



**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 Blvd.
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: 0.036" (min.) Galvanized Steel Storm Panel Shutter

APPROVAL DOCUMENT: Drawing No. 96-49, titled " Storm Panel Details ", sheets 1 through 4 of 4, prepared by Al-Farooq Corporation, dated November 25, 1996, last revision #C dated April 16, 2003, 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 panel 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.

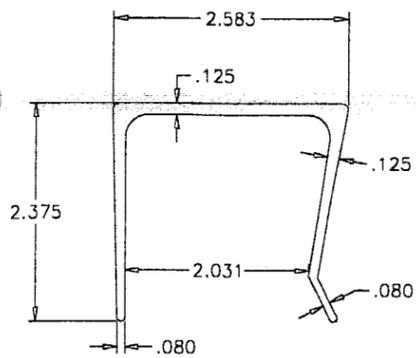
INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA **revises & renews NOA # 00-0602.01** & consists of this page 1 & approval document mentioned above. The submitted documentation was reviewed by **Helmy A. Makar, P.E.**

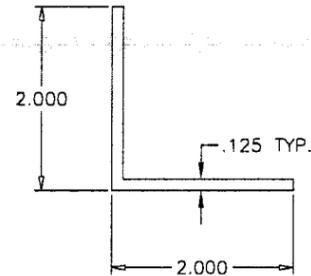


Helmy A. Makar
07/31/03

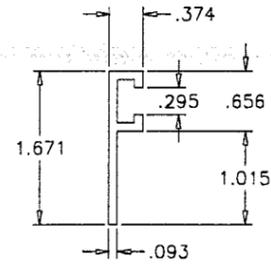
**NOA No 03-0519.01
Expiration Date: 06/19/2008
Approval Date: 07/31/2003
Page 1**



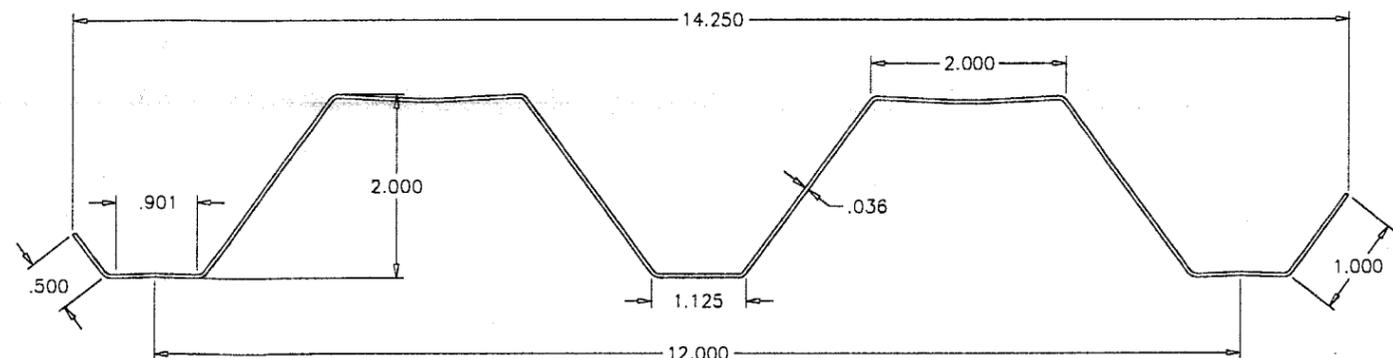
CEILING MOUNT HEADER
6063-T6



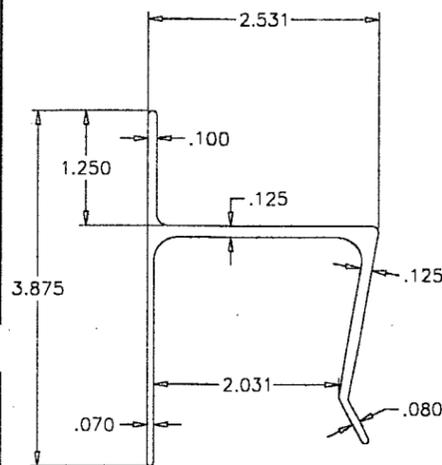
SILL ANGLE
6063-T6



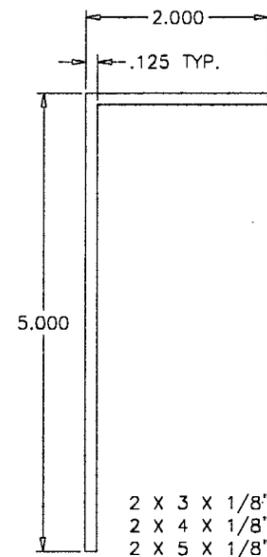
F- ANGLE CHANNEL
6063-T6



ROLL FORMED PANEL
20 GA. STEEL

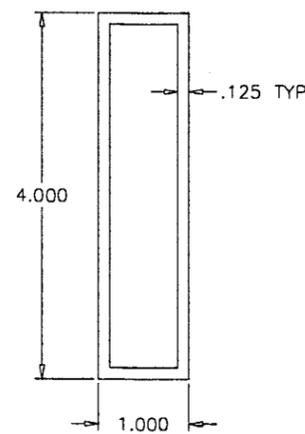


WALL MOUNT HEADER
6063-T6

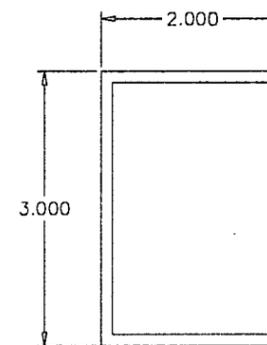


BUILT-OUT ANGLES
6063-T6

2 X 3 X 1/8"
2 X 4 X 1/8"
2 X 5 X 1/8"



ALUMINUM TUBE
6063-T6



BUILT-OUT TUBES
6063-T6

2 X 2 X 1/8"
2 X 3 X 1/8"

FASTENER SPACING IN MASONRY					
TABLES 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 TABLE) FOR 2" EDGE DIST. SPACING = 12 X .71 = 8.5 O.C.					

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

TYPICAL ANCHORS

- ANCHOR (A) = 1/4" DIA. TAPCONS
1-3/4" EMBEDMENT TO CONC.
1-1/4" EMBEDMENT TO BLOCK
- ANCHOR (E) = #14 SMS
1-1/2" MIN PENETRATION INTO WOOD(S.G.=0.55)
- ANCHOR (F) = 1/4" DIA. PANELMATE ANCHORS (ELCO-TEXTRON)
1-7/8" EMBEDMENT TO CONC.
1-1/4" EMBEDMENT TO BLOCK
1-7/8" MIN PENETRATION INTO WOOD(S.G.=0.55)

NOTE: ANCHORS, USE FULL EMBEDMENT IN CONCRETE BEYOND THE COVERING (STUCCO, TILES, ETC.)

FOR INSTALLATION DETAILS SEE SHEET 2, 3 & 4.

GENERAL NOTES

1. THIS PRODUCT IS DESIGNED TO COMPLY WITH THE HIGH VELOCITY HURRICANE ZONE OF THE 2001 FLORIDA BUILDING CODE. ALSO FOR WIND LOADS AS PER ASCE 7-88, ASCE 7-93, ASCE 7-95 OR ASCE 7-98 AS REQUIRED BY PREVAILING 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 6063-T6.
4. PANELS SHALL BE 20 GA. ROLL FORMED STEEL, ASTM A653, GR40 GALVANIZED ACCORDING TO ASTM A525, WITH A COATING DESIGNATION OF G90.
5. 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.
6. ANCHORS SHALL BE AS LISTED, SPACED AS SHOWN ON DETAILS. ANCHOR EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO.
7. ALL BOLTS SHALL BE STAINLESS STEEL, ALUMINUM ALLOY 2024-T4 OR 7075-T6. WING NUTS SHALL BE OF ZINC ALLOY.
8. DESIGN CRITERIA FOR PANELS: MAX DEFLECTION ≤ L/30 FOR NEGATIVE LOAD AND THE LESSER OF L/30 OR 2" FOR POSITIVE LOAD.
9. ANCHORING OR LOADING CONDITIONS OTHER THAN THOSE SHOWN IN THESE DETAILS ARE NOT PART OF THIS APPROVAL.
10. EXISTING STRUCTURES MUST BE CAPABLE OF SUSTAINING LOADS IMPOSED BY SHUTTER.

DESIGN LOADS SHALL BE CALCULATED AS PER REQUIREMENTS OF ASCE 7-88 OR ASCE 7-98 AS REQUIRED BY BUILDING CODE.

PRODUCT MARKING

A LABEL SHALL BE AFFIXED AT BOTTOM OF ONE PANEL OF EACH OPENING WITH THE FOLLOWING STATEMENT.

ROLLADEN INC.
20 GA STEEL STORM PANEL
"DADE COUNTY PRODUCT CONTROL APPROVED"

DESIGN PRESSURE RATING = + 70 PSF
- 70 PSF

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

MAY 05 2003

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 03-0519.01
Expiration Date 06/19/2008

By *Heather A. Miller*
Miami Dade Product Control
Division

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

STORM PANEL DETAILS
ROLLADEN INC.
550 ANSIN BOULEVARD
HALLANDALE, FL. 33009
(305) 757 - 8591

no	date	description
A	02.12.97	H ANCHOR CHARTS REV.
B	05.28.97	H GENERAL REVISION
C	04.16.03	UPDATED FOR FBC & NDS 97

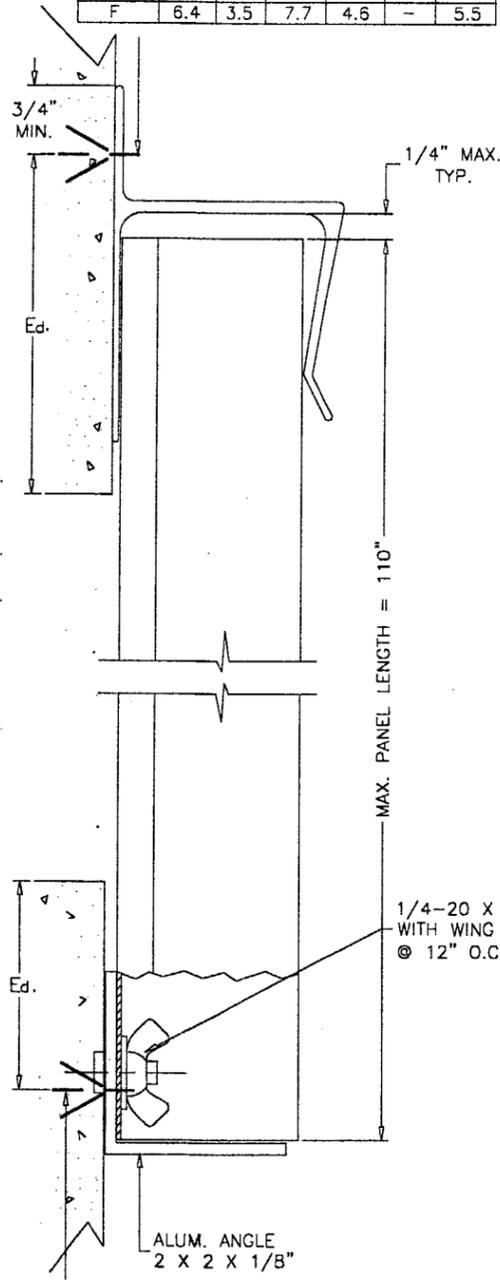
date: 11-25-96
scale: 1/2" = 1"
dr. by: HAMID
chk. by:

drawing no.
96-49
sheet 1 of 4

PANELS/RN196-49

WALL MOUNTS

ANCHOR TYPE	SPACING INCHES					
	UPTO 50 PSF			UPTO 70 PSF		
	CONC.	BLK.	WOOD	CONC.	BLK.	WOOD
A	7.8	-	-	5.6	-	-
E	-	-	6.5	-	-	4.7
F	6.4	3.5	7.7	4.6	-	5.5

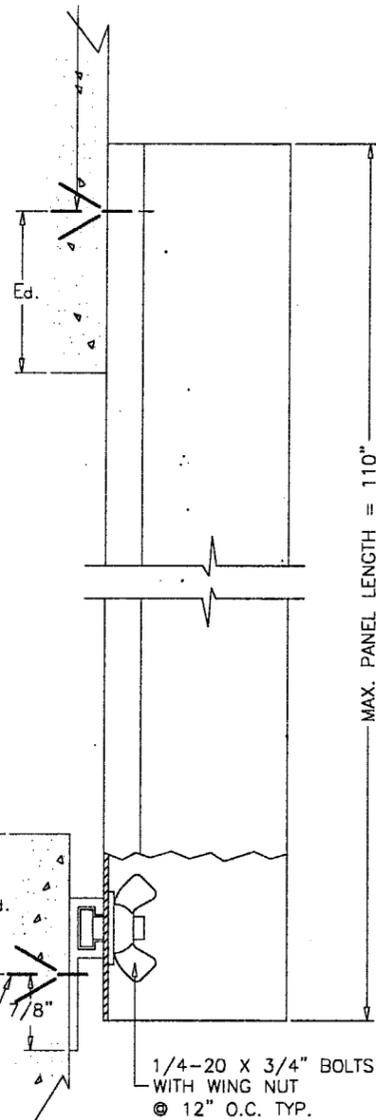


ANCHOR TYPE	SPACING INCHES					
	UPTO 50 PSF			UPTO 70 PSF		
	CONC.	BLK.	WOOD	CONC.	BLK.	WOOD
A	12	8	-	12	6	-
E	-	-	12	-	-	12
F	12	10.7	12	12	8	12

SECTION A-A

DIRECT MOUNTS

ANCHOR TYPE	SPACING INCHES					
	UPTO 50 PSF			UPTO 70 PSF		
	CONC.	BLK.	WOOD	CONC.	BLK.	WOOD
A	12	12	12	12	10.4	12



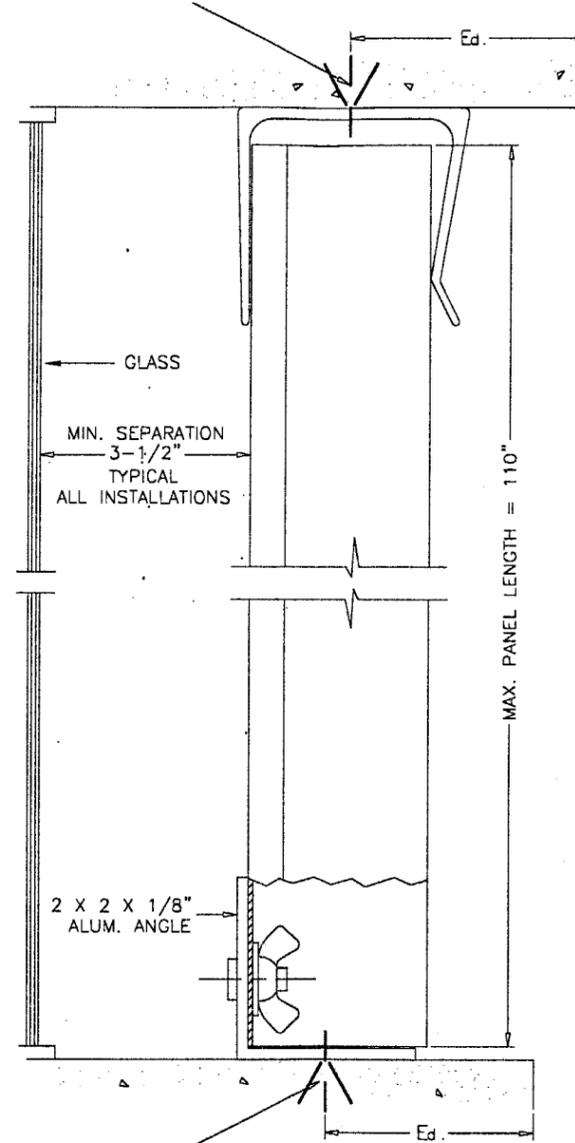
ANCHOR TYPE	SPACING INCHES					
	UPTO 50 PSF			UPTO 70 PSF		
	CONC.	BLK.	WOOD	CONC.	BLK.	WOOD
A	12	5.8	-	12	4.3	-
E	-	-	12	-	-	10
F	12	7.8	12	10.3	5.8	12

SECTION B-B

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

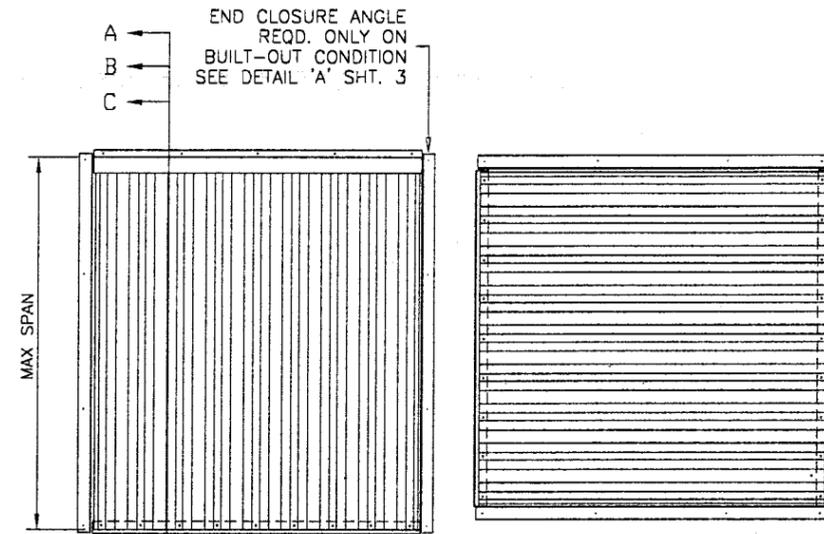
INSIDE MOUNTS

ANCHOR TYPE	SPACING INCHES					
	UPTO 50 PSF			UPTO 70 PSF		
	CONC.	BLK.	WOOD	CONC.	BLK.	WOOD
A	12	5.3	-	8.9	3.8	-
E	-	-	6.3	-	-	4.5
F	8.8	6.5	10.2	6.3	4.7	7.3



ANCHOR TYPE	SPACING INCHES					
	UPTO 50 PSF			UPTO 70 PSF		
	CONC.	BLK.	WOOD	CONC.	BLK.	WOOD
A	12	6.8	-	10.7	4.9	-
E	-	-	7.1	-	-	5.1
F	10.3	8.2	11.9	7.4	5.8	8.5

SECTION C-C



TYPICAL ELEVATION
 PANELS CAN BE INSTALLED VERTICALLY OR HORIZONTALLY USING APPLICABLE ANCHORING DETAILS.

Ed = TYPICAL EDGE DISTANCE
 CONC. & BLOCK = 12d (12 ANCHOR DIAMETERS)
 WOOD = 5d
 FOR LESSER EDGE DISTANCES SEE SHEET 1 OF 4.

HEADER AND SILL DETAILS CAN BE USED IN ANY COMBINATIONS.

FOR GENERAL NOTES AND EXTRUSION DETAILS SEE SHEET 1 OF 4.

Engr: DR. HUMAYOUN FAROOQ
 STRUCTURES
 FLA. PE # 16557

[Signature]
 MAY 05 2003

PRODUCT REVISED
 as complying with the Florida Building Code
 Acceptance No 03-0519.01
 Expiration Date 06/19/2008
 By *[Signature]*
 Miami Dade Product Control Division

afc
AL-FAROOQ CORPORATION
 ENGINEERS, PLANNERS & PRODUCT DESIGN
 1235 SW 87 AVE
 MIAMI, FLORIDA 33174
 (305) 264-8100

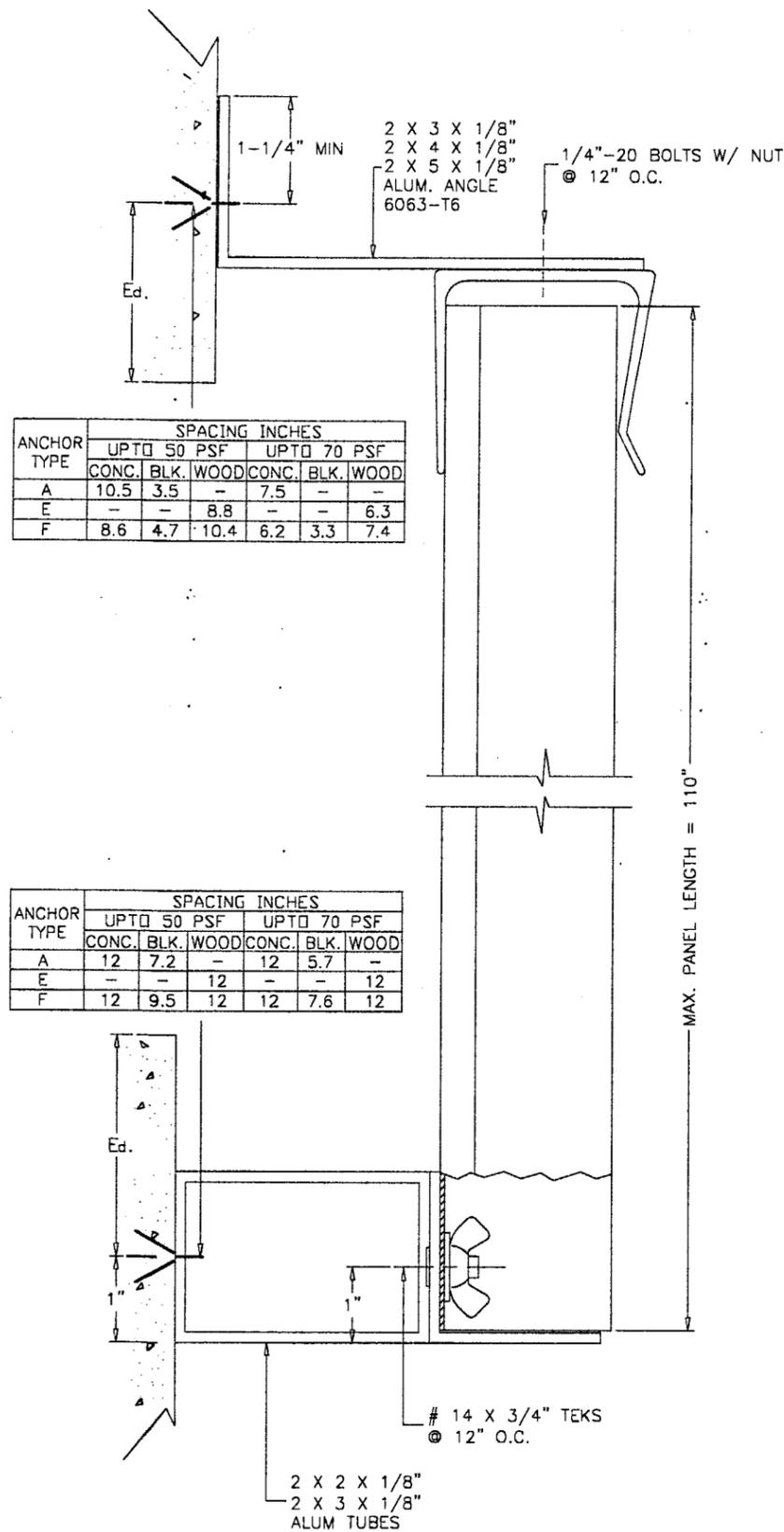
STORM PANEL DETAILS
 ROLLADEN INC.
 550 ANSIN BOULEVARD
 HALLANDALE, FL. 33009
 (305) 757 - 8591

revisions:

no.	date	by	description

date: 11-25-96
 scale: 1/2" = 1"
 dr. by: HAMID
 chk. by:
 drawing no.
96-49
 sheet 2 of 4

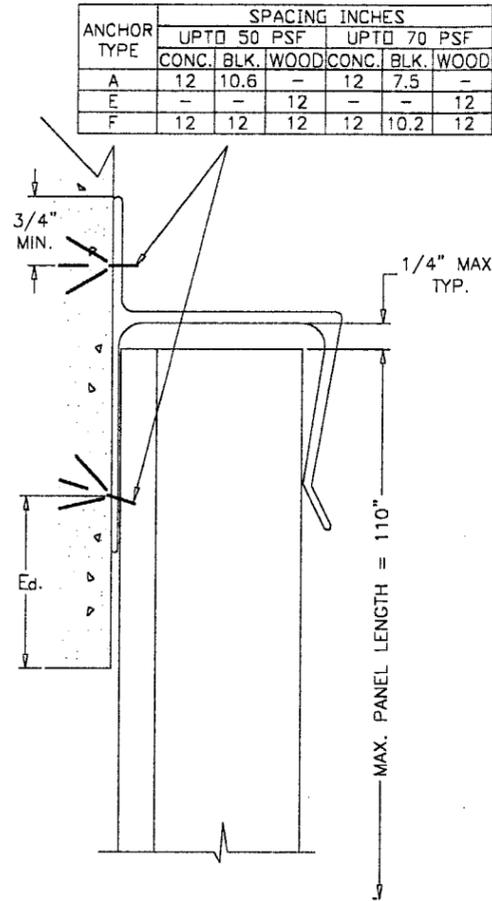
BUILT OUT CONDITION



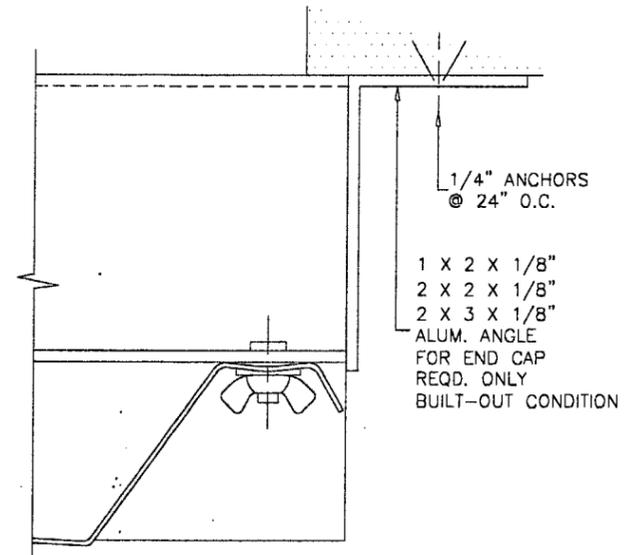
ANCHOR TYPE	SPACING INCHES					
	UPTO 50 PSF			UPTO 70 PSF		
	CONC.	BLK.	WOOD	CONC.	BLK.	WOOD
A	10.5	3.5	-	7.5	-	-
E	-	-	8.8	-	-	6.3
F	8.6	4.7	10.4	6.2	3.3	7.4

ANCHOR TYPE	SPACING INCHES					
	UPTO 50 PSF			UPTO 70 PSF		
	CONC.	BLK.	WOOD	CONC.	BLK.	WOOD
A	12	7.2	-	12	5.7	-
E	-	-	12	-	-	12
F	12	9.5	12	12	7.6	12

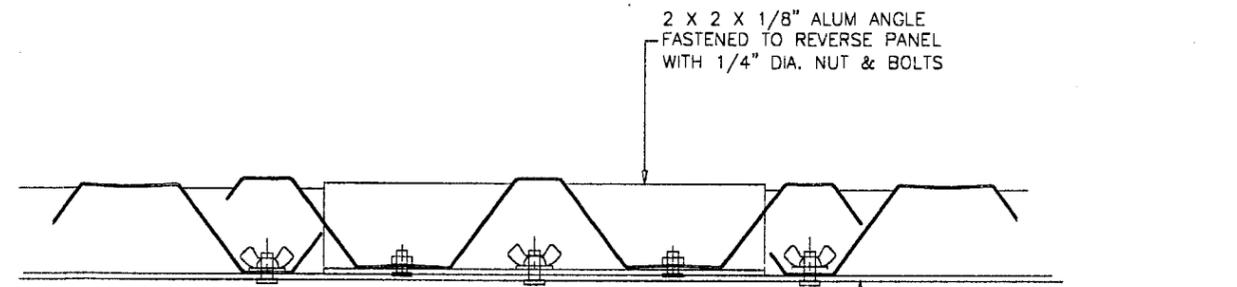
ALT. WALL MOUNTS



ANCHOR TYPE	SPACING INCHES					
	UPTO 50 PSF			UPTO 70 PSF		
	CONC.	BLK.	WOOD	CONC.	BLK.	WOOD
A	12	10.6	-	12	7.5	-
E	-	-	12	-	-	12
F	12	12	12	12	10.2	12



**END CAP BUILT-OUT CONDITION
DETAIL A**



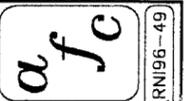
**REVERSE PANEL DETAIL
FOR EGRESS WINDOWS**

Engr: DR. HUMAYOUN FAROOQ
STRUCTURES
FLA. PE # 16557

MAY 05 2003

PRODUCT REVISED
as complying with the Florida
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Acceptance No 03-0519.01
Expiration Date 06/19/2008

By *Hamid*
Miami Dade Product Control
Division



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

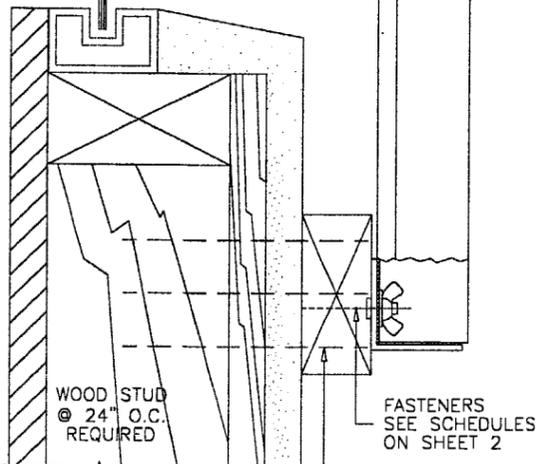
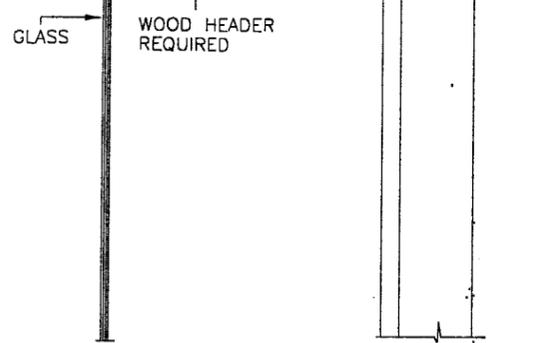
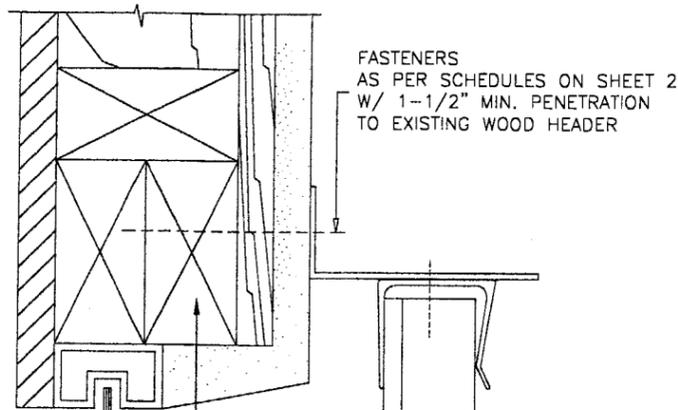
STORM PANEL DETAILS
ROLLADEN INC.
550 ANSIN BOULEVARD
HALLANDALE, FL. 33009
(305) 757 - 8591

no	date	description

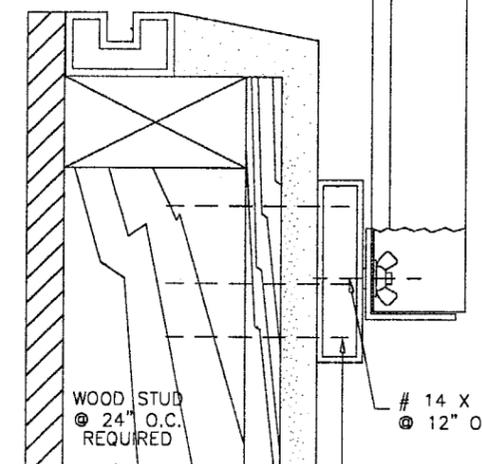
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scale: 1/2" = 1"
dr. by: HAMID
chk. by:

drawing no.
96-49
sheet 3 of 4

PANELS (R) 96-49

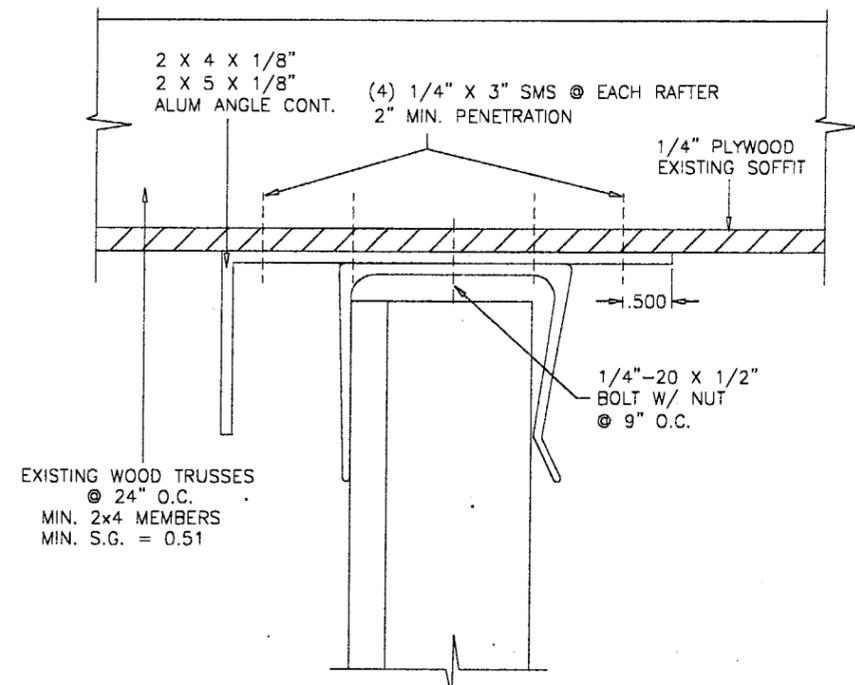


2" X 4" CONT.
W/ (3) 1/4" Ø X 5" SMS
@ EACH STUD W/ 2" MIN PENETRATION
INTO EXISTING STUD

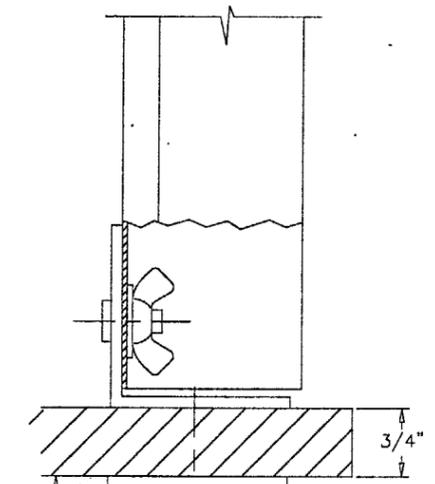


14 X 3/4" TEKS
@ 12" O.C.
1" X 4" X 1/8" CONT. ALUM TUBE
W/ (3) 1/4" Ø X 4" SMS
@ EACH STUD W/ 2" MIN PENETRATION
INTO EXISTING STUD

INSTALLATION DETAIL ON EXISTING WOOD BUCKS SCALE: 1/4"=1"
FOR SHUTTER HEIGHT OF 110" MAX. DESIGN LOAD = 70.0 PSF
FOR HEADER/SILL DETAILS CONNECTED TO CONTINUOUS WOOD MEMBERS SEE SHEET 2



HEADER CONNECTION TO WOOD TRUSSES
FOR SHUTTER HEIGHT OF 108" MAX. DESIGN LOAD = 54 PSF
FOR SHUTTER HEIGHT OF 96" MAX. DESIGN LOAD = 61 PSF
FOR SHUTTER HEIGHT OF 84" MAX. DESIGN LOAD = 69 PSF



1-1/4"
1-3/4" MIN.
2 X 3 X 1/8" ALUM. ANGLE
W/ 1/4" THRU BOLT W/
WASHER & NUT @ 6" O.C.

ANCHOR TYPE	SPACING INCHES					
	UPTO 40 PSF		UPTO 70 PSF			
	CONC.	BLK.	WOOD	CONC.	BLK.	WOOD
A	12	5.3	-	10.5	3.5	-
E	-	-	12	-	-	10.1
F	12	7.1	12	8.5	4.8	12

COUNTER TOP CONDITION
(PASS THRU WINDOW)
MAX SHUTTER HEIGHT = 6 FT.
MAX DESIGN LOAD = 70 PSF.

Engr: DR. HUMAYOUN FAROOQ
STRUCTURES
FLA. PE # 16557
MAY 05 2003

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By *Helmy A. Haddad*
Miami Dade Product Control
Division

afsc
PANELS/RN196-49

AL-FAROOQ CORPORATION
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no.	date	by	description

date: 11-25-96
scale: 1/2" = 1"
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drawing no.
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sheet 4 of 4