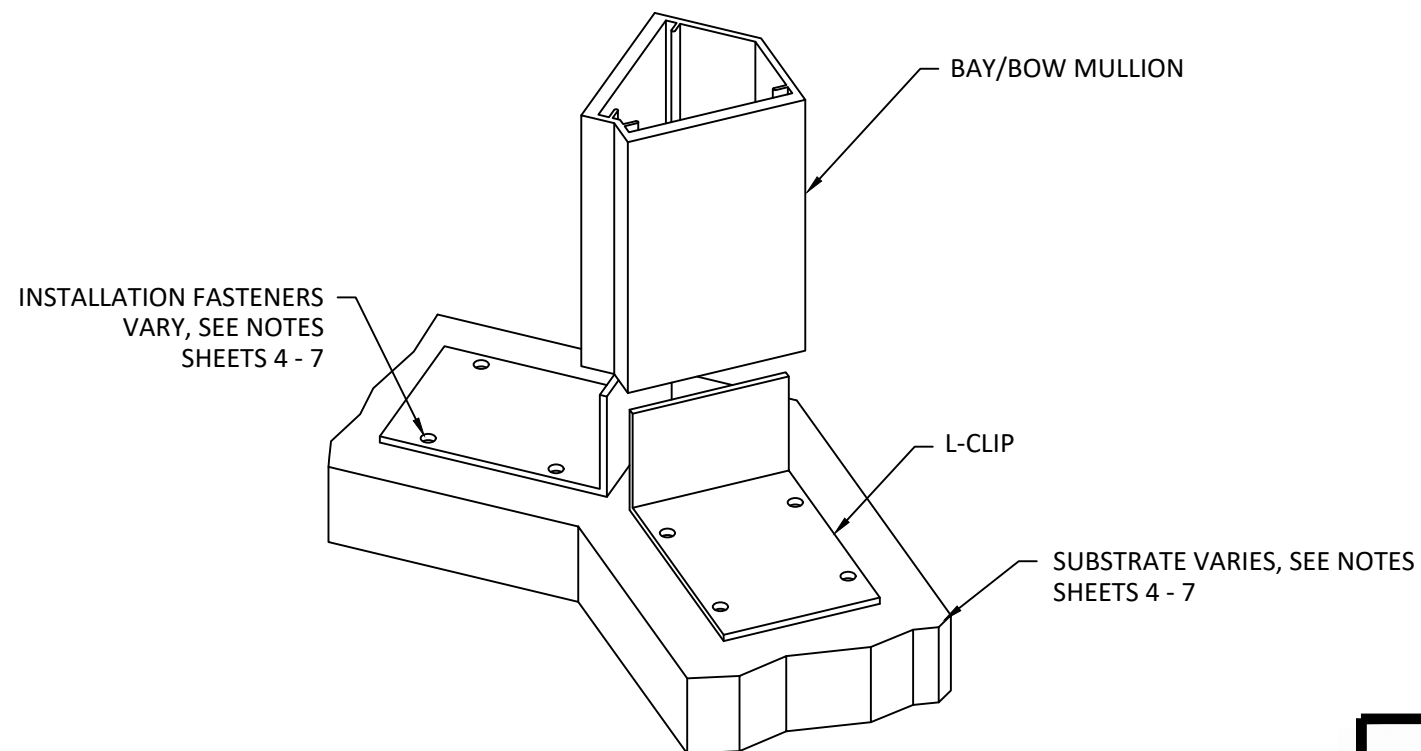
45 DEGREE MULLION

USE WITH CLIP TYPE(S):
• L-CLIPS (PAIRS)
USE CLIP DEPTH= 2-3/4"



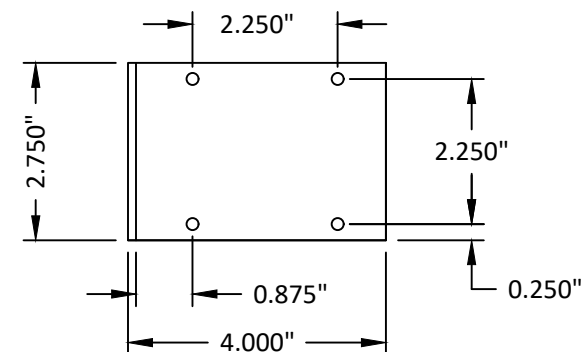
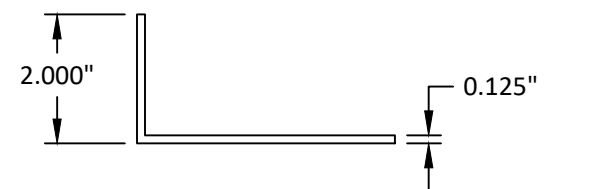
90 DEGREE MULLION

USE WITH CLIP TYPE(S):
• L-CLIPS (PAIRS)
USE CLIP DEPTH= 2-3/4"



L-CLIP ATTACHMENT (TYP.)

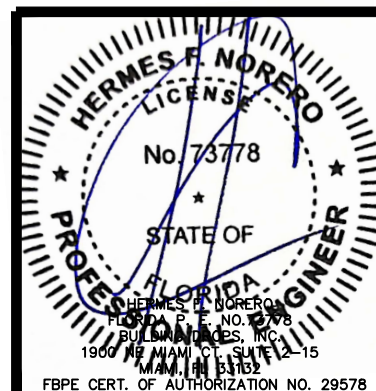
NOTE: L-CLIPS MUST BE USED WITH ANY 'BAY/BOW' MULLION TYPE. SEE SPECIFIC MULLION SHEET FOR DETAILS.



2" x 4" L-CLIP

ALUMINUM 6063-T6

L-CLIPS SHALL BE USED IN PAIRS AT MULLION ENDS.



REVISIONS			
BY	DATE	DESCRIPTION	REV

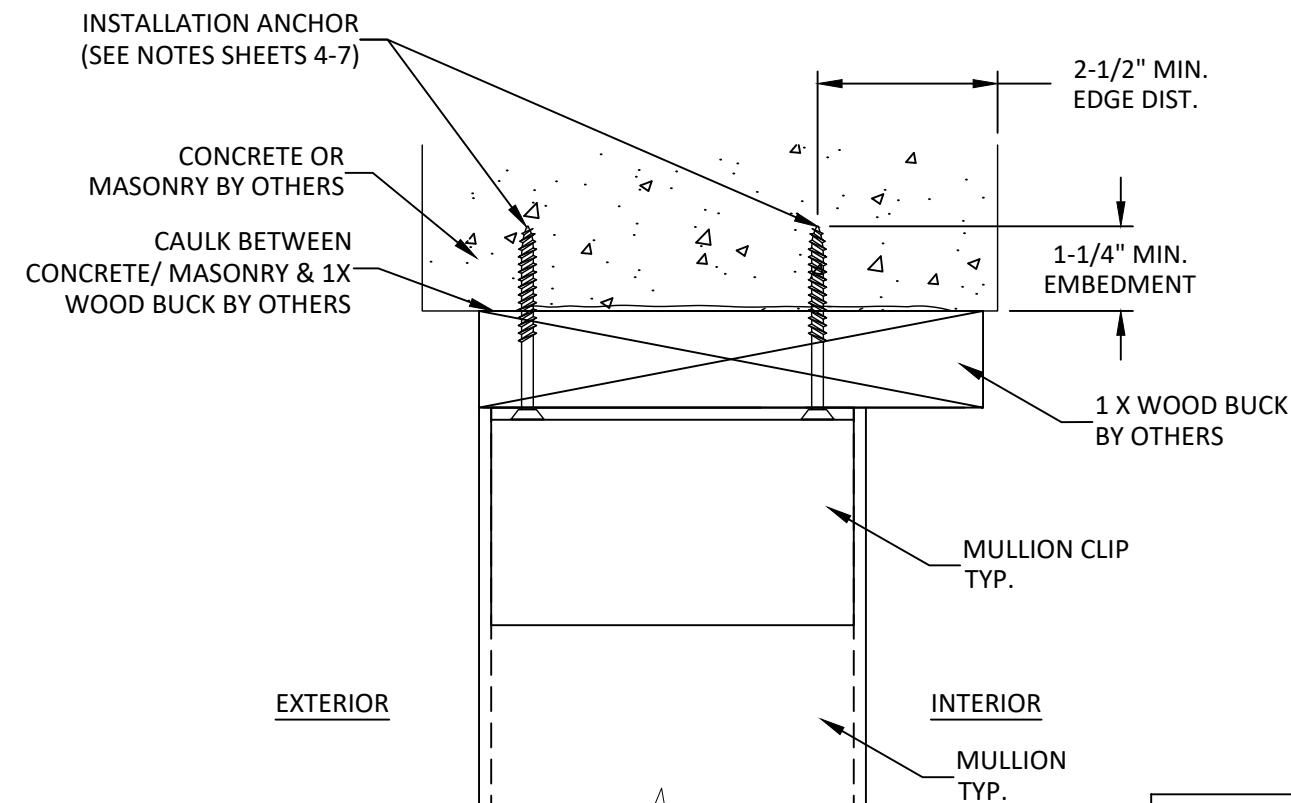


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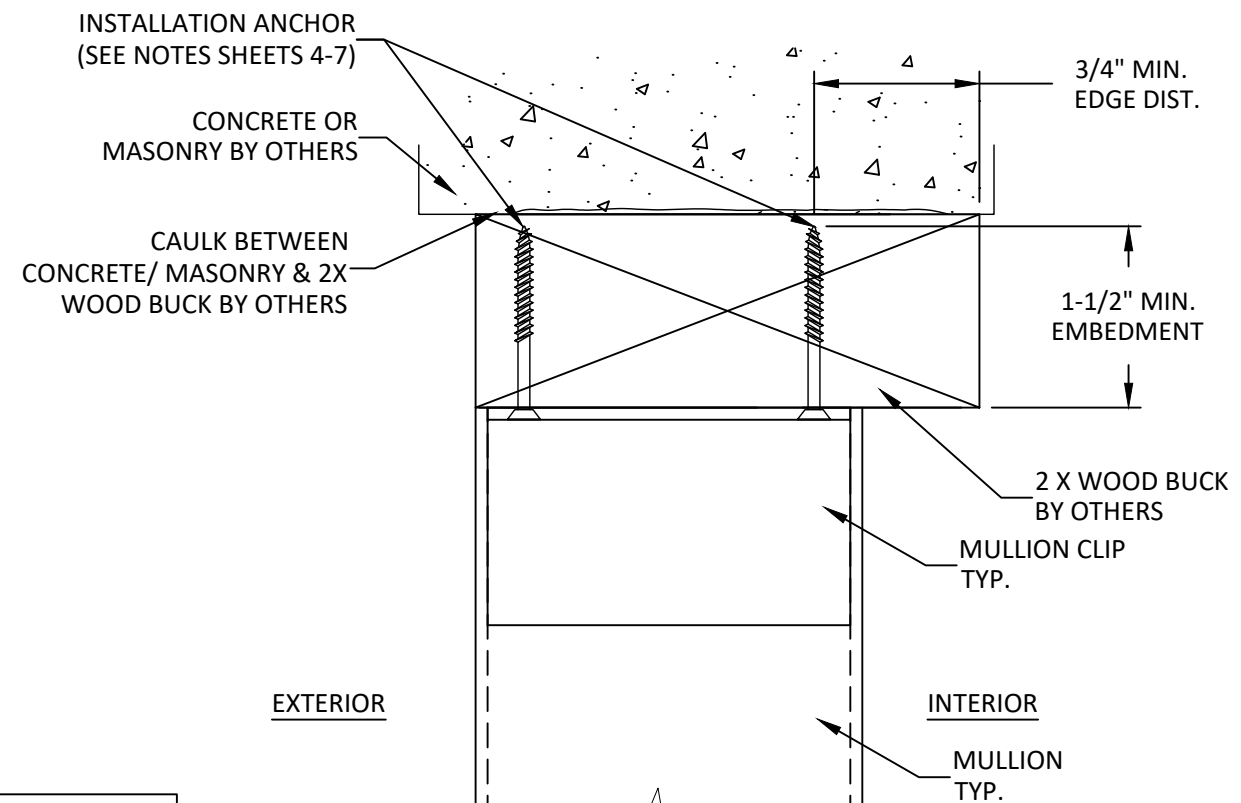
16341 DOMESTIC AVE.
FT MYERS, FL 33912
1-877-401-2190

TITLE:
**HVHZ CLIPPED ALUMINUM BAY/BOW MULLIONS
VERTICAL AND HORIZONTAL CONFIGURATIONS
MULLION ASSEMBLY AND MULLION AND CLIP DETAILS**

DATE: 02/05/13	DRAWN BY: TJH	PREPARED BY: BUILDING DROPS, INC.
DRAWING NO: PA-0004	SCALE: N.T.S.	1900 NE MIAMI CT. SUITE 2-15 MIAMI, FL 33132 PH: (954)399-8478 FAX: (954)744.4738 WEB: www.buildingdrops.com
SHEET: 2 OF 8	REV: -	

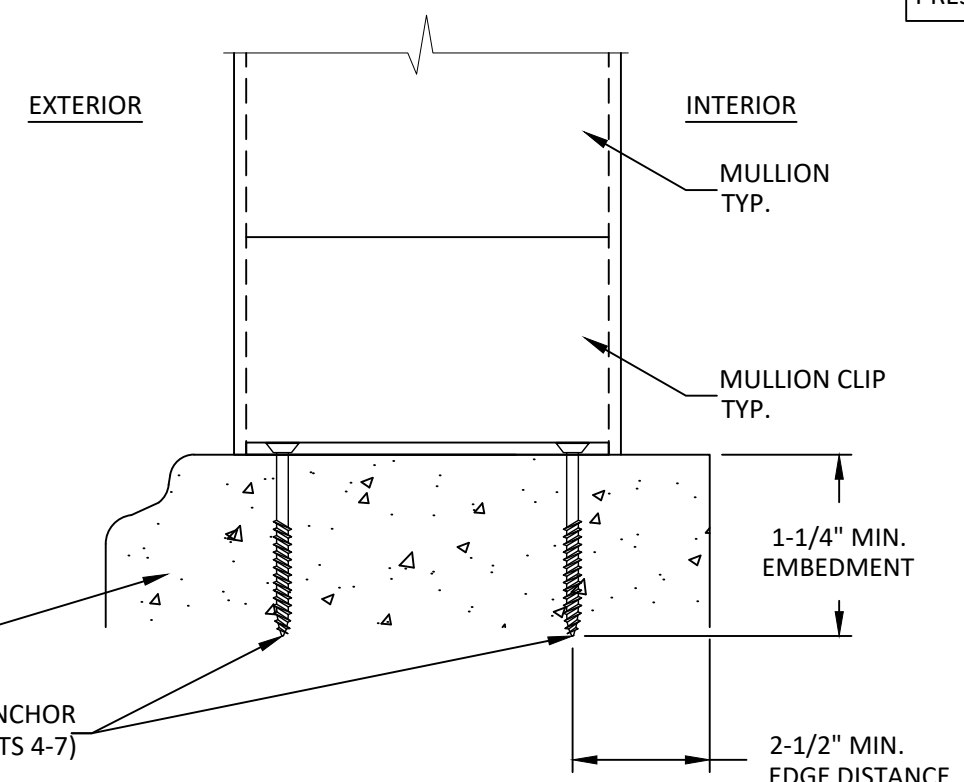


B
3 **VERTICAL SECTION**
HEAD - CONCRETE/MASONRY
SIDE VIEW-VERTICAL

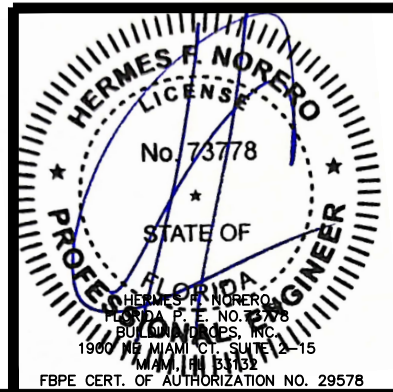


C
3 **VERTICAL SECTION**
HEAD - 2X WOOD BUCK
SIDE VIEW-VERTICAL

NOTE
DETAILS SHOWN ARE TYPICAL FOR ALL MULLION & CLIP ASSEMBLIES. SEE SHEETS 4-7 FOR ALLOWABLE MULLION CONFIGURATIONS, SIZES, AND DESIGN PRESSURES.



A
3 **VERTICAL SECTION**
SILL - CONCRETE/MASONRY
SIDE VIEW-VERTICAL



REVISIONS			
BY	DATE	DESCRIPTION	REV



EASTERN ARCHITECTURAL SYSTEMS
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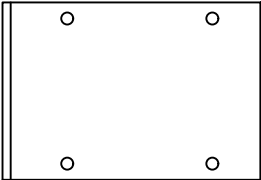
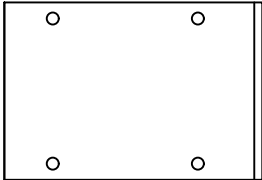
TITLE:
**HVHZ CLIPPED ALUMINUM BAY/BOW MULLIONS
VERTICAL AND HORIZONTAL CONFIGURATIONS
MULLION SECTIONS**

DATE: 02/05/13	DRAWN BY: TJH	PREPARED BY: BUILDING DROPS, INC.
DRAWING NO: PA-0004	SCALE: N.T.S.	1900 NE MIAMI CT. SUITE 2-15 MIAMI, FL 33132 PH: (954)399-8478 FAX: (954)744.4738 WEB: www.buildingdrops.com
SHEET: 3 OF 8	REV: -	

DESIGN PRESSURE LIMITS FOR MULLION: 22.5 Deg. - ONE-WAY MULLIONS										
SPAN 'L' (IN.)	TRIBUTARY WIDTH 'W' (IN.)									
	12	18	24	30	36	42	48	53.125	54	60
24	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
36	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
48	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
60	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
72	90.0	90.0	90.0	90.0	90.0	90.0	83.2	78.6	77.9	74.5
84	90.0	90.0	89.9	73.3	62.5	55.1	49.8	46.4	45.9	43.1
96	90.0	78.8	59.8	48.5	41.2	36.0	32.3	29.9	29.5	27.4
108	82.2	55.1	41.7	33.8	28.6	24.9	22.2	20.4	20.2	18.6

DESIGN PRESSURE LIMITS FOR MULLION: 22.5 Deg. - TWO-WAY MULLIONS										
SPAN 'L' (IN.)	TRIBUTARY WIDTH 'W' (IN.)									
	12	18	24	30	36	42	48	53.125	54	60
24	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
36	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
48	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
60	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
72	90.0	90.0	90.0	90.0	90.0	78.9	69.1	62.4	61.4	55.3
84	90.0	90.0	87.0	69.6	58.0	49.7	43.5	39.3	38.7	34.8
96	90.0	77.7	58.3	46.6	38.9	33.3	29.1	26.3	25.9	23.3
108	81.9	54.6	40.9	32.7	27.3	23.4	20.5	18.5	18.2	16.4

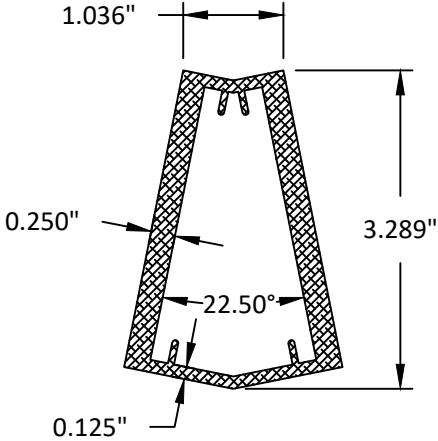
QUALIFIED ANCHOR CLIPS



L-CLIP

ALUMINUM 6063-T6
**MUST BE USED IN PAIRS

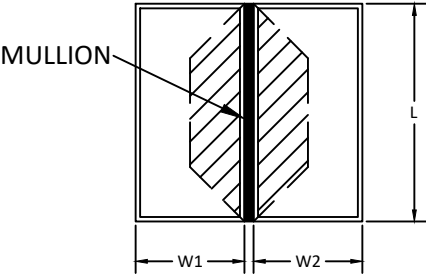
NOTE: SEE SHEET 2 FOR SPECIFIC CLIP
DIMENSIONS.



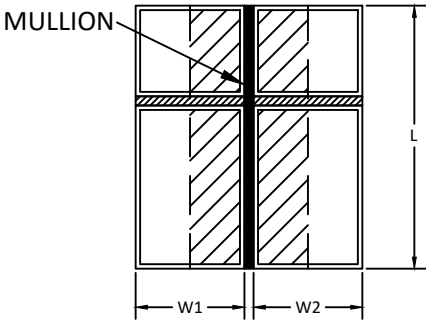
22.50 DEGREE MULLION

ALUMINUM 6005-T5

TRIBUTARY WIDTH = $\frac{W1 + W2}{2}$



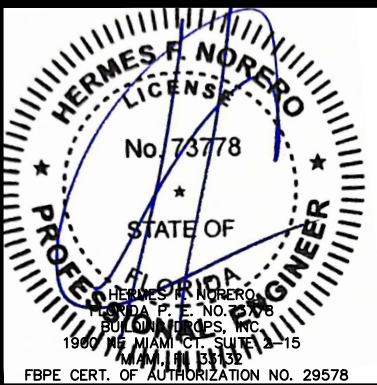
ONE-WAY MULLION DIAGRAMS



TWO-WAY MULLION DIAGRAMS

TABLE NOTES:

- SEE SHEET 1 FOR INSTRUCTIONS ON USING TABLES. SEE SHEETS 2-3 FOR TYPICAL INSTALLATION METHODS & CLIP DETAILS.
- LINEAR INTERPOLATION BETWEEN LISTED WIDTHS AND SPANS IS ALLOWED.
- SEE THIS SHEET FOR SPECIFIC MULLION DIMENSIONS.
- SEE SHEET 3 FOR SPECIFIC CLIP DIMENSIONS.
- ANCHOR REQUIREMENTS:
 - WOOD: #14 WOOD SCREWS
 - CMU: 1/4" ITW TAPCONS
 - CONCRETE: 1/4" ITW TAPCONS
 - METAL: 1/4" SELF-DRILLING SCREWS (GRADE 5)
- INSTALLATION SUBSTRATES:
 - WOOD ANCHORS SHALL HAVE A MIN. EMBEDMENT OF 1-1/2" & EDGE DISTANCE OF 3/4". WOOD SHALL BE MIN. S.G.=0.55.
 - HOLLOW CMU ANCHORS SHALL HAVE A MIN. EMBEDMENT OF 1-1/4" & EDGE DISTANCE OF 2-1/2". HOLLOW CMU SHALL BE MEDIUM WEIGHT CONFORMING TO ASTM C 90.
 - CONCRETE ANCHORS SHALL HAVE A MIN. EMBEDMENT OF 1-3/4" & EDGE DISTANCE OF 2-1/2". CONCRETE SHALL BE MIN. 4000 PSI.
 - METAL ANCHORS SHALL HAVE A MIN. (3) THREADS PENETRATION BEYOND METAL STRUCTURE. STEEL SHALL BE MIN. 18 GA. (0.045" THICK) 33 KSI YIELD. ALUMINUM SHALL BE MIN. 1/8" THICK ALUMINUM 6063-T5.
- INSTALLATION ANCHORS AND ASSOCIATED HARDWARE MUST BE MADE OF CORROSION RESISTANT MATERIAL OR HAVE A CORROSION RESISTANT COATING.
 - FASTENERS USED WITHIN 3,000 FEET OF A SALTWATER COASTLINE AND INSTALLED IN ENCLOSED SPACES SHALL BE GALVANIZED IN ACCORDANCE WITH FLORIDA BUILDING CODE SECTION 1711.1.1 (e.g., ASTM A153 CLASS D, ASTM A641 CLASS 3S, OR EQUIVALENT CORROSION RESISTANCE).
 - CONNECTORS AND METAL PLATES USED WITHIN 3,000 FEET OF A SALTWATER COASTLINE SHALL BE STANDARD GALVANIZED IN ACCORDANCE WITH FLORIDA BUILDING CODE SECTION 1711.1.2 (e.g., ASTM A653 G90, ASTM A123, OR PROTECTIVE COATING PER TPI 1).



REVISIONS			
LH	07/30/26	ADDED NOTE 7	1
BY	DATE	DESCRIPTION	REV



EASTERN ARCHITECTURAL SYSTEMS
A DIVISION OF
CORNERSTONE BUILDING BRANDS

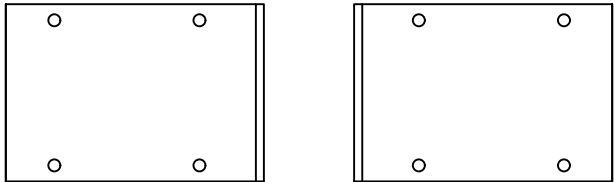
16341 DOMESTIC AVE.
FT MYERS, FL 33912
1-877-401-2190

TITLE: HVHZ CLIPPED ALUMINUM BAY/BOW MULLIONS VERTICAL AND HORIZONTAL CONFIGURATIONS 22.5° MULLION		
DATE: 02/05/13	DRAWN BY: TJH	PREPARED BY: BUILDING DROPS, INC.
DRAWING NO: PA-0004	SCALE: N.T.S.	1900 NE MIAMI CT. SUITE 2-15 MIAMI, FL 33132 PH: (954)399-8478 FAX: (954)744.4738 WEB: www.buildingdrops.com
SHEET: 4 OF 8	REV: -	

DESIGN PRESSURE LIMITS FOR MULLION: 30 Deg. - ONE-WAY MULLIONS										
SPAN 'L' (IN.)	TRIBUTARY WIDTH 'W' (IN.)									
	12	18	24	30	36	42	48	53.125	54	60
24	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
36	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
48	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
60	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
72	90.0	90.0	90.0	90.0	90.0	90.0	87.5	82.7	82.0	78.4
84	90.0	90.0	90.0	77.2	65.8	58.0	52.4	48.8	48.3	45.4
96	90.0	82.9	62.9	51.1	43.3	37.9	34.0	31.4	31.1	28.9
108	86.5	58.0	43.9	35.6	30.1	26.2	23.4	21.5	21.2	19.6

DESIGN PRESSURE LIMITS FOR MULLION: 30 Deg. - TWO-WAY MULLIONS										
SPAN 'L' (IN.)	TRIBUTARY WIDTH 'W' (IN.)									
	12	18	24	30	36	42	48	53.125	54	60
24	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
36	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
48	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
60	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
72	90.0	90.0	90.0	90.0	90.0	83.1	72.7	65.7	64.6	58.2
84	90.0	90.0	90.0	73.2	61.0	52.3	45.8	41.4	40.7	36.6
96	90.0	81.8	61.3	49.1	40.9	35.0	30.7	27.7	27.3	24.5
108	86.2	57.4	43.1	34.5	28.7	24.6	21.5	19.5	19.1	17.2

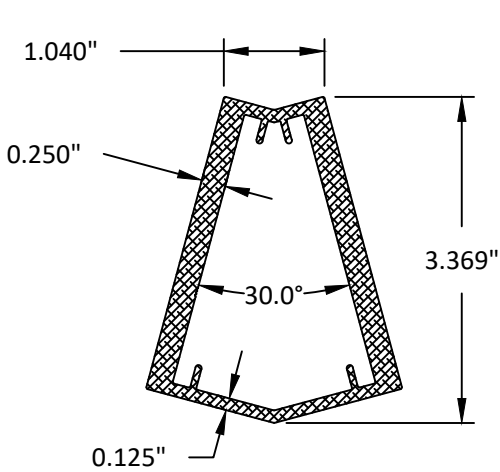
QUALIFIED ANCHOR CLIPS



L-CLIP

ALUMINUM 6063-T6
**MUST BE USED IN PAIRS

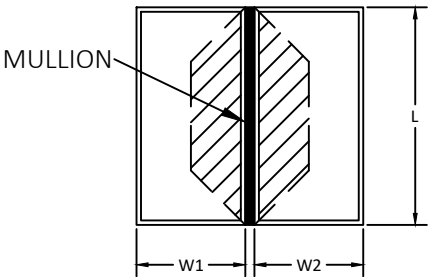
NOTE: SEE SHEET 2 FOR SPECIFIC CLIP DIMENSIONS.



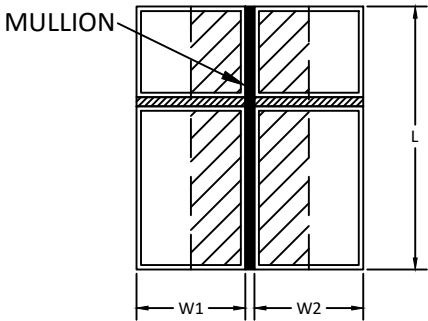
30 DEGREE MULLION

ALUMINUM 6005-T5

TRIBUTARY WIDTH = $\frac{W1 + W2}{2}$



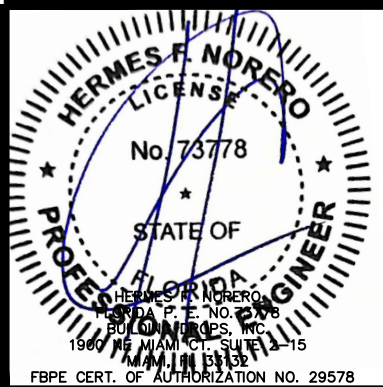
ONE-WAY MULLION DIAGRAMS



TWO-WAY MULLION DIAGRAMS

TABLE NOTES:

- SEE SHEET 1 FOR INSTRUCTIONS ON USING TABLES. SEE SHEETS 2-3 FOR TYPICAL INSTALLATION METHODS & CLIP DETAILS.
- LINEAR INTERPOLATION BETWEEN LISTED WIDTHS AND SPANS IS ALLOWED.
- SEE THIS SHEET FOR SPECIFIC MULLION DIMENSIONS.
- SEE SHEET 3 FOR SPECIFIC CLIP DIMENSIONS.
- ANCHOR REQUIREMENTS:
 - WOOD: #14 WOOD SCREWS
 - CMU: 1/4" ITW TAPCONS
 - CONCRETE: 1/4" ITW TAPCONS
 - METAL: 1/4" SELF-DRILLING SCREWS (GRADE 5)
- INSTALLATION SUBSTRATES:
 - WOOD ANCHORS SHALL HAVE A MIN. EMBEDMENT OF 1-1/2" & EDGE DISTANCE OF 3/4". WOOD SHALL BE MIN. S.G.=0.55.
 - HOLLOW CMU ANCHORS SHALL HAVE A MIN. EMBEDMENT OF 1-1/4" & EDGE DISTANCE OF 2-1/2". HOLLOW CMU SHALL BE MEDIUM WEIGHT CONFORMING TO ASTM C 90.
 - CONCRETE ANCHORS SHALL HAVE A MIN. EMBEDMENT OF 1-3/4" & EDGE DISTANCE OF 2-1/2". CONCRETE SHALL BE MIN. 4000 PSI.
 - METAL ANCHORS SHALL HAVE A MIN. (3) THREADS PENETRATION BEYOND METAL STRUCTURE. STEEL SHALL BE MIN. 18 GA. (0.045" THICK) 33 KSI YIELD. ALUMINUM SHALL BE MIN. 1/8" THICK ALUMINUM 6063-T5.
- INSTALLATION ANCHORS AND ASSOCIATED HARDWARE MUST BE MADE OF CORROSION RESISTANT MATERIAL OR HAVE A CORROSION RESISTANT COATING.
 - FASTENERS USED WITHIN 3,000 FEET OF A SALTWATER COASTLINE AND INSTALLED IN ENCLOSED SPACES SHALL BE GALVANIZED IN ACCORDANCE WITH FLORIDA BUILDING CODE SECTION 1711.1.1 (e.g., ASTM A153 CLASS D, ASTM A641 CLASS 3S, OR EQUIVALENT CORROSION RESISTANCE).
 - CONNECTORS AND METAL PLATES USED WITHIN 3,000 FEET OF A SALTWATER COASTLINE SHALL BE STANDARD GALVANIZED IN ACCORDANCE WITH FLORIDA BUILDING CODE SECTION 1711.1.2 (e.g., ASTM A653 G90, ASTM A123, OR PROTECTIVE COATING PER TPI 1).



REVISIONS			
LH	07/30/26	ADDED NOTE 7	2
SM	9-13-19	SHEET ADDED	1
BY	DATE	DESCRIPTION	REV



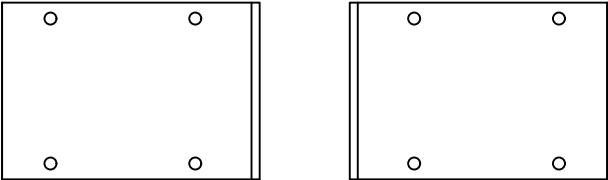
EASTERN ARCHITECTURAL SYSTEMS
A DIVISION OF
CORNERSTONE BUILDING BRANDS
16341 DOMESTIC AVE.
FT MYERS, FL 33912
1-877-401-2190

TITLE: HVHZ CLIPPED ALUMINUM BAY/BOW MULLIONS VERTICAL AND HORIZONTAL CONFIGURATIONS 30° MULLION			
DATE: 02/05/13	DRAWN BY: TJH	PREPARED BY: BUILDING DROPS, INC.	
DRAWING NO: PA-0004	SCALE: N.T.S.	1900 NE MIAMI CT. SUITE 2-15 MIAMI, FL 33132 PH: (954)399-8478 FAX: (954)744.4738 WEB: www.buildingdrops.com	
SHEET: 5 OF 8	REV: -		

DESIGN PRESSURE LIMITS FOR MULLION: 45 Deg. - ONE-WAY MULLIONS										
SPAN 'L' (IN.)	TRIBUTARY WIDTH 'W' (IN.)									
	12	18	24	30	36	42	48	53.125	54	60
24	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
36	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
48	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
60	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
72	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	88.9
84	90.0	90.0	90.0	87.4	74.6	65.7	59.4	55.3	54.8	51.4
96	90.0	90.0	71.3	57.9	49.1	43.0	38.5	35.6	35.2	32.7
108	90.0	65.8	49.8	40.3	34.0	29.7	26.5	24.4	24.0	22.2

DESIGN PRESSURE LIMITS FOR MULLION: 45 Deg. - TWO-WAY MULLIONS										
SPAN 'L' (IN.)	TRIBUTARY WIDTH 'W' (IN.)									
	12	18	24	30	36	42	48	53.125	54	60
24	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
36	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
48	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
60	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
72	90.0	90.0	90.0	90.0	90.0	90.0	82.4	74.4	73.2	65.9
84	90.0	90.0	90.0	83.0	69.2	59.3	51.9	46.9	46.1	41.5
96	90.0	90.0	69.5	55.6	46.3	39.7	34.7	31.4	30.9	27.8
108	90.0	65.1	48.8	39.0	32.5	27.9	24.4	22.1	21.7	19.5

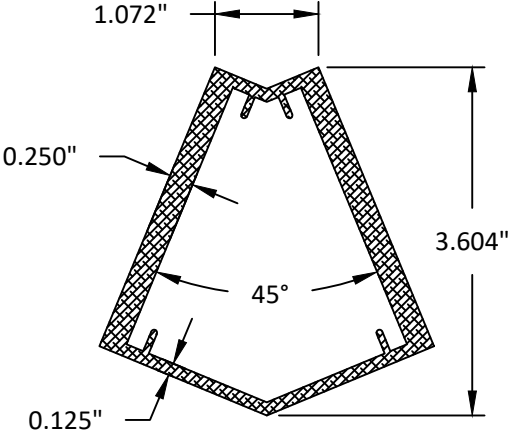
QUALIFIED ANCHOR CLIPS



L-CLIP

ALUMINUM 6063-T6
**MUST BE USED IN PAIRS

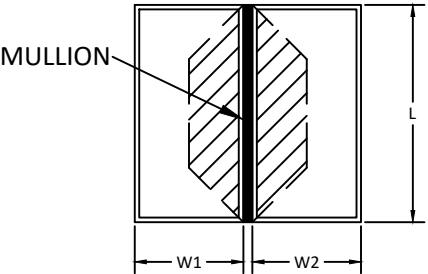
NOTE: SEE SHEET 2 FOR SPECIFIC CLIP
DIMENSIONS.



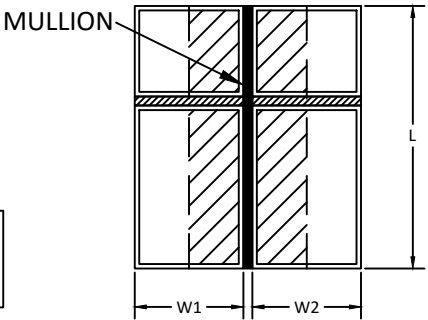
45 DEGREE MULLION

ALUMINUM 6005-T5

TRIBUTARY WIDTH = $\frac{W1 + W2}{2}$



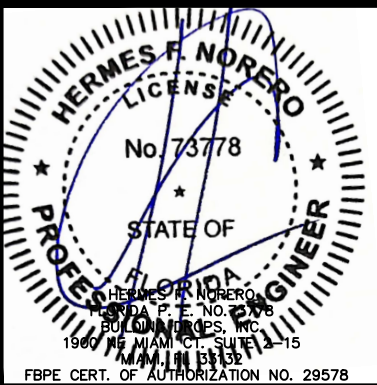
ONE-WAY MULLION DIAGRAMS



TWO-WAY MULLION DIAGRAMS

TABLE NOTES:

- SEE SHEET 1 FOR INSTRUCTIONS ON USING TABLES. SEE SHEETS 2-3 FOR TYPICAL INSTALLATION METHODS & CLIP DETAILS.
- LINEAR INTERPOLATION BETWEEN LISTED WIDTHS AND SPANS IS ALLOWED.
- SEE THIS SHEET FOR SPECIFIC MULLION DIMENSIONS.
- SEE SHEET 3 FOR SPECIFIC CLIP DIMENSIONS.
- ANCHOR REQUIREMENTS:
 - WOOD: #14 WOOD SCREWS
 - CMU: 1/4" ITW TAPCONS
 - CONCRETE: 1/4" ITW TAPCONS
 - METAL: 1/4" SELF-DRILLING SCREWS (GRADE 5)
- INSTALLATION SUBSTRATES:
 - WOOD ANCHORS SHALL HAVE A MIN. EMBEDMENT OF 1-1/2" & EDGE DISTANCE OF 3/4". WOOD SHALL BE MIN. S.G.=0.55.
 - HOLLOW CMU ANCHORS SHALL HAVE A MIN. EMBEDMENT OF 1-1/4" & EDGE DISTANCE OF 2-1/2". HOLLOW CMU SHALL BE MEDIUM WEIGHT CONFORMING TO ASTM C 90.
 - CONCRETE ANCHORS SHALL HAVE A MIN. EMBEDMENT OF 1-3/4" & EDGE DISTANCE OF 2-1/2". CONCRETE SHALL BE MIN. 4000 PSI.
 - METAL ANCHORS SHALL HAVE A MIN. (3) THREADS PENETRATION BEYOND METAL STRUCTURE. STEEL SHALL BE MIN. 18 GA. (0.045" THICK) 33 KSI YIELD. ALUMINUM SHALL BE MIN. 1/8" THICK ALUMINUM 6063-T5.
- INSTALLATION ANCHORS AND ASSOCIATED HARDWARE MUST BE MADE OF CORROSION RESISTANT MATERIAL OR HAVE A CORROSION RESISTANT COATING.
 - FASTENERS USED WITHIN 3,000 FEET OF A SALTWATER COASTLINE AND INSTALLED IN ENCLOSED SPACES SHALL BE GALVANIZED IN ACCORDANCE WITH FLORIDA BUILDING CODE SECTION 1711.1.1 (e.g., ASTM A153 CLASS D, ASTM A641 CLASS 3S, OR EQUIVALENT CORROSION RESISTANCE).
 - CONNECTORS AND METAL PLATES USED WITHIN 3,000 FEET OF A SALTWATER COASTLINE SHALL BE STANDARD GALVANIZED IN ACCORDANCE WITH FLORIDA BUILDING CODE SECTION 1711.1.2 (e.g., ASTM A653 G90, ASTM A123, OR PROTECTIVE COATING PER TPI 1).



REVISIONS			
LH	07/30/26	ADDED NOTE 7	1
BY	DATE	DESCRIPTION	REV



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1-877-401-2190

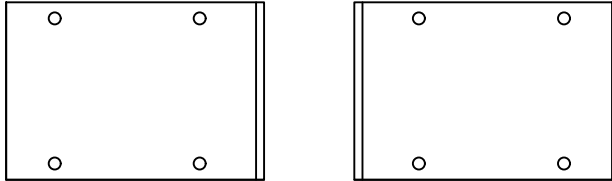
TITLE:
HVHZ CLIPPED ALUMINUM BAY/BOW MULLIONS
VERTICAL AND HORIZONTAL CONFIGURATIONS
45° MULLION

DATE: 02/05/13	DRAWN BY: TJH	PREPARED BY: BUILDING DROPS, INC. 1900 NE MIAMI CT. SUITE 2-15 MIAMI, FL 33132 PH: (954)399-8478 FAX: (954)744.4738 WEB: www.buildingdrops.com
DRAWING NO: PA-0004	SCALE: N.T.S.	
SHEET: 6 OF 8	REV: -	

DESIGN PRESSURE LIMITS FOR MULLION: 90 Deg. - ONE-WAY MULLIONS										
SPAN 'L' (IN.)	TRIBUTARY WIDTH 'W' (IN.)									
	12	18	24	30	36	42	48	53.125	54	60
24	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
36	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
48	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
60	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
72	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
84	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
96	90.0	90.0	90.0	90.0	89.4	78.2	70.1	64.9	64.1	59.5
108	90.0	90.0	90.0	73.4	62.0	54.0	48.2	44.3	43.8	40.4

DESIGN PRESSURE LIMITS FOR MULLION: 90 Deg. - TWO-WAY MULLIONS										
SPAN 'L' (IN.)	TRIBUTARY WIDTH 'W' (IN.)									
	12	18	24	30	36	42	48	53.125	54	60
24	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
36	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
48	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
60	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
72	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	83.0
84	90.0	90.0	90.0	90.0	90.0	90.0	88.9	80.4	79.1	71.2
96	90.0	90.0	90.0	90.0	84.4	72.3	63.3	57.2	56.2	50.6
108	90.0	90.0	88.9	71.1	59.3	50.8	44.4	40.2	39.5	35.6

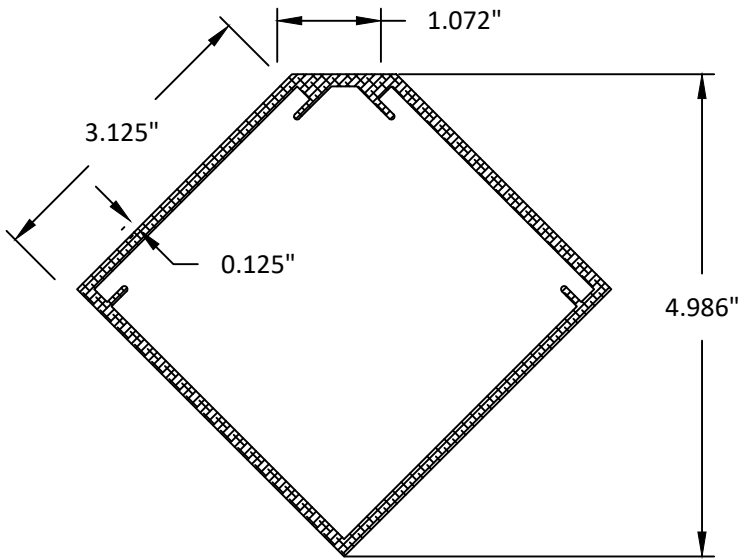
QUALIFIED ANCHOR CLIPS



L-CLIP

ALUMINUM 6063-T6
**MUST BE USED IN PAIRS

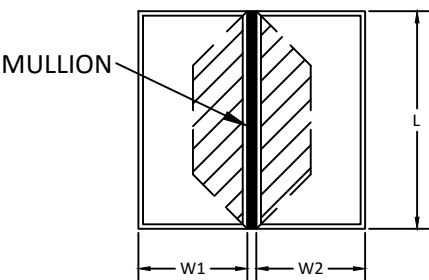
NOTE: SEE SHEET 2 FOR SPECIFIC CLIP DIMENSIONS.



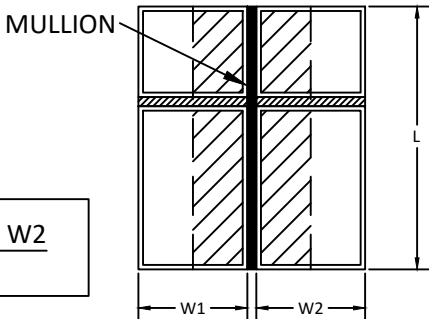
90 DEGREE MULLION

ALUMINUM 6005-T5

TRIBUTARY WIDTH = $\frac{W1 + W2}{2}$



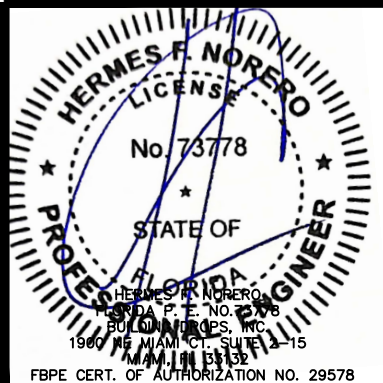
ONE-WAY MULLION DIAGRAMS



TWO-WAY MULLION DIAGRAMS

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REVISIONS			
LH	07/30/26	ADDED NOTE 7	1
BY	DATE	DESCRIPTION	REV

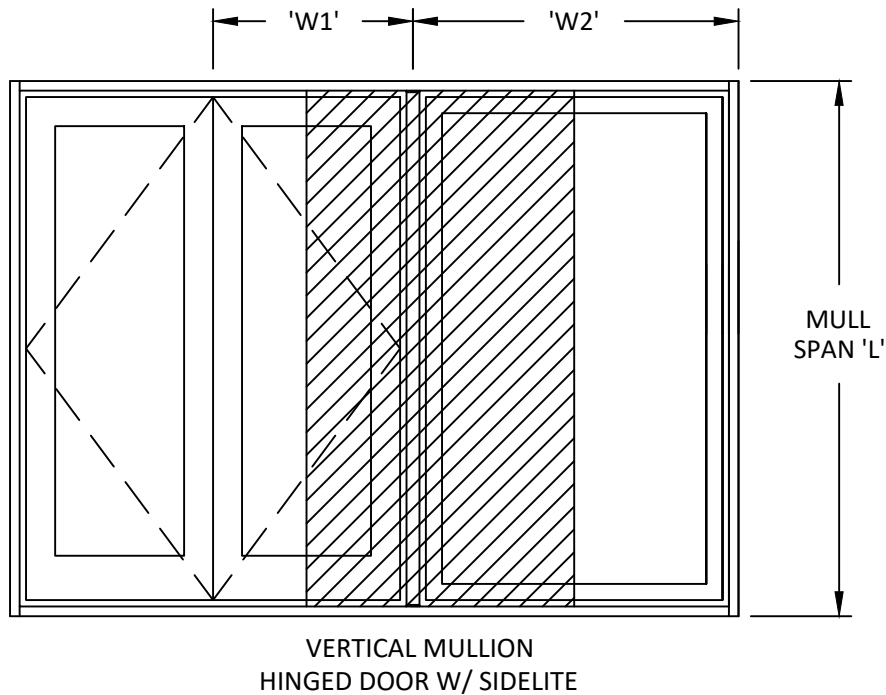
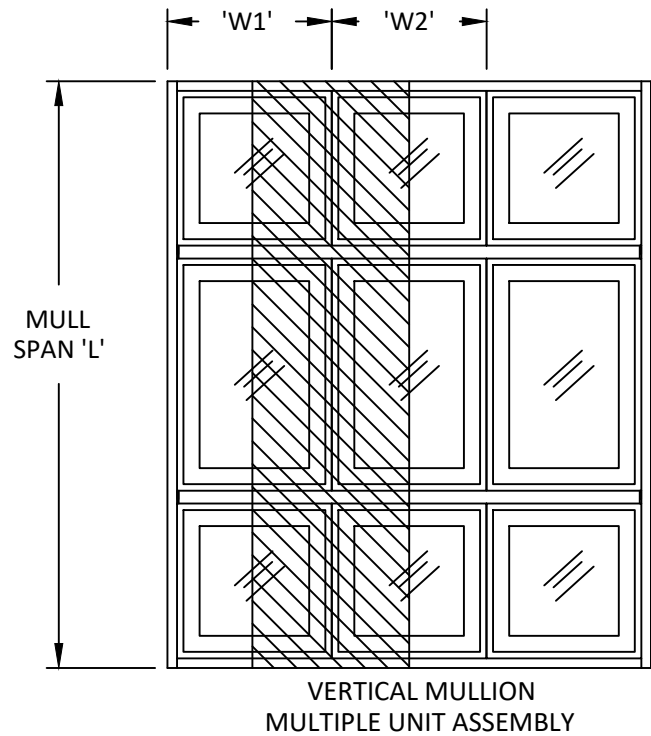
EASTERN ARCHITECTURAL SYSTEMS
A DIVISION OF
CORNERSTONE BUILDING BRANDS

16341 DOMESTIC AVE.
FT MYERS, FL 33912
1-877-401-2190

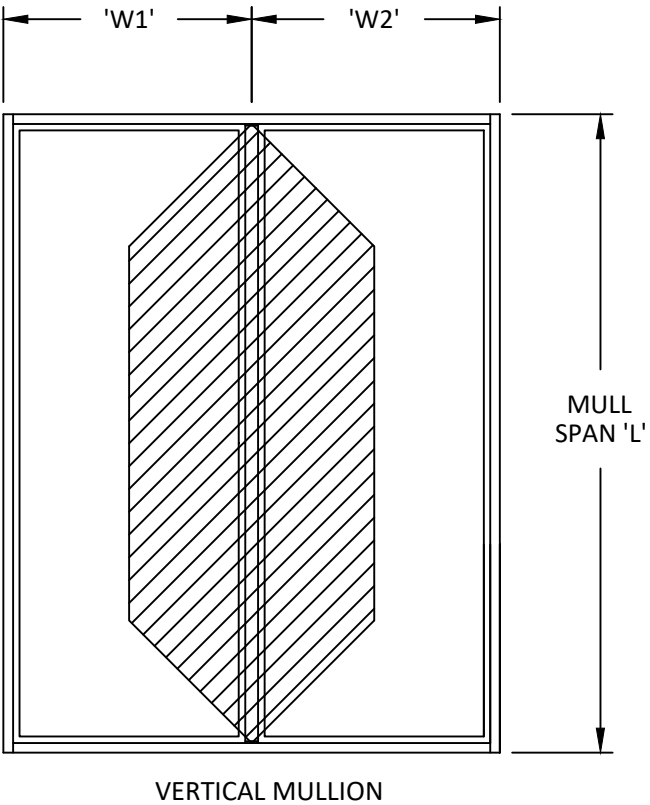
TITLE:
HVHZ CLIPPED ALUMINUM BAY/BOW MULLIONS
VERTICAL AND HORIZONTAL CONFIGURATIONS
90° MULLION

DATE: 02/05/13	DRAWN BY: TJH	PREPARED BY: BUILDING DROPS, INC. 1900 NE MIAMI CT. SUITE 2-15 MIAMI, FL 33132 PH: (954)399-8478 FAX: (954)744.4738 WEB: www.buildingdrops.com
DRAWING NO: PA-0004	SCALE: N.T.S.	
SHEET: 7 OF 8	REV: -	

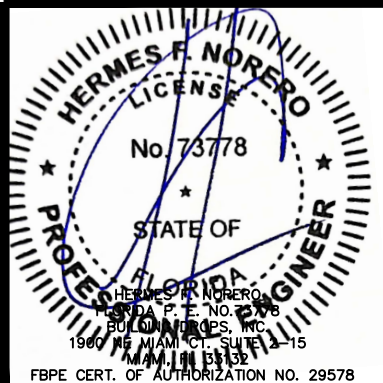
EXAMPLES OF TWO-WAY MULLION ASSEMBLIES



EXAMPLES OF ONE-WAY MULLION ASSEMBLIES



- NOTES:
- 1. DRAWINGS ARE DIAGRAMMATIC IN NATURE AND CONFIGURATIONS NOT SPECIFICALLY SHOWN MAY BE EXTRAPOLATED FROM THOSE SHOWN.
 - 2. IF THE LOADING TYPE CANNOT BE DETERMINED, USE TWO-WAY ASSEMBLY CONFIGURATION VALUES.
 - 3. FENESTRATION PRODUCTS SHALL BE ANCHORED AS APPROVED.



REVISIONS			
BY	DATE	DESCRIPTION	REV



EASTERN ARCHITECTURAL SYSTEMS
A DIVISION OF
CORNERSTONE BUILDING BRANDS

16341 DOMESTIC AVE.
FT MYERS, FL 33912
1-877-401-2190

TITLE:
HVHZ CLIPPED ALUMINUM BAY/BOW MULLIONS
VERTICAL AND HORIZONTAL CONFIGURATIONS
MULLION ASSEMBLY AND LOAD EXAMPLES

DATE: 02/05/13	DRAWN BY: TJH	PREPARED BY: BUILDING DROPS, INC.
DRAWING NO: PA-0004	SCALE: N.T.S.	1900 NE MIAMI CT. SUITE 2-15 MIAMI, FL 33132 PH: (954)399-8478 FAX: (954)744.4738 WEB: www.buildingdrops.com
SHEET: 8 OF 8	REV: -	