



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

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
11805 SW 26 Street, Room 208
T (786) 315-2590 F (786) 315-2599

www.miamidade.gov/economy

NOTICE OF ACCEPTANCE (NOA)

CGI Windows & Doors, Inc.
10100 NW 25 Street
Miami, Fl. 33172

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 "238" Outswing Aluminum Casement Window - L.M.I.

APPROVAL DOCUMENT: Drawing No. W98-100, titled "Series-238 Aluminum Casement Wdw. (L.M.I.)", sheets 1, 1.1, 2, 3, 4, 5, 5.1, 6 and 7 of 7, dated 12/04/98, with revision I dated 04/25/14, prepared by Al-Farooq Corporation, signed and sealed by Javad Ahmad, P.E., bearing the Miami-Dade County Product Control Section Revision stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Section.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state, model/series, and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

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

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA revises NOA# 12-1220.14 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.



Handwritten signature and date: 6/19/14

NOA No. 14-0506.01
Expiration Date: October 26, 2018
Approval Date: June 26, 2014
Page 1

CGI Windows & Doors, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. Manufacturer's die drawings and sections.
2. Drawing No. **W98-100**, titled "Series-238 Aluminum Casement Wdw. (L.M.I.)", sheets 1, 1.1, 2, 3, 4, 5, 5.1, 6 and 7 of 7, dated 12/04/98, with revision **I** dated 04/25/14, prepared by Al-Farooq Corporation, signed and sealed by Javad Ahmad, P.E.

B. TESTS

1. Test reports on:
 - 1) Air Infiltration Test, per FBC, TAS 202-94
 - 2) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94
 - 3) Water Resistance Test, per FBC, TAS 202-94
 - 4) Large Missile Impact Test per FBC, TAS 201-94
 - 5) Cyclic Wind Pressure Loading per FBC, TAS 203-94
 - 6) Forced Entry Test, per FBC 2411.3.2.1, and TAS 202-94along with marked-up drawings and installation diagram of a series 318 outswing aluminum casement window, prepared by Certified Testing Laboratories, Test Report No. **CTL-3009WB**, dated 03/24/14, signed and sealed by Ramesh C. Patel, P.E.
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
 - 6) Forced Entry Test, per FBC 2411.3.2.1, and TAS 202-94along with marked-up drawings and installation diagram of an aluminum casement window, prepared by American Test Lab of South Florida, Inc., Test Report No. **ATLOSF-1109.01-12**, dated 11/20/12, signed and sealed by Henry Hattem, P.E.
(Submitted under previous NOA # 12-1220.14)
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) Forced Entry Test, per FBC 2411.3.2.1, and TAS 202-94along with marked-up drawings and installation diagram of an aluminum casement window, prepared by Hurricane Testing Lab., Inc., Test Reports No. **HTL-0080-0301-07** for specimen **A** and **B** and **HTL-0080-0905-07** for specimen **B** and **C**, dated 09/21/07 and 10/12/06, both signed and sealed by Vinu J. Abraham, P.E.
(Submitted under NOA # 08-1010.02)



Mánuel Pérez, P.E.
Product Control Examiner
NOA No. 14-0506.01

Expiration Date: October 26, 2018
Approval Date: June 26, 2014

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B. TESTS (CONTINUED)

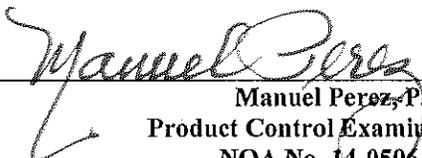
4. Test reports on: 1) Large Missile Impact Test per FBC, TAS 201-94
2) Cyclic Wind Pressure Loading per FBC, TAS 203-94
along with marked-up drawings and installation diagram of an aluminum outswing casement window, prepared by Hurricane Engineering & Testing, Inc., Test Reports No. **HETI-08-2143**, **HETI-08-2144**, **HETI-08-4287** and **HETI-07-4298**, dated 06/27/08 and 07/17/08, all signed and sealed by Candido F. Font, P.E.
(Submitted under NOA # 08-1010.02)
5. Test reports on: 1) Large Missile Impact Test per FBC, TAS 201-94
2) Cyclic Wind Pressure Loading per FBC, TAS 203-94
along with marked-up drawings and installation diagram of aluminum casement window, prepared by Hurricane Test Laboratory, Inc., Test Reports No. **HTL-0080-0303-96** and **HTL-0080-1107-98**, dated 03/06/96 and 11/10/98, both signed and sealed by Timothy S. Marshall, P.E.
(Submitted under NOA's # 96-0417.03 and # 01-1002.03)
6. Test reports on: 1) Air Infiltration Test, per FBC, TAS 202-94
2) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94
3) Water Resistance Test, per FBC, TAS 202-94
4) Large Missile Impact Test per FBC, TAS 201-94
5) Cyclic Wind Pressure Loading per FBC, TAS 203-94
6) Forced Entry Test, per FBC 2411.3.2.1, and TAS 202-94
along with marked-up drawings and installation diagram of an aluminum casement window, prepared by Fenestration Testing Laboratory, Inc., Test Reports No. **FTL-1003** and **FTL-1041**, dated 10/14/94, both signed and sealed by Yamil Kuri, P.E.
(Submitted under NOA # 96-0417.03)

C. CALCULATIONS

1. Anchor verification calculations and structural analysis, complying with **FBC-2010**, dated 4/24/14, prepared by Al-Farooq Corporation, signed and sealed by Javad Ahmad, P.E.
2. Glazing complies with **ASTM E1300-09**

D. QUALITY ASSURANCE

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


Manuel Perez, P.E.
Product Control Examiner
NOA No. 14-0506.01
Expiration Date: October 26, 2018
Approval Date: June 26, 2014

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

E. MATERIAL CERTIFICATIONS

1. Notice of Acceptance No. **11-0624.02** issued to **E.I. DuPont DeNemours & Co., Inc.** for their "**DuPont SentryGlas® Interlayer**" dated 08/25/11, expiring on 01/14/17.
2. Notice of Acceptance No. **12-1231.08** issued to **Eastman Chemical Company (MA)** for their "**Saflex CP – Saflex and Saflex HP Composite Glass Interlayers with PET Core**" dated 03/28/13, expiring on 12/11/18.
3. Notice of Acceptance No. **12-1231.10** issued to **Eastman Chemical Company (MA)** for their "**Saflex Clear and Color Glass Interlayers**" dated 03/28/13, expiring on 05/21/16.

F. STATEMENTS

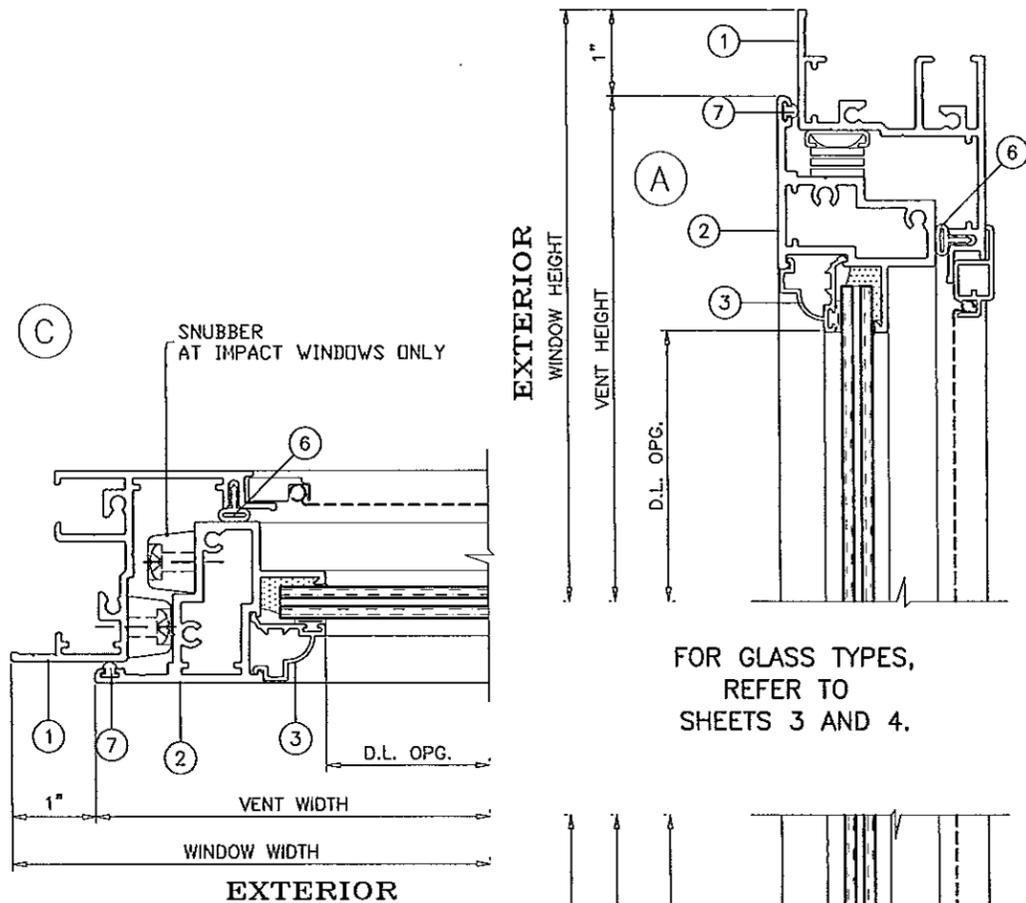
1. Statement letter of conformance, complying with **FBC- 5th Edition (2014)**, dated April 11, 2014, issued by Al-Farooq Corporation, signed and sealed by Javad Ahmad, P.E.
2. Proposal No. **13-1098** issued by the Product Control Section, dated October 02, 2013 and revised on February 24, 2014, signed by Manuel Perez, P.E.
3. Laboratory compliance letters for Test Reports No. **HTL-0080-0301-07** for specimen A and B and **HTL-0080-0905-07** for specimen B and C, issued by Hurricane Test Laboratory, Inc., dated 09/21/07 and 10/12/06, both signed and sealed by Vinu J. Abraham, P.E.
(Submitted under NOA # 08-1010.02)
4. Laboratory compliances letters for Test Reports No. **HETI-08-2143**, **HETI-08-2144**, **HETI-08-4287** and **HETI-07-4298**, issued by Hurricane Engineering & Testing, Inc., dated 06/27/08 and 07/17/08, all signed and sealed by Candido F. Font, P.E.
(Submitted under NOA # 08-1010.02)
5. Laboratory compliance letters for Test Reports No. **HTL-0080-0303-96** and **HTL-0080-1107-98**, issued by Hurricane Test Laboratory, Inc., dated 03/06/96 and 11/10/98, both signed and sealed by Timothy S. Marshall, P.E.
(Submitted under NOA # 96-0417.03 and 01-1002.03)
6. Laboratory compliance letters for Test Reports No. **FTL-1003** and **FTL-1041**, issued by Fenestration Testing Laboratory, Inc., dated 10/14/94, both signed and sealed by Yamil Kuri, P.E.
(Submitted under NOA # 96-0417.03)

G. OTHERS

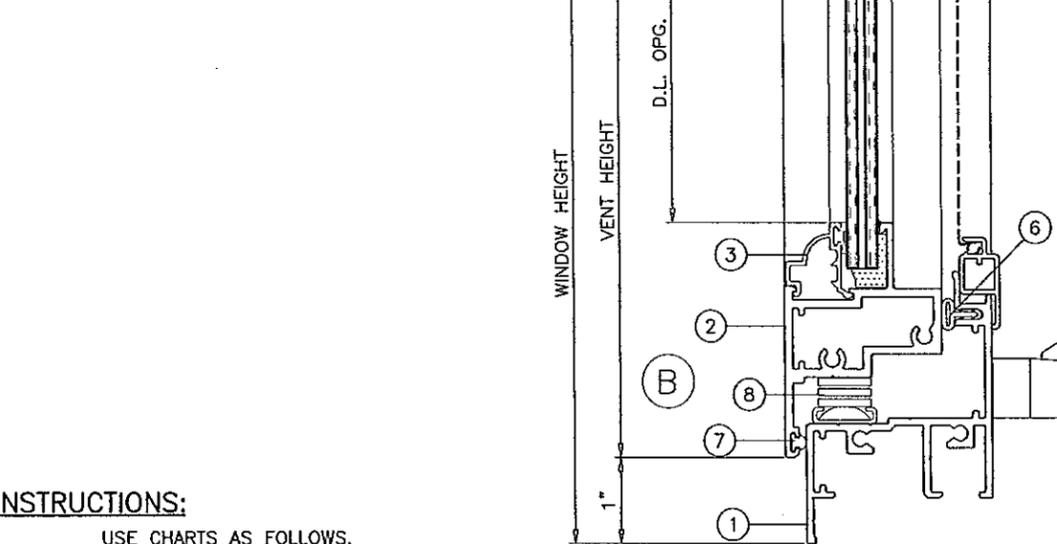
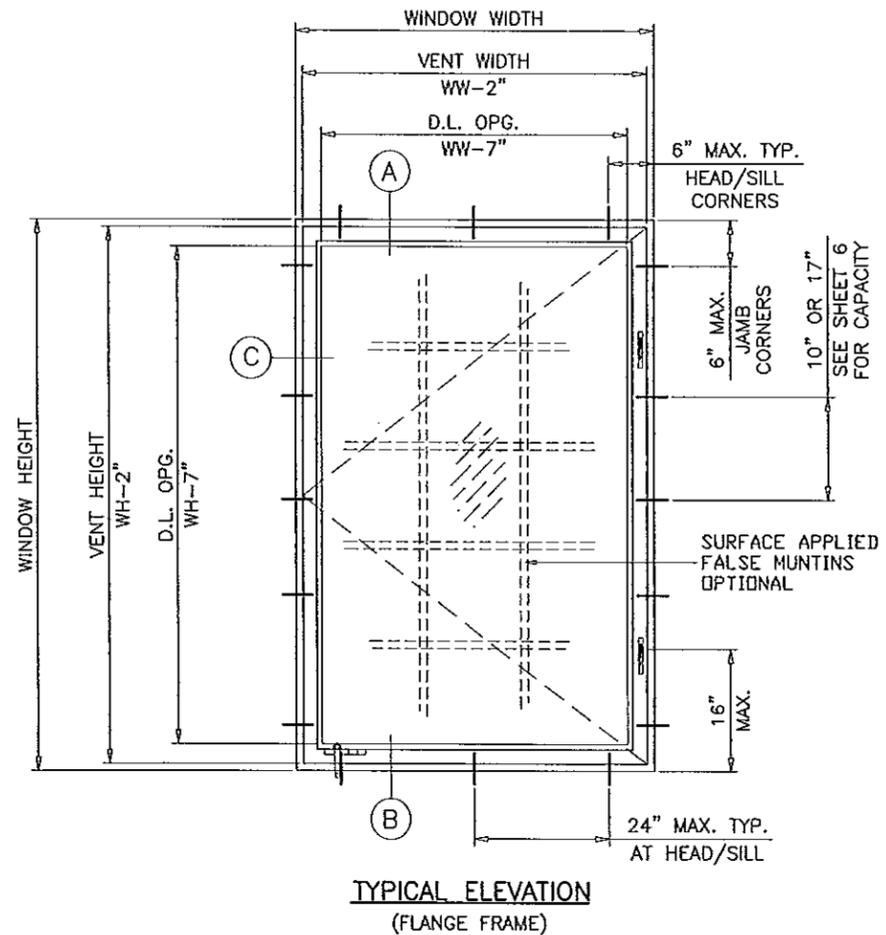
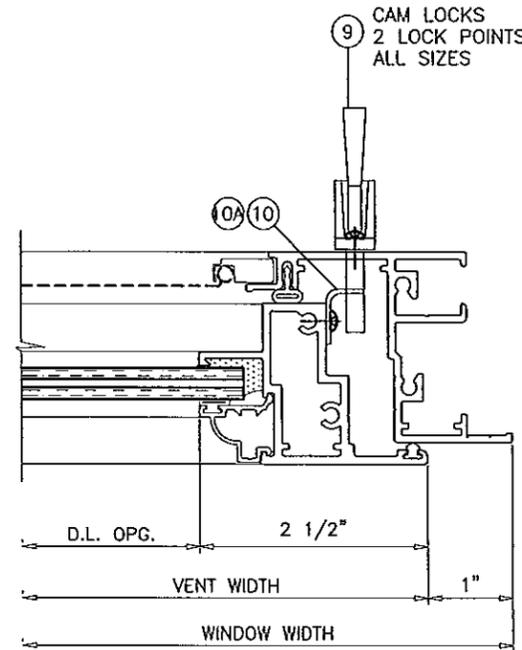
1. Notice of Acceptance No. **12-1220.14**, issued to CGI Windows & Doors, Inc. for their Series "238" Outswing Aluminum Casement Window - L.M.I., approved on 03/21/13 and expiring on 10/26/18.


Manuel Perez, P.E.
Product Control Examiner
NOA No. 14-0506.01
Expiration Date: October 26, 2018
Approval Date: June 26, 2014

**GENERAL WINDOW SECTIONS
FLANGE FRAME**

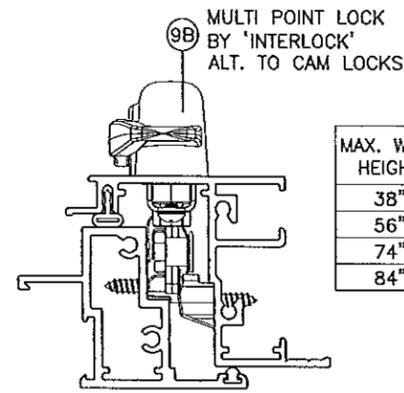


FOR GLASS TYPES,
REFER TO
SHEETS 3 AND 4.



9A
MAXIM MULTI POINT LOCK
BY 'TRUTH'
ALT. TO CAM LOCKS

MAX. WD.W. HEIGHT	LOCK POINTS
42"	2
63"	3
84"	4



MAX. WD.W. HEIGHT	LOCK POINTS
38"	2
56"	3
74"	4
84"	5

THESE WINDOWS ARE RATED FOR LARGE & SMALL MISSILE IMPACT.
SHUTTERS ARE NOT REQUIRED.

FOR MULLION/MULTIPLE UNITS, REFER TO
SEPARATE CGI MULLION N.O.A.

INSTRUCTIONS:

USE CHARTS AS FOLLOWS.

- STEP 1** DETERMINE DESIGN WIND LOAD REQUIREMENT BASED ON WIND VELOCITY, BLDG. HEIGHT, WIND ZONE USING APPLICABLE ASCE 7 STANDARD.
- STEP 2** SEE CHARTS ON SHEETS 3 AND 4 FOR DESIGN LOAD CAPACITY OF DESIRED GLASS SIZE/TYPE.
- STEP 3** USING CHART ON SHEET 6 SELECT ANCHOR OPTION WITH DESIGN RATING MORE THAN DESIGN LOAD SPECIFIED IN STEP 1 ABOVE.
- STEP 4** IF ALUMINUM BUCK SYSTEM IS USED USE CHART ON SHEET 7 TO DETERMINE CAPACITY.
- STEP 5** THE LOWEST VALUE RESULTING FROM STEPS 2, 3 AND 4 SHALL APPLY TO ENTIRE SYSTEM.

NOTES:

- THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE INCLUDING HIGH VELOCITY HURRICANE ZONE (HVHZ).
- WOOD BUCKS BY OTHERS, MUST BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE STRUCTURE.
- ANCHORS SHALL BE AS LISTED, SPACED AS SHOWN ON DETAILS, ANCHORS EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO.
- ANCHORING OR LOADING CONDITIONS NOT SHOWN IN THESE DETAILS ARE NOT PART OF THIS APPROVAL.
- A LOAD DURATION INCREASE IS USED IN DESIGN OF ANCHORS INTO WOOD ONLY.
- ALL SHIMS TO BE HIGH IMPACT, NON-METALLIC AND NON-COMPRESSIBLE.

Engr: JAVAD AHMAD
CML
FLA. PE # 70592
C.A.N. 3538

APR 30 2014

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 14-0506.01
Expiration Date 03/26/2018

By: *Manuel Perez*
Miami Dade Product Control

afC

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
1235 S.W. 87 AVE
MIAMI, FLORIDA 33174
TEL (305) 264-8100 FAX (305) 262-6978
COMP-ANL W98-100CGI

SERIES-238 ALUM OUTSWING CASEMENT WD.W. (L.M.I.)

CGI WINDOWS & DOORS INC.
10100 N.W. 25TH STREET
MIAMI, FL. 33172
TEL (305) 593-6590 FAX (305) 593-6592

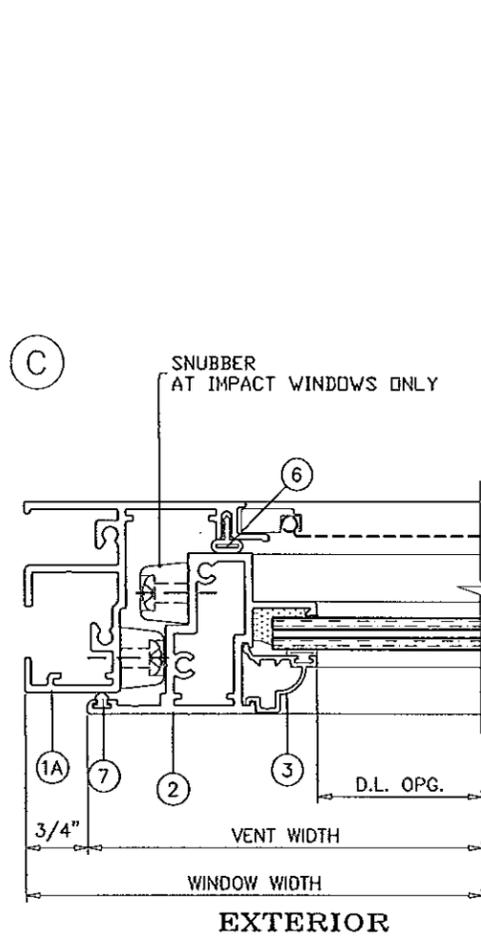
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G	12.06.12		LOCK OPTION ADDED
H	02.28.13		REV. PER PER COMMENTS
I	04.25.14		GENERAL REVISION

date: 12-04-98
scale: 1/2" = 1"
dr. by: HAMID
chk. by:

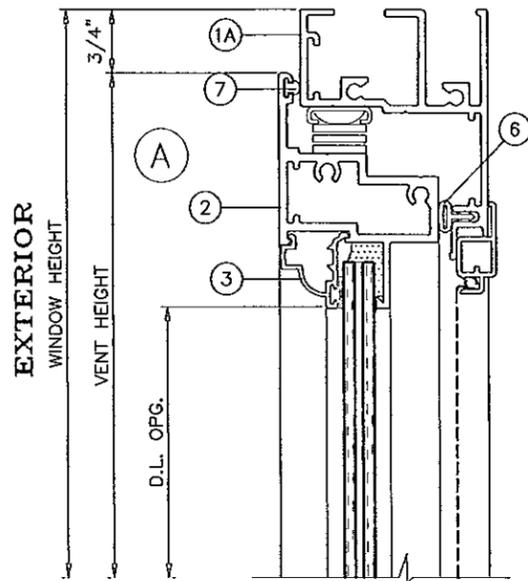
drawing no.
W98-100

sheet 1 of 7

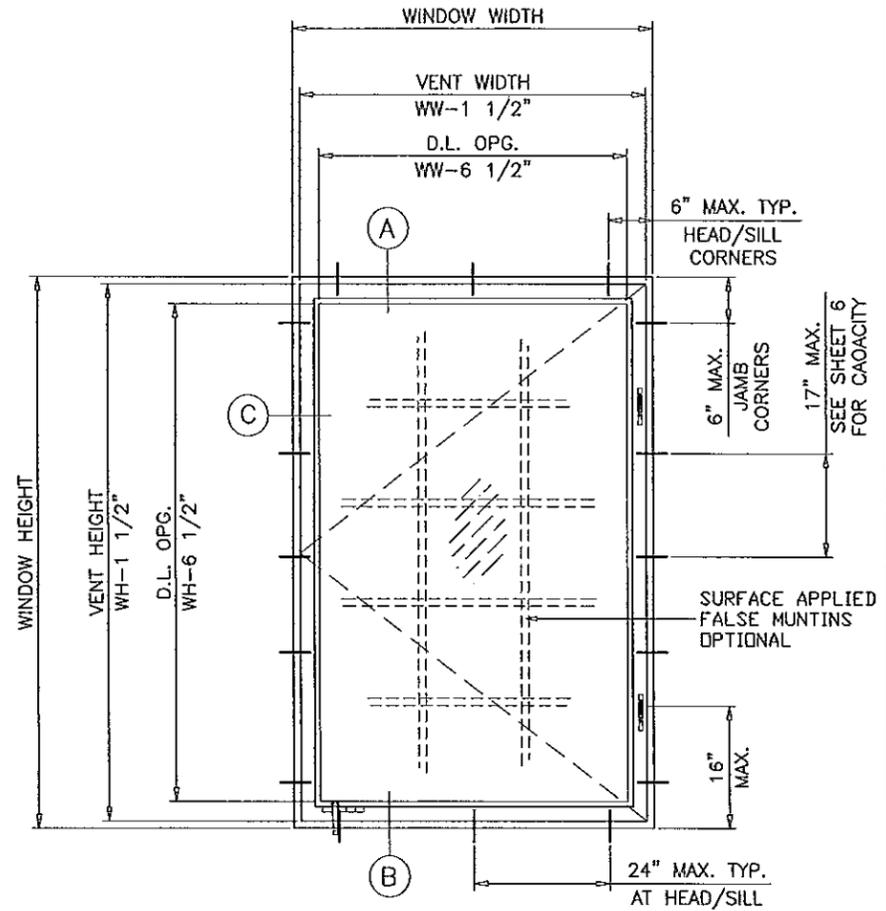
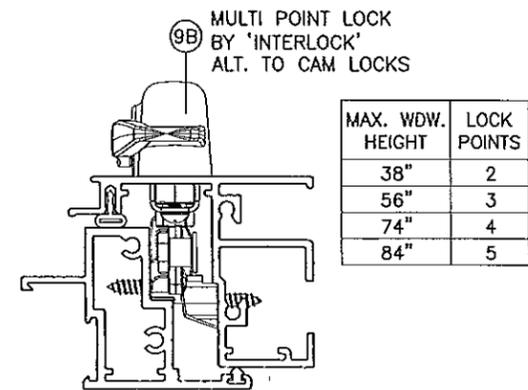
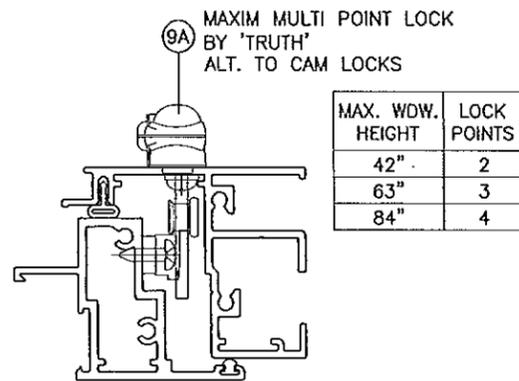
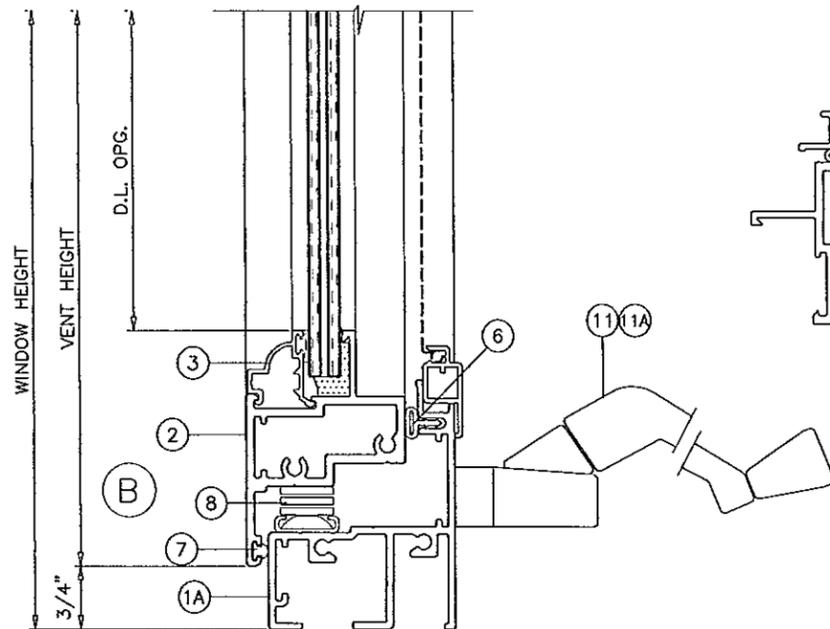
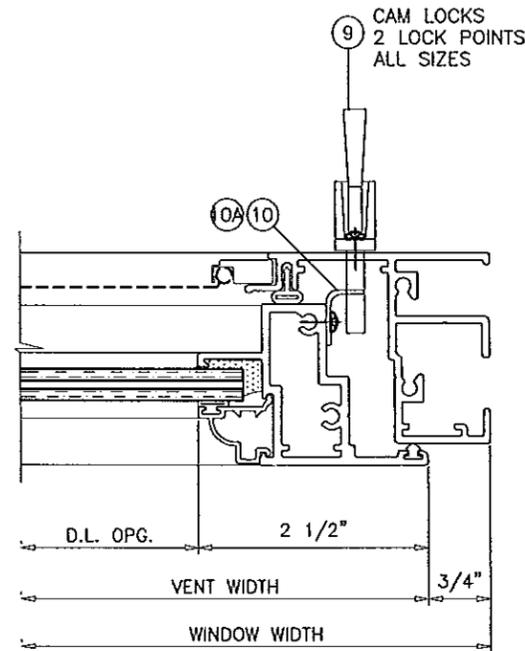
**GENERAL WINDOW SECTIONS
EQUAL LEG FRAME**



EXTERIOR



FOR GLASS TYPES,
REFER TO
SHEETS 3 AND 4.



**TYPICAL ELEVATION
(EQUAL LEG FRAME)**

Engr: JAVAD AHMAD
CIVIL
FLA. PE # 70592
C.A.N. 3538

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 14-0506.01
Expiration Date Oct. 26, 2016

By *Muhammad*
Miami Dade Product Control

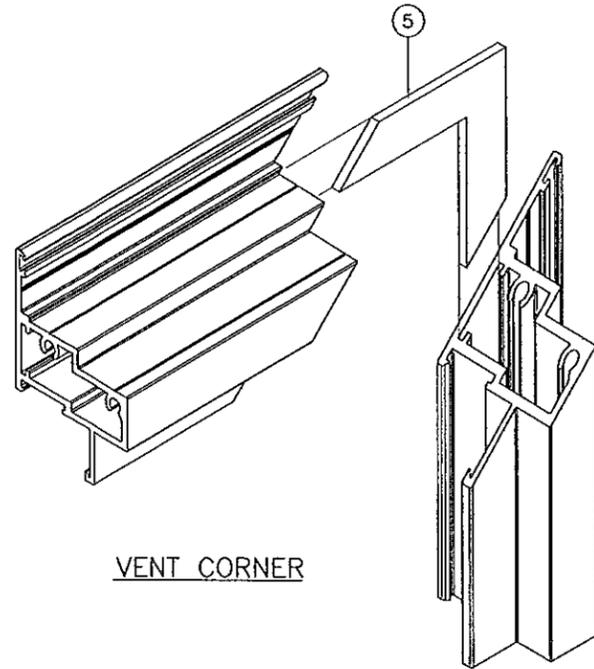
APR 30 2014

af c
AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
1235 S.W. 87 AVE
MIAMI, FLORIDA 33174
TEL. (305) 264-8100 FAX. (305) 262-6978
COMP-ANL\W98-100CGI

SERIES-238 ALUM OUTSWING CASEMENT WDW. (L.M.I.)
CGI WINDOWS & DOORS INC.
10100 N.W. 25TH STREET
MIAMI, FL. 33172
TEL. (305) 593-6590 FAX. (305) 593-6592

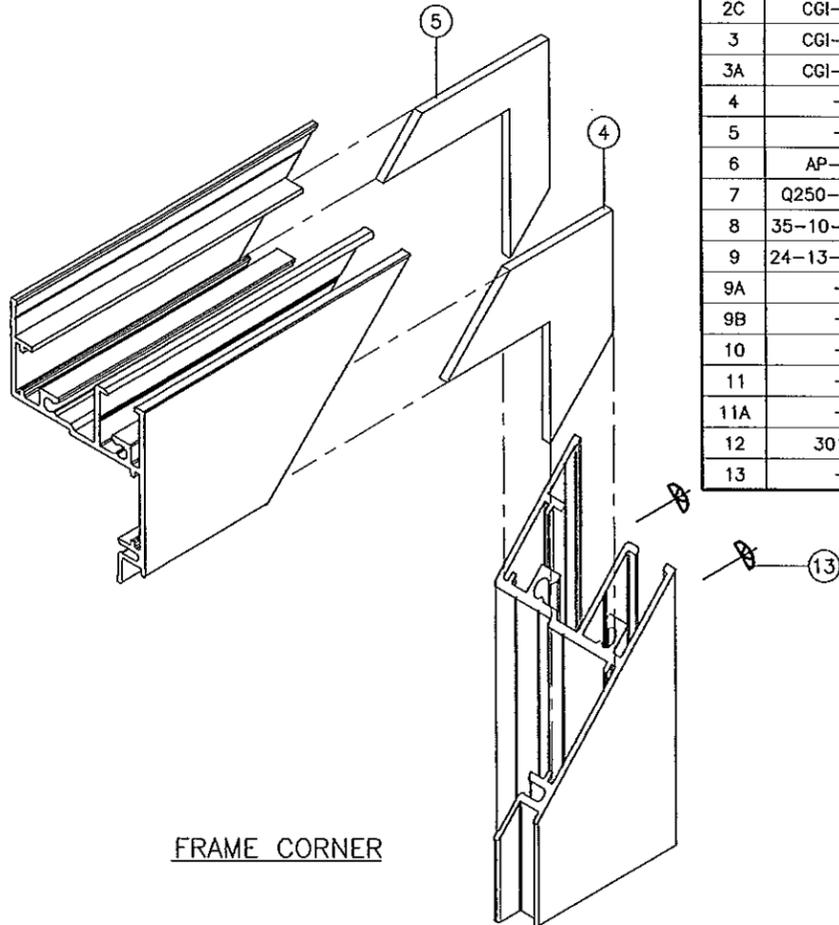
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G	12.06.12		LOCK OPTION ADDED
H	02.28.13		REV. PER REVISION COMMENTS
I	04.25.14		NO CHANGE THIS SHEET

date: 12-04-98	scale: 1/2" = 1"
dr. by: HAMID	chk. by:
drawing no. W98-100	
sheet 1.1 of 7	

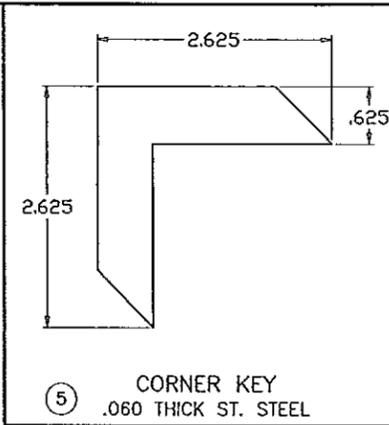


VENT CORNER

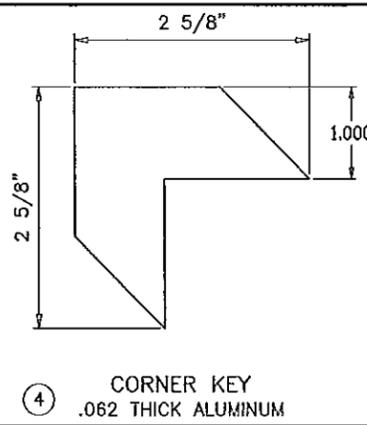
ALL FRAME AND VENT CORNERS TO BE SEALED WITH GE SILPRUF OR EQUIV.



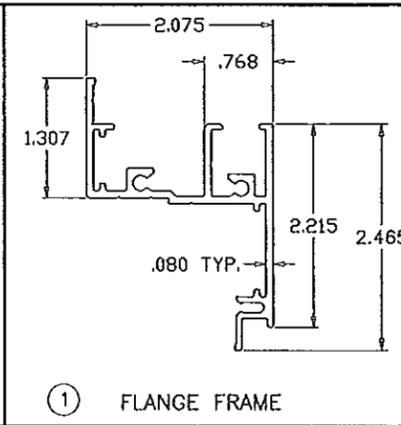
FRAME CORNER



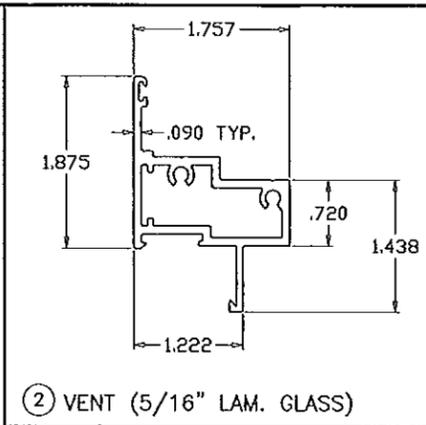
5 CORNER KEY
.060 THICK ST. STEEL



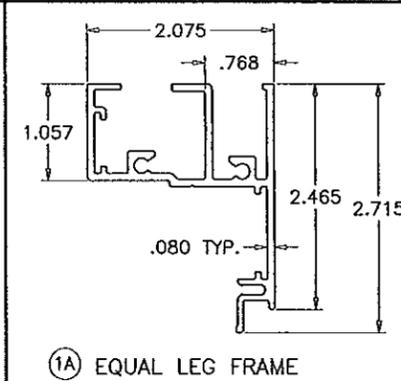
4 CORNER KEY
.062 THICK ALUMINUM



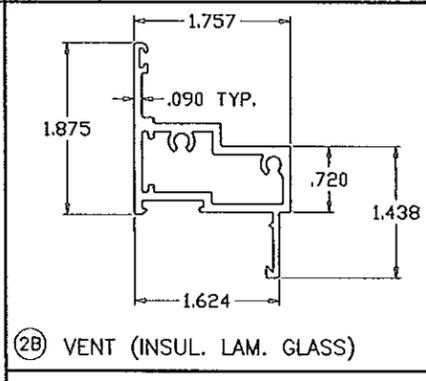
1 FLANGE FRAME



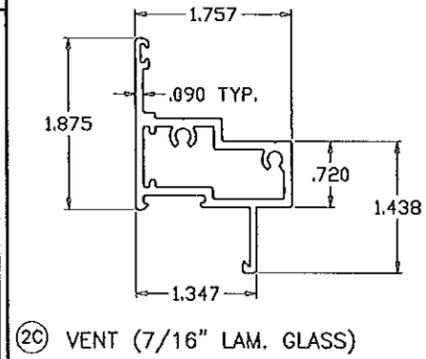
2 VENT (5/16" LAM. GLASS)



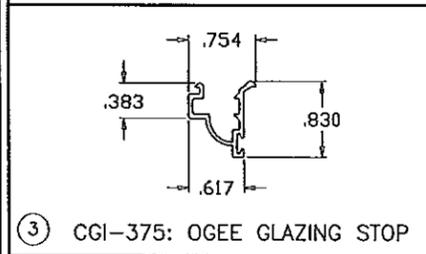
1A EQUAL LEG FRAME



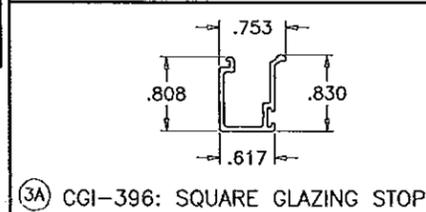
2B VENT (INSUL. LAM. GLASS)



2C VENT (7/16" LAM. GLASS)



3 CGI-375: OGEE GLAZING STOP



3A CGI-396: SQUARE GLAZING STOP

ITEM	PART #	QUANTITY	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
1	CGI-373	4	FLANGE FRAME	6063-T6	INDALEX OR EQUIV.
1A	CGI-397	4	EQUAL LEG FRAME	6063-T6	INDALEX OR EQUIV.
2	CGI-378	4	VENT (5/16" LAM. GLASS)	6063-T6	INDALEX OR EQUIV.
2B	CGI-381	4	VENT (INSUL. LAM. GLASS)	6063-T6	INDALEX OR EQUIV.
2C	CGI-385	4	VENT (7/16" LAM. GLASS)	6063-T6	INDALEX OR EQUIV.
3	CGI-375	4	OGEE GLAZING BEAD	6063-T5	INDALEX OR EQUIV.
3A	CGI-396	4	SQUARE GLAZING BEAD	6063-T5	INDALEX OR EQUIV.
4	-	4	.060 THICK CORNER KEY	ALUMINUM	-
5	-	8	.060 THICK CORNER KEY	ST. STEEL	-
6	AP-425	AS REQD.	FRAME WEATHERSTRIPPING	-	SCHLEGEL APTUS
7	Q250-K-190	AS REQD.	VENT WEATHERSTRIPPING	-	SCHLEGEL Q-LON
8	35-10-00-101	2/ VENT	4 BAR HINGE, AT TOP AND BOTTOM	STEEL	TRUTH, ATTACHED W/ (6) #8 X 3/8" SS SMS
9	24-13-00-202	2/ VENT	FACE MOUNT LOCK	STEEL	TRUTH, ATTACHED W/ (2) #8 X 3/8" SMS
9A	-	1/ VENT	MULTI POINT LOCK	-	TRUTH
9B	-	1/ VENT	MULTI POINT LOCK	-	INTERLOCK
10	-	2/ VENT	.110 THICK LOCK KEEPER, AT FRAME JAMB FACING LOCK	STEEL	CGI, ATTACHED W/ (2) #10 X 3/8" SS SMS
11	-	1	OPERATOR (OPTIONAL)	STEEL	TRUTH, ATTACHED W/ (2) #8 X 3/8" SS SMS
11A	-	1	OPERATOR (OPTIONAL)	STEEL	INTERLOCK
12	30175	1	OPERATOR TRACK	STEEL	TRUTH, ATTACHED W/ (2) #8 X 3/8" SS SMS
13	-	2/ CORNER	FRAME AND VENT ASSEMBLY SCREWS	-	#10 X 1-1/4" SS SMS

afC
AL-FAROOQ CORPORATION
 ENGINEERS & PRODUCT DEVELOPMENT
 1235 S.W. 87 AVE
 MIAMI, FLORIDA 33174
 TEL. (305) 264-8100 FAX. (305) 262-9978
 COMP-ANL\W98-100CGI

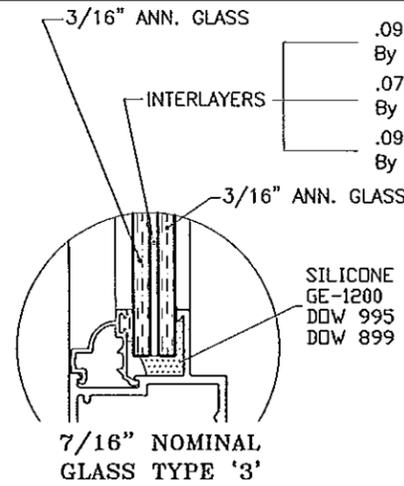
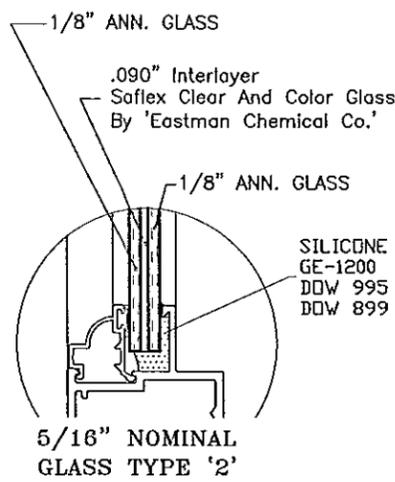
SERIES-238 ALUM OUTSWING CASEMENT WDW. (L.M.I.)
CGI WINDOWS & DOORS INC.
 10100 N.W. 25TH STREET
 MIAMI, FL. 33172
 TEL. (305) 593-6590 FAX. (305) 593-6592

no.	date	by	description
F	02.21.12		NO CHANGE THIS SHEET
G	12.06.12		LOCK OPTION ADDED
H	02.28.13		REV. PER RER COMMENTS
I	04.25.14		NO CHANGE THIS SHEET

date:	12-04-98
scale:	1/2" = 1"
dr. by:	HAMID
chk. by:	

Engr: JAVAD AHMAD
 CIVIL
 FLA. PE # 70592
 C.A.N. 3538
 APR 30 2014

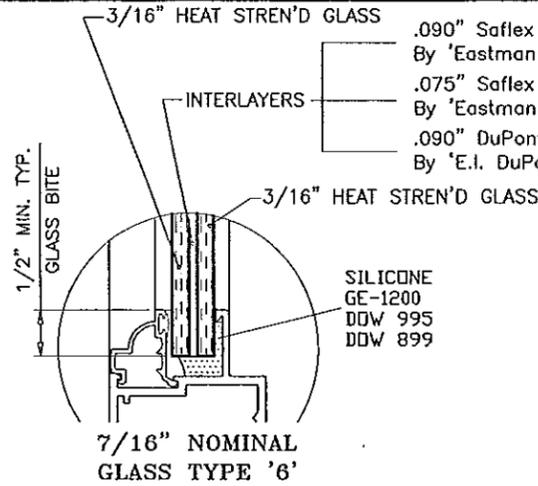
PRODUCT REVISED
 as complying with the Florida
 Building Code
 Acceptance No 14-0506.01
 Expiration Date Oct 26, 2018
 By *Manuel Perez*
 Miami Dade Product Control



.090" Saflex Clear And Color Glass
By 'Eastman Chemical Co.'

.075" Saflex CP With PET Core
By 'Eastman Chemical Co.'

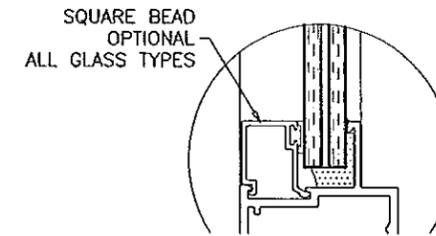
.090" DuPont SentryGlas
By 'E.I. DuPont De Nemours & Co., Inc.'



.090" Saflex Clear And Color Glass
By 'Eastman Chemical Co.'

.075" Saflex CP With PET Core
By 'Eastman Chemical Co.'

.090" DuPont SentryGlas
By 'E.I. DuPont De Nemours & Co., Inc.'



PERFORMANCE VALUES OF IMPACT RESISTANT WINDOWS							
NO SHUTTERS REQUIRED							
REFER TO SHEETS 5 THRU 7 FOR INSTALLATION DETAILS							
WINDOW DIMS.		GLASS TYPE '2'		GLASS TYPE '3'		GLASS TYPE '6'	
WIDTH	HEIGHT	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)
20"	36"	110.0	194.3	110.0	195.0	110.0	195.0
24"		110.0	161.9	110.0	195.0	110.0	195.0
28"		110.0	138.8	110.0	195.0	110.0	195.0
30"		110.0	129.5	110.0	195.0	110.0	195.0
32"		110.0	121.4	110.0	195.0	110.0	195.0
36"		107.9	107.9	110.0	195.0	110.0	195.0
40"		97.1	97.1	110.0	195.0	110.0	120.0
42"		92.5	92.5	110.0	120.0	60.0	60.0
20"	42"	110.0	166.5	110.0	195.0	110.0	195.0
24"		110.0	138.8	110.0	195.0	110.0	195.0
28"		110.0	118.9	110.0	195.0	110.0	195.0
30"		110.0	111.0	110.0	195.0	110.0	195.0
32"		104.1	104.1	110.0	195.0	110.0	120.0
36"		92.5	92.5	110.0	120.0	110.0	120.0
40"		83.3	83.3	110.0	120.0	110.0	120.0
42"		79.3	79.3	110.0	120.0	60.0	60.0
20"	48"	110.0	145.7	110.0	195.0	110.0	195.0
24"		110.0	121.4	110.0	195.0	110.0	195.0
28"		103.8	104.1	110.0	195.0	110.0	120.0
30"		97.1	97.1	110.0	195.0	110.0	120.0
32"		91.1	91.1	110.0	120.0	110.0	120.0
36"		80.9	80.9	110.0	120.0	110.0	120.0
40"		72.8	72.8	110.0	120.0	110.0	120.0
42"		69.4	69.4	110.0	120.0	60.0	60.0
20"	54"	110.0	129.5	110.0	195.0	110.0	195.0
24"		98.0	107.9	110.0	195.0	110.0	195.0
28"		88.2	92.5	110.0	120.0	110.0	120.0
30"		84.4	86.3	110.0	120.0	110.0	120.0
32"		80.9	80.9	110.0	120.0	110.0	120.0
36"		71.9	71.9	110.0	120.0	110.0	120.0
40"		64.8	64.8	110.0	120.0	110.0	120.0
42"		61.7	61.7	110.0	120.0	60.0	60.0
20"	60"	98.8	112.6	110.0	195.0	110.0	195.0
24"		85.8	95.4	110.0	195.0	110.0	120.0
28"		76.7	83.3	110.0	120.0	110.0	120.0
30"		73.2	77.7	110.0	120.0	110.0	120.0
32"		70.2	72.8	110.0	120.0	110.0	120.0
36"		64.8	64.8	110.0	120.0	110.0	120.0
40"		-	-	60.0	60.0	60.0	60.0
42"		-	-	60.0	60.0	60.0	60.0

PERFORMANCE VALUES OF IMPACT RESISTANT WINDOWS								
NO SHUTTERS REQUIRED								
REFER TO SHEETS 5 THRU 7 FOR INSTALLATION DETAILS								
WINDOW DIMS.		GLASS TYPE '2'		GLASS TYPE '3'		GLASS TYPE '6'		
WIDTH	HEIGHT	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)	
20"	66"	86.7	86.7	110.0	195.0	110.0	195.0	
24"		73.4	73.4	110.0	120.0	110.0	120.0	
28"		64.2	64.2	110.0	120.0	110.0	120.0	
30"		60.6	60.6	110.0	120.0	110.0	120.0	
32"		57.5	57.5	110.0	120.0	110.0	120.0	
36"		-	-	60.0	60.0	60.0	60.0	
40"		-	-	60.0	60.0	60.0	60.0	
20"		72"	66.4	66.4	110.0	195.0	110.0	120.0
24"	56.1		56.1	110.0	120.0	110.0	120.0	
28"	48.9		48.9	110.0	120.0	110.0	120.0	
30"	46.0		46.0	110.0	120.0	110.0	120.0	
32"	43.6		43.6	110.0	120.0	110.0	120.0	
36"	-		-	60.0	60.0	60.0	60.0	
32"	76"		-	-	60.0	60.0	60.0	60.0
36"			-	-	60.0	60.0	60.0	60.0
20"		78"	52.0	52.0	110.0	120.0	110.0	120.0
24"			43.8	43.8	110.0	120.0	110.0	120.0
28"	38.1		38.1	110.0	120.0	110.0	120.0	
30"	-		-	110.0	120.0	60.0	60.0	
32"	-		-	60.0	60.0	60.0	60.0	
20"	84"		41.5	41.5	110.0	120.0	110.0	120.0
24"			34.9	34.9	110.0	120.0	110.0	120.0
28"			-	-	110.0	120.0	54.5	54.5
30"		-	-	51.2	51.2	51.2	51.2	
32"		-	-	48.3	48.3	48.3	48.3	

PERFORMANCE VALUES OF IMPACT RESISTANT WINDOWS							
NO SHUTTERS REQUIRED							
REFER TO SHEETS 5 THRU 7 FOR INSTALLATION DETAILS							
WINDOW DIMS.		GLASS TYPE '2'		GLASS TYPE '3'		GLASS TYPE '6'	
WIDTH	HEIGHT	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)
19-1/8"	26"	110.0	195.0	110.0	195.0	110.0	195.0
26-1/2"		110.0	195.0	110.0	195.0	110.0	195.0
37"		110.0	145.4	110.0	195.0	110.0	195.0
42"		110.0	128.1	110.0	195.0*	110.0	195.0*
19-1/8"	38-3/8"	110.0	190.6	110.0	195.0	110.0	195.0
26-1/2"		110.0	137.5	110.0	195.0	110.0	195.0
37"		98.5	98.5	110.0	194.5	110.0	120.0
42"		86.8	86.8	110.0	120.0	110.0	120.0
19-1/8"	50-5/8"	110.0	144.5	110.0	195.0	110.0	195.0
26-1/2"		99.7	104.3	110.0	195.0	110.0	195.0
37"		74.7	74.7	110.0	120.0	110.0	120.0
42"		65.8	65.8	110.0	120.0	110.0	120.0
19-1/8"	63"	96.7	104.2	110.0	195.0	110.0	195.0
26-1/2"		74.9	77.9	110.0	120.0	110.0	120.0
37"		60.0	60.0	110.0	120.0	110.0	120.0
42"		-	-	60.0	60.0	60.0	60.0
19-1/8"	74-1/4"	63.0	63.0	110.0	195.0	110.0	120.0
26-1/2"		46.6	46.6	110.0	120.0	110.0	120.0
37"		-	-	59.8	59.8	59.8	59.8
37"		77"	-	-	56.3	56.3	56.3

* LIMIT MAX. LOADS TO 171.0 PSF
WHEN MULTI POINT LOCK BY 'INETRLOCK' (9B)
IS USED

** SIZE 37" X 77" APPLICABLE TO FLANGE FRAMES ONLY
SEE SHEET 1

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

Engr: JAVAD AHMAD
CML
FLA. PE # 70592
C.A.N. 3538

APR 30 2014

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 14-0506-01
Expiration Date Oct 26 2018

By Manuel Perez
Miami Dade Product Control

afC

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
1235 S.W. 87 AVE
MIAMI, FLORIDA 33174
TEL. (305) 264-8100 FAX. (305) 262-6978
COMP-ANL W98-100CGI

SERIES-238 ALUM OUTSWING CASEMENT WDW. (L.M.I.)

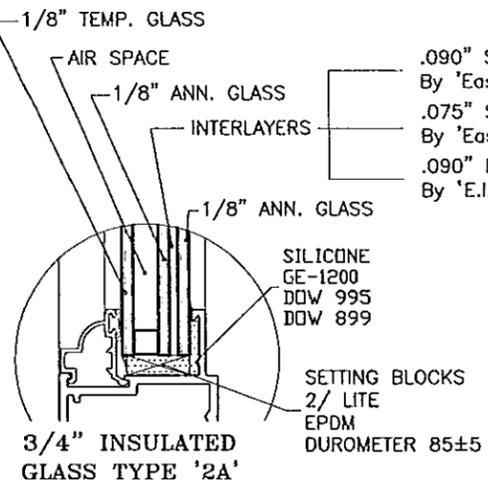
CGI WINDOWS & DOORS INC.
10100 N.W. 25TH STREET
MIAMI, FL. 33172
TEL. (305) 593-6590 FAX. (305) 593-6592

revisions:	no	date	by	description
	F	02.21.12		UPDATED TO 2010 FBC
	G	12.06.12		LOCK OPTION ADDED
	H	02.28.13		REV. PER RER COMMENTS
	I	04.25.14		GENERAL REVISION

date: 12-04-98
scale: 1/2" = 1"
dr. by: HAMID
chk. by:

drawing no.
W98-100

sheet 3 of 7

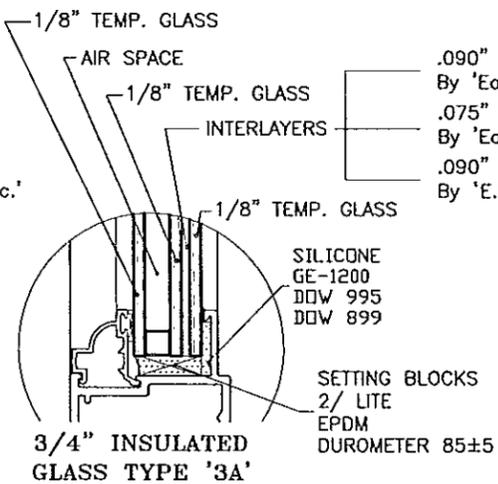


3/4" INSULATED GLASS TYPE '2A'

.090" Saflex Clear And Color Glass By 'Eastman Chemical Co.'
 .075" Saflex CP With PET Core By 'Eastman Chemical Co.'
 .090" DuPont SentryGlas By 'E.I. DuPont De Nemours & Co., Inc.'

SILICONE GE-1200 DOW 995 DOW 899

SETTING BLOCKS 2/ LITE EPDM DUROMETER 85±5



3/4" INSULATED GLASS TYPE '3A'

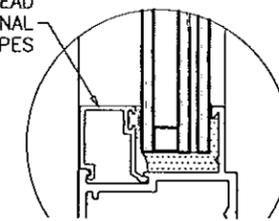
.090" Saflex Clear And Color Glass By 'Eastman Chemical Co.'
 .075" Saflex CP With PET Core By 'Eastman Chemical Co.'
 .090" DuPont SentryGlas By 'E.I. DuPont De Nemours & Co., Inc.'

SILICONE GE-1200 DOW 995 DOW 899

SETTING BLOCKS 2/ LITE EPDM DUROMETER 85±5

AIR SPACE CONSISTING OF:
 SPACER:
 METAL SPACER AROUND THE PERIMETER OF THE GLASS.

SQUARE BEAD OPTIONAL ALL GLASS TYPES



PERFORMANCE VALUES OF IMPACT RESISTANT WINDOWS
 NO SHUTTERS REQUIRED
 REFER TO SHEETS 5 THRU 7 FOR INSTALLATION DETAILS

WINDOW DIMS.		GLASS TYPE '2A'		GLASS TYPE '3A'	
WIDTH	HEIGHT	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)
20"	36"	110.0	194.3	110.0	195.0
24"		110.0	161.9	110.0	195.0
28"		110.0	138.8	110.0	195.0
30"		110.0	129.5	110.0	195.0
32"		110.0	121.4	110.0	195.0
36"		107.9	107.9	110.0	195.0
40"		97.1	97.1	110.0	120.0
42"		92.5	92.5	110.0	120.0
20"	42"	110.0	166.5	110.0	195.0
24"		110.0	138.8	110.0	195.0
28"		110.0	118.9	110.0	195.0
30"		110.0	111.0	110.0	195.0
32"		104.1	104.1	110.0	120.0
36"		92.5	92.5	110.0	120.0
40"		83.3	83.3	110.0	120.0
42"		79.3	79.3	110.0	120.0
20"	48"	110.0	145.7	110.0	195.0
24"		110.0	121.4	110.0	195.0
28"		104.1	104.1	110.0	120.0
30"		97.1	97.1	110.0	120.0
32"		91.1	91.1	110.0	120.0
36"		80.9	80.9	110.0	120.0
40"		72.8	72.8	110.0	120.0
42"		69.4	69.4	110.0	120.0
20"	54"	110.0	129.5	110.0	195.0
24"		98.0	107.9	110.0	195.0
28"		92.5	92.5	110.0	120.0
30"		84.4	86.3	110.0	120.0
32"		80.9	80.9	110.0	120.0
36"		71.9	71.9	110.0	120.0
40"		64.8	64.8	110.0	120.0
42"		61.7	61.7	110.0	120.0
20"	60"	98.8	112.6	110.0	195.0
24"		85.8	95.4	110.0	120.0
28"		76.7	83.3	110.0	120.0
30"		73.2	77.7	110.0	120.0
32"		70.2	72.8	110.0	120.0
36"		64.8	64.8	110.0	120.0
40"		60.0	60.0	-	-
42"		60.0	60.0	-	-

PERFORMANCE VALUES OF IMPACT RESISTANT WINDOWS
 NO SHUTTERS REQUIRED
 REFER TO SHEETS 5 THRU 7 FOR INSTALLATION DETAILS

WINDOW DIMS.		GLASS TYPE '2A'		GLASS TYPE '3A'		
WIDTH	HEIGHT	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)	
20"	66"	86.7	86.7	110.0	169.0	
24"		73.4	73.4	110.0	120.0	
28"		64.2	64.2	110.0	120.0	
30"		60.6	60.6	110.0	118.2	
32"		57.5	57.5	110.0	112.2	
36"		60.0	60.0	-	-	
40"		60.0	60.0	-	-	
20"		72"	66.4	66.4	110.0	120.0
24"	56.1		56.1	109.3	109.3	
28"	48.9		48.9	95.3	95.3	
30"	46.0		46.0	89.8	89.8	
32"	43.6		43.6	85.0	85.0	
36"	60.0		60.0	-	-	
32"	76"		60.0	60.0	-	-
36"			60.0	60.0	-	-
20"	78"	52.0	52.0	101.3	101.3	
24"		43.8	43.8	85.4	85.4	
28"		38.1	38.1	74.3	74.3	
32"		60.0	60.0	-	-	
20"	84"	41.5	41.5	80.8	80.8	
24"		34.9	34.9	68.0	68.0	
28"		54.5	54.5	-	-	
30"		51.2	51.2	-	-	
32"		48.3	48.3	-	-	

PERFORMANCE VALUES OF IMPACT RESISTANT WINDOWS
 NO SHUTTERS REQUIRED
 REFER TO SHEETS 5 THRU 7 FOR INSTALLATION DETAILS

WINDOW DIMS.		GLASS TYPE '2A'		GLASS TYPE '3A'	
WIDTH	HEIGHT	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)
19-1/8"	26"	110.0	195.0	110.0	195.0
26-1/2"		110.0	203.0	110.0	195.0
37"		110.0	145.4	110.0	195.0
42"		110.0	128.1	110.0	195.0*
19-1/8"	38-3/8"	110.0	190.6	110.0	195.0
26-1/2"		110.0	137.5	110.0	195.0
37"		98.5	98.5	110.0	120.0
42"	86.8	86.8	110.0	120.0	
19-1/8"	50-5/8"	110.0	144.5	110.0	195.0
26-1/2"		99.7	104.3	110.0	195.0
37"		74.7	74.7	110.0	120.0
42"		65.8	65.8	110.0	120.0
19-1/8"	63"	96.7	104.2	110.0	195.0
26-1/2"		74.9	77.9	110.0	120.0
37"		60.0	60.0	110.0	117.0
42"		60.0	60.0	-	-
19-1/8"	74-1/4"	63.0	63.0	110.0	120.0
26-1/2"		46.6	46.6	90.9	90.9
37"		59.8	59.8	-	-
37"	77"	56.3	56.3	-	-

* LIMIT MAX. LOADS TO 171.0 PSF WHEN MULTI POINT LOCK BY 'INETRLOCK' (9B) IS USED

** SIZE 37" X 77" APPLICABLE TO FLANGE FRAMES ONLY SEE SHEET 1

NOTE:
 LOAD/AREA LIMITS
 FOR +110.0, -120.0 PSF = 16.34 SQ. FT.
 +110.0, -195.0 PSF = 10.00 SQ. FT.

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

Engr: JAVAD AHMAD
 CIVIL
 FLA. PE # 70592
 C.A.N. 353B

APR 30 2014

PRODUCT REVISED as complying with the Florida Building Code
 Acceptance No. 14-0506-01
 Expiration Date 02-26-2018
 By: *Manuel Ferrer*
 Miami Dade Product Control

afC
AL-FAROOQ CORPORATION
 ENGINEERS & PRODUCT DEVELOPMENT
 1235 S.W. 87 AVE
 MIAMI, FLORIDA 33174
 TEL (305) 262-6978
 FAX (305) 262-6978
 COMP-ANL\W98-100CGI

SERIES-238 ALUM. OUTSWING CASEMENT WDW. (L.M.I.)
CGI WINDOWS & DOORS INC.
 10100 N.W. 25TH STREET
 MIAMI, FL. 33172
 TEL (305) 593-6590 FAX (305) 593-6592

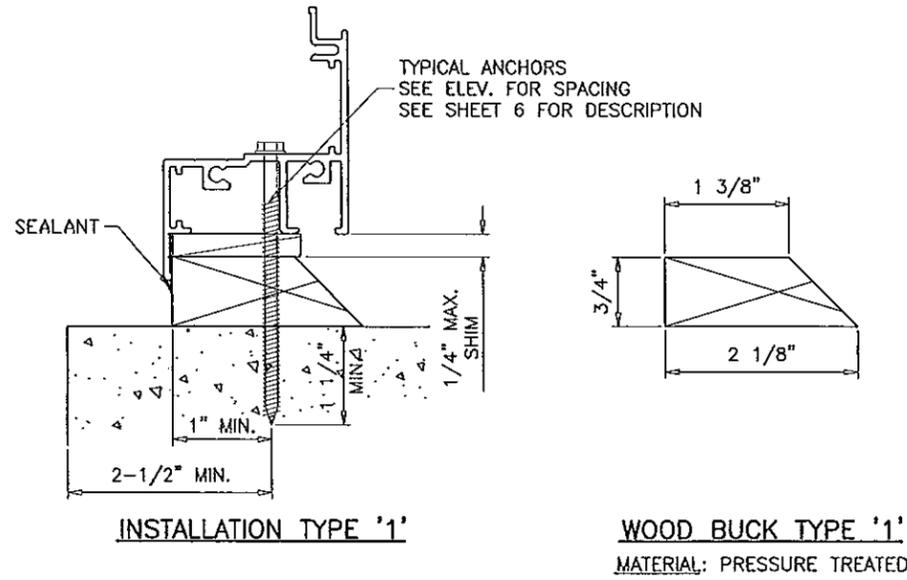
NO	DATE	DESCRIPTION
F	02.21.12	UPDATED TO 2010 FBC
G	12.06.12	LOCK OPTION ADDED
H	02.28.13	REV. PER PER COMMENTS
I	04.25.14	GENERAL REVISION

date: 12-04-98
 scale: 1/2" = 1"
 dr. by: HAMID
 chk. by:

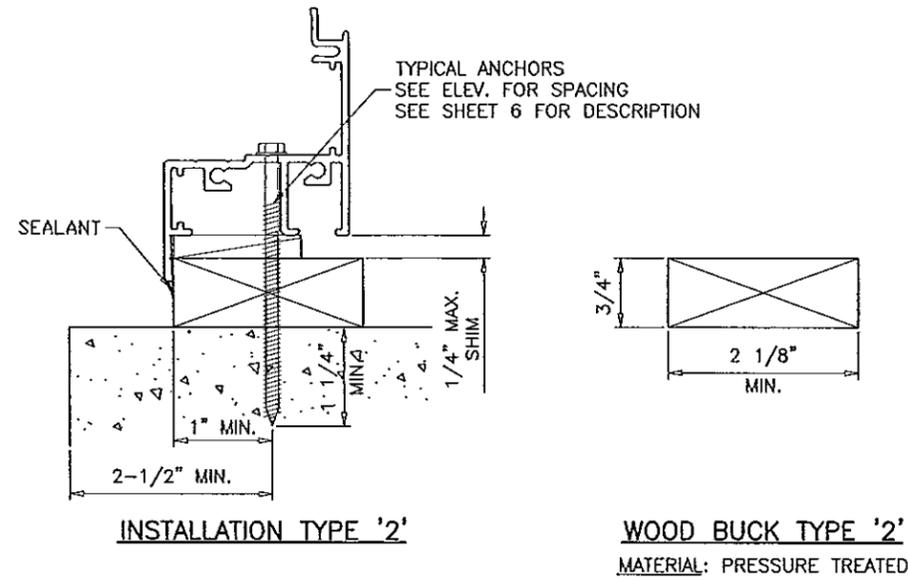
drawing no.
W98-100
 sheet 4 of 7

INSTALLATION CONDITIONS FLANGE FRAME (APPLIES TO ALL FOUR SIDES)

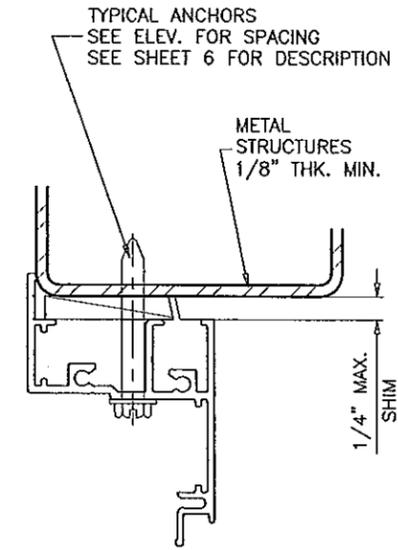
FOR ANCHOR PERFORMANCE VALUES SEE SHEET 6



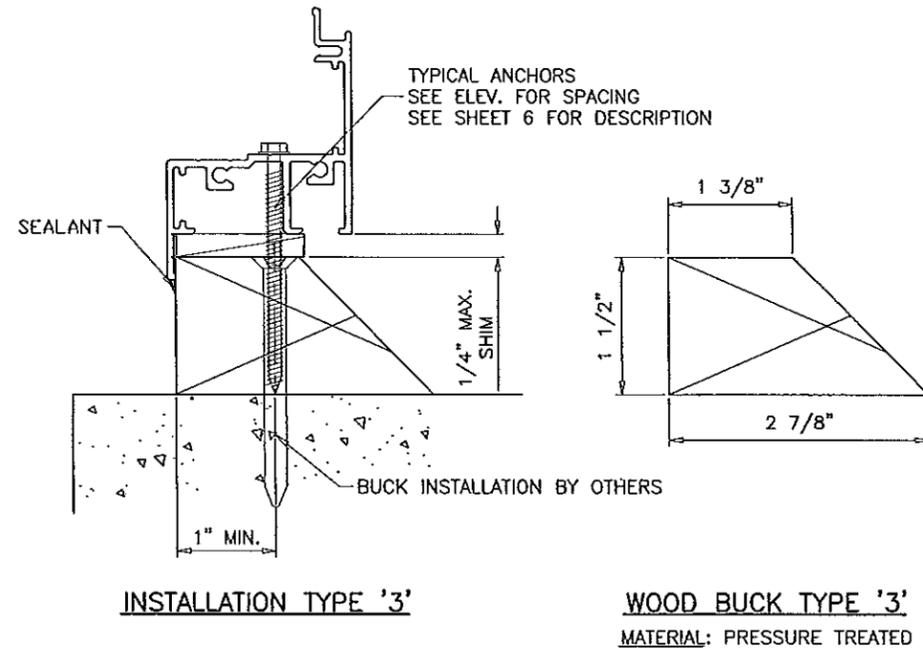
TYPICAL INSTALLATION DETAIL
ON ALL FOUR SIDES/USING WOOD



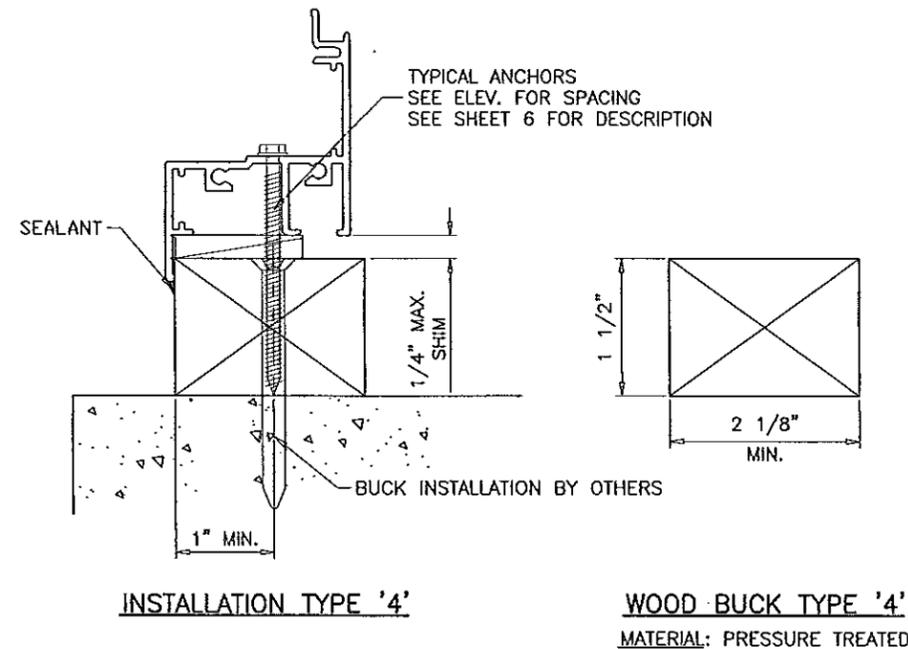
TYPICAL INSTALLATION DETAIL
ON ALL FOUR SIDES/USING WOOD



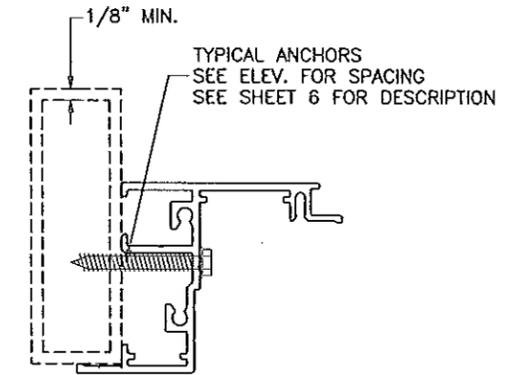
ATTACHMENT TO
METAL STRUCTURES



TYPICAL INSTALLATION DETAIL
ON ALL FOUR SIDES/USING WOOD

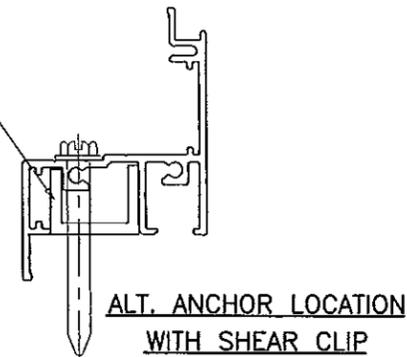


TYPICAL INSTALLATION DETAIL
ON ALL FOUR SIDES/USING WOOD



ATTACHMENT TO
APPROVED MULLIONS

ALUM CHANNEL
3/4" X 1" X 3/4" X 1/8"
2-1/2" LONG
AT ANCHOR LOCATIONS



WOOD BUCKS NOT BY CGI CORP., MUST SUSTAIN LOADS IMPOSED BY GLAZING SYSTEM AND TRANSFER THEM TO THE BUILDING STRUCTURE.

Engr: JAVAD AHMAD
CML
FLA. P.E. # 70592
C.A.N. 3538

APR 30 2014

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 14-0506-01
Expiration Date Oct. 26, 2018

By Manuel Perry
Miami Dade Product Control

afC

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
1235 S.W. 87 AVE
MIAMI, FLORIDA 33174
TEL. (305) 264-8100 FAX. (305) 262-6978
COMP-ANL W98-100CGI

SERIES-238 ALUM OUTSWING CASEMENT WDW. (L.M.I.)

CGI WINDOWS & DOORS INC.
10100 N.W. 25TH STREET
MIAMI, FL. 33172
TEL. (305) 593-6590 FAX. (305) 593-6592

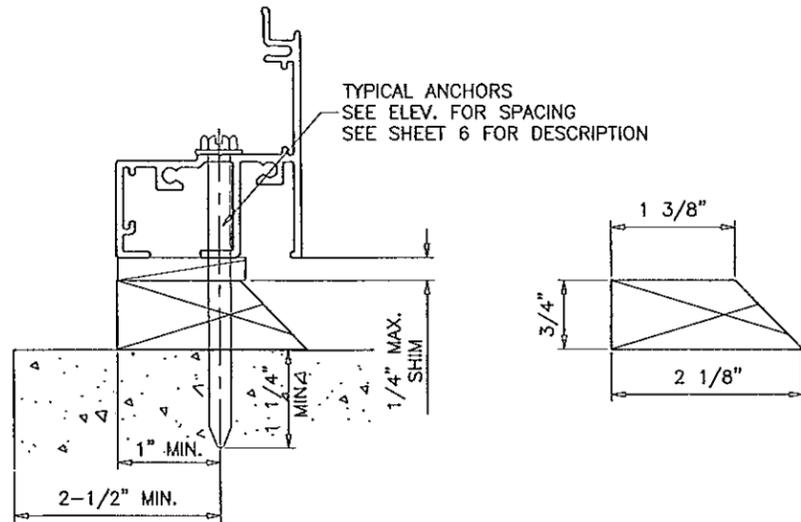
revisions:	no	date	by	description
	F	02.21.12		NO CHANGE THIS SHEET
	G	12.06.12		NO CHANGE THIS SHEET
	H	02.28.13		REV. PER RER COMMENTS
	I	04.25.14		NO CHANGE THIS SHEET

date:	12-04-98
scale:	1/2" = 1"
dr. by:	HAMID
chk. by:	

drawing no.
W98-100
sheet 5 of 7

INSTALLATION CONDITIONS EQUAL LEG FRAME (APPLIES TO ALL FOUR SIDES)

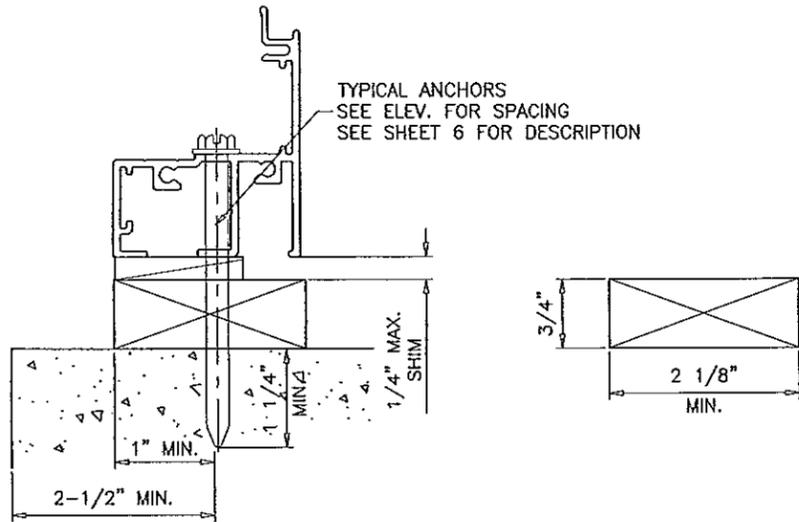
FOR ANCHOR PERFORMANCE VALUES SEE SHEET 6



INSTALLATION TYPE '1'

WOOD BUCK TYPE '1'
MATERIAL: PRESSURE TREATED

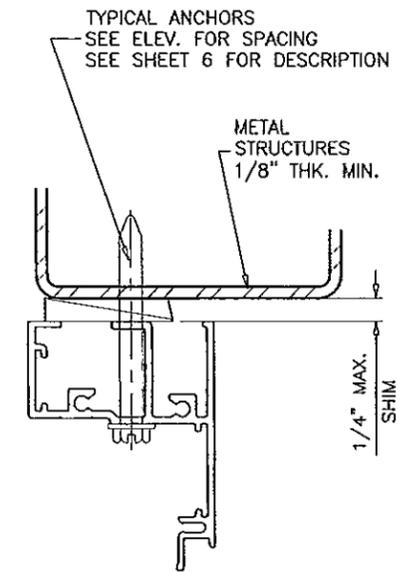
TYPICAL INSTALLATION DETAIL
ON ALL FOUR SIDES/USING WOOD



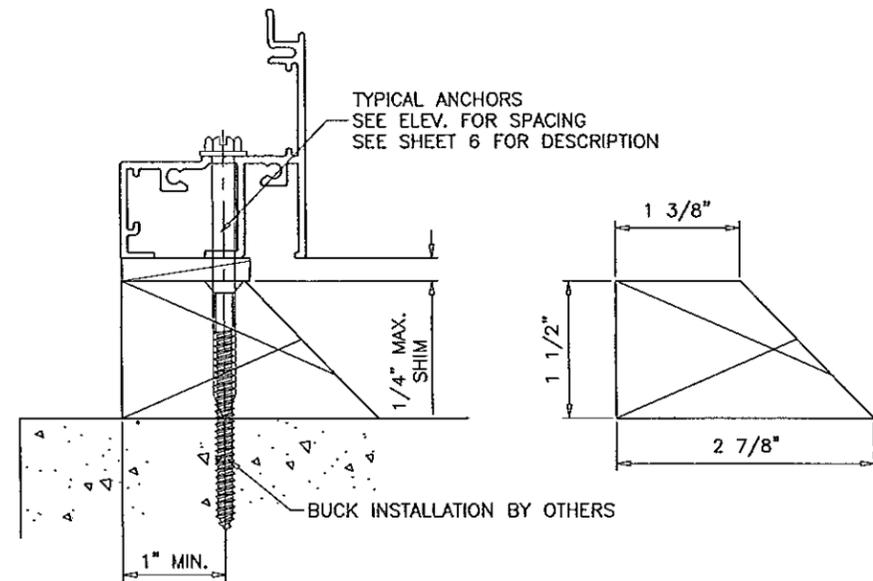
INSTALLATION TYPE '2'

WOOD BUCK TYPE '2'
MATERIAL: PRESSURE TREATED

TYPICAL INSTALLATION DETAIL
ON ALL FOUR SIDES/USING WOOD



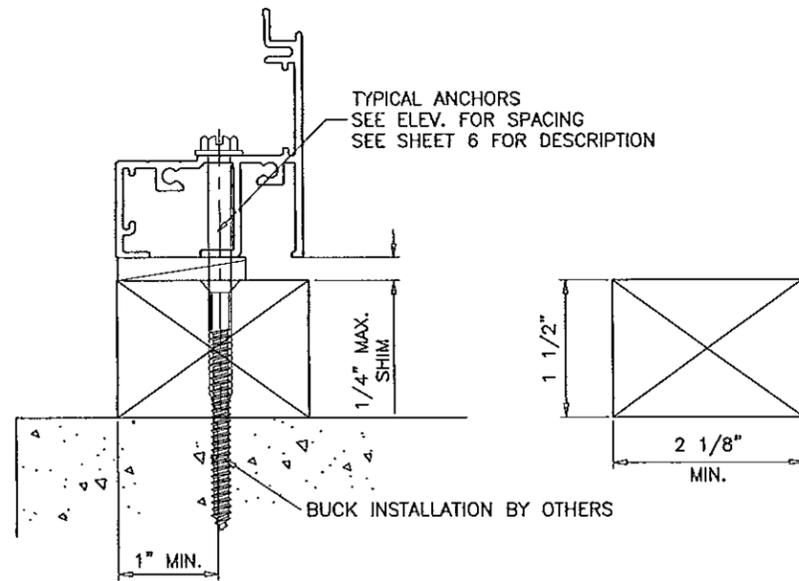
ATTACHMENT TO
METAL STRUCTURES



INSTALLATION TYPE '3'

WOOD BUCK TYPE '3'
MATERIAL: PRESSURE TREATED

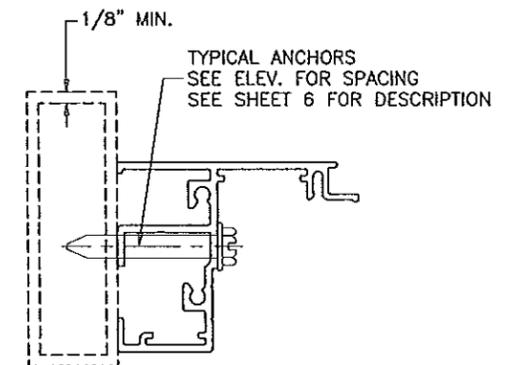
TYPICAL INSTALLATION DETAIL
ON ALL FOUR SIDES/USING WOOD



INSTALLATION TYPE '4'

WOOD BUCK TYPE '4'
MATERIAL: PRESSURE TREATED

TYPICAL INSTALLATION DETAIL
ON ALL FOUR SIDES/USING WOOD



ATTACHMENT TO
APPROVED MULLIONS

a f c
AL-FAROOQ CORPORATION
 ENGINEERS & PRODUCT DEVELOPMENT
 1235 S.W. 87 AVE
 MIAMI, FLORIDA 33174
 TEL (305) 262-6978
 FAX (305) 262-6978
 COMP-ANL\W98-100CGI

SERIES-238 ALUM OUTSWING CASEMENT WDW. (L.M.I.)
CGI WINDOWS & DOORS INC.
 10100 N.W. 25TH STREET
 MIAMI, FL. 33172
 TEL. (305) 593-6590 FAX. (305) 593-6592

no	date	description	BY
F	02.21.12	NO CHANGE THIS SHEET	
G	12.06.12	NO CHANGE THIS SHEET	
H	02.28.13	REV. PER RER COMMENTS	
I	04.25.14	NO CHANGE THIS SHEET	

date: 12-04-98	scale: 1/2" = 1"
dr. by: HAMID	chk. by:

drawing no.
W98-100
 sheet 5.1 of 7

Engr. JAVAD AHMAD
 CIVIL
 FLA. PE # 70592
 C.A.N. 3538
APR 30 2014

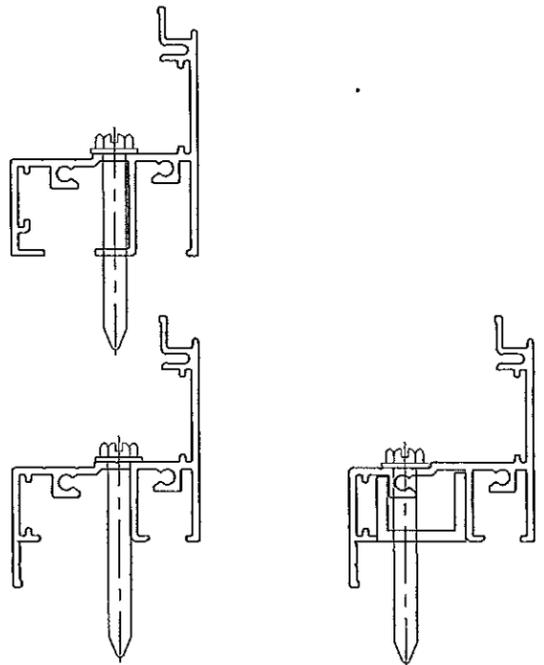
PRODUCT REVISED
 as complying with the Florida
 Building Code
 Acceptance No 14-0506.01
 Expiration Date 02/26/2018
 By *Muhammad Pervez*
 Miami Dade Product Control

WOOD BUCKS NOT BY CGI CORP., MUST SUSTAIN LOADS IMPOSED BY GLAZING SYSTEM AND TRANSFER THEM TO THE BUILDING STRUCTURE.

PERFORMANCE VALUES OF INSTALLATION ANCHORS REFER TO SHEET 5 FOR DETAILS					
WINDOW DIMS.		ANCHORS W/O SHEAR CLIP		ANCHORS WITH SHEAR CLIP	
		AT 17" O.C.	AT 10" O.C.	AT 17" O.C.	AT 10" O.C.
WIDTH	HEIGHT	EXT.(+)/INT.(-)	EXT.(+)/INT.(-)	EXT.(+)/INT.(-)	EXT.(+)/INT.(-)
20"	36"	195.0	195.0	154.8	195.0
24"		195.0	195.0	129.0	172.0
28"		192.9	195.0	110.6	147.4
30"		180.0	195.0	103.2	137.6
32"		168.8	195.0	96.8	129.0
36"		150.0	195.0	86.0	114.7
40"		135.0	180.0	77.4	103.2
42"		128.6	171.4	73.7	98.3
20"	42"	195.0	195.0	132.7	176.9
24"		192.9	195.0	110.6	147.4
28"		165.3	195.0	94.8	126.4
30"		154.3	195.0	88.5	117.9
32"		144.6	192.9	82.9	110.6
36"		128.6	171.4	73.7	98.3
40"		115.7	154.3	66.3	88.5
42"		110.2	146.9	63.2	84.2
20"	48"	195.0	195.0	154.8	193.5
24"		195.0	195.0	129.0	161.3
28"		192.9	195.0	110.6	138.2
30"		180.0	195.0	103.2	129.0
32"		168.8	195.0	96.8	120.9
36"		150.0	187.5	86.0	107.5
40"		135.0	168.8	77.4	96.8
42"		128.6	160.7	73.7	92.1
20"	54"	195.0	195.0	137.6	195.0
24"		195.0	195.0	114.7	172.0
28"		171.4	195.0	98.3	147.4
30"		160.0	195.0	91.7	137.6
32"		150.0	195.0	86.0	129.0
36"		133.3	195.0	76.4	114.7
40"		120.0	180.0	68.8	103.2
42"		114.3	171.4	65.5	98.3
20"	60"	195.0	195.0	123.8	185.8
24"		180.0	195.0	103.2	154.8
28"		154.3	195.0	88.5	132.7
30"		144.0	195.0	82.6	123.8
32"		135.0	195.0	77.4	116.1
36"		120.0	180.0	68.8	103.2
40"		108.0	162.0	61.9	92.9
42"		102.9	154.3	59.0	88.5
20"	66"	195.0	195.0	140.7	195.0
24"		195.0	195.0	117.3	164.2
28"		175.3	195.0	100.5	140.7
30"		163.6	195.0	93.8	131.3
32"		153.4	195.0	88.0	123.1
36"		136.4	190.9	78.2	109.5
40"		122.7	171.8	70.4	98.5
20"		72"	195.0	195.0	129.0
24"	187.5		195.0	107.5	150.5
28"	160.7		195.0	92.1	129.0
30"	150.0		195.0	86.0	120.4
32"	140.6		195.0	80.6	112.9
36"	125.0		175.0	71.7	100.3

PERFORMANCE VALUES OF INSTALLATION ANCHORS REFER TO SHEET 5 FOR DETAILS					
WINDOW DIMS.		ANCHORS W/O SHEAR CLIP		ANCHORS WITH SHEAR CLIP	
		AT 17" O.C.	AT 10" O.C.	AT 17" O.C.	AT 10" O.C.
WIDTH	HEIGHT	EXT.(+)/INT.(-)	EXT.(+)/INT.(-)	EXT.(+)/INT.(-)	EXT.(+)/INT.(-)
32"	76"	133.2	195.0	76.4	122.2
36"		118.4	189.5	67.9	108.6
20"	78"	195.0	195.0	119.1	190.5
24"		173.1	195.0	99.2	158.8
28"		148.4	195.0	85.1	136.1
30"		138.5	195.0	79.4	127.0
32"		129.8	195.0	74.4	119.1
20"		84"	195.0	195.0	132.7
24"	195.0		195.0	110.6	165.9
28"	165.3		195.0	94.8	142.2
32"	154.3		195.0	88.5	132.7

PERFORMANCE VALUES OF INSTALLATION ANCHORS REFER TO SHEET 5 FOR DETAILS					
WINDOW DIMS.		ANCHORS W/O SHEAR CLIP		ANCHORS WITH SHEAR CLIP	
		AT 17" O.C.	AT 10" O.C.	AT 17" O.C.	AT 10" O.C.
WIDTH	HEIGHT	EXT.(+)/INT.(-)	EXT.(+)/INT.(-)	EXT.(+)/INT.(-)	EXT.(+)/INT.(-)
19-1/8"	26"	195.0	195.0	149.4	195.0
26-1/2"		195.0	195.0	107.8	161.8
37"		195.0	195.0	77.2	115.9
19-1/8"	38-3/8"	195.0	195.0	151.9	195.0
26-1/2"		191.2	195.0	109.6	146.1
37"		136.9	182.6	78.5	104.7
19-1/8"	50-5/8"	195.0	195.0	153.5	191.9
26-1/2"		193.2	195.0	110.8	138.5
37"		138.4	173.0	79.3	99.2
19-1/8"	63"	195.0	195.0	123.3	195.0
26-1/2"		155.3	195.0	89.0	155.8
37"		111.2	194.6	63.8	111.6
42"		98.0	171.4	56.2	98.3
19-1/8"	74-1/4"	195.0	195.0	130.8	195.0
26-1/2"		164.7	195.0	94.4	151.1
37"		117.9	188.6	67.6	108.1



ANCHORS W/O SHEAR CLIP

ANCHORS WITH SHEAR CLIP

TYPICAL ANCHORS: SEE ELEV. FOR SPACING

1/4" DIA. KWIK-CON II BY 'HILTI' (Fu=163 KSI, Fy=157 KSI)

1/4" DIA. ULTRACON BY 'ELCO' (Fu=177 KSI, Fy=155 KSI)

INTO 2BY WOOD BUCKS OR WOOD STRUCTURES
1-1/2" MIN. PENETRATION INTO WOOD

THRU 1BY BUCKS INTO CONC. OR MASONRY
1-1/4" MIN. EMBED INTO CONC. OR MASONRY

DIRECTLY INTO CONC. OR MASONRY
1-1/4" MIN. EMBED INTO CONC. OR MASONRY

#14 SMS OR SELF DRILLING SCREWS (GRADE 2 CRS)

INTO MIAMI-DADE COUNTY APPROVED MULLIONS (MIN. THK. = .090")
INTO METAL STRUCTURES

STEEL : 1/8" THK. MIN. (Fy = 36 KSI MIN.)
ALUMINUM : 1/8" THK. MIN. (6063-T5 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" MIN.
INTO METAL STRUCTURE = 3/4" MIN.

CONCRETE AT HEAD, SIL, OR JAMBS f'c = 3000 PSI MIN.
C-90 HOLLOW/FILLED BLOCK AT JAMBS f'm = 2000 PSI MIN.

Engr: JAVAD AHMAD
CIVIL
FLA. PE # 70592
C.A.N. 3538

APR 30 2014

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 14-0506-01
Expiration Date Oct. 26, 2018
By *Manuel Ruiz*
Miami Dade Product Control

afC
AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
1235 S.W. 87 AVE
MIAMI, FLORIDA 33174
TEL. (305) 264-8100 FAX. (305) 262-6978
COMP-ANL W98-100CGI

SERIES-238 ALUM OUTSWING CASEMENT WDW. (L.M.I.)
CGI WINDOWS & DOORS INC.
10100 N.W. 25TH STREET
MIAMI, FL. 33172
TEL. (305) 593-6590 FAX. (305) 593-6592

no	date	description	by
F	02.21.12	NO CHANGE THIS SHEET	
G	12.06.12	CHART REV.	
H	02.28.13	REV. PER RER COMMENTS	
I	04.25.14	GENERAL REVISION	

date: 12-04-98
scale: 1/2" = 1"
dr. by: HAMID
chk. by:

drawing no.
W98-100
sheet 6 of 7

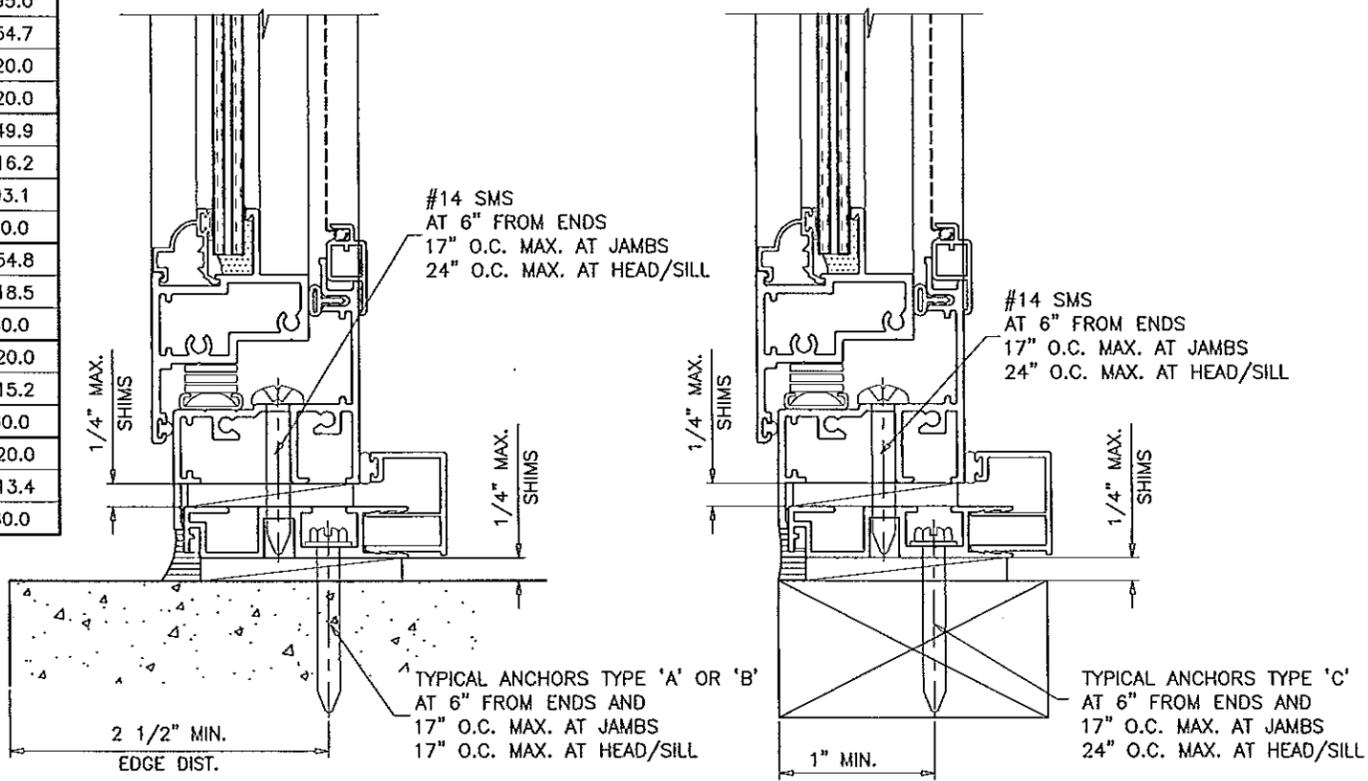
ALUMINUM BUCK FRAMING DETAILS

REFER TO SHEETS 3 THRU 6 FOR WINDOW CAPACITIES
USE LOWER APPLICABLE VALUES.

PERFORMANCE VALUES OF ALUMINUM BUCK INSTALLATION ANCHORS			
WINDOW DIMS.		EXT.(+)	INT.(-)
WIDTH	HEIGHT		
20"	36"	110.0	195.0
24"		110.0	195.0
28"		110.0	186.5
30"		110.0	182.4
32"		110.0	179.5
36"		110.0	177.3
40"		105.8	145.1
42"		97.0	120.0
20"	42"	110.0	179.5
24"		110.0	159.6
28"		106.9	146.6
30"		103.5	141.9
32"		100.7	138.1
36"		97.0	120.0
40"		95.2	120.0
42"		95.0	120.0
20"	48"	110.0	174.1
24"		110.0	177.3
28"		110.0	160.9
30"		110.0	154.8
32"		109.1	120.0
36"		103.5	120.0
40"		99.8	120.0
42"		95.0	120.0
20"	54"	110.0	174.1
24"		110.0	152.0
28"		99.8	120.0
30"		95.5	120.0
32"		91.9	120.0
36"		86.2	118.2
40"		82.2	112.7
42"		80.6	110.5
20"	60"	110.0	153.2
24"		97.0	133.0
28"		86.8	119.0
30"		82.8	113.5
32"		79.4	108.8
36"		73.9	101.3
40"		60.0	60.0
42"		60.0	60.0
20"	66"	110.0	171.0
24"		107.8	120.0
28"		95.9	120.0
30"		91.3	120.0
32"		87.3	119.7
36"		60.0	60.0
40"		60.0	60.0
42"		60.0	60.0
20"	72"	110.0	154.5
24"		97.0	120.0
28"		86.0	117.9
30"		81.7	112.0
32"		77.9	106.9
36"		60.0	60.0

PERFORMANCE VALUES OF ALUMINUM BUCK INSTALLATION ANCHORS				
WINDOW DIMS.		EXT.(+)	INT.(-)	
WIDTH	HEIGHT			
20"	76"	105.8	120.0	
24"		90.9	120.0	
28"		80.5	110.3	
30"		76.3	104.7	
32"		60.0	60.0	
36"		60.0	60.0	
20"		78"	102.7	120.0
24"			88.2	120.0
28"	77.9		120.0	
30"	73.9		101.3	
32"	60.0		60.0	
20"	84"		110.0	120.0
24"			97.0	120.0
28"			85.5	117.3
30"		60.0	60.0	
32"		60.0	60.0	

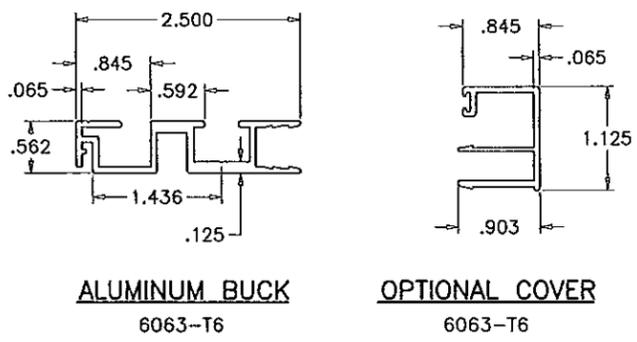
PERFORMANCE VALUES OF ALUMINUM BUCK INSTALLATION ANCHORS			
WINDOW DIMS.		EXT.(+)	INT.(-)
WIDTH	HEIGHT		
19-1/8"	26"	110.0	195.0
26-1/2"		110.0	195.0
37"		110.0	184.2
42"		110.0	152.4
19-1/8"	38-3/8"	110.0	195.0
26-1/2"		110.0	172.6
37"		110.0	156.3
42"		95.7	120.0
19-1/8"	50-5/8"	110.0	195.0
26-1/2"		110.0	154.7
37"		94.0	120.0
42"		89.8	120.0
19-1/8"	63"	109.3	149.9
26-1/2"		84.8	116.2
37"		67.9	93.1
42"		60.0	60.0
19-1/8"	74-1/4"	110.0	154.8
26-1/2"		86.4	118.5
37"		60.0	60.0
19-1/8"		76"	109.9
26-1/2"	84.0		115.2
37"	60.0		60.0
19-1/8"	77"		108.3
26-1/2"		82.7	113.4
37"		60.0	60.0



INSTALLATION TYPE '5'

INSTALLATION TYPE '6'
2BY WOOD BUCK OR WOOD STRUCTURES

TYPICAL INSTALLATION DETAIL ON ALL FOUR SIDES/USING ALUMINUM BUCK SYSTEM



- TYPICAL ANCHORS:** SEE ELEV. FOR SPACING
- A - **1/4" DIA. KWIK-CON II BY 'HILTI'** (Fu=163 KSI, Fy=157 KSI)
DIRECTLY INTO CONC. OR MASONRY
1-1/4" MIN. EMBED INTO CONC. OR MASONRY
 - B - **1/4" DIA. ULTRACON BY 'ELCO'** (Fu=177 KSI, Fy=155 KSI)
DIRECTLY INTO CONC. OR FILLED BLOCK
1-1/4" MIN. EMBED INTO CONCRETE
2-1/4" MIN. EMBED INTO GROUT FILLED BLOCKS
 - C - **#14 SMS (GRADE 2 CRS)**
INTO 2BY WOOD BUCKS OR WOOD STRUCTURES
1-1/2" MIN. PENETRATION INTO WOOD
- TYPICAL EDGE DISTANCE**
INTO CONCRETE AND MASONRY = 2-1/2" MIN.
INTO WOOD STRUCTURE = 1" MIN.
- CONCRETE AT HEAD, SILL OR JAMBS f'c = 3000 PSI MIN.
C-90 HOLLOW/FILLED BLOCK AT JAMBS f'm = 2000 PSI MIN.

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sheet 7 of 7