

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

ER)

PRODUCT CONTROL SECTION 11805 SW 26 Street, Room 208 Miami, Florida 33175-2474

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

**MIAMI-DADE COUNTY** 

#### www.miamidade.gov/building

# NOTICE OF ACCEPTANCE (NOA)

E.S. Windows, LLC 3550 NW 49<sup>th</sup> Street Miami, FL 33142

#### 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 "9500" Aluminum Window Wall System - L.M.I.

**APPROVAL DOCUMENT:** Drawing No. **W09-25**, titled "Series 9500 Alum Window Wall System (L.M.I.)", sheets 1, 2, 2.1 and 3 through 17 of 17, dated 04/16/09, with revision **H** dated 09/12/23, 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, **Barranquilla**, **Colombia**, 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. 20-1208.10 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. 23-0928.18 Expiration Date: October 28, 2024 Approval Date: November 09, 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. 03-0314.07)
- 2. Drawing No. **W09-25**, titled "Series 9500 Alum Window Wall System (L.M.I.)", sheets 1, 2, 2.1 and 3 thru 17 of 17, dated 04/16/09, with revision **G** dated 11/18/20, prepared by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E. *(Submitted under NOA No. 20-1208.10)*

#### 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

along with marked-up drawings and installation diagram of series 9500 aluminum window wall system, prepared by Fenestration Testing Laboratory, Inc., Test Reports No. **FTL-5991**, dated 10/02/09, both signed and sealed by Jorge A. Causo, P.E. (Submitted under NOA No. 10-0504.01)

- 2. 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

along with marked-up drawings and installation diagram of series 9500 aluminum window wall system, prepared by Fenestration Testing Laboratory, Inc., Test Report No. **FTL-6129**, dated 03/10/10, signed and sealed by Jorge A. Causo, P.E.

## (Submitted under NOA No. 10-0504.01)

- 3. 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, TAS 202-94

along with marked-up drawings and installation diagram of series 9500 aluminum window wall system, prepared by Fenestration Testing Laboratory, Inc., Test Report No. FTL-5546, dated 01/09/09, signed and sealed by Michael R. Wenzel, P.E. (Submitted under NOA No. 09-0623.01)

Manuel Perez, P.E. Product Control Examiner

NOA No. 23-0928.18

Expiration Date: October 28, 2024 Approval Date: November 09, 2023

## E.S. Windows, LLC

# NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

- 1. EVIDENCE SUBMITTED UNDER PREVIOUS NOA'S (CONTINUED)
- B. TESTS (CONTINUED)
  - 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, TAS 202-94

along with marked-up drawings and installation diagram of an aluminum outswing entrance door, prepared by Fenestration Testing Laboratory, Inc., Test Report No. **FTL-5554**, dated 05/10/08, signed and sealed by Carlos S. Rionda, P.E. (Submitted under NOA No. 09-0623.01)

## C. CALCULATIONS

- 1. Anchor verification calculations and structural analysis, complying with FBC 6<sup>th</sup> Edition (2017), dated 01/19/18 and 09/12/18, then updated on 11/16/20 to comply with FBC 7<sup>th</sup> Edition (2020), prepared by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E.
  - (Submitted under NOA No. 20-1208.10)
- 2. Glazing complies with ASTM E1300-09

## D. QUALITY ASSURANCE

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

#### E. MATERIAL CERTIFICATIONS

- 1. Notice of Acceptance No. 18-0725.11 issued to Kuraray America, Inc. for their "Kuraray SentryGlas® Xtra<sup>TM</sup> (SGX<sup>TM</sup>) Clear Glass Interlayer" dated 05/23/19, expiring on 05/23/24.
- 2. Notice of Acceptance No. 19-0305.02 issued to Kuraray America, Inc. for their "Trosifol® Ultraclear, Clear and Color PVB Glass Interlayers" dated 05/09/19, expiring on 07/08/24.

## F. STATEMENTS

1. Statement letter of conformance, complying with FBC 6<sup>th</sup> Edition (2017), with FBC 7<sup>th</sup> Edition (2020), and of no financial interest, dated November 16, 2020, issued by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E. (Submitted under NOA No. 20-1208.10)

Manuel Perez, P.E. Product Control Examiner NOA No. 23-0928.18

Expiration Date: October 28, 2024 Approval Date: November 09, 2023

# E.S. Windows, LLC

# NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

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

#### G. OTHERS

1. Notice of Acceptance No. **19-0708.05**, issued to E.S. Windows, LLC for their Series "9500" Aluminum Window Wall System - L.M.I., approved on 08/01/19 and expiring on 10/28/24.

#### 2. NEW EVIDENCE SUBMITTED

## A. DRAWINGS

1. Drawing No. **W09-25**, titled "Series 9500 Alum Window Wall System (L.M.I.)", sheets 1, 2, 2.1 and 3 thru 17 of 17, dated 04/16/09, with revision **H** dated 09/12/23, 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. Notice of Acceptance No. 22-1116.01 issued to Kuraray America, Inc. for their "SentryGlas® (Clear and White) Glass Interlayers" dated 12/15/22, expiring on 07/04/28.
- 2. Notice of Acceptance No. 20-0915.22 issued to Kuraray America, Inc. for their "Trosifol® Ultraclear, Clear and Color PVB Glass Interlayers" dated 11/19/20, expiring on 07/08/24.

# F. STATEMENTS

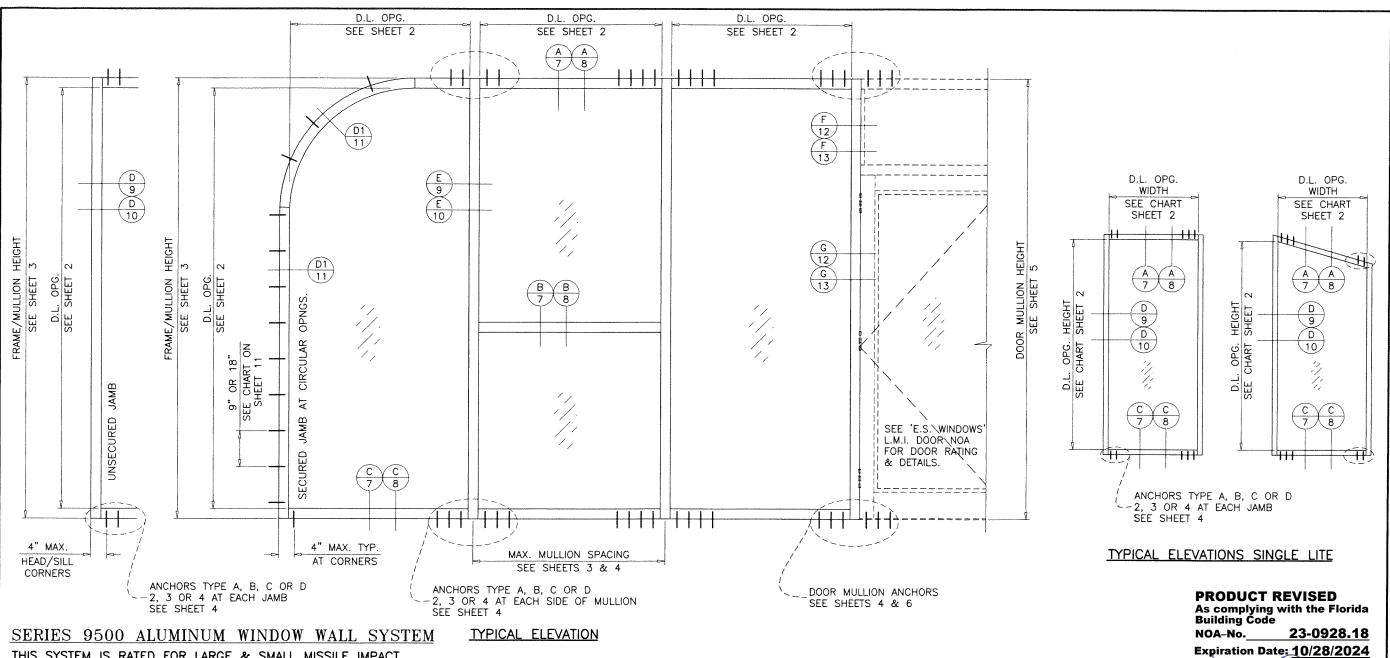
1. Statement letter of conformance, complying with FBC 7<sup>th</sup> Edition (2020), with FBC 8<sup>th</sup> Edition (2023), and of no financial interest, dated September 26, 2023, issued by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E.

#### G. OTHERS

1. Notice of Acceptance No. **20-1208.10**, issued to E.S. Windows, LLC for their Series "9500" Aluminum Window Wall System - L.M.I., approved on 02/18/21 and expiring on 10/28/24.

Manuel Perez, P.E. Product Control Examiner NOA No. 23-0928.18

Expiration Date: October 28, 2024 Approval Date: November 09, 2023



THIS SYSTEM IS RATED FOR LARGE & SMALL MISSILE IMPACT SHUTTERS ARE NOT REQUIRED.

#### CODE REQUIREMENTS FOR SAFEGUARDS MUST BE OBSERVED.

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).

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)'

#### **INSTRUCTIONS:**

STEP 1 DETERMINE DESIGN WIND PRESSURE REQUIREMENTS BASED ON WIND VELOCITY, BLDG. HEIGHT, WIND ZONE USING APPLICABLE ASCE 7 STANDARD.

STEP 2 SEE CHARTS ON SHEET 2 FOR GLASS DESIGN LOAD CAPACITY.

SPACING AND HEIGHT USING CHARTS ON SHEET 3 FOR STOREFRONT MULLION AND SHEET 5 FOR DOOR MULLION.

STEP 4 USING CHARTS ON SHEET 4 SELECT ANCHOR OPTION WITH DESIGN LOAD CAPACITY MORE THAN DESIGN LOAD SPECIFIED IN STEP 1 ABOVE.

STEP 5 THE LOWEST VALUE RESULTING FROM STEPS 2, 3 AND 4 THAT EXCEED THE DESIGN WIND PRESSURES DETERMINED THRU STEP 1 SHALL APPLY TO ENTIRE SYSTEM.

STEP 6 FOR SYSTEMS WITH UNANCHORED JAMBS, USING SHEETS 9 & 10, DETERMINE THE MIN. & MAX. GAP DIMENSIONS.

OF THE DESIGN PRESSURE RATING FOR THE SYSTEM AND

USE CHARTS AS FOLLOWS.

STEP 3 CHECK MULLION DESIGN LOAD CAPACITY FOR A GIVEN THE CAPACITY SHOULD EXCEED THE DESIGN LOAD.

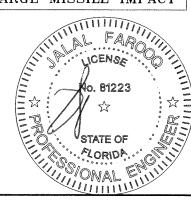
STEP 7 WHEN USING THIS SYSTEM WITH DOORS, THE LOWER VALUE THE DOOR SHALL APPLY.

Miami-Dade Product Control

WINDOW WALL SYSTEM WITH GLASS TYPES 'A' & 'B' COMPLIES WITH REQUIREMENTS OF ANSI Z97.1.

> LAMINATED GLASS INSUL. LAM. GLASS LARGE MISSILE IMPACT

SEP 2 7 2023



(C.A.N. 353<sup>1</sup>)

**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

SYSTEM

SERIES 9500 ALUM WINDOW WALL E.S. WINDOWS, LLC 3550 N.W. 49 STREET MIAMI, FL. 33142 TEL. (305) 638–5151 FA)

description
UPDATED TO 2017 F
NO CHANGE THIS SH
UPDATED TO 2020 F
UPDATED TO 2023 F revisions:
no date
E 01.26.18
F 09.28.18
G 11.18.20
H 09.12.23

1/2"=1'-0" 04scale: <u>ئ</u> <u>4</u>

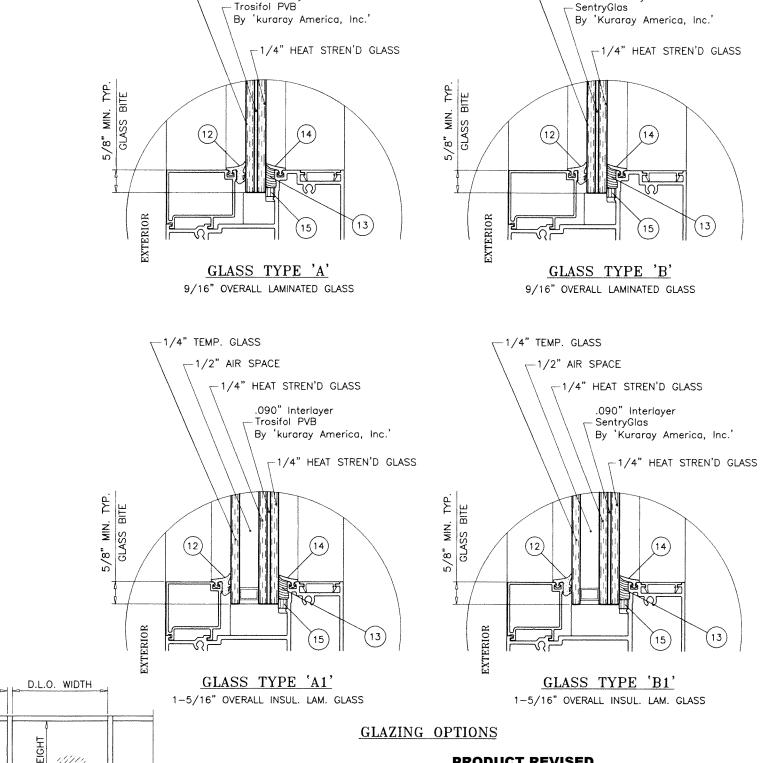
drawing no.

W09-25 sheet 1 of 17

NOMIN	AL DIMS.	GLASS TYPE	GLASS TYPE 'B'	GLASS TYPES 'A1' & 'B1'
	D.L.O. HEIGHT	EXT.(+)/INT.(-)		
28"	D.C.O. HEIGHT	65.0	120.0	90.0
32"		65.0	120.0	90.0
36"		65.0	120.0	90.0
40"		65.0	120.0	90.0
45-1/2"	91"	65.0	120.0	90.0
48"		65.0	120.0	90.0
52"		65.0	120.0	90.0
57-1/4"		65.0	120.0	90.0
28"		65.0	120.0	90.0
32"		65.0	120.0	90.0
36"		65.0	120.0	90.0
40"	93-1/2"	65.0	120.0	90.0
45-1/2"	,	65.0	120.0	90.0
48"		65.0	120.0	90.0
52"		65.0	120.0	90.0
28"		65.0	120.0	90.0
32"		65.0	120.0	90.0
36"		65.0	120.0	90.0
40"	97-1/2"	65.0	120.0	90.0
45-1/2"		65.0	120.0	90.0
48"		65.0	120.0	90.0
52"		65.0	120.0	90.0
28"		65.0	120.0	90.0
32"		65.0	120.0	90.0
36"	405"	65.0	120.0	90.0
40"	105"	65.0	120.0	90.0
45-1/2"		65.0	120.0	90.0
48"		65.0	120.0	90.0
28"		65.0	120.0	90.0
32"		65.0	120.0	90.0
36"	109"	65.0	120.0	90.0
40"	109	65.0	120.0	90.0
45-1/2"		65.0	120.0	90.0
48"		65.0	120.0	90.0
28"		65.0	120.0	90.0
32"		65.0	120.0	90.0
36"	115"	65.0	120.0	90.0
40"		65.0	120.0	90.0
45-1/2"		65.0	120.0	90.0

CHART #1

GLASS CAPACITIES ON THIS SHEET ARE BASED ON ASTM E1300-09 (3 SEC. GUSTS).



-1/4" HEAT STREN'D GLASS

.090" Interlayer



GE 2000

11/1/2

D.L.O. WIDTH

D.L.0.

'HELIMA' LOW PROFILE ALUMINUM SPACER AROUND THE PERIMETER OF THE GLASS. PERIMETER SEALANT: SILICONE DOWSIL 791

GLASS

SEP 2 7 2023

-1/4" HEAT STREN'D GLASS .090" Interlayer

PRODUCT REVISED
As complying with the Florida
Building Code 23-0928.18 NOA-No. **Expiration Date: 10/28/2024** By: Manuel Perez

Miami-Dade Product Control

| CEVISIONS: | (no date | E | 01.26.18 | F | 09.28.18 | G | 11.18.20 | H | 09.12.23 04-16-09

scale: 유 | 유 | drawing no.

۾:

3/8"

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

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

SERIES 9500 ALUM WINDOW WALL SYSTEM (L.M.I.)

(305)

E.S. WINDOWS, LLC 3550 N.W. 49 STREET MIAMI, FL. 33142 TEL. (305) 638–5151 FAX.

by description
UPDATED TO 2017 FBC
NO CHANGE THIS SHEET
UPDATED TO 2020 FBC
NO CHANGE THIS SHEET

W09 - 25sheet 2 of 17

GLASS LOAD CAPACITY - PSF			
NOMIN	GLASS TYPES 'C' & 'C1'		
D.L.O. WIDTH D.L.O. HEIGHT		EXT.(+)/INT.(-)	
28"		90.0	
32"		90.0	
36"		90.0	
40"	0.47	90.0	
45-1/2"	91"	90.0	
48"		90.0	
52"		90.0	
28"		90.0	
32"		90.0	
36"		90.0	
40"	93-1/2"	90.0	
45-1/2"		90.0	
48"		90.0	
52"		90.0	
28"		90.0	1
32"		90.0	
36"	97-1/2"	90.0	
40"	37 1/2	90.0	
45-1/2"		90.0	!
48"		90.0	ì
28"		90.0	
32"		90.0	ľ
36"	105"	90.0	١
40"		90.0	
45-1/2"		90.0	
28"		90.0	1
32"	109"	90.0	l
36"		90.0	4
40"		90.0	3
28"		90.0	֓֞֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֡֓֓֓֓֓֡֝֡֓֓֡֡֝֡֡֓֓֡֝֡֓֡֓֡֡֡֡֡֓֡֓֡֡֡֓֡֡֡֡֓֓֡֡֡֡֡֡
32"	115"	90.0	
36"		90.0	֓֞֝֞֜֜֞֜֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֡֓֓֓֡֓֓֓֡֓֓֡֓֡֓֡֡֡֡

CHART #1.1

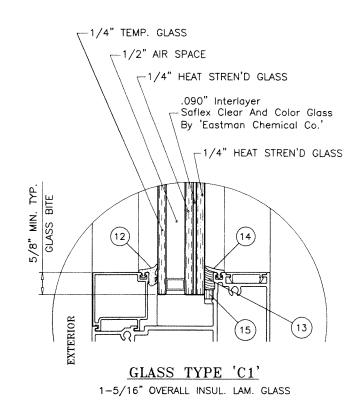
40"

	D.L.O. WIDTH	D.L.O. WIDTH	ı
НЕІСНТ	11111	D.L.O. HEIGHT	
D.L.O. HEIGHT		D.L.O. HEIGHT	

NOTE: GLASS CAPACITIES ON THIS SHEET ARE BASED ON ASTM E1300-09 (3 SEC. GUSTS).

90.0

Z



GLASS TYPE 'C'

9/16" OVERALL LAMINATED GLASS

-1/4" HEAT STREN'D GLASS
.090" Interlayer

5/8" MIN. TYP. GLASS BITE

EXTERIOR

(12)

-Saflex Clear And Color Glass

-1/4" HEAT STREN'D GLASS

(13)

By 'Eastman Chemical Co.'

1/2" AIR SPACE CONSISTING OF: SPACER:

'HELIMA' LOW PROFILE ALUMINUM SPACER
BY 'LINGERMANN GMBH'
AROUND THE PERIMETER OF THE GLASS.
PERIMETER SEALANT:
SILICONE
DOWSIL 791
GE 2000

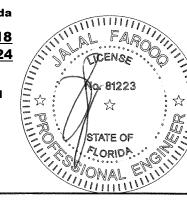
GLAZING OPTIONS

PRODUCT REVISED
As complying with the Florida
Building Code
NOA-No. 23-0928.18

Expiration Date: 10/28/2024

By: Manuel Product Control

SEP 2 7 2023



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 STORE\W09-25

SERIES 9500 ALUM WINDOW WALL SYSTEM (L.M.I.)

E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638–5151 FAX. (305) 638–5158

scale: 3/8" = 1"

dr. by: TARIQ

drawing no. W09-25

sheet 2.1of 17

GLASS

54"

60"

30"

36"

42"

48"

54"

59"

60"

30"

36"

42"

48"

53"

54"

60"

30"

36"

42"

48"

51"

54"

60"

30"

36"

42"

48"

54"

60"

30"

36"

42"

48"

54"

58"

30"

36"

42"

48"

54"

56"

CHART #2 MULLION LOAD CAPACITY - PSF WITH OR WITHOUT INTERMEDIATE HORIZONTALS JAMB 'J1' MULL 'M1' NOMINAL DIMS. EXT. (+) WIDTH (W) FRAME HEIGHT INT. (-) 30" 100.0 36" 100.0 42" 100.0 72" 48" 100.0

78"

86-1/2"

90"

96"

98-1/2"

102"

100.0

100.0

100.0

100.0

100.0

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MULLION LOAD CAPACITY WITH OR WITHOUT INTERMEDIATE HO					
NOMIN	AL DIMS.	JAMB 'J MULL 'M			
WIDTH (W)	FRAME HEIGHT	EXT. (+ INT. (-			
30"		65.0			
36"		65.0			
42"	108"	65.0			
48"		65.0			
	1				

MULLION LOAD CAPACITY - PSF WITH OR WITHOUT INTERMEDIATE HORIZONTALS			
NOMINA	JAMB 'J1' MULL 'M1'		
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (-)	
30"		65.0	
36"		65.0	ò
42"	108"	65.0	₹
48"		65.0	13
53"		65.0	F
30"		65.0	里
36"		65.0	S OR HEIGHTS ALLOWED
42"	110-1/2"	65.0	
48"		65.0	품
52"		65.0	QIW
30"		65.0	z
36"		65.0	Æ
42"	114"	65.0	
48"		65.0	B
50"		65.0	NTERPOLATION BETWEEN WIDTHS
30"		65.0	AT
36"	120"	65.0	POI
42"	120	65.0	ER
48"	***************************************	64.5	Z

MULLION LOAD CAPACITY - PSF ITH OR WITHOUT INTERMEDIATE HORIZONTALS				
NOMINA	AL DIMS.	JAMB 'J1' MULL 'M1'		
width (w)	FRAME HEIGHT	EXT. (+) INT. (–)		
30"		65.0	ED	
36"		65.0	Ó	
42"	108"	65.0	ALI	
48"		65.0	2	
53"		65.0	GH.	
30"		65.0	HEIGHTS ALLOWED	
36"		65.0	OR	
42"	110-1/2" 65.0			
48"	65.0		H	
52"		65.0	MD	
30"		65.0	z	
36"		65.0	/EE	
42"	114"	65.0	ET	
48"		65.0	B	
50"		65.0	NO	
30"		65.0	AT	
36"	120"	65.0	INTERPOLATION BETWEEN WIDTHS	
42"	120	65.0	FR	
48"	***************************************	64.5	Z	

CHART #3					
MULLION LOAD CAPACITY - PSF WITH OR WITHOUT INTERMEDIATE HORIZONTALS					
WITH OF	R WITHOUT INTE	RMEDIATE HORIZI	UNIALS		
NOMIN	AL DIMS.	JAMB 'J1' MULL 'M2'	JAMB MULL		
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (–)	EXT. INT.		
30"		90.0	120		
36"		90.0	120		
42"	72"	90.0	120		
48"	/2	90.0	120		
54"		90.0	120		
60"		90.0	120		

48"

54"

60"

30"

36"

42"

48"

54"

58"

30"

36"

42"

48"

54"

56"

30"

36"

42"

48"

53"

98-1/2"

102"

108"

WITH OR WITHOUT INTERMEDIATE HORIZONTALS			WITH	
NOMINAL DIMS.		JAMB 'J1' MULL 'M2'	JAMB 'J1' MULL 'M3'	NOMI
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (–)	EXT. (+) INT. (-)	WIDTH (W)
30"		90.0	120.0	30"
36"		90.0	120.0	36"
42"	72"	90.0	120.0	42"
48"	/2	90.0	120.0	48"
54"		90.0	120.0	52"
60"		90.0	120.0	30"
30"		90.0	120.0	36"
36"	78"	90.0	120.0	42"
42"		90.0	120.0	48"
48"		90.0	120.0	50"
54"		90.0	120.0	30"
60"		90.0	120.0	36"
30"		90.0	120.0	42"
36"		90.0	120.0	48"
42"	86-1/2"	90.0	120.0	
48"	00 1/2	90.0	120.0	
53"		90.0	120.0	M
60"		90.0	120.0	i K
30"		90.0	120.0	
36"		90.0	120.0	
42"	90"	90.0	120.0	
48"	30	90.0	120.0	K
51"		90.0	120.0	
60"		90.0	120.0	
30"		90.0	120.0	
36"		90.0	120.0	1
42"	96"	90.0	120.0	3
4 Q "	30	90.0	120.0	Í

90.0

90.0

90.0

90.0

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90.0

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90.0

90.0

90.0

120.0

120.0

116.4

120.0

120.0

120.0

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120.0

114.4

120.0

120.0

120.0

120.0

114.6

110.5

120.0

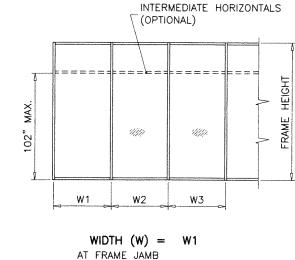
120.0

120.0

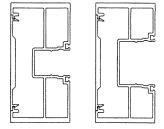
115.0

104.1

MULLION LOAD CAPACITY - PSF WITH OR WITHOUT INTERMEDIATE HORIZONTALS				
NOMINAL DIMS.		JAMB 'J1' MULL 'M2'	JAMB 'J1' MULL 'M3'	
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (–)	EXT. (+) INT. (-)	
30"		90.0	120.0	
36"		90.0	120.0	
42"	110-1/2"	90.0	120.0	
48"		90.0	109.8	
52"		90.0	101.4	
30"		90.0	120.0	
36"		90.0	120.0	
42"	114"	90.0	117.9	
48"		90.0	103.2	
50"		90.0	99.1	
30"		90.0	120.0	
36"	120"	90.0	120.0	
42"	120	90.0	106.4	
48"		90.0	93.1	



W2 + W3WIDTH (W) =AT FRAME MULLION



JAMB 'J1' NO REINF.

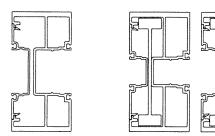
MULLION 'M1'

NO REINF.

M1 ALUM Ix IN^4 8.7132

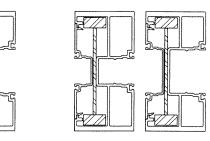
Sx IN^3 3.4853

J1	ALUM
Ix IN^4	8.7605
Sx IN^3	3.5042



MULLION 'M2' ALUM REINF.

•		
N	12	ALUM
Ix	IN^4	12.6724
Sx	IN^3	5.069



MULLION 'M3' STEEL REINF.

N	13	ALUM	STEEL
Ix	IN^4	8.7132	2.7858
Sx	IN^3	3.4853	1.2381

**PRODUCT REVISED** As complying with the Florida Building Code 23-0928.18 NOA-No.

**Expiration Date: 10/28/2024** By: Manuel Perez

Miami-Dade Product Control

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CORIDA CONTO	W
DWAL ENTITY	Sh

SEP 27 2023

MULLIONS

SYSTEM (305)9500 ALUM WINDOW WALL E.S. WINDOWS, LLC 3550 N.W. 49 STREET MIAMI, FL. 33142 TEL. (305) 638-5151 FAX. SERIES

(L.M.I.)

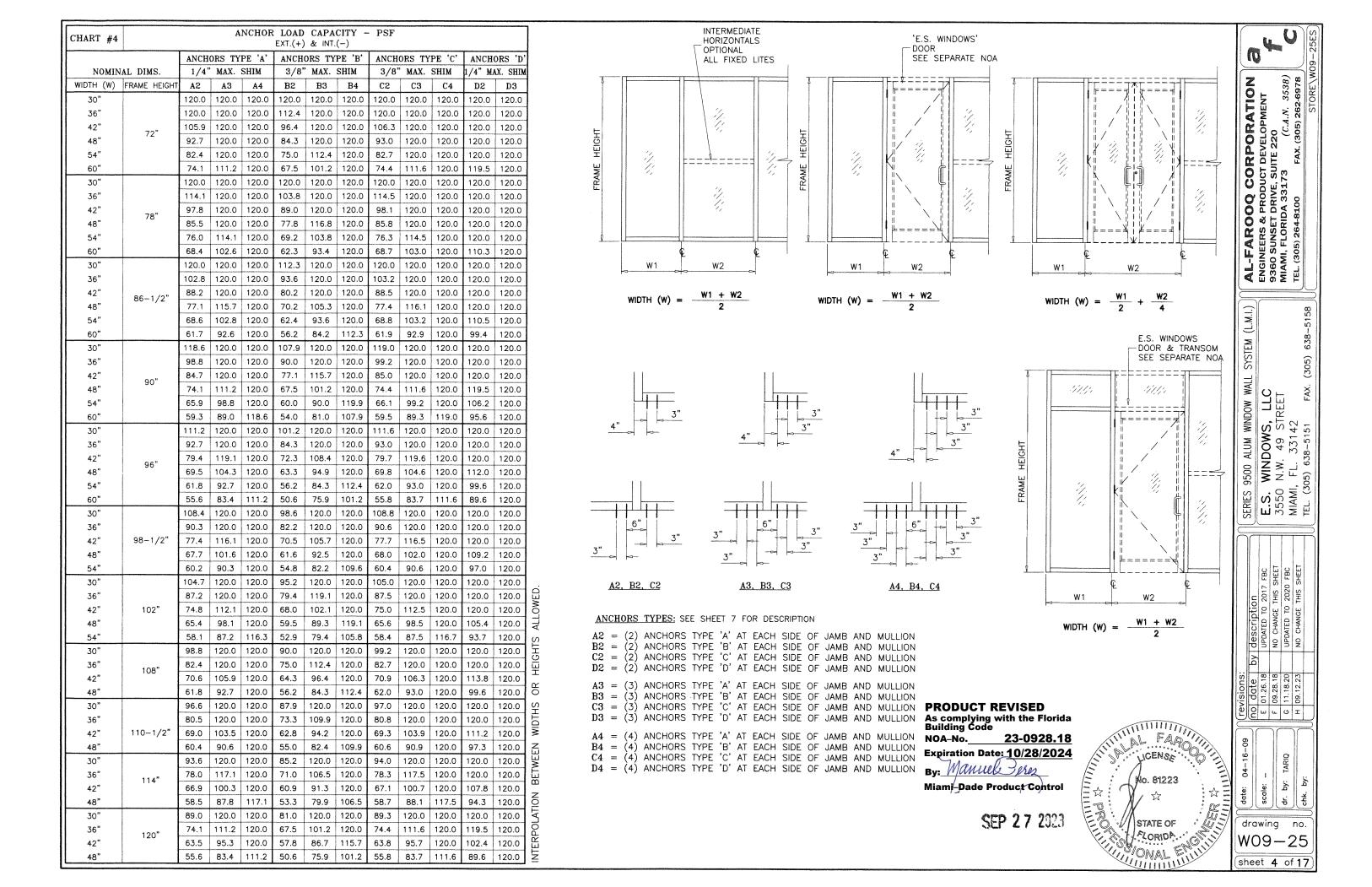
AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173 (C.A.N. 3538)
TEL. (305) 264-8100 FAX. (305) 262-6978

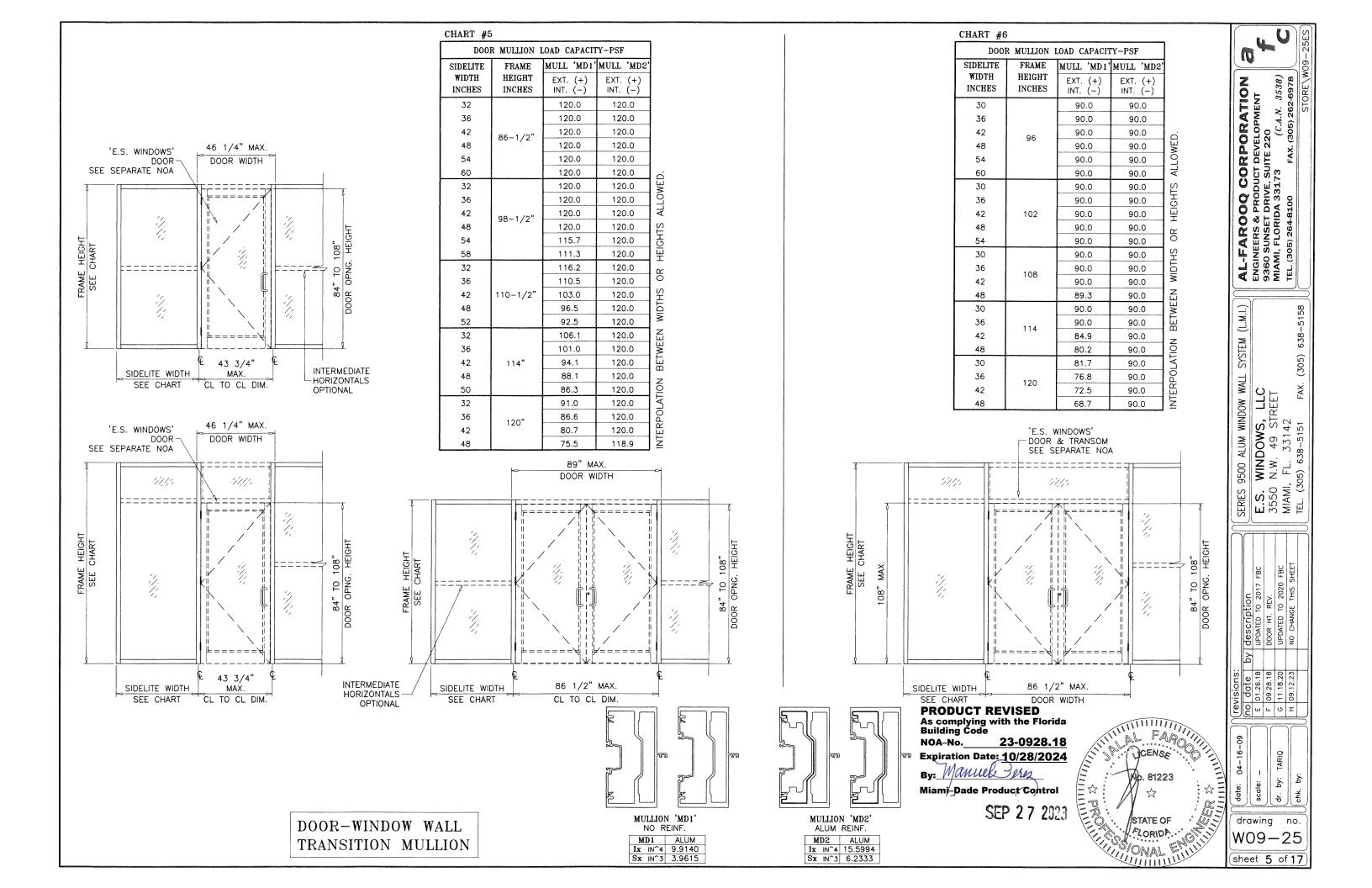
description
UPDATED TO 2017
NO CHANGE THIS SI
UPDATED TO 2020
NO CHANGE THIS S По date Е 01.26.18 F 09.28.18 G 11.18.20 H 09.12.23

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drawing no. V09-25

heet **3** of **17** 





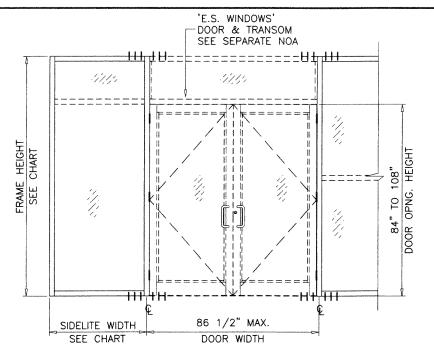
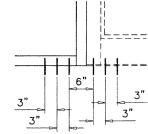


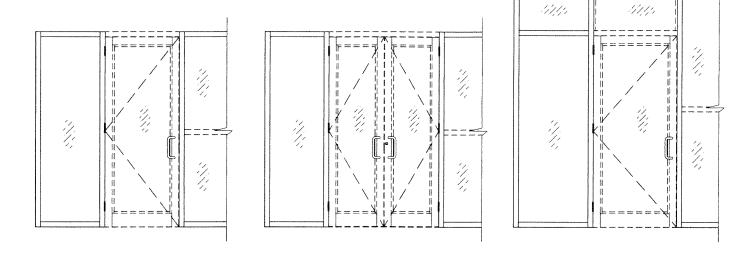
CHART #7

ANCHOR LOAD CAPACITY - PSF  EXT.(+) & INT.(-)						
NOMINAL DIMS.		ANCHORS	ANCHORS	ANCHORS	ANCHORS	
WIDTH (W)	FRAME HEIGHT	TYPE 'A3'	TYPE 'B3'	TYPE 'C3'	TYPE 'D3'	]
30		99.5	108.5	99.9	120.0	
36		88.9	96.9	89.2	120.0	
42	96	80.4	87.6	80.6	120.0	<u> </u>
48	30	73.3	79.9	73.6	118.1	ME
54		67.4	73.4	67.6	108.6	ALLOWED
60		62.3	67.9	62.6	100.5	ן ∀
30		93.5	101.9	93.9	120.0	TS
36		83.6	91.1	83.9	120.0	E E
42	102	75.5	82.3	75.8	120.0	HEIGHTS
48		68.9	75.1	69.1	111.0	I
54		63.3	69.0	63.6	102.1	OR.
30		88.2	96.1	88.5	120.0	WIDTHS
36	108	78.8	85.9	79.1	120.0	
42	108	71.3	77.7	71.5	114.8	J
48		65.0	70.9	65.2	104.8	N N
30		83.5	91.0	83.8	120.0	BETWEEN
36	114	74.6	81.3	74.9	120.0	3
42	117	67.4	73.5	67.7	108.7	i
48		61.5	67.1	61.7	99.2	9
30		80.9	88.2	81.2	120.0	3
36	120	72.2	78.7	72.4	116.3	INTERPOLATION
42	120	65.1	71.0	65.4	105.0	ER
48		59.3	64.7	59.6	95.6	Ξ

# ANCHORS TYPES: SEE SHEET 7 FOR DESCRIPTION

A3=(3) ANCHORS TYPE 'A' AT EACH SIDE OF MULLION B3=(3) ANCHORS TYPE 'B' AT EACH SIDE OF MULLION C3=(3) ANCHORS TYPE 'C' AT EACH SIDE OF MULLION D3=(3) ANCHORS TYPE 'D' AT EACH SIDE OF MULLION





FOR ANCHOR CAPACITIES FOR THE ABOVE CASES SEE SHEET 4.

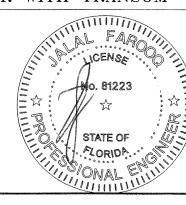
> PRODUCT REVISED As complying with the Florida Building Code

23-0928.18 NOA-No. **Expiration Date: 10/28/2024** 

By: Manuel Perez Miami-Dade Product Control

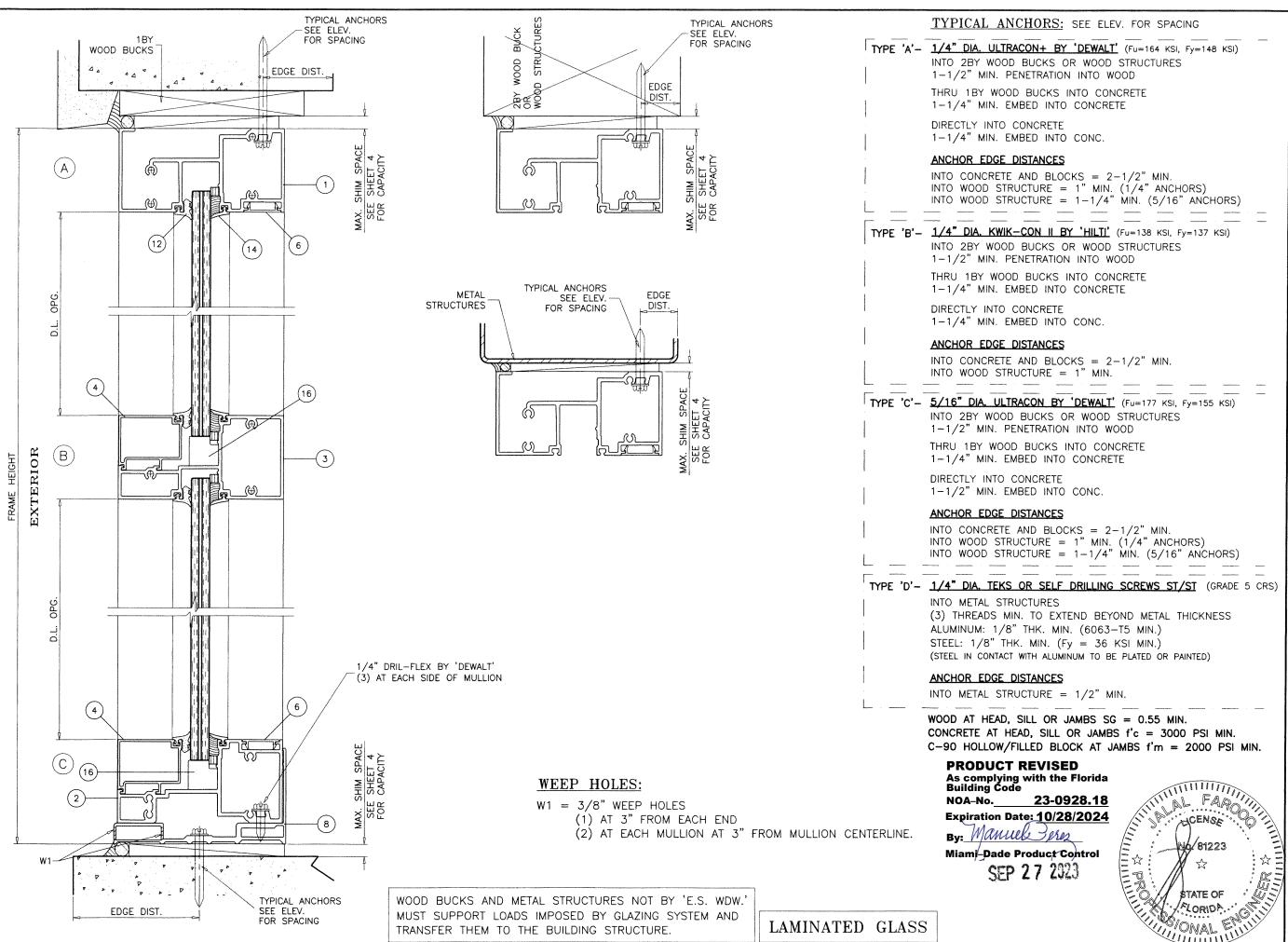
TRANSITION MULLION ANCHORS DOUBLE DOOR WITH TRANSOM

SEP 27 2023



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SERIES 9500 ALUM WINDOW WALL SYSTEM (L.M.I.)	ENGINEERS & PRODUCT DEVELOPMENT	1	MIAMI, FLUKIDA 331/3 (C.A.N. 3538)	TEL. (305) 264-8100 FAX. (305) 262-6978	STORE\W09-
					$\mathbb{R}$
(SERIES 9500 ALUM WINDOW WALL SYSTEM (L.M.I.)	E.S. WINDOWS, LLC	3550 N W 49 STREET	MIAMI EI 22140		TEL. (305) 638-5151 FAX. (305) 638-5158
					$\overline{\bigcap}$
revisions:	UPDATED TO 2017 FBC	CHART REV.	UPDATED TO 2020 FBC	NO CHANGE THIS SHEET	
revisions:	E 01.26.18	09.28.18	G 11.18.20	09.12.23	
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drawing no. W09 - 25sheet 6 of 17



AL-FAROOQ CORPORATIC ENGINEERS & PRODUCT DEVELOPMENT 9360 SUNSET DRIVE, SUITE 220 MIAMI, FLORIDA 33173 (C.A.N. 35 TEL. (305) 264-8100 FAX. (305) 262-6

SYSTEM

S. WINDOWS, LLC 50 N.W. 49 STREET MI, FL. 33142 (305) 638–5151 FA) 9500 ALUM WINDOW **E.S.** 3550 MIAMI, TEL. (30 SERIES

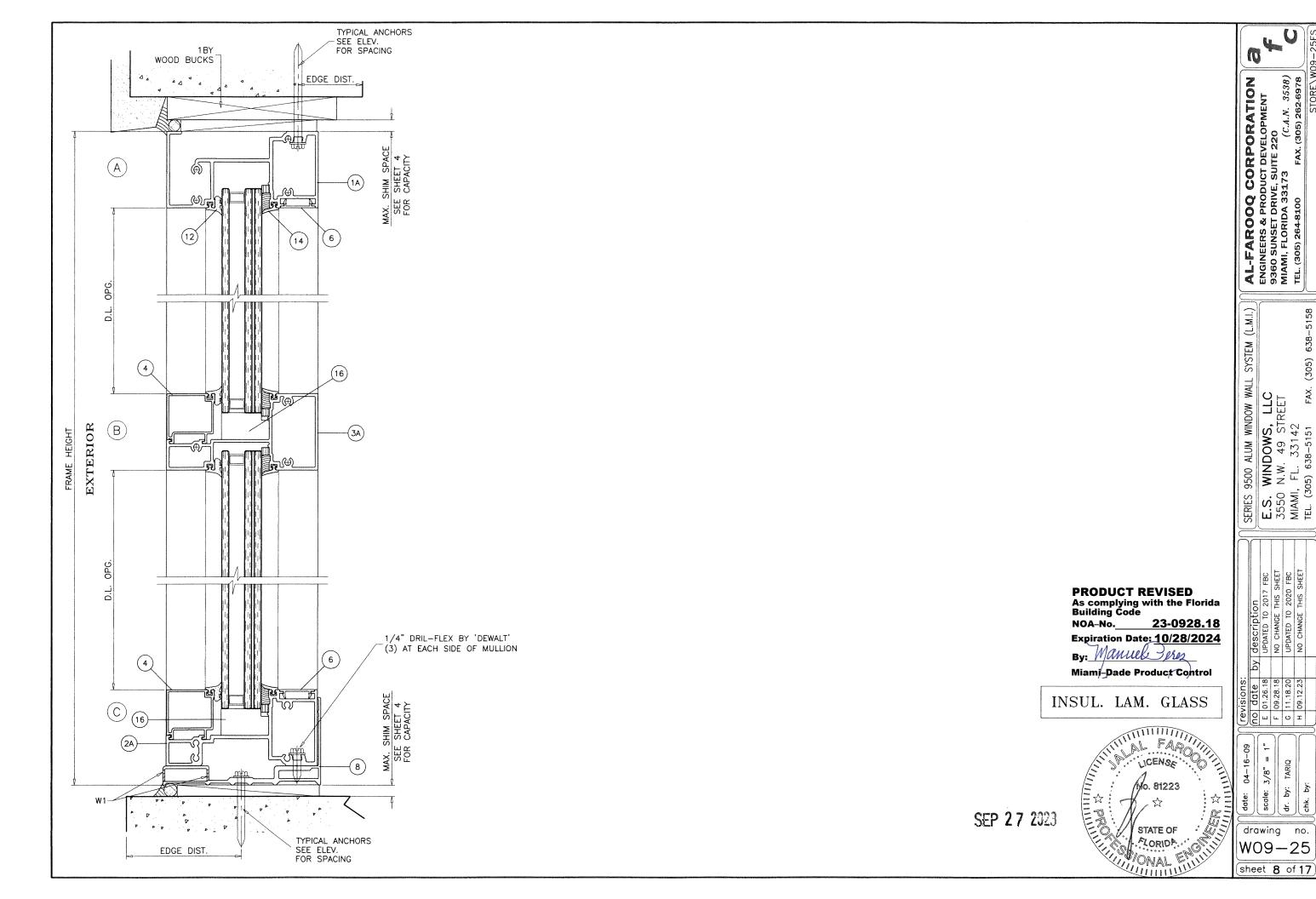
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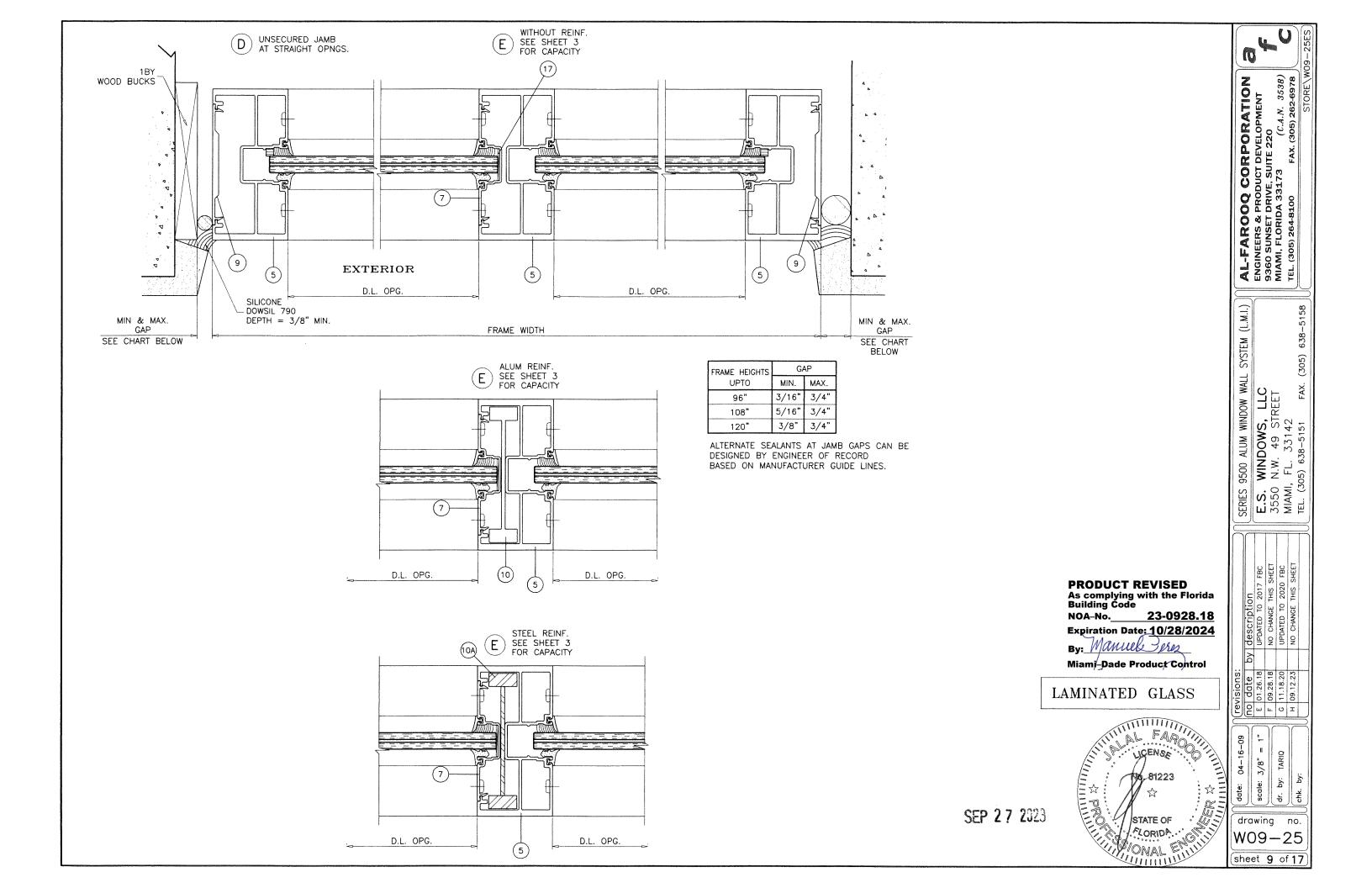
drawing no.

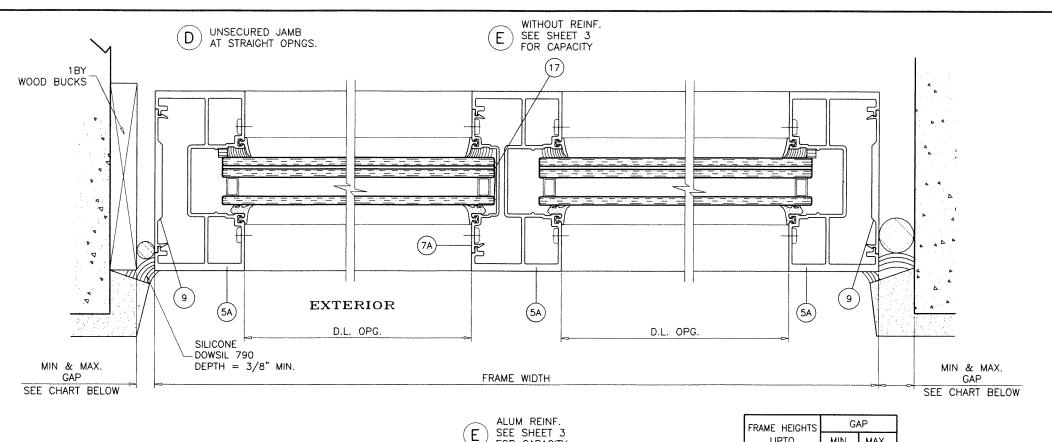
sheet 7 of 17

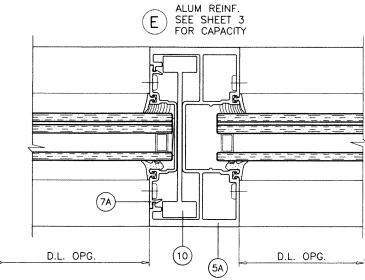
W09 - 25



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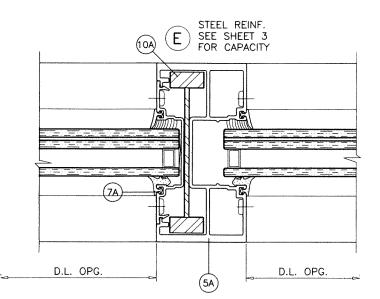






FRAME HEIGHTS	GAP				
UPTO	MIN.	MAX.			
96"	3/16"	3/4"			
108"	5/16"	3/4"			
120"	3/8"	3/4"			

ALTERNATE SEALANTS AT JAMB GAPS CAN BE DESIGNED BY ENGINEER OF RECORD BASED ON MANUFACTURER GUIDE LINES.



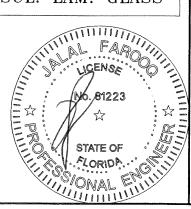
PRODUCT REVISED
As complying with the Florida
Building Code

NOA-No. <u>23-0928.18</u> Expiration Date: 10/28/2024

By: Manuel Peres
Miami-Dade Product Control

INSUL. LAM. GLASS

SEP 27 2023



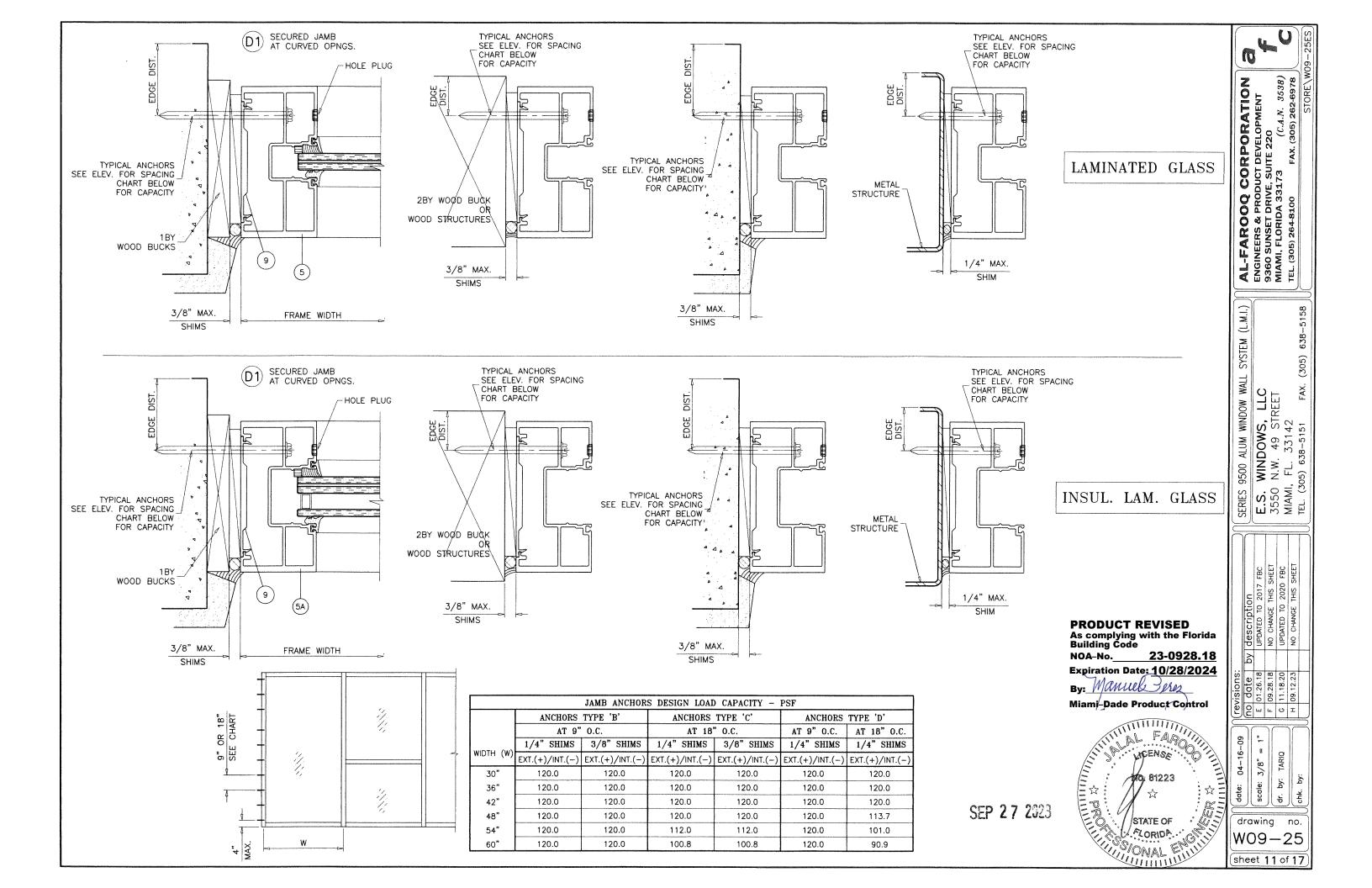
AL-FAROOQ CORPORATION	ENGINEERS & PRODUCT DEVELOPMENT	9360 SUNSET DRIVE, SUITE 220	MIAMI, FLORIDA 33173 (C.A.N. 3538)	TEL. (305) 264-8100 FAX. (305) 262-6978	
===					
YSTEM (L.M.I.)					15) 638-515R

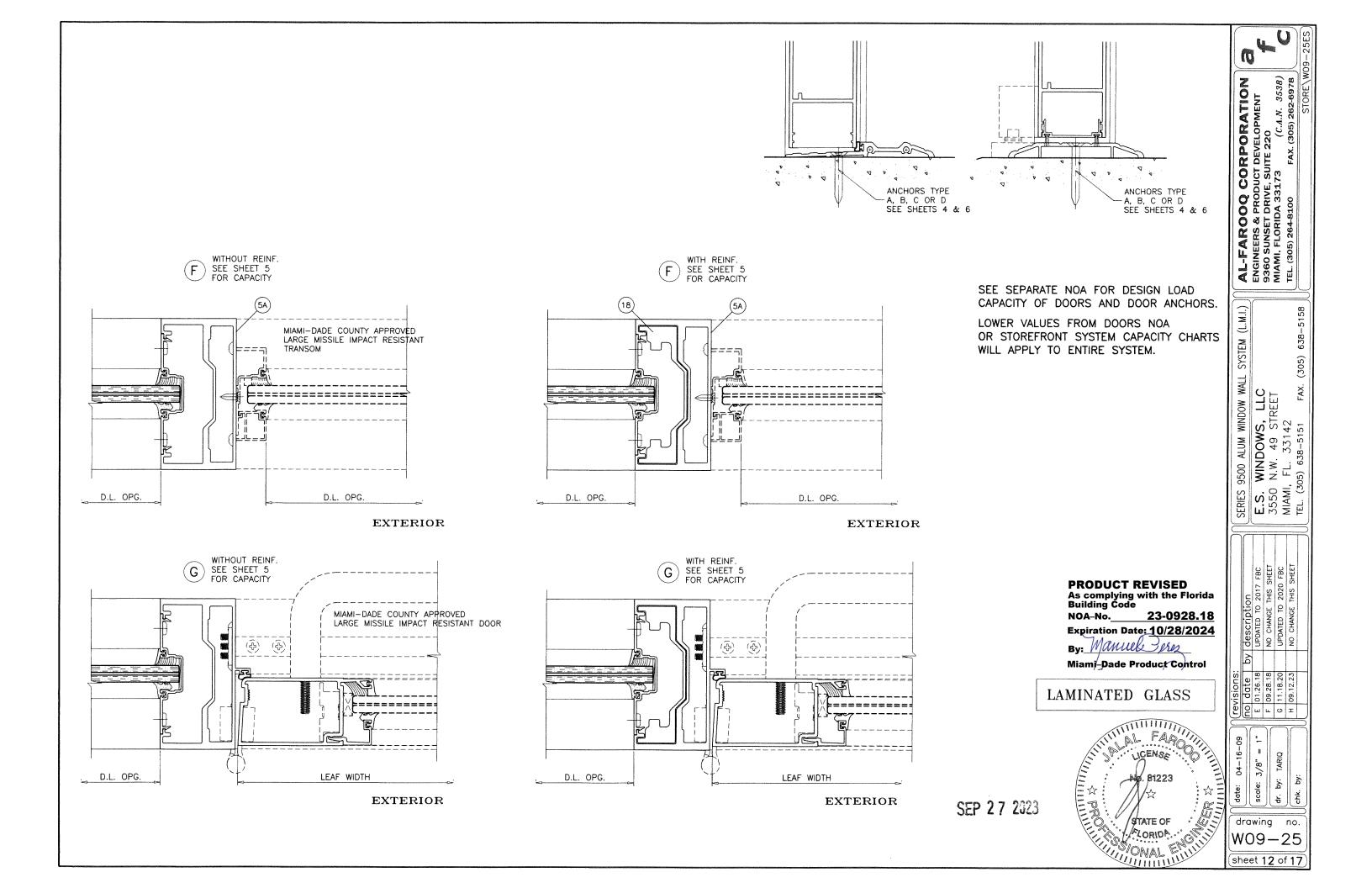
| SERIES 9500 ALUM WINDOW WALL SYST | E.S. WINDOWS, LLC | 3550 N.W. 49 STREET | MIAMI, FL. 33142 | TEL. (305) 638–5151 FAX. (305)

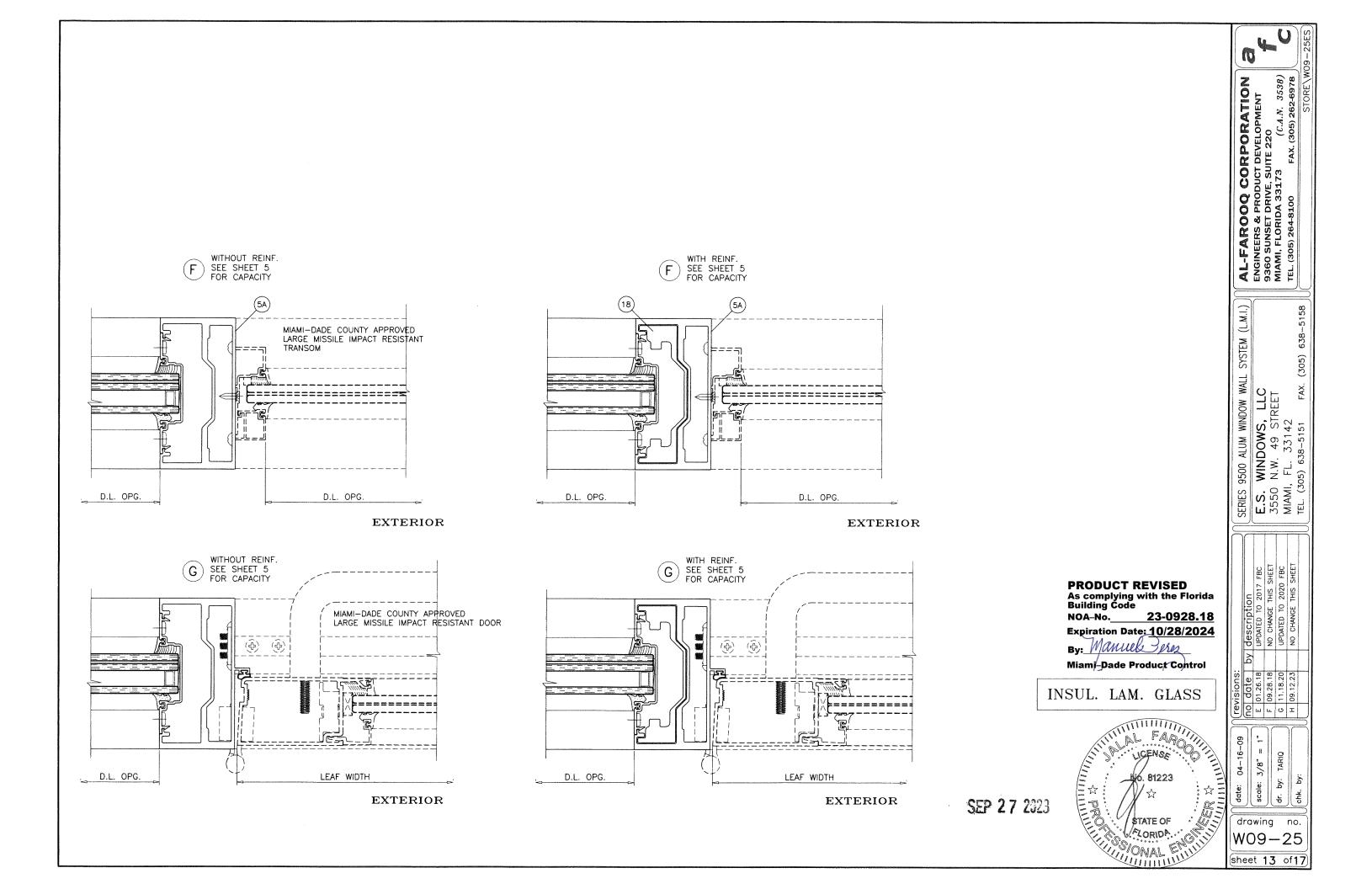
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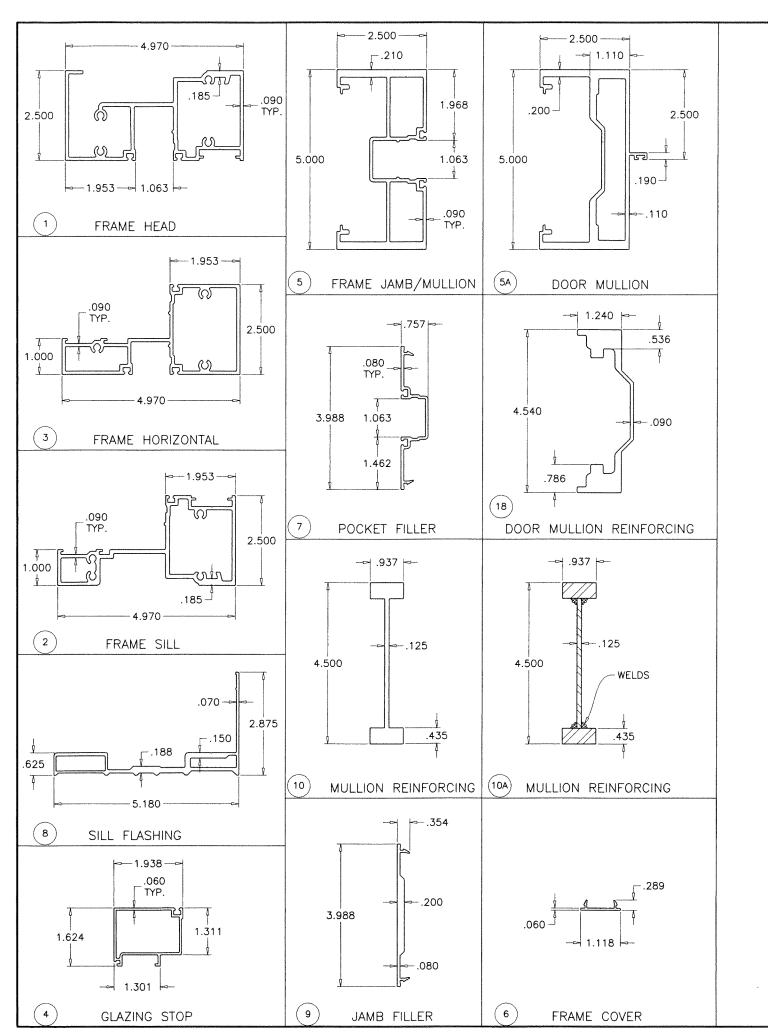
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drawing no. W09-25
Sheet 10 of 17









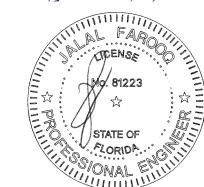
ITEM NO.	PART NUMBER	QUANTITY	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS	" C
1	ES9506	AS REQD.	FRAME HEAD (LAM. GLASS)	6063-T6		
2	ES9503	AS REQD.	FRAME SILL (LAM. GLASS)	6063-T6	-	
3	ES9505	AS REQD.	FRAME HORIZONTAL (LAM. GLASS)	6063-T5	-	<b>1</b>
4	ES9504	AS REQD.	GLAZING STOP (LAM. GLASS)	6063-T5		0 - 33 68
5	ES9507	AS REQD.	FRAME JAMB/MULLION (LAM. GLASS)	6063-T6	***	ATION 3
5A	ES9013	AS REQD.	DOOR MULLION	6063-T6		4.7.4 5) 2
6	ES9502	AS REQD.	FRAME COVER	6063-T5	-	OR/ ELOP 220 (C.A (305)
7	ES9508	AS REQD.	POCKET FILLER (LAM. GLASS)	6063-T6		DEV DEV
8	ES9501	AS REQD.	SILL FLASHING	6063-T6	-	
9	ES9016	AS REQD.	JAMB FILLER	6063-T6	-	000 000 177
10	ES9510	AS REQD.	MULLION REINFORCING	6063-T6	-	33 % 60
10A	_	AS REQD.	MULLION REINFORCING	STEEL		& PF ET DF RIDA 84-810
11	#12 X 1"	AS REQD.	FRAME ASSEMBLY SCREWS	ST/ST	P.H. SMS	S & SET
12	_	AS REQD.	WEDGE GASKET	EPDM	_	AR ERS UNS FLOI FLOI
13	_	AS REQD.	GLAZING COMPOUND	SILICONE	DOWSIL 795/983	1 1 1 W (A - C
14		AS REQD.	TRIM GASKET	EPDM		<b>AL-F</b> ENGIN 9360 : MIAMI
15	-	AS REQD.	INTERIOR SPACER 1/4" X 1/4"	EPDM		m o ≥ F
16		AS REQD.	SETTING BLOCK (LAM. GLASS)	EPDM	DUROMETER 75±5 SHORE A	
17		AS REQD.	SIDE BLOCK	EPDM	DUROMETER 75±5 SHORE A	(L.M.I.)
18	ES9017	AS REQD.	DOOR MULLION REINFORCING	6063-T6	_	( <u>-</u> )

# **SEALANTS:**

ALL FRAME CORNERS, JOINTS, MULLION SEAMS AND PERIMETER OF GLAZING BEAD TO FRAME SEALED WITH SILICONE SEALANT.

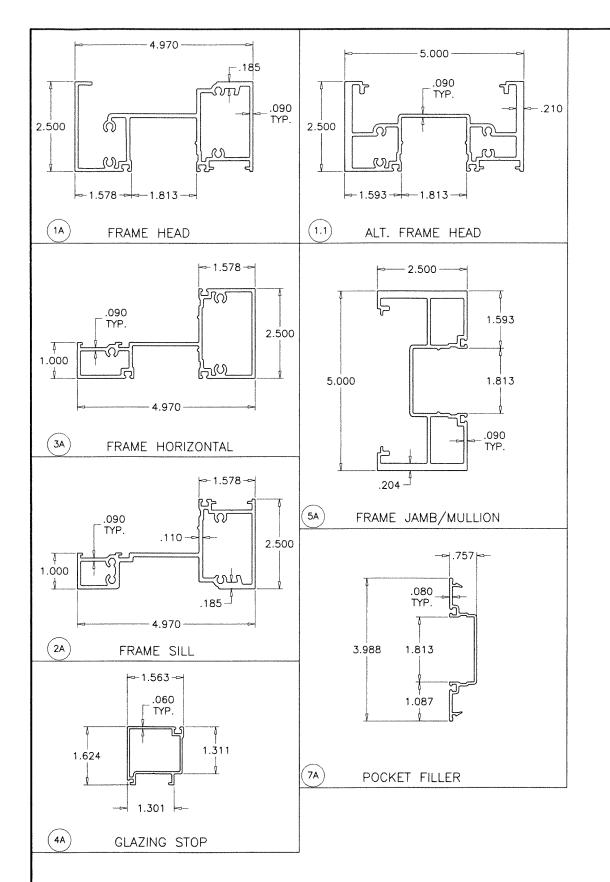
SYSTEM

E.S. WINDOWS, LLC 3550 N.W. 49 STREET MIAMI, FL. 33142 TEL. (305) 638-5151 FAX. (30)



PRODUCT REVISED As complying with the Florida Building Code		description	UPDATED TO 2017 FBC	NO CHANGE THIS SHEET	UPDATED TO 2020 FBC	NO CHANGE THIS SHEET	
NOA-No. <u>23-0928.18</u> Expiration Date <u>:</u> 10/28/2024		à					
By: Manuel Peres	revisions:	date	01.26.18	09.28.18	11.18.20	09.12.23	
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Miami-Dade Product Control  FARO  MO. 81223  STATE OF  CORIDA  CONAL  MO. 81211111111111111111111111111111111111	W	       	) scale: 3/8" = 1"	<del>-</del>	-2	no 25	5

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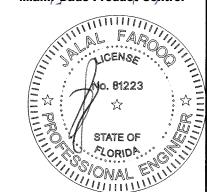


ITEM NO.	PART NUMBER	QUANTITY	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
1A	ES-9554	AS REQD.	FRAME HEAD (INSUL. LAM. GLASS)	6063-T6	-
1.1	ES-9558	AS REQD.	ALT. FRAME HEAD (INSUL. LAM. GLASS)	6063-T6	
2A	ES-9551	AS REQD.	FRAME SILL (INSUL. LAM. GLASS)	6063-T6	
3A	ES-9553	AS REQD.	FRAME HORIZONTAL (INSUL. LAM. GLASS)	6063-T5	
4A	ES-9552	AS REQD.	GLAZING STOP (INSUL. LAM. GLASS)	6063-T5	-
5A	ES-9555	AS REQD.	FRAME JAMB/MULLION (INSUL. LAM. GLASS)	6063-T6	Sect.
7A	ES-9556	AS REQD.	POCKET FILLER (INSUL. LAM. GLASS)	6063-T <b>6</b>	**************************************
16A		AS REQD.	SETTING BLOCK (INSUL. LAM. GLASS)	EPDM	DUROMETER 75±5 SHORE A

PRODUCT REVI As complying with Building Code NOA-No.

Expiration Date: 10

By: Manuel 3 Miami-Dade Produc



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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

(L.M.I.)

SYSTEM

E.S. WINDOWS, LLC 3550 N.W. 49 STREET MIAMI, FL. 33142 TEL. (305) 638-5151 FAX. (305)

638-5158

(305)

SEP 27 2023

