



**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, Inc.
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 the BCCO and accepted by the Building Code and Product Review Committee (BCPRC) 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 BCCO (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. BCPRC reserves the right to revoke this acceptance, if it is determined by BCCO 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 200H/225TUH Aluminum Mullion Clipped

APPROVAL DOCUMENT: Drawing No. M01-01, titled "YOW-200/225 Alum. Mullions Clipped," sheets 1 through 3 of 3, prepared by AL-Farooq Corporation, dated 07/23/04 revision "C" dated 08/04/04; 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

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# 01-1119.07, 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 **Herminio F. Gonzalez, P.E. , Director, BCCO**

Handwritten signature and date: 8/19/04



**NOA No 04-0603.04
Expiration Date: February 21, 2009
Approval Date: September 09, 2004
Page 1**

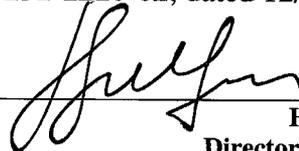
NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. Manufacturer's die drawings and sections.
2. Drawing No. **M01-01**, titled "YOW-200/225H Alum. Mullion Clipped," Sheets 1 through 3 of 3, prepared by AL-Farooq Corporation, dated 07/23/01 revision "C" dated 08/04/04, signed and sealed by Humayoun Farooq, P.E.

B. TESTS

1. Test reports on 1) Air Infiltration Test, per FBC, TAS 202-94
2) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94
3) Water Resistance Test, per FBC, TAS 202-94
4) Small Missile Impact Test per FBC, TAS 201-94
5) Cyclic Wind Pressure Loading per FBC, TAS 203-94
6) Forced Entry Test, per FBC 2411.3.2.1 and TAS 202-94
along with installation diagram of a aluminum window wall system prepared by Hurricane Test Laboratory, (specimen 2,4,5,6), Test Report No.**HTL-0231-0521-00**, dated 05/17/00, signed and sealed by Vinu J. Abraham, P.E.
"Submitted under NOA # 01-1119.07"
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) Small Missile Impact Test per FBC, TAS 201-94
5) Cyclic Wind Pressure Loading per FBC, TAS 203-94
6) Forced Entry Test, per FBC 2411.3.2.1 and TAS 202-94
along with installation diagram of a aluminum window wall system prepared by Hurricane Test Laboratory, Test Report No.**HTL-0105-1212-00**, dated 12/18-21/00, signed and sealed by Vinu J. Abraham, P.E.
"Submitted under NOA # 01-1119.07"
3. Test reports on 1) Large Missile Impact Test per FBC, TAS 201-94
2) Cyclic Loading Test, per FBC, TAS 203-94
along with installation diagram of a aluminum window wall system (specimen 1,2), prepared by Hurricane Test Laboratory, Test Report No.**HTL-0231-0810-02**, dated 08/12-14/02, signed and sealed by Vinu J. Abraham, P.E.
4. Test reports on 1) Air Infiltration Test, per FBC, TAS 202-94
2) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94
3) Water Resistance Test, per FBC, TAS 202-94
4) Forced Entry Test, per FBC 2411.3.2.1 and TAS 202-94
along with installation diagram of a window wall system prepared by Hurricane Test Laboratory, Test Report No.**HTL-0231-1210-02**, dated 12/09-02/10/03, signed and sealed by Vinu J. Abraham, P.E.



Herminio F. Gonzalez, P.E.
Director, Product Control Division
NOA No 04-0603.04

Expiration Date: February 21, 2009
Approval Date: September 09, 2004

YKK AP America, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

C. CALCULATIONS:

1. Anchor Calculations, ASTM-E1300, structural analysis, prepared, signed and sealed by Humayoun Farooq, P.E dated 11/12/01 and revised on 1/15/02.
“Submitted under NOA # 01-1119.07”
2. Anchor Calculations, ASTM-E1300, structural analysis, prepared, signed and sealed by Humayoun Farooq, P.E dated 04/13/04

D. QUALITY ASSURANCE

1. Miami Dade Building Code Compliance Office (BCCO)

E. MATERIAL CERTIFICATIONS

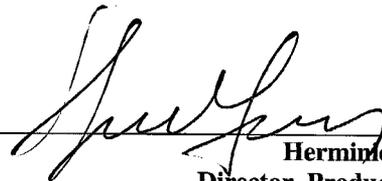
1. None

F. STATEMENTS

1. Statement letter of conformance and no financial interest, 07/20/01, signed and sealed by Humayoun Farooq, P.E.
“Submitted under NOA # 01-1119.07”
2. Statement letter of conformance and no financial interest, 04/13/04, signed and sealed by Humayoun Farooq, P.E.

G. OTHER

1. Notice of Acceptance No. **01-1119.07**, issued to YKK AP America for their Series “YOW-200H/225TUH” Aluminum Mullion Clipped, approved on 02/21/01 and expiring on 02/21/07.
2. Letter from the consultant stating that the product is in compliance with the Florida Building Code (FBC)



Herminio F. Gonzalez, P.E.

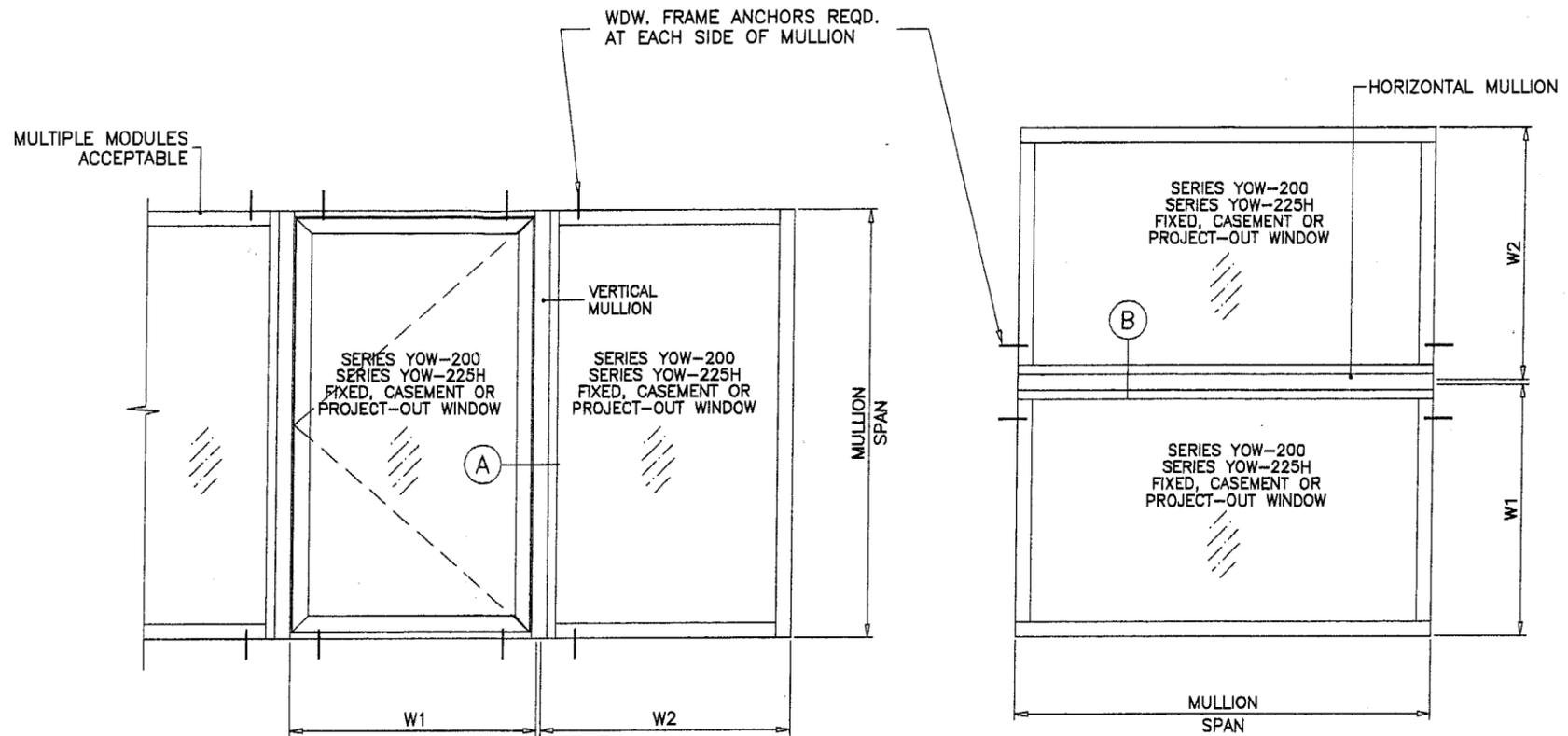
Director, Product Control Division

NOA No 04-0603.04

Expiration Date: February 21, 2009

Approval Date: September 09, 2004

| DESIGN LOAD CAPACITY - PSF YOW-200 MULL AND YOW-225H MULL | | | | |
|--|------------------------|-------------------|-------------------|------|
| AVG. WIDTH INCHES | MULLION SPAN INCHES | SMALL MISSILE | LARGE MISSILE | |
| | | EXT.(+) & INT.(-) | EXT.(+) & INT.(-) | |
| 24" | 42" | 65.0 | 65.0 | |
| 30" | | 65.0 | 65.0 | |
| 36" | | 65.0 | 65.0 | |
| 38-1/2" | | 65.0 | 65.0 | |
| 42" | | 65.0 | 65.0 | |
| 48" | | 65.0 | 65.0 | |
| 54" | 48" | 65.0 | 65.0 | |
| 24" | | 65.0 | 65.0 | |
| 30" | | 65.0 | 65.0 | |
| 36" | | 65.0 | 65.0 | |
| 38-1/2" | | 65.0 | 65.0 | |
| 42" | | 65.0 | 65.0 | |
| 48" | 54" | 65.0 | 65.0 | |
| 24" | | 65.0 | 65.0 | |
| 30" | | 65.0 | 65.0 | |
| 36" | | 65.0 | 65.0 | |
| 38-1/2" | | 65.0 | 65.0 | |
| 42" | | 65.0 | 65.0 | |
| 24" | 60" | 65.0 | 65.0 | |
| 30" | | 65.0 | 65.0 | |
| 36" | | 65.0 | 65.0 | |
| 38-1/2" | | 65.0 | 65.0 | |
| 24" | | 62" | 65.0 | 65.0 |
| 30" | | | 65.0 | 65.0 |
| 36" | 65.0 | | 65.0 | |
| 38-1/2" | 65.0 | | 65.0 | |
| 24" | 66" | | 65.0 | 65.0 |
| 30" | | | 65.0 | 65.0 |
| 36" | | 65.0 | 65.0 | |
| 24" | | 72" | 65.0 | 65.0 |
| 30" | 59.1 | | | |



$$\text{AVG. WIDTH} = \frac{W1 + W2}{2}$$

TYPICAL MULLION ARRANGEMENTS

THIS MULLION IS RATED FOR SMALL AND LARGE MISSILE IMPACT

SEE SEPARATE NOA FOR PERIMETER ANCHORS AND WINDOW DESIGN LOADS

**VERTICAL/HORIZONTAL ALUMINUM MULLION
WINDOW FRAME MEMBERS INCLUDED IN PROPERTIES**

NOTES:

- THIS PRODUCT IS DESIGNED TO COMPLY WITH THE HIGH VELOCITY HURRICANE ZONE OF THE 2001 FLORIDA BUILDING CODE.
- ALL GLAZING PRODUCTS USED WITH THESE MULLIONS MUST MEET THE APPLICABLE FLORIDA BLDG. CODE REQUIREMENTS I.E: WIND LOAD, WATER INFILTRATION, FORCED ENTRY RESISTANCE, SAFEGUARDS ETC.
- WOOD BUCKS BY OTHERS, MUST BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE STRUCTURE.
- ANCHORS SHALL BE AS LISTED, SPACED AS SHOWN ON DETAILS, EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL COVERING (STUCCO, TILE ETC.).
- ANCHORING CONDITIONS OTHER THAN THOSE SHOWN IN THESE DETAILS ARE NOT PART OF THIS APPROVAL.
- A 33% INCREASE IN ALLOWABLE STRESS IS USED IN DESIGN OF ANCHORS.

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

AUG 09 2004

INSTRUCTIONS:

USE MULLION LOAD CHART AS FOLLOWS.

- STEP 1** DETERMINE DESIGN LOAD REQUIRED FOR PARTICULAR OPENING.
- STEP 2** USE DADE COUNTY APPROVED GLAZING PRODUCTS MEETING ABOVE LOAD REQUIREMENTS, FOR WINDOWS WINDOW ANCHORS, VERT. MULLION AND MULLION ANCHORS.
- STEP 3** USING MULLION LOAD CHART DETERMINE MULLION CAPACITY WHICH MUST EXCEED THE DESIGN LOAD SPECIFIED IN STEP 1 ABOVE.

PRODUCT REVISED
to comply with the Florida
Building Code
Acceptance No 04-0603.04
Expiration Date 02/24/09
By: *[Signature]*
Miami Dade Product Control
Division

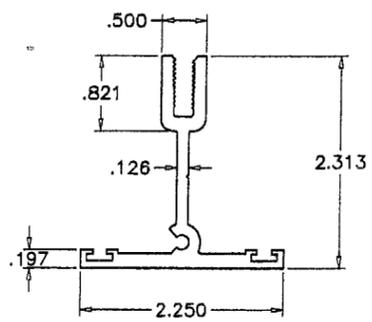
AL-FAROOQ CORPORATION
ENGINEERS, PLANNERS & PRODUCT DESIGN
1235 SW 87 AVE
MIAMI, FLORIDA 33174
TEL. (305) 264-8100 FAX. (305) 262-6978
MULLION\01-01YKK

YKK AP AMERICA INC.
5630 GWALTNEY DRIVE
ATLANTA, GA. 30336
TEL.(404) 629-3800 FAX(404) 629-3810

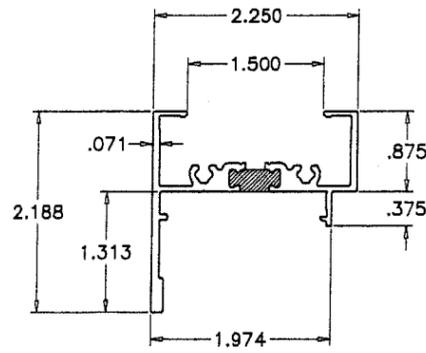
revisions:
no. date by description
A 12.12.02 LARGE MISSILE IMPACT ADD.
B 01.28.04 225H FRAME ADDED
C 08.04.04 REV. PER BCCO COMMENTS

date: 07-23-01
scale: 1/2"=1'-0"
dr. by: HAMID
chk. by:

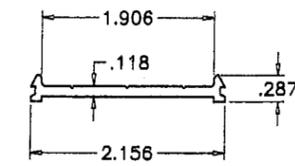
drawing no.
M01-01
sheet 1 of 3



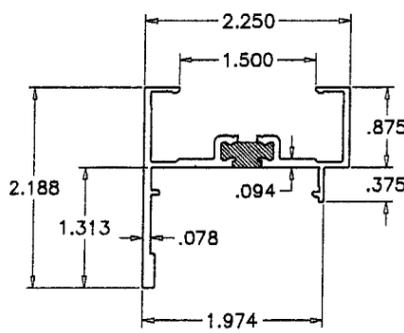
STACK MULLION
6063-T5
E9-4427



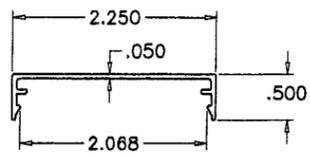
WINDOW FRAME (YOW-225H)
6063-T5
BE9-4501



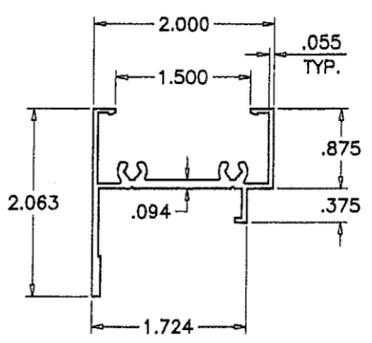
SNAP COVER BASE
6063-T5
E9-4428



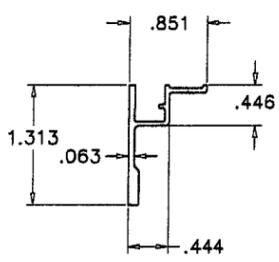
WINDOW FRAME (YOW-225H)
6063-T5
BE9-4502



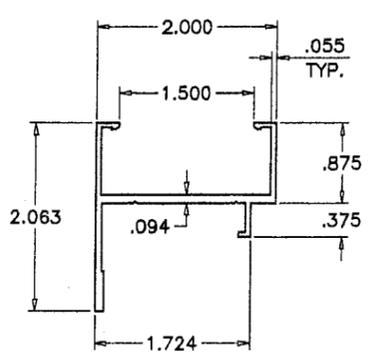
SNAP COVER
6063-T5
E9-5111



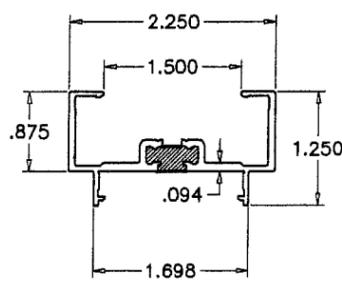
WINDOW FRAME (YOW-200)
6063-T5
E9-4401



FRAME LEG (YOW-225H)
6063-T5
E9-4513

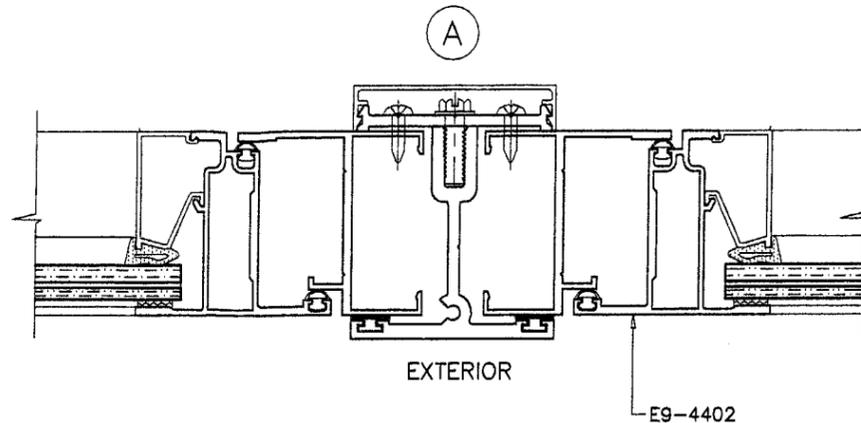


WINDOW FRAME (YOW-200)
6063-T5
E9-4402

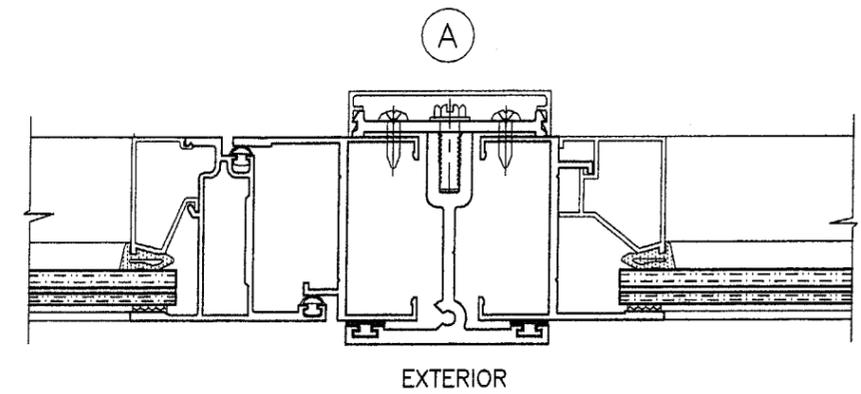


WINDOW FRAME (YOW-225H)
6063-T5
BE9-4503

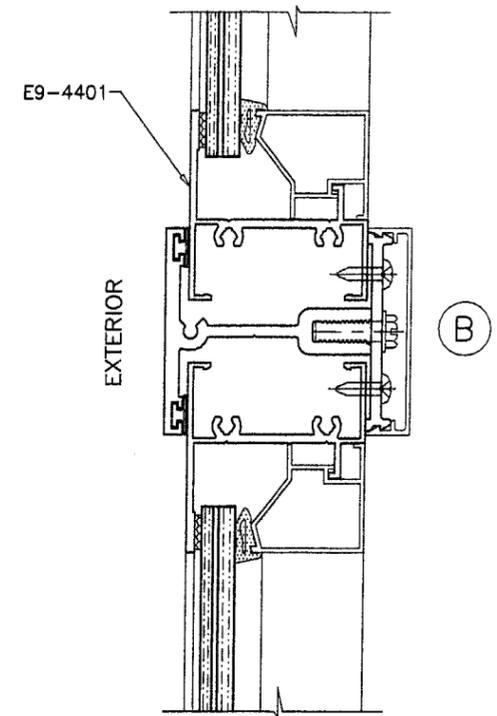
YOW-200



EXTERIOR



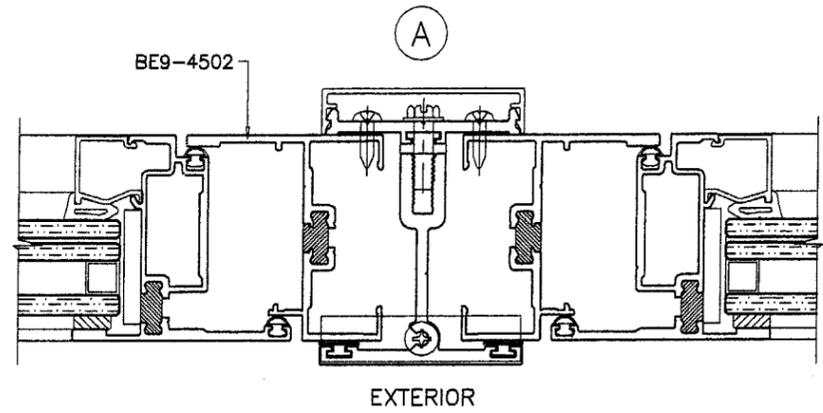
EXTERIOR



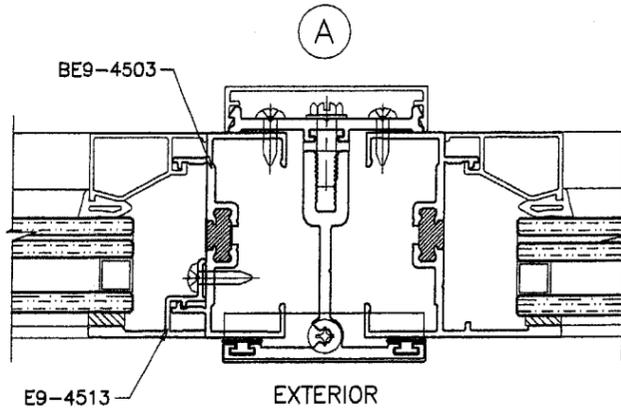
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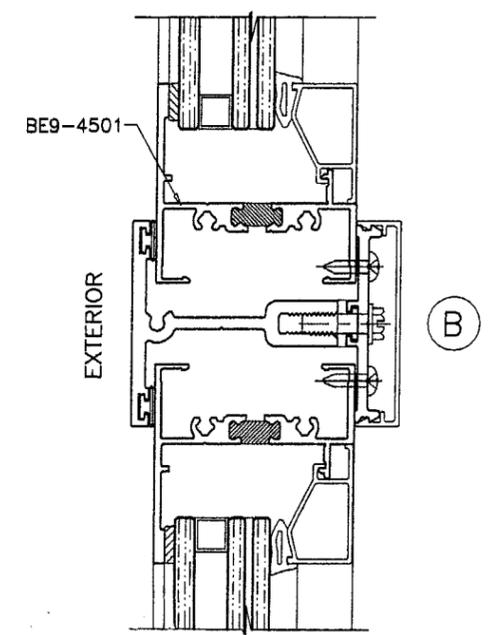
YOW-225H



EXTERIOR



EXTERIOR



EXTERIOR

B

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 04-0603-04
Expiration Date 02/21/09
By *[Signature]*
Miami Dade Product Control
Division

Engr: DR. HUMAYOON FAROOQ
STRUCTURES
FLA. PE # 18557
C.A.N. 3538
[Signature]
AUG 09 2004

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

YKK AP AMERICA INC.
5630 GWALTNEY DRIVE
ATLANTA, GA. 30336
TEL(404) 629-3800 FAX(404) 629-3810



| no | date | by | description |
|----|----------|----|----------------------|
| A | 12.12.02 | | NO CHANGE THIS SHEET |
| B | 01.28.04 | | 225H FRAME ADDED |
| C | 08.04.04 | | NO CHANGE THIS SHEET |

date: 07-23-01
scale: 1/2" = 1"
dr. by: HAMID
chk. by:
drawing no. **M01-01**
sheet 2 of 3

af

MULLION\01-01YKK

afc

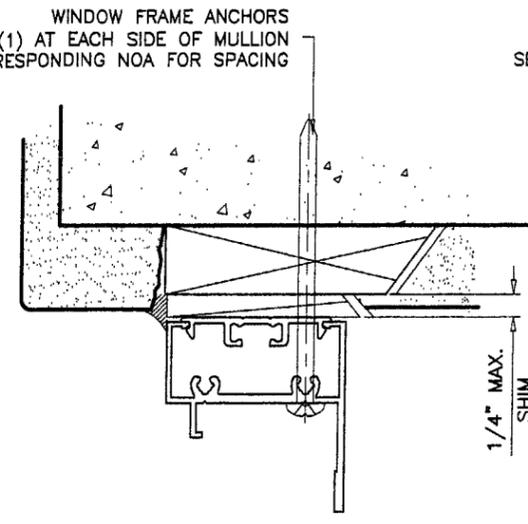
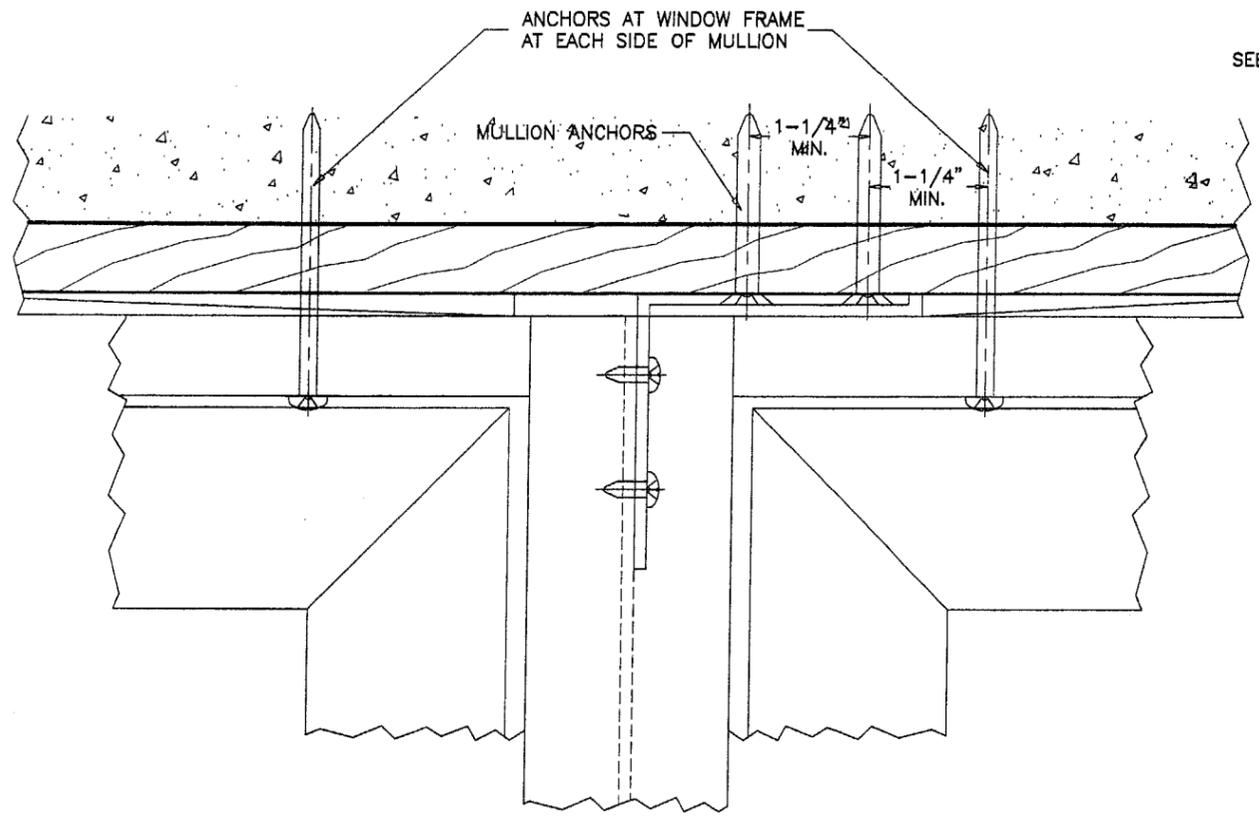
AL-FAROOQ CORPORATION
ENGINEERS, PLANNERS & PRODUCT DESIGN
1235 SW 87 AVE
MIAMI, FLORIDA 33174
TEL. (305) 264-8100 FAX. (305) 262-6978

SERIES YOW-200/225H ALUM MULLION CLIPPED
YKK AP AMERICA INC.
5630 GWALTNEY DRIVE
ATLANTA, GA. 30336
TEL. (404) 629-3800 FAX (404) 629-3810

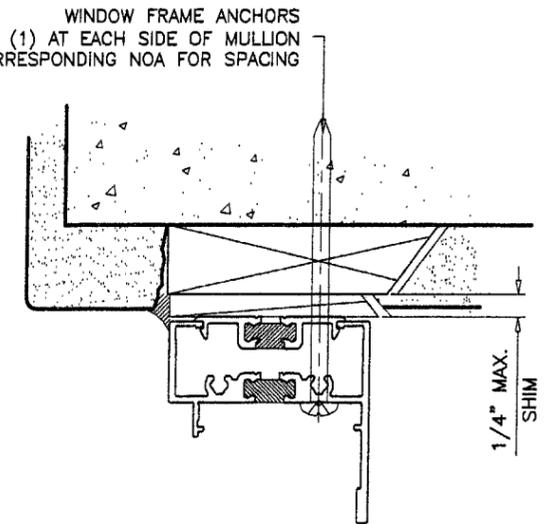
| no | date | description |
|----|----------|----------------------|
| A | 12.12.02 | ANCHORS REV. |
| B | 01.28.04 | 225H FRAME ADDED |
| C | 08.04.04 | NO CHANGE THIS SHEET |

date: 07-23-01
scale: 1/2" = 1"
dr. by: HAMID
chk. by:

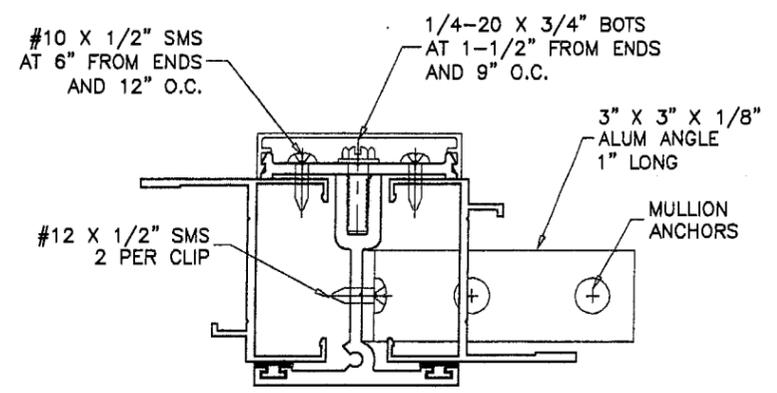
drawing no.
M01-01
sheet 3 of 3



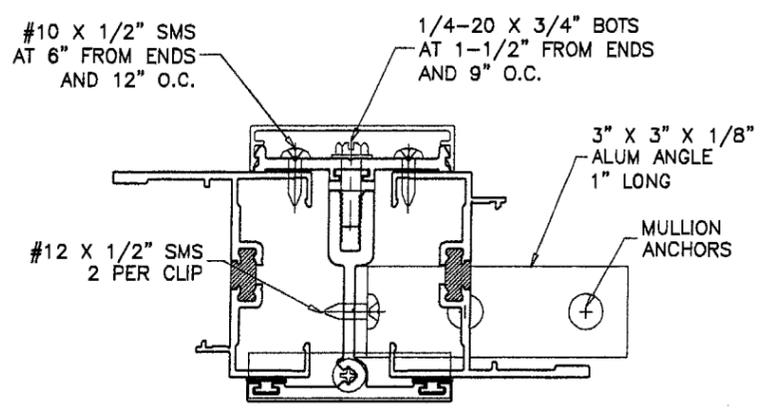
YOW-200



YOW-225H



YOW-200
MULLION CONNECTION
TYP. AT HEAD, SILL AND JAMBS



YOW-225H
MULLION CONNECTION
TYP. AT HEAD, SILL AND JAMBS

MULLION ANCHORS:

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

#12 SMS OR SELF DRILLING SCREWS
INTO METAL STRUCTURES (1/8" MIN. THICKNESS)

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 04-0003.04
Expiration Date 02/21/09

By: *[Signature]*
Miami State Product Control
Division

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

[Signature]
AUG 09 2004