



**MIAMI-DADE COUNTY  
PRODUCT CONTROL SECTION**

11805 SW 26 Street, Room 208  
Miami, FL 33175

T (786) 315-2590 F (786) 315-2599

**DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)  
BOARD AND CODE ADMINISTRATION DIVISION**

[www.miamidade.gov/economy](http://www.miamidade.gov/economy)

**NOTICE OF ACCEPTANCE (NOA)**

**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 "450" Clipped Mullion - L.M.I.**

**APPROVAL DOCUMENT:** Drawing No. MD-450MULL, titled "450 Clipped Mullion", sheets 1 through 9 of 9, dated 06/03/2020, 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 and renews NOA# 17-1226.06** and consists of this page 1 and evidence pages E-1 and E-2, as well as approval document mentioned above.

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



*S.Z.*  
09/24/2020

**NOA No. 20-0610.09  
Expiration Date: October 05, 2026  
Approval Date: September 24, 2020**

**CGI Windows & Doors, Inc.**

**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.98-0608.22*)
2. Drawing No. M98-02, titled "Series '450' Aluminum Clipped Tube Mullion", sheets 1 through 5 of 5 (including sheets 2.1, 2.2, 3.1, and 3.2), dated 04/23/98, with revision I dated 11/03/17, prepared by Al-Farooq Corporation, signed and sealed by Javad Ahmad, P.E.

**B. TESTS**

1. 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 an aluminum tube mullion, prepared by Hurricane Test Laboratory, LLC, Test Report No. **HTL-0080-0304-11**, dated 08/03/11, signed and sealed by Vinu J. Abraham, P.E. (*Submitted under previous NOA No.11-0831.05*)
2. Test reports on: 1) Air Infiltration Test, per SFBC, PA 202-94  
2) Uniform Static Air Pressure Test, Loading per SFBC, PA 202-94  
3) Water Resistance Test, per SFBC, PA 202-94  
4) Large Missile Impact Test per SFBC, PA 201-94  
5) Cyclic Wind Pressure Loading per SFBC, PA 203-94  
6) Forced Entry Test, per SFBC 3603.2 (b), and PA 202-94  
along with marked-up drawings of aluminum in/out swing door w/sidelites, by Hurricane Testing Laboratory, Inc., Test Report No. **HTL-0080-912-97**, dated 09/23/97 thru 02/27/98 for specimen No. 1, 2, 3 and 4 tested per PA 202-94, specimen No. 4, 5A, 5B and 5C tested per PA 201-94 & PA 203-94, signed and sealed by Timothy S. Marshall, P.E. (*Submitted under NOA No.98-0608.22*)
3. Test reports on: 1) Tensile Test, per SFBC and per ASTM E 8-89  
2) Spectrographic Analysis Loading Test, per SFBC and per ASTM E 415-95  
along with marked-up drawings and installation diagram of cold roll aluminum, prepared by Metallurgical, Inc., Test Report No. **MI-8CM-709**, dated 04/02/98 and 10/02/98, both signed and sealed by Frank Grate, P.E. (*Submitted under NOA No. 98-0608.22*)

**C. CALCULATIONS**

1. Anchor verification calculations and structural analysis, complying with FBC 5th Edition (2014) and with FBC 6th Edition (2017), dated 10/04/17, prepared by Al-Farooq Corporation, signed and sealed by Javad Ahmad, P.E.

  
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Sifang Zhao, P.E.  
Product Control Examiner  
NOA No. 20-0610.09  
Expiration Date: October 05, 2026  
Approval Date: September 24, 2020

**CGI Windows & Doors, Inc.**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**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 to **FBC 5<sup>th</sup> Edition (2014)** and **FBC 6<sup>th</sup> Edition (2017)**, and of no financial interest, dated 10/04/17, issued by Al-Farooq Corporation, signed and sealed by Javad Ahmad, P.E.

**G. OTHERS**

1. This NOA revises NOA #16-0523.01, expiring on 10/05/21.

**2. NEW EVIDENCE SUBMITTED**

**A. DRAWINGS**

1. Drawing No. MD-450MULL, titled “450 Clipped Mullion”, sheets 1 through 9 of 9, dated 06/03/2020, prepared by manufacturer, signed and sealed by Anthony Lynn Miller, P.E.,

**B. TESTS**

1. None.

**C. CALCULATIONS**

1. Anchor verification calculations and structural analysis, complying with **FBC-6<sup>th</sup> Edition (2017)** and **FBC-7<sup>th</sup> (2020)** dated 06/05/2020, prepared 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.

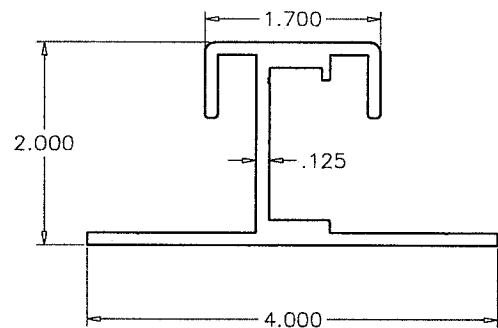
**F. STATEMENTS**

1. Statement letter of conformance, complying with **FBC 6<sup>th</sup> Edition (2017)** and with **FBC 7<sup>th</sup> Edition (2020)**, and of no financial interest, dated 06/03/2020, signed and sealed by Anthony Lynn Miller, P.E.
2. Statement letter of successor engineer per 61G15-27.001 Florida Administrative Code.

**G. OTHERS**

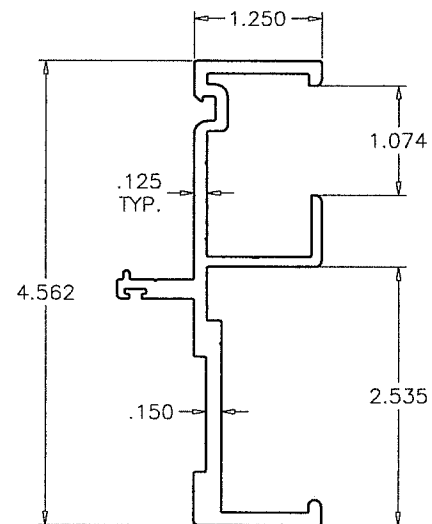
1. NOA No. **17-1226.06** issued to CGI Windows & Doors for their Series “450” Aluminum Tube Mullion - L.M.I. approved on 02/15/18 and expiring on 10/05/21,

  
\_\_\_\_\_  
**Sifang Zhao, P.E.**  
**Product Control Examiner**  
**NOA No. 20-0610.09**  
**Expiration Date: October 05, 2026**  
**Approval Date: September 24, 2020**



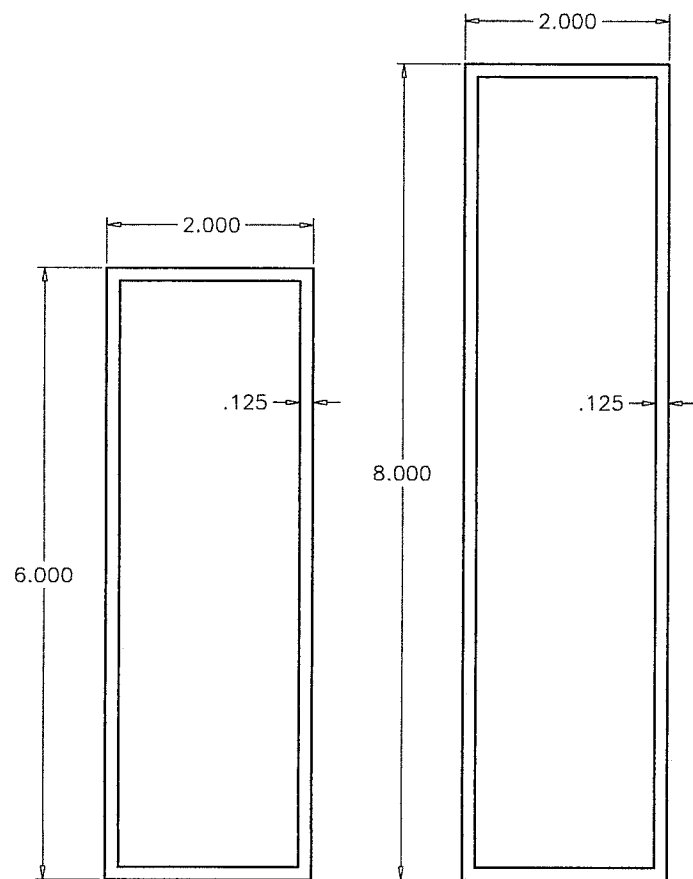
**MULLION CLIP**

CGI-395  
6063-T6



**DOOR JAMB**

CGI-509  
6063-T6



**MULLION TUBES**

6063-T6

**INSTRUCTIONS:**

USE MULLION/ANCHOR CHART AS FOLLOWS.

- STEP 1** DETERMINE DESIGN LOAD REQUIRED PER ASCE 7 FOR PARTICULAR OPENING.
- STEP 2** USE CONNECTION TO MULLION AS PER THIS PRODUCT APPROVAL.
- STEP 3** USING CHART SELECT ANCHORS WITH DESIGN RATING MORE THAN THE DESIGN LOAD SPECIFIED IN STEP 1 ABOVE.
- STEP 4** CAPACITY OF SELECTED CGI'S DOORS/SIDELITE/TRANSOM AND MULLION MUST EQUAL OR EXCEED REQUIRED LOADS.

THESE MULLIONS ARE RATED FOR LARGE & SMALL MISSILE IMPACT

**SERIES '450' VERTICAL ALUMINUM TUBE MULLION DOOR FRAME MEMBER INCLUDED IN PROPERTIES**

**NOTES:**

THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE 2017 (6TH EDITION)/2020 (7TH EDITION) FLORIDA BUILDING CODE INCLUDING HIGH VELOCITY HURRICANE ZONE (HVHZ).

ALL GLAZING PRODUCTS USED WITH THESE MULLIONS MUST MEET THE APPLICABLE CODE REQUIREMENTS I.E.: WIND LOAD, WATER INFILTRATION, FORCED ENTRY RESISTANCE, SAFEGUARDS ETC.

1BY OR 2BY WOOD BUCKS & BUCK FASTENERS BY OTHERS, MUST BE DESIGNED AND INSTALLED ADEQUATELY TO TRANSFER APPLIED PRODUCT LOADS TO THE BUILDING STRUCTURE.

ANCHORS SHALL BE CORROSION RESISTANT, SPACED AS SHOWN ON DETAILS AND INSTALLED PER MANUF'S INSTRUCTIONS. SPECIFIED EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO.

A LOAD DURATION INCREASE IS USED IN DESIGN OF ANCHORS INTO WOOD ONLY.

ALL SHIMS TO BE HIGH IMPACT, NON-METALLIC AND NON-COMPRESSIBLE.

MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE 2017/2020 FLORIDA BLDG. CODE & ADOPTED STANDARDS.

THIS PRODUCT APPROVAL IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT, I.E. LIFE SAFETY OF THIS PRODUCT, ADEQUACY OF STRUCTURE RECEIVING THIS PRODUCT AND SEALING AROUND OPENING FOR WATER INFILTRATION RESISTANCE ETC. CONDITIONS NOT SHOWN IN THIS DRAWING ARE TO BE ANALYZED SEPARATELY, AND TO BE REVIEWED BY BUILDING OFFICIAL.

THIS MULLION APPROVAL TO BE USED FOR MULLION AS SHOWN ON SHEET 5 AND MUST CONTAIN CGI'S SWING DOORS, SIDELITES AND TRANSOMS AS DEPICTED.

**PRODUCT REVISED**  
as complying with the Florida Building Code  
NOA-No. 20-0610.09  
Expiration Date 10/05/2026  
By   
Miami-Dade Product Control

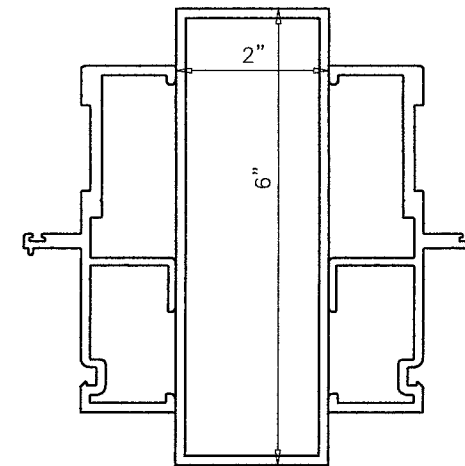
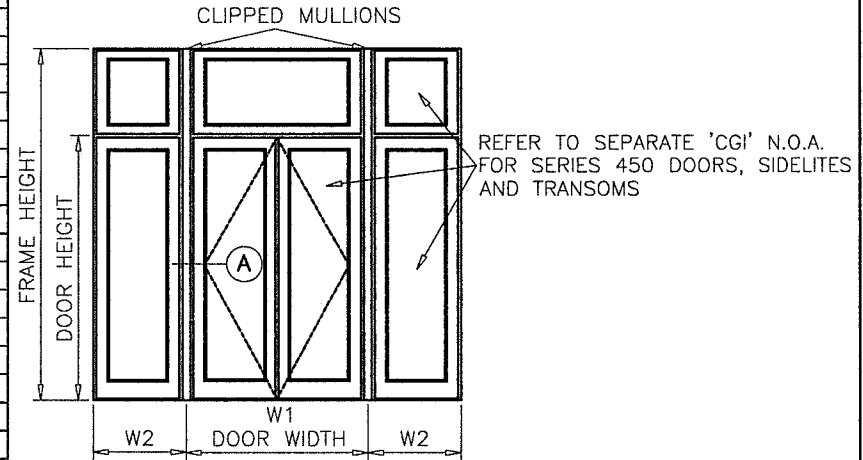
Revision: A) UPDATED TO FBC 2020.  
AK - 06/03/20

PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600	REGISTRATION #29296	Date	06/03/20	Rev.	A
	Impact Resistant Windows & Doors WE'RE STRONGER™ CGI DOORS AND WINDOWS, INC. 3780 W 104TH STREET HIALEAH, FL 33018 (305) 593-6590	EXTRUSIONS, INSTRUCTIONS, NOTES	By	AGK	DWG No.
Scale			1 OF 9	Sheet	NTS
450 CLIPPED MULLION		Series	450MULL		

ANTHONY LYNN MILLER  
LICENSE  
No. 58705  
  
6/5/20  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER  
A. LYNN MILLER, P.E.  
P.E.# 58705

DESIGN LOAD CAPACITY - PSF. (2 X 6 X 1/8")													
NOMINAL DIMS.				1/4" ANCHORS				5/16" ANCHORS					
WIDTH (W1)	WIDTH (W2)	FRAME HEIGHT INCHES	DOOR HEIGHT INCHES	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)		
60	24	96	84	110.0	110.0	110.0	110.0						
	30			108.5	108.5	110.0	110.0						
	36			101.5	101.5	110.0	110.0						
	42			95.3	95.3	106.3	106.3						
72	24					102.3	102.3	110.0	110.0				
	30					96.0	96.0	107.1	107.1				
	36					90.4	90.4	100.9	100.9				
	42					85.5	85.5	95.3	95.3				
84	24					91.1	91.1	101.6	101.6				
	30					86.1	86.1	96.0	96.0				
	36					81.6	81.6	91.0	91.0				
	42					77.5	77.5	86.5	86.5				
60	24	102	84	110.0	110.0	110.0	110.0						
	30			104.0	104.0	110.0	110.0						
	36			97.1	97.1	108.3	108.3						
	42			91.1	91.1	101.6	101.6						
72	24					98.3	98.3	109.6	109.6				
	30					92.1	92.1	102.7	102.7				
	36					86.7	86.7	96.7	96.7				
	42					81.8	81.8	91.3	91.3				
84	24					87.6	87.6	97.7	97.7				
	30					82.6	82.5	92.2	92.2				
	36					78.2	78.2	87.3	87.3				
	42					74.3	74.3	82.9	82.9				
60	24	108	84	107.6	107.6	110.0	110.0						
	30			99.8	99.8	110.0	110.0						
	36			93.1	93.1	103.9	103.9						
	42			87.3	87.3	97.3	97.3						
72	24					94.5	94.5	105.5	105.5				
	30					88.5	88.5	98.7	98.7				
	36					83.2	83.2	92.8	92.8				
	42					78.5	78.5	87.5	87.5				
84	24					84.3	84.3	94.1	94.1				
	30					79.5	79.5	88.7	88.7				
	36					75.2	75.2	83.9	83.9				
	42					71.3	71.3	79.5	79.5				
60	24	114	84	103.6	103.6	110.0	110.0						
	30			96.0	96.0	107.1	107.1						
	36			89.5	89.5	99.8	99.8						
	42			83.8	83.8	93.4	93.4						
72	24					91.1	91.1	101.6	101.6				
	30					85.2	85.2	95.0	95.0				
	36					80.0	80.0	89.2	89.2				
	42					75.4	75.4	84.1	84.1				
84	24					81.3	81.3	90.7	90.7				
	30					76.6	76.6	85.4	85.4				
	36					72.3	72.3	80.7	80.7				
	42					68.6	68.6	76.5	76.5				
60	24	120	84	99.8	99.8	110.0	110.0						
	30			92.4	92.4	103.1	103.1						
	36			86.1	86.1	96.0	96.0						
	42			80.5	80.5	89.8	89.8						
72	24					87.9	87.9	98.0	98.0				
	30					82.1	82.1	91.6	91.6				
	36					77.0	77.0	85.9	85.9				
	42					72.6	72.6	80.9	80.9				
84	24					78.5	78.5	87.5	87.5				
	30					73.8	73.8	82.4	82.4				
	36					69.7	69.7	77.8	77.8				
	42					66.0	66.0	73.7	73.7				

DESIGN LOAD CAPACITY - PSF. (2 X 6 X 1/8")													
NOMINAL DIMS.				1/4" ANCHORS				5/16" ANCHORS					
WIDTH (W1)	WIDTH (W2)	FRAME HEIGHT INCHES	DOOR HEIGHT INCHES	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)		
60	24	126	84	96.4	96.4	106.5	106.5						
	30			89.1	89.1	99.1	99.1						
	36			82.9	82.9	92.5	92.5						
	42			77.5	77.5	86.5	86.5						
72	24					84.9	84.9	93.4	93.4				
	30					79.2	79.2	87.7	87.7				
	36					74.3	74.3	82.6	82.6				
	42					69.9	69.9	78.0	78.0				
84	24					75.9	75.9	83.1	83.1				
	30					71.3	71.5	78.6	78.6				
	36					67.3	67.3	74.5	74.5				
	42					63.7	63.7	70.8	70.8				
60	24	132	84	93.1	93.1	95.7	95.7						
	30			86.1	86.1	89.2	89.2						
	36			80.0	80.0	83.5	83.5						
	42			74.7	74.7	78.5	78.5						
72	24					82.1	82.1	93.9	93.9				
	30					76.6	76.6	78.8	78.8				
	36					71.7	71.7	74.3	74.3				
	42					67.5	67.5	70.3	70.3				
84	24					73.4	73.4	74.6	74.6				
	30					69.0	69.0	70.6	70.6				
	36					65.0	65.0	67.0	67.0				
	42					61.5	61.5	63.7	63.7				
60	24	138	84	86.7	86.7	86.7	86.7						
	30			80.9	80.9	80.9	80.9						
	36			75.7	75.7	75.7	75.7						
	42			71.2	71.2	71.2	71.2						
72	24					76.0	76.0	76.0	76.0				
	30					71.4	71.4	71.4	71.4				
	36					67.4	67.4	67.4	67.4				
	42					63.8	63.8	63.8	63.8				
84	24					67.6	67.6	67.6	67.6				
	30					63.9	63.9	63.9	63.9				
	36					60.7	60.7	60.7	60.7				
	42					57.8	57.8	57.8	57.8				
60	24	144	84	76.9	76.9	76.9	76.9						
	30			71.3	71.3	71.3	71.3						
	36			66.5	66.5	66.5	66.5						
	42			62.3	62.3	62.3	62.3						
72	24					67.6	67.6	67.5	67.6				
	30					63.2	63.2	63.2	63.2				
	36					59.4	59.4	59.4	59.4				
	42					56.0	56.0	56.0	56.0				
84	24					60.3	60.3	60.3	60.3				
	30					56.8	56.8	56.8	56.8				
	36					53.7	53.7	53.7	53.7				
	42					50.9	50.9	50.9	50.9				



TOTAL PROPERTIES  
 $I_x = 14.183 \text{ IN}^4$   
 $S_x = 4.728 \text{ IN}^3$

LIMIT EXTERIOR LOADS TO +100 PSF FOR INSTALLATIONS WHERE WATER INFILTRATION RESISTANCE IS REQUIRED. SEE CHART ABOVE FOR INSTALLATIONS WHERE WATER INFILTRATION RESISTANCE IS NOT REQUIRED.

**PRODUCT REVISED**  
 as complying with the Florida Building Code  
 NOA-No. 20-0610.09  
 Expiration Date 10/05/2026  
 By *[Signature]*  
 Miami-Dade Product Control

Revision: A) NO CHANGES THIS SHEET.  
 AK - 06/03/20

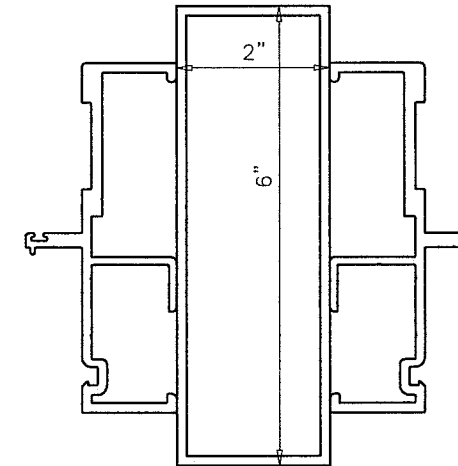
PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600	REGISTRATION #29296	Date 06/03/20	Drawn By AGK	No. MD-450MULL	Rev. A
		MULLION LOAD CHARTS		450 CLIPPED MULLION	2 OF 9

**Impact Resistant Windows & Doors**  
**WERE STRONGER™**  
 CGI DOORS AND WINDOWS, INC.  
 3780 W 104TH STREET  
 HIALEAH, FL 33018  
 (305) 593-6590

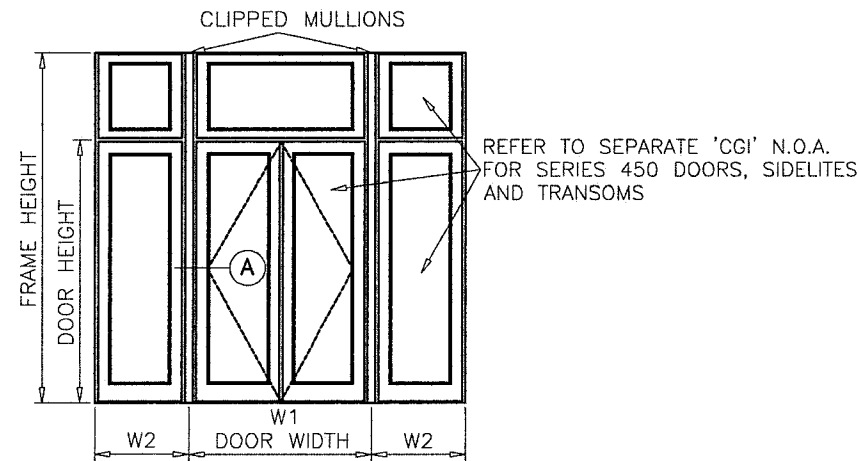
ANTHONY LYNN MILLER  
 LICENSE No. 58705  
 STATE OF FLORIDA  
 PROFESSIONAL ENGINEER  
 A. LYNN MILLER, P.E.  
 P.E.# 58705

DESIGN LOAD CAPACITY - PSF. (2 X 6 X 1/8")													
NOMINAL DIMS.				1/4" ANCHORS				5/16" ANCHORS					
WIDTH (W1)	WIDTH (W2)	FRAME HEIGHT INCHES	DOOR HEIGHT INCHES	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)		
60	24	108	96	103.1	103.1	110.0	110.0						
	30			96.0	96.0	107.1	107.1						
	36			89.8	89.8	100.1	100.1						
	42			84.3	84.3	94.1	94.1						
72	24					90.4	90.4	100.9	100.9				
	30					84.9	84.9	94.7	94.7				
	36					80.0	80.0	89.2	89.2				
	42					75.6	75.6	84.4	84.4				
84	24					80.5	80.5	89.8	89.8				
	30					76.1	76.1	84.9	84.9				
	36					72.1	72.1	80.5	80.5				
	42					68.6	68.6	76.5	76.5				
60	24	114	96	99.4	99.4	110.0	110.0						
	30			92.4	92.4	103.1	103.1						
	36			86.4	86.4	96.3	96.3						
	42			81.0	81.0	90.4	90.4						
72	24					87.3	87.3	97.3	97.3				
	30					81.8	81.8	91.3	91.3				
	36					77.0	77.0	85.9	85.9				
	42					72.8	72.8	81.2	81.2				
84	24					77.8	77.8	86.7	86.7				
	30					73.4	73.4	81.9	81.9				
	36					69.5	69.5	77.5	77.5				
	42					66.0	66.0	73.7	73.7				
60	24	120	96	96.0	96.0	107.1	107.1						
	30			89.1	89.1	99.4	99.4						
	36			83.2	83.2	92.8	92.8						
	42			78.0	78.0	87.0	87.0						
72	24					84.3	84.3	94.1	94.1				
	30					79.0	79.0	88.1	88.1				
	36					74.3	74.3	82.9	82.9				
	42					70.1	70.1	78.2	78.2				
84	24					75.2	75.2	83.9	83.9				
	30					70.9	70.9	79.1	79.1				
	36					67.1	67.1	74.8	74.8				
	42					63.7	63.7	71.0	71.0				
60	24	126	96	92.8	92.8	103.5	103.5						
	30			86.1	86.1	96.0	96.0						
	36			80.3	80.3	89.5	89.5						
	42			75.2	75.2	83.9	83.9						
72	24					81.6	81.6	91.0	91.0				
	30					76.3	76.3	85.1	85.1				
	36					71.7	71.7	80.0	80.0				
	42					67.6	67.6	75.4	75.4				
84	24					72.8	72.8	81.2	81.2				
	30					68.6	68.6	76.5	76.5				
	36					64.8	64.8	72.3	72.3				
	42					61.5	61.5	68.6	68.6				
60	24	132	96	89.8	89.8	99.2	99.2						
	30			83.2	83.2	92.1	92.1						
	36			77.5	77.5	85.9	85.9						
	42			72.6	72.6	80.5	80.5						
72	24					79.0	79.0	87.1	87.1				
	30					73.8	73.8	81.6	81.6				
	36					69.3	69.3	76.7	76.7				
	42					65.3	65.3	72.4	72.4				
84	24					70.5	70.5	77.7	77.7				
	30					66.4	66.4	73.2	73.2				
	36					62.7	62.7	69.3	69.3				
	42					59.4	59.4	65.8	65.8				

DESIGN LOAD CAPACITY - PSF. (2 X 6 X 1/8")													
NOMINAL DIMS.				1/4" ANCHORS				5/16" ANCHORS					
WIDTH (W1)	WIDTH (W2)	FRAME HEIGHT INCHES	DOOR HEIGHT INCHES	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)		
60	24	138	96	87.0	87.0	88.9	88.9						
	30			80.5	80.5	82.6	82.6						
	36			75.0	75.0	77.2	77.2						
	42			70.1	70.1	72.5	72.5						
72	24					76.6	76.6	78.0	78.0				
	30					71.5	71.5	73.2	73.2				
	36					67.1	67.1	68.9	68.9				
	42					63.2	63.2	65.1	65.1				
84	24					68.4	68.4	69.5	69.5				
	30					64.3	64.3	65.6	65.6				
	36					60.7	60.7	62.2	62.2				
	42					57.5	57.5	59.0	59.0				
60	24	144	96	80.4	80.4	80.4	80.4						
	30			74.7	74.7	74.7	74.7						
	36			69.4	69.4	69.4	69.4						
	42			64.8	64.8	64.8	64.8						
72	24					70.5	70.5	70.5	70.5				
	30					66.1	66.1	66.1	66.1				
	36					62.2	62.2	62.2	62.2				
	42					58.5	58.5	58.5	58.5				
84	24					62.7	62.7	62.7	62.7				
	30					59.3	59.3	59.3	59.3				
	36					56.2	56.2	56.2	56.2				
	42					53.3	53.3	53.3	53.3				



TOTAL PROPERTIES  
 $I_x = 14,183 \text{ IN}^4$   
 $S_x = 4,728 \text{ IN}^3$

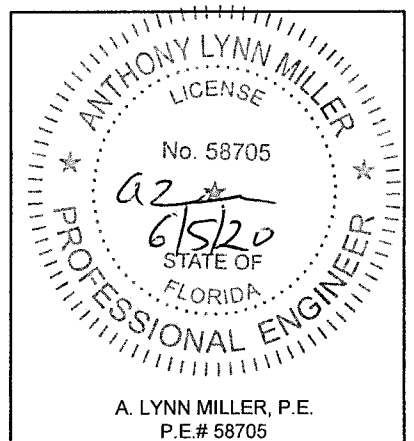


LIMIT EXTERIOR LOADS TO +100 PSF FOR INSTALLATIONS WHERE WATER INFILTRATION RESISTANCE IS REQUIRED. SEE CHART ABOVE FOR INSTALLATIONS WHERE WATER INFILTRATION RESISTANCE IS NOT REQUIRED.

**PRODUCT REVISED**  
 as complying with the Florida Building Code  
 NOA-No. 20-0610.09  
 Expiration Date 10/05/2026  
 By   
 Miami-Dade Product Control

Revision: A) NO CHANGES THIS SHEET.  
 AK - 06/03/20

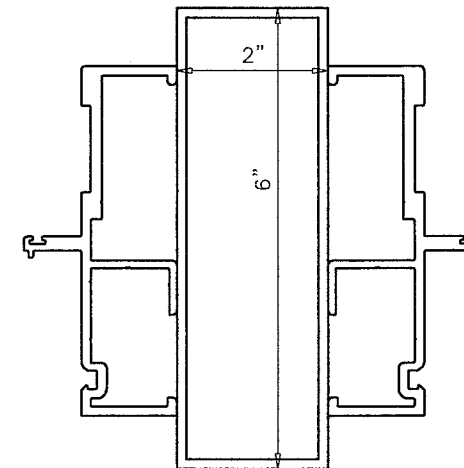
PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600	REGISTRATION #29296	Date	06/03/20	Rev.	A
		By	AGK	DWG No.	MD-450MULL
Impact Resistant Windows & Doors WE'RE STRONGER™ CGI DOORS AND WINDOWS, INC. 3780 W 104TH STREET HIALEAH, FL 33018 (305) 593-6590	MULLION LOAD CHARTS	Scale	3 OF 9	Sheet	NTS
	450 CLIPPED MULLION	Series	450MULL	Title	450MULL



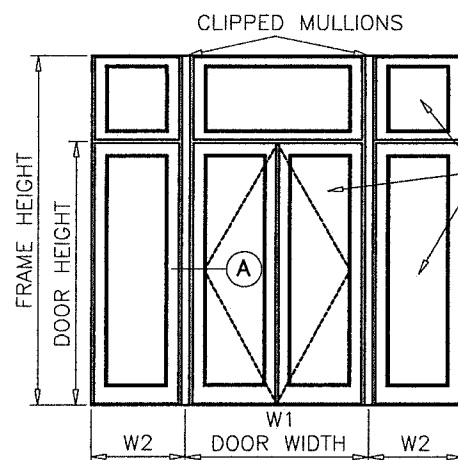
A. LYNN MILLER, P.E.  
 P.E.# 58705

DESIGN LOAD CAPACITY - PSF. (2 X 6 X 1/8")															
NOMINAL DIMS.				1/4" ANCHORS				5/16" ANCHORS							
WIDTH (W1)	WIDTH (W2)	FRAME HEIGHT INCHES	DOOR HEIGHT INCHES	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)				
60	24	120	108	92.4	92.4	103.1	103.1	83.8	83.8	93.4	93.4				
	30			86.1	86.1	96.0	96.0	78.0	78.0	87.0	87.0				
	36			80.5	80.5	89.8	89.8	73.0	73.0	81.4	81.4				
	42			75.6	75.6	84.4	84.4	68.6	68.6	76.5	76.5				
72	24			126	108	81.0	81.0	90.4	90.4	73.4	73.4	81.8	81.9		
	30					76.1	76.1	84.9	84.9	69.0	69.0	76.9	76.9		
	36					71.7	71.7	80.0	80.0	65.0	65.0	72.5	72.5		
	42					67.8	67.8	75.7	75.7	61.5	61.5	68.6	68.6		
84	24					132	108	72.1	72.1	80.5	80.5	65.3	65.3	72.9	72.9
	30							68.2	68.2	76.1	76.1	61.8	61.8	68.9	68.9
	36							64.7	64.7	72.1	72.1	58.6	58.6	65.4	65.4
	42							61.5	61.5	68.6	68.6	55.7	55.7	62.1	62.1
60	24	138	108					89.5	89.5	99.8	99.8	81.3	81.3	90.7	90.7
	30							83.2	83.2	92.8	92.8	75.6	75.6	84.4	84.4
	36							77.8	77.8	86.7	86.7	70.7	70.7	78.9	78.9
	42							73.0	73.0	81.4	81.4	66.4	66.4	74.0	74.0
72	24			144	108			78.5	78.5	87.5	87.5	71.3	71.3	79.5	79.5
	30							73.6	73.6	82.1	82.1	66.9	66.9	74.6	74.6
	36							69.3	69.3	77.3	77.3	63.0	63.0	70.3	70.3
	42							65.5	65.5	73.1	73.1	59.6	59.6	66.4	66.4
84	24					144	108	69.9	69.9	78.0	78.0	63.5	63.5	70.8	70.8
	30							66.0	66.0	73.7	73.7	60.0	60.0	66.9	66.9
	36							62.6	62.6	69.8	69.8	56.9	56.9	63.4	63.4
	42							59.4	59.4	66.3	66.3	54.0	54.0	60.3	60.3
60	24	144	108					86.7	86.7	96.7	96.7	79.0	79.0	88.1	88.1
	30							80.5	80.5	89.8	89.8	73.4	73.4	81.9	81.9
	36							75.2	75.2	83.9	83.9	68.6	68.6	76.3	76.3
	42							70.5	70.5	78.6	78.6	64.3	64.3	71.1	71.1
72	24			144	108			76.1	76.1	84.9	84.9	69.3	69.3	77.3	77.3
	30							71.3	71.3	79.5	79.5	65.0	65.0	72.5	72.5
	36							67.1	67.1	74.8	74.8	61.2	61.2	68.2	68.2
	42							63.4	63.4	70.7	70.7	57.8	57.8	64.4	64.4
84	24					144	108	67.8	67.8	75.7	75.7	61.8	61.8	68.9	68.9
	30							64.0	64.0	71.4	71.4	56.3	56.3	65.0	65.0
	36							60.6	60.6	67.6	67.6	55.2	55.2	61.6	61.6
	42							57.5	57.5	64.1	64.1	52.4	52.4	58.5	58.5
60	24	144	108					84.0	84.0	93.5	93.5	79.0	79.0	88.1	88.1
	30							78.0	78.0	86.6	86.6	73.4	73.4	81.9	81.9
	36							72.8	72.8	80.6	80.6	68.6	68.6	76.3	76.3
	42							68.2	68.2	75.3	75.3	64.3	64.3	71.1	71.1
72	24			144	108			73.8	73.8	82.4	82.4	69.3	69.3	77.3	77.3
	30							69.1	69.1	75.9	75.9	65.0	65.0	72.5	72.5
	36							65.0	65.0	72.1	72.1	61.2	61.2	68.2	68.2
	42							61.3	61.3	67.9	67.9	57.8	57.8	64.4	64.4
84	24					144	108	65.9	65.9	73.5	73.5	61.8	61.8	68.9	68.9
	30							62.1	62.1	69.2	69.2	56.3	56.3	65.0	65.0
	36							58.7	58.7	65.3	65.3	55.2	55.2	61.6	61.6
	42							55.7	55.7	61.8	61.8	52.4	52.4	58.5	58.5
60	24	144	108					81.6	81.6	83.6	83.6	79.0	79.0	88.1	88.1
	30							75.6	75.6	77.5	77.5	73.4	73.4	81.9	81.9
	36							70.5	70.5	72.2	72.2	68.6	68.6	76.3	76.3
	42							66.0	66.0	67.7	67.7	64.3	64.3	71.1	71.1
72	24			144	108			71.7	71.7	73.5	73.5	69.3	69.3	77.3	77.3
	30							67.1	67.1	68.7	68.7	65.0	65.0	72.5	72.5
	36							63.0	63.0	64.6	64.6	61.2	61.2	68.2	68.2
	42							59.4	59.4	60.9	60.9	57.8	57.8	64.4	64.4
84	24					144	108	64.0	64.0	65.6	65.6	61.8	61.8	68.9	68.9
	30							60.3	60.3	61.8	61.8	56.3	56.3	65.0	65.0
	36							57.0	57.0	58.4	58.4	55.2	55.2	61.6	61.6
	42							54.0	54.0	55.4	55.4	52.4	52.4	58.5	58.5

DESIGN LOAD CAPACITY - PSF. (2 X 6 X 1/8")															
NOMINAL DIMS.				1/4" ANCHORS				5/16" ANCHORS							
WIDTH (W1)	WIDTH (W2)	FRAME HEIGHT INCHES	DOOR HEIGHT INCHES	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)				
60	24	132	120	83.8	83.8	93.4	93.4	73.4	73.4	81.8	81.9				
	30			78.0	78.0	87.0	87.0	69.0	69.0	76.9	76.9				
	36			73.0	73.0	81.4	81.4	65.0	65.0	72.5	72.5				
	42			68.6	68.6	76.5	76.5	61.5	61.5	68.6	68.6				
72	24			138	120	73.4	73.4	81.8	81.9	65.3	65.3	72.9	72.9		
	30					69.0	69.0	76.9	76.9	61.8	61.8	68.9	68.9		
	36					65.0	65.0	72.5	72.5	58.6	58.6	65.4	65.4		
	42					61.5	61.5	68.6	68.6	55.7	55.7	62.1	62.1		
84	24					144	120	65.3	65.3	72.9	72.9	59.6	59.6	66.4	66.4
	30							61.8	61.8	68.9	68.9	56.9	56.9	63.4	63.4
	36							58.6	58.6	65.4	65.4	54.0	54.0	60.3	60.3
	42							55.7	55.7	62.1	62.1	52.4	52.4	58.5	58.5
60	24	144	120					81.3	81.3	90.7	90.7	79.0	79.0	88.1	88.1
	30							75.6	75.6	84.4	84.4	73.4	73.4	81.9	81.9
	36							70.7	70.7	78.9	78.9	68.6	68.6	76.3	76.3
	42							66.4	66.4	74.0	74.0	64.3	64.3	71.1	71.1
72	24			144	120			71.3	71.3	79.5	79.5	69.3	69.3	77.3	77.3
	30							66.9	66.9	74.6	74.6	65.0	65.0	72.5	72.5
	36							63.0	63.0	70.3	70.3	61.2	61.2	68.2	68.2
	42							59.6	59.6	66.4	66.4	57.8	57.8	64.4	64.4
84	24					144	120	63.5	63.5	70.8	70.8	61.8	61.8	68.9	68.9
	30							60.0	60.0	66.9	66.9	56.3	56.3	65.0	65.0
	36							56.9	56.9	63.4	63.4	55.2	55.2	61.6	61.6
	42							54.0	54.0	60.3	60.3	52.4	52.4	58.5	58.5



TOTAL PROPERTIES  
 $I_x = 14.183 \text{ IN}^4$   
 $S_x = 4.728 \text{ IN}^3$



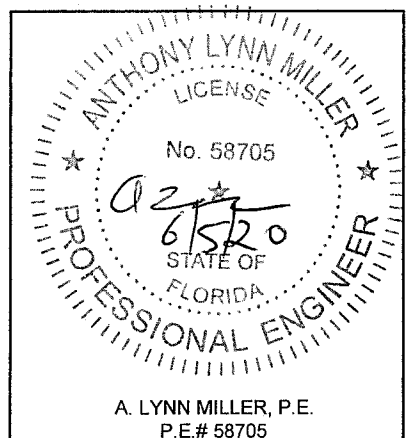
REFER TO SEPARATE 'CGI' N.O.A. FOR SERIES 450 DOORS, SIDELITES AND TRANSOMS

LIMIT EXTERIOR LOADS TO +100 PSF FOR INSTALLATIONS WHERE WATER INFILTRATION RESISTANCE IS REQUIRED. SEE CHART ABOVE FOR INSTALLATIONS WHERE WATER INFILTRATION RESISTANCE IS NOT REQUIRED.

**PRODUCT REVISED**  
 as complying with the Florida Building Code  
 NOA-No. 20-0610.09  
 Expiration Date 10/05/2026  
 By *[Signature]*  
 Miami-Dade Product Control

Revision: A) NO CHANGES THIS SHEET.  
 AK - 06/03/20

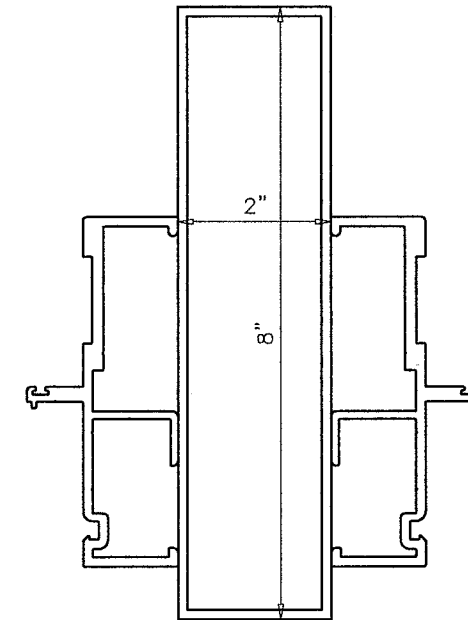
PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600	REGISTRATION #29296	Date	06/03/20	Rev.	A
	CGI DOORS AND WINDOWS, INC. 3780 W 104TH STREET HIALEAH, FL 33018 (305) 593-6590	MULLION LOAD CHARTS	By	AGK	No.
Scale					
Impact Resistant Windows & Doors WE'RE STRONGER™	450 CLIPPED MULLION	Series	450MULL	NTS	Sheet



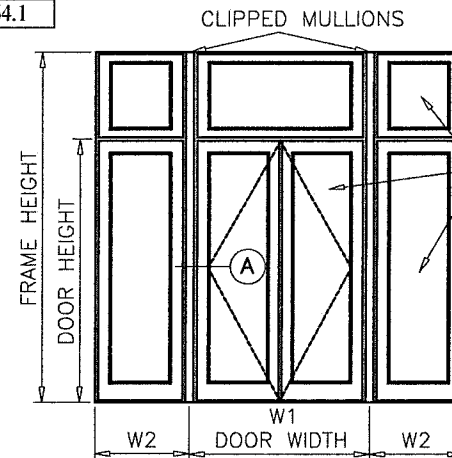
A. LYNN MILLER, P.E.  
 P.E.# 58705

DESIGN LOAD CAPACITY - PSF. (2 X 8 X 1/8")													
NOMINAL DIMS.				1/4" ANCHORS				5/16" ANCHORS					
WIDTH (W1)	WIDTH (W2)	FRAME HEIGHT INCHES	DOOR HEIGHT INCHES	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)		
60	24	96	84	110.0	110.0	110.0	110.0						
	30			108.5	108.5	110.0	110.0						
	36			101.5	101.5	110.0	110.0						
	42			95.3	95.3	106.3	106.3						
72	24					102.3	102.3	110.0	110.0				
	30					96.0	96.0	107.1	107.1				
	36					90.4	90.4	100.9	100.9				
	42					85.5	85.5	95.3	95.3				
84	24					91.1	91.1	101.6	101.6				
	30					86.1	86.1	96.0	96.0				
	36					81.6	81.6	91.0	91.0				
	42					77.5	77.5	86.5	86.5				
60	24	102	84	110.0	110.0	110.0	110.0						
	30			104.0	104.0	110.0	110.0						
	36			97.1	97.1	108.3	108.3						
	42			91.1	91.1	101.6	101.6						
72	24					98.3	98.3	109.6	109.6				
	30					92.1	92.1	102.7	102.7				
	36					86.7	86.7	96.7	96.7				
	42					81.8	81.8	91.3	91.3				
84	24					87.6	87.6	97.7	97.7				
	30					82.6	82.6	92.2	92.2				
	36					78.2	78.2	87.3	87.3				
	42					74.3	74.3	82.9	82.9				
60	24	108	84	107.6	107.6	110.0	110.0						
	30			99.8	99.8	110.0	110.0						
	36			93.1	93.1	103.9	103.9						
	42			87.3	87.3	97.3	97.3						
72	24					94.5	94.5	105.5	105.5				
	30					88.5	88.5	98.7	98.7				
	36					83.2	83.2	92.8	92.8				
	42					78.5	78.5	87.5	87.5				
84	24					84.3	84.3	94.1	94.1				
	30					79.5	79.5	88.7	88.7				
	36					75.2	75.2	83.9	83.9				
	42					71.3	71.3	79.5	79.5				
60	24	114	84	103.6	103.6	110.0	110.0						
	30			96.0	96.0	107.1	107.1						
	36			89.5	89.5	99.8	99.8						
	42			83.8	83.8	93.4	93.4						
72	24					91.1	91.1	101.6	101.6				
	30					85.2	85.2	95.0	95.0				
	36					80.0	80.0	89.2	89.2				
	42					75.4	75.4	84.1	84.1				
84	24					81.3	81.3	90.7	90.7				
	30					76.6	76.6	85.4	85.4				
	36					72.3	72.3	80.7	80.7				
	42					68.6	68.6	76.5	76.5				
60	24	120	84	99.8	99.8	110.0	110.0						
	30			92.4	92.4	103.1	103.1						
	36			86.1	86.1	96.0	96.0						
	42			80.5	80.5	89.8	89.8						
72	24					87.9	87.9	98.0	98.0				
	30					82.1	82.1	91.6	91.6				
	36					77.0	77.0	85.9	85.9				
	42					72.6	72.6	80.9	80.9				
84	24					78.5	78.5	87.5	87.5				
	30					73.8	73.8	82.4	82.4				
	36					69.7	69.7	77.8	77.8				
	42					66.0	66.0	73.7	73.7				

DESIGN LOAD CAPACITY - PSF. (2 X 8 X 1/8")													
NOMINAL DIMS.				1/4" ANCHORS				5/16" ANCHORS					
WIDTH (W1)	WIDTH (W2)	FRAME HEIGHT INCHES	DOOR HEIGHT INCHES	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)		
60	24	126	84	96.4	95.4	107.5	107.5						
	30			89.1	89.1	99.4	99.4						
	36			82.9	82.9	92.5	92.5						
	42			77.5	77.5	85.5	85.5						
72	24					84.9	84.9	94.7	94.7				
	30					79.2	79.2	88.4	88.4				
	36					74.3	74.3	82.9	82.9				
	42					69.9	59.9	78.0	78.0				
84	24					75.9	75.9	84.5	84.6				
	30					71.3	71.3	79.5	79.5				
	36					67.3	67.3	75.0	75.0				
	42					63.7	63.7	71.0	71.0				
60	24	132	84	93.1	93.1	103.9	103.9						
	30			86.1	86.1	96.0	96.0						
	36			80.0	80.0	89.2	89.2						
	42			74.7	74.7	83.4	83.4						
72	24					82.1	82.1	91.6	91.6				
	30					76.6	76.6	85.4	85.4				
	36					71.7	71.7	80.0	80.0				
	42					67.5	67.5	75.2	75.2				
84	24					73.4	73.4	81.9	81.9				
	30					69.0	69.0	76.9	76.9				
	36					65.0	65.0	72.5	72.5				
	42					61.5	61.5	68.6	68.6				
60	24	138	84	90.1	90.1	100.5	100.5						
	30			83.2	83.2	92.8	92.8						
	36			77.3	77.3	86.2	86.2						
	42			72.1	72.1	80.5	80.5						
72	24					79.5	79.5	88.7	88.7				
	30					74.1	74.1	82.6	82.6				
	36					69.3	69.3	77.3	77.3				
	42					65.2	65.2	72.7	72.7				
84	24					71.1	71.1	79.3	79.3				
	30					66.7	66.7	74.4	74.4				
	36					62.9	62.9	70.1	70.1				
	42					59.4	59.4	66.3	66.3				
60	24	144	84	87.3	87.3	96.5	96.5						
	30			80.5	80.5	89.8	89.8						
	36			74.7	74.7	83.4	83.4						
	42			69.7	69.7	77.8	77.8						
72	24					77.0	77.0	84.5	84.5				
	30					71.7	71.7	79.5	79.5				
	36					67.1	67.1	74.8	74.8				
	42					63.0	63.0	70.3	70.3				
84	24					69.0	69.0	75.1	75.1				
	30					64.7	64.7	71.1	71.1				
	36					60.9	60.9	67.6	67.6				
	42					57.5	57.5	64.1	64.1				



TOTAL PROPERTIES  
 $I_x = 23.357 \text{ IN}^4$   
 $S_x = 5.839 \text{ IN}^3$



REFER TO SEPARATE 'CGI' N.O.A. FOR SERIES 450 DOORS, SIDELITES AND TRANSOMS

LIMIT EXTERIOR LOADS TO +100 PSF FOR INSTALLATIONS WHERE WATER INFILTRATION RESISTANCE IS REQUIRED. SEE CHART ABOVE FOR INSTALLATIONS WHERE WATER INFILTRATION RESISTANCE IS NOT REQUIRED.

**PRODUCT REVISED**  
 as complying with the Florida Building Code  
 NOA-No. 20-0610.09  
 Expiration Date 10/05/2026  
 By *[Signature]*  
 Miami-Dade Product Control

Revision: A) NO CHANGES THIS SHEET.  
 AK - 06/03/20

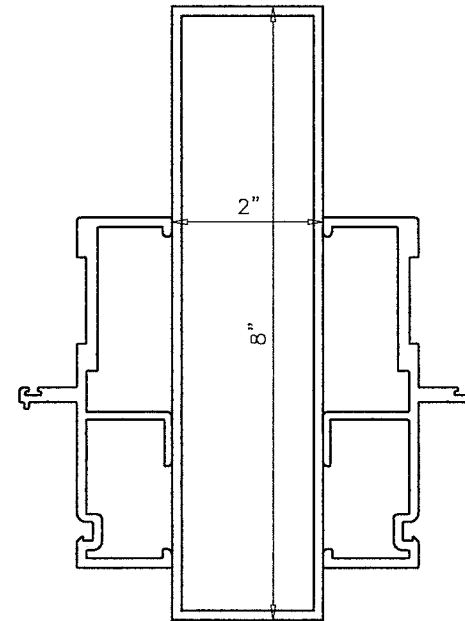
PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600	REGISTRATION #29296 06/03/20	Rev. A
	Impact Resistant Windows & Doors <b>WE'RE STRONGER™</b> CGI DOORS AND WINDOWS, INC. 3780 W 104TH STREET HIALEAH, FL 33018 (305) 593-6590	Date By Drawn AGK
MULLION LOAD CHARTS 450 CLIPPED MULLION		DWG No. 5 OF 9
Series Title 450MULL NTS		Sheet

ANTHONY LYNN MILLER  
 LICENSE  
 No. 58705  
*AGK*  
 6/5/20  
 STATE OF FLORIDA  
 PROFESSIONAL ENGINEER  
 A. LYNN MILLER, P.E.  
 P.E.# 58705

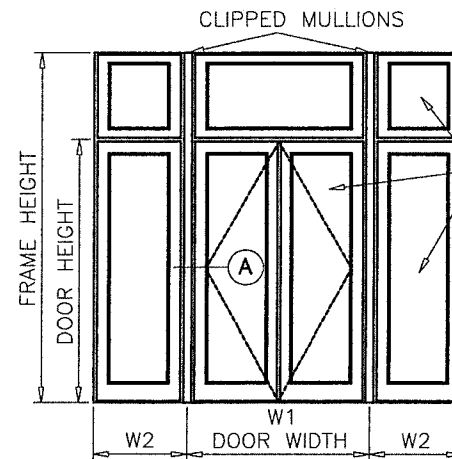


DESIGN LOAD CAPACITY - PSF. (2 X 8 X 1/8")															
NOMINAL DIMS.				1/4" ANCHORS				5/16" ANCHORS							
WIDTH (W1)	WIDTH (W2)	FRAME HEIGHT INCHES	DOOR HEIGHT INCHES	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)				
60	24	108	96	103.1	103.1	110.0	110.0	103.1	103.1	110.0	110.0				
	30			96.0	96.0	107.1	107.1	96.0	96.0	107.1	107.1				
	36			89.8	89.8	100.1	100.1	89.8	89.8	100.1	100.1				
	42			84.3	84.3	94.1	94.1	84.3	84.3	94.1	94.1				
72	24			108	96	90.4	90.4	100.9	100.9	90.4	90.4	100.9	100.9		
	30					84.9	84.9	94.7	94.7	84.9	84.9	94.7	94.7		
	36					80.0	80.0	89.2	89.2	80.0	80.0	89.2	89.2		
	42					75.6	75.6	84.4	84.4	75.6	75.6	84.4	84.4		
84	24					108	96	80.5	80.5	89.8	89.8	80.5	80.5	89.8	89.8
	30							76.1	76.1	84.9	84.9	76.1	76.1	84.9	84.9
	36							72.1	72.1	80.5	80.5	72.1	72.1	80.5	80.5
	42							68.6	68.6	76.5	76.5	68.6	68.6	76.5	76.5
60	24	114	96					99.4	99.4	110.0	110.0	99.4	99.4	110.0	110.0
	30							92.4	92.4	103.1	103.1	92.4	92.4	103.1	103.1
	36							86.4	86.4	96.3	96.3	86.4	86.4	96.3	96.3
	42							81.0	81.0	90.4	90.4	81.0	81.0	90.4	90.4
72	24			114	96			87.3	87.3	97.3	97.3	87.3	87.3	97.3	97.3
	30							81.8	81.8	91.3	91.3	81.8	81.8	91.3	91.3
	36							77.0	77.0	85.9	85.9	77.0	77.0	85.9	85.9
	42							72.8	72.8	81.2	81.2	72.8	72.8	81.2	81.2
84	24					114	96	77.8	77.8	86.7	86.7	77.8	77.8	86.7	86.7
	30							73.4	73.4	81.9	81.9	73.4	73.4	81.9	81.9
	36							69.5	69.5	77.5	77.5	69.5	69.5	77.5	77.5
	42							66.0	66.0	73.7	73.7	66.0	66.0	73.7	73.7
60	24	120	96					96.0	96.0	107.1	107.1	96.0	96.0	107.1	107.1
	30							89.1	89.1	99.4	99.4	89.1	89.1	99.4	99.4
	36							83.2	83.2	92.8	92.8	83.2	83.2	92.8	92.8
	42							78.0	78.0	87.0	87.0	78.0	78.0	87.0	87.0
72	24			120	96			84.3	84.3	94.1	94.1	84.3	84.3	94.1	94.1
	30							79.0	79.0	88.1	88.1	79.0	79.0	88.1	88.1
	36							74.3	74.3	82.9	82.9	74.3	74.3	82.9	82.9
	42							70.1	70.1	78.2	78.2	70.1	70.1	78.2	78.2
84	24					120	96	75.2	75.2	83.9	83.9	75.2	75.2	83.9	83.9
	30							70.9	70.9	79.1	79.1	70.9	70.9	79.1	79.1
	36							67.1	67.1	74.6	74.6	67.1	67.1	74.6	74.6
	42							63.7	63.7	71.0	71.0	63.7	63.7	71.0	71.0
60	24	126	96					92.8	92.8	103.5	103.5	92.8	92.8	103.5	103.5
	30							86.1	86.1	96.0	96.0	86.1	86.1	96.0	96.0
	36							80.3	80.3	89.5	89.5	80.3	80.3	89.5	89.5
	42							75.2	75.2	83.9	83.9	75.2	75.2	83.9	83.9
72	24			126	96			81.6	81.6	91.0	91.0	81.6	81.6	91.0	91.0
	30							76.3	76.1	85.1	85.1	76.3	76.1	85.1	85.1
	36							71.7	71.7	80.0	80.0	71.7	71.7	80.0	80.0
	42							67.6	67.6	75.4	75.4	67.6	67.6	75.4	75.4
84	24					126	96	72.8	72.8	81.2	81.2	72.8	72.8	81.2	81.2
	30							68.6	68.6	76.5	76.5	68.6	68.6	76.5	76.5
	36							64.8	64.8	72.3	72.3	64.8	64.8	72.3	72.3
	42							61.5	61.5	68.6	68.6	61.5	61.5	68.6	68.6
60	24	132	96					89.8	89.8	100.1	100.1	89.8	89.8	100.1	100.1
	30							83.2	83.2	92.8	92.8	83.2	83.2	92.8	92.8
	36							77.5	77.5	86.5	86.5	77.5	77.5	86.5	86.5
	42							72.6	72.6	80.9	80.9	72.6	72.6	80.9	80.9
72	24			132	96			79.0	79.0	88.1	88.1	79.0	79.0	88.1	88.1
	30							73.8	73.8	82.4	82.4	73.8	73.8	82.4	82.4
	36							69.3	69.3	77.3	77.3	69.3	69.3	77.3	77.3
	42							65.3	65.3	72.9	72.9	65.3	65.3	72.9	72.9
84	24					132	96	70.5	70.5	78.6	78.6	70.5	70.5	78.6	78.6
	30							66.4	66.4	74.0	74.0	66.4	66.4	74.0	74.0
	36							62.7	62.7	69.9	69.9	62.7	62.7	69.9	69.9
	42							59.4	59.4	66.3	66.3	59.4	59.4	66.3	66.3

DESIGN LOAD CAPACITY - PSF. (2 X 8 X 1/8")															
NOMINAL DIMS.				1/4" ANCHORS				5/16" ANCHORS							
WIDTH (W1)	WIDTH (W2)	FRAME HEIGHT INCHES	DOOR HEIGHT INCHES	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)				
60	24	138	96	87.0	87.0	97.0	97.0	87.0	87.0	97.0	97.0				
	30			80.5	80.5	89.8	89.8	80.5	80.5	89.8	89.8				
	36			75.0	75.0	83.6	83.6	75.0	75.0	83.6	83.6				
	42			70.1	70.1	78.2	78.2	70.1	70.1	78.2	78.2				
72	24			138	96	76.6	76.6	85.4	85.4	76.6	76.6	85.4	85.4		
	30					71.5	71.5	79.8	79.8	71.5	71.5	79.8	79.8		
	36					67.1	67.1	74.8	74.8	67.1	67.1	74.8	74.8		
	42					63.2	63.2	70.5	70.5	63.2	63.2	70.5	70.5		
84	24					138	96	68.4	68.4	76.3	76.3	68.4	68.4	76.3	76.3
	30							64.3	64.3	71.8	71.8	64.3	64.3	71.8	71.8
	36							60.7	60.7	67.7	67.7	60.7	60.7	67.7	67.7
	42							57.5	57.5	64.1	64.1	57.5	57.5	64.1	64.1
60	24	144	96					84.3	84.3	94.1	94.1	84.3	84.3	94.1	94.1
	30							78.0	78.0	87.0	87.0	78.0	78.0	87.0	87.0
	36							72.6	72.6	80.9	80.9	72.6	72.6	80.9	80.9
	42							67.8	67.8	75.7	75.7	67.8	67.8	75.7	75.7
72	24			144	96			74.3	74.3	82.9	82.9	74.3	74.3	82.9	82.9
	30							69.3	69.3	77.3	77.3	69.3	69.3	77.3	77.3
	36							65.0	65.0	72.5	72.5	65.0	65.0	72.5	72.5
	42							61.2	61.2	68.2	68.2	61.2	61.2	68.2	68.2
84	24					144	96	66.4	66.4	74.0	74.0	66.4	66.4	74.0	74.0
	30							62.4	62.4	69.6	69.6	62.4	62.4	69.6	69.6
	36							58.9	58.9	65.7	65.7	58.9	58.9	65.7	65.7
	42							55.7	55.7	62.1	62.1	55.7	55.7	62.1	62.1



TOTAL PROPERTIES  
 $I_x = 23.357 \text{ IN}^4$   
 $S_x = 5.839 \text{ IN}^3$



REFER TO SEPARATE 'CGI' N.O.A. FOR SERIES 450 DOORS, SIDELITES AND TRANSOMS

LIMIT EXTERIOR LOADS TO +100 PSF FOR INSTALLATIONS WHERE WATER INFILTRATION RESISTANCE IS REQUIRED. SEE CHART ABOVE FOR INSTALLATIONS WHERE WATER INFILTRATION RESISTANCE IS NOT REQUIRED.

**PRODUCT REVISED**  
 as complying with the Florida Building Code  
 NOA-No. 20-0610.09  
 Expiration Date 10/05/2026  
 By *[Signature]*  
 Miami-Dade Product Control

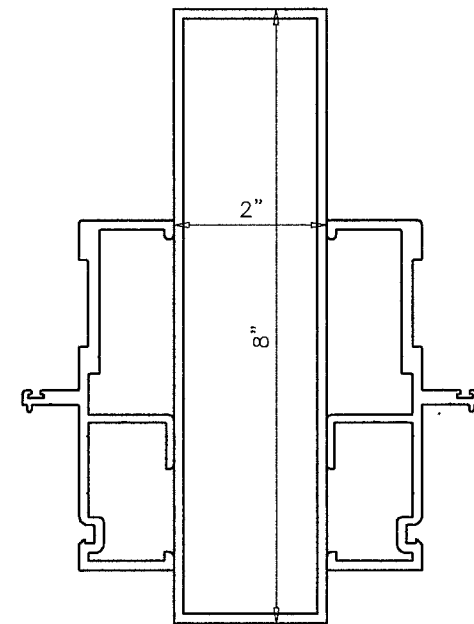
Revision: A) NO CHANGES THIS SHEET.  
 AK - 06/03/20

PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600	REGISTRATION #29296 DATE 06/03/20	DRAWN BY AGK DATE 06/03/20	DWG NO. MD-450MULL REV. A
	Impact Resistant Windows & Doors <b>WERE STRONGER™</b> CGI DOORS AND WINDOWS, INC. 3780 W 104TH STREET HIALEAH, FL 33018 (305) 593-6590	MULLION LOAD CHARTS	450 CLIPPED MULLION

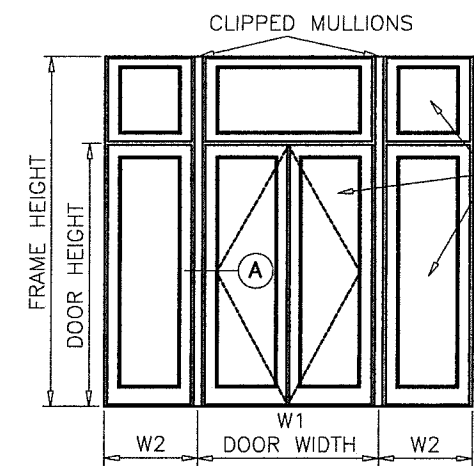
ANTHONY LYNN MILLER  
 LICENSE No. 58705  
 STATE OF FLORIDA  
 PROFESSIONAL ENGINEER  
 A. LYNN MILLER, P.E.  
 P.E.# 58705

DESIGN LOAD CAPACITY - PSF. (2 X 8 X 1/8")								DESIGN LOAD CAPACITY - PSF. (2 X 8 X 1/8")															
NOMINAL DIMS.				1/4" ANCHORS		5/16" ANCHORS		NOMINAL DIMS.				1/4" ANCHORS		5/16" ANCHORS									
WIDTH (W1)	WIDTH (W2)	FRAME HEIGHT INCHES	DOOR HEIGHT INCHES	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	WIDTH (W1)	WIDTH (W2)	FRAME HEIGHT INCHES	DOOR HEIGHT INCHES	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)								
60	24	120	108	92.4	92.4	103.1	103.1	60	24	132	120	83.8	83.8	93.4	93.4								
	30			86.1	86.1	96.0	96.0		30			78.0	78.0	87.0	87.0								
	36			80.5	80.5	89.8	89.8		36			73.0	73.0	81.4	81.4								
	42			75.6	75.6	84.4	84.4		42			68.6	68.6	76.5	76.5								
72	24			126	108	81.0	81.0	90.4	90.4			72	24	138	120	73.4	73.4	81.9	81.9				
	30					76.1	76.1	84.9	84.9				30			69.0	69.0	76.9	76.9				
	36					71.7	71.7	80.0	80.0				36			65.0	65.0	72.5	72.5				
	42					67.8	67.8	75.7	75.7				42			61.5	61.5	68.6	68.6				
84	24					132	108	72.1	72.1			80.5	80.5			84	24	144	120	65.3	65.3	72.9	72.9
	30							68.2	68.2			76.1	76.1				30			61.8	61.8	68.9	68.9
	36							64.7	64.7			72.1	72.1				36			58.6	58.6	65.4	65.4
	42							61.5	61.5			68.6	68.6				42			55.7	55.7	62.1	62.1
60	24	138	108					89.5	89.5	99.8	99.8	60	24			144	120			81.3	81.3	90.7	90.7
	30							83.2	83.2	92.8	92.8		30							75.6	75.6	84.4	84.4
	36							77.8	77.8	86.7	86.7		36							70.7	70.7	78.9	78.9
	42							73.0	73.0	81.4	81.4		42							66.4	66.4	74.0	74.0
72	24			144	108			78.5	78.5	87.5	87.5	72	24	144	120					71.3	71.3	79.5	79.5
	30							73.5	73.6	82.1	82.1		30							66.9	66.9	74.6	74.6
	36							69.3	69.3	77.3	77.3		36							63.0	63.0	70.3	70.3
	42							65.5	65.5	73.1	73.1		42							59.6	59.6	66.4	66.4
84	24					144	108	69.9	69.9	78.0	78.0	84	24					144	120	63.5	63.5	70.8	70.8
	30							66.0	66.0	73.7	73.7		30							60.0	60.0	66.9	66.9
	36							62.6	62.6	69.8	69.8		36							56.9	56.9	63.4	63.4
	42							59.4	59.4	66.3	66.3		42							54.0	54.0	60.3	60.3
60	24	144	108					86.7	86.7	96.7	96.7	60	24			144	120			79.0	79.0	88.1	88.1
	30							80.5	80.5	89.8	89.8		30							73.4	73.4	81.9	81.9
	36							75.2	75.2	83.9	83.9		36							68.6	68.6	76.5	76.5
	42							70.5	70.5	78.6	78.6		42							64.3	64.3	71.8	71.8
72	24			144	108			76.1	76.1	84.9	84.9	72	24	144	120					69.3	69.3	77.3	77.3
	30							71.3	71.3	79.5	79.5		30							65.0	65.0	72.5	72.5
	36							67.1	67.1	74.8	74.8		36							61.2	61.2	68.2	68.2
	42							63.4	63.4	70.7	70.7		42							57.8	57.8	64.4	64.4
84	24					144	108	67.8	67.8	75.7	75.7	84	24					144	120	61.8	61.8	68.9	68.9
	30							64.0	64.0	71.4	71.4		30							58.3	58.3	65.0	65.0
	36							60.6	60.6	67.6	67.6		36							55.2	55.2	61.6	61.6
	42							57.5	57.5	64.1	64.1		42							52.4	52.4	58.5	58.5
60	24	144	108					84.0	84.0	93.7	93.7	60	24			144	108			84.0	84.0	93.7	93.7
	30							78.0	78.0	87.0	87.0		30							78.0	78.0	87.0	87.0
	36							72.8	72.8	81.2	81.2		36							72.8	72.8	81.2	81.2
	42							68.2	68.2	76.1	76.1		42							68.2	68.2	76.1	76.1
72	24			144	108			73.8	73.8	82.4	82.4	72	24	144	108					73.8	73.8	82.4	82.4
	30							69.1	69.1	77.1	77.1		30							69.1	69.1	77.1	77.1
	36							65.0	65.0	72.5	72.5		36							65.0	65.0	72.5	72.5
	42							61.3	61.3	68.4	68.4		42							61.3	61.3	68.4	68.4
84	24					144	108	65.9	65.9	73.5	73.5	84	24					144	108	65.9	65.9	73.5	73.5
	30							62.1	62.1	69.3	69.3		30							62.1	62.1	69.3	69.3
	36							58.7	58.7	65.5	65.5		36							58.7	58.7	65.5	65.5
	42							55.7	55.7	62.1	62.1		42							55.7	55.7	62.1	62.1
60	24	144	108					81.6	81.6	91.0	91.0	60	24			144	108			81.6	81.6	91.0	91.0
	30							75.6	75.6	84.4	84.4		30							75.6	75.6	84.4	84.4
	36							70.5	70.5	78.6	78.6		36							70.5	70.5	78.6	78.6
	42							66.0	66.0	73.7	73.7		42							66.0	66.0	73.7	73.7
72	24			144	108			71.7	71.7	80.0	80.0	72	24	144	108					71.7	71.7	80.0	80.0
	30							67.1	67.1	74.8	74.8		30							67.1	67.1	74.8	74.8
	36							63.0	63.0	70.3	70.3		36							63.0	63.0	70.3	70.3
	42							59.4	59.4	66.3	66.3		42							59.4	59.4	66.3	66.3
84	24					144	108	64.0	64.0	71.4	71.4	84	24					144	108	64.0	64.0	71.4	71.4
	30							60.3	60.3	67.2	67.2		30							60.3	60.3	67.2	67.2
	36							57.0	57.0	63.6	63.6		36							57.0	57.0	63.6	63.6
	42							54.0	54.0	60.3	60.3		42							54.0	54.0	60.3	60.3

LIMIT EXTERIOR LOADS TO +100 PSF FOR INSTALLATIONS WHERE WATER INFILTRATION RESISTANCE IS REQUIRED. SEE CHART ABOVE FOR INSTALLATIONS WHERE WATER INFILTRATION RESISTANCE IS NOT REQUIRED.



TOTAL PROPERTIES  
 $I_x = 23.357 \text{ IN}^4$   
 $S_x = 5.839 \text{ IN}^3$



REFER TO SEPARATE 'CGI' N.O.A. FOR SERIES 450 DOORS, SIDELITES AND TRANSOMS

**PRODUCT REVISED**  
 as complying with the Florida Building Code  
 NOA-No. 20-0610.09  
 Expiration Date 10/05/2026  
 By *[Signature]*  
 Miami-Dade Product Control

Revisor: A) NO CHANGES THIS SHEET.  
 AK - 06/03/20

PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600	REGISTRATION #29296 Date: 06/03/20 By: AGK	Rev.	A
		DWG No.	MD-450MULL
<b>Impact Resistant Windows &amp; Doors</b> <b>WERE STRONGER™</b> CGI DOORS AND WINDOWS, INC. 3780 W 104TH STREET HIALEAH, FL 33018 (305) 593-6590	MULLION LOAD CHARTS 450 CLIPPED MULLION	Scale	7 OF 9
		Series	450MULL

ANTHONY LYNN MILLER  
 LICENSE  
 No. 58705  
*AGK*  
 6/5/20  
 STATE OF FLORIDA  
 PROFESSIONAL ENGINEER  
 A. LYNN MILLER, P.E.  
 P.E.# 58705

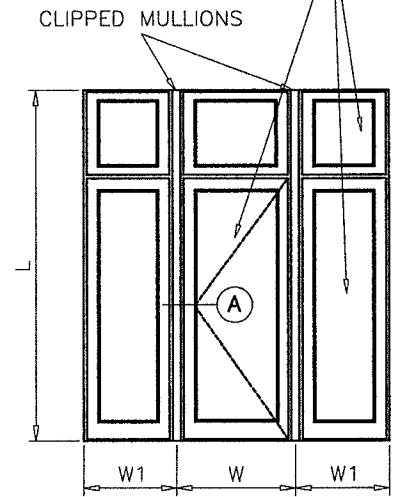
DESIGN LOAD CAPACITY - PSF

L IN.	AVG. WIDTH IN.	2 X 6 X 1/8"				2 X 8 X 1/8"				
		1/4" DIA. ULTRACON		5/16" DIA. ULTRACON		1/4" DIA. ULTRACON		5/16" DIA. ULTRACON		
		EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	
84	24	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	
	30	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	
	36	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	
	42	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	
	48	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	
	54	99.0	99.0	110.0	110.0	99.0	99.0	110.0	110.0	
	60	89.1	89.1	99.4	99.4	89.1	89.1	99.4	99.4	
	66	81.0	81.0	90.4	90.4	81.0	81.0	90.4	90.4	
	72	74.3	74.3	82.9	82.9	74.3	74.3	82.9	82.9	
	78	68.6	68.6	76.5	76.5	68.6	68.6	76.5	76.5	
	84	63.7	63.7	71.0	71.0	63.7	63.7	71.0	71.0	
	96	24	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0
30		110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	
36		110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	
42		110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	
48		97.5	97.5	108.8	108.8	97.5	97.5	108.8	108.8	
54		86.7	86.7	96.7	95.7	86.7	86.7	96.7	96.7	
60		78.0	78.0	87.0	87.0	78.0	76.0	87.0	87.0	
66		70.9	70.9	79.1	79.1	70.9	70.9	79.1	79.1	
72		65.0	65.0	72.5	72.5	65.0	65.0	72.5	72.5	
78		60.0	60.0	66.9	66.9	60.0	60.0	66.9	66.9	
84		55.7	55.7	62.1	62.1	55.7	55.7	62.1	62.1	
108		24	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0
	30	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	
	36	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	
	42	99.0	99.0	110.0	110.0	99.0	99.0	110.0	110.0	
	48	86.7	86.7	96.7	96.7	86.7	86.7	96.7	96.7	
	54	77.0	77.0	85.9	85.9	77.0	77.0	85.9	85.9	
	60	69.3	69.3	77.3	77.3	69.3	69.3	77.3	77.3	
	66	63.0	63.0	70.3	70.3	63.0	63.0	70.3	70.3	
	72	57.8	57.8	64.4	64.4	57.8	57.8	64.4	64.4	
	78	53.3	53.3	59.5	59.5	53.3	53.3	59.5	59.5	
	120	24	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0
		30	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0
36		104.0	104.0	110.0	110.0	104.0	104.0	110.0	110.0	
42		89.1	89.1	99.4	99.4	89.1	89.1	99.4	99.4	
4a		78.0	78.0	87.0	87.0	78.0	78.0	87.0	87.0	
54		69.3	69.3	77.3	77.3	69.3	69.3	77.3	77.3	
60		62.4	62.4	69.6	69.6	62.4	62.4	69.6	69.6	
66		56.7	56.7	63.3	63.3	56.7	56.7	63.3	63.3	
72		52.0	52.0	58.0	58.0	52.0	52.0	58.0	58.0	

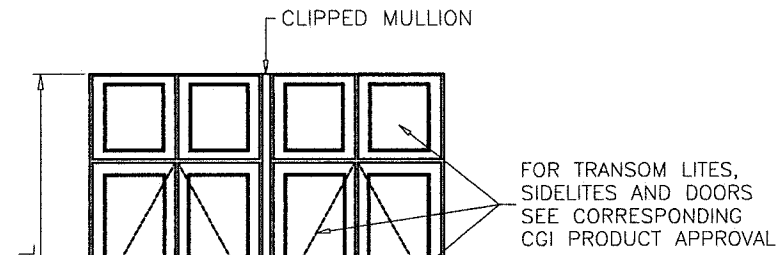
DESIGN LOAD CAPACITY - PSF

L IN.	AVG. WIDTH IN.	2 X 6 X 1/8"				2 X 8 X 1/8"			
		1/4" DIA. ULTRACON		5/16" DIA. ULTRACON		1/4" DIA. ULTRACON		5/16" DIA. ULTRACON	
		EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)
132	24	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0
	30	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0
	36	94.5	94.5	102.9	102.9	94.5	94.5	105.5	105.5
	42	81.0	81.0	88.2	88.2	81.0	81.0	90.4	90.4
	48	70.9	70.9	77.2	77.2	70.9	70.9	79.1	79.1
	54	63.0	63.0	68.6	68.6	63.0	63.0	70.3	70.3
144	60	56.7	56.7	61.8	61.8	56.7	56.7	63.3	63.3
	24	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0
	30	98.2	98.2	98.2	98.2	104.0	104.0	110.0	110.0
	36	81.9	81.9	81.9	81.9	86.7	86.7	96.7	96.7
	42	70.2	70.2	70.2	70.2	74.3	74.3	82.9	82.9
	48	61.4	61.4	61.4	61.4	65.0	65.0	72.5	72.5
54	54.6	54.6	54.6	54.6	57.8	57.8	64.4	64.4	
60	49.1	49.1	49.1	49.1	52.0	52.0	58.0	58.0	

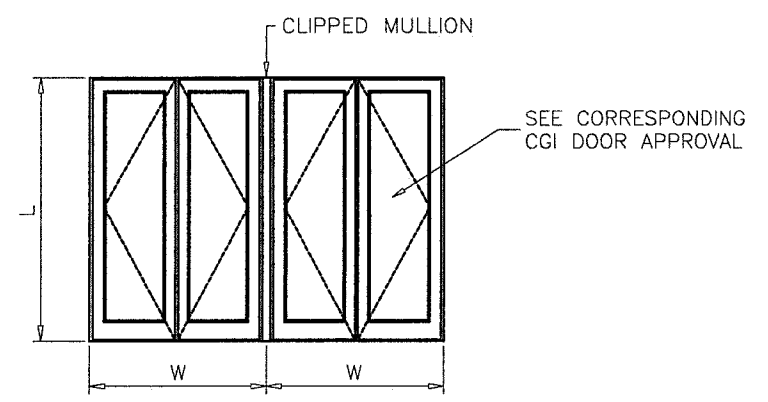
FOR TRANSOM LITES, SIDELITES AND DOORS SEE CORRESPONDING CGI PRODUCT APPROVAL



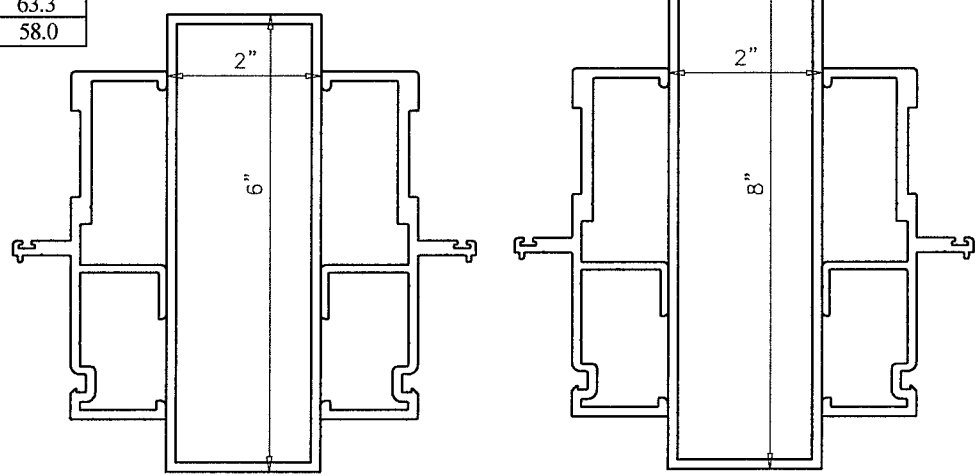
$$AVG. WIDTH = \frac{W + W1}{2}$$



$$AVG. WIDTH = W$$



$$AVG. WIDTH = \frac{W}{2}$$



TOTAL PROPERTIES  
Ix = 14.183 IN<sup>4</sup>  
Sx = 4.728 IN<sup>3</sup>

TOTAL PROPERTIES  
Ix = 23.357 IN<sup>4</sup>  
Sx = 5.839 IN<sup>3</sup>

LIMIT EXTERIOR LOADS TO +100 PSF FOR INSTALLATIONS WHERE WATER INFILTRATION RESISTANCE IS REQUIRED. SEE CHART ABOVE FOR INSTALLATIONS WHERE WATER INFILTRATION RESISTANCE IS NOT REQUIRED.

**PRODUCT REVISED**  
as complying with the Florida Building Code  
NOA-No. 20-0610.09  
Expiration Date 10/05/2026  
By *[Signature]*  
Miami-Dade Product Control

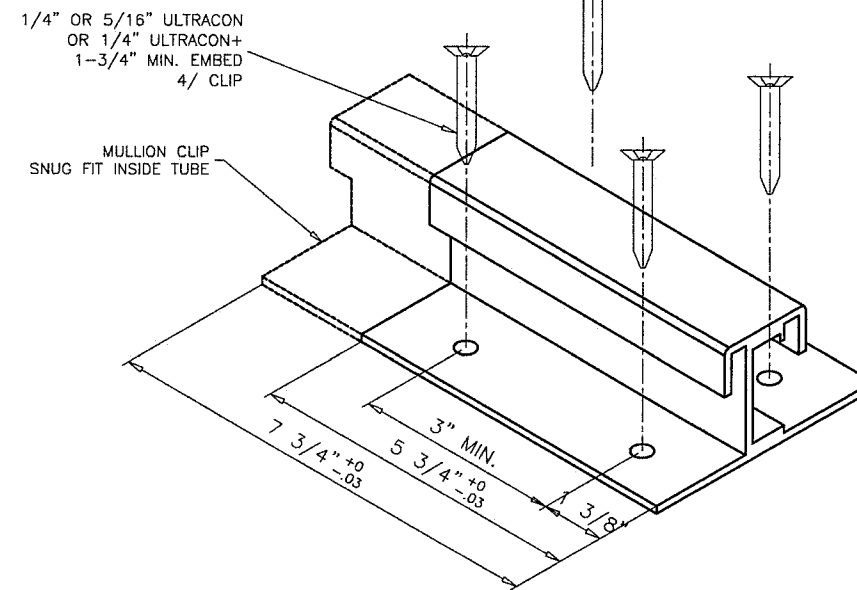
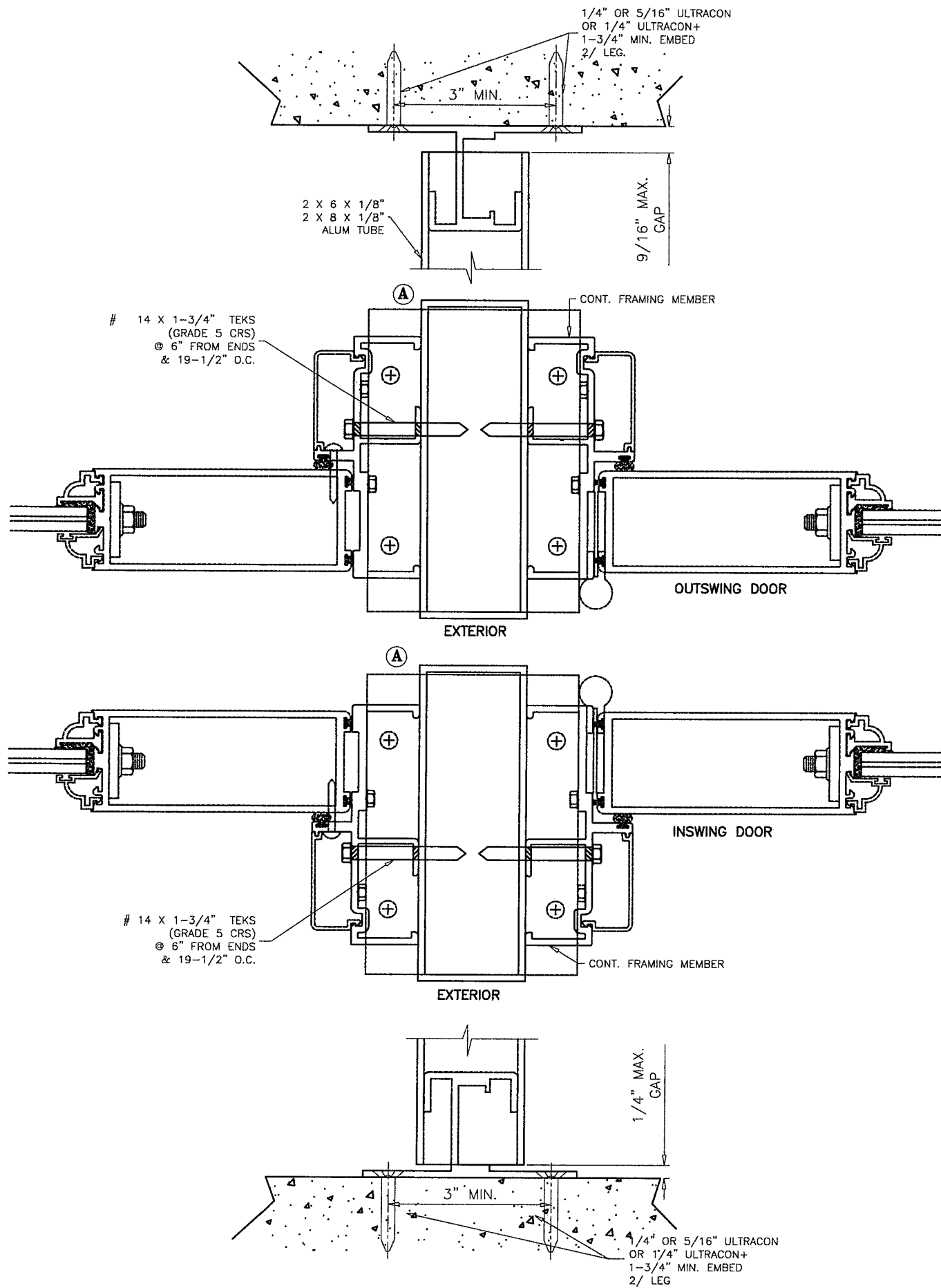
Revision: A) NO CHANGES THIS SHEET.  
AK - 06/03/20

PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600	REGISTRATION #29296	Date	06/03/20	Rev.	A
	MULLION LOAD CHARTS	By	AGK	DWG	MD-450MULL
		Scale	NTS	Sheet	8 OF 9
		Series	450MULL	Title	450 CLIPPED MULLION

Impact Resistant Windows & Doors  
WE'RE STRONGER™  
CGI DOORS AND WINDOWS, INC.  
3780 W 104TH STREET  
HIALEAH, FL 33018  
(305) 593-6590

ANTHONY LYNN MILLER  
LICENSE  
No. 58705  
6/5/20  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER

A. LYNN MILLER, P.E.  
P.E.# 58705



**NOTES:**

1/4" DIA. ULTRACON BY 'ELCO' (Fu=177 KSI, Fy=155 KSI)  
 2-1/2" MIN. EDGE DISTANCE

1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)  
 2-1/2" MIN. EDGE DISTANCE

5/16" DIA. ULTRACON BY 'ELCO/DEWALT' (Fu=177 KSI, Fy=155 KSI)  
 3-1/4" MIN. EDGE DISTANCE

CONCRETE f'c = 3000 PSI MIN.

**PRODUCT REVISED**  
 as complying with the Florida  
 Building Code  
 NOA-No. 20-0610.09  
 Expiration Date 10/05/2026  
 By *[Signature]*  
 Miami-Dade Product Control

Revision: A) ADDED ULTRACON+  
 ANCHORS.  
 AK - 06/03/20

PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600	REGISTRATION #29296	Date 06/03/20	Rev. A
	INSTALLATION DETAILS, ANCHORS	By AGK	MD-450MULL
<b>Impact Resistant          Windows &amp; Doors</b> <b>WE'RE STRONGER™</b> CGI DOORS AND WINDOWS, INC. 3780 W 104TH STREET HIALEAH, FL 33018 (305) 593-6590	450 CLIPPED MULLION	No. 9 OF 9	DWG No.
	450MULL	NTS	Scale

