

DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)

BOARD AND CODE ADMINISTRATION DIVISION

PRODUCT CONTROL SECTION 11805 SW 26 Street, Room 208 Miami, Florida 33175-2474 T (786) 315-2590 F (786) 315-2599

www.miamidade.gov/building

**MIAMI-DADE COUNTY** 

# **NOTICE OF ACCEPTANCE (NOA)**

Gopi Glass Sales & Services Corp. 7450 N.W. 41<sup>st</sup> Street Miami, FL 33166

#### 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:** Clipped, Extruded Aluminum Tube Mullion – L.M.I.

**APPROVAL DOCUMENT:** Drawing No. **M95-16**, titled "Aluminum Tube Mullions", sheets 1 through 8 of 8, dated 12/05/95, with revision **L** dated 07/28/23, prepared by Al-Farooq Corporation, signed and sealed by Jalal Farooq, 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. 21-0122.08 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 Manuel Perez, P.E.

MIAMI-DADE COUNTY
APPROVED

NOA No. 23-0815.17 Expiration Date: March 28, 2027 Approval Date: September 07, 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. 06-0210.07)
- 2. Drawing No M95–16, titled "Aluminum Tube Mullions", sheets 1 through 8 of 8, dated 12/05/95, with revision K dated 12/28/20, prepared by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P. E. (Submitted under NOA No. 21-0122.08)

#### B. TESTS

- 1. 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 aluminum fixed windows mulled together, prepared by Fenestration Testing Laboratory, Inc., verification Test

Report No. FTL-5378, dated 10/04/07, signed and sealed by Michael R. Wenzel, P.E. (Submitted under NOA No. 06-0210.07)

- 2. Test reports on: 1) Air Infiltration Test, per TAS 202-94
  - 2) Uniform Static Air Pressure Test, Loading per TAS 202-94
  - 3) Water Resistance Test, per TAS 202-94
  - 4.) Large Missile Impact Test, FBC TAS 201-94
  - 5.) Cyclic Loading Test, per FBC TAS 203-94

along with marked—up drawings and installation diagram of two mulled side-by-side series 510 aluminum fixed window, prepared by Hurricane Engineering & Testing Lab, Inc., Test Report No. **HETI-02-1145B** dated 04/30/02, signed and sealed by Hector M. Medina, P.E.

# (Submitted under NOA No. 02-0826.03) (For reference only)

3. Test reports on: 1) Uniform Static Air Pressure Test, Loading per PA 202-94 along with installation diagram of window prepared by Hurricane Engineering & Testing Inc., Test Report No. **HETI-96-512**, dated 02/02/96 signed and sealed by Hector M. Medina, P.E.

(Submitted under NOA No. 99-0331.02)

Manuel Perez, P.E. Product Control Examiner NOA No. 23-0815.17

Expiration Date: March 28, 2027 Approval Date: September 07, 2023

### Gopi Glass Sales & Services Corp.

### NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

## 1. EVIDENCE SUBMITTED UNDER PREVIOUS NOA'S (CONTINUED)

#### C. CALCULATIONS

1. Anchor verification calculations and structural analysis, complying with **FBC** 6<sup>th</sup> **Edition (2017)**, dated 02/28/18, prepared by Al-Farooq Corporation, signed and sealed by Javad Ahmad, P.E.

(Submitted under NOA No. 18-0319.06)

### 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** 7<sup>th</sup> **Edition (2020)** and of no financial interest, dated January 04, 2021, issued by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E.

(Submitted under NOA No. 21-0122.08)

## G. OTHERS

1. Notice of Acceptance No. **18-0319.06**, issued to Gopi Glass Sales & Services Corp. for their Clipped, Extruded Aluminum Tube Mullion - L.M.I., approved on 05/10/18 and expiring on 03/28/22.

Manuel Pérez, P.E.
Product Control Examiner
NOA No. 23-0815.17

Expiration Date: March 28, 2027 Approval Date: September 07, 2023

### Gopi Glass Sales & Services Corp.

### NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

### 2. NEW EVIDENCE SUBMITTED

#### A. DRAWINGS

1. Drawing No M95-16, titled "Aluminum Tube Mullions", sheets 1 through 8 of 8, dated 12/05/95, with revision L dated 07/28/23, prepared by Al-Farooq Corporation, signed and sealed by Jalal Farooq, 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

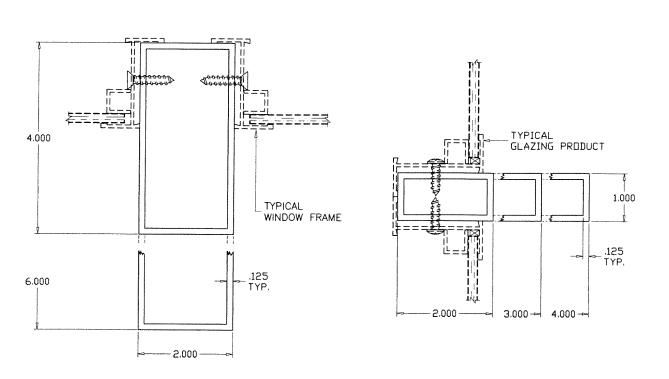
1. Statement letter of conformance, complying with FBC 7<sup>th</sup> Edition (2020), with FBC 8<sup>th</sup> Edition (2023), and of no financial interest, dated July 28, 2023, issued by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E.

### G. OTHERS

1. Notice of Acceptance No. **21-0122.08**, issued to Gopi Glass Sales & Services Corp. for their Clipped, Extruded Aluminum Tube Mullion - L.M.I.", approved on 05/13/21 and expiring on 03/28/27.

Manuel Perez, P.E.
Product Control Examiner
NOA No. 23-0815.17

Expiration Date: March 28, 2027 Approval Date: September 07, 2023



# MULLIONS CONTAINING TYPICAL GLAZING PRODUCTS HORIZONTAL OR VERTICAL

SEE WINDOW OR DOOR APPROVAL FOR FASTENERS SIZES AND SPACING

ALL MULLIONS 6063-T6 MIN.

# .690 -1.690 .125 -.125 2.500 2.500 1.530 -1,030 --3.7503.750 MULLION CLIP (6063-T6) MULLION CLIP (6063-T6)(ALT. TO ANGLES) (ALT. TO ANGLES) CLIP LENGTHS MUST BE CUT TO FIT SNUG CLIP LENGTHS MUST BE CUT TO FIT SNUG INTO TUBE MULLIONS. INTO TUBE MULLIONS. 2.000 2.000 ANGLE CLIP (6063-T6)

# RECTANGULAR ALUMINUM TUBE MULLIONS USING MULLION PROPERTIES ONLY

#### NOTES:

THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE 2020 (7TH EDITION)/2023 (8TH EDITION) FLORIDA BUILDING CODE INCLUDING HIGH VELOCITY HURRICANE ZONE (HVHZ).

ALL GLAZING PRODUCTS USED WITH THESE MULLIONS MUST MEET THE APPLICABLE BUILDING 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 2020/2023 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.

DESIGN LOADS SHOWN ARE BASED ON 'ALLOWABLE STRESS DESIGN (ASD)'

MULLION SYSTEM IS RATED FOR LARGE & SMALL MISSILE IMPACT. AND CAN BE USED WITH ALL MIAMI-DADE COUNTY APPROVED IMPACT AND NON-IMPACT RESISTANT PRODUCTS.

#### INSTRUCTIONS:

USE CHARTS AND GRAPHS AS FOLLOWS.

DETERMINE DESIGN LOAD REQUIRED PER ASCE 7 FOR PARTICULAR OPENING.

USE MIAMI-DADE COUNTY APPROVED GLAZING PRODUCTS MEETING ABOVE LOAD REQUIREMENTS.

STEP 3 USE CONNECTION TO MULLION AS PER PRODUCT

USING CHARTS ON SHEET 2 SELECT MULLION SIZE WITH STEP 4 DESIGN RATING MORE THAN DESIGN LOAD SPECIFIED IN STEP 1 ABOVE.

USING ANCHOR TYPES ON SHEETS 6 THRU 8 AND ANCHOR CHARTS ON SHEET 3 THRU 5 SELECT ANCHOR TYPE WITH DESIGN RATING MORE THAN THE DESIGN LOADS SPECIFIED IN STEP 1 ABOVE.

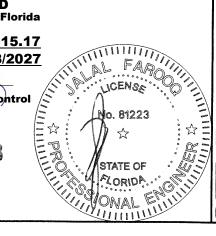
> LOWER VALUES FROM GLAZING PRODUCTS, MULLION CHARTS OR ANCHOR CHARTS WILL APPLY TO ENTIRE SYSTEM.

PRODUCT REVISED As complying with the Florida Building Code 23-0815.17 NOA-No.

Expiration Date: 03/28/2027 By: Manuel Peres

Miami-Dade Product Control

JUL 28 2023



ē 2 - 2 × 1 12-05 1/2" drawing

M95 - 16

sheet 1 of 8

(C.A.N. 3538) 305) 262-6978

FAX. (305)

CORPORATION

AL-FAROOQ (ENGINEERS & PROD 9360 SUNSET DRIVE MIAMI, FLORIDA 33:

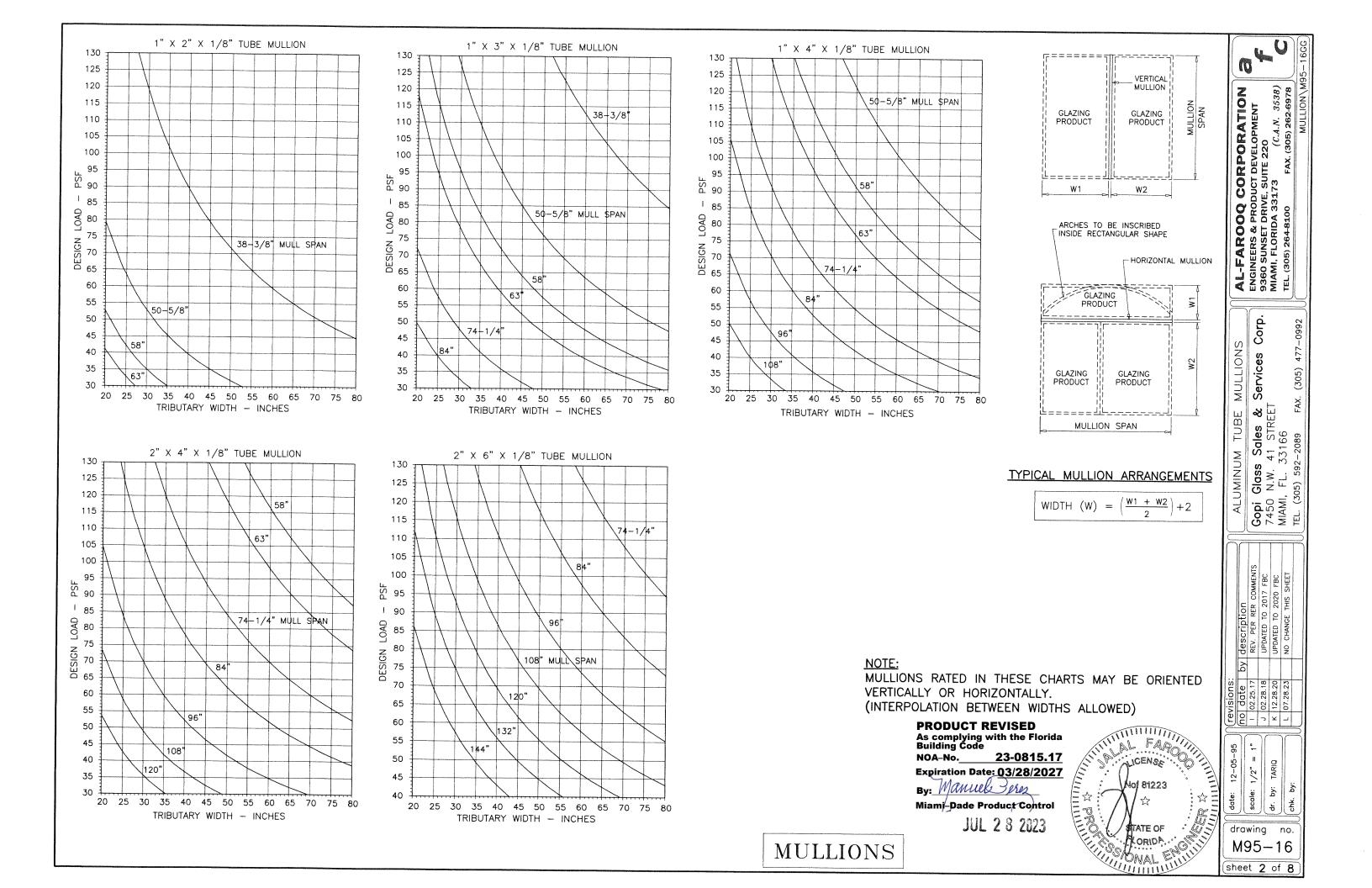
MULLION Services

TUBE

JUSS Sales & .W. 41 STREET L. 33166

Glass N.W.

**Gopi** (7450 MIAMI,



	DESIGN LO	AD CAPA	TITY - PS	er.	1	DESIGN LO	AD CADA	CITY DO	210
WINDO	W DIMS.	Y	CHORS TY		WINDO		1		
1	MULL SPAN	W2	B2	C2/M2	WINDO WIDTH (W)	W DIMS.	<del> </del>	CHORS T	
20"	MOLL STAN	130.0	107.0	130.0	20"	MULL SPAN	90.5	B2 64.5	13
25"		120.1	85.6	130.0	25"		72.4	51.6	10
30"		100.1	71.3	130.0	30"		60.3	43.0	8
35"		85.8	61.1	126.8	35"		51.7	36.8	7
40"		75.1	53.5	110.9	40"		45.3	32.2	6
45"		66.7	47.5	98.6	45"		40.2	28.6	5
50"	50-5/8"	60.1	42.8	88.7	50"	84"	36.2	25.8	5
55"	,	54.6	38.9	80.7	55"	0+	32.9	23.4	4
60"		50.1	35.7	74.0	60"		30.2	21.5	4
65"		46.2	32.9	68.3	65"		27.9		4
70"		42.9	30.6	63.4	70"		25.9		3
75"		40.0	28.5	59.2	75"		24.1	_	3:
80"		37.5	26.7	55.5	80"		22.6	_	3.
85"		35.3	25.2	52.2	85"		21.3	_	3
20"		130.0	93.4	130.0	20"		79.2	56.4	11
25"		104.9	74.7	130.0	25"		63.4	45.1	9.
30"		87.4	62.2	129.1	30"		52.8	37.6	78
35"		74.9	53.3	110.7	35"		45.3	32.2	66
40"		65.5	46.7	96.8	40"		39.6	28.2	58
45"		58.3	41.5	86.1	45"		35.2	25.1	52
50"	58"	52.4	37.3	77.5	50"	96"	31.7	22.6	46
55"		47.7	33.9	70.4	55"		28.8	20.5	42
60"		43.7	31.1	64.6	60"		26.4	-	39
65"		40.3	28.7	59.6	65"		24.4	-	36
70"		37.5	26.7	55.3	70"		22.6		33
75"		35.0	24.9	51.6	75"		21.1	_	31
80"		32.8	23.3	48.4	80"		-	_	29
85"		30.8	22.0	45.6	85"		_	-	27
20"		120.7	85.9	130.0	20"		70.4	50.1	10
25"		96.5	68.8	130.0	25"		56.3	40.1	83
30"		80.5	57.3	118.9	30"		46.9	33.4	69
35"		69.0	49.1	101.9	35"		40.2	28.6	59
40"		60.3	43.0	89.1	40"		35.2	25.1	52
45"		53.6	38.2	79.2	45"		31.3	22.3	46
50"	63"	48.3	34.4	71.3	50"	108"	28.2	20.1	41
55"	-	43.9	31.3	64.8	55"		25.6	-	37
60"		40.2	28.6	59.4	60"		23.5	_	34
65" 70"		37.1 34.5	26.4	54.9	65"		21.7	_	32
75"		32.2	24.6 22.9	50.9	70"		20.1	_	29
80"	-	30.2	21.5	47.5	75"	-			27
85"	-	28.4	20.2	41.9	80"			_	26
20"		102.4	72.9	130.0	85" 20"		67.4	- 45.1	24
25"	-	81.9	58.3	121.0	25"	-	63.4 50.7	45.1 36.1	93 74
30"		68.3	48.6	100.8	30"	<b> </b>	42.2	30.1	62
35"	F	58.5	41.7	86.4	35"		36.2	25.8	53
40"	74-1/4"	51.2	36.5	75.6	40"		31.7	22.6	46
45"		45.5	32.4	67.2	45"	ŀ	28.2	20.1	41
50"		41.0	29.2	60.5	50"	120"	25.3	20.1	37
55"		37.2	26.5	55.0	55"	120	23.0		34
60"		34.1	24.3	50.4	60"	ł	21.1		31
65"		31.5	22.4	46.5	65"	F			28
70"	F	29.3	20.8	43.2	70"	F	_		26
75"	-	27.3	_	40.3	75"	ŀ		_	25
80"		25.6	_	37.8	80"	-		_	23
85"		24.1	-	35.6	85"	<u> </u>	_		22

DESIGN LOAD CAPACITY - PSF WINDOW DIMS. ANCHORS TYPE							
	MULL SPAN						
	MULL SPAN			C2/M2			
20"		57.6	41.0	85.1			
25"		46.1	32.8	68.1			
30"		38.4	27.3	56.7			
35"		32.9	23.4	48.6			
40"		28.8	20.5	42.5			
45"		25.6	-	37.8			
50"	132"	23.0	_	34.0			
55"		20.9		30.9			
60"		_	_	28.4			
65"		_	_	26.2			
70"				24.3			
75"		_	_	22.7			
80"		_	-	21.3			
85"		_	_	20.0			
20"		52.8	37.6	78.0			
25"		42.2	30.1	62.4			
30"		35.2	25.1	52.0			
35"		30.2	21.5	44.6			
40"		26.4	_	39.0			
45"	144"	144" 23.5 -		34.7			
50"	144	21.1 -		31.2			
55"		_	- 1	28.4			
60"	Ì		_	26.0			
65"	İ	_	_	24.0			
70"			_	22.3			
75"		_	_	20.8			

C2/M2

130.0

107.0

89.1 76.4

66.9 59.4

53.5

48.6

44.6

41.1 38.2

35.7

33.4

31.5

117.0

93.6

78.0

66.9 58.5

52.0

46.8 42.5

39.0

36.0

33.4 31.2 29.3

27.5

104.0 83.2

69.3 59.4 52.0

46.2

41.6 37.8 34.7

32.0

29.7 27.7

26.0

24.5

93.6

74.9

62.4

53.5

46.8

41.6

37.4

34.0

31.2

28.8

26.7

25.0

23.4

22.0

ALL LOADS ARE EXT.(+)/INT.(-).

### TYPICAL ANCHORS:

# 1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)

- W2: INTO 2BY WOOD BUCKS OR WOOD STRUCTURES 1-1/2" MIN. PENETRATION INTO WOOD
- B2: THRU 1BY BUCKS INTO CONC. OR BLOCKS 1-1/4" MIN. EMBED INTO CONCRETE 1-3/4" MIN. EMBED INTO GROUT FILLED BLOCK
- B2: DIRECTLY INTO GROUT FILLED BLOCK 1-3/4" MIN. EMBED INTO BLOCK
- C2: DIRECTLY INTO CONCRETE 1-3/4" MIN. EMBED INTO CONCRETE

### 1/4" DIA. TEKS OR SELF DRILLING SCREWS (GRADE 5 CRS)

M2: INTO METAL STRUCTURES (3) THREADS MIN. TO EXTEND BEYOND METAL THICKNESS ALUMINUM: 1/8" THK. MIN. (6063-T5 MIN.) STEEL: 1/8" THK. MIN. (Fy = 36 KSI MIN.) (STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

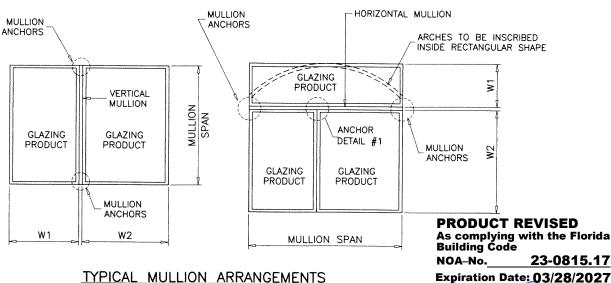
#### TYPICAL EDGE DISTANCE

INTO CONCRETE AND BLOCKS = 2-1/2" MIN. INTO WOOD STRUCTURE = 1" MIN. INTO METAL STRUCTURE = 3/4" MIN.

WOOD AT HEAD, SILL OR JAMBS SG = 0.55 MIN. CONCRETE AT HEAD, SILL OR JAMBS f'c = 3000 PSI MIN. C-90 GROUT FILLED NORMAL WEIGHT BLOCK AT JAMBS I'M = 2000 PSI MIN.

> ANY ANCHOR CONDITION SHOWN HEREIN MAY COVER LOCATIONS AT HEAD, SILL OR JAMB ENDS. SEE SHEET 6 FOR ANCHOR DETAILS.

(INTERPOLATION BETWEEN WIDTHS OR SPANS ALLOWED)



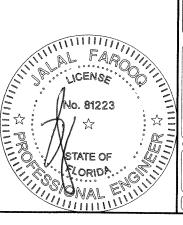
# TYPICAL MULLION ARRANGEMENTS

WIDTH (W) = 
$$\left(\frac{\text{W1} + \text{W2}}{2}\right) + 2$$

JUL 2 8 2023

Miami-Dade Product Control

By: Manuel Peres



AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173 (C.A.N. 3538)
TEL. (305) 264-8100 FAX. (305) 262-6978

Corp. MULLION

Services

TUBE

ALUMINUM

**s Sales &**41 STREET
33166
32-2089 FAX

Glass N.W. 4 FL. 3 **Gopi (**7450
MIAMI,
TEL. (30

revision no date 1 02.25.1 J 02.28.1 K 12.28.2 L 07.28.2.

12-05 by: 유 || 충

drawing no. M95 - 16sheet 3 of 8

**ANCHORS** 

DESIGN LOAD CAPACITY - PSF					DESIGN LOAD CAPACITY - PSF				
WINDOW DIMS.		ANCHORS TYPE		WINDO	WINDOW DIMS.		ANCHORS TYPE		
	) MULL SPAN		B4.2	C4.2		MULL SPAN	W4.2 B4.2		C4.2
20"		130.0	130.0	130.0	20"	MOLE GITAL	130.0	85.7	130.0
25"		130.0	113.8	130.0	25"		130.0	68.6	130.0
30"		130.0	94.8	130.0	30"		120.7	57.1	118.9
35"		130.0	81.3	130.0	35"		103.4	49.0	101.9
40"		130.0	71.1	130.0	40"		90.5	42.9	89.1
45"		130.0	63.2	130.0	45"		80.5	38.1	79.2
50"	50-5/8"	120.1	56.9	118.3	50"	84"	72.4	34.3	71.3
55"		109.2	51.7	107.6	55"	04	65.8	31.2	64.8
60"		100.1	47.4	98.6	60"		60.3	28.6	59.4
65"		92.4	43.8	91.0	65"		55.7	26.4	54.9
70"		85.8	40.6	84.5	70"		51.7	24.5	50.9
75"		80.1	37.9	78.9	75"		48.3	22.9	47.5
80"		75.1	35.6	74.0	80"		45.3	21.4	44.6
85"		70.7	33.5	69.6	85"		42.6	20.2	41.9
20"		130.0	124.1	130.0	20"		130.0	75.0	130.0
25"		130.0	99.3	130.0	25"		126.7	60.0	124.8
30"		130.0	82.8	130.0	30"		105.6	50.0	104.0
35"		130.0	70.9	130.0	35"	}	90.5	42.9	89.1
40"		130.0	62.1	129.1	40"	<b> </b>	79.2	37.5	78.0
45"		116.5	55.2	114.8	45"	-	70.4	33.3	69.3
50"	58"	104.9	49.7	103.3	50"	96"	63.4	30.0	62.4
55"		95.3	45.1	93.9	55"	90	57.6	27.3	56.7
60"		87.4	41.4	86.1	60"		52.8	25.0	52.0
65"		80.7	38.2	79.4	65"		48.7	23.1	48.0
70"		74.9	35.5	73.8	70"		45.3	21.4	44.6
75"		69.9	33.1	68.9	75"		42.2	20.0	41.6
80"		65.5	31.0	64.6	80"		39.6		39.0
85"		61.7	29.2	60.8	85"	-	37.3	-	36.7
20"		130.0	114.3	130.0	20"		130.0	66.7	130.0
25"		130.0	91.4	130.0	25"		112.6	53.3	110.9
30"		130.0	76.2	130.0	30"		93.9	44.4	92.4
35"		130.0	65.3	130.0	35"	-	80.5	38.1	79.2
40"		120.7	57.1	118.9	40"	-	70.4	33.3	69.3
45"		107.3	50.8	105.7	45"		62.6	29.6	61.6
50"	63"	96.5	45.7	95.1	50"	108"	56.3	26.7	55.5
55"		87.8	41.6	86.4	55"	100	51.2	24.2	50.4
60"		80.5	38.1	79.2	60"	-	46.9	22.2	46.2
65"		74.3	35.2	73.1	65"	-	43.3	20.5	42.7
70"		69.0	32.7	67.9	70"	F	40.2	-	39.6
75"		64.4	30.5	63.4	75"		37.5		37.0
80"	<b> </b>	60.3	28.6	59.4	80"	F	35.2		34.7
85"		56.8	26.9	55.9	85"	<u> </u>	33.1	_	32.6
20"		130.0	97.0	130.0	20"		126.7	60.0	124.8
25"		130.0	77.6	130.0	25"	<u> </u>	101.4	48.0	99.8
30"		130.0	64.6	130.0	30"	-	84.5	40.0	83.2
35"		117.0	55.4	115.3	35"	F	72.4	34.3	71.3
40"		102.4	48.5	100.8	40"		63.4	30.0	62.4
45"		91.0	43.1	89.6	45"	F	56.3	26.7	55.5
50"	74-1/4"	81.9	38.8	80.7	50"	120"	50.7	24.0	49.9
55"		74.5	35.3	73.3	55"	-	46.1	21.8	45.4
60"		68.3	32.3	67.2	60"		42.2	20.0	41.6
65"	F	63.0	29.8	62.1	65"	-	39.0	_	38.4
70"		58.5	27.7	57.6	70"	F	36.2	_	35.7
75"		54.6	25.9	53.8	75"		33.8	_	33.3
80"		51.2	24.2	50.4	80"	-	31.7		31.2
85"		48.2	22.8	47.5	85"		29.8	_	29.4
DOWNER TO A STATE OF THE PARTY	***************************************				N				

DESIGN LOAD CAPACITY - PSF							
WINDO	W DIMS.	ANCHORS TYPE					
WIDTH (W)	MULL SPAN	W4.2	B4.2	C4.2			
20"		115.2	54.5	113.5			
25"		92.2	43.6	90.8			
30"		76.8	36.4	75.6			
35"		65.8	31.2	64.8			
40"		57.6	27.3	56.7			
45"		51.2	24.2	50.4			
50"	132"	46.1	21.8	45.4			
55"		41.9		41.3			
60"		38.4		37.8			
65"		35.4		34.9			
70"		32.9	_	32.4			
75"		30.7	-	30.3			
80"		28.8		28.4			
85"		27.1		26.7			
20"		105.6	50.0	104.0			
25"		84.5	40.0	83.2			
30"		70.4	33.3	69.3			
35"		60.3	28.6	59.4			
40"		52.8	25.0	52.0			
45"		46.9	22.2	46.2			
50"	144"	42.2	20.0	41.6			
55"		38.4	_	37.8			
60"		35.2	***	34.7			
65"		32.5	-	32.0			
70"		30.2	_	29.7			
75"		28.2		27.7			
80"	Ī	26.4	_	26.0			
85"		24.8	_	24.5			

ALL LOADS ARE EXT.(+)/INT.(-).

## TYPICAL ANCHORS:

# 1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)

- W4.2: INTO 2BY WOOD BUCKS OR WOOD STRUCTURES 1-1/2" MIN. PENETRATION INTO WOOD
- B4.2: THRU 1BY BUCKS INTO CONC. OR BLOCKS 1-1/4" MIN. EMBED INTO CONCRETE
  - 1-3/4" MIN. EMBED INTO GROUT FILLED BLOCK
- B4.2: DIRECTLY INTO GROUT FILLED BLOCK 1-3/4" MIN. EMBED INTO BLOCK
- C4.2: DIRECTLY INTO CONCRETE 1-3/4" MIN. EMBED INTO CONCRETE

#### TYPICAL EDGE DISTANCE

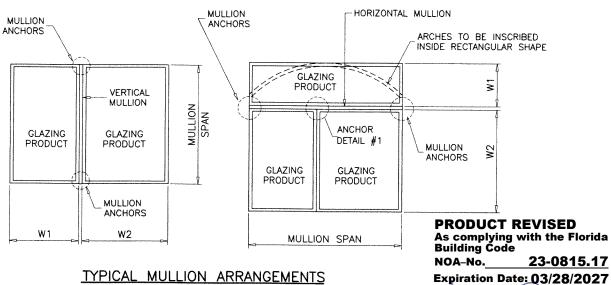
INTO CONCRETE AND BLOCKS = 2-1/2" MIN. INTO WOOD STRUCTURE = 1" MIN.

WOOD AT HEAD, SILL OR JAMBS SG = 0.55 MIN. CONCRETE AT HEAD, SILL OR JAMBS f'c = 3000 PSI MIN. C-90 GROUT FILLED NORMAL WEIGHT BLOCK AT JAMBS I'm = 2000 PSI MIN.

NOTE:

ANY ANCHOR CONDITION SHOWN HEREIN MAY COVER LOCATIONS AT HEAD, SILL OR JAMB ENDS. SEE SHEET 7 FOR ANCHOR DETAILS.

(INTERPOLATION BETWEEN WIDTHS OR SPANS ALLOWED)



# TYPICAL MULLION ARRANGEMENTS

WIDTH (W) =

Miami-Dade Product Control JUL 2 8 2023

**ANCHORS** 

STATE OF . CORIDA

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173 (C.A.N. 3538)
TEL. (305) 264-8100 FAX. (305) 262-6978

Corp. MULLIONS Services ALUMINUM

Gopi Glass (7450 N.W. 4 MIAMI, FL. 33

| revisions: | no date | 02.25.17 | J 02.28.18 | K 12.28.20 | L 07.28.23

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drawing M95 - 16

sheet 4 of 8

DESIGN LOAD CAPACITY - PSF				DESIGN LOAD CAPACITY - PSF					
WINDOW DIMS.		ANCHORS TYPE		WINDO					
WIDTH (W) MULL SPAN		W4.3	B4.3	C4.3/M4.3	4 <del>}</del>	WINDOW DIMS.  WIDTH (W) MULL SPAN		ANCHORS TYPE	
20"	MOLL SI AN	130.0	130.0	130.0	20"	MULL SPAN	W4.3	B4.3	C4.3/M4.3
25"	100	130.0	130.0	130.0	25"		130.0	128.9	130.0
30"		130.0	130.0	130.0	30"		130.0	103.1 85.9	130.0
35"		130.0	122.2	130.0	35"		103.4	<del> </del>	130.0
40"		130.0	107.0	130.0	40"			73.7	130.0
45"		130.0	95.1	130.0	45"		90.5 80.5	64.5	130.0
50"	50-5/8"	120.1	85.6	130.0	50"	84"	72.4	57.3 51.6	118.9
55"	00 0/0	109.2	77.8	130.0	55"	04	65.8	46.9	107.0
60"		100.1	71.3	130.0	60"		60.3	43.0	97.2 89.1
65"		92.4	65.8	130.0	65"		55.7	39.7	82.3
70"		85.8	61.1	126.8	70"		51.7	36.8	76.4
75"		80.1	57.0	118.3	75"		48.3	34.4	71.3
80"		75.1	53.5	110.9	80"		45.3	32.2	66.9
85"		70.7	50.3	104.4	85"		42.6	30.3	62.9
20"		130.0	130.0	130.0	20"		130.0	112.8	130.0
25"		130.0	130.0	130.0	25"		126.7	90.2	130.0
30"		130.0	124.5	130.0	30"		105.6	75.2	130.0
35"		130.0	106.7	130.0	35"		90.5	64.5	130.0
40"		130.0	93.4	130.0	40"		79.2	56.4	117.0
45"		116.5	83.0	130.0	45"		70.4	50.1	104.0
50"	58"	104.9	74.7	130.0	50"	96"	63.4	45.1	93.6
55"		95.3	67.9	130.0	55"	30	57.6	41.0	85.1
60"		87.4	62.2	129.1	60"		52.8	37.6	78.0
65"		80.7	57.4	119.2	65"		48.7	34.7	72.0
70"		74.9	53.3	110.7	70"		45.3	32.2	66.9
75"		69.9	49.8	103.3	75"	l l	42.2	30.1	62.4
80"		65.5	46.7	96.8	80"		39.6	28.2	58.5
85"		61.7	43.9	91.1	85"	f	37.3	26.5	55.1
20"		130.0	130.0	130.0	20"		130.0	100.3	130.0
25"		130.0	130.0	130.0	25"	ľ	112.6	80.2	130.0
30"		130.0	114.6	130.0	30"		93.9	66.8	130.0
35"		130.0	98.2	130.0	35"	ľ	80.5	57.3	118.9
40"		120.7	85.9	130.0	40"	·	70.4	50.1	104.0
45"		107.3	76.4	130.0	45"	ļ	62.6	44.6	92.4
50"	63"	96.5	68.8	130.0	50"	108"	56.3	40.1	83.2
55"		87.8	62.5	129.7	55"		51.2	36.5	75.6
60"		80.5	57.3	118.9	60"		46.9	33.4	69.3
65"		74.3	52.9	109.7	65"		43.3	30.9	64.0
70"		69.0	49.1	101.9	70"		40.2	28.6	59.4
75"	-	64.4	45.8	95.1	75"		37.5	26.7	55.5
80"		60.3	43.0	89.1	80"		35.2	25.1	52.0
85"		56.8	40.4	83.9	85"		33.1	23.6	48.9
20"		130.0	130.0	130.0	20"		126.7	90.2	130.0
25"		130.0	116.7	130.0	25"		101.4	72.2	130.0
30"	-	130.0	97.2	130.0	30"		84.5	60.2	124.8
35"		117.0	83.3	130.0	35"		72.4	51.6	107.0
40"		102.4	72.9	130.0	40"		63.4	45.1	93.6
45"		91.0	64.8	130.0	45"	ļ	56.3	40.1	83.2
50"	74-1/4"	81.9	58.3	121.0	50"	120"	50.7	36.1	74.9
55"	-	74.5	53.0	110.0	55"	-	46.1	32.8	68.1
60"	-	68.3	48.6	100.8	60"	L	42.2	30.1	62.4
65"		63.0	44.9	93.1	65"	L	39.0	27.8	57.6
70"	-	58.5	41.7	86.4	70"		36.2	25.8	53.5
75"	-	54.6	38.9	80.7	75"	_	33.8	24.1	49.9
80"		51.2	36.5	75.6	80"	-	31.7	22.6	46.8
85"		48.2	34.3	71.2	85"	<u>_</u>	29.8	21.2	44.0

DESIGN LOAD CAPACITY - PSF								
WINDO	W DIMS.	ANCHORS TYPE						
WIDTH (W)	MULL SPAN	W4.3	B4.3	C4.3/M4.				
20"		115.2	82.0	130.0				
25"		92.2	65.6	130.0				
30"		76.8	54.7	113.5				
35"		65.8	46.9	97.2				
40"		57.6	41.0	85.1				
45"		51.2	36.5	75.6				
50"	132"	46.1	32.8	68.1				
55"		41.9	29.8	61.9				
60"		38.4	27.3	56.7				
65"		35.4	25.2	52.4				
70*		32.9	23.4	48.6				
75"		30.7	21.9	45.4				
80"		28.8	20.5	42.5				
85"		27.1		40.0				
20"		105.6	75.2	130.0				
25"		84.5	60.2	124.8				
30"		70.4	50.1	104.0				
35"		60.3	43.0	89.1				
40"		52.8	37.6	78.0				
45"		46.9	33.4	69.3				
50"	144"	144" 42.2		62.4				
55"		38.4	27.3	56.7				
60"		35.2		52.0				
65"		32.5	23.1	48.0				
70"	Į	30.2	21.5	44.6				
75"		28.2	20.1	41.6				
80"		26.4	•••	39.0				
85"		24.8	-	36.7				

ALL LOADS ARE EXT.(+)/INT.(-).

### TYPICAL ANCHORS:

# 1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)

- W4.3: INTO 2BY WOOD BUCKS OR WOOD STRUCTURES 1-1/2" MIN. PENETRATION INTO WOOD
- B4.3: THRU 1BY BUCKS INTO CONC. OR BLOCKS 1-1/4" MIN. EMBED INTO CONCRETE

1-3/4" MIN. EMBED INTO GROUT FILLED BLOCK

- B4.3: DIRECTLY INTO GROUT FILLED BLOCK 1-3/4" MIN. EMBED INTO BLOCK
- C4.3: DIRECTLY INTO CONCRETE 1-3/4" MIN. EMBED INTO CONCRETE

# 1/4" DIA. TEKS OR SELF DRILLING SCREWS (GRADE 5 CRS)

M4.3: INTO METAL STRUCTURES (3) THREADS MIN. TO EXTEND BEYOND METAL THICKNESS ALUMINUM: 1/8" THK. MIN. (6063-T5 MIN.) STEEL: 1/8" THK. MIN. (Fy = 36 KSI MIN.) (STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

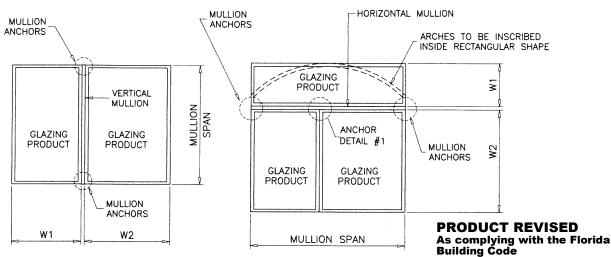
#### TYPICAL EDGE DISTANCE

INTO CONCRETE AND BLOCKS = 2-1/2" MIN. INTO WOOD STRUCTURE = 1" MIN. INTO METAL STRUCTURE = 3/4" MIN.

WOOD AT HEAD, SILL OR JAMBS SG = 0.55 MIN. CONCRETE AT HEAD, SILL OR JAMBS f'c = 3000 PSI MIN. C-90 GROUT FILLED NORMAL WEIGHT BLOCK AT JAMBS I'm = 2000 PSI MIN.

> ANY ANCHOR CONDITION SHOWN HEREIN MAY COVER LOCATIONS AT HEAD, SILL OR JAMB ENDS. SEE SHEET 8 FOR ANCHOR DETAILS.

(INTERPOLATION BETWEEN WIDTHS OR SPANS ALLOWED)



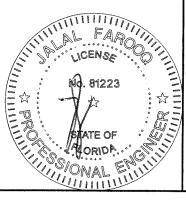
# TYPICAL MULLION ARRANGEMENTS

WIDTH (W) = 
$$\left(\frac{\text{W1} + \text{W2}}{2}\right) + 2$$

23-0815.17 NOA-No. Expiration Date: 03/28/2027

Miami-Dade Product Control JUL 2 8 2023

**ANCHORS** 





AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173 (C.A.N. 3538)
TEL. (305) 264-8100 FAX. (305) 262-6978

Corp. Services

MULLIONS

ALUMINUM

s Sales & 41 STREET 33166 TUBE Gopi Glass 7450 N.W. 4 MIAMI, FL. 337 TEL. (305) 592-

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drawing no. M95 - 16

sheet 5 of 8

