

CGI Windows and Doors, Inc. 3780 W 104th Street Hialeah, FL 33018

Scope:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone.

DESCRIPTION: Series Clipped, Extruded Aluminum Tube Mullion – L.M.I.

APPROVAL DOCUMENT: Drawing No. **TUBEMULL-CGI**, titled "Aluminum Tube Mullions, Clipped (LM)", sheets 1 through 23 of 23, dated 02/02/23, with revision **A** dated 08/23/2023, prepared by manufacturer, signed and sealed by Anthony Lynn Miller, P.E., bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Section.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant.

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state, model/series, and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA **revises NOA No. 23-0221.03** and consists of this page 1 and evidence pages E-1, E-2, and E -3, as well as approval document mentioned above.

The submitted documentation was reviewed by Sifang Zhao, P.E.





NOA No. 23-0913.04 Expiration Date: March 28, 2028 Approval Date: October 26, 2023 Page 1

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS NOA's

A. DRAWINGS

- 1. Manufacturer's die drawings and sections. (Submitted under NOA No. 95-0929.39)
- Drawing No. TUBEMULL-CGI, titled "Aluminum Tube Mullions, Clipped (LM)", sheets 1 through 23 of 23, dated 02/02/23, prepared by manufacturer, signed and sealed by Anthony Lynn Miller, P.E. (Submitted under NOA No.23-0221.03)

B. TESTS

- 1. Test reports on: 1) Air Infiltration Test, per FBC, TAS 201-94
 - 2) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94
 - 3) Water Resistance Test, per FBC, TAS 202-94
 - 4) Small Missile Impact Test per FBC, TAS 201-94
 - 5) Large Missile Impact Test per FBC, TAS 201-94

along with marked-up drawings and installation diagram of casement windows mulled using a 1"x 2"x 1/8" aluminum tube mullion, prepared by Hurricane Testing Lab, Inc., Test Report No. **HTL-0080-0105-08**, dated 03/26/08 for Specimens No. 1 and 2, signed and sealed by Vinu J. Abraham, P.E. *(Submitted under NOA No. 08-0331.07)*

- Test reports on: 1) Large Missile Impact Test, Loading per SFBC, PA 201-94 along with marked-up drawings and installation diagram of an aluminum fixed window, prepared by Hurricane Test Laboratory, Inc. Test Report No. HTL-0080-0303-96, dated 03/06/96, signed and sealed by Timothy S. Marshall, P.E. (Submitted under NOA No. 95-0929.39)
- **3.** Test reports on: 1) Uniform Static Air Pressure Test, Loading per SFBC, PA 202-94 along with marked-up drawings and installation diagram of fixed windows mulled using a 1"x 2"x 1/8" aluminum tube mullion, prepared by Hurricane Engineering & Testing, Inc., Test Report No. **HETI-96-525**, dated 02/12/96, signed and sealed by Hector M. Medina, P.E. *(Submitted under NOA No. 95-0929.39)*
- 4. Test reports on: 1) Air Infiltration Test, per FBC, TAS 202-94
 - 2) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94
 - 3) Water Resistance Test, per FBC, TAS 202-94
 - 4) Large Missile Impact Test per FBC, TAS 201-94
 - 5) Cyclic Wind Pressure Loading per FBC, TAS 203-94
 - 6) Forced Entry Test, per FBC 2411.3.2.1, and TAS 202-94

along with marked-up drawings and installation diagram of clipped aluminum mullions, prepared by Fenestration Testing Lab, Inc., Test Report No. **FTL-6443** (samples A-1 thru E-1), dated 02/28/11, and addendum letter dated 05/05/11, signed and sealed by Marlin D. Brinson, P.E. *(Submitted under NOA's No. 17-0630.11 and 20-0406.08)*

Sifang Zhao, P.E. Product Control Examiner NOA No. 23-0913.04 Expiration Date: March 28, 2028 Approval Date: October 26, 2023

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

B. TESTS (CONTINUED)

5. Test reports on: 1) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94

2) Large Missile Impact Test per FBC, TAS 201-94

3) Cyclic Wind Pressure Loading per FBC, TAS 203-94 along with marked-up drawings and installation diagram of two series 1000 fixed windows mulled together, prepared by Fenestration Testing Laboratory, Inc. Test Report No. **FTL-18-8511**, dated 11/27/18, signed and sealed by Idalmis Ortega, P.E. *(Submitted under NOA's No. 15-0728.01 and 20-0826.03)*

C. CALCULATIONS

 Mullion calculations, clip details, anchor verification calculations and structural analysis, adding additional mullions and clip options from NOA No. 20-0826.03, also adding different clip styles from NOA's No. 20-0406.08 and No. 20-0610.10, all complying with FBC 7th Edition (2020), dated 02/15/23 by manufacturer, signed and sealed by Anthony Lynn Miller, P.E.

D. QUALITY ASSURANCE

1. Miami-Dade Department of Regulatory and Economic Resources (RER).

E. MATERIAL CERTIFICATIONS

1. None.

F. STATEMENTS

- 1. Statement letter of successor engineer per 61G15-27.001 Florida Administrative Code. *(Submitted under NOA No. 20-0610.10)*
- Statement letter of conformance, of complying with FBC 7th Edition (2020) dated 02/15/23, issued by manufacturer, signed and sealed by Anthony Lynn Miller, P.E. (Submitted under NOA No.23-0221.03)
- **3.** Statement letter of no financial interest dated 02/15/23, issued by manufacturer, signed and sealed by Anthony Lynn Miller, P.E. *(Submitted under NOA No.23-0221.03)*
- Private labeling agreement between WinDoor, Inc. and CGI Windows and Doors, Inc. document in conformance of RER guideline dated 02/15/23.
 (Submitted under NOA No.23-0221.03)

G. OTHERS

1. Notice of Acceptance No. **20-0610.10**, issued to CGI Windows and Doors, Inc. for their Series Clipped Mullion - L.M.I., approved on 09/24/20 and expiring on 03/28/23.

Sifang Zhao, P.E. Product Control Examiner NOA No. 23-0913.04 Expiration Date: March 28, 2028 Approval Date: October 26, 2023

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

2. NEW EVIDENCE SUBMITTED

A. DRAWINGS

1. Drawing No. TUBEMULL-CGI, titled "Aluminum Tube Mullions, Clipped (LM)", sheets 1 through 23 of 23, dated 02/02/23, with revision A dated 08/23/23, prepared by manufacturer, signed and sealed by Anthony Lynn Miller, P.E.

B. TESTS

- 1. None.
- C. CALCULATIONS
 - 1. None.

D. QUALITY ASSURANCE

- 1. Miami-Dade Department of Regulatory and Economic Resources (RER)
- E. MATERIAL CERTIFICATIONS
 - 1. None.

F. STATEMENTS

- 1. Statement letter of conformance, of complying with **FBC** 7th **Edition (2020)** and with **FBC** 8th **Edition (2023)**, dated 08/23/2023, issued by manufacturer, signed and sealed by Anthony Lynn Miller, P.E.
- 2. Statement letter of no financial interest dated 08/23/2023, issued by manufacturer, signed and sealed by Anthony Lynn Miller, P.E.

G. OTHERS

1. Notice of Acceptance No. **23-0221.03**, issued to CGI Windows and Doors, Inc. for their Series Clipped Mullion - L.M.I., approved on 03/23/23 and expiring on 03/28/28.

Sifang Zhao, P.E. Product Control Examiner NOA No. 23-0913.04 Expiration Date: March 28, 2028 Approval Date: October 26, 2023

IMPACT-RESISTANT, CLIPPED, ALUMINUM TUBE MULLIONS

1) MULLIONS AND CLIPS HAVE BEEN DESIGNED & TESTED TO COMPLY WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE, AND ARE APPROVED FOR IMPACT AND NON-IMPACT APPLICATIONS IN THE HVHZ. MULLIONS ARE ONLY TO BE USED WITH THE MANUFACTURER'S FENESTRATION PRODUCTS.

2) INSTALLATION DETAILS SHOWN ARE FOR THE MULLION ONLY. ANCHORS SHOWN ARE <u>IN ADDITION</u> TO ANY ANCHORS REQUIRED FOR THE FENESTRATION PRODUCT INSTALLATION. TYPICAL APPLICATIONS ARE SHOWN. EACH SITUATION IS UNIQUE AND SHOULD BE EVALUATED BY AN EXPERIENCED INSTALLER FOR THE BEST INSTALLATION METHOD. OPTIONAL 1X OR 2X WOOD BUCKS IF USED, MUST BE ANCHORED PROPERLY TO TRANSFER LOADS AND ARE TO BE DESIGNED BY OTHERS.

3) THE TYPE AND NUMBER OF ANCHORS IS CRITICAL TO THE STRUCTURAL PERFORMANCE OF THE MULLED UNITS. MULLIONS HAVE BEEN TESTED AS "FREE-FLOATING" AND DO NOT NEED TO BE DIRECTLY ATTACHED TO THE MULLION CLIPS, BUT SHALL NOT HAVE A GAP OF MORE THAN 1/4" FROM THE CLIP, SEE FIG. 1, SHEET 4.

4) THE ANCHORAGE METHODS SHOWN HAVE BEEN DESIGNED TO RESIST THE WINDLOADS CORRESPONDING TO THE REQUIRED DESIGN PRESSURE. MULLIONS ARE CALCULATED TO DEFLECT NO MORE THAN L/180. THE 1/3 STRESS INCREASE WAS NOT USED IN THIS ANCHOR EVALUATION. THE 1.6 LOAD DURATION FACTOR WAS USED FOR THE EVALUATION OF WOOD SCREWS.

5) PROPER SEALING OF ENTIRE ASSEMBLY IS THE RESPONSIBILITY OF OTHERS AND IS BEYOND THE SCOPE OF THESE INSTRUCTIONS.

6) USE THE COMBINED WIDTH OR HEIGHT OF ONLY TWO ADJACENT FENESTRATION PRODUCTS TO DETERMINE PRESSURES AND ANCHORAGE FOR THE COMMON MULLION. FOR MULTIPLE UNITS, CONSIDER ONLY TWO ADJACENT UNITS AT A TIME WHEN USING THE DESIGN PRESSURE AND ANCHORAGE TABLES. THE LOWEST DESIGN PRESSURE OF MULTIPLE MULLIONS OR FENESTRATION PRODUCTS SHALL APPLY.

7) ANCHOR EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO. WOOD BUCKS BY OTHERS, MUST BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE STRUCTURE. ANCHORS SHALL BE COATED OR CORROSION RESISTANT AS APPROPRIATE FOR SUBSTRATE MATERIAL. DISSIMILAR MATERIALS SHALL BE PROTECTED AS REQUIRED TO PREVENT REACTIONS.

8) REFERENCE: DEWALT ULTRACON+, AGGRE-GATOR & CRETEFLEX NOA'S.

9) QUANTITY OF UNITS WITHIN A MULTIPLE MULLED ASSEMBLY IS UNLIMITED PROVIDED THAT THE SPAN AND OPENING WIDTH/HEIGHT OF EACH INDIVIDUAL MULLION COMPLIES WITH THE REQUIREMENTS OF THIS APPROVAL.

10) SUBSTRATES: CONCRETE SHALL CONFORM TO ACI 301 SPECIFICATIONS. HOLLOW AND GROUT-FILLED CONCRETE BLOCK UNIT (CMU) SHALL CONFORM TO ASTM C-90. WOOD SHALL HAVE A MIN. SG OF 0.55. ALUMINUM SHALL BE 6063-T5 AND BE A MINIMUM OF .125" THICK. STEEL STUDS TO BE A MINIMUM GRADE 33 AND 0.045" THICK (18 GAUGE). STRUCTURAL STEEL TO BE AT LEAST .125" THICK AND A36. ALL ANCHORS INTO METAL SHALL EXTEND AT LEAST 3 SCREW THREADS BEYOND THE MATERIAL. #12 & #14 ANCHORS INTO WOOD MAY BE STEEL, 18-8 S.S. OR 410 S.S. FIGURE 1: MULTIPLE MULLIONS

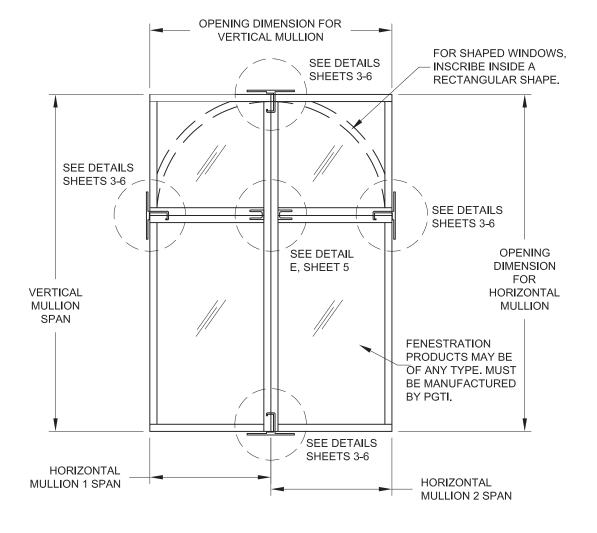
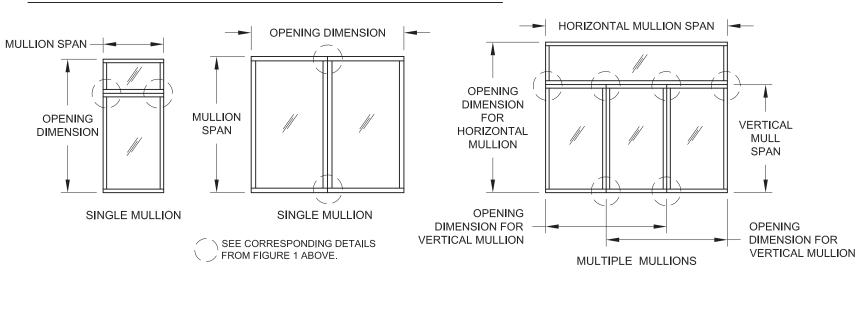


FIGURE 2: ADDITIONAL EXAMPLES OF MULLION CONFIGURATIONS:



CODES / STANDARDS USED:

- 2023 FLORIDA BUILDING CODE (FBC), 8TH EDITION
- 2020 FLORIDA BUILDING CODE (FBC), 7TH EDITION
- ANSI/AF&PA NDS-2018 FOR WOOD CONSTRUCTION
- ALUMINUM DESIGN MANUAL, ADM-2020
- AISI S100-16
- AISC 360-16

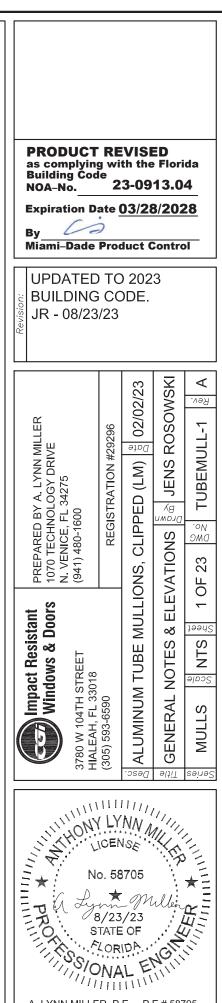
DESIGN PRESSURE RATING

SEE TABLES 1A - 14A

IMPACT RATING RATED FOR LARGE & SMALL MISSILE IMPACT RESISTANCE

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-CLIP INSTALLATION5	
2X ANGLE INSTALLATION	
BAY MULL INSTALLATION	
X 2 X 1/8 MULL SPECS	
X 2 X 3/8 MULL SPECS	
X 2-1/2 X 1/8 MULL SPECS9	
X 3 X 1/8 MULL SPECS10	
X 4 X 1/8 MULL SPECS11	
X 4 X 3/8 MULL SPECS12	
X 2-1/8 X 1/8 FIN MULL SPECS13	
2 X 4 X 1/8 MULL SPECS	
2 X 4 X 1/4 MULL SPECS15	
2 X 6 X 1/8 MULL SPECS	
2 X 6 X 1/4 MULL SPECS17	
2 X 8 X 1/8 MULL SPECS	
30° X 3-1/4 BAY MULL SPECS19	
45° X 3-1/4 BAY MULL SPECS 20	
EXAMPLE 1	
EXAMPLE 2	
OADING EXAMPLES23	



INSTRUCTIONS:

1) DETERMINE THE ALLOWABLE STRESS DESIGN PRESSURE REQUIREMENT (LBS/FT²) FOR THE OPENING USING THE ASCE-7 STANDARD.

2) TO FIND THE DESIGN PRESSURE OF THE MULLION, USE TABLES 1A THROUGH 14A. THE MULLION DESIGN PRESSURE OBTAINED SHALL MEET OR EXCEED THE DESIGN PRESSURE REQUIREMENT FOR THE OPENING OBTAINED IN STEP 1. NOTE THAT YOU MUST FIRST DETERMINE WHETHER YOU HAVE A SINGLE MULLION OR CROSSING MULLIONS.

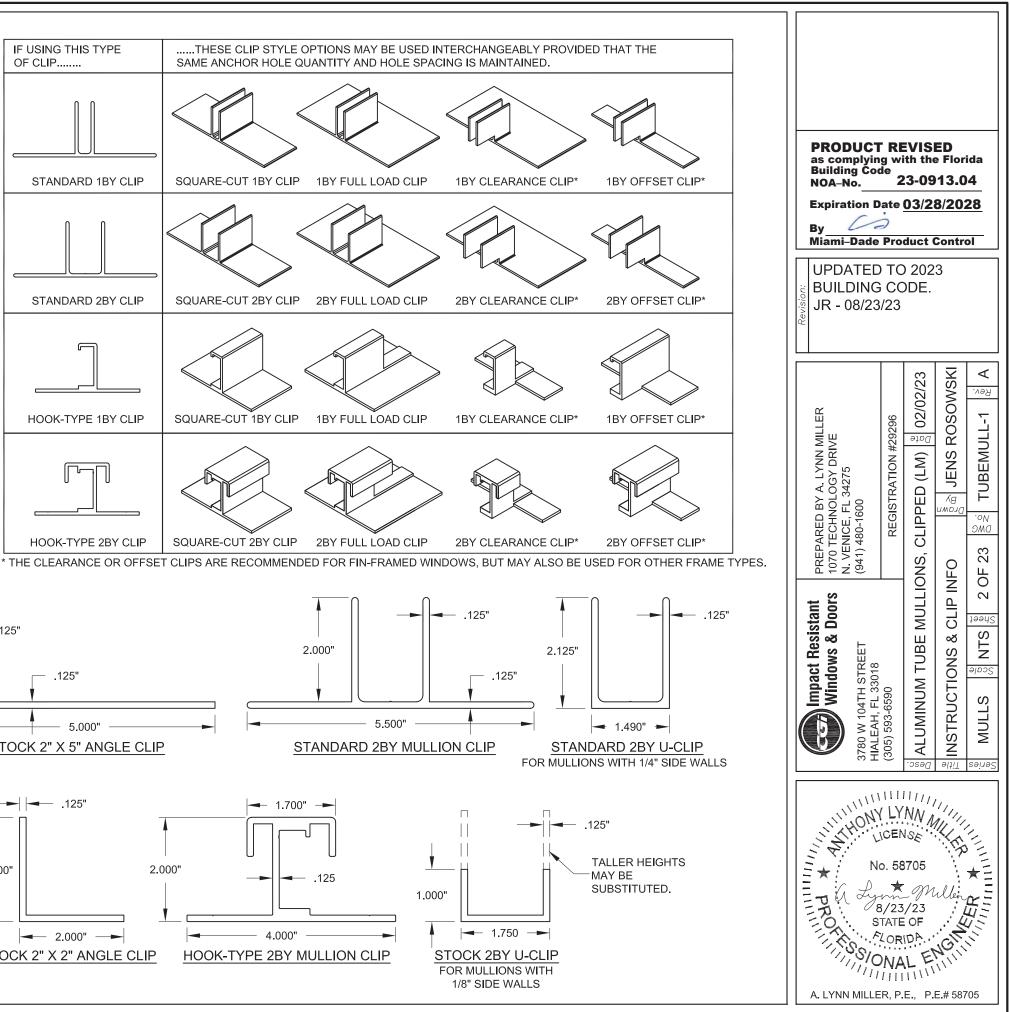
3) AFTER OBTAINING THE MULLION'S DESIGN PRESSURE, FIND THE VALUE IN THE COLUMN TITLED "ANCHOR CAPACITY REQUIRED (LBS)". THIS VALUE REPRESENTS THE CLIP/ANCHOR CAPACITY THAT MUST BE MET TO ATTAIN THE MULLION DESIGN PRESSURE.

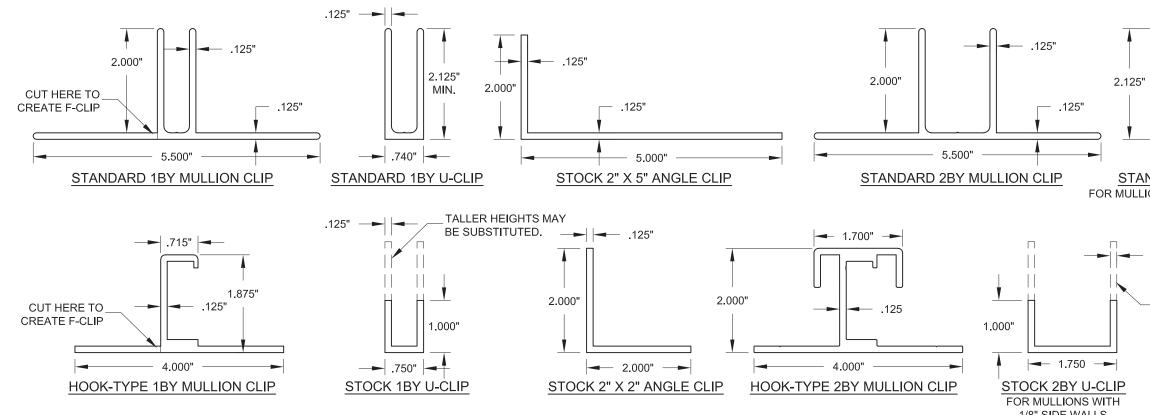
4) FROM THE ANCHOR/CLIP CAPACITY TABLE ON THE SAME SHEET, CHOOSE AN ANCHOR/CLIP/SUBSTRATE CONDITION THAT MEETS OR EXCEEDS THE VALUE OBTAINED FROM STEP 3.

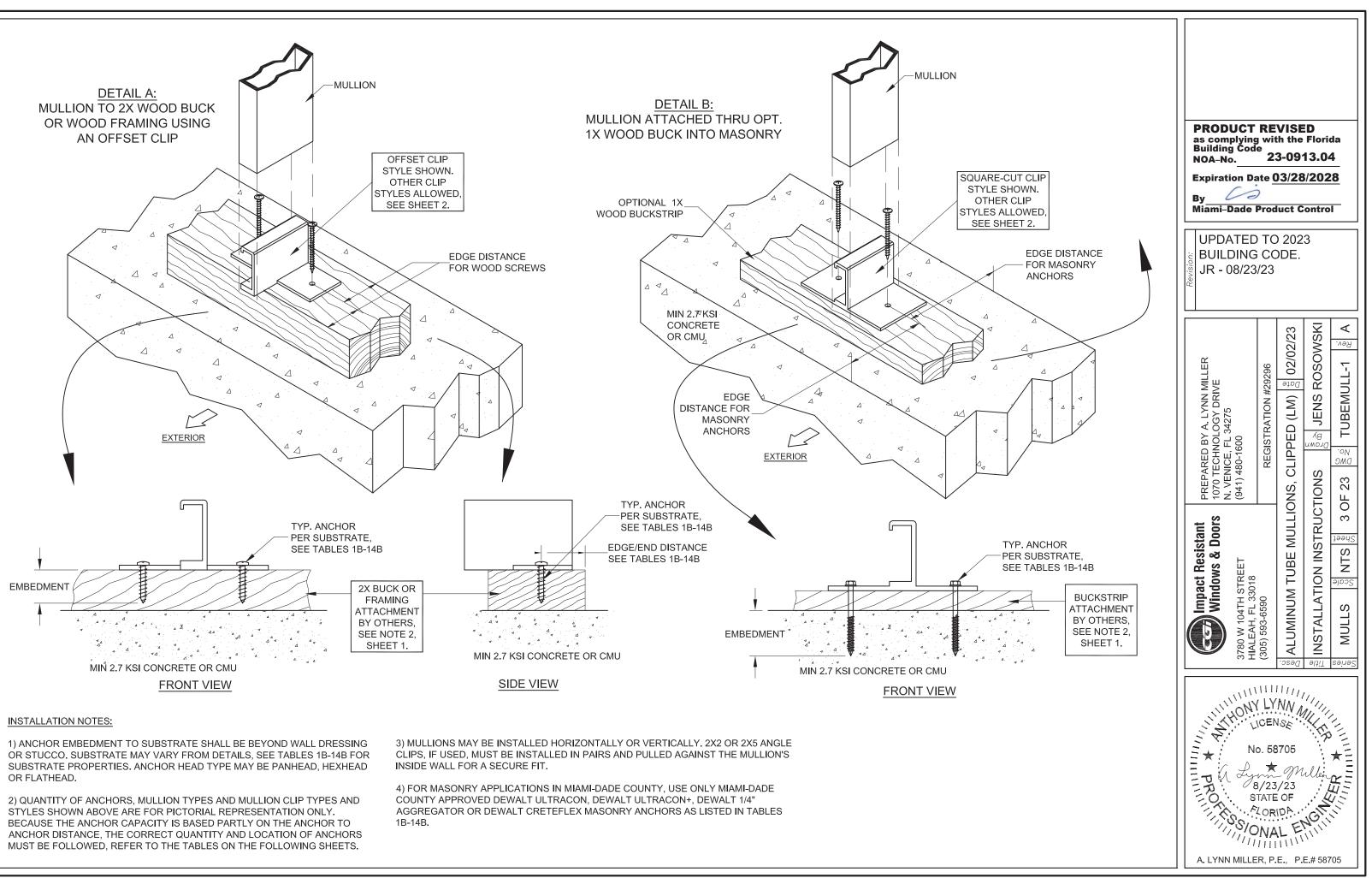
5) VERIFY THE DESIGN PRESSURE OF THE FENESTRATION PRODUCT TO BE USED AND COMPARE WITH THE FINAL DESIGN PRESSURE FOR THIS MULLION SYSTEM. THE LOWER OF THE TWO SHALL APPLY FOR THE ENTIRE MULLED ASSEMBLY.

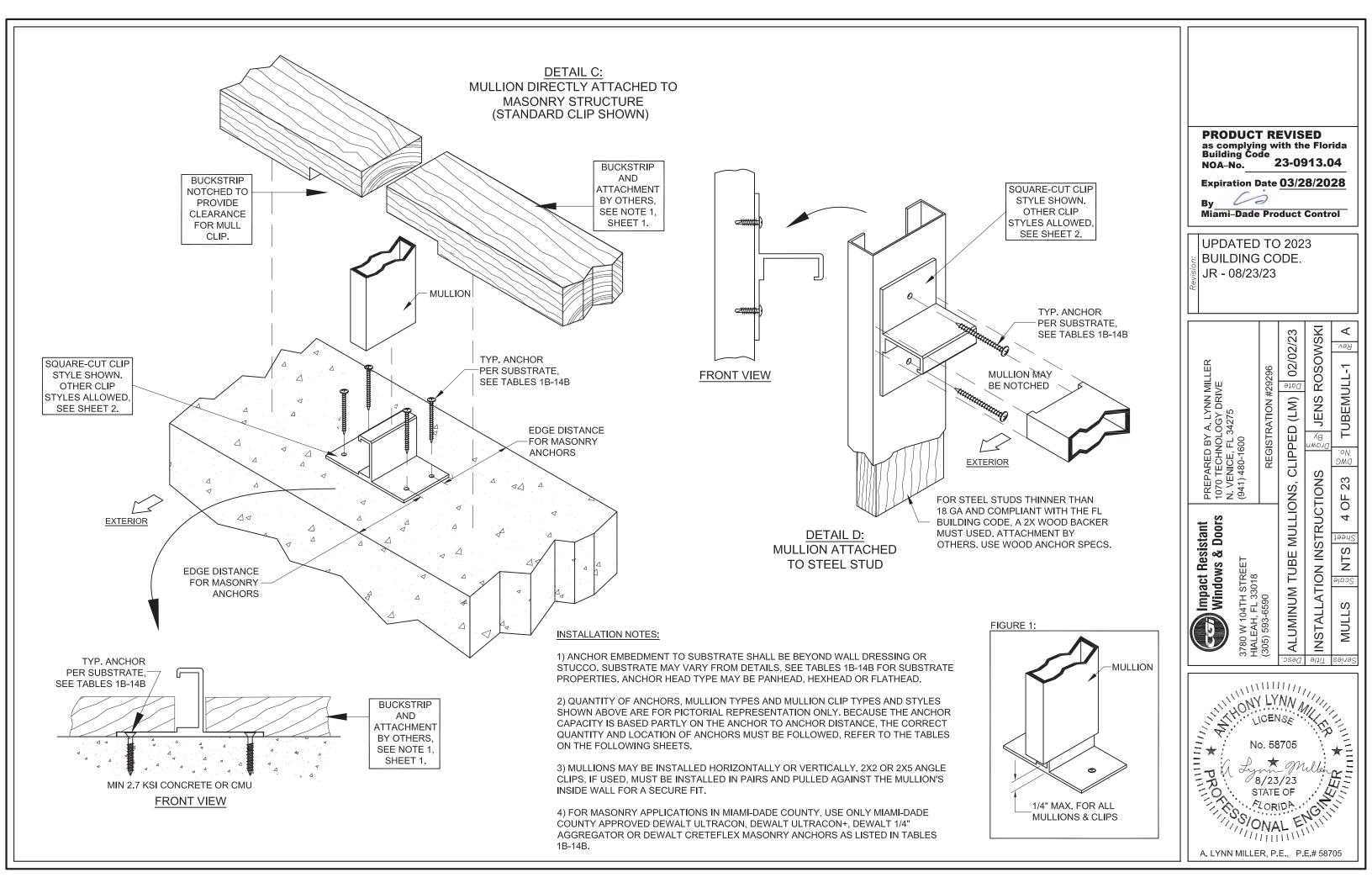
6) HIGHLIGHT OPTION USED AND TABLE VALUES USED IN A SPECIFIC APPLICATION WHEN USING THIS APPROVAL TO APPLY FOR A PERMIT.

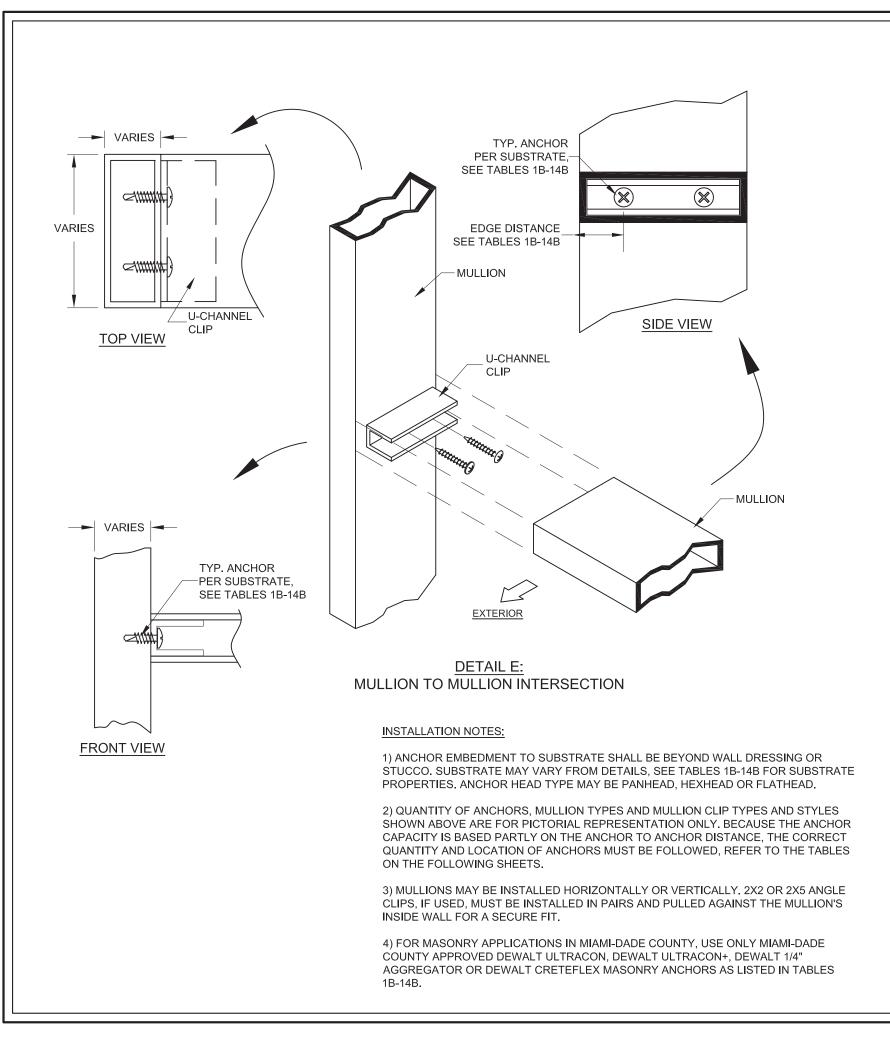
7) OPTIONALLY, IF THE MULLION DESIGN PRESSURE OBTAINED IN THE TABLE IS MUCH HIGHER THAN THE DESIGN PRESSURE REQUIREMENT FOR THE OPENING, YOU MAY USE THE "ANCHOR CAPACITY ADJUSTMENT FORMULA" ON SHEET 1 TO OBTAIN A LOWER ANCHOR/CLIP CAPACITY.

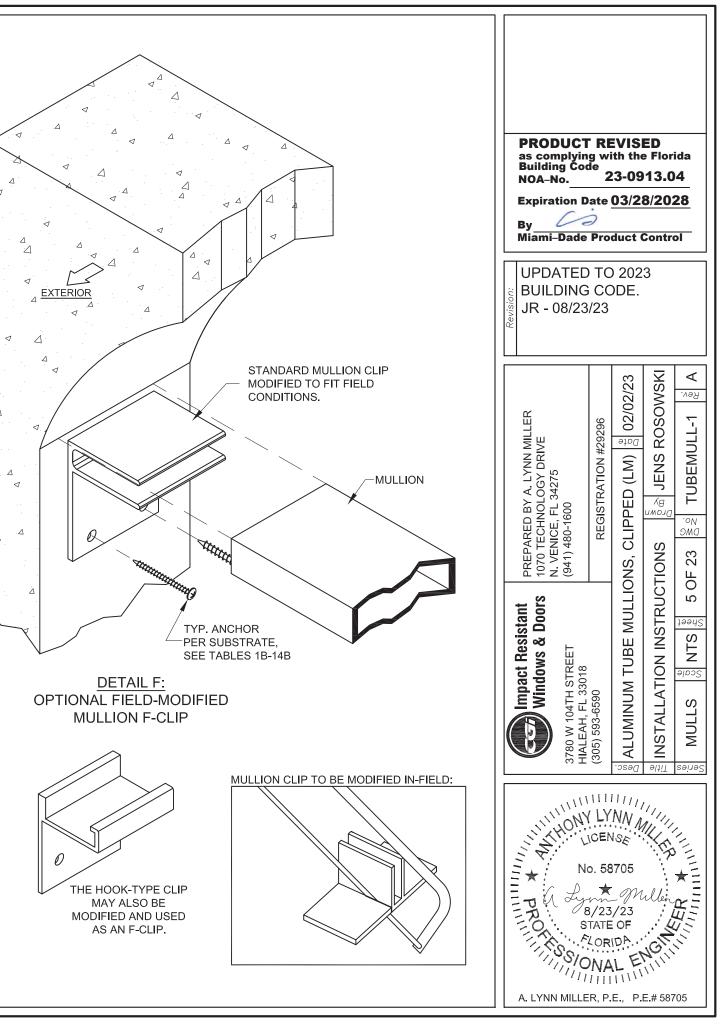


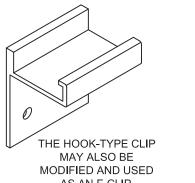


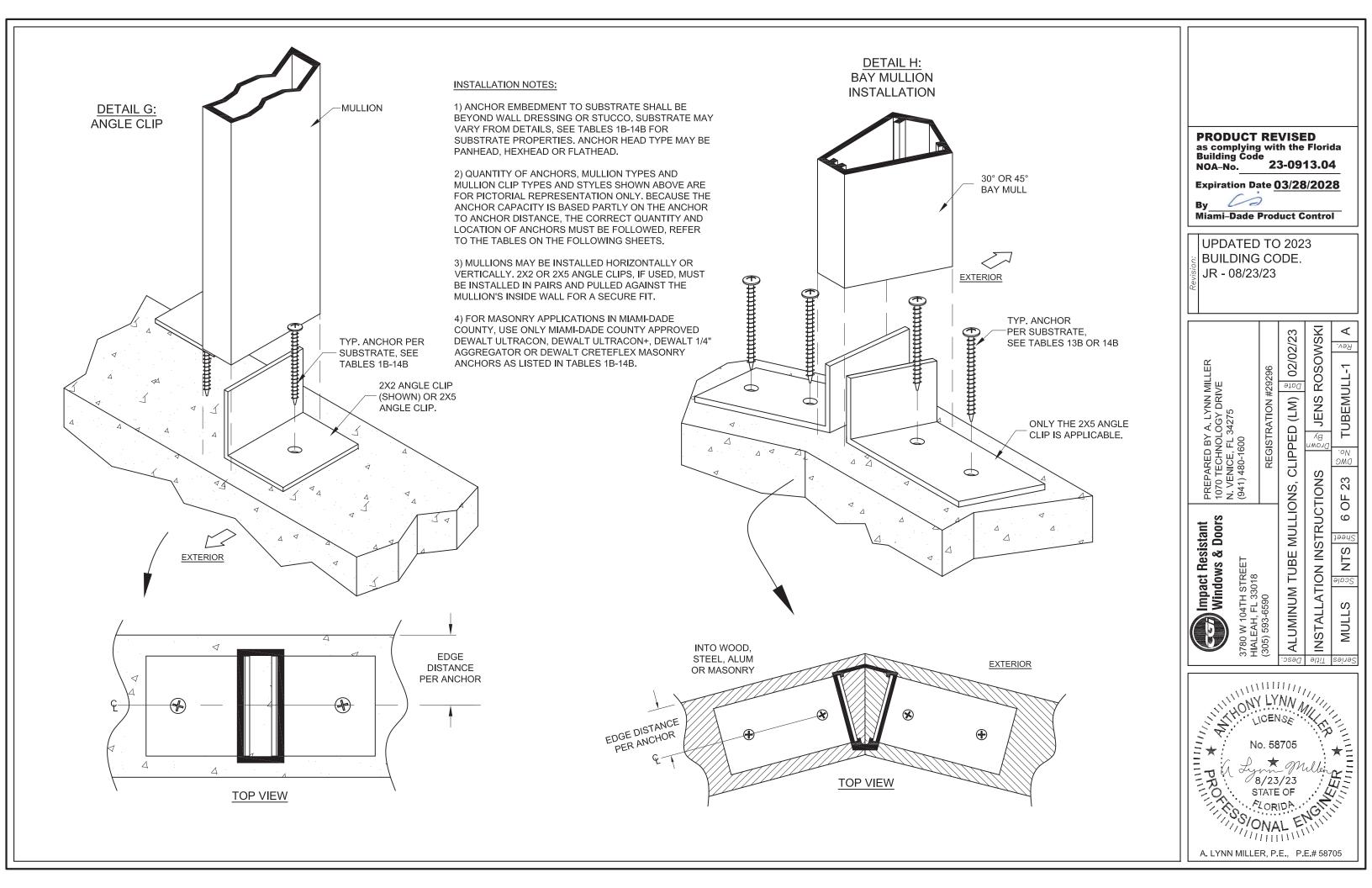












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48 in					62.4	312	73.4	252	53.5	312	66.9	248	46.8		53.1 2 ⁴		_	61.3	244					31.2	312	60.9	244	26.7	312	60.9	244	23.4	312	60.9	24
50-5/8 i					53.2	281	61.5	228	45.6	281	55.7	224	39.9		52.1 2			50.1						26.6	281	49.3	219	22.8	281	49.3	219	19.9	281	49.3	2'
50-5/8 i 54 in 60 in					43.8	247	49.8	202	37.6	247	44.8	199	32.9		11.5 1			39.4	194					21.9	247	38.0	193	18.8	247	38.0	193	16.4	247	38.0	19
			_		32.0	200	35.4	166	27.4	200	31.5	163	24.0		28.9 10		_	27.0	158				157	16.0	200	25.0	156	13.7	200	25.0	156	12.0	200	25.0	1
63 in 66 in 72 in			_		27.6	181	30.3	151	23.7	181	26.9	149	20.7		24.5 1		181	22.8	144	16.6			143	13.8	181	20.6	142	11.8	181	20.5	142	10.4	181	20.5	1
66 in 72 in					24.0 18.5	165 139	26.1 19.9	139 118	20.6 15.8	165 139	23.1 17.5	136 116	18.0	165	21.0 1	4 16.0	165	19.4	132	14.4	165	18.4 ´	131	12.0	165	17.2	129	10.3	165	17.1	129	9.0	165	17.1	
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78 in						ubstrate	16.8	106	3k Cond	crete		3	3.5k Conc				bllow or F	illed CM						Filled	СМИ				Wood		M	etal			
78 in ABLE 1B: Anchor/C wh	lip Capa	.5 118 acity (II	3 18.2 bs)		S		3/1	106 6" DeW Iltracon+	alt	1/4" [DeWalt acon+	5/1	3.5k Conc 16" DeW Ultracon	alt 3/	16" DeWa Jltracon+		bllow or F 1/4" DeW Ultracon	alt	U 1/4" DeV CreteFle		' DeWalt greGator	3/16" De Ultrac		Filled 1/4" De Ultrac	eWalt	1/4" De AggreG		#12 Ste Screw	el #1	I4 Steel Screw	#12	etal Steel srew	 		
78 in BLE 1B: Anchor/C wh	lip Capa	.5 118 acity (II	3 18.2 bs)	2 103	S	ubstrate: nor Type:	3/1	6" DeW Iltracon+	alt	1/4" [5/1	16" DeW	alt 3/	Jltracon+		1/4" DeW Ultracon	alt	1/4" DeV	ex Agg			con+	1/4" De	eWalt con+		Gator		el #1		#12 Sc	Steel			
78 in ABLE 1B: Anchor/C wh	lip Capa nen using 1/8" Tub	.5 118 acity (II ng a be Mulli	3 18.2 bs)	2 103 E	S Ancl dge Dist: Embedr	ubstrate: nor Type: ance (in): nent (in):	: 3/1 L : 1" : 1-3/4	6" DeW Iltracon+ 2: .'' 1.	alt ⊦ -1/2'' -3/4''	1/4" [Ultra 1" 1-3/4"	acon+ 2-1/2 1-3/4	5/1 2" 4"	16" DeW Ultracon 3-1/8" 2"	alt 3/ 1 1"	Ultracon+ 2-1 4'' 1-1	2" 4" 1-1	1/4" DeW Ultracon "2 /4"1	'alt + 2-1/2'' 1-1/4''	1/4" DeV CreteFle 2-1/2' 1-1/4'	ex Agg	greGator 2" 1-1/4"	Ultrac 1" 1-3/-	con+ " /4"	1/4" De Ultrac 1' 1-3/	eWalt con+ '' /4''	AggreG 2" 2"	Gator	Screw 0.54" 1-3/8"	el #1	Screw 0.60'' 1-3/8''	#12 Sc 0.3 See S	Steel rew 324" Sheet 1			
78 in ABLE 1B: Anchor/C wh	17.5 Clip Capa nen using 1/8" Tub 2 Ancho	.5 118 acity (II ng a be Mulli	3 18.2 bs) ion 28" Min. (2 103 E(O.C. / ML	S Ancl dge Dista Embedr illion Clip	ubstrate nor Type: ance (in): nent (in): (Fig. 1):	3/1 2 1-3/4 310 lk	6" DeW Jltracon+ 2- ," 1. ps 63	alt + -1/2" -3/4" 30 lbs	1/4" [Ultra 1" 1-3/4" 220 lbs	acon+ 2-1/2 1-3/4 870 II	2" 4" bs	16" DeW Ultracon 3-1/8" 2" 1105 lbs	alt 3/1	Jltracon+ 2-1 4" 1-1 bs 370	2"	1/4" DeW Ultracon "2 /4" 1 Ibs 5	'alt + 2-1/2'' 1-1/4'' 80 lbs	1/4" DeV CreteFl 2-1/2' 1-1/4' 497 lb	ex Agg	2" 1-1/4" 74 lbs	Ultrac 1" 1-3/- 170 I	con+ " /4" Ibs	1/4" De Ultrac 1' 1-3, 347	eWalt con+ '' /4'' Ibs	AggreG 2" 2" 946 I	Gator Bator	Screw 0.54" 1-3/8" 442 lbs	el #1	Screw 0.60'' 1-3/8'' 537 lbs	#12 Sc 0.3 See S 536	Steel rew 324" Sheet 1 S lbs			
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ABLE 1B: Anchor/C wh 1" x 2" x 1 2 Total A 2 Total A 4 Total A	2 Ancho 2 Ancho 2 Ancho 2 Ancho 4 Ancho 4 Anchors Anchors @ Anchors @ Anchors @ 2 Anchors @ Anchors @ 2 Anchors @ 2 Anchors @ 2 Anchors @ 3 Anchors	.5 118 acity (II ag a be Mulli ors @ 3.2 ors @ 4.1 ors @ 0.9 ors @ 1.9 0.3 @ 5" 0.0 0.97" 0.0 0.97" 0.0 0.92" 0.0 0.97" 0.0 0.97" 0.0 0.97" 0.0 0.97" 0.0 0.97" 0.0 0.97" 0.0	3 18.2 bs) ion 28" Min. (75" Min. (75" Min. (75" Min. (6. thru 2: .C. thru 3: .C. thru 3: .C. thru 4: .C. thru	2 103 0.C. / Mu 0.C. / Mu 0.C. / Mu 0.C. / Mu 2.2 Angle 2.5 Angle 2.2 Angle 2.5 Angle	S Ancl dge Dista Embedr Illion Clip Illion Clip Illion Clip Clip Pai Clip Pai Clip Pai Clip Pai Clip (Fig.	ubstrate: nor Type: ance (in); nent (in); (Fig. 1); (Fig. 2); (Fig. 3); (Fig. 3); (Fig. 3); (Fig. 3); (Fig. 6); (Fig. 6); (Fig. 6); (Fig. 6); (Fig. 6); (Fig. 8); 9 & 10); 11 & 12);	3/1 L 1-3/4 310 lt 310 lt 310 lt 310 lt 310 lt 310 lt 310 lt 620 lt	6" DeW Iltracon-1 2. " 1- 5. 63 5. 74 5. 75 5. 75	alt + -1/2" -3/4" 30 lbs 30 lbs N/A 60 lbs 30 lbs N/A 60 lbs	1/4" [Ultra 1" 1-3/4" 220 lbs 220 lbs 220 lbs 220 lbs 220 lbs 220 lbs N/A 440 lbs	acon+ 2-1/2 1-3/2 870 II 870 II N/A 1700 I 870 II 870 II N/A 1740 I	2" 5/1 4" 0 bs 0 bs 0 bs 0 bs 0 bs 0 bs 0 bs 0 bs	16" DeW/ Ultracon 3-1/8" 2" 1105 lbs 1644 lbs N/A 1420 lbs 1700 lbs N/A 2211 lbs	alt 3/ 1" 1-1/ 230 230 230 230 230 230 230 230 230 230	Jitracon+ 2-1 4" 1-1 bs 370 bs 37	2" 4" 1 4" 1 bbs 320 bbs 3	1/4" DeW Ultracon " 2 /4" 1 Ibs 5 Ibs 11 /A 11 /A 11 /A 2	ralt + 2-1/2" 1-1/4" 80 lbs 80 lbs N/A 60 lbs 80 lbs 80 lbs N/A 60 lbs	1/4" DeV CreteFl 2-1/2' 1-1/4' 497 lb 514 lb N/A 852 lb 503 lb 517 lb N/A 994 lb	Agg ' 1 ' 1 's 3 s 3 s 3 s 3 s 3 s 3 s 3 s 3 s 3 s 3 s 3 s 1 s 1	greGator 2" 1-1/4" 74 lbs 74 lbs N/A N/A 74 lbs 74 lbs N/A 48 lbs	Ultrac 1" 1-3/- 170 l 170 l 170 l 170 l 170 l 170 l 170 l 340 l	Con+ //4" Ibs Ibs Ibs Ibs Ibs Ibs A Ibs A Ibs Ibs Ibs Ibs	1/4" De Ultrac 11 1-3, 347 410 N/, 400 389 410 N/, 694	eWalt con+ /4" Ibs Ibs Ibs Ibs Ibs Ibs Ibs Ibs A Ibs Ibs A Ibs Ibs Ibs	AggreG 2" 946 I 946 I 946 I 946 I 946 I 946 I N/A 1892	Gator Ibs Ibs A A Ibs Ibs Ibs Ibs A Ibs Ibs Ibs Ibs	Screw 0.54" 1-3/8" 442 lbs 885 lbs 885 lbs 842 lbs 442 lbs 885 lbs 885 lbs 885 lbs	Hel #1 1 1 1	Screw 0.60" 1-3/8" 537 lbs 537 lbs 073 lbs 073 lbs 537 lbs 537 lbs 073 lbs 073 lbs	#12 Sc 0.: See S 536 536 107 536 536 107 107 536 536 107 107 2536	Steel rew 324" Sheet 1 5 lbs 5 lbs 3 lbs 3 lbs 5 lbs 5 lbs 3 lbs 3 lbs 3 lbs 3 lbs			

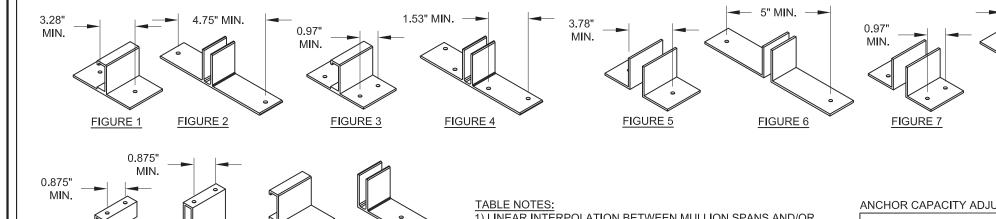


FIGURE 9

0.97'

MIN.

FIGURE 13

FIGURE 10

FIGURE 14

FIGURE 11

1.53" MIN.

FIGURE 12

1) LINEAR INTERPOLATION BETWEEN MULLION SPANS AND/OR **OPENING DIMENSIONS IS ALLOWABLE.**

2) MULLION AND MULLION CLIPS SHOWN ARE NOT TO SCALE. FOR EXACT DIMENSIONS, SEE SHEETS 21-23. HOLES MAY BE DRILLED IN THE FIELD FOLLOWING DIMENSIONAL RESTRICTIONS SHOWN ON THIS SHEET. FIGURES SHOW SUGGESTED, APPROXIMATE HOLE LOCATIONS. CLIP HOLES TO BE NO CLOSER THAN 3/8" O.C. FROM CLIP EDGE.

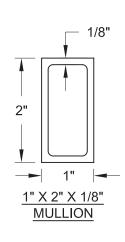
3) SEE SHEET 1 FOR ADDITIONAL ANCHOR/SUBSTRATE NOTES.

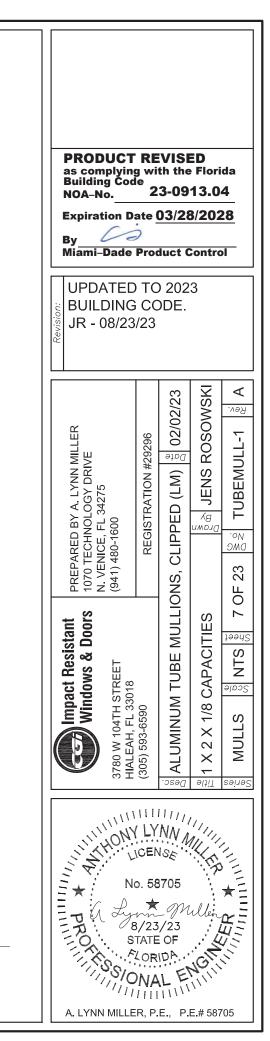
ANCHOR CAPACITY ADJUSTMENT FORMULA:

$$(\mathsf{DP}_{\mathsf{req}}) \times \left(\frac{\mathsf{ANCHOR CAP}_{\mathsf{FROM TABLE}}}{\mathsf{MULLION CAP}_{\mathsf{FROM TABLE}}}\right) = \mathsf{ANCHOR CAP}_{\mathsf{Req}}$$

— 3.25" MIN.

FIGURE 8

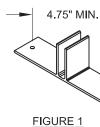


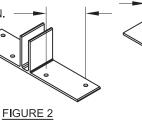


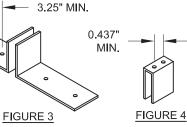
TAB	LE 2A:																																				
																		Оре	ening l	Dimen	sion																
1"	x 2" x 3/8"		50	in			60	in			70) in			80	in			90) in			10	0 in			120) in			14) in			160) in	
	be Mullion Design	Recta Loa	~ I	Trap/T Load	•	Recta Loa	ngular ding	Trap/1 Loa		Recta Loa	ngular ding	Trap/T Loa	•	Recta Loa	ngular ding	Trap/ ⁻ Loa	Friang. ding	Recta Loa	ngular ding	Trap/ ⁻ Loa	riang. ding		ingular ding		Triang. Iding	Recta Load	-	Trap/T Load		Recta Loa	•	Trap/T Loa	riang. ding	Recta Load		Trap/Tr Load	~
CI	essure & ip/Anchor Capacity quirement	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft²)	Anchor Capacity Required (lbs)	0	Anchor Capacity Required (Ibs)
	42 in	170.0	620	170.0	435	151.3	662	170.0	478	129.7	662	170.0	506	113.5	662	169.5	518	100.9	662	168.9	517	90.8	662	168.9	517	75.7	662	168.9	517	64.9	662	168.9	517	56.7	662	168.9	517
	48 in	121.6	507	136.0	419	101.4	507	119.2	410	86.9	507	108.7	403	76.0	507	102.6	399	67.6	507	99.6	397	60.8	507	99.0	396	50.7	507	99.0	396	43.4	507	99.0	396	38.0	507	99.0	396
	50-5/8 in	103.7	456	114.6	379	86.4	456	99.9	371	74.1	456	90.5	364	64.8	456	84.6	360	57.6	456	81.3	357	51.8	456	80.0	356	43.2	456	80.0	356	37.0	456	80.0	356	32.4	456	80.0	356
Span	54 in	85.4	400	93.3	336	71.2	400	80.9	328	61.0	400	72.7	322	53.4	400	67.3	318	47.5	400	64.0	315	42.7	400	62.3	314	35.6	400	61.8	313	30.5	400	61.8	313	26.7	400	61.8	313
ူလူ	60 in	62.3	324	66.9	276	51.9	324	57.5	270	44.5	324	51.2	264	38.9	324	46.9	260	34.6	324	43.9	257	31.1	324	42.0	255	26.0	324	40.5	253	22.2	324	40.5	253	19.5	324	40.5	253
5	63 in	53.8	294	57.4	252	44.8	294	49.2	246	38.4	294	43.6	241	33.6	294	39.8	237	29.9	294	37.1	234	26.9	294	35.2	232	22.4	294	33.5	230	19.2	294	33.4	230	16.8	294	33.4	230
≝	66 in	46.8	268	49.6	230	39.0	268	42.4	225	33.4	268	37.5	221	29.2	268	34.1	218	26.0	268	31.6	215	23.4	268	29.8	212	19.5	268	28.0	210	16.7	268	27.7	209	14.6	268	27.7	209
Mullion	72 in	36.0	225	37.9	196	30.0	225	32.2	191	25.7	225	28.4	188	22.5	225	25.6	185	20.0	225	23.5	182	18.0	225	22.1	180	15.0	225	20.3	177	12.9	225	19.6	176	11.3	225	19.6	176
	76 in	30.6	202	32.0	177	25.5	202	27.2	173	21.9	202	23.9	170	19.2	202	21.5	167	17.0	202	19.7	165	15.3	202	18.4	163	12.8	202	16.7	160								
	78 in	28.3	192	29.6	168	23.6	192	25.1	165	20.2	192	22.0	162	17.7	192	19.7	159	15.7	192	18.1	157	14.2	192	16.8	155												
	90 in	18.5	144	19.0	128	15.4	144	16.1	126																												

	Substrate:		3k Co	ncrete		3.5k Conc.			Hollow	or Filled CN	ΛU			Filled CMU		W	ood	Metal
Anchor/Clip Capacity (lbs) when using a	Anchor Type:	3/16" [Ultra	DeWalt con+	1/4" D Ultra		5/16" DeWalt Ultracon	3/16" [Ultra	DeWalt .con+		eWalt con+	1/4" DeWalt CreteFlex	1/4" DeWalt AggreGator	3/16" DeWalt Ultracon+	1/4" DeWalt Ultracon+	1/4" DeWalt AggreGator	#12 Steel Screw	#14 Steel Screw	#12 Stee Screw
1" x 2" x 3/8" Tube Mullion	Edge Distance (in):	1"	2-1/2"	1"	2-1/2"	3-1/8"	1"	2-1/2"	1"	2-1/2"	2-1/2"	2"	1"	1"	2"	0.54"	0.60"	0.324"
	Embedment (in):	1-3/4"	1-3/4"	1-3/4"	1-3/4"	2"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-3/4"	1-3/4"	2"	1-3/8"	1-3/8"	See Sheet
2 Anchors @ 4.75" Min	. O.C. / Mullion Clip (Fig. 1):	310 lbs	630 lbs	220 lbs	870 lbs	1644 lbs	230 lbs	370 lbs	320 lbs	580 lbs	514 lbs	374 lbs	170 lbs	410 lbs	946 lbs	442 lbs	537 lbs	536 lbs
4 Anchors @ 1.3" Min	. O.C. / Mullion Clip (Fig. 2):	353 lbs	1260 lbs	380 lbs	N/A	N/A	N/A	740 lbs	N/A	N/A	N/A	N/A	N/A	N/A	N/A	885 lbs	1073 lbs	1073 lbs
4 Total Anchors @ 3.25" O.C. thru	2x5 Angle Clip Pair (Fig. 3):	620 lbs	1260 lbs	440 lbs	1740 lbs	2211 lbs	460 lbs	740 lbs	640 lbs	1160 lbs	994 lbs	748 lbs	340 lbs	694 lbs	1892 lbs	885 lbs	1073 lbs	1073 lbs
2 Anchors @ 0.437	" Min. O.C. / U-Clip (Fig. 4):	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	536 lbs
	1 Anchor / F-Clip (Fig. 5):	155 lbs	315 lbs	110 lbs	435 lbs	850 lbs	115 lbs	185 lbs	160 lbs	290 lbs	258 lbs	187 lbs	85 lbs	205 lbs	473 lbs	221 lbs	268 lbs	268 lbs
2 Anchors @ 1.3	" Min. O.C. / F-Clip (Fig. 6):	177 lbs	630 lbs	190 lbs	N/A	N/A	N/A	370 lbs	N/A	N/A	N/A	N/A	N/A	N/A	N/A	442 lbs	537 lbs	536 lbs

1.3" MIN.







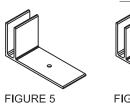


FIGURE 6

TABLE NOTES:

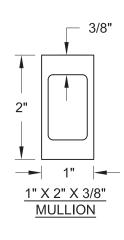
1) LINEAR INTERPOLATION BETWEEN MULLION SPANS AND/OR OPENING DIMENSIONS IS ALLOWABLE.

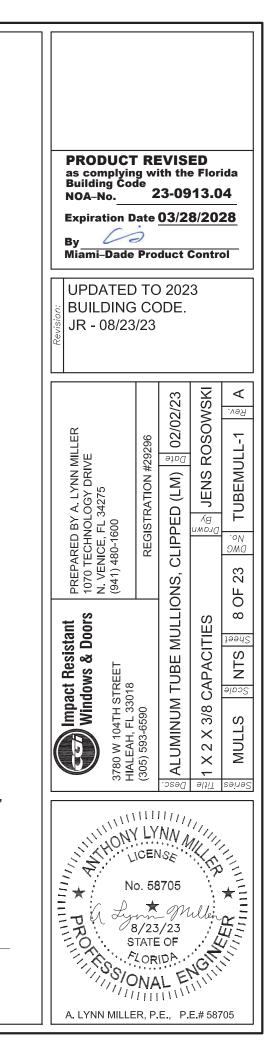
2) MULLION AND MULLION CLIPS SHOWN ARE NOT TO SCALE. FOR EXACT DIMENSIONS, SEE SHEETS 21-23. HOLES MAY BE DRILLED IN THE FIELD FOLLOWING DIMENSIONAL RESTRICTIONS SHOWN ON THIS SHEET. FIGURES SHOW SUGGESTED, APPROXIMATE HOLE LOCATIONS. CLIP HOLES TO BE <u>NO CLOSER</u> <u>THAN 3/8" O.C.</u> FROM CLIP EDGE.

3) SEE SHEET 1 FOR ADDITIONAL ANCHOR/SUBSTRATE NOTES.

ANCHOR CAPACITY ADJUSTMENT FORMULA:

$$(\mathsf{DP}_{\mathsf{req}}) \times \left(\frac{\mathsf{ANCHOR CAP}_{\mathsf{FROM TABLE}}}{\mathsf{MULLION CAP}_{\mathsf{FROM TABLE}}} \right) = \mathsf{ANCHOR CAP}_{\mathsf{req}}$$





TAB	LE 3A:																																				
																		Оре	ening	Dimen	sion																
1"	x 2-1/2" x		50) in			60	0 in			70) in			80	in			9	0 in			100	in			120) in			140	0 in			160	J in	
	/8" Tube Mullion Design		ingular ding	Trap/T Loa	Triang. Iding	Recta Loa	angular Iding	Trap/ ⁻ Loa	Triang. ading		angular ading	Trap/T Loa		Recta Loa	ngular ding	Trap/T Loa		Recta Load	-	Trap/ ⁻ Loa	Γriang. ding		angular ading	Trap/T Load		Rectar Load	-	Trap/T Loa	Triang. Iding	Rectai Load	-	Trap/Tr Load		Recta Loa	angular Iding	Trap/T Loa	~
P Cl	ressure & ip/Anchor Capacity quirement	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (Ibs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (Ibs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (Ibs)	Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (Ibs)	Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)		Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)
	42 in	170.0	620	170.0	435	163.1	714	170.0	478	139.8	714	170.0	506	122.4	714	170.0	519	108.8	714	170.0	521	97.9	714	170.0	521	81.6	714	170.0	521	69.9	714	170.0	521	61.2	714	170.0	521
	48 in	131.2	546	146.6	452	109.3	546	128.5	442	93.7	546	117.3	435	82.0	546	110.6	430	72.9	546	107.3	428	65.6	546	106.7	427	54.6	546	106.7	427	46.8	546	106.7	427	41.0	546	106.7	427
	50-5/8 in	111.8	491	123.6	409	93.2	491	107.7	400	79.9	491	97.6	393	69.9	491	91.2	388	62.1	491	87.7	385	55.9	491	86.3	384	46.6	491	86.3	384	39.9	491	86.3	384	34.9	491	86.3	384
E	54 in	92.1	432	100.6	362	76.8	432	87.2	354	65.8	432	78.4	348	57.6	432	72.6	343	51.2	432	69.0	340	46.1	432	67.1	338	38.4	432	66.6	337	32.9	432	66.6	337	28.8	432	66.6	337
Span	60 in	67.2	350	72.1	297	56.0	350	62.0	291	48.0	350	55.2	285	42.0	350	50.5	281	37.3	350	47.3	277	33.6	350	45.3	275	28.0	350	43.7	273	24.0	350	43.7	273	21.0	350	43.7	273
	63 in	58.0	317	61.9	271	48.3	317	53.1	265	41.4	317	47.1	260	36.3	317	42.9	256	32.2	317	39.9	253	29.0	317	38.0	250	24.2	317	36.1	248	20.7	317	36.0	248	18.1	317	36.0	248
<u>[0</u>	66 in	50.5	289	53.5	248	42.0	289	45.8	243	36.0	289	40.5	238	31.5	289	36.7	235	28.0	289	34.1	231	25.2	289	32.2	229	21.0	289	30.2	226	18.0	289	29.9	226	15.8	289	29.9	226
Mullion	72 in	38.9	243	40.8	211	32.4	243	34.8	206	27.8	243	30.6	203	24.3	243	27.6	199	21.6	243	25.4	196	19.4	243	23.8	194	16.2	243	21.8	191	13.9	243	21.1	190	12.1	243	21.1	190
2	76 in	33.0	218	34.5	190	27.5	218	29.3	186	23.6	218	25.7	183	20.7	218	23.1	180	18.4	218	21.2	177	16.5	218	19.8	175	13.8	218	18.0	172	11.8	218	17.1	171	10.3	218	17.0	170
	78 in	30.6	207	31.9	181	25.5	207	27.1	178	21.8	207	23.7	174	19.1	207	21.3	171	17.0	207	19.5	169	15.3	207	18.1	167	12.7	207	16.4	164		!		ل	<u> </u> '		 '	
	90 in	19.9	155	20.5	138	16.6	155	17.3	136																						!		لــــــــــــــــــــــــــــــــــــــ	<u> </u> '		<u> </u>	
	96 in	16.4	137	16.8	122																													'		L'	
TAB	LE 3B:																																				
						S	ubstrate	e:		3k Con	crete		3	5k Con	o.			Hol	llow or F	Filled CN	U					Fillec	CMU				Wood		Me	etal	1		
	nchor/Clip when	using	а			Ancł	nor Type	2·	16" DeW Jltracon			DeWalt acon+		16" DeW Ultracon		3/16" De Ultrac			/4" DeV Ultracor		1/4" De\ CreteF		/4" DeWa \ggreGatc		' DeWalt racon+		DeWalt Icon+	1/4" D Aggre		#12 Ste Screw		14 Steel Screw	1	Steel crew			
1"∶	c 2-1/2" x 1/8	8" Tuk	e Mull	ion	Ec	dge Dista	ance (in)): 1"	2	2-1/2"	1"	2-1/:	2"	3-1/8"		1"	2-1/2"	1"	'	2-1/2"	2-1/2	2"	2"		1"		1"	2	2"	0.54"		0.60"	0.3	324"	1		

1-1/4"

370 lbs

740 lbs

370 lbs

740 lbs

370 lbs

1-1/4"

320 lbs

N/A

320 lbs

N/A

N/A

1-1/4"

230 lbs

N/A

230 lbs

N/A

N/A

1-1/4"

580 lbs

N/A

580 lbs

N/A

N/A

1-1/4"

497 lbs

N/A

503 lbs

N/A

N/A

1-1/4"

374 lbs

N/A

374 lbs

N/A

N/A

1-3/4"

170 lbs

N/A

170 lbs

N/A

N/A

FIGURE 8

1-3/4"

347 lbs

N/A

389 lbs

N/A

N/A

3 Anchors @ 0.734" Min. O.C. / U-Clip (Fig. 6): N/A 1 Anchor / F-Clip (Fig. 7) 155 lbs 315 lbs 110 lbs 435 lbs 850 lbs 115 lbs 185 lbs 160 lbs 290 lbs 258 lbs 187 lbs 85 lbs 205 lbs 473 lbs 2 Anchors @ 1.47" Min. O.C. / F-Clip (Fig. 8): 202 lbs 630 lbs 198 lbs N/A N/A N/A 370 lbs N/A N/A N/A N/A N/A N/A N/A SEE SUBSTRATE PROPERTIES, SHEET 1. 3.28" 3.78" 1.47' 1.47" MIN. MIN. 1.47" MIN. MIN. MIN.

2"

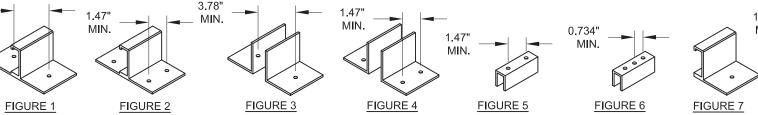
1105 lbs

N/A

1420 lbs

N/A

N/A



1-3/4"

870 lbs

N/A

870 lbs

N/A

N/A

1-3/4"

220 lbs

395 lbs

220 lbs

395 lbs

198 lbs

1-3/4"

630 lbs

1260 lbs

630 lbs

1260 lbs

630 lbs

1-3/4"

310 lbs

403 lbs

310 lbs

403 lbs

202 lbs

2 Anchors @ 3.28" Min. O.C. / Mullion Clip (Fig. 1)

4 Anchors @ 1.47" Min. O.C. / Mullion Clip (Fig. 2)

2 Anchors @ 1.47" Min. O.C. / U-Clip (Fig. 5):

2 Total Anchors @ 3.78" O.C. thru 2x2 Angle Clip Pair (Fig. 3)

4 Total Anchors @ 1.47" O.C. thru 2x2 Angle Clip Pair (Fig. 4)

Embedment (in

TABLE NOTES:

1) LINEAR INTERPOLATION BETWEEN MULLION SPANS AND/OR OPENING DIMENSIONS IS ALLOWABLE.

2) MULLION AND MULLION CLIPS SHOWN ARE NOT TO SCALE. FOR EXACT DIMENSIONS, SEE SHEETS 21-23, HOLES MAY BE DRILLED IN THE FIELD FOLLOWING DIMENSIONAL RESTRICTIONS SHOWN ON THIS SHEET. FIGURES SHOW SUGGESTED, APPROXIMATE HOLE LOCATIONS. CLIP HOLES TO BE NO CLOSER THAN 3/8" O.C. FROM CLIP EDGE.

3) SEE SHEET 1 FOR ADDITIONAL ANCHOR/SUBSTRATE NOTES.

ANCHOR CAPACITY ADJUSTMENT FORMULA:

$$(\mathsf{DP}_{\mathsf{req}}) \times \left(\frac{\mathsf{ANCHOR CAP}_{\mathsf{FROM TABLE}}}{\mathsf{MULLION CAP}_{\mathsf{FROM TABLE}}}\right) = \mathsf{ANCHOR CAP}_{\mathsf{Rec}}$$

1-3/8"

442 lbs

885 lbs

442 lbs

885 lbs

442 lbs

664 lbs

221 lbs

442 lbs

2"

946 lbs

N/A

946 lbs

N/A

N/A

1-3/8"

537 lbs

1073 lbs

537 lbs

1073 lbs

537 lbs

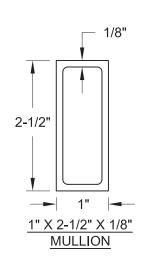
805 lbs

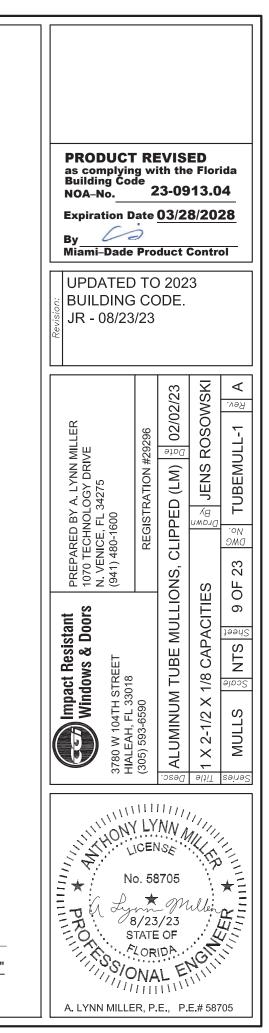
268 lbs

537 lbs

USE THIS FORMULA TO OBTAIN THE "ANCHOR CAPACITY REQUIRED" CORRESPONDING TO AN ACTUAL PRESSURE REQUIREMENT FOR THE OPENING, WHEN IT IS LOWER THAN THE MULLION CAPACITY (FROM THE TABLE) OF THE SELECTED MULLION. IT WILL YIELD A MINIMUM ANCHOR CAPACITY WHICH MAY BE USED TO QUALIFY ADDITIONAL ANCHOR OPTIONS FROM THE CLIP/ANCHOR CAPACITY TABLE

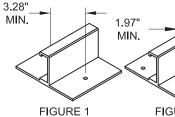
Metal
#12 Steel
Screw
0.324"
See Sheet 1
536 lbs
1073 lbs
536 lbs
1073 lbs
536 lbs
805 lbs
268 lbs
536 lbs

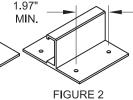




																		Ope	ning D	Dimens	sion																
1" >	x 3" x 1/8"		50) in			60) in			70) in			80) in			90) in			100) in			120) in			14	0 in			160	0 in	
Tuk I	be Mullion Design	Recta Loa	0		Triang. Iding		angular ading	Trap/ ⁻ Loa	Triang. Iding	Recta Loa	-	Trap/1 Loa	0	Recta Loa	0	Trap/T Load	0	Rectar Load	ч I	Trap/1 Loa	~ I	Recta Loa	~ I	Trap/T Load	0	Recta Loa	-	Trap/T Load	~		ingular iding	Trap/ ⁻ Loa	Friang. ding		ngular ding	Trap/ ⁻ Loa	/Trian ading
Cli C	essure & p/Anchor capacity quirement	Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft²)	Anchor Capacity Required (Ibs)	Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ff ²)	Anchor Capacity
Т	42 in	170.0	620	170.0	435	170.0	744	170.0	478	170.0	868	170.0	506	170.0	992	170.0	519	170.0	1116	170.0	521	157.6	1149	170.0	521	131.3	1149	170.0	521	112.6	1149	170.0	521	98.5	1149	170.0	52
Γ	48 in	170.0	708	170.0	524	170.0	850	170.0	584	150.8	880	170.0	630	132.0	880	170.0	661	117.3	880	170.0	677	105.6	880	170.0	680	88.0	880	170.0	680	75.4	880	170.0	680	66.0	880	170.0	6
Г	50-5/8 in	170.0	747	170.0	563	150.0	791	170.0	631	128.6	791	157.1	632	112.5	791	146.9	625	100.0	791	141.1	620	90.0	791	138.9	618	75.0	791	138.9	618	64.3	791	138.9	618	56.2	791	138.9	6
Γ	54 in	148.3	695	161.9	583	123.6	695	140.4	570	105.9	695	126.2	560	92.7	695	116.9	552	82.4	695	111.1	547	74.2	695	108.1	544	61.8	695	107.3	543	53.0	695	107.3	543	46.3	695	107.3	5
	60 in	108.1	563	116.1	479	90.1	563	99.8	468	77.2	563	88.9	459	67.6	563	81.4	452	60.1	563	76.2	447	54.1	563	72.9	443	45.0	563	70.4	440	38.6	563	70.4	440	33.8	563	70.4	4
<u>2</u> [63 in	93.4	511	99.6	437	77.8	511	85.4	427	66.7	511	75.8	419	58.4	511	69.0	412	51.9	511	64.3	407	46.7	511	61.1	403	38.9	511	58.1	400	33.4	511	57.9	399	29.2	511	57.9	
2	66 in	81.2	465	86.1	400	67.7	465	73.7	391	58.0	465	65.1	384	50.8	465	59.1	378	45.1	465	54.8	373	40.6	465	51.8	369	33.8	465	48.6	365	29.0	465	48.1	364	25.4	465	48.1	:
Ľ	72 in	62.6	391	65.7	339	52.1	391	56.0	332	44.7	391	49.2	326	39.1	391	44.4	321	34.8	391	40.9	316	31.3	391	38.3	312	26.1	391	35.2	308	22.3	391	34.0	306	19.6	391	33.9	
	76 in	53.2	351	55.6	306	44.3	351	47.3	300	38.0	351	41.5	295	33.2	351	37.3	290	29.6	351	34.2	286	26.6	351	31.9	282	22.2	351	28.9	277	19.0	351	27.6	275	16.6	351	27.3	_
≗∟	78 in	49.2	333	51.3	292	41.0	333	43.6	286	35.1	333	38.2	281	30.8	333	34.3	276	27.3	333	31.4	272	24.6	333	29.2	269	20.5	333	26.4	264	17.6	333	25.0	261	15.4	333	24.6	2
L	90 in	32.0	250	33.0	222	26.7	250	27.9	218	22.9	250	24.3	214	20.0	250	21.7	211	17.8	250	19.7	208	16.0	250	18.2	205	13.3	250	16.1	201								
L	96 in	26.4	220	27.1	197	22.0	220	22.9	193	18.9	220	19.9	190	16.5	220	17.7	187	14.7	220	16.0	184																
L	108 in	18.5	174	18.9	157																																
	111 in	17.1	165	17.4	149																																

TABLE 4B:																		
	Substrate:		3k Co	oncrete		3.5k Conc.			Hollow	or Filled CN	ΛU			Filled CMU		W	ood	Metal
Anchor/Clip Capacity (lbs) when using a	Anchor Type:		DeWalt icon+		DeWalt icon+	5/16" DeWalt Ultracon		DeWalt icon+	1	eWalt con+	1/4" DeWalt CreteFlex	1/4" DeWalt AggreGator	3/16" DeWalt Ultracon+	1/4" DeWalt Ultracon+	1/4" DeWalt AggreGator	#12 Steel Screw	#14 Steel Screw	#12 Stee Screw
1" x 3" x 1/8" Tube Mullion	Edge Distance (in):	1"	2-1/2"	1"	2-1/2"	3-1/8"	1"	2-1/2"	1"	2-1/2"	2-1/2"	2"	1"	1"	2"	0.54"	0.60"	0.324"
	Embedment (in):	1-3/4"	1-3/4"	1-3/4"	1-3/4"	2"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-3/4"	1-3/4''	2"	1-3/8"	1-3/8"	See Shee
2 Anchors @ 3.28" Mir	n. O.C. / Mullion Clip (Fig. 1):	310 lbs	630 lbs	220 lbs	870 lbs	1105 lbs	230 lbs	370 lbs	320 lbs	580 lbs	497 lbs	374 lbs	170 lbs	347 lbs	946 lbs	442 lbs	537 lbs	536 lbs
4 Anchors @ 1.97" Mir	n. O.C. / Mullion Clip (Fig. 2):	537 lbs	1260 lbs	412 lbs	1712 lbs	559 lbs	361 lbs	740 lbs	456 lbs	1018 lbs	892 lbs	N/A	340 lbs	474 lbs	N/A	885 lbs	1073 lbs	1073 lbs
6 Anchors @ 0.984" Mir	n. O.C. / Mullion Clip (Fig. 3):	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1327 lbs	1610 lbs	1609 lbs
2 Total Anchors @ 3.78" O.C. thru	a 2x2 Angle Clip Pair (Fig. 4):	310 lbs	630 lbs	220 lbs	870 lbs	1420 lbs	230 lbs	370 lbs	320 lbs	580 lbs	503 lbs	374 lbs	170 lbs	389 lbs	946 lbs	442 lbs	537 lbs	536 lbs
4 Total Anchors @ 1.97" O.C. thru	a 2x2 Angle Clip Pair (Fig. 5):	537 lbs	1260 lbs	412 lbs	1712 lbs	559 lbs	361 lbs	740 lbs	456 lbs	1018 lbs	892 lbs	N/A	340 lbs	474 lbs	N/A	885 lbs	1073 lbs	1073 lbs
6 Total Anchors @ 0.984" O.C. thru	a 2x2 Angle Clip Pair (Fig. 6):	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1327 lbs	1610 lbs	1609 lbs
2 Anchors @ 1.9	7" Min. O.C. / U-Clip (Fig. 7):	268 lbs	630 lbs	206 lbs	856 lbs	279 lbs	180 lbs	370 lbs	228 lbs	509 lbs	446 lbs	N/A	170 lbs	237 lbs	N/A	442 lbs	537 lbs	536 lbs
3 Anchors @ 0.98	4" Min. O.C. / U-Clip (Fig. 8):	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	664 lbs	805 lbs	805 lbs
	1 Anchor / F-Clip (Fig. 9):	155 lbs	315 lbs	110 lbs	435 lbs	850 lbs	115 lbs	185 lbs	160 lbs	290 lbs	258 lbs	187 lbs	85 lbs	205 lbs	473 lbs	221 lbs	268 lbs	268 lbs
2 Anchors @ 1.97	" Min. O.C. / F-Clip (Fig. 10):	268 lbs	630 lbs	206 lbs	856 lbs	279 lbs	180 lbs	370 lbs	228 lbs	509 lbs	446 lbs	N/A	170 lbs	237 lbs	N/A	442 lbs	537 lbs	536 lbs
3 Anchors @ 0.984	" Min. O.C. / F-Clip (Fig. 11):	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	664 lbs	805 lbs	805 lbs

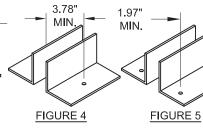


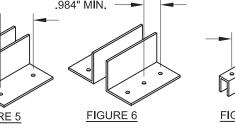


.984'

MIN.

FIGURE 3





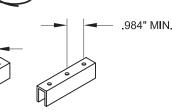


FIGURE 7

FIGURE 8

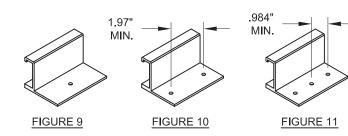


TABLE NOTES:

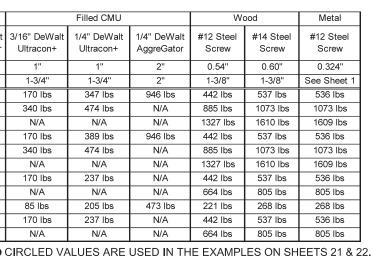
1) LINEAR INTERPOLATION BETWEEN MULLION SPANS AND/OR **OPENING DIMENSIONS IS ALLOWABLE.**

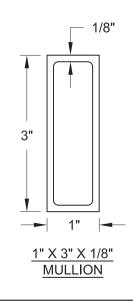
2) MULLION AND MULLION CLIPS SHOWN ARE NOT TO SCALE. FOR EXACT DIMENSIONS, SEE SHEETS 21-23, HOLES MAY BE DRILLED IN THE FIELD FOLLOWING DIMENSIONAL RESTRICTIONS SHOWN ON THIS SHEET. FIGURES SHOW SUGGESTED, APPROXIMATE HOLE LOCATIONS. CLIP HOLES TO BE NO CLOSER THAN 3/8" O.C. FROM CLIP EDGE.

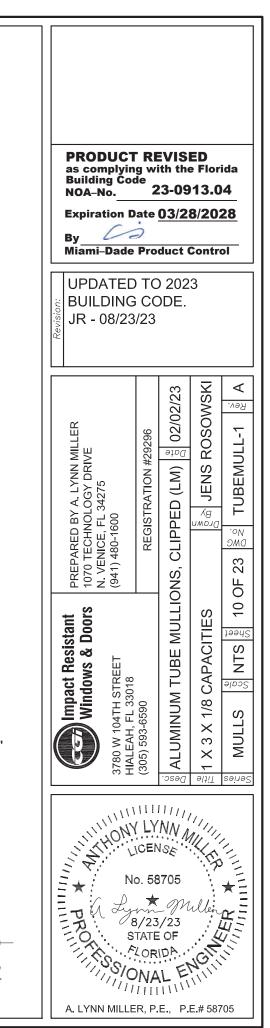
3) SEE SHEET 1 FOR ADDITIONAL ANCHOR/SUBSTRATE NOTES.

ANCHOR CAPACITY ADJUSTMENT FORMULA:

$$(\mathsf{DP}_{\mathsf{req}}) \times \left(\frac{\mathsf{ANCHOR CAP}_{\mathsf{FROM TABLE}}}{\mathsf{MULLION CAP}_{\mathsf{FROM TABLE}}} \right) = \mathsf{ANCHOR CAP}_{\mathsf{Rec}}$$







																		Оре	ening E)imens	sion																
1" :	x 4" x 1/8"		50	in			60) in			70) in			80) in			90	in			10	0 in			120) in			14	0 in			16	0 in	
Tul	be Mullion Design	Rectar Load	•	Trap/T Loa	0		ingular ding		Triang. ading	Recta Loa	-	Trap/T Loa	Friang. ding	Recta Load	0	Trap/T Load	0	Recta Loa	<u> </u>	Trap/1 Loa	0	Recta Loa	ngular ding	Trap/T Loa	0	Recta Loa	<u>с</u>	Trap/T Load	0		ingular ding	Trap/1 Loa	9	Recta Loa	0		Triang. ading
Cli C	essure & p/Anchor capacity quirement	Mullion Capacity (lbs/ft²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (Ibs)
	42 in	170.0	620	170.0	435	170.0	744	170.0	478	170.0	868	170.0	506	170.0	992	170.0	519	170.0	1116	170.0	521	170.0	1240	170.0	521	170.0	1488	170.0	521	170.0	1735	170.0	521	170.0	1983	170.0	521
- [48 in	170.0	708	170.0	524	170.0	850	170.0	584	170.0	992	170.0	630	170.0	1133	170.0	661	170.0	1275	170.0	677	170.0	1417	170.0	680	170.0	1700	170.0	680	163.7	1910	170.0	680	143.3	1910	170.0	680
	50-5/8 in	170.0	747	170.0	563	170.0	896	170.0	631	170.0	1046	170.0	684	170.0	1195	170.0	723	170.0	1345	170.0	747	170.0	1494	170.0	756	162.8	1717	170.0	756	139.6	1717	170.0	756	122.1	1717	170.0	756
	54 in	170.0	797	170.0	612	170.0	956	170.0	691	170.0	1116		754	170.0	1275	170.0	803	170.0	1434	170.0	837	161.0	1509	170.0	856	134.2	1509	170.0	861	115.0	1509	170.0	861	100.6	1509	170.0	861
	60 in	170.0	885	170.0	701	170.0	1063	170.0	797	167.7	1223	170.0	878	146.7	1223	170.0	944	130.4	1223	165.5	970	117.4	1223	158.3	962	97.8	1223	152.8	955	83.8	1223	152.8	955	73.4	1223	152.8	955
۶L	63 in	170.0	930	170.0	745	169.0	1109	170.0	850	144.8	1109	164.5	910	126.7	1109	149.8	895	112.6	1109	139.6	884	101.4	1109	132.7	875	84.5	1109	126.2	867	72.4	1109	125.7	866	63.4	1109	125.7	866
Span	66 in	170.0	974	170.0	789	147.0	1010	160.0	850	126.0	1010	141.4	834	110.2	1010	128.3	820	98.0	1010	119.0	809	88.2	1010	112.5	801	73.5	1010	105.5	792	63.0	1010	104.4	789	55.1	1010	104.4	789
Ë L	72 in	135.8	849	142.7	737	113.2	849	121.5	722	97.0	849	106.9	708	84.9	849	96.4	696	75.5	849	88.8	686	67.9	849	83.1	678	56.6	849	76.3	668	48.5	849	73.8	664	42.4	849	73.7	663
Mullion	76 in	115.5	762	120.7	665	96.2	762	102.6	652	82.5	762	90.0	640	72.2	762	80.9	629	64.2	762	74.2	620	57.7	762	69.2	612	48.1	762	62.8	602	41.2	762	59.9	597	36.1	762	59.4	595
Ξŀ	78 in	106.8	723	111.4	633	89.0	723	94.6	621	76.3	723	82.9	609	66.8	723	74.4	599	59.4	723	68.1	591	53.4	723	63.4	583	44.5	723	57.3	573	38.2	723	54.3	567	33.4	723	53.5	565
ء	90 in	69.5	543	71.8	483	58.0	543	60.6	474	49.7	543	52.8	466	43.5	543	47.1	458	38.6	543	42.8	452	34.8	543	39.5	446	29.0	543	34.9	436	24.8	543	32.1	430	21.7	543	30.7	426
-	96 in	57.3	478	58.9	427	47.8	478	49.7	419	40.9	478	43.2	412	35.8	478	38.5	406	31.8	478	34.8	400	28.7	478	32.0	395	23.9	478	28.1	386	20.5	478	25.6	380	17.9	478	24.2	376
-	108 in	40.2	377	41.1	341	33.5	377	34.6	335	28.7	377	30.0	330	25.2	377	26.6	325	22.4	377	24.0	321	20.1	377	22.0	317	16.8	377	19.0	309	14.4	377	17.1	304				──
	111 in	37.1	357	37.8	323	30.9	357	31.8	318	26.5	357	27.6	313	23.2	357	24.4	309	20.6	357	22.0	305	18.5	357	20.1	301	15.4	357	17.4	294								
-	120 in	29.3	306	29.8	278	24.5	306	25.1	274	21.0	306	21.7	270	18.3	306	19.2	267	16.3	306	17.3	263																<u> </u>
	144 in	17.0	212	17.2	196																																

ABLE 5B:	Substrate:		3k Co	ncrete		3.5k Conc.			Hollow	or Filled CN	ЛП			Filled CMU		W	bod	Metal
Anchor/Clip Capacity (lbs) when using a	Anchor Type:	3/16" [Ultra		1/4" C	eWalt con+	5/16" DeWalt Ultracon		DeWalt icon+	1/4" C	eWalt con+	1/4" DeWalt	1/4" DeWalt AggreGator	3/16" DeWalt Ultracon+	1/4" DeWalt Ultracon+	1/4" DeWalt AggreGator	#12 Steel Screw	#14 Steel Screw	#12 Ste Screw
1" x 4" x 1/8" Tube Mullion	Edge Distance (in):	1"	2-1/2"	1"	2-1/2"	3-1/8"	1"	2-1/2"	1"	2-1/2"	2-1/2"	2"	1"	1"	2"	0.54"	0.60"	0.324'
	Embedment (in):	1-3/4"	1-3/4"	1-3/4"	1-3/4"	2"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-3/4"	1-3/4"	2"	1-3/8"	1-3/8"	See Shee
2 Anchors @ 3.28" Mir	n. O.C. / Mullion Clip (Fig. 1):	310 lbs	630 lbs	220 lbs	870 lbs	1105 lbs	230 lbs	370 lbs	320 lbs	580 lbs	497 lbs	374 lbs	170 lbs	347 lbs	946 lbs	442 lbs	537 lbs	536 lbs
4 Anchors @ 2.97" Mir	n. O.C. / Mullion Clip (Fig. 2):	620 lbs	1260 lbs	438 lbs	1738 lbs	1817 lbs	454 lbs	740 lbs	629 lbs	1152 lbs	982 lbs	N/A	340 lbs	642 lbs	N/A	885 l) s	1073 lbs	1073 lb
6 Anchors @ 1.48" Mir	n. O.C. / Mullion Clip (Fig. 3):	605 lbs	1890 lbs	593 lbs	N/A	N/A	N/A	1110 lbs	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1327 lbs	1610 lbs	1609 lb
2 Total Anchors @ 3.78" O.C. thru	ı 2x2 Angle Clip Pair (Fig. 4):	310 lbs	630 lbs	220 lbs	870 lbs	1420 lbs	230 lbs	370 lbs	320 lbs	580 lbs	503 lbs	374 lbs	170 lbs	389 lbs	946 lbs	442 lbs	537 lbs	536 lbs
4 Total Anchors @ 2.97" O.C. thru	ı 2x2 Angle Clip Pair (Fig. 5):	620 lbs	1260 lbs	438 lbs	1738 lbs	1817 lbs	454 lbs	740 lbs	629 lbs	1152 lbs	982 lbs	N/A	340 lbs	642 lbs	N/A	885 lbs	1073 lbs	1073 lb
6 Total Anchors @ 1.48" O.C. thru	ı 2x2 Angle Clip Pair (Fig. 6):	605 lbs	1890 lbs	593 lbs	N/A	N/A	N/A	1110 lbs	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1327 lbs	1610 lbs	1609 lb
2 Anchors @ 2.97	7" Min. O.C. / U-Clip (Fig. 7):	310 lbs	630 lbs	219 lbs	869 lbs	909 lbs	227 lbs	370 lbs	315 lbs	576 lbs	491 lbs	N/A	170 lbs	321 lbs	N/A	442 lbs	537 lbs	536 lbs
3 Anchors @ 1.48	8" Min. O.C. / U-Clip (Fig. 8):	303 lbs	945 lbs	296 lbs	N/A	N/A	N/A	555 lbs	N/A	N/A	N/A	N/A	N/A	N/A	N/A	664 lbs	805 lbs	805 lbs
	1 Anchor / F-Clip (Fig. 9):	155 lbs	315 lbs	110 lbs	435 lbs	850 lbs	115 lbs	185 lbs	160 lbs	290 lbs	258 lbs	187 lbs	85 lbs	205 lbs	473 lbs	221 lbs	268 lbs	268 lbs
2 Anchors @ 2.97	" Min. O.C. / F-Clip (Fig. 10):	310 lbs	630 lbs	219 lbs	869 lbs	909 lbs	227 lbs	370 lbs	315 lbs	576 lbs	491 lbs	N/A	170 lbs	321 lbs	N/A	442 lbs	537 lbs	536 lbs
3 Anchors @ 1.48	" Min. O.C. / F-Clip (Fig. 11):	303 lbs	945 lbs	296 lbs	N/A	N/A	N/A	555 lbs	N/A	N/A	N/A	N/A	N/A	N/A	N/A	664 lbs	805 lbs	805 lbs

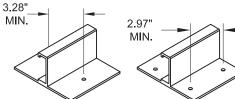
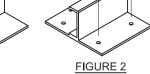
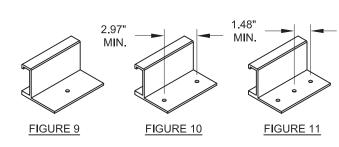


FIGURE 1



1.48" MIN.

FIGURE 3



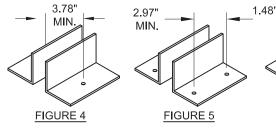
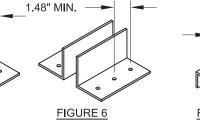


TABLE NOTES:



1.468" MIN.

FIGURE 7 FIGURE 8

2.97

MIN

ANCHOR CAPACITY ADJUSTMENT FORMULA:

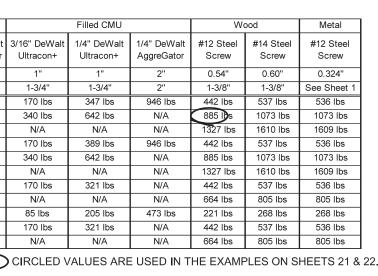
$$(DP_{REQ}) \times \left(\frac{ANCHOR CAP_{FROM TABLE}}{MULLION CAP_{FROM TABLE}}\right) = ANCHOR CAP_{REQ}$$

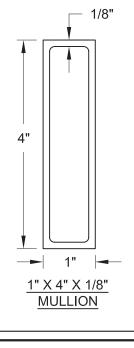
USE THIS FORMULA TO OBTAIN THE "ANCHOR CAPACITY REQUIRED" CORRESPONDING TO AN ACTUAL PRESSURE REQUIREMENT FOR THE OPENING, WHEN IT IS LOWER THAN THE MULLION CAPACITY (FROM THE TABLE) OF THE SELECTED MULLION. IT WILL YIELD A MINIMUM ANCHOR CAPACITY WHICH MAY BE USED TO QUALIFY ADDITIONAL ANCHOR OPTIONS FROM THE CLIP/ANCHOR CAPACITY TABLE

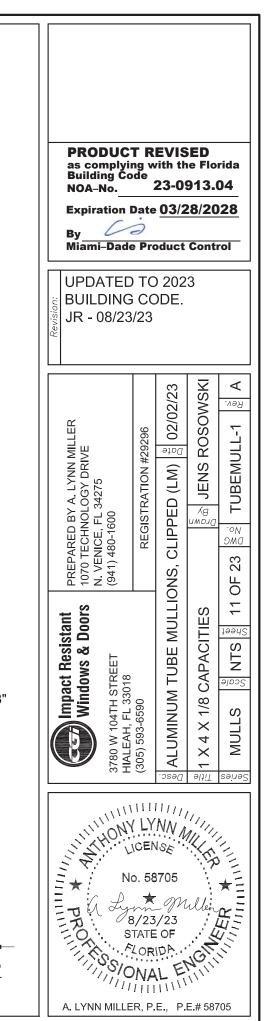
1) LINEAR INTERPOLATION BETWEEN MULLION SPANS AND/OR **OPENING DIMENSIONS IS ALLOWABLE.**

2) MULLION AND MULLION CLIPS SHOWN ARE NOT TO SCALE. FOR EXACT DIMENSIONS, SEE SHEETS 21-23. HOLES MAY BE DRILLED IN THE FIELD FOLLOWING DIMENSIONAL RESTRICTIONS SHOWN ON THIS SHEET. FIGURES SHOW SUGGESTED, APPROXIMATE HOLE LOCATIONS. CLIP HOLES TO BE NO CLOSER THAN 3/8" O.C. FROM CLIP EDGE.

3) SEE SHEET 1 FOR ADDITIONAL ANCHOR/SUBSTRATE NOTES.

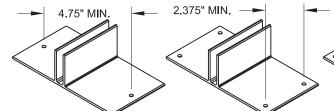


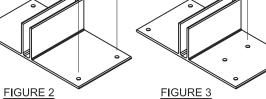




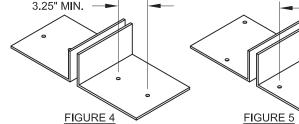
TAB	LE 6A:																																				
																		Оре	ening [Dimen	sion																
1"	x 4" x 3/8"		50) in			60) in			7) in			80) in			90) in			10	0 in			120) in			14) in			16(0 in	
	be Mullion Design	Rectar Load	-		Triang. Iding		angular Iding		Triang. ading		angular Iding	I '	Triang. ding		angular Iding	Trap/1 Loa	Friang. ding		ngular ding		Friang. ding		angular Iding	Trap/T Loa	0	Recta Loa	-	Trap/T Loa			ingular ding	Trap/T Loa	Triang. ding		angular iding	Trap/Ti Loac	<u> </u>
CI	ressure & ip/Anchor Capacity quirement	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (Ibs)	Mullion Capacity (lbs/ft²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (Ibs)	Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)
	42 in	170.0	620	170.0	435	170.0	744	170.0	478	170.0	868	170.0	506	170.0	992	170.0	519	170.0	1116	170.0	521	170.0	1240	170.0	521	170.0	1488	170.0	521	170.0	1735	170.0	521	170.0	1983	170.0	521
	48 in	170.0	708	170.0	524	170.0	850	170.0	584	170.0	992	170.0	630	170.0	1133	170.0	661	170.0	1275	170.0	677	170.0	1417	170.0	680	170.0	1700	170.0	680	170.0	1983	170.0	680	170.0	2267	170.0	680
	50-5/8 in	170.0	747	170.0	563	170.0	896	170.0	631	170.0	1046	170.0	684	170.0	1195	170.0	723	170.0	1345	170.0	747	170.0	1494	170.0	756	170.0	1793	170.0	756	170.0		170.0	756	170.0	2391	170.0	756
	54 in	170.0	797	170.0	612	170.0	956	170.0	691	170.0	1116	170.0	754	170.0	1275	170.0	803	170.0	1434	170.0	837	170.0	1594	170.0	856	170.0	1913	170.0	861	170.0	2231	170.0	861	156.4	2346	170.0	861
	60 in	170.0	885	170.0	701	170.0	1063	170.0	797	170.0	1240	170.0	878	170.0	1417	170.0	944	170.0	1594	170.0	996	170.0	1771	170.0	1033	152.0	1900	170.0	1063	130.3	1900	170.0	1063	114.0	1900	170.0	1063
	63 in	170.0	930	170.0	745	170.0	1116	170.0	850	170.0	1302	170.0	940	170.0	1488	170.0	1015	170.0	1673	170.0	1076	157.6	1723	170.0	1122	131.3	1723	170.0	1169	112.6		170.0	1171	98.5	1723	170.0	1171
Š	66 in	170.0	974	170.0	789	170.0	1169	170.0	903	170.0	1364	170.0	1002	170.0	1558	170.0	1086	152.3	1570	170.0		137.0	1570	170.0	1210	114.2	1570	164.0	1230	97.9	1570	162.2	1227	85.7	1570	162.2	1227
	72 in	170.0	1063	170.0	878	170.0	1275	170.0	1009	150.8	1320	166.2	1101	132.0	1320	149.9	1082	117.3	1320	137.9	1067	105.6	1320	129.2	1054	88.0	1320	118.7	1038	75.4	1320	114.7	1032	66.0	1320	114.5	1031
≌	76 in			170.0	937	149.6	1184	159.4	1013		1184	139.9	994	112.2	1184	125.7	978	99.7	1184	115.3	964	89.8	1184	107.5	952	74.8	1184	97.6	935	64.1	1184	93.1	927	56.1	1184	92.3	925
Mullion	78 in	166.1	1124	170.0	967	138.4	1124	147.0	965	118.6	1124	128.8	947	103.8	1124	115.6	931	92.3	1124	105.8	918	83.0	1124	98.5 61.4	906	69.2	1124	89.0	890	59.3	1124	84.3	881	51.9	1124	83.2	878
- I	90 in 96 in	108.1 89.1	844 742	111.5 91.5	750 663	90.1 74.2	844 742	94.3 77.2	736	77.2 63.6	844 742	82.1 67.2	724 641	67.6 55.7	844 742	73.3	712	60.1	844 742	66.5 54.1	702 622	54.0 44.5	844 742	49.8	693 614	45.0 37.1	844 742	54.2	678	38.6 31.8	844 742	50.0 39.8	668	33.8 27.8	844 742	47.7 37.5	662
	96 in 108 in	62.6	586	91.5 63.9	530	52.1	586	53.8	652 521	44.7	586	46.6	513	39.1	586	59.8 41.4	631 505	49.5 34.8	586	37.3	498	44.5 31.3	586	49.8 34.2	492	26.1	742 586	43.6 29.6	600 481	22.3	586	39.8 26.6	590 472	19.5	742 586	24.7	584 466
	100 in 111 in	62.6 57.6	555	58.8	503	48.0	555	49.5	495	44.7	555	40.0	487	36.0	555	38.0	480	34.0	555	34.2	490	28.8	555	34.2	492	20.1	555	29.0	401	22.3	555	20.0	472	19.5	555	24.7	400
	120 in	45.6	475	46.4	433	38.0	475	39.0	495	32.6	475	33.7	407	28.5	475	29.8	400	25.3	475	26.8	4/3	20.0	475	24.5	407	19.0	475	21.1	395	16.3	475	18.7	387	14.3	475	17.2	381
	120 in 144 in	26.4	330	26.7	305	22.0	330	22.4	301	18.9	330	19.3	297	16.5	330	17.0	293	20.5		20.0	-03	22.0		24.5	-04	13.0	-75	21.1	- 535	10.5	- 15	10.7	- 337	14.5		11.2	501
	144 111	20.4	550	20.7	1 303	22.0	1 330	22.4	501	10.9	1 330	1 10.0	231	10.5	1 330	17.0	200	1		1			1	I		11				1			لــــــــــــــــــــــــــــــــــــــ				

	Substrate:		3k Co	ncrete		3.5k Conc.			Hollow	or Filled CN	ΛU			Filled CMU		W W	ood	Metal
Anchor/Clip Capacity (lbs) when using a	Anchor Type:		DeWalt acon+		eWalt con+	5/16" DeWalt Ultracon		DeWalt con+		eWalt con+	1/4" DeWalt CreteFlex	1/4" DeWalt AggreGator	3/16" DeWalt Ultracon+	1/4" DeWalt Ultracon+	1/4" DeWalt AggreGator	#12 Steel Screw	#14 Steel Screw	#12 Steel Screw
1" x 4" x 3/8" Tube Mullion	Edge Distance (in):	1"	2-1/2"	1"	2-1/2"	3-1/8"	1"	2-1/2"	1"	2-1/2"	2-1/2"	2"	1"	1"	2"	0.54"	0.60"	0.324"
	Embedment (in):	1-3/4"	1-3/4"	1-3/4"	1-3/4"	2"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-3/4"	1-3/4"	2"	1-3/8"	1-3/8"	See Sheet
2 Anchors @ 4.75" Min.	O.C. / Mullion Clip (Fig. 1):	310 lbs	630 lbs	220 lbs	870 lbs	1644 lbs	230 lbs	370 lbs	320 lbs	580 lbs	514 lbs	374 lbs	170 lbs	410 lbs	946 lbs	442 lbs	537 lbs	536 lbs
4 Anchors @ 2.375" Min.	O.C. / Mullion Clip (Fig. 2):	620 lbs	1260 lbs	423 lbs	1723 lbs	1109 lbs	402 lbs	740 lbs	532 lbs	1077 lbs	931 lbs	N/A	340 lbs	547 lbs	N/A	885 lbs	1073 lbs	1073 lbs
8 Anchors @ 1.25" Min.	O.C. / Mullion Clip (Fig. 3):	707 lbs	2520 lbs	760 lbs	N/A	N/A	N/A	1480 lbs	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1770 lbs	2146 lbs	2146 lbs
4 Total Anchors @ 3.25" O.C. thru	2x5 Angle Clip Pair (Fig. 4):	620 lbs	1260 lbs	440 lbs	1740 lbs	2211 lbs	460 lbs	740 lbs	640 lbs	1160 lbs	994 lbs	748 lbs	340 lbs	694 lbs	1892 lbs	885 lbs	1073 lbs	1073 lbs
6 Total Anchors @ 3" O.C. thru	2x5 Angle Clip Pair (Fig. 5):	930 lbs	1890 lbs	660 lbs	2610 lbs	2844 lbs	690 lbs	1110 lbs	960 lbs	1740 lbs	1482 lbs	1122 lbs	510 lbs	978 lbs	2838 lbs	1327 lbs	1610 lbs	1609 lbs
4 Anchors @ 0.79	" Min. O.C. / U-Clip (Fig. 6):	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1073 lbs
0	" Min. O.C. / F-Clip (Fig. 7):	310 lbs	630 lbs	212 lbs	862 lbs	555 lbs	201 lbs	370 lbs	266 lbs	538 lbs	466 lbs	N/A	170 lbs	274 lbs	N/A	442 lbs	537 lbs	536 lbs
4 Anchors @ 1.25	" Min. O.C. / F-Clip (Fig. 8):	353 lbs	1260 lbs	380 lbs	N/A	N/A	N/A	740 lbs	N/A	N/A	N/A	N/A	N/A	N/A	N/A	885 lbs	1073 lbs	1073 lbs





1.25" MIN.



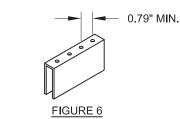


FIGURE 1

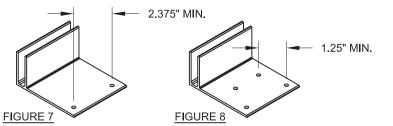


TABLE NOTES:

1) LINEAR INTERPOLATION BETWEEN MULLION SPANS AND/OR ÓPENING DIMENSIONS IS ALLOWABLE.

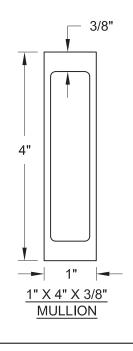
2) MULLION AND MULLION CLIPS SHOWN ARE NOT TO SCALE. FOR EXACT DIMENSIONS, SEE SHEETS 21-23. HOLES MAY BE DRILLED IN THE FIELD FOLLOWING DIMENSIONAL RESTRICTIONS SHOWN ON THIS SHEET. FIGURES SHOW SUGGESTED, APPROXIMATE HOLE LOCATIONS. CLIP HOLES TO BE NO CLOSER THAN 3/8" O.C. FROM CLIP EDGE.

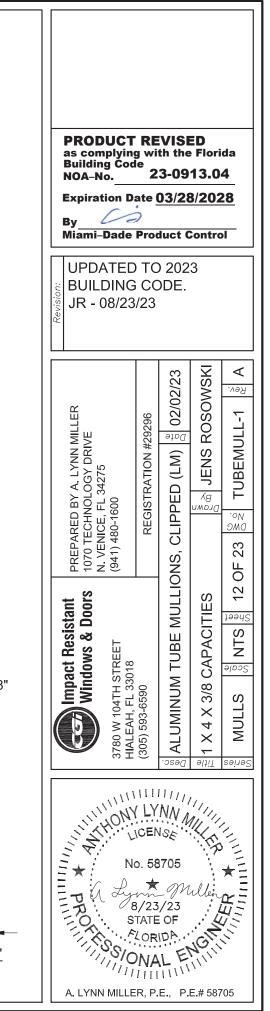
3) SEE SHEET 1 FOR ADDITIONAL ANCHOR/SUBSTRATE NOTES.

ANCHOR CAPACITY ADJUSTMENT FORMULA:

3" MIN.

$$(\mathsf{DP}_{\mathsf{req}}) \times \left(\frac{\mathsf{ANCHOR CAP}_{\mathsf{FROM TABLE}}}{\mathsf{MULLION CAP}_{\mathsf{FROM TABLE}}} \right) = \mathsf{ANCHOR CAP}_{\mathsf{Req.}}$$





TAB	LE 7A:																																				
																		Оре	ening [Dimens	sion																
	x 2-1/8" x		50) in			60) in			70	0 in			8) in			90	in			10	0 in			12) in			14() in			160	60 in	
	1/8" Fin	Rectar	ngular	Trap/	Triang.	Recta	angular	Trap/	Triang.	Recta	ngular	Trap/	Friang.	Recta	angular	Trap/1	riang.	Recta	ngular	Trap/	Triang.	Recta	angular	Trap/	Friang.	Recta	ngular	Trap/T	riang.	Recta	ingular	Trap/	Triang.	Recta	angular	Trap/T	Triang.
	be Mullion Design	Load	ding	Loa	ding	Loa	iding	Loa	ding	Loa	ding	Loa	ding	Loa	iding	Loa	ding	Loa	ding	Loa	ding	Loa	ding	Loa	ding	Loa	ding	Loa	ding	Loa	ding	Loa	ding	Loa	ading	Load	ding
	essure &	ť	ty	Ę	city	₹	ity	ty	city)	<u>₹</u>	ť	city	۲ ۲	city	t	₹	ty	ty	t	ty	ty	ty	city	£	ity	<u>₹</u>	t	ty	city)	city	ity	ty	۲۲.	£	⊊	£	۲
CI	ip/Anchor	apaci	apaci (Ibs)	apaci	apaci (Ibs)	apaci	apaci (Ibs)	apaci	apaci (Ibs)	apaci	apaci (Ibs)	apaci	apaci (lbs)	apaci	apaci (Ibs)	apaci	apacity (Ibs)	apaci	apaci (Ibs)	apaci	apaci (Ibs)	apaci	apaci (Ibs)	apaci	apaci (Ibs)	apaci	apaci (lbs)	apaci	apaci (Ibs)	apaci	apaci (Ibs)	apaci	apacity (Ibs)	apaci	apacity (Ibs)	apaci	Capacity id (Ibs)
	Capacity quirement	ullion Ca ss/ft ²)	nchor C equired	Mullion Ca (lbs/ft ²)	nchor C	ullion C: ss/ft ²)	nchor Ci equired	ullion C: ss/ft ²)	nchor Ca equired	ullion C. ss/ft ²)	nchor Ci equired	ullion C: ss/ft ²)	nchor C equired	ullion Ci ss/ft ²)	nchor C; equired	ullion Ci ss/ft ²)	nchor C equired	ullion C: ss/ft ²)	nchor Ci equired	ullion C: ss/ft ²)	nchor C; equired	ullion C: ss/ft ²)	nchor C	ullion Ca ss/ft ²)	nchor Ca equired	ullion Ci ss/ft ²)	nchor C equired	Mullion C: (lbs/ft ²)	nchor Ci equired	ullion C: ss/ft ²)	nchor Ci equired	ullion C: ss/ft ²)	nchor C. equired	ullion C: ss/ft ²)	nchor C equired	ullion Ci ss/ft ²)	Anchor C Required
	40.1	Ϊ (Ĵ P L	<u>Ā</u> Ā		<u> </u>	, ₽ ê	₹ ₽	ΣΞ	A R	≥≝	₹ £	<u>≥ ₹</u>	<u> </u>	л ё	₹ œ	Э́ Э́	₹ ¤	n ₩ 1	₹ œ	Σ≞	₹ ¤	≥≞	<u> </u>	≥ ≞	₹ ¤	≥≝	₹ ¤		₹ ¤	Σ≞	₹ ₽	Σ≞	ĀĒ	Ē€	₹ ₩	≥ ≞	
	42 in	144.2	526	167.0	428	120.2	526	148.9	419	103.0	526	138.9	414	90.1	526	134.6	411	80.1	526	134.1	411	72.1	526	134.1	411	60.1	526	134.1	411	51.5	526	134.1	411	45.1	526	134.1	411
	48 in	96.6	403	108.0 91.0	333	80.5	403	94.7 79.3	325	69.0	403	86.4	320	60.4	403	81.4	317	53.7	403	79.1	315	48.3	403	78.6	314	40.3	403	78.6	314	34.5	403	78.6	314	30.2	403	78.6	314
an	50-5/8 in 54 in	82.3 67.8	362	91.0 74.1	301 267	68.6 56.5	362		294	58.8 48.5	362 318	57.7	289	51.5	362	67.2	286	45.7	362	64.6	284	41.2 33.9	362 318	63.6 49.5	283	34.3	362	63.5	283	29.4 24.2	362 318	63.5	283 248	25.7 21.2	362	63.5	283
Span	54 in 60 in	49.5	318 258	53.1	207	41.2	318 258	64.2 45.7	261 214	35.3	258	40.7	256 210	42.4	318 258	53.5 37.2	253 207	37.7 27.5	318 258	50.8 34.9	250 204	24.7	258	33.4	249 203	28.3 20.6	318 258	49.1 32.2	248 201	17.7	258	49.1 32.2	240	15.5	318 258	49.1 32.2	248 201
5	63 in	49.3	234	45.6	213	35.6	230	39.1	195	30.5	230	34.7	192	26.7	234	31.6	189	27.5	230	29.4	186	24.7	230	28.0	184	17.8	230	26.6	183	15.3	230	26.5	183	13.4	230	26.5	183
Mullion	66 in	37.2	213	39.4	183	31.0	213	33.7	179	26.5	213	29.8	176	23.2	213	27.0	173	20.6	213	25.1	170	18.6	213	23.7	169	15.5	213	20.0	167	13.3	213	20.0	166	11.6	213	20.0	166
Ξ	72 in	28.6	179	30.1	155	23.9	179	25.6	152	20.4	179	22.5	149	17.9	179	20.3	147	15.9	179	18.7	145	14.3	179	17.5	143	11.9	179	16.1	141			0					
	76 in	24.3	161	25.4	140	20.3	161	21.6	137	17.4	161	19.0	135	15.2	161	17.0	133																				
	78 in	22.5	152	23.5	133	18.8	152	19.9	131	16.1	152	17.5	128											1										, <u> </u>			

	Substrate:		3k Co	ncrete		3.5k Conc.			Hollow	or Filled CN	10			Filled CMU		W	bod	Metal
Anchor/Clip Capacity (lbs) when using a 1-1/4" x 2-1/8" x 1/8"	Anchor Type:		DeWalt icon+	1/4" D Ultra		5/16" DeWalt Ultracon	3/16" [Ultra		1/4" D Ultra			1/4" DeWalt AggreGator	3/16" DeWalt Ultracon+	1/4" DeWalt Ultracon+	1/4" DeWalt AggreGator	#12 Steel Screw	#14 Steel Screw	#12 Steel Screw
Fin Tube Mullion	Edge Distance (in):	1"	2-1/2"	1"	2-1/2"	3-1/8"	1"	2-1/2"	1"	2-1/2"	2-1/2"	2"	1"	1"	2"	0.54"	0.60"	0.324"
	Embedment (in):	1-3/4"	1-3/4"	1-3/4"	1-3/4"	2"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-3/4"	1-3/4"	2"	1-3/8"	1-3/8"	See Sheet 1
2 Total Anchors @ 5" O.C. thru	2x5 Angle Clip Pair (Fig. 1):	310 lbs	630 lbs	220 lbs	870 lbs	1700 lbs	230 lbs	370 lbs	320 lbs	580 lbs	517 lbs	374 lbs	170 lbs	410 lbs	946 lbs	442 lbs	537 lbs	536 lbs
4 Total Anchors @ 3.25" O.C. thru	2x5 Angle Clip Pair (Fig. 2):	620 lbs	1260 lbs	440 lbs	1740 lbs	2211 lbs	460 lbs	740 lbs	640 lbs	1160 lbs	994 lbs	748 lbs	340 lbs	694 lbs	1892 lbs	885 lbs	1073 lbs	1073 lbs

SEE SUBSTRATE PROPERTIES, SHEET 1.

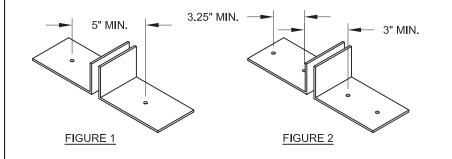


TABLE NOTES:

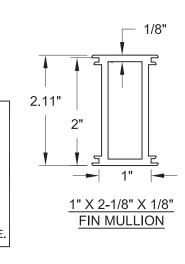
1) LINEAR INTERPOLATION BETWEEN MULLION SPANS AND/OR **OPENING DIMENSIONS IS ALLOWABLE.**

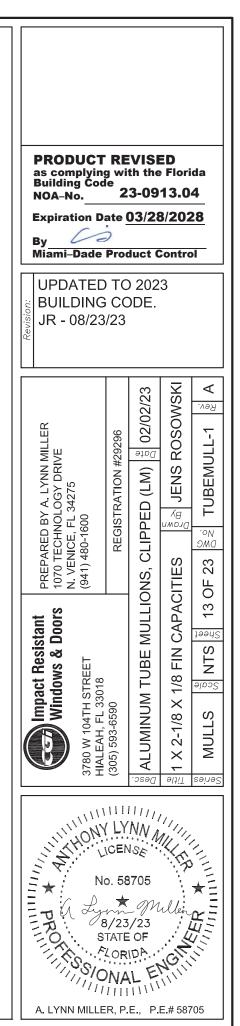
2) MULLION AND MULLION CLIPS SHOWN ARE NOT TO SCALE. FOR EXACT DIMENSIONS, SEE SHEETS 21-23. HOLES MAY BE DRILLED IN THE FIELD FOLLOWING DIMENSIONAL RESTRICTIONS SHOWN ON THIS SHEET. FIGURES SHOW SUGGESTED, APPROXIMATE HOLE LOCATIONS. CLIP HOLES TO BE NO CLOSER THAN 3/8" O.C. FROM CLIP EDGE.

3) SEE SHEET 1 FOR ADDITIONAL ANCHOR/SUBSTRATE NOTES.

ANCHOR CAPACITY ADJUSTMENT FORMULA:

$$(\mathsf{DP}_{\mathsf{req}}) \times \left(\frac{\mathsf{ANCHOR CAP}_{\mathsf{FROM TABLE}}}{\mathsf{MULLION CAP}_{\mathsf{FROM TABLE}}}\right) = \mathsf{ANCHOR CAP}_{\mathsf{Req}}$$



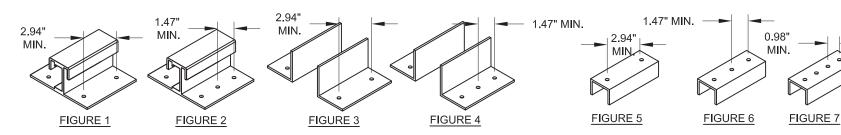


TAB	LE 8A:																																				
																		Оре	ening l	Dimen	sion																
2"	x 4" x 1/8"		50) in			60) in			70) in			80) in			90	0 in			10	0 in			120) in			14	0 in			160) in	
	be Mullion Design	Recta Load	•	· ·	Triang. ading		angular ading	· ·	Triang. ading	Recta Loa	•	Trap/1 Loa	0	Recta Loa	ingular ding	· ·	Friang. ding	Recta Loa	0	Trap/ ⁻ Loa	Friang. ding		angular ading	Trap/1 Loa	· · ·	Recta Loa	•	Trap/T Loa	0		ingular ding	Trap/T Loa	~	Recta Load	~ I	Trap/T Load	
Cli	ressure & ip/Anchor Capacity quirement	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (Ibs)	Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/f t ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/f t ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft²)	Anchor Capacity Required (lbs)
	42 in	170.0	620	170.0	435	170.0	744	170.0	478	170.0	868	170.0	506	170.0	992	170.0	519	170.0	1116	170.0	521	170.0	1240	170.0	521	170.0	1488	170.0	521	170.0	1735	170.0	521	170.0	1983	170.0	521
[48 in	170.0	708	170.0	524	170.0	850	170.0	584	170.0	992	170.0	630	170.0	1133	170.0	661	170.0	1275	170.0	677	170.0	1417	170.0	680	170.0	1700	170.0	680	170.0	1983	170.0	680	170.0	2267	170.0	680
[50-5/8 in	170.0	747	170.0	563	170.0	896	170.0	631	170.0	1046	170.0	684	170.0	1195	170.0	723	170.0	1345	170.0	747	170.0	1494	170.0	756	170.0	1793	170.0	756	170.0	2092	170.0	756	170.0	2391	170.0	756
	54 in	170.0	797	170.0	612	170.0	956	170.0	691	170.0	1116	170.0	754	170.0	1275	170.0	803	170.0	1434	170.0	837	170.0	1594	170.0	856	170.0	1913	170.0	861	165.9	2177	170.0	861	145.2	2177	170.0	861
	60 in	170.0	885	170.0	701	170.0	1063	170.0	797	170.0	1240	170.0	878	170.0	1417	170.0	944	170.0	1594	170.0	996	169.3	1764	170.0	1033	141.1	1764	170.0	1063	120.9	1764	170.0	1063	105.8	1764	170.0	1063
ا ۾ ا	63 in	170.0	930	170.0		170.0	1116	170.0	850	170.0	1302	170.0	940	170.0	1488	170.0	1015	162.5	1600	170.0	1076	146.3	1600	170.0	1122	121.9	1600	170.0	1169	104.5	1600	170.0	1171	91.4	1600	170.0	1171
Spa	66 in	170.0	974	170.0		170.0	1169	170.0	903	170.0	1364	170.0	1002	159.0	1458	170.0	1086	141.3	1458		1155	127.2	1458	162.3	1155	106.0	1458	152.3		90.9	1458	150.6	1139	79.5	1458	150.6	1139
	72 in	170.0	1063	170.0		163.3	1225	170.0	1009	140.0	1225	154.2	1022	122.5	1225	139.1	1005	108.9	1225		990	98.0	1225	120.0	979	81.7	1225	110.1	964	70.0	1225	106.5	958	61.2	1225	106.3	957
Mullion	76 in	166.6	1099	170.0		138.9	1099	148.0	940	119.0	1099	129.8	923	104.1	1099	116.7	908	92.6	1099	107.0	895	83.3	1099	99.8	884	69.4	1099	90.6	868	59.5	1099	86.4	861	52.1	1099	85.6	859
	78 in	154.1	1044	160.7	914	128.4	1044	136.5	896	110.1	1044	119.6	879	96.3	1044	107.3	865	85.6	1044		852	77.1	1044	91.4	841	64.2	1044	82.6	826	55.0	1044	78.3	818	48.2	1044	77.2	815
<pre>[</pre>	90 in	100.3	784	103.5		83.6	784	87.5	684	71.7	784	76.2	672	62.7	784	68.0	661	55.7	784	61.8	651	50.2	784	57.0	643	41.8	784	50.3	629	35.8	784	46.4	620	31.4	784	44.3	615
	96 in	82.7	689	85.0	616	68.9	689	71.7	605	59.1	689	62.3	595	51.7	689	55.5	586	45.9	689	50.3	577	41.3	689	46.2	570	34.4	689	40.5	557	29.5	689	37.0	548	25.8	689	34.8	542
	108 in	58.1	544	59.3	492	48.4	544	49.9	484	41.5	544	43.3	476	36.3	544	38.4	469	32.3	544	34.6	463	29.0	544	31.7	457	24.2	544	27.5	446	20.7	544	24.7	438	18.1	544	22.9	432
	111 in	53.5	515	54.6	467	44.6	515	45.9	459	38.2	515	39.8	452	33.4	515	35.2	446	29.7	515	31.8	439	26.7	515	29.1	434	22.3	515	25.1	424	19.1	515	22.5	416	16.7	515	20.8	410
	120 in 144 in	42.3	441	43.1	402	35.3 20.4	441 306	36.2 20.8	396 279	30.2	441	31.3	390 275	26.5	441	27.7	384	23.5	441	24.9	379	21.2	441	22.7	375	17.6	441	19.5	366	15.1	441	17.4	359				
	144 IN	24.5	306	24.8	283	20.4	300	20.8	219	17.5	306	17.9	215																								

TABLE 8B:

ADEE OD.																		1
	Substrate:		3k Co	ncrete		3.5k Conc.			Hollow	or Filled Cl	NU	_		Filled CMU		W	ood	Metal
Anchor/Clip Capacity (lbs) when using a	Anchor Type:		DeWalt icon+	1/4" D Ultra	eWalt con+	5/16" DeWalt Ultracon		DeWalt acon+		eWalt con+	1/4" DeWalt CreteFlex	1/4" DeWalt AggreGator	3/16" DeWalt Ultracon+	1/4" DeWalt Ultracon+	1/4" DeWalt AggreGator	#12 Steel Screw	#14 Steel Screw	#12 Ste Screw
2" x 4" x 1/8" Tube Mullion	Edge Distance (in):	1"	2-1/2"	1"	2-1/2"	3-1/8"	1"	2-1/2"	1"	2-1/2"	2-1/2"	2"	1"	1"	2"	0.54"	0.60"	0.324'
	Embedment (in):	1-3/4"	1-3/4"	1-3/4"	1-3/4"	2"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-3/4"	1-3/4"	2"	1-3/8"	1-3/8"	See Shee
4 Anchors @ 2.94" Min	. O.C. / Mullion Clip (Fig. 1):	620 lbs	1260 lbs	437 lbs	1737 lbs	1739 lbs	448 lbs	740 lbs	618 lbs	1143 lbs	977 lbs	N/A	340 lbs	631 lbs	N/A	885 lbs	1073 lbs	1073 lb
6 Anchors @ 1.47" Min	. O.C. / Mullion Clip (Fig. 2):	605 lbs	1890 lbs	593 lbs	N/A	N/A	N/A	1110 lbs	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1327 lbs	1610 lbs	1609 lk
4 Total Anchors @ 2.94" O.C. thru	2x5 Angle Clip Pair (Fig. 3):	620 lbs	1260 lbs	437 lbs	1737 lbs	1739 lbs	448 lbs	740 lbs	618 lbs	1143 lbs	977 lbs	N/A	340 lbs	631 lbs	N/A	885 lbs	1073 lbs	1073 lb
6 Total Anchors @ 1.47" O.C. thru	2x5 Angle Clip Pair (Fig. 4):	605 lbs	1890 lbs	593 lbs	N/A	N/A	N/A	1110 lbs	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1327 lbs	1610 lbs	1609 lb
2 Anchors @ 2.94	4" Min. O.C. / U-Clip (Fig. 5):	310 lbs	630 lbs	218 lbs	868 lbs	869 lbs	224 lbs	370 lbs	309 lbs	572 lbs	488 lbs	N/A	170 lbs	316 lbs	N/A	442 lbs	537 lbs	536 lbs
3 Anchors @ 1.47	" Min. O.C. / U-Clip (Fig. 6):	303 lbs	945 lbs	296 lbs	N/A	N/A	N/A	555 lbs	N/A	N/A	N/A	N/A	N/A	N/A	N/A	664 lbs	805 lbs	805 lbs
4 Anchors @ 0.98	3" Min. O.C. / U-Clip (Fig. 7):	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	885 lbs	1073 lbs	1073 lb
2 Anchors @ 2.94	4" Min. O.C. / F-Clip (Fig. 8):	310 lbs	630 lbs	218 lbs	868 lbs	869 lbs	224 lbs	370 lbs	309 lbs	572 lbs	488 lbs	N/A	170 lbs	316 lbs	N/A	442 lbs	537 lbs	536 lbs
3 Anchors @ 1.47	7" Min. O.C. / F-Clip (Fig. 9):	303 lbs	945 lbs	296 lbs	N/A	N/A	N/A	555 lbs	N/A	N/A	N/A	N/A	N/A	N/A	N/A	664 lbs	805 lbs	805 lbs

SEE SUBSTRATE PROPERTIES, SHEET 1.



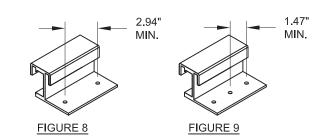


TABLE NOTES:

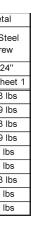
1) LINEAR INTERPOLATION BETWEEN MULLION SPANS AND/OR OPENING DIMENSIONS IS ALLOWABLE.

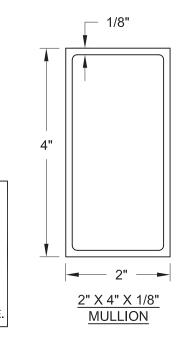
2) MULLION AND MULLION CLIPS SHOWN ARE NOT TO SCALE. FOR EXACT DIMENSIONS, SEE SHEETS 21-23. HOLES MAY BE DRILLED IN THE FIELD FOLLOWING DIMENSIONAL RESTRICTIONS SHOWN ON THIS SHEET. FIGURES SHOW SUGGESTED, APPROXIMATE HOLE LOCATIONS. CLIP HOLES TO BE <u>NO CLOSER</u> <u>THAN 3/8" O.C.</u> FROM CLIP EDGE.

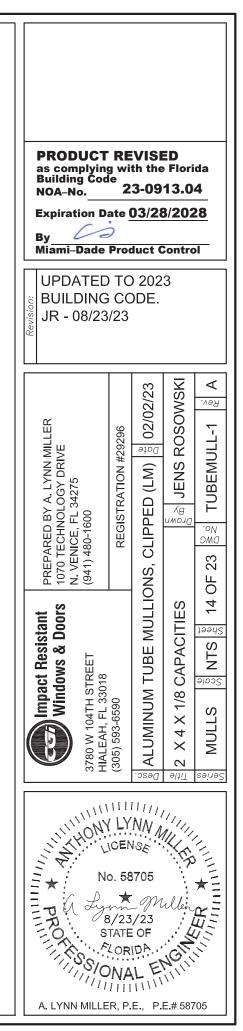
3) SEE SHEET 1 FOR ADDITIONAL ANCHOR/SUBSTRATE NOTES.

ANCHOR CAPACITY ADJUSTMENT FORMULA:

$$(\mathsf{DP}_{\mathsf{REQ}}) \times \left(\frac{\mathsf{ANCHOR CAP}_{\mathsf{FROM TABLE}}}{\mathsf{MULLION CAP}_{\mathsf{EQUALTABLE}}} \right) = \mathsf{ANCHOR CAP}_{\mathsf{REQ}}$$







																		Оре	ening [Dimens	sion																
2" x 4	" x 1/4"		50	in			60) in			70) in			80) in			90) in			100) in			120) in			140	in			160	0 in	
Tube De	Mullion sign	Rectar Load	9		Triang. Iding		angular ading		Triang. Iding		angular Iding	Trap/T Loa	0		ingular ding	Trap/T Load	~	Recta Loa	0	Trap/T Loa	0	Recta Loa	0	Trap/T Load	U	Rectar Load	-	Trap/T Load	<u> </u>	Rectar Load	~ I	Trap/T Load	~	Recta Load	· ·	I '	/Triang ading
Clip// Cap	sure & Anchor pacity irement	Mullion Capacity (lbs/ft²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (Ibs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (Ibs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (Ibs)	Mullion Capacity (lbs/ft²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (Ibs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (Ibs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (Ibs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (Ibs)	Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity
	42 in	170.0	620	170.0	435	170.0	744	170.0	478	170.0	868	170.0	506	170.0	992	170.0	519	170.0	1116	170.0	521	170.0	1240	170.0	521	170.0	1488	170.0	521	170.0	1735	170.0	521	170.0	1983	170.0	52
	48 in	170.0	708	170.0	524	170.0	850	170.0	584	170.0	992	170.0	630	170.0	1133	170.0	661	170.0	1275	170.0	677	170.0	1417	170.0	680	170.0	1700	170.0	680	170.0	1983	170.0	680	170.0	2267	170.0	68
	50-5/8 in	170.0	747	170.0	563	170.0	896	170.0	631	170.0	1046	170.0	684	170.0	1195	170.0	723	170.0	1345	170.0	747	170.0	1494	170.0	756	170.0	1793	170.0	756	170.0	2092	170.0	756	170.0	2391	170.0	75
	54 in	170.0	797	170.0	612	170.0	956	170.0	691	170.0	1116	170.0	754	170.0	1275	170.0	803	170.0	1434	170.0	837	170.0	1594	170.0	856	170.0	1913	170.0	861	170.0	2231	170.0	861	170.0	2550	170.0	86
	60 in	170.0	885	170.0	701	170.0	1063	170.0	797	170.0	1240	170.0	878	170.0	1417	170.0	944	170.0	1594	170.0	996	170.0	1771	170.0	1033	170.0	2125	170.0	1063	170.0	2479	170.0	1063	170.0	2833	170.0	106
<u> </u>	63 in	170.0	930	170.0	745	170.0	1116	170.0	850	170.0	1302	170.0	940	170.0	1488	170.0	1015	170.0	1673	170.0	1076	170.0	1859	170.0	1122	170.0	2231	170.0	1169	170.0	2603	170.0	1171	163.0	2853	170.0	117
span	66 in	170.0	974	170.0	789	170.0	1169	170.0	903	170.0	1364	170.0	1002	170.0	1558	170.0	1086	170.0	1753	170.0	1155	170.0	1948	170.0	1210	170.0	2338	170.0	1275	162.0	2599	170.0	1286	141.8	2599	170.0	128
° 🗆	72 in	170.0	1063	170.0	878	170.0	1275	170.0	1009	170.0	1488	170.0	1126	170.0	1700	170.0	1228	170.0	1913	170.0	1315	170.0	2125	170.0	1387	145.6	2184	170.0	1488	124.8	2184	170.0	1529	109.2	2184	170.0	153
Mullion	76 in	170.0	1122	170.0	937	170.0	1346	170.0	1080	170.0	1570	170.0	1209	170.0	1794	170.0	1322	165.1	1960	170.0	1421	148.6	1960	170.0	1505	123.8	1960	161.6	1548	106.1	1960	154.0	1535	92.9	1960	152.7	153
<u> </u>	78 in	170.0	1151	170.0	967	170.0	1381	170.0	1116	170.0	1611	170.0	1250	170.0	1842	170.0	1369	152.7	1861	170.0	1474	137.4	1861	163.1	1500	114.5	1861	147.3	1473	98.2	1861	139.6	1459	85.9	1861	137.6	i 145
≥	90 in	170.0	1328	170.0	1144	149.1	1398	156.0	1219	127.8	1398	136.0	1198	111.8	1398	121.3	1179	99.4	1398	110.2	1162	89.5	1398	101.6	1147	74.5	1398	89.8	1122	63.9	1398	82.7	1105	55.9	1398	78.9	109
	96 in	147.4	1229	151.5	1098	122.9	1229	127.8	1079	105.3	1229	111.2	1061	92.1	1229	98.9	1044	81.9	1229	89.6	1029	73.7	1229	82.4	1016	61.4	1229	72.2	993	52.7	1229	65.9	977	46.1	1229	62.1	96
	108 in	103.5	971	105.8	877	86.3	971	89.0	862	74.0	971	77.2	849	64.7	971	68.4	837	57.5	971	61.8	825	51.8	971	56.5	815	43.1	971	49.0	796	37.0	971	44.0	782	32.4	971	40.8	_
	111 in	95.4	919	97.3	832	79.5	919	81.9	819	68.1	919	70.9	806	59.6	919	62.9	794	53.0	919	56.7	784	47.7	919	51.8	774	39.7	919	44.8	756	34.1	919	40.2	742	29.8	919	37.1	
	120 in	75.5	786	76.8	716	62.9	786	64.5	705	53.9	786	55.8	695	47.2	786	49.4	686	41.9	786	44.4	677	37.7	786	40.5	668	31.5	786	34.9	653	27.0	786	31.0	641	23.6	786	28.4	63
	144 in	43.7	546	44.2	504	36.4	546	37.0	498	31.2	546	31.9	491	27.3	546	28.2	485	24.3	546	25.3	479	21.8	546	22.9	474	18.2	546	19.5	464	15.6	546	17.2	455				

TABLE 9B:

	Substrate:		3k Co	ncrete		3.5k Conc.			Hollow	or Filled Cl	UN			Filled CMU		W	ood	Metal
Anchor/Clip Capacity (lbs) when using a	Anchor Type:		DeWalt icon+	1/4" D Ultra	eWalt con+	5/16" DeWalt Ultracon	3/16" [Ultra	DeWalt con+		eWalt con+	1	1/4" DeWalt AggreGator	3/16" DeWalt Ultracon+	1/4" DeWalt Ultracon+	1/4" DeWalt AggreGator	#12 Steel Screw	#14 Steel Screw	#12 Steel Screw
2" x 4" x 1/4" Tube Mullion	Edge Distance (in):	1"	2-1/2"	1"	2-1/2"	3-1/8"	1"	2-1/2"	1"	2-1/2"	2-1/2"	2"	1"	1"	2"	0.54"	0.60"	0.324"
	Embedment (in):	1-3/4"	1-3/4"	1-3/4"	1-3/4"	2"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-3/4"	1-3/4"	2"	1-3/8"	1-3/8"	See Sheet
2 Anchors @ 4.75" Min	. O.C. / Mullion Clip (Fig. 1):	310 lbs	630 lbs	220 lbs	870 lbs	1644 lbs	230 lbs	370 lbs	320 lbs	580 lbs	514 lbs	374 lbs	170 lbs	410 lbs	946 lbs	442 lbs	537 lbs	536 lbs
4 Anchors @ 2.68" Min	. O.C. / Mullion Clip (Fig. 2):	620 lbs	1260 bs	430 lbs	1730 lbs	1424 lbs	425 lbs	740 os	575 lbs	1110 lbs	954 lbs	N/A	340 lbs	589 lbs	N/A	885 lbs	1073 lbs	1073 lbs
6 Anchors @ 1.71" Min	. O.C. / Mullion Clip (Fig. 3):	705 lbs	1890 lbs	608 lbs	2558 lbs	N/A	506 lbs	1110 lbs	619 lbs	1478 lbs	1304 lbs	N/A	510 lbs	647 lbs	N/A	1327 lbs	1610 lbs	1609 lbs
4 Total Anchors @ 3.25" O.C. thru	2x5 Angle Clip Pair (Fig. 4):	620 lbs	1260 lbs	440 lbs	1740 lbs	2211 lbs	460 lbs	740 lbs	640 lbs	1160 lbs	994 lbs	748 lbs	340 lbs	694 lbs	1892 lbs	885 lbs	1073 lbs	1073 lbs
6 Total Anchors @ 3" O.C. thru	2x5 Angle Clip Pair (Fig. 5):	930 lbs	1890 lbs	660 lbs	2610 lbs	2844 lbs	690 lbs	1110 lbs	960 lbs	1740 lbs	1482 lbs	1122 lbs	510 lbs	978 lbs	2838 lbs	1327 lbs	1610 lbs	1609 lbs
3 Anchors @ 1.34	" Min. O.C. / U-Clip (Fig. 6):	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	805 s
6 Anchors @ 0.64	" Min. O.C. / U-Clip (Fig. 7):	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1609 lbs
2 Anchors @ 2.68	3" Min. O.C. / F-Clip (Fig. 8):	310 lbs	630 lbs	215 lbs	865 lbs	712 lbs	213 lbs	370 lbs	288 lbs	555 lbs	477 lbs	N/A	170 lbs	295 lbs	N/A	442 lbs	537 lbs	536 lbs
3 Anchors @ 1.7	I" Min. O.C. / F-Clip (Fig. 9):	353 lbs	945 lbs	304 lbs	1279 lbs	N/A	253 lbs	555 lbs	309 lbs	739 lbs	652 lbs	N/A	255 lbs	324 lbs	N/A	664 lbs	805 lbs	805 lbs

SEE SUBSTRATE PROPERTIES, SHEET 1.

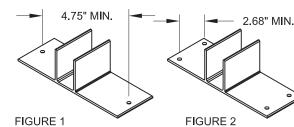
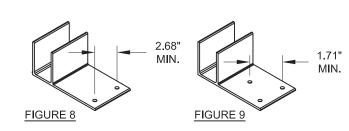
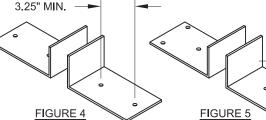


FIGURE 1

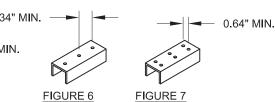


1.71" MIN. FIGURE 3

TABLE NOTES:



1.34" MIN. 3" MIN. FIGURE 6



ANCHOR CAPACITY ADJUSTMENT FORMULA:

$$\mathsf{DP}_{\mathsf{req}} X \left(\frac{\mathsf{ANCHOR CAP}_{\mathsf{FROM TABLE}}}{\mathsf{MULLION CAP}_{\mathsf{FROM TABLE}}} \right) = \mathsf{ANCHOR CAP}_{\mathsf{Rec}}$$

USE THIS FORMULA TO OBTAIN THE "ANCHOR CAPACITY REQUIRED" CORRESPONDING TO AN ACTUAL PRESSURE REQUIREMENT FOR THE OPENING, WHEN IT IS LOWER THAN THE MULLION CAPACITY (FROM THE TABLE) OF THE SELECTED MULLION. IT WILL YIELD A MINIMUM ANCHOR CAPACITY WHICH MAY BE USED TO QUALIFY ADDITIONAL ANCHOR OPTIONS FROM THE CLIP/ANCHOR CAPACITY TABLE

3) SEE SHEET 1 FOR ADDITIONAL ANCHOR/SUBSTRATE NOTES.

1) LINEAR INTERPOLATION BETWEEN MULLION SPANS AND/OR

2) MULLION AND MULLION CLIPS SHOWN ARE NOT TO SCALE.

FOR EXACT DIMENSIONS, SEE SHEETS 21-23. HOLES MAY BE

SHOWN ON THIS SHEET. FIGURES SHOW SUGGESTED,

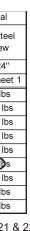
DRILLED IN THE FIELD FOLLOWING DIMENSIONAL RESTRICTIONS

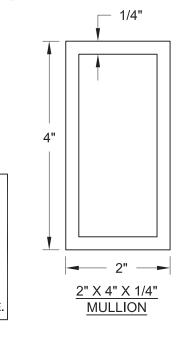
APPROXIMATE HOLE LOCATIONS. CLIP HOLES TO BE NO CLOSER

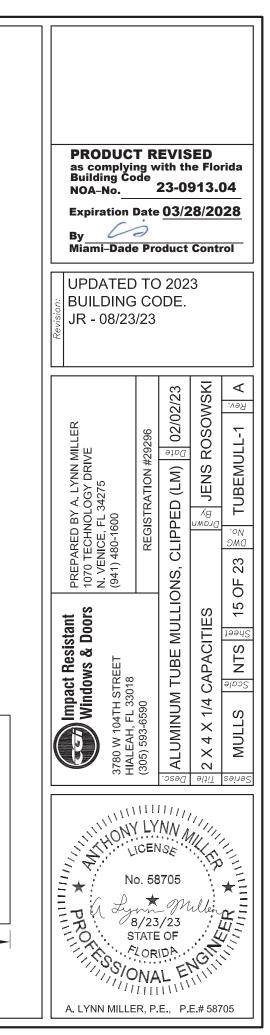
ÓPENING DIMENSIONS IS ALLOWABLE.

THAN 3/8" O.C. FROM CLIP EDGE.

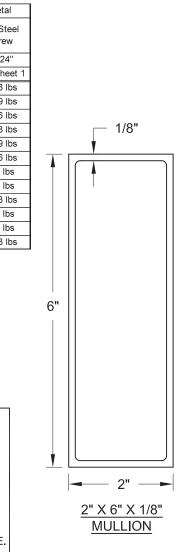
CIRCLED VALUES ARE USED IN THE EXAMPLES ON SHEETS 21 & 22.

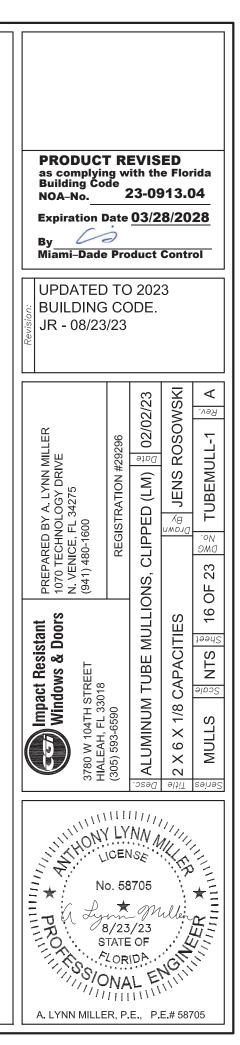




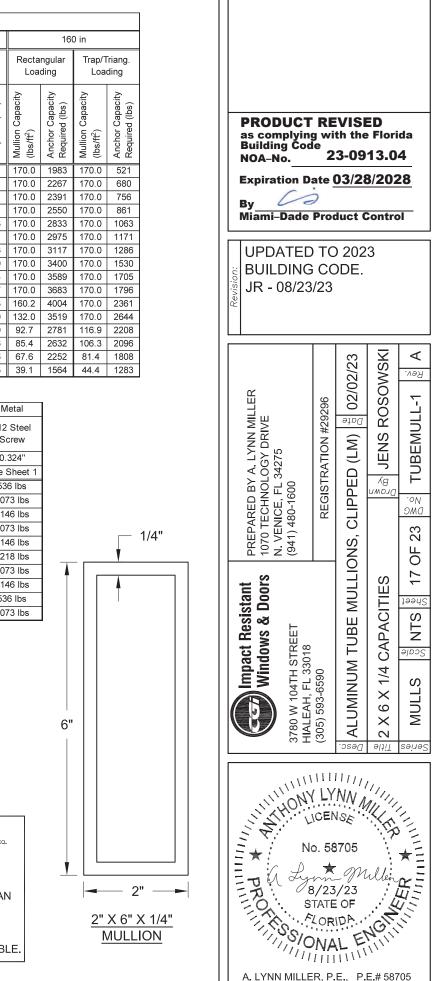


Ţ	BLE 10A:																											
					1									Openin	-	ision												
	2" x 6" x 1/8"		50 i			60 in			in			60 in			90 in			100				D in		140 in			160	
	ube Mullion Design	Rectang Loadin		Trap/Triang. Loading	Rectangula Loading	r Trap/T Load	u	ctangular ₋oading	Trap/Tria Loadir	<u> </u>	Rectangular Loading	Trap/T Loa	~	Rectangula Loading		′Triang. ading	Rectan Load	-	Trap/Tria Loadin	~ I	Rectangular Loading	Trap/Triang. Loading	Rectangul Loading		o/Triang. oading	Rectan Loadi	- I	Trap/Triang. Loading
	Pressure & Clip/Anchor Capacity Requirement	Mullion Capacity (lbs/ft ²)	duire	Mullion Capacity (lbs/ft ²) Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²) Anchor Capacity	Mullion Capacity (lbs/ft²)	Anchor Capacity Required (lbs) Mullion Capacity	(Ibs/tf ⁺) Anchor Capacity Required (Ibs)	Mullion Capacity (lbs/ft ²)	Required (lbs) Mullion Capacity	(lbs/ft ²) Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²) Anchor Capacity	Mullion Capacity (Ibs/ff ²)	hor	Mullion Capacity (lbs/ft ²)	Lire	/ff ²)	Ancrior Capacity Required (lbs)	Mullion Capacity (lbs/ft ²) Anchor Capacity Required (lbs)	Mullion Capacity (Ibs/ff ²) Anchor Capacity Required (Ibs)	Mullion Capacity (lbs/ft ²) Anchor Capacity	Required (lbs) Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Lire	Mullion Capacity (lbs/ff ²) Anchor Capacity Required (lbs)
Soon	42 in 48 in 50-5/8 in 54 in 60 in 63 in 66 in	170.0 170.0 170.0 170.0 170.0 170.0	708 747 797 885 930	170.0435170.0524170.0563170.0612170.0701170.0745170.0789	170.0 74 170.0 85 170.0 89 170.0 95 170.0 106 170.0 106 170.0 111 170.0 116	170.0 170.0 170.0 170.0 170.0 170.0 170.0 170.0 170.0 170.0	478 170 584 170 631 170 691 170 797 170 850 170 903 170	.0 992 .0 1046 .0 1116 .0 1240 .0 1302	170.0170.0170.0170.0170.0	6301768417754178781794017	70.0 992 70.0 1133 70.0 1195 70.0 1275 70.0 1417 70.0 1488 70.0 1558	170.0 170.0 170.0 170.0 170.0 170.0 170.0 170.0	519 661 723 803 944 1015 1086	170.0111170.0127170.0134170.0143170.0159170.0167170.0175	5 170.0 5 170.0 4 170.0 4 170.0 3 170.0	677 747 837 996 1076	170.0 170.0 170.0 170.0	1417 1494 1594 1771 1859	170.0 170.0 170.0 170.0 170.0 1 170.0 1	680 756 856 1033	170.01488170.01700170.01793170.01913170.02125170.02231170.02338	170.0521170.0680170.0756170.0861170.01063170.01169170.01275		83 170.0 92 170.0 31 170.0 79 170.0 03 170.0	0 680 0 756 0 861 0 1063 0 1171	170.0 170.0 170.0 170.0	1983 2267 2391 2550 2833 2975 3117	170.0 521 170.0 680 170.0 756 170.0 861 170.0 1063 170.0 1171 170.0 1286
	72 in 76 in 78 in 90 in 96 in 108 in 111 in 120 in	170.0 1 170.0 1 170.0 1 170.0 1 170.0 1 161.5 1 148.7 1 117.7 1	1122 1151 1328 1417 1514 1433 1226	170.0 878 170.0 937 170.0 967 170.0 1144 170.0 1232 164.9 1367 151.7 1297 119.7 1117	170.0 127 170.0 134 170.0 138 170.0 159 170.0 170 134.5 155 123.9 143 98.1 122	6 170.0 1 170.0 4 170.0 0 170.0 4 138.8 3 127.6 6 100.6	1009 170 1080 170 1116 170 1328 170 1434 164 1345 115 1276 106 1100 84.	.0 1570 .0 1611 .0 1859 .2 1916 .3 1514 .2 1433 1 1226	170.0 - 170.0 - 170.0 - 170.0 - 170.0 - 170.0 - 170.0 - 170.0 - 170.0 - 87.0 -	209 17 250 17 498 17 622 14 324 10 257 92 084 7	70.0 1700 70.0 1794 70.0 1842 70.0 2125 13.7 1916 50.9 1514 2.9 1433 3.6 1226	170.0 170.0 170.0 170.0 154.3 106.7 98.0 77.0	1228 1322 1369 1653 1628 1304 1239 1069	170.0191170.0201170.0207155.0218127.719189.715182.614365.4122	9 170.0 2 170.0 0 170.0 6 139.8 4 96.3 3 88.4 6 69.3	1421 1474 1793 1605 1287 1222 1055	170.0170.0139.5114.980.774.458.8	2243 2302 2180 1916 1514 1433 1226	170.0 1 170.0 1 158.4 1 128.5 1 88.1 1 80.8 1 63.2 1	1505 1564 1788 1584 1270 1206 1042	170.0 2550 170.0 2692 170.0 2763 116.2 2180 95.8 1916 67.3 1514 62.0 1433 49.0 1226	170.01488170.01629170.01700140.01749112.6154976.4124169.9117954.31019	165.5 30 153.1 29 99.6 21 82.1 19 57.7 15 53.1 14 42.0 12	57 170.0 02 170.0 80 128.9 16 102.8 14 68.7 33 62.7 26 48.4	0 1694 0 1777 9 1724 8 1523 7 1219 7 1157 4 1000	144.8 133.9 87.2 71.8 50.5 46.5 36.8	3400 3057 2902 2180 1916 1514 1433 1226	170.01530170.01705170.01796123.1170996.9150763.6120257.8114144.3984
<u>т</u> ,	144 in	68.1	851	68.9 786	56.8 85		776 48. 3k C	7 851	49.8		2.6 851 Conc.	43.9	756	37.8 85 Hollow c	1 39.4 or Filled C	1 1	34.1	851	35.8	739	28.4 851 Filled CMU	30.5 724	24.3 85		3 710	21.3	851	24.2 698
	Anchor/Clip when 2" x 6" x 1/8"	using a			Anchor Ty	U	6" DeWalt Itracon+	Ultra	DeWalt acon+	Ultr	DeWalt acon	3/16" D Ultrac	on+	1/4" D Ultrad	con+	1/4" DeV CreteFl	ex Ag	1" DeWa ggreGato	or Ultrad	con+	1/4" DeWalt Ultracon+	1/4" DeWalt AggreGator	#12 Steel Screw	#14 Stee Screw	Sc	rew		
					dge Distance (Embedment (n): 1-3/4		1" 1-3/4"	2-1/2" 1-3/4"	2		1" 1-1/4"	2-1/2" 1-1/4"	1" 1-1/4"	2-1/2" 1-1/4"	2-1/2' 1-1/4'	"	2" 1-1/4"	1-3	/4''	1" 1-3/4"	2" 2"	0.54" 1-3/8"	0.60" 1-3/8"	See S			
	6 8 4 Total Ar	Anchors @ Anchors @ nchors @ 4"	2.47" 1.65" 0.C. t	Min. O.C. / Mu Min. O.C. / Mu Min. O.C. / Mu hru 2x5 Angle hru 2x5 Angle	Illion Clip (Fig. Illion Clip (Fig. Clip Pair (Fig.	2): 930 lb 3): 907 lb	s 1890 lbs s 2520 lbs s 1260 lbs	440 lbs 638 lbs 807 lbs 440 lbs 638 lbs	1740 lbs 2588 lbs 3407 lbs 1740 lbs 2588 lbs	178 N 295	32 lbs (1/A (52 lbs 4	460 lbs 511 lbs 563 lbs 460 lbs 511 lbs	740 lbs 1110 lbs 1480 lbs 740 lbs 1110 lbs	640 lbs 8 814 lbs 8 803 lbs 640 lbs 8 814 lbs	1160 lbs 1628 lbs 1953 lbs 1160 lbs 1628 lbs	994 lb 1406 lk 1727 lk 1011 lk 1406 lk	os os os	748 lbs N/A N/A 748 lbs N/A	340 510 680 340 510	lbs lbs lbs	694 lbs 836 lbs 842 lbs 820 lbs 836 lbs	1892 lbs N/A N/A 1892 lbs N/A	885 lbs 1327 lbs 1770 lbs 885 lbs 1327 lbs	1073 lbs 1610 lbs 2146 lbs 1073 lbs 1610 lbs	s 1609 s 2140 s 1073	3 lbs 9 lbs 6 lbs 3 lbs 9 lbs		_ 1/8"
		ors @ 1.65" 2 An 3 Ancho 4 Ancho	' O.C. t ichors (ors @ 2 ors @ 1	hru 2x5 Angle	Clip Pair (Fig. . / U-Clip (Fig. . / U-Clip (Fig. . / U-Clip (Fig.	6): 907 lb 7): 310 lb 8): 465 lb 9): 453 lb	s 2520 lbs s 630 lbs s 945 lbs s 1260 lbs	807 lbs 220 lbs 319 lbs 403 lbs	3407 lbs 870 lbs 1294 lbs 1703 lbs	N 147 891 N	I/A 6 76 lbs 2 1 lbs 3 I/A 3	663 lbs 230 lbs 306 lbs 332 lbs	1480 lbs 370 lbs 555 lbs 740 lbs	 803 lbs 320 lbs 407 lbs 402 lbs 	1953 lbs 580 lbs 814 lbs 977 lbs	1727 lb 505 lb 703 lb 863 lb	s : s : s	N/A 374 lbs N/A N/A	680 170 255 340	lbs lbs lbs lbs	842 lbs 410 lbs 418 lbs 421 lbs	N/A 946 lbs N/A N/A	1770 lbs 442 lbs 664 lbs 885 lbs	2146 lbs 537 lbs 805 lbs 1073 lbs	s 2146 5 536 5 805 5 1073	6 lbs 6 lbs 6 lbs 7 lbs 3 lbs		
		3 Anchor 4 Anchor	rs @ 2. rs @ 1.	2 4" Min. O.C. 47" Min. O.C. 65" Min. O.C.	/ F-Clip (Fig. /	1): 465 lb	s 945 lbs	220 lbs 319 lbs 403 lbs	870 lbs 1294 lbs 1703 lbs	891	1 lbs :		370 lbs 555 lbs 740 lbs	407 lbs	580 lbs 814 lbs 977 lbs	505 lb 703 lb 863 lb	s	374 lbs N/A N/A	170 255 340	lbs	410 lbs 418 lbs 421 lbs	946 lbs N/A N/A	442 lbs 664 lbs 885 lbs	537 lbs 805 lbs 1073 lbs	805	i lbs i lbs 3 lbs		
SI 3.25" MIN.			2	ATT AIN.		.65" AIN.		•			4" MIN.			2.47 MIN.			1	/IN. — I.65" MIN.			2.47" MIN.	•		•	_		6"	
	FIGU 4" MIN.			EIGURE	2	1.65" MIN.	3	<u>F</u>	1) LII OPE 2) MI FOR DRIL SHO	<u>E NOT</u> NEAR IN NING D JLLION EXACT LED IN WN ON	ES: NTERPOL IMENSIO AND MU DIMENS THE FIEL THIS SH	NS IS A LLION C IONS, S .D FOLL EET. FIG	- BETWE LLOWA CLIPS S EE SH OWING GURES	EEN MULLI	RE NOT 3. HOLE IONAL F JGGES1	TO SCAI S MAY E ESTRIC ED,	LE. BE TIONS		(DP _{REQ}) USE THI REQUIR REQUIR THE MU	CAP/ X (- IS FO RED" (REMEI JLLIOI	ACITY ADJU ANCHOR (MULLION (RMULA TO (CORRESPOR NT FOR THE N CAPACITY	CAP. FROM TABLE CAP. FROM TABLE OBTAIN THE NDING TO A OPENING, ' (FROM THI) = ANC "ANCHOR N ACTUAL WHEN IT IS TABLE) C	HOR C PRESSI S LOWE	URE R THAN		V	2" X 6" X 1
	FIGUR	<u>E 10</u>		<u>FIGUR</u>	<u>E 11</u>	<u>FIG</u>	URE 12				<u>).C.</u> FROM ET 1 FOR			ANCHOR/S	SUBSTR	ATE NO	TES.		CAPACI	TY W	IULLION. IT V HICH MAY B TIONS FROM	BE USED TO	QUALIFY A	ADDITIO	NAL	Ξ.		MULLIO



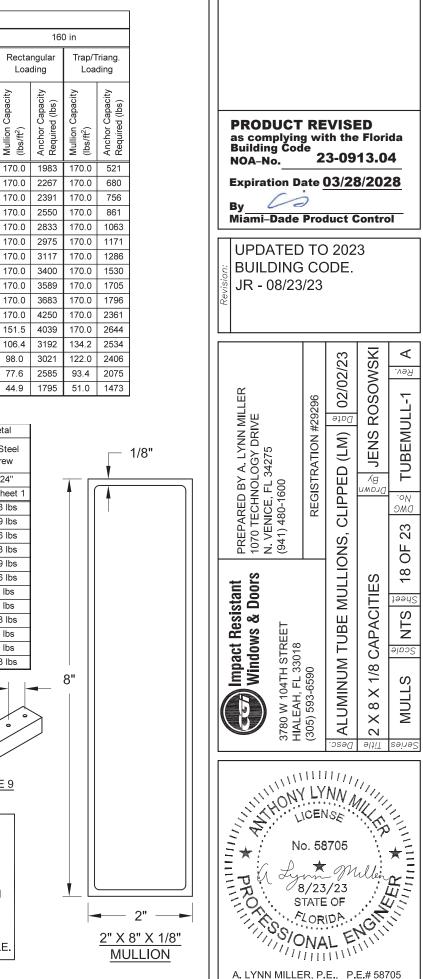


	LE 11A:																	Ope	nina	Dimen	sion													
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C	ip/Anchor Capacity	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity
	42 in 48 in	170.0 170.0	620 708	170.0 170.0	435 524	170.0 170.0	744 850	170.0 170.0	478 584	170.0 170.0	868 992	170.0 170.0	506	170.0 170.0	992 1133	170.0	519 661	170.0 170.0	1116 1275	170.0		170.0 170.0	1240 1417	170.0 170.0	521 680	170.0 170.0	1488 1700	170.0 170.0	521 680	170.0 170.0	1735 1983	170.0 170.0	521 1	
	50-5/8 in 54 in	170.0 170.0	747 797	170.0 170.0	563 612	170.0 170.0	896 956	170.0 170.0	631 691	170.0 170.0	1046 1116	170.0 170.0	754	170.0 170.0		_	723 803	170.0 170.0	1345 1434	170.0	747 837	170.0 170.0	1494 1594	170.0 170.0	756 856	170.0 170.0	1793 1913	170.0 170.0	756 861	170.0 170.0	2092 2231	170.0 170.0	861 1	170
u	60 in 63 in	170.0 170.0	885 930	170.0 170.0	701 745	170.0 170.0	1116	170.0	850	170.0	1302	170.0 170.0	940	170.0		_		170.0 170.0	1673	170.0	1076	170.0	1859	170.0	1033 1122	170.0 170.0	2125 2231	170.0 170.0	1063 1169	170.0	2603	170.0	1171 1	170
n Spa	72 in	170.0	1063	170.0	878	170.0	1275	170.0	1009	170.0	1488	170.0	1126	170.0	1700	170.0	1228	170.0	1913	170.0	1315	170.0	2125	170.0	1387	170.0	2550	170.0	1488	170.0	2975	170.0	1529 1	170
Aullio	78 in	170.0	1151	170.0	967	170.0	1381	170.0	1116	170.0	1611	170.0	1250	170.0	1842	170.0	1369	170.0	2072	170.0	1474	170.0	2302	170.0	1564	170.0	2763	170.0	1700	170.0	3223	170.0	1777 1	170
	96 in	170.0	1417	170.0	1232	170.0	1700	170.0	1434	170.0	1983	170.0	1622	170.0	2267	170.0	1794	170.0	2550	170.0	1952	170.0	2833	170.0	2095	170.0	3400	170.0	2338	150.8	3519	170.0	2520 1	132
	111 in	170.0	1638	170.0	1454	170.0	1966	170.0	1700	170.0	2293	170.0	1932	170.0	2621	170.0	2149	151.8	2632	162.3	2245	136.6	2632	148.4	2216	113.8	2632	128.4	2166	97.6	2632	115.1	2126	85.
	144 in	125.1	1564	126.6			1564	106.1	1425	89.4	1564			78.2	1564	80.7	1390	69.5	1564		1373	62.6	1564	65.7	1358	52.1	1564	56.0	1330	44.7	1564	49.2		
	LE 11B:					Si	ubstrate			3k Con	crete		3.	.5k Cor	nc.			Hol	low or	Filled CI	ЛU					Fille	d CMU				Wood		Met	tal
	-			5)		Anch	ior Type																											
2		-		n 📄	E	-	. ,	1"			1"		'	3-1/8"		1"				2-1/2"	2-1/	2"	2"		1"		1"	2	2"	0.54'	'	0.60"	0.32	24"
						ullion Clip	(Fig. 1)	310	bs 6	30 lbs	220 lbs	870 lb	s	1644 lb	s i	230 lbs	370 lbs	320	bs	580 lbs	514	lbs	374 lbs	; 1	70 lbs	4'	10 lbs	946	ibs	442 lb	s	537 lbs	536	lbs
			-								440 lbs 810 lbs			3232 lb N/A									748 lbs N/A											
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	12 Total Ancho										1265 lbs N/A	s 5165 lt N/A	os :	3092 lb N/A	s 1	188 lbs N/A	2220 lb N/A			3205 lbs N/A			N/A N/A	10		_		_		2654 I N/A	bs (3220 lbs N/A		
			-								N/A 220 lbs	N/A 870 lb	s	N/A 1616 lb	s	N/A 230 lbs	N/A 370 lbs			N/A 580 lbs			N/A 374 lbs	5 1		_				N/A 442 lb	s	N/A 537 lbs		
SE	SUBSTRA		-				Fig. 10)	470	bs 12	60 lbs	405 lbs	1705 lt	os	N/A		338 lbs	740 lbs	s 413 I	bs	985 lbs	869	lbs	N/A	3	40 lbs	43	32 lbs	N	/A	885 lb	s ·	1073 lbs	1073	lbs
						4.			1.71" N			0	3.2	25" MI	N				3" M	MIN. –				\sim			← 2. 1.65" MIN.	34" MIN	N.					
<u> </u>			-	FIGU	<u>RE 2</u>	~			<u>FIGU</u>	IRE 3	°/			<u>FIGU</u>	<u>RE 4</u>	\checkmark		<u>Fl</u>	GURI	<u>E 5</u>			<u>FIG</u>	<u>URE 6</u>	~			FIGU	<u>RE 7</u>		<u>F</u>	GURE	<u>8</u>	
	Opention The 's t																																	
	FIGURE	9	>	Ē			>					FOF DRI SHO APF <u>TH</u>	R EXA LLED DWN (PROXI AN 3/8	CT DI IN TH ON TH IMATE 3" O.C.	MENS IE FIE IIS SH E HOL FRO	SIONS, LD FOL IEET. F E LOCA M CLIP	SEE SI LOWIN IGURE ATIONS EDGE	HEETS NG DIME S SHO\ 3. CLIP I	21-23 ENSIO N SU HOLE	3. Hole Onal F Igges ⁻ Es to F	ES MAY RESTRI TED, BE <u>NO</u>	' BE ICTION <u>CLOSE</u>	<u>=R</u>	USE REQU REQU THE SELE CAPA	THIS F JIRED' JIREMI MULLIO CTED	ORMU " CORI ENT F ON CA MULL WHICH	ILA TC RESPC OR TH PACIT ION. IT) obta DNDIN(IE ope TY (FRC T WILL ` BE US	IN THI G TO A NING, DM TH YIELD ED TC	E "ANC AN ACT WHEN E TABL A MINI QUAL	Hor (Ual P It Is E) of Mum Ify Al	CAPACI RESSU LOWEF THE ANCHC	TY IRE R THAN IR NAL	



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	Z XO Tube M Desi	ullion	Recta Loa	ngular ding	Trap/ Loa	Friang. ding		ngular ding	Trap/T Loa	-	Recta Loa	ngular ding	Trap/Tr Load	- 1		ingular ding	Trap/1 Loa	Friang. ding	Recta Loa	-		Triang. Iding	Recta Loa	-	Trap/Triang. Loading		angular ading	Trap/Triang Loading	. Recta	-	Trap/Tri Loadi	-	Re
	Pressu Clip/An Capa Require	ure & ichor city	Capacity	apacity (Ibs)	Capacity	Anchor Capacity Required (lbs)	Capacity	Capacity d (lbs)	Capacity	Capacity d (lbs)	Capacity	Anchor Capacity Required (Ibs)	Capacity	apacity (lbs)	Capacity	apacity (lbs)	apacity	Anchor Capacity Required (lbs)	Capacity	Capacity id (lbs)	Capacity	Anchor Capacity Required (lbs)	Capacity	apacity (lbs)	Capacity Capacity d (lbs)		Capacity d (lbs)	apacity apacity	apacity	Anchor Capacity Required (lbs)	apacity	apacity ((lbs)	Mullion Capacity
			Mullion (lbs/ff ²)	Anchor Ca Required	Mullion (lbs/ft ²)	Ancho Requi	Mullion (lbs/ft ²)	Anchor C Required	Mullion (lbs/ft ²)	Anchor C Required	Mullion (lbs/ff ²)	Ancho Requi	Mullion (Ibs/ff ²)	Anchor Ca Required	Mullion (lbs/ft ²)	Anchor Ca Required	Mullion (lbs/ff ²)	Ancho Requi	Mullion (lbs/ff ²)	Anchor Require	Mullion ((lbs/ff ²)	Ancho Requi	Mullion (lbs/ft ²)	Anchor Ca Required	Mullion (lbs/ft ²) Anchor Require	Mullion (lbs/ff ²)	Anchor C Required	Mullion Ca (lbs/ff ²) Anchor Ca	Mullion (lbs/ft ²)	Ancho Requi	Mullion (lbs/ff ²)	Anchor Co Required	
			170.0 170.0	620 708	170.0 170.0	435 524	170.0 170.0	744 850	170.0 170.0	478 584	170.0 170.0	868 992	170.0 170.0	506 630	170.0 170.0	992 1133	170.0 170.0	519 661	170.0 170.0	1116 1275	170.0 170.0	521 677	170.0 170.0	1240 1417	170.0 521 170.0 680	170.0 170.0		170.0 52 170.0 68		1735 1983	170.0 170.0		170 170
			170.0	700	170.0	563	170.0	896	170.0	631	170.0	1046	170.0	684	170.0	1195	170.0	723	170.0	1345	170.0	747	170.0	1417	170.0 000 170.0 756	170.0		170.0 75	_	2092	170.0		170
	5	i4 in	170.0	797	170.0	612	170.0	956	170.0	691	170.0	1116	170.0	754	170.0	1275	170.0	803	170.0	1434	170.0	837	170.0	1594	170.0 856	170.0	1913	170.0 86	I 170.0	2231	170.0		170
			170.0	885	170.0	701	170.0	1063	170.0	797	170.0	1240	170.0	878	170.0	1417	170.0	944	170.0	1594	170.0	996	170.0	1771	170.0 1033	170.0		170.0 106		2479			170
			170.0 170.0	930 974	170.0 170.0	745 789	170.0 170.0	1116 1169	170.0 170.0	850 903	170.0 170.0	1302 1364	170.0 170.0	940 1002	170.0 170.0	1488 1558	170.0 170.0	1015 1086	170.0 170.0	1673 1753	170.0 170.0	1076 1155	170.0 170.0	1859 1948	170.0 1122 170.0 1210	170.0	_	170.0 116 170.0 127		2603 2727			170 170
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			170.0	1122	170.0	937	170.0	1346	170.0	1080	170.0	1570	170.0	1209	170.0	1794	170.0	1322	170.0	2019	170.0	1421	170.0	2243	170.0 1505		-	170.0 162	_	3140			170
		'8 in	170.0	1151	170.0	967	170.0	1381	170.0	1116	170.0	1611	170.0	1250	170.0	1842	170.0	1369	170.0	2072	170.0	1474	170.0	2302	170.0 1564	170.0	2763	170.0 170	0 170.0	3223			170
	9		170.0	1328	170.0	1144	170.0	1594	170.0	1328	170.0	1859	170.0	1498	170.0	2125	170.0	1653	170.0	2391	170.0	1793	170.0	2656	170.0 1918	170.0		170.0 212	_	3719			170
			170.0 170.0	1417 1594	170.0 170.0	1232 1409	170.0 170.0	1700 1913	170.0	1434 1647	170.0	1983 2231	170.0	1622	170.0	2267 2550	170.0	1794 2078	170.0 170.0	2550 2869	170.0 170.0	1952 2271	170.0 170.0	2833	170.0 2095 170.0 2450	170.0	_	170.0 233 161.1 261		3967 3192			151 106
			170.0	1638	170.0	1409	170.0	1913	170.0 170.0	1647	170.0 170.0	2231	170.0 170.0	1870 1932	170.0 170.0	2550	170.0	2078	170.0	2869	170.0	2351	170.0	3188 3021	170.0 2450 170.0 2538	141.8		161.1 261 147.4 248	_	3192			98.
			170.0	1771	170.0	1586	170.0	2125	170.0	1859	170.0	2479	170.0	2118	155.1	2585	162.3	2254	137.9	2585	146.0	2225	124.1	2585	133.2 2197	103.4		114.6 214	_	2585			77.
	14	44 in	143.6	1795	145.3	1658	119.7	1795	121.7	1636	102.6	1795	105.0	1615	89.8	1795	92.6	1595	79.8	1795	83.0	1576	71.8	1795	75.4 1558	59.8	1795	64.3 152	6 51.3	1795	56.5	1497 4	44
		or/Clip C when u ' x 1/8'' 1	sing a Fube	a Mullio	n		Anch dge Dista Embedr	nent (in)				1/4"	DeWalt acon+ 2-1/2 1-3/4	5/1	.5k Con 6" DeW Ultracon 3-1/8" 2"	/alt	3/16" De Ultrac 1" I-1/4"		1/	/4" DeW Ultracor		IU 1/4" De CreteF 2-1/2 1-1/4	lex A	4" DeWa ggreGato 2" 1-1/4"		alt 1/4" Ult	ed CMU DeWalt racon+ 1" I-3/4"	1/4" DeWal AggreGator 2" 2"	: #12 Ste Screw 0.54" 1-3/8'	v S	4 Steel Screw 0.60" 1-3/8"	Meta #12 Str Screv 0.324 See She	teel w 4"
				-	" Min. O				620 lk		60 lbs	440 lbs	1740		2211 lbs		60 lbs	740 lbs	640		160 lbs	994 I		748 lbs	340 lbs		94 lbs	1892 lbs	885 lb		073 lbs	1073 I	
-				-	" Min. O " Min. O				930 lk 1240 l		90 lbs 20 lbs	660 lbs 843 lbs	2610 I 3443 I		3316 lbs 2061 lbs			1110 lbs 1480 lbs	960 1042		740 lbs 137 lbs	1491 1851		1122 lbs N/A	510 lbs 680 lbs)41 lbs)73 lbs	2838 lbs N/A	1327 lk 1770 lk		610 lbs 146 lbs	1609 I 2146 I	
-	4	Total Ancl		-					620 lk	_	30 lbs	440 lbs	1740	_	2952 lbs		60 lbs	740 lbs	640		160 lbs	1011		748 lbs	340 lbs		20 lbs	1892 lbs	885 lb		073 lbs	1073	
		tal Anchors							930 lk	s 18	90 lbs	660 lbs	2610 I	os	3670 lbs	s 69	90 lbs	1110 lbs	960	lbs 1	740 lbs	1497	lbs	1122 lbs	510 lbs	10)88 lbs	2838 lbs	1327 lk	us 1/	610 lbs	1609 I	lbs
_	8 Tota	al Anchors	-			-			1240		20 lbs	843 lbs	3443		2061 lbs			1480 lbs	1042		137 lbs	1851		N/A	680 lbs		073 lbs	N/A	1770 lk		146 lbs	2146	
-					s @ 4" № 23.47" №				310 lk	_	0 lbs 5 lbs	220 lbs 330 lbs	870 lb 1305 l		1476 lbs 1835 lbs			370 lbs 555 lbs	320 480		580 lbs 370 lbs	505 I 748 I		374 lbs 561 lbs	170 lbs 255 lbs	_	10 lbs 44 lbs	946 lbs 1419 lbs	442 lb: 664 lb:		537 lbs 305 lbs	536 lb 805 lb	
				-	2.313" N				620 lk		50 lbs	422 lbs			1031 lbs			740 lbs	521		068 lbs	926 1		N/A	340 lbs		37 lbs	N/A	885 lb		073 lbs	1073	
					@ 4" Mi				310 lk	os 63	0 lbs	220 lbs	870 lk		1476 lbs	3 23		370 lbs	320	lbs 5	580 lbs	505 I		374 lbs	170 lbs	4	10 lbs	946 lbs	442 lb	s 5	537 lbs	536 lk	os
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		STRATE						(Fig. 12)	620 lk	os 120	60 lbs	422 lbs	1722	os	1031 lbs	\$ 3	96 lbs	740 lbs	521	ibs 1	068 lbs	926 I	bs	N/A	340 lbs	5.	37 lbs	N/A	885 lb	3 10	073 lbs	1073 I	bs
	3.25" MIN.				3.25" MIN.			2.313 MIN				FIGUR	F 4			- 4" MIN ≥ [≤]	FIGURE			•	— 3.4 MI				4" M 2.313 MIN.	3"		3.47 MIN		•	13" MIN] F		
		¥	<u>-</u>	10011	٩		<u> </u>	JUNE	<u> </u>			1001			OTES:	-							-		ANCHOR CA					_	<u>.</u>		≚
MI	ł" –			3.47' MIN							_ 2.31 MIN		ÓP	ENING	g dime	ENSIO	ATION	ALLOW.	ABLE.						$(DP_{_{REQ}}) X$		CHOF	R CAP. FROM T	ABLE) = A	NCH	OR CA	P. _{req} .	
Ć	V.		>				>				\geq		FOI DRI SHI API	R EXA ILLED OWN PROX	IN TH ON TH	MENS E FIEL IIS SHI E HOLE	LLION (IONS, S D FOL EET. FI E LOCA // CLIP	SEE SH LOWIN IGURE: TIONS	IEETS G DIM S SHO	21-23 ENSIO W SU	B. HOLE DNAL F GGES	ES MAY RESTRI FED,	' BE ICTION		USE THIS I REQUIRED REQUIREN THE MULL SELECTED CAPACITY)" COR IENT F ION CA) MULL	RESPO FOR TH APACIT	ONDING TO IE OPENIN IY (FROM T I WILL YIEL	AN ACT G, WHEN HE TABL D A MINI	UAL PI I IT IS L .E) OF IMUM <i>I</i>	RESSUF _OWER THE ANCHOI	RE THAN R	
	<u>FIGUR</u>	<u>RE 10</u>		Ē	IGURE	11		E	IGURE	<u>12</u>			3) 8	SEE S	HEET	1 FOR	ADDIT	IONAL	ANCH	IOR/S	UBSTF	RATE N	OTES.		ANCHOR (



TAB	LE 13A:																																				
																		Оре	ening l	Dimen	sion																
3	0 Degree		50) in			60) in			70) in			80) in			90	0 in			10	00 in			120	0 in			14	0 in			160	0 in	
	be Mullion Design	Recta Load	0		Triang. Iding		angular ading		Triang. ading	Recta Loa	•	Trap/ ⁻ Loa	Friang. ding	Recta Load		Trap/1 Loa	0		angular Iding	· ·	Triang. ding		angular ading	Trap/ ⁻ Loa	Friang. ding	Recta Loa	•	Trap/1 Loa	Triang. Iding		ingular ding	Trap/T Load	9		angular ading	Trap/T Load	0
CI	ressure & lip/Anchor Capacity equirement	Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft²)	Anchor Capacity Required (lbs)
	42 in	170.0	620	170.0	435	170.0	744	170.0	478	170.0	868	170.0	506	170.0	992	170.0	519	170.0	1116	170.0	521	170.0	1240	170.0	521	170.0	1488	170.0	521	163.5	1670	170.0	521	143.1	1670	170.0	521
	48 in	170.0	708	170.0	524	170.0	850	170.0	584	170.0	992	170.0	630	170.0	1133	170.0	661	170.0	1275	170.0	677	153.4	1278	170.0	680	127.8	1278	170.0	680	109.6	1278	170.0	680	95.9	1278	170.0	680
	50-5/8 in	170.0	747	170.0	563	170.0	896	170.0	631	170.0	1046	170.0	684	163.4	1149	170.0	723	145.3	1149	170.0	747	130.7	1149	170.0	756	109.0	1149	170.0	756	93.4	1149	170.0	756	81.7	1149	170.0	756
	54 in	170.0	797	170.0	612	170.0	956	170.0	691	153.9	1010	170.0	754	134.7	1010	169.8	802	119.7	1010	161.5	795	107.7	1010	157.1	791	89.8	1010	155.9	789	76.9	1010	155.9	789	67.3	1010	155.9	789
	60 in	157.1	818	168.6	695	130.9	818	145.0	680	112.2	818	129.1	667	98.2	818	118.2	657	87.3	818	110.7	649	78.5	818	105.9	644	65.4	818	102.3	639	56.1	818	102.3	639	49.1	818	102.3	639
pan	63 in	135.7	742	144.7	634	113.1	742	124.1	620	96.9	742	110.1	609	84.8	742	100.3	599	75.4	742	93.4	591	67.8	742	88.8	586	56.5	742	84.4	580	48.5	742	84.1	580	42.4	742	84.1	580
S	66 in	118.0	676	125.1	581	98.3	676	107.0	569	84.3	676	94.6	558	73.8	676	85.9	549	65.6	676	79.6	541	59.0	676	75.3	536	49.2	676	70.6	530	42.1	676	69.8	528	36.9	676	69.8	528
Mullion	72 in	90.9	568	95.5	493	75.7	568	81.3	483	64.9	568	71.5	474	56.8	568	64.5	466	50.5	568	59.4	459	45.4	568	55.6	454	37.9	568	51.1	447	32.5	568	49.4	444	28.4	568	49.3	444
i	76 in	77.3	510	80.8	445	64.4	510	68.6	436	55.2	510	60.2	428	48.3	510	54.1	421	42.9	510	49.6	415	38.6	510	46.3	410	32.2	510	42.0	403	27.6	510	40.1	399	24.2	510	39.7	398
Σ	78 in	71.5	484	74.5	424	59.6	484	63.3	415	51.1	484	55.5	408	44.7	484	49.8	401	39.7	484	45.6	395	35.7	484	42.4	390	29.8	484	38.3	383	25.5	484	36.3	379	22.3	484	35.8	378
	90 in	46.5	364	48.0	323	38.8	364	40.6	317	33.2	364	35.4	312	29.1	364	31.5	307	25.9	364	28.7	302	23.3	364	26.4	298	19.4	364	23.3	292	16.6	364	21.5	288	14.5	364	20.5	285
	96 in	38.3	320	39.4	286	32.0	320	33.3	281	27.4	320	28.9	276	24.0	320	25.7	272	21.3	320	23.3	268	19.2	320	21.4	264	16.0	320	18.8	258	13.7	320	17.1	254	12.0	320	16.2	251
	108 in	26.9	252	27.5	228	22.4	252	23.2	224	19.2	252	20.1	221	16.8	252	17.8	218	15.0	252	16.1	215														<u> </u>		
	111 in	24.8	239	25.3	216	20.7	239	21.3	213	17.7	239	18.5	210	15.5	239	16.3	207																		<u> </u>		
	120 in	19.6	205	20.0	186	16.4	205	16.8	183																										<u> </u>		

TABLE 13B:

	Substrate:		3k Co	ncrete		3.5k Conc.	W	bod	Metal
Anchor/Clip Capacity (lbs) when using a	Anchor Type:	3/16" [Ultra			eWalt con+	5/16" DeWalt Ultracon	#12 Steel Screw	#14 Steel Screw	#12 Steel Screw
30 Degree Tube Mullion	Edge Distance (in):	1"	2-1/2"	1"	2-1/2"	3-1/8"	0.54"	0.60"	0.324"
	Embedment (in):	1-3/4"	1-3/4"	1-3/4"	1-3/4"	2"	1-3/8"	1-3/8"	See Sheet 1
2 Total Anchors @ 5" O.C. thru	2x5 Angle Clip Pair (Fig. 1):	310 lbs	630 lbs	220 lbs	870 lbs	1700 lbs	442 lbs	537 lbs	536 lbs
4 Total Anchors @ 3.25" O.C. thru	2x5 Angle Clip Pair (Fig. 2):	620 lbs	1260 lbs	440 lbs	1740 lbs	2211 lbs	885 lbs	1073 lbs	1073 lbs
6 Total Anchors @ 2.71" O.C. thru	2x5 Angle Clip Pair (Fig. 3):	930 lbs	1890 lbs	648 lbs	2598 lbs	2254 lbs	1327 lbs	1610 lbs	1609 lbs

SEE SUBSTRATE PROPERTIES, SHEET 1.

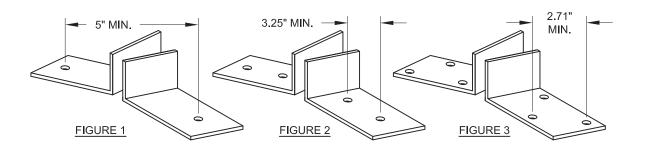


TABLE NOTES:

1) LINEAR INTERPOLATION BETWEEN MULLION SPANS AND/OR OPENING DIMENSIONS IS ALLOWABLE.

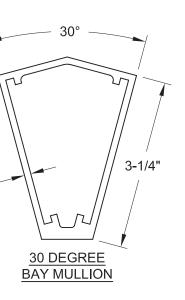
2) MULLION AND MULLION CLIPS SHOWN ARE NOT TO SCALE. FOR EXACT DIMENSIONS, SEE SHEETS 21-23. HOLES MAY BE DRILLED IN THE FIELD FOLLOWING DIMENSIONAL RESTRICTIONS SHOWN ON THIS SHEET. FIGURES SHOW SUGGESTED, APPROXIMATE HOLE LOCATIONS. CLIP HOLES TO BE <u>NO CLOSER</u> <u>THAN 3/8" O.C.</u> FROM CLIP EDGE.

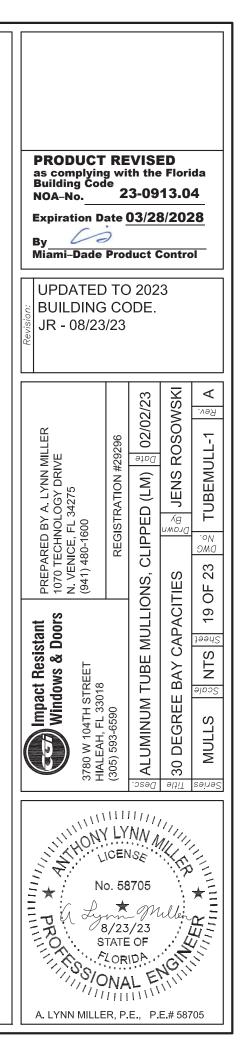
3) SEE SHEET 1 FOR ADDITIONAL ANCHOR/SUBSTRATE NOTES.

ANCHOR CAPACITY ADJUSTMENT FORMULA:

$$(DP_{REQ}) \times \left(\frac{ANCHOR CAP_{FROM TABLE}}{MULLION CAP_{FROM TABLE}}\right) = ANCHOR CAP_{REQ}$$

USE THIS FORMULA TO OBTAIN THE "ANCHOR CAPACITY REQUIRED" CORRESPONDING TO AN ACTUAL PRESSURE REQUIREMENT FOR THE OPENING, WHEN IT IS LOWER THAN THE MULLION CAPACITY (FROM THE TABLE) OF THE SELECTED MULLION. IT WILL YIELD A MINIMUM ANCHOR CAPACITY WHICH MAY BE USED TO QUALIFY ADDITIONAL ANCHOR OPTIONS FROM THE CLIP/ANCHOR CAPACITY TABLE 1/8"





TAB	LE 14A:																																				
																		Оре	ening l	Dimen	sion																
4	5 Degree		50) in			60) in			70) in			80) in			90	0 in			100	0 in			120) in			14	0 in			160	0 in	
Tu	be Mullion Design	Rectar Load	0		Triang. Iding		angular ading	Trap/ ⁻ Loa	Triang. ding	Recta Loa	ngular ding	Trap/1 Loa	riang. ding	Recta Load	0	Trap/T Load	•		ingular iding	Trap/T Loa	riang. ding	Rectar Load	~ I	Trap/T Loa	•	Recta Loa	0	Trap/T Loa	U U		angular Iding		Triang. ading		angular ading	Trap/Tr Load	U U
CI	ressure & ip/Anchor Capacity quirement	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ff ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)	Mullion Capacity (lbs/ft ²)	Anchor Capacity Required (lbs)
	42 in	170.0	620	170.0	435	170.0	744	170.0	478	170.0	868	170.0	506	170.0	992	170.0	519	170.0	1116	170.0	521	170.0	1240	170.0	521	170.0	1488	170.0	521	170.0	1735	170.0	521	164.5	1919	170.0	521
	48 in	170.0	708	170.0	524	170.0	850	170.0	584	170.0	992	170.0	630	170.0	1133	170.0	661	170.0	1275	170.0	677	170.0	1417	170.0	680	146.9	1469	170.0	680	125.9	1469	170.0	680	110.2	1469	170.0	680
	50-5/8 in	170.0		170.0		170.0	896	170.0	631	170.0	1046	170.0	684	170.0	1195	170.0	723	167.0			747	150.3	1321	170.0	756	125.2	1321	170.0	756	107.3	1321	170.0	756	93.9	1321	170.0	756
	54 in	170.0		170.0	612	170.0	956	170.0	691	170.0	1116	170.0	754	154.8	1161	170.0	803	137.6		170.0	837	123.8	1161	170.0	856	103.2	1161	170.0	861	88.4	1161	170.0	861	77.4	1161	170.0	861
	60 in	170.0	885	170.0	701	150.5	940	166.7	782	129.0	940	148.4	767	112.8	940	135.9	755	100.3	940	127.3	746	90.3	940	121.8	740	75.2	940	117.5	735	64.5	940	117.5	735	56.4	940	117.5	735
pan	63 in	156.0	853	166.3	729	130.0	853	142.6	713	111.4	853	126.5	700	97.5	853	115.3	688	86.6	853	107.4	680	78.0	853	102.1	673	65.0	853	97.0	667	55.7	853	96.7	666	48.7	853	96.7	666
ନ୍ମ	66 in	135.6	777	143.8	668	113.0	777	123.0	654	96.9	777	108.8	641	84.8	777	98.7	631	75.4	777	91.5	622	67.8	777	86.5	616	56.5	777	81.2	609	48.4	777	80.3	607	42.4	777	80.3	607
5	72 in	104.5		109.8	567	87.1	653	93.5	555	74.6	653	82.2	545	65.3	653	74.2	536	58.0	653	68.3	528	52.2	653	64.0	522	43.5	653	58.7	514	37.3	653	56.8	511	32.7	653	56.7	510
≝	76 in	88.8	586	92.8	512	74.0	586	78.9	501	63.5	586	69.2	492	55.5	586	62.2	484	49.4	586	57.1	477	44.4	586	53.2	471	37.0	586	48.3	463	31.7	586	46.1	459	27.8	586	45.7	458
Mullio	78 in	82.2	556	85.7	487	68.5	556	72.8	477	58.7	556	63.7	469	51.4	556	57.2	461	45.7	556	52.4	454	41.1	556	48.7	449	34.2	556	44.0	440	29.3	556	41.7	436	25.7	556	41.2	435
	90 in	53.5	418	55.2	371	44.6	418	46.6	364	38.2	418	40.7	358	33.4	418	36.3	352	29.7	418	32.9	347	26.7	418	30.4	343	22.3	418	26.8	335	19.1	418	24.7	330	16.7	418	23.6	328
	96 in	44.1	367	45.3	328	36.7	367	38.2	322	31.5	367	33.2	317	27.5	367	29.6	312	24.5	367	26.8	308	22.0	367	24.6	304	18.4	367	21.6	297	15.7	367	19.7	292	13.8	367	18.6	289
	108 in	31.0	290	31.6	262	25.8	290	26.6	258	22.1	290	23.1	254	19.3	290	20.5	250	17.2	290	18.5	247	15.5	290	16.9	244												
	111 in	28.5	275	29.1	249	23.8	275	24.5	245	20.4	275	21.2	241	17.8	275	18.8	238	15.8	275	16.9	234																
	120 in	22.6	235	23.0	214	18.8	235	19.3	211	16.1	235	16.7	208																								

TABLE 14B:

	Substrate:	3k Cor		ncrete		3.5k Conc.	Wood		Metal
Anchor/Clip Capacity (lbs) when using a 45 Degree Tube Mullion	Anchor Type:	3/16" DeWalt Ultracon+		1/4" DeWalt Ultracon+		5/16" DeWalt Ultracon	#12 Steel Screw	#14 Steel Screw	#12 Steel Screw
	Edge Distance (in):	1"	2-1/2"	1"	2-1/2"	3-1/8"	0.54"	0.60"	0.324"
	Embedment (in):	1-3/4"	1-3/4"	1-3/4"	1-3/4"	2"	1-3/8"	1-3/8"	See Sheet 1
2 Total Anchors @ 5" O.C. thru 2x5 Angle Clip Pair (Fig. 1):		310 lbs	630 lbs	220 lbs	870 lbs	1700 lbs	442 lbs	537 lbs	536 lbs
4 Total Anchors @ 3.25" O.C. thru 2x5 Angle Clip Pair (Fig. 2):		620 lbs	1260 lbs	440 lbs	1740 lbs	2211 lbs	885 lbs	1073 lbs	1073 lbs
6 Total Anchors @ 2.71" O.C. thru 2x5 Angle Clip Pair (Fig. 3):			1890 lbs	648 lbs	2598 lbs	2254 lbs	1327 lbs	1610 lbs	1609 lbs

SEE SUBSTRATE PROPERTIES, SHEET 1.

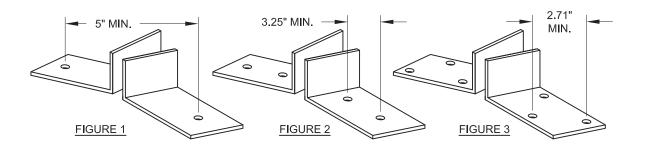


TABLE NOTES:

1) LINEAR INTERPOLATION BETWEEN MULLION SPANS AND/OR OPENING DIMENSIONS IS ALLOWABLE.

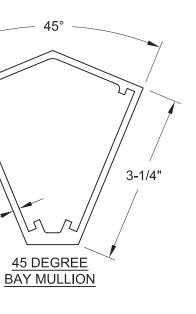
2) MULLION AND MULLION CLIPS SHOWN ARE NOT TO SCALE. FOR EXACT DIMENSIONS, SEE SHEETS 21-23. HOLES MAY BE DRILLED IN THE FIELD FOLLOWING DIMENSIONAL RESTRICTIONS SHOWN ON THIS SHEET. FIGURES SHOW SUGGESTED, APPROXIMATE HOLE LOCATIONS. CLIP HOLES TO BE <u>NO CLOSER</u> <u>THAN 3/8" O.C.</u> FROM CLIP EDGE.

3) SEE SHEET 1 FOR ADDITIONAL ANCHOR/SUBSTRATE NOTES.

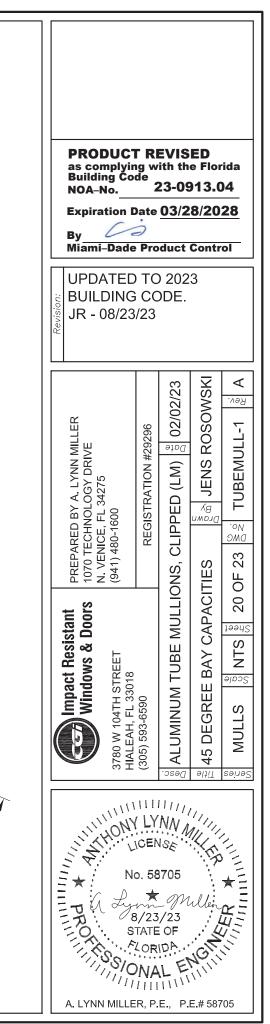
ANCHOR CAPACITY ADJUSTMENT FORMULA:

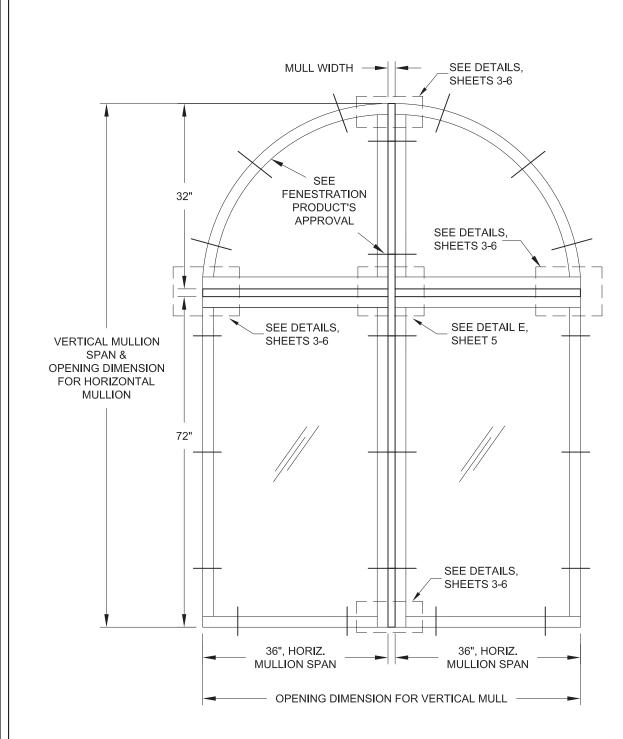
$$(DP_{REQ}) \times \left(\frac{ANCHOR CAP_{FROM TABLE}}{MULLION CAP_{FROM TABLE}}\right) = ANCHOR CAP_{REQ}.$$

USE THIS FORMULA TO OBTAIN THE "ANCHOR CAPACITY REQUIRED" CORRESPONDING TO AN ACTUAL PRESSURE REQUIREMENT FOR THE OPENING, WHEN IT IS LOWER THAN THE MULLION CAPACITY (FROM THE TABLE) OF THE SELECTED MULLION. IT WILL YIELD A MINIMUM ANCHOR CAPACITY WHICH MAY BE USED TO QUALIFY ADDITIONAL ANCHOR OPTIONS FROM THE CLIP/ANCHOR CAPACITY TABLE.



1/8"





EXAMPLE 1: MULTIPLE MULLIONS

THE BUILDING SUBSTRATE IS KNOWN TO BE CMU ON THE JAMBS AND USES A CONCRETE HEADER AND SILL. THE WINDOW FRAME DEPTH IS 2-3/8", THE OPENING REQUIRES A DESIGN PRESSURE OF +50.0/-55.0 PSF.

FOR THE VERTICAL MULLION:

1) INITIALLY ASSUMING THAT A 1" WIDE MULLION IS SUITABLE. THE MULLION SPAN IS 32"+72"+1"=105" AND THE OPENING DIMENSION IS 36"+36"+1" =73". REFERENCING SHEET 23, THE COLUMN USING RECTANGULAR LOADING SHALL BE USED. SCAN THE MULLION TABLES FOR A MULLION THAT IS AT LEAST THE WINDOW FRAME DEPTH OF 2-3/8" AND WILL MEET OR EXCEED THE REQUIRED DESIGN PRESSURE OF +50.0/-55.0 PSF. IF THE TABLE DOES NOT SHOW THE EXACT SIZE, USE THE NEXT LARGER SIZE AVAILABLE.

FROM TABLE 5A, SHEET 11, THE 1" X 4" X 1/8" MULLION (SPAN = 108", OPENING DIMENSION = 80") MEETS THE DEPTH REQUIRED, HOWEVER THE DESIGN PRESSURE IS ONLY +/-25.2 PSF AND WOULD NOT BE SUITABLE FOR THIS APPLICATION.

FROM TABLE 9A, SHEET 15, THE 2" X 4" X .250" MULLION (SPAN = 108", OPENING DIMENSION = 80") HAS A DESIGN PRESSURE OF +/-64.7 PSF WHICH EXCEEDS THE REQUIREMENTS FOR THE OPENING AND MAY BE USED IN THIS APPLICATION NOTE THE ANCHOR CAPACITY REQUIRED OF 971 LBS.

BECAUSE IT IS NOW KNOWN THAT THE MULLION WILL ADD 2" TO THE WIDTH OF THE MULLED UNIT INSTEAD OF 1", THE ADJUSTED OPENING DIMENSION IS 36"+36"+2"=74", NOT 73" AS PREVIOUSLY ASSUMED. VERIFY THAT THE DESIGN PRESSURE IS STILL APPLICABLE FOR THE ADJUSTED OPENING. ALTERNATIVELY, THE WINDOW WIDTHS MAY BE REDUCED TO MAINTAIN THE 73" DIMENSION (35-1/2"+35-1/2"+2"=73").

2) USE TABLE 9B TO FIND THE ANCHOR TYPE, ANCHOR QUANTITY AND CLIP TYPE REQUIRED FOR THE CONCRETE SUBSTRATE. IN THIS EXAMPLE, ASSUME THE POURED CONCRETE HEADER AND SILL ARE 8" WIDE. IF THE MULLION CLIP WERE TO BE CENTERED WITHIN THE 8", CARE MUST BE TAKEN TO MAINTAIN THE FASTENER'S EDGE DISTANCE. USING THE STANDARD CLIP WITH (4) 3/16" ULTRACON+ ANCHORS AT AN EDGE DISTANCE OF 2-1/2" GIVES AN ANCHOR CAPACITY OF 1260 LBS WHICH IS GREATER, AND THEREFORE SUITABLE, FOR THE REQUIRED ANCHOR CAPACITY OF 971 LBS.

FOR THE HORIZONTAL MULLIONS:

BECAUSE THE VERTICAL MULL WILL BE A 2" X 4" X ,250" MULLION. IN THIS EXAMPLE WE WILL MATCH THE HORIZONTAL AND VERTICAL MULLIONS, ALTERNATIVELY, ANOTHER MULLION TYPE COULD BE CHOSEN.

1) THE MULLION SPAN IS 36" AND THE OPENING DIMENSION IS 32"+72"+2" =106". REFERENCING SHEET 23, THE COLUMN USING TRAPEZOIDAL/TRIANGULAR LOADING MAY BE USED, FROM TABLE 9A, SHEET 15, THE 2" X 4" X .250" MULLION (@ SPAN = 42". OPENING DIMENSION = 120") HAS A DESIGN PRESSURE OF +/-170.0 PSF WHICH EXCEEDS THE REQUIREMENTS FOR THE OPENING AND MAY BE USED IN THIS APPLICATION. NOTE THE ANCHOR CAPACITY REQUIRED OF 521 LBS.

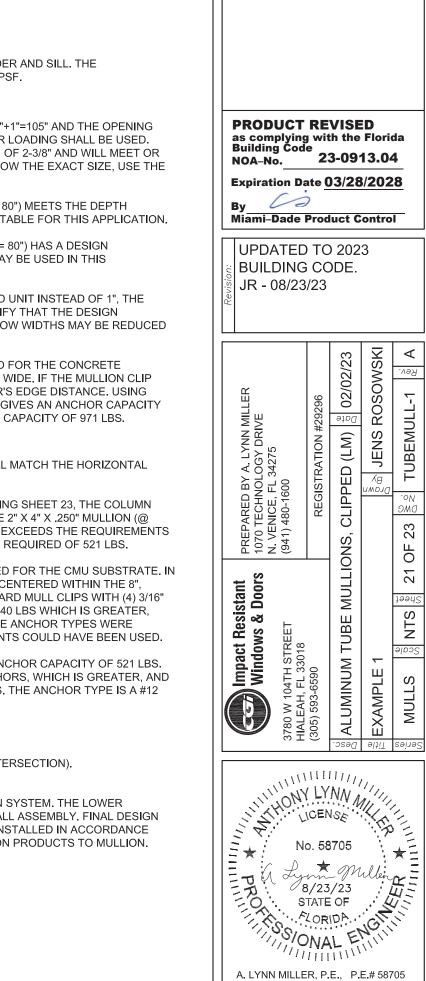
2) USE TABLE 9B TO FIND THE ANCHOR TYPE, ANCHOR QUANTITY AND CLIP TYPE REQUIRED FOR THE CMU SUBSTRATE. IN THIS EXAMPLE, ASSUME THE CMU JAMBS ARE 8" WIDE. IF THE MULLION CLIP WERE TO BE CENTERED WITHIN THE 8". CARE MUST BE TAKEN TO MAINTAIN THE FASTENER'S EDGE DISTANCE. USING THE STANDARD MULL CLIPS WITH (4) 3/16" ULTRACON+ ANCHORS AT AN EDGE DISTANCE OF 2-1/2" GIVES AN ANCHOR CAPACITY OF 740 LBS WHICH IS GREATER. AND THEREFORE SUITABLE, FOR THE REQUIRED ANCHOR CAPACITY OF 521 LBS. THE SAME ANCHOR TYPES WERE CHOSEN AS BEFORE FOR SIMPLICITY. HOWEVER ANY ANCHOR MEETING THE REQUIREMENTS COULD HAVE BEEN USED.

3) FOR THE U-CLIP IN THE HORIZONTAL MULLION TO VERTICAL MULLION, USE THE SAME ANCHOR CAPACITY OF 521 LBS. TABLE 9B FOR THE U-CLIP SHOWS THE ANCHOR CAPACITY IS 805 LBS WHEN USING 3 ANCHORS, WHICH IS GREATER, AND THEREFORE SUITABLE. FOR THE REQUIRED ANCHOR CAPACITY REQUIREMENT OF 521 LBS. THE ANCHOR TYPE IS A #12 STEEL SCREW.

FROM THE ABOVE STEPS, OUR MULLION DESIGN PRESSURE IS: +/-64.7 PSF FROM THE VERTICAL MULLION;

+/-170.0 PSF FROM THE 36" HORIZONTAL MULLION ATTACHING TO CMU; +/-170.0 PSF FROM THE 36" HORIZONTAL MULLION ATTACHING TO THE VERTICAL MULLION (INTERSECTION). THE LOWEST DESIGN PRESSURE IS +/-64.7 PSF AND WOULD APPLY TO ALL OF THE MULLIONS.

VERIFY THE DESIGN PRESSURE OF THE FENESTRATION PRODUCTS USED WITH THIS MULLION SYSTEM. THE LOWER DESIGN PRESSURE, OF MULLIONS OR FENESTRATION PRODUCTS, WILL APPLY TO THE OVERALL ASSEMBLY, FINAL DESIGN PRESSURE REQUIRES THAT THE BOTH THE MULLION AND THE FENESTRATION PRODUCT BE INSTALLED IN ACCORDANCE WITH THE INSTALLATION SPECIFICATIONS INTO RESPECTIVE SUBSTRATES AND FENESTRATION PRODUCTS TO MULLION.



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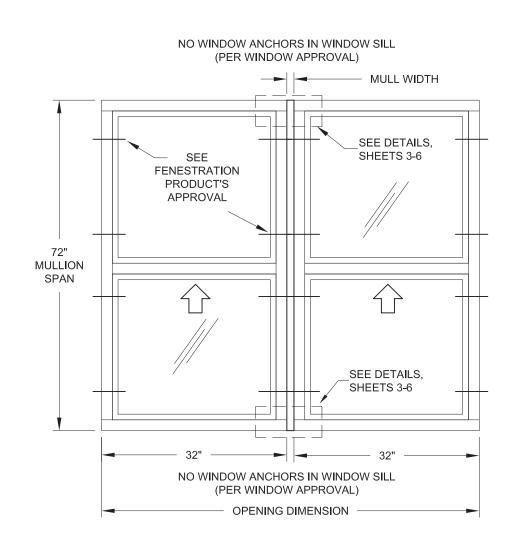
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EXAMPLE 2: SINGLE VERTICAL MULLION

THE BUILDING SUBSTRATE IS KNOWN TO BE WOOD ON ALL FOUR SIDES. THE WINDOW FRAME DEPTH IS 2-3/4". THE OPENING REQUIRES A DESIGN PRESSURE OF +60.0/-60.0 PSF.

1) INITIALLY ASSUMING THAT A 1" WIDE MULLION IS SUITABLE, THE MULLION SPAN IS 72" AND THE OPENING DIMENSION IS 32"+32+1" = 65". REFERENCING SHEET 23, THE COLUMN USING RECTANGULAR LOADING MUST BE USED. SCAN THE MULLION TABLES FOR A MULLION THAT IS AT LEAST THE WINDOW FRAME DEPTH OF 2-3/4" AND WILL MEET OR EXCEED THE REQUIRED DESIGN PRESSURE OF +60.0/-60.0 PSF. IF THE TABLE DOES NOT SHOW THE EXACT SIZE, USE THE NEXT LARGER SIZE AVAILABLE.

FROM TABLE 4A, SHEET 10, THE 1" X 3" X 1/8" MULLION (SPAN = 72", OPENING DIMENSION = 70") MEETS THE DEPTH REQUIRED, HOWEVER THE DESIGN PRESSURE IS ONLY +/-44.7 PSF AND WOULD NOT BE SUITABLE FOR THIS APPLICATION.

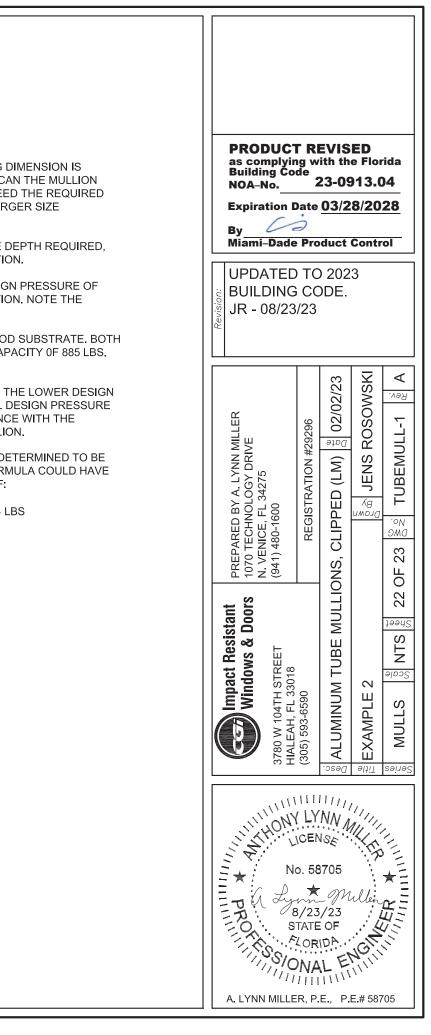
FROM TABLE 5A, SHEET 11, THE 1" X 4" X 1/8" MULLION (SPAN = 72", OPENING DIMENSION = 70") HAS A DESIGN PRESSURE OF +/-97.0 PSF WHICH EXCEEDS THE REQUIREMENTS FOR THE OPENING AND MAY BE USED IN THIS APPLICATION. NOTE THE ANCHOR CAPACITY REQUIRED OF 849 LBS.

2) USE TABLE 5B TO FIND THE ANCHOR TYPE, ANCHOR QUANTITY AND CLIP TYPE REQUIRED FOR THE WOOD SUBSTRATE. BOTH THE STANDARD CLIP WITH (4) #12 ANCHORS AND THE 2X5 ANGLE CLIPS WITH (4) #12 ANCHORS HAVE A CAPACITY 0F 885 LBS. THOUGH EITHER ONE COULD BE USED, THE STANDARD CLIP IS EASIEST TO INSTALL.

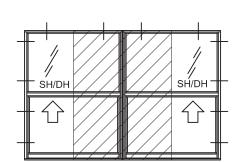
3) VERIFY THE DESIGN PRESSURE OF THE FENESTRATION PRODUCTS USED WITH THIS MULLION SYSTEM. THE LOWER DESIGN PRESSURE, OF MULLIONS OR FENESTRATION PRODUCTS, WILL APPLY TO THE OVERALL ASSEMBLY. FINAL DESIGN PRESSURE REQUIRES THAT THE BOTH THE MULLION AND THE FENESTRATION PRODUCT BE INSTALLED IN ACCORDANCE WITH THE INSTALLATION SPECIFICATIONS INTO RESPECTIVE SUBSTRATES AND FENESTRATION PRODUCTS TO MULLION.

IN THIS EXAMPLE, THE DESIGN PRESSURE REQUIRED WAS +/-60.0 PSF. THE OVERALL MULLION SYSTEM WAS DETERMINED TO BE 97.0 PSF WITH AN ANCHOR CAPACITY OF 885 LBS. ALTERNATIVELY, THE ANCHOR CAPACITY ADJUSTMENT FORMULA COULD HAVE BEEN USED TO CALCULATE THE ANCHOR CAPACITY REQUIRED FOR THE EXACT DESIGN PRESSURE OF 60 PSF:

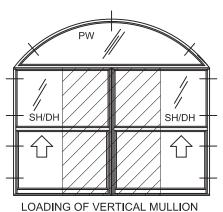
 $(60 \text{ PSF}) \times \left(\frac{885 \text{ LBS}}{97.0 \text{ PSF}}\right) = \frac{547.4 \text{ LBS}}{\text{SINCE YOU ONLY REQUIRE A DESIGN PRESSURE OF 60 PSF.}$



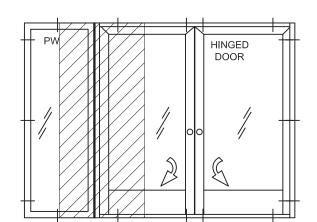
EXAMPLES OF RECTANGULAR LOADING:



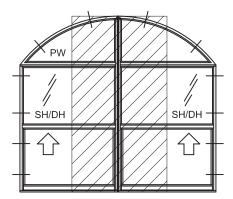
LOADING OF VERTICAL MULLION SILL OF WINDOWS NOT ANCHORED



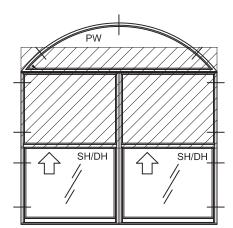
SILL OF WINDOWS NOT ANCHORED



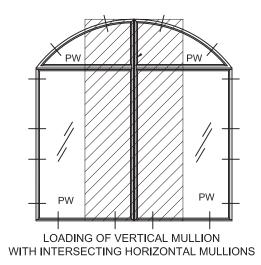
LOADING OF VERTICAL MULLION PANEL OF HINGED DOOR IS NOT CAPTURED OR ANCHORED

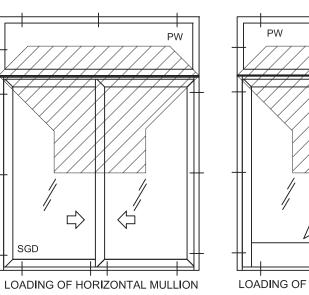


LOADING OF VERTICAL MULLION WITH INTERSECTING HORIZONTAL MULLIONS



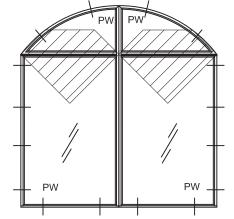
LOADING OF HORIZONTAL MULLION WITH INTERSECTING VERTICAL MULLION





HINGED Y DOOR

LOADING OF HORIZONTAL MULLION



LOADING OF (2) HORIZONTAL MULLIONS

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