



**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)

**Rolladen, Inc.
550 Ansin Boulevard
Hallandale, Florida 33009**

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 High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Aluminum Accordion Shutter

APPROVAL DOCUMENT: Drawing No. 02-22, titled (4" Blade Accordion Shutter Details), sheets 1 through 5 of 5, prepared by Al-Farooq Corporation, dated October 29, 2002, last revision #B dated March 23, 2004, 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 the 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, evidence submitted page(s) as well as approval document mentioned above. The submitted documentation was reviewed by **Helmy A. Makar, P.E.**



Helmy A. Makar
05/06/2004

**NOA No 03-0616.02
Expiration Date: 05/06/2009
Approval Date: 05/06/2004
Page 1**

Rolladen, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. *Drawing No. 02-22, titled (4" Blade Accordion Shutter Details), sheets 1 through 5 of 5, prepared by Al-Farooq Corporation, dated October 29, 2002, last revision #B dated March 23, 2004, signed and sealed by Humayoun Farooq, P.E.*

B. TESTS

1. *Test report on Large Missile Impact & Cyclic Wind Pressure Test of "Accordion Shutter", prepared by Hurricane Engineering & Testing Inc., Report No. HETI-02-1239, dated July 24, 2002, signed and sealed by Rafael E. Droz-Seda, P.E.*
2. *Test report on Uniform Static Air Pressure Test of "Accordion Shutter", prepared by Hurricane Engineering & Testing Inc., Report No. HETI-02-1240, dated July 24, 2002, signed and sealed by Rafael E. Droz-Seda, P.E.*

C. CALCULATIONS

1. *Comparative analysis and Anchor calculation, dated April 14, 2003, Sheets L1, L2, D1- D2, R1, A1 – A29, and AS1 –AS9, prepared by Al-Farooq Corporation, signed and sealed by Humayoun Farooq, P.E. on June 03, 2003.*

D. QUALITY ASSURANCE

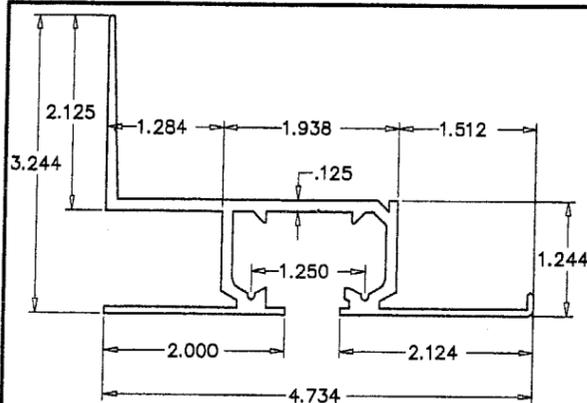
1. *By Miami-Dade County Building Code Compliance Office.*

E. MATERIAL CERTIFICATIONS

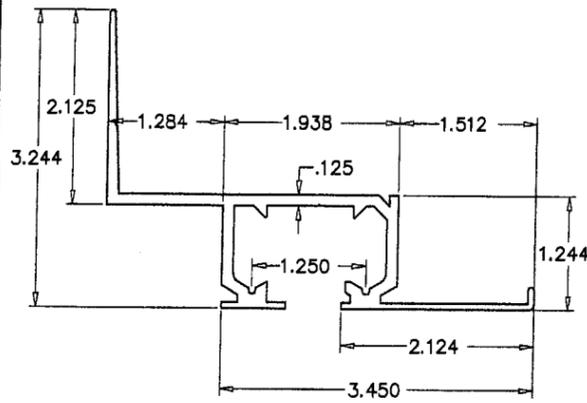
1. *Certified Tensile Test Report from Hurricane Engineering & Testing Inc., Report No. HETI-02-T052, dated August 22, 2002, signed and sealed by Rafael E. Droz-Seda, P.E.*



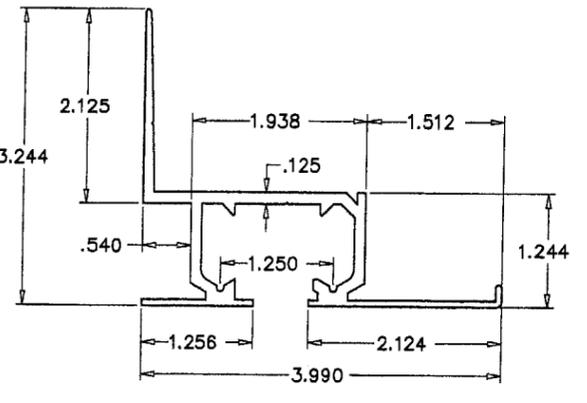
Helmy A. Makar, P. E.
Product Control Examiner
NOA No 03-0616.02
Expiration Date: 05/06/2009
Approval Date: 05/06/2004



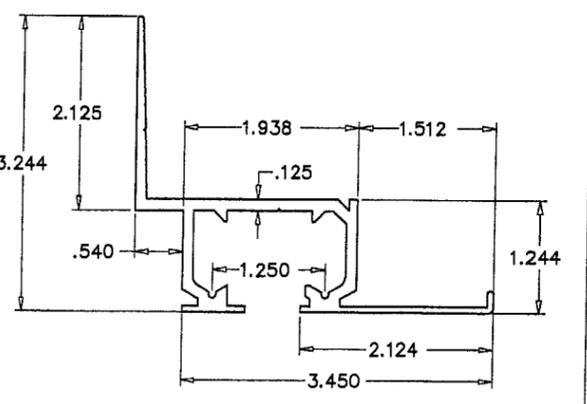
WALL TRACK
6063-T5



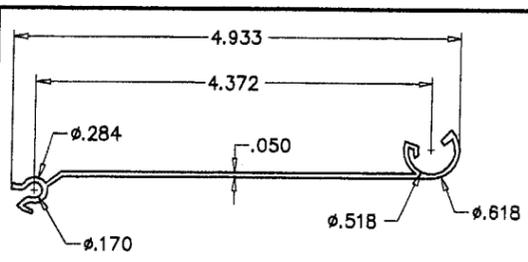
WALL TRACK
6063-T5



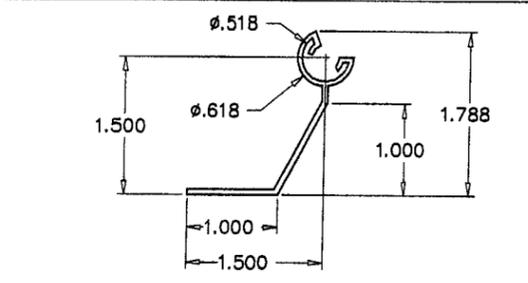
WALL TRACK
6063-T5



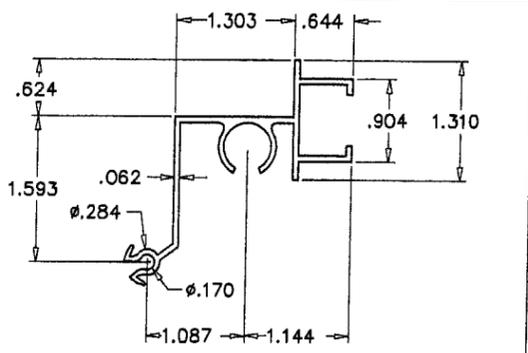
WALL TRACK
6063-T5



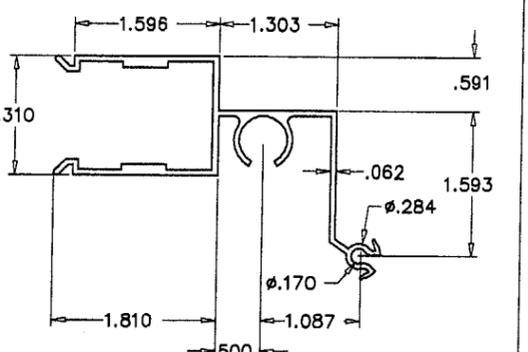
SLAT
6005-T5



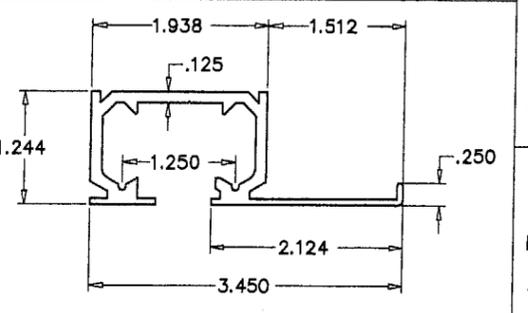
END SLAT
6005-T5



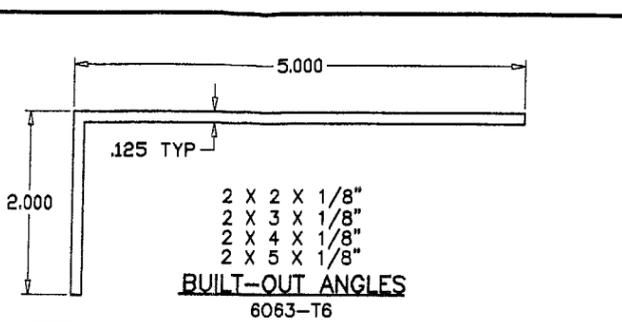
MALE LOCKING SLAT
6063-T5



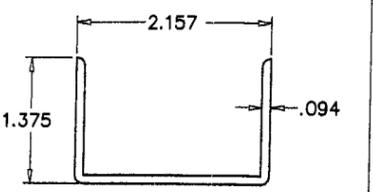
FEMALE LOCKING SLAT
6063-T5



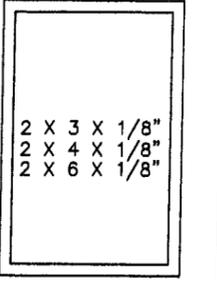
INSIDE MOUNT HEADER & SILL
6063-T5



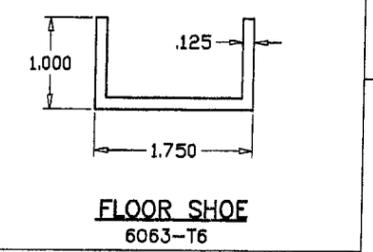
BUILT-OUT ANGLES
6063-T6



BOTTOM TRACK ADAPTER
6063-T6



BUILT-OUT TUBES
6063-T6



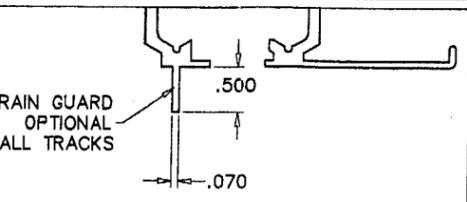
FLOOR SHOE
6063-T6

TYPICAL ANCHORS:

- ANCHOR (A) = **1/4" DIA. TAPCONS** (BY ELCO)
1-3/4" EMBEDMENT INTO 3000 PSI CONC.
1-1/4" EMBEDMENT INTO C-90 BLOCK
- ANCHOR (D) = **1/4" RAWL CALK-IN. STAR TAMPIN**
TOTAL ANCHOR BODY INTO 3000 PSI CONC.
OR C-90 BLOCK
- ANCHOR (E) = **1/4" DIA. LAG SCREWS**
1-1/2" MIN THREADED PENETRATION INTO WOOD(S.G.=0.55)
- ANCHOR (G) = **#14 SMS OR SELF DRILLING (TEKS) SCREWS**
INTO METAL STRUCTURES
(STEEL OR ALUMINUM 1/8" MIN. THICK.)

NOTE: ANCHORS EMBEDMENT SHOWN IS BEYOND WALL & FLOOR COVERINGS (STUCCO, TILES, ETC.)

FOR INSTALLATION DETAILS SEE SHEETS 2 THRU 5.



RAIN GUARD
OPTIONAL
ALL TRACKS

Approved as complying with the
Florida Building Code
Date 05/06/2004
NOA# 03-0616-02
Miami Dade Product Control
Division
By Helmy A. M...

Engr. DR. HUMAYOUN FAROOQ
STRUCTURES
FLA. PE # 16557
C.A.N. 3538
MAR 24 2004

MAXIMUM DESIGN LOAD RATING = + 69.0 PSF
- 92.0 PSF

PRODUCT MARKING

A PERMANENT LABEL SHALL BE AFFIXED ON LOCKING MEMBER OF UNIT ABOVE LOCK WITH THE FOLLOWING STATEMENT.

ROLLADEN INC., MIAMI, FL.

"MIAMI DADE COUNTY PRODUCT CONTROL APPROVED"

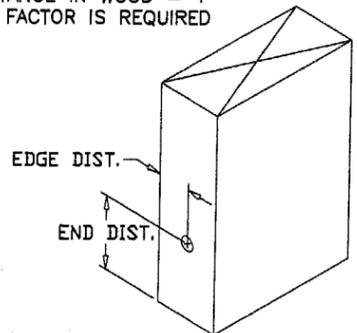
GENERAL NOTES

1. THIS PRODUCT IS DESIGNED TO COMPLY WITH THE HIGH VELOCITY HURRICANE ZONE OF THE 2001 FLORIDA BUILDING CODE.
2. DESIGN CRITERIA FOR ALUMINUM, MINIMUM MECHANICAL PROPERTIES, AND SAFETY FACTORS ARE IN ACCORDANCE WITH THE "ALUMINUM CONSTRUCTION MANUAL" LATEST EDITION.
3. ALUMINUM ALLOYS: ALL EXTRUSIONS SHALL BE ALLOY AS SHOWN.
4. STEEL SURFACES TO BE PLACED IN CONTACT WITH ALUMINUM SHALL BE GIVEN ONE COAT OF ZINC CHROMATE PRIMER IN ACCORDANCE WITH FEDERAL SPEC. NO. TTP-645, OR BE GALVANIZED.
5. ANCHORS SHALL BE AS SHOWN ON DETAILS. ANCHOR EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO.
6. ALL BOLTS SHALL BE STAINLESS STEEL, ALUMINUM ALLOY 2024-T4 OR 7075-T6, OR PLATED STEEL. WING NUTS TO BE OF ZINC ALLOY.
7. DESIGN CRITERIA FOR SLATS: MAX DEFLECTION $\leq L/30$ OR 2".
8. ANCHORING OR LOADING CONDITIONS OTHER THAN THOSE SHOWN IN THESE DETAILS ARE NOT PART OF THIS APPROVAL.
9. A 33% INCREASE IN ALLOWABLE STRESS WAS USED IN DESIGN OF ANCHOR SPACING.

DESIGN LOADS SHALL BE CALCULATED AS PER REQUIREMENTS OF ASCE 7-98.

FASTENER SPACING IN MASONRY					
CHARTS ARE BASED ON TYPICAL EDGE DISTANCE = 12d. FOR LESSER EDGE DISTANCE DECREASE SPACING BY MULTIPLYING WITH THE FACTOR BELOW					
EDGE DIST.	12d=3"	10d=2-1/2"	8d=2"	6d=1-1/2"	5d=1-1/4"
FACTOR	1.00	0.86	0.71	0.57	0.50
EXAMPLE: FOR 3" EDGE DIST. SPACING = 12" O.C. (FROM CHART) FOR 2" EDGE DIST. SPACING = 12 X .71 = 8.5 O.C.					

TYPICAL EDGE DISTANCE IN WOOD = 3/4"
TYPICAL END DISTANCE IN WOOD = 1"
NO REDUCTION FACTOR IS REQUIRED



afc

AL-FAROOQ CORPORATION
ENGINEERS, PLANNERS & PRODUCT DESIGN
1235 SW 87 AVE
MIAMI, FLORIDA 33174
TEL. (305) 264-8100 FAX. (305) 262-6978
ACCORDION/02-22RNI

4" BLADE ACCORDION SHUTTER DETAILS

ROLLADEN INC.
550 ANSIN BLVD.
HALLANDALE, FL. 33009
TEL. (954) 757-8591 FAX. (954) 454-1577

no	date	description
A	02.14.04	REV. PER BCCO COMMENTS
B	03.23.04	NO CHANGE THIS SHEET

revisions:

date: 10-29-02
scale: 1/2" = 1"
dr. by: HAMID
chk. by:

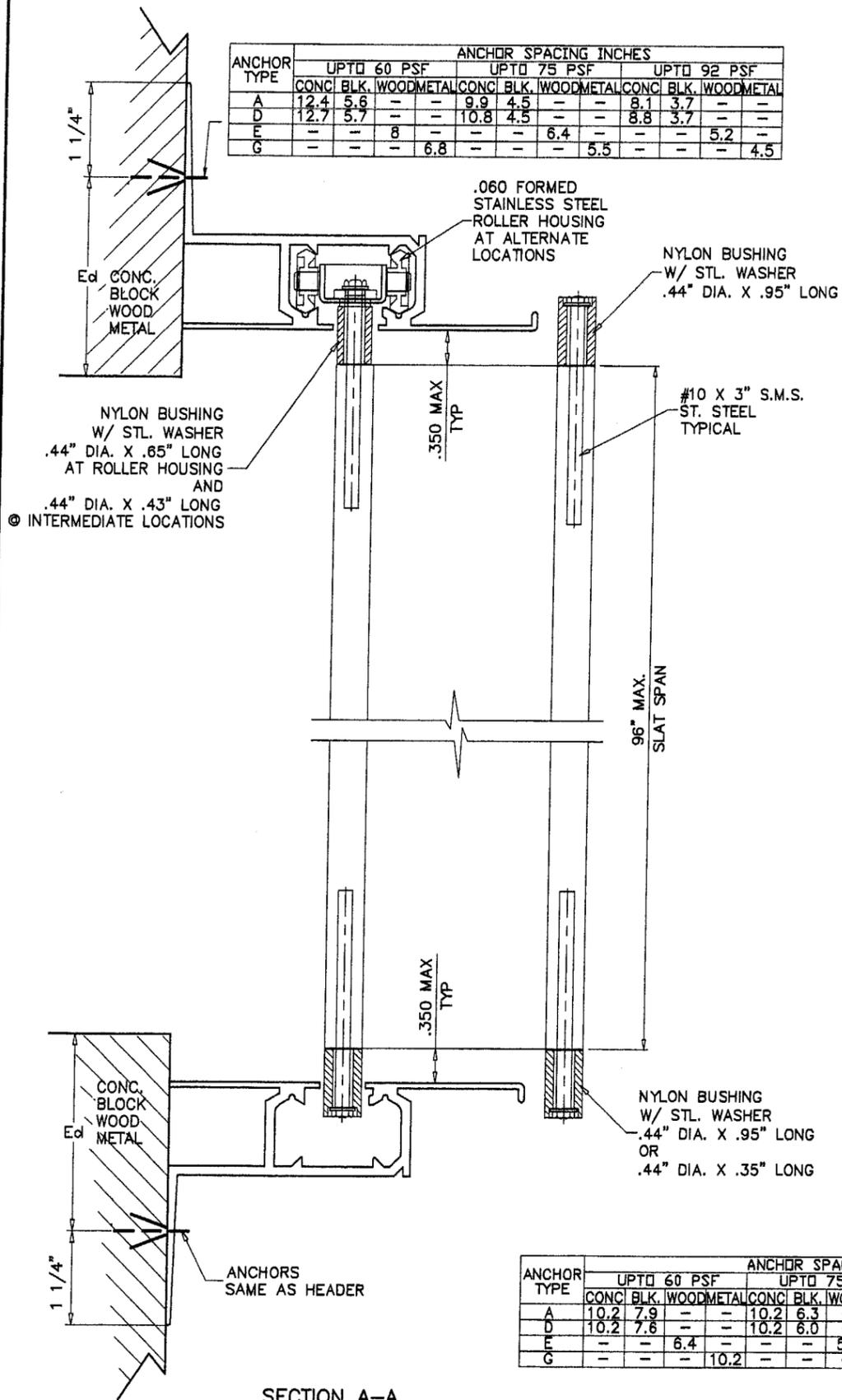
drawing no. **02-22**
sheet 1 of 5

WALL MOUNTS

INSIDE MOUNTS

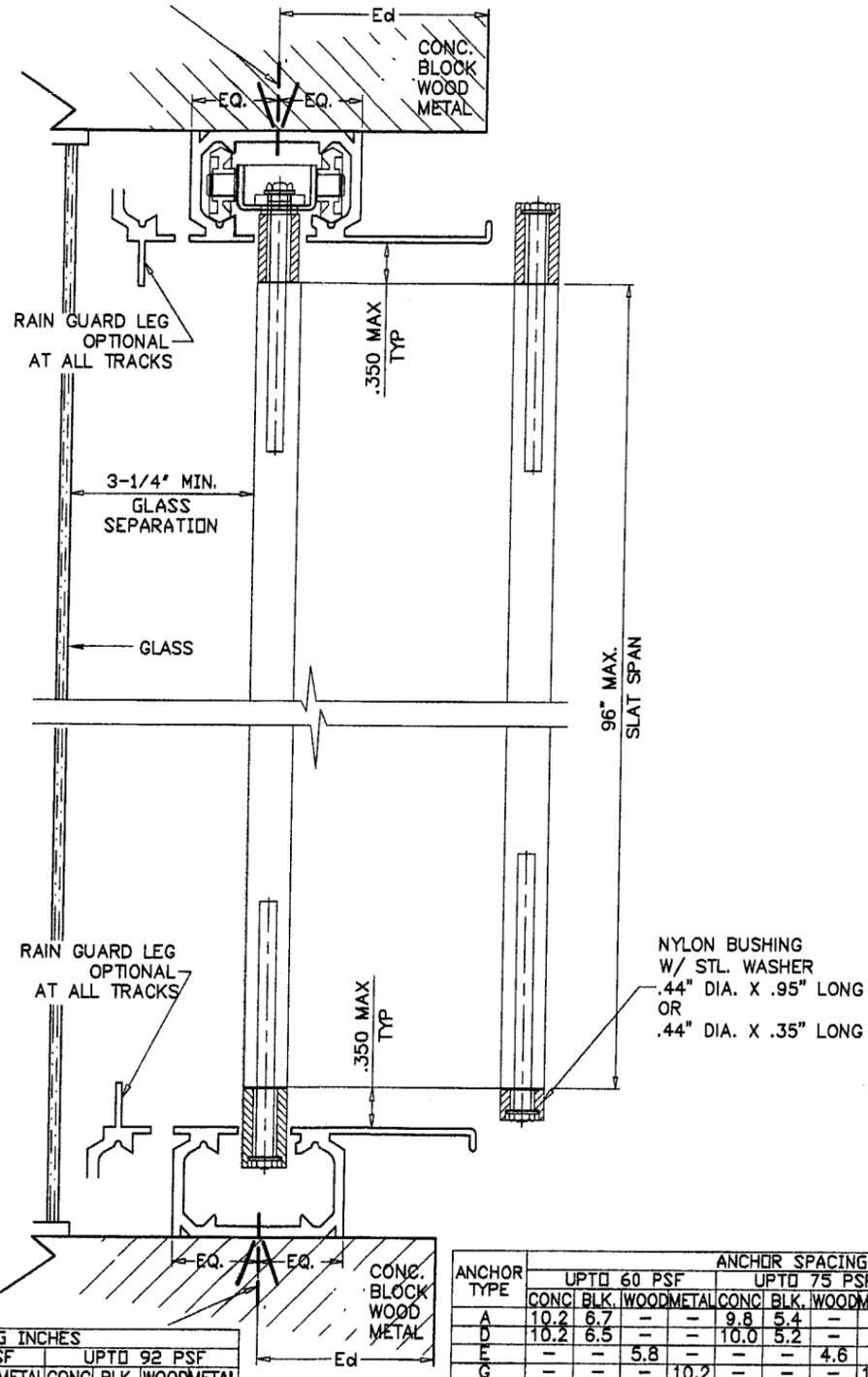
ANCHOR TYPE	ANCHOR SPACING INCHES					
	UPTO 60 PSF		UPTO 75 PSF		UPTO 92 PSF	
	CONC. BLK.	WOODMETAL	CONC. BLK.	WOODMETAL	CONC. BLK.	WOODMETAL
A	12.4	8.6	9.9	4.5	8.1	3.7
D	12.7	5.7	10.8	4.5	8.8	3.7
E	-	-	8	-	6.4	-
G	-	-	6.8	-	5.5	-
						4.5

ANCHOR TYPE	ANCHOR SPACING INCHES					
	UPTO 60 PSF		UPTO 75 PSF		UPTO 92 PSF	
	CONC. BLK.	WOODMETAL	CONC. BLK.	WOODMETAL	CONC. BLK.	WOODMETAL
A	12.7	7.6	10.9	6.1	8.9	5
D	12.7	7.2	11	5.8	9	4.8
E	-	-	6.2	-	5	-
G	-	-	8.5	-	6.9	-
						5.6



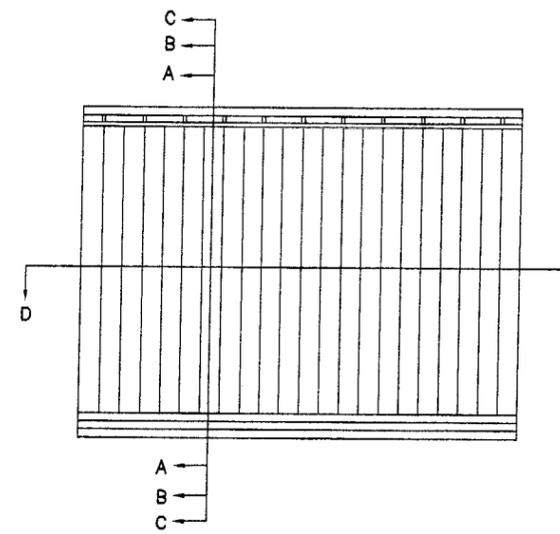
ANCHOR TYPE	ANCHOR SPACING INCHES					
	UPTO 60 PSF		UPTO 75 PSF		UPTO 92 PSF	
	CONC. BLK.	WOODMETAL	CONC. BLK.	WOODMETAL	CONC. BLK.	WOODMETAL
A	10.2	7.9	10.2	6.3	9.1	5.2
D	10.2	7.6	10.2	6.0	9.2	4.9
E	-	-	6.4	-	5.1	-
G	-	-	10.2	-	10.2	-
						8.7

SECTION A-A

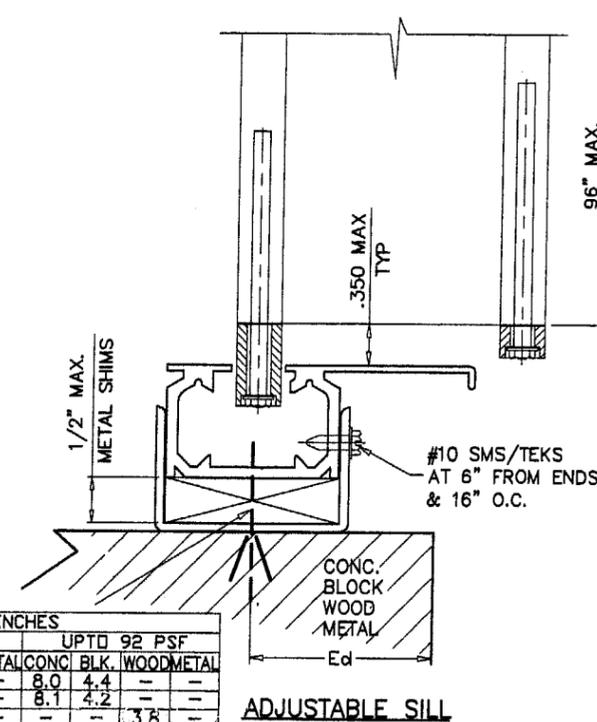


ANCHOR TYPE	ANCHOR SPACING INCHES					
	UPTO 60 PSF		UPTO 75 PSF		UPTO 92 PSF	
	CONC. BLK.	WOODMETAL	CONC. BLK.	WOODMETAL	CONC. BLK.	WOODMETAL
A	10.2	6.7	9.8	5.4	8.0	4.4
D	10.2	6.5	10.0	5.2	8.1	4.2
E	-	-	5.8	-	4.6	-
G	-	-	10.2	-	10.2	-
						8.7

SECTION B-B



TYPICAL ELEVATION



ADJUSTABLE SILL

ANCHORS: EMBEDMENT & EDGE DISTANCES SHOWN ARE BEYOND THE WALL & FLOOR COVERING (STUCCO, TILES, ETC.)

HEADER AND SILL DETAILS CAN BE USED IN ANY COMBINATIONS.

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

MAR 24 2004

Approved as complying with the Florida Building Code
Date 05/06/2004
NOA# 03-0616.01
Miami Dade Product Control
Division
By Helmy A. M...
date: 10-29-02
scale: 1/2" = 1"
dr. by: HAMID
chk. by:

afsc

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

4" BLADE ACCORDION SHUTTER DETAILS

ROLLADEN INC.
550 ANSIN BLVD.
HALLANDALE, FL. 33009
TEL. (954) 757-8591 FAX. (954) 454-1577

no	date	description
A	02.14.04	REV. PER BCCO COMMENTS
B	03.23.04	NO CHANGE THIS SHEET

drawing no. **02-22**
sheet 2 of 5

FOR GENERAL NOTES AND EXTRUSION DETAILS SEE SHEET 1 OF 5.
FOR WOOD INSTALLATIONS SEE SHEET 5.

Ed = TYPICAL EDGE DISTANCE
CONC. & BLOCK = 12d (12 ANCHOR DIAMETERS)
WOOD = 5d
FOR LESSER EDGE DISTANCES SEE SHEET 1 OF 5.

ACCORDION/02-22RNI

ALT. WALL MOUNTS

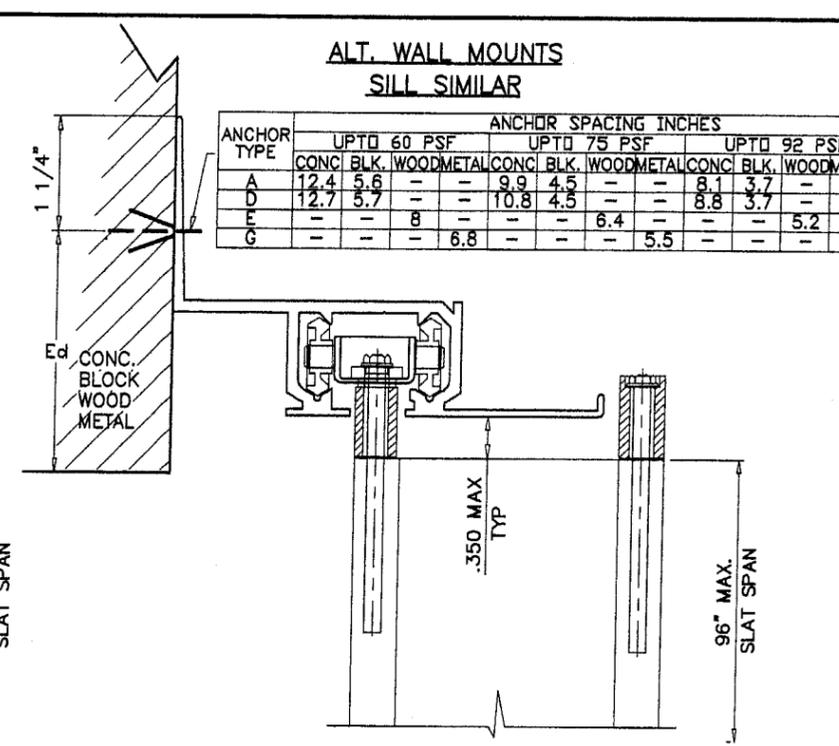
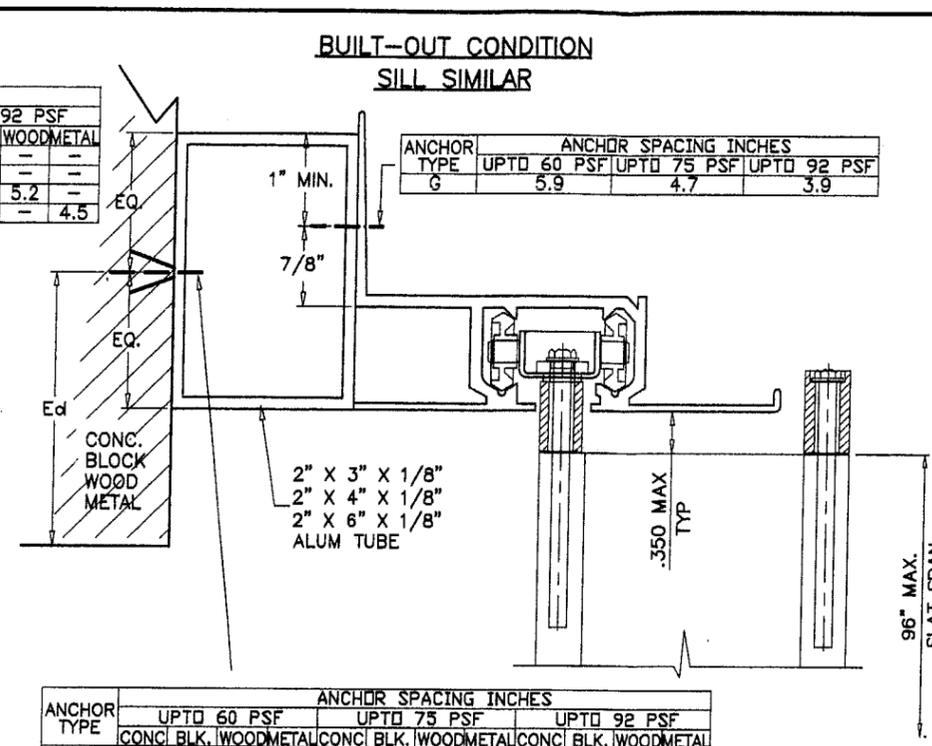
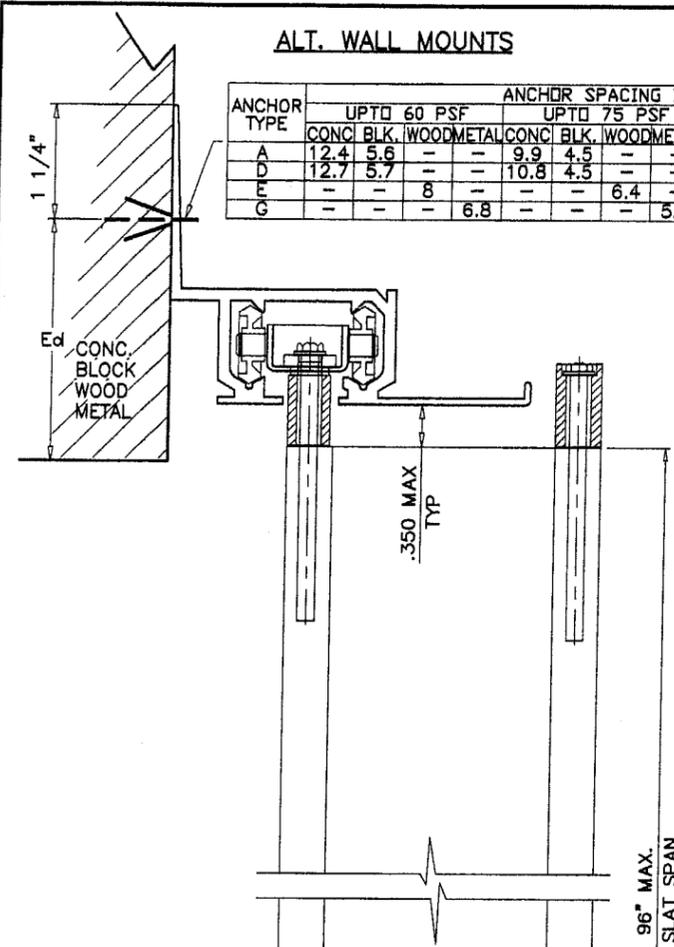
ANCHOR TYPE	ANCHOR SPACING INCHES					
	UPTD 60 PSF		UPTD 75 PSF		UPTD 92 PSF	
	CONC. BLK.	WOODMETAL	CONC. BLK.	WOODMETAL	CONC. BLK.	WOODMETAL
A	12.4	5.6	9.9	4.5	8.1	3.7
D	12.7	5.7	10.8	4.5	8.8	3.7
E	-	-	6.4	-	5.2	-
G	-	-	6.8	-	5.5	-

**BUILT-OUT CONDITION
SILL SIMILAR**

ANCHOR TYPE	ANCHOR SPACING INCHES		
	UPTD 60 PSF	UPTD 75 PSF	UPTD 92 PSF
	CONC. BLK.	WOODMETAL	WOODMETAL
G	5.9	4.7	3.9

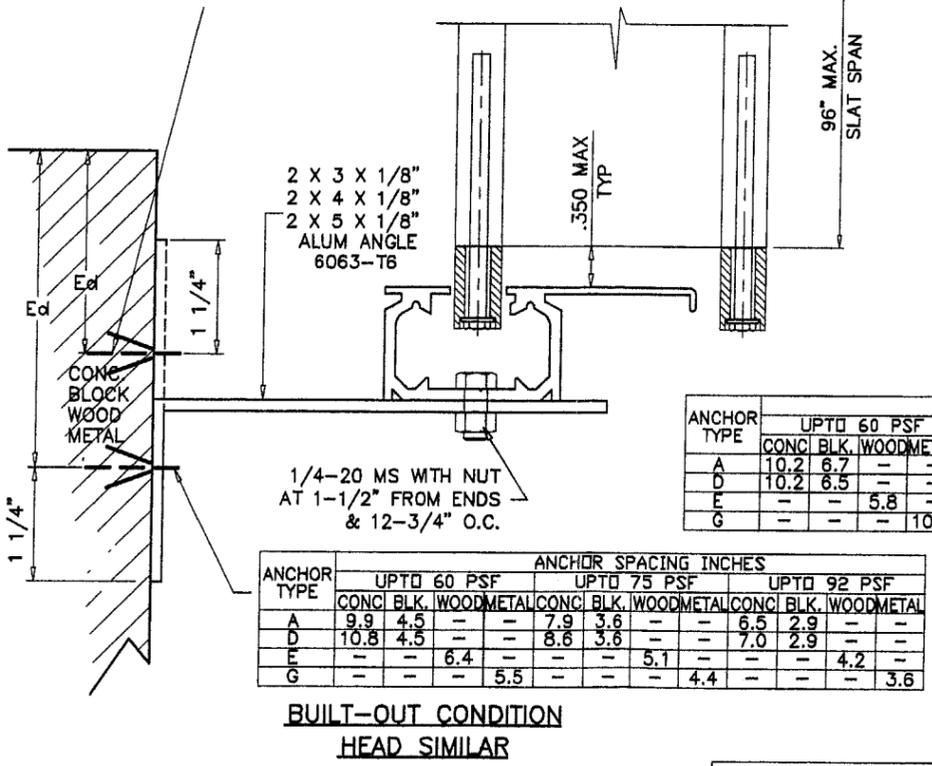
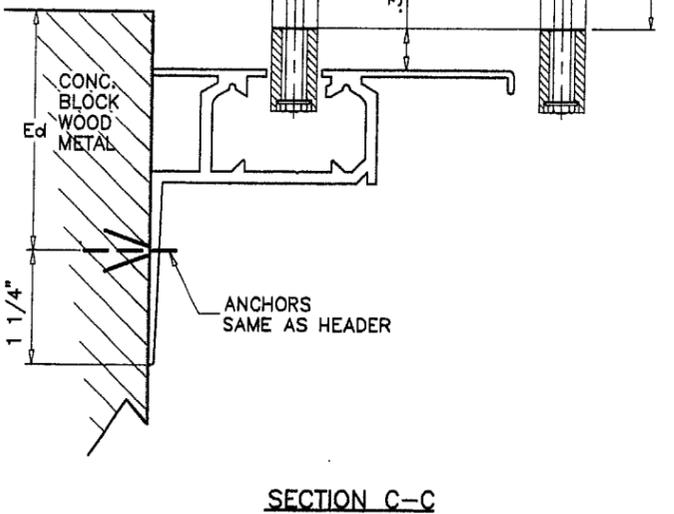
**ALT. WALL MOUNTS
SILL SIMILAR**

ANCHOR TYPE	ANCHOR SPACING INCHES					
	UPTD 60 PSF		UPTD 75 PSF		UPTD 92 PSF	
	CONC. BLK.	WOODMETAL	CONC. BLK.	WOODMETAL	CONC. BLK.	WOODMETAL
A	12.4	5.6	9.9	4.5	8.1	3.7
D	12.7	5.7	10.8	4.5	8.8	3.7
E	-	-	6.4	-	5.2	-
G	-	-	6.8	-	5.5	-



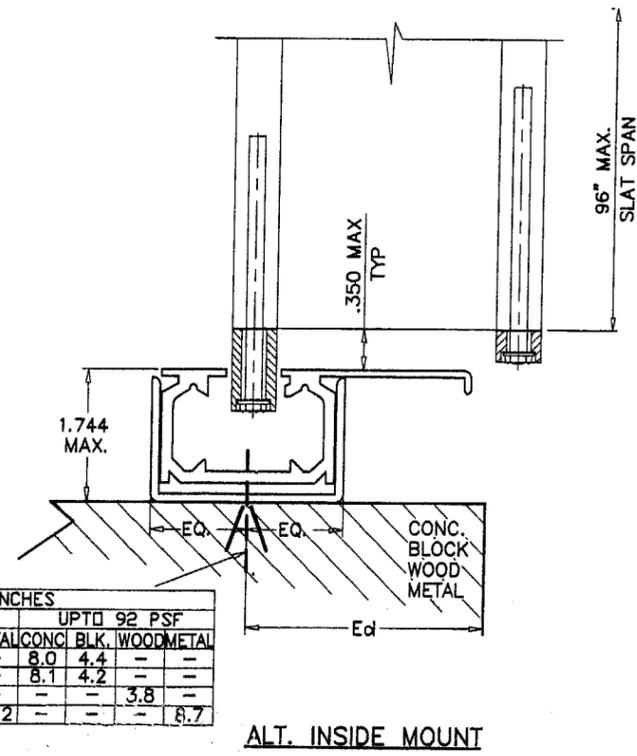
ANCHOR TYPE	ANCHOR SPACING INCHES					
	UPTD 60 PSF		UPTD 75 PSF		UPTD 92 PSF	
	CONC. BLK.	WOODMETAL	CONC. BLK.	WOODMETAL	CONC. BLK.	WOODMETAL
A	16.1	7.3	12.9	5.8	10.5	4.7
D	17	7.3	14.0	5.9	11.4	4.8
E	-	-	10.4	-	8.3	-
G	-	-	8.9	-	7.1	-

ANCHOR TYPE	ANCHOR SPACING INCHES					
	UPTD 60 PSF		UPTD 75 PSF		UPTD 92 PSF	
	CONC. BLK.	WOODMETAL	CONC. BLK.	WOODMETAL	CONC. BLK.	WOODMETAL
A	12.7	10.6	12.7	8.5	12.7	6.9
D	12.7	10.7	12.7	8.6	12.7	7.0
E	-	-	12.7	-	12.2	-
G	-	-	12.7	-	10.4	-



ANCHOR TYPE	ANCHOR SPACING INCHES					
	UPTD 60 PSF		UPTD 75 PSF		UPTD 92 PSF	
	CONC. BLK.	WOODMETAL	CONC. BLK.	WOODMETAL	CONC. BLK.	WOODMETAL
A	9.9	4.5	7.9	3.6	6.5	2.9
D	10.8	4.5	8.6	3.6	7.0	2.9
E	-	-	6.4	-	5.1	-
G	-	-	5.5	-	4.4	-

ANCHOR TYPE	ANCHOR SPACING INCHES					
	UPTD 60 PSF		UPTD 75 PSF		UPTD 92 PSF	
	CONC. BLK.	WOODMETAL	CONC. BLK.	WOODMETAL	CONC. BLK.	WOODMETAL
A	10.2	6.7	9.8	5.4	8.0	4.4
D	10.2	6.5	10.0	5.2	8.1	4.2
E	-	-	5.8	-	4.6	-
G	-	-	10.2	-	10.2	-



ALT. INSIDE MOUNT

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

Approved as complying with the
Florida Building Code
Date 05/06/2004
NOAH 03-0616-07
Miami Dade Product Control
Division
By: Helmy A. Matar

MAR 24 2004

HEADER AND SILL DETAILS CAN BE
USED IN ANY COMBINATIONS.

afc

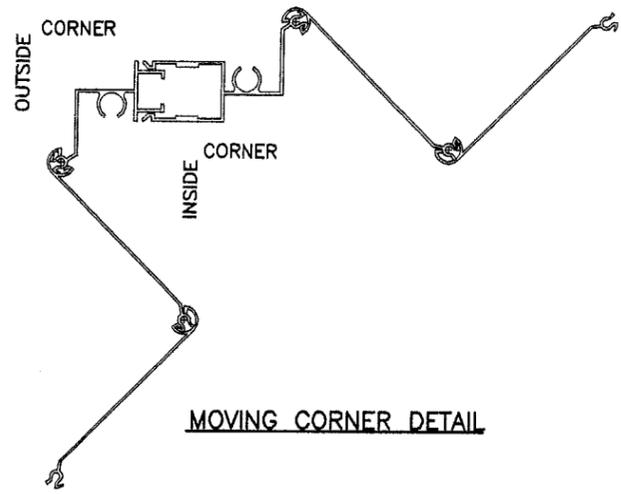
AL-FAROOQ CORPORATION
ENGINEERS, PLANNERS & PRODUCT DESIGN
1235 SW 87 AVE
MIAMI, FLORIDA 33174
TEL. (305) 264-8100 FAX. (305) 262-8978

4" BLADE ACCORDION SHUTTER DETAILS
ROLLADEN INC.
550 ANSIN BLVD.
HALLANDALE, FL. 33009
TEL. (954) 757-8591 FAX. (954) 454-1577

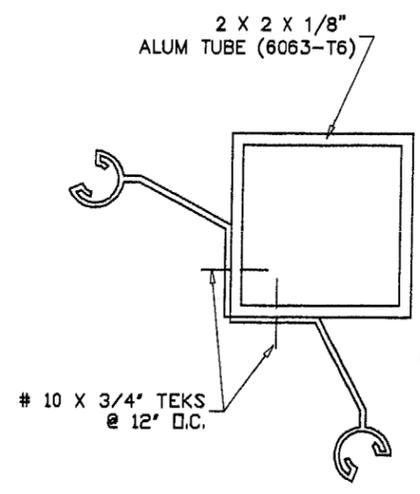
no	date	description
A	02.14.04	REV. PER BCCO COMMENTS
B	03.23.04	NO CHANGE THIS SHEET

date: 10-29-02
scale: 1/2" = 1"
dr. by: HAMID
chk. by:

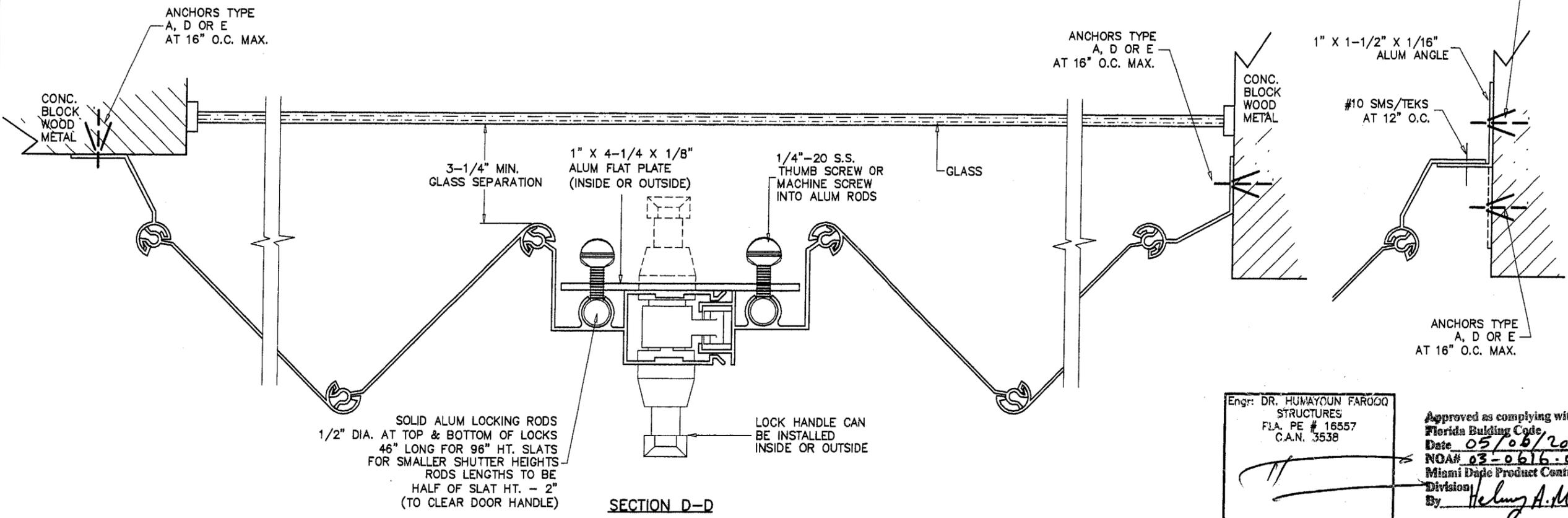
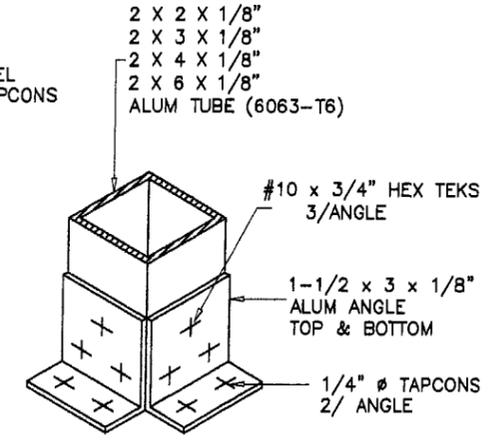
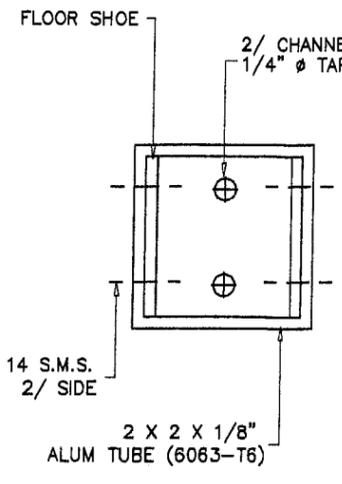
drawing no.
02-22
sheet 3 of 5



MOVING CORNER DETAIL



FIXED CORNER DETAIL



SECTION D-D

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

MAR 24 2004

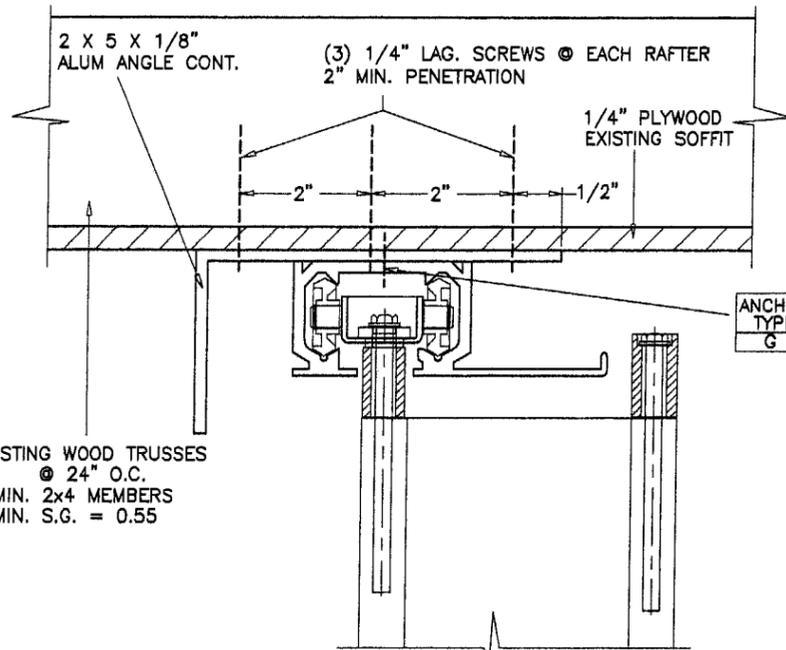
Approved as complying with the
Florida Building Code
Date: 05/06/2004
NOA# 03-0616-07
Miami Dade Product Control
Division
By: Helmy A. Mula

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

4" BLADE ACCORDION SHUTTER DETAILS
ROLLADEN INC.
550 ANSIN BLVD.
HALLANDALE, FL. 33009
TEL (954) 757-8591 FAX. (954) 454-1577

no	date	description	REV. PER BCCO COMMENTS
A	02.14.04		
B	03.23.04		

date: 10-29-02
scale: 1/2" = 1"
dr. by: HAMID
chk. by:
drawing no. 02-22
sheet 4 of 5

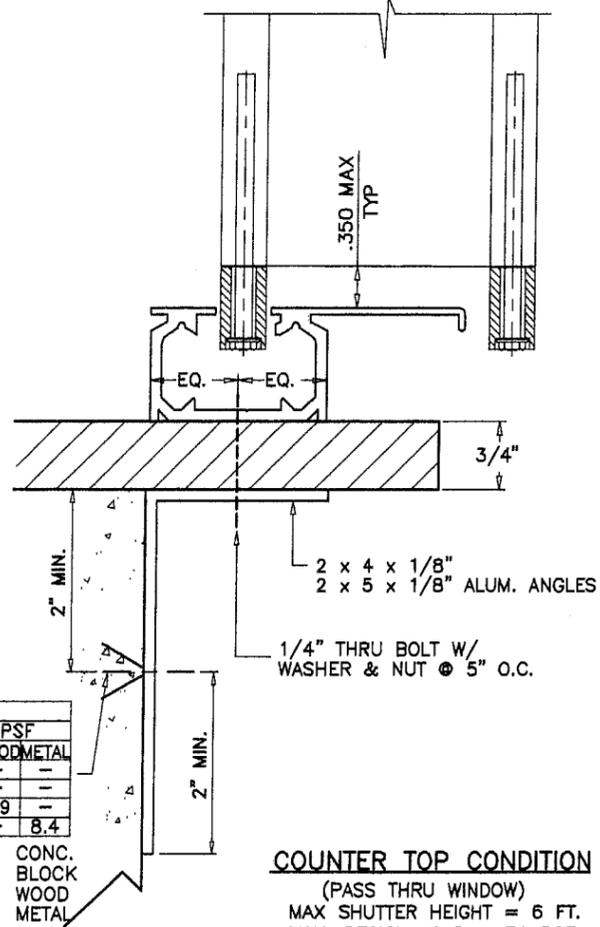


EXISTING WOOD TRUSSES
@ 24" O.C.
MIN. 2x4 MEMBERS
MIN. S.G. = 0.55

HEADER CONNECTION TO WOOD TRUSSES

FOR SHUTTER HEIGHT OF 96" MAX. DESIGN LOAD = 75 PSF
FOR SHUTTER HEIGHT OF 84" MAX. DESIGN LOAD = 85 PSF
FOR SHUTTER HEIGHT OF 72" MAX. DESIGN LOAD = 92 PSF

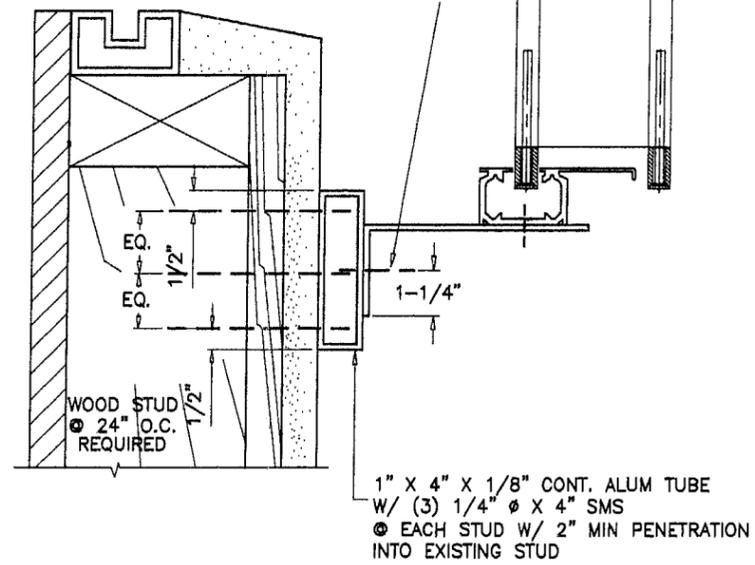
ANCHOR TYPE	ANCHOR SPACING INCHES		
	UPTO 60 PSF	UPTO 75 PSF	UPTO 92 PSF
G	8.5	6.9	5.6



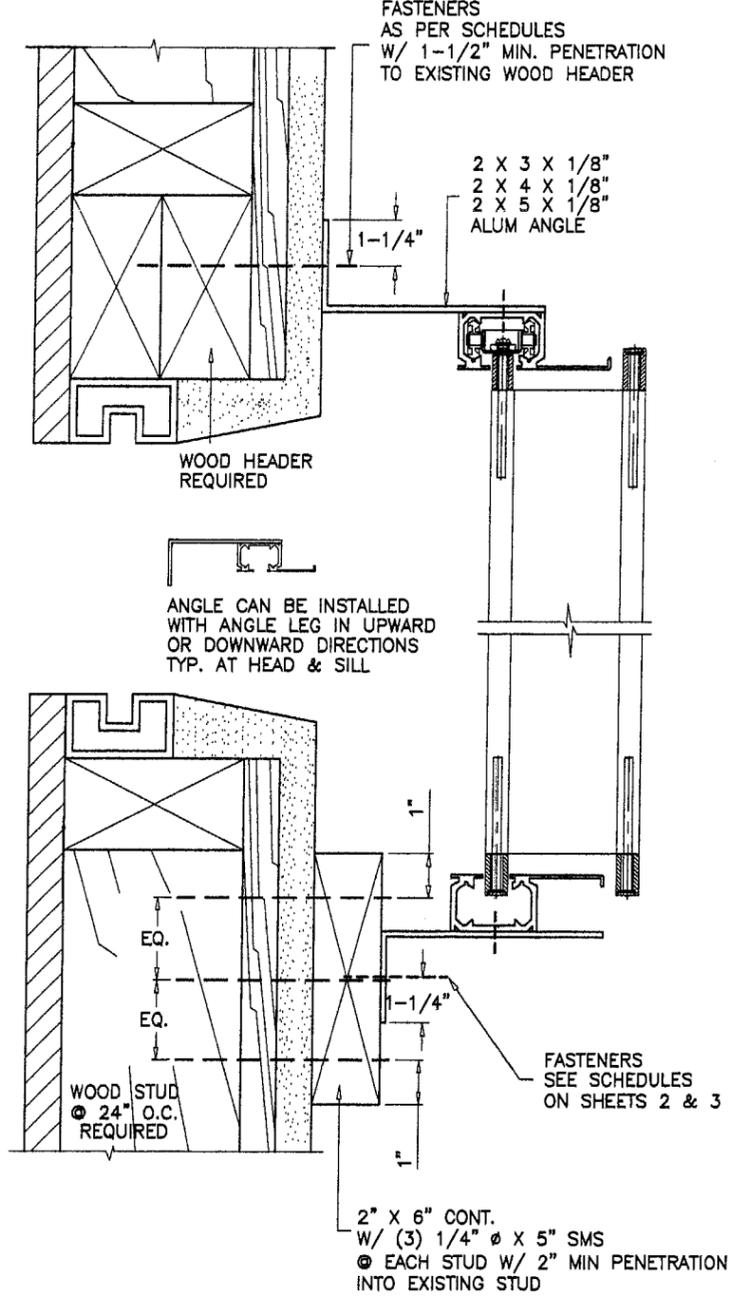
COUNTER TOP CONDITION
(PASS THRU WINDOW)
MAX SHUTTER HEIGHT = 6 FT.
MAX. DESIGN LOAD = 71 PSF

ANCHOR TYPE	ANCHOR SPACING INCHES							
	UPTO 60 PSF		UPTO 71 PSF					
	CONC.	BLK.	WOOD	METAL	CONC.	BLK.	WOOD	METAL
A	12.7	8.2	-	-	12.7	6.9	-	-
D	12.7	8.2	-	-	12.7	7	-	-
E	-	-	11.7	-	-	9.9	-	-
G	-	-	-	10	-	-	8.4	-

ANCHOR TYPE	ANCHOR SPACING INCHES		
	UPTO 60 PSF	UPTO 75 PSF	UPTO 92 PSF
G	5.5	4.4	3.6



FOR SHUTTER HEIGHT OF 96" MAX. DESIGN LOAD = 92 PSF



FOR SHUTTER HEIGHT OF 96" MAX. DESIGN LOAD = 71 PSF
FOR SHUTTER HEIGHT OF 84" MAX. DESIGN LOAD = 81 PSF
FOR SHUTTER HEIGHT OF 72" MAX. DESIGN LOAD = 92 PSF

INSTALLATION DETAIL ON EXISTING WOOD BUCKS SCALE: 1/4"=1"
FOR HEADER/SILL DETAILS CONNECTED TO CONTINUOUS WOOD MEMBERS SEE SHEETS 2 & 3.

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

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afc

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MIAMI, FLORIDA 33174
TEL. (305) 264-8100 FAX. (305) 262-6978
ACCORDION/02-22RNI

4" BLADE ACCORDION SHUTTER DETAILS

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550 ANSIN BLVD.
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TEL. (954) 757-8591 FAX. (954) 454-1577

NO.	DATE	BY	DESCRIPTION
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