



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

## NOTICE OF ACCEPTANCE (NOA)

MIAMI-DADE COUNTY  
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](http://www.miamidade.gov/building)

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 "1100WW" Aluminum Single Hung Window - S.M.I.

**APPROVAL DOCUMENT:** Drawing No. **W12-41**, titled "Series-1100WW Alum. Single Hung Window (S.M.I)", sheets 1 through 11 of 11, dated 07/20/12, with revision **G** dated 07/06/23, 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: 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.

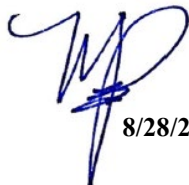
**ADVERTISEMENT:** The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

**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 and renews** NOA No. **20-1208.11** 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.**



  
8/28/23

NOA No. 23-0803.04  
Expiration Date: December 13, 2028  
Approval Date: September 07, 2023  
Page 1

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

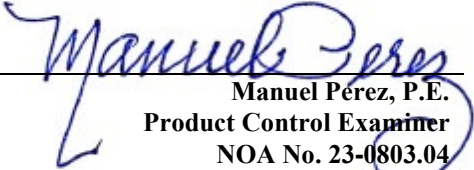
**1. EVIDENCE SUBMITTED UNDER PREVIOUS NOA's**

**A. DRAWINGS**

1. Manufacturer's die drawings and sections.  
*(Submitted under NOA No. 12-0907.02)*
2. Drawing No. **W12-41**, titled "Series-1100WW Alum Single Hung Window (S.M.I.)" sheets 1 through 11 of 11, dated 07/20/12, with revision **F** dated 11/18/20, prepared by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E.  
*(Submitted under NOA No. 20-1208.11)*

**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) Small Missile Impact Test per FBC, TAS 201-94  
6) Cyclic Wind Pressure Loading per FBC, TAS 203-94  
7) Forced Entry Test, per FBC 2411.3.2.1, and TAS 202-94  
8) Safety Performance Test, (class A) per ANSI Z97.1  
along with marked-up drawings and installation diagram of aluminum single hung window over fixed window, single and mulled units, prepared by Fenestration Testing Laboratory, Inc., Test Report No. **FTL-6800**, dated 05/18/12, signed and sealed by Marlin D. Brinson, P.E.  
*(Submitted under NOA No. 12-0907.02)*
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) Small Missile Impact Test per FBC, TAS 201-94  
6) Cyclic Wind Pressure Loading per FBC, TAS 203-94  
along with marked-up drawings and installation diagram of an aluminum single hung window, prepared by Fenestration Testing Laboratory, Inc., Test Reports No.'s **FTL-5337** dated 01/25/08 and **FTL-5815** dated 02/13/09, both signed and sealed by Michael R. Wenzel, P.E.  
*(For Reference Only - Submitted under NOA's No. 07-0928.14 and No. 09-1008.05)*

  
Manuel Pérez, P.E.  
Product Control Examiner  
NOA No. 23-0803.04  
Expiration Date: December 13, 2028  
Approval Date: September 07, 2023

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**1. EVIDENCE SUBMITTED UNDER PREVIOUS NOA's (CONTINUED)**

**B. TESTS (CONTINUED)**

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

along with marked-up drawings and installation diagram of an aluminum Single Hung window, prepared by Hurricane Engineering & Testing, Inc., Test Reports No.

**HETI-05-1432** dated 01/28/05 & **HETI-05-1945**, dated 03/28/05, signed and sealed by Ivonne Ghia, P.E. *(For Reference Only - Submitted under NOA's No. 06-0316.03, No. 07-0928.14 and 09-1008.05)*

**C. CALCULATIONS**

1. Anchor verification calculations and structural analysis, complying with **FBC 6<sup>th</sup> Edition (2017)**, dated 10/29/14 and 10/10/17, and 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. 20-1208.11)*
2. Glazing complies with **ASTM E1300-09**

**D. QUALITY ASSURANCE**

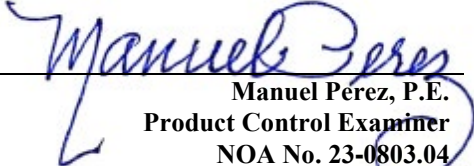
1. Miami-Dade Department of Regulatory and Economic Resources (RER).

**E. MATERIAL CERTIFICATIONS**

1. Notice of Acceptance No. **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.
2. Notice of Acceptance No. **18-0725.11** issued to **Kuraray America, Inc.** for their "Kuraray SentryGlas® Xtra™ (SGX™) Clear Glass Interlayer" dated 05/23/19, expiring on 05/23/24.

**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. 20-1208.11)*

  
Manuel Pérez, P.E.  
Product Control Examiner  
NOA No. 23-0803.04

Expiration Date: December 13, 2028  
Approval Date: September 07, 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. **18-0905.08**, issued to E.S. Windows, LLC, for their Series "1100WW" Aluminum Single Hung Window - S.M.I., approved on 10/04/18 and expiring on 12/13/23.

**2. NEW EVIDENCE SUBMITTED**

**A. DRAWINGS**

1. Drawing No. **W12-41**, titled "Series-1100WW Alum Single Hung Window (S.M.I.)" sheets 1 through 11 of 11, dated 07/20/12, with revision **G** dated 07/06/23, 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**

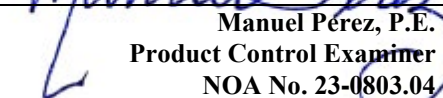
1. Notice of Acceptance No. **20-0915.22** issued to **Kuraray America, Inc.** for their "Trosifol® Ultraclear, Clear and Color PVB Glass Interlayers" dated 11/19/20, expiring on 07/08/24.
2. Notice of Acceptance No. **22-1116.01** issued to **Kuraray America, Inc.** for their "SentryGlas® (Clear and White) Glass Interlayers" dated 12/15/22, expiring on 07/04/28.

**F. STATEMENTS**

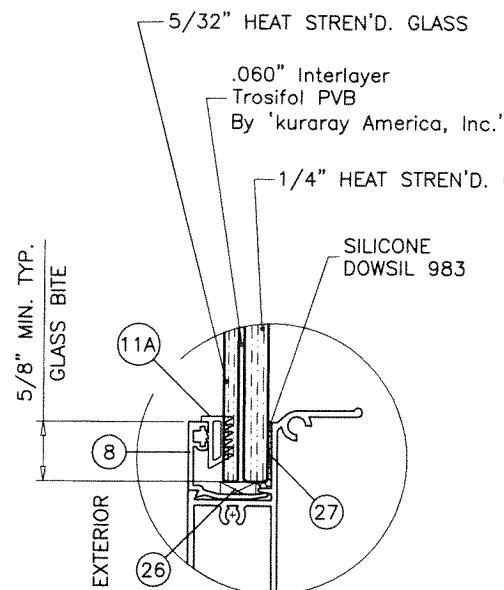
1. Statement letter of conformance, complying with **FBC 7<sup>th</sup> Edition (2020)**, with **FBC 8<sup>th</sup> Edition (2023)**, and of no financial interest, dated July 12, 2023, issued by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E.

**G. OTHERS**

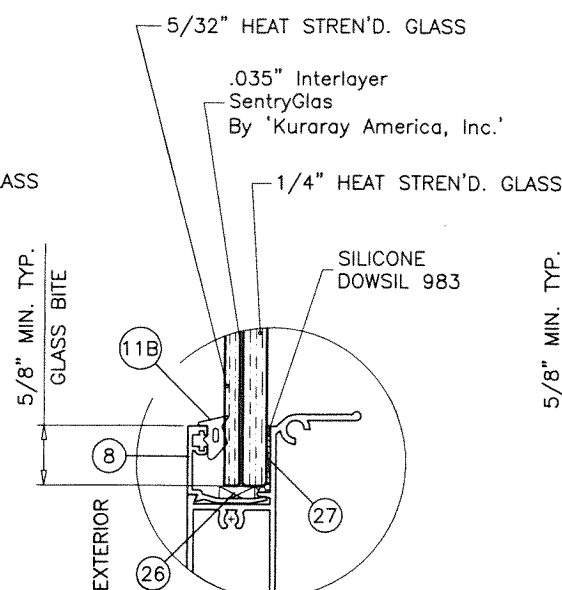
1. Notice of Acceptance No. **20-1208.11**, issued to E.S. Windows, LLC, for their Series "1100WW" Aluminum Single Hung Window - S.M.I., approved on 02/18/21 and expiring on 12/13/23.

  
Manuel Pérez, P.E.  
Product Control Examiner  
NOA No. 23-0803.04  
Expiration Date: December 13, 2028  
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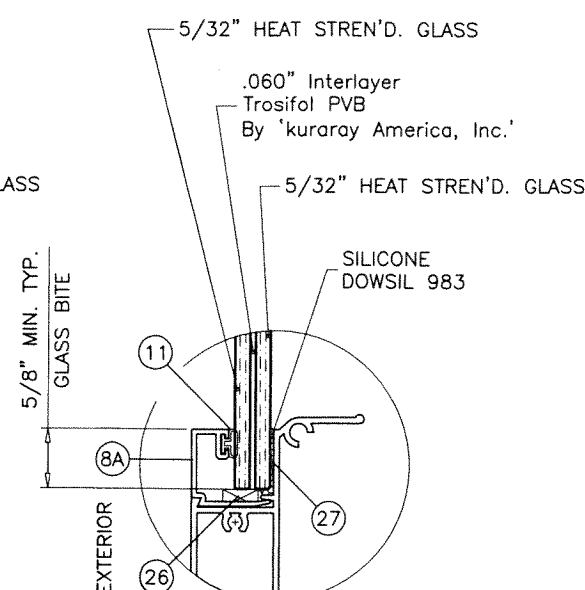




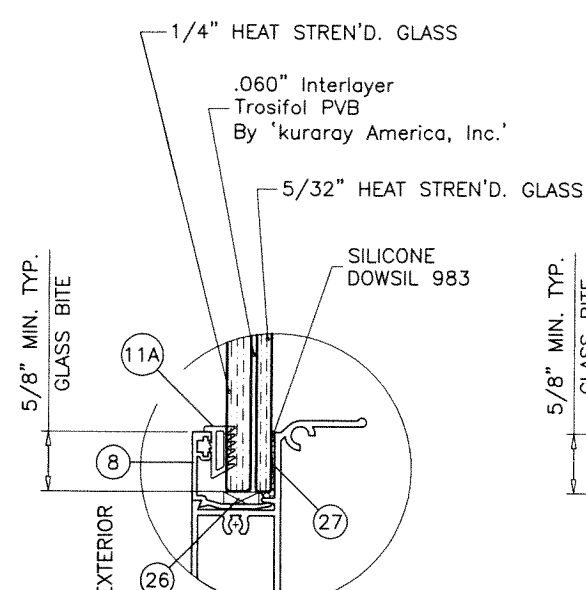
GLASS TYPE 'A'



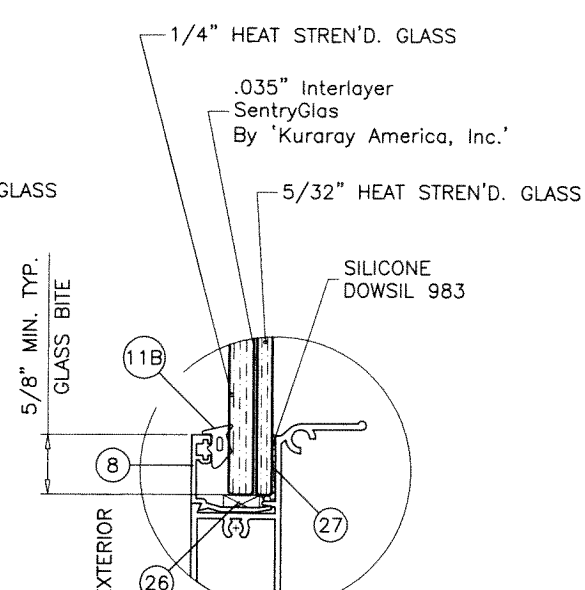
GLASS TYPE 'B'



GLASS TYPE 'C'



GLASS TYPE 'AR'



GLASS TYPE 'BR'

GLAZING OPTIONS

GLASS TYPES 'A' & 'B'  
MAXIMUM DESIGN LOAD RATING = + 100.0 PSF  
- 140.0 PSF

GLASS TYPE 'C', 'AR' & 'BR'  
MAXIMUM DESIGN LOAD RATING = + 80.0 PSF  
- 120.0 PSF

SERIES-1100WW ALUMINUM SINGLE HUNG WINDOW

THESE WINDOWS CAN BE INSTALLED AS SINGLE UNITS OR SIDE BY SIDE COMBINATION OF TWO OR MORE UNITS USING MULLIONS IN BETWEEN. FOR SINGLE HUNG WINDOW CAPACITY SEE SHEET 2. FOR SINGLE HUNG OVER FIXED WINDOW CAPACITY SEE SHEET 3. FOR SIDE BY SIDE UNITS SEE SHEET 4 FOR WINDOW MULLION CAPACITY. LOWER DESIGN PRESSURES FROM CHARTS ABOVE WILL APPLY TO ENTIRE SYSTEM.

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.

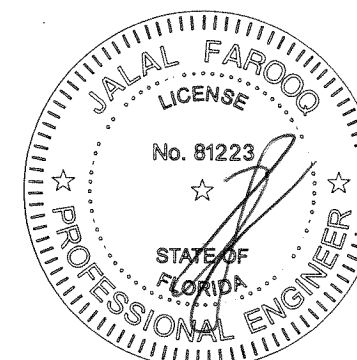
THIS PRODUCT APPROVAL IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT, i.e. LIFE SAFETY OF THIS PRODUCT, ADEQUACY OF STRUCTURE RECEIVING THIS PRODUCT AND SEALING AROUND OPENING FOR WATER INFILTRATION RESISTANCE ETC. CONDITIONS NOT SHOWN IN THIS DRAWING ARE TO BE ANALYZED SEPARATELY,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

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

NOTE:  
GLASS CAPACITIES ON THIS SHEET ARE  
BASED ON ASTM E1300-09 (3 SEC. GUSTS)  
AND FLORIDA BUILDING COMMISSION  
DECLARATORY STATEMENT DCA05-DEC-219

**PRODUCT REVISED**  
As complying with the Florida  
Building Code  
NOA-No. **23-0803.04**  
Expiration Date: **12/13/2028**  
By: *Manuel Perez*  
Miami-Dade Product Control

THESE WINDOWS ARE RATED FOR SMALL MISSILE IMPACT.  
MIAMI-DADE COUNTY APPROVED IMPACT RESISTANT SHUTTERS  
REQUIRED FOR INSTALLATIONS UP TO 30 FT. OF GRADE.  
SHUTTERS NOT REQD. FOR INSTALLATIONS ABOVE 30 FT. OF GRADE.



SERIES-1100WW ALUM SINGLE HUNG WINDOW (S.M.I.)

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

no	date	by	description
C	12.22.14		UPDATED TO 2014 FBC
D	10.23.17		UPDATED TO 2017 FBC
E	08.24.18		GLASS OPTIONS ADDED
F	11.18.20		UPDATED TO 2020 FBC
G	07.06.23		UPDATED TO 2023 FBC

date: 07-20-12  
scale: 1/2"=1'-0"  
dr. by: TARIQ  
chk. by:

drawing no.  
**W12-41**

sheet 1 of 11

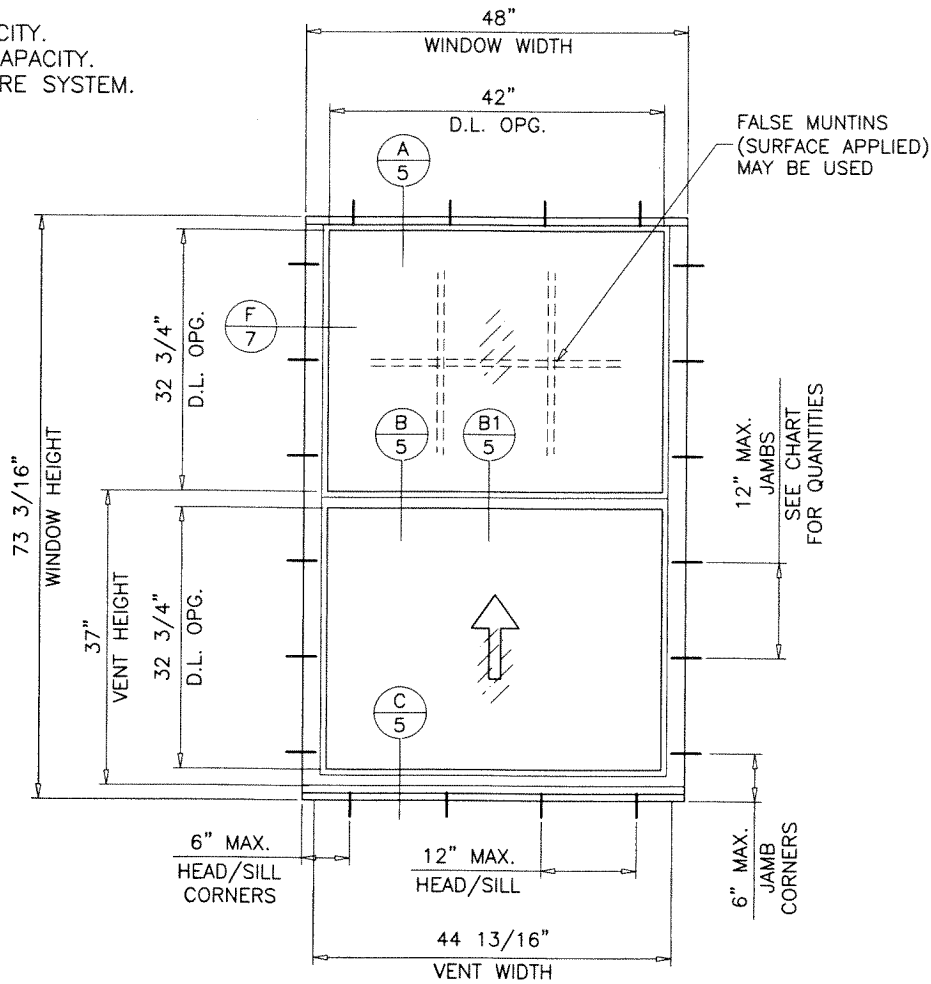
**AL-FAROOQ CORPORATION**  
ENGINEERS & PRODUCT DEVELOPMENT  
9360 SUNSET DRIVE, SUITE 220  
MIAMI, FLORIDA 33173 (C.A.N. 3538)  
TEL. (305) 264-8100 FAX. (305) 262-6978

COMP-ANL\W12-41ESW

SINGLE HUNG WINDOW ANCHOR LOAD CAPACITY - PSF									
WINDOW DIMS.		ANCHORS TYPE 'A'						ANCHORS 'C'	
		1/4" MAX. SHIM		3/8" MAX. SHIM		1/2" MAX. SHIM		3/8" MAX. SHIM	
WIDTH	HEIGHT	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)
19-1/8"	38-3/8" (4)	100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
26-1/2"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
30"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
37"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
42"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
48"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
19-1/8"	50-5/8" (5)	100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
26-1/2"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
30"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
37"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
42"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
48"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
19-1/8"	63" (6)	100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
26-1/2"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
30"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
37"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
42"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
48"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
19-1/8"	72" (6)	100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
26-1/2"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
30"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
37"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
42"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
48"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0

\* NO. IN PARENTHESIS INDICATE NO. OF ANCHORS PER JAMB.

INSTRUCTIONS:  
SEE SHEET 1 FOR GLASS TYPES AND DESIGN LOAD CAPACITY.  
SEE CHART BELOW FOR SINGLE HUNG WINDOW ANCHOR CAPACITY.  
LOWER VALUES FROM THESE CHARTS WILL APPLY TO ENTIRE SYSTEM.



TYPICAL ELEVATION

TYPICAL ANCHORS: SEE ELEV. FOR SPACING

TYPE 'A'- 5/16" DIA. ULTRACON BY 'DEWALT' (Fu=177 KSI, Fy=155 KSI)  
INTO 2BY WOOD BUCKS OR WOOD STRUCTURES  
1-1/2" MIN. PENETRATION INTO WOOD (HEAD/SILL/JAMBS)

THRU 1BY BUCKS INTO CONC. OR BLOCKS  
1-1/4" MIN. EMBED INTO CONCRETE (HEAD/SILL/JAMBS)  
1-1/4" MIN. EMBED INTO BLOCKS (JAMBS)

DIRECTLY INTO CONCRETE OR BLOCKS  
1-1/4" MIN. EMBED INTO CONCRETE (HEAD/SILL/JAMBS)  
1-1/4" MIN. EMBED INTO BLOCKS (JAMBS)

TYPE 'C'- 1/4" DIA. TEKS OR SELF DRILLING SCREWS (GRADE 5 CRS)

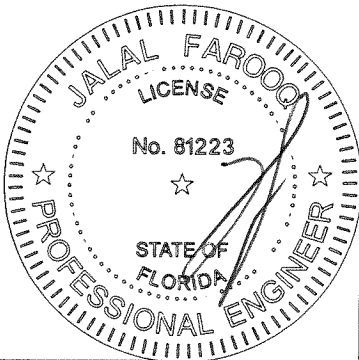
INTO MIAMI-DADE COUNTY APPROVED MULLIONS  
OR  
INTO METAL STRUCTURES (HEAD/SILL/JAMBS)  
(3) THREADS MIN. PENETRATION BEYOND SUBSTRATE  
ALUMINUM: 1/8" THK. MIN. (6063-T5 MIN.)  
STEEL: 1/8" THK. MIN. (Fy = 36 KSI MIN.)  
(STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

TYPICAL EDGE DISTANCE

INTO CONCRETE AND MASONRY = 2-1/2" MIN.  
INTO WOOD STRUCTURE = 1-1/4" 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 HOLLOW/FILLED BLOCK AT JAMBS f'm = 2000 PSI MIN.

PRODUCT REVISED  
As complying with the Florida  
Building Code  
NOA-No. 23-0803.04  
Expiration Date: 12/13/2028  
By: Manuel Perez  
Miami-Dade Product Control



af c

AL-FAROOQ CORPORATION  
ENGINEERS & PRODUCT DEVELOPMENT  
9360 SUNSET DRIVE, SUITE 220  
MIAMI, FLORIDA 33173  
TEL. (305) 262-6978  
FAX. (305) 262-6978  
COMP-ANL\W12-41ESW

SERIES-1100WW ALUM SINGLE HUNG WINDOW (S.M.I.)

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

revisions:	no	date	description	by
	C	12.22.14	UPDATED TO 2014 FBC	
	D	10.23.17	UPDATED TO 2017 FBC	
	E	08.24.18	NO CHANGE THIS SHEET	
	F	11.18.20	UPDATED TO 2020 FBC	
	G	07.06.23	NO CHANGE THIS SHEET	

date: 07-20-12

scale: 1/2"=1'-0"

dr. by: TARIQ

chk. by:

drawing no.

W12-41

sheet 2 of 11



SINGLE HUNG OVER FIXED WINDOW ANCHOR LOAD CAPACITY - PSF									
WINDOW DIMS.		ANCHORS TYPE 'A'						ANCHORS 'C'	
		1/4" MAX. SHIM		3/8" MAX. SHIM		1/2" MAX. SHIM		3/8" MAX. SHIM	
WIDTH	HEIGHT	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)
36"	60"	100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
42"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
45"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
48"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
36"	72"	100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
42"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
45"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
48"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
36"	84"	100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
42"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
45"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
48"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
36"	90"	100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
42"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
45"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
48"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
36"	96"	100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
42"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
45"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
48"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
36"	102"	100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
42"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
45"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
48"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
36"	108"	100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
42"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
45"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0
48"		100.0	140.0	100.0	140.0	100.0	140.0	100.0	140.0

\* NO. IN PARENTHESIS INDICATE NO. OF ANCHORS PER JAMB.

**TYPICAL ANCHORS:** SEE ELEV. FOR SPACING

**TYPE 'A' - 5/16" DIA. ULTRACON BY 'DEWALT'** (Fu=177 KSI, Fy=155 KSI)  
INTO 2BY WOOD BUCKS OR WOOD STRUCTURES  
1-1/2" MIN. PENETRATION INTO WOOD (HEAD/SILL/JAMBS)  
THRU 1BY BUCKS INTO CONC. OR BLOCKS  
1-1/4" MIN. EMBED INTO CONCRETE (HEAD/SILL/JAMBS)  
1-1/4" MIN. EMBED INTO BLOCKS (JAMBS)  
DIRECTLY INTO CONCRETE OR BLOCKS  
1-1/4" MIN. EMBED INTO CONCRETE (HEAD/SILL/JAMBS)  
1-1/4" MIN. EMBED INTO BLOCKS (JAMBS)

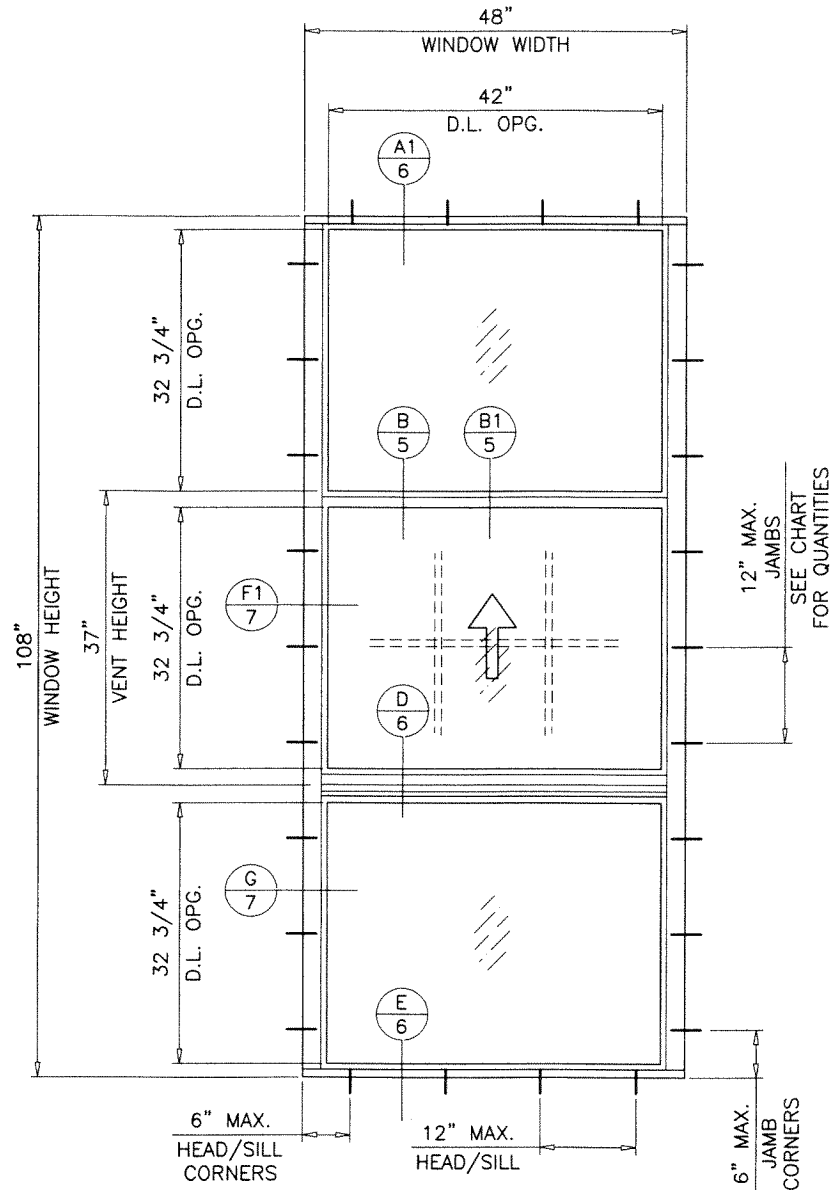
**TYPE 'C' - 1/4" DIA. TEKS OR SELF DRILLING SCREWS** (GRADE 5 CRS)  
INTO MIAMI-DADE COUNTY APPROVED MULLIONS  
OR  
INTO METAL STRUCTURES (HEAD/SILL/JAMBS)  
(3) THREADS MIN. PENETRATION BEYOND SUBSTRATE  
ALUMINUM: 1/8" THK. MIN. (6063-T5 MIN.)  
STEEL: 1/8" THK. MIN. (Fy = 36 KSI MIN.)  
(STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

**TYPICAL EDGE DISTANCE**

INTO CONCRETE AND MASONRY = 2-1/2" MIN.  
INTO WOOD STRUCTURE = 1-1/4" 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 HOLLOW/FILLED BLOCK AT JAMBS f'm = 2000 PSI MIN.

INSTRUCTIONS:  
SEE SHEET 1 FOR GLASS TYPES AND DESIGN LOAD CAPACITY.  
SEE CHART BELOW FOR S.H. OVER FIXED WINDOW ANCHOR CAPACITY.  
LOWER VALUES FROM THESE CHARTS WILL APPLY TO ENTIRE SYSTEM.

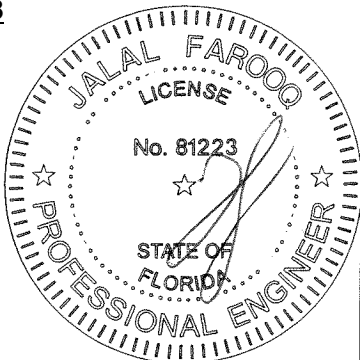


**TYPICAL ELEVATION**

PRODUCT COMPLIES WITH REQUIREMENTS OF ANSI Z97.1.  
WITH MINIMUM SILL HEIGHT OF 36 IN. ABOVE WALKING SURFACE.

**PRODUCT REVISED**  
**As complying with the Florida Building Code**  
**NOA-No. 23-0803.04**  
**Expiration Date: 12/13/2028**  
**By: Manuel Perez**  
**Miami-Dade Product Control**

JUL 07 2023



**af c**  
**AL-FAROOQ CORPORATION**  
ENGINEERS & PRODUCT DEVELOPMENT  
9360 SUNSET DRIVE, SUITE 220  
MIAMI, FLORIDA 33173  
TEL. (305) 264-8100 FAX. (305) 262-6978  
COMP-ANL\W12-41ESW

**SERIES-1100WW ALUM SINGLE HUNG WINDOW (S.M.I.)**  
**E.S. WINDOWS, LLC**  
3550 N.W. 49 STREET  
MIAMI, FL. 33142  
TEL. (305) 638-5151 FAX. (305) 638-5158

no	date	by	description
C	12.22.14		UPDATED TO 2014 FBC
D	10.23.17		UPDATED TO 2017 FBC
E	08.24.18		NO CHANGE THIS SHEET
F	11.18.20		UPDATED TO 2020 FBC
G	07.06.23		NO CHANGE THIS SHEET

date: 07-20-12

scale: 1/2"=1'-0"

dr. by: TARIQ

chk. by:

drawing no.  
**W12-41**

sheet **3** of **11**

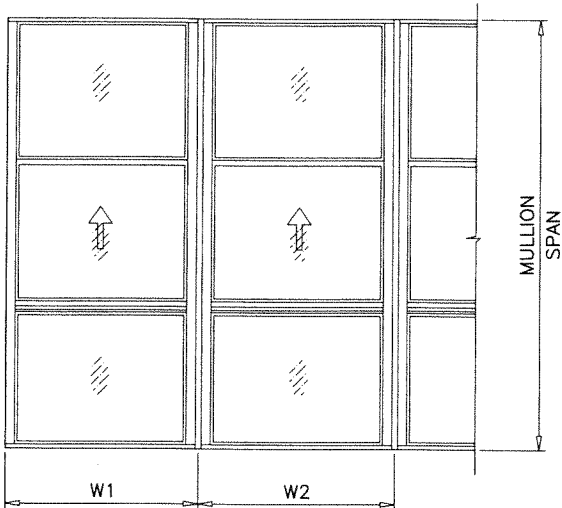
**MULLION LOAD CAPACITY - PSF  
SINGLE HUNG OVER FIXED WINDOW**

WINDOW DIMS.		6 ANCHORS @ MULL END
WIDTH (W)	MULL SPAN	EXT. (+) INT. (-)
24"	60"	140.0
30"		140.0
36"		140.0
42"		140.0
48"		140.0
24"	72"	140.0
30"		140.0
36"		140.0
42"		140.0
48"		140.0
24"	84"	140.0
30"		140.0
36"		140.0
42"		140.0
48"		140.0
24"	90"	140.0
30"		140.0
36"		140.0
42"		140.0
48"		140.0
24"	96"	140.0
30"		140.0
36"		140.0
42"		140.0
48"		140.0
24"	102"	140.0
30"		140.0
36"		140.0
42"		140.0
48"		130.7
24"	108"	140.0
30"		140.0
36"		140.0
42"		129.1
48"		114.8
48"	108"	140.0

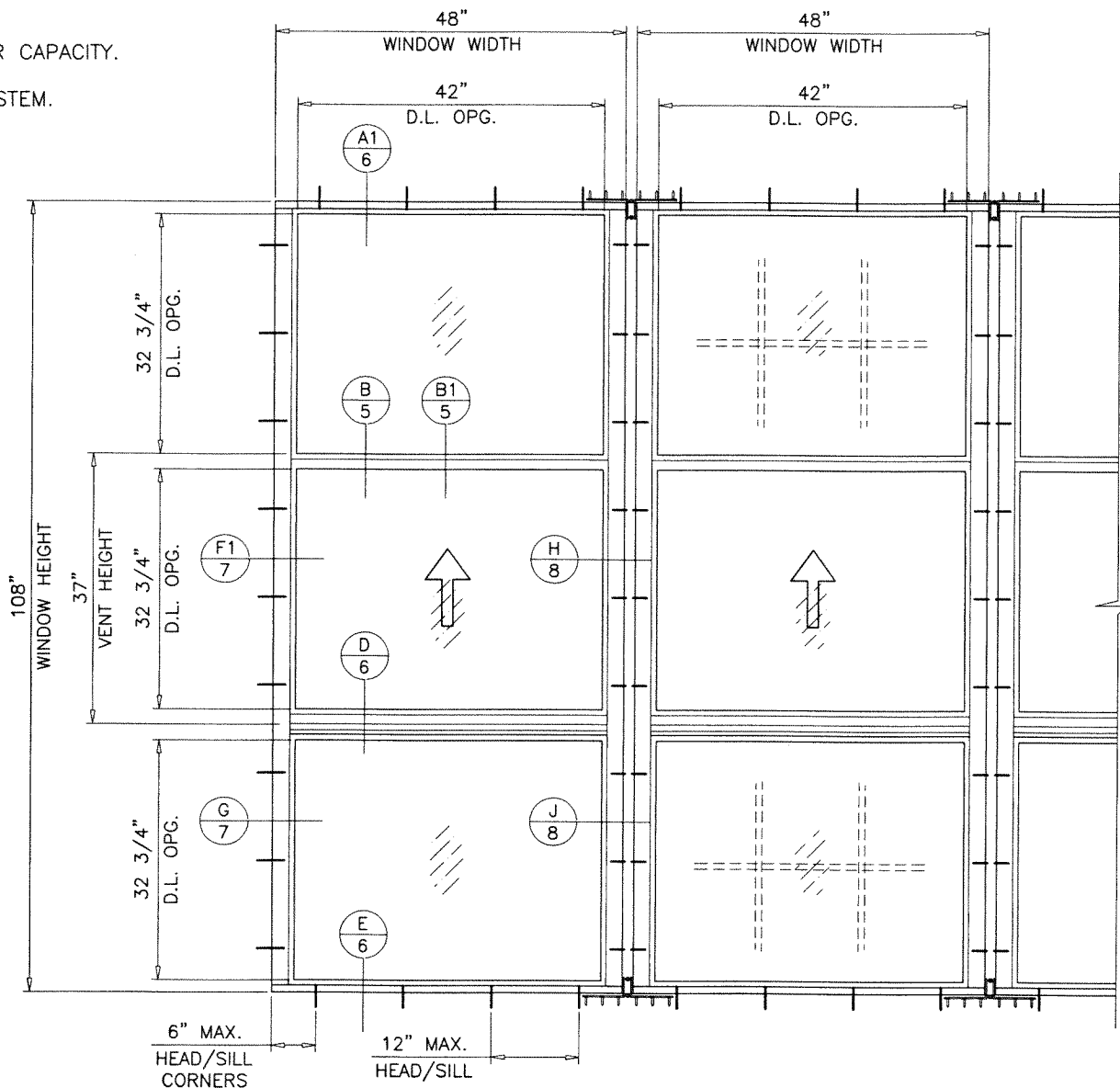
WITH MULL STIFFENER

**INSTRUCTIONS:**

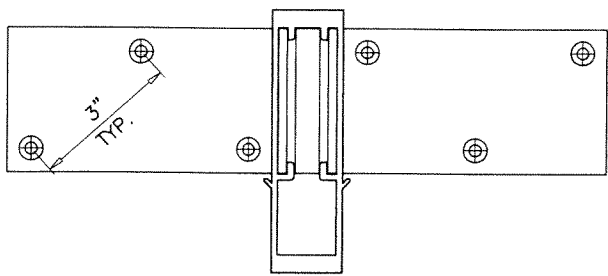
SEE SHEET 1 FOR GLASS TYPES AND DESIGN LOAD CAPACITY.  
SEE CHART ON SHEET 3 FOR S.H. OVER FIXED WINDOW ANCHOR CAPACITY.  
SEE CHARTS BELOW FOR WINDOW MULLION CAPACITY.  
LOWER VALUES FROM THESE CHARTS WILL APPLY TO ENTIRE SYSTEM.



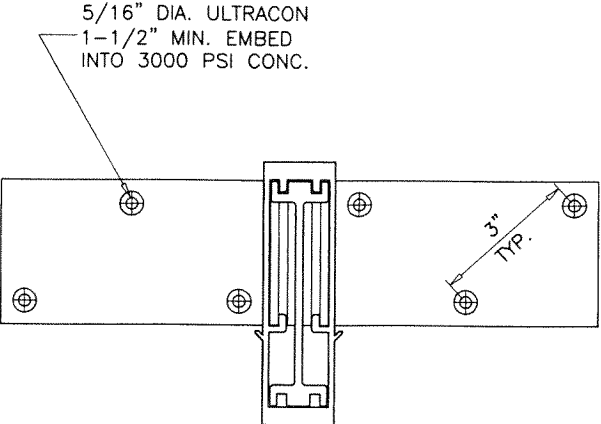
$$\text{WIDTH (W)} = \frac{W1 + W2}{2}$$



**TYPICAL ELEVATION**  
SIDE BY SIDE UNITS



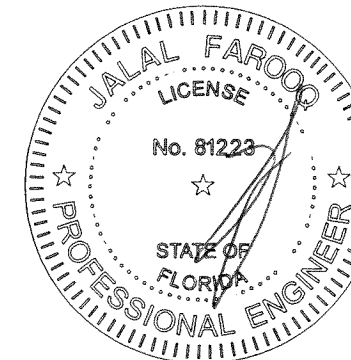
**MULLION WITHOUT STIFFENER**



**MULLION WITH STIFFENER**

INSTALL CLIP ANGLES DIRECTLY TO CONC. WITHOUT SHIM SPACE  
NOTCH WOOD BUCKS TO ACCOMMODATE CLIP ANGLES

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Expiration Date: **12/13/2028**  
By: *Manuel Perez*  
Miami-Dade Product Control



JUL 07 2023

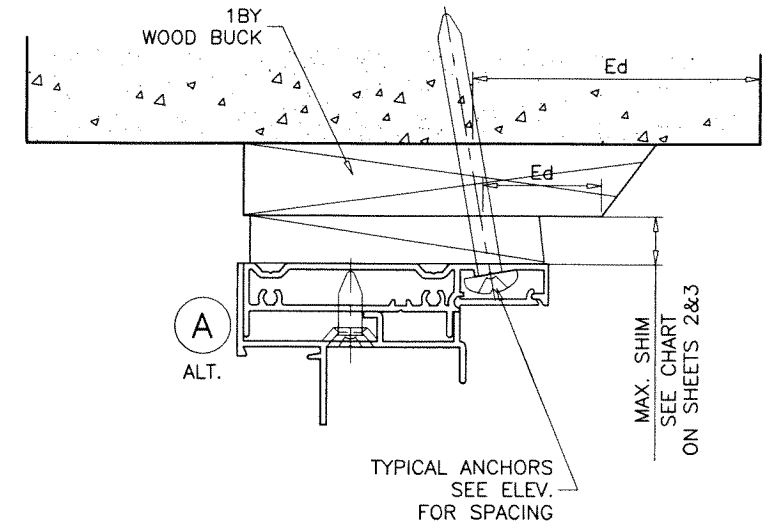
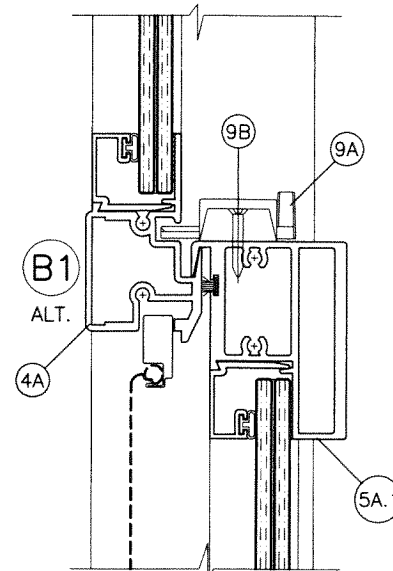
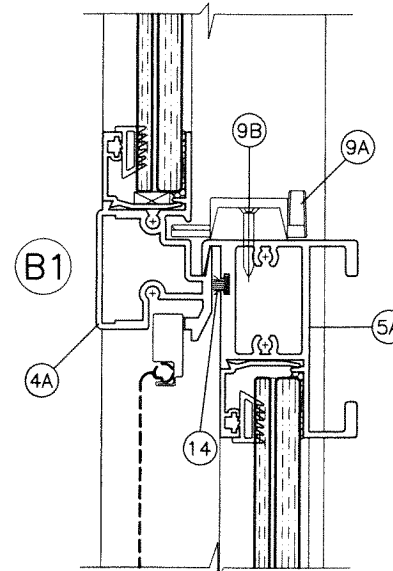
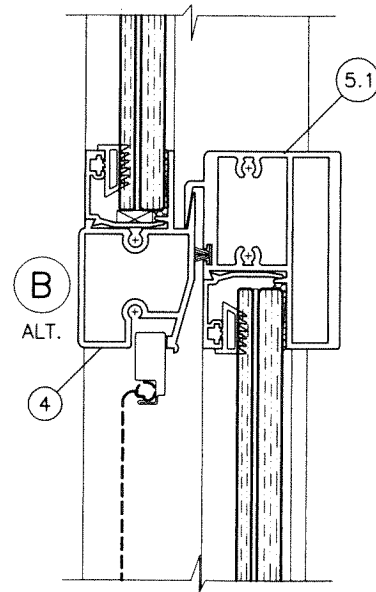
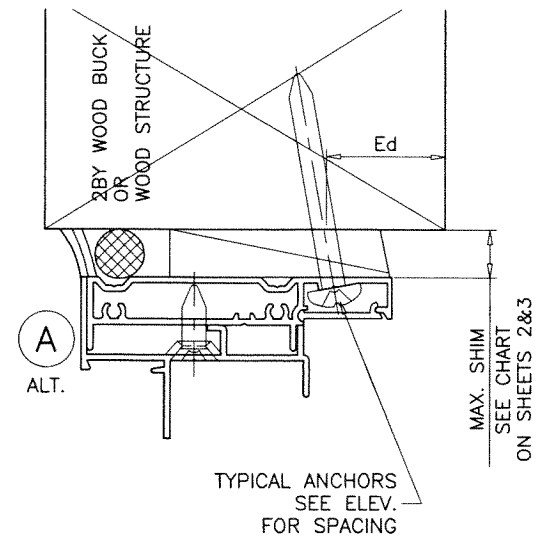
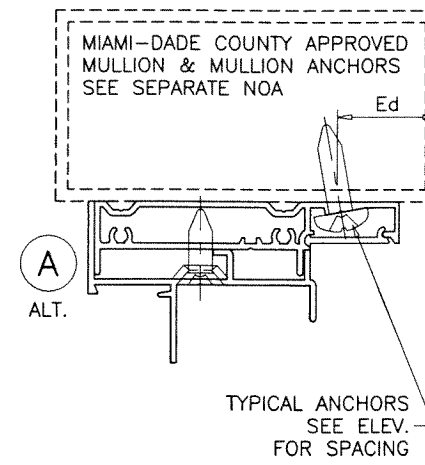
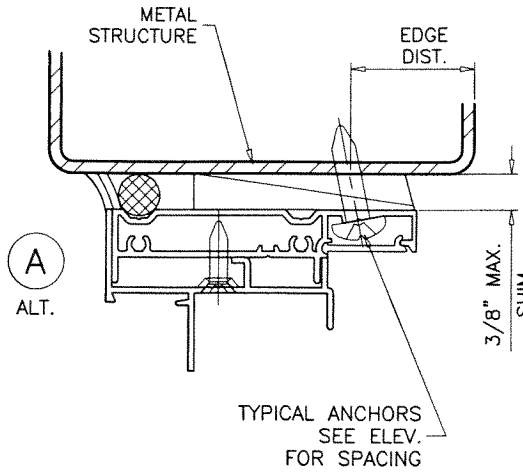
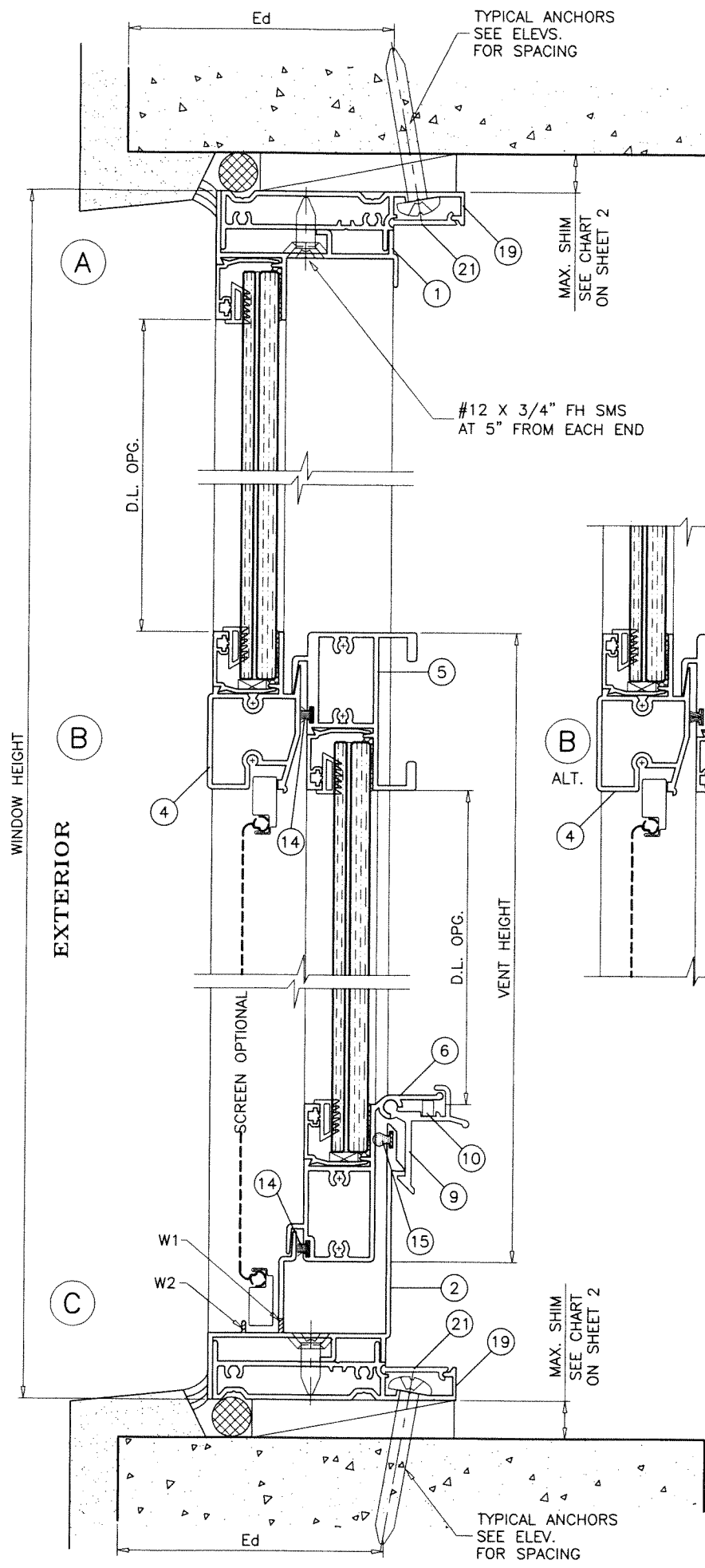
**AL-FAROOQ CORPORATION**  
ENGINEERS & PRODUCT DEVELOPMENT  
9360 SUNSET DRIVE, SUITE 220  
MIAMI, FLORIDA 33173  
TEL. (305) 264-8100 FAX. (305) 262-6978  
(C.A.N. 3538)

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

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date: 07-20-12  
scale: -  
dr. by: TARIQ  
chk. by:  
drawing no. **W12-41**  
sheet 4 of 11



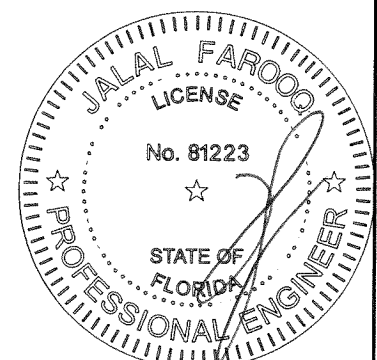


**PRODUCT REVISED**  
As complying with the Florida  
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NOA-No. **23-0803.04**  
Expiration Date: **12/13/2028**  
By: *Manuel Perez*  
Miami-Dade Product Control

WOOD BUCKS AND METAL STRUCTURE NOT BY 'E.S. WINDOWS'  
MUST SUSTAIN LOADS IMPOSED BY GLAZING SYSTEM  
AND TRANSFER THEM TO THE BUILDING STRUCTURE.

**WEEPHOLES:**

W1 = 1-1/2" X 3/16" WEEPHOLES AT 4" FROM EACH END  
W2 = 1-5/16" NOTCH AT EACH END



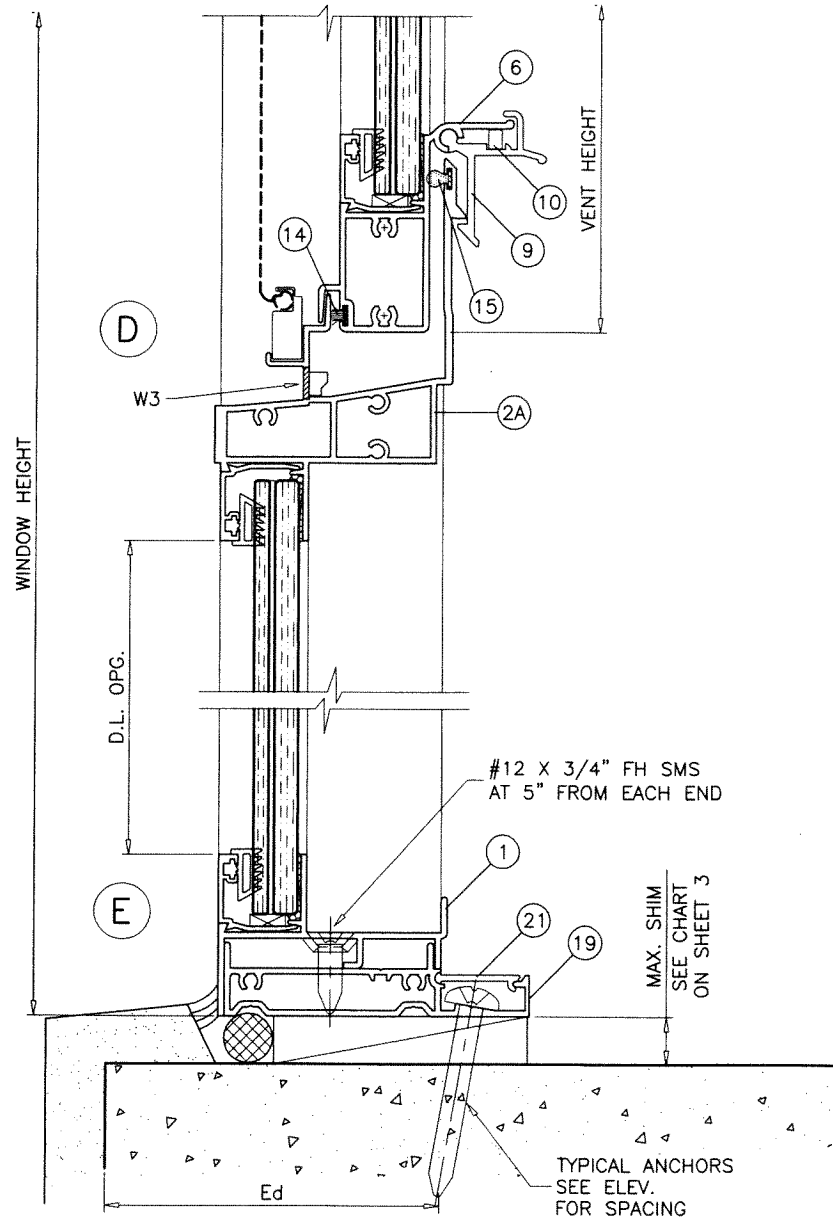
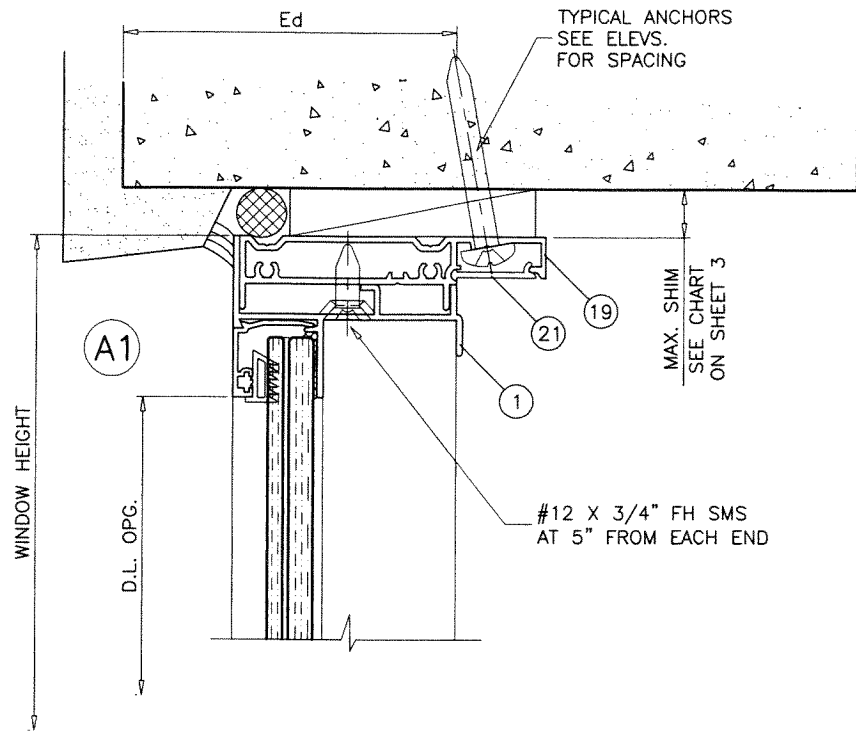
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drawing no. <b>W12-41</b>			
sheet 5 of 11			

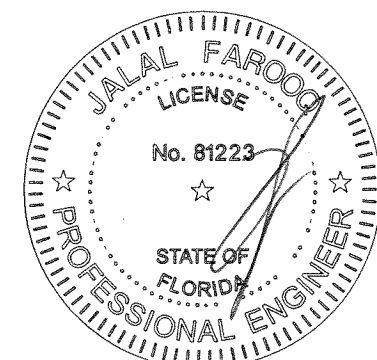


# **WEEPHOLES:**

W3 = 5/16" WEEPHOLES AT 6" FROM EACH END WITH PLASTIC BAFFLE

**PRODUCT REVISED**  
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Expiration Date: **12/13/2028**  
By: *Manuel Ferraz*  
Miami-Dade Product Control

JUL 07 2023



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ENGINEERS & PRODUCT DEVELOPMENT  
9360 SUNSET DRIVE, SUITE 220  
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COMP-ANL\W12-41ESW

SERIES-1100WW ALUM SINGLE HUNG WINDOW (S.M.I.)  
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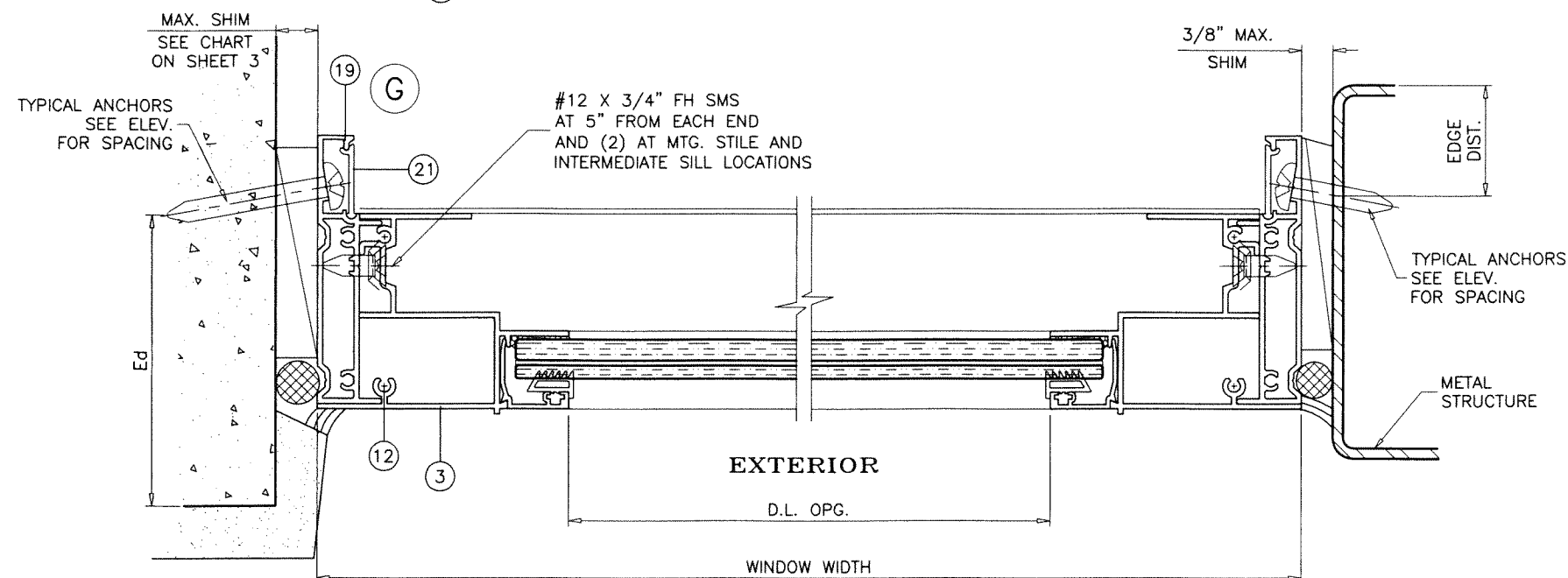
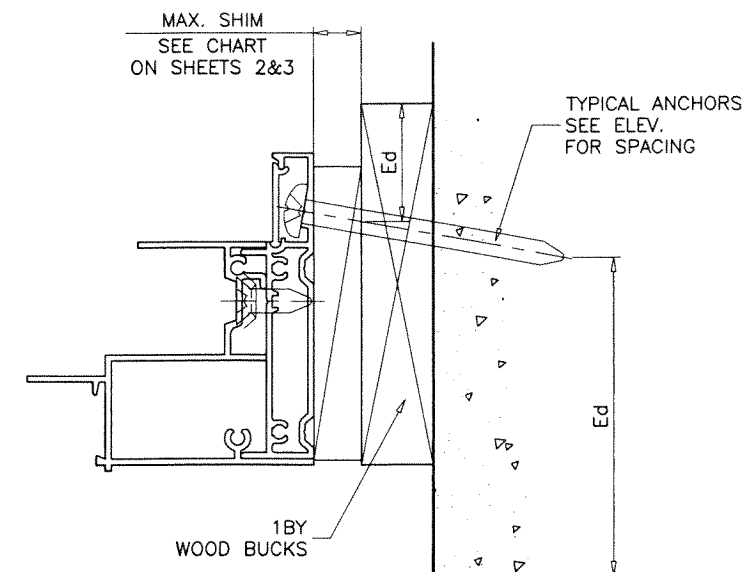
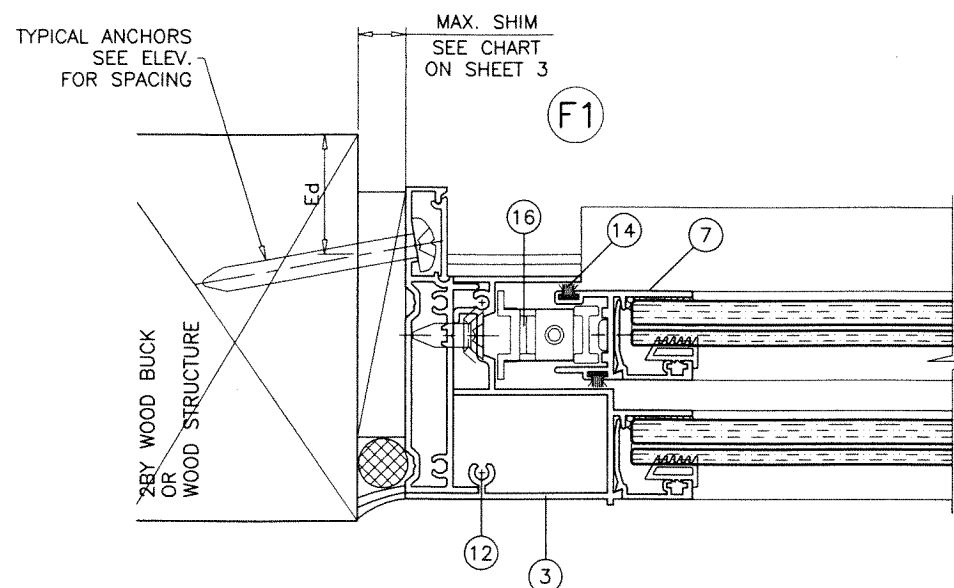
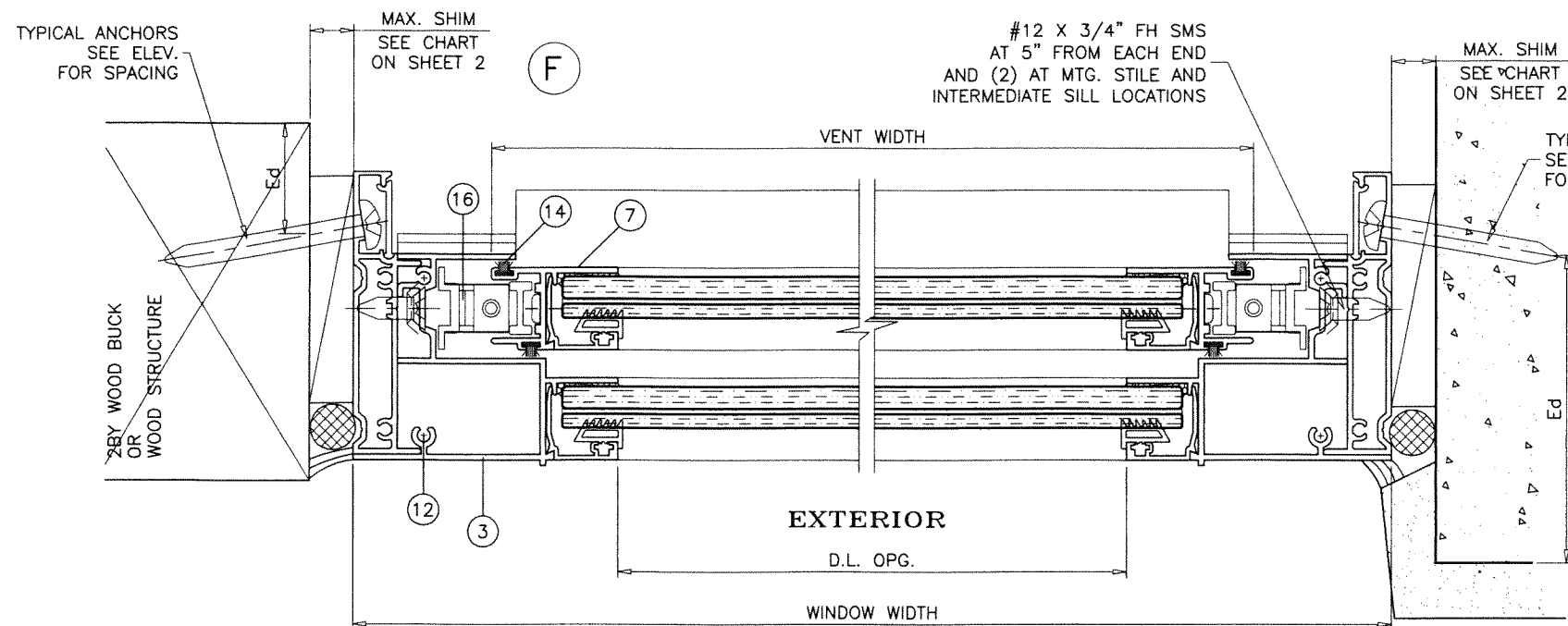
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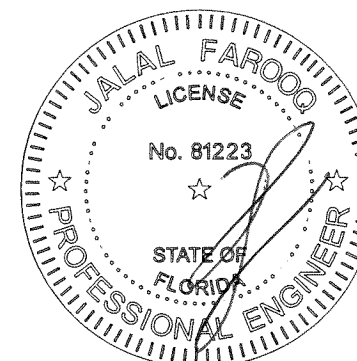
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dr. by:	TARIQ
chk. by:	

drawing no.	W12-41
sheet	6 of 11



**PRODUCT REVISED**  
 As complying with the Florida Building Code  
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 Miami-Dade Product Control



JUL 07 2020

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 ENGINEERS & PRODUCT DEVELOPMENT  
 9360 SUNSET DRIVE, SUITE 220  
 MIAMI, FLORIDA 33173  
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**af c**

COMP-ANL W12-41ESW

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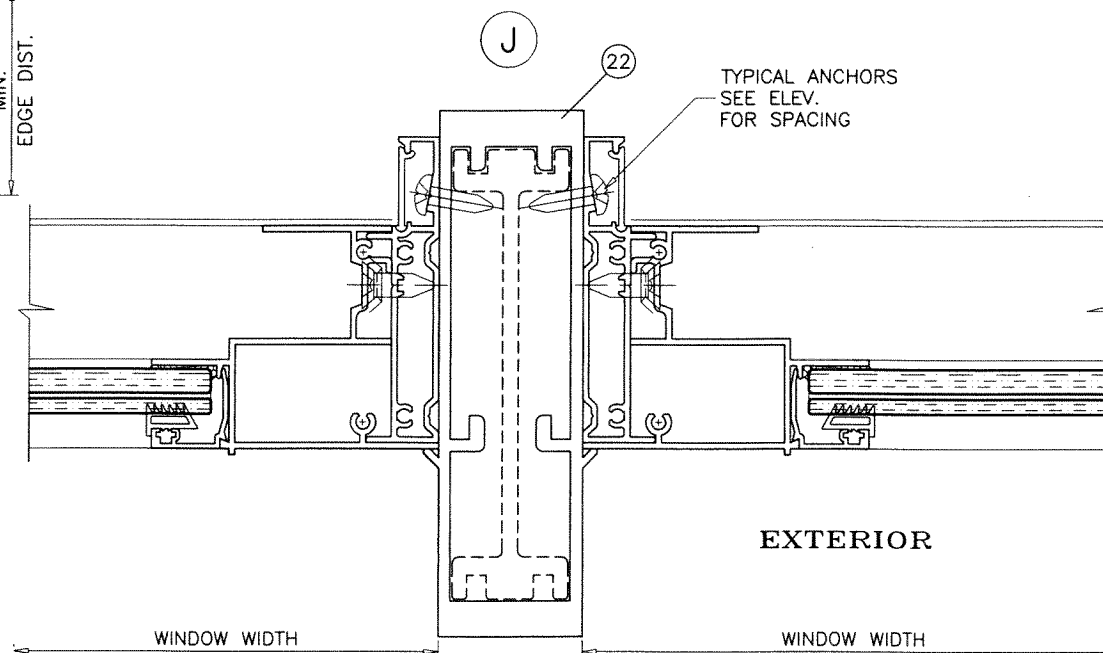
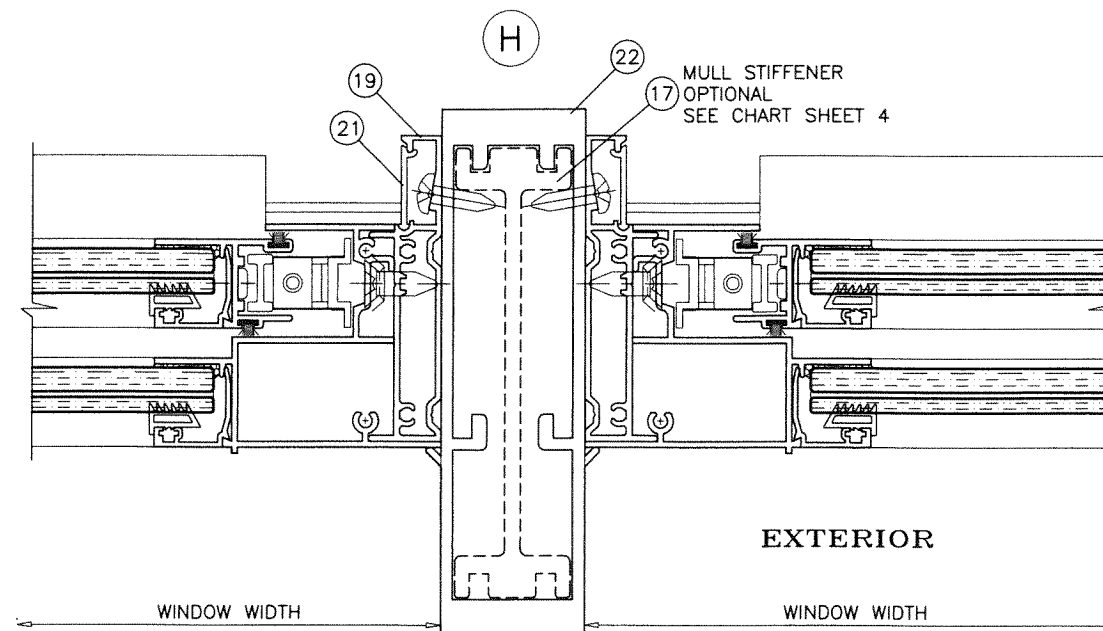
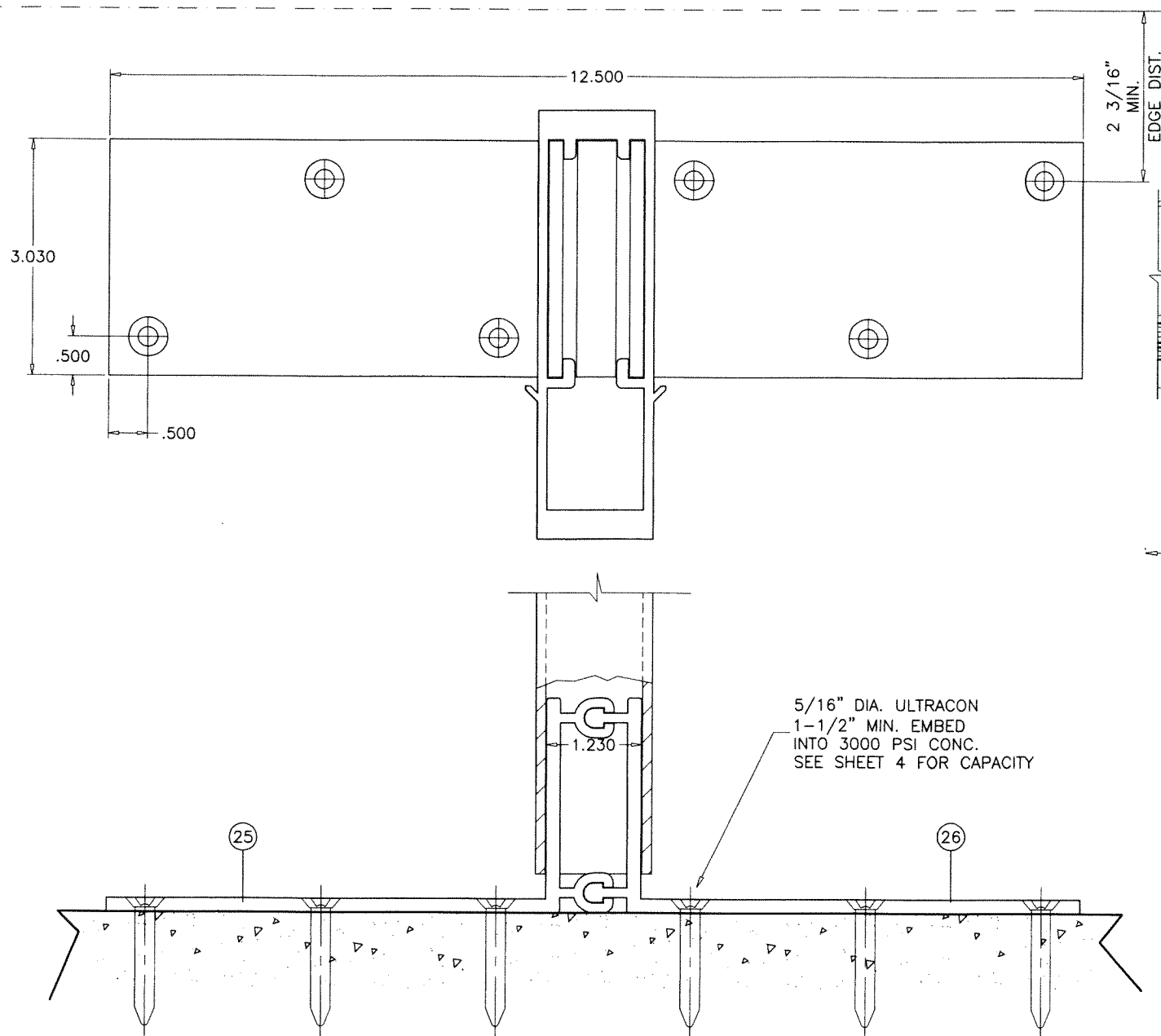
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 chk. by:

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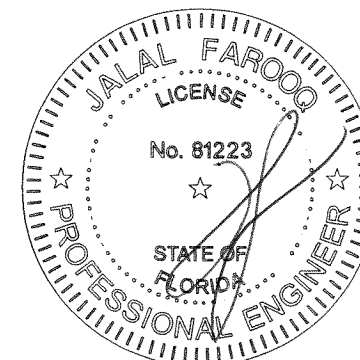
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drawing no.  
**W12-41**  
 sheet 7 of 11





**PRODUCT REVISED**  
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Miami-Dade Product Control



JUL 07 2023

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**af c**

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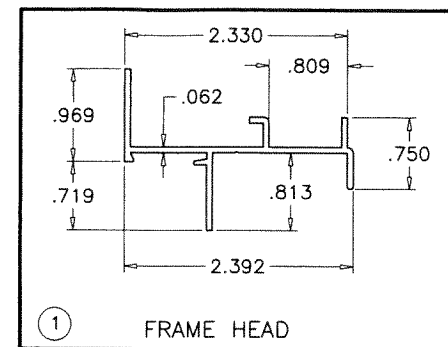
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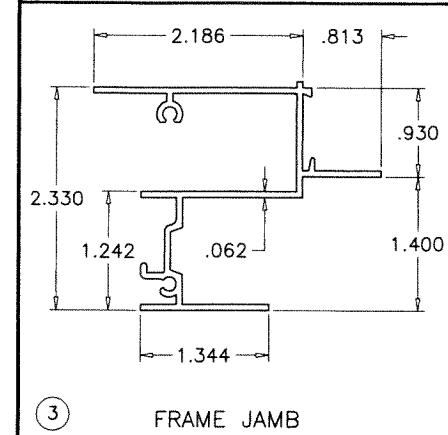
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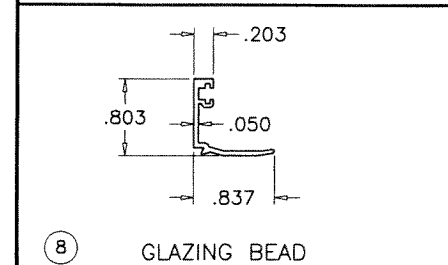
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sheet	8 of 11



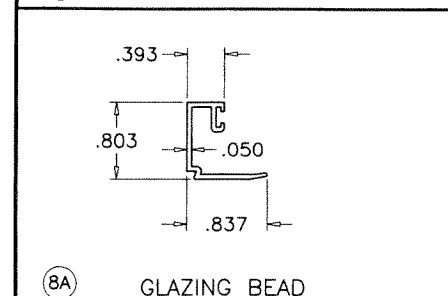
① FRAME HEAD



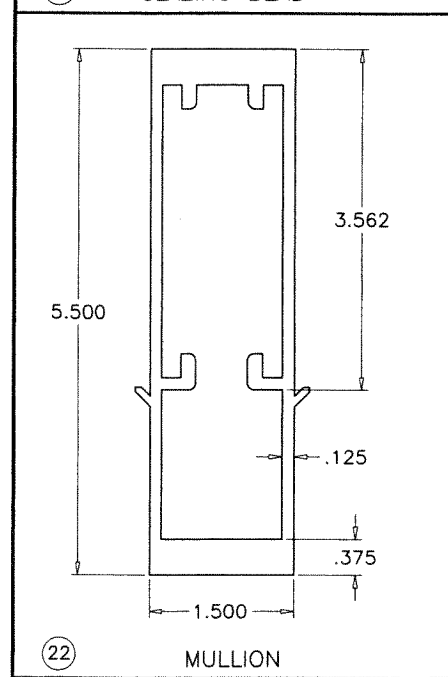
③ FRAME JAMB



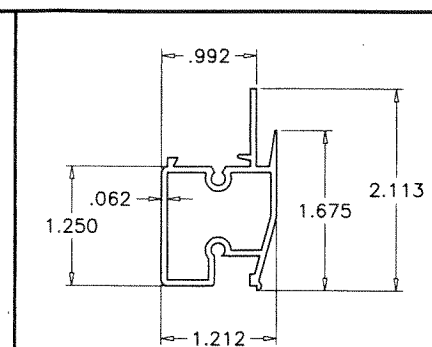
⑧ GLAZING BEAD



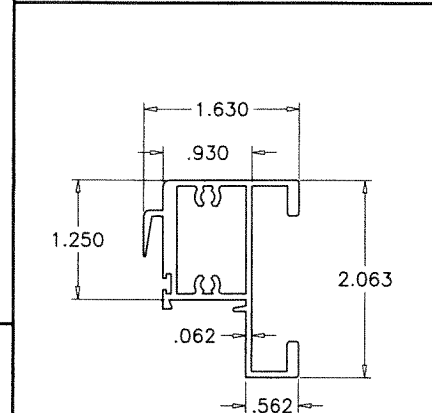
⑧A GLAZING BEAD



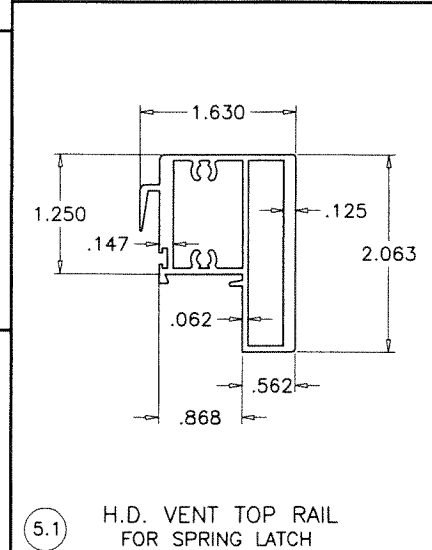
②② MULLION



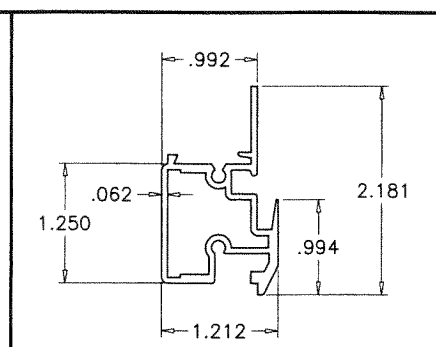
④ MEETING RAIL FOR SPRING LATCH



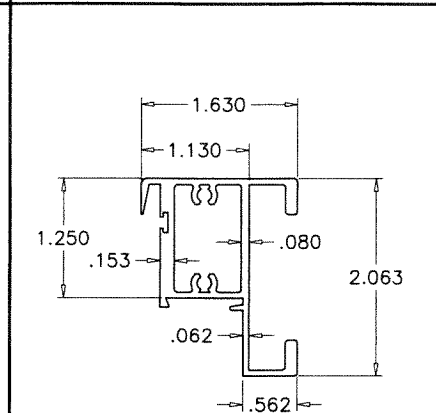
⑤ VENT TOP RAIL FOR SPRING LATCH



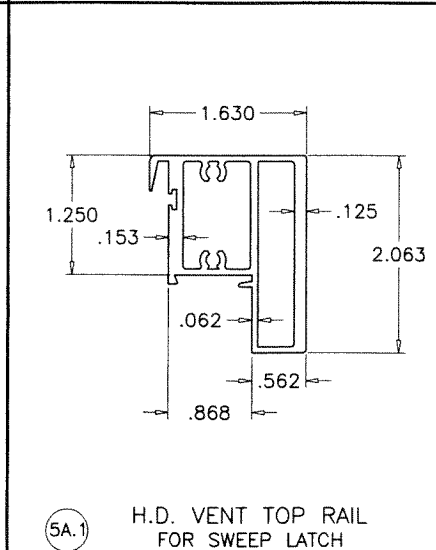
⑤.1 H.D. VENT TOP RAIL FOR SPRING LATCH



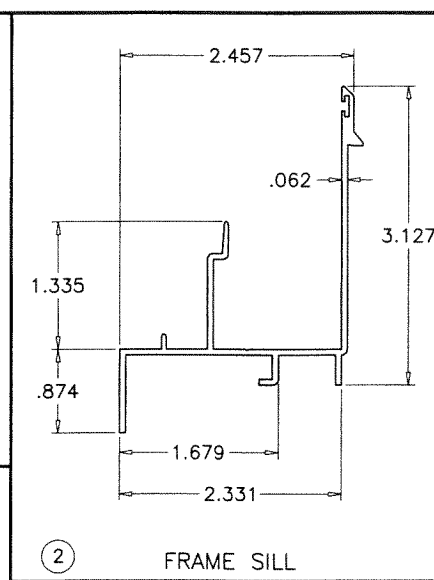
④A MEETING RAIL FOR SWEEP LATCH



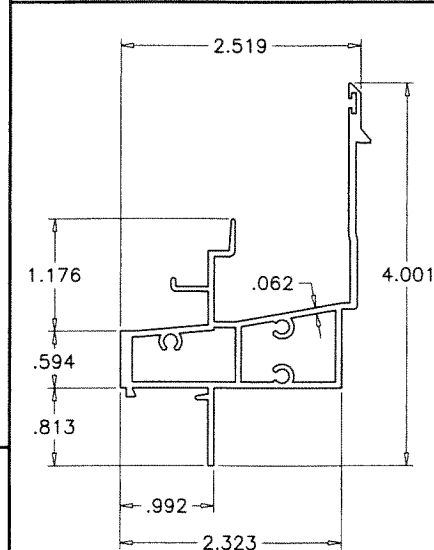
⑤A VENT TOP RAIL FOR SWEEP LATCH



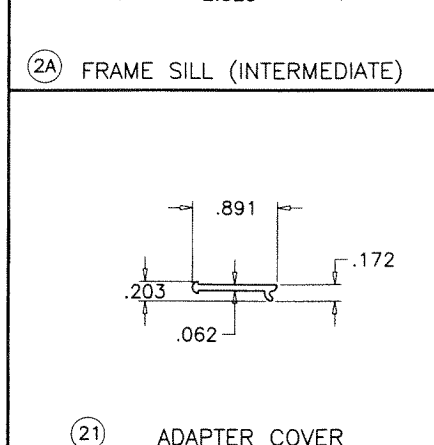
⑤A.1 H.D. VENT TOP RAIL FOR SWEEP LATCH



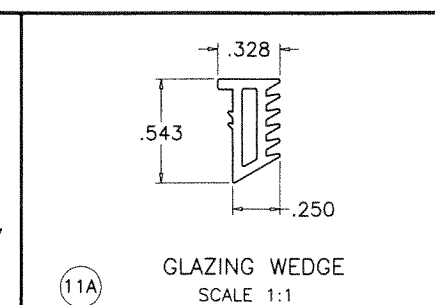
② FRAME SILL



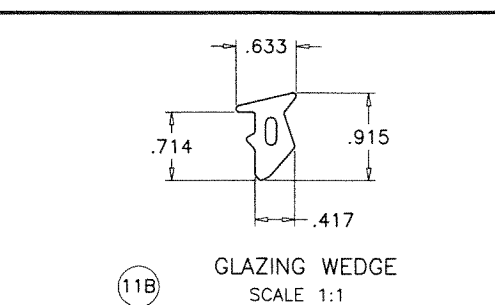
②A FRAME SILL (INTERMEDIATE)



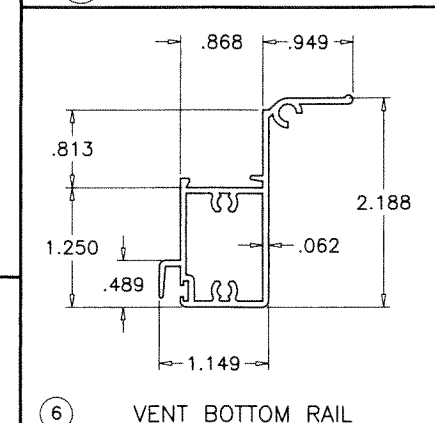
②① ADAPTER COVER



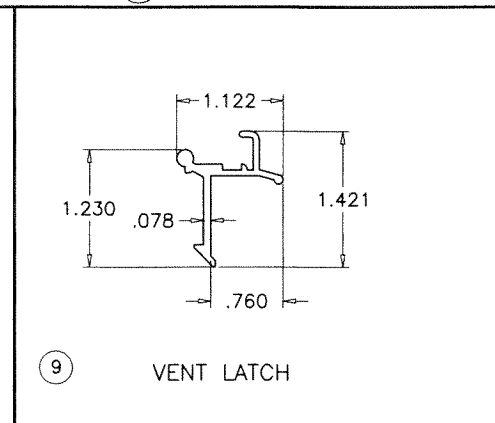
①①A GLAZING WEDGE SCALE 1:1



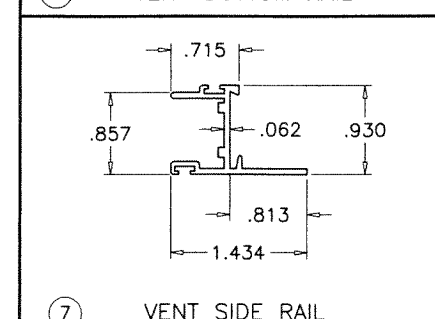
①①B GLAZING WEDGE SCALE 1:1



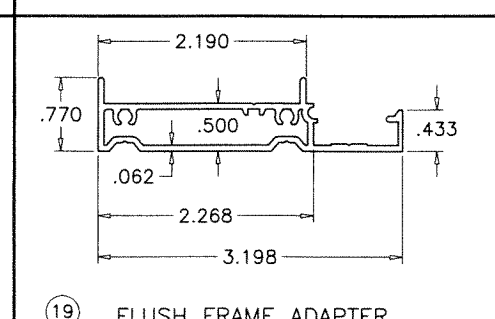
⑥ VENT BOTTOM RAIL



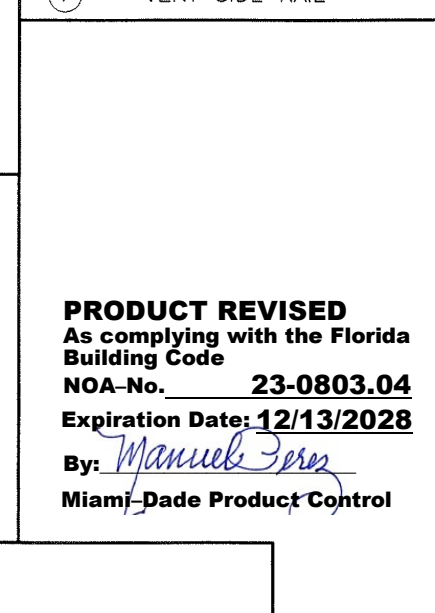
⑨ VENT LATCH



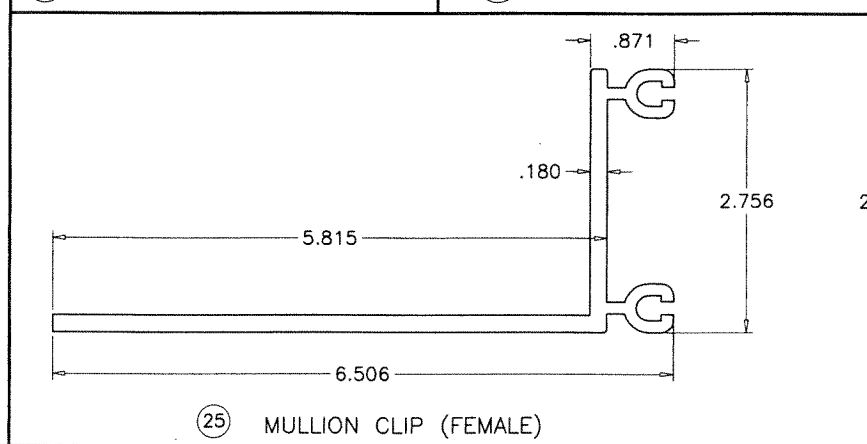
⑦ VENT SIDE RAIL



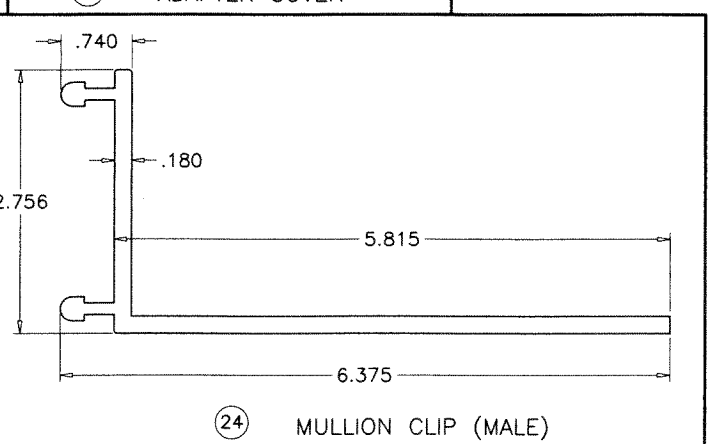
①⑨ FLUSH FRAME ADAPTER



①⑦ MULLION STIFFENER



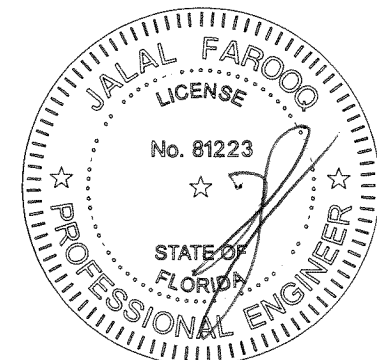
②⑤ MULLION CLIP (FEMALE)



②④ MULLION CLIP (MALE)

**PRODUCT REVISED**  
As complying with the Florida Building Code  
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Expiration Date: **12/13/2028**  
By: *Manuel Perez*  
Miami-Dade Product Control

JUL 07 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  
COMP-ANL\W12-41ESW

SERIES-1100WW ALUM SINGLE HUNG WINDOW (S.M.I.)  
**E.S. WINDOWS, LLC**  
3550 N.W. 49 STREET  
MIAMI, FL. 33142  
TEL. (305) 638-5151 FAX. (305) 638-5158

revisions:	no	date	by	description
	C	12.22.14		UPDATED TO 2014 FBC
	D	10.23.17		UPDATED TO 2017 FBC
	E	08.24.18		NO CHANGE THIS SHEET
	F	11.18.20		UPDATED TO 2020 FBC
	G	07.06.23		NO CHANGE THIS SHEET

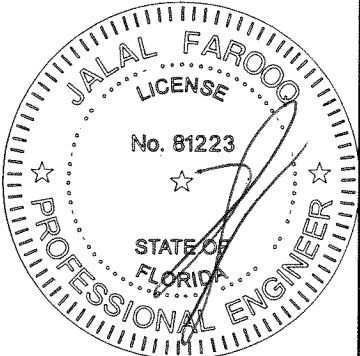
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drawing no. <b>W12-41</b>		sheet 9 of 11	

ITEM #	PART #	REQD.	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
1	ES1001	1	FRAME HEAD	6063-T6	-
2	ES1101	1	FRAME SILL	6063-T6	-
2A	ES1055	1	FRAME SILL (INTERMEDIATE)	6063-T6	-
3	ES1003	2	FRAME JAMB	6063-T6	-
4	ES1005	1	FIXED MTG. RAIL (FOR SPRING LATCH)	6063-T6	-
4A	ES1051	1	FIXED MTG. RAIL (FOR SWEEP LATCH)	6063-T6	-
5	ES2004	1	VENT TOP RAIL (FOR SPRING LATCH)	6063-T6	-
5.1	ES2004A	1	VENT TOP RAIL (FOR SPRING LATCH)	6063-T6	-
5A	ES1053	1	VENT TOP RAIL (FOR SWEEP LATCH)	6063-T6	-
5A.1	ES1053A	1	VENT TOP RAIL (FOR SWEEP LATCH)	6063-T6	-
6	ES1006	1	VENT BOTTOM RAIL	6063-T6	-
7	ES1007	2	VENT SIDE RAIL	6063-T5	-
8	ES1017	AS RQD.	GLAZING BEAD	6063-T5	-
8A	ES1102	AS RQD.	GLAZING BEAD	6063-T5	-
9	ES1009	2/VENT	SPRING LOADED VENT LATCH	6063-T5	AT 6" FROM ENDS
9A	-	2/VENT	SWEEP LATCH	ZAMAK	AT 6" FROM ENDS
9B	#8 X 1"	2/LATCH	LATCH INSTALLATION SCREWS	-	FH SMS
10	ES1012	1/LATCH	LATCH SPRING	ST. STEEL	-
11	27-425	AS REQD.	GLAZING GASKET	EPDM	DUROMETER 60±5 SHORE 'A'
11A	ES1010	AS REQD.	GLAZING WEDGE	SOFT PVC	DUROMETER 65±5 SHORE 'A'
11B	NP-200-G02	AS REQD.	GLAZING WEDGE	EPDM	DUROMETER 65±5 SHORE 'A'
12	#8 X 1"	20	FRAME & VENT ASSEMBLY SCREWS	CRS	PH SMS
13	ES1011	2/VENT	SASH CAM	CELCON	-
14	23211NG	AS REQD.	PILE W'STRIPPING WITH PLASTIC FIN	POLY PROPYLENE	-
15	Q300X190	AS REQD.	FRAME SILL W'STRIPPING	-	Q-LON2
16	SERIES 86	2/ VENT	BLOCK & TACKLE BALANCE		CALDWELL
17	ES1058	AS REQD.	MULLION STIFFENER	6063-T6	-
18	ES1013	2	SASH STOP	-	-
19	ES1056	AS REQD.	FLUSH FRAME ADAPTER	6063-T6	-
20	-	1	5/16" BOX SCREEN	-	OPTIONAL
21	ES5016	AS REQD.	ADAPTER COVER	6063-T5	-
22	ES1057	AS REQD.	MULLION	6063-T6	-
24	ES1059	AS REQD.	MULLION CLIP (MALE)	6063-T6	-
25	ES1060	AS REQD.	MULLION CLIP (FEMALE)	6063-T6	-
26	27-372	2/ LITE	SETTING BLOCK, 7/16" X 3/16" X 3-1/2" LONG	EPDM	DUROMETER 75±5 SHORE A
27	80-394	8/ LITE	SPACER, 1/32" X 1/2" X 4" LONG	EPDM	AT 6" FROM GLASS ENDS

SEALANT:

ALL JOINTS AND FRAME CONNECTIONS SEALED WITH SCHNEE MOREHEAD SEAM SEALER SM5504.

PRODUCT REVISED  
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By: Manuel Fern  
Miami-Dade Product Control



JUL 07 2023

**af c**

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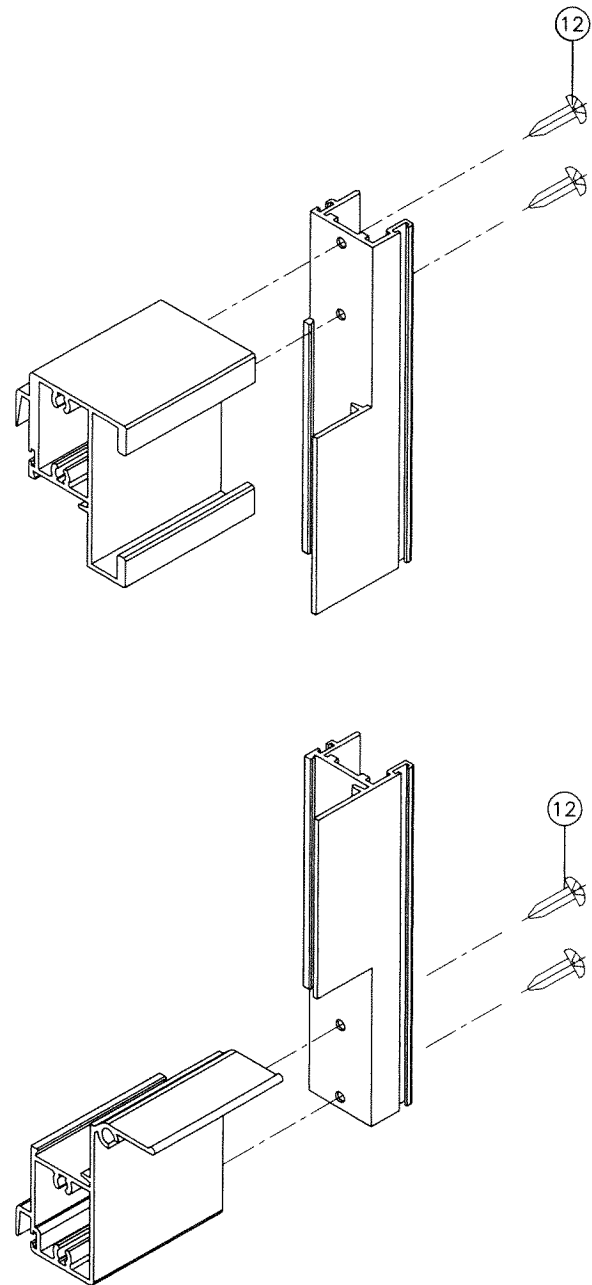
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chk. by:	

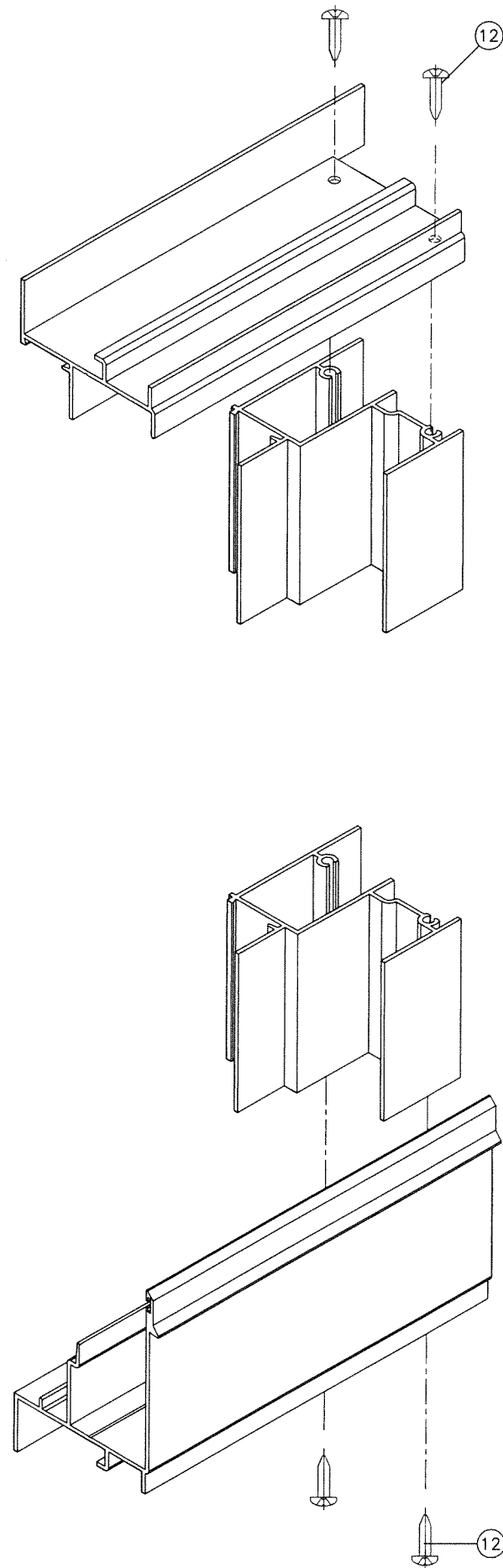
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sheet	10 of 11

COMP-ANL\W12-41ESW

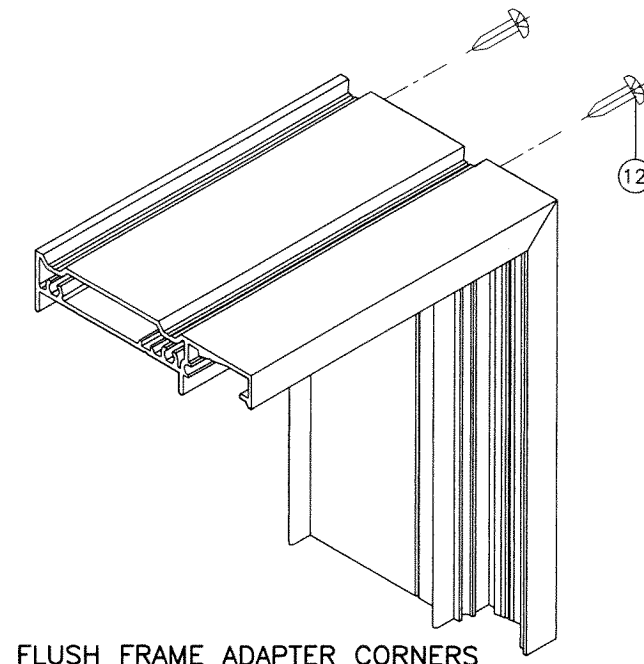




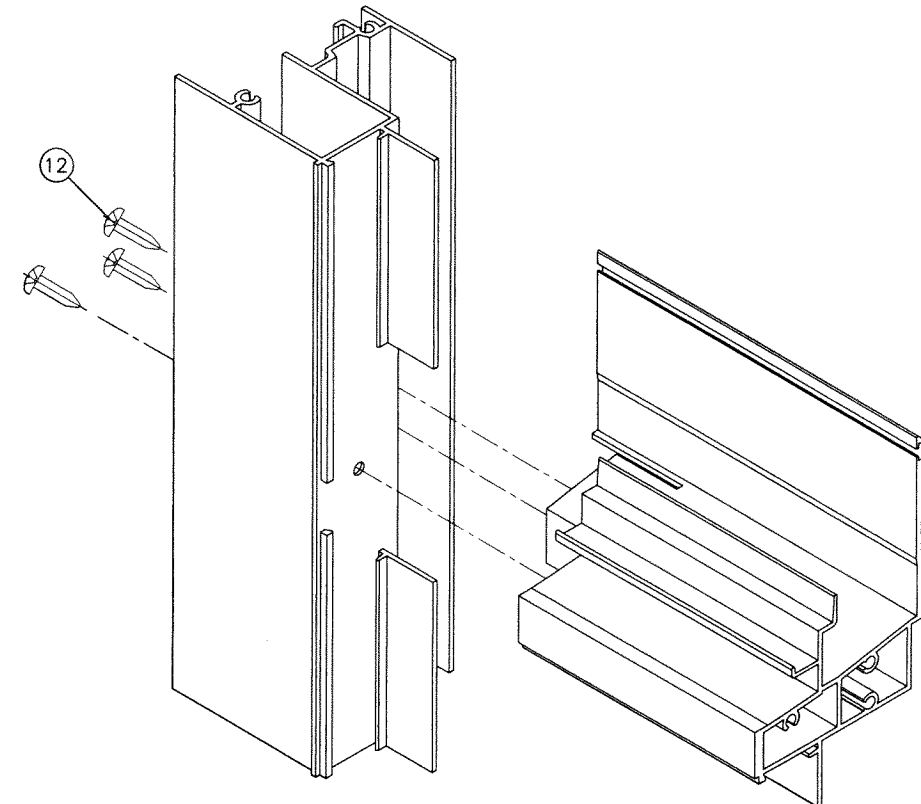
VENT TOP & BOTTOM CORNER



FRAME TOP & BOTTOM CORNERS



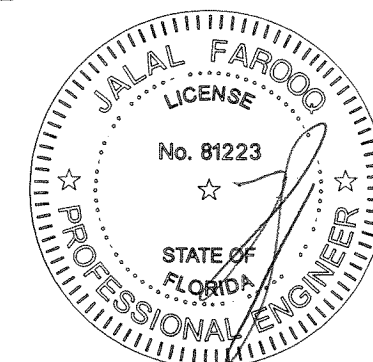
FLUSH FRAME ADAPTER CORNERS



INTERMEDIATE SILL CORNER

**PRODUCT REVISED**  
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Miami-Dade Product Control

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