



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) 375-2908

NOTICE OF ACCEPTANCE (NOA)

YKK AP America
332 Firetower Road
Dublin, GA 31021

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 "YOW-225H" Aluminum Casement Window (L.M.I)

APPROVAL DOCUMENT: Drawing No. **W03-61**, titled "YOW-225H Aluminum Casement Window (L.M.I)", sheets 1 through 6 of 6, prepared by manufacturer, dated 08/04/03, with revision date 10/31/03, signed and sealed by Humayoun Farooq, P.E., bearing the Miami-Dade County Product Control Approval stamp with the Notice of Acceptance number and approval date by the Miami-Dade County Product Control Division.

MISSILE IMPACT RATING: Large and Small Missile Impact

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 consists of this page 1 and evidence pages E1 and E2, as well as approval document mentioned above. The submitted documentation was reviewed by **Theodore Berman, P.E.**



NOA No 03-1006.04
Expiration Date: February 12, 2009
Approval Date: February 12, 2004
Page 1

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. Manufacturer's die drawings and sections.
2. Drawing No. **W03-61**, titled "YOW-225H Aluminum Casement Window (L.M.I)", sheets 1 through 6 of 6, prepared by manufacturer, dated 08/04/03, with revision date 10/31/03, signed and sealed by Humayoun Farooq, P.E.

B. TESTS

1. 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 casement window, prepared by Hurricane Test Laboratory, Inc. Test Report No. **FTL-0231-0810-02** dated 08/14/02 and 08/12/02, signed and sealed by Vinu J. Abraham, 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) Forced Entry Resistance Test, per FBC 2411.3.2.1
along with marked-up drawings and installation diagram of an aluminum casement window, prepared by Hurricane Test Laboratory, Inc. Test Report No. **FTL-0231-1210-02** dated 12/09/02, 02/10/03, signed and sealed by Vinu J. Abraham, P.E.

C. CALCULATIONS

1. Anchor Calculations, ASTM E1300-97 and structural analysis, by Al Farooq Corporation, dated 09/26/03, signed and sealed by Humayoun Farooq, P.E.

D. MATERIAL CERTIFICATIONS

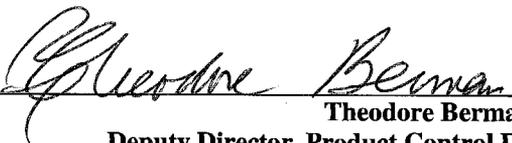
1. Notice of Acceptance No. **01-1204.01** issued to E.I. DuPont DeNemours for "Sentry Glass ® Plus" dated 01/17/02, expiring on 01/14/07.
2. Notice of Acceptance No. **03-0421.01** issued to Solutia, Inc. for "Saflex HP" dated 05/22/03, expiring on 04/14/08.
3. Notice of Acceptance No. **02-1205.03** issued to Security Impact Glass Holding L.I.C. for "SAF-GLAS Polycarbonate Laminate" dated 01/02/03, expiring on 12/16/07.

E. QUALITY ASSURANCE

1. Miami-Dade County Building Code Compliance Office

F. STATEMENTS

1. Statement letter of conformance, dated 09/26/03, signed and sealed by Humayoun Farooq, P.E.


Theodore Berman, P.E.

Deputy Director, Product Control Division

NOA No 03-1006.04

Expiration Date: February 12, 2009

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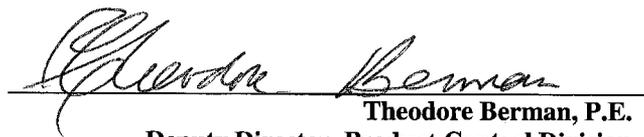
YKK AP America

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

2. Statement letter of no financial interest, dated 09/26/03, signed and sealed by Humayoun Farooq, P.E.
3. Laboratory compliance letter, as part of the above referenced test reports, issued by Hurricane Test Laboratory, Inc., **FTL-0231-1210-02**, dated 05/09/03.

G. OTHER

1. Letter from the consultant stating that the product is in compliance with the Florida Building Code (FBC)

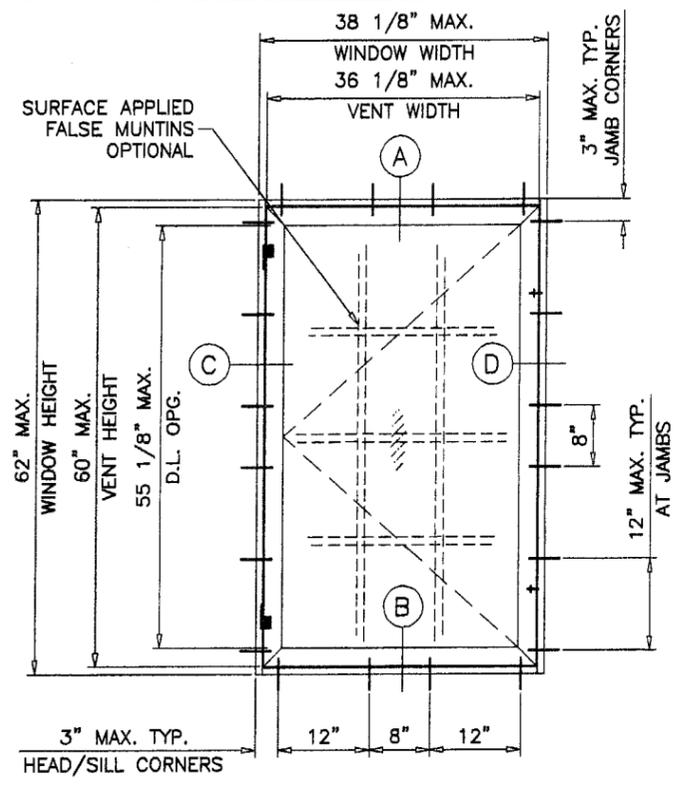

Theodore Berman, P.E.

Deputy Director, Product Control Division

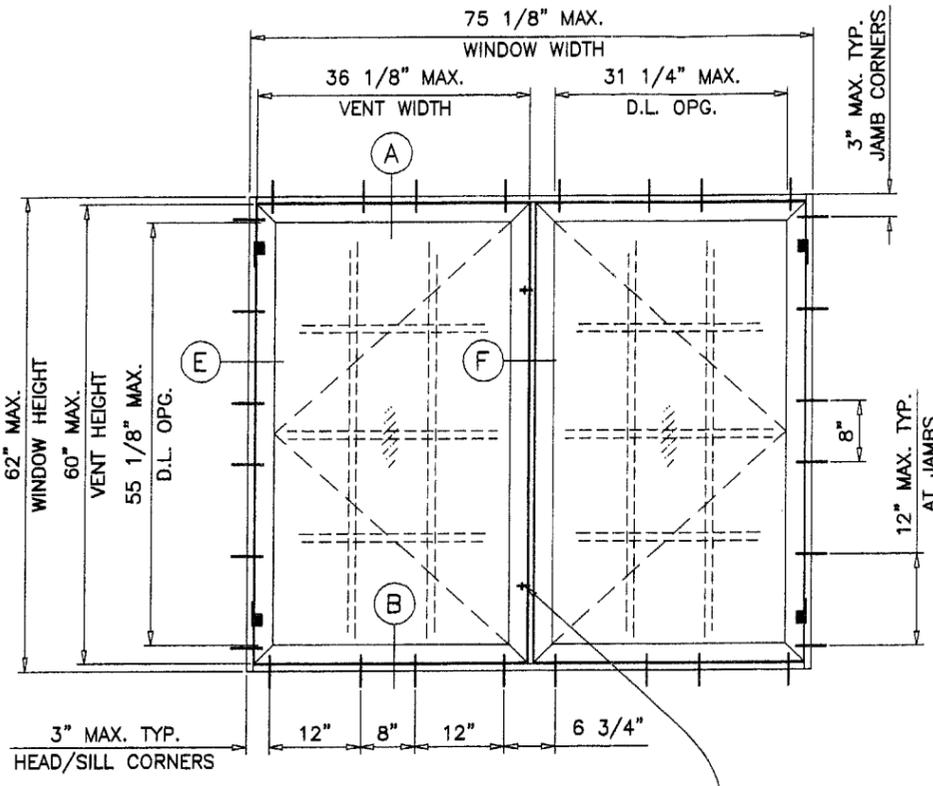
NOA No 03-1006.04

Expiration Date: February 12, 2009

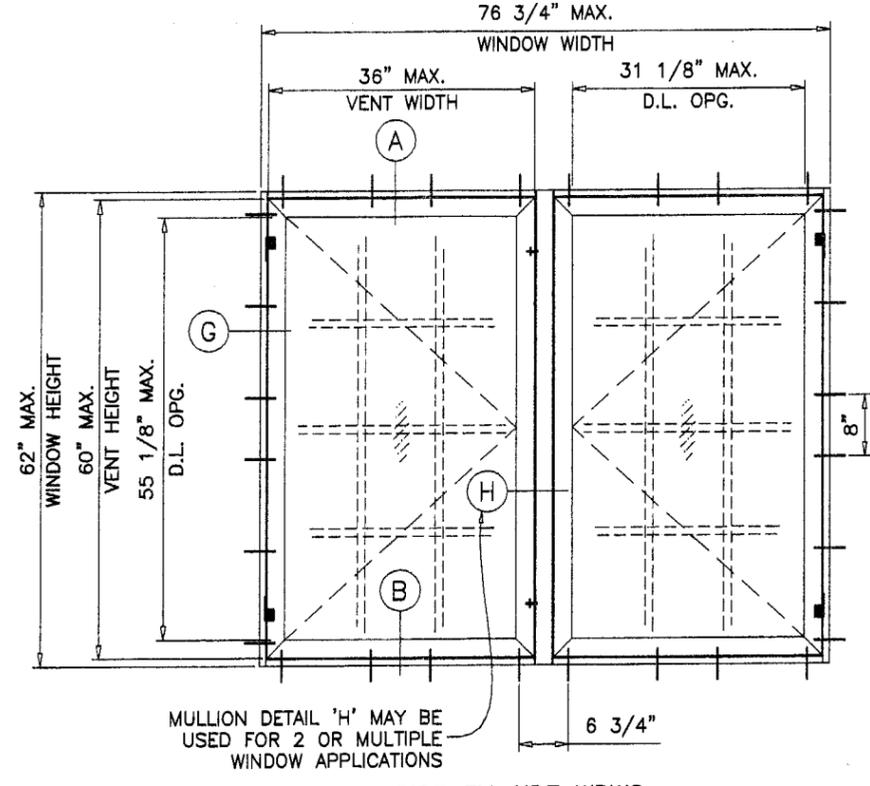
Approval Date: February 12, 2004



SINGLE VENT WDW.



DUAL VENT WDW.

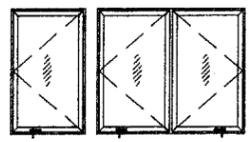


SIDE BY SIDE WDWs.

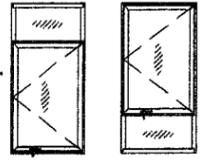
MAXIMUM DESIGN LOAD RATING = + 65.0 PSF
(FOR SIZES SHOWN OR SMALLER) - 65.0 PSF

WINDOWS GLAZED WITH LAMINATED GLASS RATED FOR LARGE MISSILE IMPACT AND DO NOT REQUIRE SHUTTERS.

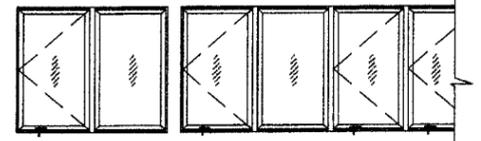
APPROVAL APPLIES TO SINGLE VENT WINDOWS OR DUAL VENT WINDOWS USING INTEGRAL IMPOST.



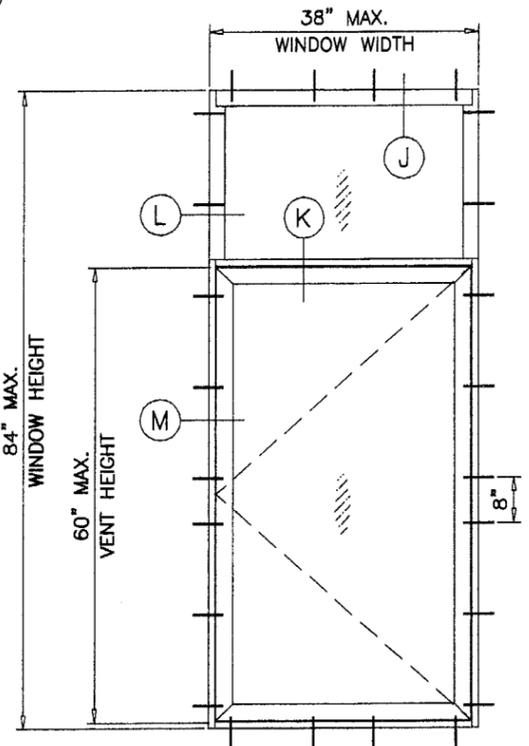
ALSO TOP AND BOTTOM COMBINATIONS OF FIXED AND CASEMENT WINDOWS USING INTEGRAL IMPOST.



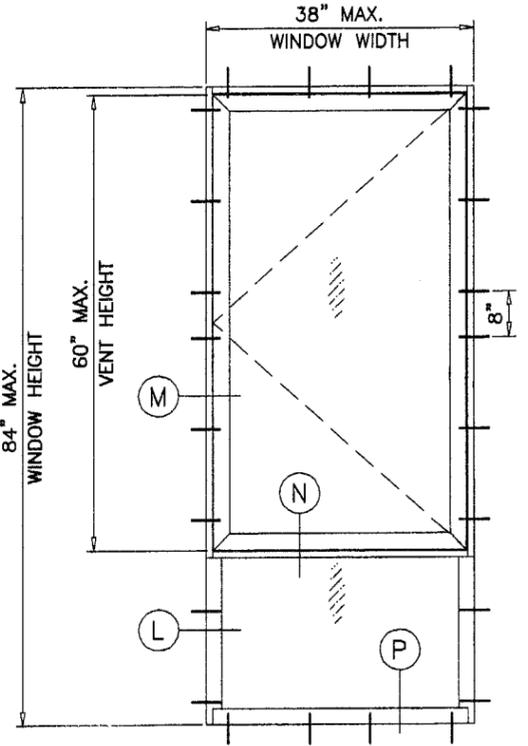
ALSO TO SIDE BY SIDE COMBINATIONS OF CASEMENT/FIXED, CASEMENT/CASEMENT OR WITH OTHER WINDOW TYPES IN MODULES OF TWO OR MORE WINDOWS USING APPROVED MULLIONS.



LATCHES LOCATED AT 8" FROM TOP AND BOTTOM OF VENT FOR WINDOWS UP TO 31" HT. USE ONE LATCH AT MIDSPAN OF VENT SIDE



FIXED/CASEMENT WDWs.



CASEMENT/FIXED WDWs.

THIS PRODUCT IS DESIGNED TO COMPLY WITH THE HIGH VELOCITY HURRICANE ZONE OF THE 2001 FLORIDA BUILDING CODE.

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

ANCHORS SHALL BE AS LISTED, SPACED AS SHOWN ON DETAILS. ANCHOR 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.

Approved as complying with the Florida Building Code
Date 02/12/04
NOA# 03-1006-04
Miami Dade Product Control
Di: *[Signature]*

Engr: DR. HUMAYOUN FAROOQ
STRUCTURES
FLA. PE # 18557
C.A.N. 3538

NOV 11 2003

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\W03-61YKK

YKK AP AMERICA INC.
332 FIRETOWER ROAD
DUBLIN, GEORGIA 31021
TEL(478) 277-1955 FAX(478) 277-1978

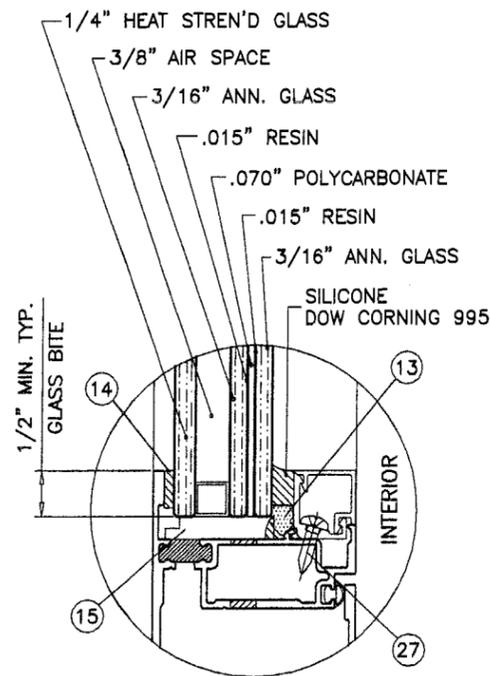
YKK AP

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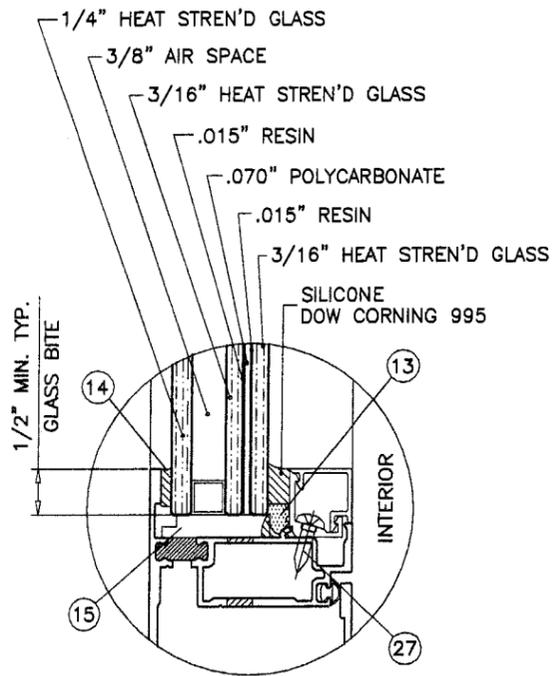
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chk. by:

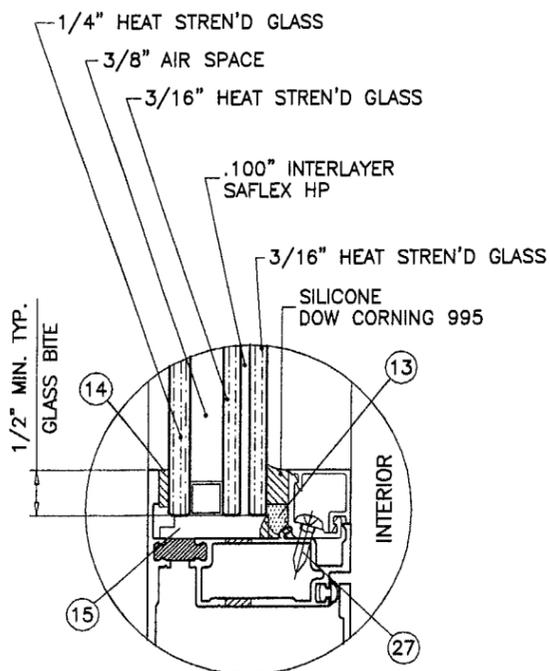
drawing no. **W03-61**
sheet 1 of 6



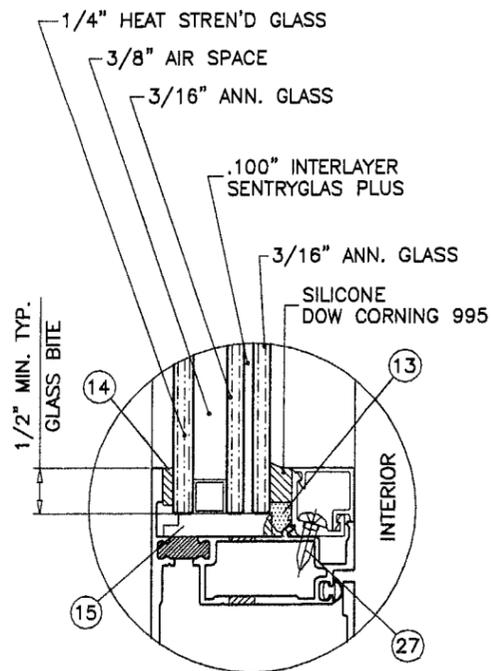
GLASS TYPE 'A'



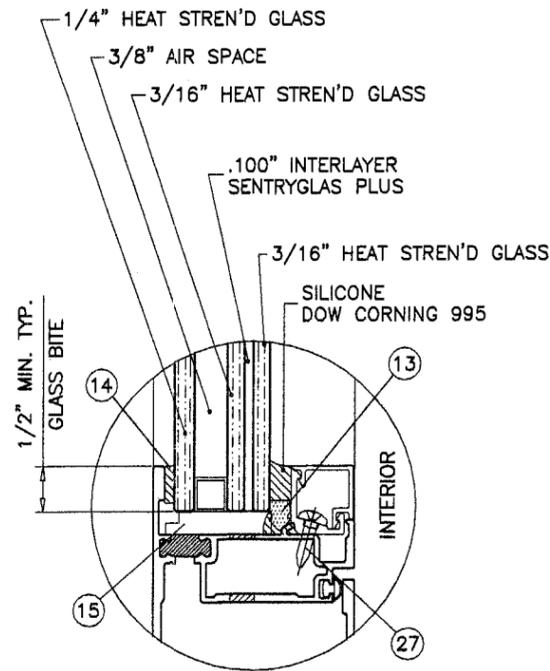
GLASS TYPE 'B'



GLASS TYPE 'C'



GLASS TYPE 'D'



GLASS TYPE 'E'

1-1/16" OVERALL LAMINATED GLASS
LARGE MISSILE IMPACT RESISTANT

GLAZING OPTIONS

TYPICAL ANCHORS: SEE ELEV. FOR SPACING

1/4" TAPCONS

INTO 2BY WOOD BUCKS OR WOOD STRUCTURE
1-3/8" MIN. PENETRATION INTO WOOD
THRU 1BY WOOD BUCKS INTO MASONRY OR CONC.
1-1/4" MIN. EMBED INTO MASONRY OR CONC.
DIRECTLY INTO MASONRY OR CONC.
1-1/4" MIN. EMBED INTO MASONRY OR CONC.

1/4" DIA. ELCO DRILLFLEX OR EQUIV.

INTO STEEL OR ALUMINUM MULLIONS
(NO SHIM SPACE)
INTO METAL STRUCTURES (1/8" MIN. THICKNESS)
(1/4" MAX. SHIM SPACE)

SEALANTS:

FRAME CORNERS JOINTS SEALED WITH BUTYL RUBBER
CORNER GASKET (#E2-0644).
TREMCO SPECTRUM 2 SILICONE SEALANT AT PERIMETER.

WEEP HOLES:

W1 = 1/4" X 1-1/16" WEEP SLOT AT CENTERLINE.
W2 = 9/32" DIA. WEEP HOLES AT 4" FROM EACH CORNER

LOCK OPTIONS:

OPTION #1:

BRONZECRAFT CAM HANDLES (E1-1541/1542)
AT LOCK STILE OF VENT, 8" FROM EACH END
SECURED WITH (2) #10 X 1/2" FH SMS.

BRONZECRAFT KEEPERS (E1-519)
AT FRAME JAMB FACING LOCKS
SECURED WITH (2) #10 X 1/2" FH SMS.
SEE DTL. 'F' ON SHEET 4

OPTION #2:

PULL HANDLE (E1-1508) AT LOCK STILE
SECURED WITH (2) #8 X 1/2" FH SMS.
MULTI-POINT LOCK ASSEMBLY
(E1-1505, E1-1704, E1-1717, E1-1701, E1-1703)
AT FRAME JAMB, ENGAGEMENT POINTS 8" FROM ENDS
BRONZECRAFT KEEPERS (E1-1556)
AT VENT LOCK STILE FACING LOCKS
SECURED WITH (2) #10 X 1/2" FH SMS.
SEE DTL. 'G' ON SHEET 4

Approved as complying with the
Florida Building Code
Date 02/12/04
NOA# 03-1006.04
Miami Dade Product Control
Division
By *[Signature]*

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

NOV 11 2003

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AL-FAROOQ CORPORATION
ENGINEERS, PLANNERS & PRODUCT DESIGN
1235 SW 87 AVE
MIAMI, FLORIDA 33174
TEL. (305) 264-8100 FAX. (305) 262-6978
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YKK AP AMERICA INC.
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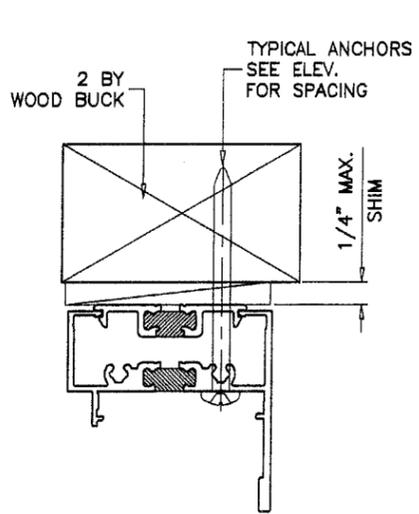
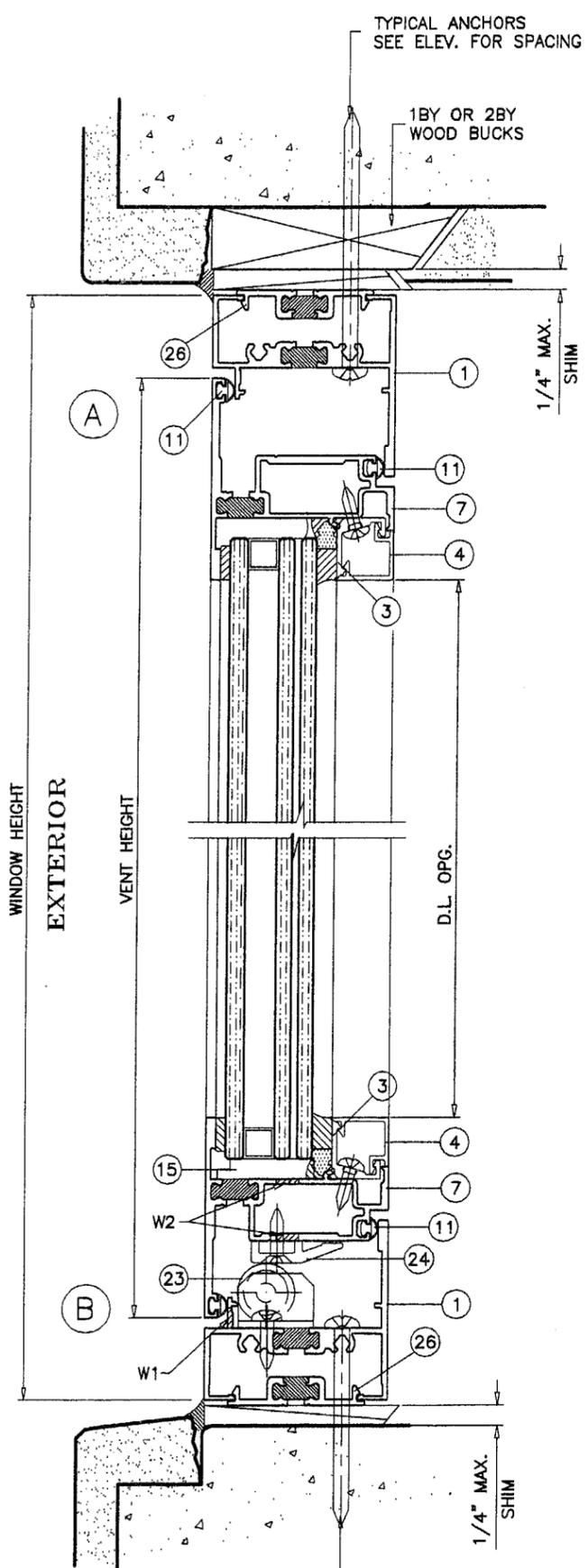
YOW-225H ALUMINUM CASEMENT WINDOW (L.M.I.)

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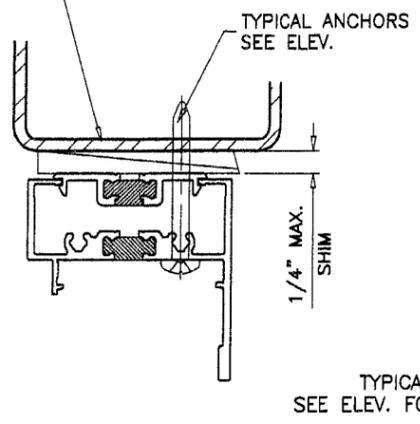
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dr. by: HAMID
chk. by:

drawing no.
W03-61

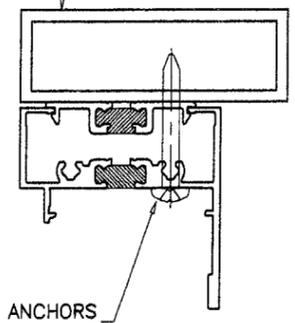
sheet 2 of 6



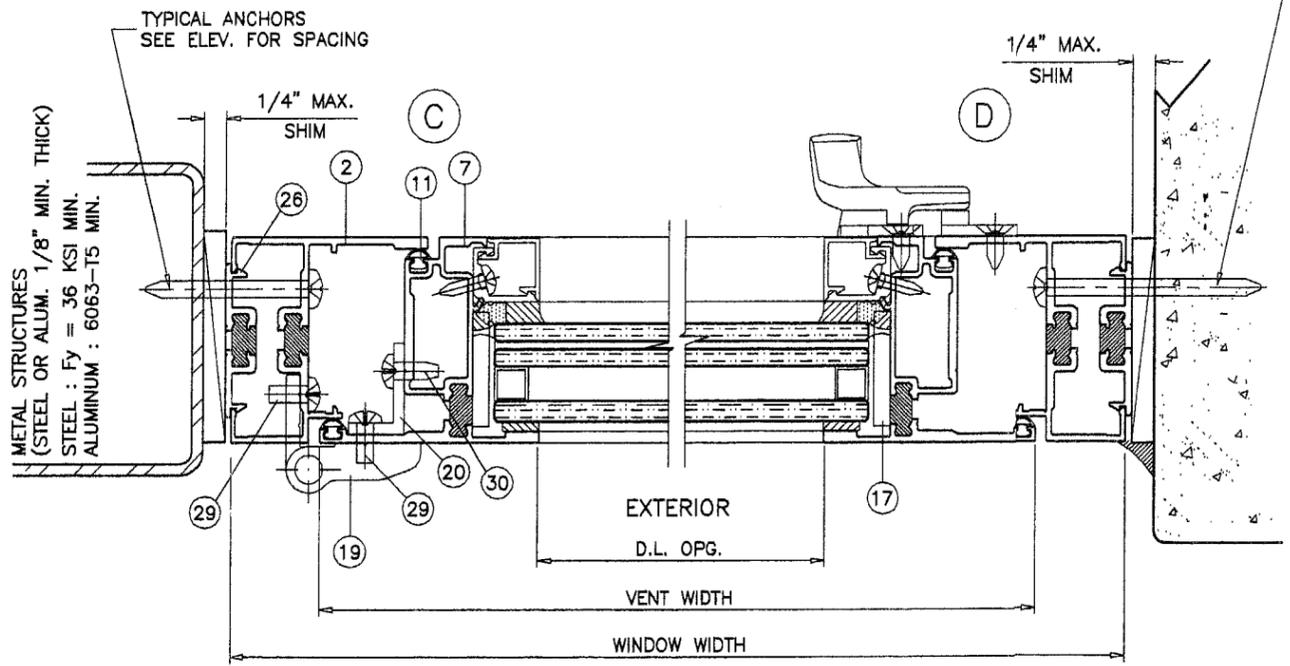
METAL STRUCTURES
(STEEL OR ALUM. 1/8" MIN. THICK)
STEEL : $F_y = 36$ KSI MIN.
ALUMINUM : 6063-T5 MIN.



DADE COUNTY
APPROVED MULLION
& MULLION ANCHORS



WOOD BUCCS NOT BY YKK AMERICA INC. MUST
SUSTAIN LOADS IMPOSED BY GLAZING SYSTEM AND
TRANSFER THEM TO THE BUILDING STRUCTURE.



SINGLE VENT WINDOWS

af
AL-FAROOQ CORPORATION
ENGINEERS, PLANNERS & PRODUCT DESIGN
1235 SW 87 AVE
MIAMI, FLORIDA 33174
TEL. (305) 264-8100 FAX. (305) 262-6978
COMP-ANI \ W03-61YKK

YOW-225H ALUMINUM CASEMENT WINDOW (L.M.I.)
YKK AP AMERICA INC.
332 FIRETOWER ROAD
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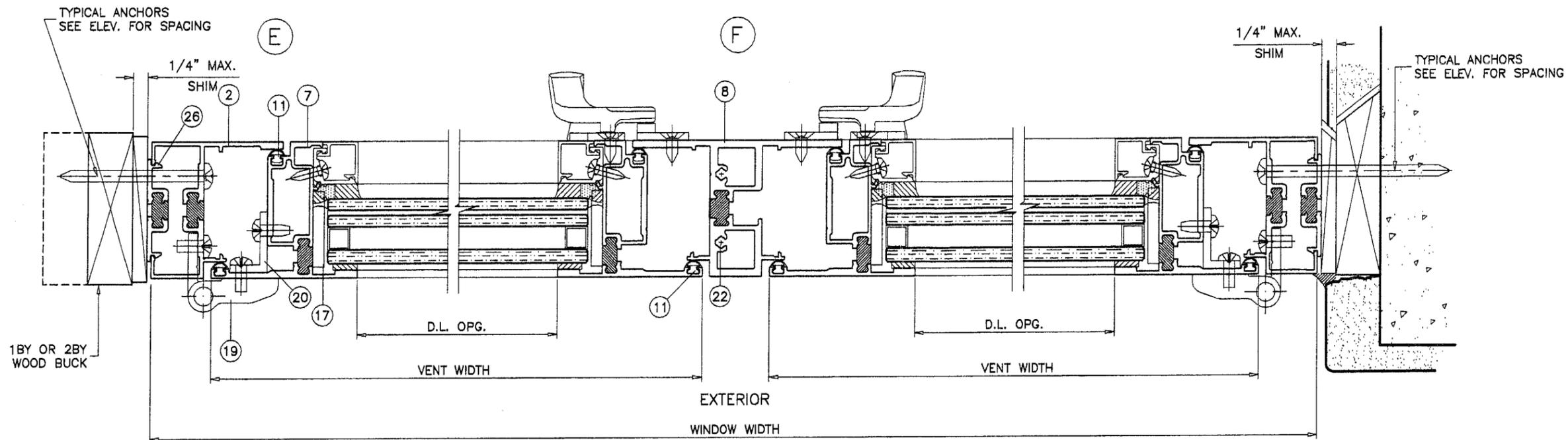
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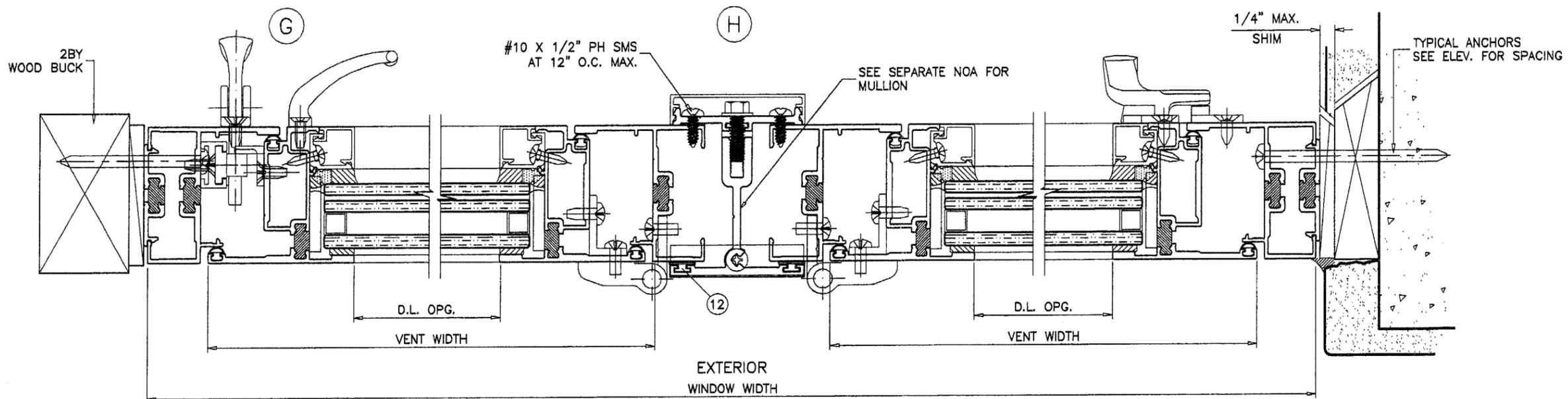
drawing no.
W03-61
sheet 3 of 6

Approved as complying with the
Florida Building Code
Date 02/12/04
NO# 03-1006.04
Miami Dade Product Control
Division
By: *[Signature]*

Engr: DR. HUMAYOON FAROOQ
STRUCTURES
FLA. PE # 18587
C.A.N. 3538
NOV 11 2003



DUAL VENT WINDOWS



SIDE BY SIDE WINDOWS

Approved as complying with the
 Florida Building Code
 Date 02/12/04
 NOA# 03-1006.04
 Miami Dade Product Control
 Division
 By: *[Signature]*

Engr: DR. HUMAYOUN FAROOQ
 STRUCTURES
 FLA. PE # 16557
 C.A.N. 3538
 NOV 11 2003

af
AL-FAROOQ CORPORATION
 ENGINEERS, PLANNERS & PRODUCT DESIGN
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 TEL. (305) 264-8100 FAX. (305) 262-6978
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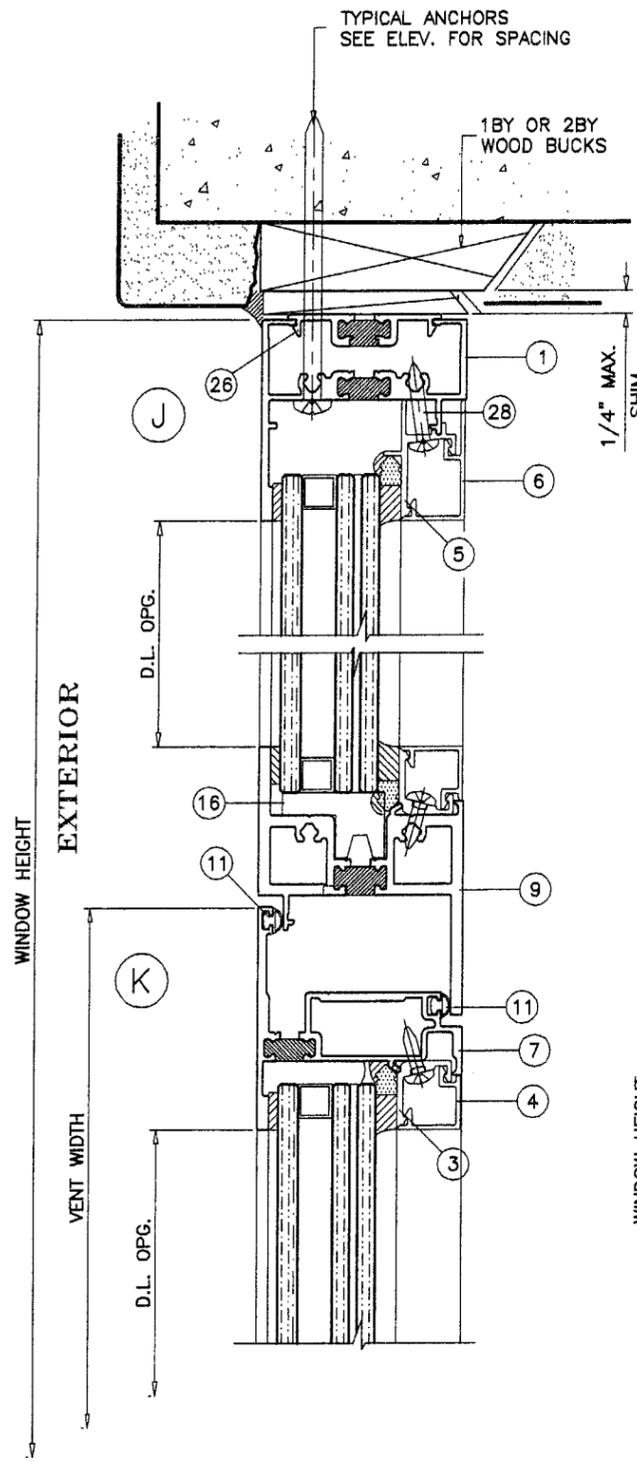
YOW-225H ALUMINUM CASEMENT WINDOW (L.M.I.)
YKK AP AMERICA INC.
 332 FIRETOWER ROAD
 DUBLIN, GEORGIA 31021
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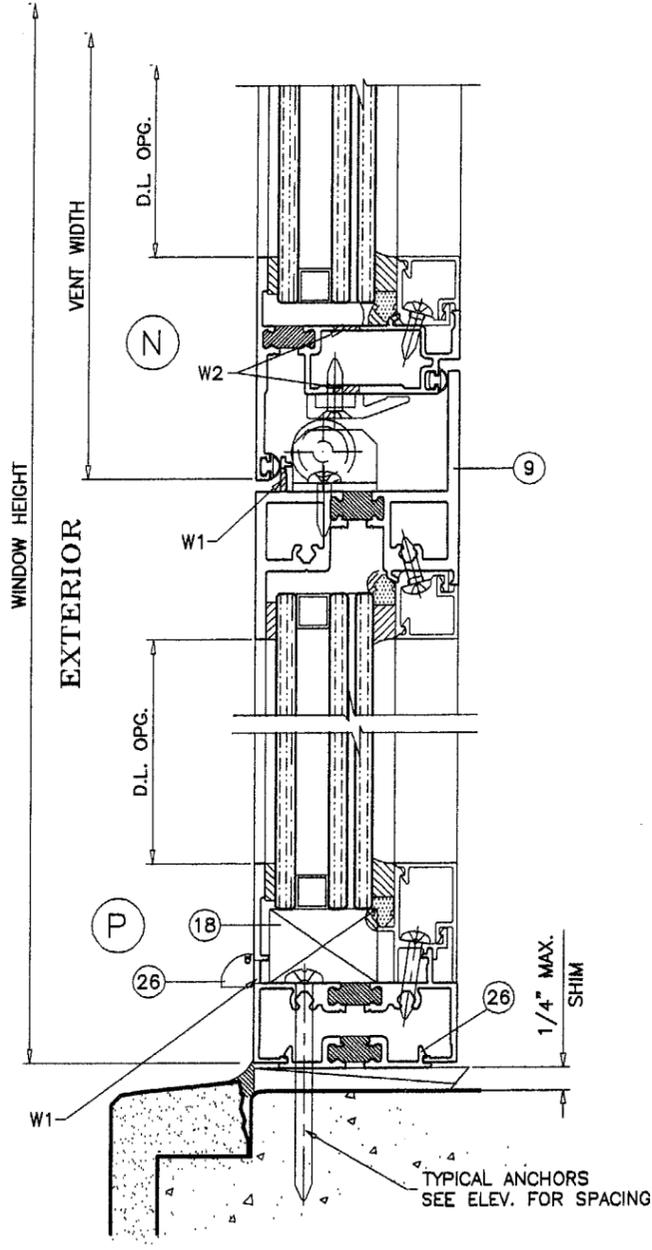
drawing no.
W03-61
 sheet 4 of 6



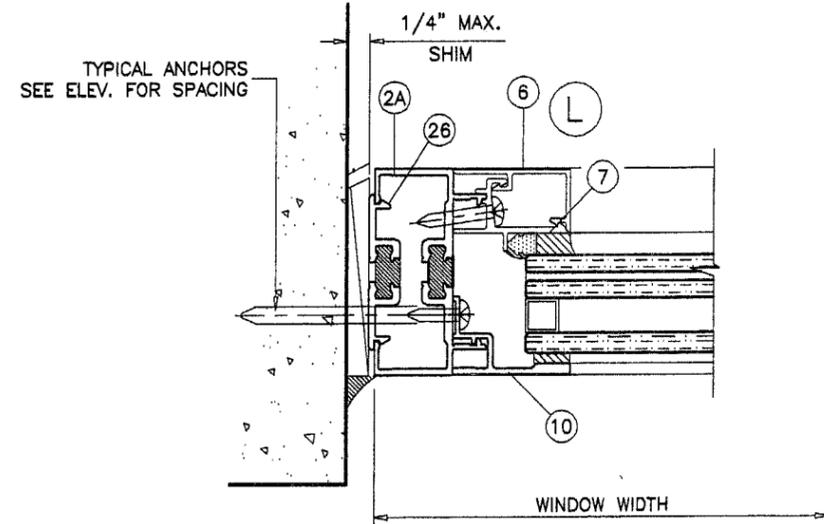
TYPICAL ANCHORS
SEE ELEV. FOR SPACING

1BY OR 2BY
WOOD BUCKS

1/4" MAX.
SHIM



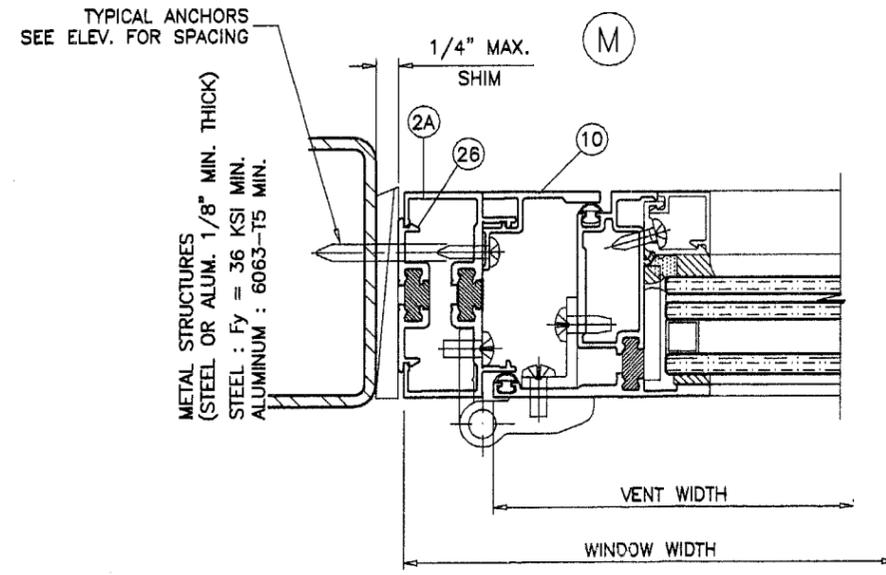
TYPICAL ANCHORS
SEE ELEV. FOR SPACING



TYPICAL ANCHORS
SEE ELEV. FOR SPACING

1/4" MAX.
SHIM

WINDOW WIDTH



TYPICAL ANCHORS
SEE ELEV. FOR SPACING

1/4" MAX.
SHIM

VENT WIDTH

WINDOW WIDTH

METAL STRUCTURES
(STEEL OR ALUM. 1/8" MIN. THICK)
STEEL : Fy = 36 KSI MIN.
ALUMINUM : 6063-T5 MIN.

Approved as complying with the
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Date 02/12/04
NOA# 03-1006-04
Miami Dade Product Control
Division
By Humayoun Farooq

Engr: DR. HUMAYOON FAROOQ
STRUCTURES
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YOW-225H ALUMINUM CASEMENT WINDOW (L.M.I.)

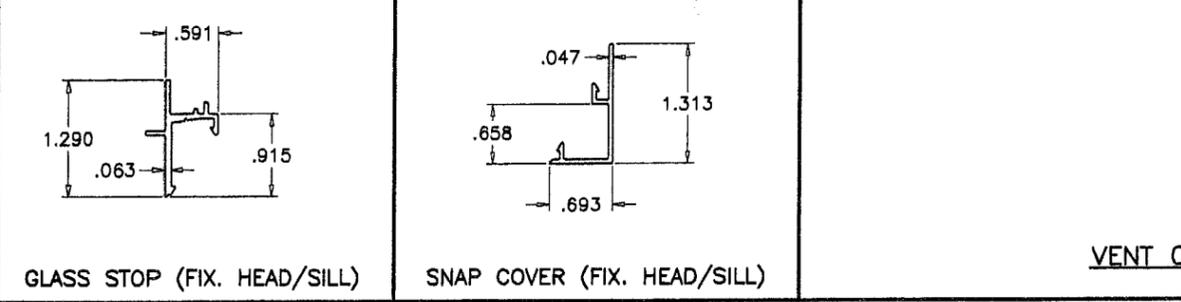
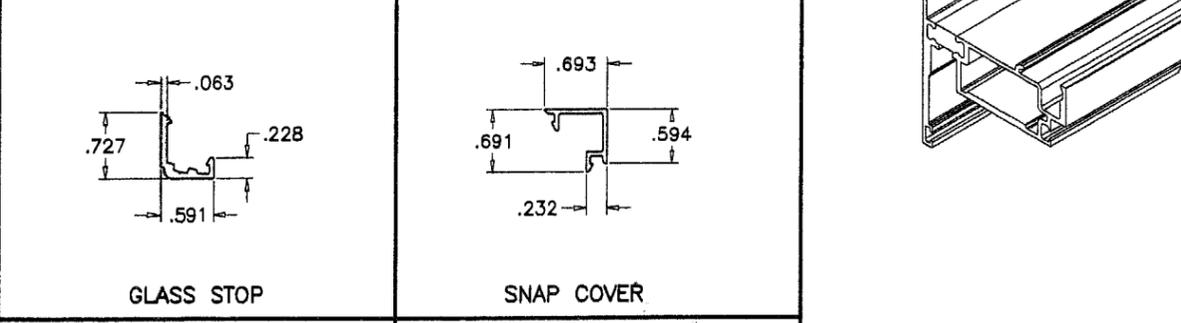
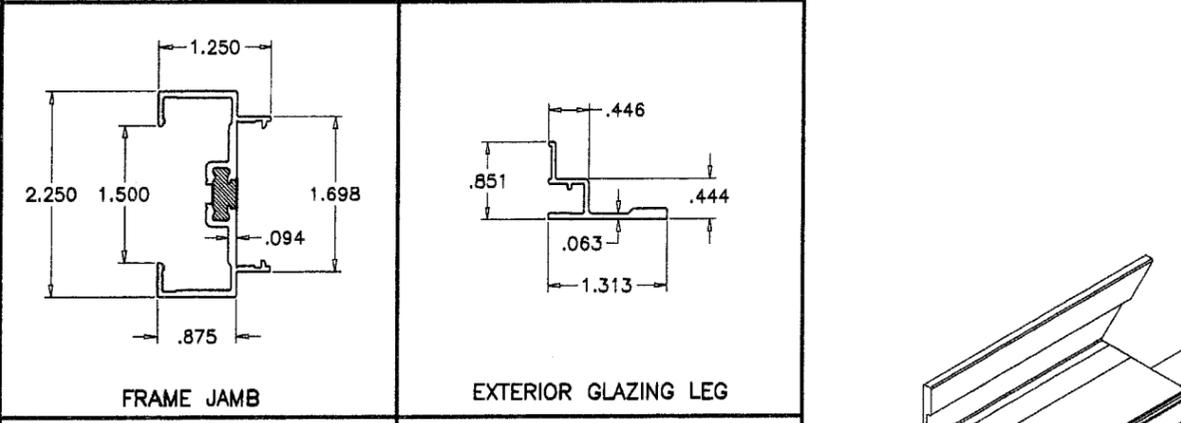
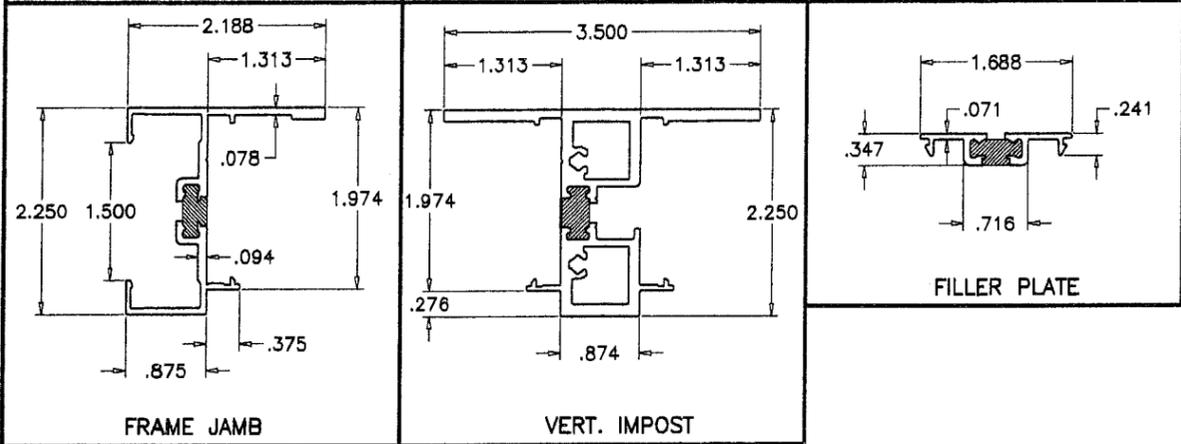
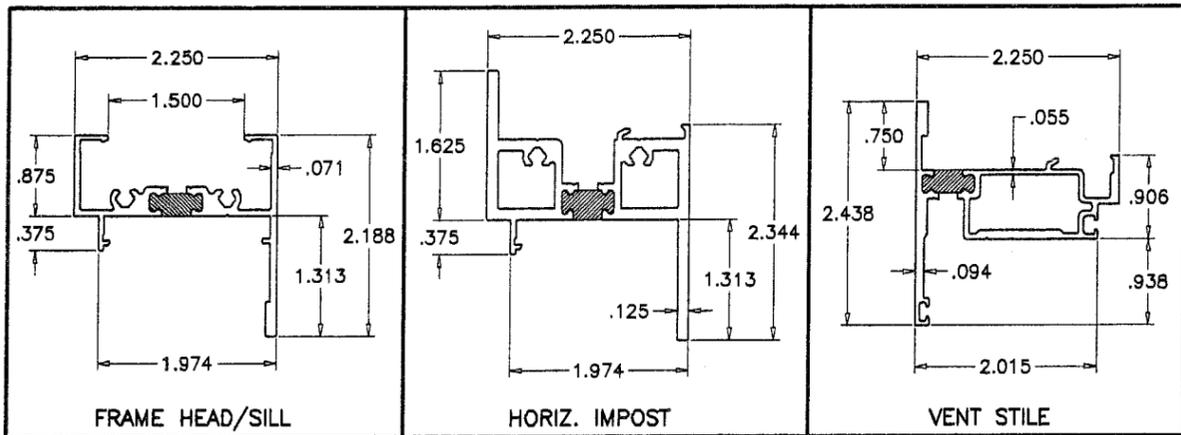
YKK AP AMERICA INC.
352 FIRETOWER ROAD
DUBLIN, GEORGIA 31021
TEL(478) 277-1955 FAX(478) 277-1978

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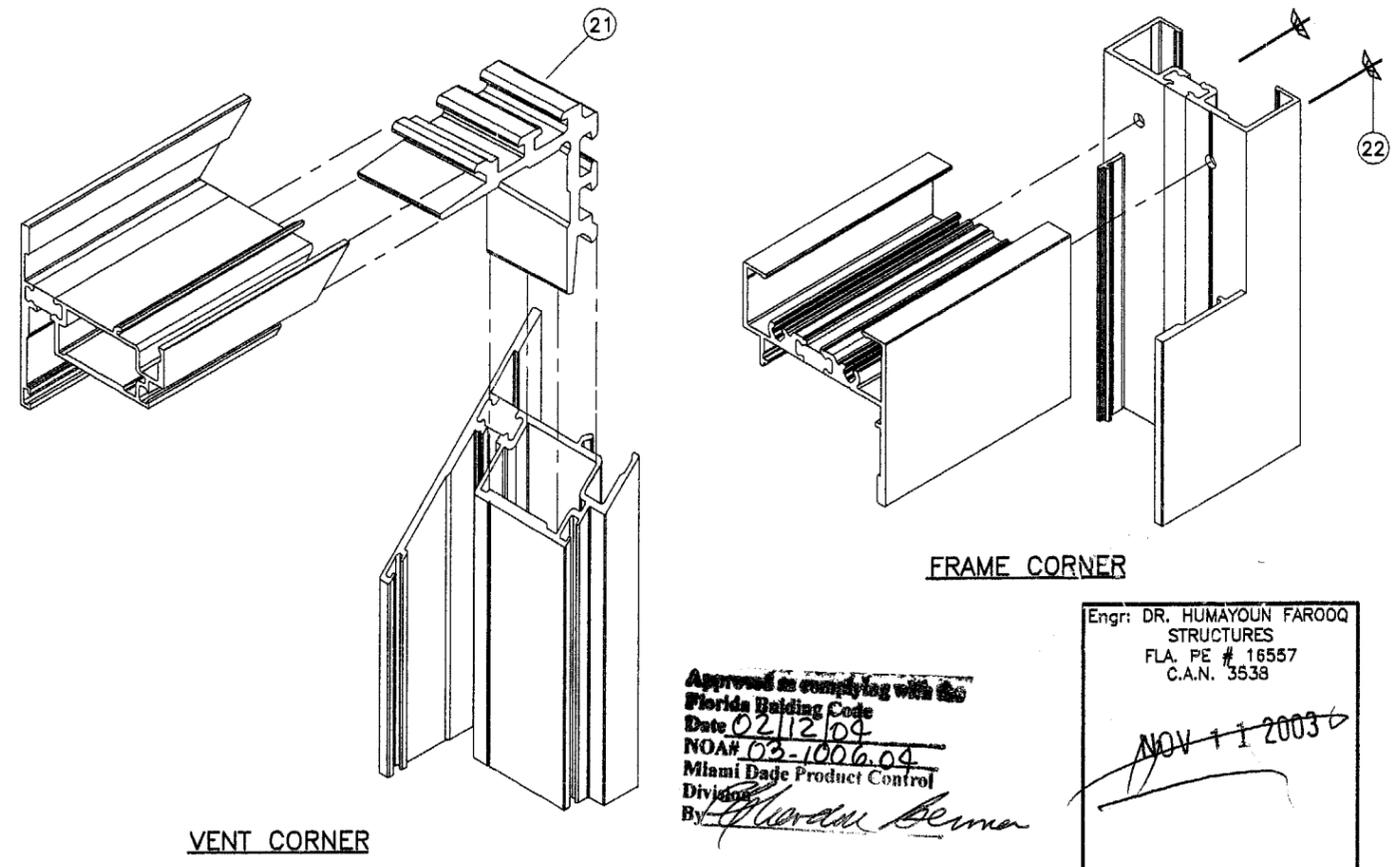
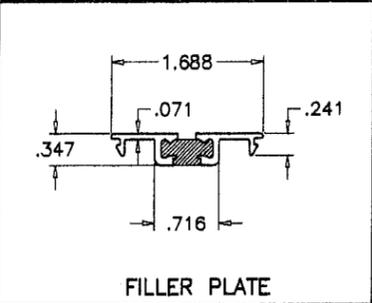
date: 08-04-03	scale: 1/2" = 1"
dr. by: HAMID	chk. by:

drawing no.
W03-61

sheet 5 of 6



ITEM NO.	PART NUMBER	QUANTITY	DESCRIPTION	MATERIAL	MANF./SUPLIER/REMARKS
1	BE9-4501	2/ WDW	FRAME HEAD/SILL	6063-T5	YKK AMERICA INC.
2	BE9-4502	2/ WDW	FRAME JAMB	6063-T5	YKK AMERICA INC.
2A	BE9-4503	AS REQD.	FRAME JAMB	6063-T5	YKK AMERICA INC.
3	E9-4526	4/ WDW	GLAZING STOP (VENT)	6063-T5	YKK AMERICA INC.
4	E9-4527	4/ WDW	GLAZING STOP COVER (VENT)	6063-T5	YKK AMERICA INC.
5	E9-4524	4/ WDW	GLAZING STOP (FIX. LITE)	6063-T5	YKK AMERICA INC.
6	E9-4525	4/ WDW	GLAZING STOP COVER (FIX. LITE)	6063-T5	YKK AMERICA INC.
7	BE9-4504	4/ WDW	VENT STILE	6063-T5	YKK AMERICA INC.
8	BE9-4512	AS REQD.	VERT. IMPOST	6063-T5	YKK AMERICA INC.
9	BE9-4509	AS REQD.	HORIZ. IMPOST	6063-T5	YKK AMERICA INC.
10	E9-4513	AS REQD.	EXTERIOR GLAZING LEG	6063-T5	YKK AMERICA INC.
11	E2-0825	AS REQD.	BULB WEATHERSTRIPPING	PVC	YKK AMERICA INC.
12	E2-0051	AS REQD.	BULB W'STRIPPING AT MULLION	PVC	YKK AMERICA INC.
13	E2-0359	AS REQD.	ARROW SPACER, 1" LONG	EPDM SPONGE	AT 3" FROM ENDS & 10" O.C. MAX.
14	E2-0648	AS REQD.	GLAZING TAPE (.196 X .406)	-	CLOSED CELL EPDM SPONGE
15	E2-0626	AS REQD.	SETTING BLOCKS	EPDM	1/4" X 1-3/16" X 4" LONG
16	E2-0847	AS REQD.	SETTING BLOCKS	EPDM	11/16" X 1-1/8" X 4" LONG
17	E2-0133	AS REQD.	SIDE BLOCKS	EPDM	-
18	E2-0846	AS REQD.	SETTING BLOCKS	EPDM	13/16" X 1-3/16" X 4" LONG
19	E1-1714/1715	2/ VENT	BUTT HINGES AT 7-1/2" FROM EACH END	6063-T5	-
20	E1-1723	1/ HINGE	HINGE ANGLE	6063-T5	-
21	E1-1712	1/ CORNER	CORNER BLOCK	6063-T5	YKK AMERICA INC.
22	#10 X 1"	2/ CORNER	FRAME ASSEMBLY SCREWS	STEEL	PH SMS
23	K-10639	1/ VENT	GUIDE ROLLER ASSEMBLY	-	SECURED TO SILL W/ (2) #8 X 1/2" PH SMS
24	E1-1713	1/ VENT	GUIDE ROLLER BASE	-	SECURED TO VENT W/ (2) #10 3/4" FH SMS
25	E3-1101	2/ WDW	WEEP COVER	NYLON	AT WEEP SLOTS
26	-	AS REQD.	FILLER PLATE, 2-1/2" LONG AT ANCHOR LOCATIONS	6063-T5	YKK AMERICA INC.
27	#8 X 1/2"	-	GLAZING STOP SCREWS	-	PH SMS AT 3" FROM ENDS & 10" O.C.
28	#10 X 1"	-	GLAZING STOP SCREWS	-	PH SMS AT 3" FROM ENDS & 10" O.C.
29	#10 X 7/16"	3/ HASP	HINGE INSTALLATION SCREWS	-	PH MS
30	#10 X 1/2"	3/ ANGLE	HINGE ANGLE SCREWS	-	PH SMS



Approved as complying with the Florida Building Code
 Date 02/12/04
 NOAH 03-1006.04
 Miami Dade Product Control
 Division
 By: *Glenn Berner*

Engr: DR. HUMAYOUN FAROOQ
 STRUCTURES
 FLA. PE # 16557
 C.A.N. 3538
 NOV 11 2003

AL-FAROOQ CORPORATION
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 COMP-ANL\W03-61YKK

YKK AP AMERICA INC.
 352 FIRETOWER ROAD
 DUBLIN, GEORGIA 31021
 TEL(478) 277-1955 FAX(478) 277-1978

YOW-225H ALUMINUM CASEMENT WINDOW (L.M.I.)

revisions:	no	date	description
	A	10.31.03	REV. PER BCCO COMMENTS

date: 08-04-03
 scale: 1/2" = 1"
 dr. by: HAMID
 chk. by:

drawing no.
W03-61

sheet 6 of 6