



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

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

**Tecnoglass, LLC**  
**3550 NW 49 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 "PH-4400" Aluminum Single Hung Window – S.M.I.**

**APPROVAL DOCUMENT:** Drawing No. **W08-62**, titled "Series PH4400 Alum Single Hung Window (S.M.I.)", sheets 1, 1.1 and 2 through 9 of 9, dated 08/13/08, with revision **H** dated 09/20/23, prepared by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E., bearing the Miami-Dade County Product Control Renewal 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 S.A.**, 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.

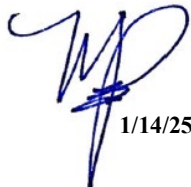
**ADVERTISEMENT:** The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

**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 **renews NOA No. 23-0928.09** and consists of this page 1, 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.**



  
 1/14/25

**NOA No. 24-1206.02**  
**Expiration Date: October 25, 2025**  
**Approval Date: January 23, 2025**  
 Page 1

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

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

**A. DRAWINGS**

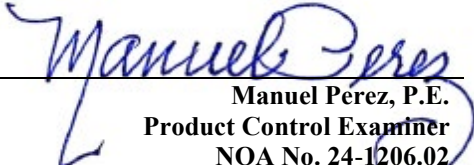
1. Manufacturer's die drawings and sections.  
*(Submitted under NOA No. 10-1118.01)*
2. Drawing No. **W08-62**, titled "Series PH4400 Alum Single Hung Window (S.M.I.)", sheets 1, 1.1 and 2 through 9 of 9, dated 08/13/08, with revision **H** dated 09/20/23, prepared by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E.  
*(Submitted under NOA No. 23-0928.09)*

**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) Small Missile Impact Test per FBC, TAS 201-94  
5) Cyclic Wind Pressure Loading per FBC, TAS 203-94  
6) Kinetic Energy Drop Load Test, (400 Ft. Lb.) per ANSI Z97.1  
along with marked-up drawings and installation diagram of Series PH4400 Aluminum Single Hung Window, prepared by Fenestration Testing Laboratory, Inc., Test Report No. **FTL-5505**, dated 03/20/08, signed and sealed by Carlos S. Rionda, P.E.  
*(Submitted under NOA No. 10-0426.11)*
2. Test reports on: 1) Small Missile Impact Test per FBC, TAS 201-94  
2) Cyclic Wind Pressure Loading per FBC, TAS 203-94  
3) Kinetic Energy Drop Load Test, (400 Ft. Lb.) per ANSI Z97.1  
along with marked-up drawings and installation diagram of Series PH4400 Aluminum Single Hung Window, prepared by Fenestration Testing Laboratory, Inc., Test Report No. **FTL-5504**, dated 01/14/08, signed and sealed by Carlos S. Rionda, P.E.  
*(Submitted under NOA No. 10-0426.11)*
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  
along with marked-up drawings and installation diagram of Series PH4400 Aluminum Single Hung Window, prepared by Fenestration Testing Laboratory, Inc., Test Report No. **FTL-5155**, dated 02/27/07, signed and sealed by Carlos S. Rionda, P.E.  
*(Submitted under NOA No. 10-0426.11)*

**C. CALCULATIONS**

1. Anchor verification and structural analysis complying with **FBC 6<sup>th</sup> Edition (2017)** dated 07/03/18, prepared by Al-Farooq Corporation, signed and sealed by Javad Ahmad, P.E.  
*(Submitted under NOA No. 16-0510.18)*

  
Manuel Perez, P.E.  
Product Control Examiner  
NOA No. 24-1206.02  
Expiration Date: October 25, 2025  
Approval Date: January 23, 2025

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

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

**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 22, 2023, issued by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E.  
*(Submitted under NOA No. 23-0928.09)*
2. Letter from Professional Engineer requesting a 1-year extension to allow time to perform verification test, dated September 22, 2023, signed by Jalal Farooq, P.E.  
*(Submitted under NOA No. 23-0928.09)*
3. Testing agreement letter dated September 27, 2023, between QAI Laboratories, Inc. (QAI) and E.S. Windows, LLC, issued by QAI and signed by Lusinda Delgado, Technical Report Writer.  
*(Submitted under NOA No. 23-0928.09)*
4. Proposal No. **06-0204** issued by BCCO to R.C. Aluminum Industries, Inc. dated 03/28/08, signed by Ishaq I. Chanda, P.E., Product Control Division.  
*(Submitted under NOA No. 10-0426.11)*

**G. OTHERS**

1. Notice of Acceptance No. **21-0405.20**, issued to Tecnoglass, LLC., for their Series “PH4400” Aluminum Single Hung Window – S.M.I.”, approved on 08/12/21 and expiring on 10/25/23.
2. This is a one-year approval, subjected to successful verification test, the final approval will be issued for a total of 5 years.

  
Manuel Perez, P.E.  
Product Control Examiner  
NOA No. 24-1206.02  
Expiration Date: October 25, 2025  
Approval Date: January 23, 2025

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**2. NEW EVIDENCE SUBMITTED**

**A. DRAWINGS**

1. None.

**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. **23-0717.30** issued to **Kuraray America, Inc.** for their “SentryGlas® (Clear and White) Glass Interlayers” dated 08/31/23, expiring on 07/04/28.
2. Notice of Acceptance No. **24-0205.08** issued to **Kuraray America, Inc.** for their “Trosifol® Ultraclear, Clear and Color PVB Glass Interlayers” dated 03/21/24, expiring on 07/08/29.

**F. STATEMENTS**

1. Statement letter of conformance, complying with **FBC 8<sup>th</sup> Edition (2023)** and of no financial interest, dated December 6, 2024, issued by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E.
2. Letter from Professional Engineer requesting a 1-year extension to allow time to perform verification test, dated December 6, 2024, signed by Jalal Farooq, P.E.
3. Testing agreement letter dated December 5, 2024, between IFET, Inc. and E.S. Windows, LLC, issued by IFET, Inc. and signed by Luis Macias, CEO - IFET, Inc.

**G. OTHERS**

1. Notice of Acceptance No. **23-0928.09**, issued to Tecnoglass, LLC., for their Series “PH-4400” Aluminum Single Hung Window – S.M.I.”, approved on 10/26/23 and expiring on 10/25/24.
2. This is a one-year approval, subjected to successful verification test, the final approval will be issued for a total of 5 years.

  
Manuel Perez, P.E.  
Product Control Examiner  
NOA No. 24-1206.02  
Expiration Date: October 25, 2025  
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THESE WINDOWS ARE RATED FOR SMALL MISSILE IMPACT.  
 MIAMI-DADE COUNTY APPROVED IMPACT RESISTANT SHUTTERS REQUIRED  
 FOR INSTALLATIONS UPTO 30 FT. OF GRADE.  
 SHUTTERS NOT REQUIRED FOR INSTALLATIONS ABOVE 30 FT. OF GRADE.

**SERIES PH4400  
 ALUMINUM SINGLE HUNG WINDOW**

APPROVAL APPLIES TO SINGLE UNITS OR SIDE BY SIDE COMBINATIONS  
 OF S.H. TO S.H. OR S.H./FIX. TO S.H./FIX. IN MODULES OF TWO OR  
 MORE WINDOWS USING MIAMI-DADE COUNTY APPROVED MULLIONS IN  
 BETWEEN.

FOR WINDOWS CAPACITY SEE CHARTS ON SHEETS 1 THRU 3.  
 FOR MULLION CAPACITY SEE CHART ON SHEET 4.  
 LOWER DESIGN PRESSURES FROM WINDOW CAPACITY CHART OR  
 MULLION CAPACITY CHART 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.

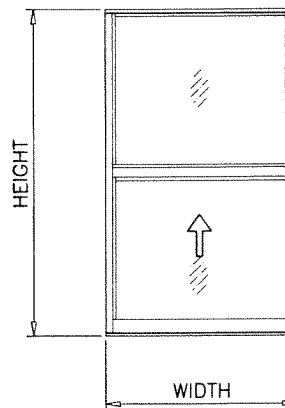
A LOAD DURATION INCREASE IS USED IN DESIGN OF ANCHORS INTO WOOD ONLY.  
 ALL SHIMS TO BE HIGH IMPACT, NON-METALLIC AND NON-COMPRESSIBLE.

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.

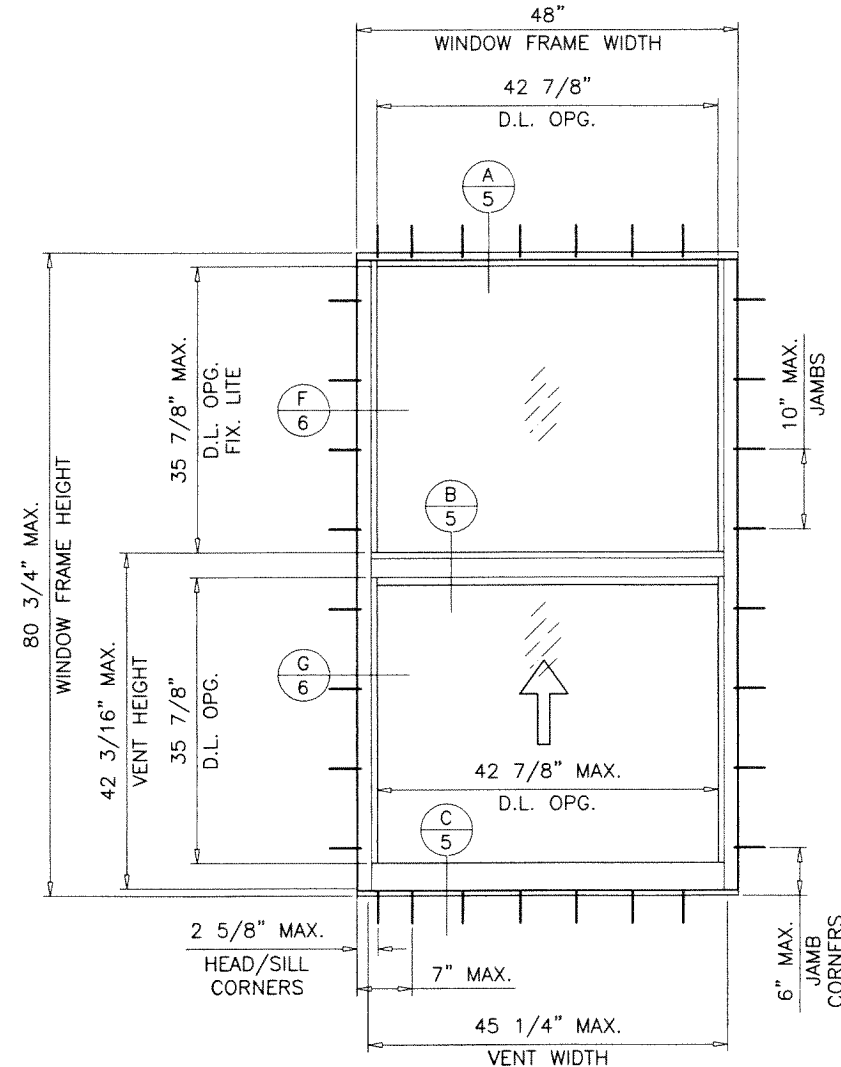
DESIGN LOADS SHOWN ARE BASED ON 'ALLOWABLE STRESS DESIGN (ASD)'.

EQUAL LITES SINGLE HUNG WINDOWS			
DESIGN LOAD CAPACITY - PSF			
WINDOW DIMS.		INSUL. LAM. GLASS	
WIDTH	HEIGHT	EXT.(+)	INT.(-)
36"	48"	120.0	120.0
42"		120.0	120.0
48"		105.0	105.0
54"		88.6	88.6
36"	54"	120.0	120.0
42"		120.0	120.0
48"		97.9	97.9
54"		82.0	82.0
36"	60"	120.0	120.0
42"		116.3	116.3
48"		92.6	92.6
54"		76.9	76.9
36"	66"	120.0	120.0
42"		112.9	112.9
48"		88.7	88.7
54"		73.0	73.0
36"	72"	120.0	120.0
42"		111.1	111.1
48"		85.9	85.9
54"		73.0	73.0
36"	78"	120.0	120.0
42"		110.7	110.7
48"		84.0	84.0
54"		73.0	73.0
36"	84"	120.0	120.0
42"		110.7	110.7
48"		84.0	84.0
54"		73.0	73.0
36"	90"	120.0	120.0
42"		110.7	110.7
48"		84.0	84.0
54"		73.0	73.0
36"	96"	120.0	120.0
42"		110.7	110.7
48"		84.0	84.0
54"		73.0	73.0
36"	102"	120.0	120.0
42"		110.7	110.7
48"		84.0	84.0
54"		73.0	73.0



EQUAL LITES  
 SINGLE HUNG WINDOWS  
**PRODUCT RENEWED**  
 as complying with the Florida  
 Building Code  
**NOA-No. 24-1206.02**  
**Expiration Date: 10/25/2025**  
 By: *Manuel Perez*  
**Miami-Dade Product Control**

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



**TYPICAL ELEVATION**  
 EQUAL LITES  
 S.H. WINDOWS

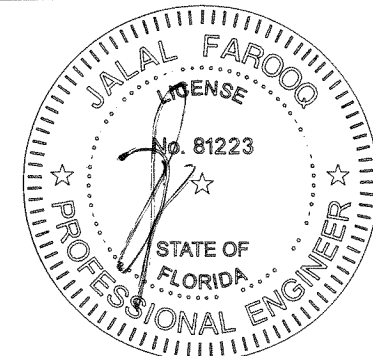
**DAYLITE OPENINGS:**

DLO WIDTH = FRAME WIDTH - 5.125 (FIX. LITE)  
 DLO WIDTH = FRAME WIDTH - 5.125 (VENT)  
 DLO HEIGHT = VENT HEIGHT - 6.313  
 VENT WIDTH = FRAME WIDTH - 2.75

PRODUCT COMPLIES WITH REQUIREMENTS OF ANSI Z97.1  
 WITH GLASS TYPE 'A' ONLY.  
 SAFEGUARD REQUIREMENTS TO BE VERIFIED.

**PRODUCT REVISED**  
 As complying with the Florida  
 Building Code  
**NOA-No. 23-0928.09**  
**Expiration Date: 10/25/2024**  
 By: *Manuel Perez*  
**Miami-Dade Product Control**

INSUL. LAM. GLASS  
 SMALL MISSILE IMPACT



SEP 22 2023

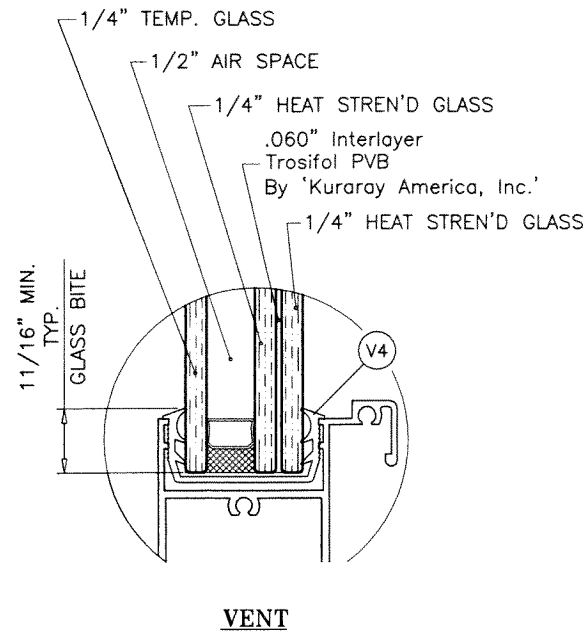
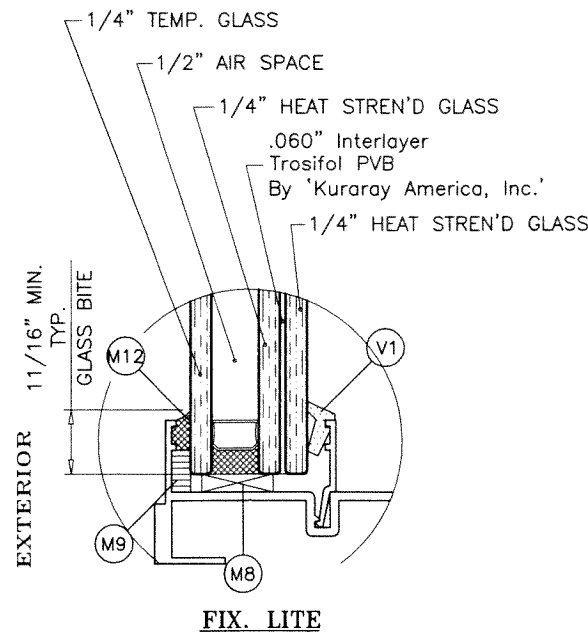
**af c**  
**AL-FAROOQ CORPORATION**  
 ENGINEERS & PRODUCT DEVELOPMENT  
 9360 SUNSET DRIVE, SUITE 220  
 MIAMI, FLORIDA 33173 (C.A.N. 3538)  
 TEL. (305) 264-8100 FAX. (305) 262-6978  
 COMP-ANL\W08-62RC

SERIES PH4400 ALUM SINGLE HUNG WINDOW (S.M.I.)  
**TECNOGLASS, LLC**  
 3550 N.W. 49 STREET  
 MIAMI, FL. 33142  
 TEL. (305) 638-5151 FAX. (305) 638-5158

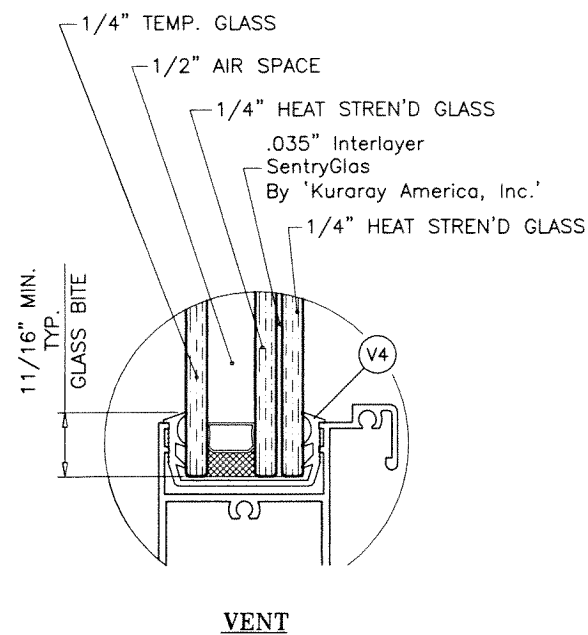
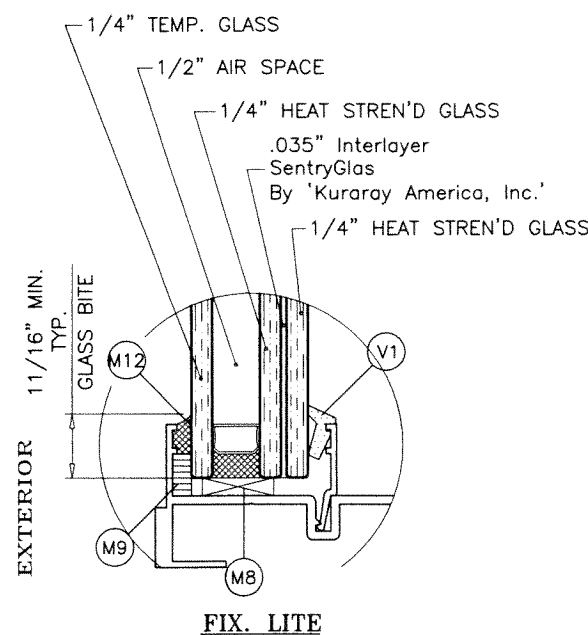
no.	date	by	description
E	07.02.18	REV. PER COMMENTS	
F	09.25.18	NO CHANGE THIS SHEET	
G	11.18.20	UPDATED TO 2020 FBC	
H	09.20.23	UPDATED TO 2023 FBC	

revisions:  
 date: 08-13-08  
 scale: 1/2" = 1'-0"  
 dr. by: TARIQ  
 chk. by:

drawing no.  
**W08-62**  
 sheet 1 of 9



**GLASS TYPE 'A'**



**GLASS TYPE 'B'**

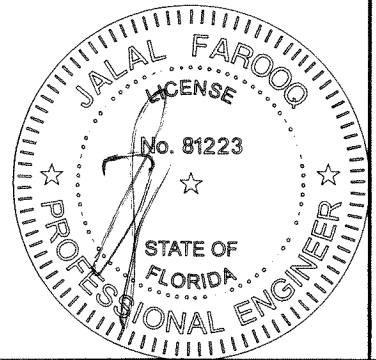
**GLAZING OPTIONS**  
1-1/4" OVERALL LAM. INSUL. GLASS

**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 982

**PRODUCT RENEWED**  
as complying with the Florida  
Building Code  
NOA-No. **24-1206.02**  
Expiration Date: **10/25/2025**  
By: *Manuel Ferrer*  
Miami-Dade Product Control

**PRODUCT REVISED**  
As complying with the Florida  
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NOA-No. **23-0928.09**  
Expiration Date: **10/25/2024**  
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Miami-Dade Product Control

**SEP 22 2023**



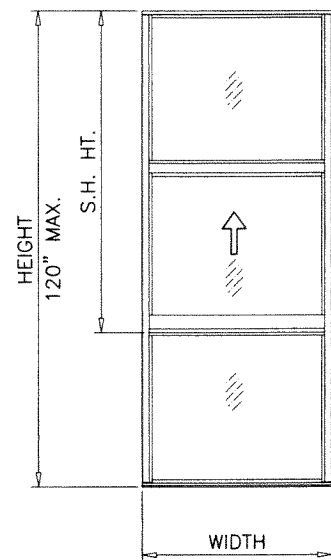
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SERIES PH4400 ALUM SINGLE HUNG WINDOW (S.M.I.)  
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scale: 1/2" = 1"  
dr. by: TARIQ  
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drawing no.  
**W08-62**  
sheet 1.1 of 9

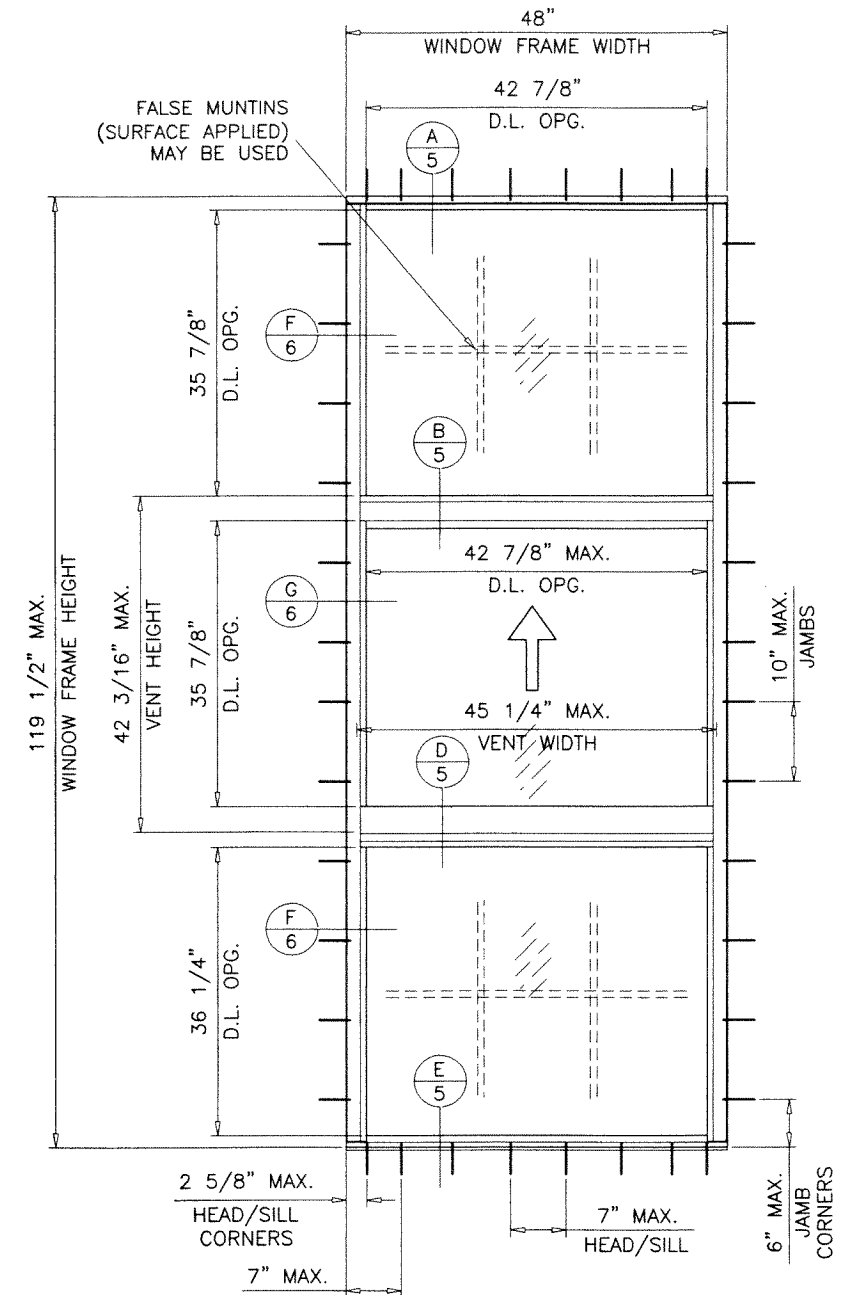
EQUAL LITES SINGLE HUNG/FIXED WINDOWS				
DESIGN LOAD CAPACITY - PSF				
WINDOW DIMS.			INSUL. LAM. GLASS	
WIDTH	S.H. HT.	HEIGHT	EXT.(+)	INT.(-)
36"			120.0	120.0
42"			120.0	120.0
48"	48"	72"	105.0	105.0
54"			88.6	88.6
36"			120.0	120.0
42"	54"	81"	120.0	120.0
48"			97.9	97.9
54"			82.0	82.0
36"			120.0	120.0
42"	60"	90"	116.3	116.3
48"			92.6	92.6
54"			76.9	76.9
36"			120.0	120.0
42"	66"	99"	112.9	112.9
48"			88.7	88.7
54"			73.0	73.0
36"			120.0	120.0
42"	72"	108"	111.1	111.1
48"			85.9	85.9
36"			120.0	120.0
42"	78"	117"	110.7	110.7
48"			84.0	84.0
36"			120.0	120.0
42"	80"	120"	110.7	110.7
48"			84.0	84.0



EQUAL LITES  
SINGLE HUNG/FIXED WINDOWS

NOTE:  
FOR ANSI Z97.1 COMPLIANCE LIMIT  
MAX. WIDTHS TO 48".

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



TYPICAL ELEVATION  
EQUAL LITES  
S.H./FIX. WDW.

**DAYLITE OPENINGS:**

DLO WIDTH = FRAME WIDTH - 5.125 (FIX. LITE)  
DLO WIDTH = FRAME WIDTH - 5.125 (VENT)

DLO HEIGHT = VENT HEIGHT - 6.313

VENT WIDTH = FRAME WIDTH - 2.75

**PRODUCT RENEWED**  
as complying with the Florida  
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NOA-No. **24-1206.02**

Expiration Date: **10/25/2025**

By: *Manuel Perez*  
Miami-Dade Product Control

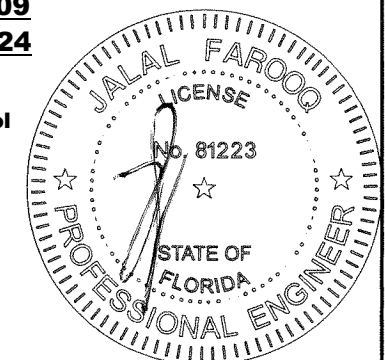
**PRODUCT REVISED**  
As complying with the Florida  
Building Code

NOA-No. **23-0928.09**

Expiration Date: **10/25/2024**

By: *Manuel Perez*  
Miami-Dade Product Control

SEP 22 2023



**af c**  
**AL-FAROOQ CORPORATION**  
ENGINEERS & PRODUCT DEVELOPMENT  
9360 SUNSET DRIVE, SUITE 220  
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SERIES PH4400 ALUM SINGLE HUNG WINDOW (S.M.I.)  
**TECNOGLASS, LLC**  
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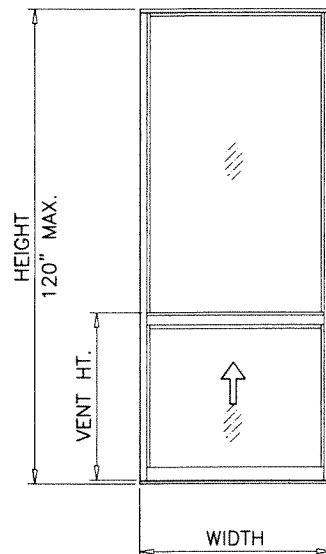
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H	09.20.23	NO CHANGE	THIS SHEET

date: 08-13-08  
scale: 1/2"=1'-0"  
dr. by: TARIQ  
chk. by:

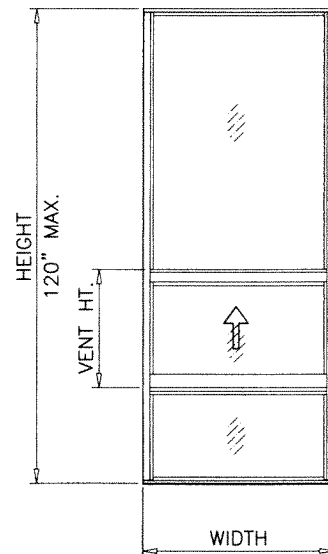
drawing no.  
**W08-62**

sheet 2 of 9

UNEQUAL LITES SINGLE HUNG WINDOWS									
UNEQUAL LITES SINGLE HUNG/FIXED WINDOWS									
DESIGN LOAD CAPACITY - PSF									
INSUL. LAM. GLASS									
WINDOW DIMS.		42-3/16" VENT HT.		36-3/16" VENT HT.		30-3/16" VENT HT.		24-3/16" VENT HT.	
WIDTH	HEIGHT	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)
36"	84"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		110.7	110.7	111.6	111.6	115.3	115.3	120.0	120.0
48"		83.3	83.3	85.4	85.4	89.3	89.3	95.5	95.5
54"		-	-	68.1	68.1	71.7	71.7	76.9	76.9
36"	90"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		110.7	110.7	111.6	111.6	115.3	115.3	120.0	120.0
48"		83.3	83.3	85.4	85.4	89.3	89.3	95.5	95.5
54"		-	-	68.1	68.1	71.7	71.7	76.9	76.9
36"	96"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		110.7	110.7	111.6	111.6	115.3	115.3	120.0	120.0
48"		83.3	83.3	85.4	85.4	89.3	89.3	95.5	95.5
54"		-	-	68.1	68.1	71.7	71.7	-	-
36"	102"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		110.7	110.7	111.6	111.6	115.3	115.3	120.0	120.0
48"		83.3	83.3	85.4	85.4	89.3	89.3	95.5	95.5
54"		-	-	68.1	68.1	-	-	-	-
36"	108"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		110.7	110.7	111.6	111.6	115.3	115.3	119.6	119.6
48"		83.3	83.3	85.4	85.4	89.3	89.3	-	-
54"		-	-	-	-	-	-	-	-
36"	114"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		110.7	110.7	111.6	111.6	115.3	115.3	-	-
48"		83.3	83.3	85.4	85.4	-	-	-	-
54"		-	-	-	-	-	-	-	-
36"	120"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		110.7	110.7	111.6	111.6	-	-	-	-
48"		83.3	83.3	-	-	-	-	-	-
54"		-	-	-	-	-	-	-	-

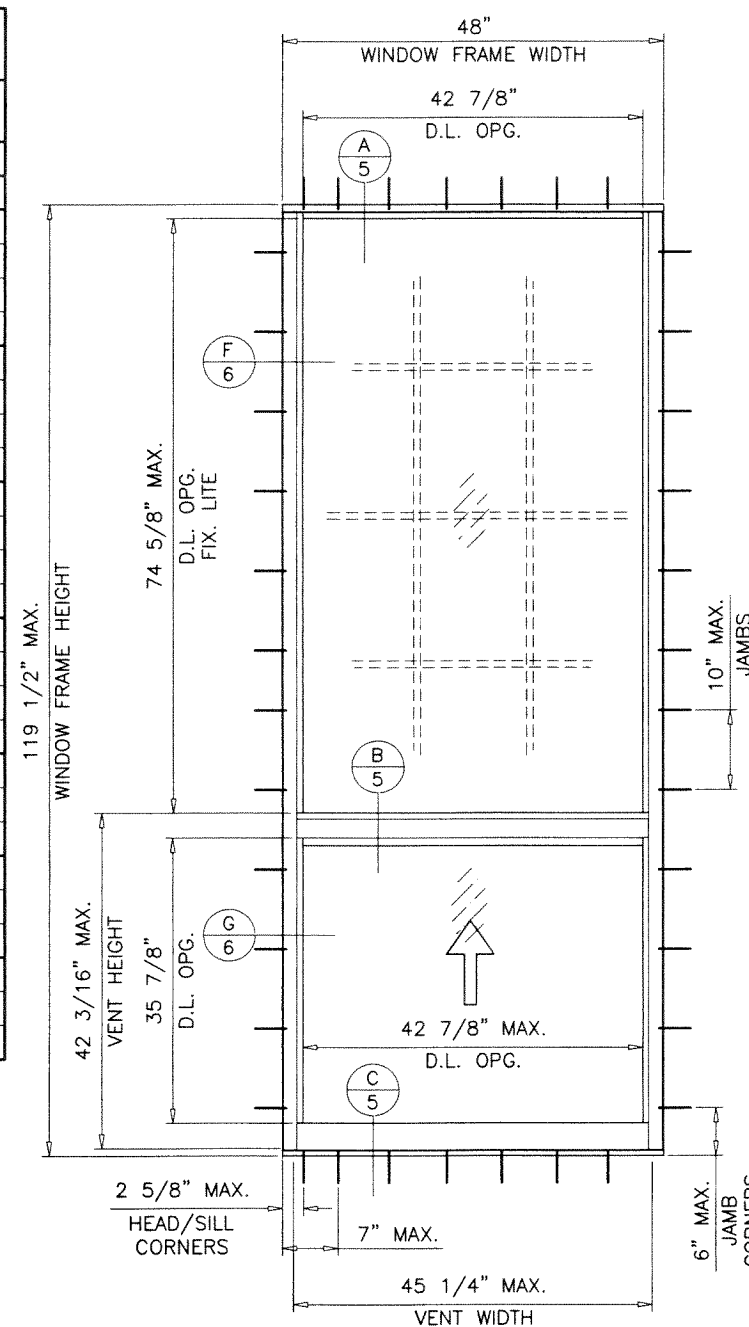


UNEQUAL LITES (ORIEL)  
SINGLE HUNG WINDOWS

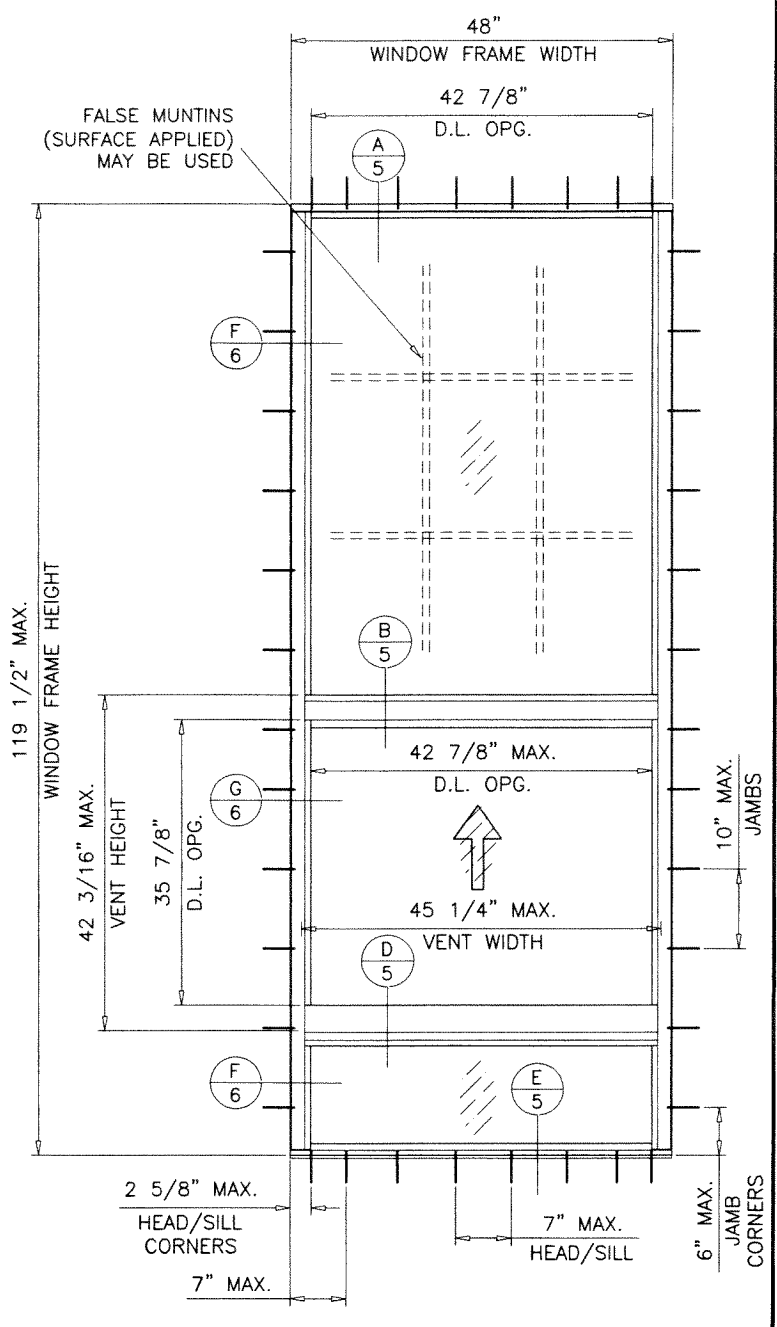


UNEQUAL LITES (ORIEL)  
SINGLE HUNG/FIXED WINDOWS

NOTE:  
FOR ANSI Z97.1 COMPLIANCE LIMIT  
MAX. WIDTHS TO 48".



TYPICAL ELEVATION  
UNEQUAL LITES (ORIEL TYPE)  
S.H. WINDOWS

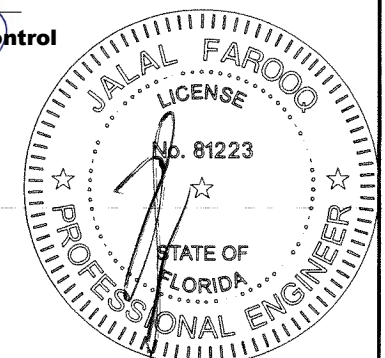


TYPICAL ELEVATION  
UNEQUAL LITES  
S.H./FIX. WDW.

**PRODUCT RENEWED**  
as complying with the Florida  
Building Code  
NOA-No. **24-1206.02**  
Expiration Date: **10/25/2025**  
By: *Manuel Perez*  
Miami-Dade Product Control

**DAYLITE OPENINGS:**  
DLO WIDTH = FRAME WIDTH - 5.125 (FIX. LITE)  
DLO WIDTH = FRAME WIDTH - 5.125 (VENT)  
DLO HEIGHT = VENT HEIGHT - 6.313  
VENT WIDTH = FRAME WIDTH - 2.75

**PRODUCT REVISED**  
As complying with the Florida  
Building Code  
NOA-No. **23-0928.09**  
Expiration Date: **10/25/2024**  
By: *Manuel Perez*  
Miami-Dade Product Control



SEP 22 2023

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

**AL-FAROOQ CORPORATION**  
ENGINEERS & PRODUCT DEVELOPMENT  
9360 SUNSET DRIVE, SUITE 220  
MIAMI, FLORIDA 33173  
TEL. (305) 264-8100 FAX. (305) 262-6978  
COMP-ANL\W08-62RC

SERIES PH4400 ALUM SINGLE HUNG WINDOW (S.M.I.)  
**TECNOGLASS, LLC**  
3550 N.W. 49 STREET  
MIAMI, FL. 33142  
TEL. (305) 638-5151 FAX. (305) 638-5158

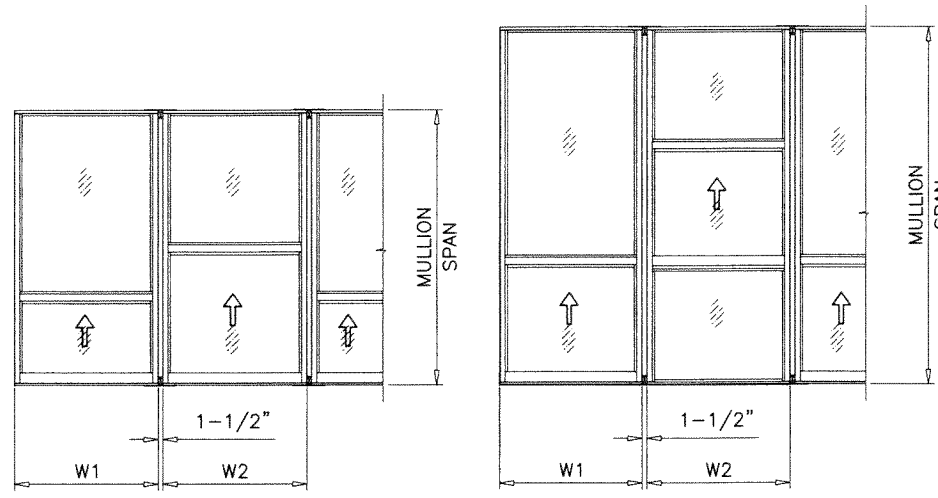
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E	07.02.18	REV. PER PER COMMENTS
F	09.25.18	NO CHANGE THIS SHEET
G	11.18.20	UPDATED TO 2020 FBC
H	09.20.23	NO CHANGE THIS SHEET

date: 08-13-08  
scale: 1/2" = 1'-0"  
dr. by: TARIQ  
chk. by:

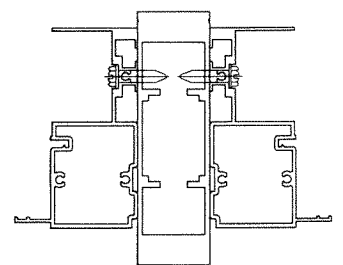
drawing no.  
**W08-62**  
sheet 3 of 9



MULLION CAPACITY CHART - PSF			
WINDOW DIMS.		STD. MULLION	
WIDTH (W)	MULL SPAN	EXT.(+)	INT.(-)
37-1/2"	78"	120.0	120.0
43-1/2"		120.0	120.0
49-1/2"		120.0	120.0
54"		120.0	120.0
37-1/2"	84"	120.0	120.0
43-1/2"		120.0	120.0
49-1/2"		120.0	120.0
54"		120.0	120.0
37-1/2"	90"	120.0	120.0
43-1/2"		120.0	120.0
49-1/2"		120.0	120.0
54"		120.0	120.0
37-1/2"	96"	120.0	120.0
43-1/2"		120.0	120.0
49-1/2"		120.0	120.0
54"		120.0	120.0
37-1/2"	102"	120.0	120.0
43-1/2"		120.0	120.0
49-1/2"		120.0	120.0
54"		120.0	120.0
37-1/2"	108"	120.0	120.0
43-1/2"		120.0	120.0
49-1/2"		120.0	120.0
54"		118.4	118.4
37-1/2"	114"	120.0	120.0
43-1/2"		120.0	120.0
49-1/2"		120.0	120.0
54"		120.0	120.0
37-1/2"	120"	120.0	120.0
43-1/2"		120.0	120.0
49-1/2"		120.0	120.0
54"		120.0	120.0



$$\text{WIDTH (W)} = \frac{W1 + W2}{2} + 1-1/2"$$



STD. MULLION

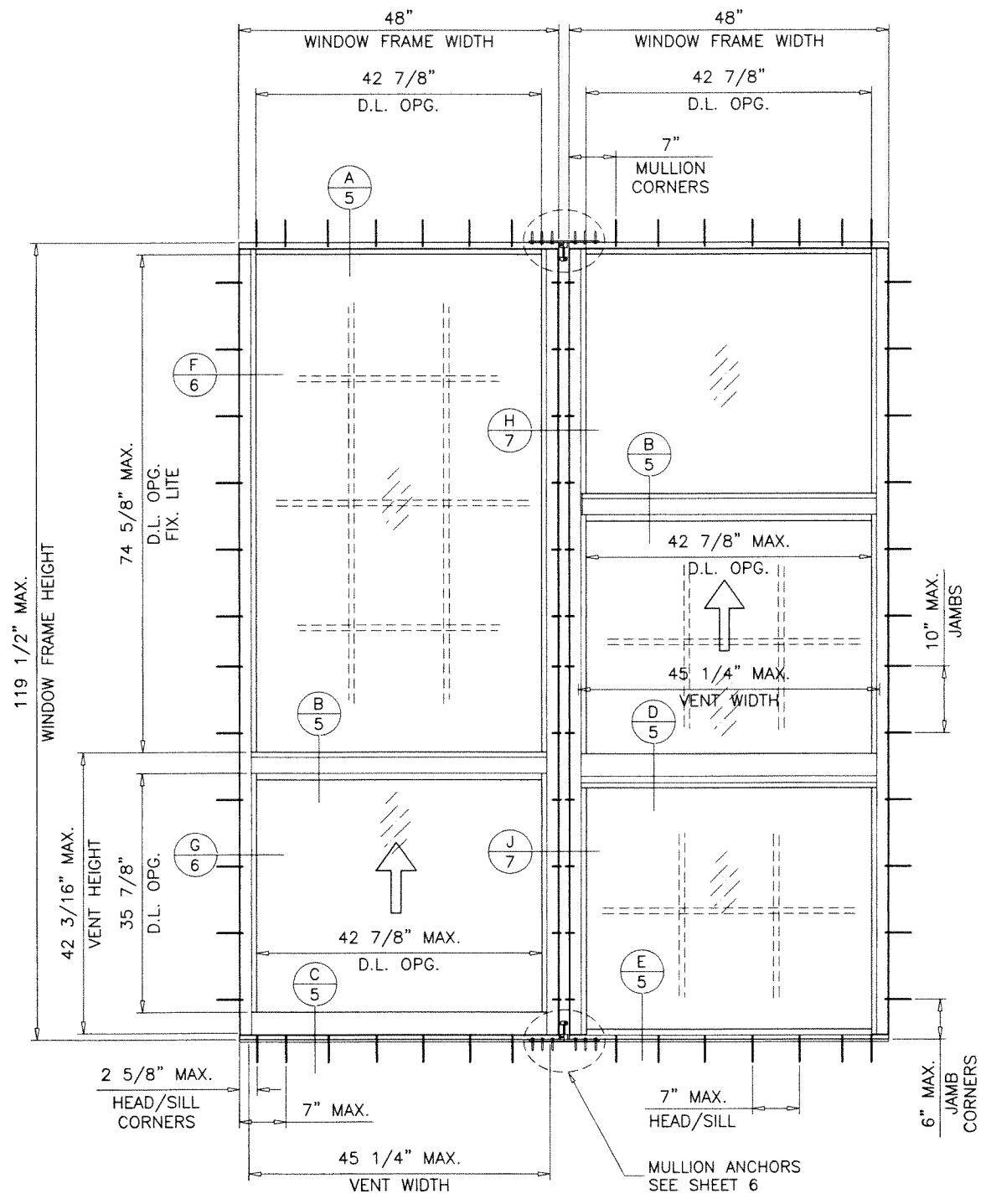
Ix	IN <sup>4</sup>	Sx	IN <sup>3</sup>
	16.8106		6.3410

REFER TO SHEET 1 THRU 3 TO OBTAIN CAPACITY OF EQUAL LITE AND UNEQUAL LITES SINGLE HUNG WINDOWS AND SINGLE HUNG/FIXED WINDOWS

REFER TO CHARTS ABOVE TO OBTAIN MULLION CAPACITY.

USE LOWEST VALUES OF WINDOW CAPACITY CHARTS OR MULLION CAPACITY CHART.

NOTE:  
FOR ANSI Z97.1 COMPLIANCE LIMIT  
MAX. WIDTHS TO 48".

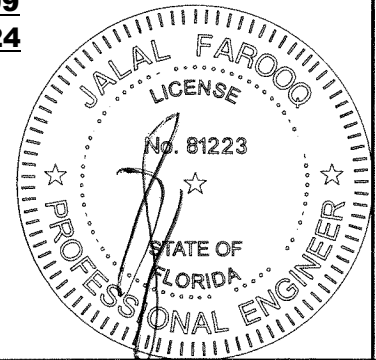


TYPICAL ELEVATION  
TESTED UNIT

**PRODUCT RENEWED**  
as complying with the Florida  
Building Code  
NOA-No. **24-1206.02**  
Expiration Date: **10/25/2025**  
By: *Manuel Perez*  
Miami-Dade Product Control

**PRODUCT REVISED**  
As complying with the Florida  
Building Code  
NOA-No. **23-0928.09**  
Expiration Date: **10/25/2024**  
By: *Manuel Perez*  
Miami-Dade Product Control

SEP 22 2023



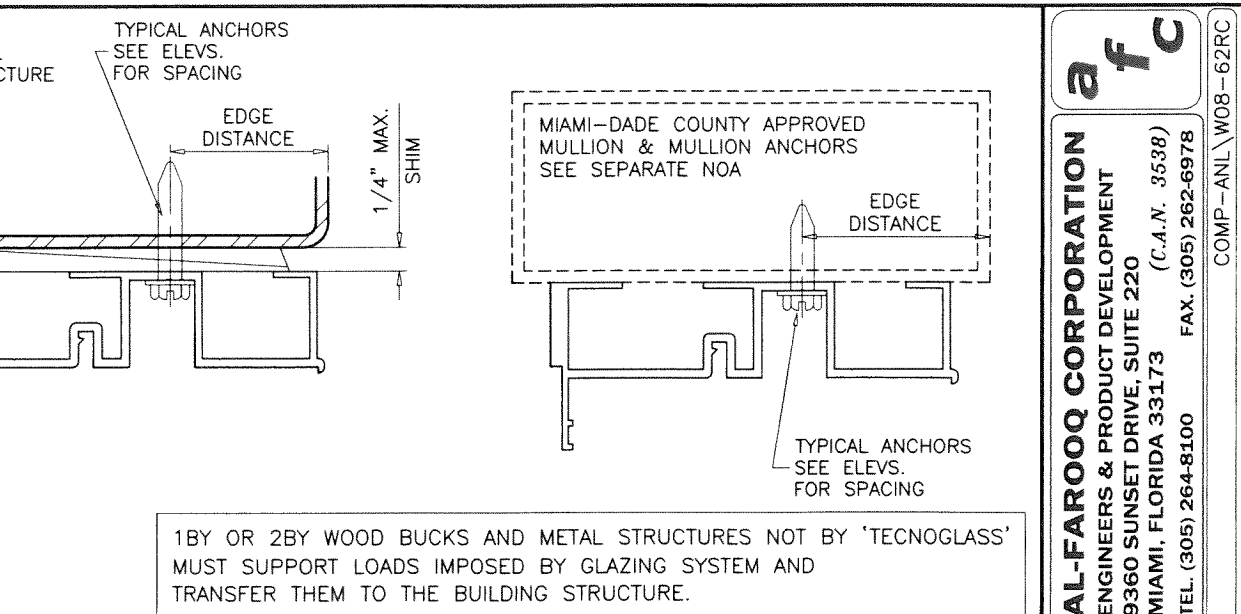
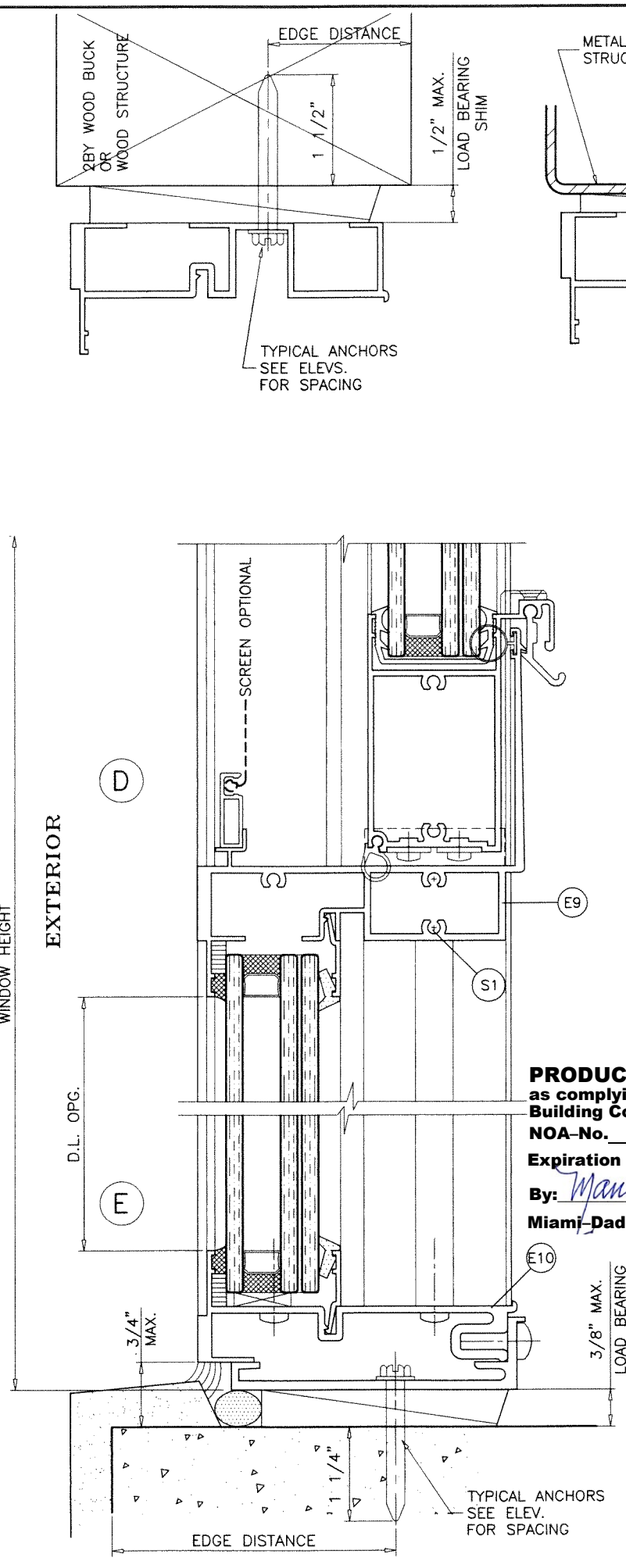
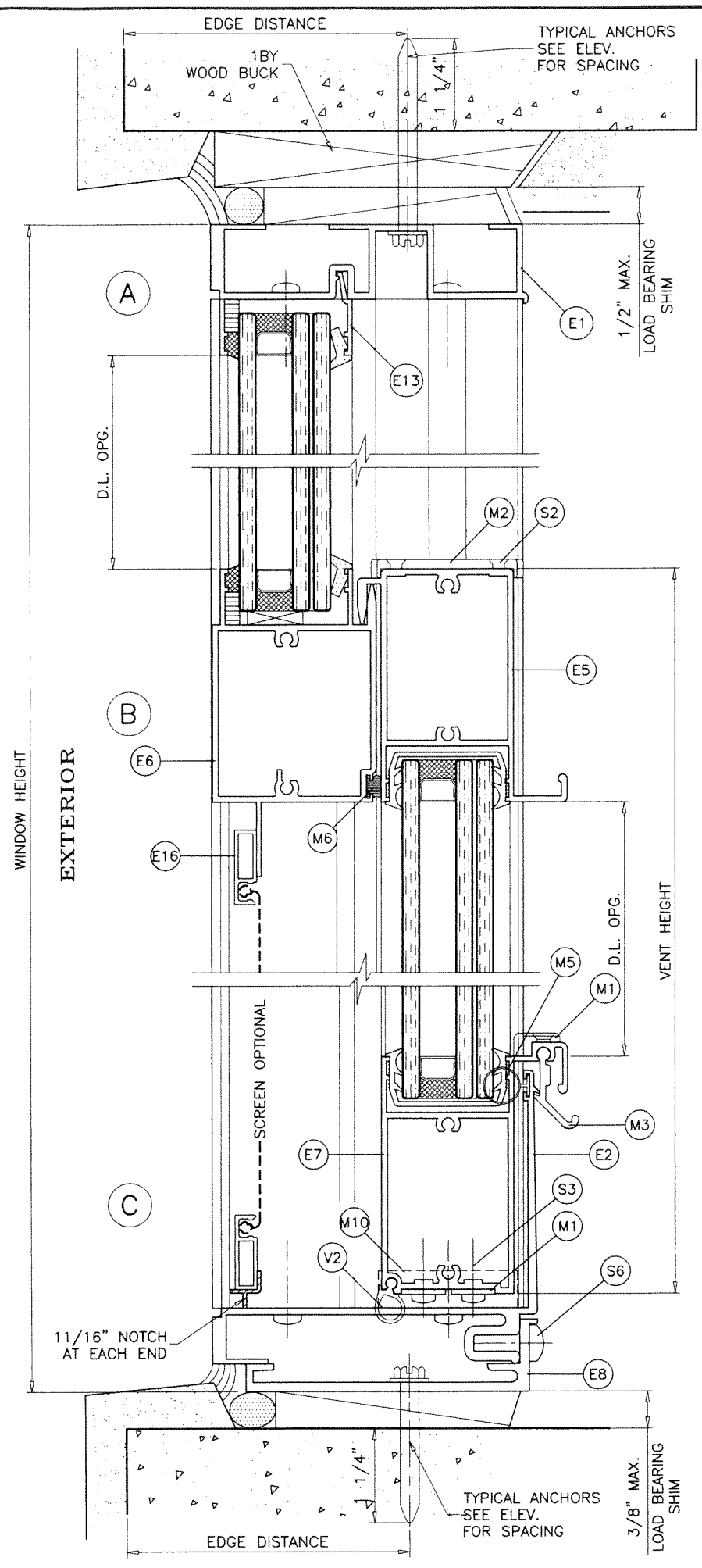
**afC**  
**AL-FAROOQ CORPORATION**  
ENGINEERS & PRODUCT DEVELOPMENT  
9360 SUNSET DRIVE, SUITE 220  
MIAMI, FLORIDA 33173  
TEL. (305) 264-8100 FAX. (305) 262-6978  
COMP-ANL\W08-62RC

SERIES PH400 ALUM SINGLE HUNG WINDOW (S.M.I.)  
**TECNOGLASS, LLC**  
3550 N.W. 49 STREET  
MIAMI, FL. 33142  
TEL. (305) 638-5151 FAX. (305) 638-5158

no	date	description
E	07.02.18	REV. PER COMMENTS
F	09.25.18	NO CHANGE THIS SHEET
G	11.18.20	UPDATED TO 2020 FBC
H	09.20.23	NO CHANGE THIS SHEET

date: 08-13-08  
scale: 1/2"=1'-0"  
dr. by: TARIQ  
chk. by:

drawing no.  
**W08-62**  
sheet 4 of 9



1BY OR 2BY WOOD BUCKS AND METAL STRUCTURES NOT BY 'TECNOGLASS' MUST SUPPORT LOADS IMPOSED BY GLAZING SYSTEM AND TRANSFER THEM TO THE BUILDING STRUCTURE.

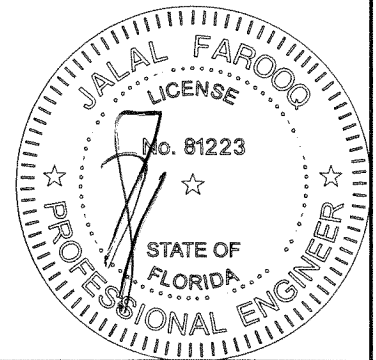
**TYPICAL ANCHORS:** SEE ELEV. FOR SPACING  
**1/4" DIA. KWIK-CON II+ BY 'HILTI'** (Fu=138 KSI, Fy=137 KSI)  
 INTO 2BY WOOD BUCKS OR WOOD STRUCTURES  
 1-1/2" MIN. PENETRATION INTO WOOD (HEAD/SILL/JAMBS)  
 THRU 1BY BUCKS INTO CONC. OR BLOCKS  
 1-1/4" MIN. EMBED INTO CONCRETE (HEAD/SILL/JAMBS)  
 1-1/4" MIN. EMBED INTO BLOCKS (JAMBS)  
 DIRECTLY INTO CONCRETE OR BLOCKS  
 1-3/4" MIN. EMBED INTO CONCRETE (HEAD/SILL/JAMBS)  
 1-1/4" MIN. EMBED INTO GROUT-FILLED BLOCKS (JAMBS)  
**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. 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)

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

**PRODUCT RENEWED**  
 as complying with the Florida Building Code  
**NOA-No. 24-1206.02** WOOD AT HEAD, SILL OR JAMBS SG = 0.55 MIN.  
**Expiration Date: 10/25/2025** CONCRETE AT HEAD, SILL OR JAMBS f'c = 3000 PSI MIN.  
 C-90 HOLLOW/FILLED BLOCK AT JAMBS f'm = 2000 PSI MIN.

**By: Manuel Perez**  
**Miami-Dade Product Control** **SEALANT:**  
 ALL JOINTS AND FRAME CONNECTIONS SEALED WITH DOWSIL 795 SEALANT.

**PRODUCT REVISED**  
 As complying with the Florida Building Code  
**NOA-No. 23-0928.09** **SEP 22 2023**  
**Expiration Date: 10/25/2024**  
**By: Manuel Perez**  
**Miami-Dade Product Control**

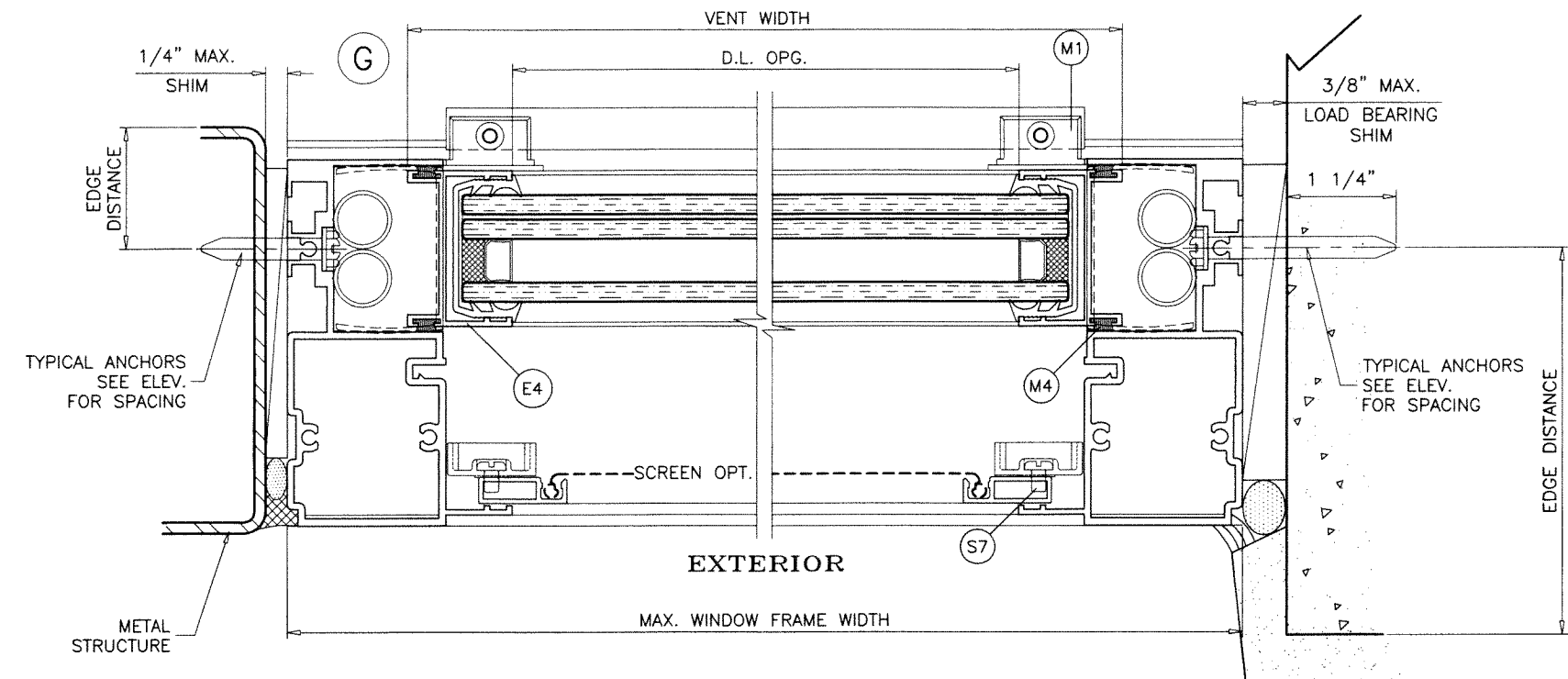
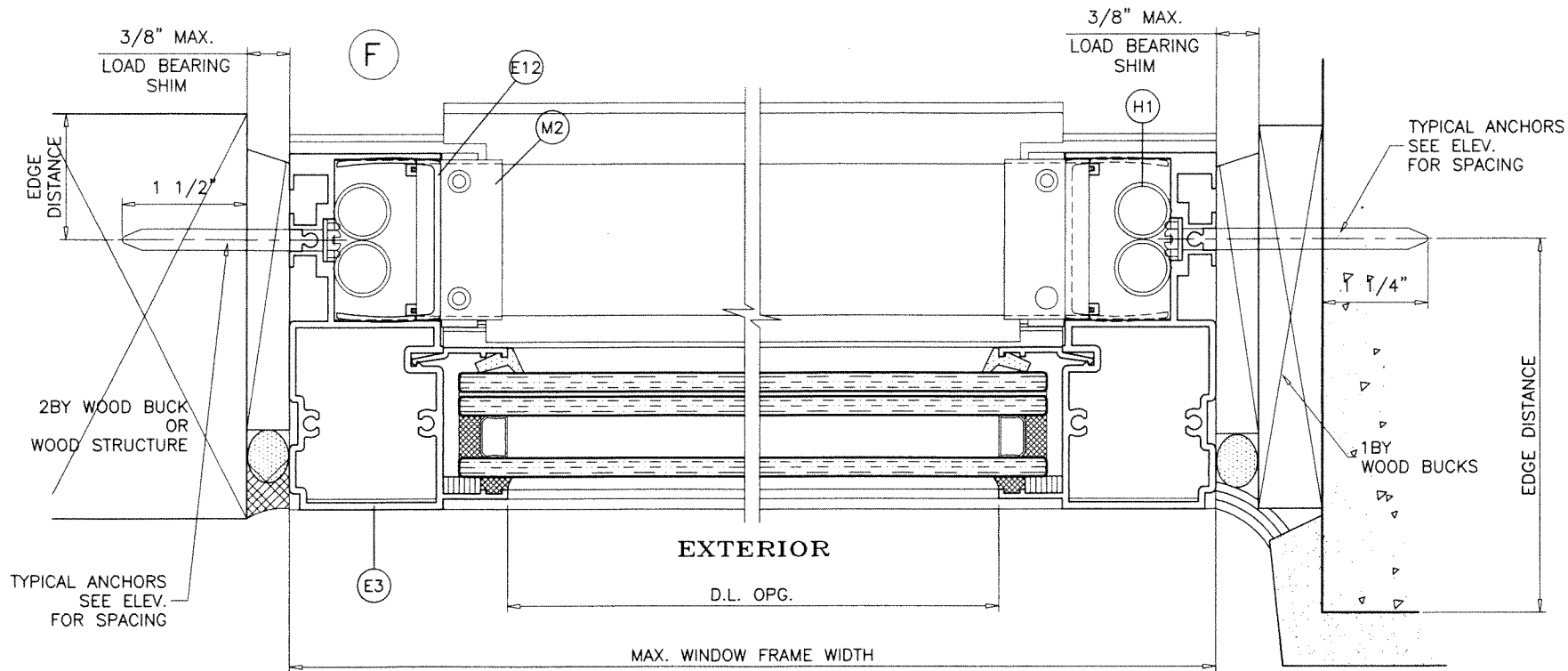


**af c**  
**AL-FAROOQ CORPORATION**  
 ENGINEERS & PRODUCT DEVELOPMENT  
 9360 SUNSET DRIVE, SUITE 220  
 MIAMI, FLORIDA 33173 (C.A.N. 3538)  
 TEL. (305) 262-6978  
 TEL. (305) 264-8100  
 COMP-ANL \ W08-62RC

SERIES PH4400 ALUM SINGLE HUNG WINDOW (S.M.I.)  
**TECNOGLASS, LLC**  
 3550 N.W. 49 STREET  
 MIAMI, FL. 33142  
 TEL. (305) 638-5151 FAX. (305) 638-5158

no	date	description
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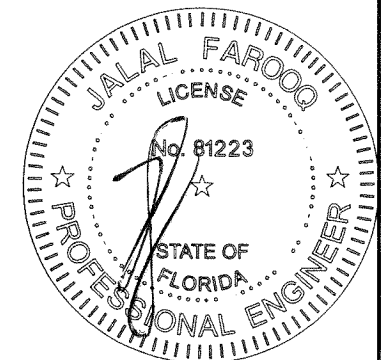
date: 08-13-08  
 scale: 1/2" = 1"  
 dr. by: TARIQ  
 chk. by:  
 drawing no. **W08-62**  
 sheet 5 of 9



**PRODUCT RENEWED**  
 as complying with the Florida Building Code  
 NOA-No. **24-1206.02**  
 Expiration Date: **10/25/2025**  
 By: *Manuel Perez*  
 Miami-Dade Product Control

**PRODUCT REVISED**  
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 NOA-No. **23-0928.09**  
 Expiration Date: **10/25/2024**  
 By: *Manuel Perez*  
 Miami-Dade Product Control

SEP 22 2023

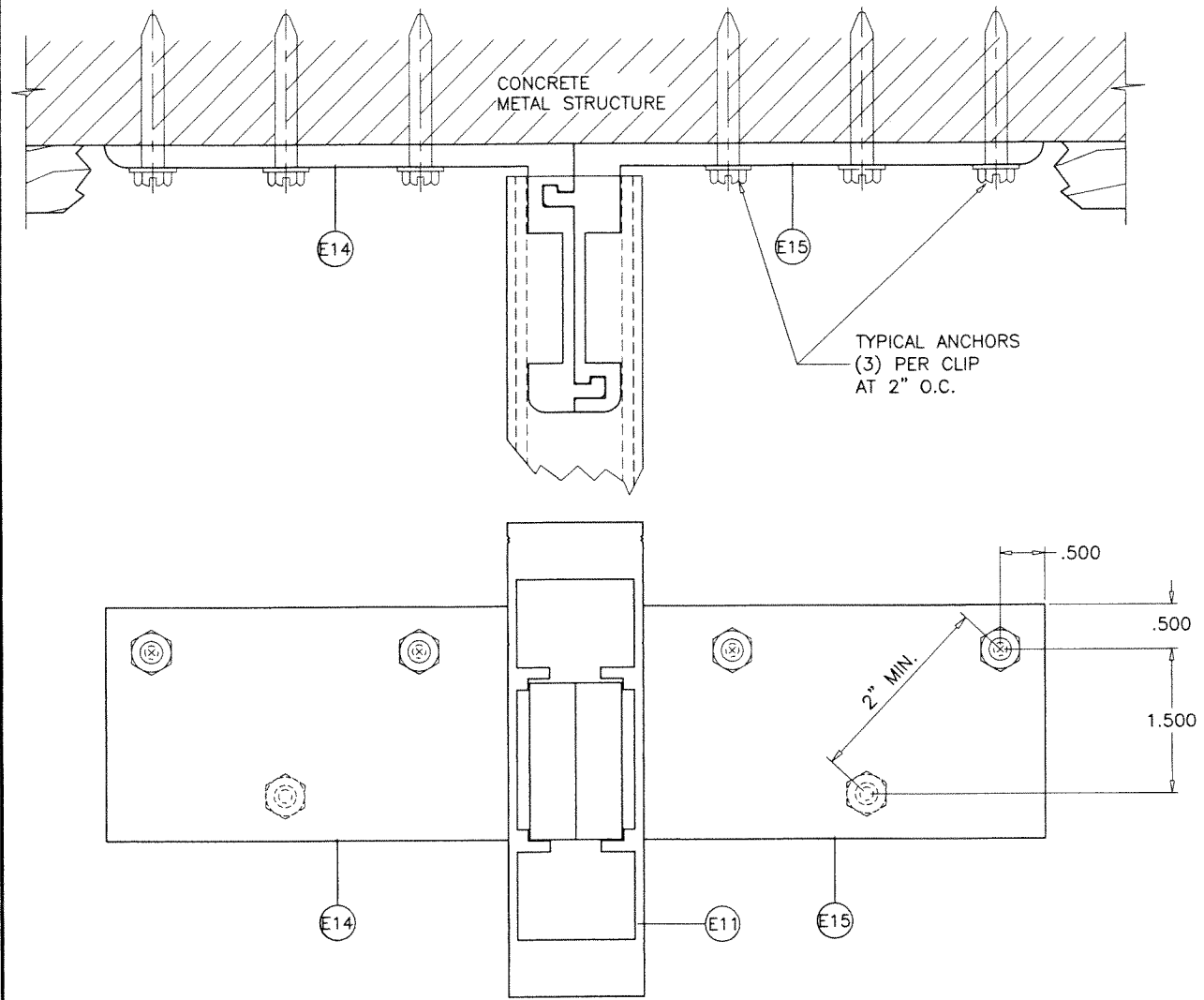


**AL-FAROOQ CORPORATION**  
 ENGINEERS & PRODUCT DEVELOPMENT  
 9360 SUNSET DRIVE, SUITE 220  
 MIAMI, FLORIDA 33173  
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 COMP-ANL\W08-62RC

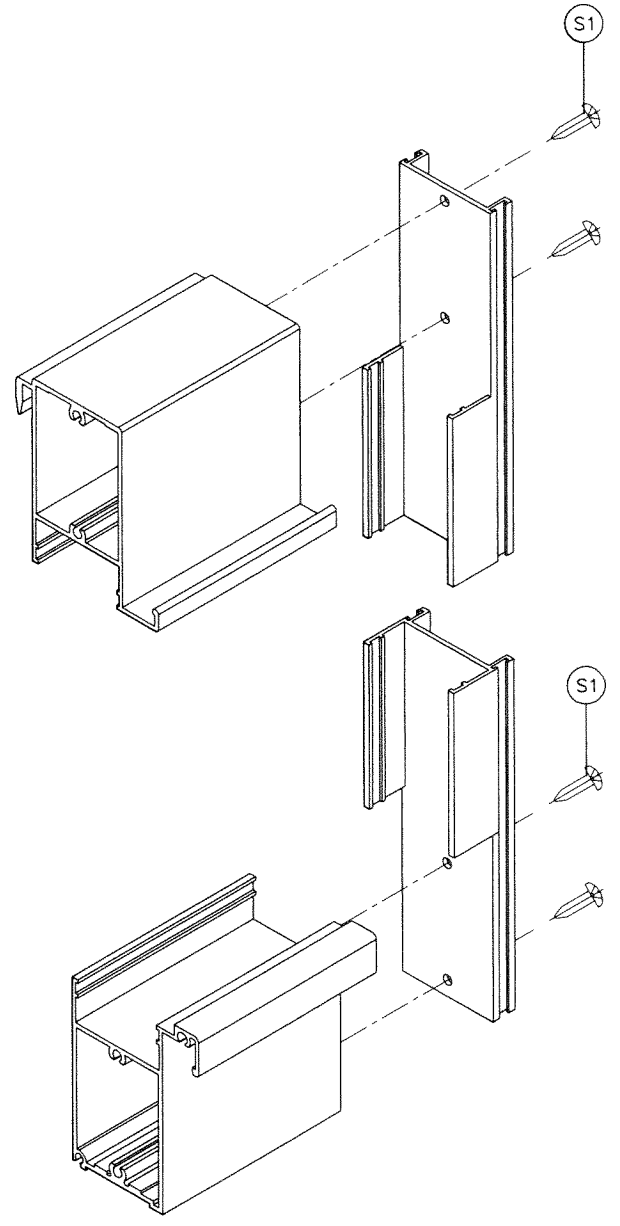
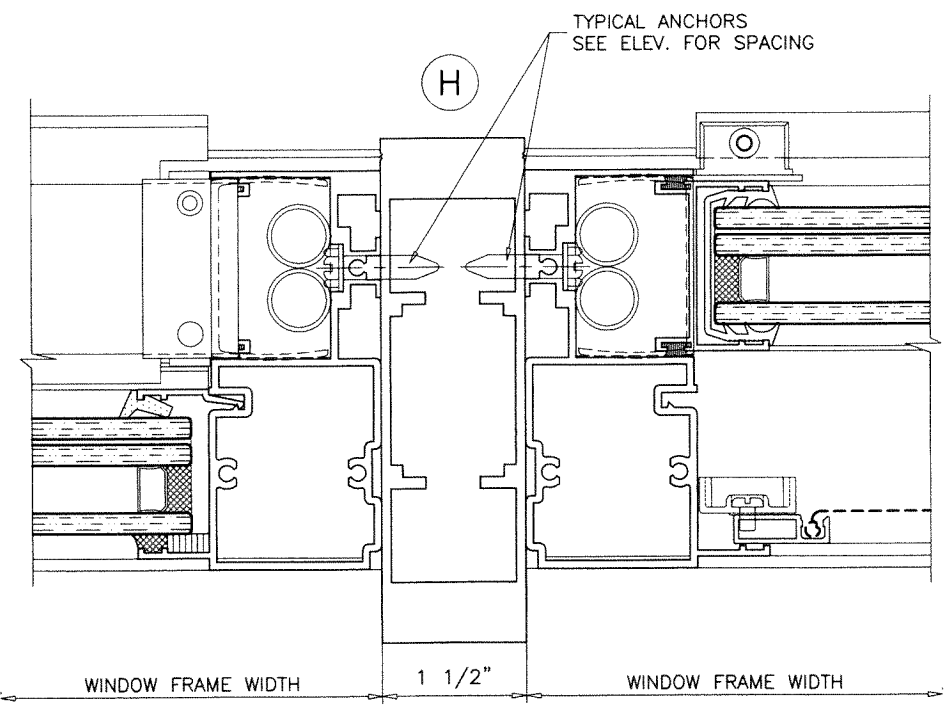
SERIES PH400 ALUM SINGLE HUNG WINDOW (S.M.I.)  
**TECNOGLASS, LLC**  
 3550 N.W. 49 STREET  
 MIAMI, FL. 33142  
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no	date	description	by
E	07.02.18	REV. PER RER COMMENTS	
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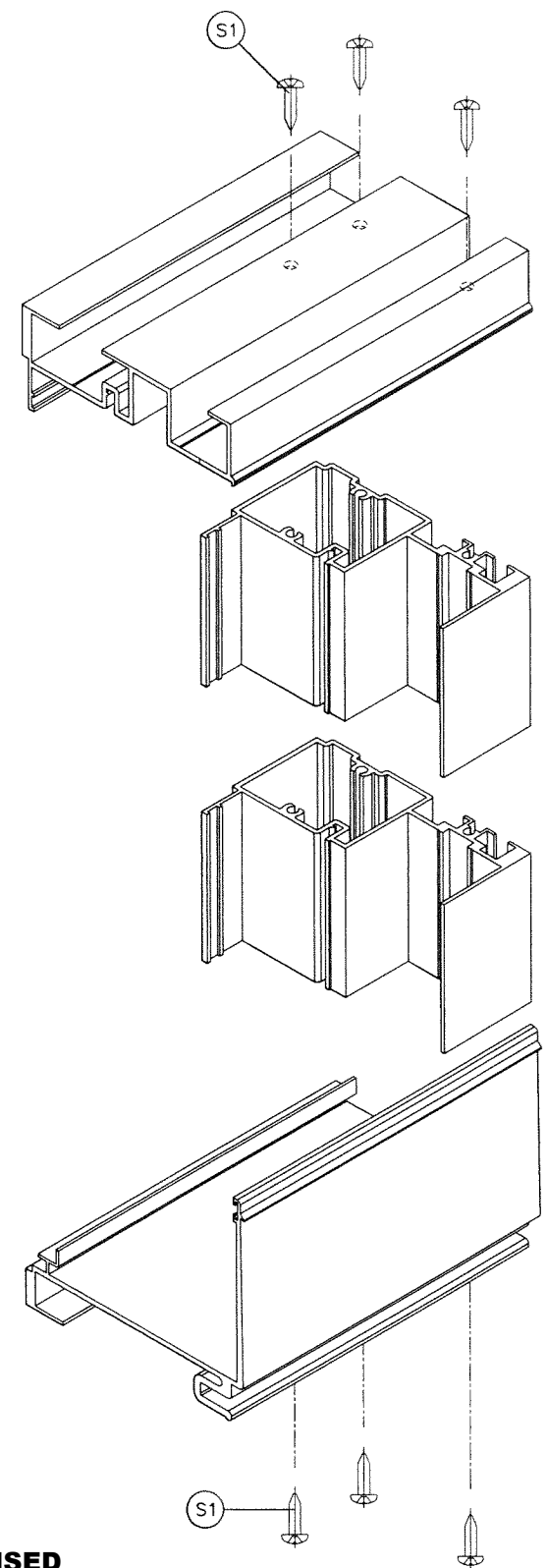
date: 08-13-08  
 scale: 1/2" = 1"  
 dr. by: TARIQ  
 chk. by:  
 drawing no. **W08-62**  
 sheet 6 of 9



MULLION CLIP CONNECTION AT HEAD & SILL



VENT CORNER DETAIL

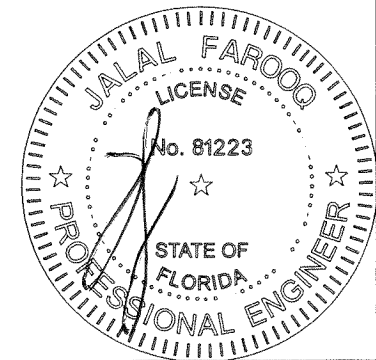


FRAME CORNERS DETAIL

**PRODUCT RENEWED**  
 as complying with the Florida Building Code  
 NOA-No. **24-1206.02**  
 Expiration Date: **10/25/2025**  
 By: *Manuel Perez*  
 Miami-Dade Product Control

**PRODUCT REVISED**  
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 Expiration Date: **10/25/2024**  
 By: *Manuel Perez*  
 Miami-Dade Product Control

SEP 22 2023



SEE CHARTS ON SHEET 4 FOR MULLION LOAD CAPACITY

**afc**

**AL-FAROOQ CORPORATION**  
 ENGINEERS & PRODUCT DEVELOPMENT  
 9360 SUNSET DRIVE, SUITE 220  
 MIAMI, FLORIDA 33173  
 TEL. (305) 264-8100 FAX. (305) 262-6978  
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SERIES PH4400 ALUM SINGLE HUNG WINDOW (S.M.I.)

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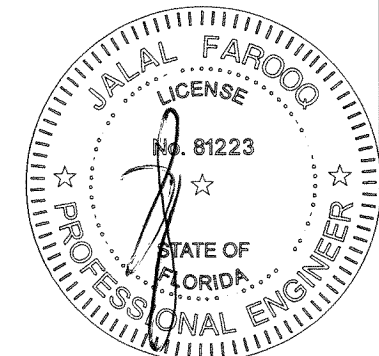
drawing no. **W08-62**  
 sheet 7 of 9

ITEM #	PART #	REQD.	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
E1	PH4400-001	1	FRAME HEAD	6063-T6	-
E2	PH4400-002	1	FRAME SILL	6063-T6	-
E3	PH4400-003	2	FRAME JAMB	6005-T5	-
E4	PH4400-004	2	VENT JAMB	6063-T6	-
E5	PH4400-005	1	VENT TOP	6005-T5	-
E6	PH4400-006	1	MEETING RAIL	6005-T5	-
E7	PH4400-007	1	VENT BOTTOM	6063-T6	-
E8	PH4400-008	1	SILL ANCHOR CLIP	6063-T6	-
E9	PH4400-009	1	MEETING SILL	6063-T6	-
E10	PH4400-010	1	FRAME SILL 3P	6063-T6	-
E11	PH4400-011A	AS REQD.	MULLIOM	6063-T6	-
E12	PH4400-012	1	VENT STOP	6063-T6	AT TOP OF FRAME
E13	500Y-007	AS REQD.	GLAZING BEAD	6063-T6	-
E14	500Y-024	AS REQD.	FEMALE ANCHOR CLIP	6063-T6	TOP & BOTTOM OF MULLION
E15	500Y-025	AS REQD.	MALE ANCHOR CLIP	6063-T6	TOP & BOTTOM OF MULLION
E16	500Y-026	AS REQD.	EXTRUDED FRAME (OPTIONAL)	-	-
V1	V-053	AS REQD.	GLAZING WEDGE (AT FIX. LITE)	EPDM	DUROMETER 70±5 SHORE A
V2	V-071	AS REQD.	VENT BOTTOM WEATHERSEAL	EPDM	DUROMETER 65±5 SHORE A
V4	V-074	AS REQD.	MARINE GLAZING GASKET (AT VENT)	EPDM	DUROMETER 75±5 SHORE A
S1		AS REQD.	#10 X 1" LG. PH. SMS POINT "B" ST/ST (ASSEMBLY SCREW)	-	-
S2		2/ GUIDE	#8 X 3/8" LG. FH. SMS TYPE "B" ST/ST (@ P-037 & P-013)	-	-
S3		-	#8 X 1/2" LG. P.H. SMS. ST/ST (@ BALANCE BRACKET)	-	AT BALANCE CLIP
S5		-	#8 X 1" LG. FH. SMS ST/ST (@ BALANCE)	-	AT TOP OF BALANCE
S6		AS REQD.	#14 X 3/4" LG. PH. SMS TYPE "B" ST/ST AT SILL	-	AT 4" FROM ENDS & 20" O.C. MAX.
S7		-	#8-32 X 1/4" LG. PHL. MACHINE SCREW ST/ST	-	-
H1		2/ WDW.	ULTRALIFT BALANCE	-	-
H2		2/ WDW.	ULTRALIFT NOT TILT BRACKET	-	-
M1	P-040	2/ VENT	VENT BOTTOM GUIDE	NYLON	BOTTOM OF SASH VENT
M2	P-037	2/ VENT	VENT TOP GUIDE	NYLON	TOP OF SASH VENT
M3	P-035	2/ WDW.	FINGER LOCK, AT 6" FROM EACH END	6063-T6	SULLIVAN & ASSOC.
M4	U56	-	Q225T270 BLACK @ VENT JAMBS	FOAM	Q-LON
M5	AP527	-	APTUS TPE WEATHERSEALS	FOAM	-
M6	U52	-	Q250T270 WHITE @ MEETING RAIL	FOAM	Q-LON
M7	P-028	-	SCREEN RETAINER CLIP-90° ROTATION	-	-
M8		AS REQD.	3/16" X 1/2" X 4 " LG. SETTING BLOCK	NEOPRENE	DUROMETER 85±5 SHORE A
M9		AS REQD.	3/16" X 3/8" SINGLE FACE TAPE, AT FIX. LITE	FOAM	-
M10		-	1 1/4" X 1 7/8" X 1/2" HIGH BAFFLE 30 PPI RETIC. W/ADHES AT BOTTOM	-	-
M12	DOWSIL 795	AS REQD.	GLAZING COMPOUND, AT FIX. LITE	SILICONE	-

**PRODUCT RENEWED**  
as complying with the Florida  
Building Code  
NOA-No. **24-1206.02**  
Expiration Date: **10/25/2025**  
By: *Manuel Perez*  
Miami-Dade Product Control

**PRODUCT REVISED**  
As complying with the Florida  
Building Code  
NOA-No. **23-0928.09**  
Expiration Date: **10/25/2024**  
By: *Manuel Perez*  
Miami-Dade Product Control

SEP 22 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)

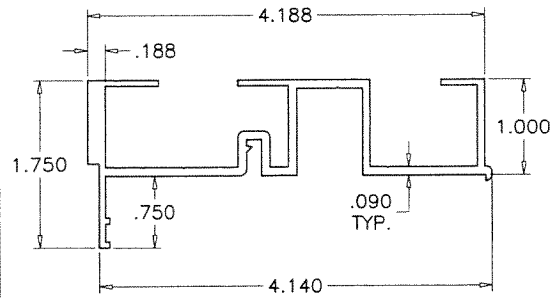
SERIES PH4400 ALUM SINGLE HUNG WINDOW (S.M.I.)  
**TECNOGLASS, LLC**  
3550 N.W. 49 STREET  
MIAMI, FL. 33142  
TEL. (305) 638-5151 FAX. (305) 638-5158

NO	DATE	DESCRIPTION
E	07.02.18	REV. PER PER COMMENTS
F	09.25.18	NO CHANGE THIS SHEET
G	11.18.20	UPDATED TO 2020 FBC
H	09.20.23	NO CHANGE THIS SHEET

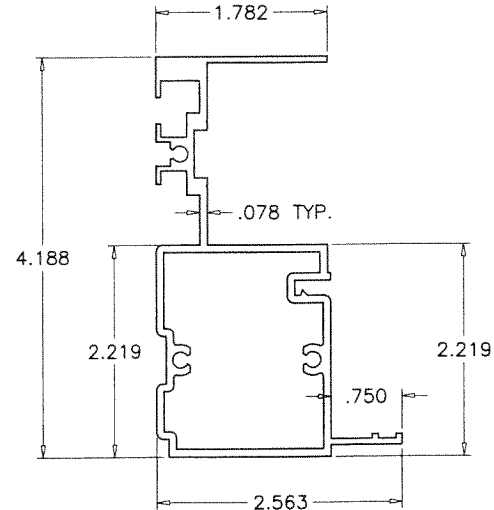
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chk. by:

drawing no.  
**W08-62**  
sheet 8 of 9

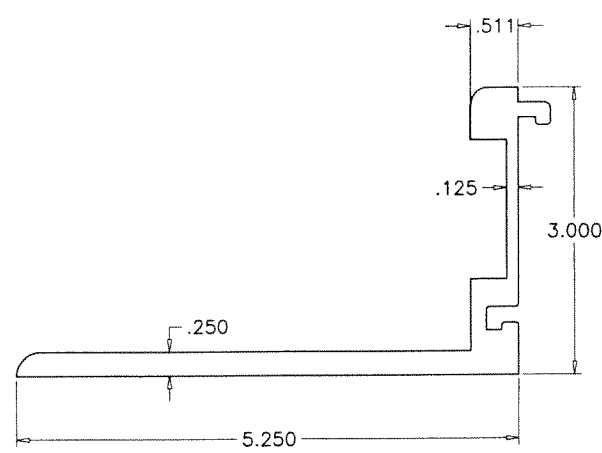
COMP-ANL\W08-62RC



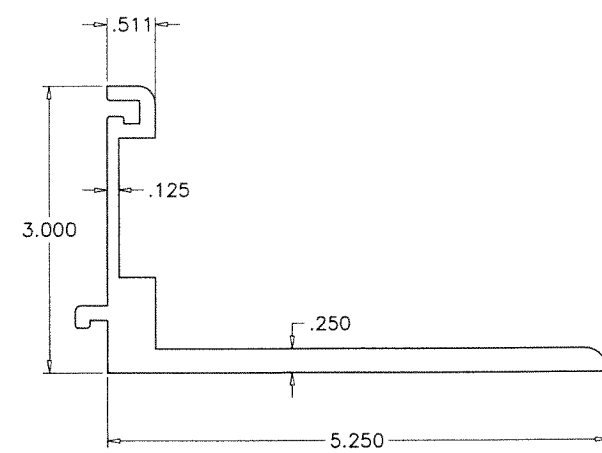
E1 FRAME HEAD



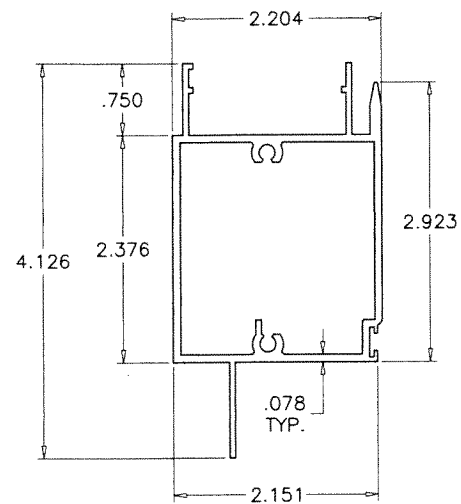
E3 FRAME JAMB



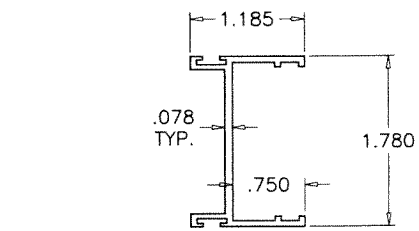
E14 FEMALE ANCHOR CLIP



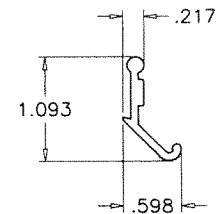
E15 MALE ANCHOR CLIP



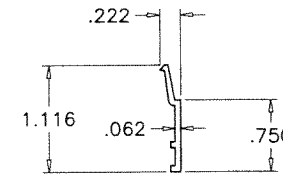
E6 MEETING RAIL



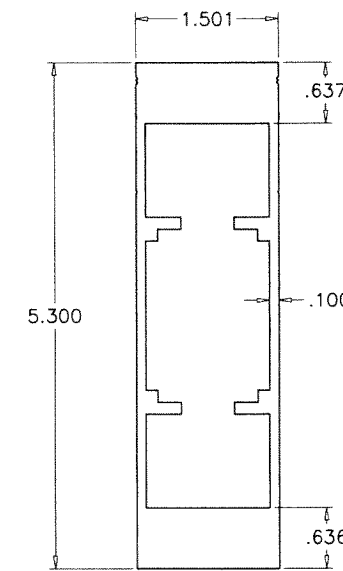
E4 VENT SIDE RAIL



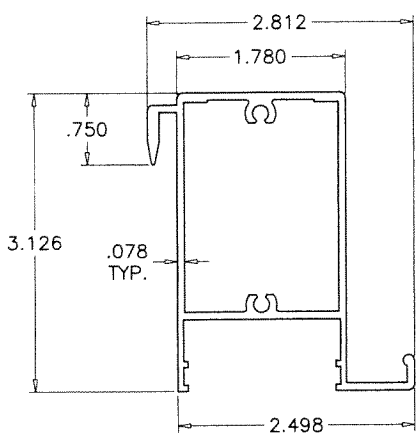
M3 VENT LATCH



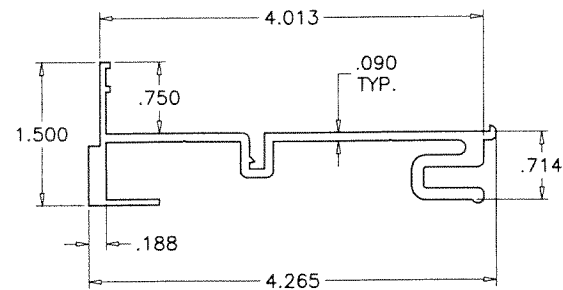
E13 GLAZING BEAD



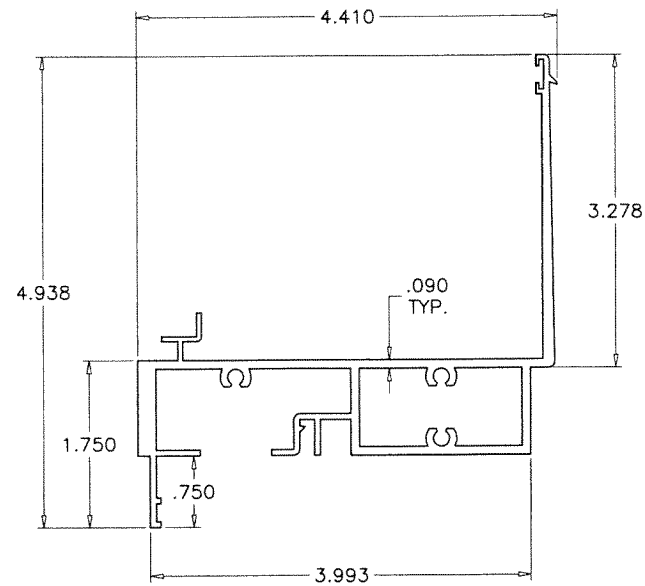
E11 STD. MULLION



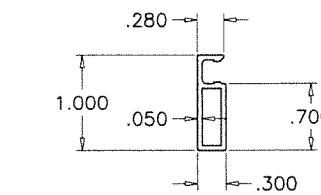
E5 VENT TOP RAIL



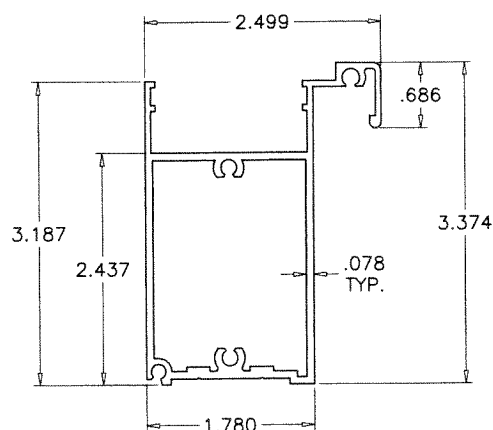
E10 FRAME SILL FIXED WDW.



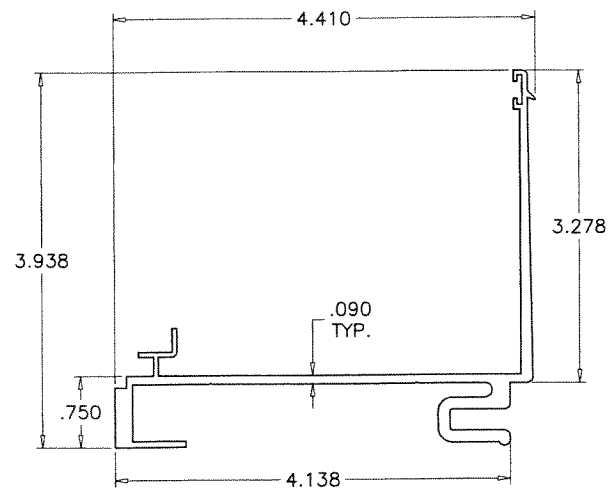
E9 SILL MTG. RAIL W/ FIXED BOTTOM



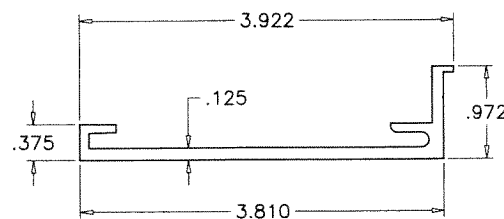
E16 SCREEN FRAME



E7 VENT BOTTOM RAIL



E2 FRAME SILL



E8 SILL ANCHOR CLIP

**PRODUCT RENEWED**  
as complying with the Florida Building Code

NOA-No. **24-1206.02**

Expiration Date: **10/25/2025**

By: *Manuel Ferrer*

Miami-Dade Product Control

**PRODUCT REVISED**  
As complying with the Florida Building Code

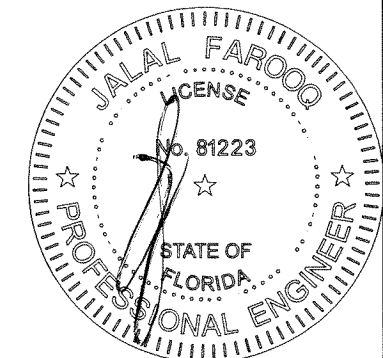
NOA-No. **23-0928.09**

Expiration Date: **10/25/2024**

By: *Manuel Ferrer*

Miami-Dade Product Control

SEP 22 2023



SERIES PH400 ALUM SINGLE HUNG WINDOW (S.M.I.)

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W08-62

sheet 9 of 9

**af c**  
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