



MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING

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

PRODUCT CONTROL NOTICE OF ACCEPTANCE

All Broward Hurricane Panel, Inc
450 West McNab Rd
Fort Lauderdale FL 33309

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

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

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

Your application for Product Approval of:

"Wronofold A.I.R." Aluminum Accordion Type Shutter

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 approval shall not be valid after the expiration date stated below. BCCO reserves the right to secure this product or material at anytime 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 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.

Acceptance No.: 00-0424.08

Expires: 07/23/2003

Raul Rodriguez
Chief Product Control Division

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 Dade County, Florida under the conditions set forth above.

Francisco J. Quintana, R.A.
Director

Miami-Dade County
Building Code Compliance Office

Approved: 07/06/2000

1 of 3



All Broward Hurricane Panel, Inc.

ACCEPTANCE No. : 00-0424.08

APPROVED : JUL 0 6 2000

EXPIRES : July 23, 2003

NOTICE OF ACCEPTANCE: SPECIFIC CONDITIONS

1. SCOPE

This revises and renews the Notice of Acceptance No. 98-0616.05, which was issued on July 10, 1998. It approves an aluminum accordion type 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 aluminum accordion type shutter and its components shall be constructed in strict compliance with the following documents: Drawing No. 94-46 titled "Accordion Shutter Details", prepared by Al-Farooq Corporation, dated June 10, 1994, last revision #E dated March 27, 2000, sheets 1 through 4 of 4, 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. 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 aluminum accordion type shutter and its components shall be installed in strict compliance with the approved drawings.

5. 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".

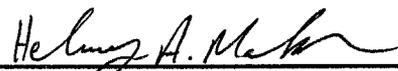
6. BUILDING PERMIT REQUIREMENTS

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

All Broward Hurricane Panel, Inc.

ACCEPTANCE No. : 00-0424.08

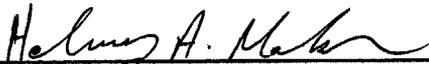
APPROVED : JUL 0 6 2000

EXPIRES : July 23, 2003

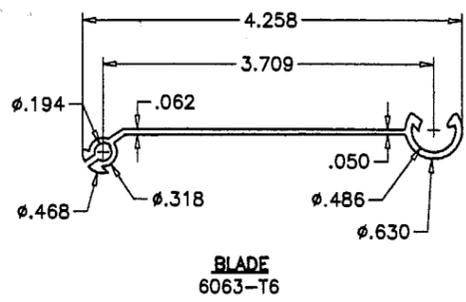
NOTICE OF ACCEPTANCE: STANDARD CONDITIONS

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.

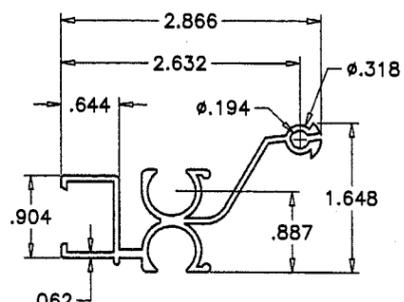
END OF THIS ACCEPTANCE



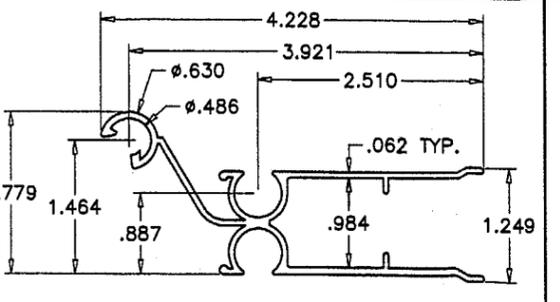
Helmy A. Makar, P.E.- Product Control Examiner
Product Control Division



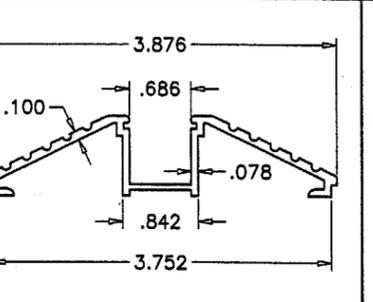
BLADE
6063-T6



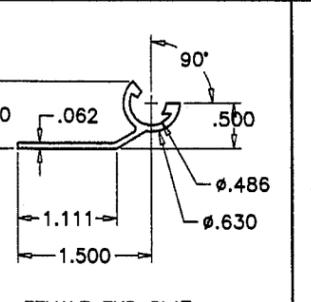
MALE LOCKING SLAT
6063-T6



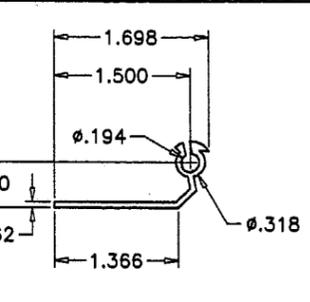
FEMALE LOCKING SLAT
6063-T6



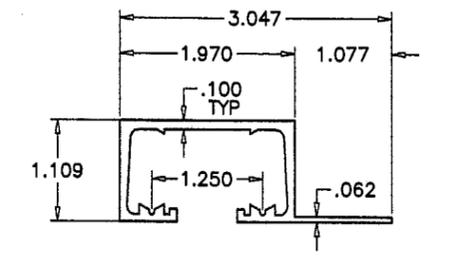
THRESHOLD TRACK
6063-T6



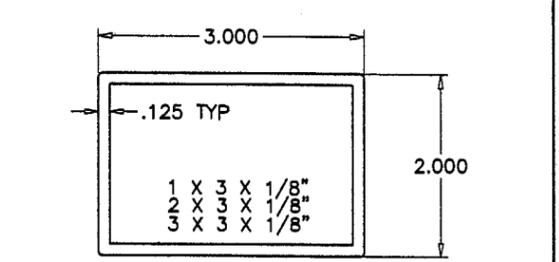
FEMALE END SLAT
6063-T6



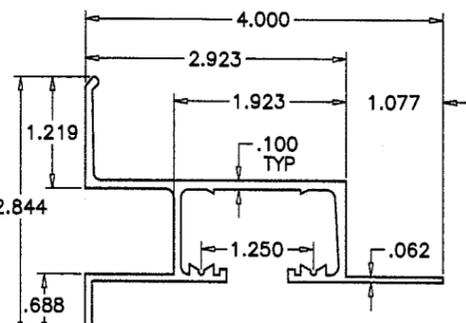
MALE END SLAT
6063-T6



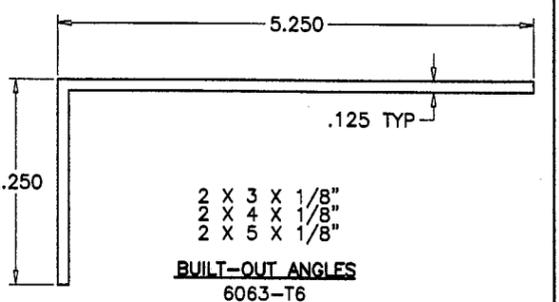
CEILING MOUNT HEADER
6063-T6



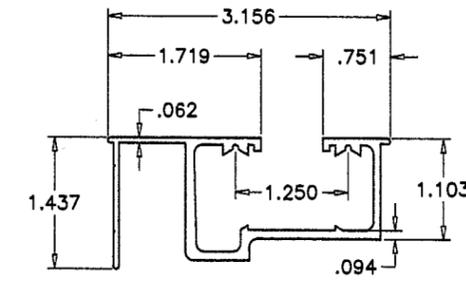
SPACER TUBE
6063-T6



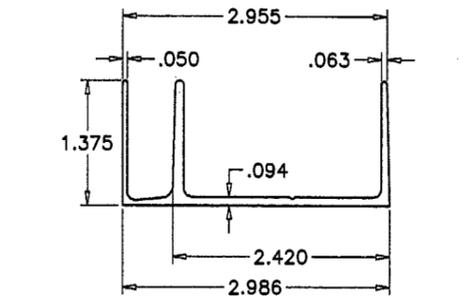
WALL MOUNT HEADER/SILL
6063-T6



BUILT-OUT ANGLES
6063-T6



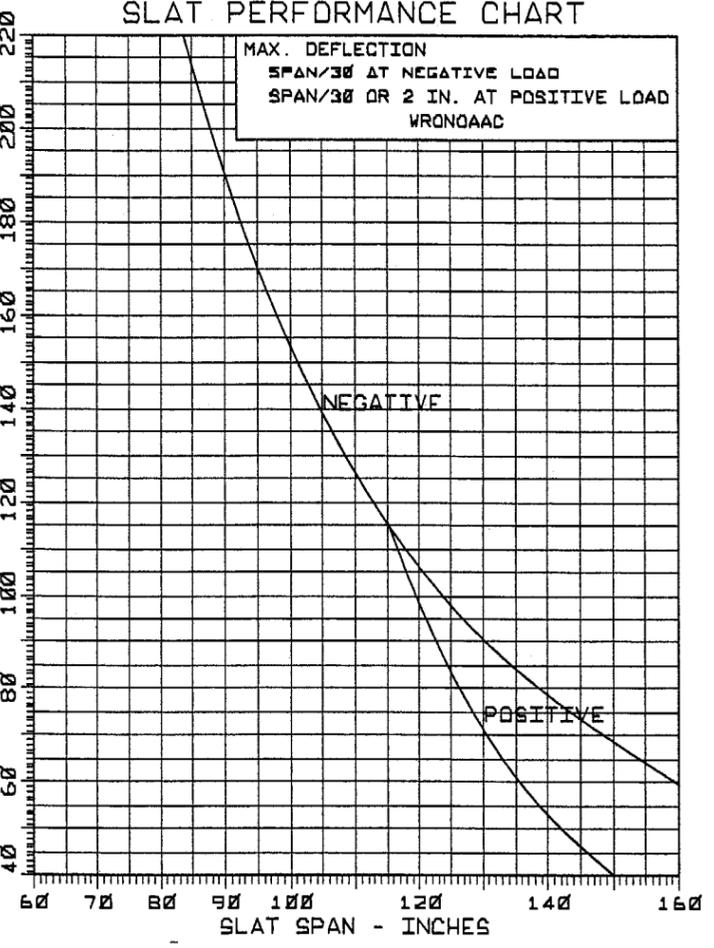
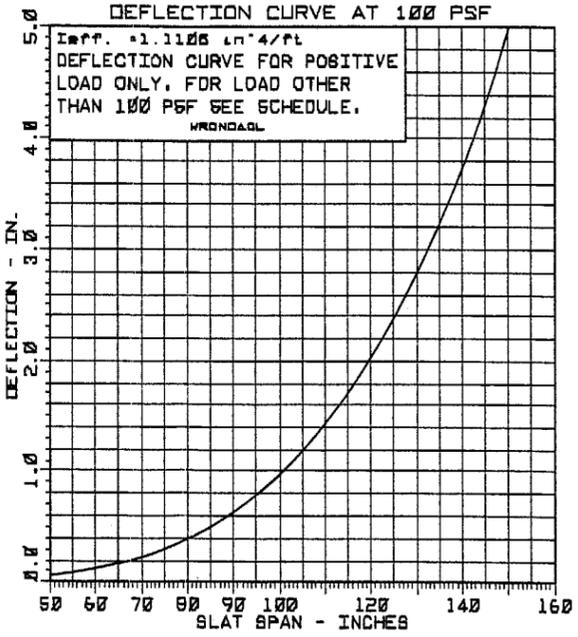
ADJ. HEADER/SILL
6063-T6



TRACK ADAPTER
6063-T6

MINIMUM SEPARATION FROM GLASS REQUIRED

SHUTTER SPAN = H = IN.
 DESIGN LOAD = Pd = PSF
 FACTOR = K = Pd/100 = IN.
 READING FROM SPAN DEFLECTION CURVE = D = IN.
 DEFLECTION AT Pd = K*D = IN.
 MIN. SEPARATION REQD. = K*D+1" = IN.
 DUE TO LARGE MISSILE IMPACT MIN. SEPARATION REQD. = 3.25 IN.
 FOR BUILDINGS UPTO 30' ELEVATION USE MAX. OF ABOVE TWO.
 FOR BUILDINGS ABOVE 30' ELEV. IGNORE LARGE MISSILE IMPACT REQUIREMENT.



USE SLAT PERFORMANCE CHART TO VERIFY SLAT CAPACITY FOR THE REQUIRED DESIGN LOAD FOR THE PARTICULAR LOCATION. USE SPAN DEFLECTION CHART TO CALCULATE SEPARATION FROM GLASS.

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, OR AS NOTED.
- 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, NUTS AND WASHERS SHALL BE STAINLESS STEEL OR ALUMINUM ALLOY 2024-T4 OR 7075-T6, OR PLATED STEEL.
- THE DESIGN AT ANY GIVEN ELEVATION SHALL COMPLY WITH THE TABLES PERTAINING TO THE EXPOSURE/ZONE.
- DESIGN CRITERIA FOR SLATS: MAX DEFLECTION ≤ L/30 OR 2".
- ANCHORING OR LOADING CONDITIONS OTHER THAN THOSE SHOWN IN THESE DETAILS ARE TO BE ENGINEERED SEPARATELY.

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 ON LOCKING MEMBER ON UNIT ABOVE THE LOCK WITH THE FOLLOWING STATEMENT.
 ALL BROWARD HURRICANE PANEL INC. FT. LAUDERDALE, FL.
 WRONFOLD 'AIR' ACCORDION SHUTTER
 "DADE COUNTY PRODUCT CONTROL APPROVED"

FOR INSTALLATION DETAILS SEE SHEET 2 & 3.

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

APR 04 2000

APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE
 DATE July 09, 2000
 BY *Hamid A. Hamid*
 PRODUCT CONTROL DIVISION
 BUILDING CODE COMPLIANCE OFFICE
 ACCEPTANCE NO. 00-0424-08

AL-FAROOQ CORPORATION
 ENGINEERS, PLANNERS & PRODUCT DESIGN
 1235 SW 87 AVE
 MIAMI, FLORIDA 33174
 TEL. (305) 264-8100 FAX. (305) 262-6978
 ACCORDION 94-46ABH

ALL BROWARD HURRICANE PANEL INC.
 450 WEST McNAB ROAD
 FT. LAUDERDALE, FL. 33309
 TEL. 1-800-432-1803 FAX. 954-973-3928

no	date	by	description
A	6.25.94	T.H.	GENERAL REVISION
B	9.23.94	T.H.	SPANS REVISED
C	12.1.94	T.H.	COMPLETE REVISION
D	6.15.98	T.H.	CO. NAME CHANGED
E	3.27.00	T.H.	SLATS REV. FOR #12 PINS

date: 06-10-94
 scale: 1/2" = 1"
 dr. by: HAMID
 chk. by:

drawing no.
94-46
 sheet 1 of 4

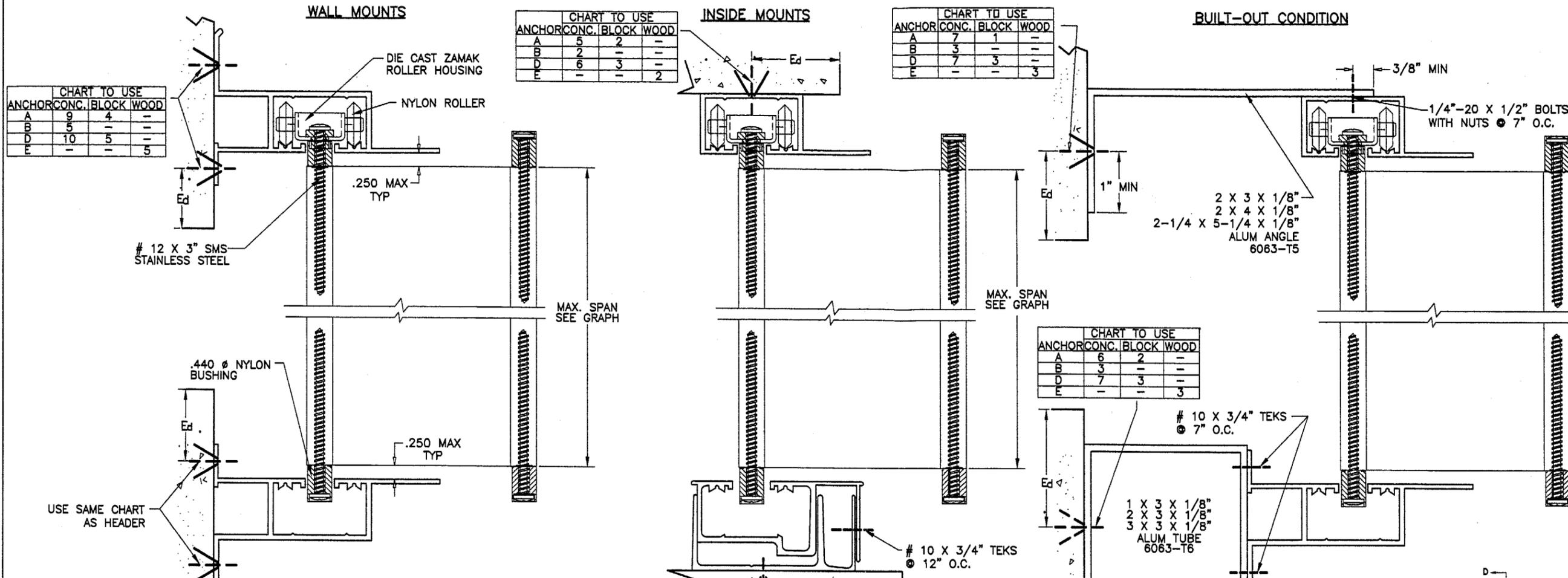


CHART TO USE		
ANCHOR	CONC.	BLOCK WOOD
A	9	4
B	5	-
D	10	5
E	-	5

CHART TO USE		
ANCHOR	CONC.	BLOCK WOOD
A	5	2
B	2	-
D	6	3
E	-	2

CHART TO USE		
ANCHOR	CONC.	BLOCK WOOD
A	7	1
B	3	-
D	7	3
E	-	3

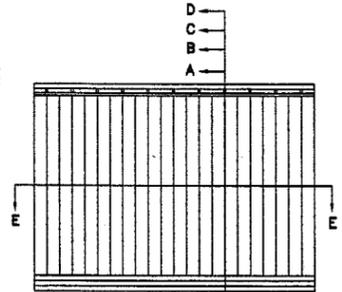
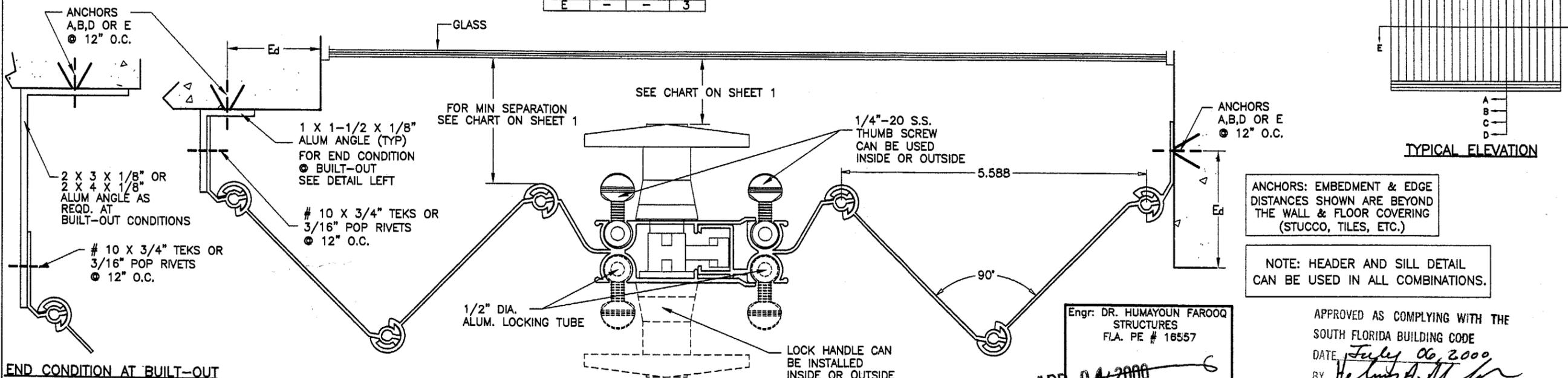
CHART TO USE		
ANCHOR	CONC.	BLOCK WOOD
A	6	2
B	3	-
D	7	3
E	-	3

CHART TO USE		
ANCHOR	CONC.	BLOCK WOOD
A	5	2
B	2	-
D	6	3
E	-	3

SECTION A-A

SECTION B-B

SECTION C-C



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

NOTE: HEADER AND SILL DETAIL CAN BE USED IN ALL COMBINATIONS.

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

APR 04 2000

APPROVED AS COMPLYING WITH THE
SOUTH FLORIDA BUILDING CODE
DATE *July 06 2000*
BY *Heung A. Mak*
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. *00-0424-08*

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

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

AL-FAROOQ CORPORATION
ENGINEERS, PLANNERS & PRODUCT DESIGN
1235 SW 87 AVE
MIAMI, FLORIDA 33174
TEL (305) 264-8100 FAX (305) 262-6978
ACCORDION 94-46ABH

ACCORDION SHUTTER DETAILS
ALL BROWARD HURRICANE PANEL INC.
450 WEST McNAB ROAD
FT. LAUDERDALE, FL. 33309
TEL. 1-800-432-1803 FAX. 954-973-3928

revisions:	no	date	by	description

date: 06-10-94
scale: 1/2" = 1"
dr. by: HAMID
chk. by:

drawing no.
94-46
sheet 2 of 4

CHART TO USE			
ANCHOR	CONC.	BLOCK	WOOD
A	4	1	-
B	1	-	-
C	5	2	-
D	-	-	2

INSIDE MOUNTS

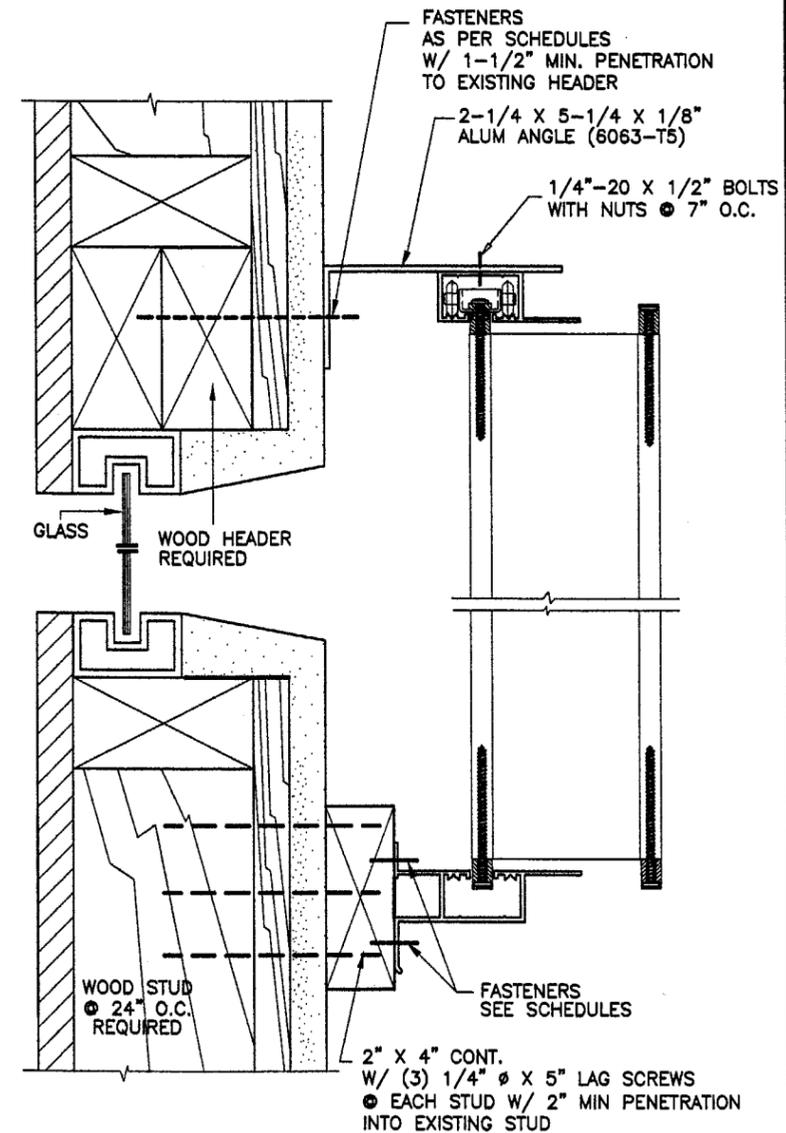
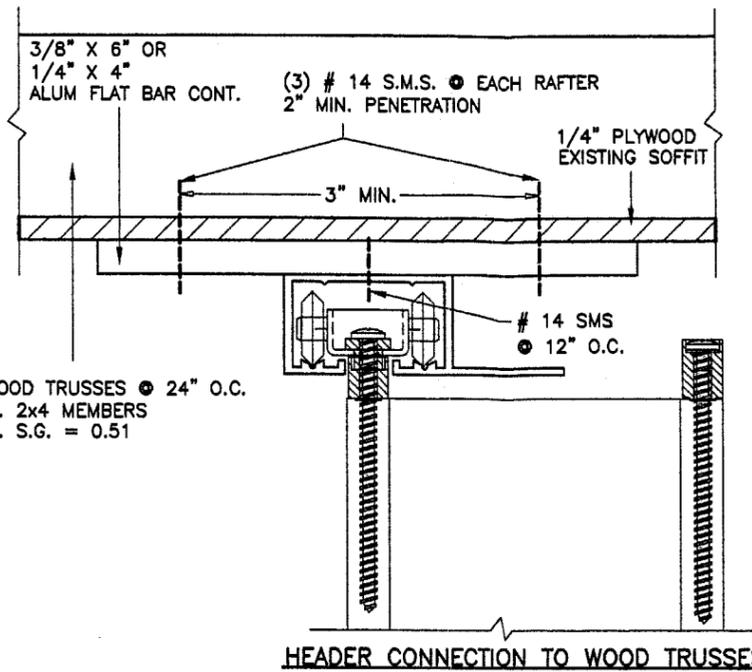
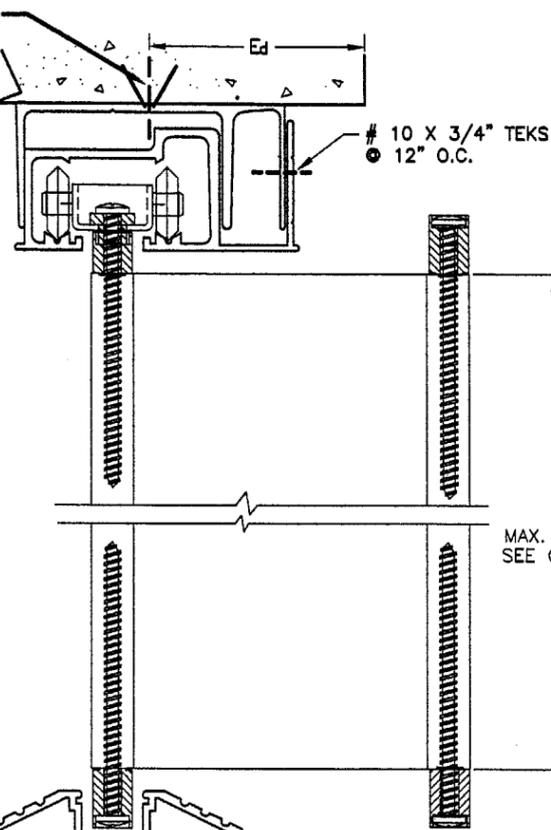
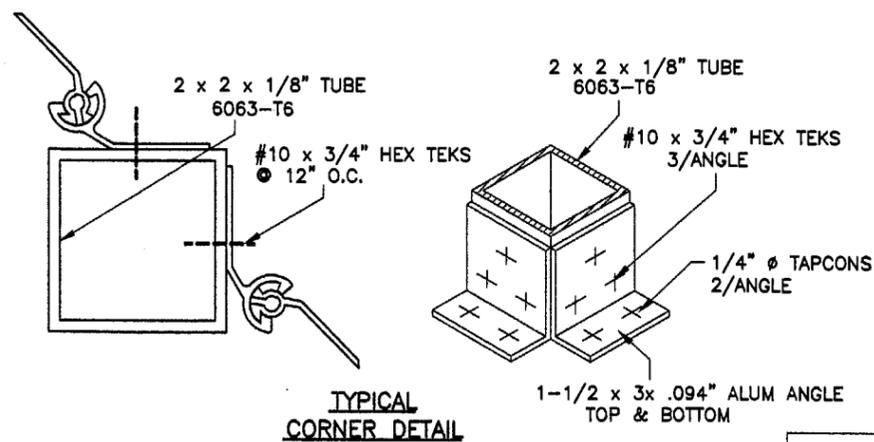
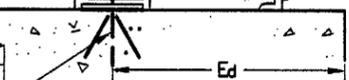


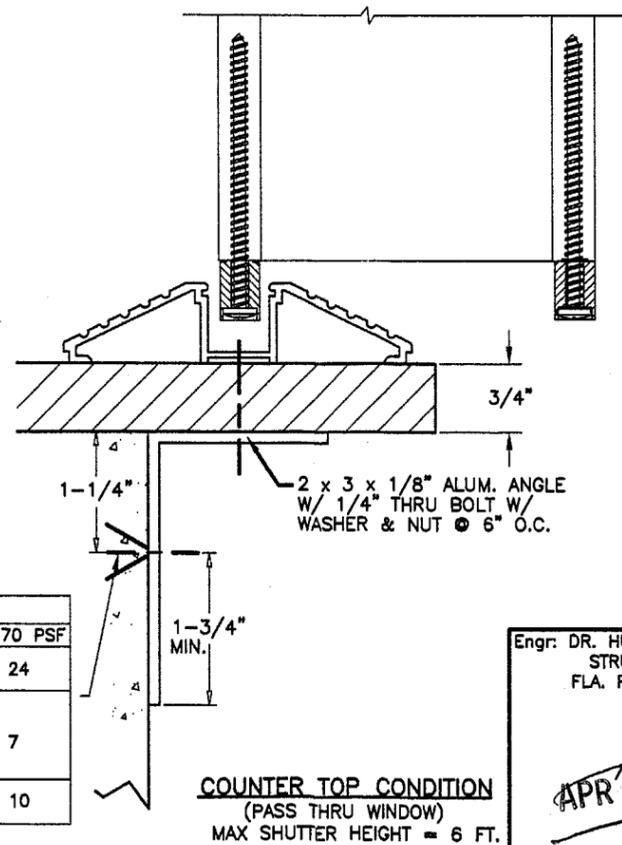
CHART TO USE			
ANCHOR	CONC.	BLOCK	WOOD
A	12	11	-
B	8	-	-
D	12	11	-
E	-	-	8

SECTION D-D



TYPICAL CORNER DETAIL

FASTENER SPACING IN.			
BASE MAT.	ANCHOR	40 PSF	70 PSF
CONCRETE	1/4" TAPCON 1-3/4" EMBED.	24	24
BLOCK	1/4" DRIVE PIN 1" EMBED. OR 1/4" TAPCONS 1-1/4" EMBED.	12	7
WOOD	#14 S.M.S. # 2 S.Y.P. 1-1/2" EMBED.	18	10



COUNTER TOP CONDITION
(PASS THRU WINDOW)
MAX SHUTTER HEIGHT = 6 FT.

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

APR 04 2000

INSTALLATION DETAIL ON EXISTING WOOD BUCKS

MAX. SPAN = 9 FT.
MAX. DESIGN LOAD = 90 PSF
OTHER CONDITIONS SIMILAR
FOR FASTENERS SEE SCHEDULES
SCALE: 1/4"=1"

APPROVED AS COMPLYING WITH THE
SOUTH FLORIDA BUILDING CODE
DATE: July 06, 2000
BY: *Heung A. Mark*
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 00-0424-08

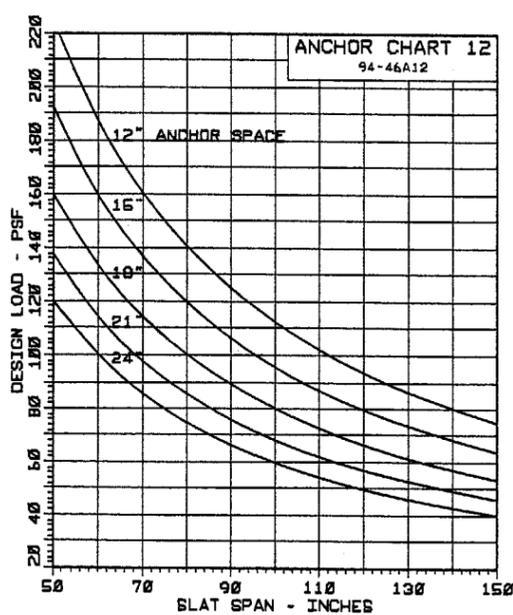
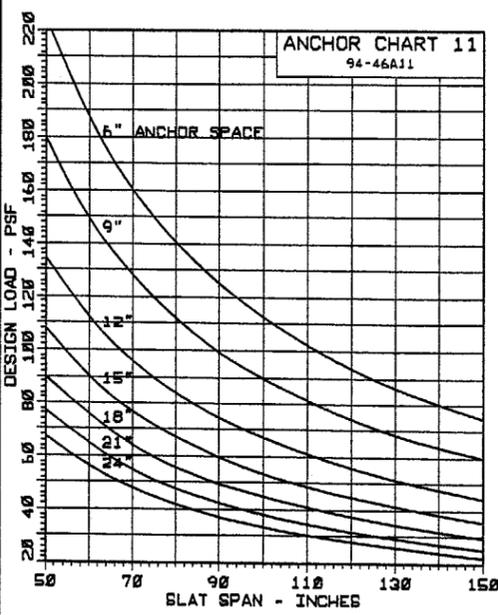
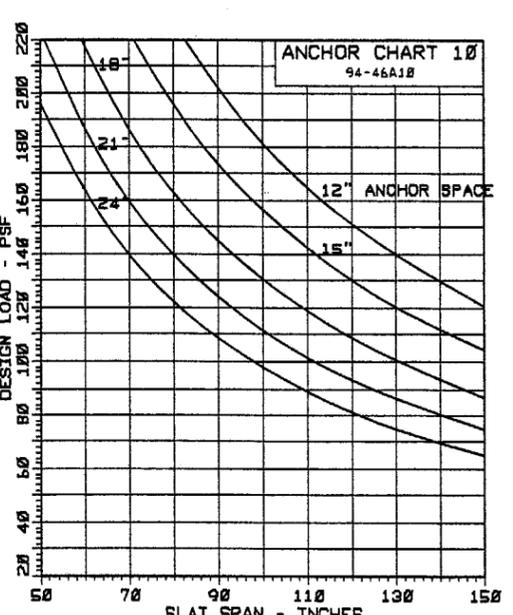
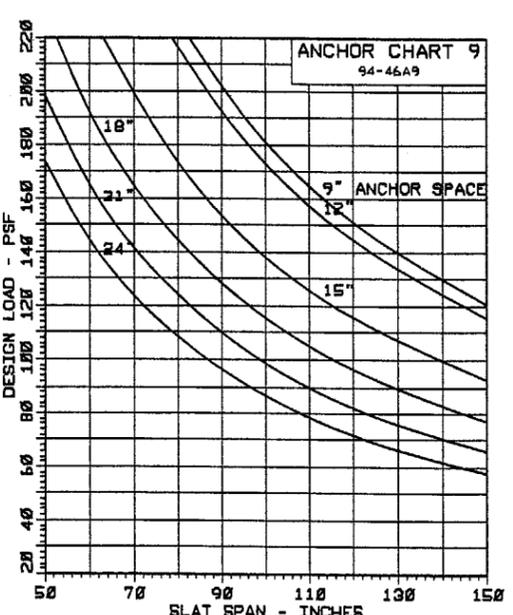
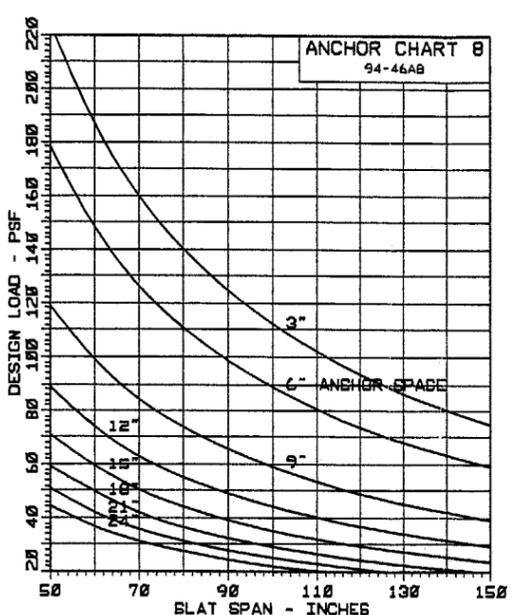
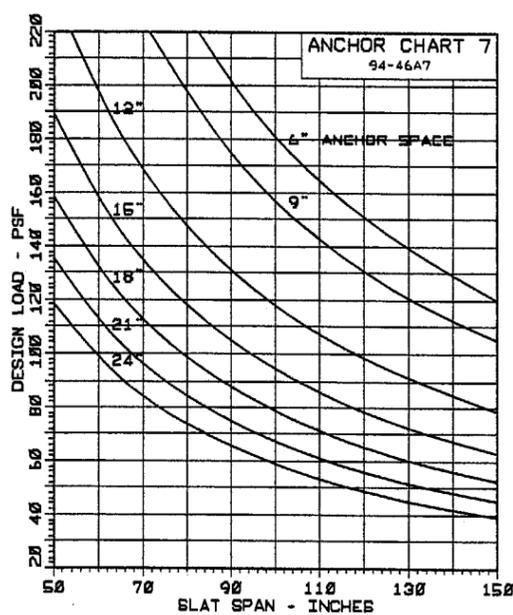
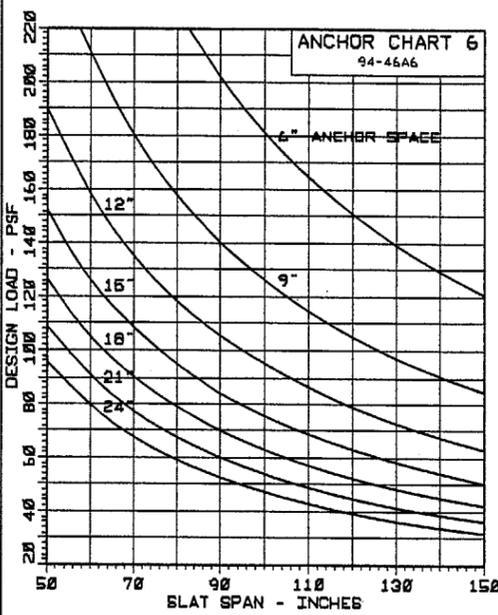
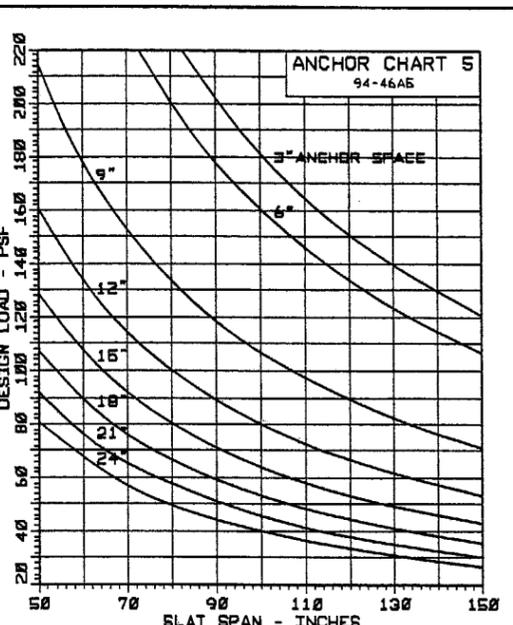
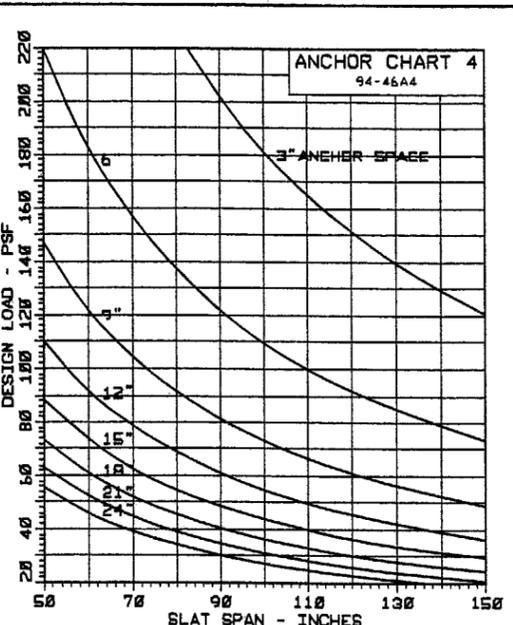
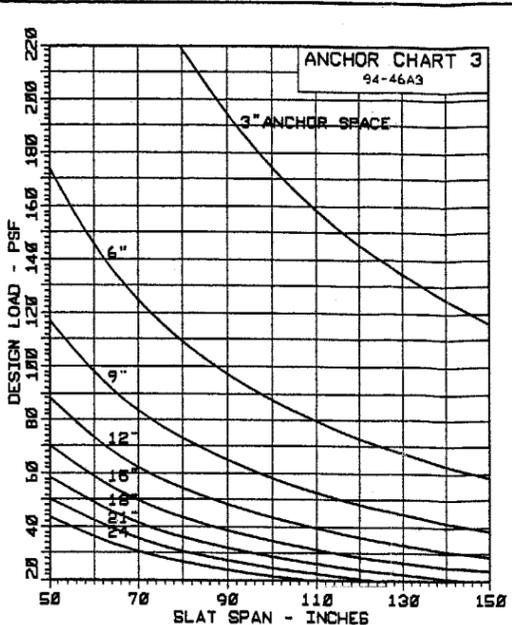
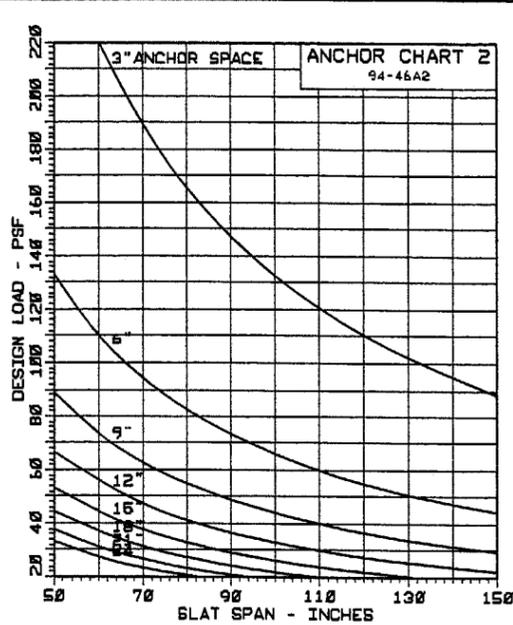
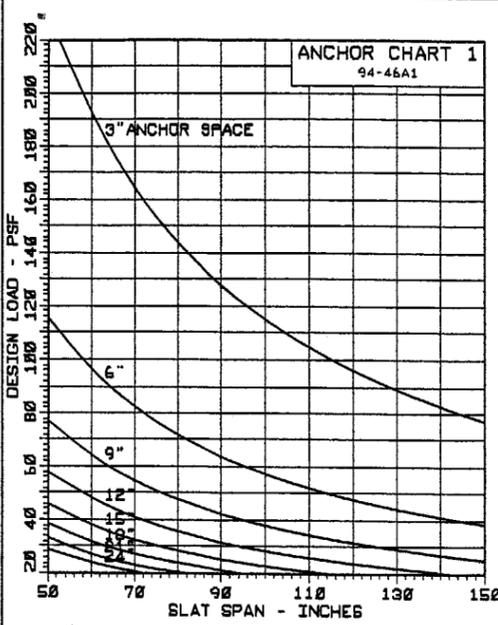
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450 WEST McNAB ROAD
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no.	date	by	description

date: 06-10-94
scale: 1/2" = 1"
dr. by: HAMID
chk. by:

drawing no.
94-46
sheet 3 of 4



TYPICAL ANCHORS

- ANCHOR (A) = 1/4" TAPCON 1-3/4" EMBEDMENT TO CONCRETE
1-1/4" EMBEDMENT TO BLOCK
 - ANCHOR (B) = #14 S.M.S. W/ RAWL SCRU-LEAD INTO CONCRETE
1-1/2" EMBEDMENT.
 - ANCHOR (D) = 1/4" RAWL CALK-IN, STAR 'TAMPIN' OR EQUAL.
TOTAL ANCHOR BODY INTO CONC.
 - ANCHOR (E) = #14 S.M.S./LAG SCREWS INTO WOOD.
1-1/2" MIN. PENETRATION. (S.G.= 0.47)
- NOTE: ANCHORS, USE FULL EMBEDMENT IN CONCRETE BEYOND THE COVERING (STUCCO, TILES, ETC.)

USE CHARTS 1 THRU 12 TO VERIFY ANCHOR REQUIREMENTS AND STRESS LIMITATIONS OF LOAD/SPAN COMBINATIONS FOR HEADER AND SILL.

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 = 1-1/4"
NO REDUCTION FACTOR IS REQUIRED

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

APR 04 2000

APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE
DATE July 06, 2000
BY *Heung A. Mak*
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 00-0424-08

AL-FAROOQ CORPORATION
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450 WEST McNAB ROAD
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TEL. 1-800-432-1803 FAX. 954-973-3928

revisions:

no	date	by	description

date: 06-10-94
scale: 1/2" = 1"
dr. by: HAMID
chk. by:

drawing no.
94-46