



BUILDING CODE COMPLIANCE OFFICE
METRO-DADE FLAGLER BUILDING
140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
(305) 375-2901 FAX (305) 375-2908

CONTRACTOR LICENSING SECTION
(305) 375-2527 FAX (305) 375-2558

CONTRACTOR ENFORCEMENT DIVISION
(305) 375-2966 FAX (305) 375-2908

PRODUCT CONTROL DIVISION
(305) 375-2902 FAX (305) 372-6339

PRODUCT CONTROL NOTICE OF ACCEPTANCE

Rolladen, Inc.
550 Ansin Boulevard
Hallandale ,FL 33009

Your application for Notice of Acceptance (NOA) of:

20 Ga. Steel Storm Panel

under Chapter 8 of the Code of Miami-Dade County governing the use of Alternate Materials and Types of Construction, and completely described herein, has been recommended for acceptance by the Miami-Dade County Building Code Compliance Office (BCCO) under the conditions specified herein.

This NOA shall not be valid after the expiration date stated below. BCCO reserves the right to secure this product or material at any time from a jobsite or manufacturer's plant for quality control testing. If this product or material fails to perform in the approved manner, BCCO may revoke, modify, or suspend the use of such product or material immediately. BCCO reserves the right to revoke this approval, if it is determined by BCCO that this product or material fails to meet the requirements of the South Florida Building Code.

The expense of such testing will be incurred by the manufacturer.

Raul Rodriguez
Chief Product Control Division

ACCEPTANCE NO.: 00-0602.01
EXPIRES: 06/19/2003

**THIS IS THE COVERSHEET, SEE ADDITIONAL PAGES FOR SPECIFIC AND GENERAL
CONDITIONS
BUILDING CODE & PRODUCT REVIEW COMMITTEE**

This application for Product Approval has been reviewed by the BCCO and approved by the Building Code and Product Review Committee to be used in Miami-Dade County, Florida under the conditions set forth above.

Francisco J. Quintana, R.A.
Director
Miami-Dade County
Building Code Compliance Office

APPROVED: 10/26/2000

Rolladen, Inc.

ACCEPTANCE No. : 00-0602.01

APPROVED : 10/26/2000

EXPIRES : 06/19/2003

NOTICE OF ACCEPTANCE: SPECIFIC CONDITIONS

1. SCOPE

This renews the Notice of Acceptance No. 97-0219.11, which was issued on June 19, 1997. It approves a 20 ga. Galvanized Steel Storm Panel Shutter, as described in Section 2 of this Notice of Acceptance, designed to comply with the South Florida Building Code, 1994 Edition for Miami-Dade County, for the locations where the pressure requirements, as determined by SFBC Chapter 23, do not exceed the Design Pressure Rating values indicated in the approved drawings.

2. PRODUCT DESCRIPTION

This 20 ga. Galvanized Steel Storm Panel Shutter and its components shall be constructed in strict compliance with the following documents: Drawing No. 96-49, titled " Storm Panel Details ", prepared by Al-Farooq Corporation, signed and sealed by Humayoun Farooq, P.E., dated November 25, 1996, last revision #B dated May 28, 1997, sheets 1 through 4 of 4, bearing the Miami-Dade County Product Control Approval and Renewal stamps with the Notice of Acceptance numbers and approval dates by the Miami-Dade County Product Control Division. These documents shall hereinafter be referred to as the approved drawings.

3. LIMITATIONS

All permanent set components, included but not limited to embedded anchor bolts, threaded cones, metal shields, headers and sills, must be protected against corrosion, contamination and damage at all times.

4. INSTALLATION

This 20 ga. Galvanized Steel Storm Panel Shutter and its components shall be installed in strict compliance with the approved drawings.

5. 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".

6. BUILDING PERMIT REQUIREMENTS

6.1 Application for building permit shall be accompanied by copies of the following:

6.1.1 This Notice of Acceptance.

6.1.2 Duplicate copies of the approved drawings, as identified in Section 2 of this Notice of Acceptance, clearly marked to show the components selected for the proposed installation.

6.1.3 Any other documents required by the Building Official or the South Florida Building Code (SFBC) in order to properly evaluate the installation of this system.



Helmy A. Makar, P.E. -Product Control Examiner
Product Control Division

Rolladen, Inc.

ACCEPTANCE No. : 00-0602.01

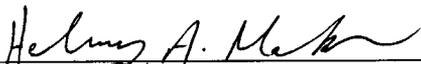
APPROVED : 10/26/2000

EXPIRES : 06/19/2003

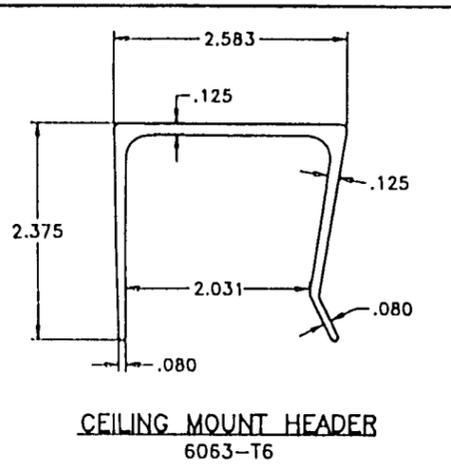
NOTICE OF ACCEPTANCE: STANDARD CONDITIONS

1. Renewal of this Acceptance (approval) shall be considered after a renewal application has been filed and the original submitted documents, including test-supporting data, engineering documents, are no older than eight (8) years.
2. Any and all approved products shall be permanently labeled with the manufacturer's name, city, state, and the following statement: "Miami-Dade County Product Control Approved", or as specifically stated in the specific conditions of this Acceptance.
3. Renewals of Acceptance will not be considered if:
 - a. There has been a change in the South Florida Building Code affecting the evaluation of this product and the product is not in compliance with the code changes.
 - b. The product is no longer the same product (identical) as the one originally approved.
 - c. If the Acceptance holder has not complied with all the requirements of this acceptance, including the correct installation of the product.
 - d. The engineer, who originally prepared, signed and sealed the required documentation initially submitted, is no longer practicing the engineering profession.
4. Any revision or change in the materials, use, and/or manufacture of the product or process shall automatically be cause for termination of this Acceptance, unless prior written approval has been requested (through the filing of a revision application with appropriate fee) and granted by this office.
5. Any of the following shall also be grounds for removal of this Acceptance:
 - a. Unsatisfactory performance of this product or process.
 - b. Misuse of this Acceptance as an endorsement of any product, for sales, advertising or any other purposes.
6. The Notice of Acceptance 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 Notice of Acceptance is displayed, then it shall be done in its entirety.
7. A copy of this Acceptance as well as approved drawings and other documents, where it applies, shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at all time. The engineer needs not reseal the copies.
8. Failure to comply with any section of this Acceptance shall be cause for termination and removal of Acceptance.
9. This Notice of Acceptance consists of pages 1, 2 and this last page 3.

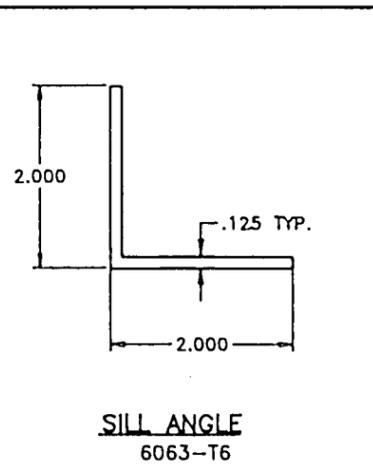
END OF THIS ACCEPTANCE



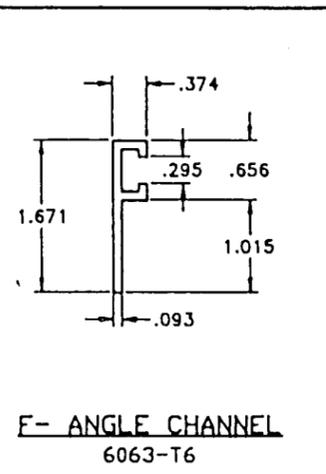
Helmy A. Makar, P.E. -Product Control Examiner
Product Control Division



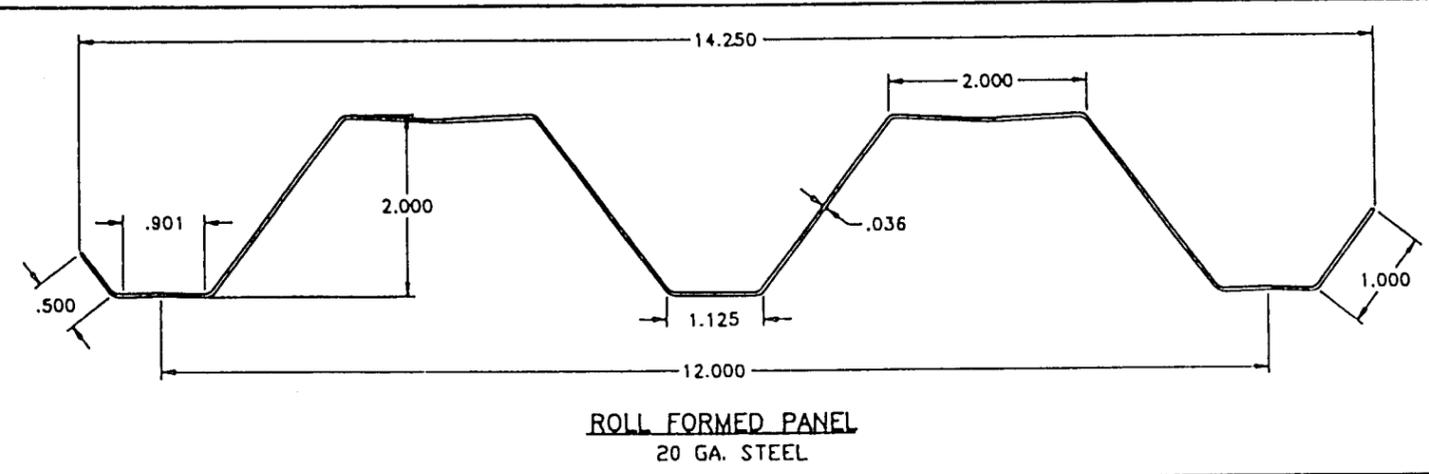
CEILING MOUNT HEADER
6063-T6



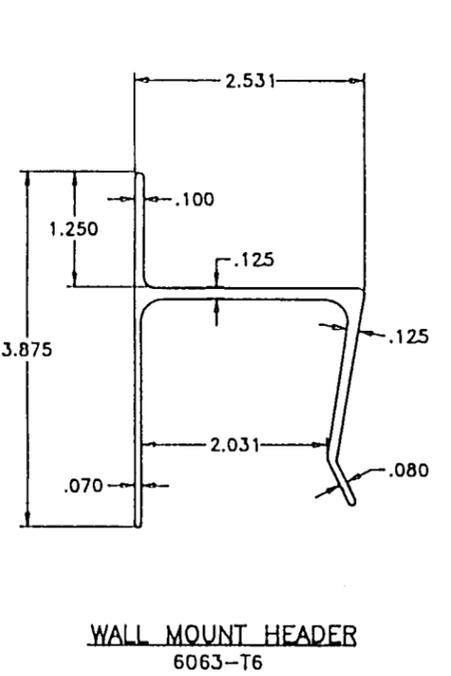
SILL ANGLE
6063-T6



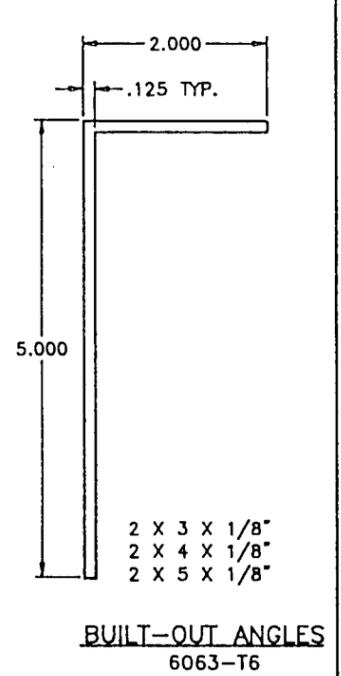
F- ANGLE CHANNEL
6063-T6



ROLL FORMED PANEL
20 GA. STEEL

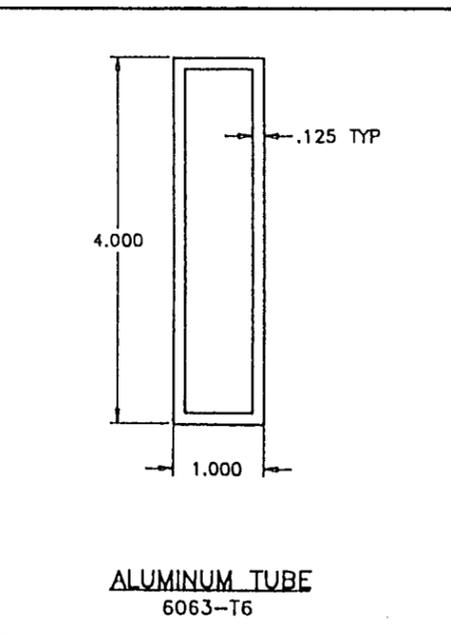


WALL MOUNT HEADER
6063-T6

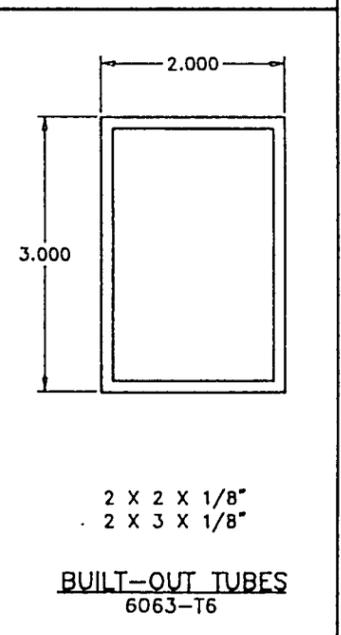


BUILT-OUT ANGLES
6063-T6

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 / LAG SCREWS
1-1/2" MIN PENETRATION INTO WOOD(S.G.=0.47)
- ANCHOR (F) = 1/4" DIA. PANELMATE ANCHORS (ELCO-TEXTIRON)
1-7/8" EMBEDMENT TO CONC.
1-1/4" EMBEDMENT TO BLOCK
1-1/2" MIN PENETRATION INTO WOOD(S.G.=0.47)

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

FOR INSTALLATION DETAILS SEE SHEET 2, 3 & 4.

- GENERAL NOTES**
- THIS STRUCTURE IS DESIGNED AS PER THE SOUTH FLORIDA BUILDING CODE 1994 EDITION FOR DADE COUNTY. ALSO FOR WIND LOADS AS PER ASCE 7-88 USING CORRESPONDING LOADS.
 - DESIGN CRITERIA FOR ALUMINUM, MINIMUM MECHANICAL PROPERTIES, AND SAFETY FACTORS ARE IN ACCORDANCE WITH THE "ALUMINUM CONSTRUCTION MANUAL" LATEST EDITION.
 - ALUMINUM ALLOYS: ALL EXTRUSIONS SHALL BE ALLOY 6063-T6.
 - PANELS SHALL BE 20 GA. ROLL FORMED STEEL, ASTM A653, GR40 GALVANIZED ACCORDING TO ASTM A525, WITH A COATING DESIGNATION OF G90.
 - 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.
 - ANCHORS SHALL BE AS LISTED, SPACED AS SHOWN ON DETAILS. ANCHOR EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO.
 - ALL BOLTS SHALL BE STAINLESS STEEL, ALUMINUM ALLOY 2024-T4 OR 7075-T6. WING NUTS SHALL BE OF ZINC ALLOY.
 - DESIGN CRITERIA FOR PANELS: MAX DEFLECTION $\leq L/30$ FOR NEGATIVE LOAD AND THE LESSER OF $L/30$ OR 2" FOR POSITIVE LOAD.
 - ANCHORING OR LOADING CONDITIONS OTHER THAN THOSE SHOWN IN THESE DETAILS ARE NOT PART OF THIS APPROVAL.
 - EXISTING STRUCTURES MUST BE CAPABLE OF SUSTAINING LOADS IMPOSED BY SHUTTER.

DESIGN LOADS SHALL BE CALCULATED AS PER REQUIREMENTS OF ASCE 7-88, BASED ON 110.MPH WIND VELOCITY.

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

PRODUCT RENEWED

ACCEPTANCE No. 00-0602.01
EXPIRATION DATE 06/19/2003
By Helmy A. Matar
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE

Engr. DR. HUMAYOUN FAROOQ
STRUCTURES
FLA PE # 16557

MAY 30 1997

APPROVED AS COMPLYING WITH THE
SOUTH FLORIDA BUILDING CODE
DATE JUNE 19 1997
BY Helmy A. Matar
PRODUCT CONTROL DIV.S ON
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 97-0219.11

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

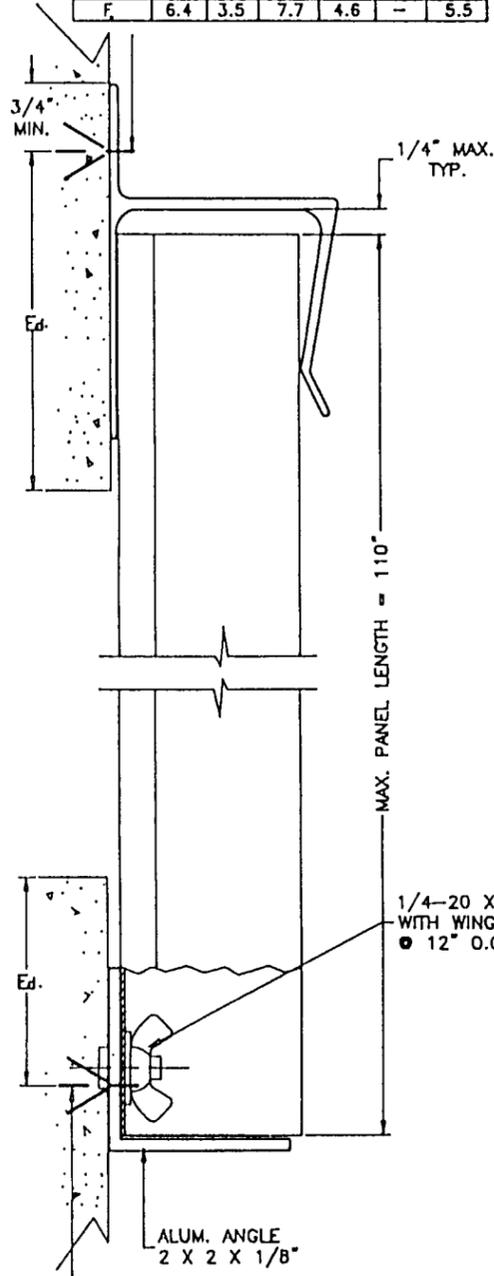
NO.	DATE	BY	DESCRIPTION	ANCHOR CHARTS REV.	GENERAL REVISION
A	02.12.97	H			
B	05.28.97	H			

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

drawing no. **96-49**
sheet 1 of 4

WALL MOUNTS

ANCHOR TYPE	SPACING INCHES					
	UPTD 50 PSF			UPTD 70 PSF		
	CONC.	BLK.	WOOD	CONC.	BLK.	WOOD
A	7.8	-	-	5.6	-	-
E	-	-	3.8	-	-	-
F	6.4	3.5	7.7	4.6	-	5.5

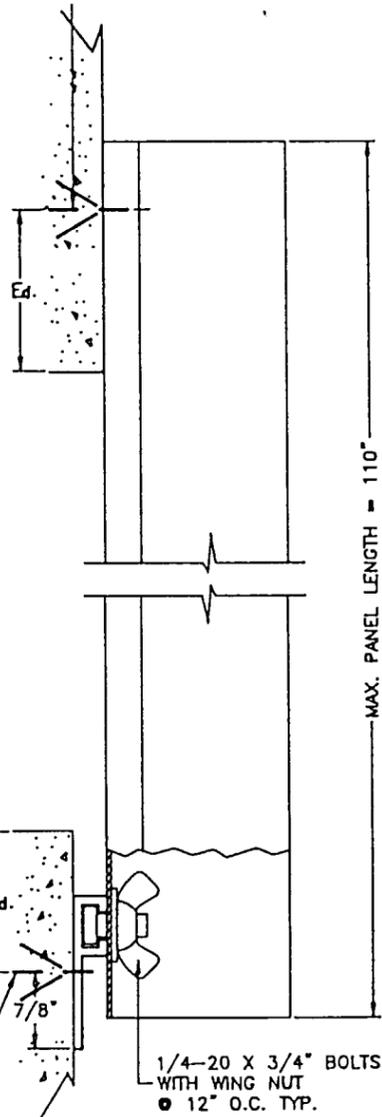


ANCHOR TYPE	SPACING INCHES					
	UPTD 50 PSF			UPTD 70 PSF		
	CONC.	BLK.	WOOD	CONC.	BLK.	WOOD
A	12	8	-	12	6	-
E	-	-	11.4	-	-	8.6
F	12	10.7	12	12	8	12

SECTION A-A

DIRECT MOUNTS

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



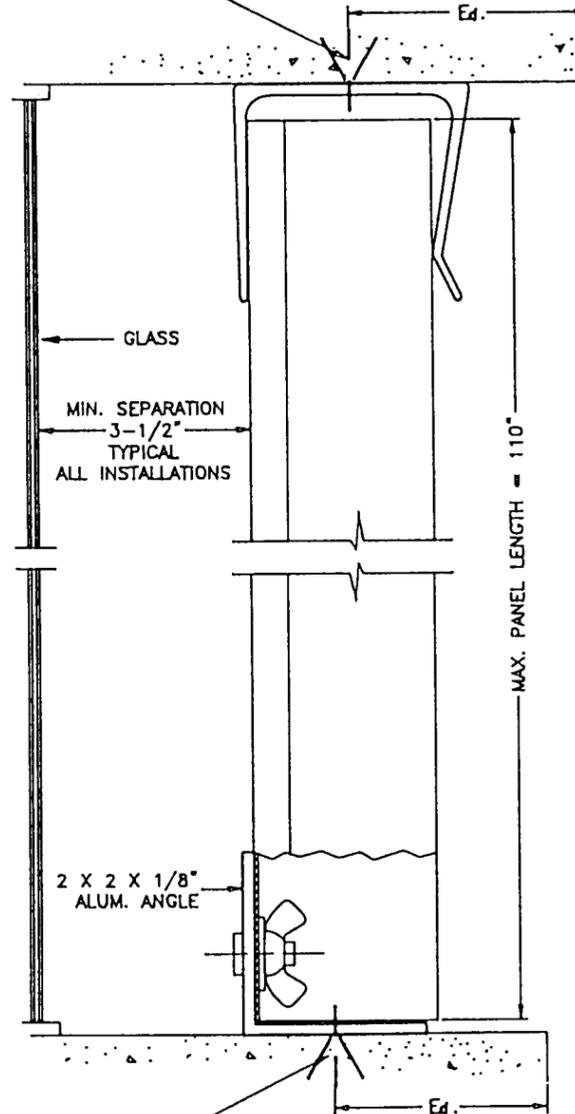
ANCHOR TYPE	SPACING INCHES					
	UPTD 50 PSF			UPTD 70 PSF		
	CONC.	BLK.	WOOD	CONC.	BLK.	WOOD
A	10	5.8	-	10	4.3	-
E	-	-	8.4	-	-	6.3
F	10	7.8	10	9	5.8	10

SECTION B-B

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

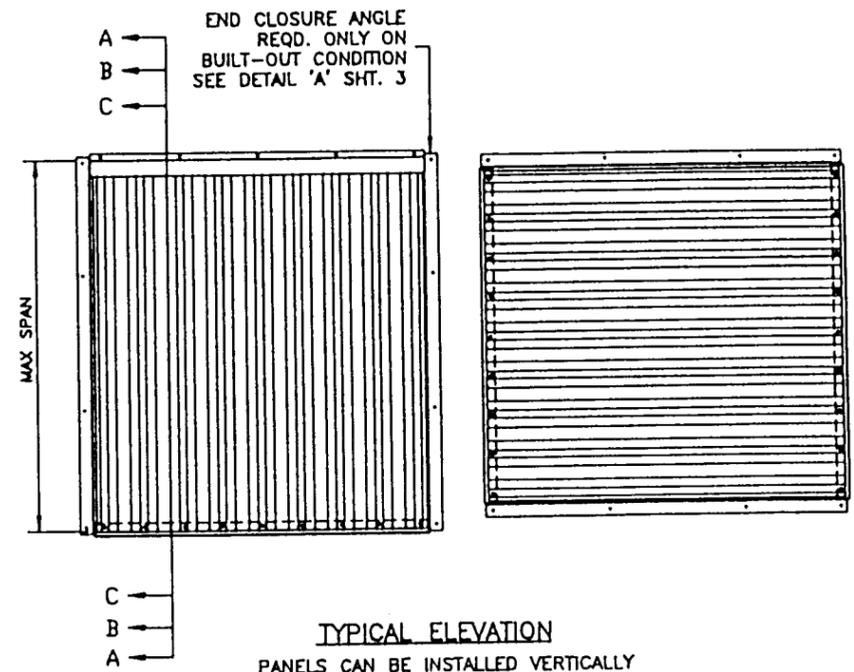
INSIDE MOUNTS

ANCHOR TYPE	SPACING INCHES					
	UPTD 50 PSF			UPTD 70 PSF		
	CONC.	BLK.	WOOD	CONC.	BLK.	WOOD
A	12	5.3	-	8.9	3.8	-
E	-	-	6.2	-	-	4.4
F	7	6.5	9	5	4.7	6.5



ANCHOR TYPE	SPACING INCHES					
	UPTD 50 PSF			UPTD 70 PSF		
	CONC.	BLK.	WOOD	CONC.	BLK.	WOOD
A	12	6.8	-	10.7	4.9	-
E	-	-	7.5	-	-	5.4
F	8.1	8.2	10.8	5.8	5.8	7.7

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.

PRODUCT RENEWED

ACCEPTANCE No. 00-0602.01
EXPIRATION DATE 06/19/2003
By *Helmy A. Maher*
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE

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

APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE
DATE JUNE 19 1997
BY *Helmy A. Maher*
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 97-0219.11

MAY 30 1997

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

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

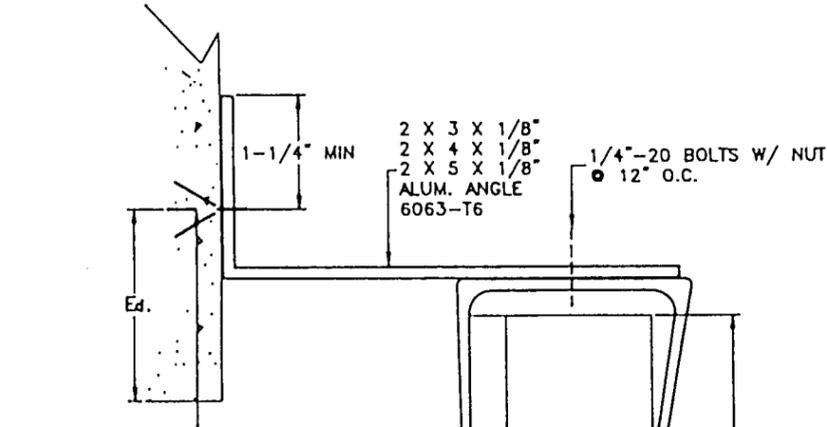
STORM PANEL DETAILS
ROLLADEN INC.
550 ANSIN BOULEVARD
HALLANDALE, FL. 33009
(305) 757 - 8591

revisions:	no	date	by	description

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

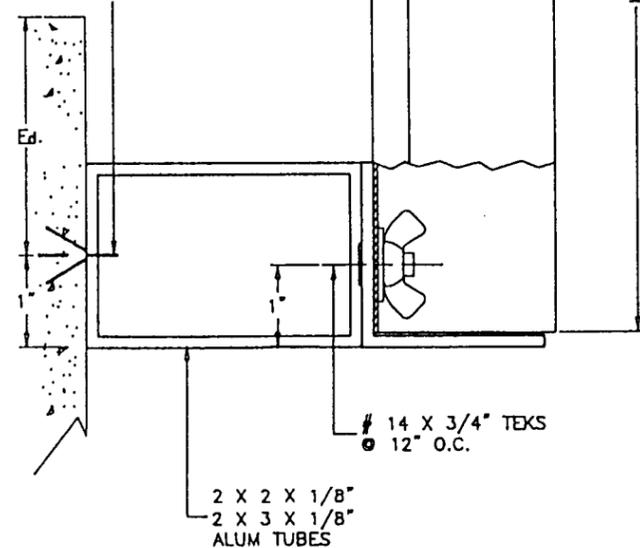
drawing no. **96-49**
sheet 2 of 4

BUILT OUT CONDITION



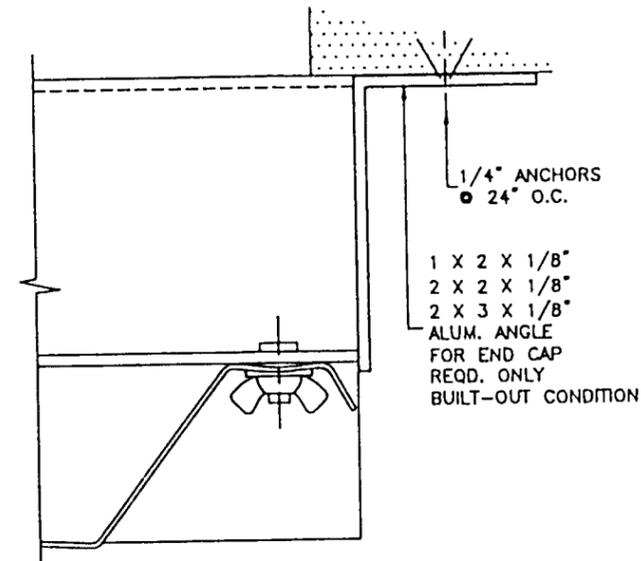
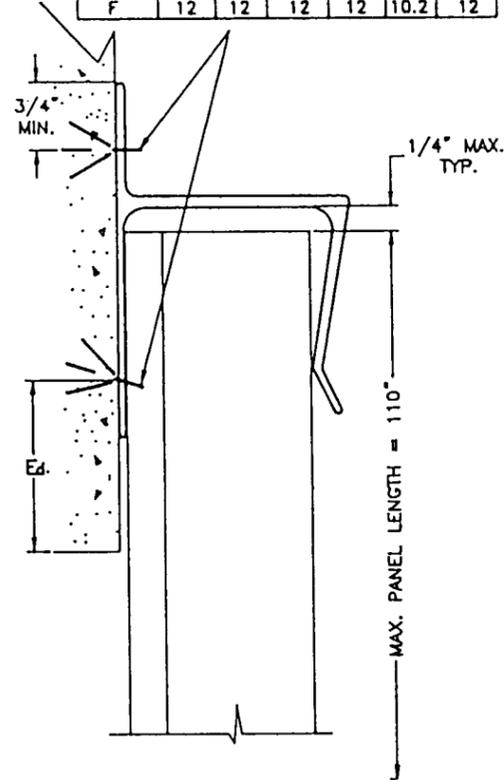
ANCHOR TYPE	SPACING INCHES					
	UPTD 50 PSF			UPTD 70 PSF		
	CONC.	BLK.	WOOD	CONC.	BLK.	WOOD
A	10.5	3.5	-	7.5	-	-
E	-	-	5.1	-	-	3.7
F	8.6	4.7	10.4	6.2	3.3	7.4

ANCHOR TYPE	SPACING INCHES					
	UPTD 50 PSF			UPTD 70 PSF		
	CONC.	BLK.	WOOD	CONC.	BLK.	WOOD
A	12	7.7	-	12	6	-
E	-	-	11	-	-	8.6
F	12	10.3	12	12	8	12

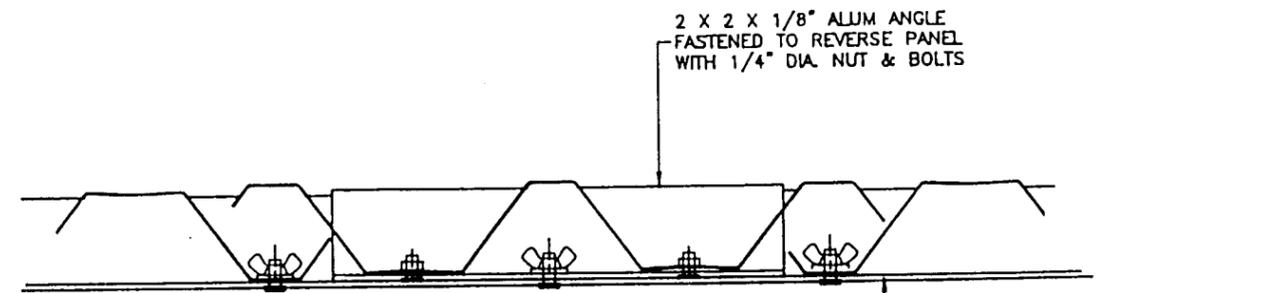


ALT. WALL MOUNTS

ANCHOR TYPE	SPACING INCHES					
	UPTD 50 PSF			UPTD 70 PSF		
	CONC.	BLK.	WOOD	CONC.	BLK.	WOOD
A	12	10.6	-	12	7.5	-
E	-	-	12	-	-	11.2
F	12	12	12	12	10.2	12



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



**REVERSE PANEL DETAIL
FOR EGRESS WINDOWS**

PRODUCT RENEWED

ACCEPTANCE No. 00-0602.01
 EXPIRATION DATE 06/19/2003
 By Helmy A. Maher
 PRODUCT CONTROL DIVISION
 BUILDING CODE COMPLIANCE OFFICE

Engr. DR. HUMAYOON FAROOQ
 STRUCTURES
 FLA. PE # 16557

11 MAY 30 1997

APPROVED AS COMPLYING WITH THE
 SOUTH FLORIDA BUILDING CODE
 DATE JUNE 19 1997
 BY Helmy A. Maher
 PRODUCT CONTROL DIVISION
 BUILDING CODE COMPLIANCE OFFICE
 ACCEPTANCE NO. 97-0219.11

afc

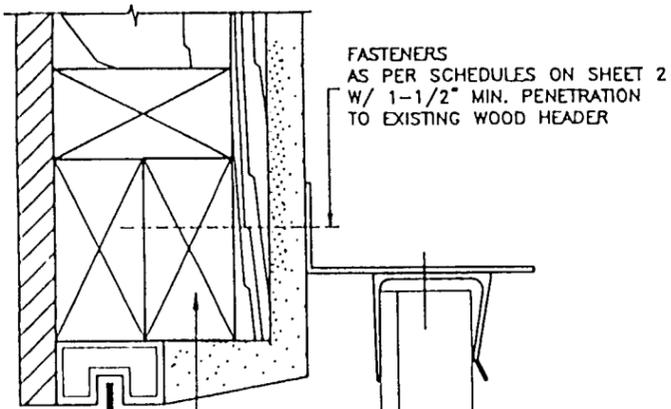
AL-FAROOQ CORPORATION
 ENGINEERS, PLANNERS & PRODUCT DESIGN
 1235 SW 87 AVE
 MIAMI, FLORIDA 33174
 (305) 264-8100

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

no.	date	description

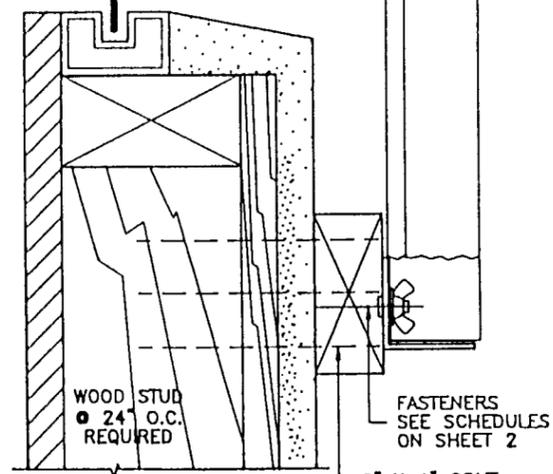
date: 11-25-96
 scale: 1/2" = 1"
 dr. by: HAMID
 chk. by:

drawing no.
96-49
 sheet 3 of 4



FASTENERS AS PER SCHEDULES ON SHEET 2 W/ 1-1/2" MIN. PENETRATION TO EXISTING WOOD HEADER

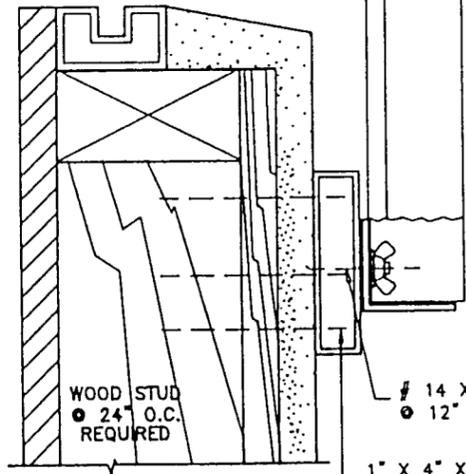
GLASS WOOD HEADER REQUIRED



WOOD STUD 24" O.C. REQUIRED

FASTENERS SEE SCHEDULES ON SHEET 2

2" X 4" CONT. W/ (3) 1/4" X 5" LAG SCREWS EACH STUD W/ 2" MIN PENETRATION INTO EXISTING STUD

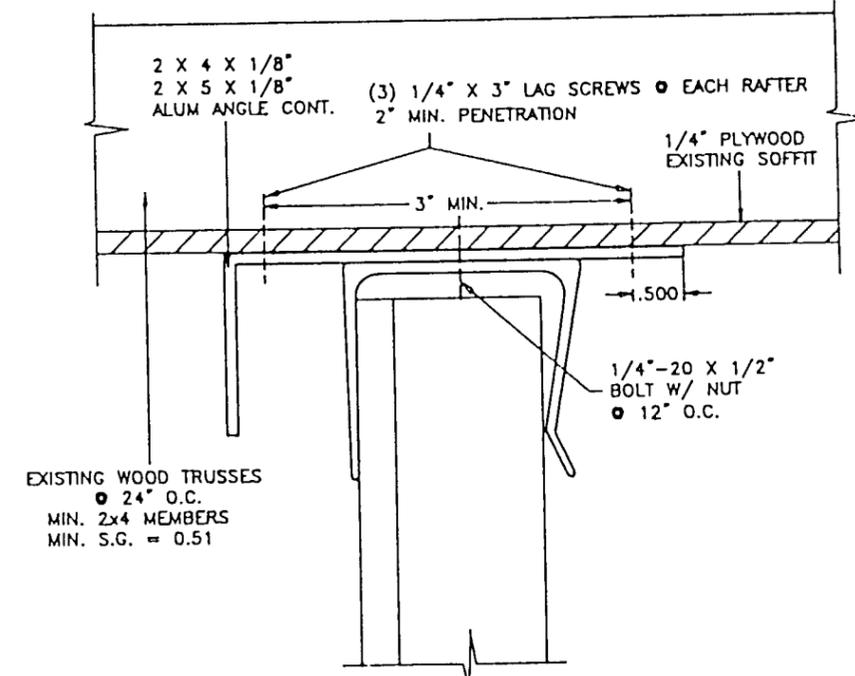


WOOD STUD 24" O.C. REQUIRED

14 X 3/4" TEKS 12" O.C.

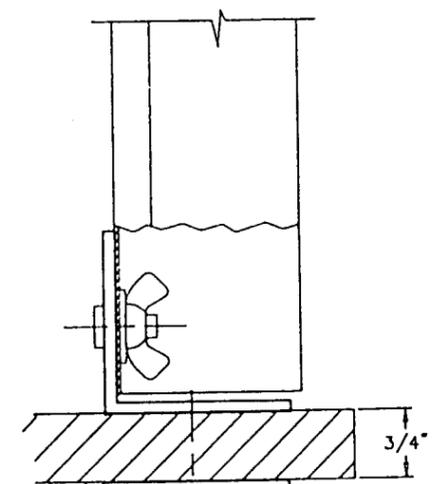
1" X 4" X 1/8" CONT. ALUM TUBE W/ (3) 1/4" X 4" LAG SCREWS EACH STUD W/ 2" MIN PENETRATION INTO EXISTING STUD

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



EXISTING WOOD TRUSSES 24" O.C. MIN. 2x4 MEMBERS MIN. S.G. = 0.51

HEADER CONNECTION TO WOOD TRUSSES FOR SHUTTER HEIGHT OF 110" MAX. DESIGN LOAD = 55 PSF FOR SHUTTER HEIGHT OF 86" MAX. DESIGN LOAD = 70 PSF



2 x 3 x 1/8" ALUM. ANGLE W/ 1/4" THRU BOLT W/ WASHER & NUT 6" O.C.

ANCHOR TYPE	SPACING INCHES					
	UPTD 40 PSF		UPTD 70 PSF			
	CONC.	BLK.	WOOD	CONC.	BLK.	WOOD
A	12	8.9	-	12	5.2	-
E	-	-	12	-	-	7.6
F	12	10.3	12	8.6	5.9	10.4

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

Engr: DR. HUMAYOON FAROOQ STRUCTURES FLA PE # 16557

MAY 30 1997

PRODUCT RENEWED
ACCEPTANCE No. 00-0602.01
EXPIRATION DATE 06/19/2003
By *Helmy A. Maher*
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE

APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE
DATE JUNE 19 1997
BY *Helmy A. Maher*
PRODUCT CONTROL DIV.S ON
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 97-0219.11

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	by	description

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

drawing no. 96-49
sheet 4 of 4