



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) 375-2908

**NOTICE OF ACCEPTANCE (NOA)**

[www.buildingcodeonline.com](http://www.buildingcodeonline.com)

**Construction Glass Industries**  
10100 N. W. 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" Aluminum Fixed Window-LMI**

**APPROVAL DOCUMENT:** Drawing No. **W99-100**, titled "Series-238 Aluminum Fixed Window, sheets 1 through 7 of 7, prepared by Al-Farooq Corporation, dated 12/19/99 and last revised on 08-30-2006, signed and sealed by Dr. Humayoun 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 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 **renews & revises** NOA # **01-1918.01** 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 **Ishaq I. Chanda, P.E.**

NOA No 06-0928.03

Expiration Date: October 26, 2007

Approval Date: October 26, 2006

Page 1



10/4/6

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

- A. DRAWINGS** (transferred from file # **01-1918.01**)
1. Manufacturer's parts and sections drawings.
  2. Drawing No. **W99-100**, titled "Series-238 Aluminum Fixed Window, sheets 1 through 7 of 7, prepared by Al-Farooq Corporation, dated 12/19/99 and last revised on 08-30-2006, signed and sealed by Dr. Humayoun Farooq, P. E.
- B. TESTS** (transferred from file # **01-1918.01**) The original test conducted per PA 201, 202, 203-94, now termed as TAS 201, TAS 202 & 203-94:
1. 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.
  2. Test report on
    - 1) Large Missile Impact Test, per PA 201-94.
    - 2) Cyclic Wind Pressure Loading, per PA 203-94Along with marked-up drawings and installation diagram of an Aluminum Fixed Window, prepared by Hurricane Testing Lab, Inc., Test Report No(s). **HTL-0080-0203-99 & HTL-0080-0606-99**, dated 11/29/99 for specimen #1, 2, 3, signed and sealed by Timothy S. Marshall, P.E.
  - 3) 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.
  - 4) Ref. 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 alum. fixed, casement and project-out windows, prepared by American Test Lab of South Florida report No. **ATL-1209.01-94** dated 2/20/95, signed and sealed by Gerard B. Sullivan, P.E.
  - 5) Ref Test report on
    - 1) Large Missile Impact Test, per PA 201-94.
    - 2) Cyclic Wind Pressure Loading, per PA 203-94Along 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 and **FTL-1041** dated 10/14/94, signed and sealed by Timothy S. Marshall, P.E.

*Ishaq I. Chanda*

Ishaq I. chanda, P.E.

Product Control Examiner

NOA No 06-0928.03

Expiration Date: October 26, 2007

Approval Date: October 26, 2006

Construction Glass Industries

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**C. CALCULATIONS**

1. Anchor Verification Calculations, complying w/ FBC-2004, dated 08-30-2006, prepared by Al-Farooq Corp., dated 09/26/01, signed and sealed by Dr. Humayoun Farooq, P.E.
2. Comparative Analysis and anchor calcs, prepared by Al-Farooq Corp., dated 02/20/99, signed and sealed by Humayoun Farooq, P.E.(from file # **01-1918.01**)

**D. QUALITY ASSURANCE**

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

**E. MATERIAL CERTIFICATIONS**

1. Notice of Acceptance No. **03-0827.08** issued to Solutia, Inc. for "Saflex interlayer", expiring on 03/04/2009.

**F. STATEMENTS**

1. Statement letter of compliance w/ FBC-2004 dated 08/25/06, signed by Dr. Humayoun Farooq, P.E.
2. Statement letter of compliance and of no financial interest, dated 08/25/06, signed and sealed by Dr. Humayoun Farooq, P.E.
3. Laboratory compliance statements, part of above test reports.

**G. OTHER**

1. This NOA **renews & revises** NOA # **01-0918.01**, **expired on September 30, 2006.**
2. One year conditional approval subjected to verification test.
3. Testing confirmation letter issued by Hurricane Testing Lab dated 09-01-2006.
4. Correspondence between CGI & BCCO dated 03/21/01 & 08/21/2001

*Ishaq I. Chanda*

Ishaq I. chanda, P.E.

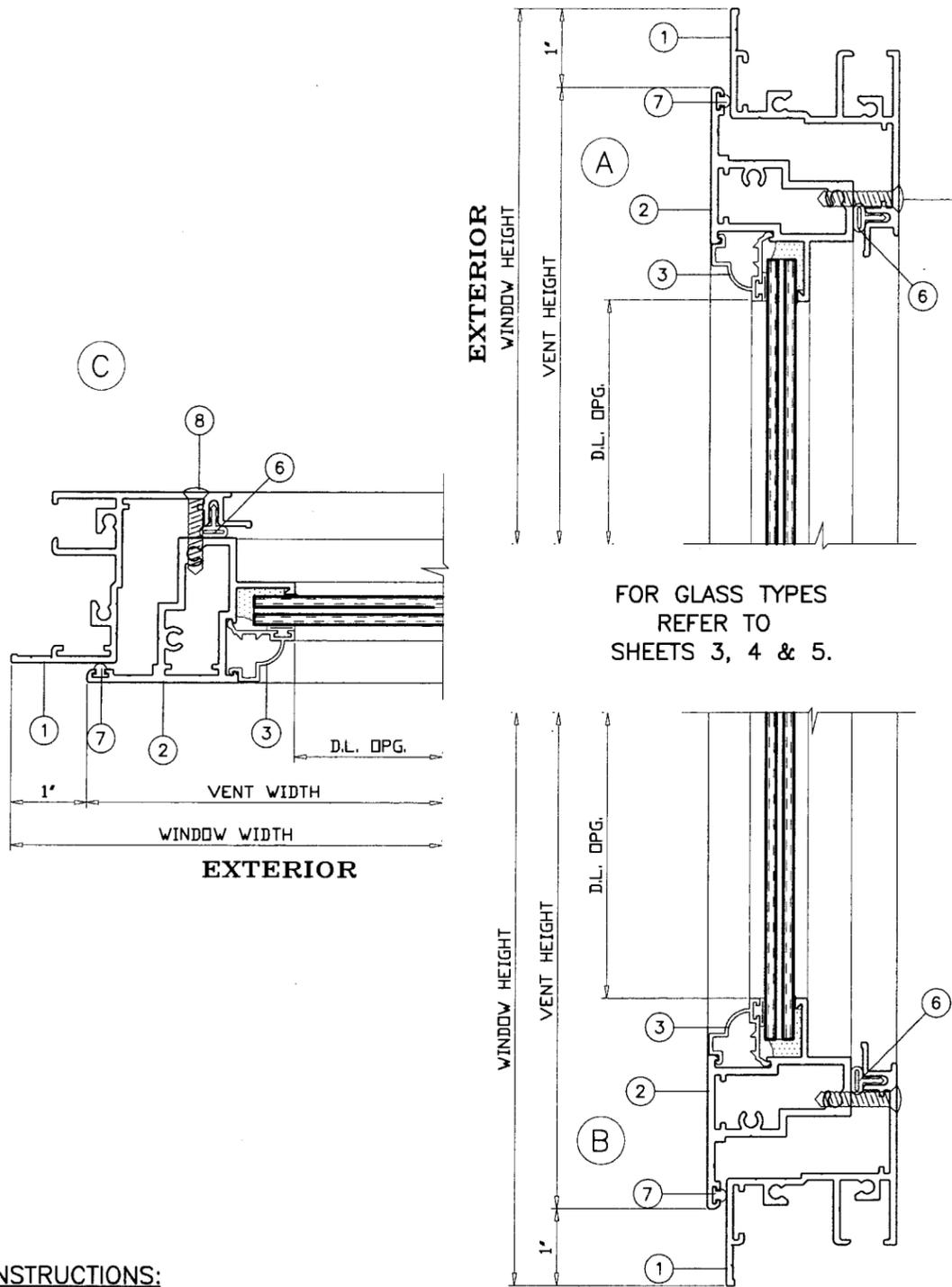
Product Control Examiner

NOA No 06-0928.03

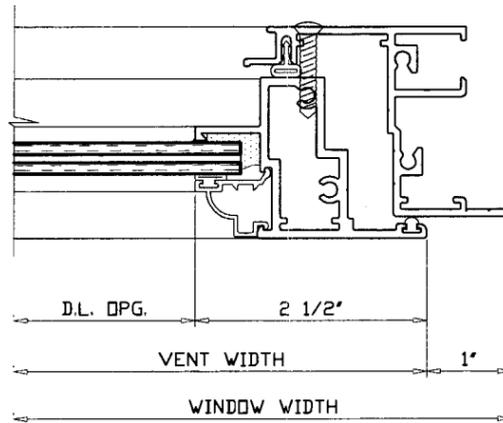
Expiration Date: October 26, 2007

Approval Date: October 26, 2006

**GENERAL WINDOW SECTIONS**



AT EACH END AND  
18" O.C. ON SHORTER SIDES  
20" O.C. ON LONGER SIDES



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

**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).

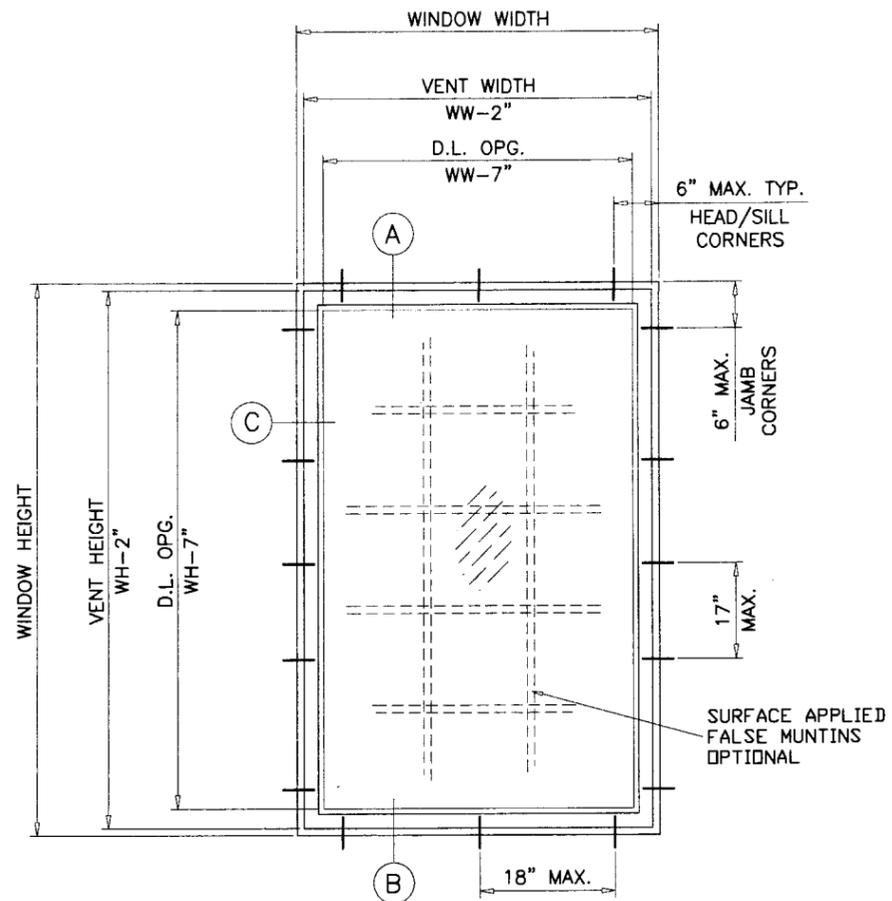
WOOD BUCKS BY OTHERS, MUST BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE STRUCTURE.

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).



**TYPICAL ELEVATION**

MAX. ANCHOR SPACING TO BE AS FOLLOWS  
17" O.C. ON LONGER SIDES  
18" O.C. ON SHORTER SIDES

**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 THRU 5 FOR DESIGN LOAD CAPACITY OF DESIRED GLASS SIZE BASED ON APPLICABLE WIND DURATION.
- STEP 3** USING CHART ON SHEET 7 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.

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

*[Signature]*

AUG 30 2006

**PRODUCT RENEWED**  
as complying with the Florida Building Code  
Acceptance No. 06-0928.03  
Expiration Date OCT 26, 2007  
By: *[Signature]*  
Miami Code Product Control Division

*afc*

**AL-FAROOQ CORPORATION**  
ENGINEERS, PLANNERS & PRODUCT DESIGN  
1235 SW 87 AVE  
MIAMI, FLORIDA 33174  
TEL. (305) 264-8100 FAX. (305) 262-6978  
COMP-ANL W99-10CGI

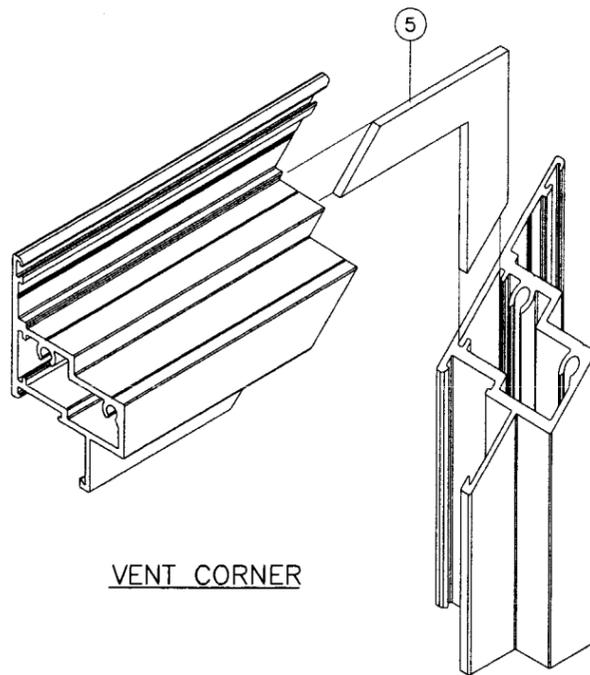
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**SERIES-238 ALUMINUM FIXED WINDOW**  
**CONSTRUCTION GLASS IND. CORP.**  
7840 N.W. 62 nd STREET  
MIAMI, FL. 33166  
TEL. (305) 593-6590 FAX. (305) 593-6592

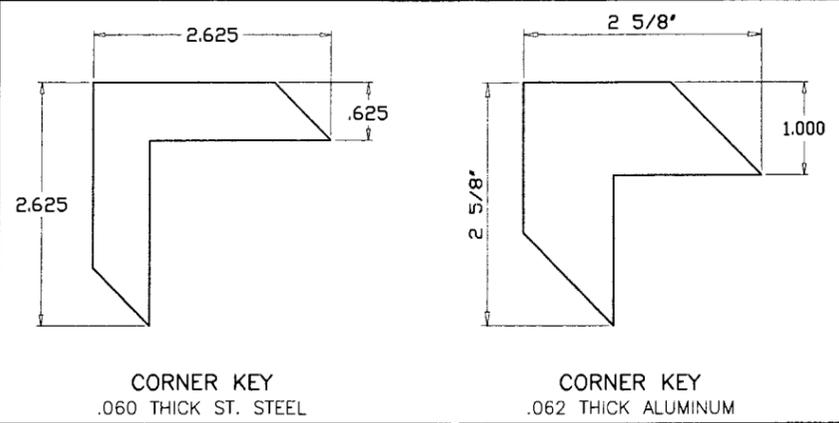
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	A	02.14.00		NEW SIZES/GLASS ADD. SHIT. 3A/6.
	B	08.09.01		CHARTS REV. PER ASTM E-1300
	C	10.04.01		3A, 4 & 6 REV./BCCO COMMENTS
	D	08.26.06		UPDATED FOR 2004. FBC

date: 02-19-99  
scale: 1/2" = 1"  
dr. by: HAMID  
chk. by:

drawing no.  
**W99-10**  
sheet 1 of 7

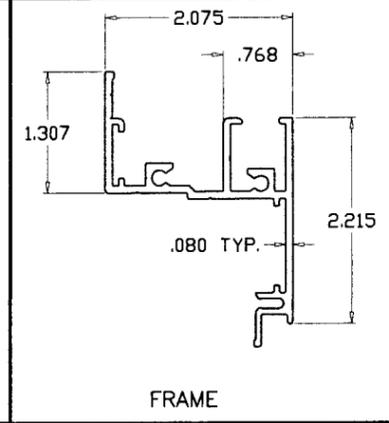


VENT CORNER

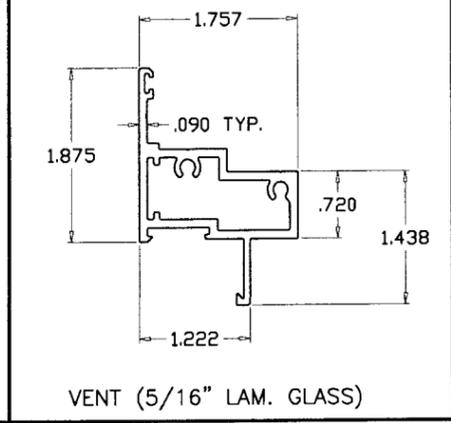


CORNER KEY  
.060 THICK ST. STEEL

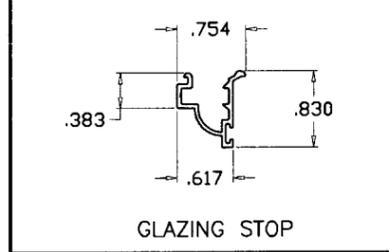
CORNER KEY  
.062 THICK ALUMINUM



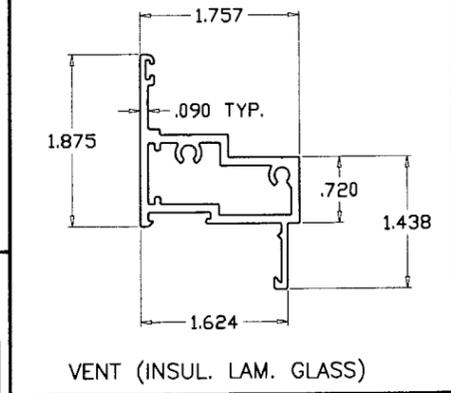
FRAME



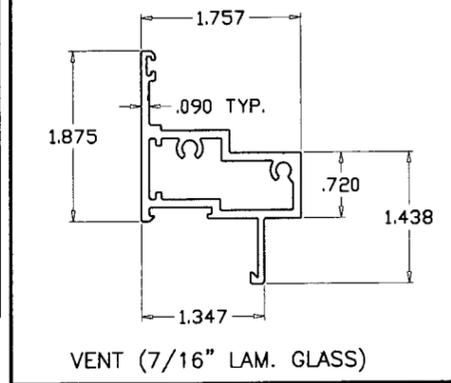
VENT (5/16" LAM. GLASS)



GLAZING STOP

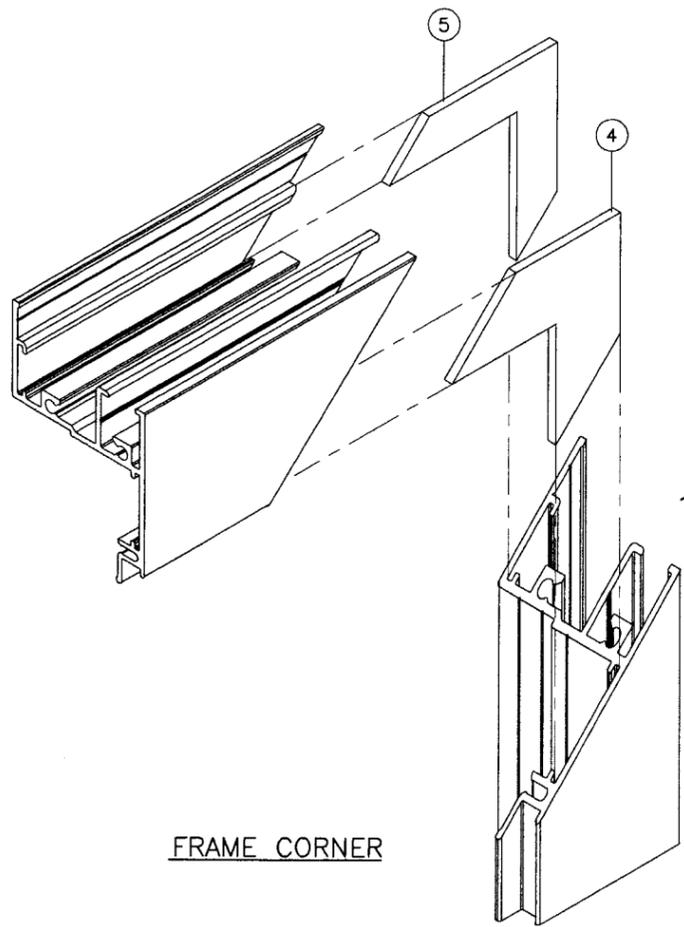


VENT (INSUL. LAM. GLASS)



VENT (7/16" LAM. GLASS)

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



FRAME CORNER

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	-	AS REQD.	VENT SCREWS @ 20" O.C. LONGER SIDES, 18" O.C. SHORTER SIDES	-	#10 X 1" SS SMS
9	-	2/ CORNER	FRAME AND VENT ASSEMBLY SCREWS	-	#10 X 1-1/4" SS SMS

**PRODUCT RENEWED**  
as complying with the Florida  
Building Code  
Acceptance No 06-0928.03  
Expiration Date OCT 26, 2007  
By Ishag I. Chande  
Miami Dade Product Control  
Division

Engr. DR. HUMAYOUN FAROOQ  
STRUCTURES  
FLA. PE # 16557  
C.A.N. 3538  
  
AUG 30 2006

**AL-FAROOQ CORPORATION**  
ENGINEERS, PLANNERS & PRODUCT DESIGN  
1235 SW 87 AVE  
MIAMI, FLORIDA 33174  
TEL. (305) 264-8100 FAX. (305) 262-6978  
COMP-ANL\W99-10CGI

SERIES-238 ALUMINUM FIXED WINDOW  
**CONSTRUCTION GLASS IND. CORP.**  
7840 N.W. 62 nd STREET  
MIAMI, FL. 33166  
TEL. (305) 593-6590 FAX. (305) 593-6592

no	date	by	description
D	06.26.06		UPDATED FOR 2004 FBC

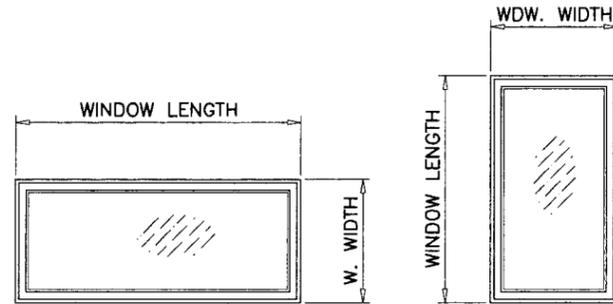
date: 02-19-99  
scale: 1/2" = 1"  
dr. by: HAMID  
chk. by:  
  
drawing no.  
**W99-10**  
sheet 2 of 7

PERFORMANCE VALUES OF IMPACT RESISTANT WINDOWS  
NO SHUTTERS REQUIRED  
REFER TO SHEETS 6 AND 7 FOR INSTALLATION DETAILS

WINDOW DIMS.		GLASS TYPE '2'		GLASS TYPE '3'	
WIDTH	HEIGHT	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)
24"	36"	110.0	180.0	110.0	180.0
30"		110.0	144.0	110.0	144.0
36"		110.0	120.0	110.0	120.0
42"		110.0	120.0	110.0	120.0
48"		101.4	101.4	110.0	120.0
54"		84.8	84.8	110.0	120.0
60"	74.7	74.7	110.0	114.3	
24"	42"	110.0	166.4	110.0	168.0
30"		110.0	142.5	110.0	144.0
36"		110.0	120.0	110.0	120.0
42"		102.9	102.9	102.9	102.9
48"		85.0	85.0	102.9	102.9
54"		75.1	75.1	102.9	102.9
60"	66.4	66.4	90.0	90.0	
24"	48"	110.0	153.1	110.0	160.0
30"		110.0	117.6	110.0	120.0
36"		101.4	101.4	110.0	120.0
42"		85.0	85.0	102.9	102.9
48"		75.5	75.5	90.0	90.0
54"		68.4	68.4	90.0	90.0
60"	63.6	63.6	90.0	90.0	
24"	54"	110.0	134.8	110.0	154.3
30"		99.4	99.4	110.0	120.0
36"		84.8	84.8	110.0	120.0
42"		75.1	75.1	102.9	102.9
48"		68.4	68.4	90.0	90.0
54"		65.8	65.8	80.0	80.0
60"	59.0	59.0	80.0	80.0	
24"	60"	110.0	119.4	110.0	120.0
30"		87.8	87.8	110.0	120.0
36"		74.7	74.7	110.0	114.3
42"		66.4	66.4	90.0	90.0
48"		63.6	63.6	90.0	90.0
54"		59.0	59.0	80.0	80.0
24"	66"	110.0	112.5	110.0	120.0
30"		82.1	82.1	110.0	120.0
36"		66.6	66.6	90.0	90.0
42"		58.1	58.1	90.0	90.0
48"		56.1	56.1	90.0	90.0
24"		72"	105.4	105.4	110.0
30"	74.0		74.0	110.0	120.0
36"	59.2		59.2	90.0	90.0
42"	51.2		51.2	90.0	90.0
48"	49.8		49.8	83.9	83.9

PERFORMANCE VALUES OF IMPACT RESISTANT WINDOWS  
NO SHUTTERS REQUIRED  
REFER TO SHEETS 6 AND 7 FOR INSTALLATION DETAILS

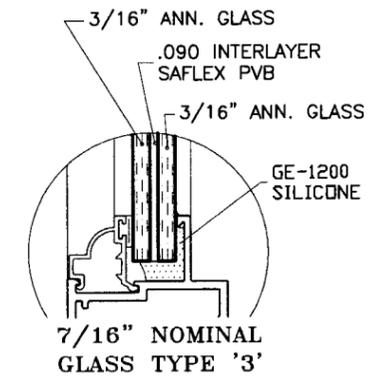
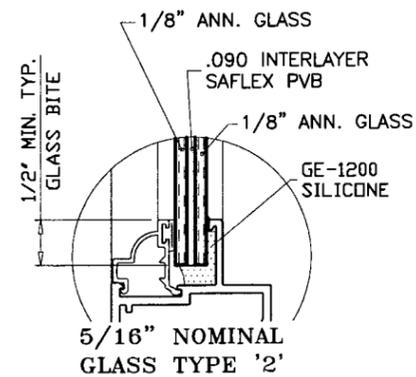
WINDOW DIMS.		GLASS TYPE '2'		GLASS TYPE '3'	
WIDTH	HEIGHT	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)
24"	78"	97.5	97.5	110.0	120.0
30"		67.2	67.2	90.0	90.0
36"		50.8	50.8	90.0	90.0
42"		46.1	46.1	86.1	86.1
24"	84"	103.0	103.0	110.0	120.0
30"		63.0	63.0	90.0	90.0
36"		47.3	47.3	90.0	90.0
24"		87.5	87.5	110.0	120.0
30"	96"	56.3	56.3	90.0	90.0
36"		41.6	41.6	90.0	90.0
24"	108"	69.6	69.6	90.0	90.0
30"		53.5	53.5	90.0	90.0
24"	120"	58.8	58.8	90.0	90.0



NOTE:  
WIDTH AND LENGTH DIMENSIONS CAN BE ORIENTED VERTICALLY OR HORIZONTALLY AS SHOWN.

PERFORMANCE VALUES OF IMPACT RESISTANT WINDOWS  
NO SHUTTERS REQUIRED  
REFER TO SHEETS 6 AND 7 FOR INSTALLATION DETAILS

WINDOW DIMS.		GLASS TYPE '2'		GLASS TYPE '3'	
WIDTH	HEIGHT	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)
19-1/8"	26"	110.0	210.0	110.0	210.0
26-1/2"		110.0	166.2	110.0	166.2
37"		110.0	166.2	110.0	166.2
53-1/8"		110.0	120.0	110.0	120.0
19-1/8"	38-3/8"	110.0	200.6	110.0	200.6
26-1/2"		110.0	163.0	110.0	163.0
37"		110.0	116.8	110.0	116.8
53-1/8"		81.9	81.9	110.0	112.6
19-1/8"	50-5/8"	110.0	185.7	110.0	185.7
26-1/2"		110.0	125.2	110.0	147.2
37"		92.1	92.1	110.0	116.8
53-1/8"		66.6	66.6	85.3	85.3
19-1/8"	63"	110.0	177.5	110.0	177.5
26-1/2"		98.1	98.1	110.0	120.0
37"		68.6	68.6	110.0	110.2
53-1/8"		56.6	56.6	81.3	81.3
19-1/8"	74-1/4"	110.0	120.0	110.0	120.0
26-1/2"		85.2	85.2	110.0	120.0
37"		55.4	55.4	90.0	90.0



PRODUCT RENEWED  
as complying with the Florida  
Building Code  
Acceptance No 06-092803  
Expiration Date OCT 26 2007  
By Ishag I. Chande  
Miami Code Product Control  
Division

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

AUG 30 2006

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

**AL-FAROOQ CORPORATION**  
ENGINEERS, PLANNERS & PRODUCT DESIGN  
1235 SW 87 AVE  
MIAMI, FLORIDA 33174  
TEL. (305) 264-8100 FAX. (305) 262-6978  
COMP-ANL W99-10CGI

SERIES-238 ALUMINUM FIXED WINDOW  
**CONSTRUCTION GLASS IND. CORP.**  
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TEL. (305) 593-6590 FAX. (305) 593-6592

no	date	description
B	08.09.01	CHARTS REV. PER ASTM E-1300
D	08.26.06	UPDATED FOR 2004 FBC

date: 02-19-99  
scale: 1/2" = 1"  
dr. by: HAMID  
chk. by:

drawing no.  
**W99-10**

sheet 3 of 7

**PERFORMANCE VALUES OF IMPACT RESISTANT WINDOWS**  
NO SHUTTERS REQUIRED  
REFER TO SHEETS 6 AND 7 FOR INSTALLATION DETAILS

WINDOW DIMS.		GLASS TYPE '6'	
WIDTH	HEIGHT	EXT. (+)	INT. (-)
24"	36"	110.0	195.8
30"		110.0	156.6
36"		110.0	130.5
42"		110.0	120.0
48"		110.0	120.0
54"		110.0	120.0
60"	110.0	120.0	
24"	42"	110.0	193.6
30"		110.0	156.6
36"		110.0	120.0
42"		96.9	111.9
48"		96.9	111.9
54"		96.9	111.9
60"	90.0	90.0	
24"	48"	110.0	184.4
30"		110.0	120.0
36"		110.0	120.0
42"		96.9	111.9
48"		84.8	97.9
54"		90.0	90.0
60"	90.0	90.0	
24"	54"	110.0	177.8
30"		110.0	120.0
36"		110.0	120.0
42"		96.9	111.9
48"		90.0	90.0
54"		80.0	80.0
60"	80.0	80.0	
24"	60"	110.0	120.0
30"		110.0	120.0
36"		110.0	120.0
42"		90.0	90.0
48"		90.0	90.0
54"		80.0	80.0
60"		70.0	70.0
63"		70.0	70.0
66"		70.0	70.0
69"		70.0	70.0
72"		70.0	70.0
75"		70.0	70.0
78"		70.0	70.0
81"		70.0	70.0
84"	50.0	50.0	
87"	50.0	50.0	

**PERFORMANCE VALUES OF IMPACT RESISTANT WINDOWS**  
NO SHUTTERS REQUIRED  
REFER TO SHEETS 6 AND 7 FOR INSTALLATION DETAILS

WINDOW DIMS.		GLASS TYPE '6'	
WIDTH	HEIGHT	EXT. (+)	INT. (-)
24"	66"	110.0	120.0
30"		110.0	120.0
36"		90.0	90.0
42"		90.0	90.0
48"		90.0	90.0
54"		70.0	70.0
57"		70.0	70.0
60"		70.0	70.0
63"		68.6	68.6
66"		65.5	65.5
69"		65.5	65.5
72"		65.5	65.5
75"		50.0	50.0
78"		50.0	50.0
81"	50.0	50.0	
84"	50.0	50.0	
87"	50.0	50.0	
24"	72"	110.0	120.0
30"		110.0	120.0
36"		90.0	90.0
42"		90.0	90.0
48"		90.0	90.0
51"		70.0	70.0
54"		70.0	70.0
57"		70.0	70.0
60"		70.0	70.0
63"		68.6	68.6
66"		65.5	65.5
69"		50.0	50.0
72"		50.0	50.0
75"		50.0	50.0
78"	50.0	50.0	
81"	50.0	50.0	
84"	50.0	50.0	
87"	50.0	50.0	
24"	78"	110.0	120.0
30"		90.0	90.0
36"		90.0	90.0
42"		90.0	90.0
45"		70.0	70.0
48"		70.0	70.0
51"		70.0	70.0
54"		70.0	70.0
57"		70.0	70.0
60"		70.0	70.0
63"		50.0	50.0
66"		50.0	50.0
69"		50.0	50.0
72"		50.0	50.0
75"	50.0	50.0	
78"	50.0	50.0	
81"	50.0	50.0	

**PERFORMANCE VALUES OF IMPACT RESISTANT WINDOWS**  
NO SHUTTERS REQUIRED  
REFER TO SHEETS 6 AND 7 FOR INSTALLATION DETAILS

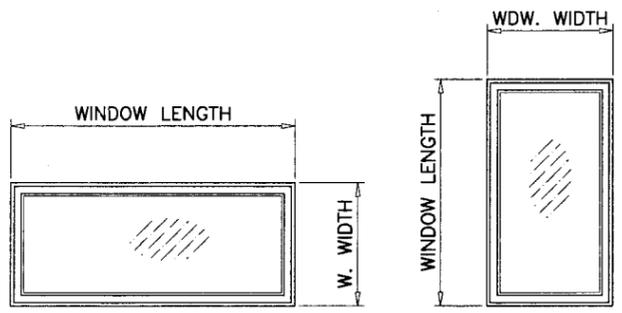
WINDOW DIMS.		GLASS TYPE '6'		
WIDTH	HEIGHT	EXT. (+)	INT. (-)	
24"	84"	110.0	120.0	
30"		90.0	90.0	
36"		90.0	90.0	
42"		70.0	70.0	
45"		70.0	70.0	
48"		70.0	70.0	
51"		70.0	70.0	
54"		70.0	70.0	
57"		70.0	70.0	
60"		50.0	50.0	
63"		50.0	50.0	
66"		50.0	50.0	
69"		50.0	50.0	
72"		50.0	50.0	
75"	50.0	50.0		
24"	96"	110.0	120.0	
30"		90.0	90.0	
36"		90.0	90.0	
42"		70.0	70.0	
45"		70.0	70.0	
48"		70.0	70.0	
51"		70.0	70.0	
54"		50.0	50.0	
57"		50.0	50.0	
60"		50.0	50.0	
63"		50.0	50.0	
66"		50.0	50.0	
69"		90.0	90.0	
72"		90.0	90.0	
75"	70.0	70.0		
78"	70.0	70.0		
81"	70.0	70.0		
84"	70.0	70.0		
87"	50.0	50.0		
24"	108"	90.0	90.0	
30"		90.0	90.0	
33"		70.0	70.0	
36"		70.0	70.0	
39"		70.0	70.0	
42"		70.0	70.0	
45"		70.0	70.0	
48"		50.0	50.0	
51"		50.0	50.0	
54"		50.0	50.0	
57"		50.0	50.0	
60"		50.0	50.0	
24"		120"	90.0	90.0
30"			70.0	70.0
33"	70.0		70.0	
36"	70.0		70.0	
39"	70.0		70.0	
42"	50.0		50.0	
45"	50.0		50.0	
48"	50.0		50.0	
51"	50.0		50.0	
54"	50.0		50.0	

**PERFORMANCE VALUES OF IMPACT RESISTANT WINDOWS**  
NO SHUTTERS REQUIRED  
REFER TO SHEETS 6 AND 7 FOR INSTALLATION DETAILS

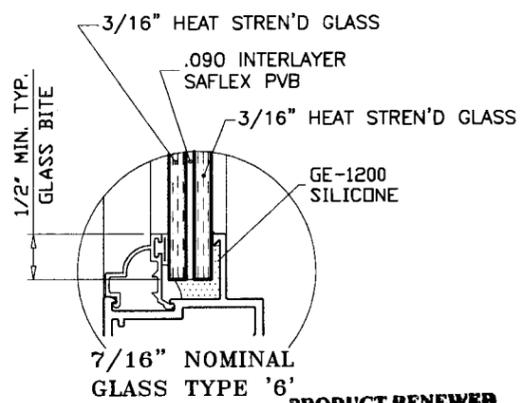
WINDOW DIMS.		GLASS TYPE '6'	
WIDTH	HEIGHT	EXT. (+)	INT. (-)
24"	132"	70.0	70.0
30"		70.0	70.0
33"		70.0	70.0
36"		70.0	70.0
39"		50.0	50.0
42"		50.0	50.0
45"		50.0	50.0
48"		50.0	50.0
24"	144"	70.0	70.0
30"		70.0	70.0
33"		70.0	70.0
36"		50.0	50.0
39"		50.0	50.0
42"		50.0	50.0
45"		50.0	50.0
48"		50.0	50.0
24"	156"	70.0	70.0
30"		70.0	70.0
33"		50.0	50.0
36"		50.0	50.0
39"		50.0	50.0
42"		50.0	50.0

**PERFORMANCE VALUES OF IMPACT RESISTANT WINDOWS**  
NO SHUTTERS REQUIRED  
REFER TO SHEETS 5 AND 6 FOR INSTALLATION DETAILS

WINDOW DIMS.		GLASS TYPE '6'	
WIDTH	HEIGHT	EXT. (+)	INT. (-)
19-1/8"	26"	110.0	210.0
26-1/2"		110.0	180.7
37"		110.0	180.7
53-1/8"		110.0	120.0
19-1/8"	38-3/8"	110.0	210.0
26-1/2"		110.0	177.3
37"		110.0	120.0
53-1/8"	110.0	120.0	
19-1/8"	50-5/8"	110.0	210.0
26-1/2"		110.0	169.7
37"		110.0	120.0
53-1/8"	85.3	85.3	
19-1/8"	63"	110.0	204.6
26-1/2"		110.0	120.0
37"		110.0	120.0
53-1/8"	81.3	81.3	
19-1/8"	74-1/4"	110.0	120.0
26-1/2"		110.0	120.0
37"		90.0	90.0
53-1/8"	70.0	70.0	



**NOTE:**  
WIDTH AND LENGTH DIMENSIONS CAN BE ORIENTED VERTICALLY OR HORIZONTALLY AS SHOWN.



**PRODUCT RENEWED**  
as complying with the Florida Building Code  
Acceptance No 06-0928-03  
Expiration Date OCT 26 2007  
By Ishag I. Ulu  
Miami Desk Product Control Division

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

**AUG 30 2006**

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

**AL-FAROOQ CORPORATION**  
ENGINEERS, PLANNERS & PRODUCT DESIGN  
1235 SW 87 AVE  
MIAMI, FLORIDA 33174  
TEL. (305) 264-8100 FAX. (305) 262-6978  
COMP-ANL\W99-10CGI

**SERIES-238 ALUMINUM FIXED WINDOW**  
**CONSTRUCTION GLASS IND. CORP.**  
7840 N.W. 62 nd STREET  
MIAMI, FL. 33166  
TEL. (305) 593-6590 FAX. (305) 593-6592

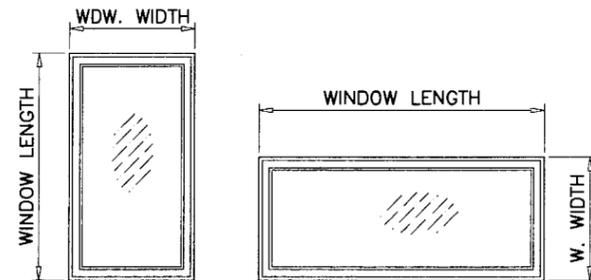
no	date	description
B	08-09-01	CHARTS REV. PER ASTM E-1300
D	08-26-06	UPDATED FOR 2004 FBC

date: 02-19-99  
scale: 1/2" = 1"  
dr. by: HAMID  
chk. by:

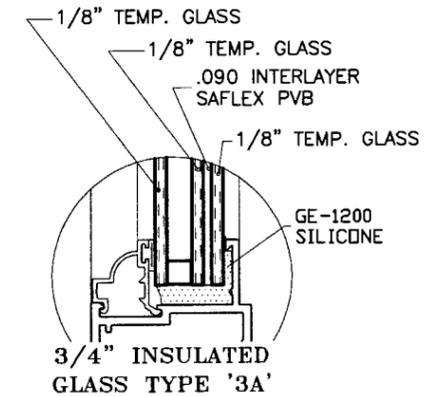
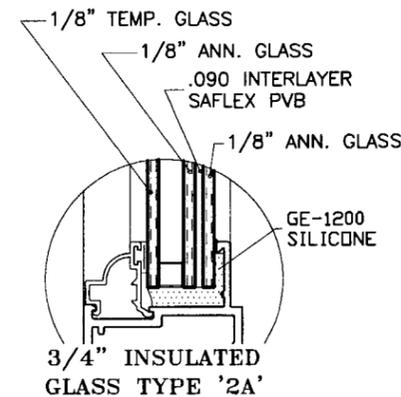
drawing no.  
**W99-10**  
sheet 4 of 7

PERFORMANCE VALUES OF IMPACT RESISTANT WINDOWS					
NO SHUTTERS REQUIRED					
REFER TO SHEETS 6 AND 7 FOR INSTALLATION DETAILS					
WINDOW DIMS.		GLASS TYPE '2A'		GLASS TYPE '3A'	
WIDTH	HEIGHT	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)
24"	36"	110.0	180.0	110.0	195.8
30"		110.0	144.0	110.0	156.6
36"		110.0	120.0	110.0	130.5
42"		110.0	120.0	110.0	120.0
48"		107.7	107.7	110.0	120.0
54"		90.1	90.1	110.0	120.0
60"	79.3	79.3	110.0	120.0	
24"	42"	110.0	168.0	110.0	193.6
30"		110.0	144.0	110.0	156.6
36"		110.0	120.0	110.0	120.0
42"		102.9	102.9	96.9	111.9
48"		90.3	90.3	96.9	111.9
54"		79.8	79.8	96.9	111.9
60"	70.5	70.5	90.0	90.0	
24"	48"	110.0	160.0	110.0	184.4
30"		110.0	120.0	110.0	120.0
36"		107.7	107.7	110.0	120.0
42"		90.3	90.3	96.9	111.9
48"		80.2	80.2	84.8	97.9
54"		72.7	72.7	90.0	90.0
60"	67.6	67.6	90.0	90.0	
24"	54"	110.0	143.3	110.0	177.8
30"		105.6	105.6	110.0	120.0
36"		90.1	90.1	110.0	120.0
42"		79.8	79.8	96.9	111.9
48"		72.7	72.7	90.0	90.0
54"		69.9	69.9	80.0	80.0
60"	62.7	62.7	80.0	80.0	
24"	60"	110.0	120.0	110.0	120.0
30"		93.3	93.3	110.0	120.0
36"		79.3	79.3	110.0	120.0
42"		70.5	70.5	90.0	90.0
48"		67.6	67.6	90.0	90.0
54"		62.7	62.7	80.0	80.0
24"	66"	110.0	119.5	110.0	120.0
30"		87.2	87.2	110.0	120.0
36"		70.7	70.7	90.0	90.0
42"		61.7	61.7	90.0	90.0
48"	59.6	59.6	90.0	90.0	
24"	72"	110.0	111.9	110.0	120.0
30"		78.6	78.6	110.0	120.0
36"		62.9	62.9	90.0	90.0
42"		54.4	54.4	90.0	90.0
48"		52.9	52.9	90.0	90.0

PERFORMANCE VALUES OF IMPACT RESISTANT WINDOWS					
NO SHUTTERS REQUIRED					
REFER TO SHEETS 6 AND 7 FOR INSTALLATION DETAILS					
WINDOW DIMS.		GLASS TYPE '2A'		GLASS TYPE '3A'	
WIDTH	HEIGHT	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)
24"	78"	103.6	103.6	110.0	120.0
30"		71.4	71.4	90.0	90.0
36"		54.0	54.0	90.0	90.0
42"		48.9	48.9	90.0	90.0
24"	84"	109.4	109.4	110.0	120.0
30"		67.0	67.0	90.0	90.0
36"		50.2	50.2	90.0	90.0
24"	96"	92.9	92.9	110.0	120.0
30"		59.8	59.8	90.0	90.0
36"		44.2	44.2	90.0	90.0
24"	108"	74.0	74.0	90.0	90.0
30"		56.8	56.8	90.0	90.0
24"	120"	62.5	62.5	90.0	90.0



NOTE:  
WIDTH AND LENGTH DIMENSIONS CAN BE ORIENTED VERTICALLY OR HORIZONTALLY AS SHOWN ABOVE.



**PRODUCT RENEWED**  
as complying with the Florida  
Building Code  
Acceptance No. 06-0928.03  
Expiration Date OCT 26 2007  
By Ishag I. Chande  
Miami Dade Product Control  
Division

PERFORMANCE VALUES OF IMPACT RESISTANT WINDOWS					
NO SHUTTERS REQUIRED					
REFER TO SHEETS 6 AND 7 FOR INSTALLATION DETAILS					
WINDOW DIMS.		GLASS TYPE '2A'		GLASS TYPE '3A'	
WIDTH	HEIGHT	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)
19-1/8"	26"	110.0	210.0	110.0	210.0
26-1/2"		110.0	166.2	110.0	180.7
37"		110.0	166.2	110.0	180.7
53-1/8"		110.0	120.0	110.0	120.0
19-1/8"	38-3/8"	110.0	200.6	110.0	210.0
26-1/2"		110.0	163.0	110.0	177.3
37"		110.0	116.8	110.0	120.0
53-1/8"	87.0	87.0	110.0	120.0	
19-1/8"	50-5/8"	110.0	185.7	110.0	210.0
26-1/2"		110.0	133.0	110.0	169.7
37"		97.9	97.9	110.0	120.0
53-1/8"		70.8	70.8	85.3	85.3
19-1/8"	63"	110.0	177.5	110.0	204.6
26-1/2"		104.3	104.3	110.0	120.0
37"		72.9	72.9	110.0	120.0
53-1/8"	60.1	60.1	81.3	81.3	
19-1/8"	74-1/4"	110.0	120.0	110.0	120.0
26-1/2"		90.5	90.5	110.0	120.0
37"		58.8	58.8	90.0	90.0

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

AUG 30 2006

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

**AL-FAROOQ CORPORATION**  
ENGINEERS, PLANNERS & PRODUCT DESIGN  
1235 SW 87 AVE  
MIAMI, FLORIDA 33174  
TEL. (305) 264-8100 FAX. (305) 262-6978  
COMP-ANL\W99-10CGI

SERIES-238 ALUMINUM FIXED WINDOW  
**CONSTRUCTION GLASS IND. CORP.**  
7840 N.W. 62<sup>nd</sup> STREET  
MIAMI, FL. 33166  
TEL. (305) 593-6590 FAX. (305) 593-6592

no	date	description
B	08.09.01	CHARTS REV. PER ASTM E-1300
C	10.04.01	CHART REV. PER BCCO COMMENTS
D	06.26.06	UPDATED FOR 2004 FBC

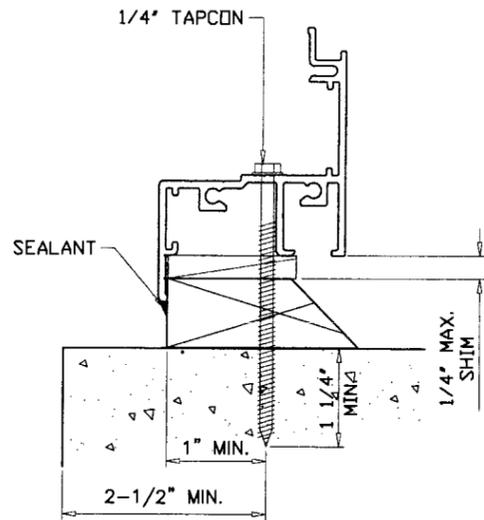
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dr. by: HAMID  
chk. by:

drawing no.  
**W99-10**

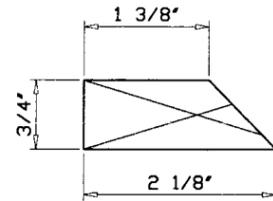
sheet 5 of 7

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

FOR ANCHOR PERFORMANCE VALUES SEE SHEET 6



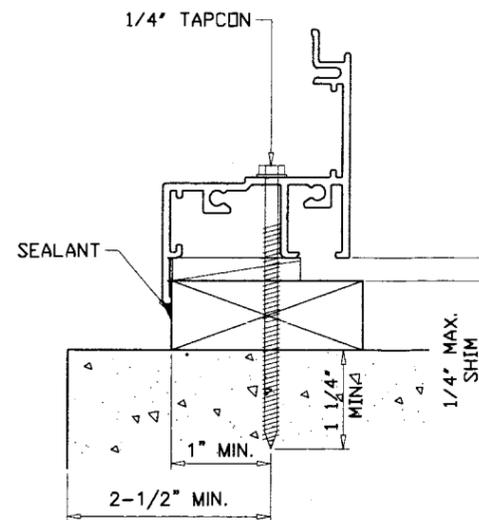
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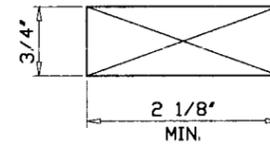
**WOOD BUCK TYPE '1'**

MATERIAL: PRESSURE TREATED

TYPICAL INSTALLATION DETAIL  
ON ALL FOUR SIDES/USING WOOD



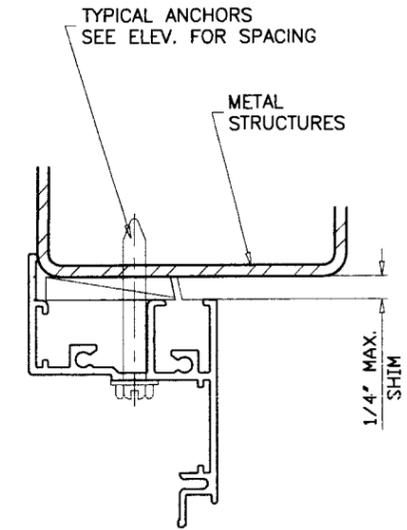
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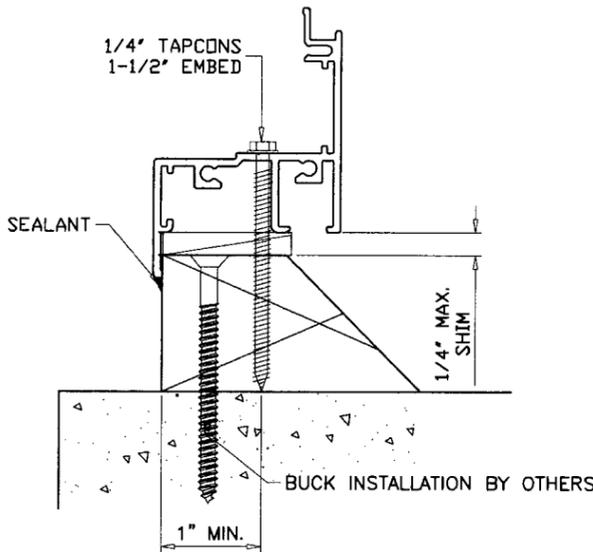
**WOOD BUCK TYPE '2'**

MATERIAL: PRESSURE TREATED

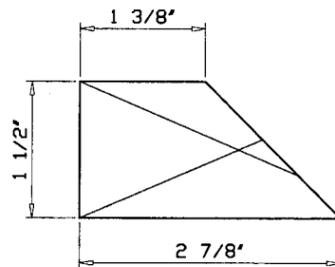
TYPICAL INSTALLATION DETAIL  
ON ALL FOUR SIDES/USING WOOD



ATTACHMENT TO  
METAL STRUCTURES



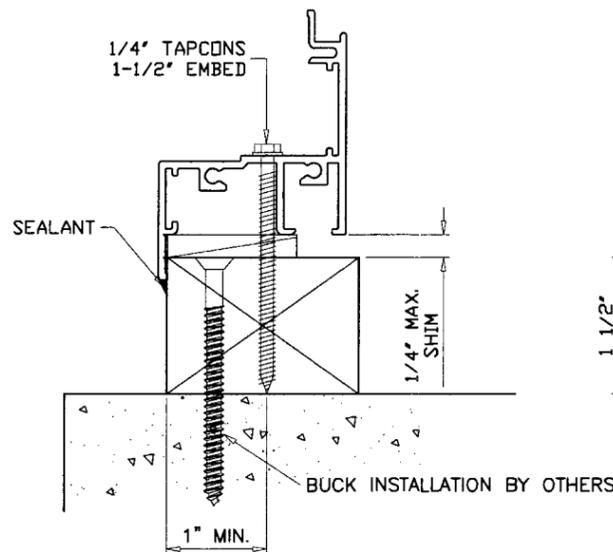
**INSTALLATION TYPE '3'**



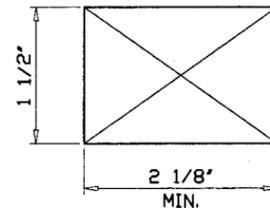
**WOOD BUCK TYPE '3'**

MATERIAL: PRESSURE TREATED

TYPICAL INSTALLATION DETAIL  
ON ALL FOUR SIDES/USING WOOD



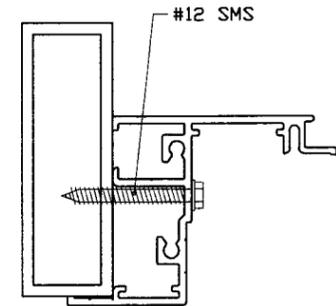
**INSTALLATION TYPE '4'**



**WOOD BUCK TYPE '4'**

MATERIAL: PRESSURE TREATED

TYPICAL INSTALLATION DETAIL  
ON ALL FOUR SIDES/USING WOOD



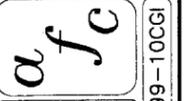
ATTACHMENT TO  
APPROVED MULLIONS

**PRODUCT RENEWED**  
as complying with the Florida  
Building Code  
Acceptance No. 06-0928.03  
Expiration Date 01/26/2007  
By: Ishtag I. Chande  
Miami Dade Product Control  
Division

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

*[Signature]*  
**AUG 30 2006**

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



**AL-FAROOQ CORPORATION**  
ENGINEERS, PLANNERS & PRODUCT DESIGN  
1235 SW 87 AVE  
MIAMI, FLORIDA 33174  
TEL. (305) 264-8100 FAX. (305) 262-6978  
COMP-ANL/W99-10CGI

SERIES-238 ALUMINUM FIXED WINDOW  
**CONSTRUCTION GLASS IND. CORP.**  
7840 N.W. 62 nd STREET  
MIAMI, FL. 33166  
TEL. (305) 593-6590 FAX. (305) 593-6592

no	date	by	description
B	08.09.01		REVISED
D	08.26.06		UPDATED FOR 2004 FBC

date: 02-19-99  
scale: 1/2" = 1"  
dr. by: HAMID  
chk. by:

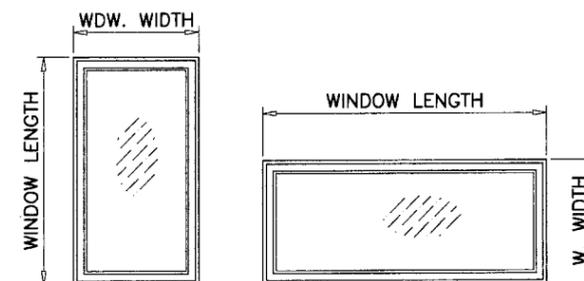
drawing no.  
**W99-10**  
sheet 6 of 7

PERFORMANCE VALUES OF INSTALLATION ANCHORS REFER TO SHEET 6 FOR DETAILS		
WINDOW DIMS.		EXT. (+) INT. (-)
WIDTH	HEIGHT	
24"	36"	210.0
30"		210.0
36"		210.0
42"		210.0
48"		210.0
54"		210.0
60"		185.1
66"		202.5
72"		180.0
78"		162.0
84"	176.7	
90"	162.0	
24"	42"	210.0
30"		210.0
36"		210.0
42"		210.0
48"		210.0
54"		202.0
60"		170.9
66"		185.1
72"		163.4
78"		146.2
84"	158.7	
90"	144.9	
24"	48"	210.0
30"		210.0
36"		210.0
42"		210.0
48"		210.0
54"		194.4
60"		162.0
66"		173.6
72"		151.9
78"		135.0
84"	145.8	
90"	132.5	
24"	54"	210.0
30"		210.0
36"		210.0
42"		202.0
48"		194.4
54"		192.0
60"		157.1
66"		166.2
72"		144.0
78"		127.1
84"	136.4	
90"	123.4	

PERFORMANCE VALUES OF INSTALLATION ANCHORS REFER TO SHEET 6 FOR DETAILS		
WINDOW DIMS.		EXT. (+) INT. (-)
WIDTH	HEIGHT	
24"	60"	210.0
30"		207.4
36"		185.1
42"		170.9
48"		162.0
54"		157.1
60"		155.5
66"		162.0
72"		138.9
78"		121.5
84"	129.6	
90"	116.6	
24"	66"	210.0
30"		210.0
36"		202.5
42"		185.1
48"		173.6
54"		166.2
60"		162.0
66"		160.7
72"		135.9
78"		117.8
84"	124.7	
90"	111.6	
24"	72"	210.0
30"		204.6
36"		180.0
42"		163.4
48"		151.9
54"		144.0
60"		138.9
66"		135.9
72"		135.0
78"		115.7
84"	121.5	
90"	108.0	
24"	78"	210.0
30"		185.1
36"		162.0
42"		146.2
48"		135.0
54"		127.1
60"		121.5
66"		117.8
72"		115.7
78"		115.0
84"	119.6	

PERFORMANCE VALUES OF INSTALLATION ANCHORS REFER TO SHEET 6 FOR DETAILS			
WINDOW DIMS.		EXT. (+) INT. (-)	
WIDTH	HEIGHT		
24"	84"	210.0	
30"		202.9	
36"		176.7	
42"		158.7	
48"		145.8	
54"		136.4	
60"		129.6	
66"		124.7	
72"		121.5	
78"		119.6	
24"	96"	208.3	
30"		172.8	
36"		149.5	
42"		133.3	
48"		121.5	
54"		112.7	
60"		106.0	
66"		101.0	
72"		97.2	
24"		108"	210.0
30"	175.6		
36"	151.2		
42"	134.1		
48"	121.5		
54"	112.0		
60"	104.7		
24"	120"		210.0
30"			177.7
36"			152.5
42"		134.6	
48"		121.5	
54"		111.5	
24"		132"	210.0
30"			179.4
36"			153.5
42"			135.1
48"	121.5		
24"	144"		198.8
30"			162.8
36"			138.9
42"			121.9
48"			109.4
24"		156"	202.5
30"			165.4
36"			140.9
42"			123.4

PERFORMANCE VALUES OF INSTALLATION ANCHORS REFER TO SHEET 6 FOR DETAILS		
WINDOW DIMS.		EXT. (+) INT. (-)
WIDTH	HEIGHT	
19-1/8"	26"	210.0
26-1/2"		210.0
37"		210.0
53-1/8"		210.0
19-1/8"	38-3/8"	210.0
26-1/2"		210.0
37"		210.0
53-1/8"		210.0
19-1/8"	50-5/8"	210.0
26-1/2"		210.0
37"		210.0
53-1/8"		198.8
19-1/8"	63"	210.0
26-1/2"		210.0
37"		170.0
53-1/8"		144.6
19-1/8"	74-1/4"	210.0
26-1/2"		210.0
37"		169.6
53-1/8"		138.1



NOTE:  
WIDTH AND LENGTH DIMENSIONS CAN BE ORIENTED VERTICALLY OR HORIZONTALLY AS SHOWN ABOVE.

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 APPROVED MULLIONS (MIN. THK. = 1/8")

(NO SHIM SPACE)

**PRODUCT RENEWED**  
as complying with the Florida  
Building Code  
Acceptance No 06-0928.03  
Expiration Date OCT 26, 2007  
By Ishag J. Chauds  
Miami Dade Product Control  
Division

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

*[Signature]*  
AUG 30 2006

**AL-FAROOQ CORPORATION**  
ENGINEERS, PLANNERS & PRODUCT DESIGN  
1235 SW 87 AVE  
MIAMI, FLORIDA 33174  
TEL. (305) 264-8100 FAX. (305) 262-6978  
COMP-ANL\W99-10CGI

SERIES-238 ALUMINUM FIXED WINDOW  
**CONSTRUCTION GLASS IND. CORP.**  
7840 N.W. 62 nd STREET  
MIAMI, FL. 33166  
TEL. (305) 593-6590 FAX. (305) 593-6592

no	date	description
B	08.09.01	CHARTS REV. PER 1997 NDS
C	10.04.01	ANCHOR REV. PER BCCO COMMENTS
D	08.26.06	UPDATED FOR 2004 FBC

date: 02-19-99  
scale: 1/2" = 1"  
dr. by: HAMID  
chk. by:

drawing no.  
**W99-10**  
sheet 7 of 7