



**MIAMI-DADE COUNTY**  
**BUILDING CODE COMPLIANCE OFFICE (BCCO)**  
**PRODUCT CONTROL DIVISION**

**MIAMI-DADE COUNTY, FLORIDA**  
**METRO-DADE FLAGLER BUILDING**  
**140 WEST FLAGLER STREET, SUITE 1603**  
**MIAMI, FLORIDA 33130-1563**  
**(305) 375-2901 FAX (305) 372-6339**

[www.maimidade.gov/buildingcode](http://www.maimidade.gov/buildingcode)

**NOTICE OF ACCEPTANCE (NOA)**

**CGI Windows & Doors**  
**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 by Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) 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 Division (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. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Division 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 Window, sheets 1 through 7 of 7, dated 12/04/98 with revision D dated 01/15/08, prepared by Al-Farooq Corporation, signed and sealed by Humayoun Farooq, P.E., bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Division.

**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 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 # 07-0928.02** and consists of this page 1 and evidence pages E-1 and E-2, as well as approval document mentioned above.

The submitted documentation was reviewed by **Manuel Perez, P.E.**



**NOA No. 08-0304.07**  
**Expiration Date: October 26, 2008**  
**Approval Date: May 1, 2008**

CGI Windows & Doors

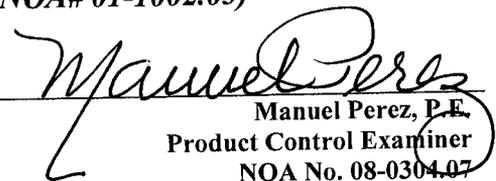
NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

**A. DRAWINGS**

1. Manufacturer's die drawings and sections.
2. Drawing No. **W98-100**, titled "Series-238 Aluminum Casement Window, sheets 1 through 7 of 7, dated 12/04/98 with revision D dated 01/15/08, prepared by Al-Farooq Corporation, signed and sealed by Humayoun Farooq, P.E.

**B. TESTS**

1. Test report on: 1) Large Missile Impact Test, per PA 201-94.  
2) Cyclic Wind Pressure Loading, per PA 203-94  
along with marked-up drawings and installation diagram of an Aluminum Casement Window, prepared by Hurricane Testing Lab, Inc., Test Report No(s). **HTL-0080-0303-96**, dated 03/06/96 for specimen #1, 2, 3 & 4 dated 10/14/94, signed and sealed by Timothy S. Marshall, P.E. (*Submitted under previous NOA# 01-1002.03*)
2. Test report on: 1) Air Infiltration Test, per ASTM E283.  
2) Uniform Static Air Pressure Test, Loading per ASTM E330.  
3) Water Resistance Test, per ASTM E547/E331.  
along with marked-up drawings and installation diagram of an aluminum casement window, prepared by Fenestration Testing Laboratory, Inc., Test Report No(s). **FTL-1003**, dated 10/14/94 and **FTL-1041** dated 10/14/94, signed and sealed by Yamil Kuri, P.E. (*Submitted under previous NOA# 01-1002.03*)
3. Test report on: 1) Large Missile Impact Test, per PA 201-94.  
2) Cyclic Wind Pressure Loading, per PA 203-94.  
along with installation diagram of a alum. fixed, casement and project-out windows, prepared by Hurricane Test Laboratory, Inc. report No. **HTL-0080-0303-96** dated 03/06/96, signed and sealed by Timothy S. Marshall, P.E. (*Submitted under previous NOA# 01-1002.03*)
4. Test report on 1) Uniform Static Air Pressure Test, Loading per ASTM E330.  
along with installation diagram of a Series CGI 238 alum. fixed windows, prepared by Hurricane Test Laboratory, Inc. report No. **HTL-0080-1127-98** dated 11/10/98, signed and sealed by Timothy S. Marshall, P.E. (*For reference only*) (*Submitted under previous NOA# 01-1002.03*)
5. Test report on: 1) Air Infiltration Test, per SFBC PA 202-94  
2) Uniform Static Air Pressure Test, Loading per SFBC PA 202-94.  
3) Water Resistance Test, per SFBC PA 202-94.  
along with installation diagram of CGI 238 alum. fixed window, prepared by Hurricane Testing Lab, Inc, report No. **HTL-0080-1107-98** dated Nov. 10, 1998, signed and sealed by Timothy S. Marshall, P.E. (*For reference only*). (*Submitted under previous NOA# 01-1002.03*)

  
Manuel Perez, P.E.  
Product Control Examiner  
NOA No. 08-0304.07

Expiration Date: October 26, 2008  
Approval Date: May 1, 2008

**CGI Windows & Doors**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

6. Test report on: 1) Large Missile Impact Test, per PA 201-94.  
2) Cyclic Wind Pressure Loading, per PA 203-94.  
along with installation diagram of a alum. fixed, casement and project-out windows,  
prepared by Hurricane Test Laboratory, Inc. report No. **HTL-0080-0303-96** dated  
03/06/96, signed and sealed by Timothy S. Marshall, P.E.  
*(For reference only). (Submitted under previous NOA# 06-0829.04)*

**C. CALCULATIONS**

1. Anchor verification calculations and structural analysis, complying with FBC-2004,  
prepared by Al-Farooq Corporation, dated 11/29/07, signed and sealed by Humayoun  
Farooq, P.E.  
**Complies with ASTM E1300-02**

**D. QUALITY ASSURANCE**

1. Miami Dade Building Code Compliance Office (BCCO).

**E. MATERIAL CERTIFICATIONS**

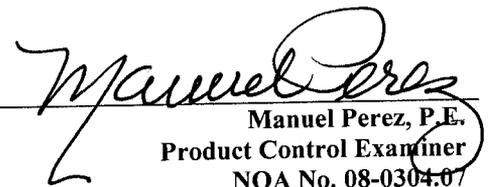
1. Notice of Acceptance No. **06-0216.06** issued to Solutia Inc. for their "**Saflex III G  
Clear or colored Interlayer**" dated 05/04/06, expiring on 05/21/11.

**F. STATEMENTS**

1. Statement letter of conformance, dated November 30, 2007, signed and sealed by  
Humayoun Farooq, P.E.  
2. Statement letter of no financial interest, dated August 31, 2006, signed and sealed by  
Humayoun Farooq, P.E.

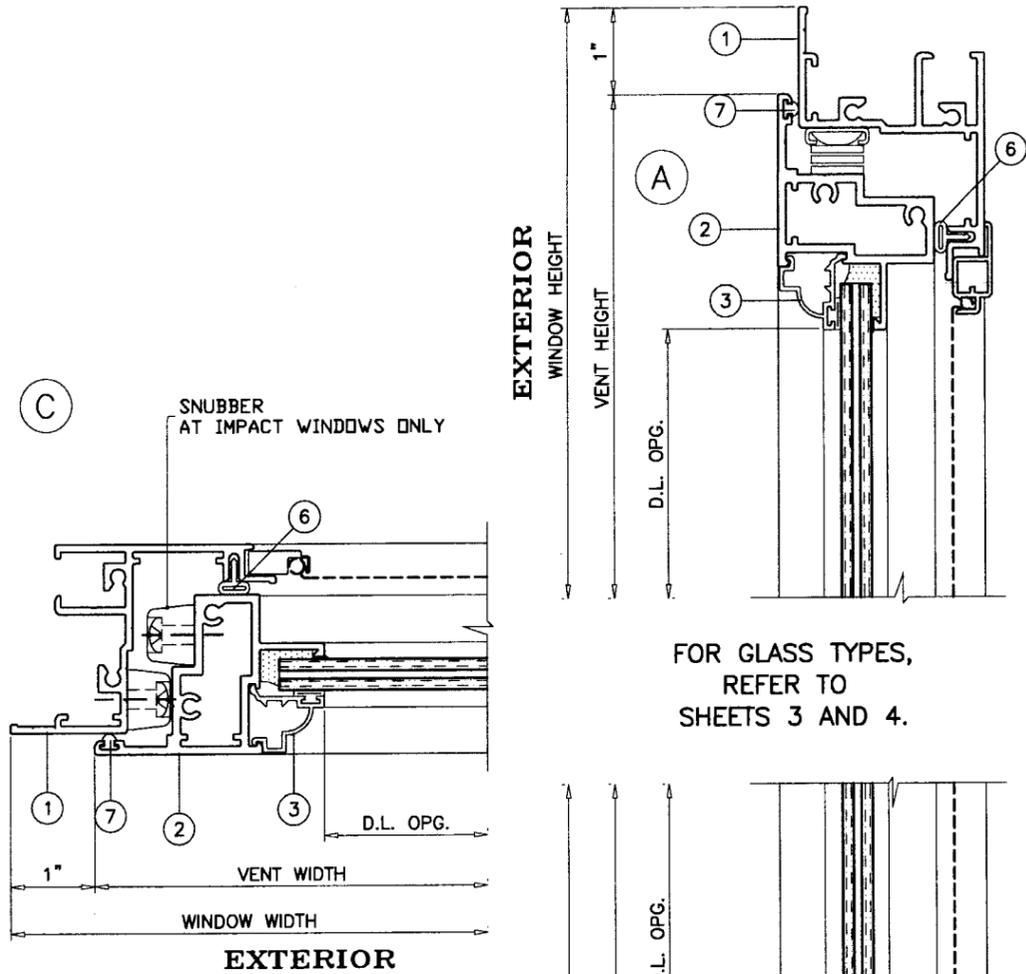
**G. OTHER**

1. Notice of Acceptance No. **07-0928.02**, issued to Construction Glass Industries for  
their Series "238" Aluminum Casement Window – L.M.I., approved on 11/01/07 and  
expiring on 10/26/08.

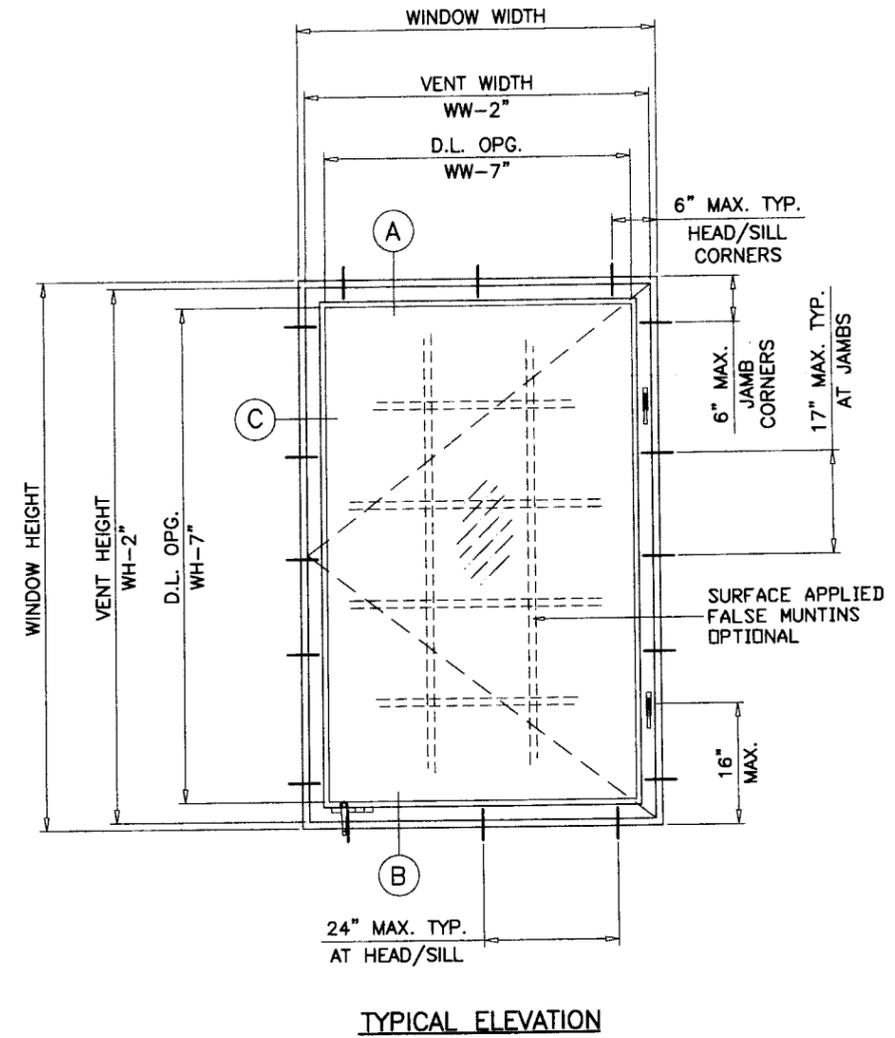
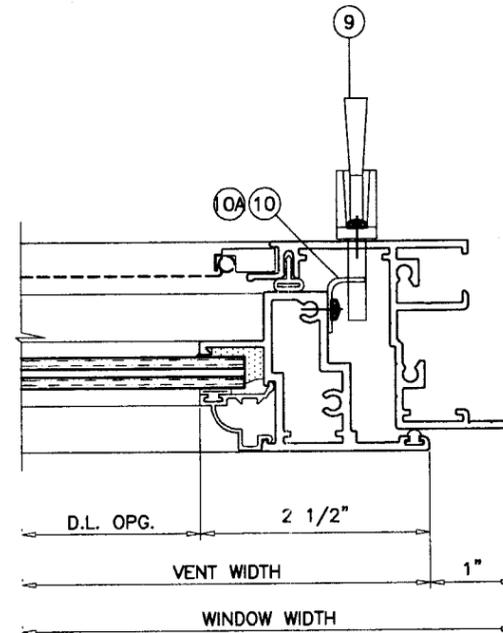
  
Manuel Perez, P.E.  
Product Control Examiner  
NOA No. 08-0304.07

Expiration Date: October 26, 2008  
Approval Date: May 1, 2008

**GENERAL WINDOW SECTIONS**



FOR GLASS TYPES, REFER TO SHEETS 3 AND 4.



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 BASED ON APPLICABLE WIND DURATION.
- STEP 3** USING CHART ON SHEET 6 SELECT ANCHOR OPTION WITH DESIGN RATING MORE THAN DESIGN LOAD SPECIFIED IN STEP 1 ABOVE.
- STEP 4** THE LOWEST VALUE RESULTING FROM STEPS 2 AND 3 SHALL APPLY TO ENTIRE SYSTEM.

**NOTES:**

THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE 2004 EDITION (REV. 2005) 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 IN ALLOWABLE STRESS IS USED IN DESIGN OF ANCHORS INTO WOOD ONLY.

MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF 2004 FLORIDA BLDG. CODE SECTION 2003.8.4 (SUPPLEMENT 2005).

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

Engr: DR. HUMAYCUN FAROOQ  
STRUCTURES  
FLA. PE # 16557  
C.A.N. 3538

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No. 08-0304.07  
Expiration Date OCT. 26, 2008

FEB 22 2008

By: *Muhammad Pese*  
Miami Trade Product Control  
Division

**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

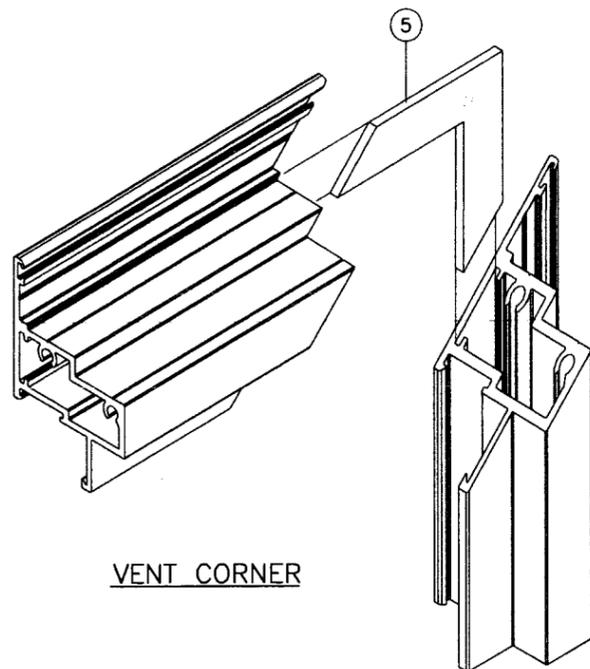
SERIES-238 ALUMINUM CASEMENT WINDOW  
**CGI WINDOWS & DOORS**  
10100 N.W. 25TH STREET  
MIAMI, FL. 33172  
TEL. (305) 593-6590 FAX. (305) 593-6592

NO	DATE	DESCRIPTION
A	09.27.01	CHARTS REV. PER ASTM E-1300
B	10.16.01	SHEET 3A REV.
C	09.01.06	UPDATED FOR 2004 FBC
D	01.15.08	NO CHANGE THIS SHEET

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

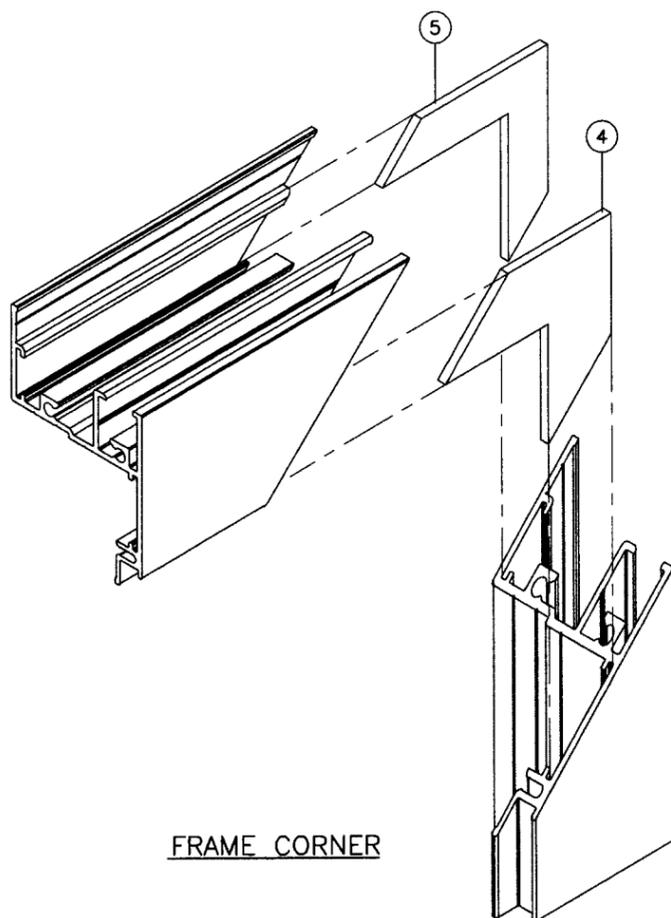
drawing no.  
**W98-100**

sheet 1 of 7

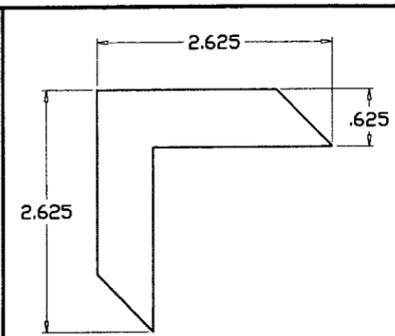


VENT CORNER

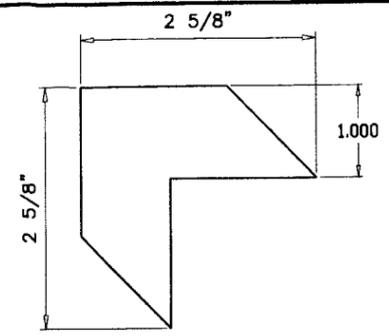
ALL FRAME AND VENT CORNERS TO BE SEALED WITH GE SILPRUF OR EQUIV.



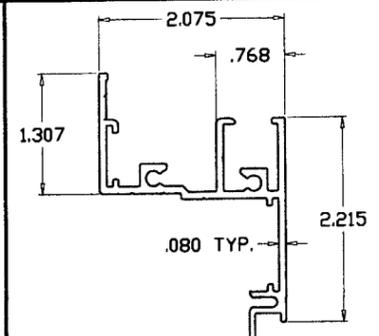
FRAME CORNER



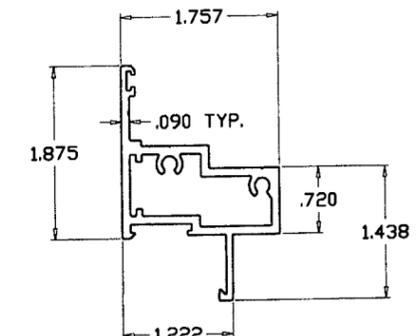
CORNER KEY  
.060 THICK ST. STEEL



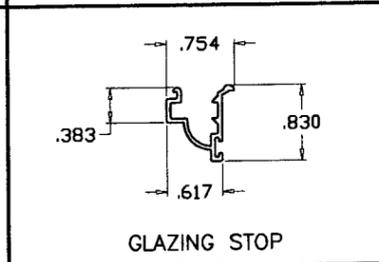
CORNER KEY  
.062 THICK ALUMINUM



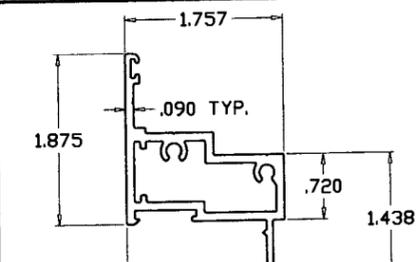
FRAME



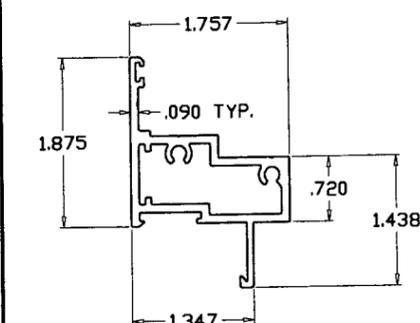
VENT (5/16" LAM. GLASS)



GLAZING STOP



VENT (INSUL. LAM. GLASS)



VENT (7/16" LAM. GLASS)

ITEM	PART #	QUANTITY	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
1	CGI-373	4	FRAME	6063-T6	INDALEX OR EQUIV.
2	CGI-378	4	VENT (5/16" LAM. GLASS)	6063-T6	INDALEX OR EQUIV.
2B	-	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	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	Q200 X190	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
10	-	2/ VENT	.110 THICK LOCK KEEPER, AT FRAME JAMB FACING LOCK	STEEL	CGI, ATTACHED W/ (2) #10 X 3/8" SS SMS
11	23-20-00-101	1	OPERATOR HANDLE	STEEL	TRUTH, ATTACHED W/ (2) #8 X 3/8" SS SMS
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

**af c**  
**AL-FAROOQ CORPORATION**  
 ENGINEERS & PRODUCT DEVELOPMENT  
 1235 S.W. 87 AVE  
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 TEL. (305) 264-8100  
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 COMP-ANL\W98-100CGI

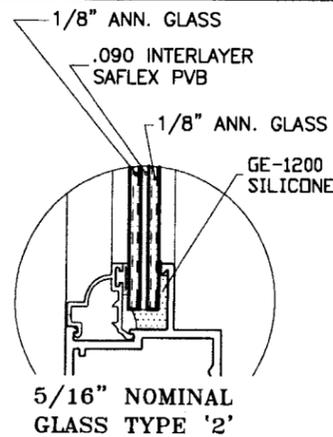
SERIES-238 ALUMINUM CASEMENT WINDOW  
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no	date	by	description
A	09.27.01	REVISD	
C	09.01.06		UPDATED FOR 2004 FBC
D	01.15.08		NO CHANGE THIS SHEET

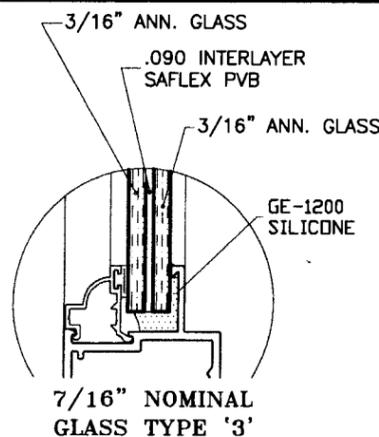
date: 12-04-98  
 scale: 1/2" = 1"  
 dr. by: HAMID  
 chk. by:  
 drawing no.  
**W98-100**  
 sheet 2 of 7

Engr: DR. HUMAYOUN FAROOQ  
 STRUCTURES  
 FLA. PE # 16557  
 C.A.N. 3538  
 FEB 28 2008

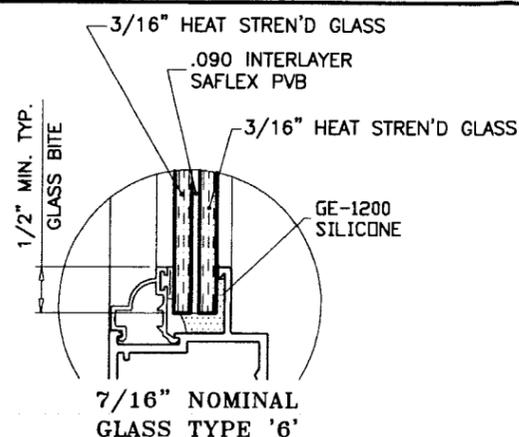
PRODUCT REVISED  
 as complying with the Florida  
 Building Code  
 Acceptance No. **08-0304.07**  
 Expiration Date **OCT-26, 2008**  
 By: *Manuel Perez*  
 Miami Basic Product Control  
 Division



5/16" NOMINAL  
GLASS TYPE '2'



7/16" NOMINAL  
GLASS TYPE '3'



7/16" NOMINAL  
GLASS TYPE '6'

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	210.0	110.0	210.0
24"		110.0	161.9	110.0	210.0	110.0	210.0
28"		110.0	138.8	110.0	210.0	110.0	210.0
30"		110.0	129.5	110.0	209.5	110.0	210.0
32"		110.0	121.4	110.0	191.1	110.0	210.0
36"		107.9	107.9	110.0	196.5	110.0	210.0
40"		97.1	97.1	110.0	120.0	110.0	120.0
42"		92.5	92.5	110.0	120.0	110.0	120.0
20"	42"	110.0	166.5	110.0	210.0	110.0	210.0
24"		110.0	138.8	110.0	210.0	110.0	210.0
28"		110.0	118.9	110.0	210.0	110.0	210.0
30"		110.0	111.0	110.0	210.0	110.0	210.0
32"		104.1	104.1	110.0	120.0	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	110.0	120.0
20"	48"	110.0	145.7	110.0	210.0	110.0	210.0
24"		110.0	121.4	110.0	210.0	110.0	210.0
28"		103.8	104.1	110.0	120.0	110.0	120.0
30"		97.1	97.1	110.0	120.0	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	110.0	120.0
20"	54"	110.0	129.5	110.0	195.7	110.0	210.0
24"		98.0	107.9	110.0	210.0	110.0	210.0
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	110.0	120.0

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"	60"	98.8	112.6	110.0	210.0	110.0	210.0
24"		85.8	95.4	110.0	120.0	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
20"	66"	86.7	86.7	110.0	169.0	110.0	169.0
24"		73.4	73.4	110.0	120.0	110.0	120.0
30"		60.6	60.6	110.0	118.2	110.0	118.2
32"		57.5	57.5	110.0	112.2	110.0	112.2
20"	72"	66.4	66.4	110.0	120.0	110.0	120.0
24"		56.1	56.1	109.3	109.3	109.3	109.3
28"		48.9	48.9	95.3	95.3	95.3	95.3
30"		46.0	46.0	89.8	89.8	89.8	89.8
32"		43.6	43.6	85.0	85.0	85.0	85.0
20"		78"	52.0	52.0	101.3	101.3	101.3
24"	43.8		43.8	85.4	85.4	85.4	85.4
28"	38.1		38.1	74.3	74.3	74.3	74.3
20"	84"	41.5	41.5	80.8	80.8	80.8	80.8
24"		34.9	34.9	68.0	68.0	68.0	68.0
19-1/8"	26"	110.0	210.0	110.0	210.0	110.0	210.0
26-1/2"		110.0	203.0	110.0	210.0	110.0	210.0
37"		110.0	145.4	110.0	210.0	110.0	210.0
19-1/8"	38-3/8"	110.0	190.6	110.0	210.0	110.0	210.0
26-1/2"		110.0	137.5	110.0	210.0	110.0	210.0
37"		98.5	98.5	110.0	120.0	110.0	120.0
19-1/8"	50-5/8"	110.0	144.5	110.0	210.0	110.0	210.0
26-1/2"		99.7	104.3	110.0	203.3	110.0	203.3
37"		74.7	74.7	110.0	120.0	110.0	120.0
19-1/8"	63"	96.7	104.2	110.0	203.2	110.0	203.2
26-1/2"		74.9	77.9	110.0	120.0	110.0	120.0
37"		60.0	60.0	110.0	117.0	110.0	117.0
19-1/8"	74-1/4"	63.0	63.0	110.0	120.0	110.0	120.0
26-1/2"		46.6	46.6	90.9	90.9	90.9	90.9

NOTE:  
GLASS CAPACITIES ON THIS SHEET ARE  
BASED ON ASTM E1300-02 (3 SEC. GUSTS)

Engr: DR. HUMAYOUN FAROOQ  
STRUCTURES  
FLA. PE # 16557  
C.A.N. 353E

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No. 08-0304.07  
Expiration Date OCT. 26, 2008  
By: *Muhammad Peres*  
Miami Made Product Control  
Division

FEB 22 2008

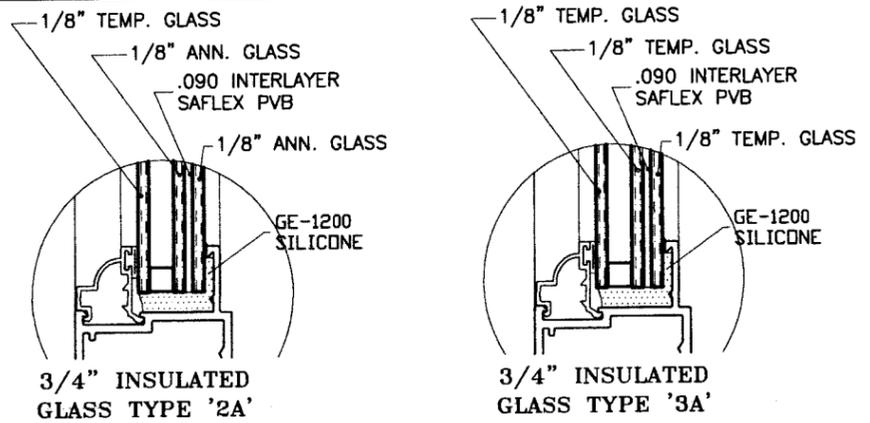
**afc**  
**AL-FAROOQ CORPORATION**  
ENGINEERS & PRODUCT DEVELOPMENT  
1235 S.W. 87 AVE  
MIAMI, FLORIDA 33174  
TEL. (305) 264-8100 FAX. (305) 262-6978  
COMP-ANL\W98-100CGI

SERIES-238 ALUMINUM CASEMENT WINDOW  
**CGI WINDOWS & DOORS**  
10100 N.W. 25TH STREET  
MIAMI, FL. 33172  
TEL. (305) 593-6590 FAX. (305) 593-6592

revisions:  
no. date by description  
A 09.27.01 CHARTS REV. PER ASTM E-1300  
C 09.01.06 UPDATED FOR 2004 FBC  
D 01.15.08 NO CHANGE THIS SHEET

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

drawing no.  
**W98-100**  
sheet 3 of 7



**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	210.0
24"		110.0	161.9	110.0	210.0
28"		110.0	138.8	110.0	210.0
30"		110.0	129.5	110.0	210.0
32"		110.0	121.4	110.0	210.0
36"		107.9	107.9	110.0	210.0
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
24"	110.0		138.8	110.0	210.0
28"	110.0		118.9	110.0	210.0
30"	110.0		111.0	110.0	210.0
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
24"		110.0	121.4	110.0	210.0
28"		103.8	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
24"	98.0		107.9	110.0	210.0
28"	88.2		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

**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"	60"	98.8	112.6	110.0	210.0
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
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	
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
20"		78"	52.0	52.0	101.3
24"	43.8		43.8	85.4	85.4
28"	38.1		38.1	74.3	74.3
20"	84"	41.5	41.5	80.8	80.8
24"		34.9	34.9	68.0	68.0
19-1/8"	26"	110.0	210.0	110.0	210.0
26-1/2"		110.0	203.0	110.0	210.0
37"		110.0	145.4	110.0	210.0
19-1/8"	38-3/8"	110.0	190.6	110.0	210.0
26-1/2"		110.0	137.5	110.0	210.0
37"		98.5	98.5	110.0	120.0
19-1/8"	50-5/8"	110.0	144.5	110.0	210.0
26-1/2"		99.7	104.3	110.0	203.3
37"		74.7	74.7	110.0	120.0
19-1/8"	63"	96.7	104.2	110.0	203.2
26-1/2"		74.9	77.9	110.0	120.0
37"		60.0	60.0	110.0	117.0
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

NOTE:  
GLASS CAPACITIES ON THIS SHEET ARE  
BASED ON ASTM E1300-02 (3 SEC. GUSTS)

Engr: DR. HUMAYOON FAROOQ  
STRUCTURES  
FLA. PE. # 16557  
C.A.N. 3538

FEB 22 2008

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No. 08-0304.07  
Expiration Date OCT. 26, 2008

By: *Manuel Perez*  
Miami Date Product Control  
Division

**af c**

**AL-FAROOQ CORPORATION**  
ENGINEERS & PRODUCT DEVELOPMENT  
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SERIES-238 ALUMINUM CASEMENT WINDOW

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

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no.	date	by	description
A	09.27.01		CHARIS REV. PER ASTM E-1300
C	09.01.06		UPDATED FOR 2004 FBC
D	01.15.08		NO CHANGE THIS SHEET

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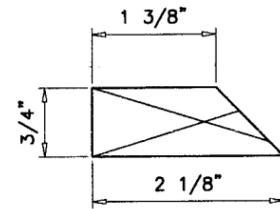
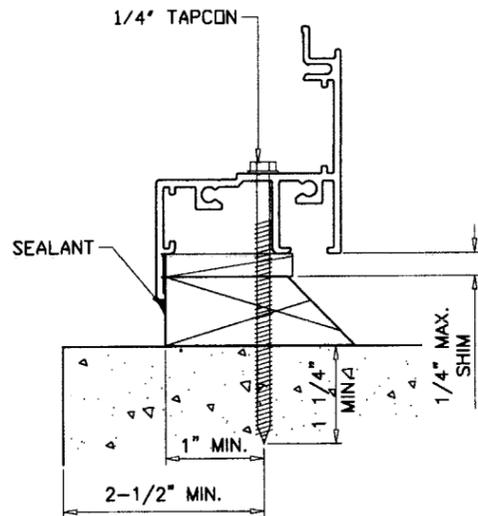
date: 12-04-98  
scale: 1/2" = 1"  
dr. by: HAMID  
chk. by:

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drawing no.  
**W98-100**  
sheet 4 of 7

**INSTALLATION CONDITIONS (APPLIES TO ALL FOUR SIDES)**

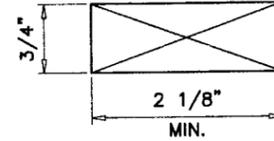
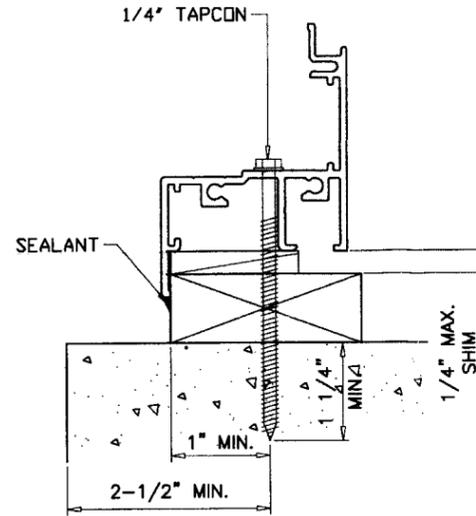
FOR ANCHOR PERFORMANCE VALUES SEE SHEET 6



**INSTALLATION TYPE '1'**

**WOOD BUCK TYPE '1'**  
MATERIAL: PRESSURE TREATED

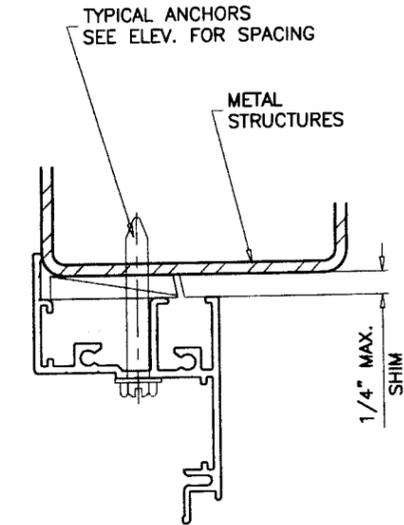
TYPICAL INSTALLATION DETAIL  
ON ALL FOUR SIDES/USING WOOD



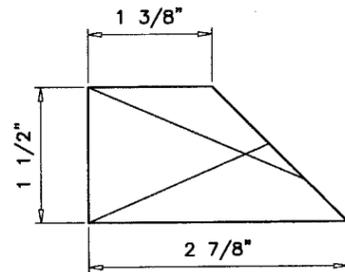
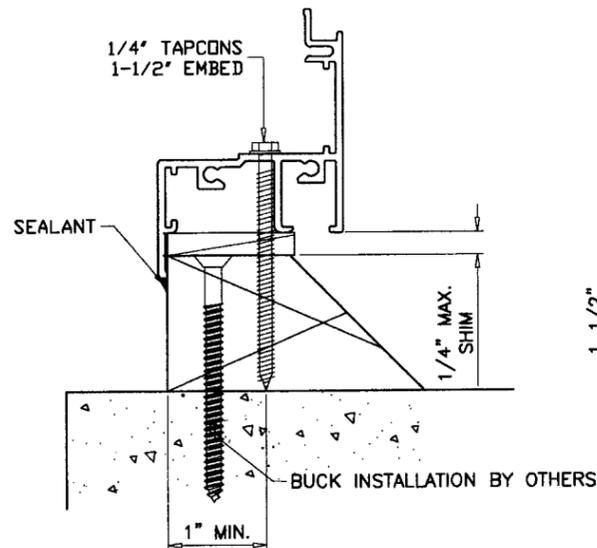
**INSTALLATION TYPE '2'**

**WOOD BUCK TYPE '2'**  
MATERIAL: PRESSURE TREATED

TYPICAL INSTALLATION DETAIL  
ON ALL FOUR SIDES/USING WOOD



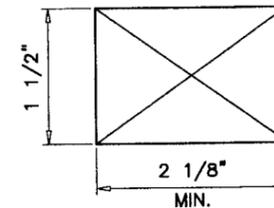
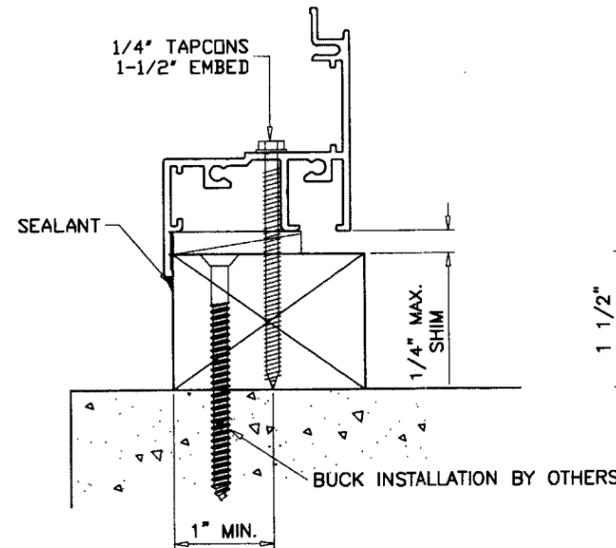
ATTACHMENT TO  
METAL STRUCTURES



**INSTALLATION TYPE '3'**

**WOOD BUCK TYPE '3'**  
MATERIAL: PRESSURE TREATED

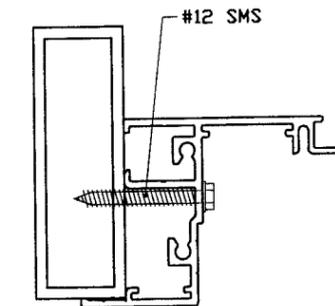
TYPICAL INSTALLATION DETAIL  
ON ALL FOUR SIDES/USING WOOD



**INSTALLATION TYPE '4'**

**WOOD BUCK TYPE '4'**  
MATERIAL: PRESSURE TREATED

TYPICAL INSTALLATION DETAIL  
ON ALL FOUR SIDES/USING WOOD



ATTACHMENT TO  
APPROVED MULLIONS

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

Engr: DR. HUMAYOUN FAROOQ  
STRUCTURES  
FLA. PE # 16557  
C.A.N. 3538

FEB 22 2008

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as complying with the Florida  
Building Code  
Acceptance No. 08-0304.07  
Expiration Date OCT. 26, 2008  
By *Manuel Perez*  
Miami Code Product Control  
Division

**af c**  
**AL-FAROOQ CORPORATION**  
ENGINEERS & PRODUCT DEVELOPMENT  
1235 S.W. 87 AVE  
MIAMI, FLORIDA 33174  
TEL. (305) 264-8100 FAX. (305) 262-6978  
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SERIES-238 ALUMINUM CASEMENT WINDOW  
**CGI WINDOWS & DOORS**  
10100 N.W. 25TH STREET  
MIAMI, FL. 33172  
TEL. (305) 593-6590 FAX. (305) 593-6592

NO	date	by	description
A	09.27.01	REVISED	
C	09.01.06	UPDATED FOR 2004 FBC	
D	01.15.08	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

PERFORMANCE VALUES OF INSTALLATION ANCHORS REFER TO SHEET 5 FOR DETAILS			
WINDOW DIMS.		EXT. (+) INT. (-)	
WIDTH	HEIGHT		
20"	36"	210.0	
24"		210.0	
28"		208.3	
30"		194.4	
32"		182.3	
36"		162.0	
40"		120.0	
42"		120.0	
20"	42"	210.0	
24"		208.3	
28"		178.5	
30"		166.6	
32"		120.0	
36"		120.0	
40"		120.0	
42"		119.0	
20"	48"	210.0	
24"		210.0	
28"		120.0	
30"		120.0	
32"		120.0	
36"		120.0	
40"		120.0	
42"		120.0	
20"	54"	210.0	
24"		210.0	
28"		120.0	
30"		120.0	
32"		120.0	
36"		120.0	
40"		120.0	
42"		120.0	
20"	60"	210.0	
24"		120.0	
28"		120.0	
30"		120.0	
32"		120.0	
36"		120.0	
20"		66"	169.0
24"			120.0
28"	120.0		
30"	118.2		
32"	112.2		
20"	72"	120.0	
24"		109.3	
28"		95.3	
30"		89.8	
32"		85.0	
20"	78"	101.3	
24"		85.4	
28"		74.3	
20"	84"	80.8	
24"		68.0	

PERFORMANCE VALUES OF INSTALLATION ANCHORS REFER TO SHEET 5 FOR DETAILS		
WINDOW DIMS.		EXT. (+) INT. (-)
WIDTH	HEIGHT	
19-1/8"	26"	210.0
26-1/2"		210.0
37"		210.0
19-1/8"	38-3/8"	210.0
26-1/2"		206.5
37"		120.0
19-1/8"	50-5/8"	210.0
26-1/2"		203.3
37"		120.0
19-1/8"	63"	203.2
26-1/2"		120.0
37"		117.0
19-1/8"	74-1/4"	120.0
26-1/2"		90.9

**TYPICAL ANCHORS:** SEE ELEV. FOR SPACING  
**1/4" TAPCONS**  
 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**  
 INTO METAL STRUCTURES  
 STEEL : 12 GA. MIN. (Fy = 36 KSI MIN.)  
 ALUMINUM : 1/8" THK. MIN. (6063-T5 MIN.)  
 (STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

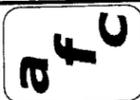
**#12 SMS OR SELF DRILLING SCREWS**  
 INTO MIAMI-DADE COUNTY APPROVED MULLIONS (MIN. THK. = 1/8")  
 (NO SHIM SPACE)

Engr: DR. HUMAYOUN FAROOQ  
 STRUCTURES  
 FLA. PE # 16557  
 C.A.N. 3538

FEB 22 2008

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By Manuel Perez  
 Miami Dade Product Control  
 Division



**AL-FAROOQ CORPORATION**  
 ENGINEERS & PRODUCT DEVELOPMENT  
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SERIES-238 ALUMINUM CASEMENT WINDOW

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

revisions:	no	date	by	description
	A	09.27.01		CHARTS REV. PER 1997 NDS
	C	09.01.06		UPDATED FOR 2004 FBC
	D	01.15.08		CHART REV.

---

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

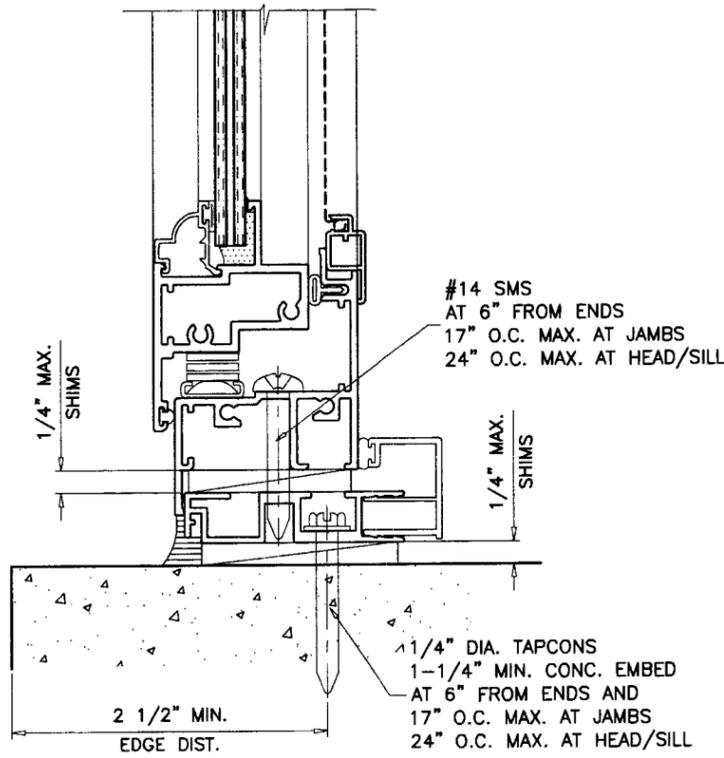
REFER TO SHEETS 3 THRU 6 FOR WINDOW CAPACITIES  
USE LOWER APPLICABLE VALUES.

### PERFORMANCE VALUES OF ALUMINUM BUCK INSTALLATION ANCHORS

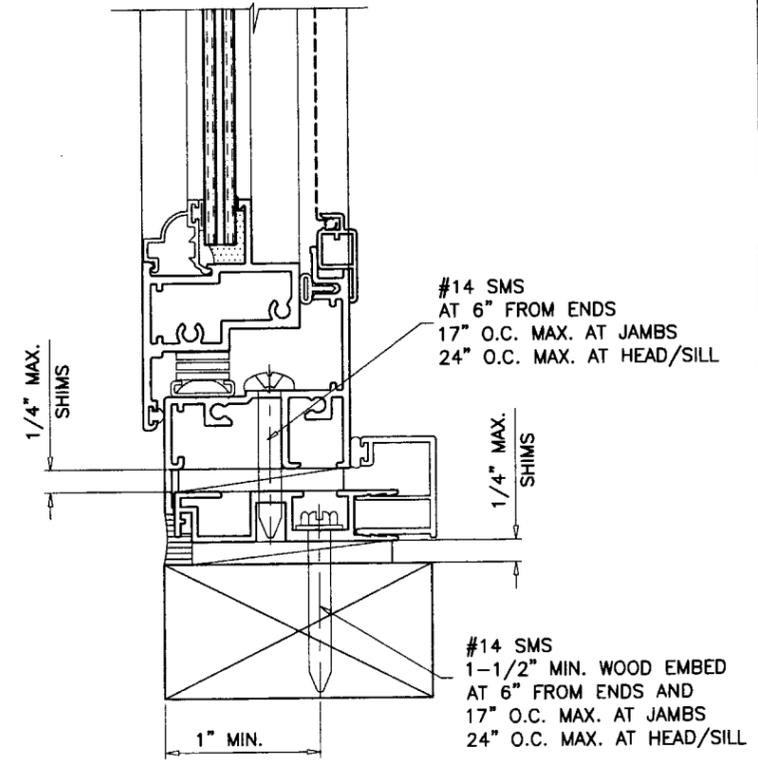
WINDOW DIMS.		EXT. (+) INT. (-)
WIDTH	HEIGHT	
20"	36"	210.0
24"		210.0
28"		210.0
30"		194.4
32"		182.3
36"		162.0
40"		120.0
42"	120.0	
20"	42"	210.0
24"		208.3
28"		178.5
30"		166.6
32"		120.0
36"		120.0
40"		120.0
42"	119.0	
20"	48"	210.0
24"		210.0
28"		120.0
30"		120.0
32"		120.0
36"		120.0
40"		120.0
42"	120.0	
20"	54"	210.0
24"		210.0
28"		120.0
30"		120.0
32"		120.0
36"		120.0
40"		120.0
42"	120.0	
20"	60"	210.0
24"		120.0
28"		120.0
30"		120.0
32"		120.0
36"	120.0	
20"	66"	169.0
24"		120.0
28"		120.0
30"		118.2
32"	112.2	
20"	72"	120.0
24"		109.3
28"		95.3
30"		89.8
32"	85.0	
20"	78"	101.3
24"		85.4
28"		74.3
20"	84"	80.8
24"		68.0

### PERFORMANCE VALUES OF ALUMINUM BUCK INSTALLATION ANCHORS

WINDOW DIMS.		EXT. (+) INT. (-)
WIDTH	HEIGHT	
19-1/8"	26"	210.0
26-1/2"		210.0
37"		202.4
19-1/8"	38-3/8"	210.0
26-1/2"		206.5
37"		120.0
19-1/8"	50-5/8"	210.0
26-1/2"		203.3
37"		120.0
19-1/8"	63"	203.2
26-1/2"		120.0
37"		117.0
19-1/8"	74-1/4"	120.0
26-1/2"		90.9



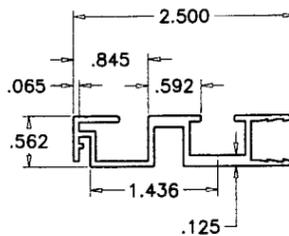
**INSTALLATION TYPE '5'**



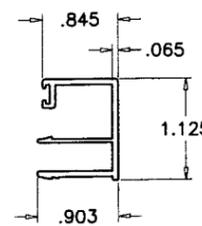
**INSTALLATION TYPE '6'**

2BY WOOD BUCK OR WOOD STRUCTURES

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



**ALUMINUM BUCK**  
6063-T6



**OPTIONAL COVER**  
6063-T6

Engr: DR. HUMAYOUN FAROOQ  
STRUCTURES  
FLA. PE # 16557  
C.A.N. 3538

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Miami Dade Product Control  
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**afc**

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revisions:	no	date	by	description
	0	01.15.08		ALUM. BUCK ADDED

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

drawing no.  
**W98-100**

sheet 7 of 7